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ERRATA.

1,108,940, page 29, fifth claim, line 5, for the word "other" read *outer*.

1,108,968, page 39, fourth claim, line 3, after the word "receptacle," strike out the comma.

1,109,126, page 95, second claim, line 5. for the word "given" read *give*.

1,109,186, page 117, third claim, lines 4–5, for the words "operable to counteract" read *normally*.

1,109,538, page 238, in heading, assignment, name of assignee, for "Frigid Fuel Co.," read *Frigid Fluid Co.*

1,109,920, page 418, first claim, lines 7–8, for the words "at an angle of approximately twenty-two and one-half degrees," read *at a relatively acute angle;* same page, second claim, lines 10–12, for the words "at an angle of approximately twenty-two and one-half degrees to the axis of said member," read *at a relatively acute angle to the axis of the pipe*.

1,110,718, page 742, in heading, residence of assignee, for "Bridgeport, England" read *Bridport, England*.

1,112,[illegible], page 1296, in heading, residence of patentees, for "Grand Rapids, Mich.," read *Grand Rapids, Wis*.

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ANNOUNCEMENTS.

Patents Nos. 1,108,874 to 1,109,653.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Total	957		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	2	2
Arizona	.....	.....	North Dakota	3	.....
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Colorado	11	.....	Oregon	2	.....
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Idaho	.....	.....	Tennessee	3	3
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Nebraska	3	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	.....	1	U. S. Navy	.....	.....
New Jersey	41	3			
New Mexico	1	.....	Total to residents of the United States	719	128
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TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	4	1	Netherlands	.....	.....
Belgium	1	.....	New South Wales	1	.....
Brazil	.....	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	1	.....
Canada	18	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	1	.....
China	.....	.....	Scotland	.....	.....
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	1	.....	Spain	.....	.....
Denmark	1	.....	Sweden	.....	1
England	19	5	Switzerland	2	1
France	3	.....	Transvaal, South Africa	.....	.....
Germany	29	2	Victoria	1	.....
Guatemala	.....	.....	Western Australia	.....	.....
India	.....	.....			
Ireland	.....	.....	Total to residents of foreign countries	85	11
Italy	1	1			
Japan	.....	.....			
Mexico	.....	.....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Renewal of Forfeited Cases.

A petition for the renewal of a forfeited application need not be signed by the inventor or assignee, but may be signed by the attorney.

A power of attorney in the original application authorizing an attorney to transact all business in the Patent Office in connection with the application construed to be of sufficient scope to include the signing of a petition for renewal and the subsequent prosecution of the application. (*Ex parte Agee*, 101 O. G., 1609.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 29, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
114	1. Fences; Fencing, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 6	June 29	561
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	July 6	649
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 30	Aug. 25	115
232	4. Bridges; Conveyors; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 2	June 29	710
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 29	June 19	462
218	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 17	July 18	584
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 15	June 26	505
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	July 23	1226
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	June 1	620
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220	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 5	July 6	505
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308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 2	July 9	989
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220	19. Dampers, Accessories, Furnaces; Heat-Distributing Systems; Stoves and Furnaces	June 5	July 10	358

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	June 8	July 3	449
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 20	July 8	488
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 11	July 18	232
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 18	July 10	491
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147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 30	July 9	430
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172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 22	June 25	376
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 20	July 16	738
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 31	382
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 17	June 16	344
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 24	July 27	561
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 16	June 30	827
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 24	June 27	823
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Mar. 3	July 13	893
321	39. Water Distribution	Apr. 20	July 8	528
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	July 29	967
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 8	July 17	428
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 14	July 1	413
332	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 29	July 27	297

Oldest new case, Nov. 20; oldest amended, June 1.
Total number of applications awaiting action..... 24,429

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
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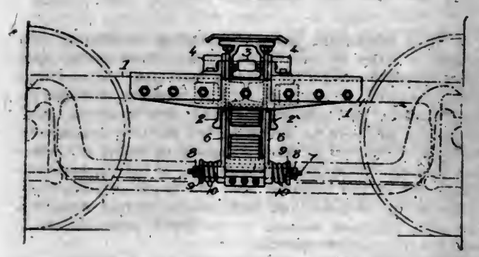
PATENTS

GRANTED SEPTEMBER 1, 1914.

1,108,874. CAR-TRUCK. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 8, 1913. Serial No. 777,801. (Cl. 105—243.)



1. In a device of the class described, means having a plurality of flat surfaces eccentric to the axis about which it is rotatably mounted for elevating springs at one side of a car truck to compensate for the sagging or set of said spring so that the car body may be maintained at its proper height.

2. In a device of the class described, a spring and rotatable adjustable means having a plurality of flat surfaces throughout its entire length for supporting the same so that said spring may be elevated whereby a car body may be maintained at its proper height.

3. In a device of the class described, transoms, hangers and means for pivotally mounting said hangers from said transoms, a pin uniting the lower ends of said hangers, a block mounted to turn on said pin and having flat surfaces eccentric to the axis of said pin, a spring plank with a bearing adapted to rest on said block, and a spring on said spring plank having a bearing mounted directly on said pin and directly supporting said spring.

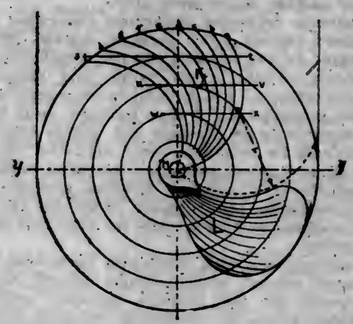
4. In a device of the class described, transoms, hangers and means for supporting said hangers from said transoms, a pin connecting the lower ends of said hangers, an adjusting block and springs for forcing the said hangers in contact with said adjusting block.

5. In a device of the class described, a truck frame, hangers and means for supporting said hangers from said frame, a pin connecting the lower end of said hangers, an adjusting block mounted directly upon and adapted to rotate on said pin, said block having flat surfaces eccentric to the axis of said pin, so that when said block is turned the top surfaces may be varied in distance from said axis.

[Claims 6 to 11 not printed in the Gazette.]

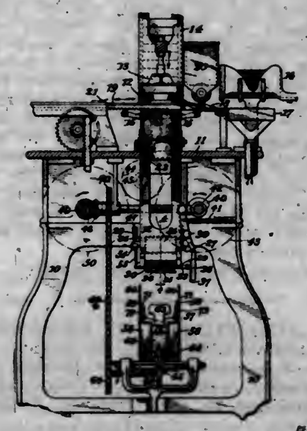
1,108,875. PROPELLER. JOHN H. C. ALEXANDER, Oakland, Cal. Filed Oct. 24, 1912. Serial No. 727,569. (Cl. 103—159.)

An impeller having one or more blades, each blade having the form described by a generatrix forming part of a logarithmic spiral diverging from the axis to the periphery of the blade and entirely in advance of the radius



which moves in a plane normal to the axis and sweeping the blade, and describing a helix of increasing axial pitch.

1,108,876. DELIVERY MECHANISM FOR LABELING-MACHINES. JOAQUIN ALEMANY, Habana, Cuba, assignor to Havana Commercial Company, Habana, Cuba, a Corporation of New Jersey. Filed June 22, 1914. Serial No. 846,536. (Cl. 216—57.)



1. A package delivering mechanism comprising a vertical channel through which packages descend, label applying means for the packages operable within said channel, separate means within said channel for temporarily retaining said packages in two separated groups, means for feeding packages singly into said channel above the upper

group and pushing said upper group downwardly until the lowermost package thereof passes the retaining means to fall upon the lower group, and means for positively operating the lower retaining means to release the lowermost package of the lower group.

2. A package delivering mechanism comprising a vertical channel through which packages descend, label applying means for the packages operable within said channel, yielding means within said channel for temporarily retaining a group of packages above the outlet end of said channel, a second yielding means at the outlet end of the channel for temporarily retaining a second group of packages in the channel spaced from the upper group, means for feeding packages one at a time to said upper group and for pushing said upper group of packages down the channel until the lowermost package passes the retaining means to fall upon the lower group, and means for positively operating the lower retaining means to release the lowermost package of the lower group.

3. A package delivering mechanism comprising a vertical channel through which packages descend, label applying means for the packages operable within said channel, separate yielding means within said channel for temporarily retaining said packages in two spaced groups, means for intermittently feeding packages upon the top of the upper group of packages and moving said group bodily through its retaining means until the lowermost package of said group passes said retaining means and falls upon the lower group of packages, and means for positively actuating the retaining means for the lower group of packages to release singly the lowermost package of said group.

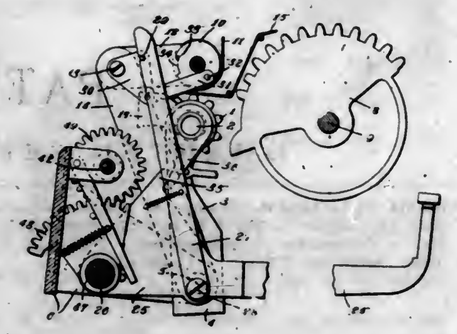
4. A package delivering mechanism comprising a vertical channel through which packages descend, label applying means for the packages operable within the said channel, means for temporarily retaining separated groups of packages within said channel, means for feeding packages singly to the upper group of packages and advancing said group along said channel until the lowermost package of the group escapes the retaining means and falls upon the lower group of packages, means for positively operating the retaining means of the lower group of packages to release the bottom package thereof, a conveyer for transporting packages from the machine, and a movable support to receive said positively released package and deliver the same to said conveyer.

5. A package delivering mechanism comprising a vertical channel through which packages descend, label applying means for the packages operable within said channel, means for temporarily retaining separated groups of packages within said channel, means for feeding packages singly to the upper group of packages and advancing said group along said channel until the lowermost package of the group escapes the retaining means and falls upon the lower group of packages, means for positively actuating the retaining means for the lower group of packages to release the bottom package thereof, a conveyer for transporting packages from the machine, a movable support to receive said positively released package, turn the same and transfer it to said conveyer, and a clamping means on said support to hold said package while being turned and transferred.

[Claims 6 to 18 not printed in the Gazette.]

1,108,877. ZERO-ELIMINATING MECHANISM FOR CALCULATING-MACHINES. WILLIAM H. BROWN, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 29, 1910. Serial No. 584,400. (Cl. 235—60.)

1. In a calculating machine, printing mechanism comprising a series of recording elements, each having type representing numerals including a zero type, the zero type being normally at the printing line, and the elements being capable of rotating complete revolutions in succession to carry the type into numerical positions, and means for actuating the inactive elements remaining to the left of those elements in which a number has been set, for moving the zero type of said inactive elements out of the printing line, substantially as and for the purpose described.



2. In a calculating machine, printing mechanism comprising a series of recording elements, each having type representing numerals including a zero type, the zero type being normally at the printing line, and the elements being rotatable for carrying the type into numerical positions, and members for actuating the inactive elements remaining to the left of those elements in which a number has been set, for moving the zero type of said inactive elements out of the printing line, the members being individual to the elements and each member having means for operating the next member to the right, substantially as and for the purpose specified.

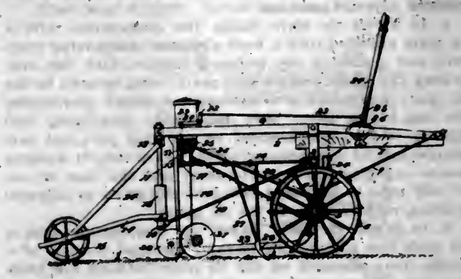
3. In a calculating machine, printing mechanism comprising a series of recording elements, each having type representing numerals including a zero type, the zero type being normally at the printing line, and the elements being rotatable for carrying the type into numerical positions, and members for actuating the inactive elements remaining to the left of those elements in which a number has been set, for moving the zero type of said inactive elements out of the printing line, the members being individual to the elements and each member having means for operating the next member to the right, and each member being operable out of operative position by its companion recording element, substantially as and for the purpose set forth.

4. In a calculating machine, printing mechanism including a series of elements each having type representing numerals including a zero type, the zero type being normally at the printing line, and the elements being rotatable for carrying the type into printing position and being capable of making complete rotations, and a member movable toward and from said elements for effecting the making of a record, members for actuating the inactive elements remaining to the left of those elements in which a number has been set, the members being individual to said elements and operable thereby and each having a part for operating the member to the right, and an operating part connected to the printing member and to the actuating members for the inactive element, substantially as and for the purpose described.

5. In a calculating machine, and in combination, a shaft, a series of recording elements rotatably mounted thereon and each having type representing numerals including a zero type, the zero type being normally at the printing line, and the elements being movable about said shaft into numerical positions, means for retarding the movement of the elements about the shaft, and means operating through the engagement of the retarding means with the recording elements for actuating the inactive elements remaining to the left of those elements in which a number has been set, for moving the zero type of said inactive elements out of the printing line, substantially as and for the purpose set forth.

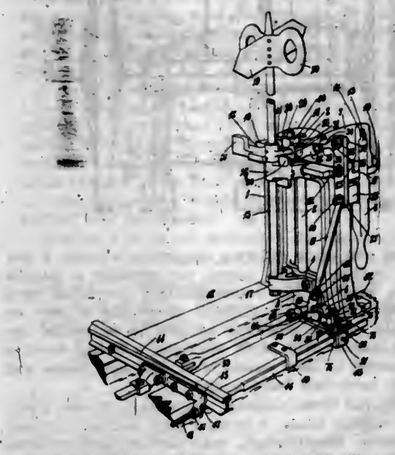
[Claims 6 to 41 not printed in the Gazette.]

1,108,878. PLANTER. CHARLES O. ANDERSON, Waterville, Kans. Filed Dec. 2, 1912. Serial No. 734,648. (Cl. 111—6.)



A planter comprising a cross bar having down-turned ends, a rod secured in and extending between said down-turned ends, hangers depending from said rod, ground wheels carried by said hangers, an upper frame secured to and extending rearwardly from said cross bar, a lower frame having side bars secured at their front ends to the said rod and extending downwardly and rearwardly therefrom, a caster carried by the rear ends of the upper and lower frames, an inner frame having its front end hung on said rod, means on the upper frame for raising and lowering the inner frame, ground treating implements carried by the sides of said inner frame, a seed tube carried by the rear end of said inner frame between the sides thereof, and means actuated by the ground wheels to feed seed through the tube.

1,108,879. LOCK FOR INTERLOCKING SWITCH-STAND MECHANISM. FRANK C. ANDERSON, Cincinnati, Ohio. Filed Oct. 15, 1913. Serial No. 795,224. (Cl. 104—25.)



1. In a lock for switch stand interlocking mechanism, the combination with interlocking members, one of the members having a slot, of a lock bolt entering said slot to engage with the member having the slot, means normally holding said bolt in said slot, and means for manually withdrawing the bolt from the slot, a plate over the member having the slot, said plate having an opening through which the lock bolt extends into the slot, and an enlargement of the lock bolt engaging with the plate, said bolt having a weakened part above the enlargement whereby the bolt will break in such part and leave the part of the bolt in position extending through the opening in the plate and extending into the slot in said member with said enlargement holding this part of the bolt in such position.

2. In a lock for switch interlocking mechanism, the combination with interlocking members, one of the members having a slot, of a bolt extending down into the slot, a plate above the member having the slot, said plate having an opening through which the bolt extends, an enlargement of the bolt engaging against the plate and limiting the movement of the bolt into the slot in said member, a spring engaging against the enlargement to normally hold the bolt down in said slot in said member, and means for manually moving the bolt out of said slot against the pressure of said spring, said bolt having a weakened part whereby it will break and leave the part of the bolt in position extending through said plate and into the slot in said member with the enlargement bearing against the plate to maintain the part in such position.

3. In a lock for switch interlocking mechanism, the combination with an interlocking bar and an interlocking plunger to engage with the bar, of a head fixed to said plunger, an extension on said head, said extension having a slot therein, a plate over said extension and having an opening, a bolt extending through the opening into the slot in the extension, a flange on the bolt bearing down against the plate and limiting the movement of the bolt into the slot in the extension, a casing forming an upper guide for the bolt, a spring compressed between the flange of the bolt and part of said casing, and means for manually raising said bolt against the pressure of said spring.

4. In a lock for switch interlocking mechanism, the combination with an interlocking bar, an interlocking plunger engaging with said bar, of a head fixed to said plunger, an extension on said head over said interlocking bar, a housing inclosing and guiding the interlocking bar and the plunger and having a recess receiving the extension of said head, a plate covering said housing and the recess therein and covering said extension in said recess, said plate having an opening and said extension having a slot, a bolt extending down through the opening in the plate and entering the slot in the extension when said plunger is engaged with said interlocking bar, means for normally holding the bolt within the slot in the extension, and means for withdrawing the bolt from said slot.

5. In a lock for switch interlocking mechanism, the combination with an interlocking bar, an interlocking plunger engaging with said bar, of a head fixed to said plunger, an extension on said head over said interlocking bar, a housing inclosing and guiding the interlocking bar and the plunger and having a recess receiving the extension of said head, a plate covering said housing and the recess therein and covering said extension in said recess, said plate having an opening and said extension having a slot, a bolt extending down through the opening in the plate and entering the slot in the extension when said plunger is engaged with said interlocking bar, said head having lateral extensions near its end opposite from the interlocking bar and said housing having slots in its sides receiving said lateral extensions whereby that end of the head is guided in the housing, means for manually withdrawing the bolt from the slot in the extension, and means for automatically returning said bolt to said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,108,880. CORE FOR LINING CONVERTERS. JULES BAILLOT, Montmagny, Quebec, Canada. Filed Apr. 28, 1913. Serial No. 764,120. (Cl. 25—118.)

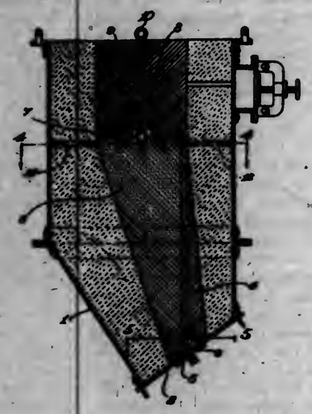
1. In combination, two core members, means for slidably connecting the same, another core member connected to the lower end thereof, and centering means disposed between said core members and said wall.

2. In combination, two core members, means for slidably connecting the same to form a frusto-conical core section, another core member connected to the lower end of said frusto-conical core section and extending at an angle to the longitudinal axis thereof, and centering means for said core members.

3. In combination, a top plate, a core member detachably connected to said plate, a second coöperating core member detachably connected to said plate, means for

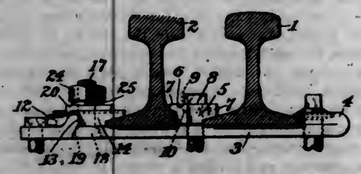
slidably connecting said core members, and a core member seated upon the free ends of said connected core members.

4. In combination, a top plate, a core member detachably connected to said plate, a second coöperating core



member detachably connected to said plate, means for slidably connecting said core members, a core member seated upon the free ends of said connected core members, and means for centering said connected core members.

1,108,881. RAIL-TIE-PLATE CLAMP. EDWARD JAMES BANKER, Sloatsburg, and JAMES BOORMAN STRONG, Hillburn, N. Y., assignors to Ramapo Iron Works, Hillburn, N. Y., a Corporation of New York. Filed Apr. 23, 1914. Serial No. 833,859. (Cl. 239—18.)



1. In a rail tie plate clamp, the combination with a tie plate having a track rail and a guard rail thereon and provided with a solid abutment having a diagonal edge, of a clip holding the track rail and the guard rail comprising two parts movable with respect to each other, one of said parts being normally secured in fixed relation to the tie plate and provided with means overlapping the top of the other part to hold same against vertical displacement, a wedge plate arranged between the base of the guard rail and said abutment, and means for holding the wedge plate in adjusted position.

2. In a rail tie plate clamp, the combination with a tie plate provided with a fixed abutment and having track rails and a spacing clip mounted thereon, said clip comprising two parts interlocking with the rails and with each other, one of said parts being loosely mounted with respect to the tie plate and the other part being provided with a flange overlapping the top of said part and interlocking therewith, of a wedge plate engaging the base of one of said rails to force said clip parts together and hold the same in interlocking position, and means for holding the wedge plate in adjusted position with relation to the tie plate.

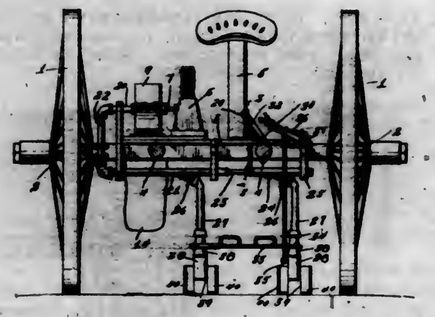
3. In a rail tie plate clamp, the combination with a tie plate provided with a fixed abutment and having track rails and a spacing clip mounted thereon, said clip comprising two parts, each interlocking with one of the track rails, one of said parts being loosely mounted on the tie plate and having a recess formed therein and the other part being adjustably secured to the tie plate and having a projection engaging in said recess, of a wedge plate engaging said abutment and the base of one of the track rails to hold said clip parts in interlocking position and a washer interlocking with the wedge plate to hold the same in adjusted position.

4. In a rail tie plate clamp, the combination with a tie plate provided with a fixed abutment and having track rails and a spacing clip mounted thereon, said clip comprising two parts, one of said parts being secured to the tie plate and being provided with a flange overlapping the top of the other part, said other part being held against vertical displacement by the fixed part and held against lateral displacement by the guard rail, of wedging means engaging the said abutment and the base of one of said rails to hold said rails and clip parts in adjusted position with relation to the tie plate.

5. In a rail tie plate clamp, the combination with a tie plate and a track rail movably mounted thereon, of a wedge plate mounted on the tie plate between the track rail and a fixed abutment, said plate being provided with a diagonally arranged slot and having a portion of its upper surface provided with locking teeth, a bolt projecting through said slot and provided with a non-circular head, a bearing for said head permitting rocking movement thereof in the bearing, and a washer mounted on said bolt and having a portion of its bottom provided with locking teeth adapted to engage the corresponding surface of the wedge plate, and means for forcing the locking teeth on said plate and washer into wedging engagement.

[Claims 6 to 8 not printed in the Gazette.]

1,108,882. BUG AND WORM COLLECTOR. REED C. BARTLETT, Waupaca, Wis. Filed Oct. 17, 1913. Serial No. 795,766. (Cl. 43—1.)

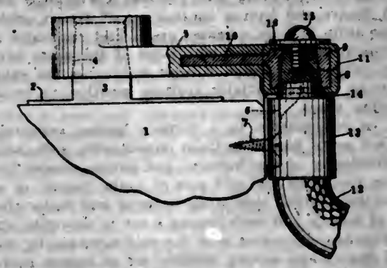


1. A bug and worm collector comprising a frame, a plurality of suction hoods, means for creating a suction therein, a suction pipe communicating therewith, said suction pipe comprising a plurality of sections, a lever engaging said suction pipe and adapted to be swung laterally for moving said hoods laterally, a second lever, a link connected to said second lever and said hoods and adapted to move said hoods vertically.

2. A bug and worm collector comprising a frame, a plurality of suction hoods, a suction pipe, means for creating a suction therethrough, said suction pipe provided with a plurality of suction spouts, means for connecting said spouts and said hoods, means for vertically and laterally adjusting said hoods, a refuse receptacle, a hinge chute carried by said frame and positioned within said refuse receptacle, rods engaging said chute, and means engaging the lower end of said rods for adjusting the angle of said chute.

3. A bug and worm collector comprising a frame, a plurality of suction hoods, means for creating a suction therein, each hood comprising a body having a tapered upper end, said body provided with a plurality of notched sides, divergently extending plates secured to said sides for directing plants to said hoods, and braces engaging said body and also engaging said divergently extending plates for bracing the same against rearward movement.

1,108,883. BATTERY CONNECTION. JOSEPH BIJUR, New York, N. Y., assignor to Bijur Motor Lighting Company, Hoboken, N. J., a Corporation of New York. Filed Sept. 6, 1913. Serial No. 788,415. (Cl. 204—29.)



1. In apparatus of the class described, in combination, a battery cell having an end plate, a metallic connecting member secured to said end plate and provided with a supporting arm diverging therefrom in rigid relation thereto and resting against said cell, and a conductor secured to said connecting member independently of said supporting arm.

2. In apparatus of the class described, in combination, a battery cell having an end plate, a metallic connecting member secured to said end plate and provided with a pair of spaced arms resting against said cell, and a conductor secured to said connecting member.

3. In apparatus of the class described, in combination, a battery cell having an end plate, a metallic connecting member secured to said end plate and provided with a pair of transversely extending relatively spaced arms resting against said cell and adapted to support said member against rocking, and a conductor secured to said connecting member.

4. In apparatus of the class described, in combination, a battery plate, a connecting member secured thereto having a recess therein, and an insertion of relatively hard metal exposed in the inner walls of said recess, and a conductor secured within said recess and fitting against said hard metal.

5. In apparatus of the class described, in combination, a battery end plate having a tapered projection, a metallic connecting member having a recess into which said projection fits and is permanently secured and a second recess, said member comprising an insert of relatively hard metal exposed in the inner walls of said second recess, and a conductor secured within said second recess and resting against said hard metal.

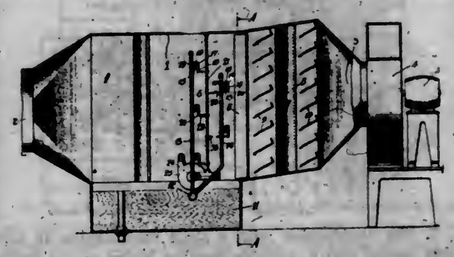
[Claims 6 to 14 not printed in the Gazette.]

1,108,884. COMPOSITE WATERPROOF SHINGLE. CHARLES S. BIRD, Walpole, Mass.. Filed Feb. 5, 1913. Serial No. 746,355. (Cl. 108—8.)

1. As a new article of manufacture, a shingle composed of two sheets of waterproof material folded upon themselves, one sheet being nested within the folds of the other, and one section of the inner member being relatively short and present only at the butt end of the shingle.

2. As a new article of manufacture, a shingle composed of two plies of waterproof paper, the outer face presenting a surface of a length equal to the length of the shingle and the under surface extending throughout the major portion of the length of the shingle upon the under surface thereof, and the second sheet lying between the members of the first sheet, said second sheet being likewise folded upon itself, one section of said second sheet being relatively narrow and present only at the butt end of the shingle.

1,108,885. SPRAYING MECHANISM. ALLEN A. BLOMFELDT, Chicago, Ill. Original application filed Feb. 20, 1913, Serial No. 749,657. Divided and this application filed Oct. 15, 1913. Serial No. 795,241. (Cl. 137—58.)



1. Air conditioning apparatus, comprising a casing, a water supply arranged in said casing, a plurality of pipes arranged in said casing in a plane transverse to the flow of air, spraying mechanism including a plurality of nozzles secured to said pipes in spaced relation, spoons shiftably mounted in front of said nozzles, means connecting certain of said spoons, a shaft rotatably mounted adjacent to said pipes, a plurality of cams angularly arranged on said shaft and being respectively adapted to engage said connecting means for shifting said spoons so as to flush said spraying mechanism, and mechanism for rotating said shaft.

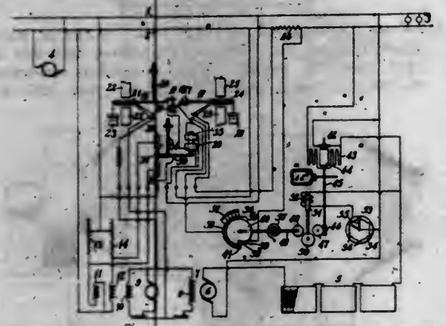
2. Air conditioning apparatus, comprising a casing, a water header arranged in said casing, a plurality of pipes connected to said header and disposed in a plurality of transverse planes with respect to said casing, spraying mechanism including a plurality of nozzles secured to said pipes and spaced apart longitudinally, spoons shiftably mounted in front of said nozzles, means connecting certain of said spoons, a vertically disposed shaft rotatably mounted between the transverse planes of said pipes, a plurality of cams angularly arranged on said shaft and being respectively adapted to engage said connecting means for shifting said spoons so as to flush said spraying mechanism, mechanism for rotating said shaft, and other means adapted to supply water to said header.

3. Air conditioning apparatus, comprising a casing, spraying mechanism including a plurality of vertically disposed water supply pipes arranged in said casing in transverse planes, spraying mechanism comprising nozzles connected to said pipes and spaced apart vertically in horizontally alined sets, a lug on each of said nozzles, an arm pivotally mounted on each of said lugs, a spoon arranged on each of said arms opposite the respective nozzle, rods connected to the lower ends of the alined sets of arms, a shaft rotatably mounted in said casing; and cams on said shaft adapted to engage said rods for shifting said spoons outwardly from said nozzles in the plane thereof, and means for supplying water to said pipes.

1,108,886. SYSTEM OF DISTRIBUTION. FRANK CONRAD, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 6, 1911. Serial No. 631,608. (Cl. 171—310.)

1. The combination with an electric circuit and an integrating wattmeter, of a movable member, means for periodically associating said movable member with said wattmeter, and means dependent upon the movement of said movable member for effecting changes in said electric circuit.

2. The combination with an electric circuit and an integrating wattmeter, of a movable member biased to its initial position, means for operatively associating said movable member with said wattmeter, and means associated with said movable member and dependent upon the degree of movement thereof for effecting changes in said electric circuit.



3. The combination with a shaft that rotates at variable speeds and a movable member biased to its initial position and adapted to be periodically associated with said shaft, of a circuit, and a circuit-controlling device associated with said movable member and adapted to effect changes in said circuit when said member is moved a predetermined amount.

4. The combination with a shaft that rotates at variable speeds, a rotatively movable member biased to its initial position and adapted to be periodically associated with said shaft for given intervals of time, of a circuit, and a circuit-controlling device associated with said rotatively movable member and adapted to effect changes in said circuit when said member is moved a predetermined amount.

5. The combination with an integrating wattmeter, a rotatively movable member biased to its initial position and adapted to be moved in proportion to the amount of energy periodically passing through said wattmeter, and electromagnetic means for periodically associating said movable member with said wattmeter, of an electric circuit, and means associated with said movable member and dependent upon a predetermined amount of movement thereof for effecting changes in said circuit.

[Claims 6 to 18 not printed in the Gazette.]

1,108,887. GRATE. THOMAS R. COOK, Pittsburgh, Pa. Filed Apr. 10, 1912. Serial No. 689,798. (Cl. 126—176.)

1. In combination in a furnace having opposing sets of fixed grate fingers inclined downwardly and extending longitudinally of the furnace, and having means for supplyinig fuel upon the said sets of grate fingers, of a pair of rotatable grate bars lying between and below the said sets of fingers and each having a set of upwardly extending fingers coöperating with the said downwardly inclined fixed fingers and having another set of fingers projecting downwardly to form a basket grate, and releasable means for limiting the rocking movement of the grate bars adapted when released to permit the downwardly projecting fingers of the said bars to swing away from each other to provide a dumping space.

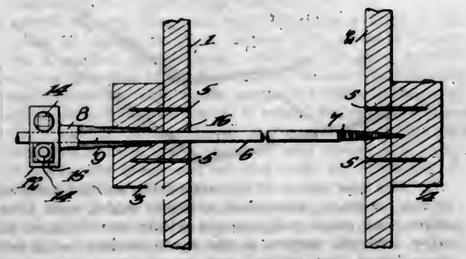
2. In combination in a furnace having opposing sets of fixed grate fingers inclined downwardly and extending longitudinally of the furnace, and having means for supplying fuel upon the said sets of grate fingers, of a pair of rotatable grate bars lying between and below the said sets of fingers and each having a set of upwardly extending fingers coöperating with the said downwardly inclined fixed fingers and having another set of fingers projecting downwardly to form a basket grate, and releasable means for limiting the rocking movement of the grate bars and when released to permit sets of fingers on the said bars to swing to substantially vertical position to provide a dumping space.

3. In combination in a furnace having opposing sets of fixed grate fingers inclined downwardly and extending longitudinally of the furnace, and having means for supplying fuel upon the said sets of grate fingers, of a pair of rotatable grate bars lying between and below the said sets of fingers and each having a set of upwardly extending fingers coöperating with the said downwardly inclined fixed fingers and having another set of fingers projecting downwardly and then substantially horizontally to form a basket grate, and releasable securing means for the bars adapted when released to permit the downwardly extending fingers of the said bars to swing away from each other to provide a dumping space between the bars.

4. In combination in a furnace having opposing sets of fixed grate fingers inclined downwardly and extending longitudinally of the furnace, and having means for supplying fuel upon the said sets of grate fingers, of a pair of rotatable grate bars lying between and below the said sets of fingers and each having a set of upwardly extending fingers coöperating with the said downwardly inclined fixed fingers and having another set of fingers projecting downwardly and then substantially horizontally to form a basket grate, and releasable securing means for the bars adapted when released to permit the downwardly extending fingers of the said bars to swing away from each other to provide a dumping space between the bars, the horizontal portions of the said grate fingers on the two bars intermeshing at the longitudinal center of the furnace.

5. In combination in a furnace having opposing sets of fixed grate fingers inclined downwardly and extending longitudinally of the furnace, and having means for supplying fuel upon the said sets of grate fingers, of a pair of rotatable grate bars lying between and below the said sets of fingers and each having a set of upwardly extending fingers coöperating with the said downwardly inclined fixed fingers and having another set of fingers projecting downwardly and then substantially horizontally to form a basket grate with the upwardly extending sets of fingers on the said bars of less length than the other sets of fingers carried thereby, and releasable means for the bars adapted when released to permit the downwardly extending fingers of the said bars to swing away from each other to provide a dumping space between the bars.

1,108,888. SPACER-BOLT. GEORGE COUSINS, Oswego, N. Y. Filed May 8, 1913. Serial No. 766,371. (Cl. 85—1.5.)



1. In combination with the oppositely arranged walls, one of the walls having an opening, of a spacer device comprising a bolt or rod adapted to pass through said opening, said bolt having a gimlet pointed end for engaging the opposite wall, a sleeve nut fitting the bolt or rod and having a frusto-conical external surface, said surface being externally threaded at the small end for engaging the other wall, and the said small end being arranged adjacent to the gimlet pointed end of the rod or bolt, said sleeve having oppositely arranged longitudinally extending slots at the opposite end to the screw threads, and the said nut being enlarged laterally at the slotted end and at each side of the slots to form oppositely arranged gripping jaws or heads, each of the said heads being beveled at each end at the inner side thereof and having an opening at each end, the said openings being in alinement, bolts passing through the openings, the bolts being oppositely arranged, and nuts engaging the bolts for clamping the slotted end of the sleeve on the rod or bolt.

2. In combination with the oppositely arranged walls, one of the walls having an opening, of a spacer device comprising a bolt or rod adapted to pass through said opening, said bolt having a gimlet pointed end for engaging the opposite wall, a sleeve nut fitting the bolt or rod and having a frusto-conical external surface, said surface being externally threaded at the small end for engaging the other wall, and the said small end being arranged adjacent to the gimlet pointed end of the rod or bolt, said sleeve having oppositely arranged longitudinally extending slots at the opposite end to the screw threads, and the said nut being enlarged laterally at the slotted end and at each side of the slots to form oppositely arranged gripping jaws or heads, and means for clamping the said heads on the rod or bolt.

3. A device of the character specified, comprising a rod or bolt having one of its ends gimlet pointed, a sleeve nut fitting the rod or bolt and having its external surface frusto-conical and arranged with the small end toward the gimlet pointed end of the rod or bolt, said sleeve being externally threaded at the small end and having oppositely arranged longitudinally extending slots at the opposite end, said nut being enlarged laterally at the slotted end on each side of the slots to form gripping jaws or heads, said jaws or heads being beveled at each end on their inner faces, and having openings at each end, the said openings of the heads registering, bolts passing through the openings, the said bolts being oppositely arranged, and nuts engaging the bolts for clamping the heads on the rod or bolt.

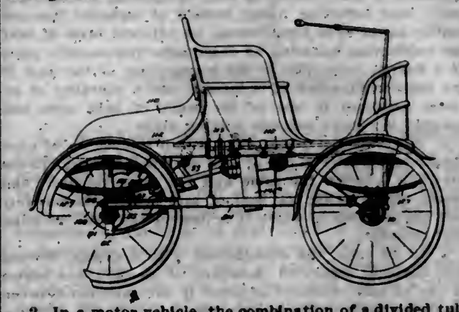
4. In a device of the character specified, comprising a rod or bolt having one of its ends gimlet pointed, a sleeve nut fitting the rod or bolt and having its external surface frusto-conical and arranged with the small end toward the gimlet pointed end of the rod or bolt, said sleeve being externally threaded at the small end and having oppositely arranged longitudinally extending slots at the opposite end, said nut being enlarged laterally at the slotted end on each side of the slots to form gripping jaws or heads, said jaws or heads being beveled at each end on their inner faces, and means for clamping the latches on the rod or bolts.

5. A device of the character specified, comprising a rod or bolt having one of its ends gimlet pointed, a sleeve nut fitting the rod or bolt and having its external surface frusto-conical and arranged with the small end toward the gimlet pointed end of the rod or bolt, said sleeve being externally threaded at the small end and having oppositely arranged longitudinally extending slots at the opposite end, said nut being enlarged laterally at the slotted end on each side of the slots to form gripping jaws or heads, and means for clamping the heads on the rod or bolts.

[Claims 6 to 8 not printed in the Gazette.]

1,108,889. REAR-AXLE STRUCTURE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and this application filed Aug. 7, 1912. Serial No. 713,931. (Cl. 21—90.)

1. In a motor vehicle, the combination of a divided tubular axle, a yoke connecting the inner ends of the sections of said axle, driving shafts extending through said sections and alined passages in the yoke, a gear wheel fitted about each of said shafts within the yoke, a removable plug fitted in a socket at the inner end of the shaft and adapted to expand the latter to firmly connect it to the gear wheel, and a countershaft having pinions meshing with said gears.



2. In a motor vehicle, the combination of a divided tubular axle, a yoke connecting the inner ends of the sections of said axle, tubular driving shafts extending through the sections of the axle and having their inner ends projecting beyond the inner faces of the sides of the yoke, said inner ends of the driving shafts being interiorly threaded and divided by a longitudinal slit, a gear fitted on said inner end of each of said shafts, a threaded plug adapted to be screwed into said split and interiorly threaded shaft end to clamp the shaft and gear together, and a countershaft having pinions adapted to drive said gears.

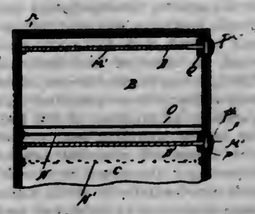
3. In a motor vehicle, the combination of a pair of tubular axle sections, a member connecting said tubular axles so that their axes are at slight angles to each other forming an arch, driving shafts arranged centrally within said axle sections, gears at the inner ends of said shafts, and a horizontally-arranged counter-shaft having gears thereon meshing with the gears upon the driving shaft.

4. In a motor vehicle, the combination with a pair of tubular axle sections, of a member connecting the inner ends of said axle sections, said axle sections being arranged so that their axes are at an angle to each other, driving shafts within said axle sections, differential gearing having driving connection with said shafts and mounted in said connecting member in bearings independent of said shafts, and road wheels directly connected to the outer ends of said driving shafts.

5. In a motor vehicle, the combination with a tubular supporting axle, of a divided driving shaft within the axle, a wheel hub secured to and supported by the shaft and having a hollow spoke bearing member extending inwardly over the tubular end of the axle, and a bearing between said shaft and axle within the hub.

[Claims 6 to 20 not printed in the Gazette.]

1,108,890. OVEN. RANSOM W. DAVENPORT, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Nov. 25, 1912. Serial No. 733,518. (Cl. 219—35.)



1. In an oven, a casing divided into a plurality of chambers, suitable heaters arranged therein, a heat reflecting shield adjustable to positions upon opposite sides of one of said heaters, a heat insulating wall, comprising a bright,

metallic heat reflecting plate, positioned in said wall at the nearest point to the inner surface which is at a temperature below that which is destructive to the bright surface, and a heat non-conducting layer adjacent to the said heat reflecting plate.

2. In an oven, a casing divided into adjacent separate chambers, a heat insulating wall, comprising a bright metallic heat reflecting lining formed of material non-corrodible at the oven temperature, an adjacent layer of heat non-conducting material, an outer reflecting metallic plate of a mterial corrodible at the temperature of the wall in the position in which it is located, and a plurality of recesses arranged in one of the walls of said oven and adapted to receive suitable heating units.

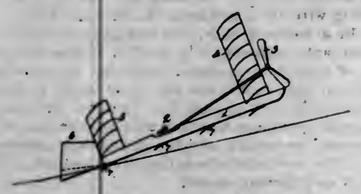
3. In an oven, a casing divided into a plurality of oven chambers, a heater in one of said chambers adjacent to the partition between the same and the other chamber, and means for directing the heat of said heater alternatively into the chamber in which it is located and into the adjacent chamber.

4. In an oven, the combination with a casing, divided into adjacent separated chambers, of an electrical heater in one of said chambers adjacent to the partition between the same and the other chamber, and an imperforate partition between said chambers, adjustable to vary the penetration of heat therethrough.

5. In an oven, the combination with a casing, divided into adjacent oven chambers, of an electrical heater in one of said chambers adjacent to the separating partition, an imperforate partition having a surface of good heat-absorbing and radiating material, and a heat-reflecting shield removably placed between said heater and partition.

[Claims 6 to 10 not printed in the Gazette.]

1,108,891. FLYING-MACHINE. LEONARD H. DYER, Greenwich, Conn. Original application filed Apr. 28, 1905, Serial No. 257,938. Divided and this application filed Feb. 10, 1911. Serial No. 607,768. (Cl. 114—66.5.)

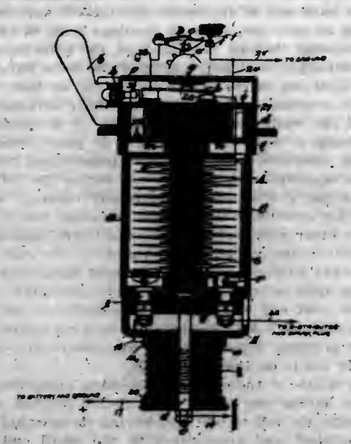


1. A water borne self-propelled apparatus, comprising a rigid hull, adapted when at rest and when moving at low speed to be supported by the displacement of the water, means acting on the water to elevate the hull to the surface thereof when traveling at higher speeds, an aeroplane connected to said hull and extending above and beyond the sides thereof, and an aerial propeller, an engine, and connections between the said propeller and engine for driving the former, a rudder, said rudder having a portion immersed when the hull is supported by the displacement of the water, and means operatable from the hull for operating the said rudder.

2. A water borne self-propelled apparatus comprising a rigid hull, a plurality of superposed aeroplanes carried by said hull and located above said hull at a point nearer the front end thereof than the rear end, said planes extending beyond the sides of said hull, an aeroplane also carried by the hull and located nearer the rear end thereof than the front end and also extending beyond the sides of said hull, a rudder at the rear of the hull, an aerial-propeller and an engine operating said propeller.

3. A water borne self-propelled apparatus comprising a rigid hull having a sharpened front end and a flat bottomed portion intermediate its ends, a plurality of superposed aeroplanes carried by said hull and located above said hull at a point nearer the front end thereof than the rear end, said planes extending beyond the sides of said hull, an aeroplane also carried by the hull and located nearer the rear end thereof than the front end and also extending beyond the sides of said hull, a rudder at the rear of the hull, and an aerial-propeller located in front of the first referred to aeroplane, and an engine operating said propeller.

1,108,892. IGNITION-COIL. ERNST EISEMANN, Stuttgart, Germany. Filed Nov. 9, 1911. Serial No. 659,409. (Cl. 171—122.)



1. A device of the class described comprising a casing, a core therein, primary and secondary windings surrounding the core, a cap for the end of the casing, said cap having a spool-like projection of non-magnetic material, and a resistance coil on the projection and connected with the primary winding.

2. A device of the class described comprising in combination, a casing, a plate of insulating material therein, binding posts on the plate, a core within the casing, primary and secondary windings on the core and connected with the binding posts, a cap attached to the casing and covering the binding posts and having a projecting portion, a resistance coil on the said projecting portion and connected by one of the binding posts in series with the primary winding, a connection between the primary winding and core, and a binding post connected with the core and extending through the said projecting portion of the cap.

3. A device of the class described comprising a casing, a condenser holder in one end of the casing, an insulating plate in the other end, a core between the plate and holder, primary and secondary windings on the core, binding posts in the said plate for connection with the terminals of the secondary winding, one terminal of the primary winding being connected with one post, a resistance coil connected with the binding post to which the primary winding is connected, the other terminal of the primary winding being connected with the condenser holder, a make and break device connected with the primary winding, and a condenser in said condenser holder in shunt relation to the make and break device.

4. A device of the class described comprising a casing, a metallic body disposed in one end of the casing, a plate of insulation in the other end of the casing, binding posts in the said plate, a magnetic core in contact with said body, a primary winding on said core having one end connected with one binding post and the other end connected to a switch on the said metallic body, a secondary winding having its terminals connected with the binding posts, a cap applied to the lower end of the casing and having a spool-like portion, a bolt extending through the said spool-like portion of the cap and anchored in the said plate in electrical connection with the core, said bolt forming a binding post, and a resistance coil on the projecting portion of the cap and connection with the binding post to which the primary winding is connected.

5. A device of the class described comprising a casing, a metallic condenser holder in one end thereof, a core connected with the said holder, a primary winding connected with the said holder, a secondary winding, a resistance coil connected with the primary winding, means connected with the end of the core opposite from the condenser holder in the primary circuit, a make and break device connected with the primary winding, switch means for connecting the make and break device in series with the winding, and a condenser in the said holder disposed in shunt relation to the make and break device.

1,108,893. LEDGER-ACCOUNT FILE. CLARENCE S. ELLINWOOD, Chicago, Ill., assignor to The National Cash Register Company, a Corporation of Ohio, (organized in 1906.) Filed Sept. 25, 1905. Serial No. 280,040. (Cl. 45—2.)

1. An account file comprising a base having a front and a back pivoted thereto, a pair of parallel strips connecting said front and back, and a series of partitions pivotally mounted on said base.

2. In combination with a case or cabinet, an account file of drawer form received by the case and when pulled out arranged to be pivotally connected thereto, said account file comprising a base, a front and a back pivoted thereto, and a series of partitions arranged transversely of the base and pivotally mounted thereon.

3. An account file comprising a base, a plate secured to said base and having parallel slots, and a series of partitions having right angled ears passing through said slots and thereby pivoting said partitions.

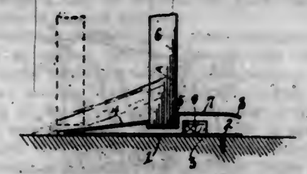
4. An account file comprising a base, a supporting plate secured to said base, and having parallel slots, and a series of partitions comprising thin plates having projections extending at right angles to the plane of said plates, said projections passing through the slots in said supporting plate.

5. An account file comprising a base having a front and a back pivoted thereto, means connecting said front and back, stops for limiting the pivotal movement of said front and back, and a series of partitions pivotally mounted on said base.

[Claims 6 to 10 not printed in the Gazette.]

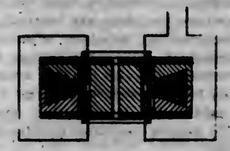
1,108,894. DOOR-HOLDER. MELVILLE FATHEREE, Jr., Atlanta, Ga. Filed Oct. 19, 1911. Serial No. 655,527. (Cl. 16—79.)

1. A door holder comprising a base plate, a clamping plate formed integral with said base plate and arranged in an acute angle thereto, a depression provided at the extremity of said clamping plate, the bottom of said depression normally lying parallel with said base plate, a foot plate extending from said depression normally lying parallel with said base plate, and an abutment member disposed between said foot plate and said base plate.



2. A door holder comprising a single strip of metal bent upon itself approximately intermediate its ends, a base plate formed by bending said strip, securing means passing through the free end of said base plate, a clamping plate formed by bending said strip, said clamping plate extending upwardly at an acute angle to said base plate, a depression formed at the extremity of said clamping plate, the rear vertical wall of said depression arranged in parallel relation with the front wall and of a greater height, the bottom of said depression normally lying parallel with said base plate, a foot plate extending from the rear wall of said depression, and normally lying parallel with said base plate, the outer end of said foot plate being curved downwardly, and an abutment member disposed between said foot plate and said base plate.

1,108,895. SIGNALING BY SOUND AND OTHER LONGITUDINAL ELASTIC IMPULSES. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Waterville, Me., a Corporation of Maine. Filed Jan. 10, 1914. Serial No. 811,428. (Cl. 250—2.)



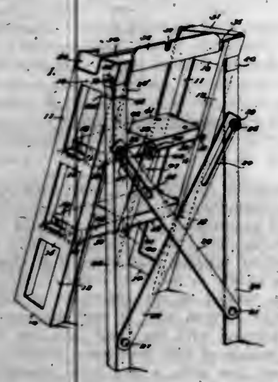
1. The method of signaling which consists in transmitting low frequency impulses from a sending station, thereby producing at the receiving station low frequency electric impulses in an electric circuit operatively connected to an indicating instrument, breaking up said low frequency electric impulses into high frequency impulses, and passing said high frequency impulses through said indicating instrument.

2. The method of submarine signaling which consists in transmitting low frequency impulses through the water from a sending station, thereby producing at the receiving station low frequency electric impulses in an electric circuit operatively connected to an indicating instrument, breaking up said low frequency impulses into high frequency impulses, and passing said high frequency impulses through said indicating instrument.

3. The method of signaling which consists in transmitting impulses of a frequency of less than 500 per second from a sending station, thereby producing at the receiving station low frequency electric impulses in an electric circuit operatively connected to an indicating instrument, breaking up said low frequency electric impulses into high frequency impulses, and passing said high frequency impulses through said indicating instrument.

4. The method of submarine signaling which consists in transmitting impulses of a frequency of less than 500 per second through the water from a sending station, thereby producing at the receiving station low frequency electric impulses in an electric circuit operatively connected to a receiving instrument, breaking up said low frequency electric impulses into high frequency impulses, and passing said high frequency impulses through said indicating instrument.

1,108,896. FOLDING STEP-LADDER. LEE OZEA GARRAWAY, Memphis, Tenn. Filed Dec. 1, 1913. Serial No. 804,087. (Cl. 225—16.)



1. In a step ladder, sides spaced apart and each formed of a longitudinally extending channel member, with inverted U-shaped clefts in the body portion at the points where the steps are to be located and bent inwardly to form stops, a rod disposed between the webs of the side members adjacent to each stop, and steps each formed of coacting sections hingedly united at their confronting ends and swingingly engaging said rods, the outer ends of the step sections extending beneath the stops when the steps are distended.

2. In a step ladder, sides spaced apart and each including longitudinally extending members having inwardly directed stops where the steps are located, a rod extending between the longitudinal members adjacent to each stop, steps each formed of coacting members hingedly united at their confronting ends and bearing upon said rods with their outer ends beneath said stops, and holding members connected to said steps and bearing beneath said rods and arranged to permit the step members to move longitudinally thereof.

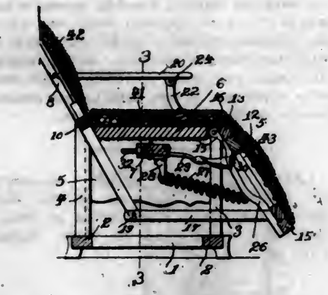
3. In a step ladder, sides spaced apart and each including longitudinally extending members having inwardly directed stops where the steps are located, steps each formed of coacting members hingedly united at their confronting ends with their outer ends beneath said stops, means for pivoting said steps respectively to said longitudinally extending members, and holding members connected to said steps and engaging said pivots to permit the step members to move longitudinally thereof.

4. In a step ladder, sides spaced apart, a plurality of foldable intermediate steps swingingly united to said sides, legs swinging from said sides, obliquely directed braces uniting said legs, clamp members adjustably connecting said braces to said legs, a combined platform and upper step swinging at one end from one of said spaced sides and detachably engaging the other spaced side, said combined platform and upper step having a vertical flange at its rear edge, and an L-shaped member engaging said flange and the adjacent portion of the platform and having an open slot for engaging the adjacent clamp member of the legs.

5. In a step ladder, sides spaced apart, a plurality of foldable intermediate steps swingingly united to said sides, legs each formed of an L member having a cleft at the upper end and the portions of the leg released by the cleft bent over to reinforce the webs of the leg, pivot pins extending through one of said bent-over portions and adjacent portion of the leg and pivotally engaging the sides and the other reinforcing portions of the leg bearing against the rear face of the ladder sides when the legs are in open position and limiting the outward movement thereof.

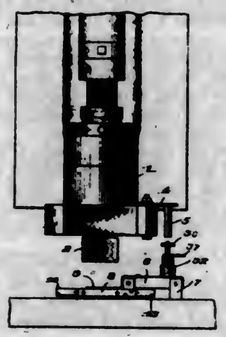
[Claims 6 and 7 not printed in the Gazette.]

1,108,897. RECLINING-CHAIR. HENRY G. GEISLER, Syracuse, N. Y. Filed May 4, 1912. Serial No. 695,193. (Cl. 155—16.)



A chair comprising a frame including a seat, a back arranged at the rear of the seat, a leg-rest arranged at the front of the seat, an arm-rest connected with the frame and the back to swing with the back, means connecting the back and leg-rest for swinging movement in unison, a cleat secured in the frame transversely beneath the seat, a spring secured to and extending between the leg-rest and the cleat, a rack-bar pivoted at its front end to the leg-rest above the spring and slidably supported by the cleat and projecting rearwardly beyond the same, the said bar being provided at one edge with rack teeth, a latch slidably mounted upon the rear side of the cleat, a spring normally holding the latch in engagement with the teeth of the rack-bar, an angle lever fulcrumed upon the cleat adjacent one side of the seat and having one arm depending from its fulcrum and its other arm extending toward the adjacent end of the cleat, a connection between the depending arm of the said lever and the said latch, and a flexible lifting element connected to the other arm of the lever and extending up beside the seat and secured to the adjacent movable arm-rest.

1,108,898. EJECTING MECHANISM FOR PRESSES. JAMES H. GARRATT, Rochester, N. Y., assignor of one-half to Halbert Greenleaf Brooks, Rochester, N. Y. Filed Aug. 2, 1913. Serial No. 782,588. (Cl. 113—50.)



1. In an ejecting mechanism for die presses and the like, the combination with an oscillatory carrier, of an oscillatory ejector member movable independently of the carrier, an actuator mounted on the carrier, a reciprocatory operating device, and means actuated by the operating device for imparting an oscillatory movement to the ejector member.

2. In an ejecting mechanism for die presses and the like, the combination with an oscillatory carrier, of an operating plunger mounted for reciprocating and rotative movement and coöperating with the carrier, an oscillatory ejector member movable independently of the carrier, and an actuator mounted on the carrier and adapted to be moved independently thereof to effect movement of the ejector member.

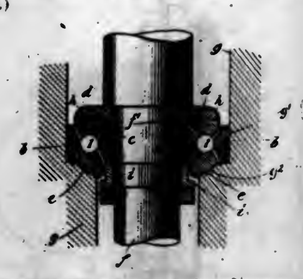
3. In an ejecting mechanism for die presses and the like, the combination with an oscillatory carrier, of a reciprocatory operating device coöperating with the carrier, an oscillatory ejector member movable independently of the carrier, and an actuator mounted on the carrier and arranged to effect movement of the ejector member.

4. In an ejecting mechanism for die presses and the like, the combination with a carrier, of a reciprocatory operating device coöperating with the carrier, an oscillatory ejector member, an actuator mounted on the carrier and movable independently thereof, and a locking means disposed on the carrier and coöperating with the actuator to hold it against movement.

5. In an ejecting mechanism for die presses and the like, the combination with a carrier, of a reciprocating operating device coöperating with the carrier, an oscillatory ejector member, an actuator mounted on the carrier and movable independently thereof, means on the carrier for locking the actuator, and means on the ejector member for operating said locking means to release the actuator from the carrier.

[Claims 6 and 7 not printed in the Gazette.]

1,108,899. BALL-BEARING. MAX GOHLKE, Berlin, Germany. Filed Nov. 7, 1908. Serial No. 461,566. (Cl. 64—49.)



In combination with a rotary member or shaft provided with an annular shoulder and with a supporting surface, a surrounding supporting member provided with an annular supporting surface and with an annular shoulder, a casing element applied to the supporting surface of the shaft, a casing element applied to the supporting surface of the supporting member, a series of interposed balls tracking on said casing elements and acting in connection with them to take radial loads, a casing element applied to the shoulder on the shaft, and a casing element applied to the shoulder on the supporting member and formed with ball tracks, said last named casing elements acting in connection with the balls to take the end thrust loads, and all of said casing elements being provided with side surfaces sloping outwardly from their ball contact surfaces, whereby the opposing casing elements will fit into each other.

1,108,900. RAILWAY-BRAKE. JOHN B. GRAVELLE, Asbury Park, N. J. Filed June 30, 1913. Serial No. 776,644. (Cl. 188—65.)

1. In a railway brake, a shoe, means supporting the shoe for movement to braking position, the shoe being provided with a sand passage opening at the braking face thereof, a sand reservoir, and a pipe leading from the reservoir to the sand passage for the shoe and arranged to conduct the sand to said passage upon movement of the shoe to braking position, the said pipe being flexible and being arranged when the shoe is in inoperative position to sag to form a trap to provide the discharge of sand when the shoe is in such position.

2. In a railway brake of the class described, a shoe adapted to be applied between the rail and wheel, the said shoe being provided with a sand passage opening at its under braking face, said passage having an inlet end opening at the upper face of the shoe, a pipe fitted at the last mentioned end of the passage, a sand reservoir to which the pipe is connected, the reservoir, pipe and shoe being so relatively located that when the shoe is in inoperative position, the pipe will be sagged to cut off the supply of sand and when the shoe is in operative position will be approximately straight, whereby the sand will be supplied to the sand passage.

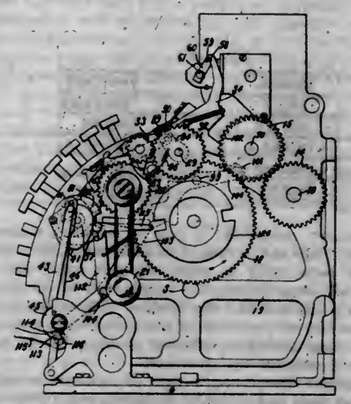
3. A shoe for a brake of the class described comprising a body portion provided at one of its lateral edges with an upstanding flange and at its other lateral edge with a depending flange, the flanges being arranged to engage respectively with a wheel and rail between which the shoe is adapted to be applied, the last mentioned flange being outturned at its ends.

4. A shoe for a brake of the class described comprising a body portion provided at one of its lateral edges with an upstanding flange and at its other lateral edge with a depending flange, the flanges being arranged to engage respectively with a wheel and rail between which the shoe is adapted to be applied, the first mentioned flange at the entering end of the shoe being outturned.

5. A shoe for a brake of the class described comprising a body portion provided at one of its lateral edges with an upstanding flange and at its other lateral edge with a depending flange, the flanges being arranged to engage respectively with a wheel and rail between which the shoe is adapted to be applied, the first mentioned flange at its end at the entering end of the shoe being outturned and the second mentioned flange having its ends also outturned.

[Claims 6 to 9 not printed in the Gazette.]

1,108,901. CASH-REGISTER. LOUIS GRUBER, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 30, 1911. Serial No. 657,422. (Cl. 235—144.)



1 In an accounting machine, the combination with an accumulator, of actuators therefor, operating mechanism for said actuators, a driving device for said operating mechanism normally connected thereto, resetting means for the accumulator and means for disconnecting the driving device and the operating mechanism and connecting said device with the resetting means so that upon the operation of the driving device while connected with the

resetting means the accumulator will be cleared or reset to zero.

2. In an accounting machine, the combination with an accumulator, of actuators therefor, operating mechanism for said actuators, resetting means for the accumulator, a driving device common to the operating mechanism and the resetting means, and means for connecting the driving device with the resetting means or the operating mechanism at will.

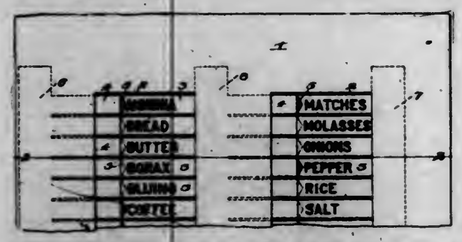
3. In an accounting machine, the combination with an accumulator, of actuators therefor, operating mechanism for said actuators, resetting means, including a pinion, for the accumulator, a driving gear common to the operating mechanism and the resetting means, a pawl normally connecting the driving gear and the operating mechanism, and means for operating the pawl and thereby disconnecting the driving gear and the operating mechanism and connecting the pinion of the resetting means and the driving gear.

4. In an accounting machine, the combination with an accumulator, of actuators therefor, operating mechanism for said actuators, resetting means for the accumulator, a driving device common to the operating mechanism and the resetting means, means for connecting the driving device with the resetting means or the operating mechanism at will, and a stop device positioned under the control of the connecting means for arresting the driving device after the latter has been operated to reset the accumulator.

5. In an accounting machine, the combination with an accumulator, of actuators therefor, operating mechanism for said actuators, resetting means for the accumulator, a driving device common to the operating mechanism and the resetting means, a manipulative device and connections for establishing operative relation between the driving device and either the operating mechanism or the resetting means, a stop device positioned under the control of the manipulative device for arresting the driving device after the accumulator has been reset, and means for withdrawing said stop device when an operative relation is established between the driving device and the operating mechanism.

[Claims 6 to 21 not printed in the Gazette.]

1,108,902. REGISTER. EDWARD S. HALL, Rochester, N. Y. Filed Feb. 28, 1913. Serial No. 751,261. (Cl. 116—50.)



1. A register comprising a pair of members supported at their far ends and arranged in superposed relationship to overlap each other at their adjacent ends, one constituting an index having the major part of its surface permanently exposed and the other a coöperating indicator, the on and off positions of the latter with respect to the index being alternately effected by reversing the superposed relationship of the members.

2. A register comprising a pair of members supported at their far ends and arranged in superposed relationship to partially overlap each other at their adjacent ends, one constituting an index having the major portion of its surface permanently exposed and bearing a legend and the other a coöperating indicator having its overlapping portion visually distinguished from that of the index, the on and off positions of the indicator with respect to the index being alternately effected by reversing the superposed relationship of the members.

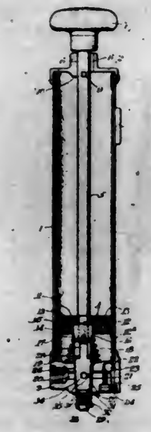
3. A register comprising a pair of projecting members arranged in superposed relationship to overlap each other and constituting, respectively, an index and a coöperating indicator, one of said members being resiliently flexible to permit it to pass the other laterally whereby the on and off positions of the indicator with respect to the index may be alternately effected by reversing the superposed relationship of the members.

4. A register comprising a pair of flexibly resilient overlapping members, respectively, constituting an index and and a coöperating indicator, the on and off positions of the latter with respect to the former being alternately effected through reversing the superposed relationship of the members by thrusting the uppermost member past the lowermost.

5. A register comprising a pair of resiliently flexible overlapping fingers, respectively, constituting an index bearing a legend and a coöperating indicator having its overlapping portion visually distinguished from that of the index, the on and off positions of the indicator with respect to the index being alternately effected by thrusting one finger past the other whereby the superposed relationship of the members is reversed.

[Claims 6 to 8 not printed in the Gazette.]

1,108,903. PUMP. HARRY W. HANCOCK, Charlotte, Mich. Filed Mar. 31, 1913. Serial No. 757,807. (Cl. 230—27.)



1. In a hand pump, in combination, a cylinder having a head at one end provided with an outlet passage extending transversely of the axis of the cylinder, a rotary valve plug extending across said passage and having a port arranged to register with said passage, a plunger in said cylinder having a disengageable connection with said plug for rotating the latter, and means for preventing reciprocation of said plunger until said port has been moved into register with said passage.

2. In a hand pump, in combination, a cylinder having a head at one end provided with an outlet passage extending transversely of the axis of the cylinder, a rotary valve plug mounted in the head axially of the cylinder and crossing said passage, said plug having a transverse port arranged to register with said passage, a plunger slidable in said cylinder and having a disengageable connection with said valve plug, a coiled compression spring mounted on the inner end of said plunger and arranged to engage said head, said spring tending to force said plunger outwardly, a coöperating pin and groove on the plunger stem and the opposite end of the cylinder, the port in said valve plug registering with said passage when said pin registers with said groove, the pin preventing outward movement of the plunger until the pin registers with the groove.

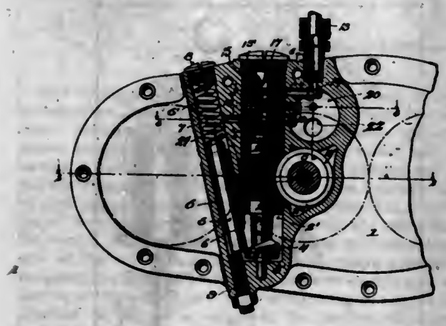
3. In a pump, in combination, a cylinder having an outlet passage, a valve plug crossing said passage and having a transverse port therethrough adapted to register with said passage, said plug also having a vent port leading substantially at right angles from the first mentioned port to the surface of the plug, the cylinder having a vent passage adapted to register with said vent port in the plug, and a hand-operable plunger slidable in said cylinder and adapted to rotate said valve plug.

4. In a pump, in combination, a cylinder having an outlet passage and having a vent opening communicating with said passage, a valve member arranged to control said passage and said vent opening, an outwardly opening check valve controlling said passage between said valve member and the inner end of said passage, and a hand-operable plunger slidable in said cylinder and arranged to operate said valve.

5. In a pump, a combination, a cylinder having a head provided with a transverse outlet passage and having a vent opening communicating with said passage, a rotary valve plug crossing said passage, said valve plug having ports arranged to register with said passage and said vent opening, an outwardly opening check valve controlling said passage between said valve plug and the inner end of the passage, and a hand-operable plunger slidable in said cylinder and arranged to rotate said valve plug.

[Claims 6 to 13 not printed in the Gazette.]

1,108,904. OIL-DISTRIBUTING MECHANISM. WILLIAM S. HARLEY, Milwaukee, Wis. Filed May 18, 1914. Serial No. 839,397. (Cl. 184—35.)



1. An oil-distributing mechanism comprising a housing having a chamber therein provided with an inlet port and a discharge port upon different planes, the said housing being also provided with a well and a receiving and delivery port communicating with said well and chamber, a rotatory valve-plug mounted in the chamber having a cored longitudinally disposed receiving and delivery duct, and a peripheral segmental delivery groove for registration with the inlet port and a peripheral discharge groove for registration with the discharge port together with an uninterrupted receiving and delivery groove for registration with the pump-well receiving and delivery port, each of which grooves communicate with the receiving and delivery duct, a spring-controlled pump-piston mounted in the well below the receiving and delivery port, actuating means carried by the valve-plug for imparting motion to the pump piston.

2. An oil-distributing mechanism comprising a housing having a chamber therein provided with an inlet port and a discharge port upon different planes, the said housing being also provided with a well and a receiving and delivery port communicating with said well and chamber, a rotatory valve-plug mounted in the chamber having a cored longitudinally disposed receiving and delivery duct, and a peripheral segmental delivery groove for registration with the inlet port and a peripheral discharge groove for registration with the discharge port together with an uninterrupted receiving and delivery groove for registration with the pump-well receiving and delivery port, each of which grooves communicate with the receiving and delivery duct, a spring-controlled pump-piston mounted in the well below the receiving and delivery port, an eccentric head carried by the valve-plug engageable with the pump-piston.

3. An oil-distributing mechanism comprising a housing having a chamber therein provided with an inlet port and a discharge port upon different planes, the said housing being also provided with a well and a receiving and delivery port communicating with said well and chamber, a rotatory valve-plug mounted in the chamber having a cored longitudinally disposed receiving and delivery duct, and a peripheral segmental delivery groove for registration with the inlet port and a peripheral discharge groove for registration with the discharge port together with an uninterrupted receiving and delivery groove for registration with the pump-well receiving and delivery port, each of which grooves communicate with the receiving and delivery duct, a spring-controlled pump-piston mounted in the well below the receiving and delivery port, actuating means carried by the valve-plug for imparting motion to the pump piston, and means for adjusting the stroke of the pump-piston.

4. An oil-distributing mechanism comprising a housing having a chamber therein provided with an inlet port and a discharge port upon different planes, the said housing being also provided with a well and a receiving and delivery port communicating with said well and chamber, a rotatory valve-plug mounted in the chamber having a cored longitudinally disposed receiving and delivery duct, and a peripheral segmental delivery groove for registration with the inlet port and a peripheral discharge groove for registration with the discharge port together with an uninterrupted receiving and delivery groove for registration with the pump-well receiving and delivery port, each of which grooves communicate with the receiving and delivery duct, a spring-controlled pump-piston mounted in the well below the receiving and delivery port, an eccentric head carried by the valve-plug engageable with an end of the pump piston, and an adjusting screw for engagement with said end whereby a stroke of the pump piston may be regulated.

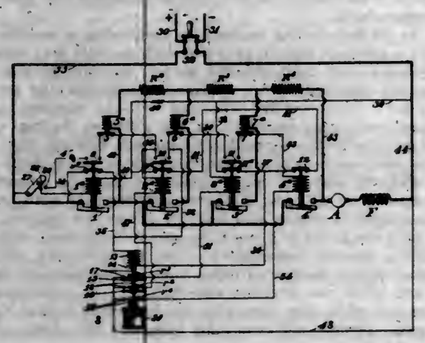
5. An oil-distributing mechanism comprising a housing having a chamber therein provided with an inlet port and a discharge port upon different planes, the said housing being also provided with a well and a receiving and delivery port communicating with said well and chamber, a rotatory valve-plug mounted in the chamber having a cored longitudinally disposed receiving and delivery duct, and a peripheral segmental delivery groove for registration with the inlet port and a peripheral discharge groove for registration with the discharge port together with an uninterrupted receiving and delivery groove for registration with the pump-well receiving and delivery port, each of which grooves communicate with the receiving and delivery duct, a spring-controlled pump-piston mounted in the well below the receiving and delivery port, an eccentric carried by the valve-plug for engagement with an end of the pump-piston, means engageable with the ends of said pump piston for adjusting the stroke of the same, and a worm geared driving means for the aforesaid valve-plug.

1,108,905. MOTOR-CONTROLLER. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 23, 1909. Serial No. 491,670. (Cl. 172—288.)

1. In a controller for electric motors, in combination, a plurality of successively operated switches having individual operating means and a single automatic device for controlling said switches to insure a predetermined lapse of time between the operation of successive switches, said device being controlled by said switches to operate irrespective of the motor current.

2. In a controller for electric motors, in combination, a plurality of switches, a plurality of electromagnetic windings for operating said switches successively, and a single automatic device controlling said windings to insure a predetermined lapse of time between the operation of successive switches, said device being controlled by

said switches to operate independently of current conditions of the motor circuit.



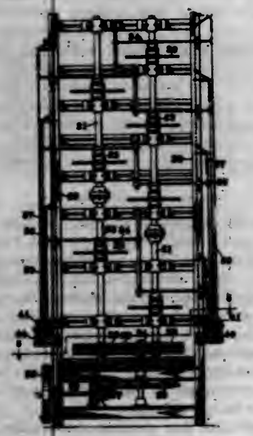
3. In a controller for electric motors in combination means for accelerating the motor by steps and means controlled exclusively by said first mentioned means and operating independently of current condition in the motor circuit for insuring a definite time interval between successive steps of acceleration.

4. In combination, means for accelerating the motor by steps, means controlled by said first mentioned means for insuring a definite time interval between successive steps of acceleration and means independent of said second mentioned means for arresting the operation of said first mentioned means while abnormal conditions prevail in a motor circuit.

5. In a motor controller for electric motors, in combination, a plurality of electro-responsive switches and automatic means electrically controlled directly by said switches and operating independently of the current conditions of the motor circuit for preventing the response of each of said switches until a preceding switch has responded and said means has been operated, thereby insuring a definite interval between the closure of successive switches.

[Claims 6 to 13 not printed in the Gazette.]

1,108,906. ORE-ROASTING FURNACE. ADOLPH F. HERZIG, East St. Louis, Ill. Filed Aug. 13, 1913. Serial No. 784,502. (Cl. 75—142.)

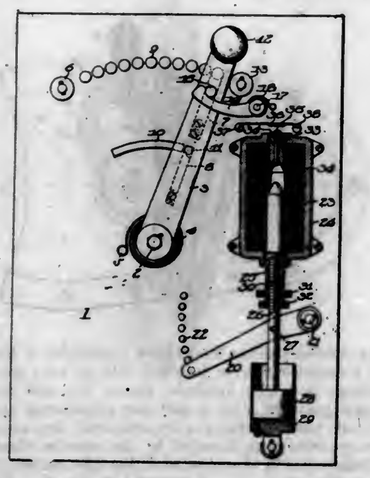


1. The combination with an ore furnace divided into a plurality of compartments, of a shaft having a plurality of wheels mounted thereon, means for independently connecting each of said wheels to said shaft, raking mechanism coöperating with different compartments of the furnace and driven by said wheels, and means for driving said shaft.

2. The combination with an ore furnace divided into compartments, of a shaft having a plurality of wheels mounted thereon, means for independently connecting each of said wheels operatively to said shaft, a second shaft carrying idlers and arranged between said first named shaft and said furnace, raking mechanism coöperating with different compartments of the furnace and driven by said wheels, and means for driving said first named shaft.

3. The combination with an ore roasting furnace divided into a plurality of compartments, of a pair of vertical shafts, gearing driving said shafts in opposite directions, sprocket wheels arranged on said shafts, idlers, sprocket chains passing around said sprocket wheels and idlers, raking mechanism coöperating with the different compartments and driven from said sprocket chains, clutches for throwing said sprocket wheels into engagement with said shafts, rock shafts operating said clutches, means normally holding said rock shafts in position to release said clutches, and connections actuating said rock shafts to apply the clutches.

1,108,907. MOTOR-CONTROLLER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 6, 1908. Serial No. 442,173. (Cl. 172—179.)



1. In a speed controller for electric motors, in combination, a controlling element, an automatically operated member for actuating said controlling element and an adjustable connection between said member and said element for varying the range of movement of said element to cause the motor to operate at different predetermined speeds.

2. In a speed controller for electric motors, in combination, a controlling element, an electromagnetically operated member for actuating said element and an adjustable connection between said member and said element for varying the range of movement of said element to cause the motor to operate at different predetermined speeds.

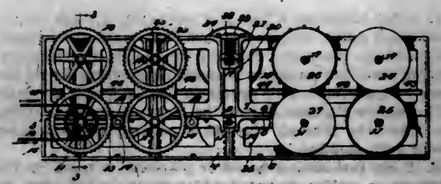
3. In a speed controller for electric motors, in combination, a controlling element, an electromagnetic winding, a movable plunger within said winding and connected to said element, and a stationary plug within said winding for limiting the movement of said plunger, said plunger being adjustable relative to said plug for varying the range of movement of said controlling element to cause the motor to operate at different predetermined speeds.

4. In a speed controller for electric motors, in combination, a controlling element, an electromagnetic winding, a plunger mounted within said winding, a stationary plug within said winding for limiting the movement of said plunger and an adjustable connection between said plunger and said controlling element whereby said plunger may be adjusted to vary the range of movement of said controlling element to cause the motor to operate at different predetermined speeds.

5. In a speed controller for electric motors, in combination, a controlling element, movable over a series of contacts, an electromagnetic winding, a plunger within said winding, the end of said plunger being hollow and internally screw-threaded, a tail rod connected to said controlling element and having a screw-threaded portion fitting within the internally screw-threaded portion of said plunger, and a lock-nut for preventing movement of said plunger relative to said tail rod the screw threaded connection affording means whereby said element may be brought to rest in engabement with different contacts upon the energization of said winding.

[Claims 6 to 9 not printed in the Gazette.]

1,108,908. MACHINE FOR MAKING FENCE-POSTS. LEE H. JONES, Bloomfield, Ind. Filed Aug. 12, 1913. Serial No. 784,387. (Cl. 113—1.)



In a machine for the purpose set forth, a pair of rollers arranged to engage a blank fed between them, the lower roller being provided in its periphery with spaced recesses extending in axial planes of the roller and each having a central depressed socket in its bottom and outwardly diverging surfaces extending from opposite edges of said socket toward the ends of the roller and terminating at the peripheral surface of the roller, the side walls of the recess being straight and extending parallel with the axis of the roller, and the upper roller being provided on its periphery with spaced radial projections lying in axial planes of the roller and each comprising a central knob adapted to engage a socket in the bottom of a recess in the lower roller and diverging surfaces extending from the opposite sides of said knob toward the ends of the roller and co-acting with the diverging surfaces extending from the said socket, the side walls of the projections being straight and parallel to abut the side walls of the socket.

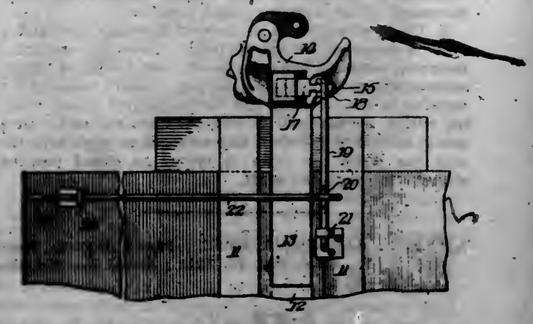
1,108,909. HARROW-TOOTH FASTENER. WILLIAM F. KELLER, Minneapolis, Minn. Filed Feb. 27, 1914. Serial No. 821,392. (Cl. 55—94.)

1. The combination with a channel bar and a tooth extended transversely thereof, of a clamping loop completely surrounding said tooth and engaging the same flatwise, said loop fitting between the flanges of said channel bar, and a bolt connecting said loop to the back of said channel bar and tightly drawing the tooth against the edges of the flanges of said channel bar.

2. The combination with a channel bar and a tooth extended transversely thereof, said tooth being angular in cross section, of a polygonal clamping loop completely surrounding said tooth and engaging the same flatwise, said loop being of a width to fit between the flanges of said channel bar, and a bolt connecting said loop to the back of said channel bar and thereby holding one edge of said tooth tightly pressed against the edges of the flanges of said channel bar.

3. The combination with a channel bar and a tooth extended transversely thereof, said tooth being rectangular in cross section, of a flat clamping loop completely embracing said tooth, the said clamping loop being in the form of a five sided tube of the width to fit between the flanges of said channel bar, one of the sides of said loop being parallel to the back of said channel bar, and a bolt connecting the back of said channel bar to the said parallel side of said loop and tightly clamping one edge of said tooth against the edges of the flanges of said channel bar.

1,108,910. RADIAL-MOTION OPERATING-LEVER. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 13, 1911. Serial No. 654,448. (Cl. 213—59.)



1. Coupler operating mechanism comprising, in combination, a car coupler having a lock operating lever, a rod connected to said lever and extending rearwardly in line with said coupler to a point close to the pivotal point of the coupler, means for supporting said rod, means for rotating said rod around its longitudinal axis, said last means including a second rod extending to the side of the car, substantially as described.

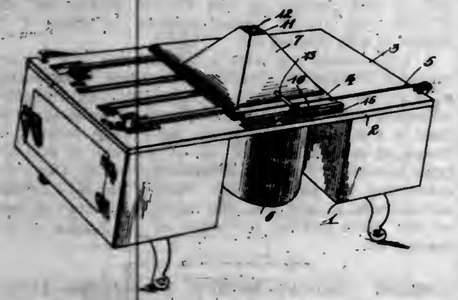
2. Coupler operating means comprising, in combination, a car coupler mounted for limited radial movement, an operating lever for said coupler, a rod connected to said lever and extending rearwardly longitudinally of the coupler, said rod having a lever projecting therefrom at a point close to its rear end and a second rod attached to said lever and extending to the side of the car whereby said first rod may be caused to rotate, substantially as described.

3. Coupler operating mechanism comprising, in combination, a car coupler having an operating lever, a rod attached to said lever, said rod extending rearwardly longitudinally of said coupler, a bracket adapted to support the rear end of said rod, said rod having a loop formed therein which loop serves as a lever, and a second rod attached to said first rod at the loop therein, said second rod extending to the side of the car and being adapted to cause limited rotation of said first rod and said coupler operating lever, substantially as described.

1,108,911. DISINFECTANT-DISTRIBUTER FOR CLOSETS. JACOB J. KLEIN, Kearney, Nebr. Original application filed Jan. 14, 1913, Serial No. 742,075. Divided and this application filed Oct. 27, 1913. Serial No. 797,568. (Cl. 4—30.)

1. The combination with a closet having a seat opening and a cover mounted for sliding movement above the seat opening, of a disinfectant reservoir carried by the cover, a feeding device arranged to discharge material from the reservoir through said opening, and means actuated by the

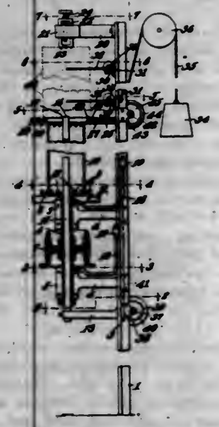
movement of the cover for operating the feeding device of the reservoir.



2. The combination with a closet including a seat and a cover mounted for sliding movement above the seat, of a reservoir carried by the cover, and means arranged to automatically discharge material from the reservoir upon movement of the cover to closed position.

3. The combination with a closet having a seat and a cover mounted for sliding movement above the seat, of a reservoir mounted upon the cover and having a downwardly presented discharge opening, a shaft mounted for rotation in the reservoir and having feeding means working within the reservoir, a rack bar upon the seat, and a pinion carried by the shaft and arranged to mesh with the rack bar when the cover is moved to closed position whereby to rotate the shaft.

1,108,912. SAWING-MACHINE. FRANK KOONS, Grooville, N. Y. Filed Dec. 15, 1913. Serial No. 806,868. (Cl. 143—85.)

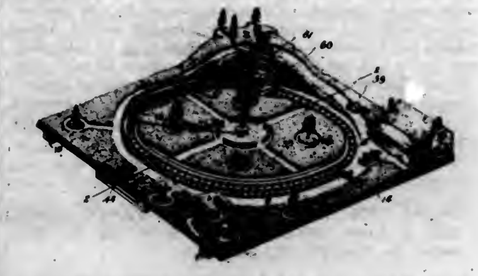


1. In a sawing machine, a rotary tubular saw and a carriage movable longitudinally relative to one another, clamping members carried by the carriage for engaging the ends of the stock, one of the said members working through the saw, a guide for the saw carried by the carriage adjacent to the free end of the said clamping member, and stock clamping means carried by the carriage intermediate the said guide and the other clamping member.

2. In a sawing machine, a guide, a carriage movable therealong, a bearing carried by the carriage, a tubular shaft journaled through the bearing, a tubular saw carried by the said shaft, a spindle slidable through the said shaft and attached to the carriage, an adjustable clamping member carried by the carriage and coöperating with the said spindle to engage the ends of the stock, a guide member carried by the carriage and having an opening to accommodate the saw, and adjustable stock clamping means carried by the carriage intermediate the guide member and said clamping member.

3. In a sawing machine, a rotary carrier, a tubular saw attached to the carrier, and a fan attached to the carrier and including funnel-shaped blades, the carrier having openings leading from the inner ends of the blades into the saw.

1,108,913. TOY. EUGENE A. LAHIERE, Washington, D. C. Filed Jan. 27, 1914. Serial No. 814,621. (Cl. 46—27.)



1. A toy including a board or platform, a track on the platform, a pulley mounted adjacent the track and beneath the platform, means for rotating the pulley, a member extending from the pulley, a wheeled figure movable on the track and provided with openings, one of which is adapted to receive the free end of the member, and a coupling pin insertible through the other opening to detachably secure such member.

2. A toy including a board or platform, a track on the platform, a pulley mounted adjacent the track and beneath the platform, means for rotating the pulley, a member extending from the pulley and provided at its outer end with an eye, a locomotive movable on the track and including a cowcatcher having openings in its inner and top walls, the former being adapted to receive the outer end of the member, and a coupling pin adapted to be inserted through the opening in the upper wall of the cowcatcher.

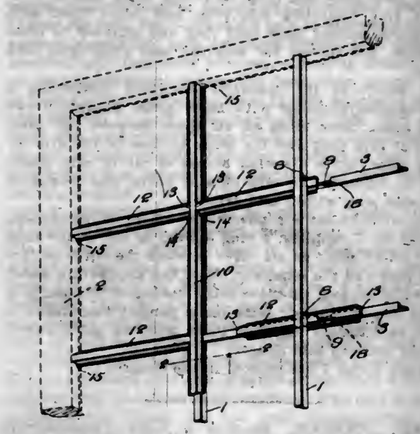
3. A toy including a board or platform provided with an opening, a disk mounted in spaced relation above the platform, and covering the opening, a track located about the disk and on the platform, a wheeled figure movable on the track, a pulley located beneath the platform and disk and a member connected at one end to the pulley and extending through the opening of the platform and beneath the disk, said member being adapted at its opposite end for connection with the wheeled figure.

4. A toy including sections hingedly connected to form a board or platform, braces extending along the lower faces of the sections adjacent their hinged edges, transverse braces hingedly connected at their ends to one of the first braces and adapted for detachable connection with the other of the first mentioned braces when the board is extended to lock the board in extended position, bearings formed in the transverse braces, shafts journaled in the bearings, a pulley freely mounted on one shaft, a pulley detachably secured to the other shaft, a belt trained about the pulleys, means for rotating that shaft having the fixed pulley, a track carried by the upper face of the platform, a wheeled figure adapted for movement along the track, and operative connection between the loose pulley and figure.

1,108,914. WINDOW-SASH CONSTRUCTION. HENRY W. LANDOLT, Brooklyn, N. Y. Filed Mar. 6, 1913. Serial No. 752,447. (Cl. 20—56.)

1. A window sash structure comprising intersecting base members, and molding pieces detachably carried by said base members and serving to lock said base members together.

2. A window sash structure comprising intersecting base members notched together, and separately formed molding pieces secured to said base members interlocking with each other to retain said base members locked together.



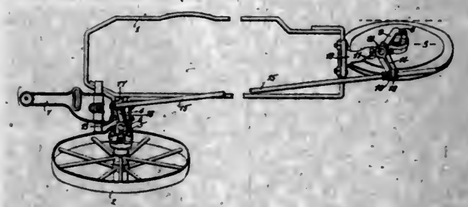
3. A window sash structure comprising intersecting base members notched together, and means locking said base members notched together at the points of intersection comprising separately formed molding pieces carried by said base members respectively, said molding pieces being readily adjustable into and out of locking position upon said base members.

4. A window sash structure comprising intersecting base members notched together, and means for retaining said base members in locked relation, comprising separately formed molding pieces detachably interlocked therewith and with each other.

5. A window sash structure comprising a plurality of intersecting base members, each comprising a T-section, and separately formed members extending longitudinally along the length of the head portions of said T-sections and interlocking with each other to lock said T-sections together.

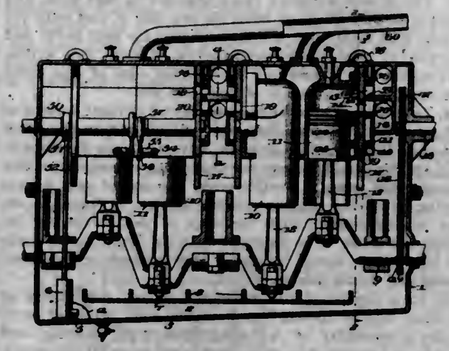
[Claims 6 to 23 not printed in the Gazette.]

1,108,915. MEANS FOR CONTROLLING THE CASTERING OF THE FURROW-WHEELS OF PLOWS. WILLIAM H. LEE, Syracuse, N. Y., assignor to The Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 26, 1910. Serial No. 579,124. (Cl. 97—74.)



In a wheeled plow, a frame having front and rear upright bearings, a front furrow wheel having its axle provided with an upright spindle journaled in the front bearing, a rear wheel provided with an upright spindle journaled in the rear bearing, rock arms on the spindles and extending laterally in opposite directions from their spindles, the front rock arm normally extending slightly forwardly out of a transverse line extending through the axis of the front spindle and at a right angle to the normal line of draft, a rod connecting the rock arms and having a sliding and swivel connection with the rear arm, the sliding movement being in the direction lengthwise of the axis of the rod, the rod also having a bearing slidable along the front arm toward and from the axis thereof and being normally arranged at the outer end of the front arm in front of said transverse line, a shoulder on the rod and engaging with the rear arm to normally prevent forward sliding movement of the rear arm along the rod, and a tongue connected to the front spindle to turn the same during the turning of the plow in either direction, substantially as and for the purpose described.

1,108,916. INTERNAL-COMBUSTION ENGINE. CHARLES F. LEMBKE, Valparaiso, Ind. Filed Feb. 7, 1913. Serial No. 746,899. (Cl. 123—190.)



1. In an internal combustion motor, the combination of a cylinder, a piston, a crank shaft, a valve shaft parallel to and driven from the crank shaft, a gas chest arranged at one side of the cylinder, a rotary disk valve interposed and operating between and in contact at both sides with the cylinder and chest and provided with inlet and exhaust ports which are arranged at unequal distances from the axis of the valve and register with similar ports in the cylinder and chest, said valve being fast on and revolving with the valve shaft, and packing strips supported by the opposing faces of the cylinder and chest and lying in contact with the opposite faces of said disk valve.

2. In an internal combustion motor, the combination of a pair of cylinders, pistons working therein, a crank shaft, a valve shaft parallel to and driven from the crank shaft, a gas chest arranged between said cylinders, rotary disk valves interposed and operating between and in contact with the adjacent sides of said cylinders and chest and provided with inlet and exhaust ports which are arranged at unequal distances from the axis of the valve and register with similar ports in the cylinders and chest, said valve being fast on and revolving with the valve shaft.

1,108,917. FIRELESS BROODER. ROBERT C. B. LETHBRIDGE, Port Kennedy, Pa. Filed Mar. 13, 1913. Serial No. 753,939. (Cl. 119—33.)

1. A hover consisting of an upwardly extending side wall, a flexible cover supported on the upper edge of said side wall with its edge extending downwardly on the outside of said wall and having its central portion flexibly sagging within said hover to form a pocket adapted to support a cushion, and means secured to the edge of said cover and adapted to engage the outer periphery of said wall whereby the depth of said pocket can be varied according to the age and height of the chicks by raising and lowering said securing means on the exterior of said wall.

2. In a device of the character stated, a hover consisting of a circular side wall with an open bottom, said wall having a door on one side and a plurality of windows therein on the opposite side, one of said windows being opposite to said door, and each of said windows having a closure of transparent material, a cover for said hover and adapted to have its central portion flexibly sag within said hover, and a fastening band at the edge of said cover and engaging the exterior of said side wall.

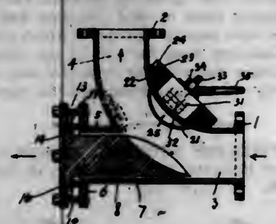
3. In a device of the character stated, a hover consisting of a circular side wall with an open bottom, said wall having a door on one side of a central line and a plurality of windows therein on the opposite side of the said central line, one of said windows being opposite to said door, and another of said windows being on one side of and adjacent to said first mentioned window, a cover for said hover and adapted to have its central portion flexibly sag within said hover, and a fastening band at the edge of said cover and engaging the exterior of said side wall.

4. In a fireless brooder, a plurality of circular hovers of different diameters, whereby one will fit within the other and each hover having an open bottom, means for detachably securing said hovers together with a communication between the same, a flexible cover for one of said hovers having a flexibly sagging central portion, a fastening device in engagement with the edge of said cover for enabling the latter to be adjusted upon its hover, and a cover for the other hover, whereby both hovers are suitably closed and drafts are prevented.

5. In a device of the character stated, a plurality of circular hovers having an annular wall provided with doors, a plurality of fastening devices for holding said hovers in assembled position with said doors in alinement, a removable partition for said doors retained by said fastening devices, an apertured closure for the one of said hovers adapted to serve as a yard, a transparent plate for said closure, each of said hovers being also provided with a plurality of windows, a flexible cover for the other of said hovers, having its central portion sagged within its hover to form a pocket, and a fastener for the edge of said cover in engagement with the exterior of the contiguous hover.

[Claim 6 not printed in the Gazette.]

1,108,918. ELBOW FOR PNEUMATIC CONVEYERS. GUIDO E. LOB, Chicago, Ill., assignor to Pneumatic Conveyor Company, Chicago, Ill. Filed Jan. 6, 1913. Serial No. 740,284. (Cl. 193—10.)



1. A device of the character described comprising a member provided with three arms, a plug in one of said arms, there being an air space between the outer surface of said plug and the inner surface of said arm, a ring encircling said plug, and means coöperating with said ring, said ring being adapted to regulate the size of the entrance to said air space, and means to secure said plug upon said member.

2. A device of the character described comprising a member provided with three arms, a plug in one of said arms, there being an air space between the outer surface of said plug and the inner surface of said arm, an annular band or bead upon said plug, said bead being formed with ports, a valve adapted to close said ports, and means for securing said plug upon said member.

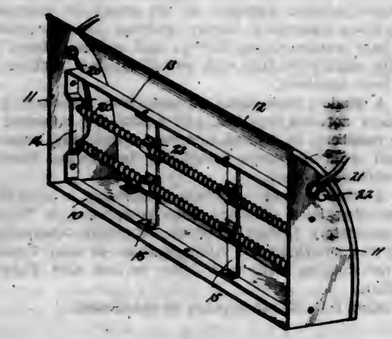
3. A device of the character described comprising a member provided with three arms, a plug in one of said arms, there being an air space between the outer surface of said plug and the inner surface of said arm, an annular band or bead upon said plug, said bead being formed with ports, a ring encircling said plug and riding upon said bead, means carried upon said ring and adapted to close said ports, and means for securing said plug upon said member.

4. A device of the character described comprising a hollow casting provided with three arms, a plug in one of said arms, there being an air space between the outer surface of said plug and the inner surface of the arm retaining same, ports allowing access of air to said space, means to regulate the size of said ports, and means to secure said plug within said arm.

5. An attachment for pneumatic conveyers comprising a long-sweep T-coupling, a plug located in one of the arms thereof, there being an air-space between the outer surface of said plug and the inner surface of the arm within which same is placed, said air-space being unobstructed, said plug and the arm supporting same being flanged, and means to connect said flanges together, there being an unobstructed air space between said flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,108,919. HEATER. FRANCIS F. LONG, Campbellford, Ontario, Canada. Filed May 13, 1913. Serial No. 767,375. (Cl. 219—34.)



1. A confectionery heater including heating elements, a housing inclosing said elements including a flat supporting base and a curved rear wall hingedly connected to said base adjacent one of the longitudinal edges thereof whereby access is gained to the rear of said heating elements, the opposite ends of said wall being turned at right-angles to the body for engagement with the sides of the casing for preventing the escapement of heat.

2. A heater including a frame, the ends of said frame being depressed, supporting rods, the opposite ends thereof being disposed in said depressed portions, vertical supporting bars arranged in said frame, loop-straps adapted to hold said rods to said bars, and a housing inclosing said frame, the rear wall thereof being curved so as to reflect the heat forwardly and downwardly.

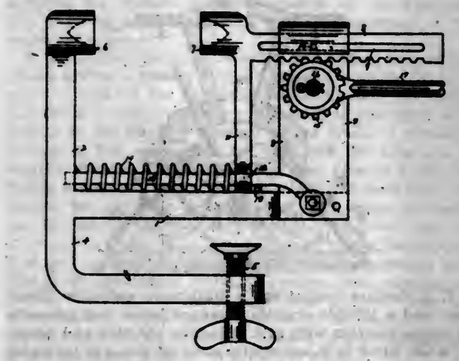
3. A heater including a rectangular frame, the ends of said frame being depressed, supporting rods arranged in spaced relation in the frame, the opposite ends of said rods being disposed in said depressed portions, vertical supporting bars arranged in said frame, each of said bars being provided with a plurality of depressed portions, loop-straps adapted to hold said rods in said depressed portions of said bars, and a housing inclosing said frame the rear walls thereof being curved so as to reflect the heat forwardly and downwardly therefrom.

4. A confectionery heater including a housing, said housing comprising an integrally formed base and side walls, said side walls having the rear edges thereof curved rearwardly and downwardly, a rear wall hingedly mounted on said base, said rear wall conforming to the curvatures of said rear walls, flanges formed on the ends of said rear wall and adapted for engagement with said walls, a frame disposed within said housing, said frame having the opposed ends thereof provided with depressed portions, supporting rods extending longitudinally of said casing and having the ends thereof secured to said depressed portions, vertical supporting bars arranged within said frame and provided with depressed portions, a heating element coiled on said longitudinal supporting bars, loop straps carried by said vertical supporting bars in said depressed portions and adapted to hold said longitudinal rods into engagement with said vertical supporting bars, an insulated strip carried in each of said depressed portions of said vertical supporting bars, whereby to insulate said bars from said heating element.

5. A confectionery heater including a frame, the ends of said frame being depressed, supporting rods, the opposite ends thereof being disposed in said depressed portions, vertical supporting bars arranged in said frame, said bars being provided with depressed portions, a resistance coil encircling each of said rods, each of said rods adapted for engagement with said vertical bars, loop straps carried by each of said bars for holding said rods into engagement with said vertical bars, an insulating strip carried by each of said depressed portions in said vertical bars whereby to insulate said bar from said resistance coil, and a housing inclosing said frame, the rear wall thereof being curved so as to reflect the heat forwardly and downwardly therefrom.

[Claims 6 and 7 not printed in the Gazette.]

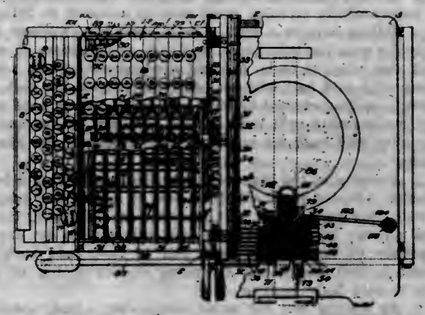
1,108,920. NUTCRACKER. FRANK B. MAY, Wharton, Tex. Filed Feb. 27, 1914. Serial No. 821,387. (Cl. 146—3.)



1. A device of the character described including a framework having two opposing upstanding arms, a socket member carried by the free end of one of said arms and integral therewith, the free end of the other of said arms being bent over and forming a bearing member, a rack member having a lengthwise slot therein and having slidable engagement with said bearing member, a pin carried by said bearing member and extending through said slot, a socket member integral with the inner end of said rack member and opposing said first mentioned socket member, rack teeth carried by said rack member, a spur gear wheel rotatably secured upon one of said upstanding arms, the teeth of which mesh with the teeth of said rack member, a handle secured upon said gear wheel, provided to rotate same, an arm integral with and depending from the inner end of said rack member, a bearing carried by the lower end of said depending arm, a rod whose respective ends are attached to the arms of said framework and which extends through said last mentioned bearing, a spring operating against said last mentioned bearing member and tending to hold said socket members apart, and means for securing said device to a stationary support.

2. A device of the character described including a framework having two opposing upstanding arms, a socket member carried by the free end of one of said arms and integral therewith, the free end of the other of said arms carrying a bearing member, a rack member having a lengthwise slot therein and having slidable engagement with said bearing member, a pin extending through said bearing member and slot, a socket member integral with the inner end of said rack member and opposing said first mentioned socket member, rack teeth carried by the lower side of said rack member, a spur gear wheel rotatably secured upon one of said upstanding arms, the teeth of which mesh with the teeth of said rack member, a handle fixed to said gear wheel and provided to rotate the same, an arm integral with and depending from the inner end of said rack member, a bearing carried by the lower end of said depending arm, a rod whose respective ends are secured to the arms of said framework and which extends through said last mentioned bearing, a coil spring surrounding said rod resting against one of said upstanding arms and opposing said last mentioned bearing member and tending to hold said socket member apart and means for securing said device to a stationary support.

1,108,921. COMBINED TYPE-WRITER AND CALCULATOR. JAMES F. MAYS, Birmingham, Ala., assignor, by mesne assignments, to Mays Accounting Machine Company, Asheville, N. C., a Corporation of Nevada. Filed Apr. 10, 1906. Serial No. 311,006. (Cl. 235—59.)



1. In a machine of the character described, a plurality of registering devices provided with type digits, a pivoted frame supporting said devices, actuating levers pivotally connected to said devices, the pivot connections for said levers and frame being substantially in alinement, and means to move said levers and frame for the purposes described.

2. In a machine of the character described, a platen, a pivoted frame, type dials journaled in said frame, dial moving arms, key operated levers pivotally connected to said arms in line with the pivotal axes of said frame, and means to rock said frame and move said dials into engagement with said platen for the purposes described.

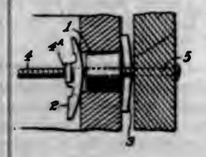
3. In a machine of the character described, calculator keys and mechanism movable thereby, totaling dials with type digits, a platen, a frame which supports said platen, movable supports for said dials carried by said frame, operating connections between the dials and said mechanism, means to move said supports to bring said dials into engagement with said platen, and means to prevent the imparting of rotary movement to said dials from their operating connections as they move bodily into engagement with said platen, said dials and their operating connections remaining in mesh during the movement of the dials toward the platen.

4. In a combined calculator and typewriter, the combination of a platen, and separate printing mechanisms for the typewriter and calculator adapted to coöperate with said platen, independent key operated levers to directly operate said mechanisms, said calculator printing mechanism being disposed adjacent to and to the right of said typewriter printing mechanism and comprising a set of independently operable type dials mounted in a movable support normally positioned beneath and in close proximity to said platen, and means to detachably couple up the operating levers for the said printing mechanisms substantially as described.

5. In a machine of the character described, the combination with a type-writing mechanism, of calculating dials, mechanism to operate said dials comprising rows of numeral keys from front to rear of the machine, and means to directly transmit differential movements from the keys of each row to the corresponding dial, and means to transmit movement from said dial operating mechanism to said typewriting mechanism, as and for the purposes described.

[Claims 6 to 40 not printed in the Gazette.]

1,108,922. HANGER-BOLT. HERMAN MENTEN, New York, N. Y., assignor of one-half to Mrs. Theodore Koehler, Steinway, N. Y. Filed Aug. 7, 1911. Serial No. 642,890. (Cl. 85—3.)

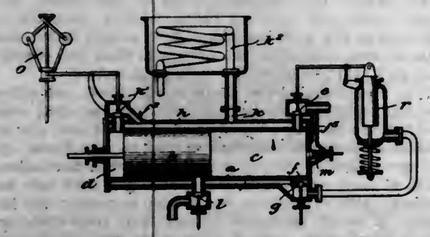


1. A device of the character described comprising a body of substantially circular cross section adapted to fill and fit a drilled hole in a wall, a bolt extending through the body for securing it in place, an inside anchor loose on said bolt and adapted to be brought approximately into alinement with said bolt without removing it from the bolt, an outside anchor carried by said bolt for clamping said wall and maintaining said body in said hole, and means co-acting with said body for securing door facings or the like in place.

2. A device of the character described comprising a body member adapted to fit a drilled hole in a wall and having a hole therethrough, a bolt mounted in said hole, inside and outside anchors on said bolt adapted to be drawn together by rotation of said bolt to hold said body in position, and means for attaching a door facing or the like to said body member.

3. An anchor bolt for walls comprising a body member having a marking point detachably mounted therein, a bolt passing through said body member, and anchors carried by said bolt for engaging the inner and outer surfaces of the wall.

1,108,923. STEAM-ENGINE. JACOB HEINRICH MISSONG, Frankfort-on-the-Main, Germany. Filed Feb. 28, 1911. Serial No. 611,510. (Cl. 121—45.)



1. In a steam engine the combination with a cylinder provided with a uniform diametered piston and piston rod, of means to admit live steam to one cylinder side, means to admit the expanded steam to the other cylinder side, and means to discharge part of the steam expanded at the high pressure side, without entering the low pressure side.

2. In a steam engine the combination with a cylinder provided with a uniform diametered piston and piston rod, of means to admit live steam to one cylinder side, means to admit the expanded steam to the other cylinder side, and means to discharge part of the steam expanded at the high pressure side into a conduit for heating or cooking purposes without entering the low pressure side.

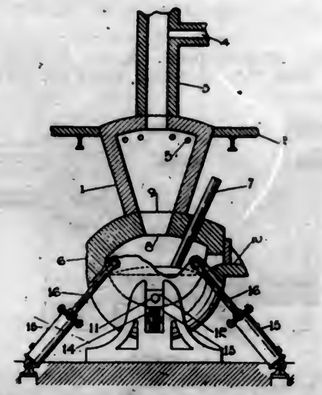
3. In a steam engine the combination with a cylinder provided with a uniform diametered piston and piston rod, of means to admit live steam to one cylinder side, means to admit the expanded steam to the other cylinder side, and means to discharge part of the steam expanded at the high pressure side by recompressing part of the expanded steam at the high pressure side.

4. In a steam engine the combination with a cylinder provided with a uniform diametered piston and piston rod, of means to admit live steam to one cylinder side, means to admit the expanded steam to the other cylinder side, and means to discharge part of the steam expanded at the high pressure side by recompressing part of the expanded steam at the high pressure side and returning part of it into the live steam pipe.

5. In a steam engine the combination with a cylinder provided with a uniform diametered piston and piston rod, of means to admit live steam to one cylinder side, means to admit the expanded steam to the other cylinder side, and of means to discharge part of the steam expanded at the high pressure side into a conduit for heating or cooking and part by recompressing the expanded steam at the high pressure side.

[Claims 6 to 9 not printed in the Gazette.]

1,108,924. ELECTRIC FURNACE. JAMES W. MOFFAT, Toronto, Ontario, Canada. Filed Nov. 22, 1913. Serial No. 802,433. (Cl. 204—64.)



1. A furnace comprising a stationary reduction chamber; and a tiltable crucible arranged below and normally in communication with said reduction chamber and adapted when tilted to substantially close off the said reduction chamber.

2. A furnace comprising a stationary reduction chamber; a tiltable crucible arranged below and normally in communication with said reduction chamber and adapted when tilted to substantially close off the said reduction chamber; and means for lifting said crucible to bring it into close connection with the lower part of the chamber.

3. A furnace comprising a stack; a reduction chamber into which the stack opens, said reduction chamber having an opening at its lower end; a tiltable crucible arranged below the chamber and having an opening therein adapted to register with the opening in the lower end of the reduction chamber, said crucible being adapted when tilted to substantially close off the said reduction chamber.

4. A furnace comprising a stationary reduction chamber; a tiltable crucible arranged below and normally in communication with said reduction chamber and provided with a tap hole so positioned that its level relative to the bottom of the chamber of the crucible may be varied by tilting the latter; and electrodes extending into the interior of the crucible from the outside.

5. A furnace comprising a stationary reduction chamber; a tiltable crucible arranged below and normally in communication with said reduction chamber and adapted when tilted to substantially close off the said reduction chamber; and electrodes extending into the interior of the crucible from the outside.

1,108,925. WHEELED GRADER. ALEXANDER MORTON and MAURICK A. BRAAE, Labonte, Wyo. Filed Aug. 7, 1913. Serial No. 783,629. (Cl. 37—7.)

1. A grading machine including a Y-shaped supporting frame having a pair of rear wheels and a single forward wheel, a fork for the forward wheel and a king pin rising therefrom, the king pin being connected to and fixed with respect to the forward end of the frame, a substantially rectangular scraper, flexible means suspending the scraper from the frame, and a U-shaped frame member carried by the forward end of the scraper, said U-shaped member having its bight portion mounted for vertical sliding movement on the king pin.

2. A grading machine including a Y-shaped supporting frame having a pair of rear wheels and a single forward wheel, a fork for the forward wheel and a king pin rising therefrom, a shoulder formed at the junction of the fork and the king pin, the king pin being connected to and fixed with respect to the forward end of the supporting frame, a substantially rectangular scraper, flexible means carried by the supporting frame and connected to the scraper for suspending the scraper from the frame, and a U-shaped member carried by the forward end of the frame, said U-shaped member having its bight portion apertured and mounted for vertical sliding movement on the king pin, said shoulder being adapted to limit the movement of the U-shaped member.

3. A grading machine including a Y-shaped supporting frame having a pair of rear wheels and a single forward wheel, a fork for the forward wheel and a king pin rising therefrom, the king pin being connected to and fixed with respect to the forward terminal of the frame, a shoulder formed at the junction of the fork and the king pin, a scraper, flexible means suspending the scraper from the frame, means controlling the last-mentioned means for adjusting the elevation of the scraper, and means for holding the scraper against longitudinal movement with respect to the frame, said last-mentioned means including a U-shaped member rising vertically from the scraper and having an opening in its bight portion, said opening receiving the king pin and being of less diameter than the said shoulder, whereby the downward movement of the forward end of the scraper is limited by the engagement of the U-shaped member with the shoulder.

1,108,926. TYPE-WRITING MACHINE. LEWIS C. MYERS, Brooklyn, N. Y., assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 31, 1911. Serial No. 618,122. (Cl. 197—136.)

1. Card feeding devices for a typewriting machine comprising a platen having a longitudinal recess in its face, a clamp hinged and supported within said recess, means located at the end of the platen and extending longitudinally within the platen for automatically opening the clamp when the platen is turned to card receiving position and adjustable means on the frame of the platen for automatically arresting the cylinder at a determined point when the cylinder is rotated from card receiving position whereby provision is made in the same machine for cards of different length.

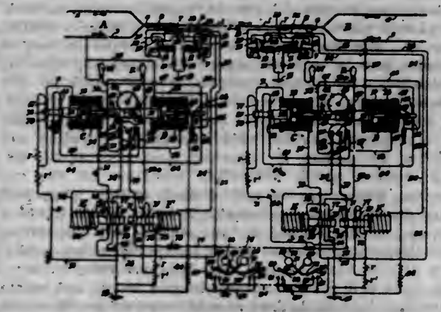
2. Card feeding devices for a typewriting machine, comprising a platen frame, a revoluble platen thereon having a longitudinal recess in its face, a rock shaft turning therein, a clamp mounted on the rock shaft, an arm on one end of the rock shaft at the end of the platen having a surface substantially radial to the platen, a spring tending normally to close the clamp and a stop on the frame having a surface coöperating with the radial surface of the arm for the purpose set forth.

3. Card feeding devices for a typewriting machine comprising a rocking arm carried by the platen and having a stop surface substantially radial to the platen, a spring applied to the arm and tending to depress it and a stop on the frame having a surface coöperating with the surface on the rocking arm to raise the arm against the tension of the spring when by rotation of the platen the two surfaces are brought into contact, rock shaft within the platen controlled by the rocking arm and a paper clamp controlled by the rock shaft.

4. Card feeding devices for a typewriting machine comprising a rocking arm carried by the platen and having a stop surface, a spring tending to depress the arm and a stop on the frame coöperating with the stop surface of the arm and an adjustable wheel on which a stop is mounted whereby an adjustment for cards of varying length is provided, a rock shaft within the platen controlled by the rocking arm and a paper clamp controlled by the rock shaft.

5. Card feeding devices for a typewriting machine comprising a rocking arm carried by the platen and having a stop surface, a spring tending to depress the arm and a stop on the frame coöperating with the stop surface of the arm, a stop adapted to act on the end of the arm and adjustable in a circular path concentric to the axis of the platen whereby an adjustment for cards of varying length is provided, a rock shaft within the platen controlled by the rocking arm and a paper clamp controlled by the rock shaft.

1,108,927. ELECTRIC SIGNALING SYSTEM. CARL P. NACHOD, Philadelphia, Pa. Filed Feb. 25, 1910. Serial No. 545,869. (Cl. 246—36.)



1. In a signaling system, home and distant stations at opposite ends of a block, car counting apparatus at said home station, a signal conductor extending between said stations, a stop signal at said distant station, a vehicle controlled contact and connections at said home station controlling the actuation of said counting apparatus and controlling the display of said stop signal through said conductor, a directionally sensitive switch at said distant station and connections including another conductor extending between stations controlled by said switch for further actuation of said counting apparatus at said home station upon improper entry of a vehicle from said distant station to said block, clearing mechanism at said home station for returning said car counting apparatus toward normal, connections controlled by said directionally sensitive switch for actuating said clearing mechanism through said first mentioned conductor upon backing out of said vehicle from said block at said distant station, whereby the effect upon said car counting apparatus produced by said vehicle improperly entering said block at said distant station is canceled.

2. In a signaling system, home and distant stations at opposite ends of a block, car counting apparatus and a permissive signal at said home station, a stop signal at said distant station, a conductor extending between said stations, a vehicle controlled contact at said home station and connections controlling the display of said permissive signal and the actuation of said car counting apparatus and controlling the display of said stop signal through said conductor upon the passage of the first vehicle from said home station to said block, another conductor extending between said stations, a switch at each station in said second conductor, means actuating said switches when said permissive and stop signals are set, a directionally sensitive switch at said distant station, connections including said second conductor controlled by said directionally sensitive switch further actuating said car counting apparatus at said home station upon improper entry of a vehicle to said block at said distant station, and clearing mechanism at said home station for returning said car counting apparatus toward normal, said directionally sensitive switch controlling said clearing mechanism through said first named conductor upon backing out of said vehicle from said block at said distant station, whereby the effect upon said car counting apparatus upon improper entry of said vehicle at said distant station is canceled.

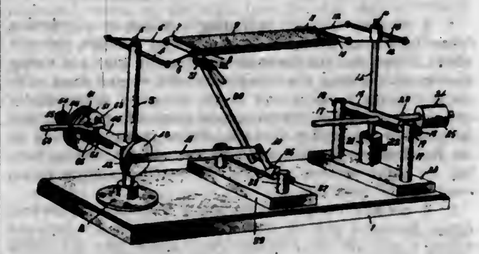
3. In a signaling system, home and distant stations at opposite ends of a block, car counting apparatus and means for actuating the same at both stations, a stop signal at said distant station, means controlling display of said stop signal at said distant station and controlling said means for actuating said car counting apparatus at said home station upon the passage of a vehicle from said home station to said block, means preventing operation of the means for actuating said car counting apparatus at said distant station when said car counting apparatus at said home station is actuated, means at said distant station and coöperating means causing further actuation of said car counting apparatus at said home station upon improper entry of a vehicle from said distant station to said block, and means coöperating with said stop signal displaying means for restoring said car counting apparatus at said home station to its former condition upon the backing of said vehicle from said block at said distant station.

4. In a signaling system, home and distant stations at opposite ends of a block, signal displaying and clearing mechanism at said home station, a stop signal at said distant station, means for actuating said signal displaying mechanism at said home station and said stop signal at said distant station, said mechanism including car counting mechanism, car counting mechanism at the distant station, means preventing actuation of the car counting mechanism at said distant station when said signal displaying mechanism at said home station has been actuated, means at said distant station and coöperating connections causing actuation of said car counting mechanism at said home station upon improper entry of a vehicle from said distant station to said block, and means controlling said mechanism at said home station to return said car counting mechanism to its previous condition upon the backing out of said vehicle from said block at said distant station.

5. In a signaling system, home and distant stations at opposite ends of a block, step-by-step car counting mechanism at each station, an electro-magnet for actuating each of said car counting mechanisms, a clearing electromagnet at said home station controlling the return of said car counting mechanism at said home station toward normal, a stop signal at said distant station, a vehicle controlled switch contact at said home station and connections controlling said car counting magnet at said home station and said stop signal at said distant station, a switch interrupting the circuit of said car counting magnet at said distant station upon control of said car counting magnet at said home station by said vehicle controlled switch contact, means responsive to improper entry of a vehicle from said distant station to said block for controlling said car counting magnet at said home station, whereby said counting mechanism at said home station counts another car, and means responsive to the backing out of said vehicle from said block controlling said clearing magnet at said home station to restore said car counting mechanism to its previous condition.

[Claims 6 to 19 not printed in the Gazette.]

1,108,928. APPARATUS FOR TESTING THE DURABILITY OF CUTTING EDGES. WILLIAM E. NICKERSON, Cambridge, Mass. Filed Nov. 8, 1907. Serial No. 401,256. (Cl. 73—51.)

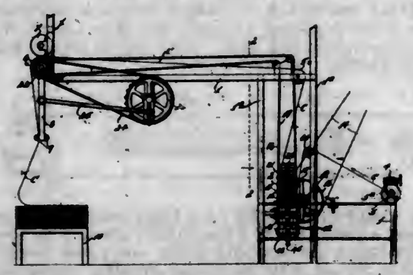


1. An apparatus for testing razor blades comprising means for supporting an abrading surface, means for holding the cutting edge of the razor blade at approximately right angles to said abrading surface and in contact therewith and means for producing uniform relative dulling movements between said abrading surface and the cutting edge of the blade.

2. An apparatus for testing razor blades comprising a yieldingly supported abrading surface, means for holding the cutting edge of the razor blade in contact with said abrading surface at approximate right angles thereto and means for producing uniform relative reciprocatory movement between said abrading surface and said cutting edge while in contact one with the other.

3. An apparatus for testing the durability of cutting edges, comprising a support, a dulling element in the form of an endless belt removably mounted upon said support, counterbalance means for holding said dulling element under suitable tension, a reciprocating element having means for holding a cutting edge in scraping relation to said dulling element, a driving wheel for operating said reciprocating element, and automatic means for stopping said reciprocating element at the end of each forward and backward movement thereof, substantially as described.

1,108,929. CLOTH-STAMPING MACHINE. ANTON E. NIELSEN and LANGDON GEER, New York, N. Y.; said Nielsen assignor to said Geer. Filed Feb. 23, 1909. Serial No. 479,598. (Cl. 101—126.)



1. An arrangement for stamping cloth comprising in combination a main frame, a cloth roll mounted in bearings thereon, a rotating stamp carrying shaft having one or more tubular sockets fixed thereto and a stamping device having a stem adjustably secured in each of said sockets, said shaft having a gearing connection with said cloth roll, means for transferring ink to said stamping devices comprising a series of three inking rolls peripherally in contact, all mounted in line, said lowermost roll adapted to supply ink and said uppermost roll adapted to contact with the said stamping devices for transferring ink thereto, and a positive gearing connection from said stamping shaft to said middle inking roller, and means for adjusting said stamp carrying shaft and said cloth roll toward and away from each other.

2. An arrangement for stamping cloth comprising in combination a main frame, a cloth roll carried in bearings on said main frame and adapted to yield upwardly, a stamp carrying shaft mounted below said cloth roll and provided with one or more stamping devices arranged in pairs and oppositely disposed for acting against said cloth roll from beneath the same, a series of inking rolls for said stamping devices mounted in adjustable bearings below said stamping shaft and diametrically opposite said cloth roll, and power devices and gearing connections for driving said stamping devices and said inking rolls at the same peripheral speed as said cloth roll.

3. An arrangement for samping cloth comprising in combination a main frame, having upright guide frames at each side thereof, bearing blocks adjustably mounted in said guide frames and adapted to yield upwardly, a cloth roll carried in said bearing blocks, a stamp carrying shaft mounted in bearings directly below said cloth roll and provided with one or more stamps adjustably fixed thereto, vertical guide rods on said main frame below said shaft, and a series of separate bearing blocks slidably mounted on said guide rods, one above the other, each block having an inking roll mounted therein, an ink fountain mounted adjacent said lowermost inking roll, and means for adjusting said inking rolls simultaneously toward and away from said stamp carrying shaft, a power shaft connected to drive said stamp carrying shaft, and gearing connections to said inking rolls and said cloth roll.

4. In a cloth stamping machine in combination, a main frame having a series of cloth rolls mounted thereon and power devices for driving said rolls to pass cloth over the same from the rear to the front of the machine, one of said cloth rolls being adjustably mounted in said main frame and adapted to yield upwardly, stamping devices rotatably mounted directly beneath said yielding cloth roll, a series of contacting inking rolls mounted in separate bearings adjacent said stamping devices and simultaneously adjustable with relation thereto, a hand operated tension device at the rear of said main frame for creating a tension on said cloth as it passes to said stamping devices.

5. An arrangement for stamping cloth comprising in combination a main frame, a cloth roll adjustably mounted in upwardly yielding bearings, a rotary stamp-carrying shaft mounted beneath said cloth roll having oppositely disposed stamping devices carried thereon, and ink-transferring means comprising a series of three inking rollers for said stamping devices mounted below the same and adjustable relative thereto, said cloth-roll stamp-carrying shaft and inking rollers being all mounted in line.

[Claim 6 not printed in the Gazette.]

1,108,930. AIR-SPRING. WILHELM L. OSTENDORF, Wilkins township, Allegheny county, Pa., assignor of one-third to Albert H. Klesa and one-third to Frank P. Scott, Allegheny county, Pa. Filed Dec. 21, 1912. Serial No. 737,936. (Cl. 21—50.)

1. In an air-spring, telescoping cylinders forming a cushion chamber and containing fluid, a pump actuated by the reciprocation of said cylinders adapted to raise said fluid in said chamber, and a valve actuated by the reciprocation of said cylinders controlling the admission of liquid to said pump, the capacity of said valve being less than that of said pump whereby the reciprocation of said cylinders is throttled.

2. In an air-spring, telescoping cylinders forming a cushion chamber and containing fluid, a pump adapted to raise said fluid in said chamber and consisting of a pump barrel mounted in unison with one of said cylinders and a plunger mounted in unison with the other cylinder and reciprocating in sad barrel, and a resiliently seated valve in said plunger whereby the reciprocation of said cylinders is throttled.

3. In an air-spring, telescoping cylinders forming a cushion chamber and containing fluid, a pump adapted to raise said fluid in said chamber and consisting of a pump barrel mounted in unison with one of said cylinders and a plunger mounted in unison with the other cylinder, and a valve in said plunger of less capacity than said barrel whereby the reciprocation of said cylinders is throttled.

4. In an air-spring, telescoping cylinders forming a cushion chamber and containing fluid, a low pressure reservoir communicating with said chamber by means of a passage, means whereby said passage is blocked but when the pressure in said chamber rises above a predetermined degree said passage opens and permits the excess fluid to escape into said reservoir, and a pump actuated by the reciprocation of said cylinders adapted to transfer fluid from said reservoir to said chamber.

5. In an air-spring, telescoping cylinders forming a cushion chamber and containing fluid, a low pressure reservoir communicating with said chamber by means of a passage, a relief valve in said passage whereby excess pressure in said chamber may be relieved into said reservoir, and means operated by the reciprocation of said cylinders for admitting chamber pressure during the expansion of said telescoping cylinders through said passage to said relief valve.

[Claims 6 to 39 not printed in the Gazette.]

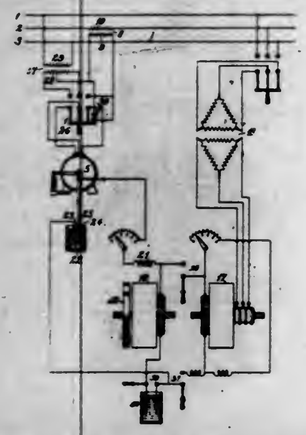
1,108,931. SYSTEM OF ELECTRICAL DISTRIBUTION. JOHN SEDGWICK PECK, Manchester, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 2, 1909. Serial No. 520,752. (Cl. 171—312.)

1. In a system of electrical distribution, the combination with an alternating current distributing circuit, and an equalizer machine associated therewith, of a regulating device for the equalizer machine, an actuating motor therefor that is connected to said circuit, and transformers interposed in the connections between the motor and the circuit having T-connected secondary windings, one of said transformers being connected in shunt to the distributing circuit and the other in series therewith.

2. An equalizer system for polyphase alternating current circuits having an equalizer machine and a regulating device which is so connected to the circuit that, upon a reversal of the direction of flow of current in the supply circuit, the said device operates to reduce the electromotive force generated by the equalizer machine below that of the supply circuit.

3. In a system of electrical distribution, the combination with an alternating current circuit, an equalizing dynamo-electric machine having a fly-wheel, of a regulating rheostat for said machine, and an operating motor for said rheostat which is connected to the said circuit and the direction of rotative movement of which depends upon the direction of energy flow in said circuit.

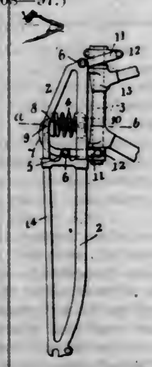
4. The combination with an alternating current work circuit and an equalizing dynamo-electric machine therefor, of a regulating rheostat for said machine and an operating motor for said rheostat which has a shunt and a series connection to the work circuit and the direction of rotative movement of which depends upon the direction of energy flow in said work circuit.



5. In a system of electrical distribution, the combination with an alternating current distributing circuit, and an equalizer machine associated therewith, of a regulating device for the equalizer machine, an actuating motor therefor that is connected to said circuit, and transformers having T connected secondary windings which are interposed in the connections between the motor and the circuit whereby currents differing approximately 90° in phase are supplied to the motor

[Claim 6 not printed in the Gazette.]

1,108,932. SPRING-FORK FOR CYCLES AND MOTOR-CYCLES. SAMUEL ROBINSON RIDGWAY, Birmingham, England, assignor of one-third to Frederick John Ridgway and one-third to Colin Mosley Brunt, Stoke-upon-Trent, England. Filed Nov. 23, 1912. Serial No. 733,141. (Cl. 208—97.)



1. A spring fork for motorcycles and the like comprising in combination, a steering head, a pair of fork members flexibly connected with the upper part of said head, means consisting of a single unit pivotally mounted between said fork members and hinged to the lower part of said steering head, a fixed abutment on the fork members, and a spring or springs arranged between said abutment and said unit substantially as set forth.

2. A spring fork for motorcycles and the like comprising in combination a steering head, a pair of fork members flexibly connected at their upper ends to the upper part of said head, a yoke pivotally mounted between said fork members and having one end hinged to the lower part of the said head, a fixed abutment on the fork members, and a spring or springs arranged between said abutment and the other end of the said yoke substantially as set forth.

3. A spring fork for motor-cycles and the like comprising in combination a steering head, a pair of fork members flexibly connected at the upper ends with said head, a yoke comprising a transverse tubular member supported by and between said fork members, a single bifurcated member projecting rearwardly therefrom and hinged to said head and a single bifurcated member projecting forwardly from said tubular member, a fixed abutment carried by said fork members and a spring or springs arranged between said abutment and said forwardly projecting bifurcated member and adapted to be compressed by the said forwardly bifurcated member of the yoke, substantially as herein set forth.

1,108,933. DRILL-PRESS. JULIUS F. RUTZ, JULIUS K. LUETHE, and ARNOLD O. RUTZ, Milwaukee, Wis., assignors to Rulu Gas Lighter Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 16, 1913. Serial No. 768,069. (Cl. 77—32.)

1. In a machine of the class described, the combination of clamping-means adapted to support the tool from and fasten it to the object to be operated upon, a tool-shaft adapted to hold a rotary end-cutting tool located on one side of said clamping-means, and means for turning said shaft disposed on the opposite side of said clamping-means.

2. In a machine of the class described, the combination of a supporting-member, clamping-means on said supporting-member adapted to secure it in a fixed position to the work and support the tool therefrom, a tool-shaft mounted and rotating on said supporting-member on one side of said clamping-means, said tool-shaft being adapted to carry a rotary end-cutting tool, a driving-shaft carried by said supporting-member parallel to said tool-shaft, and a driving-connection between said tool-shaft and said driving-shaft; said driving-shaft having means for applying a crank to either end thereof.

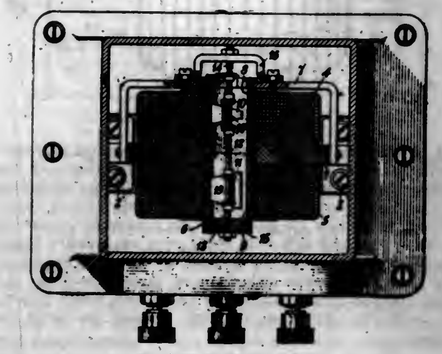
3. In a machine of the class described, the combination of a supporting-member, clamping means on said supporting-member adapted to secure it in a fixed position to the work and support it therefrom, a tool-shaft mounted and rotating on said supporting-member on one side of said clamping-means, said tool-shaft being adapted to carry a rotary end-cutting tool, a driving-shaft carried by said supporting-member parallel to said tool-shaft, and a driving-connection between said tool-shaft and said driving-shaft; said driving-shaft extending from said tool-shaft to the opposite side of said clamping-means and having means for applying a crank on the end opposite the tool-shaft.

4. In a machine of the class described, the combination of a supporting-member, clamping means on said supporting-member adapted to secure it in a fixed position to and support it from the work, a tool-shaft mounted and rotating on said supporting-member on one side of said clamping-means, said tool-shaft being adapted to carry a rotary end-cutting tool, a driving-shaft carried by said supporting-member parallel to said tool-shaft, a driving-connection between said tool-shaft and said driving-shaft; said driving-shaft extending from said tool-shaft to the opposite side of said clamping-means and having means for applying a crank on the end opposite the tool-shaft, and a positive feed-mechanism mounted on said tool-shaft and operated thereby to advance it uniformly as it rotates.

5. In a machine of the class described, the combination of a frame having on one end clamping-means adapted to secure it to the work and support it therefrom, said frame passing at one side of the work to the opposite side from said clamp, a tool-shaft adapted to hold a rotary end-cutting tool mounted on said frame upon the opposite end thereof and on the opposite side of the work from said clamp, and a driving-shaft mechanically connected to said tool-shaft and supported by said frame at the same side of the work as said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,108,934. TEMPERATURE-INDICATOR. MAURICE C. RYPINSKI, Braddock, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1907. Serial No. 350,964. (Cl. 171—95.)



1. The combination with magnet windings, of core members for the respective windings consisting of cylindrically curved plates of varying width from end to end and reversely disposed, and other core members that are rigidly connected together and are relatively movable with respect and adjacent to the aforesaid members.

2. The combination with magnet windings, of core members for the respective windings consisting of cylindrically curved plates of varying widths from end to end and reversely disposed, and other core members that are relatively movable with respect thereto.

3. The combination with a pair of windings connected to be energized in parallel, of a pair of cylindrically curved stationary core plates of varying width from end to end and reversely disposed, and a pair of rigidly connected movable core members that are inductively related to said core plates.

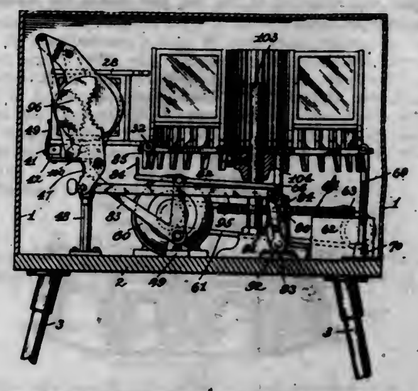
4. The combination with a pair of coils connected to be energized in parallel and having cylindrically curved core plates of varying width from end to end and reversely disposed, of a rotatable shaft and a pair of core members mounted thereon in inductive relation to said core plates.

5. The combination with a pair of axially aligned coils connected to be energized in parallel and having cylindrically curved core plates of varying width from end to end and reversely disposed, of a rotatable shaft and a pair of oppositely disposed core members mounted thereon in inductive relation to said core plates.

1,108,935. STEREOMOTOGRAPH. FREDERICK SCHWANHAUSSER, Jersey City, N. J. Filed Feb. 28, 1913. Serial No. 751,387. (Cl. 88—28.)

1. In a stereopticon mechanism the combination of a circular base plate, stereopticon plate frames pivotally supported at the outer edge of the said base plate, means for intermittently moving the said base plate so as to bring the said plate frames successively into the vicinity of the position of exposure of the said plates, means for tipping one of the said plate frames into position of exposure and at the same time restoring another of the said plate frames to normal position.

2. In a stereopticon mechanism the combination of a circular supporting base, plate frames removably and pivotally supported in the said base, plates supported in the said plate frames, a shutter mechanism, means for closing the said shutter mechanism, means for rotatably moving the said base intermittently so as to successively bring the said plates in the vicinity of the position of exposure and means for tipping said frames so as to permit the said plates to drop into position of exposure and at the same time to restore to normal position the plate exposed in the preceding operation of the stereopticon.



3. In a stereopticon mechanism the combination of a circular supporting base, plate frames removably and pivotally supported in the said base, plates supported in the said plate frames, a shutter mechanism, means for closing the said shutter mechanism, means for rotatably moving the said base intermittently so as to successively bring the said plates in the vicinity of the position of exposure and means for tipping said frames so as to permit the said plates to drop into position of exposure and at the same time restore to normal position the plate exposed in the preceding operation of the stereopticon, cushioning devices adapted to receive the said plate frames as their positions are changed.

4. In a stereopticon, the combination of a circular supporting base plate, plate frames supported on the said base, means for rotating the said base plate intermittently so as to successively bring the said plate frames in the vicinity of the position of exposure, and means for tipping said plate frames to permit the frames to drop into position of exposure, means for receiving the said frames when falling to position of exposure, and means for restoring each frame to normal position as the succeeding plate frame is tripped and allowed to drop into position of exposure.

5. In a stereopticon mechanism the combination of a base plate, plate frames supported radially on the said base plate, the said plate frames pivotally secured to the outer edge of the said base plate at a point in the outer edges of the plate frames.

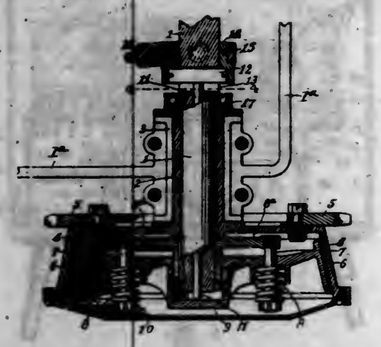
[Claims 6 to 9 not printed in the Gazette.]

1,108,936. CLUTCH. CLAUDE SINTZ, Detroit, Mich. Filed Aug. 14, 1912. Serial No. 715,060. (Cl. 192—8.)

1. A friction clutch, comprising a rotative shaft, a rotative sleeve in which the shaft is journaled, an outer conical clutch member fixed on the sleeve, a spider fixed on the shaft, an inner clutch member movable longitudinally of its axis and movably connected to the spider, a hub on the inner clutch member having one end closed over the end of the shaft, springs to move the inner clutch member into engagement with the outer clutch member, a push rod movable longitudinally in the shaft and engaging the closed end of said hub, and means for manually operating the push rod to disengage the clutch members.

2. A friction clutch, comprising a rotative shaft; a rotative sleeve in which the shaft is journaled, a conical outer clutch member fixed on the sleeve, a spider fixed on the

shaft and within the outer clutch member, an inner conical clutch member movably connected to the spider by studs, a hub on said inner clutch member having one end closed over the end of the shaft, springs on the studs to move the inner clutch member into contact with the outer clutch member, a push rod longitudinally movable in the axis of the shaft and engaging the closed end of said hub to disengage the clutch members, a transverse key in the shaft engaging the other end of the rod, a collar slidable on the shaft and attached to the key and means for manually moving the collar.



3. A friction clutch, comprising a case, a sleeve journaled in the wall of the case and extending therethrough, a shaft rotative in the sleeve and extending therethrough, a conical outer clutch member fixed on the outer end of the sleeve, a spider fixed on the outer end of the shaft, studs fixed in the spider, an inner clutch member slidable on the studs, springs on the studs to move the inner clutch member into contact with the outer clutch member, a push rod longitudinally movable in the axis of the shaft and engaging the outer clutch member oppositely to the springs, a transverse key in the shaft within the case to engage the inner end of the rod, a collar slidable on the shaft and engaging the key and means within the case and extending outside thereof for manually moving the collar on the shaft.

4. A friction clutch, comprising a case, a sleeve journaled in the wall of the case and extending therethrough, an outer conical clutch member carried on the outer end of the sleeve, a shaft rotative in the sleeve, an inner conical clutch member connected to the shaft and movable longitudinally thereof, a push rod extending within the shaft to operate the clutch, and means for manually operating the push rod extending through the wall of the case and, connected to the push rod within the case.

1,108,937. SHIPPING-PACKAGE. PARKE T. SNYDER, Chicago, Ill. Filed Mar. 19, 1913. Serial No. 755,478. (Cl. 220—2.)

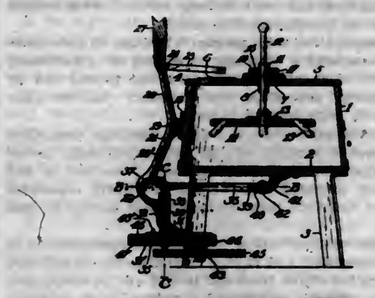
1. A shipping package comprising a side wall having an imperforate groove near its edge; a closure having an exterior flange overlying said groove; and having in said flange perforate indentations in substantially the same plane as said groove to receive a key which coöperates with the groove in the walls to hold the parts together.

2. A shipping package comprising a side wall having an imperforate groove near its edge; a closure having an exterior flange overlying said groove, and having in said flange a plurality of pairs of perforate indentations, spaced apart longitudinally of said flange, and substantially in the same plane as said grooves, to receive keys which cooperate with the grooves in the walls to hold the parts together.

3. A shipping package comprising a corrugated side wall having a series of notches in the outward crests of the corrugations, near its edge; a closure having an exterior flange overlying said notches, and having in said flange perforate indentations in substantially the same plane as said notches, to receive a key which coöperates with the notches in the wall to hold the parts together.

4. A shipping package comprising a corrugated side wall having a series of notches in the outward crests of the corrugations, near its edge; a closure having an inset disk part and an exterior annular bead portion, radially therebeyond, to provide an inner annular groove for reception of the edge of said side wall, and having an outward flange extending inwardly to inclose said notches, and having in said flange perforate indentations in substantially the same plane as said notches, to receive keys which coöperate with the notches in the wall to hold the parts together.

1,108,938. MOTION-AUGMENTING PENDULUM-GEARING. HARRISON L. STALEY, Martinsville, Ind. Filed Apr. 24, 1911. Serial No. 622,927. (Cl. 74—50.)



1. Gearing including an arm having an offset crank box and also a journal box, a shaft rotatable in the journal box and having a crank arm movable in the crank box, and a wheel larger than the crank arm fixed on the shaft for receiving and imparting energy to rotate the shaft.

2. Gearing including a pendulum device swingingly suspended and having on its free end a relatively movable weight element, and means acting on movement of the device for moving the weight element to store energy therein and enabling the weight element when energized to impart swinging motion to the device.

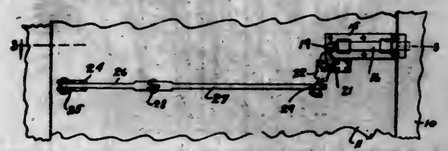
3. Gearing including a pendulum device swingingly suspended, a pivoted lever for swinging the device, a wheel rotatably mounted on the device, and means acting on movement of the device for rotating the wheel to store energy therein and enabling the wheel when energized to impart swinging motion to the device for transmitting motion to the lever.

4. Gearing including a support, an arm swingingly suspended on the support, a shaft rotatably mounted on the arm and a wheel thereon, and means connected with the shaft acting, on swinging movement of the arm, to automatically rotate the shaft and continue rotating the shaft during the reversing interruptions in the swinging movement of the arm.

5. Gearing including a support, an arm swingingly suspended on the support, a balance-wheel rotatably mounted on the arm, means for rotating the balance-wheel to store energy therein, and means enabling the balance-wheel when energized to impart swinging motion to the arm.

[Claims 6 to 24 not printed in the Gazette.]

1,108,939. BOLT FOR DOORS. GEORGE H. STANBRIDGE, Cleveland, Ohio. Filed Nov. 18, 1912. Serial No. 732,022. (Cl. 70—120.)



1. In a device of the character indicated, the combination with a door and its surrounding casing, of a bolt slidably mounted on said door and adapted to engage with said casing so as to hold said door against movement, said bolt being provided with a lug having an eye therein, a support mounted near said bolt, a bolt lever mounted on said support so as to oscillate around a horizontal axis, one end of said lever being adapted to extend into the eye on said bolt and a toggle, one member of said toggle being hinged to the door at one end, and the other member of said toggle having its free end provided with an eye adapted to receive one end of the bolt lever, for the purpose set forth.

2. In a device of the character indicated, the combination with a door and its surrounding casing, of a pair of bolts slidably mounted on said door, a bolt lever pivotally mounted near each bolt and having one end connected with the adjacent bolt, a pair of toggles, one end of each toggle being secured to the door and the other end being secured to the adjacent bolt lever and a yoke operatively connecting said toggles.

1,108,940. COLLECTOR-RING. CHARLES W. STARKEY, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 6, 1912. Serial No. 735,238. (Cl. 171—211.)

1. In combination, a tube of insulating material, said tube comprising a plurality of concentric layers having recesses, collector rings upon the said tube, and terminals for said rings located between the inner and the outer concentric layers and in said recesses.

2. In combination, a tube of insulating material, said tube comprising three concentric layers, collector rings spaced apart upon said tube, terminals for said rings extending longitudinally between the inner and the outer concentric layers, the ends of said terminals lying in substantially the same circumference on the outer periphery of the tube.

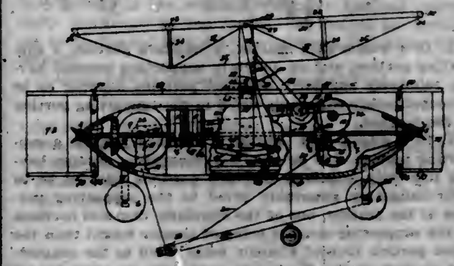
3. In combination, a tube of insulating material comprising concentric layers having slots, terminals in said slots, and collector rings spaced apart upon said tube and connected to said terminals.

4. In combination, a tube of insulation comprising a plurality of concentric layers, an intermediate layer of said tube having longitudinal slots spaced apart circumferentially and the exterior layer having slots which, in part, register with the first named slot, collector rings mounted on said tube, and terminals in said slots, each of which is connected at one end to one of said rings and at the other end is adapted for external electrical connection.

5. In combination, a tube of insulation adapted to be placed upon a shaft, said tube comprising concentric layers, collector rings spaced apart on said tube, terminals in slots in an intermediate layer, said terminals extending, at one end, through slots in the other layer to connect with said rings and, at the other end, extending through slots in the outer layer and adapted for external electrical connection.

[Claims 6 and 7 not printed in the Gazette.]

1,108,941. AEROPLANE. JOHN STABJAN, Seattle, Wash. Filed Dec. 3, 1913. Serial No. 804,340. (Cl. 244—1.)



1. The combination with an aeroplane, of explosive means, and means for attaching same to the aeroplane, means for predetermining the length of flight of the aeroplane, and means for automatically detaching the said explosive when the limit of forward flight has been reached.

2. The combination with an aeroplane, of explosive means and means for attaching same to the aeroplane, means for predetermining the length of flight of the aeroplane, means for automatically detaching the said explosive means when the limit of the forward flight has been reached, and means for reversing the course of the aeroplane after said explosive means has been detached.

3. The combination with an aeroplane, of explosive means and means for attaching same to the aeroplane, means for predetermining the length of the forward flight of the aeroplane, means for automatically detaching said explosive means when the limit of forward flight has been reached, and means controlled by the last mentioned means for reversing the travel of the aeroplane.

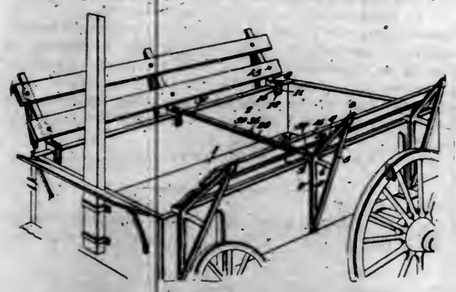
4. The combination with an aeroplane, of a bomb and means for attaching same to the aeroplane, means for tilting the plane of the aeroplane to reverse its forward flight, means for predetermining the length of the flight, means controlled by the last mentioned means for reversing the flight, means for automatically tilting the said plane when the limit of forward travel has been reached, means for automatically detaching said bomb at about the same instant, and means for automatically stopping the aeroplane after it has returned to the starting point.

5. The combination with an aeroplane, of a bomb and means, including a notched block, for attaching same to the aeroplane, a belt which is caused to be actuated by the propeller shaft of the aeroplane, and by means of which the forward flight is predetermined, a trigger which controls the said notched block, means which is attached to the said belt for actuating the said trigger, an arm which moves with the said notched block, means controlled by

said arm to automatically reverse the flight of the aeroplane, a hook adjusted upon said belt and means adapted to be actuated by said hook to cause the power to be shut off from the engine of the aeroplane.

[Claim 6 not printed in the Gazette.]

1,108,942. WAGON-RACK. ENOCH H. STUDEBAKER, Waverly, Va., assignor of one-half to John L. Birdsong, Kenbridge, Va. Filed Aug. 12, 1913. Serial No. 784,401. (Cl. 21—74.)



1. In a wagon rack bracket, a standard portion, a supporting portion, and an auxiliary supporting member having relatively angularly disposed portions adapted to be interchangeably removably fitted to the supporting portion of the bracket.

2. In a wagon rack bracket, a standard portion, a supporting portion, and an auxiliary supporting member having relatively angularly disposed portions adapted to be interchangeably removably fitted to the supporting portion of the bracket, one of the angularly disposed portions of the supporting member being of greater length than the other portion thereof whereby when fitted to the supporting portion of the bracket to constitute an extension of the said portion.

3. In a wagon rack bracket, a standard member, a supporting member including a transversely extending portion and a flange extending at an angle to the plane thereof, and an auxiliary supporting member having a lip and spaced fingers extending beneath the lip, the lip overlapping the transversely extending portion of the supporting member and the fingers straddling the flange and engaging at their edges against that face of the transversely extending portion from which the flange projects.

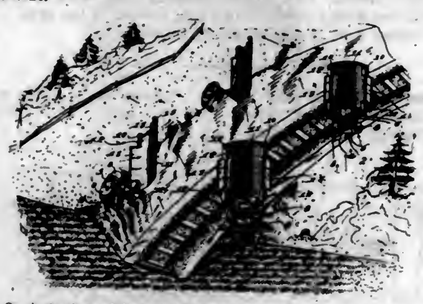
4. In a wagon rack bracket, a standard member, a supporting member having a transversely extending body portion and an angularly extending flange, and an auxiliary supporting member having relatively angularly positioned portions each provided at its end with a lip engageable over the transversely extending body portion of the supporting member and spaced fingers engageable against the sides of the flange and at their edges against the said transversely extending portion.

5. In a wagon rack bracket, a standard portion, a supporting portion, and an auxiliary supporting member having relatively angularly positioned portions, each provided at its end with spaced members arranged to fit the end of the supporting portion of the bracket, the engagement of the ends of the auxiliary supporting member with the supporting portion of the bracket being interchangeable.

1,108,943. DEVICE FOR PREVENTING SNOW-DRIFTS. BENJAMIN FRANKLIN SWEZEY, Bellingham, Minn. Filed Jan. 4, 1913. Serial No. 740,228. (Cl. 104—66.)

1. A device of the class described comprising a support, a wind shield and a plurality of supporting arms secured to said wind shield and adapted to swing from side to side relative to said support, whereby said shield may be brought in efficient engagement with the wind according to the direction in which the wind is traveling.

2. The herein described means for preventing the accumulation of snow in railroad cuts comprising an anchor member, a shield and a plurality of supporting arms engaging said shield, said arms being loosely mounted on the latter for facilitating the swinging of said shield from side to side.

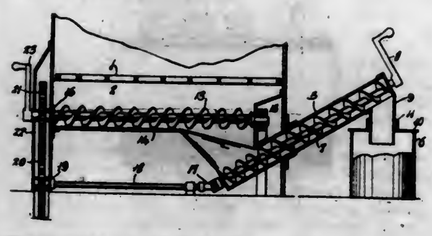


3. A device of the class described comprising an anchor post, a supporting standard, a head rotatably mounted upon said supporting standard, a wind shield and a plurality of supporting arms secured to said wind shield and head and loosely mounted on the latter for facilitating the swinging of said shield from side to side.

4. A device of the class described comprising an anchor member, a supporting standard, a head securely mounted thereon and provided with a central boss portion, a plurality of arms journaled on the head and a shield, said arms being provided with upwardly extending outer ends engaging said shield, said shield being provided with a plurality of rolled ears fitting over said upwardly extending ends, and said arms being adapted to facilitate the swinging of said shield from side to side.

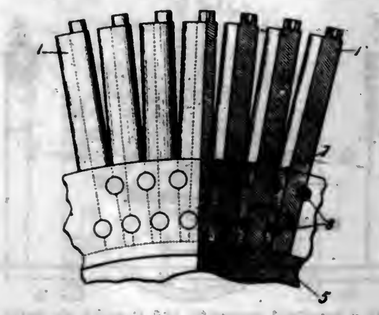
5. A device of the class described comprising an anchor member, a supporting standard, a head fixedly mounted thereon and provided with a central boss portion, a plurality of arms journaled on the head and a shield, said arms being provided with upwardly extending outer ends engaging said shield, said shield being provided with a plurality of rolled ears fitting over said upwardly extending ends; said arms being adapted to facilitate the swinging of said shield from side to side and said shield being provided with rearwardly extending portions constituting broad wind engaging wings.

1,108,944. ASH-REMOVER. ROBERT TANNENBAUM, Cincinnati, Ohio. Filed Apr. 14, 1913. Serial No. 760,876. (Cl. 126—242.)



The combination with the ash-pit of a furnace, said ash-pit being provided with walls converging downwardly into a channel in the bottom of said ash-pit, of a worm adapted to rotate in said channel, said worm being journaled in the ends of said ash-pit and one end of the shaft of said worm projecting out of said ash-pit, a gear mounted on said projecting shaft, a barrel mounted with one end in said ash-pit below said worm, a second worm mounted to rotate in said barrel, means whereby ashes falling from said channel are directed into said barrel and into contact with said second worm, a shaft operatively connected with the internal end of said second worm, said shaft being journaled in the end of said ash-pit and projecting beyond the same, a gear on the outer end of said shaft, said gear being adapted to intermesh with the gear on the shaft of the first worm, and a crank on the shaft of said first worm whereby both of said worms may be rotated to remove ashes from said ash-pit through said barrel.

1,108,945. TURBINE-WHEEL. MILTON E. THOMPSON, Ridgway, Pa. Filed July 2, 1912. Serial No. 707,173. (Cl. 121—57.)



1. A turbine wheel having a continuous peripheral groove with straight parallel walls, blades of uniform cross-section but with the wings cut away at one end to form a central shank, said shanks fitting in said groove, distance pieces in the groove filling the spaces between said shanks, and rivets passing transversely through the wheel each rivet engaging a blade shank and distance piece.

2. A turbine wheel having a peripheral groove, turbine blades of uniform cross-section except that their wings are cut away at the base to form central shanks fitting said groove, said shanks being insertible in said groove by movement in a radial direction, and distance pieces similarly insertible in said groove, said blades and distance pieces being riveted in said groove.

3. A turbine wheel having a peripheral groove, turbine blades of substantially the same width as the wheel and of uniform cross-section except that their wings are cut away at the base to form central shanks fitting said groove, said shanks being insertible in said groove by movement in a radial direction, and distance pieces similarly insertible in said groove, said blades and distance pieces being riveted in said groove.

4. A turbine wheel having a peripheral groove, turbine blades of uniform cross-section except that their wings are cut away at the base to form central shanks fitting said groove, said shanks being insertible in said groove by movement in a radial direction, distance pieces between said blades similarly insertible in said groove, and rivets, each engaging a blade and a distance piece securing the same together.

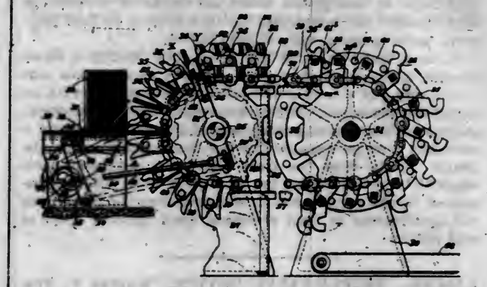
1,108,946. STAVE BENDING AND FORMING MACHINE. ERNEST C. THORSCHMIDT, New York, N. Y. Filed Apr. 16, 1914. Serial No. 832,285. (Cl. 144—256.)

1. In a stave forming machine, an endless carrier, means for supporting the staves on edge on said carrier through the major portion of the travel of the carrier, said supporting means comprising forms, and means for compressing the staves in said forms.

2. In a stave forming machine, an endless chain, forms carried by the chain having the forming surfaces in the direction of the width of the stave disposed substantially transverse to the chain, and means for compressing the staves between the forms.

3. In a stave forming machine, an endless carrier, means for supporting the staves on edge on said carrier comprising forms, and means acting in the direction of motion of the carrier for compressing the staves between the forms.

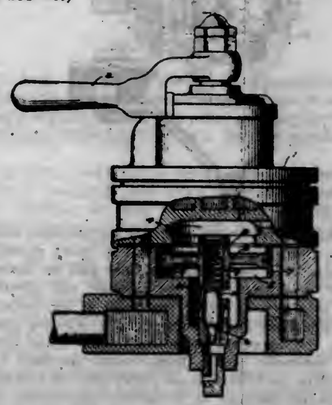
4. In a stave forming machine, an endless carrier comprising a chain, sprockets upon which the chain is carried, forms carried by the chain, means for feeding a stave between the forms during the upward travel of the chain upon one of the sprockets, and means for compressing the stave between the forms when it has reached substantially the top of the sprocket wheel.



5. In a stave forming machine, a pair of endless chains, forms carried thereby and having a limited movement longitudinally thereof, said forms having their forming surface directly in the width of the stave disposed substantially transverse to the chains, and means for pressing the forms toward each other to compress the staves therebetween.

[Claims 6 to 24 not printed in the Gazette.]

1,108,947. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 7, 1909. Serial No. 471,134. (Cl. 188—7.)



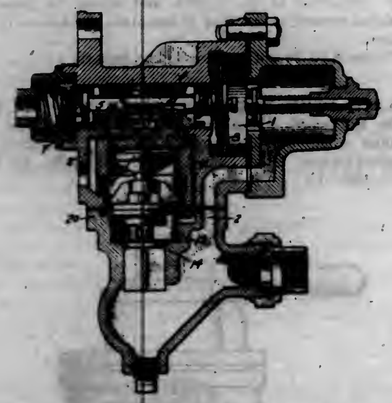
1. In a brake valve, the combination with means for supplying fluid to the train pipe for releasing the brakes, a movable abutment subject to the opposing pressures of the train pipe and a chamber and independent of said means and valve means operated by said abutment for controlling the discharge of air from the train pipe, of a restricted port opened by an excess of fluid pressure on the chamber side of said abutment for equalizing the fluid pressures on opposite sides of said abutment.

2. In a brake valve, the combination with a movable abutment subject to the opposing pressures of the train pipe and a chamber, valve means operated by said abutment for controlling the discharge of air from the train pipe and means separate from said abutment for supplying fluid to the train pipe, of restricted ports controlled by the movement of said abutment and adapted to be opened by an excess of fluid pressure on the chamber side of said abutment to permit the fluid pressures on opposite sides of the abutment to equalize.

3. In a brake valve of the usual type having a direct passage through which fluid is supplied to the train pipe, the combination with an equalising discharge valve mechanism comprising a piston subject to the opposing pressures of the train pipe and a chamber, a valve operated thereby for controlling the discharge of air from the train pipe, and restricted ports adapted to be opened by the movement of said piston under an excess of pressure in said chamber for permitting the equalization of fluid pressures upon opposite sides of said piston.

4. In a brake valve of the usual type having a direct passage through which fluid is supplied to the train pipe in running and release positions, the combination with an equalising discharge valve mechanism comprising a piston subject to the opposing pressures of the train pipe and a chamber, a valve operated thereby for controlling the discharge of air from the train pipe, and restricted ports adapted to be opened by the movement of said piston under an excess of pressure in said chamber for permitting the equalization of fluid pressures upon opposite sides of said piston.

1,108,948. TRIPLE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 8, 1911. Serial No. 607,245. (Cl. 188—15.)



1. A triple valve device comprising a movable abutment subject to train pipe pressure and a valve operated by said abutment for controlling an inlet and an outlet port of a local train pipe discharge passage, the effective capacity of said passage being regulated at the outlet port.

2. A triple valve device comprising a movable abutment subject to the opposing pressures of the train pipe and auxiliary reservoir and a main valve operated thereby for controlling an inlet and an outlet port of a local train pipe discharge passage in a service application of the brakes, said valve being adapted to regulate the capacity of said passage at the outlet port.

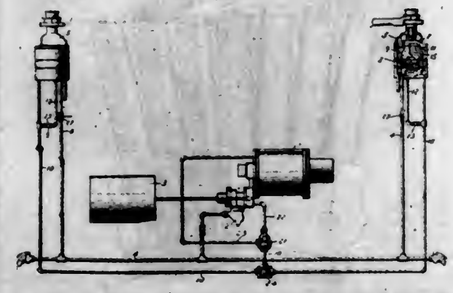
3. A triple valve device comprising a movable abutment subject to the opposing pressures of the train pipe and auxiliary reservoir and a main slide valve operated by said abutment upon a reduction in train pipe pressure for first opening an inlet port of a local train pipe discharge passage and then an outlet port of said discharge passage.

4. A triple valve device comprising a movable abutment subject to the opposing pressures of the train pipe and auxiliary reservoir and a main slide valve operated by said abutment upon a gradual reduction in train pipe pressure for first opening an inlet port of a local train pipe discharge passage and then an outlet port of said discharge passage to thereby effect a local venting of air from the train pipe.

5. A triple valve device comprising a movable abutment subject to the opposing pressures of the train pipe and auxiliary reservoir and a slide valve operated by said abutment upon a gradual reduction in train pipe pressure for first opening an inlet port of a local train pipe discharge passage and then an outlet port of said discharge passage and a brake cylinder service port.

[Claims 6 to 12 not printed in the Gazette.]

1,108,949. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1912. Serial No. 671,252. (Cl. 188—1.)



1. In a combined automatic and straight air brake, the combination with a train pipe and a straight air pipe, of a brake valve provided with a straight air service port and a straight air emergency port and separate pipe connections from said ports to the straight air pipe.

2. In a combined automatic and straight air brake, the combination with a train pipe for controlling the brakes automatically and a straight air pipe, of a brake valve having a port for straight air service and a port for supplying straight air in emergency, said ports having separate pipe connections to the straight air pipe and a cut-out cock in the straight air service pipe connection.

3. In a combined automatic and straight air brake, the combination with a train pipe for controlling the brakes automatically and a straight air pipe, of a brake valve having an always open straight air pipe connection for supplying straight air in automatic emergency position and a straight air pipe connection containing a cut-out cock for supplying air in straight air service.

4. In a combined automatic and straight air brake, the combination with a train pipe provided with a cut-out cock and adapted for controlling the brakes automatically and a straight air pipe, of a brake valve having a pipe connection with the straight air pipe provided with a cut-out cock and adapted for straight air service and a free open pipe connection with said straight air pipe for supplying straight air in automatic emergency position.

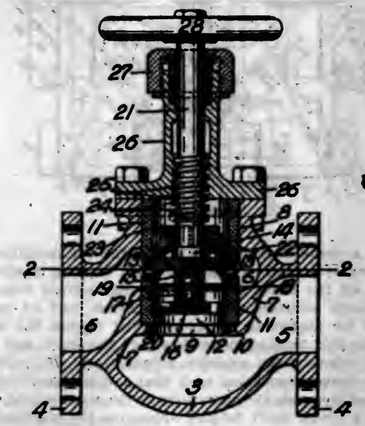
5. The combination with a brake valve and brake cylinder, of a straight air pipe leading from the brake cylinder to the brake valve and having two branches for supplying straight air to the brake cylinder, one of which is provided with a cut-out cock.

[Claim 6 not printed in the Gazette.]

1,108,950. REDUCING-VALVE. GEORGE H. VICER, Montreal, Quebec, Canada. Filed Aug. 23, 1912. Serial No. 716,777. (Cl. 137—4.)

1. A reducing valve comprising a body having inlet and outlet passages, a cylinder in said body communicating through its end with the inlet passage, ports in the curved wall of said cylinder communicating with the outlet passage, a piston valve in said cylinder an apertured disk carried by said piston valve and spaced therefrom, and means for reciprocating the valve to cover and uncover the ports.

2. A reducing valve comprising a body having inlet and outlet passages, a cylinder in said body communicating through its bottom with the inlet passage, ports in the curved wall of said cylinder communicating with the outlet passage, a piston in said cylinder having a concave lower face, an apertured disk carried by the piston limiting fluid flow through the bottom of the cylinder, and means for reciprocating the piston to cover and uncover the ports.



3. A reducing valve comprising a body having inlet and outlet passages, a cylinder in the body having apertures communicating with the outlet and with the inlet, a piston valve mounted to reciprocate in said cylinder having a downwardly extending projection and an apertured disk provided with a post revolubly mounted in said projection.

1,108,951. AUTOMOBILE COVER-ADJUSTER. GEORGE F. VON MOOS, Chicago, Ill., assignor of one-third to Edward G. Siggers, Washington, D. C. Filed May 7, 1913. Serial No. 766,213. (Cl. 21—62.)

1. A manipulating member for tops or covers of vehicles comprising a telescoping rod or bar having the ends provided with angle eye extensions adapted to the pivot pins of the front bow of a vehicle top.

2. A manipulating member for tops of vehicles having bows designed to be freed from their supports, comprising an extension member of a length to reach between the freed ends of the vehicle-top bow and provided with means constructed to temporarily secure the extension member to said bow.

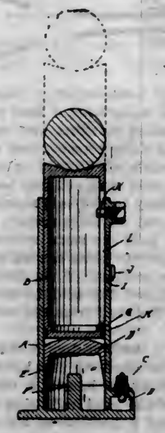
3. A manipulating member for tops of vehicles having bows designed to be freed from their supports, comprising an extension member of a length to reach between the freed ends of the vehicle top bow and provided with means for engaging said ends to temporarily secure the extension member thereto, said extension member consisting of two telescoping members in telescoping relation and provided with terminal eye blocks each projecting at an angle to the longitudinal axis of the extension member.

4. A manipulating member for tops of vehicles having bows designed to be freed from their supports, comprising an extension member of a length to reach between the freed ends of the vehicle top bow and provided with means for engaging said ends to temporarily secure the extension member thereto, said extension member consisting of two tubular members telescoping one in the other and provided with terminal eye blocks each projecting at an angle to the longitudinal axis of the extension member, the outer tubular member having the end receiving the other tubular member split longitudinally and exteriorly threaded, and a clamp nut applied to the threaded portion.

5. The combination with a vehicle top or cover of bow construction, of an extensible manipulating member extending across the top between the ends of the front bow thereof and provided with angle and extensions engaging the pivot pins of the said front bow.

[Claims 6 to 8 not printed in the Gazette.]

1,108,952. PNEUMATIC JACK. NATHANIEL B. WALES, Saginaw, Mich., assignor to Ralph C. Morley, Saginaw, Mich. Filed Mar. 9, 1914. Serial No. 823,610. (Cl. 138—9.)



1. A jack, comprising telescopically engaged stationary and movable members, an air-tight piston in one of said members bearing against the other member, and means for introducing compressed air into the first-mentioned member.

2. A jack, comprising a barrel member, a member telescopically engaging said barrel, an independent air-tight piston member in said barrel bearing against the telescopically-engaging member, and means for introducing compressed air into said barrel.

3. A pneumatic jack, comprising a hollow barrel member, a member telescopically engaging the same, a piston fitting within said barrel member having an annular knife-edge forming an air-seal, and a check-valve controlled inlet connection for said barrel.

4. A jack, comprising a hollow barrel member, a member telescopically engaging the same, a cupped piston fitting within said barrel member, provided with an annular knife-edge for forming an air-seal, means for introducing compressed air into said barrel and for exhausting the same, and a stop for limiting the downward movement of said cupped piston to protect said knife-edge from injury.

5. A jack, comprising a hollow barrel member, a member telescopically engaging the same, a piston forming an air-tight seal with said barrel member adapted to lift said telescopic member, means for introducing compressed air into said barrel, and a vent in said barrel unsealed by said piston at the limit of its upward movement.

[Claims 6 to 10 not printed in the Gazette.]

1,108,953. CAR-SEAL. HENRY J. WARD, Indiana Harbor, Ind., assignor to Barlow C. Dickey, Indiana Harbor, Ind. Filed Aug. 23, 1913. Serial No. 786,269. (Cl. 70—99.)

1. In a car seal, in combination, a chambered head having top and bottom walls and an open end, one of the said walls of the head being longitudinally channeled for a

portion of its length only to provide an outwardly facing transverse shoulder extending only part way across the said wall intermediate its ends, a strap adapted to enter the chamber of the head through its said open end, the strap being channeled to provide a transverse shoulder complementary to the said shoulder on the wall of the head, and a coöperating spring tongue and stop shoulder, one of said parts being mounted in the chamber of the head beyond the said transverse shoulder on the wall of the head and the other being carried by the tongue and the parts being so proportioned that the spring tongue is operatively engaged with the stop shoulder to hold the shackle against movement when the said two transverse shoulders are in contact.

2. In a car seal, in combination, a chambered head having an open end and comprising a base plate and a cover plate having interfolded margins and one of said plates having an outwardly facing transverse shoulder intermediate its ends, a shackle adapted to enter the chamber of the head through its said open end and having a transverse shoulder complementary to the said shoulder on one of the plates of the head and an intermediate plate engageable with the shackle to hold the same within the chamber of the head, the intermediate plate having one of its margins interfolded with the margins of the said base and cover plates at a point beyond the said transverse shoulder on one of the plates of the head from the said open end of the head.

3. In a car seal, in combination, a chambered head having an open end, one wall of the head being depressed throughout a portion of its length, a tongue formed integral with the wall of the head and being depressed to form a channel throughout a portion of its length, a shackle adapted to enter the head through its open end to engage the tongue, the shackle being of channel shape at the end which enters said head, the depressed portions of the head, tongue and end of the shackle being of complementary form and nested together when the end of the shackle is inserted in the head.

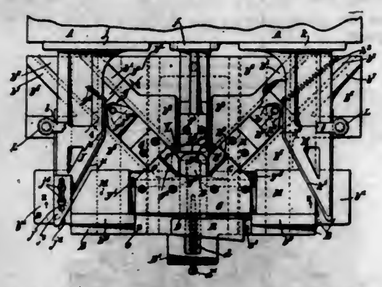
4. In a car seal, in combination, a continuous strip, adapted to be folded upon itself to form a chambered head and shackle, a plurality of countersunk portions provided throughout the length of the strip, the countersunk portions of the strip when folded being complementary to each other, one of the countersunk portions being provided with a tongue, the shackle having a countersunk end adapted to enter the open end of the head, the shoulders provided by the countersunk portions of the tongue and head forming a stop for the shackle and the countersunk part of the shackle forming a closure for the open end of the chambered head.

5. In a car seal, in combination, a chambered head having an open end, a tongue within the chamber of the head, the point of the tongue being inwardly facing and the tongue being provided with an outwardly facing shouldder, a shackle adapted to enter the chamber of the head provided with a pair of oppositely facing abutment shoulders, one for engaging the point of the tongue and the other for engaging the shoulder on the tongue.

[Claim 6 not printed in the Gazette.]

1,108,954. CRANK-SHAFT-FORGING APPARATUS. ARTHUR L. WARNER, Moline, Ill., assignor to Williams, White & Company, a Corporation of Illinois. Filed June 24, 1911. Serial No. 635,112. (Cl. 29—6.)

1. In a crank shaft forging apparatus, the combination of an actuator adapted to make a forward stroke, mechanism actuated by said actuator operative in the first part of each forward stroke for producing all the bends of the crank, and mechanism actuated by said actuator operative in the last part of each forward stroke thereof for upsetting the corners by displacing the crank wrist relatively toward the shaft line.



2. In a crank shaft forging apparatus the combination of a movable actuator or head, a shaft bending means for making all the bends of the crank, connections whereby the actuator actuates said bending means, and an upsetting die for displacing the crank wrist toward the shaft line after said bending means has bent the shaft, and connections whereby the actuator actuates said die, said respective connections being such that a single operation of the actuator causes the operations in the order named.

3. In a crank shaft forging apparatus the combination of a movable actuator or head, a shaft bending means for making all the bends of the crank, connections whereby the actuator actuates said bending means, an upsetting die actuated by said actuator for displacing the crank wrist toward the shaft line after said bending means has bent the shaft, a shifting anvil, and means whereby said anvil may be caused to resist said bending means during bending and may be caused to thereafter yield.

4. In a crank shaft forging apparatus the combination of a movable actuator or head, a shaft bending means for making all the bends of the crank, connections whereby the actuator actuates said bending means, an upsetting die actuated by said actuator for displacing the crank wrist toward the shaft line after said bending means has bent the shaft, and a shifting anvil having means to cause it to resist said beanding means during bending and thereafter to yield and recede during forging against the pressure of said upsetting die, and finally come to a stop to resist said die in the final pressing operation.

5. In a crank shaft forging apparatus the combination of a movable actuator or head adapted to make a forward stroke, a shaft bending means for making all the bends of the crank, connections whereby the actuator actuates said bending means in the first part of its stroke, and an upsetting die actuated by said actuator in the latter part of its stroke for bodily displacing the crank wrist toward the shaft line.

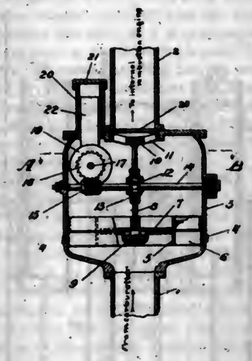
[Claims 6 to 30 not printed in the Gazette.]

1,108,955. LUBRICATING DEVICE FOR INTERNAL-COMBUSTION ENGINES. REYBURN WATRES, Scranton, Pa., assignor, by mesne assignments, to National Graphite Lubrication Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 11, 1913. Serial No. 760,393. (Cl. 184—60.)

1. A part comprising a passage for the gases of an internal combustion engine, a motor therein driven by the flow of gases, and an abrading or cutting means actuated by the motor to remove from a block of graphite finely divided particles for lubrication of the engine.

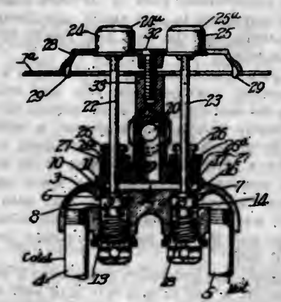
2. A part comprising an intake passage leading from the carbureter of an internal combustion engine, a motor of turbine type located in said passage and driven by the flow of gases therethrough, an abrading or cutting device also located in said passage and actuated by the motor, and means for supporting a block of graphite in contact with the abrading devices.

3. A part comprising a passage for the gases of an internal combustion engine, a motor of turbine type located in said passage and driven by the flow of gases therethrough and means actuated by the motor and adapted to remove from a block of graphite finely divided particles for lubrication of the engine.



4. In a lubricator adapted to be placed in a motor fluid line, a motor adapted to be operated by flow of the motor fluid, a block of graphite, and cutting means actuated by the motor to remove from the block finely divided particles for lubricating purposes.

1,108,956. LAVATORY-FIXTURE. EARL G. WATROUS, Chicago, Ill. Filed July 26, 1909. Serial No. 509,567. (Cl. 4—24.)



1. In a lavatory fixture, the combination, with the bowl and the top plate thereof, of a casing having a water supply connection, valve mechanism therein, a depressible operating rod for the valve mechanism, an arched plate arranged to be secured to said casing and to clamp the top plate of the bowl, and a button connected with said operating rod and passing through and operating in said plate; substantially as described.

2. In a lavatory fixture, the combination, with the bowl and the top plate thereof, of a casing having a water supply connection, valve mechanism therein, a depressible operating rod for the valve mechanism, an arched plate arranged to be secured to said casing and to clamp the top plate of the bowl, and a button connected with said operating rod and passing through and operating in said plate, said arched plate and button having coöperating means for preventing the rotation of the button in the plate.

3. In a lavatory fixture, the combination, with the bowl and the top plate thereof, of a casing having a water supply connection, valve mechanism therein, a depressible operating rod for the valve mechanism, an arched plate arranged to be secured to said casing and to clamp the top plate of the bowl, and a button connected with said operating rod and passing through and operating in said plate, said button having a bottom flange provided with lugs 31 and the plate having a projection 30 coöperating therewith to prevent rotation of the button in the plate.

4. In a lavatory fixture, the combination, with the bowl and its top plate, of a casing having a water supply connection and an extension coöperating with the underside of a portion of the bowl structure, valve mechanism within the casing, a depressible operating rod for the valve mechanism, a plate arranged to be secured to said extension and to clamp the top plate of the bowl and fixture together, and a button passing through the plate and connected with said rod, substantially as described.

5. In a lavatory fixture, the combination, with the bowl and its top plate, of a casing having hot and cold water supply connections, valve mechanisms therein for governing the hot and cold water, operating rods for said mechanisms, and a plate secured to said casing and having openings for the operating rods, said two plates having means for interlocking connection; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,108,957. SPECTACLES. JOEL C. WELLS, Southbridge, Mass. Filed Apr. 18, 1914. Serial No. 832,912. (Cl. 88—50.)

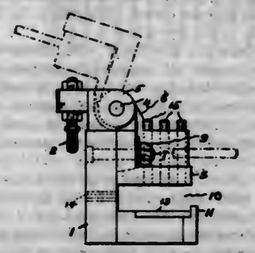
1. The combination with a support having an aperture formed therethrough, of a lower non-rotatable guard, an upper movable guard, a bearing for the latter, actuating means for the movable guard, and means engaged in the aperture in the bridge for securing the various parts in position, substantially as described.

2. In a spectacle mounting, the combination with a supporting portion, of a pivot carried thereby, a pair of independent guards mounted upon the pivot, means for locking one of said guards against rotation on the pivot, and means for rocking the other guard on the pivot.

3. In a spectacle mounting, the combination with a supporting portion, of a pivot carried thereby, a lower guard embracing the pivot and locked against rotation thereon, an upper guard rotatably mounted on the pivot and a spring carried by the pivot for actuating said upper guard.

4. In a spectacle mounting, the combination with a support, of a guard interlocking with the support, a pivot member having a portion clamping said guard in interlocking engagement with the support, and a second guard rotatably mounted on the pivot, means for manually operating said second guard in one direction and means for automatically actuating it in the opposite direction.

1,108,958. DIE-BLOCK. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Nov. 29, 1913. Serial No. 803,671. (Cl. 19—24.)



1. In a die block, the combination with a body member; of a cap pivotally connected therewith; and means for securing said cap to said body member in its closed position.

2. In a die block, the combination with a body member; of a cap or cover; means for pivotally securing the same to said body member; means for securing said cap to said body member against movement when in its closed position, said means permitting the movement of the cap from its open to its closed position without affecting the relative position of such means in said body member.

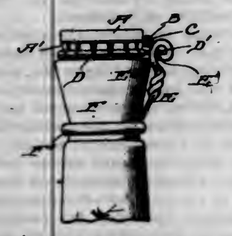
3. In a die block, the combination with a body member, having two walls at an angular relation to each other; of a cap; means for pivotally securing said cap to said body member; and threaded means for securing said cap to said body member when in its closed position.

4. In a die block, the combination with a body member; of a cap; means for inseparably and movably securing said cap to said body member, whereby it may occupy at different points of its movement a closed or an open position in relation to said body member; and means for securing said cap to said body member when in its closed position.

5. In a die block, the combination with a body member, having two walls at an angular relation to each other; of a retaining bolt fixed therein, the end thereof projecting through one wall thereof and over the other wall; a cap; and means for pivotally securing said cap to said body member, said cap passing over the projecting end of said bolt while being moved from its closed to its open position, and vice versa.

[Claim 6 not printed in the Gazette.]

1,108,959. BOTTLE-CAP. GEORGE A. WILLIAMS, Waterbury, Conn., assignor to The Williams Sealing Corporation, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 30, 1912. Serial No. 723,077. (Cl. 215—88.)



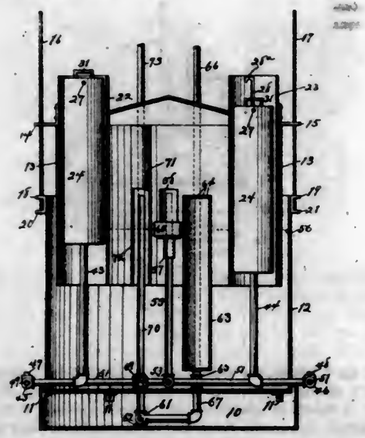
1. A bottle cap comprising a slotted apron, bearing sleeve, contracting ring and lever, the ends of the bearing sleeve being flattened to prevent rolling, said ring having a crimp.

2. A bottle cap having a slotted apron, bearing sleeve, with flattened ends, a contracting ring with hooked ends and a lever having converging sides adapted to engage said hooked ends and also bear against said sleeve, the inner end of said lever head being curved to engage the under side of said hooked ends when said lever is turned down.

1,108,960. ACETYLENE-GAS GENERATOR. EDGAR T. WINTER, Des Moines, Iowa. Filed Oct. 21, 1912. Serial No. 727,022. (Cl. 48—42.)

1. An acetylene gas generator, comprising a water tank open at its top, a gas bell open at its bottom and mounted within said tank, said gas bell being arranged for vertical movement relative to said tank, open-ended wells in said gas bell, carbid cartridges removably and replaceably mounted in said wells, pivoted means connecting said cartridges for maintaining one of said cartridges in inoperative and the other in operative position, gas communication between said wells and gas bell through said tank, and means for drawing gas from said bell.

2. An acetylene gas generator, comprising a water tank, a gas bell mounted in said tank, open-ended wells in said gas bell, shells adjustably mounted in said wells balanced connections between said shells, carbid cartridges removably and replaceably mounted in said shells, said cartridges formed with holes in their bottoms, gas pipes entering said holes and passing down through the shells and communicating with said gas bell, and means for drawing gas from said bell.



3. An acetylene gas generator, comprising a water tank, a bell mounted relative thereto, open-ended wells in said bell, shells formed with studs and slidingly mounted in said wells, vertical slots in said wells, the studs of the shells entering said slots, a lever pivotally mounted and formed with longitudinal slots in its ends engaging said studs carbid containers in said shells, gas communication between the shells and the bell, and means for drawing gas from said bell.

4. An acetylene gas generator, comprising a water tank, a gas bell therein, a well in said bell, said well open at its top above the bell and open at its bottom to said tank, a shell adjustably mounted in said well, a water seal in and carried by the lower portion of said shell, and removable therewith a cartridge holder open at its bottom and containing a removable cartridge, the lower end of said holder adapted to enter said water seal, said cartridge formed with water ports, gas communication between said cartridge and the gas bell, and means for drawing gas from said bell.

5. An acetylene gas generator, comprising a water tank, a gas bell therein, a well in said bell, said well open at its top above the bell and open at its bottom to said tank, a gas pipe rising through said well and leading to the gas bell, an open-ended shell adjustably mounted in said well, a water seal in and carried by the lower portion of said shell, and removable therewith a cartridge holder open at its bottom and containing a cartridge, the cartridge holder adapted to be mounted in said shell and to enter said water seal, the cartridge formed with means for receiving the upper end of said gas pipe and also formed with water ports, and means for drawing gas from said bell.

[Claim 6 not printed in the Gazette.]

1,108,961. INNER-SEALED RECEPTACLE. SAMUEL C. YEATON, New York, N. Y. Filed Nov. 3, 1913. Serial No. 799,013. (Cl. 215—17.)

1. The combination with a receptacle having a seal seat formed on the interior thereof and an abutment on the interior and above the seat, of a seal detachably supported by the seat having a yieldable upwardly bulged portion and upstanding locking fingers projecting therefrom engaged by the said abutment and releasably responsive to the depression of said bulged portion whereby said fingers move inwardly to clear the abutment.

2. The combination with a receptacle having a seal seat formed on the interior thereof and an abutment on the interior and above the seat, of a seal detachably supported by the seat having a yieldable upwardly bulged portion and a plurality of spaced locking fingers projecting therefrom engaged by the said abutment and releasably responsive to the depression of said bulged portion whereby said fingers are brought inwardly into contact with each other to clear the abutment and to resist the further depression of the bulged portion.

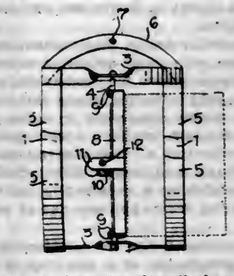
3. The combination with a receptacle having a seal seat formed on the interior thereof and an abutment on the interior and above the seat, of a seal detachably supported by the seat having a yieldable upwardly bulged portion and a plurality of spaced locking fingers projecting therefrom engaged by the said abutment and releasably responsive to the depression of said bulged portion whereby said fingers are brought inwardly into contact with each other to clear the abutment and to resist the further depression of the bulged portion before coming into a plane.

4. The combination with a receptacle having a seal seat formed on the interior thereof and an abutment on the interior and above the seat, of a seal detachably supported by the seat having a yieldable upwardly bulged portion and upstanding locking fingers projecting therefrom engaged at their extreme upper ends by the said abutment and releasably responsive to the depression of said bulged portion whereby said fingers move inwardly to clear the abutment.

1,108,962. FLEXIBLE FILM. AUGUST W. ANDERSON, Vancouver, British Columbia, Canada. Filed Jan. 17, 1913. Serial No. 742,685. (Cl. 206—59.)

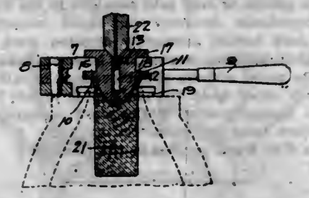
A thin flat band formed as a coil, the flat of the band being normal to the axis of the coil, and the band passing from one end of the coil to the other outside of the coil in reverse conical spirals, said spirals being located at the same side of the central axis of the coil, substantially as shown and described.

1,108,963. BOOK-HOLDER. HENRY ANDREE, Rossville, Md., assignor of one-half to George F. Moersberger, Baltimore, Md. Filed Dec. 19, 1913. Serial No. 807,773. (Cl. 45—58.)



A device of the character described comprising a supporting member, a pintle mounted therein and disposed on an upward and rearwardly directed incline, coacting binding members provided with rearwardly disposed perforate ears through which the pintle passes, a rearwardly directed extension carried by each of the binding members, and an expansible member interposed between the extensions, the rear longitudinal margins of the binding members being provided with inwardly directed flanges for limiting insertion between said binding members.

1,108,964. COMBINED NECK-RING AND FORMER FOR MAKING HOLLOW GLASSWARE. CHARLES V. ARBOGAST, Stowe township, Allegheny county, Pa. Filed June 15, 1912. Serial No. 703,907. (Cl. 49—65.)



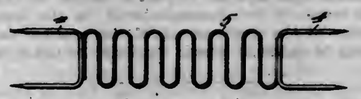
1. In a combined neck ring and former for making hollow glassware, the combination of a neck-ring member composed of two hinged sections, a one-piece inside former, an interengaging connection between said neck-ring member and former, and means for controlling the extent of opening of said ring member, whereby said ring-member supports said former in its open position.

2. In a combined neck-ring and former for making hollow glassware, the combination of a neck-ring member composed of two hinged sections having recesses formed in their inner faces, a one piece inside former having a collar adapted to engage said recesses in the closed position of the neck-ring member, means for controlling the extent of opening of said neck ring member, whereby said neck ring meinber supports said former in its open position to release the article formed therein.

3. In a combined neck-ring and former for making hollow glassware, the combination of a neck-ring member composed of two hinged sections, a one piece inside former having a projection engaging said neck-ring member, and means for controlling the extent of opening of said ring member, whereby said ring member supports said former in its open position.

4. In apparatus for forming hollow glass articles, the combination of a suitable receptacle to receive the plastic glass, a neck-ring member composed of two hinged portions, a one-piece inside former supported directly by said neck-ring portions in the open and closed positions of said portions, and means for forcing glass from said receptacle into said neck-ring member and around the former.

1,108,965. FLY-CLOSER FOR BOOTS AND SHOES. CHARLES A. BONNEY, St. Louis, Mo., assignor to United Shoe Machinery Company, a Corporation of New Jersey. Filed Nov. 8, 1909, Serial No. 526,859. Renewed Oct. 21, 1911. Serial No. 656,039. (Cl. 12—113.)



1. A detachable fly-closer for shoes comprising two staple shaped members having oppositely and outwardly directed work engaging prongs and a spring whereon said members are mounted and whereby said members are normally separated from each other substantially as described.

2. A detachable fly-closer for shoes comprising two staple shaped members having oppositely and outwardly directed work engaging prongs and a sinuous spring whereon said members are mounted and whereby said members are normally kept separated from each other substantially as described.

3. A detachable fly-closer for button shoes, comprising means to engage each fly and yielding means uniting said

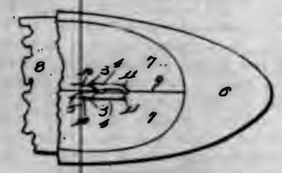
engaging means, said engaging means being constructed and arranged to be attached either to the inside or to the outside of a shoe upper and to be readily detachable even while the flies are under tension whether attached to the inside or outside of the upper.

4. A detachable fly-closer for shoes comprising two oppositely directed members each having outwardly directed prongs arranged to engage and retain the linings of opposite flies of a shoe upper, and a spring connecting said members and arranged to permit and facilitate oppositely moving said members to effect simultaneous insertion of the prongs of both said members in the work.

5. A detachable fly-closer for shoes comprising two members each having outwardly directed work engaging parts, and a yielding connection between said members arranged to resist withdrawing movement of said members toward each other when the fastener is in use to prevent accidental disengagement of the work engaging parts of said members from the work.

[Claims 6 to 8 not printed in the Gazette.]

1,108,966. FLY-CLOSER FOR BOOTS AND SHOES. CHARLES A. BONNEY, St. Louis, Mo., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 16, 1909, Serial No. 513,129. Renewed Oct. 21, 1911. Serial No. 656,040. (Cl. 12—113.)



1. A fly-closer for button shoes, consisting of two parallel double-pointed needles, a plate carrying each of said needles, and a hinge connection between said plates, substantially as described.

2. A fly-closer for button shoes, consisting of two parallel double-pointed needles, a plate carrying each of said needles, and a hinge connection between said plates, the plates being of such length and being so secured to said needles as to provide a device having two shorter needle points at one end and two longer needle points at the opposite end, substantially as described.

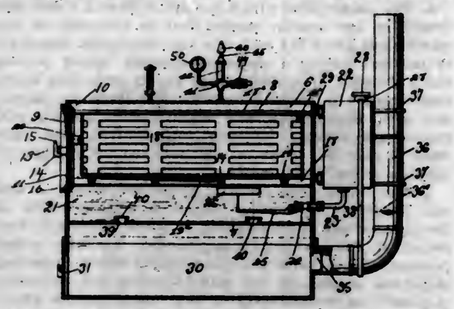
3. A detachable fly-closer for shoes comprising a pair of engaging means adapted to pierce the lining of one fly, and means to engage the lining of the opposite fly, and a yielding connection uniting said engaging means whereby the fly-closer may conform automatically to the curvature of a last, said engaging means and said connection being constructed and arranged to be detached while the flies are under tension.

4. A fly-closer for shoes constructed and arranged to be detached while the flies are under tension, comprising two members hinged together in such a manner as to permit the fly-closer to accommodate itself to the transverse curvature of the crown of a last, each member having a plurality of means to engage the lining of one fly only.

1,108,967. STEAM COOKING APPARATUS. JAMES L. CARBERY, Rockhill, S. C. Filed Mar. 22, 1913. Serial No. 756,241. (Cl. 126—346.)

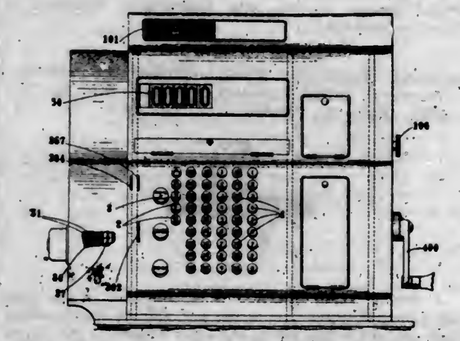
1. In apparatus of the character described, a main closed shell having its upper portion constituting a processing chamber and its lower portion a water receiving chamber, horizontal rails mounted within the processing chamber, a wheeled carriage mounted to travel upon the rails, means mounted within the main closed shell for preventing the carriage from tilting when moved to its outer position, and means to heat the processing chamber.

2. In apparatus of the character described, a main closed shell having its upper portion constituting a processing chamber and its lower portion a water receiving chamber, substantially horizontal rails mounted within the processing chamber, a carriage mounted to travel longitudinally upon the rails, guide rails disposed near the



carriage, an element attached to the carriage and operating beneath and in slidable engagement with the guide rails, and means to heat the water receiving chamber.

1,108,968. CASH-REGISTER. THOMAS CARROLL, Oakwood, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 10, 1909. Serial No. 501,235. (Cl. 235—3.)



1. In an accounting device, the combination with a plurality of totalizers, of a single actuating means common to all of said totalizers, means for establishing a coöperative relation between said actuating means and any one of the totalizers, said means comprising a series of operating connections one for each totalizer, a main operating device common to and operating all of said operating connections, a series of keys and means differentially controlled thereby for establishing a coöperative relation between said main operating device and any one of said operating connections.

2. In an accounting device, the combination with a plurality of totalizers, of a single actuating means common to all of said totalizers, means for establishing a coöperative relation between said actuating means and any one of the totalizers, said means comprising a series of operating connections one for each totalizer, a main operating device common to and operating all of said operating connections, manipulative means, and means differentially controlled thereby for establishing a coöperative relation between said main operating device and any one of said operating connections.

3. In an accounting device, the combination with a plurality of cash receptacles, of a plurality of latching devices, one for each receptacle each including a latch and each including a member always connected thereto operated at each operation of the machine, an actuating device having a constant movement at each operation of the machine and operatively connected to all of said members,

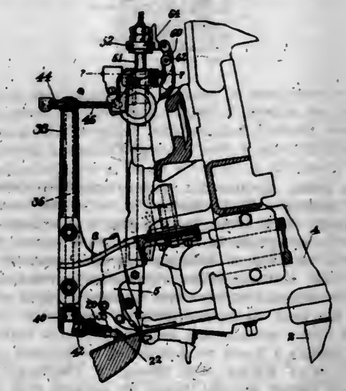
a series of keys, and means differentially controlled thereby for rendering one of said members effective to release its appropriate latch at an operation of the actuating device,

4. In an accounting device, the combination with a plurality of cash receptacles, of a plurality of latching devices, one for each receptacle, each including a latch and each including a member always connected thereto operated at each operation of the machine, an actuating device having a constant movement at each operation of the machine and operatively connected to all of said members, manipulative means, and means differentially controlled thereby for rendering one of said members effective to release its appropriate latch at an operation of the actuating device.

5. In an accounting device, the combination with a totalizer, of means for differentially actuating the same, manipulative means for determining the extent of such differential actuation, a main actuator for restoring said actuating means to normal position, devices for establishing a coöperative relation between said totalizer and its actuating means during the return movement of the latter, an obstructing device carried by the actuating means for limiting its return movement, an auxiliary actuator, and means actuated by the totalizer for simultaneously disabling said obstructing means and establishing a coöperative relation between said actuating means and auxiliary actuator whereby to give an extra degree of motion to said actuating means and the totalizer.

[Claims 6 to 57 not printed in the Gazette.]

1,108,969. LASTING-MACHINE. ARTHUR CASELTON, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 2, 1911. Serial No. 652,270. (Cl. 12—2.)



1. In a machine of the class described, a tread rest constructed to be automatically adjusted about predetermined intersecting axes extending substantially perpendicular to one another by contact with the work to suit variations in the inclination of the surface engaged by said rest.

2. In a machine of the class described, a tread rest having a movable work-engaging portion adjustable about predetermined intersecting axes extending substantially perpendicular to one another for variations in the position of the surface engaged thereby.

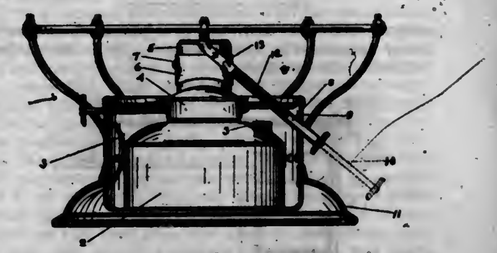
3. In a machine of the class described, a tread rest provided with a work-engaging portion having provisions for adjustment for variations in the inclination of the work in a transverse direction and also about a predetermined axis extending lengthwise of the shoe.

4. In a machine of the class described, a tread rest provided with a work-engaging portion having provisions for adjustment for variations in the work in a longitudinal direction about a predetermined axis extending obliquely upwardly and outwardly substantially in the median line of the machine.

5. In a machine of the class described, a tread rest provided with a work-engaging portion having provisions for adjustment about predetermined axes extending substantially horizontally and located adjacent to the tread face of the work for variations in the longitudinal and transverse inclinations of the work.

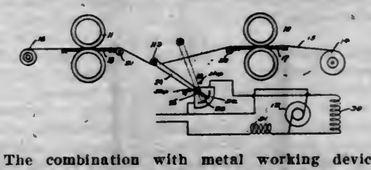
[Claims 6 to 32 not printed in the Gazette.]

1,108,970. LIGHTING DEVICE. JOHN B. CHEVALLARD, Jr., Columbus, Ohio. Filed Feb. 16, 1914. Serial No. 818,883. (Cl. 67—9.)



A lighting device comprising a tubular guide, a plunger in said guide, said guide being open at its upper end, a match igniter disposed adjacent the upper open end, a box-like match magazine carried by said guide and in communication therewith throughout its length, said magazine being provided with an aperture in its end adjacent the side opposite to that attached to said guide, a follower head on the inside of said magazine, the corner of said follower head with which said plunger first contacts when it is moved to eject a match being beveled, and spring means for forcing said follower head toward said guide, said spring means being such as to permit the follower head to be moved to a position in the rear of said magazine behind said aperture to permit loading of the magazine.

1,108,971. SPEED-CONTROLLING MECHANISM FOR ROLLING-MILLS AND THE LIKE. WALTER R. CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 11, 1913. Serial No. 753,629. (Cl. 80—35.)



1. The combination with metal working devices arranged in tandem for simultaneous operation on a length of stock, of a prime mover for one of said devices automatically controlled by variations in the slackness of the stock between said devices; substantially as described.

2. The combination with metal working devices arranged for simultaneous operation on successive portions of a length of stock, and separate prime movers for driving said devices, of a speed adjusting device for one of said prime movers actuated by variations in the slackness of the stock; substantially as described.

3. The combination with metal working devices arranged in tandem for simultaneous action on successive portions of an advancing length of stock fed by one of said devices to the other, and separate means for driving said devices, of a controlling device for one of said means actuated automatically by variations in the slackness of the stock between said metal working devices; substantially as described.

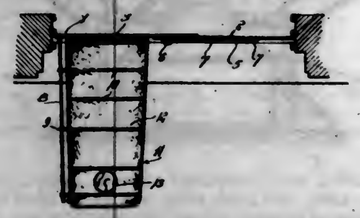
4. The combination with metal working devices arranged for simultaneous operation on a length of stock fed from one of said devices to the other, of motors for driv-

ing said devices separately, and a speed adjusting device for one of said motors actuated automatically by variations in the slackness of the stock between said metal working devices; substantially as described.

5. The combination with separate metal working devices arranged in tandem for operation on a length of stock fed from one of said devices to the other, of means for driving one of said devices, an electric motor for driving the other device, and controlling means for said electric motor actuated automatically by variations in the slackness of the stock; substantially as described.

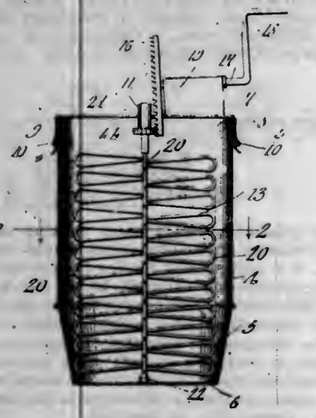
[Claims 6 to 26 not printed in the Gazette.]

1,108,972. FRESH-AIR HOOD. SARAH E. CLINTON, Grand Rapids, Wis. Filed June 8, 1912. Serial No. 702,486. (Cl. 98—31.)



In a device of the class described, the combination with a plate which is provided with an air inlet, of a bar pivoted to the plate, and a plurality of alined hoops, certain of which bear rings for slidably engaging the bar, a cover of flexible material inclosing all of the hoops to provide a hood open at one end, said hood being adapted to telescope upon sliding the rings upon the bar, whereby the open end of said hood may be swung from registry with the air inlet, said hood being also adapted when extended to have its open end register with said inlet.

1,108,973. EGG AND CREAM WHIPPER. HARRY A. COVEY, Akron, Ohio. Filed Dec. 29, 1913. Serial No. 809,331. (Cl. 107—38.)



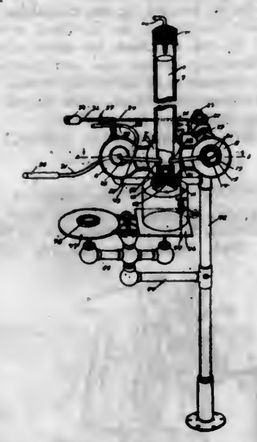
1. A beater comprising a plurality of coils including outstanding loops and with the upper and lower extremities thereof bent into longitudinal alinement and forming trunnions for the rotatable mounting of the beater, the said beater being longitudinally expansible and contractible.

2. A beater comprising a plurality of superimposed distichous coils connected at their inner extremities, each coil narrowing or tapering toward the inner extremity which is the axis of the beater, said beater being longitudinally expansible and contractible and of substantially constant width throughout a large range of contraction and expansion.

3. A beater comprising a plurality of coils connected at their inner extremities, said beater being longitudinally expansible and contractible and of substantially constant width throughout a large range of contraction and expansion.

4. An apparatus of the class described, comprising a receptacle, a bearing carried by the bottom thereof, a detachable lid with a bearing therein, and a longitudinally expansible and contractible beater positioned within said receptacle engaging the bearings of the lid and bottom, the normal longitudinal length of said beater being relatively greater than the distance between said bearings, providing for the securement of the beater within the bearings prior to the engagement of the receptacle by the lid.

1,108,974. FILLING-MACHINE. JOHN P. CRANDALL, Buffalo, N. Y. Filed Nov. 22, 1910. Serial No. 593,647. (Cl. 73—181.)



1. In a filling machine the combination with scales, capable of holding a liquid receptacle; of an inclosed casing, a supply valve within said casing, a discharge valve within said casing, means for opening said valves, means for holding said valves open against their normal tendency to close, and means for automatically tripping and thereby closing said valves when a predetermined amount of liquid has been discharged from the machine.

2. In a filling machine the combination with scales, capable of holding a liquid receptacle; of an inclosed casing, a supply valve within said casing, a discharge valve within said casing, manual means for opening first one of said valves and then the other in the reverse of the order above named, means for holding said valves open against their normal tendency to close, and automatic means for tripping and thereby closing said valves in the order named when a predetermined amount of liquid has been discharged from said machine.

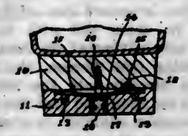
3. In a filling machine the combination with scales, capable of holding a liquid receptacle; of an inclosed casing, a supply valve within said casing, a discharge valve within said casing, manual means for opening first one of said valves and then the other in the reverse of the order above named, means for holding said valves open against their normal tendency to close, and means connecting said valves and said scales, whereby said valves may be automatically tripped and thereby closed in the order above named when a predetermined amount of liquid has been discharged from said machine.

4. In a filling machine the combination with scales, capable of holding a liquid receptacle; of an inclosed casing, a discharge valve disposed within and at the bottom of said casing, a closed tube rising vertically from said casing above said discharge valve, a discharge valve stem slidably mounted in said tube and said casing, a supply valve mounted within said casing and connected with a suitable supply of liquid, manual means for opening said discharge valve and said supply valve in the order named, means for holding said valves open against their normal tendency to close, and automatic means for tripping and thereby closing said valves in the reverse of the order above named when a predetermined amount of liquid has been discharged from said machine.

5. In a filling machine the combination with scales, capable of holding a liquid receptacle; of an inclosed casing, a discharge valve disposed within and at the bottom of said casing, a closed tube rising vertically from said casing above said discharge valve, a discharge valve stem slidably mounted in said tube and said casing, a supply valve comprising a hollow tapered plug carried by said casing and connected with a suitable supply of liquid, a valve seat member rotatably mounted upon said plug, said supply valve plug and seat each being provided with lateral slots, manual means for opening said discharge valve and said supply valve in the order named, means for holding said valves open against their normal tendency to close, and automatic means for tripping and thereby closing said valves in the reverse of the order above named when a predetermined amount of liquid has been discharged from said machine.

[Claims 6 to 8 not printed in the Gazette.]

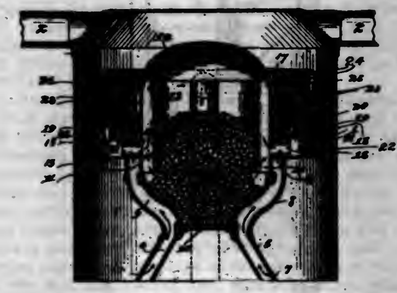
1,108,975. SHOE-HEEL. EDWARD CUVELIER, Halifax, Nova Scotia, Canada. Filed Mar. 2, 1914. Serial No. 821,955. (Cl. 36—36.)



1. In a shoe-heel, a heel-proper, a heel-piece, a dished metallic plate formed with offset Z flanges on one side and spurs on the other side secured thereto, said heel-piece having a single transverse orifice approximately centrally situated, and a single wood-screw arranged to bind the parts together.

2. In a shoe-heel, a heel-proper, a heel-piece, a metallic plate formed of a single piece of sheet metal deformed to have Z flanges on one side and spurs on the other side, said plate flanges being embedded in said heel-piece, and a single centrally situated binding member arranged to secure said plate against said heel-proper and cause said spurs to engage said heel-proper.

1,108,976. FURNACE. FRANCIS J. DOYLE, Chicago, Ill. Filed Oct. 5, 1909, Serial No. 521,103. Renewed Jan. 27, 1913. Serial No. 744,590. (Cl. 126—102.)



1. A furnace comprising in combination, an outer casing, a base member, a fire bowl mounted upon said base member, said base member and fire bowl being provided with a surrounding air passage communicating at one end with the outer atmosphere, a cylindric member mounted upon said fire bowl and constituting the primary combustion chamber of the furnace, an auxiliary combustion chamber within said outer casing and having a circuitous passage therethrough and connecting members forming passageways from said primary combustion chamber to said auxiliary combustion chamber through which the gases of combustion pass, said connecting members having communication with said air passage, whereby the gases of combustion are supplied with heated atmospheric air as they pass from said primary combustion chamber into said auxiliary combustion chamber, for the purpose described.

2. In a furnace, the combination with the outer casing, fire bowl and combustion chamber thereof, of one or more auxiliary combustion chambers within said outer casing and arranged exteriorly of said primary combustion chamber, connecting pipes between said primary combustion chamber and said auxiliary combustion chamber through which the gases of combustion from said primary combustion chamber pass into said auxiliary combustion chambers, there being air passageways adjacent said fire bowl and communicating at one end with the outer atmosphere and at its other end with said connecting pipes whereby heated atmospheric air is mixed with said gases of combustion as they pass from said primary combustion chamber into said auxiliary combustion chamber, said auxiliary combustion chamber being provided with partition members forming a circuitous passage therethrough wherein a more complete and intense combustion of said gases takes place, and dampers in said connecting pipes for regulating and controlling the communication between said primary and auxiliary combustion chambers, substantially as described.

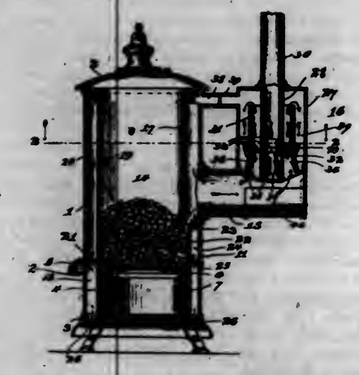
3. A furnace comprising in combination a conical base member with double walls, a fire bowl with double walls mounted upon said base member, whereby an air passage is provided between the walls of said base member and fire bowl with an opening to the outer atmosphere, a cylindrical member mounted upon said fire bowl and forming the primary combustion chamber thereof, outleading pipes from said primary combustion chamber which also have communication with said air passage, and a regenerative device communicating with said outleading pipes into which the products of combustion pass mixed with heated atmospheric air from said air passage, said regenerative device comprising a closed chamber provided with partition members forming a circuitous passage within which a more complete and intense combustion takes place, and an eduction pipe leading from said regenerative device, substantially as described.

4. In a furnace, the combination with the fire bowl and combustion chamber thereof, of an outer wall above said fire bowl forming an air space therebetween which has communication with the outer atmosphere, one or more auxiliary combustion chambers mounted upon said furnace and having communication with the primary combustion chamber thereof and with said air space, whereby the gases of combustion from said primary combustion chamber are supplied with heated atmospheric air as they pass into said auxiliary combustion chambers, dampers for controlling the admission of said gases of combustion to said auxiliary combustion chambers, said auxiliary combustion chambers being provided with partition members forming a circuitous passage therethrough and a connecting pipe into which said auxiliary combustion chamber passages merge, said connecting pipe discharging into the smoke chimney, substantially as and for the purpose described.

5. In a furnace, the combination with the fire bowl and combination chamber thereof and a grate in the fire bowl, of a plurality of flues within the combustion chamber communicating at their upper and lower ends with the combustion chamber to receive gases and products of combustion from the burning fuel, an outlet from each flue to the exterior for the products of combustion and gases, means for supplying air to the products of combustion and gases as they enter the outlets, a common auxiliary combustion chamber encircling in greater part the combustion cham-

ber and connected with each of said outlets, said auxiliary combustion chamber being constructed to afford a circuitous path for the hot products of combustion, gas and air to cause a more thorough mixture and combustion, an outlet from said auxiliary combustion chamber, an outer casing or shell containing the fire bowl combustion chamber and auxiliary combustion chamber, and means for distributing the heated air from said casing.

1,108,977. STOVE. FRANCIS J. DOYLE, Chicago, Ill. Filed Oct. 5, 1909. Serial No. 521,105. Renewed Jan. 27, 1913. Serial No. 744,591. (Cl. 126—77.)



1. In a heating stove, the combination with the grate and outer casing thereof forming the primary combustion chamber, of a partition member mounted within said casing above said grate and forming with said casing a passage which communicates at both ends with said primary combustion chamber, a second partition member mounted within said outer casing and forming with said casing an air passage which communicates with the outer atmosphere at one end and with said combustion chamber at its other end, and an auxiliary combustion chamber mounted upon said stove and communicating with said first passage to receive the gases of combustion therefrom mixed with supplies of heated air from said second passage, said auxiliary combustion chamber having a circuitous passage therethrough whereby a more complete and intense combustion is maintained during the passage of said gases therethrough.

2. In a stove, the combination with the grate and outer casing which forms the primary combustion chamber, of partition members within said casing above said grate and forming air passages between said partition members and outer casing, which communicate at their upper ends with said primary combustion chamber, one of said partition members being open to admit the gases of combustion from said primary combustion chamber, a partition member within said casing below said grate and forming an air space between said partition member and outer casing which communicates with one of said air passages and with the outer atmosphere, and an auxiliary combustion chamber arranged to receive the gases of combustion and supplies of heated air from said primary combustion chamber and air passages, said auxiliary combustion chamber being provided with a circuitous passage therethrough wherein said gases and air are thoroughly mixed and a more complete and intense combustion takes place, substantially as shown and described.

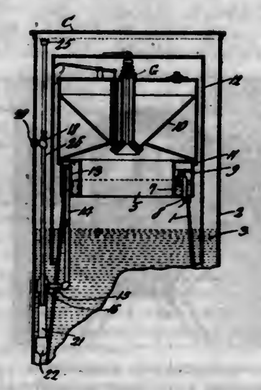
3. In a heating stove, the combination with the combustion chamber thereof, of an auxiliary combustion chamber comprising an elbow-like member attached thereto and communicating therewith at one end, said elbow-like member being provided in its upturned portion with a plurality of concentrically arranged partitions forming a circuitous passage therethrough and discharging into an upwardly leading eduction pipe, means for feeding heated air to the gases of combustion as they pass into said auxiliary combustion chamber, whereby a more complete and intense combustion is had, and a direct draft communication between the upper portion of said auxiliary combustion chamber and the combustion chamber of said stove, said draft communication being provided with a manually operable damper, substantially as shown and described.

4. In a heating stove, the combination with an outer casing forming a primary combustion chamber, a grate at the lower end of said chamber for receiving the fuel to be burned, a flue running upwardly through said combustion chamber and communicating at its upper end with the top of said combustion chamber and at its lower end with the atmosphere, a second flue within said chamber communicating at its upper end with the upper end of said chamber and terminating at its lower end near said grate and the burning fuel thereon, the hot products of combustion flowing directly into the lower end of said second flue, and the air from said first flue flowing through the top of the combustion chamber to mingle with the gas driven from said fuel to the upper part of said chamber and to flow with said gas into the second flue to mingle with the hot products of combustion flowing into the lower end of said second flue, and an auxiliary combustion chamber communicating with said second flue and providing a circuitous passageway to cause more thorough mixture and combustion of the mixture of gas, air and hot products of combustion received from said second flue.

5. In a heating stove, the combination with an outer casing forming a primary combustion chamber, a grate at the lower end of said chamber for receiving fuel to be burned, a flue running upwardly through said combustion chamber and communicating at its upper end with the top of said combustion chamber and at its lower end with the atmosphere, a second flue within said chamber communicating at its upper end with the upper end of said chamber and terminating at its lower end near said grate and the burning fuel thereon, the hot products of combustion flowing directly into the lower end of said second flue, and the air from said first flue flowing through the top of the combustion chamber to mingle with the gas driven from said fuel to the upper part of said chamber and to flow with said gas into the second flue to mingle with the hot products of combustion flowing into the lower end of said second flue, an auxiliary combustion chamber communicating with said second flue and providing a circuitous passageway to cause more thorough mixture and combustion of the mixture of gas, air and hot products of combustion received from said second flue, and an air chamber adjacent the burning fuel for heating the air flowing through said first flue.

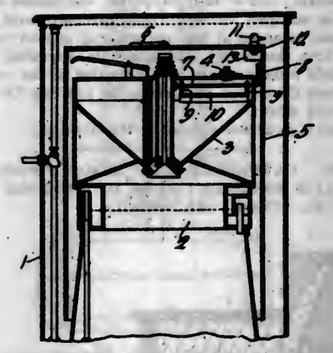
[Claims 6 and 7 not printed in the Gazette.]

1,108,978. GAS-WASHER FOR ACETYLENE-GENERATORS. ALBERT DUIS, Streator, Ill. Filed Mar. 21, 1914. Serial No. 826,284. (Cl. 48—38.)



An acetylene gas generator, including a generating chamber open at the upper end, an annular gas washing member fitting upon the upper end thereof, a carbid holder supported by the gas washing chamber, means for feeding carbid from the carbid holder to the generating chamber, a pipe leading from the gas washing member exteriorly of the generating chamber, a U-shaped condensate receiving member into which said pipe empties, a draining pipe connected to one terminal of said condensate member, and a gas directing conduit leading from the other terminal of the U-shaped member.

1,108,979. RESERVE CARBID-HOLDER FOR ACETYLENE-GAS GENERATORS. ALBERT DUIS, Streator, Ill. Filed Mar. 21, 1914. Serial No. 826,285. (Cl. 48—38.)



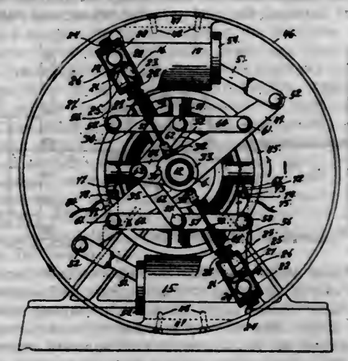
1. In an acetylene gas generator, the combination with a main carbid holder and a bell disposed thereabove for vertical and oscillatory movements, of a reserve carbid receptacle mounted within the main carbid holder, and coöperable means carried thereby and the bell, whereby when the bell is in its lowermost position and is oscillated, the reserve carbid receptacle is emptied.

2. In an acetylene gas generator, the combination with a main carbid holder and a bell mounted to surround the same for oscillatory and vertical movements, of a reserve carbid holder, including a receptacle mounted in the upper portion of the main carbid holder for swinging movement, an arm carried thereby and projecting exteriorly of the main carbid holder, and a lug carried by and projecting from the under side of the bell for disposition in the path of said arm whereby when the bell is oscillated, the reserve carbid receptacle is tilted and emptied.

3. In an acetylene gas generator, the combination with a main carbid holder provided with a carbid inlet and a bell surrounding the same for oscillatory and vertical movements, of a reserve carbid holder, including a rod mounted for swinging movement within the main carbid holder and directly below the carbid inlet thereof, a reserve carbid receptacle suspended from said rod and movable therewith, an arm connected to the outer end of the rod and projecting exteriorly of and above the main carbid holder, and means carried by the bell for disposition in the path of to engage said arm when the bell is in its lowermost position and the bell is oscillated.

4. In an acetylene gas generator, the combination with a main carbid holder provided with a carbid inlet and a bell surrounding the same for oscillatory and vertical movements, of a reserve carbid holder, including a rod mounted for swinging movement within the main carbid holder and directly below the carbid inlet thereof, a reserve carbid receptacle suspended from said rod and movable therewith, an arm connected to the outer end of the rod and projecting exteriorly of and above the main carbid holder, and a plate attached to the under side of the dome of the bell and having two parallel flanges extending therefrom for disposition in the path of to engage the arm of the rod when the bell is in its lowermost position, whereby when the bell is oscillated the rod and receptacle are tilted to empty the reserve carbid.

1,108,980. ROTARY EXPLOSIVE-ENGINE. OLOF F. ENQVIST, Denver, Colo. Filed Dec. 18, 1911, Serial No. 666,489. Renewed Dec. 7, 1912. Serial No. 735,542. (Cl. 123—43.)



1. In a rotary explosive engine, the combination with a shaft having a crank, of a cylinder mounted to rotate around said shaft, a piston arranged to reciprocate in said cylinder, an arm journaled on the shaft to rotate independently of the cylinder, a toggle joint connection between the said arm and the cylinder, and a link connection between the crank of the shaft and the said toggle joint.

2. In a rotary explosive engine, the combination with a shaft having a crank, of a plurality of cylinders mounted to rotate around the said shaft, pistons arranged to reciprocate in said cylinders, a hub journaled on the shaft and equipped with radial arms arranged to rotate independently of the cylinders, toggle joint connections between the said radial arms and the respective cylinders, and link connections between the crank of the shaft and all of the said toggle joints, substantially as described.

3. In a rotary explosive engine the combination with a shaft having a crank of a cylinder mounted to rotate around said shaft, said cylinder being so arranged that its produced axis does not intersect the center of motion, a piston arranged to reciprocate in said cylinder, an arm journaled on the shaft to rotate independently of the cylinder, a toggle joint connection between the said arm and the cylinder and a link connection between the crank of the shaft and the said toggle joint.

4. In a rotary explosive engine, the combination with a shaft having a crank of a plurality of cylinders mounted to rotate around the shaft and so arranged that their produced axes do not intersect the center of motion, pistons arranged to reciprocate in the respective cylinders, a hub journaled on the shaft and equipped with radial arms arranged to rotate independently of the cylinders, toggle joint connections between the said radial arms and the respective cylinders, and link connections between the crank of the shaft and all of the said toggle joints, substantially as described.

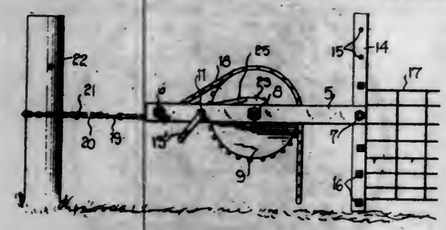
5. In a rotary explosive engine the combination with a stationary shaft having a crank of a cylinder mounted to rotate continuously around the shaft the said cylinder being so arranged that its produced axis will not intersect the axis of rotation a piston mounted to reciprocate in said cylinder, an arm journaled on the shaft to rotate independently of the cylinder, a toggle joint connection between the said arm and the cylinder and a link connection between the crank of the shaft and said toggle joint.

[Claims 6 to 13 not printed in the Gazette.]

1,108,981. WIRE-STRETCHER. MILOUS S. EOFF, Kingston, Ark. Filed Mar. 28, 1914. Serial No. 827,958. (Cl. 39—62.)

In a device of the class described comprising a supporting frame, said frame consisting of spaced side bars con-

nected together at their opposite ends, clamping bars mounted in one end of said frame, a shaft rotatably mounted in said bars intermediate of their ends, a sprocket wheel having a ratchet formed therewith mounted on said shaft between said bars, sleeves carried on said shaft between the said sprocket wheel and said side



bars, a crank shaft rotatably mounted in said bars adjacent one end of said frame, a gear wheel and a pawl carried on said crank shaft adapted to engage the said sprocket wheel and ratchet respectively and a sprocket chain engaged at one end with said sprocket wheel, the opposite end being connected to a suitable support.

1,108,982. SOAP-DISPENSING MACHINE. HENRY R. EVANS, New York, N. Y., assignor to Granulator Soap Company, a Corporation of New York. Filed Dec. 10, 1910. Serial No. 596,578. (Cl. 146—11.)

1. In a soap dispensing machine, the combination of a soap receptacle, a dished cutter in engagement with and surrounding one extremity of the soap to be dispensed, a device engaging and locking together the adjacent cakes of soap, said device being positioned adjacent the cutter substantially concentric therewith and extending toward the cutter beyond the upper edge thereof, a spindle extending above and below said device and journaled at its end adjacent the cutter, and means for producing relative movement between said device and cutter.

2. In a soap dispensing machine, the combination of a soap receptacle, a dished cutter in engagement with and surrounding one extremity of the soap to be dispensed, a device engaging and locking together the adjacent cakes of soap, said device being positioned adjacent the cutter substantially concentric therewith and a spindle passing through said device and connected to rotate therewith, and means for rotating said spindle and device.

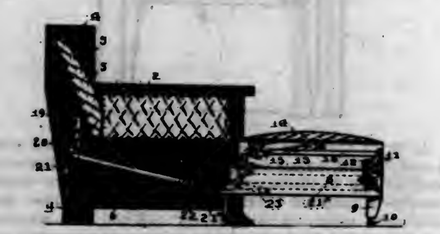
3. In a soap dispensing machine, the combination of a soap receptacle, a dished cutter in engagement with and surrounding one extremity of the soap to be dispensed, a device engaging and locking together the adjacent cakes of soap, said device being positioned adjacent the cutter substantially concentric therewith and extending into close proximity to the apex of the cutter, a rotating spindle passing through said device, and means rotating the spindle and causing relative movement between said cutter and device.

4. In a soap dispensing machine, the combination of a soap receptacle, a dished soap cutter mounted at the delivery end of said receptacle, and means engaging the cakes of soap to lock them together, said locking means also mounted at the delivery end of said receptacle coaxial with said cutter and extending toward the cutter beyond the outer end thereof and relatively movable rotatively with respect thereto.

5. In a soap dispensing machine, the combination of a soap receptacle, a stationary dished soap cutter mounted at the delivery end of said receptacle, and means engaging the cakes of soap to lock them together, said locking means also mounted at the delivery end of said receptacle coaxial with said cutter, and a spindle extending on each side of said locking means and journaled at the end thereof adjacent the cutter, and means for rotating the spindle and locking means.

[Claims 6 to 27 not printed in the Gazette.]

1,108,983. DAVENPORT-BED. HYMAN FREEDMAN and NATHAN M. FREEDMAN, Chicago, Ill. Filed Aug. 5, 1912. Serial No. 713,485. (Cl. 5—51.)

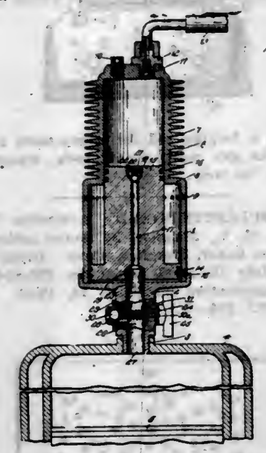


1. A davenport bed comprising a rigid main frame, consisting of a back and side pieces, a frame, slidable with respect to said main frame, a seat portion hinged to said slidable frame, a spring made in a front, rear and a middle section, a link swingingly connecting the rear end of said rear section to a point at the rear of the back of the main frame, a pivotal connection between the front of said rear frame and the rear of said middle frame, a link centrally pivoted near the corner of said seat portion, the front of said middle section being pivoted to one end of said link, the rear of said front section being pivoted to the remaining end of said link, and the front of said front section being pivoted to the said seat, and a pivotal link connecting said middle section with said slidable frame.

2. A davenport bed comprising a main frame consisting of a back and end sections rigidly secured together, a grooved track horizontally disposed upon the end sections of said main frame, a movable frame having lateral projections extending into the grooves of said tracks, a seat section hinged to the forward end of said movable frame, a bed spring consisting of front, rear and middle sections, a link swingingly connecting the rear end of said rear section to a point at the rear of the back of the main frame, a pivotal connection between the front of said rear section and the rear of said middle section, a link centrally pivoted to the corner of the bottom of said seat section, the front of said middle section being pivoted to an end of said link, the rear of said front section being pivoted to the other end of said link, and the front of said front section being swingingly linked to said seat section, and a link swingingly connecting said middle section with said slidable frame.

1,108,984. APPARATUS FOR COMPRESSING AIR. HERBERT H. FREY, Chicago, Ill. Filed Dec. 23, 1912. Serial No. 738,168. (Cl. 230—27.)

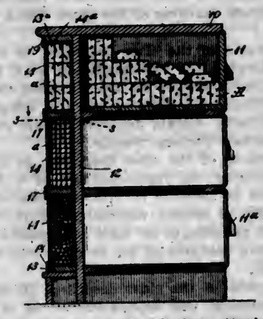
1. In a device of the class described, a pair of differential cylinders, connected pistons in said cylinders, the lower end of the larger cylinder being provided with a stem having a passage therethrough, and a breather valve controlling communication between said passage and the atmosphere, said breather valve comprising a seat located at one side of said passage, a valve member, and a compression spring normally holding said valve member against said seat, said spring bearing against said valve member and extending across said passage to the opposite side thereof.



2. In a device of the class described, a pair of differential cylinders, connected pistons in said cylinders, the larger cylinder being provided with a stem, a passage through said stem, and a breather valve controlling communication between said passage and the atmosphere, said breather valve scomprising a seat located at one side of said passage, a valve member and a spring normally holding said valve member against said seat, said spring being located within said passage.

3. In a device of the class described, a power cylinder, a piston in said cylinder, a stem carried by the lower end of said cylinder, a passage through said stem, and a breather valve, said breather valve comprising a valve member and a spring normally holding said valve member against its seat, said valve member and spring being located in the passage through said stem.

1,108,985. DISPLAY-COUNTER. EDWARD FRIEDRICH, San Antonio, Tex. Filed Nov. 1, 1913. Serial No. 798,649. (Cl. 211—6.)



1. In a counter, a sample display attachment comprising a series of horizontal shelves, projecting forwardly at the front of the counter and of trapezoidal shape, a series of transparent containers trapezoidal in cross section, and a hinged skeleton frame comprising vertical side rails beveled at their inner faces to conform to the convergent formation of the containers at the sides, and cross bars extending between the side rails in positions corresponding with the shelves, the cross bars being of a width considered vertically to extend beyond the shelves and overlap the containers, and means for fastening the skeleton frame in closed position.

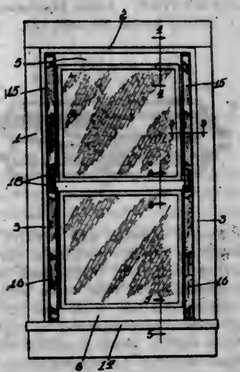
2. In a sample display attachment for counters, a series of shelves projecting forwardly from the front of the counter, a vertical series of transparent sample containers of a height to fit between adjacent shelves, there being a member on the counter to extend over the uppermost container, the sides of the shelves and containers being convergent in a forward direction, and a skeleton frame composed of vertical side rails and cross bars, the frame being hinged at one side to the counter, the cross bars being positioned to correspond with the positions of the shelves and conforming to the sides and front of the shelves and containers and being of a width vertically to overlap the containers.

3. In a sample display attachment for counters, a vertical series of shelves projecting forwardly from the front of the counter and each presenting side edges and a front edge, a series of transparent containers fitting between the shelves, and a skeleton retaining frame hinged at one side to the counter and having cross bars corresponding to the positions of the shelves, said cross bars in the closed positions overlapping the containers.

4. In a sample display attachment for counters, a vertical series of shelves projecting forwardly from the front of the counter, a transparent container on each of said shelves, and a skeleton retaining frame common to the containers and shelves and serving to lock said containers in place on the shelves.

5. In a counter, a sample display attachment, comprising shelves projecting forwardly from the front of the counter, bulging containers on said shelves, and a skeleton retaining frame having cross bars corresponding with the bulging containers, said cross bars being positioned to correspond with the position of the shelves and overlap the containers, to lock the same in place.

1,108,986. WEATHER AND DUST PROOFING DEVICE. JOHN B. GLOWACKI, Chicago, Ill. Filed Nov. 29, 1912. Serial No. 734,064. (Cl. 20—68.)



1. The combination with a window frame and a sliding sash movable between the stops thereon, of weather stripping mechanism comprising longitudinally movable weatherstrip members mounted on the side rails of the sash, a slotted cylinder rigidly secured on said sash, a spring contained therein and normally bearing against one end of said movable member, pins securing said movable member engaging through inclined slots therein, and fixed in the window sash rail, and an outwardly turned projection on said movable member adapted to contact the frame when the sash is closed to project said movable member in wedging relation between the window sash

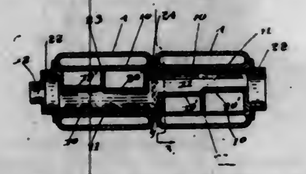
and a stop against the compression of said spring to seal the sash in the window frame.

2. The combination with a window frame having a sash slidable between stops thereon, of weather stripping mechanism comprising a weatherstrip member having inclined slots therein, pins engaging through said slots and into the window sash to movably connect said member and said sash together, a cylinder rigidly secured on the window sash, and having slots extending longitudinally thereof, a spring contained within said cylinder and normally bearing against one end of said member engaging in said slot in said cylinder, and means on the lower end of said member adapted to contact the window frame when the sash is closed to project said member between the sash and a stop against the stress of said spring to seal the sash in the window frame.

3. The combination with a window frame and a sash slidable therein, of weather stripping mechanism comprising a movable weather strip carried on the side of the sash adjacent the frame and having a beveled edge adapted to wedgingly engage between the sash and the frame, a projection on said weatherstrip adapted to engage a fixed part of the frame to project said strip outwardly into wedging engagement between the sash and the frame when the sash is closed, pins engaging through inclined slots in said weather stripping element to connect the same with said sash, said pin and slot connection causing a diagonal movement of said weatherstrip when the same is moved relative the sash, and a slotted cylinder secured on the sash with one end of said weatherstrip slidably engaging therein permitting diagonal movement of said weatherstrip element to take place in said cylinder.

4. In a device of the class described upper and lower sliding sashes, diagonally movable weather strips supported on each side of each sash, a projection on each adapted to engage a fixed part adjacent thereto when the sash is closed to project the same outwardly to seal the joint between the sash and the stops, springs engaging said movable weather strips and acting to shift the same inwardly when the respective sashes are moved in opening, and slotted cylinders mounted on the meeting rail of each sash to inclose said springs, the extremities of said weather strips engaging in said slots and guided in their movement thereby.

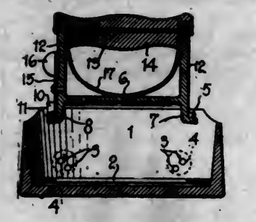
1,108,987. GAS-ENGINE. JOHN HAMMELL, Chicago, Ill. Filed Mar. 1, 1912. Serial No. 680,783. (Cl. 123—190.)



In a gas engine, a cylinder and a valve casing formed integral therewith, a tubular rotatable valve mounted in said casing having peripheral intake and exhaust recesses formed in the sides thereof, said valve being open at both ends and in communication with the air, said cylinder being provided with a port adapted to register with said recesses and said casing being provided with intake and exhaust passages adapted to communicate with said intake and exhaust recesses, respectively, substantially as described.

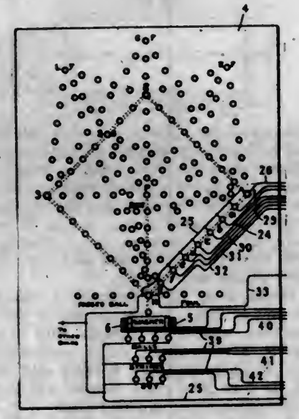
1,108,988. SAD-IRON. ALBERT B. HANCOCK, Dubuque, Iowa. Filed Apr. 25, 1914. Serial No. 834,456. (Cl. 68—26.)

An internally heated sad-iron comprising a hollow body having an open top, a cover mounted on said body to partially close said open top, said cover terminating short of the ends of said body, inwardly extending pins formed on the side walls of said body adjacent one end thereof, a downwardly extending curved lug formed on one end of said cover for engagement beneath said pins, one wall of said body having an opening therein adjacent the opposite end of the body, a lever pivotally connected to said cover



and carrying a locking rod for engagement through the opening in the side wall of said body, whereby to lock said cover to the body.

1,108,989. BULLETIN-BOARD. AUGUSTUS M. HENRY, New York, N. Y., assignor, by mesne assignments, to Mabel Crane Baker, Stamford, Conn. Original application filed July 19, 1906, Serial No. 326,854. Divided and this application filed Jan. 14, 1910. Serial No. 538,036. (Cl. 235—1.)



1. In apparatus of the class described, adapted to reproduce graphically a ball game in combination, a member carrying the representation of a field, and a plurality of closely associated lights extending between different positions on the field, the game which is being reproduced adapted to indicate by their progressive luminosity in certain series certain features of the game which is being reproduced.

2. In apparatus of the class described, in combination, a member carrying the representation of a field, and a plurality of closely associated lights leading radially from different significant positions on the field adapted to indicate by luminosity certain features of an event or the progress of certain factors therein.

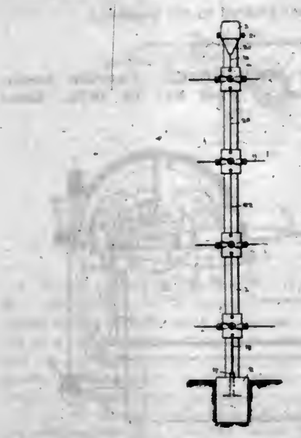
3. In apparatus of the class described, in combination, a member carrying the representation of a field, a plurality of lights to indicate certain positions on the field, and a plurality of closely associated lights arranged in series adapted to indicate by their progressive luminosity in series certain features of an event or the progress of factors therein.

4. In apparatus of the class described, in combination, a member carrying the representation of a field, and electrical means adapted to be more prominently displayed in progressive series to indicate the progress of certain factors appropriate to said field and at substantially any point of the field.

5. In apparatus of the class described, in combination, a member carrying the representation of a field, electric signals disposed thereon in series, and switching means for actuating progressively the units of one or more of said series independently or simultaneously.

[Claims 6 to 12 not printed in the Gazette.]

1,108,990. WIRE-SECURING APPLIANCE FOR FENCE-POSTS. HARDIN M. HUGHS, McComb, Okla. Filed Aug. 14, 1913. Serial No. 784,844. (Cl. 256—54.)



1. A wire securing means comprising a substantially semicylindrical holder adapted to secure fence wires to a post, said holder provided, with spaced toothed lugs adapted to engage said post, said holder provided with V-shaped notches through which the horizontal wires of a fence are adapted to extend, the vertical wires of said fence adapted to extend between said toothed lugs, oppositely extending arms formed on said holder, in combination with means for co-acting with said arms in securing said holder to the post.

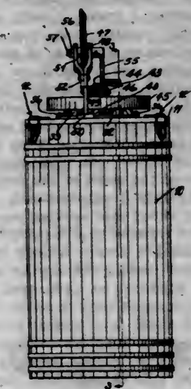
2. A wire securing means comprising a substantially semicylindrical holder adapted to secure the vertical and horizontal wires of a fence to a post, said holder comprising a substantially semicylindrical body, spaced toothed lugs thereon adapted to engage said post, said body provided with substantially V-shaped notches through which the horizontal wires of the fence are adapted to extend, the vertical wires thereof adapted to extend between said lugs, outwardly extending arms on said body, in combination with a wire adapted to be knotted about the intersecting points of said vertical and horizontal wires, the ends of said wire adapted to be passed around said post in opposite directions preferably one under and one over said arms, and adapted to be twisted on said arms over said horizontal fence wires.

3. A wire securing means comprising a holder adapted to secure the horizontal and vertical wires of a fence post said holder comprising a substantially semicylindrical body, means on said body for gripping said post, said body provided with substantially V-shaped notches therein, through which the horizontal wires of the fence are adapted to extend, the vertical wires of said fence adapted to be positioned between said body and said post, said horizontal and vertical wires forming knots at their intersecting point, said body provided with a central opening adapted to be centered over said knot, said body adjacent said opening being conically beveled to form a seat for said knot, oppositely extending arms formed on said body, retaining lugs formed on said arms, pairs of lugs formed on said body in spaced relation to said arms, said notches having their edges oppositely beveled, said arms provided with grooved offsets, in which said horizontal wires are adapted to lie, a securing wire adapted to be twisted about said knot, said securing wire twisted at its central portion about said knot, and having its ends extending outwardly through said center opening passed in opposite directions one under and one over one of said arms, passed around said post in spaced relation and between said arms and the adjacent lugs on said body, said ends being wrapped around said arms and having their ends wrapped around said retaining lugs, portions of said ends lying against the beveled edges co-acting with the lugs on said body for preventing movement of said securing wire longitudinally of said post, said securing wire having its ends wrapped around said horizontal wire adjacent said offsets for clamping said horizontal wire thereagainst.

4. Means for securing the vertical and horizontal wires of a fence to a fence post, said means comprising a plurality of semicylindrical holders adapted to engage said horizontal and vertical fence wires adjacent their intersecting points, said holders provided with openings in their opposite ends, and anchoring wires having their ends passed through said openings said anchoring wires connecting said holders.

5. A fence post having its base seated in the ground, a cap on said post, a plurality of wire holders secured to said post and adapted to engage the horizontal and vertical wires of a fence for securing the same, connecting means between said cap and the uppermost of said holders, an anchoring element secured in said base, connecting means between said anchoring element and the lowermost of said holders, and intermediate connecting means between said holders.

1,108,991. MULTIPLE-DASHER ROTARY CHURN. SAMUEL A. HYSON, Akron, Ohio. Filed Mar. 6, 1913. Serial No. 752,472. (Cl. 31—44.)

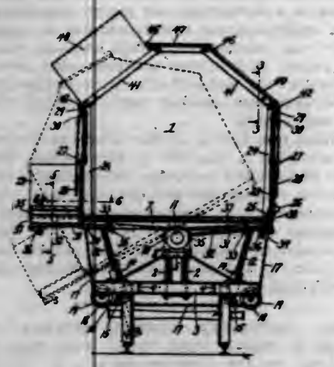


1. In a churn, a receptacle, a cover for the receptacle, means detachably securing the cover to the receptacle, opposed pairs of dashers mounted in the receptacle and having tapered lower end forming shoulders, sockets mounted on the bottom of the receptacle and rotatably receiving said tapered ends, cross braces having sleeves through which the dashers are rotatable, a connection between said cross braces, said dashers being formed with shoulders near their upper ends whereby the sleeves will be held against the shoulders, a drive wheel mounted on the cover and drive connections between said wheel and the shafts, said shafts projecting through the cover when the latter is in position.

2. In a churn, a receptacle, a cover for the receptacle, means detachably securing the cover to the receptacle, vertical dashers rotatably supported in the receptacle and rotatably extending through the cover, said dashers having squared upper ends, a ring-like plate mounted on the cover and having a plurality of sleeves receiving the dashers therethrough, pinions engaged on the squared portions of the dashers, braces secured to said plate and contacting with the hubs of the pinions to hold the latter in position, a bearing bolt secured centrally to the cover and having an upwardly flanged plate, an internal gear

having a hub rotatable on the bolt and engages within the flange, a flanged nut on the upper end of the bolt and also inclosing the hub, a pinion carried by the last named gear, an arched support mounted on the cover and a drive gear carried by the support and in mesh with the pinion last mentioned for imparting rotation to the rotatable parts aforesaid.

1,108,992. VEHICLE. CHARLES W. JACKSON, Chicago, Ill. Filed Apr. 21, 1910. Serial No. 556,838. (Cl. 105—191.)



1. A vehicle for transporting material from one point to another, comprising a frame, a body having a central, longitudinal, pivotal, rocking connection with said frame, movable rigid supports on each side of said central pivotal connection for holding said body in an upright position, devices for preventing said supports from being moved laterally, means for moving said supports longitudinally, the supports for the sides of said body adapted to engage and support said body while it is being moved to its unloading position on either side respectively, and a series of discharge doors at the sides of the body through which the material in the body is automatically discharged when the body is moved about said rocking connection.

2. A vehicle for transporting material from one point to another comprising a frame, a body having a central, longitudinal, pivotal rocking connection with said frame, rigid, adjustable supports on each side of said pivotal connection for holding said body in all its various positions while being moved about said central rocking connection, means for moving said supports longitudinally and for preventing the movement thereof laterally, a series of discharge doors at the side of said body through which the material in the body is automatically discharged when the body is moved about said rocking connection, and a series of sliding platforms associated with said doors and adapted to be slid back and forth at the bottom thereof.

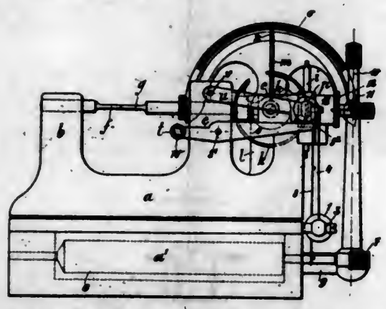
3. A vehicle for transporting material comprising a frame, a body portion having a longitudinal central rocking connection with said frame so as to rock about a longitudinal axis, rigid adjustable supports for said body portion, located on each side of said central rocking connection, said supports located below the body, means for moving said supports in the direction of their length and for preventing the movement thereof laterally while the longitudinal movement is taking place, the supports on one side adapted to engage and support the body portion and when operated gradually lower it while it is moving about said longitudinal axis to its discharged position.

4. A vehicle for transporting material from one point to another comprising a frame, a body movably connected to said frame by a central, longitudinal, pivotal connection, and adapted to be tilted about its connection with the frame toward either side of said longitudinal, pivotal connection, and adjustable screw threaded rods supporting the bottom of said body and adapted to be moved longitudinally, means for preventing lateral movement of said rods and adapted to engage the body so as to hold said body in any of its tilted positions and to prevent its movement about its connection with the frame.

5. A vehicle for transporting material comprising a frame, a body pivotally connected to said frame near its middle so as to move about a longitudinal axis, screw threaded rods on each side of said pivotal connection of the body to the frame, and adapted to engage said body, the screw-threaded rods on each side of the body adapted to be screwed down so as to gradually lower the body to its discharge position.

[Claims 6 and 7 not printed in the Gazette.]

1,108,993. SCREW-MICROMETER. CAMILLE JORIOT, Villers-de-Lac, France. Filed May 16, 1914. Serial No. 839,070. (Cl. 33—147.)



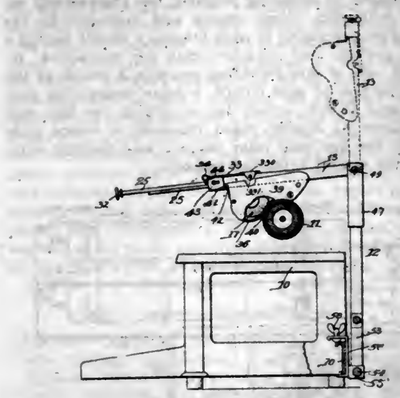
1. In a screw micrometer, the combination with the micrometric screw, of a member normally uncoupled from the micrometric screw, a graduated arc, an indicating hand movable over said arc by said member, means for coupling said member to the micrometric screw when it is desired that it shall be moved by the micrometric screw, and means for setting said indicating hand to any desired point of its course when said member is uncoupled from the micrometric screw.

2. In a screw micrometer, the combination with the micrometric screw, of a yoke normally uncoupled from the micrometric screw, a graduated arc, an indicating hand movable over said arc by said yoke, means for coupling said yoke to the micrometric screw when it is desired that it shall be moved by the micrometric screw, and means comprising two levers and an arm coöperating therewith for moving said yoke when said yoke is uncoupled from the micrometric screw for setting said indicating hand to any desired point of its course, and for keeping it stationary at said point during the coupling of said yoke to the micrometric screw.

3. In a screw micrometer, the combination with the micrometric screw, of a member normally uncoupled therefrom, a graduated arc graduated to fractions of the indications of the micrometric screw, an indicating hand movable over said arc by said member, means for coupling said member to the micrometric screw when it is desired that it shall be moved by the micrometric screw, means for moving said indicating hand to any desired point of its course when the said member is uncoupled from the micrometric screw, means for keeping said indicating hand at said point during the coupling of said member to the micrometric screw, and mutiplying connections between the micrometric screw and said indicating hand whereby the motion of the latter is caused to indicate submultiples of the indications of the micrometric screw.

1,108,994. TYPE-WRITER ERASING DEVICE. WILLIAM KLINE, Woodstock, Va., assignor of one-half to William J. Moore, Washington, D. C. Filed June 26, 1913. Serial No. 775,977. (Cl. 197—181.)

1. In an erasing mechanism for typewriting machines, the combination of a rotatable eraser, a support upon which it is freely rotatable, and eraser-rotating means acting directly upon the eraser and moving cross-wise of the eraser axis.



2. In an erasing mechanism for typewriting machines, the combination of a rotatable eraser, eraser-rotating means acting directly upon the eraser, said means consisting of a reciprocating slide, and a support for the eraser and its operating means movably attached to the typewriting machine whereby the eraser may be placed in and removed from position for use.

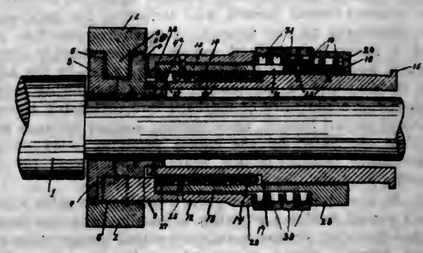
3. In an erasing mechanism for typewriting machines, the combination of a rotatable eraser disk, a support upon which the disk is freely rotatable, and means for rotating the same acting directly upon the periphery of said disk and having frictional contact with the disk and being free therefrom.

4. In an erasing mechanism for typewriting machines, the combination of a rotatable eraser disk, and a slidable rod having frictional contact with the disk.

5. In an erasing mechanism for typewriting machines, the combination of a rotatable eraser disk, means for rotating the same acting directly upon the periphery of said disk, said disk being supported for movement toward and from said rotating means.

[Claims 6 to 14 not printed in the Gazette.]

1,108,995. LOCKING DEVICE FOR INTERNAL-COMBUSTION ENGINES. LEWIS J. KNIEL, Detroit, Mich. Filed Jan. 28, 1914. Serial No. 815,085. (Cl. 70—90.)



1. In a locking device for engines, the combination with a rotatable shaft of the engine and a gear wheel loosely mounted thereon, of a connecting device secured to said shaft and provided with elements for imparting rotative motion from said shaft to said gear wheel when it is desired to operate the engine, said elements being also arranged to be moved into position wherein the gear wheel will not be rotated on the rotation of said shaft, and a series of manually operated permutation tumbler locking rings coöperating with the connecting device and arranged to lock the elements of the connecting device in either the operative or inoperative position.

2. In a locking device for engines, the combination with the crank-shaft of the engine and the master gear loosely mounted thereon of a connecting device having elements fixed to said shaft, other elements slidable into operative engagement with the master gear for imparting rotative motion from said shaft to said gear when in engagement therewith and also slidable into position wherein the master gear will not be rotated on the rotation of said shaft, and a series of permutation tumbler locking rings coöperating with the fixed and slidable elements of the connecting device for locking the slidable elements of the connecting device in or out of operative engagement with the master gear.

3. In a locking device for engines, the combination with a rotatable shaft of an engine and a gear wheel loosely mounted thereon, of a connecting device for imparting rotation from said shaft to said gear wheel, said connecting device comprising an inner sleeve secured to the shaft, outer sleeves slidable on but rotated by said inner sleeve, means carried by the outer sleeves adapted to be slid into and out of operative engagement with the gear, and manually operated permutation tumbler locking rings carried by the connecting device adapted to lock the outer sleeves in operative engagement with the gear wheel or in position whereby the gear wheel will not be rotated.

4. In a locking device for engines, the combination with a rotatable shaft of an engine and a gear wheel loosely mounted thereon, of a connecting device for imparting rotation from said shaft to said gear wheel, said connecting device comprising an inner sleeve secured to the shaft, outer sleeves slidable on but rotated by said inner sleeve, means carried by the outer sleeves adapted to be slid into and out of operative engagement with the gear wheel, and locking means carried by the connecting device adapted to lock the outer sleeves in operative engagement with the gear wheel or in position whereby the gear wheel will not be rotated, said locking means comprising a plurality of internally channeled permutation tumbler rings provided with spaced notches in their side walls and toothed plates carried by said inner sleeve, the teeth of said plates being adapted to loosely fit within the channels of said permutation tumbler locking rings.

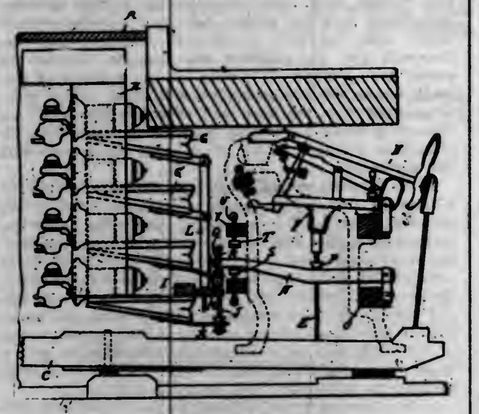
1,108,996. BOTTLE-CAP. FREDERICK G. KOLLENBERG, Owensboro, Ky., assignor of one-half to William E. Danhauer, Owensboro, Ky. Filed Dec. 15, 1913. Serial No. 806,871. (Cl. 215—10.)

A receptacle cap fashioned from a blank having a central tongue projecting from its periphery and provided with slits extended inwardly from its periphery and defining the base and the central tongue and defining a pair of lateral tongues located upon opposite sides of the central tongue, the periphery of the blank being bent to form a receptacle engaging flange, the slits being disposed in inwardly diverging relation to cause the lateral tongues to overlap the outer face of the central tongue when the flange is formed, the free ends of the lateral tongues being spaced from each other to facilitate the separation of the lateral tongues and the release of the flange when the central tongue is flexed outwardly.

1,108,997. AUTOMATIC PLAYING MECHANISM FOR GRAND PIANOS. RICHARD A. LEADBETTER, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed July 16, 1912. Serial No. 709,685. (Cl. 84—233.)

1. In a grand piano, the combination with the piano action and manually operative key levers, of a pneumatic action arranged in front of the piano action, horizontally ex-

tending levers pivoted at their near ends, and adjustable pins carried by the free ends of the horizontal levers for engagement with the pneumatic action.



2. In a grand piano the combination with a piano action and key levers having rods extending vertically therefrom, of a pneumatic action arranged in front of the piano action, and levers extending horizontally above the key levers, engaging at their free ends with projections on the pneumatic action and intermediate their ends loosely engaging with the vertical rods of the key rods.

3. In a grand piano the combination with the piano action, and key levers having vertical rods extending upward therefrom, of a pneumatic action arranged in front of said piano action and provided with a plurality of tiers of striking pneumatics, horizontal levers arranged above the key levers, fulcrumed at their rear ends, the forward ends of said levers being connected with said striking pneumatics, and loose engaging means between intermediate portions of said levers and the vertical rods on said key levers.

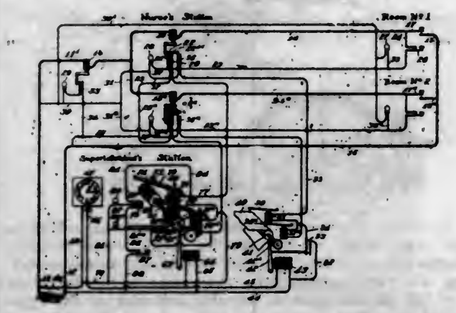
4. In a grand piano the combination with the piano action, and key levers having vertical rods extending upward thereon, of a pneumatic action arranged in front of said piano action, and horizontal levers arranged above said key levers, being fulcrumed at their rear ends and slotted intermediate their ends for the free passage of said vertical rods, adjustable engaging means between said rods and said levers, adjustable means between the free ends of said levers and the striking pneumatics, and an adjustable stop, for limiting the movement of each lever.

5. In a grand piano the combination with a piano action, and key levers having vertically extending rods thereon, of a pneumatic action arranged in front of said piano action, horizontally extending levers above the respective key levers, fulcrumed at their rear ends and slotted intermediate their ends for the free passage of said vertical rods, adjustable buttons on said vertical rods against which said levers are positioned to strike, and adjustable connection between the free ends of said levers and their respective pneumatics, and adjustable stops for limiting the movement of said levers.

[Claims 6 to 9 not printed in the Gazette.]

1,108,998. SIGNALING SYSTEM. MAURICE LEVISON, Chicago, Ill., assignor, by direct and mesne assignments, to Chicago Signal Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 15, 1911. Serial No. 621,186. (Cl. 234—27.5.)

1. In a signaling system, the combination of a primary circuit having a plurality of branches from a common signal-receiving station to a plurality of signal-transmitting stations, and suitable means of current supply; at each transmitting station, switching means to establish, control and maintenance of, and to break, the circuit branch individual to that station; at the central station a relay magnet in each circuit branch, and registering means comprising a plurality of actuating magnets, one responsively associated with each circuit branch and controlled by the relay-magnet pertaining to such branch, a circuit having a common portion, and branches each for energizing, respectively, one of said actuating magnets, a switch in the common portion of said circuit, a relay magnet for controlling said switch, means for energizing the last said relay magnet at regular timed intervals, a record strip driven by the last said relay magnet, and markers actuated by the several actuating magnets.



2. In a signal system, the combination of a source of current supply; a line circuit divided into a plurality of normally open branches each extending from a common receiving station to a respective transmitting station; at the receiving station a plurality of relays each having its magnet in one respective branch circuit, a circuit pertaining to each said relay and controlled thereby and including an electro-responsive actuating magnet, time-interval-controlling means associated with the circuits of said actuating magnets, marking devices controlled by said actuating magnets, a record receiving surface associated with said marking devices; and at each transmitting station a signal initiating device, and a separate release device, the two being independently operable, said signal initiating device controlling the energization of the first said relay and said release device controlling its deenergization.

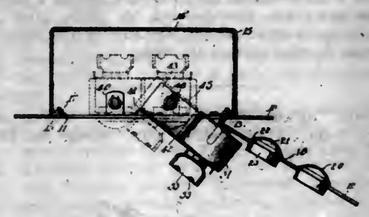
3. In a signaling system, the combination of a primary circuit having a plurality of branches from a common signal-receiving station to a plurality of signal-transmitting stations, suitable means of current supply, central station relays, each having its magnet in one, respectively, of said circuit branches, a holding circuit for each primary-circuit branch automatically closable upon the closure of the primary-circuit branch, and including the relay-magnet pertaining to that branch; at each transmitting station a normally open call switch in the primary-circuit branch, and a normally closed release switch in the holding circuit; and at the central station registering means comprising a plurality of markers, one pertaining to each primary-circuit branch, an actuating magnet for each said marker controlled by the signal receiving relay of the appropriate primary-circuit branch, and means for advancing said strip at a regular rate of speed.

4. In a signaling system, the combination with a primary circuit having a plurality of parallel branches from a signal receiving station to separate signal transmitting stations, suitable means of current supply; at each sending station means to establish, control the maintenance of, and to break an energized circuit through the branch individual to said station, at the central station a plurality of electro-responsive signal receiving devices, each connected for inclusion in its respective one of said circuit branches, and registering means comprising a plurality of markers, each individual to one sending station, an actuating electro-responsive device for each marker, and circuit connections for each said actuating device, controlled by the electro-responsive signal receiving means appurtenant to the individual circuit branch for the corresponding transmitting station.

5. In a signaling system, the combination with a primary circuit having a plurality of parallel branches, from the signal receiving station to separate signal transmitting stations and means of current supply, at each sending station means to establish, control the maintenance of, and to break an energized circuit individual to said station; at the central station a plurality of electro-responsive signal receiving devices, each connected for inclusion in its respective one of the last said circuits, and registering means comprising a like plurality of markers, each individual to one transmitting station, an actuating electro-responsive device for each marker, and circuit connections for each said actuating device, controlled by the electro-responsive signal receiving means appurtenant to the individual circuit of the corresponding transmitting station, a switch common to all of the actuating devices, and means to close the last said switch at regular time intervals.

[Claims 6 to 18 not printed in the Gazette.]

1,108,999. ANNUNCIATOR-CABINET. MAURICE LEVISON, Chicago, Ill., assignor to Chicago Signal Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 6, 1914. Serial No. 823,016. (Cl. 240—2.)



1. In an annunciator construction, the combination of a frame having an opening, a closure for said opening having light apertures, a lamp-receptacle carrying-plate hingedly connected with said frame and movable through the opening thereof, and lamp-receptacles carried by said plate having their wiring terminals on the rear side thereof.

2. In an annunciator construction of the character described, the combination of a housing comprising a box member and a front frame member having an opening, a movable closure for said opening having light apertures therein, a lamp-receptacle carrying-plate, lamp-receptacles on said plate registering with the respective light openings in the closure and having the wiring terminals on the rear of the plate, and means within the casing supporting said plate for pivotal movement through the front opening to expose the wiring terminals of the lamp-receptacles outwardly.

3. In an annunciator construction, the combination of a plate having an opening, a movable closure for said opening having light apertures, brackets on said plate, two of said brackets being arranged in a vertically alining couple, a lamp-receptacle carrying-plate, connections between said plate and said vertically alining brackets whereon the plate may be pivotally moved, and lamp receptacles carried by said plate in register with the light openings.

4. In a construction of the character described, the combination of a frame having an opening, a closure therefor having light apertures therein, brackets carried by said frame extending into the area registering with the frame-opening, a lamp-receptacle carrying plate having forwardly extending flanges at its top and bottom, coöperating with said brackets, means for detachably connecting said flanges with said brackets including a couple of vertical alining connectors adapted to act as pivots for movement of said plate through said frame opening, and lamp receptacles on said plate.

5. In a structure of the character described, the combination of a frame 10, having an opening 11, brackets 40, arranged in horizontal pairs and vertical couples, extending into register with the said opening, the lamp carrying plate 42 having forwardly extending top and bottom flanges 43, provided with slots 45, connector-bolts 46 taking through said brackets 40 and slots 45, lamp receptacles carried by said plate, and a closure for said opening 11, having light openings registering with said lamp receptacles.

[Claims 6 to 14 not printed in the Gazette.]

1,109,000. WRENCH. WILLIAM T. LONG, Auburn, Wash., assignor to C. H. Halsey, Auburn, Wash. Filed Feb. 12, 1914. Serial No. 818,335. (Cl. 81—127.)

1. A tool comprising a handle, a jaw support, jaws swiveled thereon, the handle being arranged to oscillate in the longitudinal plane of the jaw-support, means whereby movement of the handle will cause one of the jaws to approach or recede from the other jaw, and means to hold said jaw at various points of its receding travel.

2. A tool comprising a handle, a jaw support carried by the handle, the handle being arranged to oscillate in the longitudinal plane of the jaw suport, jaws swiveled on said support, and means on the support for locking the jaws in a set position.

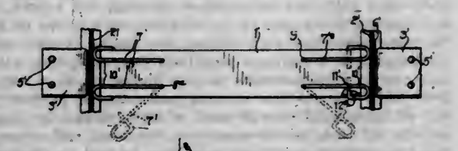
3. A tool comprising a handle, a jaw support, a housing inclosing the support and the end of the handle, jaws swiveled upon the support, a connection between one of said jaws and the housing, and a latch mounted upon the handle and adapted to engage said housing.

4. The combination of a jaw support, jaws swiveled thereon, means for effecting relative movement of the jaws, and means carried by the jaw support and acting upon one end of the swiveled mounting of the jaws to hold the jaws in a set relation to the jaw support.

5. The combination of a base-bar having a lug at one end, a standard at the opposite end of said bar, a wrench jaw having a stem swiveled in the said lug and in the said standard, a jaw slidably mounted on said stem, means for moving said slidable jaw to and from the first mentioned jaw, and a latch mounted in the said standard and engaging the end of the stem to lock the same in set relation to the base-bar.

[Claims 6 to 8 not printed in the Gazette.]

1,109,001. RAILWAY-TIE. ALVA A. LOOMIS, East Akron, Ohio. Filed Mar. 28, 1914. Serial No. 827,993. (Cl. 238—4.)

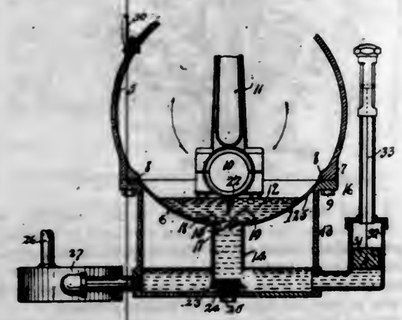


1. A device of the class described including a U-shaped tie, clamping plates secured to the ends thereof, clamping rods having their inner ends pivotally mounted within the body of the tie and their other ends bent upon themselves to form loops adapted to engage over the inner base flanges of the rails and their extreme ends disposed transversely across the inner ends of said loops, as and for the purpose set forth.

2. A device of the class described including a U-shaped tie member, clamping plates secured to the ends thereof, clamping rods having their inner ends pivotally mounted

within the body of the tie and their outer ends bent upon themselves to form loops adapted for engagement with the base flanges of the rails and having their extreme ends extending inwardly across the inner ends of the loops and adapted for removable engagement within the side walls of the tie, as and for the purpose set forth.

1,109,002. LUBRICATING SYSTEM. HARVEY F. MARANVILLE, Akron, Ohio, assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 7, 1910. Serial No. 585,819. (Cl. 84—6.)



1. A crank case comprising an upper section and a lower section, the lower section being provided with an outlet near the bottom thereof and with an overflow above said outlet, a sediment receptacle located below said outlet, and an oil receptacle inclosing the sediment receptacle and detachably connected to the upper section and arranged to receive the overflow from the lower section.

2. A crank case provided with an outlet near the bottom thereof and having an overflow opening above said outlet, a sediment receptacle located below said outlet, and an oil receptacle inclosing the sediment receptacle and arranged to receive the overflow from the crank case.

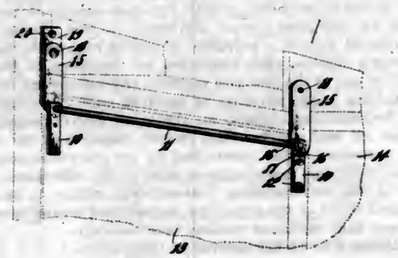
3. In an internal combustion engine, the combination with a crank case comprising an upper and a lower section, the lower section being provided near its bottom with an outlet port and having at a higher level than said port an overflow opening, the height of said opening being such as to bring the level of the oil in the case sufficiently high so that the engine crank will dip therein, of a sediment receptacle communicating with said port, an oil receptacle having its bottom below the overflow opening and adapted to receive the oil discharged therethrough, a filter, means for forcing oil from the receptacle to the filter, and connections for returning oil from said filter to said crank case.

4. In an internal combustion engine, the combination, with a crank case having near its bottom an outlet port and having in its wall at one side of its bottom at a higher level than said port an overflow opening, the height of said opening being such as to bring the level of the oil in the case sufficiently high so that the engine cranks will dip therein, of a sediment receptacle communicating with said port, an oil receptacle having its bottom at a lower level than the overflow opening and adapted to receive the oil discharged therethrough, a filter, means for forcing the oil from the receptacle to the filter, and connections for returning oil from said filter to said crank case.

5. The combination of a crank case having adjacent to the bottom thereof an outlet port and having above said port an overflow opening, a sediment receptacle communicating with said port, an oil receptacle connected to the crank case and located below the overflow opening and including the sediment receptacle, means, extending through the oil receptacle and communicating with the sediment receptacle, for removing sediment from the latter receptacle, and means for supplying oil from the oil receptacle to the crank case.

[Claims 6 to 16 not printed in the Gazette.]

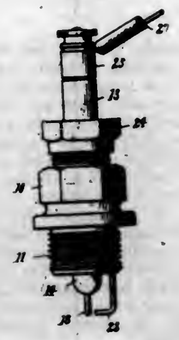
1,109,003. HINGE. CHRISTIAN H. MARTIN, Akron, Ohio. Filed Apr. 17, 1914. Serial No. 832,412. (Cl. 16—11.)



1. A hinge, comprising a pair of pivotally mounted links, a rod connecting the links and having rigid connection therewith, and pivot plates pivotally mounted on the rod.

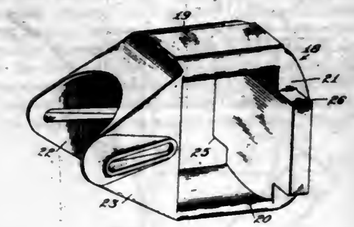
2. A hinge, comprising a pair of pivotally mounted links, a rod connecting the links and having a rigid connection therewith, shoulders on the links, pivot plates pivotally mounted on the rod, and lugs on the pivot plates engaging the shoulders of the links.

1,109,004. SPARK-PLUG. CHARLES F. MEYER, Bridgeport, Conn. Filed Nov. 9, 1912. Serial No. 730,302. (Cl. 123—169.)



A spark plug consisting of a casing externally threaded for attachment to the engine casing and provided with an internal shoulder located at the inner end of the casing and a shoulder located medially of the ends of the casing, an insulating member inserted in the casing and having integral shoulders bearing on the shoulders of the casing and having a rounded inner end projecting through the inner end of the casing and forming a deflecting surface, a sparking pin on the inner end of the casing, a sparking rod extending through the casing and slidable through the insulating member and having its inner end disposed near the end of the sparking pin, a member on said rod bearing against the outer end of the insulating member, a second insulating member surrounding said rod and bearing against said member, a packing sleeve surrounding said second insulating member and projecting slightly from the other end of the casing, said second insulating member extending outwardly of the casing, a nut threaded externally on the outer end of the casing and bearing against the packing sleeve and adapted to hold the first insulating member seated against the casing shoulders, said second insulating member projecting through said nut, and means for adjusting the rod in the second insulating member.

1,109,005. DRAFT-RIGGING. CHARLES J. NASH, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 7, 1911. Serial No. 664,461. (Cl. 213—42.)



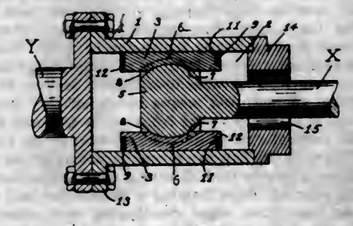
1. In a draft rigging, in combination, a yoke having laterally projecting shoulders for engaging draft lugs, whereby longitudinal pressure on the yoke exerted by the resilient element carried therein will bring it to central position.

2. In a draft rigging, in combination, a yoke having longitudinal members with concave inner faces, a pair of springs located side by side and one seated against the inner face of each of such members, and a spacing and locking element interposed between the springs and having laterally projecting tongues at each side engaging the two springs.

3. In a draft rigging, in combination, a yoke having longitudinal members each having instanding marginal edges, a pair of springs located side by side and one seated against the inner face of each of such members, and a spacing and locking element interposed between the springs and having laterally projecting tongues at each side engaging the two springs.

4. In a draft rigging, in combination, a pair of springs located side by side, and a spacing and locking element, located between the springs, formed of a plate of pliable metal slitted from each side edge to form a plurality of tongues adapted to be bent to conform to the curve of the peripheries of the springs.

1,109,006. UNIVERSAL JOINT. ELMER E. NEAL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 21, 1910. Serial No. 550,661. (Cl. 74—19.)



1. The combination of a coupling member having a non-circular opening, oppositely disposed separate socket plates mounted in said opening, each plate being rockable upon an axis transverse to the plane of its body and each having a socket, members for so mounting said plates received in said opening, said members carrying said plates and having portions in contact along a substantial length with the sides of said opening intersecting said planes, and a second coupling member having oppositely extending projections received between said socket plates and in the sockets thereof, each of said projections being curved upon an axis transverse to the axis of rocking of said socket plates; substantially as described.

2. The combination of a coupling member having a non-circular opening, oppositely disposed separate socket plates slidably mounted in said opening, each plate being rockable upon an axis transverse to the plane of its body and each having a socket, members for so mounting said plates, said members being slidably received in said opening, carrying said plates, and having portions in contact along a substantial length with the sides of said opening intersecting said planes, and a second coupling member having oppositely extending projections received between said socket plates and in the sockets thereof, each of said projections being curved upon an axis transverse to the axis of rocking of said socket plates; substantially as described.

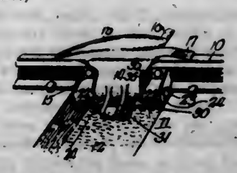
3. The combination of a coupling member, a slide in sliding and driving relation thereto, a socket plate rockably supported upon said slide to rock upon an axis transverse to the plane of said slide, a second coupling member received in the socket of said socket plate and rockable therein on a line transverse to that of the rocking of said socket plate, and means for supporting said second coupling member in driving relation to said socket plate; substantially as described.

4. The combination of a coupling member, a slide in sliding and driving relation thereto and having a socket, a socket plate rockably supported in said socket of said slide, a second coupling member received in the socket of said socket plate and rockable therein in a line transverse to that of the rocking of said socket plate, and means for supporting said second coupling member in driving relation to said socket plate; substantially as described.

5. The combination of a coupling member, a slide in sliding and driving relation thereto and having a socket, a socket plate rockably supported in said socket of said slide and having a shouldered portion coöperating with said slide, a second coupling member received in the socket of said socket plate and rockable therein in a line transverse to that of the rocking of said socket plate, and means for supporting said second coupling member in driving relation to said socket plate; substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,007. DERAILING DEVICE. GEORGE W. NIBAR, Chicago, Ill. Filed Nov. 10, 1913. Serial No. 800,026. (Cl. 104—127.)



1. In a derailing device, the combination of a derailing block, means for operatively supporting said derailing block for motion to and from derailing position, and adjusting means whereby said derailing device may be made to accommodate rails of different heights.

2. In a derailing device, the combination of a derailing block, means for rotatively supporting said derailing block for motion to and from derailing position, and means for vertically adjusting the axis about which said block rotates to accommodate rails of different heights.

3. In a derailing device, the combination of a derailing block, a support therefor fixed in a position adjacent to a rail, means for operatively connecting said derailing block to said support for motion to and from derailing position, and adjusting means whereby said derailing device may be made to accommodate rails of different heights.

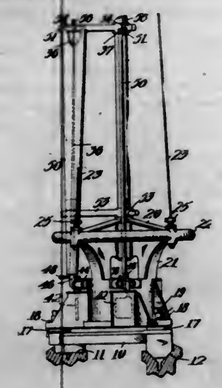
4. In a derailing device, the combination of a derailing block, an arm fixed thereto, means for rotatively attaching said arm in a position adjacent to a rail, and means for vertically adjusting the axis of rotation of said arm to accommodate rails of different heights.

5. In a derailing device, the combination of a derailing block, a rock arm fixed thereto, a supporting member adapted to be attached to the rail, means whereby said

rock arm is rotatively connected to said supporting member, and means for vertically adjusting the axis of rotation of said arm to accommodate rails of different heights.

[Claims 6 to 9 not printed in the Gazette.]

1,109,008. TESTING DEVICE. CHARLES H. NORTON, Worcester, Mass. Filed May 1, 1913. Serial No. 764,747. (Cl. 73—51.)



1. In an instrument of the class described, the combination with a main body, a mast extending upwardly from the body, a pendulum depending freely from the top of said mast, an indicating needle pivoted on the main body and connected with said pendulum for registering the vibrations thereof, and a scale carried by said mast at a point above the top of said main body over which said needle swings.

2. In an instrument of the class described, the combination with a main body, a mast extending upwardly from the body, a weight depending from the top of said mast, and two indicating needles at right angles to each other, both connected with said weight for registering the vibrations thereof.

3. In an instrument of the class described, the combination with a main body, a mast extending upwardly from the body, a pendulum depending freely from the top of said mast, an indicating needle pivoted on the main body, and connected with said pendulum for registering the vibrations thereof, and means carried by said main body for damping the vibrations of the needle.

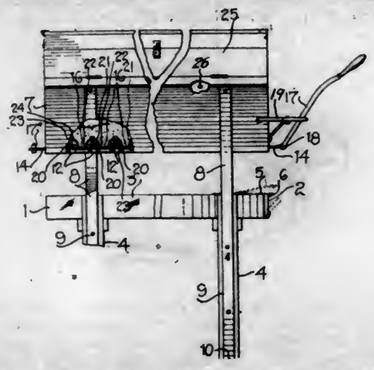
4. In an instrument of the class described, the combination of the main body, a mast projecting upwardly therefrom, a wire depending from the top of said mast, a weight hung on the bottom of said wire and located within said body, said weight having reservoirs for liquid in the top surface thereof, and the body having vanes extending down into said reservoirs for damping the vibrations of the weight.

5. In an instrument of the class described, the combination of a mast, a wire secured to the top of said mast and depending from it, a weight hung on the bottom of said wire, means for damping the vibrations of the weight, a bearing point at a higher level than the top of said weight, an indicating needle pivoted on said bearing point, and a flexible connection from the indicating needle to the weight for causing the needle to move with the weight.

[Claims 6 to 16 not printed in the Gazette.]

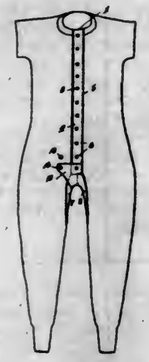
1,109,009. STOCK-FEEDER. JOHN J. O'BRIEN, Sterling, Colo. Filed Mar. 21, 1914. Serial No. 826,310. (Cl. 119—56.)

A device of the character described including a hopper having a plurality of discharge openings in its base, a slide member positioned upon such base and provided with openings adapted to register with the discharge openings, transverse members disposed above the discharge openings of the hopper and the slide member, and spring members



carried by the transverse members contacting with the adjacent face of the slide member.

1,109,010. UNION GARMENT. GEORGE J. OLTSCH, South Bend, Ind., assignor to Clinton B. Stephenson, South Bend, Ind. Filed Apr. 16, 1913. Serial No. 761,422. (Cl. 2—144.)



1. A union garment formed with a continuous posterior and crotch opening, flaps forming a closure for said opening having inner free edges overlapping each other, the outer of said flaps gradually increasing in width from the crotch portion upwardly in front to the upper edge thereof to form a relatively greater overlapping section for the front portion thereof, and means for detachably securing the free end of said flap at the front to the garment to one side of the vertical central line thereof whereby to provide a lateral draw on the flap to prevent a parting of the flaps.

2. A union garment formed with a continuous posterior and crotch opening, flaps forming a closure for said opening having inner free edges overlapping each other, the outer of said flaps gradually increasing in width from the crotch portion to the front upper edge thereof to form a relatively greater overlapping section for the front portion thereof, and means for adjustably securing the free end of said flap to the garment to one side of the vertical central line thereof to prevent the gapping of the flaps and to vary the trunk length of the garment.

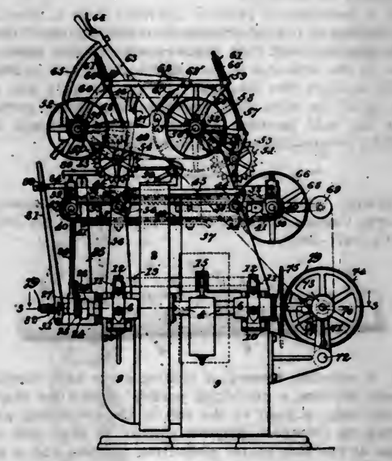
1,109,011. ENVELOP-SEALER. HENRY C. OSBORN, Cleveland, Ohio, assignor to The Saunders Sealer Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 19, 1910, Serial No. 544,807. Renewed July 20, 1912. Serial No. 710,699. (Cl. 120—6.)

1. In an envelop sealer, the combination of a wick-trough made of sheet metal and having a rearwardly

extending central portion, a diagonal handle member consisting of a tube permanently closed at its upper end and resting at its lower end on said rearward extension and secured thereto, the rearward extension constituting a bottom for the reservoir within the handle, there being an opening through such bottom, a plug for closing said opening having its head within a recess below the bottom and behind the wick-trough, and a downwardly extending lip on the forward side of the handle leaving a capillary opening connecting the reservoir with the wick-trough, the said rearward extension being turned downwardly behind the plug to provide a supporting foot.

2. In an envelop sealer, a wick-trough having a rearward extension, a depression in said extension, a tubular handle closed at its upper end and secured at its lower end to said extension, a filling opening through the extension into the handle, a lip carried by the handle at its front lower edge and coöperating with said depression to provide a reduced opening from the handle to the wick-trough directly opposite the wick combined with the wick in the said trough, and a presser plate carried by the handle and extending above the wick and having a portion parallel with the wick and in front thereof to engage the outer surface of the envelop flap.

1,109,012. RESAWING-MACHINE. GEORGE M. PELTON, Milwaukee, Wis., assignor to The Filer & Stowell Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 25, 1910. Serial No. 573,726. (Cl. 143—19.)



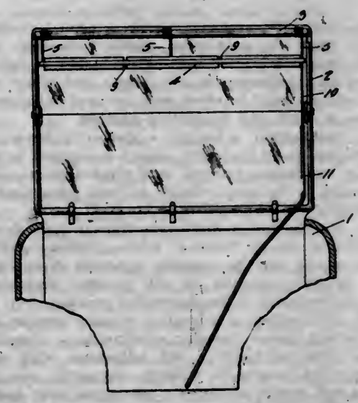
1. In a resawing machine the combination with a horizontal band saw and a support on which lumber is fed thereto, of a shaft located above and parallel with the working side of the saw and provided with gears, arms pivotally mounted concentric with said shaft, toothed feed wheels mounted on said arms and movable therewith independently of one another toward and from said support, gears connecting said wheels with the gears on said shaft, a stop bar arranged above said arms and parallel with said shaft and adjustable toward and from said support, and stop rods pivoted to said arms and having sliding connections with the stop bar so as to limit the downward movement of the several feed wheels.

2. In a resawing machine the combination with a horizontal band saw and a support on which lumber is fed thereto, of a shaft located above and parallel with the working side of the saw and provided with gears, arms pivotally mounted concentric with said shaft, toothed feed wheels mounted on said arms and movable therewith independently of one another toward and from said support, gears connecting said wheels with the gears on said shaft, a stop bar arranged above said arms and parallel with said shaft and adjustable toward and from said support, stop rods pivoted to said arms and having sliding connections with said bar, a lever connected with said stop bar and adapted to shift the same up and down, and means for locking said lever to hold said bar in different positions.

3. In a resawing machine the combination with a horizontal band saw and a support on which lumber is fed thereto, of a shaft located above and parallel with the working side of the saw, and provided with gears, arms pivotally mounted concentric with said shaft, toothed feed wheels mounted on said arms and movable therewith independently of one another toward and from said support, gears connecting said wheels with the gears on said shaft, an adjustable stop bar connected by radius arms with the machine frame adjacent to said shaft, means for locking and holding said bar in adjusted position, and stop rods pivoted to the feed wheel arms and having sliding connections with said bar.

4. In a resawing machine the combination with a horizontal band saw and a support on which lumber is fed thereto, of shafts located above said support parallel with the working side of the saw, and provided with gears, arms pivotally mounted concentric with said shafts, toothed feed wheels mounted on said arms and movable therewith independently of one another toward and from said support, gears connecting said wheels with the gears on said shaft, stop bars arranged parallel with said shafts and connected with the machine frame adjacent thereto by radius arms, stop rods connecting the feed wheel arms with said bars, and an adjusting lever connected with said stop bars and provided with means for locking the same in different positions.

1,109,013. LIGHT-FOCUS-INTERCEPTING SHADE. WILLIS J. PERKINS, Grand Rapids, Mich. Filed Aug. 19, 1912. Serial No. 715,868. (Cl. 21—148.)



1. In combination, a motor driven and manually guided vehicle, an adjustable light focus intercepting shade supported on the vehicle, and flexible connecting means leading from the shade to the guiding means of the vehicle whereby the shade may be manually shifted from the vehicle guiding means.

2. In a motor driven and manually guided vehicle, a wind shield, a light focus intercepting shade supported from and adjustable with respect to the wind shield, and flexible connecting means leading from the light focus intercepting shade to the guiding means for the vehicle.

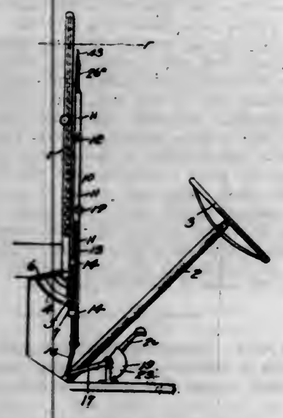
3. A light focus intercepting shade, comprising a strip of material that intercepts the free passage of light, a reinforcing member located lengthwise of the strip, the main shading member extending to either side of the reinforcing member, and a plurality of observation sections in said shade.

4. A light focus intercepting shade comprising a strip of light intercepting material and a plurality of sections in said strip permitting the free passage of light.

5. In combination, a motor driven carrying vehicle adapted to be controlled in its movements by an attendant, a steering means therefor, a wind shield, a narrow light intercepting shade positioned back of the wind-shield and lying in substantially horizontal position said shade serving to shield the eyes of the attendant or others from exterior lights and a connecting device interposed between the shade and the steering means.

[Claims 6 to 14 not printed in the Gazette.]

1,109,014. LIGHT-FOCUS SHADE OR DIMMER ZONE. WILLIS J. PERKINS, Grand Rapids, Mich. Filed Jan. 31, 1913. Serial No. 745,356. (Cl. 21—148.)



1. In combination with a vehicle, a protective dimmer zone or shade, a supporting member therefor, means whereby said member and zone or shade may be vertically adjusted with reference to the vehicle and means manually operable at will to effect such vertical adjustment of the zone or shade and supporting member.

2. In combination, a vehicle, a protective dimmer zone or shade associated therewith, means to support said zone or shade, and means whereby said supporting means may be adjusted in sections relative to each other and as a whole relative to the vehicle.

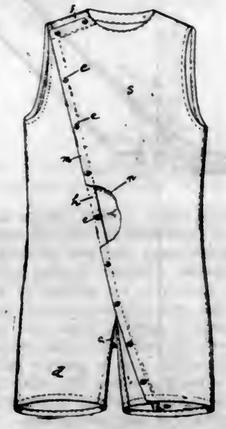
3. In combination, a protective dimmer zone or shade, a supporting means therefor, means whereby said supporting means may be slidably adjusted vertically and means mannally operable at will to effect such vertical slidable adjustment of the supporting means.

4. In combination, a protective dimmer zone or shade, a supporting means therefor comprising a plurality of sections attached together and adjustable with respect to each other, means for slidably supporting one of the sections and means operatively associated with such section to effect its slidable movements and hold it at different positions relative to its support.

5. In combination, a protective dimmer zone or shade, a vehicle, means to support the zone on the vehicle at a predetermined position above the floor of the vehicle, means whereby the supporting means may be adjusted to lower the zone or shade to inoperative position, means whereby the zone may be operated to a third position above the first mentioned position and means associated with the zone or shade and manually operable to effect the adjustment of the zone or shade at will to the first or third mentioned positions.

[Claims 6 to 25 not printed in the Gazette.]

1,109,015. COMBINATION-GARMENT. MAX PHILLIPS, New York, N. Y., assignor to Innovation Shirt Company, New York, N. Y., a Corporation of New York. Filed Mar. 10, 1914. Serial No. 823,711. (Cl. 2—144.)



1. A combination garment provided with a front opening having a row of releasable fastenings, said opening extending laterally from the neck opening to a point adjacent to the arm-hole on one side and then diagonally across the front of the body and along the leg on the other side, forward of the crotch portion of that leg; substantially as described.

2. A combination garment provided with a front opening having a row of releasable fastenings, said opening extending laterally from the neck opening to a point adjacent to the arm-hole on one side and then in a substantially straight line diagonally across the body and along the leg of the other side forward of the crotch portion of that leg, said garment having a closed seat and closed crotch; substantially as described.

1,109,016. COUPLING. GEORGE A. QUIN, Toronto, Ontario, Canada. Filed Feb. 24, 1913. Serial No. 750,352. (Cl. 247—26.)

1. A coupling formed of similar parts each comprising a body portion, a projecting portion of half the thickness of the body, a head at the end of the projecting portion having its thickness disposed equally on each side of the plane of the face of the projecting portion, and a socket formed in the body adjacent the projecting portion to receive the head of the other part of the coupling, the inwardly directed face of the head and the corresponding face of the socket being curved substantially on arcs of the same circle struck from a center at the middle of the coupling.

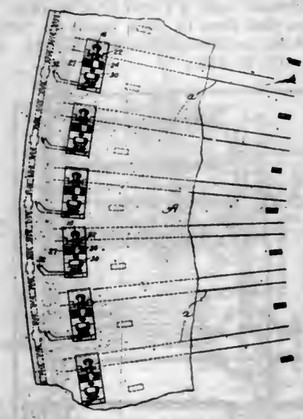
2. A coupling formed of similar parts each comprising a body portion, a projecting portion of half the thickness of the body, a head at the end of the projecting portion having its thickness disposed equally on each side of the

plane of the face of the projecting portion, a socket formed in the body adjacent the projecting portion to receive the head of the other part of the coupling, the inwardly directed face of the head and the corresponding face of the socket being curved substantially on arcs of the same circle struck from a center at the middle of the coupling, and the faces at the end of the projecting portion and the shoulder of the body portion also being curved on arcs of the same circle concentric with the faces of the head and socket hereinbefore referred to.

3. A coupling formed of similar parts each comprising a body portion, a projecting portion of half the thickness of the body, a head at the end of the projecting portion having its thickness disposed equally on each side of the plane of the face of the projecting portion, a socket formed in the body adjacent the projecting portion to receive the head of the other part of the coupling, the inwardly directed face of the head and the corresponding face of the socket being curved substantially on arcs of the same circle struck from a center at the middle of the coupling, the faces at the end of the projecting portion and the shoulder of the body portion also being curved on arcs of the same circle concentric with the faces of the head and socket hereinbefore referred to, and the face of the outer end of the head also being curved concentric with the curves hereinbefore referred to.

4. A coupling formed of similar parts each comprising a body portion, a projecting portion of half the thickness of the body, a head at the end of the projecting portion having its thickness disposed equally on each side of the plane of the face of the projecting portion, a socket formed in the body adjacent the projecting portion to receive the head of the other part of the coupling, the inwardly directed face of the head and the corresponding face of the socket being curved substantially on arcs of the same circle struck from a center at the middle of the coupling, the faces at the end of the projecting portion and the shoulder of the body portion also being curved on arcs of the same circle concentric with the faces of the head and socket hereinbefore referred to, the face of the outer end of the head also being curved concentric with the curves hereinbefore referred to and the face of the inner wall of the socket being flat.

1,109,017. ROUNDHOUSE EQUIPMENT. JAMES RILEY, Parsons, Kans. Filed Mar. 13, 1914. Serial No. 824,574. (Cl. 104—208.)



1. In a round house equipment, the combination of an exhauster having an inlet at one side thereof, an uptake pipe having a laterally extending terminal fixed thereon at its upper end, terminating and extending directly toward the inlet of the exhauster, and means at the lower end of the uptake pipe whereby it may be connected to the stack of a locomotive.

2. In a round house equipment, the combination of an exhauster having an inlet at one side thereof, means for driving said exhauster, an uptake-pipe having a laterally extending terminal fixed thereon at its upper end, and extending toward the inlet of the exhauster, and means at the lower end of the uptake pipe whereby it may be connected to the stack of a locomotive, said uptake pipe being disposed adjacent the exhauster.

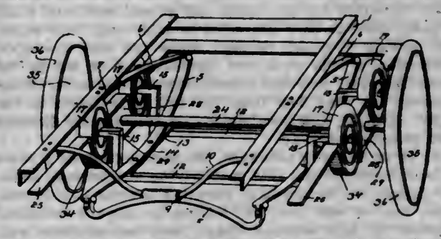
3. In a round-house equipment, the combination of an exhauster having an inlet at one side thereof, means for driving said exhauster, an uptake pipe having a laterally extending elbow fixed thereon at its upper end, the exit end of said elbow being substantially co-axial with the inlet of the exhauster, and means at the lower end of said pipe whereby it may be connected to the stack of a locomotive.

4. In a round-house equipment, the combination of an exhauster having an inlet at one side thereof, means for driving said exhauster, an uptake pipe having a laterally extending elbow fixed thereon at its upper end, the exit end of said elbow being substantially co-axial with the inlet of the exhauster, and means at the lower end of said pipe whereby it may be connected to the stack of a locomotive, said elbow being disposed adjacent the exhauster.

5. A round-house equipment, the combination of an exhauster having an inlet at one side thereof, means for driving said exhauster, an uptake pipe having a laterally extending terminal fixed thereon at its upper end and leading to said inlet, a swivel-connection which permits the pipe and said terminal to swing so the lower end of the pipe may be adjusted longitudinally of the stall, and means at the lower end of said pipe whereby it may be connected to the stack of a locomotive.

[Claims 6 to 28 not printed in the Gazette.]

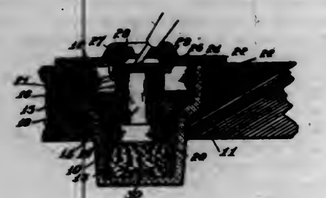
1,109,018. MOTOR-VEHICLE. ELBERT R. ROBINSON, Chicago, Ill. Filed May 24, 1912. Serial No. 699,413. (Cl. 21—50.)



1. A vehicle including wheels, axles therefor, a chassis and body springs, a bed-frame connecting said axles together, transverse substantially U-shaped rods, the rear body springs comprising quarter elliptic members connected to said chassis and semi-elliptic members having their forward ends connected to a transverse element or member, said bed-frame having opposite downwardly curved arcuate portions, pneumatic cushioning elements arranged within the resulting depressions of said arcuate portions of the bed-frame said substantially U-shaped rods being arranged under and secured to the semi-elliptic portions of said body springs, said pneumatic cushioning elements being arranged upon the ends of said substantially U-shaped rods.

2. A vehicle including transporting wheels, axles therefor, a chassis, springs connected to said chassis, a bed-frame affording means of connection between said axles, said bed-frame having opposite downwardly curved arcuate bends, connected substantially U-shaped members having their connections secured to said springs, annular pneumatic cushioning members received within said arcuate bends of said bed-frame, themselves receiving the arms or elevated end-portions of said U-shaped members, said arcuate bends being in pairs at the rear end of the chassis, the rear pair of bends having the rear axle arranged intermediate thereof, bearing blocks receiving said rear axle, and straps for holding said bearing blocks in position secured to said rear pairs of bends.

1,109,019. INK-WELL. GUSTAV J. SENOBUSCH, Milwaukee, Wis. Filed Nov. 29, 1912, Serial No. 733,934. Renewed Nov. 7, 1913. Serial No. 799,815. (Cl. 120—61.)



1. In an ink well structure, the combination of a bowl, a cover for said bowl having a depending annular flange, a guide member adapted to seat at its lower end against the inner wall of said bowl and having its upper end extending into said flange, said guide member having a central vertical passageway therethrough, a float member adapted to play in said passageway, an abutment on said cover for said float member and a dip opening through said abutment, said guide member having passageway therethrough through which ink may flow upon depression of said float member, the upper end of said guide member terminating short of said abutment and said flange having overflow passageways.

2. In an ink well structure, the combination of a bowl, a cover structure for said bowl having a depending annular flange, an intermediate partition seating against the inner face of said bowl and having an upward extension received by said annular flange, said intermediate wall and extension dividing said bowl into an upper and lower chamber, said extension having a vertical guide passageway, a float member in said lower chamber having a stem engaging in said passageway, an abutment on said cover structure for the upper end of said stem and a dip opening through said abutment to said stem, said extension having by-passes through which ink may flow upon depression of the stem and displacement of ink in the lower chamber, over-flow passageways in said cover flange whereby ink may flow from the top of the stem to the upper chamber, and level equalizing passageways through said intermediate wall.

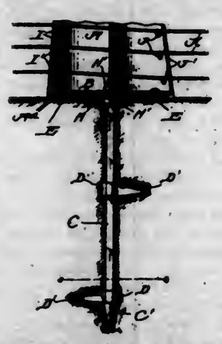
3. In an ink well structure, the combination of a bowl, a cover structure for said bowl having a depending annular flange, an intermediate partition seating against the inner face of said bowl and having an upward extension received by said annular flange, said intermediate wall and extension dividing said bowl into an upper and a lower chamber, said extension having a vertical guide passageway, a float member in said lower chamber having a stem engaging in said passageway, an abutment on said cover structure for the upper end of said stem and a dip opening through said abutment to said stem, said extension having by-passes through which ink may flow upon depression of the stem and displacement of ink in the lower chamber, over-flow passageways in said cover flange whereby ink may flow from the top of the stem to the upper chamber, and level equalizing passageways through said intermediate wall, said bowl and intermediate wall and extension being of glass and the seat and engaging surfaces being ground.

4. In an ink well structure, the combination of a bowl, a metallic cover for said bowl having a central opening, a dipping guide head having a flange extending through said opening, an intermediate structure seating against the sides of said bowl intermediate its ends and having an upward extension received by the lower end of said flange, a float member in said bowl having a neck extending through said extension, said extension having by-passes through which ink may flow upon depression of the float member, said flange having overflow passageways through which ink may flow from the top of said float and the upper end of said extension.

5. In an ink well structure, the combination of a bowl, a cover for said bowl having a dip opening, a flange depending from said cover and surrounding said opening, a guide frame in said bowl having its upper end extending into said flange, said guide frame having a vertical passageway therethrough, a float member adapted to play in said passageway and to be floated by ink in the well to hold its upper surface against the under side of the cover to seal the dip opening, said guide frame having passageway therethrough through which ink may flow upon depression of said float member, and overflow passageway for the flow of ink back to the well from the space in the guide frame above the depressed float member.

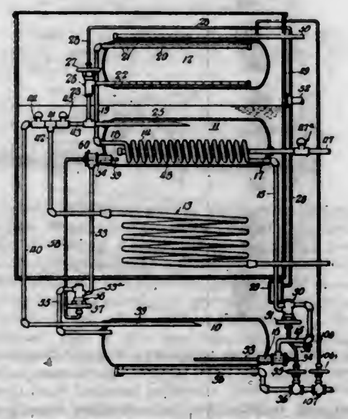
[Claims 6 and 7 not printed in the Gazette.]

1,109,020. FENCE-POST. JOSEPH BOOTH SKIFF, Clinton, Iowa, and CHARLES JACOB WESTPHALL, Portland, Oreg. Filed Feb. 23, 1911. Serial No. 610,249. (Cl. 189—30.)



The combination with a metal fence post having a base, of a depending shank carried by said base, and semi-circular blades slidably and non-rotatably mounted upon said shank, said blades occupying different horizontal planes and projecting laterally in opposite directions, said blades being out of vertical alinement with each other.

1,109,021. REFRIGERATING APPARATUS. HARRISON H. SOUTHWORTH, Cleveland, Ohio, and CHARLES G. ARMSTRONG, Atlantic Highlands, N. J., assignors, by mesne assignments, to The Iceless Refrigeration Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed June 14, 1912, Serial No. 703,596. Divided and this application filed Nov. 6, 1912. Serial No. 729,717. (Cl. 62—19.)



1. In an absorption refrigerating apparatus, in combination, a vessel adapted to act as a still, a vessel adapted to act as an absorber, an intermediary container adapted to receive the contents of one vessel while a transposition is made of the contents of the other vessel to the vessel whose contents have passed to the intermediary container, and means for applying the heat of the contents of the still to produce the required pressure to refill the still.

2. In an absorption refrigerating apparatus, in combination, a still, an absorber, an intermediary container, means for heating said still, conduits connecting said still, absorber and container adapted to permit transposition of the contents of the still and absorber through the medium of said intermediary container, means for imparting the temperature of the weak absorbent after it has left the still to the strong absorbent to drive said strong absorbent into the still, devices for controlling the flow through said conduits, and means for discontinuing the generation from said still when the absorbent therein has been reduced to a predetermined degree of weakness.

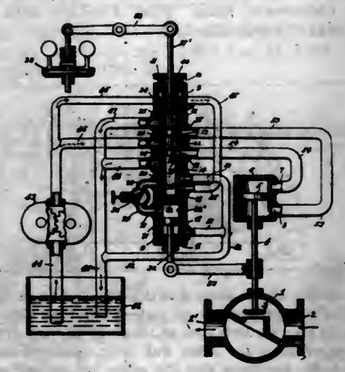
3. In an absorption refrigerating apparatus, in combination, a still, an absorber, an intermediary container, means for heating said still, conduits connecting said still, absorber and container adapted to permit transposition of the contents of the still and absorber through the medium of said intermediary container, means for imparting the temperature of the weak absorbent after it has left the still to the strong absorbent to produce the pressure required to drive said strong absorbent into the still, and devices for controlling the flow through said conduits.

4. In an absorption refrigerating apparatus, in combination, a still, means for heating said still, an absorber, and an intermediary container, and means for producing a transposition of contents from the still to the container, from the absorber to the still and from the container to the absorber when the contents of the still have been raised to a predetermined temperature, said transmission being separated by time intervals.

5. In an absorption refrigerating apparatus, in combination, a still, means for heating said still, an absorber, and an intermediary container, and means for automatically producing a transmission of contents from the still to the container, from the absorber to the still and from the container to the absorber, when the contents of the still have been raised to a predetermined temperature.

[Claims 6 to 10 not printed in the Gazette.]

1,109,022. GOVERNOR FOR ENGINES, MOTORS, OR THE LIKE. ELMER D. SPICER, Wellsville, N. Y. Filed Dec. 15, 1913. Serial No. 806,810. (Cl. 121—112.)



1. A device for regulating the flow of motive fluid to the faces of actuating pistons such as are used to regulate the movements of valves or regulators controlling the flow of energy to motors, engines, machines or the like; comprising a valve casing having a plurality of ports adapted to accommodate the motive fluid as it passes to and exhausts from the faces of the actuating piston; a primary valve having a plurality of ports adapted to register with ports in the casing; a secondary valve co-acting with the primary valve and adapted to be controlled by a suitable speed governor or similar device, dependent upon the regulated machine, for controlling the ports in the primary valve and the flow of fluid and pressure to and from the faces of the actuating piston; means for causing the primary valve to normally occupy a definite position relative to the valve casing; means independent of but co-acting with the primary valve and adapted to be controlled by the movement of the actuating piston for causing displacement of the primary valve from its normal position; and means for causing the primary valve to return to its normal position when displaced therefrom.

2. A device for regulating the flow of motive fluid to the faces of actuating pistons such as are used to regulate the movements of valves or regulators controlling the flow of energy to motors, engines, machines or the like, comprising a valve casing having a plurality of ports adapted to accommodate the motive fluid as it passes to and exhausts from the faces of the actuating piston; a primary valve having a plurality of ports adapted to register with ports in the casing; a secondary valve co-acting with the primary valve and adapted to be controlled by a suitable speed governor or similar device, dependent upon the regulated machine, for controlling the ports in the primary valve and the flow of fluid and pressure to and from the faces of the actuating piston; means for causing the primary valve to normally occupy a definite position relative to the valve casing; means independent of but co-acting with the primary valve and adapted to be controlled by the movement of the actuating piston for causing displacement of the primary valve from its normal position; means for causing the primary valve to return to its normal position when displaced therefrom; and means for regulating the coöperation between the primary valve and the displacing means and for regulating the time required for the primary valve to return from a displaced to its normal position.

3. A device for regulating the flow of motive fluid to the faces of actuating pistons such as are used to regulate the movements of valves or regulators controlling the flow of energy to motors, engines, machines or the like; comprising a valve casing having a plurality of ports adapted to accommodate the motive fluid as it passes to and exhausts from the faces of the actuating piston; a primary valve having a plurality of ports adapted to register with ports in the casing; a secondary valve co-acting with the primary valve and adapted to be controlled by a suitable governor or similar device, dependent upon the regulated machine, for controlling the ports in the primary valve and the flow of fluid and pressure to and from the faces of the actuating piston; means for causing the primary valve to normally occupy a definite position relative to the valve casing; means independent of but co-acting with the primary valve and adapted to be controlled by the movement of the actuating piston for causing displacement of the primary valve from its normal position; means for causing the primary valve to return to its normal position when displaced therefrom; means for regulating the coöperation between the primary valve and the displacing means and for regulating the time required for the primary valve to return from a displaced to its normal position; and means for preventing excessive displacement of the primary valve such as would prevent the otherwise proper performance of the functions ascribed to it.

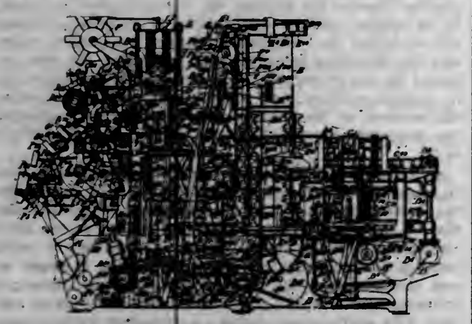
4. A device for regulating the flow of motive fluid to the faces of actuating pistons such as are used to regulate the movements of valves or regulators controlling the flow of energy to motors, engines, machines or the like; comprising a valve casing having a plurality of ports adapted to accommodate the motive fluid as it passes to and exhausts from the faces of the actuating piston; a primary valve having a plurality of ports adapted to register with ports in the casing; a secondary valve co-acting with the primary valve and adapted to be controlled by a suitable speed governor or similar device, dependent upon the regulated machine, for controlling the ports in the primary valve and the flow of fluid and pressure to and from the faces of the actuating piston; means for

causing the primary valve to normally occupy a definite position relative to the valve casing; means independent of but co-acting with the primary valve and adapted to be controlled by the movement of the actuating piston for causing displacement of the primary valve from its normal position; means for causing the primary valve to return to its normal position when displaced therefrom; means for regulating the coöperation between the primary valve and the displacing means and for regulating the time required for the primary valve to return from a displaced to its normal position; means for preventing excessive displacement of the primary valve such as would prevent the otherwise proper performance of the functions ascribed to it and means for preventing the escape of fluid as leakage to the outside of the valve case.

5. A device for regulating the flow of motive fluid to the faces of actuating pistons such as are used to regulate the movements of valves or regulators controlling the flow of energy to motors, engines, machines or the like; comprising a valve casing having a plurality of ports adapted to accommodate the motive fluid as it passes to and exhausts from the faces of the actuating piston; a primary valve having a plurality of ports adapted to register with ports in the casing; a secondary valve co-acting with the primary valve and adapted to be controlled by a suitable speed governor or similar device, dependent upon the regulated machine, for controlling the ports in the primary valve and the flow of fluid and pressure to and from the faces of the actuating piston; means for causing the primary valve to normally occupy a definite position relative to the valve casing; means independent of but co-acting with the primary valve and adapted to be controlled by the movement of the actuating piston for causing displacement of the primary valve from its normal position; means for causing the primary valve to return to its normal position when displaced therefrom; means for regulating the coöperation between the primary valve and the displacing means and for regulating the time required for the primary valve to return from a displaced to its normal position; means for preventing excessive displacement of the primary valve such as would prevent the otherwise proper performance of the functions ascribed to it; means for preventing the escape of fluid as leakage to the outside of the valve case; and means for preventing the accumulation of fluid at such points as would hinder or prevent the otherwise proper performance of the functions ascribed to the various parts of the device.

[Claim 6 not printed in the Gazette.]

1,109,023. PACKAGING-MACHINE. CHARLES B. STILWELL, Wayne, Pa., assignor to The Union Paper Bag Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 26, 1906, Serial No. 313,764. Renewed Oct. 13, 1911. Serial No. 654,540. (Cl. 93—93.)



1. In a machine for packaging paper bags, the combination with feed rolls for supplying the bags to the machine, two sets of bag assembling devices arranged in the line of feed, switching mechanism for diverting the supply of bags from one set of assembling devices to the other, timing mechanism for actuating the switch, said timing mechanism consisting of a series of switch actuating levers, a spring tending to shift the lever system so as to throw the switch and means for suppressing the switch throwing action of the spring except at predetermined intervals; substantially as described.

2. In a machine for packaging paper bags, the combination with feed rolls for supplying the bags to the machine, two sets of bag assembling devices arranged in the line of feed, switching mechanism for diverting the supply of bags from one set of assembling devices to the other, timing mechanism for actuating the switch, said timing mechanism consisting of a series of switch actuating levers, a spring tending to shift the lever system so as to throw the switch and means for suppressing the switch throwing action of the spring except at predetermined intervals, said means consisting of a flange wheel having diametrically opposite slots, to which wheel the spring is connected, and a stud or projection connected to the lever system and bearing upon the wheel flange; substantially as described.

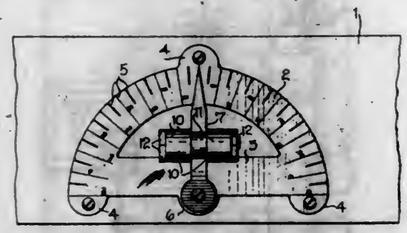
3. In a machine for packaging paper bags, a bag assembling device consisting of a pair of paddle wheels having bag receiving and discharging pockets, the pockets of each wheel coöperating, each with a corresponding pocket of the other wheel to form a bag receiver a back-stop against which the bags are delivered and means for tapping the bags on their edges as they are received by the back-stop so as to bring the edges into alinement; substantially as described.

4. In a machine for packaging paper bags, a bag assembling device consisting of coöperating paddle wheels having bag receiving and discharging pockets, a back-stop against which the bags are delivered and means for tapping the bags on their edges as they are received by the back-stop so as to bring the edges into alinement, said means consisting of reciprocating tapper arms operating against the side and top edges of the bags; substantially as described.

5. In a machine for packaging paper bags, a bag assembling device, consisting of coöperating paddle wheels having bag receiving and discharging pockets, a back-stop, a pusher coöperating with the back-stop and mechanism for shifting the back-stop and pusher with respect to the paddle wheels, so as to shift the assembled bags bodily.

[Claims 6 to 77 not printed in the Gazette.]

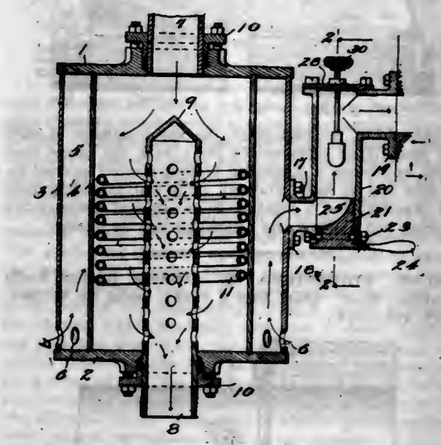
1,109,024. LEVEL ATTACHMENT. CHARLES G. SUTTON, Cherryvale, Kans. Filed June 27, 1913. Serial No. 776,143. (Cl. 33—21.)



1. A device of the class described including an indicator formed of a single piece of material having slits formed therein to provide two sets of tongues, one set of tongues being larger than the other and bent upon themselves to form tubular members and the other set of tongues being bent inwardly and arranged across the ends of the tubular members, as and for the purpose set forth.

2. A device of the class described including an arcuate graduated body member, means for securing the same to a straight edge or the like, a transverse web connecting the ends of said body, an indicator pivotally mounted upon said web and having its outer end arranged adjacent the graduated face, tubular side members formed upon opposite sides of the indicator, a level tube arranged therein, and transverse resilient tongues disposed across the ends of the tubular side members to retain the level tube therein.

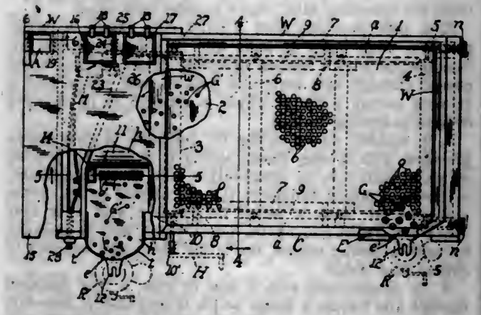
1,109,025. FUEL-HEATER. THOMAS A. TAYLOR, Kenton, Ohio. Filed Sept. 8, 1913. Serial No. 788,734. (Cl. 48—148.)



1. In a fluid fuel heater the combination of a perforated shell forming an air chamber, an imperforate casing within the shell and a coil in the casing having inlet and outlet, an inlet pipe to the casing, and a perforated outlet pipe extending from one end of the casing to near the other end thereof, whereby the coil is heated by gases flowing through the casing to the outlet pipe.

2. In a fluid fuel heater, the combination with a carbureting chamber and kerosene tank communicating therewith, of a perforated shell, an imperforate casing within the shell, an inlet for heated gases to said casing and an outlet pipe, perforated, and extending from one end of the casing to near the other, the space between the shell and casing forming an air chamber and communicating with the carbureting chamber, and a coil in the casing communicating with said tank, whereby the coil is heated by the gases flowing through the casing to the outlet pipe.

1,109,026. MONEY-SORTING MACHINE. MARTIN J. WALSH, Jr., St. Louis, Mo. Filed Jan. 24, 1914. Serial No. 814,134. (Cl. 133—3.)



1. In a money sorting machine, a perforated member for the deposit of the original coin operating to intercept coins of specific denominations, and allowing those of other denominations to pass through the openings thereof, a traveling member for intercepting the coins discharged through said perforated member, and conducting said intercepted coin to a suitable point of discharge, a second perforated member positioned below the plane of, and beyond the first perforated member for receiving the coins discharged from said traveling member, and operating to intercept said coins and direct their discharge across the general direction of movement of the traveling member and allow the dirt and foreign material to pass therethrough.

2. In a money-sorting machine, a stationary depositing table for the coins, perforated to discharge coins of certain denominations and intercept coins of other denominations, a discharge for the intercepted coins leading from said table, a conveyer below the table for intercepting the coins discharged through the table perforations, and for conducting the same to a suitable point of discharge, a transversely disposed chute positioned beyond the table for receiving the coins discharged from the conveyer, a perforated plate at the base of the chute operating to intercept the coin delivered thereto but allowing dirt and foreign matter to pass therethrough, and means on said plate for effecting a discharge of the coin intercepted thereby.

3. In a money sorting machine, a stationary depositing table for the coins, perforated to discharge coins of certain denominations and intercept coins of other denominations, a discharge for the intercepted coins leading from said table, a belt-conveyer below the table for intercepting the coins discharged through the perforations of the table, a chute located at the discharge end of the conveyer beyond the end of the table and inclined transversely to the general direction of travel of the belt, an extension leading from the inclined portion of the chute and provided with perforations for the escape of dirt and foreign substances, and having a marginal discharge for the coins, and a chute leading from said extension and extending a suitable distance above the upper surface of the same through which a portion of the coins accumulating on said extension may be discarded.

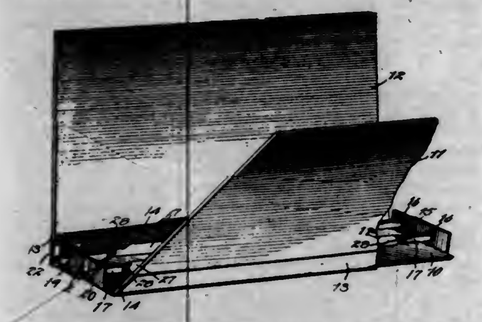
4. In a money sorting machine, a stationary depositing table for the coins, perforated to discharge coins of certain denominations and intercept coins of other denominations, a discharge for the intercepted coins, leading from said table, an endless belt-conveyer below the table for intercepting the coins discharged through the perforations of the table, ledges disposed longitudinally of and at the sides and above the belt and having faces inclining toward the belt for guiding the coins onto the belt, a chute at the discharge end of the belt beyond the table having a wall for guiding the coin thereinto and a bottom inclined transversely to the general direction of travel of the belt, a perforated extension leading from said inclined bottom and provided with a marginal discharge for the coins, a receptacle below said extension, a chute leading from the extension to the receptacle for conveying discarded coins to the receptacle, a motor in the space beneath the inclined bottom of the chute aforesaid, rollers for the belt, and intermediate connections between the motor and the adjacent roller for imparting movement to the belt.

5. In a money sorting machine, a suitable frame, a top perforated plate for the deposit of coin, an endless belt conveyer beneath the plate, means on the side of the conveyer for guiding the coins dropping through the perforations, onto the plate, terminal guide rollers for the belt, a chute beyond the perforated plate having an inclined bottom at the discharge end of the conveyer disposed transversely to the general direction of travel of the belt and receiving the discharges from the belt, a motor positioned below said inclined bottom within the bounding planes of the frame, a counter-shaft actuated by the motor, a sprocket wheel on said shaft, a terminal sprocket on the roller adjacent the motor, and a sprocket chain connecting the sprockets whereby movement is imparted to the belt.

1,109,027. TEMPORARY BINDER. SAXTON S. BARRETT, Chicago, Ill.; The Northern Trust Company, executor of said Saxton S. Barrett, deceased, assignor to Mary K. Barrett, Glencoe, Ill. Filed May 10, 1912. Serial No. 696,361. (Cl. 129—38.)

1. A locking-plate for binders having a slot adapted to receive and secure a retaining-strip, said slot having

means for bending or deflecting the retaining-strip between its upper and lower margins as it passes therethrough.



2. A locking-plate for binders having a slot adapted to receive and secure a retaining-strip, said slot having an angular entering passage for bending or deflecting the retaining-strip between its upper and lower margins as it passes therethrough.

3. A binder, comprising a suitable back having a locking-plate connected therewith, and a retaining-strip, said retaining-strip being capable of being temporarily bent or deflected between its upper and lower margins, said locking-plate having a slot to receive said strip, said slot having means for so deflecting said retaining-strip as it enters the slot.

4. A binder, comprising a suitable back having a locking-plate connected therewith, and a retaining-strip, said retaining-strip being capable of being temporarily bent or deflected between its upper and lower margins, said locking-plate having a slot to receive said strip, said slot having an angular entering passage for so deflecting said retaining-strip as it enters the slot.

5. A locking-plate for binders having a slot adapted to receive and secure a retaining-strip, said slot having means for bending or deflecting the retaining-strip between its upper and lower margins and for twisting said strip axially as it passes therethrough.

[Claims 6 to 8 not printed in the Gazette.]

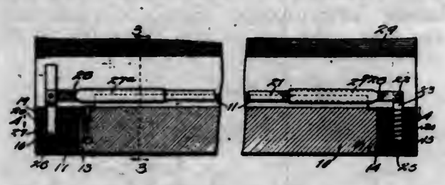
1,109,028. TEMPORARY BINDER. SAXTON S. BARRETT, Chicago, Ill.; The Northern Trust Company, executor of said Saxton S. Barrett, deceased, assignor to Mary K. Barrett, Glencoe, Ill. Filed May 10, 1912. Serial No. 696,364. (Cl. 129—38.)

A temporary binder, comprising a hub having a series of longitudinal grooves arranged at intervals around it, a series of retaining strips pivotally connected with said hub and adapted to lie in said grooves, a series of securing hooks adapted to engage and secure the free ends of said retaining strips, and a handle connected with said hub, said securing hooks being placed between the handle and a portion of the hub.

1,109,029. TEMPORARY BINDER. ARTHUR M. BARRET, Chicago, Ill., assignor, by mesne assignments, to Mary K. Barrett, Glencoe, Ill. Filed May 10, 1912. Serial No. 696,365. (Cl. 129—38.)

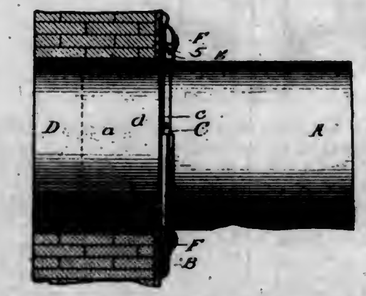
1. In a temporary binder, the combination with a back-piece and a retaining-strip pivotally connected with the back-piece at one end, of an end piece attached to the other end of said back-piece and forming a continuation thereof and providing a chamber at that end of the back-piece, a spring strip secured within said chamber having a hook at its free end, and a depending locking member carried by the free end of the retaining-strip and extending into said chamber and adapted to be engaged by said hook.

2. In a temporary binder, the combination with a back-piece, of a retaining-strip pivotally connected with the back-piece at one end, of an end piece formed of a bent plate attached to the opposite end of said back-piece and forming a continuation thereof and providing a chamber



at that end of the back-piece, the upper member of said bent plate lying substantially flush with the upper face of the back-piece, a depending locking member carried by the free end of said retaining strip and extending into said chamber, and a yielding device in said chamber for engaging and holding said depending locking member.

1,109,030. STOVEPIPE-LOCK. DAVID R. BARTON, North Yakima, Wash. Filed June 3, 1914. Serial No. 842,664. (Cl. 126—318.)



1. A thimble for a stove-pipe hole provided with a flange having pairs of slots and intermediate strips arranged at intervals, in combination with fastening means adapted to pass behind said strips, a tubular part adapted to enter said thimble and an attachment of said tubular part acting as a stop therefor and adapted to be engaged at corresponding intervals by said fastening means for holding the parts together.

2. A thimble and ring each provided with a flange, in combination with a stove pipe on which said ring is fixed and flexible means for fastening said flanges together, said flanges being provided with corresponding parts adapted to have said flexible means passed behind and around them for fastening said flanges against each other.

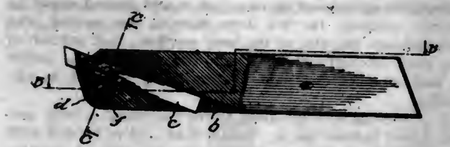
3. A pipe provided with a fixed ring having a flange provided with pairs of slots and intervening strips, in combination with a flexible fastening device adapted to be passed through said slots and around said strips, and a thimble having a flange which is adapted to be engaged by said fastening devices.

4. A tubular outlet device for products of combustion provided with a stop flange which is slotted to provide strips at intervals, in combination with fastening means, a thimble adapted to receive the end of said outlet device and provided with a flange for contact with that first above mentioned and having parts which may be engaged by said fastening means, the latter being also adapted to engage said strips.

5. In combination with a pipe or tube, a ring fastened thereon and having a flange which is provided at intervals with pairs of slots to provide strips, a thimble adapted to receive the end of said pipe or tube and provided with a flange having slots and strips corresponding to those first above mentioned, wires adapted to pass through said slots behind the strips of the thimble flange and in front of the strips of the ring flange and bind said flanges together by being twisted.

[Claims 6 to 11 not printed in the Gazette.]

1,109,031. TOOL-HOLDER FOR LATHES. MARTIN C. BERSTED, Chicago, Ill. Filed Nov. 17, 1913. Serial No. 801,334. (Cl. 29—96.)



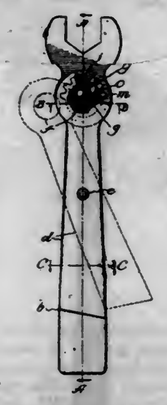
1. In a device of the class described, the combination with a holding bar having a diagonal passage therethrough of a shape to accommodate a cutting tool having the body thereof rectangular in its shortest cross section, a vertical side of the passage being parallel to the vertical sides of the bar, of a tool rectangular in its shortest cross section extending through the passage, and a locking cylinder journaled in the bar adapted to be turned therein by extraneous means and having some of its cylindrical surface projecting into the passage and adapted to engage the tool, said cylinder having a channel therein wider than the adjacent side of the tool forming two cam surfaces thereon, the cam surface formed by the bottom of the channel which gradually increases in depth coöperating with one side of the tool, while the second cam surface is formed on one side of the channel, both cam surfaces lying so that the thrust of the work on the cutting tool tends to rotate the cylinder to tighten its grip on the two sides of the tool engaged by it and to jam its opposite sides against the opposed walls of the passage.

2. In a device of the class described, the combination with a holding bar having a diagonal passage therethrough of a shape to accommodate a cutting tool having the body thereof rectangular in its shortest cross section, a vertical side of the passage being parallel to the vertical sides of the bar, of a tool rectangular in its shortest cross section extending through the passage, and a locking cylinder journaled in the bar having an aperture therein polygonal in its cross section and adapted to be turned in the bar by a tool coöperating with the aperture and having some of its cylindrical surface projecting into the passage and adapted to engage the tool, said cylinder having a channel therein wider than the adjacent side of the tool and forming two cam surfaces thereon, the cam surface formed by the bottom of the channel which gradually increases in depth coöperating with one side of the tool, while the second cam surface is formed on one side of the channel, both cam surfaces lying so that the thrust of the work on the cutting tool tends to rotate the cylinder to tighten its grip on the two sides of the tool engaged by it and to jam its opposite sides against the opposed walls of the passage.

3. In a device of the class described, the combination with a holding bar having a diagonal passage therethrough of a shape to accommodate a cutting tool extending therethrough and having the body thereof rectangular in its shortest cross section, a vertical side of the passage being parallel to the vertical sides of the bar, of a locking cylinder journaled in the bar, adapted to be turned therein by extraneous means, and having some of its cylindrical surface projecting into the passage and adapted to engage the tool, said cylinder having a channel therein wider than the adjacent side of the tool and forming two cam surfaces thereon, the cam surface formed by the bottom of the channel, which gradually increases in depth, cooperating with one side of the tool, while the second cam surface is formed on one side of the channel, both cam surfaces lying so that the thrust of the work on the cutting tool tends to rotate the cylinder to tighten its grip on the two sides of the tool engaged by it and to jam its opposite sides against the opposed walls of the passage.

1,109,032. WRENCH. MARTIN C. BERSTED, Chicago, Ill. Filed Nov. 17, 1913. Serial No. 801,335. (Cl. 81—59.)

1. In a wrench, the combination with a two-part handle having a bearing lug projecting from the outer end of the main part, the other part extending outward the same distance and permanently pivoted thereto being adapted to be swung over or away from said lug as desired, of a jaw having an aperture therein adapted to be fitted over the lug in various positions when the swinging portion of the handle is withdrawn, and connections between said lug and the aperture of the jaw to hold the latter in any of the positions in which it is placed, substantially as and for the purpose described.



2. In a wrench, the combination of a two-part handle having a circular bearing-lug rigidly secured to and projecting from the outer end of the main part, the other part being adapted to be swung over or away from said lug as desired, of a jaw having a circular aperture with recesses in the periphery of the aperture and adapted to be fitted over the lug in various positions when the swinging portion of the handle is withdrawn, and a sliding spring-pressed plunger mounted in the lug and having a nose adapted to coöperate with any of the above-mentioned recesses.

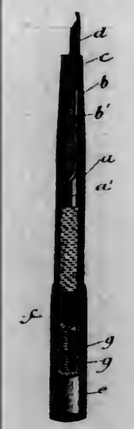
3. In a wrench, the combination with a two-part handle having a circular bearing-lug with a T-shaped recess therethrough rigidly secured to and projecting from the outer end of the main part, the other part being adapted to be swung over or away from said lug, as desired, of a jaw having a circular aperture therein with recesses in the periphery of the aperture adapted to be fitted over the lug in various positions when the swinging portion of the handle is withdrawn, and a sliding spring-pressed plunger mounted in the lug, having a nose adapted to cooperate with any of the recesses, and having flattened surfaces coöperating with the sides of the narrower part of the T-shape recess to prevent the plunger from turning.

4. In a wrench, the combination with a two-part handle having a circular bearing-lug with a T-shaped aperture therein projecting from the outer end of the main part, the other part being adapted to be swung over or away from said lug, as desired, of a jaw having a circular aperture with recesses in the periphery of the aperture adapted to be fitted over the lug in various positions when the swinging portion of the handle is withdrawn, a sliding spring-pressed plunger mounted in the lug, hollow at one end and having a nose at the other end adapted to cooperate with the recesses in the jaw, a coöperating aperture in the lug into which the hollow end of the plunger may be forced, and a helically-coiled expanding spring in said hollow and aperture.

5. In a wrench, the combination with a two-part handle having a circular bearing-lug with an aperture therethrough rigidly secured to and projecting from the outer end of the main part, the other part being adapted to be swung over or away from said lug, as desired, the swinging part having another aperture registering with the aperture in the bearing lug when the handle is closed, of a jaw having a circular aperture with recesses in the periphery of the aperture adapted to be fitted over the

lug in various positions when the swinging portion of the handle is withdrawn, and a sliding spring-pressed plunger mounted in the lug and having a nose adapted to cooperate with the recesses, and a flange which can be manipulated through the apertures in the swinging portion of the handle and the bearing lug.

1,109,033. FOUNTAIN-PEN. EDWARD K. BIXBY, Chicago, Ill. Filed Mar. 19, 1913. Serial No. 755,292. (Cl. 120—42.)



A fountain pen, comprising a body having a liquid chamber therein extending substantially the length thereof, a nipple and pen body detachably connected to one end of said body, a solid exteriorly screw threaded extension at the end of said body opposite the pen body, a magazine having an interior screw thread engaging said screw threaded extension, and a detachable cap adapted to fit over either the pen body or over said magazine and onto the said body at that end.

1,109,034. SEALING-WAX-APPLYING DEVICE. BARNABAS BRYAN, Washington, D. C. Filed June 17, 1912. Serial No. 704,053. (Cl. 219—21.)

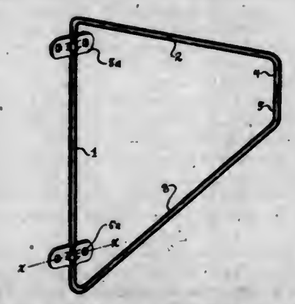
1. A sealing-wax applying-device including a body portion composed of insulating material and formed with a lengthwise-extending channel for a stick of sealing-wax and at one of its ends with a pair of integral spaced jaws; a pair of electrical heaters carried by the latter and having casings of conducting material which converge toward their outer ends and are arranged to support that end of the stick of sealing-wax which is to be melted; said casings being opposed to each other and spaced apart by lateral openings for the free flow of the melted wax therethrough sidewise of the body portion; that portion of the stick of sealing-wax which lies between the outlet of said channel and said heaters being exposed to air-cooling.

2. A sealing-wax-applying device including a body portion which is oval-like in cross-section and is formed with a lengthwise-extending channel for a stick of sealing-wax and which is provided at one end with a pair of spaced electrical heaters which are opposed to each other and separated by integral openings which permit the free flow of the melted wax in a direction substantially parallel to the shorter transverse axis of the body portion, whereby clogging of the outlet end of said channel by back-flowing wax when the device is laid down horizontally is avoided.

3. A sealing-wax-applying device including a body-portion composed substantially throughout of a heat-insulating and electric-insulating material and formed with a lengthwise-extending channel for a stick of sealing-wax and with passages for electrical conductors; and electrical heating elements carried by said body portion and provided with casings of conductive material arranged to receive that end of the stick of sealing-wax which is to be melted, said elements being separated from the outlet end of said channel by a substantial air-space which keeps cool that portion of the stick of sealing-wax which lies just beyond the outlet end of said channel.

4. A sealing-wax-applying device including a body-portion formed at one end with a swell and at the its other end with a pair of integral spaced jaws; and electrical heating elements carried by the latter.

1,109,035. PAPER-FILE. DANIEL C. BUIE, Wills Point, Tex. Filed Jan. 23, 1914. Serial No. 813,847. (Cl. 129—8.)



In a file of the character described, the combination with suitable journaling means, of the file formed of a single piece of wire, comprising a base portion adapted to be journaled in said journaling means, a file holding portion angularly disposed with regard to said base portion, an angularly disposed pointed end on said file holding portion, an upper portion, and an angularly disposed socketed portion carried by said upper portion.

1,109,036. ELECTRIC FUSE. PETER C. BURNS, Chicago, Ill., assignor to American Electric Telephone Company, Chicago, Ill., a Corporation of New Jersey. Filed Sept. 14, 1905. Serial No. 278,380. (Cl. 175—273.)

1. An electric fuse comprising metallic terminal members, a body member upon which said terminal members are mounted, a fuse wire, and removable longitudinally split metal plugs securing the end-portions of the fuse wire to and within the said terminal members, said plugs removable outwardly from the ends of the terminals.

2. An electric fuse comprising metallic terminal members, a body member upon which said terminal members are mounted, a fuse wire, and removable longitudinally split metal plugs securing the end-portions of the fuse wire to the said terminal members, the wire being coiled around each plug, said plugs having their bifurcated ends extending toward each other.

3. An electric fuse comprising a tube of insulation, grooved metal terminals secured to the end-portions of the tube and provided with openings registering with the bore thereof, a fuse wire extending through the tube and grooves of the terminals, and metal plugs fitting within the said terminals and holding the ends of the fuse wire in electrical contact therewith.

4. An electric fuse comprising a tube of insulation, grooved metal terminals secured to the ends of said tube, a fuse wire extending through the tube and lying in the grooves of the terminals, and longitudinally split metal plugs fitting within the ends of said terminals and holding the fuse wire in close electrical contact therewith.

5. A tubular fuse provided with a longitudinally extending fuse wire, and having its ends provided with internally grooved metal terminals to which the end-portions of the said fuse wire are removably and electrically connected, the wire lying in the grooves thereof, and means for holding the wire in the grooves.

[Claims 6 to 12 not printed in the Gazette.]

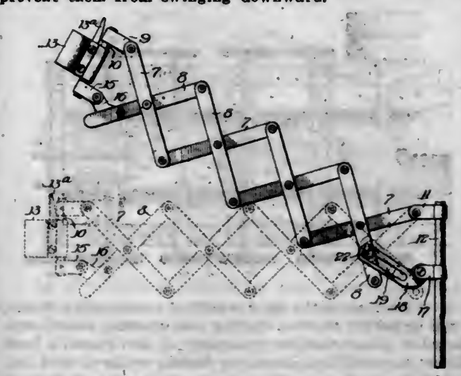
1,109,037. MOUTHPIECE ATTACHMENT FOR TELEPHONE-TRANSMITTERS. PETER C. BURNS, Chicago, Ill., assignor to The American Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1909. Serial No. 512,497. (Cl. 179—187.)

As an article of manufacture, a metal fitting provided with a screw-threaded portion for attachment to the front of a transmitter, said fitting having a diaphragm or transverse wall provided with a slot for a screw driver, and a glass mouth piece attached to said fitting.

1,109,038. EXTENSIBLE SUPPORT. PETER C. BURNS, Chicago, Ill., assignor to The American Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 8, 1913. Serial No. 766,277. (Cl. 248—1.)

1. In a device of the class described, a support, an extensible bracket secured to said support and adapted to be extended and contracted in a plane at right angles to said support, means for permitting said support being extended at an upwardly inclined angle, means for automatically locking the extended support in this raised position, and means for automatically releasing this locking means when the support is contracted.

2. In a device of the class described, a support, lazy-tongs pivotally connected to said support, adapted to be extended and contracted in a horizontal plane, means for permitting said lazy tongs to be extended to an upwardly inclined angle, and means for automatically locking said lazy-tongs in said extended and raised position so as to prevent them from swinging downward.



3. In a device of the class described, a support, lazy-tongs pivotally connected to said support, adapted to be extended and contracted in a horizontal plane, means for permitting said lazy-tongs to be extended to an upwardly inclined angle, means for automatically locking said lazy-tongs in said extended and raised position so as to prevent them from swinging downward, and means for releasing said locking means by the movement of said lazy-tongs as they are brought into closed position.

4. In a device of the class described, a support, an extensible bracket secured to said support and adapted to be extended and contracted in a plane at right angles to said support, means for permitting said bracket being extended at an upwardly inclined angle, means for automatically locking the extended bracket in this raised position, means for automatically releasing this locking means when the bracket is contracted, and means for then retarding the downward movement of said bracket.

5. In a device of the class described, lazy-tongs, a support, pivotal connections at one point between said support and said lazy-tongs, adjustable connections at a second point, said adjustable connections comprising a slotted arm pivotally connected to said support, a stud carried by said lazy-tongs and engaging said slot, said connection permitting said lazy-tongs to be raised into extended position, an enlarged end portion on said slot adapted to be engaged by said stud for locking said tongs in this raised position, and means for automatically releasing said stud from said enlarged end portion of said slot when said lazy-tongs are contracted.

[Claims 6 to 12 not printed in the Gazette.]

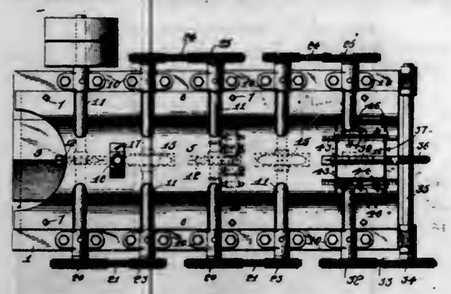
1,109,039. SALMON-SLIMING MACHINE. CHARLES T. CARSON, Seattle, Wash. Filed Jan. 31, 1914. Serial No. 815,704. (Cl. 17—10.)

1. A machine of the class described comprising a frame, a top, a hood positioned upon said top, said top provided with a plurality of apertures, feeding wheels extending through said apertures, cleaning wheels extending through some of said apertures, and means for yieldably holding said hood upon said top.

2. A machine of the class described comprising a frame, a substantially inverted V-shape top provided with a plurality of alined apertures, feeding wheels extending through some of said apertures, cleaning wheels extending through other of said apertures, a shield hood positioned over said top, means for yieldably supporting said shield hood upon said top, and means for feeding water to said hood.

3. A machine of the class described comprising a frame, a top, a hood yieldably supported upon said top, feeding

wheels extending through said top and adapted to feed fish longitudinally of said top as said feeding wheels are rotated, cleaning wheels supported adjacent said feeding wheels and adapted to travel at a greater rate of speed than said feeding wheels, and means for feeding water under said hood.

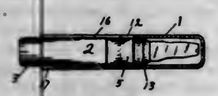


4. A machine of the class described comprising a frame, a top supported thereon, feeding and cleaning wheels supported in alined relation upon said top and frame, a hood fitting over said top, means for feeding water to said top, and transversely extending cleaning belts carried by said top adapted to efficiently clean the under face of fish adapted to pass thereover.

5. A machine of the class described comprising a frame, a top carried thereby and provided with a plurality of transverse apertures, cleaning belts working in said apertures, drums supporting said belts, means for driving said drums, said belts provided with roughened knobs upon their outer faces and adapted to contact with substantially the entire width of the under face of a fish, means for feeding a fish longitudinally of said machine, and rotating cleaning wheels coöperating with said feeding means for engaging the central portion of the under face of a fish.

[Claims 6 to 8 not printed in the Gazette.]

1,109,040. SCREW-DRIVER. WILLIAM CARTER, Louisville, Ky., assignor of one-half to B. F. Meeks Sons, Louisville, Ky., a Corporation of Kentucky. Filed Nov. 28, 1913. Serial No. 803,503. (Cl. 145—64.)

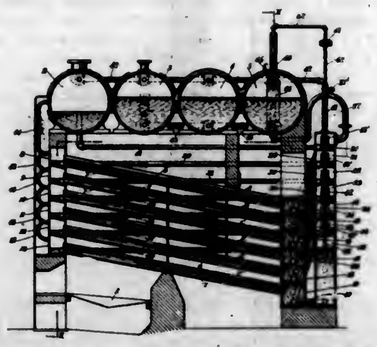


1. In a screw-driver, the combination of a tubular handle closed at one end and provided with a substantially long longitudinal slot extended in from the open end, and an oppositely disposed shorter slot extended in from said open end, a holder, a blade secured in said holder, a lateral extension on said blade extending beyond the circumference of said holder and adapted to be engaged respectively in said slots to limit the entrance and prevent rotation of the holder within said handle.

2. In a screw-driver a holder having a transverse slot in one end thereof, a reduced portion on said end, a blade adapted to fit in said slot the width of the blade being coincident with the diameter of said reduced portion, lateral extensions on the rear end of the blade, one of said extensions projecting beyond the circumference of the body of said holder and the other extension lying flush with the surface thereof, a ferrule screw-threaded on said reduced portion the inner end thereof bearing on said extensions and securing said blade in rigid relationship to the holder.

3. A screw-driver comprising a holder, a blade secured therein, a lateral extension on the rear end of said blade projecting beyond the circumference of the holder, a tubular handle within which the holder is adapted to telescope closed at one end and provided with oppositely disposed slots extended in from the open end, one of said slots adapted to receive said extension and hold the blade in rigid operative connection with the handle, the other slot adapted to permit the insertion of the holder in a reverse or inoperative position.

1,109,041. STEAM-GENERATOR. ALBERT A. CARY, New York, N. Y. Filed Oct. 26, 1911. Serial No. 656,798. (Cl. 122—235.)



1. In a steam generator, a plurality of steam generating tubes, all inclined in the same direction, a header for each end of each tube, means for taking off steam from the headers at the upper ends of said tubes, and means for conducting water from each of said last mentioned headers to the opposite header of the next succeeding tube below.

2. In a steam generator, a plurality of banks of inclined steam generating water tubes, front and rear headers for said banks, said tubes being substantially all inclined in the same direction and means for admitting water to the lower end of each tube and causing the water to pass progressively downwardly through the successive banks of tubes.

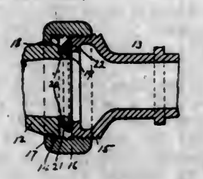
3. In a steam generator, a plurality of banks of inclined steam generating water tubes, front and rear headers for said banks of tubes, and means for conducting water from the front header of one bank of tubes to the rear header of the bank below, said means being situated outside of the main heat zone whereby steam is not materially generated in said means.

4. In a steam generator, a plurality of inclined water tubes, and means for conducting water from the upper end of one tube to the lower end of the tube below, said means being situated outside of the main heat zone whereby no material amount of steam is generated in said means.

5. In a steam generator a plurality of banks of inclined water tubes, the tubes of each lying substantially parallel to one another and extending in substantially a common plane, whereby the space occupied by the tubes is reduced, and means for conducting the water from the upper ends of each bank of tubes to the lower ends of the next succeeding bank of tubes below.

[Claims 6 to 56 not printed in the Gazette.]

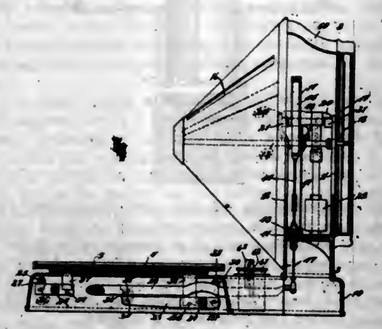
1,109,042. TUBE OR PIPE JOINT. CHARLES A. CLAFLIN, Medford, Mass. Filed Oct. 19, 1912. Serial No. 726,762. (Cl. 137—28.)



1. In a tube or pipe joint a tubular member having an annular washer-supporting end face, a grooved lip projecting from said face and an annular non-resilient ductile washer bearing on said face and originally of frusto-conical form, the inner edge of the washer being contracted as described into the groove by flattening pressure of the washer against said end face, and locked in place by the outer side of the groove, the locked washer having flat sides conforming to said end faces and to an opposed face on another member.

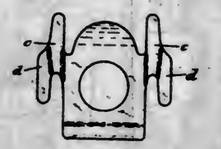
2. A tube or pipe joint comprising two tubular members having opposed substantially parallel annular end faces, connecting means adapted to force said end faces toward each other, one of said members having an externally grooved lip, and an annular non-resilient ductile washer interposed between said faces and originally of frusto conical form, the said end faces being formed to flatten the washer and contract its inner edge into the groove of said lip, until the washer is locked by the other side of said groove, the locked washer having flat sides conforming to said end faces.

1,109,043. WEIGHING-SCALES. JOSEPH E. COCHRAN, Elkhart, Ind. Filed July 5, 1907. Serial No. 382,241. (Cl. 73—104.)



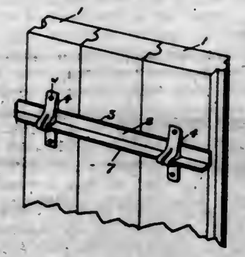
In a scale of the class described, the combination of a horizontal load platform, an upstanding support offset rearwardly and laterally with respect to said platform, a rotary conical dial mounted on said support above said platform with its axis horizontally disposed, and having its inclined surface above the nearest boundary substantially of said platform, and means actuated by said platform for rotating said dial.

1,109,044. GUARD FOR EDGED TOOLS. HANNIBAL J. A. CONTI, Pittsburgh, Pa. Filed Apr. 30, 1913. Serial No. 764,723. (Cl. 145—24.)



A guard for edged tools comprising a single piece of resilient metal, the lower end thereof terminating in a lip adapted to engage over and project the edge of the tool, and the upper edge terminating in an outwardly projecting blade adapted when pressed against the tool to throw the lower lip member, when out of engagement with the tool, to one side thereof, side members adapted to engage the sides of the tool for the purpose of holding the same movably thereon whereby the same may be positioned on the tool when the same is in use without being removed therefrom.

1,109,045. REINFORCING DEVICE FOR SILOS. FRED P. CORY, Saginaw, Mich., assignor to Farmers' Handy Wagon Co., Saginaw, Mich., a Corporation of Michigan. Filed Dec. 18, 1912. Serial No. 737,581. (Cl. 217—92.)

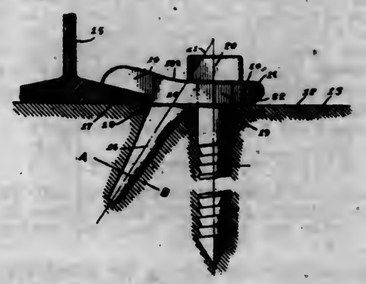


1. In a reinforcing device for silos, the combination with the silo staves and the external silo hoops; of a rib formed of sections, which sections have overlapping ends and a plurality of rib-engaging brackets secured to said silo at intervals to slidably receive said rib-sections and retain them from outward movement.

2. In a reinforcing device for silos, the combination with the silo staves and the external silo hoops; of a substantially L-shaped stiffening rib formed of sections, which sections have overlapping ends and means for slidably receiving said sections, for the purpose set forth.

3. In a reinforcing device for silos, comprising a flanged stiffening rib formed of sections, which sections have overlapping ends, spaced brackets secured to said silo and engaging the flange of said stiffening rib to hold same against vertical and outward movement, said stiffening rib being slidably engaged by said brackets, for the purpose set forth.

1,109,046. RAIL-FASTENING. WILLIAM ARTHUR CROWELL, Dartmouth, Nova Scotia, Canada. Filed Mar. 23, 1914. Serial No. 826,729. (Cl. 85—23.)



1. A rail-fastener comprising in combination a body-piece having a flat tie-engaging flange, a rail-engaging flange offset therefrom, a spike formed integral with said flanges and depending angularly from said tie-engaging flange, said tie-engaging flange having a vertical orifice therethrough at the point of junction of said angular spike, a threaded retaining member having a head and adapted to be passed through said orifice as regards its shank, and engaging the tie, in a manner to act as a fulcrum for said body-piece.

2. A rail-fastener comprising in combination a body-piece and a threaded tie-engaging member passed therethrough, said body-piece having an obliquely disposed tie-engaging spike offset at the point where the threaded member passes through the body, said body also having a rounded heel adapted to assist in removal of the device and permit said threaded member to act as a fulcrum.

1,109,047. **RECOIL AND RUNNING-OUT GEAR FOR ORDNANCE.** ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, London, England, assignors, by mesne assignments, to Vickers, Limited, Westminster, England. Filed May 27, 1910. Serial No. 563,782. (Cl. 89—43.)

1. In recoil and running out gear for ordnance the combination of a brake cylinder, an air compressor, an air reservoir, means for connecting the rear ends of the said brake cylinder and the air compressor to the forward end of the air reservoir, and a floating piston in the air reservoir.

2. In recoil and running out gear for ordnance, the combination of a brake cylinder, an air reservoir, an air compressor having a passage communicating with the air reservoir, means for connecting the rear ends of the said brake cylinder and the air compressor to the forward end of the air reservoir so that the said cylinder and compressor project wholly in front of the reservoir, and a floating piston in the air reservoir.

3. In recoil and running out gear for ordnance, the combination of a brake cylinder, an air compressor arranged beneath said brake cylinder, an air reservoir, means for connecting the rear ends of the said brake cylinder and the air compressor to the forward end of the air reservoir so that the said cylinder and compressor project wholly in front of the reservoir, and a floating piston in the air reservoir.

4. In recoil and running out gear for ordnance, the combination of a brake cylinder, an air reservoir, an air compressor having a passage communicating with the air reservoir, means for connecting the said brake cylinder and the air compressor to the forward end of the air reservoir and a floating piston in the air reservoir.

5. In recoil and running out gear for ordnance, the combination of a brake cylinder, an air reservoir, an air compressor having a passage communicating with the air reservoir, means for connecting the said brake cylinder and the air compressor to the forward end of the air reservoir, a floating piston in the air reservoir and packing rings on said floating piston.

[Claims 6 and 7 not printed in the Gazette.]

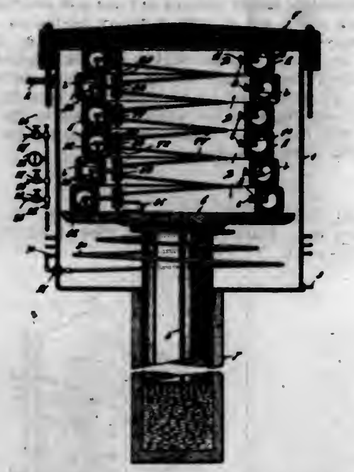
1,109,048. **APPARATUS FOR FORMING AND VULCANIZING RUBBER ARTICLES.** MARK A. DEES, St. Louis, Mo. Filed July 12, 1913. Serial No. 778,772. (Cl. 18—17.)

1. An apparatus for forming and vulcanizing rubber articles, comprising a vulcanizer pot, a mold confined within said vulcanizer pot, mold moving means in said vulvanizer pot and means for conducting fluid from the exterior of said vulcanizer pot to the interior of said mold.

2. An apparatus for forming and vulcanizing rubber articles, comprising a vulcanizer pot, a mold confined within said vulcanizer pot, mold moving means in said vulcanizer pot, means for conducting fluid from the exterior of said vulcanizer pot to the interior of said mold, and means operable at the exterior of said vulcanizer pot whereby the admission of fluid to and discharge of fluid from said mold may be controlled.

3. An apparatus for forming and vulcanizing rubber articles, comprising a vulcanizer pot, a mold confined within said vulcanizer pot, mold moving means in said vulcanizer pot, means for conducting fluid from the exterior of said vulcanizer pot to the interior of said mold, and means through which said fluid is vented from said mold to the exterior of said vulcanizer pot.

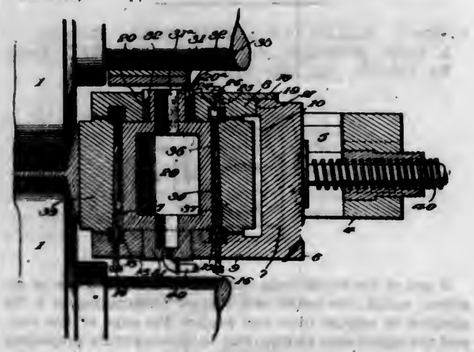
4. An apparatus for forming and vulcanizing rubber articles, comprising a vulcanizer pot, mold moving means in said vulcanizer pot, a mold in said vulcanizer pot movable by said moving means, a fluid receiver, a fluid conducting pipe carried by said mold moving means for delivering fluid from said fluid receiver to the interior of said mold, means for supplying fluid to said fluid receiver for delivery to the interior of said mold, means for venting fluid from said mold, and means for introducing a second fluid to said receiver for delivery into said mold.



5. An apparatus for forming and vulcanizing rubber articles, comprising a vulcanizer pot, a mold confined within said vulcanizer pot, an automatic valve device providing communication between the interior of said mold and the interior of said vulcanizer pot, and means for delivering fluid under pressure from the exterior of said vulcanizer pot to the interior of said mold.

[Claims 6 to 18 not printed in the Gazette.]

1,109,049. **WEAR-COMPENSATING BEARING.** WILLIAM A. DUNN, Duluth, Minn., assignor of one-half to A. M. Miller, Jr., Duluth, Minn. Original application filed Nov. 5, 1910, Serial No. 590,919. Divided and this application filed Feb. 2, 1912, Serial No. 674,934. Renewed Feb. 7, 1914. Serial No. 817,327. (Cl. 64—55.)



1. In combination, a frame, a hub having upper and lower shoulders and mounted in the frame, the shoulders engaging the inner surfaces of the frame and confined therebetween, a tapered bushing slidably mounted on the hub, a spline between the hub and bushing, means for sliding the bushing upward including adjusting devices on which said bushing is supported, the bushing being normally seated on said devices by gravity, a rotary element mounted on the bushing and supported on the frame, means for permitting circumferential movement of the hub and bushing to take up wear of the rotary element, and means at the top of the hub and the frame for locking the hub in position.

2. In combination, a frame comprising a section having one end open and a coöperating section having a depending flange which engages the inner surfaces of the first mentioned section, the said sections having alined openings, means for securing the sections together, a hub having a central bearing portion and provided at its ends with reduced trunnions which fit in the openings in the sections, the shoulders adjacent the trunnions bearing against and being confined between the upper and lower surfaces of the frame, a tapered bushing fitted over the central bearing portion of the hub, a rotatable element mounted on the bushing and confined at its upper and lower ends between the sections, means for vertically adjusting the tapered bushing, and means coöperating with one of the trunnions for locking the hub in the frame.

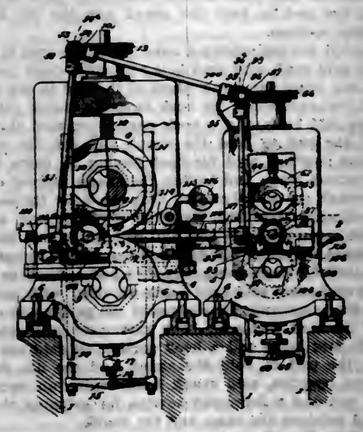
3. In combination, a frame formed with alined openings, the walls of one of said openings having a slot, a hub having a central bearing portion and end trunnions, the latter fitting in the alined openings, a bushing splined on the central bearing portion one of said trunnions having a slot adapted to register with the slot in the opening in the frame, a key fitting in the registering slots to lock the hub in position and means for vertically adjusting the bushing, and a rotatable element supported on the bushing.

4. In combination, a frame formed with alined openings and adjacent walls, a hub mounted in the alined openings, means including a key and slots between the hub and the casing for locking the hub against rotation, a tapered bushing splined on the hub and adjustable in alinement with the walls, means in the bottom of the bearing for vertically adjusting the tapered bushing, and a rotatable element mounted to rotate on the tapered bushing.

5. In combination, a frame formed with alined openings, a hollow hub mounted in the openings and open at its upper end, means between the hub and the bearing for locking said hub against rotation, a tapered bushing splined on the hub, means for vertically adjusting and supporting the tapered bushing, and a rotatable element freely rotatable on the tapered bushing.

[Claims 6 and 7 not printed in the Gazette.]

1,109,050. **METHOD OF FINISHING BEAMS.** WILLIAM A. DUNN, Smithville, Minn., assignor of one-half to A. M. Miller, Jr., Duluth, Minn. Filed Nov. 5, 1910, Serial No. 590,920. Renewed Feb. 7, 1914. Serial No. 817,328. (Cl. 80—66.)

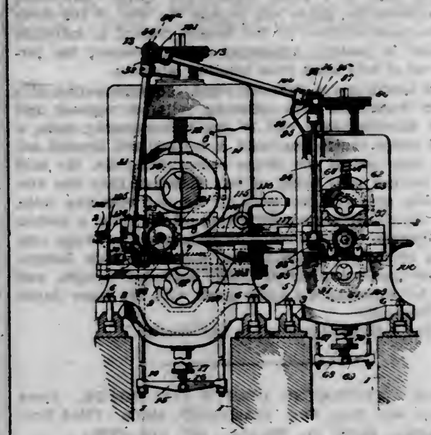


1. The herein described method of rolling flanged beams, consisting in subjecting the surfaces of the web of the beam to rolling pressure and simultaneously subjecting the outside surfaces and opposite edges of the flanges to rolling pressure, and holding the flanges of the beam in positive alinement throughout the space of application of the rolling pressure and for a definite distance after the beam has received the rolling pressure by contact of guiding means with the inside of the flanges to prevent lateral bending of the forward end of the beam.

2. The herein described method of producing flanged beams, consisting in subjecting the upper and lower surfaces of the web to rolling pressure and simultaneously therewith subjecting the upper and lower edges of the flanges of said beam to rolling pressure at a different point in the length of the beam, subjecting the outer side surfaces of the flanges of the beam to inward rolling pressure adjacent the points where the upper and lower surfaces of the web and the upper and lower edges of the beam are subjected to pressure, and holding the flanges of the beam in positive alinement throughout the space of application of the rolling pressure and for a definite distance after the beam has received the rolling pressure by contact of guiding means with the inside of the flanges to prevent lateral bending of the forward end of the beam.

3. The herein described method of rolling beams, consisting in subjecting the surfaces of the web of the beam to rolling pressure, and holding the beam in positive alinement throughout the space of application of rolling pressure and for a definite space after the beam has received the rolling pressure by contact of guiding means with the inside of the flanges to prevent lateral bending of the forward end of the beam.

1,109,051. **ROLLER-MILL.** WILLIAM A. DUNN, Smithville, Minn., assignor of one-half to A. M. Miller, Jr., Duluth, Minn. Filed Nov. 5, 1910, Serial No. 590,919. Renewed Feb. 7, 1914. Serial No. 817,329. (Cl. 80—34.)



1. In a mill of the class described, the combination of a set of web reducing rolls, vertical rolls located on the ends of the web reducing rolls, a set of flange controlling rolls, each of which is provided with a reduced portion, a lower guide extending from a point adjacent the lower web reducing roll and between the reduced portions of the set of flange controlling rolls, means for supporting the rear end of said guide, means for supporting the front portion of said guide, said guide having depending side flanges, an upper guide located between the web reducing rolls and the flange controlling rolls, means for supporting the said upper guide, means for adjusting the web reducing and flange controlling rolls, and the upper guide, said upper guide having upwardly extending flanges, said upwardly extending flanges and the depending flanges of the lower guide engaging the inner surface of the flanges of a beam passing through the mill.

2. In a mill of the class described, the combination of a set of web reducing rolls, a set of flange controlling

rolls, vertical rolls disposed adjacent the ends of the web reducing rolls, vertical rolls disposed adjacent the flange controlling rolls, the flange controlling rolls having a reduced cylindrical portion, a lower guide having depending flanges extending from a point over the lower web reducing roll and between the flange controlling rolls and beyond the same, means for supporting said lower guide, an upper guide supported at one end on the upper flange controlling roll, a bar supporting the opposite end of the upper guide, and a second upper guide pivoted on the said bar and having a weighted lever to retain the end of the said second guide in contact with the upper web reducing roll.

3. In a mill of the class described, the combination of web reducing rolls, a vertical roll adjacent each end of the rolls, means for adjusting the vertical rolls, a set of flange controlling rolls, each of which is reduced at its center and having flanges at its ends which are beveled on their outer surface, vertical rolls located adjacent the flange controlling rolls, means for adjusting said vertical rolls, a lower guide extending from the lower web reducing rolls and between and beyond the flange controlling rolls, means for supporting said guide, said guide having depending flanges, an upper guide extending from the upper web reducing roll rearwardly to the upper flange controlling roll and provided with an opening through which the reduced portion of the upper flange controlling roll passes, and means coöperating with the said guide to cause its forward end to follow the vertical movement of the upper web reducing roll.

4. In a mill for rolling flanged beams, the combination of a pair of horizontal web reducing rolls, a pair of flange controlling rolls, means for adjusting all of said rolls, a continuous guide for a beam, said guide having a flat surface for the web of the beam and surfaces disposed at an angle to the flat surface and extending from the web reducing rolls to a point beyond the flange controlling rolls whereby the guide will engage the web of the beam and the inner surfaces of the flanges thereof to maintain the beam in positive alinement and to prevent the forward end of said beam from bending laterally.

5. In a mill of the class described, the combination of a pair of horizontal web reducing rolls, a vertical roll located adjacent each end of the web reducing rolls, a pair of flange controlling rolls, a vertical roll located adjacent each end of the flange controlling rolls, the said latter vertical rolls being of less diameter than the vertical rolls adjacent the ends of the web reducing rolls, means for simultaneously adjusting all the rolls, a bottom guide between the web reducing rolls and the flange controlling rolls, said guide having depending side flanges, an upper guide having upwardly extended flanges, and means for adjusting the upper guide with the upper flange controlling roll.

[Claims 6 to 8 not printed in the Gazette.]

1,109,052. ANCHORING DEVICE FOR BOATS. JOHN EDMAN and EARL ECK, Minneapolis, Minn. Filed Nov. 15, 1913. Serial No. 801,181. (Cl. 114—206.)

1. The combination with a boat, of an anchoring device, comprising an anchor support detachably secured to said boat, an anchor, and means carried by said support for moving said anchor to and from operative positions.

2. The combination with a boat, of an anchoring device, comprising an anchor support detachably secured to said boat, a crank equipped drum journaled on said support, and an anchor connected to and operated by said crank equipped drum.

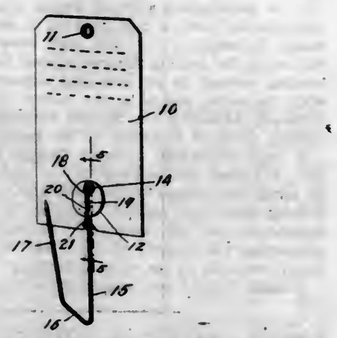
3. The combination with a boat, of a supporting casing detachably secured to said boat, a crank equipped windlass drum journaled within said casing, a cable attached to said windlass drum and extending downward through said casing, and an anchor attached to the lower end of said cable and movable into and out of said casing.

4. The combination with a boat, of a supporting casing secured to said boat, a crank equipped windlass drum journaled in open seats in said casing and having a friction wheel, a brake device coöperating with said friction wheel and arranged to hold said windlass drum against removal from said open seats, a cable attached to said windlass drum, and an anchor attached to the lower end of said cable.

5. The combination with a boat, of a supporting casing secured to said boat, a crank equipped windlass drum journaled in open seats in the upper end of said casing, a pawl and ratchet device for holding said windlass drum in different set adjustments, a friction wheel on said windlass drum, a brake device coöperating with said friction wheel and arranged to hold said windlass drum against removal from said open seats, a cable attached to said windlass drum and extending downward through said casing, and an anchor attached to the lower end of said cable and movable into and out of said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,109,053. BILL-FILE. EDWARD ELLIS, Minneapolis, Minn. Filed Oct. 13, 1913. Serial No. 794,826. (Cl. 129—21.)



1. A bill file comprising a card, a pad secured to a portion of said card, said card being provided with holes adjacent the inner and outer edges of the pad in the central line of the card, and a file hook having a shank extending through said holes and a hook portion on said shank engaging the pad to hold the shank and the file hook in operative position.

2. A bill file comprising a card, a pad secured to a portion of said card, said card being provided with holes adjacent the inner and outer edges of the pad in the central line of the card, and a file hook having a shank extending through said holes and a hook portion on said shank engaging the pad to hold the shank and the file hook in operative position, said file hook having all parts thereof in a common plane and having the shank thereof extending through the said holes so that the hook thereon may be disengaged from said pad and the file hook may be laid flat upon the card and will be held within the margin thereof when the bill files are packed for shipping.

3. A bill file comprising a card, a pad secured to a portion of said card, said card being provided with holes adjacent the inner and outer edges of the pad in the central line of the card, and a file hook having a shank extending through said holes and a hook portion on said shank engaging the pad to hold the shank and the file hook in operative position, said shank hook having an outwardly turned end and a depressed portion for gripping the card and pad between the same and the shank.

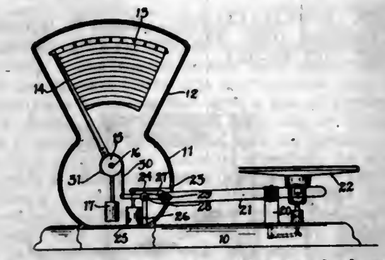
4. A bill file comprising a card adapted to receive advertising matter thereon, means at one end for suspending

the card, a pair of pads secured at opposite sides of the other end of the card along the central line thereof, a hole being provided through said pads and card adjacent the inner edge of the pads, and a file hook having the shank thereof extending through said hole and having a hook-like member at the end of the shank gripping the pads between the shank and said member to hold the file hook in a plane perpendicular to the plane of the card.

5. A bill file comprising a card, a pad secured to a portion of said card, said card having holes adjacent the inner and outer edges of said pad, and a file hook having a shank extending through said holes and a hook portion on said shank engaging the pad to hold the shank and the file hook in operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,109,054. COMPUTING-SCALE. BENJAMIN D. EMANUEL, Hamilton, Ohio, assignor, by mesne assignments, to The Hamilton Scale & Tank Company, Hamilton, Ohio, a Corporation. Filed May 27, 1912. Serial No. 700,023. (Cl. 73—104.)



1. A weighing scale including a housing, load receiving means, a scale beam carrying said load receiving means on one end and fulcrumed between the load receiving means and the housing and with one end projecting into the housing and overbalancing the outer end of the beam and the load receiving means, an indicator having a hub pivoted in the housing, a pendulum secured on said hub and suspended vertically when the indicator is at zero, a lever fulcrumed between its ends with one end pivotally connected with the inner end of the scale beam, and a flexible strip connected with the other end of the lever passing over the hub of the indicator and secured to the opposite side thereof.

2. A weighing scale including a housing, load receiving means, a scale beam carrying said load receiving means on one end and fulcrumed between the load receiving means and the housing and with one end projecting into the housing and overbalancing the outer end of the beam and the load receiving means, an indicator having a hub pivoted in the housing, a pendulum secured on said hub and suspended vertically when the indicator is at zero, a lever fulcrumed between its ends with one end pivotally connected with the inner end of the scale beam, a flexible strip connected with the other end of the lever passing over the hub of the indicator and secured to the opposite side thereof, a dash pot in said housing, and an arm extending from the inner end of the beam to an operative connection with said dash pot.

1,109,055. PYROPHORIC-IGNITION MINER'S SAFETY-LAMP. FRANZ FATTINGER, Treibach, Carinthia, Austria-Hungary, assignor to Treibacher Chemische Werke Gesellschaft M. B. H., Treibach, Austria-Hungary, a Corporation of Austria. Filed Dec. 16, 1911. Serial No. 666,144. (Cl. 240—18.)

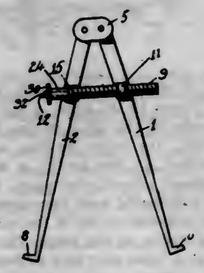
1. A pyrophoric-ignition miners' safety lamp having a filter adapted and designed to intercept and retain unburnt particles of pyrophoric alloy and prevent such particles from gaining access to the mine atmosphere, while permitting free access of the same to the space within the filter and free flow of the gaseous products of combustion therethrough.

2. A pyrophoric-ignition miners' safety lamp having an inverted cup-shaped filter adapted and designed to intercept and retain unburnt particles of pyrophoric alloy and prevent such particles from gaining access to the mine atmosphere, while permitting free access of the same to the space within the filter and free flow of the gaseous products of combustion therethrough.

2. In a pyrophoric-ignition miners' safety lamp having a heat-conducting filter adapted and designed to intercept and retain unburnt particles of pyrophoric alloy and prevent such particles from gaining access to the mine atmosphere, while permitting free access of the same to the space within the filter and free flow of the gaseous products of combustion therethrough.

4. A pyrophoric-ignition miners' safety lamp having a heat-conducting screen and a filter adapted and designed to intercept and retain unburnt particles of pyrophoric alloy and prevent such particles from gaining access to the mine atmosphere, while permitting free access of the same to the space within the filter and free flow of the gaseous products of combustion therethrough.

1,109,056. REVERSIBLE CALIPERS. GEORGE B. FENNO, Smithville Flats, N. Y., assignor of one-half to Claude Adams, Smithville Flats, N. Y. Filed Apr. 21, 1913. Serial No. 762,677. (Cl. 33—149.)



1. A caliper including a head member, a pair of reversible legs pivotally secured thereto, a perforate ear pivoted on one of said legs, an adjusting screw threaded through said ear, a perforate ear pivoted on the other leg, an integral finger formed on one terminal of said screw, and operating through said second ear, and a detachable disk lock adapted to be mounted on said finger for holding said finger against withdrawal from said ear.

2. A caliper including a head member, a pair of reversible legs pivotally secured thereto, a perforate ear pivotally attached to one of said legs, an adjusting screw threaded through and adjustable in said ear, an integral finger formed on one terminal of said screw, a perforate ear pivoted on the other leg, and adapted to receive said finger, and a detachable disk lock for holding said finger against withdrawal from said ear.

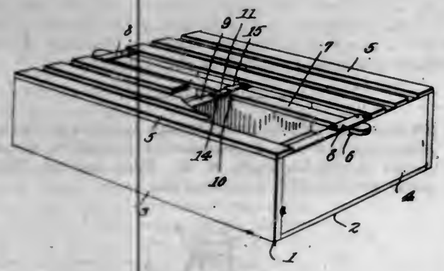
3. A caliper including a head member, a pair of reversible legs pivotally secured thereto, a pair of perforate ears

pivoted on each of said legs, an adjusting screw threaded through and adjustable in one of said ears, an integral finger formed on one terminal of said adjusting screw and operating through the perforation of the other ear, and unitary means for manipulating said adjusting screw and holding said finger against withdrawal from said last named ear.

4. A caliper including a head member, a pair of reversible legs pivotally secured thereto, a perforate ear for each of said leg members, an adjusting screw threaded through and adjustable in one of said ears, an integral notched finger formed terminally of said screw and extending longitudinally thereof, the other ear being adapted to receive said finger, and unitary means for holding said finger against withdrawal from said last named ear, and for manipulating said adjusting screw, said means including a disk member having a central opening, and a spring pressed latch member pivoted on said disk and adapted to engage the notch of said finger when in assembled position.

5. A caliper including a head member, a pair of leg members pivotally secured thereto, an adjusting screw, an ear pivotally mounted on each of said leg members, and adapted to receive said screw, a lock disk for said screw for manipulating said screw and holding it against withdrawal from said ears, said lock disk including a body member having a central opening, a latch member pivoted to said body member, a leaf spring secured to said body member and bearing against said latch member.

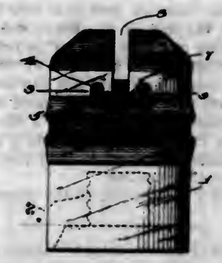
1,109,057. COOP-FASTENING. GEORGE W. FLETCHER, Mendon, Ill. Filed Mar. 14, 1913. Serial No. 754,310. (Cl. 217—62.)



In a device of the class described, a coop including a wall having a notch in its edge; a flat straight plate secured at its ends to the edge of the wall and extended across the notch, the plate having an opening located within the contour of the notch; a slat located in the notch and disposed beneath the plate; the slat having an opening which is alinable with the opening in the plate; a flat spring arm disposed on top of the plate and of substantially the same width as the plate, the arm resting upon the plate, the arm being provided adjacent one end with a stud which is engaged in the openings, the arm being broadened adjacent the stud to form a finger piece, and the plate serving to space the finger piece from the slat; and a securing element uniting the other end of the arm with the plate only.

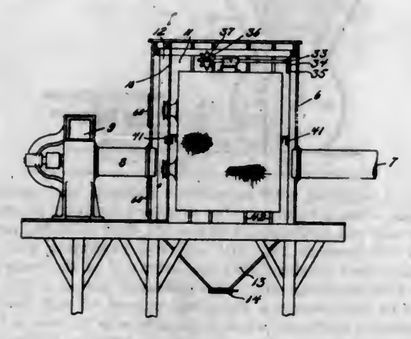
1,109,058. INSULATOR. OSVILLE J. FRITZ, Weisenburg, Pa. Filed Aug. 23, 1913. Serial No. 786,329. (Cl. 173—316.)

An insulator comprising a body, said body provided contiguous its upper portion with an enlarged transverse slot, said body provided with a pair of diverging passages adjacent each end portion of said slot, integral lips formed upon said body at the outer portions of said slot and passages, the sides of said body at the lower portion of said slot being parallel at their central portion, said slot being adapted to receive a pair of wires and to allow the wires to pass outwardly through said passages and be held in said passages by said lips, the lower parallel portion of said side walls adapted to form a binding engagement



with the wires thereby firmly holding the wires within said slot.

1,109,059. DUST-COLLECTOR. GEORGE W. GLASSFORD, Jr., Cleveland, Ohio. Filed Nov. 3, 1913. Serial No. 798,977. (Cl. 83—47.)

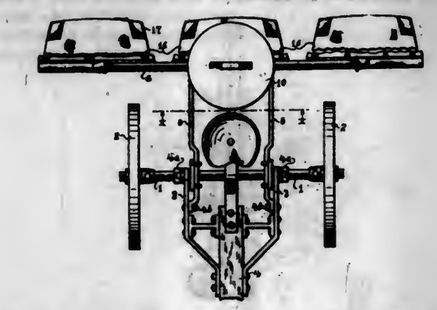


1. A dust arrester comprising a casing with a partition across the same, forming inlet and exhaust chambers, said partition having a plurality of openings therein, and a plurality of separate and independently-removable screen units standing side by side in the inlet chamber, each screen unit having a frame extending completely around the same and screen cloth on opposite sides of said frame, one side bar of the frame having a nozzle communicating with the corresponding opening in the partition, packing between each nozzle and the edge of the opening with which it communicates and permitting vibration of the screen frame, and means to jar each screen frame.

2. A dust arrester comprising a casing having a partition therein forming an inlet chamber on one side and an exhaust chamber on the other, a screen unit in the inlet chamber, said unit including a frame, and having an outlet nozzle, rigidly fixed to the frame, and projecting therefrom through the partition into the exhaust chamber, a gland between said nozzle and the partition, said gland having packing permitting vibration of the nozzle and screen frame with respect to the partition, and means to jar the screen frame.

3. A dust arrester comprising a casing having a partition therein forming inlet and exhaust chambers, a plurality of hollow screen units standing edgewise in the inlet chamber, each unit having a nozzle rigid therewith and communicating with the interior thereof and projecting at one side thereof through the partition, a packing gland between the partition and the nozzle, permitting vibration of the latter, and clamping the nozzle to the partition, and hammers arranged to strike the screen units at one end thereof, the gland being removable on the outer side of the partition, to permit removal of the unit, after loosening of the gland.

1,109,060. BOLL-WEEVIL EXTERMINATOR. WILLIS F. GRIFFIN, Cottonwood, Tex. Filed Aug. 25, 1913. Serial No. 786,361. (Cl. 43—5.)



1. In a device of the character described, the combination with a wheel-frame, of a tank carried by said frame containing an insect-destroying liquid, a pipe mounted transversely upon the machine having communication with said tank, a plurality of shorter pipes alined with each other and parallel to the pipe first specified, each of the shorter pipes being provided with a line of perforations, and a flexible apron suspended from each of the smaller pipes in position to be saturated with the liquid.

2. In a device of the character described, the combination with a wheel-frame, of a tank carried by said frame containing an insect-destroying liquid, a pipe mounted transversely upon the machine having communication with said tank and provided with a line of perforations, and an apron suspended from said pipe formed of some flexible material and in position to be saturated with the liquid.

3. In a device of the character described, the combination with a wheel-frame, of a tank carried by said frame, containing an insect-destroying fluid, a pipe mounted transversely upon the machine, having communication with said tank and formed with a line of perforations, caps mounted upon the extremities of said pipe, and an apron suspended from said pipe having its upper edge portion forming a tube extending between the caps carried by the pipe.

4. In a device of the character described, the combination with a wheel-frame, of a pair of bars pivoted upon the frame extending rearwardly therefrom, a pipe transversely carried by the rear extremities of said bars, a tank containing an insect-destroying liquid centrally mounted upon said pipe and having communication therewith, a plurality of supplementary pipes mounted beneath the first-specified pipe mounted parallel to the same, each of the supplementary pipes having its extremities closed and being provided with a line of perforations, and an apron suspended from each supplementary pipe in position to be saturated with the liquid.

1,109,061. NUT AND PIPE WRENCH. FRANCIS J. HANRAHAN, Rupert, Pa. Filed July 31, 1913. Serial No. 782,344. (Cl. 81—180.)

1. In a wrench, a stock having a jaw at one end, a removable jaw slidably engaging the stock, the faces of the jaws being flat, means for locking the movable jaw to the stock, a pair of removable interchangeable supplemental members slidably engaging the stock and having their remote faces flat and resting snugly against the faces of the jaws, the adjoining faces of the supplemental members diverging away from the stock, the last mentioned face of one supplemental member being toothed, and a toothed element slidably carried by the last mentioned face of the other supplemental member and movable to and from the stock.

2. In a wrench, a stock having a jaw at one end and a dove-tailed portion extending from the said jaw, a removable jaw having a dove-tailed portion slidably engaging the said dove-tailed portion, the faces of the two jaws being flat and disposed at right angles to the stock, means for locking the movable jaw to the stock, a pair of removable interchangeable supplemental members having dove-tailed portions slidably engaging the first mentioned dove-tailed portion, the remote faces of the supplemental members being flat and resting snugly against the faces of the jaws, the adjoining faces of the supplemental

members diverging away from the stock, the last mentioned face of one supplemental member being toothed, and the last mentioned face of the other supplemental member having a dove-tailed portion extending from the stock, and a toothed element slidable upon the last mentioned face of the last mentioned supplemental member and having a dove-tailed portion slidably engaging the dove-tailed portion thereof.

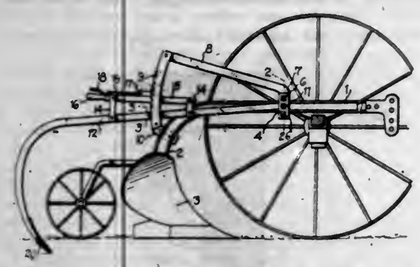
1,109,062. ELEVATOR. FREDERIC W. HARJES, Ticonic, Iowa. Filed Jan. 31, 1914. Serial No. 815,728. (Cl. 193—14.)

A device of the class described including a substantially inclosed frame having a substantially horizontal portion, and an inclined portion, guide members arranged upon the sides of the inclined portion of the frame and arranged in spaced relation, a top having the lower end upturned and the other end downturned, supporting arms secured to the longitudinal edges of the top adapted to be removably arranged within the guide members to hold the top in position.

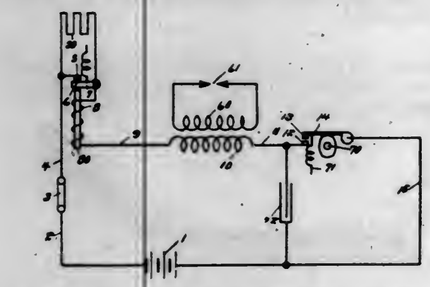
1,109,063. SUBSOILER. JAMES S. HARRIS and JAMES A. GRAHAM, Thompsonville, Ill., assignors of one-third to Thomas G. Puckett and one-third to David D. Puckett, Thompsonville, Ill., and one-third to said Graham. Filed Mar. 11, 1914. Serial No. 824,012. (Cl. 97—32.)

In combination with a plow beam, a block positioned to one side of the beam and provided with an opening disposed substantially parallel to the beam, an elongated member positioned above the beam and provided at one extremity with a depending member overlying the beam at the side thereof opposite to the block, clamping means common to the block and the depending member for holding the same to the beam, a rack depending from the opposite extremity of the elongated member and overlying the beam, means for clamping the overlying portion of the rack and the beam, a subsoiler beam having one extremity projecting within the opening of the block and pivotally engaged therewith and of a length to project rearwardly of the rack, a bar positioned above and carried

by the subsoiler beam and provided with an extension to afford a hand grasp, a latch mechanism carried by the bar and coacting with the rack whereby the subsoiler beam may be maintained in differing adjustments about its pivoted connection with the block, said latch including a member overlying the projected portion of the bar whereby the latch may be operated by the hand in engagement with the projected portion, the clamping means for the block and depending member and the clamping means for the rack constituting the only point of engagement with the plow beam.



1,109,064. IGNITION APPARATUS. PAUL H. HAWKER and IRVING J. REUTER, Anderson, Ind., assignors to Remy Electric Company, Anderson, Ind. Filed Dec. 2, 1912. Serial No. 734,502. (Cl. 123—148.)



1. An igniting apparatus including in combination an ignition winding, a regulating resistance in series with said winding, and electrically controlled contact points in parallel with said regulating resistance.

2. An ignition apparatus including in combination an ignition winding, a regulating resistance, a timer, and a source of current, the aforesaid parts being connected in series, and electrically actuated controller contacts in parallel with said regulating resistance.

3. An ignition apparatus including in combination a source of current, an ignition winding, a regulating resistance in series with said ignition winding, normally closed contact points in parallel with said regulating resistance, electrical means for opening said contact points, a source of current adapted to supply current to said ignition winding and to said means for opening said contacts points, and a timer adapted to control the supply of current to said winding and to said means for opening said contact points.

4. An ignition apparatus including in combination an ignition winding, a regulating resistance in series with said ignition winding, a controller responsive to the current in said ignition winding and having normally closed contacts in parallel with said regulating resistance.

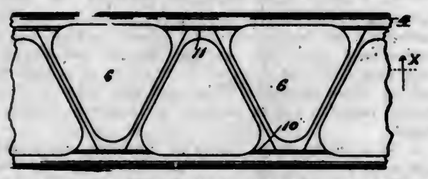
5. In ignition apparatus, the combination of an ignition winding, a regulating resistance adapted to be introduced into the circuit of said ignition winding, and electromagnetic means for introducing said resistance into the circuit of said ignition winding.

[Claims 6 to 9 not printed in the Gazette.]

1,109,065. INFANT SLING-SUPPORT. JOSHUA HEATH, Sydney, and FRANCIS JOHN BOYLE, North Sydney, New South Wales, Australia. Filed Aug. 12, 1913. Serial No. 784,378. (Cl. 224—6.)

An improved infant sling support comprising in combination an adjustable shoulder strap, a seat for the infant dependent from the ends of said strap, and an adjustable band to encircle the infant and loops attached to adjustable buckles on the said shoulder strap through which said band is passed, as herein set forth.

1,109,066. TIRE. EDWARD J. HEMINGTON, Akron, Ohio. Filed Oct. 24, 1913. Serial No. 797,119. (Cl. 152—9.)



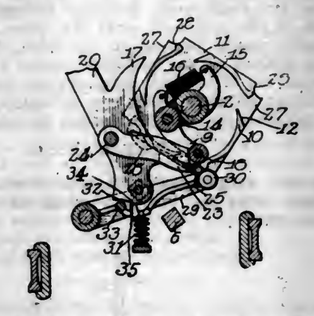
1. A vehicle tire of the block type adapted to be positioned on the felly band of a vehicle wheel comprising a plurality of metallic plates, all of said plates triangular in outline and disposed with apices alternating with the bases of coadjacent blocks, a portion of said plates provided on their lateral faces with grooves and the alternating plates provided with lateral ridges arranged to interengage with the grooves of the other plates, all of said plates provided with resilient blocks secured thereto.

2. A tire for vehicles comprising a plurality of metallic plates triangular in outline and each provided with a block of resilient material and secured to the outer face thereof, the opposite face of the block concave and provided with three projecting lugs arranged to seat on the periphery of a wheel, said lugs being arranged approximately at the corners of said blocks.

1,109,067. CORN-PLANTER CLUTCH MECHANISM. EDWARD M. HEYLMAN, Rock Island, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed Oct. 3, 1912. Serial No. 723,653. (Cl. 111—5.)

1. In a planter, the combination with a seed plate, of a constantly operating mechanism, and connecting means comprising a shaft for operating said plate, a revoluble device adapted to be connected with the constantly operating mechanism for a constant predetermined amount of movement, a pawl for connecting said revoluble device and said shaft, means for disengaging said pawl from said device, and a lever provided with a cam surface for engaging said pawl and raising it from said revoluble device for a part of the movement of the latter after said pawl has been disengaged from said device.

2. In a planter, the combination with a seed plate and a shaft for actuating the same, of a constantly rotating device revolubly mounted on said shaft, a sleeve loosely mounted on said shaft and adapted to be connected with said constantly rotating device for a constant predetermined movement, a ratchet rigidly secured to said shaft, a pawl carried by said sleeve and normally engaging said ratchet, means for disengaging said pawl from said ratchet, and a lever provided with a cam surface for engaging said pawl and raising it from said ratchet during a part of the movement of said sleeve after the pawl has been disengaged from said ratchet.



3. In a planter, the combination of a clutch mechanism including a rotatable shaft, a constantly rotatable clutch member journaled upon said shaft and having a rim portion provided with internal depressions, a sleeve journaled upon said shaft adjacent said member, a pawl carried by said sleeve and adapted to engage with said depressions, a rocking clutch tripping member adapted to normally hold said pawl disengaged, a second clutch member secured to said shaft at the opposite end of said sleeve and provided with pawl engaging grooves upon its periphery, a second pawl carried by said sleeve and adapted to engage with said grooves, means for first moving said second pawl from engagement with said grooves, and a swinging cam adapted to engage with said second pawl and then raise it from said grooves to disengage the same after said first disengagement for various degrees of angular movement of said second clutch member.

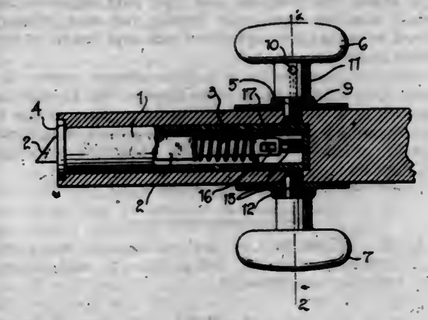
4. In a planter, a rotary seed shaft, a clutch wheel secured upon said shaft, said clutch wheel provided with a peripheral flange having openings therein, a pivoted dog working inside of said clutch wheel, adapted to engage said openings, means for first causing said dog to disengage from said openings, and means for then moving said dog so as to skip one or more openings before again engaging therewith.

5. In a planter, a rotary seed shaft, a clutch wheel secured upon said shaft, said wheel provided with a peripheral flange having openings therein, a rotary element which is loose on said shaft, a dog pivoted on said element adapted to engage said openings, a spring for forcing the dog into the openings, means for first causing said dog to disengage from the openings, and means for then causing the dog to skip one or more of said openings before again engaging therewith.

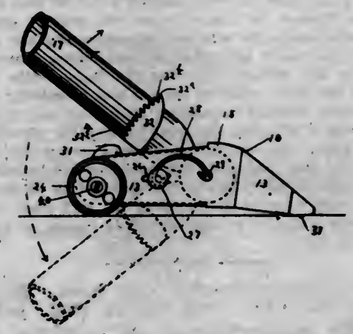
[Claims 6 to 15 not printed in the Gazette.]

1,109,068. LOCK. BENJMIN F. HIGGINS, Christopher, Ill. Filed Feb. 26, 1914. Serial No. 821,291. (Cl. 70—91.)

A device of the class described including a casing, a locking bolt movable therein having its inner end reduced and provided with an elongated slot, a coil spring mounted upon said reduced end and having one end secured to the casing and the other end bearing against the shoulder formed by the reduced end, whereby the locking bolt is normally retained in its projected position, a knob spindle, a knob mounted upon one end for rotation with the spindle, a second knob loosely mounted upon the other end and provided with a central opening extending entirely through the knob, said spindle having a triangular recess and said knob having a triangular recess adapted to be arranged in opposed relation with the recess on the spindle to form a rectangular bore, a key member adapted to be inserted within said bore, whereby to rotate the spindle with the rotation of the knob, and a pin carried by the spindle and adapted to be disposed within the slot in the locking bolt, whereby upon the rotation of the knob spindle, the locking bolt will be retracted against the tension of the coil spring.



1,109,069. VACUUM-CLEANER NOZZLE. CLARENCE S. HILL, Ilion, N. Y. Filed June 10, 1911. Serial No. 632,359. (Cl. 15—60.)



1. In a vacuum cleaner nozzle a hollow body with a nozle slot therein adapted to engage the surface to be cleaned, a handle pivotally connected to said body and swinging freely thereon at certain angles, toothed racks upon said body and upon said handle adapted to be brought into engagement with each other at other angles, one of said toothed racks being movably mounted to be withdrawn from engagement with the other, and resilient means for normally extending said movable toothed rack into the path of the other.

2. In a vacuum cleaner nozzle a hollow body having a nozzle slot on its lower side, a handle pivotally connected to said body, supports on said body on each side of said handle extending rearwardly of the pivoting point of said handle and body and adapted to support said body in operative position upon the surface being cleaned while the handle is above said supports and to allow said handle to be swung therebetween and means for detachably locking said handle in said lowered position.

3. In a vacuum cleaner nozzle a hollow body having a nozzle slot on its lower side, a handle pivotally connected to said body, supports on said body on each side of said handle, extending rearwardly of the pivoting point of said handle and body and adapted to support said body in operative position upon the surface being cleaned while the handle is above said supports and to allow said handle to be swung therebetween and toothed members upon said handle and said supports adapted to engage each other and lock said handle in said lowered position.

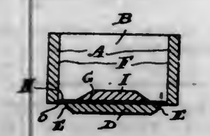
4. In a vacuum cleaner nozzle a hollow body having a nozzle slot on its lower side, a handle pivotally connected to said body, supports on said body on each side of said handle extending rearwardly of the pivoting point of said handle and body and adapted to support said body in op-

erative position upon the surface being cleaned while the handle is above said supports and to allow said handle to be swung therebetween and past said supports and toothed members upon said handle and said supports adapted to engage each other and lock said handle in said lowered position.

5. The combination in a vacuum cleaner nozzle of a hollow body with a nozzle slot therein and an agitator consisting of a resilient wire formed in a loop having its ends secured to said body and its loop extending longitudinally of said nozzle slot and yieldingly projecting therethrough.

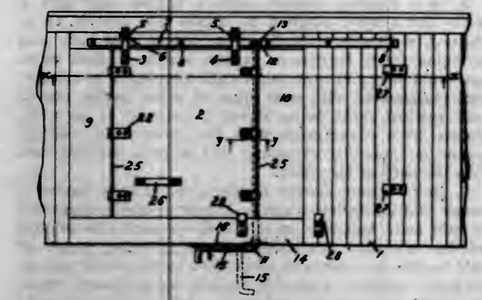
[Claim 6 not printed in the Gazette.]

1,109,070. BRICK-MOLD. HENRY EDWARD HUNT, Toronto, Ontario, Canada. Filed July 10, 1913. Serial No. 778,284. (Cl. 25—119.)



In a brick mold, the combination with the side and end members thereof, of a stock-board, the ends of which extend underneath the said end members and are secured thereto; the width of said stock board being considerably less than the distance between the inner walls of said sides of the mold, so as to prevent any possibility of said stock-board laterally expanding enough to interfere with the escape of air from the mold; a metallic plate carried by the upper side of said stock-board, the width of said plate being less than the horizontal distance between said inner walls of said sides of the mold so as to provide a passage-way between each side of the said plate and the said inner walls to permit the ready escape of air from the mold.

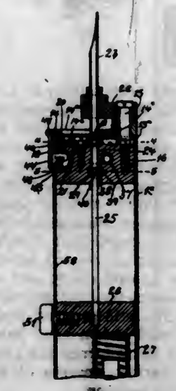
1,109,071. REFRIGERATOR-CAR DOOR. GEORGE H. JUDIA, Cisco, Tex. Filed Dec. 12, 1913. Serial No. 806,201. (Cl. 20—23.)



1. In a device of the character described, the combination with a car wall formed with a doorway, of a door arranged to normally fit in the doorway, formed with a plurality of recesses in one lateral edge, means normally securing the other edge of the door against outward displacement, a vertical rock-shaft mounted adjacent to the recessed edge of the door, members mounted fast upon the rock-shaft normally engaging in said recesses, and displaceable therefrom through a slight rotation of the rock-shaft, arms mounted fast upon the rock-shaft, normally closely adjacent to the inside of the door, a slight rotation of the rock-shaft serving to displace the adjacent end of the door outwardly due to the shifting of said arms, and a lever by which the rock-shaft may be manually rotated.

2. In a device of the character described, the combination with a car wall formed with a doorway, of a door arranged to normally fit in the doorway, the vertical edges of the door and doorway being so beveled that the door when closed is seated against the doorway edges, a plurality of recesses being formed in one of the vertical door edges, means normally securing the other edge of the door against outward displacement, a vertical rock-shaft mounted adjacent to the recessed edge of the door, members mounted fast upon the rock-shaft, normally engaging in said recesses, and displaceable therefrom through a slight rotation of the rock-shaft, arms fast upon the rock-shaft normally closely adjacent to the inside of the door, a slight rotation of the rock-shaft serving to displace the adjacent end of the door outwardly due to the resulting shifting of said arms, and a lever, pivotally connected with the rock-shaft for manually rotating the same.

1,109,072. PILL-INJECTOR. JOHN KOZMOUSKY, Boston, Mass. Filed Mar. 8, 1913. Serial No. 752,955. (Cl. 128—27.)



1. A pill injector comprising a casing having a pill chamber, a pill outlet and a plunger guide, said outlet and guide being in alinement with each other, a spring projected plunger movable in the guide and outlet, a movable detent adapted to hold the plunger retracted, a pill feeder movable in said chamber and having a series of pill pockets which are movable successively into the path of the plunger, and means for successively moving the feeder to bring one of its pockets into the path of the plunger, and displacing the detent to permit the projection of the plunger.

2. A pill injector comprising a casing having a pill chamber, a pill outlet and a plunger guide, said outlet and guide being in alinement with each other, a spring projected plunger movable in the guide and outlet, a rotary pill feeder journaled in the chamber at one side of the path of the plunger and having a concentric series of pill pockets and a peripheral series of ratchet teeth, and a movable operating member having a detent which normally engages the plunger to hold it retracted, and a pawl engaged with the ratcheted periphery of the feeder, and adapted to rotate the latter step-by-step, the arrangement of said pawl and detent being such that a movement of the operating member successively moves the feeder and releases the plunger.

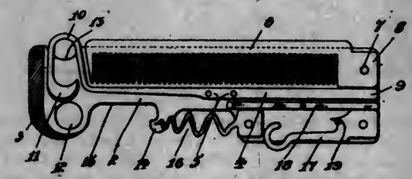
3. A pill injector comprising a casing having a pill chamber, a pill outlet and a plunger guide, said outlet and guide being in alinement with each other, a spring projected plunger movable in the guide and outlet, a rotary pill feeder journaled in the chamber at one side of the path of the plunger and having a concentric series of pill pockets and a peripheral series of ratchet teeth, and a spring-pressed push piece having a keyhole shaped slot through which the plunger passes, the narrower portion of said slot constituting a detent engaging a groove in the plunger, and a pawl pivoted to the push piece and held in yielding engagement with the ratcheted periphery of the feeder, the spring controlling the push piece normally holding the detent in engagement with the plunger, and the pawl in a retracted position.

4. A pill injector comprising a casing having a fixed block or partition forming the inner side of a pill chamber, a head pivoted to the casing and forming the outer side of said chamber, the head being displaceable to open the chamber, and provided with a sight opening having a transparent filling in which a pill outlet is formed, a rotary pill feeder journaled in the chamber under said filling, and having a circular series of pill pockets, and a plunger movable in the casing and adapted to be projected into the pill feeder and outlet.

5. A pill injector comprising a casing having a pill chamber at one end, and an internal plunger guide, the outer side of the chamber being provided with a pill outlet coinciding with said guide, a rotary ratchet-toothed pill feeder in the chamber, a spring pressed push piece movable in a guide in said block and provided with a pawl engaged with the periphery of the feeder, and with a detent adapted to engage and release the plunger.

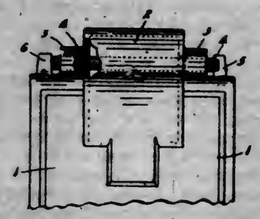
[Claims 6 and 7 not printed in the Gazette.]

1,109,073. CIGAR-CUTTING TOOL. JOSEPH CHARLES AUGUSTE LABARCHE, Edmonton, Alberta, Canada. Filed Aug. 13, 1913. Serial No. 784,572. (Cl. 131—38.)



In a cigar cutting tool, a casing formed of a pair of side plates distanced and coupled and having alined coacting lateral holes to receive a cigar tip, a backbone spring secured longitudinally within said casing, the outer end of said spring being formed into a loop extending partly out of the casing at its upper end and sharpened at its lower end to a knife edge adapted to form a cigar cutter in conjunction with said holes.

1,109,074. JOURNAL-BOX LID. JUDSON A. LAMON, Montclair, N. J., assignor to McCord and Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 26, 1912. Serial No. 716,952. (Cl. 64—23.)



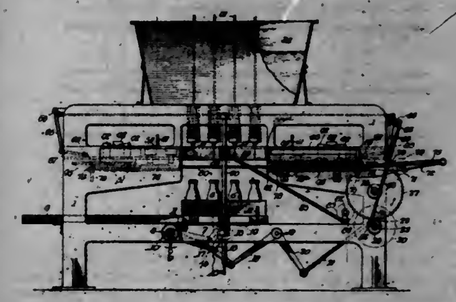
1. A journal box lid having a hinge lug and a hinge bolt seated therein and having also a retaining lug capable of being bent in a plane that transversely intersects the axis of said bolt, from a position out of the line of axial movement of said bolt into a position within the line of movement of said bolt, for retaining the same in working position.

2. A journal box lid having hinge lugs and a hinge bolt seated therein and removable therefrom by endwise movement, said lid having integral bolt retaining lugs alined with the ends of said bolt and at least one of which retaining lugs is adapted to be bent in a plane that transversely intersects the axis of said bolt, from a position out of line of axial movement of said bolt into the line of movement of said bolt for retaining said bolt in working position, said retaining lug being an element distinct from said hinge lug.

3. A journal box lid having hinge lugs and bolt seats therein, said lid having integral retaining lugs located axially outward of said hinge lugs, a hinge bolt seated in the said hinge lugs and interlocked to one of said retaining lugs and thereby held for rotation with said lid, and the other of which retaining lugs is capable of being bent in a plane that transversely intersects the axis of said bolt, from a position out of line of axial movement of said bolt into the line of movement of said bolt, said retaining lug being an element distinct from said hinge lug.

4. A journal box lid having hinge lugs with bolt seats therein, and a hinge bolt applicable to and movable from said hinge lugs by endwise movement, said lid also having integral retaining lugs located axially outward of said hinge lugs, at least one of which retaining lugs is capable of being bent in a plane that transversely intersects the axis of said bolt, to and from alinement with said hinge bolt, and said bolt having a notch at one end embracing one of the said hinge lugs to hold said pin for rotation with said lid, said retaining lug being an element distinct from said hinge lug.

1,109,075. BOTTLE FILLING AND CAPPING MACHINE. OTTO LANGE, Chicago, Ill. Filed May 28, 1913. Serial No. 770,409. (Cl. 226—28.)



1. A machine of the character described comprising means for holding the bottles, said holding means being devoid of horizontal movement, means to elevate and lower said holding means, means to fill the bottles when in elevated position, means to move the caps to a point where said caps are above the filled bottles after the same have been lowered, and means to apply the caps to the bottles, said last-mentioned means being adapted to operate when the bottles are in lowered position.

2. A machine of the character described comprising means for holding the bottles, said holding means being adapted to reciprocate vertically only, means to fill the bottles when in elevated position, laterally moving means to advance the caps to a position above the mouths of the bottles while said bottles are at rest and in lowered position, and a vertically-moving means to apply the caps to the bottles, said means being adapted to operate while the bottles are in lowered position.

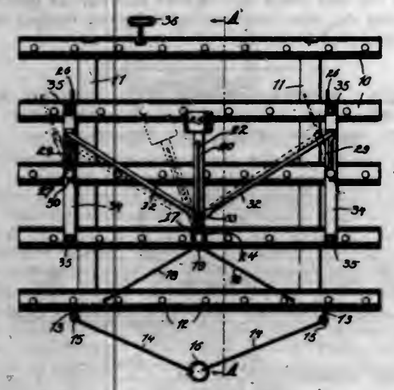
3. A machine of the character described comprising means for holding the bottles, a fixed support, means for reciprocating the bottle-holder vertically within said fixed support, laterally-moving means adapted to advance the caps to a position above the mouths of the bottles, and means to apply the caps to the bottles, said last-mentioned means being adapted to operate when the bottles are in lowered position.

4. A machine of the character described comprising means to receive the bottles, said means being adapted to reciprocate vertically, means to fill the bottles when in elevated position, means to store a supply of caps to be applied to the bottles, laterally-moving means to feed said caps from said storage means to a point above the bottles, and means to apply the caps to the bottles, said last-mentioned means being adapted to operate when the bottles are in lowered position.

5. A machine of the character described comprising means to receive the bottles, said means being substantially free from horizontal movement, means to elevate and lower the same, means to fill the bottles when in elevated position, means to store the caps to be applied to said bottles, means to select the caps from said storage means, means to advance the caps to a position above the mouths of the bottles, means to depress the cap-holding devices to a point adjacent the mouths of the bottles, and means to apply the caps to the bottles, said last-mentioned means being adapted to operate when the bottles are in lowered position.

[Claims 6 to 28 not printed in the Gazette.]

1,109,076. AUTOMATIC GUIDING DEVICE FOR HARROWS. JESSE G. LEAL, Bakersfield, Cal. Filed Jan. 30, 1913. Serial No. 745,295. (Cl. 55—3.)



1. In a device of the character described, the combination with a harrow of a series of runners movably mounted thereon and automatic means for actuating the movement of said runners, as and for the purpose set forth and described.

2. In a device of the character described, the combination with a harrow of a series of runners movably mounted thereon, and a weighted element provided upon said harrow for actuating the movement of said runners, as and for the purpose set forth and described.

3. In a device of the character described, the combination with a harrow of a series of runners movably mounted thereon, a weighted bar movably mounted upon said harrow and means connecting said bar and said runners, substantially as described.

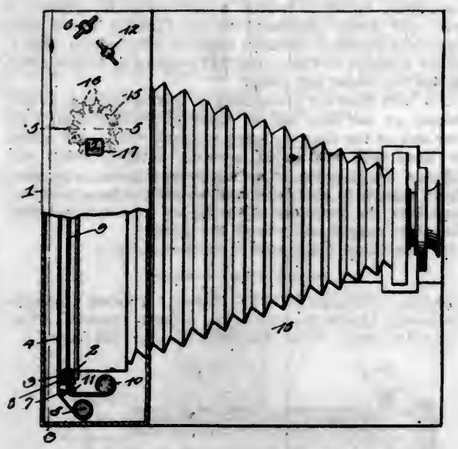
4. In a device of the character described, the combination with a harrow of a pair of runners movably mounted thereon, a weighted bar movably mounted upon said harrow, means connecting said bar at one of its ends with said runners, substantially as described.

5. In a device of the character described, the combination with a harrow of a pair of runners movably mounted thereon, a post provided upon said harrow, a bar movably mounted upon said post adjacent its lower extremity, a weight carried upon said bar near its outer end, means connecting said bar and said runners, whereby the movement of said bar will be imparted to said runners, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,077. CAMERA ATTACHMENT. ROBERT LOCKYER, Sarnia, Ontario, Canada. Filed Dec. 21, 1912. Serial No. 738,044. (Cl. 95—36.)

1. In a device of the class described, the combination with a camera box adapted to receive a sensitized body therein; of a curtain carried within said box in advance of the portion thereof for the reception of said body, said curtain being provided with a plurality of openings to enable a plurality of exposures to be made on said body, means for operating said curtain, and means in connection with said curtain for indicating to the operator which of the openings in said curtain is immediately forward of the sensitized body.



2. In a device of the class described, the combination with a camera box adapted to receive a sensitized body therein; of a curtain extended transversely of the box in advance of said sensitized body, said curtain being provided with a plurality of spaced openings to enable a plurality of exposures to be made on the body, means to manually operate said body, and an indicating disk rotatably mounted in the top of said camera box and having connection with said curtain to disclose to the operator which of the various openings are in position in front of the sensitized body.

3. In a device of the class described, the combination with a camera box having an opening in the top thereof, said box being adapted to receive a sensitized body therein; of a curtain carried on said box in advance of the portion thereof receiving said body, said curtain being provided with a plurality of openings whereby to enable a plurality of exposures to be made on said body, said curtain being also provided with a plurality of additional and smaller openings adjacent its upper edge, means to manually operate said curtain, and an indicating disk rotatably mounted in the top of said box and provided with peripheral teeth to engage the additional openings in said curtain, said disk being observed through the opening in the top of said box to disclose to the operator which of the various openings in the curtain is in position immediately in front of the sensitized body.

4. The combination with a camera box adapted to receive a sensitized body therein, of a curtain carried by said box in advance of said sensitized body, said curtain being provided with a plurality of spaced openings to enable a plurality of exposures to be made on the sensitized body, means for operating said curtain, and a movable member coacting with the curtain to disclose to the operator which of the various openings is in position in front of the sensitized body.

5. The combination with a camera box adapted to receive a sensitized body therein, of a curtain extended transversely of the box in advance of said sensitized body, said curtain being provided with a plurality of spaced openings to enable a plurality of exposures to be made on the body, means for operating said curtain, and an indicating disk rotatably supported by said camera box and having connection with said curtain to disclose to the operator which of the various openings is in position in front of the sensitized body.

[Claim 6 not printed in the Gazette.]

1,109,078. OIL-WELL PACKER. PATRICK H. MACK, Bradford, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 7, 1914. Serial No. 823,174. (Cl. 166—12.)

1. In an oil well packer, the combination with an annular compressible packing, of a packer body, an abutment through which the packer body is movable, an anchor for anchoring the abutment on the walls of the well, means for fixing the anchor with relation to the body of the packer and releasing it therefrom while in the well, and an extension member below the anchor said member having a telescoping connection with the body of the packer.

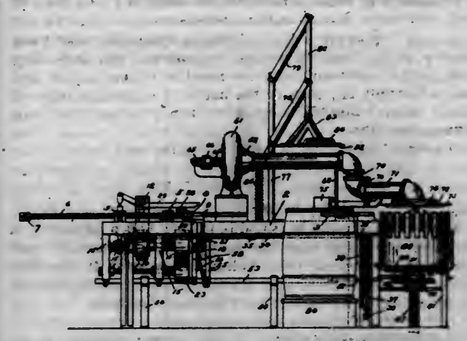
2. In an oil well packer, the combination of a packer body, an annular packing, an abutment for the packing, said abutment and the body of the packer being relatively movable, an anchor for the abutment, said anchor and the body of the packer being also relatively movable, means for at will connecting and disconnecting the anchor and the packer body while in the well, and a pendent extension member below the anchor, said member being movable with relation to the packer body and adapted to engage the anchor.

3. In an oil well packer, the combination with an annular compressible packing, of a packer body, an abutment for the annular packing said abutment being movable with relation to the packer body, an anchor cage having slips loosely carried thereby, semi-elliptic springs connected with the anchor cage and bearing on the slips, said springs being adapted to engage the walls of a well, means for connecting the anchor cage to and disconnecting it from the body of the packer at will while in the well, and a pendent extension member having a telescoping connection with the lower end of the packer body.

4. In a well packer, the combination of a packer body, a suspended downward extension thereof, said extension having a telescoping connection with the packer body, an annular packing, an abutment for the annular packing, and means carried by the packer body for anchoring the abutment to the walls of a well said means being operable independently of the suspended extension member of the packer body.

5. In a well packer, the combination of a body member, an extension member suspended from and telescopically connected with the body member, an annular packing, an annular abutment for the packing, anchor devices for supporting the abutment from the walls of a well, and spring members on the anchor for frictionally engaging the walls of a well.

1,109,079. BARREL-HEADING MACHINE. HENRY F. MARTEN, HENRY GRAHN, and JULIUS C. ANDRESEN, San Francisco, Cal. Filed Dec. 6, 1913. Serial No. 805,176. (Cl. 147—6.)



1. In a machine of the character described, the combination with a supporting means, for an open ended barrel, said means engaging the staves of which the barrel is formed whereby the same are held in temporary engagement with a barrel head, a barrel head magazine positioned adjacent the barrel support, head positioning means for removing a head from the magazine and positioning the same on the barrel, means for feeding the barrel heads to a position to be received by the head positioning means, said feeding means having an operative connection with the stave engaging means whereby the same are actuated consonantly.

2. In a machine of the character described, the combination with an open ended barrel receiving means operable to compress the staves of which the barrel is formed, a barrel head magazine positioned adjacent the barrel receiving means and having an operative connection with said receiving means whereby when the same is actuated the heads will be fed to a position to be removed, means for removing the head from the magazine and positioning the same on the barrel, and means for positioning a head retaining means on the barrel while the receiving means maintain the staves under compression.

3. In a machine of the character described, the combination with an open ended barrel receiving means comprising a stationary stave engaging element and a movable stave engaging element, means for actuating said movable element, means for positioning a head on the barrel, means actuated in timed relation with the movement of the movable stave engaging member and having an operative connection therewith for moving the staves to a position whereby the same may be engaged by the head positioning member.

4. In a machine of the character described, the combination with means for receiving an open ended barrel, said means including a stationary stave engaging member, and a movable stave engaging member, means for actuating the movable stave engaging member to bring the same into and out of contact with the staves of which the barrel is formed, said stave engaging means when in contact with the staves compressing the same whereby a barrel head may be positioned on the same, a barrel head positioning member, a magazine supplying heads to said positioning member, a feed device operating within the magazine and actuated by the operating means of the movable stave engaging member as said member brings the stave engaging means out of contact with the staves.

5. In a machine of the character described, the combination with means for receiving an open ended barrel, said means including coöperating members one of which is movable, means for moving said member into and out of engagement with the staves of which the barrel is formed, said coöperating members temporarily compressing the staves, means for positioning a head upon the barrel, and means having an operative connection with the means for actuating the movable stave engaging mem-

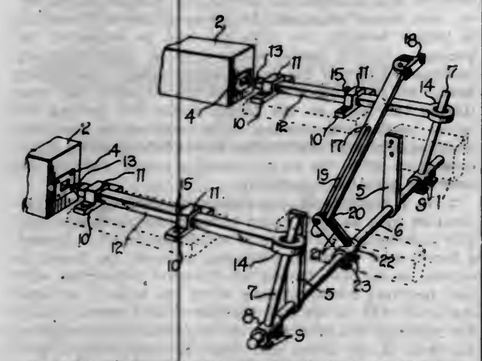
ber whereby upon the movement of said member out of contact with the barrel, a barrel head will be forced to a position where the same may be engaged by the head positioning member.

[Claims 6 to 8 not printed in the Gazette.]

1,109,080. TOOTH. MELVIN EDGAR MERKER, New York, N. Y. Filed Nov. 22, 1911. Serial No. 661,682. (Cl. 32—9.)

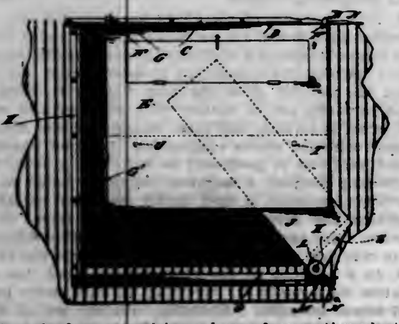
An artificial tooth having in its base end a plurality of pin-receiving holes, pins for said holes, a horizontal part connecting said pins, there being a depression in the base of the tooth to receive said horizontal part, and a root-pin secured to said horizontal part between the pins.

1,109,081. SAFETY-LOCK. GERD A. NULL, Craig, Iowa. Filed Feb. 4, 1914. Serial No. 816,581. (Cl. 214—11.)



A device of the class described including movable locking pins, having loops formed at their outer ends, a rotatable shaft, levers carried thereby and having their outer ends movable in said loops, a movable bar having a slot, an arm carried by said shaft, and a pin carried by said arm and arranged within said slot, as and for the purpose set forth.

1,109,082. GRAIN-DOOR. BRYAN J. O'NEILL, Peoria, Ill. Filed Apr. 7, 1913. Serial No. 759,530. (Cl. 20—29.)



1. A grain door comprising a lower door section pivoted at the lower corner of the door opening, and an upper horizontally movable section engaged and moved by said lower section.

2. A grain door comprising a lower door section pivoted at the lower corner of the door opening and adapted to tilt in a plane parallel to the side of the car, an upper door section adapted to move in a horizontal direction parallel to the side of the car and engaged and moved by the pivoted section.

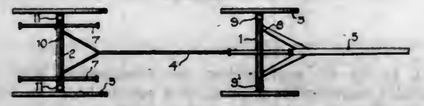
3. A grain door comprising a lower door section pivoted at one of the lower corners adjacent one of the lower corners of the door opening and adapted to tilt on its pivot parallel to the side of the car, an upper door section horizontally movable parallel to the side of the car, and a part on said upper door section engaged by the lower door section after a predetermined upward movement of said lower door section.

4. A grain door comprising a lower door section pivoted near the floor of the car at one side of the door opening and adapted to tilt parallel to the side of the car, an upper suspended door section also movable parallel to the side of the car and engaged and moved by the said lower door section, and means to operate the latter.

5. A grain door comprising a lower door section pivoted near the floor of the car at one side of the door opening and adapted to tilt parallel to the side of the car, an upper suspended door section also movable parallel to the side of the car and engaged and moved by the said lower door section, a member secured relative to the door, and means to engage and operate the member.

[Claims 6 to 8 not printed in the Gazette.]

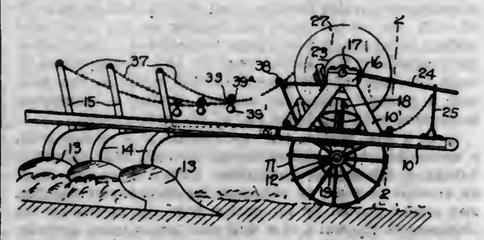
1,109,083. PORTABLE STRETCHER. MICHAEL SALTIS, Fort William McKinley, Philippine Islands. Filed Apr. 14, 1914. Serial No. 831,865. (Cl. 21—80.)



1. A device of the class described including a supporting truck having removable socket members yieldably mounted thereon, and a stretcher having its supporting legs removably arranged within said sockets, as and for the purpose set forth.

2. A device of the class described including a truck having a forward and rear axle, an elliptical spring secured centrally to the forward axle, a set of elliptical springs arranged upon opposite sides of the center of the rear axle and rigidly secured thereto, a transverse bar mounted upon the upper side of the first spring and a second transverse bar mounted upon the upper side of the second springs, removable socket members carried by the ends of said bars and a stretcher having its supporting legs removably arranged within said sockets as and for the purpose set forth.

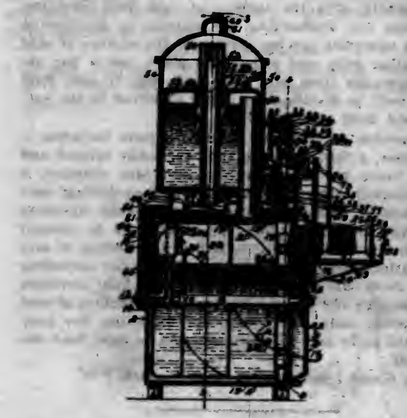
1,109,084. PLOW-LIFTING MECHANISM. WILLIAM F. SCHANE, Griffin, N. D. Filed Aug. 4, 1913. Serial No. 782,985. (Cl. 74—46.)



1. A stop mechanism including a shaft, means for rotating the shaft, a wheel freely rotatable around the shaft, a toothed member fixed to the shaft, a pawl carried by the wheel and normally maintained in engagement with the toothed member, spaced members carried by the wheel, a member adapted to be moved between such spaced members whereby the wheel is held against rotation, and means movable simultaneously with the last mentioned member engageable with the pawl to release the same from engagement with the toothed member when such last named member is caused to be projected between the spaced members of the wheel.

2. A stop mechanism including a shaft, means for rotating the shaft, a member loosely mounted on the shaft, a toothed member fixed to the shaft, a pawl carried by the first named member and normally maintained in engagement with the toothed member, a combined trip and stop member pivotally mounted and provided with a trip arm extending into the path of said pawl and being provided with a stop arm projecting on the opposite side of the wheel from the trip arm, means for manually moving the combined trip and stop member, and cam lugs carried by the first member for moving said combined trip and stop member independently of said manually operated means, said stop arm being adapted for engagement with the first member for holding it against movement while the trip arm is adapted to engage the pawl and adjust the same out of engagement with the toothed member.

1,109,085. CARBURETING APPARATUS. GUSTAVE FRANZ SCHMIDT, Chicago, Ill. Continuation of application Serial No. 488,896, filed Apr. 9, 1909. This application filed July 25, 1911. Serial No. 640,420. (Cl. 48—145.)



1. A carbureting apparatus comprising a first and a second casing, a blower within the second casing, a regulator bell within the first casing, an air chamber above the regualtor bell, said first casing having an air inlet to said air chamber, means for conveying air from said air chamber of the first casing into the second casing, means for conveying carbureted air from the second casing back into the first casing and beneath the regulator bell, means within the first casing and coöperating with the regulator bell for controlling the admission of air into the second casing, means for carbureting the air as soon as it passes from the first casing into the second casing, means for further carbureting said air before it leaves the second casing to pass it into the first casing beneath the regulator bell, said first named carbureting means comprising a fan, and means for dropping gasolene onto the fan.

2. A carbureting apparatus comprising a first and a second casing, a blower within the second casing a regulator bell within the first casing, an air chamber above the regulator bell, said first casing having an air inlet to said air chamber, means for conveying air from said air chamber of the first casing into the second casing, means for conveying air from the second casing back into the first casing and beneath the regulator bell, means within the first casing and coöperating with the regulator bell for controlling the admission of air into the second casing, means for carbureting the air as soon as it passes from the first casing into the second casing, means for further carbureting said air before it leaves the second casing to pass it into the first casing beneath the regulator bell, said first named carbureting means comprising a fan, means for dropping gasolene onto the fan, said second mentioned carbureting means comprising a stationary member having a zigzag passage through which the air and gas pass in their travel from the second casing back to the first casing, and means for admitting gasolene into said zigzag passage.

3. In a carbureting apparatus, a blower casing, a gas bell casing supported thereover, said casings having ports in communication with one another, a gas bell within the gas bell casing, and a blower within the blower casing, said blower comprising blades and a casing surrounding said blades and rotatable therewith, a pipe within said surrounding casing in communication with one of said ports of said blower casing through which the blower sucks air from the bell casing, a stationary carbureter within the blower casing through which the blower forces the air, said stationary carbureter having communication with one of the ports of the bell casing, and means for conveying gaseous fluid from said last named port beneath the gas bell, means for actuating said blower, means for admitting gasolene into said carbureter to carburet the air in its passage through the carbureter, and means for actuating said last named means from the blower actuating means.

4. In a carbureting apparatus, a gas bell casing and a blower casing, said gas bell casing having an air chamber, means within the blower casing for withdrawing air from the gas bell casing into the blower casing and returning it from the blower casing into the gas bell casing beneath the gas bell, means for carbureting the air as it enters the gas bell casing, said last named means comprising a gasolene casing, mounted adjacent to the blower and gas bell casing, a gasolene feeding means within said gasolene casing, a receiver for receiving gasolene from said gasolene feeding means, a pipe connected with the receiver and discharging within the blower casing to convey gasolene into the blower casing to carburet the air as it enters the blower casing.

5. In a carbureting apparatus, a gas bell casing, and a blower casing, said gas bell casing having an air chamber, means within the blower casing for withdrawing air from the gas bell casing into the blower casing and returning it from the blower casing into the gas bell casing beneath the gas bell, means for carbureting said air as it leaves the blower to pass back into the gas bell casing beneath the gas bell, said last named means comprising a gasolene casing, a gasolene feeding means within the gasolene casing, a receiver to receive the gasolene from the feeding means, a carbureting means including a carbureter casing, and means for conveying the gasolene from the receiver to the carbureting means.

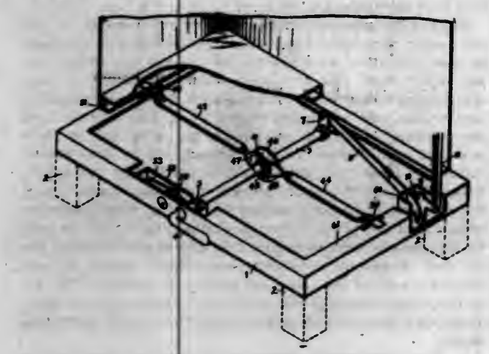
[Claims 6 to 10 not printed in the Gazette.]

1,109,086. BASE-LOCK FOR HORIZONTAL UNITS. EVERETT STUCK, Syracuse, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Original application filed Mar. 29, 1912, Serial No. 686,993. Divided and this application filed Apr. 18, 1913. Serial No. 762,007. (Cl. 45—94.)

1. The combination in a system of horizontal units of a base section having a rock shaft mounted therein, a lock thereon for controlling the rocking of said shaft, a unit section superimposed upon said base, a pair of bolts in said base capable of engaging with said unit section to fasten the unit section to the base, said bolts being movable to and held in locking position by the operation of said rock shaft, said rock shaft being capable of being thereafter freely rocked without moving said bolts from their locking position.

2. The combination in a system of horizontal units of a base section having a rock shaft mounted therein, a lock thereon for controlling the rocking of said shaft, a unit section superimposed upon said base, a pair of bolts in said base capable of engaging with said unit section to fasten the unit section to the base, said bolts being movable to and held in locking position by the operation of said rock shaft, a bell crank in said base section connected

to and operated by said rock shaft, a locking bar carried in said unit section in line with one arm of said bell crank, said bar being positively raised by the bell crank upon the operation of the rock shaft, a spring operated rock shaft in said unit section connected to and operated by said bar.



3. The combination in a system of horizontal units of a base section having an operating and locking device therein, a unit section on the top thereof, a locking device in said base section comprising a central shaft having a crank plate thereon, a pair of slotted locking bolts mounted to slide transversely of the shaft, each of said bolts having a shoulder thereon, pins on the plate to engage with the shoulders on said bolts, said pins operating to drive said bolts forward when the shaft is operated in one direction, a bell crank in the base section connected for operation by said rock shaft, an operating bar in the unit section making contact with an arm of said bell crank for operation longitudinally thereby, drawer locking means in the unit section controlled by said operating bar.

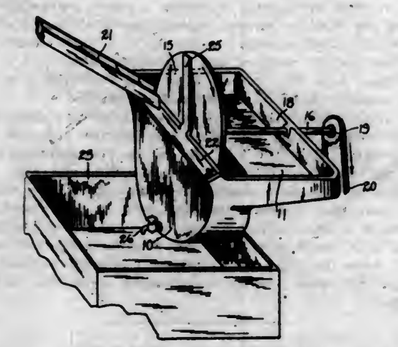
4. The combination in a system of horizontal units of a base section having an operating and locking device therein, a unit section on the top thereof, a locking device in said base section comprising a central shaft having a crank plate thereon, a pair of slotted locking bolts mounted to slide transversely of the shaft, each of said bolts having a shoulder thereon, pins on the plate to engage with the shoulders on said bolts, said pins operating to drive said bolts forward when the shaft is operated in one direction, a bell crank in the base section connected for operation by said rock shaft, an operating bar in the unit section making contact with an arm of said bell crank for operation longitudinally thereby, said bolts being operable to engage with a unit section and lock it to the base section upon the operation of said rock shaft.

1,109,087. MACHINE FOR APPLYING FLUID TO OBJECTS. DANIEL H. TALBERT, Indianapolis, Ind. Filed July 8, 1912. Serial No. 708,200. (Cl. 91—51.)

1. A machine for applying fluid to objects including a chamber adapted to contain the fluid, a vertical rotatable disk with the lower portion thereof projecting into the fluid chamber, and means for discharging the objects to be treated against the upwardly moving side face vertical surface of the disk.

2. A machine for applying fluid to objects including a chamber adapted to contain the fluid, a vertical rotatable disk with the lower portion thereof projecting into the fluid chamber, and a chute inclined downwardly and adapted to discharge the objects to be treated against the upwardly moving side face of said disk.

3. A machine for applying fluid to objects including a fluid chamber, a vertically rotatable disk and with the lower portion projecting into said chamber, a plate connected with said chamber and projecting into close proximity with the side face of said disk, and means for discharging the objects to be treated against an upwardly moving side face of said disk and above said plate whereby the objects will be prevented from entering the fluid chamber and will fall by gravity outside the same.

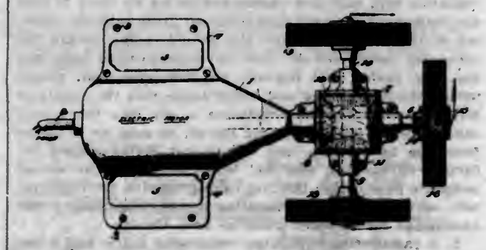


4. A machine for applying fluid to objects including a fluid chamber, a fluid elevating body vertically rotated and with the lower portion projecting into said chamber, a plate connected with said chamber and projecting into close proximity with the surface of said fluid elevating body, means for discharging the objects to be treated against an upwardly moving portion of the surface of said fluid elevating body and above said plate, and a bar extending upwardly from said plate and close to said fluid elevating body to dislodge any object adhering to the surface of said fluid elevating body.

5. A machine for applying fluid to objects including a fluid chamber, a fluid elevating body vertically rotated and with the lower portion projecting into said chamber, a plate connected with said chamber and projecting into close proximity with the surface of said fluid elevating body, means for discharging the objects to be treated against an upwardly moving portion of the surface of said fluid elevating body and above said plate, a bar extending upwardly from said plate and close to said fluid elevating body to dislodge any object adhering to the surface of said fluid elevating body, and means for adjusting the position of said plate and bar with relation to said fluid elevating body.

[Claims 6 and 7 not printed in the Gazette.]

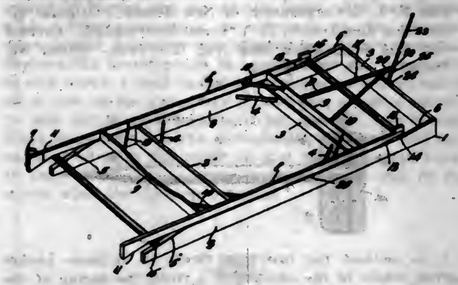
1,109,088. DRIVING MECHANISM. DAVID H. TAYLOR and BENJAMIN E. CONNELLY, Wheeling, W. Va. Filed Mar. 3, 1913. Serial No. 751,862. (Cl. 74—7.)



1. The combination of a casing having lateral longitudinally extending offsets on its sides provided with longitudinal slots, a gear casing carried by one end of said first-mentioned casing, a motor mounted in the first-mentioned casing, a shaft extending from said motor through the gear casing, shafts journaled in the gear casing and projecting laterally therefrom, and gearing within said casing connecting said shafts.

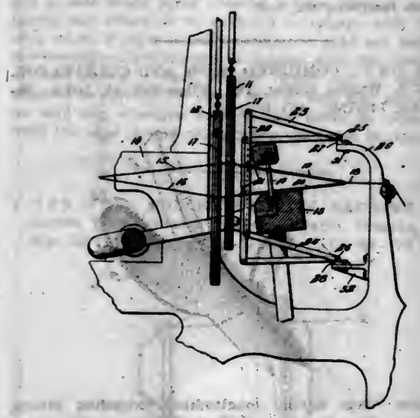
2. The combination of a casing having lateral longitudinally extending offsets on its sides provided with longitudinal slots, a motor within the casing, a shaft extending from the motor and the casing, and gearing actuated by the outer end of said shaft.

1,109,089. INCLINE LIFTING-JACK. GEORGE K. TUCKER, Horace, Ill. Filed Mar. 11, 1912. Serial No. 683,004. (Cl. 57—15.)



A device of the class described comprising a fixed frame and a superposed movable frame, the frames having mutually inclined surfaces; rollers engaged between the mutually inclined surfaces of the frames; a vehicle engaging stop member on the movable frame; a lever fulcrumed on one end of the fixed frame; and a link pivoted to the end of the movable frame and to the lever, the link and the lever being adapted to knuckle into interlocked relation, and one roller being engageable by the link to bind the roller against movement.

1,109,090. LOOM. WALTER H. UNDERWOOD, New York, N. Y. Filed Oct. 28, 1912. Serial No. 728,303. (Cl. 139—18.)



1. In a loom, a reed for beating the weft into position and tubular members adapted to receive the warp threads and extending forwardly and rearwardly of the limits of movement of the reed.

2. In a loom, a reed for beating the weft into position, tubular members, adapted to receive the warp threads, and having their forward ends arranged close to the woven fabric and their rear ends arranged rearward of the rear most position of said reed, for the purpose described.

3. In a loom, a reed for beating the weft into position, tubular members adapted to receive the warp threads, and having their forward ends arranged close to the woven fabric whereby the weft will open the shed as it passes the forward ends of the tubular members.

4. In a loom, means for beating the weft thread into position, shedding mechanism, and means whereby the shed is additionally opened at the fabric to permit the weft to be laid close to the fabric.

5. In a loom, means for beating the weft into position, means for shifting the positions of the warp threads, and means independent of said last mentioned means for opening the shed at the fabric to permit the weft to be laid close to the fabric.

[Claims 6 to 10 not printed in the Gazette.]

1,109,091. TIME-LIMIT CONTROL FOR CIRCUIT-BREAKERS. CHARLES S. VAN NUIS, New Brunswick, N. J. Filed Feb. 19, 1909. Serial No. 478,862. (Cl. 175—270.)

1. A time-limit device comprising an actuating magnet coil, an armature coöperating therewith, and a retarding device coöperating with said armature comprising a float connected to said armature, a chamber containing liquid in which said float operates, a reservoir connected to said chamber through a restricted passage, a check valve in the connection between said chamber and said reservoir permitting free flow of the liquid only from said reservoir to said chamber, and an overflow connection between said chamber and said reservoir.

2. A time-limit device comprising an actuating magnet coil, an armature coöperating therewith, a second armature coöperating with the magnetic field produced both by said coil and by the first armature, and a retarding device coöperating with said first armature comprising a float connected to said armature, a chamber containing liquid in which said float operates, a reservoir connected to said chamber through a restricted passage, a check valve in the connection between said chamber and reservoir permitting free flow of the liquid only from said reservoir to said chamber, and an overflow connection between said chamber and said reservoir.

3. In a time-limit device, a retarding device comprising a float, a chamber containing liquid in which said float operates, a reservoir connected to said chamber through a restricted passage, and a float within said reservoir having a limited upward movement when the liquid in said reservoir rises owing to lowering of the float in the chamber.

4. In a time-limit device, a retarding device comprising a float, a chamber containing liquid in which said float operates, a reservoir connected to said chamber through a restricted passage, a check valve in the connection between said chamber and said reservoir permitting free flow of the liquid only from said reservoir to said chamber, a displacement piston in said reservoir for regulating the level of the liquid, and a float in said reservoir having a limited upward movement when the level of the liquid in said reservoir rises owing to lowering of the float in the chamber.

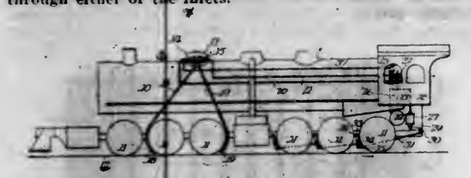
5. A time element control having a coil and an armature which is influenced by a magnetic field created by the coil, and a retarding device in coöperative engagement with the armature, such retarding device including a float, and a reservoir, the reservoir partly encircling the coil.

[Claims 6 to 16 not printed in the Gazette.]

1,109,092. TRACK-SANDING APPARATUS. HARRY VISSERING, Chicago, Ill., assignor to Harry Visserion & Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1912. Serial No. 691,458. (Cl. 105—263.)

1. A trap comprising a body having connection to a receptacle for material, a plurality of air inlet connections, one whereof is arranged for downward discharge into the trap, and a continuous connection to a common de-

livery pipe, communicating therewith and arranged for the discharge of material therethrough upon admission of air through either of the inlets.



2. A trap comprising a body having connections to a receptacle for material and to a discharge pipe, a connection to a sander controlling valve, and a connection to an engineer's brake valve.

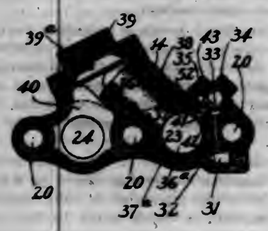
3. A trap comprising a body having connections to a receptacle for material and to a discharge pipe, a connection to a sander controlling valve, and a connection to an emergency port on an engineer's brake valve.

4. A trap comprising a body having connection to a receptacle for material, a plurality of air inlet connections, and a connection to a discharge pipe, one of said air inlet connections being arranged below the other thereof and arranged for discharge into the trap.

5. A trap comprising a body having connection to a receptacle for material, a plurality of air inlet connections and a continuous connection to a common delivery pipe, one of said air inlet connections being arranged at an angle to another thereof and adapted for downward discharge into the trap.

[Claims 6 to 24 not printed in the Gazette.]

1,109,093. TRAP FOR SANDER DEVICES. HARRY VISSERING, Chicago, Ill., assignor to Harry Vissering and Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 17, 1910, Serial No. 544,434. Renewed July 2, 1914. Serial No. 848,696. (Cl. 105—263.)



1. A trap comprising a relatively hard body portion having connections to a receptacle for material, a discharge passage 36 and a connecting passage 36^a, and a relatively soft metal lining in said passage 36^a.

2. A trap comprising a body portion 10 having a passage 36^a and a lead lining in said passage.

3. A trap comprising a body portion 10 having passages 36 and 36^a and an integral soft lining in said passages.

4. A trap having a connection to a receptacle for material, a connection to a source of fluid pressure, and a nozzle, said nozzle being arranged above said material receptacle connection, and having a relatively large orifice toward the material connection and a relatively small opening toward the fluid pressure connection.

5. A trap having a connection to a receptacle for material, a connection to a source of fluid pressure, and a downwardly discharging blast nozzle between said connection to the receptacle for material and fluid pressure supply, said nozzle being located above said fluid pressure connection, and having a relatively large orifice toward the material connection and a relatively small opening toward the fluid pressure connection.

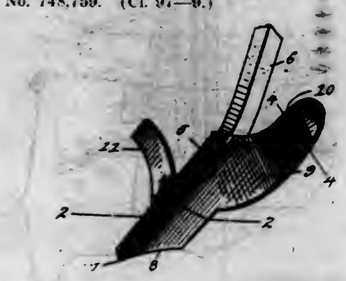
[Claims 6 to 31 not printed in the Gazette.]

1,109,094. METHOD FOR INSERTING RIVETS IN RE-BLADE-KNIVES. JOSEPH V. WECKBAUGH, St. Louis, Mo., assignor to Nagle Re Blade Knife Company, Newark, N. J., a Corporation of New Jersey. Original application filed Dec. 5, 1911, Serial No. 664,126. Divided and this application filed Aug. 25, 1913. Serial No. 786,584. (Cl. 29—86.1.)

1. A method for inserting rivets in re blade pocket knives, where in the absence of a rivet, the spring of the handle tends to force the rivet hole of the blade out of line with the holes of the handle, consisting in applying the female member of the rivet to the reduced extremity of a tool, inserting the tool through the rivet holes in the blade and handle of the knife until the female member of the rivet takes its proper position, then removing the tool and inserting the male member of the rivet.

2. A method for inserting rivets in re blade pocket knives where in the absence of a rivet, the spring of the handle tends to force the rivet hole of the blade out of line with the holes of the handle, consisting in applying a rivet member to the extremity of the tool, inserting the tool through the rivet holes in the blade and handle of the knife until the said rivet member takes its proper position, and then removing the tool.

1,109,095. COMBINED PLOW AND CULTIVATOR. JOHN A. WEEKS, Ganer, Ala. Filed Feb. 15, 1913. Serial No. 748,759. (Cl. 97—9.)

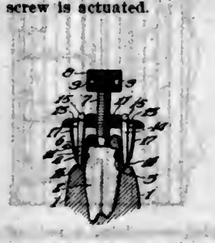


A plow blade having longitudinal extending divergently related portions of relatively different widths presenting a longitudinal ridge, and a laterally directed longitudinally curved flat wing integrally formed with an intermediate portion of the longitudinal edge of the narrower portion of said blade and disposed substantially at right angles thereto, the forward face of such wing being in continuity with the outer face of the adjacent portion of the blade whereby the forward flat face of the wing is substantially vertically disposed.

1,109,096. DENTAL CROWN-REMOVER. JOHN ALDEN WEST, Los Angeles, Cal. Filed June 19, 1913. Serial No. 774,705. (Cl. 32—10.)

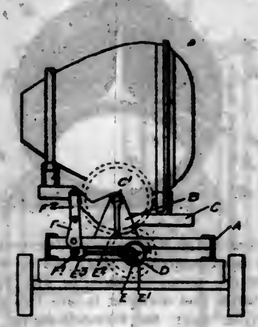
1. A dental crown remover comprising a nut, a screw passing through said nut, one end of said screw being adapted to pass through an opening in a crown to be removed and engage the top of the tooth, said nut having openings therethrough on opposite sides thereof, a headed hook in each opening in said nut depending downwardly therethrough and arranged to engage with the lower edge of the crown, and springs arranged to keep the hooks in engagement with the edge of the crown when the screw is actuated.

2. A dental crown remover comprising a nut, a screw passing through said nut, one end of said screw being adapted to pass through an opening in a crown to be removed to engage the top of the tooth, said nut having hook receiving openings therethrough on the opposite sides thereof, a hook in each opening in said nut depending downwardly therethrough to engage with the lower edge of said crown, a head on the upper end of each hook adapted to rest on the upper face of said nut, a spring secured to said nut in each hook receiving opening, said springs being arranged to extend downwardly from said nut into engagement with the outer face of the respective hooks to keep said hooks in engagement with the edge of the crown when the screw is actuated.



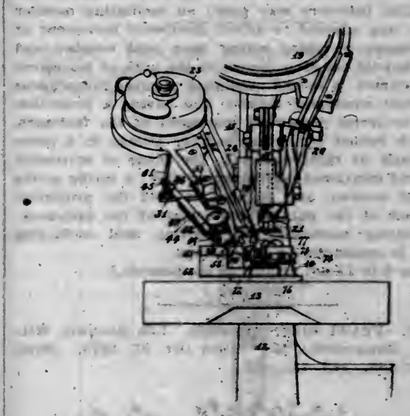
3. A dental crown remover comprising a nut provided with engagement means for receiving a holding device, said nut being provided with openings therethrough, a screw passing through said nut provided at one end with engagement means for an actuating device, the opposite end of said screw being adapted to pass through an opening in the crown to be removed to engage with the top of a tooth, a hook in each opening in said nut depending downwardly therethrough to engage with the lower edge of said crown, a head on the upper end of each hook adapted to rest on the upper face of said nut, and springs on said nut arranged to keep said hooks in engagement with the edge of said crown when the screw is actuated.

1,109,097. CONCRETE-MIXING MACHINE. JOHN LEWIS WETTLAUFER, Toronto, Ontario, Canada. Filed Mar. 3, 1911. Serial No. 612,042. (Cl. 83—73.)



A concrete mixing machine comprising a main frame, a trunnion shaft, supports therefor on said frame, a tiltable drum frame depending from said trunnion shaft, a drum on said drum frame having opposite feed and discharge openings, the pivotal axis of said drum frame being between said drum frame and the drum thereon, the center of gravity of said drum and its frame, when loaded, lying approximately within said axis, rotating means for said drum, a power shaft, means coaxial with said trunnion shaft for transmitting power from said power shaft to said rotating means, normally inoperative tilting means for the drum frame, means for operatively connecting said rotating means and said tilting means.

1,109,098. FASTENER-FEEDING MECHANISM FOR BUTTON-ATTACHING MACHINES. FRANKLIN R. WHITE, Watertown, Conn., assignor to Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 5, 1913. Serial No. 804,934. (Cl. 218—12.)



1. In a button attaching machine, fastener feeding mechanism comprising a downwardly extending chute along which fasteners may pass; an oscillating member having a stop adapted to arrest downward movement of the fasteners in said chute; a second oscillating member independent of said first mentioned member and having a projection, and which second oscillating member swings in a plane substantially at right angles to the plane of movement of said first mentioned oscillating member; and operating mechanism adapted to simultaneously move said stop out of and said projection into the path of movement of the fasteners in said chute.

2. In a button attaching machine, fastener feeding mechanism comprising a downwardly extending chute along which fasteners may pass; an oscillating member supported by said chute and having a stop adapted to arrest downward movement of the fasteners; a second oscillating member independent of said first mentioned member and supported by said chute and having a projection, and which second oscillating member swings in a plane substantially at right angles to the plane of movement of said first mentioned oscillating member; and operating mechanism supported by said chute and adapted to simultaneously move said stop out of and said projection into the path of movement of the fasteners in said chute.

3. In a button attaching machine, fastener feeding mechanism comprising a downwardly inclined chute along which fasteners may pass; an oscillating member supported upon the under side of said chute and having a stop adapted to extend through an opening provided in the bottom wall of said chute and into a position to arrest downward movement of the fasteners; a second oscillating member independent of said first mentioned member and supported upon the upper side of said chute and having a projection; and operating mechanism supported by said chute and adapted to simultaneously move said stop out of and said projection into the path of movement of the fasteners in said chute.

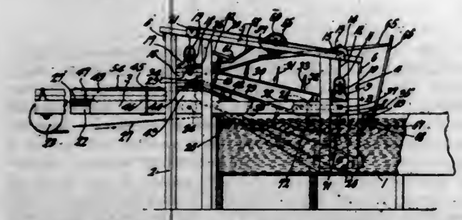
4. In a button attaching machine, fastener feeding mechanism comprising a downwardly extending chute along which fasteners provided with body portions and with stems may pass; an oscillating member supported by said chute and having a longitudinal stop extending cross-wise of said chute and so located as to be engaged by the stems of said fasteners and thus adapted to arrest downward movement of the fasteners; a second oscillating member independent of said first mentioned member and supported by said chute and having a projection adapted to engage the body portions of said fasteners and thus arrest downward movement of the fasteners; an oscil-

lating shaft; a bearing carried by said chute for supporting said shaft; and operating members connected with said shaft and adapted to operate said oscillating members.

3. In a button attaching machine, fastener feeding mechanism comprising a downwardly extending chute along which fasteners may pass; an oscillating member having a stop adapted to arrest downward movement of the fasteners; a spring acting upon said member and adapted to hold the stop thereof in the path of movement of the fasteners; a second oscillating member independent of said first mentioned member and having a projection adapted to arrest downward movement of the fasteners, and which second oscillating member swings in a plane substantially at right angles to the plane of movement of said first mentioned oscillating member; a spring acting upon said member and adapted to hold the projection thereof out of the path of movement of the fasteners; and operating mechanism for moving said oscillating members in opposition to said springs.

[Claims 6 to 17 not printed in the Gazette.]

1,109,099. FRUIT SIZE-GRADER. LEE BARNETT WILLIAMS, Humansville, Mo. Filed Oct. 27, 1913. Serial No. 797,665. (Cl. 130—32.)



1. The combination with a washing tank, of fruit sizing means for removing fruit from the tank.

2. The combination with a washing tank, of combined fruit sizing and elevating means for removing fruit from the tank, and means controlled by said sizing means for deflecting the sized fruit in different directions, according to grade.

3. The combination with a washing tank, of a combined elevating and conveying apron extending upwardly within and beyond the tank, means cöperating with the apron for sizing fruit while moving upwardly with the apron, and mechanism for feeding fruit to said sizing means.

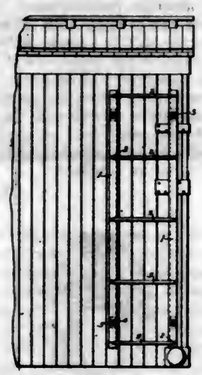
4. The combination with a washing tank and an elevating apron inclined upwardly and outwardly therein, of means cöperating with the apron for engaging fruit and sizing it during its upward movement upon the apron, and a buoyant retainer cöperating with the sizing means.

5. The combination with a washing tank, and an inclined fruit supporting structure within the tank and extending therebeyond, of means above and movable longitudinally of said inclined supporting structure for elevating and grading fruit, and a buoyant retainer under and adapted to be contacted by said conveying and grading means.

[Claims 6 to 19 not printed in the Gazette.]

1,109,100. CAR-LADDER. GEORGE L. ALLEN, Wilmington, N. C. Filed Sept. 4, 1912. Serial No. 718,528. (Cl. 228—1.)

1. A car ladder comprising a pair of stiles each consisting of a strip of angle iron having one part parallel with the surface against which the ladder is placed and the other part at an angle to said surface, the latter part being arranged with its free edge against said surface and serving to hold the parallel part of the angle iron away from said surface, said parallel parts being provided with rung openings and openings for the bolts of the securing brackets, rungs having their ends in said rung openings, supporting brackets bearing at their outer ends against the parallel parts of the angle irons, and securing bolts extending through the openings in the parallel parts of the angle irons and through the brackets.



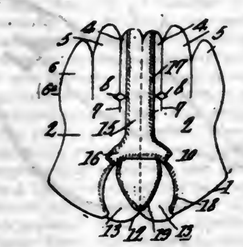
2. A car ladder comprising a pair of stiles each consisting of a strip of angle iron having one part parallel with the surface against which the latter is placed and the other part at an angle to said surface, the latter part being arranged with its free edge against said surface and serving to hold the parallel part of the angle iron away from said surface, said latter parts being on the inner edges of the parallel parts, said parallel parts being provided with rung openings and openings for the bolts of the securing brackets, rungs having their ends in said rung openings, supporting brackets bearing at their outer ends against the parallel parts of the angle irons, and securing bolts extending through the openings in the parallel parts of the angle irons and through the brackets.

1,109,101. PNEUMATIC TIRE. HASKELL R. ARMSTRONG, Peoria, Ill. Filed July 2, 1912. Serial No. 707,352. (Cl. 152—10.)

1. A tire comprising a shoe or casing severed along its inner side or base, a dividing partition or wall lying perpendicular to the plane of the tire and connecting the sides of the latter and dividing it into two compartments, an inner and an outer, the former adapted for receiving an air tube, and a pair of spaced members of relatively softer material than that composing the shoe or casing and lying within the outer compartment and extending longitudinally of and being integral with the inner side of the tread portion of the shoe and adapted when weight is imposed thereon to bear upon the said dividing partition and to increase in lateral measurement due to their compressibility.

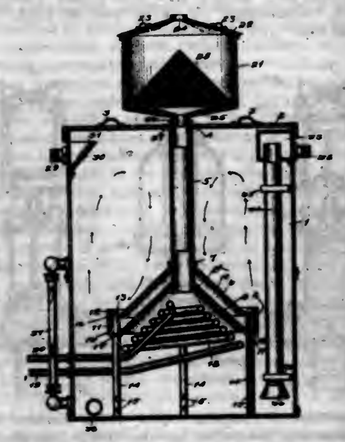
2. A tire comprising a shoe or casing severed along its inner side or base, a dividing partition or wall lying perpendicular to the plane of the tire and connecting the sides of the latter and dividing it into two compartments, an inner and an outer, the former adapted for receiving an air tube, and a pair of spaced members of relatively softer material than that composing the shoe or casing and lying within the outer compartment and extending longitudinally of and being integral with the inner side of the tread portion of the shoe and adapted when weight is imposed thereon to bear upon the said dividing partition and to increase in lateral measurement due to their compressibility and adapted to abut upon one another.

1,109,102. GLOVE. EDWIN T. BASKIN, Independence, Mo. Filed Oct. 2, 1913. Serial No. 793,044. (Cl. 2—9.)



A glove or mitten comprising a body having a thumb opening and a thumb lap, an index finger lining stitched to the body and having its lower end disposed flush with the edges of the thumb opening, and a thumb pocket blank having certain of its edges disposed flush with the thumb opening, said edges of the thumb pocket blank and the lower end of the said lining being stitched to the body with the thumb lap projecting from between the said lining and the thumb pocket blank, and the thumb lap having its edges stitched to the thumb pocket blank, the said edges of the thumb pocket blank being turned under adjacent the quirk.

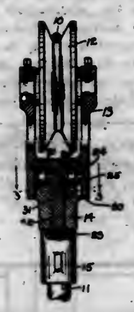
1,109,103. OIL-PURIFYING APPARATUS. EDWIN P. BAUM, Keokuk, Iowa. Filed Nov. 13, 1913. Serial No. 800,805. (Cl. 210—10.)



1. In apparatus of the character described, the combination with a main casing, of a shell arranged therein for forming a heating chamber therebelow and provided with an upstanding flange forming a catchment receptacle for the water separated from the oil, depending tubes connected with the shell and having communication with the catchment receptacle, a heating coil arranged within the heating chamber, and a feed pipe discharging into the heating chamber.

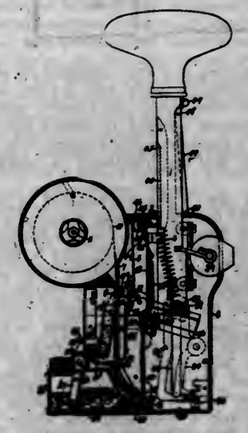
2. In apparatus of the character described, the combination with a main casing, of a conical double walled shell arranged therein and increasing in diameter downwardly for providing a heating chamber open at its lower end, a continuous flange formed upon the upper side of the conical shell for providing a catchment receptacle, tubular legs connected with the double walled shell, engaging the bottom of the main casing, and apertured near their lower ends, a feed pipe leading into the heating chamber, and a heating coil arranged within the heating chamber.

1,109,104. TROLLEY-WHEEL MOUNTING. JOSEPH BISESI, Martinsville, Ind. Filed Apr. 13, 1914. Serial No. 831,636. (Cl. 64—70.)



A trolley wheel construction including a trolley pole, a cylindrical bearing member on the upper end thereof having a semi-circular recess in its upper end, a trolley wheel housing with a cylindrical recess in its lower end surrounding the upper part of said bearing member and having also a pivot pin extending centrally through said bearing member, an arm projecting radially from said pivot pin into said recess in the bearing member, and a spring on each side of said arm and lying between said arm and the vertical walls at the upper end of said bearing member for returning said housing to its normal position after oscillation.

1,109,105. STAMP-AFFIXING MACHINE. CHARLES ASHTON HENRY BULLOCK, London, England. Filed Aug. 12, 1912. Serial No. 714,685. (Cl. 216—28.)

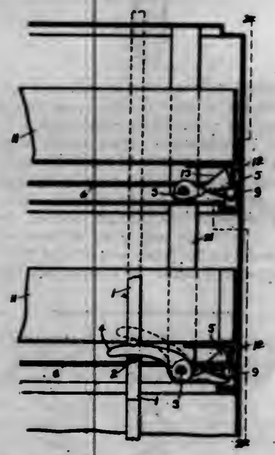


1. In a stamp affixing apparatus, a casing, a plunger having one end operating in the casing, a stamp roll supporting device and a stamp moistening means associated with the stamp roll supporting device, a stamp guide for guiding the stamps from the stamp roll to the plunger, a stamp feeding mechanism within the casing, said feeding mechanism comprising pins supported by a depending flexible arm, and means in the casing for forcing the pins into engagement with the stamps of the stamp roll.

2. In a stamp affixing apparatus, a casing, a plunger operating in the casing, a stamp roll supporting device forming a part of the casing, a stamp guide for guiding stamps to one end of the plunger, a stamp feeding apparatus comprising pins supported by a flexible arm, the said arm being movable with the plunger, a roller on one end of the arm, means adapted to coöperate with the roller for forcing the pins into engagement with the stamps of the stamp roll.

3. In a stamp affixing apparatus, a casing, a plunger operating in the casing, a stamp roll supporting device disposed adjacent one side of the casing, means for guiding the stamps from the stamp roll supporting device to the lower end of the plunger, a stamp feeding mechanism comprising pins supported on a flexible arm, said arm adapted to move with the plunger and means on one end of the flexible arm for engaging an inclined track for forcing the pins into engagement with the stamp strip.

1,109,106. LOCK FOR FILING-CASES. RAYMOND G. BULLOCK, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed June 6, 1913. Serial No. 772,191. (Cl. 45—94.)



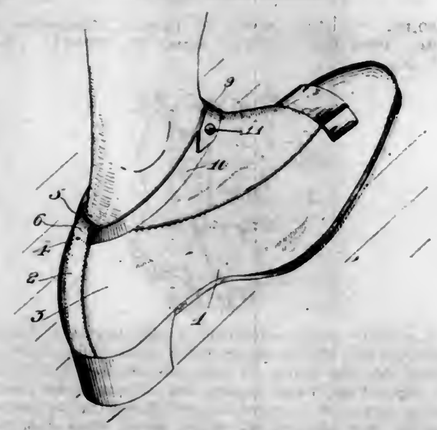
1. In a filing case, a drawer mounted to slide therein, a locking clip mounted below said drawer, a rock shaft mounted in said case below the drawer, said rock shaft having a dog thereon adapted to engage said clip, and a spring exerting a constant upward pressure on the dog and adapted to hold said dog yieldingly in engagement with the clip.

2. In a filing case, a drawer mounted to slide therein, a flange on the bottom of said drawer, a rock shaft mounted in said filing case below the drawer, a locking dog mounted on said rock shaft, and a torsion spring mounted on said filing case engaging with said dog and exerting a constant upward pressure thereon, said spring yieldingly holding the dog in engagement with said flange.

3. In a filing case, a drawer mounted to slide therein, a flange extending downwardly from said drawer, a pivotally mounted locking dog engaging with said flange from below said drawer, a torsion spring removably mounted on said case having a loose sliding engagement with said dog, and a rock shaft on which the locking dog is mounted, said shaft being operable to turn the dog against the pressure of said spring to release said dog from engagement with said flange.

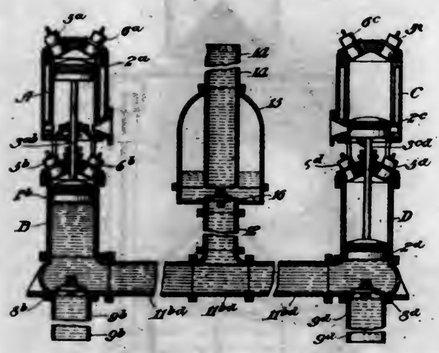
1,100,107. STRAP FOR SHOES. THOMAS F. BYRNES, Emporia, Kans. Filed Feb. 24, 1914. Serial No. 820,657. (Cl. 36—50.)

A device of the class described comprising a loop adapted to be carried upon the heel portion of a shoe and provided with a straight upper portion, and a strap adapted to be carried by said loop, said strap being provided with a central bridge portion, said bridge portion being provided with a straight upper edge, and a plurality of arms integrally formed upon said bridge and extending divergently therefrom, the inner edges of said arms extending at oblique angles relative to the upper edge of



said bridge, said bridge being adapted to be positioned within said loop so as to allow said upper edge to rest snugly against the straight upper portion of said loop, said arms being adapted to be passed around the ankle of the wearer to engage each other whereby a shoe will be held against slipping and said angular construction of said arms preventing said strap from bulging when in use.

1,109,108. METHOD AND APPARATUS FOR PUMPING LIQUIDS. HENRY M. CHANCE and THOMAS M. CHANCE, Philadelphia, Pa. Filed Jan. 30, 1913. Serial No. 745,150. (Cl. 103—67.)



1. A method of pumping liquid which consists in applying pressure, generated by the power impulse of a prime mover actuated by an elastic medium, to a confined body of liquid, a portion of which is interposed between an inlet for liquid and a region of discharge and a portion of which is interposed between said prime mover and a second similar prime mover, in causing said pressure to commence the discharge of liquid at said region of discharge and simultaneously to cause said second prime mover to commence a return stroke thereof, in causing the movement of said second named portion of liquid after the completion of the power stroke of the first named prime mover to effect the completion of the return stroke of the second prime mover and simultaneously therewith to draw in a new increment of liquid.

2. A method of pumping liquids by means of a medium having high initial pressure and expansive force, which consists in causing said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between a pump chamber containing liquid in operative relation to said high pressure medium and a pump chamber containing liquid in operative relation to a similar medium at relatively low pressure and a portion of which is interposed between an inlet for liquid and a relatively high-pressure discharge, in discharging a portion of the liquid interposed between said inlet and said discharge while said low-pressure medium is still at relatively low pressure, in permitting the movement of the liquid interposed between the said two pump chambers to increase the pressure of the medium at low pressure and to draw in a new increment of liquid through said inlet, and in causing said increase in pressure to bring the body of liquid interposed between the said pump chambers to rest prior to the return power stroke; whereby the elastic medium in operative relation to said first named pump chamber is expanded to relatively low pressure prior to its exhaust and the elastic medium in operative relation to the said second named pump chamber is compressed to relatively high pressure prior to its expansion in effecting the return power stroke and whereby each movement of said body of liquid is effected by a power stroke of said medium operating alternately on the liquid in the said two pump chambers.

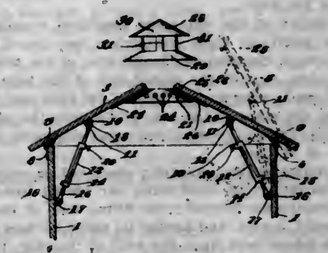
3. A method of pumping liquids by the expansion of an ignited combustible mixture, which consists in causing said ignited combustible to impart movement to a body of liquid, a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge and a portion of which is interposed between a pump chamber containing liquid that is in operative relation to said ignited combustible and a pump chamber containing liquid that is in operative relation to an unignited combustible mixture at relatively low pressure, in causing said movement to commence the discharge of liquid at said region of discharge when the unignited combustible mixture is at relatively low pressure and in causing said movement to effect the compression of the said unignited combustible mixture to relatively high pressure.

4. A method of pumping liquids by the expansion of an ignited combustible mixture, which consists in causing said ignited combustible to impart movement to a body of liquid, a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge and a portion of which is interposed between a pump chamber containing liquid that is in operative relation to said ignited combustible and a pump chamber containing liquid that is in operative relation to an unignited combustible mixture at relatively low pressure, in causing said movement to commence the discharge of liquid at said region of discharge when the unignited combustible mixture is at relatively low pressure, in causing said movement to effect the compression of the said unignited combustible mixture to relatively high pressure and to draw in a new increment of liquid through said inlet after said ignited combustible has expanded to relatively low pressure.

5. A method of pumping liquid which consists in applying pressure to liquid contained in a pump chamber which through a conduit is connected with a discharge main and which also has an unobstructed communication through another conduit with another pump chamber similarly connected with a discharge main, both of said chambers being connected with intakes for liquid to be pumped, and all of said conduits, connections and pump chambers containing liquid, in permitting liquid to discharge into said first named discharge main and in permitting liquid to flow into said second named pump chamber, in cutting off the application of pressure to said liquid in said first named chamber, in permitting liquid to continue to flow into said second named chamber and a new increment of liquid to flow in through the intake connecting with said first named chamber; whereby the energy of the power-stroke in said first pump chamber is partly used to discharge liquid and to impart velocity to the liquid flowing toward said discharge, (whereby said discharge is continued after the actuating pressure drops below the discharge pressure,) and is partly used to effect the return stroke in said second pump chamber and to impart velocity to liquid filling the conduit connecting the two pump chambers, whereby the return stroke in said second pump chamber is completed.

[Claims 6 to 9 not printed in the Gazette.]

1,109,109. SILO-ROOF. WALTER D. CHURCH, Caledonia, Ill. Filed Apr. 26, 1913. Serial No. 763,842. (Cl. 20—1.4.)



1. A silo roof composed of a plurality of triangularly-shaped sections hingedly connected to the upper edge of the sides of a silo and ventilating means permanently connected to the inner end of one of said triangularly-shaped sections and releasably engaging the inner ends of the remaining sections to support the same.

2. A silo roof composed of a plurality of triangularly-shaped sections hingedly connected to the upper edge of the sides of a silo, means connected to each of said triangularly-shaped sections and to the interior of the sides of the silo for holding said sections in adjusted positions and ventilating means connected to the inner end of one of said triangularly-shaped sections and fitting beneath the remaining sections to releasably support the same.

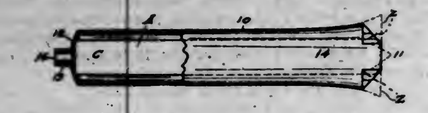
3. In a silo roof, the combination of a plurality of triangularly-shaped sections hingedly connected to the upper edge of the sides of a silo, adjustable bracing means connecting each of said sections directly to the interior of the sides of the silo for holding said triangularly-shaped sections in adjusted positions, a conically-shaped member secured to one of said sections said conically-shaped member forming a ventilator for the interior of the silo, and a hood fitting over the inner ends of said sections and forming a means for preventing water from entering the silo through said conically-shaped member.

4. In a silo roof, the combination of a plurality of triangularly-shaped sections hingedly connected to the upper edge of the sides of a silo, adjustable bracing means connecting each of said sections directly to the interior of the sides of the silo for holding said triangularly-shaped sections in adjusted positions, a conically-shaped member secured to one of said sections said conically-shaped member forming a ventilator for the interior of the silo, a hood fitting over the inuer ends of said sections and forming a means for preventing water from entering the silo through said conically-shaped member, said conically-shaped member provided with a plurality of openings through its side and means mounted upon the inner sides of said sections adapted to be inserted in said openings or aiding in holding said sections in place.

5. In a silo roof the combination of a plurality of sections hingedly connected to the upper edge of the sides of a silo, a collar provided with an open upper end rigidly secured to the inner face of one of said sections and provided with a plurality of openings, pins carried by the other of said sections for fitting into the openings of said collar whereby said collar will releasably engage said sections and support the inner ends of said sections, and means for holding said sections in an adjusted position.

[Claim 6 not printed in the Gazette.]

1,109,110. REINFORCED COLLAPSIBLE TUBE. LE VERT CLARK, Detroit, Mich. Filed June 18, 1913. Serial No. 774,329. (Cl. 221—60.)

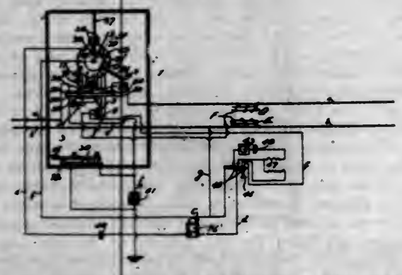


1. A collapsible tube having a relatively rigid reinforcing bar placed inside lengthwise thereof; whereby in using the device the tubular portion may be collapsed transversely, but not longitudinally of the bar to dispense the contents of the tube.

2. In a device of the character described, a collapsible tube and a relatively rigid reinforcing bar placed inside thereof centrally disposed and lengthwise of the tube; the end, of the bar, nearest the sealed end of the tube, being somewhat broad; whereby the wall of the tube may be collapsed upon the sides of the bar, to dispense the contents of the device; the device itself not being otherwise flexible lengthwise of the bar.

3. In a device of the character described, a collapsible tube, a relatively rigid reinforcing bar placed inside and centrally lengthwise thereof; the filling end of the tube being collapsed, sealed, and having its sharp corners on opposite sides folded back upon the wall of the tube, thereby reducing the width of the tube at its sealed end, the wall of the tube being collapsible upon the sides of the bar, but otherwise practically inflexible lengthwise thereof.

1,109,111. TELEPHONE SYSTEM. OLIVER COLEMAN, Wawanesa, Manitoba, Canada. Filed Apr. 8, 1912. Serial No. 689,310. (Cl. 179—85.)



1. In a telephone party line system, a telegraphic circuit means for opening and closing the telegraphic circuit, a normally open telephonic circuit, normally open bell circuits, rotatable dials located in the telegraphic circuit at each station in the system and controlled by the same, the dials presenting in each instance numbers representing all the call numbers of the parties in the system and means for rotating said dials a fixed distance for each make and break in the telegraphic circuit, disks arranged to be set in any relation to the respective dials, the disks, when set rotating with the dials, means actuated by the disks in rotating for closing the telephonic circuits at the respective stations, contact pieces introduced in the bell circuits and adjoining the dials, a cam groove formed on each dial, a tiltable member controlled by each cam groove and arranged when tilted, to engage the contact pieces in the bell circuits, as and for the purpose specified.

2. In a telephone party line system, a telegraphic circuit means for opening and closing the telegraphic circuit, a normally open telephonic circuit, normally open bell circuits, rotatable dials located in the telegraphic circuit at each station in the system and controlled by the same, the dials presenting in each instance numbers representing all the call numbers of the parties in the system and means causing said dials to rotate a fixed distance for each make and break in the telegraphic circuit, disks arranged to be set in any relation to the respective dials, the disks when set rotating with the dials, means actuated by the disk in rotating for closing the telephonic circuits at the respective stations, contact pieces introduced in the bell circuits and adjoining the dials, a cam groove formed on each dial, a centrally pivoted hollow tube adjoining each dial having the forward end thereof extending into or controlled by the groove and the rear end thereof located above the contact pieces of each bell circuit and a liquid within the tube, the arrangement being such that the contact pieces in the respective bell circuits are engaged when depressed by the rear end of the adjoining tube, as and for the purpose specified.

4. The combination comprising, a rotatably mounted spindle, electrically controlled means for rotating the spindle, a dial fixed on the spindle, a disk adjoining the dial and slidable on the spindle, a sleeve interposed between the dial and the disk, a spring normally holding the disk against the sleeve, an arm fixed to the disk and radiating therefrom, the arm having a portion thereof extending from the disk normally into one or other of the openings in the dial, a suitably supported catch piece adjoining the disk and normally preventing the same from being shifted on the spindle, and a trip piece fixed on the dial and engageable with the catch piece and designed to release the same from the disk, as and for the purpose specified.

5. The combination comprising, a rotatable spindle, a dial secured to the spindle and rotatable therewith, electrically controlled means for rotating the spindle, a cam groove formed on the dial, a pivotally mounted tube adjoining the dial, said tube having the ends closed and being provided at the forward end with a pin passing into the cam groove and a liquid within the tube, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,109,112. REINFORCED LUG FOR BRAKE-SHOES. GEORGE COOK, Allendale, N. J., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed May 23, 1913. Serial No. 769,373. (Cl. 188—82.)

1. A back for a brake shoe comprising a back proper, and a key lug made separate therefrom and attached thereto, the vertical walls of said key lug being folded backwardly upon themselves whereby to increase the surface of the edges thereof.

2. A back for a brake shoe comprising a back proper, and a key lug made separate therefrom and attached thereto, the vertical walls of said key lug being folded back upon themselves, and reinforced by the metal of the back proper.

3. A back for a brake shoe having a key lug made separate therefrom and secured thereto, the vertical walls and top of said key lug being made of a plurality of layers of metal, the vertical walls of said lugs being reinforced by the metal of said back.

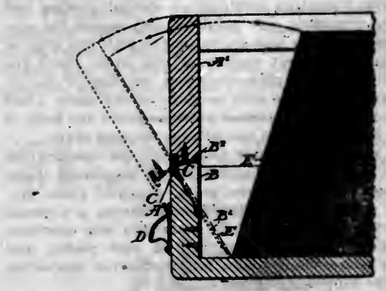
1,109,113. PROCESS OF MAKING ZINC-WHITE. ELISHA B. CUTTEN, Erie, Pa. Filed Sept. 15, 1913. Serial No. 789,842. (Cl. 134—78.)

1. The herein described process of obtaining pigment which consists in treating a compound, containing a mixture of oxids including zinc oxid, slowly with a dilute solution of a suitable water-soluble acid, maintaining the temperature low during such treatment, whereby the acid ions attack mainly the zinc acid, continuing the treatment until enough acid has been added to just about use up the zinc, taking away the fluid containing the dissolved zinc salt, and obtaining zinc therefrom as zinc oxid or hydrate or both.

2. The herein described process of obtaining pigment, which consists in converting zinc and any associated metals to which zinc is electro-positive in zinkiferous compounds, into oxids, crushing, treating slowly said compounds with a suitable water soluble acid, maintaining the temperature low during such treatment, whereby the acid ions attack mainly the zinc oxid, continuing the treatment until enough acid has been added to just about use up the zinc, taking away the fluid containing the dissolved zinc salt, and treating said zinc salt solution with a suitable precipitating agent to obtain zinc white, substantially as described.

3. The herein described process of obtaining pigment, which consists in converting zinc and any associated metals to which zinc is electro-positive in zinkiferous compounds, into oxids, crushing, treating slowly said compounds with a suitable water soluble acid, maintaining the temperature low during such treatment, whereby the acid ions attack mainly the zinc oxid, continuing the treatment until enough acid has been added to just about use up the zinc, taking away the fluid containing the dissolved zinc salt, maintaining the fluid at a low temperature and in a state of quiescence, and precipitating the zinc therefrom as oxid by treating said solution with ammonia, substantially as described.

1,109,114. FILE. ESTEY F. DAYTON, New York, N. Y. Filed Dec. 16, 1911. Serial No. 666,181. (Cl. 129—16.)



1. A file-case provided with a front having a hinge invisible from the front of the file and dividing it into fixed and movable parts, and an automatic detent holding the movable part of the front erect, or permitting its tilting as desired.

2. A file-case having a body, a front divided on a substantially horizontal plane into fixed and movable parts and having a hinge on the inner edge, the fixed portion of the front being cut away to permit the movable part to tilt, the movable part being shaped upon a curve substantially concentric with the hinge; whereby a close sliding fit is secured for excluding dust.

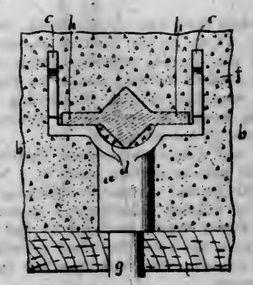
3. A file-case having a body, a front divided on a substantially horizontal plane into fixed and movable parts and having a hinge on the inner edge, the fixed portion of the front being cut away to permit the movable part to tilt, and one of the parts carrying an automatic catch holding the movable part of the front erect, or permitting its tilting.

4. A file-case having a body, a front divided on a substantially horizontal plane into fixed and movable parts, and a hinge upon the inner edge joining the two parts, the hinge provided with arms in substantially the plane of the movable part and moving therewith; whereby when the movable part is erect the arms are practically vertical, and when the movable part is tilted forward, the arms project into the case to form a substitute for the ordinary miter block.

5. A file-case having a body, and a front divided on a horizontal plane into fixed and movable parts hinged together, the hinge being provided with arms in substantially the plane of the movable part and an automatic catch permitting the movable part to stand erect or to tilt, as desired; whereby the arms upon the hinge when the movable part of the front is erect are substantially vertical, and when it is tilted project into the file-case, to form a substitute for the miter block.

[Claims 6 to 12 not printed in the Gazette.]

1,109,115. HANGER-SOCKET. CHARLES W. DENNY, Philadelphia, Pa. Filed May 21, 1913. Serial No. 768,936. (Cl. 72—105.)



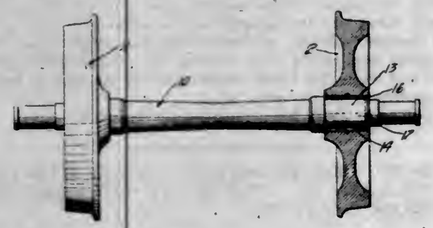
1. As an improved article of manufacture, a hanger socket for embedment in concrete ceilings and the like, comprising a body portion having a hollow member depending therefrom, the top surface of said body portion having a trough-shaped recess therein and the walls of said recess being extended laterally on opposite sides therefrom to form lateral supporting arms and upright extensions projecting from said arms, the edges of said upright extensions having notches therein whereby upper anchoring terminals are formed, the notches in said upright extensions being adapted for the reception of concrete, whereby the device after being placed in position and surrounded with concrete is locked against vertical and lateral displacement.

2. The combination of a hanger socket for embedment in concrete ceilings and the like, comprising a body portion having a hollow member depending therefrom, the top surface of said body portion having a trough-shaped recess therein and the walls of said recess being extended laterally on opposite sides therefrom to form lateral supporting arms, said arms having upright extensions thereon, the opposite edges of said upright extensions having notches therein whereby upper anchoring terminals are formed, the notches in said upright extensions being adapted for the reception of concrete, whereby the device after being placed in position and surrounded with concrete is locked against vertical and lateral displacement, and a bar supported in said trough-shaped recess and extending transversely thereto.

3. The combination of a hanger socket for embedment in concrete ceilings and the like, comprising a body portion having a hollow member depending therefrom, the top surface of said body portion having a trough-shaped recess therein and the walls of said recess being extended later-

ally on opposite sides of said trough-shaped recess to form lateral supporting arms, said arms having upright extensions, the opposite edges of said extensions having notches therein, whereby upper anchoring terminals are formed, said notches being adapted for the reception of concrete whereby the device after being placed in position and surrounded with cement is locked against vertical and lateral displacement, and a bar supported in said trough-shaped recess and extending transversely thereto, said bar having laterally extending flanges adapted to be supported upon the laterally extending socket arms.

1,109,116. DIFFERENTIAL CAR-WHEEL. ARTHUR W. DOWE, Los Angeles, Cal. Filed Oct. 13, 1913. Serial No. 794,790. (Cl. 105—67.)



1. A car wheel and axle construction, comprising an axle having a wheel journal surface thereon, a bearing sleeve around the journal surface, means to secure the bearing sleeve against endwise motion on the axle, and a wheel rigidly mounted on the sleeve and covering the sleeve securing means to prevent its removal while the wheel is in place on the sleeve.

2. A wheel and axle construction, comprising an axle having a wheel journal surface thereon, a bearing sleeve revoluble on the journal surface, a retaining ring secured on the axle to prevent longitudinal movement of the sleeve, and a wheel rigidly mounted on the sleeve to revolve therewith on the axle, the wheel covering the sleeve retaining ring to prevent its removal while the wheel is in place on the sleeve.

3. A wheel and axle construction, comprising an axle having a wheel journal surface thereon, a bearing sleeve revoluble on the journal surface, a retaining ring screw-threaded on the axle to prevent longitudinal movement of the bearing sleeve, a pin in the ring and axle to prevent the ring from unscrewing, and a wheel rigidly mounted on the sleeve and extending over the ring and pin.

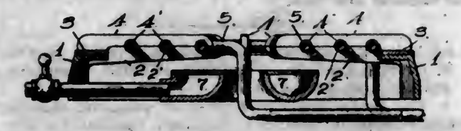
4. A wheel and axle construction, comprising an axle having a wheel journal surface thereon, a bearing sleeve revoluble on the journal surface, a retaining ring screw-threaded on the axle to prevent longitudinal movement of the bearing sleeve, a pin in the ring and axle to prevent the ring from unscrewing, and a wheel forced upon the sleeve and extending over the ring and pin.

5. A wheel and axle construction, comprising an axle having a wheel journal surface thereon, a bearing sleeve revoluble on the journal surface, a retaining ring screw-threaded on the axle to prevent longitudinal movement of the bearing sleeve, a pin in the ring and axle to prevent the ring from unscrewing, lubricant carrying pockets in the bearing sleeve, and a wheel forced upon the sleeve and extending over the ring and the pin.

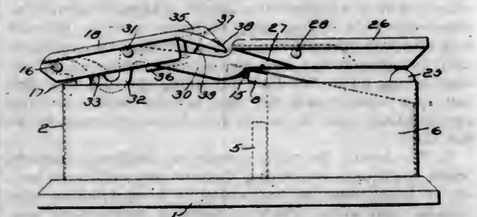
1,109,117. WATER-HEATING COIL FOR GAS-PLATES. WILLIAM DOWNIE, San Francisco, Cal. Filed Nov. 4, 1912. Serial No. 729,495. (Cl. 126—53.)

1. In a water heating coil for gas plates, the combination of a suitable gas plate having radial arms with semicircular openings in the upper edges thereof; a water heating coil adapted to engage the semicircular openings; and means for retaining the coil within the said semicircular openings.

2. In a water heating coil for gas plates, the combination of a suitable gas plate having radial arms with semicircular openings in the upper edges thereof; a water heating coil within the semicircular openings; and a superimposed plate having radial arms with openings in the lower edges thereof and adapted to coincide with the radial arms and openings therein of the gas plate and to retain the water heating coil between the gas plate and the superimposed plate.



1,109,118. ENVELOP MOISTENER AND SEALER. CLARE H. DRAPER, Hopedale, Mass., assignor to Clare H. Draper and Charles F. Roper, Copartners trading as C. F. Roper & Company, Hopedale, Mass. Filed Sept. 26, 1913. Serial No. 792,051. (Cl. 120—6.)



1. In an envelop moistener and sealer, the combination of a frame, a moisture supplying device associated therewith, moistener and sealer plates connected to said frame, and sustained with the central edge portion of the sealer plate above the edge of the moistener plate to direct the flap of an envelop downwardly and the side edge portions of the sealer plate below the edge of the moistener plate to direct the body of the envelop upwardly as the envelop is moved over said plates.

2. In an envelop moistener and sealer, the combination of a frame, a moisture supplying device associated therewith, moistener and sealer plates connected to said frame, said sealer plate having a flap and envelop directing edge provided with a central reëntrant or cut-out portion and downwardly extending side portions, and means for sustaining said moistener and sealer plates with the edge of the reëntrant or cut-out portion of the latter above the edge of the moistener plate to direct the flap of an envelop downward and the side portions of the sealer plate below the edge of the moistener plate to direct the body of an envelop upward as it is moved over the said plates.

3. In an envelop moistener and sealer, the combination of a frame, a moisture supplying device associated therewith, a depressible moistener plate, a sealer plate provided with a flap and envelop director having a recessed central portion and downwardly extending side portions, yielding means for sustaining one of said plates, and connections between said plates for causing the depression of one by the depression of the other.

4. In an envelop moistener and sealer, the combination of a frame, a moisture supplying device, depressible moistener and sealer plates having their edges separated, said sealer plate having a flap and envelop director provided with an edge portion curved downwardly from the center toward each side of said director, and yielding means for supporting said plates with the central edge portion of the director above the adjacent edge of the moistener plate and the side edge portions of said director below the edge of the moistener plate.

5. In an envelop moistener and sealer, the combination of a frame, a moisture supplying device, depressible moistener and sealer plates having their edges separated, said sealer plate having a flap and envelop director provided with an edge portion curved downwardly from the center toward each side of said director, and yielding means for supporting said plates with the central edge portion of the director above the adjacent edge of the moistener plate and the side edge portions of said director below the edge of the moistener plate, and a stop for limiting the action of said yielding means.

[Claims 6 to 9 not printed in the Gazette.]

1,109,119. SOLIDIFIED OIL AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Mar. 29, 1910. Serial No. 552,177. (Cl. 167—6.)

1. The herein described firm solid insectifugal composition comprising an essential oil and a modicum of a soap of stearic acid with sufficient additional water-insoluble material to substantially reduce the solubility of the solidified product in water, said composition being prepared at a temperature above 100° C. whereby it becomes clear and transparent.

2. The herein described firm, solid insectifugal composition comprising an essential oil and a modicum of a sodium soap of stearic acid with sufficient additional water-insoluble material to substantially reduce the solubility of the solidified product in water, said composition being prepared at a temeprature above 100° C. whereby it becomes clear and transparent.

3. The herein described solid insectifugal composition comprising pine oil, naphthalene and a modicum or sodium stearate so blended as to constitute a clear and transparent mass.

4. The herein described solid insectifugal composition comprising pine oil, naphthalene and a modicum of sodium stearate incorporated with a non-volatile oil to substantially reduce the solubility of the solidified product in water; the components of said composition being so blended as to constitute a clear and transparent cake.

1,109,120. WATER-REPELLENT CEMENT AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J. Filed Feb. 20, 1912. Serial No. 678,882. (Cl. 106—43.)

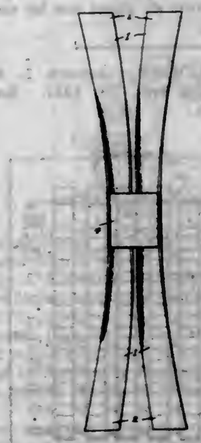
1. The process of making a waterproofed concrete which comprises incorporating with concrete a modicum of a miscible oil, carrying mineral oil, an emulsifying agent, water soluble soap and water insoluble soap.

2. The process of making a waterproof concrete which comprises incorporating with cementitious material an oil-containing composition carrying mineral oil, a water soluble soap in solution in said composition and a water insoluble soap incorporated therewith.

1,109,121. DRILL-CHUCK. GEORGE W. EMRICK, Brooklyn, N. Y. Filed June 30, 1913. Serial No. 776,497. (Cl. 29—128.)

A chuck body, comprising an outer rotary shell portion and an inner central top or head portion, said head portion being provided with a downwardly extending conically tapered part threaded throughout its length, and said shell portion being provided with a correspondingly tapered chamber to receive said part, and which is provided with a downward extension which opens through the bottom of said casing, said casing being also provided in the walls thereof with jaw bores which communicate with said chamber through slots formed in connection therewith, said slots and said bores being also in communication with the downward extension of said chamber, and jaws mounted in said jaw bores and movable longitudinally and having longitudinal ribs movable in said slots and provided at their upper ends with threads which engage the threads of the conically tapered part, said jaws having a downward and converging or an upward and diverging movement according to the direction in which said shell is turned.

1,109,122. METALLIC BACK FOR BRAKE-SHOES. GEORGE S. EVANS, Lenoir City, Tenn., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed May 6, 1913. Serial No. 765,894. (Cl. 188—82.)



A metallic backing for brake shoes comprising a pair of arms curved longitudinally and arranged side by side and having the central portions thereof corrugated longitudinally and the opposite end portions flat, and a loop connecting said arms at the central portions thereof and integral with the outer edges of said arms.

1,109,123. KALEIDOSCOPIC CONTAINER. LEONHART H. FREUND and HANS R. FREUND, New York, N. Y. Filed May 27, 1913. Serial No. 770,242. (Cl. 88—15.)

1. A container provided with a closed translucent bottom and a closed top having an opening, a reflecting tube of a relatively smaller diameter than that of the container,

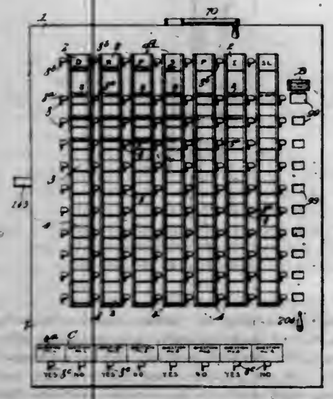
adapted to be detachably secured to the container aforesaid in line with the opening in the closed top.

2. A container provided with a closed translucent bottom and a closed top having an opening, a reflecting tube adapted to be detachably secured to the container in line with the opening in the top thereof, and a transparent closure carried by the tube in that end which is adapted to be secured to the container.

3. A container provided with a closed translucent bottom and a closed top having an opening, a removable cover for said opening, a reflecting tube adapted to be substituted for the removable cover and to be detachably secured to the said container in line with the opening aforesaid, whereby the container will constitute an object box for the reflecting tube.

4. A container provided with a closed translucent bottom and a closed top having an opening, a removable cover for said opening, a reflecting tube adapted to be substituted for the removable cover and to be detachably secured to the said container in line with the opening aforesaid, and a transparent closure carried by the tube in that end which is adapted to be secured to the container, whereby the container will constitute an object box for the reflecting tube.

1,109,124. VOTING-MACHINE. ARTHUR L. GRIFFIN, Middlebury, Ind. Filed Sept. 18, 1911. Serial No. 649,900. (Cl. 235—55.)



1. In a voting machine, a series of voting keys arranged in horizontal and vertical rows, a horizontal row of straight ticket keys, a dog mounted on the machine adjacent each key and operatively connected with the latter, a latch mounted in the machine and adapted to engage and lock the dog to secure the key in a predetermined position, a lock bar coöperating with each vertical row of keys other than the straight ticket keys, each of said bars being slotted to permit independent movement of the keys when the bars are in normal position, and means actuated by the straight ticket key to operate the locking bar of the vertically alined remaining keys whereby to lock all of said latter keys against movement.

2. In a voting machine, a series of voting keys arranged in horizontal and vertical rows, a horizontal row of straight ticket keys, a dog mounted on the machine adjacent each key and operatively connected with the latter, a latch mounted in the machine and adapted to engage and lock the dog to secure the key in a predetermined position, a lock bar coöperating with each vertical row of keys other than the straight ticket keys, each of said bars being slotted to permit independent movement of the keys when the bars are in normal position, a bar mounted for movement transverse the machine, an angle lever intermediate said bar and each of said locking bars, and a lever intermediate said bar and each of the straight ticket keys, whereby to elevate the locking bars in the actuation of any straight ticket key.

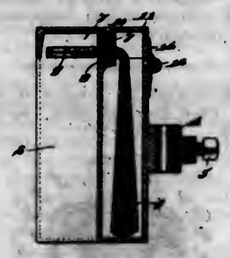
3. In a voting machine, a series of voting keys arranged in horizontal and vertical rows, a horizontal row of straight ticket keys, a dog mounted on the machine adjacent each key and operatively connected with the latter, a latch mounted in the machine and adapted to engage and lock the dog to secure the key in a predetermined position, a lock bar coöperating with each vertical row of keys other than the straight ticket keys, each of said bars being slotted to permit independent movement of the keys when the bars are in normal position, a bar mounted for movement transverse the machine, an angle lever intermediate said bar and each of said locking bars, a lever intermediate said bar and each of the straight ticket keys, whereby to elevate the locking bars in the actuation of any straight ticket key, and means adapted for manual operation to elevate any predetermined number of said locking bars to locking position, whereby to cut out certain rows of keys.

4. In a voting machine, a series of voting keys arranged in horizontal and vertical rows, a horizontal row of straight ticket keys, a dog mounted on the machine adjacent each key and operatively connected with the latter, a latch mounted in the machine and adapted to engage and lock the dog to secure the key in a predetermined position, a lock bar coöperating with each vertical row of keys other than the straight ticket keys, each of said bars being slotted to permit independent movement of the keys when the bars are in normal position, a bar mounted for movement transverse the machine, an angle lever intermediate said bar and each of said locking bars, and a lever intermediate said bar and each of the straight ticket keys, whereby to elevate the locking bars in the actuation of any straight ticket key, a shell mounted in the machine below the locking bars and formed with openings to coöperate with and permit movement of said bars, and means for manually adjusting said shell to provide for operation of any predetermined number of said locking bars.

5. In a voting machine a casing, a series of rods mounted transversely therein, a series of sleeves mounted on each rod, a voting key mounted on each sleeve, a spring encircling the sleeve and connected at one end to the key, a ratchet fixed on the sleeve, and means projecting from each sleeve for engaging the ratchet of the key immediately thereabove.

[Claims 6 and 7 not printed in the Gazette.]

1,109,125. LUBRICATOR. MARTIN M. HEISLER and AUGUST G. WITTE, Chicago, Ill. Filed June 19, 1913. Serial No. 774,550. (Cl. 184—22.)



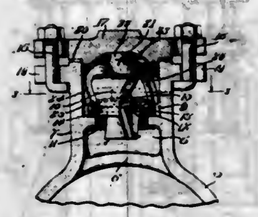
1. A lubricator comprising an oil receptacle having a recess therein adapted to receive a guide rail, there being openings through the walls of said receptacle; and wicks suspended in the receptacle with their ends protruding through said openings and adapted to contact endwise with a guide rail in said recess, substantially as described.

2. A lubricator comprising an oil receptacle having a recess therein adapted to receive a guide rail, there being openings through the walls of said receptacle; a spring held cover for said receptacle; and wicks suspended in the receptacle with their ends protruding through said openings, substantially as described.

3. A lubricator comprising an oil receptacle having a recess therein adapted to receive a guide rail, there being openings through the walls of said receptacle; wicks suspended in the receptacle with their ends protruding through said openings; and screws securing the upper ends of said wicks in said openings, substantially as described.

4. A lubricator comprising an oil receptacle having a recess therein adapted to receive a guide rail, there being openings through the walls of said receptacle leading into the upper portion of said recess; a spring held cover for said receptacle; wicks suspended in the receptacle with their ends protruding through said openings; and screws securing the upper ends of said wicks in said openings, substantially as described.

1,109,126. VALVE STRUCTURE FOR PUMPS. OSCAR W. JOHNSON, Rockford, Ill., assignor to Ward Pump Company, Rockford, Ill., a Corporation of Illinois. Filed Dec. 6, 1913. Serial No. 805,077. (Cl. 103—66.)



1. In a valve structure, the combination of a removable valve seat member and a valve therefor, and means for holding the valve seat member in position including a member having resilient spirally disposed legs.

2. In a valve structure, the combination of a removable valve containing member and a valve therefor, and means for holding the valve member in position including members obliquely disposed relative to the valve axis for allowing a given movement in the direction of said valve axis.

3. The combination of a valve member adapted to be held operatively in a fixed position, and means for holding said member in said fixed position comprising a substantially rigid member having a portion thereof formed of a material such as will give a certain resiliency to said portion when pressure is applied thereto to a certain extent.

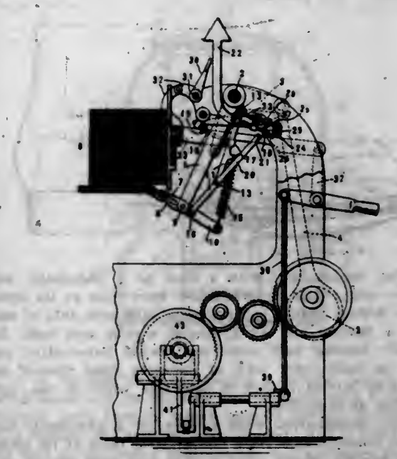
4. The combination of a casing having a passage with an open end, a valve member located within the passage and having a valve associated therewith, a cap covering said open end of the passage and being mounted on a gasket, fastening means for moving and holding the cap in a tight joint position, and means associated with the cap for engaging and holding the said valve member in an operative position, said means being yieldable during a portion of the movement of said cap to its tight joint position to compensate for variations in the thickness of said gasket.

5. In a valve structure, the combination of a removable valve seat member and a valve therefor, and means for holding the valve seat member in position, said means having metallic leg-members of such construction as to hold the valve seat fixedly in position and to give a certain resiliency to permit said means to yield in a compensating movement.

1,109,127. SIGNATURE-GATHERING MACHINE. CHARLES A. JUENGST, Croton Falls, N. Y. Filed Dec. 15, 1908. Serial No. 467,585. (Cl. 11—25.)

1. In a signature gathering machine, the combination with gripper jaws, of pivoted toggle bars for opening and closing the jaws, an extension on one of said toggle bars, an element on said extension, and a controlling member having a gate through which the element on the extension passes when the gripper jaws take a signature of normal thickness.

2. In a signature gathering machine, gripper jaws, a toggle for opening and closing the jaws, controlling mechanism, and an extension on one of the members of the toggle having a detector member the movement of which in reference to a relatively fixed point is greater than the closing movement of the jaws, adapted when the gripper jaws take a signature of improper thickness or fail to take any signature, to actively engage the controlling mechanism.



3. In a signature gathering machine, a gripper arm, gripper jaws carried thereby, means for opening and closing said jaws, a detector member forming an extension of the means for opening and closing the jaws and having a movement in reference to a relatively fixed point relatively greater than the closing movement of the gripper jaws, and means controlling the operation of the machine adapted to be operatively engaged by the detector member when the gripper jaws take an improper thickness of material.

4. In a signature gathering machine, gripper jaws, toggle bars, means for actuating said toggle bars to cause them to open and close the jaws, a detector extension on one of the toggle bars, and mechanism controlling the operation of the machine adapted to be actively engaged by the detector extension should the gripper jaws take an improper thickness of signature or fail to take a signature.

5. In combination, a hopper for signatures, a conveyer, a gripper arm traveling back and forth between the signature hopper and conveyer, gripper jaws carried by the gripper arm, pivoted toggle bars connected with one of the gripper jaws for opening and closing the jaws with respect to each other, means for operating the toggle bars for opening and closing the jaws, one of said toggle bars having an extension constituting a detector member, and means exercising a control over the machine having a gate through which the detector member passes when the gripper jaws take a signature of normal thickness.

[Claims 6 to 17 not printed in the Gazette.]

1,109,128. GALVANIC CELL. MORDUCH L. KAPLAN, Brooklyn, N. Y. Filed Jan. 27, 1914. Serial No. 814,726. (Cl. 204—38.)

1. A galvanic cell containing blue-colored neutral salts of a hydrated poly-manganic acid.

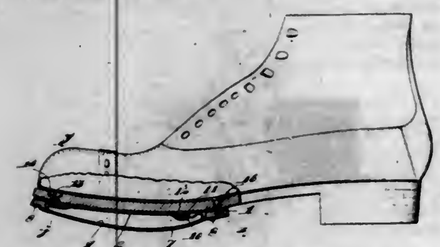
2. A galvanic cell containing neutral salts of a hydrated poly-manganic acid comprising four molecula of manganese dioxid to one equivalent of a base, as a depolarizing agent.

3. A process of obtaining salts of a hydrated poly manganic acid suitable for use as depolarizing agents in galvanic cells consisting in treating an alkali salt of a poly-manganic acid with a solution of a metal salt.

1,109,129. GALVANIC CELL. MORDUCH L. KAPLAN, Brooklyn, N. Y. Filed June 1, 1914. Serial No. 842,021. (Cl. 204—38.)

A galvanic cell containing manganous-polymanganite as a depolarizing agent.

1,109,130. PNEUMATIC SOLE FOR SHOES. EDGAR C. KAYE, Chicago, Ill. Filed Oct. 13, 1913. Serial No. 794,899. (Cl. 36—29.)



1. The combination with a shoe, of a pneumatic sole therefor comprising a rigid hollow body open at its under side; a flexible convex outer wall at said open side of said body; a flexible air bag arranged within said body for normally holding said outer wall flexed outwardly; and means on said outer wall at opposite sides thereof for preventing lateral rolling of said sole when in use, substantially as described.

2. The combination with a shoe, of a pneumatic sole therefor comprising a rigid hollow body open at its under side; a flexible convex outer wall at said open side of said body; a flexible air bag arranged within said body for normally holding said outer wall flexed outwardly; and flexible strips on said outer wall at opposite sides thereof for preventing lateral rolling of the sole when in use, substantially as described.

3. The combination with a shoe, of a pneumatic sole therefor comprising a rigid peripheral frame; a rigid inner wall having its periphery secured to one side of said frame; a flexible outer wall having its periphery secured to the other side of said frame; and a flexible air bag arranged within said frame between said inner and outer walls for normally holding said outer wall in outwardly flexed position, substantially as described.

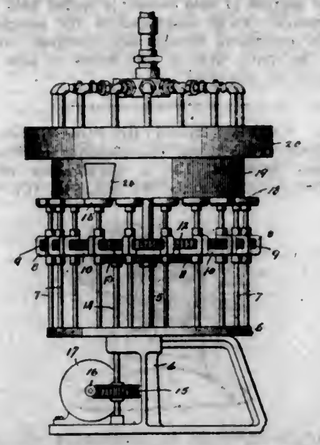
4. The combination with a shoe, of a pneumatic sole therefor comprising a rigid comparatively shallow body open at its under side; a flexible convex outer wall at said open side of said body; a flexible air bag arranged within said body for normally holding said outer wall flexed outwardly; means for releasably securing said sole to the sole of said shoe, said means comprising a slot and pin connection between the toe portion of said sole body, and the corresponding portion of the shoe sole; and a releasable connection between the opposite end portion of said sole body and the corresponding portion of the shoe sole, substantially as described.

5. The combination with a shoe, of a pneumatic sole therefor comprising a rigid comparatively shallow body open at its under side; a flexible convex outer wall at said open side of said body; a flexible air bag arranged within said body for normally holding said outer wall flexed outwardly; means for releasably securing said sole to the sole of said shoe, said means comprising a headed pin projecting from the shoe sole adapted to releasably engage a key hole slot provided in the toe portion of said sole body; and a screw for releasably locking the opposite end of said sole body to the shoe sole, substantially as described.

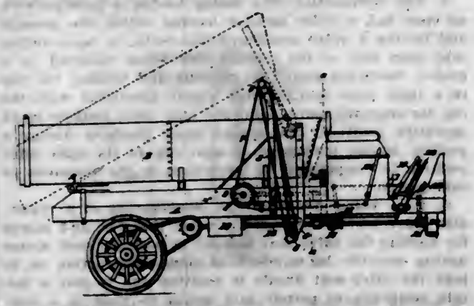
[Claims 6 and 7 not printed in the Gazette.]

1,109,131. GLASS-HEATING BURNER. ALBERT B. KNIGHT, Fairmont, W. Va. Filed Aug. 15, 1912. Serial No. 715,142. (Cl. 49—58.)

In apparatus of the character described, the combination with an approximately semi-annular relatively large metallic burner conduit having a substantially horizontal flat bottom wall provided with relatively fine perforations, of a plurality of fuel supply conduits connected with one side of the approximately semi-annular metallic burner conduit and leading into the same at substantially equidistantly spaced points to supply gas therein for maintaining a uniform pressure of the gas throughout all portions of the burner conduit, a fuel supply chamber arranged substantially concentric with relation to the approximately semi-annular metallic burner conduit and connected with the fuel supply conduits, means for supplying air to the fuel supply chamber, means to supply gas to the fuel supply chamber, a bodily rotatable carrier arranged near and below the approximately semi-annular burner conduit, a plurality of devices connected with the bodily rotatable carrier to move therewith and hold tumblers or the like below and in proximity to the perforated bottom wall of the metallic burner conduit, and means to rotate the devices upon their longitudinal axes during their bodily rotation with the carrier.



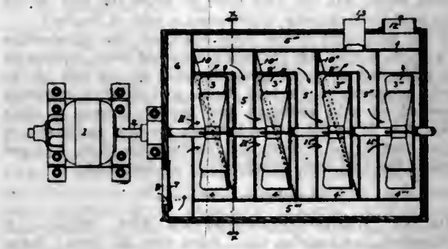
1,109,132. DUMP-BODY FOR VEHICLES. DANIEL A. LOWNEY, San Francisco, Cal. Filed Sept. 30, 1913. Serial No. 792,612. (Cl. 21—20.)



1. In combination with a truck frame, and a dump body pivoted at its rear end thereto, depending hangers rigidly secured to the sides of the dump body at the front end thereof, a pulley sheave on the lower end of each hanger, upwardly projecting standards rigidly secured to the sides of the truck frame in spaced relation and to the rear of said hangers, a pulley sheave on the upper end of each standard, a shaft journaled in the truck frame and arranged in spaced relation and to the rear of the standards, a drum on each end of the shaft, means to drive the shaft, and a cable for each drum connected thereto and passed upwardly over the respective sheaves of the standards then passed downwardly under the respective sheaves of the hangers then upwardly over the sheaves of the standards and finally downwardly and rigidly secured to the respective lower ends of the hangers.

2. In combination with a truck frame, and a dump body pivoted thereto, uprights at the sides of the frame disposed between the pivotal point of the body and the front end thereof, downwardly extending elements carried by the body and disposed between the uprights and the front end of the body, the lower ends of said elements being offset toward the rear end of the body and the upper ends of the uprights being offset toward the rear end of the body whereby in the up movement of the body the offset ends of the elements will move close to the offset ends of the uprights, and hoisting means connected to the offset ends of the elements and to the offset ends of the uprights.

1,109,133. CENTRIFUGAL BLOWER. JOHN S. MELCHERS, New York, N. Y. Filed July 6, 1911. Serial No. 637,213. (Cl. 230—11.)



1. A compound centrifugal blower comprising a plurality of fans, a volute fan-chamber for each fan, a compression chamber interposed between each pair of fan-chambers and one or more outlets for the compressed air.

2. A compound centrifugal blower comprising a plurality of fans, a volute fan-chamber for each fan, a compression-chamber interposed between each pair of fan-chambers and a high-pressure chamber surrounding the several blower units.

3. A centrifugal blower consisting of a fan, a fan-chamber with an air-inlet near the center of the fan, an air-outlet, such as 9, opening into a compression chamber through a gradually-diminishing passage comprised between the concentric wall 14 of the fan-chamber, the diagonally-disposed partition 10 and the outer casing of the fan-chamber.

4. In a compound centrifugal blower comprising a plurality of fans and a volute fan chamber for each fan, means for preventing the over-heating of air therein consisting in the provision of a storage chamber adjacent to each fan chamber within which the compressed air may be stored without being churned by the fans.

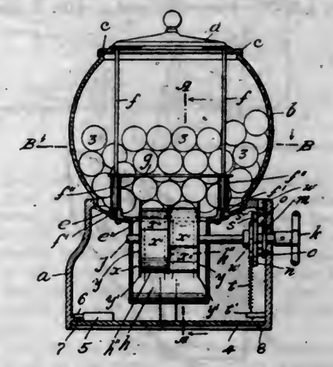
5. In a compound centrifugal blower comprising a plurality of fans each in its own chamber, means for suppressing the vibration of the walls thereof consisting in the provision of a separate compression chamber for each fan chamber, one of such compression chambers substantially surrounding the fan chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,109,134. VENDING-MACHINE. WILLIAM MILLARD, New York, N. Y., assignor to Alball Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 23, 1911. Serial No. 645,559. (Cl. 211—33.)

1. A vending machine having a rotary ejector consisting of a plurality of disks, each having pockets on the periphery thereof, and said pockets on one disk being staggered in relation to the pockets on the other disks, and a separating plate, said plate having corners which project beyond the periphery of the disk, so as to form a channel to direct the articles to be vended, to such pockets, and also agitate such articles.

2. A vending machine having a rotary ejector consisting of a plurality of disks, each having pockets on the periphery thereof, and said pockets on one disk being staggered in relation to the pockets on the other disks, and a separating plate, side plates on the sides of the disks, said plates having corners which project beyond the periphery of the disk, so as to form a channel to direct the articles to be vended, to such pockets, and also agitate such articles.



3. A vending machine having a rotary ejector formed with pockets in its rim face and provided with a side-plate formed with corners which project beyond the rim face and agitate the articles to be vended; and a plate mounted free to tilt above said ejector and arranged to relieve the articles below the plate from the weight of the articles above the same.

4. A vending machine having a rotary ejector formed with pockets in its rim face and provided at each side with a side-plate formed with corners which project beyond the rim face and agitate the articles to be vended and form the interrupted lateral walls of a channel for guiding the articles to the pockets; and a plate mounted free to tilt above said ejector and arranged to relieve the articles below the plate from the weight of the articles above the same.

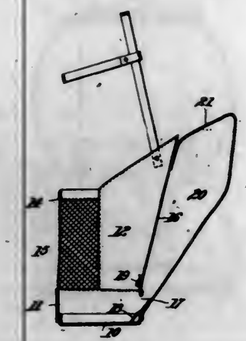
5. A vending machine having a receptacle the bottom of which is formed with an opening for the escape of the articles to be vended; an ejector mounted in close proximity to said opening and formed with pockets in its rim face and provided at each side with a side-plate formed with corners which project beyond the rim face and agitate the articles to be vended and form the interrupted lateral walls of a channel for guiding the articles to the pockets; and a plate mounted free to tilt above said opening and arranged to relieve the articles below the plate from the weight of the articles above the same.

[Claim 6 not printed in the Gazette.]

1,109,135. NOSE-BAG. GEORGE J. MOTTER, Washington, D. C. Filed Feb. 27, 1914. Serial No. 821,475. (Cl. 119—65.)

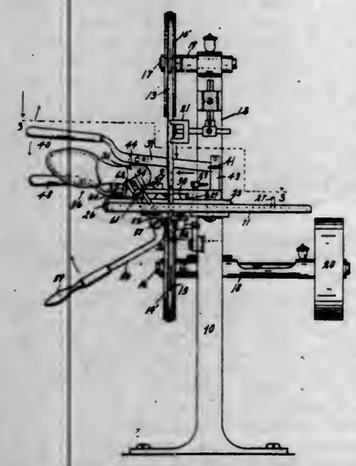
1. A nose bag comprising a base, a feed receptacle comprising a cylindrical wall secured at its lower edge to said base, spaced apart side pieces having their lower edges secured to the top edge of said cylindrical wall, the upper edges of said pieces being inclined upwardly from front to rear to fit closely around the jaw of the animal, a rear wall uniting the rear edges of the side pieces back of the jaw of the animal, a head strap secured to the tops of the side pieces near the rear edges thereof, a strap joining the forward edges of said side pieces where the front and top edges of said pieces meet, said straps being arranged to fit closely around the nose of the animal, and coöperating with the head strap to prevent swinging movement of the nose bag, a rectangular front opening being formed between said strap and said cylindrical wall and the forward edges of said side pieces, and an open mesh fabric of textile material covering said rectangular opening.

2. A nose bag comprising a base, a feed receptacle comprising a cylindrical wall secured at its upper edge to said base, spaced apart side pieces having their lower edges secured to the top edge of said cylindrical wall, the upper edges of said pieces being inclined upwardly from front to rear to fit closely around the jaw of the animal, a chute forming the rear wall of the nose bag and connecting the rear edges of the side pieces back of the jaw of the animal, said chute having an opening leading into said receptacle, a flexible closure for said opening, a head strap



secured to the tops of the side pieces near the rear edges thereof, a strap joining the forward edges of said side pieces where the front and top edges of said pieces meet, said strap being arranged to fit closely around the nose of the animal, and coöperating with the head strap to prevent swinging movement of the nose bag, a rectangular front opening being formed between said strap and said cylindrical wall and the forward edges of said side pieces, and an open mesh fabric of textile material covering said rectangular opening.

1,109,136. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Oct. 4, 1913. Serial No. 793,476. (Cl. 12—42.)



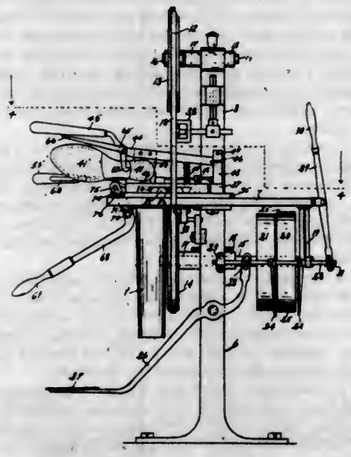
1. Improved apparatus of the class specified, comprising a pillar, a platform and a post on the pillar, shafts mounted on the pillar and post, wheels on the shafts, a table mounted on the platform and movable longitudinally thereof, a band saw on said wheels, a second table mounted on and movable transversely of the first table, means for holding a shoe on the second table, and means to operate the first table to move the heel of the shoe past the band saw to cut away a part of the heel, substantially as described.

2. In apparatus of the class specified, the combination of a platform, a table mounted on the platform and movable longitudinally thereof, band saw at one side of the table, a second table adjustably mounted on the first table, a heel rest on the second table, including a curved block and a curved blade disposed on the side of the block remote from the band saw, means for holding the heel of a shoe clamped in position against the heel rest, and means to operate the first table to move the heel past the band saw to cut away a part of the heel, substantially as described.

3. Improved apparatus of the class specified, comprising a pillar, a platform and a post on the pillar, shafts mounted on the pillar and post, wheels on the shafts, a table movably mounted on the platform, a band saw on said wheels, a second table adjustably mounted on the first table, means for holding a shoe on the second table, means for locking the second table in adjusted position, and means to operate the first table to move the heel of the shoe past the band saw to cut away a part of the heel.

4. In apparatus of the class specified, the combination of a table, a heel rest including a curved block resting on the table and a curved blade disposed on the side of the block, a standard on said table, and a lever pivotally mounted on said standard and having thereon a plate adapted to fit in the hollow between the heel and insole or upper leather of a shoe for holding the heel clamped against the heel rest, substantially as described.

1,109,137. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Nov. 28, 1913. Serial No. 803,616. (Cl. 12—42.)



1. In apparatus of the class specified, the combination of a table, means including a lever on said table for holding and clamping the heel of a shoe, and an angular lever pivotally mounted on said lever and having thereon an abutment adapted to bear against the forward part of the heel, substantially as described.

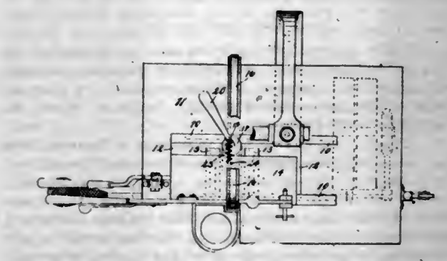
2. In apparatus of the class specified, the combination of a table, a second table mounted on the first table, means including a lever whereby the second table is adjustable in position on the first table, means including a screw on the second table for locking the second table in adjusted position on the first table, an arm on the screw, a spring connected with the second table and said arm and adapted to turn the screw to lock the second table in position on the first table, and means for turning the screw to unlock said second table, the last named means including a bell crank pivotally mounted on the lever, a handle on the bell crank, and a rod operatively connecting the bell crank with the arm, substantially as described.

3. In apparatus of the class specified, the combination of a table, means including a pivotally mounted lever carried on said table for holding and clamping the heel of a shoe, a spring interposed between said table and said lever, and an angular lever pivotally mounted on said lever and having thereon an abutment adapted to bear against the forward part of the heel, substantially as described.

4. In apparatus of the class specified, the combination of a saw, a table, a second table thereon, means including a lever pivotally mounted on the second table for holding and clamping the heel of a shoe, a spring interposed between the second table and said lever, an angular lever pivotally mounted on said lever and provided with an abutment adapted to bear against the forward part of the heel, means including a lever whereby the second table is adjustable on the first table, means including a screw on the second table for locking the second table in adjusted position on the first table, an arm on the screw, a spring connected with the second table and said arm and adapted to turn the screw to lock the second table, means for turning the screw to unlock the second table, the last named means including a bell crank pivotally mounted on the last named lever and a rod operatively connecting the bell crank with the arm, and means for operating the first table to move the heel past the saw to cut away a part of the heel, substantially as described.

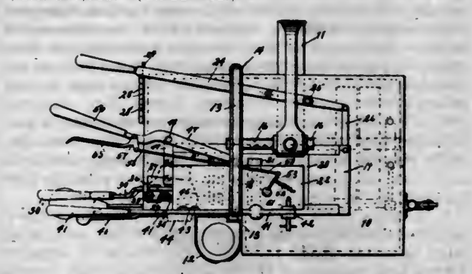
5. Apparatus of the class specified, comprising a platform, a table movably mounted on the platform, a band saw at one side of the table, a chute secured to the platform adjacent to the band saw, a second table movable transversely on the first table, means including a spring-pressed lever pivotally mounted on the second table for holding and clamping the heel of a shoe, an angular lever pivotally mounted on said lever and provided with an abutment adapted to bear against the forward part of the heel, means including a lever for adjusting the position of the second table on the first table, means including a screw on the second table for locking the second table in adjusted position, an arm on the screw, a spring adapted to turn the screw to lock the second table in position, means for turning the screw to unlock the second table, the last named means including a bell crank pivotally mounted on the last named lever and a rod operatively connecting the bell crank with the arm, and means for operating the first table to move the heel past the band saw to cut away a part of the heel, substantially as described.

1,109,138. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Mar. 19, 1914. Serial No. 826,120. (Cl. 12—42.)



In heel cutting apparatus, the combination of a table, a second table slidably mounted on the first table and having a cutaway portion on its underside, a shelf extending into the cutaway portion and secured to the first mentioned table, a pivot on the shelf, a cam eccentrically mounted on the pivot, a post on the second mentioned table, a spring attached to said pivot and said post, and a handle on the cam for turning said cam to move the second mentioned table, substantially as described.

1,109,139. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 830,063. (Cl. 12—42.)

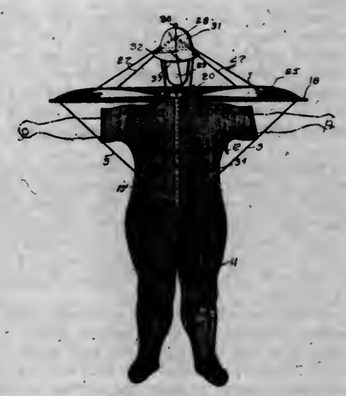


1. In heel cutting apparatus, the combination of a support, a pivot on the support, a platform mounted on the pivot, means for adjusting the platform on the pivot, a table movable longitudinally on the platform, a second table movable transversely on the first mentioned table, means on the second table for clamping the heel of a shoe, a saw, and means for operating the first mentioned toble to move the heel past the saw to cut away a part of the heel.

2. In heel cutting apparatus, the combination of a support, a pivot on the support, a platform mounted on the pivot, a saw, means including a lever pivotally mounted on the support for adjusting the platform angularly to the saw, a table movable longitudinally on the platform, a second table adjustable transversely on the first mentioned table, means on the second table for clamping the heel of a shoe, and means including a lever pivotally mounted on the platform for operating the first mentioned table to move the heel past the saw to cut away a part of the heel.

3. In heel cutting apparatus, the combination of a support, a cutter, a platform mounted on the support, means for adjusting the platform angularly to the cutter, adjustable means on the platform for clamping the heel of a shoe, and means including a lever pivotally mounted on the platform for operating the second mentioned means to move the heel against the cutter to cut away a part of the heel.

1,109,140. LIFE-SAVING GARMENT. DAVID WILLIAMS OGILVIE, Balboa, Canal Zone. Filed Feb. 11, 1913. Serial No. 747,817. (Cl. 244—21.)



1. In combination with a garment and head gear, of rods movably connected with the garment, means coacting with the garment and the rods for limiting the movement thereof in one direction, means connected to the rods and coacting with the head gear for manually imparting movement to the rods in one direction, and a flexible body carried by the rods.

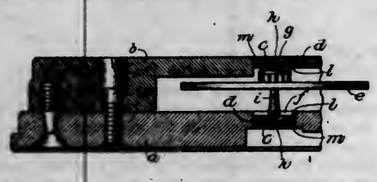
2. A device of the character described including a garment comprising separable walls adapted to be distended by confined air and provided with means whereby such air may be inserted between the walls thereof, rods pivotally engaged with the inner wall of the garment, a flexible body carried by such rods, and flexible means operatively connected with the rods and the inner wall of the garment for limiting the movement of the rods in one direction.

3. A device of the character described including a garment provided with a substantially rigid collar, rods pivotally engaged with such collar, a flexible body carried by such rods, and means operatively connected with the rods for limiting the movement thereof in one direction.

4. A device of the character described comprising a garment provided with a substantially rigid collar, such collar being provided with recesses, rods detachably engaged within such recesses of the collar, a flexible body carried by such rods, and means for limiting the movement of the rods in one direction.

5. A device of the character described including a garment provided with a substantially rigid collar, such collar having recesses therein, rods detachably engaged within such recesses of the collar, an auxiliary collar telescopically engaged with the first collar for maintaining such rods against displacement, a flexible body carried by the rods, and means for limiting the movement of the rods in one direction.

1,109,141. PIVOT-BEARING FOR WATCH-MOVEMENTS. OLOF OHLSON, West Newton, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed July 12, 1911. Serial No. 638,119. (Cl. 58—140.)



1. The combination with a watch movement plate having an aperture therein, of a pivot bearing, and a setting therefor located within said aperture, said setting being distorted between the center and the perimeter thereof, and in a direction to take the pressure off of said bearing, to cause said setting to frictionally engage the wall of said aperture.

2. The combination with a watch movement plate having an aperture therein, of a pivot bearing, and a setting therefor located within said aperture, said setting being provided with an annular indentation between the center and the perimeter thereof distorting the setting in a direction to take the pressure off of said bearing and to cause said setting to frictionally engage the wall of said aperture.

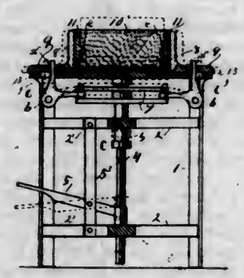
3. The combination with a watch movement plate having an aperture therein, of a pivot bearing, and a setting therefor located within said apertnre, the opposite faces of said setting being provided with annular indentations between the center and the perimeter of the setting distorting the latter in a direction to take the pressure off of said bearing and to cause the setting to frictionally engage the wall of the aperture.

4. The combination with a watch movement plate having an aperture therein, of a pivot bearing, and a setting therefor located within said aperture, said setting being provided with annular indentations between the center and the perimeter thereof to cause the setting to frictionally engage the wall of the aperture, the sides of the indentations toward the bearing being parallel with the axis of the latter, and the outer sides of the indentations being inclined to distort the setting outwardly and in a direction to take the pressure off of said bearing.

5. In a watch movement the combination with oppositely arranged plates, of staff pivot bearings, and settings for said bearings, said settings being distorted between the centers and the perimeters thereof and in a direction to take the pressure off of said bearings, to cause the settings to frictionally engage the walls of the respective apertures, said settings being mounted with capability of adjustment toward and from each other.

[Claim 6 not printed in the Gazette.]

1,109,142. MOLDING-MACHINE. WILLIAM PASSAGE, Ashland, Mich., assignor of one-half to Herbert Church, Bailey, Mich. Filed July 13, 1912. Serial No. 709,276. (Cl. 25—41.)



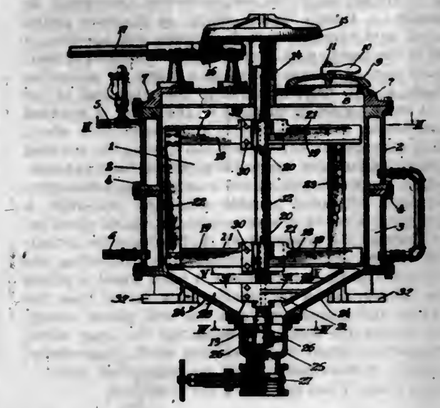
1. In a molding machine, a supporting frame, a vertically adjustable bottom in said frame, the sides and ends of a mold movably supported on top of the frame, an actuating pedal pivotally connected with the frame, connecting rods connecting one end of the pedal with the vertically movable bed, angle levers pivotally connected with the top of the frame and having the ends so connected with the bottom of the mold and with the sides and ends of the mold that a single movement of the lever will force the bottom of the mold upward and the ends and sides of the mold outward simultaneously, and the weight of the bottom of the mold will force the connected end of the pedal downward and the sides and ends of the mold inward.

2. In combination with the frame, and the vertically movable bottom and horizontally movable sides and ends of a block molding machine, a pedal pivoted to the frame, a connecting rod connecting one end of the pedal with the bottom of the mold, angle levers pivotally connected with the frame and each having one arm connected with the bottom of the mold and the other arm connected with the sides and ends, respectively of the mold, all so arranged that a single movement of the pedal downward will raise the bottom and cause the sides and ends to recede from each other, and a single upward movement of the pedal will cause the bottom to lower and the sides and ends to approach each other simultaneously.

1,109,143. GLUE-KETTLE. FRANK G. PERKINS, deceased, Lansdale, Pa., by Gertrude S. Perkins, executrix, Lansdale, Pa., assignor to Perkins Glue Co., a Corporation of Pennsylvania. Filed Mar. 4, 1911. Serial No. 612,180. (Cl. 126—284.)

1. A kettle for mixing and dissolving a flour to form glue, comprising a suitable container having a de-segregating mechanism therein embracing a scraper moving adjacent the side of the container for preventing the accumulation of gelatinous material adjacent the side of the container, one or more de-segregating stirring members passing through the body of the glue, and a scraper running adjacent to and parallel to the bottom of the container for preventing the accumulation of suspended flour as sediment, and of gelatinous matter adjacent the bottom and forcing the same up into the path of the other de-segregating members.

2. A kettle for mixing and dissolving a flour to form glue, comprising a suitable container, means therein for de-segregating the glue, said container having an outlet in its bottom, means for opening and closing said outlet, and means at the outlet for stirring the glue in the outlet when the outlet is closed without packing any solid material therein and adapted to force the glue through the outlet when the outlet is open.



3. A kettle for mixing and dissolving a flour to form glue, comprising a suitable container, means therein for de-segregating the glue, said container having an outlet in its bottom, the bottom inclining downwardly toward the outlet, one or more scraping members running parallel to and adjacent the bottom acting to progress the glue toward the outlet as the container is being emptied, means for opening and closing said outlet and means at the outlet for stirring the glue in the outlet when the outlet is closed without packing any solid material therein and adapted to force the glue through the outlet when the outlet is open.

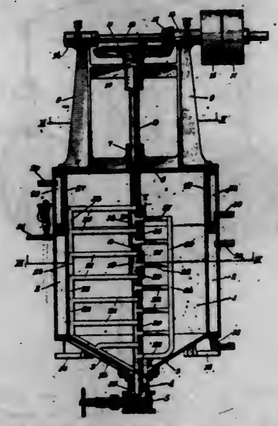
4. A kettle for mixing and dissolving a flour to form glue, comprising a suitable container, means therein for de-segregating the glue, said container having an outlet in its bottom, means for opening and closing said outlet, and a screw in the outlet for stirring the glue in the outlet when the outlet is closed, without packing any solid material therein and adapted to force the glue through the outlet when the outlet is open.

5. A kettle for mixing and dissolving a flour to form glue, comprising a suitable container, means therein for de-segregating the glue embracing a scraper moving adjacent the side of the container for preventing the accumulation of gelatinous material adjacent the side of the container, one or more de-segregating stirring members passing through the body of the glue, and a scraper running adjacent to and parallel to the bottom of the container for preventing the accumulation of suspended flour as sediment, and of gelatinous matter adjacent the bottom and forcing the same up into the path of the other de-segregating members, said container having an outlet in its bottom, means for opening and closing said outlet and a screw in the outlet for stirring the glue in the outlet when the outlet is closed without packing any solid material therein, and adapted to force the glue through the outlet when the outlet is open.

[Claims 6 and 7 not printed in the Gazette.]

1,109,144. GLUE-KETTLE. FRANK G. PERKINS, deceased, Lansdale, Pa., by Gertrude S. Perkins, executrix, Lansdale, Pa., assignor to Perkins Glue Co., a Corporation of Pennsylvania. Filed Mar. 4, 1911. Serial No. 612,181. (Cl. 126—284.)

1. A glue kettle comprising a main container having a heating jacket about its sides and an outlet from its bottom, the bottom inclining downwardly toward said outlet, a valve in said outlet, a stirrer in the container, said stirrer having radial arms extending in opposite directions in substantially the same plane, the arms extending in one direction nearly to the inside wall of the container and carrying an upright member which runs near the inside wall of the container; and the arms extending in the opposite direction being shorter than said first mentioned arms and carrying an upright member which runs intermediate the center of the kettle and the path of said first mentioned upright member, said arms being beveled on their underneath sides in a direction to force the glue downwardly, said first mentioned upright member being beveled on its inner side in a direction to force the glue inwardly, said second mentioned upright member being beveled on its outer side in a direction to force the glue outwardly, a screw carried by said stirrer for forcing the glue out through said outlet, and means for operating said stirrer.



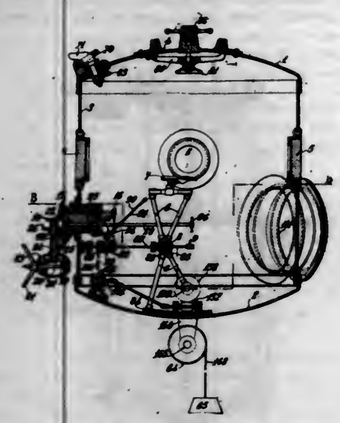
2. A glue kettle comprising a main container having an outlet from its bottom, a stirrer in the container, said stirrer having radial arms extending in opposite directions in substantially the same plane, the arms extending in one direction nearly to the inside wall of the container and carrying an upright member which runs near the inside wall of the container, and the arms extending in the opposite direction being shorter than said first mentioned arms and carrying an upright member which runs intermediate the center of the kettle and the path of said first mentioned upright member, said arms being beveled on their underneath sides in a direction to force the glue downwardly, said first mentioned upright member being beveled on its inner side in a direction to force the glue inwardly, said second mentioned upright member being beveled on its outer side in a direction to force the glue outwardly, a screw carried by said stirrer for forcing the glue out through said outlet, means for operating said stirrer, and a stirrer forming an extension to said first mentioned stirrer and having similar radial arms and upright members.

3. A glue kettle comprising a container having an outlet in its bottom for the glue, means for forcing the glue through said outlet, a stirrer in the container carrying an upright member which runs near the inside wall of the container and also carrying an upright member which runs intermediate the center of the kettle and the path of said first mentioned upright member said first mentioned upright member being beveled on its inner side in a direction to force the glue inwardly and said second mentioned upright member being beveled on its outer side in a direction to force the glue outwardly to more effectively stir the glue, said means for forcing the glue through said outlet comprising a screw integral with said stirrer.

1,109,145. DIVING-CHAMBER FOR SUBMARINE OPERATIONS. CHARLES PETIT, Paris, France. Filed Mar. 12, 1913. Serial No. 753,675. (Cl. 61—7.)

1. In a diving apparatus for submarine operations, in combination: a tightly closed casing, an aperture giving access into said casing, means for closing said aperture

working arms mounted on the casing so as to have an universal movement thereon, means for actuating said arms from the interior of the casing, a screw propeller shaft supported from the casing, at the outside of the same, a screw propeller on said shaft, a frame supported in the casing, a saddle on said frame, an actuating shaft rotatably mounted in the frame, crank arms on said shaft, pedals on said crank arms and means operatively connecting the actuating shaft to the screw propeller shaft, substantially as described and for the purpose set forth.



2. In a diving apparatus for submarine operations, in combination: a tightly closed casing, an aperture giving access into said casing, means for closing said aperture, working arms mounted on the casing so as to have an universal movement thereon, means for actuating said arms from the interior of the casing, a screw propeller shaft supported from the casing, at the outside of the same, a screw propeller on said shaft a frame supported in the casing, a saddle on said frame, an actuating shaft rotatably mounted in the frame, crank arms on said shaft, pedals on said crank arms, means operatively connecting the actuating shaft to the screw propeller shaft, a box carrying the propeller shaft, a vertical sleeve on said box, a bracket secured to the casing and carrying said vertical sleeve, and means for rotating said sleeve about its longitudinal axis, substantially as described and for the purpose set forth.

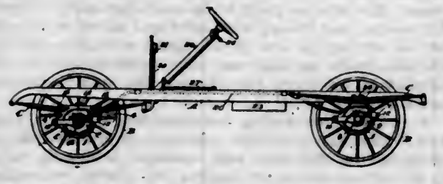
3. In a diving apparatus for submarine operations, in combination: a tightly closed casing, an aperture giving access into said casing, means for closing said aperture, working arms mounted on the casing so as to have an universal movement thereon, means for actuating said arms from the interior of the casing, a screw propeller shaft supported from the casing, at the outside of the same, a screw propeller on said shaft, a frame supported in the casing, a saddle on said frame, an actuating shaft rotatably mounted in the frame, crank arms on said shaft, pedals on said crank arms, a winch carried by the casing, a cable wound on said winch, a weight attached to said cable and means for coupling the actuating shaft to either the screw propeller shaft or the winch substantially as described and for the purpose set forth.

4. In a diving apparatus for submarine operations, in combination: a tightly closed casing, an aperture giving access into said casing, means for closing said aperture, a support in the casing wall, an outer shaft rotatably mounted in said support, means including a worm for actuating said shaft, a stub shaft mounted in the outer end of the shaft, at right angles to the axis of the latter, a working arm pivoted on said stub shaft, an intermediary shaft, extending through the outer shaft, and driving the working arm, means including a worm for actuating said intermediary shaft, tools mounted on the working arm, a nonrotating internally threaded member actuating the tools, a threaded shaft screwed in said member, a central shaft extending through the intermediary-shaft, means for actuating said central shaft and an universal joint connecting the threaded shaft to the central shaft, substantially as described and for the purpose set forth.

5. In a diving apparatus for submarine operations, in combination: a tightly closed casing, an aperture giving access into said casing, means for closing said aperture, a support in the casing wall, an outer shaft rotatably mounted in said support, means including a worm for actuating said shaft, a stub shaft mounted in the other end of the shaft, at right angles to the axis of the latter, a working arm pivoted on said stub shaft, an intermediary shaft, extending through the outer shaft and driving the working arm, means including a worm for actuating said intermediary shaft, tools mounted on the working arm, a nonrotating internally threaded member actuating the tools, a threaded shaft screwed in said member, a central shaft extending through the intermediary shaft, means for actuating said central shaft, an universal joint connecting the threaded shaft to the central shaft, a hand wheel, a pinion movable axially, means for rotating said pinion from the hand wheel and means for displacing said pinion axially so as to engage the means for actuating the outer shaft, the intermediary shaft or the central shaft, respectively, substantially as described and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,109,146. PNEUMATIC VEHICLE-SPRING. ROSS M. G. PHILLIPS, Harrison, N. J., assignor of one-half to Charles W. Chisholm, East Orange, N. J. Filed Nov. 5, 1907. Serial No. 400,862. (Cl. 21—50.)



1. In a pneumatic vehicle spring, a pneumatic cushion acting between the vehicle frame and the axle, a cushion frame, and means for compressing the cushion by the movement of the vehicle frame to cushion both the up and down movement of the frame including a pivotal mounting between the cushion frame and axle to permit the cushion frame to rock longitudinally of the axle to secure freedom of cushioning movement.

2. In a pneumatic vehicle spring, a pneumatic cushion acting between the vehicle frame and axle, in combination with a metal spring on which the vehicle frame is mounted, a cushion frame secured to the metal spring, and means for compressing the cushion by the movement of the vehicle frame to cushion both the up and down movement of the frame including a pivotal mounting between the cushion frame and axle to permit the cushion frame to rock longitudinally of the axle to secure freedom of cushioning movement.

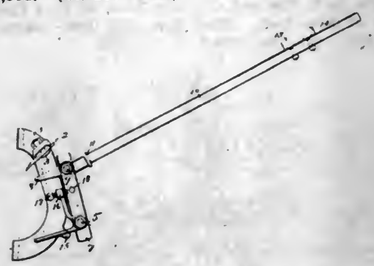
3. In a pneumatic vehicle spring, the combination with the axle and vehicle frame, of a cushion support on the axle, a cushion frame mounted to move vertically in said support, a pneumatic cushion carried by said frame, said frame and support being arranged to compress the cushion on both upward and downward movement of the cushion frame, and a pivotal mounting for the cushion frame permitting the cushion frame to rock longitudinally of the axle to secure freedom of cushioning movement, and supporting connections between the vehicle frame and cushion frame.

4. In a vehicle spring, the combination with the axle and vehicle frame, of a cushion support on the axle, a cushion frame pivoted in said support to swing vertically, cushion carried by said frame, said frame and support being arranged to compress the cushion on both upward and downward movement of the cushion frame, and supporting connections between the vehicle frame and cushion frame.

5. In a vehicle spring, the combination with the axle and vehicle frame, of a cushion support on the axle, a cushion frame pivoted in said support to swing vertically, a cushion carried by said frame, said frame and support being arranged to compress the cushion on both upward and downward movement of the cushion frame, and to permit the cushion frame to rock longitudinally of the axle to secure freedom of cushioning movement, and supporting connections between the vehicle frame and cushion frame.

[Claims 6 to 36 not printed in the Gazette.]

1,109,147. PICKET-POINTER. JOHN S. PURDY, Houston Heights, Tex. Filed July 5, 1913. Serial No. 777,532. (Cl. 144—146.)



1. A device of the character described, including a frame, a cutting blade to said frame, a pair of links pivoted to the frame at one end, a dog between the other ends of said links pivoted thereto and arranged to oppose said blade and spaced therefrom, an adjustable member carried by the frame for engaging and limiting the movement of said links and the dog carried thereby, a handle secured to said dog for manipulating the same and a supporting plate secured to said handle near its free end.

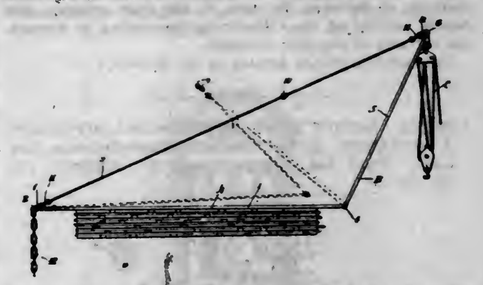
2. A device of the character described including a frame, a cutting blade fixed to said frame, a pair of links pivoted to the frame at one end, a dog between the other ends of said links pivoted thereto and arranged to oppose said blade and spaced therefrom, one end of one of said links projecting upwardly beyond said dog and forming a lateral brace, a handle secured to said dog for manipulating the same and a supporting plate secured to said handle near its free end.

3. A device of the character described, including a frame, a cutting blade fixed to said frame, a pair of links pivoted to the frame at one end, a dog between the other ends of said links pivoted thereto and arranged to oppose said blade and spaced therefrom, one end of one of said links projecting upwardly beyond said dog and forming a lateral brace, means for regulating the position of said dog, a handle secured to said dog for manipulating the same and a supporting means secured to said handle near its free end.

1,109,148. JACK FOR PORTABLE HOISTS. HENRY A. RUDD and FRANK B. COLLINS, Barberton, Ohio, assignors to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1911. Serial No. 658,947. (Cl. 57—129.)

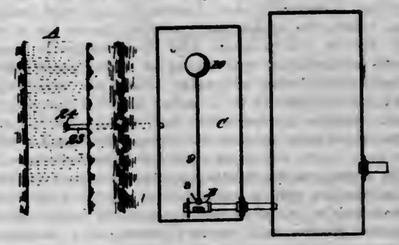
1. In a folding jack for portable hoists, two pivotally connected skeleton sections, whereof one constitutes a base portion and the other a tackle supporting portion, said sections being so constructed and interjointed that one may be folded upon or within the other, a tie-connection for the said sections comprising a plurality of rods and joint members between the outer extremities of said rods and the respective sections, whereby the said rods may be opened out or folded with the said sections, anchor means pivotally connected with the joint member of the base portion, and tackle means pivotally connected with the other joint member.

2. In a folding jack for portable hoists, two triangular frame sections pivotally connected at their wider or basal ends, angle pieces pivotally connected to the apices of said sections, a tie-connection for the said section comprising a plurality of rods which are jointed together and to the said angle-pieces, a tackle-block connected with the angle-



piece of one of said sections, and a depending chain connected with the angle-piece of the other section.

1,109,149. CONSTANT-FLOW METER. GEORGE SCARFE, Nevada City, Cal. Filed Mar. 31, 1914. Serial No. 828,471. (Cl. 61—28.)



1. In a meter, the combination of a cylinder having inlet and outlet openings formed therein, a sleeve turnable on the cylinder having an opening formed therein which is normally adapted to register with the inlet opening in the cylinder, a source of water supply, means controlled by the rise or fall of water in the source of supply for turning the sleeve to increase or decrease the area of the inlet opening, and means for increasing or decreasing the area of the inlet opening in the cylinder independent of the turnable sleeve.

2. In a meter, the combination of a cylinder having inlet and outlet openings formed therein, a sleeve turnable on the cylinder having an opening formed therein which is normally adapted to register with the inlet opening in the cylinder, a source of water supply, and means controlled by the rise or fall of water in the source of supply for turning the sleeve to increase or decrease the area of the inlet opening.

3. In a meter, the combination of a cylinder having inlet and outlet openings formed therein, a sleeve turnable on the cylinder having an opening formed therein which is normally adapted to register with the inlet opening in the cylinder, a source of water supply, an arm secured to the sleeve, and a float on the arm controlled by the rise or fall of water in the source of supply for turning the sleeve to increase or decrease the area of the inlet opening.

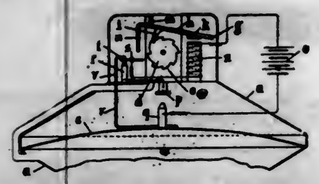
4. In a meter, the combination of a cylinder having inlet and outlet openings formed therein, a sleeve turnable on the cylinder having an opening formed therein which is normally adapted to register with the inlet opening in the cylinder, a source of water supply, means controlled by the rise or fall of water in the source of supply for turning the sleeve to increase or decrease the area of the inlet opening, and means interior of the cylinder for increasing or decreasing the area of the inlet opening.

5. In a meter, the combination of a cylinder having inlet and outlet openings formed therein, a sleeve turnable on the cylinder having an opening formed therein which is normally adapted to register with the inlet opening in the cylinder, a source of water supply, an arm secured to

the sleeve, a float on the arm controlled by the rise or fall of water in the source of supply for turning the sleeve to increase or decrease the area of the inlet opening, and means interior of the cylinder for increasing or decreasing the area of the inlet opening.

[Claims 6 to 10 not printed in the Gazette.]

1,109,130. DEVICE FOR LIGHTING GAS-LAMPS FROM A DISTANCE. LUDWIG SEVERIN, Hagen-Delstern, Germany. Filed Apr. 6, 1914. Serial No. 829,923. (Cl. 67—18.)



1. In apparatus for lighting gas lamps from a distance, the combination with a valve for the gas, an electric circuit including a pair of normally separated contact-pieces, means for closing said contact pieces on a temporary rise in gas pressure, and electromagnetic means, normally actuated by the closing of said contact pieces, for opening or closing said valve, of means, comprising a contact device adapted to be acted upon by said electromagnetic means, for rendering said contact pieces, after closure, inoperative to close the circuit until said contact pieces have again separated a predetermined distance.

2. In apparatus for lighting gas lamps from a distance, the combination with a valve for the gas, an electric circuit including a pair of normally separated contact pieces, means for closing said contact pieces on a temporary rise in gas pressure, and electromagnetic means, normally actuated by the closing of said contact pieces, for opening or closing said valve, of means, comprising a contact device adapted to be acted upon by said electromagnetic means and connected in series with said contact pieces, for rendering said contact pieces, after closure, inoperative to close the circuit until said contact pieces have again separated a predetermined distance.

3. In apparatus for lighting gas lamps from a distance, the combination of an electric circuit with a valve for the gas, a pair of normally separated contact pieces, means for closing said contact pieces on a temporary rise in gas pressure, and electromagnetic means, normally actuated by the closing of said contact pieces, for opening or closing said valve, a contact device adapted to be opened by the movement of said electromagnetic means and connected in series with said contact pieces, and means influenced by reduction of the gas pressure for reclosing said contact device.

4. In apparatus for lighting gas lamps from a distance, the combination of an electric circuit with a valve for the gas, a pair of normally separated contact pieces, means comprising a diaphragm for closing said contact pieces on a temporary rise in gas pressure, and electromagnetic means, normally actuated by the closing of said contact pieces, for opening or closing said valve, of a fixed contact piece and a rocking lever in series with said contact pieces, and means operatively connected to said diaphragm for drawing said lever and contact piece into contact on the diaphragm returning to its normal position, said electromagnetic means after actuation holding said lever away from said contact piece.

1,109,151. PUNCTURE-HEALING LIQUID FOR TIRES. JENS SIMONI, Keyport, N. J., assignor to Harry Clarkson, Flushing, N. Y. Filed Dec. 11, 1913. Serial No. 806,092. (Cl. 134—17.5.)

1. A puncture healing liquid including asbestos, gum and chromic acid.

2. A puncture healing liquid including asbestos, gum arabic, gum tragacanth, and chromic acid.

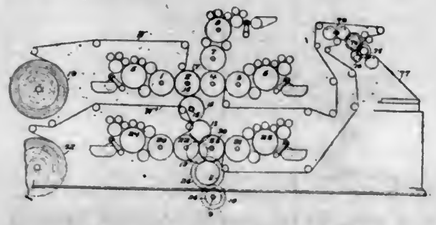
3. A puncture healing liquid including asbestos, gum, chromic acid and water.

4. A puncture healing liquid including asbestos, gum, arabic, gum tragacanth, chromic acid and water.

5. A puncture healing liquid consisting of asbestos fiber, asbestos cement, gum arabic, gum tragacanth, chromic acid and water.

[Claim 6 not printed in the Gazette.]

1,109,152. PRINTING-MACHINE. WILLIAM SPALCKHAVER, New York, N. Y., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed June 26, 1906. Serial No. 323,418. (Cl. 101—124.)



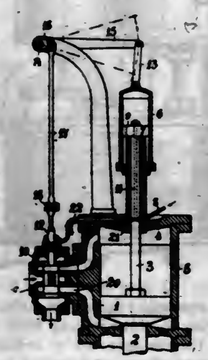
1. In a printing machine, the combination with a plurality of superposed decks of rotary printing and perfecting couples, the cylinders of which are parallel and through which the webs are led in a straight line, of means for driving the top deck at full speed, the top deck being arranged to receive a color applying cylinder, means for driving a lower deck at varying speeds, including half speed, means for leading webs to and through the decks, means coöperating with said lower deck when it is driven at a slower speed than the top deck to bring its product up to the speed of the product of the top deck prior to its association therewith in order to obtain proper register, a collecting cylinder to which the product is led, and a folder to which the collecting cylinder delivers.

2. In a printing machine, the combination with a plurality of superposed decks of rotary printing and perfecting couples the cylinders of which are parallel and through which webs are led in a straight line, of a color applying cylinder forming a part of the top deck, means for driving the top deck at full speed, means for driving a lower deck at varying speeds, means for leading webs to and through the decks, means coöperating with said lower deck when it is driven at a slower speed than the top deck to bring its product up to the speed of the product of the top deck, a collecting cylinder to which the product is led, and a folder to which the collecting cylinder delivers.

3. In a printing machine, the combination with a plurality of superposed decks of rotary printing and perfecting couples the cylinders of which are parallel and through which webs are led in a straight line, the top deck being arranged to receive a color applying cylinder, of means including a train of gearing for driving the top deck at full speed, a shaft for operating the train, change gearing whereby said shaft may drive the lower deck at varying speeds, including half speed, means for leading webs to and through the decks, means coöperating with said lower deck when it is driven at a slower speed than the top deck to bring its product up to the speed of the product of the top deck prior to its association therewith in order to obtain proper register, a collecting cylinder to which the product is led, and a folder to which said cylinder delivers.

4. In a printing machine, the combination with a plurality of superposed decks of rotary printing and perfecting couples the cylinders of which are parallel and through which webs are led in a straight line, of a color applying cylinder forming a part of the top deck, means including a train of gearing for driving the top deck at full speed, a shaft for operating the train, change gearing whereby said shaft may drive said lower deck at varying speeds, means for leading webs to and through the decks, means coöperating with said lower deck when it is driven at a slower speed than the top deck to bring its product up to the speed of the product of the top deck, a collecting cylinder to which the product is led, and a folder to which said cylinder delivers.

1,109,153. RELIEF MECHANISM FOR WATER-MOTORS. GUDMUND SUNDBY, Glöshaugen, near Trondhjem, Norway. Filed Dec. 23, 1912. Serial No. 738,275. (Cl. 138—18.)



1. In a relief mechanism for water motors, the combination with a water admission device having a servo-motor and a relief valve, of means operated by the governor of the motor for actuating the relief valve, and means operated by the valve actuating means for operating the servo-motor.

2. In a relief mechanism for water motors, the combination with a water admission device having a servo-motor and a relief valve, of a power cylinder, a piston therein connected with the relief valve, means operated by the governor of the motor for controlling the admission of a pressure medium to the power cylinder, and means operated by the piston to actuate the servo motor.

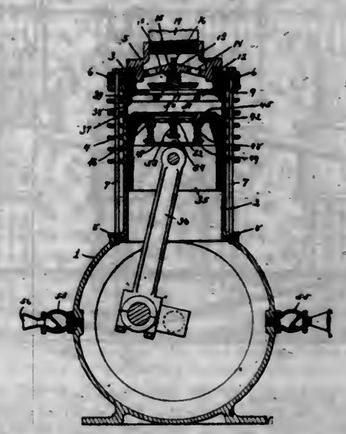
3. In a relief mechanism for water motors, the combination with a water admission device having a servo motor and a relief valve, of a power cylinder, a piston therein connected with the relief valve, a slide valve operated by the governor of the water motor to control the admission of a pressure medium to the power cylinder, and a cataract connected with said piston and servo-motor to control the admission of a pressure medium to the latter.

4. In a relief mechanism for water motors, the combination with a water admission device having a servo motor, and a relief valve, of a power cylinder, a piston therein connected with the relief valve and controlled by liquid pressure, a cataract connected with the piston, a controlling member for the servo motor, operating means connecting the cataract and controlling member, a lever connected with said operating means and the governor of the water motor, and means operated by said lever for regulating the supply of pressure liquid to said power cylinder.

5. In a relief mechanism for water motors, the combination with a water admission device having a servo-motor and a relief valve, of a power cylinder, a piston therein having a rod connected to the relief valve, a valve for controlling the admission of a pressure fluid to the cylinder for reciprocating the piston, a cataract comprising an auxiliary piston on said rod, a cylinder containing the auxiliary piston, a pressure fluid inlet on one side of the latter, an outlet channel from the other side of said auxiliary piston, and means to close said channel simultaneously with the admission of pressure fluid to the power cylinder.

[Claim 6 not printed in the Gazette.]

1,109,154. AIR-COMPRESSOR. JOHN H. THOMAS, Bloomfield, N. J., assignor to Thomas Motive Power Company, a Corporation of New Jersey. Filed Apr. 11, 1913. Serial No. 760,349. (Cl. 230—27.)



1. The combination with a cylinder having a valved discharge in its head, of a piston in said cylinder, an inwardly opening valve having a stem slidably seated in the end of said piston, said valve having a central longitudinal passage through its said stem, and a second inwardly opening valve in said passage.

2. The combination with a cylinder body and a piston therefor, of a cap for said cylinder having a flange seated upon the end of the cylinder and a portion projecting into said cylinder and providing a transverse partition with a valve seat therein, a valve carrier mounted centrally in said cap and adapted to receive a discharge pipe, a valve in said valve carrier normally engaging said valve seat and adapted to open outwardly, and means for securing said cap to the cylinder independent of said valve carrier.

3. The combination with a cylinder and a closed crank-case having an inwardly opening check valve in its wall, of a piston in said cylinder, an inwardly opening valve having a stem slidably seated in the end of said piston, said valve having a central longitudinal passage through its said stem, and a second inwardly opening valve in said passage.

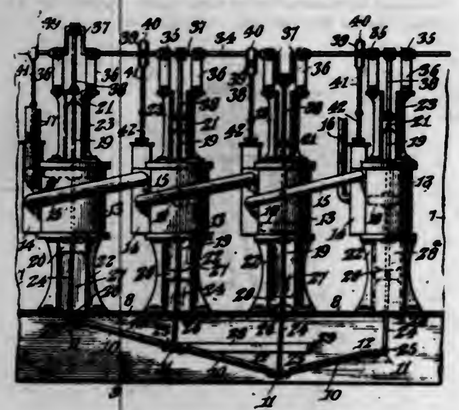
1,109,155. PROPELLING MECHANISM. JOSEPH TURNER, New York, N. Y., assignor, by mesne assignments, to American Vertebrate Propeller Company, New York, N. Y., a Corporation of Arizona. Filed May 14, 1908, Serial No. 432,910. Renewed Nov. 3, 1909. Serial No. 526,106. (Cl. 115—28.)

1. In mechanism of the character set forth, the combination with a propeller comprising a plurality of inextensible inelastic or stiff sections flexibly connected, of means acting upon the individual sections and connected with the same at the joints thereof to produce a sinuous movement of the propeller, said means allowing limited movement of the sections longitudinally.

2. In mechanism of the character set forth, the combination with a propeller comprising a plurality of inextensible inelastic or stiff sections flexibly connected, of means acting upon the respective adjacent sections in timed sequence and connected with the same at the joints thereof to produce a sinuous movement of the propeller, said means allowing limited movement of the sections longitudinally.

3. In mechanism of the character set forth, the combination with a propeller comprising a plurality of inextensible inelastic or stiff sections flexibly connected in tandem relation, of means acting transversely upon adjacent sections at their points of connection to produce a sinuous movement of the propeller, and separate means

from the said means to cause limited longitudinal movement of the propeller sections.

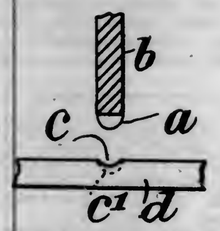


4. In mechanism of the class described, the combination with a propeller comprising a plurality of inextensible inelastic or stiff sections hingedly connected and acting individually upon the water, of pitmen connected to the propeller and swinging longitudinally of the same, and movable means to which the pitmen are pivotally connected.

5. In mechanism of the character set forth, the combination with a flexible propeller capable of sinuous movement, of a plurality of reciprocatory rods, and pitmen connected to the rods and to the propeller and having a swinging movement in a direction longitudinally of the said propeller.

[Claims 6 to 28 not printed in the Gazette.]

1,109,156. MANUFACTURE OF FILES OR RASPS. WILLIAM HENRY WAKFER, South Norwood, England, assignor of one-half to Samuel Peck, Calbourne, England. Filed Dec. 13, 1913. Serial No. 806,497. (Cl. 76—24.)



1. The method of manufacturing files, which comprises forming the cutting edges on a file by sawing kerfs across a blank at the desired angle to the longitudinal axis of the blank.

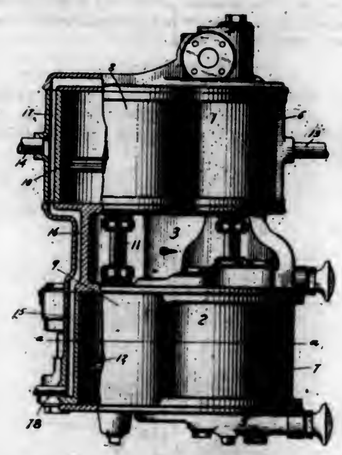
2. The method of manufacturing files, which comprises forming the cutting edges of a file by subjecting a file blank to a sawing operation and increasing the depth of the kerf from one end to the other during such sawing operation.

3. The method of manufacturing files, which comprises forming cutting edges of a file by sawing kerfs in a file blank, said kerfs increasing in width from one end to the other.

4. The method of manufacturing files, which comprises forming cutting edges of a file by sawing in a file blank kerfs increasing both in width and depth from one end to the other.

5. The method of manufacturing files, which comprises forming cutting edges of a file by subjecting a file blank to a reciprocatory sawing operation, for the purpose set forth.

1,109,157. STEAM-PUMP. HENRY H. WESTINGHOUSE, New York, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1912. Serial No. 733,762. (Cl. 230—6.)



1. In a fluid compressor, the combination with a cylinder, a piston therein for compressing fluid, a steam cylinder, and a piston therein operated by steam for actuating said fluid compressing piston, of a cooling jacket surrounding the fluid compressing cylinder and a passage for supplying exhaust steam from said steam cylinder to said jacket.

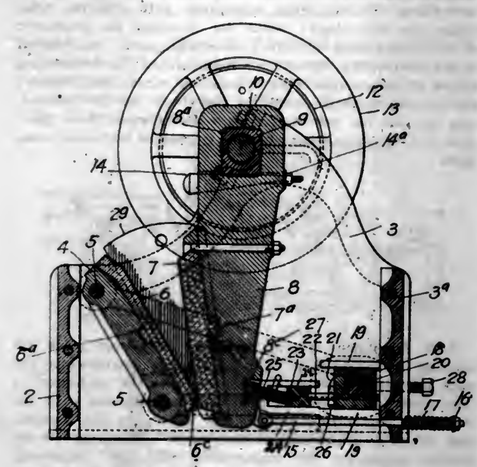
2. In a compound fluid compressor, the combination with high and low pressure steam cylinders and high and low pressure fluid compressing cylinders, of means for cooling the walls of the high pressure fluid compressing cylinder by the flow of exhaust steam from the steam cylinders.

3. In a cross compound fluid compressor, the combination with high and low pressure cylinders containing pistons for compressing fluid, a high pressure steam cylinder containing a piston connected to the low pressure fluid compressing piston, and a low pressure steam cylinder containing a piston connected to the high pressure fluid compressing piston, of a cooling jacket for the high pressure fluid compressing cylinder and means for supplying exhaust steam from the low pressure steam cylinder to said jacket.

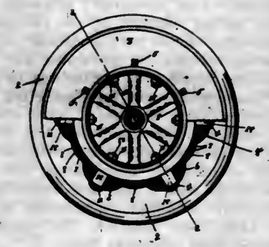
1,109,158. ROCK-CRUSHER. SAMUEL C. ARNOLD, Denver, Colo., assignor to The Denver Quartz Mill and Crusher Company, Denver, Colo. Filed July 18, 1910. Serial No. 572,450. (Cl. 83—53.)

1. In a rock crusher, a frame including parallel side plates provided with opposite slots, fixed and movable jaws between said plates, means for imparting a circular movement to the upper portion of the movable jaw, an abutment having projections slidingly extending through the said slots, a toggle connection between said abutment and the lower portion of the movable jaw, a spring disposed to maintain the latter yieldingly in engagement with the said toggle, and yokes connected with the protruding portions of the said projections and secured at separate points at the upper and lower portions of the frame at its end at which the stationary jaw is located to receive the stress caused by the crushing force in the operation of the machine.

2. In a rock crusher, a frame including parallel side plates provided with opposite slots, fixed and movable jaws between said plates, means for imparting a circular movement to the upper portion of the movable jaw, an abutment having projections slidingly extending through the said slots, a toggle connection between said abutment and the lower portion of the movable jaw, a spring disposed to maintain the latter yieldingly in engagement with the said toggle, yokes embracing the protruding portions of the said projections at opposite sides of the frame and connected at their extremities with the upper and lower ends of the stationary jaw, and adjustment screws extending through apertures in the yokes in engagement with the said projections.



1,109,159. VEHICLE-TIRE. ALBERT BALL, Canton, Ohio. Filed Dec. 13, 1913. Serial No. 806,370. (Cl. 152—37.)



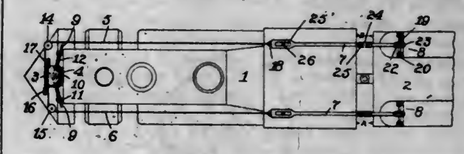
1. A resilient wheel comprising a felly provided with spaced flanges, one of said flanges fixed to the felly and the other flange detachable therefrom, a series of arched springs located around the periphery of the felly and between said flanges, the free ends of said springs adapted to overlap each other and provided with slots, bolts located through the slots and into the felly, a tire provided with a web located between said flanges, said web provided with concaved recesses corresponding substantially with the form of the springs, said springs adapted to normally engage the walls of said recesses and means for drawing said springs out of contact with said recesses.

2. A resilient wheel comprising a felly provided with spaced flanges, one of said flanges fixed to the felly and the other flange detachable therefrom, a series of arched springs located around the periphery of the felly and between said flanges, the free ends of said springs adapted to overlap each other and provided with slots, bolts located through the slots and into the felly, resilient cushions located between the arch in said springs and the felly, a tire provided with a web, said web provided with concaved recesses corresponding substantially with the form of the springs, said springs adapted to normally engage the walls of said recesses and means for drawing said springs out of contact with said recesses.

3. A resilient wheel comprising a felly provided with spaced flanges, one of said flanges fixed to the felly and the other flange detachable therefrom, a series of arched springs located around the periphery of the felly and between said flanges, the free ends of said springs adapted to overlap each other and provided with slots, bolts located through the slots and into the felly, resilient cushions located between the arch of each spring and the felly, a tire provided with a web, said web provided with concaved recesses corresponding substantially with the form of the springs, said springs adapted to normally engage the walls of said recesses, and means for drawing said springs out of contact with said recesses, said means comprising a bolt located through the arch of each spring and through the resilient cushion and felly and provided with a nut upon the inside of the felly.

4. A resilient wheel comprising a felly provided with spaced flanges, one of said flanges fixed to the felly and the other flange detachable therefrom, a series of arched springs located around the periphery of the felly and between said flanges, the free ends of said springs adapted to overlap each other and provided with slots, bolts located through the slots and into the felly, a resilient cushion located between the arch of each spring and the felly, a tire provided with a web adapted to be located between the spaced flanges on the felly, said web provided with concaved recesses corresponding substantially with the form of the springs, said springs adapted to normally engage the walls of said recesses, means for drawing said springs out of contact with said recesses, said means consisting of a belt located through the arch of each spring and through the resilient cushion and felly and provided with a nut upon the inside of the felly, and an enlarged tread portion upon said tire, concentric to and spaced from said spaced flanges.

1,109,160. LOCOMOTIVE-HEADLIGHT CONTROL. CHARLIE MATTHEW BURNS, Maysville, Ga. Filed May 7, 1914. Serial No. 837,035. (Cl. 240—62.)



1. A system of automatic headlight control comprising a pivotally mounted headlight support, flexible connections between said bracket and the tender, and vibration absorbing securing devices on the tender for said connections.

2. A headlight control comprising a pivotally mounted headlight support, operating connections therefor, and vibration absorbing securing means for said connections upon the tender including guideways, a rod slidably held therein, and means for movably connecting said connections upon said rod.

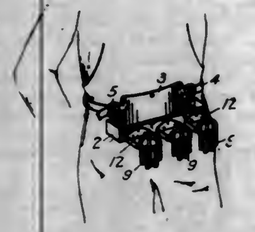
3. A headlight control comprising a pivotally mounted headlight support, operating connections therefor, and vibration absorbing securing means for said connections upon the tender including guideways, a rod slidably held therein, spring centering means for said rod, and means for movably connecting said connections upon said rod.

1,109,161. PAINT-CAN CARRIER. GUSTAF CHINDGREN, Denver, Colo. Filed Feb. 18, 1914. Serial No. 819,572. (Cl. 224—5.)

1. A carrier of the character described comprising a receptacle having means for securing it to the body of a person, and at one of its sides a shield for engagement with said body, and a holder connected at the opposite side of the receptacle by a universal joint whereby it is constantly maintained in an upright position.

2. A carrier of the character described comprising a receptacle having at one of its sides, a shield to engage the body of a person, means attached to said shield for fastening the receptacle on said body, and a holder con-

nected at the opposite side of the receptacle by a universal joint whereby it is constantly maintained in an upright position.



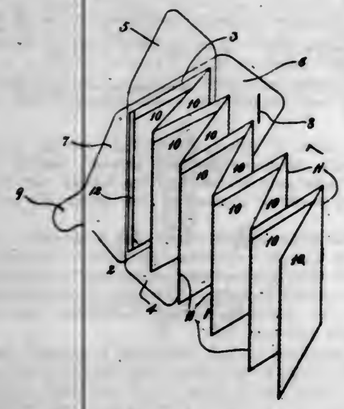
3. A carrier of the character described comprising a member having means for securing it to the body of a person, a suspension member pivotally connected with the first-mentioned member, and a holder pivotally suspended from said suspension-member.

4. A carrier of the character described comprising a member having means for securing it to the body of a person, a bail pivotally connected with said member, and a holder pivotally suspended in said bail.

5. A carrier of the character described comprising a member having means for securing it to the body of a person, a bail pivotally and detachably connected with said member, and a holder pivotally suspended in said bail.

[Claims 6 to 11 not printed in the Gazette.]

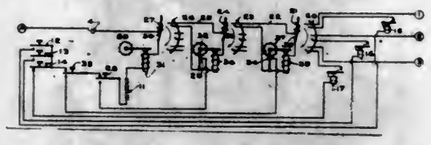
1,109,162. DRINKING-CUP PACKET. WALTER E. CLAUSSEN, Hartford, Conn. Filed June 25, 1913. Serial No. 775,374. (Cl. 206—46.)



A drinking cup packet comprising a cup structure involving a series of cups connected in alternation with each other and an envelop to the body of which the cup structure is connected, the envelop having flaps adapted when closed with the body to completely inclose the cup structure, the cup structure being foldable flatwise within the closed envelop.

1,109,163. TELEPHONE-EXCHANGE SYSTEM. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1912. Serial No. 714,416. (Cl. 179—27.)

1. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines having contacts at the exchange; a line extending connecting device for engagement with the contacts; controlling circuits for governing the association of said connecting device, each controlling circuit having a contact for engagement with the connecting device, the controlling circuits being associated with different telephone line extensions; means for changing the character of the controlling circuits; electro-magnetic mechanism in the controlling circuits for maintaining the connecting device in association with a modified controlling circuit; and electro-magnetic switches individual to the controlling circuits for restoring such circuits when their associate line extensions have become connected with telephone lines.



2. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines having contacts at the exchange; a line extending connecting device for engagement with the contacts; controlling circuits for governing the association of said connecting device, each controlling circuit having a contact for engagement with the connecting device, the controlling circuits being associated with different telephone line extensions; means for changing the character of the controlling circuits; electro-magnetic mechanism in the controlling circuits for maintaining the connecting device in association with a modified controlling circuit; and means individual to the controlling circuits for restoring such circuits when their associate line extensions have become connected with telephone lines.

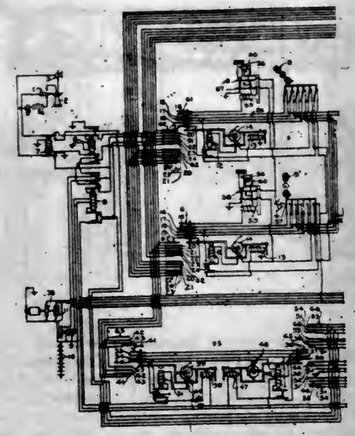
3. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines having contacts at the exchange; a line extending connecting device for engagement with the contacts; controlling circuits for governing the association of said connecting device, each controlling circuit having a contact for engagement with the connecting device, the controlling circuits being associated with different telephone line extensions; means for changing the character of the controlling circuits; electro-magnetic mechanism in the controlling circuits for maintaining the connecting device in association with a modified controlling circuit; and electro-magnetic switching mechanism for restoring such circuits when their associate line extensions have become connected with telephone lines.

4. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines having contacts at the exchange; a line extending connecting device for engagement with the contacts; controlling circuits for governing the association of said connecting device, each controlling circuit having a contact for engagement with the connecting device, the controlling circuits being associated with different telephone line extensions; means for changing the character of the controlling circuits; electro-magnetic mechanism in the controlling circuits for maintaining the connecting device in association with a modified controlling circuit; and means for restoring such circuits when their associate line extensions have become connected with telephone lines.

5. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines having contacts at the exchange; a line extending connecting device for engagement with the contacts; controlling circuits for governing the association of said connecting device, each controlling circuit having a contact for engagement with the connecting device, the controlling circuits being associated with different telephone line extensions; means individual to the controlling circuits for changing the character of the controlling circuits; electro-magnetic mechanism in the controlling circuits for maintaining the connecting device in association with a modified controlling circuit; and means for restoring such circuits when their associate line extensions have become connected with telephone lines.

[Claims 6 to 39 not printed in the Gazette.]

1,109,164. TELEPHONE-EXCHANGE SYSTEM. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1912. Serial No. 714,417. (Cl. 179—27.)



1. A telephone exchange system including lines extending from telephone stations to an exchange; a plurality of link connectors at the exchange for uniting telephone lines; operators' responsive devices; a plurality of selector switches adapted to associate free operators' responsive devices with calling lines, the link connectors having operator controlled means to adapt them to their line joining function independently of the aforesaid selector switches; operator controlled apparatus taking part in establishing connection between calling and called lines and brought into operative association by the selector switches employed to connect operators' responsive devices with calling lines; and means for dissociating the operators' responsive devices from the selector switches that have associated these responsive devices with calling lines and for transferring these responsive devices into association with other selector switches whereby the selector switches which were employed to associate operators' responsive devices with calling lines may be continued in service to enable the operators to further connection between calling and called lines without interfering with the association of the operators' responsive devices with other calling lines.

2. A telephone exchange system including lines extending from telephone stations to an exchange; a plurality of link connectors at the exchange for uniting telephone lines; operators' responsive devices; a plurality of selector switches common to a plurality of lines and adapted to associate free operators' responsive devices with calling lines, the link connectors having operator controlled means to adapt them to their line joining function independently of the aforesaid selector switches; operator controlled apparatus taking part in establishing connection between calling and called lines and brought into operative association by the selector switches employed to connect operators' responsive devices with calling lines; and means for dissociating the operators' responsive devices from the selector switches that have associated these responsive devices with calling lines and for transferring these responsive devices into association with other selector switches whereby the selector switches which were employed to associate operators' responsive devices with calling lines may be continued in service to enable the operators to further connection between calling and called lines without interfering with the association of the operators' responsive devices with other calling lines.

3. A telephone exchange system including lines extending from telephone stations to an exchange; a plurality of link connectors at the exchange for uniting telephone lines; operators' responsive devices; a plurality of selector switches adapted to associate free operators' responsive devices with calling lines, the link connectors having operator controlled means to adapt them to their line joining function independently of the aforesaid selector switches; automatically operating calling line selector switches for connecting the link connectors with calling lines; operator controlled means for setting these line selector switches into operation and associated therewith by the selector switches employed for associating operators' responsive devices with calling lines; and means for transferring the operators' responsive devices from the selector switches that have associated them with calling lines to association with other selector switches.

4. A telephone exchange system including lines extending from telephone stations to an exchange; a plurality of link connectors at the exchange for uniting telephone lines; operators' responsive devices; a plurality of selector switches adapted to associate free operators' responsive devices with calling lines, the link connectors having operator controlled means to adapt them to their line joining function independently of the aforesaid selector switches; automatically operating called line selector switches for connecting the link connectors with called lines; operator controlled means for setting these line selector switches into operation and associated therewith by the selector switches employed for associating operators' responsive devices with calling lines; and means for transferring the operators' responsive devices from the selector switches that have associated them with calling lines to association with other selector switches.

5. A telephone exchange system including lines extending from telephone stations to an exchange; a plurality of link connectors at the exchange for uniting telephone lines; operators' responsive devices; a plurality of selector switches adapted to associate free operators' responsive devices with calling lines, the link connectors having operator controlled means to adapt them to their line joining function independently of the aforesaid selector switches; a source of signaling current; means governed by the selector switches employed for associating operators' responsive devices with calling lines for associating the source of signaling current with called lines; and means for transferring the operators' responsive devices from the selector switches that have associated them with calling lines to association with other selector switches.

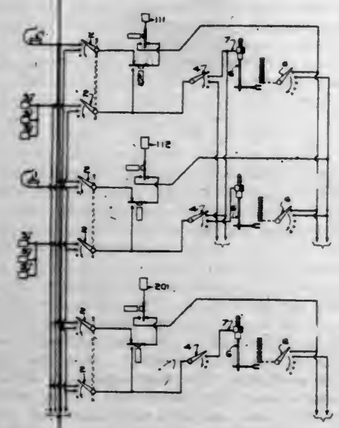
[Claims 6 to 20 not printed in the Gazette.]

1,109,165. TELEPHONE-EXCHANGE SYSTEM. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1912. Serial No. 714,419. (Cl. 179—27.)

1. A telephone exchange system including telephone lines extending from stations to an exchange; link connectors at the exchange for extending calling lines; electromagnetic switching devices for connecting said link connectors with calling lines and including traveling wipers and waiting contacts; testing means jointly governed by the link connectors and electro-magnetic switching devices for enabling operators to determine the busy or idle condition of the link connectors as the electro-magnetic switching devices operate; and operator controlled means for arresting the switching devices when in association with idle link connectors.

2. A telephone exchange system including telephone lines extending from stations to an exchange; link connectors at the exchange for extending calling lines; electromagnetic switching devices for connecting said link connectors with calling lines and including traveling wipers and waiting contacts; testing means jointly governed by the link connectors and electro-magnetic switching devices

for enabling operators to determine the busy or idle condition of the link connectors as the electro-magnetic switching devices operate; operator controlled means for arresting the switching devices when in association with idle link connectors; and operator controlled electro-magnetically operated connector switches for connecting said electro-magnetic switching devices, that are connected with operator appropriated link connectors, with desired lines.



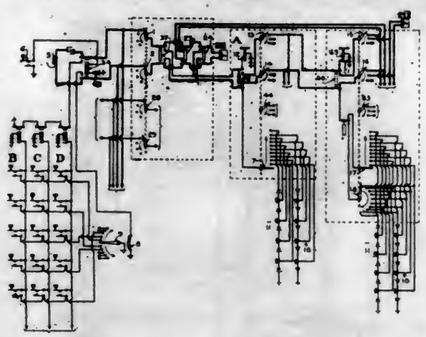
3. A telephone exchange system including telephone lines extending from stations to an exchange; link connectors at the exchange for extending calling lines; electro-magnetic switching devices for connecting said link connectors with calling lines and including traveling wipers and waiting contacts; testing means jointly governed by the link connectors and electro-magnetic switching devices for enabling operators to determine the busy or idle condition of the link connectors as the electro-magnetic switching devices operate; operator controlled means for arresting the switching devices when in association with idle link connectors; operators' responsive devices at different operators' positions; and selecting mechanism for selecting operators' responsive devices that are free for selection.

4. A telephone exchange system including telephone lines extending from stations to an exchange; link connectors at the exchange for extending calling lines; electro-magnetic switching devices for connecting said link connectors with calling lines and including traveling wipers and waiting contacts; testing means jointly governed by the link connectors and electro-magnetic switching devices for enabling operators to determine the busy or idle condition of the link connectors as the electro-magnetic switching devices operate; operator controlled means for arresting the switching devices when in association with idle link connectors; operator controlled electro-magnetically operated connector switches for connecting said electro-magnetic switching devices, that are connected with operator appropriated link connectors, with desired lines; operators' responsive devices at different operators' positions; and selecting mechanism for selecting operators' responsive devices that are free for selection.

5. A telephone exchange system including telephone lines extending from stations to an exchange; link connectors at the exchange for extending calling lines; electro-magnetic switching devices for connecting said link connectors with calling lines and including traveling wipers and waiting contacts; testing means jointly governed by the link connectors and electro-magnetic switching devices for enabling operators to determine the busy or idle condition of the link connectors as the electro-magnetic switching devices operate; operator controlled means for arresting the switching devices when in association with idle link connectors; operators' responsive devices at different operators' positions; and selecting mechanism for selecting operators' responsive devices that are free for selection, the link connectors performing their line joining functions independently of said selecting mechanism that selects operators' responsive devices.

[Claim 6 not printed in the Gazette.]

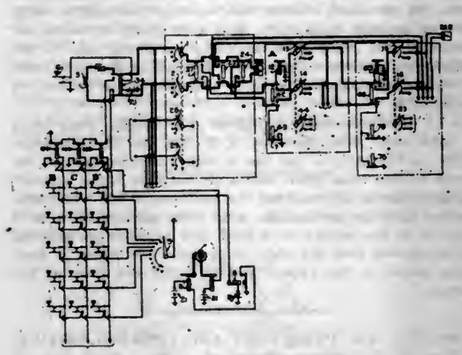
1,109,166. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1912. Serial No. 724,753. (Cl. 179—27.)



1. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines; an electro-magnetic line extending connecting device; controlling circuits for governing the association of said line extending connecting device and individual to the different positions of the switching parts of said line extending connecting device; operator controlled means for partially effecting modification of selected controlling circuits for the purpose of arresting the switching parts of the line extending connecting device in the positions corresponding to the controlling circuits selected for modification; apparatus governed by said controlling circuits for arresting the switching parts of the line extending connecting device and operated by such circuits when modified; and switching means governed by the line extending connecting device and operating jointly with the aforesaid operator controlled means for modifying selected controlling circuits and brought into association with said controlling circuits individually whereby the apparatus for arresting the switching parts of the line extending connecting device is operated to arrest these switching parts in positions corresponding to the modified controlling circuits, there being present a plurality of circuits of different character which are successively modified by the line extending connecting device and an electro-magnet operated to differing extents by the circuits controlled by the line extending connecting device and in turn operating upon the aforesaid line extending connecting device controlled switching means to bring the same individually into association with the aforesaid controlling circuits.

2. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines; an electro-magnetic line extending connecting device; controlling circuits for governing the association of said line extending connecting device and individual to the different positions of the switching parts of said line extending connecting device; operator controlled means for partially effecting modification of selected controlling circuits for the purpose of arresting the switching parts of the line extending connecting device in the positions corresponding to the controlling circuits selected for modification; apparatus governed by said controlling circuits for arresting the switching parts of the line extending connecting device and operated by such circuits when modified; and means governed by the line extending connecting device and brought into association with said controlling circuits individually whereby the apparatus for arresting the switching parts of the line extending connecting device is operated to arrest these switching parts in positions corresponding to the modified controlling circuits, there being present a plurality of circuits of different character which are successively modified by the line extending connecting device and an electro-magnet operated to differing extents by the circuits controlled by the line extending connecting device and in turn operating upon the aforesaid line extending connecting device controlled means to bring the same individually into association with the aforesaid controlling circuits.

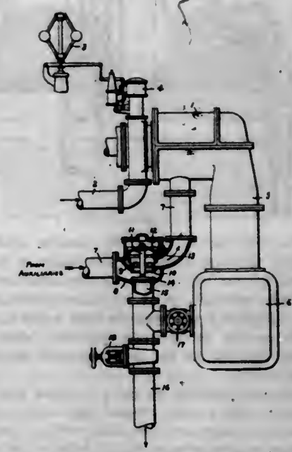
1,109,167. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1912. Serial No. 724,754. (Cl. 179—27.)



1. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines; an electro-magnetic line extending connecting device; controlling circuits for governing the association of said line extending connecting device and individual to the different positions of the switching parts of said line extending connecting device; operator controlled means for partially effecting modification of selected controlling circuits for the purpose of arresting the switching parts of the line extending connecting device in the positions corresponding to the controlling circuits selected for modification; apparatus governed by said controlling circuits for arresting the switching parts of the line extending connecting device and operated by such circuits when modified; and means governed by the line extending connecting device and brought into association with said controlling circuits individually whereby the apparatus for arresting the switching parts of the line extending connecting device is operated to arrest these switching parts in positions corresponding to the modified controlling circuits, there being present electro-magnetic mechanism for operating the means governed by the line extending connecting device step by step, a circuit for this mechanism and means governed by the line extending connecting device for interrupting this circuit to occasion the step by step operation of the electro-magnetic mechanism.

2. A telephone system including telephone lines extending from stations to an exchange; extensions for such telephone lines; an electro-magnetic line extending connecting device; controlling circuits for governing the association of said line extending connecting device and individual to the different positions of the switching parts of said line extending connecting device; operator controlled means for partially effecting modification of selected controlling circuits for the purpose of arresting the switching parts of the line extending connecting device in the positions corresponding to the controlling circuits selected for modification; apparatus governed by said controlling circuits for arresting the switching parts of the line extending connecting device and operated by such circuits when modified; and switching means governed by the line extending connecting device and operating jointly with the aforesaid operator controlled means for modifying selected controlling circuits and brought into association with said controlling circuits individually whereby the apparatus for arresting the switching parts of the line extending connecting device is operated to arrest these switching parts in positions corresponding to the modified controlling circuits, there being present electro-magnetic mechanism for operating the switching means governed by the line extending connecting device step by step, a circuit for this mechanism and means governed by the line extending connecting device for interrupting this circuit to occasion the step by step operation of the electro-magnetic mechanism.

1,109,168. POWER SYSTEM. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 21, 1913. Serial No. 780,374. (Cl. 121—118.)



1. In a power system, the combination of a main engine, conduit means for supplying exhaust fluid to an intermediate stage or region of the engine and to another region, a valve mechanism which regulates the flow through the conduit means, and a device responsive to the pressure in said stage that controls the valve mechanism to divert the supply from it to the other region when said pressure falls below a predetermined value.

2. In a power system the combination of a main engine, a conduit for supplying exhaust fluid to an intermediate stage or region of the engine, a valve in the conduit for regulating the supply, a device responsive to the pressure in the intermediate stage or region for controlling the valve, a second conduit leading from the first, a valve controlling the second conduit, and means for causing the second valve to open when the first valve is moved toward its closed position to regulate the supply of exhaust fluid passing to each conduit.

3. In a power system the combination of a main engine, a conduit for supplying exhaust fluid to an intermediate stage or region of the engine, a throttling valve in the conduit for regulating the supply, and means actuated by pressures at opposite sides of the valve for controlling said valve.

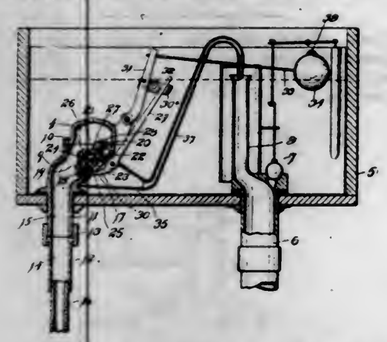
4. In a power system the combination of a main engine, a conduit for conveying exhaust fluid to an intermediate stage or region of the main engine, a valve in the conduit for regulating the supply, a movable abutment subjected to the pressures in the conduit on opposite sides of the valve, a second conduit leading from the first, a valve controlling the second conduit, and means connecting the abutment and the valves.

5. In a power system the combination of a main engine, a conduit for conveying exhaust fluid to an intermediate stage or region of the main engine, a second conduit leading from the first, and valve mechanism for controlling the flow through the conduits comprising a casing having ports through which fluid flows to the engine and

an outlet leading to the second conduit, valves controlling the ports and the outlet, and a movable piston connected to the valves, said piston being subjected on one side to the pressure within the casing and on the other side to the pressure in the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,109,169. VALVE. GEORGE J. LE MAY, Unionville, Conn. Filed May 18, 1912. Serial No. 698,182. (Cl. 137—104.)



1. A valve body having an inlet opening and an outlet opening and a valve seat around the latter, a valve pivotally mounted within the body to control said outlet opening, a pivotally mounted valve lever to operate said valve, a pivotally mounted float lever having a float, and a connection between the valve lever and float lever, said connection being located on the same side of the fulcrum of each of said levers.

2. A valve body having an inlet opening and an outlet opening with a valve seat around the latter, a pivotally mounted valve located within the body to control said outlet opening, a pivotally mounted valve lever to operate said valve, a pivotally mounted float lever, said levers extending in the same general direction and one along side of the other, and a connection between said levers.

3. A valve body having an inlet opening and an outlet opening with a valve seat around the latter, a valve pivotally mounted within the valve body to control said outlet opening, a pivotally mounted valve lever to operate said valve, a pivotally mounted float lever having a float attached thereto, said levers extending in the same general direction and one along side of the other, and an arm loosely connecting said levers.

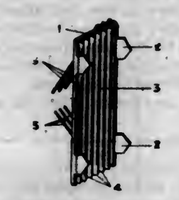
4. A valve body having an inlet opening and an outlet opening with a valve seat around the latter, a valve pivotally mounted within the body to control said outlet opening, a pivotally mounted valve lever located outside of the body with one end in engagement with but disconnnected from said valve, a pivotally mounted float lever having a float attached thereto, said levers extending in the same general direction and one along side of the other, and an arm loosely connecting said levers.

5. A valve body having an inlet opening, and an outlet opening through the wall thereof, a valve pivotally mounted within the body to control the flow of liquid through the outlet opening, a valve lever pivotally mounted on the valve body and in engagement with but disconnected from the valve, a float lever pivotally connected to the body, and an arm loosely connecting the valve and float levers.

[Claims 6 to 9 not printed in the Gazette.]

1,109,170. FILE FOR DOCUMENTS, PAPERS, AND THE LIKE. HANS LOCHER, Genoa, Italy. Filed May 1, 1913. Serial No. 764,945. (Cl. 129—1.)

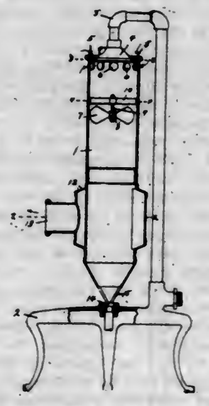
1. A file for documents, papers and the like, comprising a rigid back piece provided with lugs for fastening the same on the back of the file, a rigid corrugated strip secured to said back piece, and a plurality of wires inserted in the grooves of the strip, the portions of the wires projecting from the ends of the strip being adapted to be bent over on to the papers to be held, to secure the papers in position.



2. A file for documents, papers and the like, comprising a rigid back piece provided with lugs for fastening the same on the back of the file, a rigid corrugated strip secured to said back piece, and a plurality of wires inserted in the grooves of the strip on either side of the latter, the portions of the wires projecting from the ends of the strip being adapted to be bent over on to the papers to be held.

3. A file for documents, papers and the like, comprising a rigid back piece provided with lugs for fastening the same on the back of the file, a rigid corrugated strip secured to said back piece, and a plurality of wires inserted in the grooves of the strip, the portions of the wires projecting from the ends of the strip being adapted to be bent over on to the papers to be held, and metal tubes adapted to be applied over the ends of the wires in order to keep them down on the papers and to cover the ends of the wires.

1,109,171. AIR PURIFYING AND COOLING DEVICE. CARL F. LUNDEBERG, Hartford, Conn. Filed Apr. 3, 1913. Serial No. 758,592. (Cl. 98—43.)



1. In an air purifying and cooling device, a cylinder having a plurality of inlets for said air at the top thereof, a sprinkler adjacent to said inlets supplying water under pressure, a fan in the path of said water rotated thereby to mix said air and water in the form of a spray having a whirling action and means for separating the air from said water.

2. In an air purifying and cooling device, a cylinder having an air inlet at the top thereof, a sprinkler supplying water under pressure to be mixed with said air within said cylinder, means for separating the air from said water, said means consisting of a sleeve forming an air chamber between itself and said cylinder, said sleeve having an air outlet at one side thereof out of alinement of an opening on the side of said cylinder whereby air may escape through said opening around said cylinder to the air outlet in said sleeve.

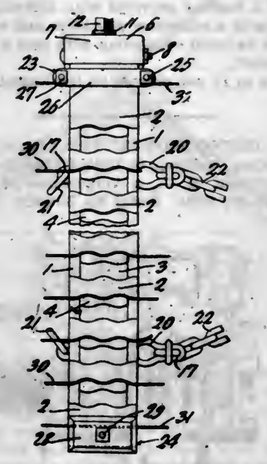
3. In an air purifying and cooling device, a cylinder having an air inlet, a sprinkler supplying water under pressure adjacent thereto, means for mixing said air and water in a whirling action, means of separating said air and water, and an outlet for said water having arranged adjacent thereto means for checking the whirling action of said water whereby said water cannot rise and circulate into the air outlet thereabove substantially as described.

4. In an air purifying and cooling device a cylinder having an air inlet, a sprinkler supplying water under pressure adjacent thereto, means for separating said air and water consisting of an opening on the side of said cylinder and a sleeve providing an air chamber encircling said cylinder and having an air outlet therein on the opposite side of said cylinder from said opening therein.

5. In an air purifying and cooling device a cylinder having a plurality of air inlets at the top thereof, a sprinkler supplying water under pressure adjacent to said inlets; said water from said sprinkler being in the form of jets traveling substantially parallel to each other and parallel to the sides of said cylinder; said jets of water operating a fan, without other motive power, adapted in its revolutions to crush succeeding jets of water, thereby mixing said water and said air, and means for separating said air and said water, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,172. FENCE-CLAMP. MILTON MCCARTER, Colfax, Ind. Filed Mar. 23, 1914. Serial No. 826,692. (Cl. 30—53.)



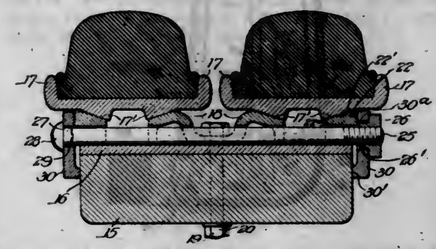
1. In a clamping device, a channel-shaped bar having its back cut away to provide spaced webs, a second channel-shaped bar fitted within the aforesaid bar with its back resting against the said webs, the back of the second bar being provided with transverse ribs between and coöperable with the said webs, means carried by the flanges of the first bar and engaging the flanges of the second bar to hold the second bar slidably within the first bar, and actuating means connecting certain ends of the bars for sliding the second bar.

2. In a clamping device, a frame having a series of jaws, a slide carried by the frame and having a series of jaws coöperable with the aforesaid jaws, means connecting the frame and slide for actuating the latter, and an adjustable clamp mounted upon one end portion of the frame, the adjustable clamp including a U-shaped bolt straddling the frame, coöperable clamp bars mounted upon the end portions of the said bolt, and nuts threaded upon the ends of the bolt.

3. In a clamping device, a frame having a series of jaws, a slide mounted within the frame and having jaws cooperable with the aforesaid jaws, a cap mounted upon one end of the frame, a screw journaled through the cap and having means for engaging the cap to prevent the longitudinal movement of the screw, and a nut portion carried by one end of the slide and threadedly receiving the said screw.

4. In a clamping device, a frame having transverse slots, clamping means carried by the frame, open links fitting through the said slots, each link having a bulged portion adjacent one end for the passage of chain links therethrough to engage within the said end, and retaining means carried by the other ends of the links and seatable against the frame.

1,109,173. DEMOUNTABLE VEHICLE-RIM. CARMON A. MYERS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed May 31, 1912. Serial No. 700,694. (Cl. 152—7.)



1. In a demountable rim construction of the character described, the combination of a pair of tire rims, a felly having a band thereon, a center ring on said felly band between said rims, said center ring having a pair of oppositely disposed abutment surfaces, a pair of wedging rings engaging said tire rims on their outer sides, a pair of side rings, each of which engages one of said wedging rings and said felly, a plurality of bolts passing through both of said side rings, and nuts for said bolts whereby, on tightening said nuts, said tire rims will be simultaneously drawn toward each other and against the abutment surfaces of said center ring, thereby securing said tire rims in position, substantially as described.

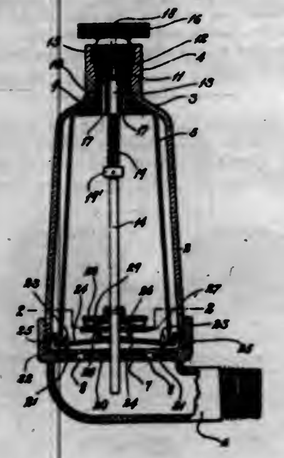
2. In a demountable rim construction of the character described, the combination of a pair of tire rims, a felly having a band thereon, a center ring on said felly band between said rims, said center ring having a pair of oppositely and obliquely disposed abutment surfaces, means for fastening said center ring to said felly band, a pair of wedging rings engaging said tire rims on their outer sides, a pair of side rings, each of which engages one of said wedging rings and said felly, a plurality of bolts passing through both of said side rings, said wedging rings and said center ring, and nuts for said bolts, whereby, on tightening said nuts, said tire rims will be simultaneously drawn toward each other and against the obliquely disposed surfaces of said center ring, thereby securing said tire rims in position, substantially as described.

1,109,174. AIR-VALVE. CARL H. PETERSON, Hartford, Conn. Filed Feb. 21, 1913. Serial No. 749,799. (Cl. 237—19.)

1. A device of the class described, comprising a casing provided with a part having a port opening to atmosphere, a valve coöperating with said port, a heat-expansible shell in said casing, a pair of crossed levers the outer portions of which are operatable by said shell on the expansion thereof, said levers being supported for rocking movement between their ends, and means engageable by the inner portions of said levers, for closing the valve.

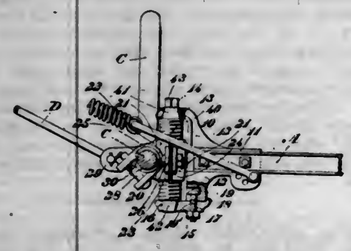
2. A device of the class described, comprising a casing provided with a part having a port opening to atmosphere, a valve coöperating with said port, a heat-expansible shell in said casing, a pair of levers the inner portion of one of which has a fork, the inner portion of the other lever extending between the branches of said fork, the outer portions of said levers being operatable by said shell on

the expansion thereof, said levers being supported for rocking motion between their ends, and means engageable by the inner portions of said levers, for closing the valve on the expansion of said shell.



3. A device of the class described, comprising a casing provided with a part having a port opening to atmosphere, a valve in said casing, for controlling said port, spring means acting against the valve and tending constantly to maintain the same open, a heat expansible shell fastened in said casing, and mechanism including spring means, for yieldingly transferring the motion of the free portion of said shell to said valve in a direction to close the latter, on the expansion of said free portion, said last mentioned spring means being of greater tension than said first mentioned spring means and both said spring means being inclosed by the casing.

1,109,175. CULTIVATOR GANG CONNECTION. SPENCER HERMANUS PHELPS, Evansville, Ind., assignor to Blount Plow Works, Evansville, Ind., a Corporation of Indiana. Filed Apr. 23, 1913. Serial No. 763,026. (Cl. 97—7.)



1. A cultivator coupling comprising a vertical sleeve having an interior screwthread and provided with attaching means for a swiveled connection with a cultivator frame, an elongated vertically movable rotary screwshaft engaging said sleeve and adjustable up or down therein by rotation in either direction respectively, and a bracket provided with attaching means for connection with a cultivator plowbeam and with attaching means for a swiveled connection with said vertically movable screwshaft.

2. A cultivator coupling comprising a vertical sleeve having an interior screwthread and provided with attaching means for a swiveled connection with a cultivator frame, an elongated vertically movable rotary screwshaft engaging said sleeve and adjustable up or down therein by rotation in either direction respectively and provided with rotation means, and a bracket provided with attaching means for connection with a cultivator plowbeam and with attaching means for a swiveled connection with said vertically movable screwshaft.

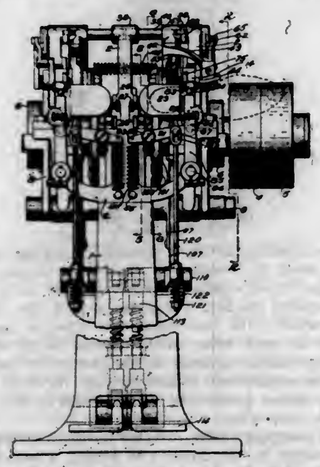
3. A cultivator coupling comprising a vertical sleeve having an interior screwthread and provided with attaching means for connection with a cultivator frame, a bracket provided with attaching means for connection with a cultivator plowbeam and with journal bearings disposed one above the other, an elongated vertically movable rotary screwshaft engaging said sleeve and adjustable up or down therein by rotation in either direction respectively and provided with end journals engaging said bearings.

4. A cultivator coupling comprising a vertical sleeve having an interior screwthread and provided with attaching means for connection with a cultivator frame, a bracket provided with attaching means for connection with a cultivator plowbeam and with journal bearings disposed one above the other, an elongated vertically movable rotary screwshaft engaging said sleeve and adjustable up or down therein by rotation in either direction respectively and provided with end journals engaging said bearings and with rotation means.

5. A cultivator coupling comprising a vertical split clamping sleeve having tightening means, an interior screwthread and attaching means for a swiveled connection with a cultivator frame, an elongated vertically movable rotary screwshaft engaging said sleeve and adjustable up or down therein by rotation in either direction respectively, and a bracket provided with attaching means for connection with a cultivator plowbeam and with attaching means for a swiveled connection with said vertically movable screwshaft.

[Claims 6 to 11 not printed in the Gazette.]

1,109,176. CONNECTION-CUTTER. THOMAS G. PLANT, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 14, 1909. Serial No. 501,920. (Cl. 12—85.)



1. In a machine of the character described, the combination of a knife for cutting the edge of a heel breast, a knife for cutting the edge of the shank in front of the heel breast, and means for causing said knives to act successively.

2. In a machine of the character described, the combination of a heel rest for supporting the tread surface of a heel, a knife for cutting the edge of a heel breast, a knife for cutting the edge of the shank in front of the heel breast, and means for causing said knives to act successively.

3. In a machine of the character described, the combination of a heel breast gage, a knife for cutting the edge

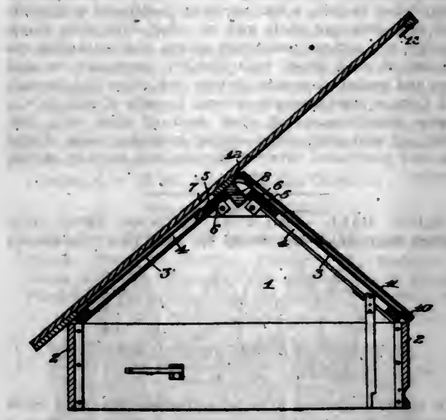
of a heel breast, a knife for cutting the edge of the shank in front of the heel breast, and means for causing said knives to act successively.

4. In a machine of the character described, the combination of a heel breast gage, a knife for cutting the edge of a heel breast, a knife for cutting the edge of the shank in front of the heel breast, means for causing said knives to act successively, and means for moving the breast gage away from the heel druing the action of the heel edge knife.

5. In a connection cutter, the combination of a heel rest for supporting the tread surface of the heel, a heel breast gage, said heel rest and breast gage acting to position the heel for treatment, and a cutter for acting on the edge of the shank in front of the heel breast.

[Claims 6 to 31 not printed in the Gazette.]

1,109,177. COOP. ISRAEL PUTNAM, Elmira, N. Y., assignor of one-half to Florence M. Putnam and one-half to Charles L. Hart, Elmira, N. Y. Filed Nov. 8, 1911. Serial No. 659,194. (Cl. 119—19.)

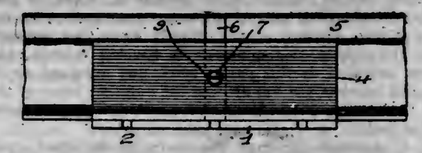


1. In a coop, the combination with a pair of peaked end walls, of the roof pivoted at an intermediate point to the apexes of the walls to alternately coöperate with opposite sides of the coop and cover pivoted to the roof at a point adjacent to the apex of the walls to lie on one side of the pivot of the roof and adapted to cover that side of the coop by spanning the end walls substantially in the plane of their upper edges when the roof is tilted to cover the other side, said cover being foldable against the underside of the roof.

2. The combination with a coop having open slanting sides, of a flat roof pivoted at an intermediate point to tilt on an axis arranged substantially at the intersection of said sides to alternately coöperate with each and a cover pivoted to the roof at one side of its axis but adjacent thereto and adapted to cover that side of the coop when the roof is in coöperation with the other side by spanning the end walls substantially in the plane of their upper edges.

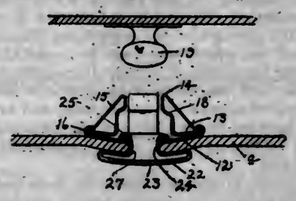
1,109,178. RAIL-JOINT. WILLIAM RAROHA, Philadelphia, Pa., assignor of one-half to Domonkos Raroha, Hinsdale, Mass. Filed Nov. 12, 1913. Serial No. 800,625. (Cl. 239—3.)

A rail chair comprising a tie plate having a base portion adapted to be secured to a tie, splice bars formed integral with the base portion and adapted to brace the sides of rails and having a portion engaging the underface of the tread of a rail, a detachable rail section arranged between said splice bars upon said tie plate and serving functionally as a spacer block, said rail being disposed in said chair with a base engaging the inner face thereof, and a screw extending through one of said splice bars and



tapped into said rail section and the other of said splice bars for detachably holding said rail section in position.

1,109,179. SEPARABLE FASTENER. LUES REITER and HARRY FULFORD, Providence, R. I. Filed July 11, 1913. Serial No. 778,482. (Cl. 24—216.)

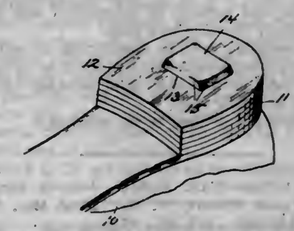


1. A socket member consisting of a single sheet of material bent upon itself to form a base comprising inner and outer plates, the inner edge of said inner plate having a plurality of integral spring fingers bent downwardly with their ends resting upon the outer edge of said inner plate, the periphery of said base being folded upon the ends of said fingers to clamp them in position.

2. A socket member consisting of a single sheet of material bent upon itself to form a base comprising inner and outer plates, the inner edge of said inner plate having a plurality of integral spring fingers bent downwardly with their ends resting upon the outer edge of said inner plate, said tongues being offset between the bend therein and said inner plate to form an enlarged socket, and the periphery of said base being folded upon the ends of said fingers to clamp them in position.

3. In a separable fastener, a socket member consisting of a single sheet of material bent upon itself to form a base comprising inner and outer plates, said outer plate having a central opening, the inner edge of said inner plate having a plurality of spring tongues bent downwardly and outwardly with their ends resting upon the outer edge of said inner plate, the periphery of said base being bent upon the ends of said fingers to clamp them in position, and means pasing through the opening in said outer plate and engaging the periphery thereof for securing said socket upon a fabric.

1,109,180. PNEUMATIC PLUG FOR HEELS. BENJAMIN ROSENBERG, New York, N. Y. Filed Jan. 19, 1914. Serial No. 813,119. (Cl. 36—59.)



1. A pneumatic plug of the character described, consisting of an elastic chambered body arranged to be disposed through an opening provided in the top-lift of the heel of a shoe so as to protrude a distance beyond the under-

side of the top-lift for contacting with the surface upon which the wearer of the shoe may be walking, said elastic body having tapered outer peripheral edges to prevent the protruding part of the body from overlapping the edge of the opening of the top-lift when the pressure from the weight of the person is directed thereon, and means provided on the elastic body, and arranged to be disposed between the top-lift and the adjacent layer of the heel for holding the body against accidental displacement to the heel.

2. A pneumatic plug of the character described, comprising an elastic chambered body arranged to be disposed through an opening provided in the top-lift of the heel of a shoe so as to protrude a distance beyond the underside of the top-lift for contacting with the surface upon which the wearer of the shoe may be walking, said elastic body having tapered outer peripheral edges to prevent the protruding part of the body from overlapping the edge of the opening of the top-lift when the pressure from the weight of the person is directed thereon, and the wall of the chamber of the body being disposed on an incline so that the elastic body may be forced through the opening of the top-lift to fit tightly therein without materially reducing the dimension of the chamber in the body, and means provided upon the elastic body, and arranged to be disposed between the top-lift and the adjacent layer of the heel for holding the body against accidental displacement to the heel.

3. A pneumatic plug of the character described, consisting of a substantially rectangular elastic chambered body arranged to be disposed through an opening provided in the top-lift of the heel of a shoe so as to protrude a distance beyond the underside of the top-lift for contacting with the surface upon which the wearer of the shoe may be walking, and having means arranged to be disposed between the top-lift and the adjacent layer of the heel for holding the body against accidental displacement to the heel, said elastic body being formed with an outer tapered peripheral edge to prevent the protruding part of the body from overlapping the edge of the opening of the top-lift when the pressure from the weight of the person is directed thereon.

1,109,181. ELECTROGALVANIZING SOLUTION. GUIDO SACERDOTE, New York, N. Y., assignor to The Metal Treating & Equipment Co., Inc., New York, N. Y. Filed July 21, 1909. Serial No. 508,822. (Cl. 204—18.)

1. An electroplating solution comprising, in water solution, a salt of the metal to be deposited, together with salts of iron, aluminum and manganese with acetic and sulfuric acids.

2. An electroplating solution comprising, in water solution, a salt of the metal to be deposited, together with salts of iron, aluminum and manganese with sulfuric acid and an organic acid.

3. An electroplating solution comprising, in water solution, a salt of the metal to be deposited, together with salts of iron and aluminum with sulfuric acid and an organic acid, said solution being substantially free of alkali salts.

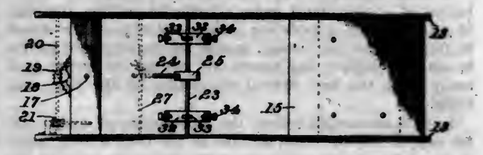
4. An electroplating solution comprising, in water solution, a salt of the metal to be deposited, together with a sulfate of iron and acetate of aluminum, said solution being substantially fre of alkali salts.

5. An electroplating solution comprising, in water solution, salts of iron, aluminum and the metal to be deposited with sulfuric and acetic acids, said solution being substantially free of alkali salts.

[Claims 6 to 9 not printed in the Gazette.]

1,109,182. AUTOMOBILE SLED. JOSEPH SADUS and WALENTY SADUS, Filbert, W. Va. Filed Mar. 7, 1914. Serial No. 823,071. (Cl. 21—47.)

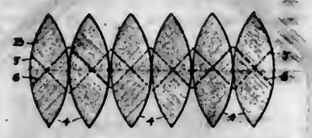
1. In a device of the class described, a driven shaft, disks secured thereto adjacent the ends of the shaft, each having radial bores, rims positioned normally concentric with said disks, each provided with slots extending therethrough, rods slidably-mounted in the bores of each disk and projecting through the slots of the rims, coil-springs encircling the rods between the rims and disks, and confining means carried by the rods for said springs.



2. In a device of the class described, a driven shaft, a disk secured thereto and provided with radial bores, a rim normally concentric with the disk and provided with slots therethrough, rods slidably-mounted in the bores of said disk and projecting through the slots of said rim, said rods forming a support for the rim and said slots permitting the rim to have limited rotary movement independent of the disk and shaft, and means for holding the rim in spaced relation with respect to the disk.

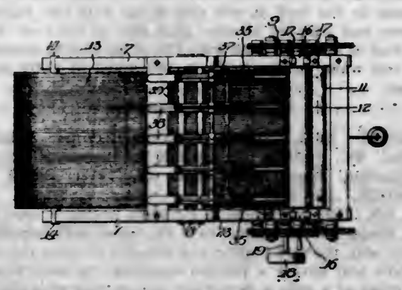
3. A device of the class described comprising a driven shaft, a disk concentrically keyed thereto and having radial bores therein, a rim normally positioned concentric with said disk and shaft and provided with slots therethrough, coil springs positioned within and contacting the bottoms of said bores, rods slidably positioned in said bores and seated upon said springs and projecting through said slots, a transverse pin secured to each of said rods, a washer slidably-mounted upon each of said rods, outwardly of said pins, and a spring encircling each of said rods and positioned between the pin and washer carried thereby.

1,109,183. BALL. PHILIP H. SCHNEIDER, Akron, Ohio. Filed Sept. 27, 1909. Serial No. 519,712. (Cl. 46—4.)



In the manufacture of balls and other objects, a cover consisting of a plurality of uniform sections cut from a woven fabric into elliptical shape at an inclination approximately forty-five degrees to the warp and woof thereof and sewed together along their edges, the alternate sections being arranged with their respective warp threads at reverse inclinations latitudinally of the ball and alternately inverted as to their sides, whereby the same angular relation is sustained between like woof threads as between like warp threads, as shown and described.

1,109,184. MACHINE FOR MAKING SURGICAL BANDAGES. OTTO C. SCHULZ, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Sept. 28, 1912. Serial No. 722,796. (Cl. 164—65.)



1. In a machine for making surgical bandages, the combination of mechanism for feeding a strip of fabric longitudinally through the machine, means for separating longitudinal threads of the fabric, and means for weakening the transverse threads between said separated longitudinal threads.

2. In a machine for making surgical bandages, the combination of mechanism for feeding a woven fabric through the machine, means for displacing warp threads of the fabric to compact said warp threads adjacent a warpless space, and means for weakening the filling threads extending across said warpless space.

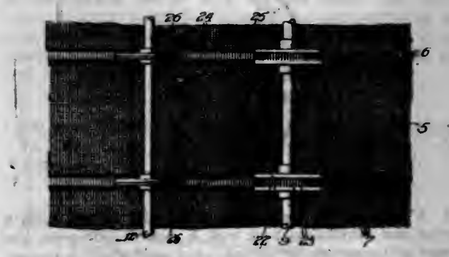
3. In a machine for making surgical bandages, the combination of mechanism for feeding a woven fabric through the machine, and means for displacing warp threads from their original position in the fabric, said means comprising a plurality of separators and mechanism for projecting said separators through the plane of the fabric.

4. In a machine for making surgical bandages, the combination of a warp separating device, comprising a plurality of separators and means for projecting said separators through and withdrawing them from the fabric, and means for holding the fabric in coöperative relation with the separating device.

5. In a machine for making surgical bandages, the combination of a plurality of devices for separating warp threads of a woven fabric, said devices each comprising a radially slotted wheel, a tapered separator slidably disposed in each slot and mechanism for projecting the separators in succession beyond the perimeter of the wheel and through the fabric, and means for retaining the fabric in coöperative relation with said devices, said means comprising a wheel for each separator wheel provided with radial slots adapted to receive the ends of the separators projected through the fabric.

[Claims 6 to 12 not printed in the Gazette.]

1,109,185. METHOD OF MAKING SURGICAL BANDAGES. OTTO C. SCHULZ, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Sept. 28, 1912. Serial No. 722,797. (Cl. 164—65.)



1. The method of making surgical bandages which consists in positioning the longitudinal threads adjacent the edges of a strip of fabric closer together than the intermediate longitudinal threads and terminating the transverse threads beyond the longitudinal threads to provide free transverse thread ends projecting at the edges of the bandage.

2. The method of making surgical bandages which consists in manipulating the warp threads of a woven fabric to compact said threads adjacent the edges of a woven strip and terminating the weft threads at a distance from the warp threads to leave free ends projecting at the edges of the bandage.

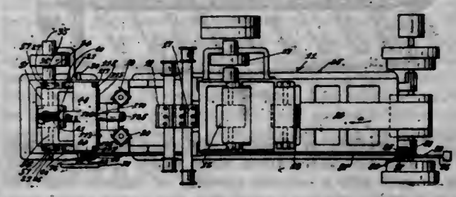
3. The method of making surgical bandages which consists in displacing the warp threads at intervals across a woven fabric to compact said displaced threads at each side of warpless spaces and dividing the weft threads between the compacted warps to produce a plurality of bandages having free weft ends projecting from the edges thereof.

4. The method of making surgical bandages which consists in separating adjacent warp threads of a woven fabric to produce a longitudinally extending warpless portion bounded on each side by a portion in which the warp threads are compacted and severing the weft threads disposed across said warpless portion.

5. The method of making surgical bandages which consists in displacing warp threads of a woven fabric in opposite directions from a median line and severing the weft threads between the displaced warp threads.

[Claim 6 not printed in the Gazette.]

1,109,186. FEEDING MECHANISM FOR WOODWORKING MACHINERY. PETER A. SOLEM, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Dec. 2, 1912. Serial No. 734,518. (Cl. 144—246.)



1. In a wood-working machine, the combination, with a wood-cutting agency, of a feed-roll at the feed-out end of the machine, means normally causing retraction of said feed-roll out of range of the stock passing through the machine, and means at the feed-in end of the machine operable to counteract said last-named means.

2. In a wood-working machine, the combination, with a wood-cutting agency, of a feed-roll frame at the feed-out end of the machine, a feed-out roll thereon, means normally causing elevation of said frame for positioning said feed-out roll out of operative contact with the stock passing through the machine, and means at the feed-in end of the machine operable to counteract said last-named means and thereby causing operative contact of said feed-out roll with said stock.

3. In a wood-working machine, the combination, with a wood-cutting agency, of a feed-out roll and a pneumatic head at the feed-out end of said machine, said pneumatic head in advance of said feed-out roll, means operable to counteract causing retraction of said feed-out roll and pneumatic head in a direction from the plane of the stock passing through the machine, and means at the feed-in end of the machine operable to counteract said last-named means.

4. In a wood-working machine, the combination, with a wood-cutting agency, of a feed-roll frame at the feed-out end of the machine, means for adjusting said feed-roll frame up and down, a feed-out roll and a pneumatic head located on and movable with said feed-roll frame, said pneumatic head located in advance of said feed-out roll, means normally raising said feed-roll frame into a normal raised position whereby said feed-out roll and pneumatic head are moved into retracted positions with relation to the stock passing through the machine, and means under control of the operator operable to counteract said last-named means.

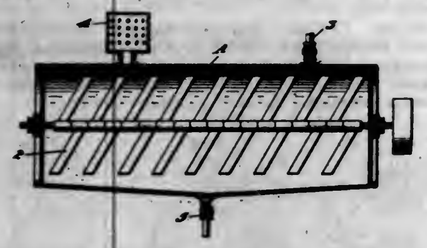
5. In a wood-working machine, the combination of a wood-cutting agency, a feed-roll in rear of said wood-cutting agency, means normally raising said feed-roll into position out of range of the stock comprising a rocker-element located adjacent to the vertical plane of said feed-roll, and means for forcing said feed-roll into stock-contacting position, said last-named means having operative connection with said rocker-element and comprising operating means under control of the operator and located at the feed-in end of the machine.

[Claims 6 to 29 not printed in the Gazette.]

1,109,187. REFINING PETROLEUM AND ITS BY-PRODUCTS. ERIC A. STARKE, Berkeley, Cal. Filed May 25, 1911. Serial No. 629,419. (Cl. 196—26.)

1. The method of treating oils containing a nucleus of the aromatic hydrocarbon series which consists in adding

to such oils a suitable quantity of sulfuric acid and subjecting the mixture to agitation in a closed vessel until the specific gravity of the oil becomes constant and no longer decreases upon the addition of sulfuric acid, but retaining the sulfur dioxid within the body of the oil and preventing its escape therefrom, and allowing the mass to settle until the sulfonic acids have separated from the petroleum.



2. The method of treating oils containing a nucleus of the aromatic hydrocarbon series which consists in adding to such oils a suitable quantity of sulfuric acid and subjecting the mixture to agitation in a closed vessel until the specific gravity of the oil becomes constant and no longer decreases upon the addition of a sulfur acid, but retaining the sulfur dioxid within the body of the oil and preventing its escape therefrom, allowing the mass to settle until the sulfonic acids have separated from the petroleum, and then recovering the benzene from the sulfonic acids and the sulfur dioxid from the petroleum.

3. The method of treating oils containing a nucleus of the aromatic hydrocarbon series which consist in adding to such oils a suitable quantity of sulfuric acid and subjecting the mixture to agitation in a closed vessel until the specific gravity of the oil becomes constant and no longer decreases upon the addition of sulfur acid, but retaining the sulfur dioxid within the body of the oil and preventing its escape therefrom, allowing the mass to settle until the sulfonic acids have separated from the petroleum, drawing off the sulfonic acids and repeating the cycle with the remaining petroleum with its sulfur dioxid.

4. The method of treating petroleum distillate containing a nucleus of the aromatic hydrocarbon series, which consists in adding to such oils a suitable quantity of sulfuric acid and subjecting the mixture to agitation in a closed vessel in the presence of heat until the specific gravity of the oil becomes constant and no longer decreases upon the addition of sulfuric acid, but retains the sulfur dioxid generated as a result of interaction between the ingredients within the body of the oil.

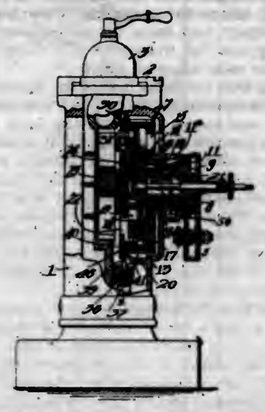
5. The proces sof treating oils which consists in mixing distillates of petroleum containing a nucleus of the aromatic hydrocarbon series, saturating the same with SO_2 and then treating this mixture with sulfuric acid subjecting the mixture to rapid agitation in a closed vessel so as to retain within the oil the SO_2.

1,109,188. DRIVING MECHANISM FOR SHAPING-MACHINES. RADFORD STOCKBRIDGE, Worcester, Mass., assignor of one-half to Arthur W. Beaman, Worcester, Mass. Filed Apr. 2, 1913. Serial No. 758,430. (Cl. 74—5.)

1. A shaping machine having in combination a driving crank plate having a cylindrical hub and a circumferential external bearing surface, a column, a bearing mounted on said column and supporting said hub and a fixed bearing ring mounted in the column and supporting the crank plate on its circumferential external bearing surface.

2. In a device of the class described, the combination of a driving gear having a flange projecting therefrom on one side, a crank plate mounted upon a fixed hub and freely rotatable within but projecting beyond said flange, and a fixed bearing ring having its inner surface surrounding and engaging the outer surface of the crank plate.

3. In a shaping machine, the combination of a driving gear having a flange projecting therefrom on one side, a crank plate freely rotatable within and projecting beyond said flange, a fixed bearing ring having a cylindrical surface engaging the outer surface of the crank plate, and



a lubricating device, said ring bearing being arranged in vertical position and having an opening therethrough at the bottom thereof to permit liquid lubricant to be applied to the outer surface of said crank plate by said lubricating device.

1,109,189. LENS-MOUNT. WILLIAM R. UHLEMANN, Chicago, Ill. Filed Aug. 13, 1913. Serial No. 784,549. (Cl. 88—47.)

1. A lens mount, comprising a box clip formed with a curved and continuous back web, a pair of side webs and a pair of transverse attaching webs, providing in connection with a lens a closed cavity adapted to retain a cementing body, said attaching webs being adapted to be sprung into radial notches in the perimeter of a lens.

2. A lens mount, comprising a box clip formed with a curved and continuous back web, a pair of side webs and a pair of transverse attaching webs, providing in connection with a lens a closed cavity adapted to retain a cementing body, said attaching webs being adapted to be sprung into radial notches in the perimeter of a lens, each side web comprising a pair of widened portions connected together by a narrow central portion adapting the clip to be symmetrically bent to fit varying curvatures of the perimeter of the lens.

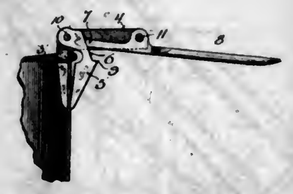
3. A lens mount, comprising a box clip formed with a curved and continuous back web, a pair of side webs and a pair of transverse attaching webs connected solely to the back web and free from connection with the side webs providing in connection with a lens a closed cavity adapted to retain a cementing body, the said attaching webs being adapted to be sprung into radial notches in the perimeter of a lens, each side web comprising a pair of widened portions connected together by a narrow central portion adapting the clip to be symmetrically bent to fit varying curvatures of the perimeter of the lens.

4. A lens mount, comprising a box clip formed with a curved and continuous back web, the radius of which is smaller than the perimeter of the lens to which attachment is to be made, a pair of side webs, and a pair of transverse attaching webs, said attaching webs being adapted to be sprung into radial notches in the perimeter of a lens, the said back and side webs providing in connection with a lens a closed cavity adapted to retain a cementing body.

5. A lens mount, comprising a box clip formed with a curved and continuous back web, the radius of which is smaller than the perimeter of the lens to which attachment is to be made, a pair of side webs, and a pair of transverse attaching webs connected solely to the back web and free from connection with the side webs, the said attaching webs being adapted to be sprung into radial notches in the perimeter of a lens, the said back and side webs providing in connection with a lens a closed cavity adapted to retain a cementing body.

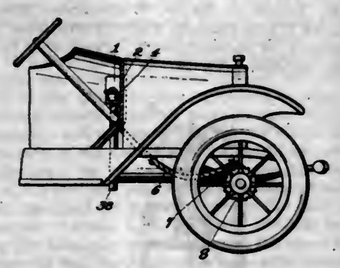
[Claims 6 and 7 not printed in the Gazette.]

1,109,190. GRIPPING DEVICE. WILLIAM WERNER, Milwaukee, Wis. Filed July 21, 1913. Serial No. 780,412. (Cl. 65—32.)



The combination of a gripping-jaw having a longitudinally slotted shank integral therewith at an approximate right-angle thereto, another jaw having an upper rearwardly inclined crank-end pivotally hung in the said shank at the junction thereof with the first named jaw, and a lever pivotally suspended between its extremities in the outer end of the aforesaid shank to cam downward at one extremity against the incline of the crank-end of the pivoted jaw when its other extremity is lifted.

1,109,191. VEHICLE. FREDERICK A. WIELAND, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 813,146. (Cl. 116—31.)



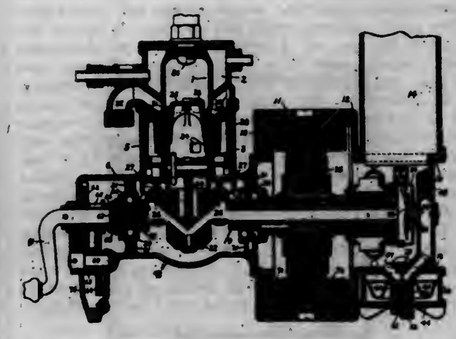
1. The combination with a vehicle of a token container thereon; means for discharging tokens from said container to the ground; governing means connected to be operated at a speed proportionate to the speed of the vehicle; and means for causing said governing means to effect operation of said discharging means at a predetermined speed, substantially as described.

2. The combination with a vehicle, of a casing mounted thereon; a token container in said casing; a governor shaft in said casing; a centrifugal governor on said shaft; means for driving said shaft at a speed proportionate to the speed of the vehicle; and means operable by said governor for discharging tokens from said container, substantially as described.

3. The combination with a vehicle, of a casing mounted thereon; a token container in said casing; a governor shaft in said casing; a centrifugal governor on said shaft; means for driving said shaft at a speed proportionate to the speed of the vehicle; means for discharging tokens singly from said container; and clutch mechanism operable by said governor arranged to connect said discharging means with said governor shaft, substantially as described.

4. The combination with a vehicle, of a casing mounted on the dash board thereof; a door for said casing; a token container in said casing and open at top and bottom; a slide for closing the top of said container arranged to be controlled by the door of said casing; a discharge slide arranged to reciprocate across the bottom of said container; a discharge tube adapted to receive tokens discharged by said slide and discharge said tokens under said vehicle; a governor shaft in said casing; a centrifugal governor on said shaft; a flexible shaft connected with a front wheel of said vehicle and with said governor shaft; an adjustable friction clutch on said governor shaft connected to be operated by said governor; and an operative connection between said clutch and said discharge slide, substantially as described.

1,109,192. INTERNAL-COMBUSTION ENGINE. GILBERT WRIGHT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 7, 1910. Serial No. 585,739. (Cl. 123—65.)



1. An internal combustion engine having a power cylinder, an annular charging cylinder concentric therewith, pistons for the cylinders, a crank case, a crank shaft provided with opposed cranks therein, means for connecting the pistons to said cranks whereby the same move in opposite directions relatively to each other, means for supplying a charge to the crank case, means controlled by one of the pistons for supplying a charge from the crank case to the annular cylinder, and means for connecting the annular cylinder with the power cylinder.

2. In an internal combustion engine, the combination of a power cylinder, an annular charging cylinder concentric therewith, a tubular crank shaft provided with opposed cranks connected to the power piston and the annular charging piston respectively and having passages from the interior opening into the crank case through the cranks, means for connecting the crank case with the charging cylinder, and a carbureter communicating with the open end of the shaft.

3. An internal combustion engine having a casing provided with a crank case or chamber and a second chamber adjacent to the first, a crank shaft arranged in the first chamber and having a portion extending through the second chamber, a driven member carried by said portion of the shaft, a carbureter mounted on the casing beyond said member and its chamber, there being a passage in the shaft leading from its outer end to the crank case, and a connection between the carbureter and said passage.

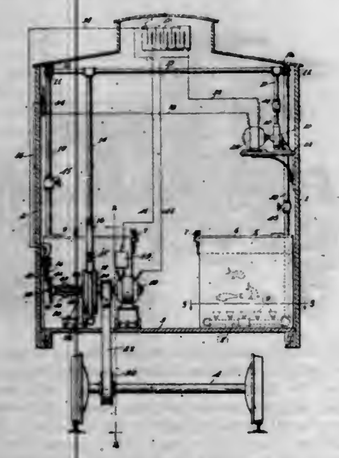
4. An internal combustion engine having a casing provided with a crank case or chamber, a second chamber

adjacent to the first and supporting members adjacent its ends, a crank shaft supported in bearings in the walls of the first chamber and having a portion extending through the second chamber, a driven member carried by said portion, a carbureter mounted on the casing beyond said member and its chamber, there being a passage in the shaft leading from its outer end to the crank case, a connection between the carbureter and said passage, and starting mechanism mounted in the opposite end of the casing beyond the crank case.

5. In an internal combustion engine, the combination of a crank case, a cylinder that opens at one end into said case, a trunk piston, a second cylinder concentric with the first, an annular piston arranged in the space between the two cylinder walls, a carbureter, means for supplying an explosive mixture to the crank case from the carbureter, a port in the wall of the first cylinder that connects its interior with said annular space and is uncovered by the trunk piston near the end of its outer stroke, a port in the wall of the trunk piston that connects the crank case with said annular space near the end of the inner stroke of the trunk piston, cranks on the shaft arranged at an angle to each other, and connecting rods between the cranks and the pistons.

[Claims 6 to 12 not printed in the Gazette.]

1,109,193. AERATING APPARATUS. OSCAR ZISTEL, Sandusky, Ohio. Filed Oct. 29, 1913. Serial No. 797,951. (Cl. 119—5.)



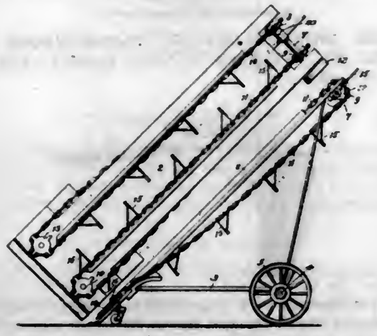
1. Apparatus for transporting fish comprising, in combination, a car and a water tank carried thereby, an air pump, connections for conducting air from the pump to the water within the tank, an electric motor for driving said pump, a storage battery, and means operated by the prime mover of the car for charging said battery.

2. Apparatus for transporting fish, comprising, in combination, a car and a water tank carried thereby, a pump carried by the car, connections for conducting air from the pump to the water within the tank, an electric motor for driving said pump, a storage battery carried by the car from which the motor receives its current, and a generator operatively connected to the car axle for charging the battery.

3. Apparatus for transporting fish, comprising, in combination, a car and a water tank carried thereby, a pump, connections for conducting air from the pump to the water within the tank, driving means between the car axle and the pump, an auxiliary pump, connections for conducting air from the last mentioned pump to the water within the tank, an electric motor for operating the auxiliary pump, a source of electric energy carried by the same car for supplying current to said motor, and means for automatically connecting said source to said motor when the car speed falls below a predetermined rate.

4. The combination with a vehicle having an axle and a water tank carried by the vehicle, of a pump, connections for conducting air from the pump to the water within the tank, driving means between the axle and the pump, an auxiliary pump, connections for conducting air from the last mentioned pump to the water within the tank, an electric motor for driving the auxiliary pump, a source of electric energy carried by the vehicle, a circuit including the motor, the source of electric energy, and a switch, and a governor operated by the first mentioned pump for actuating the switch to close the aforesaid circuit when the speed of said pump falls below a predetermined point.

1,109,194. MECHANICAL SHOVEL. JOHN R. ZYGALINSKI, Wallingford, Conn. Filed Feb. 18, 1914. Serial No. 819,437. (Cl. 193—8.)



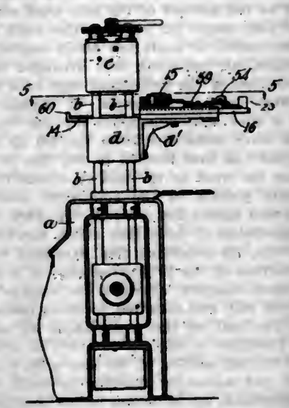
A mechanical shovel comprising a chute, a frame adapted to support the chute in an inclined position, a horizontally arranged driving shaft at the upper end of the chute, two chain engaging wheels on said driving shaft, chain engaging wheels at the lower end of said chute turning on axles at right angles to the driving shaft, chains passing over said wheels, and buckets carried by said chains the buckets on one chain extending toward the buckets carried by the other chain.

1,109,195. POWER CONTROL FOR SPINNING-MACHINES. FRANK E. BATES, Whitinsville, Mass., assignor to the Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Feb. 1, 1911. Serial No. 605,930. (Cl. 74—39.)

1. In a power-driven machine, a vertical rock-shaft, a handle thereon, a power-controlling device connected with the rock-shaft and movable in one direction or the other to throw the power on or off according to the direction in which the shaft is turned, in combination with a flange on said rock-shaft, a fixed collar beneath said flange, and a detent operative between said flange and collar to hold the rock-shaft in determinate on and off positions and adapted to cam the flange and shaft upward against the force of gravity when force is applied to the handle to rotate the shaft.

2. Power-controlling mechanism comprising the combination of a support, a vertical rock-shaft journaled therein and provided with a handle, a power-controlling device connected with said rock-shaft, a flange on the said shaft, a fixed collar on the support immediately beneath said flange, the two last-recited elements being provided in their meeting faces, one with a plurality of recesses and the other with a series of rounded cavities, and a rounded head stud adapted to be seated in any of said recesses and to engage said cavities with its rounded head according as the shaft is turned.

1,109,196. MACHINE FOR MOLDING SOLES. ALBERT G. BREWER, Natick, Mass., assignor to Welted Sole Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 5, 1912. Serial No. 724,218. (Cl. 12—21.)



1. In a machine of the character stated, in combination, an upper and a lower pressing member, one movable relatively to the other to exert pressure on and release an interposed article, a movable carrier provided with a mold which is located by movements of the carrier alternately in an operative position between the opposed faces of the pressing members, and in an exposed position at one side of said faces, a loosely mounted die formed to enter the mold and indent an article therein, and means operated by a movement of the mold to its operative position to insert the die in the mold and leave the die free to be forced into said article, and by a movement of the mold to its exposed position to raise the die and hold it loosely at one side of the mold cavity, leaving the latter exposed.

2. In a machine of the character stated, in combination, an upper and a lower pressing member, one movable relatively to the other to exert pressure on and release an interposed article, a carrier movable upon the lower pressing member and provided with a mold which is located by movements of the carrier alternately in an operative position between the opposed faces of the pressing members and in an exposed position at one side of said faces, a loosely mounted die formed to enter the mold and indent an article therein, swinging arms pivoted to fixed supports, the swinging end portions of the arms and the end portions of the die being provided with separable interengaging members, and means operated by movements of the carrier for raising and lowering said arms and die.

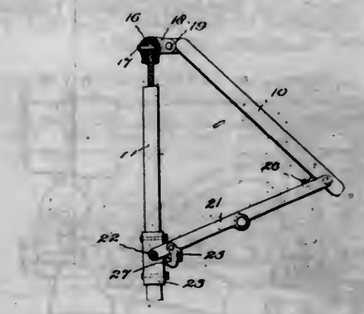
3. In a machine of the character stated, in combination, an upper and a lower pressing member, one movable relatively to the other to exert pressure on and release an interposed article, a carrier movable upon the lower pressing member and provided with a mold which is located by movements of the carrier alternately in an operative position between the opposed faces of the pressing members and in an exposed position at one side of said faces, a loosely mounted die formed to enter the mold and indent an article therein, said die being provided with ears, swinging arms pivoted to fixed supports and provided with slots adapted to engage said ears, and cam blocks moved by the carrier adapted to raise and lower the arms and die, the said arms being provided with die stops.

4. In a machine of the character stated, in combination, an upper and a lower pressing member, one movable relatively to the other to exert pressure on and release an interposed article, a carrier movable upon the lower pressing member, and provided with a mold, which is adapted to be opened and closed, and is located by movements of the carrier alternately in an operative position between opposed faces of the pressing members and in an exposed position at one side of said faces, mold-closing means operated by a movement of the mold to its operative position, the mold being automatically opened when moved to its exposed position, a loosely mounted die formed to enter the mold and indent an article therein, and means operated by a movement of the mold to its operative position to insert the die in the mold and leave the die free to be forced into said article, and by a movement of the mold to its exposed position, to raise the die and hold it loosely at one side of the mold cavity, leaving the latter exposed and open.

5. In a machine of the character stated, in combination, an upper and a lower pressing member, one movable relatively to the other to press and release an interposed article, a carrier movable on the lower pressing member and provided with a mold composed of an inner section movable with the carrier and an outer section movable with the inner section and independently thereof to open and close the mold, the outer section being normally separated yieldingly from the inner section to open the mold, a bar movable with the carrier and independently thereof crosswise of the carrier, means operated by movements of the carrier for moving said bar crosswise of the carrier alternately in opposite directions, the bar and the outer mold section being provided with complemental means whereby said movements of the bar alternately close and permit the opening of the mold, the movements of the carrier alternately locating the mold in an operative position between the opposed faces of the pressing members, and in an exposed position at one side of said faces, a loosely mounted die formed to enter the mold and indent an article therein, and means operated by a movement of the mold to its operative position to insert the die in the mold and leave the die free to be forced into said article, and by a movement of the mold to its exposed position to raise the die and hold it loosely at one side of the mold cavity leaving the latter exposed and open.

[Claims 6 to 11 not printed in the Gazette.]

1,109,197. WIND-SHIELD. EDWARD S. BROWER, Ridgewood, N. J. Filed Apr. 19, 1912. Serial No. 691,891. (Cl. 21—148.)



1. In combination with a vehicle wind shield having an upper transparent portion, a bracket secured to the wind shield, a rain guard hinged to the bracket, brace devices to support said rain guard in operative position, a locking member carried by the braces, and members carried by the wind shield and the rain guard respectively, arranged to be engaged by the locking member on the braces to lock the braces in open position with the rain guard extended,

or to lock the braces in folded position with the rain guard lowered.

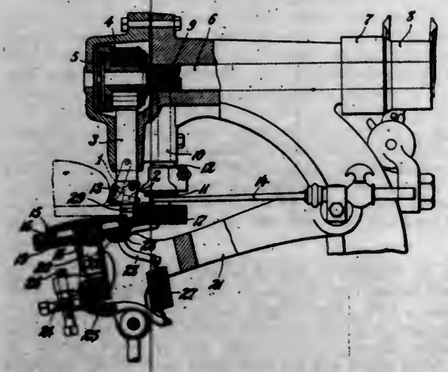
2. In combination with a vehicle wind shield having an upper transparent portion, a forwardly extending bracket resting on the top of the wind shield and secured thereto, a transparent rain guard hinged at its upper edge to the forwardly extending portion of the bracket, hinged braces connected between the sides of the wind shield and the rain guard, a locking member carried by the hinged braces, and members carried by the wind shield and the rain guard respectively, arranged to be engaged by the locking member on the braces to lock the braces in open position with the rain guard extended, or to lock the braces in folded position with the rain guard lowered.

1,109,198. SPRING-TIRE. HUGH B. BRYAN, Johnston City, Ill., assignor of one-half to Lorenzo D. Hobbs, Johnston City, Ill. Filed Oct. 26, 1912. Serial No. 727,867. (Cl. 152—8.)

1. In combination with a wheel rim, of a web surrounding the same, flanges formed upon the outer edge of the web, a plurality of transversely curved spring plates having their ends bowed, means for connecting the bowed ends of said plates to the flange, and curved plates having their inner edges secured to the base of the web and slidably engaged by the spring plates, said curved plates serving to limit the lateral movement of the spring plates.

2. In combination with a wheel rim, of a web surrounding the same, continuous flanges formed integral with the outer edge of the web, inclined continuous slots formed in the edges of the flanges, a plurality of transversely curved plates having their ends gradually tapered and terminating in angularly disposed ears adapted to engage said grooves when the ends of the plates are bowed, and means carried by the web to limit the lateral movement of the spring plates, and a casing inclosing the spring plates, said casing being connected to the rim.

1,109,199. IMPRESSION OR IMITATION STITCH MACHINE. LOUIS A. CASGRAIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 19, 1909. Serial No. 484,529. (Cl. 12—32.)



1. An impression or imitation stitch machine, having, in combination, an indenting tool arranged to act upon the upper surface of the projecting edge of a shoe sole, a rotatable work support arranged to engage the tread surface of the sole, means for supporting the work support against the thrust of the tool arranged to permit the work support to tip under the force exerted by the tool on the work to automatically adapt itself to that portion of the sole with which it is in engagement, and means for rotating the work suport.

2. An impression or imitation stitch machine, having, in combination, an indenting wheel arranged to act upon the upper surface of the projecting edge of a shoe sole, means for causing the wheel to strike a series of blows in rapid succession upon the work, a rotatable work support arranged to engage the tread surface of the sole, means for supporting the work support against the thrust of the tool arranged to permit the work support to tip under the force exerted by the tool on the work to automatically adapt itself to the portion of the sole with which it is in engagement and means for rotating the work support.

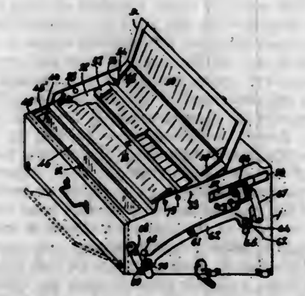
3. An impression or imitation stitch machine, having, in combination, an indenting tool arranged to act upon the upper surface of the projecting edge of a shoe sole, a rotatable work support arranged to engage the tread surface of a shoe sole, a support for the work support arranged to move under the force exerted by the tool on the work about an axis located in the line of the thrust exerted upon the work by the tool to automatically adapt itself to that portion of the sole with which it is in engagement and means for rotating the work support.

4. An impression or imitation stitch machine, having, in combination, an indenting tool arranged to act upon the upper surface of the projecting edge of a shoe sole, a rotatable work support arranged to engage the tread surface of the sole and mounted to move under the force exerted by the tool on the work about an axis extending in the direction of the line of feed to automatically adapt itself to that portion of the sole with which it is in engagement, and means for rotating the work support.

5. An impression or imitation stitch machine, having, in combination, an indenting tool arranged to act upon the upper surface of the projecting edge of a shoe sole, a work support arranged to engage the tread surface of the sole, means for supporting the work support against the thrust of the tool arranged to permit the work support to move under the force exerted by the tool on the work to automatically adapt itself to that portion of the sole with which it is in engagement, and means for adjusting the initial angular position of the work support.

[Claims 6 to 13 not printed in the Gazette.]

1,109,200. VOTING-MACHINE. EUGENE F. CHAPMAN, Fort Collins, Colo. Filed Dec. 27, 1912. Serial No. 738,857. (Cl. 235—50.)



1. A voting machine comprising a casing, a web mounted in said casing, said web being adapted to receive a record of votes marked thereon successively by individual electors, a sliding top for said casing to protect said web, an opening in said top through which access may be had to said web to record such votes, means whereby said web may be advanced intermittently to receive such record, a hinged flap on said top whereby a section of said web may be exposed to permit the reading of the record thereon, means whereby said web may be returned for such reading, and means to operate said sliding top alternately to permit the marking and the reading of such record during the advance and return respectively of said web.

2. A voting machine comprising a casing, a web mounted in said casing, said web being adapted to receive a record of votes marked thereon successively by individual electors, a tally plate, an operating arm for the actuation of said web, baffles mounted at intervals on said tally plate, and means whereby said baffles are adapted successively to engage said operating arm to stop the movement thereof.

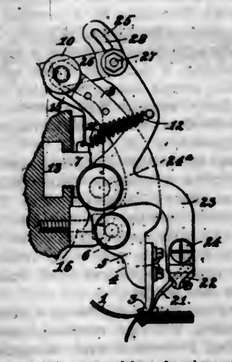
3. A voting machine comprising a casing, said casing being provided with hinged doors in the front and rear sides thereof, a web mounted on rollers in said casing, said web being adapted to receive a record of votes marked thereon successively by individual electors, and segmental bearings for said rollers, one segment of each of said bearings being attached to the wall of said casing, and the other segment being carried by an arm pivotally mounted in said casing, the free end of said arm being adapted to bear against one of said doors, whereby, upon the opening or closing of said door, said bearing is automatically broken or completed.

4. A voting machine comprising a casing, a web mounted in said casing, said web being adapted to receive a record of votes marked thereon successively by individual electors, means whereby said web may be advanced intermittently to receive such record, a card containing a list of candidates to be voted upon, means to support said card in proper relative position with reference to said web, and a hinged leaf on said support, said leaf being provided with a list of offices to be filled, said offices being in alinement with the spaces between longitudinal rulings on said web.

5. A voting machine comprising a casing, a web mounted in said casing, said web being adapted to receive a record of votes marked thereon successively by individual electors, a top for said casing to protect said web, an opening in said top through which access may be had to said web to record such votes, means whereby said web may be advanced intermittently to receive such record, a card containing a list of candidates to be voted upon, means to support said card in proper relative position with reference to said web, and a hinged leaf on said support, said leaf being provided on each side with a list of offices to be filled, said offices being in alinement with the spaces between longitudinal rulings on said web.

[Claims 6 to 11 not printed in the Gazette.]

1,109,201. SEWING-MACHINE. FRANK CHATEAUNEUF, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1911. Serial No. 660,746. (Cl. 112—20.)



1. An inseam sewing machine having, in combination stitch forming mechanism including a curved hook needle arranged to enter and emerge from the outer face of the sole during its work piercing stroke, a feed slide, a presser foot for engagement with the outer face of the sole supported on the feed slide for movement therewith and mounted for oscillatory movement to engage and disengage the sole and having a perforation formed in the work engaging portion thereof, an awl supported on the feed slide for movement therewith and mounted for oscillatory movement through the perforation in the sole engaging member to engage and disengage the sole, means to operate the feed slide and means to actuate the awl and sole engaging member.

2. An inseam sewing machine having, in combination, stitch forming mechanism including a curved hook needle, a feed slide, a presser foot supported on the feed slide for movement therewith and mounted for oscillatory movement to engage and disengage the sole and having a perforation formed in the work engaging portion thereof, an awl supported on the feed slide for movement therewith and mounted for oscillatory movement through the perforation in the presser foot to engage and disengage the sole, means to operate the feed slide, means to oscillate the presser foot and connections between the presser foot and awl for imparting oscillatory movements to the awl.

3. An inseam sewing machine having, in combination, stitch forming mechanism including a curved hook needle, a feed slide, an oscillatory lever mounted on the feed slide, an awl carried by said lever, a second lever mounted on the feed slide to oscillate on an axis parallel to the axis of said first lever and located between the axis of said first lever and the awl, a presser foot mounted on said second lever having a perforation formed in the work engaging portion thereof in which the awl is arranged to operate, a link connecting the outer extremities of said levers and means to oscillate said second lever.

4. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, a feed slide, an oscillatory lever mounted on the feed slide, a presser foot mounted on said lever, a second lever mounted on the feed slide to oscillate on an axis parallel with the axis of the first lever, an awl carried by the second lever, a link connecting the outer extremities of said levers and means to oscillate the first lever.

5. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, a feed slide, an oscillatory lever mounted on the feed slide, a second lever mounted on the feed slide to oscillate upon an axis parallel with the axis of the first lever and located between the axis of the first lever and the awl, a presser foot mounted on the second lever, a link connecting the outer extremities of said levers and means to oscillate the second lever.

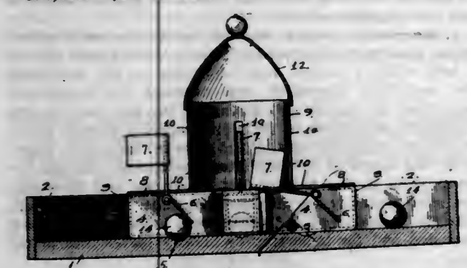
[Claims 6 to 15 not printed in the Gazette.]

1,109,202. DOOR-HANGER. MYRON COSSEY, New York, N. Y., assignor to Reliance Ball Bearing Door Hanger Company, New York, N. Y., a Corporation of New York. Filed Nov. 21, 1912. Serial No. 732,663. (Cl. 39—94.)

A two-speed door hanger comprising a supporting structure consisting of a supporting plate, a beam secured thereto, a depending plate secured to the beam, a plurality of fixed tracks supported by said plates, movable carriers upon said fixed tracks respectively bearing members interposed between the top and bottom edges of said carriers and said fixed tracks, hangers secured to said carriers to support the several doors in substantially the same vertical plane with the tracks

respectively, a stationary rack carried by the supporting beam, a second rack secured to one of said movable carriers, and a gear carried by another of said movable carriers and engaging both of said racks whereby one carrier has a different speed with respect to the other carrier.

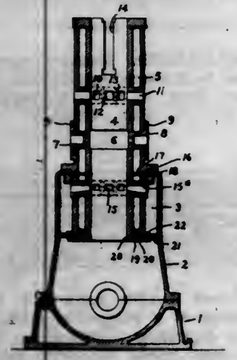
1,109,203. GAME APPARATUS. EDWARD C. CUSACK, San Francisco, Cal. Filed Mar. 24, 1914. Serial No. 827,500. (Cl. 46—41.)



1. A game comprising a board having sides thereon; a vertical wall secured to the board and bent to form oppositely faced recesses therein and above the plane of the board; a gate pivotally secured within each recess and having a flag secured thereto; a plurality of balls arranged to enter one of the recesses one at a time and display the flag secured to the pivoted gate; and means within each recess arranged to retain a ball therein when the board is held approximately horizontal.

2. A game comprising a board having sides thereto; four freely rolling balls rolling on the board and within the sides thereof; a vertical wall secured to the board and bent to form four oppositely faced recesses; indentations within the board and within each recess; a gate pivotally secured within each recess and having a flag secured thereto; a suitable cover having a tower thereon and arranged to cover the recesses and having slots therein directly above each recess and projecting into the tower, said slots being arranged to permit the passage of a flag from within the tower when one of the balls is rolled against the gate and into the indentation within the recess.

1,109,204. CYLINDER CONSTRUCTION FOR ENGINES. HEINRICH DECHAMPS, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 23, 1913. Serial No. 808,395. (Cl. 123—193.)



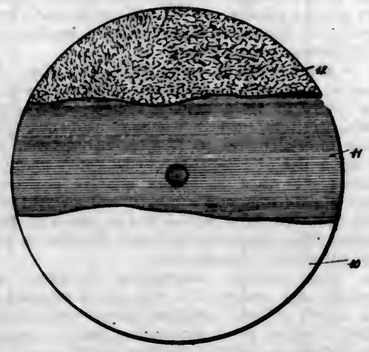
1. A cylinder for an engine which is formed as a unit with its cooling jacket, said jacket being slotted in a plane perpendicular to the axis of the cylinder to compensate for the effects of the different temperatures to which the cylinder and jacket are subjected.

2. A cylinder for an engine which is formed in one piece with its water jacket and is provided with scavenging and exhaust ports, said jacket being provided with a cylinder supporting flange located in the plane of the middle portion of the cylinder between the ports and slotted in a plane perpendicular to the axis of the cylinder to reduce the effects of temperature changes.

3. A cylinder for an engine which is formed in one piece with its water jacket, said jacket being slotted in a plane perpendicular to the axis of the cylinder and also at one end concentric thereto, and filling means for said slots.

4. In an engine, the combination of a support having an opening, a cylinder and water jacket formed in a unit and located in the opening, said jacket being slotted in a plane perpendicular to the axis of the cylinder, and a packing that closes said slot and is located between the jacket and the wall of said opening.

1,109,205. STATIC ELECTRIC MACHINE. JAMES B. DEMPSTER, Des Moines, Iowa. Filed Oct. 9, 1911. Serial No. 653,606. (Cl. 171—23.)



1. In a static electric machine, the combination of a current collecting plate, a binder on the surface thereof, and a layer of small particles of non-hygroscopic crystals partially embedded in said binder.

2. In a static electric machine, the combination of a current collecting plate, a binder on the surface thereof, and a layer of small particles of silica crystals partially embedded in said binder.

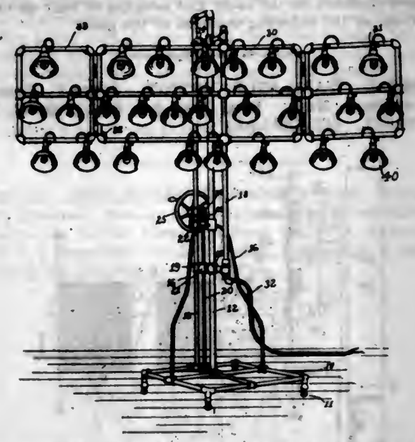
3. In a static electric machine, the combination of a current collecting disk, a coating of binding material thereon, and a coating of small particles of silica crystals partially embedded in said binder, for the purposes stated.

1,109,206. ILLUMINATING APPARATUS. HENRY P. DEXHEIMER and WILLIAM H. CLIFFORD, Marion, Ind. Filed June 7, 1913. Serial No. 772,413. (Cl. 240—9.)

1. Illuminating apparatus including a stationary frame having two uprights, a movable frame slidable on said stationary frame, means connected with the stationary frame for vertically moving the movable frame, and a lamp frame mounted on the movable frame so as to be horizontally oscillatable.

2. Illuminating apparatus including a stationary frame having two uprights, a movable frame slidable on said stationary frame, means connected with the stationary frame for vertically moving the movable frame, a lamp frame mounted on the movable frame so as to be horizontally oscillatable, lamps on said lamp frame, and means passing through said movable and lamp frames for maintaining lights in said lamps.

3. Illuminating apparatus including a stationary frame having two uprights, a frame vertically movable on said uprights including a vertical tube horizontally oscillatable, a lamp frame formed of tubes and secured to said vertical tube, lamps on said lamp frame, and means passing through said vertical tube and lamp frame tubes for maintaining lights in said lamps.

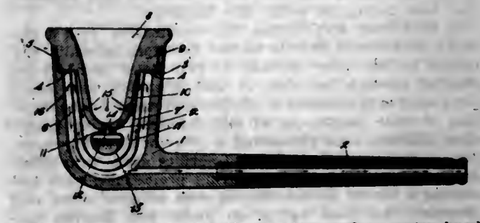


4. Illuminating apparatus including a base frame, a pair of uprights extending therefrom connected at their upper ends, an intermediate cross bar secured to said uprights, lateral braces extending from said cross bar to the base, a screw having bearings in said cross bar and the brace, means for driving the screw, a frame mounted on said uprights so as to be vertically slidable, an operative connection between said screw and said movable frame whereby the latter is elevated or lowered, and a lamp frame mounted on said movable frame so as to be horizontally oscillatable.

5. Illuminating apparatus including a stationary frame having two uprights, a movable frame slidable on said stationary frame, means connected with the stationary member for vertically moving the movable frame, a lamp frame mounted on the movable frame so as to be horizontally oscillatable, and additional lamp frames hinged to said main lamp frame so that they may be adjusted to any angle with reference thereto.

[Claims 6 and 7 not printed in the Gazette.]

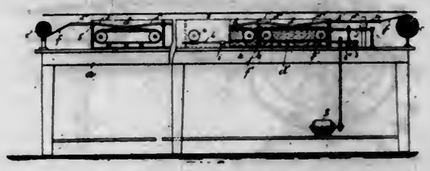
1,109,207. TOBACCO-PIPE. NATALE DI BIANCA, New York, N. Y. Filed Aug. 4, 1913. Serial No. 782,881. (Cl. 131—12.)



1. A tobacco pipe including a stem and an outer bowl communicating therewith, a bowl within the outer bowl and having its wall spaced therefrom, a nicotin cup secured to the inner bowl and supported thereby above the bottom of the other bowl, said inner bowl having smoke openings above said nicotin cup, and a baffle cup surrounding said nicotin cup and inner bowl.

2. A tobacco pipe including a stem and an outer bowl in communication therewith, a second bowl having its rim screw threaded in the rim of said outer bowl and having its wall spaced from the wall of the outer bowl, said second bowl having smoke passages and a pair of spaced baffle cups interposed between the outer bowl and the second bowl and having rim flanges secured between the screw threaded rims of the outer and the second bowls, said baffle cups having smoke openings at different elevations.

1,109,208. APPARATUS FOR SUCCESSIVE TREATMENT OF MOTION-PICTURE FILMS. GEORGE C. DOBBS and MALCOLM MCGREGOR, New York, N. Y. Filed Mar. 25, 1914. Serial No. 827,217. (Cl. 95—94.)



1. An apparatus for successively treating motion picture films, comprising a plurality of compartments, one for each treatment and a stationary film guide or track extending continuously through all said compartments.

2. An apparatus for successively treating motion picture films, comprising a plurality of compartments, one for each treatment, a stationary film guide or track extending continuously through all said compartments, and means to feed the film in a continuous manner and successively along said guide through the different compartments.

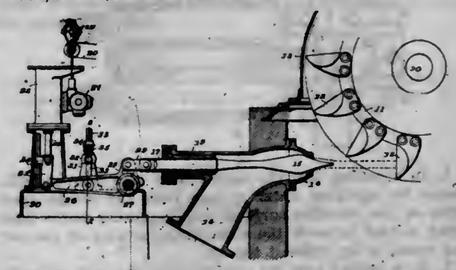
3. In an apparatus for successively treating motion picture films, a stationary coiled guide or track for the said film strip.

4. In an apparatus for successively treating motion picture films, a number of compartments, one for each treatment, a stationary guide or track for the film strip continuously extending through all the said compartments and having coiled parts, one for each compartment.

5. In an apparatus for successively treating motion picture films, a stationary coiled guide or track of U-shaped cross section.

[Claims 6 to 17 not printed in the Gazette.]

1,109,209. GOVERNING MECHANISM. WILLIAM A. DOBLE, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed June 2, 1913. Serial No. 771,309. (Cl. 121—112.)



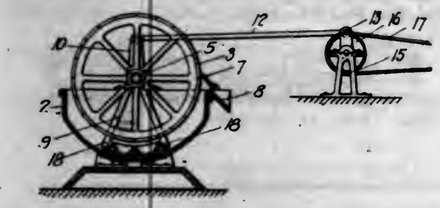
1. A governor comprising speed responsive means, speed controlling means actuated by said speed responsive means, and means for limiting the speed increasing action of said speed controlling means, and including a fixed abutment, a buffer on said fixed abutment, a rod adapted to be moved by said speed responsive means, and an adjustable nut on said rod and adapted to engage said buffer.

2. A governor comprising speed responsive means, speed controlling means, means connecting said speed responsive means and said speed controlling means and including a lever adapted to be rocked by said speed responsive means, an abutment having trunnions mounted in fixed bearings, a buffer on said abutment, a rod pivotally connected to said lever and passing through said abutment, and an adjustable nut on said rod and adapted to engage said buffer to limit the speed increasing action of said speed controlling means.

1,109,210. AGITATOR. JOHN V. N. DORR, Denver, Colo. Filed Feb. 25, 1913. Serial No. 750,586. (Cl. 75—86.)

1. The combination with a tank and an element having a rotary movement in spaced relation to an interior sur-

face thereof, of an element having a reciprocating movement in said space.



2. The combination with a tank and a substantially cylindrical element having a rotary movement in spaced relation to an interior surface thereof, of an element having an oscillatory movement in said space.

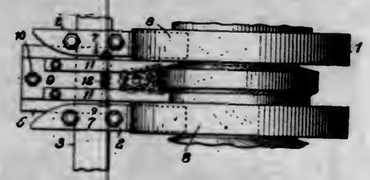
3. The combination with a tank and a substantially cylindrical element having a rotary movement in spaced relation to an interior surface thereof, of an element having an oscillatory movement in said space about the axis of rotation of the first-mentioned element.

4. The combination with a tank having a curved surface and an element having a rotary movement in spaced relation to said surface, of an element having an oscillating movement in said space in an arc substantially concentric with said surface.

5. The combination with a tank and an element having a rotary movement in spaced relation to an interior surface thereof, of a series of bars extending longitudinally in the said space, and means for imparting a transverse reciprocating movement to said series.

[Claims 6 to 12 not printed in the Gazette.]

1,109,211. ROLLING-MILL. CHARLES E. DUNCAN, Sault Ste. Marie, Ontario, Canada. Filed Oct. 15, 1913. Serial No. 795,386. (Cl. 80—1.)



1. In a rolling mill the combination of a pair of rolls, means for applying water to said rolls and means operative on the reducing surfaces for preventing water from being carried between the contacting surfaces of the roll and metal being reduced thereby.

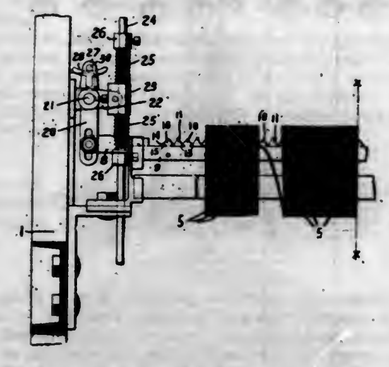
2. In a rolling mill the combination of a pair of rolls, having reducing passes formed therein, means for applying water to said rolls and non-abrading means bearing against the surfaces of the reducing passes for the removal of water from such surfaces prior to moving into contact with the metal being reduced.

3. In a rolling mill, the combination of a pair of rolls having reducing passes formed therein means for applying water to said rolls, a block bearing against portions of such passes and spring actuated fingers bearing against other portions of the passes, whereby water is removed from the reducing surfaces prior to contact with the metal being reduced.

4. In a rolling mill the combination of a pair of rolls having a pass formed therein, means for applying water to said rolls, guides for directing metal into the pass, a plate removably mounted on the guides and a block carried by the plate and adapted to bear against the reducing surfaces of the pass.

5. In a rolling mill the combination of a pair of rolls having a pass formed therein, means for applying water to said rolls, guides for directing metal into the pass, a plate removably mounted on the guides, a block carried by the plate and adapted to bear against the portions of the reducing surfaces of the pass, and spring actuated fingers mounted on the block and adapted to bear on other portions of the reducing surfaces of the pass.

1,109,212. WARP STOP-MOTION. JOHN F. DUSTIN, Lawrence, Mass. Filed Feb. 24, 1913. Serial No. 750,112. (Cl. 139—92.)



1. In a warp stop motion, the combination with a plurality of resilient flexible slotted detectors normally sustained by the warp threads, of two feeler members extending through the slots of said detectors, and means for giving said members a relative movement in the direction of their length, one of said members having projections thereon, each presenting a detector-arresting shoulder at its base and an inclined surface above said shoulder, and the other member having projections, each presenting a lateral detector-flexing nose situated above said shoulder.

2. In a warp stop motion, the combination with a plurality of resilient flexible slotted detectors normally sustained by the warp threads, of two feeler members extending through the slots of said detectors, and means for giving said members a relative movement in the direction of their length, one of said members having projections thereon, each presenting a detector-arresting shoulder at its base and an inclined surface above said shoulder, and the other member having projections, each presenting a lateral detector-flexing nose situated above said shoulder, said nose having its under face inclined.

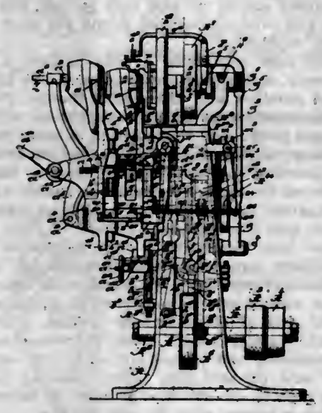
3. In a warp stop motion, the combination with a plurality of resilient flexible slotted detectors normally sustained by the warp threads, of two feeler members extending through the slots of said detectors, and means for giving said members a relative movement in the direction of their length, one of said members having projections thereon, each presenting a detector-arresting shoulder at its base and an inclined surface above said shoulder, and the other member having projections, each presenting a lateral detector-flexing nose situated above said shoulder, said nose having an under face inclined substantially parallel to said inclined surface.

4. In a warp stop motion, the combination with a plurality of resilient flexible slotted detectors normally sustained by the warp threads, of two feeler members extending through the slots of said detectors, and means for giving said members a relative movement in the direction of their length, one of said members having projections thereon, each presenting on both sides thereof a detector-arresting shoulder at its base and an inclined surface above said shoulder, and the other member having projections each presenting on both sides thereof a lateral detector-flexing nose situated above the shoulder.

5. In a warp stop motion, the combination with a plurality of resilient flexible slotted detectors normally sustained by the warp threads, of two feeler members extending through the slots of said detectors, and means for giving said members a relative movement in the direction of their length, one of said members having projections thereon, each presenting on both sides thereof a detector-arresting shoulder at its base and an inclined surface above said shoulder, and the other member having projections each presenting on both sides thereof a lateral detector-flexing nose situated above the shoulder, the under face of each nose having an inclined surface parallel to the first-named inclined surface.

[Claims 6 and 7 not printed in the Gazette.]

1,109,213. HEEL-BURNISHING MECHANISM. ANALDO M. ENGLISH, Boston, Mass., asisgnor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 4, 1906. Serial No. 333,062. (Cl. 12—71.)



1. In a machine of the class described, a burnishing tool comprising a plurality of parts of different shapes in cross-section in the direction of the height of the heel and arranged side by side in the direction of the height of the heel, each section co-acting with a separate part of the heel with relation to its height, the central part of the tool presenting a practically straight face in its median line transversely of the height of the heel and means to actuate said plural parts of the tool simultaneously to cause them to burnish the heel surface.

2. In a machine of the class described, a burnishing tool presenting in cross-section in the line of the height of the heel a concaved and a convexed face, and actuating means therefor to cause each face to act on the same part of the heel in the direction of its length as the tool is carried about the exterior of the heel.

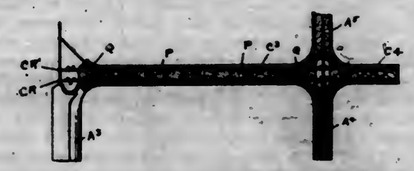
3. In a machine of the class described, a burnishing tool presenting a convexed face to act on the exterior of the top-lift and a concaved face to act on the exterior of the heel at its heel-seat, and two lips, one to act on the margin of the top-lift, and the other to enter the rand-crease and actuating means to cause the parts of the tool to act upon the work.

4. In a machine of he class described, a burnishing tool mounted to be moved in the direction of the height of the heel about a pivot in a plane at right angles to the height of the heel, combined with means for moving said tool to and fro about the exterior of the heel in the direction of the length of the heel.

5. In a machine of the class described, the combination of a jack for supporting a shoe, a head, a burnishing tool carried by said head, means to rotate the said head and to move said tool bodily to and fro on said head in contact with the exterior of the heel of a shoe supported by said jack, and means for changing the relative vertical position of the jack and tool as said head is rotated.

[Claims 6 to 67 not printed in the Gazette.]

1,109,214. BUILDING CONSTRUCTION. WILLARD B. FEATHERSTONE, Washington, D. C. Filed July 2, 1909. Serial No. 505,696. (Cl. 72—15.)



1. A building having its framework constructed of preformed concrete shells each comprising a mold substantially equal in length to the beam or column of which it forms a part, tranverse projections on the inner surfaces of the shells, longitudinal reinforcements partially embedded by the projections and extending beyond the ends of the shells, for the purpose of bonding or tying the adjoining beams or columns, and concrete filling the shells and embedding the remainder of the reinforcements.

2. A structural unit composed of a preformed concrete shell comprising a mold substantially equal in length to the unit of which it forms a part, and having transverse interior projections, longitudinal reinforcements passing through and partially embedded by the projections, and extending beyond the ends of the shell for the purpose of facilitating union with like units or shells, and concrete filling the shell and embedding the remainder of the reinforcements.

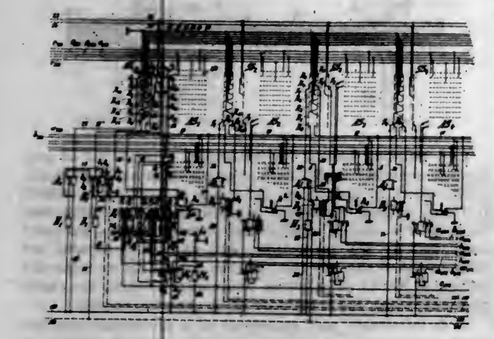
3. A girder composed of a preformed concrete shell of approximately U-shaped section and substantially equal in length to the girder, and having transverse ribs P, reinforcing rods or the like, T, CR, passing through the ribs and extending beyond the ends of the shell, and concrete filling the shell.

4. A girder form comprising a one-piece concrete shell of approximately U-shaped section, and substantially equal in length to the length of a girder unit, projections, P, P, on the inner surface of the shell, reinforcements partially embedded in the projections and extending beyond the ends of the shell.

1,109,215. GARMENT-FASTENER. SOLOMAN GERMAN, Reisterstown, Md. Filed Apr. 21, 1911. Serial No. 622,454. (Cl. 24—210.)

In a separable fastener, a stud member comprising a series of resilient prongs rising from a plate forming a head, a socket member forming an eyelet to be engaged by said stud member, the head of said stud member being normally greater in diameter than said eyelet member, whereby a snap fastening is secured between the two members, and means for spreading said head and locking it positively in said socket member, said spreading means embodying a hinged cap, a conical plug rigidly secured to said hinged cap and provided with a groove in its base at its connection with said cap, said groove forming an abrupt shoulder to engage the ends of the resilient prongs and lock the parts together against other than a positive displacement, the diameter of the grooved portion of the plug being greater than the width of the opening formed between the ends of the resilient prongs, whereby when the ends of the prongs are seated in the groove of the plug, the prongs will be expanded and be held positively in contact with the socket member and retain the members rigidly together.

1,109,216. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. GEORG GRABE, Nikolassee, near Berlin, Germany, assignor to Siemens & Halske A. G., Berlin, Germany. Filed Dec. 11, 1909. Serial No. 532,711. (Cl. 179—18.)

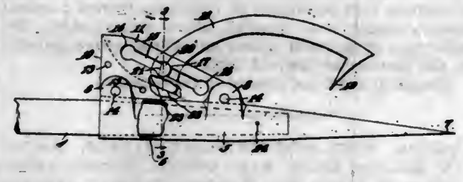


1. In an automatic telephone system the combination with a plurality of subscribers' lines and selecting and connecting devices for connecting a desired line with a calling line, of a call-seeking switching device, adapted to move in two kinds of switching steps to seek a calling line, banks of contacts in said switching device connected with subscribers' lines, said banks being divided in sub-groups, said switching devices moving in one kind of step independently of a call being present, relays and connections for moving a switching device in the other kind of step, when a call is received, to find the contacts of said bank connected with the calling line.

2. In an automatic telephone system comprising subscribers' stations, calling devices in each subscriber's station, an exchange, lines connecting said stations with the exchange, one calling device for each line in the exchange, call seeking devices adapted to move in two kinds of switching steps to seek a calling line, selectors and connectors for connecting in the exchange a calling station with the called station, said selectors and connectors being set by the calling devices in the stations, the combination of banks of contacts arranged in rows to which the lines of a group of subscribers are led in multiple connection, a call seeking switch provided with switch arms for each bank of contacts and means for setting said switch to a calling line, with means for setting one call seeking switch automatically to each part of the rows of contacts, which parts each form a sub-group in the group independently as to whether a call is present in the sub-group.

3. In an automatic telephone system, the combination of a plurality of subscribers' lines, switching means in each subscriber's station, an exchange, lines connecting said stations with the exchange, selectors and connectors for connecting in the exchange a calling station with the called station, of call-seeking devices to seek the calling line and to connect said line with an idle selector, combined with banks of contacts divided in sub-groups, connected with a group of subscribers' lines, relays for automatically setting call-seeking devices to each sub-group of contacts independently of a call being present, relays and switches preventing a second call-seeking device from stopping at a sub-group being already occupied by another seeking-device, relays for starting said call seeking-devices when a call is present in the sub-group to which they are set and for moving them to the contacts of a calling line, a sufficient number of call seeking devices being provided for each group of subscribers' lines so that at least one idle reserve call seeking device is free for engagement, and releasing means to unlock the locking device of a sub-group when the call seeking device is started to take charge of a call, and relays for setting a reserve call seeking device to a sub-group as soon as the call seeking device in reserve at this sub-group has been started by a call.

1,109,217. CANT-HOOK. PERRY GRAHAM, Blaine, Wash., assignor of one-third to Robert Francis Doan and one-third to Oscar Stevenson, Blaine, Wash. Filed Jan. 7, 1914. Serial No. 810,893. (Cl. 145—22.)



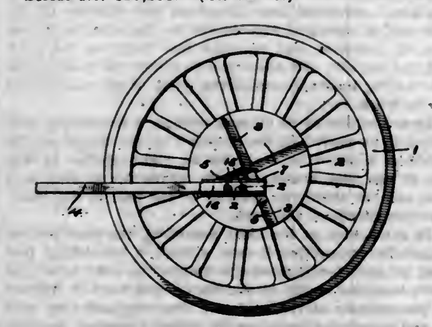
1. A cant hook comprising a body portion, a handle carried thereby, an outstanding member carried by said body portion and provided with alined slots therein, the longitudinal axes of said slots inclined at an angle to the longitudinal axis of the said body portion, and a hook adjustably and rotatably secured within the slots of said outstanding member.

2. A cant hook comprising a body portion, a handle carried thereby, outstanding members carried by said body portion and provided with alined slots therein, the longitudinal axes of said slots inclined at an angle to the longitudinal axis of the said body portion, a hook, outstanding trunnions carried thereby projecting in said slots, said slots provided with cylindrical grooves at spaced intervals adapted to receive the trunnions therein and hold the hook against further shifting, said hook adapted to rotate about said trunnions as a center.

3. A cant hook comprising a body portion, a handle carried thereby, outstanding members carried by said body portion and provided with alined slots therein, the longitudinal axes of said slots inclined at an angle to the longitudinal axis of the said body portion, a hook adjustably and rotatably secured within the slots of said outstanding members, and means carried by the said hook contacting with the said body portion limiting the rotation of the hook in one direction to hold the extremity of the hook out of contact with the body portion.

4. A cant hook including a body portion, upstanding spaced bosses carried thereby, outstanding plates rigidly secured to and extending between said bosses, said plates held in spaced relation and provided with slots extending at an angle to the longitudinal axis of the body portion, said slots provided with cylindrical grooves, a hook provided with outstanding flattened trunnions positioned in said slots and adapted to rotatably engage the said cylindrical grooves, said grooves adapted to hold the said hook in adjusted position during certain phases of the rotation of the stub shaft, the adjusted positions of said hook holding the same at spaced points from the body portion.

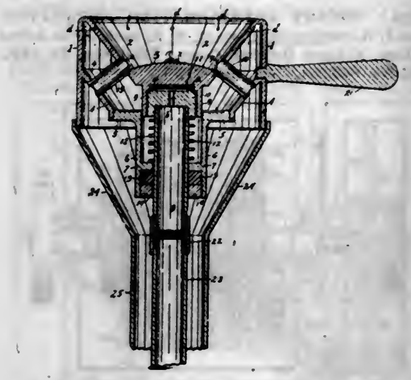
1,109,218. POWER-TRANSMISSION MECHANISM. ALBERT GREENBURG, Oakville, Pa. Filed Feb. 17, 1914. Serial No. 819,153. (Cl. 74—5.)



1. The combination with a rotary element having grooves therein at right angles to each other and crossing each other, a reciprocating element comprising a bar having openings in its ends, blocks in the grooves having studs thereon positioned in the openings in the bar, bearing sleeves around said studs in the openings, said bar having recesses in its outer face, disks in said recesses secured to the ends of the studs, said bar having a longitudinal groove in its outer face, and a connecting rod secured in said groove and covering the said recesses, substantially as described.

2. The combination with a rotary element having grooves therein at right angles to each other and crossing each other, a reciprocating element comprising a bar having openings in its ends, blocks in the grooves having studs thereon positioned in the openings in the bar, bearing sleeves around said studs in the openings, said bar having recesses in its outer face, disks in said recesses secured to the ends of the studs, said bar having a longitudinal groove in its outer face, a connecting rod secured in said groove and covering the said recesses, said bar having a recess in its under face, and bolts projected through the connecting rod and said bar, and nuts on said bolts located in the last-mentioned recesses, substantially as described.

1,109,219. SANITARY DRINKING-FOUNTAIN. FREDERICK GRUMME, Indianapolis, Ind. Filed Oct. 9, 1911, Serial No. 653,541. Renewed Jan. 29, 1914. Serial No. 815,288. (Cl. 137—11.)



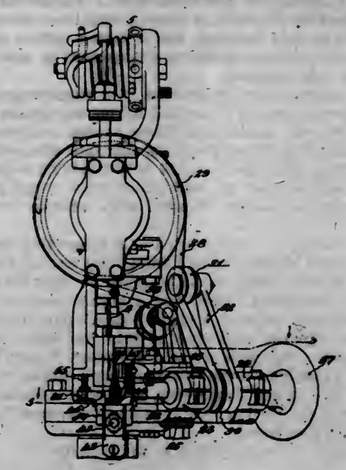
1. A sanitary drinking fountain including a bowl having a convex bottom, drainage conduits leading from the bottom of the bowl, there being a plurality of inlet apertures formed in the upper portion of the bowl which are adapted to direct streams of water to a central point in such manner that the force of the water will cause it to form a solid column above the meeting point, a valve adapted to automatically shut off the water supply, and means whereby if the fountain be turned horisontally a slight distance the valve will permit the water to be discharged through said apertures in the bowl as set forth, all substantially as described.

2. A sanitary drinking fountain including a bowl having a convex bottom and sloping sides, means for draining the bottom of the bowl, a valve adapted to automatically shut off the water supply, means whereby if the device be turned slightly the valve will be opened permitting the water to be admitted into the fountain and to be discharged through apertures formed in the wall of the bowl in such manner as to cause the several streams to meet in a common center and then be forced upward forming a solid column, all substantially as shown and described and for the purposes set forth.

3. In a sanitary drinking fountain, a stationary supply-pipe, a head having a central vertical aperture therethrough secured on the upper end of the supply pipe, a strip surrounding the head and having a pair of diametrically opposite darts extending upward therefrom, an inverted cup-like member, a strip extending around the inside of said member and having notches therein in which said darts are adapted to fit, a cushion located in the top of said cup-like member with which said head is adapted to engage, a spring adapted to normally retain said cushion in contact with the face of said head, the whole forming a valve for restraining the water under pressure in the supply-pipe but allowing it to be released when said cup-like member is turned horizontally in either direction, as set forth.

4. A sanitary drinking fountain comprising a fixed supply-pipe, a head located on the end of said pipe, a movable flange surrounding the head, a bowl, a bottom for the bowl, the underside of said bottom forming the cover for the space inclosed by said flange, a casing surrounding the bowl and spaced therefrom, said casing, bowl, bottom and flange being formed integral with each other, and the wall of the bowl being formed at an angle with relation to the casing, there being delivery apertures formed around through the upper portion of the bowl, drainage conduits leading from the bowl, a partition located below the bowl, a disk adapted to close the central aperture in said partition, a tube extending down from said disk and located around the supply pipe, a rib formed around in said tube, a spring surrounding the tube with one end thereof pressing on said rib and the other pressing on the under edge of said head, a cushion against which the face of said head is adapted to be pressed by said spring, and means whereby said head and cushion may be spaced apart, all substantially as shown and described.

1,109,220. TACK PULLING AND RESETTING MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 28, 1911. Serial No. 668,341. (Cl. 12—16.)



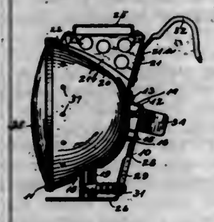
1. A tack pulling and resetting machine having, in combination, a tack driving plunger, means under the control of the operator for imparting a working stroke to the plunger, a rotary tack pulling tool having its axis arranged obliquely to the line of feed of the shoe, and means for continuously actuating the tack pulling tool, substantially as described.

2. A tack pulling and resetting machine having, in combination, a rotary tack pulling tool arranged to have a tack pulling movement in a rearward direction, means for actuating the tool, a tack driving plunger located adjacent to the tack pulling tool and operating in the line of feed of the shoe, and means under the control of the operator for imparting a working stroke to the plunger, substantially as described.

3. A tack pulling and resetting machine comprising a rotary tack pulling tool arranged to operate in the line

of feed of the shoe, mechanism for actuating the tool transversely to the line of tacks, and a stationary jaw arranged to support the tack against the thrust of the tack pulling tool and having provision for a yielding movement away from the tool, substantially as described.

1,109,221. LAMP. AUGIE L. HANSEN, Chicago, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1913. Serial No. 805,909. (Cl. 240—53.)



1. In a lamp of the class described, the combination of a supporting structure having guide-ways, a reflector secured to said structure, a burner, and a supporting frame for said burner having frictional slidable engagement in said guide-ways whereby said burner may be adjusted with reference to said reflector.

2. In a lamp, the combination of a supporting plate having guiding brackets, a burner structure having tongues extending therefrom and adapted for slidable engagement in said brackets, and a spring tongue for coöperating with said supporting plate to cause said other tongues to engage frictionally with said brackets.

3. In a lamp, the combination of a supporting plate having guiding brackets, a burner structure slidable on said plate in said brackets, and a spring tongue on said structure for causing frictional engagement of said structure with said brackets.

4. In a lamp, the combination of a supporting frame, a shell secured to said frame and having an opening at its under side, said supporting frame having guide-ways, a burner extending through said opening into said shell, and a supporting structure for said burner having adjustable slidable engagement in said guide-ways whereby said burner may be readily adjusted with reference to said shell.

5. In a lamp, the combination of a supporting frame, a reflector shell secured to said frame and having an opening in its lower side, guide brackets on said frame, an L-shaped supporting frame, and a burner secured to the horizontal wall of said L-shaped supporting frame and extending through said opening into the shell, the upwardly extending wall of said L-shaped frame having slidable adjustable engagement in said guide brackets whereby the burner frame may be readily adjusted with reference to the shell or readily entirely disconnected from said supporting frame.

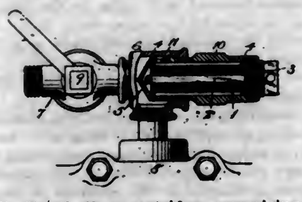
[Claims 6 to 8 not printed in the Gazette.]

1,109,222. OILER. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 16, 1910, Serial No. 561,715. Divided and this application filed Aug. 13, 1910. Serial No. 577,030. (Cl. 184—58.)

1. An oil distributing cartridge comprising a strip of oil absorbing material and a strip of wire gauze rolled together to form a porous mass.

2. An oil distributing cartridge comprising a plug, a pin projecting therefrom, a strip of oil absorbing material and a strip of wire gauze rolled together around said pin to form a porous mass.

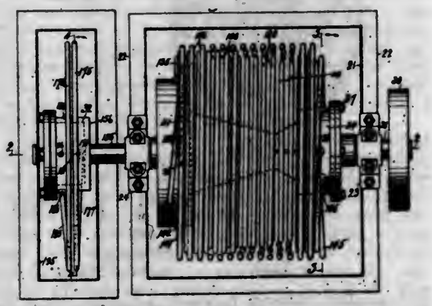
3. An oil distributing cartridge comprising a plug, a pin projecting therefrom, a strip of oil absorbing material and a strip of wire gauze rolled together around said pin to form a porous mass and means for securing said porous mass in position on the pin.



4. An oil distributing cartridge comprising a screw threaded plug, a pin projecting therefrom, a strip of oil absorbing material and a strip of wire gauze rolled together around said pin to form a porous mass and means engaging the pin for securing the porous mass in position thereon.

5. An oil distributing cartridge for a fluid pressure supply passage comprising a hollow shell arranged to project into said supply passage, a plug removably secured to the shell and an exposed porous body portion secured to the plug and projecting into said hollow shell the hollow shell being provided with one or more openings for bringing the said porous body portion into open communication with the fluid pressure supply passage.

1,109,223. ROTARY REFRIGERATING APPARATUS. DAVID J. HAVENSTEITE, Newark, N. J., assignor to Julius H. Stone, Noroton Heights, Conn. Filed Nov. 18, 1911. Serial No. 660,954. (Cl. 62—115.)



1. In a refrigerating apparatus the combination of a rotary reservoir for a refrigerant and a compressing fluid, a compression chamber at one end of said reservoir, an expansion chamber at the other end thereof, means to conduct the refrigerant and compressing fluid from said reservoir to the compression chamber and at the same time compress and liquefy the refrigerant and means to conduct the liquefied refrigerant to said expansion chamber.

2. In a refrigerating apparatus the combination of a rotary reservoir for a refrigerant and a compressing fluid, a compression chamber extending from said reservoir, an expansion chamber extending from the reservoir, a charging chamber formed with the reservoir, a compressing coil connecting the said charging chamber and the compression chamber, means to conduct the refrigerant from the compression chamber to the expansion chamber and means to lead the compressing fluid from the compression chamber back to said reservoir.

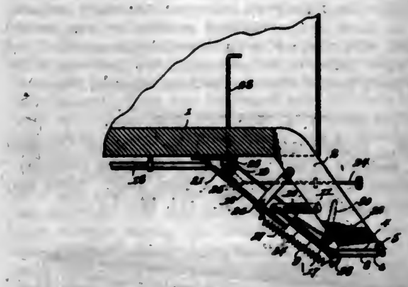
3. In a refrigerating apparatus the combination of a rotary reservoir for a refrigerant and a compressing fluid, a compression chamber at one end of said reservoir, an expansion chamber at the other end of the reservoir, means to charge the reservoir, a coil connecting the charging end of the reservoir and the said compression chamber, a hollow bracket in the compression chamber, floating supporting sleeves extending from said bracket registering with bearings in the compression chamber, a regulating valve controlling a port leading into said bracket, a float in the compression chamber supporting said valve, a conduit having a port in the compression chamber leading through said hollow bracket and extending to the expansion chamber and a float encircling said conduit and controlling the port therein.

4. In a refrigerating apparatus the combination of a rotary reservoir, a charging chamber formed with the reservoir at one end thereof, a compression chamber at the other end of the reservoir, a coil connecting the charging chamber and said compression chamber, an expansion chamber beyond said charging chamber, expansion coils connected with the expansion chamber, means to control the flow of a compressing fluid from the compression chamber to said reservoir, means to conduct a refrigerant from the compression chamber to the expansion chamber, and means to control the flow of said refrigerant to said expansion chamber.

5. In a refrigerating apparatus the combination of a rotary reservoir for a refrigerant and a compressing fluid, a compression chamber connected to said reservoir, an expansion chamber connected to said reservoir, a compressing coil with one end extending from the reservoir and the other end connected to said compression chamber, automatic means to discharge the compressing fluid from the compression chamber and return it to the reservoir to prevent the overflowing of said fluid in the compression chamber and automatic means to discharge the refrigerant from the compression chamber and lead it into said expansion chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,109,224. EXTENSION CAR-STEP. BERVIN E. HERRIN, Ahloso, Okla. Filed May 6, 1913. Serial No. 765,849. (Cl. 105—86.)



1. In combination with an extensible car step, a compressed air cylinder, a piston operable within said cylinder and having connection with said step, a valve for controlling the air supply thereto, means for actuating said valve from the car platform, means for actuating said valve from the station platform, and means having connection with said piston for actuating said step independent of the pneumatic means, as and for the purpose set forth.

2. In combination with an extensible car step, pneumatic means including a compressed air cylinder, a piston operable within said cylinder, said piston having connection with the said step, a valve for controlling the air supply thereto, a segmental rack secured to said valve adapted to be actuated from the car platform, a link connected to said valve adapted to be actuated from the station platform, and spring means for returning said step to its normal folded position when the air pressure within the cylinder is relieved, as and for the purpose set forth.

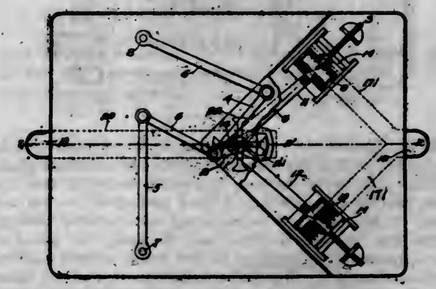
3. In combination with an extensible car step, an operating rod connected thereto, movable support means therefor, and pawl and ratchet mechanism connected to said operating rod for actuating said step, as and for the purpose set forth.

4. In combination with an extensible car step, a compressed air cylinder, a piston operable within said cylinder and having connection with said step, a rotary valve operable adjacent said cylinder for controlling the air supplied thereto, means for actuating said valve from the car platform, means for actuating said valve from the station platform, and means including suitable pawl and ratchet mechanism having connection with said piston for actuating the same independent of the pneumatic means, as and for the purpose set forth.

5. In combination with an extensible car step, an operating rod therefor, support means for the said step, means for normally maintaining said step in folded position, and means including suitable pawl and ratchet mechanism having connection with said operating rod for actuating the same to extend the step, as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,109,225. GAS-METER. CHARLES W. HINMAN, Boston, Mass. Filed Sept. 20, 1906. Serial No. 335,359. (Cl. 73—1.)



1. A gas meter, having, in combination, valves and valve seats provided with ports offering a variable resistance to the flow of gas according to the position of the valves, means offering an inversely varying resistance to the flow of gas through the meter to compensate for the variation in the resistance offered to said flow by the valves and ports, and means for operating the valves and resistance means, substantially as described.

2. A gas meter, having, in combination, valves and valve seats provided with ports for controlling the flow of gas, a compensating device, and means operating the valves to vary the area of the open ports and operating the compensating device to compensate for the variations in said open port area whereby a substantially constant flow of gas through the meter is maintained, substantially as described.

3. A gas meter, having, in combination, valves and valve seats provided with ports offering a variable resistance to the flow of gas, and a compensating device, and means for operating the valves and for operating the compensating device to maintain a substantially constant flow of gas through the meter, substantially as described.

4. A gas meter, having, in combination, valves and valve seats provided with ports for controlling the flow of gas, to variably throttle the flow of gas through the ports, a throttling device, and means operating said valves and also the throttling device to variably throttle the flow of gas inversely to the throttling of the valves, substantially as described.

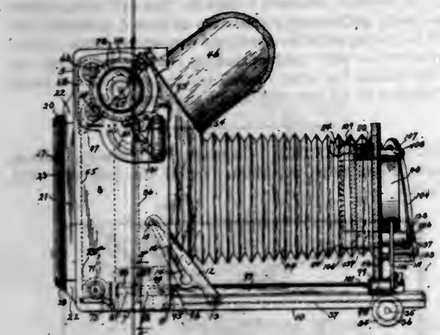
5. A gas meter, having, in combination, valves and valve seats provided with ports for controlling the flow of gas, means for operating the valves, and a resistance device to compensate for the variable resistance offered to the flow of gas by the valve ports, said resistance device being operatively connected to the valve operating means, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,109,226. CAMERA. LUDWIG HOLLAND-LEITZ, Chicago, Ill., assignor to John Howard McElroy, Chicago, Ill. Filed Mar. 7, 1910. Serial No. 547,643. (Cl. 95—42.)

1. In a camera, the combination with a shallow box, of means for holding a sensitized surface in a certain plane, a lens, a focusing surface, means for focusing the lens

upon said focusing surface, a hood located at the top and front of the box and surrounding an aperture through which the focusing surface may be seen, the plane of the aperture being inclined to the plane of said surface, and a plate adapted to close said aperture pivoted at the upper edge thereof and swinging always substantially above the top of the sensitized plate.



2. In a camera, the combination with a shallow box, of means for holding the sensitized surface in a certain plane, a lens, a focusing surface, means for focusing the lens upon said focusing surface, a hood located at the top and front of the box and surrounding an aperture through which the focusing surface may be seen, the plane of the aperture being inclined to the plane of said surface, a plate adapted to close said aperture pivoted at the upper edge thereof and swinging always substantially above the top of the sensitized plate, and means for automatically first moving the plate to close the aperture and then exposing the sensitized surface.

3. In a camera, the combination with a box, of means for holding a sensitized surface in a certain plane, a lens, a focusing surface, means for focusing the lens upon the focusing surface, a hood located at the front of the box and surrounding an aperture through which the focusing surface may be seen, a swinging plate pivoted at one edge of the aperture to open and close the same, and curtains connecting the two edges of the plate adjacent the pivoted edge to the adjacent edges of the aperture.

4. In a camera, the combination with a box, of means for holding a sensitized surface in a certain plane, a lens, a focusing surface, means for focusing the lens upon the focusing surface, a hood located at the front of the box and surrounding an aperture through which the focusing surface may be seen, a swinging plate pivoted at one edge of the aperture to open and close the same, and rectangular curtains connecting the two edges of the plate adjacent the pivoted edge to the adjacent edges of the aperture.

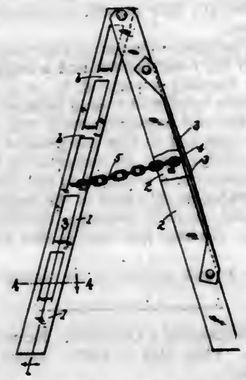
5. In a camera, the combination with means for holding a sensitized surface in a certain plane, of a lens, a movable exposing curtain between the lens and said plane, a covering curtain, antomatic means for first moving the exposing curtain and then the covering curtain, mechanism for regulating the interval of time between the movements of the two curtains to regulate the time of exposure, means for reguluating the distance between the rear edge of the exposing curtain and the forward edge of the covering curtain as they move transversely to the sensitized surface, and means for regulating the speed of the movement of said curtains.

[Claims 6 to 11 not printed in the Gazette.]

1,109,227. LEAD-PENCIL. JOHN A. HOLLENBERGER, Hagerstown, Md. Filed Dec. 18, 1912. Serial No. 737,536. (Cl. 120—19.)

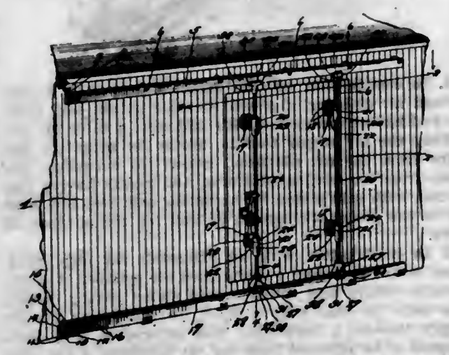
A lead pencil comprising a body portion formed with a longitudinal bore, a tube having a bore of equal diameter to that of the body portion fitted within one end of said body portion, a stick of lead slidable within the bores of the body portion and tube, said tube being provided upon opposite sides with longitudinal recesses communicating with the bore, said stick of lead projecting into the recesses, and means for holding the lead in adjusted position carried by said tube.

1,109,228. STEP-LADDER. DALLAS A. HOUSTON, Springfield, Ill. Filed Apr. 6, 1912, Serial No. 688,883. Renewed Jan. 21, 1914. Serial No. 813,550. (Cl. 228—14.)



A ladder comprising an inverted U-shaped metallic frame, the sides thereof having sections or tongues cut therefrom, said tongues being opposite one another and bent at right angles to the said sides, the free ends of the tongues being welded together to form rungs or steps.

1,109,229. DOOR-HANGER. ROBERT HUFF, Passaic, N. J., assignor to the "Box Car Flush Door Company" Incorporated, a Corporation of New York. Filed May 28, 1913. Serial No. 770,327. (Cl. 16—7.)

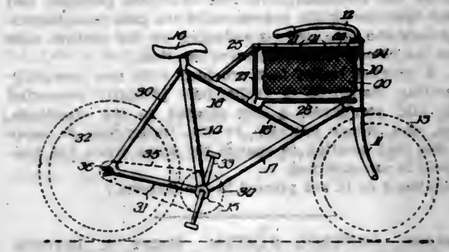


1. In improvements in door hanger construction, upper and lower rails, hangers thereon having grooves to receive said rails and to be engaged thereby, one of said hangers having a transverse groove extending in a plane transversely of one of said rails, a spool roller bearing engaging between the transverse groove and one of said rails having flanges engaging the inner and outer faces of said hanger to hold the spool roller bearing in place, rods having bearing connections with said hangers, and connections between the rods and the door.

2. In improvements in door hanger construction, a pair of supporting rails, pairs of hangers on said rails, each hanger of one pair having a groove arranged in a plane

parallel with its supporting rail and engaging therewith, and provided with a second groove extending at right angles to the first groove, said second groove being deeper than the first groove, a spool roller bearing comprising a cylinder of less radii than the radii of the crotch of the second groove and engaging the same, the cylinder being substantially corresponding in length with the crotch of the second groove, said roller bearing having flanges to engage the inner and outer faces of said hanger to prevent displacement of the roller bearing, and means of connection between said hangers and the door.

1,109,230. CYCLE-FRAME. LUTHER JOHNS, Oak Park, Ill. Filed Feb. 24, 1913. Serial No. 750,079. (Cl. 208—45.)



1. In a package carrying cycle frame, the combination of a steering head, a saddle post, a reach extending from the steering head to the saddle post, a brace extending from said reach to said saddle post, wheel supporting elements for the frame, and a package-carrier frame extending from said steering head and connected to said brace, substantially as described.

2. In a package carrying cycle frame, the combination of a steering head, a seat post, means connected with said seat post for supporting a wheel, a reach connecting said steering head and said seat post, a brace connecting said reach and said seat post, a package-carrier frame connected to said steering head, and a bracing element extending from said brace to said package-carrier frame.

3. In a package carrying cycle frame, the combination of a seat post, a forked suporting member extending rearwardly from said seat post, a bracing member connecting said forked supporting member and said seat post, a steering head, a reach connecting said steering head and said seat post, a brace connecting said reach and said seat post, a package-carrier frame connected to said steering head, and a connection between said carrier frame and said brace.

4. In a package carrying cycle, the combination of a seat post, a wheel standard, a steering head, a reach extending from said steering head to said seat post, a brace extending from said reach to said seat post, a package-carrier frame connected to said steering head, a connection between said carrier frame and said brace, and a package receptacle supported by said frame, the rear wall of said package receptacle forming an acute angle with the plane of the package-receptacle frame.

5. In a package-carrying cycle frame, the combination of a seat post, a steering head, a substantially Y-shaped structure having one leg thereof rigidly connected to said steering head and two legs thereof rigidly connected to said seat post, and a package-carrier frame rigidly connected to said steering head and to one of the legs of said Y-shaped structure connected to the seat post.

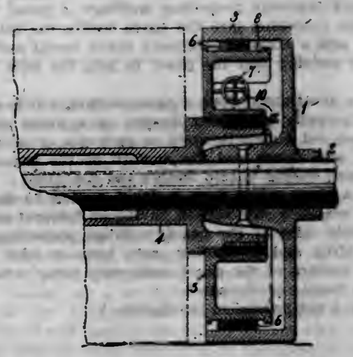
[Claim 6 not printed in the Gazette.]

1,109,231. BLOOMERS. MARGARET E. KILLEAN, San Francisco, Cal. Filed Sept. 8, 1913. Serial No. 788,724. (Cl. 2—122.)

In a bifurcated nether garment, a waist band having separated ends secured to the upper edge of the garment, said waist band being formed of inelastic material, a flap connected to the seat, an elastic band at the upper edge of the flap directly connected to the ends of said flap, fastening means at the ends of the waist band, and fastening means at the ends of the flap to engage with the

first named fastening means, whereby said elastic band of the flap acts to tension the waist band and to draw same taut and smooth.

1,109,232. FRICTION-CLUTCH. ALBERT KINGSBURY, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 7, 1911. Serial No. 642,883. (Cl. 192—14.)



1. The combination with two independently rotatable members having concentric annular surfaces, of a helical spring held upon the inner annular surface against relative rotative movement and expansible by centrifugal force to engage the outer annular surface.

2. The combination with a driven shaft having an annular clutch member and a driving member having an annular surface located within said clutch member, of a helical spring mounted upon said annular surface and held thereon against relative rotative movement, and a tension spring for normally clamping the helical spring to said annular surface and the pull of which is overcome by centrifugal force when the driving member attains a predetermined speed of rotation.

3. A clutch comprising concentric driving and driven rotatable members and an interposed circumferentially disposed helical spring that is constrained to turn with the driving member and is expansible by centrifugal force to effect a frictional locking engagement between said members.

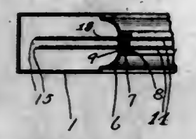
4. A friction clutch comprising a hollow cylindrical member, an independently rotatable driving member, a circumferentially interposed helical spring that is expansible by centrifugal force to engage the hollow cylindrical member and is constrained to turn with the driving member, and means acting upon said spring in opposition to centrifugal force.

5. A friction clutch comprising a pair of concentric independently rotatable members, an interposed helical

spring having closed turns of rectangular cross section, a spring tending to wrap the helical spring about the inner member, and means for preventing rotative movement of said helical spring upon said inner member.

[Claim 6 not printed in the Gazette.]

1,109,233. CONSTRUCTION OF SHEET-METAL DOORS. MAURICE LACHMAN, New York, N. Y. Filed May 6, 1913. Serial No. 765,779. (Cl. 189—53.)



1. In a sheet metal door, a panel, a stile section having an inwardly projecting flange, and a metallic strip between said flange and the surface of said panel welded to both said flange and said panel to secure said stile to the panel.

2. In a sheet metal door, a panel, a stile section provided with a molding along the inner edge, a flange projecting inwardly from said molding and a relatively heavy solid metal strip between said flange and said panel, said strip being welded to the face of the panel and to the flange.

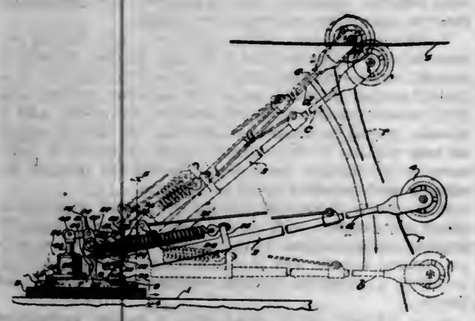
3. In a sheet metal door, sheet metal stile sections provided with inwardly projecting moldings, a panel having free edges extending into the space within the said stile sections and a strip of relatively heavy metal welded to both the molding and the panel to join the stile to the panel.

4. In a sheet metal door, a panel section, a stile section having inwardly projecting flanges on opposite sides of said panel and a metallic strip on each side of said panel between said flange and the surface of the panel, said strips being welded to said flanges and the panel.

5. In a sheet metal door, a panel section having free edges, a one-piece stile section having an integral molding on opposite sides of the panel, a flange projecting from said molding and a welding strip between said flange and the surface of the panel, said strip being welded to both the flange and the panel.

[Claim 6 not printed in the Gazette.]

1,109,234. RETRIEVING-TROLLEY. CHARLES EUGENE LANG, Los Angeles, Cal. Filed June 22, 1908. Serial No. 439,878. (Cl. 191—88.)



1. A retrieving trolley comprising a trolley pole, springs normally in commission to uplift the trolley pole, a fluid containing cylinder, a piston for the cylinder, said piston being operable by movement of the trolley pole, a by-pass way to pass the fluid from one side of the piston to the other side, a valve operable by movement of the piston to close the way, and means operable by pressure of said fluid to throw the springs out of commission.

2. A pivoted heel, a latch to hold said heel, a pole fulcrumed on said heel, a spring arranged to raise the pole, means operable by the shifting fulcrum to change the draft line of the spring to reduce its lifting effect on the pole, and means to release the latch to allow said heel to shift, thereby to shift the fulcrum and change the draft line of the spring.

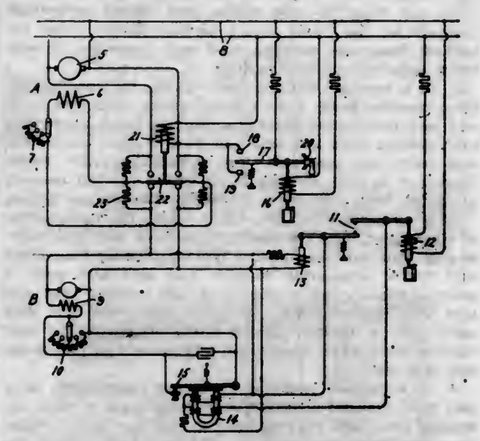
3. A rotatable foot, a pivotally mounted trolley pole carried thereby, means to restrict the rotation of the foot, means to swing the pole upward, a latch to retain said pole-swinging means and pole in pole-supporting position relative to each other, and means operable by rapid movement of the pole to release said latch and to move the restricting means into commission.

4. A trolley pole mounted to swing on a vertical axis and also on a horizontal axis, means for swinging said pole on the horizontal axis into operative position, and means operable by the movement of the pole to automatically lock the pole against swinging on the vertical axis when the pole is out of operative position.

5. A pivoted trolley-foot provided with two upwardly-projecting standards, a trolley-pole pivotally connected with said standards, a dog pivoted to the standards, stops, and means operable by the trolley-pole to move the dog into position to engage the stops when the trolley-pole is unrestrained.

[Claims 6 to 12 not printed in the Gazette.]

1,109,235. CONTROL SYSTEM. HARRY A. LAYCOCK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 21, 1912. Serial No. 679,018. (Cl. 175—294.)



1. In a control system, an electric generator, two sources of excitation therefor, means for automatically controlling the voltage of one of said sources to regulate the voltage of said generator in the desired manner, the other source being unaffected by said means, and automatic means for shifting from said controlled source to the other source on a failure of said first-named means.

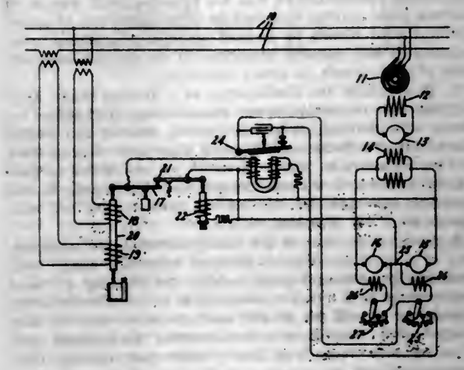
2. In a control system, an electric generator, a normally disconnected unregulated source of excitation, a normally connected regulable voltage source of excitation, automatic means for controlling said latter source to regulate the voltage of said generator in the desired manner, and other means for automatically disconnecting said regulable voltage source and connecting said unregulated source to said generator field on an abnormal change of voltage of said generator resulting from a failure of said first-named means.

3. In a control system, an electric generator, an exciter normally energizing the field thereof, automatic means controlling said exciter to regulate the voltage of said generator in the desired manner, and other means responsive to an abnormal voltage on said generator, resulting from a failure of said automatic means, for shifting the energization of said generator field to self-excitation.

4. In a control system, an electric generator, a normally disconnected unregulated source of excitation, a normally connected regulable voltage source of excitation, automatic means for controlling said latter source to regulate the voltage of said generator in the desired manner, and electromagnetically operated means for automatically disconnecting said regulable voltage source and connecting said unregulated source to said generator field on an abnormal change of voltage of said generator, resulting from a failure of said first-named means.

5. In a control system, an electric generator, an exciter normally energizing the field thereof, automatic means controlling said exciter to regulate the voltage of said generator in the desired manner, and an electromagnetically operated switch, responsive to an abnormal voltage on said generator, resulting from a failure of said automatic means, for shifting the energization of said generator field to self-excitation, and holding it there.

1,109,236. REGULATING SYSTEM. HARRY A. LAYCOCK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 28, 1913. Serial No. 763,988. (Cl. 171—225.)



1. A means for regulating the electrical condition of a circuit comprising a dynamo electric machine connected thereto and an exciting means for the said machine comprising two sources of electrical energy connected in opposition, at least one of said sources being a dynamo electric machine, and means controlled by the electrical condition of the aforesaid circuit and of the latter dynamo electric machine for regulating the field excitation of the said machine.

2. A means for regulating the field excitation of a dynamo electric machine comprising two sources of electrical energy connected in opposition, one of said sources being a dynamo electric machine, and a regulator of the vibrating contact type for the field of the latter dynamo electric machine having an electromagnetic coil connected across the armature leads thereof.

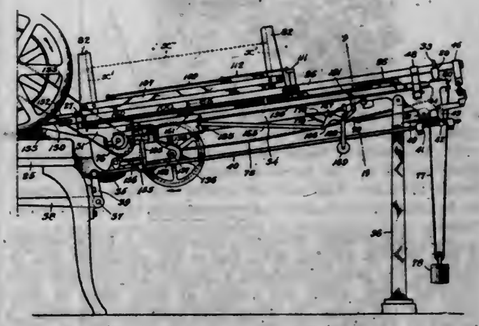
3. A means for regulating the field excitation of a dynamo electric machine comprising two sources of electrical energy connected in opposition, one of said sources being a dynamo electric machine, and a regulator of the vibrating contact type having coils connected across the leads of the former and latter dynamo electric machines respectively.

4. A system for regulating the electrical condition of a circuit comprising a dynamo electric machine and means for exciting the field thereof comprising two sources of electrical energy connected in opposition, one of said sources being a dynamo electric machine, and a regulator of the vibrating contact type for the field of the latter dynamo electric machine having an electromagnetic coil connected in the aforesaid circuit and another coil connected across the armature leads of the said machine.

5. A means for regulating the field excitation of a dynamo electric machine comprising a pair of generators connected in opposition and a regulator of the vibrating contact type for the field of one of said generators having an electromagnetic coil connected across the armature leads of the said generator.

[Claims 6 and 7 not printed in the Gazette.]

1,109,237. STRIP-FEEDING MECHANISM. HERBERT C. LEONARD, Acushnet, Mass., assignor to Atlas Tack Company, Fairhaven, Mass., a Corporation of New Jersey. Filed May 6, 1913. Serial No. 765,788. (Cl. 10—177.)



1. Strip-handling mechanism comprising means for feeding a blank strip, a magazine for blank strips, sliding members arranged to carry a blank strip from said magazine to said feeding means, and swinging members arranged to coöperate with said sliding members to clamp the blank strip, the axes of said swinging members being transverse to the plane of carrying movement of the strip.

2. Strip-handling mechanism comprising means for feeding a blank strip, a magazine for blank strips, means arranged to carry a blank strip from said magazine to said feeding means, and a pivotally mounted member arranged to overlie the strip on said carrying means and move therewith to said feeding means, the axis of said pivotally mounted member being transverse to the plane of carrying movement of the strip.

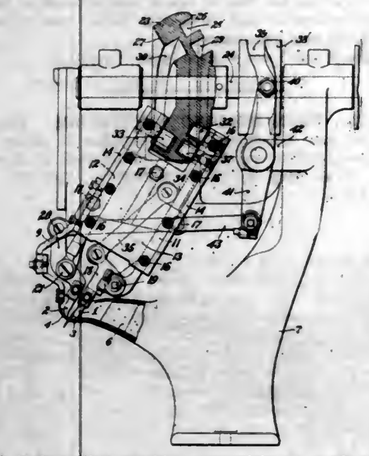
3. Strip-handling mechanism comprising means for feeding a blank strip, a magazine for blank strips, sliding means arranged to carry a blank strip in a straight path from said magazine to said feeding means, and a member arranged to swing about an axis toward and from said feeding means to hold the blank strip on said carrying means, said axis being transverse to the plane of carrying movement of the strip.

4. Strip handling mechanism comprising a feed barrel, means movable through said barrel for feeding a strip by engagement with an end of the strip, said barrel having an opening in its side to receive a strip, means for carrying a strip into said barrel through said opening, and means for positioning one end of the strip for engagement by said feeding means, said positioning means being movable by said feeding means from strip-engaging position.

5. Strip handling mechanism comprising a feed barrel having an opening in its side for receiving a strip, means movable through said barrel for feeding a strip, means for transferring a strip into said barrel through said opening, and means movable into said barrel by said transferring means for holding an end of the strip in position to be operatively engaged by said feeding means, said strip-holding means being movable by said feeding means while said transferring means is in operative engagement with said strip.

[Claims 6 to 12 not printed in the Gazette.]

1,109,238. TACK-PULLING MACHINE. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 11, 1911. Serial No. 601,953. (Cl. 12—16.)



1. A tack pulling machine, comprising a work support, a pair of tack pulling jaws, means for advancing and retracting the jaws comprising a rotary cam provided with working faces which are normal at their point of operation to the plane in which the jaws are retracted, a plurality of slides supporting the jaws and adapted to move parallel to the said plane, and operative connections between the cam and slides, substantially as described.

2. A tack pulling machine, having, in combination, a work support, a pair of tack pulling jaws, means for advancing and retracting the jaws comprising a rotary cam having a plurality of conical faces parallel to the plane in which the jaws are retracted, cam grooves formed in the conical faces and having their working faces normal to the plane at their points of operation and operative connections between the cam and jaws, substantially as described.

3. A tack pulling machine, having, in combination, a work support, a pair of tack pulling jaws, a slide supporting each jaw, a rotary cam adapted to reciprocate the slides to advance and retract the jaws, the slides being adapted to move parallel to the plane in which the jaws are retracted, an auxiliary slide supported upon one of the first mentioned slides and operated by the rotary cam to oscillate one of the jaws, and a second rotary cam operatively connected to the second jaw and adapted to oscillate it at the proper intervals to open and close the jaws, substantially as described.

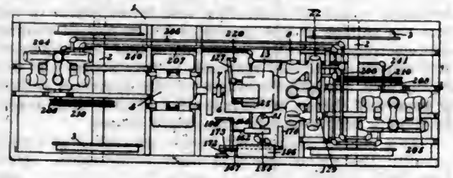
4. A tack pulling machine comprising a pair of jaws having a tack pulling movement in an inclined plane, a slide carrying each jaw and moving parallel to the plane of the tack pulling movement, and a single rotary cam for imparting a tack pulling movement to both jaws, substantially as described.

5. A tack pulling machine comprising a tack pulling tool, a drive shaft, a rotary cam mounted thereon having a face arranged obliquely to the drive shaft and provided with a cam groove, and operative connections between the rotary cam and tack pulling tool, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,239. POWER-DRIVEN RAILWAY-CAR. CHARLES M. MANLY, Freeport, and WOOLRIDGE B. MORTON, New York, N. Y. Filed Sept. 14, 1911. Serial No. 649,360. (Cl. 138—3.)

1. In a vehicle the combination with the driving wheels, of a driving motor, a hydraulic power transmitting mechanism between said driving motors and said wheels, and means operatable at will for enabling or preventing said wheels overrunning said driving motor while maintaining said driving connection.



2. In a vehicle the combination of a driving shaft, driving wheels, a reversible hydraulic power transmitting mechanism between said driving shaft and driving wheels for driving said wheels in either direction without changing the direction of rotation of said driving shaft and means operatable at will for enabling said wheels to overrun their driving elements in either direction of movement of said driving wheels as desired while maintaining said driving connection.

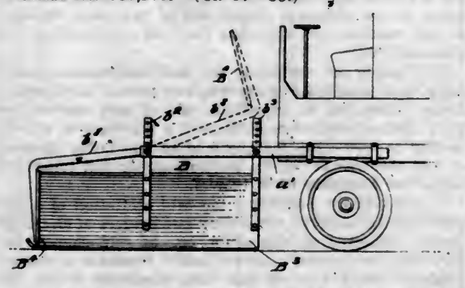
3. In a vehicle the combination of a driving shaft, driving wheels, a reversible hydraulic power transmitting mechanism between said driving shaft and driving wheels and means operatable at will for enabling said wheels to overrun their driving elements in either direction of movement of said wheels as desired without permitting overrunning in the opposite direction, or to prevent overrunning of said wheels in either direction.

4. In a vehicle the combination of a driving shaft, driving wheels, a reversible power transmitting mechanism between said driving shaft and driving wheels and means operatable at will for enabling said wheels to overrun their driving elements in either direction of movement of said wheels as desired without permitting overrunning in the opposite direction, or to prevent overrunning of said wheels in either direction.

5. In an apparatus of the class described, the combination of a variable capacity pump, a hydraulic motor, connections between said pump and motor forming a closed fluid circuit and a valve mechanism in said connections operatable at will to permit said motor to overrun said pump in one direction only or to prevent independent operation of said pump and motor while maintaining their driving connection.

[Claims 6 to 18 not printed in the Gazette.]

1,109,240. SNOW-REMOVING DEVICE. WILLIAM H. MASTERSON, New York, N. Y. Filed Nov. 8, 1912. Serial No. 730,279. (Cl. 37—35.)

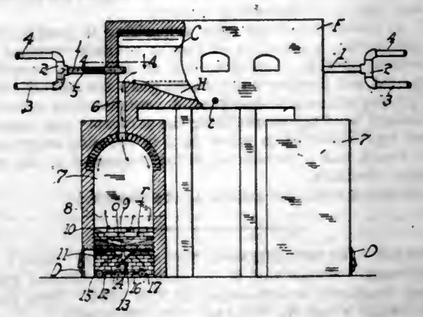


1. A snow removing device comprising an inclosing body having a rear end portion, two outwardly and forwardly diverging sides connected to the rear portion, a substantially unobstructed bottom, means for supporting the same, means for driving same in a forward direction, and means connected to the front of the inclosing body to retain the load within the same.

2. The combination with suitable supporting and driving means, of an inclosing body having a rear portion, two outwardly and forwardly diverging sides connected to the rear portion, a substantially unobstructed bottom, a front piece normally retained in open position and adapted to swing closed to retain the load within the inclosure.

3. The combination with a motor truck having arms detachably connected thereto and extending forwardly therefrom, of an inclosing body having a rear portion, two outwardly and forwardly diverging sides connected to the rear portion, a substantially unobstructed bottom, and a front piece pivoted to swing into position to retain a load of snow with the body.

1,109,241. METALLURGICAL FURNACE. EDWARD MCCABE, Granite City, Ill. Filed Mar. 13, 1914. Serial No. 824,447. (Cl. 75—94.)



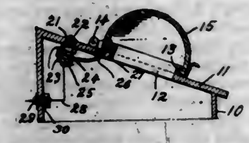
1. In combination with a furnace provided with a hearth, down-take flues positioned in proximity to the hearth, a checker-work regenerator, a basin into which said flues operate to discharge overflow material from the hearth, said basin being spaced from the checker-work and provided with a drain or discharge opening, and a portable slag pot movable into position beneath the opening and adapted to be forced against the bottom of the basin and form therewith a seal around the opening.

2. In combination with a furnace having a treatment chamber and a hearth, a down-take flue leading from said treatment chamber in proximity to the hearth, an air-and-gas chamber in communication with said down-take, a checker-work regenerator leading from the chamber, a basin beneath the down-take spaced from the checker-work and provided with a drain opening, a portable pot movable into position beneath the opening and adapted to be forced against the bottom of the basin and form therewith a seal circumscribing said opening.

3. In combination with an open-hearth furnace provided with a treatment chamber and a hearth, down-take flues leading from the chamber in proximity to the hearth, an air-and-gas chamber communicating with said flues, a checker-work regenerator flue or tunnel leading from the bottom of said air-and-gas chamber, a pair of basins positioned at the bottom of said last mentioned chamber beneath the down-take flues and provided with drain openings, a dividing ridge separating the basins, a chamber or tunnel beneath each basin opposite the drain opening thereof, and a portable pot operating in said tunnel and adapted to have its edges brought into forcible engagement with the bottom of the basin and form therewith, a seal surrounding the drain opening of the basin.

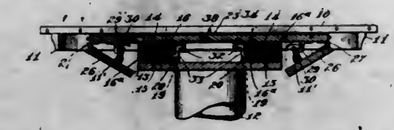
4. In combination with an open hearth furnace having a treatment chamber and a hearth, and provided with alternately operable burners at opposite sides of the hearth, down-take flues leading from the treatment chamber at opposite sides and in proximity to, the hearth, an air-and-gas chamber communicating with each set of said flues, a checker-work regenerator flue leading from the bottom of each air-and-gas chamber, a pair of non-inter-communicating catch-basins at the bottom of the air-and-gas chamber, positioned under the down-take flues and to one side of the terminal of the regenerator, a dividing ridge separating the basins, each basin being provided with a bottom drain opening, a tunnel under each basin communicating with the basin through the drain-opening, the latter penetrating the roof of the tunnel, a portable slag-pot adapted to be positioned beneath the roof of the tunnel beneath the drain opening and provided with a luting band to engage the roof of the tunnel around the opening, and means for forcing the slag-pot and lute thereof into sealing engagement with the tunnel roof, the parts operating substantially as, and for the purpose set forth.

1,109,242. SIGNALING DEVICE FOR LETTER-BOXES. CHARLES E. MCINTOSH and SOLOMON S. HOPKINS, Waynesboro, Va. Filed Jan. 8, 1913. Serial No. 740,873. (Cl. 177—301.)



In a device of the kind described, a box comprising a body and a top therefor having a mail receiving opening, a cover hinged to said top and arranged to close said opening, a pair of binding posts mounted at the rear of said opening on said top within the box and insulated therefrom, a laterally disposed spring contact strip mounted on one of said posts and arranged to resiliently bear against the second post, said top having a small opening therethrough substantially centrally positioned at the rear of said mail-receiving opening; an arcuate arm extending through said small opening, one end of said arm being fixed to said cover and the other end arranged to engage said strip and hold the same out of engagement with said second post when the cover is closed, said arm being also adapted for resilient engagement with a side of said small opening during the opening of the cover.

1,109,243. EXTENSION-TABLE. EDWARD H. MERSMAN, Celina, Ohio. Filed Aug. 7, 1911. Serial No. 642,699. (Cl. 45—9.)



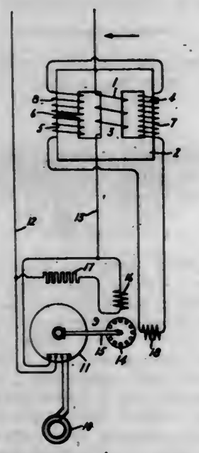
1. In an extension table, the combination of a set of three slide pairs; a bridge connecting the central pair of slides; top sections carried by the inner and outer slide pairs, adapted to meet when the table is closed and mounted above their slides to leave a central clearance space between the slides and top sections; a leaf adapted to fit into said clearance space, comprising a body part, and infolding side edge portions; a frame carried by said bridge and at one end extended therebeyond under one of the table top sections; swinging links carrying the leaf-body, pivoted to said frame; an actuating lever carried by said extended end of the frame; and a connection between said lever and the leaf-body to elevate the leaf on its links when the lever is moved to one position.

2. In an extension table, the combination of slidable semi-circular top sections, slide members secured to the top sections to provide between the slides and top sections a clearance space, a pedestal supporting the slides, a leaf body of size to permit inclusion thereof in said clearance space within the confines of the top when the latter is closed, parallel links connected to the said leaf portion and to a pedestal-carried part, said part extending between the slides toward the edge of one of the table top sections, means upon said extended end of the said part to move said leaf portion upon said links into or out of the plane of the table-top, and edge sections pivoted to the edges of said leaf portion.

3. In an extension table, the combination of a set of three slide pairs; a bridge connecting the slides of the central pair; top sections carried by the inner and outer slide pairs, adapted to meet when the table is closed and mounted above their slides to leave a central clearance space between the slides and the top sections; a leaf adapted to fit into said clearance space comprising a body portion and hinged edge portions; a frame having sides secured to the bridge between the slides and at one end extending therebeyond under one of the table top sections; guide strips secured to the leaf body between the sides of the frame; swinging links connecting the said frame sides and guide strips and means on the frame extension for moving the leaf on its swinging-link connections.

4. In an extension table, the combination of a set of three slide pairs, a bridge connecting the slides of the central pair, top sections carried by the inner and outer slide pairs adapted to meet when the table is closed and mounted above the slides to leave a central clearance space between the slides and the top sections, a leaf adapted to fit into said clearance space comprising a body portion and hinged edge portions, a frame comprising two side members each secured upon the bridge parallel to the slides and extending beyond one edge of the bridge, and a cross member connecting said extended ends of the said members, guide strips secured to the leaf body parallel to said members of the frame, swinging links connecting said side members of the frame and the respective guide strips of the leaf body, an actuating lever carried by said cross member of the bridge-carried frame, and a connection between said lever and leaf body to move a leaf on its link by means of said lever.

1,109,244. CURRENT-REVERSING RELAY. EDWIN J. MURPHY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 5, 1913. Serial No. 752,075. (Cl. 171—119.)



1. A current reversing relay comprising in combination a primary winding, a secondary winding in inductive relation thereto composed of a plurality of portions connected in series and to give opposing electromotive forces, and magnetic means in inductive relation with said windings adapted to change the relative values of said electromotive forces when a current exceeding a predetermined amount flows in the primary winding.

2. A current reversing relay comprising in combination a primary winding, a secondary winding in inductive relation thereto composed of two portions connected in series and to give opposing electromotive forces, and magnetic means in inductive relation with said windings adapted to change the relative values of said electromotive forces when a current exceeding a predetermined amount flows in the primary winding.

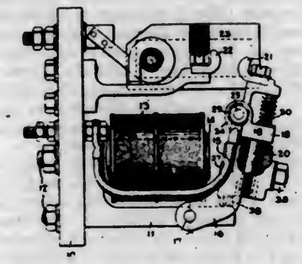
3. A current reversing relay comprising in combination a primary winding, a secondary winding in inductive relation thereto composed of a plurality of portions connected in series and to give opposing electromotive forces, and magnetic means having one portion normally saturated and another portion normally unsaturated in inductive relation with said windings and adapted to change the relative values of said electromotive forces when a current exceeding a predetermined amount flows in the primary winding.

4. A current reversing relay comprising in combination a three legged magnetic core, a primary winding surrounding one leg of said core, and secondary windings connected to give opposing electromotive forces surrounding the other legs one of which is normally saturated and the other unsaturated when the current flowing in the primary is less than a predetermined amount.

5. A current reversing relay comprising in combination a core having a plurality of legs, a primary winding in inductive relation therewith, one of said legs normally saturated and another unsaturated when the current flowing in the primary is less than a predetermined amount, secondary windings surrounding the saturated and unsaturated legs connected in series to give opposing electromotive forces, and a translating device connected to the secondary windings.

[Claims 6 and 7 not printed in the Gazette.]

1,109,245. ELECTROMAGNETIC SWITCH. EDWIN J. MURPHY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 5, 1913. Serial No. 771,794. (Cl. 175—281.)



1. An electromagnetic switch comprising a frame of magnetic material, a magnetizing winding therefor, an armature pivoted to said frame, a contact support having a shank entering an aperture in the armature at substantially right angles to the axis of said armature, and a contact pivoted to said support on an axis parallel to the axis of the armature.

2. An electromagnetic switch comprising a frame of magnetic material, a magnetizing winding therefor, an apertured armature pivoted to said frame divided through the aperture into two parts, a contact support having a shank entering said aperture, means for securing the two parts together to clamp the support, and a contact pivoted to said support on an axis parallel to the axis of the armature.

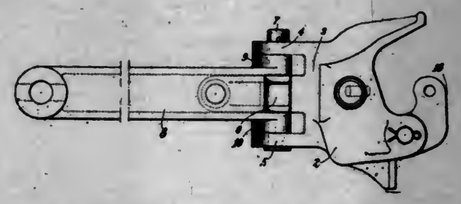
3. An electromagnetic switch comprising a frame of magnetic material, a magnetizing winding therefor, an apertured armature pivoted to said frame, a shank entering the aperture having a head, a contact pivoted to said head, and a spring interposed between the head and the contact tending to turn the latter on its axis.

4. An electromagnetic switch comprising a frame of magnetic material, a magnetizing winding therefor, an armature pivoted to said frame, a shank entering an aperture in the armature at substantially right angles to the axis of said armature, a head for said shank, a contact pivoted to said head, and a spring interposed between the head and the contact tending to turn the latter on its axis.

5. An electromagnetic switch comprising a frame of magnetic material, a magnetizing winding therefor, an armature having two apertures pivoted to said frame and divided through the apertures into two parts, two contact supports each having a shank entering one of said apertures, means for securing the two parts together to clamp the supports, and a contact pivoted to each support on an axis parallel to the axis of the armature.

[Claim 6 not printed in the Gazette.]

1,109,246. CAR-COUPLING. HENRY F. POPE, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 15, 1912. Serial No. 683,931. (Cl. 213—42.)



1. In a car coupling mechanism of the Master Car Builders' type, a coupler-head having vertically disposed projections extending rearwardly therefrom, a hollow coupler shank having vertically disposed forwardly extending lugs, a horizontal pivot pin, said lugs and projections having registering apertures for the admission of the pin, one of said projections having at its rear end spring seats, springs mounted on said seats and bearing against the interior of the coupler shank, and being adapted to hold the coupler head normally in horizontal alinement with the coupler shank.

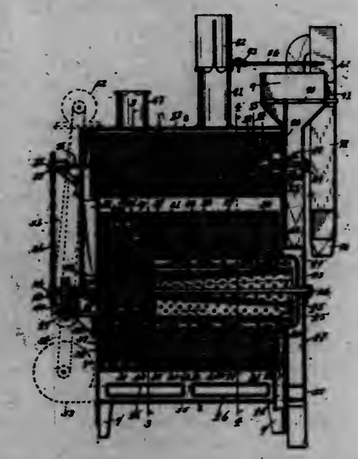
2. In a car coupling mechanism of the Master Car Builders' type, a coupler head having vertically disposed projections extending rearwardly therefrom, a hollow coupler shank having at its forward end vertically extending lugs, said projections and lugs having registering apertures for the admission of a pivot pin, a central extension projecting rearwardly from the coupler shank to the rear of the pivot pin and being adapted to be positioned in the shank of the coupler, and to co-act with means for normally maintaining the coupler head in horizontal alinement with the coupler shank.

1,109,247. CORN-POPPING MACHINE. NATHANIEL B. POST, Chicago, Ill. Filed May 10, 1913. Serial No. 766,750. (Cl. 53—4.)

1. In a corn popping machine, the combination of a popping chamber; a plurality of partitions in said popping chamber dividing the latter into compartments, said partitions being provided with registering perforations in their central portions and registering slits leading from said perforations to the peripheries of said partitions; and a sheet of curved material having offset portions therein removably held in said perforations and slits, substantially as described.

2. In a corn popping machine, the combination of a popping chamber; a plurality of partitions in said popping chamber dividing the latter into compartments, said partitions being provided with registering perforations in their central portions and registering slits leading from said perforations to the peripheries of said partitions; and a spirally curved sheet in said perforations and said slits, the portion of said sheet in said slits having offsets therein and the portion thereof in said perforations being also curved conically, substantially as described.

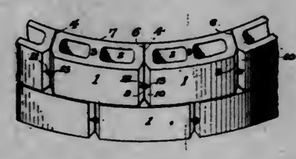
3. In a corn popping machine, the combination of a popping chamber; a plurality of partitions in said popping chamber dividing the latter into compartments, said partitions being provided with registering perforations in their central portions and registering slits leading from said perforations to the peripheries of said partitions; and a curved sheet in said slits and perforations, the portion of said sheet in said slits being offset and having perforations therein except in the offset parts thereof, substantially as described.



4. In a corn popping machine, the combination of a rotary popping chamber; and a spirally curved sheet in said chamber with its outer edge engaging the inner side of the latter, said sheet having spaced offset portions therein and being perforated except in said offset portions, substantially as described.

5. In a corn popping machine, the combination of a rotary popping chamber; a spirally curved sheet in said chamber with its outer edge engaging the inner side of the latter and its inner edge near the axis thereof, said sheet having spaced offset portions therein and being perforated except at said offset portions; and supporting means rigidly supporting said sheet in operative position in said chamber, substantially as described.

1,109,248. REINFORCED BUILDING-BLOCK FOR CIRCULAR WALLS. JOHN J. RAYNER, Washington township, Carroll county, Mo., assignor to O. S. Rayner, Braymer, Mo. Filed Oct. 28, 1912, Serial No. 728,276. Renewed Jan. 23, 1914. Serial No. 813,977. (Cl. 72—42.)



1. The combination in a reinforced building block for circular walls, of an arcuate building block having chamfered end faces, an arcuate reinforcing rod embedded in said arcuate building block, said arcuate reinforcing rod having a hook protruding from one of said chamfered end faces and an eye protruding from the other, said hook being adapted to enter an eye protruding from the chamfered end face of an adjacent block, and said eye being adapted to receive a hook protruding from the chamfered end face of another adjacent block, substantially as described.

2. The combination in a reinforced building block for circular walls, of an arcuate building block having chamfered end faces, a hook protruding from one of said chamfered end faces, an eye protruding from the other of said chamfered end faces, and an arcuate reinforcing rod formed integral with and connecting said hook and eye, substantially as described.

1,109,249. FOUNTAIN-PEN FILLER. WILLIAM RODIGER, Chicago, Ill. Filed Mar. 18, 1911. Serial No. 615,277. (Cl. 226—34.)

1. A fountain pen filler comprising a receptacle having an inelastic body portion, and an elastic tube secured to one end of said body and adapted to receive the fountain pen, and an elastic and compressible member secured to the other end of the body.

2. A fountain pen filler comprising a receptacle having an inelastic body portion, a rubber bottom for the same comprising a seat at its upper end, a diaphragm at its lower end and cylindrical sides connecting such seat and diaphragm and adapting such bottom to be compressed when desired in combination with means for securing the bottom to the body portion of the receptacle.

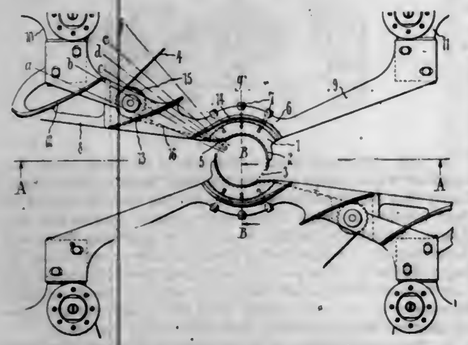
3. A fountain pen filler comprising a receptacle containing an inelastic body portion, a rubber bottom for the same comprising a seat at its upper end, and a bearing against one edge of such body portion, and having a diaphragm connected by flexible side walls to the seat, thus adapting said bottom to be manipulated to give the desired movement to the ink to fill the fountain pen.

4. A fountain pen filling device comprising a receptacle, having an inelastic body portion, and an elastic tube secured to one end of said body portion and adapted to receive the fountain pen and an elastic and extensible member secured to the other end of the body portion.

5. A fountain pen filling device, comprising a receptacle having at one end elastic means adapted to receive the fountain pen, and an elastic member capable of extension and contraction secured to the other end of the receptacle.

[Claim 6 not printed in the Gazette.]

1,109,250. SHUTTLE. VERNON ROYLE, Paterson, N. J. Filed Oct. 19, 1912. Serial No. 726,791. (Cl. 139—27.)



1. A shuttle provided with a thread guide and lay, the said thread guide and lay having an open groove in its forward end.

2. A shuttle provided with a thread guide and lay having an open groove in its forward end, the said forward end of the thread guide and lay having its face directed away from the core in a plane approaching a tangent to the periphery of the weaving pin or core about which the thread guide and lay is intended to operate.

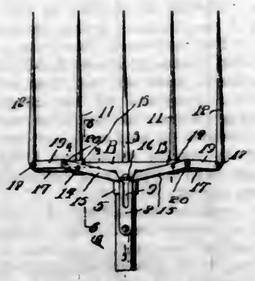
3. A shuttle provided with a thread guide and lay and a holder for the said thread guide and lay, the said holder having its advance edge oblique to a radial line drawn from the center of the weaving pin or core about which the thread guide and lay is intended to operate, the outer portion of the said holder being on a radial line in advance of the inner portion of the said holder.

4. A shuttle provided with a thread guide and lay and a holder for the same, the said holder being provided with a plurality of warp spreaders or fences.

5. A shuttle provided with a thread guide and lay and a holder for the same, the said holder being provided with a plurality of warp spreaders or fences located in planes substantially parallel to a plane tangential to the periphery of the weaving pin or core about which the thread guide and lay is intended to operate.

[Claims 6 to 8 not printed in the Gazette.]

1,109,251. PITCHFORK. ALVIN C. SANDVIG, Grafton, N. D. Filed Sept. 6, 1912, Serial No. 719,025. Renewed Feb. 3, 1914. Serial No. 816,356. (Cl. 55—2.)



1. In a pitch fork, the combination with a head, of outer tines connected to the ends of the head for adjustment therealong, intermediate tines slidable on the head, levers each fulcrumed intermediate its ends to a respective intermediate tine, links each pivotally connected at one end to the outer end of a lever and at its other end to a respective outer tine, and means for adjustably connecting the inner ends of the levers to the head.

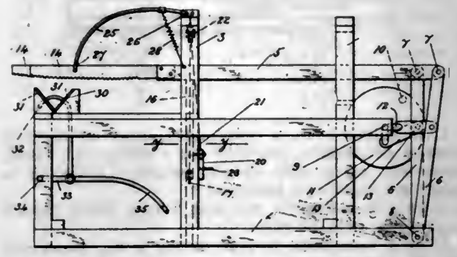
2. In a pitch fork, the combination with a head having an attaching plate centrally extending therefrom and arranged at right angles thereto, of outer tines connected to the ends of the head for adjustment therealong, intermediate tines slidable on the head on either side of the plate, levers each fulcrumed intermediate its ends to a respective intermediate tine, links each pivotally connected at one end to the outer end of a lever and at its other end to a respective outer tine, and means for adjustably connecting the inner ends of the levers to the attaching plate.

3. In a pitch fork, the combination with a head having an attaching plate centrally extending therefrom and arranged at right angles thereto, of outer tines connected to the ends of the head for adjustment therealong, intermediate tines slidable on the head on either side of the plate, levers each fulcrumed intermediate its ends to a respective intermediate tine, links each pivotally connected at one end to the outer end of a lever and at its other end to a respective outer tine, and a pin and slot connection between the inner ends of the levers and the head.

4. In a pitch fork, the combination with a tubular head of angular cross section, of outer tines each having laterally extending angular arms telescopically arranged within a respective end of the head, intermediate tines respectively formed at one end with a rectangular sleeve for sliding engagement with the head, levers each fulcrumed intermediate its ends to a respective intermediate tine, links each pivotally connected at one end to the outer end of a lever and at its other end to a respective outer tine, and means for adjustably connecting the inner ends of the levers to the head.

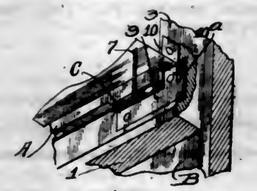
5. In a pitch fork, the combination with a tubular head of angular cross section, a centrally disposed attaching plate extending at right angles from the head and formed with a longitudinal slot, of outer tines each having laterally extending angular arms telescopically arranged within a respective end of the head, intermediate tines respectively formed at one end with a rectangular sleeve for sliding engagement with the head, levers each fulcrumed intermediate its ends to the sleeve of a respective intermediate tine, links each pivotally connected at one end to the outer end of a lever and at its other end to the angle of a respective outer tine, and a clamping means extending through the slot of the plate and engageable with the inner ends of the levers for adjustably connecting the inner ends of said levers along the plate.

1,109,252. SAWING-MACHINE. MATTHEW SCHAMANN, Alma, Wis. Filed June 2, 1913. Serial No. 771,233. (Cl. 143—63.)



In a sawing machine, the combination, with two guides provided with hollow uprights having slots in their adjacent sides, of two saws slidable in the guides above the hollow uprights, plungers for raising the saws slidable in the hollow uprights and projecting from their upper ends, a crossbar pivoted at its opposite ends to the two plungers and working in the said slots, and means for raising the plungers simultaneously connected to the middle part of the crossbar.

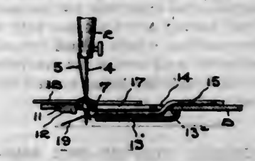
1,109,253. WINDOW AND FRAME THEREFOR. JOHN SCHERORA, Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,239. (Cl. 20—47.)



The combination with a sliding sash, and a frame therefor, of rope attaching and locking means comprising a metallic plate attached to the side rail of the sash and having a portion thereof bent at an angle thereto and provided with a tapered slot to receive the knotted end of a rope for supporting the sash, said side plate being extended into a projecting hook formed integrally therewith, and a plate projecting partly over a recess in the frame adapted to be engaged by said hook when the sash is rotated in a horizontal position to prevent removal of the sash from the frame.

1,109,254. BRAID-GUIDE FOR SEWING-MACHINES. AARON SCHNEIDER, Philadelphia, Pa. Filed Jan. 13, 1914. Serial No. 811,800. (Cl. 112—3.)

1. The combination with a sewing machine, of a throat plate having an opening therein through which a feed dog projects and is adapted to feed goods across the throat plate, said throat plate having an opening therein through which the needle and the braid to be sewed are adapted to pass, said plate also having a longitudinal guide for braid leading to the needle opening in the plate and at an angle to the line of feed, substantially as described.

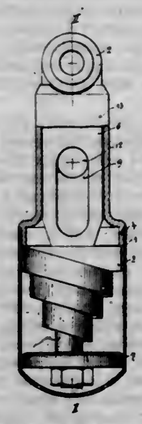


2. The combination with a sewing machine, of a throat plate having an opening therein through which a feed dog projects and is adapted to feed goods across the throat plate, said throat plate having an opening therein through which the needle and the braid to be sewed are adapted to pass, said plate also having a longitudinal guide for braid leading to the needle opening in the plate and at an angle to the line of feed, said plate having an opening over the guide, substantially as described.

3. The combination with a sewing machine, of a throat plate having a slot therein for the reception of a feed dog, said plate having a needle and a braid receiving opening adjacent the slot, and a braid receiving opening at a point removed from the needle opening, said plate having a guide at an angle to the line of feed and connecting the said openings, substantially as described.

4. The combination with a sewing machine, of a throat plate having a slot therein for the reception of a feed dog, said plate having a needle and a braid receiving opening adjacent the slot, and a braid receiving opening at a point removed from the needle opening, said plate having a guide at an angle to the line of feed and connecting the said openings, and said plate having a slot above the guide between the said openings, substantially as described.

1,109,255. SHOCK-ABSORBER FOR VEHICLES. GEORG SCHWAGER, Berlin, Germany. Filed June 27, 1912. Serial No. 706,225. (Cl. 21—50.)

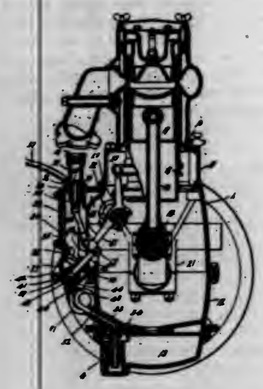


1. In a shock absorber of the character described the combination with a conical volute spring, of a cylinder surrounding said spring and provided with an air vent in its bottom part, of a piston adapted to support the small end of said spring, and of a flat hanger centrally disposed within said cylinder and guided within the head of the same, substantially as described.

2. In a shock absorber of the character described, the combination with a cylinder, of a conical volute spring mounted within said cylinder, a piston also mounted within said cylinder having a flat coupling rod or bar connected thereto and projecting through the head of said cylin-

der, said spring being arranged so as to surround said bar and bear against said piston at its small end, the head of said cylinder being provided with an extension whose length is comparable to that of the cylinder proper, said extension having a longitudinal aperture therein affording an extended bearing for said flat connecting bar, said extension having transverse apertures for the reception of a bolt, and said bar having a transverse bolt aperture as well as a slot for receiving a bolt passed through the apertures in said extension, and means for attaching said piston to said bar, said cylinder being vented for the relief of air under compression.

1,109,256. PUMPING SYSTEM FOR GAS-ENGINES. LOUIS SCHWITZER, Indianapolis, Ind. Filed June 3, 1912. Serial No. 701,231. (Cl. 123—139.)



1. In an internal combustion engine, the combination with a cylinder, piston and interposed longitudinally shiftable valve sleeve, of a valve shaft having an eccentric portion, a connecting arm connecting said eccentric portion and the valve sleeve, an oil pump comprising an oscillatory valve member and a reciprocatory plunger carried by said valve member, a connection between the connecting arm and the reciprocatory plunger of the oil pump, an air pump having a reciprocating member, and a connection between said reciprocating member and the connecting arm.

2. In an internal combustion engine, the combination with a cylinder, piston and interposed longitudinally shiftable valve sleeve, of a valve shaft having an eccentric portion, a connecting arm connecting said eccentric portion and the valve sleeve, an oil pump, a connection between the connecting arm and the oil pump, an air pump having a reciprocating member, and a connection between said reciprocating member and the connecting arm.

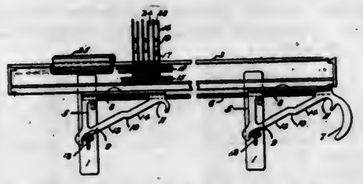
3. In an internal combustion engine, the combination with a cylinder, piston and interposed longitudinally shiftable valve sleeve, of a valve shaft having an eccentric portion, a connecting arm connecting said eccentric portion and the valve sleeve, an oil pump comprising an oscillatory valve member and a reciprocatory plunger carried by said valve member, a connection between the connecting arm and the reciprocatory plunger of the oil pump.

4. In an internal combustion engine, the combination with a cylinder, piston and interposed longitudinally shiftable valve sleeve, of a valve shaft having an eccentric portion, a connecting arm connecting said eccentric portion and the valve sleeve, an oil pump, a connection between the connecting arm and the oil pump.

5. In an internal combustion engine, the combination with a casing member having an external extension, an oil pump body detachably connected to said extension, and having a cylindrical bore, a cylindrical valve member oscillatably mounted in said bore and having a passage there through with an inlet end and an exhaust end, and the pump body having an inlet passage and an exhaust passage arranged for alternate registry with the inlet and exhaust ends of the passage through the valve, a pump cylinder carried by the valve member and projecting substantially radially therefrom, and a pump piston reciprocably mounted within said pump chamber, a shaft journaled within the casing member and provided with an eccentric portion, and a connection between said eccentric portion and the pump piston, an axially shiftable valve sleeve arranged within the engine cylinder and embracing the piston thereof, and a connection between the connecting arm of the pump piston and said last mentioned valve sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,109,257. LEASE-FORMER. JOHN W. SIDEBOTTOM, Lowell, Mass., assignor to T. C. Entwistle Company, Lowell, Mass., a Corporation of Massachusetts. Filed Jan. 16, 1913. Serial No. 742,451. (Cl. 28—29.)



1. In a lease-comb, a dent having at an intermediate point in its height a spiral-eye for a thread and having above said eye a plain upward extension exceeding in length the depth of a lease-shed.

2. In a lease-comb, a flat dent having affixed thereto a spiral-eye of round wire.

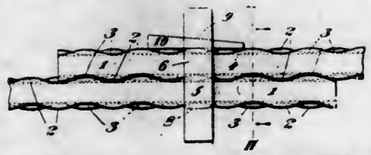
3. In a lease-comb, a dent having a flat shank and having a spiral-eye.

4. In a lease-comb, a dent having at an intermediate point in its height a spiral-eye having ascending and descending portions that are laterally offset from the shank.

5. In a lease-comb, a dent having at an intermediate point in its height a spiral-eye having ascending and descending portions that are laterally offset from the shank, one such portion being in the lateral projection of its shank upwardly extended.

[Claims 6 to 13 not printed in the Gazette.]

1,109,258. SPLICED REINFORCING-BAR. EDWIN E. SLICK, Westmont borough, Pa. Filed Oct. 6, 1913. Serial No. 793,500. (Cl. 72—114.)



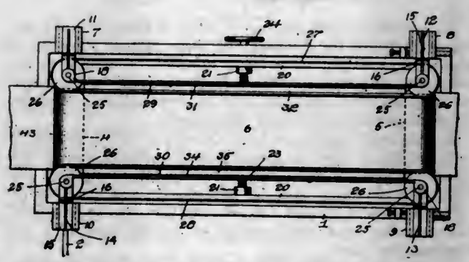
1. A pair of metal reinforcing bars, at least one of two opposite sides of each being provided with a plurality of sinuous projections and depressions fitted together and adapted to prevent relative longitudinal movement of said bars, an integral metal clamp surrounding said bars, adapted to contact with the other sides of said bars and one of the first mentioned sides of one of said bars so as to prevent the relative lateral displacement of said bars, thereby serving to hold the interlocking projections and depressions of the two bars in close engagement, and a wedge coöperating with said clamp and bars adapted to hold them firmly together.

2. A pair of rolled metal reinforcing bars, each of which is of substantially equal cross section throughout, two opposite sides of each of which are rolled substantially parallel, at least one of the other sides of each being provided with two rows of projections and depressions of

curved outline rolled adjacent to the corners thereof forming sinuous surfaces adapted to fit together and interlock against longitudinal movement, a groove between said rows of projections, an integral metal clamp surrounding said bars adapted to contact with the parallel sides thereof and the outer surfaces of one of the sinuous sides of one of said bars and thereby hold them in relative interlocking relation, a wedge inserted between one of said bars and the clamp, said wedge being provided with a flat surface on one side adapted to contact with the interior end surface of said clamp, the opposite side of said wedge having flat surfaces near the edges and a projecting rib between the same adapted to fit into and contact with the surface of the groove in said bars.

3. A pair of concrete reinforcing bars, each having a central body portion and a plurality of flanges projecting from two opposite sides beyond the body portion, at least two of said flanges being corrugated in the direction of their projection and the edges of the corrugated flanges being parallel; the ends of said bars overlapping and interlocking longitudinally by means of the corrugated flanges aforesaid, a clamp comprising an integral perforated piece of metal adapted to surround and to contact with the other sides of said bars so as to prevent the relative lateral displacement of said bars, thereby serving to hold the interlocking projections and depressions of the two bars in close engagement, and a wedge inserted between said clamp and the surfaces of one of the said bars.

1,109,259. WRAPPER-SEALING MACHINE. ERNEST L. SONS, MICHAEL J. BAKER, and AUGUST REITMEYER, Pittsburgh, Pa., assignors to M. A. Baker's Sons, Pittsburgh, Pa., a Copartnership. Filed Oct. 30, 1913. Serial No. 798,328. (Cl. 93—2.)



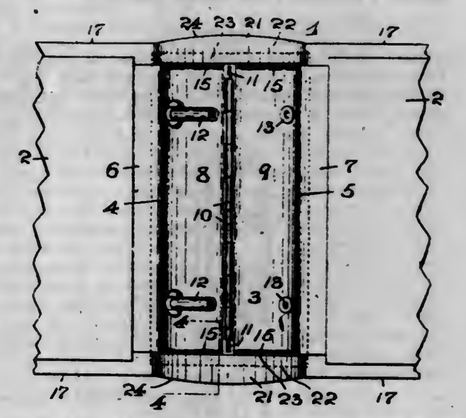
1. A wrapper sealing machine comprising a pair of opposed horizontally extending heated conveyers operating on the ends of the wrapped package for sealing the end folds of the wrapper, a longitudinally extended heated conveyer operating on the bottom of the package for sealing the bottom of the wrapper and arranged below the horizontal conveyers, a two part heat transferring element having both of its parts associated with said longitudinal conveyer, one part associated with a horizontal conveyer and its other part with the other horizontal conveyer, means for heating said element, and means for operating said conveyers.

2. A wrapper sealing machine comprising a pair of opposed horizontally extending heated conveyers operating on the ends of the wrapped package for sealing the end folds of the wrapper, a longitudinally extended heated conveyer operating on the bottom of the package for sealing the bottom of the wrapper and arranged below the horizontal conveyers, a two part heat transferring element having both of its parts associated with said longitudinal conveyer, one part associated with a horizontal conveyer and its other part with the other horizontal conveyer, means for heating said element, means for operating said conveyers, and means for adjusting said horizontal conveyers with respect to each other and for simultaneously adjusting the parts of said element.

3. A wrapper sealing machine comprising a pair of opposed horizontally extending heated conveyers operating on the ends of the wrapped package for sealing the end folds of the wrapper, a longitudinally extended heated conveyer operating on the bottom of the package for sealing the bottom of the wrapper and arranged below the horizontal conveyers, means for operating said conveyers, means extending between each of said conveyers for heating them, and means for simultaneously adjusting said horizontal conveyers and said heating means.

4. A wrapper sealing machine comprising a series of continuous movable heated sealing elements operating upon the end folds and bottom of the wrapper for sealing the latter during the transporting of a wrapped package by said elements, a heating element for said sealing elements, means for adjusting certain of said sealing elements to provide for different sizes of packages, and for simultaneously adjusting said heating element.

1,109,260. LOOSE-LEAF BINDER. HOWARD A. STANLEY, Newark, N. J. Filed Feb. 6, 1913. Serial No. 746,480. (Cl. 129—1.)



1. In a loose-leaf binder, the combination with the cover-sections and the back of the binder, of a heel-piece secured to the inner surface of said back, said heel-piece being made of a material having resilient qualities, and said heel-piece having one of its marginal edge-portions projecting beyond the marginal edge-portion of said back.

2. In a loose-leaf binder, the combination with the cover-sections and the back of the binder, of a facing mounted upon the outer surfaces of said cover-sections and said back, said facing having its marginal edge-portions extending around the marginal edge-portions of said cover-sections and said back, and secured to the inner surface-portions of said cover-sections and said back, and a heel-piece secured to the inner surface of said back, said heel-piece being made of a material having resilient qualities.

3. In a loose-leaf binder, the combination with the cover-sections and the back of the binder, of a facing mounted upon the outer surfaces of said cover-sections and said back, said facing having its marginal edge-portions extending around the marginal edge-portions of said cover-sections and said back, and secured to the inner surface-portions of said cover-sections and said back, and a heel-piece secured to the inner surface of said back, said heel-piece being made of a material having resilient qualities, and said heel-piece having one of its marginal edge-portions projecting beyond the marginal edge-portion of said back.

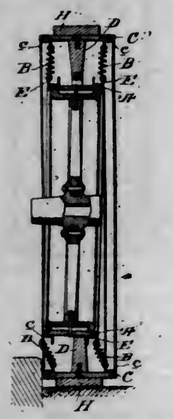
4. In a loose-leaf binder, the combination with the cover-sections and the back of the binder, of a facing mounted upon the outer surfaces of said cover-sections and said back, said facing having its marginal edge-portions extending around the marginal edge-portions of said cover-sections and said back, and secured to the inner surface-portions of said cover-sections and said back, a strengthening strip mounted upon the facing of said

back, said strip having its end-portions extending also around the marginal edge-portions of the facing upon said back, and a heel-piece secured to the inner surface of said back, said heel-piece being made of a material having resilient qualities.

5. In a loose-leaf binder, the combination with the cover-sections and the back of the binder, of a facing mounted upon the outer surfaces of the said cover-sections and said back, said facing having its marginal edge-portions extending around the marginal edge-portions of said cover-sections and said back, and secured to the inner surface-portions of said cover-sections and said back, a strengthening strip mounted upon the facing of said back, said strip having its end-portions extending also aronnd the marginal edge-portions of the facing upon said back, and a heel-piece secured to the inner surface of said back, said heel-piece being made of a material having resilient qualities, and said heel-piece having one of its marginal edge-portions projecting beyond the marginal edge-portion of said back.

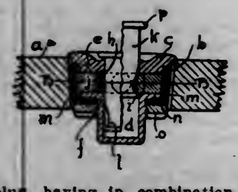
[Claims 6 to 13 not printed in the Gazette.]

1,109,261. RESILIENT TIRE. CHARLES K. STINSON, Templeton, Mass. Continuation of application Serial No. 650,169, filed Sept. 19, 1911. This application filed Feb. 11, 1914. Serial No. 818,000. (Cl. 152—32.)



In a vehicle tire, an inner rim, an outer rim of greater width than said inner rim, a buffer connected to the outer rim and extending toward the inner rim, channel members secured adjacent the edges of said inner and outer rims, and a series of coiled springs arranged on each side of said buffer and connected to the inner sides of the channel members secured on the outer rim, and to the outer sides of the channel members secured on the inner rim.

1,109,262. EXPANSIBLE BUNG-PLUG. EDWARD J. TACKNEY, Detroit, Mich., assignor of one-half to Henry C. Wiedeman, Detroit, Mich. Filed June 21, 1913. Serial No. 774,960. (Cl. 217—109).

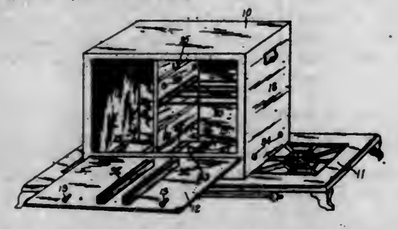


1. A bung-plug, having in combination a body comprising an inner and an outer portion connected by posts and having a central recess or socket, a plurality of segmental pieces having neck portions protruding between said posts, and a wedging pin adapted to be driven into said recess or socket to expand the segmental pieces, substantially as described.

2. A bung-plug, having in combination a body member provided with a central recess or socket and comprising an outer portion and an inner portion connected by posts, a plurality of segments having neck portions adapted to protrude between the posts, the said segments adapted to move radially between the outer and inner portion of the body, a rubber gasket adapted to fit over the outside of the segments, and a wedging pin adapted to be driven into the central recess or socket to expand the segments against the gasket, substantially as described.

3. A bung-plug, having in combination a body provided with a central recess or socket, a plurality of segments adapted to move radially with respect to said body, said segments provided with beveled sides so that the divisions between the segments are oblique, and a wedging pin adapted to be driven into the central recess or socket to expand the segments, substantially as described.

1,109,263. ADJUSTABLE OVEN. HERBERT C. TAYLOR, Greensburg, Ind. Filed Jan. 22, 1912. Serial No. 672,615. (Cl. 126—275.)



1. A cooking oven having an open bottom, and a transverse partition for dividing the same into a plurality of chambers, said partition being adapted to remain in the oven and be slidable therein from one end to the other, so that one oven chamber may be provided or a plurality of chambers of any desired dimensions.

2. The combination of an oven adapted to be heated by a plurality of heating means and a member loosely disposed within the oven and normally lying adjacent one wall thereof which may be adjusted to any position between the ends thereof for reducing the size of the heating chamber and the number of means necessary for heating the same.

3. The combination of an oven having an open bottom, a plurality of separate means for heating the same, and a non-conducting member loosely disposed in each end of the oven which may be adjusted to any position between the ends thereof, said members being normally positioned adjacent the outer end walls thereof.

4. The combination of an oven having an open bottom, a plurality of separate means for heating the same, and a non-conducting chamber loosely disposed within the oven and normally forming a part of one wall thereof which may be adjusted to any position between the ends thereof.

5. The combination with an oven having heat insulating means for reducing the radiation of heat from the oven, and a plurality of separate means for heating said oven, of a non-conducting chamber loosely disposed in each end of said oven which may be adjusted to any position between the ends thereof, and means for subdividing said heat insulating means whereby when the heated portion of said oven is reduced heat will be prevented from passing from said heated portion to the unheated portion of the oven.

[Claims 6 to 8 not printed in the Gazette.]

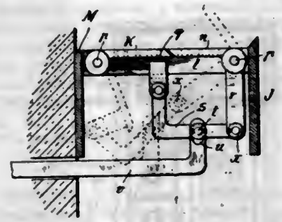
1,109,264. MEANS OF PROTECTION FOR FEMININE WEAR. NATALIE A. TEEPLE (now by marriage NATALIE A. STOLP), Philadelphia, Pa. Filed Oct. 4, 1913. Serial No. 793,299. (Cl. 2—42.)

1. A protector of the character designated comprising a base adapted for attachment to an undergarment, an elastic-resilient spring mounted thereon, and a pricker arranged to protrude upon the compression of the spring for the purpose described.

2. In a protector of the character designated, the combination of the base b, elastic resilient spring s, formed with the retaining shoulder s^2, and bent end s^3, and the tongue p', and pricker p, arranged and operating in the manner and for the purpose set forth.

3. A protector of the character designated comprising a base adapted for attachment to an undergarment, and a pricker and an elastic-resilient spring mounted thereon in such manner that the spring protects the point of the pricker until said spring is compressed thereby causing the point of the pricker to protrude.

1,109,265. DUMPING-GRATE. GEORGE H. THACHER, Jr., Albany, N. Y., assignor to George H. Thacher, Sr., Albany, N. Y. Filed Oct. 22, 1912. Serial No. 727,146. (Cl. 126—162.)



1. A dumping grate for the purposes described, comprising leaves coöperating to form a grate surface and mounted to rock in opposite directions, the one upwardly and the other downwardly, and means for rocking said leaves, said means consisting of a dumping bar, a bell crank lever operatively connected to said bar, and projections from the leaves of the grate, one projection being longer than the other, to which projections the bell crank lever is jointed to swing said leaves open when the bar is pulled and to lock said leaves in open position until said bar is moved inward again; substantially as described.

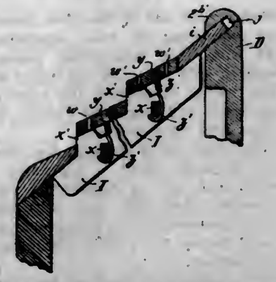
2. A dumping grate for the purposes described, comprising leaves coöperating to form a grate surface and mounted to rock in opposite directions, the one upwardly and the other downwardly, and means for rocking said leaves simultaneously, said means consisting of a dumping bar, a bell crank lever to which said bar is operatively connected, a depending arm extending downwardly from the axis of one of the rocking leaves, a depending arm extending downwardly from the forward part of the other leaf, said depending arms being jointed to said bell crank lever, the length of said parts being such that the parts are substantially locked in the dumping position until the operator pushes in on the said dumping bar; substantially as described.

3. A dumping grate for the purposes described, comprising leaves coöperating to form a grate surface and mounted to rock in opposite directions, the one upwardly and the other downwardly, and means for rocking said leaves simultaneously, said means consisting of a dumping bar, a bell crank lever carrying a wrist pin by which said dumping bar is connected to the bell crank lever, a depending arm extending downwardly from the axis of one of the rocking leaves, and a depending arm extending downwardly from the forward part of the other leaf, said depending arms being jointed to the said bell crank lever in such manner that when the grate is dumped the wrist pin and the axis of the upwardly rising leaf shall lie in a common plane below the intermediate joint; substantially as described.

4. In a furnace, the combination of a central magazine, a feed screw therein, an inclined grate surface down which the coal transported and lifted by said screw may fall, a horizontal grate surface at the base of said inclined grate surface, said horizontal grate surface comprising a plurality of leaves grouped in pairs, said leaves being arranged to swing about axes parallel with said screw conveyer, one swinging upwardly and the other downwardly when the grate is to be dumped, the upwardly swinging leaf being provided with a vertically depending arm attached near the axis thereof, and the other leaf being provided with a shorter depending arm attached at the forward part thereof, said arms being connected by a bell crank, and a horizontal pull bar having a lost motion connection with said bell crank and projecting outward through the side of the furnace and under the downwardly swinging leaf, said bell crank and its related parts being so proportioned that after the grate has been dumped the parts will be substantially locked in the dumping position until the operator pushes in again on the bar whereby the action is controlled.

5. A dumping grate for use in conjunction with a central magazine and a grate inclined toward the side of the fire box and over which coal delivered from said magazine may fall, said dumping grate comprising parallel supporting bars with cross pieces between and a plurality of pairs of leaves pivotally connected with said cross pieces and adapted to swing one upward and the other downward, the upwardly swinging leaf having a vertically depending arm attached near its pivotal support, and the other leaf having a shorter arm attached near its forward part, said arms being connected by a link bent at right-angles, a horizonal dumping bar, said link serving as a bell crank for pivotal connection with said dumping bar, this connection providing for lost motion when the bar is pulled to dump the grate, said dumping bar being arranged to extend horizontally below the downwardly swinging leaf and out through the wall of the fire box there to be accessible to the operator and the several pivotal points of said leaves and the link being positioned to cause said parts to lock in the dumping position until the pull bar is pushed inward again.

1,109,266. INCLINED GRATE FOR FURNACES. GEORGE H. THACHER, Jr., Albany, N. Y., assignor to George H. Thacher, Sr., Albany, N. Y. Filed Oct. 22, 1912. Serial No. 727,148. (Cl. 110—44.)



1. The combination with a stationary inclined grate, of a magazine for distributing fuel thereto, said magazine having a slot or groove arranged longitudinally in its outer wall, and the inclined grate having tongues received within and covered by said slot; said tongues being free to move therein when the grate expands with heat substantially as described.

2. The combination with a magazine provided with a slot or groove, of a stationary inclined grate bar provided at its extreme upper end with a flat, inclined tongue adapted to seat within said slot or groove to support the grate bar at its upper end, said tongue being free to move into and out of said slot or groove with the expansion and contraction of said grate bar; substantially as described.

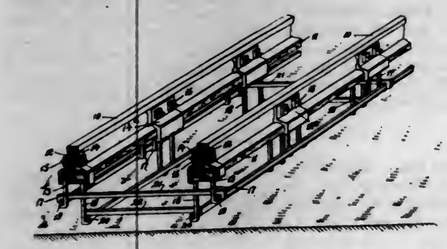
3. A grate bar for inclined grates, having notched and chamfered upper edges and provided with a series of flat, perforate inclined plates seated on said chamfered edges and forming steps, said steps being separate and each removable from its normal position in the grate independently and without movement of any other step, or series of steps each step being provided with a bendable tongue for removably securing it in place; substantially as described.

4. A grate bar for inclined grates, provided with side webs, having notched and chamfered upper edges cross-connections for said webs formed integral therewith, and individual steps, one for each cross-connection and removably anchored thereto, said steps consisting of flat rectangular plates supported solely at their edges in the chamfers of the web and being spaced apart with the straight front edge of one lying directly above and forming with the straight rear edge of the next an air passage of uniform width from web to web of said bar; substantially as described.

5. A grate bar for inclined grates, provided with side webs, cross-connections for said webs formed integrally therewith and inclined individual steps one for each cross-connection and anchored thereto, said steps being independently removable therefrom without disturbing any other step or series of steps, said steps being supported at their edges on said side webs and being spaced apart to form intervening gas openings through said bar of a uniform width from web to web; substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,267. RAILWAY-BED AND RAIL-SUPPORT. JOHN B. THOMAS, Lakewood, N. J. Filed Mar. 21, 1912. Serial No. 685,148. (Cl. 238—3.)



1. In a railway road bed of the kind described, a unitary structure comprising the rails, depending means located beneath each rail, reinforcing means extending lengthwise beneath said rails and connected with said depending means, means connecting the reinforcing means together transversely and means for rigidly clamping said depending means and rails together.

2. In a railway road bed of the kind described, a unitary structure comprising the rails, a depending anchor rod located beneath each rail, a reinforcing rod extending lengthwise beneath each rail and connected with an anchor rod, means connecting the reinforcing rods together transversely and means for rigidly clamping the anchor rods and rails together.

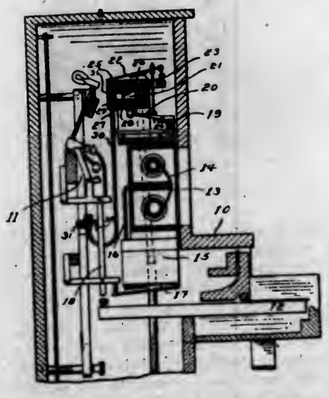
3. In a railway road bed of the kind described, a unitary structure comprising the rails, fish-plates arranged in pairs on opposite sides of each rail at intervals for clamping the rails, sole plates carried by said fish plates and extending beneath the rail base, anchor rods detachably connected with said sole plates and depending therefrom, on opposite sides of vertical planes drawn through the rail webs, reinforcing bars beneath each rail and extending lengthwise thereof and connected with said anchor rods and cross-reinforcing bars connected with said lengthwise extending reinforcing bars and bridging the space between said rails.

4. In a railway road bed of the kind described, a unitary structure comprising the rails, a cushion extending beneath and in contact with each rail, a plate engaging the lower surface of each cushion, means for clamping said plates, cushions and rails together, reinforcing means extending lengthwise beneath each rail, connections between said reinforcing means and said plates and means connecting said reinforcing means together transversely.

5. A railway road bed and rail support comprising continuous parallel sleepers of coalescent material, integral cross-braces of similar material extending between said sleepers at intervals, rails supported on said sleepers, clamping plates engaging the rails and having portions extending beneath the rail base and provided with openings, anchor rods extending through said openings and provided with heads seated therein and maintained against upward movement relatively to said plates by the rails, said anchor rods having their free portions embedded in the sleepers, reinforcing bars embedded in said sleepers and extending lengthwise throughout the same and connected with said anchor rods and cross-reinforcing bars embedded in said cross-braces and extending lengthwise thereof from the reinforcing bars in one sleeper to the reinforcing bars in the other sleeper.

[Claim 6 not printed in the Gazette.]

1,109,268. ORCHESTRION. BURT R. VAN VALKENBURG, Oakland, Cal. Filed Apr. 18, 1912. Serial No. 691,721. (Cl. 84—198.)



An orchestrion including a note sounding device, a tracker board positioned beneath said note sounding device, keys having their inner ends extending beneath said tracker board, a piano action coöperating with said keys and including abstracts extending above the rear ends of said keys whereby said piano action may be operated by said keys, a pneumatic action for said piano action device positioned between said keys and tracker board, and located adjacent said abstracts whereby said pneumatic operator may operate said piano action, a base board positioned to the rear of said abstracts and provided with openings leading to its upper face, valves pivoted to said base board, and adapted to close the upper ends of said openings and extending over the forward ends of said base board, means carried by said abstracts to operate said valves upon the movement of said abstracts, tubes leading from said note sounding device and communicating with the lower ends of the openings in said base board, and tubes leading from said pneumatic action to said tracker board.

1,109,269. SLIDING BOTTOM FOR INCUBATORS. CHARLES L. VETTER, Philadelphia, Pa. Filed Dec. 12, 1910. Serial No. 596,747. (Cl. 119—30.)

1. In an incubator, a casing, a main bottom, upper and lower supports for the said bottom, and an auxiliary bottom fitting the upper supports and provided with a brooder mother upon its under surface.

2. In an incubator, a casing, a movable bottom, upper and lower supports therefor retaining the bottom in either

of two positions, the one directly over the other, and a guide directing the path of the bottom in movement between the supports.

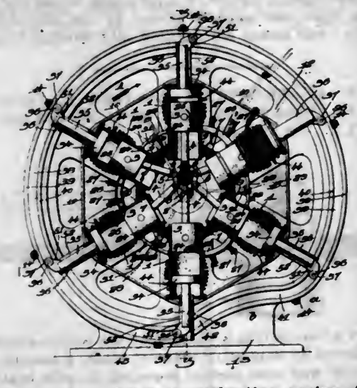
3. In an incubator, a casing, a removable brooder bottom therefor, and a removable brooder top carrying a brooder mother and providing a bottom for the incubator upon its upper surface.

4. In an incubator, a casing, a bottom capable of movement within the casing and wholly removable therefrom, supports at the back of the bottom, a track guiding the supports in movement within the casing and means for guiding the bottom in insertion or removal when the supports pass beneath the track.

5. In an incubator, a casing, a removable bottom therefor, coöperating strips upon the casing and bottom engaging along horisontal planes to seal the strips upon the bottom against strips on the casing to prevent leakage of air in upper and lower operative positions within the casing, and a track upon which the bottom is guided between the positions.

[Claim 6 not printed in the Gazette.]

1,109,270. ROTARY INTERNAL-COMBUSTION ENGINE. JOSEPH A. WALLIS, 2d, Beverly, Mass. Filed Dec. 11, 1911. Serial No. 665,028. (Cl. 123—44.)



1. In a rotary internal combustion engine, the combination with a stationary crank shaft, of a plurality of radially-arranged cylinders rotatable about the crank shaft, a working piston in each cylinder connected to the crank shaft, a scavenging piston in each cylinder, and means encircling the cylinders to operate the scavenging pistons thereby to scavenge each cylinder at the proper point in the cycle of operations.

2. In a rotary internal combustion engine, the combination with a stationary crank shaft, of a plurality of radially-arranged cylinders rotatable about the crank shaft, a working piston in each cylinder connected to the crank shaft, a scavenging piston at the outer end of each cylinder, and means encircling the cylinders to move each scavenging piston in the cylinder at the proper point in the cycle of operations thereby to scavenge said cylinder.

3. In a rotary internal combustion engine, the combination with a stationary crank shaft, of a plurality of radially-arranged cylinders rotatable about the crank shaft, a working piston in each cylinder connected to the crank shaft, a scavenging piston in the outer end of each cylinder, each scavenging piston being provided with a stem extending beyond the cylinder, and means encircling the cylinders acting on the end of the stems to move the scavenging pistons in the cylindera thereby to scavenge the latter.

4. In a rotary internal combustion engine, the combination with a stationary crank shaft, of a plurality of radially-arranged cylinders rotatable about the crank shaft, a working piston in each cylinder connected to the crank shaft, a scavenging piston in the outer end of each cylinder, each scavenging piston having a stem projecting through the cylinder head, and means encircling the cylinders acting on said stems and operating to move each scavenging piston inwardly thereby to scavenge the cylinders and then to move said pistons outwardly thereby to draw in a fresh charge.

5. In a rotary internal combustion engine, the combination with a stationary crank shaft, of a plurality of radially-arranged cylinders rotatable about the crank shaft, a working piston in each cylinder connected to the crank shaft, a scavenging piston in the outer end of each cylinder, each scavenging piston having a stem projecting through the cylinder head and provided with guide rolls, a track exterior to the cylinders and on which said guide rolls operate, said track being shaped to give each scavenging piston an inward movement to scavenge the cylinder and an outward movement to draw a fresh charge of mixture into the cylinder.

[Claim 6 not printed in the Gazette.]

1,109,271. VALVE MECHANISM FOR PUMPS, ENGINES, &c. WILLIAM A. WARMAN, New York, N. Y. Filed Aug. 9, 1912. Serial No. 714,159. (Cl. 230—34.)

1. In valve mechanism, a valve chamber having a valve seat and a port in said seat; two oscillating valve members in contact with one another and one of which moves in contact with said seat, said valve members having each a port, which ports are adapted to register with one another and with the port in said seat; and means for moving said valve members simultaneously in opposite direction, the arrangement of the parts being such that the ports of said valve members register with one another and with the port in said valve seat when said members are in their middle positions.

2. In valve mechanism, a valve chamber having a cylindrical valve seat and a port in said seat; two concentric oscillating cylindrical valve members in contact with one another and one of which moves in contact with said seat, said valve members having each a port, which ports are adapted to register with one another and with the port in said seat; and means for moving said valve members simultaneously in opposite directions to move the ports of said valve members past one another and past the port in said valve seat, and simultaneously in opposite directions but reversed with reference to said first mentioned movements to again move the ports of said valve members past one another and past the port in said valve seat.

3. In valve mechanism, a valve chamber having a cylindrical valve seat and a port in said seat; two concentric oscillating cylindrical valve members in contact with one another and one of which moves in contact

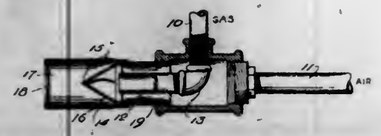
with said seat, said valve members having each a port, which ports are adapted to register with one another and with the port in said seat; means for moving said valve members simultaneously in opposite directions; a second port in said valve seat; a second oscillating cylindrical valve member having a port adapted to register with the second port in said valve seat; and means for moving said second-mentioned valve member.

4. In a device of the class described, a cylinder; a reciprocating piston therein; and valve mechanism for controlling the flow of fluid operated upon by said piston, said valve mechanism including a valve seat having a port; two oscillating valve members in contact with one another, and one of which is in contact with said seat, said valve members having each a port, which ports are adapted to register with one another and with the port in said valve seat; and means for moving said valve members simultaneously in opposite directions relative to one another upon one stroke of said piston, and simultaneously in opposite directions relative to one another, but which directions are reversed as to each valve member, upon the next succeeding stroke of said piston in the same direction.

5. In a device of the class described, a cylinder; a reciprocating piston therein; and valve mechanism for controlling the flow of fluid operated upon by said piston, said valve mechanism including a cylindrical valve seat having a port; two concentric oscillating cylindrical valve members in contact with one another, and the outer of which is in contact with said seat, said valve members having each a port, which ports are adapted to register with one another and with the port in said valve seat; and means for moving said valve members simultaneously in opposite directions relative to one another upon one stroke of said piston, and simultaneously in opposite directions relative to one another, but which directions are reversed as to each valve member, upon the next succeeding stroke of said piston in the same direction.

[Claims 6 to 10 not printed in the Gazette.]

1,109,272. GAS-BURNER. HOWARD F. WIERUM, Upper Montclair, N. J. Filed Oct. 9, 1913. Serial No. 794,295. (Cl. 158—109.)



1. A burner comprising inlet pipes for air and gas; a preliminary mixing chamber; an element forming the end of said chamber, said element being provided with non-radial curved slits, said slits having a total area, equal to less than the sectional area of said chamber; a supplemental mixing chamber adjacent said member provided with slits; and a gauze closing the end of said supplemental mixing chamber.

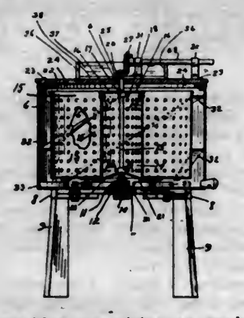
2. A gas burner comprising inlet pipes for air and gas, one of said pipes being located within the other; a preliminary mixing chamber receiving both the gas and air from said pipes; a hollow body supported at and forming the outer end of said chamber, said body being provided with helical, non-radial slits of less than the sectional area of said chamber; a supplemental mixing chamber adjacent said hollow body, and a gauze closing the end of said supplemental mixing chamber.

3. A gas burner comprising inlet pipes for air and gas, one of said pipes being located within the other; a preliminary mixing chamber, receiving both the gas and air from said pipes; a hollow body supported at and forming the outer end of said chamber, said body being provided with helical, non-radial, spiral slits of less than the sectional area of said chamber; a supplemental mixing chamber adjacent said hollow body, and a gauze closing the end of said supplemental mixing chamber.

4. In a gas burner, a hollow body for producing a mixing of the gas and air, said body being provided with non-radial helical slits, arranged at an angle oblique to the axis of said body, substantially as described.

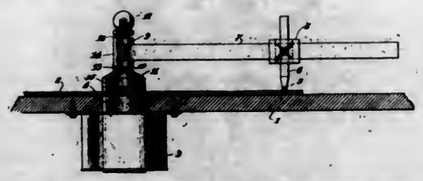
5. In a gas burner, a hollow body for producing a mixing of the gas and air, said body being provided with non-radial helical, spiral slits, arranged at an angle oblique to the axis of said body, substantially as described.

1,109,273. WASHING-MACHINE. EUGENE YAZEL, Vermilion, S. D. Filed June 9, 1913. Serial No. 772,637. (Cl. 68—18.)



A washing-machine comprising an upright outer tub having helically-disposed ribs on the inner periphery thereof, an internal rim adjacent the upper edge thereof and water guides in the bottom thereof; an internal tub mounted for rotation within the outer tub and having a perforated periphery and a central bottom opening; an upright cylinder secured to and disposed coaxially within said internal tub and having a perforated periphery, said cylinder being of substantially the same diameter as said bottom opening and said water guides being scroll-shaped and positioned to approach the center of the tub from the periphery thereof in a gradually decreasing curve whereby little resistance is offered to the circulation of the water; and means for rotating said internal tub.

1,109,274. GLASS-CUTTER. BENJAMIN L. ALTIC, Roanoke, Va. Filed Feb. 18, 1914. Serial No. 819,424. (Cl. 33—27.)

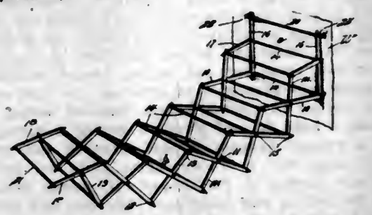


1. In a glass cutting arrangement the combination of a table adapted to support a plate of glass, a magnet having the coil and core thereof mounted in said table, the face of said core being adjacent to the under side of the plate of glass, a post disposed on the upper side of the plate of glass and being held against the same by the magnetic attraction, a portion of said post forming a vertical pintle, a cutter bar rotatably mounted on said pintle, and a glass cutter secured to said cutter bar, substantially as described.

2. In a glass cutting arrangement the combination of a table adapted to support a plate of glass, a magnet having the coil and core thereof mounted in said table, the face of said core being adjacent to the under side of the plate of glass, a post disposed on the upper side of the plate of glass and being held against the same by the magnetic attraction, a cutter bar rotatably mounted on said post, a glass cutter secured to said cutter bar, and friction inserts in the base of said post, substantially as described.

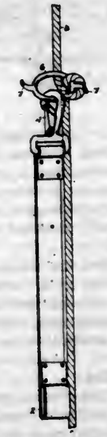
3. In a glass cutting arrangement the combination of a table adapted to support a plate of glass, a maguet having the coil and core thereof mounted in said table, the face of said core being adjacent to the under side of the plate of glass, a post disposed on the upper side of the plate of glass, and being held against the same by the magnetic attraction, a cutter bar rotatably secured to said post, and a glass cutter movably secured to said cutter bar, substantially as described.

1,109,275. CLOTHES-RACK. MARTIN L. ANDREWS, Trowbridge, Pa. Filed Sept. 17, 1913. Serial No. 790,279. (Cl. 68—34.)



In a clothes rack, the combination of a pair of lazy tongs each comprising a series of pivotally connected pairs of similar levers, cross bars joining said lazy tongs and forming a frame with the levers at one end, the levers adjacent to the end being permanently connected to said frame, the ends of said cross bars constituting the pivotal connections for the levers forming the lazy tongs, the levers comprising each pair of levers being pivoted together beyond their longitudinal centers so as to form arms of unequal length of each of the levers constituting a pair whereby said rack, when extended, will extend along a curve and form an arch-like support for clothes, said frame being adapted to be attached to a wall and support the rack so that it will hang downwardly and outwardly on a curve from said wall.

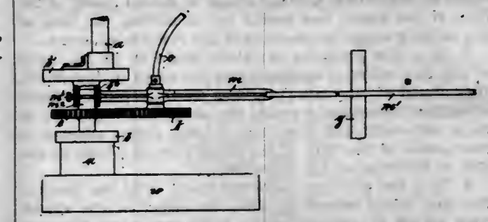
1,109,276. SAFETY APPLIANCE FOR PAINTERS AND THE LIKE. HARRY BARMAN, San Francisco, Cal. Filed Apr. 22, 1914. Serial No. 833,635. (Cl. 24—115.)



In combination, a curved rigid member, means for suspending a man from said member, and a rope having a bight around a portion of said rigid member, and extending upwardly and downwardly therefrom, the downwardly extending portion of said rope passing between, and being compressed by, said member and the upwardly extending portion of the rope.

1,109,277. GRINDING-MACHINE. CARL BLECHER, Berlin, Germany. Filed Aug. 28, 1913. Serial No. 787,121. (Cl. 51—4.)

1. In a machine for grinding cylindrical bodies, a flat grinding element, means for imparting a circular motion thereto about an axis eccentric to said element, means for imparting a slow rotary motion to said element about its geometric axis, and means for imparting an oscillatory motion to said element about its geometric axis, said oscillatory motion being alternately added to and subtracted from said rotary motion.



2. In a machine for grinding cylindrical bodies movable to and fro axially, a flat grinding element, means for imparting a circular motion to said element about a fixed axis eccentric thereto, and means for imparting a small reciprocatory angular motion to said element about its geometric axis during the axial movement of the work, the change period of the angular motion corresponding to the change period of the to and fro movement of the work.

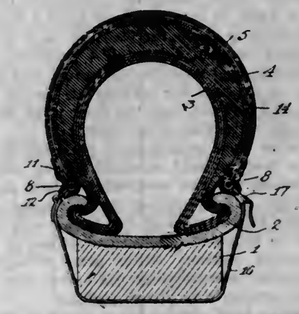
3. In a machine for grinding cylindrical bodies, a stationary rotary shaft, an eccentric thereon, a flat grinding element driven by said eccentric, means for simultaneously imparting a slow rotary motion to said element about its geometric axis, and means for simultaneously imparting an oscillatory motion to said element about its geometric axis.

4. In a machine for grinding cylindrical bodies, a stationary rotary shaft, a flat grinding element rotatable about its geometric axis, an eccentric on said shaft imparting a circular motion to said element about said shaft, a gear wheel rotatable with said element, a member with which said gear wheel makes rolling engagement and means for imparting a slow movement to said member for transmitting a slow rotary motion to said wheel and element.

5. In a machine for grinding cylindrical bodies movable to and fro axially, a stationary rotary shaft, a flat grinding element rotatable about its geometric axis, an eccentric on said shaft imparting a circular motion to said element about said shaft, a gear wheel rotatable with said element, and a movable transmission member engaging with said gear wheel for imparting a slow rotary motion to said wheel and element.

[Claims 6 to 9 not printed in the Gazette.]

1,109,278. TIRE-PROTECTOR. ROGER BOWEN and WILLIAM F. SWEENEY, Southwest, Pa. Filed June 10, 1914. Serial No. 844,158. (Cl. 152—17.)



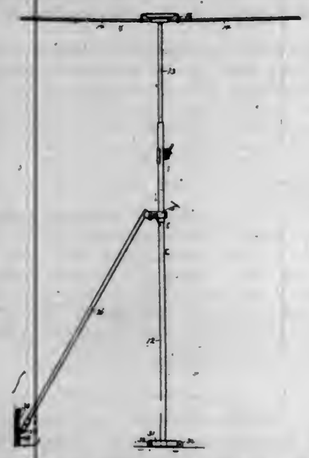
1. In a tire protector, a fabric shield to fit the tread of the tire, wires extending along the edges of the shield, straps extending transversely across the shield and connected at their ends with said wires, and holding straps adapted to extend between said wires around the felly of the wheel.

2. In a tire protector, a shield to fit the tread of the tire comprising plies of fabric secured together by stitching, wires extending along the edges of the shield and stitched between the edges of the plies, restraining straps incorporated in the fabric material of the shield and extending transversely across the same with their ends secured to said wires, holding straps to extend inside of the felly of the wheel, and means for connecting the ends of the holding straps to the ends of the restraining straps.

3. In a tire protector, a fabric shield to fit the tread of the tire, wires extending along the edges of the shield, clips placed at intervals along each wire, restraining straps extending transversely across the shield and connected at their ends with said clips, and holding straps adapted to pass inside of the felly of the wheel from the clips on one side to the clips on the other side.

4. In a tire protector, a fabric shield to fit the tread of the tire, wires extending along the edges of the shield, clips placed at intervals along each wire, each clip comprising a recessed cylindrical body part to receive the wire and loops extending from opposite sides of the body part, restraining straps extending transversely across the shield and connecting the inner loops of opposite clips, and holding straps to pass inside of the felly to connect the outer loops of opposite clips.

1,109,279. CLOTHES-DRIER. SAMUEL BUTTERWORTH, Everett, Mass., assignor of one-half to Charles W. Aiken, Brooklyn, N. Y. Filed Jan. 5, 1914. Serial No. 810,389. (Cl. 68—34.)



1. A clothes drier comprising a standard having a sliding foot, a head on said standard having radiating drier arms, a runner movable vertically on said standard, and braces hinged to said runner and provided with means for engaging a fixed support, the braces and runner being adjustable to support the standard either in a projected or a retracted position, and the drier arms being foldable to permit the retraction of the standard.

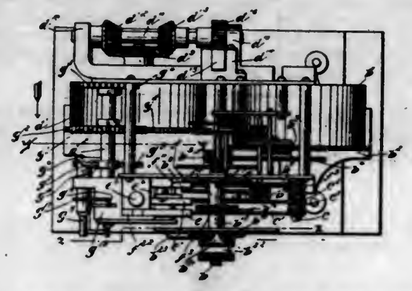
2. A clothes drier comprising a standard having a sliding foot, a head on said standard having radiating drier arms, a runner movable vertically on said standard, and braces hinged to said runner and provided with means for engaging a fixed support, the braces and runner being adjustable to support the standard either in a projected or a retracted position, means being provided for preventing relative movement of the braces and runner and holding the standard in either position.

3. A clothes drier comprising a standard having a sliding foot, a head on said standard having radiating drier arms, a runner movable vertically on said standard, and provided with means whereby it may be locked thereto, a pair of diverging braces connected at their inner ends, a hinge connecting the connected ends of the braces with the runner, and having means whereby it may be locked, and terminals hinged to the outer ends of said braces and adapted to be attached to a fixed support, the braces and runner being adjustable to support the standard either in a projected or a retracted position, the hinge, when locked, and the runner when confined on the standard, holding the standard in either position.

4. A clothes drier comprising a standard having a sliding foot, a head on said standard having radiating drier arms, a compressible runner movable on said standard and having means whereby it may be compressed and confined thereon, said runner having a hinge ear, a complemental hinge ear pivoted to the runner ear and having a cross bar, diverging braces, attached at their inner ends to said cross bar and having hinged terminals at their outer ends adapted to be attached to a fixed support.

5. A clothes drier comprising a standard having a sliding foot, a head on said standard having radiating drier arms, a runner movable on said standard and provided with a hinge ear, a brace-carrying cross bar having a hinge ear pivoted to the runner ear, means being provided for locking said hinge ears together, and diverging braces attached at their inner ends to said cross bar and having hinged terminals at their outer ends adapted to be attached to a fixed support.

1,109,280. TIME-CONTROLLED OPERATING MECHANISM. GEORGE R. CLARK, Dayton, Ohio, assignor to Clark & Harvey, Dayton, Ohio, a Partnership composed of George R. Clark and Thomas J. Harvey. Filed Nov. 10, 1909. Serial No. 527,209. (Cl. 161—27.)



1. In a time-controlled operating device, a movable member, a motor mechanism, timing devices controlling the movement of said mechanism, a vertically movable rack connected to said movable member, and a connection between said motor mechanism and said rack to cause said rack to move said movable member in either direction, substantially as specified.

2. In a time-controlled operating device, a movable member, a vertically movable rack connected to said member, a motor mechanism, timing devices for controlling the movement of said mechanism, and connections between said rack and motor mechanism to cause said mechanism to impart to said rack a movement in either direction, substantially as specified.

3. In a time-controlled electric switch, a movable member of said switch, a vertically movable rack connected to said movable switch member, a motor mechanism, timing devices, for controlling the movement of said motor mechanism and said rack to impart to said rack a movement in either direction, substantially as specified.

4. In a time-controlled operating device, a movable member, a motor mechanism, timing devices for controlling the movement of said mechanism, a gear connected with said motor mechanism, one-half of said gear being devoid of teeth, two pinions adapted to be alternately engaged by the teeth of said gear and connections from said pinions to said movable switch member, substantially as specified.

5. In a time-controlled operating mechanism, a movable member, a rack connected to said member, a motor mechanism, timing devices for controlling the movement of said motor mechanism, one-half of said gear being devoid of teeth, two pinions on opposite sides of said gear adapted to be alternately engaged with the teeth thereof, a shaft to which said pinions are connected and a third pinion on said shaft meshing with said rack, substantially as specified.

[Claims 6 to 55 not printed in the Gazette.]

1,109,281. CAR JOURNAL-BOX. DONALD C. DAVIS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Nov. 15, 1913. Serial No. 801,110. (Cl. 64—23.)

1. The combination with a journal box, and a lid therefor, of a boltless hinge for said lid comprising a lug on the box provided with laterally projecting journals and having a hole extending axially through said lug and said journals, and hollow bosses on said lid which receive and are adapted to turn on said journals, said lid being adapted to be opened and closed by a simple swinging movement about said journals, said bosses having slots through which said journals are adapted to pass when said lid is swung to a predetermined position, substantially as set forth.

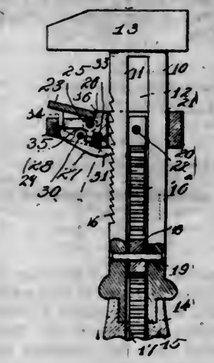
2. The combination with a journal box, and a lid therefor, of a boltless hinge for said lid comprising a lug on the box provided with laterally projecting journals, and hollow cylindrical bosses in said lid which receive and are adapted to turn on said journals, said lid being adapted to be opened and closed by a simple swinging movement on said journals, said bosses having slots in the lower portions of their cylindrical walls, through which said journals are adapted to pass when said lid is swung to a predetermined position, substantially as set forth.

3. The combination with a journal box, and a lid therefor, of a boltless hinge for said lid comprising a lug on the box provided with laterally projecting mutilated cylindrical journals and hollow cylindrical bosses on said lid which receive and are adapted to turn on said journals, said bosses having slots in their cylindrical walls through which said journals are adapted to pass only when said lid is swung to a position in which said slots are opposite the narrowest parts of said journals, substantially as set forth.

4. The combination with a journal box, and a lid therefor, of a boltless hinge for said lid comprising a fixed part on said lid which is adapted to turn on a fixed part on said box, said parts having interlocking portions which prevent the disconnection of said parts except when said lid is in a predetermined position, and a closing spring for said lid which acts to hold said parts in connection, and which exerts its maximum force when said lid is in position for disconnection from said box, substantially as set forth.

5. The combination with a journal box, and a lid therefor, of a boltless hinge for said lid comprising a lug on the box provided with an axial hinge pin hole and with laterally projecting journals concentric with said hole, and hollow bosses on said lid which receive and are adapted to turn on said journals, said lid being adapted to be opened and closed by a simple swinging movement about said journals, said bosses having slots through which said journals are adapted to pass when said lid is swung to a predetermined position, substantially as set forth.

1,109,282. WRENCH. FERDINAND DRAK, Toledo, Ohio. Filed Feb. 6, 1914. Serial No. 816,962. (Cl. 81—134.)

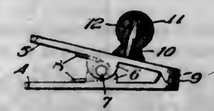


1. In a wrench, a slidable jaw having a portion of its engaging face cut-away, a face plate adapted for alinement with the face portion of the jaw and pivotally-mounted on the latter, said jaw having a socket, a dog pivoted within said socket to said movable jaw and a pin extending through an opening in the slidable jaw and adapted to engage said face plate and dog, said dog having a pointed end adapted for automatic engagement with a fixed portion of the wrench when the latter is in engagement with the work.

2. A wrench comprising a slotted shank, a movable jaw slidable thereon, a rack positioned within the slot of said shank and having said jaw connected to the top thereof, a pinion journaled in said shank in mesh with said rack, said movable jaw having its engaging face partially cut-away, having a perforation therethrough and also having a recess therein, a face plate positioned in said cut-away portion and pivoted to said jaw, a dog pivoted in said recess to said jaw and a pin extending through said perforation, and resilient means normally depressing the pointed end of said dog, said dog adapted for automatic engagement with said shank upon an engagement of said pivoted plate with the work to be operated upon.

3. In combination with a toothed wrench shank having a longitudinal slot therein, of a movable rack within said slot, a slidable jaw pivoted to the upper end of said rack, said slidable jaw having a portion of its engaging face cut-away and having a recess with a perforation between said recess and cut-away portion, a face-plate pivoted to said jaw and positioned in said cut-away portion, a dog pivoted upon trunnions in parallelism with the axial pivot of said face plate and a pin extending through said perforation and adapted for engaging the adjacent surface of said plate, and resilient means socketed in said jaw normally maintaining said pin in contact with said plates, one end of said dog being pointed and adapted for locking engagement with the wrench proper upon a seating of the work upon said pivoted plate.

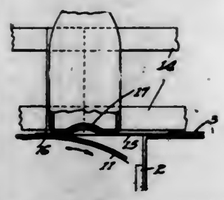
1,109,283. NECKTIE-FASTENER. CHARLES F. ELMORE, Chicago, Ill. Filed Jan. 20, 1914. Serial No. 813,224. (Cl. 24—73.)



A neck-tie fastener comprising a clip adapted to engage a portion of a shirt, a pin extending outwardly at

right angles from one member of the clip intermediate the ends thereof and adapted to pierce the material of a neck-tie, and a cap adapted to be secured over the pin to hold the neck-tie in place thereon.

1,109,284. CONVEYER. JOHN J. FRIEL, Ellwood City, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation. Filed Nov. 5, 1913. Serial No. 799,305. (Cl. 193—24.)



1. The combination, with a main conveyer and a cross conveyer for delivering articles to said main conveyer, of a deflector or guiding device arranged to bridge the gap between said conveyers, and means for tilting backwardly the articles passing upon said bridging means and overcoming the momentum thereof.

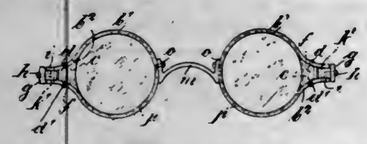
2. The combination, with a main conveyer, of a cross conveyer, a deflector plate arranged to bridge the gap between said conveyers and over which plate the articles are pushed, those in front being fed forward by contact of the articles in the rear, said plate having means for tilting each article backwardly to check the momentum thereof and prevent its toppling over.

3. The combination, with a main conveyer, of a cross conveyer, means bridging the gap between said conveyers and over which bridging means the articles are fed, the forward ones by the contact of those in the rear, said bridging means having a hump thereon arranged in the path of the articles moving thereover, for the purpose specified.

4. The combination, with a main conveyer belt, of a cross conveyer arranged to deliver bottles in an upright position to said main conveyer, a bridging means interposed between said conveyer, said bridging means having a V-shaped recess in its edge adjacent to said cross conveyer, and a hump formed thereon contiguous to the apex of said recess and over which hump the bottles are fed by said cross conveyer.

5. The combination, with a main conveyer, of cross conveyers, means bridging the gap between said main conveyer and cross conveyers and over which bridging means the articles are fed from said cross conveyers to said main conveyer, and curved guides overhanging said main conveyer and arranged to guide the articles in distinct rows upon said main conveyer parallel, substantially, with the edges thereof.

1,109,285. FRAME FOR SPECTACLES, EYEGLASSES, AND THE LIKE. HEINRICH HAASE, Rathenow, Germany. Filed Mar. 31, 1913. Serial No. 757,889. (Cl. 88—41.)

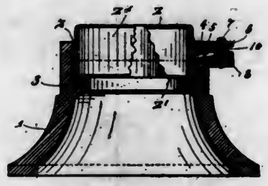


1. A frame for spectacles and eye-glasses comprising strips of straight-grained material of animal origin, the grain being lengthwise of the strips.

2. A frame for spectacles and eye-glasses comprising strips of straight-grained albuminous material, the grain being lengthwise of the strips.

3. A frame for spectacles and eye-glasses comprising, in combination, two bent strips forming the lens mounts, a bridge-piece connected thereto, a block intermediate the meeting ends of each of said strips, an internally-threaded sleeve in said block, and screws passing through said meeting ends into said sleeve.

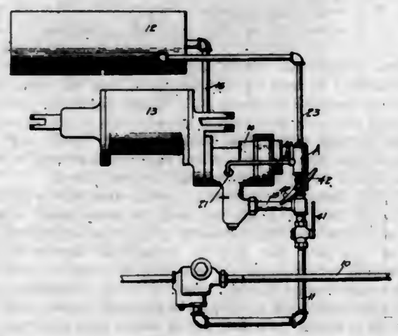
1,109,286. BOX-SEAL CUTTER. LOUIS R. HAGEN, Minneapolis, Minn. Filed Jan. 15, 1914. Serial No. 812,235. (Cl. 30—3.)



1. The combination with a base having a box-receiving socket with an opening in its wall, of a lever intermediately pivoted to the outer wall of said base, one end of said lever normally engaging said base and acting as a stop, a knife on the other end of said lever working through said opening into said socket, and a spring operative on said lever, to normally hold said knife retracted.

2. The combination with a base having a box-receiving socket with an opening in its wall, of a lever intermediately pivoted to and between a pair of bearing lugs on the outer wall of said base, one end of said lever normally engaging said base and acting as a stop, a knife on the other end of said lever working through said opening into said socket, and a spring operative on said lever, to normally hold said knife retracted.

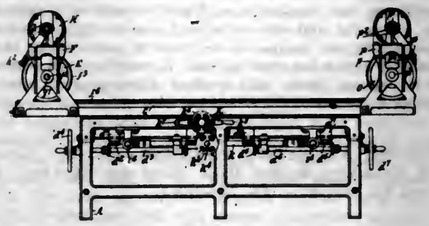
1,109,287. AUTOMATIC RETAINER FOR AIR-BRAKES. JOHN O. HARRISON, Boone, Iowa, assignor of one-half to Joseph C. Flannery, Boone, Iowa. Filed Jan. 2, 1914. Serial No. 810,088. (Cl. 188—12.)



1. In an air brake system having a train line, an auxiliary reservoir, a brake cylinder and a triple valve, a valve casing, a valve therein having ends of different diameters subject to the respective pressures of air in the auxiliary reservoir and the train line.

2. In an air brake system having a train line, an auxiliary reservoir, a brake cylinder and a triple valve, a hollow valve casing communicating at one end with the train line and at the other end with the auxiliary reservoir, and having an opening at a point between its ends, communicating with the brake cylinder, and having an exhaust opening, a valve in said casing having its end adjacent to the portion of the casing which communicates with the auxiliary reservoir, larger than its other end and having an annular groove so arranged that when the valve is in one position of its movement the exhaust opening is closed and when the valve is in another position of its movement said openings are in communication with the space in said casing around said groove.

1,109,288. OFFSET-PRINTING MACHINE. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Filed Feb. 9, 1911. Serial No. 607,595. (Cl. 101—99.)



1. The combination with a support for a primary printing surface, a suport for a print-receiving surface, an offset cylinder, driving means for causing said offset cylinder to roll over said primary printing surface to take an impression therefrom and over said print-receiving surface to apply the impression thereto, and means for moving said offset cylinder into and out of contact with said printing and print-receiving surfaces, of means for adjusting said primary printing surface on said support in the direction of travel of said offset cylinder comprising a holder which is provided with a movable part which carries the printing surface, substantially as set forth.

2. The combination with a support for a primary printing surface, a support for a print-receiving surface, an offset cylinder, driving means for causing said offset cylinder to roll over said primary printing surface to take an impression therefrom and over said print-receiving surface to apply the impression thereto, and means for moving said offset cylinder into and out of contact with said printing and print-receiving surfaces, of means for adjusting said primary printing surface on said support transversely relative to the direction of travel of said offset cylinder comprising a holder which is provided with a movable part which carries the printing surface, substantially as set forth.

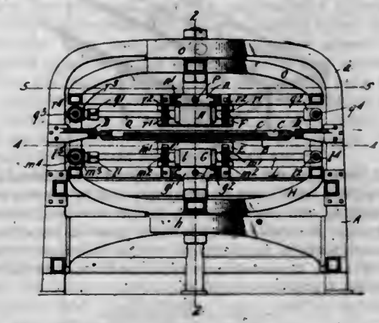
3. The combination with a support for a primary printing surface, a support for a print-receiving surface, an offset cylinder, driving means for causing said offset cylinder to roll over said primary printing surface to take an impression therefrom and over said print-receiving surface to apply the impression thereto, and means for moving said offset cylinder into and out of contact with said printing and print-receiving surfaces, of means for adjusting said primary printing surface longitudinally, transversely and angularly to different positions relative to the direction of travel of said offset cylinder, substantially as set forth.

4. The combination with a support for a primary printing surface, a support for a print-receiving surface, an offset cylinder, driving means for causing said offset cylinder to roll over said primary printing surface to take an impression therefrom and over said print-receiving surface to apply the impression thereto, and means for moving said offset cylinder into and out of contact with said printing and print-receiving surfaces, of means for adjusting said primary printing surface in the plane of the surface to different positions, and means for adjusting said offset cylinder to different positions relative to said supports, substantially as set forth.

5. The combination with a support for a primary printing surface, a support for a print-receiving surface, an offset cylinder, and driving means for causing said offset cylinder to roll over said primary printing surface to take an impression therefrom and over said print-receiving surface to apply the impression thereto, and means for moving said offset cylinder into and out of contact with said printing and print-receiving surfaces, of means for adjusting said primary printing surface in the plane of the surface longitudinally, transversely and angularly, and means for adjusting said offset cylinder circumferentially and also transversely relative to said supports, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,109,289. PHOTOGRAPHIC-PRINTING APPARATUS. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Filed Aug. 28, 1911. Serial No. 646,374. (Cl. 95—73.)



1. The combination of a device for holding a sensitized part, a photographic device for producing a print upon the sensitized part, one of said devices being adjustable with reference to the other, adjusting means for said adjustable part capable of circular movement in a plane parallel with the surface of said sensitized part, and guiding means for maintaining said adjustable part in positions which are parallel with each other in the different adjustments of said part.

2. The combination of a holder for a sensitized part, a photographic device for producing a print upon the sensitized part, an adjusting device for said photographic device capable of circular movement in a plane parallel with the surface of said sensitized part, and a guiding device which maintains said photographic device in positions which are parallel with each other in the different adjustments of said photographic device.

3. The combination of a holder for a sensitized part, a light chamber opposite said sensitized part for illuminating a photographic printing plate, an adjusting device for said chamber capable of circular movement in a plane parallel with the surface of said sensitized part, and guiding means for maintaining said chamber in positions which are parallel with each other in the different adjustments of said chamber.

4. The combination of a light chamber for illuminating a photographic printing plate, a pressure device, a holder for supporting a sensitized part between said light chamber and said pressure device, an adjusting device for said pressure device capable of circular movement in a plane parallel with the surface of said sensitized part, and guiding means for maintaining said pressure device in positions which are parallel with each other in the different adjustments of said pressure device.

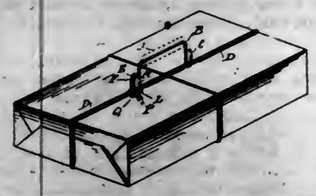
5. The combination of a light chamber for illuminating a photographic printing plate, a pressure device, a holder for supporting a sensitized part between said light chamber and said pressure device, adjusting devices for said light chamber and said pressure device capable of circular movement in planes parallel with the surface of said sensitized part, and guiding means for maintaining said chamber and said pressure device each in positions which are parallel with each other in the different adjustments of said chamber and pressure device.

[Claims 6 to 19 not printed in the Gazette.]

1,109,290. PACKAGE-HANDLE. WATSON HURLBURT, Chicago, Ill. Filed Dec. 9, 1908. Serial No. 466,695. (Cl. 224—57.)

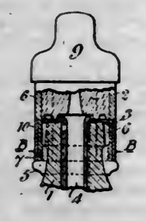
1. A package carrier handle formed from a piece of spring metal, comprising a U shaped member, a cord re-

ceiving member bent upwardly from one end of the U shaped member, a second cord receiving member bent outwardly and upwardly parallel to but spaced from the other end of the U shaped member, said second cord receiving member being then bent downwardly and inwardly to form a cord clamp, a portion thereof being turned partially across the adjacent leg of the U shaped member to form an obstruction.



2. A device of the character described comprising a wire member bent back upon itself at one end to provide means for engaging and fastening together the ends of a cord or string about a bundle and having a hook on its other end to engage beneath a portion of said cord remote from the fastened ends, a central portion of said wire being raised to provide a grip for the hand.

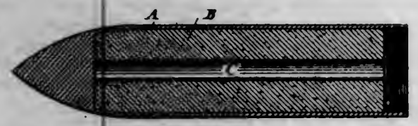
1,109,291. SIPHON FOR AERATED LIQUIDS. WILLIAM TREVENA WILLIAMS IDRIS and WILLIAM OLIVER ROSS, London, England, assignors to Idris & Co., Limited, London, England. Filed Dec. 5, 1913. Serial No. 804,933. (Cl. 215—114.)



1. In a siphon head the combination of a split ring, a casing screwing onto the split ring and having in it at its lower end a plurality of slots, a block the body of which is adapted to fit the casing and having upon it a plurality of projections adapted to fit the slots, and a ring fitting around the lower part of the casing and having its ends abutting against the block and the split ring respectively.

2. In a siphon head the combination of a split ring, a casing screwing onto the split ring and having in it at its lower end a plurality of slots, a block the body of which is adapted to fit the casing and having upon it a plurality of projections adapted to fit the slots, a ring fitting around the lower part of the casing and having its ends abutting against the block and the split ring respectively and lugs fixed inside the ring and adapted to fit the lower part of the slots.

1,109,292. EXPLOSIVE CHARGE. EDMOND JANDRIER and GEORGE SPENCER MERRILL, Peace Dale, R. I. Filed Mar. 7, 1910. Serial No. 547,736. (Cl. 102—29.)



1. The combination with a projectile, provided with a charge cavity, of an explosive charge formed of an explosive material capable of being melted at a relatively low temperature, said charge comprising a cast body of said explosive in solid form and of such size and proportions as to closely but removably fit the charge cavity of said projectile, whereby the charge and the projectile can be safely and separately stored, transported, assembled, and separated, without disintegration of the charge.

2. The combination with a projectile provided with a charge cavity, of an explosive charge, consisting of a cast body of high explosive material in solid homogeneous form containing the required quantity for a service charge for the projectile, and of a form and size to tightly but removably fit the charge cavity thereof, said charge being provided with a longitudinal bore to facilitate the removal of the charge bodily and without disintegration, and to receive a detonator.

1,109,293. AUTOMATIC WEIGHING DEVICE. ERNEST S. KNEELAND, Malden, Mass. Filed Nov. 21, 1913. Serial No. 802,267. (Cl. 73—168.)

1. In a device of the class described, weighing means; a receptacle supported thereby and provided with compartments; a movable baffle carried by the receptacle and cooperating with the compartments individually; closures movable upon the receptacle and controlling the outflow from the compartments; a single movable member mounted on the receptacle; means for operatively connecting the single movable member with the closures; means for operatively connecting the said single movable member with the baffle; a latch adapted to engage directly with the movable member; and means for supporting the latch; the receptacle being movable with the weighing means under an accumulated load to effect a disengagement of the movable member from the latch.

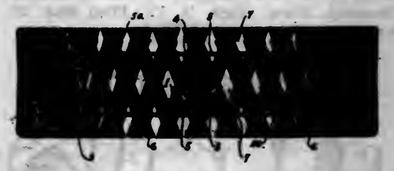
2. In a device of the class described, weighing means; a receptacle supported thereby; a movable baffle carried by the receptacle; a closure pivoted to the receptacle; a single movable member pivoted to the receptacle; a link connecting the said single movable member with the closure; a latch adapted to engage directly with the said single movable member; means for supporting the latch; and means for operatively connecting the said single movable member with the baffle.

3. In a device of the class described, weighing means; a receptacle supported thereby; and provided with compartments; a movable baffle; means for supporting the baffle for pivotal movement, the baffle being adapted to cooperate with the compartments; closures movable on the receptacle and controlling the outflow from the compartments; a single movable member mounted on the receptacle; means for operatively connecting the said single movable member with the closures; means for operatively connecting the said single movable member with the baffle; and means supported independently of the receptacle for controlling the movement of the movable member.

4. In a device of the class described, weighing means; a receptacle supported thereby and provided with compartments; a pivotally supported baffle coöperating with the compartments individually; a lever fulcrumed upon the receptacle and loosely connected with the baffle; a movable member pivotally supported upon the receptacle and provided with projections adapted to engage the lever; means for limiting the movement of the movable member; closures carried by the receptacle and controlling the compartments; and means for operatively connecting the closures with the movable member.

5. In a device of the class described, weighing means; a receptacle supported thereby and provided with compartments; a movable baffle carried by the receptacle and coöperating with the compartments individually; an arm projecting from the baffle; spaced stops upon the receptacle, between which stops the arm is adapted to move; a lever fulcrumed intermediate its ends upon the receptacle, one end of the lever being loosely connected with the arm; a movable member pivoted upon the receptacle and provided with spaced projections adapted to receive the other end of the lever, the movable member being provided with a tooth; a latch adapted to engage opposite sides of the tooth; means for supporting the latch; closures pivoted to the receptacle and controlling the compartments; and links pivoted to the closures and to the movable member.

1,109,294. TRACTOR-WHEEL. JOHN M. KROYER, Stockton, Cal. Filed Apr. 15, 1913. Serial No. 761,168. (Cl. 21—216.)

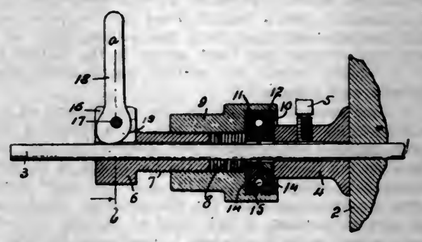


1. A device of the character described comprising a hub, spokes mounted on one end of said hub, projecting arms on the outer ends of said spokes, a plurality of cutter rings secured to said arms in spaced relation and angle grips secured on said cutter rings in spaced relation, as described.

2. A device of the character described comprising a hub and spokes, spaced cutter rings mounted on said spokes, each cutter ring being provided with a plurality of projecting arms, said arms being disposed in spaced relation, and a plurality of gripping members mounted on said projecting arms, as described.

3. A device of the character described comprising the combination of a hub, spokes mounted on one end of said hub, a projecting arm on each spoke, a pair of spaced flanges on each arm, a cutter ring secured to each of said flanges, said cutter rings being provided with a plurality of spaced arms, and gripping members secured to said spaced arms, as described.

1,109,295. MOLD-CLAMPING DEVICE. HENRY H. LAMPERT, Kansas City, Mo., assignor of one-half to Arthur L. Richtmyre, Kansas City, Mo. Filed Nov. 29, 1912. Serial No. 733,938. (Cl. 57—44.)



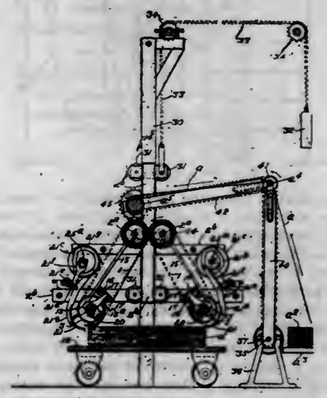
1. In a mold clamping device, a clamping collar, a tie-rod extending therethrough, releasable means for locking the collar to said rod, two tubular members mounted on said rod and having screw threaded connection with each other and rotatable one relative to the other, a thrust ball bearing carried by one of the tubular members and adapted to bear against and movable longitudinally on said rod, with the member which carries it, independently of said collar, and means for releasably locking the other tubular member to said tie-rod.

2. In a mold clamping device, a clamping collar, a tie-rod extending therethrough, releasable means for locking the collar to said rod, two tubular members detachably mounted on said rod and having screw threaded connection with each other, one tubular member being rotatable relative to the other, a thrust ball bearing carried by the rotary member and adapted to bear against and movable longitudinally on said rod with the member which carries it independently of said collar, and a cam lever pivoted to the other tubular member for releasably locking said member to said rod.

3. In a mold clamping device, a tie-rod, two clamping collars mounted on said rod, each collar having means for being secured tightly to said rod, one of the collars being longitudinally adjustable on said rod, and a tightening device adapted for longitudinal expansion and contraction and for longitudinal adjustment on and having means for being releasably locked to said rod, and adapted to engage and longitudinally move and to be detached from said adjustable clamping collar.

4. In a mold clamping device, a tie-rod, a clamping collar longitudinally adjustable on said rod and having means for being releasably locked thereto, and a tightening device adapted for longitudinal expansion and contraction, and longitudinally adjustable on said rod independently of said clamping collar and adapted for longitudinally moving said collar, and provided with means for being releasably locked to said rod.

1,109,296. CLOTH-FOLDING MACHINE. WILLARD I. LEWIS, Walpole, Mass., assignor of one-half to Frank A. Sayles, Pawtucket, R. I. Filed Oct. 29, 1912. Serial No. 728,431. (Cl. 26—3.)



1. In a web-folding machine, in combination, a plurality of folding members, and means for causing said members to travel in opposite diverging elongated endless paths and to engage with the web in an alternating succession, thereby drawing it out in folds extending in opposite directions alternately.

2. In a web-folding machine, in combination, opposite endless flexible carriers traveling in elongated paths approaching each other at the web-receiving place and diverging obliquely therefrom, and folding members moved by said carriers and caused to engage with the web in an alternating succession and deliver it in oppositely-extending folds.

3. In a web-folding machine, in combination, opposite endless flexible carriers traveling in paths approaching

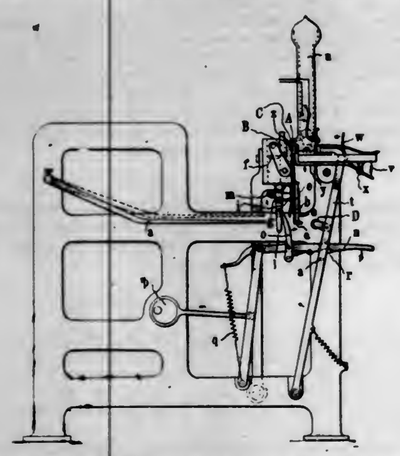
each other at the web-receiving place and diverging therefrom, folding members moved by the respective carriers and operated thereby to form the web into oppositely-extending folds, and adjusting means to vary the length of fold.

4. In a web-folding machine, in combination, opposite endless flexible carriers traveling in paths approaching each other at the web-receiving place and diverging therefrom, folding members moved by the respective carriers and operated thereby to form the web into oppositely-extending folds, and means to adjust the distance between the outer portions of said paths and thereby vary the length of fold.

5. In a web-folding machine, in combination, oppositely-acting folding members, means for causing said members respectively to travel in endless paths approaching each other at the web-receiving place and diverging therefrom and for operating them to form the web into oppositely-extending folds, and means for adjusting the length of fold.

[Claims 6 to 14 not printed in the Gazette.]

1,109,297. SHUTTLE-CHANGING MECHANISM FOR LOOMS. OSKAR LÖTZSCH, Dresden, Germany. Filed Aug. 16, 1912. Serial No. 715,435. (Cl. 139—85.)



1. In a shuttle changing mechanism for looms, a shuttle magazine, a batten, a double armed lever pivoted on the batten, a lever adapted to strike the double armed lever, a slide which is set free by said double armed lever, an inner part of the shuttle box bottom which is driven upward by said slide, a spindle provided with an arm resting on a roller provided on said slide, a stop arm secured to said spindle, a cam which is engaged by the stop arm when the batten moves forward, a hooked lever on which the cam is pivotally mounted, an eccentric for oscillating said lever, a feeder pulled toward the batten by the hooked lever, a lever operating a closing flap for the shuttle magazine and resting on the feeder, a shuttle box, means whereby the shuttle box is forced to open when the flap for the shuttle magazine rises and means whereby the parts are returned to normal position, for the purpose set forth.

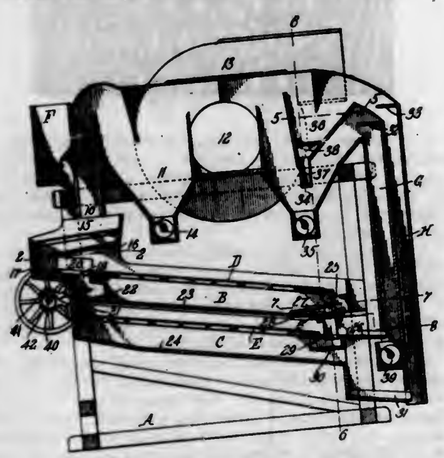
2. In a shuttle changing mechanism for looms, a shuttle magazine, a batten, a double armed lever pivoted to the batten, a lever adapted to strike the double armed lever, a slide mounted in the batten which is set free by said double armed lever, an inner part of the shuttle box bottom which is driven upward by said slide, a spindle, a pair of bearings supporting said spindle, an arm on said spindle, a roller provided on said slide, said arm resting on said roller, a stop arm secured to said spindle, a cam which is engaged by the stop arm when the batten moves forward, a hooked lever positioned by said cam, an eccentric for oscillating said lever, a shuttle feeder engaged by said hooked lever and pulled toward the batten, a double arm lever positioned by contact with said shuttle feeder, a closing flap for the shuttle magazine, a hook locking the closing flap and coupled to the double armed lever, a shuttle box, a movable front wall to the shuttle box and arms arranged thereon whereby said wall is forced to rise with the closing flap, and means for returning the parts to their normal position, for the purpose set forth.

1,109,298. LUBRICANT-GREASE. FRANK E. MARINER, Gull Point, Fla., assignor to The Pensacola Tar & Turpentine Company, Gull Point, Fla., a Corporation of Florida. Filed Oct. 2, 1913. Serial No. 792,981. (Cl. 87—9.)

1. A lubricant-grease comprising a mineral oil, distilled rosin having an abietic acid content of more than 60%, and a saponifying medium.

2. A lubricant-grease comprising a mixture of substantially ninety parts mineral oil, and eight parts rosin, having an abietic acid content of upward of 60% and twenty parts milk of lime.

1,109,299. GRAIN-SEPARATOR. THEODORE F. MORSE, Silver Creek, N. Y., assignor to Huntley Manufacturing Company, Silver Creek, N. Y. Filed Mar. 26, 1908. Serial No. 423,354. (Cl. 130—15.)



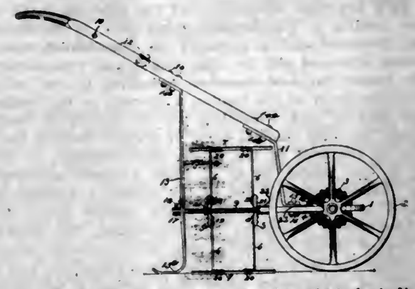
1. In a separating machine, the combination of a plurality of shaking screens of like mesh arranged one beneath the other, means for directing the material to the head ends of the several screens, the upper screen having a bottom board provided with discharge conduits for the material which passes through said screen, a tail board at the tail end of the lower screen which is arranged to receive the material tailing off of said screens for uniting said material, and a bottom board for the lower screen, said conduits extending from the bottom board of said upper screen past said lower screen to the bottom board of the lower screen for uniting the material passing through said screens.

2. In a separating machine, the combination of a plurality of shaking screens of like mesh inclining in the same direction and arranged one beneath the other, means for directing the material to the head ends of the several screens, the upper screen having a bottom board provided with discharge conduits for the material which passes through said screen, a tail board at the tail end of the lower screen which is arranged to receive the material tailing off of said screens for uniting said material, and a bottom board for the lower screen, said tail board having

openings through which said conduits pass to the bottom board of the lower screen for uniting the material passing through said screens.

3. In a separating machine, the combination of a plurality of screens of like mesh extending in the same direction and arranged one below the other, the upper screen having an extension forming a head board provided with a transverse row of spaced feed openings for the lower screen, open-ended longitudinal feed conductors arranged between said openings leading to the upper screen, a bottom board for the upper screen provided with discharge conduits for the material passing through said screen, a tail board on the lower screen for collecting the material tailing off both screens, said tail board having openings through which said conduits pass to the bottom board of the next lower screen for uniting the material passing through said screens.

1,109,300. CHOPPING-MACHINE. LOUIS F. NEWSOM, Auburn, N. Y. Filed Nov. 26, 1913. Serial No. 803,230. (Cl. 97—46.)



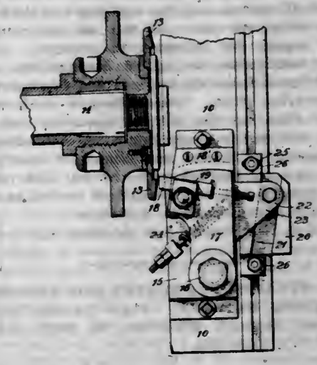
1. A device of the character described including a wheeled frame, handles extending therefrom, intersecting bars depending from the handles and having their lower extremities bent to form runners to contact with the surface over which the device is adapted to be drawn, a shaft rotatably supported by the frame and the intersecting portions of the bars, chopping blades operatively connected to the shaft, and an operative connection between the supporting wheels and the shaft whereby such shaft may be caused to revolve upon rotation of the wheels.

2. A device of the character described including a wheeled frame, spaced straps projecting upwardly from the frame, rearwardly directed handles operatively connected to the upper extremities of the straps, intersecting bars depending from the handles and having their lower extremities bent to form rearwardly disposed runners to contact with the surface over which the device is adapted to be drawn, a shaft rotatably supported by the frame and the intersecting portions of the bars, chopping blades operatively connected to the shaft rearwardly of the frame, and an operative connection between the supporting wheels and the shaft whereby such shaft may be caused to revolve upon rotation of the wheels.

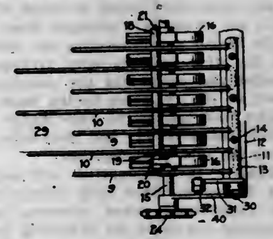
1,109,301. TOOL FOR MACHINING BEVEL-GEAR BLANKS AND OTHER OBJECTS WITH INCLINED SURFACES. JAMES CHARLES POTTER, Providence, R. I., assignor to Potter & Johnston Machine Company, Pawtucket, R. I. Filed Nov. 28, 1910. Serial No. 594,586. (Cl. 82—17.)

1. In a tool for turning or machining objects having inclined surfaces, the combination of a work holder, a tool-slide movable crosswise of the work holder axis, a tool carrier connected with said slide as to partake of the traversing movement of the slide, said tool carrier being shiftable upon and independently of the tool slide and in a direction crosswise of the work holder axis, a shiftable base upon which said slide is mounted, and an inclined former with which said carrier coacts mounted on said base and shiftable along the same to suit the position of the carrier.

2. In a tool for turning or machining objects having inclined surfaces, the combination of a work holder, a shiftable cross slide base, a cross slide, a bracket on the top of the cross slide adjustable to different positions in the direction in which the cross slide moves and independently of the cross slide, a tool carrier pivoted to the upper side of said bracket, a former having an inclined edge and adjustably mounted on the cross slide base adjacent the cross slide, and a lateral projection on said tool carrier having a member engaging said inclined edge.



1,109, 302. BEATER MECHANISM. WILLIAM H. RICE, Rochester, N. Y.; JOHN E. RICE, administrator of said WILLIAM H. RICE, deceased. Original application filed Feb. 23, 1909, Serial No. 479,632. Divided and this application filed May 5, 1913. Serial No. 765,713. (Cl. 130—32.)



1. Beater-mechanism having, in combination, a series of fingers arranged side-by-side and adapted to receive material upon their forward portions, and means for vibrating the fingers upwardly; some of the fingers, at their rearward ends, extending beyond the others so as to provide intermediate spaces through which tubers may fall while the vines are supported by the longer fingers and separated from the tubers.

2. Beater-mechanism having, in combination, a series of fingers arranged side-by-side and pivotally mounted adjacent their forward ends, upon which they are adapted to receive material; means for oscillating the fingers upwardly and simultaneously, and means for propelling the material toward the rearward ends of the fingers; alternate fingers extending beyond the intermediate fingers, at their rearward ends, so as to provide spaces through which tubers may fall while the vines are supported by the longer fingers and thus separated from the tubers.

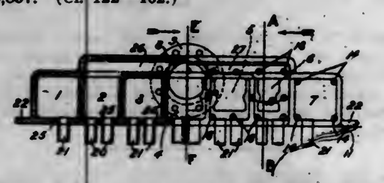
3. Beater-mechanism having, in combination, a series of fingers adapted to support vines while separating them from adherent material, means for vibrating the fingers upwardly to promote the separation, and means, manually operable during the operation of the beater, to vary the amplitude of the vibrations according with variations in the character of the material.

4. Beater-mechanism having, in combination, a series of fingers lying side-by-side and adapted to support vines while separating them from adherent material; and means for vibrating the fingers upwardly and simultaneously, said means comprising a shaft extending transversely beneath the fingers, a rod fixed to and parallel with the shaft, and means for rotating the shaft to impart an eccentric movement to the rod and cause it to alternately engage and disengage the fingers.

5. Beater-mechanism having, in combination, a series of fingers lying side-by-side and adapted to support vines while separating them from adherent material, and means for vibrating the fingers upwardly and simultaneously; said means comprising a rod extending transversely beneath the fingers, and means for revolving the rod about an axis parallel with the rod, the rod being adjustable toward and from its axis of revolution to vary the amplitude of its operative movement.

[Claims 6 to 10 not printed in the Gazette.]

1,109,303. STEAM-SUPERHEATER FOR LOCOMOTIVE AND OTHER BOILERS. JOHN GEORGE ROBINSON, Manchester, England. Filed Mar. 23, 1912. Serial No. 685,857. (Cl. 122—462.)

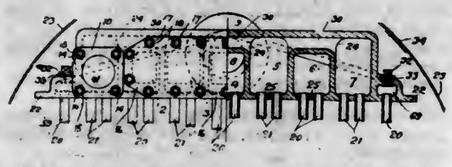


1. In a superheater, the combination, with superheater elements; of a header provided with integrally-formed transverse and longitudinal partitions which divide it into compartments and longitudinal steam passages, said compartments comprising chambers for saturated steam and chambers for superheated steam arranged alternately and side by side, one of the said passages being arranged at the top of the header and connecting the chambers of one series, and the other passages being arranged at the back of the header and connecting the chambers of the other series, and all the chambers having hand-openings at the front sides and having the superheater elements connected to their bottom sides; and removable covering means for closing the said hand-openings.

2. In a superheater, the combination, with superheater elements; of a heater provided with integrally-formed transverse and longitudinal steam passages, said compartments comprising chambers for saturated steam and chambers for superheated steam arranged alternately and side by side, one of the said passages being arranged at the top of the header and connecting the chambers of one series, and the other passages being arranged at the back of the header and connecting the chambers of the other series, and all the chambers having hand-openings at their front sides and having the superheater elements connected to their bottom sides; and removable covering means for closing the said hand-openings, said covering means being provided with a longitudinal steam passage which forms a supplementary communication between certain of the similar steam chambers of one series.

1,109,304. STEAM-SUPERHEATER FOR LOCOMOTIVE AND OTHER BOILERS. JOHN GEORGE ROBINSON, Manchester, England. Original application filed Mar. 25, 1912; Serial No. 685,857. Divided and this application filed June 5, 1914. Serial No. 843,200. (Cl. 122—462.)

1. In a fire tube steam superheater of the kind set forth, a header comprising, in combination, a plurality of saturated steam chambers and a plurality of superheated steam chambers arranged side by side within and transversely of the header the said chambers extending to and being open at the front of the header, a channel arranged within the header at the rear of and connecting all the saturated steam chambers the said channel being of greatly reduced cross section at the ends of the header and extending to the front of the header so as to form a small saturated steam chamber at each end of the header, a passage or passages in the top portion of the header above the saturated steam chambers and connecting the several superheated steam chambers, removable covering means for closing the open sides of the steam chambers, and a plurality of superheater pipes each having a saturated steam inlet and a superheated steam delivery end bent at right angles and connected to the bottom of the header and communicating respectively with adjacent saturated and superheated steam chambers.

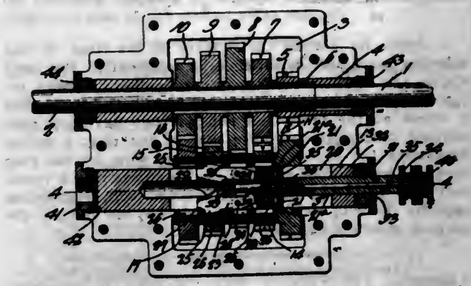


2. In a fire tube superheater of the kind set forth, a header having in combination a plurality of saturated steam chambers and a plurality of superheated steam chambers arranged side by side within and transversely of the header the said chambers extending to and being open at the front of the header, a channel in the header at the rear of and connecting all the saturated steam chambers the said channel being of greatly reduced cross section at the ends of the header and extending to the front of the header so as to form a small saturated steam chamber at each end of the header, a passage or passages in the top portion of the header above the saturated steam chambers and connecting the several superheated steam chambers, removable covering means for closing the open sides of the steam chambers, and a plurality of superheater pipes each having a saturated steam inlet and a superheated steam delivery end bent at right angles and connected to the bottom of the header and communicating respectively with adjacent saturated and superheated steam chambers.

3. In a fire tube steam superheater of the kind set forth, a header comprising, in combination, a plurality of saturated steam chambers and a plurality of superheated steam chambers arranged side by side within and transversely of the header the said chambers extending to and being open at the front of the header, a channel arranged within the header at the rear of and connecting all the saturated steam chambers the said channel gradually decreasing in cross sectional area from the middle to the ends of the header, channels in a horizontal plane within the header and above the saturated steam chambers the said channels connecting the superheated steam chambers at the top thereof, removable covering means for closing the open sides of the steam chambers, a saturated steam chamber at each end of the header and of considerably less height and width than the other chambers the said small saturated steam chambers extending to and being closed by an integral wall at the front of the header, the end walls of the header being constituted mainly by the outer walls of the superheated steam chambers adjacent to the said small saturated steam chambers, superheater pipes whose steam inlet and outlet ends are bent at right angles and connected to the bottom of the header so as to communicate respectively with the saturated and superheated steam chambers, openings in the top of the said small saturated steam chambers and removable means for closing the said openings in a steam tight manner.

1,109,305. SELECTIVE TRANSMISSION MECHANISM. ARTHUR R. ROGERS, Jonesport, Me. Filed Mar. 31, 1913. Serial No. 757,984. (Cl. 74—59.)

1. A selective transmission mechanism, including a casing, a drive shaft journaled therein, a driven shaft journaled in the casing and disposed in axial alinement with the drive shaft, a counter shaft journaled in the casing and operably connected at all times to the drive shaft, a plurality of freely rotatable power transmitting members mounted upon the counter shaft within the casing, a similar number of coöperating power transmitting members keyed to the driven shaft within the casing, a collapsible selecting means carried slidably by the counter shaft for engagement with one of the power transmitting members at a time, said member being normally expanded, manually operated means for collapsing said member, and manually operated means for sliding the member when collapsed to a position for engagement with a selected power transmitting member of the counter shaft.



2. A selective transmission mechanism, including a casing, a drive shaft journaled therein, a driven shaft journaled in the casing and disposed in axial alinement with the drive shaft, a counter shaft journaled in the casing and operably connected at all times to the drive shaft, a plurality of freely rotatable power transmitting members mounted upon the counter shaft within the casing, a similar number of coöperating power transmitting members keyed to the driven shaft within the casing, a collapsible selecting means carried slidably by the counter shaft for engagement with one of the power transmitting members at a time, said member being normally expanded, manually operated means movable in one direction for collapsing the selecting means, and manually operable means for bodily moving the selecting means and the collapsing means so that the selecting member may be disposed in selected position.

3. A selective transmission mechanism, including a casing, a drive shaft journaled therein, a driven shaft also journeled therein and disposed in axial alinement to the drive shaft, a counter shaft journaled in the casing and operably connected at all times to the drive shaft, said counter shaft being provided with a transversely disposed slot extending the full length of the casing and terminating in a central bore through one end thereof, a plurality of freely rotatable power transmitting members carried by the counter shaft within the casing, a similar number of coöperating power transmitting members keyed to the driven shaft, a tubular rod slidably mounted in the bore of the counter shaft, a normally expansible collapsible selecting member carried upon one end of the tubular rod within the slot of the counter shaft, said selecting member being provided with means to engage one of the power transmitting members of the counter shaft at a time to lock the same for rotation with the counter shaft, a rod slidably mounted in the tubular rod and provided with means for collapsing the selecting member, manually controlled means for operating the last rod, and manually controlled means for operating the tubular rod.

4. A selective transmission mechanism, including a casing, a drive shaft journaled therein, a driven shaft also journaled therein and disposed in axial alinement to the drive shaft, a counter shaft journaled in the casing and operably connected at all times to the drive shaft, said counter shaft being provided with a transversely disposed slot extending the full length of the casing and terminating in a central bore through one end thereof, a plurality of freely rotatable power transmitting members carried by the counter shaft within the casing, a similar number of coöperating power transmitting members keyed to the driven shaft, a tubular rod slidably mounted in the bore of the counter shaft, a normally expansible collapsible selecting member carried upon one end of the tubular rod within the slot of the counter shaft, said selecting member being provided with means to engage one of the power transmitting members of the counter shaft at a time to lock the same for rotation with the counter shaft, a rod slidably mounted in the tubular rod and provided with means for collapsing the selecting member, manually controlled means for operating the last rod, manually controlled means for operating the tubuar rod, means for locking both rods against sliding movement, and means for locking the tubular rod actuating means until the selecting member has been collapsed.

5. A selective transmission mechanism, including a casing, a drive shaft journaled therein, a driven shaft also journaled therein and disposed in axial alinement thereto, a counter shaft journaled in the casing parallel to the driving and driven shafts, a transmission device operably connecting the drive shaft to the counter shaft, a plurality of transmission members keyed upon the driven shaft, a similar number of coöperating transmission members rotatably mounted upon the counter shaft, each of the latter transmission members being provided with a key-way adjacent the counter shaft, said counter shaft being provided with a transverse slot extending the full length of the power transmitting member, a collapsible key slidably mounted in the transverse slot of the counter shaft, said key being normally expanded to engage the key way of a selective power transmitting member, manually controlled means for collapsing the key, and manually controlled means for sliding the key to selective position.

[Claim 6 not printed in the Gazette.]

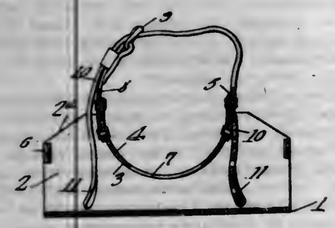
1,109,306. HEDDLE. EMIL ARTHUR SCHURIG, Grossröhrsdorf, Germany. Filed Nov. 15, 1913. Serial No. 801,274. (Cl. 139—14.)

A heddle composed of two superposed strips, each strip having a longitudinal open-ended slot carried through a little more than half the strip length, the strips being placed together so that the slots run in opposite directions and form an eye in the middle of the strip for the reception of the warp thread, the portions forming such eye being depressed in opposite directions so that the strips can be held in the same plane as the warp thread, substantially as set forth.

1,109,307. TIRE ATTACHMENT. CHRISTIAN SEEWALD, Williamsport, Pa. Filed May 26, 1913. Serial No. 770,034. (Cl. 152—14.)

1. A device of the class described comprising a trough-shaped tread and a trough-shaped saddle inset into the walls of the tread, the saddle and the tread being dished in a common direction, the tread being terminally extended beyond the side walls of the saddle and being upwardly extended upon the side walls of the saddle, thereby to afford a reinforcement, the tread and the saddle being angularly disposed with respect to each other.

2. A device of the class described comprising a trough-shaped tread and a trough-shaped saddle inset into the walls of the tread, the saddle and the tread being dished in a common direction and being angularly disposed, the tread being open at its ends and the saddle having a vent opening for which the tread constitutes a shield.



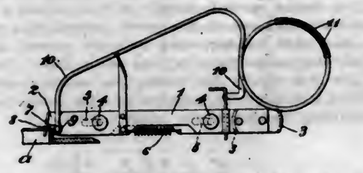
3. A device of the class described comprising a trough-shaped tread; a trough-shaped saddle disposed transversely of the tread and assembled with the tread; and connecting straps carried by the saddle, the ends of the straps being wedged between the side walls of the tread, to constitute closures for the openings existing between the side walls of the tread.

1,109,308. CLINICAL-THERMOMETER CASE. THOMAS W. SIMS, Eheart, Va. Filed Aug. 18, 1913. Serial No. 785,329. (Cl. 73—52.)

1. A thermometer case comprising a tubular body internally threaded at one end thereof, a container engaged with the threaded end of said body and forming a closure for the latter, a tubular wick disposed within said body, an additional wick member carried by the aforesaid wick and projecting within said container, an annular flange formed within the body adjacent the opposite end of the same to prevent the sliding movement of the tubular wick therein, and a closure for the last mentioned end of the body.

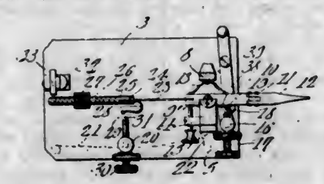
2. A thermometer case comprising a tubular body, internally threaded at one end thereof, a container engaged with the threaded end of said body and forming a closure for the latter, a tubular wick member disposed within said body and having one end thereof resting in engagement with the peripheral edge of said container projecting within said body, means formed in said body to prevent the sliding movement of the tubular wick member therein, an additional wick member of elongated design snugly received in the bore of the tubular wick member at the last mentioned end thereof and projecting within said container, and a closure for the opposite end of the body.

1,109,309. APPLIANCE FOR USE WITH RING-SPINNING MACHINES. HERMANN STÄUBLI and ROBERT STÄUBLI, Horgen, Switzerland. Filed Dec. 19, 1912. Serial No. 737,699. (Cl. 29—84.)



A device for placing the runners on the rings of ring spinning machines, comprising in combination two bars which are movable relative to each other, handles integrally formed at one end of said bars, both bars having a recess at the other end and one bar having a nose adapted to engage the inner edge of the ring, a spring connecting the two bars, and a guide wire for the runners, one end thereof mounted on the bar having a recess only and the other end being inclined and terminating opposite the said recess, all substantially as and for the purpose specified and shown.

1,109,310. TELEGRAPH-KEY. BARTOW B. YOUMANS, College Park, Ga. Filed Apr. 4, 1913. Serial No. 758,978. (Cl. 178—82.)



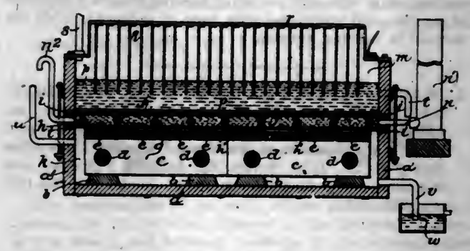
1. A telegraph key including a base having two main line connecting and supporting screws for permanently connecting the base to a support, a frame carried by the base, a horizontally swinging lever supported from the base, a resilient "dot" contact spring and a fixed "dash" contact carried by the lever, two contact carrying posts connected to the base, said posts being disposed adjacent to the respective contact spring and fixed contact of the lever, and resilient means carried by the frame for equalizing the pressure at the pivotal point of the lever to maintain the lever with the contacts disengaged and the circuit open.

2. A telegraph key including a base having two main line connecting and supporting screws for permanently connecting the base to a support, a frame carried by the base, a horizontally swinging lever supported from the base, a resilient "dot" contact spring and a fixed "dash" contact carried by the lever, two contact carrying posts connected to the base, said posts being disposed adjacent to the respective contact spring and fixed contact of the lever, and a double terminal spring carried by the frame and having its terminals disposed to engage the lever equidistantly upon each side of the pivotal point thereof.

3. A telegraph key including a base, two connecting and supporting screws connected thereto for permanently connecting the base to a support, said screws also forming the terminals for the main line, a frame carried by the base, a horizontally swinging lever supported from the base and provided with an intermediate resilient section capable of flexing horizontally, a resilient "dot" contact spring connected adjacent to the resilient section with the outer rigid section, a "dash" contact carried by the rigid section upon the opposite side of the pivotal point of the lever to the resilient contact, two posts connected to and insulated from the base, one of said posts being disposed adjacent to the fixed contact while the other post is disposed adjacent to the resilient contact, an adjustable contact mounted in each of said posts, and a double terminal spring carried by the frame and having its terminals disposed to engage the lever equidistantly upon each side of the pivotal point thereof.

4. A telegraph key, including a base having two main connecting screws, a frame carried by the base, a horizontally swinging lever supported from the base, a resilient "dot" contact spring and a fixed "dash" contact carried by the lever, two contact carrying posts connected to the base, said posts being disposed adjacent to the respective contact spring and fixed contact of the lever, and a double terminal spring carried by the frame and having its terminals disposed to engage the lever equidistantly upon each side of the pivotal point thereof.

1,109,311. METHOD AND MEANS FOR ELECTROLYZING SALINE SOLUTIONS. EDWARD A. ALLEN, Rumford Falls, Me. Filed Jan. 6, 1912. Serial No. 669,792. (Cl. 204—58.)



1. The herein described process of electrolyzing saline solutions, which consists in bringing a body of solution into contact with the inner confronting faces of opposed horizontal diaphragms, passing a current of electricity therethrough, liberating chlorin at an unimmersed anode outside of one of said diaphragms so that it is unabsorbed by said body of electrolyte, liberating the metal in contact with the lower surface of a mercury cathode outside of and in contact with the other diaphragm to amalgamate with said mercury, and liberating the said metal at the upper surface of said cathode in the presence of water.

2. The herein described process of electrolyzing saline solutions, which includes passing a current of electricity upwardly from an anode through such solution and through a horizontal diaphragm, a layer of mercury, and a body of water to a terminal electrode, all in the order named, liberating the metal in said solution in contact with the under face of said cathode to amalgamate therewith, liberating said metal at the upper surface of said cathode in the presence of water to form a hydrate, and liberating chlorin at a point below the body of saline solution and out of contact therewith.

3. In an electrolytic cell, the combination of horizontal confronting diaphragms forming an electrolyte compartment between them, a carbon anode below and in contact with the lower diaphragm, and a layer of mercury resting on the upper diaphragm and constituting the cathode.

4. An electrolytic cell, comprising a cell body, separated horizontal diaphragms in said body forming a compartment between them for the electrolyte, an anode compartment below them, and a cathode compartment above them, an anode below and in contact with the lower diaphragm, a mercury cathode above the upper diaphragm and in contact therewith, and a body of water above and in contact with the cathode.

5. An electrolytic cell, comprising a body, separated diaphragms forming a compartment for the electrolyte, a grid between said diaphragms, an anode on which the lower diaphragm rests, a mercury cathode covering the upper diaphragm, terminal electrodes, means for circulating electrolyte through said electrolyte compartment, and means for supplying a body of water to said cell to contact with said terminal electrodes and said mercury cathode.

[Claim 6 not printed in the Gazette.]

1,109,312. SUSPENSION-FENCING. OLIVER C. ALLEN, Center township, Hancock county, Ind. Filed July 19, 1913. Serial No. 779,969. (Cl. 256—23.)

1. Suspension fencing including two upright masts, a suspension cable supported by the masts, a plurality of fence panels each comprising vertical end members and also rails, the rails of the terminal panels being inclined relatively to the end members, the rails of the remaining panel or panels being horizontal, and suspenders differing in length connected to the end members of the respective panels and also to the cable, the shorter suspenders being connected to the terminal end members of the terminal panels.

2. Suspension fencing including two upright masts, two cables extending movably through the two masts, one cable above the other in each mast, the end portions of the upper cable extending downward convergently to the end portions of the lower cable beyond the masts respectively, one end portion of each cable being provided with a tension adjuster, an anchor block operatively connected with the tension adjusters, an anchor block operatively connected with the opposite end portion of the two cables, two eye-bolts connected to the two masts respectively, each between the two cables, two stays connected to the two eye-bolts respectively, one of the stays being operatively connected with one of the anchor blocks, the remaining stay being operatively connected with the remaining one of the anchor blocks, a device connecting the two cables together between the masts, and fencing supported by the lower one of the cables.

3. Suspension fencing including two upright masts, each mast having two thimbles therein arranged one above the other, two anchor blocks arranged beyond the masts respectively, a suspension cable extending movably through the lower thimbles and operatively connected with the two anchor blocks, each end portion of the cable being provided with a tension adjuster, a stay wire extending movably through the upper thimbles and operatively connected also with the two anchor blocks, each end portion of the stay wire being provided with a tension adjuster, a binder securing the suspension cable to the stay wire between the masts, two anchoring links connected to the two anchor blocks respectively, one link being connected with one of the masts between the two thimbles and the other link with the remaining mast between the two thimbles, each link being provided with a tension adjuster, and fencing supported by the suspension cable.

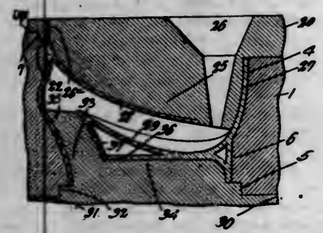
4. Suspension fencing including two upright masts, a suspension cable supported by the two masts, a plurality of fence panels each comprising vertical end members and also rails, the rails of two of the panels being inclined relative to the end members, the rails of the remaining panels being horizontal, the panels being arranged end to end, one of the panels that has inclined rails being arranged between two of the panels that have horizontal rails, suspenders connected to the end members respectively of the several panels and also to the cable, a number of the suspenders that are connected to the end members of the terminal panels being shorter than the remaining suspenders, bands loosely connecting the adjacent end members of adjacent panels together at the lower and higher portions of the members, and bands loosely connecting the terminal end members of the terminal panels respectively to the masts.

5. Suspension fencing including two uprightly supported masts, each mast having a thimble therein, a suspension cable supported by the masts within the thimbles and anchored at its ends beyond the masts, the cable being movable in the thimbles and provided with a tension ad-

juster, a plurality of fence panels loosely connected together end to end, the two terminal ones of the panels having inclined rails extending upward toward the masts, the remaining panels having relatively horizontal rails, all the panels having each a plurality of relatively vertical members that extend upward beyond the rails, and a plurality of suspenders connected to the suspension cable and also respectively connected to the upper portions of the vertical members of the panels, the suspenders that are in proximity to the masts being shorter than the others.

[Claims 6 to 12 not printed in the Gazette.]

1,109,313. LATRINE MOLD CASTING SYSTEM. SAMUEL L. BARNES, New Castle, Pa., assignor of one-half to Henry Price, New Castle, Pa. Filed Jan. 29, 1913. Serial No. 744,952. (Cl. 25—155.)



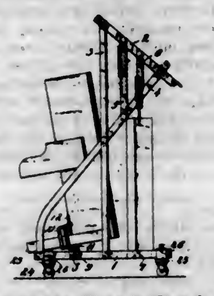
1. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spool forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spool forming member, leaving the spoon exposed; and assembling a plastic outlet with the exposed spoon, in the mold.

2. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spoon forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spoon forming member to expose the contents of the mold; coating an outlet-forming member with plastic material; introducing the outlet forming member into the mold to cause a coalescence between the material on the outlet forming member and the contents of the mold; and removing the outlet forming member.

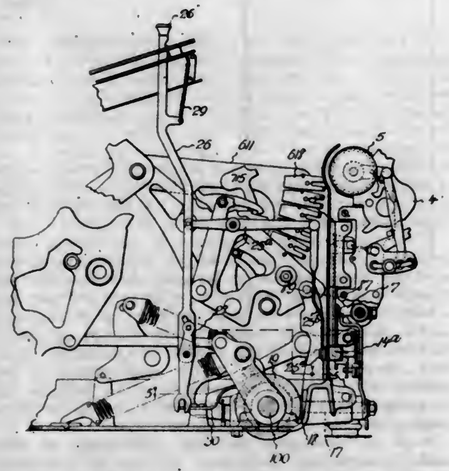
3. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spoon forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spoon forming member, immersing an outlet forming member in plastic material; permitting a portion of the plastic material to set upon the outlet forming member; removing the outlet forming member from the plastic portion of the material; introducing the outlet forming member into the mold to cause a coalescence between the material on the outlet forming member and the contents of the mold; and removing the outlet forming member.

1,109,314. ARTICLE-HOLDER FOR LIQUID-COATING MACHINES. REME A. BEAUSEJOUR, New York, N. Y., assignor to Standard Varnish Works, New York, N. Y., a Corporation of New York. Filed Apr. 17, 1908. Serial No. 427,658. (Cl. 91—60.)

An article holder for liquid coating machines having a main frame comprising a bottom, a top arranged at an angle thereto, and crossed side bars leading respectively from the front of the top to an intermediate point on the bottom and from the back of the top to the front of the bottom and additional side bars parallel with the first described cross bars and auxiliary holding frames adjustable along the said additional side bars to coöperate with the bottom in holding articles.



1,109,315. CARRIAGE MECHANISM FOR RECORDING-MACHINES. RUSSELL E. BENNER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Original application filed Feb. 21, 1910, Serial No. 545,037. Divided and this application filed Dec. 5, 1912. Serial No. 735,153. (Cl. 235—63.)



1. In a machine of the character described, the combination of a laterally shiftable paper carriage, line-spacing mechanism including a spring-held coupler piece, means for reciprocating the paper carriage including a member having a movably mounted tappet to displace said coupler when the carriage is moved one way, and manipulative means for disabling said tappet.

2. In a machine of the character described, the combination of a laterally shiftable paper carriage, line-spacing mechanism including a spring-held coupler piece, means for shifting the carriage back and forth including a reciprocating bar, a spring-held tappet lever on said bar adapted to displace said coupler, and manipulative means for displacing said lever.

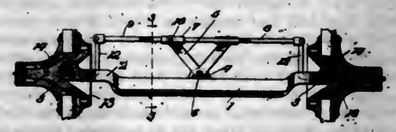
3. In a machine of the character described, the combination of a laterally shiftable paper carriage, line-spacing mechanism including a spring-held coupler piece, means for shifting the carriage back and forth including a reciprocating bar, a spring-held tappet lever on said bar adapted to displace said coupler, a depressible key, and a finger operated thereby and arranged to displace said lever.

4. In a machine of the character described, the combination of a laterally shiftable paper carriage, line-spacing mechanism, a prime mover, means for shifting the paper carriage oppositely in successive operations of said prime mover, means for disabling the line-spacing mechanism as an incident to the shifting of the carriage one way, and manipulative means common to the carriage shifting means and said disabling means for disabling both.

5. In a machine of the character described, the combination of a laterally shiftable paper carriage, line-spacing mechanism, a prime mover, means for shifting the paper carriage oppositely in successive operations of said prime mover, means for disabling the line-spacing mechanism as an incident to the shifting of the carriage one way, and a key and connections for disabling both the carriage shifting means and the line-space mechanism disabling means.

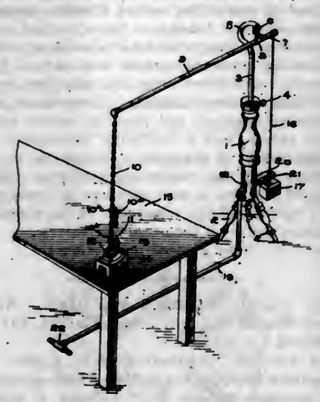
[Claims 6 to 8 not printed in the Gazette.]

1,109,316. STEERING-GEAR. FRANK A. BOWMAN and JOHN E. BRIGGS, Gilbert, Minn. Filed May 20, 1913. Serial No. 768,882. (Cl. 21—197.)



The combination of an axle, wheels pivotally mounted thereon, the pivots being disposed in the diametrical plane of the wheels and between the sides of the wheels, arms rigidly connected to said wheels at one side of the axle and extending laterally therefrom, steering rods pivoted at their outer ends to the free ends of said arms and having their inner ends overlapping, and an equalising lever consisting of diverging arms fulcrumed at their meeting ends upon the axle and having their free ends pivoted to the inner ends of the respective steering rods, said diverging arms being parallel with lines passing through the outer ends of the steering rods to which they are respectively pivoted and the pivotal connection of the axle with the wheel adjacent said steering rod.

1,109,317. SAD-IRON-BALANCING MECHANISM. KAMAGHIEL G. BOYAJIAN, Swarthmore, Pa. Filed Sept. 12, 1913. Serial No. 789,423. (Cl. 68—9.)

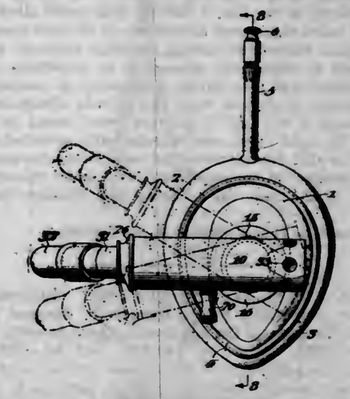


1. A mechanism of the character described, comprising a support, a relatively long lever, a device adjacent one end of the lever connected to the support and providing a pivotal support for the lever and permitting lateral swinging movement of the lever, flexible devices depending from both ends of the lever, the flexible device at the longer end of the lever adapted to be connected to an iron, a weight connected to the flexible device at the shorter end of the lever, a foot lever pivotally supported near one end, and at its shorter end connected to the last-mentioned flexible device, substantially as described.

2. A mechanism of the character described, comprising a vertical support having a ring at its upper end, a relatively long lever, a hook adjacent one end of the lever engaging in the ring, flexible devices depending from both ends of the lever, the flexible device at the longer end of the lever adapted to be connected to an iron, a weight connected to the flexible device at the shorter end of the lever, a foot lever pivotally mounted to move vertically and held against lateral movement, said foot lever connected to the last-mentioned flexible device, substantially as described.

3. A mechanism of the character described, comprising a post, having a slot therethrough, a rod adjustable in said post and having a goose neck at its upper end, a ring supported in said goose neck, a lever, a collar on said lever near one end, a hook secured to the collar and positioned in the ring, flexible devices depending from both ends of said lever, a foot lever projecting through the slot in the post and fulcrumed adjacent one end in said slot, said lever at its shorter end connected to one of said flexible devices, and a weight secured to said last-mentioned flexible device, substantially as described.

1,109,318. SURGICAL INHALER. ARTHUR W. BROWNE, Prince Bay, N. Y., and FREDERICK L. WALLACE, Lansdowne, Pa., assignors to The S. S. White Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 8, 1913. Serial No. 747,016. (Cl. 128—13.)



1. A surgical inhaler having means of connection with a face piece, and comprising a valve casing having an opening through which anesthetics and gases may pass to and from the face piece, a slide valve having a plurality of openings, any one of which may be moved into alinement with the opening in the valve casing, and means for indicating which of the said openings in the said valve is in alinement with the opening in the valve casing, and for registering the intermediate, as well as the end, openings in the valve with the opening in the valve casing.

2. A surgical inhaler comprising a tubular valve casing having an opening therein and also having a passage way leading to a source of anesthetic, a tubular slide valve situated in the said casing one end of which is adapted to close the said passage way and the said valve having an opening through which an anesthetic may pass from the said passage way and also having a plurality of openings which may be moved into alinement with the opening in the said valve casing by movement of the said valve, and reciprocatory valves in the said slide valve for controlling the passage of gases through the opening in said valve casing.

3. A surgical inhaler comprising a tubular valve casing having an opening in one side thereof, one end of the

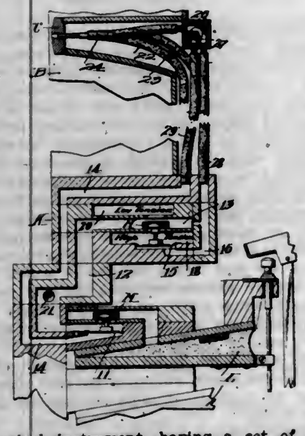
said casing being closed by a detachable member having an opening in communication with a source of anesthetic, the said opening being surrounded by a valve seat, a tubular slide valve situated in the said tubular casing one end of which is adapted to close the opening through the said member when in one position and the said valve being provided with an opening through which an anesthetic may enter the chamber in the same and being also provided with a plurality of openings, and one of which may be moved into alinement with the opening in the side of the said valve casing by movement of the said valve, and valves situated in the said slide valve for controlling the passage of gases through the opening in the side of the said valve casing.

4. A surgical inhaler comprising a tubular valve casing having an opening in one side thereof, the said valve casing being arranged for connection with a source of anesthetic or the like, a tubular slide valve situated in the said casing, adapted to close the communication between the said valve casing and the connection with said source of anesthetic, said valve being provided with a plurality of openings any one of which is adapted to be carried into alinement with the opening in the side of the valve casing by movement of the said valve, and check valves situated in the said slide valve and being associated with certain of the openings therein to control the passage of the anesthetic and gases therethrough and through the said valve casing.

5. A surgical inhaler comprising a valve casing, having an opening intermediate its ends for communication with a face piece and also having an opening to the open air adjacent to one of its ends, the opposite end of the said valve casing being arranged for connection with a source of anesthetic or the like, a tubular slide valve situated in the said valve casing and having one of its ends closed for the purpose stated and having openings adjacent to said closed end to permit the passage of an anesthetic or the like thereinto and also having a plurality of openings any one of which is adapted to be carried into alinement with the opening in the side of the said valve casing by movement of the said valve, and automatically actuated valves within the said tubular valve for controlling the direction of the passage of the anesthetic and gases through the opening in the said valve casing and through the said valve.

[Claims 6 to 19 not printed in the Gazette.]

1,109,319. MUSICAL INSTRUMENT. THEODORE P. BROWN, Worcester, Mass., assignor to Simplex Player Action Company, a Corporation of Massachusetts. Filed Jan. 6, 1913. Serial No. 740,351. (Cl. 84—168.)



1. A musical instrument, having a set of operating pneumatics, a set of controlling valves therefor, means for inducing high tension and low tension, a set of valves for controlling the connection of the pneumatics with said means, a tracker having a series of speaking openings, connections therefrom to the first named controlling valves, additional connections from part of the openings to the second named valves, and a switching mechanism arranged so that said series of openings can be employed in connection with the first named controlling valves, or a part thereof in connection with the controlling valves, and the other part in connection with the second named valves.

2. A musical instrument having a set of operating pneumatics, a set of controlling valves therefor, means for inducing high tension and low tension, a set of accent controlling valves, a tracker having a series of speaking openings, connections therefrom to the controlling valves, additional connections from part of the openings to the accent valves, and a switching mechanism arranged so that said series of openings can be employed in connection with the controlling valves, or a middle part or section thereon in connection with the controlling valves, and the two end parts or sections in connection with the accent valves.

3. A musical instrument having a set of operating pneumatics, a set of controlling valves therefor, means for inducing high and low tension, a set of accent controlling valves, a tracker having a series of speaking openings, connections from the speaking openings to the controlling valves, additional connections from part of the speaking openings and from the accent openings to the accent valves, and a switching mechanism arranged so that said series of speaking openings can be employed in connection with the controlling valves, or a part thereof, and the accent openings in connection with the accent valves, and the remainder of the speaking openings in connection with the operating valves.

4. A musical instrument having a set of operating pneumatics, a set of controlling valves therefor, means for inducing high and low tension, a set of accent controlling valves, a tracker having a series of speaking openings and accent openings arranged outside the speaking openings, connections from the speaking openings to the controlling valves, additional connections from part of the speaking openings and from the accent openings to the accent valves, and a switching mechanism arranged so that said series of speaking openings can be employed in connection with the controlling valves, or the end sections thereof and the accent openings in connection with the accent valves, and the remainder of the speaking openings in connection with the operating valves.

5. A musical instrument having a set of operating pneumatics, a set of controlling valves therefor, means for inducing high and low tension, a set of accent controlling valves, a tracker having a series of speaking openings and accent openings arranged outside each end of the speaking openings, connections from the speaking openings to the controlling valves, additional connections from part of the speaking openings and from the accent openings to the accent valves, and a switching mechanism arranged so that said series of speaking openings can be employed in connection with the controlling valves, or the end sections thereof and the accent openings in connection with the accent valves and the remainder of the speaking openings in connection with the operating valves.

[Claims 6 to 12 not printed in the Gazette.]

1,109,320. DRILL-GRINDING MACHINE. WILLARD C. BURNER, New York, N. Y. Filed Feb. 18, 1913. Serial No. 749,105. (Cl. 51—7.)

1. In a machine for grinding drills, a main frame, a shaft mounted thereon, a grinding wheel secured to said shaft, a member movable vertically on a supplemental frame, a support movable horizontally on said member, a drill holder pivoted to said support, an adjustable link-shaped frame mounted on a bearing on said shaft and rotatable therewith in the operation of grinding a drill.

2. In a machine for grinding drills, a main frame, a shaft mounted thereon, a grinding wheel secured to said shaft, a member movable vertically on a supplemental frame, a support movable horizontally on said member, a drill holder pivoted to said support, an adjustable link-shaped frame mounted on a bearing on said shaft and rotatable therewith in the operation or grinding a drill, and means on said vertically and horizontally movable parts for regulating the proper angle for grinding said drill in relation to the face of said grinding wheel.

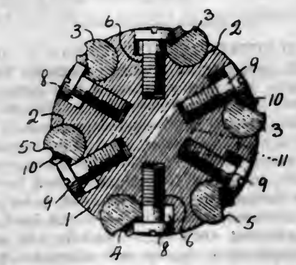
3. In a drill grinding machine, a main and supplemental frame, a shaft mounted in the main frame and to which is secured a grinding wheel, a member vertically movable on the supplemental frame, a support horizontally movable on said member, a drill holder pivotally secured to said support, a link-shaped frame adjustably mounted on a bearing on said shaft and one end of which is pivoted to the horizontally movable support, and means on said vertically and horizontally movable parts whereby the adjustment for grinding a drill at its proper angle may be accomplished in relation to the grinding wheel.

4. In a drill grinding machine, a main and supplemental frame, a shaft mounted in the main frame to which is secured a grinding wheel, a member vertically movable on the supplemental frame, a support horizontally movable on said member, a drill holder pivotally secured to said support, a link-shaped frame adjustably mounted on a bearing on said shaft and one end of which is pivoted to the horizontally movable support, and means on said vertically and horizontally movable parts whereby the adjustment for grinding a drill at its proper angle may be accomplished in relation to the grinding wheel, and means in connection with said drill holder for moving said drill forwardly in the operation of grinding the same.

5. In a drill grinding machine, a main frame, a shaft mounted therein, a grinding wheel secured thereto, a bearing mounted on said shaft on which is placed an adjustable link-shaped frame, a member vertically movable on a supplemental frame, a support pivoted to said link-shaped frame and horizontally movable on said member, a drill holder pivotally and adjustably secured to said support the shaft of which is provided with means for adjusting a drill forwardly in said holder, and means on said vertically and horizontally movable parts for adjusting the relation thereof in connection with said grinding wheel so that the proper angle of a drill can be obtained in the operation of grinding the same.

[Claims 6 to 8 not printed in the Gazette.]

1,109,321. REAMER. WILLIAM T. CHARLES, Waynesboro, Pa. Filed Oct. 22, 1913. Serial No. 796,741. (Cl. 77—75.)

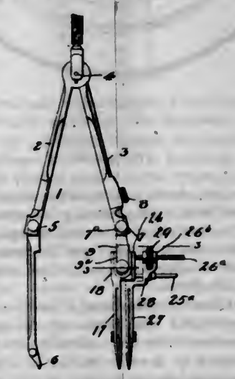


1. A reamer of the class described comprising a body having a plurality of longitudinal grooves in the sides thereof, a plurality of cutters received in said grooves and projecting beyond the outer faces of said body, said cutters being rotatably adjustable in said grooves, and means for adjustably securing said cutters in position in the body.

2. A reamer of the class described comprising a substantially cylindrical body having a plurality of longitudinal grooves in the periphery thereof, a plurality of elongated cutters arranged in said grooves and having portions thereof projecting beyond the periphery of said body, and a plurality of adjusting screws extending radially within the body, said adjusting screws being arranged in series and engaged with opposite sides of each of the cutters to adjustably retain the latter in the grooves of the body.

3. A reamer of the class described comprising a substantially cylindrical body having a plurality of arcuate and longitudinal grooves in the periphery thereof, a plurality of substantially cylindrical cutters received in said grooves and having portions thereof projecting beyond the periphery of said body, each of said cutters having a longitudinal groove and a plurality of recesses therein, a plurality of adjusting screws extending radially within the body and having the heads thereof positioned for engagement with the edges of the recesses in the cutters, whereby to adjust said cutters within the grooves, and a plurality of additional adjusting screws extending radially within the body and adapted for engagement with the opposite sides of the cutters to secure the same in their adjusted positions.

1,109,322. DRAFTING INSTRUMENT. JOSEPH FRANCIS COLLINS, Washington, D. C. Filed Sept. 28, 1910. Serial No. 584,267. (Cl. 33—149.)



1. In a drafting instrument, a supporting member a plurality of marking elements mounted thereon, and common means for adjusting the different elements in opposite directions simultaneously one toward and the other from said member.

2. In a drafting instrument, a plurality of marking elements parallel to each other, means for laterally spacing said elements relative to each other, and means for vertically adjusting the different elements in opposite directions simultaneously.

3. In a drafting instrument, the combination of a holder with a plurality of marking elements, means common to each of said elements for vertically adjusting them simultaneously, and means for locking said adjusting means whereby said elements will be held in their adjusted positions.

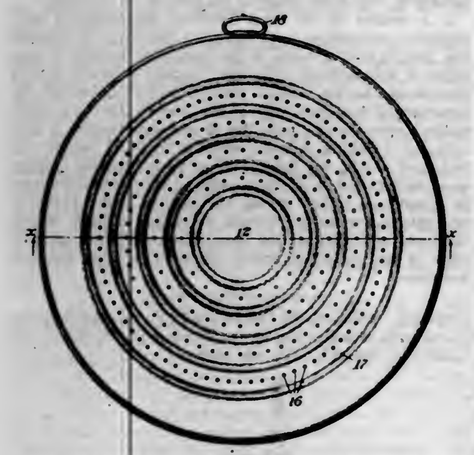
4. In a drafting instrument, the combination with a supporting member and a pair of marking elements arranged thereon to assume marking positions spaced apart, of common means connected to each of said elements for adjusting the same toward and from said support so that one will be in its marking position and the other out of its marking position or both in their respective marking positions.

5. In a device of the class described, the combination with a pair of marking elements and a supporting member

therefor, of lateral adjusting means connected to one of said elements, and common adjusting means connected to each of said elements for adjusting the same simultaneously toward and from said support so that one will be in its marking position and the other out of its marking position or both in their respective marking positions.

[Claims 6 to 9 not printed in the Gazette.]

1,109,323. HEAT-DISTRIBUTER FOR COOKING UTENSILS. ARTHUR B. CRUICKSHANK, London, England. Filed June 18, 1913. Serial No. 774,319. (Cl. 126—215.)



1. A heat distributer comprising a concavo convex plate of sheet metal provided with series of concentric corrugations and intermediate annular portions, the said annular portions being provided with series of apertures, the said apertures in the inner series being spaced at greater distances than the apertures in the outer series.

2. A heat distributer comprising a concavo convex plate of sheet metal provided with series of spaced apertures increasing in size and number from the innermost to the outermost series of apertures, and a depending rim connected to the said plate.

3. A heat distributer comprising a concavo convex plate of sheet metal provided with series of circularly arranged apertures, the apertures in the central series thereof being smaller and spaced at greater distances apart than the apertures in the outer series thereof, and a rim connected to and depending from the said plate.

4. A heat distributer comprising a concavo convex plate of sheet metal provided with series of concentric corrugations and intermediate annular portions, the said annular portions being provided with series of apertures, the apertures in the innermost annular portion being smaller and spaced at greater distances than the apertures in the outermost annular portion, and a depending rim connected with the said plate.

5. A heat distributer comprising a concavo convex plate of sheet metal, provided with series of spaced concentric corrugations and intermediate annular portions, the said annular portions being provided with a series of apertures, the apertures of the said series thereof gradually increasing in diameter from the innermost to the outermost series with the distance between the series of the said apertures gradually decreasing from the innermost to the outermost series thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,109,324. CAR-ROOF. RAYMOND C. DUDLEY, Chicago, Ill. Filed Jan. 11, 1913. Serial No. 741,382. (Cl. 108—5.)

1. In an outside metal car roof, the combination of the top sheathing, supercarlines supported thereon, roof sheets resting on the said sheathing between the supercarlines and having at their sides flanges extending upward and backward at the sides of the supercarlines and having also flanges which lap over the supercarlines, seam caps which embrace the upwardly and backwardly extending flanges and interlock therewith, and which embrace the supercarlines, and means for securing the ends of the seam caps, substantially as specified.

2. In an outside metal car roof, the combination of the top sheathing, super-carlines resting thereon and pivotally connected at their upper ends with the roof and having their middle portions movable longitudinally of the roof as may be required by the movement of the roof sheets, roof sheets resting on the said sheathing between the super-carlines and having at their sides flanges embracing the sides and tops of the super-carlines, seam caps embracing the said flanges and the super-carlines, and means for securing the outer ends of the seam caps, substantially as specified.

3. In a car roof, the combination of a supporting frame, supercarlines movably secured at their ridge ends to the said frame, roof sheets having side flanges extending up at the sides of the supercarlines, and seam caps embracing the said side flanges and secured at their ridge ends and at their eaves ends to the roof frame, whereby the roof sheet flanges and the lower part of the supercarlines may oscillate longitudinally of the roof within the seam caps; substantially as specified.

4. In a car roof, the combination of a supporting frame, supercarlines fitted together and superposed at their ridge ends, roof sheets having side flanges extending up at the sides of the supercarlines, seam caps embracing the roof sheet flanges and supercarlines and secured at their eaves ends to the roof frame, and bolts passing through the seam caps, supercarlines and ridge portion of the roof frame, leaving the lower and outer parts of the supercarlines free to oscillate longitudinally of the car to accommodate the pressure or shifting of the roof sheets; substantially as set forth.

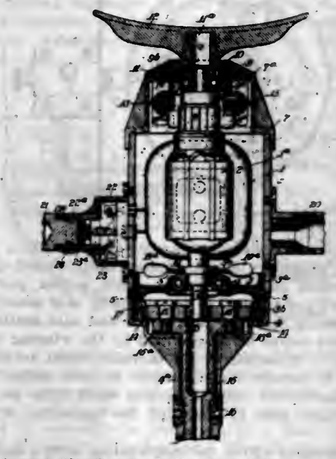
5. In a car roof, the combination of roof sheets having Z-flanges at their sides comprising flanges which extend upward and backward at the sides of the supercarlines and flanges which lap over the supercarlines, seam caps embracing and extending under said flanges and secured at both ends to the roof frame, whereby the said parts are interlocked at points between the ridge and eaves against separation, supercarlines within and between the said Z-flanges, and said roof frame; substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,109,325. ELECTRIC DRILL. WILLIAM O. DUNTLEY, Chicago, Ill., assignor to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed May 2, 1904. Serial No. 206,015. (Cl. 172—36.)

1. A portable electric drill adapted for manual support, and comprising a casing with upper and lower end heads, an electric motor arranged within the casing with its armature shaft journaled in said heads and having one end extended through the lower end head, a tool spindle, and gearing arranged outside the lower end head for connecting the adjacent ends of the spindle and armature shaft, and comprising a circular rack associated with said lower end head.

2. A portable electric drill adapted for manual support, and comprising a casing with upper and lower end heads, an electric motor with its armature shaft journaled in said heads and having one end extended through the lower end head, a tool spindle arranged in axial alinement with the armature shaft, and gearing arranged outside the lower end head for connecting the adjacent ends of the spindle and armature shaft, and comprising a toothed rack associated with said lower end head.



3. A portable electric drill adapted for manual support, and comprising a main casing with upper and lower heads, the lower head comprising a plate with marginal flanges extending in opposite directions, one of which flanges is connected with the casing, an electric motor arranged within the casing with its armature shaft journaled in and extending through said head, a gear casing detachably secured to the other of said flanges of the lower end head, a tool spindle journaled in said gear casing, and gearing mounted within the gear casing and forming the operating connection between the armature shaft and tool spindle.

4. A portable electric drill comprising a main casing forming the field frame of an electric machine and the body of the drill, a rotatable armature within said casing, end heads for the casing in which the armature shaft is journaled, a gear casing connected with the lower end head, a tool spindle journaled in said gear casing, gearing mounted within the gear casing and forming the operating connection between the armature shaft and tool spindle, a bearing for the shaft in the lower end head, an adjustable end-thrust bearing in the upper end head for the upper end of the armature shaft, and grasping handles secured to the main casing.

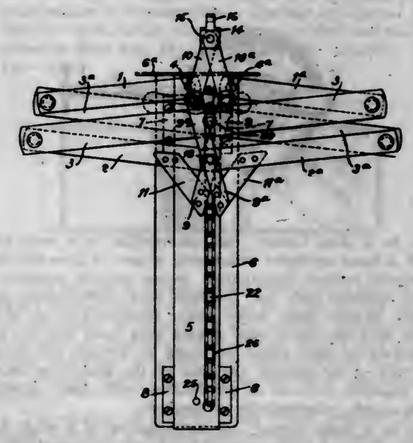
5. In an electric drill, a casing, an electric motor therein comprising an armature shaft, a spur pinion carried by said shaft, a tool spindle, planetary spur pinions carried by the spindle and meshing with the shaft pinion, and a relatively fixed circular toothed rack with which the pinions on the spindle are engaged.

[Claims 6 to 28 not printed in the Gazette.]

1,109,326. SASH RAISING AND LOWERING DEVICE. FRITZ ECKEY, Twickenham, England. Filed Mar. 14, 1914. Serial No. 824,727. (Cl. 16—53.)

1. In a device for raising and lowering windows, the combination, with a stationary support, and a main lazy tongs having its upper end levers connected to the said support; of a secondary lazy tongs working in the reverse direction from the main lazy tongs and having its lower end levers operatively connected with the lower end levers of the main lazy tongs, means for connecting the upper end levers of the secondary lazy tongs with the window, and means for operating both the lazy tongs connected to the intermediate levers of the said main lazy tongs.

2. In a device for raising and lowering windows, the combination, with a stationary support provided with a locking device, and a lazy tongs apparatus connected to the support and adapted to actuate a window; of drive wheels journaled in the support, a flexible driving device passing over the said wheels and operatively connected with the lazy tongs apparatus, a housing secured to the said support, an operating shaft slidable longitudinally in the housing and in one of the drive wheels and adapted to revolve the latter, a spring-pressed locking-plate mounted to revolve with the operating shaft and arranged to slide into and out of engagement with the said locking device, and a handle pivoted to the said operating shaft outside the housing and adapted to revolve the shaft when placed axially in line with it, said handle having a projection which normally holds the locking devices out of engagement with each other and which permits them to interlock when the handle is moved to a position crosswise of the operating shaft.



3. In lazy tongs apparatus for operating sliding windows, the combination with a main lazy tongs adapted to be pivotally mounted at its upper end on a support, a secondary or smaller lazy tongs mounted on the lower end of the said main lazy tongs, means for actuating the main lazy tongs, and means on the secondary lazy tongs for supporting the window or window glass, of a pair of operating members for the secondary lazy tongs, one operating member being fixedly connected to one of the lowermost levers of the main lazy tongs at a point intermediate the pivotal points of said lever and operatively connected to one of the lowermost levers of the secondary lazy tongs below the point of intersection of said levers and the other operating member similarly connected to the other lowermost lever of the main lazy tongs and of the secondary lazy tongs respectively.

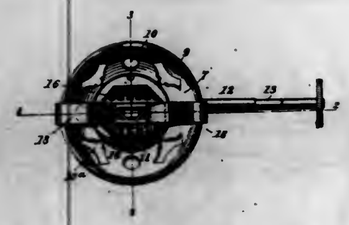
4. In apparatus of the kind set forth, comprising a main lazy tongs pivotally mounted at its upper end on a plate and a smaller lazy tongs operatively connected with the lower end of the main lazy tongs, the combination with lower levers of the smaller lazy tongs, which levers cross or intersect each other and at their point of intersection are pivotally mounted on the pivot or pin connecting the inner ends of the lowermost levers of the main lazy tongs, of a pair of arms or plates fixed at their upper ends one on each of the lowermost levers of the main lazy tongs the said arms being fixed at their lower ends respectively one to the lower end of one of the said intersecting levers of the smaller lazy tongs and the other to the lower end of the other intersecting lever of the smaller lazy tongs, and means for actuating (opening or expanding and closing or collapsing) the main lazy tongs, for the purposes set forth.

5. In apparatus, for the purposes set forth, the combination with a main lazy tongs, a smaller lazy tongs operatively connected at the lower end to the lower end of the main lazy tongs, and a plate on which the main lazy tongs

is pivotally mounted at its upper end, of a spindle, a sprocket wheel with which the said spindle is in driving connection; a handle in operative connection with the said spindle, a lower sprocket wheel, an endless sprocket chain in operative engagement with the said sprocket wheels, and a pivot pin fixed on the said chain and in operative engagement with intermediate levers or members of the main lazy tongs, substantially as and for the purposes described.

[Claims 6 and 7 not printed in the Gazette.]

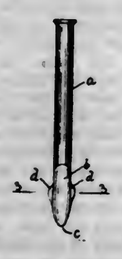
1,109,327. LAMP-BURNER. GUSTAV EKLUND, New York, N. Y., assignor to The Dressel Railway Lamp Works, a Corporation of New York. Filed Oct. 6, 1910. Serial No. 585,554. (Cl. 67—53.)



1. In a lamp burner, the combination of a wick tube with a flame spreader comprising a pair of inwardly and upwardly curved longitudinal plates secured together at their opposite ends and provided with perforations, said plates having their lower edges substantially in alinement with the upper edge of said wick tube, and the perforations in said plates arranged to project the incoming jets of air against the base of the flame and retard the upgoing currents of air entering said flame spreader from below, substantially as specified.

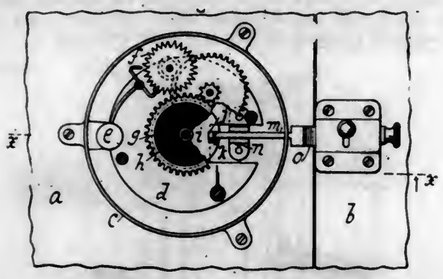
2. In a lamp burner, the combination of a wick tube with a flame spreader comprising a pair of oppositely arranged upwardly and inwardly curved, longitudinal plates, a pair of upwardly and outwardly inclined members arranged at the opposite ends of said longitudinal plates and means for supporting said flame spreader in position with its lower edge in the same horizontal plane with the upper edge of said wick tube, the said longitudinal plates being provided with perforations whereby to project a plurality of incoming jets of air downwardly and inwardly toward the wick tube whereby to retard the upgoing currents of air entering said flame spreader from below and enveloping said wick tube, substantially as specified.

1,109,328. NAIL. GEORGE B. EVANS, Winthrop, Mass. Filed Apr. 10, 1914. Serial No. 831,035. (Cl. 85—30.)



A nail or brad having a body portion and a flattened point portion which is oval in cross section, the opposite edges of the point portion having integral thin sharp-edged wings or ribs terminating short of the tip of the point portion and also terminating short of the point of junction of the body and point portions.

1,109,329. BURGLAR-ALARM. THOMAS H. FARRELL, New York, N. Y. Filed Mar. 11, 1912. Serial No. 682,937. (Cl. 116—44.)



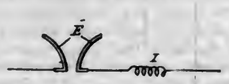
1. In a burglar alarm, the combination with a movable and a stationary object, of a normally wound spring motor mounted on the movable object, a disk provided with a notch and adapted to be rotated by said motor, and means normally engaging said notch and said stationary member, said means being governed by the winding up of the spring, or actuation of the movable object to release said disk to permit the operation of said motor, said means automatically reëngaging said notch after each rotation of said disk to interrupt the operation of said motor.

2. In a burglar alarm, the combination with a movable and a stationary object, of a motor including an arbor with a normally wound coiled spring mounted on the movable object, a disk provided with a notch and secured to said arbor, and means normally engaging said notch and said stationary object, said means being governed by the winding up of the spring or actuation of the movable object to release said disk to permit the operation of said motor, said means automatically re-engaging said notch after each rotation of said disk to interrupt the operation of said motor.

3. A burglar alarm comprising a motor including an arbor with a spring, a disk mounted on the arbor and operated by the spring, a notch located in the circumference of the disk with a lip formed on one side of the notch, a detent to normally engage the notch and prevent movement of the disk, said lip being adapted to lift the detent out of engagement with the notch when the spring is being wound.

4. In a burglar alarm, the combination of a movable and a stationary object, of a normally wound spring motor, mounted on said movable object, means normally retaining said motor against operation, a disk provided with a notch and adapted to be engaged by said means, means carried by said disk adapted to actuate said first mentioned means to release said motor for winding, and means secured to said stationary object adapted to release said first-mentioned means upon actuation of said movable object, said first-mentioned means being adapted to automatically reëngage said notch to interrupt the operation of said motor.

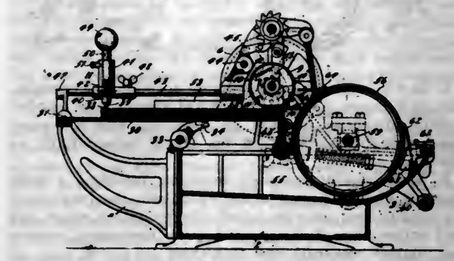
1,109,330. STABILIZING MEANS FOR ELECTRIC-ARC FURNACES. CHARLES EUGÈNE GUYE, Geneva, Switzerland, assignor to Southern Power Company, Charlotte, N. C., a Corporation of New Jersey. Filed Jan. 8, 1912. Serial No. 670,027. (Cl. 204—31.)



1. The combination with a circuit comprising electrodes between which an electric arc may be produced, and an arc-stabilizing coil of copper wire, free from iron, included in the circuit.

2. The combination with a circuit comprising electrodes between which an electric arc may be produced, and an arc-stabilizing coil of copper wire, free from iron, included in the circuit in series with said electrodes.

1,109,331. SHEET-COATING MACHINE. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 23, 1911. Serial No. 667,444. (Cl. 101—39.)



1. In a machine of the character described, a rotary power-operated feed-controlling device embodying successive circumferential sheet-engaging surfaces having different co-efficients of friction and one or the other of which is normally in contact with a sheet and one of which is operative for feeding a sheet to the machine and the other of which permits said sheet to readily slip relatively thereto, actuating means to rotate said feed roll, and automatic means operable when the surface of less co-efficient of friction is in contact with the sheet to disconnect the actuating means from the feed roll and thereby stop said roll.

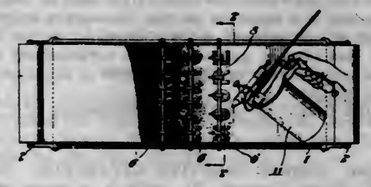
2. In a machine of the character described, a rotary power-operated feed-controlling device embodying successive circumferential sheet-engaging surfaces having different co-efficients of friction and one or the other of which is normally in contact with a sheet and one of which is operative for feeding a sheet to the machine and the other of which permits said sheet to readily slip relatively thereto, actuating means to rotate said feed roll, and automatic means operable when the surface of less co-efficient of friction is in contact with the sheet to disconnect the actuating means from the feed roll and thereby stop said roll, said means adapted to positively hold said feed roll against further rotation.

3. In a machine of the character described, a rotary power-operated feed-controlling device embodying successive circumferential sheet-engaging surfaces having different co-efficients of friction and one or the other of which is normally in contact with a sheet and one of which is operative for feeding a sheet to the machine and the other of which permits said sheet to readily slip relatively thereto, actuating means to rotate said feed roll, and automatic means operable when the surface of less co-efficient of friction is in contact with the sheet to disconnect the actuating means from the feed roll and thereby stop said roll, said means adapted to positively hold said feed roll against further rotation, but operable to release the feed roll and reëstablish the connection between the same and the actuating means.

4. In a machine of the character described, a rotary power-operated feed-controlling device embodying successive circumferential sheet-engaging surfaces having different co-efficients of friction and one or the other of which is normally in contact with a sheet and one of which is operative for feeding a sheet to the machine and the other of which permits said sheet to readily slip relatively thereto, actuating means to rotate said feed roll, and automatic means operable when the surface of less co-efficient of friction is in contact with the sheet to disconnect the actuating means from the feed roll and thereby stop said roll, said means adapted to positively hold said feed roll against further rotation, and said means being under the control of the operator to release said feed roll and reëstablish the connection between the same and the actuating means.

5. In a machine of the character described, a rotary power-operated feed roll, the whole peripheral surface of which is movable in a path that intersects the path of travel of the sheet being fed and is made up of two sections, one of which is operative for feeding a sheet to the machine and the other of which permits said sheet to slip relatively thereto, actuating means to rotate said feed roll, and automatic means operable when the last-named section is in contact with the sheet to disconnect the actuating means from the feed roll and thereby stop said roll.

1,109,332. METHOD OF FORMING CHARACTERS. JACOB ROBERT HERSHEY, Philadelphia, Pa., assignor to Electric Service Supplies Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed July 22, 1912, Serial No. 710,754. Divided and this application filed Aug. 15, 1913. Serial No. 784,867. (Cl. 101—132.)



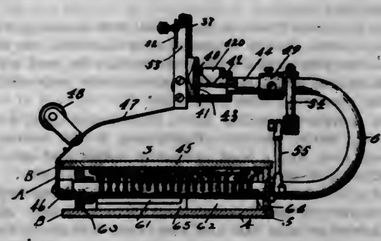
1. The method of forming characters upon a base which consists in covering part of a base so as to outline the desired character or characters and prevent coloring matter sprayed on said base from flowing within the outline of said character or characters and spraying said base with coloring matter so as to outline said character or characters.

2. The method of forming signs which consists in arranging forms in a desired relation upon a base so as to cover and outline the characters to be formed, pressing said forms upon said base so as to prevent the capillary movement of liquid within the desired outline, and spraying coloring matter upon said base around said forms.

3. The method of forming signs which consists in arranging letters upon a base, holding said letters under pressure against said base so as to prevent liquid carried by said base from flowing under said letters, and forming a background by coating said base with coloring matter around said letters.

4. The method of making signs which consists in arranging letters upon a textile fabric, pressing said letters and fabric together so as to prevent the flow of ink under said letters by capillary action and spraying ink upon said fabric by an air brush.

1,109,333. REVERSIBLE SAD-IRON. FRANKLIN P. HINDS, Lynn, and WILLIAM H. DALTON, Boston, Mass.; said Hinds assignor to George E. Benner, Lowell, Mass. Filed Jan. 7, 1911. Serial No. 601,454. (Cl. 158—23.1.)



1. In a laundry iron, the combination with a support, of a reversible iron pivotally mounted thereon, an iron-

reversing arm pivoted to turn about an axis parallel to that of the iron, and a link connecting said arm with the iron at one side of its axis.

2. In a laundry iron, the combination with a support, of a reversible iron pivotally mounted thereon, an iron-reversing arm pivotally mounted above the iron, and a link connecting said arm with the iron at one side of its axis whereby the iron may be reversed by a swinging movement of the arm first in one direction and then in the other.

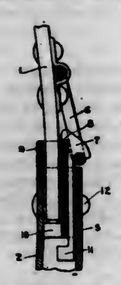
3. In a laundry iron, the combination with a support, of a reversible iron pivotally mounted thereon, a shaft journaled in said support, an arm carried by the shaft, a link connecting the arm with the iron at one side of its axis, and means to turn the shaft first in one direction and then in the other direction thereby to reverse the iron.

4. In a laundry iron, the combination with an iron support presenting a U-shape, of an iron pivotally mounted on one arm of said support, a pivotally mounted iron-reversing arm on the other arm of said support, and a link connecting said iron-reversing arm with the iron at one side of its axis.

5. In a laundry iron, the combination with an iron support having a U-shape, of an iron pivotally mounted on one arm of said support, a shaft journaled on the other arm of said support, and connections between said shaft and the iron whereby turning movement of the shaft will reverse the iron.

[Claims 6 and 7 not printed in the Gazette.]

1,109,334. TIMBER-TREATING APPARATUS. HENRY C. HOLTHOFF, Riverside, Ill., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Oct. 14, 1911. Serial No. 654,759. (Cl. 214—5.)



1. In a timber treating car, a bail arm, a bail, a link having a swinging connection with said bail, and hook means movably supported by but locked relatively to said bail arm, said hook means being detachably connected to said link.

2. In a timber treating car, a hollow bail arm, a member extending into the hollow portion of said arm, a bail extending into said arm and coacting with said member to be stopped thereby, and a hook adapted to extend under said member and to connect with said bail to unite said bail and bail arm.

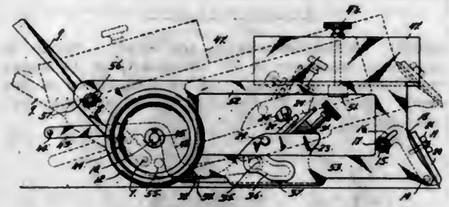
3. In a timber treating car, a bail arm member, a bail member, a link secured to one of said members, the other of said members having definite stops thereon, and a hook carried by and freely movable between said stops and detachably connected with said link.

4. In a timber treating car, a hollow bail arm, a stop within the hollow portion of said arm, a bail contacting with said stop, and a hook extending under said stop and connecting with said bail to unite said bail and arm.

5. In a timber treating car, a bail arm having definite stops thereon, a bail, a link secured to said bail, and a hook carried by said bail arm and freely movable between said stops, said hook being detachably connected with said link.

[Claims 6 and 7 not printed in the Gazette.]

1,109,335. FLOOR PLANING AND SCRAPING MACHINE. ALFRED A. JACKSON, Arvada, Colo. Filed Feb. 16, 1914. Serial No. 818,898. (Cl. 145—47.)



1. In a floor planing and scraping machine, the combination of a frame, a plane trunnioned therein and longitudinally adjustable to vary its elevation, and a scraper also adjustably mounted on the frame, substantially as described.

2. A machine of the class described, including a main frame, a planing device having trunnions, the frame having longitudinal grooves which the trunnions enter, the rear extremities of the grooves being lowermost, whence they extend upwardly and forwardly.

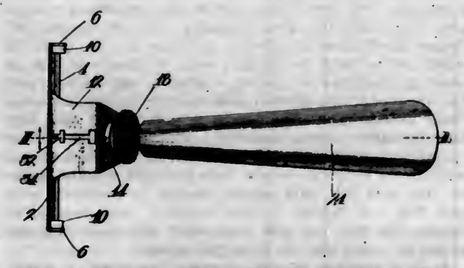
3. A machine of the class described, including a main frame, a planer device having trunnions, the frame having longitudinal grooves which the trunnions enter, the rear extremities of the grooves being lowermost, the grooves extending upwardly and forwardly therefrom, their forward extremities being open above to permit the passage of the trunnions.

4. The combination of a main frame composed of two members suitably spaced and having longitudinal grooves respectively formed therein, the rear extremities of the said grooves being lowermost, whence they extend upwardly anad forwardly, and a plane located between said members and having trunnions engaging the said grooves and movable therein.

5. The combination of a main frame having longitudinal grooves whose rear extremities are lowermost, a plane having trunnions engaging the said grooves and movable therein, and means connected with the trunnions and extending forwardly therefrom to facilitate manual manipulation.

[Claims 6 to 10 not printed in the Gazette.]

1,109,336. SAFETY-RAZOR. FLOYD D. JONES, Kansas City, Mo. Filed Oct. 8, 1913. Serial No. 794,052. (Cl. 30—12.)



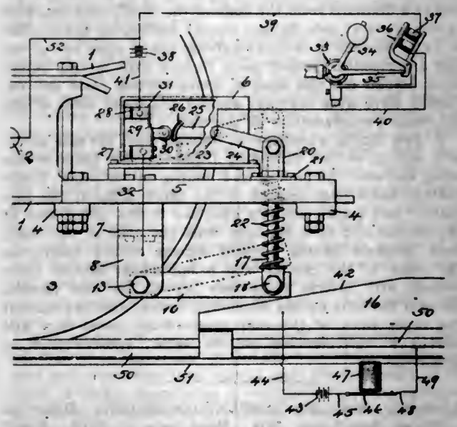
1. In a safety razor, the combination of a blade, a clamping plate provided with an angular arm projecting rearward therefrom, the free end of said arm extending opposite to and approximately parallel with said plate, the other portion of said arm being provided with a slot enlarged at its rear end, a guard member for holding said blade against said plate and having a headed lug adapted to be inserted through the enlarged portion of said slot, a screw operating through the free end of said arm to force said guard member into engagement with said blade and hold said guard member with said lug normally in engagement with the narrow portion of said slot, the length of the narrow portion of said slot being such as to prevent detachment of the guard member upon withdrawal of the screw only sufficiently to unclamp and release said blade, while further withdrawal of the screw will permit said guard member to be tilted about the end of the screw to present the head of said lug in position to withdraw the same through said enlarged end of the slot.

2. In a safety razor, the combination of a blade, a clamping plate provided with an arm projecting rearward therefrom, said arm having a slot enlarged at its rear end, a guard member for holding said blade against said plate and having a headed lug adapted to be inserted through the enlarged portion of said slot and into engagement with the front portion of the slot, thereby holding said guard member detachably in position, and means for clamping said guard member against said blade, said means holding said guard member with said lug normally engaged with the narrow portion of said slot.

3. In a safety razor, the combination of a blade, a clamping plate provided with an angular arm projecting rearward therefrom, the free end of said arm extending opposite to and approximately parallel with said plate, the other portion of said arm being provided with a slot enlarged at its rear end, a guard member for holding said blade against said plate and having a headed lug adapted to be inserted through the enlarged portion of said slot, the head of said lug being deflected rearward, a screw operating through the free end of said arm to force said guard member into engagement with said blade and hold said guard member with said lug normally engaged with the narrow portion of said slot, said guard member being permitted a slight tilting movement when said screw is partially withdrawn to present the head of said lug in position to withdraw the same through said enlarged end of said slot.

4. In a safety razor, the combination of a blade, a clamping plate provided with an angular arm having a threaded opening near its free end, said plate having a pair of end lugs at its upper margin, overlying and engaging the upper corners of said blade and holding the latter out of engagement with said arm, a guard member for holding said blade against the inner face of the plate, a handle having one end thereof provided with an opening, and a screw extending through said openings into engagement with said guard member for clamping both said handle and guard in position.

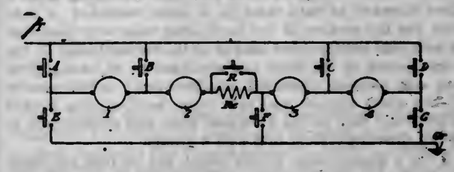
1,109,337. BRAKE-VALVE-CONTROLLING DEVICE FOR VEHICLES. FRANK T. JONES, Baltimore, Md., assignor to The Jones Safety Train Control System Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 27, 1912. Serial No. 738,783. (Cl. 246—25.)



1. A contact shoe for engaging ramp rails in safety appliances for vehicles comprising two spaced-apart side bars to extend in vertical planes along the opposite sides of a ramp rail with means for pivotally sustaining said bars at one end and said shoe having a cross-bar connecting said spaced side bars whereby said cross-bar may engage the contact surface of the ramp rails and be moved vertically thereby.

2. In a train controlling valve device for vehicles the combination with a controlling valve on the vehicle, of electrically-controlled means on the vehicle for normally holding the valve in one position; a contact shoe engaging ramp rails along the road,—said shoe comprising two spaced-apart side bars to extend in vertical planes along opposite sides of the ramp rail said shoe being pivoted at one end and having a cross-bar extending crosswise of and connecting said spaced side bars whereby said cross-bar will extend crosswise of the ramp rail to engage the contact surface of said rail and be moved vertically thereby; means for electrically connecting the free cross-bar end of the shoe with one side of the electrically-controlled means that holds the valve and means for connecting the pivoted end of at least one side bar of the shoe with the other side of the said electrically-controlled means one of said electric connections including a battery whereby a normal circuit will be formed through the electrically-controlled means said circuit including the pivoted and the free ends of the shoe while the shoe is traveling between ramp rails.

1,109,338. CONTROL OF ELECTRIC MOTORS AND APPARATUS THEREFOR. PEARL N. JONES and JAMES W. WELSH, Pittsburgh, Pa. Filed Nov. 12, 1913. Serial No. 800,502. (Cl. 172—179.)



1. In the control of sets of four electric motors, the steps which consist in starting with all the motors in series, subsequently connecting them in series-parallel groups, and then connecting the motors all in parallel by successively establishing as many different parallel current paths as there are motors, and while establishing such parallel paths, maintaining at least three of the motors actively in circuit; substantially as described.

2. In the control of four electric motors, the method of changing the motors from series-parallel relation to full-parallel relation, which consists in successively establishing as many different parallel current paths as there are motors, and while establishing such parallel paths maintaining at least three of the motors actively in circuit; substantially as described.

3. In the control of four electric motors, the method of changing the motors from series-parallel relation to full-parallel relation, which consists in successively connecting the motors one after another to receive the full line voltage, and maintaining at least three of the motors actively in circuit while so connecting them; substantially as described.

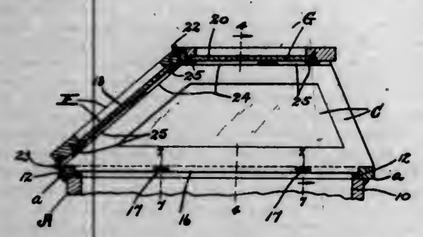
4. In the control of four electric motors, the method of changing the motors from series-parallel to full-parallel which consists in first cutting out one of the motors and leaving two of them in series and the third in parallel with the two which are in series, then re-connecting said motor in parallel with the motors so left, then cutting out one of the two motors in series and finally connecting the last named motor in parallel with the others; substantially as described.

5. In the control of four electric motors, the method of changing the motors from series-parallel to full parallel, which consists in cutting out one of the motors, leaving two of them in series and the third in parallel with the two in series, and connecting in resistance with said third motor, then removing said resistance and re-connecting the cut out motor in parallel with the motors so left, then

cutting out one of the two motors which are in series and re-connecting it in parallel with the other motors; substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,109,339. DISPLAY-CASE. ADOLPH S. KLEIN, Cleveland, Ohio. Filed Dec. 22, 1913. Serial No. 808,141. (Cl. 211—25.)



1. In a display-case, the combination, with the body of the case, which body has an interior chamber having an inlet at the top of the body, of a hood arranged over said inlet and mounted on said body and comprising two laterally spaced substantially vertically arranged side sections, a front section, and a top section, the side sections of the hood being mounted on the aforesaid body at opposite sides respectively of the aforesaid inlet and removably secured to said body, each side section extending from a point forward of said inlet to a point rearward of said inlet, the top section of the hood being removably mounted on said side sections and hinged at its forward edge to the front section of the hood and arranged to be swung from said side sections upwardly and forwardly independently of said front section, and said front section being hinged at its lower edge to the aforesaid body and arranged to be swung forwardly from said side sections.

2. In a display-case, a body which has an interior chamber having an inlet at the top of the body, and a hood arranged over said inlet and mounted on said body and comprising two upright side sections, an upwardly and forwardly facing sloping front section, and a substantially horizontally arranged top section, the side sections of the hood being mounted on the aforesaid body at opposite sides respectively of the aforesaid inlet and removably secured to said body, each side section having a sloping forward edge extending upwardly and rearwardly from a point forward of said inlet, and said side section having a substantially horizontal top edge extending rearwardly from said sloping edge, the top section of the hood being removably mounted on said side sections and hinged at its forward edge to the front section of the hood and arranged to be swung from said side sections upwardly and forwardly, and said front section being hinged at its lower edge to the aforesaid body and arranged to be swung forwardly from said side sections but leaning against the aforesaid sloping edge of each side section of the hood.

3. In a display-case, a body which has an interior chamber having an inlet at the top of the body, and a hood arranged over said inlet and mounted on said body and comprising two upright side sections, a front section, and a substantially horizontally arranged top section, the side sections of the hood being mounted on the aforesaid body at opposite sides respectively of the aforesaid inlet and removably secured to said body, each side section having an upwardly and forwardly facing sloping forward edge and a substantially horizontal top edge and being provided at its inner side with a recess extending along said edges, the top section of the hood being removably mounted on said side sections and hinged at its forward edge to the front section of the hood and arranged to be swung from said side sections upwardly and forwardly, said front section being hinged at its lower edge to the aforesaid body and leaning against the aforesaid sloping edge of each side section of the hood and arranged to be swung forwardly from the side sections of the hood, and both the front and side sections of the hood having portions thereof projecting into the aforesaid recess.

4. In a display-case, the combination, with the body of the case, which body has an interior chamber and comprises a horizontally arranged quadrangular frame forming the top of said body and having its opening forming an inlet of said chamber, of a hood arranged over said inlet and mounted on said frame and comprising two upright side sections, a front section and a top section, the side sections of the hood being mounted on said frame at opposite sides respectively of the aforesaid opening and removably secured to said frame, each side section extending from a point forward of the said opening to a point rearward of said opening, the top section of the hood being removably mounted on said side sections and hinged at its forward edge to the front section of the hood and arranged to be swung from said side sections upwardly and forwardly, and said front sections being hinged at its lower edge to the aforesaid frame and arranged to be swung forwardly from said side sections.

5. In a display-case, a body which has an interior chamber and comprises a horizontally arranged quadrangular frame forming the top of said body and having its opening forming an inlet of said chamber, which opening is larger transversely within the upper section than within the lower portion of said frame, the upper transversely larger portion of said opening having two parallel side walls, a hood arranged over said opening and mounted on said frame and comprising two upright side sections, a front section and a top section, and metal plates secured to the aforesaid walls, the side sections of the hood being mounted on said frame at opposite sides respectively of said opening and having portions which extend into the upper portion of said opening and from end to end of said walls and are removably secured to said plates.

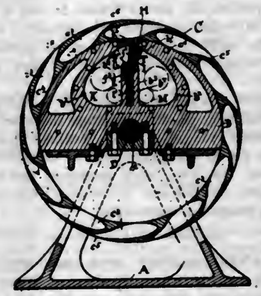
1,109,340. CARLINE STRUCTURE. SAM F. KLOHS, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 28, 1912. Serial No. 686,817. (Cl. 108—5.)

1. In a carline structure, in combination; the side plates of a car; a carline extending from one side plate to the other and resting on the tops of the same; and metal brackets attached to the under side of the carline and at a distance from the ends of the same, such brackets having vertical side flanges closely embracing the carline so as to provide a carline-receiving space open at its top and a horizontal bottom plate formed with lateral extensions beyond the side flanges, which bottom plate and extension have wide bearings against the inner sides of the car frame; substantially as specified.

2. In a carline structure, in combination; the side plates of a car; a carline extending from one side plate to the other and over the tops of and resting on the same; longitudinal metal bars secured to the inner sides of the side plates; and metal brackets attached to the under side of the carline and at a distance from the ends of the same, such brackets having vertical flanges closely embracing the sides of the carline and a horizontal bottom plate formed with lateral extensions beyond the side flanges, the said brackets having depending flanges abutting against the inner sides of the said longitudinal metal bars and having a wide bearing on the same; substantially as specified.

1,109,341. ROTARY COMBUSTION-ENGINE. HENRY G. KRESS, Manitowoc, Wis. Filed Sept. 8, 1913. Serial No. 788,767. (Cl. 123—9.)

1. A motor of the class described comprising a rotor adapted to tangentially receive gases escaping under pressure and transform their energy into rotary energy of the rotor, a stator comprising a combustion-chamber adapted to receive a combustible gas-mixture, a port leading from said combustion-chamber and adapted to deliver gas therefrom to said rotor, a valve for closing said port, said valve being adapted to be shifted by the increasing pressure of the burning gas on one explosion so as to open said port, and means for bringing the pressure of a following explosion to bear against said valve in the opposite direction to return said valve to its position closing said port after the gas from the first explosion has escaped.



2. A motor of the class described comprising a rotor adapted to tangentially receive gases escaping under pressure and transform their energy into rotary energy of the rotor, a stator comprising a combustion-chamber adapted to receive a combustible gas-mixture, a port leading from said combustion-chamber and adapted to deliver gas therefrom to said rotor, a valve for closing said port, said valve being adapted to be shifted by the increasing pressure of the burning gas so as to open said port, means for returning said valve to its position closing said port after the gas has escaped, and means actuated by said valve in its returning movement for admitting gas to said chamber.

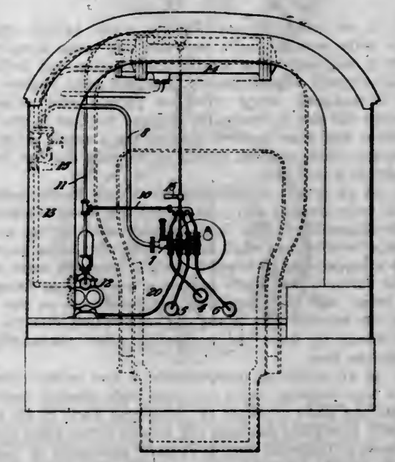
3. A motor of the class described comprising a rotor adapted to tangentially receive gases escaping under pressure and transform their energy into rotary energy of the rotor, a stator comprising a combustion-chamber adapted to receive a combustible gas-mixture, a port leading from said combustion-chamber and adapted to deliver gas therefrom to said rotor, a valve for closing said port, said valve being adapted to be shifted by the increasing pressure of the burning gas so as to open said port, means for returning said valve to its position closing said port after the gas has escaped, an admission-valve adapted to admit gas to said chamber and normally closed, and means actuated by said first-named valve in its returning movement for opening said admission-valve.

4. A motor of the class described comprising a rotor adapted to tangentially receive gases escaping under pressure and transform their energy into rotary energy of the rotor, a stator comprising a combustion-chamber adapted to receive a combustible gas-mixture, a port leading from said combustion-chamber and adapted to deliver gas therefrom to said rotor, a valve for closing said port, said valve being adapted to be shifted by the increasing pressure of the burning gas so as to open said port, means for returning said valve to its position closing said port after the gas has escaped, an admission-valve adapted to admit gas to said chamber and normally closed, means actuated by said first-named valve in its returning movement for opening said admission-valve, and means for forcing the combustible mixture through said admission-valve under pressure.

5. A motor of the class described comprising a rotor adapted to tangentially receive gases escaping under pressure and transform their energy into rotary energy of the rotor, a stator comprising a combustion-chamber adapted to receive a combustible gas-mixture, and divided into two compartments separated from one another, there being one or more ports leading from said compartments adapted to discharge the gases therefrom, an oscillating valve separating said two compartments and adapted in one of its extreme positions to close the exit of one compartment and open that of the other, and in the other extreme position to close that of the second compartment and open that of the first, means for alternately charging the two compartments with the combustible gaseous mixture, and means for igniting said mixture alternately in the respective compartments.

[Claims 6 to 9 not printed in the Gazette.]

1,109,342. SYSTEM OF BURNING LIQUID FUEL. ANDREW LAING, Newcastle-upon-Tyne, England. Filed June 10, 1913. Serial No. 772,786. (Cl. 158—36.)



1. A liquid fuel burning system comprising a combustion chamber, a plurality of liquid fuel burners, means adapted to feed the liquid fuel to said burners, a valve box distributing the fuel to said burners, means therein for regulating each burner independently and means for simultaneously cutting out a predetermined number of burners, substantially as described.

2. A liquid fuel burning system comprising a combustion chamber, a plurality of liquid fuel burners, a pump adapted to force the liquid fuel to said burners and to spray it therein, a valve box distributing the fuel to said burners, means therein for regulating each burner independently and means for simultaneously cutting out a predetermined number of burners, substantially as described.

3. A liquid fuel burning system comprising a combustion chamber, a plurality of liquid fuel burners, means adapted to feed the fuel to said burners, a distributing valve box, and means in said distributing valve box for blowing steam through said burners when they are cut out, substantially as described.

4. A liquid fuel burning system comprising a combustion chamber, a plurality of liquid fuel burners, means adapted to feed the said burners, means therein for regulating each burner independently, means for simultaneously cutting out a predetermined number of burners, and means when such burners are cut out for blowing steam therethrough, substantially as described.

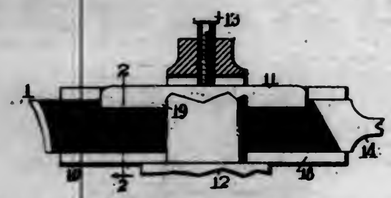
5. A liquid fuel burning system comprising a combustion chamber, a plurality of liquid fuel burners, means adapted to feed and distribute the fuel to said burners, a steam heated fuel heater, and means for reducing the steam passed through the heater as the burners are cut off, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,109,343. TOOL-HOLDER. JOSEPH A. LEDOUX, Worcester, Mass. Filed Nov. 1, 1913. Serial No. 798,755. (Cl. 29—96.)

1. As an article of manufacture, a tool holder comprising a body member and a cap, said body having integral upwardly extending ends with downwardly and rearwardly inclined grooves in their inner faces, and said cap having

flanges in its ends corresponding to the angle of the grooves and adapted to slide therein.

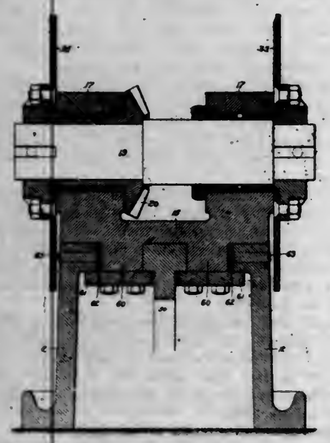


2. As an article of manufacture, a tool holder comprising a body member and a cap, said cap being mounted to slide in diagonal ways in said body portion and having a transverse slot formed therein, and said body member having a clamping screw threaded therein and extending through the slot to secure the cap and the tool to the body member, said body member also having a shank projecting angularly from one end thereof to support the tool holder rigidly in a tool post.

3. As an article of manufacture, a tool holder comprising a body member and a cap, said cap being mounted to slide diagonally in the body member and having an upwardly beveled rear edge, and said member being provided with a supporting plate mounted in transverse ways in its lower surface, said plate having a tool holding flange on the front edge and a beveled vertical flange on the rear edge, the beveled edge of the cap coöperating with the beveled flange to force the supporting plate rearwardly to clamp the tool.

4. As an article of manufacture, a tool holder comprising a body member and a cap, said body member having a supporting plate mounted in transverse ways in its lower surface, said plate and said cap having coöperating beveled surfaces so disposed that downward movement of the cap will cause rearward movement of the plate to clamp the plate to the body member.

1,109,344. METAL-CUTTING MACHINE. WILLIAM H. LUCAS, Philadelphia, Pa., assignor to Fred F. Espen, Jacob Espen, Jr., and William H. Lucas, Philadelphia, Pa., a Copartnership as Espen-Lucas Machine Works. Filed June 19, 1911. Serial No. 634,096. (Cl. 29—70.)



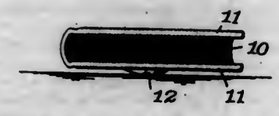
1. In a multiple metal-sawing machine, the combination of the bed plate, a plurality of sawing machines each having a plurality of saws, means for mounting said machines upon the bed plate so as to permit of their adjustment from and toward each other, means for securing the saws of each machine so that they may be adjusted from and toward each other, and means for transmitting power to the saws of the different machines.

2. In a multiple metal-sawing machine, the combination of the saw shaft, a carriage having bearings therefor, and saws having hubs mounted outside of said bearings upon the oppositely projecting ends of the saw shaft, each saw being secured to the face of its hub and said hub projecting beyond the saw to a greater extent upon one side than upon the other, whereby the distance between the saws can be varied by reversing the hub of either saw upon the shaft.

3. In a metal sawing machine the combination of the saw shaft, a carriage having bearings for said shaft and having a plurality of separated guide tongues projecting downwardly therefrom, and a frame having a central support for the carriage, opposite side supports therefor, and guide slots for said tongues located on opposite sides of said central support and between the same and the side supports.

4. In a metal sawing machine, the combination of the saw shaft, a carriage having bearings therefor, and having projecting guide tongues with retainer plates applied thereto, and a frame comprising outer members and a centrally disposed rib, the outer members having inwardly projecting guide flanges and the central rib having a projecting guide flange on each side.

1,109,345. ATTACHMENT FOR BOOKS AND THE LIKE. JOHN W. MAWBEY, Worcester, Mass. Filed Apr. 7, 1913. Serial No. 759,349. (Cl. 11—18.)



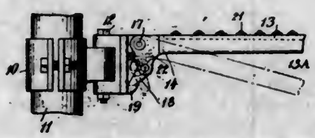
1. The combination with a book having a cover, of an attachment for the cover having an inner flat surface and an outer convex surface, and means carried by the cover for securing the attachment thereto.

2. As an article of manufacture, a book having a cover provided with small outer circular convex portion having its thickest part under the center of gravity of the book when the book is lying on its side.

3. As an article of manufacture, a supporting attachment having a convex surface, a flat top plate, and a cover for the attachment over the convex surface and extending over the outer edges of the plate.

4. As an article of manufacture, a book having a projection substantially at the center of one cover thereof and extending outwardly therefrom, the outer surface of such projection being convex and constituting a support having a small supporting area, whereby when the book is laid on its side with said projection underneath only the center of said projection will come into contact with the supporting surface and the book can be turned readily on said center as a pivot.

1,109,346. FIRE-HOSE RACK. WILLIAM MCCLINTOCK, New York, N. Y. Filed Oct. 16, 1911. Serial No. 654,985. (Cl. 137—31.)

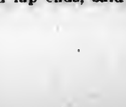


1. A hose rack comprising a pair of parallel arms and a plurality of pins, for holding a flattened hose, vertically swiveled in said arms, means for supporting said arms in a horizontal position and arranged to release the arms when they are slightly elevated and to support them together with said pins in an inclined position, to facilitate the removal of the hose.

2. A hose rack comprising a pair of parallel arms, a connecting back therefor, the outer ends of said arms being provided with means for holding a hose nozzle, and a plurality of swiveled pins, for holding a flattened hose, capable of rotation in substantially one plane spaced along said arms between said back and said nozzle holding means, a pivotal support for said arms, a latch arranged to hold the arms in a horizontal position, and to be released by slightly elevating the arms to allow said arms to drop into an inclined position to facilitate the removal of the hose therefrom.

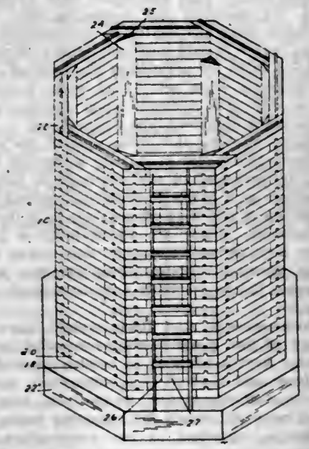
3. A hose rack comprising a pair of parallel arms, a connecting back therefor, the outer ends of said arms being provided with means for holding a hose nozzle, and a plurality of swiveled pins, for holding a flattened hose, capable of rotation in substantially one plane spaced along said arms between said back and nozzle holding means, a supporting member for the rack, a vertical pivot between said connecting back and the supporting member, a latch arranged to hold the arms in a horizontal position and to be automatically released by slightly elevating the arms to allow said arms to drop into an inclined position to facilitate the removal of the hose therefrom, and means for adjusting the degree of said inclination.

1,109,347. NUT. WILLIAM J. MCINTYRE, Hartford, Conn., assignor to The Allen Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 21, 1913. Serial No. 755,921. (Cl. 85—32.)



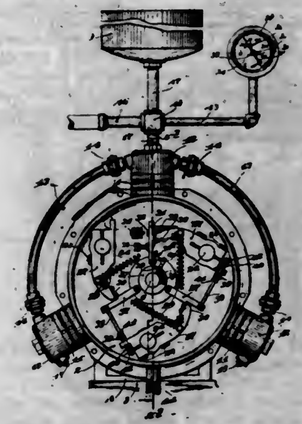
A nut for bolts having a plane cylindrical exterior surface and an opening extending axially through the interior, the opening for a substantial distance in from one end of the nut being hexagonal to provide a strong wrench socket, and the opening for a substantial distance in from the other end of the nut being cylindrical and provided with a continuous screw thread of uniform pitch and height, the threaded cylindrical section of the opening being of less diameter than the diameter of the hexagonal section of the opening so as to provide a shoulder at the bottom of the wrench socket.

1,109,348. SILO. EDWARD C. MCNERNEY, Tonganoxie, Kans., assignor to Tung-Lok Silo Company, Kansas City, Mo., a Corporation of Missouri. Filed Sept. 16, 1913. Serial No. 790,113. (Cl. 20—1.4.)



A polygonal structure comprising superimposed rows of units having butt and lap ends, said units each having a tongue and grooves, the tongue and longitudinal grooves extending throughout the length of the units, transverse grooves at one end of each of said units, said transverse grooves being parallel with the adjacent end of said units and extending throughout the width of said units.

1,109,349. MULTICYLINDER-PUMP. ROBERT CLARK MEALEY, Minneapolis, Minn. Filed July 21, 1913. Serial No. 780,157. (Cl. 103—87.)



1. The combination with a plurality of pumps and continuously driven means for operating the same, of latches for temporarily securing said pumps against action, and pressure actuated means for rendering said latches progressively active to render said pumps inoperative.

2. The combination with a plurality of pumps and continuously driven means for operating the same, of normally inoperative latches for securing said pumps against action, pressure actuated means for operating one of the said latches, and means whereby the operation of the first latch will progressively cause the operation of the other latches and to progressively render the said pump temporarily inoperative.

3. The combination with a plurality of reciprocating pumps connected to deliver to a common source, of normally inoperative latches movable to repder said pumps temporarily inoperative, a pressure gage having two electrodes, the one movable by varying pressure therein, and the other adjustable into different positions for engagements under different predetermined pressures, an electric circuit including said electrodes, a source of electric energy and an electro-magnet, the said electro-magnet when energized being operative on one of the said latches to render the same operative, and the other latches having connections whereby they are rendered operative in succession by coöperating pumps.

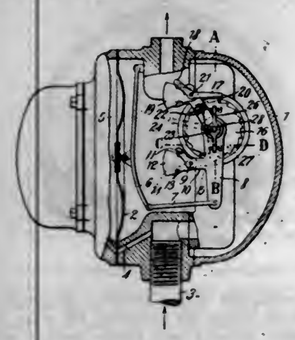
4. The combination with a pump casing having an inlet for the supply of fluid to be pumped, of a plurality of cylinder and piston pumps connected to receive from said casing and having their delivery ends connected to the common discharge pipe, a rotating cam in said casing operating in succession on the pistons of said pumps, rock shafts connected to the several pump pistons and provided with spring retracted arms, yielding retracted latches operative on said arms to temporarily secure the pistons of said pumps against action, and pressure actuated means for rendering said latches operative.

5. The combination with a pump casing having an inlet for the supply of fluid to be pumped, of a plurality of cylinder and piston pumps connected to receive from said casing and having their delivery ends connected to the common discharge pipe, a rotating cam in said casing operating in succession on the pistons of said pumps, rock shafts connected to the several pump pistons and provided with spring retracted arms, yielding retracted latches

operative on said arms to temporarily secure the pistons of said pumps against action, yielding retracted latches operative on said arms to support the pistons of said pumps against action, pressure actuated means operative directly on one of said latches to render the same operative on the coöperative arm, the other latches having connections to adjacent arms whereby they are rendered operative by movements of the arms to which they are connected.

[Claims 6 and 7 not printed in the Gazette.]

1,109,350. RATCHET MECHANISM FOR REVERSIBLE APPARATUS FOR LIGHTING GAS FROM A DISTANCE. HERMANN MENZEL, Berlin, Germany, assignor to Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft, Berlin, Germany, a Corporation of Germany. Filed June 19, 1913. Serial No. 774,717. (Cl. 67—18.)



1. In ratchet mechanism for reversible apparatus for actuating gas burners from a distance, the combination of a ratchet wheel, a feed lever therefor, means for operating said lever, a pawl pivoted to said lever and engaging the ratchet wheel by gravity in one position of the apparatus and means coöperating with the pawl to insure its engagement with the ratchet wheel in the other position of the apparatus.

2. In ratchet mechanism for reversible apparatus for actuating gas burners from a distance, the combination of a ratchet wheel, a feed lever therefor, means for operating said lever, a pawl pivoted to said lever and engaging the ratchet wheel, means connected to the pawl adapted to retain it in contact with the ratchet wheel in one position of the apparatus and a stop for engaging said means when the apparatus is in the other position.

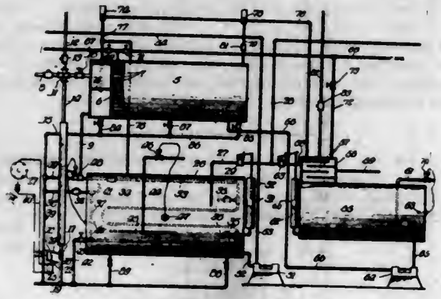
3. In reversible apparatus for actuating gas burners from a distance, the combination of a casing, a yielding pressure member therein, a gas supply pipe communicating with the casing, a ratchet wheel mounted within the casing, a feed lever for said ratchet wheel, a pivoted pawl mounted on said lever and engaging the ratchet wheel in one position of the apparatus, means connecting the feed lever and yielding pressure member and means coöperating with the pawl to insure its engagement with the ratchet wheel when the apparatus is in the other position.

4. In reversible apparatus for actuating gas burners from a distance, the combination of a casing, a yielding pressure member therein, a gas supply pipe communicating with the casing, a ratchet wheel mounted within the casing, a feed lever for said ratchet wheel, a pivoted pawl mounted on said lever and engaging the ratchet wheel, means connecting the feed lever and yielding pressure member, means connected to the pawl adapted to retain it in contact with the ratchet wheel in one position of the apparatus and means for arresting said means when the apparatus is in the other position.

5. In reversible apparatus for actuating gas burners from a distance, the combination of a casing, a yielding pressure member therein, a gas supply pipe communicating with the casing, a ratchet wheel mounted within the casing, a feed lever for said ratchet wheel, a pivoted pawl mounted on said lever and engaging the ratchet wheel, means connecting the feed lever and yielding pressure member, a weight pivoted to the pawl adapted to retain the pawl in contact with the ratchet wheel in one position of the apparatus and means for supporting the weight in an inoperative position when the apparatus is in the other position.

[Claims 6 to 10 not printed in the Gazette.]

1,109,351. BOILER WASHING AND FILLING SYSTEM. FRANK W. MILLER, Chicago, Ill., assignor of one-half to Clarence D. Bauers, Chicago, Ill. Filed Oct. 30, 1911. Serial No. 657,492. (Cl. 122—396.)



1. In a boiler washing and filling system, the combination of a reservoir, means for maintaining a predetermined level of water in said reservoir, means for conducting the blow-off steam and water of a boiler to said reservoir, and thermostatically controlled means for preventing said blow-off steam and water from entering said reservoir when the water in the reservoir is above a predetermined temperature.

2. In a boiler washing and filling system, the combination of a reservoir, a coil arranged in said reservoir, means whereby said coil may be connected with a locomotive boiler to permit the blow-off steam and water of said boiler to be delivered to the coil, means for supplying water to said reservoir, and means for diverting the blow-off steam and water of a boiler from said coil when the water in the reservoir reaches a predetermined temperature.

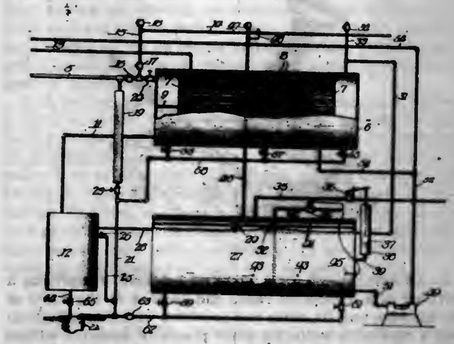
3. In a boiler washing and filling system, the combination of a filing water heater, a blow-off line connected therewith to deliver blow-off steam and water to said heater, a reservoir, a pipe connecting said filling water heater with the reservoir for delivering said blow-off steam and water from the heater to the reservoir, means for supplying water to said reservoir, and a thermostatically controlled valve for permitting the blow-off contents of a boiler delivered from said filling water heater to be discharged outside said reservoir when the water in the reservoir reaches a predetermined temperature.

4. In a boiler washing and filling system, the combination of a reservoir adapted to contain water for washout purposes, a coil arranged in said reservoir to convey the blow-off contents of a boiler therethrough, means for permitting a portion of said blow-off contents to be discharged into the reservoir, means for maintaining a predetermined water level in said reservoir, and means for preventing said blow-off contents from entering said coil when the water in the reservoir reaches a predetermined temperature.

5. In a boiler washing and filling system, the combination of a blow-off line, a scale pocket connected therewith, a filling water heater adapted to receive blow-off steam and water from said blow-off line, a reservoir, means for conducting blow-off steam and water from said heater through said reservoir, means for supplying water to said reservoir, means controlled by the temperature of the water in said reservoir for diverting the blow-off steam and water from said heater directly to a sewer, means normally closing the bottom of said scale pocket, and automatically and intermittently actuated means for opening the bottom of said scale pocket at predetermined intervals.

[Claims 6 to 18 not printed in the Gazette.]

1,109,352. BOILER WASHING AND FILLING SYSTEM. FRANK W. MILLER, Chicago, Ill., assignor of one-half to Clarence D. Bauers, Chicago, Ill. Filed Oct. 30, 1911. Serial No. 657,491. (Cl. 122—396.)



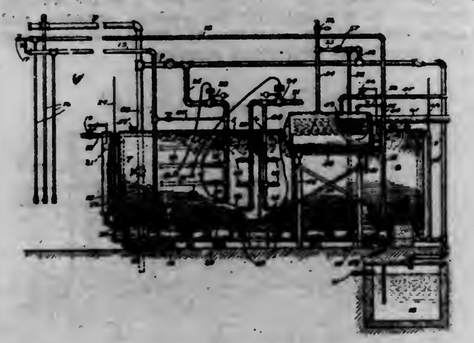
1. In a boiler washing and filling system, the combination of a filling water heater, means for conducing blow-off steam and water to said heater, a separating tank, means for conducting blow-off steam and water from said heater to said tank, a washout and refilling water reservoir, means for conducting water to said reservoir, means for maintaining a predetermined water level in said reservoir, a perforated plate disposed in the top of said reservoir beneath the water inlet, a pipe for delivering the steam rising uncondensed from the filling water heater to said reservoir beneath said plate, a second pipe for conveying the steam separated from the water in said tank to the filling water reservoir beneath said plate, the water delivered to the reservoir being heated by the steam delivered by said pipes, a refilling line connected with said filling water heater, a washout line, and means for supplying water to said heater and to said washout line from said reservoir.

2. In a boiler washing and filling system, the combination of a filling water heater, means for conducting blow-off steam and water from locomotive boilers to said heater, means for conducting blow-off steam from power boilers to said heater, a washout and refilling water reservoir, means for supplying water to said reservoir, means for maintaining a predetermined water level therein, a separating tank, means for delivering blow-off steam and water from said filling water heater to said tank, means for delivering the water from said tank to a sewer, means for conveying the steam separated from said water to said washout and refilling water reservoir, means for conveying the steam rising uncondensed from said filling water heater to the reservoir for heating the water delivered thereto, means for conducting water from said reservoir to said filling water heater, means for conducting refilling water from said heater to a boiler, and means for conducting washout water from said reservoir to a boiler.

1,109,353. BOILER WASHING AND FILLING SYSTEM. FRANK W. MILLER, Chicago, Ill., assignor of one-half to Clarence D. Bauers, Chicago, Ill. Filed Feb. 28, 1912. Serial No. 680,386. (Cl. 122—396.)

1. In a boiler washing and filling system, the combination of a reservoir for washing water, a reservoir for filling water, a blow-off main for conveying blow-off steam and water from a boiler, connections between the blow-off main and the washing water reservoir and between said main and the filling water reservoir, and thermostatic means for automatically controlling the deliverance of the blow-off steam and water from said main to the washing water reservoir.

2. In a boiler washing and filling system, the combination of a reservoir for washing water, a reservoir for filling water, a blow-off main for conveying blow-off steam and water from a boiler, means for delivering a portion of the blow-off steam and water to the washing water reservoir, means for controlling the quantity of blow-off steam and water delivered to the washing water reservoir, and means for conducting blow-off steam to the refilling water reservoir.



3. In a boiler washing and filling system, the combination of a reservoir for washing water, a reservoir for filling water, a blow-off main communicating with a catch-basin or the like, means connected with the blow-off main for delivering a portion of the blow-off steam and water to the washing water reservoir, means dependent upon the temperature of the water in the washing water reservoir for automatically controlling the amount of blow-off steam and water delivered to the washing water reservoir, and means connected with the blow-off main for delivering blow-off steam to the filling water reservoir.

4. In a boiler washing and filling system, the combination of a tank comprising a washing water reservoir, and a filling water reservoir, a blow-off main, means for mingling a portion of the blow-off steam and water with the water in the washing water reservoir, a heater, connections between said heater and the filling water reservoir, a single means for maintaining a predetermined level of water in said heater and filling water reservoir, and a pipe connected with the blow-off main for delivering blow-off steam to the filling water reservoir whereby said filling water is further heated.

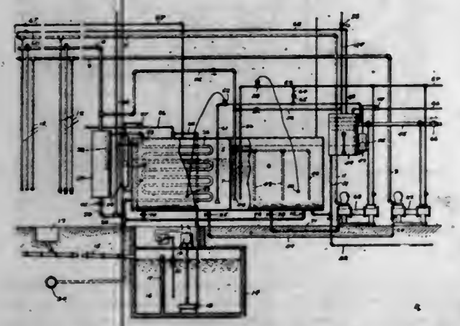
5. In a boiler washing and filling system, the combination of a filling water reservoir, a blow-off main for conveying blow-off steam and water from a boiler, a heater connected with said filling water reservoir whereby the filling water is primarily heated before being delivered to the filling water resevoir, a pipe for delivering blow-off steam to said filling water reservoir for further heating the water therein, and connections whereby the surplus steam from said heater is delivered to said pipe for heating the water in the filling water reservoir.

[Claims 6 to 12 not printed in the Gazette.]

1,109,354. BOILER WASHING AND FILLING SYSTEM. FRANK W. MILLER, Chicago, Ill., assignor of one-half to Clarence D. Bauers, Chicago, Ill. Filed May 27, 1912. Serial No. 700,045. (Cl. 122—396.)

1. In a boiler washing and filling system, the combination of a washing water reservoir, a filling water reservoir, means for supplying water to said washing water reservoir, means for supplying water to said filling water reservoir, a blow-off main, means for separating the blow-off steam and water, means for conducting the separated blow-off steam to the refilling reservoir to heat the water therein, and means for conducting the separated blow-off water through the washing water reservoir to heat the washing water therein without mingling the blow-off water therewith.

2. In a boiler washing and filling system, the combination of a washing water reservoir, a filling water reservoir, a feed water heater, means for delivering water from said feed water heater to the filling water reservoir, means for supplying water to the washing water reservoir, means for conducting blow-off steam to the filling water reservoir for heating the water therein, means for conducting blow-off water through the washing water reservoir for heating the water therein without mingling the blow-off water therewith, means for delivering water from the washing reservoir to a roundhouse for washout purposes, and means for delivering water from the filling water reservoir to a roundhouse for refilling purposes.



3. In a boiler washing and filling system, the combination of a washing water reservoir, a sump, roundhouse pits, means for conducting washout water from the roundhouse pits to said sump, means for delivering water from said sump to the washing water reservoir, and a closed coil disposed in said washing water reservoir whereby blow-off water from a boiler is conducted through said reservoir to heat the water therein without being mingled with said water.

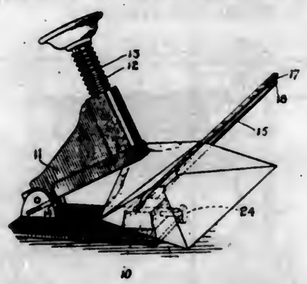
4. In a boiler washing and filling system, the combination of a washing water reservoir, a sump, roundhouse pits, means for conducting washout water from the roundhouse pits to said sump, means for delivering water from said sump to the washing water reservoir, an auxiliary pipe for supplying water to said washing water reservoir, means for conducting blow-off steam and water from a locomotive boiler, and means for separating the blow-off water from the blow-off steam and conducting said water through the washing water reservoir, whereby the washing water in said reservoir is heated from the blow-off water of the boiler without being mingled therewith.

5. In a boiler washing and filling system, the combination of a washing water reservoir, a filling water reservoir, means for supplying water to said filling water reservoir, a sump, roundhouse pits, means for conducting washout water from the roundhouse pits to said sump, means for delivering water from the sump to said washing water reservoir, means for mingling blow-off steam with the water in the filling water reservoir to heat the same, and means for conducting blow-off water through the water in the washing water reservoir to heat the same without mingling the blow-off water therewith.

[Claims 6 and 7 not printed in the Gazette.]

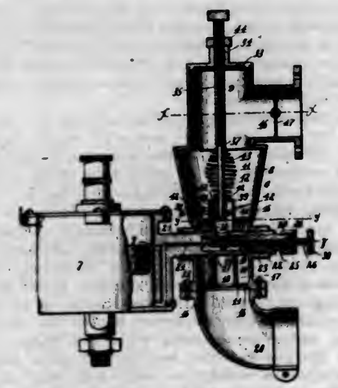
1,109,355. ENVELOP-SEALING ATTACHMENT FOR STAPLING-MACHINES. JOHN MUTH, Norwalk, Conn., assignor to The E. H. Hotchkiss Company, Norwalk, Conn., a Corporation of Connecticut. Filed Jan. 22, 1914. Serial No. 813,686. (Cl. 1—48.)

1. The combination with the anvil of a stapling machine provided with a longitudinal opening having a stop pin therein and a transverse screw-threaded opening; of a horizontal carrying rod having its inner end provided with a slot to receive the stop pin when inserted in the longitudinal opening and its outer end provided with a longitudinal slot; a clamping screw operating in the transverse screw-threaded opening to engage the carrying rod; a vertically swinging plate pivotally mounted within the outer slot in the carrying rod and provided with a stop shoulder to engage the carrying rod to positively limit the upward movement of said plate, and a vertically swinging clenching arm having its outer end rigidly secured to the plate and its inner end off-set laterally over the anvil and having upon its upper surface a clenching recess.



2. An attachment for a stapling machine, comprising a carrying arm having its inner end secured to the anvil of the machine and its outer end provided with a longitudinal slot, a vertically swinging plate pivotally mounted within the longitudinal slot and provided with a shoulder to engage the carrying arm to positively limit the upward movement of said plate, and a vertically swinging clenching arm rigidly secured to the pivoted plate and having its inner end laterally off-set over the anvil of the machine and provided upon its upper surface with a clenching recess.

1,109,356. CARBURETER. WILLIAM O. MYCUE, Niagara Falls, N. Y. Filed Oct. 19, 1911. Serial No. 655,610. (Cl. 48—155.2.)



1. A carbureter comprising a casing having an intermediate upwardly-flaring portion serving as a mixing-chamber, a carbureting-chamber beneath said mixing-chamber having a center tube to provide a center-chamber and an annular-chamber between said tube and the wall of the casing, said annular-chamber having a perforated bottom wall and a perforated top wall and said center tube having an opening to connect said center-chamber with said annular-chamber, a gasolene feed-tube extending diametrically through said center and annular-chambers and having a gasolene well therein and a valve for regulating the flow of gasolene into said well, said gasolene well having an opening for the escape of gasolene therefrom, a governor-valve having a central cup portion provided with openings and an outstanding flange normally closing the perforations in the top wall of said annular-chamber, means for guiding said valve, a spring normally holding said valve in closed position, and means for regulating the tension of said spring.

2. A carbureter comprising a casing having an intermediate upwardly-flaring portion serving as a mixing chamber, a carbureting chamber beneath said mixing chamber having a center tube to provide a center chamber and an annular chamber between said tube and the wall of the casing, said annular chamber having a perforated bottom wall and a perforated top wall and said center tube having an opening to connect said center chamber with said annular chamber, means in said center chamber for causing air to be carbureted in passing therethrough, and a governor valve to control the mixture at the upper ends of said center and annular chambers.

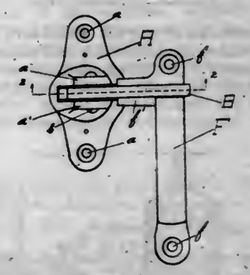
3. A carbureter comprising a casing having an air inlet, a mixture outlet and a mixing chamber having its wall flaring toward said mixture outlet, means for carbureting air passing through said casing, and a governor valve normally held at the small end of said mixing chamber and having a space between it and the flaring wall of said mixing chamber, said space gradually increasing in size as said valve is moved toward the larger end of said mixing chamber, said valve controlling the passage of carbureted air and diluting air into said mixing chamber.

1,109,357. LADDER. YOSHIKAZU OKAMIYA, New York, N. Y. Filed Dec. 1, 1911. Serial No. 663,193. (Cl. 228—18.)

The combination with a folding ladder of a foldable prop therefor comprising a plurality of longitudinal members 12 and 13 each pivotally connected to cross bars 14 and 15 and one of said pivots being slidable in one of said cross bars, a Y shaped engaging member at one end of each said longitudinal member, and a serrated member pivoted at approximately mid-length of each said longitudinal member said serrated members being sectionally foldable as and for the purpose set forth.

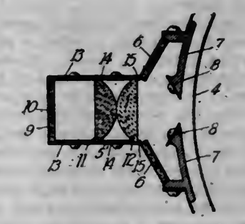
1,109,358. SPRING-LATCH. FLOYD N. PERKINS, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Apr. 15, 1914. Serial No. 831,981. (Cl. 70—119.)

1. In a device of the class described the combination with a part for attachment to the door having a suitable projection, of a casing adapted for attachment to the frame, a rocking lever pivoted to said casing having an arm for engagement with said part upon the door, suitable fingers to limit its movement in either direction and a radially projecting foot, a cup secured to said casing, a spring under longitudinal compression in said cup, a spring table resting upon the spring and pressing upon said foot to hold the arm alternately in the locked or unlocked position, and an incline upon the under surface of the casing engaging the spring table in its upward movement and rocking said table and spring in the direction in which the foot of the rocking lever is moving when passing toward the locked position.



2. In a device of the class described the combination with a part for attachment to the door having a suitable projection, of a casing adapted for attachment to the frame, a rocking lever pivoted to said casing having an arm for engagement with said part upon the door, suitable fingers to limit its movement in either direction and a radially projecting foot, a cup secured to said casing, a spring under longitudinal compression in said cup, a spring table resting upon the spring and pressing upon said foot to hold the arm alternately in the locked or unlocked position and engaging one of said fingers in one position of the lever.

1,109,359. SCALE. ELMER C. POOL, New Castle, Pa., assignor to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed July 30, 1910. Serial No. 574,617. (Cl. 73—104.)



1. In a scale the combination of a movable chart, an element bearing a reading line and lens system, the parts being so related and arranged that an image of the appropriate element of the chart is projected into coincidence with the reading line.

2. In a scale provided with a movable reading chart, a casing inclosing the same but having a sight opening, an element bearing a reading line and a lens system intermediate the reading line and chart, the parts being so related and arranged that an image of the appropriate element of the chart is projected into coincidence with the reading line.

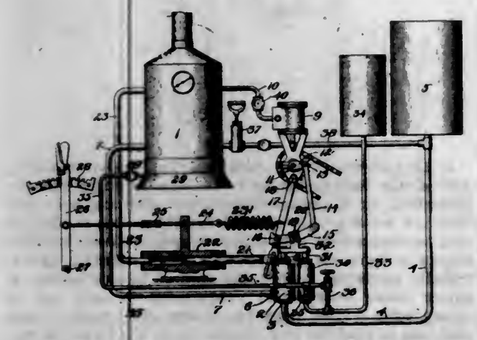
3. In a scale, the combination of an element bearing a reading line, a chart movable relative thereto, and a cylindrical lens system so arranged that the reading line and correct reading position on the chart respectively occupy the conjugate focal lines of the lens system.

4. In a scale, the combination of an element bearing a reading line, a chart movable relative thereto, and a pair of plano-convex cylindrical lenses constituting a system, the relation of the parts being such that the reading line and the correct reading position on the chart of the scale occupy the conjugate focal lines of the lens system.

5. In a scale, the combination of a chart, a casing therefor having a sight opening opposite the reading position, a reading tube covering the sight opening, and a window adjacent thereto for admitting light to the reading position.

[Claims 6 and 7 not printed in the Gazette.]

1,109,360. APPARATUS FOR GENERATING STEAM. ARTHUR F. RANDALL, Somerville, and EDMUND A. BATES, Chelsea, Mass.; Alfred Bates administrator of said Edmund A. Bates, deceased. Filed Feb. 3, 1900. Serial No. 3,803. (Cl. 122—448.)



1. In an apparatus for generating steam the combination of a boiler, a burner, a reciprocating pump for supplying water to the boiler, a reciprocating pump for supplying fuel to the burner, means for reciprocating said pumps in unison, and automatic means controlled by the pressure of the boiler for varying the quantities of water and fuel discharged during each reciprocation of the pumps in proportion to the drop of boiler pressure below a predetermined degree.

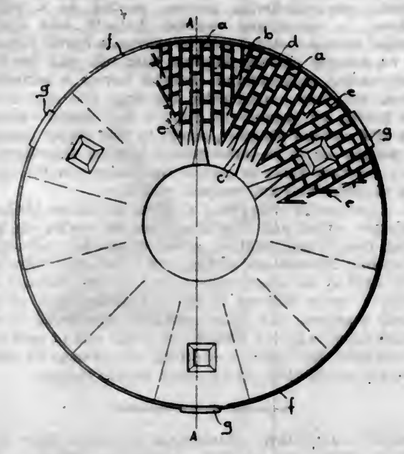
2. In a system of control for steam propelled vehicles, the combination of an engine, a boiler, a burner, a variable stroke water pump, a variable stroke fuel pump, means for synchronizing the movements of the pump pistons, means which receive a definite movement from the engine for driving the pumps, and automatic compensating means between the pump pistons and the driving means whereby the pump strokes can be varied.

3. In a system of control for steam-actuated apparatus, the combination of an engine, a boiler, a burner, variable stroke pumps for the water and fuel which automatically vary the amount supplied in accordance with the demand, a mechanical connection for driving the pumps from the engine which has a constant length of stroke, a compensating device between the connection and the pumps, and a throttle valve whereby the engine is directly, and the pumps indirectly controlled.

4. In a system of control for steam-actuated apparatus, the combination of a flash boiler, a burner, a variable-stroke pump for supplying water to the boiler, a direct connection between the boiler and the pump, a variable-stroke pump for supplying fuel to the burner, and a regulator which acts automatically to vary the stroke of both pumps and is itself controlled by the pressure of the boiler.

5. An apparatus for generating steam including in combination, a flash generator, a burner for heating the same, a pump for supplying water to the generator, a pump for supplying a fluid fuel to the burner, a motor connected with the generator, an adjustable connection through which said motor positively drives the two pumps in unison, and means controlled by the pressure of the fluid in the generator for automatically adjusting said connection so as to simultaneously vary the length of strokes of said pumps when the pressure in the generator changes and without varying the quantitative relation between the supplies of water and fuel.

1,109,361. GRINDING-DISK. ROBERT A. REYNOLDS, Port Huron, Mich. Filed June 18, 1913. Serial No. 774,299. (Cl. 83—3.)



A grinding disk comprising a flat surface having a plurality of ribs, baffles located in the grooves formed by the ribs, said baffles gradually rising in height from the center toward the periphery of the disk, substantially as described.

1,109,362. METHOD AND APPARATUS FOR ANNEALING OR CEMENTING VARIOUS ARTICLES. GEORG RICHTER, Stettin, Germany, assignor to Stettiner Chamotte-Fabrik Aktien-Gesellschaft vormals Didier, Stettin, Germany, a Corporation of Germany. Filed May 29, 1913. Serial No. 770,568. (Cl. 148—17.)

1. The herein described process for annealing or cementing articles or material, which consists in causing the said articles to travel in a predetermined direction and subjecting them successively to the action of heating currents and of cooling currents conducted transversely of the first-mentioned direction and alternately in opposite directions.

2. The herein described process for annealing or cementing articles or material, which consists in causing the said articles to enter a furnace successively and to travel therethrough in a predetermined direction, and causing currents of a heating agent and of a cooling agent respectively to flow alternately in opposite directions through successive portions or zones of said furnace, transversely to the path of the articles undergoing treatment, so as to secure a uniform heating and cooling of said articles in the successive furnace zones.

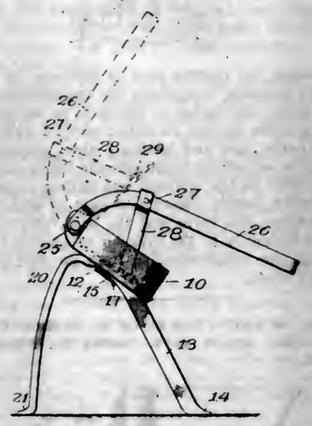
3. The herein described process for annealing or cementing articles or material, which consists in subjecting a consecutively arranged series of such articles to the action of heating and cooling currents flowing transversely of the series at different zones thereof, and advancing said series stepwise so as to bring its several portions successively into the several heating and cooling zones, the articles being advanced transversely of the path of said currents.

4. An annealing or cementing furnace provided with a longitudinal passage, combustion chambers located at opposite sides of said passage, out of transverse alinement, and channels located in the side walls of the furnace and communicating with said chambers, the channels on each side of the passage being divided into separate sections, and the channel sections on opposite sides of said passage being connected with each other by successive portions of said passage so as to compel the gases from said chambers to travel in a single current or stream across the full width of said passage alternately in opposite directions through successive portions or zones of said passage.

5. An annealing or cementing furnace provided with a passage extending therethrough lengthwise, combustion chambers located at the central portion of the furnace on opposite sides thereof, longitudinal channel sections located adjacent to said passage and communicating therewith and also with said combustion chambers, baffles located in staggered arrangement on opposite sides of said passage and separating adjacent channel sections, an air inlet at one end of the furnace, an outlet for combustion gases, at the other end of the furnace, and means to cause the cooling air to travel from one end of the furnace to the combustion chambers, and the combustion products to travel from said chambers to the other end of the furnace, the stream of cooling air and the stream of combustion products passing repeatedly across the entire width of said passage, alternately in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

1,109,363. MEAT AND FRUIT PRESS. SIXTEN A. ROSEN, Worcester, Mass., assignor of one-half to Herman L. Dow, Worcester, Mass. Filed June 28, 1913. Serial No. 776,247. (Cl. 100—41.)

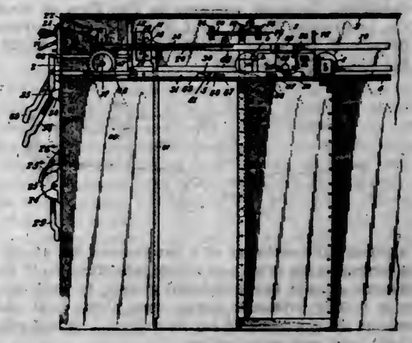


1. As an article of manufacture a press comprising a container mounted at an inclination, a single piece of material secured to the bottom of said container and extending downwardly at an inclination from both of the lower corners thereof to form a pair of legs for assisting in supporting the container, and a third leg consisting of a single piece extending downwardly from the upper end of the bottom of the container and wholly secured in position on said container by said first named piece.

2. As an article of manufacture a press of the character described comprising a slanting container and a pair of legs extending down from the lower edge of said container, said legs having a plate integrally connecting their upper ends and located flat on the bottom of the container and secured thereto, said plate having an offset portion near the center of the container, and a third leg extending down from the upper edge of the bottom of the container, terminating at the top of the flat plate, extending under said offset, and provided with a transverse flange at its extreme end so as to be held securely against the bottom of the container by said plate.

3. As an article of manufacture a press comprising an inclined container, a pair of legs extending downwardly from the opposite corners of the lower edge of the bottom of said container and being integrally connected with each other by a continuous portion secured against the bottom of the said container and having an offset portion in the center thereof spaced from the bottom of the container, and a third leg having a flat portion extending into the space between the offset portion of the first plate and the bottom of the container, securely held therein by said plate, and having a pair of edge flanges extending therefrom longitudinally thereof and a transverse flange at one end, by which flanges it is retained in position, said plate extending upwardly from the first named plate toward the upper edge of the bottom of the container and then being bent downwardly and outwardly therefrom.

1,109,364. DEVICE FOR OPERATING AND LOCKING PRISON-DOORS. CHARLES SCHORNFELD, Canton, Ohio. Filed Sept. 27, 1910. Serial No. 584,046. (Cl. 189—8.)



1. In a structure of the character described, in combination with a slidable door, a door coupling bolt and a door locking bar, a door actuating rod, hand lever actuated means for actuating said rod, hand lever actuated means for actuating the coupling bolt to couple and uncouple said door with relation to said rod and to simultaneously actuate said door locking bar, and hand lever actuated means for locking said door-locking bar against movement.

2. In a structure of the character described, in combination with a slidable door, a vertically reciprocating bolt connected to said door, a door actuating bar arranged above said bolt and provided with a socket adapted to receive said bolt when same is in raised position, a coupling bar arranged beneath said bolt, said coupling bar provided with notches, said bolt adapted for contact with the upper edge of said bar, said notches so disposed as to permit said bolt to drop into said notches when the door is in the fully open and fully closed positions and means, independent of said coupling bar, for maintaining said bolt in raised position at all points intermediate said fully open and fully closed positions.

3. In a structure of the character described, in combination with a slidable door, a vertically reciprocating bolt connected to said door, a door actuating bar arranged above said bolt and provided with a socket adapted to receive said bolt when same is in raised position, a fixed bar arranged beneath said bolt and adapted to maintain said bolt in its raised position at all points except in the fully open and fully closed positions of said door and a coupling bar also engaging said bolt, said coupling bar adapted for movement with relation to said bar and adapted to raise said bolt when said door is in the fully open and fully closed positions.

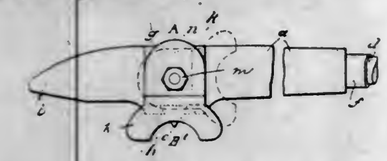
4. In a structure of the character described, in combination with a slidable door, a vertically reciprocating bolt connected to said door, a door actuating bar arranged above said bolt and provided with a socket adapted to receive said bolt when same is in raised position, a fixed bar arranged beneath said bolt, said bolt adapted to bear against said fixed bar when in raised position, said fixed

bar terminating at points where said bolt may drop down over the ends of said bar when said door is in the fully open and fully closed positions and a coupling bar also engaging said bolt and movable with relation to said fixed bar, said coupling bar adapted to raise said bolt at the ends of said fixed bar, substantially as described.

5. In a structure of the character described, in combination with a slidable door, a vertically reciprocating bolt connected to said door, a door actuating bar arranged above said bolt and provided with a socket adapted to receive said bolt when same is in raised position, fixed bolt sustaining means beneath said bolt and adapted to maintain said bolt in raised position at all points except in the fully open and fully closed positions of said door and movable means for raising said bolt when said door is in the fully open and fully closed positions.

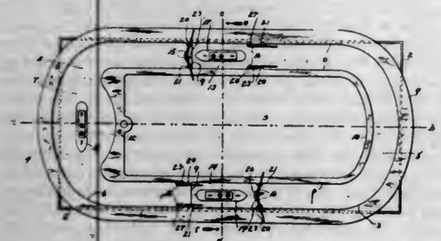
[Claims 6 to 9 not printed in the Gazette.]

1,109,365. PINCH-BAR. EDUARD SCHOLLE, Neuss-on-the-Rhine, Germany, assignor to The Firm of Wecks & Co., proprietors Messrs. Graf, Keller & Jost, Oberhausen, Rhineland, Germany. Filed June 6, 1914. Serial No. 843,356. (Cl. 105—70.)



A pinch bar consisting of a bar tapered flat at one end and having at its other end a long tube fitted to it, in the underside of said bar a dovetail groove, in said dovetail groove a long prismatic wedge, two plates held against bosses at the sides of said bar by a screw bolt and adapted to hold said wedge in position.

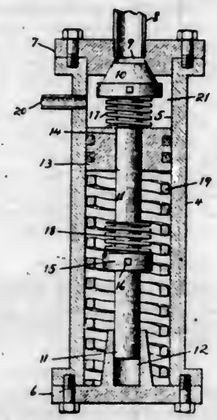
1,109,366. LOCK-CANAL MARINE TOY. WILLIAM F. SEELYE, New Haven, Conn., assignor of one-half to John P. Wilson, New Haven, Conn. Filed Feb. 9, 1914. Serial No. 817,552. (Cl. 46—37.)



In a lock-canal marine toy, the combination with a shallow water-tank or reservoir, of a tray adapted to be set into the said tank, having a flange overhanging the same and also having its bottom formed with an upper and a lower level arranged to produce an endless channel comprising an upper level and a sea-level and inclosing a central space, two locks located in the said endless channel and arranged therein for the continuous passage of miniature ships through the channel in one direction without turning about, and overflow ports from the channel into the tank.

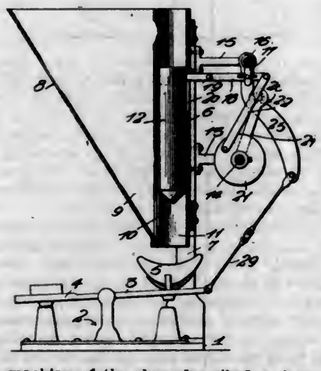
1,109,367. FLUID-BLAST STOKER. JOSEPH M. SHULTS and FREDERICK W. SHULTS, Baltimore, Md. Filed Aug. 22, 1912. Serial No. 716,474. (Cl. 110—104.)

1. In a stoker for automatically feeding charges of fuel to furnaces by the action of short, quick blasts of compressed fluid, the combination of a chute for conveying fuel into a furnace; a cylinder having an outlet port; a blast pipe communicating from the outlet port to the said chute; a valve controlling said outlet port and provided with a stem which has central position within the cylinder; a piston reciprocable in the cylinder and having a central hole which allows certain free movement of the piston on the valve-stem and said piston moving the valve to open and close said port; a power spring pressing on one side of the piston and serving to move the piston in the direction that will close the said valve; and a pipe opening into said cylinder for supplying fluid-pressure that will act on the piston and move the latter in the direction that will open the said valve.



2. A stoker for feeding fuel to furnaces by blasts of fluid under pressure, comprising the combination of a fuel chute in which the charge of fuel is to be seated; a fluid-pressure cylinder having an outlet port; a valve controlling said outlet port and having a stem provided with a collar that is adjustable longitudinally along said stem; a piston movable in the cylinder and having a central hole through which loosely passes that part of said valve-stem that is between the valve and the said collar; means to supply fluid-pressure to the cylinder to operate the piston, and a blast-pipe communicating from the said outlet port to the fuel chute.

1,109,368. SCALE. LAWRENCE G. SIEBER, Cincinnati, Ohio. Filed Apr. 6, 1914. Serial No. 829,946. (Cl. 73—181.)



1. In a machine of the class described, a frame, a hopper carried thereon having an opening adjacent the lower end thereof, a sliding closure for the opening, a shaft mounted for oscillatory movement on the frame, a lever fulcrumed intermediate of its ends on the frame and having connection with said closure at its one end, means

connecting the opposite end of said lever with said shaft whereby to dispose said closure to its open position with respect to the opening when the shaft is actuated in one direction, means for retaining the shaft and closure in their actuated positions, and additional means for releasing the shaft and closure upon the removal of a predetermined amount of the contents from said hopper.

2. In a weighing device of the class described, a frame, a hopper carried thereon having an outlet opening adjacent its lower end, a sliding closure for said opening, a shaft mounted for oscillatory movement on said frame, a lever fulcrumed intermediate of its ends on the frame and having connection at its one end with said sliding closure, means connecting said shaft with the opposite end of said lever whereby to dispose said closure to its open position upon the actuation of the shaft in one direction, means to lock said shaft and sliding closure in their actuated positions, and additional means in connection with the last referred to means for automatically releasing the shaft and closure upon the removal of a predetermined amount of the contents from said hopper.

3. In a weighing device of the class described, a frame, a hopper carried thereon having an outlet opening adjacent its lower end, a sliding closure for said opening, a shaft mounted for oscillatory movement on the frame, means connecting said shaft with the closure whereby to dispose the latter to its open position with respect to the opening upon the actuation of said shaft in one direction, an arm carried on said shaft for actuation therewith, a locking arm pivotally carried on the frame and having engagement with the first mentioned arm to lock the shaft and sliding closure in their actuated positions, whereby to permit the contents of the hopper to flow therefrom, and means for automatically releasing said locking arm to permit the closure to be returned to its closed position upon the removal of a predetermined amount of the contents from said hopper.

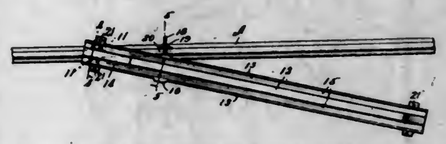
4. In a weighing device of the class described, a frame, a hopper carried thereon having an outlet opening adjacent its lower end, a sliding closure for said opening, a shaft mounted for oscillatory movement on the frame, means connecting said shaft with the closure whereby to dispose the latter to its open position with respect to the opening upon the actuation of said shaft in one direction, an arm carried on said shaft for actuation therewith, a roller carried on the outer end of said arm and extending laterally therefrom, an additional arm pivotally carried on the frame and having an arcuate lower portion thereon, the upper extremity of the arcuate portion terminating in a locking notch, said roller being received in contact with one edge of said arcuate portion and adapted to be received in said locking notch to retain said shaft and closure in their actuated positions, whereby to permit the contents of the hopper to flow through said outlet opening, and means in connection with said additional arm for automatically actuating the same.

5. In a machine of the class described, a frame, a hopper mounted thereon and having an opening adjacent its lower end, a sliding closure for said opening, a rock shaft also mounted on the frame, a lever fulcrumed intermediate of its ends on said frame above the rock shaft and having connection at one of its ends with said closure, means connecting the opposite end of said lever with said rock shaft, to actuate the closure upon the actuation of said rock shaft, an arm carried on said rock shaft for actuation therewith, a locking arm pivotally carried on the frame and having engagement with the last mentioned arm to lock the shaft and sliding closure in their actuated positions, and means for releasing the shaft and closure upon the removal of a predetermined amount of the contents of said hopper.

[Claims 6 and 7 not printed in the Gazette.]

1,109,369. CAR-REPLACER. ZEBULON B. SMITH, Elizabeth City County, Va. Filed Aug. 11, 1913. Serial No. 784,181. (Cl. 104—163.)

1. A car replacer comprising a body formed on its upper face with a central longitudinal rib for the tread of a wheel, said rib having parallel sides and extending from end to end of the body, a flange projecting from the body on each side of said rib above the top of the rib and parallel therewith, said flanges being as long as the body and spaced from the rib sufficiently far to form parallel grooves for the wheel flanges, a pair of spaced lugs depending from the under side of said replacer at one end to engage the head of a track-rail on each side and lock said end of the replacer to said rail against lateral displacement in either direction, and a removable clamp adapted to be swiveled to either flange of said replacer and engage the head of the track-rail for holding said replacer in proper relation to the track-rail.



2. A car replacer comprising a body formed on its upper face with a central longitudinal rib for the tread of a wheel, having parallel sides and extending from end to end of the body, and a flange projecting from the body on each side of said rib above the top of the same and parallel with said rib, said flanges being spaced from the rib sufficiently far to form parallel grooves for the wheel flanges, said replacer being adapted to be applied on either side of the track rail, spaced lugs on the underside of said replacer at one end to engage the head of a rail, a bolt or threaded bar adapted to extend through an opening in either flange, and a clamping jaw on said bolt or bar adapted to engage the track rail.

3. A car replacer comprising a body formed on its upper face with a central longitudinal rib extending from end to end of the body having parallel sides of equal height throughout its length, and a flange projecting from the body on each side of said rib above the top of the same and parallel with said rib, said flanges being spaced from the rib sufficiently far to form parallel grooves for the wheel flanges, spaced lugs on the underside of said replacer at one end to engage the head of a track rail, and a fastening lug on each side of the replacer near each end provided with a hole adapted to receive a fastening device.

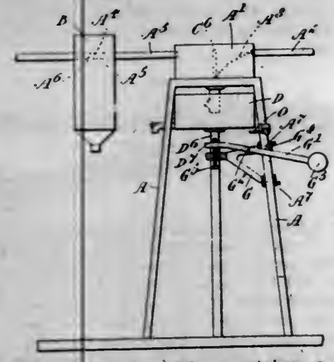
4. A car replacer comprising a body having a central longitudinal rib on its upper face and a flange on each side of said rib spaced therefrom and projecting above the surface of said rib, said rib and flanges extending parallel with each other from end to end of the body, a lug on each side of the body near each end provided with a hole adapted to receive a fastening device whereby said car replacer may be joined at each end to similar car replacers to form a continuous temporary track.

1,109,370. MILK-RELEASER. ALEXANDER STORRIE, Invercargill, New Zealand. Filed Nov. 1, 1913. Serial No. 798,719. (Cl. 31—97.)

1. A milk releaser comprising a plurality of chambers, means for moving one chamber relative to the other, communicating passages between said chambers arranged to be opened and closed by the relative movement of the chambers, means for admitting milk to one of said chambers, means for continuously exhausting the air from one of said chambers and from the other when shifted in proper position with relation thereto, the passages being arranged to permit milk to flow from one chamber to the other chamber when the chambers are in proper relation to each other, and means for withdrawing the milk from the last mentioned chamber when the chambers are moved to the position to close the communicating passages between the chambers, substantially as described.

2. A milk releaser comprising a fixed chamber and a movable chamber, a milk inlet pipe connected to the fixed chamber, an air exhaust pipe connected to the fixed chamber, mechanical means for raising the movable chamber with relation to the fixed chamber, there being communicating passages between the fixed chamber and the movable

chamber arranged to be opened when the movable chamber is in its elevated position to permit the milk to flow from the fixed chamber to the movable chamber, and exhaust the air from the movable chamber, there being a port in the movable chamber arranged to be opened to the atmosphere when the movable chamber is in its lowest position, and a valve in the movable chamber to be opened to permit milk to flow therefrom when the movable chamber is in its lowermost position, substantially as described.



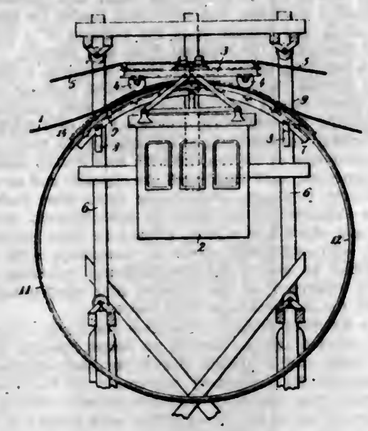
3. A milk releaser, comprising a retainer, a milk inlet connected to said retainer, an air exhaust pipe from said retainer, an automatic emptying and measuring device connected to said retainer, there being ports leading from said retainer and arranged to communicate with the emptying and measuring device, raising means for moving the measuring device to open said ports to permit the air to be exhausted from the measuring device and to allow the milk to flow from the retainer to the measuring device, said measuring device being arranged to be held in proper position with relation to the retainer to keep the ports and passages open by the raising means and the atmospheric pressure on the outside of the measuring device, and adapted to move downward against the action of the raising means and the atmospheric pressure when a predetermined amount of milk has passed to the measuring device, and means for automatically releasing the milk from the measuring device when it has moved downwardly and closed the ports and passages between the measuring device and retainer, substantially as described.

4. A milk releaser comprising a fixed chamber, a milk inlet leading to said chamber, an air exhaust pipe leading from said chamber, a hollow stem extending downwardly from said chamber, a movable chamber slidably mounted on said stem, there being ports for opening communication between the movable chamber and the fixed chamber when the movable chamber is in its elevated position, to permit the milk to flow from the fixed chamber to the movable chamber and air from the movable chamber to the fixed chamber, means for raising the movable chamber relative to the fixed chamber, and means for admitting air to the movable chamber when in its lowermost position, and means for permitting milk to flow from the movable chamber when in its lowered position, substantially as described.

5. A milk releaser comprising a fixed chamber, a milk inlet pipe connected to said chamber, an air exhaust pipe connected to said chamber, a baffle within said chamber between said pipes, a hollow stem extending downwardly from said chamber, a movable chamber slidably mounted on said stem, there being ports for opening communication between the movable chamber and the fixed chamber when the movable chamber is in its elevated position, to permit the milk to flow from the fixed chamber to the movable chamber and air from the movable chamber to the fixed chamber, means for raising the movable chamber relative to the fixed chamber, and means for admitting air to the movable chamber when in its lowermost position, and means for permitting milk to flow from the movable chamber when in its lowered position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,109,371. ROPE RAILWAY. TITUS THUNHART, Leoben, Styria, Austria-Hungary. Filed Dec. 24, 1913. Serial No. 808,616. (Cl. 104—146.)



1. In a suspension railway or rope-way, the combination of supports, carrying ropes passing continuously over the supports without being secured to them, a guide rail projecting above said ropes without deflecting the same, said guide rail being adapted to raise the car from the carrying ropes, and means on each support for guiding and allowing longitudinal displacement of said ropes, substantially as described.

2. In a suspension railway, the combination of a plurality of carrying ropes, standards, supports on the latter for supporting said ropes, a guide rail mounted on each support, extending upwardly above said ropes and being adapted to raise the car from the carrying ropes, each support comprising a plurality of rollers, and a grooved ring carried by said rollers and adapted to guide and support a rope, substantially as described.

3. In a suspension railway or rope-way, the combination of two groups of carrying ropes arranged one beside another, a trolley supported by said ropes, and a car suspended from the trolley between the groups of ropes; one rope of one group at one side of the car being connected to a rope of another group at the other side of the car, and means for tensioning those ropes of two groups which are connected together, substantially as described.

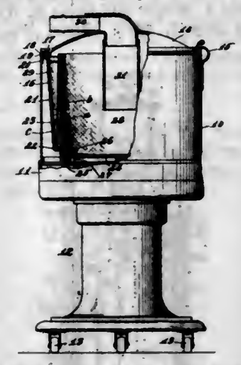
4. In a suspension railway, the combination of two groups of carrying ropes, a plurality of trolleys supported by said ropes, a plurality of cars each suspended from a trolley and depending between the said groups, a traction rope detachably connected to the trolleys, and a second traction rope connecting the trolleys one with another, substantially as described.

5. In a suspension railway, the combination of two rope ways each comprising two groups of carrying ropes, a plurality of trolleys supported by said ropes, a plurality of cars each suspended from a trolley and depending between said groups, a traction rope detachably connected to the trolleys, and a second traction rope connecting the trolleys one with another, the said second traction rope being adapted to transfer the trolleys from one rope way to the other after their release from the former traction rope, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,109,372. DUST-COLLECTOR. CHARLES R. THURMAN, Pittsburgh, Pa., assignor to Electric Renovator Manufacturing Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 7, 1913. Serial No. 793,809. (Cl. 83—47.)

1. A dust collector comprising a receptacle, a cover for said receptacle, a bag shaped filtering member insertible in said receptacle, a supporting frame clamped between said cover and said receptacle and secured to the mouth of said filtering member, and a second supporting frame within said receptacle, said filtering member adapted to automatically fold over said frames when inserted in said receptacle to form a plurality of upwardly opening dust collecting pockets and spaced concentric filtering walls, and which straightens out when removed from the receptacle to form a holder for the collected dirt.



2. A dust collector comprising a receptacle, a cover for said receptacle, a filtering bag insertible in said receptacle, a supporting frame removable with said bag comprising upper and lower rings and arms connecting the same disposed within the mouth of said bag, to the upper of which rings said bag is secured, said upper ring being supported from the upper edge of said receptacle and clamped thereon by said cover and a second supporting frame of less diameter than the first frame made of perforated material secured within the receptacle, said bag adapted to fold over said frames when inserted in said receptacle to form a plurality of upwardly opening dust collecting pockets and spaced concentric filtering walls.

3. A dust collector comprising a closed receptacle, a bag shaped filtering member insertible in said receptacle, supporting frames over which said member automatically folds when inserted in said receptacle to form a plurality of upwardly opening dust collecting pockets and spaced concentric filtering walls, and an air inlet tube projecting within and discharging adjacent the bottom wall of the innermost of said pockets.

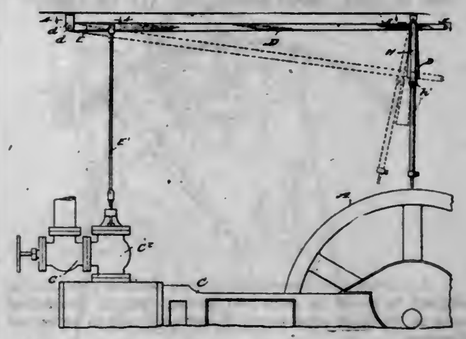
4. A dust collector comprising a closed receptacle having a tight removable cover, a bag shaped filtering member insertible in said receptacle, supporting frames over which said member automatically folds when inserted in said receptacle to form a plurality of upwardly opening dust collecting pockets and spaced concentric filtering walls, and an air inlet tube opening through said cover and projecting downwardly within and discharging adjacent the bottom wall of the innermost of said pockets.

5. A dust collector comprising a receptacle, a cover for said receptacle, a filtering bag insertible in said receptacle, a supporting frame within the mouth of said bag and secured thereto, said frame comprising an upper and a lower ring and arms connecting same, said upper ring having a horizontal supporting flange adapted to engage the upper edge of said receptacle, and to be clamped thereon by said cover, a packing carried by said flange, and a corrugated vertical flange to which the mouth of the bag is attached; a second supporting frame secured within the receptacle made of perforated material, said bag adapted to automatically fold over said frames when inserted in the receptacle to form a plurality of upwardly opening dust collecting pockets and spaced concentric filtering walls.

[Claims 6 to 8 not printed in the Gazette.]

1,109,373. AUTOMATIC ENGINE-STOP. TIMOTHY TRURAN, Middlesboro, British Columbia, Canada. Filed Aug. 2, 1913. Serial No. 782,749. (Cl. 57—130.)

1. The combination with a drive rope drum and its power mechanism, the latter being provided with a cut-off, of a trip lever pivoted at one end and having connection with the cut-off and provided with a depending extension at its opposite end, and a U-shaped frame pivotally supported with its lower cross bar transversely above and in close proximity to the rope drum to swing in the direction of movement of the rope, said frame consisting of depending tubular rods and a U-shaped bar having its legs adjustably secured in the lower ends of the said supports, and a roller carried by the frame and normally supporting the depending extension of the trip lever, all for the purpose described.



2. The combination with a drive rope drum and its power mechanism, the latter of which is provided with a cut-off, of a trip lever pivoted at one end above the power mechanism and having connection adjacent its pivoted end with the cut-off and a frame pivotally supported transversely above the drive rope drum and provided with a cross bar adjacent to said drum and adjustable toward and away from the same said frame normally forming a direct support for the free end of the trip lever and being movable in the direction of movement of the rope, all for the purpose described.

3. The combination with a drive rope drum and its power mechanism, the latter of which is provided with a cut-off, of a swinging frame movable in the direction of movement of the rope and having a cross bar adjacent to and transversely above the drum, a trip lever pivoted at one end above the power mechanism and having its free end normally disposed directly on and supported by the said swinging frame, and an operative connection between the said trip lever and the cut-off of the power mechanism, all for the purpose described.

1,109,374. RULE FOR ROTARY PRINTING-MACHINES. GEORGE T. TRUNDLE, Jr., Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 2, 1912. Serial No. 734,438. (Cl. 101—179.)

1. A column rule consisting of a strip having a tongue projecting from the supporting edge in a direction normal to the printing edge, the lower portion of said tongue being bent at an angle to the plane of the strip.

2. A column rule consisting of an arcual strip having radial tongues projecting from the concave edge, the inner portions of said tongues being bent at an angle to the plane of the strip.

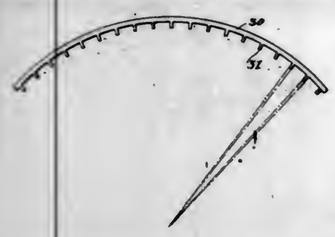
3. A column rule consisting of a strip having tongues projecting downwardly from the bottom edge, the tongues near their ends being bent, one toward one side of the strip and another toward the opposite side of the strip.

4. A column rule consisting of a strip, a series of tongues projecting downwardly from the bottom edge of the strip, said tongues for a distance lying in the plane of the strip and then adjacent to their free ends being bent at an angle to the plane of the strip.

5. A column rule consisting of an arcual strip, radial tongues projecting from the concave edge of the strip, said tongues for a distance lying in the plane of the strip and then adjacent to their free ends being bent at an angle to the plane of the strip.

[Claims 6 to 26 not printed in the Gazette.]

1,109,375. COLUMN-RULE. GEORGE T. TRUNDLE, Jr., Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 18, 1914. Serial No. 845,756. (Cl. 101—179.)



1. A column rule comprising a thin flexible arcual strip adapted to stand on edge and having radially projecting teeth on its inner edge which do not overhang in an arcual direction.

2. A column rule comprising a flexible arcual strip lying in one plane and having inwardly projecting teeth which lie in the said plane and do not project in an arcual direction.

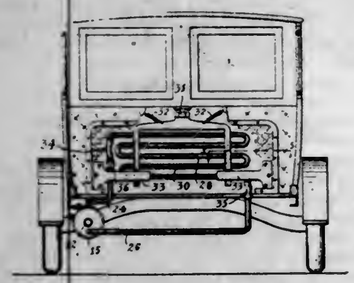
3. A column rule consisting of a flexible arcual strip having substantially parallel edged teeth projecting radially from its inner edge.

4. A column rule consisting of a flexible arcual strip higher in a radial direction than it is wide and having on its inner edge equidistant teeth projecting toward the center of the arc and having edges which do not overhang.

5. The combination, with a segmental or drum-like holder having parallel rails, of a flexible arcual strip adapted to rest on said holder and having inwardly projecting radial teeth adapted to be forced directly from the side of the periphery of the holder into the space between the rails.

[Claims 6 to 14 not printed in the Gazette.]

1,109,376. HEATER FOR AUTOMOBILES. CHARLES WELLING VAN SCHOIK, New York, N. Y. Filed Jan. 16, 1912. Serial No. 671,460. (Cl. 237—5.)



1. In a vehicle, the combination with the body, of a water heater, a radiator in the body, and pipes connecting the heater with the radiator, said radiator being pivotally supported at the upper part thereof to permit lateral swinging of the same, said pipes being provided with flexible connections near where they join the radiator.

2. In a vehicle, the combination of a water heater, a radiator in the front part of the cab; a foot warmer in the lower part of the cab, and pipes connecting the heater with the foot warmer and the radiator, said radiator being pivotally suspended to permit transverse pivotal movement, said pipes being provided with flexible connections near where they join the radiator.

1,109,377. ACETYLENE-GAS GENERATOR. GRANT A. WALLER and FLOYD E. WRIGHT, Fortville, Ind., assignors to Quincy A. Wright and Floyd E. Wright, Fortville, Ind. Filed May 3, 1912. Serial No. 694,843. (Cl. 48—55.)

1. Feeding means including a valve box that is rectangular in cross-section, two valves pivotally supported below two opposite wall portions respectively of the box and extending upward approximately to the wall portions and also each toward the other, a movably guided pivot rod, two links pivotally connected to the rod and to the outer upper portion of one of the valves on opposite sides thereof and two links connected also to the rod and to the outer upper portion of the remaining one of the valves on opposite sides thereof for forcing the valves together.

2. Feeding means including a vertically movable valve box comprising two long sides having each a vertical guide slot therein and two relatively shorter sides, the long sides having rear extensions respectively, two valves pivoted to the two long sides and movable between them under the shorter sides, each valve to or from the other, a pivot rod extending movably through the guide slots of the two sides and through the valve box, two links connected to the rod and to one of the valves, two links connected also to the rod and to the remaining one of the valves, two operating rods connected to opposite end portions of the pivot rod, an operating lever pivoted at one end to the extensions of the long sides and connected to the operating rods, a weight secured to the opposite end portion of the lever for forcibly closing the valves, and a device supported below the weighted portion of the lever to which the lever is periodically carried by the moving valve box for actuating the lever to open the valves.

3. In carbid-feeding means, the combination of a valve box that is rectangular in cross-section, two opposite wall portions thereof being longer than the remaining two wall portions and having rear extensions, two valves pivotally supported between the two longer wall portions and extending to the near ends of the shorter wall portions, a lever comprising two bars pivoted at one end to the extensions of the two wall portions respectively, two operating rods pivotally connected to the two bars of the lever respectively, a pivot rod connected to the two operating rods, two links connected to the pivot rod and to one of the valves, and two links connected also to the pivot rod and to the remaining one of the valves.

4. In an acetylene gas generator, carbid feeding means comprising a magazine movably guided vertically, means for moving the magazine, a valve box that is rectangular

in cross-section connected to the magazine and carried thereby, two opposite wall portions of the box being longer than the remaining two wall portions and having each a rear extension thereon, two valves pivotally supported between the two longer wall portions and extending to the near ends of the shorter wall portions, the valves having curved ends opposite to said ends of the wall portions, a lever comprising two bars pivoted at one end to the extension of the two wall portions respectively and a weight secured between the opposite ends of the two bars, means operatively connecting the lever to the two valves, and an adjustably supported device below the weighted portion of the lever in the path of movement of the lever.

1,109,378. ADDING-MACHINE. JOHN D. WARD, deceased, late of Buffalo, N. Y., by Lillian H. Ward, administratrix, Buffalo, N. Y. Filed Aug. 23, 1913. Serial No. 786,293. (Cl. 235—71.)

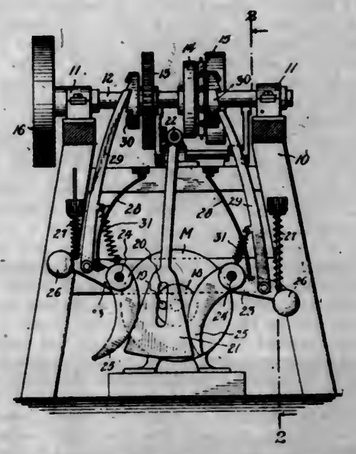
In an adding machine of the class described, a casing formed with a row of openings, a sprocket wheel arranged in said casing so that part of the same will appear opposite said openings, a chain for each of said sprocket wheels, a pivotally mounted number tab on each of said chains designed to be brought sucessively past said openings, each of said tabs being formed with a projection and means in said housing engaging said projections for moving the tabs to a position substantially normal to the links after the links have passed said row of openings, whereby said tabs may be grasped and said chains moved to any desired extent.

1,109,379. TRUSS. ROBERT L. WARD, Robinson, Ill. Filed Aug. 14, 1913. Serial No. 784,773. (Cl. 128—26.)

A truss pad structure comprising a dished plate provided with means for detachable connection to a truss belt, a hook mounted on said plate at one end thereof and projecting on the convex side of the plate, a pair of hooks mounted on the other end of said plate and projecting on the concave side thereof, a pad, a pair of eyes mounted on the pad and engaged over the hooks projecting on the concave side of the plate, and flexible strands secured to opposite sides of the pad and engaged beneath the hook projecting on the concave side of the plate.

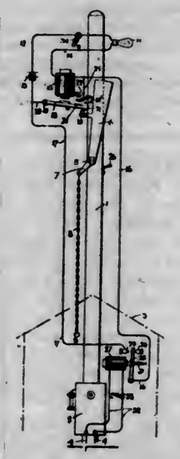
1,109,380. MECHANICAL MOTOR. MADISON T. B. WASHINGTON, New York, N. Y., assignor of one-fifth to James W. Witherspoon, New York, N. Y. Filed Dec. 22, 1910, Serial No. 598,767. Renewed Feb. 3, 1914. Serial No. 816,333. (Cl. 74—54.)

1. The combination of a prime mover including a rotary shaft, a disk, a pendulum adapted to oscillate adjacent said disk, a pin and slot connection between said disk and the pendulum whereby the latter may be operated from the prime mover, a pair of bell cranks pivoted on opposite sides of the pendulum and in substantially the plane of its oscillation and adapted to be operated in alternation by the pendulum, a counter shaft, and means between the bell cranks and the counter shaft whereby the latter is rotated from the bell cranks, substantially as set forth.



2. The combination of a prime mover having a rotary element and a wrist pin, a pendulum mounted to oscillate in a plane adjacent to and transverse of said rotary element and having a slot in which said pin operates, a pair of bell cranks pivoted substantially in said plane on opposite sides of the pendulum and adapted to be oscillated in alternation thereby, counterpoise means to maintain the bell cranks in contact with the edges of the pendulum, a counter shaft, and pawl and ratchet devices between the bell cranks and the counter shaft, whereby the latter is given a constant rotation from the oscillation of the bell cranks, substantially as set forth.

1,109,381. SIGNAL SYSTEM. FAY H. WEBSTER, Marvell, Ark. Filed Jan. 17, 1913. Serial No. 742,599. (Cl. 177—330.)



1. In a signal system, a relay including a visual signal, a source of current, and an electro-magnet, connected in

series, a semaphore arm engaged and held in inoperative position by the armature of the electro-magnet, and contacts for bridging the relay circuit, one of which contacts is carried and movable with the armature of the electro-magnet to engage the other contact and form a continuous circuit through the signal, source of current and electro-magnet when the relay circuit is completed to release the semaphore arm.

2. In a signal system, a relay circuit including a visual signal, a source of current and an electro-magnet connected in series, and the latter of which is energized when the relay is completed, a semaphore arm engaged and held in inoperative position by the armature of the electro-magnet, said armature being connected to one side of the relay circuit and provided with a contact member, and a contact member connected to the opposite side of the relay circuit, and with which the armature carried contact engages when the armature is moved toward the electro-magnet to release the semaphore arm, and the electro-magnet is energized by completion of the relay circuit.

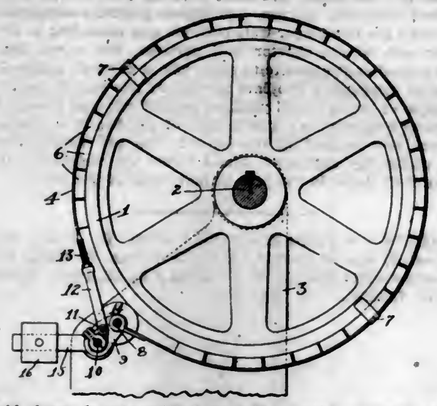
3. A visual signal comprising a circuit made up of a relay actuated device for closing the circuit, a source of current, a lamp and an electro-magnet, the said elements being connected in series, the armature of the electro-magnet being connected to one side of the said circuit, a contact finger with which the armature is adapted to engage and connected to the other side of the circuit, a semaphore arm engaged by the said armature and maintained in one position, movement of the armature when the electro-magnet is energized permitting the semaphore arm to come to a second position, the armature engaging the said contact finger, whereby a circuit is closed through the source of current, the lamp and the electro-magnet, the semaphore arm being provided with means for moving the said contact finger away from the armature when the semaphore falls, thereby opening the circuit through the said electro-magnet, lamp and source of current.

4. A signal system comprising a circuit made up of a circuit closing device, a source of current, a lamp and an electro-magnet, a semaphore arm, the armature of the electro-magnet engaging the semaphore arm and maintaining it in one position, closing of the circuit through the electro-magnet disengaging the armature from the arm and permitting the arm to come to a second position, the said armature being connected to one side of the circuit between the source of current and the circuit closing device, a contact finger with which the armature is adapted to engage and connected to the other side of the circuit between the electro-magnet and the said circuit closing device, movement of the armature when the electro-magnet is energized bringing the armature into engagement with the contact finger, whereby a circuit is closed through the electro-magnet, source of current and the lamp, manual means for returning the semaphore to first position, and means on the semaphore engaging the armature and bringing it away from the said contact finger, whereby the circuit through the said lamp is broken.

1,109,382. AUTOMATIC CONTROL FOR A BAND-BRAKE. GUSTAV PERS. WERN, New York, N. Y. Filed Feb. 26, 1912, Serial No. 680,065. Renewed Feb. 2, 1914. Serial No. 816,088. (Cl. 74—37.)

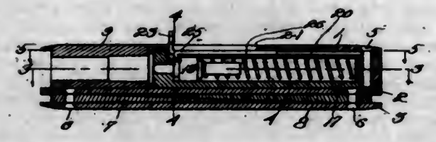
1. In a device of the character described, in combination, a brake drum, a brake band surrounding said drum, a pivotally mounted movable member to which the ends of said band are attached at different distances from said pivot, and a resilient rotary member mounted upon said movable member in engagement with said drum whereby the initial movement of said drum is transmitted to said movable member and tightens or releases said band and means for normally maintaining said resilient rotary member in engagement with the drum.

2. In a device of the character described, in combination, a brake drum, a brake band surrounding said drum, a pivotally mounted movable member to which the ends of said band are attached at different distances from said pivot, and a resilient rotary member mounted upon said movable member at the end opposite its pivot and in engagement with said drum whereby the initial movement of



said drum is transmitted to said movable member and tightens or releases said band.

1,109,383. FIREARM. JOSEPH C. WHITE, Newtonville, Mass. Filed June 23, 1914. Serial No. 846,714. (Cl. 42—1.)

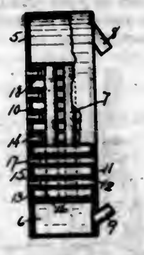


1. A firearm of the character described comprising a frame; a barrel pivotally mounted on said frame; means for holding said barrel in its closed position; a firing pin mounted in said frame; a spring for operating said pin in one direction; a trigger movably mounted on said frame and directly engaging the firing pin to retract the latter when said trigger is shifted on said frame, and means on the frame for operating the trigger to disengage it from the firing pin when said trigger reaches the limit of its pin retracting movement.

2. A firearm of the character described comprising a frame made with a trigger slot having a deflection at its rear end; a barrel pivotally mounted on said frame; means normally locking said barrel in its closed position; a firing pin; a spring for operating said pin in one direction; and a trigger slidably mounted within said frame provided with a finger piece extending through said slot to the exterior of the frame and with a hook coöperating directly with the firing pin, said finger piece being acted upon by the deflection in said slot to shift the trigger sidewise and free the firing pin when the latter is fully retracted by said trigger.

3. A firearm of the character described comprising a frame consisting of two side plates and an intermediate block rigidly fastened together, one of said plates being formed with a trigger slot having a deflection at its rear end and said block having the face thereof adjacent said slot formed with a trigger recess and said recess being made with a slot in its bottom opening into a longitudinal bore provided within said block; a firing pin mounted within the bore of the block; a spring mounted within said bore for operating the firing pin in one direction; a trigger slidably mounted within the recess of the block provided with a finger piece extending through the slot of the plate to the exterior of the frame and with a spring hook extending through the slot at the bottom of the recess to engage the firing pin, a barrel pivotally mounted on said frame, and means normally locking the barrel in its closed position.

1,109,384. RADIATOR. JOHN ALEXANDER, Hartford, Conn. Filed May 12, 1913. Serial No. 766,920. (Cl. 62—28.)

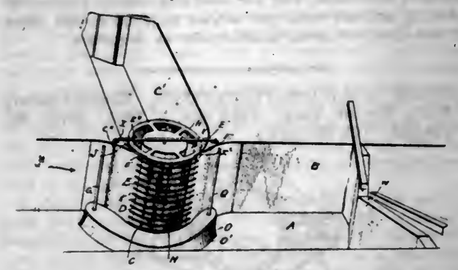


1. In a radiator, a frame including a front and back plate, and a series of tubes having screw-threaded ends and connected with one of said plates, the connections including nipples fitting within said screw threaded ends of the tubes and having openings with flared outlets at that end of the nipples opening into said tubes.

2. A radiator including a frame having front and back plates, and a series of tubes, having screw-threaded ends, said tubes extending between said plates, and being secured to one of the plates to deliver air through the openings in said tubes, the connections for said tubes including nipples fitting the screw threaded ends of the tubes and having flared mouths at one end and flared outlets at the opposite ends that open into said tubes.

3. A radiator including a frame having front and back plates with a reservoir at the top of the frame and a chamber at the bottom connected by circulating pipes, and a series of tubes having screw threaded ends connected to the front plate and opening in line with said pipes, the connections securing the tubes to the place including nipples fitting said screw threaded ends of the tubes and having flared mouths at their inlet ends and flared outlets at the opposite ends of the nipples that open into said tubes.

1,109,385. DEVICE FOR PREVENTING FISH AND DRIFT FROM GOING DOWN WATERWAYS. ANDREW J. ALLISON, Hartshorne, Okla. Filed Oct. 30, 1913. Serial No. 798,323. (Cl. 61—5.)



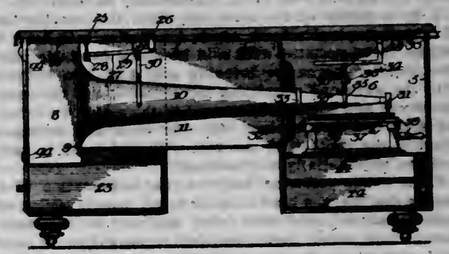
1. An apparatus for preventing fish and drift from passing into irrigating canals, etc., comprising a rotatable screened power wheel adapted to be positioned near the entrance to the canal leading from a stream and positioned a slight distance from the wall of the canal, bars positioned across the entrance leading into the canal, and pivotally mounted yielding gates at the opening in the canal and adjacent to said wheel, as set forth.

2. An apparatus for preventing fish and drift from passing into irrigating canals, etc., comprising a rotatable screened power wheel adapted to be positioned near the entrance to the canal leading from a stream and positioned a slight distance from the wall of the canal, bars positioned across the entrance leading into the canal, pivotally mounted yielding gates at the opening in the canal and adjacent to said wheel, and a vertically movable float positioned adjacent to said bars, as set forth.

3. An apparatus for preventing fish and drift from passing into irrigating canals, etc., comprising a rotatable screened power wheel adapted to be positioned near the entrance to the canal leading from a stream and positioned a slight distance from the wall of the canal, bars positioned across the entrance leading into the canal, pivotally mounted yielding gates at the opening in the canal and adjacent to said wheel, vertically disposed bars positioned slight distances from the entrance to the canal, and a float movable upon said vertical bars, as set forth.

4. An apparatus for preventing fish and drift from passing into irrigating canals, etc., comprising a rotatable screened power wheel, said wheel having fixed nonswinging and swinging hinged wings with cross bars connecting the ends of the wheels, a screen about said bars, pivotally mounted wheel, gates adjacent to said wheel and tending to prevent fish from passing by the wheel and serving to deflect trash carried by the current in the stream from coming in contact with the wheel, as set forth.

1,109,386. CABINET FOR SOUND-REPRODUCING MACHINES. HELGE A. BORRESEN, Marquette, Mich. Filed Nov. 9, 1908. Serial No. 461,739. (Cl. 181—3.)



1. A cabinet for sound reproducing machines comprising a compartment, a movable horn a horn supporting means therein, another compartment situated at one end of said first mentioned compartment, and a flexible partition between said compartments having an opening for said horn therein.

2. In a cabinet for sound reproducing machines, a horn compartment, a horn therein a rail therein, means for carrying said horn upon said rail, means for guiding said horn in the direction of said rail, a machine compartment with an entrance for said horn in the wall thereof and a flexible partition surrounding said horn entrance and separating said compartments.

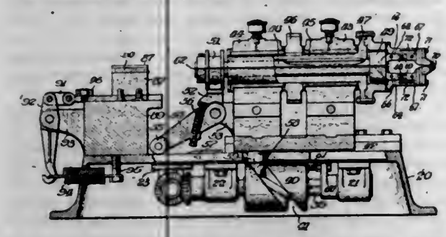
3. In a cabinet for sound reproducing machines, a horn compartment, a movable horn therein means for suspending said horn therein, a machine compartment, and a conical flexible partition snugly fitting about said horn and separating said aforementioned compartments.

4. In a cabinet for sound reproducing machines, a horn compartment, a horn therein an inclined rail therein, means for carrying said horn thereon, a flexible partition through which said horn is adapted to extend, doors for the escape of sound therefrom, a machine compartment on the other side of said flexible partition, a door thereto, and means for opening the doors for the escape of the sound located at said last mentioned door.

5. A cabinet for sound reproducing machines comprising a compartment, a movable horn therein, means for suspending said movable horn therein, a sound reproducing machine compartment located at one end of said first mentioned compartment, a flexible partition between said compartments having an opening for said horn therein, and means operable from the outside of said machine compartment for starting and stopping a machine contained therein.

[Claims 6 and 7 not printed in the Gazette.]

1,109,387. AUTOMATIC MACHINE FOR REMOVING BURS FROM ELECTRIC WELDS. JOHN S. BANTA, Waukegan, and ALBERT T. WEAVER, Joliet, Ill., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 23, 1912. Serial No. 716,606. (Cl. 90—11.)



1. In a bur-removing device, the combination of a base, a movable head, means for automatically moving said head forward and backward through its path of travel during each cycle of operation, a cutting tool bodily rotatably mounted in said head, and means for bringing said tool into contact with the work during the forward travel of said head and retracting the same therefrom during the backward travel of the head, substantially as described.

2. In a device of the class described, the combination of a base, a movable head, means for moving said head, a cutting tool associated with said head and rotatable relative thereto, means for bringing said tool into contact with the work and permitting the retraction of the same therefrom, and a spring interposed in the means for bringing said tool into contact with the work and arranged whereby the contact of the tool with the work is non-positive, substantially as described.

3. In a bur removing machine, the combination of a base having ways, a head adapted to act upon a section of welded material, said head being mounted for reciprocation in said ways, means causing reciprocation of said head, said means including a cam, and means for bodily shifting said cam whereby the path of travel of said head is changed, substantially as described.

4. In a device of the class described, the combination of a base, a head mounted for movement relative to said base, a hollow shaft carried by said head, a cutting tool carried by said shaft, means for rotating said shaft and tool, means permitting the location of the work in the center of said shaft, and means for bringing said tool into contact with the work during the travel of said head, substantially as described.

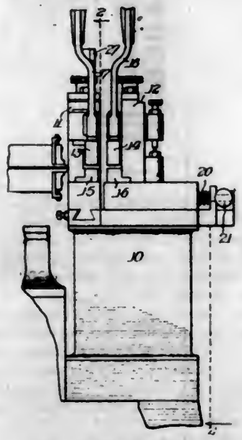
5. In a device of the class described, the combination of a base, a head movable relative thereto, a hollow shaft carried by said head, a cutting tool carried by said hollow shaft, means for rotating said tool and shaft, a second shaft within said hollow shaft and arranged for rotation therewith and longitudinal movement relative thereto, and means connecting said second shaft with said cutting tool whereby said tool is brought into contact with the work during the travel of said head, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,109,388. WIRE-JOINING MECHANISM. JOHN S. BANTA, Waukegan, and ALBERT T. WEAVER, Joliet, Ill., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Original application filed Aug. 23, 1912, Serial No. 716,606. Divided and this application filed Jan. 24, 1914. Serial No. 814,083. (Cl. 78—82.)

1. In a device of the class described, the combination of a welding device, a bur removing tool arranged for synchronous operation with said welding device, and means for simultaneously advancing and rotating said tool over the work previously acted upon by said welding device, substantially as described.

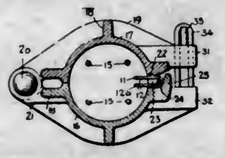
2. A welding and bur removing device, comprising in combination, clamping jaws arranged to secure the work during the welding operation, a bur removing tool, means for retracting one set of said clamping jaws to permit the operation of the bur removing tool, and means coöperating with the other set of jaws arranged to rigidly clamp the work during the operation of the bur removing device, substantially as described.



3. In a device of the class described, the combination of a welding apparatus including means for clamping two ends of the material to be welded, means for automatically advancing one set of clamping means toward the other during the welding operation whereby metal is displaced outside of the contour of the material acted upon, and a bur removing tool connected for synchronous operation with said welding device, said bur removing tool being rotatable and adapted for bodily advancement to act upon the welded joint while said joint is held in the position in which it was welded, substantially as described.

4. In a device of the class described, the combination of welding apparatus including two pairs of clamping jaws, means for moving one set of clamping jaws toward the other during the welding operation, means for retracting one set of clamping jaws and releasing the welded material therefrom, and bur removing means adapted to advance and act upon the welded material in the plane of the retracted jaws, substantially as described.

1,109,389. MOLD FOR FENCE-POSTS. EDWIN PRESTON BAUM, Keokuk, Iowa. Filed Jan. 9, 1913. Serial No. 740,992. (Cl. 25—121.)

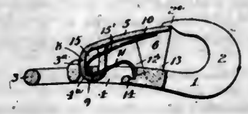


1. A mold for fence posts, comprising sections movable to a closed or an open position, one of said sections having horizontal slots at an edge thereof to receive wire fastener loops to be molded in the post, and the opposite section at the adjacent edge having a lip overlapping the other section and the slots therein and spaced therefrom radially to provide a space radially inward from the lip when in the closed position, to accommodate the radially disposed fastener loops in the slots of the first section.

2. A molding means for fence posts, comprising mold sections movable to an open or a closed position, one of said sections having pairs of slots adjacent to the meeting line of the sections for receiving wire-holding elements while the post is being molded, there being a lug between the slots of each pair, the opposite section of the mold hav

ing a lip overlapping the first section and the slots in said first section and spaced radially therefrom, to provide a space radially inward from the lip when in a closed position to accommodate the radially disposed fastener loops in the slots of the first section, and an elongated rod receivable between the said lip and the opposed surface of the adjacent section, to engage a wire-holding element.

1,109,390. PIVOTED-TONGUE SNAP-HOOK. JOHN B. BAXTER, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Dec. 20, 1910. Serial No. 598,348. (Cl. 24—233.)



1. In a snap hook, a body part having a hook at one end, and a transversely extending bearing bar at its opposite end, a substantially U-shaped spring mounted at its bend on said bearing and engaging at one end the hook member and at its opposite end the tongue, the tongue being formed of bendable material and having a tail piece bent about and under the bearing bar, and also having integral elongated flat fingers projecting at a point intermediate its sides, one finger being at each side of the spring with the flat surface thereof bent forwardly of and under the bar.

2. In a snap hook, a body portion having at one end a hook, and adajacent its opposite end a bearing member, a tongue, and a bent spring, said spring engaging at its bend the said bearing, the tongue having a bent part projecting over the bearing member, the bearing part and tongue having oppositely disposed recessed portions in which the bend of the spring lies, and the inner surface of the bent portion of the tongue at opposite sides of its recess being relatively wide and adapted to engage the bearing member.

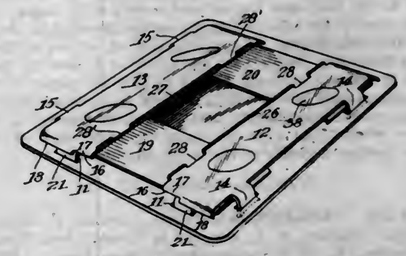
3. In a snap hook, the combination of a body part having a hook at its forward end and a transversely extending bearing bar adjacent its opposite end said bearing bar being separated intermediate its ends from the body part of the hook, a tongue adapted at its forward end to engage the hook, a substantially U-shaped spring mounted at its bend on said bar with one arm engaging the body part and one arm engaging the tongue, the said tongue having intermediate its sides a downwardly projecting relatively wide rearwardly extending tail portion adapted to engage over the rear surface of the bar and overlying the spring, and said tongue also having intermediate its sides separated downwardly projecting relatively wide flat lugs, one at each side of the spring arms, the flat surface of the said lugs engaging about the forward surface of the bar.

4. In a snap hook, the combination of a body part, a hook part, a bearing part on the body part, a tongue adapted at its free end to engage the hook and having the rear end of its body part extending to form a relatively wide integral projecting tongue free from side flanges whereby its inner surface is adapted to be bent around and engage the bearing part, a substantially U-shaped spring mounted at its bend on said bearing part and beneath the bent tongue of the hook, and integral projections depending from the tongue on opposite sides of the spring adjacent said bearing part.

1,109,391. COLLAPSIBLE OUTLET-BOX. WILLIAM J. BILLINGS and MICHEL P. CAFFE, New York, N. Y. Filed Aug. 15, 1912. Serial No. 715,288. (Cl. 247—5.)

1. A collapsible metal outlet box comprising in combination a bottom having slots therein and sides for the box having projections adjacent the lower edges thereof adapted to extend through the slots and formed to pivotally connect said sides with the bottom and prevent the movement of said sides outwardly past a vertical position.

2. A metallic collapsible outlet box having in combination a bottom section provided with a slot adjacent its edge, a side section and means for pivotally and interlockingly connecting the side section to the bottom section comprising a projection on the side section extending through the slot, said projection having the end thereof enlarged to prevent its withdrawal from the slot.



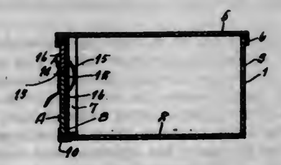
3. A collapsible metallic outlet box having in combination a bottom section provided with slots adjacent its perimeter, side sections and projections on said side sections extending through the slots, said projections being enlarged at their ends to prevent the detachment of the sides from the bottom and also being bent so that they will abut against the bottom section and prevent the outward movement of the side sections past a vertical position with relation to the bottom.

4. A collapsible outlet box having in combination a rectangular bottom section provided with slots along its edges, four side sections, means for pivotally and interlockingly connecting the side sections to the bottom section comprising integral projections on the side sections extending through the slots in the bottom, said projections being bent around to abut against the bottom section when the sides are upright and limit the outward movement thereof, said projections also being broadened at their ends to prevent their withdrawal through the slots, the ends of two oppositely disposed side sections being curved inwardly, the two remaining side sections being movable between said two oppositely disposed side sections and adapted to be forced past the inwardly curved ends of the latter, and means at the ends of each of the side sections adapted to releasably interlock the sides, said side sections being foldable inwardly to lie substantially parallel to the bottom.

5. A collapsible box comprising a bottom, side sections, projections connecting the side sections to the bottom, said projections being broadened at their ends to lock the parts together, a cover, and means for connecting the cover to the side sections.

[Claims 6 to 8 not printed in the Gazette.]

1,109,392. HAT-BOX. CORNELIA BITLER, Frederick, Kans. Filed May 28, 1914. Serial No. 841,512. (Cl. 229—49.)

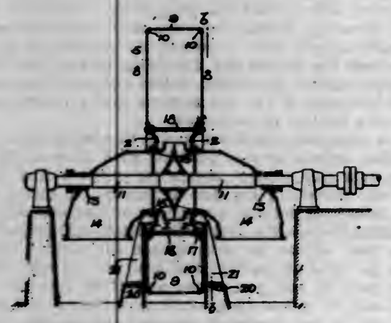


1. A hat box comprising a bottom wall, side walls secured to three of the edges of the bottom wall, a hinged side wall hingedly secured to the bottom wall on the free edge thereof, strips secured on the inner faces of the opposed side walls and on the bottom wall to engage the hinged side when said side is in closed position, a flanged cover for the box, the upper edge of the hinged side wall

to engage the inner face of the adjacent flange on the cover, said side wall comprising two sections hingedly connected with each other and a flexible element secured to the upper section and extended through the lower section on the inside thereof.

2. A hat box consisting of a bottom wall, side walls secured to three of the edges of the bottom wall, and to each other, a flanged lid mounted upon the side wall and a hinged side wall hinged at its lower edge to the bottom wall at the free edge thereof and arranged to engage the inner face of the adjacent flange on the lid when in closed position, said hinged side wall consisting of two sections being hinged to each other, elastic strips secured at their ends to the sections and serving to hold the upper of the sections in engagement with the inner face of the adjacent flange on the cover and a flexible element secured to the upper section and extended from the inner face of the lower section through to the outer face thereof.

1,109,393. CENTRIFUGAL PUMP. ANDERS P. BLACKSTEAD, Camden, N. J., assignor to Camden Iron Works, Camden, N. J., a Corporation of New Jersey. Filed May 1, 1913. Serial No. 764,851. (Cl. 103—43.)



1. The combination in a centrifugal pump, of two side plates, each having a central opening therein; a series of annular connections between the two side plates holding them in alinement; a volute made of sheet metal and secured to the side plates beyond the connections and independent thereof; a shaft extending through the openings in the side plates; independent bearings for the shaft; and an impeller on the shaft located between the side plates, the impeller being less in diameter than the space inclosed by the connections of the side plates.

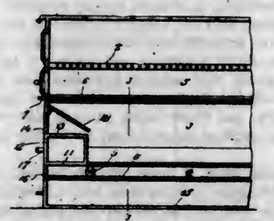
2. The combination in a centrifugal pump, of two side plates; means for rigidly connecting the plates together; a volute secured to the side plates outside of said connections and independent thereof; a shaft extending through the openings in the side plates; an impeller on the shaft less in diameter than the space inclosed by the connections of the side plates; independent bearings for the shaft; and legs secured to the side plates and supporting the plates and the volute independently of the bearings of the shaft.

3. The combination in a centrifugal pump, of two side plates, each plate being made in halves and each having a flange; a volute, also made in halves, the partings of the volute being on the same line as the parting of the side plates, said volute being secured to the flanges of the side plates, connections extending from one side plate to the other whereby the plates are rigidly spaced apart and held independently of the connections with the volute; brackets on the lower half of each side plate; legs secured to the brackets independently of the volute and resting on a foundation so as to support the volute through the side plates; a shaft; an impeller on the shaft located between the side plates and in the space surrounded by the connections; and bearings for supporting the shaft independently of the supports for the side plates and volute.

1,109,394. LEG-BAND. CHARLES O. BOURNE, Melrose, Mass. Filed Feb. 16, 1912. Serial No. 678,050. (Cl. 40—3.)

As a new article of manufacture, a leg band comprising a strip of metal having at one end a slot and at the other end both a tongue to be inserted through said slot and then bent back against the body of the band, and a locking finger flexibly connected to the strip adjacent the end of the tongue when the latter is thus bent back against the body, said finger being adapted to be bent down over the end of the tongue thereby to lock the tongue in position.

1,109,395. ASH-SIFTER. PAUL C. BRENNER, Chicago, Ill. Filed Sept. 23, 1913. Serial No. 791,340. (Cl. 126—245.)



1. A sifting device for stoves comprising a horizontal slide mounted beneath the grate, a sifting tray slidably mounted in the stove, the stove having an opening disposed in line with the tray, a rectangular relatively wide shield movable in the opening and carried by the tray, a second tray mounted beneath the first tray, and a downwardly extending deflecting plate carried by the stove and underlying the slide and overlying the rectangular portion of the first tray.

2. An ash sifter for stoves, comprising an impervious slide mounted within the stove beneath the grate, a slidable tray mounted in the ash pit of the stove, a movable shifting tray beneath the slide and a deflecting member carried by the front wall of the stove and extending in the direction of the sifting tray.

1,109,396. REFRIGERATING APPARATUS. EUGENE BRETNEY, Indianapolis, Ind. Filed Aug. 8, 1911. Serial No. 642,972. (Cl. 257—18.)

1. A combined refrigerator and display case consisting of a unitary structure comprising a multiplicity of compartments part of which are provided with thansparent sides for displaying the contents and part of which are inclosed by insulated double walls, a refrigerating compartment containing a refrigerating coil, a system of air circulating pipes a part of which lead from said refrigerating compartment to discharge into the storage and display compartments of the apparatus and part of which lead from said compartments back to a fan, and said fan arranged to discharge into said refrigerating compartment, substantially as set forth.

2. A refrigerator consisting of a unitary structure comprising several compartments each separated from the other by imperforate insulated walls, a refrigerating compartment within said structure surrounded by insulated walls, a refrigerating coil mounted in said compartment, a rotary fan mounted within said structure and connected to discharge into said refrigerating compartment, pipes leading from said refrigerating compartment through the upper side of the other compartments and formed with a series of discharge apertures located at intervals throughout their length, and another series of pipes located in the opposite corners of the upper side of said other compartments having a series of inlet apertures at intervals throughout their length and communicating with the eye of said rotary fan, whereby the air from the refrigerating compartment is forced into the upper side of said other compartments at one side and the warmer air withdrawn from the opposite side and forced through said refrigerating compartment, substantially as set forth.

3. A refrigerator consisting of a unitary structure comprising several compartments and containing the refrigerating apparatus, the upper compartments being formed with transparent sides to serve as display compartments and the lower compartments inclosed by nontransparent sides to serve as storage compartments, a refrigerating compartment forming a part of the structure and separated by insulated walls from the other compartments, air circulating pipes extending from the upper portion of said refrigerating compartment throughout the upper portions on one side of said display and storage compartments, another series of pipes communicating with the lower portion of said refrigerating compartment and extending throughout said several compartments in the opposite upper corner thereof said several pipes being formed with apertures at intervals throughout their length, and a rotary fan interposed in said air circulating pipes for forcing the air in one direction and creating suction in the other direction whereby a constant circulation is maintained through said refrigerating compartment and through said several storage and display compartments the cold air being discharged in the upper corner of one side of said compartments and the warmer air withdrawn from the opposite upper corner, substantially as set forth.

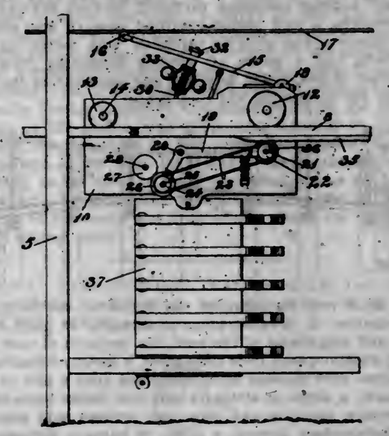
4. A refrigerator comprising a refrigerating compartment and storage compartments, air circulating pipes leading to and arranged to discharge into and from said refrigerating compartment and into and from the other storage compartments of the refrigerator, said pipes being provided with a series of apertures arranged at intervals throughout the length of the refrigerator storage compartments, and valves arranged to control the size of said apertures, substantially as set forth.

1,109,397. ELECTRIC-DESPATCH SYSTEM. ROBERT BROWN, Greenville, Mo. Filed May 3, 1912. Serial No. 695,006. (Cl. 104—210.)

1. In an article carrying device, the combination with an elevated track, a trolley car adapted to travel on the track, and a trolley pole carried by the car; of means for retracting the trolley pole from contact with the trolley wire under predetermined conditions (and including an element depending from the track), a centrifugal governor carried by the car and connected to the pole, and means actuated by said element for driving said governors.

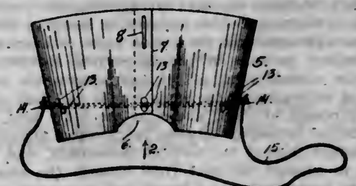
2. In an article carrying device, the combination with an elevated track, and a trolley car adapted to travel on the track; of means for retarding the speed of the car under predetermined conditions, said means including a rocking element adapted for engagement with said track, a centrifugal governor adapted to retract the trolley pole intermittently from the trolley wire, and means for driving said governor.

3. In an article carrying device, the combination with an elevated track, a trolley car adapted to travel on said track, a trolley wire, and a trolley pole carried by the car, of means for retracting the pole from contact with the trolley wire under predetermined conditions, said means



including a governor carried by the car and connected to the pole, and means connected to said car for driving said governor.

1,109,398. EYE-SHADE. CHARLES H. BUTLER and MARTIN P. MILLER, Denver, Colo. Filed May 23, 1913. Serial No. 769,427. (Cl. 2—149.)



1. As an improved article of manufacture, an eye-shade comprising a casing made of one piece and open at both ends and a piece of transparent material supported in the casing intermediate its extremities.

2. An eye-shade, comprising a casing, a piece of transparent material, two plates lying adjacent the surface of said material between which the said material is held, and means for securing the plates within the casing, and maintaining the latter in proper shape.

3. An eye-shade comprising a hood or casing, pieces of transparent material, and means including a plate for securing said pieces within the casing intermediate the extremities of the latter, said plate lying adjacent the transparent material for the purpose set forth.

4. An eye-shade, comprising a hood or casing, transparent disks, means for securing said disks within the casing intermediate the extremities of the latter, said means comprising two coöperating plates equipped with means for securing them to the casing, and maintaining the form of the latter, said plates lying adjacent the surfaces of the transparent disks for the purpose set forth.

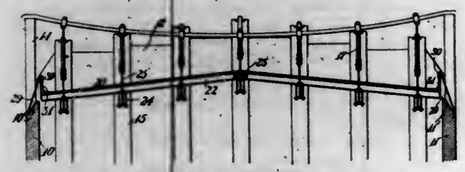
5. An eye shade comprising a hood or casing, transparent pieces, and means for securing said pieces within the casing intermediate the extremities of the latter, said means comprising two coöperating plates having flexible lips adapted to pass through the casing and be bent on the outside thereof for clenching purposes.

[Claims 6 to 8 not printed in the Gazette.]

1,109,399. SUSPENSION-ROOF. COOLEY BUTLER, New York, N. Y. Filed Aug. 23, 1913. Serial No. 786,262. (Cl. 108—1.)

1. The herein described roof construction comprising, in combination, elevated supports arranged opposite each

other in pairs, suspension members, each of such members resting upon and suspended between a pair of said supports, one set of said members being above another set thereof, hangers extending vertically between the two sets of members, a roof proper arranged beneath said suspension members and movable vertically with respect to said supports, and a series of hangers depending from the lower set of suspension members and constituting the only means for supporting the roof proper.



2. In a roof structure of the character set forth, the combination of elevated supports arranged in pairs crosswise and lengthwise of the roof, the supports of each pair being widely spaced from each other, a series of suspension members, each member being supported upon a pair of said supports, a series of stringers and roof beams beneath the suspension members and extending between said supports but independent thereof, a series of hangers between the beams and said members, means to connect the upper ends of the hangers to the suspension members and the lower ends thereof to the beams, and a storm and water-proof roof proper arranged between the suspension members and the stringers and supported by said stringers and beams.

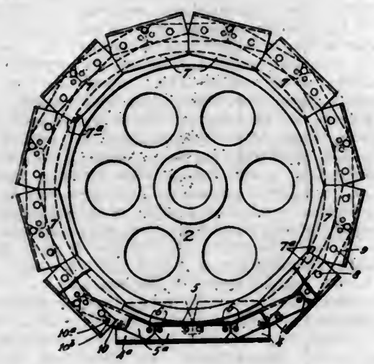
3. In a device of the character set forth, the combination of pairs of elevated supports arranged opposite each other at great distances, flexible suspension members extending between and supported upon said pairs of supports, the intermediate portions of the suspension members being otherwise unsupported, all of said suspension members being of substantially the same length and half of them being arranged at right angles to the other half, a roof construction extending between the elevated supports and independent thereof for vertical movements, and hanger means to support the roof from beneath the suspension members whereby the roof is not only supported but may partake of any vertical movements incident to changes of season or variations in temperature.

4. The herein described roof construction comprising stringers, beams arranged beneath the stringers and at an angle thereto, water-proofing material extending from one end of the roof to the other above said stringers, elevated supports, suspension members each extending from one support to another at a great distance and some of said members being arranged at right angles to and spaced above the rest, means to support the roof beams from said suspension members, the ends of the roof being free to move vertically with respect to said supports, and means to exclude rain and snow from the space between the roof and the supports.

5. In a suspension roof construction comprising, in combination, elevated supports arranged opposite each other in pairs crosswise and lengthwise of the roof, a series of flexible suspension members extending across and supported upon said pairs of supports, certain of said suspension members being at right angles to the others and spaced vertically therefrom, a series of hangers extending between the upper series of suspension members and the lower series thereof, a roof construction proper arranged within all of said supports and independent thereof, and means to support the roof construction proper from the lower series of suspension members.

1,109,400. PLATFORM-WHEEL. JOHN H. CARR, Alhambra, Cal. Filed Aug. 15, 1913. Serial No. 784,897. (Cl. 21—150.)

1. In a structure of the character described, the combination with a rotary member, of an endless track loosely surrounding the same, and comprising a series of shoes hinged together end to end, and side plates atached to said shoes and having their ends cut at an angle to positively hold the track away from the rotary member except at the bottom.



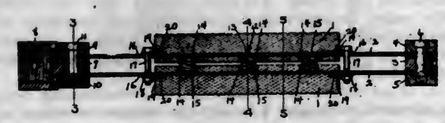
2. In a structure of the character described, the combination with a rotary member, of an endless track loosely surrounding the same, and comprising a series of shoes hinged together end to end, and side plates attached to said shoes and having their ends cut at an angle to positively hold the track away from the rotary member except at the bottom, and filler pieces interposed between the shoes and side plates for the purpose specified.

3. In a structure of the character described, the combination with a rotary member, of an endless track loosely surrounding the same, and comprising a series of shoes hinged together end to end, and side plates attached to said shoes and having their ends cut at an angle to positively hold the track away from the rotary member except at the bottom, and additional links loosely connecting said side plates.

4. In a structure of the character described, the combination with a rotary member, of an endless track loosely surrounding the same and consisting of a series of shoes, links, and transverse hinge pins connecting said shoes and links, and side plates attached to the shoes and overlapping the ends of said hinge pins for the purpose specified, said side plates also having their ends cut at an angle to positively hold the track away from the rotary member except at the bottom.

5. In a structure of the character described, the combination with a rotary member, of an endless track loosely surrounding the same, and comprising a series of shoes hinged together end to end, and side plates attached to said shoes and having their ends cut at an angle to positively hold the track away from the rotary member except at the bottom, the outer edges of said side plates projecting beyond the shoes, and a resilient tire loosely surrounding the track and arranged in the channel formed by said projecting edges of the side plates and the outer surfaces of the shoes.

1,109,401. LAP. RUDOLPH CONRADER, Erie, Pa. Filed Dec. 13, 1910. Serial No. 597,013. (Cl. 51—1.)



1. In a lap, the combination of a lap wheel divided longitudinally; axially extending spring bar supports for the wheel parts; a rotatable mounting for said supports having its axis on the axis of the lap wheel; and means for limiting the outward movement of the parts.

2. In a lap, the combination of a lap wheel divided longitudinally; spring bar supports extending axially from both ends of the wheel parts; and means uniting the bars at each end of the wheel parts.

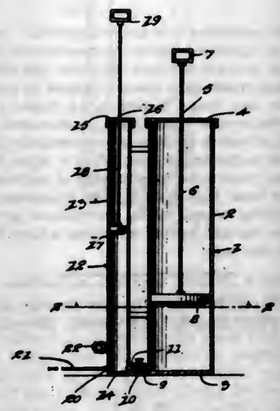
3. In a lap, the combination of a lap wheel divided longitudinally; bar supports extending axially from both ends of the wheel parts; means uniting the bars at each end of the wheel parts; and devices for limiting the outward movement of the parts.

4. In a lap, the combination of a lap wheel divided longitudinally; bar supports extending axially from both ends of the wheel parts; means uniting the bars at each end of the wheel parts; devices for limiting the outward movement of the parts; and means for adjusting said devices to vary the limit of outward movement of the parts.

5. In a lap, the combination of a lap wheel divided longitudinally, the opposing faces of the parts having spring sockets therein; axially extending bar supports for the wheel parts; a rotatable mounting for said supports having its axis on the axis of the lap wheel; and a spring in said sockets for forcing said parts outwardly.

[Claims 6 to 11 not printed in the Gazette.]

1,109,402. LUBRICATING DEVICE. ERNEST ODES COX, Wetumka, Okla. Filed Feb. 27, 1914. Serial No. 821,619. (Cl. 184—28.)



1. A device of the character described comprising a lubricant receiving chamber, a plunger slidable in said lubricant receiving chamber, means to slide the plunger in the lubricant receiving chamber, a pump, tubular means connecting the lower end of the pump with the lubricant receiving chamber, a piston slidable in the pump, an air valve near the lower end of the pump, said air valve being adapted to admit air to the pump cylinder when the piston is being drawn upward, and a conveyer tube connected to the pump and adapted to carry the lubricant to the desired point.

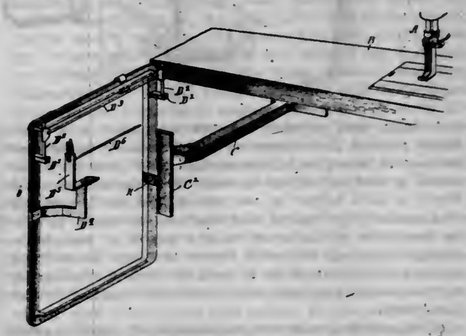
2. A device of the character described comprising the combination with a cylinder adapted to receive lubricant, a piston slidable in the cylinder, a duct connected to the lower end of the cylinder, of a pump connected to the end of the duct opposite the lubricant receiving cylinder, a valve in the duct between the lubricant receiving cylinder and the pump, a piston slidable in the pump, an air valve near the lower end of the pump, said air valve being adapted to admit air to the interior of the pump when the piston is being drawn away from the duct, and means connected to the pump near the duct to carry the lubricant to the desired point.

3. A device of the character described comprising a cylindrical lubricant receiving chamber, a closure at one end of said chamber, a removable closure at the opposite end of said chamber, said removable closure being provided with a centrally located aperture, a plunger slidable within the lubricant receiving chamber, a stem on the plunger, said stem extending through the aperture in the removable closure, a hand hold at the free end of the stem, and a lubricant duct near the closed end of the lubricant receiving chamber, of a valve in the duct and adapted to close the same, a pump at the end of the duct opposite the lubricant receiving chamber, a piston slidable in the pump, a closure formed at the end of the pump, a removable closure secured to the opposite end of the pump, said removable closure being provided with a centrally located aperture, a piston slidable in the pump, a stem on the piston, said stem being adapted to extend through the aperture in the removable closure, handle on the end of the stem by means of which the device is operated, an air valve in the pump cylinder near the lubricant duct, and a conveyer tube communicating with the interior of the pump and adapted to convey the lubricant to the desired point.

1,109,403. RING-SETTING. HATTIE AMELIA DAVIDSON, New York, N. Y. Filed June 13, 1912. Serial No. 703,366. (Cl. 63—27.)

In a device of the character described, a setting formed with a base, eyelets connected to said base, and a ring projecting through said eyelets, said ring being formed with a split, the ends adjacent said split being formed of substantially half the thickness of the remaining part of the ring, said portions overlapping whereby a line of cleavage is presented extending from the interior of the ring part of the distance through the body of the ring, then longitudinally of the ring and then radially to the periphery of the ring whereby any pinching action of the divided part of the ring is obviated.

1,109,404. GUIDE FOR SEWING-MACHINES. THOMAS F. DENNISON, Passaic, N. J. Filed Nov. 19, 1912. Serial No. 732,243. (Cl. 112—9.)



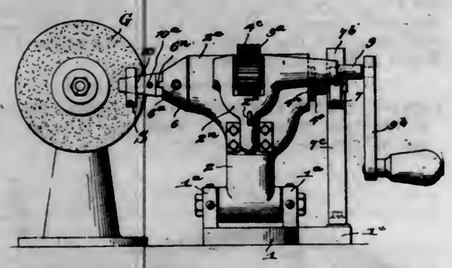
1. In a guide for sewing machines, a forwardly extending bracket secured to a support adapted to carry a sewing machine, the said bracket having a vertical member at its outer or forward end, a guide comprising a frame provided with guide bars, hinges connecting the frame at one side to the vertical member of the said bracket, the said guide when in normal or closed position extending in front of and parallel with the feeding side of the sewing machine for guiding the fabric to the sewing machine, the hinges having their pintles disposed vertically to permit of swinging the guide from the normal closed position outward into an open position to one side of and at an angle to the sewing machine, and a spring catch on the guide frame adapted to engage the vertical member of the bracket to hold the guide in normal working position.

2. In a guide for a sewing machine, the combination with a bench adapted to support a sewing machine, of a

bracket extending forwardly from said bench, a rectangular guide frame hinged at one side on the outer end of said bracket, the hinges having their pintles disposed vertically to permit of swinging the frame into normal or closed position parallel to the bench and in front of the feeding side of the sewing machine, or into an open position to give access to the sewing machine, horizontal guide bars carried by said guide frame, the said bars when the frame is in the closed position guiding the fabric to the sewing machine, and means for locking the guide frame to the bracket when the guide frame is in closed or working position.

3. A guide for sewing machines, comprising a vertically arranged frame provided with projecting brackets on its side members near the upper ends thereof, the said brackets having vertical pins, a horizontal guide bar supported at its ends on said pins, an angular bracket projecting from one side member of the frame and having an adjustable member thereon, a horizontal guide bar secured to said adjustable member, the said guide bar being in a lower plane than the first guide bar and spaced a greater distance from the face of the frame, and means for pivotally supporting the frame at one side to permit of swinging the frame into closed position in front of the feeding side of the sewing machine, or into an open position to give access to the sewing machine, the said guide bars when the frame is in the closed position serving to guide the fabric to the sewing machine.

1,109,405. SHELL-GRINDER. FRANK DI GIANNI, Muscatine, Iowa. Filed Feb. 25, 1914. Serial No. 820,917. (Cl. 51—3.)

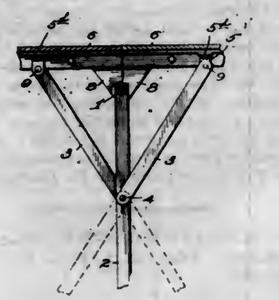


1. In a shell grinder the combination of a swinging frame pivoted at its lower end on a suitable support and having its upper end bifurcated, a shaft rotatably journaled in and extending through the bifurcations of the frame, a shell holder on one end of said shaft, a shaping cam on the other end of said shaft, an abutment attached to the frame and adapted to be engaged by said cam, a spring connected with said frame and base for normally swinging the frame so as to hold the cam in yielding contact with said abutment, and means for manually rotating said shaft.

2. In a shell grinder the combination of a base, a swinging frame pivoted to said base, and a shaft rotatably journaled in and extending through the frame, a shell holder on one end of said shaft, a shaping cam on the other end of said shaft, an abutment on the base adapted to be engaged by said cam, a spring for normally swinging the frame so as to bring the cam in contact with said abutment; a gear on said shaft, a manually operable shaft mounted on said frame parallel with the first shaft, and a pinion on the manually operable shaft engaging the gear on the first shaft.

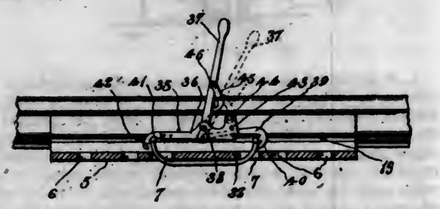
3. In a shell grinder the combination of a base, a Y-shaped frame hinged thereon at its lower end and having a bifurcated upper end, a rotatable shaft journaled in the bifurcations of said frame, a shell holder on one end of the shaft, a shaping cam removably attached to the other end of the shaft, an abutment on the base adjacent said cam, a spring for yieldingly swinging said frame to hold said cam in contact with said abutment, a gear on said shaft, an upstanding bracket attached to the front side of said frame adjacent said pinion, a manually operable shaft journaled in said bracket parallel with the first shaft, and a pinion on the manually operable shaft engaging the gear on the first shaft.

1,109,406. EMBALMING-BOARD. CARL B. DOLGE, Westport, Conn. Filed Aug. 14, 1913. Serial No. 784,807. (Cl. 45—50.)



A foldable embalmer's board, comprising top sections, frame bars, of right-angle form in cross-section, fixed to the undersides of the top sections adjacent the side edges of the board, said frame bars being arranged in pairs and the bars of each pair being alined, arms fixed to the inner portions of the several frame bars, a transverse rod to the end portions of which said arms are pivotally connected, a leg connected to the transverse rod at a point between the pairs of arms, transverse bars extending between and fixed to the frame bars, lugs fixed to and depending from said bars and having lateral bolts, and braces pivotally connected to the leg and having apertures adapted to receive the bolts on the lugs.

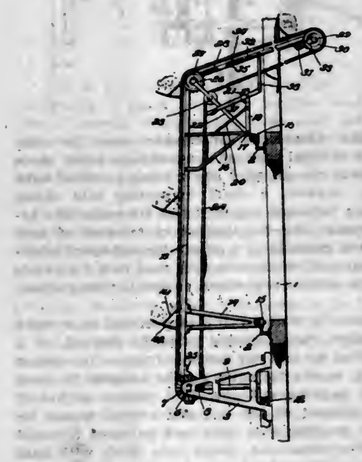
1,109,407. RAIL-JOINT. GEORGE EDICK, Albuquerque, N. Mex. Filed June 8, 1914. Serial No. 843,845. (Cl. 239—6.)



1. A rail joint including a rail chair, a locking bar removably secured to the rail chair, rail flange and web engaging members carried by the rail chair, the locking member and web engaging members being disposed at opposite sides of the rail chair, a coöperating rail engaging member slidable longitudinally of the rail chair between the locking bar and the web engaging member, a tapered flange formed on the coöperating rail holding member, said tapered flange engaging the locking bar and adapted to force the rail holding member toward the web engaging portion, a plurality of teeth carried on the upper surface of the flange, and means carried by the rail chair to engage the teeth and hold the coöperating rail engaging member against longitudinal movement.

2. A rail joint including a rail chair, web and flange engaging members formed on the rail chair, means carried by the web engaging portion to hold railroad rails against longitudinal movement, a lateral extension formed on the rail chair, said lateral extension being provided with a plurality of spaced apertures, a locking bar carried by the apertured edge of the extension, hooks formed on the locking bar and extending through the apertures to hold the bar in place, a coöperating rail holding member, a tapered flange carried by the coöperating rail engaging member, said member being slidable longitudinally of the rail chair, the tapered flange engaging the locking bar, a plurality of teeth on the upper surface of the flange, and a spring extending through the lateral extension on the rail chair and being provided with angular extensions to engage the teeth and hold the coöperating rail holding member against longitudinal movement.

1,109,408. HAY OR GRAIN ELEVATOR AND DISTRIBUTER. DAVID F. ESHLEMAN, Marion, Pa. Filed Jan. 23, 1913. Serial No. 743,861. (Cl. 193—8.)



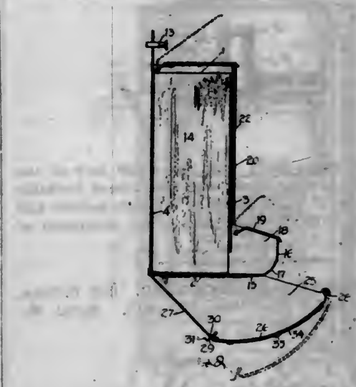
1. The combination of a fixed support, a trolley mounted to travel on said support, a frame rigidly connected with said trolley and extending above the same, posts rising from the trolley and supporting the upper end of the frame, standards rising from the trolley, a laterally extending frame supported by the posts in pivotal relation to the upper end of the first-mentioned frame, devices mounted on the standards below the laterally extending frame and connected therewith for raising and lowering the same, a conveyer disposed to travel the length of both frames, and means for operating said elevator.

2. The combination of a track, a carriage mounted to travel on said track from end to end thereof and projecting forwardly therefrom, a frame secured to the front end of said carriage, a second frame disposed above and supported by the carriage and extending laterally from the upper end of the first-mentioned frame, an elevator extending around both frames, and means on the carriage below the laterally extending frame for raising and lowering the same.

3. The combination of a fixed support, upper and lower tracks on said support, carriages mounted to travel on said tracks and projecting forwardly therefrom, the lower carriage being longer than the upper carriage, a frame secured to the front ends of said carriages, a laterally extending frame supported by the upper carriage and having a hinged connection with the upper end of the first-mentioned frame, means on the upper carriage to raise and lower said laterally extending frame, an elevator extending around the two frames, and means for actuating said elevator.

4. The combination of an elevator frame, supporting arms secured to and extending rearwardly from said frame, a trolley secured to and extending between the rear ends of said arms, standards rising from the trolley, posts secured to and rising from the trolley, a laterally extending swinging frame supported by the upper ends of said posts, an elevator arranged to travel upon the elevator frame and said swinging frame, levers mounted on the said standards, and links connecting said levers with the swinging frame.

1,109,409. MATCH-BOX. OSCAR FALKENWALDE, Baltimore, Md., assignor of one-half to John George Neumeister, Baltimore, Md. Filed Nov. 25, 1913. Serial No. 802,993. (Cl. 206—31.)



1. A receptacle for matches comprising a rectangular match box receiving compartment, the side and rear walls of the match box receiving compartment extending downwardly below the bottom wall and forming side and rear walls for a burnt match receiving compartment, a hinged bottom wall for the burnt match receiving compartment, a spring catch on the free end of said bottom wall for locking it in closed position, the bottom wall of said match box receiving compartment extending outwardly and being bent at right angles to provide the bottom and front walls of a discharge receptacle, side walls for said discharge receptacle, said discharge receptacle communicating with the match box receiving receptacle to permit removal of matches and hinged covers for said match box receiving compartment and discharge receptacles.

2. A receptacle for matches comprising a rectangular match box receiving compartment having its upper end open, a hinged cover for the open end of said compartment, a burnt match receiving compartment carried at the lower end of said first compartment and having one end open and disposed forwardly of the front wall of said first compartment, a hinged bottom wall for said last named compartment, a discharge receptacle disposed adjacent the lower front side of the first compartment and communicating therewith and having its upper end open, a hinged cover for said discharge receptacle and said hinged bottom wall adapted to have a match scratching surface secured to its outer face.

3. A receptacle for matches comprising a rectangular match box receiving compartment having its upper end open and adapted to receive a box of matches, said compartment having an opening in its front wall adjacent the lower terminal thereof, a discharge receptacle communicating with the opening and having certain walls formed integral with the bottom wall of the first compartment, securing flanges on the longitudinal edges on the front wall of said first compartment, a receptacle to receive burnt matches at the lower end of said first compartment and a hinged bottom wall for said burnt match receiving receptacle.

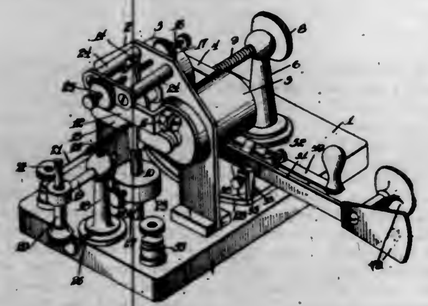
1,109,410. ENVELOP AND FASTENER THEREFOR. MICHAEL H. FLAHERTY, Girardville, Pa. Filed Nov. 19, 1913. Serial No. 801,922. (Cl. 229—78.)

The combination with an envelop of a fastener therefor adapted to be inserted through the several flaps of an envelop, said fastener comprising a tubular member consisting of a single blank of spring metal having overlapping ends to provide a spring tube, a plurality of bendable tongues formed integral with one end of the tube, said tube having an annular groove adjacent the end thereof farthest removed from the tongues, a locking sleeve adapted

to be mounted upon said tubular member and having an annular rib adjacent one end to fit within the groove in said tube and a plurality of bendable tongues formed integral with the inner end of said locking sleeve and arranged

to be bent into engagement with the outer face of the outermost of the envelop flaps, said first named bendable tongues being bent at right angles to the body portion and into engagement with the inner face of the innermost of the envelop flaps.

1,109,411. TELEGRAPH-TRANSMITTER. ROY F. GALE, Fort Wayne, Ind. Filed Jan. 15, 1913. Serial No. 742,256. (Cl. 178—82.)

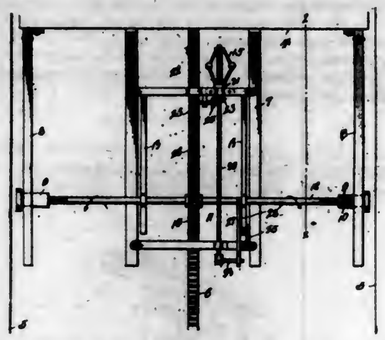


1. A telegraph key comprising a base, a key lever pivoted upon the base, contacts disposed at the opposite sides of said key lever to facilitate the sending of dots and dashes respectively, and a tension adjuster for controlling the movement of said key lever, said adjuster comprising a shank having relatively reverse screw threads formed thereon, and nuts receiving said shank and adapted to be moved toward and away from each other to vary the throw of the lever.

2. A telegraph key comprising a base, a key lever pivoted upon said base, contacts disposed at the opposite sides of said key lever to facilitate the sending of dots and dashes respectively, and a tension adjuster for controlling the movement of said key lever, said adjuster comprising a shank having relatively reverse screw threads formed thereon, nuts threaded onto said shank and adapted to be moved toward and away from each other to vary the throw of said lever, and springs interposed between said nuts and lever.

3. In a telegraph transmitter, a base, a support projecting upwardly from said base, a magnet carried by said support, a yoke secured to said support and extending outwardly therefrom above the pole of said magnet, horizontally alining adjustable bearings carried by said yoke, a vertical lever pivoted within said bearings and capable of vibration, an armature secured to said lever and disposed within the influence of the pole of said magnet and adapted when the magnet is energized to swing the lever in one direction, a stationary contact secured to said support above said yoke, a contact carried by the upper end of said lever and adapted to alternately engage and disengage said first contact in the vibration of the lever, a spring for restoring said lever to normal position succeeding the deënergization of said magnet, a yoke carried by said support above said first yoke and embracing the upper end of said lever, and an adjusting screw carried by said last yoke and bearing upon the adjacent end of said lever to limit the swinging movement thereof.

1,109,412. SAFETY DEVICE FOR ELEVATORS. JOHN GEHMAN, Brutus, Mich. Filed Nov. 7, 1912. Serial No. 730,075. (Cl. 187—89.)



1. In a safety attachment for elevator cars, the combination with a vertical rack, of non-rotatable brake shoes supported by said car the said shoes being provided with complementary recesses, a shaft connecting said shoes, said shaft being threaded oppositely at its respective extremities to engage the complementary recesses of said shoes, and means operable at a predetermined speed of descent of said car and engageable with said rack for rotating said shaft to actuate said shoes, as and for the purpose set forth.

2. The combination with an elevator car, and an upright track and upright rack disposed laterally thereof, of a brake shoe carried by said car movable from or to contact with said track, means including a gear adapted to mesh with said rack to move said shoe into contact with said tracks during descent of the car, and second means including a gear meshing with said rack to move the said gear of said first-mentioned means into mesh with said rack when the car descends at a predetermined speed, substantially as and for the purpose set forth.

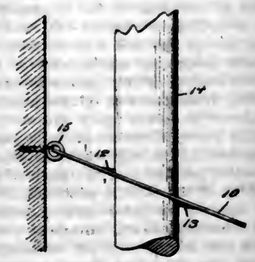
3. The combination with an elevator car, and upright tracks, disposed in parallelism, and an upright rack disposed laterally of the car, of brake shoes, carried by said car, one for each track movable from or to contact therewith, means including a gear adapted to mesh with said rack, to move said shoes simultaneously in counter directions to contact with their respective tracks, and second means including a gear meshing with said rack, to move said first-mentioned gear into mesh with said rack when the car descends at a predetermined speed, substantially as and for the purpose set forth.

4. The combination with an elevator car, and an upright track and upright rack disposed laterally thereof, of a brake shoe carried by said car movable from or to contact with said track, means including a gear adapted to mesh with said rack to move said shoe into contact with said track during descent of the car, second means including a gear meshing with said rack to move the said gear of said first-mentioned means into mesh with said rack when the car descends at a predetermined speed, and locking mechanism for retaining said first-mentioned gear in mesh with said rack, when actuated by said second means, substantially as and for the purpose set forth.

5. The combination with an elevator car, and two upright tracks disposed in parallelism, and an upright rack disposed laterally of the car, of brake shoes, carried by said car, one for each track, movable from or to contact therewith, and each having a screw-threaded recess, said recesses facing each other with a common axis, a shaft having ends screw threaded in opposite directions, to fit into the said recesses of said shoes, a gear for rotating said shaft during descent of the car, adapted to mesh with said rack, and second means including a gear meshing with said rack to move the said first-mentioned gear into mesh with said rack, when the car descends at a predetermined speed, substantially as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,109,413. BROOM-HOLDER. EDGAR W. GORHAM, Lyndonville, Vt. Filed May 10, 1912. Serial No. 696,440. (Cl. 24—249.)



1. As a new article of manufacture, a broom holder comprising a plate having a handle receiving aperture formed therein, stops arranged on each side of the plate adjacent the aperture, said stops being diametrically disposed and constituting permanent rigid gripping members offset with respect to the upper and lower faces of the plate.

2. As a new article of manufacture, a broom holder comprising a plate having a handle receiving aperture formed therein and entirely surrounded by the plate, the plate adjacent the aperture and at diametrically opposite points being pressed outwardly to form permanent rigid gripping members offset with respect to the upper and lower faces of the plate.

3. As a new article of manufacture, a broom holder consisting of a rigid metallic plate having an approximately centrally disposed orifice adapted to receive a broom handle, and integrally formed permanent rigid stops arranged at diametrically opposed portions of the orifice and produced by pressing the metal outwardly in opposite directions.

4. As a new article of manufacture, a broom holder consisting of a rigid metallic plate having an approximately centrally arranged orifice, and permanent rigid gripping members formed integrally with the plate and arranged at diametrically opposed points in the orifice, the edges of said gripping members being offset with respect to the opposite faces of the plate, said gripping members being adapted to engage the broom handle throughout their length.

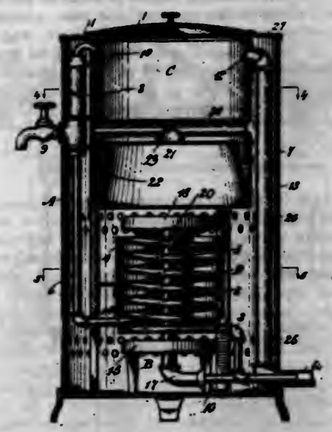
1,109,414. HOT-WATER DISPENSER AND DRINKING-GLASS STERILIZER. PETER S. GRAVES and JAMES I. OLLIVETTI, Plattsburg, N. Y. Filed Apr. 15, 1914. Serial No. 831,953. (Cl. 126—350.)

1. An apparatus of the class described comprising a hot water heater, a sterilizing tank, and a hot water dispensing device connected with the said heater and overflowing into the said tank, said hot water heater and dispensing device being disposed externally to the sterilizing tank.

2. An apparatus of the class described comprising a hot water heater, a sterilizing tank, a hot water dispensing device connected with the said heater and overflowing into the said tank, and an overflow connected with the said tank and so arranged as to maintain a body of water in the latter for sterilizing purposes.

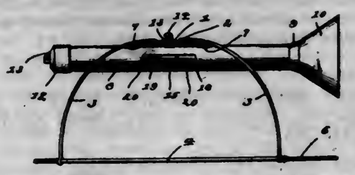
3. An apparatus of the class described comprising a casing, a sterilizing tank therein, a heating coil disposed under the tank, heaters for the tank and coil, a hot water dispensing reservoir connected with the coil and overflowing into the tank, and an overflow for the tank.

4. An apparatus of the class described comprising a casing, a tank in the top thereof, a heating coil below the tank, a burner between the tank and heating coil, a burner under the heating coil, a hot water dispensing chamber connected with the delivery end of the coil and arranged within the casing, a faucet connected with the chamber and extending out of the tank, and an overflow connection between the top of the reservoir and the top of the tank.



5. An apparatus of the class described comprising a casing, a sterilizing tank therein, said tank being formed with a reëntrant bottom and having a flue extending from the bottom through the tank to the side thereof for products of combustion, a burner under the tank, a hot water heating means, a burner therefor, a dispensing reservoir connected with the hot water heating means and overflowing into the top of the said tank, and an overflow pipe for said tank.

1,109,415. MINER'S LAMP. RICHARD G. HARRIS, Bearden, Tenn., assignor of one-third to James W. Hill and one-third to Ira W. Hill, Bearden, Tenn. Filed Dec. 13, 1913. Serial No. 806,614. (Cl. 240—8.5.)



1. A miner's lamp comprising a tube, a socket member connected to one end of said tube, a lamp bulb carried by said socket member, a reflector surrounding said bulb, a container mounted within said tube and capable of sliding movement therein, a battery within said container, and means for sliding said container to connect said battery with said socket whereby the lamp will be illuminated.

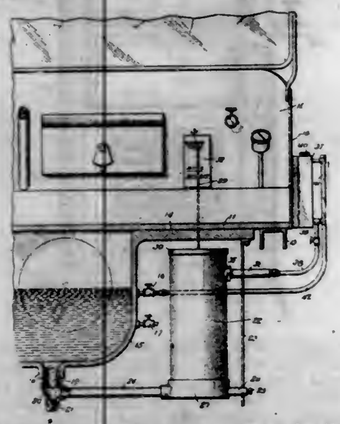
2. A miner's lamp comprising a tube, a socket member connected to one end of said tube, a lamp bulb carried by said socket member, a reflector surrounding said bulb, a container mounted within said tube and capable of sliding movement therein, a battery within said container, means for sliding said container to connect said battery with said socket whereby the lamp will be illuminated, and means for locking said container against movement.

1,109,416. [WITHDRAWN.]

1,109,417. AUTOMATIC OIL INDICATOR AND FEEDER. CHARLES EDWARD HENKELMAN, Atlantic City, N. J. Filed Apr. 11, 1913. Serial No. 760,440. (Cl. 184—103.)

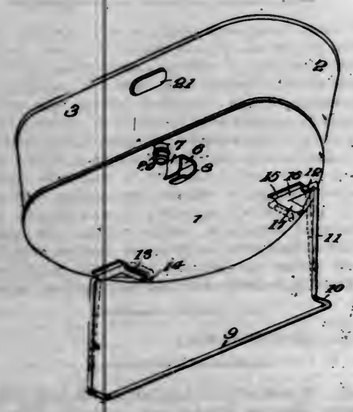
1. In an automatic oil indicator and feeder for gasolene engines, the combination with a crank case and a vertically elongated supply chamber having communication therewith; of a float movable in the chamber and buoyed up by the fluid therein, a stem connected to the float ex-

tending vertically through the chamber; an indicator directly connected to the stem and operated by the rise and fall of the oil to render visible in front of the operator the amount of oil in the chamber and case, a supply pipe for oil communicating with the chamber, and means operated by the indicator operating means to supply oil to the chamber whereby the oil is maintained at a constant level.



2. An automatic oil indicator and feeder for the crank cases of motors, comprising a vertical chamber for containing a lubricant, pipe connections between the chamber and the drain opening of the crank case, a float in the chamber and buoyed up by the lubricant therein, a pointer operated by the rise and fall of the float in the chamber, a lubricant reserve tank leading into the chamber and having an outlet opening for supplying the lubricant therein, a valve normally closing in said opening, a stop carried by the float, and a pivotal connection coöperating with the valve and stop to automatically open the valve upon the fall of the float and permit the closing thereof upon the float rising to a predetermined level.

1,109,418. KITCHEN UTENSIL. EDWIN G. HINES, Drums, Pa. Filed Jan. 9, 1913. Serial No. 741,027. (Cl. 141—9.)

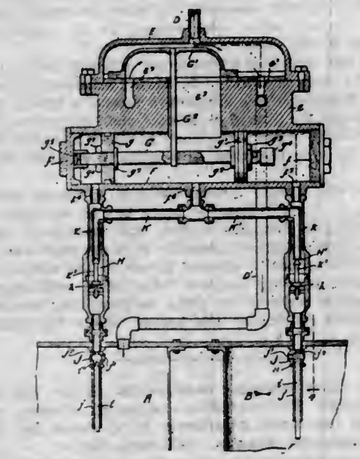


1. In a device of the class described, a receptacle having an outlet, attaching means located at one side of the receptacle, and a support located in the other side of the receptacle, the support including spaced legs and a connecting foot, the legs having laterally extending portions hingedly connected with the bottom of the receptacle and having portions extending from the said laterally projecting portions and constituting stops, the said bottom of the receptacle being provided with sockets to receive the stops.

2. In a device of the class described, a receptacle, attaching means at one side of the receptacle, and a support for the receptacle located at the other side thereof and including spaced legs and a connecting foot, the legs having laterally projecting pintle portions hingedly connected with the bottom of the receptacle and having portions projecting from the said pintle portions, the legs having a tendency to spring apart and the bottom of the receptacle being provided with sockets to receive the last mentioned portions of the legs when the supporting member is in extended position and the legs are sprung apart.

3. In a device of the class described, a receptacle, and a supporting member for the receptacle including spaced legs having a tendency toward movement away from each other, the said legs having portions hingedly and slidably connected with the receptacle whereby the legs may be swung to extend from or lie beside the bottom of the receptacle, the receptacle being provided upon its bottom near the hinged end of each leg with a socket arranged to coöperate with the said end of the leg to hold the supporting member in supporting position.

1,109,419. PNEUMATIC PUMP. ANDREW J. HUBBARD and CARL A. SWANSON, Jacksonville, Ill. Filed Dec. 26, 1912. Serial No. 738,607. (Cl. 103—8.)



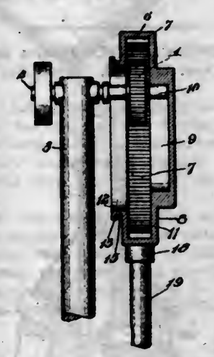
1. In a pneumatic pump, the combination of a pair of water chambers, having submerged foot valves and water outlet pipes, a piston cylinder having a central exhaust, a piston therein comprising spaced heads upon opposite sides of the exhaust, connections between the cylinder ends and the upper portions of the water chambers and having valves normally closing the same, float members within the water chambers and controlling the said valves, a valve chamber adjacent the piston chamber and carrying a central port communicating with the cylinder exhaust, and side ports communicating with the upper portions of the water chambers, an air supply pipe leading to the valve chamber, and a slide valve having connection with the piston and movable therewith to alternately register one of the valve side ports with the exhaust.

2. In a pneumatic pump, the combination of a pair of water chambers having submerged foot valves and water outlet pipes, a main air supply pipe, a valve casing with which the said main air pipe communicates and which is provided with side ports, branch air pipes leading from said ports to the upper portions of the water chambers, said casing also having the central exhaust port, an air controlling valve movable in said casing to alternately register one of said side ports with the exhaust port, a valve actuating member having connection with said valve, a casing within which said member is movable, connections between opposite ends of said last named casing and the upper portions of the water chambers whereby air may be admitted to the casing to move the actuating member toward opposite ends thereof, the lower ends of said connections having valve seats, and floats arranged in the water chambers and having upwardly projecting stems provided with tapered upper ends forming valves and adapted to coöperate with the said seats.

3. In a pneumatic pump, the combination of a pair of water chambers, having submerged foot valves and water outlet pipes, a piston cylinder having a central exhaust, a piston therein comprising spaced heads upon opposite sides of the exhaust, connecting pipes between the cylinder ends and the upper portions of the water chambers, and having intermediate valve seats and side ports above said seats, tubes depending in said pipes and having their upper ends communicating with said side ports, doubled ended valve members movable between said valve seats and the lower ends of the tubes and adapted to coöperate therewith, said connecting pipes also having lower valves, float members within the water chambers and controlling the said lower valves, a valve chamber adjacent the piston chamber and having a central port communicating with a cylinder exhaust and side ports communicating with the upper portions of the water chambers, an air supply pipe leading to the said valve chamber, and a slide valve having connection with the piston and movable therewith to alternately register one of the valve side ports with the exhaust.

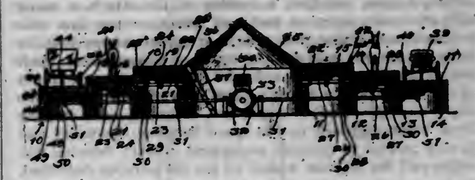
4. In a device of the character described, a piston comprising a stem having threaded end portions, heads secured upon said stem in spaced relation, adjusting sleeves which are alternately threaded and adapted to be screwed upon the threaded end portions of the stem to selected positions, and externally threaded adjusting nuts adapted to be screwed within the said sleeves and to abut the ends of the stem of the piston, substantially as described.

1,109,420. RACK-AND-PINION DEVICE. HARRY J. IRVINE, Blue Grass, Iowa. Filed May 7, 1913. Serial No. 766,184. (Cl. 74—27.)



A pump rod operating connection including a support, a driven member, a section of approximately elliptic form, said section being formed with an edge channel provided with teeth on one wall thereof, a pinion coöperating with the teeth, and a shaft mounted in the support and carrying the pinion, said elliptic section being formed with a guiding channel to receive the shaft and hold the pinion in coöperation with the teeth of the member, said member being formed with an additional guiding channel following the contour of the section, and a guiding element carried on the shaft and coöperating with said last mentioned channel, the respective guiding channels being disposed on opposite sides of the pinion.

1,109,421. AMUSEMENT APPARATUS. JOHN A. JOBSON, Shamokin, Pa. Filed Dec. 30, 1913. Serial No. 809,512. (Cl. 46—27.)



1. In apparatus of the character described, the combination with a relatively stationary substantially circular support provided with an annular slot, of an automobile mounted to travel upon the relatively stationary support, an operating ring arranged wholly below the relatively stationary support and adjacent the annular slot, coupling means between the automobile and operating ring, and means to drive the operating ring.

2. In apparatus of the character described, the combination with a relatively stationary support provided with a substantially annular slot, of an automobile mounted to travel upon the relatively stationary support, an operating ring arranged wholly below the relatively stationary support adjacent the annular slot, a bolt connected with the axle of the automobile and with the operating ring, means connected with the operating ring for positively preventing the rotation of the bolt with relation thereto, and means to rotate the operating ring.

3. In apparatus of the character described, the combination with a relatively stationary suport provided with a substantially annular slot, of a vehicle mounted upon the relatively stationary support to travel thereon in proximity to the annular slot, an operating ring arranged below the relatively stationary support and adjacent the annular slot, operative connections between the vehicle and operating ring, and means to drive the operating ring, substantially as described.

4. In apparatus of the character described, the combination with a relatively stationary support including a plurality of hollow supporting-members having their upper closed walls provided with substantially annular slots, annular gears arranged within the hollow supporting-members and disposed near the annular slots thereof, vehicles arranged upon the supporting-members, connecting means between the annular gears and the vehicles and passing through the annular slots, a common driving shaft passing through the lower portion of the hollow supporting-members, gearing connecting the common driving shaft with the annular gears, and means to rotate the common driving shaft.

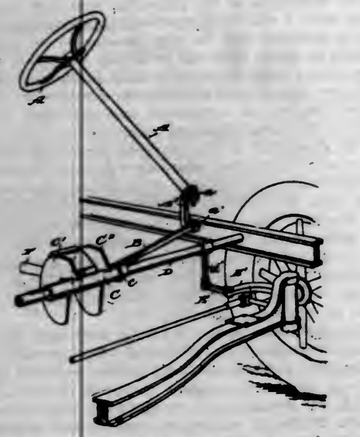
5. In apparatus of the character described, the combination with a relatively stationary support including a plurality of stepped concentric hollow supporting-members having their upper sides closed by walls provided with substantially annular slots, a common driving shaft journaled through the lower portions of the hollow supporting-members, annular gears arranged within the hollow supporting-members adjacent the substantially annular slots thereof, a gear connected with the outer end of the common driving shaft and engaging the annular gear within the outermost hollow supporting-member, shafts arranged above the common driving shaft and journaled within the upper portions of the inner supporting-members, gears carried by the said shafts and engaging the annular gears within the inner supporting-members, driving connecting means between the common driving shaft and said shafts, and means to rotate the common driving shaft.

[Claim 6 not printed in the Gazette.]

1,109,422. STEERING DEVICE FOR AUTOMOBILES. JOHN R. JUNKIN, Fairbanks, Alaska. Filed Jan. 13, 1914. Serial No. 811,835. (Cl. 21—199.)

1. In a motor vehicle steering device, the combination with the steering post and steering knuckles, of a transverse shaft journaled in portions of the frame of the ma-

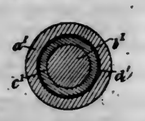
chine and having a crank provided with connections uniting the same with one of the steering knuckles, a sleeve splined upon the said transverse shaft, a connecting rod having a yoke engaging a portion of the sleeve, a crank secured to the steering post and having connection with the said connecting rod, a pair of spaced vanes radially formed upon the said splined sleeve, a power driven shaft having a friction wheel extended between the said vanes of the sleeve, and a bearing block in which the end of the shaft and its friction wheel are mounted, said bearing block being disposed in the space between the vanes and having means to prevent accidental contact between the vanes and the friction wheel, all for the purpose described.



2. In a steering mechanism, the combination with a steering post and the steering knuckles, of a shaft journaled to rotate and having a crank controlling the steering knuckles, a sleeve splined upon the said shaft and provided with a pair of spaced vanes formed radially thereon and similarly curved, a power driven shaft having a friction wheel secured thereon and positioned in the space between the said vanes, and connections between the steering post and the splined sleeve whereby to control longitudinal movement of the sleeve by rotative movement of the post.

3. In a steering mechanism, the combination with a steering post and steering knuckles, of a shaft journaled to rotate and having connections for controlling the steering knuckles, a sleeve splined upon the shaft and having spaced vanes formed radially thereof and similarly curved, a power shaft having a friction wheel positioned in the space between the vanes, a bearing block seated between the vanes and through which the extremity of the said power driven shaft projects, a spring controlled block mounted in the said bearing block and which receives the extremity of the said driven shaft to prevent accidental contact of the friction wheel and vanes, and connections between the steering post and the sleeve for controlling longitudinal movement of the sleeve, all for the purpose described.

1,109,423. MANUFACTURE OF SOLDER-CORED WIRE. FRIEDRICH KAMMERER, Pforzheim, Germany. Filed Feb. 27, 1911. Serial No. 611,168. (Cl. 29—182.)

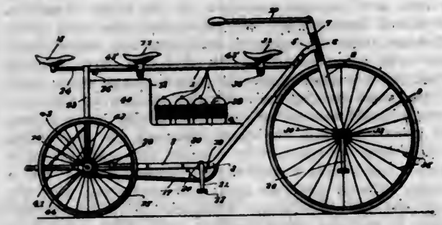


1. Composite wire for the purpose set forth comprising a core, a massive layer of solder surrounding said core and united therewith by melting, and an external metal sheath.

2. Composite wire for the purpose set forth comprising a metal sheath, a central core, a massive layer of solder surrounding said core and united therewith by melting, and a layer of metal tougher than said sheath between the latter and said massive layer of solder.

3. The method of producing composite wire which consists in forming a core, surrounding said core with a massive layer of solder, uniting said solder layer with said core by melting, inserting said core and solder layer into a metal sheath, and reducing the ingot thus prepared to wire.

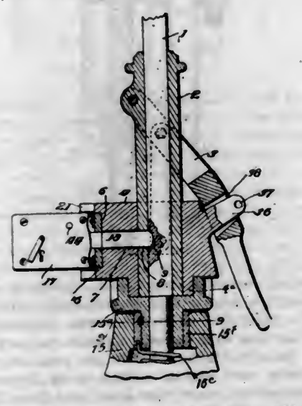
1,109,424. BICYCLE. CLAUDE R. KIEFER, Mishawaka, Ind. Filed Apr. 11, 1914. Serial No. 831,220. (Cl. 208—113.)



1. In a bicycle, a frame embodying a top run, parallel bottom runs in spaced relation to each other and having heir forward portions deflected upwardly and connected to the forward extremity of the top run, a rear fork extending from the top run downwardly to the rear extremities of the bottom runs, rear axle bearings at the points of junction of the bottom runs and rear fork, a rotary driving axle journaled in said bearings, driving wheels fast on the opposite ends of said axle, a crank shaft, sprocket wheels on said crank shaft and rear driving axle, and a sprocket chain running around said sprocket wheels.

2. A bicycle embodying a frame comprising a tubular horizontal top run, a driver's seat adjustable lengthwise of said top run, an extension seat bar telescopically fitted in said top run, means for fixing the adjustment of said seat bar, and an auxiliary seat carried by said extension seat bar.

1,109,425. SWITCH-CLUTCH. JOSEPH KIEREN, Gilbert, Minn. Filed Apr. 11, 1912. Serial No. 689,972. (Cl. 104—25.)



1. In combination with a center bar provided with a depression and a sleeve having a perforation, a locking mechanism comprising a collar mounted upon the sleeve, means for moving the collar, and a lock carried by the collar and having a bolt adapted to be projected through the perforation in the collar into the depression.

2. In combination with a center bar having a depression, a sleeve slidably mounted thereon and provided with a perforation, a collar mounted upon the sleeve, and a lock carried by the collar and having a bolt adapted to be projected through the perforation into the depression, said bolt having at a point between its ends a weakened place.

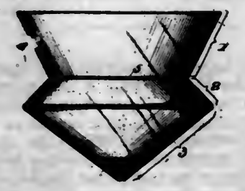
3. In combination with a bar provided with a depression, a sleeve slidably mounted upon the bar and having a perforation, a collar mounted upon the sleeve and having a socket, a lock having an end portion fitting snugly within the socket, and a bolt carried by the lock and adapted to be projected through the perforation in the sleeve into the depression in the bar.

4. In combination with a bar having a depression, a sleeve slidably mounted upon the bar and having a perforation, a collar mounted upon the sleeve and having a socket, a lock fitting at one end in the socket and carrying a bolt adapted to be projected through the perforation in the sleeve into the depression in the bar, and means carried by the collar and lying over the end portion of the lock casing for securing the same.

5. In combination with a bar provided with a depression, a sleeve slidably mounted upon the bar and having a perforation, a collar mounted upon the sleeve and having a socket with lugs located at the opposite sides thereof, a lock having a casing provided with an end plate which is snugly received within the socket, blocks interposed between the lugs and lying against the outer face of said plate, and devices for securing the blocks to the lugs, said lock carrying a bolt adapted to be projected through the perforation in the sleeve into the depression in the bar.

[Claims 6 to 13 not printed in the Gazette.]

1,109,426. TOP. ROBERT LANGSTAFF, Donora, Pa. Filed Oct. 27, 1913. Serial No. 797,628. (Cl. 46—32.)



1. In a top, a body comprising upper and lower frusto-conical portions, the lower portion having its surface inclined from the horizontal to a less degree than the surface of the upper frusto-conical portion, and a conical portion projecting from the base of the lower frusto-conical portion.

2. In a top, a body comprising upper and lower frusto conical portions united at their minor ends, and a conical portion projecting from the base of the lower frusto-conical portion, the said body being provided with a circumscribing groove at the juncture of the minor ends of the frusto-conical portions.

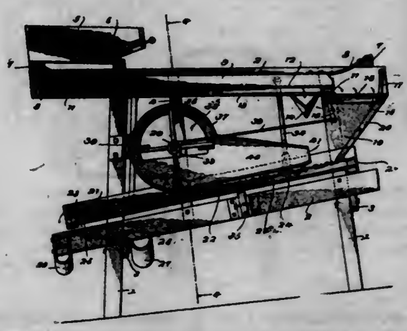
1,109,427. TIRE. AUGUSTUS D. LAURENT, Westfield, N. J. Filed Feb. 24, 1912. Serial No. 679,615. (Cl. 152—18.)

1. In a vehicle tire, a body consisting of woven elements of resilient material of U-configuration, one extremity of each element being turned outwardly and bent to form an overlying engaging portion, said portion being provided with an internal socket, the opposite end of each element being bent outwardly and forming a straight portion to be inserted within the engaging portion of the meeting end of a companion element, and a projection provided upon the straight portion of each element for engagement with the socket of the engaging portion of the element associated therewith.

2. In a vehicle tire, a body consisting of woven elements of resilient material of U-configuration, one extremity of each element being extended outwardly and thence bent inwardly to form an overlying engaging portion, said portion being disposed in superposed relation to the outwardly extending portion throughout its entire length, said engaging portion being provided in its opposed

surface with a depressed socket, the opposite end of each element being bent outwardly and forming a straight portion adapted to be sprung within the engaging portion of the meeting end of a companion element, and a projection provided upon the straight portion of each element, adjacent its terminal portion for engagement with the depressed socket of the engaging portion of the element associated therewith.

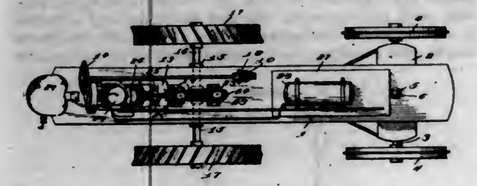
1,109,428. SEED-CLEANER. CLIFFORD A. LEE, Morris, Minn. Filed Mar. 13, 1913. Serial No. 754,052. (Cl. 130—15.)



1. An apparatus for the purpose set forth comprising a main frame, an inclined screen suspended upon the frame, a fan-shaft below said screen, a separator disposed adjacent the lower end of said screen, links pivoted at their upper ends upon the main frame and at their lower ends to the outer edge of said separator, a link pivoted upon the frame below said separator and having its upper end pivoted to the bottom of said separator near the inner edge thereof, and a pitman pivoted at its outer end to the lower end of said link and having its inner end connected to the fan-shaft whereby the pitman will be reciprocated by said shaft.

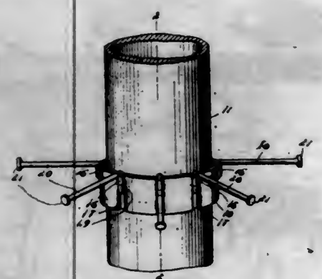
2. In an apparatus for the purpose set forth, the combination of a main frame, a screen slidably supported upon the top of the main frame, a separator disposed adjacent the rear end of said screen, a lower screen disposed within the main frame and suspended from the upper screen, a deflector pivoted within the main frame and extending from the outer rear end of the separator to the outer rear end of the lower screen, a fan-casing supported within the main frame between the screen and having its outlet directed toward said deflector, a fan within said casing, a crank shaft extending transversely through said casing and carrying said fan, a pitman connecting said shaft with the separator, hangers fitted upon said shaft and depending therefrom and secured to the lower screen, and means for rotating said shaft.

1,109,429. FARM-TRACTOR. WILLIAM W. LEMMON, Junior, La. Filed Nov. 22, 1911. Serial No. 661,802. (Cl. 21—114.)



A farm tractor including a narrow elongated body, tractor wheels for supporting the rear end of the body, an engine mounted on said rear end of the body to drive the tractor wheels, a bolster pivoted to the front end of the body, and having arcuate grooved ends extending beyond the opposite sides of the longitudinal edges of the elongated body adjacent the front end thereof, steering wheels secured to the bolster, a vertical shaft extending through the body and having a sprocket wheel on its lower end, a linked belt engaging the sprocket wheel and terminally connected to and flush with the front edges of the bolster and adapted to be guided around the grooved ends thereof to turn the same, and a steering rod suitably geared to the upright shaft.

1,109,430. SUPPORTING-RACK. JOHAN G. LENHART, Bellingham, Wash. Filed Jan. 3, 1912. Serial No. 669,183. (Cl. 126—343.)



A supporting rack for use on stove pipes or other like supports of a band encircling the support of the stove pipe with the band provided at spaced points with upper and lower semi-tubular portions struck therefrom in vertical alinement, the upper semi-tubular portions being outturned and the lower semi-tubular portions being inturned to form vertical openings in the band and supporting arms carried by the band and movable therein with the inner end of each band at right angles with its body, the said upper semi-tubular portions of the band being spaced from the lower semi-tubular portions of the band to permit the said right angle portion of the arm to be turned therein for adjusting the arms from a horizontal to an upright position.

1,109,431. VEHICLE TOP-SUPPORT. FRED K. LEWIS, Ashtabula, Ohio, assignor to The Ashtabula Bow Socket Company, Ashtabula, Ohio, a Corporation of Ohio. Filed Apr. 6, 1912. Serial No. 688,824. (Cl. 21—62.)

In a vehicle top support, the combination of a main supporting member curved at its lower end, said member having an engaging member mounted intermediate its ends and extending laterally therefrom and a similar engaging member mounted at the lower end of said supporting member, and an auxiliary supporting member having a similar curved portion adjacent one end, such end being adapted to engage either such offset, laterally engaging member, or such member at the end of said main member, whereby, in the first-named position, said main and auxiliary supporting members will lie parallel to each other through their straight portions, and in the second position, said

members will lie substantially in contact throughout their length, thereby facilitating their interconnection and the attachment of a cover for said vehicle top.

1,109,432. BED-COVER AND AUTOMOBILE-ROBE HOLDER. WARREN LEWIS, Coutolenc, Cal. Filed July 11, 1913. Serial No. 778,609. (Cl. 5—22.)

1. A holder for covering comprising an elastic strap adapted to surround the covering, a ring carried intermediate the end of the strap, a pair of rings secured to one of the ends of said strap, a snap hook carried on the other end of said strap and adapted to engage one of said last named rings, and flexible tie cords carried by the first named and the other of the last named rings.

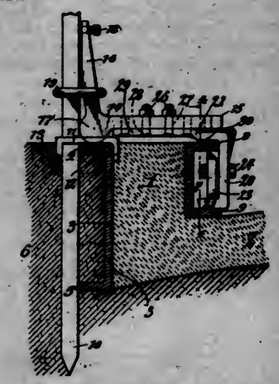
2. A holder for covering comprising an elastic strap adapted to suround the covering, a ring carried intermediate the end of the strap, a flexible tie cord carried by said ring, a pair of rings secured to one of the ends of the strap, a snap hook, the other end of said strap being looped through the snap hook, an adjusting buckle on said strap adjacent the last named end thereof and secured to the last named end and a flexible tie cord carried by one of last named rings, the other of said last named rings being adapted for engagement with the snap hook.

1,109,433. CONCRETE-MOLD. FRED J. LEYDECKER and ADOLPH J. LEYDECKER, Ebenezer, N. Y. Filed July 9, 1913. Serial No. 777,994. (Cl. 25—118.)

1. A concrete curb mold comprising a high outer wall, a low inner wall having its upper edge flush with the upper edge of said outer wall, and means for adjusting said walls vertically one relatively to the other comprising a lever pivoted to turn vertically on said outer wall and connected with said inner wall.

2. A concrete mold comprising a stake, an outer wall arranged adjacent to said stake, an inner wall, and a supporting lever having a lower arm connected with said inner wall, an upper arm connected with said stake, and a knuckle engaging with the corner between the upper edge of said outer wall and the adjacent surface of said stake.

3. A concrete mold comprising a stake, an outer wall arranged adjacent to said stake, an inner wall, a supporting lever supported on the outer wall and having a lower arm connected with said inner wall and an upper arm, and means for adjustably connecting said upper arm and said stake.

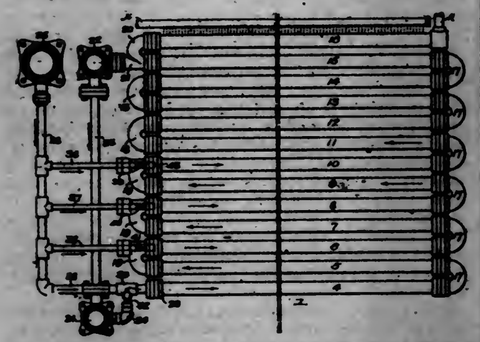


4. A concrete mold comprising a stake, an outer wall arranged adjacent to said stake, an inner wall, a supporting lever supported on the outer wall and having a lower arm connected with said inner wall and an upper arm, and means for adjustably connecting said upper arm and said stake, comprising an adjusting screw arranged on said upper arm and engaging said stake, and a ring slipped over said stake and upper arm.

5. A concrete curb mold comprising a high outer wall, a low inner wall, a lever resting on the outer wall, and means for connecting said lever and inner wall comprising a hanger having an upright bar arranged on the outer side of the inner wall and connected with the latter, and means for adjustably connecting said lever and hanger.

[Claims 6 to 8 not printed in the Gazette.]

1,109,434. CONDENSER. PETER J. LEYENDECKER, Haddonfield, N. J. Filed Jan. 28, 1913. Serial No. 744,775. (Cl. 257—28.)



1. A condenser comprising a body portion; a main gas inlet pipe communicating therewith; an agitating nozzle for injecting additional quantities of gas into said body portion; means for delivering gas to said nozzle; and a condensed liquid discharge pipe for said body portion.

2. A condenser comprising a body portion; a main gas inlet pipe communicating therewith; a series of agitating nozzles connected to a source of gas and arranged to inject gas into the interior of said body portion at different points of the length thereof; and a condensed liquid discharge pipe for the said body portion.

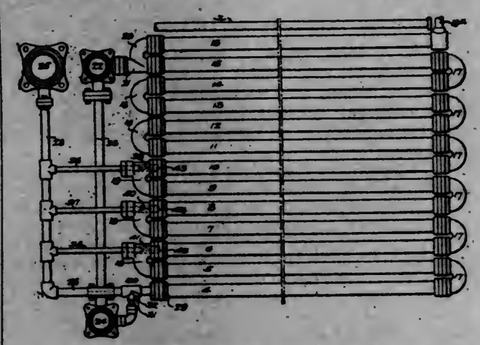
3. A condenser comprising a coil; a main gas inlet pipe communicating therewith; an agitating nozzle connected to a source of gas and arranged with its delivery passage in position to direct gas into the coil at an angle to the line of the adjacent portion thereof; and a condensed liquid discharge pipe for the said coil.

4. A condenser comprising a body portion; a main gas inlet pipe communicating therewith; an agitating nozzle connected to a source of gas and mounted to inject additional gas into said body portion; a device coöperating with the nozzle to form a suction within the coil for accelerating the movement of the fluid therein; and a condensed liquid discharge pipe for the said body portion.

5. A condenser comprising a body portion; a main gas inlet pipe communicating therewith; an agitating nozzle connected to inject additional gas into said body portion; a sleeve provided with ports and surrounding said nozzle, said sleeve being open adjacent the discharge end of the nozzle; means for delivering gas to the nozzle and thence through said sleeve to form a suction through the ports thereof; and a condensed liquid discharge pipe for the coil.

[Claims 6 to 12 not printed in the Gazette.]

1,109,435. CONDENSER. PETER J. LEYENDECKER, Haddonfield, N. J. Original application filed Jan. 28, 1913, Serial No. 744,775. Divided and this application filed Aug. 18, 1913. Serial No. 785,358. (Cl. 257—28.)



1. A condenser consisting of a coil having a plurality of convolutions of tubing; a gas inlet pipe leading therein; a nozzle for injecting a spray of liquid into the incoming gas; means for supplying liquid to said nozzle; and a discharge pipe for the condensed liquid.

2. A condenser consisting of a coil having a plurality of super-imposed convolutions of tubing; a gas inlet pipe leading into the coil adjacent the bottom thereof; a nozzle extending into the gas inlet pipe for injecting a spray of liquid therein; means for supplying liquid to the nozzle; and a condensed liquid discharge pipe leading from the upper portion of the coil.

3. A condenser consisting of a coil having a plurality of super-imposed convolutions of tubing; a gas inlet pipe leading into the coil adjacent the bottom thereof; a nozzle extending into the gas inlet pipe for injecting a spray of liquid therein; a condensed liquid discharge pipe leading from the upper portion of the coil; and a pipe connecting said discharge pipe and the nozzle.

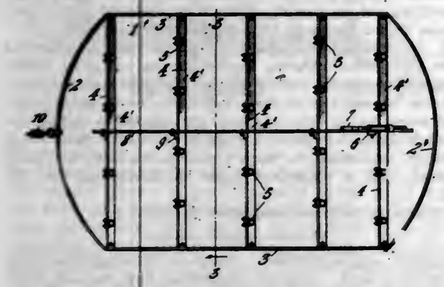
4. A condenser consisting of a coil having a plurality of convolutions of tubing; a gas inlet pipe leading therein; a condensed liquid discharge pipe leading therefrom; and a nozzle for injecting liquid into the gas inlet, said nozzle having a contracted passage leading into the ejecting opening thereof.

5. A condenser consisting of a coil having a plurality of convolutions of tubing; a gas inlet pipe leading therein; a condensed liquid discharge pipe leading therefrom; and a nozzle having an enlarged ejecting passage and a contracted passage leading thereto.

1,109,436. HARROW. MACK C. LUSTER, Okmulgee, Okla. Filed July 15, 1913. Serial No. 779,192. (Cl. 55—108.)

1. An implement comprising a leveling frame composed of parallel longitudinal side bars and outwardly curved

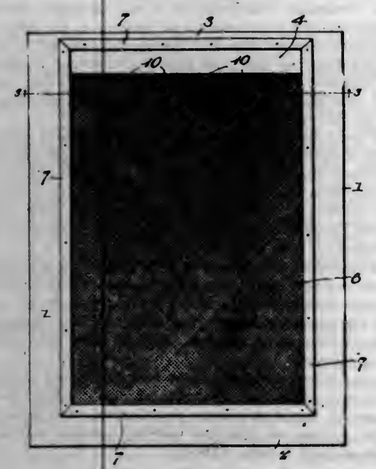
end bars uniting the extreme ends thereof and lying in the same horizontal plane therewith, a plurality of earth working tools depending from said frame, and means whereby said tools may be inclined downwardly and forwardly, whereby said leveling frame is forced into contact with the soil as the device is drawn forwardly.



2. An implement comprising a leveling frame composed of parallel longitudinal side bars and outwardly curved end bars uniting the extreme ends thereof and lying in the same horizontal plane therewith, a number of transverse tooth supporting bars pivotally supported within said frame, teeth depending from said bars, and means whereby said bars may be rocked to incline said teeth downwardly and forwardly, whereby said leveling frame is forced into contact with the soil as the device is drawn forwardly.

3. An implement comprising a leveling frame composed of parallel longitudinal side bars and outwardly curved end bars uniting the extreme ends thereof and lying in the same horizontal plane therewith, a number of transverse tooth supporting bars pivoted at their opposite ends to said side bars and lying within said frame, teeth depending from said bars and means whereby said bars may be rocked around their pivots to incline said teeth downwardly and forwardly, whereby said leveling frame is forced into contact with the soil as the device is drawn forwardly.

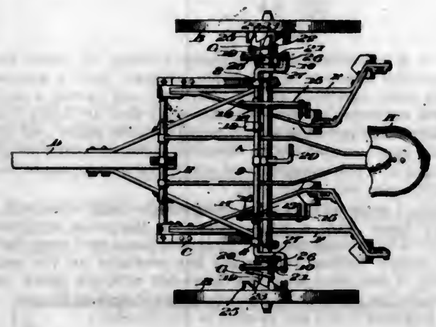
1,109,437. SCREEN. ELIZABETH LYNCH, Minneapolis, Minn. Filed Sept. 19, 1913. Serial No. 790,730. (Cl. 156—37.)



1. A screen including side and end frame bars, the upper frame bar having its inner or lower edge of less width than its upper edge throughout the full length of said bar between the side bars and presenting an inclined inner surface leading from the lower edge toward the upper edge, the upper edge of the screen cloth being secured beneath the lower edge of the upper frame bar and presenting a lateral projection at its upper edge throughout the full length of the screen cloth intermediate the side bars.

2. A screen including side and end frame bars, the upper frame bar having its inner or lower edge of less width than its upper edge throughout the full length of said bar between the side bars and presenting an inclined inner surface leading from the lower edge toward the upper edge, the upper edge of the screen cloth being secured beneath the lower edge of the upper frame bar and presenting a lateral projection at its upper edge throughout the full length of the screen cloth intermediate the side bars, said screen cloth at the juncture of the lateral projection and main length of said cloth being formed with openings.

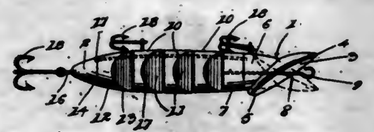
1,109,438. CULTIVATOR. SHERLEY B. LYON, Lexington, Ky. Filed Apr. 18, 1913. Serial No. 761,998. (Cl. 97—55.)



1. A riding cultivator having supporting wheels and implement carrying beams, a rock shaft supported on the cultivator frame, stop means for limiting the oscillation of the rock shaft in one direction, means connecting the rock shaft with the beams to elevate the latter by the oscillation of the rock shaft, means for transmitting motion from a supporting wheel to the rock shaft including a crank on the latter, a member supported for oscillation about the axis of the supporting wheel and having a radial arm, means connecting said arm with the crank of the rock shaft, a bell crank fulcrumed on the oscillatory member, a ratchet wheel secured on the supporting wheel and concentric therewith, and ratchet engaging means carried by one arm of the bell crank; a spring actuated rock shaft supported in substantially parallel relation to the first mentioned rock shaft and having a crank, means connecting said crank with the second arm of the bell crank, a lever extending radially from the spring actuated rock shaft and having a catch, and a stop member extending from the first mentioned rock shaft and adapted to engage said catch.

2. A riding cultivator having supporting wheels and implement carrying beams, a rock shaft supported on the cultivator frame and having segment racks, levers fulcrumed upon the rock shaft and having stop members adjustably engaging the segment racks, links connecting the levers with the beams, means for transmitting motion from a supporting wheel to the rock shaft including an oscillatory member and a bell crank fulcrumed thereon for throwing the transmission means into and out of gear, a spring actuated rock shaft supported in substantially parallel relation to the first mentioned rock shaft and having a terminal crank, means connecting said crank with the bell crank governing the transmission means, means for limiting the oscillation of the first mentioned rock shaft in one direction, a stop member extending from said rock shaft, and a lever extending from the spring actuated rock shaft and having a catch adapted to engage the stop member.

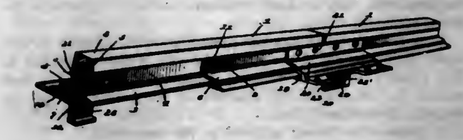
1,109,439. ARTIFICIAL BAIT. EDWARD J. MAUS, Joliet, Ill. Filed Jan. 23, 1914. Serial No. 813,925. (Cl. 43—30.)



1. An artificial minnow provided with a pivoted and adjustable head, said head having an inclined and concave front surface, a plurality of sections having cut-away portions providing diverging side surfaces, said sections and head being connected together by means of a cord extending through the sections and connected to the head and tail members of the minnow.

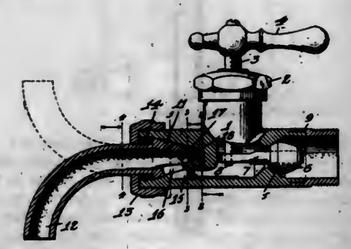
2. An artificial minnow comprising a series of sections connected together by a flexible cord, said sections being cut away at their opposite sides to permit the minnow to articulate in the water, said minnow having a head portion pivoted on a longitudinally disposed pin and provided with an inclined and concave front surface, said head member being reversible to dive or float, and a tail member provided with converging side surfaces and a threaded rod extending into the tail section and provided with a loop for the connection of a duplex hook.

1,109,440. RAIL. WILLIAM W. MCELRATH, Sr., East Radford, Va. Filed Dec. 2, 1913. Serial No. 804,257. (Cl. 239—16.)



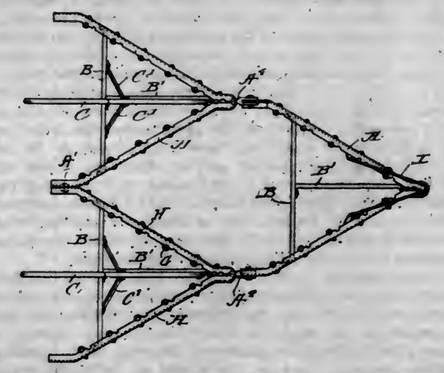
In combination, a main rail, the head of said rail having depending longitudinal edge portions defining channels with the opposite side faces of the web of the rail, side plates of substantially L-shaped formation engaging the base flange and web of the rail and having their upper edges snugly disposed within said channel, each of said plates being formed with a laterally disposed shoulder for engagement with the said depending edges of the head of the rail, and a chair receiving said rail and bearing against the underside of said shoulder.

1,109,441. FOUNTAIN-FAUCET. JOHN F. MCGOWAN, San Mateo, Cal. Filed May 3, 1913. Serial No. 765,358. (Cl. 137—7.)



A fountain faucet comprising a straight shank having a valve therein and a curved spout revolubly mounted to rotate about the axis of said straight shank, said curved spout having a large inlet opening and a small inlet opening, means to regulate the size of the small opening, and means to secure the spout to the shank.

1,109,442. HARROW. OSCAR LEE MCKINLEY, Demopolis, Ala. Filed Sept. 17, 1913. Serial No. 790,195. (Cl. 55—32.)

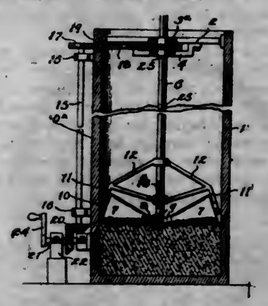


1. A harrow consisting of a plurality of rearwardly opening V-shaped sections, each of which sections is provided at its apex with an elongated goose neck curve and with angular extensions at its rear ends projecting parallel with the line of draft, and each section being provided with an aperture centrally of its goose neck curve and apertures in its said extensions, a bolt connecting the adjacent side extensions of each pair of rear sections and passing through the openings of said extensions, and a bolt secured through the opening of the goose neck curve of each rear section and connected at its forward end to one of the rear extensions of one of the said sections, substantially shown and described.

2. A harrow section consisting of a substantially V-shaped frame having a forwardly elongated goose neck curve substantially in the center of the line of draft and having angular rearward extensions at its rear ends arranged parallel with the line of draft, the frame being also provided with apertures in the central forward portion of its goose neck curve and through its rear extensions, and a plurality of teeth adjustably connected along the frame sides, substantially as described.

3. A harrow section consisting of a substantially V-shaped frame having transverse and longitudinal brace members and having a forwardly elongated goose neck curve at its apex, and a plurality of harrow teeth adjustably mounted along the inner surface of the frame, the forward tooth of which is disposed within the goose neck curve and in line with the teeth along that of the frame sides whereby to eliminate all side draft.

1,109,443. ROLLER ENSILAGE-PACKER. EMERSON O. MCLAUGHLIN, Moorefield, Nebr. Filed May 21, 1914. Serial No. 839,950. (Cl. 100—56.)



1. An ensilage packer for silos including an upright shaft arranged within the silo, means for rotating the shaft, brackets projecting from the shaft, rollers upon the brackets for engaging the silo to maintain the shaft in a

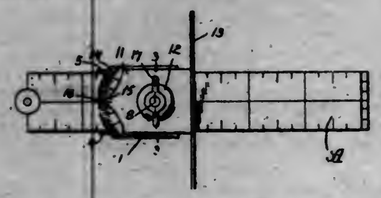
centered position therein, a second set of brackets projecting from the shaft, and packing rollers journaled between the second set of brackets and the shaft.

2. An ensilage packer for silos including a sprocket wheel formed with a polygonal opening, means for mounting the sprocket wheel at the upper end of a silo, means for driving the sprocket wheel, a polygonal shaft extending through the silo and slidably received within the polygonal opening of the sprocket wheel, said polygonal shaft being formed with short sections which have a detachable connection so that as the shaft moves upwardly the sections thereof above the sprocket wheel can be removed, brackets projecting laterally from the lower end of the shaft, rollers upon the brackets for engaging the interior of the silo to hold the shaft in a properly centered position therein, a second set of brackets projecting from the lower end of the shaft, and packing rollers journaled between the second set of brackets and the shaft.

3. An ensilage packer for silos, including an upright shaft arranged within the silo, brackets projecting from the shaft, rollers upon the brackets for engaging the silo to maintain the shaft in a centered position therein, a second set of brackets projecting from the shaft, packing rollers journaled between the second set of brackets and the shaft, a drive wheel having a central opening through which the shaft slidably passes, tensioning means upon the drive wheel for engaging the shaft, and means for operating the drive wheel.

4. An ensilage packer for silos, including an upright polygonal shaft arranged within the silo, a packing roller at the lower end of the shaft, brackets projecting from the shaft, rollers upon the brackets for engaging the silo to maintain the shaft in a properly centered position therein, a drive wheel having a central polygonal opening through which the shaft slidably passes, means for driving said drive wheel, a fixed roller carried by the drive wheel and engaging one side of the shaft, a movable roller carried by the drive wheel and engaging the opposite side of the shaft, spring means for holding the movable roller in operative position, and means for adjusting the tension of the spring means.

1,109,444. ATTACHMENT FOR RULERS. HARRY A. MCLAUGHLIN, Jacksonville, Fla. Filed Aug. 26, 1913. Serial No. 786,789. (Cl. 33—43.)



An attachment for rulers comprising a slide said slide consisting of a base plate, sides at right angles to said base plate formed integral with said base plate, a boss formed centrally on said base plate, a vertical screw mounted within said boss, a plate pivotally mounted upon said base plate, said plate having a transversely extending portion disposed in a plane at right angles to the plane of said plate, said last mentioned plate provided centrally with a depression adapted for engagement with said boss, said screw extended through said depression, and means for locking said plate in adjusted position including a thumb screw mounted on said vertical screw and adapted for engagement with said last named plate.

1,109,445. SEAM-SPACER FOR SEWING-MACHINES. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 11, 1907. Serial No. 373,070. (Cl. 112—12.)

1. The combination with a plurality of needles and complementary stitch forming mechanism of means cooperating therewith to form and stitch simultaneously a plurality of tucks and means for varying the distance between the lines of stitching forming the tucks.

2. The combination with a plurality of needles and complementary stitch forming mechanism and means cooperating therewith for forming independent stitched tucks and adjustable means located between said tuck forming devices for varying the distance between said tucks.

3. The combination with a plurality of pairs of needles, a presser foot, a work support means coöperating with the needles to form spaced tucks, a rib or fin, carried by one of said parts and located between said pairs of needles, the other of said parts having a groove for receiving said rib or fin and means for adjusting the position of said rib or fin whereby the distance between the tucks may be varied.

4. The combination with a plurality of needles and complementary stitch forming mechanism of a presser foot, a rib carried by said presser foot, means for adjusting said rib, and a work support having a groove to receive said rib.

5. A presser foot having spaced grooves formed in the lower face thereof, for receiving tucks, a rib connected to the presser foot and located between said grooves and means for adjusting the amount of projection of the rib beneath the presser foot.

[Claims 6 to 14 not printed in the Gazette.]

1,109,446. SOIL-TESTER. MILLER L. MELBERG, Bloomer, Wis. Filed Nov. 3, 1913. Serial No. 798,988. (Cl. 83—15.)

1. In a device of the character described, a tubular body member having an open lower end, a removable magazine mountable in the body member, and a cutting element secured to the lower terminal of the body member and feeding into the magazine.

2. In a device of the character described, a tubular body member, a cutting element secured to the lower terminal of the tubular body member, and forming in connection therewith a substantially conical tip, a magazine removably mounted in the body member and having an open lower end, and a detachable handle for the upper terminal of the body member.

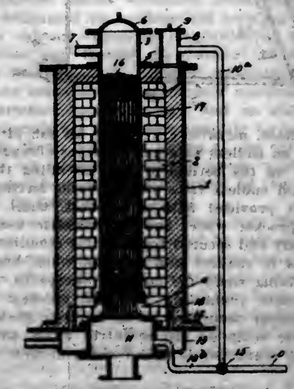
3. In a device of the character described, a tubular body member, a detachable handle carried by one terminal of the body member, a cylindrical cutting element secured to the other terminal of the body member, and a removable magazine adapted to be arranged in the body member and adapted to receive the material which passes through the cutting element into the body member.

4. In a device of the character described, a tubular body member, a removable handle for one terminal thereof, said body member being formed at its other terminal with a number of longitudinally extending V-shaped incisions, a cylindrical cutting member having its lower terminal sharpened, said cutting member being arranged in the incised terminal of the body member, the tongues produced by incising the body member being bent inwardly to produce a conical portion and having their lower edges in engagement with the cutting member at a point intermediate the length thereof, a binder interposed between the outer wall of the cutting member and the inner walls of the said tongues, said binder terminating at a point short of the inner terminal of the cutting member, and a cylindrical magazine removably mounted in the body-member and disposed with its lower terminal in the annular chamber defined by the binder and adjacent portions of the cutting member and body member.

5. In a device of the character described, a body member open at its lower end, a removable handle forming a closure for the upper terminal of the body member, a cutting element carried by the lower terminal of the body member, and a removable magazine insertible in the body member through the upper terminal thereof, said magazine being adapted to receive material which is fed into the body member through the cutting element.

[Claims 6 to 9 not printed in the Gazette.]

1,109,447. GENERATION OF HYDROGEN BY MEANS OF IRON. ANTON MESSERSCHMITT, Stolberg, Germany. Filed June 26, 1912. Serial No. 705,970. (Cl. 48—198.)



1. An improved process for the generation of hydrogen by the alternate oxidation of spongy iron by a draft current of steam and the reduction of the resulting iron by a draft current of reducing gases, which comprises passing the various draft currents through a charge of spongy iron combined with compact iron, the surface layers only of the compact iron taking part in the reactions as set forth.

2. An improved process for the generation of hydrogen by the alternate oxidation of spongy iron by a draft current of steam and the reduction of the resulting iron oxid by the reducing gases, which comprises passing the various draft currents through a charge of spongy iron contained in open receptacles composed of compact iron arranged in the reaction vessel as set forth.

3. An improved process for the generation of hydrogen by the alternate oxidation of spongy iron by a draft current of steam and the reduction of the resulting iron oxid by reducing gases, which comprises passing the various draft currents through a charge of spongy iron intermingled with and reinforced by compact iron in the reaction vessel as set forth.

4. An improved process for the generation of hydrogen by the alternate oxidation of spongy iron by a draft current of steam, and the reduction of the resulting iron oxids by reducing gases, which comprises passing the various draft currents through a charge of spongy iron in receptacles of compact iron having walls pervious to gas, arranged in the reaction vessel, as set forth.

5. An improved process for the generation of hydrogen by the alternate oxidation of spongy iron by a draft current of steam and the reduction of the resulting iron oxid by reducing gases, which comprises passing the various draft currents through a charge composed of masses of combined spongy iron and compact iron arranged with interspaces between the said masses in the reaction vessel, as set forth.

1,109,448. MANUFACTURE OF HYDROGEN. ANTON MESSERSCHMITT, Stolberg, Germany. Filed Mar. 14, 1913. Serial No. 754,335. (Cl. 48—198.)

1. In the manufacture of hydrogen, the process which comprises alternately contacting a current of reducing gas and a current of steam with a mass of material comprising oxids of two or more of the metals of the iron group and collecting the hydrogen produced by the latter current.

2. In the manufacture of hydrogen, the process which comprises alternately contacting a current of reducing gas and a current of steam with a mass of material comprising a manganese oxid and an oxid of another metal of the iron group and collecting the hydrogen produced by the latter current.

3. In the manufacture of hydrogen, the process which comprises alternately contacting a current of reducing gas and a current of steam with a mass of material comprising a manganese oxid and an iron oxid and collecting the hydrogen produced by the latter current.

4. In the manufacture of hydrogen the process which comprises alternate reduction and steaming of a pervious ferruginous reaction mass containing iron and sufficient finely distributed manganese oxid to maintain the porosity of the mass.

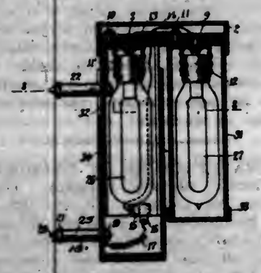
5. In the manufacture of hydrogen, the process which comprises alternately contacting a current of reducing gas and a current of steam with a mass of material comprising a native ore comprising manganese and iron and collecting the hydrogen produced by the latter current.

1,109,449. LINER FOR WOOD-PULP DIGESTERS. GEORGE ERNEST MILLER, Madison, Me. Filed Jan. 15, 1914. Serial No. 812,302. (Cl. 92—19.)

A digester comprising a metallic casing, a plurality of acid-proof members disposed therein and constituting a

lining therefor, a longitudinally extending bead formed on two sides of the latter, the remaining sides having therein a similarly extending channel whereby when said members are placed in position the bead on one member will project into the channel of the adjacent member, hook-shaped projections extending longitudinally across the upper face of said members, said projections being formed integral with said members and composed of the same material as the latter and adapted to coact therewith to form pipe supports.

1,109,450. TESTING-LAMP AND FUSE-TESTING DEVICE. CHARLES W. MITCHELL, New York, N. Y., assignor of one-half to Charles W. Lansing, Brooklyn, N. Y. Filed May 8, 1912. Serial No. 695,859. (Cl. 175—183.)



1. In a testing device of the class described, the combination with a housing, a signal device arranged in the housing, a contact member arranged in the housing, means for connecting one side of said signal device to said contact, a telescoping cover for said housing, and a contact connected with said telescoping cover, of a flexible wire connecting said contact with the opposite side of said signal devices to said first mentioned contact, the telescoping cover permitting the ready adjustment of the distance between said contacts, and said flexible means maintaining a continuous circuit.

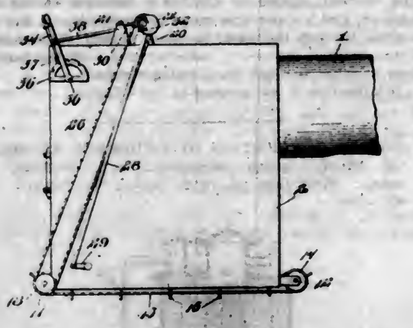
2. In a device of the character described, the combination with a housing, lamps positioned in said housing, means for connecting the lamps in series, a contact member connected with one side of said lamps and carried by said housing, a telescoping cap for said housing and a contact carried thereby, of means for connecting said last mentioned contact with said lamp adapted to permit a free reciprocation of said cap for permitting a variation of the distance between said contacts, said means including a socket rigidly secured to said housing, a knife removably fitting into said socket, and a flexible conductor connecting said knife and the contact mounted on said cap.

3. In a testing device of the character described, a pair of lamps, a base for supporting said lamps, side by side, a housing secured to said base formed with a window in a plane between said lamps, a telescoping cap fitting over said housing formed with a window registering with the window in said housing, a contact member secured to said housing, means for connecting one side of said lamps to said contact member, a contact member secured to said cap, flexible means connecting said last mentioned contact with said lamps, said flexible means permitting a back and forth movement of said cap without breaking the circuit, and said windows in said cap and said housing permitting a view simultaneously of both of said lamps.

4. In a testing device of the character described, a pair of lamps, means for connecting the same in series, a housing for inclosing said lamps, a contact member secured to said housing, means for connecting said contact member with one side of said lamps, said housing being formed with a window, a cap formed with a window and a slot, said cap fitting over said housing and adapted to be moved longitudinally thereof, said slot accommodating said contact member and said window co-acting with the window in said housing for disclosing to view said lamps, a contact member mounted on said cap, and a flexible wire for connecting said contact member with said lamps regardless of the position of the contact member.

5. In a testing device of the character described, a pair of lamps, a socket for each lamp, a housing for said lamps, a base member for supporting said sockets spaced from the end of said housing whereby a large and small compartment is provided, said lamps occupying said large compartment, clamping means extending through said base member from said smaller compartment and engaging said sockets for holding the same in position, said clamping members acting as terminals for the opposite sides of each of said lamps, a cover for the end of said housing carrying said base member, a fuse connecting some of said clamping members for connecting the lamps in series, a contact member rigidly secured to said housing, means for connecting said contact member with one of said clamping members, a socket secured to the housing at the upper end thereof, means for flexibly connecting said socket with one of the terminals of said lamps whereby current entering said contact member must pass through both of said lamps and said socket, a telescoping cover for said housing, a contact member rigidly connected with said telescoping cover, a knife removably engaging said socket, and means for connecting said knife and the contact member carried by said cap, said means being flexible and adapted to permit a longitudinal back and forth movement of said cap without causing the withdrawal of said knife from said socket.

1,109,451. FURNACE-CLEANER. PETER MOLSTAD, Macoun, Saskatchewan, Canada. Filed Dec. 20, 1913. Serial No. 808,041. (Cl. 110—165.)

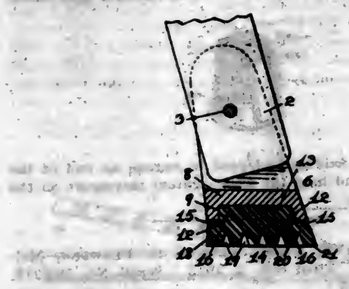


In a furnace, movable grate bars, an ash pit below the grate bars, an endless rake and conveyer arranged with its upper lead on the bottom of and extending through the ash pit, said endless rake and conveyer having an actuating shaft provided with a sprocket wheel, a driving shaft, a sprocket wheel and an eccentric loose on said driving shaft and secured together for simultaneous rotation, means to connect said sprocket wheel and eccentric to said driving shaft for rotation therewith, an endless sprocket chain connecting the said sprocket wheels, a rocking element connected to the movable grate bars and an eccentric strap on the eccentric wheel and provided with a rod connected to said rocking element to actuate the latter.

1,109,452. SAFETY-FOOT FOR LADDERS. GEORGE W. MORRISON, Lowell, Mass. Filed Apr. 16, 1914. Serial No. 832,345. (Cl. 228—5.)

In a ladder foot, an oblong bottom-recessed base having lateral, vertical, parallel ears provided with edges inclined in the same direction from the bottom line of the base, and a shouldered rubber pad having a solid perforated upper portion engaging the recess of said base, a circumscribing outward and downward sloping shoulder angularly engaging the wall of said recess, to provide a working interval, and an elongated lower portion having a series of separately inclosed bottom recesses having marginal

separating ribs within an inclosing wall, said wall and ribs having their bottom edges in the same horizontal plane,



and transverse parallel bolts for connecting the ladder, the pad and the base.

1,109,453. BANK-CHECK. LOYAL H. MUDGE, Denver, Colo. Filed Aug. 27, 1912, Serial No. 717,338. Renewed June 19, 1914. Serial No. 846,201. (Cl. 11—13.)

1. A check having extensions at both ends divided into narrow spaces for the reception of writing, said spaces being respectively designated by suitable signs to guide the writer of the check, the order of said signs upon opposite ends of the check and with respect to the middle thereof, being reversed.

2. A check having extensions at both ends thereof divided into narrow spaces extending transversely of the check and designated by arithmetical notation signs arranged in a column extending lengthwise of the check and at the lower edge thereof, the spaces at one end of the check being subdivided, the different subdivisions of the various spaces containing inconspicuous numerals from 1 to a predetermined higher numeral and on which corresponding numerals are to be conspicuously formed by the writer of the check, while the spaces at the opposite end of the check are adapted to receive words corresponding with the numerals conspicuously formed by the writer of the check on the numeral end thereof.

3. A check having extensions at both ends divided into narrow spaces respectively designated by suitable signs to guide the writer of the check, the said signs being the same at both ends of the check but arranged in reverse order with reference to the outermost end of the check.

4. A check having extensions at both ends divided into narrow spaces respectively designated by suitable signs to guide the writer of the check, the spaces at each end having their respective signs consecutively arranged, the sign indicating the highest number being outermost at one end of the check and innermost at the opposite end thereof, for the purpose set forth.

5. A check having extensions at both ends thereof, divided into narrow spaces extending transversely of the check and respectively designated by suitable signs arranged in columns extending lengthwise of the check and at the edge thereof, the sign designating the space in which are to be written numerals indicating the highest amounts being placed outermost on one end extension and innermost on the other end extension, the denominations of the other spaces being arranged in numerical order, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,109,454. CONVERTIBLE SWING. WILLIAM H. MOLLER, Union Course, N. Y. Filed Oct. 4, 1913. Serial No. 793,281. (Cl. 155—6.)

1. In a convertible swing, a horizontal bottom box frame, end frames and a back projecting up from said bottom frame, a bed bottom secured under said bottom frame, a false bottom or seat removably mounted on said bottom frame and spaced above said bed bottom, and at least one side frame adapted to be located in said bottom frame between said false bottom and said bed bottom, and also adapted to be projected above said bottom frame when said false bottom is removed.

2. A convertible swing which includes a box-like bottom frame, a bed bottom secured beneath the same, front and back corner posts projecting upwardly from said bottom frame, handle members connecting the front and back posts at the ends of the frame, said back posts extending above said handle members, back slats connecting said rear posts, screened frames mounted beneath said handle members between the front and back posts, a screened front and a screened back frame mounted on said bottom frame, and adapted to project upwardly therefrom, said screened front and back frames terminating in a horizontal plane substantially coincident with that of said handle members, said front frame adapted to be folded down into said bottom frame when not in use, and a false bottom or seat supported by said bottom frame over and spaced from said bed bottom when said front frame is folded down, substantially as shown and described.

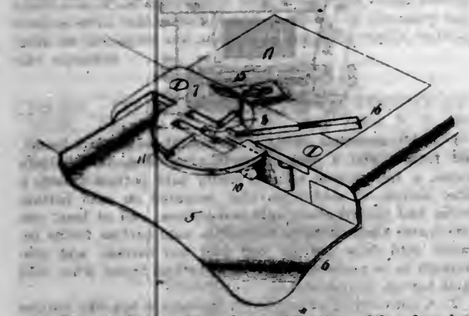
3. A convertible swing and crib which comprises a rectangular bed frame consisting of front and side bars, a bottom frame secured beneath the bed frame, a bed bottom carried by said bottom frame, a back projecting upwardly from said bed frame, relatively fixedly located side posts and handles, projecting upwardly at the ends of said bed frame, and at least one longitudinal frame hingedly secured to be folded down in said bed frame, or be projected upwardly therefrom, and a false seat carried by said bed frame to cover said longitudinal frame when folded down, said removable seat being adapted to be supported from said longitudinal and end frames when the same are upwardly projected to form a top when said longitudinal frame is projected upwardly.

1,109,455. OVERSEAMING-MACHINE. LANSING ONDERDONK, New York, N. Y., assignor to The Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 4, 1901, Serial No. 63,078. Divided and this application filed July 12, 1906. Serial No. 325,916. (Cl. 112—29.)

1. A work support having a feed slot therein, and a relatively small projecting portion, around which small tubular articles may be fed, said work support having a cut-away portion extending to the rear of said feed slot, whereby said tubular articles, by contact with said cut-away portion are stripped from the work support after passing the feed.

2. A work support having a feed slot therein, a needle opening and an opening therein extending substantially at right angles to the feed slot for the operation of an overedge thread carrying implement, said work support having a relatively small projecting portion, around which small tubular articles may be placed, said projecting portion being cut-away from a point substantially in the rear of the feed slot toward the front of the machine, whereby tubular articles by contact with the cut-away portion, after being stitched, are deflected from the line of feed, toward the front of the machine, so that very small articles may be stitched.

3. In a sewing machine the combination with a cloth plate, a projecting horn or work support carried thereby, and a cloth support located in a plane below the horn for supporting the body of the fabric, and the hand of the operator, while a portion of said fabric is being manipulated on the horn.

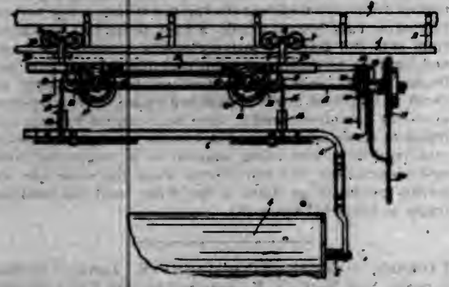


4. In a sewing machine the combination with a flat cloth plate, a projecting horn carried by the cloth plate and extending beyond the edge thereof, whereby tubular articles may be placed over said horn, said horn having feed slots therein, and being cut-away from a point in rear of the feed slots toward the front of the machine.

5. In a sewing machine, the combination with a cloth plate, a throat plate secured to said cloth plate, and projecting therefrom, a plate extending in a plane below said throat plate, and having a downwardly turned portion at the forward end therefor.

[Claim 6 not printed in the Gazette.]

1,109,456. LITTER-CARRIER. GUSTAV A. OLSON, Albert Lea, Minn. Filed Dec. 7, 1912. Serial No. 735,463. (Cl. 212—135.)



The combination with a truck arranged to travel on an elevated track, of a bucket supporting frame, a bucket pivotally connected to said frame, a pair of windlasses and a pair of cable guiding wheels carried by and spaced in reverse arrangement longitudinally of said truck, cables independently attached one to each of said windlass drums and extended in reverse directions over said cable guiding wheels and thence downward and attached to said bucket supporting frame, said cables being attached to said windlass drums on the same side of said truck, a shaft carried by and extended longitudinally of said truck, and gears connecting said shaft to said windlass drums and arranged to simultaneously rotate the same in reverse directions.

1,109,457. THIMBLE. WILLIAM R. PIKE, Lenox, Mass. Filed Oct. 7, 1913. Serial No. 793,922. (Cl. 223—51.)

As a new article of manufacture, a thimble comprising a body, guideways formed on the body by striking portions therefrom, a member for sliding engagement with the said guideways, said guideways being relatively inclined and said member having its longitudinal edges inclined to conform to the inclination of the guideways and limit the sliding movement of the member on the guideways, and a lug formed by striking a portion of the said body therefrom with the said lug adapted to engage an end of the said member and hold the same against movement on the said guideways.

1,109,458. BAND-SAW. ARTHUR D. PLOWDEN, Melbourne, Fla. Filed Oct. 3, 1913. Serial No. 793,218. (Cl. 143—133.)

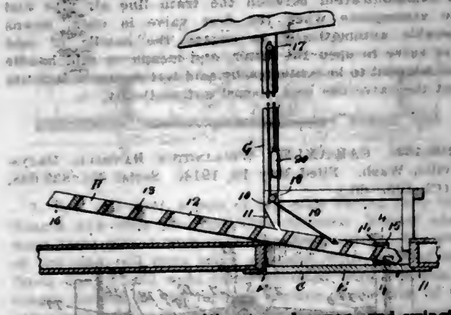
A band saw blade having the rear edge thereof straight on the side remote from the work and beveled on the side next to the work to be sawed so as to tend to run out of the work.

1,109,459. GRINDING-PLATE. EJNAR POSSELT, Denver, Colo. Filed Feb. 21, 1914. Serial No. 820,236. (Cl. 83—9.)

1. In a ball mill, the combination with a plurality of stepped or overlapping grinding plates, each having a plurality of discharge openings formed therein, and blocks fastened to the plates in a position to receive the greatest amount of wear during the grinding operation.

2. The combination with a grinding mill having stepped grinding plates provided with a plurality of discharge orifices, said plates having recesses therein, a block received in each recess for relieving the strain and wear of the plate, and means for removably connecting the blocks to the plates.

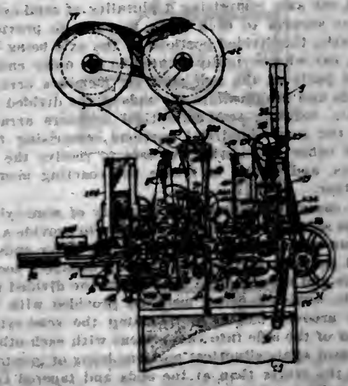
1,109,460. SCUTTLE-LADDER. GEORGE A. FRALL, Keosauqua, Iowa. Filed Feb. 25, 1914. Serial No. 820,987. (Cl. 228—27.)



1. The combination with a trap doorway and swinging door therefor, of a ladder movable through the doorway, guide cleats fixed to the door and engageable with the side rails of the ladder, a railing fixed to the doorway and rising above the plane thereof, vertical posts rising from the railing and having cut-away portions for receiving the side rails of the ladder and forming abutments therefor when the ladder has been extended through the doorway and the door opened, and weighted balancing means supported by the uprights and connected with the ladder.

2. The combination with a trap doorway and swinging door therefor, of a ladder movable through the doorway, guide cleats fixed to the door and engageable with the side rails of the ladder, a railing fixed to the doorway and rising above the plane thereof, vertical posts rising from the railing and having cut-away portions for receiving the side rails of the ladder and forming abutments therefor when the ladder has been extended through the doorway and the door opened, weighted balancing means supported by the uprights and connected with the ladder, slotted keeper plates mounted in the inner face of the door, and gravity catches pivotally mounted on the side rails of the ladder for engagement in the keeper plates to lock the ladder against sliding movement in the guide cleats on the opening of the door.

1,109,461. GUM-WRAPPING MACHINE. ALBERT M. PRICE, Elgin, Ill. Filed Aug. 13, 1913. Serial No. 784,479. (Cl. 93—4.)



1. In a wrapping machine, the combination of a carrier, means for successively charging bundles into said carrier, means for folding a wrapper about three sides of each bundle during charging thereof into said carrier, the wrapper being wider than the bundle, sealing mechanism, means for charging the partially wrapped bundles successively from said carrier into said sealing mechanism to effect folding of the remaining end of the wrappers about the remaining side of the bundles and to overlap the ends of the wrappers, means controlled by said sealing mechanism for sealing together said overlapping ends, a second carrier adapted to receive the bundles from the sealing mechanism, folding mechanism on said second carrier for partially folding the extending sides of the bundles during transit to said second carrier, additional folding mechanism and means for shifting the bundles thereto from said second carrier, said additional folding mechanism effecting complete folding together of the extending sides of the wrapper, and means for sealing said folds together.

2. In a gum wrapping machine, the combination of means for individually wrapping sticks of gum, means for stacking any predetermined number of sticks into bundles, means for winding and folding a wrapper intimately about each bundle, means for sealing together the folds of the wrapper, and means for securing a label about each wrapped bundle.

3. In a wrapping machine of the class described, the combination of a frame for successively receiving bundles of articles, a transfer member having a receiving pocket, means for feeding wrappers one at a time between said frame and receiving pocket, means for discharging a bundle from said frame toward and into said pocket whereby a fed wrapper is wound about three sides of the bundle, a second transfer member having a pocket, means for moving said first transfer member to carry its pocket into register with the pocket of the second transfer member, means for discharging the bundle from said first transfer member to the second transfer member and an intermediate member for wrapping the end of the wrapper about the remaining side of the bundle during such shifting of the bundle between the transfer members, the wrappers being wider than the length of the bundles, means for partially folding the extending sides of the wrapper against the bundle ends during transfer of the bundle to the second transfer member, additional folding mechanism, means for moving said second transfer member into register with said additional folding mechanism, and means for discharging the bundles from said second carrier member to the additional folding mechanism, said additional folding mechanism causing complete folding of the extending sides of the wrapper against the bundle ends, and means for sealing the folds together.

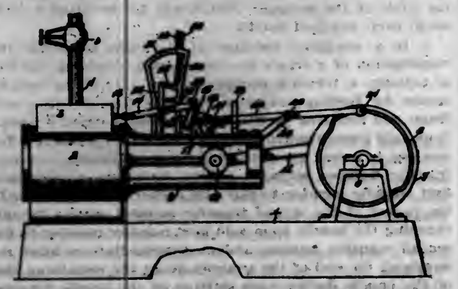
4. In a wrapping machine of the class described, the combination of a frame for successively receiving bundles of articles, a transfer member having a receiving pocket, means for feeding wrappers one at a time between said frame and receiving pocket, means for discharging a bundle from said frame toward and into said pocket whereby a fed wrapper is wound about three sides of the bundle, a second transfer member having a pocket, means for moving said first transfer member to carry its pocket into register with the pocket of the second transfer member, means for discharging the bundle from said first transfer member to the second transfer member and an intermediate member for wrapping the end of the wrapper about the remaining side of the bundle during such shifting of the bundle between the transfer members, the wrappers being wider than the length of the bundles, means for partially folding the extending sides of the wrapper against the bundle ends during transfer of the bundle to the second transfer member, additional folding mechanism, means for moving said second transfer member into register with said additional folding mechanism, means for discharging the bundles from said second carrier member to the additional folding mechanism, said additional folding mechanism causing complete folding of the extending sides of the wrapper against the bundle ends, and means for sealing the folds together.

5. In a wrapping machine of the class described, the combination of a frame for receiving a bundle of articles, a carrier having a receiving pocket, means for feeding wrappers of greater width than the length of the bundles, means for shifting the bundle from said frame into said pocket, means for causing the wrapper to be partly wound about a bundle during such shifting, a second carrier member having a pocket, means for shifting a bundle from said first carrier toward said second carrier and into the pocket of the second carrier, a sealing frame having a

passageway through which said bundle passes on its way to the second carrier, said passageway completing the winding of the wrapper about the bundle, means for partially folding the extending sides of the wrapper against the bundle ends during passage of the bundle into said second carrier, means for discharging the bundle from the second carrier, and additional folding means for receiving the bundle from the second carrier and for completing the folding of the extending sides of the wrapper.

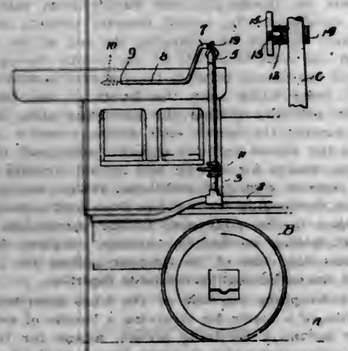
[Claims 6 to 25 not printed in the Gazette.]

1,109,462. STEAM-ENGINE REVERSING-GEAR. LUTHER PROFITT, Mancelona, Mich. Filed Dec. 16, 1913. Serial No. 807,149. (Cl. 121—98.)



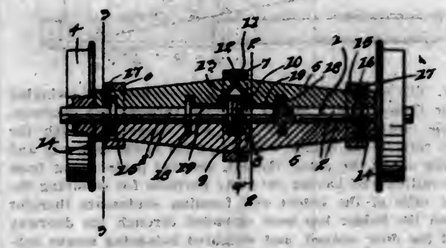
In reversing gear for steam engines, the combination with the steam cylinder, cross head guides, steam valve and crank shaft, of a cam disk fast on said crank shaft and provided with a cam groove, a valve operating link fulcrumed on the cross head guide and having its axis parallel to the axis of said crank shaft, a connecting rod between said link and the stem of said valve, a fork extending laterally from said link and provided with two slots intersecting each other at right angles, a link rocking lever having one end slidable in one of said slots and a pin slidable in the other slot of said fork and the other end provided with a runner working in said cam groove, and a reversing thumb latch lever operatively connected with said connecting rod for shifting the point of engagement between said rod and the valve operating link.

1,109,463. AUTOMATIC TRAIN-STOPPING APPARATUS. WILLIAM F. PURCELL, Hornell, N. Y. Filed Feb. 15, 1913. Serial No. 748,656. (Cl. 246—60.)



In automatic train stopping apparatus, the combination with the train line air pipe of the brake system, of a valve connected in said pipe and adapted when open to bleed the same, a handle on said valve, an operating rod having one extremity connected to said handle and passed through the wall of the locomotive cab, a handle on the cab end of said rod within the reach of the engineer whereby said rod may be actuated to open said valve manually, a second valve connected in said pipe and operable to cut off communication between the train line air pipe and the atmosphere when the first valve is open, means operable automatically to engage the handle of said first valve to open the latter, and means on said handle and adapted to be contacted by said last means to indicate that the valve has been opened automatically.

1,109,464. CAR-AXLE. WELLINGTON RANDALL, Marysville, Wash. Filed May 16, 1914. Serial No. 839,038. (Cl. 105—66.)



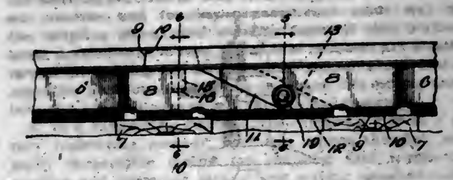
1. A car axle comprising a plurality of semi-cylindrical portions secured to each other to provide a divided axle, car wheels secured to the outer ends of the divided parts of the axle, semi-cylindrical bearing members secured to the inner ends of each divided part of the axle, a pair of semi-cylindrical members having longitudinally grooved flat faces to clamp the divided portions in position, rings securing the semi-cylindrical portions to each other, and means to lubricate the bearing members.

2. A car axle comprising a plurality of semi-cylindrical portions secured to each other in pairs to provide a divided axle, the divided portions of the axle being of equal length, car wheels rigidly secured to the outer ends of the divided parts of the axle, bearing members arranged at the ends and intermediate the ends of the divided parts of the axle, coacting semi-cylindrical members arranged to clamp the semi-cylindrical portions comprising the axle to each other and having recesses to receive the bearing members, means to secure the coacting members to each other and lubricating means for the bearing members.

3. A car axle comprising a plurality of semi-cylindrical portions secured to each other in pairs to provide a divided axle, the divided portions of the axle being of equal length, car wheels rigidly secured to the outer ends of the divided parts of the axle, bearing members arranged at the ends and intermediate the ends of the divided parts of the axle, coacting semi-cylindrical members arranged to clamp the semi-cylindrical portions comprising the axle to each other and having recesses to receive the bearing members, and means to secure the coacting members to each other.

4. A car axle comprising a plurality of semi-cylindrical portions secured to each other in pairs to provide a divided axle, car wheels rigidly secured to the outer ends of the divided portions of the axle, bearing members secured to the ends and intermediate the ends of the divided parts of the axle, semi-cylindrical members provided with longitudinally grooved flat faces to clamp the semi-cylindrical portions of the axle into engagement with each other, said last named semi-cylindrical portions being of greater diameter in the center than at the ends and tapered from the center to the ends, rings mounted upon the ends of the semi-cylindrical members and a ring arranged centrally of the ends of the semi-cylindrical members, said semi-cylindrical members being recessed transversely to receive the bearing members, certain of said recesses being larger than the others to provide oil receiving compartments, and lubricating means communicating with said compartments.

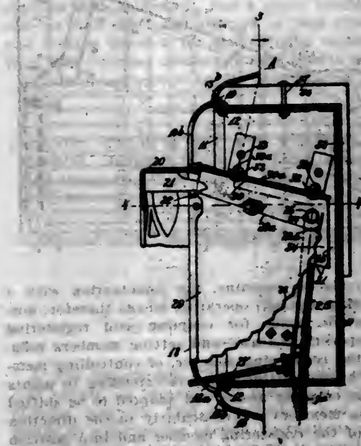
1,109,465. RAIL-JOINT. DAVIS RATCLIFF, Gloster, Miss. Filed Aug. 16, 1911, Serial No. 644,824. Renewed Feb. 2, 1914. Serial No. 816,091. (Cl. 230—8.)



1. In a rail joint, a pair of rail ends having their base flanges and balls provided with reversely beveled abutment faces spaced from each other, respectively, the webs of the said rail ends being provided with inclined surfaces, one of said webs being provided with a recess, a tongue formed on the inclined surface of the web of the other rail and engageable in the recess, a bolt member passed through the tongue and adjacent walls of the recess receiving the same for locking the rail ends together, one of said rail ends being provided with a socket, and a depending locking lug on the other rail end for engagement in the socket to hold the rail ends joined.

2. In a rail joint, a pair of rail ends, each having its ball and base reversely beveled and its web thickened, one of said webs being provided with a medial groove in its free edge, a tongue projecting medially from the other web and engageable in said groove, the ball of one rail being extended beyond the web, the ball of the other rail being retracted from the free edge of its web, whereby on the joining of the webs of the rails the projected portion of the ball of one rail will overlie the web of the other rail, a lug depending from the projected portion of the ball of one rail and engageable with the underlying web of the other rail, and a bolt member passed through the side walls of the groove in one web and engageable in the tongue on the other web.

1,109,466. WALL-HEATER. GEORGE FOSTER REZNOR, Mercer, Pa. Filed Aug. 2, 1913. Serial No. 782,706. (Cl. 126—86.)

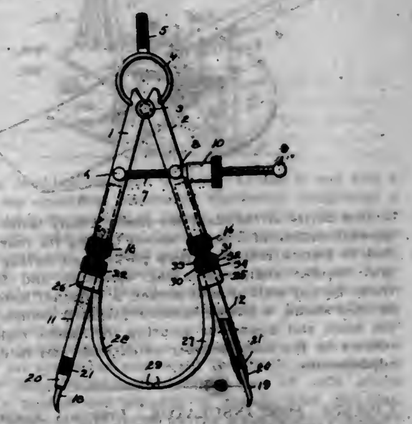


1. In a heater of the character described, a box-like body open at the front, a hood supported in the body below the top thereof and spaced from the back of the body, the intervening air space between the hood and body having an inlet at the bottom and having an outlet through the open front of the body, heating means in the body beneath the hood, and an exterior shell extending over the body at the top and depending at the sides and back of the body, there being an intervening space between the body and shell, the space between the body and shell being open at the bottom and having an outlet at the front of the heater.

2. In a heater of the character described, a box-like body open at the front and adapted to be received in a wall recess, a main frame extending around the body at the front, a shell outside the body and spaced therefrom, said shell extending over the top and depending at the sides, the space between the shell and body being open at the bottom for the inlet of air, and the said main frame having a flange extending rearwardly and outwardly over the front edge of the shell, said flange having an outlet for air from the space between the shell and body, a facing frame supported on the main frame, a hood supported in the body and spaced from the latter, providing an intervening air chamber which is open at the bottom, the said facing frame forming a continuation of the air space between the hood and body and having an outlet for air, and heating means beneath the hood.

3. A heater of the character described, a box-like body having an open front, a transverse burner between the top and bottom of the body, a reflector extending upwardly and rearwardly from the front to the burner and terminating at the back of the burner, and means associated with the body and reflector, forming three separate air chambers, open at the bottom, said means comprising a hood above the reflector and below the top of the body, the hood having a top extending to the front of the body and rearwardly beyond the burner and provided with a depending apron, the hood at the top, back and sides being spaced from the body, and a shell outside the body and spaced therefrom at the top, back and sides, the said space between the hood and the body, being separated from the spaces beneath the hood, the said spaces having separate outlets at the front.

1,109,467. CALIPERS. PHILIP J. ROBINSON, Leominster, Mass. Filed Mar. 11, 1914. Serial No. 823,996. (Cl. 33—152.)

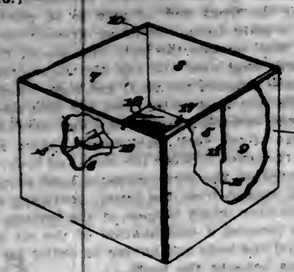


1. In a pair of calipers, pivoted supporting legs having split sleeves slidably mounted thereupon, arcuate arms formed upon said sleeves, and means coacting with said split sleeves for binding them in engagement with said supporting legs for holding said sleeves in adjusted position.

2. In a pair of calipers, pivoted supporting legs, pointed divider rods adjustable upon said supporting legs for increasing or decreasing the stroke of the dividers, means for holding said rods in adjusted position, and arcuate arms slidably mounted upon said rods.

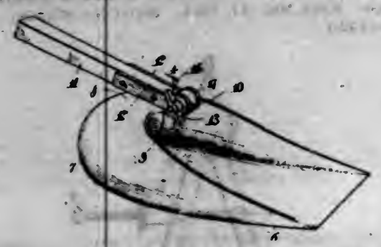
3. In a pair of calipers, pivoted supporting legs, pointed divider rods adjustable upon said supporting legs for increasing or decreasing the stroke of the divider, means for holding said rods in adjusted positions, arcuate arms slidably mounted upon said rods, and means for holding said arms in adjusted positions.

1,109,468. BERRY-BOX. JOHN W. ROSE, Dodge City, Kans. Filed Aug. 8, 1913. Serial No. 783,810. (Cl. 229—16.)



A box comprising a substantially rectangular shaped body formed from a single blank bent on itself to provide the walls thereof, the ends of the blank being detachably interlocked with each other, an extension on one end of the blank at its lower edge and bent upwardly and inwardly over the upper edge of the blank against the outer and inner faces of the detachably interlocked ends of the same, the said extension being further bent to form a swinging bottom, inwardly and upwardly bent flaps at the lower edge of the blank forming a bearing for the bottom, and a tongue cut from one wall of the body and arranged in the path of the free edge of the bottom to prevent the swinging thereof away from the flap.

1,109,469. COMBINATION SHOVEL AND HOE. OLE SANDBERG, Ogema, Saskatchewan, Canada. Filed June 21, 1913. Serial No. 775,084. (Cl. 55—38.)

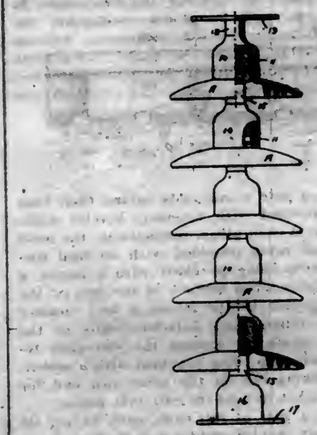


In a device of the class described, a body member of the general outline of a scoop shovel having its rear end bellied to form a relatively deep pocket and having an integral tubular shank extending upwardly and forwardly from the top wall of said pocket, a terminal head carried by said shank, a handle member pivotally connected with the head, and means for securing the handle rigidly with respect to the body member at extreme and intermediate adjustments.

1,109,470. POST-INSULATOR. JOSEPH A. SANDFORD, Jr., East Liverpool, Ohio, assignor to The R. Thomas and Sons Company, East Liverpool, Ohio, a Corporation of Ohio. Filed Feb. 21, 1913. Serial No. 749,806. (Cl. 173—318.)

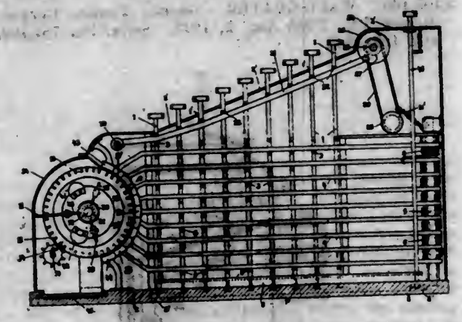
1. An insulator comprising a series of bell-head, petticoated insulator units spaced apart, each unit comprising, as spacing means, a metallic cap permanently secured upon the head of the insulator unit and provided with an axial threaded boss, and a metallic pin permanently secured axially within the head of said unit and having its outer free end threaded, substantially as described.

2. An insulator unit for a built-up insulator, said unit comprising a bell-head insulator, a metallic cap permanently secured upon the insulator head and provided at its outer end with a threaded boss, and a metallic pin permanently secured within the head of the insulator and having its outer end threaded, said threaded boss on the cap and threaded end of the pin being adapted to respectively engage coöperating members for spacing apart adjacent insulator units in a built-up insulator.



3. For a built-up insulator having a series of insulator units spaced apart, spacing means between adjacent units comprising a metallic cap member permanently secured upon the head of one insulator unit and a metallic pin permanently secured within the head of the superposed insulator unit, the adjacent ends of said metallic cap and pin members being threaded to afford a screw joint between the same, substantially as described.

1,109,471. CALCULATING-MACHINE. CARL SCHALLER, Brunswick, Germany. Filed Jan. 27, 1914. Serial No. 814,782. (Cl. 235—79.)



1. In a calculating machine, the combination with a rotary registering member, operating means therefor, normally inoperative means for coupling said registering member and operating means, and setting members coöperating with the registering member, of controlling members operated by the setting members extending to points adjacent to the coupling means and adapted to be shifted by said setting members perpendicularly to the direction of movement of the registering member and into position for throwing said coupling means into coupling position, and means to return the setting members and controlling members into normal positions.

2. In a calculating machine, the combination with a rotary registering member, operating means therefor, normally inoperative means for coupling said registering member and operating means, and setting members coöperating with the registering member, of controlling members operated by the setting members extending to points adjacent to the coupling means and adapted to be shifted

by said setting members perpendicularly to the direction of movement of the registering member and into position for throwing said coupling means into coupling position, the working portions of said controlling members abutting one another and forming a continuous guide way for the coupling means, the abutting faces of said portions being beveled so as to form, when said members are shifted, means for guiding the said coupling means into or out of operative positions, and means to return the setting members and controlling members into normal positions.

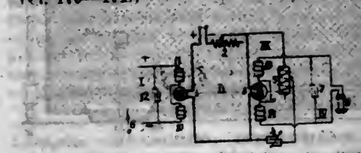
3. In a calculating machine, the combination with a rotary registering member, operating means therefor, normally inoperative means for coupling said registering member and operating means, and setting members coöperating with the registering member, of controlling members operated by the setting members extending to points adjacent to the coupling means and adapted to be shifted by said setting members perpendicularly to the direction of movement of the registering member and into position for throwing said coupling means into operative position, the working portions of said controlling members abutting one another and forming a continuous guide way for the coupling means, the abutting faces of said portions being beveled so as to form, when said members are shifted, means for guiding said coupling means into or out of operative positions, stationary guide members provided at the front and rear ends of the said continuous guide way and formed with correspondingly beveled faces providing means for guiding said coupling means into or out of operative positions, and means to return the setting members and controlling members into normal positions.

4. In a calculating machine, the combination with a registering wheel, a shaft loosely supporting the same, and operating means for the registering wheel, of a coupling member for said registering wheel adapted to connect the same with the operating means, and means controlled by said coupling member for locking the wheel against rotation with the shaft.

5. In a calculating machine, the combination with a registering wheel, a shaft loosely supporting the same, and operating means for the registering wheel, of a coupling member for said registering wheel adapted to connect the same with the operating means, a member mounted on a relatively fixed part and adapted to be rocked into engagement with the registering wheel to lock the latter against rotation with said shaft, and a sleeve longitudinally slidable on said shaft and engaged by said coupling member and locking member for transmitting rocking movement from said coupling member to said locking member.

[Claim 6 not printed in the Gazette.]

1,109,472. TELEPHONIC AND TELEGRAPHIC APPARATUS. JOSEF SCHIESSLER, Baden, near Vienna, Austria-Hungary. Filed Aug. 19, 1908. Serial No. 449,345. (Cl. 179—171.)



1. The combination with a strong relay continuous current circuit, an incandescent resistance in said circuit, a bi-polar magnetic field to influence said resistance; of means to superimpose current fluctuations on the current in said circuit, a resonating circuit in parallel with the relay circuit, a variable capacity and a regulable resistance in series in the resonating circuit, and a receiving circuit in operative electrical relation to the resonating circuit.

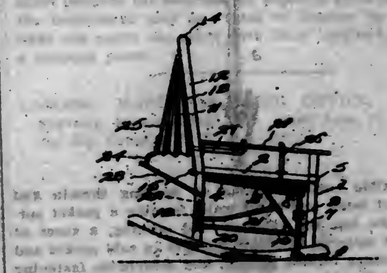
2. The combination with a relay continuous current circuit, a resistance therein capable of being magnetically varied and windings in proximity to said resistance, of means to superimpose current fluctuations on said relay circuit, a resonating circuit in parallel with the relay circuit, a variable capacity and regulable resistance in said circuit, and a receiving circuit in operative electrical relation to the resonating circuit.

3. The combination with a relay continuous current circuit having a resistance therein heated by the current in said circuit, means to superimpose line currents on said circuit, an oscillating circuit in parallel with the first circuit and including said resistance, and a third circuit including windings in inductive relation to said resistance.

4. The combination with a relay continuous current circuit, a resistance therein capable of being varied by a variable magnetic field and a winding on each side of said resistance to produce a bi-polar magnetic field therefor, of a resistance winding in said circuit, a telephone circuit and means included in said circuit in operative electrical relation to said resistance winding to superimpose the current fluctuations of the talking circuit upon the relay circuit, a resonating circuit in parallel with the relay circuit containing self-inductance and capacity, and a receiving circuit in operative electrical relation to the resonating circuit to receive amplified current variations in synchronism with the talking current variations.

5. The combination with a strong relay continuous current circuit having an incandescent resistance therein; of a resonating circuit having a regulable resistance and a variable capacity therein, an incandescent winding in the relay circuit, a telephone circuit having a winding in magnetic relation to said incandescent winding, and a receiving circuit in operative electrical relation to the resonating circuit.

1,109,473. BELLOWS ATTACHMENT FOR CHAIRS. ANTHONY J. SCHROEDER, Donaldsonville, La. Filed July 28, 1913. Serial No. 781,682. (Cl. 230—8.)



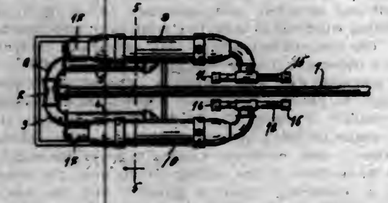
1. The combination with a rocker having a seat and a back of an apparatus associated therewith, comprising a pair of hingedly-connected strips adapted to detachably engage with said seat and back, a bellows secured to the strip on said seat, a second bellows secured to the strip on said back, means for effecting the operation of the first-named bellows, operative connections between said means and the second-named bellows, and means for conducting air from said bellows.

2. The combination with a rocker having a seat and a back of an apparatus associated therewith, comprising a pair of hingedly-connected strips, one of said strips having a hooked end adapted to engage with the seat, and the other of said strips having a resiliently-connected hooked end adapted to engage with said back, a bellows secured to the strip on the seat, a second bellows secured to the strip on the back, a device carried by the first-named bellows adapted to effect the working thereof through the rocking motion of the chair, operative connections between said device and the second-named bellows, and means for conducting air from said bellows.

1,109,474. OIL-BURNER. NORMAN W. SHERMAN, Lake City, Iowa. Filed May 15, 1914. Serial No. 838,723. (Cl. 158—53.)

An oil burner comprising a feed pipe, a plurality of parallel spaced and horizontal inner and outer pipes connected with the feed pipe and arranged on opposite sides thereof, relatively enlarged pipes arranged in parallel re-

lation to each other and the inner and outer pipes and above the inner and outer pipes, couplings connecting the enlarged and inner and outer pipes, burner pipes operatively connected with the enlarged pipes, and a rectan-



gular pan to receive a suitable amount of hydrocarbon to be burned and having the inner and outer pipes mounted therein, said pan being suspended from the enlarged pipes.

1,109,475. CURTAIN-LIGHT. ELBERT N. SIPPERLEY, Westport, Conn. Filed Apr. 21, 1914. Serial No. 833,511. (Cl. 156—41.)

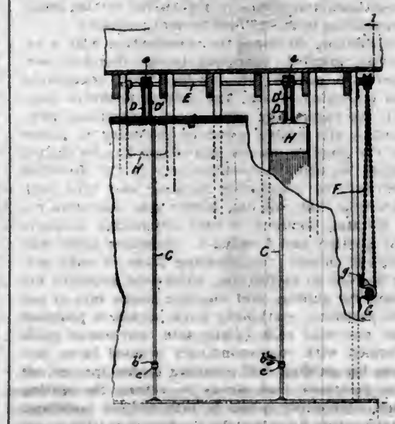
1. A flexible curtain having an opening therein and spaced-apart inner and outer walls forming a pocket surrounding the top and sides of said opening, a sheet of transparent material fitted at its edges in said pocket and having openings formed therein, and detachable fastening means extending through such openings.

2. A flexible curtain having an opening therein and spaced-apart inner and outer walls forming a pocket surrounding the top and sides of said opening, a sheet of transparent material fitted at its edges in said pocket and having openings formed therein, the lower edge of said sheet extending beneath the lower edge of said opening on the outside of the top, and fastening means extending through said openings.

1,109,476. BED. THEODORE H. SORLIEN, Granite Falls, Minn. Filed Oct. 29, 1913. Serial No. 797,996. (Cl. 5—18.)

1. In combination with the paneled ceiling of a room having an opening of the size and shape of one or more of its panels and provided with division strips between its panels, certain of which are extended around the said opening with their inner edges projecting inwardly beyond the sides of the opening, of a bed flexibly suspended for movement within and out of the said ceiling opening, means for moving the bed, and a false ceiling plate freely movable in a vertical direction within the ceiling opening and adapted to rest at its side edges upon the inwardly projecting edges of the said division strip surrounding the opening, when the bed is lowered in operative position.

2. The combination with the ceiling of a room having an opening, of a bed flexibly suspended for movement within the said opening, comprising side and end walls and a base, legs movable to vertical and horizontal positions with respect to the side walls of the bed frame and having tubular transverse extensions at one end extending transversely of the bed in the same plane, brackets secured to the bed frame and through which the said tubular extensions are mounted to rotate and move longitudinally, a tube confined between certain of the brackets and in which the inner adjacent ends of the tubular leg extensions are disposed, said inner ends of said leg extensions being cut away and provided with inner racks, a



pinion disposed between and engaging the said racks at its opposite sides, a pin secured through the confined tube and upon which the pinion is journaled, whereby movement of one leg will be communicated to the other, spring clips for confining the legs in vertical operative position, and connections for raising and lowering the bed within and out of the ceiling opening, all for the purpose described.

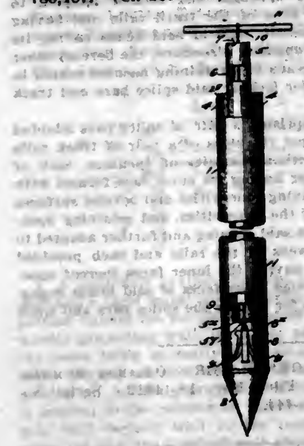
1,109,477. PORTABLE GRAZING-PEN AND CHICKEN-COOP. BONIFACE SPANKE, Nevada, Mo. Filed July 20, 1912. Serial No. 710,564. (Cl. 119—21.)

1. A knock-down portable grazing pen comprising a frame made up of inverted U-shaped members and cross-bars, said frame mounted and supported at its lower ends on rollers, an open bottom, covered top, and reticulated side panels depending from the frame and located a sufficient distance in from the rollers to afford protection for the poultry in moving the pen from place to place, said rollers forming the sole support of the pen and holding the lower edges of the panels at a substantially uniform distance at all times from the ground or surface on which the pen rests.

2. A knock-down portable grazing pen and coop comprising a frame made up of inverted U-shaped sides, and cross-rods, said frame mounted and carried at its lower ends on rollers, a coop carried on said frame and having a

movable bottom between the coop and pen forming a doorway between the two, and reticulated side-panels carried by the frame in planes within the areas of the rollers.

1,109,478. TENT-PEG. WILLARD GEORGE STEADMAN, JR., Southington, Conn. Filed Aug. 7, 1913. Serial No. 783,487. (Cl. 189—92.)



1. A tent peg comprising a pipe provided with a conical end and having openings in its side near its bottom, a plurality of curved anchors arranged to extend through said openings, a flexible member secured to the inner ends of said anchors for withdrawing the major portions of said anchors into said pipe, and an inner pipe inclosing said flexible member and arranged to engage the inner ends of said anchors for forcing them outwardly.

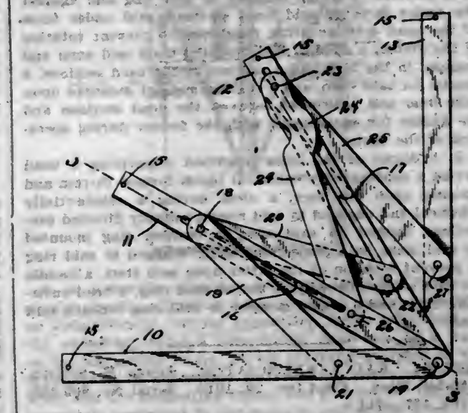
2. A tent peg comprising a pipe provided with a conical end and having openings in its side near its bottom, a plurality of curved anchors arranged to extend through said openings, a flexible member secured to the inner ends of said anchors for withdrawing the major portions of said anchors into said pipe, an inner pipe inclosing said flexible member and arranged to engage the inner ends of said anchors for forcing them outwardly, and means for locking said inner pipe to said outer pipe.

3. A tent peg comprising an outer pipe provided with a conical end and having openings in its side near its bottom and near its top, a plurality of anchors arranged to extend through said openings, said anchors being curved and being provided with expanded heads at one end and with cam surfaces at the other, a common chain secured to the anchors at their cam surfaces, an inner pipe provided with a perforated bottom arranged to receive the chain and adapted to bear on the cam surfaces of said anchors for forcing the anchors outwardly, a handle secured to one end of said chain, and means for locking said inner pipe to said outer pipe.

1,109,479. MEASURING INSTRUMENT. RALPH W. STEAD, Portland, Ind. Filed Dec. 11, 1912. Serial No. 736,140. (Cl. 33—91.)

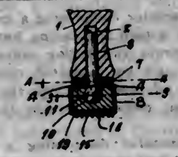
1. An instrument of the class described comprising a pair of limiting arms and a plurality of intermediate arms, a pivot pin connecting corresponding ends of said limiting and intermediate arm, said pin being extended at one end to form a point, pins mounted in the free ends of the limiting and intermediate arms having their outer ends disposed in a common plane with the outer end of the pivot pin, and means operated by the movement of the limiting arms toward and away from each other for simultaneously altering the position of the intermediate arms to constantly maintain the angles between adjacent intermediate arms and between the limiting arms and adjacent intermediate arms equal.

2. An instrument of the class described comprising a plurality of arms having corresponding ends mounted on a common pivot, certain of said arms having each a longitudinal slot, a pivot pin slidable in each of said slots, and a plurality of pairs of connecting links, the links of each pair having their outer ends mounted on a common



pivot pin and their inner ends pivotally connected to adjacent arms at points equidistant from the common pivot of said arms, and certain of said links being provided with offset portions for receiving an adjacent pivot pin whereby the instrument may be folded to dispose the arms and links one above the other with their longitudinal axes in a common plane.

1,109,480. HAND CANCELING DEVICE. DAURY E. STEVENS, Pleasant Hill, La. Filed June 13, 1914. Serial No. 844,909. (Cl. 101—58.)



1. A device of the class described comprising head sections having registering recesses, a head encircling ring engaged around said sections to retain the same in proper position, a stem having an enlarged portion formed on one end and engaged in said registering recesses, a handle for said stem, a cushion member mounted upon said stem above said head sections and adapted for engagement with the latter, and a stamp mounted in the ring beneath the head sections.

2. A device of the class described comprising head sections having registering recesses opening upon one face, a stem, a ball formed on one end of said stem and engaged in said registering recesses, a handle mounted upon said stem, a cushioning member mounted upon said stem between said handle and said head sections and adapted for engagement with the latter, means for retaining said head sections in engagement with one another, and a stamp mounted in the last mentioned means beneath said head sections.

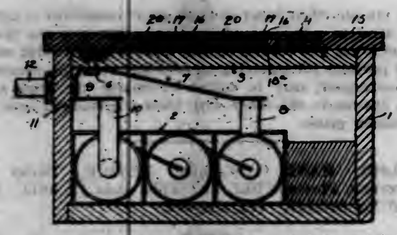
3. A device of the class described comprising head sections having registering semi-spherical recesses in their upper ends, a stem, a ball formed on one end of said stem and engaged in the registering semi-spherical recesses of the head sections, a ring for securing said head sections in engagement with one another, a stamp member carried by said ring and projecting from the same, said stamp member being engaged against one face of the head sections, a handle mounted on said stem, and a cush-

ion ring mounted on said stem between the handle and the head sections and slightly spaced from the latter.

4. A device of the class described comprising head sections having inclined adjacent faces, said head sections being provided with semi-spherical registering recesses in their upper portions, a ring engaged around said head sections, a stamp engaged in said ring and against the under faces of said head sections, said under faces of the head sections being roughened to prevent rotation of the stamp, a stem, a ball mounted upon said stem and engaged in the registering recesses of the head sections, a handle for said stem, and a cushion member mounted upon said stem and positioned between the head sections and the handle for engagement with the former during operation of the device.

5. A device of the class described comprising a head having a substantially spherical recess formed therein and opening upon one face, a stem having a substantially spherical end engaged in said recess, radially directed projections formed on said stem, a cushion ring mounted on said stem, said projections being engaged in said ring to prevent rotation of the latter upon said stem, a handle for said stem outwardly of the cushion ring, a head encircling ring, and a stamp member in said ring beneath said head.

1,109,481. RAIN-ANNUNCIATOR. JAMES H. STROUD, Mabel, Minn. Filed Dec. 29, 1913. Serial No. 809,359. (Cl. 177—311.)

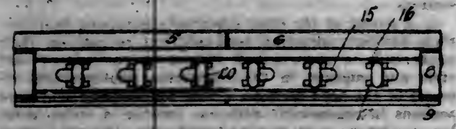


1. A rain annunciator comprising a casing containing a battery, a support within the casing having spaced terminals connected thereto and spring contacts in connection with the battery and an insulated cover provided with spaced connectors adapted to bridge the terminals, and a hygroscopic element disposed within the spaces between the connectors.

2. A rain annunciator comprising a casing, batteries with the casing, a bell connected electrically to the batteries, a support, spring contacts carried by said supports and connected to the batteries, spaced terminals connected to said support, a non-conducting cover, provided with a series of spaced connectors, said connectors being alternately recessed on their lower edges, strips connected in said recesses, and their hygroscopic elements disposed between the connectors.

3. In an apparatus of the character described the combination of a casing, batteries in said casing, a bell connected to the batteries, spaced terminals, and a top or cover for said casing made of a non-conducting material and provided with a recess extending through the same, spaced connectors extending across the recess and spaced apart, and hygroscopic elements disposed between the connectors.

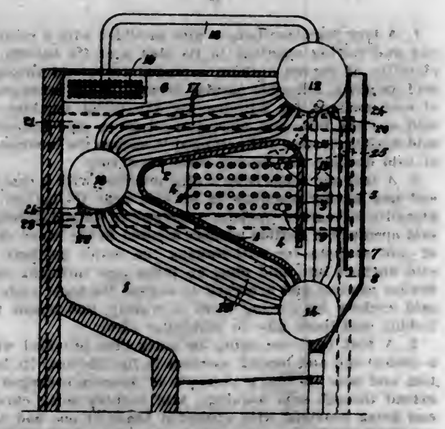
1,109,482. RAIL-JOINT. RUBEN TRUMMER, Millvale, Pa. Filed May 25, 1914. Serial No. 840,894. (Cl. 239—11.)



1. A rail joint comprising a pair of fish plates adapted to be positioned against the sides of a pair of track rails and formed with openings, each of said splice bars on its outer face provided with pairs of projecting portions arranged parallel to the side walls of said openings, each of said offsets having its outer face provided with a centrally disposed concavity and each of its end portions beveled, the bevel of the ends of each projecting portion being opposite with respect to each other, retaining members extending through said openings and further adapted to extend through the webs of the track rails and having heads at the ends thereof, each of said heads having its inner face beveled in opposite directions, the beveled inner faces of each of the heads of a retaining member seated in opposite concavities for locking said splice bars and track rails together.

2. A rail joint comprising a pair of splice bars adapted to be positioned against the sides of a pair of track rails and each provided with a plurality of openings, each of said splice bars further having its outer face formed with projecting portions having concavities and beveled surfaces leading to the ends of the concavities, and retaining members extending through said opening and further adapted to extend through the webs of the rails and each provided with a pair of heads having the inner faces thereof oppositely beveled, the beveled inner faces of said heads engaging in said concavities for locking the splice bars and track rails together.

1,109,483. STEAM-GENERATOR. OALANDO SUMNER, London, England. Filed Nov. 18, 1912. Serial No. 732,109. (Cl. 122—444.)



1. In combination with a furnace and the combustion chamber thereof, a steam generator comprising drums, tubes connecting the drums, an economizer supported between the drums, means for substantially housing the economizer, said means having an opening for admitting products of combustion to the economizer.

2. In combination with a furnace and the combustion chamber thereof, a steam generator comprising drums, an economizer associated with the drums, baffle plates substantially housing the economizer, said baffle plates being arranged to provide an opening, said opening adapted to admit products of combustion to the economizer substantially as described.

3. In combination with a furnace, a steam generator comprising drums, water tubes connecting the drums, an economizer chamber supported between the drums, an economizer supported in the chamber, said chamber having an opening arranged within the outlet of the furnace to admit products of combustion to the economizer for heating water held thereby.

4. In combination with a furnace and the combustion chamber thereof, a steam generator comprising drums, tubes connecting the drums, an economizer supported between the drums, means for substantially housing the economizer, said means having an opening for admitting products of combustion to the economizer, means of communication between the economizer chamber to the smoke uptake by inducing circulation through said economizer chamber.

1,109,484. SHEET-METAL COVER FOR RECEPTACLES. THOMAS LUCIEN TALIAFERRO, Wheeling, W. Va., assignor, by mesne assignments, to Phoenix-Hermetic Company, New York, N. Y., a Corporation of New York. Filed June 4, 1913. Serial No. 771,723. (Cl. 215—82.)

1. A receptacle having a vertical wall at its outer upper edge and a sheet metal cover therefor comprising a circular portion having the periphery thereof bent to form a downwardly projecting wall, the lower portion of said wall of the cover being normally bent outwardly relative to the upper portion of said wall and forming with said upper portion an inwardly projecting shoulder when said cover is secured to the receptacle, which shoulder is adapted to grip said vertical wall of the receptacle and hold said cover thereon, the vertical wall above said gripping shoulder being bulged outwardly when said cover is closed on the receptacle whereby said gripping shoulder is held in contact with the receptacle.

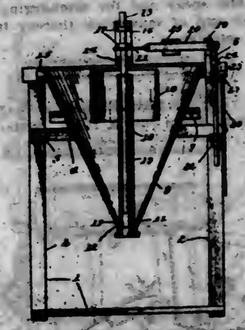
2. A receptacle having a vertical wall at its outer upper edge and a sheet metal cover therefor comprising a circular portion having its periphery bent to form a downwardly projecting wall, the inner surface of said wall of the cover having a lining of plastic sealing material thereon, the lower portion of said wall of the cover being normally bent outwardly relative to the upper portion thereof and forming with said upper portion an inwardly projecting shoulder when said cover is secured to the receptacle, which shoulder is adapted to be embedded in the sealing material thus forming a continuous sealing line therein, said shoulder also being adapted to grip said vertical wall of the receptacle and hold the cover thereon.

3. A receptacle having a vertical wall at its upper edge and a sheet metal cover therefor, comprising a circular portion having its periphery bent to form a U-shaped channel engaging said vertical wall of the receptacle, said channel having a lining of sealing material on the inner surface thereof, the lower portion of the outer wall of said channel being bent outwardly relative to the upper portion of said outer wall and forming with said upper portion an inwardly projecting shoulder which is embedded in the sealing material and forms a continuous sealing line therein, and which grips said vertical wall of the receptacle and holds the cover thereon.

1,109,485. ORE-PULP CLASSIFIER. JOSEPH T. THEBY, Jr., San Francisco, Cal. Filed Sept. 12, 1913. Serial No. 789,498. (Cl. 82—82.)

1. A hydraulic classifier including a weight yielding adjusting frame, an automatically leveling supporting frame movably mounted therein, a main receptacle, movably mounted in the supporting frame, said receptacle being formed with a valved discharge opening, and means connected to the valve and operating in the movement of the receptacle under the accumulations of material therein to actuate the valve to free the discharge opening.

2. A hydraulic classifier including a main frame, a weight yielding adjusting frame pivotally mounted therein, an automatically leveling supporting frame movably mounted in the adjusting frame, a cone shaped main receptacle in the supporting frame and formed with a discharge opening, a valve controlling said opening, a weighted lever supported on the main frame and connected to the valve, and a connection intermediate said lever and adjusting frame.



3. A hydraulic classifier including a main frame, a weight yielding adjusting frame pivotally mounted therein, an automatically leveling supporting frame fulcrumed on the adjusting frame, a cone-shaped main receptacle fixed on the supporting frame, a lever pivotally mounted on the main frame, a connection intermediate one arm of said lever and the supporting frame, and a valve for the main receptacle connected to the opposite end of the lever.

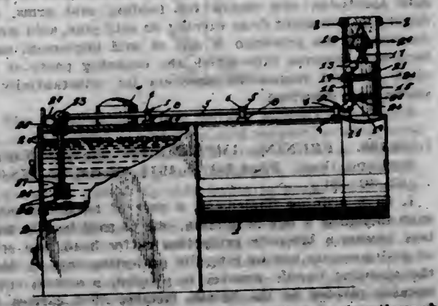
4. A hydraulic classifier including a main frame, a weight yielding adjusting frame pivotally mounted therein, an automatically leveling supporting frame fulcrumed on the adjusting frame, a cone-shaped main receptacle fixed on the supporting frame, a lever pivotally mounted on the main frame, a connection intermediate one arm of said lever and the supporting frame, and a valve for the main receptacle connected to the opposite end of the lever and a weight adjustable longitudinally of the lever.

5. A hydraulic classifier including a main frame, a weight yielding adjusting frame pivotally mounted therein, an automatically leveling supporting frame fulcrumed on the adjusting frame, a cone-shaped main receptacle fixed on the supporting frame, a lever pivotally mounted on the main frame, a connection intermediate one arm of said lever and the supporting frame, and a valve for the main receptacle connected to the opposite end of the lever and a weight adjustable longitudinally of the lever, and feed means depending within the main receptacle.

[Claims 6 and 7 not printed in the Gazette.]

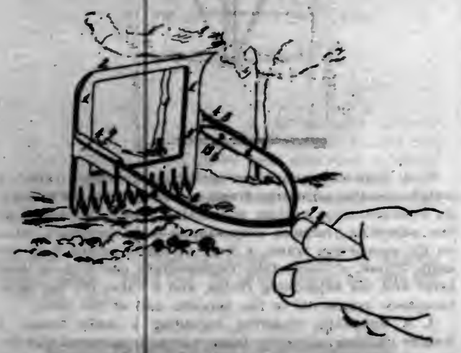
1,109,486. SPARK-EXTINGUISHER. ENOS THOMPSON, Radnor, W. Va. Filed Aug. 16, 1913. Serial No. 785,181. (Cl. 110—142.)

In a spark arrester of the class described the combination with a boiler, a stack, a supply pipe passing through said boiler, means for controlling the passage through said pipe, a strainer carried by one end of said supply pipe for preventing the admission of solid substance into said supply pipe, of a cone-shaped spray-head carried by said supply pipe and positioned in the upper end of said stack,



said cone-shaped spray-hood provided with perforated side walls, a plurality of perforated partitions carried within said spray-hood for breaking water or liquid passing therethrough into fine spray and for discharging a fine spray from the upper end of said stack thereby increasing the draft through said stack.

1,109,487. GARDEN IMPLEMENT. KAYOZI TSUBOI, Portland, Oreg. Filed July 5, 1913. Serial No. 777,510. (Cl. 55—43.)



1. A garden implement comprising a handle including a pair of opposite resilient side arms, each having an aperture and a longitudinal groove on the outer face that extends from the apertures to the end of the arm, and a tool including side fingers each of which has a portion for engaging the aperture in its respective side arm, and another portion for engaging the grooves in their said respective side arms.

2. A garden implement comprising a handle including a pair of opposite resilient side arms, each having an aperture near its outer end, a groove in the outer face thereof that extends from the aperture to the outer end of the arm, the said outer end having a notch, and a tool, the said tool including side fingers for seating in the grooves of the side arms, the ends of the said fingers terminating in inturned members for engaging the apertures in the side arms, said tool also including portions for seating in the notches in the ends of the side arms.

3. A garden implement which comprises two implement members, one of which consists of a handle including a pair of resilient side arms having a circular aperture in each near the outer ends of the same, the other of said implement members comprising a tool that includes opposing side fingers, pins carried by said side fingers to enter said apertures, and means for holding said arms, and fingers in alinement from turning on said pins, said means comprising the provision of one of said implement members with grooves into which the opposing parts of the other of said implement members lie, substantially as shown and described.

1,109,488. PRUNING IMPLEMENT. KAYOZI TSUBOI, Portland, Oreg. Filed July 9, 1913. Serial No. 778,022. (Cl. 30—24.)

1. In a pruning implement, a pair of handle members each including a bowed portion, one of said handle members having a laterally projecting cutter head, the other of said members having laterally projecting ears to which the opposing handle member is pivoted, a second cutter member pivoted to the handle member that carries the first mentioned cutter member, said second cutter member projecting laterally to coöperate with said first mentioned cutter member and having a heel portion projecting over to the opposite handle member, said heel portion having a curved surface, said other handle member having a member to engage said heel, said last named member and said heel operating when said handle members are closed together, to close said cutters, and means held between said handle members at said bowed portions to continuously tend to separate said handle members, substantially as shown and described.

2. In a pruning implement, a handle member having a relatively rigid laterally projecting cutter head, a second handle member, a pivotal connection between said handle members, a second cutter member pivoted to the first mentioned handle member and projecting laterally in the same direction as the first mentioned cutter member to coöperate therewith, said second cutter member having a heel portion projecting over to the second handle member, said heel portion having a cam surface, a roller relatively fixedly located on said second handle member to engage and coöperate with said cam surface when said handle members are closed together to close said cutters, a spring continuously tending to separate said handles to open said cutters, said second cutter member having two cutting edges one to coöperate with said fixed cutting member and the other cutting edge being located opposite to said first mentioned cutting edge, and means for holding said handle members closed together against the tension of said spring, whereby said cutter heads may be maintained with their adjacent cutting edges closed, substantially as described.

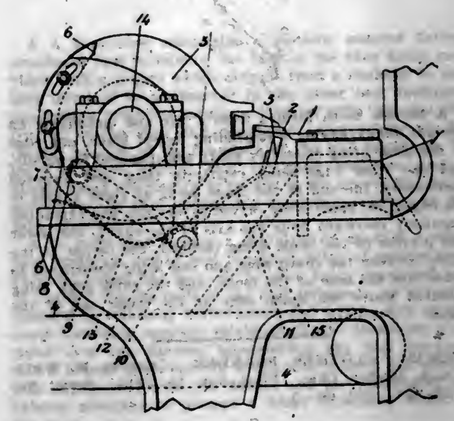
3. In a pruning implement, a first and a second handle member, the first of said handle members having an integral laterally projecting cutter head, said second handle member having laterally projecting ears to which said first handle member is pivoted, a second cutting member pivoted to the first handle member and projecting laterally to coöperate with said first cutter member, and having a heel portion projecting over to the second handle member, said heel portion having a cam surface, a member on said second handle member to coöperate with said cam surface when said handle members are opened and closed to correspondingly open and close said cutters, all being arranged substantially as shown and described.

4. In a pruning implement, a pair of handle members each including a bowed portion, one of said handle members having an integrally formed laterally projecting cutter head, the other of said handle members having laterally projecting ears to which the opposing handle member is pivoted, a second cutter member pivoted to the handle member that has the integral cutter member, said second cutter member projecting laterally to coöperate with said first cutter member and having a heel portion projecting over to the opposite handle member, said heel portion having a cam surface, a member on the adjacent handle member for coöperating with said cam surface when said handle members are closed together to close said cutters, and an expansion spring held between said handle members at said bowed portions, substantially as shown and described.

5. In a pruning implement, a first and a second handle member, a cutter head integrally formed with said first handle member and projecting laterally therefrom, a second cutter head pivoted to said first handle member adjacent to said first mentioned cutter head, said second cutter head having a laterally projecting heel provided with a cam surface, said second handle member having laterally projecting ears pivoted to said first handle member, means on said second handle member to coöperate with said cam surface to open and close said cutters as said handle members are opened or closed, means between said handle members continuously tending to open the same.

[Claims 6 not printed in the Gazette.]

1,109,489. PAPER-CUTTING MACHINE. FREDERICK WILLIAM VICKERY, London, England, assignor to Vickerys Patents Limited, London, England. Filed June 12, 1913. Serial No. 773,327. (Cl. 164—68.)



1. In a paper cutting machine, the combination, with coacting fixed and rotary knives; of means engageable with the rear end of a cut sheet for moving said end out of the path of the rotary knife, to permit the latter to clear said sheet.

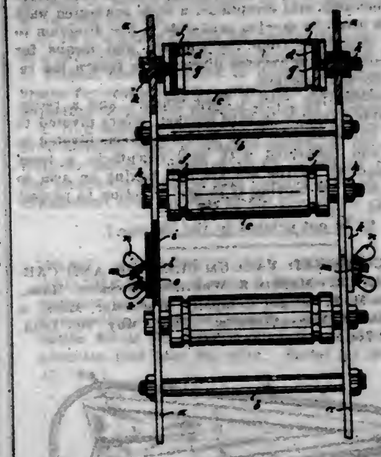
2. In a paper cutting machine, the combination, with coacting fixed and rotary knives; of means connected with the rotary knife for movement therewith into engagement with the rear end of a cut sheet for moving said end out of the path of the rotary knife, to permit the latter to clear said sheet.

3. In a paper cutting machine, the combination, with a fixed knife, a rotary drum, and a knife carried by said drum for coaction with the fixed knife; of a device connected with said drum, and located in advance of and beneath the second-named knife; and means for moving said device into engagement with the rear end of a cut sheet, to shift said end out of the path of said second-named knife to permit the latter to clear said sheet.

4. In a paper cutting machine, the combination, with a fixed knife, a rotary knife-carrier, and a knife mounted on said carrier for coaction with the fixed knife; of a spring-controlled member connected with said carrier and normally located beneath and within the path of the second-named knife; and means for periodically moving said member out of said path into engagement with a cut sheet, to permit said second-named knife to clear said sheet.

5. In a paper cutting machine, the combination, with coacting fixed and rotary knives; of a member yieldingly connected with the rotary knife and located in advance of and beneath the same; and means for periodically moving said member outwardly beyond said rotary knife into engagement with a cut sheet, to permit the said rotary knife to clear said sheet.

1,109,490. ROLLER-BEARING. FRANZ VIELBERTH, Nuremberg, Germany. Filed Apr. 7, 1913. Serial No. 759,479. (Cl. 64—49.)



Ball bearing of the character described comprising in combination a carrier for said bearing provided with annular grooves intermediate its ends, disks endwise inserted into said carrier provided with recesses in their outer faces, a ball resting in the recess of each disk, set screws passing laterally through said carrier each provided with a cavity at the inner end constituting with the recess of each disk a bearing for said ball for pressing the disk in opposite directions against the outer walls of said grooves, substantially as described.

1,109,491. MAIL-RECEPTACLE. FRANK M. WEIMER and ROBERT F. WEIMER, Somerset, Pa. Filed Aug. 2, 1913. Serial No. 782,736. (Cl. 232—40.)

1. The combination with a suitable support and a receptacle, of two levers mounted on said support, arms pivoted to said levers and both of said arms connected directly with said receptacle at points separated from each other, and means for operating said levers to project the receptacle.

2. The combination with a support and a receptacle, of two levers mounted on said support, arms pivotally attached to said levers, one of said arms being pivotally attached to the receptacle and the other arm being rigidly secured to said receptacle, and means for operating said levers to project said receptacle and simultaneously turn it in a horizontal plane.

3. The combination with a support, a receptacle, and a hinged cover for the latter, of mechanism for projecting said receptacle from the support and simultaneously turning it in a horizontal plane, and devices coöperating with

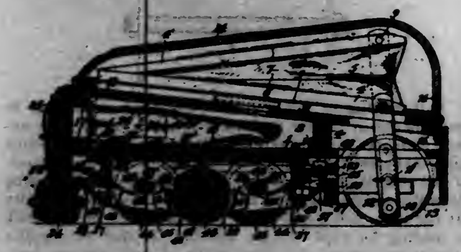
said projecting and turning mechanism for raising said cover.

4. The combination with a support, and a receptacle, of levers mounted on said support, arms pivoted to said levers and connected with said receptacle, a slide connected with said levers, a lever for moving said slide in one direction to project the receptacle from the support, and means for moving the slide in the reverse direction to return the receptacle to normal position.

5. The combination with a fixed bracket, and a receptacle, of a slide mounted in said bracket, levers pivoted to said bracket and connected with said slide, arms pivoted to said levers and connected with said receptacle, a lever pivotally supported by the bracket and having an arm to engage said slide for moving it in one direction to project the receptacle

[Claims 6 to 10 not printed in the Gazette.]

1,109,492. COMBINED VACUUM-CLEANER AND CARPET-SWEEPER. MORRIS S. WRIGHT, Worcester, Mass., assignor to M. S. Wright Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 10, 1913. Serial No. 766,870. (Cl. 15—60.)



1. In combination, a suction cleaner, a carpet sweeper, one of said devices being arranged below and connected to the other for simultaneous movement and operation, and means whereby said devices may be bodily detached one from the other as complete units whereby they are independently operable, the one as a suction cleaner and the other as a carpet sweeper.

2. In combination with a vacuum cleaning machine having a dust box, a dust inlet nozzle, vacuum creating means and a supporting wheel, of a carpet sweeper having a dust chamber, a brush and driving wheels, and means for detachably connecting the carpet sweeper to the vacuum cleaning machine below the dust box between the said inlet nozzle and supporting wheel.

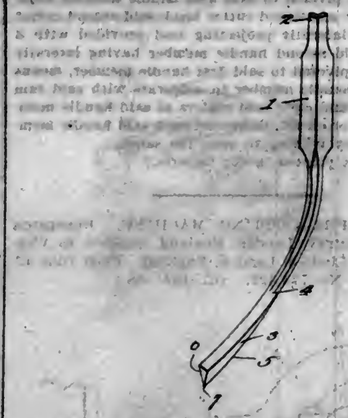
3. In a carpet cleaning machine, the combination of vacuum cleaning means including a portable frame, vacuum creating means, inlet nozzle and supporting wheel, of a sweeper including a brush and driving means therefor, means for detachably connecting said sweeper to the vacuum cleaner whereby they are operable together or either the vacuum cleaner or the sweeper may be independently operated when removed, and the said sweeper being independently movable vertically when positioned on the vacuum cleaner.

4. In combination with a vacuum cleaner having vacuum creating means, a dust box, a supporting wheel and dust inlet nozzle, the nozzle being supported at one end, of a sweeper comprising a casing, supporting wheels, a brush and dust collecting chamber, and attaching devices one on the vacuum cleaner frame and the other on the inlet nozzle adapted to engage opposite ends of the sweeper casing.

5. In combination with a vacuum cleaner having vacuum creating means, a dust box, a supporting wheel and dust inlet nozzle, the nozzle being supported at one end and the wheel at the opposite end, of a sweeper comprising a casing, supporting wheels, a brush and dirt collecting chamber, said nozzle being removable and having an attaching means to engage the sweeper casing and maintain the latter in position, the sweeper being rendered detachable by the removal of the nozzle.

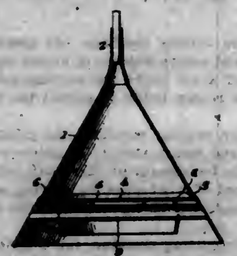
[Claims 6 to 10 not printed in the Gazette.]

1,109,493. HARROW-TOOTH. JAMES WHIPPS, Carlisle, Ind. Filed Dec. 6, 1913. Serial No. 805,881. (Cl. 55—87.)



A harrow tooth formed from a bar and embodying an upright shank having a depending forged blade, one edge of the blade being relatively sharp and disposed forwardly, and the other edge being relatively thick and disposed rearwardly, the end of the blade being at right angles to the edges, the blade being curved to one side and extending angularly rearward from the axis of the shank, the lower end portion of the blade being inclined, the corner of the blade between the sharp edge and end being lowermost, to constitute the nose of the tooth, and the thick edge being elevated above the sharp edge at the lower end of the blade.

1,109,494. CLOTHES-POUNDER. CHARLES M. WHITMAN, Meeker, Okla. Filed Aug. 15, 1913. Serial No. 784,931. (Cl. 68—5.)

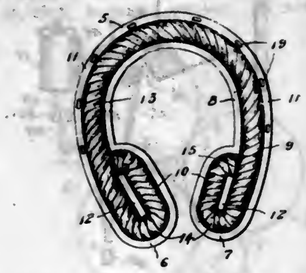


A pounder comprising a conical body, a partition located in the lower portion of the body, an annular flange attached to the partition and provided at its upper edge portion with openings, a pipe passing transversely through the flange and the opposite side portions of the body and spaced from the partition and being provided at its upper side with an opening which traverses its length and provided at its lower side with an opening which is approximately centrally positioned with relation to the flange.

1,109,495. HORSESHOE. JOHN H. WHISTMAN, Philadelphia, Pa. Filed Jan. 14, 1914. Serial No. 812,697. (Cl. 168—13.)

1. A horse-shoe comprising a metallic member having broadened heel terminals, the shoe being provided with a channel throughout the face thereof, and a fibrous tread adapted to be fitted in the channel of the metallic member and doubled upon itself at the heel terminals, the ends of the fibrous tread terminating in engagement with the main body thereof.

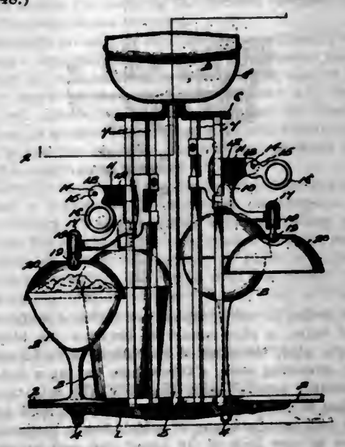
2. A horse-shoe comprising a metallic member having a narrow tread and broadened heel terminals, each terminal being provided with a chamber, and said chambers being connected by a channel extending around the face of the shoe, a fibrous tread adapted to be packed within the channel and the terminal chambers, and means within the terminal chambers and disconnected from the metallic tread to retain the fibrous material therein.



3. A horse-shoe comprising a metallic member having broadened heel terminals, the face of the shoe being provided with a groove which extends from a chamber in one heel terminal to a chamber in the other heel terminal, upstanding retaining members integral with the metallic portion of the shoe and positioned substantially at the central portion of the chambers of the heel terminals, to leave a space around said retaining members, and a fibrous tread adapted to be packed in the groove and to be wound around said upstanding retaining members to fill said chambers.

4. A horse-shoe having a plurality of channel ovoidal heel terminals, one of said terminals being of greater area than the other, the face of the shoe being channeled out to connect the channels of the heel terminals, an integral upstanding retaining device opsitioned within each of the ovoid terminals, opposed retaining flanges positioned at a point over the channel intermediate the heel terminal and a fibrous tread secured within the channel and placed into engagement with the flanges and the upstanding retaining members to present a broad cushioned tread to the shoe.

1,109,496. SANITARY CARRIER FOR LIQUID-RECEPTACLES. ROY JOHN WOODBURY, Atlanta, Ga., assignor of one-half to William E. Armistead, Atlanta, Ga. Filed June 19, 1913. Serial No. 774,662. (Cl. 224—48.)



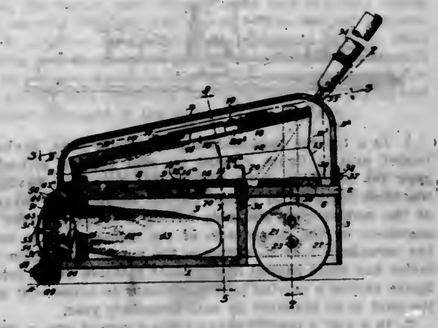
1. In a sanitary carrier for receptacles, the combination of a carrying rack, receptacle covers adapted to fit vessels of various sizes, mounted to permit universal movement, and means for resiliently mounting said covers.

2. In a sanitary carrier for receptacles, the combination of a carrying rack, receptacle covers adapted to fit vessel of various sizes, and mounting means for said covers adapted to permit adjustment of each cover independently at various heights.

3. In a sanitary carrier for receptacles, the combination of a carrying rack, receptacle covers adapted to fit vessels of various sizes, mounted to permit universal movement, means for resiliently mounting said covers and means for adjusting each cover independently at various heights.

4. In a sanitary carrier for receptacles, the combination of a carrying rack, a concave receptacle cover of flexible resilient material adapted to fit vessels of various sizes, and means for clamping said concave cover in tight closing engagement over the edge of the receptacle.

1,109,497. APPARATUS FOR CLEANING CARPETS AND THE LIKE. MORRIS S. WRIGHT, Worcester, Mass., assignor to M. S. Wright Company, Worcester, Mass., a Corporation of Massachusetts. Continuation of application Serial No. 630,726, filed June 1, 1911. This application filed May 29, 1914. Serial No. 841,737. (Cl. 15—60.)



1. In a device of the character described, the combination of a box-like casing having a division wall intermediate its ends and an open end chamber, a nozzle member at the forward end of the casing constituting a closure for the open end of the chamber, suction bellows mounted upon the top of the casing and extending from adjacent the forward end to a point adjacent the rear end thereof beyond the said partition, said bellows communicating with the chamber, traction driving means secured on the casing at the rear of the partition beneath the rear ends of the bellows, and pitman connections from the driving means to the sides of the bellows, substantially as described.

2. In a device of the character described, the combination with a casing having a vacuum chamber therein and a removable nozzle member at the front of the vacuum chamber, of suction means comprising bellows mounted on the top of the casing, said bellows extending from a point adjacent the front to a point adjacent the rear of the casing, traction driving means located beneath the rear end of the bellows, and pitman connections between the bellows and the driving means and located to operate at the sides of the bellows.

3. In a device of the character described, the combination with a casing having a vacuum chamber therein and means for creating a vacuum in the chamber, of a removable nozzle member at the end of the chamber, means for securing the nozzle member on the chamber comprising a swinging member, a spring coacting with the swinging member to normally hold the nozzle member uniformly in tight contact with the walls of the opening in the casing, and a filtering bag having an open mouth with a surrounding frame, and means for holding the frame in air tight contact with the nozzle member.

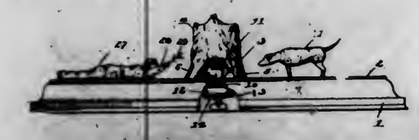
4. In a device of the character described, the combination with a casing having a vacuum chamber and means

for creating a vacuum in the chamber, of a nozzle member detachably positioned at the end of the vacuum chamber and carrying a curved spring member, a ball secured to the casing and projecting across the front of the nozzle member into engagement with the spring member, and a filtering bag in the vacuum chamber having a frame member at its forward open end, and means for holding the frame member in position within the vacuum chamber.

5. In a device of the character described, the combination with a casing having a vacuum chamber therein and means for creating a vacuum in the chamber, of a removable nozzle member at the end of the chamber having a plurality of bow shaped springs thereon, a ball member secured to the casing and having its free outer end extending crosswise of the frame and adapted to engage the bow shaped springs, and a filtering bag associated with the nozzle member and located within the chamber.

[Claims 6 to 13 not printed in the Gazette.]

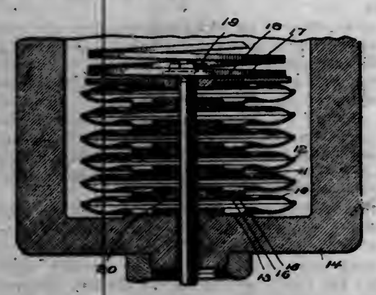
1,109,498. MECHANICAL TOY. EMIL R. YOUNG, Jordan, Minn. Filed Dec. 13, 1913. Serial No. 806,627. (Cl. 46—40.)



1. In a toy the combination of a master gear, having a tappet arm, a figure carried by said gear, a secondary gear for engagement by the master gear and having a toothless segment to permit partial independent rotation of the master gear and also having a tappet pin for engagement by the tappet arm of the master gear to cause the secondary gear to reëngage the master gear after the latter has made partial independent rotation and a second figure having a moving part and means to cause said moving part to be actuated by said secondary gear.

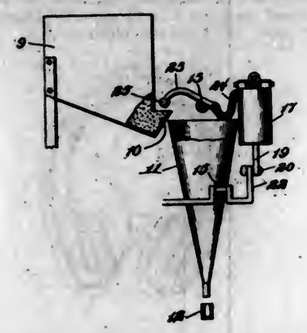
2. In a toy, a master gear having a tappet arm, a figure carried by said gear, a plurality of secondary gears for engagement by the master gear and each having a toothless segment and also having a tappet pin for engagement by the tappet arm of the master gears and a plurality of figures each having a moving part, and means to cause the secondary gears to actuate the moving parts of the last-named figures.

1,109,499. EXPANSIBLE DIAPHRAGMS. WILLIAM E. ZIEBDEN, Johnsonburg, Pa. Filed Feb. 16, 1912. Serial No. 678,110. (Cl. 50—21.)



A fluid pressure regulating device comprising a plurality of annular diaphragms composed of resilient material and formed with corrugations, a plane portion extending within the corrugated portion of the diaphragms and a clamping member engaging part only of the plane portion and rigidly clamping together the central portions of the proximate members of adjacent pairs.

1,109,500. SEED-DROPPING MECHANISM FOR PLANTERS. ALBERT D. ANDERSON, Duluth, Minn. Filed Oct. 7, 1913. Serial No. 793,911. (Cl. 111—32.)

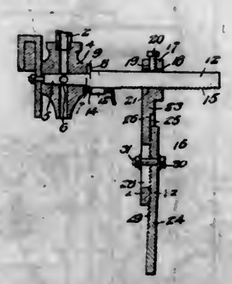


1. In combination with a seed receptacle a seed dropping mechanism comprising a shaft mounted for rocking movement, a seed pickup mounted upon the shaft, a pump cylinder pivotally mounted, a flexible hose connecting the cylinder with said seed pickup and means for operating the pump and for rocking the shaft.

2. In combination with a seed receptacle a seed dropping mechanism comprising a shaft journaled adjacent the receptacle, a seed pickup carried by the shaft, a pump pivotally mounted adjacent the shaft and operatively connected with the seed pickup a supporting wheel for the receptacle, a shaft journaled adjacent the supporting wheel and operatively connected with the first mentioned shaft and the pump and a disk slidably mounted upon the last mentioned shaft and having frictional engagement with the said supporting wheel.

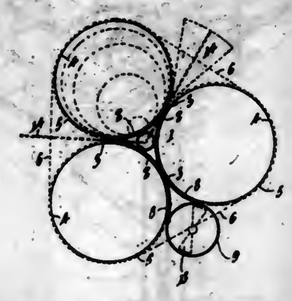
3. In combination with a planter having a supporting wheel, a hopper and a chute, a pump mounted upon the planter, a seed pickup mounted upon the planter and adapted to move from the receptacle to the chute, means for operating the seed pickup from the said supporting wheel and adjustable means for operating the pump from the supporting wheel.

1,109,501. BRAKE-OPERATING DEVICE. JOHN A. ANTHONY, Charleston, S. C. Filed Apr. 23, 1913. Serial No. 763,089. (Cl. 246—59.)



In a device for the purpose set forth, a main air pipe, a bleed valve, a pipe connected between the bleed valve and main pipe, the plug of the bleed valve having a coaxially extending stem, a throw arm having a head which is adjustably secured upon the stem, the said throw arm extending at an angle from the stem, the said arm comprising two members, one of which has a rectangular depression in one face of its lower end and an elongated opening, the inner face of the depression being formed with teeth, the second member having one of its faces formed with teeth and adapted to be received within the depression of the first mentioned member, a bolt connected with the second mentioned member and extending through the slot of the first mentioned member, and a nut for the bolt.

1,109,502. DIRIGIBLE AIRSHIP AND THE LIKE. JOHN ARTHUR ARMSTRONG, London, England. Filed Nov. 22, 1913. Serial No. 802,485. (Cl. 244—3.)



1. A dirigible air-ship or the like, having a longitudinal rigid frame comprising a central compression member, a plurality of radially disposed struts connected with and projecting from the central member, and tension members connecting the outer ends of the struts and the ends of the central member, said central member being thereby placed in compression and a plurality of elongated gas envelops attached to and disposed in clustered and longitudinal relation to said frame.

2. In a dirigible air-ship or the like, the combination of a longitudinal rigid frame comprising a central compression member, a plurality of radially disposed struts connected with and projecting from the central member, and tension members connecting the outer ends of the struts and the ends of the central member, said central member being thereby placed in compression, a plurality of elongated gas envelops attached to said frame and a propeller rotatably mounted on one end of the frame and in axial alinement therewith.

3. In a dirigible air-ship or the like, having a stiffening means comprising a longitudinally arranged compression member, a plurality of sets of ribs, said sets being spaced apart along the length of the compression member and the ribs of each set connected together in pairs to constitute struts, tension members correlated with said struts and means for securing the tension members to the ends of the compression member.

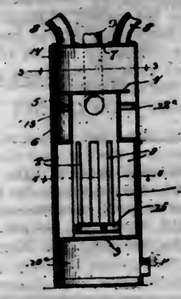
4. A diribible air-ship or the like having stiffening means comprising a longitudinally arranged compression member, a plurality of sets of ribs, said sets being spaced apart along the length of the compression member and the ribs of each set connected together in pairs to constitute struts, tension members correlated with said struts and adjustable means for securing the tension members to the ends of the compression member.

5. A dirigible air-ship or the like having stiffening means comprising a longitudinally arranged compression member, a plurality of sets of ribs, said sets being spaced apart along the length of the compression member and the ribs of each set connected together in pairs to constitute struts, tension members correlated with said struts, means for securing the tension members to the ends of the compression member and bracings connecting adjacent sets of ribs.

[Claims 6 to 11 not printed in the Gazette.]

1,109,503. FURNACE. MORTIMER M. BAIRD, Rochester, N. Y. Filed Oct. 8, 1912. Serial No. 724,564. (Cl. 126—99.)

In a furnace, an elongated tubular casing, a fire pot arranged therein, said casing having spaces above and below the fire pot, a cold air inlet pipe leading into the space below the fire pot, radially extending, hollow arms on the fire pot engaging the inner side of the casing and forming therewith hot air flues which communicate with the space below the fire pot, said arms extending from the bottom of the fire pot to a point slightly above its longitudinal center, a removable top for the fire pot having an overhanging flange projecting toward the casing, an inwardly extending flange carried by the casing and arranged between the upper ends of said arms and the first flange and coacting with the first flange of the fire pot and casing to produce an irregular passage, said hot air flues opening into the space surrounding the fire pot and beneath the last-named flange, a smoke pipe connected to the fire pot, hot air flues extending out of the top of the casing and a burner arranged in the bottom of the fire pot.



1,109,504. SWIMMING-APPARATUS GOWN. NIKOLAI L. BERNATZKY, St. Petersburg, Russia. Filed Feb. 24, 1913. Serial No. 750,407. (Cl. 9—20.)

1. An apparatus of the class described, comprising a garment, a keel, floats supported by the keel, means for supporting the floats to the user of the garment, means for propelling the apparatus, and means for deflecting the keel to steer the apparatus.

2. An apparatus of the class described, comprising an elastic garment having leg portions, a keel fitting between the leg portions, floats supported on the keel, float supporting means extending over the shoulder portions of the garment, means by which the apparatus may be propelled, and means for deflecting the keel to steer the apparatus.

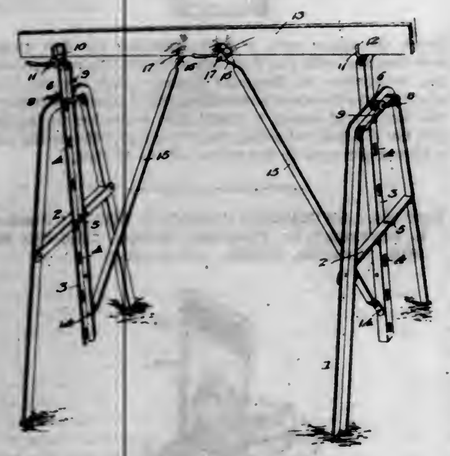
3. An apparatus of the class described comprising an elastic garment having leg portions, a keel fitting between the leg portions, floats supported on the keel, float supporting means extending over the garment, means by which the apparatus may be propelled, and means for shifting the position of the keel to steer the apparatus.

4. An apparatus of the class described, comprising an elastic garment composed of body and head sections to engage the person using the apparatus, said garment having a lining, a keel, floats mounted on the keel, means for supporting the floats on the garment, a frame on the garment, and a sail carried by the frame.

5. An apparatus of the class described, comprising an elastic garment including leg portions, a keel, floats, a frame supported on the elastic garment, said frame extending down each leg portion of the garment and above the latter, a sail on the upper portion of the frame, and weights at the lower ends of the frame adjacent the leg portions to balance the apparatus.

[Claim 6 not printed in the Gazette.]

1,109,505. ADJUSTABLE SCAFFOLD. GEORGE BONENBERGER, Evansville, Ind., assignor to Steel Scaffolding Company, Evansville, Ind., a Corporation of Indiana. Filed Feb. 12, 1913, Serial No. 747,943. Renewed Apr. 6, 1914. Serial No. 830,086. (Cl. 20—83.)

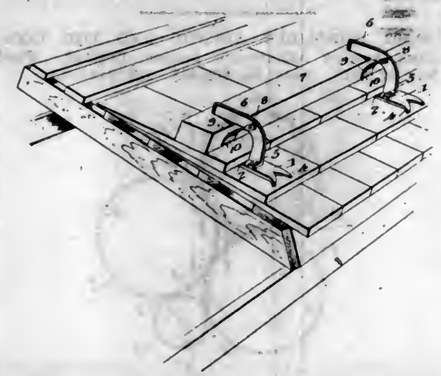


1. In an adjustable scaffold, the combination with a frame having a laterally projecting fixed hook, of a laterally projecting hook clamp carried by the frame at a different height from the fixed hook, said hook and hook clamp being in vertical alinement, an angle iron upright provided with a row of elongated openings, different ones of which are adapted to receive the hook and the hoop clamp at different heights of said upright at the same time, said hook clamp being adapted to engage one of the webs of said angle iron upright and to bind it against the frame, and means on the upright adapted to engage a scaffold or trestle cross-piece.

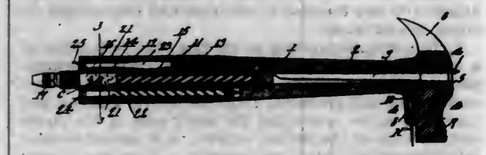
2. In an adjustable scaffold, the combination with a frame, of an upright adjustable in relation thereto, means for securing the upright to the frame, a brace pivoted to the upright, and oppositely set hook clamps carried by the brace and the upright which are adapted to receive a scaffold plank and to engage opposite sides thereof.

1,109,506. SHINGLING-BRACKET. GEORGE BONENBERGER, Evansville, Ind., assignor to Steel Scaffolding Company, Evansville, Ind., a Corporation of Indiana. Filed Feb. 12, 1913, Serial No. 747,944. Renewed Apr. 6, 1914. Serial No. 830,087. (Cl. 20—86.)

A shingling bracket embodying a base having means adapted to engage a shingle, a hook secured to the base and arranged in overhanging relation thereto in position to embrace a piece of timber, and an abutment pivoted to the bill of the hook intermediate the ends of the latter with its free end extending toward the free end of the hook in abruptly inclined or angular relation to the hook and base and in position to be pressed by the timber into engagement with a shingle.



1,109,507. TOOL. FREDERICK L. BOSTOCK, Pittston, Pa. Filed Aug. 26, 1912. Serial No. 717,148. (Cl. 145—30.)



1. A tool comprising a hammer head, a handle carried thereby, a slot provided in said hammer head and lying upon the longitudinal axis of said handle and head, the said slot substantially U-shaped in cross section with the opening thereof extending at right angles to the plane defined by the longitudinal axis of the handle and head, during the nailing operation, said U-shaped slot disposed upon the rear of said hammer head, said U-shaped slot adapted to house a nail therein and adapted to hold the same.

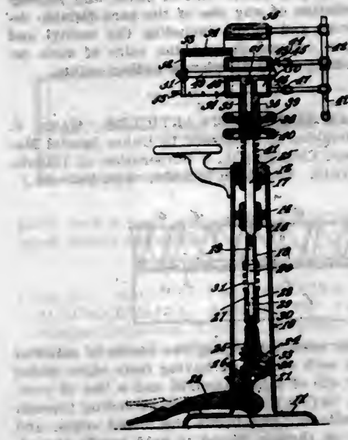
2. A tool comprising a hammer head, a handle carried thereby, a slot formed in said hammer head positioned upon the longitudinal median plane of said handle and hammer head, the said slot disposed intermediate the center of gravity of the said hammer head and said handle and approximating the center of percussion, said slot U-shape in transverse cross section and opening at right angles to the plane described by the longitudinal axis of the handle during the nailing operation, said U-shaped slot adapted to house and hold a nail therein.

1,109,508. CUFF-PRESS. LIONEL F. BOWERS, Columbia, Pa., assignor to Columbia Mfg. Co., Columbia, Pa. Filed Apr. 23, 1912. Serial No. 692,707. (Cl. 68—9.)

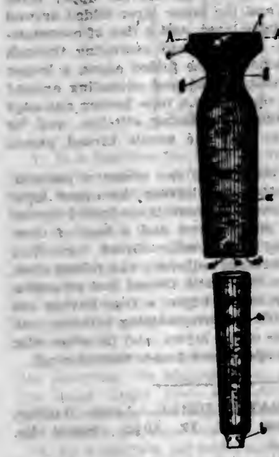
1. A cuff press comprising a stationary heating member, a movable heating member, said members being maintained parallel at all times, a perforated goods support, a plunger carried by said goods support, said movable member being bored to receive said plunger.

2. A cuff press including a stationary heating member, a movable heating member, a plunger supported by said movable member, a bed supported by said plunger, said heating member and said bed being maintained in fixed parallel relation, a thrust bar for imparting movement to said movable member, a lever arranged to actuate said thrust bar, a treadle, and coacting lugs carried by the thrust bar and lever.

3. A cuff press including a movable heating member, a stationary heating member, a bed carried by said movable heating member and in fixed parallel relation therewith, a shaft connected to said movable heating member, a hollow link pivotally connected to said shaft, a thrust bar extending within said hollow link, a treadle, a segmental gear carried by said treadle, a lever, a segmental gear carried by said lever, said gears being in mesh, and a hollow link connected to said lever, said link receiving the end of the thrust bar remote from the first mentioned hollow link.

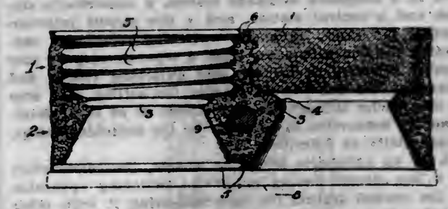


1,109,509. UMBRELLA-ENVELOP. JULIUS BRAUN, Lüttringhausen, Germany. Filed Sept. 15, 1913. Serial No. 789,920. (Cl. 135—33.)



An umbrella case comprising a tubular member of elastic material having a contracted portion adjacent one end thereof, a snap button on the tubular member, one portion of the snap button extending through both walls of the tubular member, the other portion of the snap button being secured to one of the walls of the tubular member, so that when the first mentioned portion is positioned on the second mentioned portion, a fold is formed in the tubular member whereby the case is brought into close engagement with an umbrella housed by the casing, and a ferrule of elastic material on the opposite end of the tubular member.

1,109,510. VAULT-LIGHT CONSTRUCTION. ALEXANDER CHAMBLEY, Philadelphia, Pa. Filed Jan. 30, 1914. Serial No. 815,572. (Cl. 94—7.)

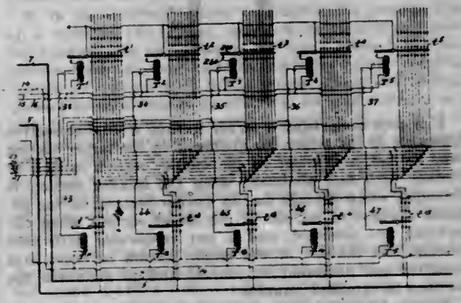


1. A receptacle for an individual lens in a vault light, comprising a body formed from two sections, each section being provided with a flange adapted to coöperate with the other flange to secure said sections together, the opposite edge portions of each of said sections being looped outwardly and reversely to form a bead.

2. A vault light receptacle comprising a substantially pyramidal base portion, surrounded by a beading and terminating upwardly in a substantially circular opening, a substantially cylindrical portion, secured to said lower portion, and provided with screw threads upon its inner surface, and a transparent member secured in said upper portion by engagement with said thread.

3. A vault light receptacle comprising a substantially pyramidal base portion, surrounded by a beading and terminating upwardly in a substantially circular opening, a substantially cylindrical portion, secured to said lower portion, and provided with screw threads upon its inner surfaces, and a transparent member secured in said upper portion by engagement with said thread, said upper portion having its edge shaped to form a beading.

1,109,511. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed July 14, 1906, Serial No. 326,253. Renewed July 20, 1914. Serial No. 852,087. (Cl. 179—23.)



1. In a telephone exchange system, a plurality of line circuits, a group of relays containing contacts connected so as to form combinations adapted to directly interconnect the said line circuits, and means associated with the line circuits for sending a series of selective impulses of a predetermined total number to control the said relays, substantially as described.

2. In a telephone exchange system, a plurality of line circuits, a plurality of relays having contacts adapted to directly interconnect the said circuits, and means for selectively controlling the said relays through the line circuits by means of a predetermined total number of current impulses sent thereover, substantially as described.

3. In a telephone exchange system, a plurality of line circuits having substation and central station terminals, with impulse transmitters at the former, and switching sets at the latter composed exclusively of tens and units relays, and circuit connections whereby said impulse trans-

mitters may act selectively and successively upon the tens and units relays of the relay sets through the line circuits, substantially as described.

4. In a telephone exchange system, a subscriber's station and a central station, and a line circuit interconnecting the same, automatic switching relays for connecting the line with other lines, a separate step by step number selecting device for said switching relays, and means at the subscriber's station for setting said step by step device through the line circuit so as to predetermine the connection to be made by the switching relays, substantially as described.

5. In an automatic telephone system, the combination of a line circuit having automatic switching apparatus at the central station for interconnecting it with other line circuits, a set of step by step number selecting relays for said switching apparatus, and means for selectively controlling said relays by current changes in the line circuit, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,109,512. PROCESS OF MAKING A CELLULOSE ACETATE SOLUBLE IN ETHYL ACETATE. FRIEDRICH COLLISCHONN, Frankfort-on-the-Main, and FRIEDRICH RUPPERT, Mainz-Mombach, Germany, assignors to Verein für Chemische Industrie in Mainz, Mainz, Germany. Filed Feb. 18, 1913. Serial No. 749,235. (Cl. 23—24.)

The described process for the manufacture of cellulose acetate soluble in ethyl acetate, consisting in heating solutions of the known cellulose acetates, which contain water, but no substances having a hydrolytic action to a temperature of 90 to 110° C. till a sample of the reaction mass dissolves in ethyl-acetate to a clear solution.

1,109,513. TELESCOPIC POLE. LYTLE O. COOKE, Lake City, Minn. Filed Dec. 6, 1913. Serial No. 805,110. (Cl. 135—15.)

1. A pole comprising a larger section, a smaller section telescopic in the larger, an abutment in the larger section near its end, a shoulder on the smaller section capable of contact with said abutment when the smaller section is extended, screw-threads on the smaller section having position exterior of an end of the larger section when the sections are extended, and a nut coöperable with said threads and the end of the larger section to cause said shoulder and abutment to contact and to maintain the sections in extended relation.

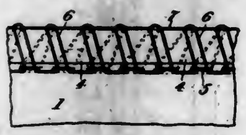
2. A pole comprising tubular sections of different sizes one telescopic within the other, a collar screwed onto the end of the larger section through which the smaller section slides and on said collar an interior abutment, a shoulder near the inner end of the inner section capable of contact with said abutment when the sections are extended and screw-threads on the smaller section having position exterior of said collar when the sections are extended, and a nut coöperable with said screw-threads and the outer end of said collar to cause said shoulder and abutment to contact and to maintain the sections in extended relation.

1,109,514. PHOTOGRAPHIC SENSITIVE PLATES AND THE LIKE. RAYMOND EDWIN CROWTHER, Carlisle, England. Filed Dec. 23, 1913. Serial No. 808,463. (Cl. 95—7.)

1. Photographic plates, films and papers the coatings of which are rendered sensitive by a haloid salt of silver and for the purpose of preventing the reversal of the image impregnated with a solution of any para-diamido derivative of benzol and toluol, including the methyl and ethyl substitution compounds and the salts of such derivatives.

2. Photographic plates, films or papers having coatings rendered sensitive by a haloid halt of silver and impregnated with a solution of any one of the para-diamido derivatives of benzol and toluol, including the methyl and ethyl substitution compounds and the salts of such derivative, with addition of a solution of sodium sulfite.

1,109,515. SEAM FOR SEWED ARTICLES. HARRY J. DAHL, Philadelphia, Pa., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1910. Serial No. 585,610. (Cl. 112—34.)



1. An overedge seam comprising two pieces of material superposed upon each other and having their edges folded onto the face of one of said materials, and a line of overseaming stitches having a needle thread extending through said materials adjacent and inside the folded edges, and a looper thread or threads joined to said needle thread, and extending about and covering said folded edges.

2. An overedge seam comprising two pieces of material superposed upon each other and having the upper layer folded back upon itself, and the lower layer folded around the folded edge of the upper layer, and a line of overseaming stitches having the needle thread extending through the layers of material adjacent and inside the folded edges, and a looper thread joined to the needle thread and extending around and covering the folded edges.

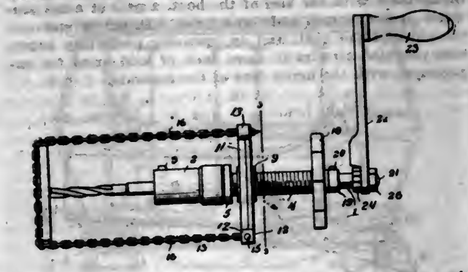
3. An overedge seam comprising two pieces of material superposed upon each other and having the upper layer folded back upon itself, and the lower layer folded around the folded edge of the upper layer, and a line of overseaming stitches having the needle thread extending through the layers of material adjacent the folded edges, a looper thread joined to the needle thread and extending around and covering the folded edges, and a tape having one edge extending underneath the overseaming stitches, and its other edge positioned so that the needle thread passes therethrough.

4. An overedge seam comprising two pieces of material superposed upon each other and having the upper layer folded back upon itself and the lower layer folded around the folded edge of the upper layer, and a line of overseaming stitches having the needle thread extending through the layers of material adjacent the folded dges, a looper thread joined to the needle thread and extending around and covering the folded edges, a tape having one edge extending underneath the overseaming stitches, and within the folded portions of the layers, and its other edge positioned so that the needle thread passes therethrough.

1,109,516. HAND-OPERATED DRILL. JAMES DALTON, Roxbury, Mass. Filed Sept. 17, 1913. Serial No. 790,270. (Cl. 77—14.)

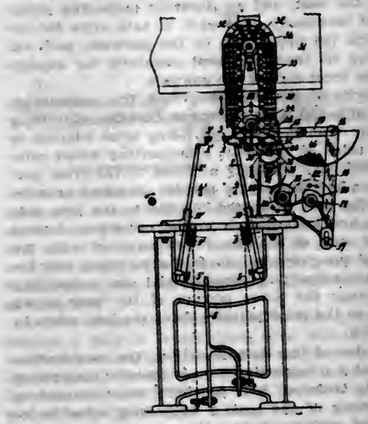
In a drill, a shaft, a drill receiving socket in one end of said shaft, a feed screw surrounding said shaft, an anti-friction bearing between one end of said feed screw and said socket, a hand wheel upon the opposite end of said feed screw for operating the latter, a collar surrounding said screw and threadedly engaging the same, arms extending outwardly from said collar at diametrically opposite points, cross bars carried by the outer ends of said arms, heads on the opposite ends of each cross bar, one of said heads being formed with a rectangular opening, a bolt passed through the walls of said opening, the other head being formed to provide a hook, chains each having one end fixed to the bolt on the respective head of one of said arms and the

other end detachably connected with the hooked head, a crank handle loosely surrounding the outer end of said



shaft, and a pawl and ratchet connection between said crank handle and shaft.

1,109,517. MACHINE FOR CARRYING, DRYING, AND AUTOMATICALLY ARRANGING PAPER TUBES. JOSEPH DELGOFFE, Verviers, Belgium. Filed Dec. 27, 1911. Serial No. 668,143. (Cl. 34—12.)



1. In a machine for making paper tubes, an elevator arranged to receive a tube, a carrier disposed to receive the tube from said elevator, a drying apparatus and a carrier adapted to convey the tube through said drying apparatus and to deposit it in a receptacle.

2. In a machine for making paper tubes, an elevator for receiving the tube, a carrier movable in a plane at an angle to said elevator, a drying apparatus and a carrier for receiving the tube from said elevator and conveying it to said drying apparatus and finally depositing it in a receptacle.

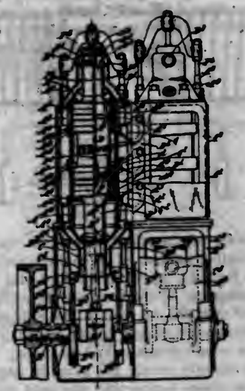
3. In a machine for making paper tubes, an elevator for receiving the shaped tube, a conveyer for receiving the tubes singly from said elevator and movable in a plane at an angle to the direction of travel of the elevator and a chain for receiving the tubes from the carrier.

4. In a machine for making paper tubes, an elevator for receiving the shaped tube, a conveyer for receiving the tubes singly from said elevator and movable in a plane at an angle to the direction of travel of the elevator, a chain for receiving the tubes from the carrier, and means for giving said chains an intermittent movement.

5. In a machine for making paper tubes, an elevator for receiving the shaped tube, a conveyer for receiving the tubes singly from said elevator and movable in a plane at an angle to the direction of travel of the elevator, a chain for receiving the tubes from the carrier, and means for keeping the tubes separated on said chain.

[Claims 6 to 14 not printed in the Gazette.]

1,109,518. INTERNAL-COMBUSTION ENGINE. JOHN DOUGLAS, East Sheen, Surrey, England. Filed Nov. 23, 1912. Serial No. 733,113. (Cl. 123—62.)



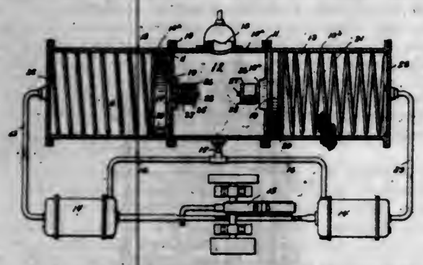
1. In an internal combustion engine the combination of a cylinder, a working piston reciprocating therein, said piston constituting one wall of the combustion chamber between it and the end of the cylinder, a second piston reciprocating in said cylinder and moving relatively to said first piston, an inlet port admitting a charge into the space between the two pistons, said space between the pistons being so proportioned relatively to the working portion of the cylinder that a larger charge can be compressed therein than is necessary to fill the working portion of the cylinder at a suitable pressure whereby the surplus is available for scavenging without the pressure of the charge retained being reduced below the normal, and means for admitting the charge so compressed between the pistons into the working portion of the cylinder wherein said first piston operates.

2. In an internal combustion engine the combination of, a cylinder, two pistons reciprocating therein and moving relatively to one another, the space between the two pistons being so proportioned relatively to the working portion of said cylinder that a larger charge can be compressed therein than is necessary to fill said working portion of the cylinder at a suitable pressure, an air inlet at one end and a mixture inlet at the other end of said space between the pistons, transfer ports connecting said space and said working portion of the cylinder whereby the air and mixture are discharged separately thereinto and whereby only a portion of the pure air is permitted to escape.

3. An internal combustion engine comprising a cylinder formed with an extension or neck at the end adjacent to the crank shaft, a hollow piston provided with a hollow extension projecting through said cylinder extension adapted to carry the gudgeon-pin to connect with said shaft; a second piston within said piston carried by a rod extending through the other end of said cylinder remote from the crank-shaft, a yoke for said rod, guide rods for said yoke extending downwardly on each side of the cylinder to connect with the crank-shaft.

4. An internal combustion engine comprising a cylinder formed with an extension having ports therein, a hollow piston provided with an extension for said cylinder, a piston within said hollow piston forming a pump-chamber, ports in said piston extension adapted to alternately register with ports in said cylinder extension and with the working portion of the cylinder, whereby air is admitted to said pump-chamber, ports in said hollow piston adapted to be shut and opened by said second piston, said ports communicating with a chamber, ports in the cylinder wall communicating with said chamber.

1,109,519. AIR-COMPRESSING MACHINE. ALTOMON L. ELLIS, Eden, Miss. Filed Mar. 21, 1913. Serial No. 756,062. (Cl. 230—32.)



1. In a device of the class described, the combination with double-acting pumps, of a casing, plates secured in the casing to form an air chamber and end compartments therein, compressing heads mounted to slide in the compartments and adapted to engage the said plates to limit the sliding movement of the heads in the compartments, springs in the compartments and engaging the compressing heads to normally retain the same in engagement with the said plates, pipes connecting the said pumps with the said compartments, a pipe connecting the said pumps with the said air chamber, an outlet pipe for the air chamber, and spring-engaged valves mounted on the said compressing heads to normally close openings therein.

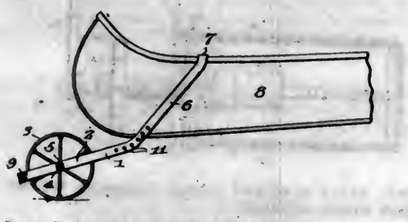
2. In a device of the class described, the combination with double-acting pumps, of a casing, plates secured in the casing to form an air chamber and end compartments therein, compressing heads mounted to slide in the compartments and adapted to engage the said plates to limit the sliding movement of the heads on the compartments, springs in the compartments and engaging the compressing heads to normally retain the same in engagement with the said plates, pipes connecting the said pumps with the said compartments, a pipe connecting the said pump with the said air chamber, an outlet pipe for the air chamber, spring-engaged valves mounted on the said compressing heads to normally close openings therein, and apertured housings on the said heads and adapted to inclose the said valves therein.

3. In a device of the class described, the combination with a casing subdivided to form an air chamber and end compartments, of pumps having connection with the said air chamber and end compartments for forcing air therein, of compressing heads slidable in the end compartments, plates secured to the casing to limit the sliding movement of the said heads and the said compartments, springs in the said compartments and engaging the ends to normally retain the same in engagement with the said plates, valves adapted to normally close openings in the said heads, and springs engaging the valves to normally retain the same in closed position.

4. In a device of the class described, the combination with a casing subdivided to form an air chamber and end compartments, of pumps having connection with the said air chamber and end compartments for forcing air therein, of compressing heads slidable in the end compartments, plates secured to the casing to limit the sliding movement of the said heads and the said compartments, springs in the said compartments and engaging the heads to normally retain the same in engagement with the said plates, valves adapted to normally close openings in the said heads, springs engaging the valves to normally retain the same in closed position, and apertured housings on the said heads and adapted to inclose the said valves.

1,109,520. CANOE-HARROW. FRANK B. FLOWER, Philadelphia, Pa. Filed Jan. 14, 1914. Serial No. 812,165. (Cl. 21—65.)

1. In a device of the class described, the combination with a boat, of a transporting barrow therefor comprising a body, a supporting wheel rotatably mounted upon the body, a supporting member provided upon said body for engagement with the keel of the boat, a pair of arms provided upon the said body and being adapted to embrace the sides of the boat, and an inwardly projecting extension provided terminally upon each of said arms for engagement with the upper face of the gunwale.



2. In a device of the class described, the combination with a boat, of a transporting barrow therefor comprising a body, a supporting wheel rotatably mounted upon the body, a supporting member provided upon said body for engagement with the keel of the boat, a pair of arms provided upon the said body and being adapted to embrace the sides of the boat, and an inwardly projecting extension provided terminally upon each of said arms for engagement with the upper face of the gunwale, each extension having its inner end bent angularly for engagement with the inner face of the gunwale.

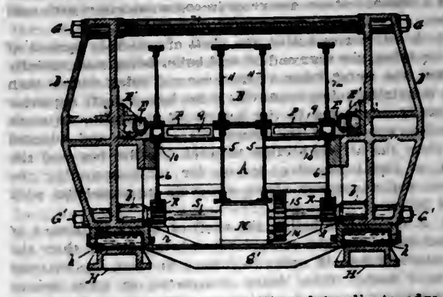
3. In a device of the class described, the combination with a boat, of a transporting barrow therefor comprising a substantially U-shaped body providing arms adapted to embrace the sides of the boat, a supporting wheel rotatably connected with the body adjacent to the cross portion thereof, a keel-supporting member mounted between the arms of the body in spaced relation to the free ends of the same, and inwardly projecting extensions formed upon the free ends of the arm for engagement with the upper faces of the gunwales, the said arms being bent between the keel-supporting member and the supporting wheel to arrange the lower portion of the body at an oblique angle to the longitudinal axis of the boat when in applied position.

4. In a device of the class described, the combination with a boat, of a transporting barrow therefor comprising a substantially U-shaped body providing arms adapted to embrace the sides of the boat, a supporting wheel rotatably connected with the body adjacent to the cross portion thereof, a keel-supporting member mounted between the arms of the body in spaced relation to the free ends of the same, and inwardly projecting extensions formed upon the free ends of the arm for engagement with the upper faces of the gunwales, the keel-supporting member being longitudinally adjustable upon the body.

5. In a device of the class described, the combination with a boat, of a transporting barrow therefor comprising a substantially U-shaped body providing arms adapted to embrace the sides of the boat, a supporting wheel rotatably connected with the body adjacent to the cross portion thereof, a keel-supporting member mounted between the arms of the body in spaced relation to the free ends of the same, and inwardly projecting extensions formed upon the free ends of the arm for engagement with the upper faces of the gunwales, the arms of the body being provided with a plurality of longitudinally spaced openings arranged in transversely alining sets and the keel-supporting member being in the form of a flexible member having hooks provided terminally for detachable engagement within the arm openings.

1,109,521. MACHINE FOR EDGING METAL PLATES. JOHN FRASER, Hackensack, N. J. Filed Nov. 8, 1909. Serial No. 526,855. (Cl. 80—40.)

A machine for edging plates, having a stationary table and clamping frame in combination with traveling standards fixed with relation to each other on opposite sides of the work table, tool-carriers laterally movable and means whereby the tool carriers may be set and secured on the



said standards in different positions laterally to edge different widths of plates.

1,109,522. MACHINE FOR FORMING SHEET-METAL PIPES. JOHN FRASER, Hackensack, N. J. Filed Nov. 12, 1909. Serial No. 527,706. (Cl. 153—34.)

1. A machine for bending plates into pipe form, comprising a pair of longitudinal edge dies, a longitudinal mandrel and a strong back secured to the mandrel longitudinally, and means to move the mandrel and plate between and over the edge dies, a space being left below the latter to facilitate endwise removal of the pipe form, substantially as described.

2. A machine for bending plates into pipe form, comprising a pair of longitudinal edge dies, a longitudinal mandrel a strong back secured to the back of the mandrel longitudinally, and means to move the mandrel and plate between and over the edge dies, in combination with a pair of laterally movable folding bars to finish the folding of the edges and means to move the strong back and mandrel and the folding bars, substantially as described.

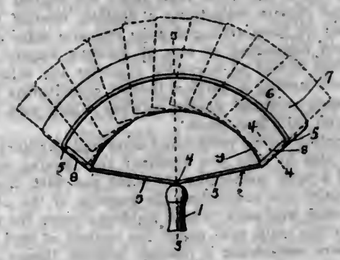
3. A machine for bending plates into pipe form, comprising a frame-work, a pair of detachable edge dies, a mandrel and an I-beam secured to the mandrel longitudinally, and means to raise and lower the mandrel and I-beam.

4. A machine for bending plates into pipe form, comprising a framework, a pair of detachable edge dies, a mandrel and an I-beam secured to the mandrel longitudinally, laterally movable folding bars, means to raise and lower the mandrel and beam and means to move the folding bars.

1,109,523. CAKE-TURNER. ERWIN S. FREY, Brooklyn, and FRANK MARRIOTT, Woodhaven, N. Y. Filed Oct. 21, 1913. Serial No. 796,510. (Cl. 65—3.)

The hereindescribed cake turner comprising a shank, a flat turning blade connected to one end of said shank and inclined therefrom, a handle mounted on the other end of said shank, a sleeve mounted to slide on said shank and provided with a spiral slot, a pin projecting from said shank through said spiral slot, a spring bearing at one end against said handle and at its opposite end against said sleeve, an arm connected to said sleeve, said arm being bent away from said sleeve and extending over a portion of said handle, said arm being provided with an angular finger hold projecting away from the handle member, said arm having slot therein and a screw for holding said arm slidably connected to said handle.

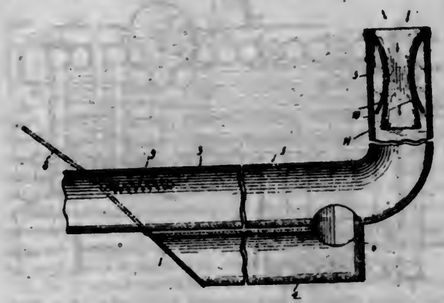
1,109,524. HOLDER FOR PLAYING-CARDS. WILLIAM GESSNER, West Hoboken, N. J. Filed Feb. 10, 1914. Serial No. 817,836. (Cl. 46—55.)



1. A holder for playing cards comprising a wire frame, said frame including a curved bar, an arcuate plate supported by the frame and coacting with the bar to hold cards therebetween, and means carried by the plate to limit the downward movement of the cards.

2. A holder for playing cards comprising a handle, a wire frame formed from a single length of wire and being bent to provide horizontal bars, the inner ends of said bars being connected to the handle, the outer ends of said bars terminating in upwardly inclined arms, a curved bar connecting said arms, an arcuate sheet metal plate having its end edges provided with sleeves for engaging the inclined arms, the lower edge of said plate being provided with an inwardly directed continuous flange for engagement by the lower end edges of the cards when the same are engaged between the curved bar and plate.

1,109,525. NOZZLE FOR COTTON-PICKERS. GEORGE HARRY HARTWELL, Jr., San Antonio, Tex. Filed Aug. 30, 1913. Serial No. 787,492. (Cl. 56—117.)



1. A suction nozzle comprising main and auxiliary tubes arranged side by side, the auxiliary tube having one end open and the other end communicating with the main tube; a valve located at the open end of the auxiliary tube, to control the passage of the air current through said tubes; means for normally holding said valve in open position; means for closing said valve against the action of said holding means; and a yielding closure for the inlet end of the main tube under the control of said valve.

2. A suction nozzle comprising communicating main and auxiliary tubes, the former having its mouth-piece provided with a yielding, interiorly-located closure composed

of a flexible, tubular throat, and a pair of spring jaws arranged upon opposite sides of said throat for normally constricting the same, said mouth-piece having a portion thereof constituting a pair of oppositely-arranged guides between which said throat extends and said jaws work; and a valve coöperative with the auxiliary tube for regulating the passage of the air current through that tube into the main tube, to control the operation of said closure.

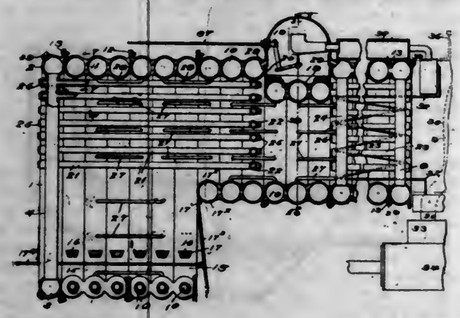
3. A suction nozzle comprising main and auxiliary tubes arranged side by side, the auxiliary tube having one end open and a neck connecting its other end with the main tube; a movable valve for controlling the passage of the air current through said neck; and a yielding closure for the inlet end of the main tube under the control of said valve, said closure embodying a flexible, tubular throat, and a pair of jaws arranged upon opposite sides of said throat and consisting of sets of yielding fingers bowed toward said throat to normally constrict the same, said mouth-piece having a portion thereof constituting a pair of oppositely-arranged guides between which said throat extends and said jaws work.

4. A suction nozzle comprising main and auxiliary tubes arranged side by side, the auxiliary tube having one end open and a neck connecting its other end with the main tube; a valve for controlling the passage of the air currents through said neck; and a yielding closure for the inlet end of the main tube under the control of said valve, said closure embodying a flexible, tubular throat and a pair of yielding jaws arranged upon opposite sides of said throat for normally constricting the same.

5. A suction nozzle comprising main and auxiliary tubes arranged side by side, the auxiliary tube having one end open and a neck connecting its other end with the main tube; a valve for controlling the passage of the air current through said neck; means for normally holding said valve in open position; means for closing said valve against the action of said holding means; and a yielding closure for the inlet end of the main tube under the control of said valve, said yielding closure embodying a flexible, tubular throat and a pair of yielding jaws arranged upon opposite sides of said throat for normally constricting the same.

[Claims 6 and 7 not printed in the Gazette.]

1,109,526. WATER TUBULAR BOILER FOR LOCOMOTIVES. PATRICK J. HEALY, Seattle, Wash., assignor of one-third to William R. Houghtling, Seattle, Wash. Filed Aug. 21, 1913. Serial No. 785,984. (Cl. 122—94.)



1. A locomotive boiler, the shell of which is formed of sections of water tubing, means for inter connecting said water tubings, means for locking the sections to each other, and means connecting the tubings to a common reservoir of steam.

2. A locomotive boiler, the shell of which is formed of sections, said sections comprising inter-connecting tubes, means for securing said sections together, means for inter-communication between the sections, and a common reservoir of steam in connection with the said sections.

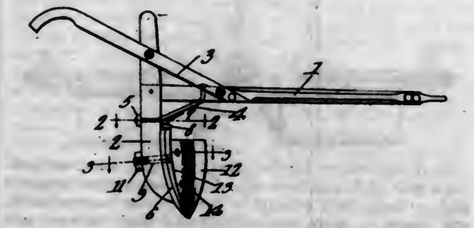
3. A locomotive boiler, the shell of which is formed of water tubes, the water tubes of one end of said boiler being deeper than the remaining tubes, a fire-box formed in the deeper tubes, means for inter-connecting said tubes, and a common steam reservoir in communication with said tubes.

4. A locomotive boiler, the shell of which is formed of water tubes, the rear end of said boiler being substantially closed, the water tubes at the rear end being deeper than the remaining tubes to provide a fire-box, a draft regulator pivotally connected to the bottom of the boiler adjacent the forward end of the deeper water tubes and adapted to close the air connection between the fire box and the rest of the locomotive, means for inter-connecting the tubes, and a common steam reservoir in connection with said tubes.

5. A locomotive boiler, the shell of which is formed of water tubes, certain of said tubes being deeper than the remaining tubes, in order to form a fire box, the bottoms of said deeper tubes being contracted to leave spaces therebetween, means for inter-connecting the water tubes, and a common steam reservoir in connection with said tubes.

[Claims 6 to 16 not printed in the Gazette.]

1,109,527. PLOW. JOHN HEFFNER, Saxton, Pa. Filed Apr. 20, 1914. Serial No. 833,259. (Cl. 97—6.)

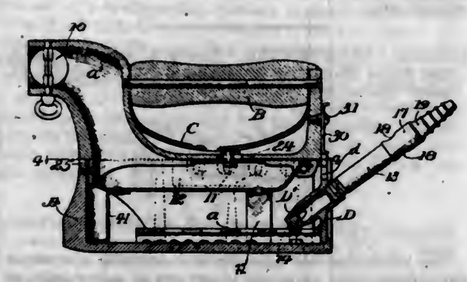


1. A shovel blade, and a vertical cutter attached to the face thereof, the cutter having basal lips resting against the blade and having their edges sharpened whereby the faces of the lips merge gently into the face of the blade.

2. A shovel blade, a vertical cutter having sharpened basal lips fitting against the face of the blade, and securing members engaged through the said lips and through the blade.

3. A shovel blade, a vertical cutter having basal lips resting against the face of the blade, and means securing the said lips to the blade, the faces of the cutter and said lips blending together gently, the free edges of the lips being sharpened whereby the faces of the lips merge gently into the face of the cutter, and the cutter being tapered downwardly.

1,109,528. SAD-IRON. WILLIAM E. HOYT, New York, N. Y. Continuation in part of application Serial No. 703,046, filed June 11, 1912. This application filed Jan. 22, 1914. Serial No. 813,721. (Cl. 158—23.1.)



1. A sad-iron comprising a body formed with an internal combustion chamber having an open side with vertical retaining grooves at each side of said opening, a sliding plate with edges adapted to be mounted in and slide in said grooves to engage therewith and disengage therefrom, and formed with a gas burner as an integral part thereof, said gas burner extending part on one side of said plate and part on the other and in a direction inclined inwardly toward the bottom of said combustion chamber, the inner end of said burner being formed flared and with a multiple of discharge openings leading at angles each way from the central opening and the outer end of said burner being formed for the attachment of a gas pipe, substantially as set forth.

2. A sad iron comprising a body formed with a combustion chamber with an opening at one end having an overhanging flange around its vertical sides and bottom, a sliding plate for closing said opening, of dimensions to normally pass through said opening but formed with laterally projecting wings adapted to engage behind the vertical overhanging flanges when in closed position, and to be released from engagement with said flanges by a slight upward movement, said plate being also formed with a gas burner integral therewith and extending on each side thereof, the outer portion being formed for attachment with the gas supply pipe, and the portion extending within the combustion chamber being formed to direct the flame over the surface of the combustion chamber adjacent to the operative surface of the iron, substantially as set forth.

3. A sad iron comprising a body formed with a combustion chamber with an opening at one end having flanges overhanging its vertical sides, which flanges are inclined from the top inwardly toward the bottom, a sliding plate for closing said opening formed to fit behind and be retained by said flanges when in closed position, and to be released from said flanges when slid upwardly a short distance, whereby only a slight vertical movement is necessary to engage and disengage it from said retaining flanges, said plate being formed with a gas burner integral therewith and extending on each side thereof, the outer portion being formed for attachment with the gas supply pipe, and the inner portion formed to project the flame appropriately within the combustion chamber, substantially as set forth.

4. In a sad iron adapted to be heated by either solid fuel, or gas, the combination of a combined grate and flame spreader formed wide at its rear end and narrow at its forward end and extending the greater part of the length of the combustion chamber on the bottom thereof, and a gas burner having attachments for connecting with the gas supply and formed as a part of a removable door to the combustion chamber, the burner being formed with angularly disposed openings to discharge a fan-shaped flame and positioned to discharge upon the top of the rear end of said combined grate and flame spreader, whereby said flame is spread over the bottom of the iron, substantially as set forth.

5. An internally heated sad iron adapted for use with solid fuel for gas, comprising a combustion chamber, a combined frame spreader and grate mounted on the bottom of said combustion chamber, a door to said combustion chamber, a gas burner mounted in said door and provided with means for connecting with the gas supply, said gas burner being formed with angularly disposed openings and arranged to discharge its flame upon the surface of said combined grate and flame spreader, substantially as set forth.

1,109,529. PROCESS FOR EFFECTING THE SEPARATION OF MATERIALS. RICHARD JAFFÉ, Frankfort-on-the-Main, Germany. Filed Mar. 16, 1912. Serial No. 684,335. (Cl. 83—84.)

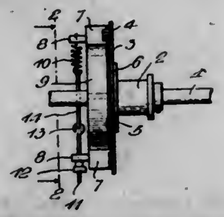
1. The herein described method of separating the constituents of a mixed mass of finely divided material, comprising depositing material to be separated upon the upper of a plurality of superposed bodies of liquid differing in specific gravity, and both of less specific gravity than the constituents to be separated, while maintaining relative movement between said upper liquid body and the stream of material in a direction transverse to that in which the stream of material moves, the separation being effected by the passage of the material through the upper liquid as set forth.

2. The herein described method of separating the constituents of a mixed mass of finely divided material, comprising depositing material to be separated upon the upper of a plurality of superposed bodies of liquid differing in specific gravity, and both of less specific gravity than the constituents to be separated, while maintaining relative movement between said upper liquid body and both the stream of material and the lower liquid.

3. The herein described method of separating the constituents of a mixed mass of finely divided material, comprising depositing the material to be separated upon a lather-like layer supported by a liquid body while causing said lather-like layer to move relative to the stream of material and to the supporting liquid, all of said material passing through the lather-like layer and being separated during such passage and deposited in the lower liquid body at different points, as set forth.

4. The herein described method of separating the constituents of a mixed mass of finely divided material, comprising depositing the material to be separated upon a liquid body composed of a lower layer of water and an upper floating layer of the character described, all of the material passing through said upper layer and being separated during such passage so that the constituents thereof will be deposited at different points in the body of water.

1,109,530. SPEED-REGULATOR. LOUIS JOHNSON, Webster township, Rice county, Minn. Filed Oct. 9, 1913. Serial No. 794,304. (Cl. 74—45.)

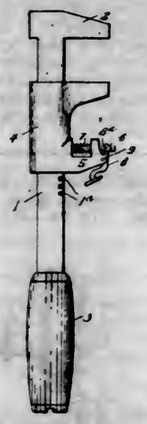


1. In a speed regulator, the combination with a main shaft, a fly wheel fast thereon, and a driven pulley loose thereon and having a flange extending beyond the periphery of said fly wheel; of a pair of curved arms pivoted at one end to said flange at opposite points thereon, hooks on the flange overlying the bodies of said arms to limit the outward swinging movement of the latter, a pair of shoes carried by the other ends of said arms and standing adjacent the periphery of the fly wheel, and means for drawing said shoes toward each other with yielding force.

2. In a speed regulator, the combination with a main shaft, a fly wheel fast thereon, and a driven pulley loose thereon and having a flange extending beyond the periphery of said fly wheel; of a pair of curved arms pivoted at one end to said flange at opposite points thereon, hooks on the flange overlying the bodies of said arms to limit the outward swinging movement of the latter, a pair of shoes carried by the other ends of said arms and standing adjacent the periphery of the fly wheel, each shoe having a lateral ear, a spring connected with one ear, a hook whose shank passes loosely through the other ear and is threaded, a link connecting the bill of the hook with the inner end of the spring, and a set screw on the outer end of said shank.

3. In a speed regulator, the combination with a main shaft, a fly wheel mounted to rotate therewith, a driven pulley loosely mounted on said shaft immediately adjacent said fly wheel and an enlarged flange removably secured to one end of said pulley between the latter and said fly wheel; of a pair of arcuate arms pivotally secured at one end to said flange at substantially diametrically opposite points thereon, said arms extending in opposite directions on the pulley, hook members formed on the peripheral edge of said flange at diametrically opposite points thereon, said hook members extending inwardly and overlying portions of said arcuate arms to limit the outward swinging movement of the latter with respect to the flange, brake shoes carried on the free ends of said arms and designed for contact with the periphery of said fly wheel, laterally extending ears carried on said shoes, a coil spring having one end thereof engaged with one of said ears, a hook member having a threaded shank loosely disposed through the other of said ears, connecting means between said hook member and the other end of said coil spring, and means in connection with the threaded shank of said hook member and the last mentioned ear to adjustably secure the former in place with respect to the latter and also afford a means for the adjustment of the tension of said spring.

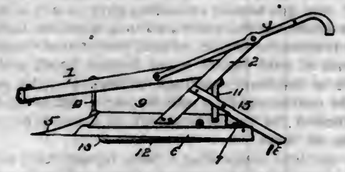
1,109,531. WRENCH. OSCAR J. JOHNSON, Cloquet, Minn. Filed Sept. 5, 1913. Serial No. 788,345. (Cl. 81—145.)



1. A wrench comprising a shank having a stationary jaw and provided lengthwise thereof with racks arranged in staggered relation, a jaw movable along the shank and having an offstanding arm provided with openings therein, spring-pressed pins slidably mounted in the openings of said arm and adapted at their inner ends to engage with the racks of the shank, the said pins being formed with longitudinal slots at their outer ends, springs arranged between said arm and the body of the movable jaw and acting on the catches to cause engagement of the latter with the racks, a lever pivoted to the arm aforesaid, and means on the lever engaging in the slots of said pins for operating the pins substantially as specified.

2. A wrench comprising a shank having a stationary jaw and provided lengthwise thereof with adjacent racks arranged in staggered relation, a movable jaw adjustable on the shank, a pair of independent spring-pressed reciprocatory plungers mounted side by side on said movable jaw and arranged at their inner ends to engage said racks, said movable jaw having a guide arm common to said plungers for guiding the movement of the same, an operating lever pivoted to the movable jaw, pin and slot connections intermediate said operating lever and the outer ends of the plunger permitting movement of one plunger independently of the other plunger, and a handle carried by the shank.

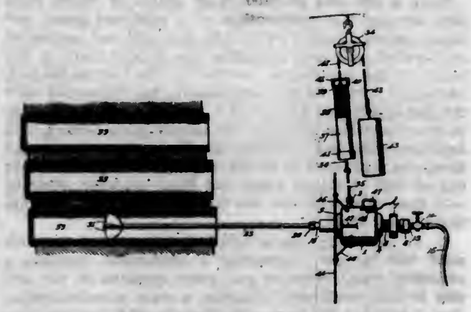
1,109,532. KEEL FOR CULTIVATORS. GEORGE LANDER JONES, Kenuewick, Wash. Filed Mar. 18, 1912. Serial No. 684,371. (Cl. 97—10.)



1. The combination with a cultivator comprising a mold board and blades extending rearwardly from the mold board and at an angle to each other, of a keel extending longitudinally of the cultivator the full length of said blades, the forward end thereof being attached to the under face of the mold board, the lower front edge of said keel being curved and extended below the lower edges of the mold board and blades the forward end of the keel being extended a greater distance below the blades than the rear end.

2. The combination with a cultivator comprising a beam, a rod extending downwardly from the forward portion of the beam, a standard at the rear end of the beam, a mold board attached to said rod and a pair of blades pivotally attached to and extending rearwardly from the mold board, of a keel attached at its forward end to said rod and engaging the lower end of the standard, said keel extending the full length of said blades and having its lower edge extending in a plane below the lower edges of the blades, the forward end of the keel extending a greater distance below the blades than the rear end, the forward and lower edges of the keel being tapered to a cutting edge, said keel having its lower front edge curved.

1,109,533. MACHINE FOR REMOVING SLAG, ASH, OR OTHER RESIDUE FROM THE RETORTS OF ZINC-FURNACES. EDWARD W. KEITH, Denver, Colo. Filed Feb. 14, 1911. Serial No. 608,619. (Cl. 255—40.)



1. In a machine as specified, the combination of an electric motor having a shaft supported in hubs and provided with a drill-receiving bore in its forward end and an axial passage extending from said bore to the opposite end of the shaft, a cap on the rear hub of the motor having a chamber communicating with and providing an unrestricted inlet to the axial passage in the shaft, and a valved hose connected to said cap.

2. In a machine as specified, the combination of an electric motor having a shaft supported in hubs and provided with a drill-receiving bore at one end and an axial passage extending from said bore to the opposite end of the shaft, a cap on one hub of said motor and having a chamber communicating with and providing an unrestricted inlet to the axial passage in the shaft, a cut-off valve connected to said cap, and a hose connected to said cut-off valve.

3. In a machine as specified, an electric motor having a shaft supported in hubs and provided with a drill-receiving bore at one end and an axial passage extending from the bore to the opposite end of the shaft, a cap on one hub of the motor and having a chamber communicating with and providing an unrestricted inlet to the axial passage in the shaft, and a valved hose connected with said cap.

4. In a machine as specified, an electric motor having a shaft supported in hubs and provided with an axial passage and a bore in its forward end, a hollow coupling on one hub of the motor communicating with and providing an unrestricted inlet to the passage in the shaft, a valved hose connected to the said coupling, and a shield carried by said motor and having peep-holes therein.

1,109,534. CONTROLLING DEVICE FOR RAILWAY-VEHICLES. CARL KÖNIG, Vohwinkel, Germany. Filed Aug. 1, 1912. Serial No. 712,655. (Cl. 246—21.)

1. In an electrical controlling system for railway trains, in combination, a rail track having practically no electric resistance, two resistance conductors stretched out along the line, and a signaling conductor, the rail track being connected to the middle point of the one resistance conductor, the ends of which are connected, in parallel, to the signaling conductor and to the ends of the second resistance conductor, the said second resistance conductor being connected by the moving train to the rail track, a current source being included in the said connection.

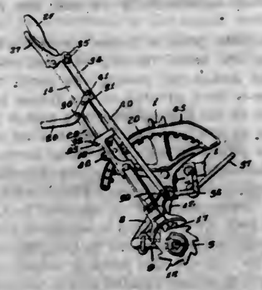
2. In an electrical controlling system for railway trains, in combination, a rail track having practically no electric resistance, two resistance conductors stretched out along the line, and a signaling conductor, the rail track being connected to the middle point of the one resistance conductor, the ends of the two resistance conductors and signaling conductor being connected in parallel, the second resistance conductor being connected by the moving train to the rail track, and a current source being included in the resulting circuit.

3. In an electrical controlling system for railway trains, in combination, a railway train, an electrical connection, two resistance conductors stretched out along the electrical connection, and an indicating conductor, the ends of the resistance conductors being connected in parallel with the indicating conductor, the electrical connection being connected to the middle point of the one resistance conductor, the moving railway train establishing connection between the second resistance conductor and the electrical connection, and a current source being included in the resulting circuit.

4. In an electrical controlling system for railway trains in combination, a moving train, an electrical connection having practically no electrical resistance, two resistance conductors stretched out along the electrical connection, and a signaling conductor, the ends of the resistance conductors being connected in parallel to the signaling conductor, the electrical connection being connected to the middle point of the one resistance conductor, the moving train establishing electrical connection between the second resistance conductor and the said electrical connection, and a current source being included in the resulting circuit.

5. In an electrical controlling system for railway trains in combination, a railway train, an electric circuit established by said railway train, an electric indicator to indicate the direction and the change of volume of the current through said circuit, the change of the current being caused by the travel of said railway train by means of which the position of the train over a prescribed distance may be exactly and continuously ascertained.

1,109,535. SULKY-PLOW. WILLIAM H. LEE, Syracuse, N. Y., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,781. (Cl. 97—55.)



1. In a sulky plow, a frame, ground wheels supporting the frame, an earth turning element connected to the frame, and means for raising the earth turning element comprising a lever pivoted to the frame and fixed to the axle of one of the ground wheels, a clutch member carried by the lever and shiftable into and out of connection with one of the ground wheels, and being normally out of connection therewith, and means for moving the clutch member into and out of connection with one of the ground wheels including an element slidable lengthwise of the lever and connected to the clutch member, an operating lever pivoted between its ends to the first-mentioned lever and being connected on one side of its pivot to the slidable element, and a foot lever pivoted to the frame and connected to the operating lever on the opposite side of its pivot, substantially as and for the purpose set forth.

2. In a sulky plow, a frame, ground wheels supporting the frame, an earth turning element connected to the frame, and means for raising the earth turning element comprising a lever pivoted to the frame and fixed to the axle of one of the ground wheels, a clutch member carried by the lever and shiftable into and out of connection with one of the ground wheels, and being normally out of connection therewith, and means for moving the clutch member into and out of connection with one of the ground wheels including an element slidable lengthwise of the lever and connected to the clutch member, and operating levers pivoted to the first-mentioned lever and connected to the slidable element on opposite sides of the first-mentioned lever, substantially as and for the purpose specified.

3. In a sulky plow, a frame, ground wheels supporting the frame, an earth turning element connected to the frame, and means for raising the earth turning element comprising a lever pivoted to the frame and fixed to the axle of one of the ground wheels, a clutch member carried by the lever and shiftable into and out of connection with one of the ground wheels, and being normally out of connection therewith, and means for moving the clutch member into and out of connection with one of the ground wheels including an element slidable lengthwise of the lever and connected to the clutch member, operating levers pivoted at different points to the first-mentioned lever, and links connecting said operating levers and the slidable element, the links being arranged on opposite sides of the first-mentioned lever, substantially as and for the purpose specified.

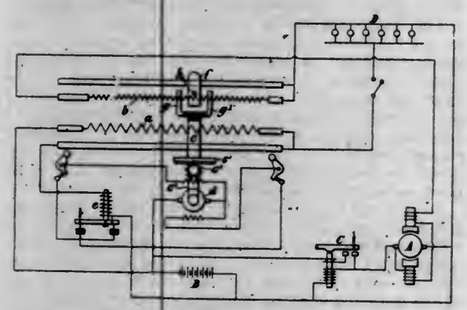
4. In a sulky plow, a frame, ground wheels supporting the frame, an earth turning element connected to the frame, and means for raising the earth turning element comprising a lever pivoted to the frame and fixed to the axle of one of the ground wheels, a clutch member carried by the lever and shiftable into and out of connection with one of the ground wheels, and being normally out of connection therewith, and means for moving the clutch member into and out of connection with one of the ground wheels including an element slidable lengthwise of the lever and connected to the clutch member, an operating

lever pivoted to the first-mentioned lever and connected to the slidable element on one side of the first-mentioned lever, a foot lever pivoted to the frame, and a link connecting the foot lever and the operating lever, and being connected thereto on the opposite side of the first-mentioned lever, substantially as and for the purpose set forth.

5. In a sulky plow, a frame, ground wheels supporting the frame, an earth turning element connected to the frame, and means for raising the earth turning element comprising a lever pivoted to the frame and fixed to the axle of one of the ground wheels, a clutch member slidable lengthwise of the lever into and out of connection with one of the ground wheels and being normally out of connection therewith, and means for operating the clutch member comprising an element slidable lengthwise of said lever and being connected at one end to the clutch member, and a foot lever pivoted between its ends to the frame and connected at its rear end to the slidable element, substantially as and for the purpose described.

[Claims 6 to 10 not printed in the Gazette.]

1,109,536. APPARATUS FOR THE CONTROL OF ELECTRIC CIRCUITS. HENRY LEITNER, London, England. Filed May 5, 1913. Serial No. 765,673. (Cl. 171—313.)



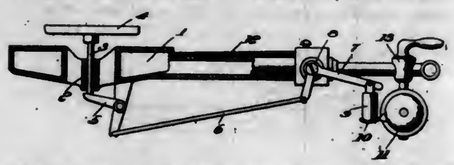
1. In an electric system, the combination with a lamp circuit, a battery of accumulators, a dynamo, a rheostat provided with a plurality of series of resistances, a movable arm adapted to cut certain of said resistances in and out, and an electric motor for operating said arm, of a part operated by said rheostat arm in both directions, for cutting in and out certain other of said resistances, said part being connected with said arm by means permitting lost motion in both directions whereby when the movement of said arm is reversed in either direction of travel, certain only of said plurality of series of resistances are affected, without immediately affecting others.

2. In an electric system, the combination with a lamp circuit, a battery of accumulators, a dynamo, a rheostat, provided with a plurality of series of resistances, a movable arm adapted to cut certain of said resistances in and out, and an electric motor for operating said arm, of a subsidiary resistance controlling arm for cutting in and out certain other of said resistances, driven by the main arm in both directions, but having a certain amount of play with respect thereto, in both directions of movement of said operating arm.

3. In an electric system, the combination with a lamp circuit, a battery of accumulators, a dynamo, a rheostat, provided with a plurality of series of resistances, a movable arm adapted to cut certain of said resistances in and out, and an electric motor for operating said arm, said rheostat arm being provided with bifurcated portions, of a subsidiary controlling arm located between said bifurcated portions, and movable thereby in both directions, for controlling certain other of said series of resistances and capable of slight relative movement with respect to said bifurcated portions, in both directions of movement thereof.

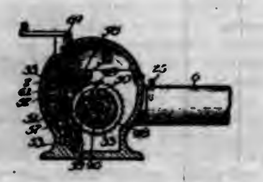
4. In an electric system, the combination with a lamp circuit, a battery of accumulators, a dynamo, a rheostat comprising a series of resistances in the lamp circuit, a series of resistances in the shunt field winding of the dynamo, and a rheostat arm for cutting in and out of the lamp circuit resistance, of a part operatively connected with but movable with respect to the rheostat arm for cutting in and out the resistance in the shunt field winding of the dynamo, a motor for operating the rheostat arm, and a voltmeter control device for said motor, whereby the resistance in the lamp circuit may be changed without immediately altering the resistance in the shunt field winding of the dynamo.

1,109,537. SAFETY GAS-BURNER. HERMAN MENTEN, New York, N. Y. Filed July 28, 1911. Serial No. 641,163. (Cl. 126—52.)



The combination of a gas burner, a pipe conducting the gas thereto, a manually operatable valve in said pipe, a second valve in said pipe between said first mentioned valve and said burner, a movable vessel support carried by said gas burner, a connection between said support and said second valve adapted to open said valve upon depression of said support, a projecting arm carried by said valve and movable upon the actuation of said valve by said support, a signal device attached to the rotatable portion of the first mentioned valve, said signal device having an operating arm which is brought into the path of movement of the projecting arm of said second valve when said first valve is turned to opened position, and means for closing said second valve when said vessel support is free of weight.

1,109,538. CASKET LOWERING AND RAISING APPARATUS. FREDERICK W. MILLER, Chicago, Ill., assignor to Frigid Fuel Co., Chicago, Ill. Filed Dec. 9, 1912. Serial No. 735,767. (Cl. 27—6.)



1. In a device of the character described, the combination with supporting straps, a pair of rotatable sleeves to which said straps are secured, a plurality of heads in which said sleeves terminate and on which said sleeves are rotatably mounted, means whereby said sleeves rotate synchronously, a governor to control the rotation of said sleeves when a weight is placed upon said straps, a pawl and ratchet and worm and worm wheel interposed between said sleeves and said governor, a shaft for said worm, and a bridge for supporting said worm shaft and governor shaft.

2. In a device of the character described, the combination with supporting straps, a pair of rotatable sleeves to which said straps are secured, a plurality of heads in which said sleeves terminate and on which said sleeves are rotatably mounted, means whereby said sleeves rotate synchronously, a governor to control the rotation of said sleeves when a weight is placed upon said straps, means for uniting one of said sleeves with said governor, said means including a square shaft and engaging power transmitting mechanism between said shaft and said sleeve, said power transmitting mechanism being slidable on said shaft and said square shaft being jointed, and means for sliding said sleeve along said shaft to permit said shaft to be folded to permit collapsing of said device.

3. In a device of the character described, the combination with supporting straps, a pair of rotatable sleeves to which said straps are secured, a plurality of heads in which said sleeves terminate and on which said sleeves are rotatably mounted, means whereby said sleeves rotate synchronously, a governor to control the rotation of said sleeves when a weight is placed upon said straps, means for uniting one of said sleeves with said governor, said means including a square shaft and engaging power transmitting mechanism between said shaft and said sleeve, said power transmitting mechanism being slidable on said shaft and said square shaft being jointed, means for sliding said sleeve along said shaft to permit said shaft to be folded to permit collapsing of said device, and a second sleeve telescoping within said last aforesaid sleeve and also having power transmitting connection with said square shaft.

1,109,539. RAILWAY-TIE. WILLIAM EARL MUNSLOW, Steubenville, Ohio. Filed Feb. 17, 1914. Serial No. 819,250. (Cl. 238—5.)

1. A metallic tie comprising a tube having a flat depressed portion forming a seat for a rail, the seat having openings arranged to the opposite sides of the rails, rail securing elements for the openings, said elements each comprising spaced arms which extend through the openings and which are constructed of malleable metal, and an outwardly bowed connecting member arranged within the interior of the tie, the ends of the arms adapted to be bent over the edges and base portion of the rail and the bowed connecting member adapted to exert a tension upon the said bent portions.

2. A hollow metal tie having spaced openings arranged in pairs, and a rail adapted to be seated upon the tie between the pairs of openings therein, of a securing member for connecting the rail with the tie, said member including a lower bowed portion having parallel angular arms extending therefrom, the said arms adapted to be inserted through two of the openings at each of the opposite sides of the rail, and adapted to be bent over the longitudinal edges of the rail and to straighten the bow-shaped connecting member against the under face of the tie to permit of a constant tension being exerted between the connecting member of the arms and the bent portions of the arms which engage with the rail.

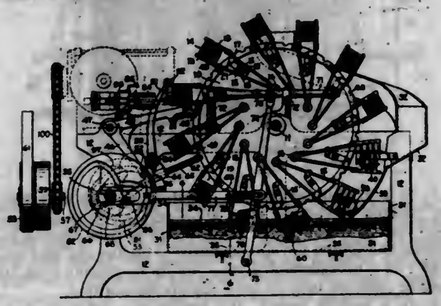
1,109,540. WATERPROOF CONCRETE COMPOSITION. HANS M. OLSON, Beaumont, Cal. Filed Aug. 26, 1912. Serial No. 716,964. (Cl. 106—43.)

The herein described composition of matter consisting of lime, ten pounds, crude oil one gallon and water.

1,109,541. FRUIT-FEEDING MACHINE. FRANKLIN B. PEASE and JOHN W. PEASE, Rochester, N. Y. Filed Dec. 6, 1912. Serial No. 735,315. (Cl. 146—8.)

1. A fruit-feeding machine having, in combination, an endless conveyer provided with a series of outwardly-projecting fruit-holders adapted to open and close laterally; means for moving the conveyer intermittently and for introducing fruit to and discharging it from the successive fruit-holders; a receptacle located beneath the lowermost portion of the conveyer and adapted to contain a liquid in which the lowermost fruit-holders are immersed, and means for closing the holders successively upon the fruit while in said receptacle.

2. A fruit-feeding machine having, in combination, an endless conveyer movable in a plane at an angle to the horizontal and provided with a series of fruit-holders adapted to open and close laterally; means for moving the conveyer intermittently and for introducing fruit to and discharging it from the fruit-holders in the direction of their axes; a receptacle adapted to contain a liquid in which the fruit may be floated, said receptacle being mounted beneath a portion of the conveyer upon which the fruit-holders are downwardly-directed, so that said fruit-holders may be immersed in the liquid without the immersion of any portion of the conveyer; and means for closing the holders successively upon the fruit while so immersed.



3. A fruit-feeding machine having, in combination, an endless conveyer provided with a series of fruit-holders adapted to open and close laterally; means for moving the conveyer intermittently through a curved path in a plane at an angle to the horizontal; means for introducing fruit to and discharging it from the successive fruit-holders during dwells in the movement of the conveyer; and a receptacle located adjacent a portion of the conveyer at which the fruit-holders are in depending position, the receptacle being adapted to contain a liquid to float the fruit in the fruit-holders and the conveyer being adapted to lower the fruit-holders into and raise them from said receptacle; the fruit-holders being arranged upon the conveyer with their axes at such an angle that they are in substantially vertical position at the point of emergence from the receptacle.

4. A fruit-feeding machine having, in combination, a conveyer-wheel rotatable in a plane at an angle to the horizontal a series of fruit-holders mounted upon the wheel and adapted to open and close laterally; means for moving the conveyer-wheel intermittently and for introducing fruit to and discharging it from the fruit-holders axially during the dwells in the movements of the wheel; a receptacle located beneath the lowermost portion of the conveyer-wheel and adapted to contain a liquid in which the lowermost fruit-holders are immersed; and means for closing the fruit-holders successively upon the fruit while in said receptacle.

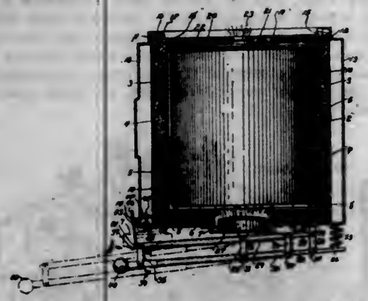
5. A fruit-feeding machine having, in combination, a conveyer-wheel rotatable in a plane at an angle to the horizontal; a series of fruit-holders mounted upon the wheel and adapted to open and close laterally; means for moving the conveyer-wheel intermittently and for introducing fruit to and discharging it from the fruit-holders axially during the dwells in the movements of the wheel; a receptacle located beneath the lowermost portion of the conveyer-wheel and adapted to contain a liquid in which the lowermost fruit-holders are immersed; and means for closing the fruit-holders successively upon the fruit while in said receptacle, the fruit-holders being mounted upon the conveyer-wheel at such an angle that their axes lie in substantially vertical position at the point of their emergence from the receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,109,542. FIRELESS COOKER. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn., a Corporation. Filed Feb. 12, 1914. Serial No. 818,279. (Cl. 161—1.)

1. In a fireless cooker, the combination with a cooking receptacle, of a pre-heater movable toward and away

from the bottom of the said receptacle, and means for automatically moving the said pre-heater into its heat-conserving position at a predetermined time.



2. In a fireless cooker, the combination with a stationary cooking receptacle, of a pre-heater movable with respect thereto into heating, heat-conserving and lighting positions, and means for automatically releasing the said pre-heater at a predetermined time for its movement from its heating position into its heat-conserving position.

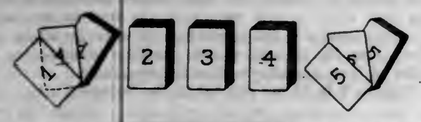
3. In a fireless cooker, the combination with an insulated container provided at its lower end with an ingress draft-passage, of a cooking receptacle located in the said container, a pre-heater adapted to be entered into the said draft-passage and movable into heating, heat-conserving and lighting positions, and means for automatically releasing the said pre-heater to permit it at a pre-determined time to move from its heating or depressed position into its heat-conserving position in which the said passage is closed.

4. In a fireless cooker, the combination with a container provided in its lower end with an ingress draft-passage, of a cooking receptacle located in the container, a pre-heater located below the said container, a pre-heater-carrier upon which the pre-heater is mounted and by which it is moved into its lighting, heating and heat-conserving positions, and automatically operated tripping mechanism co-acting with the said carrier for permitting the same to move the pre-heater into its heat-conserving position for the closure of the said draft-passage at a predetermined time.

5. In a fireless cooker, the combination with a container having an ingress draft-passage in its lower end, of a cooking-receptacle located in the said container, a pre-heater located below the said container in line with the said draft-passage, an extensible pre-heater carrier comprising two pivotal rods located one above the other in the same vertical plane, two tubes sleeved over the said rods, and means for connecting the said tubes and rods and for operating them, and means for automatically releasing the said carrier at a predetermined time for the movement of the pre-heater from its heating position into its heat-conserving position.

[Claims 6 to 10 not printed in the Gazette.]

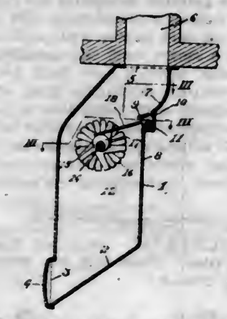
1,109,543. GAME APPARATUS. FREDERIC W. PHIPPS, Wellesley, Mass. Filed Mar. 31, 1913. Serial No. 757,772. (Cl. 46—25.)



1. A game apparatus consisting of a series of packs of cards serially designated to distinguish each pack from the others, whereby the seriality of a corresponding number of game tables or stations may be indicated, all of the members of each pack bearing the same designation.

2. A game apparatus consisting of a series of packs of cards serially designated, the members of each pack bearing the same serial designation, all the members of each pack bearing the same designation, and the designation on the members of each pack differing from the designations on the members of the other packs.

1,109,544. DISCHARGING DEVICE FOR VERTICAL RETORTS. PIERRE PLANTINGA, Cleveland, Ohio. Filed Jan. 16, 1914. Serial No. 812,400. (Cl. 202—5.)



1. In a discharging device for vertical retorts, the combination of a casing having an opening communicating with the said retort and provided with an interior downwardly inclined surface below same; a discharging member mounted in said casing; agitating means located intermediately of said surface and said discharging member; and means for actuating said agitating means.

2. In a discharging device for vertical retorts, the combination of a casing having an opening communicating with the said retort and provided with an interior downwardly inclined surface below said opening; an actuatable discharging member mounted in said casing; agitating means located intermediately of said surface and discharging members; and means operated by the latter for actuating said agitating means.

3. In a discharging device for vertical retorts, the combination of a casing having an opening communicating with the said retort and provided with an interior downwardly inclined surface below said opening; a discharging member mounted in said casing; an oscillatable agitator located intermediately of said surface and discharging member; and means for effecting the oscillation of said agitator.

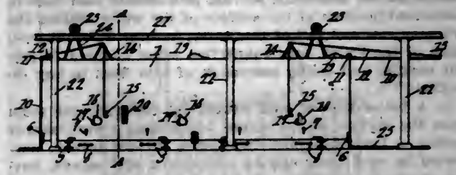
4. In a discharging device for vertical retorts, the combination of a casing having an opening communicating with the said retort and provided with an interior downwardly inclined surface below said opening; an actuatable discharging member mounted in said casing; an oscillatable agitator located intermediately of said surface and discharging member; and means operated by the latter for effecting the oscillation of said agitator.

5. In a discharging device for vertical retorts, the combination of a casing having an opening communicating with the said retort and provided with an interior downwardly inclined surface below same; an actuatable discharging member mounted in said casing; agitating means comprising a plurality of independently operable members; and means for actuating the latter non-synchronously.

[Claims 6 to 10 not printed in the Gazette.]

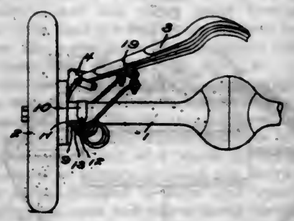
1,109,545. PORTABLE ENAMELING-OVEN. HENRY ALEXANDER POLHEMUS, Buffalo, N. Y. Filed May 21, 1913. Serial No. 769,101. (Cl. 34—10.)

1. An enameling oven comprising a top and side walls, longitudinally extending strips movably secured to the lower extremities of said side walls, means for locking said strips in a raised position, means for locking said strips in a lowered position, the side walls provided with valve controlled openings extending therethrough, said top provided with ventilating openings extending therethrough, and swinging doors positioned at the ends of the said oven.



2. An enameling oven comprising an open-ended chamber, hingedly mounted end doors secured thereto, means for holding the same in an open position, longitudinal strips secured to the lower extremities of the side walls of the chamber, means for locking said strips in a raised and lowered position, said chamber provided with openings extending through the top and side walls thereof, and valves controlling the said openings.

1,109,546. SHOCK-ABSORBER. JOHN RAAB and ANDREW RAAB, Tacoma, Wash. Filed Sept. 10, 1913. Serial No. 789,178. (Cl. 21—105.)



1. A shock absorber for vehicles comprising a resilient member, one end of which is secured to the lower side of the axle of the vehicle, parallel portions being formed on the resilient member one extending upon each side of the axle, and an anti-friction member mounted between said parallel members adapted to engage an elliptical spring carried by the vehicle.

2. A shock absorber for vehicles comprising a resilient member, the lower end of which is secured to the axle adjacent one end thereof, there being substantially parallel portions on the resilient member extending one upon each side of the axle, and an anti-friction member mounted between said substantially parallel portions adapted to engage an elliptical spring carried by the vehicle, said parallel portions extending toward the center of the axle.

3. A shock absorber for vehicles comprising a resilient member, the central portion of which is bent to present substantially parallel portions adapted to engage the under side of the axle, means for holding substantially parallel portions against the axle, and means carried by the resilient member for engaging the elliptical spring of the vehicle.

4. A shock absorber for vehicles comprising a bent spring member having two looped ends, adjustable roller carrying means passing through said looped ends, and a roller carried by said carrying means adapted to engage the leaf spring of the vehicle.

5. A shock absorber for vehicles comprising a bent spring member secured to the axle of the vehicle, and having two ends extending therefrom, one of said ends extending upon each side of the axle, and means for spacing the ends of said ends, said spacing member comprising anti-friction means adapted to engage the leaf spring of a vehicle.

[Claims 6 to 8 not printed in the Gazette.]

1,109,547. ENGINE-MUFFLER. JOHN R. ROBINSON, Whittier, Cal. Filed Dec. 19, 1912. Serial No. 737,747. (Cl. 123—144.)

A muffler including a cylindrical casing, a plurality of dished baffles forming partitions transverse of said casing, an engine exhaust pipe entering one end of said casing on the longitudinal axis of said casing, all of said baffles having their central portions depressed inwardly and formed with central openings that aline with said exhaust pipe, a release valve in the opposite end of said casing in

alinement with said exhaust pipe, and a suction pipe of substantially U-shape embracing said casing longitudinally and having a plurality of nozzles on each leg entering said casing, the nozzles of each leg being in alinement with each other and projecting beyond the inner wall of the casing and into the spaces between said baffles.

1,109,548. SAUSAGE-STUFFER. GEORGE J. SAYER, Chicago, Ill. Filed July 14, 1913. Serial No. 778,994. (Cl. 138—10.)

1. In a machine of the character described the combination with a cylinder, of a cylinder head, means for carrying the cylinder head and moving the same into and out of position, and means provided upon said last aforesaid means adapted when said cylinder head is moved away from its position of closure, to project beyond the inner wall of said cylinder to prevent escape of the piston.

2. In a machine of the character described the combination with a cylinder, of a cylinder head, means for rotatably carrying said cylinder head, and a locking device interposed between said means and said cylinder head.

3. In a machine of the character described the combination with a cylinder, of a cylinder head, means for rotatably carrying said cylinder head, and a locking device interposed between said means and said cylinder head, said locking device including a spring pressed plunger and a socket.

4. In a machine of the character described the combination with a cylinder, of a cylinder head, a bridge for rotatably carrying said cylinder head, and a locking device interposed between said bridge and said cylinder head, said locking device including a spring pressed plunger and a socket.

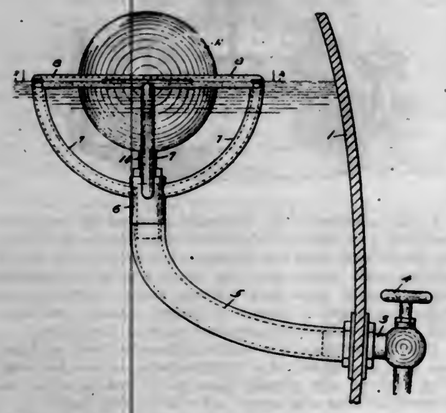
5. In a machine of the character described the combination with a cylinder, of a cylinder head, a bridge for rotatably carrying said cylinder head, and a locking device interposed between said bridge and said cylinder head, said locking device including a spring pressed plunger and a plurality of sockets carried by said cylinder head.

[Claims 6 to 12 not printed in the Gazette.]

1,109,549. SPRING-WHEEL. CARL SCHEVITZ, Jacksonville, Fla. Filed Jan. 3, 1914. Serial No. 810,202. (Cl. 152—47.)

A spring wheel comprising an endless rim, a hub arranged centrally thereof, a series of spokes each embodying telescopic sections one of which has a jointed connection with the felly and the other of which has a jointed connection with the hub, expansion springs arranged in the tubular spoke sections and acting on the other spoke sections slidable therein, stay chains connected at one end to the outer extremities of the inner spoke sections, threaded rods at the outer ends of said chains, and nuts threaded on said rods and adjustable in the tubular spoke sections and bearing against the outer extremities of said springs.

1,109,550. BOILER-CLEANER. NORBERT SCHREIBER, Lincoln, Ill., assignor of forty-nine one-hundredths to Raphael Rosenthal, Lincoln, Ill. Filed Oct. 23, 1912. Serial No. 727,401. (Cl. 122—389.)



1. A boiler blow-off and cleaner comprising a float having an intake at the surface of the water, and an outlet connection for said float, serving to maintain said float in horizontal position at the surface of the water, during the ordinary rise and fall of the water, and for all positions of the boiler.

2. A boiler blow-off and cleaner comprising a float having an intake at the surface of the water, and an outlet connection for said float, serving to maintain said float in horizontal position at the surface of the water, during the ordinary rise and fall of the water, and for all positions of the boiler, said connection comprising a pipe which is flexible to permit movement of said float in any direction.

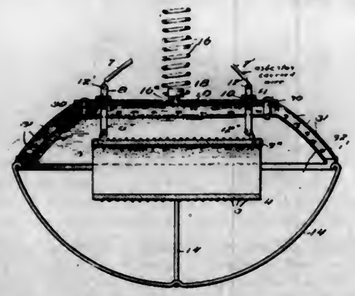
3. A boiler blow-off and cleaner comprising a float having an intake at the surface of the water, and an outlet connection for said float, serving to maintain said float in horizontal position at the surface of the water, during the ordinary rise and fall of the water, said connection permitting bodily up and down movement of said float.

4. A boiler blow-off and cleaner comprising a float having an intake at the surface of the water, and an outlet connection for said float, serving to maintain said float in horizontal position at the surface of the water, during the ordinary rise and fall of the water, and for different positions of the boiler, said connection being adapted to permit rocking and bodily movement of said float in any direction.

5. A boiler blow-off and cleaner for removing the scum from the surface of the water, comprising a float, means having a horizontal slot forming a surface intake, supported by said float, and an offtake for said means, having provisions serving to enable said means to avoid tilting and thereby maintain said slot exactly horizontal at all times during the ordinary rise and fall of the water.

[Claims 6 to 18 not printed in the Gazette.]

1,109,551. ELECTRIC RADIATOR. MILTON H. SHOENBERG, San Francisco, Cal., assignor, by mesne assignments, to Majestic Electric Development Co., San Francisco, Cal., a Corporation. Filed Feb. 3, 1914. Serial No. 816,197. (Cl. 219—34.)



1. An electric radiator, comprising a reflector, a heating element, current conducting standards secured thereto and insulated therefrom, means for detachably suspending the heating element from the inner ends of said standards, and means for securing electric conductors or leads to the opposite ends of said standards.

2. An electric radiator, comprising a reflector, a heating element, connecting standards secured thereto and insulated therefrom, means for detachably securing the heating element to the inner ends of said standards, means for securing the terminals of an electric cord conductor to the opposite ends of said standards, and a resilient metal support fastened to said reflector and adapted to be supported by said cord conductor having an extended heat radiating surface.

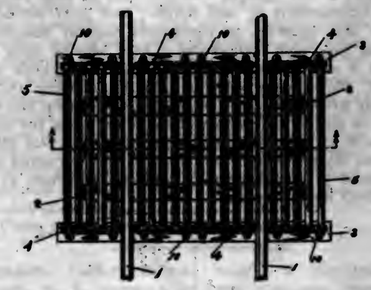
3. An electric radiator, comprising a reflector, a heating element, standards extending through apertures in said reflector and having separable members provided with connecting means adapted to hold an insulating medium adjacent said apertures, and fastening devices carried upon opposite ends of said standards.

4. An electric radiator, comprising a polished metallic reflector, a heating element supported in spaced relation thereto, an electric cord conductor, means for connecting the electric terminals of said cord to said element, and a supporting member carried at one end by said reflector having an extended heat radiating surface and provided with means at the opposite end for engaging said cord.

5. An electric radiator, comprising a dome-like reflector having inner and outer members held in spaced relation thereby providing a chamber or channel therebetween, said inner member having a polished reflecting surface and said outer member being perforated, terminal standards projecting inwardly through said inner member, a heating element connected to and supported by said standards within the inner member, and means for connecting electric conductors to said element.

[Claim 6 not printed in the Gazette.]

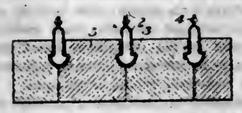
1,109,552. CATTLE-GUARD. CALVIN SKINNER, Columbus, Ohio. Filed Jan. 21, 1914. Serial No. 813,565. (Cl. 256—16.)



1. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending rollers spanning the distance between said cross ties, and a plurality of end pieces engaging the top, sides and ends of said rollers, said end pieces being formed on their upper sides with semi-circular flange portions to loosely fit said rollers, the lower sides of said rollers lying directly upon the upper sides of said cross ties.

2. A cattle guard comprising, in combination with suitable cross ties, a plurality of longitudinally extending pipe sections spanning the distance between and lying directly upon said cross ties, and a plurality of end pieces of identical structure and of a length to engage half the required number of rollers between the track rails, said end pieces being disposed between and upon each side of the track rails, said end pieces being formed on their upper sides with semi-circular flange portions to loosely fit said rollers to permit their rotation.

1,109,553. FURNACE-ROOF. EDWIN E. SLICK, Johnstown, PA. Filed Nov. 29, 1913. Serial No. 803,710. (Cl. 75—84.)



1. A furnace roof, comprising a series of girders having lower hollow water cooled portions, connections for circulating water therethrough and rows of bricks or blocks hung on the water cooled portions of the girders, said girders projecting upwardly above the bricks and blocks; substantially as described.

2. A furnace roof, comprising a series of parallel horizontally extending transverse girders of greater depth than width, having lower hollow water cooled portions, connections for circulating water therethrough, and rows of bricks or blocks supported upon the water cooled portions of the girders, which girders project upwardly above the tops of the blocks; substantially as described.

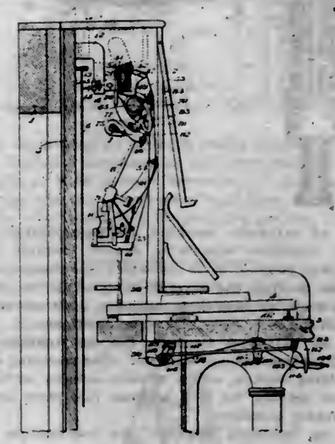
3. A furnace roof, comprising a series of transverse girders resting on the side walls and formed of steel shapes of greater depth than width, said girders having lower hollow water cooled portions, connections for circulating water through said water cooled portions, and rows of bricks or blocks supported on the water cooled portions of the girders, which girders project upwardly above the tops of blocks and separate their upper portions; substantially as described.

4. A furnace roof having a series of girders, with solid upper portions and water cooling cavities in their lower portions, and rows of bricks supported on each side of the lower portion, substantially as described.

5. A furnace roof comprising hollow water-cooled girders, each of a depth considerably greater than its width, and provided with projections on the lower portions of the sides thereof with rows of bricks or blocks supported by said projections, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,554. AUTOMATIC MUSICAL-INSTRUMENT PLAYER. IRVING B. SMITH, Philadelphia, Pa., assignor to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1908. Serial No. 422,768. (Cl. 84—231.)



1. In an electrically controlled playing mechanism for pianos, a series of magnets, and a series of armatures associated therewith, each of said armatures comprising a rigid body portion, and a superposed spring-plate secured thereto but spaced therefrom, and hammer actuating elements connected with said spring plates.

2. In an electrically controlled playing mechanism for pianos, a series of magnets, and a series of armatures associated therewith, each of said armatures comprising a rigid body portion and a superposed spring plate secured thereto at one end only and spaced therefrom but co-extensive therewith, and a hammer actuating element connected with the free end of each of said spring plates.

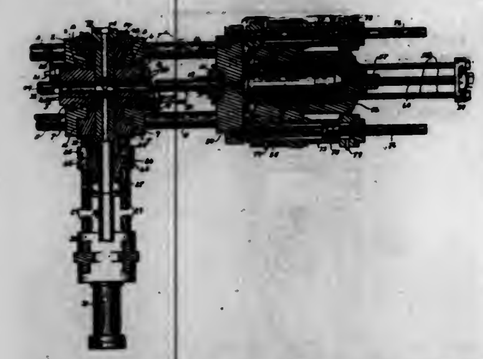
3. In an electrically controlled playing mechanism for pianos, a series of magnets, and a series of armatures associated therewith, each of said armatures comprising a rigid body portion movably supported at one end, and a superposed spring plate, connected therewith near one end adjacent the support, and spaced apart therefrom substantially throughout its length, a set screw passing loosely through said spring plate near its free end to limit its movement relative to the body portion, and a hammer actuating element pivoted to the free end of each of said spring plates.

4. In an electrically controlled playing mechanism for pianos, a series of magnets, and a series of armatures associated therewith, said armatures comprising rigid and resilient portions, shoes connected with the hammer actions and pivoted to the resilient portions of said armatures, and a rotary drum arranged in coöperative relation with said shoes.

5. In an electrically controlled playing mechanism for pianos, a magnet rail, a series of armatures pivotally supported thereon, each of said armatures comprising a rigid body and a superposed spring plate, hammer actuating elements pivoted to said spring plates, adjustable means for limiting the movement of each of said spring plates relative to the associated rigid body portion, and other adjustable means for limiting the movement of each of the armatures as a whole.

[Claims 6 to 30 not printed in the Gazette.]

1,109,555. EXTRUSION-MACHINE. DAVID L. SUMMEY, Waterbury, Conn., assignor to Chase Rolling Mill Co., Waterbury, Conn., a Corporation. Filed Jan. 4, 1913. Serial No. 740,133. (Cl. 207—3.)



1. In an extrusion machine, the combination with a sectional container comprising several movable coöperative sections adapted to be assembled and disassembled, of means for moving the several sections of the container toward each other into their extrusion positions and away from each other in their clearance positions.

2. In an extrusion machine, the combination with a sectional container comprising two billet-receiving sections, a die-holding section, and a mandrel-holding section; and means for moving the said sections into their assembled and clearance positions.

3. In an extrusion machine, the combination with a skeleton main-casting having its opposite sides correspondingly recessed and formed with a transverse slot or opening, of a sectional container comprising billet-receiving sections and die-holding and mandrel-holding sections shaped to fit into the recessed and slotted main-casting.

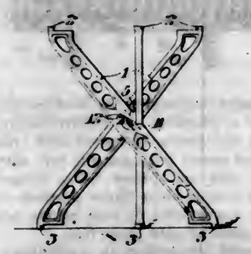
4. In an extrusion machine, the combination with a main casting having recessed side faces, and a transverse opening, of a sectional container consisting of two billet-receiving sections entering the recessed side-openings of the casting, and a die-holding and a mandrel-holding section entering the transverse opening of the casting, and means for moving the several sections into their assembled and clearance positions.

5. In an extrusion machine, the combination with a skeleton main-casting having recessed sides, and a transverse opening or slot, of a sectional container comprising two billet-receiving sections, and a die-holding and mandrel-holding section, two cross-heads respectively fitting into the recessed sides of the main-casting and carrying the respective billet-receiving container-sections, means for operating said cross-heads, means for carrying and operating the said die-holding and mandrel-holding sections which enter the opposite ends of the transverse opening or slot in the main-casting, and pressure rams arranged in line with the bores of the said billet-receiving container-sections.

[Claims 6 to 10 not printed in the Gazette.]

1,109,556. BOILER-STAND. FRANK SUTCLIFFE, Conshohocken, Pa. Filed June 10, 1913. Serial No. 772,897. (Cl. 248—41.)

1. A reversible boiler stand comprising a plurality of legs each having a boiler retaining lug at each end, an angular flanged portion intermediate of its length, having two plane faces outwardly divergent with respect to the axis of the stand and including between them a sector of a circle concentric with said axis, retaining ledges at the opposite ends of said sectoral portions, said ledges extending transversely with respect to the length of the leg and in cassated directions upon the respective plane faces of said portions, the ledges upon each face being parallel with each other and so spaced as to fit the complementary sectoral face of the contiguous leg and retain the latter in diagonal transverse relation to the axis of the stand; a bolt opening through each of said angular flanges intermediate of said ledges; and bolts extending through said openings in contiguous angular flanges of adjoining legs, each bolt having a head bearing upon one leg and a nut bearing upon the other contiguous leg; whereby, the opposite ends of each leg member are respectively presented at the top of the stand upon one side of its axis and at the bottom of the stand upon the opposite side of its axis; said ends being at respectively different radial distances from said axis, so that the stand may be reversed to hold boilers of different diameters at its respectively opposite ends.



2. A reversible boiler stand comprising a plurality of legs each having a boiler retaining lug at each end, an angular flanged portion intermediate of its length, having two plane faces outwardly divergent with respect to the axis of the stand and including between them a sector of a circle concentric with said axis, retaining ledges at the opposite ends of said sectoral portions, said ledges extending transversely with respect to the length of the leg and in cassated directions upon the respective plane faces of said portions, the ledges upon each face being parallel with each other and so spaced as to fit the complementary sectoral face of the contiguous leg and retain the latter in diagonal transverse relation to the axis of the stand; and connecting means; whereby, the opposite ends of each leg member are respectively presented at the top of the stand upon one side of its axis and at the bottom of the stand upon the opposite side of its axis; said ends being at respectively different radial distances from said axis, so that the stand may be reversed to hold boilers of different diameters at its respectively opposite ends.

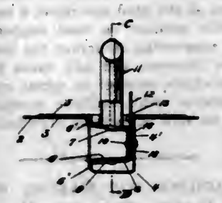
3. A boiler stand comprising a plurality of legs each having an angular flanged portion intermediate of its length, having two plane faces outwardly divergent with respect to the axis of the stand and including between them a sector of a circle concentric with said axis, retaining ledges at the opposite ends of said sectoral portions, said ledges extending transversely with respect to the length of the leg, the ledges upon each face being parallel with each other and so spaced as to fit the complementary sectoral face of the contiguous leg and retain the latter in diagonal transverse relation to the axis of the stand; and connecting means; whereby, the opposite ends of each leg member are respectively presented at the top of the stand upon one side of its axis and at the bottom of the stand upon the opposite side of its axis.

4. A boiler stand comprising three legs each having an angular flanged portion intermediate of its length, having two plane faces outwardly divergent with respect to the axis of the stand and including between them a one hundred and twenty degree sector of a circle concentric with said axis, retaining ledges at the opposite ends of said sectoral portions, said ledges extending transversely with respect to the length of the leg, the ledges upon each face being parallel with each other and so spaced as to fit the complementary sectoral face of the contiguous leg and retain the latter in diagonal transverse relation to the axis of the stand; and connecting means; whereby, the opposite ends of each leg member are respectively presented at the top of the stand upon one side of its axis and at the bottom of the stand upon the opposite side of its axis.

5. A boiler stand comprising legs each having an angular flanged portion intermediate of its length, having two plane faces outwardly divergent with respect to the axis of the stand and including between them a sector of a circle concentric with said axis, retaining ledges at the opposite ends of said sectoral portions, said ledges extending transversely with respect to the length of the leg, the ledges upon each face being parallel with each other and so spaced as to fit the complementary sectoral face of the contiguous leg and retain the latter in diagonal transverse relation to the axis of the stand; and connecting means; whereby, the opposite ends of each leg member are respectively presented at the top of the stand upon one side of its axis and at the bottom of the stand upon the opposite side of its axis.

[Claim 6 not printed in the Gazette.]

1,109,557. CAN-CLOSURE. DANIEL B. TAMAGNO, New York, N. Y., assignor to Lydie Tamagno, New York, N. Y. Filed Nov. 30, 1912. Serial No. 734,251. (Cl. 221—26.)



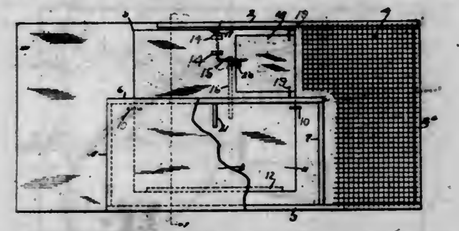
1. A can closure comprising a plate having therein a countersunk chamber, an opening in a wall of said chamber, a separately formed tapered cup-shaped part inserted in said opening and secured at its outer edges to the wall of the chamber and containing a port, a corresponding cup-shaped thimble surrounding and turning upon the first cup-shaped member and having integral with it a spout, the arrangement being such that the spout registers with the port when turned to pouring position and is occluded therefrom when in depressed position and an axial pivot rivet passing through the closed ends of the two tapered cup-shaped ports and serving to draw them tightly together, the wall of the chamber adjacent the closed end of the thimble having in it a counter sink in which the head of said rivet is supported.

2. A can closure comprising a plate with a countersunk chamber, an opening in the side wall thereof, a tapered cup-shaped member inserted in said opening and hermetically attached at its outer edge to said side wall and having a port therein, a second tapered cup-shaped member enveloping the first and adapted to turn thereon, packing interposed between the tapered surfaces of said two members and a rivet passing through the closed ends of both said members and serving to draw them tightly together and a pouring spout carried by the second named tapered cup-shaped member.

3. A can closure comprising a plate with a countersunk chamber, an opening in the side wall thereof, a tapered cup-shaped member inserted in said opening and hermetically attached at its outer edge to said side wall and having a port therein, a second tapered cup-shaped member enveloping the first and adapted to turn thereon, interposed packing, means for drawing the two tapered cup-shaped members tightly together and a pouring spout carried by the second named tapered cup-shaped member, an arm attached to the outer face of the closed end of said last named cup-shaped member and a catch on the wall of said chamber adapted to coöperate therewith to hold the spout in elevated or pouring position.

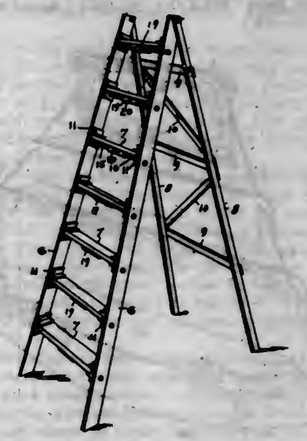
1,109,558. ANIMAL-TRAP. DAVID S. TRAVIS, Marengo, Ohio. Filed Oct. 2, 1911. Serial No. 652,351. (Cl. 43—24.)

An animal trap comprising an uncovered stationary approach, an uncovered runway, a pivoted floor for said runway in the same plane as said approach, an inclosed casing on one side of said runway, a portion of said floor extending under said casing and operating within said casing, a supplemental floor flap at the inner end of said runway pivoted at its inner end and in the same plane with said approach, a bait compartment to the rear of



said flap comprising an inclosed casing covered with wire, a swing latch for maintaining said floor and flap in position, a pin to limit upward movement of said flap, a pin for limiting upward movement of said floor, and a counter weight to return said floor to operative position after said trap has been sprung.

1,109,559. STEP-LADDER. FRANK B. UNDERWOOD, Noblesville, Ind., assignor of one-half to Fred E. Heylmann, Noblesville, Ind. Filed Nov. 28, 1913. Serial No. 803,597. (Cl. 228—14.)

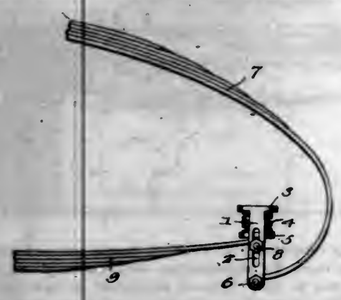


The combination with the side-bars and steps of a ladder of a plate for each step-end located between the step and adjacent side-bar and having a pair of parallel flanges on its inner face above its lower end to receive the ends of the step between them with a close fit, said plates having lugs on their sides which contact with the side-bars, to prevent turning of the plates on the side-bars, said lugs entering indents in the side-bars, a bolt under each step passing through the plates at the ends of the step, below the flanges for the step, said bolts being in two parts forming inner ends which are screw threaded and said bolts having heads on their outer ends which contact with the outer sides of the side-bars, and a cylinder having screw threaded bores into which both of the screw threaded ends of the bolt members are screwed.

1,109,560. SHOCK-ABSORBER. WILLIAM J. WALLACE, Detroit, Mich. Filed Oct. 18, 1913. Serial No. 795,969. (Cl. 21—50.)

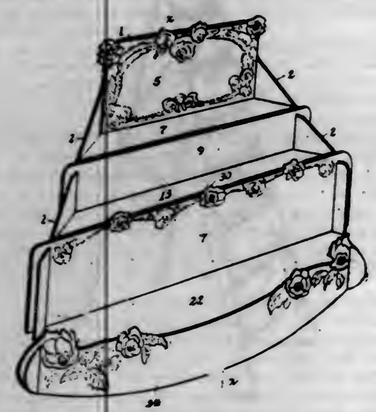
A shock absorber comprising a U-shaped frame embodying a cross piece and integral parallel side members, the cross piece being widened and flanged at its outer edge and the side members having opposed longitudinal

slots, a bolt connecting the free ends of the side members and forming attaching means to receive one of the parts to which the shock absorber is applied, a rest movable between the side members and formed with a flange on its outer edge upon the side facing the cross piece of the frame, a bolt engaging the rest and movable in the



longitudinal slots of the side members and serving to engage the other one of the parts to which the shock absorber is applied, and a cushioning spring arranged between the side members of the cross piece and the rest and retained in place by the flanges of the said cross piece and rest.

1,109,561. DISPLAY-EASEL. JAMES B. WILLIAMSON, Everett, Mass. Filed Oct. 23, 1913. Serial No. 796,944. (Cl. 211—24.)



A display easel composed of a single sheet of card board scored, cut and bent to form a substantially rectangular back, substantially triangular sides integral with the lateral edges of the back, each side having a plurality of vertical slits, a front integral with the top edge of said back and of equal width and depending vertically therefrom, a shelf integral with the lower edge of said front and supported thereby thereat, an upright integral with said shelf at the latter's front edge, said upright being longer than said shelf and having vertical slits near its ends, the slits in said upright being put into engagement with certain slits in said triangular sides, another shelf integral with the lower edge of said upright, and another upright integral with the front edge of said shelf, the latter upright being also longer than its connected shelf and formed with slits near its ends put into engagement with certain of the vertical slits in said triangular sides.

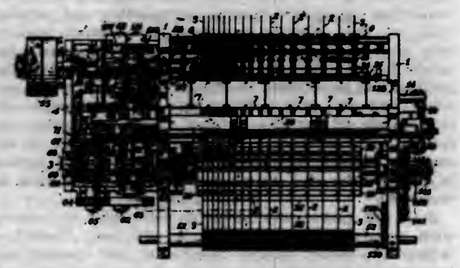
1,109,562. TOP. JOHN W. WINGERT, Wichita, Kans. Filed Mar. 27, 1913. Serial No. 757,255. (Cl. 46—32.)

1. In a device of the character described, a supporting structure, a member revoluble thereon, said member formed in sections, and a ring member secured between said sections, substantially as described.

2. In a device of the character described, a supporting structure including a head portion, a member revoluble about said structure, means for eliminating friction between said member and said head portion, said member being formed in sections, and a ring member gripped between said sections, substantially as described.

3. In a device of the kind described, a supporting structure, a revoluble member on said supporting structure, means on said supporting structure for retaining said revoluble member thereon, and ball races formed on both ends of said revoluble member to admit bearings whereby the friction between said revoluble member and said retaining means on said supporting structure will be eliminated.

1,109,563. MACHINE FOR MAKING WIRE FABRIC. ARTHUR E. BARLOW, Worcester, Mass., assignor to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 1, 1911. Serial No. 611,692. (Cl. 140—12.)



1. In a wire fabric machine, means for supporting a series of strand wires in the same plane, means for laying a stay wire transversely to said strand wires, means for forming U-shaped loops in said stay wire to correspond with each strand wire, and means for bodily rotating each of said loops about an axis coincident with the axis of the corresponding strand wire, and parallel with the sides of said loop.

2. In a wire fabric machine, means for supporting a series of strand wires in a horizontal plane, means for laying a stay wire transversely to the strand wires and supported thereon, means for successively forming U-shaped loops in the stay wire, with the crown of each loop resting upon its corresponding strand wire and with the sides of the loops parallel with and on opposite sides of the strand wire, and means for rotating the sides of the loops about axes corresponding with the axes of the strand wires, with the crowns of the loops still resting on the strand wire.

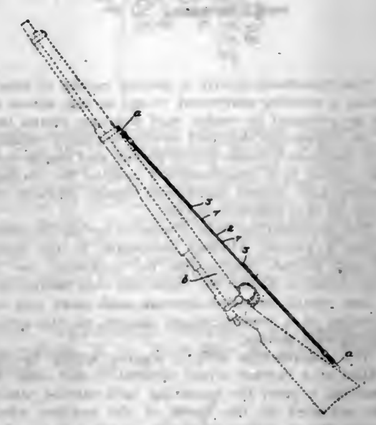
3. In a wire fabric machine, means for supporting a series of strand wires in the same plane, means for laying a stay wire transversely to said stand wires, means for forming U-shaped loops in said stay wire opposite each strand wire, means for holding the sides of said loop 180° apart, and means for rotating said holding means about an axis parallel to and intermediate said sides.

4. In a wire fabric machine, means for supporting a series of strand wires in a common plane, means for laying a stay wire transversely to said strand wires, means for forming a U-shaped loop in said stay wire opposite each strand wire, and means for bodily rotating the sides of each loop in a common circular path about an axis parallel to said sides.

5. In a wire fabric machine, means for supporting a series of strand wires in the same plane, means for laying a stay wire transversely across the strand wires, a notched plate parallel with said stay wire, with the strand wires passing through its notches, a series of slidable loop forming jaws, and means for successively moving said jaws through said notched plate.

[Claims 6 to 45 not printed in the Gazette.]

1,109,564. WOVEN STRAP. FRANK R. BATCHELDER, Worcester, Mass. Filed Nov. 4, 1912. Serial No. 729,242. (Cl. 224—11.)



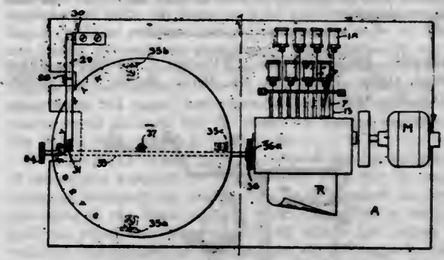
1. A gun-sling or the like article consisting of a narrow strap of woven material of solid thickness adapted to be passed through the suspension-link of a gun, or the like member, and having in an edge thereof a succession of separate adjustment openings extending transversely inward within the thickness of the strap or web combined with an adjustment device having an engaging portion adapted to enter the respective openings.

2. A gun-sling or the like article consisting of a narrow woven strap or web adapted to be passed through the suspension-link of a gun, or the like member, and having a succession of separate adjustment openings woven in an edge thereof and extending transversely inward within the thickness of the strap or web combined with an adjustment device having an engaging portion adapted to enter the respective openings.

3. A gun-sling or the like article consisting of a narrow strap of woven material of solid thickness adapted to be passed through the suspension-link of a gun, or the like member, and having in its respective edges opposite series of separate adjustment openings extending transversely inward within the thickness of the strap, combined with an adjustment device having engaging portions adapted to enter the respective openings.

4. A gun-sling or the like article consisting of a narrow woven strap or web adapted to be passed through the suspension-link of a gun, or the like member, and having woven in each of its edges a succession of separate adjustment openings extending transversely inward within the thickness of the strap or web combined with an adjustment device having engaging portions adapted to enter the respective openings.

1,109,565. PERFORATING-MACHINE. EVERETT H. BICKLEY, Detroit, Mich., assignor to Motograph Company of America, Detroit, Mich., a Corporation of Michigan. Filed Dec. 26, 1912. Serial No. 738,546. (Cl. 164—115.)



1. A perforating machine, having in combination, a plurality of punches, a revolving member, an actuator for each punch adapted to be thrust into the path of the revolving member and means for selecting certain of the actuators to be thrust into the path of the revolving member, substantially as described.

2. A perforating machine, having in combination, a plurality of punches, a punch-actuator for each punch, a revolving member into the path of which the actuators may be thrust, punch-setters for thrusting the punch-actuators into the path of the revolving member and selective means for controlling the punch-setters, substantially as described.

3. A perforating machine, having in combination, a plurality of punches, springs for normally keeping the punches in retracted position, a revolving member, a pivoted punch-actuator for each punch, a punch-setter for carrying each punch-actuator and thrusting it into the path of the revolving member and selective means for operating the punch-setters, substantially as described.

4. A perforating machine, having in combination, a plurality of punches, a punch-actuator for each punch, a revolving member into the path of which the punch-actuators are thrust to actuate the punches, a punch-setter in the form of a bell-crank arm for each punch-actuator and to which each punch-actuator is pivoted and selective means for swinging the punch-setters or bell-crank arms to thrust the punch-actuators into the path of the revolving member and actuate the punches, substantially as described.

5. A perforating machine, having in combination, a plurality of punches, individual means for controlling the actuation of each punch, means for rapidly and repeatedly reciprocating the punches designated by the control means, a pattern and electrical connections between the pattern and the individual control means for each punch for selectively designating the punches in accordance with the design of the pattern, substantially as described.

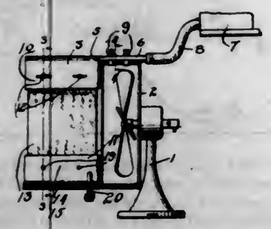
[Claims 6 to 12 not printed in the Gazette.]

1,109,566. SILO. SAMUEL N. BROOKSHIRE, Fort Worth, Tex. Filed Sept. 9, 1913. Serial No. 788,807. (Cl. 72—6.)

1. A silo constructed of concrete blocks laid in tiers and exterior horizontal bands or angle irons binding the blocks together, each band having a flange projecting radially inward between two tiers of blocks, and a sealing material binding the bands and the blocks together.

2. A silo constructed of tiers of blocks, formed of concrete material, each block having an angular groove on each edge thereof, an exterior horizontal band having a flange integral therewith and projecting between the horizontal meeting faces of two tiers of blocks, and a plastic material poured into the groove to bind said tiers and said flange together.

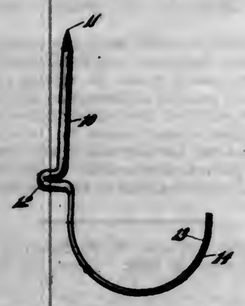
1,109,567. HUMIDIFIER. WILLIAM C. CLIFFORD, Mannford, Okla. Filed Apr. 24, 1913. Serial No. 763,396. (Cl. 98—44.)



1. In a humidifier, the combination with a hood, of a liquid supply tube for the hood, plates carried by the hood, a wick having its upper end engaged in the hood and between the plates, means passable through the plates to contract the same to compress the wick, and a trough connected to the lower end of the wick.

2. In a humidifier, the combination with a hood, of a liquid supply tube for the hood, the sides of said hood terminating in plates, a wick having its upper end engaged in the hood and between the plates, a collector comprising a trough, the sides of which terminate in plates, means passable through the last named plates for holding the collector in engagement with the lower end of the wick, and means passable through the first named plates for moving the same toward or away from each other, thereby regulating the pressure upon the wick, as and for the purpose set forth.

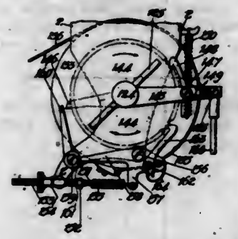
1,109,568. CONDUCTOR-HOOK. GEORGE FLAGGE, Milwaukee, Wis., assignor, by mesne assignments, to Milwaukee Corrugating Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 19, 1912. Serial No. 691,774. (Cl. 248—36.)



1. A conductor hook formed of a length of wire sharpened at one end to form a pointed stem and bent at right angles to the stem and then reversely upon itself also at right angles to the stem and continuing for a greater length than the first mentioned bent portion to form a straight driving head with the reversely bent portions in engagement with each other, the end of the wire then bending in a direction opposite the stem portion and terminating in a curved hook portion with the end thereof connected with the driving head offset laterally with relation to the stem.

2. A conductor hook formed integrally with a straight tapered driving stem and a curved hook and having a reverse bend at the junction of the stem and hook forming a driving head disposed transversely to the stem and extending both outwardly and inwardly beyond its axis, the stem being offset outwardly from the adjoining end of the hook.

1,109,569. SPRING-MOTOR-OVERWINDING PREVENTER. LESLIE HAROLD FRIEDMAN, St. Kilda, Melbourne, Victoria, Australia. Original application filed Feb. 12, 1912, Serial No. 677,064. Divided and this application filed Nov. 15, 1912. Serial No. 731,502. (Cl. 185—43.)



1. The combination with a tension spring of means for applying a winding movement to the spring, means adapted to be actuated to render said winding means inoperative, an adjustable resilient device normally holding the second mentioned means out of action, and means operated by the spring at a predetermined tension for setting into operation said second mentioned means against the resistance of said resilient device.

2. The combination with a tension spring of means for applying a partial winding movement to the spring, a pawl and ratchet mechanism for retaining the spring against recoil, a device for rendering said means inoperative, and means operated through said pawl and ratchet mechanism by a predetermined tension on the spring for actuating said device.

3. The combination with a tension spring having one end fixed of a ratchet wheel secured to the other end of the spring, a pawl for operating said ratchet wheel and means actuated by the recoil of the ratchet wheel for arresting the operation of the pawl when the spring has acquired a predetermined tension.

4. The combination with a driving drum of a tension spring within said drum, an axle secured to the spring, a ratchet wheel secured to one of said parts, means for actuating said ratchet wheel, a trip pawl adapted to be actuated to render said means inoperative, means for actuating said trip pawl, operated by the recoil of the ratchet wheel, when the spring reaches a predetermined tension, and means for preventing operation of said trip pawl by its actuating means until said predetermined tension is reached.

5. The combination with a tension spring of an axle controlled by said spring, a ratchet wheel secured to said axle, a lever having an extension intermediately pivoted to said axle, a pawl carried by said lever at one end engaging said ratchet, a spring lifting said lever at its pawl end and depressing the extension, and means actuated by the recoil of the ratchet wheel when the spring reaches a predetermined tension for preventing the depression of said extension.

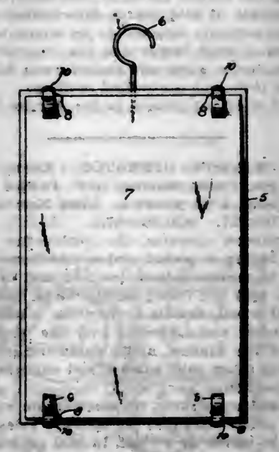
[Claims 6 to 10 not printed in the Gazette.]

1,109,570. BOTTLE-CLOSURE. ALBERT P. FULMER and FRANK M. NERINGER, Wilmington, Del. Filed Apr. 2, 1912. Serial No. 688,103. (Cl. 215—36.)

The combination with a bottle having a neck and a stopper therefor, a bail encircling the neck and having its ends twisted around each other to rigidly secure the bail on the neck, a plurality of opposed eyes formed on the bail, a U-shaped member having its medial portion passing through the stopper of the bottle and its ends depending adjacent the sides of the bottle, said ends being adapted to bear against the sides of the bottle and offset in opposite directions at their extremities to provide bearing portions against which the fingers of the operator are adapted to press, an adjusting member having its ends journaled in the eyes of the bail, eyes formed on the adjusting member and having the sides of the stopper-engaging member passing loosely therethrough, with the said sides offset at the points of passing through the eyes of the adjusting member, the said adjusting member being adapted to have

its medial portion normally abut against the wall of the bottle when the stopper-engaging member is in a vertical position to hold the stopper in closed position on the bottle and whereby, when pressure is exerted on the bearing surfaces of the free ends of the sides of the stopper-engaging member, the said adjusting member will have its medial portion swung out of engagement with the sides of the bottle to raise the stopper engaging member and remove the stopper from closed position on the said bottle.

1,109,571. FLY-PAPER HOLDER. GOTTFRIED GAERTNER, Newark, N. J. Filed Mar. 21, 1914. Serial No. 826,329. (Cl. 43—22.)



1. A fly paper holder including a base the opposite sides of which are adapted for engagement with the paper, and means carried by the base and having a portion engaged with each face of the latter for clamping the paper on both sides of the base.

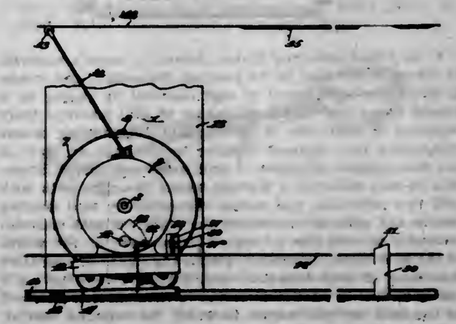
2. A fly paper holder including a base, the opposite sides of which are adapted for engagement with the fly paper, and means arranged on opposite ends of the base and engaging with the opposite sides thereof to hold the paper thereon.

3. A fly paper holder including a base, the opposite sides of which are adapted for engagement with the fly paper, straps arranged on the base, the end of each strap engaging the opposite side of said base to hold the fly paper thereon.

4. A fly paper holder including a base, the opposite sides of which are adapted for engagement with the fly paper, a plurality of elements for clamping the paper in engagement with the base, each of said elements comprising a metallic resilient strap, the opposite ends of which are looped for resilient engagement with the paper on the opposite side of the base, said loops accommodating the fingers of the operator therein in order to disengage the same from the paper and likewise providing spacing elements so as to hold the fly paper in spaced relation to the object with which it is engaged.

5. A fly paper holder including a base the opposite sides of which are adapted for engagement with the fly paper, clamping elements for holding the paper against the opposite sides of the base, each of which comprises a metallic resilient strap the opposite ends of which are looped for resilient engagement with the paper on the opposite sides of the base, the opposite ends of said strap adjacent said loop being turned at right angles to the body in order to provide a substantially U-shaped element the vertex of which is engaged with the end of the supporting base for the purpose specified.

1,109,572. CASTING APPARATUS. BERNARD GALLAGHER, Lynn, Mass. Filed May 5, 1913. Serial No. 765,568. (Cl. 22—65.)



1. Apparatus for making castings, having, in combination, a rotatable receptacle for receiving molten metal having an opening near its axis of rotation for the introduction of the molten metal and having an opening near its circumference normally covered by a hinged, peripheral closure for removing the cast metal, and means for rotating the receptacle while the metal solidifies, substantially as described.

2. Apparatus for making castings, having, in combination, a rotatable receptacle for receiving molten metal of a substantially cylindrical outline divided into a plurality of compartments and having openings into the compartments near the axis of the receptacle for the introduction of the molten metal and having openings near the periphery of the receptacle normally covered with closures for the removal of the castings from the compartments, and means for rotating the receptacle while the metal solidifies, substantially as described.

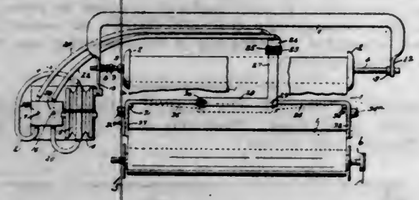
3. Apparatus for making castings, having, in combination, a rotatable receptacle for receiving molten metal of a substantially cylindrical outline, a plurality of partitions extending inwardly from the periphery of the receptacle and terminating at a distance from the axis of the receptacle so as to divide the interior of the receptacle into a number of inwardly opening compartments, said receptacle having one of its ends open near the axis for the introduction of the molten metal into the interior of the receptacle and into the open compartments, closures on the periphery of the receptacle to give access to the compartments to remove the cast ingots, and means for rapidly rotating the receptacle while the metal solidifies, substantially as described.

4. Apparatus for making castings, having, in combination, a rotatable receptacle for receiving molten metal, means for rapidly rotating the receptacle until the metal solidifies, a carriage upon which the receptacle is mounted, and means acting automatically to start the carriage when the receptacle is filled, substantially as described.

5. Apparatus for making castings, having, in combination, a rotatable receptacle for receiving molten metal, means for rapidly rotating the receptacle while the metal solidifies, means for supplying molten metal to the receptacle, and means acting automatically to cut off the supply of molten metal when the receptacle is filled, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,109,573. CENTERING MEANS FOR FEED-GUIDES. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed June 1, 1914. Serial No. 842,117. (Cl. 84—161.)



1. In a feed-centering device; means to cause a material to travel in the line of its greatest dimension, and means to determine said travel of said material by gaging by a second lesser and varied dimension of said material truly centered to said line of travel, said determining means comprising two opposed detector means, one at each of the two opposite extremes of said lesser and varied dimension of said material, a floating means co-acting with both said two detectors, and means controlled by said floating means and adapted to control the travel of said material centrally to said line of travel irrespective of the width of the said lesser dimension within the limits of operative movement of said detectors, said floating means having a bodily motion in similar direction to the said line of travel as the said material varies in width but remains central.

2. In a feed-centering device; means to cause a material to travel in the line of its greatest dimension, and means to determine said travel of said material by gaging by a second lesser and varied dimension of said material truly centered to said line of travel, said determining means comprising two opposed detector means, one at each of the two opposite extremes of said lesser and varied dimension of said material, a floating means co-acting with both said two detectors, and means controlled by said floating means and adapted to control the travel of said material centrally to said line of travel irrespective of the width of the said lesser dimension within the limits of operative movement of said detectors, said floating means having a bodily motion in similar direction to the said line of travel as the said material varies in width but remains central and a controlling part of said floating means having a motion transverse to the line of travel when said material departs from said centered line of travel.

3. In a feed-centering device; means to cause a material to travel in the line of its greatest dimension, and means to determine said travel of said material by gaging by a second lesser and varied dimension of said material truly centered to said line of travel, said determining means comprising two opposed detector means, one at each of the two opposite extremes of said lesser and varied dimension of said material, a floating means co-acting with both said two detectors, and means controlled by said floating means and adapted to control the travel of said material centrally to said line of travel irrespective of the width of the said lesser dimension within the limits of operative movement of said detectors, said floating means having a bodily motion in similar direction to the said line of travel as the said material varies in width but remains central and a controlling part of said floating means having a motion transverse to the line of travel when said material departs from said centered line of travel, and two control ports controlled by said controlling part of said floating means and adapted to be alternately opened by the right and left motion of said controlling part as it is moved in the direction of said transverse motion.

5. In a feed-centering device; means to cause a material to travel in the direction of its greatest dimension, two contact fingers disposed to bear one against each extreme of a lesser dimension of said material, each said finger movable in the direction of said lesser dimension, and each said finger having an extension substantially at right angles to said finger and projecting in opposite directions and substantially in alinement with the other, said fingers and their extensions having revoluble bearings at their junctures, a floating member having a pivotal connection with the free end of each said extension, said floating member having a controlling part thereof distant from the line on which the two pivotal connections lie, means for determining the central travel of said material, and dual control elements of said center determining means, said dual control elements disposed to be alternately operated by a motion of said fingers and the controlling part of said floating means when said material and fingers are deflected from their true centralized position.

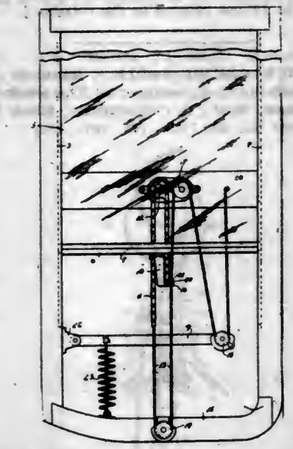
[Claims 6 to 10 not printed in the Gazette.]

1,109,574. WINDOW-OPERATOR. LOUIS W. GATES, West Haven, Conn., assignor to C. Cowles & Co., New Haven, Conn., a Corporation. Filed Nov. 3, 1913. Serial No. 798,927. (Cl. 39—97.)

1. In a window operator, the combination with a vehicle door having a pocket and a mid-frame, a window adapted to be moved up and down in said door, a wheel mounted on said mid-frame, an operating handle adapted to turn said wheel, flexible connections between the door and the window and extending over the wheel into connection with the window, and a balancing lever mounted in the pocket below said window and engaging with said flexible connection.

2. In a window operator, the combination with a casing, of vertical guides arranged on opposite sides, a window adapted to be moved by a chain in said guides, a chain, a sprocket wheel mounted in said casing and engaging said chain, a ratchet connected with said sprocket wheel, two reversely arranged pawls engaging with said ratchet, a handle, and a tripper connected with the said handle and adapted to lift said pawls.

3. In a window operator, the combination with a vehicle door having a mid-frame and a pocket, a window adapted to be moved up and down in said door, a sprocket wheel mounted on said mid-frame, an operating handle adapted to turn said sprocket wheel, and flexible connection between the door and the window and extending over the sprocket wheel into connection with the window and a balancing lever mounted in the said pocket below said window and engaging with said flexible connection.

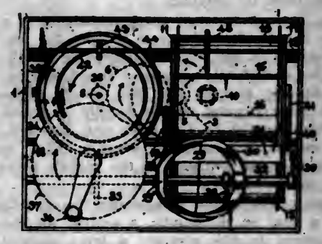


4. In a window operator, the combination with a casing, of a window adapted to be moved up and down therein, a sprocket wheel mounted on a shaft in said casing, an operating handle connected with said shaft and adapted to turn said sprocket wheel, and flexible connection between the casing and window and extending over said sprocket wheel, a ratchet connected with said handle, two reversely turned pawls engaging with said ratchet, a tripper adapted to lift the pawls out of engagement with the ratchet, and a friction yoke surrounding said shaft.

5. In a window operator, the combination with a casing, of a vertically movable window arranged therein, a sprocket wheel, a shaft extending through said casing upon which the wheel is mounted the end of said shaft formed with projections, and the center of the sprocket wheel formed with recesses wider than said projections whereby the shaft has movement independent of the sprocket, a ratchet connected with the sprocket, two reversely turned pawls adapted to engage with said ratchet, and a tripper adapted to lift the said pawls.

[Claims 6 and 7 not printed in the Gazette.]

1,109,575. KINEMATOGRAPHIC APPARATUS UTILIZING THE USUAL PHOTOGRAPHIC FILMS. ALFONSO DE GIGLIO, Copenhagen, Denmark. Filed May 10, 1911. Serial No. 626,233. (Cl. 88—16.)



1. In a kinematograph, a main operating shaft, an auxiliary shaft transverse thereto, means to impart periodic movement to said shaft, a continuous cam carried by said transverse shaft having two helical portions connected by circular portions, and a laterally movable film carriage operated step-by-step by said cam.

2. In a kinematograph, a laterally movable film carriage, a shaft parallel thereto, a cam on said shaft having two helical portions connected by circular portions for operating the carriage, means on said shaft and coöperating means on the carriage brought into operation at each end of the travel of said carriage to feed the film longitudinally.

3. In a kinematograph, the combination with a laterally movable film carriage; of a cam for moving the carriage, means to move the cam step-by-step, and mechanism to lock the carriage after each step and operated by said means.

4. In a kinematograph, a laterally movable film carriage, a shaft parallel thereto, a cam on said shaft having two helical portions connected by circular portions for operating said carriage, a pair of feed rolls on the carriage, a ratchet wheel on one of said rolls, means to lock the ratchet wheel against rotation, a pair of oppositely directed pawl arms on said shaft to engage and actuate said ratchet wheel at each end of the travel of the carriage and means on said arms to unlock said locking means during the engagement of the arms with the ratchet wheels.

5. In a kinematograph, the combination with the film carriage and a guide roll and feed roll thereon; of a frame pivoted to the carriage to swing to and from operative position, a guide roll and a coöperating feed roll mounted in the frame, means in said frame to regulate the pressure of the feed roll against its coöperating roll, and a latch to hold the frame in operative position.

1,109,576. ICE-CREAM DISHER. RAYMOND B. GILCHRIST, Newark, N. J., assignor to The Gilchrist Company, Newark, N. J., a Corporation. Filed Sept. 26, 1907. Serial No. 394,728. (Cl. 107—48.)

1. An ice-cream disher comprising a handle, a bowl on the handle, a scraper for the bowl, a scraper-shaft extending lengthwise of the handle, a lever pivoted to the handle, an actuator arm for rotating the shaft, operated by the lever, a spring for operating said lever in one direction, a bearing for the shaft, and means for holding the shaft in said bearing, said means being operable on the shaft independently of the lever to permit removal of the shaft from the bearing.

2. An ice-cream disher, comprising a handle, a bowl on the handle, a scraper for the bowl, a scraper-shaft extending lengthwise of the handle, a lever pivoted to the handle, an actuator element for rotating the shaft, operated by the lever, a trunnion on the scraper, a trunnion-bearing in the bowl, a bearing for the shaft, and means movably connected to the shaft for holding the shaft in its bearing, said means being operable on the shaft independently of the lever to permit removal of the shaft from the bearing.

3. An ice-cream disher comprising a handle, a bowl on the handle, a scraper for the bowl, a scraper-shaft extending lengthwise of the handle, a lever pivoted to the handle, an actuator element for rotating the shaft, operated by the lever, a plurality of bearings, one of which is open to permit the shaft to be moved laterally therefrom, and means for holding the shaft in operative position, said means being operable on the shaft independently of the lever to permit removal of the shaft from the handle.

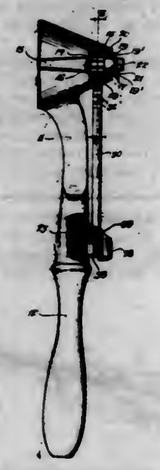
4. An ice cream disher, comprising a handle, a bowl on the handle, a scraper for the bowl, a scraper-shaft extending lengthwise of the handle, a lever pivoted to the handle, an actuator element for rotating the shaft, operated by the lever, two bearings, one of which is open and the other of which is closed, and means for holding the shaft in operative relation to the handle, operable to release the shaft and permit it to be removed transversely through the open bearing.

5. An ice-cream disher comprising a handle, a bowl on the handle, a scraper for the bowl, a scraper-shaft extend-

ing lengthwise of the handle, a lever pivoted to the handle, an actuator element for rotating the shaft, operated by the lever, a trunnion on the scraper, a trunnion-bearing in the bowl, two bearings, one of which is open and the other closed, and means for holding the shaft in operative relation to the handle, operable to permit the shaft to be removed laterally through the open bearing.

[Claims 6 to 22 not printed in the Gazette.]

1,109,577. ICE-CREAM LADLE. RAYMOND B. GILCHRIST, Newark, N. J., assignor to The Gilchrist Company, Newark, N. J., a Corporation. Filed Apr. 16, 1910. Serial No. 555,878. (Cl. 107—48.)



1. In an ice-cream disher, the combination of a handle, a bowl on the handle, a rotatable scraper removably mounted in the bowl and a catch for securing the scraper in operative, rotatable position in the bowl, said catch being adapted to automatically pass into position to secure the scraper upon insertion of the scraper in the bowl.

2. In an ice-cream disher, the combination of a handle, a bowl on the handle, a scraper rotatably and removably held in the bowl, a spindle for the scraper, means for rotating the scraper, and a device for rotatably securing the scraper in operative rotatable position in the bowl, said device acting automatically to secure the scraper in operative position when force is applied to the spindle to place the scraper in the bowl.

3. In a device of the character described, the combination of a handle, a bowl on the handle, a scraper rotatably and removably held in the bowl, a spindle for the scraper, means for rotating the scraper, and a device for rotatably securing the scraper in operative rotatable position in the bowl, said scraper being releasable from said bowl by force applied to the spindle to displace the scraper from the bowl.

4. In a device of the character described, the combination of a handle, a bowl connected to the handle, a spindled scraper rotatably and removably held in the bowl, mechanism mounted on the handle for rotating the scraper, and yieldable holding-means for engaging the spindle of the scraper operating automatically to engage and retain the scraper in the bowl when the latter is inserted in the bowl, and yieldable to pressure applied to the spindle to remove the scraper from the bowl.

5. In a device of the character described, the combination of a handle, a bowl on the handle, a scraper rotatably and removably held in said bowl, a pinion operatively connected to said scraper, and removable through the bowl, operating mechanism for said pinion, and means independent of said operating mechanism and said pinion, for holding the scraper in the bowl, said scraper being rotatable when held by said holding means.

[Claims 6 to 17 not printed in the Gazette.]

1,109,578. ICE-CREAM LADLE. RAYMOND B. GILCHRIST, Newark, N. J., assignor to The Gilchrist Company, Newark, N. J., a Corporation. Filed June 22, 1911. Serial No. 634,752. (Cl. 107—48.)

1. In an ice-cream disher the combination of a handle, a bowl on the handle, a narrow scraper for the bowl, a bearing for the inner end of the scraper, a spindle as thick, at least, as the scraper is wide secured to the scraper, a bearing on the handle for the outer end of said spindle, a closed bearing for the spindle adjacent the scraper, a lever pivoted to the handle, and lever operated means on the spindle for rotating the spindle, and disposed between the two spindle bearings, the scraper being removable through the bearing adjacent the scraper and the spindle being removable from its bearings.

2. In an ice-cream disher, the combination of a handle, a bowl on the handle, a narrow scraper for the bowl, a trunnion on the scraper, a bearing at one side of the bowl for said trunnion, a spindle secured to the scraper, a bearing on the handle for the outer end of said spindle, a closed bearing at least as wide as the scraper for the spindle adjacent the scraper, a lever pivoted to the handle, and lever operated means on the spindle for rotating the spindle and disposed between the two spindle bearings, the scraper being removable through the bearing adjacent the scraper from its bearings.

3. In an ice-cream disher, the combination of a handle, a bowl on the handle, a narrow scraper for the bowl, a spindle secured to the scraper, a bearing on the handle for the outer end of said spindle, a closed bearing at least as wide as the scraper for the spindle adjacent the scraper, a lever pivoted to the handle, a pinion on the spindle and operated by the lever and disposed between the two spindle bearings, the scraper being removable through said closed bearing and the spindle being removable from the bearings.

4. An ice cream disher comprising the combination of a handle, a bowl on the handle, a scraper for the bowl, a spindle secured to the scraper, a lever pivoted to the handle, a pinion on the spindle, operated by the lever and for rotating the spindle, and a closed bearing in the bowl for said spindle, said scraper being formed so it can be withdrawn from the bowl through said closed bearing.

5. In an ice-cream disher the combination of a handle, a bowl on the handle, a scraper for the bowl, a trunnion on the scraper, a bearing in the bowl for said trunnion, a spindle secured to the scraper, a lever pivoted to the handle, and having an opening therein, means on the spindle operated by the lever for rotating the spindle and

scraper, and a bearing for the spindle extending through the opening in the lever, said scraper and spindle being removable from said bearings.

[Claims 6 to 9 not printed in the Gazette.]

1,109,579. ICE-CREAM DISHER. RAYMOND B. GILCHRIST, Newark, N. J., assignor to The Gilchrist Company, Newark, N. J., a Corporation. Filed June 24, 1911. Serial No. 635,192. (Cl. 107—48.)

1. In an ice-cream disher, the combination of a handle, a bowl on the handle, a scraper for the bowl, a shaft to which the scraper is secured, a bearing on the handle, for the inner end of the shaft, an open bearing for the outer end of the shaft, provided with means for holding the shaft therein, a pinion on said shaft and disposed between said shaft bearings, and a lever and rack for rotating said pinion, said shaft having means movable longitudinally out of the bearing to permit withdrawal of the shaft through the open-bearing.

2. In an ice-cream-disher, the combination of a handle, a bowl on the handle, a scraper for the bowl, a trunnion on the scraper, a bearing in the bowl for said trunnion, a shaft to which the scraper is secured, a bearing on the handle for the inner end of the shaft, an open bearing for the outer end of the shaft, provided with means for holding the shaft therein, a pinion on said shaft and disposed between said shaft bearings and a lever and rack for rotating said pinion, said shaft being removably held in said bearings and having means movable out of the bearing at the outer end of the shaft to a position which permits withdrawal of the shaft through the open bearing, said scraper being resilient to hold the shaft against longitudinal movement in its bearings.

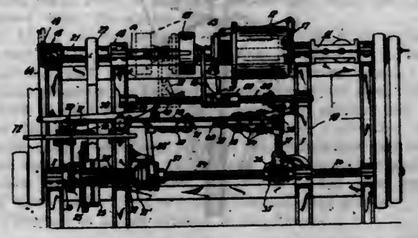
3. In an ice-cream-disher, the combination of a handle, a bowl on the handle, a scraper for the bowl, a shaft to which the scraper is secured, a bearing on the handle for the inner end of said shaft, a bearing for the outer end of the shaft, provided with a restricted opening, the shaft having an enlargement thereon fitting in said open bearing and with a part, which, when shifted from the open bearing, permits the shaft to be withdrawn laterally from said open bearing, said shaft being longitudinally movable in its bearings, a pinion on said shaft, and a lever and rack for operating said pinion and shaft.

4. In an ice-cream disher, the combination of a handle, a bowl on the handle, a scraper for the bowl, a trunnion on the scraper, a bearing in the bowl for said trunnion, a shaft to which the scraper is secured, a bearing on the handle for the inner end of the shaft, a bearing for the outer end of the shaft provided with a restricted opening, the shaft having an enlargement thereon fitting in said open bearing and with a part, which, when shifted from the open bearing, permits the shaft to be withdrawn laterally from said open bearing, said shaft being longitudinally movable in its bearings, a pinion on said shaft, and a lever and rack for operating said pinion and shaft.

5. In an ice-cream disher, the combination of a handle, a bowl on the handle, a scraper for the bowl, a lever pivoted to the handle and differentially operating gear-mechanism between the lever and the scraper.

[Claims 6 to 22 not printed in the Gazette.]

1,109,580. TENSION-REGULATOR. JOHN GOOD, New York, N. Y. Filed Aug. 9, 1911. Serial No. 643,075. (Cl. 118—8.)



1. In a spinning machine, a flier and suitable parts for supporting a bobbin in operative relation thereto, means for applying an increasing retarding effect to the bobbin, and means for automatically reducing such effect in connection with the removal of the bobbin from its support.

2. In a spinning machine, the combination of the flier spindle and a part for maintaining a bobbin in operative relation thereto, with a tension device for maintaining constant tension in the yarn passing from the flier to the bobbin, and means controlled by said part when moved to permit replacement of the bobbin for automatically setting the said tension device.

3. In a spinning machine, a bobbin confining member, a bobbin retarding device, means for increasing the retarding force exerted by said device and means controlled by the said confining member when moved to release the bobbin for reducing the retarding force of said device.

4. In a spinning machine, a head to which the bobbin is connected, a spindle on which said head is mounted, means for locking the spindle in its operative position, a retarding device for said head, means for increasing the retarding force of said device, and means actuated by the locking means when operated to release the spindle for reducing the retarding force.

5. In a spinning machine an open end flier and a movable support for the bobbin therein provided with an obstruction to its removal from bobbin-supporting position, in combination with means for applying an increasing retarding effect to the bobbin and means for reducing such effect, rendered operative by the movement of the said obstruction.

[Claims 6 to 13 not printed in the Gazette.]

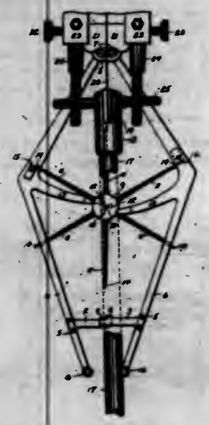
1,109,581. TOWER-CLOCK ESCAPEMENT. ARTHUR M. GORDON, Plymouth, Conn., assignor to Seth Thomas Clock Co., Thomaston, Conn., a Corporation. Filed May 25, 1914. Serial No. 840,770. (Cl. 58—124.)

1. In a tower-clock escapement, the combination with two gravity-arms, a pendulum-rod and an escapement wheel, of checking means applied to one of the said arms to prevent the arms from being lifted beyond their locking-positions with respect to the escapement-wheel.

2. In a tower-clock escapement, the combination with two gravity-arms, a pendulum-rod and an escapement-wheel, of co-acting checking means applied to the respective arms to prevent the same from being lifted beyond their locking positions with respect to the escapement wheel.

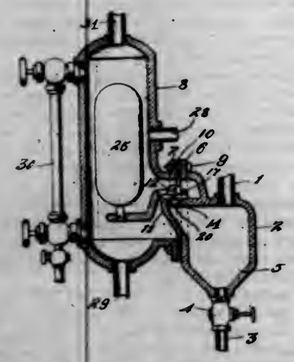
3. In a tower-clock escapement, the combination with two pivotal gravity-arms, a pendulum-rod and an escapement-wheel, of two checking-arms respectively applied to

the gravity-arms and having their inner ends adapted to constitute abutments each for the other to prevent the



gravity-arms from being carried by a sudden access of power, beyond their locking positions.

1,109,582. FEED-WATER CLEANSER. CHARLES E. GORTON, Montclair, N. J., assignor to Edward Muller, New York, N. Y. Filed Dec. 6, 1909. Serial No. 531,486. (Cl. 137—101.)



1. A device of the character described, comprising a float chamber, a closed settling chamber removably secured thereto and having an out-let at the lower part thereof, the walls of said chamber sloping inwardly toward such out-let, an off-set portion formed on said settling chamber and adapted to extend within said float chamber and providing a valve seat, a valve, and an inlet at the upper part of said settling chamber located out of alinement with said out-let and in position to direct the incoming fluid toward said sloping walls whereby a swirling motion is given to the fluid and the sediment thereby removed from the sloping walls when said out-let is open.

2. A device of the character described comprising a float chamber, a closed settling chamber, formed with inwardly sloping walls, detachably secured to said float chamber and provided with an off-set portion projecting thereinto, and forming a valve seat, a float operated valve, a fluid inlet for said settling chamber located adjacent to said valve, an out-let arranged at the lower extremity of said settling chamber and positioned out of alinement with said inlet, whereby the contour of the walls of said chamber will serve to impart a rotary motion to the fluid entering through said inlet to carry off the sediment through said out-let and cleanse said settling chamber.

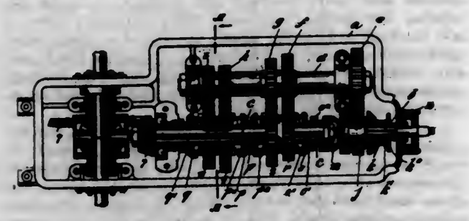
1,109,583. CLASP FOR HOSE-SUPPORTERS. ROBERT GORTON, Newton, Mass. Filed Nov. 8, 1911. Serial No. 659,173. (Cl. 24—245.)

1. A hose supporter clasp comprising a loop having an opening wide at one end and relatively narrow at the other where the side walls of the opening are made approximately straight and parallel, and a button having an oblong shank substantially equal in width to the width of the narrow portion of the loop opening and having approximately straight, parallel side walls of a length sufficient to engage the said straight, parallel side walls of the loop throughout their length, and side flanges on the button forming a head therefor and terminating short of that end of the shank nearest the outer extremity of the narrow portion of the loop whereby the button when in use and under strain will remain deep in the loop and present the full length of the side walls of the shank to the opposing walls of the loop opening, and the loop may draw the fabric to which the clasp is attached into firm contact with the outer end of the button shank.

2. A hose-supporter clasp, comprising an oblong button having an oblong shank and a head formed by side flanges and a loop formed with a straight, relatively narrow, flat lower part for engaging the button shank and which is parallel with the button flanges, and a wide button-receiving upper part which is bent to form a hump disposed in front and wholly above the button-engaging part of the loop.,

3. A hose-supported clasp, comprising webbing, a base plate attached thereto, an oblong button having an oblong shank attached to the base plate and a loop formed with a relatively narrow, straight, flat lower part for engaging the button shank which is parallel with and close to the base plate, and a wide button-receiving upper part, the sides of which upper part are bent to form a forwardly extending hump containing the wider part of the loop opening.

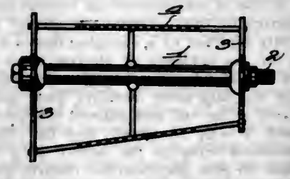
1,109,584. POWER-TRANSMISSION MECHANISM. BENJAMIN A. GRAMM, Lima, Ohio. Filed Dec. 27, 1913. Serial No. 808,938. (Cl. 74—59.)



Power-transmission mechanism comprising a drive-shaft; a counter-shaft; a transmission-shaft; a toothed wheel loosely mounted on said transmission-shaft; a toothed wheel loosely mounted on said drive-shaft; toothed wheels which are mounted on said counter-shaft and one of which meshes with the toothed wheel upon said drive-shaft and the other of which meshes with the toothed wheel upon said transmission-shaft; a drive-shaft clutch-member slidable along said drive-shaft and rotatable therewith and normally held in clutching engagement with the toothed wheel loosely mounted thereon, said clutch-member being formed with an arm-receiving groove; a transmission-shaft clutch-member slidable along said transmission shaft and rotatable therewith and arranged

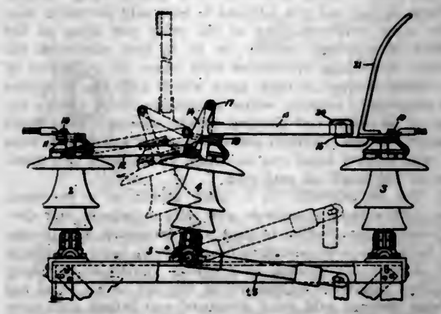
when shifted in one direction to clutch thereto the toothed wheel loosely mounted thereon and, when shifted in the opposite direction, to clutch said drive-shaft and transmission-shaft together without the interposition of said toothed wheels; and a clutch-controlling shift-rod provided with a pair of clutch-controlling arms one of which enters said arm-receiving groove and disengages said drive-shaft clutch-member from the toothed wheel on said drive-shaft when the other of said arms clutches said drive-shaft and transmission shaft together; said groove being made wide enough to permit the first-named arm to travel idly when said other arm is shifted along said transmission-shaft to clutch thereto the toothed wheel loosely mounted thereon.

1,109,585. PEDAL FOR BICYCLES AND THE LIKE. RICHARD HENRY GULLEFORD, St. Albans, Christchurch, New Zealand. Filed May 5, 1914. Serial No. 836,394. (Cl. 208—70.)



A pedal for bicycles, and the like, having its rearmost tread-bar disposed at an angle with the crank-pin in an inwardly and forwardly direction from the outer extremity of such tread-bar, substantially as and for the purpose set forth.

1,109,586. LINE-DISCONNECTING SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 5, 1909. Serial No. 494,060. (Cl. 175—282.)



1. In an electric switch, the combination with a rocking insulator mounted on a fixed pivot, means for rocking said insulator, and a metal yoke mounted on said insulator, of a contact operatively related to said yoke and mounted to swing in the same plane as said insulator about a movable pivot, said yoke being connected to said contact at a point eccentric to said movable pivot, and actuating connections for swinging said contact through a path outside of the arc described by said yoke whereby said yoke is always as close to the pivot of said insulator as any other live part of the switch.

2. In an electric switch, the combination with stationary insulated terminals, of a member pivoted to one terminal, a contact blade pivotally connected with said member and coöperating with the other terminal, and a rocking insulator mounted to swing in the same plane as said blade and connected to said blade to move said blade about its pivotal connection to said member.

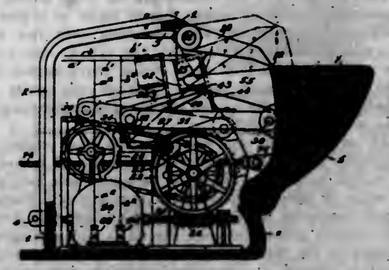
3. In an electric switch, the combination with stationary insulated terminals, of a member pivoted to one terminal, a contact blade pivotally connected with said member and coöperating with the other terminal, and a rocking insulator mounted between said terminals to support said member and said blade and to rock said blade about its pivotal connection.

4. In an electric switch, the combination with a fixed contact and a coöperating switch blade mounted on a pivot, of an insulator pivoted eccentric to said blade to swing toward and away from the fixed contact and from one side of said switch blade pivot to the other, and connections between said insulator and said blade whereby said insulator is brought between said switch blade pivot and said fixed contact when the switch is closed and said switch blade pivot is between the insulator and the fixed contact when the switch is opened.

5. In an electric switch, the combination with a fixed contact and a movable contact blade having arms mounted on separated pivots, of an insulator pivoted to move in a path eccentric to the path of movement of said blade to rock toward and away from said fixed contact and to pass between said separated pivots, a stationary insulator, and connections between said insulators and said blade for rocking said blade about said separated pivots to open the switch as said insulator is rocked away from said fixed contact and to a point beyond said pivots.

[Claims 6 to 11 not printed in the Gazette.]

1,109,587. MOVABLE CONTACT MEMBER. ELMER M. JONES, Atlanta, Ga., assignor to Jones Signal System Company, Atlanta, Ga., a Corporation of Georgia. Filed July 7, 1909. Serial No. 506,277. (Cl. 246—59.)



1. The combination of a casing adapted to be secured along a trackway, a member parallel with the track and pivoted to the casing having an exposed contact surface, arms for moving said member transversely into the casing, a motor, mechanism driven thereby, and controllable means for connecting said arms with said mechanism.

2. The combination of a contact member mounted alongside of the trackway and substantially parallel thereto and having an exposed upper surface parallel with the track, means for moving said contact member, and means for automatically scraping across its surface consequent upon such movement.

3. The combination of a casing adapted to be secured along a trackway, a movable contact member parallel with the trackway and carried by the casing, means for moving it transversely into the casing, and a cleaning plate extending longitudinally of the contact member and carried by the casing, for scraping across the surface of the contact member by resting against it, whereby said cleaning plate moves relatively along the surface of the contact member.

4. The combination of a movable contact member having a normally upwardly facing surface, means for moving such member, a cleaning device adapted to rest on the surface and scrape across it as the contact member moves, and means for normally locking the cleaning device against movement.

5. The combination of a casing extending lengthwise of a trackway, a movable contact member extending lengthwise of and pivoted to the casing, a motor, gearing driven by the motor and including a sprocket chain, arm connected with said contact member, and a magnetically con-

trolled latch on the arm for connecting the arm with the sprocket chain, whereby the contact member is moved into the casing transversely.

[Claim 6 not printed in the Gazette.]

1,109,588. APPARATUS FOR UNOILING STEAM AND THE LIKE. EDUARD KLUGE, Leipzig, Germany. Filed Oct. 10, 1913. Serial No. 794,462. (Cl. 83—90.)

1. In an apparatus for separating oil from steam, the combination of parallel zigzag-shaped walls of rather obtuse angles, a straight strainer between each two adjacent walls in direct contact with the latter, and a plurality of small chambers with closed sharp-angled ends formed at the contact points between the walls and strainers on both sides of the latter, substantially as and for the purpose set forth.

2. In an apparatus for separating oil from steam, the combination of parallel zigzag-shaped walls of rather obtuse angles, a straight strainer between each two adjacent walls in direct contact with the latter, a plurality of small chambers with closed sharp-angled ends formed at the contact points between the walls and strainers on both sides of the latter, and short flattenings at said contact points formed on said walls parallel to said strainers, substantially as and for the purpose set forth.

1,109,589. ELECTRIC-LAMP SOCKET. MAGNUS LARSEN, New York, N. Y., assignor of one-half to Frederick F. Hespe, Jersey City, N. J. Filed Jan. 18, 1908. Serial No. 411,456. (Cl. 173—362.)

1. As an article of manufacture an electric lamp socket casing consisting of three members relatively adjustable and held together by a clamping device, and having an opening for entrance of electric wires to the interior of said three members, which opening is situated in the center member, two of the said members, when joined, being tubular in form at one end and adapted to receive a porcelain base with a lamp receptacle and the other end of said two members being in the nature of a hollow bifurcated sphere adapted to give playroom for electric wires attached to said porcelain base, the third member being a ring adapted to occupy the space produced by the bifurcation of said spherical portion of the said two members, said ring having a threaded hollow nozzle attached for the entrance of aforesaid electric conductors to the aforesaid porcelain base and for fastening said ring to a fixture by means of its threaded nozzle.

2. As an article of manufacture an electric lamp socket casing consisting of three members, relatively adjustable, and held together by a clamping device and having an opening for entrance of electric wires to the interior of said three members, which opening is situated in the center member, two of the said members, when joined, being tubular in form at one end and adapted to receive a porcelain base with a lamp receptacle, and the other end of said two members being in the nature of a hollow sphere, bifurcated to receive and hold in place the third member, a ring, by the aid of a clamping device in the shape of an axial rod passing axially through said three members, and in the spherical portion of same, said axial rod also serving to hold the three members in any position of relative adjustment.

3. As an article of manufacture an electric lamp socket casing consisting of three members relatively adjustable and held firmly together by a clamping device and having an opening for the entrance of electric wires which do not pass out of said three members, but terminate within them, two of the said three members when joined being tubular in form at one end and adapted to receive a porcelain base with a lamp receptacle, and the other end of said two members being in the nature of a bifurcated sphere, hollow, to give playroom for electric wires entering through the third member, a ring, which ring is adapted to occupy a space produced by the bifurcation of said spherical portion of said two members, said electric wires passing through a nozzle attached to said ring and to the wire terminals of said porcelain base.

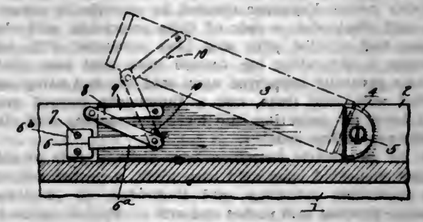
4. As an article of manufacture an electric lamp socket, comprising a porcelain base with a lamp receptacle and electric conductors leading to said porcelain base, a casing to inclose said porcelain base with its lamp receptacle and said conductors, said casing consisting of three members relatively adjustable and held together by a clamping device, two of said members when joined being tubular in form at one end and adapted to hold said porcelain base with lamp receptacle, and at the other end being in the nature of a sphere, hollow, so as to give playroom for electric wires, and bifurcated with space for reception of the third member, a ring, upon which said two members are adapted to revolve, while means are being had in the way of an axial rod passing axially through said three members in the spherical portion of same and thumb nuts on ends of said axial rod to firmly clamp said two members at any angle of said ring.

5. The combination in a lamp socket of a porcelain base with a lamp receptacle and wire terminals and electric conductors leading to said wire terminals with a casing to inclose said porcelain base with its lamp receptacle and electric conductors, said casing consisting of three members relatively adjustable by the aid of an axial rod passing through said three members, and thumb nuts upon the threaded ends of said axial rod, two of the said three members being tubular in form at one end for the reception of aforesaid porcelain base with its lamp receptacle and electric conductors and the other end of said two members being in the nature of a hollow bifurcated sphere adapted to inclose and revolve on the third member, a ring, said ring having a hollow threaded nozzle attached or integral therewith for the fastening of said ring to a fixture and to allow said electric conductors aforesaid to enter the interior of said three members, one conductor on each side of the interior of said ring to terminate at the terminals of said porcelain base.

[Claim 6 not printed in the Gazette.]

1,109,590. PENCIL-BOX. DAVID MORGAN, Ashland, Wis. Filed May 28, 1910. Serial No. 563,901. (Cl. 45—90.)

In a device of the character described the combination of an overhanging support, a box open at the top thereof and arranged under the overhanging support so as to be normally closed thereby, said box being located adjacent the free edge of the overhanging support and substantially parallel thereto, means for pivoting one end of the box to the lower face of the overhanging support so that when the box is swung outwardly away from the overhanging support it will be uncovered to admit of access being readily had to the interior thereof, a Z shaped bracket having one arm thereof secured to the lower face of the overhanging support and projecting downwardly therefrom, the other end of the bracket extending under the free end of the box so as to prevent sagging thereof when



the box is swung inwardly into a closed position, a pair of pivoted link members connecting the lower arm of the Z shaped bracket to the bottom of the box to limit the outward swinging movement of the box and provide a support for the same when it is swung outwardly, and a stop pin projecting from the box and serving the double function of engaging one of the link members to prevent the two link members from being swung into alinement when the box is moved outwardly and also to engage the lower arm of the Z shaped bracket to limit the inward swinging movement of the box when it is swung under the overhanging support.

1,109,591. WELDING-TOOL. SAMUEL S. MORGAN, St. Charles, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 23, 1914. Serial No. 840,542. (Cl. 219—4.)

1. In a welding apparatus, a welding tool comprising welding electrodes in a normally open circuit, one electrode being adapted to initially mechanically contact with work and the other to carry additional work, means for simultaneously moving both electrodes to cause an electrical contact between said first and second mentioned work, and a source of electrical energy in said circuit.

2. In welding apparatus, a welding tool comprising an insulating supporting structure, welding electrodes in fixed relation secured thereto, one electrode adapted to initially mechanically contact with work and the other electrode adapted to hold additional work, the first mentioned electrode adapted to have subsequent movement with respect to said first mentioned work to actuate the other electrode to carry said additional work into mechanical and electrical contact with said first-mentioned work, and means for electrifying both electrodes.

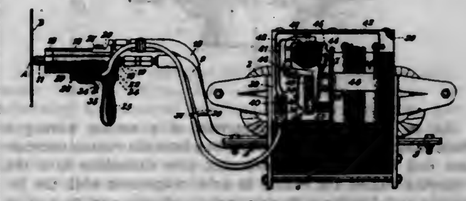
3. In welding apparatus, a welding tool comprising an insulating supporting structure, a welding electrode affixed thereto adapted to initially mechanically contact with work and permit said structure to move toward or from said work, another welding electrode affixed to said structure adapted to hold other work, and upon movement of said structure to carry the latter work into electrical contact with said first mentioned work, and means for electrifying both electrodes.

4. In welding apparatus, a welding transformer having primary and secondary windings, the former in a normally closed circuit including a source of energy and a switch and the latter in a normally open circuit with welding electrodes, an insulating structure with a gripping portion supporting said electrodes, one electrode being adapted to initially mechanically contact with work and the other to carry additional work, said structure being adapted to be rocked with the first mentioned electrode to carry said additional work into electrical contact with said first-mentioned work.

5. A portable welding tool comprising an insulating supporting structure having a handle portion, separated current-conducting terminal pieces attached thereto, a welding electrode secured to each terminal piece, one being rockable and the other adapted to hold work, and means for connecting an electrical conductor to each terminal piece.

[Claims 6 to 15 not printed in the Gazette.]

1,109,592. ELECTRIC WELDING APPARATUS. SAMUEL S. MORGAN, St. Charles, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 23, 1914. Serial No. 840,543. (Cl. 219—4.)



1. In welding apparatus, a transformer having a primary winding in a normally open primary circuit including a source of energy, electro-magnetically operated means in a control circuit adapted to close said primary circuit upon operation of a circuit closer in said control circuit, and a transformer secondary winding in a work-closed circuit including portable welding electrodes.

2. In welding apparatus, a transformer having primary and secondary windings, the former in an open circuit with a source of energy, and the latter in a normally open circuit with portable welding electrodes, one of which carries work and is adapted to cause the same to contact with associated circuit-closing work before the other electrode, and circuit-closing means in a control circuit having an independent source of energy adapted to actuate means for closing said primary circuit.

3. In welding apparatus, a transformer having primary and stcondary windings, the former in an open primary circuit with a source of energy, and the latter in an open circuit with welding electrodes adapted to be closed by work, a control circuit having an independent source of energy and circuit-closing means therefor adapted to actuate a primary circuit-closing switch, comprising a magnetizable core, a relay coil and an armature therefor, and armature supported means carrying a contact adapted to bridge contacts in said primary winding circuit.

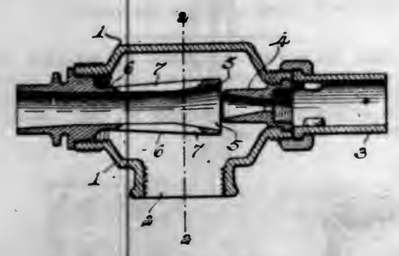
4. In welding apparatus, a source of energy connected with a transformer having primary and secondary windings, each winding being in an open circuit, a circuit-closer for said primary winding circuit, flexible leads therefrom and from said secondary winding connected to a portable welding tool, comprising a movable spring-pressed electrode adapted to carry work and cause the same to contact with affiliated work in advance of a relatively stationary electrode, said welding tool having a suitable structure supporting and insulating from each other both said electrodes, and means carried by said structure adapted to actuate said primary winding circuit closer.

5. In welding apparatus, a portable welding tool comprising a hollow current-conducting body portion, a conductor terminal secured thereto and also a welding elec-

trode detachably secured to one end thereof, an internal insulating lining for said body portion, a current-conducting plunger guided by a portion thereof and attached to a conductor and to a work-holding spring-pressed welding electrode movable through, but insulated from, and normally projecting beyond, said first mentioned electrode, a circuit-closer operable by a trigger and carried by but insulated from said body, and an insulating handle for the latter.

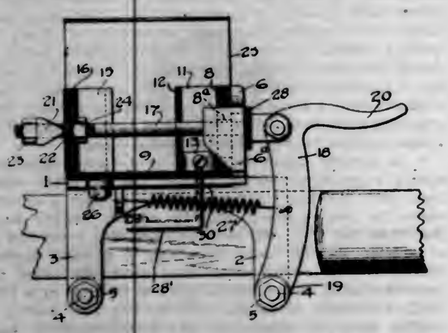
[Claims 6 to 9 not printed in the Gazette.]

1,109,593. EJECTOR. FRANK J. O'LEARY, Detroit, Mich., assignor to Penberthy Injector Co., Detroit, Mich., a Corporation of Michigan. Filed Nov. 22, 1912. Serial No. 732,816. (Cl. 162—1.)



In an ejector, the combination of a casing having a fluid inlet, and jet nozzle extending into the casing through one end thereof, of a combining tube extending into the opposite end of the casing in axial alinement with the jet nozzle and having a flaring inner end adjacent to and of greater diameter than the end of the nozzle and said combining tube being formed with diametrically opposed narrow slits in its side extending longitudinally thereof within the casing from adjacent to its open end to a point near the end of the casing through which the tube extends, one of said slits confronting the fluid inlet of said casing and the other slit the wall opposite said fluid inlet, whereby back pressure from said fluid inlet is admitted to said tube to combine with the direct pressure from said fluid inlet at a point in axial alinement with said jet nozzle.

1,109,594. ELECTRIC SWITCH. JOSEPH A. OSBORN, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 1, 1911. Serial No. 630,705. (Cl. 177—10.)



1. In an electric switch, a base plate, an insulating plate on said base plate, a carrying handle, a pair of electrodes supported upon said insulating plate, an insulating member between therein, an insulating current jump-guard extension on the latter projecting beyond said electrode, a current-conducting member movably supported on said insulating plate, spaced contact extensions thereon, said insulating guard being adapted to project between said contacts, a pivotally mounted lever adjacent said handle, a link paralleling said base and connecting said lever with said movable member, whereby the contact extensions of said member may be drawn into contact with said electrodes.

2. In an electric switch, a base plate, an insulating plate thereon, a pair of electrodes supported upon said insulating plate, an insulating member between said electrodes extending therebeyond to form a current jump-guard, a slidably mounted member adapted for electrically connecting said electrodes, a pair of links embracing said electrodes and parallel with said base connected with said member, a depending lug formed upon said base plate, a lever pivotally supported upon said lug and being connected with said links, and a thumb-grip formed upon said lever for operating said lever and moving said electrodes-connecting member.

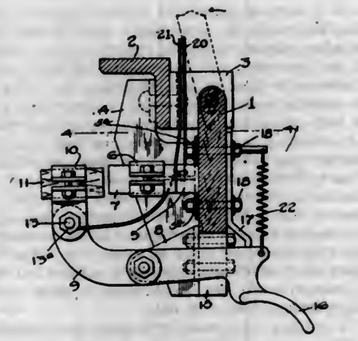
3. In an electric switch, a base plate, a pair of electrodes supported upon said base plate, a pocket adapted for removably retaining said electrodes, an insulating member between said pocket and said electrodes, means for electrically connecting said electrodes, and means extending through said insulating member adapted for operating said last mentioned means.

4. In an electric switch, a base plate, a pair of electrodes supported upon said base plate, an upstanding wall formed upon said base plate comprising a pocket adapted for removably retaining said electrodes, an insulating member between said wall and said electrodes and being fixed to said electrodes and engaging said pocket, means for electrically connecting said electrodes, and means extending through said insulating member and through said wall adapted for operating said last mentioned means.

5. In an electric switch, a base plate, a pair of electrodes supported upon said base plate, a member adapted for electrically connecting said electrodes, said member being movably supported upon said base plate, an insulating member fixed to said electrodes-connecting member, a knife-bar engaging said insulating member, and means fixed to said knife-bar extending through said insulating member adapted for moving said electrodes-connecting member into contact with said electrodes.

[Claims 6 to 9 not printed in the Gazette.]

1,109,595. ELECTRIC SWITCH. JOSEPH A. OSBORN, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 1, 1911. Serial No. 630,706. (Cl. 177—10.)



1. In an electric switch, a freely swinging base-board hinged horizontally to present opposite sides, a bracket fixed to one side of said base-board, an electrode in said bracket, a second electrode adapted to be moved into contact with said first electrode, means disposed upon the opposite side of said base-board for maintaining said electrodes electrically disconnected, and means projecting through said base-board pivotally connected to said electrode adapted for moving said second electrode into contact with said first electrode.

2. In an electric switch, a swinging support, a pair of brackets fixed to one side of said swinging support, an electrode carried by one of said brackets, a lever pivotally mounted upon the other bracket and extending beyond said support, a second electrode connected to one end of said lever, a foot treadle formed upon the opposite end of said lever whereby said second electrode may be moved into contact with said first electrode, and means for maintaining said electrodes separated.

3. In an electric switch, a swinging support including a clamp, an electrode adjustably mounted on said clamp, a conductor electrically connected to said electrode, a member movable relative to said swinging support, a clamp connected to and movable with said member, an electrode adjustably mounted on said clamp, and a conductor electrically connected to said second electrode and insulated from the movable member.

4. In an electric switch, an oscillatory member, a clamp thereon, an electrode carried by said clamp, an actuating extension on said oscillatory member, a bolt constituting a pivotal connection between said member and clamp, a member insulating said bolt from said oscillatory member, said insulating member having a portion disposed between said oscillatory member and clamp and means coacting with said bolt adapted to frictionally fasten in fixed relation said oscillatory member, said portion of said insulating member and said clamp.

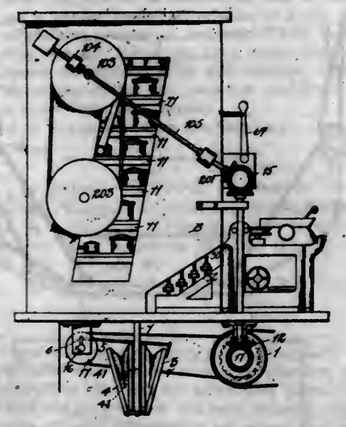
5. In an electric switch, an oscillatory member, a clamp thereon, an electrode carried by said clamp, a pivotal connection between said member and clamp, a member insulating said connection from said oscillatory member, said insulating member extending between said oscillatory member and clamp, means acting on said connection to frictionally clamp together said oscillatory member, insulating member and clamp, and a conductor attached by said last mentioned means to said pivotal connection.

[Claim 6 not printed in the Gazette.]

1,109,596. PUNCH FOR MAKING CENTRALLY-PERFORATED WASHERS. PETER RAU, Saarlouis, Germany. Filed Mar. 5, 1914. Serial No. 822,622. (Cl. 164—32.)

In a punch for making centrally perforated washers, the combination of a resiliently mounted automatic ejector, means to limit the extent of movement of the latter, and two concentric cutters, the inner one being removably fixed to and movable with said ejector, substantially as and for the purpose set forth.

1,109,597. AUTOMATIC TYPE-WRITER ACTUATOR. LYMAN R. ROBERTS and CHARLES L. DAVIS, Detroit, Mich., assignors to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 20, 1908. Serial No. 428,050. (Cl. 197—20.)



1. A typewriter operator including a plurality of pneumatic tracker boards, individual actuating means for actuating the several members of the typewriter, and pneumatic connections from each tracker board to each actuating means, whereby the actuation of the typewriter can be controlled from any tracker board.

2. A typewriter operator including a plurality of pneumatic tracker boards, individual actuating means for actuating the several members of the typewriter, pneumatic connections from each tracker board to each actuating means, whereby the actuation of the typewriter can be controlled from any tracker board, and means whereby any tracker board may be brought into requisition for operating the typewriter.

3. A typewriter operator in which a plurality of pneumatic master sheets operate alternately over a plurality of tracker boards, the sheets controlling a shifting mechanism to cause either sheet to become effective and stop the other sheet.

4. The combination with a typewriter, of an operator including a power-driven master wheel, pneumatics having means to operate said typewriter, a traveling perforated sheet adapted to act as a control for the air actuating said pneumatics, means for advancing said perforated sheet, and pneumatic means for stopping the advance thereof controlled by a perforation through said sheet.

5. The combination with a typewriter, of an operator including a plurality of pneumatics having means to operate said typewriter, a plurality of perforated master sheets to control the air pressure actuating said pneumatics, and pneumatic means controlled by said sheets for automatically shifting the control from one to another of said master sheets and causing them to stop and advance in alternation.

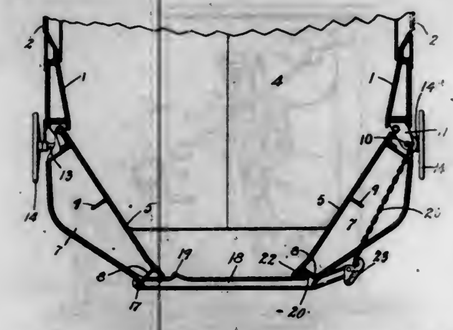
[Claims 6 to 128 not printed in the Gazette.]

1,109,598. HOPPER-CAR-DOOR-OPERATING MECHANISM. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 29, 1912. Serial No. 687,225. (Cl. 105—185.)

1. The combination with a pair of oppositely moving doors for closing the opening in a hopper car, of a lever pivotally connected to one of the doors near the free edge thereof, and coöperating with the opposite door, and means for moving the lever longitudinally and pressing it against the last mentioned door to close the same.

2. The combination with oppositely moving doors for closing the opening in a hopper car, of a lever pivotally

connected to one of the doors near its free edge, which lever coöperating with the free edge of the opposite door, and means for swinging the lever to close the first mentioned door and simultaneously exert pressure upon the last mentioned door to close the same.



3. The combination with the doors of a hopper car, of a lever pivotally connected to one door near its free edge and slidably supporting the free edge of the opposite door, a catch member pivotally mounted on the free end of the lever, and means for moving the lever to close the doors and finally operate the catch member to secure the doors in closed position.

4. The combination with the hinged doors of a hopper car, of a lever pivotally connected to one of the doors near its free edge, which lever supports the free edge of the opposite door, a hook pivotally mounted on the free end of the lever, a winding shaft in position to be engaged by the hook when the doors are closed, a flexible connection between said winding shaft and the hook, and means on said hook and normally engaging the flexible connection for holding said hook in position to engage the winding shaft when the doors are closed.

5. The combination with a pair of hopper car doors, of a lever supporting the free edges of said doors, which lever is pivotally connected to one of said doors, a shaft at the side of the car, a hook carried by the free end of the lever and adapted to engage said shaft when the doors are closed, and a connection between the free end of the lever and the winding shaft, whereby said lever will be raised to close the doors.

[Claims 6 to 25 not printed in the Gazette.]

1,109,599. RAILWAY-CAR END CONSTRUCTION. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 14, 1913. Serial No. 742,000. (Cl. 105—192.)

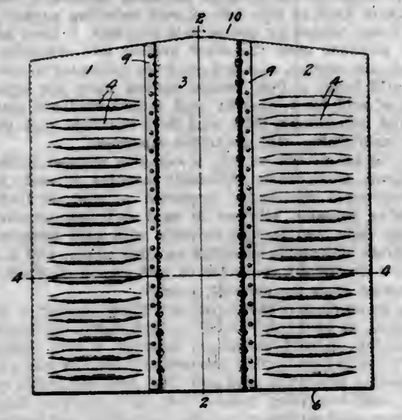
1. A car end comprising a plurality of panels or sections, the central one of which is offset to an increasing extent from top to bottom so that the major portion thereof occupies a plane in front of the vertical plane occupied by the other panels, and said other panels having formed therein transverse stiffening ribs or corrugations.

2. A car end composed of a pair of side sections or panels, and a central section forming a considerable portion of the end wall and disposed in a plane a substantial distance in front of the side sections and connected thereto by longitudinally directed flanges.

3. A car end composed of three vertically disposed sections or panels, having their main portions disposed on lines parallel transversely of the car, the central one of which sections occupies a plane a substantial distance in front of the plane occupied by the side sections.

4. A car end composed of sheet metal, the central portion of which occupies a plane a substantial distance in front of the plane occupied by the side portions and forms a stiffening rib for the car end having its major portion extending parallel to the side portions transversely of the car.

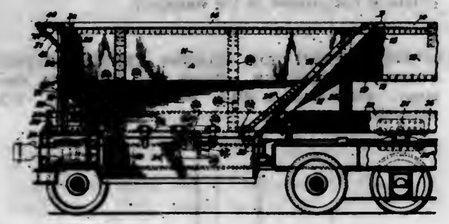
5. A car end composed of sheet metal, the central portion of which is offset with respect to the side portions to a gradually increasing extent from top to bottom and



jointed thereto by longitudinally directed flanges disposed substantially at right angles to said portions, and said side portions being provided with horizontally arranged corrugations.

[Claims 6 to 10 not printed in the Gazette.]

1,109,600. HOPPER-CAR WITH ARTICULATED TRUCK. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 23, 1914. Serial No. 840,552. (Cl. 105—185.)



1. In a dumping car, a car body provided with hoppers at each end with an intermediate connecting portion, in combination with continuous side sills, a truck intermediate said hoppers, and means for connecting the car body and truck.

2. In a dumping car, a rigid car body provided with hoppers at each end with an intermediate connecting portion, in combination with a truck intermediate said hoppers, and means for connecting the car body and truck.

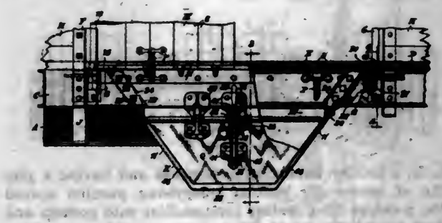
3. In a dumping car, a car body provided with hoppers having discharge openings in each end portion thereof, supports near each end of said body and a truck slidably connected with said body intermediate the discharge openings of said hoppers.

4. In combination, an articulated truck and a hopper car body movable longitudinally with relation to a part of said truck and transversely relative to another part of said truck.

5. In a car, an articulated truck comprising an intermediate section and two end sections supported at their end portions on said intermediate section, in combination with a rigid body portion having hoppers in each end thereof adapted to discharge within said truck end portions and to move transversely of said intermediate truck portion.

[Claims 6 to 25 not printed in the Gazette.]

1,109,601. GRAIN-HOPPER. JOHN W. STEINMEYER, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 17, 1912. Serial No. 737,236. (Cl. 105—184.)



1. In a car, the combination with a center sill having a retaining strip thereon, of a side sill having a threshold plate extending above said side sill, a removable floor adapted to rest on said retaining strip and side sill, and having a portion adapted to engage the strip on the side opposite the side sill, one side of said door abutting said threshold plate.

2. The combination with a center sill, of a side sill having its upper face disposed above the plane of the upper face of the center sill, and a door adapted in one position to be restrained from movement transversely of the sills by an opposing door and to be supported by said sills, the upper surface of said door being in a plane above both said center and side sills.

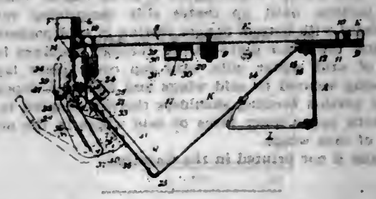
3. In a car, a hopper, center and side sills, intermediate longitudinal stringers disposed between the center and side sills and threaded through the sides of said hopper, transverse hopper-supporting members, each lapped by one of said intermediate stringers.

4. In a car, cross-bearers, transverse pieces in juxtaposition to and paralleling said bearers, and a hopper having outturned flanges supported by said pieces.

5. In a car, cross-bearers, transverse pieces in juxtaposition thereto, center sill and side sill, a hopper having outturned flanges overlapping said center sill and transverse pieces, and means attaching said hopper to said side sill.

[Claims 6 to 9 not printed in the Gazette.]

1,109,602. HOPPER-DOOR MECHANISM. JOHN W. STEINMEYER, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Original application filed Dec. 17, 1912, Serial No. 737,236. Divided and this application filed Aug. 21, 1913. Serial No. 786,043. (Cl. 105—186.)



1. A receptacle having an opening, a flange outlining a portion of said opening and extending substantially in the plane of the same, a door adapted to rest on said flange to close said opening, and a door-supporting and actuating means adapted to raise said door from said angle to uncover said opening.

2. A receptacle having a bottom opening therein, a door-supporting flange forming part of said receptacle, a door resting on said flange when closing said opening, and door actuating mechanism for lowering said door through said opening to uncover the same.

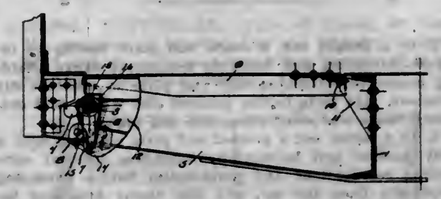
3. A hopper including a downwardly inclined wall having an upturned lower flange, a pivoted door adapted to be supported by said flange, and door actuating means adapted to raise said door to clear said flange.

4. A hopper having an outlet, a door supporting member outlining a part of said outlet, a pivoted door resting on said member, and door actuating means adapted to slide said door from and to its position on said member.

5. In a car, a hopper having an opening in a side thereof, a door supporting member at one side of said opening, a door having one side supported by a hinge connection and the opposite side supported by said member, and door actuating means for sliding said door into position to disconnect the same from said member.

[Claims 6 to 13 not printed in the Gazette.]

1,109,603. DUMPING-CAR DOOR. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 15, 1910. Serial No. 567,105. (Cl. 105—14.)



1. In a flat bottom car, the combination with cross bearers and a dumping door, of a shaft bodily movably sustained by said cross bearers, a bracket fixed to and depending from the door below said shaft and having an outstanding shoulder, the shaft being adapted to be moved to and from a position beneath said shoulder, and a flexible connection between the shaft and the lower portion of the bracket.

2. In a car, the combination with a hinged door, of a rotatably mounted shaft, movably mounted means for supporting the same, said supporting means being designed for adapting the shaft to move bodily to and from a position beneath the door, a bracket depending from the door a distance greater than the distance between the lower surface of the door and the lowermost point of the shaft when beneath the door, and a flexible connection between the shaft and bracket.

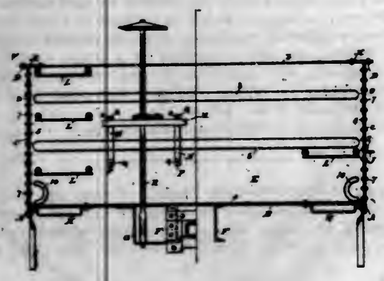
3. In a car, the combination with a hinged bottom door, of a rotatably mounted shaft, movably mounted means for supporting the same, said supporting means being designed for adapting the shaft to move bodily to and from a position beneath the door, a shouldered bracket fixed to and depending from the door below said shaft and adapted when the door is closed to extend past the shaft with the shoulder overhanging the shaft, means for moving the shaft to and from a position beneath said shoulder, and a flexible connection between the shaft and bracket.

4. In a car, the combination with a hinged bottom door, of a rotatably mounted shaft, movably mounted means for supporting the same, said supporting means being designed for adapting the shaft to move bodily to and from a position beneath the door, a shouldered bracket fixed to and depending from the door below said shaft and adapted when the door is closed to extend past the shaft with the shoulder overhanging the shaft, means for moving the shaft to and from a position beneath said shoulder, a sleeve on said shaft adapted to be engaged by said shoulder, and a flexible connection between the shaft and bracket.

5. In a car, the combination of a hinged door, a bodily, laterally shiftable, rotatably mounted shaft movable beyond the free edge of the door, a rockable support for said shaft, rockably supported on an independent support below the shaft a bracket depending from the door and lying substantially within the longitudinal vertical plane of said free edge, and a flexible connection between the bracket and shaft.

[Claims 6 to 21 not printed in the Gazette.]

1,109,604. CAR END CONSTRUCTION. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 3, 1912. Serial No. 707,639. (Cl. 105—192.)



1. In a freight car, a single end plate having an integral outturning and outlining continuous flange affording means for attaching said end plate to adjacent car members, said plate having integral ribs within said outlining flange and reinforcing said end plate.

2. In a metal car, a pressed end plate provided with a body portion and horizontally extending integral reinforcing corrugations and perimetrical flanges extending outwardly from the car, and side sheets extending beyond the body portion of the end sheet lapping and being secured by direct rivet connection to said flange.

3. In a gondola car, an end plate provided with perimetrical flanges extending outwardly from the transverse portion of said plate, side wall plates lapping and secured directly to some of said flanges, and a floor lapping another of said flanges.

4. As an article of manufacture, a sheet metal end for a car pressed from a single sheet of metal and having vertical flanges and push pole pockets formed therein near said flanges, and having transversely extending corrugations across the major portion of said sheet.

1,109,605. RAILWAY-CAR. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 21, 1913. Serial No. 780,303. (Cl. 105—76.)

1. In a car underframe, a center sill, spaced side sills and continuous cross bearers held in interlocking engagement with all of said sills by penetration of and connections therewith.

2. In a car underframe, a center sill, spaced side sills and continuous rolled cross bearers of constant section held in interlocking engagement with all of said sills by penetration of and connection therewith.

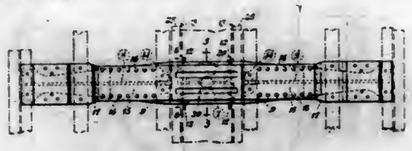
3. In a car underframe, a center sill, spaced side sills and a continuous rolled cross bearer penetrating said sills and being supported thereby near its middle portion and near its opposite ends.

4. In a car underframe, continuous spaced side sills, center sill, and cross bearers penetrating all of said sills and connected rigidly therewith to form a buffing column the entire width of the underframe.

5. In a car underframe, a center sill, a longitudinal sill at each side of said center sill in a plane therewith, a plurality of continuous cross bearers penetrating and connected with all of said sills, and means rigidly connecting said parts.

[Claims 6 to 17 not printed in the Gazette.]

1,109,606. CAST-STEEL BODY-BOLSTER. JACOB H. WEISBROD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 9, 1913. Serial No. 805,556. (Cl. 105—104.)



1. In a bolster having wing portions and having a plurality of center sill pockets comprising parallel spaced walls, a center filler casting intermediate said pockets and of less height than said wing portions, said center filler casting comprising some of said walls, and a top cover plate spanning all of said walls and having a depending portion in contact with an upper face of said center filler casting and adapted to contact with the vertical inner faces of some of said walls.

2. In a cast bolster, a unitary casting comprising a center filler portion, extensions or wings projecting outwardly at each side of and to a greater altitude than said portion, said bolster having sill pockets at two sides of said filler portion, a top cover plate riveted to said extensions and depending shoulders formed on said cover plate adapted to contact with inner faces of some of the walls of said pockets.

3. In a bolster, a center filler portion having vertical walls, center sills riveted directly to said walls and extending to a plane higher than said walls, said bolster having wings extending transversely of said sills and to a plane higher than said center filler and having sill pockets intermediate said wings and center filler portion, and a top cover plate projected through the webs of said center sills and connected with said wings, said plate depending below the top plane of said wings and abutting spaced walls of said pockets.

4. In a body bolster, a unitary casting comprising a center filler portion having vertical walls and spaced wings extending to a plane higher than the top of said filler with sill pockets intermediate said filler portion and said wings, built up center sills comprising vertical web plates and having flanges resting in said pockets and a bolster top cover plate passed through openings in the webs of said center sills, a middle portion of said cover plate extending in alinement with body portions of said wings, and said cover plate being secured directly to said wings.

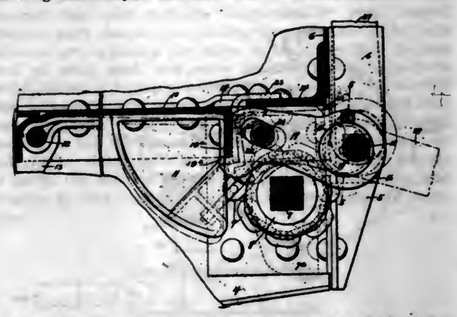
5. In a body bolster, a unitary casting comprising a center filler portion having vertical walls and spaced wings with sill pockets intermediate said filler portion and said wings, the wings extending to a plane higher than the filler portion, built up center sills comprising vertical web plates with bottom flanges resting in said pockets and a bolster top cover plate passed through openings in the webs of said center sills, said top cover plate lapping and being secured to said wings and having a depending middle portion forming shoulders thereon adapted to contact with upper inner faces of said wings in the normal plane of said wings.

[Claim 6 not printed in the Gazette.]

1,109,607. FLUSH CAR-DOOR. LEOPOLD ALMQUIST, Ridgewood, N. J., assignor, by mesne assignments, to American Car and Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed June 23, 1910. Serial No. 568,555. (Cl. 105—14.)

1. The combination of a door, an actuating shaft, a connection between said door and shaft, a latch having a slot therein and adapted to lock said door, means supporting said latch through said slot, a cam rotatably mounted in said latch and adapted to reciprocate the same.

2. The combination of a door, an actuating shaft, a connection between said door and shaft, a latch having a slot therein and adapted to lock said door, means supporting said latch through said slot, a cam rotatably mounted in said latch and adapted to reciprocate the same, and an actuating shaft keyed to said cam.



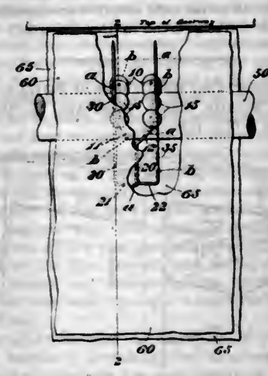
3. The combination of a door, an actuating shaft, a connection between said door and shaft, a latch having a slot therein and adapted to lock said door, means supporting said latch through said slot, a cam rotatably mounted in said latch and adapted to reciprocate the same, and a second shaft keyed to said cam, and means positioning said cam on said shaft.

4. The combination of a hinged door, an actuating shaft having a connection with said door, a sliding latch adapted to engage beneath the free edge of the door, and actuating means engaging said latch for reciprocating said latch inwardly and upwardly to lock said door firmly in position.

5. In a flush bottom car, a swinging door, closing means therefor, including a door operating shaft, a supplemental shaft and longitudinally slidable means, said means being adapted to be projected inwardly and upwardly to tighten said door in closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,109,608. CURTAIN-POLE-CONCEALING SUSPENSION MEANS FOR DOUBLE-FABRIC DRAPERIES. EDITH BANCROFT ASHMORE, Philadelphia, Pa. Filed May 19, 1914. Serial No. 839,540. (Cl. 156—21.)



1. A duplex drapery suspension pin composed of wire strands forming a central carriage having an arched span adapted to slide on a curtain pole, shanks integral with said span and extending downward from opposite ends thereof, spreading bars disposed at right angles to the span of the carriage and integral with said shanks, and upturned pins at the outer ends of said spreading bars.

2. A duplex drapery suspension pin composed of wire strands forming a central carriage provided with anti-friction rollers and having dependent twisted shanks on its opposite sides, spreading bars at the lower ends of said shanks, and upturned pins at the outer ends of said spreading bars.

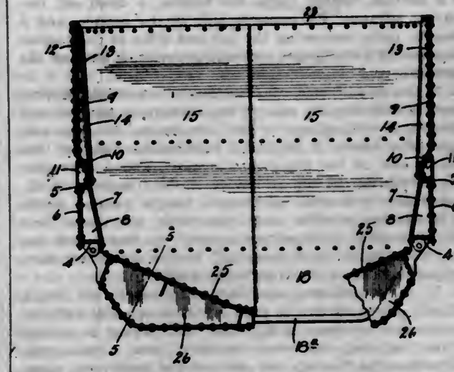
3. A duplex drapery suspension pin composed of wire strands forming a central carriage having a divided top span and dependent twisted shanks at its opposite sides, spreading bars at the lower ends of said shanks, and upturned pins at the outer ends of said spreading bars.

4. A duplex drapery suspension pin composed of wire strands forming a central carriage having dependent twisted shanks at its opposite sides, spreading bars at the lower ends of said shanks, and upturned pins at the outer ends of said spreading bars, said pins being operative to hold the fabrics of a double curtain in concealing positions on opposite sides of a pole.

5. A duplex drapery suspension pin composed of wire and comprising a central straddling carriage adapted to travel on a curtain pole, and upturned pins integral with said carriage on opposite sides thereof, said pins being adapted respectively to engage separate fabrics of a double curtain or curtains.

[Claim 6 not printed in the Gazette.]

1,109,609. HOPPER-CAR. PAUL M. BEARD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 15, 1912. Serial No. 691,051. (Cl. 105—185.)



1. A hopper car having sides, sloping end sheets extending below the plane occupied by the sides, the space between the lower portions of said sides and end sheets being open and unobstructed, a door the main body portion of which is arranged in a plane below the sides and above the plane occupied by the lower ends of the sloping end sheets and means carried by said door for closing the space between the ends of said door and the lower portions of the sloping end sheets.

2. A hopper car having sides, sloping end sheets extending below the sides, the space between the lower portions of said sides and end sheets being open and unobstructed, doors for closing the bottom of the car, the main body portions of which doors are arranged below the sides and above the lower portions of the sloping end sheets and means on said door for closing the spaces between the ends of said doors and the lower portions of the sloping end sheets.

3. A hopper car having sides, sloping end sheets extending below the sides, the space between the lower portions of said sides and end sheets being open and unobstructed, doors the main body portions of which are arranged below the sides and above the lower portions of the sloping end sheets and spaced therefrom, and load-retaining means for closing the spaces between the ends of the doors and the sloping end sheets.

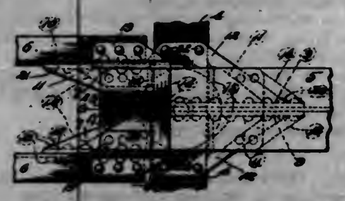
4. A hopper car having sides, sloping end sheets extending a substantial distance below the sides, the entire space between the lower portions of said sides and end sheets being open and unobstructed, and load-retaining means closing the openings between the sides and the lower portions of the sloping end sheets.

5. In a hopper car, a pair of sloping end sheets, the lower portions of which extend substantially below the

sides of the car and the space between the lower portions of said sloping end sheets and the lower portions of the sides of the car being open and unobstructed.

[Claims 6 to 33 not printed in the Gazette.]

1,109,610. DRAFT AND CENTER SILL CONNECTION. PAUL M. BRAND, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 9, 1914. Serial No. 823,390. (Cl. 105—76.)



1. In an underframe construction, the combination of a center sill having a portion abutting a side of the bolster, and a portion resting above the bolster, a draft sill terminating adjacent the opposite side of the bolster, and a connector plate embracing the top and sides of the bolster and provided with flanges connecting the draft sill and the center sill.

2. In an underframe construction, a center sill having a portion abutting the side of the transverse member and a portion overhanging the said transverse member and supported thereon, a draft sill terminating adjacent the opposite side of the transverse member, and a connector plate embracing the top and sides of the transverse member and provided with continuous flanges passing above the transverse member and connecting the center and draft sills, and a removable member passing below the transverse member and connected to the connector plate at opposite sides of the transverse member.

3. In an underframe construction, a center sill and a draft sill offset relative to each other on opposite sides of a transverse member, said center sill having a portion overhanging the transverse member, and a connector plate embracing the top and sides of the transverse member and having offset webs attached to the center and draft sills respectively, said offset webs being connected to each other by flanges passing over the transverse member.

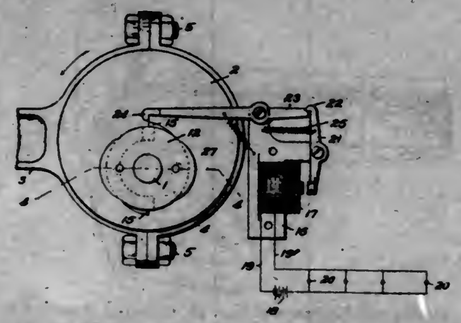
4. In an underframe construction, a center sill and a draft sill horizontally offset from each other, a transverse member disposed intermediate said center and draft sills, said sills having vertical web portions, and a connector plate embracing the top and sides of said transverse member and having a portion in the form of a housing with vertical sides and top and bottom sides spanning the interval intermediate the center and draft sills.

5. In an underframe construction, a connector plate provided with a downwardly opening aperture, a transverse member disposed in said aperture and removable downwardly therefrom, a center sill and a draft sill disposed on opposite sides of said transverse member and offset horizontally from each other, said connector plate being provided with vertical and horizontal web portions, forming a filling member spanning the interval of the lateral offset and longitudinal displacement of the ends of the center and draft sills, and means securing said center and draft sills to said connector plates.

[Claims 6 to 10 not printed in the Gazette.]

1,109,611. ENGINE STOP MECHANISM. EDGAR H. BRISTOL, Naugatuck, Conn., assignor, by mesne assignments, to The Foxboro Company, Foxboro, Mass., a Corporation of Massachusetts. Filed Sept. 27, 1910. Serial No. 583,999. (Cl. 121—97.)

1. An engine stop mechanism comprising in combination, a shaft, an eccentric loose thereon, means detachably connecting said eccentric to said shaft, and remotely operable means coöperating therewith for releasing said eccentric from said shaft.



2. An engine stop mechanism comprising in combination, a shaft, an eccentric loose thereon, means detachably connecting said eccentric to said shaft, and remotely operable electrical means coöperating therewith for releasing said eccentric from said shaft.

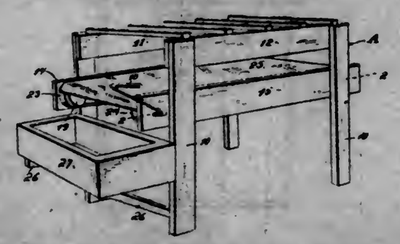
3. An engine stop mechanism comprising in combination, a shaft, a valve controlling eccentric loosely mounted thereon, coöperating cam members fast and loose on said shaft respectively, and means operable by relative movement of said members for disconnecting one of them from said eccentric.

4. An engine stop mechanism comprising in combination, a shaft, a valve controlling eccentric loosely mounted thereon, coöperating cam members fast and loose on said shaft respectively, means operable by relative movement of said members for disconnecting one of them from said eccentric, and means for causing said relative movement of said members.

5. An engine stop mechanism comprising in combination, a shaft, a valve controlling eccentric loosely mounted thereon, coöperating cam members fast and loose on said shaft respectively, means operable by relative movement of said members for disconnecting one of them from said eccentric, and latch means for holding one of said members stationary to cause said relative movement.

[Claims 6 to 8 not printed in the Gazette.]

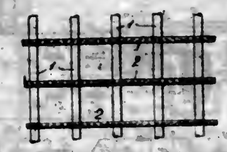
1,109,612. ROOSTING DEVICE FOR FOWLS. WILLIAM CALLAWAY, Wichita, Kans. Filed Apr. 15, 1912. Serial No. 690,788. (Cl. 119—22.)



In a device of the kind described, the combination with a series of poultry perches; of a pair of spaced shafts located in a plain lower than said perches, spaced belts carried upon said shafts, and a web attached to said belt and extending substantially half way along said belts.

1,109,613. GRATING. FERDINAND B. CANDA, New York, N. Y. Filed Apr. 20, 1914. Serial No. 833,159. (Cl. 189—10.)

1. A grating comprising in combination two series of intersecting members, certain of the members of one said series notched at intervals for engagement by the members of the other series, the members of such other series being of composite construction and comprising each a channel bar and another bar mounted within the channel of such channel bar, and movable longitudinally with respect thereto, such channel bar having lips parallel to the back of such bar, inclosing the edges of the other bar, the sub-bars of each such composite member having apertures which, when in registry, permit the passage of the notched members of the first series, one of the bars composing each such composite member having openings elongated, with respect to the section of the bars of the first series, and reduced in width in one portion to permit such sub-bar to enter the notches of the bars of the first series and thereby to lock together the two series of grating members.



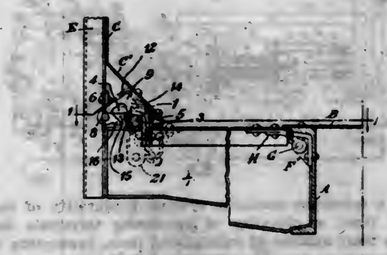
2. A grating comprising in combination two series of intersecting members, certain of the members of one said series notched at intervals for engagement by the members of the other series, the members of such other series being of composite construction, and comprising each a channel bar and a key bar mounted within the channel of such channel bar, and movable longitudinally with respect thereto, such channel bar having lips parallel to the back of such bar inclosing the edges of the key bar, each channel bar and its corresponding key bar having apertures which, when in registry, permit the passage of the notched members of the first series, the key bars having openings elongated, with respect to the section of the bars of the first series, and reduced in width in one portion to permit such key bars to enter the edges of the bars of the first series, and thereby to lock together the two series of grating members.

3. A grating comprising in combination two series of intersecting members, certain of the members of one said series notched, at intervals for engagement by the members of the other series, the members of such other series being of composite construction and comprising each a channel bar and another bar mounted within the channel of such channel bar, and movable longitudinally with respect thereto, such channel bar having lips parallel to the back of such bar, inclosing the edges of the other bar, the sub-bars of each such composite member having apertures which, when in registry, permit the passage of the notched members of the first series, one of the bars composing each such composite member having openings elongated, with respect to the section of the bars of the first series, and reduced in width in one portion to permit such sub-bar to enter the notches of the bars of the first series and thereby to lock together the two series of grating members, and cover plates within the channels of such channel bars and engaged by the lips thereof, and fitting over the bars of the first series and concealing the above mentioned elongations of openings through which the bars of the first series pass.

4. A grating comprising in combination two series of intersecting members, certain of the members of one said series notched at intervals for engagement by the members of the other series, the members of such other series being of composite construction, and comprising each a channel bar and a key bar mounted within the channel of such channel bar, and movable longitudinally with respect thereto, such channel bar having lips parallel to the back of such bar inclosing the edges of the key bar, each channel bar and its corresponding key bar having apertures which, when in registry, permit the passage of the notched members of the first series, the key bars having openings elongated, with respect to the section of the bars of the first series, and reduced in width in one portion to permit such key bars to enter the edges of the bars of the first series, and thereby to lock together the two series of

grating members, and cover plates within the channels of such channel bars and engaged by the lips thereof, and fitting over the bars of the first series and concealing the above mentioned elongation of openings through which the bars of the first series pass.

1,109,614. DOOR-OPERATING MECHANISM. GEORGE C. CHERBONNIER, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 9, 1913. Serial No. 759,999. (Cl. 105—14.)



1. In a door operating device, the combination comprising a door hinged near one edge thereof, a transversely movable winding shaft supported above the plane of the opposite edge of said door when the door is closed, means connecting the door and shaft, means for locking the shaft in one position, and a trip on the door adapted to release the locking means.

2. In a door operating device, the combination comprising a door hinged near one edge thereof, a transversely movable winding shaft supported above the plane of the opposite edge of said door when the door is closed, means connecting the door and shaft, means for locking the shaft in one position, and a supporting hook carried by the door adapted to release said shaft locking means.

3. In a door operating device, the combination comprising a door hinged near one edge thereof, cross bearers, a transversely movable winding shaft supported on the upper face of said cross bearers above the plane of the opposite edge of said door when the door is closed, means connecting the door and shaft, and automatically operable means for locking the shaft in position on said cross bearer.

4. In a door operating device, the combination comprising a door hinged near one edge thereof, a transversely movable winding shaft supported above the plane of the opposite edge of said door when the door is closed, means connecting the door and shaft, and an automatically operable latch for locking the shaft out of the path of movement of said door and its attachments.

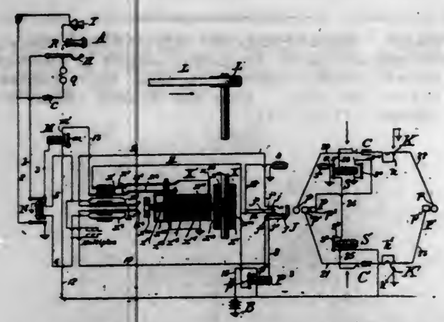
5. In a door operating device, the combination comprising a door hinged near one edge thereof, a transversely movable winding shaft supported above the plane of the opposite edge of said door when the door is closed, means connecting the door and shaft, and a latch mounted in position to engage said shaft when the door is open and to release the shaft when the door is closing.

[Claims 6 to 11 not printed in the Gazette.]

1,109,615. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Sept. 21, 1905. Serial No. 279,481. (Cl. 179—27.)

1. In a telephone exchange system, a plurality of subscribers' lines, a plurality of answering terminals less than the total number of subscribers' lines, connecting or calling terminals for the subscribers' lines, an operator's connective circuit adapted to connect an answering with a calling terminal, automatic switching means responsive to current in a calling line to connect the same with an answering terminal, a calling signal operative upon making

said connection but cut-out when the call is answered, together with a supervisory signal rendered operative when the call is answered, and automatic connective switching means intermediate the calling terminals and the subscribers' lines.



2. In a telephone exchange system, a plurality of subscribers' lines, a plurality of answering terminals less than the total number of subscribers' lines, connecting or calling terminals for the subscribers' lines, an operator's connective circuit adapted to connect an answering with a calling terminal, automatic switching means responsive to current in a calling line to connect the same with an answering terminal, a calling signal placed under control of the calling subscriber through said switching means, a supervisory signal placed under control of said subscriber in answering a call, and automatic connective means interpolated between calling terminals and subscribers' lines and arranged to be directively actuated to connect the calling terminals with the subscribers' lines.

3. In a telephone exchange system, a plurality of subscribers' lines, a plurality of answering-jacks less in number than the number of lines, a primary selector switch associated with each answering jack and containing line-terminals, automatic controlling means for said switch responsive to a call over any of the lines having terminals in the switch, and operator's connective apparatus adapted to coöperate with said answering jacks, to complete the connection of the line calling with a line wanted, and switching means transferring the control of said selector switch to the operator upon connection of the operator's circuit with said answering jacks, substantially as described.

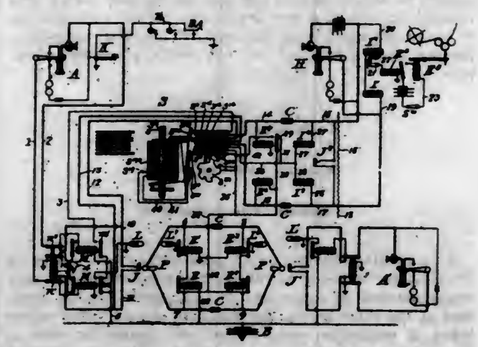
4. In a telephone exchange system, a plurality of subscribers' lines, a plurality of answering jacks less in number than the number of lines, a plurality of connecting jacks having connection with the lines, automatic primary selector switches for connecting the lines to the answering jacks, operators' means to connect an answering jack with a connecting jack, means to actuate said switches controlled by a line in calling, and retaining means independent of the said actuating means and holding the switch in actuated positions until connection is made with an answering jack.

5. In a telephone exchange system, a plurality of subscribers' lines, a plurality of answering-jacks, a selector switch associated with each answering-jack and containing line-terminals, a controlling magnet for said switch, means to drive the switch, means controlled by a line in calling to determine the actuation of said magnet and the control of the switch to connect the calling line with an answering-jack, and retaining means for the said switch independent of the line, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,109,616. ELECTRICAL SIGNALING SYSTEM FOR TELEPHONE-EXCHANGES. EDWARD E. CLEMENT, Washington, D. C. Filed Apr. 12, 1906. Serial No. 311,388. (Cl. 179—5.)

1. In a composite telephone exchange system, a plurality of telephone lines, and switching means to interconnect the same for conversation, of an automatic selective device having individual connections to the several lines, a code signal receiving station connected to said selective device, and means controllable in the use of any line to actuate said selective device to connect the line to said code signal receiving station, together with an automatically operating code transmitter arranged to transmit impulses to said receiving station according to a predetermined code upon the connection of any line with said signal receiving station.



2. In a composite telephone exchange system, a plurality of telephone lines and means for interconnecting the same for conversation, of an automatic selective device containing individual terminals for the several lines, a special substation telephone circuit permanently connected to said selective device, and means operable over any line to actuate said selective device and connect the line to said telephone circuit.

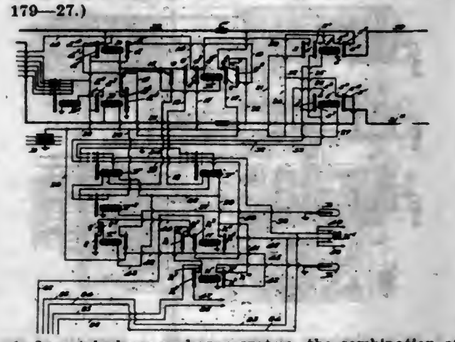
3. In a composite telephone exchange system, a plurality of telephone line-circuits, a central office switchboard containing terminals, line-signals, and connective apparatus for said lines, a common code signal receiving circuit, and a separate selective switching mechanism also containing terminals of said lines and adapted to be actuated over any one of the lines to connect it with the common code signal receiving circuit, together with an automatically operating code transmitter arranged to transmit impulses to said receiving circuit according to a predetermined code upon the connection of any line with said signal receiving circuit.

4. In a combined telephone and code signaling system, a plurality of telephone circuits, a central office switching equipment containing terminals and connective devices for said circuits, a separate selective switching apparatus also containing terminals of the lines, code signal receiving means with a trunk circuit therefrom to said selective switching apparatus, and means operable over any line for selectively initiating connection of the line either through said connecting equipment, or with said selective switching apparatus, together with an automatically operating code transmitter associated with said selective switching apparatus and arranged to transmit to the said signal receiving means signals according to a predetermined code upon connection of any line with said switching apparatus.

5. In a combined telephone and signaling system, a plurality of telephone lines, a central office switchboard for interconnecting the same for telephonic purposes, line signals thereat, a separate, special and additional selective switching apparatus normally in disuse but common to a plurality of lines for connecting the lines outside of the telephone switchboard for signaling purposes and embracing actuating means, means responsive to current changes in each line for operating the line signal to effect a call at the telephone switchboard, and means also responsive to current changes in each line for operating the separate switching apparatus to effect a call outside the switchboard at will.

[Claims 6 to 22 not printed in the Gazette.]

1,109,617. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed June 23, 1906. Serial No. 323,096. (Cl. 179—27.)



1. In a telephone exchange system, the combination of the following instrumentalities: a plurality of line circuits, automatic switching means for interconnecting the circuits, an operator's controlling apparatus and telephone, and automatic means comprising a set of selective relays for connecting the said controlling apparatus and telephone with said interconnecting means and with a calling line, respectively, substantially as described.

2. In a telephone exchange system, a plurality of line circuits and means for interconnecting them comprising the following instrumentalities: banks of relays actuated when lines are calling to connect therewith, automatic switches associated therewith and adapted to select the lines wanted, controlling apparatus for said switches adapted to be manually actuated at the central office or exchange, and automatic switching apparatus for connecting the same to the selecting switch circuits, substantially as described.

3. In a telephone exchange system, a plurality of line circuits and means for interconnecting them comprising the following instrumentalities: automatic answering switches actuated when lines are calling to connect therewith, other automatic switches associated therewith and adapted to select the lines wanted, groups of relays for selecting and connecting with any of the aforesaid switch circuits, and operator's sending apparatus associated therewith and brought thereby into proper relation with the main switches to control the same, substantially as described.

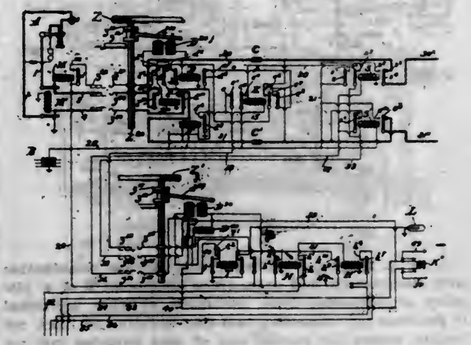
4. In a telephone exchange system, a plurality of subscriber's lines and connective apparatus therefor comprising the following instrumentalities: groups of relays adapted to connect with the line calling together with other automatic switches adapted to connect with the line wanted, circuits interconnecting the same, an operator's controlling apparatus therefor, and automatic means for connecting the same thereto when a calling line is connected thereto and for disconnecting the same therefrom when the wanted subscriber's connection is completed, substantially as described.

5. In a telephone exchange system, the combination of a plurality of lines to be interconnected, with primary selector switches for answering the calls and initiating connections, line selectors and connectors for completing the connection, secondary selectors comprising sets of digitally associated relays for bringing an operator's set into connection with the circuits of the primary and line switches, and means included in said set whereby an operator may control the same, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

1,109,618. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed July 20, 1906. Serial No. 327,096. (Cl. 179—27.)

1. In a telephone exchange system, a plurality of line circuits, a plurality of link circuits for interconnecting the same, a double set of automatic switches associated with said links, one set adapted to effect initial connection between links and lines, and the other set to be driven in a predetermined manner to the wanted lines, mechanism adapted to be controlled by an operator for directing the second set of switches, and a continuously rotated secondary switch individual to said operator's mechanism arranged to be automatically driven to connect its associated operator's mechanism with the link circuit associated with the calling line and thereby associate said operator's mechanism with the switches of the second set for the operator's control thereof.



2. In a telephone exchange system, a plurality of line circuits, a plurality of connecting trunks, automatic switches for connecting the same to calling lines, other automatic switches for connecting the same to wanted lines, means for actuating said last mentioned automatic switches comprising operator's number selecting circuit closers and a power driven impulse generator therefor at a central point, and a continuously rotated secondary switch individual to said operator's selecting set, and active upon connection of any trunk to a calling line to find the trunk and connect the associated operator's set thereto, substantially as described.

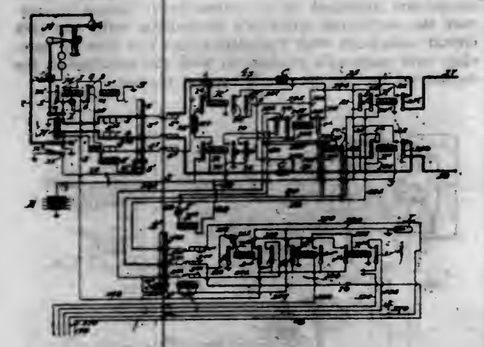
3. In a telephone exchange system, a plurality of subscribers' lines, a plurality of connective link circuits, a double set of automatic switches for said links, the first set adapted to connect calling lines thereto, and the second set to connect the links with wanted lines, an operator's set comprising a telephone and mechanism adapted to actuate the second set of switches, and an auxiliary continuously rotated switch individual to each operator's set and automatically actuated when a line is calling to connect the operator's set through a link circuit to a calling subscriber and also to the second set of switches, whereby the wanted subscriber may be selected, substantially as described.

4. In a telephone exchange system, a plurality of line circuits and a plurality of trunk lines less in number than the line circuits, automatic switches for connecting calling lines to said trunks, and other automatic switches for connecting the trunks to wanted lines, together with operators' controlling apparatus for the trunks, and automatic continuously rotated switches, one individual to each set of operator's controlling apparatus for connecting the operator's sets to the trunks, substantially as described.

5. In a telephone exchange system, a plurality of line circuits, a plurality of connective trunks therefor less in number than the number of lines, a primary selector switch for each trunk adapted to connect the trunk with a calling line, a selector switch constituting the connecting or calling terminal of the trunk, an operator's answering and controlling set, and a continuously rotated secondary selector switch individual to said operator's set for connecting the same to the trunk, substantially as described.

[Claims 6 to 34 not printed in the Gazette.]

1,100,619. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Apr. 6, 1907. Serial No. 366,849. (Cl. 179—27.)



1. In a telephone exchange system, the combination with line circuits and subscribers' instruments of a plurality of connecting links, automatic switches individual to the lines for connecting said line circuits and links, automatic means for moving any of said switches into position to connect a subscriber's line with an idle link, said automatic means being set into operation by the single act of removing a subscriber's receiver, an operator's position, and automatic means individual to the connecting links set into operation by the same primary act to connect the subscriber thereto, together with directively driven switches controlled by the operators to connect the links with wanted lines, substantially as described.

2. In a telephone exchange system, the combination with line circuits and subscribers' instruments of a plurality of connecting links, automatic switches individual to the subscribers' lines and each having a bias to its initial position, for connecting said line circuits when calling, to the links, means for moving said switches set into operation by the single act of removing a subscriber's receiver, automatic selective switches adapted to connect the links and thereby the calling lines to the lines wanted, an operator's set, and further automatic means individual to the links for connecting the same to a line when calling, substantially as described.

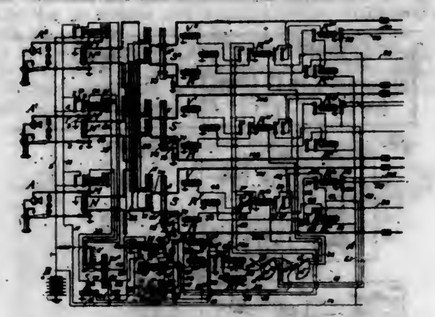
3. In a telephone exchange system, a plurality of line circuits, a plurality of connecting links, automatic switches for connecting the same to calling lines, other automatic switches for connecting the same to wanted lines, means for actuating said automatic switches, an operator's set, and automatic means individual to the links for connecting the said operator's set to a calling line, substantially as described.

4. In a telephone exchange system, a plurality of line circuits, a plurality of connecting links, automatic switches for connecting the same to wanted lines, means for actuating said automatic switches comprising circuit closers and a power driven impulse generator controlled thereby, an operator's set, and automatic switching means individual to the links for connecting the said operator's set to a calling line and link, substantially as described.

5. In a telephone exchange system, a plurality of subscribers' lines, a plurality of connective circuits, automatic step by step switches individual to the lines for connecting said lines to said connective circuits, an operator's controlling apparatus for said connective circuits, and auxiliary step by step switching apparatus individual to the connective circuits for connecting the operator's apparatus to the connective circuits in initiating a connection, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,100,620. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Feb. 26, 1908. Serial No. 417,976. (Cl. 179—18.)



1. In a telephone exchange system, a plurality of subscribers' lines, link circuits for interconnecting said lines, means for connecting a calling line with any link, and a unitary automatic pilot or selector for said means, common to a plurality of lines and links, containing testing terminals for the lines, and acting in response to a call over any line to automatically select said line and synchronously actuate connecting means to select the same line and connect it with an idle link.

2. In a telephone exchange system, a plurality of subscribers' lines, link circuits for interconnecting said lines, a plurality of automatic means for connecting calling lines with the links, means for distributing the calls among the links, and a unitary automatic pilot or selector common to a plurality of lines and links, containing testing terminals for the lines, and acting in response to a call over any line to automatically select said line and synchronously actuate connecting means to select the same line and connect it with an idle link.

3. In a telephone exchange system, a plurality of subscribers' lines, link circuits for interconnecting said lines, a plurality of automatic connective devices, a unitary pilot switch arranged to select a calling line and means associated with said pilot switch for effecting synchronously with the selection of the calling line the connection of a calling line to a link through the medium of one of said automatic connective devices.

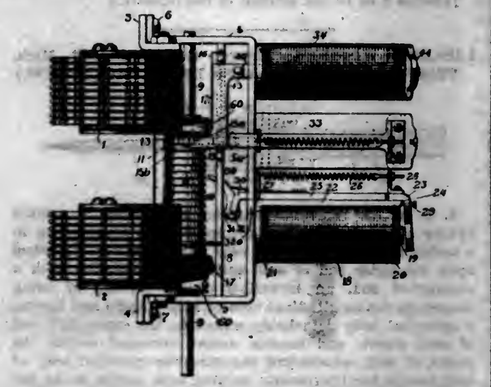
4. In a telephone exchange system, a plurality of subscribers' lines, link circuits for interconnecting said lines, automatic connective means associated with each link circuit and a unitary pilot switch common to a plurality of said lines and links containing line testing terminals and adapted in response to a call over any line to test said terminals until the calling line is found, and to synchronously actuate an indle one of said automatic connective means.

5. In a telephone exchange system, a plurality of subscribers' lines, a plurality of link circuits for interconnecting said lines, a unitary pilot switch common to said links and arranged to select a calling line, an automatic switch associated with each link and synchronously controlled by said pilot switch for connecting a calling line with a link and means for distributing the calls among the idle links.

[Claims 6 to 16 not printed in the Gazette.]

1,109,621. TELEPHONIC APPARATUS. EDWARD E. CLEMENT, Washington, D. C. Filed Nov. 13, 1907. Serial No. 402,027. Renewed July 3, 1914. Serial No. 848,995. (Cl. 179—27.5.)

1. A selective switch for electrical systems comprising a bank of fixed contacts, supporting means therefor, a frame secured thereto, a selective contact adapted to reciprocate within the frame, and self-contained electromagnetic actuating means for said contact mounted upon the outside of the frame and having its actuating parts extending within the frame into operative relation with the said contact.



2. A selective switch for electrical systems comprising a bank of fixed contacts, supporting means therefor, a frame secured thereto and bridging over the bank, a spindle carrying a selective contact and mounted so as to have motion within the frame, and an actuating electromagnet for said spindle having a core secured at one end to the outside of the frame so as to be substantially perpendicular to the axis of the spindle, and working parts extending within the frame into operative relation with the spindle.

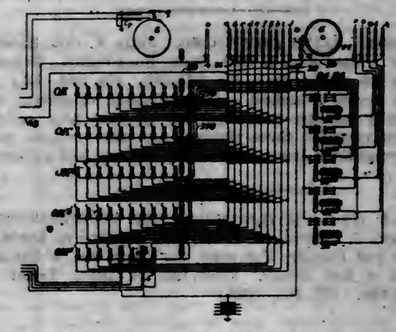
3. A selective switch for electrical systems comprising bank contacts, supporting means therefor, a frame secured thereto, bridging the bank and spaced away therefrom, a spindle carrying a selective contact and mounted so as to have motion within said frame, and an electromagnetic actuating unit for the spindle having a core, a magnet spool thereon, a return bar extending along the spool parallel to the core, and a bell crank armature mounted on said return bar and having an extended operating lever, said electromagnet and return bar being secured to the outside of the frame so that the core is substantially perpendicular to the axis of the spindle, and said armature lever extending within the frame so as to bring its free end into operative relation with the spindle.

4. A selective switch for electrical systems comprising bank contacts, a frame connected thereto, a spindle mounted in said frame, a movable contact or wiper carried on said spindle, and electromagnetic actuating means for the spindle separately assembled and mounted as a unit upon the outside of the frame with actuating parts extending within the same so as to operatively engage the spindle.

5. A selective switch for electrical systems comprising bank contacts, a U-shaped frame having its ends attached to the contact banks, a spindle extending across said frame with its ends journaled in the end members thereof so as to both reciprocate and turn therein, a vertical and a rotary ratchet adapted to set the spindle, a guide strip mounted in said frame parallel with the spindle so as to leave a working space between itself and the frame, a single dog detent pivoted on said guide strip and adapted to engage both the vertical and rotary ratchets, a vertical magnet and a rotary magnet, both end-supported on the frame with their axes perpendicular to the spindle, each having a core, a spool thereon, a return bar with a knife edge bearing on its end, a bell crank armature, and a spiral retractile spring therefor, the armature of the vertical magnet extending along the top of the return bar with its end projecting into the working space between the frame and guide strip, and having a pawl pivoted upon it with the end of the pawl extending through a slot in the guide strip so as to engage the vertical ratchet and lift the spindle when the vertical magnet is energized; and the armature of said rotary magnet extending along the return bar thereof into said working space, with a horizontal pawl pivoted thereon and extending through a guide slot in said guide strip, so as to engage the rotary ratchet wheel and turn the spindle when said rotary magnet is energized; together with means for disengaging said detent from the ratchets, to permit the release and restoration of the spindle and movable contacts to their normal or zero position when the switch is not in use.

[Claims 6 to 8 not printed in the Gazette.]

1,109,622. TELEPHONIC APPARATUS AND SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Original application filed July 15, 1907, Serial No. 383,875. Divided and this application filed Nov. 13, 1907. Serial No. 402,029. Renewed July 20, 1914. Serial No. 852,088. (Cl. 179—90.)



1. In a telephone exchange system, automatic switches, and means for producing impulses to work the switches, in combination with a controlling or sending machine therefor comprising the following instrumentalities: a supporting frame fitted with suitable bearings, a drum having a shaft mounted to turn in said bearings, a motor connected to said drum, a plurality of contact springs overlying the drum, and cams of different lengths on the surface of the drum adapted to work said springs to make and break their contacts during correspondingly different periods of time, whereby different numbers of impulses will be transmitted.

2. An impulse transmitter or sending machine comprising a frame with bearings, a selective cam drum or wheel mounted to turn in said bearings, a commutator having a continuous set of teeth and associated with said cam drum, a contact overlying said commutator, a plurality of other springs overlying the cams on the drum, and operating studs for said springs, transmitting motion from the cams to the springs when the drum is rotating, said cam actuated springs being connected on one side by a common conductor to the commutator contact and on the other side to diverse circuits and serving to distribute the impulses from the commutator contact into said circuits.

3. An impulse transmitter or sending machine comprising a frame with bearings, a cam drum or wheel mounted to turn in said bearings, a commutator having a continuous set of teeth and associated with said cam drum, a pair of springs overlying said commutator with an operating stud transmitting motion therebetween, a plurality of other springs overlying cams on the drum, and operating studs for said springs, transmitting motion from the cams to the springs when the drum is rotated, said cam springs being connected to diverse circuits and serving to distribute the impulses from the commutator springs into said circuits, and the cams on the drum being so proportioned with respect to the teeth on the commutator as to make and break when there is zero potential on the commutator springs, that is to say when the latter are opened, so that all sparking will be confined to said commutator springs.

4. An impulse transmitter or sending machine comprising an impulse generating device, and an impulse distributing device comprising distributing make and break contacts, in series with said impulse generating device,

and means for selectively operating said contacts to send impulses over a given circuit, said last named operating means being timed with respect to the impulse generating device to operate said distributing contacts at break periods between said impulses.

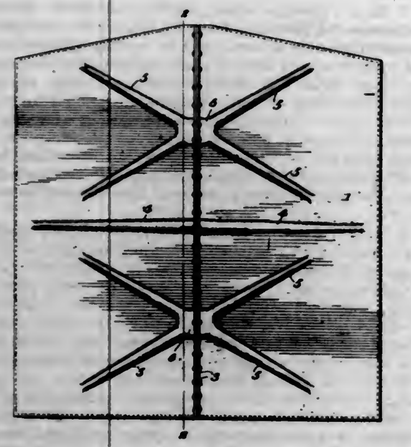
5. In combination, an impulse commutator, and an impulse selector and transmitter, the former producing a continuous series of impulses and the latter connected thereto so as to select and transmit any desired number of impulses at will, together with means for producing breaks in the transmitted impulses at periods of zero potential on the commutator, between the periods of impulse production thereof, whereby sparking at the transmitter contacts is prevented, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,623. PAINT COMPOUND. JOHN F. COE, Raleigh, N. C. Filed Aug. 4, 1911, Serial No. 642,248. Renewed Mar. 16, 1914. Serial No. 825,152. (Cl. 134—52.)

The herein described paint compound, consisting substantially of the following: oil of tar, fifty gallons, Princes metallic, three hundred and fifty pounds, gloss oil, five gallons, Japan drier, seven and one-half gallons.

1,109,624. RAILWAY-CAR END CONSTRUCTION. JAMES J. COOPER, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 14, 1913. Serial No. 741,999. (Cl. 105—192.)



1. A car end comprising two conversely identical sheet metal sections, each section having formed therein reinforcing ribs or corrugations.

2. A car end comprising two conversely identical sheet metal sections, each section having formed therein reinforcing ribs or corrugations, and the ribs or corrugations of said sections joining at the junction of the sections.

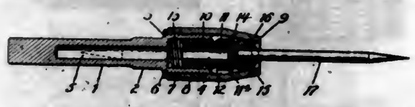
3. A car end comprising two conversely identical sections of sheet metal in which are pressed reinforcing ribs or corrugations diverging from the junction of the sections.

4. A car end composed of two sections of sheet metal provided with stiffening ribs or corrugations which coalesce at the junction of the sections, the said sections having connecting flanges extending from the protuberant sides of the corrugations.

5. A car end made up of a plurality of joined sections of sheet metal in which are pressed stiffening corrugations which coalesce at the junction of the sections, the said sections having connecting flanges extending from the protuberant sides of the corrugations.

[Claims 6 to 10 not printed in the Gazette.]

1,109,625. WIGGLER. ROBERT COOPER, Detroit, Mich. Filed Sept. 20, 1913. Serial No. 790,853. (Cl. 33—169.)



1. A milling machine wiggler, comprising a spindle having a longitudinal bore formed therein terminating in a socket in the outer end of said spindle, a sleeve screwed upon the outer end of said spindle and provided with a contracted end, an invertible needle capable of being housed in the longitudinal bore of said spindle and having a spherical body detachably seated in the contracted end of said sleeve, and tension means arranged within the socket of said spindle and engaging the spherical body of said needle for frictionally holding said needle in an adjusted position.

2. A milling machine wiggler comprising a spindle having the outer end thereof provided with a socket, a sleeve adjustably mounted upon the outer end of said spindle and provided with a contracted end, a needle having the inner end thereof frictionally held in the contracted end of said sleeve, a guide engaging the inner end of said needle and extending into the socket of said spindle, and means encircling said guide arranged within said socket and engaging the said guide for holding said guide normally in engagement with the inner end of said needle.

3. A milling machine wiggler comprising a spindle having the outer end thereof provided with a socket, a sleeve adjustably mounted upon the outer end of said spindle, a needle having the inner end thereof detachably seated in said sleeve, a tubular spring encircled guide detachably mounted in the socket of said spindle for frictionally engaging and holding the inner end of said needle in engagement with said sleeve.

4. A milling machine wiggler comprising a spindle having the outer end thereof provided with a socket, a sleeve screwed upon the outer end of said spindle and provided with a contracted end, a nut screwed upon said spindle against said sleeve, a needle having the inner end thereof seated in the contracted end of said sleeve, a tubular guide arranged in the socket of said spindle and said sleeve for engaging the inner end of said needle, and means interposed between said guide and said spindle for holding said guide normally in engagement with the inner end of said needle.

5. A milling machine wiggler comprising a spindle having a longitudinal bore terminating in a socket at the outer end of said spindle, a sleeve screwed upon the outer end of said spindle, and having a contracted outer end, a needle having the inner end thereof seated in the contracted end of said sleeve, a guide arranged in said sleeve against the inner end of said needle, said guide having a bore longitudinally alining with the bore of said spindle and coöperating therewith to receive said needle when inserted and housed by said spindle and said sleeve, and means arranged in the socket of said spindle and adapted to hold said guide normally in engagement with the inner end of said needle.

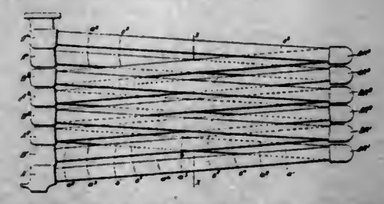
1,109,626. ARTERIAL TUBE. FREDERICK W. DAVIS, Chicago, Ill., assignor to Frigid Fluid Company, Chicago, Ill. Filed Apr. 5, 1913. Serial No. 759,165. (Cl. 27—18.)

1. An arterial tube for inserting embalming fluid having a tube adapted for insertion into a flexible pipe, a cord for binding said flexible pipe to said tube, and means upon said tube to securely hold the free ends of said cord, said means consisting of a slit.

2. An arterial tube for inserting embalming fluid comprising a body portion having a duct longitudinally therethrough, a slit provided upon said body portion for holding free ends of binding cords, a hollow tube mounted upon

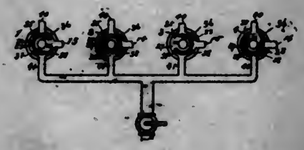
said body portion and having its hollow interior register with the duct of said body portion.

1,109,627. WATER-TUBE BOILER. ROBERT DELAUNAY-BELLEVILLE, St. Denis, France, assignor to Societe Anonyme des Etablissements Delaunay-Belleville, St. Denis, France, a Corporation of France. Filed Dec. 11, 1913. Serial No. 806,044. (Cl. 122—235.)



A boiler element of the Belleville type, composed of a spiral coil having clockwise convolutions and a spiral coil having anti-clockwise convolutions, the front boxes on the one hand and the rear boxes on the other hand being superposed but disposed in staggered relation, the left hand half of the boxes of the second spiral coil resting upon the right hand half of the boxes of the first spiral coil and vice versa, all the tubes rising from front to rear on the one hand and all the tubes rising from rear to front on the other hand being parallel and equally spaced.

1,109,628. ROTARY VALVE FOR EXPLOSIVE-ENGINES. WILLIAM RICHARD HALLETT, Castor, Alberta, Canada. Filed June 18, 1913. Serial No. 774,899. (Cl. 123—177.)



1. A rotator for the valves of explosive engines, including a shaft and a supporting means mounted on said shaft, said means comprising semi-circular circumferentially irregularly shaped end pieces and longitudinally disposed radially extending wings connecting said end pieces; a segmentally deficient cylindrical sleeve, longitudinally extending grooves on the inner periphery of said sleeve adapted for the reception of said wings, the ends of said supporting means closing the ends of said sleeve to the extent of their area, the irregular parts of said end pieces registering with the deficient part of said sleeve and completing the cylindrical shape of the ends thereof.

2. A device of the character described comprising a hollow rotary valve, a valve casing having inlet and exhaust ports and a port connecting with an engine, a chamber in said valve and a longitudinally elongated opening in the periphery of said valve communicating with said chamber, said valve coöperating with said casing to alternately connect said engine port with said inlet and exhaust ports, and perforated means of communication interposed between said valve and said ports.

3. A device of the character described, comprising a hollow rotary valve, a valve casing having inlet and exhaust ports and a port connecting with an engine, a longitudinally disposed partition dividing the interior of said valve into two parts, one of said parts being closed at the ends, and the other open and adapted for the passage of air therethrough, a longitudinally elongated peripheral opening in said valve communicating with the closed part thereof, said opening forming means whereby the engine port in said casing is alternately brought into communication with said inlet and exhaust ports, and a perforated cylindrical bushing interposed between said valve and casing, said ports communicating through said perforations, the elements composing an incoming charge of explosive being there-by co-mingled and their coolness imparted to the parts of said valve structure.

4. A device of the character described comprising a hollow rotary valve, a valve casing having inlet and exhaust ports and a port connecting with an engine, a perforated bushing interposed between said valve and casing, longitudinally disposed radially extending partitions dividing said casing into separate compartments, said ports selectively connecting with said compartments, perforations in the wall of said casing, the interior of said valve being divided longitudinally into two parts, the ends of one part closed and the other open, a longitudinally extending peripheral opening in said valve communicating with the closed part thereof, rotation of said valve serving by means of said opening to alternately connect the engine connected compartment with the inlet and exhaust port compartments, the incoming charge of gas cooling the perforated parts through which it passes, the inner peripheral wall of the valve cooled by the passage of air through its open part, the outer peripheral wall of said valve, and the chamber in said valve cooled by the passage of air through the perforations in said casing and bushing.

5. A device of the character described, comprising a shaft, an open ended hollow cylindrical valve mounted upon said shaft, a longitudinally extending peripherally depressed chamber in said valve, a perforated cylindrical bushing around the valve and concentric therewith, a compartmentally divided casing inclosing said bushing and said valve to the inner peripheral wall thereof, the outer periphery of said bushing being provided with longitudinal grooves adapted to receive the edges of the dividing walls in said casing, said casing having inlet, exhaust and engine ports opening into said compartments, and perforations in a portion of its outer wall, said casing being made in two halves adapted to be bolted together about the other parts of the structure and secured to the cylinder of an engine.

1,109,629. BOLSTER. KARL M. HAMILTON, Davenport, Iowa, assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 1, 1913. Serial No. 776,865. (Cl. 105—104.)

1. In a device of the character described, the combination of a sill, a bolster comprising a bolster center casting and side sections arranged on opposite sides of the sill and opposed to each other, and means integral with each of the bolster side sections lapping said bolster center casting and coöperting therewith for supporting the respective side sections.

2. In a device of the character described, the combination of a sill, a bolster center casting, bolster side sections

arranged on opposite sides of the sill and opposed to each other, and means integral with each of the bolster side sections and extending beyond one end of each of said sections lapping and being secured to said bolster center casting to support the respective side sections.

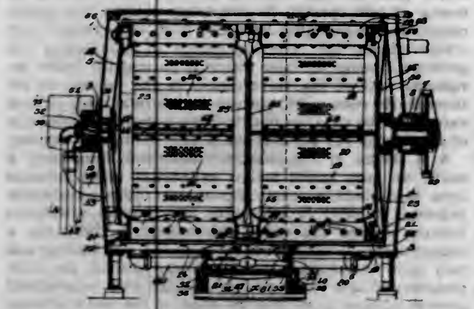
3. In a device of the character described, the combination of a sill, a bolster central section provided with a center bearing portion and side sections arranged on opposite sides of the sill and opposed to each other, each of said side sections being provided with an integral extension projecting beyond one end thereof and adapted to connect directly to said bolster central section.

4. In a device of the class described, the combination of a sill, a bolster comprising coöperating sections arranged on opposite sides of said sill, a bolster central section provided with a center bearing portion connected with said sill, and connected extensions on said side bolster sections secured directly to said bolster central section.

5. In a device of the character described, the combination of a sill, a bolster comprising sections arranged on opposite sides of the sill and opposed to each other, and means integral with each of the bolster sections and extending beyond one end of each of the sections and passing through the sill and being directly connected together within the sill.

[Claims 6 to 34 not printed in the Gazette.]

1,109,630. COMBINED WASHING AND CLOTHES-DRYING MACHINE. WILLIAM A. E. HENRICI, Boston, Mass., assignor to Liberty Trust Company, Boston, Mass., a Corporation of Massachusetts, trustee. Filed May 26, 1910. Serial No. 563,495. (Cl. 34—5.)



1. In a combined washing and clothes-drying machine the combination with a casing, of a clothes containing drum rotatable therein, said drum comprising heads, tie bars connecting the heads, circumferentially disposed perforated plates secured to the tie bars, hollow lifting bars having lateral circulation passages therethrough, a pipe connecting said bars with each other, a trunnion on said drum and connected with said pipe providing means for conducting a heating medium therethrough, and means for creating a partial vacuum in said casing and drum.

2. In a combined clothes washing and drying machine, a drum comprising heads having opposed convex and concave members, a ring welded to each head, the tie-bars secured to said rings.

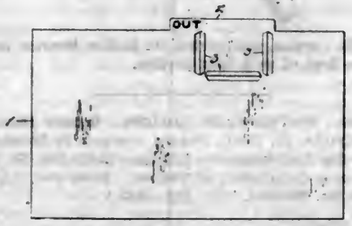
3. In a combined clothes washing and driving machine, a drum comprising heads having opposed convex and concave members, a ring welded to each head, a ring intermediate said heads, tie-bars secured to said rings, and end plates with clothes deflecting sections therein positioned within and secured to said rings.

4. In a combined clothes washing and drying machine, a drum comprising heads having opposed convex and concave disks, a ring welded to each head, a ring intermediate said heads, tie-bars secured to said rings, an end plate secured to each end ring, a pair of end plates secured back to back to said intermediate ring each plate having a clothes deflecting section therein forming thereby a plurality of clothes containing chambers.

5. In a combined clothes washing and drying machine, a drum comprising heads having opposed convex and concave disks, a ring welded to each head, a ring positioned intermediate said heads, tie-bars secured to said rings, an end plate secured to each end ring, a pair of end plates secured back to back to said intermediate ring each plate having a clothes deflecting section, forming thereby a plurality of clothes containing chambers, and circumferentially disposed plates provided with oblong perforations secured between said tie-bars.

[Claims 6 to 16 not printed in the Gazette.]

1,109,631. FILING DEVICE. JOHN C. HUB, Lakewood, Ohio. Filed May 17, 1913. Serial No. 768,254. (Cl. 129—16.)



1. In a device of the character described, the combination with a guide provided with a projecting tab and a holder adjacent thereto; of a slip adapted to be inserted in such holder.

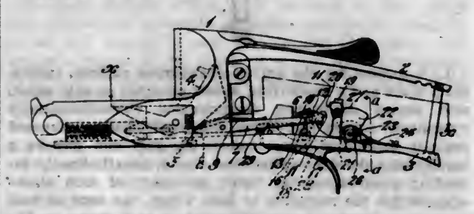
2. In a device of the character described, the combination with a guide provided with a projecting tab and a holder adjacen thereto, such tab bearing a notation; of a slip adapted to be inserted in such holder and having a space adapted to aline with the notation on such tab.

3. In a device of the character described, the combination with a guide provided with a projecting tab and a holder located below one portion of such tab, such tab bearing the notation "Out"; of a slip adapted to be inserted in such holder and having a space adapted to aline with the notation on such tab.

4. In an index, an out-card adapted to be inserted into the index in place of withdrawn indexed matter, and a card adapted to display memoranda relative to such withdrawn matter and means for removably holding said card on the out-card.

5. In an index, an out-card adapted to be inserted into the index in place of withdrawn indexed matter, and a card adapted to display memoranda relative to such withdrawn matter; and a plurality of suitably disposed tongues mounted on said out-card and adapted to removably hold said card.

1,109,632. AUTOMATIC SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS. JOSEPH KAUTZKY, Fort Dodge, Iowa. Filed Apr. 14, 1914. Serial No. 831,686. (Cl. 42—42.)



1. In a device of the character stated, a plurality of firing means, a trigger provided with means for successively actuating said firing means, a laterally extending shoulder carried by a member of said trigger, and a block mounted in operative relation to said member and laterally thereof and normally out of engagement with said shoulder, and arranged to be moved by the recoil to a position

with its face beneath said shoulder to be temporarily engaged thereby in this one position of said block to prevent said trigger from being released involuntarily by the recoil.

2. In a device of the character stated, a plurality of firing means, a trigger provided with means for successively actuating said firing means, a laterally extending shoulder carried by a member of said trigger, and a block, having a curved face, mounted in operative relation to said member and laterally thereof and normally out of engagement with said shoulder, and arranged to be moved by the recoil to a position with its upper face beneath said shoulder to be temporarily engaged thereby in this one position of said block to prevent said trigger from being released involuntarily by the recoil.

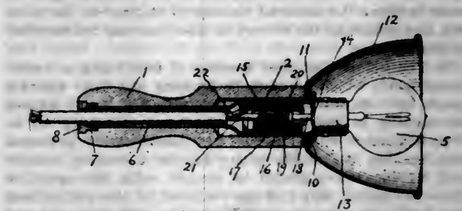
3. In a device of the character stated, a plurality of firing means, a trigger provided with means for successively actuating said firing means, a laterally extending shoulder carried by said trigger, a block mounted in operative relation to said shoulder, and adapted to be moved to a position with its upper face beneath said shoulder to be engaged thereby to prevent said trigger from being released involuntarily by the recoil, and means on said trigger for moving said block to unlocking position.

4. In a device of the character stated, a plurality of firing means, a trigger provided with means for successively actuating said firing means, a laterally extending shoulder carried by said trigger, a block mounted in operative relation to said shoulder, and adapted to be moved to a position with its upper face beneath said shoulder to be engaged thereby to prevent said trigger from being released involuntarily by the recoil, means on said trigger for moving said block to unlocking position, and yielding means for holding the block in either locking or unlocking position.

5. In a fire arm, the combination with a plurality of firing means, of a trigger provided with means for successively actuating the firing means and having a locking abutment, a detent mounted in operative relation to said abutment and adapted to be moved to engage therewith upon the discharge of said gun, and means on said detent adapted to engage said trigger during the movement of said detent to actuate said abutment to engage said detent.

[Claims 6 to 10 not printed in the Gazette.]

1,109,633. ELECTRIC-LAMP SOCKET. GEORGE C. KNAUFF, Chicago, Ill. Filed Nov. 14, 1913. Serial No. 800,943. (Cl. 240—52.)



1. A socket for a lamp having its filament terminals connected respectively to a shell and an axially disposed contact, including a casing equipped with means for coupling the lamp thereto, an axially disposed wire terminal housed by the casing and insulated therefrom, and a cylindrical wire terminal interposed between the aforesaid wire terminal and the casing and contacting with the latter to carry current thereto, the said cylindrical wire terminal slidingly interfitting the casing and being movable beyond the end of the said casing to permit access to both wire terminals for attaching wires thereto.

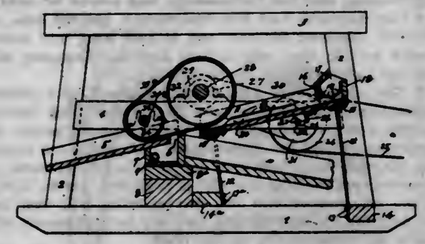
2. In a socket, lamp and reflector combination, a tubular handle, a centrally perforated reflector disposed at one end thereof, contact members housed by the said tubular handle and connected to the terminals of a circuit; a tubular member comprising in integral formation a shell equipped with means for coupling the said lamp thereto, a casing interposed between an end portion of the said handle and the said contact members and contacting with one of the latter, and an extension upon the said casing extending approximately to the other end of the said handle; an insulating washer housed by the reflector, there being an enlargement upon the tubular member interposed between the said shell and casing and engaging the said washer; and means coöperating with the said handle and tubular member for forcing the said enlargement against the said washer to simultaneously fasten the handle to the reflector and the tubular member.

3. In a socket for an electric lamp equipped upon its base with a shell and an axially disposed contact connected respectively to the ends of the lamp filament, the combination with a tubular casing having one end slidingly fitting the said shell of the lamp and equipped at its said end with means for coupling the casing to the lamp, of an auxiliary casing slidingly and contactingly fitting the interior of the tubular casing and connected to one terminal of a circuit, an insulating body mounted in the auxiliary casing, a wire terminal carried by the insulating body and connected to the other terminal of the circuit, an extension carried by the said wire terminal and contacting with the said axially disposed contact, and a spring interposed between the said extension and the wire terminal carrying the same, and pressing said extension against the said contact.

4. In a lamp socket, the combination with a tubular support, of a socket casing housed by the said support and projecting at one end beyond the said support and equipped at its said end with means for coupling a lamp thereto, the said casing equipped adjacent to the said coupling means with a lateral flange engaging the adjacent end of the said tubular support; means threaded upon the other end of the said casing and engaging the tubular support and coacting with the latter to force the said flange against the end of the tubular support adjacent to the latter, thereby rigidly securing the said casing to the said support; and wire terminals carried by the said casing and contacting with the terminals of the said lamp.

5. A lamp socket including a casing and a tubular support therefor, the said casing equipped both with an extension housed by the said tubular support and with a lateral flange formed by radially distending and longitudinally compressing a portion of the said casing; and means carried by the said extension and coacting with the said support to move the said extension and casing relatively to the said support to clamp the said support therebetween.

1,109,634. MAGNETIC ORE-SEPARATOR. GORDON LAND, Seattle, Wash., assignor to Leighton Howard-smith, King county, Wash. Filed May 24, 1913. Serial No. 769,696. (Cl. 83—71.)



1. The combination in a magnetic ore separator of a main frame and a magnetic drum revoluble thereupon, a second drum, an endless belt embracing both of the said drums, and an oscillatory downwardly inclined trough for the ore, a perforated false bottom in the said trough which is in spaced relation to the true bottom, and means for feeding an ore carrying medium between the said bottoms whereby particles of the ore are drawn upwardly through the perforations in the said false bottom and against the said belt.

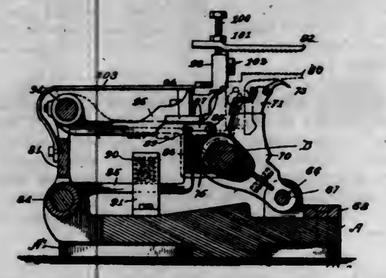
2. In a magnetic ore separator, the combination with its main frame, magnetic drum and means for rotating the

same, of vertical spring bars whose lower ends are fixed to the said frame, a downwardly inclined ore inlet trough which is supported upon the free ends of the said spring bars, a bracket upon the said trough and cams which co-operate therewith to cause the said trough to vibrate as the said drum is rotated, a partition transversely of the said trough whose lower edge is spaced above the bottom of the trough, a strainer between the said partition and one end of the trough, a false bottom for the trough, having perforations therein, and which extends into the field of the said magnetic drum, the first mentioned trough being adapted to pass material to be separated beneath the said false bottom.

3. In a magnetic separator, a material receiving table, a magnetic cylinder mounted to rotate adjacent to said table; means for supplying material and water to said table, means for conveying away the discharge from said table, and a screen extending between said table and said cylinder, said screen being spaced from the table.

4. In a magnetic separator, a material receiving table, a magnetic cylinder mounted to rotate adjacent said table, means for supplying material and water to said table, means for conveying away the discharge from said table, a flume mounted over said discharge means, a roller journaled on said flume and a belt passing around said cylinder and said roller to convey the magnetic material from said cylinder to said flume.

1,109,635. ZIGZAG, STRAIGHTAWAY, STITCH SEWING-MACHINE WITH TOP FEED. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1905. Serial No. 289,488. (Cl. 112—8.)



1. The combination with a work support, of a feeding mechanism comprising a feed bar, a feed dog carried thereby and overhanging the work support, means for reciprocating said bar horizontally, and means for raising and lowering said feed bar, including a pivoted arm, an eccentric engaging the free end of said arm, and means carried by the free end of said arm for engaging said feed bar; substantially as described.

2. The combination with a work support, of a feeding mechanism comprising a feed bar, a feed dog carried thereby and overhanging the work support, means for reciprocating said bar horizontally, and means for raising and lowering said feed bar, including a pivoted arm, an eccentric engaging the free end of said arm, means carried by the free end of said arm for engaging said feed bar, and a spring for holding said feed bar in engagement with said arm; substantially as described.

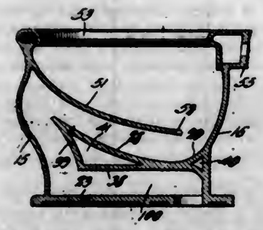
3. The combination with a work support, of a feeding mechanism, a feed dog overhanging the work support and acting on the upper surface of the material, an eccentric and means to operate it, an arm in engagement with said eccentric and pivoted to a stationary center, a second arm pivoted to a moving center, means to swing said center, means carried by said first named arm for engaging and lifting said second arm and means to hold said arms in engagement with one another; substantially as described.

4. A sewing machine including in combination, a needle, a feed dog overhanging the work support, and acting upon the material, an eccentric, means for operating the eccentric, an arm engaging said eccentric for imparting vertical movement to the feed dog, said arm being pivoted to swing up and down about a fixed center, a rocking frame, a second arm pivoted to said rocking frame, and adapted to be moved up and down by the first-named arm, said feed dog being carried by said second arm, the pivotal connection between the arm and said rocking frame being over the pivotal connection of the first arm, said pivotal connections being on the same side of the needle, substantially as described.

5. In a feeding mechanism, a feed dog acting on the material, an eccentric, an arm in engagement with said eccentric and pivoted to a stationary center, means to hold said arm in engagement with said eccentric, a second arm having vertical motion imparted to it from the first arm and being pivoted to a moving center, and means moving bodily with said second arm to hold it in engagement with the first arm; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,109,636. LATRINE-MOLDING SYSTEM. HENRY PRICE, New Castle, Pa. Filed Jan. 29, 1913. Serial No. 744,996. (Cl. 25—155.)



1. The herein described process of fashioning a water-closet body, which consists in forming the bowl peripherally leaving an opening in the bottom of the bowl; mounting a spoon in place below the opening; and closing the opening.

2. The herein described process of fashioning a water-closet body, which consists in forming the bowl in a mold, leaving an opening in the bottom of the bowl, charging a member with material and inserting the member into the mold; removing the member and leaving the material to form the spoon, charging a second member with material and superposing the second member upon the mold to cause the material thereon to register in the opening, and removing the second member, leaving the material in the opening.

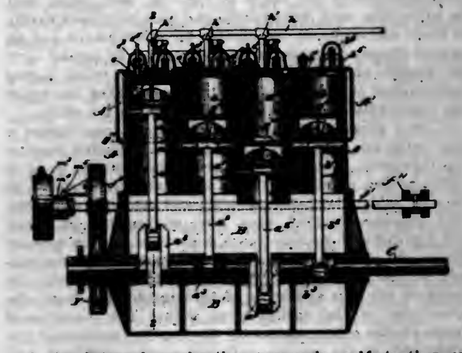
3. The herein described process of fashioning a water-closet body, which consists in forming the bowl and the spoon into an integral structure within a mold, leaving an opening in the bottom of the bowl; charging an L-shaped member with material and inserting the L-shaped member into the mold; removing the L-shaped member and leaving the material in contact with the spoon to form the upper wall and the end wall of the outlet from the bowl; charging a second member with material and superposing the second member upon the mold to cause the material thereon to register in the opening; and removing the second member, leaving the material in the opening.

4. The herein described process of fashioning a water-closet body, which consists in forming the bowl in a mold, leaving an opening in the bottom of the bowl; charging a member with material and inserting the member into the mold; removing the member and leaving the material to form the spoon; charging an L-shaped member with material and inserting the L-shaped member into the mold; removing the L-shaped member and leaving the material carried thereby in contact with the spoon to form the upper wall and the end wall of the outlet from the bowl; charging a third member with material and superposing the third member upon the mold to cause the material thereon to register in the opening; and removing the third member, leaving the material in the opening.

5. The herein described process of fashioning a water-closet body, which consists in forming the bowl and the spoon into an integral structure within a mold; charging an L-shaped member with material and inserting the L-shaped member into the bowl; and removing the L-shaped member, leaving the material in contact with the spoon to form the upper and end walls of the outlet for the bowl.

[Claims 6 and 7 not printed in the Gazette.]

1,109,637. INTERNAL-COMBUSTION ENGINE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed June 29, 1903. Serial No. 163,500. (Cl. 123—41.)



1. An internal combustion two-cycle, self-starting engine comprising a plurality of power cylinders, pistons therein, a compression cylinder and its piston, means to supply fluid under pressure from said compression cylinder to said power cylinders to start the engine and during the operation thereof, reversing means governing the admission of said fluid under pressure, and ignition means connected to said reversing means and adjustable simultaneously with reversing of the engine.

2. An internal combustion two-cycle, self-starting engine having one or more power cylinders each provided with a working piston, a compressed air reservoir, means for maintaining a supply of highly compressed air in said reservoir, means constantly acting during the operation of said engine for supplying to the cylinder a mixture of fuel and highly compressed air from said reservoir for utilization in each forward stroke of the piston, means subsequently to ignite said mixture and cut off said supply, means to exhaust the spent gases and permit return of the piston without necessity of compression, said means including a normally closed exhaust passage near one end of the piston stroke, and a constantly open exhaust passage near the other end of the stroke, and means for controlling the cut off of said supply means to vary the volume of mixture to be ignited and for varying also said ignition means.

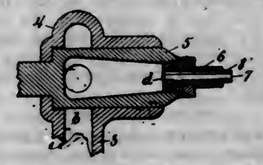
3. An internal combustion two-cycle, self-starting engine comprising one or more power cylinders each with its working piston, a compression cylinder with its piston, means to supply the mixture of fuel and compressed air from said compression cylinder to said power cylinder or cylinders for utilization on each forward stroke, means for varying the cut-off of the said mixture supply, means for exhausting the residual gases on each return stroke, ignition means, and means for varying the timing of the ignition means.

4. An internal combustion two-cycle, self-starting engine having a power cylinder with its piston, a compression cylinder with its piston, means for supplying the mixture of compressed air and fuel from the compression cylinder, to the power cylinder for utilization on each forward stroke, means for exhausting the residual gases therefrom on each backward piston stroke and reversing means for synchronously shifting the time of admission and ignition of the mixture to effect the reversal of said engine.

5. An internal combustion engine having a power cylinder, a compression cylinder, means for compressing the air charge for said power cylinder in said compression cylinder, means for introducing the previously compressed charge into the power cylinder, variable cut-off means for varying the volume of the charge so introduced, while maintaining the compression constant, and means for igniting the mixture.

[Claims 6 to 10 not printed in the Gazette.]

1,109,638. BUTTON-CUTTING MACHINE. CHARLES R. STADDEN, Davenport, Iowa. Filed June 28, 1913. Serial No. 776,393. (Cl. 79—16.)



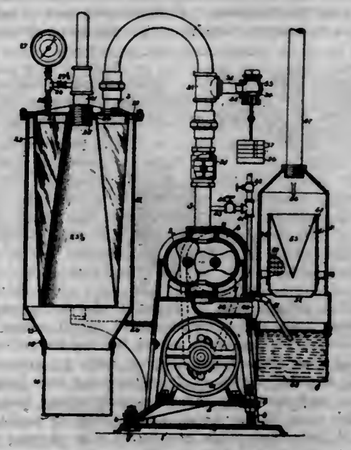
1. In a button cutting machine, the combination of a frame having a forward part provided with a chamber having a discharge opening and an elongated bearing, a shaft having a hollow chuck formed with discharge openings at its inner end leading to the chamber and mounted in the elongated bearing, a saw carrying spool having a tapering saw opening and mounted in the chuck and a tapering sheet-metal saw mounted in the saw opening of the spool.

2. In a button cutting machine, the combination with an open sided cylindrical saw having its adjacent open edges sharpened, substantially as described herein, of a wedge having grooved edges corresponding to the sharpened edges of the saw.

3. In a button cutting machine, the combination with a spool adapted to receive a cylindrical saw, of a key way formed therein and a thickened saw wedge adapted to enter the key way.

4. In a button cutting machine, the combination with a spool having a key way formed therein, of a thickened wedge corresponding to the key way and having its edges grooved to receive the corresponding edges of the cylindrical saw.

1,109,639. VACUUM-CLEANER. WILLIAM S. SUTTON, Rockford, Ill., assignor to American Radiator Company, Chicago, Ill., a Corporation of New Jersey. Filed Sept. 27, 1909. Serial No. 519,841. (Cl. 83—47.)



1. In a vacuum cleaning machine, a dust collector comprising a casing, an inner tube impervious to air located

therein, a tube pervious to air also located in the casing and surrounding the impervious tube, said tubes being spaced apart at one end and secured to one end of the casing and having their other ends secured together in spaced relation to the other end of the casing, means for introducing dust-laden air into the end of the impervious tube that is connected to the end of the casing, and means for withdrawing air from the corresponding end of the outer tube exteriorly of the inner tube.

2. In a vacuum cleaning machine, a dust collected comprising a vertical casing having an upper head and a lower dust receptacle, a flared tube impervious to air arranged within the receptacle and secured at its upper end to the upper head, a tapered tube pervious to air surrounding the impervious tube and connected at its upper end to the upper head, said tubes being engaged at their lower ends, a pipe for introducing dust-laden air into the end of the impervious tube that is connected to the upper head of the casing and communicating with the inner tube, and means for withdrawing air from the casing connected to the upper head in the space between the impervious and pervious tubes.

1,109,640. MAKING AN ALLOY OF FERROMANGANESE AND SILICON. JOHN C. WALKER, Yonkers, N. Y. Filed Feb. 4, 1913. Serial No. 746,187. (Cl. 75—1.)

1. In the making of ferro-silico-manganese the process which consists in melting ferro-manganese and producing nascent silicon in the presence of the molten ferro-manganese and causing the silicon as it is produced to combine with the ferro-manganese.

2. In the making of ferro-silico-manganese the process which consists in melting ferro-manganese and reducing silica to silicon in the presence of the molten ferro-manganese and maintaining non-oxidizing conditions so as to prevent reoxidation of the silicon and to cause it to combine in nascent condition with the ferro-manganese.

3. In the making of ferro-silico-manganese the process which consists in providing a pool of ferro-silico-manganese withdrawing portions thereof from time to time and replenishing the same by the addition of ferro-manganese to the pool and the addition of silica and a reducing agent to the slag and heating the same to reduce the silica to silicon, and maintaining non-oxidizing conditions to prevent reoxidation of the silicon and to cause it to combine in nascent condition with the metal of the pool.

4. In the making of ferro-silico-manganese the process which consists in providing a pool of ferro-silico-manganese, withdrawing portions thereof from time to time and replenishing the same by the addition of ferro-manganese to the pool and the addition of silica a reducing agent to the slag, and furnishing sufficient heat to reduce the silica to silicon, and maintaining a non-oxidizing atmosphere so as to prevent reoxidation of the silicon and to cause it to combine in nascent condition with the metal of the pool.

1,109,641. GREASE-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed Nov. 13, 1912. Serial No. 731,206. (Cl. 184—48.)

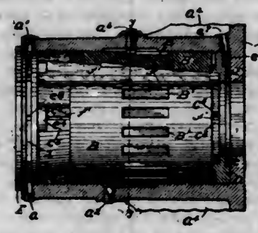
1. In a grease cup, the combination of a cup, a cap screwing onto the same, a sheet metal collar slidably mounted on the cup, and a spring forcing the collar toward the cap, the collar being formed with an upwardly projecting annular marginal flange lapping the periphery of the cap, and upwardly extending projections located adjacent the base of the flange and formed by indenting the body of the collar from the under side thereof, the projections coöperating with notches on the lower edge of the cap, substantially as and for the purpose described.

2. In a grease cup, the combination of a cup, a cap screwing on the same, a collar slidably mounted on the cup, and a spring forcing the collar toward the cap, the collar and cap having coöperating projections and notches, the notches being at the lower edge of the cap and the collar being formed of sheet metal and having its margin bent downwardly and backwardly on itself and upwardly to provide a downward and an upward flange, the upward flange lapping the periphery of the cap, and the collar being indented from the lower side thereof near said flanges forming upward projections constituting the projections coacting with the notches at the lower edge of the cap, substantially as and for the purpose specified.

3. In a grease cup, the combination of a cup having body with shank and an extended head, a cap internally screw threaded screwing onto the head, a collar having bore surrounding the shank of the cup, said collar near its outer edge bent downwardly and then bent backwardly on itself and upwardly to provide for a downward and an upward flange, the upward flange adapted to extend over the outside of the wall of the cap, and a coiled spring surrounding the shank of the cup and having its upper coil lying within the down-turned flange on the collar.

4. In a grease cup, the combination of a cup having a body with an angular exterior and an extended head, a cap internally screw threaded screwing onto the head, a collar having an angular bore surrounding the shank of the cup, said collar being of metal and near its outer edge bent downwardly and then bent backwardly on itself and upwardly to provide for a downward and an upward flange, the upward flange adapted to extend over the outside of the wall of the cap, a spring surrounding the shank of the cup and being of inverted conical form, the upper coil of the spring lying within the downturned flange on the collar, means on the cup for supporting the lower end of the spring, and coöperating shoulders and notches on the bottom portion of the collar and the lower edge of the cap, the shoulders being formed by pressing the bottom portion of the collar upwardly.

1,109,642. ADJUSTABLE JOURNAL-BOX. FRANCIS E. BUXTON, Dayton, Ohio. Filed Jan. 16, 1909. Serial No. 472,762. (Cl. 64—55.)



1. A journal box comprising in combination with a fixed outer casing and a journal to be supported, a rotary sleeve located in the casing, means for moving said sleeve longitudinally forward and backward independent of its rotation within the casing, a compressible sleeve movably attached to and supported within the first named sleeve, a pair of collars interlocking with said bearing sleeve and movable therewith, and means for locking the bearing sleeve, the casing, the movable sleeve, and the collars into a unit after they have been adjusted as desired, all substantially as shown and described.

2. An adjustable journal box comprising in combination with a casing and a journal projecting therethrough, a bearing sleeve disposed through the casing, said bearing sleeve being formed with a plurality of outwardly flaring grooves formed in its periphery and extending throughout its length on lines parallel to its axis, a second sleeve of less length than the bearing sleeve and adapted to be moved longitudinally within the casing and surrounding the said bearing sleeve and having threaded connection therewith, a plurality of collars adapted to register with said grooves of the bearing sleeve, means for the adjustment of the bearing sleeve relative to the journal without disturbing the radial adjustment of the bearing sleeve, and means for locking the parts together after adjustment has been made, all substantially as shown and described.

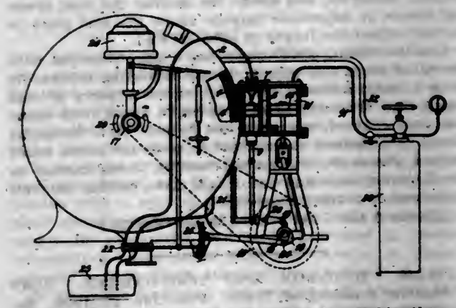
3. The combination with a fixed casing and a journal projecting therethrough, a bearing element disposed about the journal, a screw sleeve slidably engaging with the casing, there being a plurality of equidistant slots formed in the periphery of the said sleeve and extending longitudinally thereof and affording means for locking the sleeve, there being a conical aperture formed within the sleeve a portion of which is threaded to engage with the bearing element in order to afford means for the longitudinal movements of the sleeve with relation to the casing, a plurality of collars interlocking within the opposite end portions of the bearing and operative therewith to provide means for the radial adjustment of the bearing element.

4. A journal box or the like comprising a fixed casing, a plurality of adjusting taper screws carried thereby, a plurality of supporting collars disposed at the ends of the casing and movably connected thereto, an inner or bearing sleeve having right angular grooves formed on its exterior to interlock with corresponding projections carried on the supporting collars, a plurality of bearing sleeve projections having their exterior faces formed circular, an outer sleeve disposed around the bearing sleeve and having interior threads meshing with threads formed around sections of the central portion of the bearing sleeve, means for rotating the bearing sleeve and the outer sleeve together for circumferential adjustment, and means carried by the casing for locking the connected sleeves therewith, all substantially as shown and described.

5. In a journal boxing, the combination with a fixed casing and a rotary shaft, a movable sleeve located within the casing, means for locking said sleeve at various positions circumferentially and longitudinally, a bearing sleeve provided with a reduced conical exterior engaging a reverse conical aperture in the first mentioned sleeve and having threaded portions meshing with said bearing sleeve and adapted to positively control the movements of the sleeves, a plurality of collars adapted to actuate the bearing sleeve, an eccentric oil ring positioned in the casing, and a wedge to retain the oil ring in engagement with the shaft, all substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,109,643. EXPLOSION-TURBINE. FRANZ PRETTNER, Eibiswald, Styria, Austria-Hungary, assignor of one-half to Josef Walchensteiner, Eibiswald, Austria-Hungary. Filed June 7, 1913. Serial No. 772,332. (Cl. 60—4.)



1. An explosion turbine comprising in combination, a rotor casing, a rotor wheel arranged in said casing and provided with a central circumferential ring, the rotor casing having a groove in which to accommodate said ring, two cylindrical combustion chambers arranged in juxtaposition and connected to the rotor casing so as to direct the motive fluid radially to the rotor at opposite sides of said ring, an air pump driven by the rotor for forcing air alternately into the combustion chambers, the casing containing the combustion chambers being integral with the pump cylinder, means actuated by the pump shaft for feeding motive fluid into said chambers simultaneously with the air, spring-actuated pistons arranged in the combustion chambers so as to close normally the communication with the rotor casing, cams on the pump shaft for operating the pistons and opening said communication at the moment of explosion, means operated by the piston rods for igniting the explosive mixture, and means operated by the rotor shaft for regulating the fuel supply.

2. An explosion turbine comprising in combination, a rotor casing, a rotor wheel arranged in said casing and provided with a central circumferential ring, the rotor casing having a groove in which to accommodate said ring, two cylindrical combustion chambers arranged in juxtaposition and connected to the rotor casing so as to direct the motive fluid radially to the rotor at opposite sides of said ring, an air pump driven by the rotor for forcing air alternately into the combustion chambers, the casing containing the combustion chambers being integral with the pump cylinder, means actuated by the pump shaft for feeding motive fluid into said chambers simultaneously with the air, spring-actuated pistons arranged in the combustion chambers so as to close normally the communication with the rotor casing, cams on the pump shaft for operating the pistons and opening said communication at the moment of explosion, means operated by the piston rods for igniting the explosive mixture, and means operated by the rotor shaft regulating the fuel supply.

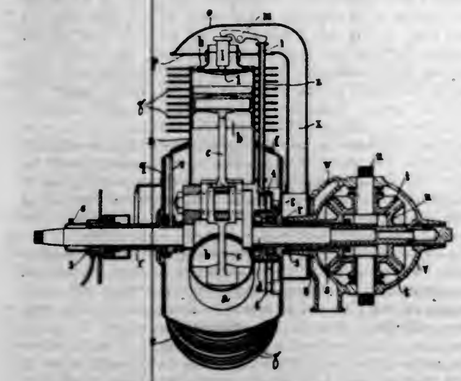
3. An explosion turbine comprising in combination, a rotor casing, a rotor wheel arranged in said casing and provided with a central circumferential ring, the rotor casing having a groove in which to accommodate said ring, two cylindrical combustion chambers arranged in juxtaposition and connected to the rotor casing so as to direct the motive fluid radially to the rotor at opposite sides of said ring, an air pump driven by the rotor for forcing air alternately into the combustion chambers, means actuated by the pump shaft for feeding motive fluid into said chambers simultaneously with the air, spring-actuated pistons arranged in the combustion chambers so as to close normally the communication with the rotor casing, cams on the pump shaft for operating the pistons and opening said communication at the moment of explosion, sparking elements arranged in the combustion chambers so as to be normally in contact, one element being connected to the piston rod so as to interrupt the contact and produce the spark when the piston is actuated in opposition to its spring, the electric conductor to said latter element being carried through the piston rod to the outside.

4. An explosion turbine comprising in combination, a rotor casing, a rotor wheel arranged in said casing and provided with a central circumferential ring, the rotor casing having a groove in which to accommodate said ring, two cylindrical combustion chambers arranged in juxtaposition and connected to the rotor casing so as to direct the motive fluid radially to the rotor at opposite sides of said ring, an air pump driven by the rotor for forcing air alternately into the combustion chambers, a double-acting fuel pump adapted to feed fuel alternately into the two combustion chambers simultaneously with the air, connections, including a crank and a Stephenson link, between the air pump shaft and the fuel pump rod for operating the latter, a centrifugal governor driven by the rotor shaft and connected to said Stephenson link for regulating the fuel supply, spring-actuated pistons arranged in the combustion chambers so as to close normally the communication with the rotor casing, cams on the pump shaft for operating the pistons and opening said communication at the moment of explosion, and means operated by the piston rods for igniting the explosive mixture.

5. An explosion turbine, comprising in combination, a rotor casing, a rotor wheel arranged in said casing, two cylindrical combustion chambers arranged in juxtaposition and connected to the rotor casing so as to direct the motive fluid radially to the rotor, an air pump driven by the rotor for feeding air alternately into the combustion

chambers, means actuated by the pump shaft for feeding motive fluid into said chambers simultaneously with the air, means for igniting the explosive mixture in the combustion chamber, means for putting said combustion chambers into communication with the rotor casing at the moment of explosion, a metal bottle adapted to hold compressed air, means for setting said bottle into communication with the rotor casing for starting the rotor and means for setting the bottle into communication with the air pump for restoring the bottle to normal pressure after such starting.

1,109,644. INTERNAL-COMBUSTION ENGINE. ALFRED LEASON REDRUP and HENRY KIRK BOYLE, Leeds, England. Filed Dec. 20, 1913. Serial No. 807,947. (Cl. 123—44.)



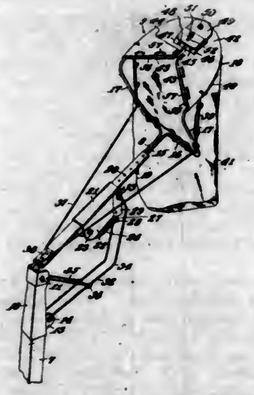
1. An internal combustion engine comprising a plurality of cylinders adapted to rotate about a crank shaft with concentrically arranged inlet and exhaust valves in the head of each cylinder, dome shaped covers acting as fuel passages and adapted to protect said valves, means arranged at a slight distance from the cylinder heads for separating the inlet and exhaust passages, tubes and rods for each set of valves, two stationary cams adapted to actuate said tubes and rods and means for imparting the movement of the tubes and rods to the valves.

2. In an internal combustion engine comprising a plurality of cylinders adapted to rotate about a crank shaft, with concentrically arranged inlet and exhaust valves in the head of each cylinder, flange members arranged at a slight distance from the cylinder heads, and supporting said valves, hollow tubes projecting through said flange members, rods within said tubes, two stationary cams adapted to actuate said tubes and rods, pivoted levers transmitting the movement of the tubes and rods to the valve and dome shaped covers jointed to said flange members and inclosing said pivoted levers.

3. In an internal combustion engine, in combination, a crank case, a plurality of cylinders extending radially therefrom, inlet and exhaust valves concentrically arranged in the head of each cylinder, a dome shaped cover, a flange member between said cover and cylinder head, means for operating said valves comprising tubes and rods, two stationary members adapted to surround the engine crank shaft and to support the engine, two cams mounted on one of said stationary members and adapted to actuate the valve operating means.

1,109,645. FRUIT-HARVESTER. JOHN L. SLATTON, Baypoint, Cal. Filed Jan. 12, 1914. Serial No. 811,727. (Cl. 56—99.)

1. A harvester comprising a supporting member, an arm pivotally secured thereto and adapted to rotate in a vertical plane, a harvesting head carried by the said arm, a casing slidably mounted upon said arm, a latch carried by said sliding casing adapted to engage the arm and lock at various intervals therealong, a bracket pivotally secured to said sliding casing and said supporting member, holding the arm and supporting member in adjusted angular position predetermined by the position of said sliding casing.



2. A harvester comprising a supporting member, an arm pivotally secured thereto and adapted to rotate in a vertical plane, a harvesting head carried by the said arm, a casing slidably mounted upon said arm, a latch carried by said sliding casing adapted to engage the arm and lock at various intervals therealong, a bracket pivotally secured to said sliding casing and said supporting member, holding the arm and supporting member in adjusted angular position predetermined by the position of said sliding casing, and a strut member pivotally secured to the upper extremity of said supporting member and slidably and frictionally engaging the said bracket.

3. A harvesting head comprising a length of wire being bent to form an arm, the wire at one extremity of said arm projecting in opposite directions and forming outstanding brackets, the brackets at their extremities being bent upwardly and forming upstanding legs, the legs at their extremities being bent to form a loop, a plate carried by said loop, a plucking device carried by said plate adapted to separate the fruit from its supporting branch, and an auxiliary loop positioned beneath the aforementioned loop, and a conveyer carried by said auxiliary loop.

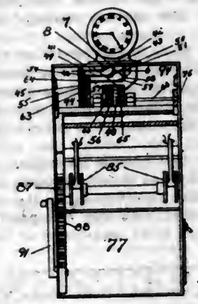
4. A harvesting head comprising a plate provided with diverging edges and with a channel extending rearwardly from a point adjacent the point of convergence of said edges, said diverging edges adapted to direct fruit stems into said channel, means carried by said plate extending across said channel and adapted to sever the stems which contact therewith, and means for spacing the stem severing means at adjustable heights above the said plate to thereby adjust the length of stem severed.

5. A harvesting head comprising a plate provided with diverging edges and with a channel extending rearwardly from a point adjacent the point of convergence of said edges, said diverging edges adapted to direct fruit stems into said channel, means carried by said plate extending across said channel and adapted to sever the stems which contact therewith, and an outstanding lining carried by the diverging edges and slot of said plate, holding the fruit stems out of contact therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,109,646. MAIL-BOX AND TIME-MARKER. JOHN STASIAK, Cumberland, Wash. Filed Jan. 27, 1909. Serial No. 476,854. (Cl. 232—18.)

1. In a mail box and time marker, a lever, a rack operated thereby, a movable platform operated by said rack, a lid normally closing the letter opening of the mail box and operated by said movable platform, a printing mechanism operated by said lever, means provided in said opening for permitting a single letter only to enter said mail box and means for retracting said lever to print the envelop of the letter.



2. The combination with a mail box and mail marker having an inlet opening, of means in said opening for preventing the insertion of more than a single letter at any one time, an oscillating platform pivoted in said opening, a pivoted lid for said opening having means adapted to engage said platform during a portion of its travel, printing means arranged above said platform, and means for oscillating said platform, said oscillating means so arranged that during the period of its operation in an initial direction said platform is caused successively to engage said lid to uncover said inlet opening to permit the insertion of a letter, and then to convey said letter to a position beneath said printing means, and during the period of its operation in the reverse direction, said platform is caused to press said letter against said printing means and then deposit said letter in the receiving space of said mail box.

1,109,647. EYELET. WILLIAM M. HURLEY, Rockland, Mass. Filed Apr. 6, 1914. Serial No. 829,877. (Cl. 24—141.)

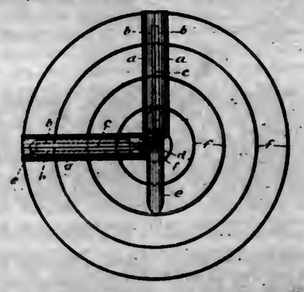
1. An eyelet consisting of a tubular body having an ear extending outwardly at its upper end which is coextensive with a portion only thereof and arranged for cooperation with an opposing flange formed by bending outwardly the lower end of said body, thereby to clamp a material between them, substantially as described.

2. An eyelet consisting of a tubular body having an outwardly extended ear at its upper end which is co-extensive with a portion only thereof and arranged in a plane above said upper end of the body, said ear being arranged for coöperation with a flange formed by bending outwardly a lower end of said body, thereby to clamp a material between them, substantially as described.

3. An eyelet consisting of a tubular body adapted to be arranged in an eyelet-hole and having a narrow ear at its upper end which is adapted to overlie the surface of the material at one side of the eyelet-hole, which ear serves as a coöperative part of the engaging means for the eyelet, substantially as described.

4. An eyelet for laced-shoes consisting of a tubular body adapted to be arranged in an eyelet-hole in the upper at the side of the front opening with its upper end-portion for the most part terminating substantially flush with but not projecting beyond the outer surface of the upper, and having an ear at its upper end which is adapted to extend for a short distance over the outer surface of the upper at that side of the eyelet-hole between said hole and the edge of the portion in which it is set, thereby to be covered by the lacing, said ear serving as a coöperative part of the engaging-means for the eyelet, substantially as described.

1,109,648. HALL FOR AIRSHIPS. WILHELM KAUERTZ, Dusseldorf, Germany. Filed June 16, 1913. Serial No. 774,037. (Cl. 244—1.)

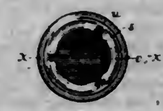


1. A hall for airships, comprising two longitudinal halves having their inner ends pivoted to a common fixed point and adapted to move around the latter independently of each other on a circular way.

2. A hall for airships, comprising two longitudinal halves having their inner ends pivoted to a common fixed point and adapted to move around the latter independently of each other on a circular way, and a common separate movable bottom part for said halves arranged in the same way as the latter around the central point.

3. The combination of a plurality of halls each comprising two longitudinal halves having their inner ends pivoted to a common fixed point and adapted to move around the latter independently of each other on a circular way, each two adjacent halves of said halls adapted to form in closed or open position of the halls a right angle between them.

1,109,649. CLOSURE FOR CANS. EDWARD M. LANG, Jr., Portland, Me. Filed May 6, 1912. Serial No. 695,524. (Cl. 220—59.)

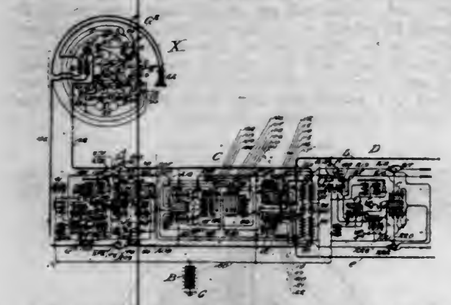


A cam cap adapted to form with other like caps, columns with relatively open joints or spaces said cap consisting of a metal disk having an outer annular groove formed on its under side immediately adjacent to its outer edge and an inner annular groove on the upper side adjacent to the outer groove, said inner groove being divided into sections by one or more small plain portions in the same plane as the upper surface, to prevent the caps from closely nesting.

1,109,650. TELEPHONE-EXCHANGE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed June 16, 1906, Serial No. 322,079. Renewed Mar. 27, 1907. Serial No. 364,754. (Cl. 179—18.)

1. In a telephone exchange system, telephone lines, a trunk-line, automatic means for automatically trunking in one direction over said trunk-line, automatic means for automatically trunking in the opposite direction over said

trunk-line, and a centralized source of current supply for both operating said automatic means and supplying talking current to the said telephone lines.



2. In a telephone exchange system, telephone lines, a two-way trunk-line, a repeater and a selector for automatically trunking in one direction over said trunk-line, another repeater and a selector for automatically trunking in the opposite direction over said trunk-line, a battery for supplying current for operating said repeaters and selectors, and subscribers' transmitters adapted to receive talking current over the said telephone lines from said battery.

3. In a telephone exchange system, a two-way trunk-line composed of but two parallel metallic conductors, one-way trunk-lines each comprising three parallel metallic conductors, repeaters and selectors for connecting a three-conductor trunk with the two-way trunk to automatically extend a trunking connection over the latter in one direction, repeaters and selectors for connecting a three-conductor trunk with the two-way trunk-line to automatically extend a trunking connection over the latter in the opposite direction, telephone lines each comprising but two parallel metallic conductors, and common battery means for supplying both talking and switching current to the said telephone lines.

4. In a telephone exchange system, a two-way trunk-line, automatic means including a repeater for automatically trunking over said trunk-line in one direction, and automatic means including a repeater for automatically trunking over said trunk-line in the opposite direction, the means for trunking in one direction being separate and distinct from the means for trunking in the other direction, but both means being allotted to and connected with the ends of said trunk-line.

5. In a telephone exchange system, a two-way trunk-line, a repeater and a selector allotted to and connected with one end of said trunk-line, another repeater and selector allotted to and connected with the other end of said trunk-line, and means for controlling said repeaters and selectors, the selector at one end of the trunk-line being adapted to coöperate with the repeater at the other end for trunking in one direction, and the other repeater and selector being adapted for trunking in the opposite direction, said repeaters being units in themselves and separate and distinct from said selectors.

[Claims 6 to 145 not printed in the Gazette.]

1,109,651. TOOTH. MELVIN EDGAR MERKER, New York, N. Y. Filed Oct. 17, 1913. Serial No. 795,700. (Cl. 32—9.)

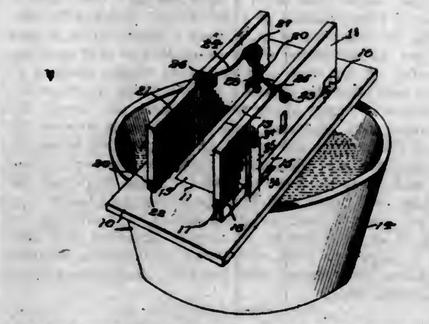
1. An artificial tooth having on its rear side a plurality of shoulders transverse to the length of the tooth, said shoulders being at different points in the length of the tooth, there being holes in said shoulders extending longitudinally of the tooth.

2. An artificial tooth having on its rear side a plurality of shoulders transverse to the length of the tooth, said shoulders being at different points in the length of the tooth, there being holes in said shoulders, pins in said holes, said holes and pins extending lengthwise of the tooth.

3. An artificial tooth having on its rear side a plurality of shoulders at different points in the length of the tooth, holes in said shoulders, a metal backing for the tooth, pins secured to the backing in position to enter said holes in the tooth, the holes and pins extending lengthwise of the tooth.

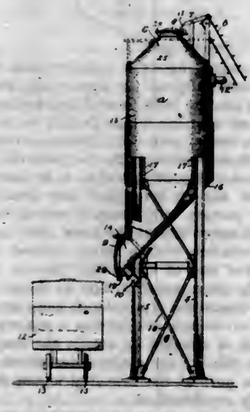
4. An artificial front tooth having on its rear side a plurality of shoulders at different points in the length of the tooth, one of the shoulders being the end of a central rib, there being other shoulders on opposite sides of the base of said rib, and holes lengthwise of the tooth in said shoulders.

1,109,652. TRAP. NIKOLAI MIETTUNEN, Chisholm, Minn. Filed Feb. 25, 1913. Serial No. 750,676. (Cl. 43—24.)



In a trap, a base having an opening, a spring-pressed closure for the opening, wings hinged to the base at opposite sides of the opening, a lock-bar pivoted to one of the wings and having its free terminal arranged for insertion in a recess formed in the base, a bait hook, and a bail adapted to suspend the bait hook above the closure, said bail having one terminal pivotally secured to one of the wings and its other terminal adapted to be detachably secured to the other wing whereby the bail co-acts with the lock bar in holding the wings in operative assembled position.

1,109,653. APPARATUS FOR TREATING WOODEN BLOCKS. JOSEPH B. CARD, Highland Park, Ill., and FRANK MCARDLE, Terre Haute, Ind. Filed Aug. 15, 1913. Serial No. 785,010. (Cl. 99—12.)



1. In an apparatus for treating wooden blocks, a treating tank having an imperforate bottom inclining laterally and downwardly from one side of the tank to the other, a discharge spout having its bottom wall alined with the bottom of the tank and its free edge disposed as an entirety beyond the adjacent vertical wall of the tank, and means opening into the tank at remotely located points for maintaining a circulation of the treating medium.

2. In an apparatus for treating wooden block, the combination of a treating tank having an imperforate bottom inclining laterally and downwardly throughout its surface, a discharge spout having its bottom wall alined with the bottom of the tank and its free edge disposed as an entirety beyond the adjacent vertical wall of the tank, circulatory means opening into the tank at remotely located points, and conveyer mechanism for delivering material to the tank remote from the inclined bottom thereof.

REISSUES.

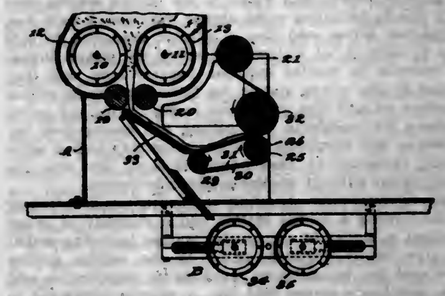
13,793. MAKING COMPOUNDS OF NITROCELLULOSE AND SIMILAR SUBSTANCES. (DAVID BACHRACH, Baltimore, Md. Filed Aug. 25, 1910. Serial No. 578,992. Original No. 794,581, dated July 11, 1905, Serial No. 189,286. (Cl. 106—37.)

1. A non-inflammable or slow-burning compound of nitrocellulose and similar substances, produced by the addition to the usual constituents thereof the non-aqueous silicates of ethyl, methyl and amyl and similar silicates known as "silicic esters," and a free acid, substantially as described.

2. A non-inflammable or slow-burning compound of nitrocellulose containing free silica and free acid, formed by adding the silicic esters and acid, substantially as described.

3. The process of forming a non-inflammable or slow-burning compound of nitrocellulose, by the addition of free silicates, an acid and an absorbent, substantially as described.

13,794. BAT-ACCUMULATOR. WILLIAM L. CLAYTON, GEORGE RAYMOND BROWN, and BENJAMIN CLAYTON, Oklahoma, Okla. Filed May 1, 1914. Serial No. 835,775. Original No. 1,048,289, dated Dec. 24, 1912, Serial No. 696,986. (Cl. 100—1.)



1. In a bat former, the combination with a bat forming mechanism and a pressing mechanism for the bat delivered from said bat forming mechanism, of a supplemental receiver for the bat, means operable independently of the said supplemental receiver for severing the bat at times and deflecting it to the supplemental receiver, means for operating the supplemental receiver to accumulate the bat deflected thereto independent of the pressing mechanism, and means for discharging the bat from the supplemental receiver to the pressing mechanism.

2. In a bat former, the combination with a bat forming mechanism and a pressing mechanism for the bat delivered from said bat forming mechanism, of a rotatable receiver for the bat, means operable independently of the said supplemental receiver for severing the bat at times and deflecting it to the supplemental receiver, means for rotating the supplemental receiver to wind the bat thereon independent of the movements of the pressing mechanism, means for rotating said supplemental receiver to unwind the bat therefrom, and means for discharging the bat unwound from the supplemental receiver to the pressing mechanism.

3. The combination with a continuously acting bat forming mechanism and an intermittently-acting pressing mechanism for the bat delivered from said bat forming mechanism, of a supplemental receiver for the bat, means operable independently of the said supplemental receiver for severing the bat and deflecting it to the said receiver, and means for operating the supplemental receiver to cause it to accumulate the bat while the pressing mechanism is inactive and to discharge it to the pressing mechanism when the said mechanism is active.

4. The combination with a continuously-acting bat forming mechanism and an intermittently-acting pressing mechanism for the bat delivered from said bat forming mechanism, of a supplemental receiver for the bat, means operable independently of the said supplemental receiver for moving across the normal path of the bat to sever it and deflect it to the said receiver, and means for operating the supplemental receiver to cause it to accumulate the bat while the pressing mechanism is inactive and to discharge it to the pressing mechanism when the said mechanism is active.

5. The combination with a continuously-acting bat forming mechanism and an intermittently-acting pressing mechanism for the bat delivered from said bat forming mechanism, of a supplemental receiver for the bat, a guide for the bat having a part movable across the normal path of the bat to sever it and deliver it to the said supplemental receiver, and means for operating the supplemental receiver to cause it to accumulate the bat while the pressing mechanism is inactive and to discharge it to the pressing mechanism when the said mechanism is active.

6. The combination with a continuously-acting bat forming mechanism and an intermittently-acting pressing mechanism for the bat delivered from the bat forming mechanism, of a supplemental receiver for the bat comprising two rollers rotatable about fixed parallel axes and a belt secured at its ends to the rollers respectively so as to be wound from one to the other, and means serving at times to deflect the bat to the said supplemental receiver.

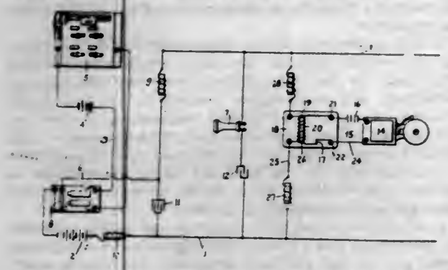
7. The combination with a continuously-acting bat forming mechanism and an intermittently-acting pressing mechanism for the bat delivered from said bat forming mechanism, of a supplemental receiver for the bat, comprising two rollers rotatable about fixed parallel axes and a belt secured at its ends to the rollers respectively so as to be wound from one to the other, a guide for the bat having a part movable across the normal path of the bat to sever it and deliver it to the said supplemental receiver, and means for operating the supplemental receiver to cause it to accumulate the bat while the pressing mechanism is inactive and to discharge it to the pressing mechanism when the said mechanism is active.

13,795. SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Aug. 16, 1913. Serial No. 785,172. Original No. 1,019,781, dated Mar. 12, 1912, Serial No. 488,314. (Cl. 179—4.)

1. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, a protective short circuit across said lines comprising suitably proportioned capacity and inductance in series, message receiving instruments in bridge of said lines, a condenser in said bridge, selective signaling devices in bridge of said lines, and impedance in said last bridge.

2. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, condensance in bridge of said lines, message

receiving instruments in bridge of said lines, condensance in said bridge, selective signaling devices in bridge of said lines, and impedance in said last bridge disposed between said selective device and each of said lines.



3. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, condensance in bridge thereof, a message receiving instrument in bridge of said lines, a condenser in said bridge, an inductive selector in bridge of said lines, and a local circuit including a signal adapted to be controlled by said selector.

4. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, condensance in bridge thereof, a message receiving instrument in bridge of said lines, condensance in said bridge, an inductive selector in bridge of said lines, impedance in said bridge and arranged between said selector and each of said lines, and a local circuit including an alarm device controlled by said selector.

5. In a system adapted for the simultaneous operation of telephones and selective signaling device, in combination, a circuit comprising parallel lines, means for impressing current on said lines, a key operated relay for controlling the impression of current upon said lines, a telephone in bridge of said lines, condensance in said bridge, an inductive selector in bridge of said lines, impedance in said bridge, a local signal comprising an alarm device, and a circuit for the local signal controlled by said selector.

6. In a signaling system of the class described, in combination, a line comprising metallic sides, a selector in bridge, of said lines impedance in said bridge, a local circuit comprising a local signal adapted to be closed by selector, telephone apparatus in bridge of said line, a condenser in said bridge, a battery, a relay for applying said battery to the line, and impedance located between the battery and the line.

7. In a system adapted for the simultaneous operation of telephones and selective signaling device, in combination, a circuit comprising parallel lines, means for impressing current on said lines, a key operated relay for controlling the impression of current upon said lines, a plurality of impedance devices in series with said lines, a condenser in bridge thereof, a telephone in bridge with said lines, a condenser in said bridge, an inductive selector in bridge of said lines, impedance in said bridge, a local signal comprising an alarm device, and a circuit for the local signal controlled by said selector.

8. In a system adapted for the simultaneous operation of telephone and selective signaling devices in combination, a circuit comprising parallel lines, means for impressing current on said lines, a key operated relay for controlling the impression of current upon said lines, a plurality of impedance devices in series with said lines, a condenser in bridge thereof, a telephone in bridge of said lines, a condenser in said bridge, an inductive selector in bridge of said lines, a plurality of impedance devices in said last bridge one of said devices being located between each of terminals of the selective device and one of said lines, a local circuit, and an alarm in said local circuit, the operation of which is determined by the opening and closing of said local circuit by said selector.

9. In a selective signaling system the combination of a line uniting a calling station and a plurality of called stations, a signal at each called station including means to give an answer-back signal to the calling station over said line by varying the potential on said line, telephones on said line, a selector controlling said signals in response to calling impulse impressed on said line, means for impressing abrupt calling impulses on said line and means for modifying the nature of the calling impulses and the answer-back variations whereby telephonic communication over said line may be had while a call, including an answer-back, is being sent over the same circuit without substantial interference.

10. In a selective signaling system, the combination of a line uniting a calling station and a plurality of called stations, an electro-magnetic signal at each called station including means to give an answer-back signal to the calling station over said line by rapidly and abruptly varying the electrical condition of said line, telephones across said line, a selector at each called station controlling the signal thereat in response to calling impulses impressed upon said line, means for impressing abrupt calling impulses on said line, means modifying the nature of the calling impulses and the effect of the answer-back signal on the line, whereby telephone communication may be had while a call, including an answer-back signal, is being sent over the same circuit without substantial interference.

11. In a selective signaling system, the combination of a line uniting a calling station and a plurality of called stations, an electro-magnetic signal at each called station including means to give an answer-back signal to the calling station over said line by rapidly and abruptly varying the potential of said line, telephones connected across said line, a selector at each called station controlling the signal thereat in response to calling impulses impressed on said line, means for impressing said impulses on said line and impedance and capacity on said line, whereby the abrupt calling impulses and the abrupt potential changes on the line caused by the signal during the answer-back are so modified that telephonic communication may be had while a call, including the answer-back signal, is being sent over the same circuit without substantial interference.

12. In a selective signaling system the combination of a line uniting a calling station and a plurality of called stations, a signal at each called station including means to give an answer-back signal to the calling station over said line by initiating rapid abrupt impulses on said line, telephones across said line, a selector connected to said line at each called station controlling the signal thereat in response to specific impulses impressed on said line, means at the calling station for initiating abrupt calling impulses on said line, and means at the calling and called stations for modifying said calling and answer-back impulses so that telephonic communication may be had while a call, including an answer-back, is being sent over the same circuit without uncomfortable interference.

13. In a selective signaling system the combination of a line uniting a calling station and a plurality of called stations, a signal at each called station including means to give an answer-back signal to the calling station over said line by initiating rapid abrupt impulses on said line, telephones across said line, a selector connected to said line at each called station controlling the signal thereat in response to specific impulses impressed on said line, means at the calling station for initiating abrupt calling impulses on said line and impedance at the calling station and at the called stations, and condensance common to both impedances whereby conversation may be had while a call including an answer-back is being sent over the same circuit without uncomfortable interference.

14. In a selective signaling system, the combination of a line uniting a calling station and a plurality of called stations, means at the calling station for initiating abrupt calling impulses on said line, a signal at the called station responsive to said impulses and including means to initiate rapid abrupt answer-back impulses on said line while responding to said calling impulses, telephones across said line, impedance in the line at the calling station and impedance in bridge of the line at the called station, and condensance in bridge of said line, whereby the character of the calling and answer-back impulses is so modified that conversation may be had while a call, including an answer-back, is being sent over the same circuit without uncomfortable interference.

13,796. SULFUR COMPOUND AND PROCESS OF MAKING. CHARLES E. HITE, Burlington, N. J., assignor of one-half to Walter Pincus, Philadelphia, Pa. Filed Mar. 28, 1914. Serial No. 828,100. Original No. 1,068,769, dated July 29, 1913, Serial No. 583,591. (Cl. 23—13.)

1. The process which consists in mixing together approximately combining quantities by weight of powdered sulfur and a fixed alkali, subjecting the mixture to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, and maintaining the mixture at the required temperature until the required chemical action has been effected, utilizing the moisture formed.

2. The process which consists in first mixing together in the dry state substantially combining weights of a fixed alkali and powdered sulfur, then, in order to facilitate the operation, adding to the mixture just sufficient water to hasten a chemical action therein, and subjecting the same to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, until the required chemical action has been effected, stirring said mixture meanwhile until a fixed alkali has been practically all combined, thereby forming a sodium compounds, and rendering a certain percentage of the total sulfur, which is uncombined with sodium, soluble in water.

3. A product resulting from a mixture of substantially combining parts by weight, of sulfur and fixed alkali, subjected to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, in which the fixed alkali is practically all combined with a portion of the sulfur, the balance of the sulfur uncombined with a base, and the compound, including the uncombined sulfur, soluble in water.

4. A product resulting from a mixture of substantially combining parts by weight, of sulfur and fixed alkali, subjected to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, which compound contains practically no uncombined alkali and a large proportion of sulfur, soluble in water, substantially as per analysis given.

5. The process which consists in mixing together combining quantities by weight of powdered sulfur and a fixed alkali, subjecting the mixture to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, and maintaining the mixture at the required temperature until the required chemical action has been effected, ultilizing the moisture formed.

6. The process which consists in first mixing together in a dry state substantially combining weights of a fixed alkali and powdered sulfur, then, in order to facilitate the operation, adding to the mixture just sufficient water to hasten a chemical action therein, and subjecting the same to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, to continue and complete the chemical action, stirring said mixture meanwhile until the alkali has been practically all combined, thereby forming alkali metal sulfur compounds, and rendering a certain percentage of the total sulfur, which is uncombined with alkali metal soluble in water.

7. A product resulting from a mixture of substantially combining parts by weight, of sulfur and fixed alkali, subjected to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, in which the alkali is practically all combined with a portion of the sulfur, the balance of the sulfur uncombined with alkali metal, and the compound, including the uncombined sulfur, soluble in water.

8. A product resulting from a mixture of substantially combining parts by weight, of sulfur and fixed alkali, subjected to a temperature sufficiently high to evaporate a portion of the water, but not high enough to vaporize any considerable amount of the sulfur, which compound contains practically no uncombined alkali and approximately 36.98% of free sulfur uncombined with alkali metal and soluble in water, substantially as per analysis given.

9. The process which consists in mixing together approximately equal proportions of sulfur and caustic soda, subjecting the mixture to a temperature sufficiently high to drive off part of the water liberated but not high enough to drive off sulfur to any extent, and maintaining the mixture at the said temperature until the soda has become neutralized, utilizing in the reaction the moisture formed.

10. A product resulting from a mixture of substantially equal parts by weight, of sulfur and caustic soda, subjected to a temperature high enough to drive off some of the liberated water but not high enough to drive off sulfur, to any extent, which product contains approximately 36.98% of sulfur, and is soluble in water.

DESIGNS.

46,330. FONT OF TYPE. MORRIS FULLER BENTON, Plainfield, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 1, 1913. Serial No. 776,859. Term of patent 14 years.

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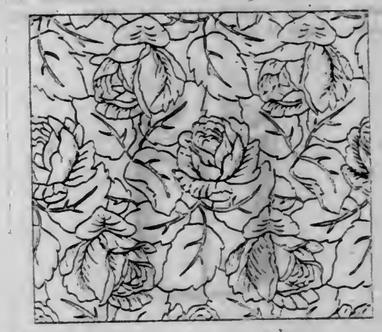
wxyz ,;:.-"!? fiffffffffl

The ornamental design for a font of type shown in the accompanying drawing.

46,331. TEXTILE FABRIC. ROBERT CASARETTO, Crefeld, Germany, assignor to Theo. Tiedemann & Sons, New York, N. Y., a Firm composed of Theodore Tiedemann, Henry F. Tiedemann, and Rudolph E. Tiedemann. Filed June 27, 1914. Serial No. 847,764. Term of patent 7 years.



The ornamental design for a textile fabric, as shown.

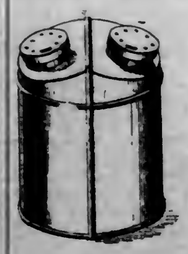
46,332. CARD-CASE. LOUIS COHN, New York, N. Y. Filed June 30, 1914. Serial No. 848,315. Term of patent 7 years.

The ornamental design for a card case, as shown.

46,333. SHEET-METAL TALCUM-CANISTER. HARRY R. COREY, Brooklyn, N. Y., assignor to American Stopper Company, Brooklyn, N. Y., a Corporation of New Jersey. Filed Dec. 30, 1912. Serial No. 739,416. Term of patent 7 years.

The ornamental design for a sheet metal talcum canister, as shown.

46,334. POWDER BOX OR CAN. ERNESTO FUCHS, Trenton, N. J. Filed June 21, 1912. Serial No. 705,129. Term of patent 3½ years.

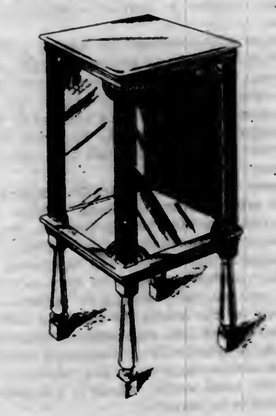


The ornamental design for a powder box or can, as shown.

46,335. DISH. WILLIAM J. GIBBONS, Philadelphia, Pa. Filed June 24, 1914. Serial No. 847,124. Term of patent 14 years.

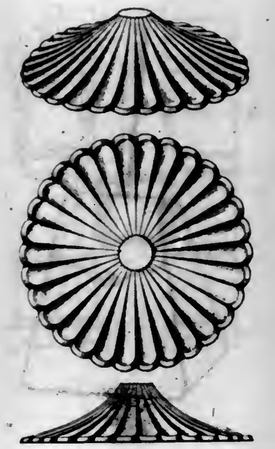
The ornamental design for a dish, as shown.

46,336. PUMP-CASING. WILLIAM E. GORTON, St. Joseph, Mo. Filed July 8, 1914. Serial No. 849,855. Term of patent 7 years.



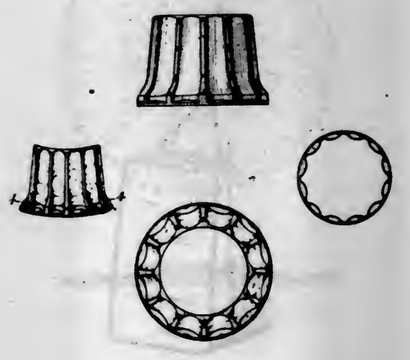
The ornamental design for a pump casing, as shown.

46,337. LIGHTING-FIXTURE TRIMMING. HERMAN E. GOTHBERG, Roselle Park, N. J. Filed May 7, 1914. Serial No. 837,086. Term of patent 3½ years.



The ornamental design for a lighting-fixture trimming, as shown.

46,338. LIGHTING-FIXTURE TRIMMING. HERMAN E. GOTHBERG, Roselle Park, N. J. Filed May 7, 1914. Serial No. 837,087. Term of patent 7 years.

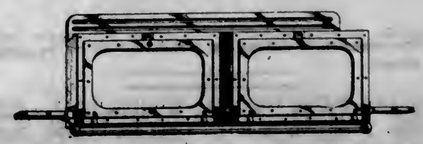


The ornamental design for a lighting-fixture trimming, as shown.

46,339. LEMON-SQUEEZER. WILLIAM A. HAND, Providence, R. I. Filed May 27, 1914. Serial No. 841,384. Term of patent 14 years.

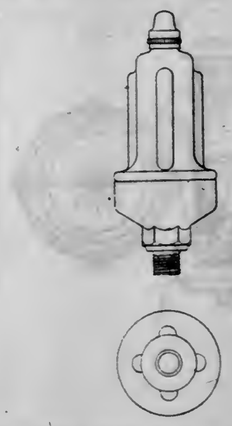
The ornamental design for a lemon squeezer, as shown.

46,340. STOVE OR RANGE WARMING-OVEN. FRANK R. HENRY, St. Louis, Mo. Filed July 6, 1914. Serial No. 849,293. Term of patent 14 years.



The ornamental design for a stove or range warming oven, as shown.

46,341. RADIATOR-AIR-VALVE CASING. GEORGE D. HOFFMAN, Pasadena, Cal., assignor to Hoffman Specialty Company, Boston, Mass., a Corporation of Massachusetts. Filed May 25, 1914. Serial No. 840,951. Term of patent 14 years.

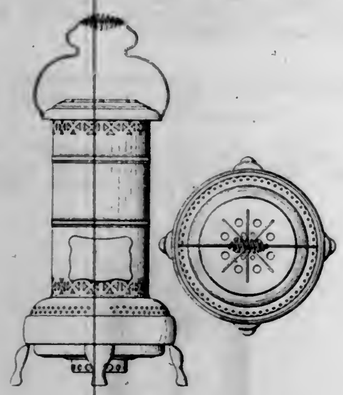


The ornamental design for a radiator air valve casing as shown.

46,342. RADIATOR-AIR-VALVE CASING. GEORGE D. HOFFMAN, Pasadena, Cal., assignor to Hoffman Specialty Company, Boston, Mass., a Corporation of Massachusetts. Filed May 25, 1914. Serial No. 840,952. Term of patent 14 years.

The ornamental design for a radiator air valve casing as shown.

46,343. HEATER. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed July 3, 1914. Serial No. 848,956. Term of patent 14 years.



The ornamental design for a heater, as shown.

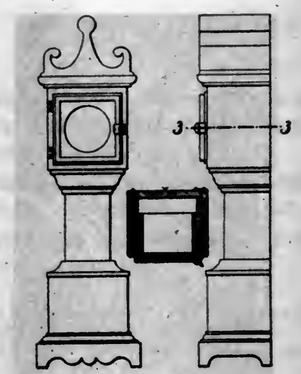
46,344. VANITY-CASE. ART KAUFMANN, Newark, N. J. Filed June 16, 1914. Serial No. 845,490. Term of patent 3½ years.

The ornamental design for a vanity case, as shown.

46,345. VANITY-CASE. ART KAUFMANN, Newark, N. J. Filed June 16, 1914. Serial No. 845,491. Term of patent 3½ years.

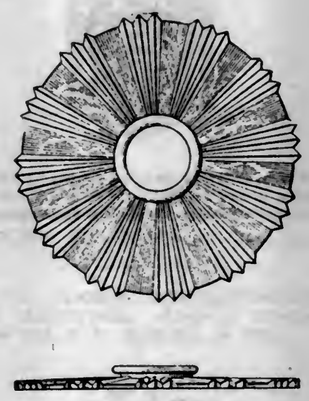
The ornamental design for a vanity case, as shown.

46,346. ALARM OR DRUM-SHAPED CLOCK HOUSING STAND. JACOB MARCUS, Boston, Mass. Filed July 3, 1914. Serial No. 848,971. Term of patent 3½ years.



The ornamental design for an alarm or drum-shaped clock housing-stand, as shown.

46,347. GLASS SHADE OR REFLECTOR. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 436,992. Term of patent 14 years.

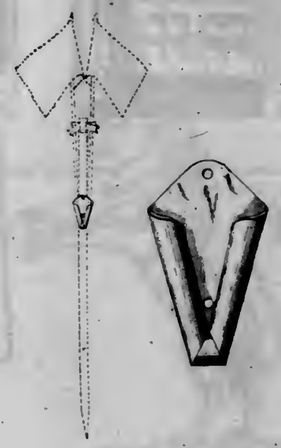


The ornamental design for glass shades or reflectors consisting of bands of radial prisms extending substantially from the neck portion to the periphery thereof and plane surfaces between the said bands, substantially as shown and described.

46,348. BUILT-IN KITCHEN-CABINET. MILTON C. POWELL, Ralston, Nebr. Filed Jan. 30, 1914. Serial No. 815,552. Term of patent 14 years.

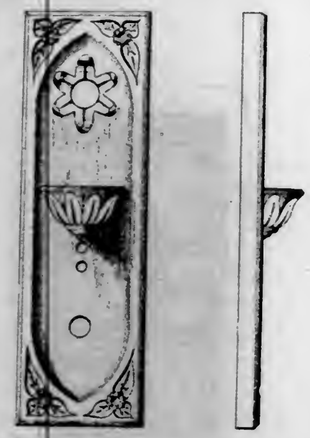
The ornamental design for a built-in kitchen cabinet, as shown.

46,349. FLAG-HOLDER FOR SOLDIERS' GRAVES AND OTHER DECORATIVE PURPOSES. MARY LEWIS REDD, Columbus, Ga. Filed May 18, 1914. Serial No. 839,462. Term of patent 7 years.



The ornamental design for a flag holder for soldiers' graves, and other decorative purposes as shown.

46,350. ESCUTCHEON-PLATE. CLARENCE SIKORSKI, Dayton, Ohio. Filed July 3, 1914. Serial No. 848,965. Term of patent 7 years.



The ornamental design for an escutcheon plate, as shown.

46,351. BUILT-IN COMBINED CHINA-CLOSET AND WRITING-DESK. HARRY B. STEARNS, Oakland, Cal. Filed June 20, 1914. Serial No. 848,095. Term of patent 3½ years.

The ornamental design for a built-in combined china closet and writing desk, as shown.

46,352. PLUSH FABRIC. BERTRAM A. STROOCK, New York, N. Y., assignor to Stroock Plush Company, Newburgh, N. Y., a Coropration of New York. Filed May 7, 1914. Serial No. 837,063. Term of patent 14 years.

The ornamental design for plush fabric, as shown.

46,353. BOX. LEO UNGEMACH, Schiltigheim, near Strassburg, Germany. Filed May 26, 1914. Serial No. 841,163. Term of patent 3½ years.

The ornamental design for a box as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 1, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 54,775. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed Feb. 28, 1911.

MERCEDES

Particular description of goods.—Priming Devices for Internal-Combustion Engines, Cranking Mechanism for Internal-Combustion Engines, Carbureters.
Claims use since Nov. 12, 1909.

Ser. No. 58,571. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOWNE MANUFACTURING COMPANY, Poughkeepsie, N. Y. Filed Sept. 7, 1911.

The surface of the geometrical figures is usually shown in red and the letters or markings thereon in white.
Particular description of goods.—Candy.
Claims use since Mar. 15, 1911.

Ser. No. 61,715. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) AMERICAN STOPPER COMPANY, New York, N. Y. Filed Feb. 24, 1912.

Particular description of goods.—Metal Caps.
Claims use since Feb. 26, 1910.

Ser. No. 62,439. (CLASS 6 CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FELDMAN FLY EXTERMINATOR COMPANY, Denver, Colo. Filed Mar. 26, 1912.

PIONEER

Particular description of goods.—Fly-Exterminators.
Claims use since May 15, 1911.

Ser. No. 62,806. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) D. MEYER & C., Bahia Blanca, Argentina. Filed Apr. 10, 1912.

Particular description of goods.—Wire.
Claims use since Aug. 11, 1905.

Ser. No. 63,239. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOODRICH DRUG CO., Omaha, Nebr. Filed May 1, 1912.

Particular description of goods.—Spices.
Claims use since Nov. 1, 1903.

Ser. No. 64,793. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PASS & SEYMOUR, INC., Solvay, N. Y. Filed July 17, 1912.

Shurlok

Particular description of goods.—Incandescent-Electric-Lamp Sockets.
Claims use since Feb. 2, 1912.

Ser. No. 66,788. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTONIO SISTI, Utica, N. Y. Filed Nov. 9, 1912.

The ring portion of said trade-mark being of a blue color, as indicated in the drawing, no claim being made to the word "Brand."
Particular description of goods.—Olive-Oil.
Claims use since Oct. 31, 1912.

Ser. No. 67,585. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON CO., Baltimore, Md. Filed Dec. 26, 1912.

Particular description of goods.—Engine and Machine Oils.
Claims use since 1887.

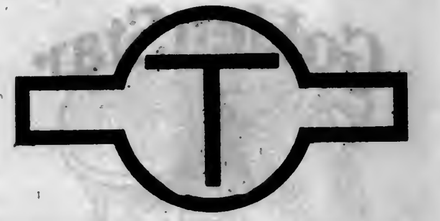
Ser. No. 67,640. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HENRY J. GUISE, New York, N. Y. Filed Dec. 30, 1912.

The letters "rapeola" being printed within the letter "G."
Particular description of goods.—Grape-Juice.
Claims use since Nov. 10, 1912.

Ser. No. 68,123. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) NATIONAL TUBE COMPANY, Pittsburgh, Pa. Filed Jan. 25, 1913.

Particular description of goods.—Pipes, Tubes, and Casings.
Claims use since Oct. 26, 1905.

Ser. No. 69,775. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NORTHWESTERN NEEDLE COMPANY, Minneapolis, Minn. Filed Apr. 14, 1913.



Particular description of goods.—Sewing-Machine Needles.
Claims use since Jan. 1, 1906.

Ser. No. 69,915. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHANNA BLOCH, New York, N. Y. Filed Apr. 19, 1913.

NULOX

Particular description of goods.—Scalp-Salves and Hair-Restoring Applications.
Claims use since Feb. 28, 1913.

Ser. No. 70,504. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSUMERS' IMPORTING COMPANY, Newark, N. J. Filed May 20, 1913.

Particular description of goods.—Tea.
Claims use since Feb. 1, 1913.

Ser. No. 70,753. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CENTURY RUBBER CO., Plainfield, N. J. Filed May 29, 1913.

CRE-PA-RA

No claim being made to the exclusive use of the word "Pa-Ra."
Particular description of goods.—Pneumatic Tires.
Claims use since Jan. 10, 1913.

Ser. No. 71,346. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SUCCINOLAC COMPANY, New York, N. Y., assignor to O. C. Earp-Thomas, Bloomfield, N. J. Filed June 24, 1913.

Succinolac

Particular description of goods.—A Culture of *Bacillus Bulgaricus*.
Claims use since Apr. 1, 1913.

Ser. No. 71,649. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

Particular description of goods.—Steam, Gas, Air, Hot-Air, Compressed-Air, and Internal-Combustion Engines, Spring-Motors of All Kinds, Apparatus for Starting Stationary Explosion-Motors, Carbureters, Apparatus for Filling Balloons or Airships with Gas, Steam-Whistles, Steam Signal-Whistles, Hammers, Chisels, Spanners, Wrenches, Screw-Drivers, Boring-Braces, Lifting-Jacks, Screw-Jacks, Puncheons, Axes, Gimlets, Gouges, Cramps, Clamps, Files, Rasps, Mallets, Pincers, Picks, Pipe and Rod Cutters, Planes, Spokeshaves, Wood-Scrapers, Pliers, Scissors, Vises, Brad-Awls, Awls, Resmers, Shears, Spades, Shovels, Nut-Keys, Tongs, Milling-Tools, Shaft-Couplings, Garden-Engines, Crop-Sprayers, Bill-Hooks, Agricultural Forks, Hoes, Planting-Tools, Rakes, Land-Rollers, Sifting and Screening Apparatus, Bedding and Potting Appliances, Diggers, Harrows, Excavators, Hay-Loaders, Tines, Clod-Crushers, Mechanically-Operated Clutches for Conveying Rotary Motion, Pivots, Stuffing-Boxes, Calks for Joints, Shackles, Universal Joints, Claw-Clutches, Friction-Clutches, Pneumatic Lifts, Printing-Machines, Threshing-Machines, Road-Sweeping Machines, Ice-Machines, Grinding and Polishing Machines, Winches, Centrifugal Machines, and Air, Feed, Manure, Iron and Brass, Hand and Power, Oil-Well, Artesian-Well, and Steam Pumps, Fire-Extinguishers, Levers and Connecting-Rods, Cranks and Crank-Shafts, Lubricating-Oil Rings, Pressed Gear-Wheels, Cams and Cam-Shafts, Fly-Wheels, Governors, Floats for the Float-Chambers of Internal-Combustion Engines, Spindles and Toggles for Said Floats, Ignition-Plugs and Operating Mechanism, Sleeves for Ignition-Spindles, Clamp-Fastenings, Ball-Bearings and Sliding Bearings, Chain-Tighteners, Exhaust-Openers, Reversing Mechanism and Change-Speed-Operating Rods, Air-Admission Chambers for Explosion-Motors, Wheel-Removers, Spring-Driven Fans, Motors Whose Valves are Spring-Operated, Exhaust-Boxes, Soldering-Tools, Lubricators and Sight-Glasses Thereof, Ignition-Timing Apparatus, Friction-Disks, Metal Wedges for Actuating Friction-Clutches, Toothed Rack-Bars, Ratchet-Bars, Wrought Chain-Wheels for Stationary Devices, Pawls, Ratchet-Wheels, Sight-Glass Holders, Guide-Blocks, Adjustment-Rings, Bearing-Slides, Shafts for Stationary Engines, Clutch-Casings, Chain-Wheels for Stationary Machinery, Treadle-Levers, Hand-Actuated Levers, Governor-Rings, Forked Joints, Forks for Shifting Belts, Forks for Shifting the Collars of Clutch and Brake Mechanism in Stationary Machines, Pedestal-Bearings, Plumber-Blocks, Bearing-Hangers, Valve-Spindles, Photograph-Print Cutters and Trimmers, Snow-Plows, and Traction-Engines.
Claims use since November, 1910.

Ser. No. 71,655. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

Particular description of goods.—Automobile and Vehicle Appliances—to wit, Soldering-Lamps, Hot-Water Foot-Warmers, Foot-Warmers Heated by Liquid or Solid Fuel, Oil and Liquid-Fuel Lamps, Gas-Lamps, Gas-Lighters, Lamp and Gas Brackets, Metal Lamp-Reflectors, Metal Lamp-Galleries, Lamplighters' Torches, Lamp Pedestals and Standards, Lamp-Pendants, Oil and Gas Burners, Light-Extinguishers, Gaseliers, Chandeliers, Lamp Wind-Guards, Billiard Gas and Oil Lamps, Oil and Gas Reading-Lamps, Night Oil and Candle Lights, Carriage Oil and Gas Lamps, Night-Light Holders, Oil and Gas Signal-Lamps, Grease-Guards, Smoke-Catchers, Vapor-Burners, Antivibrators for Incandescent Oil and Gas Lamps, Mantle-Supports, Wick-Burners, Wick-Trimmers.
Claims use since November, 1910.

Ser. No. 71,915. (CLASS 5. ADHESIVES.) PUNCTURE CURB SALES CO., Newark, N. J. Filed July 23, 1913.

Kor Ker

Particular description of goods.—Puncture-Sealing Compositions for Pneumatic Tires.
Claims use since July 3, 1913.

Ser. No. 72,413. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EHRICH & GRAETZ, Berlin, Germany. Filed Aug. 19, 1913.

ESSO

Particular description of goods.—Electric Incandescent Lamps and Parts Thereof, Carbon Filaments, Metal Filaments, Bulbs, Sockets, Cut-Outs, Resistances, Fuses, Switches, Wall-Plugs, Contact-Boxes, Electric-Arc Lamps, Inclosed-Arc Lamps, Electrodes, and Hoisting Apparatus for Arc-Lamps.
Claims use since Nov. 29, 1907.

Ser. No. 72,647. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TILLMANN & BENDEL, San Francisco, Cal. Filed Sept. 2, 1913.

Golden Star

Particular description of goods.—Flavoring Extracts for Foods, Lemonade Sugar, Mustard, Fruit Jellies, Fruit Jams, Canned Pumpkin, Canned Vegetables, Canned Fruits, Canned Salmon, and Tomato Catsup.
Claims use since September, 1876.

Ser. No. 72,675. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ORLEANS CIDER & VINEGAR CO., LTD., New Orleans, La. Filed Sept. 4, 1913.

MINO

Particular description of goods.—Imitation Apple Cider; Artificial Colors and Flavors for Beverages; and Grape Artificial Color and Flavor.
Claims use since Aug. 1, 1913.

Ser. No. 75,064. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OAKLAND VINEGAR & PICKLE COMPANY, Saginaw, Mich. Filed Jan. 9, 1914.

STATE SEAL

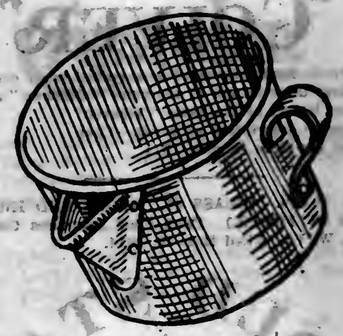
Particular description of goods.—Sugar-Vinegar.
Claims use since October, 1903.

Ser. No. 75,154. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) FRANEY, SHORB & CO., New York, N. Y. Filed Jan. 13, 1914.

THE COMBUSTO

Particular description of goods.—Heating Appliance in the Nature of a Fuel-Economizer.
Claims use since about Dec. 1, 1912.

Ser. No. 75,514. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLETCHER STARLING PHILLIPS, Kansas City, Mo. Filed Jan. 26, 1914.



Particular description of goods.—A Non-Shrinking Compound for Use in Dyeing.
Claims use since Dec. 20, 1913.

Ser. No. 75,921. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BAKER BREAD COMPANY, Zanesville, Ohio. Filed Feb. 10, 1914.

Particular description of goods.—Bread.
Claims use since Feb. 10, 1914.

Ser. No. 75,960. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEWIS S. ELMER, Baltimore, Md. Filed Feb. 17, 1914.

Marco

Particular description of goods.—Macaroni, Spaghetti, Noodles, Corn-Starch, Barley, Vinegar, and a Preparation Composed of Wheat-Flour, with Egg, Skimmed Milk, Shortening, Sugar, and Baking-Powder, for Preparing Cakes, Doughnuts, Biscuits, and Custards.
Claims use since June 1, 1910.

Ser. No. 76,048. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DENISON & COMPANY, Chicago, Ill. Filed Feb. 20, 1914.

CAFE' ROYALE

Particular description of goods.—Coffee.
Claims use since 1908.

Ser. No. 76,069. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CUPAL LIMITED, Blackburn, England. Filed Feb. 21, 1914.

SECTO SECTO

Particular description of goods.—Insect-Destroying Preparations.
Claims use since June 17, 1907.

Ser. No. 76,235. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DIE ALTSTÄDTISCHE OPTISCHE INDUSTRIE-ANSTALT NITSCHE & GÜNTHER, Ratbenow, Germany. Filed Feb. 28, 1914.

Particular description of goods.—Ophthalmometers, Ophthalmoscopes, Retinoscopes, Optical Lenses, Optometers, Mirrors for Optical Purposes with or without Frames, Spy-Glasses, Telescopes, Microscopes, Stereoscopes, Magic Lanterns, Levels, Lenses, Magnifying-Glasses, Reading-Glasses, Glass Prisms, Optical Illuminating Devices, Spectacles, Pince-Nez, Monocles, Lunettes, Lorgnettes and Parts Thereof, Eye-Protectors, Spectacle-Lenses, Test-Lens Boxes, Slide-Rules, Calculators, Barometers, Thermometers, Induction Apparatus, Glass Hydrometers, Glass Cylinders for Hydrometers, Weather-Indicators, Weather-Houses, Nautical Compasses, Theodolites, Pedometers, Curve-Measures, Cyclometers, Letter-Balances, Measuring-Scales, Measuring-Tapes, Hydrostatic Balances, Sand-Glasses, Plumb-Lines, Protractors, Ruling-Pens, Drawing Compasses and Dividers, Bow Pens and Pencils, Proportional Compasses, Scales, Stethoscopes.
Claims use since September, 1900.

Ser. No. 76,236. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DIE ALTSTÄDTISCHE OPTISCHE INDUSTRIE-ANSTALT NITSCHE & GÜNTHER, Rathenow, Germany. Filed Feb. 28, 1914.

EN-GEE

Particular description of goods.—Ophthalmometers, Ophthalmoscopes, Retinoscopes, Optical Lenses, Optometers, Mirrors for Optical Purposes with or without Frames, Spy-Glasses, Telescopes, Microscopes, Stereoscopes, Magic Lanterns, Levels, Lenses, Magnifying-Glasses, Reading-Glasses, Glass Prisms, Optical Illuminating Devices, Spectacles, Pince-Nez, Monocles, Lunettes, Lorgnettes and Parts Thereof, Eye-Protectors, Spectacle-Lenses, Test-Lens Boxes, Slide-Rules, Calculators, Barometers, Thermometers, Induction Apparatus, Glass Hydrometers, Glass Cylinders for Hydrometers, Weather-Indicators, Weather-Houses, Nautical Compasses, Theodolites, Pedometers, Curve-Measures, Cyclometers, Letter-Balances, Measuring-Scales, Measuring-Tapes, Hydrostatic Balances, Sand-Glasses, Plumb-Lines, Protractors, Ruling-Pens, Drawing Compasses and Dividers, Bow Pens and Pencils, Proportional Compasses, Scales, Stethoscopes.

Claims use since 1901.

Ser. No. 76,264. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BAKER BREAD CO., Zanesville, Ohio. Filed Feb. 24, 1914.

PLEZOL

Particular description of goods.—Bread.

Claims use since Jan. 31, 1914.

Ser. No. 76,328. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa. Filed Mar. 4, 1914.

SANTO

The word "Santo."

Particular description of goods.—Rubber Belting, Rubber Hose, Rubber Vehicle-Tires, Rubber Inner Tubes for Vehicle-Tires, Rubber Packing, and Rubber Dredger-Sleeves.

Claims use since Nov. 20, 1913.

Ser. No. 76,330. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa. Filed Mar. 4, 1914.

CHIEF

The word "Chief."

Particular description of goods.—Rubber Belting, Rubber Vehicle-Tires, Rubber Inner Tubes for Vehicle-Tires, Rubber Packing, Rubber Dredging-Sleeves, and Rubber Valves.

Claims use since Nov. 20, 1913.

Ser. No. 76,463. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) EBENSBURG COAL COMPANY, Cambria and Philadelphia, Pa. Filed Mar. 9, 1914.

"COLVER"

The trade-mark "Colver" is a coined word consisting of the first three letters of the name "Coleman" and the last three letters of the name "Weaver."

Particular description of goods.—Coal.

Claims use since August, 1911.

Ser. No. 76,514. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PURE FOOD PRODUCTS CO., Fairmont, W. Va. Filed Mar. 10, 1914.

GOLD STAR

Particular description of goods.—Spices and Seasonings, Extracts and Flavorings, All Used as Ingredients of Foods.

Claims use since Sept. 1, 1911.

Ser. No. 76,625. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) BUTTERFIELDS LIMITED, Stechford, England. Filed Mar. 14, 1914.

LEVIS

Particular description of goods.—Cycles, Motor-Cycles, Cycle-Cars, Motor-Cars, and Gearing for Motor-Cycles, for Cycle-Cars, and for Motor-Vehicles.

Claims use since September, 1910.

Ser. No. 76,782. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) H. TEMPLE TUCKER, Fort Smith, Ark. Filed Mar. 19, 1914.

Particular description of goods.—Tents, Tarpaulins, and Awnings.

Claims use since January, 1914.

Ser. No. 76,867. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NORTON COMPANY, Worcester, Mass. Filed Mar. 23, 1914.

Crystolon

Particular description of goods.—Heat-Refractory Plates, Tubes, Muffles, Crucibles, and Dishes Adapted for Use in Laboratories.

Claims use since May, 1911.

Ser. No. 76,868. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NORTON COMPANY, Worcester, Mass. Filed Mar. 23, 1914.

Alundum

Particular description of goods.—Heat-Refractory Plates, Tubes, Muffles, Crucibles, and Dishes Adapted for Use in Laboratories.

Claims use since May, 1911.

Ser. No. 76,946. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PURABLA OIL COMPANY, West Hoboken, N. J., and Blue Point, N. Y. Filed Mar. 25, 1914.

-P-O-C-O-

Particular description of goods.—Sesame-Oil.

Claims use since Jan. 16, 1914.

Ser. No. 76,970. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RHEINSTROM BROS., Cincinnati, Ohio. Filed Mar. 26, 1914.

EAGLE BRAND

The trade-mark is shown in the drawing, excepting the words "Trade Mark" and "Brand," exclusive right to the use of which is hereby disclaimed.

Particular description of goods.—Cherries, Pineapples, Assorted Fruits, Peaches, Citron, Ginger, and Strawberries.

Claims use since Jan. 1, 1895.

Ser. No. 77,084. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALIER & SPIES MILLING CO., St. Louis, Mo. Filed Mar. 30, 1914. Under ten-year proviso.

ULSTER

Particular description of goods.—Wheat-Flour.

Claims use since Mar. 25, 1890.

Ser. No. 77,090. (CLASS 2. RECEPTACLES.) AMES HARRIS NEVILLE CO., San Francisco, Cal. Filed Mar. 31, 1914.

Said trade-mark consists of two parallel lines upon the bag.

Particular description of the goods.—Jute Bags.

Claims use since Jan. 1, 1877.

Ser. No. 77,121. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EUREKA RUBBING STONE COMPANY, Chicago, Ill. Filed Apr. 1, 1914.

No claim being made to the words "Rubbing Stone Co." or the words "Rubbing Stone" or the word "Chicago," appearing thereon.

Particular description of goods.—Rubbing-Stone.

Claims use since April, 1889.

Ser. No. 77,130. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KANETSUGU KIMURA, Kanda, Tokyo, Japan. Filed Apr. 1, 1914.

Particular description of goods.—Soy, (Shoyu in the Japanese Name.)
Claims use since Oct. 27, 1885.

Ser. No. 77,179. (CLASS 34. HEATING, LIGHTING AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GOLDMAN & SALATSCH, Vienna, Austria-Hungary. Filed Apr. 3, 1914.

BRISWELL

Particular description of goods.—Air-Moistening Devices for Use with Radiators, Stoves, and the Like, Made of Unglazed Pottery.
Claims use since Nov. 20, 1913.

Ser. No. 77,275. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) ESSEX RUBBER COMPANY, Trenton, N. J. Filed Apr. 7, 1914.

RODURA

Particular description of goods.—Asbestos Packing.
Claims use since about the middle of March, 1914.

Ser. No. 77,368. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BAILOR PLOW MANUFACTURING COMPANY, Atchison, Kans. Filed Apr. 10, 1914.

Bailor

Which consists of the surname of the corporation, written by E. V. Jones, the treasurer and general manager of the corporation.
Particular description of goods.—Cultivators.
Claims use since Oct. 10, 1910.

Ser. No. 77,473. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE COLORADO RADIUM PRODUCTS COMPANY, Denver, Colo. Filed Apr. 14, 1914.

RAYODE

Consisting of the word "Rayode."
Particular description of goods.—Radioactive Generator for Producing Radioactivity in Liquids, and Especially Water.
Claims use since March, 1914.

Ser. No. 77,514. (CLASS 38. PRINTS AND PUBLICATIONS.) NURNBERGER ABZIEHBILDER-FABRIK TROEGER & BUCKING, Nuremberg, Germany. Filed Apr. 16, 1914.

Troebuck

Particular description of goods.—Metachromotypes.
Claims use since Feb. 3, 1914.

Ser. No. 77,537. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAURY-COLE COMPANY, Memphis, Tenn. Filed Apr. 17, 1914.

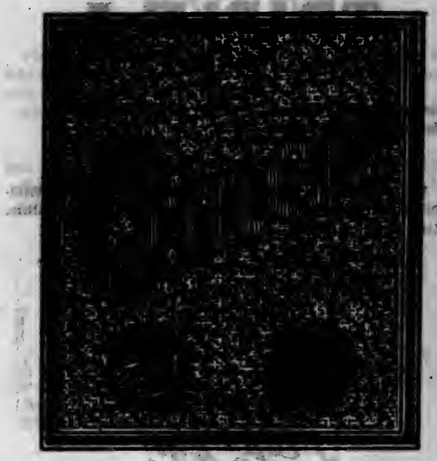
CHISCA

Particular description of goods.—Coffee.
Claims use since Jan. 24, 1914.

Ser. No. 77,731. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OKLAHOMA CITY MILL & ELEVATOR CO., Oklahoma, Okla. Filed Apr. 24, 1914.

Particular description of goods.—Wheat-Flour.
Claims use since Apr. 15, 1913.

Ser. No. 77,732. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OKLAHOMA MILL CO., Kingfisher, Okla. Filed Apr. 24, 1914.



The word "Fancy" being disclaimed. The word "Omco" appearing in the drawing is lined for red and the background for orange.
Particular description of goods.—Wheat-Flour.
Claims use since Apr. 3, 1914.

Ser. No. 77,751. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THEODORE NICKOLAUS JACKEROTT, New York, N. Y. Filed Apr. 25, 1914.

POP

Particular description of goods.—A Food Product Consisting of a Cooked Cereal—Such, for Instance, as Popcorn or Puffed Wheat—a Sweetening Material—Such, for Instance, as Sugar or Molasses—and a Flavoring Material—Such, for Instance, as Vanilla or Such Like Extract—Mixed and Pressed into the Form of Oblong Cakes.
Claims use since Mar. 1, 1914.

Ser. No. 77,752. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) KAROLA ELECTRIC LABORATORIES CO., Baltimore, Md. Filed Apr. 25, 1914.

KELCO

Particular description of goods.—Storage Batteries.
Claims use since the 19th day of October, 1913.

Ser. No. 77,851. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERTHA ZEIDLER, Los Angeles, Cal. Filed Apr. 28, 1914.

ZEIDLER

Consisting of the word "Zeidler," the name of an individual, printed in a particular and distinctive manner.
Particular description of goods.—A Preparation for the Treatment of Epilepsy.
Claims use since Mar. 1, 1914.

Ser. No. 77,869. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BOYD E. RAINEY, St. Louis, Mo. Filed Apr. 29, 1914.

VACUUM

Particular description of goods.—Furnaces for Heating Buildings.
Claims use since Jan. 12, 1914.

Ser. No. 77,967. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE AMERICAN COAL REFINING COMPANY, Denver, Colo. Filed May 4, 1914.

Particular description of goods.—A Liquid Product Which When Used in Connection with Kerosene Produces a Fuel Usable in Explosive Gas-Engines.
Claims use since July 28, 1914.

Ser. No. 77,983. (CLASS 17. TOBACCO PRODUCTS.) LIBORIO CIGAR CO., Tampa, Fla. Filed May 4, 1914.

No claim being made to the exclusive use of the word "Habana."

Particular description of goods.—Cigars.

Claims use since Jan. 19, 1914.

Ser. No. 77,987. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD J. REILLY, Baltimore, Md. Filed May 2, 1914.

Eddie's Everlasting

The word "Everlasting" being hereby disclaimed.

Particular description of goods.—Liquid Dyes for Shoes, Satchels, Belts, Gloves, Straw Hats, and the Like.

Claims use since July, 1901.

Ser. No. 78,026. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LEVY-ROTH G. M. B. H., Berlin, Germany. Filed May 6, 1914.

Pentagraph

Particular description of goods.—Cameras.

Claims use since Feb. 18, 1914.

Ser. No. 78,114. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES L. WALSH, Providence, R. I. Filed May 7, 1914.

TRIPLE-A

AAA

Particular description of goods.—Local Antiseptic.

Claims use since May 1, 1914.

Ser. No. 78,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FANNIE H. SMITH, Dayton, Ohio. Filed May 11, 1914.

"Confections" being no part of the trade-mark sought to be registered.

Particular description of goods.—Fruit Preserves, Jams, Syrups, and Juices for Foods.

Claims use since Jan. 1, 1914.

Ser. No. 78,238. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ELLSWORTH W. COOK, Central Falls, R. I. Filed May 13, 1914.

CRAFTEX

Particular description of goods.—Piece Goods in Cotton, Silk, Wool, and Worsted Fabrics or Combination of the Same.

Claims use since December, 1913.

Ser. No. 78,244. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ILLINOIS MIDLAND COAL COMPANY, Chicago, Ill. Filed May 13, 1914.

SHERLITE

Particular description of goods.—Coal.

Claims use since Oct. 1, 1913.

Ser. No. 78,299. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JOSEPH BETHENOD, Paris, France. Filed May 15, 1914.

RADIOS

Particular description of goods.—Apparatus for Electric Lighting of All Vehicles, Lighting Dynamos, Magnetos, and Ignition Apparatus for Motors.

Claims use since Oct. 1, 1913.

Ser. No. 78,309. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN EDWARD MUELLER, Salt Lake City, Utah. Filed May 15, 1914.

CLIMAX BREAD

I disclaim the exclusive use of the word "Bread" and the representation of the loaf of bread.

Particular description of goods.—Bread.

Claims use since January, 1914.

Ser. No. 78,365. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. PIERCE CO., San Francisco, Cal. Filed May 18, 1914.

Particular description of goods.—Canned Tunny, Clams, and Mussels.

Claims use since Apr. 13, 1913.

Ser. No. 78,386. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HULMAN & Co., Terre Haute, Ind. Filed May 19, 1914.

FARMERS PRIDE BRAND

The exclusive use of the word "Brand" being disclaimed.

Particular description of goods.—Canned Peaches, Cherries, Pineapples, Raspberries, Gooseberries, Blackberries, Strawberries, Plums, Pears, Blueberries, Apples, Apricots, Catsup, Pickles, Cinnamon, Mixed Spices, Mace, Ginger, Cassia-Sage, Corn-Starch, Rice, Tea, Tapioca, Olives, Pepper, Nutmegs, Laurel-Leaves, Cloves, Allspice, Honey, Whole Spices, Buckwheat-Flour, Cereal, Barley, Cocoa, Molasses, Dried Raspberries, Figs, Peaches, Prunes, Raisins, Currants, Nectarines, Preserved Cherries, and Food-Flavoring Extracts.

Claims use since the year 1907.

Ser. No. 78,438. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDREW DAVIS, Jamestown, N. Y. Filed May 21, 1914.

ALVEOLINE

Particular description of goods.—A Remedy for Pyorrhea, Rheumatism, and Indigestion.

Claims use since Apr. 10, 1914.

Ser. No. 78,474. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) B. KASPROWICZ, Gnesen, Germany. Filed May 22, 1914.

Opato

Particular description of goods.—A Brandy.

Claims use since Oct. 24, 1911.

Ser. No. 78,523. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HOLBROOK RAW HIDE COMPANY, Providence, R. I. Filed May 25, 1914. Under ten-year proviso.

TENAX

Particular description of goods.—Leather.

Claims use since Sept. 15, 1881.

Ser. No. 78,566. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) H. SCHMINCKE & Co., Dusseldorf-Grafenberg, Germany. Filed May 26, 1914.

Particular description of goods.—Oil-Colors in Tubes and Water-Colors.

Claims use since July 1, 1882.

Ser. No. 78,601. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLOTHIER PUBLISHING CO., INC., New York, N. Y. Filed May 28, 1914.

The Manufacturing Clothier

Particular description of goods.—A Monthly Publication.
Claims use since May 19, 1914.

Ser. No. 78,668. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) VULCAN PROCESS CO., Minneapolis, Minn. Filed May 29, 1914.

VULCAN

Particular description of goods.—Acetylene-Generators, Welding and Cutting Torches, Automatic Regulating-Valves, and Pressure-Gages, All Forming Parts of Apparatus for Use in Autogenous Welding or a Process Known as Oxyacetylene Welding and Cutting.
Claims use since on or about Sept. 1, 1912.

Ser. No. 78,684. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CENTRAL BREWING COMPANY OF NEW YORK, New York, N. Y. Filed June 1, 1914.

Cherokee

Particular description of goods.—Beer and Ales.
Claims use since the year 1900.

Ser. No. 78,710. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL GUM & MICA COMPANY, New York, N. Y. Filed June 1, 1914.

PERMASOL

Namely, "Permasol."
Particular description of goods.—Lacquers, Varnishes, Dry, Paste, and Ready-Mixed Paints, and Painters' Materials Consisting of Glosses, Glazes, and Similar Finishing Compositions.
Claims use since May 21, 1914.

Ser. No. 78,721. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAMSON COUNTY COAL COMPANY, St. Louis, Mo. Filed June 1, 1914.

Particular description of goods.—Coal.
Claims use since about Feb. 17, 1914.

Ser. No. 78,722. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAMSON COUNTY COAL COMPANY, St. Louis, Mo. Filed June 1, 1914.

BLACK BRIER

Particular description of goods.—Coal.
Claims use since about Sept. 15, 1905.

Ser. No. 78,832. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EDWIN H. FLEMING, Mobile, Ala. Filed June 5, 1914.

MOBILA

Particular description of goods.—Cold-Water Paint in Powder Form.
Claims use since Jan. 1, 1914.

Ser. No. 78,954. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAAMLOOZE VENNOOTSCHAP FABRIEK VAN MELKPRODUCTEN "EXCELSIOR," Woerden, Netherlands. Filed June 10, 1914.

PIONEER

Particular description of goods.—Condensed Milk.
Claims use since Nov. 7, 1912.

Ser. No. 78,955. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW YORK QUEBRACHO EXTRACT CO., INC., New York, N. Y. Filed June 10, 1914.

Particular description of goods.—Quebracho-Wood Extract.
Claims use since May 23, 1914.

Ser. No. 78,958. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS W. S. PHILLIPS, New York, N. Y. Filed June 10, 1914.

NARA

Particular description of goods.—Toilet Powder, Face-Powder, and Perfumes.
Claims use since the 16th day of May, 1914.

Ser. No. 79,024. (CLASS 38. PRINTS AND PUBLICATIONS.) ARCHAEOLOGICAL INSTITUTE OF AMERICA, Washington, D. C. Filed June 12, 1914.

ART and ARCHAEOLOGY

Particular description of goods.—A Periodical Publication.
Claims use since Jan. 3, 1914.

Ser. No. 79,029. (CLASS 15. OILS AND GREASES.) EAGLE OIL & SUPPLY CO., Boston, Mass. Filed June 12, 1914.

CTHATK

Particular description of goods.—Automobile Cylinder-Oil.
Claims use since July 1, 1907.

Ser. No. 79,057. (CLASS 32. FURNITURE AND UPHOLSTERY.) ENGLANDER SPRING BED COMPANY, Brooklyn, N. Y. Filed June 13, 1914.

FOLDAWAY

Particular description of goods.—Folding Beds, Folding Cots, and Folding Hammocks.
Claims use since the 13th day of April, 1914.

Ser. No. 79,154. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALLE & CO., AKTIENGESELLSCHAFT, Biebrich-on-the-Rhine, Germany. Filed June 16, 1914.

„Lutosargin"

The trade-mark consists of the arbitrary or fanciful word "Lutosargin."
Particular description of goods.—Preparations for the Treatment of Syphilis, Lupus, Scrofula, and Cutaneous Diseases.
Claims use since Mar. 15, 1914.

Ser. No. 79,184. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) UDDEHOLMS AKTIEBOLAG, Uddeholm, Sweden. Filed June 17, 1914.

UB

Particular description of goods.—Horse-Nails, Frost-Nails, Screws of Iron or Brass and Adapted for Wood or Metal.
Claims use since Mar. 15, 1914.

Ser. No. 79,204. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODEL MILL COMPANY, Johnson City, Tenn. Filed June 18, 1914.

No trade-mark claim being made to the words "Ever-Ready Self-Rising Biscuit Flour."

Particular description of goods.—Ready-Mixed Self-Rising Wheat-Flour.

Claims use since January, 1910.

Ser. No. 79,246. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RENFREW M'F'G. CO., Adams, Mass. Filed June 20, 1914.

The designs and lettering being shown in gilt upon a black band label with gilt border. Applicant herewith disclaims the right to the exclusive use of the words "Yarn Dyed Fabrics," "Guaranteed," "Sun Proof and Tub Proof," "M'f'g Co.," "F. U. Stearns," and "Treas."

Particular description of goods.—Cotton Piece Goods.

Claims use since May, 1911.

Ser. No. 79,249. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SANDWICH MANUFACTURING CO., Sandwich, Ill. Filed June 20, 1914.

Easyway

Particular description of goods.—Hay-Loaders.

Claims use since Jan. 1, 1914.

Ser. No. 79,277. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) RILEY-KLOTZ MANUFACTURING COMPANY, Newark, N. J. Filed June 22, 1914.

ARKAY

Particular description of goods.—Electrical Horns for Motor-Cars, Motor-Cycles, and other Vehicles.

Claims use since May 15, 1914.

Ser. No. 79,423. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FRED DOLLE, Chicago, Ill. Filed June 29, 1914.

DE LUXE

Particular description of goods.—Razors.

Claims use since the year 1901.

Ser. No. 79,431. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GWIN AND MAYS DRUG CO., Ada, Okla. Filed June 29, 1914.

The label being printed in red.

Particular description of goods.—Salve.

Claims use since Jan. 7, 1910.

Ser. No. 79,484. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ERICKSON AND MCANDREW, Omaha, Nebr. Filed July 1, 1914.

E M

Particular description of goods.—Furniture-Polish.

Claims use since June 1, 1913.

Ser. No. 79,489. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FRANCES E. HARDING, Mansfield, Mass. Filed July 1, 1914.

BLUE LINE

Particular description of goods.—Screw-Drivers, Ripping-Knives, Burnishers, Pin-Pushers, and Reamers.

Claims use since June 2, 1914.

Ser. No. 79,563. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE GEM CHEMICAL CO., Washington, D. C. Filed July 6, 1914.

Verol

Particular description of goods.—An Insecticide and Disinfectant.

Claims use since Aug. 1, 1911.

Ser. No. 79,590. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MORDECAI M. WILLSON, Des Moines, Iowa. Filed July 6, 1914.

No claim is made to the exclusive right to the use of the words "Trade Mark."

Particular description of goods.—Skin-Lotions, Toilet and Face Creams, Toilet Water and Perfumes, Talcum and Face Powders, Hair Tonics and Restorers, Eyebrow-Pencils, Sachet-Powders, Massage-Creams, Rouge, Shampoo Preparations.

Claims use since about Jan. 1, 1913.

Ser. No. 79,622. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ALUMINUM GOODS MFG. CO., Manitowoc, Wis. Filed July 8, 1914.

No claim being made for the exclusive use of the words "Highest Quality Aluminum."

Particular description of goods.—Aluminum Cooking Utensils Consisting of Percolating Coffee-Pots, Coffee-Pots, Teapots, Double Boilers, Tea-Kettles, Lipped Saucepans, Berlin Saucepans, Stew-Pans, Windsor Saucepans, Stock-Pans, Pudding-Pans, Lipped Fry-Pans, Mixing-Bowls, Preserving-Pots, Berlin Pots, Stock-Pots, Preserving-Kettles, Berlin Kettles, Stock-Kettles, Casseroles, Pie-Plates, Jelly-Cake Pans, Bread-Pans, Tube-Cake Pans, Colanders, Steamer Sets, Roasters.

Claims use since May, 1914.

Ser. No. 79,646. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ROCK ISLAND BREWING CO., Rock Island, Ill. Filed July 8, 1914.

Maltjoos

Particular description of goods.—A Non-Alcoholic Carbonated Beverage of Malt Nature.

Claims use since June 29, 1914.

Ser. No. 79,649. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY PAUL SENAY, Washington, D. C. Filed July 8, 1914.

"PINKAPS"

Particular description of goods.—Medicine for Neuralgia, Headache, and Fatigue.

Claims use since July 1, 1913.

Ser. No. 79,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. W. SURBRUG, New York, N. Y. Filed July 8, 1914.

ANALAX

Particular description of goods.—Fruit Laxatives.

Claims use since May 14, 1914.

Ser. No. 79,686. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SPIEGEL, MAY, STERN COMPANY, Chicago, Ill. Filed July 9, 1914.

Kildust

Particular description of goods.—Suction-Sweepers.

Claims use since Mar. 3, 1914.

Ser. No. 79,691. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CYCLONE FENCE COMPANY, Waukegan and North Chicago, Ill. Filed July 10, 1914.

Cyclone Fence Company

No claim being made, however, for the words "Fence Company."

Particular description of goods.—Ornamental Lawn Fence and Gates, Steel Farm-Gates, Cemetery Fence and Arches, Flower-Guard, Trellis, Posts, and Mats, All of Metal.

Claims use since Nov. 1, 1913.

Ser. No. 79,702. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLEVELAND-AKRON BAG COMPANY, Cleveland, Ohio. Filed July 10, 1914.

Ropewove

Particular description of goods.—Printed Signs.
Claims use since April, 1912.

Ser. No. 79,768. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SWAN REMEDY CO., Milwaukee, Wis. Filed July 13, 1914.

The portrait shown is that of Wilgam F. Schwan.
Particular description of goods.—A Preparation for the Treatment of Hog-Cholera.
Claims use since July 2, 1914.

Ser. No. 79,770. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NEW FICTION PUBLISHING COMPANY, New York, N. Y. Filed July 7, 1914.

SNAPPY STORIES

Particular description of goods.—A Monthly Magazine.
Claims use since about July 15, 1912.

Ser. No. 79,861. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ONE PIECE BIFOCAL LENS COMPANY, Indianapolis, Ind. Filed July 16, 1914.

ULTEX

Particular description of goods.—Lenses.
Claims use since Feb. 28, 1914.

Ser. No. 79,880. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CONRAD H. LEISEGANG, Philadelphia, Pa. Filed July 17, 1914.

SLITZ

Particular description of goods.—Cigar-Cutters.
Claims use since June 1, 1914.

Ser. No. 79,890. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PAUL ED. NÖLTING & CO., Hamburg, Germany. Filed July 17, 1914.

Pilsener Sprudel
aus der Actienbrauerei Asch
in Asch, Böhmen.

No claim being made to the words "Pilsner aus der Aktien-Brauerei Asch in Asch, Böhmen."
Particular description of goods.—Beer.
Claims use since Aug. 5, 1900.

Ser. No. 79,900. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHICAGO VARNISH CO., Chicago, Ill. Filed July 18, 1914.

CVC SUPERIORITY OUR STANDARD

No claim being made to the exclusive use of the words "Superiority Our Standard."
Particular description of goods.—Varnishes, Japans, Enamels, Ready-Mixed Paints, Fillers, Surfacers, Stains.
Claims use since April, 1912.

Ser. No. 79,937. (CLASS 39. CLOTHING.) NEWMAN DRESS AND SKIRT COMPANY, Cleveland, Ohio. Filed July 20, 1914.

Fairsex

Particular description of goods.—Ladies' Dresses and Skirts.
Claims use since January, 1906.

Ser. No. 79,940. (CLASS 39. CLOTHING.) LEO J. WOLFENBERGER, Wichita, Kans. Filed July 20, 1914.

UWEAREM

Particular description of goods.—Coats, Hats, Dresses, Undergarments, Stockings, Socks, and Trousers.
Claims use since July 10, 1914.

Ser. No. 79,973. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE V. G. S. SYNDICATE LIMITED, London, England. Filed July 21, 1914.

LOMBIO

Particular description of goods.—An Ointment for Human Use.
Claims use since December, 1910.

Ser. No. 80,001. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARZILLAI L. COLE, St. Louis, Mo. Filed July 23, 1914.

NU-CO-LAX

Particular description of goods.—A Tablet for the Relief of Disorders of the Liver and for Constipation.
Claims use since June 6, 1914.

Ser. No. 80,007. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK E. GRAY, Port Huron, Mich. Filed July 23, 1914.

SAN-I-GERM

Particular description of goods.—A Deodorizer and Disinfectant.
Claims use since Jan. 1, 1914.

Ser. No. 80,057. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENACH JAFFE, Cleveland, Ohio. Filed July 25, 1914.

ITCHNO

Particular description of goods.—A Medical Preparation to Relieve Itching and All Kinds of Skin Diseases.
Claims use since about July 1, 1913.

Ser. No. 80,075. (CLASS 10. FERTILIZERS.) STOCKHOLMS SUPERFOSFAT FABRIKS AKTIEBOLAG, Stockholm, Sweden. Filed July 25, 1914.

Particular description of goods.—All Kinds of Fertilizers.
Claims use since May 10, 1897.

Ser. No. 80,089. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WILLIAM R. BURKHARD CO., St. Paul, Minn. Filed July 27, 1914.

Particular description of goods.—Rowboats, Power-Boats, Launches, Canoes, Oars, and Paddles.
Claims use since March, 1897.

Ser. No. 80,121. (CLASS 15. OILS AND GREASES.) FISKE BROTHERS REFINING COMPANY, New York, N. Y. Filed July 28, 1914.

The Ford

Particular description of goods.—Lubricating-Oils.
Claims use since Aug. 6, 1913.

Ser. No. 80,168. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SUZABURO YAMAMOTO, Los Angeles, Cal. Filed July 29, 1914.

Particular description of goods.—Preparation for Curing Burns.

Claims use since Feb. 1, 1914.

Ser. No. 80,176. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAMBERS BRO'S, Middletown, N. Y. Filed July 30, 1914.

QUICKEEZ

Particular description of goods.—Liniment or Ointment for Rheumatism, Lumbago, Pleurisy, Colds, Bronchitis, Croup, Asthma, Sore Joints and Muscles, and Lame Back.

Claims use since July, 1913.

Ser. No. 80,184. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE NATIONAL SCREW & TACK COMPANY, Cleveland, Ohio. Filed July 30, 1914.

Particular description of goods.—Spokes and Nipples for Wire Wheels of Vehicles, Especially Motor-Vehicles and Bicycles.

Claims use since about June 15, 1914.

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SEPTEMBER 1, 1914.

99,413. WOOD SUBSTITUTES MADE FROM PULP. THE AGASOTE MILLBOARD CO., Trenton, N. J.
Filed April 29, 1914. Serial No. 77,852. PUBLISHED JUNE 23, 1914.

99,414. PETROLEUM-STOVES, SOLDERING-LAMPS, AND KITCHEN-STOVES. AKTIEBOLAGET RADICS, Stockholm, Sweden.
Filed September 15, 1913. Serial No. 72,852. PUBLISHED JUNE 23, 1914.

99,415. FERTILIZING-SULFATES. AMERICAN COAL PRODUCTS COMPANY, New York, N. Y.
Filed April 22, 1914. Serial No. 77,643. PUBLISHED JUNE 30, 1914.

99,416. RUBBER BOOTS AND RUBBER SHOES. APSLEY RUBBER CO., Hudson, Mass.
Filed May 12, 1914. Serial No. 78,226. PUBLISHED JUNE 30, 1914.

99,417. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,048. PUBLISHED JUNE 30, 1914.

99,418. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,049. PUBLISHED JUNE 30, 1914.

99,419. BASE-BALLS, MITTS, BASE-BALL GLOVES, BATTING AND SPORTING GLOVES. BIGELOW & DOWSE COMPANY, Boston, Mass.
Filed January 21, 1914. Serial No. 75,323. PUBLISHED JUNE 30, 1914.

99,420. AWNINGS. BRONX WINDOW SHADE & AWNING CO., New York, N. Y.
Filed April 16, 1914. Serial No. 77,502. PUBLISHED JUNE 23, 1914.

99,421. BITS, SPURS, STIRRUPS, SADDLERY HARDWARE, EXCLUDING GOODS WHOLLY OR PARTLY MADE OF LEATHER. AUGUST BUERMANN MANUFACTURING CO., Newark, N. J.
Filed March 24, 1914. Serial No. 76,895. PUBLISHED JUNE 30, 1914.

99,422. CERTAIN NAMED ARTICLES MADE OF PRECIOUS METALS. BUGBEE & NILES CO., Providence, R. I.
Filed April 22, 1914. Serial No. 77,646. PUBLISHED JUNE 30, 1914.

99,423. CARRIAGES, MOTOR-CARRIAGES, MOTOR-CHASSIS, MOTOR-CYCLES, SIDE CARS. H. BUSSING, Brunswick, Germany.
Filed April 16, 1914. Serial No. 77,501. PUBLISHED JUNE 30, 1914.

99,424. PRESERVATIVE FOR PREVENTING RUST AND CORROSION OF IRON AND STEEL. CARBONDALE CALCIUM CO., Carbondale, Pa.
Filed May 28, 1914. Serial No. 78,602. PUBLISHED JUNE 30, 1914.

99,425. COVER, BOND, WRITING, AND PRINTING PAPER. THE CENTRAL OHIO PAPER COMPANY, Columbus, Ohio.
Filed April 17, 1914. Serial No. 77,521. PUBLISHED JUNE 23, 1914.

99,426. PERIODICAL MAGAZINES, PRINTED BOOKS, AND PRINTS. THE CENTURY CO., New York, N. Y.
Filed June 21, 1913. Serial No. 71,231. PUBLISHED JUNE 23, 1914.

99,427. BRICKS, TILE, FLUE-LINING, WALL-COPINGS, AND SEWER-PIPES. CHICAGO FIRE BRICK CO., Chicago, Ill.
Filed May 9, 1914. Serial No. 78,140. PUBLISHED JUNE 30, 1914.

99,428. MUSICAL INSTRUMENTS WITH CERTAIN ELECTRICAL ATTACHMENTS, PARTS THEREOF, AND SUPPLIES. CHORALCELO COMPANY, Portland, Me., and Boston, Mass.
Filed March 13, 1913. Serial No. 68,995. PUBLISHED JUNE 30, 1914.

99,429. MONTHLY MAGAZINES. CLOUD PUBLISHING COMPANY, Chicago, Ill.
Filed March 28, 1914. Serial No. 77,019. PUBLISHED JUNE 23, 1914.

99,430. FLOOR-OILS. CLARENCE W. COBURN, San Francisco, Cal.
Filed April 20, 1914. Serial No. 77,617. PUBLISHED JUNE 30, 1914.

99,431. BED-SPRINGS. CLEVELAND WIRE SPRING CO., Cleveland, Ohio.
Filed March 13, 1913. Serial No. 69,031. PUBLISHED JUNE 30, 1914.

99,432. BRISTLES, HORSEHAIR, FIBERS, ANIMAL HAIRS, AND ARTIFICIAL HAIRS. FREDERICK H. CONE, New York, N. Y.
Filed March 31, 1914. Serial No. 77,094. PUBLISHED JUNE 23, 1914.

99,433. BRICK. ERNEST L. COOK, Bridgewater, Mass.
Filed May 24, 1913. Serial No. 70,610. PUBLISHED JUNE 30, 1914.

99,434. CERTAIN NAMED SEEDS. COURTEEN SEED COMPANY, Milwaukee, Wis.
Filed March 30, 1914. Serial No. 77,048. PUBLISHED JUNE 23, 1914.

99,435. CERTAIN NAMED SEEDS AND SEED-CORN. COURTEEN SEED COMPANY, Milwaukee, Wis.
Filed March 30, 1914. Serial No. 77,049. PUBLISHED JUNE 23, 1914.

99,436. YELLOW-DENT SEED-CORN. COURTEEN SEED COMPANY, Milwaukee, Wis.
Filed March 30, 1914. Serial No. 77,050. PUBLISHED JUNE 23, 1914.

99,437. PAINT-PASTE. THOS. CUSACK COMPANY, Chicago, Ill.
Filed August 30, 1913. Serial No. 72,591. PUBLISHED JUNE 30, 1914.

99,438. MEDICAL PREPARATIONS FOR TREATING CERTAIN NAMED DISEASES. SOPHIE D'AMOUR, Rumford, Me.
Filed January 31, 1914. Serial No. 75,571. PUBLISHED JUNE 23, 1914.

99,439. RUBBER BULBS. THE DE VILBISS MANUFACTURING COMPANY, Toledo, Ohio.
Filed April 1, 1914. Serial No. 77,119. PUBLISHED JUNE 30, 1914.

99,440. AUTOMOBILE SPRINGS AND WIRE WHEELS. WM. SMALLEY DANIELS, Detroit, Mich.
Filed March 4, 1914. Serial No. 76,314. PUBLISHED JUNE 30, 1914.

99,441. SEWER-GAS TRAPS. DETROIT SANITARY SUPPLY COMPANY, Detroit, Mich.
Filed April 20, 1914. Serial No. 77,583. PUBLISHED JUNE 30, 1914.

99,442. COCOA MATTING. RUDOLPH DEUTSCH, New York, N. Y.
Filed May 22, 1914. Serial No. 78,468. PUBLISHED JUNE 30, 1914.

99,443. ANTIFRICTION METALS AND JOURNAL-BOXES. DIAMOND ANTI FRICTION METAL COMPANY, Chicago, Ill.
Filed May 7, 1913. Serial No. 70,275. PUBLISHED JUNE 30, 1914.

99,444. FLANNEL PIECE GOODS. FREDERICK DOBLE & SONS, London and Dewsbury, England.
Filed June 5, 1914. Serial No. 78,830. PUBLISHED JUNE 30, 1914.

99,445. BRICKS. DOVER FIRE BRICK COMPANY, Cleveland, Ohio.
Filed May 11, 1914. Serial No. 78,197. PUBLISHED JUNE 30, 1914.

99,446. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed May 1, 1914. Serial No. 77,914. PUBLISHED JUNE 30, 1914.

99,447. CERTAIN NAMED SURGICAL APPLIANCES AND TREATMENT-CABINETS. EARLE & LYON, Salt Lake City, Utah.
Filed April 13, 1914. Serial No. 77,437. PUBLISHED JUNE 30, 1914.

99,448. ARTIFICIAL FEATHERS, PLUMES, FEATHERS, AND CERTAIN ARTICLES MADE WHOLLY OR PARTLY THEREFROM. E. EISEMANN & CO., New York, N. Y.
Filed March 25, 1914. Serial No. 76,925. PUBLISHED JUNE 30, 1914.

99,449. ARTIFICIAL FEATHERS, PLUMES, FEATHERS, AND CERTAIN ARTICLES MADE WHOLLY OR PARTLY THEREFROM. E. EISEMANN & CO., New York, N. Y.
Filed March 25, 1914. Serial No. 76,926. PUBLISHED JUNE 30, 1914.

99,450. CERTAIN NAMED METALLIC ALLOYS. ELEKTRIZITÄTSWERK LONZA, Gampel, Switzerland.
Filed August 22, 1913. Serial No. 72,482. PUBLISHED JUNE 30, 1914.

99,451. PINE-CREOSOTE, PINE-OIL, AND PINE-TAR. FOREST PRODUCTS CO., New Orleans, La.
Filed April 30, 1913. Serial No. 70,131. PUBLISHED JUNE 30, 1914.

99,452. BOOTS, SHOES, AND SLIPPERS MADE WHOLLY OR IN PART OF LEATHER AND CLOTH. FOSS, PACKARD & CO., Auburn, Me.
Filed March 18, 1914. Serial No. 76,732. PUBLISHED JUNE 30, 1914.

99,453. CALCIMINES AND WATER-PAINTS. M. EWING FOX & CO., New York, N. Y.
Filed May 28, 1914. Serial No. 78,606. PUBLISHED JUNE 30, 1914.

99,454. MEN'S NECKWEAR—VIZ., NECKTIES, NECK-SCARFS, AND JABOTS. ISRAEL FRIEDMAN, New York, N. Y.
Filed May 6, 1914. Serial No. 78,017. PUBLISHED JUNE 30, 1914.

99,455. WOOD-FIBER WALL-BOARD. CHAUNCEY O. FRISBIE, Chicago, Ill.
Filed December 30, 1913. Serial No. 74,894. PUBLISHED JUNE 30, 1914.

99,456. COOKING STOVES AND RANGES, PARLOR-HEATERS, AND FURNACES. GALUSHA STOVE COMPANY, Rochester, N. Y.
Filed April 10, 1914. Serial No. 77,374. PUBLISHED JUNE 23, 1914.

99,457. FUSES. GERMANIA IMPORTING COMPANY, New York, N. Y.
Filed May 27, 1912. Serial No. 63,819. PUBLISHED JUNE 30, 1914.

99,458. APPARATUS FOR COOKING BY RETAINED HEAT. GRAND RAPIDS UPHOLSTERING CO., Grand Rapids, Mich.
Filed April 12, 1909. Serial No. 41,737. PUBLISHED JUNE 23, 1914.

99,459. LADIES' AND MISSES' DRESSES AND COSTUMES. MELVILLE A. GUNST COSTUME CO., New York, N. Y.
Filed April 4, 1914. Serial No. 77,200. PUBLISHED JUNE 30, 1914.

99,460. JUICE OF PLANTS OF NATURAL PRODUCT, A FLUID INTENDED TO BE USED BEFORE CONFINEMENTS. ERNEST HANDL, Chicago, Ill.
Filed May 4, 1914. Serial No. 77,976. PUBLISHED JUNE 30, 1914.

99,461. SPECTACLE AND EYEGLASS LENSES. F. A. HARDY & CO., Chicago, Ill.
Filed May 25, 1914. Serial No. 78,521. PUBLISHED JUNE 30, 1914.

99,462. HIGH EXPLOSIVES. HERCULES POWDER COMPANY, Wilmington, Del.
Filed April 18, 1914. Serial No. 77,559. PUBLISHED JUNE 30, 1914.

99,463. LEATHER SHOES. PHIL HEROLD COMPANY, San Jose, Cal.
Filed April 29, 1913. Serial No. 70,115. PUBLISHED JUNE 30, 1914.

99,464. COLORED, STIFFENED, AND FINISHED FABRIC. THE HOLLISTON MILLS, Norwood, Mass.
Filed May 15, 1914. Serial No. 78,305. PUBLISHED JUNE 30, 1914.

99,465. CERTAIN NAMED BUILDING MATERIAL. HOQUIAM LUMBER & SHINGLE COMPANY, Hoquiam, Wash.
Filed January 3, 1914. Serial No. 74,96[illegible] PUBLISHED JUNE 30, 1914.

99,466. MUSIC-SHEETS FOR MUSICAL-INSTRUMENT PLAYERS. IMPERIAL PLAYER ROLL COMPANY, Chicago, Ill.
Filed May 25, 1914. Serial No. 78,524. PUBLISHED JUNE 30, 1914.

99,467. CIGARETTES. A. B. C. IMPORTATION CO., New York, N. Y.
Filed March 11, 1914. Serial No. 76,523. PUBLISHED JUNE 23, 1914.

99,468. CIGARETTES. A. B. C. IMPORTATION CO., New York, N. Y.
Filed March 11, 1914. Serial No. 76,524. PUBLISHED JUNE 23, 1914.

99,469. NATURAL MINERAL WATER. IRVEN E. JOHNSON, Mineral Wells, Tex.
Filed July 3, 1913. Serial No. 71,515. PUBLISHED JUNE 30, 1914.

99,470. BACILLI PREPARATIONS FOR THE TREATMENT OF TUBERCULOSIS AND OTHER INFECTIOUS DISEASES. KALLE & CO., AKTIENGESELLSCHAFT, Biebrich, Germany.
Filed April 27, 1914. Serial No. 77,784. PUBLISHED JUNE 30, 1914.

99,471. HAIR-TONIC AND TOILET WATER. N. KANTER & SON, Cleveland, Ohio.
Filed May 11, 1914. Serial No. 78,201. PUBLISHED JUNE 23, 1914.

99,472. VARNISHES. KILEY HARDWARE COMPANY, Boston, Mass.
Filed May 6, 1914. Serial No. 78,023. PUBLISHED JUNE 30, 1914.

99,473. HATS AND CAPS. THE KNOX HAT MANUFACTURING COMPANY, New York, N. Y.
Filed May 6, 1914. Serial No. 78,024. PUBLISHED JUNE 30, 1914.

99,474. CALCIMINE. THE LA SALLE VARNISH CO., Chicago, Ill.
Filed May 18, 1914. Serial No. 78,356. PUBLISHED JUNE 30, 1914.

99,475. OVERALL UNION SUITS. THE H. D. LEE MERCANTILE COMPANY, Salina, Kans.
Filed May 6, 1914. Serial No. 78,027. PUBLISHED JUNE 30, 1914.

99,476. DECORATIVE FABRIC FOR WALLS AND CEILINGS. LINCRUSTA WORKS "PALLAS," INC., New York, N. Y.
Filed February 9, 1914. Serial No. 75,806. PUBLISHED JUNE 30, 1914.

99,477. READY-MIXED PAINTS, ENAMELS, AND VARNISHES. JOHN LINE & SONS, LIMITED, London, England.
Filed January 27, 1913. Serial No. 68,144. PUBLISHED JUNE 30, 1914.

99,478. READY-MIXED PAINTS, ENAMELS, AND VARNISHES. JOHN LINE & SONS, LIMITED, London, England.
Filed January 27, 1913. Serial No. 68,145. PUBLISHED JUNE 30, 1914.

99,479. RUBBER AUTOMOBILE AND VEHICLE TIRES. THE MANSFIELD TIRE & RUBBER CO., Mansfield, Ohio.
Filed February 25, 1914. Serial No. 76,147. PUBLISHED JUNE 9, 1914.

99,480. ELECTRIC TRANSFORMERS. EDWARD P. MAURER, Cleveland, Ohio.
Filed May 18, 1914. Serial No. 78,360. PUBLISHED JUNE 30, 1914.

99,481. GLASS LAMP GLOBES, SHADES, AND REFLECTORS. H. G. MCFADDIN & CO., New York, N. Y.
Filed October 18, 1912. Serial No. 66,348. PUBLISHED JUNE 23, 1914.

99,482. PREPARATION FOR THE TREATMENT OF SKIN DISEASES AND ERUPTIONS. LAURA BELLES MILLER, Aldan, Pa.
Filed March 28, 1914. Serial No. 77,025. PUBLISHED JUNE 30, 1914.

99,483. WRITING-TABLETS, WRITING-PAPER, ENVELOPS, CORRESPONDENCE-CARDS, AND PAPETERIES. MONTAG BROTHERS, Atlanta, Ga.
Filed April 28, 1914. Serial No. 77,839. PUBLISHED JUNE 16, 1914.

99,484. PERFUMERY, TOILET WATERS, TOILET POWDERS, DENTIFRICES, AND AROMATIC SALTS. MORNY FRERES LIMITED, London, England.
Filed February 6, 1912. Serial No. 61,306. PUBLISHED JUNE 30, 1914.

99,485. AROMATIC SALTS, TOILET WATERS, TOILET, BATH AND SACHET POWDERS, AND BATH DUSTING-POWDERS, LOTIONS, DENTIFRICES, PERFUMERY, AND BRILLIANTINE. MORNY FRERES LTD., London, England.
Filed February 6, 1912. Serial No. 61,307. PUBLISHED JUNE 30, 1914.

99,486. LAXATIVE TABLETS OR POWDER. NEW ENGLAND DRUG COMPANY, Boston, Mass.
Filed February 18, 1914. Serial No. 76,009. PUBLISHED JUNE 30, 1914.

99,487. CIGARS. EVELYN B. NORA GON, Memphis, Tenn.
Filed March 7, 1914. Serial No. 76,445. PUBLISHED JUNE 23, 1914.

99,488. GAMES. JOSHUA JEROME NORDMAN, Pittsburgh, Pa.
Filed March 26, 1914. Serial No. 76,967. PUBLISHED JUNE 30, 1914.

99,489. TOILET-COMBS. NOYES COMB COMPANY, Binghamton, N. Y.
Filed May 14, 1914. Serial No. 78,282. PUBLISHED JUNE 30, 1914.

99,490. NON-INTOXICATING CARBONATED BEVERAGE AND SYRUP FOR MAKING SAME. O'HALLORAN & BISHOP, INC., Columbus, Ga.
Filed April 13, 1914. Serial No. 77,447. PUBLISHED JUNE 30, 1914.

99,491. CIGARETTES. OLD DRURY CIGARETTE CO., INC., New York, N. Y.
Filed April 2, 1914. Serial No. 77,186. PUBLISHED JUNE 23, 1914.

99,492. PREPARATION OFFENSIVE TO RAPACIOUS BIRDS AND ANIMALS. ALBERT T. OTTO, New York, N. Y.
Filed April 9, 1914. Serial No. 77,353. PUBLISHED JUNE 30, 1914.

99,493. WRITING AND BOND PAPERS. THE PAPER MAKERS CO., Louisville, Ky.
Filed July 15, 1912. Serial No. 64,723. PUBLISHED JUNE 30, 1914.

99,494. WORSTED PIECE GOODS. PERSEVERANCE WORSTED COMPANY, Woonsocket, R. I.
Filed March 2, 1912. Serial No. 61,877. PUBLISHED JUNE 30, 1914.

99,495. BEER. PITTSBURGH BREWING COMPANY, Pittsburgh, Pa.
Filed October 29, 1913. Serial No. 73,656. PUBLISHED JUNE 30, 1914.

99,496. MEDICINAL COMPOUND FOR THE TREATMENT OF THE SCALP. LEON PLASCHY, New York, N. Y.
Filed May 8, 1914. Serial No. 78,138. PUBLISHED JUNE 30, 1914.

99,497. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGE A. QUIMBY, Laconia, N. H.
Filed February 4, 1914. Serial No. 75,689. PUBLISHED JUNE 30, 1914.

99,498. CERTAIN MEDICINES AND REMEDIES FOR CERTAIN NAMED DISEASES AND AILMENTS. J. W. QUINN DRUG COMPANY, Greenwood, Miss.
Filed May 12, 1914. Serial No. 78,223. PUBLISHED JUNE 23, 1914.

99,499. PAPER OR FIBER CARTONS, BOXES, OR CONTAINERS. ROCHESTER CARRIER CO., Rochester, N. Y.
Filed March 2, 1914. Serial No. 76,295. PUBLISHED JUNE 30, 1914.

99,500. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,703. PUBLISHED JUNE 30, 1914.

99,501. INSTANTANEOUS AUTOMATIC WATER HEATERS AND STORAGE SYSTEMS. RUUD MANUFACTURING COMPANY, Pittsburgh, Pa.
Filed March 16, 1914. Serial No. 76,708. PUBLISHED JUNE 23, 1914.

99,502. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 25, 1914. Serial No. 78,534. PUBLISHED JUNE 30, 1914.

99,503. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 25, 1914. Serial No. 78,536. PUBLISHED JUNE 30, 1914.

99,504. WOMEN'S, CHILDREN'S AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 27, 1914. Serial No. 78,591. PUBLISHED JUNE 30, 1914.

99,505. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 27, 1914. Serial No. 78,592. PUBLISHED JUNE 30, 1914.

99,506. COTTON AND WOOL PIECE GOODS. HENRY F. SCATCHARD MFG. CO., Norristown, Pa.
Filed April 1, 1913. Serial No. 69,517. PUBLISHED JUNE 30, 1914.

99,507. RADIO-ACTIVE MEDICAL APPLIANCE FOR THE PRODUCTION OF RADIO-ACTIVE MEDICINAL WATER. WILLIAM JAY SCHIEFFELIN, New York, N. Y.
Filed April 22, 1914. Serial No. 77,860. PUBLISHED JUNE 30, 1914.

99,508. LEATHER SHOES. JNO. J. SCHULTEN & Co., Louisville, Ky.
Filed May 22, 1914. Serial No. 78,482. PUBLISHED JUNE 30, 1914.

99,509. ELECTRICAL DYNAMOS, MOTORS, SWITCHES, MAGNETOS, SPARK COILS AND PLUGS. SPLITDORF ELECTRICAL COMPANY, Newark, N. J.
Filed May 15, 1914. Serial No. 78,317. PUBLISHED JUNE 30, 1914.

99,510. HOSE-SUPPORTERS. A. STEIN & COMPANY, Chicago, Ill.
Filed July 27, 1912. Serial No. 64,959. PUBLISHED JUNE 30, 1914.

99,511. PLANS AND SPECIFICATIONS FOR HOUSES AND BUNGALOWS. GUSTAV STICKLEY, New York, N. Y.
Filed September 23, 1912. Serial No. 65,919. PUBLISHED JUNE 23, 1914.

99,512. LAXATIVES. FRANZ STOHR, Vienna, Austria-Hungary.
Filed February 16, 1914. Serial No. 75,948. PUBLISHED JUNE 30, 1914.

99,513. SODA-WATER, LIMEADE, LEMONADE, ORANGEADE, SARSAPARILLA, AND GINGER-ALE. SULLIVAN, MCMAHAN, BUCK & WISNER, Memphis, Tenn.
Filed April 14, 1914. Serial No. 77,483. PUBLISHED JUNE 30, 1914.

99,514. FACE-POWDER. CLARA TETLOW, Philadelphia, Pa.
Filed May 7, 1914. Serial No. 78,117. PUBLISHED JUNE 30, 1914.

99,515. FACE-POWDER AND TALCUM POWDER. CLARA TETLOW, Philadelphia, Pa.
Filed May 13, 1914. Serial No. 78,270. PUBLISHED JUNE 30, 1914.

99,516. COTTON PIECE GOODS. TREMONT & SUFFOLK MILLS, Lowell, Mass.
Filed April 15, 1913. Serial No. 69,813. PUBLISHED JUNE 30, 1914.

99,517. CRAVENETTE COATS, RAIN-COATS, AND WATERPROOF RAIN-COATS. TRUE-FIT WATERPROOF CO., INC., New York, N. Y.
Filed January 30, 1914. Serial No. 75,558. PUBLISHED JUNE 30, 1914.

99,518. OILS AND GREASES GENERALLY USED FOR LUBRICATION AND TO PREVENT RUSTING. UNION PETROLEUM COMPANY, Philadelphia, Pa.
Filed May 14, 1914. Serial No. 78,291. PUBLISHED JUNE 30, 1914.

99,519. VEILINGS AND NETTINGS. E. & Z. VAN RAALTE, New York, N. Y.
Filed June 5, 1914. Serial No. 78,848. PUBLISHED JUNE 30, 1914.

99,520. BAKING-POWDER. VITTUCCI IMPORTING CO., Seattle, Wash.
Filed May 19, 1914. Serial No. 78,403. PUBLISHED JUNE 30, 1914.

99,521. CONSTIPATION-TABLETS, KIDNEY-TABLETS, AND LINIMENTS. DANIEL TEDFORD WALKER, Chicago, Ill.
Filed October 16, 1913. Serial No. 73,433. PUBLISHED JUNE 30, 1914.

99,522. ASPHALTUM. WARNER-QUINLAN ASPHALT COMPANY, Syracuse, N. Y.
Filed May 4, 1914. Serial No. 77,993. PUBLISHED JUNE 30, 1914.

99,523. LEATHER AND CANVAS SHOES AND SLIPPERS. WICHERT & GARDINER, Brooklyn and New York, N. Y.
Filed February 2, 1914. Serial No. 75,640. PUBLISHED JUNE 30, 1914.

99,524. LEATHER. THE WILDER-MANNING TANNING COMPANY, Chicago, Ill.
Filed April 13, 1914. Serial No. 77,463. PUBLISHED JUNE 23, 1914.

99,525. LEATHER. THE WILDER-MANNING TANNING COMPANY, Chicago, Ill.
Filed April 13, 1914. Serial No. 77,464. PUBLISHED JUNE 23, 1914.

99,526. AUTOMOBILE-GOGGLES. T. A. WILLSON & Co., INC., Reading, Pa.
Filed May 13, 1914. Serial No. 78,269. PUBLISHED JUNE 30, 1914.

99,527. BOOKS FOR CHILDREN'S USE AS PLAYTHINGS AND FOR INSTRUCTION AND ENTERTAINMENT. DAVID WOLF, New York, N. Y.
Filed April 2, 1914. Serial No. 77,172. PUBLISHED JUNE 23, 1914.

99,528. AUTOMOBILES. FRANCIS A. WOODS, Chicago, Ill., assignor to Woods Mobilette Company, Chicago, Ill., a Corporation of Arizona.
Filed November 26, 1913. Serial No. 74,223. PUBLISHED JUNE 30, 1914.

99,529. CERTAIN NAMED CUTLERY AND TOOLS AND PARTS THEREOF. EDWARD ZINN, New York, N. Y.
Filed April 6, 1914. Serial No. 77,261. PUBLISHED JUNE 30, 1914.

99,530. OINTMENT. ZONOZ CHEMICAL CO. INC., Brooklyn, N. Y.
Filed April 9, 1914. Serial No. 77,366. PUBLISHED JUNE 30, 1914.

LABELS

REGISTERED SEPTEMBER 1, 1914.

17,934.—*Title:* "ANISE ALCOHOLATE." (For Anise Alcoholate.) L. BERGONZI & Co., New York, N. Y. Filed July 11, 1911.

17,935.—*Title:* "BRADFORD'S B. C. C. FOR CHILLS AND FEVER." (For Medicine.) BRADFORD & MEADOWS, Columbus, Ga. Filed August 8, 1914.

17,936.—*Title:* "POWDERED SKIM MILK." (For Powdered Skim Milk.) CALIFORNIA CENTRAL CREAMERIES, San Francisco, Cal. Filed August 4, 1914.

17,937.—*Title:* "I'VE GOTA BISCUIT." (For Crackers and Biscuit.) THE CANTON BISCUIT CO., Canton, Ohio. Filed July 20, 1914.

17,938.—*Title:* "WHITE DOME." (For Shortening.) THE CAPITOL REFINING COMPANY INC., South Washington, Va. Filed August 12, 1914.

17,939.—*Title:* "CRISP WHITE." (For Shortening.) THE CAPITOL REFINING COMPANY INC., South Washington, Va. Filed August 12, 1914.

17,940.—*Title:* "REX." (For Pork and Beans.) THE CUDAHY PACKING CO., Chicago, Ill. Filed June 15, 1914.

17,941.—*Title:* "5-20-7." (For Hosiery.) DAVIS HOSIERY MILLS, Chattanooga, Tenn. Filed June 22, 1914.

17,942.—*Title:* "HYGIENIC TANGO POWDER PUFF." (For Toilet-Boxes.) ANGELO GIGLIO, New York, N. Y. Filed July 11, 1914.

17,943.—*Title:* "OTTO BRAND." (For Sardines.) THE GLOBE CANNING COMPANY, Eastport, Me. Filed July 1, 1914.

17,944.—*Title:* "NOMAD BRAND." (For Sardines.) THE GLOBE CANNING COMPANY, Eastport, Me. Filed July 1, 1914.

17,945.—*Title:* "GLANCO BRAND." (For Sardines.) THE GLOBE CANNING COMPANY, Eastport, Me. Filed July 1, 1914.

17,946.—*Title:* "JENSEN BRAND." (For Sardines.) THE GLOBE CANNING COMPANY, Eastport, Me. Filed July 1, 1914.

17,947.—*Title:* "MANCHINIC BRAND." (For Sardines.) THE GLOBE CANNING COMPANY, Eastport, Me. Filed July 1, 1914.

17,948.—*Title:* "LORD DUKE." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed August 4, 1914.

17,949.—*Title:* "BENEFIT." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed August 4, 1914.

17,950.—*Title:* "SORE-OFF THE HORSE'S BEST FRIEND." (For a Veterinary Remedy.) JOSEPH KAHN, New York, N. Y. Filed June 16, 1914.

17,951.—*Title:* "UNIVERSAL." (For Putty-Knives.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed July 2, 1914.

17,952.—*Title:* "LASTLONG." (For Underwear.) LASTLONG UNDERWEAR CO., Oswego, N. Y. Filed August 6, 1914.

17,953.—*Title:* "CIMEX FOR BED BUGS TERE-METALOL CHLORIMINE." (For an Insecticide.) MICHELANGELO PACELLA, Chicago, Ill. Filed June 1, 1914.

17,954.—*Title:* "CALIFORNIA CHERRIES." (For Cherries.) PENRYN FRUIT COMPANY, Penryn, Cal. Filed May 19, 1914.

17,955.—*Title:* "PHOENIX'S CALIFORNIA RIPE OLIVES." (For Ripe Olives.) PHOENIX BROS., Fairoaks, Cal. Filed August 12, 1914.

17,956.—*Title.:* "FLLI SCORSONE." (For Tomato Paste.) SCORSONE BROTHERS, St. Antonio-Angio, Italy. Filed March 7, 1914.

17,957.—*Title:* "GREEN DRAGON." (For Violin-Strings.) SOUTHERN CALIFORNIA MUSIC COMPANY, Los Angeles, Cal. Filed April 15, 1913.

17,958.—*Title:* "TRIPLEX BISCUIT." (For Biscuit.) TRIPLEX BISCUIT CO. INC., Buffalo, N. Y. Filed July 27, 1914.

17,959.—*Title:* "VELVET HAND CLEANSER." (For a Hand-Cleaner.) VELVET CLEANSER CO., INC., Washington, D. C. Filed February 7, 1913.

PRINTS

REGISTERED SEPTEMBER 1, 1914.

3,715.—*Title:* "ADMIRATION OUTFIT." (For Clothing.) ABRAHAM BAUMAN, New York, N. Y. Filed July 15, 1914.

3,716.—*Title:* "ALGOLA PILLS." (For Pills.) DUANE PHARMACAL COMPANY, New York, N. Y. Filed October 17, 1913.

3,717.—*Title:* "CUBIE." (For Blue.) RECKITTS (U. S. A.), LTD., New York, N. Y. Filed July 3, 1914.

3,718.—*Title:* "MAKES YOUR MOUTH WATER." (For Chewing-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 6, 1914.

3,719.—*Title:* "GETTING AWAY WITH A GOOD THING." (For Chewing-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 6, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S Circuit Court of Appeals—Seventh Circuit.

KRELL AUTO GRAND PIANO CO. OF AMERICA *v.* STORY & CLARK CO. *et al.*

Decided April 15, 1913.

207 FED. REP., 946.

1. PATENTS—VALIDITY—DETERMINATION ON DEMURRER.
A patent cannot be held invalid on demurrer to a bill for its infringement unless inevitably void either on its face or by reason of matters of such universal or common knowledge that the court may take judicial notice of them.

2. SAME—SAME—PATENTABLE COMBINATION.
A patent for a mechanism consisting of two or more elements is not necessarily invalid as an aggregation because there is no direct coaction between the elements where such coaction comes to produce a unitary result through the mediation of the operator or the operating force.

3. SAME—SAME—AUTOMATIC PIANO-PLAYER.
The Welin patent, No. 825,784, for an automatic playing attachment for musical instruments, is not void on its face either for lack of patentable novelty or as an aggregation of old elements.

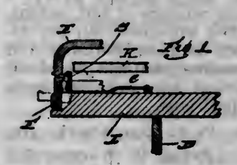
4. SAME—"AGGREGATION" DEFINED.
In one sense (which, in the interest of accurate terminology, might well be taken as the exclusive sense) "aggregation" in the law of patents means that the claims in and of themselves, independently of the prior art, show that the elements are incapable of coacting to produce a unitary result.

APPEAL from the District Court of the United States for the District of Indiana; Albert B. Anderson, judge.

STATEMENT OF THE CASE.

Appellant filed its bill, in the usual form, to hold appellees as infringers of the Welin patent, No. 825,784, issued July 10, 1906, on application filed July 20, 1904, for an "automatic playing attachment for musical instruments." Appellees demurred on the grounds (1) that no patentable novelty is disclosed in the specification and claims, and (2) that the claims are for aggregations of old elements which have not been brought into patentable combinations. Upon the demurrer's being sustained, the bill was dismissed for want of equity; and this appeal resulted.

Drawings, description, and claims of the patent are as follows:



This invention relates to that class of automatic playing attachments which are housed within the casing of the pianos to which they are applied.

The especial object of this invention is to combine the levers which control the automatic playing with the piano casing in a strong, compact, and convenient arrangement which will permit said parts to be entirely inclosed when the piano is to be played manually and while at the same time said parts will occupy comparatively little room within the casing itself.

To these ends this invention consists of the piano casing and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying two sheets of drawings, Figure 1 is a sectional view of sufficient parts of a piano casing to illustrate the application of my invention thereto; and Fig. 2 is a perspective view of the controlling levers, showing the fall-board swung down into position to permit access to the levers.

In equipping a piano case with controlling levers for the automatic playing I arrange them above the ledge of the keyboard, and the ends of the controlling levers extend out into a recess which is normally closed by a small fall-board or swinging cover and which fall-board when opened forms a ledge for guiding the hands of the user in the lateral movement of the levers. The piano casing, as usual, has a keyboard ledge or board L.

The controlling levers are preferably arranged underneath the piano keys and are ordinarily concealed from view so that there will be no indication on the exterior of the piano that the piano is provided with automatic playing attachments.

As shown in Fig. 1, the keys K are located above the ledge or board L. Below the keys K are the controlling levers C, which extend forward so that their front ends are located in a hollow key slip or recess of the keyboard ledge.

As shown most clearly in Fig. 1, this recess has an inner stationary member S and can be opened and closed by an outer member in the form of a pivoted or rockable cover or fall-board F.

When the lower fall-board F is closed, as shown in Fig. 1, it constitutes, in effect, part of a continuous rail cooperating with the fall-board or key-cover E, while when the small fall-board F is swung down or opened, as shown in Fig. 2, about its pivot, which is preferably lower than the ends of the levers, it forms, in effect, a supporting ledge for guiding the lateral movement of the hand of the operator when shifting the controlling levers.

I am aware that changes may be made in applying my invention to piano cases of different styles and proportions. I do not wish, therefore, to be limited to the construction I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is:

1. The combination of a piano casing, controlling levers for automatic playing attachments with the ends of said levers below and in front of the piano keys, and a fall-board or swinging cover for concealing said levers mounted to swing on a pivot located lower than the ends of said levers.

2. The combination of a piano casing, controlling levers for automatic playing attachments, and a pivoted fall-board or rockable member which, when in normal position, conceals the controlling levers and forms part of the ledge or rail which cooperates with the key-cover and which when open, forms a ledge or support for the hand of the operator.

3. The combination of a piano casing, controlling levers for automatic playing attachments, located below the piano keys and having their ends extending forward into a recess or opening in the key rail or ledge of the casing, and a pivoted fall-board, which, when in normal position, conceals the controlling levers, and forms part of the ledge or rail which cooperates with the key cover and which, when open, forms a ledge or support for the hand of the operator.

4. In an automatic combination-piano, a recessed or hollow key-slip composed of an inner member and an outer movable member; in combination with the key-bed, manual keyboard, and expression manipulatory devices, having their terminals beneath said key-slip.

5. In an automatic combination-piano, a recessed or hollow key-slip comprising an outer rockable member in combination with the manual keyboard and expression-manipulatory devices, having their terminals beneath said key-slip, said rockable member being adapted to swing outwardly under said manipulatory devices.

Outside the record, which consists of bill, patent, demurrer, ruling, and decree, appellees call our attention to patents, articles on piano-building and cabinet-making in encyclopedias, photographs of old paintings, histories of musical art, and catalogues of museums and world expositions.

Mr. Russell Wiles, *Mr. P. C. Dyrenforth*, *Mr. Joseph A. Minturn*, and *Mr. Frank W. Woerner* for the appellant.

Mr. Frank F. Reed and *Mr. Edward S. Rogers* for the appellees.

Before BAKER and KOHLSAAT, Circuit Judges, and WRIGHT, District Judge.

BAKER, *Cir. J.*, (after stating the facts as above:)

(1) I. Is the exhibited patent inevitably void by reason of facts within judicial notice?

In *Lange* v. *McGuin* (177 Fed., 219; 101 C. C. A., 389) this court said:

> The office of a general demurrer to a bill is to test the legal sufficiency of the averments to state a good cause of action in equity. Of course, a demurrer may be addressed to a bill for infringement of a patent as well as to any other bill. And, though the bill be in due form and complete in all its parts, yet, if the exhibited patent be inevitably void either on its face or by reason of matters of universal knowledge, the demurrer should be sustained.
>
> * * * * * *
>
> Bills in patent causes and demurrers thereto are not so unique that they are exempt from the general principles and rules of equity pleading. And therein it is not the province of a demurrer to speak of matters beyond the bill. Of course, every bill is written against the background of common knowledge; and in that view a demurrer may be said to invite the chancellor to take judicial notice of the background. But if a bill, in and by its own averments, states a *prima facie* case, that case cannot properly be overthrown by the chancellor merely on the ground that he judicially knows of facts that would support an answer. His judicial knowledge must go farther, and be so broad and all-embracing that he can properly hold that no facts exist that would tend to controvert the supposed answer and support a replication and the bill. This is so because, if such facts exist, the complainant is entitled to a hearing where he can present and argue the facts, and such a hearing cannot be had on demurrer to the bill.[1]

As a general formula it is said that courts will treat as evidence "facts of universal notoriety," "facts that may be regarded as forming a part of the common knowledge of every person of ordinary understanding and intelligence;" and that for the purpose of "refreshing the memory" reference may be made to "standard publications." Public libraries and museums are open to all. But is every book a standard publication? Is everything in a standard publication true? If true statements were somehow marked for immediate identification, would all of them be known to the person of ordinary understanding and intelligence? Is there nothing in accessible records and memorials that is rare, curious, not commonly known? But we find it unnecessary to inquire how far, if at all, appellees have been flattering the common knowledge, for, if every item be accepted as evidentiary, we are nevertheless unable to draw therefrom the finding of ultimate fact which, under the rule stated in *Lange* v. *McGuin*, would be necessary to defeat the patent.

Two classes of matters are brought forward, general publications and patents.

All that we learn from the words and pictures of the publications is that in ancient desks, cabinets, and casings of musical instruments it is common to find recesses concealed by covers that slide or are variously hinged. The precise and limited combination of the patent in suit is not found. This combination is restricted to a piano that can be played both manually and mechanically, and has to do with an instrument that in form and mechanism has wholly developed since the ancient cabinet-makers were at work.

Eighteen patents are cited. Half of these, by reason of their dates, would be eliminated as evidence of a defense if appellant on rebuttal should carry Welin's date of invention back to the beginning of the two-year period prior to his application. That is, patents and other publications since July 20, 1902, may be overcome by evidence which, if it

[1] *Brown* v. *Piper*, (91 U. S., 37; 23 L. Ed., 200;) *Slawson* v. *Grand St. R. Co.*, (107 U. S., 652; 2 Sup. Ct., 663; 27 L. Ed., 576;) *Richards* v. *Chase Elevator Co.*, (158 U. S., 299; 15 Sup. Ct., 831; 39 L. Ed., 991;) *Risdon Locomotive Works* v. *Medart*, (158 U. S., 68; 15 Sup. Ct., 745; 39 L. Ed., 899;) *Kaolatype Engraving Co.* v. *Hoke*, (C. C., 30 Fed., 444;) *N. Y. Belting & P. Co.* v. *N. J. Car-Spring & Rubber Co.*, (C. C., 30 Fed., 785;) *West* v. *Rae*, (C. C., 33 Fed., 45;) *Eclipse Mfg. Co.* v. *Adkins*, (C. C., 36 Fed., 554;) *Buckingham* v. *Iron Co.*, (C. C., 51 Fed., 236;) *Wall* v. *Leck*, (C. C., 61 Fed., 291;) *American Fiber-Chamois Co.* v. *Buckskin Fiber Co.*, (72 Fed., 508; 18 C. C. A., 662;) *Caldwell* v. *Powell*, (73 Fed., 488; 19 C. C. A., 592;) *Strom Mfg. Co.* v. *Weir Frog Co.*, (C. C., 75 Fed., 279, and *Id.*, 83 Fed., 170; 27 C. C. A., 502;) *Conley* v. *Marum*, (C. C., 83 Fed., 309, and *Id.*, 84 Fed., 990; 29 C. C. A., 680;) *Lappin Brake-Shoe Co.* v. *Corning Brake-Shoe Co.*, (C. C., 94 Fed., 162, and *Id.*, 99 Fed., 1004; 40 C. C. A., 215;) *Higgin Mfg. Co.* v. *Scherer*, (100 Fed., 459; 40 C. C. A., 491;) *Beer* v. *Walbridge*, (100 Fed., 465; 40 C. C. A., 496;) *Richards* v. *Michigan Cent. R. Co.*, (102 Fed., 508; 42 C. C. A., 484;) *Fowler* v. *City of New York*, (C. C., 110 Fed., 749;) *Milner Seating Co.* v. *Yesbera*, (111 Fed., 386; 49 C. C. A., 397;) *Mahler* v. *Animarium Co.*, (111 Fed., 530; 49 C. C. A., 431;) *Chinnock* v. *Patterson Tel. Co.*, (112 Fed., 531; 50 C. C. A., 384;) *Hocke* v. *New York Central R. Co.*, (C. C., 117 Fed., 320;) *Drake Castle Pressed Steel Co.* v. *Brownell*, (123 Fed., 86; 59 C. C. A., 216;) *American Sales Book Co.* v. *Carter-Crume Co.*, (C. C., 125 Fed., 490;) *Brunswick-Balke-Collender Co.* v. *Klumpp*, (C. C., 128 Fed., 765;) *General Electric Co.* v. *Campbell*, (C. C., 137 Fed., 600;) *American Type Founders Co.* v. *Damon & Peets*, (C. C., 140 Fed., 715;) *Kuhn* v. *Lock Stub Check Co.*, (C. C., 157 Fed., 235, and *Id.*, 165 Fed., 445; 91 C. C. A., 389;) *Southern Plow Co.* v. *Atlanta Agricultural Works*, (C. C., 165 Fed., 214;) *Victor Co.* v. *Hawthorne*, (C. C., 168 Fed., 554, and *Id.*, 178 Fed., 455; 101 C. C. A., 439;) *Neidich* v. *Edwards*, (C. C., 169 Fed., 424;) *Westrumite Co.* v. *Commissioners*, (174 Fed., 144; 98 C. C. A., 178;) *Charles Boldt Co.* v. *Nicison*, (194 Fed., 871; 114 C. C. A., 617;) *International Mausoleum Co.* v. *Sievert*, ([illegible] C. C., 197 Fed., 936.)

exists, cannot be noticed except from proofs duly introduced, and which judicial knowledge or foreknowledge cannot say is non-existent.

Among those that antedate July 20, 1902, we find none that in terms or apparent scope is exactly anticipative of Welin's combination. So the question would be whether the disclosures were so suggestive of the new modifications and constructions of Welin that mechanics skilled in the art of building combination-pianos would, or could when called on, at once adopt the suggestions, or whether there still remained room in the art for the exercise of the inventive faculty in producing the Welin device. If these prior patents be taken as proving that common knowledge includes the facts, that, at the date of Welin's production, combination-pianos were old and that various attempts to improve the location and relation of parts had been made, they do not afford the special knowledge necessary to determine whether the paper attempts in fact advanced the practical art; whether the mechanical relations between the parts necessary for manual playing and the parts for mechanical playing rendered the Welin construction difficult, if not seemingly impossible; whether mechanics skilled in the practical art had long and vainly striven to achieve the Welin result; and whether, if all the evidence respecting the art, both paper and practical, left the presumptive validity of the patent wavering in the balance, the device filled a special need, met with prompt and great success, and was recognized as a meritorious invention by those specially skilled and interested in the art, either by their keeping away from the patent, or by their paying royalties for its use.

In this case no one thing among those of which we are asked to take judicial notice squarely anticipates Welin's combinations. Though all the elements may be old and may have been variously combined, a new combination of them may involve invention. Granting that appellees' showing and argument, in the absence of other evidence, might justify a finding that the defense of want of invention was sustained, we cannot find as a fact that judicial knowledge extends to the point of knowing that appellant can produce no competent and relevant evidence in support of the patent's presumptive validity and in antagonism of the inference of ultimate fact sought to be drawn from the evidence for the defense.

II. Are the claims void because elements have been aggregated and not patentally combined?

In the books the word "aggregation" is used in different senses. Of one of these, *Richards* v. *Chase Elevator Co.* (158 U. S., 299; 15 Sup. Ct., 831; 39 L. Ed., 991; on petition for rehearing, 159 U. S., 477; 16 Sup. Ct., 53; 40 L. Ed., 225) is a good illustration. There Richards brought together certain elements in order to—

> do away with elevators, by securing the continuous and automatic transfer of grain from one car to another, weighing it in transit, and preserving the identity of each lot.

On examination of the prior art it was found that each element was old. Invention, therefore, if present, lay in a new combination of old elements. But on analysis it appeared that Richards's combination—

> resolves itself into the omission of the storage feature and a necessary incident thereto;

that is, Richards took an old combination and omitted one element and also its function. So with respect to neither the elements considered separately nor the combination viewed as an entity had Richards produced anything new. The implication, however, is that, if he had, a patentable combination might have been found. In other words, the claims, in and of themselves, independently of the prior art, did not show that the elements were incapable of coacting to produce a unitary result. If the word "aggregation," in the sense that a patent is "void for lack of invention in view of the prior art," is sought to be applied in this case, the inquiry reverts to the question of fact considered in the first part of this opinion.

(4) In another sense (which, in the interest of accurate terminology, might well be taken as the exclusive sense) "aggregation" means that the claims, in and of themselves, independently of the prior art, show that the elements are incapable of coacting to produce a unitary result. Illustrative of this is the case of *Reckendorfer* v. *Faber* (92 U. S., 347; 27 L. Ed., 719.)

> A handle in common, a joint handle, does not create a new or combined operation.

In the instances of pencil and eraser, pencil and pen, corkscrew and knife-blade, toothpick and ear-spoon, granting that each element is novel, the claims, in and of themselves, independently of the prior art, affirmatively disclose that a common handle cannot make any two or more of those elements coact to produce a unitary result, a combined operation.

Now, in Welin's device it is evident that the controlling-levers C and the fall-board F have no immediate relation with each other. It is also manifest from the face of the patent that these elements are intended to coact through the mediation of the operator. That such coaction produces new and improved results appellant argues from the face of the patent and asserts can be established by evidence; but at this stage of the case it is enough, on the question of fact, to accept the presumption of utility arising from the grant.

(2) There remains the question of law: Can a claim for a mechanism be saved from the doctrine of aggregation, as last defined, where there is no direct coaction between the elements, and where the only coaction comes through the mediation of the operator (or, what seems to us the same, the mediation of the thing or material operated upon)?

In *Morgan Envelope Co.* v. *Albany Paper Co.* (152 U. S., 425; 14 Sup. Ct., 627; 38 L. Ed., 500) the object of one of the patents was—

> to so arrange the paper as to prevent more than a given quantity of it to be withdrawn from the roll at a single operation, and so that in the act of withdrawing such given quantity it shall be automatically severed from the roll, leaving pendent from the roll a free end, which shall serve as a means of withdrawing a like quantity by the next user.

This was accomplished by having an oval roll upon an oscillating holder and a cutter fixed in such a relation that when the holder was oscillated by a pull upon the free end of the paper the roll would strike the cutter, whereupon the given quantity would be severed and the holder would return to its initial position. Several claims included the paper roll as an element of the combinations. Against these claims it was contended, first, that unlawful attempts at combinations were disclosed, and, second, that the claims, if valid, were not infringed.

The first defense—

said the court—

raises the question whether, when a machine is designed to manufacture, distribute, or serve out to users a certain article, the article so dealt with can be said to be a part of the combination of which the machine itself is another part. If this be so, then it would seem to follow that the log which is sawn in the mill; the wheat which is ground by the rollers; the pin which is produced by the patented machine; the paper which is folded and delivered by the printing press—may be claimed as an element of a combination of which the mechanism doing the work is another element. The motion of the hand necessary to turn the roll and withdraw the paper is analogous to the motive power which operates the machinery in the other instances. But without expressing an opinion upon this point, we think the facts of this case fail to sustain the charge of infringement.

Other combination claims excluded the paper-roll as an element. Respecting these, the court remarked:

No question is made but that the mechanism by which the paper is served out to the user involves a patentable novelty.

Now although the court did not explicitly consider the question herein propounded, it may be urged that this paper-roll case argumentatively supports an affirmative answer. For the oscillating paper-holder and the fixed cutter have no direct connection, no immediate relation. It is only through the mediation of the operator that the parts coact to produce the new unitary results. Operator stands as motive power and paper-roll as means of power transmission. So the oscillating holder and the fixed cutter (with their settings to bring them into one organization) can be a lawful combination only because the existence and the proper application of power are necessarily implied. Does not every claim of a mechanical combination say, "These elements, when power is properly applied, will coöperate to produce a new unitary result?" Is not this true of every patentable tool or machine? Utility is a statutory requirement. That tools and machines should be useful presupposes the existence and application of power. Whether the power be mediately or immediately human seems to us indifferent. For electricity, steam, and falling water have useful power only through human intervention, and in a machine are, after all, merely means of expressing the ultimate human power through the operator. And what difference does it make where the power is applied, whether at the beginning or the end or the middle of the group of mechanical parts? In a loom, for instance, is the operative law of the structure changed if the gears or belts, by which is transmitted from part to part the motive power that is applied only at the head of the group, should be omitted and the motive power applied independently to each part in proper time relation? Or if it were found that an intermediate belt between two parts could be omitted because the web of cloth was a sufficient power transmitter at that point?

At this session (*Oshkosh Grass Matting Co.* v. *Waite Grass Carpet Co.*, 207 Fed., 937) we are upholding, against the defense of aggregation, in a machine for making grass twine, claims for combinations of—

means for forcing the material forwardly, a funnel into which the material is received, compression rolls adapted to receive the material therebetween after said material leaves the funnel, and means, after the material is compressed, for wrapping a twine therearound,

although the compression-rolls, in the middle of the group of elements, are incapable, in the machine as organized by the inventor, of coöperating to produce the twine except through the mediation of the twine material.[3]

In stating the question we expressed our belief that it is immaterial whether the unclaimed mediator between otherwise unrelated elements be the material operated upon or the operator. The paper-roll and the grass-twine cases have to do with the material operated upon, as the connecting means. But in *Burdett-Rowntree Mfg. Co.* v. *Standard Plunger Elevator Co.* (C. C., 196 Fed., 43; affirmed by the Court of Appeals for the Third Circuit, 197 Fed., 743) the intervention of the operator was indispensable to the mechanical elements coöperating to produce the improved result. Improvement of existing automatic electric elevators was the subject-matter; and it consisted of organizing a "one-point control," whereby quicker and safer work was accomplished. The elements were the elevator-car, the electric motor in the basement of the building, call-bells, floor-bells, and door-signals. Call-bells informed the motor operator at what floors the car was wanted; floor-bells announced that the car had arrived and was waiting for passengers; and door-signals showed the operator that shaft-doors were closed before he started the motor.

By the grouping and arrangement that are said to be merely aggregation, it seems plain that an intimately related whole has in fact been evolved, in which each part has been made more effective to accomplish the common object, and in which this increased efficiency is due to the new relation of each part to the others. The total result is certainly greatly improved in the several particulars already referred to; and, while it is not a tangible product that has been improved, the new method of operation produces a clearly perceptible advance in the art. Elevators with one-point control arrangement of signals and motor are operated more rapidly, more easily, more safely, and more efficiently, and this greatly improved operation seems to be a new and beneficial result produced by a new combination and arrangement of known elements within the meaning of the language used in *Loom Co.* v. *Higgins*, (105 U. S., 580; 26 L. Ed., 1177.)

Unless an affirmative answer can be given to our question many inventions in which the unitary result would be more apparent than in the automatic-

[3] On this phase of the subject see also: 1 Robinson on Patents, (sec. 155;) *Taylor* v. *Wood*, (1 Bann. & A., 270;) *Hawes* v. *Antisdel*, (2 Bann. & A., 10;) *Stutz* v. *Armstrong*, (C. C., 20 Fed., 843;) *Bowers* v. *Von Schmidt*, (C. C., 63 Fed., 572, 583;) *Fuller* v. *Berger*, (120 Fed., 274; 56 C. C. A., 588; 65 L. R. A., 381;) *Diamond Match Co.* v. *Ruby Match Co.*, (C. C., 127 Fed., 341;) *Novelty Glass Co.* v. *Brookfield*, (170 Fed., 946, 960; 95 C. C. A., 516;) *Rand, McNally & Co.* v. *Exchange Scrip-Book Co.*, (187 Fed., 984; 110 C. C. A., 322.)

electric-elevator case might be denied the protection of the statute.

It seems to us that the man who first provided a gun with sights made a valuable invention. And although there is no coöperation between the front sight and the rear sight, or between them and the gun, except through the mediation of the marksman, yet truly the elements are brought into one organization and there contribute to a new and useful result. Between the strings and the chin-rest of a violin, the hand-rest of a mandolin, the finger-rest of a banjo, there is no connection except through the player. But it is possible that invention was required to produce the new organizations that made better playing possible. So with the banding-wheel for china decoration, wherein a revolving disk holds the china plate and a fixed rest supports the decorator's hand. So, too, with the lathe and tool-rest. In *Union Edge Setter Co.* v. *Keith* (139 U. S., 530; 11 Sup. Ct., 621; 35 L. Ed., 261) the combination of a burnishing-machine and a finger-rest was found to be unpatentable, not in law, but in fact, by reason of the prior art. In the Selden automobile patent (*Columbia Motor Car Co.* v. *Duerr & Co.*, 184 Fed., 893; 107 C. C. A., 215) the power of a gas-engine is applied to the rear wheels of the vehicle through a clutch and reducing-gears, and the separate power of the operator is applied to the front wheels through a steering-wheel and column. Though there can be no coöperation between the driving mechanism and the steering mechanism except through the hands of the driver no one questioned that the association of elements constituted a true combination.

(3) Our conclusion is that the statute should not be narrowed to exclude improvements of the kind we have illustrated from the past, and that an affirmative answer to our question should be recorded.

As neither ground of demurrer is sustainable, the decree is reversed, and the cause remanded for further proceedings.

ADJUDICATED PATENTS.

(U. S. C. C. A.) Meissner patent, No. 529,286, claim 5, for furnace swinging grate in combination with sloping fire-bed, *Held* not infringed by a structure having swinging grates operating separately and independently. *Meissner* v. *Westinghouse Mach. Co.*, 214 F., 378.

(U. S. C. C. A.) The Borsch patent, No. 637,444, for a bifocal lens for eyeglasses, and the Borsch, Jr., patent, No. 876,933, for an improvement on such lens, both *Held* valid and infringed. *Stead Lens Co.* v. *Kryptok Co.*, 214 F., 368.

(U. S. C. C. A.) The Sargent patent, No. 665,582, for a lamp-socket for electric lights, *Held* valid, but not infringed. *General Electric Co.* v. *American Brass & Copper Co.*, 214 F., 380.

(U. S. C. C. A.) The Gaynor patent, No. 705,832, for a bottle-labeling machine, claim 1 construed and *Held* not infringed. *Economic Machinery Co.* v. *Berry*, 214 F., 354.

(U. S. D. C.) The Welsbach patent, No. 837,017, for a pyrophoric alloy, *Held* novel and valid and infringed. *Treibacher Chemische Werke Gesellschaft mit Beschränkter Haftung* v. *Roessler & Hasslacher Chemical Co.*, 214 F., 410.

(U. S. D. C.) The Welsbach patent, No. 837,017, for a pyrophoric alloy, *Held* valid and infringed on a motion for preliminary injunction. *Treibacher Chemische Werke Gesellschaft mit Beschränkter Haftung* v. *Wolf Safety Lamp Co. of America*, 214 F., 414.

(U. S. D. C.) Murphy patent, No. 853,206, for curtain-fastener for carriages and automobiles, *Held* void for want of patentable novelty. *G. W. J. Murphy Co.* v. *Metal Stamping Co.*, 214 F., 382.

(U. S. D. C.) The Forsyth patent, No. 862,897, for expanded sheet metal, *Held* not infringed. *Trussed Concrete Steel Co.* v. *Corrugated Bar Co.*, 214 F., 393.

(U. S. D. C.) The Rowntree patent, No. 935,929, for a passenger-car, claims 3 to 6, inclusive, *Held* void for lack of invention and claims 7 to 16 not infringed. *Prepayment Car Sales Co.* v. *Orange County Traction Co.*, 214 F., 402.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1914.

Progressive Product Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of S. Strunz & Son, Nos. 708 to 716 Bingham street, Pittsburgh, Pa., for registration of a trade-mark and trade-mark registered May 30, 1893, No. 23,142, to the Progressive Product Company, of Jersey City, N. J., and New York, N. Y., and a notice of such declaration sent by registered mail to said Progressive Product Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Progressive Product Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Kennard & Oudesheys, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Capital City Dairy Co., of West First avenue and Perry street, Columbus, Ohio, for registration of a trade-mark and trade-mark registered August 16, 1881, No. 8,571, to Kennard & Oudesheys, of Baltimore, Md., and a notice of such declaration sent by registered mail to said Kennard & Oudesheys at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kennard & Oudesheys, their assigns or legal representatives, shall enter an appearance therein within thirty days from the

first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Sallie P. Ayres, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Cereo Company, of Tappan, N. Y., for registration of a trade-mark and trade-mark registered February 25, 1902, No. 37,850, to Sallie P. Ayres, of 1331 F street, Washington, D. C., and a notice of such declaration sent by registered mail to said Sallie P. Ayres at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Sallie P. Ayres, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 19, 1914.

The Great Golden Seal Drug Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Styron-Beggs Company, of 37 South Fourth street, Newark, Ohio, for registration of a trade-mark and trade-mark registered November 22, 1887, No. 14,954, to The Great Golden Seal Drug Co., of Chicago, Ill., and the Office having failed to secure proof of service upon The Great Golden Seal Drug Co. at the said address within the time allowed for that purpose, notice is hereby given that unless The Great Golden Seal Drug Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 15, 1914.

William Seeger, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene G. Gassaway, Fort Worth, Tex., for registration of a trade-mark and trade-mark registered November 10, 1908, No. 71,263, to William Seeger, 3515 Dodier street, St. Louis, Mo., and a notice of such declaration sent by registered mail to said William Seeger at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Seeger, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

The notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

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TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	1	North Carolina	2	.....
Arizona	1	.....	North Dakota	6	.....
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California	33	4	Oklahoma	3	.....
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Idaho	2	.....	Tennessee	5	3
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Iowa	11	.....	Vermont	1	.....
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Mississippi	2	.....	District of Columbia	7	1
Missouri	12	7	Hawaii Territory	.....	.....
Montana	4	.....	Philippine Islands	.....	1
Nebraska	6	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	3	.....	U. S. Navy	.....	.....
New Jersey	31	7			
New Mexico	.....	.....	Total to residents of the United States	641	141
New York	99	20			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	3	.....	Newfoundland	.....	.....
Belgium	1	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	7	.....	Queensland	.....	.....
Canary Islands	1	.....	Roumania	.....	.....
Cuba	1	.....	Russia	.....	.....
Denmark	.....	.....	Scotland	.....	.....
Dominican Republic	.....	.....	South Australia	.....	.....
Dutch East India	.....	.....	Spain	.....	.....
England	14	1	Sweden	.....	.....
France	3	.....	Switzerland	.....	1
Germany	11	.....	Transvaal, South Africa	.....	.....
Greece	.....	.....	Wales	.....	.....
Guatemala	.....	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	.....	1	Total to residents of foreign countries	47	3
Japan	.....	.....			
Mexico	.....	.....			

Disclaimer.

1,080,555.—*Clarence H. Howard* and *Harry M. Pflager*, St. Louis, Mo. TRUCK CONSTRUCTION. Patent dated December 9, 1913. Disclaimer filed August 24, 1914, by the assignee, *Double Body Bolster Company.*

Enters this disclaimer—

"To the said claim (17) in the said specification which is in the following words to wit:

"In a truck construction, wheel carrying axles, journal boxes, a truck frame having wheel pieces lying wholly above the axles and journal boxes, brake heads coöperating with the wheels carried by said axles, and equalising members for yieldingly supporting the truck frame upon the journal boxes, said equalising members being disposed wholly above the brake heads."

Adverse Decisions in Interference.

PATENT NO. 1,062,177.

On July 29, 1914, a decision was rendered that James T. McElfatrick was not the first inventor of the subject-matter covered by claims 1, 2, 3, and 4 of his Patent No. 1,062,177, subject "Registers," and no appeal having been taken within the time allowed such decision has become final.

Notice.

Decision leaflets of the OFFICIAL GAZETTE are sold as a separate publication—

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APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 8, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 6	July 1	561
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	July 17	678
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Aug. 8	Aug. 26	114
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 25	July 30	741
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 29	June 27	478
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 3	July 21	614
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	June 1	July 2	656
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	Aug. 1	1224
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	June 1	658
235	10. Carriages and Wagons	Apr. 15	July 6	1124
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 25	Aug. 10	261
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 6	June 15	1268
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 5	July 6	537
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 6	Aug. 6	447
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 3	July 18	965
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	July 1	724
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 10	Aug. 8	237
227	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 11	July 25	254
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	July 15	348

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	June 8	July 16	442
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 22	July 8	507
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 11	July 14	232
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 18	July 21	507
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 21	July 24	606
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 22	July 25	231
106	26. Electricity, Generation; Motive Power.	Nov. 20	June 12	929
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 2	July 23	513
65	28. Internal-Combustion Engines	May 1	June 30	648
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 8	July 15	422
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 17	July 22	415
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 22	July 20	334
278	33. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 4	July 16	756
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	Aug. 6	393
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 19	June 25	347
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264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 23	June 26	841
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 24	June 27	889
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Mar. 3	July 13	916
221	39. Water Distribution	Apr. 20	July 15	519
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 17	Aug. 10	995
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 8	July 28	470
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 16	July 1	425
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 3	July 31	314

Oldest new case, Nov. 20; oldest amended, June 1.
Total number of applications awaiting action..... 25,157

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
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	Designs	July 27	Aug. 19	227
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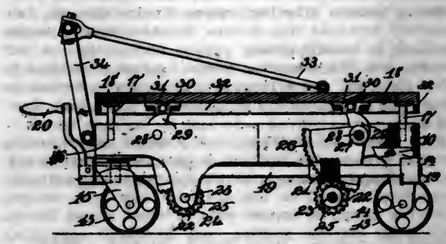
PATENTS

GRANTED SEPTEMBER 8, 1914.

1,109,654. TRUCK. ALOISE ANTOINE and JULIUS ROOS, Passaic, N. J. Filed Oct. 18, 1912. Serial No. 726,470. (Cl. 21—118.)

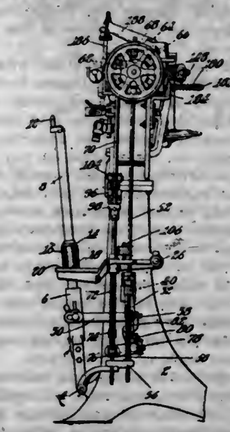


1. A truck consisting of a frame mounted on wheels, a platform movable vertically on the frame, pins on the platform, the frame having recesses to receive the pins to prevent horizontal movement of the platform, cams mounted to swing in the frame and engage the platform to support it at different elevations, transversely arranged cam-shafts on which the cams are mounted, said cam-shafts being near the top of the frame, segmental racks on the cam-shafts, a main shaft extending longitudinally through the frame below the cam-shafts and projecting from the end, a handle on the projecting end of the shaft, worms on the main shaft, transverse shafts in the frame below the cam-shafts, and gears on the transverse shafts, the gears engaging the racks and the worms.

2. A truck consisting of a rectangular frame mounted on wheels, a rectangular platform having pins on its under side, the frame being recessed to receive the pins whereby the platform is held against horizontal movement, cam-shafts mounted across the frame, spiral cams on the shafts, the cams being so disposed that when they are swung outwardly they act to raise the platform, rollers on the platform and resting on the cam, a main shaft extending longitudinally through the frame below the cam-shafts, a handle on the main shaft, transverse shafts mounted in the frame and below the main shaft, worms on the main shaft, worm-gears on the transverse shafts and meshing with the worms of the main shaft, gears on the transverse shafts, racks on the cam-shafts and in mesh with the gears of the transverse shafts, and automatic means for stopping the main-shaft when the cams have lifted the platform to its highest point.

3. A truck consisting of a frame mounted on wheels, a platform movable vertically on the frame, pins on the platform, the frame having recesses to receive the pins to prevent horizontal movement of the platform, cams mounted to swing in the frame and engage the platform to support it at different elevations, transversely arranged cam-shafts on which the cams are mounted, segmental racks on the cam-shafts, a main shaft extending longitudinally through the frame and projecting from the end, a handle on the projecting end of the shaft, worms on the main shaft, transverse shafts in the frame, gears on the transverse shafts, the gears engaging the racks and the worms, a portion of the main shaft being screw-threaded, a nut on the screw-threaded portion of the shaft and held against rotation thereon, and stops for limiting the longitudinal movement of the nut on the shaft.

1,109,655. MACHINE FOR ASSEMBLING PARTS OF BOOTS AND SHOES. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 3, 1910. Serial No. 585,111. (Cl. 12—4.)



1. A machine for assembling parts of boots and shoes having, in combination, means for supporting a shoe and means for inserting a fastening in the shoe at a point out of the plane of the sole thereof, said fastening inserting means being movable into a plurality of angular relations to a median plane extending longitudinally in the direction of the height of the shoe.

2. A machine for assembling parts of boots and shoes having, in combination, means for supporting a shoe and means for inserting a fastening in the shoe at a point out of the plane of the sole thereof and in any one of a plurality of angular relations to a median plane extending longitudinally in the direction of the height of the shoe.

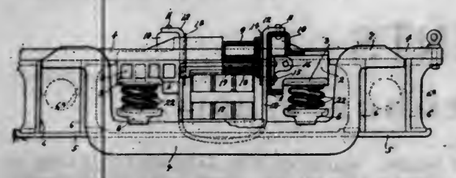
3. A machine for assembling parts of boots and shoes having, in combination, means for supporting a shoe and a driver for inserting a tack in said shoe at a point out of the plane of the sole thereof, said driver being mounted to swing horizontally through various angles, whereby the tack may be inserted in any one of a plurality of angular relations to a median plane extending longitudinally in the direction of the height of the shoe.

4. A machine for assembling parts of boots and shoes having, in combination, a last, means for wiping an upper over the edge of said last, automatic means for applying pressure to said last during the wiping operation, and additional automatic means for applying additional pressure to said last at the completion of said wiping operation.

5. A machine for assembling parts of boots and shoes, having, in combination, a last, means for wiping an upper over the edge of said last, means for applying pressure to said last during the wiping operation, means for applying additional pressure to the last at the completion of the wiping operation, and means for inserting a fastening in said upper while said extra pressure is applied.

[Claims 6 to 22 not printed in the Gazette.]

1,109,656. LOCOMOTIVE-TENDER TRUCK. FRANKLIN L. BARBER and EDWIN W. WEBB, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 20, 1914. Serial No. 819,865. (Cl. 105—243.)



1. In a car truck, the combination with truck side frames and equalizers, said trunk frames having top bars, of rigidly connected transoms and truck end castings spring supported on said equalizers, said truck end casting having horizontal flanges that underlies and vertical flanges that engage the inner edges of top bars of said truck side frames.

2. In a car truck, the combination with truck side frames and equalizers, said truck frames having top bars, of rigidly connected transoms and truck end castings spring supported on said equalizers, said truck end castings having horizontal flanges that underlie and vertical flanges that engage the inner edges of top bars of said truck side frames, stirrups located inward of said truck end castings and supported from said transoms, and a truck bolster spring supported on said stirrups.

3. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the tops of said truck end castings, the latter having horizontal flanges that underlie said top bars, and having vertical flanges engaging the inner edges of said top bars.

4. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the tops of said truck end castings, the latter having horizontal flanges that underlie said top bars, and having vertical flanges engaging the inner edges of said top bars, in combination with stirrups located inward of said truck end castings and supported by said transoms, and a truck bolster spring supported on said stirrups.

5. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the tops of said truck end castings, the latter having horizontal flanges that underlie said top bars and having vertical flanges engaging the inner edges of said top bars, in combination with stirrups located inward of said truck side frames and supported from said transoms, springs carried by said stirrups combined spring caps and roller bases supported by said springs and guided for vertical movements by said stirrups, lateral motion rollers on said combined spring caps and roller bases, said truck bolster being shorter than the distance between the vertical flanges of said truck end castings, and the said vertical flanges affording striking surfaces for the ends of the bolster.

[Claims 6 to 9 not printed in the Gazette.]

1,109,657. SWITCH-CONTROLLING SYSTEM. CLARENCE E. BEACH and HERMAN W. DOUGHTY, Binghamton, N. Y., assignors to George O. Knapp, New York, N. Y. Original application filed Oct. 31, 1910, Serial No. 589,958. Divided and this application filed Aug. 11, 1913. Serial No. 784,225. (Cl. 175—282.)

1. The combination with a series of switches of a detachable common actuating means, fixed abutments, oppositely arranged stop devices on said actuating means normally engaging said abutments, and arrangement of said stop devices to be capable of separate disengagement from said abutments.

2. The combination with a series of gang switches of a common actuating means, a detachable connection between said means and each of said gang switches, fixed abutments, oppositely arranged stop devices on said actuating means normally engaging said abutments, and arrangement of said stop devices to be capable of separate disengagement from said abutments.

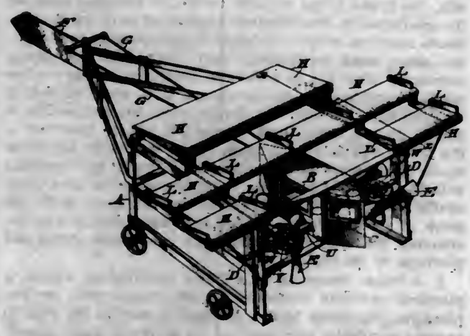
3. The combination with a series of switches of a detachable common actuating means, fixed abutments, two oppositely arranged stop devices on said actuating means arranged to simultaneously engage said abutments and thereby lock the actuating means against movement in either direction, and arrangement of said stop devices to be capable of separate disengagement from said abutments.

4. A series of switches, each capable of occupying either of two extreme positions or one intermediate or normal position, a common actuating means for said switches, mechanism adapted to automatically lock said common actuating means in normal position when moved thereto from either extreme position, and detachable connecting means between said actuating means and each of said switches constructed and arranged to be adjusted to lock each of the switches in a certain position when the actuating means is locked in a certain position.

5. The combination with a series of switches of a detachable common actuating means, two latches controlling said actuating means, arrangement of one latch to tend normally to prevent movement of the actuating means in one direction, and arrangement of the other latch to tend normally to prevent movement of the actuating means in the other direction.

[Claims 6 and 7 not printed in the Gazette.]

1,109,658. AIRSHIP. JOHN W. BOUGHTON, Philadelphia, Pa. Filed Jan. 4, 1911. Serial No. 600,765. (Cl. 244—12.)



1. In an airship, a frame, and a bank of wings arranged substantially horizontally thereon and disposed transversely, each wing having its forward end deflected downwardly and rearwardly, its upper face inclined downwardly and rearwardly, and guards at the opposite edges of the upper face of said wing extending substantially vertically.

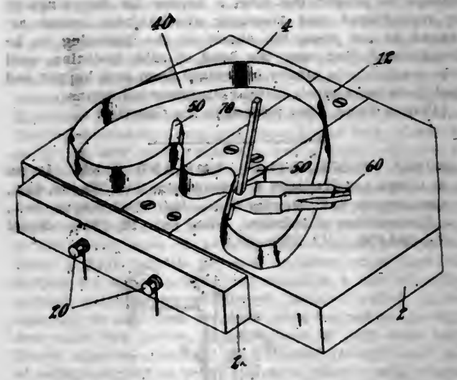
2. In an airship, a frame, and wings secured thereto in banks disposed transversely across said frame in different horizontal planes, each wing having vertical transversely disposed guards to prevent lateral deflection of the air on the backs of the wings, said wings having inclined upper surface and provided with an elbow upon its under face.

3. In an air ship, a frame and wings secured thereto in banks disposed transversely across said frame in different horizontal planes, each wing having thereon a downward deflection presented to the front and extended rearwardly beneath the body of the wing forming elbows upon their under faces to direct air beneath said wing and impact it forwardly on the back of said deflection, said wings having inclined upper surfaces and upwardly extended means upon their upper faces on opposite sides, to retain vacuums on the upper faces of the wings and to prevent lateral deflection of the air on the backs of said wings.

4. In an airship, a wing having thereon a downward deflection presented to the front and extended rearwardly beneath the body of the wing to direct air beneath said wing and impact it forwardly on the back of said deflection, said wing being reinforced within its front terminal and upon its upper face provided with vertical guards at opposite edges thereof.

5. In an airship, a wing having thereon a downward deflection presented to the front and extended rearwardly beneath the body of the wing to direct air beneath said wing and impact it forwardly on the back of said deflection, the terminal of said wing having a transverse reinforce therein, said wing being provided with vertical guards at opposite edges thereof, the upper face of the wing being inclined downwardly and rearwardly.

1,109,659. ART OF SOLDERING. ALBERT R. BRADEN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 9, 1909. Serial No. 532,152. (Cl. 113—112.)

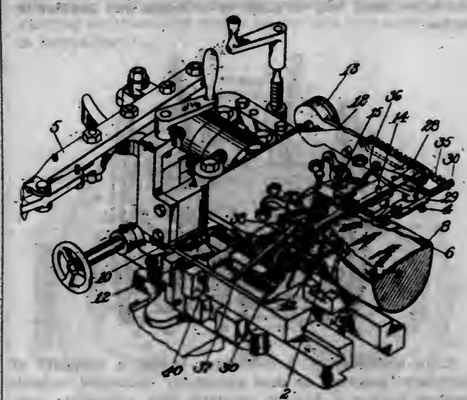


1. The method of producing soldered joints between metal pieces, which consists in arranging the pieces in the required relation with adjacent vertical faces in contact, magnetically clamping the pieces to a support in fixed position and magnetizing the pieces to clamp them to each other, heating the pieces while so clamped, and applying solder to the upper edge of the joint.

2. The method of producing soldered joints between metal pieces, which consists in arranging the pieces with their corresponding faces in a common plane, clamping the pieces magnetically in fixed position and simultaneously magnetizing the pieces to clamp them to each other, heating the pieces while so clamped to a temperature below the fusing point of the pieces and applying solder to the upper edge of the joint.

3. The method of producing soldered joints between metal pieces which consists in magnetizing the pieces to hold them in contact with each other, heating them to a temperature below the melting point of solder, running melted solder between the pieces, and finally demagnetizing the pieces.

1,109,660. TOE-BINDING APPARATUS. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 14, 1910. Serial No. 571,941. (Cl. 12—14.)



1. In a machine of the class described, a binder holder mounted for movement at an angle to the plane of the shoe bottom from a position to receive a toe binder into position to deliver the binder to a shoe.

2. In a machine of the class described, toe lasting mechanism, a binder holder adapted to receive a toe binder that is unattached to the shoe while the holder is in a position remote from the work and which is movable independently of the toe lasting mechanism to deliver the binder in a position in which it embraces the toe portion of the shoe.

3. In a machine of the class described, the combination with end embracing wipers, of a binder holder movable from binder receiving position above the plane of the wipers into position to deliver the binder in front of the wipers.

4. In a machine of the class described, the combination with end embracing wipers, and means for actuating the wipers to work an upper into lasted position over the feather of an innersole and then to back away from the edge portion of the upper to permit the application of a toe binder, of a binder holder movable to apply a binder to the shoe in the channel between the edge portion of the upper and said wipers.

5. In a machine of the class described, the combination with end embracing wipers, and means for actuating the wipers to work an upper into lasted position over the feather of an innersole and then to back away from the edge portion of the upper to permit the application of a toe binder, of a binder holder movable downwardly into the channel between the edge of the upper and said wipers to deliver a bowed binder in said channel.

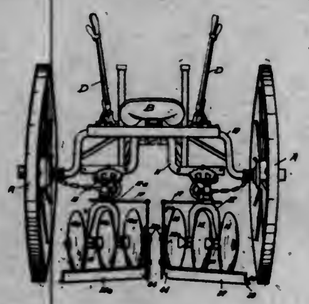
[Claims 6 to 49 not printed in the Gazette.]

1,109,661. CULTIVATOR. IVELL R. CARROLL, Milmine, Ill. Filed Mar. 13, 1911. Serial No. 614,233. (Cl. 97—37.)

1. In combination, a cultivator having a plurality of cultivator sections, an arm adjustably connected to each section having a hanger pivotally and adjustably connected to its inner end, a blade member adjustably attached to the lower portion of each hanger, said blade members being spaced apart and extending obliquely to the line of draft.

2. In combination, a cultivator having a plurality of cultivator sections, an arm adjustably connected to each section having a hanger pivotally and adjustably connected to its inner end, a blade member adjustably attached to the lower portion of each hanger, said blade members being spaced apart and extending obliquely to the

line of draft, the adjustment for said blade members being provided by a curved slot at the lower end of each hanger and an aperture thereabove, elongated slots in said blade member and securing means passing through said curved slot and aperture and said elongated slots whereby the adjustment may be made as to height and angular relation.

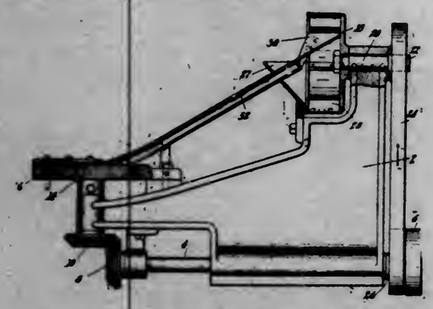


3. In combination, a cultivator having a plurality of cultivator sections, an arm adjustably connected to each section having a hanger pivotally and adjustably connected to its inner end, a blade member adjustably attached to the lower portion of each hanger, said blade members being spaced apart and extending obliquely to the line of draft, and fenders adjustably secured to said hangers and extending forwardly therefrom to prevent injury to the growing crop.

4. An attachment for an agricultural implement comprising an arm slotted so as to be capable of adjustable attachment thereto, a hanger adjustably pivoted to one end of said arm, and a blade member adjustably connected to said hanger, said blade member including an attaching portion extending parallel to said hanger and a blade proper extending obliquely therefrom.

5. An attachment for an agricultural implement comprising an arm slotted so as to be capable of adjustable attachment thereto, a hanger adjustably pivoted to one end of said arm, and a blade member adjustably connected to said hanger, said blade member including an attaching portion extending parallel to said hanger and a blade proper extending obliquely therefrom, and a fender adjustably attached to said hanger.

1,109,662. MACHINE FOR OPERATING UPON FASTENINGS. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 23, 1908. Serial No. 459,187. (Cl. 153—32.)



1. Mechanism for straightening nails and similar headed fastenings comprising a rotating disk, a member lying in the plane of rotation of said disk, said member having a surface concentric to and adjacent to the periphery of said disk between which and said periphery the shanks of said fastenings to be straightened are rolled while suspended by the heads of the fastenings, and means for delivering fastenings in succession to said straightening mechanism.

2. A machine of the class described, having in combination, fastening straightening means, comprising two relatively movable members between the adjacent surfaces of which the fastenings to be straightened are rolled, and means for delivering fastenings to said straightening means, one of said surfaces being reduced in that dimension along which the shank of the fastenings to be straightened extends at the point where the fastenings are delivered to said straightening means.

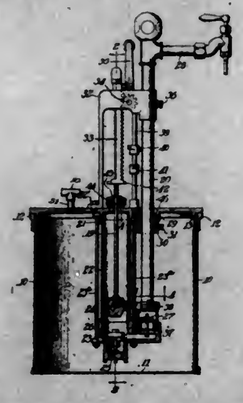
3. A machine of the class described, having in combination, fastening straightening mechanism, comprising relatively movable members between the adjacent surfaces of which the fastenings to be straightened are rolled, means for delivering fastenings to said straightening mechanism, one of said relatively movable members being so constructed that the vertical dimension of its rolling surface increases from a measurement less than the length of the fastenings to be straightened near the point where the fastenings are delivered to said mechanism to a measurement equal to, or greater than, the length of said fastenings at a distance from the point at which the fastenings are delivered to said mechanism.

4. In a machine of the class described, fastening delivering means comprising an inclined, cylindrical tube slotted in its upper face, means for guiding the shanks of the fastenings into the upper end of the slot in said tube with the heads of the fastenings overlying the sides of the slot, and straightening mechanism for the shanks of nails and similar fastenings operatively connected with the lower end of the slot in said tube.

5. Mechanism for straightening fastenings, having, in combination, a fastening raceway comprising an inclined, slotted tube bent toward a horizontal plane at its lower end and so reduced at said end that the shanks of the fastenings lie outside the tube, a hopper for fastenings to be straightened and fastening straightening means arranged to act upon the shank of the fastening to be straightened first near the head of said fastening, said tube operating to convey fastenings from said hopper and feed them successively to said straightening means.

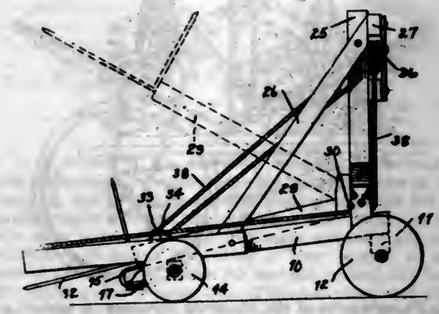
[Claims 6 and 7 not printed in the Gazette.]

1,109,663. COMBINATION PUMP AND TANK. DAVID A. COREY and HERBERT J. GROSVENOR, Fort Wayne, Ind., assignors to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Oct. 16, 1911. Serial No. 654,805. (Cl. 221—80.)



In a liquid dispensing apparatus the combination with a closed tank of a single cast metal cover therefor formed with a depending flange to fit the inside of the tank, the said cover being provided with openings therethrough, some of said openings being surrounded above and below the cover with annular projections forming packing gland cases and one of said openings being adjacent the periphery of said cover, the edges of the cover being formed with slots, hinged clamping bolts secured to the tank adjacent the top thereof and adapted to be pivotally swung into engagement with the slots of said cover, winged nuts to engage said bolts to bind the cover in position and a lid for the said opening adjacent the periphery of the cover adapted, when in closed position, to be engaged on one side by one of the winged nuts for securing the cover in position, and a separate winged nut inserted through the other side of the lid into the cover for securing the lid firmly in position.

1,109,664. HAY-PITCHER. ORLA E. COX, Hoopeston, Ill. Filed Aug. 12, 1913. Serial No. 784,377. (Cl. 57—53.)



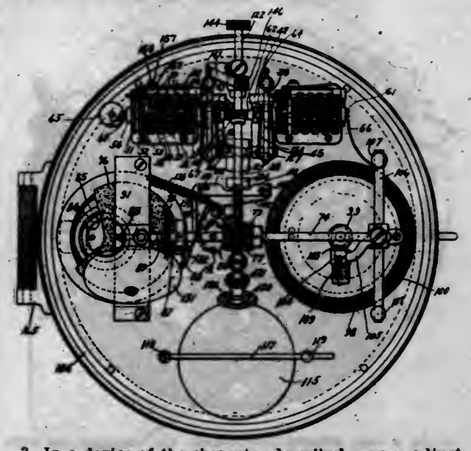
1. A pitcher including a wheeled truck, uprights on the rear end of said truck, a hay fork having fork arms pivoted to the lower ends of said uprights, upper pulleys and lower pulleys carried on said uprights, a pair of pulleys centrally secured between the upper ends of said uprights, a pulley centrally secured on said fork, a loop cable having the bight trained over said fork pulley, the ends of said cable being from thence trained through said pair of centrally secured pulleys, and thence directed in opposite directions through said upper upright pulleys and thence directed forwardly along and beyond said fork, means for anchoring said truck stationary, and a draft appliance attachable to said cable for drawing forwardly said cable with a resultant raising of said fork to dumping position.

2. A pitcher including a wheeled truck, uprights on the rear end of said truck, a hay fork having fork arms pivoted to the lower ends of said uprights, upper pulleys and lower pulleys carried by said uprights, cross bars connecting the upper ends of said uprights, a pair of pulleys carried centrally by said cross bars, a pulley carried centrally by said fork, a looped cable trained at the bight over said fork pulley, the terminals of said cable being thence directed upwardly and trained through said pair of pulleys carried by said cross bars, thence being trained in opposite directions and passed through the pulleys at the upper ends of said uprights, thence trained downwardly and passed through the pulleys at the lower ends of said uprights, thence directed forwardly beyond said fork, means for anchoring said truck stationary, and a draft appliance attachable to the ends of said cable for drawing out said cable with a resultant raising of said fork to dumping position.

1,109,665. ENGINE-LOG FOR VESSELS. HENRY H. CUMMINGS, Newton, Mass. Filed Dec. 6, 1909. Serial No. 531,530. (Cl. 235—91.)

1. In an apparatus of the kind described, the combination with the engine, of automatic means to indicate the length of time of a given number of revolutions of the engine, including stop-watch mechanism, means to start said watch, automatic means responsive to the engine to stop said watch mechanism at the end of said given number of revolutions of the engine, and signaling mechanism to signal to the navigator before said watch mechanism is restored again to starting position.

2. In an apparatus of the kind described, the combination with a plurality of ship's engines for propelling a ship, of automatic means to indicate the length of time of a given number of revolutions, and manually controlled means for rendering said automatic means responsive to any one of said engines desired, including visual means indicating automatically which engine said automatic means is responding to.



3. In a device of the character described, means adjustable in accordance with the number of operations of some part of any one of a plurality of the ship's propelling mechanisms necessary to propel the ship a unit of distance, a result-indicator operable by said propelling mechanism, means adjustable by the adjustment of the first mentioned means to vary the amount of movement of said result-indicator relatively to a given number of said operations, and manually controlled means for connecting said result-indicator to any one of said plurality of propelling mechanisms as desired.

4. In an apparatus of the kind described, the combination with a plurality of ship's engines for propelling a ship, of means capable of being actuated by any one of said engines and having manually operated adjustment with reference to the ship's slippage and other external travel-affecting conditions for indicating the distance traveled by the ship through the water in terms of distance units or measurements, and manually controlled means for connecting said indicating means to any one of said engines as described, including visual means indicating automatically which engine is actuating said indicating means.

5. In an apparatus of the kind described, the combination with a plurality of ship's engines for propelling a ship, of automatic means responsive to the movements of any one of said engines to indicate distance measurements, regulating means for said automatic means for setting the latter in accordance with the number of revolutions of the engine necessary to make a unit of said measurement, and manually controlled means for rendering said automatic means responsive to any one of said engines desired.

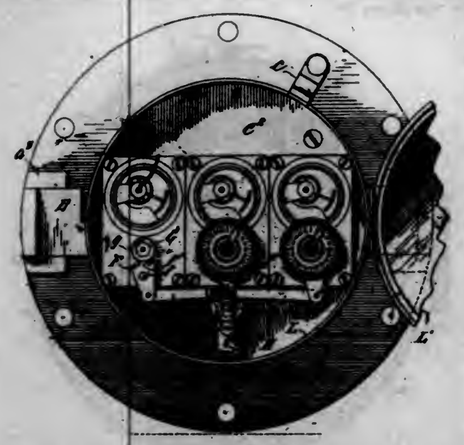
[Claims 6 to 24 not printed in the Gazette.]

1,109,666. AUTOMATIC BOLTWORK FOR SAFES. HARRY MILTON DALTON, Cincinnati, Ohio. Filed Mar. 4, 1908. Serial No. 419,218. (Cl. 109—9.)

1. In a safe locking mechanism, the combination with safe bolts, of a spring for moving said bolts from locked to unlocked position, a trigger for holding said spring from movement, a revoluble device having a disk for holding said trigger, said trigger being constructed to engage a sufficient extent of the periphery of said disk to be held thereby from movement, a timer mechanism and connecting means to release said trigger.

2. In a safe locking mechanism, the combination with safe bolts, of a spring for moving said bolts from locked

to unlocked position, a trigger and connections to hold said spring and bolts in locked position, a revoluble device having a disk to hold the trigger from moving from locked position, said disk having a notch in its periphery to release the said trigger to unlock said spring and bolts, and a timer mechanism to move the said disk to unlock the safe.



3. In a safe locking mechanism, the combination with a locking member, of a spring for moving said locking member from locking to unlocking position, means for compressing said spring and moving said locking member to locking position, means including a revoluble device for holding the said spring and locking member from movement, said revoluble device having a spring connected therewith to move it to and hold it in locking position, and a timer mechanism to move said revoluble device to release said bolt spring.

4. In a safe locking mechanism, the combination with a locking member, of a spring for moving said locking member from locked to unlocked position, a trigger operatively connected to said spring to hold said unlocking spring from movement, a revoluble device for engaging a recess in said trigger to hold it from movement, a spring for moving said revoluble device to and hold it in locking engagement with said trigger, and a timer mechanism to turn said revoluble device to release said trigger.

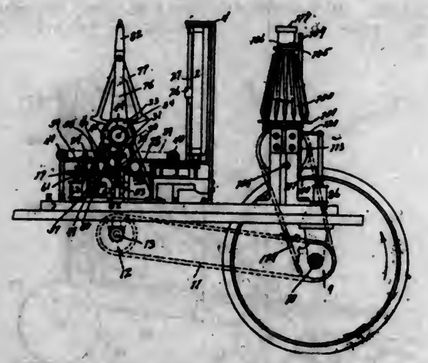
5. In a safe lock, the combination with the safe bolts and a spring for moving them from locked to unlocked position, of a trigger for holding said means from action, said trigger being provided with a concave surface, and a notch or recess adjacent thereto, a trigger holding means having a convex surface for engaging the concave surface of the trigger and a pin or projection adapted to be moved into the notch in the trigger, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

1,109,667. SURVEYING INSTRUMENT. MYRON J. DIKEMAN, Detroit, Mich. Filed Jan. 2, 1913. Serial No. 739,651. (Cl. 234—8.)

1. In apparatus of the character described, a vehicle, a record sheet carried thereby, a marking device adapted to produce a line on said sheet, means operated by movement of the vehicle for moving the marking device across the sheet, means for moving the sheet at right angles to the direction of movement of the marking device, means for regulating the speed of movement of the marking device and of the record sheet, means for making a visible record of the line traversed on the surface passed over by the vehicle, said last mentioned means being controlled by the means for regulating the speed of movement of the record sheet.

2. In apparatus of the character described, a vehicle, a record sheet carried thereby, a movable marking device for producing a profile line on said sheet, a stationary marking device for producing a datum line on the sheet, means actuated by movement of the vehicle for moving the profile marking device across the sheet, means for simultaneously moving the record sheet at right angles to the direction of movement of the profile marking device, means for regulating the speed of movement of the profile marking device and of the record sheet, and means for making a visible record of the line of the line traversed on the surface passed over by the vehicle, said last mentioned means being controlled by the means for regulating the speed of movement of the record sheet.



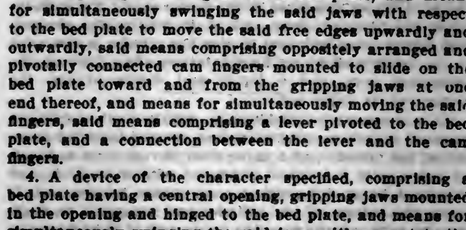
3. In apparatus of the character described, a vehicle, a record sheet vertically positioned thereon, a movable marking device for producing a profile line on said sheet, a stationary marking device for producing a datum line on said sheet, means for moving the movable marking device vertically across the sheet, means for simultaneously moving the record sheet horizontally, means for regulating the speed of movement of the record sheet whereby the datum line produced by said movement is indicative of the distance traversed by the vehicle in a horizontal plane, means for regulating the speed of movement of the movable marking device whereby the line traced thereby is indicative of the surface distance traversed, and means for setting markers in the surface on the line traversed at equidistant points in a horizontal plane.

4. In apparatus of the character described, a vehicle, a record sheet carried thereby, a movable marking device for producing a profile line on said sheet, a stationary marking device for producing a datum line on said sheet, means for moving the movable marking device across the sheet, the line of said movement being fixed, means for simultaneously moving the record sheet at right angles to the direction of movement of the movable marking device, means for regulating the speed of movement of the record sheet whereby the datum line produced by said movement is indicative of the distance in a horizontal plane traversed by the vehicle, means for regulating the speed of movement of the movable marking device whereby the line traced thereby is indicative of the surface distance traversed, means for setting markers in the surface on the line traversed, means controlled by the speed regulating means of the record sheet whereby the markers are set in the surface at equidistant points in a horizontal plane, and means for indicating on the record sheet the relative point at which the markers are set.

5. In apparatus of the character described, a vehicle, a record sheet vertically positioned thereon, a movable marking device for producing a profile line on said sheet, the sheet being movable horizontally and the marking device movable vertically, a friction disk rotated by movement of the vehicle, a friction wheel engaging the disk for controlling the speed of movement of the marking device, a second friction wheel engaging the disk for controlling the speed of movement of the record sheet, means set in operation by alterations in the inclination to a horizontal plane of the surface traversed for positioning the friction wheels on the friction disk whereby the speed of movement of the marking device and of the record sheet may be altered to accord with the surface distance traversed, means for setting markers in the surface on the line traversed, and means controlled by said second friction wheel for regulating the spacing of the markers.

[Claims 6 to 8 not printed in the Gazette.]

1,109,668. SUCKER-ROD-PULLING DEVICE. JOSEPH B. DUNLAP and WILLIAM D. BRYAN, Tulsa, Okla. Filed Apr. 18, 1913. Serial No. 761,973. (Cl. 24—249.)



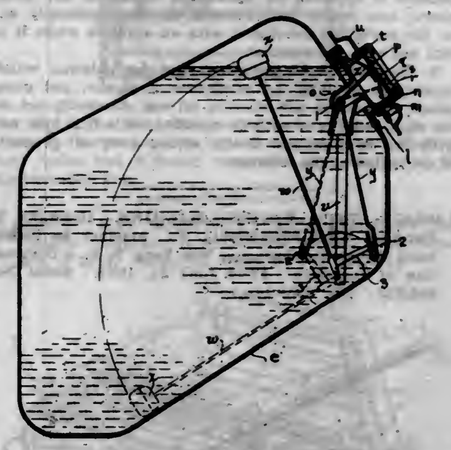
1. A device of the character specified, comprising a bed plate having a central opening, gripping jaws in the opening, and hinged to the bed plate, and means for simultaneously swinging the said jaws with respect to the bed plate to move the said free edges upwardly and outwardly, said means comprising a lever pivoted at one end of the bed plate, a slide bar movable toward and from the opening on the upper face of the bed plate, said slide bar being in approximate alinement with the free edges of the jaws, a slidable connection between the said bar and the bed plate, a pivotal connection between the outer end of the bar and the lever, arc-shaped cam fingers, said fingers being oppositely arranged and each finger being pivoted at its outer end to the inner end of the slide bar, the convex edges of the fingers being adjacent and the said fingers diverging toward their free ends, the said free ends extending above the opening of the bed plate and beneath the adjacent gripping jaws, and a slidable connection between each cam finger and the bed plate.

2. A device of the character specified, comprising a bed plate having a central opening, gripping jaws in the opening and said jaws being hinged to the bed plate, and means for simultaneously swinging the said jaws with respect to the bed plate to move the said free edges upwardly and outwardly, said means comprising a lever pivoted at one end of the bed plate, a slide bar movable toward and from the opening on the upper face of the bed plate, said slide bar being in approximate alinement with the free edges of the jaws, a slidable connection between the said bar and the bed plate, a pivotal connection between the outer end of the bar and the lever, cam fingers slidably connected to the bed plate and having their inner ends extending above the opening of the bed plate and beneath the adjacent gripping jaw to raise the said jaws when the fingers are moving toward the opening, and a connection between the said fingers and the slide bar.

3. A device of the character specified, comprising a bed plate having a central opening, gripping jaws mounted in the opening and hinged to the bed plate, and means for simultaneously swinging the said jaws with respect to the bed plate to move the said free edges upwardly and outwardly, said means comprising oppositely arranged and pivotally connected cam fingers mounted to slide on the bed plate toward and from the gripping jaws at one end thereof, and means for simultaneously moving the said fingers, said means comprising a lever pivoted to the bed plate, and a connection between the lever and the cam fingers.

4. A device of the character specified, comprising a bed plate having a central opening, gripping jaws mounted in the opening and hinged to the bed plate, and means for simultaneously swinging the said jaws with respect to the bed plate to move the said free edges upwardly and outwardly, said means comprising oppositely arranged and pivotally connected cam fingers mounted to slide on the bed plate toward and from the gripping jaws at one end thereof, and means for simultaneously moving the said fingers.

1,109,669. GASOLENE-GAGE. CHARLES OZRO EGERTON, Detroit, Mich., assignor to Hudson Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 8, 1914. Serial No. 810,952. (Cl. 73—82.)



1. A liquid gage, having in combination with a tank, a ring riveted thereto, a gage body comprising a flanged portion that is detachably secured to the ring in an air-tight fit, a threaded tubular portion, and a complete sheath extending downward into the tank and open only at the lower end, a packing gasket at the end of the tubular portion, a glass overlying the gasket, a cap screwing onto the tubular portion and adapted to hold the glass in and pack the same against the gasket to form an air-tight fit, and an indicator member partially in said body of the gage casing and arranged to swing on an axis transverse of the body, and means within the tank for operating the indicator member.

2. A liquid gage, having in combination with a tank, a gage body secured thereto in air-tight relation and comprising a tubular threaded portion, an annular flange by which the same is secured to the tank, and a complete sheath extending downward into the tank and open only at its lower end, a plate provided with a sight opening placed against the end of the tubular portion, a glass overlying the said plate, a cap for holding the glass to the plate and screwing into the threads of the tubular portion, an indicator plate adapted to swing across the sight opening on an axis transverse of the gage body, and means within the tank for operating the indicator plate in accordance with the liquid level.

3. A liquid gage, having in combination with a tank, a body secured to the tank in air-tight relation and having closed sides extending downward into the liquid space of the tank to form an air trap, a transparent member having an air-tight fit with the upper end of the body, and indicator means partially located in the air trap chamber and passing out of the opening in the body at or near the lower end, the said indicator means being arranged to swing on an axis transverse of the gage body.

1,109,670. METHOD OF PREPARING STEEL FOR PAINTING. GEORGE D. FEIDT, Philadelphia, Pa., assignor, by mesne assignments, to American Chemical Paint Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 4, 1914. Serial No. 816,537. (Cl. 148—42.)

1. The method of preparing steel for painting which consists in treating it with an alcohol phosphate dissolved in alcohol.

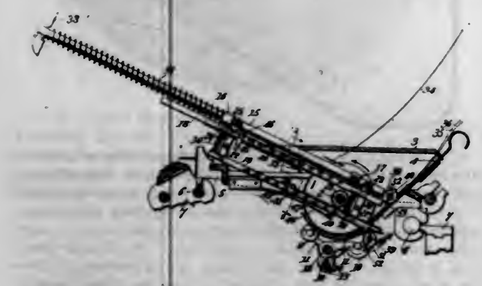
2. The method of preparing steel for painting which consists in treating it with an admixture of alcohol and phosphoric acid, which will dissolve oil and act on the steel.

3. The method of preparing steel for painting which consists in applying an alcoholic solution of orthophosphoric acid.

4. The method of preparing steel for painting which consists in applying an admixture of alcohol and phosphoric acid which will dissolve oil and chemically act on the steel, and rubbing it with an abrasive while it is still wet with the solution.

5. The method of preparing steel for painting which consists in applying an admixture of alcohol and phosphoric acid which will dissolve oil and chemically act on the steel, rubbing it with an abrasive while it is still wet with the solution, and finally wiping away all products of the action of the solution.

1,109,671. TYPE-WRITING MACHINE. HERMANN V. FENGLER, West Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 24, 1914. Serial No. 846,933. (Cl. 197—116.)



1. In a typewriting machine, the combination with a platen, of a driver for rotating the platen first in one direction, and then in the other direction during the movement of the driver in one direction, said driver returnable to initial position without rotating the platen during its return movement.

2. The combination with a platen, of a driver for rotating the platen, said driver comprising racks, and gearing between said racks and the platen, one of said racks operable through said gearing to rotate the platen in one direction, and the other rack operable through said gearing to rotate the platen in the opposite direction.

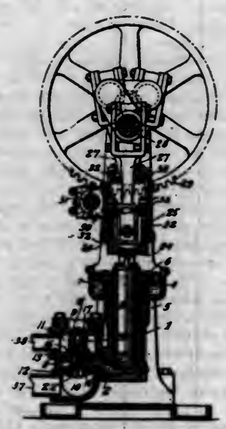
3. In a typewriting machine, the combination with a roller platen, of a gear pinion connected to rotate the platen, a reciprocating driver to rotate said pinion, said driver comprising parallel supporting bars, links connecting said bars, racks adjustably mounted in said bars, one of said racks located in advance of the other to engage said pinion and rotate the platen in one direction during part of the advance movement of the driver, the other rack being in position to engage said pinion and rotate the platen in the opposite direction during a further advance movement of the driver, cams in position for holding said supporting bars in operative position during the advance of the driver, said cams mounted to swing out of said holding position during the return of the driver, springs to hold said supporting bars out of operative position during the return of the driver, a detent to hold the driver in an intermediate position after the first rack has operated but before the second rack has operated, an adjustable stop to limit the advance movement of the driver, and a spring to hold the driver in its normal position.

4. In a typewriting machine, the combination with a roller platen, of a gear pinion connected to rotate the platen, a reciprocating driver to rotate said pinion, said driver comprising parallel supporting bars, links connecting said bars, and racks adjustably mounted in said bars, one of said racks located in advance of the other to engage said pinion and rotate the platen in one direction during part of the advance movement of the driver, the other rack being in position to engage said pinion and rotate the platen in the opposite direction during a further advance movement of the driver.

5. In a typewriting machine, the combination with a roller platen, of a gear pinion connected to rotate the platen, a reciprocating driver to rotate said pinion, said driver comprising parallel supporting bars, links connecting said bars, racks adjustably mounted in said bars, one of said racks located in advance of the other to engage said pinion and rotate the platen in one direction during part of the advance movement of the driver, the other rack being in position to engage said pinion and rotate the platen in the opposite direction during a further advance movement of the driver, cams in position for holding said supporting bars in operative position during the advance of the driver, said cams mounted to swing out of said holding position during the return of the driver, and springs to hold said supporting bars out of operative position during the return of the driver.

[Claims 6 to 32 not printed in the Gazette.]

1,109,672. PUMP. WILLS M. FLEMING, Holyoke, Mass., assignor to International Steam Pump Company, a Corporation of New Jersey. Filed June 5, 1913. Serial No. 771,841. (Cl. 103—77.)



1. In a pump, the combination, with a vertical cylinder having a transverse port extending upward from the lower end of the cylinder, of a valve-chest having inlet and outlet valve-seats separated by an intervening space whose bottom wall is above the bottom of the cylinder and arranged to drain therein, with which space the upper end of the transverse port connects, upward-opening inlet and outlet valves coacting with the respective seats, a single-acting plunger movable in the cylinder and longer than the same, said plunger fitting the cylinder to confine all cylinder clearance to the lower end of the cylinder below the plunger, means for reciprocating the plunger, said means being arranged to give the plunger a clearance at its lower end whose height is less than that of the transverse port, and a liquid seal device around the plunger at its upper end.

2. In a pump, the combination, with a vertical cylinder having a transverse port extending upward from the lower end of the cylinder, of a valve-chest having inlet and outlet valve seats in vertical alinement with each other, and separated by an intervening space whose bottom wall is above the bottom of the cylinder and arranged to drain therein, with which space the upper end of the transverse port connects, upward-opening inlet and outlet valves coacting with the respective seats, a single-acting plunger movable in the cylinder and longer than the same, said plunger fitting the cylinder to confine all cylinder clearance to the lower end of the cylinder below the plunger, means for reciprocating the plunger, said means being arranged to give the plunger a clearance at its lower end whose height is less than that of the transverse port, and a liquid-seal device around the plunger at its upper end.

3. In a pump, the combination, with a vertical cylinder having a transverse port extending upward from the lower end of the cylinder, of a valve-chest having inlet and outlet valve-seats separated by an intervening space whose bottom wall is above the bottom of the cylinder and arranged to drain therein, with which space the upper end of the transverse port connects, upward-opening inlet and outlet valve coacting with the respective seats, a single-acting plunger movable in the cylinder and longer than the same, said plunger fitting the cylinder to confine all cylinder clearance to the lower end of the cylinder below the plunger, means for reciprocating the plunger, said means being arranged to give the plunger a clearance at its lower end whose height is less than that of the transverse port, an outside packing device for the plunger and a liquid-holding basin having walls surrounding the packing device and spaced away laterally therefrom, said walls extending above the packing and arranged to contain liquid at a level such that said liquid will contact with the plunger.

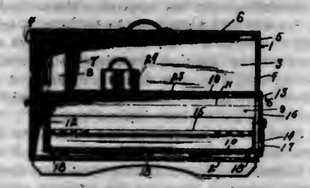
4. In a pump, the combination, with a vertical cylinder having a transverse port extending upward from the lower end of the cylinder, of a valve-chest having inlet and outlet valve seats separated by an intervening space whose bottom wall is above the bottom of the cylinder and arranged to drain therein, with which space the upper end of the transverse port connects, upward opening inlet and outlet valves co-acting with the respective seats, a single-acting plunger movable in the cylinder and longer than the same, said plunger fitting the cylinder to confine all cylinder clearance to the lower end of the cylinder below the plunger, slides above the plunger, an adjustable crosshead connected to the plunger and movable in the slides, means located at the upper face of the crosshead for adjusting it in the slides, means for moving the crosshead plunger, said means being arranged to give the plunger a clearance at its lower end whose height is less than that of the transverse port, an outside packing device at the upper end of the plunger, and a liquid-holding basin having walls surrounding the plunger and packing device and spaced away laterally therefrom, said walls extending above the packing device to hold liquid at a level such that said liquid will contact with the plunger.

5. The combination, with a three-cylinder single-acting outside packed plunger pump, and means for driving the plungers in three-phase relation to each other, each cylinder having an upwardly extending transverse port opening into the lower end of said cylinder, of a valve-chest having an inlet-chamber and an outlet-chamber, and a plurality of intermediate spaces, one for each cylinder, each connected to the upper end of the respective transverse port and having its bottom wall above the bottom of its respective cylinder, inlet valves between the inlet chamber and the respective intermediate spaces, outlet valves between the outlet chamber and the respective intermediate spaces, a liquid-holding basin having walls surrounding the outside packing devices of all the cylinders and spaced away laterally therefrom, said basin having walls extending above the packing devices, and means for causing a circulation of liquid through said basin at a level such that said liquid will contact with the plungers.

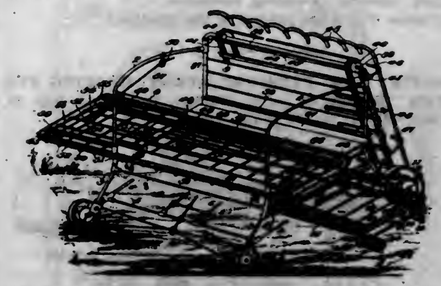
1,109,673. CANNING APPARATUS. EDGAR LEE FLOWERS, Hickory, N. C., assignor to Home Canner Company, Hickory, N. C. Filed Sept. 13, 1913. Serial No. 789,717. (Cl. 126—346.)

A canning apparatus comprising a boiler, a chamber formed in one end of the boiler, a cover for the upper end of the boiler, a furnace mounted in the boiler and having its bottom, sides and one end spaced from the interior surface of the boiler, the other end of said furnace being open, a door opening formed in one end of the boiler, and

in registry with the open end of the furnace, a door for closing the opening, a horizontally disposed flue leading from one end of the furnace and spaced therefrom and one side of the boiler, said flue passing through the chamber and boiler to permit products of combustion to pass from the furnace and to heat the liquid in said chamber and boiler and a frame removably supported upon the furnace and flue.



1,109,674. HAY GATHERING AND STACKING MACHINE. WALLACE G. GALLAHER, Salida, Colo. Filed Nov. 9, 1911. Serial No. 659,376. (Cl. 214—2.)



1. In a hay gathering machine of the character described, a main supporting frame, a hay rack mounted upon the frame and including an upwardly extending back and front, a conveyer pivotally mounted upon the main frame at one end thereof approximately at the level of the floor of the rack, a conveyer carried upon the main frame and the conveyer supporting frame and forming the floor of the rack and one end of the rack when the pivoted conveyer supporting frame is turned to a vertical position, means for driving the said conveyer, and means for disengaging the conveyer from the driving means.

2. In a hay gathering machine of the character described, a main supporting frame, a hay rack mounted upon the frame and open at its ends and including upwardly extending front and rear members, auxiliary frames pivotally mounted at the ends of the main frame each at a point approximately level with the floor of the hay rack, and endless conveyers mounted upon said auxiliary frames and extending across the floor of the rack, said auxiliary frames being movable into a vertical position to close the ends of the rack or into a horizontal position.

3. In a hay gathering machine of the character described, a main supporting frame, a hay rack mounted upon the frame including an upwardly extending back and an upwardly extending front, a conveyer supporting frame pivotally mounted upon the main frame at one end thereof approximately at the level of the floor of the rack, a conveyer carried upon the main frame and the conveyer supporting frame and forming the floor of the rack and one end of the rack when the pivoted conveyer supporting frame is turned to a vertical position but forming a continuation of the floor of the rack when the pivoted frame is turned to a horizontal position, a vertically disposed conveyer connected at one side of the rack and discharging there into driving means for operating said conveyer, and means for independently connecting either one of the conveyers to said driving means or disconnecting it therefrom.

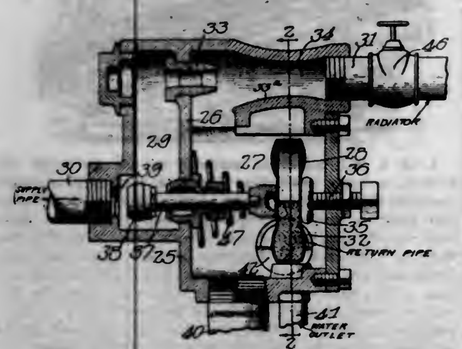
4. In a hay gathering machine of the character described, a main supporting frame, a hay rack mounted

upon the frame and including a vertically disposed back and a vertically disposed front, auxiliary conveyer supporting frames pivotally mounted upon the main frame each at a point approximately level with the floor of the rack and extending out on opposite sides thereof, said supporting frames being adapted to be turned up to form ends closing the ends of the hay rack, endless conveyers operating across the floor of the rack and extending over and carried by said auxiliary frames, means for operating the endless conveyers, and means for raising and lowering the endless conveyers at any desired angle.

5. In a gathering machine of the character described, main supporting frame, a hay rack mounted upon the frame and including vertically disposed back and a vertically disposed front, a conveyer supporting frame pivotally mounted upon the main frame at one end thereof approximately at the level of the floor of the rack, an endless conveyer carried upon the main frame and the conveyer supporting frame and forming the front of the rack and one end of the rack when the pivoted conveyer supporting frame is turned to a vertical position, an auxiliary conveyer frame pivotally supported from the end of the first-named pivoted conveyer frame, and an endless conveyer operating thereover.

[Claims 6 to 8 not printed in the Gazette.]

1,109,675. LOW-PRESSURE STEAM-HEATING SYSTEM. EGBERT H. GOLD, Chicago, Ill. Filed July 31, 1912. Serial No. 712,562. (Cl. 237—12.)



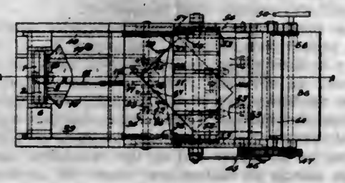
1. In a low pressure heating system, the combination with a source of supply of high pressure steam; of a radiator; controlling apparatus comprising a chamber having an outlet, a pipe leading from said chamber to the radiator, means constituting a conduit leading from the source of supply to said chamber which terminates in position to normally deliver the inflowing steam to the pipe leading to said radiator, a thermostat in said chamber and a valve actuated by the thermostat for controlling the flow of steam through said conduit; and means for closing the pipe leading to said radiator so as to direct the inflowing steam immediately to the thermostat.

2. In a low pressure heating system, the combination with a source of supply of high pressure steam; of a radiator; controlling apparatus comprising a chamber, a pipe leading from said chamber to the radiator, a return pipe from the radiator to said chamber, means constituting a conduit leading from the source of supply to said chamber which terminates in position to normally deliver the inflowing steam to the pipe leading to said radiator, a thermostat in said chamber and a valve actuated by the thermostat for controlling the flow of steam through said conduit; means for closing the pipe leading to said radiator so as to direct the inflowing steam immediately to the thermostat; and means for preventing any effective quantity of steam from entering the radiator through its return end when the supply is shut off from the inlet end of the radiator.

3. In a low pressure heating system, the combination with a source of supply of high pressure steam; of a radiator; controlling apparatus comprising a chamber, a pipe leading from said chamber to the radiator, a return pipe from said radiator to the chamber, means constituting a conduit leading from the source of supply of steam to said chamber which terminates in position to normally deliver the inflowing steam to the pipe leading to the radiator, a thermostat in said chamber, and a valve actuated by the thermostat for controlling the flow of steam through said conduit; a water outlet pipe interposed between the return end of the radiator and said thermostat chamber, and means for closing the pipe leading to said radiator so as to direct the inflowing steam immediately to the thermostat.

[Claims 6 to 12 not printed in the Gazette.]

1,109,676. DEVICE FOR SEPARATING METAL SHEETS. ALBERT E. GRANT, Troy, N. Y., assignor to John Moir Grant, Pittsburgh, Pa. Filed Dec. 18, 1912. Serial No. 737,384. (Cl. 113—113.)



1. A device for separating sheets of a pack, comprising a means for pinching and bending one corner of the pack, thereby loosening the sheets from each other at that corner; a vacuum cup; and means for bringing the vacuum cup in engagement with that corner of the sheets, one after another, that have been thus loosened.

2. A device for separating separate sheets of a pack of metal plates, comprising a yielding table; means for conveying the pack of sheets to the table; means for bending the ends of the sheets; a vacuum cup; means for applying said vacuum cup to one of the sheets and lifting said sheet from the pack; means for holding the other of said sheets than the one thus separated in position on the table until the separated sheets is entirely removed from the pack.

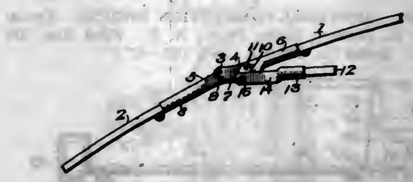
3. In a device for separating sheets of a pack of metal plates, means for conducting the pack to a yielding table; a yielding table; means in connection with said table for causing it to be moved in the same plane as said conducting means, whereby the pack may be moved along said conducting means onto said table; a vacuum cup; means for causing said vacuum cup to engage the upper sheet of the pack; means for causing said vacuum cup to lift said upper sheet and carry the same clear of the pack; means for engaging said sheet after it has been separated from the pack; means for causing said vacuum cup to break its connection with the sheet, substantially as described.

4. In a device for separating sheets of a pack of metal plates, means for conducting the pack, comprising a plate upon which the pack is placed; a series of rollers adapted to engage and bend the ends of the pack when the plate containing them is moved toward a horizontal position; means for moving the pack held by the said rollers to a yielding table, substantially as described.

5. In a device for separating sheets of a pack of metal plates, a large roll; a table over which it rolls; a sliding shoe; rods connecting said shoe to the trunnions of the said large roll; means carried by said roll for separating from the pack one of the sheets; and means for causing said shoe to hold the remaining sheets of the pack on the table during the operation of the large roll.

[Claim 6 not printed in the Gazette.]

1,109,677. FOLDING UMBRELLA. MORRIS H. HARTZELL, Philadelphia, Pa., assignor to Samuel S. Fretz, Jr., Philadelphia, Pa. Filed Feb. 6, 1914. Serial No. 816,882. (Cl. 135—25.)



1. In a folding umbrella, a rib formed of sections, a stretcher, locking members on said stretcher and one of said rib sections, means preventing outward thrust of the stretcher, and means for connecting said stretcher with the other rib section embodying an oscillating device connected intermediately with said stretcher and the adjacent rib section, whereby rotary motions are imparted to the stretcher and to the locking member that it carries, said locking members being relatively movable to overlap each other and directly engageable to lock said sections in distended position.

2. In a folding umbrella, a rib formed of sections, a stretcher, a locking member on one of said sections, a locking member on said stretcher, said members being adapted to be engaged and disengaged, means preventing outward thrust of the stretcher, and means connected with said stretcher and one of said sections whereby rotary swinging motions may be imparted to said stretcher and consequently to the locking member that it carries in opposite directions, said locking members being relatively movable to overlap each other and directly engageable to lock said sections in distended position.

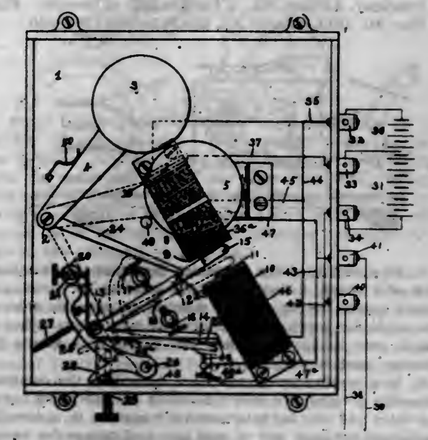
3. In a folding umbrella, a rib formed of sections, means for pivotally connecting the same, a tongue on one of said sections, a stretcher, a tongue on the latter, means for preventing outward thrust of the stretcher, and a swinging member which is pivotally connected with said stretcher and the adjacent rib section, whereby the tongue on said stretcher may be swung into engagement with the tongue of the opposite rib section and thrust endwise therebeneath and into direct engagement therewith, thus locking said tongues and consequently the rib sections as one, and said tongue on the stretcher may be swung from its engagement with the opposite rib section thus permitting the following of the latter.

4. In a folding umbrella, a rib formed of sections, ears connected with the adjacent ends of said sections, means for pivotally connecting said ears whereby said sections may be turned one on the other, a tongue connected with one of said rib sections, a stretcher, a tongue connected with the latter, said tongues being adapted to be lockingly engaged, means preventing outward thrust of the stretcher, and a hanger pivotally connected with one of the rib sections, and with said stretcher whereby said latter may swingingly carry its tongue to the opposite tongue to thrust it endwise beneath and into direct engagement therewith to interlock said tongues, and from said opposite tongue to unlock said tongues.

5. In a folding umbrella, a rib formed of pivotally connected sections, a stretcher, a swinging crank arm hanger pivotally mounted on one of the sections near its connection with the other section, a tongue on one section, and a tongue rigid with the stretcher pivotally connected with said crank arm and adapted to pass under the tongue on the said section to lock the rib sections in their distended position, downwardly projecting means on one of said sections to limit the outward thrust of the stretcher.

[Claims 6 and 7 not printed in the Gazette.]

1,109,678. ELECTROMAGNETIC DEVICE. ELMER M. JONES, Atlanta, Ga., assignor to Jones Signal System Company, Atlanta, Ga., a Corporation of Georgia. Filed Nov. 7, 1907. Serial No. 401,057. (Cl. 246—25.)



1. In an electro-magnetic device, the combination of an armature, a pair of electro-magnets therefor, one of said magnets having two coils, a circuit including one of the coils of the last mentioned magnet, a circuit including the other coil of said magnet and the coil of the other magnet, means for momentarily closing the second circuit, and means for thereafter maintaining closed a third circuit including the two last-mentioned coils, substantially as specified.

2. In an electro-magnetic device, the combination of an armature, a pair of electromagnets therefor, one of said magnets having reversely acting coils, a circuit including one of the coils of the last mentioned magnet, two circuits including the other coil of said magnet and the coil of the other magnet, means for momentarily closing one of the last mentioned circuits, and means operable by the movement of the armature for closing the other of the two last mentioned circuits, substantially as specified.

3. In an electro-magnetic device, the combination of an armature, a pair of opposed electro-magnets therefor, one of said magnets having reversely acting coils, a closed circuit including one of the coils of one of said magnets, two circuits including the other coil of said magnet and the coil of the other magnet, means for momentarily closing one of the two last-mentioned circuits, and means, operable by the movement of the armature by the momentarily-closed circuit, for closing the other of the last-mentioned circuits, substantially as specified.

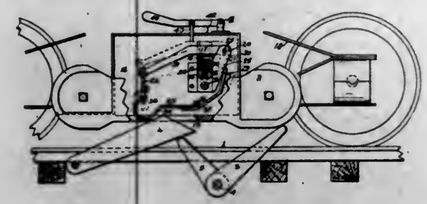
4. In an electro-magnetic device, the combination of an armature, a pair of electro-magnets therefor, one of said magnets having reversely acting coils, a circuit including one of the coils of one of said magnets, two circuits includ-

ing the other coil of said magnet and the coil of the other magnet, one of the last-mentioned circuits including a pair of line-wires adapted to be momentarily cross-connected, and means, operable by the movement of the armature by the momentarily closed circuit, for closing the other of the last-mentioned circuits, substantially as specified.

5. The combination of an armature, a magnet having thereon opposed windings, an electrical circuit for transmitting current through one of said windings thereby attracting said armature, an electrical circuit for transmitting current through the other winding to thereby deënergize the magnet and release the armature allowing it to move, a second electrical circuit through said last mentioned winding closed by the movement of the armature, and means for concurrently replacing the armature and breaking the circuit through the latter winding, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

1,109,679. TRAIN-CONTROLLING DEVICE. ELMER M. JONES, Atlanta, Ga., assignor to Jones Signal System Company, Atlanta, Ga., a Corporation of Georgia. Filed Mar. 16, 1911. Serial No. 614,915. (Cl. 246—59.)



1. In a device of the character described, the combination of a valve, a bodily movable member for holding it closed, means acting on said member on opposite sides of the valve for holding the member at two points either of which may move to release the valve, and means for effecting such movement.

2. In a mechanism of the class described, the combination with a valve of a bodily movable bar extending across the valve and bearing intermediately against it, a movable anchorage for each end of said bar, and means for releasing said bar when desired at one end.

3. In a device of the character described, the combination with a valve, of a member acting intermediately thereon to hold it closed, a movable holding device for said member on one side of the valve and a separable latch for the member on the other side, one portion of which is connected with said movable holding device, and means for releasing said latch by moving said holding device.

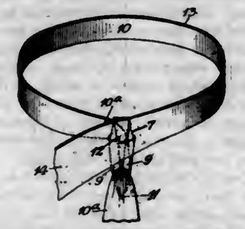
4. In a device of the character described, the combination with an air valve of members normally connected in a circuit and acting on the valve to hold it closed, said circuit of members being pivoted at one point and being separable at another, and means for moving such parts on said pivot.

5. In a mechanism of the class described, the combination with an air valve of a bodily movable bar for holding it closed, a pivoted member, a link connecting said member with the bar on one side of the valve and a latch connecting said member with the bar on the other side of the valve, and means for swinging said member on its pivot to cause the latch to release the bar.

[Claims 6 to 13 not printed in the Gazette.]

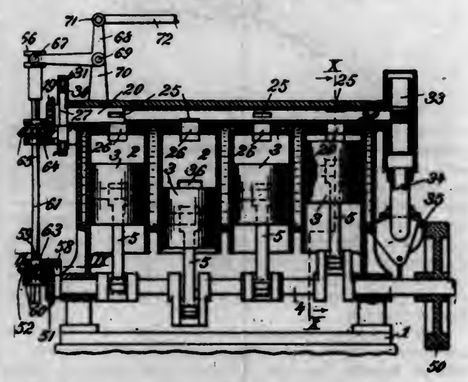
1,109,680. NECKTIE-HOLDER. VICTOR F. JONES, Chicago, Ill. Filed Aug. 28, 1913. Serial No. 787,077. (Cl. 2—84.)

1. As an improved article of manufacture, the herein described necktie holder consisting of an elongated body having at its upper part a forwardly and downwardly projected tongue and at each of its sides a forwardly and inwardly extended flange, the said tongue and flanges being spaced from the front face of said body, separated from one another, and the upper ends of said flanges terminating below the lower end of the tongue.



2. As an improved article of manufacture, the herein described necktie holder consisting of an elongated body having at its lower end a pointed projection and at its upper part a forwardly and downwardly projected tongue and at each of its sides a forwardly and inwardly extended flange, the said tongue and flanges being spaced from the front face of said body, separated from one another, and the upper ends of said flanges terminating below the lower end of the tongue.

1,109,681. INTERNAL-COMBUSTION ENGINE. CHAMPION H. JUDSON, Dobbs Ferry, N. Y. Filed Aug. 19, 1910. Serial No. 578,013. (Cl. 123—67.)



1. An internal combustion engine having a crank shaft, a functioning valve and driving connection between said crank shaft and valve including a plurality of blocks and a twisted shaft passing through said blocks and adapted to fit the same for altering the point in the stroke at which the valve shall open and close.

2. An internal combustion engine having an explosion chamber, a piston therein actuating a crank shaft, a valve at the head end of said explosion chamber, and means for altering the point in the stroke at which the valve shall open and close, including a plurality of blocks, a twisted shaft passing through said blocks and fitting the same, means for positively rotating one of said blocks from the crank shaft and means for transmitting motion from the other to said valve.

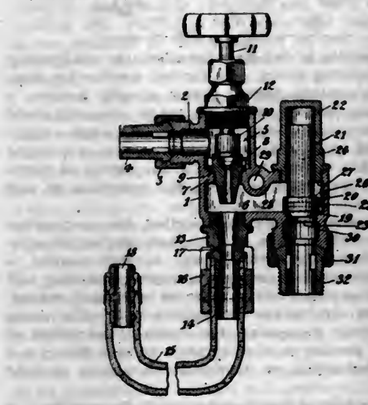
3. An internal combustion engine having an explosion chamber, a piston therein actuating a crank shaft, a rotary tubular valve at the head end of the explosion chamber, and means for altering the angularity of said valve with respect to said crank shaft, including a plurality of blocks, a twisted shaft passing through said blocks and fitting the same, means for positively rotating one of said blocks from the crank shaft, and means for transmitting rotation from the other to said valve.

4. An internal combustion engine having an explosion chamber, a piston therein actuating a crank shaft, a rotary tubular valve at the head end of the explosion chamber, and means for altering the angularity of said valve with respect to said crank shaft, including a plurality of blocks, a twisted shaft passing through said blocks and adapted to fit the same, means for positively rotating one of said blocks from the crank shaft, means for transmitting rotation from the other to said valve, and means for adjusting said twisted shaft in a longitudinal direction.

5. An internal combustion engine having an explosion chamber, a piston therein actuating a crank shaft, a rotary tubular valve at the head end of the explosion chamber, and means for altering the angularity of said valve with respect to said crank shaft, including a block rotated from said crank shaft alined with a block rotating said valve, and a twisted shaft passing through said blocks and fitting the same, and means for adjusting said shaft longitudinally while the engine is in operation.

[Claims 6 and 7 not printed in the Gazette.]

1,109,682. JET-PUMP APPARATUS. LEOPOLD KASSANDER, New York, N. Y., assignor to The Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed May 12, 1914. Serial No. 838,163. (Cl. 162—1.)



1. In a jet pump apparatus, a discharge nozzle having a port extending crosswise through same, connecting the interior of said nozzle directly with the atmosphere at all times.

2. In a jet pump apparatus, a discharge nozzle having a port extending crosswise through same, connecting the interior of the nozzle directly with the atmosphere at all times, and means for connecting a hose to the outlet end of said nozzle.

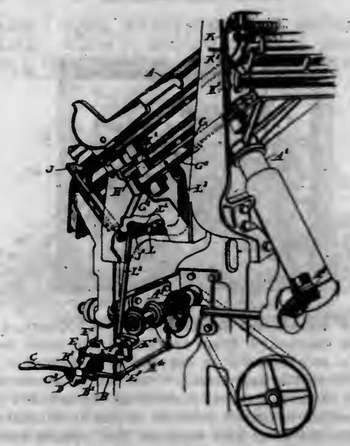
3. In a jet pump apparatus, with steam and water supply connections thereto, a discharge nozzle having a port extending crosswise through same, connecting the interior of said nozzle with the atmosphere, and a loaded check adapted to normally close said water supply connection against the ingress of water.

4. In a jet pump apparatus, steam and water supply connections thereto, means controlling the steam supply, a discharge nozzle having a port extending crosswise through same, connecting the interior of said nozzle with the atmosphere, and a loaded check adapted to normally close said water supply connection against the ingress of water.

5. In a jet pump apparatus provided with steam and water supply connections, in combination, a valve controlling the steam supply, a steam nozzle, a discharge nozzle in alinement with each other, said discharge nozzle having a port extending crosswise through same, connecting the interior of said nozzle with the atmosphere, and a loaded check adapted to normally close said water supply connection against the ingress of water.

[Claim 6 not printed in the Gazette.]

1,109,683. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Aug. 6, 1912. Serial No. 713,505. (Cl. 199—7.)



1. In a typographical machine, the combination of a plurality of magazines, reversible power driven mechanism to raise and lower said magazines, and controlling means for said mechanism, the said controlling means comprising a handle movable in different directions to control the operation of the power driven mechanism and mounted to be moved in another direction before it can be given the aforesaid movements.

2. In a typographical machine, the combination of a plurality of magazines, reversible power driven mechanism to raise and lower said magazines, and controlling means for said mechanism, the said controlling means comprising a handle movable in different directions from an abnormal neutral position to control the operation of the power driven mechanism, and means for preventing the return of the handle to normal position prior to its restoration to its abnormal neutral position.

3. In a typographical machine, the combination of a plurality of magazines, reversible power driven mechanism to raise and lower said magazines, and controlling means for said mechanism, the said controlling means comprising a handle capable of occupying several abnormal neutral positions, and movable in different directions from one of them, and movable in but one direction from another of them.

4. In a typographical machine, the combination of a plurality of magazines, reversible power driven mechanism to raise and lower said magazines, and controlling means for said mechanism, the said controlling means comprising a laterally movable handle and relatively stationary projections to prevent such lateral movement when the handle occupies its normal position.

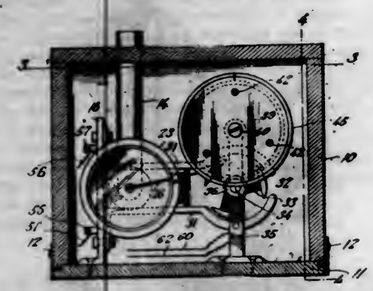
5. In a typographical machine, the combination of a plurality of magazines, reversible power driven mechanism to raise and lower said magazines, and controlling means for said mechanism which occupy the same position after each operation, the said controlling means comprising the relatively movable arms B and C and devices for locking said means in their normal position, the said means adapted to be released therefrom by the relative movement of said arms.

[Claims 6 to 36 not printed in the Gazette.]

1,109,684. SIGNAL. ALBERT L. MAILLARD and LOUIS H. CROOK, Washington, D. C. Filed Feb. 7, 1913. Serial No. 746,841. (Cl. 181—2.)

1. In a signal, the combination, of a support, a shaft journaled thereon, a drum carried by the shaft for supporting a record tablet, a reproducer including a stylus

operable over the said drum, a member carried on the shaft and in juxtaposition to the said drum, and a plurality of means operable on the drum and engaging the member for adjusting the said drum relatively to the said stylus.



2. In a signal, the combination, of a support, a shaft journaled thereon, a drum carried by the shaft for supporting a record tablet, a reproducer including a stylus operable over the said drum, a toothed wheel carried by the shaft, a motor, means connecting the motor with the toothed wheel to impart rotation to the drum, and means carried by the drum and engaging the toothed wheel for adjusting the said drum relatively to the said stylus.

3. In a signal, the combination, of a support, a shaft journaled thereon, a drum carried by the shaft for supporting a record tablet, a reproducer including a stylus operable over the said drum, a toothed wheel carried by the shaft, a motor, means connecting the motor with the toothed wheel to impart rotation to the drum, and a series of set screws adjustably carried on the drum and engaging the toothed wheel for varying the position of the drum relatively to the said toothed wheel.

4. In a signal, the combination, of a support, a shaft journaled thereon, a drum carried by the shaft for supporting a record tablet, a reproducer including a stylus operable over the said drum, a toothed wheel carried by the shaft, a motor, means connecting the motor with the toothed wheel to impart rotation to the drum, a series of set screws adjustably carried on the drum and engaging the toothed wheel for varying the position of the drum relatively to the said toothed wheel, and means centrally arranged on the drum and having connection with the shaft for varying the space between the said drum and the said shaft.

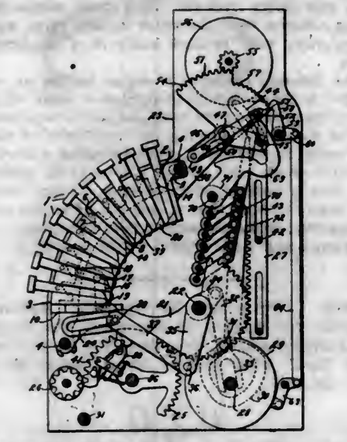
5. In a signal, the combination of a drum for supporting a record tablet, a reproducer including a stylus operable over the drum, a revoluble member supporting the drum, and means connecting the revoluble member with the drum for adjusting the drum in a plurality of planes at an angle to each other and to the said stylus.

[Claim 6 not printed in the Gazette.]

1,109,685. CASH-REGISTER. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (Incorporated in 1906.) Filed Dec. 28, 1912. Serial No. 739,017. (Cl. 235—9.)

1. In a machine of the class described, the combination with an accounting device, of an actuator therefor, means for driving said actuator comprising a pair of levers pivoted end to end, the remaining end of one of said levers having a fixed pivot, and the remaining end of the other lever having connections to said actuator, means for rocking said levers as a unit around the fixed pivot, and means for also giving said levers a different relative movement around the pivot connecting the two and thereby control the extent of movement of said actuator.

2. In a machine of the class described, the combination with an accounting device, of actuators therefor, means having a constant movement for driving said actuators, and manipulative devices adapted to be differentially positioned into the path of said means to deflect it from its normal course and thereby regulate the movements of said actuators.



3. In a machine of the class described, the combination with an accounting device, of a toothed member for actuating the accounting device, a slot in said member, a driver for said toothed member, a toggle connecting said toothed member and driver, a roller on said toggle extending into said slot, and means for moving said roller along said slot thereby to regulate the extent of movement of said toothed member on the operation of said driver.

4. In a machine of the class described, the combination with an accounting device, of a toothed member for actuating the accounting device, a slot in said member, a driver for said toothed member, a toggle connecting said toothed member and driver, a roller on said toggle extending into said slot, means for moving said roller along said slot thereby to regulate the extent of movement of said toothed member on the operation of said driver, and means for imparting an invariable movement to said driver.

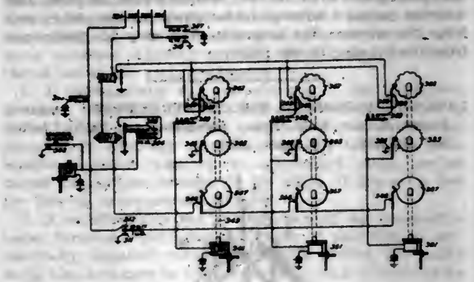
5. In a machine of the class described, the combination with an accounting device, of a pivoted gear element for actuating the accounting device, a slot in said gear element, a toggle pivoted concentric with the gear element at one end and at its other end having a roller extending into said slot, means for rocking said toggle around its pivot and thereby through the roller driving said gear element, and means for idly expending any desired part of the movement of said toggle by permitting its roller to move along said slot.

[Claims 6 to 17 not printed in the Gazette.]

1,109,686. TELEPHONE-EXCHANGE SYSTEM. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 10, 1910. Serial No. 591,560. (Cl. 179—18.)

1. In a telephone system exchange, the combination of a plurality of lines terminating in a central exchange, a call-storing register at said central exchange, means for automatically connecting the same to a calling line, of automatic switching apparatus at the central exchange for extending the calling line, said automatic switching apparatus being controlled by said call-storing register, and means under the control of the automatic switching apparatus for returning said call-storing device to normal.

2. In a telephone exchange system, the combination with automatic switching apparatus at a central station, of a primary controller at a distant station operating to send current impulses over a connecting line to said central station, a secondary controller at said central station controlled in its adjustment by such impulses and when adjusted controlling said switching apparatus, and impulse sending means operated in the movement of said switching apparatus to restore said secondary controller to normal condition.



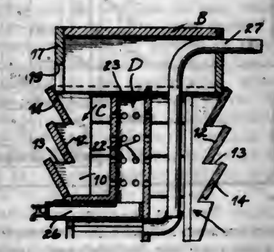
3. In a telephone exchange system, the combination with automatic switching apparatus at a central station, of a primary controller at a distant station, a secondary controller at the central station controlled in its adjustment by said primary controller and when adjusted controlling said switching apparatus, and impulse sending means operated in the movement of said switching apparatus to restore said secondary controller to normal condition.

4. In a telephone exchange system, a plurality of lines terminating at a central station and provided with impulse sending mechanism, call-storing registers, less in number that the number of lines, located at said central station and responsive to impulses from said lines, means for automatically connecting an idle one of said registers with a calling line, automatic switching apparatus located at said central station, and controlled by the selected call-storing register.

5. In a telephone system, a central station, a plurality of lines each provided with impulse sending means terminating thereat, automatic switching apparatus at said central station for extending the calling line and a plurality of call storing registers common to said switching apparatus and arranged to be controlled by said impulse sending means, said switching apparatus being controlled by an automatically selected call storing register.

[Claims 6 to 17 not printed in the Gazette.]

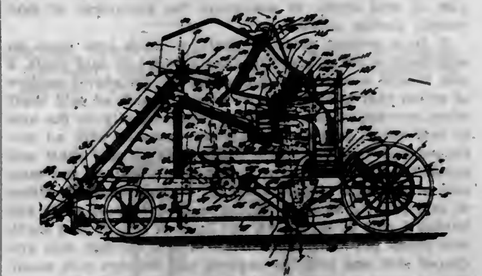
1,109,687. SEED-GERMINATOR AND PLANT-FORCER. RICHARD MCCLOY, Lynn Haven, Fla. Filed Nov. 10, 1913. Serial No. 800,169. (Cl. 47—27.)



1. In a device of the class described the combination of a body adapted to support soil within same, said body member comprising corner members having an angular cross section and resulting arm portions, said arm portions having their outer edges stepped to form inwardly inclined portions and horizontally inclined portions, side members secured against said inwardly inclined portions, and means for heating the soil disposed within the body.

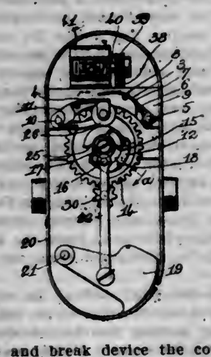
2. In a device of the class described, the combination of a body adapted to support soil within same, means for heating the soil disposed within the body, and a removable top member supported by the body and comprising a housing having sloping side members, and plates secured to said side members longitudinally thereof and in spaced relation to each other.

1,109,688. CORN HARVESTER AND HUSKING MACHINE. ELMER J. MCCRABB, Sigourney, Iowa. Filed July 3, 1913. Serial No. 777,281. (Cl. 56—110.)



In a machine for harvesting corn, a frame having forward and rear supporting wheels, the frame having a snapping roll chamber provided with snapping rolls and terminating at its rear in a stalk chopping or cutting chamber provided with stalk chopping rolls and having an outlet spout, said snapping rolls being inclined upwardly and slightly rearwardly, a husking chamber below the snapping roll chamber and provided with husking rolls inclined downwardly and rearwardly and arranged substantially at right angles to the lower ends of the snapping rolls, means for elevating the stalks to the mouth of the snapping roll chamber, a conveyer for conveying the stalks from the mouth to the snapping rolls, these means at their junctions including a beater at one side for beating the stalks endwise in position to pass between the snapping rolls, a conveyer for conveying the husks to the rear under the outlet spout, which husks and the ground stalks are designed to be conveyed to one side, and means for connecting the foregoing elements to the rear wheels, whereby the elements may operate coordinately.

1,109,689. ELECTRIC-CIRCUIT CLOSER AND BREAKER. THOMAS H. MCQUOWN, Cambridge, Mass., assignor, by direct and mesne assignments, to Arthur Atwater Kent, Philadelphia, Pa. Filed Nov. 24, 1900. Serial No. 344,812. (Cl. 177—10.)



1. In a make and break device the combination of a shaft, a wheel mounted on said shaft and rigidly secured thereto and carrying a pair of oppositely arranged shoulders, an arm loosely mounted on said shaft, a pin carried by said arm and extending into the path of the rotative movement of said shoulders, a contact point, a movable support therefor, a symmetrical contact-closing member having an arc-shaped projection to operatively engage said

support, said contact closing member being loosely mounted on said shaft between said arm and said wheel and provided with a slot through which said pin extends; a stationary contact point arranged to coöperate with said first mentioned contact point, and yielding means also connected to said pin and acting on said arm immediately prior to the instant that said arc-shaped projection passes through a plane passing through the point of the operative engagement of said support with said projection and the axis of said shaft, to accelerate the movement of said contact closing member.

2. In a contact device a shaft, a crank arm loose on said shaft, a crank pin extending parallel to said shaft, a cam loosely mounted on said shaft, the peripheral surface of which that is most remote from the axis of said shaft being arc-shaped and extending concentrically to the axis of said shaft, said cam being also provided with an arc-shaped slot also concentric to the axis of said shaft and symmetrically arranged with respect to and on the same side of the axis of said shaft as said arc-shaped surface of said cam; a member rigidly secured to said shaft and having a pair of shoulders, one on each side of said shaft, said crank pin extending from said arm through said arc-shaped slot and into the path of and between said shoulders, a contact point carrying arm in the path of the projecting arc-shaped surface of said cam and moved away from the axis of said shaft when operated upon by said cam, a spring tending to force said arm toward the axis of said shaft to move said arm into its position nearest the axis of said shaft when said arm is not being acted upon by said cam, a contact point mounted on said contact carrying arm, a fixed contact point coöperating therewith, and a weight connected to said crank pin and normally holding said crank pin in alinement with the axis of said shaft and the point of engagement of said cam with said movable contact support and on that side of the axis of said shaft diametrically opposite to that of said support.

1,109,690. COIN-CONTROLLED DEVICE. PAUL MERKLE, Philadelphia, Pa. Filed July 23, 1913. Serial No. 780,616. (Cl. 194—101.)

1. In a coin-controlled device, the combination of a support, a coin carrier movable on the support and having a coin-receiving opening therein provided with an open side, a magnet on the support, a plate movable on the support between the carrier and the magnet and having a coin-receiving opening, and means for causing said plate to move with said carrier and for permitting lost motion therebetween, said coin-receiving openings coming into registry with each other adjacent said magnet when moved to one position, and said coin-receiving openings being away from said magnet and said plate closing the open side of the coin-receiving opening in the carrier when moved to another position, whereby when the said openings come into registry adjacent said magnet it may draw a magnetic coin from the opening in the carrier to the opening in the plate, and whereby during a subsequent movement of the plate away from the magnet the magnetic coin may be discharged from the opening in the plate.

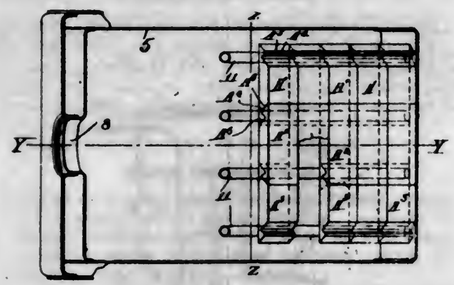
2. In a coin-controlled device, the combination of a support, a coin carrier movable on the support and having a coin-receiving opening therein provided with an open side, a magnet on the support, a plate movable on the support between the carrier and the magnet and having a coin-receiving opening, and a pin projecting from said carrier and into a slot formed in said plate, said pin causing said plate to move with said carrier and said slot permitting lost motion between the plate and the carrier, said coin-receiving openings coming into registry with each other adjacent said magnet when moved to one position, and said coin-receiving openings being away from said magnet and said plate closing the open side of the coin-receiving opening in the carrier when moved to another position, whereby when the openings come into registry adjacent said magnet it may draw a magnetic coin from the opening in the carrier to the opening in the plate, and whereby during a subsequent movement of the plate away from the magnet the magnetic coin may be discharged from the opening in the plate.

1,109,691. UMBRELLA-RIB CONSTRUCTION. ANDREW JAMES MILLS, Weir, Miss. Filed Dec. 16, 1913. Serial No. 807,078. (Cl. 135—36.)

1. An improved manufacture of rib tip comprising a rib formed of sheet metal having a serrated outer end edge, the end portion of the rib thereadjacent being crimped at opposite sides into substantially cylindrical form, the outer part being flared to form a cup-like portion for the reception of a jewel.

2. An improved manufacture of rib tip comprising a rib formed of sheet metal, the blank for which is provided with a transverse series of points across the outer end edge, a slit being formed longitudinally in the end of the blank extending inwardly from the end between the points, the sides of the blank being crimped into cylindrical form a distance from the end, the outer end portions being bent divergently and recurved to form an enlarged setting.

1,109,692. REFRACTORY ARCH FOR LOCOMOTIVE-BOILER FURNACES. CHARLES BREARLEY MOORE, Evanston, Ill., assignor, by mesne assignments, to American Arch Company, New York, N. Y., a Corporation of New York. Filed Nov. 17, 1908. Serial No. 463,070. (Cl. 110—87.)



1. A refractory arch brick of greater length than width having its ends reversely inclined and having each end thereof provided with a longitudinal rib and a complementary groove parallel therewith and adapted to receive the complementary rib of a like brick, said ribs and grooves being co-extensive with said ends of the brick.

2. A locomotive boiler furnace containing a plurality of arch tubes in combination with a substantially flat refractory arch thereon composed of a plurality of rows of bricks resting upon said arch tubes and having abutting ends above respective tubes, each of said bricks having a complementary interlocking rib and recess on each of its ends, the ribs of adjacent bricks entering respectively the

recesses thereof and preventing the endwise separation of the bricks upon said tubes and permitting the free removal of certain of said bricks, as and for the purpose specified.

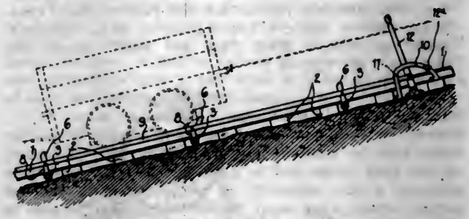
3. A refractory arch for locomotive boiler furnaces composed of substantially identical bricks, wedge-shaped at their ends and provided thereon with complementary hooked interlocking parts which prevent relative endwise separation of any two abutting bricks, the alternate bricks being reversed whereby certain thereof may be freely raised out of the arch for repairs.

4. A substantially flat refractory arch for locomotive furnaces composed of relatively reversed wedge-shaped bricks having complementary interlocking ribs and grooves upon their abutting wedging surfaces laterally coextensive therewith whereby the interlocked bricks are retained in abutting relation in the plane of the arch, but are free to be separated vertically.

5. A substantially flat refractory arch for locomotive boiler furnaces comprising a plurality of longitudinal substantially identical rows of refractory bricks, the bricks being also arranged in transverse rows, each of said bricks being reversely beveled at its ends and having a rib and groove along each end to interlock with the corresponding rib and groove in an abutting brick, the said bricks when interlocked preventing transverse separation of bricks and permitting free vertical removal of certain of the bricks.

[Claim 6 not printed in the Gazette.]

1,109,693. INCLINE SAFETY-CATCH. STEPHEN MORRIS, Newcomer, Pa. Filed May 2, 1914. Serial No. 835,960. (Cl. 188—76.)

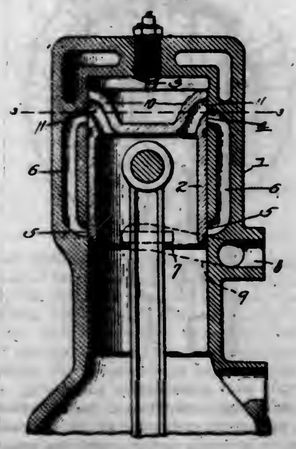


1. The combination with an inclined track including cross ties and track rails, of pairs of brackets secured on opposite sides of the track rails and depending therefrom, shafts journaled near their ends in said brackets and extending transversely of the track rails underneath the latter, trip arms secured to said shafts between the track rails and projecting perpendicularly from the shafts, the cross ties being provided with abutment blocks against which the trip arms are adapted to rest, counter-weight arms secured to the shafts at one end thereof and at one side of the track, crank arms secured to the other ends of the shafts and on the other side of the track, link bars pivotally connected to the crank arms, quadrant bars located on the said side of the track as the link bars, a lever mounted to move between said quadrant bars and pivotally connected intermediate of its ends to one end of the link bars and a pin adapted to extend across from one quadrant bar to the other to hold the lever and the other parts in an inoperative position.

2. The combination with an inclined track, including track rails, of shafts extending transversely underneath the track rails, means for supporting said shafts, trip arms secured on said shafts, intermediate of the rails, counter-weight arms connected to the shaft at one end of the latter and tending to move the shafts in one direction, means for stopping this movement of the shafts with the trip arms projected above the track rails, cranks mounted on the other ends of said shafts, means for moving said cranks, and a lost motion connection between said cranks and shafts, as and for the purpose set forth.

3. The combination with an inclined track, including track rails, of shafts extending transversely underneath the track rails, means for supporting said shafts, trip arms secured on said shafts, intermediate of the rails, counter-weight arms connected to the shaft at one end of the latter and tending to move the shafts in one direction, means for stopping this movement of the shafts with the trip arms projected above the track rails, cranks mounted on the other ends of said shafts, means for moving said cranks, the shafts being formed with transverse recesses, and the crank arms being provided with lugs movable in said recesses, as and for the purpose set forth.

1,109,694. TWO-CYCLE ENGINE. JOSEPH H. MOSIER, Provemont, Mich. Filed Nov. 11, 1911. Serial No. 659,694. (Cl. 123—73.)



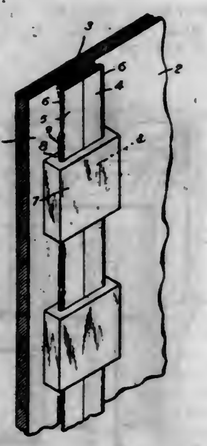
1. In an internal combustion engine, a cylinder having intake ports arranged upon opposite sides thereof, inlet ports in vertical alinement with said intake ports, each inlet port having communication with one of the intake ports through a longitudinal passage, said cylinder having an exhaust port out of horizontal and vertical alinement with the intake ports, and a piston provided upon opposite sides with upwardly and outwardly extending lips, said piston being hollow and downwardly open, and having passages in said lips, said passages being adapted to register with the intake ports, and the said piston covering the exhaust port during the entire time that said lips cover the inlet ports, the piston uncovering the exhaust port only during the time that said lips register with the intake ports.

2. In an internal combustion engine, a cylinder, igniting means arranged in one end of the cylinder, inlet ports formed in opposite sides of the cylinder and adjacent the ignition device, a set of intake ports arranged in longitudinal alinement with the ports first mentioned, longitudinally extending passages connecting the intake and inlet ports respectively, an exhaust port off-set with respect to the intake ports, a hollow piston open at one end and having upwardly extending lips upon the end adjacent the ignition device, and having passages through said lips, the said lips being adapted to cover alternately the intake and inlet ports, the passages registering with said ports, and said piston being of such length that the exhaust port will be covered during the time that said lips cover the inlet ports, said lips covering the intake ports during the entire time that the exhaust port is open.

3. An internal combustion engine comprising a cylinder open at one end and having an ignition device at its inner end, and having inlet ports discharging directly into said inner end portion of the cylinder and adjacent said ignition device, the said cylinder having also ports having free communication through longitudinal passages with the first mentioned ports, said cylinder having also an exhaust port adjacent the said second mentioned ports, and a

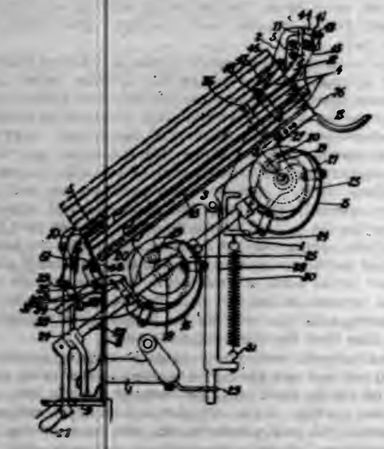
piston provided with lips adapted to cover the first and second mentioned ports alternately, said lips having passages therethrough adapted to be brought into alinement with said ports as the lips pass by them.

1,109,695. SAFE OR VAULT WALL CONSTRUCTION. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Apr. 3, 1914. Serial No. 829,216. (Cl. 109—1.)



Safe or vault wall construction comprising, a pair of plates with their edges abutting, a dovetailed rib united to the inner surface of each plate at its joint and having its inner edge in abutting contact with the inner edge of its fellow rib, key-blocks engaging said ribs and provided with dovetailed recesses whose lesser width is greater than the greatest width of the ribs, and a key disposed in the recess of the key-block and engaging between the side of a rib and the inner face of the key-block, combined substantially as set forth.

1,109,696. MATRIX-COMPOSING MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 7, 1912. Serial No. 702,148. (Cl. 199—7.)



1. In a matrix composing machine of the class stated, the combination with its movable column of magazines and the supporting frame for said column, of three supports arranged under the supporting frame approximately at the angles of an equilateral triangle.

2. In a matrix composing machine of the class stated, the combination with its movable column of magazines and the supporting frame for said column, of three supports arranged under the supporting frame approximately at the angles of an equilateral triangle having one side parallel with the mouths of the magazines.

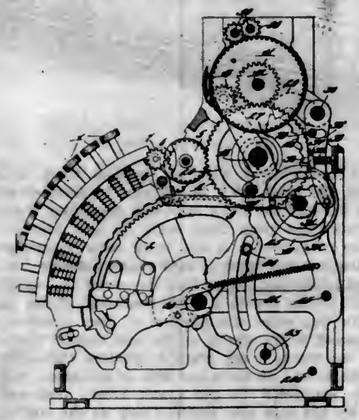
3. In a matrix composing machine of the class stated, the combination with its movable column of magazines and the supporting frame for said column, of three supports arranged under the supporting frame approximately at the angles of an equilateral triangle having one side parallel with and near to the entrance mouths of the magazines and the subtending angle near to their delivery mouths.

4. In a matrix composing machine of the class stated, the combination with its movable column of magazines, of a set of supporting cams mounted independently of the said column and arranged under it approximately at the angles of an equilateral triangle, and means for turning all the cams to effect a quick change.

5. In a matrix composing machine of the class stated, the combination with its movable column of magazines, of a set of supporting cams mounted independently of the said column and arranged under it approximately at the angles of an equilateral triangle, and means for turning all the cams simultaneously to effect a quick change.

[Claims 6 to 52 not printed in the Gazette.]

1,109,697. CASH-REGISTER. WILLIAM H. MUZZY, Dayton, Ohio, assignor to the National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (Incorporated in 1906.) Filed June 29, 1907. Serial No. 381,411. (Cl. 235—3.)



1. The combination with an operating mechanism, of a series of indicators arranged to show a sum total of different items entered, means for concealing the indicators, means for turning the indicators to zero, and a device for controlling the concealing means and the turn-to-zero means whereby the indicators are turned to zero after being first disclosed.

2. In a machine of the class described, the combination with an operating mechanism, of a series of indicating elements, means for concealing said elements, a special manipulative device, and an element, constantly driven by said operating mechanism, and constructed to be moved under control of said manipulative device into and out of a position for engagement with an element of said concealing means.

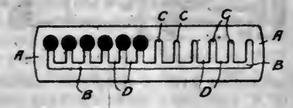
3. In a machine of the class described, the combination with an operating mechanism, of a series of digit carriers having printing type connected thereto, a platen for taking impressions from said type, devices for operating said platen, continuously connected to said operating mechanism but normally disconnected from said platen, a special manipulative device, and devices controlled thereby for connecting said platen to its operating mechanism.

4. In a machine of the class described, the combination with an operating mechanism, of a series of indicating elements, designed to exhibit a total of items entered, means for concealing said indicating elements, a cam for withdrawing said concealing means from concealing position, and constantly driven by said operating mechanism, a special manipulative device, and connections controlled by said manipulative device constructed to move said cam into and out of a position for engagement with an element of said concealing means.

5. The combination with an operating mechanism, of a series of indicators arranged to show a sum total of the different items entered, means for turning the indicators to zero, and means for preparing the turn-to-zero means for operation upon the next succeeding operation of the machine.

[Claims 6 to 56 not printed in the Gazette.]

1,109,698. PUZZLE. EDGAR A. NELSON, Jr., Washington, D. C. Filed Nov. 25, 1913. Serial No. 802,919. (Cl. 46—41.)



1. A puzzle comprising a plate having a longitudinal slot or channel, a plurality of transverse slots or channels connecting therewith, and a plurality of sets or series of headed buttons of diverse values, the shanks of said buttons adapted to slide in said slots or channels, one button of each set having a reduced shank.

2. A puzzle comprising a base plate having a longitudinal slot or channel, a series of transverse slots or channels connecting therewith, a definite number of said transverse slots or channels being of less width than the remaining transverse slots or channels, and a plurality of sets of buttons of diverse value, each button having heads and a shank, said shank adapted to slide in the aforesaid slots or channels, one button in each set provided with a reduced shank capable of being slid in any of the slots, but fitting only in to the reduced slots, whereby the plurality of sets of diverse values may be moved or shifted in a predetermined arbitrary number of moves from a continuous arrangement of sets to an alternate arrangement of buttons.

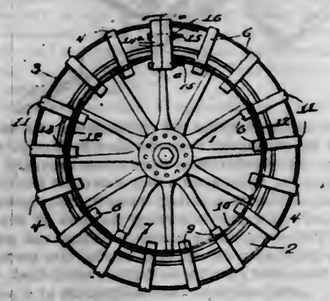
3. A puzzle comprising a base plate having a longitudinal slot or channel, a plurality of transverse slots or channels connecting therewith, a definite number of said transverse slots or channels being of reduced width, an additional number of transverse trap slots or channels, and a plurality of sets of buttons or pieces the shanks of which are adapted to slide in the aforesaid slots, one button of each set being provided with a reduced shank capable of fitting only the reduced transverse slots or channels.

4. A puzzle comprising a plate having a longitudinal slot or channel, a plurality of transverse slots or channels connecting therewith, a definite number of said transverse slots being of reduced width, an additional number of transverse trap slots of reduced and normal width, and a plurality of sets of buttons of diverse value the shanks of which are adapted to be moved into and out of said slots or channels, one button of each set being provided with a reduced shank capable of movement into and out of the aforesaid reduced slots or channels.

5. A puzzle comprising a plate having a longitudinal slot or channel, a plurality of transverse slots or channels connecting therewith, a definite number of said transverse slots being of reduced width relative to the other slots, a plurality of sets of buttons, each set being of diverse value, a plurality of buttons in each set having shanks of such diameter as will prevent their entrance into the reduced transverse slots, and a single button in each set having a reduced shank adapted to fit in the aforesaid reduced slots, whereby the buttons in the sets may be moved from one predetermined placement to another predetermined alternate placement in a predetermined and arbitrary number of moves of two buttons simultaneously.

[Claim 6 not printed in the Gazette.]

1,109,699. NON-SKIDDING TIRE APPLIANCE. LEON SMITH NORBURY, Brooklyn, N. Y. Filed July 21, 1913. Serial No. 780,322. (Cl. 152—2.)



1. A non-skidding tire appliance comprising a pair of resilient bands for encircling the tire, clamping tread bars connecting the bands, a plurality of tread bars secured to and extending across the bands and having ends projecting over the sides of the tire, removable rods connecting certain of the plurality of tread bars, and means for flexibly connecting the rod-connected bars with the other tread bars.

2. A non-skidding tire appliance comprising a pair of resilient bands encircling the tire, a plurality of tread bars secured to and extending across the bands and having projecting ends, clamping tread bars connecting the bands, two pairs of tread bars secured to the bands and connected in pairs for separating said plurality of bars into two sets, rods connecting said pairs of bars and adapted to be removed so as to permit one of said sets to be swung open, means for loosely connecting one set of the bars with a bar of each of said pairs, and means for loosely connecting the other set of bars with the other bar of said pairs and with the clamping bars.

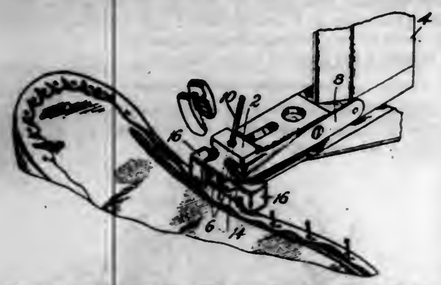
3. A non-skidding tire appliance comprising a pair of resilient bands encircling the tire, a plurality of tread bars secured to and extending across the bands and forming a continuous tread and having radially depending ends, rods connecting certain of the bars in pairs and adapted to be removed for spreading these bars apart, a tread clamping member secured to each end of the bands and having slotted ends, and means for loosely connecting the said depending ends together and with the rod-connected bars and with the clamping members.

1,109,700. LASTING-MACHINE. THOMAS HENRY O'BRIEN, Camden, N. J., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 7, 1912. Serial No. 713,784. (Cl. 12—2.)

1. In a lasting machine, the combination with means for wiping successive portions of the upper into lasted position, means for driving tacks to secure the upper arranged to leave the stems of the tacks upstanding above the surface of the upper, and means carried by the wiping means and extending into a position laterally beyond the tack block for bending inwardly toward the last each tack prior to the insertion of the following tack.

2. In a lasting machine, the combination of a reciprocating tack block, a tack driver, operating and controlling means therefor arranged to leave the stems of the tacks upstanding above the surface of the upper, and means operating at a point laterally separated from the driver a distance greater than half the width of the tack block for

bending inwardly the tack last previously driven as the tack block moves into position to drive the succeeding tack.



3. In a lasting machine the combination of a tack block arranged for movement over the shoe bottom to wipe the upper into lasted position, a tack driver arranged to leave the stems of the tacks upstanding above the surface of the upper, and devices projecting laterally at opposite sides of the tack block and extending forward of the line of action of the driver and adapted to engage the upper portion of a previously driven tack during the movement of the tack block into position to drive another tack.

4. In a lasting machine, the combination of a reciprocating tack block, a driver, said block and driver being arranged to operate to effect partial insertion of the tacks substantially as described in a direction inclined downwardly and inwardly away from the edge of the last, and a device forming a lateral projection at one side of the tack block to engage and bend inwardly the upstanding portion of a previously driven tack that is spaced away from the driver a distance greater than half the width of the tack block.

5. In a lasting machine, the combination of a tack block arranged for movement over the shoe bottom to wipe the upper into lasted position, a tack driver, the tack block and driver being relatively arranged for insertion of a tack in a direction oblique to the plane of the shoe bottom, and means operating at a point laterally separated from the tack block to engage a previously driven tack during the movement of the tack block into position to drive another tack and to bend the head portion of the tack into a vertical position.

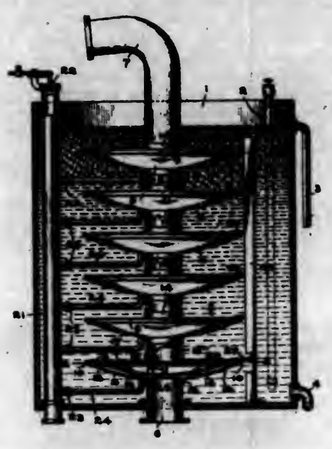
[Claims 6 and 7 not printed in the Gazette.]

1,109,701. HIGH-PROOF WATER-COOLED SPIRIT-DISTILLING COLUMN. PHILIP PUBLICKER, Philadelphia, Pa. Filed May 9, 1914. Serial No. 837,520. (Cl. 195—13.)

1. A column of the character described, comprising a vertical series of super-imposed units, each unit having a pan therein, a manifold pipe communicating with all of the pans, and each pan having a screen over the top thereof through which the distillate is compelled to pass before collecting in the pan, substantially as described.

2. A column of the character described, comprising a vertical series of super-imposed units, each unit having a pan therein, a manifold pipe communicating with all of the pans, and each pan having a screen over the top thereof through which the distillate is compelled to pass before collecting in the pan, brackets connecting the bottoms of the pans with the bottoms of the units and other brackets located in line with the first-mentioned brackets and connecting the upper surfaces of the pans with the tops of the units, said last-mentioned brackets projecting through the screens, substantially as described.

3. The combination with a receptacle containing cooling liquid, of a high-proof spirit-distilling column submerged in the liquid of the receptacle and consisting of a plurality of super-imposed units, each unit consisting of a concavo-convex bottom, a flat top, a concavo-convex pan above the bottom and concentric therewith, a screen over the pan, devices connecting the pan with the bottom and with the top, whereby the latter are braced against pressure from without and the pan spaced from both the top and the bottom, the bottom of each unit connected with the top of the unit below, and a manifold pipe having branch pipes connecting the same with all of said pans, substantially as described.



4. The combination with a receptacle containing cooling liquid, of a high-proof spirit-distilling column submerged in the liquid of the receptacle and consisting of a plurality of super-imposed units, each unit consisting of a concavo-convex bottom, a flat top, a concavo-convex pan above the bottom and concentric therewith, a screen over the pan, devices connecting the pan with the bottom and with the top, whereby the latter are braced against pressure from without and the pan spaced from both the top and the bottom, the bottom of each unit connected with the top of the unit below, a manifold pipe having branch pipes connecting the same with all of said pans, and vertical bars supported on the bottom of the receptacle and connected to each unit of the column, substantially as described.

5. A column of the character described, comprising a vertical series of super-imposed units, each unit consisting of a concavo-convex bottom, a flat top having its edge bent over the edge of the bottom, a concavo-convex band located in the chamber formed by the top and the bottom, straps connecting the pan at its edges with the bottom, brackets connecting the pan with the top and with the bottom, and a screen over the pan, each of said pans having a drain pipe communicating with a common manifold, substantially as described.

1,109,702. MUFFLER FOR AUTOS. WILLIAM REETZ, Chicago, Ill., assignor to Universal Auto Supply Manufacturing Company, Chicago, Ill. Filed Sept. 25, 1913. Serial No. 791,694. (Cl. 123—194.)

1. A muffler comprising a casing, an enlarged part upon said casing, a fan within said enlargement, a shaft upon which said fan is mounted, said shaft being journaled in the casing, and a worm or screw upon said shaft, there being a conduit intermediate the engine and the enlarged part of said casing, and a conduit extending from said worm to said enlargement, said worm being of substantially the same diameter as that part of the casing within which the worm is received.

2. A muffler comprising a casing formed with an enlargement, a fan received within said enlarged part, a worm received within the casing, a shaft upon which both said worm and said fan are secured, a conduit leading from the engine and entering said enlarged part, and a conduit leading from said enlarged part and adapted to convey the gases from said enlarged part to said worm, said worm being of substantially the same diameter as that part of the casing within which the worm is received.

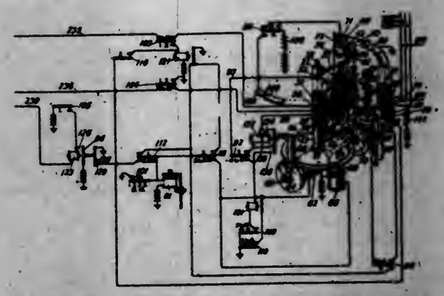
3. A muffler comprising a casing formed with an enlargement, a fan received within said enlarged part, a worm received within the casing, a shaft upon which both said worm and said fan are secured, a conduit leading from the engine and entering said enlarged part, and a conduit leading from said enlarged part and adapted to convey the gases from said enlarged part to said worm, the cavity within which said fan moves being larger near the hub than near the outer extremities of the blades of the fan.

4. A muffler comprising a casing formed with an enlargement, a fan received within said enlarged part, a worm received within the casing, a shaft upon which both said worm and said fan are secured, a conduit leading from the engine and entering said enlarged part, and a conduit leading from said enlarged part and adapted to convey the gases from said enlarged part to said worm, said fan being provided with blades which are relatively wide at or near the hub but narrower at their extremities.

5. A muffler comprising a hollow casing made in sections, means for securing said sections together, said sections being formed with an enlarged cavity at one end and with a cylindrical cavity, there being a conduit intermediate said cylindrical cavity and the cavity formed by said enlargement, a conduit in connection with said enlargement and adapted to convey the gases from the engine thereinto, a shaft, a worm thereupon within said cylindrical part of said casing, and a fan thereupon within said enlargement, said fan having blades relatively wide near the hubs and relatively narrow at their extremities, and means for supporting said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,109,703. TELEPHONE-EXCHANGE SYSTEM. FRANK N. REEVES, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 20, 1912. Serial No. 684,946. (Cl. 179—27.)



1. The combination with a selector, of a test brush and fixed terminals adapted to be traversed thereby, means for initially moving said selector and means governed by the electrical condition of any one of said terminals during a portion of the period the test brush is in contact therewith for controlling the continued movement of said selector.

2. In the combination with a selector having test terminals, a test brush and means for causing said brush to traverse said terminals, and a test circuit for arresting said brush upon an idle terminal, said test circuit being interrupted during a portion of the period the test brush is traversing any test terminal.

3. The combination with a selector, wherein the trunks are represented by fixed terminals whose electrical condition determines their idle or busy condition, the said fixed test terminals, a test brush therefor, power-driven means for moving said brush, of means for arresting its movement when engaging an idle trunk, and means for preventing said arresting means from becoming operative due to a change in the electrical condition of a test terminal while said brush is engaging the latter portion thereof.

4. In combination with a selector, the continuation of whose advance is determined by the electrical condition of the fixed terminals which its test brush engages, the said fixed test terminals and the test brush, of a power-shaft, a magnetic clutch for coupling said power-shaft to said brush, and a relay responsive to the electrical condition of the first portion only of any test terminal for uncoupling said clutch.

5. In combination with a power-driven trunk hunting switch having a test relay for controlling the seizure of idle trunks by its responsiveness to the electrical condition of their test terminals, and a test brush, with means for driving said brush, said test relay being connected to said brush and adapted when operated to cause the disconnection of said driving means from said brush, and a switching device adapted to close an operative circuit for said test relay only when the test brush is engaging the first part of a fixed terminal representing an idle trunk.

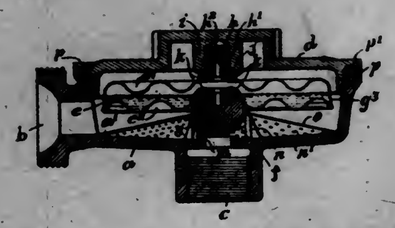
[Claims 6 to 15 not printed in the Gazette.]

1,109,704. PROCESS OF PRODUCING A FERRATED AND BORATED ALKALINE SILICATE. THOMAS ROUSE, Stamford Hill, London, England, assignor of one-half to Bessler Waechter & Company, Limited, London, England. Filed Feb. 9, 1911. Serial No. 607,580. (Cl. 23—13.)

1. A process for the production of a solid soluble alkaline silicate, herein termed ferrated and borated alkaline silicate, which consists in heating alkaline silicious material and water with relatively small quantities of ferric oxid and calcined borax that are thoroughly incorporated therewith and continuing the heating of the mass until such time that the ferrated and borated alkaline silicate obtained will solidify on cooling.

2. As a new article of manufacture, soluble alkaline silicious material, herein termed ferrated and borated alkaline silicate, said material being of a dry and non-deliquescent character and capable of being readily powdered, which contains a very high percentage of alkaline silicate and is insoluble in cold water but readily soluble in hot water at atmospheric pressure.

1,109,705. THERMOSTATIC VALVE. JOHN A. SERRELL, North Plainfield, and JAMES LOGAN FITTS, Pensauken township, Camden county, N. J.; said Fitts assignor to Warren Webster & Company, a Corporation of New Jersey. Filed June 30, 1911. Serial No. 636,224. (Cl. 236—10.)



1. In a thermostatic valve of the character described, the combination with a casing having an inlet and an outlet, and a valve-piece to control the thoroughfare through said valve, of a removable cap for said casing, and an expansion-cell to control said valve, said cell having the diaphragm forming one of its walls provided with a

central hole and having the edge of the metal about said hole inserted in a groove in the valve-piece and the metal of said valve-piece within said groove spun or swaged over said inserted edge.

2. In a thermostatic valve, the combination with a casing having an inlet and an outlet and a valve-piece to control the thoroughfare through said valve, of an expansion-cell in said casing controlling said valve-piece, and a screen of shallow cone shape supported in the bottom of said casing and having a central opening for the valve-piece.

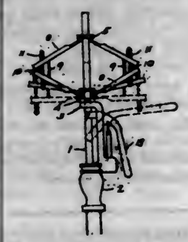
3. In a thermostatic valve, the combination with a casing having an inlet and an outlet and a valve-seat, of a valve-piece adapted to fit said seat, upright guides in the casing arranged about said seat and adapted to guide the valve-piece, and an expansion-cell in said casing controlling said valve-piece, and a screen of shallow cone shape extending from said guides to the bottom of the casing and having a central opening for the valve-piece.

4. In a thermostatic valve, the combination with a casing having an inlet and an outlet and a valve-seat, of a valve-piece adapted to fit said seat, upright guides in the casing arranged about said seat and adapted to guide the valve-piece and having radial arms tapering down toward the bottom of the casing, an expansion-cell in said casing controlling said valve-piece, and a screen of shallow cone shape resting on said guide arms and having a central opening for the valve-piece.

5. In a thermostatic valve of the character described, the combination of a plurality of expansion cells and a connecting thimble uniting adjacent cells together, the edges of the metal about a central hole in the adjacent walls of the cells being each inserted in a groove in said thimble and the metal of said thimble inside of said groove being spun or swaged over said inserted edge.

[Claim 6 not printed in the Gazette.]

1,109,706. PUMP-EQUALIZER. CLAUDE D. SHELLABARGER, Spokane, Wash. Filed Sept. 23, 1913. Serial No. 791,444. (Cl. 103—62.)

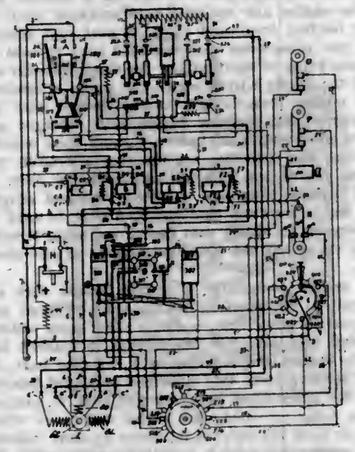


1. The combination with a pump having a reciprocating rod, of lever arms fulcrumed between their ends in pairs, the outer ends of the arms having springs adapted to be compressed by the movement of the arms, one of the lever arms being attached to a bearing on the pump and the other to a bearing on the pump rod.

2. The combination with a pump having a reciprocating rod, of lever arms fulcrumed between their ends in pairs, the outer ends being slidably mounted on a bolt having its ends inclosed by springs, one of the lever arms being attached to a bearing on the pump and the other to a bearing on the pump rod, the said springs being adapted to be compressed by the action of the levers.

1,109,707. SYSTEM OF ELEVATOR CONTROL. JOHN C. SMITH, Louisville, Ky. Filed July 5, 1911. Serial No. 636,825. (Cl. 172—152.)

1. In a system of motor control, a reversing switch, a main switch, operating circuits for said switches, a manual switch having contacts in said circuits and adapted to close them in the sequence named, an initially open switch interposed in the main switch circuit between said reversing switch and said main switch the contactor of which is connected with a moving part of the reversing switch and adapted to complete the continuity of the main-switch-circuit upon the setting of the reversing switch, said open switch serving to prevent the operation of the main switch until the reversing switch is set.



2. In a system of motor control, a reversing switch, a main switch, and an accelerating switch, operating circuits for said switches, a manual switch having contacts in said circuits and adapted to close them in the sequence named, an initially open switch in the main-switch-circuit connected with the reversing switch and adapted to prevent the operation of the main switch until the reversing switch is set, an initially closed switch in the main switch circuit connected with the accelerating switch and adapted to be opened by the closing of said accelerating-switch to prevent the operation of the main switch when said accelerating-switch is closed.

3. In a system of elevator control, a reversing switch, a main switch an accelerating switch, operating circuits for said switches, a manual switch having contacts in said circuits and operative to close them in the sequence named, holding coils associated with the reversing switch and included in the main switch circuit, an initially open switch in the main-switch circuit the contactor of which is connected with the reversing switch and adapted to be shifted thereby to establish the continuity of the main-switch circuit.

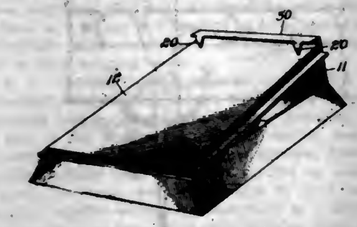
4. In a system of elevator control, a reversing switch, a main switch, and an accelerating switch, operating circuits for said switches, holding coils associated with the reversing switch and included in the main-switch circuit, an initially open switch interposed in the main-switch circuit between the holding coils and the main switch, the contactor of said open switch being connected with a moving part of the reversing switch and adapted to establish the continuity of the main circuit.

5. In a system of elevator control, a shunt wound motor, a reversing switch, a main switch, and an accelerating switch comprising a plurality of members operating *seriatim*, a resistance initially included in the shunt field winding, an electro-magnetic switch controlled by the main switch and adapted to short circuit said resistance, a second resistance, an electromagnetic switch controlled by the last member of the accelerating switch and adapted to insert said second resistance in the shunt field.

[Claims 6 to 13 not printed in the Gazette.]

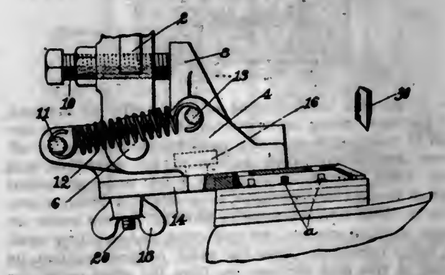
1,109,708. PAPER-PAD HOLDER. LOUIS SMITH, Chicago, Ill. Filed Apr. 23, 1913. Serial No. 763,078. (Cl. 24—66.)

1. A holder for a pad of paper sheets comprising a sheet metal base provided at its rear end with an upstanding member having at its upper margin near the ends of said upstanding member integral, laterally spaced, down turned teeth to engage the upper sheets of the pad near their margins only, said base being formed at its forward end with a forwardly and downwardly inclined surface, and a pad supporting spring plate attached to the base at said inclined forward portion thereof and extending upwardly and rearwardly therefrom with its rear end beneath said teeth, and between the rear end of which and said teeth a paper pad is adapted to be confined.



2. A paper holder comprising a base provided with a top wall, said wall having at its forward end an oblique portion, said top wall being cut away at its rear portion and the cut away portion being turned upwardly and provided at its margin and near its ends with depending teeth, and a pad supporting plate attached to the oblique portion of the top wall and urged by its resiliency at its rear end toward said teeth.

1,109,709. HEEL-BREASTING MACHINE. HAROLD A. SOULIS, New York, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 16, 1912. Serial No. 715,440. (Cl. 12—47.)



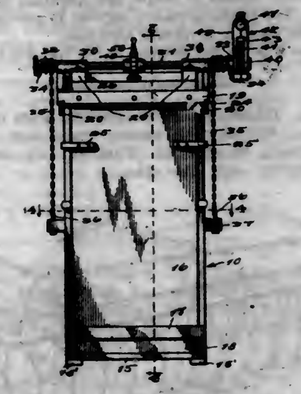
1. A heel breasting machine, having, in combination, a tread plate holder, and a tread plate secured thereto having recesses formed to receive projections on the tread face of the heel, said plate being of a thickness to space the tread face of the heel away from the holder a distance greater than the height of the projections.

2. A tread plate for heel breasting machines adapted for use in breasting a heel having projections inserted therein, comprising a plate with recesses extending along the tread face longitudinally of the heel and opening through the breast end of the plate, said recesses being of greater depth than the height of the projections.

3. In a machine of the class described for breasting heels having projections thereon, the combination of a holder and a member for applying pressure to the tread surface of the heel being breasted comprising bearings adapted to extend longitudinally of the heel between the said projections and to apply pressure to the surface of the heel when the holder is forced toward the heel and to permit retraction of the heel longitudinally from beneath the member when the pressure is released.

4. A tread plate for machines for breasting heels having projections extending from their tread faces, comprising a plate with recesses extending along the tread face of the plate longitudinally of the heel and opening through the breast end of the plate.

1,109,710. PRESS. ALFRED SPINK, Davenport, Iowa. Filed Nov. 19, 1913. Serial No. 801,865. (Cl. 100—12.)



1. In a press of the character described, a baling chamber having its side walls diverging toward the open side of the baling chamber, a movable door to normally close the open side of the baling chamber and adapted to be moved to open and closed positions, a movable head mounted upon the upper end of the baling chamber near one end thereof and adapted to be moved to open and closed positions, a follower mounted within the baling chamber to move longitudinally thereof, an operating shaft mounted upon the head, and connecting means between the operating shaft and the follower.

2. In a press of the character described, a baling chamber having one longitudinal side piece and the transverse side pieces permanently connected and the transverse side pieces diverging toward the open side of the baling chamber, a removable door to close the open side of the baling chamber, a head hinged to the baling chamber to close one end thereof and adapted to be swung to an open position, a follower mounted within the baling chamber to move longitudinally thereof, an operating shaft mounted upon the head, and flexible elements arranged upon opposite sides of the baling chamber and connected with the operating shaft and follower.

3. In a press of the character described, an upstanding baling chamber having its upper end open, a movable head to normally close the upper end of the baling chamber and adapted to be moved to an open position whereby the baling chamber may be conveniently filled with the material to be pressed, a follower mounted within the baling chamber and movable upwardly toward the head for compressing the material, and means connecting the follower and head and adapted to be operated to effect the upward movement of the follower.

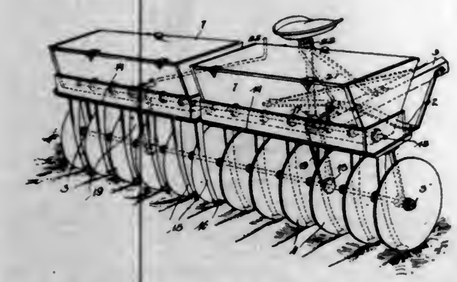
4. In a press of the character described, an upstanding baling chamber including a plurality of walls, the oppositely arranged walls diverging toward the open side of the baling chamber, a holding strip attached to the lower end of the baling chamber upon the open side thereof, a removable door adapted for insertion within the open side of the baling chamber to have its lower end arranged inwardly of and in engagement with the holding strip, a locking strip connected with the removable door near the upper end thereof, holding dogs pivoted to the opposite diverging walls and adapted to engage with the locking strip and having their ends provided with weights whereby the free ends thereof will automatically swing upwardly, fixed stops arranged below the weights to positively limit their downward movement, and means arranged within the baling chamber to press the material therein.

5. In a press of the character described, the combination with an upstanding baling chamber, of a head hinged to the upper end thereof and adapted to be swung to open and closed positions, an operating shaft mounted upon the head, a follower movably mounted within the baling cham-

ber, flexible elements arranged upon opposite sides of the baling chamber and connected with the operating shaft and follower, means to rotate the operating shaft in one direction, and means normally serving to prevent the rotation of the shaft in a reverse direction.

[Claims 6 to 11 not printed in the Gazette.]

1,109,711. DRILLING ATTACHMENT FOR DISK HARROWS. WILLIAM M. SPORE, Cisco, and FREDERICK HARPSTRITE, Decatur, Ill. Filed Nov. 25, 1913. Serial No. 802,954. (Cl. 111—18.)



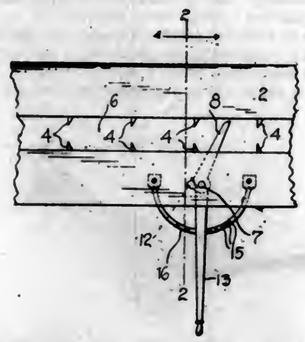
1. The combination with a harrow including a supporting frame, weight boxes supported upon the frame, a rotatable shaft and harrow disks mounted at spaced intervals upon said shaft, of a drilling attachment therefor comprising a removable seed box, a feed shaft mounted upon and supported below the seed box and operatively connected to the harrow shaft to rotate therewith, a plurality of seed disks operating in slots formed in the bottom of the seed box and controlling the passage of seed from the seed box, and seed discharging spouts, one below each seed disk mounted upon the weight box and each discharging behind one of the harrow disks.

2. The combination with a harrow including a supporting frame, a weight box, a rotatable shaft and a plurality of disk harrows supported upon the shaft, of a removable seed box, a housing mounted upon the lower end of the seed box and extending down to and resting upon the upper face of the weight box, each seed box being formed to provide a plurality of hoppers, the lower end of each hopper having slots, a shaft mounted below the bottom of the seed box, seed disks mounted on said shafts and operating partially in the slots of each hopper, a plurality of seed spouts extending from the bottom of the weight box beneath each of said feed disks and discharging each behind one of the harrow disks, and detachable operative connections between the feed shaft and the harrow disk shaft.

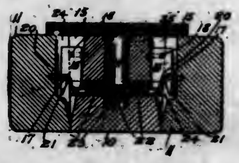
3. A seeding attachment for disk harrows, comprising a seed box, a housing having downwardly extending spouts attached to the bottom of the seed box, a member upon which the housing rests and from which the housing is detachable, said member being adapted to constitute a weight box when the housing and seed box are removed, seed spouts extending down from said member and discharging adjacent the lower edges of the harrow disks, a shaft mounted in the housing extending below the seed box, a plurality of seed disks upon each shaft coacting with slots formed in the bottom of the seed box, said seed disks discharging into said spouts, and detachable means for operatively connecting the seed shaft to the harrow disk shaft.

1,109,712. RETARDING DEVICE FOR CORN-BINDERS. DANIEL STAHLEY, Kirk, Colo. Filed Feb. 21, 1914. Serial No. 820,344. (Cl. 56—119.)

The combination with the upper and lower conveyers, of a corn harvester, of a rotatable standard disposed between said conveyers, an outwardly projecting arm mounted thereon and adapted to rotate independently thereof, a coil spring mounted upon said standard and having a portion thereof engaging the standard and another portion thereof engaging the inner end of the arm to retatin the same in an operative position, a rack suspended between said conveyers, a lever mounted upon the standard whereby to rotate the same and place the coil spring under tension, said lever engaging the rack to retain the same in an adjusted position, and a spring member secured at one end to the lever and having its other or free end bearing against the under side of the rack to yieldingly retain the lever in an adjusted position.



1,109,713. SECTIONAL FORMING-BLOCK. LESLIE STEVENS, Glen Ridge, N. J. Filed May 14, 1909. Serial No. 495,898. (Cl. 223—21.)



1. A forming block formed of a plurality of sections, and having a spring catch carried by one of the block sections in position to engage a co-acting member on an adjacent block section when the sections are assembled, said catch being formed to hold said block sections against relative separating movement in a direction either transverse to their meeting faces or parallel thereto under ordinary working strains, and said catch and co-acting member being formed to cause the catch to move against its spring to free said sections one from the other under the influence of a strong pull tending to move one of the block sections relatively to the other in a direction substantially parallel to their meeting faces.

2. A forming block formed of a plurality of sections, and having a spring catch carried by one of the block sections in position to engage a coacting member on an adjacent block section when the sections are assembled to hold said sections against relative separating movement in a direction either transverse to or parallel to their meeting faces, said catch being formed by a metal plate pivotally mounted in a slot in the block section by which it is carried in position to project edgewise to enter a slot in the adjacent block section to prevent relative turning movement between said block sections.

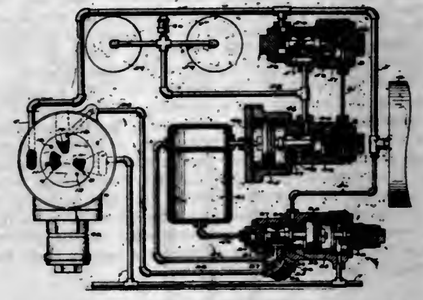
3. A forming block formed of a plurality of sections provided with releasable holding means for holding adjoining block sections against relative separating movement in a direction either transverse to or parallel to their meeting faces comprising a plate having an inside notch and mounted edgewise in a slot in the meeting face of one section and projecting therefrom to enter a slot in the meeting face of the adjoining section and a member carried by said adjoining section to co-act with said plate to hold said sections against relative separating movement.

4. A forming block formed of a plurality of sections provided with holding means for holding adjoining block sections against relative separating movement in a direction either transverse to or parallel to their meeting faces comprising a plate mounted edgewise in a slot in the meeting face of one section and projecting therefrom to enter a slot in the meeting face of the adjoining section and a member carried by said adjoining section to co-act with said plate to hold said sections against relative separating movement, said plate having an inside notch and an extension beyond the notch with an inclined inside edge, and one of said parts being yieldingly held and said parts being formed to cause the yieldingly held part to move to free said block sections one from the other under the influence of a strong pull tending to move one of the sections relatively to the other in a direction substantially parallel to their meeting faces.

5. A forming block formed of a plurality of sections provided with holding means for holding adjoining block sections together comprising a plate mounted edgewise in a slot in the meeting face of one section and projecting therefrom to enter a slot in the meeting face of the adjoining section and a member carried by said adjoining section to co-act with said plate to hold said sections against relative separating movement in a direction either transverse to or parallel to their meeting faces, and steadying means other than said holding means for preventing relative turning movement between said block sections.

[Claims 6 to 15 not printed in the Gazette.]

1,109,714. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 6, 1905. Serial No. 244,265. (Cl. 188—1.)



1. In a fluid pressure brake, a distributing valve device comprising a main valve for controlling the supply of fluid under pressure to the brake cylinder, a regulating chamber, a movable abutment subject to pressure of the regulating chamber and operated by an increase in pressure therein for opening the supply valve and adapted close said supply valve when the brake cylinder pressure substantially equals the regulating chamber pressure, a release valve operated by siad abutment, and means for charging and releasing fluid from the regulating chamber.

2. A distributing valve device comprising a brake cylinder supply valve, a regulating chamber, a movable abutment subject to the opposing pressures of the regulating chamber and the brake cylinder for controlling the supply valve and adapted to close said supply valve when the brake cylinder pressure substantially equals the pressure in the regulating chamber, a release valve operated by said abutment, and means for charging the regulating chamber to the desired brake cylinder pressure.

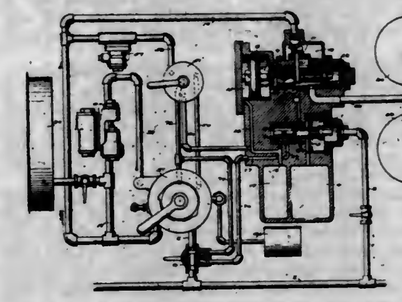
3. A distributing valve device comprising a regulating chamber, a valve mechanism operated by the opposing pressures of the regulating chamber and the brake cylinder for controlling the supply of air to and its release from the brake cylinder, and a triple valve device operated by variations in train pipe pressure for supplying air to said regulating chamber.

4. A distributing valve device comprising a regulating chamber and an auixiliary chamber, valve mechanism governed by the pressure of the regulating chamber for controlling the supply of air to and its release from the brake cylinder, and a triple valve device operated by variations in train pipe pressure for controlling the supply of air from the auxiliary chamber to the regulating chamber.

5. In a fluid pressure brake, the combination of a reservoir or source of pressure, a regulating chamber and an auxiliary chamber, valve mechanism governed by the pressure of the regulating chamber for controlling the supply of air from the reservoir to the brake cylinder, and a triple valve device operated by variations in train pipe pressure for controlling the supply of air from the auxiliary chamber to the regulating chamber, and from the reservoir to the auxiliary chamber.

[Claims 6 to 25 not printed in the Gazette.]

1,109,715. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 15, 1905. Serial No. 287,527. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a brake cylinder and train pipe of a valve for controlling the supply of air to the brake cylinder to apply the brake, an application or regulating chamber separated from the train pipe, a movable abutment connected to said valve and subject to the pressure of the application chamber, and means for supplying and releasing air to and from the application chamber to vary the degree of pressure therein.

2. In a fluid pressure brake, the combination with a brake cylinder, of a valve for controlling the supply of air to the brake cylinder to apply the brake, an application chamber separated from the train pipe, a movable abutment subject to the opposing pressures of the application chamber and the brake cylinder and operated by an increase in pressure in the application chamber for moving said valve to apply the brakes, and means for varying the pressure in said application chamber.

3. In a fluid pressure brake, the combination with a brake cylinder of a valve for controlling the supply of air to the brake cylinder, an application or regulating chamber normally at atmospheric pressure and separated from the train pipe, a movable abutment connected to said valve and subject to the pressure of the application chamber, a brake cylinder release valve operated by said abutment and means for supplying and releasing air to and from the application chamber.

4. In a fluid pressure brake, the combination with a brake cylinder, of a valve for controlling the supply of air to the brake cylinder, an application chamber separated from the train pipe, a movable abutment subject to the opposing pressures of the application chamber and the brake cylinder for moving said valve to apply the brakes upon an increase in pressure in the application chamber, a brake cylinder release valve operated by said abutment, and means for supplying air to and releasing same from the application chamber.

5. In a fluid pressure brake, the combination with a train pipe, and brake cylinder, of a valve for controlling the supply of air to the brake cylinder, an application

chamber, a movable abutment subject to the opposing pressures of the application chamber and the brake cylinder for moving said valve, and a valve mechanism operated by variations in train pipe pressure for varying the pressure in said application chamber.

[Claims 6 to 29 not printed in the Gazette.]

1,109,716. MUSIC ROLL OR SPOOL AND FLANGE THEREFOR. EUGENE T. TURNEY, New York, N. Y. Filed Feb. 26, 1913. Serial No. 750,822. (Cl. 242—123.)

1. A music roll or the like comprising a body and an end piece having a flange and having a tubular portion engaging a portion of said body, said tubular portion having a tongue extending into an axially elongated slot in said body so as to fasten it adjustably thereto, said slot being closed to prevent separation of said end portion from said body.

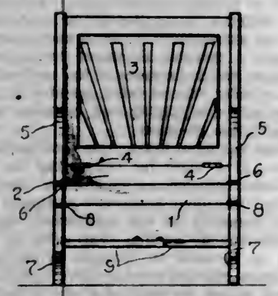
2. A music roll or the like comprising a hollow body A of fiber board and an end piece having a flange D and a tubular portion E, said tubular portion located on the outer side of the flange and engaging the end of the body and having a socket H extending into the end of the body, said flange, tubular portion and socket being formed integrally of a single piece of stamped sheet metal.

3. An end piece for music rolls and the like comprising a tubular portion adapted to embrace the end of a roll body with a close fit, and a transverse circular flange extending outward from the inside edge of said tubular portion, said tubular portion having a recessed head extending into said tubular portion and adapted to receive the end of a supporting or driving shaft.

4. An end piece for music rolls and the like comprising a tubular portion adapted to fit over the end of a roll body, and a transverse circular flange extending outward from the inside edge of said tubular portion, said tubular portion having a recessed head at its outer end adapted to receive the end of a supporting or driving shaft, said end piece being made of a single piece of sheet metal bent to shape.

5. An end piece for music rolls and the like comprising a tubular portion E adapted to fit over the end of a roll body, a flange D extending outward from the inside edge of said tubular portion, and a socket H formed within the outside edge of said tubular portion.

1,109,717. FOLDING CHAIR. MARY R. VAN DUSEN, Charlevoix, Mich. Filed Dec. 13, 1913. Serial No. 806,622. (Cl. 155—8.)



A device of the class described including a substantially rectangular bottom member, side arms hingedly connected thereto and adapted to fold inwardly thereon, an upwardly projecting flange formed at the rear of said bottom member, a back member hingedly connected to said flange and adapted to fold inwardly upon the side arms, rockers hingedly connected to the longitudinal side edges of said bottom member upon the under side thereof and adapted to fold inwardly upon the under side of the bottom, longitudinal brace bars carried by said rockers, inwardly projecting arms carried by said brace bars, said brace bars being disposed out of alinement so that the inner ends thereof will be arranged in parallel relation, and alternate hooks and eyes carried by the inner ends of said arms to retain the same in their inoperative position and support the rockers when in an upright position, as and for the purpose set forth.

1,109,718. STEERING-GEAR. JOSHUA F. VOGEL, Toledo, Ohio, assignor to Gendron Wheel Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 21, 1913. Serial No. 796,395. (Cl. 21—201.)

1. In a steering gear, the combination with a support adapted to be connected to the vehicle body, and a bolster pivotally connected to the support, of a steering stem normally supported obliquely to the vehicle body and the bolster journaled to said support, a rearwardly and downwardly extending arm secured to the stem and provided with lateral extensions, and connecting means for turning the bolster upon the turning of the steering stem.

2. In a steering gear, the combination with a support composed of a bearing and a plurality of legs adapted to be connected to the vehicle body, of a bolster arranged upon the bearing to turn thereupon, a steering stem, means secured to one of the legs to support the steering stem in alinement therewith, an arm fixed to the stem and arranged to move in an arc at an angle to the path of movement of the bolster, and connections between the arm and the bolster upon opposite sides of the pivotal connection of the latter for turning the bolster upon the turning of said steering stem.

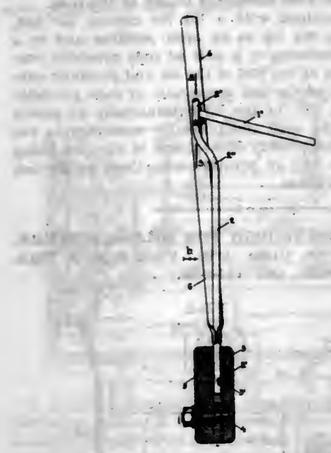
1,109,719. PILE-WIRE FOR PILE-FABRIC LOOMS. WILLIAM WATTIE, Worcester Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Nov. 22, 1909. Serial No. 529,174. (Cl. 139—62.)

1. The combination with a pile wire over which the pile loops are formed, and an upright blade made separate therefrom, and having its lower end notched on one edge to receive a projection on a transverse bar to secure said upright blade in position, and having at its upper end a loop formed by bending over the end of said upright blade, said loop of wedge shape at its upper end, and having the attached end of the pile wire rigidly secured therein, of a guide strip having its upper end free and extending above the attached end of the pile wire, and its lower end secured to the lower part of said upright blade.

2. The combination with a pile wire over which the pile loops are formed, and an upright blade made separate therefrom, and having a loop at its upper end formed by bending over the end of said upright blade, said loop of wedge shape at its upper end, and having the attached end of the pile wire rigidly secured therein, of a guide strip, having its upright end extending above the attached end of the pile wire, and its lower end secured to the lower part of said upright blade.

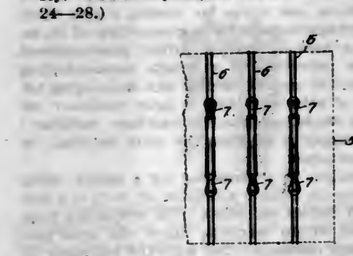
3. The combination with a pile wire over which the pile loops are formed, and an upright blade made separate

therefrom, and having an offset therein, and having a loop at its upper end formed by bending over the end of said upright blade, said loop of wedge shape at its upper end, and having the attached end of the pile wire rigidly se-



cured therein, of a guide strip, having its upright end extending above the attached end of the pile wire, and its lower end secured to the lower part of said upright blade by bending over the edges thereof on said blade.

1,109,720. BALE-TIE. ALBERT T. WEAVER, Joliet, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed July 11, 1913. Serial No. 778,518. (Cl. 24—28.)



1. A bale tie comprising a loop of endless wire, and a pair of buckles slidably connected with the loop, each of said buckles being constructed to engage with the wires of the loop and prevent slippage of the buckle along the loop under pull on the buckle longitudinally thereof.

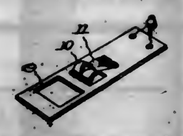
2. A bale tie comprising a loop of endless wire, and a pair of buckles slidably mounted on said loop near each end thereof, each buckle having provisions for connection with the end of the loop projecting from the other buckle.

3. A bale tie comprising a band of endless wire, and a pair of oppositely disposed buckles slidably mounted on said band, each buckle being provided with a hook for connection with an end of the band and having a slot through which the other end of the band passes, the walls of said slots being adapted to engage with the band under tension exerted on said buckles longitudinally thereof and prevent slippage of the buckles on the band.

4. A bale tie comprising a loop of endless wire adapted to be disposed around a bale with the ends of the loop overlapping, and buckles, each connected with one of said overlapping ends and slidably engaged with the loop adjacent the other end thereof, said buckles being adapted to grip the loop and prevent slippage between the loop and the buckles under pull exerted longitudinally of the buckles.

5. A bale tie comprising a loop of endless wire, and a pair of buckles each provided with an opening through which the ends of said loop are threaded, said buckles having hooks to engage with the opposite ends of the loops to draw the ends past each other and tighten the tie as the buckles are moved apart along the loop.

1,109,721. BALE-TIE. ALBERT T. WEAVER, Joliet, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed July 11, 1913. Serial No. 778,519. (Cl. 24—28.)



1. A bale tie comprising a loop of endless wire, and a buckle slidably mounted on said loop near one end thereof and provided with a hook, the end of the loop projecting beyond said buckle being passed through the opposite end of the loop, doubled back, passed through an aperture in the buckle and engaged with said hook.

2. A bale tie comprising a loop of endless wire, a buckle consisting of a metal plate provided with apertures through which the wires of the loop project, and a tongue intermediate the ends thereof with which the end of the loop passing through the plate is engaged after being inserted through the other end of said loop.

3. A bale tie comprising a double loop of endless wire, and a buckle consisting of a metal plate slidably connected at one end with the loop, provided with an aperture adjacent the other end and having a hook intermediate its ends, one end of the loop being passed through the other end thereof and attached to said hook, whereby the tie may be tightened by sliding the buckle backward on the tie.

4. A bale tie comprising a metal plate provided with wire receiving apertures adjacent one end, a large aperture adjacent the other end and a projecting tongue intermediate its ends, and an endless wire loop having individual wires passed through said first mentioned apertures, inserted through the opposite end of the loop, then threaded through said single enlarged aperture and engaged with said tongue.

5. A bale tie comprising an endless wire loop, and a metal buckle, said buckle consisting of a metal plate provided with a pair of apertures at one end through which the wires of the loop are slidably disposed, a tongue intermediate its ends, and a guard disposed adjacent said tongue to prevent disengagement of an end of the wire loop from said tongue, the end of the loop projecting through said apertures being inserted through the other end of the loop, doubled back and engaged with said tongue.

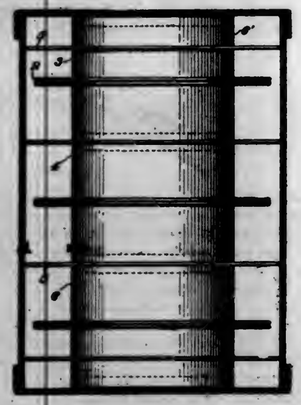
[Claim 6 not printed in the Gazette.]

1,109,722. COLLAPSIBLE HAT-PACKAGE. JOSEPH W. WEISS, Baltimore, Md. Filed Aug. 13, 1913. Serial No. 784,491. (Cl. 206—8.)

1. A spacing and positioning member for hats, the spacing member consisting of a flat plate apertured in the form of the crown of the hat and having inwardly projecting tongues on the edges of the aperture, and the positioning member consisting of a cylinder within the aperture, slotted to receive the tongues, the cylinder being of a length exceeding twice the height of a hat crown.

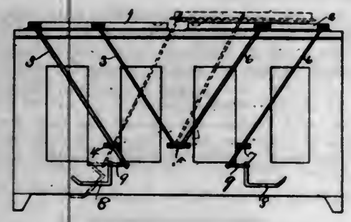
2. A collapsible hat package consisting of a box having a collapsible tubular body of polygonal cross section, a correspondingly polygonal cover and bottom, each having an upright rim to inclose the end edges of the body, and spacing and positioning members within the box, the positioning members within the box, the positioning members consisting each of a flat plate of dimensions to substantially fit the inside of the box, each positioning member being centrally apertured in the form of the cross section

of the hat crowns and having inwardly projecting tongues on the edges of the aperture, the spacing members consisting each of a flexible band joined at its ends to form a ring or cylinder, slotted to receive the tongues, each cylinder being placed inside the aperture of a corresponding positioning member, the tongues of the positioning member entering the slots of the spacing member, the hats being placed in a single column, crown to crown and brim to brim, the adjacent crowns being inclosed each in a



single spacing member of a length exceeding the height of the two crowns so that the tops of the crowns are spaced apart, and the end crowns being inclosed in a single spacing member of reduced length slightly exceeding the height of the crown so that the crowns are held out of contact with the box and with each other, each spacing member being inclosed within a positioning member which engages the side walls of the box and keeps the edges of the brims out of contact with the side walls of the box.

1,109,723. LID-MOVER FOR ICE-BOXES, REFRIGERATORS, AND THE LIKE. BROWN WHITE, Fort Worth, Tex. Filed Feb. 7, 1913. Serial No. 746,793. (Cl. 211—26.)

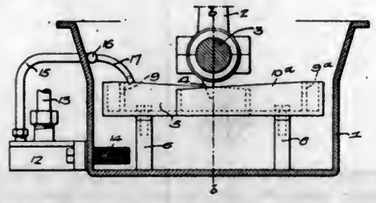


1. In a box having two lids in the same plane, means for moving either lid to an open position and on top of the other lid and back to the closed position and holding the moving lid parallel to and in close proximity to the plane of the top of the box while being moved, said means consisting of pairs of relatively long rods set at inclines to the lids and pivotally connected to the outer end portions of the lid, and pivotally connected to the sides of the box, and pairs of relatively long inclined rods pivotally connected to the central edge portions of the lids and to the sides of the box, the pivotal connections of the lids being in the same plane and the pivotal connections on the box being in the same plane and near the bottom of the box.

2. In a box provided with a lid for closing the box, means for lifting the lid and moving the same parallel to and in close proximity to the top of the box, consisting of pairs of rods connected to each edge of the lid near the end thereof, and pairs of rods connected to the edges of the lid near the central portions thereof, said rods being extended down on the outsides of the box and pivotally connected thereto near the bottom thereof and adapted to swing in planes parallel to each other and to the sides of the box, and a foot-lever connected to one of the rods.

3. In a box provided with a lid for closing the box, means for moving the lid to an open position and to a closed position consisting of a pair of rods pivotally connected to each side of the end of the lid and pivotally connected to the side of the box and a pair of rods pivotally connected to each side of the lid substantially at points midway between the ends and pivotally connected to the sides of the box, all pivotal connections of the lids being in the same plane and all pivotal connections to the box being in the same plane.

1,109,724. SPLASH-TROUGH FOR OILING SYSTEMS. ERNEST M. WHITE, Globe, Ariz. Filed Sept. 9, 1913. Serial No. 788,832. (Cl. 184—13.)



1. The combination of a splash trough for an oiling system; and means for causing a body of oil to have a predetermined depth in said splash trough regardless of its inclination within operating limits, from a normal position, the same consisting of a duct communicating with the splash trough at one end thereof and discharging adjacent one side of said splash trough.

2. The combination of an auxiliary container for a splash oiling system, and means for causing a body of oil to have a predetermined depth therein regardless of its inclination from a normal position within predetermined limits, the same consisting of a trough communicating with the container at one end thereof and discharging adjacent the side of said container; a main container for collecting the oil discharged from the auxiliary container; and means for supplying oil from the main container to said auxiliary container.

3. The combination of a container for a splash oiling system, and means for causing a body of oil to have a predetermined depth therein regardless of its inclination from a normal position within operating limits, the same consisting of a trough communicating with the container at one end thereof through a level maintaining overflow opening and discharging adjacent the side of said container through a second level maintaining overflow opening.

4. The combination of a container for a splash oiling system, and means for causing a body of oil to have a predetermined depth therein regardless of its inclination within operating limits from a normal position, the same consisting of a trough communicating with the container at one end thereof and discharging adjacent the side of said container through a level determining overflow opening.

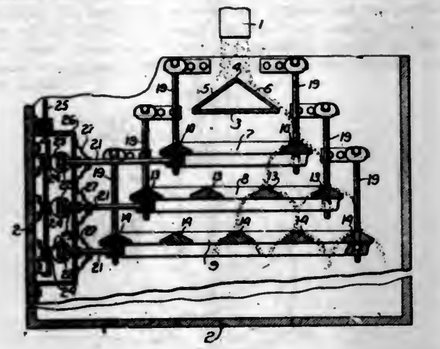
5. The combination of an auxiliary reservoir for an oiling system; with an L-shaped trough having an overflow opening at one side of said reservoir and connected to receive oil from or deliver it to the reservoir at one end thereof.

[Claims 6 to 14 not printed in the Gazette.]

1,109,725. MIXER. GEORGE E. WHITNEY, Yonkers, N. Y., assignor to The International Pavement Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 27, 1908. Serial No. 464,676. (Cl. 83—73.)

1. A mixer comprising in combination a downwardly increasing series of deflectors and means for moving said series relatively to each other.

2. A mixer for granular and pulverulent material comprising in combination, a plurality of interrupting shelves arranged in echelon and means to impart an oppositely substantially horizontal reciprocal movement to the adjacent parallels of said echelon.



3. A mixer comprising in combination a downwardly increasing series of deflectors and means for shifting a plurality of said series oppositely in reciprocation.

4. A mixer comprising in combination a downwardly increasing horizontally arranged series of shelves and means to impart oppositely reciprocal horizontal movements to adjacent series of said shelves.

1,109,726. POTHEAD. PAUL F. WILLIAMS, Chicago, Ill., assignor to G. & W. Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 26, 1911. Serial No. 604,807. (Cl. 247—12.)

1. A cable pothead comprising in combination, a casing provided with an inlet aperture, a perforated plug for closing said aperture projecting when in normal position within said casing, the outer edge of said plug within the casing being cut away to provide a space for insulating compound between the plug and the casing.

2. A cable pothead comprising in combination, a casing having an inlet aperture, a perforated plug for closing said aperture engaging the inside of the pothead, a cable sheath entering the pothead through the perforation in said plug and flared out in contact with the inner face of said plug, a ring for clamping the end of said sheath against the inner face of said plug, said ring being of less diameter than the interior of said pothead and said plug being cut away at a point immediately beyond the outer edge of said ring forming a space for compound extending between the casing on one side and the ring and end of the cable sheath on the other side to a point below the end of the cable sheath whereby the joints on both sides of said sheath may be sealed with compound.

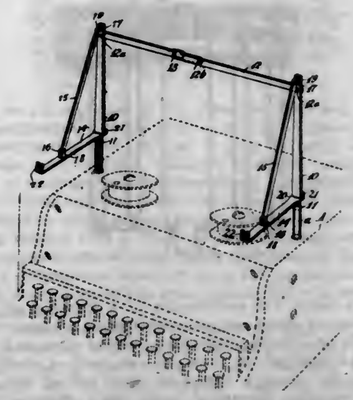
3. A cable pothead having in combination, a casing, a collar through which the cable is led having screw threaded connection with the inside of the mouth of the casing, and means independent of the casing for securing said collar to the cable.

4. A device of the class specified, having a collar 10^a, provided with a screw threaded connection with the mouth of the device, into which the cable is led, said collar 10^a having a flange 12 to engage the lower edge of the device, a ring 14 within the mouth of the device, in combination with a cable having its metal sheath bent outwardly to form a flange, which is interposed between the collar 10^a and ring 14, and screws 15 to secure the ring 14 and collar 10^a together.

5. The combination of a casing having an aperture, a perforate plug for closing said aperture having a socket, a cable having a metallic sheath passing through said plug, and a pipe surrounding the sheath of said cable and engaging said socket.

[Claims 6 to 10 not printed in the Gazette.]

1,109,727. COPY-HOLDER. GROVER CLEVELAND WILSON, Lexington, Ky. Filed Aug. 20, 1913. Serial No. 785,656. (Cl. 120—28.)

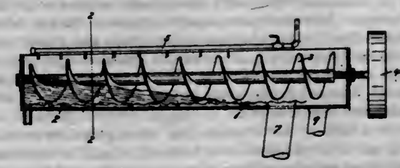


1. A collapsible copy holder comprising standards, a cross bar formed of sections pivoted to each other and to the standards, copy holding arms adapted to engage at one end with the standards, and hanger bars pivotally connected with the copy holding arms between the ends of the latter and pivotally connected at their upper ends with the standards.

2. In a copy holder, standards, copy holding arms, hanger bars pivotally connected at their upper ends with the standards and pivotally connected at their lower ends with the copy holding arms between the ends of the latter, there being co-acting members on the standards and on the adjacent ends of the copy holding arms to form an interengagement between the standards and arms.

3. In a copy holder, standards, a foldable cross bar uniting the standards, hanger bars pivotally connected at their upper ends to the standards, and copy holding arms pivotally connected between their ends with the lower ends of the hanger bars, the ends of the said arms being upturned and forked and the standards having downwardly disposed shoulders for engaging the said arms at one end.

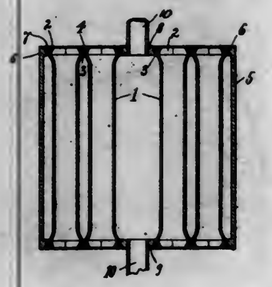
1,109,728. MACHINE FOR WASHING BEANS, &c. THOMAS WILSON, Marlette, Mich. Filed July 21, 1913. Serial No. 780,337. (Cl. 146—14.)



In a machine for washing beans, the combination with an inclined delivery trough having a screw conveyer mounted therein, of a removable screen arranged in said

delivery trough adjacent the lower periphery of said screw conveyer adapted to span said delivery trough to form an auxiliary removable bottom therefor, a spray pipe adapted to discharge water into said trough and partly submerge said screen, a suction pipe communicating with said trough beneath the upper submerged part of the removable screen, and a discharge pipe communicating with said trough adjacent the upper end of said removable screen.

1,109,729. BOILER. WILLIAM H. WINSLOW, Chicago, Ill., assignor to The Steam Power Devices Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 5, 1908. Serial No. 466,084. (Cl. 122—44.)



1. In a boiler, the combination of a plurality of flues, each having a flange at each end formed integral therewith, each set of flanges lying in a common plane and fitted and fused together to form an end wall, a shell surrounding the flues, a flange at each end of the shell formed integral therewith, said shell flanges being formed to receive and to fit the end walls formed by the flue flanges, said shell flanges being fused to said flue flanges whereby an integral boiler is formed.

2. In a boiler, the combination of a plurality of flues each having its ends expanded to form flanges, said flues being grouped and the ends matched and fused together to form an end wall, an inclosing shell parallel to the flues having its ends upset to form inwardly extending flanges, said shell flanges having a contour to receive and to fit the grouped end flanges of the flues and being fused to said flue flanges to form the outer sections of said end walls.

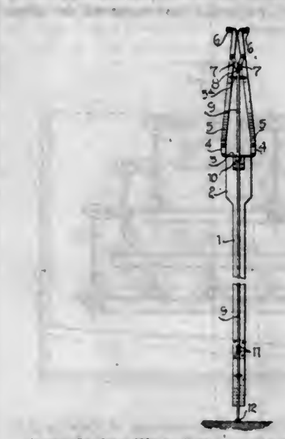
3. In a boiler, the combination of a shell, flues extending through said shell, the end sections of the flues being expanded outwardly and the ends of the end sections being inclined inwardly to form polygonal flanges, the flanges engaging at their lower edges when the flues are grouped within the shell and said engaging flanges forming V-shaped pockets or channels, and fused material in said pockets or channels connecting the parts into an integral structure.

4. In a boiler, the combination of a plurality of flues having their ends expanded and then inclined inwardly to form polygonal flanges, there being pockets or channels formed between the inclined flanges when the flues are grouped parallel together, a shell surrounding the flues, inturned flanges at the ends of the shell formed to engage with the flanges of the outer flues, there being also pockets or channels formed between said inturned flanges of the shell and the inclined flanges of the flues, and fused material in said pockets or channels connecting the flue flanges and shell flanges into an integral structure, said inturned flanges of the shell and the flanges of the flues forming the boiler heads.

5. In a boiler, the combination of a plurality of flues having ends of polygonal conformation, and a shell having an inwardly extending edge conformed to fit the flue ends, said parts together constituting an integral structure.

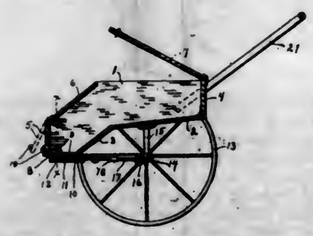
[Claims 6 to 8 not printed in the Gazette.]

1,109,730. GOODS-HANDLING DEVICE. HIRAM B. WINTER, Clarksburg, W. Va. Filed Feb. 4, 1914. Serial No. 816,555. (Cl. 57—113.)



A goods handling device comprising a pole or handle provided at its upper end with an enlarged head, an approximately U-shaped strap secured to the upper end of the head and having its ends bent on a quarter turn and disposed at right angles to the attached portion to provide ears, a pair of clamping bars having their lower ends pivoted to the ears and their upper ends bent outward at right angles to the length of the bars and curved to provide jaws, a link pivoted to each of the bars, guides secured to the pole, an actuating rod engaging the guides and having one end projecting beyond the smaller end of the pole and its other end pivotally connected with the links, and a retracting spring connected with the clamping bars below the links.

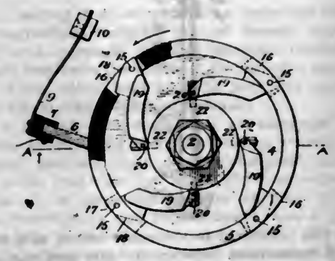
1,109,731. ASH-DISTRIBUTER. FANNIE M. WORTHINGTON, Sterling, Ill. Filed Aug. 23, 1912. Serial No. 716,631. (Cl. 111—34.)



A machine of the class described, comprising a wheeled receptacle; a plate in the bottom of said receptacle, provided with a pair of transverse parallel slots; a plate slidably mounted beneath said first-named plate and provided with a slot adapted to register with one of the slots in said first-named plate upon said last-named plate being given a reciprocating movement; a crank-shaft uniting the wheels of said machine; a pitman connecting said crank-arm with said slide-plate so as to impart a reciprocating movement thereto when said machine is in motion; and means for adjusting the length of said pitman, so as to cause the slot in said slide-plate to alternately register with the slots in said first-named plate.

1,109,732. AUTOMATIC SPARK-TIMER FOR INTERNAL-COMBUSTION ENGINES. GEORGE R. WRIGHT and FREDRICK W. JOHNSON, Sardis, British Columbia, Canada. Filed Mar. 28, 1914. Serial No. 828,073. (Cl. 123—117.)

1. An automatic spark timer for an internal combustion engine, comprising the combination with a hollow cylinder of insulating material secured on a shaft which is rotatable with the engine, said cylinder having a circumferentially elongated aperture in it for each ignition circuit of the engine, a metallic contact member in each aperture electrically connected to the engine frame, means coöperative with the speed of rotation for varying circumferentially the length of said contact exposed at the periphery of the cylinder through the aperture, and a brush in electrical connection with the ignition circuit in frictional engagement with the periphery of the cylinder and its contact.



2. An automatic spark timer for an internal combustion engine, said timer comprising a hollow cylinder of insulating material rotatable with the engine, said cylinder having a circumferentially elongated aperture in it for each ignition circuit of the engine, a contact member pivotally mounted in each aperture and electrically connected to the engine frame, said contact member having normally a portion of its length coincident with the outer circle of the cylinder, the remainder of its length in the aperture being within the circle of the cylinder but susceptible of moving out to it under an increase in the speed of rotation, and a brush contact for each ignition circuit bearing on the outside of the cylinder and engaging its contact.

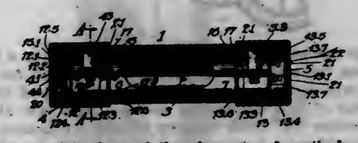
3. An automatic spark timer for an internal combustion engine, said timer comprising a hollow cylinder of insulating material secured on a shaft which is rotatable with the engine, said cylinder having a series of circumferentially elongated apertures through it one for each ignition circuit of the engine, said apertures being at equal distances apart and arranged in parallel but different planes of rotation, a contact member pivotally mounted in each aperture and electrically connected to the engine frame, said contact member having a portion rearwardly extended from its pivot which is coincident with the outside of the cylinder at a certain minimum speed of rotation, and a portion forwardly extended from the pivot which forwardly extended portion is inwardly curved from the outer circle of the cylinder to a radius less than the cylinder.

4. An automatic spark timer for an internal combustion engine, said timer comprising the combination with a hollow cylinder of insulating material rotatable with the engine, said cylinder having a circumferentially elongated aperture through it for each ignition circuit of the engine, said apertures being angularly equidistant from one another and in adjacent parallel planes of rotation, a contact member pivotally mounted in each aperture that portion of the contact member aft of the pivot being normally coincident with the outer circle of the cylinder and that portion of it in advance of the pivot inclining inward away from that circle but susceptible of being moved outward under the centrifugal force on the contact member to bring successive extensions from the fulcrum to the circle of the cylinder under successive increases of the speed of rotation, a spring counterbalancing the centrifugal effort on the contact member at different speeds, means for electrically connecting the contact member to the engine frame, and a brush electrically connected to each ignition circuit and bearing on the cylinder in the plane of each pivotally mounted contact member.

5. An automatic spark timer for an internal combustion engine, comprising a cylinder of insulating material secured on a shaft which is rotatable with the engine, a brush connected in each ignition circuit of the engine and bearing on the outer surface of the cylinder, contacts pivotally mounted in the cylinder under the path of each brush thereon and adapted under centrifugal force to vary the distance at which contact is made with the brush from the pivot on which it is mounted, and a common spring controlling the outward movement of all the pivotal contact members.

[Claims 6 and 7 not printed in the Gazette.]

1,109,733. FUSE-HOLDER. HARRY W. YOUNG, Chicago, Ill. Filed Apr. 28, 1913. Serial No. 764,113. (Cl. 175—273.)



1. In a safety fuse of the character described, a casing in combination with terminal clamping members contained in said casing and adapted to grip the ends of a fuse element, one of said clamping members comprising a pair of coacting jaws correspondingly corrugated in registry on their opposing faces, one of said jaws being rigidly attached to said casing, and the other or movable jaw being formed with a back portion extending adjacent to the opposite side of said casing and adapted to abut radially thereagainst when the jaws are opened, and thereby limit the opening of the jaws, substantially as and for the purpose set forth.

2. In a safety fuse of the character described, a casing in combination with terminal clamping members contained in said casing and adapted to grip the ends of a fuse element, one of said clamping members comprising a pair of coacting jaws correspondingly corrugated in registry on their opposing faces and a clamping screw therefor, said jaws being provided with oppositely and outwardly disposed guard shoulders, one on the inner end of each jaw and extending adjacent to the opposite sides respectively of said casing and adapted thereby to prevent inserting any fuse body between the clamping means and the sides of the casing, substantially as and for the purpose set forth.

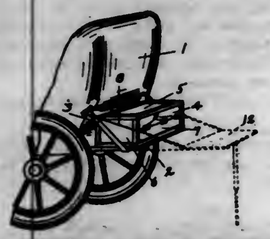
3. In a safety fuse of the character described, a cylindrical casing member of insulating material, in combination with a terminal member mounted rigidly in one end of the casing, said terminal member comprising a disk portion fitting closely within the extremity of said casing and an axially disposed clamping jaw member formed integrally with said disk portion, and a movable complementary jaw member adapted to be clamped rigidly to the first said body for holding a fuse end.

4. In a safety fuse of the character described, a cylindrical casing member of insulating material, in combination with a terminal member mounted rigidly in one end of the casing, said terminal member comprising a disk portion fitting closely within the extremity of said casing and an axially disposed clamping jaw member formed integrally with said disk portion, and a movable complementary jaw member adapted to be clamped rigidly to the first said body for holding a fuse end, said terminal parts consisting of sheet metal stampings.

5. In a safety fuse of the character described, a cylindrical casing member of insulating material, in combination with a stamped sheet metal terminal member mounted rigidly in one end of the casing, said terminal member comprising a disk portion fitting closely within the extremity of said casing and an axially disposed clamping jaw member formed integrally with said disk portion; and a movable complementary jaw member adapted to be clamped rigidly to the first said body for holding a fuse end, said fixed disk and jaw stamping having radially projecting tips adapted to engage the casing for rigid attachment of said stamping thereto.

[Claims 6 to 20 not printed in the Gazette.]

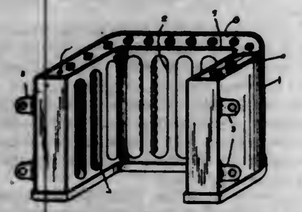
1,109,734. COMBINATION PROVISION AND EXTENSIBLE-TABLE CHEST. HARVEY WYNANT BAUER, Spokane, Wash. Filed Sept. 30, 1912. Serial No. 723,190. (Cl. 224—29.)



1. A provision chest comprising in combination, a body, a covering for said body including a lid, hinges for connecting said cover to said body, an extension leaf hinged to the edge of said lid farthest removed from said hinges, said extension leaf being adapted to fold flat against said lid when said cover is closed, and an extensible leg pivoted to said leaf near the edge thereof which is farthest from the connection of the leaf with the lid, said leg being adapted to fold against the side of said leaf which is out of contact with said lid when the leaf is folded.

2. A provision chest comprising in combination, a body, said body being provided with oppositely sloping side walls and having front and rear walls of which the front wall has the lesser height, a cover hinged to said front wall having a lid and also two side members adapted to complete a substantially rectangular configuration in combination with said body when said cover is closed, an extensible leaf hinged to said lid at the edge thereof farthest removed from the point of connection between the cover and the body of the box, said leaf being adapted to form a substantially uninterrupted surface with said lid when in its extended position, and means for supporting said leaf when in an extended position.

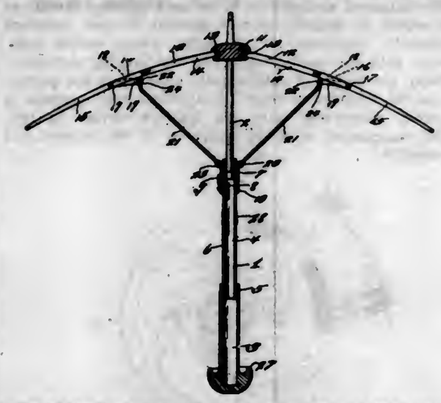
1,109,735. ELECTRIC ATTACHMENT FOR CARBURETERS. ALFRED STUART BIGNELL, Bergerville, Quebec, Canada. Filed Aug. 23, 1913. Serial No. 786,263. (Cl. 219—38.)



An electric attachment for carbureters comprising a 3-sided and double walled heating device, around the carbureter, having lugs for securing said device to the engine casing and vertical slots in the inner wall thereof, electric heating coils between the said walls adjacent to said vertical slots, a source of electric current, connections from said source to said coils, an electric switch in said connections, a rheostat and an electric switch between said rheostat and said connections.

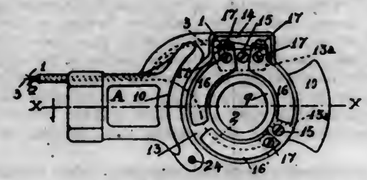
1,109,736. FOLDABLE UMBRELLA. IRA B. CARTWRIGHT, Minong, Wis. Filed Oct. 29, 1913. Serial No. 798,003. (Cl. 135—46.)

In a foldable umbrella, a stick comprising a handle section, a ferrule section and an intermediate joining section having a vertical slot, one end of which terminates in a transverse slot, said sections being telescopically united, the ferrule section having a lug moving in said vertical slot, a sleeve runner on the intermediate joining section and provided with a spring catch to engage the transverse slot to hold the sleeve runner at one end of the intermediate section, said spring catch engaging under the lug of the ferrule section to hold the same extended in position,



collapsible ribs connected to the upper end of said ferrule section and connections between the ribs and the sleeve runner.

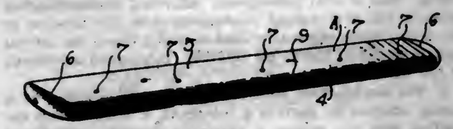
1,109,737. COUPLING. JAMES W. COFFMAN, Springfield, Ill. Filed Mar. 24, 1913. Serial No. 756,466. (Cl. 173—333.)



The combination of two complemental coupling heads, each having a circular depression adapted to accommodate a packing ring, two radial depressions, one adapted to accommodate a single-width block and the other adapted to accommodate a double-width block and co-acting cams effective upon the rotation of one head relative to the other on a transverse axis common to both heads, to draw the heads together; compressible complemental packing rings fitted in the circular depressions of said heads respectively; insulating rings each having a double-width reinforcing block and a single-width reinforcing block adapted to fit in the respective radial depressions in said heads to afford stable connections of the insulating rings with the heads and stable connections of contact springs with the rings; screws extending through the reinforcing blocks and connecting the insulating rings with the heads respectively; two complemental pairs of arcuate contact-springs, one pair being mounted on the double-width reinforcing block of one insulating ring and the other pair being mounted on the double-width reinforcing block of the other insulating ring; a third pair of arcuate contact-springs, one spring of the pair being mounted on the single width reinforcing block of one insulating ring and the other spring of the pair being mounted on the single width reinforcing block of the other insulating ring; outgoing conductors electrically connected with the complemental pairs of contact springs mounted on the double-width reinforcing blocks; and a common-return conductor electrically connected with the pair of contact springs mounted on the single-width reinforcing blocks.

1,109,738. NAILING-CLEAT. WILLIAM P. COLDREN, Lebanon, Pa., assignor to Coldren Roofing Co., Lancaster, Pa. Filed June 6, 1914. Serial No. 843,509. (Cl. 108—7.)

1. A nailing cleat comprising an elongated strip having one longitudinal marginal portion thereof angularly disposed and having a plurality of openings in the opposite marginal portion, said openings being surrounded by depending guiding lips disposed on an incline toward the angular marginal portion.

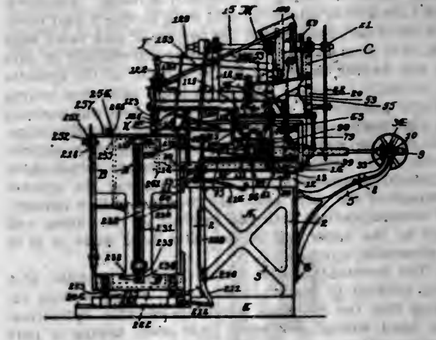


2. A nailing cleat comprising an elongated strip having one longitudinal marginal portion thereof angularly disposed, said angularly disposed marginal portion being of a width less than the width of the opposite marginal portion of the cleat, said opposite marginal portion being plane transversely and longitudinally.

3. A nailing cleat comprising an elongated strip having one longitudinal marginal portion thereof angularly disposed, said angularly disposed marginal portion being of a width less than the width of the opposite marginal portion of the cleat, said opposite marginal portion being plane transversely and longitudinally, and a plurality of openings in the opposite margin.

4. A nailing cleat comprising an elongated strip having one longitudinal marginal portion thereof angularly disposed, said angularly disposed marginal portion being of a width less than the width of the opposite marginal portion of the cleat, said opposite marginal portion being plane transversely and longitudinally, and a plurality of openings in the opposite margin in close proximity to the junction therewith of the angularly disposed margin.

1,109,739. AUTOMATIC NAILING-MACHINE. THOMAS G. CUMMINGS, Fargo, N. D., assignor of one-half to Patrick Grant, Grand Rapids, Mich. Filed Jan. 4, 1911. Serial No. 600,773. (Cl. 1—10.)

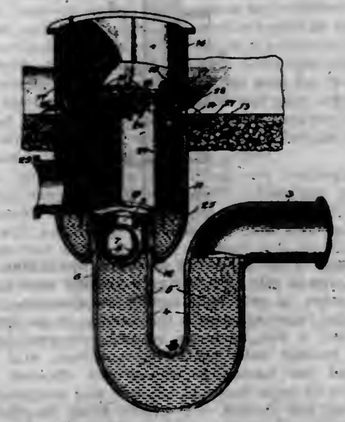


1. In a nail setting machine, a supporting frame, a driving mechanism mounted on said frame and having a nail driver, a nail feed adapted to deliver a nail adjacent to said nail driver, a nail holder adapted to hold a nail in a driving position, a punch adapted to form an aperture for a nail, means for presenting said holder to said nail feed to receive a nail and to said nail driver to drive said nail, and means for bringing said punch into coaction with said nail driver to punch a hole for said nail.

2. In a nail setting machine, a support, a nail driving head on said machine having a driver, and a nail holder and punch coöperating therewith, means on said support to move said head longitudinally and laterally thereof step by step, a holding frame mounted on said support to cooperate with said driving head and means connected therewith to position the same longitudinally or laterally on said support.

3. A nail setting machine, comprising in combination, a support, a drive shaft mounted on said frame, a pair of cam wheels mounted on said shaft, a nail driver mounted on said support and operated by one of said cam wheels, a nail holder having a punch connected therewith, and both movable into operative relation with said nail driver by means of the other of said cam wheels and a nail feed for loose nails adapted to deliver a nail to said holder in one position thereof during the operation of said punch, said holder then moving to position said nail under said driver.

1,109,740. COMBINED FLOOR-DRAIN AND HOPPER. GEORGE J. DEHN, Chicago, Ill. Filed Nov. 25, 1912. Serial No. 733,308. (Cl. 182—13.)



1. A combined floor-drain and hopper comprising a receiver-basin, adapted to be secured in a floor, and having openings adjacent the floor for directing floor-drainage into the receiver, a hopper above the basin, a perforated hopper-bottom, a discharge-means for conducting drainage from said bottom through said basin, and a pipe connected to the bottom of said basin.

2. A combined floor-drain and hopper comprising a receiver-basin, adapted to be secured in a floor, and having openings adjacent the floor for directing floor-drainage into the receiver, a hopper above the basin, a perforated hopper-bottom removably held in the hopper, discharge-means for conducting the drainage from said bottom through said basin, and a pipe connected to the bottom of said basin.

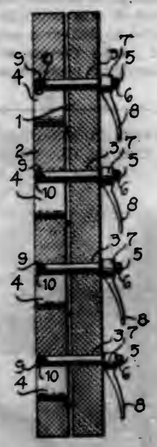
3. A combined floor-drain and hopper comprising a receiver-basin, adapted to be secured in a floor, and having openings adjacent the floor for directing floor-drainage into the receiver, a hopper above the basin, a perforated hopper-bottom, discharge-means for conducting drainage from said bottom through said basin, and a pipe connected to the bottom of said basin, said hopper-bottom having an inwardly sloping rim and being integral with said conducting-means.

4. A combined floor-drain and hopper, comprising a receiver-basin, having a floor-flange, the receiver-basin having openings adjacent the flange for directing floor-drainage into the receiver, a hopper above the flange, a perforated hopper-bottom, a discharge-pipe having an inlet terminal extended above the bottom of the receiver to retain the liquid in the bottom of the receiver in the basin, and a wall extending downwardly from the hopper-bottom below the top of the inlet pipe and into the water around it.

5. A combined floor drain and hopper comprising a basin having a floor-flange, the basin having openings adjacent the flange for directing floor-drainage into the receiver, a hopper above the flange, a removable perforated hopper-bottom, a removable strainer in the basin below said openings, a pipe having a trap therein connected to the bottom of said basin, and a wall extending downwardly from the hopper bottom below the top of the inlet-pipe.

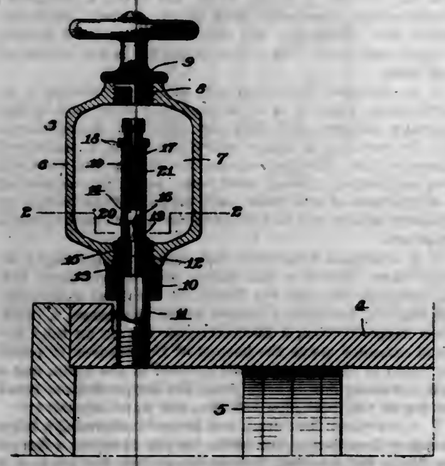
[Claims 6 to 10 not printed in the Gazette.]

1,109,741. CLAMP. JOE A. DILLON, Tecumseh, Nebr. Filed May 16, 1914. Serial No. 839,101. (Cl. 39—53.)



A clamp of the character described comprising a pair of bars, one of said bars having a circular opening therein the other of said bars having an elongated opening therein for registration with the opening in the first mentioned bar, a bolt having a laterally disposed head arranged through said registering openings, said second mentioned bar having a transversely disposed groove formed in its outer face and crossing said elongated opening at one end thereof, said groove being adapted to receive the head of the bolt when the bars are connected together, so that the head is maintained out of alinement with the elongated opening.

1,109,742. LUBRICATING DEVICE. WALTER S. EARLEY and ROBERT W. KILPATRICK, Philadelphia, Pa., assignors, by mesne assignments, to The Earley Dry Graphite Lubricator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 21, 1913. Serial No. 768,930. (Cl. 184—55.)



1. The combination with a fluid pressure cylinder, of a casing adapted to contain a lubricant, a hollow stem extending into the casing, a vertically-movable cylindrical valve head loosely fitted within said stem and guided thereby, said stem having a part forming a valve seat upon which the bottom of said valve head rests, said stem having a passageway surrounded by said seat and leading therefrom to the interior of the cylinder and normally closed by said valve head, said stem having a lateral passageway therein above said seat and opening into the casing, said lateral passageway affording communication between the first named passageway and the interior of the casing when said valve head is raised above the lateral passageway, and means for limiting the upward movement of the valve head.

2. The combination with a fluid pressure cylinder, of a casing adapted to contain a lubricant, a hollow stem extending into the casing, a vertically-movable, cylindrical valve head loosely fitted within said stem and guided thereby, said stem having a part forming a valve seat upon which the bottom of said valve head rests, said stem having a passageway surrounded by said seat and leading therefrom to the interior of the cylinder and normally closed by said valve head, said stem having a lateral passageway therein above said seat and opening into the casing, said lateral passageway affording communication between the first named passageway and the interior of the casing when said valve head is raised above the lateral passageway, and an adjustable screw screwed into the top of said stem and adapted to limit the upward movement of the valve head.

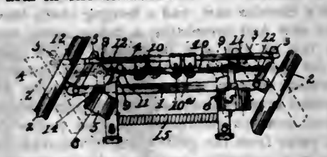
3. The combination with a fluid pressure cylinder, of a casing adapted to contain a lubricant, a hollow stem extending into the casing and communicating with the cylinder, said stem having a lateral passageway therein opening into the casing, a vertically-movable, cylindrical valve head within said stem and normally closing said passageway, said passageway affording communication bteween the interior of the casing and the interior of the cylinder when the valve head is raised above the passageway, and a part limiting the upward movement of the valve head, and provided with a passageway communicting with the interior of the casing and closed by the upper end of the valve head when it is in the uppermost position.

4. The combination with a fluid pressure cylinder, of a casing adapted to contain a lubricant, a hollow stem extending into the casing, a vertically-movable, cylindrical valve head within said stem, said stem having a part forming a valve seat upon which the bottom of said valve head rests, said stem having a passageway surrounded by said seat and leading therefrom to the interior of the cylinder and normally closed by said valve head, said stem having a lateral passageway therein above said seat and opening into the casing, said lateral passageway affording communication between the first named passageway and the interior of the casing when said valve head is raised above the lateral passageway, and a part limiting the upward movement of the valve head, and provided with a passageway communicating with the interior of the casing and closed by the upper end of the valve head when it is in the uppermost position.

5. The combination with a fluid pressure cylinder, of a casing adapted to contain a lubricant, a hollow stem extending into the casing, a vertically-movable, cylindrical valve head within said stem, said stem having a part forming a valve seat upon which the bottom of said valve head rests, said stem having a passageway surrounded by said seat and leading therefrom to the interior of the cylinder and normally closed by said valve head, said stem having a lateral passageway therein above said seat and opening into the casing, said lateral passageway affordiug communiction between the first named passageway and the interior of the casing when said valve head is raised above the lateral passageway, and an adjustable screw screwed into the top of said stem and adapted to limit the upward movement of the valve head, said screw having a passageway extending therethrough and communicating with the interior of the casing and closed by the upper end of the valve head when it is in the uppermost position.

1,109,743. HEADLIGHT FOR AUTOMOBILES. JOHN D. ELLISON, Union City, Tenn. Filed Jan. 27, 1912. Serial No. 673,932. (Cl. 240—62.)

1. The combination, with the steering bar of a vehicle, of a pair of swiveled headlights having projecting lever arms, and a rod connecting each of said lever arms to said steering bar each rod having sliding connection with its lever arm in one direction.



2. The combination, with the steering bar of a vehicle, of a pair of swiveled headlights having projecting lever arms, and rods extending in opposite directions between said lever arms and steering bar, the adjacent ends of said rods being attached to the latter and their other ends having sliding connection with the respective lever arms in an outward direction for the purpose specified.

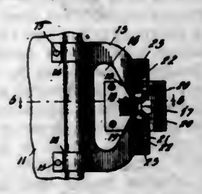
3. The combination, with the steering bar of a vehicle, of a pair of swiveled headlights having projecting lever arms, and rods extending in opposite directions between said lever arms and steering bar, the adjacent ends of said rods being attached to the latter and their other end portions having sliding connection with the respective lever arms in an outward direction, and heads on the outer extremities of said rods whereby said lever arms, are moved therewith in an inward direction.

4. The combination, with the steering bar of a vehicle, of a pair of swiveled headlights having projecting lever arms, cuffs swiveled on the latter, and rods extending loosely through said cuffs and having heads adjacent to the same, said rods being also attached to said steering bar for the purpose specified.

5. The combination, with the steering bar of a vehicle, of a pair of swiveled headlights having projecting lever arms, and rods connecting said lever arms to said steering bar and having sliding connection with the former in one direction, and means adapted to engage the lever arm of each headlight for retaining one of the headlights in its normal position during the sliding movement of its connecting rod while the other headlight is being turned by its connecting rod.

[Claims 6 to 9 not printed in the Gazette.]

1,109,744. GUARD-CURTAIN FOR VESTIBULE-CARS. PLATO G. EMERY, Chicago, Ill. Filed Feb. 15, 1911. Serial No. 608,749. (Cl. 105—266.)



1. A guard-curtain for railway-car vestibules comprising in combination, a curtain secured at one edge to a spring roller, the attachment being reinforced by a loop surrounding the roller and fastened to the curtain, a handle secured to the other edge of the curtain and having a spring-thrust friction guarded gate forming an opening in the said handle for receiving, frictionally retaining, and permitting, upon greater than the normal strain due to the spring in the spring roller, the escape of the holding hook, said reinforcing loop being adapted to withstand abnormal strains and to prevent tearing of the curtain from the roller, substantially as specified.

2. A latching device for railway-car vestibule guard-curtains which is adapted to coöperate with a hook, said device including a handle attachable to the free edge of the curtain and extending in a vertical plane, said handle having an enlarged opening through which the hook is adapted to be placed transversely, the opening being provided with a contracted mouth, the opposite edges of which are movably mounted in a vertical line and adapted to separate to release the hook upon more than normal pull, substantially as specified.

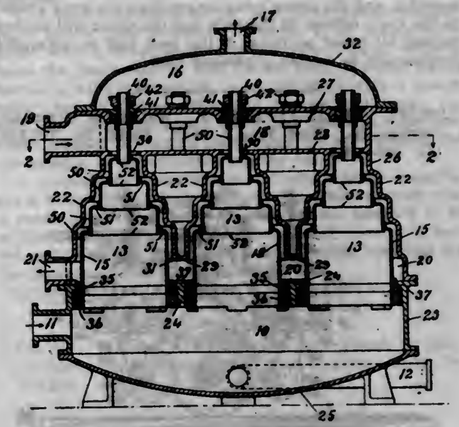
3. A latching device for railway-car vestibule guard-curtains which is adapted to coöperate with a hook, said device including a handle attachable to the free edge of the curtain and extending in a vertical plane, said handle being provided with an enlarged opening adapted to receive the hook transversely therethrough, said opening having a contracted mouth, one edge of said mouth comprising a spring-thrust member adapted to be moved in a vertical line by the hook to release the latter upon more than normal pull, substantially as specified.

4. A latching device for railway-car vestibule guard-curtains, adapted to coöperate with a hook and consisting of a handle attachable to the edge of the curtain, and provided with an opening to receive the hook, said opening being provided with a friction guarded gate for the release of the hook upon more than the normal pull, said friction guarded gate comprising spring-thrust members adapted to be laterally moved by the hook, and springs engaging said members, substantially as specified.

5. A latching device for railway-car vestibule guard-curtains, adapted to coöperate with a hook and consisting of a handle attachable to the edge of the curtain and provided with an opening to receive the hook, said opening being provided with a friction guarded gate for the release of the hook upon more than normal pull, said friction guarded gate comprising a spring-thrust surface adapted to be laterally moved by the escaping hook, and means for adjusting the spring-thrust, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,109,745. CONDENSER. ADALBERT FISCHER, Philadelphia, Pa. Filed July 9, 1912. Serial No. 708,407. (Cl. 62—26.)



1. A surface condenser having an upwardly extending cooling surface divided transversely of the direction of flow of the liquid deposited thereon into a plurality of sections, each section being provided with means for clearing it of liquid deposited thereon independently of the other section or sections.

2. A surface condenser having an upwardly extending cooling surface a portion of which is separated from an adjacent lower portion by a part formed to prevent liquid deposited on the portion above from flowing over such lower portion.

3. A surface condenser having an upwardly extending cooling surface separating a condensing space from a cooling liquid space, said surface being divided into a plurality of sections separated by protecting water-discharging edges formed to discharge the liquid deposited on the section above the edge and to direct it away from the section or sections below.

4. A surface condenser having a cooling surface formed by a vertically arranged shell which separates a condensing space within it from a space for a cooling liquid outside the shell, said shell being of decreasing cross sectional size from its inlet to its outlet end and the inner, cooling surface of the shell being divided transversely of the direction of flow of the liquid deposited thereon by means for discharging the liquid deposited on the surface above such means and directing it away from the surface below.

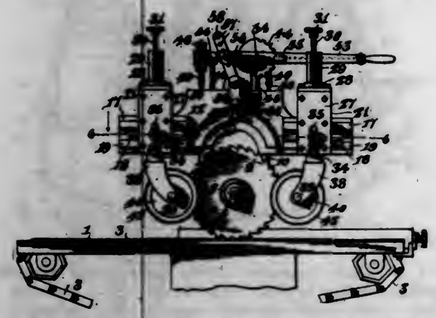
5. A surface condenser having a cooling surface formed by a vertically arranged shell which separates a condensing space within it from a space for a cooling liquid outside the shell, said shell being of decreasing cross sectional size from bottom to top and the inner, cooling surface of the shell being divided horizontally into a plurality of sections separated by projecting water-discharging edges formed to discharge the liquid deposited on the surface of the section above the edge and to direct it away from the surface of the section below.

[Claims 6 to 15 not printed in the Gazette.]

1,109,746. BALING-TACK. GEORGE W. FUATH, Cleveland, Ohio. Filed June 12, 1912. Serial No. 703,307. (Cl. 24—28.)

A baling tack comprising a body provided at its extreme ends with a binder-receiving wing and a material-engaging prong extended in opposite directions and disposed in approximate parallelism, the angle defined by the body and the wing and the end of the material-engaging prong constituting means for supporting the tack upon the material, and the prong being longer than the wing whereby the angle defined by the body and the prong will project beyond all other portions of the tack and be presented prominently to receive a hammer blow.

1,109,747. CHAIN-FEED SAW. WALDEMAR GIERTSEN, Chicago, Ill. Filed June 7, 1913. Serial No. 772,345. (Cl. 143—49.)



1. In a machine of the class described, the combination with a circular saw, and a chain traveling beneath the saw and presenting a flat working face for supporting material fed to the saw, and a presser roller located above the chain and peripherally grooved for the entrance of the cutting edge of the saw and projecting inwardly under the same so as to engage the material close to the active portion of the saw.

2. In a machine of the class described, the combination with a circular saw, of a feeding chain traveling beneath the saw and presenting a flat upper face to the work, said saw extending into the feeding chain below the working face thereof, and a presser roller located above the chain and peripherally grooved for the entrance of the cutting edge of the saw, whereby the roller is adapted to project inwardly under the circular saw and engage the work close to the active portion of the same.

3. In a machine of the class described, the combination with a circular saw, and a feeding chain traveling beneath the saw and presenting a flat working face to the material fed to the saw, a presser roller peripherally grooved for the entrance of the teeth of the saw thereinto and provided with a supporting member in which the presser roller is journaled, said supporting member having a stem and arms in embracing relation to the roller and extended away from the center line of the stem to arrange the roller in a projecting position beneath the saw in close proximity to the active portion thereof.

4. In a machine of the class described, the combination with a circular saw, and a chain traveling beneath the same, of a head and support therefor upon which the head is adjustable up and down, said saw being mounted on the support, carriers on the head adjustable laterally thereof, and presser rollers mounted on the said carriers and located in advance and in rear of the saw, the presser rollers being each peripherally grooved to receive the cutting edge of the saw, whereby the rollers are adapted to project inwardly under the saw for engaging the material close to the active portion of the said saw.

5. In a machine of the class described, the combination with a circular saw, and a feeding chain traveling beneath the saw, of an arm supporting the saw, a head mounted on the arm to move up and down with respect thereto, a shaft journaled on the arm and provided at opposite sides thereof with pulleys and having a counterweight, flexible connections between the pulleys and the said head, a lever carried by the arm, connections between the lever and the head for raising and lowering the head, and presser rollers carried by the head and located in advance and in rear of the saw.

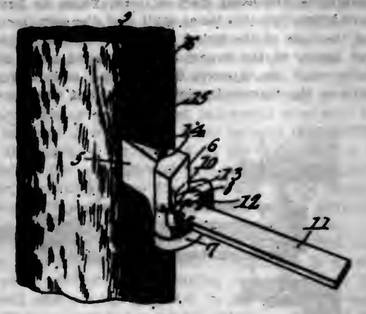
[Claims 6 to 14 not printed in the Gazette.]

1,109,748. CRAVAT-SHIELD. HIGGINS L. GOODLOE, Marshall, Mo. Filed Nov. 22, 1911. Serial No. 661,823. (Cl. 2—84.)

A tie holder comprising a body of approximate T-shape and including a shank and laterally extended arms, the lower end of the shank being forwardly extended to form a tie supporting prong, the shank having a longitudinal rib alined with the prong and coöperating with the prong to prevent the tie from sliding laterally; and a tie engaging and button engaging grip pivoted to the shank, the shank having in its rear, two sets of opposed, approaching lips coöperating with the grip to prevent the lateral movement thereof, the sets of lips being spaced apart longitudinally of the shank to permit the fingers of the operator to engage the grip.

1,109,749. TREE-FELLING FOOTBOARD. PERRY GRAHAM, Blaine, Wash. Filed Feb. 2, 1914. Serial No. 816,074. (Cl. 20—84.)

A device of the class described comprising a wedge, a head portion carried thereby, a supporting bracket projecting beneath said head provided with an apertured central portion, said head provided with an opening extending therein positioned above the aperture of the supporting



bracket, and a platform provided with an upstanding pivot resting upon said supporting bracket with the pivot removably projecting within the head opening.

1,109,750. PROCESS OF PRODUCING RENOVATED AND ARTIFICIAL BUTTER. ERNST B. HELLER, New York, N. Y., assignor to Beatrice Creamery Company, Lincoln, Nebr., a Corporation of Iowa. Filed Mar. 25, 1912. Serial No. 686,083. (Cl. 99—13.)

1. The process of producing butter, which consists in heating a portion of the material consisting of a fatty substance and a lacteal fluid out of which said butter is to be made in a vacuum chamber; pasteurising another portion of said material in another vacuum chamber; inoculating said last mentioned portion with flavoring bacteria while maintaining it free from contact with germ laden air; transferring said inoculated portion from said last mentioned chamber into said first chamber while maintaining the same out of contact with the air; mixing said portions; permitting them to ripen; and finally churning and working the butter thus produced, substantially as described.

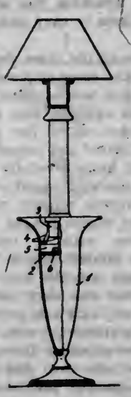
2. The process of producing butter, which consists in melting the fat containing material; washing the same; chilling and granulating said material; inoculating a lacteal fluid with a flavoring culture; mixing said inoculated fluid with said granulated material; exhausting the air from the chamber containing said mixed materials and allowing them to ripen for a predetermined period in said exhausted chamber; and finally churning and working the butter thus prpoduced, substantially as described.

3. The process of producing renovated butter, which consists in melting butter material *in vacuo;* washing the same to remove impurities; chilling and granulating said washed material *in vacuo;* pasteurizing milk to be mixed with said material *in vacuo;* inoculating said milk with flavoring bacteria while maintaining it free from germ laden air; mixing said butter material and inoculated milk while maintaining all the materials out of contact with the atmosphere; allowing said mixed materials to ripen *in vacuo;* and churning and working the butter thus produced *in vacuo,* substantially as described.

4. The process of producing renovated butter, which consists in melting the butter forming material; washing the same; mixing the washed material with bacteria inoculated milk; exhausting the air from the vessel containing said mixture; permitting said mixture to ripen *in vacuo;* and finally churning and working the butter thus produced *in vacuo,* substantially as described.

1,109,751. COMBINATION VASE AND CANDLESTICK. GUSTAVE A. HENCKEL, New York, N. Y. Filed Mar. 18, 1914. Serial No. 825,535. (Cl. 67—23.)

1. A combined flower holder and candle holder comprising a hollow body provided internally, at an intermediate point, with a flange projecting inwardly a short distance from the inner wall of said hollow body, the said flange having a wide open center.



2. A combined flower holder and candle holder comprising a hollow body provided internally, at an intermediate point, with a flange projecting inwardly a short distance from the inner wall of said hollow body, the said flange having a wide open center, in combination with a candle socket having a base adapted to rest on said flange.

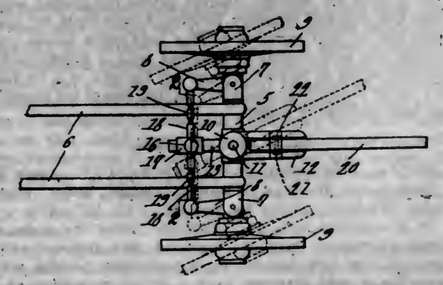
3. A combined flower holder and candle holder comprising a hollow body provided internally, at an intermediate point, with a flange projecting inwardly a short distance from the inner wall of said hollow body, the said flange having a wide open center, in combination with a candle socket having a base adapted to rest on said flange, and means for locking such candle socket and hollow body together.

4. A combined flower holder and candle holder comprising a hollow body provided internally, at an intermediate point, with a flange projecting inwardly a short distance from the inner wall of said hollow body, the said flange having a wide open center, in combination with a candle socket having a base adapted to rest on said flange, the said base being open at the center and openings being provided between the candle socket and the base thereof, for the passage of flower stems and the like.

5. A combined flower holder and candle holder comprising a hollow body adapted to serve as a flower holder and a candle-supporting member having a base adapted to fit within said hollow body, such holow body having a seat for said base, the said candle holder having openings for the passage of flower stems and the like.

[Claims 6 and 7 not printed in the Gazette.]

1,109,752. WAGON STEERING-GEAR. PETER H. HENDRICKSON, Ione, Wash. Filed Nov. 6, 1913. Serial No. 799,593. (Cl. 21—139.)



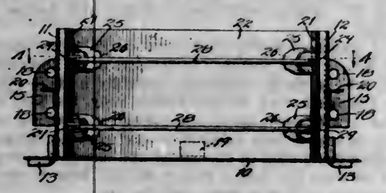
1. In an apparatus of the class described, the combination of a vehicle axle, steering knuckles pivotally secured to the outer extremities thereof and having wheels thereon, and an arm pivotally secured to the vehicle axle, a

tongue connected to the said arm adapted to rotate the same, and means for transmitting motion from the said arm to the steering knuckles, the said means adjustable longitudinally of the arm to vary and adjust the lever arm thereof.

2. In an apparatus of the class described, the combination with a vehicle axle, steering knuckles and wheels carried thereby, of a wagon tongue carrying member pivotally supported by the said axle, an arm projecting therefrom, a member slidably secured to the said arm adapted to shift longitudinally thereof and means for locking it in any desired position, and links pivotally secured to the said member and to the steering knuckles adapted to impart motion thereto at varying velocity ratios with respect to the movements of the wagon tongue.

3. The combination with a vehicle axle, steering knuckles, and wheels carried thereby, of an arm rotatably supported by the said vehicle axle, a tongue receiving member secured to the said arm and adapted to impart limited rotation thereto, said arm provided with a slot extending longitudinally thereof, a member slidably engaging the said arm, a bolt extending through the said bearing member, through the arm slot, and adapted to lock the bearing member at adjusted positions thereon, links pivotally secured to the said bearing member bolt and to the steering knuckles adapted to impart motion thereto at varying velocity ratios taken with respect to movements of the arm to thereby vary the turning of the wheels with corresponding turning of the wagon tongue.

1,109,753. MOLD FOR MAKING REINFORCED-CONCRETE BLOCKS. GUY C. HENKLE, Chicago, Ill., assignor to The Hurst Silo Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1913. Serial No. 757,639. (Cl. 25—121.)



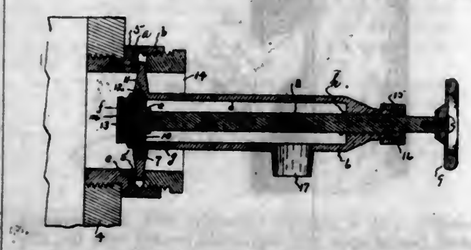
1. A mold for making concrete blocks comprising side and end members forming a receptacle for the concrete, one of said members having means projecting into said receptacle and provided with a recess to receive the end of a tie rod, the adjacent member having means for covering said recess.

2. A mold for making concrete blocks comprising side and end members forming a receptacle for the concrete, one of said side members having means projecting into said receptacle and provided with a recess to receive the end of a tie rod, one of the adjacent end members having a cover for closing said recess.

3. A mold for making concrete blocks comprising separable side and end members forming a receptacle for concrete, one of said members having expansible means projecting into said receptacle provided with a substantially inclosed recess to receive and protect the end of a tie rod, and one of the adjacent members having means for expanding said expansible means.

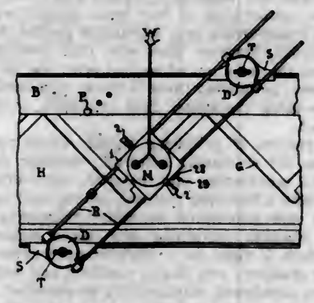
1,109,754. COMBINED PLUG AND FAUCET. JOHN E. HOWELL and WILLIAM H. HOWELL, Omaha, Nebr. Filed Jan. 30, 1913. Serial No. 745,157. (Cl. 137—27.)

In a combined bung and reversible faucet for casks, a sleeve having an interiorly threaded part disposed exteriorly of the cask and having a transverse bearing wall inwardly of said threaded part, a faucet consisting of a casing provided with a cone shaped valve seat at its junction with said flange, a valve stem threaded in the casing provided with a handle at one of its terminals, its opposite terminal being provided with a cylindrical boss with an annular projection, a ring valve mounted inwardly of said annular projection upon the boss of said valve stem and having an interiorly threaded part, a cap engaging the interiorly threaded part of said valve to provide a recess intermediate its inner wall and the annular projection of the boss of the valve stem, said annular outwardly tapered flange of the faucet being adapted to be disposed centrally with its tapered flange lying inwardly of and adjacent to the interiorly threaded part of the sleeve, and



a lock nut adapted to work in the interiorly threaded part of the sleeve for pressing an annular part of the tapered flange against the transverse bearing wall of the sleeve while said faucet is disposed interiorly of the cask, said lock nut also being adapted to work in the interiorly threaded part of the sleeve for pressing an annular part of the tapered flange against the transverse bearing wall of the sleeve while the faucet is disposed exteriorly of the cask.

1,109,755. ELECTRIC ROUTING-MACHINE. SAMUEL HUNTER, Pittsburgh, Pa. Filed Dec. 4, 1913. Serial No. 804,694. (Cl. 144—136.)



1. In a wood working machine the combination with a carriage, and means for movably supporting it above the work; of an upright tubular casing within said carriage having a slot at one side, a tubular sleeve slidably mounted in the casing and having a rack bar projecting through said slot, a tubular stock rotatably mounted within said sleeve, means for preventing it from moving longitudinally therein, a power-driven shaft splined into the upper end of said stock, a bit at the lower end of the stock, and adjusting mechanism including a gear wheel engaging said rack bar.

2. In a wood working machine, the combination with a carriage, and means for movably supporting it above the work; of an upright tubular casing within said carriage having a slot at one side, a tubular sleeve slidably mounted in the casing and having a rack bar projecting through said slot, a tubular stock rotatably mounted within said sleeve and having a flange around it near its upper end, a flange around the upper end of the sleeve having an internal shoulder beneath the flange of the stock, a ring secured to the flange of the sleeve above that of said stock, a bit at the lower end of the stock, and adjusting mechanism including a gear wheel engaging said rack bar.

3. In a wood working machine, the combination with a carriage, and means for movably supporting it above the work; of a tubular casing having a radial flange at its upper end and an upright slot in its rear wall, connections between said flange and carriage, a tubular sleeve having a radial flange at its upper end loosely fitting within said casing and an upwardly facing shoulder within this flange, an internal flange at the lower end of the casing loosely fitting around said sleeve, an upright rack bar on the rear of the latter movably mounted in the slot in the casing, a tubular stock having a radial flange near its upper end resting on the shoulder of the sleeve, a ring secured on the upper edge of the flange of the sleeve over said flange of the stock, a power-driven shaft splined into the upper end of the stock, a bit carried by its lower end, a shaft journaled in the carriage and having a gear engaging said rack bar, a crank disk on the outer end of the shaft, and a set screw through said crank disk, for the purpose set forth.

4. In a wood working machine, the combination with a carriage, and means for movably supporting it above the work; of a tubular casing having a radial flange at its upper end and an upright slot in its rear wall, connections between said flange and carriage, a tubular sleeve loosely fitting within said casing, an upright rack bar on the sleeve movably mounted in the slot in the casing, a tubular stock journaled in said sleeve, a power-driven shaft splined into the upper end of the stock, a bit carried by its lower end, a shaft journaled in the carriage and having a gear engaging said rack bar, a crank disk on the outer end of the shaft, and a set screw through said crank disk, for the purpose set forth.

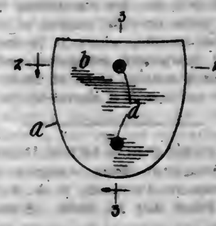
1,109,756. COMBINED PLOW AND FERTILIZER-DISTRIBUTER. MILAN HUELBUT, Waller, Tex. Filed Aug. 28, 1912. Serial No. 717,621. (Cl. 111—32.)

1. In a machine of the character described, a frame, a plate secured in the frame, said plate being provided with an opening, a hopper mounted upon said plate and having an outlet neck extending through the opening therein, a fertilizer receiving cup rotatably mounted beneath the opening in said plate, a baffle plate secured to said first named plate adjacent the opening therein and extending into said cup, and means for rotating the cup.

2. In a machine of the character described, a frame, a plate secured in said frame and provided with an opening, a plurality of upstanding bars secured to the plate around the edge of said opening, a hopper vertically adjustable upon said bars, hangers depending from the under side of the plate, a rotatable fertilizer receiving cup supported by said hangers beneath the opening in the plate, a baffle plate extending into said cup, and means for rotating said cup.

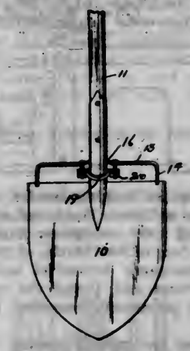
3. In a machine of the character described, a frame, a plate secured in said frame and provided with an opening, a hopper supported upon said plate and having a reduced outlet neck extending through the opening therein, hangers depending from the under side of the plate at the edge of said opening, a fertilizer receiving cup provided with an annular groove in its periphery, each of said hangers having a lug extending into said groove, the base of the cup having a convex upper surface, a baffle plate secured to said first named plate and extending into said cup adjacent the outer edge thereof, means for vertically adjusting the hopper to position its outlet neck with respect to the convex surface of said cup, and means for rotating the cup.

1,109,757. CUSHIONED HEEL. THOMAS JAMES IRWIN, Trenton, N. J. Filed Nov. 3, 1913. Serial No. 799,046. (Cl. 36—36.)



The combination of a heel cushion and means for securing the same to a boot or shoe heel, said cushion having a longitudinal depression in the top thereof, and said longitudinal depression being provided in the bottom thereof with transverse corrugations, said cushion being also provided with side slits communicating with said longitudinal depression and L-shaped in cross section, and a clamp device consisting of a central longitudinal part arranged to fit in said longitudinal depression and provided with transverse corrugations and side flanges which are L-shaped in cross section and arranged to enter said slits.

1,109,758. ATTACHMENT FOR SHOVELS AND SPADES. ARTHUR E. JAMES, Searsboro, Iowa. Filed Dec. 22, 1913. Serial No. 808,506. (Cl. 55—115.)



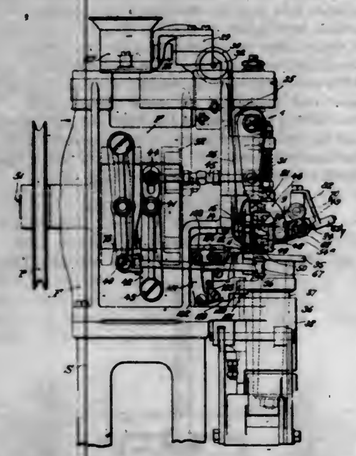
1. In a device of the class described, a flat horizontal bar, having vertical, downward extensions at its ends, the forward edge of said bar at its central portion being bent upwardly and curved to fit the neck of a spade or shovel, bolts extended through said bar on each side of said curved portion, and a curved bar detachably mounted on the ends of said bolts and designed to engage the front lower portion of the shovel handle.

2. In a device of the class described, a flat horizontal bar, having vertical, downward extensions at its ends, the forward edge of said bar at its central portion being bent upwardly and curved to fit the neck of a spade or shovel, bolts extended through said bar on each side of said curved portion, and a curved bar detachably mounted on the ends of said bolts and designed to engage the front lower portion of the shovel handle, said bolts being bent near said bar so that their lower portions extend forwardly and downwardly from the bar to permit the central portion of the first bar and said bar for connecting the ends of the bolts to lie in a plane at right angles to the longitudinal axis of the shovel handle, where it is encircled by said attachment.

3. In a device of the class described, a flat horizontal bar, having vertical, downward extensions at its ends, the forward edge of said bar at its central portion being bent upwardly and curved to fit the neck of a spade or shovel, bolts extended through said bar on each side of said curved portion, and a curved bar detachably mounted on the ends of said bolts and designed to engage the front lower por-

tion of the shovel handle, said bolts being bent near said bar so that their lower portions extend forwardly and downwardly from the bar to permit the central portion of the first bar and said bar for connecting the ends of the bolts to lie in a plane at right angles to the longitudinal axis of the shovel handle, where it is encircled by said attachment, said downward extension and end portions being provided with central slots at their lower ends to receive the upper portion of a shovel blade.

1,109,759. MACHINE FOR MAKING INSOLES. ALBERT E. JOHNSON, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 14, 1908. Serial No. 432,765. (Cl. 112—20.)



1. In a machine for making insoles, the combination with a support for an insole blank and devices for engaging and upturning two contiguous flaps cut from the substance of one face of the blank, of means for successively inserting fastening devices in said flaps adjacent the upturning devices and during the operation of said devices to form a permanent compound lip on the insole blank.

2. In a machine for making insoles, the combination with means for cutting and upturning two contiguous flaps, of a stitching mechanism, and means to operate said mechanism to stitch said flaps together during the operation of the cutting and upturning means to form a permanent compound lip.

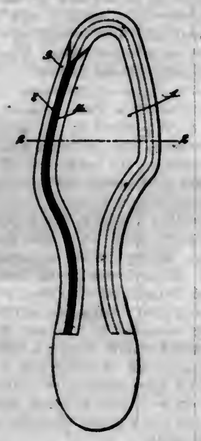
3. In a machine for making insoles, the combination with a channel knife and an edge knife for cutting two contiguous flaps, and means for holding said flaps in upturned position, of a sewing mechanism for stitching said flaps together, one of said knives being constructed and arranged to permit the needle of the sewing mechanism to pass through it, thereby to form the stitch immediately adjacent the junction of the forward ends of the severed flaps and insole.

4. In a machine for making insoles, the combination with means for holding the sole in working position, of means for securing the two contiguous flaps together by a line of stitches to form a single, compound lip, and means under control of the operator for simultaneously releasing the sole and severing the thread at the completion of the stitching operation.

5. In an insole machine the combination with means for securing the two contiguous flaps together by a line of stitches to form a single, compound lip, of a device for severing the thread, a work support constructed and arranged to be moved to facilitate removal of the work, and means controlled by the movement of the work support for operating the thread-severing device.

[Claims 6 to 10 not printed in the Gazette.]

1,109,760. INSOLE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 3, 1912. Serial No. 669,225. (Cl. 36—22.)



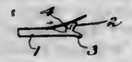
1. As an article of manufacture, a leather blank for insoles, having a flap which is formed by cutting downwardly and outwardly in one face of the blank and which is turned up with the fibers of the leather stretched at its upper margin to produce a length at this portion of the flap greater than the length of the flap at its base to permanently set it, substantially as described.

2. As an article of manufacture, a leather blank for insoles, having a flap which is formed by cutting downwardly and outwardly in one face of the blank and which is turned up and permanently set in its upturned position by a series of transverse crimps or corrugations throughout its length, substantially as described.

3. As an article of manufacture, a leather blank for insoles, having a flap and a parallel lip cut from one face of the blank and which are turned up and united in their upturned position to form a single substantially upright rib, by a series of coöperating transverse crimps or corrugations throughout its length, substantially as described.

4. As an article of manufacture, a leather insole blank having a marginal lip or rib provided with a series of transverse crimps or corrugations to stiffen it and permanently set it in substantially upright position, substantially as described.

1,109,761. INSOLE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 4, 1912. Serial No. 669,323. (Cl. 36—22.)



1. As an article of manufacture, a leather blank for reinforced insoles, having a flap which is formed by cutting downwardly and outwardly in one face of the blank and which is turned up and molded outwardly throughout its length toward the marginal edge of the blank to permanently set the flap in such position that the outer surface of the flap and the plane of the surface from which the flap is cut subtend an angle substantially less than 90 degrees.

2. As an article of manufacture a leather blank for reinforced insoles having a flap and a parallel lip cut in one face, said flap being turned up and rolled over upon the lip with its upturned edge stretched throughout its length by a molding pressure along lines longitudinal of the flap, substantially as described.

3. As an article of manufacture, a leather blank for reinforced insoles, having a flap and a parallel lip cut in one face, said lip being turned up and permanently set in upturned position by molding pressure, and said flap being turned up against said lip with the fibers of the leather at its upper margin stretched to lengthen its up-turned edge relative to the length of its base by being molded throughout its length along lines longitudinal of the flap to permanently set it in upturned position and prevent drooping, substantially as described.

1,109,762. TOOTH FOR CRUSHING-ROLLS. JOHN S. JOHNSON, Lansford, Pa., assignor of one-fourth to George W. WILMOT, Hazleton, Pa., and one-fourth to Samuel V. Tench, Lansford, Pa. Filed Sept. 4, 1913. Serial No. 788,066. (Cl. 83—52.)

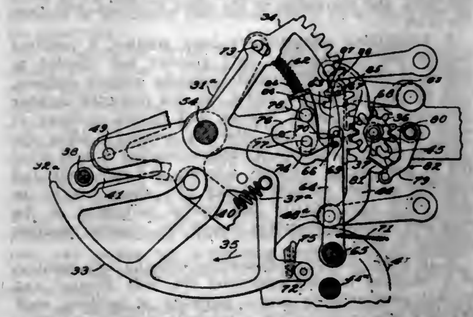
1. As a new article of manufacture, a tooth for a crushing roll comprising a body portion having converging, tapering and concaved sides, the edges between adjacent sides constituting cutting edges.

2. As a new article of manufacture, a tooth for a crushing roll having concaved, converging and tapering sides and also having longitudinally curved cutting edges intermediate adjacent sides.

3. As a new article of manufacture, a tooth for a crushing roll comprising a pyramidal body portion having concaved side surfaces and also having longitudinally curved cutting edges intermediate the said sides.

4. As a new article of manufacture, a tooth for a crushing roll comprising a shank and a body portion having converging, tapering sides, which sides are concaved whereby longitudinally curved cutting edges formed intermediate adjacent sides.

1,109,763. REGISTERING MECHANISM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 1, 1907. Serial No. 376,830. (Cl. 235—6.)



1. In a registering mechanism, the combination with manipulative devices, and operating devices differentially positioned thereby, of a plurality of registers, a supporting shaft for said registers, and means controlled by certain of said manipulative devices for differentially moving said shaft to bring any desired counter to operative relation with the operating devices.

2. In a registering mechanism, the combination with manipulative devices, and operating devices differentially positioned thereby, of a plurality of registers each comprising a series of wheels, a supporting shaft carrying said wheels, the wheels of each denomination in all the registers being adjacent, and means controlled by certain of said manipulative devices for sliding said shaft and wheels to bring the wheels of any desired register into operative relation with the operating devices.

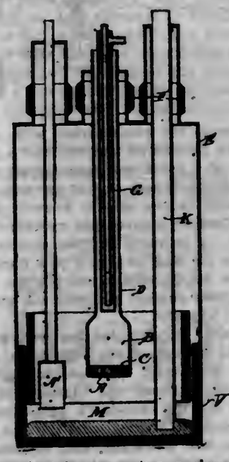
3. In a registering mechanism, the combination with manipulative devices, and spaced operating devices differentially positioned thereby, of a supporting shaft, a plurality of registers, each comprising a series of wheels carried by said shaft, each wheel of each of the registers being spaced from the wheel of the same register of next order, and means controlled by certain of said manipulative devices for establishing an operative relation between said operating devices and any one of the sets of register wheels.

4. In a registering mechanism, the combination with a supporting shaft, and a plurality of totalizing registers, each comprising a set of denominational elements all positioned by denominations on said shaft, of a single set of operating devices for all said registers, a main driving mechanism, connections from said driving mechanism for determining the movement of said operating devices, and devices, actuated by said main driving mechanism, for positioning any of said registers in operative relation to said operating devices, with keys controlling said positioning devices.

5. In a registering mechanism, the combination with a supporting shaft, and a plurality of totalizing registers, each comprising a set of denominational elements, all positioned by denominations on said shaft, a single set of operating devices for all said registers, a main driving mechanism, having connections for positioning any of said registers in operative relation to said operating devices, and a series of keys controlling said positioning connections.

[Claims 6 to 48 not printed in the Gazette.]

1,109,764. ELECTRODE FOR VAPOR ELECTRIC APPARATUS. CHARLES A. KRAUS, Newton Highlands, and ROY D. MAILEY, Lynn, Mass. Filed June 30, 1910. Serial No. 569,698. (Cl. 176—42.)



1. In a vapor electric apparatus, a closed container, an anode and a metallic extension together forming a chamber, an insulating seal securing the extension to and insulating it from the container, a pool of liquid in the bottom of the chamber, and means between the anode and the seal to condense the vapors of the liquid within the chamber and return the condensed liquid to the pool.

2. In a vapor electric apparatus, a closed container, an anode and a metallic extension together forming a chamber

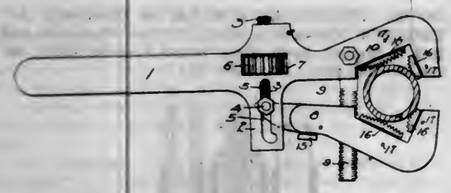
within the container, a pool of liquid in the bottom of the chamber, means to condense vapor of the said liquid and return the condensed liquid to the pool, and an insulating seal without the region of condensation of said vapor, joining the extension to the container.

3. In a vapor electric apparatus, a closed container, an anode and an extension together forming a chamber within the container, the lower portion of said chamber being in enlarged bulb form, a pool of liquid in the bottom of the bulb, and an insulating seal securing the extension to the container wall above the region of condensation of vapor from the said liquid.

1,109,765. DISPLAY-STAND. HENRY J. LAMPERT, St. Louis, Mo., assignor to Loose-Wiles Biscuit Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 6, 1913. Serial No. 788,398. (Cl. 45—48.)

In a knockdown display stand, a sheet metal top provided on its under side with a pocket, a leg of angle-shape in cross section whose upper end abuts against the lower side of said top, and a laterally projecting pressed metal member on said leg that fits in said pocket, said member having wings that are bent downwardly from said member and connected to the side portions of said legs.

1,109,766. WRENCH. FREDERICK M. LANDON, Tacoma, Wash. Filed July 8, 1912. Serial No. 708,148. (Cl. 81—118.)

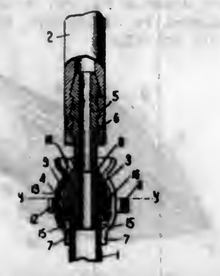


1. In a wrench, the combination with a fixed portion having a handle formed on one end and a jaw formed on the other end; of a screw-bolt transversely mounted in the handle and slidable therein; a nut screwed on said screw-bolt and mounted in the handle whereby the position of said bolt is adjusted; a pivot pin mounted on the end of said screw-bolt; a movable portion pivoted to said fixed portion by said pin and having a jaw formed on its free end; and a rack bar pivoted to one portion and adjustably engaging the other portion whereby the opening between said portions is adjusted.

2. In a wrench, the combination with a fixed portion having a handle formed on one end and a jaw formed on the other end; of an arm extending at right angles from said fixed portion between the handle and the jaw, and having a guide slot cut therein; a screw-bolt transversely mounted in the handle in line with the slot in the arm; a nut screwed on said screw-bolt and mounted in the handle whereby the position of said bolt is adjusted; a pivot pin mounted on the end of said screw-bolt and passing through said slot and guided thereby; a movable portion pivoted to said fixed portion by said pin and having a jaw formed on its free end; and a rack bar pivoted to one portion and adjustably engaging the other portion whereby the opening between said portions is adjusted.

3. In a wrench, the combination with a fixed portion having a handle formed on one end and a jaw formed on the other end; of a movable portion pivotally secured to the fixed portion and having a jaw formed on its free end; a rack bar pivoted to one portion and passing across the space between the two portions and having teeth on two opposite faces thereof; means mounted on the other portion to engage the teeth of the rack; and a sliding latch mounted on said portion on the opposite side of said rack from said engaging means and engaging the teeth of said rack.

1,109,767. COUPLING. CLIFFORD J. LARKIN, Everett, Mass. Filed Jan. 13, 1913. Serial No. 741,714. (Cl. 137—28.)



1. In a coupling, the combination with a coupling member divided longitudinally into a plurality of sections and provided at one end with pipe-engaging jaws, of a body member having a portion situated within the coupling member and capable of a slight longitudinal movement therein, said coupling and body members having such a relative shape that such longitudinal movement will cause the coupling member sections to rock in two directions about transverse axes thereby to move the jaws radially.

2. In a coupling, the combination with a body member having tapering portions, of a coupling member encircling said tapering portions and provided at one end with pipe engaging jaws, said coupling member being divided longitudinally into a plurality of sections and capable of a slight movement longitudinally of the body member, the tapering portions of the body member acting during such movement to rock the coupling member sections movement in one direction operating to open the jaws and movement in the opposite direction operating to close the jaws.

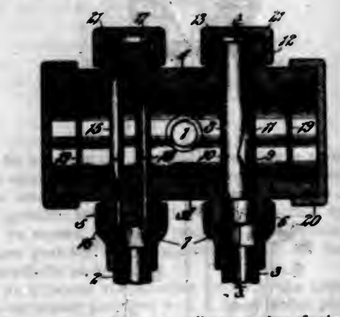
3. In a coupling, the combination with a body member of a coupling member encircling the body member and capable of slight longitudinal movement, said coupling member having pipe engaging jaws, the aforesaid parts being so shaped that movement in one direction will open the jaws, and movement in the other direction will close the jaws.

4. A coupling comprising a body member, a coupling member surrounding the body member and divided to present a plurality of separate coupling member sections, each having an opening and a common retaining member encircling the coupling member and having portions to enter said openings, said retaining member holding the coupling member sections in position relative to each other and in position on the body member, and said body and coupling member sections having such shape relative to each other that relative longitudinal movement of the body and coupling members causes the coupling member sections to rock.

5. In a coupling, the combination with the body member, of a coupling member encircling the body member and divided longitudinally into a plurality of sections, each having a pipe engaging jaw, a retaining member encircling the coupling member sections and held from longitudinal movement relative thereto and holding them in proper relative position while permitting rocking movement thereof, said parts having such a shape that relative longitudinal movement will cause a radial movement of the pipe engaging jaws.

[Claims 6 and 7 not printed in the Gazette.]

1,109,768. OIL-MEASURING DEVICE FOR GAS-MACHINES. MATHIAS LAUX, St. Louis, Mo., assignor to Aero-Gas Machine Company, St. Louis, Mo., a Corporation of Maine. Filed Feb. 28, 1913. Serial No. 751,210. (Cl. 137—21.)



1. In a gas machine, an oil-measuring device comprising a closed chamber to which charges of oil are supplied, adjustable means for permitting all over a certain quantity of a charge of oil that is supplied to said chamber at one time to escape from said chamber, a discharge port through which the measured oil escapes from said chamber to a conduit leading to the carbureter of the machine, a normally stationary needle valve coöperating with said discharge port for regulating the flow of the measured oil from said chamber, and means whereby air from the carbureter is supplied to said measuring chamber so as to prevent a vacuum or partial vacuum from being created in said chamber.

2. An oil-measuring device for gas machines, comprising a closed chamber to which oil is supplied, adjustable means for permitting all over a certain quantity of the oil that is supplied to said chamber at one period to escape from said chamber back to the source of supply, a conduit leading from said chamber to the carbureter of the machine, an adjustable valve that is normally stationary for controlling the flow of the measured oil from said chamber into said conduit, and a vent pipe arranged wholly within said measuring chamber for establishing communication between the interior of said conduit and said measuring chamber.

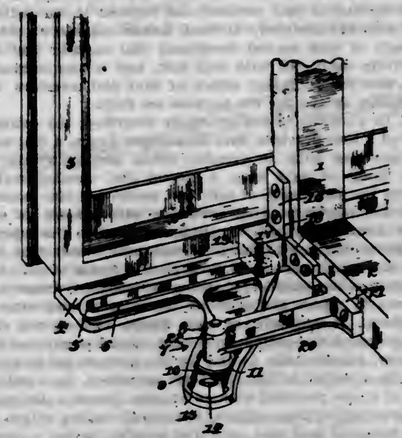
3. An oil-measuring device for gas machines, comprising a closed chamber to which oil is supplied, a stationary tubular-shaped member arranged inside of said chamber and permanently connected to the casing of the chamber, an adjustable tubular-snaped member rotatably mounted in the stationary member, and coöperating elongated slots in said members, one of said slots being disposed at an angle to the other so as to form a discharge opening of gradually increasing width from its lower to its upper end.

4. A measuring device for gas machines, comprising a casing that forms a closed measuring chamber to which oil is supplied, a stationary tubular-shaped member permanently connected to said casing and arranged in said chamber, said member being provided with a vertically disposed elongated slot, a rotatable tubular-shaped member arranged inside of said stationary member in snug engagement with same and provided with an elongated slot that extends at an angle across the slot in the stationary member so as to form an overflow opening of gradually increasing width from its lower to its upper end, and means for preventing said rotatable member from moving longitudinally with relation to said stationary member.

5. An oil-measuring device for gas machines consisting of a casing that forms a measuring chamber to which oil is supplied, an overflow pipe connected to said casing, a carbureter supply pipe connected to said casing, two telescoped tubular-shaped members provided with coöperating elongated slots arranged at an angle with relation to each other so as to form an overflow opening of gradually increasing width from its lower to its upper end through which all over a certain quantity of the oil supplied to said chamber at one period can escape into said overflow pipe, one of said members being adapted to be rotated with relation to the other so as to vary the size of said overflow opening, an adjustable needle valve for regulating the flow of the measured oil from said chamber into the carbureter supply pipe, and a vent-tube for establishing communication between said carbureter supply pipe and the interior of said casing.

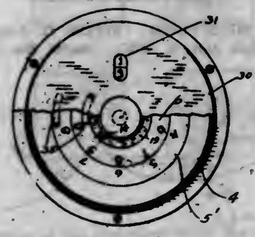
[Claim 6 not printed in the Gazette.]

1,109,769. WINDOW. WALTER GORDON LAWRENCE, Winton, England. Filed Sept. 12, 1912. Serial No. 719,964. (Cl. 20—53.)



A window frame, a window sash, a bracket secured to said window frame at the lower end and having a longitudinal slot parallel with the lower horizontal of said frame and a lug extending outwardly from the inner end toward the outer end, said end being formed in opposing curves and channeled to form a slideway and having beveled recesses at intervals in said channel, a bracket secured to said sash and having a boss and a pin projecting downwardly from said boss into said longitudinal slot, an arm secured to said sash and carrying at the extremity thereof a pin casing and a pin spring held to its lower position in said casing and engaging said lug in said channel and recesses.

1,109,770. ELECTRIC SWITCH. ADOLPH B. LEE, Oakland, Cal. Filed May 11, 1912. Serial No. 696,681. (Cl. 175—282.)



1. A switch of the character described comprising in combination, a base, a plurality of juxtaposed insulating dial members revoluble with respect thereto, a ring conductor for the uppermost dial member having a lug communicating with the periphery of said dial member, conducting mechanism carried by the dial member intermediate said uppermost dial and said base, a contact alined to contact with said conducting mechanism of the dial mem-

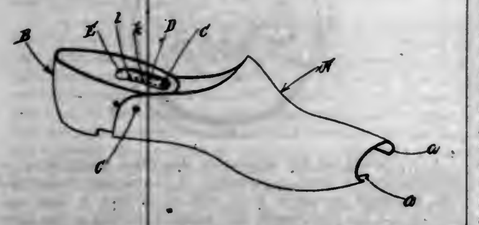
ber adjacent said base, when said dial member is in a predetermined position with respect thereto, a binding post connected with said last mentioned contact, a washer contacting with said ring conductor, and a binding post operatively connected with said washer, substantially as and for the purpose set forth.

2. In a switch of the character described, the combination of a base provided with an annular flange, a dial member provided with an annular flange and resting within the said flange of said base, a second dial member resting within the said flange of said first mentioned dial member, said dial members being revoluble with respect to each other and to said base, a bolt passing concentrically through said dial members and said base, a contact exposed to the internal periphery of said flange of said base, conducting mechanism carried by the said flange of said first mentioned dial member and exposed to the internal and external periphery thereof, means exposed at the periphery of said second mentioned dial member and conductively connected with said bolt, and means carried by said bolt for actuating either of said dial members, substantially as and for the purpose set forth.

3. In a switch of the character described, the combination of a base provided with an annular flange, a dial member provided with an annular flange resting within the said flange of said base, a second dial member resting within the said flange of said first mentioned dial member, said dial members being revoluble with respect to each other and to said base, a contact exposed to the internal periphery of the said flange of said base, conducting buttons movable transversely through said flange of said first mentioned dial member, a spring interposed between said buttons to expose the same at the internal and external periphery, respectively, of said flange, and circuit closing means at the periphery of said second mentioned dial member, substantially as and for the purpose set forth.

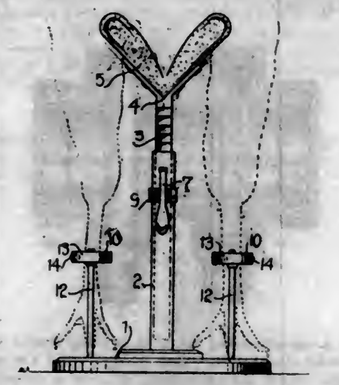
4. In a switch of the character described, the combination of a base provided with an annular flange, a dial member provided with an annular flange and resting within the said flange of said base, said dial member having a recess, a second dial member resting within the said flange of the first mentioned dial member, above the said recess therein, said dial members being revoluble with respect to each other and to said base, a revoluble member passing concentrically through the said dial members and said base, a contact exposed to the internal periphery of the said flange of said base, conducting mechanism carried by the said flange of said first mentioned dial member and exposed to the internal and external periphery thereof, circuit closing means at the periphery of said second mentioned dial member, a ratchet wheel carried by said revoluble member, and coacting pawls carried by said first and said second mentioned dial members, and coacting with said ratchet wheel to actuate the same by movement thereof, said ratchet wheel and pawls being disposed in the said recess of said first mentioned dial, substantially as and for the purpose set forth.

1,109,771. SHOE-FORM. ALFRED G. LEGGE, Brockton, Mass. Filed Jan. 8, 1913. Serial No. 740,785. (Cl. 12—128.)



A shoe form composed of resilient and somewhat flexible material and having a truncated open-ended toe portion which will adapt itself, under pressure, to shoes having different shapes or styles of toes.

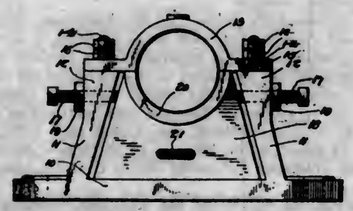
1,109,772. CHICKEN-HOLDING DEVICE. HARRY W. LEITH, Jeannette, Pa. Filed Feb. 28, 1914. Serial No. 821,743. (Cl. 119—97.)



1. A device of the character described including a base, a tubular upstanding standard mounted thereon, a post telescoping with said standard, a saddle V-shaped in cross-section connected to the upper end of said post, and means carried by the standard to hold the saddle post at different elevations.

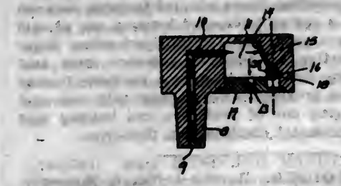
2. A device of the character described including a base, a standard mounted thereon and extending upwardly therefrom, a saddle post telescoping with said standard and provided with a bifurcated upper end, a saddle V-shaped in cross section secured within the bifurcated end of the saddle post, and means carried by the standard and engageable with the saddle post to hold the saddle at different elevations.

1,109,773. ADJUSTABLE SECTIONAL BEARING. JOHN GEO. LUDWIG, Jr., Freeland, Pa. Filed June 2, 1913. Serial No. 771,254. (Cl. 64—52.)



A bearing comprising a base having upstanding integral side walls, threaded pins carried by the upper ends of said walls, a bearing block positioned between said walls, said bearing block capable of longitudinal movement upon said base between said walls since the sides of said block are normally spaced at a distance from said walls, said bearing block provided with vertical grooves upon its sides, set-screws passing through said side walls and positioned within said groove so as to engage the sides of said bearing block, said set-screws adapted to shift said block for adjusting the same, said grooves bracing the inner ends of said screws, said bearing block provided upon its upper side with a shaft receiving pocket, a cap carried upon the upper ends of said walls, said caps provided with longitudinal slots, said threaded pins adapted to pass through said slots, retaining means carried by said pins for holding said cap upon said walls, said cap also provided with a shaft receiving portion, said pockets adapted to receive a shaft whereby said block will move the shaft and said cap will also be moved by the shaft.

1,109,774. BLEED-VALVE. JAMES G. LUTES, Hooper, and FRANK E. HARDY, Hillyard, Wash. Filed Dec. 9, 1913. Serial No. 805,561. (Cl. 188—10.)



1. As a means for bleeding an air brake system, an air brake structure provided with a bleed outlet portion opening to atmosphere, and closure means for said outlet portion openable into the path of and deflecting the bled air from its normal course to maintain said closure means in an open position by engagement of such air thereagainst, substantially as described.

2. As a means for bleeding an air brake system, an air brake structure provided with a bleed outlet portion opening to atmosphere, and a hinged valve closure openable into the path of the bled air to maintain said valve in an open position by engagement of such air thereagainst, substantially as described.

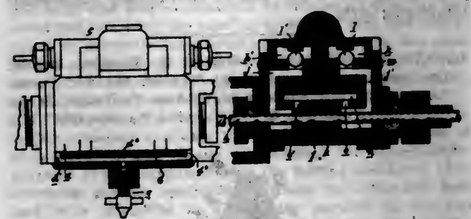
3. As a means for bleeding an air brake system, an air brake structure provided with a bleed outlet portion opening to atmosphere, and a hinged closure interposed in said outlet portion to be opened into the path of the bled air and held in a closed position under pressure through said outlet portion, substantially as described.

4. As a means for bleeding an air brake system, an air brake structure provided with an outlet portion opening to atmosphere, a hinged flap valve interposed in said outlet portion in a position to be held open or closed under pressure therethrough, and means having a lost motion connection with said flap valve for moving the same into the path of the bled air and into an open position, substantially as described.

5. As a means for bleeding an air brake system, an air brake structure having a bleed outlet portion opening to atmosphere, and hinged valve means actuated to be held in an open position by bled air passing through said portion, substantially as described.

[Claim 6 not printed in the Gazette.]

1,109,775. LUBRICATOR. ELIJAH MCCOY, Detroit, Mich., assignor to Ypsilanti Lubricator Company, Ypsilanti, Mich., a Corporation of Michigan. Filed June 2, 1906. Serial No. 319,843. (Cl. 103—76.)



1. In a lubricator, a pump comprising a piston, a cylinder in which said piston reciprocates, having discharge passages connected to the opposite ends thereof and two intermediate inlet ports separated from each other by a distance substantially as great as the length of the piston and communicating with a common inlet passage whereby only that portion of the stroke of the piston beyond said inlet ports is effective in discharging the oil and during the preceding portion of the stroke the oil is bypassed from one end of the cylinder to the other.

2. In a lubricator, a pump comprising a piston, a cylinder having a discharge passage connected to opposite ends thereof and two intermediate inlet ports separated from each other by a distance substantially as great as the length of the piston, said ports being connected to a common valveless inlet passage and said piston having limits of travel beyond said inlet ports.

3. In a lubricator, a pump comprising a piston and a cylinder having discharge connections to the opposite ends thereof, outwardly opening check valves in said discharge connections, two intermediate inlet ports connected to a common inlet passage and separated from each other by a distance substantially as great as the length of the piston.

4. In a lubricator, a pump for feeding oil to the parts to be lubricated, comprising a piston, a cylinder having a discharge passage connected to opposite ends thereof, and two intermediate inlet ports connected to a common valveless passage.

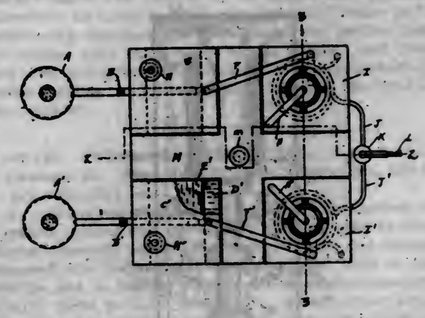
1,109,776. LAWN-MOWER BLADE. JOHN N. MCGRIFF, Anderson, Ind. Filed Nov. 18, 1913. Serial No. 801,660. (Cl. 56—19.)

1. The combination with a mower blade mounted for rotation, and a cutter bar, of a grass lifting bracket located upon that face of the blade which is presented toward the cutter bar when the blade is coacting with the cutter bar, the bracket being movable with the blade transversely of the cutter bar and independently of the cutter bar.

2. In a device of the class described, a mower blade mounted for rotation and provided with diverging, grass lifting prongs inclined with respect to the blade toward the free edge of the blade at an angle to the direction of divergence of the prongs.

3. In a device of the class described, a mower blade mounted for rotation and a grass lifter secured to the blade, the lifter comprising diverging prongs, the prongs being inclined with respect to the blade toward the cutting edge of the blade, at an angle to the direction of divergence of the prongs, the lifter including a base plate connecting the prongs; and means for connecting the base plate with the blade.

1,109,777. APPARATUS FOR TREATING WELDING-GASES. HANS MÜLLER, Milwaukee, Wis., assignor to Universal Oxygen Company, a Corporation of Wisconsin. Filed Nov. 26, 1909. Serial No. 529,934. (Cl. 48—166.)



1. In apparatus of the described class, the combination of a set of receptacles for separately storing a high temperature burning gas and a combustion supporting gas, a carbureting chamber connected with each such receptacle to receive fluid therefrom, a water tank in cooling relation to the carbureting chambers and separating said chambers from each other, and a mixing chamber connected with both carbureting chambers and provided with a burner outlet.

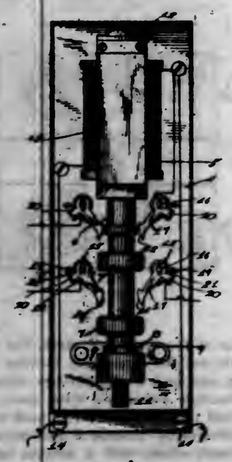
2. In apparatus of the described class, the combination of a set of receptacles for separately storing a high temperature burning gas and a combustion supporting gas, a carbureting chamber connected with each such receptacle to receive fluid therefrom, and a mixing chamber connected with both carbureting chambers and provided with a burner outlet, together with a set of auxiliary filtering and flame resisting chambers interposed in the path of the gases between each of the carbureting chambers and the mixing chamber.

3. In apparatus of the described class, the combination of a set of receptacles for separately storing a high temperature burning gas and a combustion supporting gas, a carbureting chamber connected with each such receptacle, to receive fluid therefrom, and a mixing chamber connected with both carbureting chambers and provided with a burner outlet, together with a filter, and a water chamber concentric therewith and interposed between each of the carbureting chambers and the mixing chamber, the arrangement being such that the gas passes upwardly through the water in the water chamber.

4. In a device of the described class, the combination of a set of storage receptacles, a set of carbureting chambers, one for each storage receptacle, a filter, an auxiliary filtering and flame resisting chamber for each carbureter concentric with said filter, and means for discharging gas from each carbureter through such filter and auxiliary chambers, an open vent chamber in communication with the bottom portion of the auxiliary chamber, and a mixing chamber arranged to receive the gases from the several chambers.

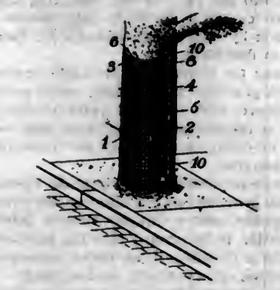
5. In a device of the described class, the combination of a mixing chamber provided with a burner nozzle, a set of storage receptacles, a set of carbureting chambers, one for each storage receptacle, a filter arranged for upward gas delivery, an auxiliary filtering and flame resisting chamber for each carbureter, means for delivering gas from the upper portion of the filter to the lower portion of the auxiliary chamber, a coiled pipe communicating from the upper portion of each auxiliary chamber downwardly therethrough to the mixing chamber and adapted to conduct gas from the respective carbureter filter and auxiliary chambers to the mixing chamber, said carbureters, filters and chambers being separated from each other by a body of non-combustible liquid.

1,109,778. RELAY CONTACT DEVICE. GEORGE C. MURPHY, Louisville, Ky. Original application filed Jan. 14, 1912, Serial No. 740,219. Divided and this application filed July 30, 1913. Serial No. 782,130. (Cl. 175—282.)



A relay contact shoe for a relay device of the class described comprising a body provided with a curved contact point, a supporting post, said supporting post provided with a laterally extending portion provided with a pair of outwardly extending spaced ears, said shoe provided with a laterally extending finger adapted to swing between said spaced ears, a spring interposed between one of said ears and passing around said laterally extending finger for normally exerting a downward pressure upon said finger and allowing said shoe to have a yieldable inward swing, said spring provided with an upwardly bent end portion for engaging one of said ears and holding said spring against accidental displacement therefrom.

1,109,779. TREE-GUARD. HAROLD J. NEALE, Worcester, Mass., assignor to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1912. Serial No. 733,937. (Cl. 47—38.)



1. A tree guard comprising a wire fabric having interwoven reinforcing straps adapted to be fastened to the tree trunk, said strips being spaced from the selvage edges of the fabric to permit the latter to yield as the tree expands.

2. A tree guard comprising a rectangle meshed woven wire fabric having longitudinal reinforcing strips interwoven in and spaced from its selvage edges to permit the fabric to yield as the tree expands said strips being adapted to be fastened to the tree with longitudinal interwoven selvage wires outside said reinforcing strips and connecting the loops of the transverse wires of the fabric.

3. A tree guard comprising a woven wire fabric having a central longitudinal reinforcing strip and flat longitudinal perforated reinforcing strips spaced from the looped ends of the transverse wires of the fabric.

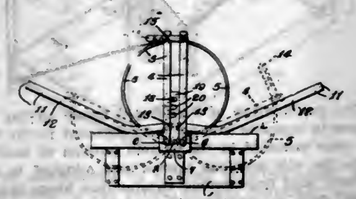
4. A tree guard comprising a woven wire fabric having longitudinal reinforcing strips spaced from the looped ends of the transverse wires of the fabric and adapted to be attached to the tree, and an intermediate longitudinal reinforcing strip.

1,109,780. RAIL-JOINT. HENRY F. NELSON, Angola, La., assignor of one-half to William Wallace Pecue, Angola, La., and one-half to William T. Hodge, Bayou Sara, La. Filed Dec. 3, 1913. Serial No. 804,498. (Cl. 239—6.)

1. In a rail joint, clamp members adapted to receive the rail ends, and having tongues arranged to overlap beneath the rails, the adjoining faces of the tongues being curved laterally on compound curves so as to have longitudinal rounded contacting portions, whereby the clamp members are moved together under pressure upon the rail ends and whereby the clamp members are adapted to be swung together and apart laterally.

2. In a rail joint, clamp members each embodying a base portion having an upstanding web engaging jaw, the adjoining edges of the base portions having upper and lower overlapping tongues, the adjoining faces of the tongues being curved laterally on compound curves so as to have longitudinal rounded contacting portions, whereby the clamp members are moved together under pressure upon the rail ends, and whereby the clamp members are adapted to be swung together and apart laterally, the jaws having interchangeable dowels and sockets, and the dowels being engageable through the apertures in the rail webs.

1,109,781. BAG-BUNDLING MACHINE. CHARLES A. PHILLIPS and FRED C. SHERWOOD, Manitus, N. Y.; said Sherwood assignor to said Phillips. Filed Feb. 3, 1911. Serial No. 606,305. (Cl. 100—31.)



1. A machine for bundling flat article comprising opposing clamping elements for folding the side portions of such articles, and means for holding the intermediate portions thereof during the folding operation, the clamping elements being constructed to fold the edges of the side portions inwardly and permit the side portions to bulge between their free edges and the point they are held by said means, substantially as and for the purpose described.

2. A machine for bundling flat articles comprising opposing clamping elements for folding the side portions of such articles, and means for holding the intermediate portions of said articles during the folding operation, each clamping element comprising a frame including end bars and members spaced at intervals lengthwise of the frame and extending in a direction parallel to the end bars, said members being constructed to permit the articles to bulge on opposite sides of their intermediate portions during the folding operation, substantially as and for the purpose set forth.

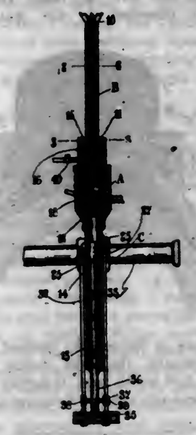
3. A machine for bundling flat articles comprising opposing clamping elements for folding side portions of said articles, and means for holding the intermediate portions of such articles during the folding operation, each clamping element comprising a frame including end bars pivoted at corresponding ends and a lengthwise bar connecting the end bars, and means connected to the lengthwise bar and extending in a direction parallel to the end bars, and spaced apart at intervals lengthwise of the frame, the last-mentioned means being constructed to permit the side portions of the articles to bulge during the folding operation, substantially as and for the purpose described.

4. A machine for bundling flat articles comprising opposing clamping elements for folding the side portions of such articles, and means for holding the intermediate portions of said articles during the folding operation, each clamping member comprising a frame including end bars and bails extending in a direction parallel to the end bars and spaced apart at intervals lengthwise of the frame, substantially as and for the purpose specified.

5. A machine for bundling flat articles comprising opposing clamping elements for folding side portions of the articles, and means for holding the intermediate portions of said articles during the folding operation, each clamping element comprising a frame including end bars pivoted at corresponding ends and a lengthwise bar connecting the end bars and bails extending in a direction parallel to the end bars and spaced apart at intervals lengthwise of the frame and connected at corresponding ends to the lengthwise bar and being pivoted at their opposite ends near the pivotal axis of the frame, substantially as and for the purpose set forth.

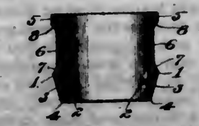
[Claims 6 to 13 not printed in the Gazette.]

1,109,782. ROCK-DRILL. JOHN JAMES PURCELL, Burke, Idaho. Filed May 10, 1911. Serial No. 626,170. (Cl. 121—10.)



In a mechanism of the class described, the combination with the cylinder of a piston slidable therein, means for supplying a fluid for operating said piston, a steel, a chuck, a head having a passageway formed from end to end of the same and extending through the chuck and cylinder wall, and an exhaust port joining at an acute angle into the passageway from the said cylinder, a tube surrounding the steel and communicating with one end of the passageway in the head, and being supported from the chuck, the exhaust in discharging through the port and passageway being adapted to create a suction and to draw the cuttings through the tube, as and for the purpose specified.

1,109,783. DIE. GEORGE D. PUTNAM, St. Louis, Mo. Filed Apr. 18, 1914. Serial No. 832,703. (Cl. 164—29.)



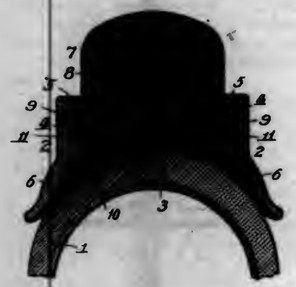
A cutting die, comprising a continuous integral wall, thicker above and thinner in its middle and presenting outwardly an upper and a lower peripheral flange and an intervening depressed unbroken peripheral surface joined by inclines with the surfaces of the flanges; said flanges and intervening depression forming a handhold tending to crowd together, and away from both edges, the fingers of the operator.

1,109,784. PNEUMATIC-TIRE SHIELD. JOHN P. QUILL, Chicago, Ill. Filed Jan. 21, 1914. Serial No. 813,364. (Cl. 152—33.)

1. A tire shield comprising, a reinforcing ring formed with a central orificed web, outwardly extending annular flanges having inwardly overhanging annular lips, and inwardly disposed side flanges or skirts of a curved form in cross-section, and an annular cushion tire or tread comprising a central tread portion, side flanges on said tread portion adapted for engagement beneath the aforesaid overhanging lips, and with an inner annular portion or lining integrally connected to the main tread portion through the orifices in the central orificed web of the reinforcing ring aforesaid, substantially as set forth.

2. A tire shield comprising, a reinforcing ring formed with a central orificed web, outwardly extending annular flanges having inwardly overhanging annular lips, and inwardly disposed side flanges or skirts of a curved form in cross-section, and an annular cushion tire or tread com-

prising a central tread portion, side flanges on said tread portion adapted for engagement beneath the aforesaid overhanging lips, and with an inner annular portion or lining integrally conected to the main tread portion



through the orifices in the central orificed web of the reinforcing ring aforesaid, the said lining being of added thickness at its mid-width and tapering therefrom to a thin edge at its respective sides, substantially as set forth.

1,100,785. FLOOR AND CEILING CONSTRUCTION. CHARLES REIER, New York, N. Y., assignor to Building Improvement Co., New York, N. Y., a Corporation of New York. Filed Feb. 6, 1912. Serial No. 675,795. (Cl. 72—66.)

1. A block or unit comprising a top wall, side walls depending from said top wall at opposite edges thereof to form therewith an inverted U-shaped element and a bottom forming member extending outwardly from one of said side walls, the distance between said side wall and the free edge of said bottom forming member being greater than the distance between the two side walls.

2. A block or unit comprising a top wall, side walls depending from said top wall at opposite edges thereof to form therewith an inverted U-shaped element, a bottom forming member extending outwardly from one of said side walls and a flange projecting upwardly from said bottom forming member at the free edge thereof, the distance between said flange and the one side wall being greater than the distance between the two side walls.

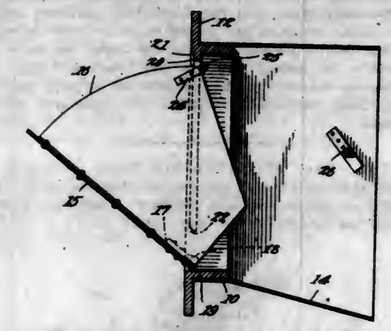
3. In a floor or ceiling construction, a plurality of units comprising an inverted substantially U-shaped body having open ends and being open at the bottom, said units being arranged adjacent to each other and each having a portion extending beneath the inverted U-shaped body of an adjacent unit across the axis thereof to form a bottom for said adjacent inverted U-shaped body and a coalescent material located between said blocks.

4. In a floor or ceiling construction, a plurality of units having bodies open at the bottom and arranged adjacent to each other, said units having portions adapted to form opposite walls of a channel and another laterally extending portion adapted to extend beneath the body of an adjacent unit across the axis thereof to form a bottom for said body and also to form the bottom of said channel and a calescent material in said channel.

5. In a floor or ceiling construction, a plurality of units, arranged adjacent to each other and having top walls and side walls depending therefrom, each unit having a bottom wall extending beneath the one side wall of an adjacent unit into engagement with the opposite side wall thereof to form the bottom of said adjacent unit and to space portions of adjacent blocks to form the opposite walls of a channel, said bottom wall itself forming the bottom of said channel and a coalescent material in said channel.

[Claims 6 and 7 not printed in the Gazette.]

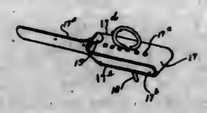
1,100,786. CHUTE. ALBERT RENTNER, Hammond, Ind. Filed Nov. 5, 1913. Serial No. 799,289. (Cl. 193—33.)



1. The combination of a rabbeted frame having oblong apertures in opposite side portions adjacent to the bottom, and a door mounted in the bottom portion of said frame between the side portions thereof and adapted to seat in the rabbet, said door having outstanding hinge pintles on its inner face on opposite sides working in the aforesaid apertures, said apertures being inclined in the direction of their greatest dimensions, and the inclination being toward the inner portion of the frame.

2. The combination of a frame having a rib on the inside of its top and side portions to form a rabbet, the rib on the side portions of the frame stopping short of the bottom thereof, and said side portions of the frame having hinge apertures located below the rib, a door seating in the rabbet, and lugs on the door, said lugs having outstanding hinge pintles working in the aforesaid apertures, and the lugs abutting against the lower end of the rib on the side portions of the frame when the door is closed.

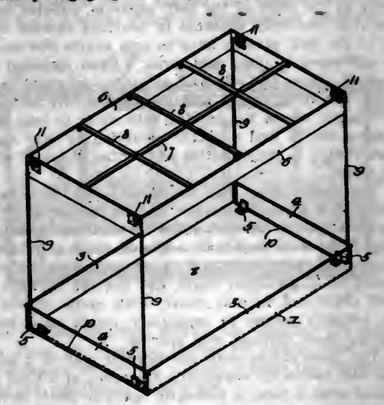
1,100,787. KEY-LOCK. CLARK ROBINSON, Hillyard, Wash. Filed June 30, 1913. Serial No. 776,561. (Cl. 70—65.)



A key-lock comprising a U shaped member for engagement with the key portion outside of the lock and a portion connected therewith extending horizontally from the end of one wing of said U shaped member for engagement in the key-hole of the lock adjacent to the key, a pin passing through said U shaped member and engaging the key portion therein, together with an outward deflection of the end of the other wing of the U-shaped member between the pin and the portion extending horizontally from the end of the other wing of the U-shaped member, said deflection consisting of a portion at approximately right angles with said wing adapted for guarding said pin against being removed by an instrument inserted through the key-hole of the lock from the opposite side of said lock.

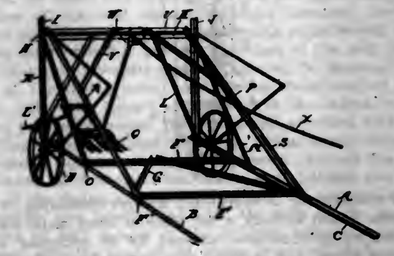
1,100,788. UMBRELLA-STAND. JAMES M. ROSE, Philadelphia, Pa., assignor to Merchant & Evans Company, Camden, N. J., a Corporation of New Jersey. Filed Mar. 20, 1912. Serial No. 685,022. (Cl. 45—33.)

1. The combination in an umbrella stand of a relatively shallow container forming a base; an open frame formed to removably fit within the container; intersecting bars extending between opposite sides of the frame to form receiving compartments; means for supporting the frame at a distance above the container consisting of U-shaped rods having their ends hinged to said frame and foldable within the same; with means carried by the container for detachably engaging said supporting rods.



2. The combination in a stand of a container; holding members fixed to the bottom of said container, each with a part spaced away from and substantially parallel with an end of the container; an open frame having receiving compartments; and supporting members movably connected to the frame so as to be capable of folding within the same or of extending substantially at right angles thereto, said supporting members removably fitting between the ends of the container respectively and the holding members adjacent thereto.

1,100,789. WAGON-LOADER. CHARLES L. SAMP, Detroit, Mich. Filed Dec. 20, 1913. Serial No. 807,868. (Cl. 214—3.)



1. A wagon loader, comprising a main frame, traction wheels secured to said frame, a swinging frame carried by the main frame, an upwardly-extending frame attached to the main frame and adapted to support said swinging frame in an inclined position, a sheave carried by the swinging frame, a loading implement, a cable extending through said sheave and attached to said implement, said implement being adapted during the loading movement thereof to initially raise to a predetermined position independently of the swinging frame and to then move as a unit with said swinging frame.

2. The combination with a main frame composed of spaced side bars and cross-connecting members, of a supporting frame composed of standards and a cross-bar connecting the standards adjacent the upper ends of the latter, said supporting frame being connected to the main frame, traction wheels for the main frame, a swinging frame comprising uprights pivotally connected to said side-bars and a cross-bar connecting said uprights, a sheave carried by the swinging frame, a loading implement, a cable passing through said sheave and engaging said implement, means for limiting the forward swinging movement of the swinging frame, the latter being normally supported by said upright frame, and a guide and trip cable connected to said implement.

3. A wagon loader, comprising a main frame, an upright frame, a swinging frame normally supported in an inclined position by said upright frame, an implement, means for raising said implement during the initial loading movement independent of said swinging frame and for then moving said implement and said swinging frame as a unit, and means for locking said implement to the swinging frame.

4. A wagon loader, comprising a main frame, an upright frame, a swinging frame normally supported in an inclined position by said upright frame, an implement, means for raising said implement during the initial loading movement independent of said swinging frame and for then moving said implement and said swinging frame as a unit, and means for locking said implement to said swinging frame, said locking means being arranged to automatically release said implement when said swinging frame is returned to said inclined position.

5. A wagon loader, comprising a main frame, traction wheels secured to said frame, a swinging frame carried by the main frame, an upright frame normally supporting said swinging frame in an upright position, a sheave carried by the swinging frame adjacent its upper end, a loading implement, a cable passing over said sheave and engaging said implement, said implement during the loading movement being adapted to move independently of said swinging frame until said implement is raised to adjacent the upper end of the swinging frame, there being coöperating bearings upon the swinging frame and implement arresting a further upward movement of the implement and for then causing the implement and swinging frame to move as a unit, and a pivotal member attached to the swinging frame and adapted to have a locking engagement with said implement upon the initial upward movement of said swinging frame.

[Claim 6 not printed in the Gazette.]

1,100,790. AUTOMATIC PASSENGER-FARE-REGISTERING MECHANISM. HARRY SAVAGE and WILLARD LYMAN BAKER, San Antonio, Tex. Filed June 10, 1913. Serial No. 772,867. (Cl. 235—99.)

1. A fare registering mechanism, having a step hanger, a hingle carried thereby, a step section connected by said hinging element to the hanger, a lever pivoted to said hinging element, and means for connecting the lever to the step hanger, whereby when the step section is folded the lever is moved therewith, and also by means of which the lever may be operated when the step section is extended.

2. A fare registering mechanism, having a step hanger, a hinge carried thereby, a step section connected by said hinging element to the hanger, a main lever pivoted intermediate of its ends to the hinge and having one terminal disposed substantially parallel to the step section, means connecting such terminal for swinging movement with

the step section, a pin carried by the other terminal of the main lever, an auxiliary lever having one end pivoted to the main lever between the hinge and the pin, and means controlled by the auxiliary lever for operating a registering mechanism, said pin forming a stop for the auxiliary lever when the step section is extended and whereby when the step section is folded and extended, the two levers and the means controlled thereby will not be disarranged or operated.

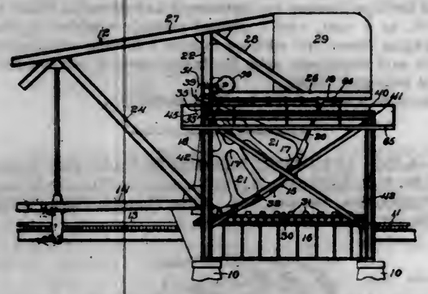
1,109,791. STABLE HYDROGEN PEROXID AND METHOD OF MAKING THE SAME. ALOIS SCHAIDHAUF, Frankfort-on-the-Main, Germany, assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed June 20, 1912. Serial No. 704,787. (Cl. 23—10.)

1. The method of rendering a hydrogen peroxid solution stable which consists in adding soap to a neutral solution of hydrogen peroxid.

2. The method of rendering a hydrogen peroxid solution stable which consists in adding soap to a neutral solution of hydrogen peroxid and heating the mixture to accelerate the diasociation of the soap.

3. A hydrogen peroxid solution containing soap.

1,109,792. BASCULE-BRIDGE. ALBERT H. SCHERZER, Chicago, Ill. Filed Jan. 23, 1911. Serial No. 604,015. (Cl. 14—40.)



1. In a rolling lift bridge, a support provided with tracks, a swinging leaf having at its heel end segments which rest and roll on said tracks, racks carried by said support, pinions meshing with said racks, operating shafts rotatively mounted in bearings carried by the leaf and movable with the segments along said tracks, to which shafts said pinions are fixed, a motor driven shaft extending across the leaf and geared to said operating shafts, a manually operable rotative shaft extending across the leaf and mounted in bearings carried by the sides of said leaf and having means to disconnectedly gear it to said motor shaft and operating through the latter shaft to rotate said operating shafts, hand cranks connected to the ends of said manually operable shaft, and fixed platforms adjacent to said cranks and extending parallel to the direction of travel of said hand cranks.

2. The combination with the movable leaf of a bascule bridge, and a support therefor, of racks carried by said support at the sides of the leaf, pinions meshing with said racks, operating shafts rotatively mounted in bearings carried by the sides of said leaf to which said pinions are fixed, a motor driven shaft extending across the leaf and geared at its ends to said pinion shafts and provided between its ends with two gear wheels of different diameters, a manually operable rotative shaft also extending across and movable with the leaf and having bearing in the sides of the leaf, with means to rotate the same, pinions slidable on said latter shaft between the ends thereof, with means to separately engage and lock them in mesh with said gear wheels of the motor driven shaft, and an operator's platform at the side of the leaf adjacent to and elongated in the path of movement of the rotating means for the operating shaft.

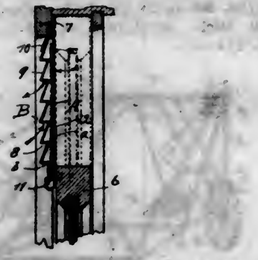
3. The combination with the movable leaf of a bascule bridge, and a support therefor, of racks carried by said support at the sides of the leaf, separate, tubular operating shafts rotatively mounted in bearings carried by the sides of the leaf, pinions fixed to said shafts and meshing with and movable along said racks, a hand operated shaft extending across the leaf and rotatably mounted in said tubular operating shafts and provided at its ends with hand cranks, means for gearing said shaft to both of the operating shafts, and a platform carried by said support and extending in the direction of the line of travel of said hand crank.

4. The combination with the movable leaf of a bascule bridge and a support therefor, of a rack carried by said support, a tubular operating shaft rotatively mounted in and movable with said leaf, a pinion fixed to said shaft and meshing with said rack, a second shaft rotatively mounted in said tubular shaft, and gearing between said second shaft and tubular shaft, with motor driven and hand actuable means to separately rotate said tubular operating shaft through said gearing.

5. The combination with the movable leaf of a bascule bridge and means for supporting the same, of a fixed strut provided with a rack, a manually operable shaft provided with a hand crank, a tubular operating shaft in which the manual shaft is rotatively mounted, a pinion fixed to the operating shaft and engaging said rack, a motor shaft geared to said operating shaft, a pinion on the manually rotative shaft, and a gear wheel fixed to the motor shaft with which said latter pinion meshes.

[Claims 6 to 11 not printed in the Gazette.]

1,109,793. VENTILATOR. JOHN C. SCOTT, Covington, Ky. Filed Mar. 26, 1913. Serial No. 756,857. (Cl. 98—31.)



In a ventilator, a ventilating member consisting of two endwise alined sections, a flat piece of sheet metal having ventilating perforations adapted to be attached to a window frame and serving as a supporting member for the sections mentioned, said supporting member being provided with lugs adapted to engage the upper edge of said sections and having its lower edge turned up to engage the lower edge of said sections, permitting thereby sliding adjustment of one section in an endwise direction with reference to the other section, these latter being shaped to form horizontal portions which are perforated to permit passage of air and inclined portions between these horizontal portions to shed rain.

1,109,794. COMBINED CONDENSER AND REBOILER. PRESTON H. SELLERS, East St. Louis, Ill. Filed Nov. 3, 1913. Serial No. 798,814. (Cl. 62—30.)

1. In combination with a condenser, and a shell arranged to receive steam and conduct it to the condenser, a reboiler within said shell, arranged to receive water of condensation from the condenser, said reboiler holding its body of water to be reboiled where it will be subjected to the steam passing through the shell, but not in communication therewith, and also holding said body of water where it will not be influenced by the cooling action of the condenser.

2. In an apparatus of the class described, a condenser, a shell located beneath the condenser, means for admitting steam to said shell, means for placing said shell in steam communication with the condenser, a reboiler within said shell completely closed against the admission of steam, means for admitting water of condensation from the condenser to the reboiler, means for drawing the reboiled water from the reboiler, having its intake ends beneath the condenser to provide a space within the reboiler and means for ventilating said space.

1,109,795. TICKET-HOLDER. FRED AUGUST SEMMELHACK, Watersmeet, Mich. Filed Dec. 17, 1913. Serial No. 807,366. (Cl. 206—39.)

A device of the character described comprising a casing having its upper face open and having the upper marginal portion of one end open, the upper marginal portion of the opposite end being provided with an outwardly disposed flange, the free marginal portions of the side being provided with inwardly disposed flanges, the flange at the end of the casing being positioned a predetermined distance below the flanges of the sides of the casing, a follower positioned within the casing and provided with depending flanges adapted to engage the adjacent walls of the casing, and a coil spring interposed between the follower and the bottom of the casing, such follower and bottom of the casing having inwardly directed tongues struck therefrom and interlocking with the coils of the spring, certain of said flanges of the follower being adapted to contact with the base of the casing to prevent undue compression of the coil spring.

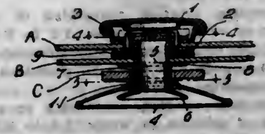
1,109,796. FINGER-PROTECTOR. JOHN F. SILLS, Albertville, Ala. Filed Dec. 27, 1913. Serial No. 809,019. (Cl. 56—6.)

1. A finger protector of the class described including a flexible body of thimble-like design, having a plurality of annular ribs formed thereon, and a plurality of integral projections formed on said ribs, as and for the purpose set forth.

2. A finger protector of the class described including a body of yieldable material designed to form substantially a thimble, a plurality of annular ribs formed at regular intervals throughout the length of the body, and a plurality of integral projections formed on said ribs, as and for the purpose set forth.

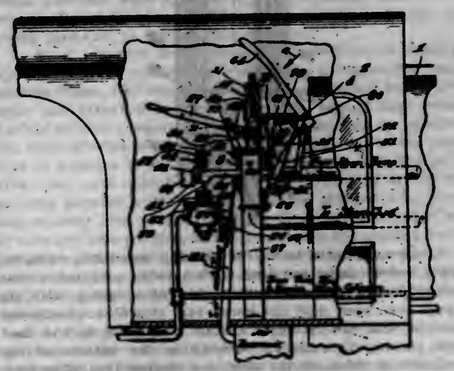
3. A finger protector of the class described including a body of yieldable material designed to form substantially a thimble, a plurality of spaced ribs formed on said body at regular intervals throughout the length thereof, and a plurality of integral spaced projections formed on said ribs at regular intervals throughout the length thereof.

1,109,797. BUTTON. JESSE W. SILVER, South Tacoma, Wash. Filed Nov. 21, 1912. Serial No. 732,722. (Cl. 24—73.)



A separable button of the character described comprising a socket member; a stud member including a shank having attached to it a resilient head at one end adapted to enter said socket member and having a flange at its other end, and a sleeve secured around the shank of this member with its inner end spaced from said flange; and a hollow button-head loose on the shank between the inner end of said sleeve and the flange of the shank, the button head having an annular shoulder adapted to make contact with the inner end of said sleeve when this head is pushed outward on the shank, for the purpose set forth.

1,109,798. AUTOMATIC SAFETY DEVICE FOR LOCOMOTIVES. JAMES H. SMITH, Port Murry, N. J. Filed May 2, 1913. Serial No. 765,167. (Cl. 246—59.)



1. In combination with a locomotive, a partially rockable shaft comprising two sections having coupled connections, one of said sections having a device to contact with a member in its path to actuate one section which in turn operates the other section, means operated by said shaft for actuating the controlling mechanism of the locomotive, means upon said shaft for returning the same to a partial normal position, thereby returning the air valve of the controlling mechanism from emergency to service position, and means in the path of the first means for limiting the return of said shaft to a partial normal position.

2. In combination with a locomotive, a partially rockable shaft comprising two sections having coupling connections, one of the sections having a device to contact

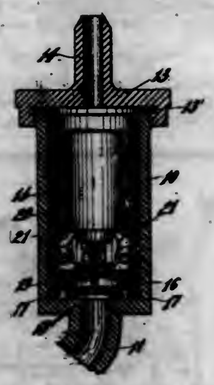
with a member in its path to actuate said section which in turn operates the other section, means operated by said shaft for actuating the controlling mechanism of the locomotive, means upon said shaft for returning the same to a partial normal position, thereby returning the air valve of said controlling mechanism from emergency to service position, means in the path of the first means for limiting the return of said shaft to a partial normal position, means for holding the first means against operation, parts of said first means adapted to be disconnected from the air valve, and means for operating the coupling connections whereby the section of said shaft having the device may operate idly.

1,109,799. WATERPROOFING MATERIAL. GEORGE W. SNYDER, Los Angeles, Cal., assignor to California Drug and Chemical Company, Los Angeles, Cal., a Corporation of California. Filed Aug. 5, 1912. Serial No. 713,470. (Cl. 134—43.)

1. A waterproofing solution containing in each one hundred gallons of solution in water, 1.2 to 3.7 pounds sodium hydrate, 20 to 28 pounds fatty material, ½ pound sulfur, 20 to 24 pounds glue, 3 to 16 pounds alum, and 2 to 4 pounds potassium nitrate.

2. A waterproofing solution containing in each one hundred gallons of solution in water, 1.2 to 3.7 pounds sodium hydrate, 20 to 28 pounds Japan wax, ½ pound sulfur, 20 to 24 pounds glue, 3 to 16 pounds alum, and 2 to 4 pounds potassium nitrate.

1,109,800. VALVE FOR MILKING-MACHINES. CARL SORENSEN, Racine, Wis., assignor of one-half to Andrew Johnson, Racine, Wis. Filed Oct. 28, 1911. Serial No. 657,293. (Cl. 31—97.)

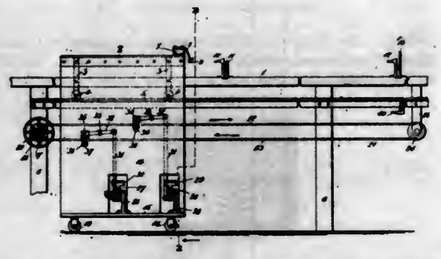


1. An automatic valve for milking machines, comprising a valve casing provided with a valve seat and a teat connection, a cylinder within the valve casing with its upper end open and its lower end closed, a shouldered float within the cylinder, a stem connected to the float and passing through an opening in the bottom of the cylinder, a valve on the stem for closing the valve seat, and gravity dogs within the cylinder for engaging the float and initially holding the valve off of its seat and adapted to fall out of position for engagement with the float when the float is lifted by the milk contained within the cylinder.

2. An automatic valve for milking machines, comprising a valve casing having a valve seat and a teat connection, a base within the valve casing having an opening, spacing blocks on the base resting on the bottom of the valve casing for holding the base above the bottom of the valve casing and spaced from the walls of the valve casing, a cylinder mounted on the base with its upper end open, a shouldered float within the cylinder, a stem on the float passing through the opening in the base, a valve on the stem for closing the valve seat, lugs on the base, and gravity dogs pivoted between the lugs for initially engaging the shoulder of the float to hold the valve off of its seat and adapted to fall out of position for engagement with the float when the float is lifted by milk within the cylinder.

3. In a milking machine, a cluster of valve casings rigidly connected together and having a common suction connection, teat connections at the upper ends of the valve casings, a cylinder contained within each valve casing with its upper end open and its lower end closed, a shouldered float valve with its stem passing loosely through the closed lower end of the cylinder with its float contained within the cylinder for closing the suction connection in the bottom of the valve casing, and a plurality of gravity dogs surrounding the float valve and adapted to engage the shoulder thereof for holding the float valve in its open position, but adapted to fall out of position for engaging the float valve when the float valve is lifted by the presence of milk in the cylinder.

1,109,801. CLOTH-FOLDING MACHINE. CHARLES A. STEWART, Rollingsford, N. H. Filed Jan. 15, 1913. Serial No. 742,109. (Cl. 104—18.)



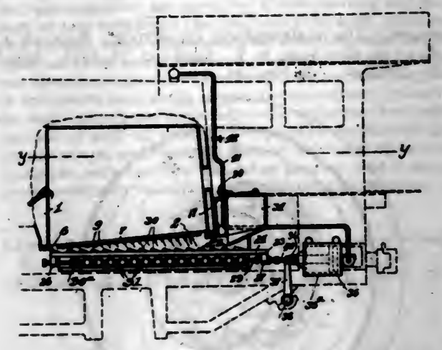
1. In a folding machine, the combination with a raised table, of a carrier movable over said table with a forward and reverse movement, an operator's stand secured to said carrier and movable therewith, the same comprising a frame connecting with said carrier and depending therefrom alongside said table and a platform carried by said frame, mechanism whereby power may be applied for moving said carrier and operator's stand with a forward and reverse movement, and means carried by said stand whereby an operator standing on said platform may control the application of power to said carrier and stand for moving the same as aforesaid.

2. In a folding machine, the combination with a table, of a carrier movable over said table with a forward and reverse movement, an operator's stand secured to and movable with said carrier, pulleys oppositely arranged, a belt passed around said pulleys with portions thereof movable in opposite directions upon the application of power to said pulleys, and separate releasable clutch-forming mechanisms carried by said stand and attachable respectively to the opposite running portions of said belt.

3. In a folding machine, the combination with a table, of a carrier movable over said table with a forward and reverse movement, an operator's stand secured to and movable with said carrier, pulleys oppositely arranged, a belt passed around said pulleys with portions thereof movable in opposite directions upon the application of power to said pulleys, foot-levers mounted upon said stand, and separate releasable clutch-forming members controlled respectively by said levers and attachable respectively to the opposite running portions of said belt.

4. In a folding machine, the combination with a raised table, of a carrier movable over said table with a forward and reverse movement, an operator's stand secured to said carrier and movable therewith, the same comprising a frame connecting with said carrier and depending therefrom alongside said table and a platform carried by said frame, mechanism whereby power may be applied for moving said carrier and operator's stand with a forward and reverse movement, the same comprising in part a power-driven endless belt with portions thereof running in reverse directions, fixed clutch members secured to said frame adjacent the respective running portions of said belt, movable clutch members coöperating therewith to grip said opposite-running portions of the belt, levers pivotally secured to said platform and link-forming connections interposed between said levers and said movable clutch forming members whereby said members may be controlled by said levers with relation to said fixed clutch members and said belt.

1,109,802. AUTOMATIC STOKER FOR LOCOMOTIVES. PAUL M. THAYER, Plymouth, Ind. Filed Mar. 6, 1913. Serial No. 752,313. (Cl. 110—44.)



1. An automatic stoker comprising in combination with the fire box, a plurality of spaced coal chutes, grate castings spanning the spaces between the coal chutes, pushing means for pushing the coal forwardly of the coal chutes, perforated cover plates disposed over the upper ends of the coal chutes, and deflecting means for directing the coal upwardly in the chutes through the openings in the cover plates and onto the grate castings.

2. An automatic stoker comprising in combination with the fire box, a coal chute the upper end of the chute being open and communicating with the fire box, a reticulated cover plate disposed over the open end of the chute, deflector plates carried by the cover plate, other deflector plates carried by the side walls of the chute, and means for feeding coal forwardly of the chute to be deflected upwardly into the fire box by the said deflector plates.

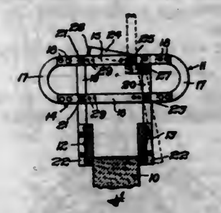
3. An automatic stoker comprising in combination with the fire box, a coal chute communicating with the fire box and provided with openings in one of its side walls, a swinging member mounted without the chute and carrying a plurality of deflecting plates, means for swinging said member to selectively project a portion of the deflector plates carried thereby into the coal chute at different points in the length thereof, and means for feeding fuel lengthwise of the chute to be deflected upwardly by the deflector plates carried by the swinging member.

4. A stoker comprising in combination with a fire box, a plurality of coal chutes provided with converging longitudinal walls, said walls enlarged to form beams extending longitudinally of the fire box, grate bars supported by the longitudinal beams, perforated cover plates supported at the upper ends of the chutes, said perforated cover plates lying substantially flush with the grate bars, feeding means in the chutes for imparting a progressive movement to the coal in the chutes, deflecting means for directing the coal upwardly through the perforations in the cover plates out upon the grate bars, and a suitable operating means for the feeding means in the chutes.

5. In an automatic stoker, a coal chute having its upper end communicating with the fire box of a furnace, a perforated cover plate disposed over the upper end of the chute, depending deflector plates carried by the cover plate, other deflecting means projecting from the side walls of the chute, and feeding means for imparting a progressive feed to the coal in the chute to be deflected upwardly by the deflectors.

[Claims 6 to 9 not printed in the Gazette.]

1,109,803. CONCRETE-MOLD. WILLIAM H. TUOHY, Eagle, Wis. Filed Dec. 27, 1913. Serial No. 808,947. (Cl. 25—131.)



1. A concrete mold, comprising mold-boards spaced apart to receive concrete between them, a supporting frame transverse to said board, two arms on said frame which extend below the same and are attached to the mold-boards, one of said arms having pivotal connection with the frame, and an operating lever pivoted to the frame and adapted to have bearing engagement with said pivoted arm, and to be moved to swing said arm in one direction, and to lock the same from movement, said arm being provided with means for operatively connecting the same to said lever when moved to swing said arm in the opposite direction.

2. A concrete mold, comprising mold boards spaced apart to receive concrete between them, a supporting frame transverse to said boards, two arms on said frame extending below the same and attached to the mold-boards, one of said arms having pivotal connection with the frame, and an operating lever pivoted to the frame and adapted to have bearing engagement with a surface of the pivoted arm, said lever acting to swing the arm in one direction and to lock the same from movement, said arm being provided with a link adapted to engage said lever when released from bearing engagement with said arm, to swing said arm in the opposite direction.

3. In a concrete mold, comprising mold-boards spaced apart to receive concrete between them, a transverse supporting frame, two arms on said frame extending below the same and attached to the mold-boards, one of said arms having pivotal connection with the frame, and an operating lever pivoted to the frame and having its shorter portion in position to have bearing engagement with the pivoted arm; said operating lever being pivoted to swing on an axis parallel with the pivot of the pivoted arm, and said shorter arm of the operating lever being adapted to be brought into position at right angles to the pivoted arm, for locking the board to which it is attached, in operative position, said pivoted arm being provided with a link adapted to engage said lever, to swing said arm from its operative position.

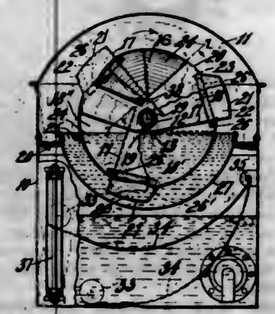
4. A concrete mold, comprising mold-boards spaced apart to receive concrete between them, a transverse supporting frame consisting of upper and lower rigidly connected frame members, two arms connected with said frame, one of said arms being pivoted to the lower member of the frame, and an operating lever pivoted to the upper member of the frame, and acting on the upper end of the pivoted arm to swing the same into and out of operative position; said pivoted arm being provided below the upper frame member with a transversely extending link member, and the operating lever being adapted to act in one direction on the same pivoted arm and in the opposite direction on said link member for swinging the lower end of said pivoted arm inwardly and outwardly.

5. A concrete mold, comprising mold-boards spaced apart to receive concrete between them, a transverse supporting frame having upper and lower, rigidly connected, frame members, two arms connected with said frame, one

of said arms being pivoted to the lower member of the frame, and an operating lever pivoted to the upper member of the frame, and acting on the pivoted arm to swing the same into and out of operative position; said pivoted arm being provided adjacent to the upper frame member with separated bearing surfaces facing toward each other, and the shorter arm of said operating lever being adapted to act on said bearing surfaces for shifting the pivoted arm into and out of operative position and to be brought into locking relation with one of said bearing surfaces, for holding the lower end of the pivoted arm rigidly from outward movement.

[Claims 6 to 12 not printed in the Gazette.]

1,109,804. WATER-METER. OSWAL O. WAGLEY, Milwaukee, Wis. Filed Nov. 11, 1911. Serial No. 659,674. (Cl. 73—37.)



1. A water meter, comprising a drum having a plurality of tangentially positioned partitions dividing the drum into a plurality of compartments in communication with each other near the axis of rotation of the drum and also having a discharge opening for each compartment, extension compartments projecting from the periphery of the drum and a supply pipe for successively feeding liquid to said compartments and said liquid adapted to cause the rotation of said drum and to be discharged through the discharge openings thereof.

2. A water meter, comprising a constant liquid level receptacle, a drum partly positioned within the receptacle and having a plurality of tangentially positioned partitions dividing the drum into a plurality of compartments in communication with each other near the axis of rotation of the drum and also having a discharge opening for each compartment, and a supply pipe for successively feeding liquid to said compartments and said liquid adapted to cause the rotation of said drum and to be discharged through the discharge openings thereof, said receptacle supporting the weight of the liquid within the drum and arranged to maintain a constant liquid level.

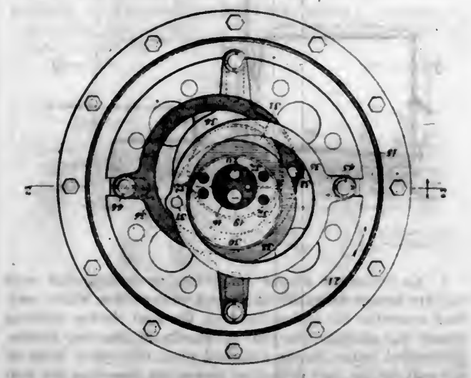
3. A water meter comprising a constant liquid level receptacle, a drum partly positioned within the receptacle and provided with a plurality of compartments having outlet openings for discharging a liquid therefrom into the receptacle, said receptacle arranged to discharge the liquid in excess of a fixed level, and an inlet pipe extending into the drum for successively feeding a liquid to the compartments, said liquid causing the rotation of the drum.

4. A water meter, comprising a constant liquid level receptacle, a drum partly positioned within the receptacle and provided with a plurality of compartments having outlet openings and said compartments also being in communication with each other near the axis of rotation of the drum, and an inlet pipe extending into the drum and around which the drum rotates, said inlet pipe provided with apertures for successively feeding a liquid to the compartments and the compartments in turn discharging the liquid into the receptacle, the said receptacle supporting substantially all of the weight of the liquid within the compartments arranged to maintain a constant liquid level.

5. A water meter, comprising a constant liquid level receptacle, said receptacle arranged to maintain a constant liquid level, a perforated aube extending horizontally above the receptacle, a drum journaled on the tube and extending into the receptacle, and tangential partitions positioned within the drum and dividing the drum into a plurality of compartments which are in communication with each other near the axis of rotation of the drum and which are adapted to be successively filled from the perforated tube, said drum provided with a discharge opening for each compartment, and pockets covering the discharge opening, and having their respective openings opening in a direction opposite to the direction of rotation of the drum and positioned circumferentially a distance beyond the drum openings.

[Claims 6 to 11 not printed in the Gazette.]

1,109,805. AIR COMPRESSOR OR MOTOR. WILLIAM A. WARMAN, New York, N. Y. Filed Oct. 24, 1913. Serial No. 796,999. (Cl. 230—31.)



1. In a device of the class described, a stationary valve member; a cylinder member rotatable about said valve member and having a plurality of radiating cylinders; a reciprocating piston in each of said cylinders; a stationary eccentric disk; an eccentric strap surrounding said disk and operatively connected with one of said pistons; an operating member one end of which is pivotally connected with said strap and the other end with another of said pistons; and a driving shaft operatively connected with said cylinder member.

2. In a device of the class described, a suitable casing; a stationary valve member supported by said casing; a cylinder member within said casing and rotatable about said valve member and having a plurality of radiating cylinders; a reciprocating piston in each of said cylinders; two similarly arranged stationary eccentric disks located one upon each side of said cylinder member; two eccentric straps one surrounding each of said disks and which straps are operatively connected with one of the pistons aforesaid; two operating members, one end of each of which is pivotally connected with one of said straps and the other ends of which are operatively connected with another of said pistons; a bearing carried by said casing; and a driving shaft extending through said bearing and operatively connected with said cylinder member.

3. In a device of the class described, a stationary valve member; a cylinder member rotatable about said valve member and having a plurality of radiating cylinders; a reciprocating piston in each of said cylinders; a stationary eccentric disk supported by said valve member; an eccentric strap surrounding said disk and operatively connected with one of said pistons; a yoke surrounding said disk and strap, one end thereof being pivotally connected with said strap and the other end operatively connected with another of said pistons; and a driving shaft operatively connected with said cylinder member.

4. In a device of the class described, a stationary valve member; a cylinder member rotatable about said valve member and having four radiating cylinders arranged at right angles to one another; a reciprocating piston in each of said cylinders; two stationary eccentric disks arranged opposite one another, so as to move their straps simultaneously in opposite directions; two eccentric straps, one surrounding each of said disks and which straps are operatively connected one with each of two oppositely located pistons; two operating members, one end of each of which is pivotally connected with one of said straps, and the other ends of which are operatively connected with the two remaining pistons; and a driving shaft operatively connected with said cylinder member.

5. In a device of the class described, a suitable casing; a stationary valve member supported by said casing; a cylinder member supported by and rotatable about said valve member and having four radiating cylinders arranged at right angles to one another; a reciprocating piston in each of said cylinders; two stationary eccentric disks carried by said valve member and arranged opposite one another, so as to move their straps simultaneously in opposite directions; two eccentric straps, one surrounding each of said disks and which straps are operatively connected one with each of two oppositely located pistons; two yokes, one end of each of which is pivotally connected with one of said straps, and the other ends of which are operatively connected with the two remaining pistons; and a driven shaft operatively connected with said cylinder member.

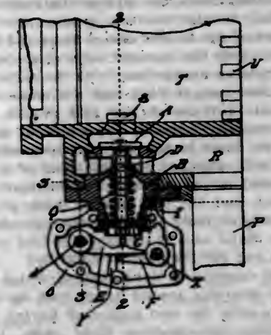
1,109,806. GANG-PLOW. DANIEL WENTLAND, Pettibone, N. D. Filed Sept. 17, 1913. Serial No. 790,185. (Cl. 97—36.)

A sulky gang plow comprising a heavy member provided with a seat for an operator rising from the rear portion, plow beams including plows rigidly fixed to diametrically opposite sides of said member, the upper face of said member at its forward portion being provided with a bearing, an arched axle mounted in said bearing, the sides of the arch axle being diametrically opposite and normally inclined downwardly and forwardly and provided with wheels, one side of the arch axle having a rearwardly extending lever, a lug projecting laterally of said member on which the lever engages to hold the sides of the axle normally inclined downwardly and forwardly, a segmental rack rising from said member, said lever constituting means whereby the sides of the axle may be inclined downwardly and rearwardly, said lever having means to engage the rack to assist in holding the sides of the axle inclined rearwardly and downwardly, the seat being so arranged relative to the member, the axle and the said plow beams, that the weight of the operator on the seat constitutes means not only to co-act with said lug to hold the sides of the axle inclined downwardly and forwardly, but to co-act with the rack and the means on the lever to hold the sides of the axle inclined rearwardly and downwardly, so that the plow is directed downwardly in the soil.

1,109,807. VALVE-GEAR FOR STEAM-ENGINES. EDWIN F. WILLIAMS and LE GRAND SKINNER, Erie, Pa., assignors to the Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed July 21, 1913. Serial No. 780,202. (Cl. 121—45.)

1. In a valve-controlling mechanism for steam-engines, the combination of an exhaust valve, a positive gear for operating said valve, means controlled by vacuum in the exhaust pipe for making the gear inoperative, and means for holding said valve closed when the gear is inoperative.

2. In a valve-controlling mechanism for steam-engines, the combination of an exhaust valve, a spring tending to close said valve, a gear operating to open said valve, and means controlled by vacuum in the exhaust pipe for making the gear inoperative, whereby the valve will remain closed when vacuum exists.



3. In a valve-controlling mechanism for steam-engines, the combination of an exhaust valve, a shiftable rocker, and its shaft acting on said valve to open the same, means controlled by vacuum in the exhaust pipe to shift the shaft and rocker to inoperative position when such sufficient vacuum exists, and means to return the shaft and rocker to operative position when the vacuum fails.

4. In a valve-controlling mechanism for steam-engines, the combination of an exhaust valve of the puppet type, an operating device bearing under the stem of the valve and acting to lift and open the same, and means controlled by vacuum in the exhaust pipe to move the device to inoperative position.

5. In a valve-controlling mechanism for steam-engines, the combination of an exhaust valve, a rocker and its shaft acting on said valve to open the same, said shaft being shiftable endwise to bring the rocker to inoperative position, and a spring pressing against the shaft and tending to hold the same in operative position, said shaft being exposed to vacuum in the exhaust pipes operating, in the presence of sufficient vacuum, to shift said shaft against the tension of the spring.

[Claims 6 to 11 not printed in the Gazette.]

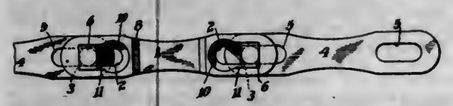
1,109,808. DRIVE-CHAIN. GEORGE W. WILMOT, Hazleton, Pa. Filed Dec. 26, 1912, Serial No. 738,654. Renewed June 15, 1914. Serial No. 845,293. (Cl. 74—32.)

1. A chain comprising links consisting of two parallel spaced members having slots in their opposite ends the said slots each having an enlarged portion intermediate their ends and the portions thereof upon opposite sides of the said enlarged portions having substantially straight sides, links which alternate with the first named links and which have their ends interposed between the members of the latter and which have elongated slots in their opposite ends, pintles for connecting the ends of the alternating links, the said pintles respectively having elliptical portions at their opposite end portions for engagement with the slots in the parallel spaced members of the said first mentioned links, and the said pintles each having oblong heads at their opposite ends arranged at right angles to the major axes of the said elliptical portions, substantially as and for the purpose described.

2. A chain comprising links consisting of two parallel spaced members each of which is provided with slots at its opposite ends, the said slots having an enlarged portion intermediate their ends and the said slots terminating in rounded ends, links alternating with the first named links and having their opposite ends situated between the end portions of the members of the adjacent alternating links and also having elongated slots in their opposite ends, pintles extending through the slots of the overlapped ends of the alternating links, the said pintles respectively being provided with circular central portions for engagement with the slots of the second named links and having elliptical portions upon the opposite sides of the said enlarged central portions for engagement with the slots in the members of the first named links and the minor axes of the said elliptical portions of the said pintles being of a length substantially equal to the width of the narrower portions of the slots in the said members, and the major axes of the said elliptical portions being of a length substantially equal to the width of the enlarged portions of the said slots, and the said pintles being provided with elongated heads at their opposite ends extending at right angles to the major axes of the said elliptical portions, substantially as and for the purpose described.

3. A chain comprising links each of which consists of two parallel members spaced apart and having slots in their opposite ends, the said slots each having an enlarged circular portion intermediate their ends, links which alternate with the first named links and which have their ends interposed between the members of the latter and which are provided with longitudinal horizontal slots, the said slots terminating in rounded ends, pintles for connecting the ends of the alternating links, the said pintles having circular central portions with which the rounded ends of the slots in the second named links are engaged, and the said pintles respectively having oblong portions upon opposite sides of the central portions for engagement with the slots in the parallel spaced members of the first mentioned links, and the said pintles each having oblonk heads at their opposite ends arranged at right angles to the length of the said oblong portions, substantially as and for the purpose described.

1,109,809. DRIVE-CHAIN. GEORGE W. WILMOT, Hazleton, Pa. Filed Dec. 26, 1912, Serial No. 738,653. Renewed June 15, 1914. Serial No. 845,294. (Cl. 74—32.)



1. A chain comprising links provided with elongated straight sided slots at their opposite ends and also provided with recesses in the outer sides of their opposite ends, the said slots extending from the bottoms of said recesses, and which recesses respectively comprise an enlarged portion and a polygonal portion of less width, pintles supported in the opposite ends of the said links, the said pintles having elongated heads which are adapted normally to be situated in the polygonal portions of the said recesses, and the said pintles being adapted to be moved into positions with their heads within the region of the enlarged portions of the said recesses for the purpose stated, and alternate links having elongated openings at their opposite ends through which the said pintles extend whereby the said last mentioned links have pivotal connection with the first mentioned links.

2. A chain comprising links having elongated straight slots, pintles situated at the opposite ends of the said links, and supported in the said slots, the said pintles having heads at their opposite ends with squared ends and the said links being provided with bosses or projections upon their outer sides at their opposite ends which projections are provided with recesses from the bottoms of which the said slots extend and each of which recesses includes a circular and a polygonal portion, the former being of a width greater than that of the latter, and the width of the latter being substantially equal to the length of the said heads whereby when the said heads are situated within the said polygonal portions of the said recesses they are prevented from turning, but which heads are permitted to turn when the pintle is moved toward the centers of the said links bringing the said heads within the region of the circular portions of the said recesses and alternate links having slots through which the said pintles extend whereby the said last mentioned links have pivotal connection with the first mentioned links.

3. A chain comprising links consisting of two members in parallel spaced relation with respect to each other and each of the said members being provided with slots and also with projections or thickened portions upon their outer sides at their opposite ends, the said projections or thickened portions being provided with recesses from the bottoms of which the said slots extend and each of which comprises a circular and a rectangular portion, pintles supported in said slots and having rectangular heads at their opposite ends, the said heads normally occupying the rectangular portions of the said recesses and being of a length substantially equal to the width of such portions of said recesses whereby the pintles are prevented from turning, and the said pintles being adapted to be moved toward the center of said members to bring the said heads within the region of the circular portions of said recesses whereby the said heads may be turned to bring them into parallel relation with the said slots, and alternate links having their opposite ends situated intermediate the ends of the members of the first mentioned links and having elongated slots through which the said pintles pass whereby they are pivotally connected to the first mentioned links.

1,109,810. COLUMN-MOLD. WILLIAM W. WILSON, Dorchester, Mass. Filed Dec. 16, 1910. Serial No. 597,650. (Cl. 25—121.)

1. In a monolithic column mold the combination with longitudinally extending molding walls and cross bars arranged transversely at intervals on each side of the mold to overlie the molding boards and longitudinal strips overlying the cross bars, the strips on opposite sides of the mold being bolted together at a plurality of points intermediate the cross bars to bind together all the intervening cross bars.

2. In a monolithic column mold the combination with longitudinally extending molding walls of cross bars arranged transversely at intervals at each side of the mold to overlie the molding walls and having their ends projecting beyond the sides of the mold, longitudinal metallic strips overlying the projecting ends of the cross bars, and connecting the strips on opposite sides of the mold and disposed in said intervals at a plurality of points in the height of the mold to bind together all the intervening cross bars.

3. In a monolithic column mold the combination with longitudinally extending mold members, cross bars arranged transversely at intervals on each side of the mold to overlie the mold members and having their ends projecting beyond the sides of the mold, and longitudinally extending angle irons having their sides extending from their intersection inwardly toward the middle of the corresponding face of the mold and overlying the projecting ends of the cross bars, the opposed angle irons being bolted together to clamp together the intervening cross bars.

4. In a monolithic column mold the combination with longitudinally extending mold members of cross bars arranged transversely at intervals on each side of the mold to overlie the mold members, longitudinally extending angle irons having their flanges extending inwardly toward each other on the adjacent face of the mold and overlying the ends of the cross bars and bolts disposed in said intervals and clamping adjacent angle irons together, the bolts passing outside of the molding members.

5. In a monolithic column mold, the combination with longitudinally extending mold members, cross bars arranged transversely at intervals on each side of the mold to overlie the mold members, such cross bars consisting of pairs of oppositely disposed members, and successive pairs being arranged in different planes and disposed substantially at right angles to the next pair and with their ends projecting beyond the sides of the mold, longitudinally extending angle irons having their sides overlying the projecting ends of the cross bars to hold the same in position against the longitudinally extending mold members, and bolts disposed in said intervals and clamping each angle iron to the adjacent angle iron whereby the said cross bars may be drawn tightly against the longitudinal mold members and the same clamped into a unitary structure.

1,109,811. SOUNDER. EDWARD C. WOOD, Somerville, Mass., assignor to Submarine Signal Company, Waterville, Me., a Corporation of Maine. Filed Nov. 16, 1910. Serial No. 592,600. (Cl. 116—1.)

1. The sounder above described comprising a frame, a disk and means for vibrating said disk, said disk being fixedly attached to said frame at points in a circular node and said disk-vibrating means being mounted upon said frame to act upon said disk at a predetermined point within said circular node.

2. In a device of the kind described, a frame, a disk fixedly attached thereto, and means for exciting vibrations in said disk also mounted on said frame, the attachment of said disk to said frame being in a circular node on said disk whereby when vibrations are excited in said disk by said exciting means the portion of said disk representing said circular node will be held stationary with relation to said frame, and the portion of said disk within and without said node will vibrate in opposite directions about the points of attachment of said disk and frame.

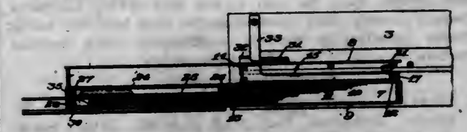
3. The sounder above described comprising a frame, a disk, and means for vibrating said disk, said disk being fixedly attached to said frame at points in a circular node and said disk-vibrating means being mounted upon said frame to act upon said disk at a predetermined point within said circular node in combination with means whereby said sounder may be suspended.

4. The sounder above described comprising a frame, a disk fixedly attached thereto at points in a nodal circle, a clapper arm mounted on said frame and carrying a clapper, means for operating said clapper arm and means for supporting said sounder whereby said sounder may be submerged and said clapper operated to give a signal.

5. The sounder above described comprising a disk, a frame, means for vibrating said disk, and means for supporting said disk in said frame, said disk being provided with openings therethrough and said supporting means comprising clamping bolts passing through said openings in opposite directions whereby the heads of said bolts engage opposite sides of said disk, said disk being clamped between the heads of said bolts.

[Claim 6 not printed in the Gazette.]

1,109,812. DRAWER-SUPPORT. PHILIP H. YAWMAN, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 5, 1909. Serial No. 526,394. (Cl. 45—77.)



1. The combination with a casing and a drawer operating therein, of a guiding flange on one of said members having guiding faces on opposite sides thereof, a supporting member provided with a way with which the guiding flange coöperates and having tracks disposed at opposite sides of the flange, rollers arranged to act between each guiding face of the latter and one of the tracks on the supporting member and supporting connections between the latter and the other of said first mentioned members.

2. The combination with a casing and a drawer operating therein, of a guiding flange on one of said members having guiding faces on opposite sides thereof, a supporting member provided with a way with which the guiding flange coöperates and having tracks disposed at opposite sides of the flange, rollers having axes movable relatively to both flange and support arranged to act between each guiding face of the latter and one of the tracks on the supporting member, and supporting connections between the latter and the other of said first mentioned members.

3. The combination with a casing and a drawer operating therein, of a guiding flange on one of said members having guiding faces on opposite sides thereof, a supporting member provided with a way with which the guiding flange coöperates and having tracks disposed at opposite sides of the flange, rollers having axes movable relatively to both flange and support arranged to act between each guiding face of the latter and one of the tracks on the supporting member, a spacing member operatively connecting together the rollers on both guiding faces to maintain them all in substantially fixed relation to each other and supporting connections between the supporting member and the other of said first mentioned members.

4. The combination with a casing and a drawer operating therein, of a guiding flange on one of said members having guiding faces on opposite sides thereof, a supporting member provided with a way with which the guiding flange coöperates and having tracks disposed at opposite sides of the flange, rollers having axes movable relatively to both flange and support arranged to act between each guiding face of the latter and one of the tracks

on the supporting member, and a spacing member operatively connecting together the rollers on both guiding faces to maintain them all in substantially fixed relation to each other, there being a forward and a rearward roller on one guiding face and a rearward roller on the other.

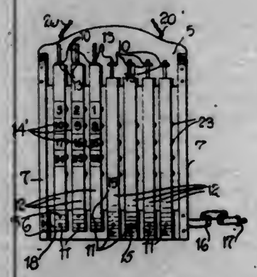
5. The combination with a drawer and a support, of a guiding flange on one of said members having guiding faces on opposite sides thereof, a way on the other with which said guiding flange coöperates and having tracks disposed at opposite sides of the flange, a forward and rearward roller acting between one track and one of the guiding faces and a rearward roller acting between the other track and the other guiding face to prevent relative tilting of the drawer and its support.

[Claims 6 to 10 not printed in the Gazette.]

1,109,813. HARROW. EVERT ASPPOAS, Floodwood, Minn. Filed Apr. 17, 1913. Serial No. 761,783. (Cl. 55—11.)

The combination in a harrow of a plurality of rectangular frames having draft attachments formed thereon, legs formed upon the said frames and having apertures formed therein, bars connecting the said legs, the lower frame constituting runners, and rotary teeth secured thereto.

1,109,814. PERPETUAL CALENDAR. GEORGE W. BAILEY, Arlington, Va. Filed Apr. 29, 1914. Serial No. 835,203. (Cl. 40—107.)

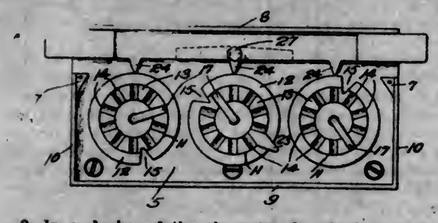


1. A perpetual calendar including a base provided with week day indicating characters, numeral carrying bars corresponding in number to said characters, pins fixed in the base, each of said bars being provided wtih an opening in one end to receive one of said pins whereby the bars may be transposably arranged upon the base to indicate any month in a year, and means for retaining the numeral carrying bars upon the respective pins.

2. A perpetual calendar including a base provided with week day indicating characters, numeral carrying bars corresponding in number to said characters, a plurality of pins fixed in said base, a plurality of staples secured upon the base, said numeral carrying bars having openings in one of their ends to receive the respective pins and provided with studs upon their other ends for engagement in the respective staples whereby said bars may be transposably arranged upon the base to indicate any month in a year, and means for retaining said bars in position upon the base.

1,109,815. COMBINATION DOOR-BOLT. WILLIAM A. BAKER, Coloma, Mich. Filed Apr. 27, 1914. Serial No. 834,621. (Cl. 70—53.)

1. In a device of the character described, a sliding bolt, a plurality of tumblers mounted edgewise to each other below the bolt, means for raising the bolt on rotative movement of a tumbler and for moving the bolt laterally, means for holding the bolt against sliding movement on raising thereof and movement to a certain position, and means for permitting the lowering of the bolt through gravity and thereby rendering the holding means ineffective upon positioning the tumblers in certain predetermined positions, substantially as described.



2. In a device of the character described, a casing, a bolt mounted therein for sliding movement in either direction from a central position in the casing, said bolt having its ends extending beyond the ends of the casing when in central position, a cover plate for the casing, a pin projecting from the bolt through an opening in the cover plate, drop latches pivotally mounted above the said opening and having ends extending over the upper portion thereof, the ends of the latches being spaced apart, and means for causing the elevation of the bolt and pin thereon as the bolt is moved to central position, the pin thereupon seating between the ends of the latches and holding the bolt against sliding movement in either direction substantially as described.

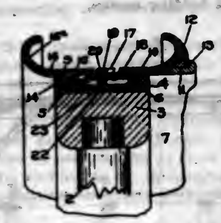
3. In a device of the character described, a casing, a bolt mounted slidably in the upper portion thereof, projecting portions on the under side of the bolt, a series of tumblers, one for each projection rotatively mounted below the bolt, each tumbler having a notch adapted to receive the corresponding projection on the bolt, a cover for the casing, a pin attached to the bolt and projecting therefrom through an opening in the cover, drop latches mounted adjacent the said opening and having ends spaced apart, means whereby on movement of the bolt to a certain position, the pin will seat between the said latches and hold the bolt against movement, and means to operate the tumblers into position so that the projections on the bolt will be received by the notches of the tumblers, thereby moving the pin from between the said latches and freeing the bolt for sliding movement.

4. In a device of the character described, a bolt mounted for sliding movement, means for elevating said bolt on movement to a certain position, gravity catches pivotally mounted adjacent the bolt, and means attached to the bolt and carried to a position between the gravity catches on the elevation of the bolt, thereby holding the bolt from movement substantially as described.

5. In a device of the character described, a locking element slidable back and forth, locking tumblers for controlling the locking element, said tumblers each comprising a disk like body and a raised ring with a plurality of radially positioned grooves in said ring, a rod having a laterally bent end associated with each tumbler, said tumblers being loosely mounted on the rods, and the ends of the rods seated in a groove in each tumbler, operating members secured to the said rods, a plate provided with raised index lugs thereon, said lugs being grouped into a plurality of index dials one for each operating member and positioned adjacent said operating members, and a pair of pointer elements included with each operating member and movable over the raised lugs, said pointers of the operating members being shaped differently to distinguish from each other.

1,109,816. DEMOUNTABLE TIRE-RIM. BERT C. BALL and LEWIS E. YOUNIS, Portland, Oreg. Filed Sept. 28, 1910. Serial No. 584,161. (Cl. 152—21.)

1. In a demountable tire rim, the combination of three rim parts, the first part separated transversely and having an exterior locking shoulder thereon, a tire supporting surface and a rib at its edge; a second part forming a complete ring and having an interior locking shoulder engaging the shoulder on the first part, and a tire retaining flange integral with said second part; and a third part in the form of a ring forming a tire retaining flange arranged on the first part and against said rib.

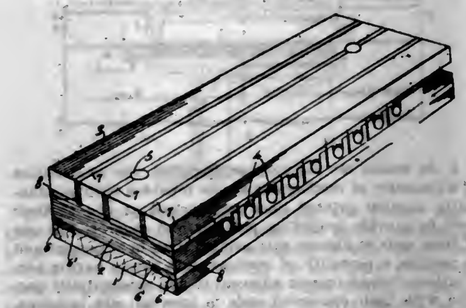


2. In a demountable tire rim, the combination of three rim parts, the first part separated transversely and having an exterior locking shoulder thereon, a tire supporting surface, and a rib at its edge, the locking shoulder being at the opposite side of the assembled rim from the rib; a second part forming a complete ring and having an interior locking shoulder engaging the shoulder on the first part, and a tire retaining flange integral with said second part; and a third part in the form of a ring forming a tire retaining flange arranged on the first part and against said rib.

3. In a demountable tire rim, the combination of three rim parts, the first part separated transversely and having an exterior locking shoulder thereon, a tire supporting surface, and a rib at its edge, the locking shoulder being at the opposite side of the assembled rim from the rib; a second part forming a complete ring and having an interior locking shoulder engaging the shoulder on the first part, a tire retaining flange integral with said second part, and a lip extending laterally from the shouldered portion of the part and toward the lateral center of the assembled rim; and a third part in the form of a ring forming a tire retaining flange arranged on the first part and against said rib.

4. In a demountable tire rim, the combination of two rim parts, the first part separated transversely, and having an exterior shoulder thereon, and having a tire supporting surface on its outer surface, and the second part forming a complete ring and having an interior shoulder engaging the shoulder on the first part, and provided with an opening at its edge, and a pin secured to the first of said parts and extending outwardly into said opening.

1,109,817. CIGAR-MOLD. CHARLES E. BENEDICT and PHILIP NORDECK, Cincinnati, Ohio. Filed Aug. 9, 1913. Serial No. 783,906. (Cl. 131—9.)



1. In a device of the character specified, a means of reinforcing and holding against displacement the parts of the same, comprising strips of wood set in between the surfaces to be reinforced and engaging the surfaces in more than one plane.

2. In a cigar mold of the character specified, a means of reinforcing and holding against displacement the parts of the same, comprising strips of wood set in between the surfaces to be reinforced and engaging the surfaces in a lateral and a vertical plane.

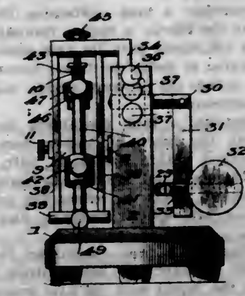
3. In a cigar mold of the character specified, a means of reinforcing and holding against displacement the parts of the same, comprising strips of wood, set in between the surfaces to be reinforced, each strip engaging each surface between which it is situated in a lateral and a vertical plane.

4. In a cigar mold of the character specified, a means of reinforcing and holding against displacement the parts of the lid thereof, comprising a plurality of strips set vertically in the lid piece and extending into and engaging the cup pieces, for the purpose described.

5. In a cigar mold of the character specified, a means of reinforcing and holding against displacement the parts of the lid thereof, comprising a plurality of strips set vertically in the lid piece, one of said strips being set into the connecting posts of said mold, and said strips extending into and engaging the cup pieces, for the purpose described.

[Claim 6 not printed in the Gazette.]

1,109,818. TELEGRAPH-KEY. ROYAL L. BOULTER, Los Angeles, Cal. Filed Mar. 29, 1912. Serial No. 687,198. (Cl. 178—82.)



1. In a telegraph transmitter, the combination with a pivotally mounted flexible vibrator whose vibratory part projects freely, of means for vibrating said vibrator, and means carried bodily by the vibrator and its pivotal mounting adapted for changing and maintaining the tension of its freely projecting flexible part independent of the means for accomplishing its vibration.

2. In a telegraph transmitter, the combination with a pivotally mounted flexible vibrator whose vibratory part projects freely, of means for vibrating said vibrator, and self-contained adjustable spring means carried bodily by the vibrator and its pivotal mounting adapted for changing and maintaining the tension of its freely projecting flexible part independent of the means for accomplishing its vibration.

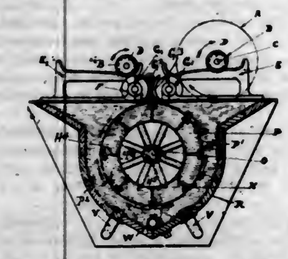
3. A vibrator for telegraph transmitters having separated leaf or ribbon springs, cross end members connecting said springs, a member carried by the vibrator, and an adjustable weight carried by said member.

4. A vibrator for telegraph transmitters having leaf or ribbon springs, end members connecting said springs, a tubular member carried by one of said end members, a weight adjustably carried by said tubular member, a coil spring connecting the end members together, and means for adjusting the tension of said coil spring.

5. In a telegraph key, the combination with a vibrator, and a contact carried thereby, of a movably mounted contact, and means whereby said movably mounted contact may be shifted as an entirety lengthwise of the vibrator to different positions to obtain a coarse adjustment and having means whereby it may be finely adjusted independently of such shifting in the same direction in which it is adapted to be shifted.

[Claims 6 and 7 not printed in the Gazette.]

1,109,819. APPARATUS FOR TREATING FABRICS. CAY BUHL, Paterson, N. J., assignor of one-half to S. Douglas McCausland, Paterson, N. J. Filed Feb. 25, 1914. Serial No. 820,907. (Cl. 8—19.)



1. In combination, a tank containing the liquid with which to treat the fabric, a hollow foraminous means arranged in and serving to guide the fabric through the liquid, and means to reduce the pressure within said foraminous means below atmospheric pressure.

2. In combination, a tank containing the liquid with which to treat the fabric, a hollow foraminous means arranged in and serving to guide the fabric through the liquid, and means to reduce the pressure below atmospheric at one side of the part of the fabric in contact with the first means.

3. In combination, a tank containing the liquid with which to treat the fabric, a hollow foraminous drum arranged within the liquid with its axis substantially horizontal and serving to guide the fabric through the liquid, and means to reduce the pressure within said drum below atmospheric pressure.

4. In combination, a tank containing the liquid with which to treat the fabric, a hollow foraminous drum revolubly arranged within the liquid with its axis substantially horizontal and serving to guide the fabric through the liquid, means to reduce the pressure within said drum below atmospheric pressure, and means to rotate the drum.

5. In combination, a tank containing the liquid with which to treat the fabric, a hollow drum revolubly arranged within the liquid with its axis substantially horizontal and having a foraminous cylindrical wall around and in contact with which the fabric is adapted to be extended through the liquid, means to produce a difference in pressure as between the interior and exterior of the drum, means to rotate the drum, and means to close communication through all of the foraminous part of said wall with which the fabric is not in contact.

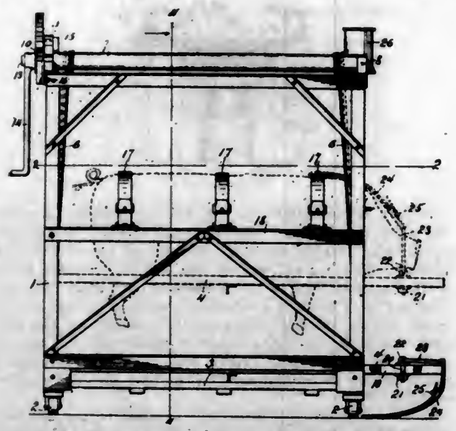
[Claims 6 to 10 not printed in the Gazette.]

1,109,820. ANIMAL-TRUSSING APPARATUS. DEVIRDA H. BURCHAM, Kansas City, Kans. Filed Mar. 23, 1914. Serial No. 826,518. (Cl. 119—103.)

1. In an animal trussing apparatus, a supporting frame, means provided thereon for embracing and holding the back of an animal, a supporting member adapted to embrace the belly of the animal and provided with holes therethrough for respectively receiving the legs of the animal, and means for raising said supporting member to a position in which the back of the animal will be embraced and held by said embracing and holding means.

2. In an animal trussing apparatus, a supporting frame provided with a floor upon which an animal is adapted to be driven, means provided on said frame for embracing and holding the back of the animal, a supporting member adapted to embrace the belly of the animal and provided with holes therethrough for respectively receiving the legs of the animal and adapted to rest upon said floor, and means for raising said supporting member from said floor to a position in which the animal will be lifted from its feet and raised to a position in which its back will be embraced and held by said embracing and holding means.

3. In an animal trussing apparatus, a vehicle provided with a floor and a supporting frame, means carried by said frame for embracing and holding the back of an animal, a supporting member above said floor adapted to embrace the belly of the animal and provided with holes therethrough for respectively receiving the legs of the animal, and means for raising said supporting member so as to lift the animal from its feet and from the floor to a position in which its back will be embraced and held by said embracing and holding means.

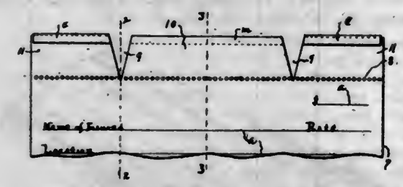


4. In an animal trussing apparatus, a supporting frame, a supporting member vertically movable in said frame, adapted to embrace the belly of an animal, and provided with holes for respectively receiving therethrough the legs of the animal, and means carried by said frame for raising said supporting member so as to lift the animal from its feet.

5. In an animal trussing apparatus, a supporting frame provided with a floor upon which an animal is adapted to be driven, a supporting member vertically movable in said frame from above said floor, adapted to embrace the belly of the animal, and provided with holes for respectively receiving therethrough the legs of the animal, and means carried by said frame for raising said supporting member so as to lift the animal from its feet and raise it from said floor.

[Claims 6 to 12 not printed in the Gazette.]

1,109,821. ALINING MEANS FOR TYPE-WRITING SHEETS. ORNE W. CHAPIN, Omaha, Nebr. Filed Apr. 6, 1914. Serial No. 829,752. (Cl. 11—11.)



1. In means for the purpose described, the combination of a plurality of rectangular sheets provided with substantially parallel printed lines and incised at one of their ends to provide projecting portions and connected at one of their ends to dispose said printed lines in alinement and to provide a plurality of sections, said sheets having perforations formed therein adjacent to and substantially parallel with their connected ends to open on said incisions, and means for connecting said sections outwardly of said perforations.

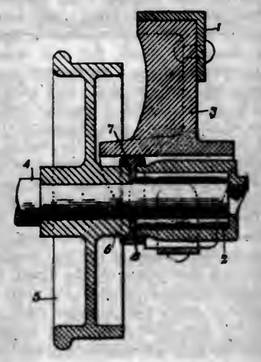
2. In means for the purpose described, the combination of a plurality of sections each consisting of sheets provided with printed lines and connected at one of their ends to dispose their printed lines in alinement and perforated on transverse lines adjacent to said connected ends, said sheets being open at their opposite ends to permit carbon sheets to be interposed and incised at substantially right angles to and opening on the lines of perforations to form outwardly thereof a pair of outer projecting portions and an intermediate projecting portion, and means for connecting said sections outwardly of said perforated lines.

3. Means for the purpose described, comprising a plurality of rectangular sheets provided with parallel lines and connected at one of their ends to dispose said lines in alinement and to provide a plurality of sections, and perforated on lines adjacent to said connected ends, said sheets being incised at substantially right angles to and opening on the lines of perforations to form a plurality of projecting portions, and means for connecting said sections intermediate the longitudinal edges of the sheets and said incisions.

4. In means for the purpose described, the combination of a plurality of sections each consisting of rectangular sheets having parallel lines disposed transversely thereof and connected at one of their ends to dispose their lines in alinement, and having longitudinal incisions opening on their connected ends to form a pair of outer projecting portions and an intermediate projecting portion, said sections being connected at their outer projecting portions and each section being provided with perforations extending between its longitudinal edges to open on said incisions so that it may be conveniently separated from said outer projecting portions for providing an outwardly-projecting engaging-member.

5. In means for the purpose described, the combination of a plurality of sections each consisting of rectangular sheets having parallel lines and connected at one of their ends to dispose their lines in a single plane, and incised longitudinally to open on their connected ends to form a plurality of projecting portions, said sections being connected at one of their projecting portions and each of said sections being provided with perforations extending between their longitudinal edges to open on said incisions.

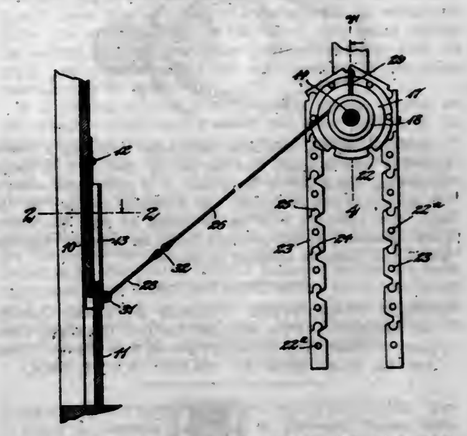
1,109,822. GUARD FOR BEARINGS. SHERWOOD M. CHASE, Columbus, Ohio, assignor to The Chase Foundry and Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed May 14, 1913. Serial No. 767,620. (Cl. 64—22.)



1. The combination, with a bearing, and a part journaled in said bearing, of a floating dust shield comprising a flat annular body portion extending loosely about the end of said bearing and having an inwardly extending radial stop spaced away from both edges thereof to maintain said shield in proper relation to said bearing, said shield being free to move relatively to both said bearing and the part journaled therein.

2. The combination, with a bearing, a part journaled in said bearing, and a hub carried by said part adjacent to said bearing, of an annular shield extending loosely about the part journaled in said bearing and having axially extending portions overlapping the adjacent ends of said bearing and said hub and having a portion extending inwardly between said hub and bearing to position the shield relatively thereto, said shield being loosely supported and free to move relatively to any or all of said parts.

1,109,823. COUNTERBALANCE FOR DOORS. GEORGE N. COLE, Upper Montclair, N. J. Filed Apr. 1, 1912. Serial No. 687,688. (Cl. 20—16.)



1. In a counterbalance for doors and other structures, the combination of a member hinged for movement on a horizontal axis, a rotatable member, a tension member secured to said hinged member and adapted to be wound on the rotatable member, and a flexible counterweight engaging with the periphery of said rotatable member in such manner that the free ends of said flexible counterweight hand free, the rotation of the rotatable member causing the flexible counterweight to be shifted over said rotatable member to increase the weight of one depending portion of the counterweight and simultaneously decrease the weight of the other depending portion thereof, whereby said flexible counterweight serves, at all times, to substantially equilibrate the tension exerted on the tension member by the hinged member.

2. In a counterweight for doors, the combination with a door hinged for movement on a horizontal axis, of a winding drum, a cable coiled on said drum and connected with the door, and a flexible counterweight straddling the winding drum, said counterweight having lengths thereof depending from the drum at the respective sides of the axis of rotation of the drum and said counterweight being shiftable relative to the drum by the rotation thereof so as to increase the effectiveness of the weight due to an increased pull of the door when moved toward an open position.

3. In a counterbalance for doors, a door hinged for movement on a horizontal axis, a shaft, a drum on said shaft, sprocket wheels on said drum, and a flexible counterweight engaging with said sprocket wheels, said counterweight comprising a plurality of weights which are substantially equally distributed on both sides of said shaft when said door is in a closed position.

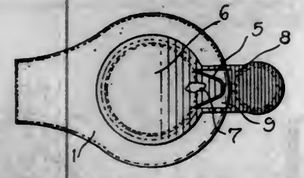
4. In a counterbalance for doors, the combination with a hinged door, of a counterbalance comprising a shaft, a drum on said shaft, and connected with said door sprocket wheels on said drum, and a plurality of flexibly connected weights, said weights being positioned to pass over said drum between the sprocket wheels.

5. In a counterbalance for doors, the combination with a hinged door, of a counterbalance comprising a shaft, a drum rotatable with said shaft, and connected with said door sprocket wheels on said drum, and a plurality of flexibly connected weights adapted to pass over said drum,

each of said weights being provided with means for engaging the sprocket wheels as said weights pass between said sprocket wheels.

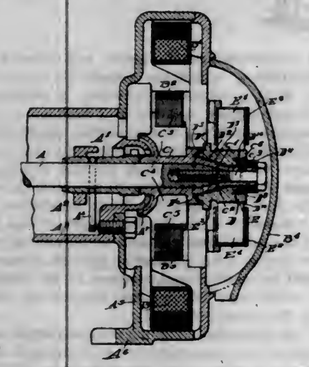
[Claims 6 and 7 not printed in the Gazette.]

1,109,824. TOILET VESSEL. BENJAMIN W. COOK, Midland, Mich. Filed Jan. 17, 1914. Serial No. 812,765. (Cl. 4—19.)



A device of the character described including a vessel provided with a spout and having an open face, a flange projecting upwardly of the vessel at a point intermediate the open face and the spout, and a closure member for the open face provided with an extension to close the spout, such extension being provided with an opening through which the flange is adapted to project.

1,109,825. ARMATURE. CHARLES W. DAKE, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 25, 1913. Serial No. 763,510. (Cl. 171—206.)



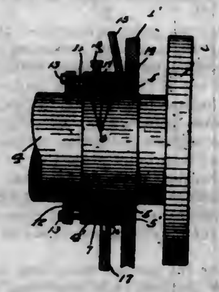
1. A support for a commutator comprising a tapered hub, an undercut flange located at the larger portion of said hub, a sleeve projecting outwardly from the smaller portion of said hub and an undercut collar slidable on said sleeve in opposition to said flange, and means for forcing said collar toward said flange and holding it in position.

2. A commutator comprising a tapered hub, an undercut flange about the larger portion of said hub, commutator bars grouped about said hub having outwardly extending fingers underlying the undercut flange, a cylindrical extension projecting outwardly from the small end of said hub, fingers on said commutator bars beneath the working surfaces thereof, a collar slidable on said sleeve and undercut to overlie said fingers, and means for forcing said collar against said fingers.

3. A hub for electric armatures and the like having a truncated conical portion, an undercut flange about the larger portion of said cone, commutator segments peripherally arranged about said truncated conical portion having inclined fingers projecting under said undercut flange, a cylindrical extension projecting outwardly from the upper smaller end of said truncated conical portion and a collar having an undercut portion slidable upon said sleeve and overlying fingers on said commutator segments and means for drawing said collar and said flange together to clamp said commutator segments.

4. A rotor for electric machines comprising an armature and commutator hub, a shaft upon which said hub is mounted, a commutator located at one end of said hub, an armature at the other, said hub being cylindrically apertured through the commutator end, a truncated conical contact portion in the commutator end of the hub, a cylindrical shaft upon which said hub is mounted having a tapered end in close contact with said truncated conical portion and means for drawing said shaft and said hub longitudinally together to center the end of the hub on the shaft.

1,109,826. PACKING-GLAND FOR HYDRAULIC MOTORS. WILLIAM A. DOBLE, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Apr. 14, 1913. Serial No. 760,858. (Cl. 137—11.)

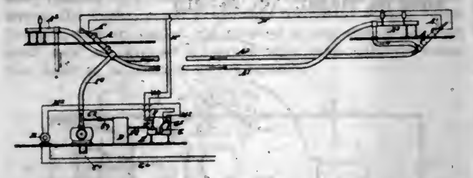


1. In a packing gland of the class described the combination with a packing flange, a shaft extending therethrough, a plurality of disk-shaped rings interposed between said shaft and the packing flange, a plurality of perforated disk-shaped spacing rings arranged in alternate relation with the packing rings, means for admitting grease to that spacing ring adjacent the outer end of the flange, means for delivering a cooling fluid to another of said rings between the first mentioned ring and casing, and an outlet for the waste fluid leading from the packing flange, the said grease forming an air seal at the outer end of the flange.

2. In a hydraulic motor, the combination of a substantially cylindrical casing having an inlet in the periphery thereof, an outlet pipe leading from the side thereof, a rotatable wheel within the casing, the casing having on the side opposite to said inlet conduit a laterally extending packing flange, a shaft for the wheel projecting through said packing flange, a perforated metallic spacing ring interposed between the shaft and packing flange adjacent the side of the casing, a conduit leading from the upper portion of the casing and communicating with said spacing ring through the wall of the flange, a perforated metallic spacing ring arranged to the outside of the first mentioned ring, a conduit leading from the casing inlet conduit to the lower face of said packing flange and communicating through the wall of the flange with said last mentioned spacing ring, an auxiliary perforated metallic ring arranged to the outside of the last mentioned spacing ring, a grease cup positioned on the upper surface of the flange and communicating through the wall of the flange with the auxiliary perforated spacing ring, packing rings arranged between the rings and to the outisde of the end ring, and a stuffing gland engaging the end packing.

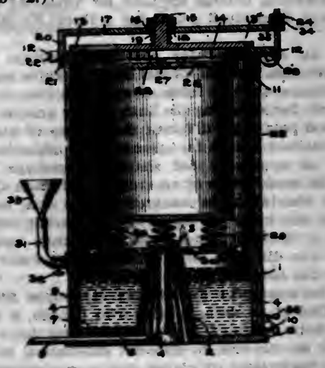
1,109,827. PNEUMATIC-DESPATCH-TUBE APPARATUS. MERTON L. EMERSON, Braintree, Mass., assignor to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Sept. 16, 1911. Serial No. 649,685. (Cl. 243—7.)

1. In a pneumatic despatch tube apparatus, a station, a tube for the transmission of carriers from said station, a continuously operated motor set to operate within a certain range of speed, a pump continuously driven by said motor, mechanism, controlled from said station, for increasing the speed of said pump to maximum for the transmission of a carrier through said tube, said mechanism having means to return said pump to its minimum speed, and timing means for controlling said last mentioned means.



2. In a pneumatic despatch tube apparatus, a station, a tube for the transmission of carriers from said station, a continuously driven pump for displacing air through said tube, a continuously driven motor for driving said pump, said pump being normally driven at a determined minimum speed, means controlled from said station for increasing the speed of said pump to transmit a carrier, inserted at said station, through said tube, and timing means for normally limiting the duration of said departure in speed from said minimum, to a substantially determined interval of time.

1,109,828. COOKING APPARATUS. SAMUEL B. GOFF, Camden, N. J. Filed Oct. 7, 1913. Serial No. 793,805. (Cl. 53—2.)



1. A cooking apparatus, comprising a casing, a cover on the casing, a bar across the casing inside the cover, a boiler located within the lower portion of the casing and having a perforated top, a receptacle cover against the lower face of the bar, a receptacle against the lower face of said last-mentioned cover, and springs exerting upward pressure on the receptacle holding it against the last-mentioned cover and elevating the bottom of the receptacle above the perforated top of the boiler, substantially as described.

2. A cooking apparatus comprising a casing, a cover on the casing, a boiler fitting within the lower portion of the casing and having a central burner receiving passage extending entirely through the boiler, a plug adapted to close the upper end of the passage, a cock extending through both the boiler and the wall of the casing, said boiler having a transverse passage in its bottom communicating with a recess in the bottom of the receptacle for the admission of a pipe to supply the burner when the latter is in the first-mentioned passage, and means for holding a receptacle within the casing spaced above the boiler, substantially as described.

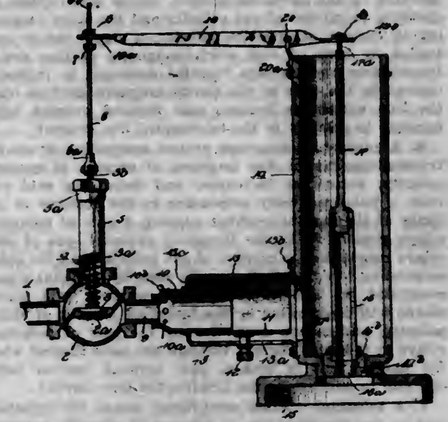
3. A cooking apparatus comprising a casing, a cover on the casing, a boiler fitting within the lower portion of the casing and having a central burner receiving passage extending entirely through the boiler, a plug adapted to close the upper end of the passage, said boiler having a perforated top, a receptacle within the casing, and means wthin the casing supporting the receptacle with all of its walls spaced from the walls of the receptacle and above the perforated top of the boiler, substantially as described.

4. A cooking apparatus, comprising a casing, a cover on the casing, a bar across the casing inside the cover, a boiler located within the lower portion of the casing and having a perforated top, a receptacle cover against the lower face of the bar, a receptacle against the lower face of said last-mentioned cover, springs exerting upward pressure on the receptacle holding it against the last-mentioned cover and elevating the bottom of the receptacle above the perforated top of the boiler, said boiler having its central passage corrugated circumferentially with its upper end screw-threaded for the reception of the plug, substantially as described.

5. A cooking apparatus comprising a casing, a cover on the casing, a boiler fitting within the lower portion of the casing and having a central burner receiving passage extending entirely through the boiler, a plug adapted to close the upper end of the passage, a cock extending through both the boiler and the wall of the casing, said boiler having a transverse passage in its bottom communicating with a recess in the bottom of the receptacle for the admission of a pipe to supply the burner when the latter is in the first-mentioned passage, means for holding a receptacle within the casing spaced above the boiler, said boiler having its central passage corrugated circumferentially with its upper end screw-threaded for the reception of the plug, substantially as described.

[Claim 6 not printed in the Gazette.]

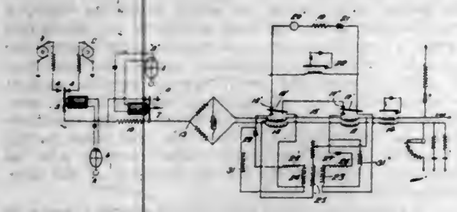
1,109,829. IGNITER FOR EXPLOSIVE-ENGINES. RAYMOND D. GORDON and LEE O. HUDSON, Tulsa, Okla. Filed Jan. 2, 1914. Serial No. 809,843. (Cl. 123—145.)



1. An igniter for explosive engines, comprising an ignition tube, a chimney surrounding said tube provided with an opening in its wall, a burner connected with said chimney and communicating with said opening, a pipe communicating with said burner, a valve adapted to control the gas passing through said pipe to said burner, and means connecting said valve with said ignition tube whereby said valve will be automatically controlled by the heat in said chimney.

2. An igniter for explosive engines, comprising an ignition tube, a chimney surrounding the same and having an opening in its side walls, a casing secured to said chimney and communicating with said opening, an adjustable burner mounted in said casing, a gas supply pipe communicating with said burner, a valve controlling said pipe, a thermostat connected with said ignition tube, and means connecting said thermostat with said valve whereby the position of the valve is controlled by said thermostat.

1,109,830. QUADRUPLEX TELEGRAPH SYSTEM. JOHN GOTT, Hove, Brighton, England, assignor to Commercial Cable Company, New York, N. Y., a Corporation of New York. Filed May 9, 1912. Serial No. 696,162. (Cl. 178—55.)



1. A quadruplex telegraph system comprising means for transmitting impulses of current of opposite polarity, means for increasing and decreasing said currents, a polarized relay responsive to the reversals of polarity of the normal current, electro-magnetic devices adapted to be operated by the increased current, one of said devices responding to current of one polarity and the other responding to current of opposite polarity, a signal means controlled by both of said electro-magnetic devices and means controlled by said devices for inducing a current through the coils thereof when the line current is broken, said induced current being opposite in polarity to the interrupted line current.

2. A quadruplex telegraph system comprising means for transmitting impulses of current of opposite polarity, means for increasing and decreasing said currents, a polarized relay responsive to the reversals of polarity of the normal current, electro-magnetic devices adapted to be operated by the increased current, one of said devices responding to current of one polarity and the other responding to current of opposite polarity, a signal means controlled by both of said electro-magnetic devices and a transformer and circuits therefor arranged to induce a current in the coils of the electro-magnetic devices when the line current is broken, said induced current being opposite in polarity to the interrupted line current.

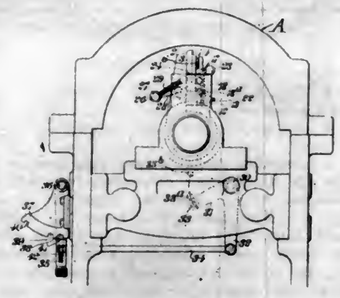
3. A quadruplex telegraph system comprising means for transmitting to the line impulses of current of opposite polarity, means for increasing and decreasing said current, a polarized relay responsive to the changes in polarity of the normal working current, a pair of polarized relays responsive to the increased currents, one of said relays responding to current of one polarity and the other responding to current of opposite polarity, a signal means controlled by both of said relays whereby said signal means will be operated by the increased current of either polarity, and means controlled by the pair of polarized relays to induce a current through the coils thereof when the line current is broken, said induced current being opposite in polarity to the interrupted line current.

4. A telegraph system comprising means for transmitting to the line impulses of current of opposite polarity, means for increasing and decreasing said current, a pair of polarized relays responsive to the increased currents, one of said relays responding to current of one polarity and the other responding to current of opposite polarity, and means controlled by said pair of polarized relays to induce a current through the coils of said relays when the line current is broken.

5. A telegraph system comprising means for transmitting to the line impulses of current of opposite polarity, means for increasing and decreasing said current, a pair of polarized relays responsive to the increased currents, one of said relays responding to current of one polarity and the other responding to current of opposite polarity, and means controlled by said pair of polarized relays to induce a current through the coils of said relays when the line current is broken, said induced current being opposite in polarity to the interrupted line current.

[Claims 6 to 9 not printed in the Gazette.]

1,109,831. APPARATUS FOR SHAVING CURVED STEREOTYPE-PLATES. BENJAMIN JOSEPH JOHN GOULDING, London, England, assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 9, 1909, Serial No. 511,943. Renewed Feb. 19, 1914. Serial No. 819,841. (Cl. 29—21.)



1. In an apparatus for shaving stereotype printing plates, the combination of an arch, a shaving knife, and means for simultaneously and equally adjusting the ends of the knife to different determined points for different thicknesses of plates.

2. In an apparatus for shaving stereotype printing plates, the combination of an arch, a shaving knife, and means extending outside the arch for adjusting the knife to different determined points for different thicknesses of plates.

3. In an apparatus for shaving stereotype printing plates, the combination of an arch, a knife supporting arm therein, a shaving knife arranged on the arm, means in the arch for adjusting the knife on the arm to different determined points for different thicknesses of plates, and means outside the arch for operating the adjusting means.

4. In an apparatus for shaving stereotype printing plates, the combination of an arch, a knife arm therein, a rotatable shaving knife mounted on the arm, means for adjusting the knife on the arm to different determined points for different thicknesses of plates, and means whereby the different adjustments of the knife will be made by the rotation of the parts.

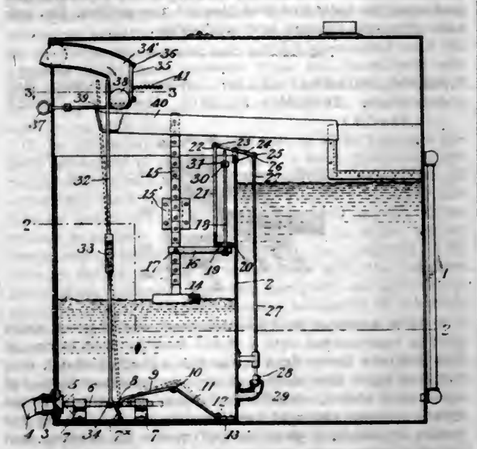
5. In an apparatus for shaving stereotype plates, the combination of an arch, a knife arm therein, a rotatable shaving knife mounted in the arm, means for adjusting the knife on the arm to different determined points for different thicknesses of plates, and means which can be thrown into and out of the path of the adjusting means so that the knife can be adjusted to its different determined points by the rotation of the parts.

[Claims 6 to 17 not printed in the Gazette.]

1,109,832. APPARATUS FOR DISPENSING GASOLENE, &c. ELIAS GRAHAM, Hazel Dell, and WILLIAM C. TURNER, HOMER FOSTER, and HARVEY M. GRANT, Casey, Ill.; said Grant assignor to W. B. Linn, Martinsville, Ill. Filed Aug. 5, 1913. Serial No. 783,172. (Cl. 221—95.)

1. An apparatus for dispensing liquid comprising two tanks with passageway communicating between the same, an exit opening in one tank, a valve adapted to control said exit opening, a stem to said valve and means for actuating said valve, hinged plate connections with said valve stem and the tank, a movable float mounted within one of said tanks and adapted to contact with said plates to close the valve, said float having a graduated stem, an arm adjustable upon said stem, a rock shaft, a valve actuated thereby and designed to control the passageway between the tanks, and connections between the rock shaft and said arm, as set forth.

2. An apparatus for dispensing liquid comprising two tanks with passageway communicating between the same, an exit opening in one tank, a valve adapted to control said exit opening, a stem to said valve and means for actuating said valve, hinged plate connections with said valve stem and the tank, a movable float mounted within one of said tanks and adapted to contact with said plates to close the valve, said float having a graduated stem, an arm adjustable upon said stem, a rock shaft, a valve actuated thereby and designed to control the passageway between the tanks, a rod projecting from said arm, a collar thereon, and an angled rod pivoted to one end of the rock shaft and adapted to coöperate with said collar to cause the shaft to be rocked, as set forth.



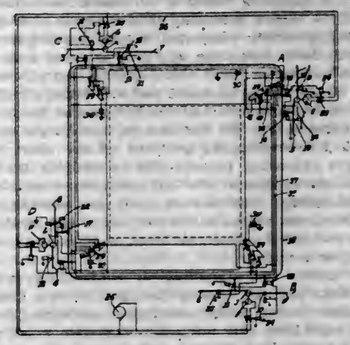
3. An apparatus for dispensing liquid comprising two tanks with passageway communicating between the same, an exit opening in one tank, a valve adapted to control said exit opening, a stem to said valve and means for actuating said valve, hinged plate connections with said valve stem and the tank, a movable float mounted within one of said tanks and adapted to contact with said plates to close the valve, said float having a graduated stem, an arm adjustable upon said stem, a rock shaft, a valve actuated thereby and designed to control the passageway between the tanks, a rod projecting from said arm, an adjustable collar thereon, a rod pivoted to one end of said rock shaft and having an angled portion which is apertured for the reception of the rod carrying said collar, as set forth.

4. An apparatus for dispensing liquid comprising two tanks with passageway communicating between the same, an exit opening in one tank, a valve adapted to control said exit opening, a stem to said valve and means for actuating said valve, hinged plate connections with said valve stem and the tank, a movable float mounted within one of said tanks and adapted to contact with said plates to close the valve, said float having a graduated stem, an arm adjustable upon said stem, a rock shaft, a valve actuated thereby and designed to control the passageway between the tanks, a rod projecting from said arm, a collar thereon, an angled rod pivoted to one end of the rock shaft and adapted to coöperate with said collar to cause the shaft to be rocked, and a spring, as set forth.

1,109,833. FIRE-FIGHTING SYSTEM. HIRAM T. HALL, Oakland, Cal. Filed Mar. 22, 1913. Serial No. 756,174. (Cl. 103—79.)

1. A fire-fighting system, comprising a plurality of suitably spaced pumping units, means for operating any one of the same independently or in combination with the remainder thereof, and suitable means located at each of said units whereby and from which the operating means of any or all of the said units may be actuated, as set forth.

2. A fire-fighting system, comprising a plurality of power operated and electrically controlled water pumping units connected with a suitable water supply, and means at each and every unit for actuating the said electric controlling means at the said unit and at all other units if desired.



3. A fire-fighting system comprising a plurality of suitably disposed power-operated pumping units connected independently with a suitable water supply, an endless auxiliary water main connecting all the said units, water gate-valves suitably located on and between the said water supply, pumps, and auxiliary main, electrical operating means on said valves, and hand-operated means for actuating said operating means, said hand-operating means being located at each of the said units and capable of controlling from any of the same the operation of the electrical operating means on any or all of the said units, as and for the purpose set forth.

4. In a fire fighting system in combination, an endless auxiliary water main, a plurality of pumping units arranged along said main and adapted to pump into the same, motors for operating said units, valves intermediate said units and said auxiliary main, and hand controlled electrical means whereby the operator at any one unit may start said unit and thereafter any or all of the other units, said means being adapted to open the valve between the first unit started and the auxiliary main as well as the valve between any additional unit and the auxiliary main upon the starting of such additional unit.

1,109,834. DEVICE FOR EXPANDING AND CONTRACTING CHAINS. FRANK HAMACHEK, Kewaunee, Wis. Filed Oct. 3, 1910. Serial No. 584,964. (Cl. 59—29.)

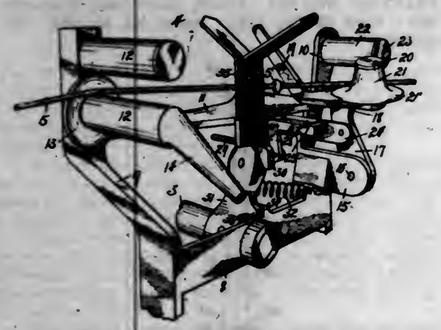
1. A device for expanding or contracting chains, comprising a lever arm provided with an elongated slotted portion, another lever arm having a portion extending into

the slotted portion of the first mentioned arm, a pivot pin extending through the overlapping portions of both lever arms, said lever arms provided with jaw portions having chain link engaging faces, a bell crank lever having the apex of its angles extending into the slot of the slotted lever and pivotally connected to said slotted lever, said bell crank lever consisting of a long arm and a short arm, the last mentioned short arm being formed of two thicknesses of metal spaced apart and straddling the free end of the other short arm and the free end of the lever arm which extends into the slotted arm, a pivot pin extending through the overlapping portions of the short arms, a pivot pin extending through the overlapping portions of the two thicknesses of the bell crank lever and the lever arm extending therebetween, and an adjusting screw threaded to one of the bell crank levers and positioned to engage the other bell crank lever to limit the movement of the jaw portions.

2. A device for expanding or contracting detachable chain links and for closing the eyes thereof, comprising lever arms having medial overlapped portions pivoted together, each lever arm being provided with a jaw portion which extends in a plane on the same side of the pivotal connection as the arm, the faces of said jaws being shaped to partly surround the parts of the links engaged, and bell crank operating levers pivotally connected to the lever arms and having their inwardly extending portions pivotally connected together, the pivotal connections of the levers with each other and with the lever arms positioned to approximately aline with each other when the operating levers are in closed position.

3. A device for expanding or contracting detachable chain links and for closing the eyes thereof, comprising lever arms having medial overlapped portions pivoted together, each lever arm being provided with a jaw portion which extends in a plane on the same side of the pivotal connection as the arm, the inner and outer faces of said jaws being of curved shape to partly surround the parts of the links engaged, and bell crank operating levers connected to the lever arms and having their inwardly extending portions pivotally connected together, the pivotal connections of the levers with each other and with the lever arms positioned to approximately aline with each other when the operating levers are in closed position.

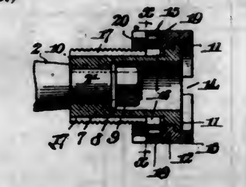
1,109,835. CORN-PLANTING MACHINE. BERNARD HANSON, Martin, Ohio. Filed Apr. 27, 1914. Serial No. 834,731. (Cl. 111—43.)



1. The combination with a planting machine and a check-row wire placed at a side of the machine in divergent relation to the travel thereof, of a wire engaging mechanism carried by the machine and having a rocker-head mounted for vertical swinging movements and movable from inoperative to operative position by an inward pressure of the wire thereagainst and from operative to inoperative position by an outward pressure of the wire thereagainst, and manually controlled means operable to lock said rocker-head in either its operative or its inoperative positions.

2. In a machine of the class described, a check-row wire coacting mechanism having a rocker-head adapted to be placed in upright or reclining position and having a guide finger and a roller projecting from the outer end portion thereof in spaced relation, means limiting the outward swinging movements of said rocker-head, said means having spaced shoulders and a manually operable catch member for engaging one or the other of said shoulders to secure the rocker-head in either its upright or reclining positions, and means coöperating with said rocker-head and with the parts carried thereby for guiding the passage of a wire through said mechanism.

1,109,836. SHAFT-COUPLING. RUFUS R. HANSON, Boston, Mass. Filed May 21, 1913. Serial No. 768,934. (Cl. 64—13.)



1. In a device of the class described, the adjacent shaft ends in combination with a clutch member fixed to one of said shafts, a sleeve fixed to the other shaft, a clutch ring swiveled upon said sleeve, an annular member feathered upon said sleeve, coöperating means on said swiveled clutch member and said annular member for locking the former in adjusted position, and means for holding said annular member in operative position, substantially as described.

2. In a device of the class described, the adjacent shaft ends, a clutch member fixed to one of said shafts, a clutch member rotatably mounted upon the other shaft, a projection on the inner face of said last mentioned clutch member, a sliding member carried by said last mentioned shaft, and rotatable therewith, said member being provided with an annular series of apertures adapted to receive said projection and means for holding said member in operative position, substantially as described.

3. In a device of the class described, the adjacent shaft ends in combination with a clutch member fixed to one of said shafts, an externally threaded sleeve fixed to the other shaft, and provided on its outer face with a key way, a clutch member swiveled upon the end of said sleeve, an annular member slidably mounted on said sleeve and provided with a key arranged in said key way, said annular member being provided with an annular series of apertures, a pin on the adjacent face of said swiveled clutch member adapted to engage in any of said apertures and a jamb nut threaded upon said sleeve and adapted to hold said annular member in operative position, substantially as described.

1,109,837. BRAKE-SLACK ADJUSTER. JESSE S. HARDING, Stoughton, Mass., assignor of one-half to Charles D. Dyer, Whitman, Mass. Filed June 13, 1913. Serial No. 773,433. (Cl. 188—50.)

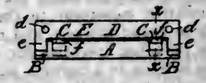
1. In combination, a truck, a pair of brake beams, a live lever connected to one brake beam, a dead lever connected to the other brake beam, a separate automatically adjustable take-up device for each brake beam, each take-up device having a support for one end thereof in which limited reciprocatory movement is permitted, the other end of the take up device having a connection with the adjacent brake beam whereby these two parts will normally reciprocate together but upon excessive movement of the brake beam in one direction will take new positions relative to each other.

2. In combination with a truck, a pair of brake heads at each side of the truck, a live lever connected to one brake head, a dead lever connected to the other brake head, a separate automatically adjustable take-up device for each brake head, a bracket for each take up device depending from the truck and in which one end of the take up device is slidably mounted for limited reciprocatory movement relative to the truck, the other end of the take up device having a pawl and ratchet connection with the adjacent brake head whereby these two parts will normally reciprocate together but upon excessive movement of the brake head in one direction will take new positions relative to each other.

3. In combination, a truck, a pair of brake beams, a live lever connected to one brake beam, a dead lever connected to the other brake beam, an automatically adjustable rod connecting the levers, a separate automatically adjustable take-up device for each brake beam, each take-up device having a support for one end thereof in which limited reciprocatory movement is permitted, the other end of the take-up device having a connection with the adjacent brake beam, whereby these two parts will normally reciprocate together, but upon excessive movement of the brake beam in one direction will take new positions relative to each other.

4. In combination, a truck, a brake head provided with a brake shoe, a take up member, a support depending from the truck for one end of said take up device, in which support the take up device has limited reciprocatory movement, the other end of the take up device having a connection with the brake head whereby these two parts will normally reciprocate together, but upon excessive movement of the brake head in one direction will take new positions relative to each other.

1,109,838. KNIFE-EDGE BEARING FOR WEIGHING APPARATUS. ERIK GUSTAF HEDMAN, Stockholm, Sweden. Filed May 2, 1913. Serial No. 765,028. (Cl. 73—152.)



1. In a knife edge bearing for a weighing apparatus, a bearing member comprising two or more bearing faces set at an angle one to another and all containing a common straight line, and a knife edge member composed of two plates whereof the adjacent faces come together and are formed substantially as planes, one or more of the knife edges being formed in one of said plates and another or others in the other plate and all said knife edges being disposed in a single straight line and adapted to contact with the bearing along said line.

2. In a knife edge bearing for weighing apparatus, a bearing member comprising two or more bearing faces set at an angle one to another and all containing a common straight line, walls or partitions each of which separates one bearing face from another, and a knife edge member adapted to bear on said bearing faces, and having gaps therein to bridge over said walls or partitions.

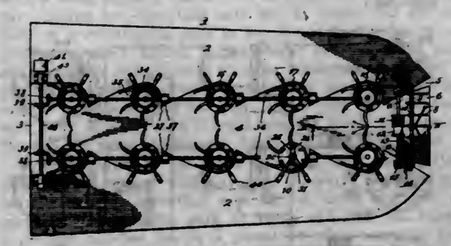
3. In a knife edge bearing for weighing apparatus, a bearing member comprising two or more bearing faces set at an angle one to another, and all containing a common straight line, walls or partitions each of which separates one bearing face from another, and a knife edge member having gaps therein to bridge over said walls or partitions, said gaps leaving projections of the knife edge member, each projection being adapted to bear on one of the bearing faces and one or more of the ends of said projections adapted to touch a wall or walls aforesaid only at the plane of the respective bearing surface whereby endwise movement of the knife edge portion relative to the bearing portion is prevented without introduction of friction.

4. In a knife edge bearing for a weighing apparatus, a bearing member comprising two or more bearing faces set at an angle one to another and all containing a common straight line, walls or partitions each of which separates one bearing face from another, and a knife edge member having gaps therein to bridge over said walls or partitions, said gaps leaving projections forming the knife edges, each projection being adapted to bear on one of said bearing faces, adjacent ends of a wall and gap touching at the plane of said bearing surfaces and being thence divergent whereby endwise movement is prevented and radial contact and friction avoided.

5. In a knife edge bearing for a weighing apparatus, a bearing member comprising two or more bearing faces set at an angle one to another and all containing a common straight line, walls or partitions each of which separates one bearing face from another, and a knife edge member having gaps therein to bridge over said walls or partitions, said gaps leaving projections of the knife edge member, each projection being adapted to bear on one of said bearing faces, adjacent ends of a wall and gap touching at the plane of said bearing surfaces, the ends of the wall being thence sloped away from the ends of the gap, whereby endwise movement is prevented and radial contact and friction avoided.

[Claim 6 not printed in the Gazette.]

1,109,839. CURRENT-MOTOR. WILLIAM HENRY, North Kansas City, Mo. Filed July 31, 1913. Serial No. 782,376. (Cl. 170—114.)



1. A motor of the character described, consisting of a float having a flume extending therethrough, a gate pivoted at the entrance of said flume to control the flow of water therethrough, means for actuating said gate, segments secured at their lower ends to said gate, a transverse bar secured to the float and having openings through which said segments project, and water wheels mounted in the flume.

2. A motor of the character described, consisting of a float having a flume extending therethrough, two series of water wheels mounted in said flume, gearing connecting each series of water wheels, and gearing intermeshing with the first-mentioned gearing to transmit power therefrom.

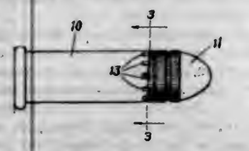
3. A motor of the character described, consisting of a float having a flume extending therethrough, pockets in the sides of said flume, said pockets having curved portions, turbines mounted in said pockets, having pivoted blades adapted to be folded by the curved portions of said pockets during part of the revolution of the turbines, and means for unfolding said blades after they have passed out of contact with the pockets.

4. A motor of the character described, consisting of a float having a flume extending therethrough, turbines mounted in said flume, said turbines having pivoted blades adapted to fold to inoperative position, pockets in the sides of the flume having curved portions concentric with the turbines to fold the blades thereof during a portion of the revolution of said turbines, and means for tripping said blades to open position after they have passed out of contact with the pockets.

5. A motor of the character described, consisting of a float having a flume extending therethrough, pockets in the sides of said flume, turbines mounted in said pockets, having foldable blades with crank arms at the inner ends thereof, and a trip-pin against which said crank arms impinge and unfold the blades of the turbines.

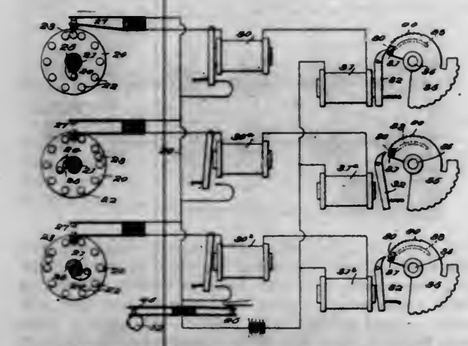
[Claim 6 not printed in the Gazette.]

1,109,840. CARTRIDGE. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 18, 1914. Serial No. 845,775. (Cl. 102—12.)



A cartridge of the character described comprising a relatively light metallic shell and a bullet locked therein by a plurality of circumferentially placed indentations of the metal of the shell into the bullet, said indentations beginning back of the exterior line of separation between the shell and the bullet and crossing said line, irrespective of the lengths of shells or the length of different portions of the wall of the same shell.

1,109,841. APPARATUS FOR USE IN TABULATING SYSTEMS. HERMAN HOLLERITH, Washington, D. C. Filed June 20, 1913. Serial No. 774,924. (Cl. 235—92.)



1. In apparatus of the character described, the combination with a registering device, of recording mechanism normally inactive, recording mechanism controlling means actuated in synchronism with said registering device, an electric circuit, electro-magnets in said circuit, means for actuating said recording mechanism, and means actuated by said recording mechanism controlling means for closing said circuit.

2. In apparatus of the character described, the combination with a registering device, of recording mechanism normally inactive, recording mechanism controlling means actuated in synchronism with said registering device, an electric circuit, electro-magnets in said circuit, means for actuating said recording mechanism, and means actuated by said recording mechanism controlling means for closing said circuit as said registering device is returned to its initial position.

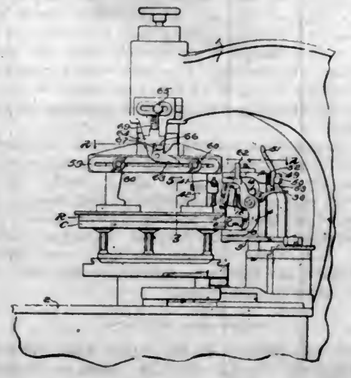
3. In apparatus of the character described, the combination with a registering device, of recording mechanism normally inactive, recording mechanism controlling means actuated in synchronism with said registering device, an electric circuit, electro-magnets in said circuit, means actuated by said recording mechanism controlling means for closing said circuit, and means for synchronously actuating said recording mechanism and returning said registering device to its initial position.

4. In apparatus of the character described, the combination with a registering device, of recording mechanism normally inactive, recording mechanism controlling means actuated by said registering device, an electric circuit, electro-magnets in said circuit, means for actuating said recording mechanism, and means actuated by said recording mechanism controlling means for closing said circuit.

5. In apparatus of the character described, the combination with a registering device, of recording mechanism normally inactive, recording mechanism controlling means actuated by said registering device, an electric circuit, electro-magnets in said circuit, means for actuating said recording mechanism, and means actuated by said recording mechanism controlling means for closing said circuit as said registering device is returned to its initial position.

[Claims 6 to 25 not printed in the Gazette.]

1,109,842. SOLE-ROUNDING MACHINE. EDWARD L. HURD, Milton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 2, 1912. Serial No. 681,144. (Cl. 12—19.)



1. A sole rounding machine, having, in combination, a pattern, a rounding knife guided by the pattern, means for imparting a relative movement to the pattern and the rounding knife to round the sole, and means operating at the end of the rounding operation for swinging the knife away from the pattern to a position with its cutting edge directed diagonally toward the pattern, substantially as described.

2. A sole rounding machine, having, in combination, a pattern, a rounding knife guided by the pattern, means for imparting a relative movement to the pattern and the rounding knife to round the sole, and means operating automatically at the end of the rounding operation for moving the knife out of contact with the pattern, substantially as described.

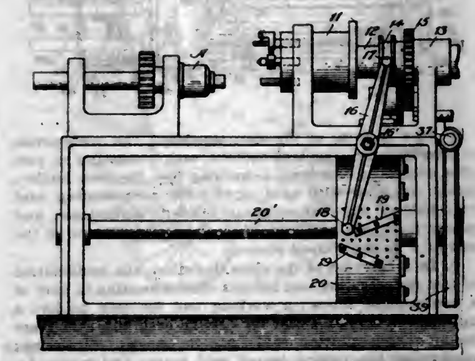
3. A sole rounding machine, having, in combination, a pattern smaller than the sole blank to be operated upon, a rounding knife guided by the pattern, means for imparting a relative movement to the pattern and the rounding knife to round the sole, and means for initially holding the rounding knife in such a position that the cut on the sole is commenced at the edge of the margin projecting from the pattern and continues diagonally toward the pattern until the pattern is reached, substantially as described.

4. A sole rounding machine, having, in combination, a rounding knife guided by the pattern, means to cause the knife to traverse the outline of the pattern, overrun and return to its starting point, and means operating during the return movement to swing the rounding knife to a position with its cutting edge pointing toward the sole and its blade directed at an acute angle to the outline of the pattern, substantially as described.

5. A sole rounding machine, having, in combination, a rounding knife and a channeling knife, a pattern for guiding the rounding knife, a block for supporting the channeling knife, means to cause the rounding knife to traverse the outline of the pattern, a pair of geared levers pivotally mounted on the channeling knife block, one of said levers being arranged to engage the sole and means for automatically actuating the other lever to pry the channeling knife out of operative engagement with the sole at the end of the traversing movement of the rounding knife, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,109,843. TURRET-OPERATING MECHANISM FOR AUTOMATIC SCREW-MACHINES. JOHN HUBERT JANN, Chicago, Ill. Filed Aug. 21, 1907. Serial No. 389,426. (Cl. 29—43.)

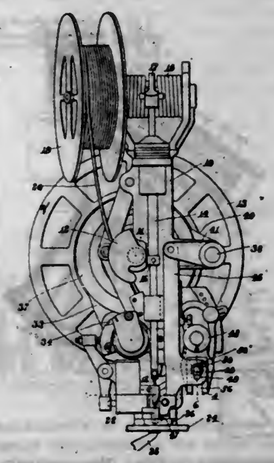


1. In a machine of the character described, the combination with a work-holder, a turret having a series of tool holders, and indexing means therefor, of means for controlling the operation of the indexing means to rotatably set the turret to index the tool-holders with respect to the work-holder by a continuous uniform movement from one index position to a successive index position or from one index position to a non-successive index position and skipping the intermediate index position or positions between said non-successive index positions.

2. In a machine of the character described, the combination with a work-holder and a turret having a series of tool-holders, of indexing means for the turret including a continuously operating driving element and a drive-connection extending between the driving element and the turret whereby there may be imparted to the turret a complete rotation thereof by a continuous movement of the turret, and means for controlling the operation of the indexing means to rotatably set the turret to index the tool-holders with respect to the work-holder by a continuous uniform movement from one index position to a successive index position or from one index position to a non-successive index position and skipping the intermediate index position or positions between said non-successive index positions, said controlling means comprising a clutch included in the said drive-connection, a clutch disconnector normally holding the clutch elements disconnected, and a trip device for releasing the clutch disconnector including a rotating element having a plurality of tappets adjustable upon the rotating element, the clutch disconnector lying in the path of the tappets.

1,109,844. AWL MECHANISM FOR NAILING-MACHINES. LAWRENCE E. JOHNSON, Winthrop, Mass., assignor to Julius Garst, Worcester, Mass. Filed June 5, 1913. Serial No. 772,012. (Cl. 1—29.)

1. In a device of the class described, the combination with a work support and driver, of a pivoted awl-carrying bar; means for operating said bar to cause said awl to move in a rectangular path to pierce and feed the work; a pivoted member having a pocket in its periphery for carrying a nail into position below said driver; and means for moving said member about its pivot out of the path of said bar prior to the work feeding movement of the awl.



2. In a device of the class described, the combination with a work support and driver, of a pivoted awl-carrying bar; means for operating said bar to cause said awl to move in a rectangular path to pierce and feed the work; a pivoted member having a peripheral nail carrying slot adapted to be brought into position beneath said driver; a pivoted lever; a universal connection between the free ends of said lever and member; and a cam for operating said lever to move said pivoted member from the path of the awl bar prior to the work feeding movement thereof.

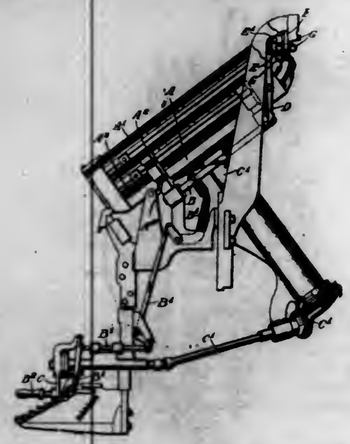
3. In a device of the class described, the combination with a work support and driver, of a pivoted awl-carrying bar; means for operating said bar to cause said awl to move in a rectangular path to pierce and feed the work; a pivoted member having a peripheral nail carrying slot adapted to be brought into position beneath said driver; a pivoted lever; a forked block carried by said member and movable horizontally thereon; a pivotal connection between said block and the free end of said lever; and a cam for operating said lever to move said pivoted member from the path of the awl bar prior to its work-feeding movement thereof.

4. In a device of the class described, the combination with a work support and driver, of a pivoted awl-carrying bar; means for operating said bar to cause said awl to move in a rectangular path to pierce and feed the work; a pivoted member having a peripheral nail carrying slot adapted to be brought into position beneath said driver; a pivoted lever; a forked block carried by said member and movable horizontally thereon; a pin extending outwardly from said block and adapted to reciprocate in a hole in the end of said lever; and a cam for operating said lever to move said pivoted member from the path of the awl-bar prior to the work feeding movement thereof.

5. In a device of the class described, the combination with a work support and driver, of a pivoted awl-carrying bar; means for operating said bar to cause said awl to move in a rectangular path to pierce and feed the work; a pivoted member having a peripheral nail carrying slot adapted to be brought into position beneath said driver; a pivoted lever; a forked block carried by said member and movable horizontally thereon; a flat sided pin in said member on which said block is adapted to reciprocate; and a cam for operating said lever to move said pivoted member from the path of the awl-bar prior to its work-feeding movement thereof.

[Claim 6 not printed in the Gazette.]

1,109,845. TYPOGRAPHICAL COMPOSING-MACHINE. DAVID SHERWOOD KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 22, 1912. Serial No. 692,235. (Cl. 199—7.)



1. In a typographical machine, the combination of distributing mechanism, means movable into engagement with the type or matrices in normal position therein, and means dependent upon such engagement for arresting the distributing mechanism.

2. In a typographical machine, the combination of distributing mechanism, means operable at will to contact with type or matrices in normal position therein, and devices connected thereto to arrest the distributing mechanism and controlled by such contact.

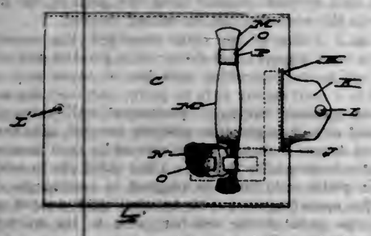
3. In a typographical machine, the combination of distributing mechanism, means to determine the presence or absence of type or matrices in normal position therein, and connections from said means to arrest the distributing mechanism.

4. In a typographical composing machine, the combination of distributing mechanism, a feeler capable of projection into the distributing mechanism to determine the presence or absence of type or matrices in normal position therein, and connections from said feeler to arrest the distributing mechanism.

5. In a typographical composing machine, the combination of distributing mechanism, a feeler capable of projection into the distributing mechanism to determine the presence or absence of type or matrices in normal position therein, and also capable of a further relative movement with reference to the distributing mechanism, and connections controlled by its said relative movement to arrest the distributing mechanism.

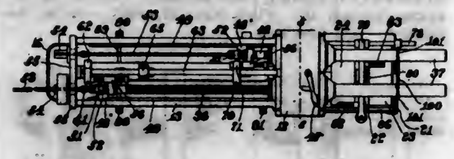
[Claims 6 to 16 not printed in the Gazette.]

1,109,846. BOOK-COVER. WILLIAM F. KNAP, Des Moines, Iowa. Filed Feb. 18, 1914. Serial No. 819,464. (Cl. 224—47.)



The herein described article, consisting of the inner lining, the outer cover portion having the pair of end flaps, and the securing edge for retaining the lining, cover and flaps, the strips mounted upon the lining between the lining and cover, the handle retaining strips fastened to said strips, the handle having the flaring ends and retained by the handle-retaining strips, and the tab secured to one end of the cover and having a socket plate and a stud upon the other end of the cover to be engaged by said socket plate, for fastening the two sides of the cover.

1,109,847. KEY-SEAT-BROACHING MACHINE. FRANCIS J. LAPOINTE, New London, Conn. Filed Aug. 23, 1913. Serial No. 786,321. (Cl. 90—33.)



1. In a machine of the class described, the combination of two reciprocating tool holders, each consisting in part of a nonrevoluble screw; a working tool for each holder; means coacting with said screws for reciprocating said tool holders simultaneously in opposite directions; and means for arresting the movement of said holders at the end of a predetermined stroke.

2. In a machine of the class described, the combination of two reciprocating tool holders each consisting in part of a nonrevoluble screw; a working tool for each holder; a nut on each screw; a gear for driving each nut, said gears meshing and rotating said nuts in opposite directions; mechanism for driving one of said gears; and means for arresting the movement of said driving mechanism at the end of a predetermined stroke of said tool holders in either direction.

3. In a machine of the class described, the combination of two reciprocating tool holders each consisting in part of a nonrevoluble screw; a working tool for each holder; a nut on each screw; a gear for driving each nut, said gears meshing and rotating said nuts in opposite directions; mechanism for driving one of said gears; a pivotal lever for moving the other gear out of mesh with the driven nut gear; and means for arresting the movement of said driving mechanism at the end of a predetermined stroke of said tool holders in either direction.

4. In a machine of the class described, the combination of two reciprocating tool holders each consisting in part of a nonrevoluble screw; a working tool for each holder; a nut on each screw; a carrier for each nut; a gear fixed on one carrier; a companion gear adapted to mesh therewith movable lengthwise of the other carrier; means for moving the latter gear into and out of mesh with the fixed gear; mechanism for driving said fixed gear in either direction; and means for arresting the movement of said driving mechanism at the end of a predetermined stroke of said tool holder in either direction.

5. In a machine of the class described, the combination of a working tool; a reciprocating tool holder consisting in part of a nonrevoluble screw; a nut thereon; a gear to drive said nut provided with tubular hubs revoluble in bearings, one of said hubs containing said nut; an antifriction device for surrounding the other hub between said gear and the bearing for said hub; and members threaded to the outer end of said hub adapted to adjust said antifriction device and sustain the end thrust when said nut is rotated in a reverse direction.

[Claims 6 to 13 not printed in the Gazette.]

1,109,848. CHILD'S FOLDING CARRIAGE. WILLIAM LAYTON and COZ R. LOWE, Chicago, Ill., assignors to Garrett Go-Cart & Carriage Company, Chicago, Ill., a Corporation of Illinois. Filed June 10, 1912. Serial No. 702,713. (Cl. 21—83.)

1. In a folding carriage a bed frame, front and rear wheels supporting said bed frame, a handle connected to the rear portion of the bed frame and adapted to fold forwardly against the bed frame, and means projecting rearwardly from the bed frame upon which the operator may exert downward pressure to tilt the bed frame upwardly upon the axis of the rear wheels to bring the handle and the bed frame into proximity to each other, said means being free from positive connection with the handle, whereby the latter may swing toward the bed frame independently of said means.

2. In a folding carriage, in combination, a foldable body, wheel-supporting members foldable separately from the body, foot-pressure-receiving means extending rearwardly of the wheels and connected to the body for tilting the latter and a handle connected to the body and free from positive connection with the foot-pressure-receiving means.

3. In a folding carriage, in combination, a carriage frame; wheels connected to said frame for folding and unfolding movement; a bail pivoted to the frame for folding and unfolding the wheels; a second bail pivoted between its ends to the frame, the lower portion of the second bail extending alongside the first bail; a handle pivoted to the frame; and carriage-body rails connecting the handle to the upper portion of the second bail.

4. In a folding carriage, in combination, a carriage frame, wheels connected to said frame for folding and unfolding movement, a wheel-folding member pivoted to the frame, and an actuator connected to said wheel-folding member adapted to rest upon the ground and receive the weight of said carriage frame and wheels.

5. In a folding carriage, in combination, a carriage frame; wheels connected to said frame for folding and unfolding movement; a wheel-operating member pivoted to the frame; and an actuator connected to said member arranged for movement longitudinally of the carriage frame said actuator extending rearwardly beyond the rear wheels.

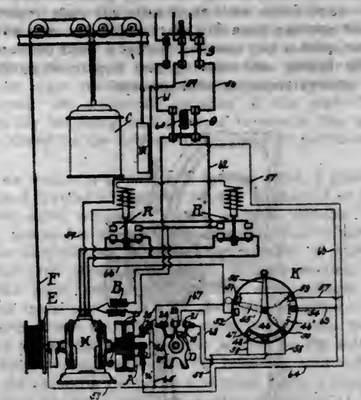
[Claims 6 to 16 not printed in the Gazette].

1,109,849. PROCESS OF SOFTENING WATER. HERMANN LEY, Elberfeld, Germany, assignor to Vereinigte Seidenfärbereien C. A. Langenbeck & I. P. Lohe, Elberfeld, Germany, a Firm. Filed Nov. 24, 1913. Serial No. 802,647. (Cl. 23—13.)

1. The process of softening water by treating it with a precipitate obtained by mixing a solution of phosphate of soda with a solution of an alkali-metal silicate, the softening effect being obtained by an exchange of bases, substantially as set forth.

2. A process for making a water softening agent of the kind which acts by the exchange of bases, which process consists in mixing a solution of phosphate of soda with a solution of an alkali-metal silicate and separating the precipitate produced.

1,109,850. ELECTRIC SLOW-DOWN DEVICE. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 17, 1910. Serial No. 544,399. (Cl. 172—152.)



1. The combination of an electric motor and a brake therefor, means for connecting the motor and brake to a source of current supply, and means dependent on the speed of the motor for cutting off said supply and applying the brake when the speed of the motor has been reduced to a predetermined value.

2. The combination of an electric motor and an electromagnetic brake therefor, a switch connecting the motor and brake magnet to a source of current supply, mechanism for effecting a slowing down of the motor, and means controlled by the speed of the motor for automatically opening said switch and applying the brake when the motor speed has been reduced to a predetermined value.

3. The combination of a motor, an automatic switch, an electro-responsive brake for the motor connected through the said switch, and automatic centrifugal means whereby a holding circuit is closed through the magnet coil of the automatic switch until the speed of the motor falls to a predetermined limit.

4. The combination of a motor, reversing switches therefor, an automatic electro-responsive switch to admit current to the motor through the reversing switches, an electro-magnetic brake with its magnet winding connected through the automatic switch, and automatic means operated by the motor when rotating whereby the automatic switch opens circuits through the brake magnet winding and the reversing switch when the speed of the motor falls to a certain limit.

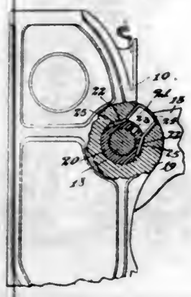
5. The combination of a motor, reversing switches therefor, a directional switch operated by the motor, and means in connection with the directional switch whereby in stopping the motor from rotating in the direction induced by the closure of one reversing switch, the other reversing switch is automatically closed as soon as the closed reversing switch is opened.

[Claims 6 to 21 not printed in the Gazette.]

1,109,851. KEY-LOCK FOR BEARING ELEMENTS. JOSEPH MALICKI, Chicago, Ill., assignor to Templeton, Kenly & Co., Ltd., Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1913. Serial No. 800,716. (Cl. 64—10.)

1. The combination with an annular bearing member having an opening formed through its wall, of a shaft element fitted to said bearing member and formed with a pair of transverse key grooves disposed on opposite sides of an axial plane of said element and at one end registering with said opening inwardly of the opposite side walls of the latter, and a key member having a head portion substantially fitting said opening and a pair of prongs engaging said grooves.

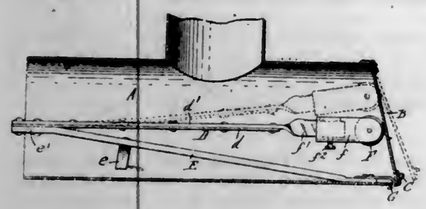
2. The combination, with an annular bearing member having an opening formed through its wall, of a bushing fitted to said bearing member and formed with a pair of transverse key grooves disposed on opposite sides of an axial plane of said bushing, said key grooves lying at an angle to each other with their adjacent ends registering with said opening inwardly of the opposite side walls of the latter, and a key member having a head portion substantially fitting said opening and a pair of outwardly splayed prongs engaging said grooves.



3. The combination, with an annular bearing member having an opening formed through its wall, of a bushing fitted to said bearing member and formed with a pair of oppositely disposed transverse key grooves lying at an angle to each other with their adjacent ends registering with said opening inwardly of the opposite side walls of the latter, said grooves having a width less than the width of said opening in the axial direction of said bearing member, and a key member having a U-shaped head portion substantially fitting and filling said opening, and a pair of outwardly splayed prongs forming narrowed extensions of the sides of said head portion and engaging said grooves.

4. The combination, with an annular bearing member having an opening formed through its wall, of a bushing fitted to said bearing member and formed with a pair of oppositely disposed transverse key grooves at one end registering with said opening inwardly of the opposite side walls of the latter, and further formed with a radial aperture between the adjacent ends of said key grooves, and a key member having a hollow head portion substantially fitting said opening and a pair of prongs engaging said grooves.

1,109,852. DRAFT-REGULATOR. ADOLF J. MARSCHALL, Madison, Wis. Filed July 12, 1912. Serial No. 708,974. (Cl. 236—5.)



1. The combination with a flue having an open end, and a hinged damper for said open end, of a thermostatic regulator which is of a construction adapting it to be inserted into and removed from the flue through said open end thereof said regulator comprising a base which rests loosely on the bottom of the flue and a thermoresponsive member which is attached at one end to said base and has a free end which is caused to move by changes in temperature and is arranged to engage and move said damper, said regulator being disconnected from said flue and said damper whereby it is free to be removed from the flue and the damper can be moved independently of the regulator, said base having lateral portions which bear against the flue to hold the regulator upright therein.

2. The combination with a flue having an open end, and a hinged damper for said open end, of a thermostatic regulator which is of a construction adapting it to be inserted into and removed from the flue through said open end thereof, said regulator comprising a base which rests loosely on the bottom of the flue and a thermoresponsive member which is attached at one end to said base and has a free end which is caused to move by changes in temperature and is arranged to engage and move said damper, said regulator being disconnected from said flue and said damper whereby it is free to be removed from the flue, and the damper can be moved independently of the regulator, said base being provided with a part having a detachable engagement with the flue which prevents movement of said regulator away from said damper.

3. The combination with a flue having an open end, and a hinged damper for said open end, of a thermostatic regulator which is of a construction adapting it to be inserted into and removed from the flue through said open end thereof, said regulator comprising a base which rests loosely on the bottom of the flue and a thermoresponsive member which is attached at one end to said base and has a free end which is caused to move by changes in temperature and is arranged to engage and move said damper, said regulator being disconnected from said flue and said damper whereby it is free to be removed from the flue and the damper can be moved independently of the regulator, said base having a hooked part which engages the end of the flue and prevents movement of said regulator away from said damper.

4. The combination with a flue having an open end, and a hinged damper for said open end, of a thermostatic regulator which is of a construction adapting it to be inserted into and removed from the flue through said open end thereof, said regulator comprising a base which rests loosely on the bottom of the flue and a thermoresponsive member which is attached at one end to said base and has a free end which is caused to move by changes in temperature and is arranged to engage and move said damper, said regulator being disconnected from said flue and said damper whereby it is free to be removed from the flue and the damper can be moved independently of the regulator, and a part which is adjustably connected to said base and engages the end of the flue for holding said regulator stationary in different adjustments relative to the damper.

1,109,853. ELEVATOR. EDWIN S. MATTHEWS, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 26, 1911. Serial No. 629,652. (Cl. 187—46.)

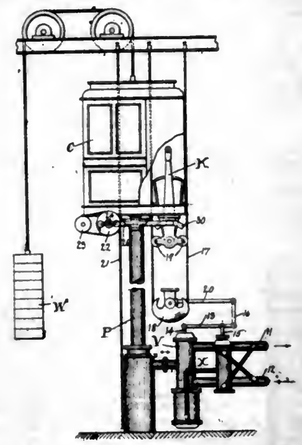
1. In elevator apparatus, the combination of a car, motive means for the car, a controlling member in the car, means to prevent the reversal of the controlling member when the car is moving above a predetermined speed, and a mechanical speed governor controlled by the motion of the car connected to operate and control said reversal preventive means.

2. In an elevator, the combination of a car, motive means therefor, a controlling device in the car, and a centrifugal safety governor operable to prevent the reversal of the controlling means when the car is traveling at more than a pretermined speed.

3. In a hydraulic elevator, the combination of a car, a controlling device for the car, means to prevent the reversal of the controlling device when the car is moving above a predetermined speed, and a mechanical safety governor operated by the car and controlling said means.

4. In an elevator, the combination of a car, motive means for the car, a lever in the car for governing the motive means, and a speed governor operated by the car and arranged to prevent the lever from passing its central position when the car is moving in the direction corresponding with the position of the lever on either side of its central position.

5. In an elevator, the combination of a car, motive means therefor, a lever in the car to govern the motive



means, and a centrifugal speed governor operable to prevent the reversal of the lever when the elevator car is moving too fast.

[Claims 6 to 9 not printed in the Gazette.]

1,109,854. UMBRELLA. BERNARD J. MCCABE, Detroit, Mich. Filed Jan. 2, 1913. Serial No. 739,693. (Cl. 135—22.)

1. An umbrella including a stick, a plurality of ribs each having a resilient portion, means for rigidly connecting each of said resilient rib portions at one end to the stick, a runner slidably on said stick, means for movably coupling said ribs to said runner, a spring connected to said runner, a plunger section movable relative to said stick and connected to the spring and operating to place the spring under stretched tension when actuated, means for locking said plunger section in its inner position, and means for releasing said plunger section.

2. An umbrella including a stick, a plurality of ribs each having a resilient portion secured at one end to the stick, a runner upon the stick, spreaders connected respectively to said runner and to said ribs, a spring connected to said runner, means for placing said spring under tension, means for holding said runner against the pull of said spring, and means for releasing said runner.

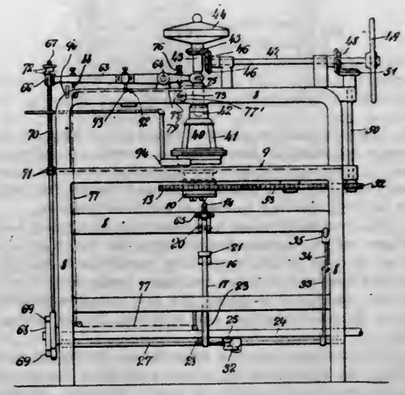
3. An umbrella including a tubular stick, a plurality of ribs each having a resilient portion secured at one end to the stick, a runner upon the stick, spreaders connected respectively to said runner and to said ribs, a plunger operating in said tubular stick, a spring connected at one end to said runner and at the other end to said plunger and thereby placed under tension when the plunger is moved into its inner position, means for releasing said runner to permit the automatic opening of the umbrella, and means for releasing said plunger to enable the umbrella to be closed by the action of the resilient portions of the ribs.

4. An umbrella including a tubular stick, a plurality of ribs each having a resilient portion connected at one end to said stick, an outer runner member slidable on said stick, means for movably coupling said ribs to said outer runner member, an inner runner member, a spring connecting said runner members, a plunger section slidable in said stick, means for coupling said plunger section to said inner runner member to cause the plunger section to apply strain to the spring when moved into the stick, means for locking said plunger section to the stick when in inner position, and means for releasing said lock.

5. An umbrella including a tubular stick, a plurality of ribs each having a resilient portion connected at one end to said stick, an outer runner member slidable on said stick, means for movably coupling said ribs to said outer runner member, an inner runner member, a spring connecting said runner members, a plunger section slidable in said stick and having a reduced intermediate portion and a resiliently supported latch at the inner end adapted to engage with the stick and locking the plunger section thereto when the tip section is moved into the stick against the resistance of the spring, a pin extending transversely of the plunger section, a resilient rod connected at one end to the outer runner member and with a lateral latch at the other end, said rod being arranged to pass over said plunger section pin and deflected laterally thereby, and means for consecutively releasing the plunger section latch and the resilient rod latch and the spring held under tension thereby.

[Claims 6 to 10 not printed in the Gazette.]

1,109,855. MACHINE FOR RECTIFYING ELECTROTYPES. WALKER W. MCCARROLL, Arlington, N. J. Filed Jan. 9, 1911. Serial No. 601,585. (Cl. 29—21.)



1. The combination of a bed plate for supporting an electrotype plate, tools in said bed plate, a hammer for operating on the said tools, an abutment supported above the latter, means for operating said hammer and abutment in unison to rectify the said electrotype plate and means for operating said abutment independent of the operation of the said hammer.

2. In a machine of the character described the combination of a bed plate for supporting an electrotype, tools in said plate, a hammer below said tools, means for operating said hammer, an abutment above the tools, means for operating said abutment, a treadle for actuating both of the said operating means, a treadle shoe and means for adjusting the latter to limit the movement of the said treadle.

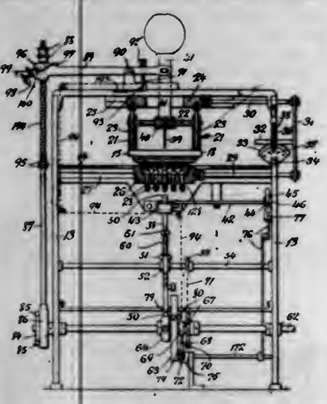
3. In a machine of the character described the combination of a bed plate for supporting an electrotype, means for operating on the latter to rectify the same, a treadle for actuating the said means, a treadle shoe for regulating the movements of the treadle, an operating lever for said treadle shoe and locking means for locking the said lever in a predetermined position.

4. In a machine of the character described the combination of a bed plate for supporting an electrotype, a hammer, means for operating the latter to rectify the said electrotype, an abutment for exercising a pressure against the operation of the said hammer and a yielding member secured to the abutment for cushioning the latter as the same is pressed against the said electrotype.

5. In a machine of the character described the combination of a bed plate for supporting an electrotype, a hammer, means for operating the latter to rectify the said elecwithin the said abutment and means for adjusting the said trotype, an abutment for exercising a pressure against the operation of the said hammer and a ring contained ring to level the lower surface of the abutment.

[Claims 6 to 8 not printed in the Gazette.]

1,109,856. MACHINE FOR RECTIFYING ELECTROTYPES. WALKER W. MCCARROLL, Arlington, N. J. Filed Apr. 6, 1911. Serial No. 619,203. (Cl. 29—21.)



1. The combination of rectifying tools, a hammer rod, a hammer for striking the latter to operate one of the said tools, a rotating member for operating the said hammer away from the said hammer rod and means for tripping said rotating member to release the said hammer.

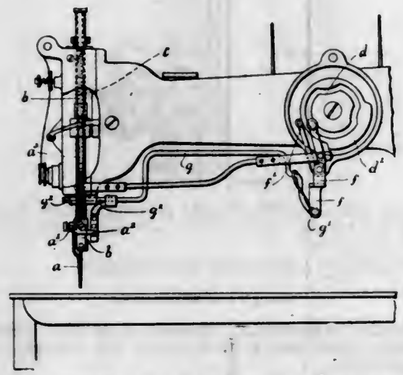
2. The combination of a plurality of rectifying tools, a hammer rod, a hammer for striking the latter to operate one of the said tools, a rotating member adapted to engage the hammer to move the same away from the hammer rod, means for tripping the said rotating member to release the said hammer and a spring for actuating the latter.

3. The combination of a plurality of rectifying tools, a hammer for operating the same, a member for operating the hammer a given distance in one direction, means for tripping the said member to release the said hammer and a spring carried by the latter for actuating the said hammer to strike an upward blow.

4. The combination of a glass block, a lever for reciprocating the same vertically, means for adjusting the stroke of the said lever at both ends thereof, rectifying tools supported below the said glass, means for operating any one of the said tools upwardly against the said glass and mechanism for adjusting the said tool operating means.

5. The combination of a glass block, means for operating the same, a plurality of rectifying tools, a hammer for operating any one of the said tools against the said glass, a movable member for operating the said hammer away from the said tools, means for tripping the said movable member to release the said hammer and a spring for actuating the latter.

1,109,857. PUNCH ATTACHMENT FOR HEMSTITCH-MACHINES. WILLIAM ROBERT MCCAULEY, Lurgan, Ireland, assignor to Henry Matier & Company Limited, Belfast, Ireland. Filed Nov. 26, 1913. Serial No. 803,106. (Cl. 112—7.)



1. The combination with a hemstitch sewing machine of a needle bar, a punch, a punch holder slidably supported on the needle bar of the machine, spring means in connection with the needle bar of the machine and with the slidable punch holder whereby the latter is normally pressed downward and caused to move with the needle bar as the latter is reciprocated, a projecting part on the punch holder, a cam lever and link mechanism operated thereby and a trip operated by the lever and link mechanism and adapted when put into action thereby to intercept the descent of the punch holder at the required times and to hold the punch out of action.

2. The combination with a hemstitch sewing machine of a punch, a punch holder slidably supported on the needle bar of the machine, spring means in connection with the needle bar of the machine and with the slidable punch holder whereby the latter is normally pressed downward and caused to move with the needle bar as the latter is reciprocated, a projecting part on the punch holder, a link slidably supported in the machine head, a trip adjustably supported on the link, a lever pivotally connected at one end to the other end of the link and itself pivotally supported on the machine framing, a needle bar vibrating cam on which the other end of the lever rests and which is provided with a projecting portion adapted when the lever end engages it to move the lever and link and the trip connected therewith so that the latter is moved out of the way of the projecting part of the punch holder, thereby allowing the descent of the punch holder during such times as the lever end is in contact with the projecting portion of the periphery of the cam, and spring means for maintaining the lever end in contact with the periphery of the cam.

3. The combination with a hemstitch sewing machine of a hollow needle bar, a punch, a punch holder slidably supported on the needle bar of the machine, a spring accommodated in the interior of the needle bar and bearing at its lower end on the slidable punch holder whereby the latter is normally pressed downward and caused to move with the needle bar as the latter is reciprocated, a projecting part on the punch holder, a cam lever and link mechanism operated thereby and a trip operated by the lever and

link mechanism and adapted when put into action thereby to intercept the descent of the punch holder at the required times and to hold the punch out of action.

1,109,858. NECKWEAR. GEORGE W. MILLS, Jr., New York, N. Y., assignor to William A. Keys, New York, N. Y. Filed July 17, 1912. Serial No. 709,849. (Cl. 2—11.)

1. In a necktie, a neckband and two tying ends formed of a fabric cut and folded so that the inner and outer faces are of the same fabric throughout, in the tying ends the adjacent edges of said folded fabric meeting on the inner face of the necktie intermediate the edges thereof, and in an intermediate portion of the necktie the edges of the said folded fabric meeting substantially on one edge only thereof.

2. In a necktie having a neckband and two tying ends formed of fabric cut from piece goods, and folded so that the inner and outer faces are of the same fabric throughout, in the tying ends the adjacent edges of said folded fabric meeting on the inner face of the necktie intermediate the edges thereof and in an intermediate part of the necktie the adjacent edges of said folded fabric meeting substantially on the edge thereof, a thin narrow interlining extending throughout said necktie and supplemental interlinings in the tying ends substantially wider in part than said thin interlining.

3. In a necktie having a neckband and two tying ends, the two faces of which are of the same fabric formed by cutting material from piece goods and folding same to form said neckband and tying ends, the edges of said folded fabric in the tying ends meeting on the inner face of the necktie intermediate the edges thereof, and in an intermediate part of the necktie the edges of said fabric meeting on one edge only, and an interlining in said necktie, an intermediate portion of the fabric of the inner face only of the necktie being cemented to the interlining.

4. A necktie formed of suitable fabric folded and shaped in a flat tubular form, embodying a narrow backband portion and tying-end portions at the ends of the neckband portion, the edges of the back fold of the folded fabric in the tying ends being intermediate the edges of the tie, an interlining in the tying-end portions, and stitches in the tying-end portions attaching the interlining to the back fold only of the tie throughout the tying ends of the tie whereby said stitches will not appear on the outer face of the tie.

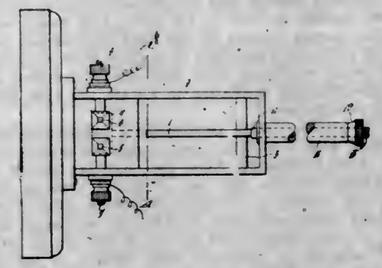
5. In a necktie having a neckband and two tying ends formed of a fabric material cut and folded to form the face and back of said necktie, the edges of said material meeting on the back of the tie intermediate the edges of the tying ends and a reinforcing strip extending substantially throughout the length of said necktie and secure to the fabric of the back only of the tying ends of said necktie.

[Claims 6 and 7 not printed in the Gazette.]

1,109,859. FIRE-ALARM. MATTHEW MOLONEY, Christchurch, New Zealand. Filed Feb. 14, 1912. Serial No. 677,593. (Cl. 177—128.)

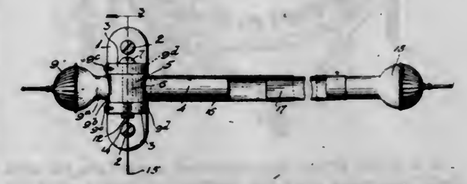
1. An improved alarm comprising a casing, having a removable cover, a pair of contacts located within said casing, said contacts being included in an electric circuit, a lever pivoted in said casing, an expansible sleeve secured to the outside of said casing, and a rod secured to the other end of said sleeve and projecting through said casing into engagement with the lever located therein, said rod, when the sleeve expands, being moved out of engagement with said lever to allow same to bridge said contacts and close said circuit.

2. An improved alarm comprising a casing having a removable cover, a pair of contacts located within said casing, said contacts being included in an electric circuit, a lever pivoted in said casing, an expansible sleeve secured to the outside of said casing, and a rod secured to the other end of said sleeve and projecting therethrough into engagement with the lever located in said casing, said rod, when the sleeve expands, being moved out of engagement with said lever to allow same to bridge said contacts and close said circuit.



3. An improved alarm comprising a casing having a removable cover, a pair of contacts located within said casing, said contacts being included in an electric circuit, a lever pivoted in said casing, an expansible sleeve secured to the outside of said casing, a rod secured to the other end of said sleeve and projecting through said casing into engagement with the lever located therein, said rod when the sleeve expands, being moved out of engagement with said lever to allow same to bridge said contacts and close said circuit, screw threads formed on said rod, and a nut carried by said sleeve and engaging said screw threads for adjusting the rod relatively to the sleeve.

1,109,860. CURTAIN-FIXTURE. GEORGE E. MOLYNEUX, Bayonne, N. J. Filed July 17, 1911. Serial No. 638,803. (Cl. 156—22.)



1. A curtain fixture comprising a supporting bracket provided with a securing-portion and a pair of parallel arms extending from the securing-portion at a right-angle thereto; an ornamental device secured to said securing-portion substantially at a right-angle to the parallel arms; a curtain pole having at one end an enlargement adapted to enter between and coöperate with said parallel arms; means for pivotally securing the said end to the said arms; and complemental means carried by one of the arms and the said enlargement for securing the bracket and pole adjustably together; the opposite end of said pole having an ornamental piece complemental to the one carried by the securing-member, substantially as described.

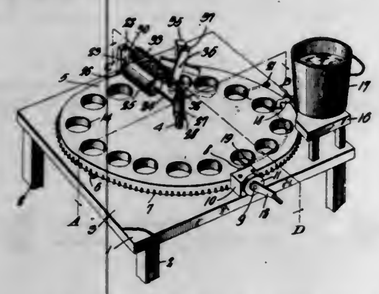
2. A curtain fixture comprising a supporting bracket having a member for securing the same in position, and having a pair of parallel arms; a pole having at one end an enlargement adapted to enter between said arms, the said enlargement being provided with a plurality of apertures circularly arranged; spring-controlled means carried by the lower one of the arms of the bracket for entering the apertures, whereby to hold the pole and bracket adjustably together; means connecting the pole and arms which will enable the pole to have a swinging movement relatively to said arms; and operating means depending from the said spring-controlled means into convenient position for manipulation of the latter, whereby upon actuating

the controlling means the pole may be released so as to be swung around into various positions upon the bracket arms.

3. A curtain fixture comprising a supporting bracket having a securing means and a pair of parallel arms; a pole having at one end an enlargement for entering between and coöperating with said arms; means for pivotally securing the said arms and said enlargement together; including ball-bearings arranged between the said arms and opposite sides of said enlargements; spring controlled means carried by one of the arms, and means complemental thereto carried by the said enlargement for securing the latter adjustably in position between the arms; and means depending from said spring-controlled means for manipulating the latter to release the pole, substantially as described.

4. A curtain fixture comprising a supporting bracket provided with a securing portion and a plurality of parallel arms extending from the securing-portion at a right-angle thereto, and one of which arms is shorter than the others; a plurality of curtain poles pivotally mounted upon said arms in different horizontal planes, each of said curtain poles having at one end an enlargement adapted to coöperate with certain of the arms; means for pivotally securing the poles by their enlarged ends to certain of said arms; and complemental means carried by the said enlargements and certain of the several arms, for securing the bracket and poles adjustably together, substantially as described.

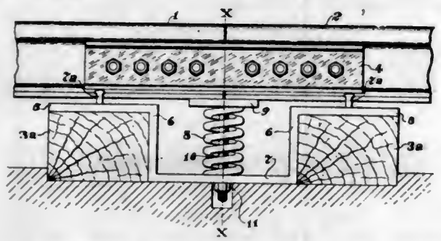
1,109,861. POPCORN-CAKE MACHINE. WILLIAM T. MOSS, San Jose, Cal. Filed Mar. 18, 1912, Serial No. 684,577. Renewed Feb. 19, 1914. Serial No. 819,837. (Cl. 107—16.)



In a device of the class described, a platform; a main shaft upstanding from the platform; a carrier rotatably supported by the shaft above the platform and provided with a pocket; a standard fixed to the platform; an auxiliary shaft supported terminally upon the standard and upon the main shaft for adjustment toward and away from the carrier; means for holding the auxiliary shaft in adjusted positions along the main shaft and the standard; a roller carried by the auxiliary shaft and adapted to bear upon the carrier; a spring arm terminally mounted on the main shaft and on the standard for adjustment toward and away from the roller; a moistening device supported by the arm and yieldably pressed by the arm against the roller; and means for holding the spring arm in adjusted positions upon the main shaft and the standard.

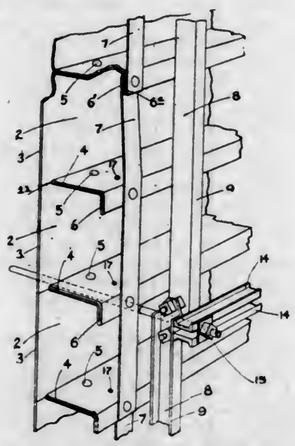
1,109,862. RAIL-JOINT SHOCK-ABSORBER. STEPHEN D. MYERS, Carrollton, Tex. Filed Nov. 14, 1913. Serial No. 800,996. (Cl. 239—12.)

1. In a device of the character described, the combination of two abutting rail extremities, of a plate disposed beneath said rail extremities bridging the two ties nearest adjacent to the joint, the central portion of said plate being depressed between said ties, a coiled spring abutting at its lower end against the depressed portion of said plate and supporting the abutting rail ends at its upper extremity, and means for adjusting the compression of said spring.



2. In a device of the character described, the combination with two abutting rail extremities, of a plate disposed beneath said extremities and normally spaced therefrom, said plate being bridged between the two ties nearest adjacent to the joint and having its center portion depressed between said ties, a coiled spring having its lower end abutting upon the depressed central portion of said plate and supporting the two rail ends at its top, a plate interposed between the rail ends and the top of said spring, a bolt passing centrally through the spring having its head counter-sunk in the top of said plate and having its lower end projecting through the central portion of said plate and a nut screw-threaded upon said bolt adapted to be tightened against the central portion of said plate.

1,109,863. FORM OR MOLD. CHARLES M. NEELD, Pittsburgh, Pa. Filed Jan. 16, 1913. Serial No. 742,386. (Cl. 25—121.)



1. In a mold of the character described, a wall composed of a plurality of sections, each section consisting of a wall portion formed of sheet metal and a plurality of angularly projecting reinforcing integral flanges, having end folds extending at an angle to the plane of the flanges.

2. In a mold of the character described, a wall composed of similar sections, each section consisting of a wall portion formed of sheet metal and a plurality of flanges angularly disposed along the section and each comprising an intermediate flange and a longitudinal edge flange on said intermediate flange at an angle thereto formed by folding the body of the sheet metal.

3. In a mold of the character described, a wall composed of similar abutting sections, each section consisting of a wall portion formed of sheet metal and having a plurality of integral flanges along its length and angularly disposed with regard to the body of the sheet, said plurality including end flanges interlocking with end flanges of an adjacent section and also including flanges formed by a fold of metal of the sheet and intermediate said end flanges, and separate means for reinforcing the sections.

4. In a concrete form section, a mold wall section of thin sheet metal carrying a plurality of reinforcing flanges at its back, each such flange being formed by an L-shaped double fold of the sheet metal, and a plurality of tie strips secured to the ends of the flanges.

5. In a wall mold for concrete, a mold face comprising a plurality of abutting sections of sheet metal, each sheet of metal being folded to produce an L-shaped bracing flange having a part in a plane parallel to said sheet and vertical connecting means for said parts.

[Claims 6 and 7 not printed in the Gazette.]

1,109,864. DRAFTING APPARATUS. JAMES E. NELSON, Lancaster, N. Y. Filed Mar. 26, 1914. Serial No. 827,388. (Cl. 35—12.)

1. In an apparatus of the kind described, the combination with a holder for an object, of a transparent plate, means for supporting the plate to be rotatably adjusted horizontally and vertically to different positions relative to said object, and means for releasably holding the plate in adjusted position.

2. In an apparatus of the kind described, the combination with a holder for an object, of a transparent plate, a support on which said plate is mounted to swing to a position over said object or at a side thereof, and means for holding the plate in the position in which it is set.

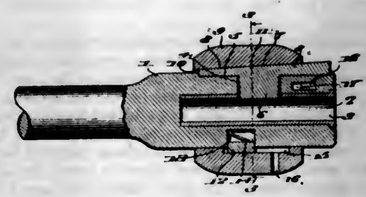
3. In an apparatus of the kind described, the combination of a base, a transparent plate, and a bracket pivoted on the base to swing horizontally and to which said plate is pivoted to swing vertically.

4. In an apparatus of the kind described, the combination of a base, a transparent plate, and a bracket pivoted to swing in one plane relatively to said base, said plate being pivotally mounted on said bracket to swing in a plane substantially perpendicular to said first mentioned plane.

5. In an apparatus of the kind described, the combination of a base, a transparent plate, a bracket pivoted to swing in one plane relatively to said base, and a frame supporting said plate and pivotally supported on said bracket to swing in a plane substantially perpendicular to said first mentioned plane.

[Claims 6 to 14 not printed in the Gazette.]

1,109,865. MINING-MACHINE CHUCK. FREDERICK NUGENT, Mace, Idaho, assignor of one-half to Levi R. Nugent, Missoula, Mont. Filed Sept. 23, 1913. Serial No. 791,381. (Cl. 255—57.)



1. In a self tightening drill chuck, a chuck body having a tool socket therein and formed with a radial slot opening onto the outer surface thereof, a key within said slot, a ring surrounding said chuck body adapted to force said key into engagement with the tool, and a spring-pressed dog acting upon said ring to limit the movement thereof to releasing position.

2. In a self tightening drill chuck, a chuck body having a tool socket therein formed with a radial slot opening onto the outer surface thereof, a key within said slot, a ring surrounding said chuck body and adapted to force said key into engagement with the tool, and means for sliding said ring to releasing position in the event of undue binding between the parts.

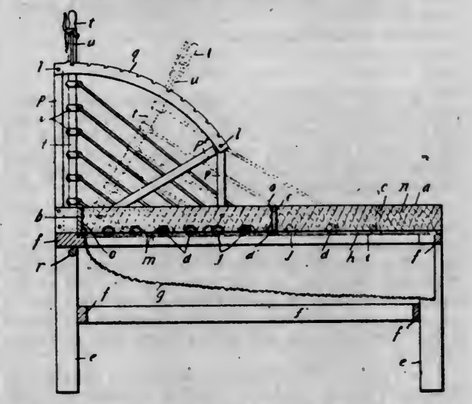
3. In a self tightening drill chuck, a chuck body having a tool socket therein formed with a radial slot opening onto the outer surface thereof, a key within said slot, a ring surrounding said chuck body and adapted to force said key into engagement with the tool, and a wedge-shaped key adapted to slide said ring to releasing position in the event of undue binding between the parts.

4. In a self tightening drill chuck, a chuck body having a tool socket therein and formed with a radial slot opening onto the outer surface thereof, a key within said slot, a ring surrounding said chuck body and adapted to force said key into engagement with the tool, and a spring pressed dog carried by said chuck body and engaging the inner wall of said ring to limit the movement thereof to releasing position.

5. In a self tightening drill chuck, a chuck body having a tool socket therein and formed with a radial slot opening onto the outer surface thereof, a key within said slot, a ring surrounding said chuck body and adapted to force said key into engagement with the tool, and a spring pressed dog carried by said chuck body and engaging the inner wall of said ring to limit the movement thereof to releasing position, said ring being provided with means whereby an instrument may be inserted to relieve said ring of the influence of said dog.

[Claim 6 not printed in the Gazette.]

1,109,866. ADJUSTABLE GRADER. JAMES R. NUNAMAKER, Hood River, Oreg. Filed Dec. 24, 1913. Serial No. 808,625. (Cl. 130—32.)



1. An adjustable grader comprising a body having sides and ends, a plurality of grading bars movably supported between the sides, one of the ends of the body being carried by one of said bars, a lever element and connections therefrom to said bars adapted for moving the latter simultaneously toward and from each other, and whereby said bars are positioned equidistantly from each other.

2. An adjustable grader comprising a body having sides and ends, a plurality of grading bars movably supported between the sides, one of the ends of the body being carried by one of said bars, a lever element and connections therefrom to said bars adapted for moving the latter simultaneously toward and from each other, and whereby said bars are positioned equidistantly from each other, means for gaging the movement of the lever element rela-

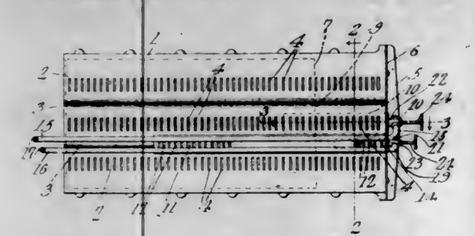
tively to the desired spacing of the bars, and means for locking the lever element in place as adjusted.

3. An adjustable grader comprising a body having sides and ends, a plurality of grading bars movably supported between the sides, one of the ends of the body being carried by one of said bars, levers fulcrumed at the sides of the body, rods connecting said levers with the bars respectively, means for gaging the movement of the levers relatively to the desired spacing of the bars, and means for locking the levers in place as adjusted.

4. An adjustable grader comprising a body having sides and ends, a plurality of grading bars movably supported between the sides, one of the ends of the body being carried by one of said bars, levers fulcrumed at the sides of the body, collars adjustably mounted on said levers, rods connecting said collars with the bars respectively, means for gaging the movement of the levers relatively to the desired spacing of the bars, and means for locking the levers in place as adjusted.

5. An adjustable grader comprising a body having sides and ends, the sides being provided with horizontal slots at the bottom, a plurality of grading bars bearing at their ends in said slots of the sides, one of the ends of the body being carried by one of said bars, levers fulcrumed at the sides of the body, collars adjustably mounted on said levers, rods connecting said collars with the ends of said bars respectively, notched arc bars, and spring-controlled pawls on the levers engaging therewith.

1,109,867. HYDROCARBON-BURNER. LARA ESTES OSBORN, Estes Park, Colo. Filed May 23, 1914. Serial No. 840,613. (Cl. 158—31.)



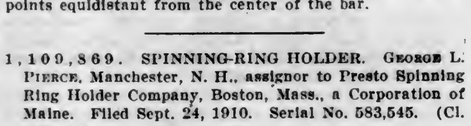
1. A burner embodying a casing having upper outlets, a diaphragm within the casing and extending to the sides and one end thereof, there being an opening between the other end of the casing and diaphragm, and a mixing tube carried by the last mentioned end of the casing and projecting under the diaphragm.

2. A burner comprising a casing, the top of which is provided with longitudinal corrugations, the ridges of the corrugations having outlets, a diaphragm disposed within the casing adjacent the furrows of the corrugations, the diaphragm extending to the sides and one end of the casing, there being an opening between the other end of the casing and the diaphragm, and a mixing tube carried by the last mentioned end of the casing and projecting under the diaphragm.

3. In a device of the character described, a main burner including a casing, the top of which is provided with corrugations having outlets in their ridges, a pilot burner including an elongated casing seated within one of the furrows of the corrugations and having longitudinal series of upper outlets, a longitudinal perforated partition disposed between the sides of the pilot burner casing, and a pair of generators disposed above the pilot burner, one generator communicating with the interior of the main burner casing, and the other generator communicating through one end of the pilot burner casing below the said partition.

1,109,868. EVENER. ROBERT J. PAUL, Gilman, Iowa. Filed Jan. 31, 1914. Serial No. 815,795. (Cl. 21—76.)

1. In a device of the class described, an evener bar designed to be attached to a plurality of harrow sections, a forwardly extending arm at the center thereof, links pivoted to said evener bar at points spaced apart from the center thereof, a forwardly extending arm pivoted to said bar spaced apart from said first arm at a distance equal to one sixth of the distance between said arm and one of said links, a second forwardly extending arm secured to the bar at a similar distance from said pivoted arm on the side nearest the adjacent link, flexible devices secured to the links slidably extended through the nearest respective fixed forwardly extending arms and secured to said pivoted arm at points distant from the pivotal point of said arm in the proportion of three and five.



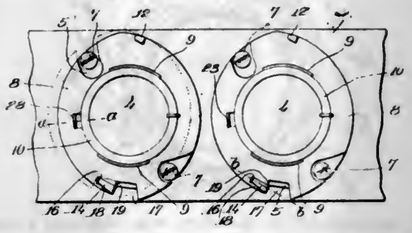
2. In a device of the class described, a bar, means for securing harrow sections thereto, a forwardly extending arm pivoted thereto at one side of the center thereof, draft devices secured thereto at points equidistant from the ends thereof, and longer and shorter flexible draft devices secured to the respective first devices on the long and short ends of the bar, said flexible devices being slidably mounted on said bar at points on each side of said arm and equidistant therefrom, and secured to said arm at such points that the distance from the point where the shorter flexible device is attached to the bar, from the point where the longer flexible device is secured to the bar, bears the same relation to the distance of the latter point from the pivotal point of the bar that the burden of draft, designed to be drawn from the shorter flexible draft device, bears to the burden of draft, designed to be drawn to the longer flexible device.

3. In a device of the class described, a bar, means for securing harrow sections thereto, a forwardly extending arm pivoted thereto at one side of the center thereof, draft devices secured thereto at points equidistant from the ends thereof, and longer and shorter flexible draft devices secured to the respective first devices on the long and short ends of the bar, said flexible devices being slidably mounted on said bar at points on each side of said arm and equidistant therefrom, one of said points being at the middle of the bar, and secured to said arm at such points that the distance from the point where the shorter flexible device is attached to the bar, from the point where the longer flexible device is secured to the bar, bears the same relation to the distance of the latter point from the pivotal point of the bar that the burden of draft, designed to be drawn from the shorter flexible draft device bears to the burden of draft designed to be drawn to the longer flexible device, said parts being arranged so that the flexible devices may be detached from said arm and said bar except at the center of the latter, so that draft bars for even draft hitch may be secured to the flexible devices at points equidistant from the center of the bar.

1,109,869. SPINNING-RING HOLDER. GEORGE L. PIERCE, Manchester, N. H., assignor to Presto Spinning Ring Holder Company, Boston, Mass., a Corporation of Maine. Filed Sept. 24, 1910. Serial No. 583,545. (Cl. 118—11.)

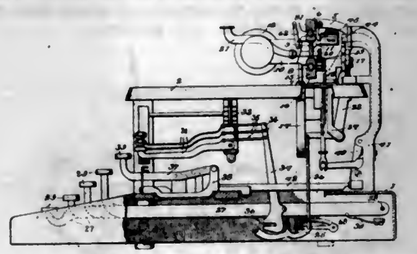
1. In a spinning ring, the combination with a rail plate having a guiding projection and a resiliently sustained locking member which extends parallel to the upper face of the rail plate, of a ring holder having an opening to receive the guiding projection and adapted to turn laterally about said guiding projection as a center and having another opening to receive the locking member whereby when the ring holder is turned laterally about the guiding projection a portion of the ring holder will pass beneath the resiliently-sustained locking member and be frictionally engaged thereby.

2. In a spinning ring, the combination with a rail plate having a guiding projection and a locking member which extends parallel thereto, of a ring holder having an opening to receive the guiding projection and adapted to turn laterally about said guiding projection as a center and having another opening to receive the locking member



whereby when the ring holder is turned laterally about the guiding projection a portion of the ring holder will pass beneath the locking member, said locking member having a locking lip adapted to enter a recess in the ring holder when the latter is properly positioned.

1,109,870. TABULATING MECHANISM. GEORGE W. RAMSEY, Peoria, Ill. Filed Oct. 5, 1910. Serial No. 585,370. (Cl. 197—179.)



1. A device of the character described including a frame, a movable carriage mounted on said frame, type bars, keys operatively connected with said type bars, a stop member operatively mounted on said frame, a series of stops carried by said movable carriage, and means operative by certain of said keys for positioning certain stops in said series of stops.

2. A device of the character described including a frame, a power propelled carriage mounted on said frame, type bars, keys operatively connected with said type bars, a movable stop member mounted upon said frame, a series of stops mounted upon said carriage, and means for automatically positioning certain stops in said series of stops when certain of said keys are actuated.

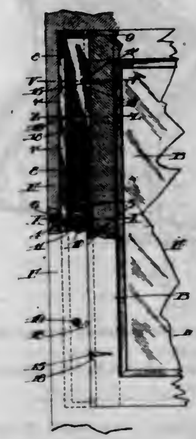
3. A device of the character described including a frame, a movable carriage mounted on said frame, letter spacing mechanism, keys adapted to operate said letter spacing mechanism, a series of stop members mounted on said movable carriage, and means operated by certain of said keys for positioning certain of said stops in said series.

4. A device of the character described including a frame, a movable carriage mounted on said frame, printing members, keys for operating said printing members, a series of denominational stop members operatively mounted on said frame, a series of movable stops operatively connected with said carriage, means operated by certain of said keys for positioning certain stops in said series of stops, and means for operating said denominational stops.

5. A device of the character described including a frame, a movable carriage mounted on said frame, a letter spacing mechanism, keys for operating said letter spacing mechanism, a series of denominational stops operatively mounted on said frame, a stop carrying rack mounted on said movable carriage, stops carried by said stop carrying rack, means for positioning certain of said stops carried by said rack when certain of said keys are operated, and means for positioning said denominational stops.

[Claims 6 to 80 not printed in the Gazette.]

1,109,871. SASH-LOCK FOR REVERSIBLE WINDOWS. ERNEST L. REGUIN, San Francisco, Cal. Filed Dec. 26, 1912. Serial No. 738,534. (Cl. 20—49.)



In a window, the combination of a window frame, a sash centrally pivoted on horizontal pivots to swing in the opening in the frame, a side rail of the sash having, on its face which is adjacent to a side of the frame, a longitudinal slot in the plane of the sash, a locking bar mounted in the open slot in the side of the frame, so as to be projected toward and from the slotted side of the sash, locking hooks formed on the outer edge of the bar, the slot in the sash having keepers engageable with said hooks, said locking bar having a limited lengthwise movement, in its slot in the frame, said bar having segmental upper and lower guide slots which extend in a crosswise direction of said bar, guide pins in the frame fitting said slots and permitting a movement of the bar in and out of its slot in addition to its aforesaid lengthwise movement, and an eccentric key turning in the frame and engaging the bar to move it in and out of its slot and to move it lengthwise thereof, to cause said hooks to engage and disengage with the keepers in the sash.

1,109,872. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 1, 1911. Serial No. 624,426. (Cl. 199—7.)

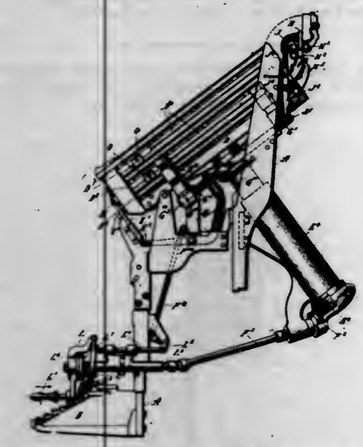
1. In a typographical machine, the combination of a plurality of magazines to contain the matrices, means for shifting the magazines, and independent locking means controlled by the matrices to prevent the shifting of the magazines unless the matrices be properly inclosed within the magazines.

2. In a typographical machine, the combination of a magazine to contain the matrices, means for shifting it, and independent locking means controlled by the matrices to prevent the shifting of the magazine unless the matrices be properly inclosed within the magazine.

3. In a typographical machine comprising adjustable parts, the combination of a magazine to contain the matrices, and independent locking means controlled by the matrices to prevent the adjustment of the said parts unless the matrices be properly inclosed within the magazine.

4. In a typographical machine, the combination of a magazine to contain the matrices, means for shifting it, and independent locking means controlled by the matrices to prevent the shifting of the magazine.

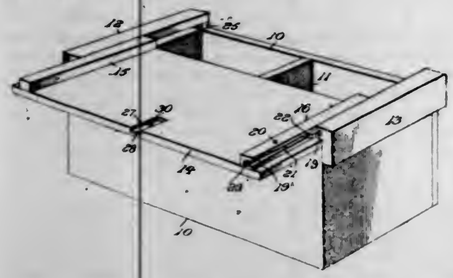
5. In a typographical machine, comprising matrices and manually controlled adjustable parts, independent locking



means controlled by the matrices to prevent the adjustment of the said parts.

[Claims 6 to 74 not printed in the Gazette.]

1,109,873. EGG-CRATE. FREDERICK W. SCHOEN, Scranton, Pa. Filed May 6, 1913. Serial No. 765,946. (Cl. 217—62.)

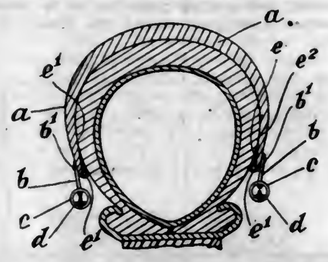


1. A container having upwardly directed guide cleats with a channel in the inner face of one of the cleats, the inner end of the channel being oblique to the transverse plane of the container and merging gradually into the inner face of the cleat and with a socket at the inner end of the oblique portion, a cover slidably engaging the guide cleats, and a spring controlled catch device carried by the cover and including a projection for engaging the oblique portion of the channel and guided thereby into the socket.

2. A container having upwardly directed guide cleats with a channel in the inner face of one of the cleats and a socket at the inner end of the channel, a cover slidably engaging the guide cleats, a cleat carried by the cover and having an outwardly opening channel, and a spring controlled catch device mounted to swing within the channel of the cover cleat and including a projection for engaging in the socket and extending at the outer end in advance of the cover.

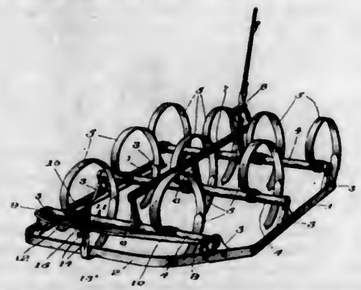
1,109,874. SUPPLEMENTARY COVER OR BAND FOR PNEUMATIC TIRES. EDWARD SCOTT, Wooler, England. Filed Aug. 1, 1913. Serial No. 782,488. (Cl. 152—17.)

1. In a protector for pneumatic tires, comprising a cover piece, suitable means provided on the cover piece for attachment on the tire, a dirt excluding device provided on the sides of the cover comprising a tapered strip, said strip having a beading on its outer end to provide a cushion between the edge of the protector and the tire, substantially and for the purpose set forth.



2. In a protector for pneumatic tires comprising a cover piece, means riveted on the cover piece for attaching the cover in place on the tire, a dirt excluding device provided on the sides of the cover piece comprising an enlarged end or beading for abutment on the tire and a tapered feather edge extending between the tire and the end of the cover piece to protect the tire from the rivets of the attaching means all substantially and for the purpose set forth.

1,109,875. DRAFT CONNECTION. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 18, 1912, Serial No. 691,667. Renewed Mar. 22, 1913. Serial No. 756,212. (Cl. 55—104.)



1. In a draft connection, a frame, a draft link attached thereto, a draft member therefor, and means rigidly connecting said elements for adjusting said draft member into any one of a plurality of positions in any one of a plurality of planes intersecting substantially at right angles to each other.

2. In a draft connection, a frame, a draft link attached thereto, a member engaged by said link in any one of a plurality of positions of the latter, said member being adjustable with respect to said frame, a draft member attached adjustably to said link, and means for rigidly locking together all of the above mentioned elements.

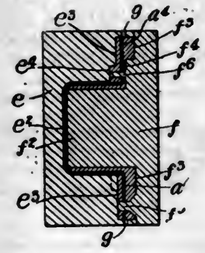
3. In a draft connection, a frame, a notched standard adjustably mounted thereon, a swinging draft link pivotally connected to said frame and movable into engagement with the notches in said standard, and a single means locking said standard in position on said frame and said link in position on said standard.

4. In a draft connection, a frame, a notched standard carried thereon, a swinging draft link pivoted to said frame and movable into engagement with the notches on said standard, a draft member adjustably mounted on said link, and means for locking said link in position upon said standard releasable upon removal of said draft member.

5. In a draft connection, a frame, a standard protruding substantially at right angles to a portion thereof and adjustable longitudinally thereon, a draft link pivoted to said frame and extending substantially parallel thereto, and means for positioning said draft link in any one of a plurality of positions upon said standard.

[Claims 6 to 11 not printed in the Gazette.]

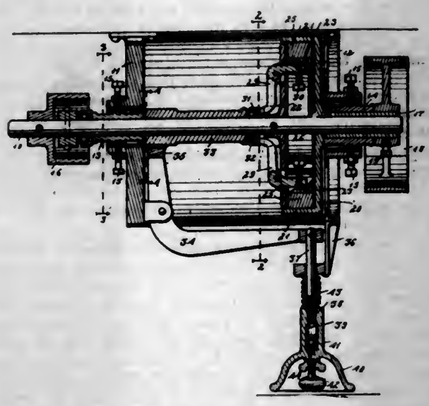
1,109,876. HINGE-BUTT. JOSEPH SOSS, New York, N. Y. Filed Apr. 9, 1914. Serial No. 830,622. (Cl. 16—107.)



1. A hinge butt, comprising an inner core or frame member of sheet metal inclosed and reinforced partially or wholly by a casting or castings.

2. A hinge butt, comprising a yoke-shaped or box-shaped frame member of sheet metal and having side wings, said parts being inclosed and reinforced by a metal casting or castings.

1,109,877. GOVERNOR-PULLEY DEVICE. CHARLES P. STRITE, Cedar Rapids, Iowa, assignor to Cedar Rapids Foundry and Machine Company, Cedar Rapids, Iowa, a Corporation of Iowa. Filed May 1, 1911. Serial No. 624,293. (Cl. 74—45.)



1. In a device of the class described, the combination of a rotatable friction wheel, a disk independently rotatable relative to the friction wheel, centrifugally operated friction shoes carried by said disk, springs tending to hold the friction shoes out of engagement with the friction wheel, levers connected to the friction shoes, a sliding collar to engage the levers, a lever pivoted to a stationary support and operatively connected with the sliding collar, a rod pivoted to the lever, a stationary support through which the rod is extended, an extensible spring on the rod to engage the stationary support, and a threaded hand-wheel on the rod to engage said spring.

2. In a device of the class described, the combination of a rotatable friction wheel, a disk independently rotatable relative to the friction wheel, centrifugally operated friction shoes carried by said disk, springs tending to hold the friction shoes out of engagement with the friction wheel, levers connected to the friction shoes, a sliding collar to engage the levers, a lever pivoted to a stationary support and operatively connected with the sliding collar, a rod pivoted to the lever, a stationary support through which the rod is extended, an extensible spring on the rod to engage the stationary support, a threaded hand-wheel on the rod to engage said spring, and a gage screw seated in the hand-wheel to engage said rod.

3. In a device of the class described, the combination of a rotatable friction wheel, a disk independently rotatable relative to the friction wheel, centrifugally operated friction shoes carried by said disk, springs tending to hold the friction shoes out of engagement with the friction wheel, levers connected to the friction shoes, a sliding collar to engage the levers, a lever pivoted to a stationary support and operatively connected with the sliding collar, a rod pivoted to the lever, a stationary support through which the rod is extended, an extensible spring on the rod to engage the stationary support, a threaded hand-wheel on the rod to engage said spring, a gage screw seated in the hand-wheel to engage said rod, and a lock nut for the gage screw.

4. In a device of the class described, the combination of a friction wheel, a disk rotatable relative thereto, centrifugally operated friction shoes to engage the friction wheel, a sliding collar, means actuated by the sliding collar for forcing the friction shoes into engagement with the friction wheel, a lever connected with the sliding collar, a rod pivoted to the lever, a stationary support through which said rod is extended, an extensible coil spring on the rod, and in engagement with the support, a substantially cup-shaped handle screwed to said rod, and an adjustable gage screw seated in said handle in line with said rod, for the purposes stated.

5. In a device of the class described, the combination of a friction wheel, a disk rotatable relative thereto, centrifugally operated friction shoes to engage the friction wheel, a sliding collar, means actuated by the sliding collar for forcing the friction shoes into engagement with the friction wheel, a lever connected with the sliding collar, a rod pivoted to the lever, a stationary support through which said rod is extended, an extensible coil spring on the rod, and in engagement with the support, a substantially cup-shaped handle screwed to said rod, an adjustable gage screw seated in said handle in line with said rod, and a lock nut on said adjustable gage screw to engage a part of said cup-shaped handle.

[Claim 6 not printed in the Gazette.]

1,109,878. ALARM-CABLE. JEROME SULZBACHER, New York, N. Y. Filed Dec. 30, 1911. Serial No. 668,649. (Cl. 177—303.)

1. An alarm cable which comprises a number of signal wires and a circuit wire held together by suitable coverings to form the main body of the cable and a number of independent thermostatic sections arranged at intervals on the outside of said main body and each adapted to bring about an electric connection between its corresponding signal wire and the circuit wire in response to excess heat; whereby each thermostatic section gives a different alarm from every other thermostatic section.

2. An alarm cable which comprises a hollow tube adapted to serve as a conduit, a number of signal wires, and a circuit wire held together by suitable coverings to form the main body of the cable and a number of independent thermostatic sections arranged at intervals on the outside of said main body and each adapted to bring about an electric connection between its corresponding signal wire and the circuit wire in response to excess heat; whereby each thermostatic section gives a different alarm from every other thermostatic section.

1,109,879. RAILWAY SIGNALING SYSTEM. LOUIS H. THULLEN, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1904. Serial No. 192,145. (Cl. 246—36.)

1. In an electric railway signaling system having closed track circuits, a plurality of block sections each having both rails insulated from both rails of an adjacent block section, a source of alternating signaling current for sup-

plying each closed track circuit with an alternating signaling current, a signal for each block section controlled by said alternating signaling current, a source of current for propelling the cars, and means comprising windings connecting the rails of one block section with the rails of an adjacent block section for permitting the return propulsion current to flow from both rails of one block section to both rails of an adjacent block section.

2. In an electric railway signaling system having closed track circuits, a plurality of block sections each having both rails insulated from both rails of an adjacent block section, a source of alternating signaling current for supplying each closed track circuit with an alternating signaling current, a signal for each block section controlled by said alternating signaling current, a source of current for propelling the cars, means comprising windings connecting the rails of one block section with the opposite rails of an adjacent block section for permitting the return propulsion current to flow from both rails of one block section to both rails of an adjacent block section, and a cross inductive winding for each block section.

3. The combination in an electric railway system, a source of car propulsion current; vehicles operated thereby; a circuit for said car propulsion current comprising two conductors with which the car makes moving contact, one of which is formed by the track; means for dividing the track to form block sections; signal circuits, at least one for each block section, of which the rails of the track form both sides; a source of signaling current for each signal circuit connected to both rails; a signal device for each signal circuit and completing such signal circuit; and inductive bonds located at the ends of adjacent block sections, the windings of which electrically connect the rails of adjacent block sections, and some of the turns of said windings neutralizing the magnetic effect of other turns of said windings.

4. In an electric railway signaling system, closed track circuits, a plurality of block sections, each having both rails insulated, a source of current for supplying the rails of each block section with signaling current, a signal for each block section controlled by said signaling current, a source of direct current for propelling the cars, and a plurality of inductive devices connecting the ends of adjacent rail sections, each inductive device consisting of a pair of windings on a core, the two rails of one block section being connected by one pair of said windings and the rails of the adjacent block section being connected by another pair thereof, the two pairs being electrically connected, the windings being such that the members of each pair are inductive to the signal current and that the propulsion current flowing in said members causes opposing magneto-forces.

5. In a signaling system for electric railways, the combination with a plurality of block sections both track rails of which are insulated, of a track circuit for each block section; a source of alternating current supply for each track circuit; a source of current for propelling the cars, the track rails of the block sections forming a return path therefor; and means between adjacent block sections for permitting propulsion current to pass from the track rails of one block section to the track rails of another block section and said means being formed to be unaffected by the passage of the propulsion current through it by reason of opposing magnetic effects created thereby.

[Claims 6 to 33 not printed in the Gazette.]

1,109,880. SIGNALING SYSTEM FOR RAILWAYS. LOUIS H. THULLEN, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 22, 1904, Serial No. 221,774. Renewed Feb. 27, 1906. Serial No. 303,201. (Cl. 246—36.)

1. In a signaling system for electric railways in which the track rails are employed as a return path for the propulsion current, the combination with a series of insulated track sections, inductive windings connecting the rails of adjacent track sections, a track circuit for each track section, translating devices for each track circuit, one such translating device being located at about each end of the track circuit, and a source of alternating current for each track circuit located at about the middle of each track section.

2. In a signaling system for electric railways in which the track rails are employed as a return path for the propulsion current, the combination with a series of insulated track sections, of inductive windings arranged to be unaffected by the passage of the propulsion current from one track section to another but to afford a path of high impedance to the passage of alternating signaling current, and a track circuit for each track section which comprises a source of alternating signaling current located between the ends of the track section and adapted to deliver an alternating signaling current at the ends of the track section of lower potential than at its point of connection with the track rails of the track section.

3. The combination in a signaling system for electric railways, the track rails of which are used as a return for the propulsion current, and are divided into insulated sections, of inductive windings for connecting the track rails of adjacent track sections, a track circuit for each track section which comprises at least two translating devices one being located at about one end of the track circuit and the other located at about the other end of the track circuit and a source of alternating current, said source of alternating current being located at a point in the track circuit whereby substantially equal alternating current potentials will be supplied the track rails of the track section at the terminals of each inductive winding at the ends of the track section.

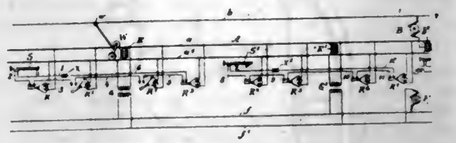
4. The combination in a signaling system for electric railways, the track rails of which are used as a return for the propulsion current and are divided into insulated track sections, an inductive winding at each track section which permits of the passage of the propulsion current, and a track circuit for each track section comprising at least two relays one being located at about one end of the track circuit and a source of alternating current located in the track section at a point to produce a higher alternating current potential between the track rails than that produced at the inductive windings at the ends of the track section.

5. The combination in a signaling system for electric railways, the track rails of which are used as a return for the propulsion current and are divided into insulated track sections, inductive windings at each track section which afford a path of high impedance, and a track circuit comprising at least two relays one being located at about one end of the track section and the other located at about the other end of the track section and a source of alternating current located in the track section at a point to produce a higher alternating current potential between the track rails than that produced at the inductive windings at the ends of the track section.

[Claims 6 to 13 not printed in the Gazette.]

1,109,881. SIGNALING SYSTEM FOR RAILWAYS. LOUIS H. THULLEN, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissville, Pa., a Corporation of Pennsylvania. Filed Aug. 22, 1904, Serial No. 221,773. Renewed Mar. 5, 1906. Serial No. 304,262. (Cl. 246—36.)

1. The combination with an electric railway system which comprises a source of current of one character, a circuit therefor comprising two sides, one of which is formed by both track rails of the trackway and which are without insulated joints where a signaling system is applied, and vehicles propelled along the railway by current from said source of power current; of railway signals located at intervals along the trackway and signaling the passage of the vehicles; a signal circuit for each railway signal; a plurality of relays each controlling a circuit breaker in said signal circuit, a relay being at each end of the signal circuit and connected with the track rails; and a source of controlling signaling current for supplying an alternating signaling current to the plurality of relays, said source of controlling current being connected with both track rails and located intermediate the relays at the ends of the signal circuit.



2. The combination with an electric railway system which comprises a source of current of one character, a circuit therefor comprising two sides, one of which is formed by both track rails of the trackway and which are without insulated joints where a signaling system is applied, and vehicles propelled along the railway by current from said source of power current; of railway signals located at intervals along the trackway and signaling the passage of the vehicles; a signal circuit for each railway signal comprising a wire independent of the trackway and extending along the trackway; a plurality of relays each controlling a circuit breaker in said signal circuit, a relay being at each end of the signal circuit and the relays connected with the track rail; and a source of controlling signaling current for supplying an alternating signaling current to the plurality of relays, said source of controlling current being connected with both track rails and located intermediate the relays at the ends of the signal circuit.

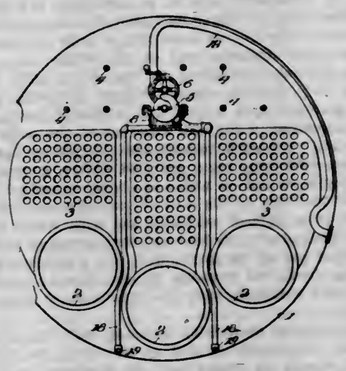
3. The combination with an electric railway system which comprises a source of power current of one character, a circuit therefor comprising two sides, one of which is formed by both track rails of the trackway and which are without insulated joints where a signaling system is applied, and vehicles propelled along the railway by current from said source of power current; of railway signals located at intervals along the trackway and signaling the passage of the vehicles; a signal circuit for each railway signal extending along the trackway; a plurality of relays each controlling a circuit breaker in said signal circuit, a relay being at each end of the signal circuit and the relays connected with the rails of the trackway; a source of controlling signaling current for supplying an alternating signaling current to the plurality of relays, said source of controlling current being connected with both track rails and located intermediate the relays at the ends of the signal circuit; and bonds placed across the rails of the trackway at intervals to equalize any differences of potential of the car propulsion current between the track rails and without short-circuiting the alternating signaling current from the relays.

4. The combination with an electric railway system which comprises a source of current of one character, a circuit therefor comprising two sides, one of which is formed by both track rails of the trackway and which are without insulated joints where a signaling system is applied, and vehicles propelled along the railway by current from said source of power current; of railway signals located at intervals along the trackway and signaling the passage of the vehicles; a signal circuit for each railway signal extending along the trackway; a plurality of relays each controlling a circuit breaker in said signal circuit, a relay being at each end of the signal circuit and the relays being connected with the track rails; and a transformer for each signal circuit located intermediate the relays at the ends of the signal circuit, and having its secondary winding connected with both track rails for supplying an alternating signaling current to the plurality of relays; a main source of alternating signaling current, a conductor independent of the trackway and extending therefrom, to which the primary windings of the several transformers are connected.

5. The combination with an electric railway system which comprises a source of current of one character, a circuit therefor comprising two sides, one of which is formed by both track rails of the railway and which are without insulated joints where a signaling system is applied, and vehicles propelled along the railway by current from said source of power current; cross-bonds connecting said rails together at intervals and which do not short-circuit the signal current from the relays, railway signals located at intervals along the railway; a signal circuit for each railway signal extending along the trackway; a plurality of relays for each signal circuit, one being located at each end of each signal circuit and each relay controlling a circuit breaker in its signal circuit and the relays being connected with the track rails; and a source of signal current furnishing controlling energy to the relays of each signal circuit and located intermediate the relays of its signal circuit.

[Claims 6 to 10 not printed in the Gazette.]

1,109,882. WATER-CIRCULATOR FOR STEAM-BOILERS. JOHN EDWIN TULL, Brooklyn, N. Y. Filed July 31, 1913. Serial No. 782,367. (Cl. 122—411.)



1. The combination with a steam boiler, of a turbine operated by the feed water supply, and means operated by the turbine for drawing the dead water from the bottom of the boiler and discharging it at the top thereof.

2. The combination with a steam boiler, of a suction pump for drawing the dead water from the bottom of the boiler and discharging it at the top thereof, and means responsive to feed water pressure for driving said pump.

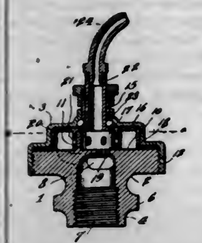
3. The combination with a steam boiler having an internal furnace, of an intergeared turbine and suction pump, a feed water pipe connected with the inlet of the turbine, and suction pipes extending from the pump to the bottom of the boiler.

4. The combination with a steam boiler having an internal furnace, of a water circulator and its complemental motor mounted on a common base, and chairs to support said base.

5. The combination with a steam boiler having an internal furnace, of a suction pump mounted in the boiler a little below the water level and having suction pipes extending to the bottom of the boiler and equipped with perforate terminals, and means for driving said pump in response to feed water pressure.

[Claim 6 not printed in the Gazette.]

1,109,883. SPRAYER. THEODORE WANG, Jacksonville, Fla. Filed Aug. 15, 1913. Serial No. 784,939. (Cl. 137—87.)



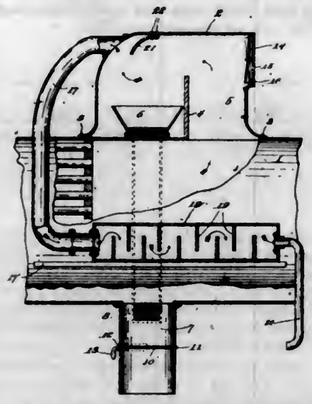
1. A sprayer comprising a casing having a chamber and an intake duct at an angle to and extending through one face of the chamber at a point spaced from the center and also having a baffle projecting into the chamber from said face and between the center of said chamber and the inner or discharge end of the intake duct, a rotor in the chamber of the casing, having a central chamber at one side of and in which the baffle is located, and also having openings in the wall of its chamber and buckets on the outer side of said wall and with which said openings communicate, said buckets being arranged to pass over the inner end of said intake duct, and a discharge tube extending from and revolved by the rotor and arranged with its inner end communicating with the chamber of the rotor and its outer end eccentric thereto.

2. A sprayer comprising a casing including a body and a cover detachably secured on the body, the body being provided with an intake duct, the discharge end of which is eccentric thereto and also with a baffle between its center and the discharge end of the intake duct, the said cover forming a chamber in connection with that face of the body through which the duct discharges and being also provided with a centrally arranged bearing, and a rotor arranged in the said chamber of the casing, having a centrally arranged tubular shaft extending through the bearing, said rotor being provided with a central chamber at one side of and in which the baffle is located, and also having openings in the wall of said chamber and buckets on the outer side of said wall and with which said openings communicate, the buckets being arranged to pass over the inner end of the intake duct and a discharge tube extending from and revolved by the tubular shaft of the rotor and arranged with its outer end eccentric to the rotor.

3. A sprayer comprising a casing including a body and a cover detachably secured on the body, the body being provided with an intake duct, the discharge end of which is eccentric thereto and also with a baffle between its center and the discharge end of the intake duct, the said cover forming a chamber in connection with that face of the body through which the duct discharges and being also provided with a centrally arranged bearing, and a rotor arranged in the said chamber of the casing, having a centrally arranged tubular shaft extending through the bearing, said rotor being provided with a central chamber at one side of and in which the baffle is located, and also having openings in the wall of said chamber and buckets on the outer side of said wall and with which said openings communicate, the buckets being arranged to pass over the inner end of the intake duct and a discharge tube extending from and revolved by the tubular shaft of the rotor and arranged with its outer end eccentric to the rotor, the cover of the casing being provided with a cone, and bearing balls arranged in said cone and engaging the rotor in the angle between the outer side thereof and the inner end of its tubular shaft.

4. A sprayer of the class described including a body having an intake duct discharging at a point out of the center of said body and also having a baffle also arranged at one side of the center of said body, a cover forming a chamber into which the intake duct discharges, and a rotor arranged in said chamber and having a central chamber at one side of and in which the baffle is located and also having openings in the wall of its chamber and buckets on the outer side of said wall and with which said openings communicate, the buckets being arranged to pass over the inner end of the intake duct, said rotor having a discharge tube extending from and revolving therewith and communicating at its inner end with the chamber of the rotor.

1,109,884. SPARK-ARRESTER AND SMOKE-TREATING DEVICE. HERMAN A. WEBER, Hartford, Conn. Filed Oct. 15, 1912. Serial No. 725,860. (Cl. 110—130.)

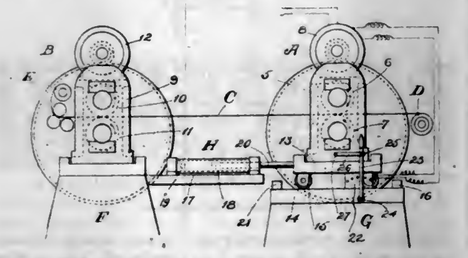


1. In a spark arrester and smoke treating device for locomotives, the combination of a discharge chamber for the products of combustion, a hopper disposed within said chamber, a cinder discharge chute, channels communicating the said hopper with the said chute, means for directing the cinders into the hopper, of an air driven fan arranged adjacent an opening formed within the said chamber, the said opening being arranged to receive a direct current of air during the forward travel of the locomotive, a chamber outlet pipe, a smoke treating chamber into which the said pipe discharges, a plurality of baffle plates arranged within the said chamber, and an outlet pipe connected to the said chamber adapted to discharge the treated smoke to the atmosphere at a point adjacent the ground, as and for the purpose set forth.

2. In a spark arrester and smoke treating device for locomotives, the combination of a discharge chamber for the products of combustion, a hopper disposed within said chamber, a cinder discharge chute, arcuate channels communicating the said hopper with the said chute, an arcuate baffle plate disposed to direct the cinders into the hopper, and means carried by said chute for controlling the outlet thereof, of an air driven fan arranged adjacent an opening formed within the said chamber, the said opening being disposed to receive a direct current of air during the forward travel of the locomotive, a pipe leading from the said chamber exteriorly of the locomotive and to one side thereof, the said baffle being arranged adjacent the pipe opening, a smoke treating chamber into which the smoke is conveyed, a plurality of spaced oppositely extending baffle plates arranged within the said chamber, and an outlet pipe connected to the opposite end of the said chamber from that of the said first mentioned pipe, the said outlet adapted to discharge the treated smoke to the atmosphere at a point adjacent the ground and at one side of the locomotive.

3. In a spark arrester and smoke treating device for locomotives, the combination of a smoke stack having a discharge chamber formed therein adapted to receive the products of combustion, a partition arranged within the said smoke stack, a hopper disposed within the said chamber, a cinder discharge chute, arcuate channels communicating the said hopper with the said chute, an arcuate baffle plate depending from the top of the said stack, the said plate being disposed to direct the cinders into the said hopper, and valve means carried by the said chute for controlling the outlet thereof, of an air driven fan arranged within an opening formed within the said stack and disposed to receive a direct current of air during the forward travel of the locomotive, the said air current adapted to direct the product of combustion against the said arcuate baffle plate, a pipe leading from the said chamber at a point adjacent the said baffle, a smoke treating chamber arranged exteriorly of the locomotive into which the said pipe extends, a plurality of uniformly spaced oppositely extending baffle plates arranged within the said smoke treating chamber, and an outlet pipe leading from the opposite end of the chamber from that to which the said first mentioned pipe is secured for conveying the treated smoke to the atmosphere at a point adjacent the ground and at one side of the locomotive, as and for the purpose set forth.

1,109,885. ROLLING-MILL OR SIMILAR INSTALLATION. WILLIAM R. WEBSTER, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 11, 1913. Serial No. 753,622. (Cl. 80—35.)



1. The combination of a metal working device adapted to act on a length of stock, a device spaced from said metal working device and supporting the stock acted on by the latter, one of said devices being movable toward and away from the other, a prime mover for driving one of said devices, and a speed adjusting means for said prime mover controlled automatically by the bodily movements of said movable device; substantially as described.

2. The combination of a metal working device adapted to act on a length of stock, a device spaced from said metal working device and supporting the stock acted on by the latter, a track on which one of said devices is movable toward and away from the other, a prime mover for driving one of said devices, and a speed adjusting means for said prime mover controlled automatically by the bodily movements of said movable device; substantially as described.

3. The combination of a metal working device adapted to act on a length of stock, a device spaced from said metal working device and supporting the stock acted on by the latter, a track on which one of said devices is movable toward and away from the other, separate prime movers for the respective devices, and speed adjusting means for one of said prime movers controlled automatically by the bodily movements of said movable device; substantially as described.

4. The combination of a metal working device adapted to act on a length of stock, a device spaced from said metal working device and supporting the stock acted on by the latter, one of said devices being movable toward and away from the other, balancing means acting on the movable device, a prime mover for driving one of said devices, and speed adjusting means for said prime mover operatively connected with said movable device; substantially as described.

5. The combination of a power driven metal working device adapted to act on a length of stock, a power driven device spaced from said metal working device and supporting the stock acted on by the latter, one of said devices being movable toward and away from the other, and means for varying the working speed of one of said devices in consonance with the bodily movements of said movable device; substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,109,886. MANUFACTURE OF ELECTRIC FILAMENT. CARL AUER VON WELSBACH, Vienna, Austria-Hungary, assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Aug. 9, 1898. Serial No. 688,203. (Cl. 176—132.)

1. The herein-described process of making filaments for electric incandescent lamps, which consists in repeatedly applying successive coatings containing osmium to a wire and subjecting the same to the action of a drying heat between each coating, and then subjecting the coated wire to the action of an electric current in a protective atmosphere oxidizing as to any carbon present in the coating, until it is raised to a temperature higher than the volatilizing temperature of its core; substantially as set forth.

2. The herein-described process of making filaments for electric lamps, which consists in repeatedly applying coatings containing osmium to a wire and subjecting the same to the action of heat between each coating, and finally exposing the coated wire in a protective atmosphere oxidizing as to any carbon present in the coating, to a gradually increasing temperature which finally is greater than the volatilizing temperature of the core; substantially as set forth.

3. The herein-described process of making filaments for electric lamps, which consists in applying coatings containing osmium to a platinum wire and finally subjecting the coated wire to the action of an electric current in a protective atmosphere oxidizing as to any carbon present in the coating, up to a temperature beyond the volatilizing temperature of the platinum; substantially as set forth.

4. The herein-described process of making filaments for incandescent lamps, which consists in applying a coating containing osmium to a wire, then subjecting the same to a drying heat and then to a gradually increasing electric current in a protective atmosphere oxidizing as to any carbon present in the coating, until the temperature of the wire core exceeds its temperature of volatilization; substantially as set forth.

5. The herein described process of making metallic filaments for incandescent lamps, consisting in coating a wire core with a coating containing a metal having a point of fusion above the volatilizing point of the wire core, then subjecting the same to a drying heat and then to the action of the electric current, in the presence of a reducing gas, until sufficient heat has been developed to volatilize the wire core and leave the metallic particles in a cemented or coherent condition; substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,109,887. MANUFACTURE OF ELECTRIC FILAMENTS. CARL AUER VON WELSBACH, Vienna, Austria-Hungary. Filed Aug. 24, 1899. Serial No. 728,357. (Cl. 176—132.)

1. A filament for electric vacuum lamps, containing osmium, and oxid of a rare metal earth, and a supplemental oxid, said filament containing, at ordinary temperatures, substantially only such gases as remain occluded therein at white incandescence.

2. A filament for electric vacuum lamps, containing osmium, and partly reduced oxid compounds of a supplemental metal.

3. A filament for electric vacuum lamps, containing osmium, and partly reduced oxid compounds of a rare metal earth.

4. A filament for electric vacuum lamps, containing osmium, partly reduced oxid compounds of a rare metal earth, and an oxid of a supplemental metal.

5. A filament for electric vacuum lamps, containing osmium, and partly reduced oxid compounds of thorium.

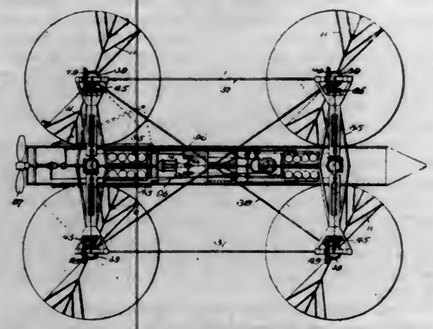
[Claims 6 to 12 not printed in the Gazette.]

1,109,888. MANUFACTURE OF ELECTRIC FILAMENTS. CARL AUER VON WELSBACH, Vienna, Austria-Hungary. Filed Aug. 24, 1899. Serial No. 728,358. (Cl. 176—132.)

1. A filament for electric vacuum lamps, containing osmium and zirconium alloyed therewith.

2. A filament for electric vacuum lamps, containing osmium and zirconium alloyed therewith, in substantially equal portions.

1,109,889. FLYING-MACHINE. RALPH N. WHITCOMB, New York, N. Y. Filed Feb. 7, 1913. Serial No. 746,821. (Cl. 103—63.)



1. In a flying machine a wing composed of members each of which has an opening therein, the members being so arranged that each forms a part both of the upper and of the lower face of the wing.

2. In a flying machine a wing composed of members each of which has an opening therein, the members being so arranged that the covered portion of each overlaps the opening in the other, and the parts of the respective members being so placed that one part of each forms a portion of the upper face of the wing and another part forms a portion of the lower face thereof.

3. In a flying machine a circular wing composed of members each of which has a sector-shaped opening therein, one part of each member adjacent to the opening being passed upwardly through the opening in the other member and then along in contact therewith, whereby each member is caused to constitute a portion of both the upper and lower faces of the wing.

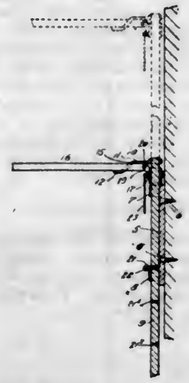
4. In a flying machine a wing composed of members each formed of flexible ribs and a covering attached to the ribs, the members each having an opening therein through which extends a portion of the other member, such portions being disposed to lie along and in contact with the other member, whereby a flexible wing composed of members each of which forms a part both of the upper and under face thereof is formed.

5. In a flying machine a wing composed of members each of which has an opening therein, the parts of the respective members being so disposed in respect of each other that each member forms a part both of the upper and lower surface of the wing, and means for warping the parts of the members adjacent to the openings.

[Claims 6 to 22 not printed in the Gazette.]

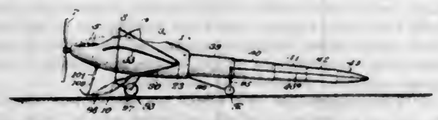
1,109,890. CLOTHES-DRIER. SAMSON WILLIAMSON, Seattle, Wash. Filed Nov. 18, 1912. Serial No. 732,020. (Cl. 68—34.

In a clothes-drier, the combination of a wall board, a pair of spaced vertically alined sockets secured thereto adjacent the upper and lower ends thereof, a pole rectangular in cross section slidably mounted in said sockets for vertical movements and having its inner face contacting the wall board, said pole provided with a series of spaced openings, a pin adapted to be selectively inserted in one of said openings and resting upon the upper edge of the lower socket for holding the pole at a predetermined height with respect to the wall board, a head fixedly secured to the upper end of the pole and provided with a plurality of openings disposed between upper and lower elements of the head, the length of the upper elements being greater than that of the lower elements, a spider having a rectingular sleeve slidably mounted on said pole, upwardly and outwardly extending lugs carried by said



spider, a pull rod connected to said spider and arms hingedly connected to the lugs and extending through the respective openings in said head whereby when the pole is lowered the spider will engage the upper socket and the arms will be extended and be supported upon the lower element of said head while the inner ends of said arms engage the upper elements of said head.

1,109,891. FLYING-MACHINE. LEWIS GINTER YOUNG, New York, N. Y., assignor to Minnie E. Young, New York, N. Y. Filed June 14, 1911. Serial No. 633,041. (Cl. 244—12.)



1. A flying machine, comprising a rigid body portion, a flexible rear body portion of substantial weight, a pair of supporting planes secured to and carried by said rigid body portion, and means for gradually flexing said flexible rear body portion during flight and maintaining it in a straight or curved form, whereby the center of the sum of the weights of the machine is maintained in the line which passes through the center of the sum of the supports, and stability is restored or maintained regardless of the adjustment of the machine or its inclination to the horizontal.

2. A flying machine, comprising a rigid body portion, a flexible rear body portion, a horizontal balancing plane disposed on each side of said flexible rear body portion and capable of relative angular movement therewith, a pair of supporting planes secured to and carried by the said rigid body portion, and means for curving the flexible rear body portion and maintaining the same in the desired curvature.

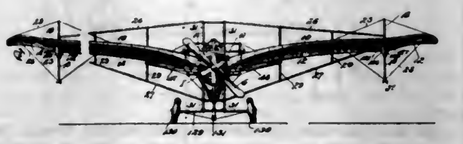
3. In a flying machine, a pair of supporting planes disposed at a dihedral angle and movable on axes running approximately parallel with the body of the machine, a flexible tail, means for elevating and lowering said supporting planes and simultaneously therewith adjusting said tail, to lie on or describe arcs of circles of different radii.

4. In a flying machine, a flexible body portion capable of being adjusted to arcs of different circles, a pivoted supporting plane, and means for simultaneously operating said supporting plane and said body portion for increasing or decreasing the supporting force of said supporting plane and adjusting said body portion in arcs of different circles.

5. In a flying machine, a movable supporting plane having a rigid portion curved longitudinally upwardly and downwardly and curved transversely upwardly and downwardly, and having secured along its rear margin a flexible portion and along its end margin a flexible portion, and means for elevating and lowering said rigid portion and straightening out said flexible portion, lowering said rigid portion and curving said flexible portion, whereby the supporting force of the plane may be increased and decreased at the will of the operator.

[Claims 6 to 32 not printed in the Gazette.]

1,109,892. FLYING-MACHINE. LEWIS GINTER YOUNG, New York, N. Y. Filed June 10, 1912. Serial No. 702,867. (Cl. 244—29.)



1. A flying machine, comprising a rigid body portion, a flexible body and tail portion, movable supporting planes set on the rigid body portion at a dihedral angle, a member disposed transversely to the rigid body portion and movable relative thereto, and means for adjusting said member for changing the dihedral angle of the supporting planes.

2. A flying machine, comprising a rigid body portion, a flexible body portion and tail, a triangular framework disposed transversely of the rigid body portion and movable relative thereto, supporting planes set on the rigid body portion and mounted in said triangular framework, and means for causing relative movement of said triangular framework to said rigid body portion and simultaneously flexing the flexible body portion and tail.

3. In a flying machine, a supporting plane provided with a concave surface near its end and having its angle of ascendance prolonged to the extreme end in a semi-circle, whereby the same resistance is offered to the incoming air, should the machine dip at an angle to the line of flight, as to the front cutting edge of the plane.

4. In a flying machine, having a rigid body portion, a triangular framework disposed transversely of said rigid body portion and movable relative to said rigid body portion, supporting planes mounted in said triangular framework, and a resilient skid carried by the terminal portions of the triangular framework for the protection of the planes when the machine alights.

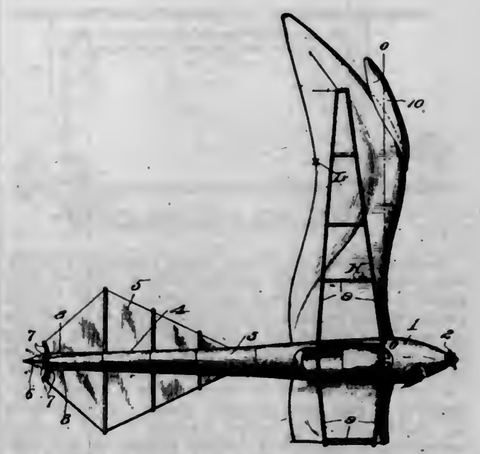
5. A flying machine, having a rigid body portion, a flexible body portion and tail, a triangular framework disposed transversely of said rigid body portion and movable relative thereto, supporting planes pivoted to said rigid body portion and to said triangular framework, and means for the simultaneous operation of said framework and said flexible body and tail portion.

[Claims 6 to 18 not printed in the Gazette.]

1,109,893. FLYING-MACHINE. LEWIS GINTER YOUNG, New York, N. Y., assignor to Minnie E. Young, New York, N. Y. Filed Aug. 14, 1912. Serial No. 715,001. (Cl. 244—12.)

1. A wing for a flying machine having a definite proportion of length and width and having adjacent to the body of the flying machine and to its own front edge a sustaining surface, concave below, curved in a longitudinal direction and in a lateral direction, with a longitudinally stabilizing surface at the rear, the distances of the centers of pressure of the stabilizing surface and the sustaining surface from the lateral axis of the wing having substantially the same proportion as the length and width of the wing.

2. A wing for a flying machine having a definite proportion of length and width and having adjacent to the body of the flying machine and to its own front edge a sustaining surface, concave below, curved in a longitudinal direction and in a lateral direction and a laterally stabilizing surface at the side of the wing remote from the body of the machine, the distances of the centers of pressure of the laterally stabilizing surface and the sustaining surface from the longitudinal axis of the machine having substantially the same proportion as the length and width of the wing.



3. A wing for a flying machine composed of two parts, one part having adjacent to the body of the flying machine and to its own front edge a sustaining surface, concave below, curved in a longitudinal direction and in a lateral direction, and having also a reversely curved laterally stabilizing surface at the side remote from the body, and a second part curved similarly to the first part and symmetrical with the first part with respect to the line of joinder of the two parts, the two parts being joined along substantially the line of the low points of the reverse curves without abrupt change of surface lines.

4. A wing for a flying machine composed of two parts, one part adjacent to the body of the flying machine and to its own front edge, a sustaining surface, concave below, curved in a longitudinal direction and in a lateral direction, and having also a reversely curved laterally stabilizing surface at the side remote from the body, and a second part curved similarly to the first part and symmetrical with the first part with respect to the line of joinder of the two parts, the two parts being joined along substantially the line of the low points of the reverse curves without abrupt change of surface lines, the second part terminating along the curved line extending from the front edge near the point of joining of the two parts to the rear outer portion of the second part, substantially along the line of the high points of the second part.

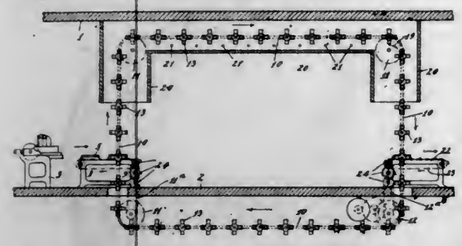
5. A wing for a flying machine having adjacent to the body of the flying machine and to its own front edge a sustaining surface, concave below, curved in a longitudinal direction and in a lateral direction, the amplitude of curvature in a lateral direction being greatest near the front edge and progressively smaller toward the rear forming a partial funnel with its mouth at the front of the wing and tapering toward the rear.

[Claims 6 to 8 not printed in the Gazette.]

1,109,894. APPARATUS FOR TREATING DOUGH PREPARATORY TO BAKING. GEORGE SAMUEL BAKER, London, England. Filed July 13, 1909. Serial No. 507,307. (Cl. 193—2.)

1. An apparatus for proving dough preparatory to baking, comprising a main endless conveyer provided with supports for setting boards, means for feeding setting

boards to said main conveyer comprising an endless feeding conveyer positioned for movement in a direction rectangular to said main conveyer, means for transferring the boards from said feeding conveyer to said supports comprising an endless feed conveyer adapted for movement in a direction rectangular to said main conveyer, means for discharging the setting boards from said main conveyer comprising an endless discharge conveyer adapted for movement in a direction similar to that of said second feed conveyer, and means for intermittently driving the second feed and discharge conveyers.



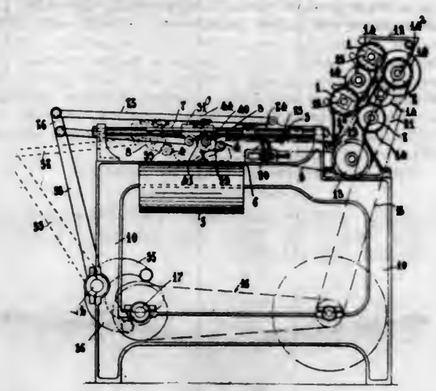
2. An apparatus for proving dough preparatory to baking, comprising a main endless conveyer provided with supports for setting boards and passing through vertical and horizontal courses, means whereby the setting boards are positively maintained in horizontal position in passing from one course to another, means for feeding setting boards to said main conveyer comprising an endless feeding conveyer positioned for movement in a direction rectangular to said main conveyer, means for transferring the boards from said feeding conveyer to said supports comprising an endless feed conveyer adapted for movement in a direction rectangular to said main conveyer, means for discharging the setting boards from said main conveyer comprising an endless discharge conveyer adapted for movement in a direction similar to that of said second feed conveyer, and means for intermittently driving the second feed and discharge conveyers.

3. An apparatus for proving dough preparatory to baking, comprising a main endless conveyer comprising a pair of parallel endless chains provided with supports for setting boards, means for feeding setting boards to said main conveyer comprising an endless feeding conveyer positioned for movement in a direction rectangular to said main conveyer, means for transferring the boards from said feeding conveyer to said supports comprising an endless feed conveyer positioned between the chains of the main conveyer and adapted for movement in a direction rectangular to said main conveyer, means for discharging the setting boards from said main conveyer comprising an endless discharge conveyer positioned between the chains of the main conveyer and adapted for movement in a direction similar to that of said second feed conveyer, and means for intermittently driving the second feed and discharge conveyers.

1,109,895. MOLDING OR SHAPING DOUGH. GEORGE SAMUEL BAKER and GEORGE RALPH BAKER, London, England. Filed June 20, 1913. Serial No. 774,830. (Cl. 107—9.)

1. In a machine for molding and shaping dough, the combination of a reciprocatory folding member adapted to engage the initial portion of a sheet of dough and move same in a horizontal plane, a support in a lower plane than said folding member onto which the remainder of the dough is deposited by gravity with its final portion in the form of a fold, and means for returning said folding member to deposit said initial portion over said remainder in the form of a second fold.

2. In a machine for molding and shaping dough, the combination of means for feeding a sheet of dough, a folding member adapted to receive the initial portion of the sheet from said feeding means, means for moving said folding member away from said feeding means whereby the remainder of said sheet is deposited by gravity, the feeding means depositing the final portion of the sheet in the form of a fold, and means for returning the folding member to deposit said initial portion over said remainder and compress the whole.



3. In a machine for molding and shaping dough, the combination of means for gaging and sheeting a mass of dough, a reciprocating folding member adapted to receive the initial portion of a sheet of dough from said gaging and sheeting means, and a support onto which the remainder of the dough is deposited from said gaging and sheeting means by gravity in a fold, the folding member being adapted to deposit the initial portion of the dough on said remainder in a second fold.

4. In a machine for molding and shaping dough, the combination of a gaging and sheeting device, a reciprocating folding member adapted to engage and receive a portion of the dough from said gaging and sheeting device and remove it therefrom, a support movable transversely to the movement of said folding member, and means receiving the remainder of the dough in a fold, there being a second fold laid thereon by the return movement of the folding member, and means for actuating said movable support to discharge the dough.

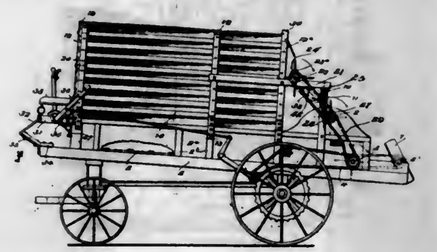
5. In a machine for molding and shaping dough, the combination of gaging means, a feeding element adapted to deliver the dough to said gaging means, a folding member adapted to engage the initial portion of the dough from said gaging means and move same away therefrom in a horizontal plane, a support in a lower plane than said folding member on which the remainder of the dough is deposited by gravity from the gaging means in the form of a fold, means for causing the folding member to return and deposit the initial portion of the dough on the remainder in a second fold, and means for operating said feeding element in timed relation with said folding member.

[Claims 6 to 10 not printed in the Gazette.]

1,109,896. STRAW-SPREADING ATTACHMENT FOR MANURE-DISTRIBUTERS. KARL W. BAYER, Chase, Kans. Filed Mar. 25, 1913. Serial No. 756,787. (Cl. 111—40.)

1. The combination with a distributer including a body and a rotatable beater at the rear of the body, of a rack adapted to be detachably supported on the body, said rack having upwardly extending sides and a forward end, the rear end of the rack being open, a cross bar extending across the upper end of the rear of the rack and having downwardly extending teeth and forming thereby a partial closure for the upper end of the rack, a rotatable beater carried at the rear end of the rack and disposed above and forward of the first named beater and below and rearward of said cross bar and teeth, means operatively connecting the first named beater to the traction wheels of the distributer, and means operatively connecting the first named beater to the second named beater.

2. In a manure distributer, a body, a rack mounted upon the body, a plurality of beaters carried rearward of the rack and above the body, said beaters being arranged in stepped relation in a downwardly and rearwardly extending series, and a cross bar extending across the upper end of the rack at the rear thereof and having downwardly and rearwardly extending teeth, said cross bar being disposed in a plane rearward of the uppermost beater.



3. A straw scattering attachment for manure distributers including a rack having upwardly and outwardly inclined sides one end of the rack being closed and the rear end open, the uper portion of each side of the rack being formed of longitudinally extending fixed slats, the lower portion of each side of the rack being formed by a slatted section extending longitudinally the whole length of the rack hinged to the upper portion of the adjacent side, supporting members projecting from the rear end of the rack, and a rotatable beater mounted upon said supporting members and adapted to be operatively connected to the driving mechanism of the distributer.

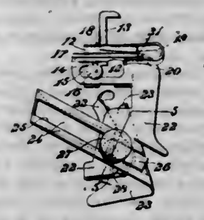
4. The combination with a distributer including a body and a rotatable beater disposed at the rear end of the body, of a rack supported on the body, a plurality of beaters carried by the rack and disposed above the first named beater, the beaters on the rack being arranged one above another with the uppermost beater forward of the lower beater and the lower beater on the rack being forward of the beater mounted upon the body, and means for rotating the beaters all in the same direction.

1,109,897. HAY-RAKE. JOHN A. BISTLINE and JOHN P. JONES, Logan, Utah. Filed June 3, 1913. Serial No. 771,536. (Cl. 56—115.)

1. In a hay cocker and windrower, a wheel supported dumping rake, a frame pivotally carried by the rake, forwardly extending and downwardly and outwardly inclined gathering rakes, links pivotally mounted on the dumping rake, means rigidly carried by the gathering rakes and pivotally carried by the links, means for raising and lowering the dumping rake independently of the gathering rakes, and means for raising and lowering the gathering rakes independently of the dumping rake.

2. In a hay cocker and windrower, a main wheel supported dumping rake, a frame pivotally connected to the rake and provided with draft means, a bar pivotally mounted on the main rake and extending the length of the said rake, forwardly extending arms on the ends of the bar, forwardly extending and downwardly and outwardly inclined gathering rakes, said forwardly extending arms being rigidly connected to the gathering rakes, means for raising and lowering the dumping rake, and means for rocking the said bar to raise and lower the gathering rakes.

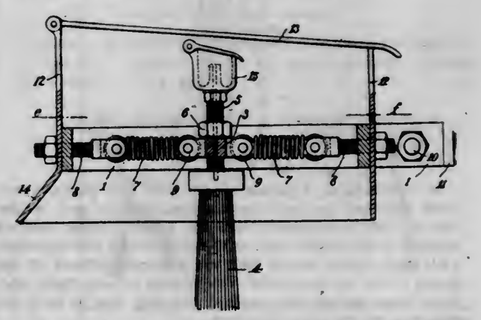
1,109,898. SEWING-MACHINE HEMMER AND THE LIKE. EMANUEL J. BOYLER, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Feb. 10, 1913. Serial No. 747,389. (Cl. 112—35.)



1. The combination with a sewing machine presser-foot, of a hemmer adjustably mounted on said foot so that its working position on said foot may be varied laterally, said hemmer comprising fixed and adjustable scroll parts, a looped member on which said adjustable scroll part is formed, said fixed scroll member being located in a plane between the upper and lower limbs of said looped member; whereby hems of different widths may be formed, and whereby also a dragging pressure, beneath the hemmer, on the roll or fold of cloth which is to form the hem, will be avoided.

2. A sewing machine attachment comprising a presser-foot provided with a headed stud, an attachment part having a shank provided with a slot having an enlarged portion to permit the head of said stud to pass through said shank, the said shank having an up-turned flange fitting against the shank portion of said pressed-foot, and a looped spring attached to the said shank portion of said presser-foot and having a spring member which overlaps and bears against the said up-turned flange to hold the attachment part in place frictionally, but permitting it to be readily adjusted or removed.

1,109,899. BRUSH FOR ELECTRIC CONTACTS. JOSEPH ERNEST COLAS and EDMOND LOUIS MARIE-RAGONOT, Paris, France. Filed Nov. 1, 1913. Serial No. 798,733. (Cl. 246—25.)



1. A contact brush holder comprising in combination with a brush consisting of a plurality of conductive filaments, a supporting frame, an element holding the brush and pivotally mounted in said supporting frame and means connected with the brush holder for supplying a lubricant to the entire space between the various conductive filaments.

2. A contact brush holding device comprising in combination with a brush consisting of conductive filaments, a frame, a supporting element pivotally mounted in the

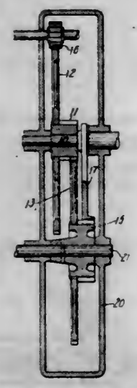
frame, a plurality of springs connected with the sides of the frame and with said supporting element, the brush being axially adjustable in the supporting element and means for supplying a lubricant to the interspace between the filaments.

3. A contact brush holding device comprising in combination with a brush consisting of a plurality of conductive elements, a frame, a supporting element pivotally mounted in said frame, a threaded member connected with the brush and extending through said pivotal supporting element, a receptacle containing a lubricant on said threaded member, said threaded member being provided with a bore communicating with said receptacle and terminating above the brush.

4. A contact brush holding device comprising in combination with a brush consisting of a plurality of electric filaments, a frame, a supporting element for the brush pivotally mounted in said frame, a member connected with the brush and extending adjustably through the pivotal support, said member being provided with a bore and means for feeding a lubricant into said bore.

5. A contact brush holding device comprising in combination with a brush consisting of a plurality of filaments, a frame, a supporting element for the brush pivotally mounted in said frame, springs detachably connected with the frame and with said supporting element, a threaded member provided with a bore connected with the brush and extending through said supporting element and a lubricant receptacle mounted on said threaded member and adapted to supply a lubricant through the bore of said threaded member to the elements of the brush.

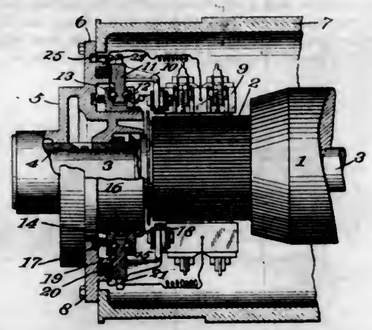
1,109,900. GEARING. JOHN P. COLEMAN, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Aug. 5, 1912, Serial No. 713,239. Divided and this application filed May 23, 1913. Serial No. 769,403. (Cl. 74—41.)



In combination, a pinion whose teeth are partially cut down adjacent one end leaving shoulders, a gear whose hub is slightly narrower than the length of the reduced portion of the pinion teeth, said hub having a bore provided with teeth which match with the reduced portions of the pinion teeth, the projecting ends of said reduced tooth portions being peened over against the gear hub to hold the gear against the said shoulders.

1,109,901. REVERSIBLE BRUSH-HOLDER FOR DYNAMOS. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Aug. 29, 1911. Serial No. 646,650. (Cl. 171—210.)

1. In a dynamo electric machine an armature, means for maintaining the current flow always in the same direction for reversals of rotation of said armature, said means being adapted to rotate therewith; said means comprising means also rotatable with the armature for holding the first-named means stationary, both means being movable in the direction of the axis of the armature.



2. In a dynamo electric machine an armature, means for maintaining the current flow always in the same direction for reversals of rotation of said armature, said means being adapted to rotate therewith; said means comprising magnetizable means also rotatable with the armature for holding the first-named means stationary so as to avoid chattering, both means being movable in the direction of the axis of the armature.

3. In a dynamo electric machine an armature, means for maintaining the current flow always in the same direction for reversals of rotation of said armature, said means being adapted to rotate therewith; said means comprising magnetizable means also rotatable with the armature, and electromagnetic means for holding the magnetizable means stationary so as to avoid chattering, said magnetizable means being also movable in the direction of the axis of the armature.

4. In a dynamo electric machine an armature, means for maintaining the current flow always in the same direction for reversals of rotation of said armature, said means being adapted to rotate therewith; said means comprising magnetizable means also rotatable with the armature, said means being movable in the direction of the axis thereof; one or more stops for restraining said magnetizable means, and electromagnetic means for holding the magnetizable means stationary so as to avoid chattering.

5. A dynamo having an armature, a commutator and brushes therefor, means for holding said brushes in operative relation to said commutator, means for rotatably supporting said holding means whereby the same may be rotated comprising bearing means located upon opposite sides of said supporting means, and magnetic means cooperating therewith.

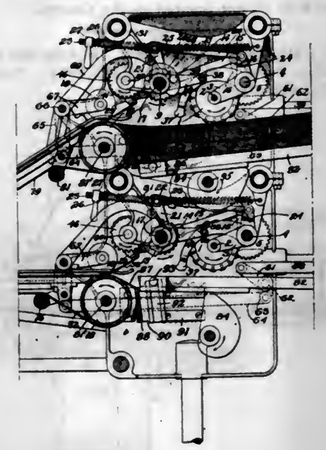
[Claims 6 to 13 not printed in the Gazette.]

1,109,902. PAPER-FEEDING MACHINE. FRANK L. CROSS, Wollaston, Mass., assignor to Cross Paper Feeder Company, a Corporation of Maine. Filed Jan. 2, 1912. Serial No. 668,864. (Cl. 101—39.)

1. A paper feeding machine, having, in combination, a plurality of mechanisms for separating and feeding sheets in regular succession, and means for discontinuing the action of one mechanism and starting an inactive mechanism to continue the feed of sheets in the regular succession, substantially as described.

2. A paper feeding machine, having, in combination, a plurality of feed tables, sheet separating mechanism for each table, and means for stopping the action of one separating mechanism and starting another to continue the feeding of sheets in regular succession, substantially as described.

3. A paper feeding machine, having, in combination, a plurality of sheet separating mechanisms, devices for delivering the sheets from either mechanism to a common point, and means for stopping one separating mechanism and starting another to continue the delivery of sheets in regular succession, substantially as described.

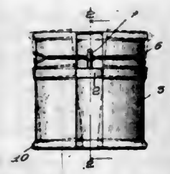


4. A paper feeding machine, having, in combination, a plurality of sheet separating mechanisms, devices for delivering the sheets from either mechanism to a common point, and mechanism for automatically stopping an active mechanism and starting an idle mechanism to continue the delivery of sheets in regular succession, substantially as described.

5. A paper feeding machine, having, in combination, a plurality of vertically movable feed tables, sheet separating devices for each table, devices for delivering the sheets from either separating mechanism in regular succession, and means for discontinuing the feed of sheets from one table and starting the feed of sheets from another table, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,109,903. MUSICAL TOY. CURTIS L. CRUVER and WILLIAM A. PETERS, Chicago, Ill. Filed Oct. 8, 1913. Serial No. 794,019. (Cl. 46—46.)



1. A musical toy comprising a cylinder having a longitudinally disposed opening in one side thereof, a diaphragm mounted within the said cylinder transversely of the axis thereof, a torsionally flexible member stretched across the said gap and secured at its opposite ends to the said cylinder, and a tapper carried by the said flexible member, one end of the said tapper extending inward of the cylinder through the said gap and normally pressed against the said diaphragm by the torsional action of the said flexible member, the other end of said tapper providing a handle for digitally manipulating the tapper.

2. A musical toy comprising a cylinder having a gap longitudinally disposed therein, a resonant disk mounted within the said cylinder, a torsionally flexible member mounted upon the said cylinder and extending across the said gap, and a tapper carried by the said flexible member, the ends of the said tapper extending respectively outward beyond the periphery of the said cylinder and inward into engagement with the said resonant disk, there being circumferentially disposed formations upon the said cylinder engaging the said disk to prevent the motion of the latter longitudinally of the cylinder, the tension of the said flexible member simultaneously holding the said cylinder with its said formations in their said engagement with the said disk and holding the inner end of the tapper yieldingly against the said disk.

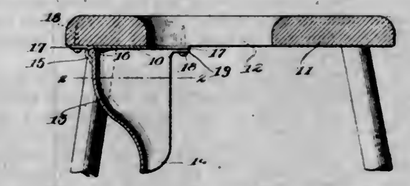
3. A musical toy comprising a cylinder having a longitudinally disposed gap therein and having an inwardly concave groove extending circumferentially thereof, a resonant disk housed by the cylinder and seated in the said groove, the bore of the said cylinder being smaller than the said disk, a torsionally flexible member stretched across the said gap and secured at its ends to the said cylinder, and a tapper carried by the said flexible member and having one end yieldingly pressed by the flexible member against the said disk, the tension of the said flexible member tending to decrease the diameter of the cylinder, whereby the said groove formation is caused to house the edges of the disk to hold the latter rigid with respect to the cylinder.

4. A musical toy comprising a cylinder of resonant material having a longitudinally disposed gap therein and having a pair of prongs disposed at opposite sides of the said gap, an endless flexible member looped over the said prongs and stretched across the said gap, and a tapper carried by the portion of the said flexible member opposite the said gap; the said flexible member being twisted about itself, whereby its torsional tendency to untwist will hold the inner end of the said tapper in yielding engagement with the said disk, the other end of the said tapper projecting outwardly of the said cylinder and enabling the tapper to be digitally manipulated.

5. A musical toy comprising a disk of resonant material, a casing therefor formed of a strip of metal shorter in length than the circumference of the said disk and equipped with a longitudinally disposed groove formation, the said strip being wrapped about the periphery of the said disk to form a casing for the latter, the edge portion of the said disk being seated in the said groove to interlock the disk with the said casing, a torsionally flexible member secured at its ends to portions of the said housing and stretched across the gap between the ends of the strip forming the said casing, and a tapper carried by the said flexible member and projecting through the said gap into the interior of the said housing and into engagement with the said disk, the said tapper also having a portion projecting outwardly of the casing to afford a means for digitally manipulating the tapper.

[Claims 6 to 9 not printed in the Gazette.]

1,109,904. SHIELD FOR TOILET-SEATS. AMANDA G. DAHLGREN, Chicago, Ill. Filed Nov. 11, 1913. Serial No. 800,294. (Cl. 4—18.)

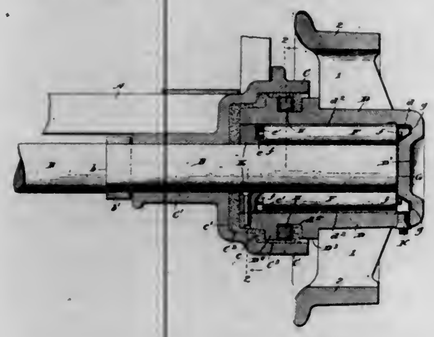


1. A device of the class described comprising a top member having an undercurving rim at one edge formed in sections spaced apart, a depending member having a bead at the upper edge formed in sections spaced apart and engaging respectively in the undercurving rim sections of the top member, an ear projecting from the depending section and extended between the turned-under rim sections and adapted to be secured to a support, and means adapted to connect the top section and the depending section to a support at their forward edges.

2. A top member having an undercurving rim at one edge formed in sections spaced apart and with terminal

ears, a depending member having a bead at the upper edge formed in sections spaced apart and engaging in the under-curving rim sections, an ear projecting from the depending section and extending between the curved-under rim sections, other ears projecting from the depending member and bearing beneath the terminal ears of the top member, said ears adapted to receive fastening devices to secure the top member and the depending member to a support.

1,109,905. WHEEL STRUCTURE. ALFRED BRYANT DAY, Knoxville, Tenn. Filed Aug. 14, 1913. Serial No. 784,805. (Cl. 105—67.)



1. In a wheel structure and in combination, a cylindrical axle part, a pedestal having a recessed outer end portion, a hub sleeved on the axle, a barrier member fixedly secured within the inner end of the hub, rollers within the hub, and means for retaining the rollers within the hub when the axle is removed.

2. In a car and in combination with a body, a cylindrical axle member, a pedestal member to which the axle is secured and having a recessed outer portion of different diameters forming a shouldered part between the portions, a hub loosely mounted on the end of the axle with its inner ends separated from the pedestal member by an unobstructed space, and having a projecting rib part at said inner end spaced from said shouldered portion and from the pedestal box, an end thrust bearing on the hub, and means on the pedestal for securing the hub against outward movement, substantially as described.

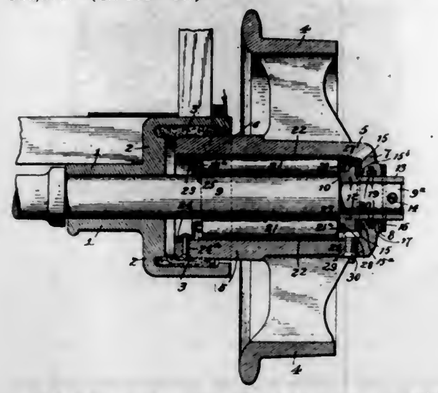
3. In a wheel structure and in combination a pedestal member having a recessed outer portion of different diameters formed with a shouldered portion therebetween, a hub part having a shoulder on its periphery adjacent its inner end and fitted in said pedestal portion, means on the pedestal portion for maintaining the hub against outward movement, and an axle member having a cylindrical end entering the hub and secured to said pedestal portion, substantially as described.

4. In a wheel structure and in combination a pedestal having a recessed outer end portion an axle, a hub sleeved on the axle and having an end positioned within a terminal recess of the pedestal, said hub also having an integral end cap portion constituting an end thrust bearing for the axle and formed with an annular recess adjacent said cap, a barrier removably secured at the opposite end of the hub and having an inwardly projecting part, and a series of rollers having end studs located respectively within said recess and spaced between the inwardly projecting part of the barrier and the hub.

5. In a wheel structure, the combination with a pedestal member having a recessed outer portion a cylindrical axle projecting from the pedestal, of a hub member sleeved upon the axle and positioned within the recess of the pedestal, said hub member having a closed outer end formed with an annular recess on its inner wall, of a barrier member having a longitudinally projecting inner portion secured to the inner end of the hub, and anti-friction rollers in the hub having projecting portions entering between the longitudinal portion of the barrier and the hub and in the said annular recesses respectively.

[Claims 6 to 10 not printed in the Gazette.]

1,109,906. MINING-CAR WHEEL. ALFRED BRYANT DAY, Knoxville, Tenn. Filed Jan. 28, 1914. Serial No. 814,879. (Cl. 105—67.)



1. In a wheel construction, the combination of a pedestal member having a hub receiving part, a wheel having a hub with a portion positioned within the hub receiving part of the pedestal and having an opening in its cap, an axle projecting through the hub and through the end opening thereof, and a thimble sleeved upon the axle and secured thereto and having means engaging the hub cap.

2. In a wheel construction, the combination of a pedestal member, a wheel, a hub for the wheel, an axle projecting from the pedestal and through the hub, a collar interposed between the axle and hub cap and projecting through the latter, and means for securing the collar to the axle.

3. In a wheel construction, the combination of an axle, a wheel having a hub rotatably mounted on the axle, means for resisting end thrust of the hub in one direction, and means for resisting said end thrust in an opposite direction, including an annular collar secured to the axle and overlying the inner face of the hub cap, the hub cap overlying and having a sleeved engagement with said collar.

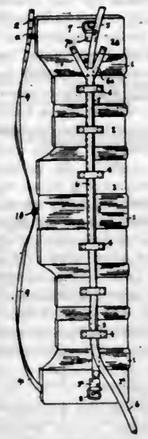
4. In a wheel construction, the combination of an axle, a wheel having a hub rotatably mounted on the axle, means for resisting end thrust of the hub in one direction, and means for resisting said end thrust in an opposite direction, including an annular collar secured to the axle and overlying the inner face of the hub cap, and a friction receiving member interposed between said collar and said inner face of the cap.

5. In a wheel construction, the combination of a pedestal, a wheel having a hub part loosely positioned in the pedestal, an axle, the hub being loosely sleeved upon the axle for rotatable movement, the axle projecting through the hub cap, means positioned on the axle to the outside of the hub cap for resisting the end thrust movement in one direction, and means detachably secured to the axle and having an abutting part arranged to the inside of the hub cap for resisting the end thrust in an opposite direction.

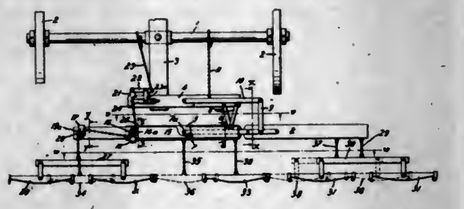
[Claims 6 to 21 not printed in the Gazette.]

1,109,907. LIFE-BELT. RICHARD DRURY, Liverpool, England. Filed Mar. 17, 1913. Serial No. 754,843. (Cl. 9—17.)

A life belt consisting of canvas pockets, with intervening pliable portions and cork slabs in said pockets, and of two superposed straps fixed to opposite ends along the middle of the life belt, open scroll-hooks fixed adjacent to the attached end of each strap in combination with a single shoulder strap fast at one end and adjustably secured to the other end of the life belt with slidable connection at the middle of the life belt, as shown and described.



1,109,908. DRAFT-EQUALIZER. THOMAS J. DUDLEY, Dallas, Tex. Filed Dec. 31, 1913. Serial No. 809,633. (Cl. 21—76.)

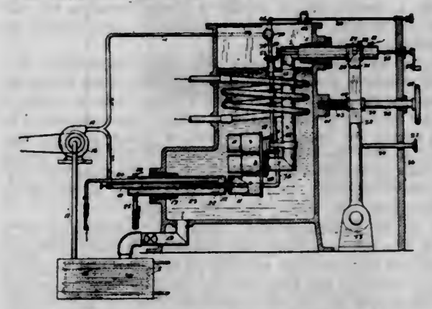


1. A draft equalizer, comprising a lever transversely pivoted upon the beam of a farm implement, a second lever spaced in front of the first lever, and pivotally supported by the same, a third lever pivoted upon the second lever, a fourth lever pivotally connected with the second lever and normally alined with the same, a fifth lever pivoted upon the first lever, and projecting beyond one end of the same, a swinging link extending between the free end of the fifth lever and the fourth lever, a flexible connection between the fifth lever and some portion of the farm implement, and whiffle-trees respectively connected with the outer end of the fourth lever and with the end portions of the third lever.

2. A draft equalizer comprising a lever transversely pivoted upon the beam of a farm implement, a second lever spaced in front of the first lever and pivotally supported by the same, a third lever pivoted upon the second lever, a fourth lever pivotally connected with the first lever and normally alined with the same, a fifth lever pivoted upon the first lever and projecting beyond one extremity of same, a swinging link connecting the free end of the fifth lever with the fourth lever, a flexible connection between the fifth lever and some portion of the farm implement, a flexible connection between the first lever and some portion of the farm implement, a flexible connection between the first and second lever having a portion extending longitudinally upon the third lever, and adapted to move longitudinally relative to the same, and having a portion extending forwardly from the third lever, and whiffle-trees respectively connected to the forward end of said flexible connection, to the third lever, and to the outer end of the fourth lever.

3. A draft equalizer comprising a lever eccentrically pivoted upon the beam of a farm implement, a second lever spaced in front of the first lever and pivotally supported at one of its extremities by the longer arm of the first lever, a third lever pivoted upon the free end of the second lever, and projecting beyond said end, a fourth lever pivotally connected with the pivoted end of the second lever, and normally alined with the second lever, means limiting the angular displacement of the fourth lever, a flexible connection between the short arm of the first lever and the adjacent end portion of the third lever and whiffle-trees respectively having connection with the outer end of the fourth lever and the end portions of the third lever.

1,109,909. WIRELESS OSCILLATOR. HENRY P. DWYER, San Francisco, Cal., assignor to Dwyer Wireless Telephone and Telegraph Company, San Francisco, Cal., a Corporation of Delaware. Filed Aug. 5, 1912. Serial No. 713,275. (Cl. 250—38.)



1. An oscillator comprising a liquid, electrodes immersed therein, one of said electrodes having an aperture and the other having a surface opposite to said aperture and means for producing a continuous flow of said liquid through said aperture.

2. An oscillator comprising alcohol, electrodes immersed therein, one of said electrodes having an aperture and the other having a surface opposite said aperture, and means for producing a continuous flow of alcohol through said aperture.

3. An oscillator comprising alcohol, electrodes having electrode surfaces immersed therein, one of said electrode surfaces having an aperture opposite to the center of the other electrode surface, means for producing a continuous flow of said alcohol through said aperture.

4. An oscillator comprising a liquid, electrodes having electrode surfaces immersed therein, one of said electrode surfaces having an aperture opposite to the center of the other electrode surface, means for producing a continuous flow of said liquid through said aperture against the nearer surface of said other electrode, and for producing a continuous flow of said liquid against its other surface.

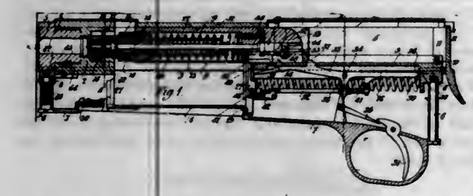
5. An oscillator comprising an optically active liquid, electrodes having electrode surfaces immersed therein, one of said electrode surfaces having an aperture opposite to the center of the other electrode surface, means for producing a continuous flow of said liquid through said aprture, and means for cooling said liquid.

[Claims 6 and 7 not printed in the Gazette.]

1,109,910. AUTOMATIC SMALL-ARM. JAMES EASTWICK, Fyning Wood, Rogate, England. Filed June 13, 1914. Serial No. 845,015. (Cl. 42—3.)

1. In an automatic small arm, the combination of a stock, a barrel, a raceway fast therewith, a recoil spring between the stock and the raceway, a breech bolt, a weight, a spring between the bolt and the weight, and means actuated by this spring for unlocking the bolt.

2. In an automatic small arm, the combination of a stock, a barrel, a magazine and a raceway fast therewith, a recoil spring between the stock and the raceway, a breech bolt, a weight, a spring between the bolt and the weight, and means actuated by this spring for unlocking the bolt.



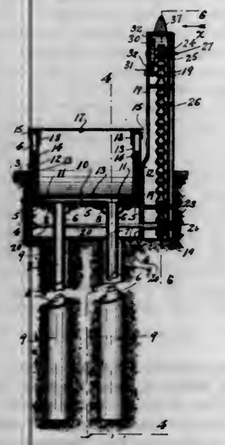
3. In an automatic small arm, the combination of a stock, a barrel, a raceway fast therewith, a recoil spring between the stock and the raceway, a clutch adapted normally to lock the raceway to the stock, a trigger, means actuated by the trigger for releasing the raceway from the stock, a breech bolt, a weight, a spring between the bolt and the weight, and means actuated by this spring for unlocking the bolt.

4. In an automatic small arm, the combination of a stock, a barrel, a raceway fast therewith, a recoil spring between the stock and the raceway, a breech bolt, a weight, a spring between the bolt and the weight, means actuated by this spring for unlocking the bolt, a clutch adapted normally to lock the raceway and weight to the stock, a trigger, means actuated by the trigger for releasing the raceway from the stock, and means actuated by the recoil for withdrawing the clutch from the weight.

5. In an automatic small arm, the combination of a stock, a barrel, a raceway fast therewith, a recoil spring between the stock and the raceway; a breech bolt, a weight, a spring between the bolt and the weight, means actuated by this spring for unlocking the bolt, a clutch adapted normally to lock the raceway and weight to the stock, a trigger, means actuated by the trigger for releasing the raceway from the stock, a hand lever pivoted on the weight and adapted to unlock the bolt and to release the weight from the clutch.

[Claims 6 to 8 not printed in the Gazette.]

1,109,911. REFUSE-DEPOSITORY. FRANK EHRHARDT, Newark, N. J. Filed Oct. 14, 1913. Serial No. 795,042. (Cl. 214—12.)



1. In elevating means for refuse receptacles a main-casing adapted to be sunk in the ground, tubular guide-members extending downwardly from the bottom of said main-casing, rack-members slidably mounted in said guide-members, means for pivotally supporting a refuse-receptacle in connection with the upper ends of said rack-members, a transverse shaft journaled in the lower portion of said main-casing beneath said refuse-receptacle, spur-gears fixed upon said shaft, said guide-members being provided with openings through which said spur-gears project to mesh with said rack-members, power transmission mechanism for operating said shaft, spur-gears and rack-members and a hollow post-member adjacent to said main casing in which said power transmission mechanism is concealed.

2. In elevating means for refuse receptacles a main-casing adapted to be sunk in the ground, tubular guide-members extending downwardly from the bottom of said main-casing, rack-members slidably mounted in said guide-members, means for pivotally supporting a refuse-receptacle in connection with the upper ends of said rack-members, a transverse shaft journaled in the lower portion of said main-casing beneath said refuse-receptacle, spur-gears fixed upon said shaft, said guide-members being provided with openings through which said spur-gears project to mesh with said rack-members, power transmission mechanism for operating said shaft, spur-gears and rack-members and a detachable hand-crank for applying power to said transmission mechanism.

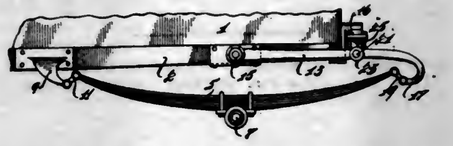
3. In an elevating means for refuse-receptacles a main-casing adapted to be sunk in the ground, tubular guide-members extending downwardly from the bottom of said main-casing, rack-members slidably mounted in said guide-members, means for pivotally supporting a refuse-receptacle in connection with the upper ends of said rack-members, a transverse shaft journaled in the lower portion of said main-casing beneath said refuse-receptacle, spur-gears fixed upon said shaft, said guide-members being provided with openings through which said spur-gears project to mesh with said rack-members, power transmission mechanism for operating said shaft, spur-gears and rack-members, a detachable hand-crank for applying power to said transmission mechanism, a brake mechanism for locking said power transmission mechanism to hold said refuse-receptacle in lifted position while being dumped.

4. In an elevating means for refuse-receptacle, a main-casing adapted to be sunk in the ground, tubular guide-members extending downwardly from the bottom of said main-casing, rack-members slidably mounted in said guide-members, means for pivotally supporting a refuse-receptacle in connection with the upper ends of said rack-members, a transverse shaft journaled in the lower portion of said main-casing beneath said refuse-receptacle, spur-gears fixed upon said shaft, said guide-members being provided with openings through which said spur-gears project to mesh with said rack-members, power transmission mechanism for operating said shaft, spur-gears and rack-members and a detachable hand-crank for applying power to said transmission mechanism, a brake mechanism for locking said power transmission mechanism to hold said refuse-receptacle in lifted position while being dumped, and a hollow post-member adjacent to said main casing in which said power-transmission mechanism is concealed.

5. In an elevating means for refuse-receptacles a main-casing adapted to be sunk in the ground, tubular guide-members extending downwardly from the bottom of said main-casing, rack-member slidably mounted in said guide-members, means for pivotally supporting a refuse-receptacle in connection with the upper ends of said rack-members, a transverse shaft journaled in the lower portion of said main-casing beneath said refuse-receptacle, spur-gears fixed upon said shaft, said guide-members being provided with openings through which said spur-gears project to mesh with said rack-members, a hollow-post-member mounted in the ground adjacent to said main-casing, one end of said shaft extending through the lower end of said post-member, a driving-shaft journaled in the upper end of said post-member, sprocket-wheels attached respectively upon said transverse shaft and said driving shaft, a driving-chain running over said sprocket-wheels, and a detachable hand-crank adapted to be connected with one end of said driving-shaft to apply power thereto.

[Claim 6 not printed in the Gazette.]

1,109,912. SPRING SUSPENSION MECHANISM FOR VEHICLES AND THE LIKE. WILLIAM CHARLES FENTON, New York, N. Y., assignor of one-half to Henry F. Wells, New York, N. Y. Filed Jan. 22, 1913. Serial No. 743,503. (Cl. 21—101.)



1. In a spring suspension mechanism for vehicles and the like, in combination, a longitudinal spring interposed between said vehicle body and its wheel support, means connecting said vehicle body to an end of said spring, comprising a longitudinal lever arm pivoted to said vehicle body directly above said wheel support and extending rearwardly therefrom, said lever arm being connected at its outer end to said spring, and a resilient device intermediate the ends of said lever arm for resisting the movement of said arm.

2. In a spring suspension mechanism for vehicles and the like, in combination, a longitudinal spring at each side of said vehicle interposed between said vehicle body and its wheel support, means connecting said vehicle body to an end of each spring comprising a longitudinal lever arm pivoted to said vehicle body at each side thereof, and a transverse leaf spring member mounted on said vehicle body and extending across the same with its ends connected to said pivoted lever arms.

3. In a spring suspension mechanism for vehicles and the like, in combination, a longitudinal spring at each side of said vehicle interposed between said vehicle body and its wheel support, means connecting said vehicle body to an end of each spring, comprising a longitudinal lever arm pivoted to said vehicle body at each side thereof and extending rearwardly therefrom, and a transverse spring member pivotally mounted on said vehicle body and having its ends connected to said pivoted lever arms.

4. In a spring suspension mechanism for vehicles and the like, in combination, a longitudinal spring at each side of said vehicle interposed between said vehicle body and its wheel support, a longitudinal lever arm pivoted to said vehicle body at each side thereof and connected at one end to the adjacent longitudinal spring, a transverse spring member pivotally mounted on said vehicle body and having its ends connected to said pivoted lever arms.

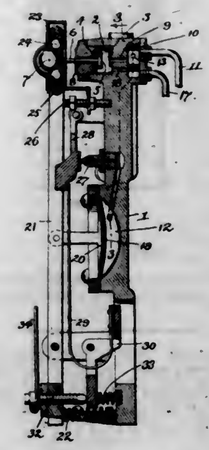
5. In a spring suspension mechanism for vehicles and the like, in combination a longitudinal spring at each side of said vehicle interposed between said vehicle body and its wheel support, a longitudinal lever arm pivoted to said vehicle body at each side thereof directly above said wheel support, said lever being connected at one end to the adjacent longitudinal spring, and a transverse leaf spring mounted on said vehicle body and having each end connected to a pivoted lever arm intermediate the ends of said arm.

[Claims 6 to 9 not printed in the Gazette.]

1,109,913. THERMOSTAT. CHARLES L. FORTIER, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 9, 1912. Serial No. 730,518. (Cl. 236—8.)

1. The combination of a movable valve; a motor; a control device for the motor sensitive to atmospheric conditions; and a quick-throw device forming an operative connection between the motor and valve and comprising a member having a relatively large middle portion, and a contractile, annular helical spring adapted to move to one or the other side of said middle portion to reverse the direction of action of the spring on said member.

2. The combination of a movable valve; a motor; a control device for the motor sensitive to atmospheric conditions; and a quick-throw device forming an operative connection between the motor and valve, and comprising a substantially spherical member and a surrounding contractile annular helical spring adapted to move to one or the other side of the median plane of said spherical member to reverse the direction of action of said spring on said member.



3. The combination of a movable valve; a motor; a control device for the motor responsive to changes in atmospheric conditions; and a quick-throw device forming an operative connection between the valve and motor and comprising a ball and a surrounding annular spring, the ball and spring being relatively movable by the motor to cause a reversal of the direction of action of the spring.

4. The combination of a movable valve; a motor; a control device for the motor responsive to changes in atmospheric conditions; and a quick-throw device forming an operative connection between the valve and motor and comprising a ball, a surrounding annular spring and a series of anti-friction balls interposed between said ball and spring, the ball and the spring with the anti-friction balls being relatively movable by the motor to reverse the direction of action of the spring.

5. The combination of a movable valve; a motor; a control device for the motor responsive to changes in atmospheric conditions; and a quick-throw device forming an operative connection between the valve and motor and comprising a reversely tapered cam, a surrounding annular spring and a series of antifriction balls between said cam and said spring, the cam and the spring with the antifriction balls being relatively movable by the motor to reverse the direction of action of the spring.

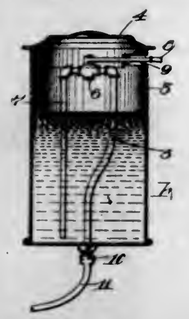
[Claims 6 to 9 not printed in the Gazette.]

1,109,914. DECARBONIZING-LIQUID INJECTOR AND AUXILIARY AIR CONTROL. CONSTANTINE CHRISTIAN FRANGOPOLU, San Francisco, Cal., assignor to W. H. Kent, San Francisco, Cal. Filed July 19, 1913. Serial No. 780,014. (Cl. 123—198.)

1. In combination with a gas engine manifold, a receptacle, a U-shaped pipe mounted in said receptacle and connected to said manifold, a valve in said pipe, means to operate said valve, said receptacle having a slot through which said means extends to allow the latter to move in said slot so as to enable opening and closing of the valve, said slot also acting as an inlet for air to enable the latter to enter the receptacle and be drawn through said pipe to enter the manifold, and a cover for the receptacle.

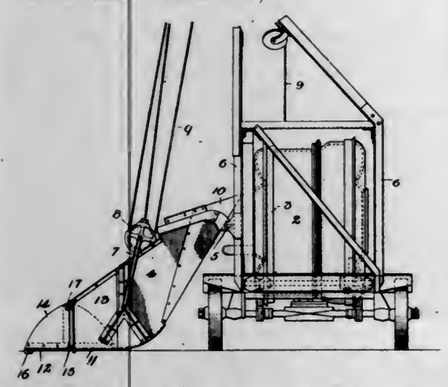
2. In combination with a gas engine manifold, a receptacle, a U-shaped pipe mounted in said receptacle and connected to said manifold, a valve in said pipe, means to operate said valve, said receptacle having a slot, which is located in one side thereof and through which said means extends to enable the means to be moved along the

length of the slot to enable opening and closing of the valve, said slot also acting as an inlet for air to enable the



latter to enter the receptacle and be drawn through said pipe to enter the manifold, and a cover for the receptacle.

1,109,915. LOADER FOR CONCRETE-MIXERS AND SIMILAR MACHINES. DONALD FRASER, Milwaukee, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 18, 1912. Serial No. 732,110. (Cl. 214—1.)

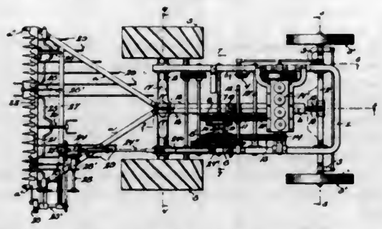


1. A tilting loader having an open delivery end portion, a bottom adapted to rest upon a support, permanent side walls bounding the said delivery end portion and the bottom of the loader, and a hinged wall for the outer end of the loader adapted to be moved into substantially the plane of the bottom, whereby the loader is open at both ends, or to be turned up into engagement with the ends of the sides to form a closing wall for the outer end of the loader.

2. A tilting loader having an open delivery end and an open outer end, a bottom, a portion of which is adapted to rest upon a support, permanent side walls, a pivoted end wall connected at its lower edge with the outer end of the bottom, and side pieces carried by the end walls, these parts being arranged as described whereby when the end wall is let down the loader is open from end to end and the side pieces carried by the hinged end wall form practical continuations of the side walls of the loader, and when said end wall is turned up it closes the outer end of the loader.

3. A pivoted tilting loader having an open spout section to which is secured the pivot about which the loader turns, an outer portion open at its end and having a bottom adapted to rest upon a support, there being permanent side walls bounding both said sections of the loader and terminating on lines which are substantially perpendicular to the plane of the resting portion of the bottom, and an end wall hinged to the outer edge of the bottom of the loader and provided with segmental side pieces arranged to lie close to and parallel with the side walls, whereby when the end wall is let down it forms a practical continuation of the bottom of the loader, and the segmental side pieces which it carries practical continuations of the side walls, and when turned up meets the vertical edges of the side walls and closes the outer end of the loader.

1,109,916. HARVESTER. WILBUR L. FRIDAY, Beaver Dam, Wis. Filed Feb. 24, 1914. Serial No. 820,539. (Cl. 56—78.)

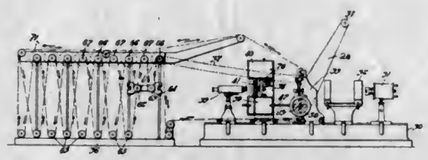


1. The combination of a harvester comprising a tractor having a truck and front and rear axles therefor, a cutter-carrying frame having a reach-bar extending over the front axle and provided with legs projecting forwardly of the axle, cutter-mechanism carried by the frame-legs, an adjustable pivot connection between the reach-bar and truck-frame, and a yielding pivotal connection between the front axle and cutter-carrying frame intermediate of the cutting apparatus and adjustable pivot connection aforesaid.

2. The combination of a harvester comprising a tractor having a wheel-supported truck and front and rear axles for said wheels, a cutter-carrying frame in advance of the truck having a reach-bar extending rearwardly of said truck and over the front axle, a leaf-spring fitted between the reach-bar and axle, means for pivotally confining the reach-bar and axle together whereby said reach-bar is adapted to rise and fall under control of the leaf-spring, and means connecting the rear end of the reach-bar and truck-frame for raising and lowering the forward end of the cutter-carrying frame.

3. The combination of a harvester comprising a tractor having a truck provided with front and rear axles, a cutter-carrying frame extending forwardly of the truck having a reach-bar extending over the front axle and rearwardly of the frame, guides carried by the truck for engagement with the rear end of the reach-bar, a leaf spring secured to the reach-bar having concavo-convexed ends engageable with the front axle, and clip-bolts surrounding said front axle in engagement with said reach-bar.

1,109,917. APPARATUS FOR PRODUCING MOTION-PICTURE FILMS. ADOLPH F. GALL, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 12, 1911. Serial No. 654,224. (Cl. 88—24.)



1. In a motion picture printing machine, means to move a negative film intermittently in one direction, means to move another negative film intermittently in the opposite direction, means to move a single sensitized film in synchronism with said negatives and means including a device for projecting light to print photographically and simultaneously on the single sensitized film, one picture from each of the negative films, substantially as described.

2. In a motion picture printing machine, means to move a negative film intermittently in one direction, means to move another negative film intermittently in the opposite direction, and means to shift the relative position of the negatives to bring the pictures thereof in alinement, substantially as described.

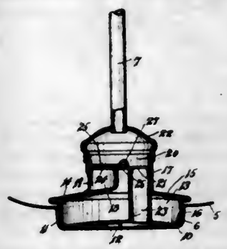
3. In a motion picture printing machine, means to move a negative film intermittently in one direction, means to move a second negative intermittently and in synchronism with said negative, means to move a second negative film intermittently and in synchronism with said first named negative and said sensitized films, but in the opposite direction, and means including a device for projecting light to photographically and simultaneously print on said sensitized film one picture from each negative, substantially as described.

4. In a motion picture printing machine, means to move a negative film intermittently in one direction, means to move a sensitized film intermittently and in synchronism with said negative, means to move a second negative intermittently and in synchronism with said first named negative and said sensitized films, but in the opposite direction, means including a device for projecting light to photographically and simultaneously print on said sensitized film, one picture from each negative, and means to shift the relative positions of the negatives to bring the pictures thereof in alinement substantially as described.

5. In a motion picture printing machine, a plate having a plurality of exposure openings therein, means for moving a negative film intermittently and past one of said openings in one direction, means for moving another negative film intermittently past another of said openings and in the opposite direction, means for intermittently moving a sensitized film parallel to said negatives and in synchronism therewith, and means to pass light through said negative films and exposure openings on to said sensitized film, when all the films are at rest, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,109,918. PERCOLATING COFFEE-POT. ISRAEL GEFTER, Meriden, Conn. Filed Dec. 15, 1913. Serial No. 806,667. (Cl. 53—3.)



1. A percolator including a vessel, a device constructed to form the top of a heating chamber at the bottom of the vessel, a neck rising from the top of said device and having a closed top, a fountain tube opening into the neck, a diaphragm extending across the neck, a valve chamber above said diaphragm and an inlet chamber below it, the said diaphragm having a valve opening and an opening to a passage to the heating chamber, said neck having an opening in its side wall to said inlet chamber, and a valve pivotally mounted on said diaphragm to control flow through the valve opening.

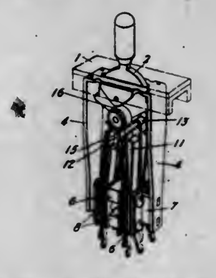
2. A percolator including a vessel, a device formed to provide a heating chamber at the bottom of the vessel, said device having a neck rising therefrom, a cap removably secured to the neck to close the top thereof, a fountain tube rising from said cap, a diaphragm extending across the neck and constituting a boundary of a valve chamber above and an inlet chamber below said diaphragm, the said diaphragm having a valve opening and an opening to a passage communicating with the heating chamber, said neck having an opening through its side wall communicating with the inlet chamber, and a valve pivotally mounted upon said diaphragm to control flow through the valve opening.

3. A percolator including a vessel, a fountain located in the bottom of the vessel and constructed to form the top of a heating chamber at the bottom of the vessel, said fountain having an insulating chamber, a neck rising from the top of the insulating chamber, said neck being closed at its top, a fountain tube rising from the top of the neck, a diaphragm extending across the neck forming a boundary of a valve chamber above and an inlet chamber below said diaphragm, the said diaphragm having a valve opening and an opening to a passage extending through the fountain to the heating chamber, said neck also having an opening to said inlet chamber, and a valve pivotally mounted on said diaphragm to control flow through said valve opening.

4. A percolator including a vessel, a fountain constructed to form the top of a heating chamber at the bottom of the vessel, said fountain having a top forming one wall of an insulating chamber, a neck rising from said top, a cap removably secured to the neck and forming the top of a valve chamber within the neck, a fountain tube rising from said cap, a tube extending through said fountain and forming a passage between the heating chamber and said valve chamber, a diaphragm extending across the neck and dividing its interior into said valve chamber and into a lower inlet chamber, the said diaphragm having an opening to the inlet chamber, and an opening to said passage, and a valve pivotally mounted on said diaphragm to control flow through the opening to the inlet chamber, said neck having an opening through its side wall to said inlet chamber.

5. A percolator including a vessel, a fountain constructed to form the top of a heating chamber at the bottom of the vessel, said fountain having a top forming one wall of an insulating chamber within the fountain, a neck projecting upwardly from the top of said fountain and closed at its upper end, a fountain tube rising from said neck, a diaphragm extending across the neck between its top and bottom, and dividing the neck into a valve chamber above and an inlet chamber below said diaphragm, said diaphragm having a valve opening and an opening to a passage through the insulating chamber to the heating chamber, said neck having an opening through its side wall to the inlet chamber, and a valve pivotally mounted on said diaphragm to control flow through said valve opening.

1,109,919. SWITCH-KEY. ALBERT F. F. GILSON, Closter, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 10, 1914. Serial No. 817,832. (Cl. 179—176.)



1. In a key switch, the combination with an operating device, of a pair of normally closed switch springs controlled thereby, one of said springs carrying a resilient portion to be engaged by said operating device, all of the resilience of said portion being taken up after the engagement of said operating device and before the separation of said contacts occurs.

2. In a key switch, the combination with an operating lever, of an insulated spring-actuating member carried thereon, a spring engaged by said member having two resilient portions, one of said resilient portions being flexed upon the first engagement of said insulated actuating member with said spring to absorb the inertia of said operating lever, and the other of said resilient portions being flexed by the manual movement of said operating lever, and circuit controlling contacts actuated by the flexure of the last named resilient portion.

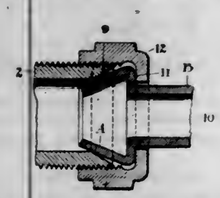
3. In a key switch, the combination with a movable operating device, of a switch spring adapted to be engaged by said device, means for throwing said device into engagement with said switch spring when the device has been manually released, and a resilient member carried on said switch spring to absorb the inertia of said operating member when the latter is thrown into engagement with said switch spring so that the contact portion of said switch spring will not be unduly moved out of its normal position by the inertia of said actuating member in its engagement with said switch spring.

4. In a key switch, a group of contact springs embracing a master contact member, an operating lever, a resilient loop shaped portion on said master contact member having its free end normally engaged by said operating lever and so positioned that said operating lever moves toward the knee of said loop-shaped portion upon being actuated from normal position.

5. In a key switch, a group of contact springs embracing a master contact member, an operating lever, and a compressible loop shaped portion on said master contact member having its free end normally engaged by said operating lever and so positioned that said operating lever moves toward the knee of said loop-shaped portion upon being actuated from normal position.

[Claims 6 and 7 not printed in the Gazette.]

1,100,920. BASIN, BATH-COCK, AND OTHER PLUMBING CONNECTION. JOSEPH H. GLAUBER, Cleveland, Ohio. Filed Mar. 10, 1911. Serial No. 613,610. (Cl. 137—28.)

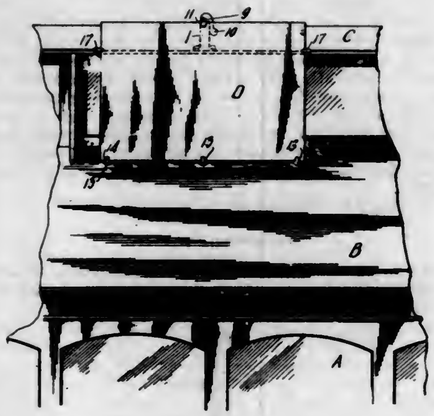


1. As a new article of manufacture and sale, a tubular coupling pipe of pliant metal having an acute-angled truncated head formed from the wall thereof at one end, said head being of relatively greater diameter than the pipe to form a right-angled shoulder for a union nut and having a converging portion of uniform thickness extending on straight lines at an angle of approximately twenty-two and one-half degrees to the axis of the pipe from the outside diameter of said shoulder to a smaller diameter than the smallest internal diameter of the inner edge of the tapered seat of the cast metal faucet shanks in general use so as to provide an initial seating engagement of the truncated portion of the head with said edge at a point directly opposite the thick portion of the shank end.

2. In a plumbing connection adapted to be used between a service pipe and a faucet, a tubular shank having an internally-tapered end providing a flaring seat with an annular sharp edge inwardly from its extremity, in combination with a tubular coupling member having separate coupling ends, one of which comprises a hollow truncated acute-angled cone having a right-angled base wall to provide an annular angular shoulder about said member and a side wall of substantially uniform thickness converging forwardly on straight lines at an angle of approximately twenty-two and one-half degrees to the axis of said member and providing a yielding body of greater diameter than said tubular member and of extended length and of smaller diameter at its end than said shank internally at the inner sharp edge of its tapering seat, and means to forcibly couple said shank and member together.

3. In a plumbing connection, the combination of a tubular threaded shank for a faucet or other water distributing device, having an internal flaring seat at one end, and a union nut, with a coupling tube for a service pipe, made of pliant metal with one end thereof expanded to a relatively greater diameter in the form of an annular right-angled shoulder and an annular converging portion of substantially uniform thickness extending on straight lines externally and internally from the outer portion of said shoulder to a smaller diameter of relatively the same diameter as said tube, the degree of angle of said converging portion being relatively acute to the axis of the pipe and said portion being also relatively long to make an initial seating engagement with said flaring shank seat inwardly from its extremity and providing a contractible extension to permit the said coupling tube end to project into the main bore of said shank beyond the smallest diameter of said flaring seat when the parts are coupled together with the union nut screwed to its limit.

1,109,921. SIGN-SUPPORT. ERNEST A. HAVENS, Peoria, Ill., assignor to Mark D. Batchelder, Peoria, Ill. Filed Nov. 5, 1907. Serial No. 400,889. (Cl. 40—125.)



1. In combination in a sign support, a standard, a member slidably connected with said standard, means for securing said member in adjusted positions, and a weighted arm pivotally connected with said member to swing in a plane parallel to the face of the standard and having means to retain a sign when the weighted arm is in its lower position.

2. In combination in a sign support, a standard, a member slidingly mounted on said standard, means for locking the member in adjusted positions on said standard, a weighted arm pivotally connected with said member to swing in a plane parallel to the face of the standard, said weighted arm being formed with a curved or elbow portion having a finger extending therefrom in a direction substantially parallel with the weighted arm, which finger is adapted to lock a sign between itself and said member when the weighted arm is at its lower position.

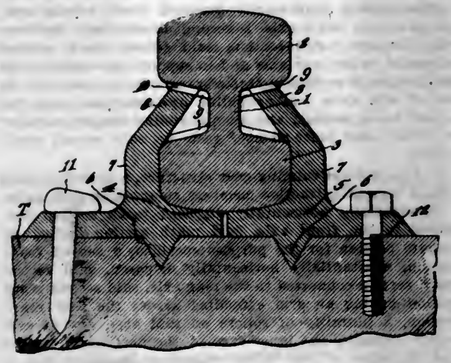
3. In combination in a sign support, a standard, a member slidingly mounted on said standard, means for locking said member in adjusted positions on said standard, a rib formed on the upper portion of said member, which rib forms an offset on the upper end of said member, a weighted arm pivoted to said member, said weighted arm having a finger and also being provided with an offset which is adapted to engage said first mentioned offset when the weighted arm is in its upper position to limit its upward movement, said finger being constructed so as to assume a downwardly extending position spaced from said rib when the weighted arm is lowered.

4. A car sign support, comprising a plurality of cleats to be attached to the lower deck of a car for receiving the lower edges of signs, cleats adapted to be attached to the upper deck of a car for receiving the side edges of adjacent signs to prevent endwise movement, and a standard adapted to be supported by the upper deck of a car and means connected with the said standard for detachably securing the upper edge of said signs.

5. A car sign support, comprising a plurality of members for receiving the lower edge of a sign, means with which the opposite edges of the sign may have a slidable relation and for preventing endwise movement of said sign, a standard, a member having a slidable relation with said standard, and an arm pivotally connected with said member, and provided with a finger for securing the upper edge of the sign between said finger and said member.

[Claim 6 not printed in the Gazette.]

1,109,922. RAILROAD-RAIL. FRANK O. HELLSTROM, Bismarck, N. D., assignor to American Safety Steel Rail Co., Bismarck, N. D. Filed Dec. 15, 1913. Serial No. 806,895. (Cl. 239—16.)



1. A railroad rail including an invertible and reversible body having upper and lower duplicate heads, and holding members for receiving the body therebetween and supporting the same, each of said members including a base, a rib extending downwardly therefrom, a flange upstanding from the base, the flanges and bases of the holding members coöperating to form a seat for the reception of the lower head of the body, and said flanges extending inwardly and upwardly against the lower faces of the upper head of the body.

2. A railroad rail including an invertible and reversible body having upper and lower duplicate heads, and holding members for receiving the body therebetween and supporting the same, each of said members including a base, a flange upstanding from the base, the flanges and bases of the holding members coöperating to form a seat for the reception of the lower head of the body, and said flanges extending inwardly and upwardly against the lower faces of the upper head of the body, there being a reinforcing rib extending longitudinally under each base plate in the line of thrust exerted by the upper head against the flange.

3. A railroad rail including an invertible and reversible body having upper and lower duplicate heads, and holding members for receiving the body therebetween and supporting the same, each of said members including a base, a rib extending downwardly from the base, a flange upstanding from the base, the flanges and bases of the holding members coöperating to form a seat for the reception of the lower head of the body, and said flanges extending inwardly and upwardly against the lower faces of the upper head of the body, there being interengaging portions upon the meeting faces of the body and flanges, for preventing longitudinal movement of the body relative to the flanges.

4. A railroad rail including an invertible and reversible body having upper and lower duplicate heads and a web connecting the same, and holding members, each of said members including a base, a rib extending downwardly from the base, and an upstanding flange extending longitudinally thereof, the bases and flanges of the two holding members coöperating to form a seat to fit snugly against and to receive the lower head of the body, the upper portions of the flanges bearing against the lower faces of the upper head of the body, and interengaging means upon the lower face of the upper head and the flanges for holding the body against longitudinal movement relative to the flanges.

5. A railroad rail including an invertible and reversible body having upper and lower duplicate heads and a web connecting the same, and holding members, each of said members including a base, a rib extending downwardly from the base and an upstanding flange extending longitudinally thereof, the bases and flanges of the two holding members coöperating to form a seat to fit snugly against and to receive the lower head of the body, the upper portions of the flanges bearing against the lower faces of the upper head of the body, teeth upon the lower faces of the upper head, and said flanges having toothed upper edges for engagement with the teeth.

[Claims 6 to 8 not printed in the Gazette.]

1,109,923. PROCESS OF REFRIGERATION AND APPARATUS THEREFOR. NICOLAI H. HILLER, Carbondale, Pa. Filed June 15, 1912. Serial No. 703,882. (Cl. 62—119.)

1. The herein described method of effecting refrigeration, which comprises expanding a refrigerating fluid under pressure to a suitable lower pressure, and thereby absorbing heat, absorbing a portion of the resulting gas in liquid at about the pressure resulting from such expansion, compressing a further portion of the resulting gas to a higher pressure than that to which such gas is expanded, absorbing the gas so compressed in liquid, and at about the pressure to which the gas is so compressed, and evaporating the gas from such liquid under pressure, and again expanding it.

2. The herein described method of effecting refrigeration, which comprises expanding a refrigerating fluid under pressure to a suitable lower pressure, and thereby absorbing heat, absorbing a portion of the resulting gas in liquid at about the pressure resulting from such expansion, compressing a further portion of the resulting gas to a higher pressure than that to which such gas is expanded, absorbing the gas so compressed in the liquid resulting from the first absorption, and at about the pressure to which the gas is so compressed, and evaporating the gas from such liquid under pressure, and again expanding it.

3. Absorption refrigeration apparatus comprising in combination a generator and a multi-stage absorber, the stages of which are maintained at different pressures, an expansion chamber to which the refrigerating agent delivered by the generator is supplied, the low pressure stage of the absorber connected to receive a portion of the gas from such expansion chamber, and a compressor connected to receive a further portion of the gas, from such expan-

sion chamber, and to deliver such gas, compressed, to the higher pressure stage of such absorber.

4. Absorption refrigeration apparatus comprising in combination a generator and a multi-stage absorber comprising a plurality of absorbing vessels at different levels proportionate to the different pressures to be maintained in said vessels, an expansion chamber to which the refrigerating agent delivered by the generator is supplied, the low pressure stage of the absorber connected to receive a portion of the gas from such expansion chamber, and a compressor connected to receive a further portion of the gas from such expansion chamber and to deliver such gas, compressed, to the higher pressure stage of such absorber.

5. Absorption refrigeration apparatus comprising in combination a generator and a multi-stage absorber comprising a plurality of absorbing vessels at different levels proportionate to the different pressures to be maintained in said vessels, an expansion chamber to which the refrigerating agent delivered by the generator is supplied, the low pressure stage of the absorber connected to receive a portion of the gas from such expansion chamber, and a compressor connected to receive a further portion of the gas from such expansion chamber and to deliver such gas, compressed, to the higher pressure stage of such absorber, said absorber comprising means for the flow of absorbing liquid from the low pressure absorption vessel to the high pressure absorption vessel.

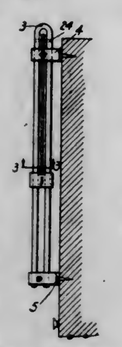
1,109,924. DENTAL INSTRUMENT. HARRY M. HOFFMAN and WALTER B. GARRETT, Caruthersville, Mo. Filed July 9, 1913. Serial No. 778,196. (Cl. 32—10.)

1. A dental instrument including a shank and a blade which is crescent-shaped in front elevation and is transversely curved whereby its terminals are directed rearwardly toward the shank.

2. A dental instrument including a shank and a blade, said blade being formed with a relatively wide central portion and tapering from the central portion toward each terminal, the terminals being pointed and bent rearwardly.

3. A dental instrument including a shank, and a blade extending at an acute rearward angle thereto, said blade being crescent shaped in front elevation and transversely curved, whereby its terminals are directed rearwardly toward the shank.

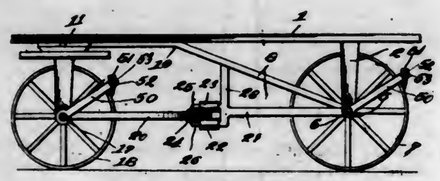
1,109,925. SHADE-SUPPORT. PASQUALE IUDICIANI, Columbus, Ohio. Filed Mar. 31, 1914. Serial No. 828,594. (Cl. 156—27.)



1. An adjustable shade roller support comprising a U-shaped slide rod, a pulley mounted in the upper end of said slide rod, an adjustable shade bracket slidable upon said slide rod, brackets for supporting said slide rod, and means for control of said shade bracket.

2. An adjustable shade roller support comprising spaced slide rods, adjustable shade bracket controlling mechanism, and a shade bracket comprising a sheet metal piece bent to provide hooks upon both extremities to embrace the slide rods and having a central extension bent to location between said slide rods.

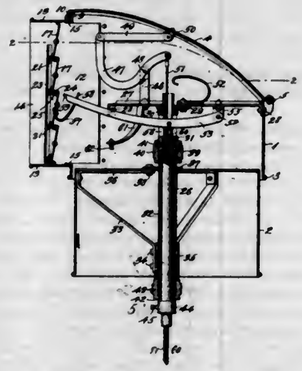
1,109,926. RUNNING-GEAR. ROBERT K. JAYNE, Jackson, Miss. Filed Aug. 13, 1913. Serial No. 784,593. (Cl. 21—39.)



1. In a vehicle running gear structure, a turnable front axle, a rear axle, traction members mounted on said axles, a substantially horizontally disposed reach section connected to the front axle, a second substantially horizontally disposed reach section, said second reach section connected to the rear axle and in supporting relation with the first reach section, a frame-brace member connected to one of said axles and extending upwardly and over the second reach section, and an upstanding support member on which said brace-member rests on said second reach section.

2. In a vehicle running gear structure, a turnable front axle, a rear axle, traction members mounted on said axles, a substantially horizontally disposed reach section connected to the front axle, said reach section having an arcuate portion for the purpose specified, a second reach section, substantially horizontally disposed, said second reach section connected to the rear axle, said second reach section having an arm extending across the first reach section, a plurality of rollers on said arm, one of said rollers engaging the inner face of the first reach section and the other of said rollers engaging the under face of the first reach section for the purpose specified.

1,109,927. VENTILATOR. ANTON JOCH, Cleveland, Ohio. Filed July 5, 1913. Serial No. 777,450. (Cl. 98—4.)



1. In a ventilator, the combination, with a tubular base, of a cowl rotatably supported thereby and having an opening in its top and an opening in one side, and a cover for said cowl which is hinged to that side of the cowl opposite the aforesaid opening.

2. In a ventilator, the combination with a tubular base, of a cowl rotatably supported thereby and having an opening in its top and an opening in one side, and a cover for said cowl which is hinged to that side of the cowl opposite the aforesaid opening, and mechanism for raising said cover.

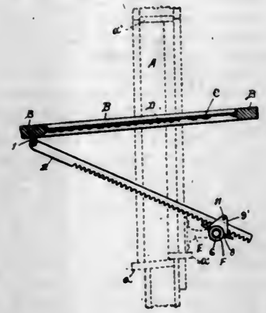
3. In a ventilator, the combination, with a tubular base, of a cowl rotatably supported thereby and having an opening in its top and an opening in one side, a cover for said cowl which is hinged to that side of the cowl opposite the aforesaid opening, mechanism for raising said cover, and means for retaining the mechanism in cover raising position.

4. A ventilator comprising, in combination, a cowl having an opening in one of its sides, a louver pivotally supported within said opening, a bracket carried by the louver, and an arm pivoted within the cowl the free end of which overhangs the end of the aforesaid bracket, the end of said arm being arranged to abut the end of the bracket when the louver is in open position.

5. A ventilator comprising, in combination, a cowl having a substantially rectangular opening in one side thereof which is surrounded by a frame, a series of louvers pivoted within said frame and having their corresponding edges linked together, a bracket carried by one of the louvers said bracket extending toward the interior of the cowl and having a portion of its end in a substantially parallel plane with the louver there being a notch within such end, and an arm pivoted within the cowl and extending toward said bracket and through the notch therein, the free end of the arm having a shoulder which is arranged to abut the bottom of said notch, when the louver is in open position.

[Claims 6 to 10 not printed in the Gazette.]

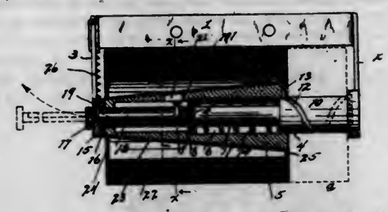
1,109,928. SASH-OPERATING DEVICE. JAMES E. JONES, Richmond, Ind. Filed Mar. 23, 1914. Serial No. 826,467. (Cl. 16—28.)



In combination with a rotary shaft and a window-sash adapted to be opened and closed; a spool secured on the shaft and comprising a body, an inner flange adjoining one end of the body, an outer flange spaced from the inner flange, bars connecting the two flanges and forming a pinion, the periphery of the pinion being of less diameter than the diameter of said flanges; a block resting on the periphery of said bars, a roller carried by the block, a rack-bar adapted to operate through the block contacting with said roller and engaging with said bars, and a stirrup engaging with the peripheries of the block and retaining the block in operative position, all substantially as set forth.

1,109,929. PAPER-ROLL HOLDER. GEORGE F. KEARNEY, Highland Park, Mich. Filed Jan. 6, 1913. Serial No. 740,382. (Cl. 211—31.)

1. In a paper roll holder, a bracket, a shaft secured thereto, a roll supporting spindle carried thereby, means whereby a rotation of the spindle produces a longitudinal movement thereof, and a spring adapted to yieldably resist said movement and return the spindle to its original position upon the release thereof.



2. In a paper roll holder, a bracket, a shaft fixedly secured thereto, a paper roll spindle carried by the shaft, means whereby rotation of the roll and spindle produces a longitudinal movement thereof, and a spring within the spindle adapted to yieldably resist said longitudinal movement and return the spindle to its original position upon the release thereof, the arrangement of parts being such that the longitudinal movement of the spindle is limited.

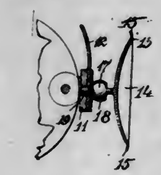
3. In a paper roll holder, a bracket, a shaft fixedly secured thereto, a paper roll spindle rotatably mounted on the shaft, said shaft being provided with a spiral groove, a pin or lug on the spindle engaging said groove whereby a rotation of the spindle produces a movement thereof longitudinally of the shaft, and a spring adapted to yieldably resist said longitudinal movement and return the spindle to its original position when released.

4. In a paper roll holder, a bracket provided with a fixed and a movable arm, a shaft having one end secured to the fixed arm the movable arm being provided with a socket for supporting the free end of the shaft, a paper roll spindle mounted for rotation on the shaft, means whereby a rotation of the spindle produces a longitudinal movement thereof, a spring adapted to yieldably resist said longitudinal movement and return the spindle to its original position when released, and releasable means for holding the movable arm in engagement with the shaft end.

5. In a paper roll holder, a bracket provided with a fixed and a pivoted arm, a shaft having one end secured to the fixed arm, the opposite end being normally supported by the pivoted arm, a paper roll spindle mounted for rotation on the shaft, said shaft being provided with a spiral groove, a lug or pin on the spindle engaging in said groove whereby a rotation of the spindle produces a movement thereof longitudinally of the shaft, a spring adapted to yieldably resist said longitudinal movement and return the spindle to its original position when free to act, and releasable means for holding the pivoted arm in normal engagement with the shaft end.

[Claims 6 to 15 not printed in the Gazette.]

1,109,930. NOSE-GUARD FOR EYEGLASSES. AUGUSTUS J. KLEIN, Orange, N. J. Filed May 24, 1912. Serial No. 699,598. (Cl. 88—50.)

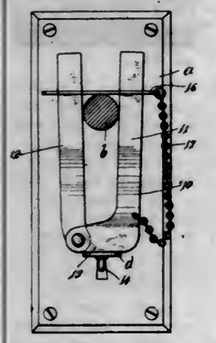


1. The combination of a pair of eyeglasses comprising a bridge and lens attaching devices at the ends of the bridge, with a pair of thin clips made with cup-shaped faces opposing each other, and means for fastening the clips on the bridge, the clips being made thinner at their edges, the edges being rounded and curved outward.

2. The combination of a pair of eyeglasses comprising a bridge and lens attaching devices at the ends of the bridge, with a pair of thin clips made with cup-shaped

faces opposing each other, each clip being made of one piece of rigid material with a ball on the back and having its edge thinned, rounded and bent outward, and sockets secured on the bridge to receive the balls of the clips.

1,109,931. KEY-GUARD. OSCAR S. LINDSTROM, Hartford, Conn. Filed Oct. 8, 1913. Serial No. 794,134. (Cl. 70—65.)

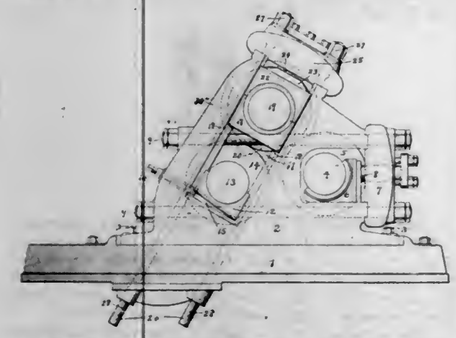


1. The combination with a lock set including a knob and its spindle and a removable key, of a guard to prevent the removal of sad key, said guard comprising a pair of arms pivoted together at one end and lying on opposite sides of said spindle, a fin projecting from one of said arms and adapted to be engaged with the head of said key when it is positioned crosswise of the key slot, and a yoke to hold the free ends of said arms in position against said spindle.

2. The combination with a lock set comprising a knob and its spindle, and a key adapted to be removably positioned below said knob, of a guard for said key comprising a pair of arms pivoted together at their lower ends and adapted to lie at either side of said knob spindle, a yoke engaging the free ends of said arms above said shank, and a fin depending from one arm and adapted to engage the head of said key when it is in horizontal position.

3. A device of the character described, comprising an arm having a lateral extension at one end thereof, a second arm pivoted at the end of said lateral extension, a yoke for the free ends of said arms, and a key-engaging fin depending from the lower edge of said lateral extension and arranged at right angles thereto.

1,109,932. MILL. JEFFERSON D. MARSHALL, New Orleans, La. Filed May 27, 1914. Serial No. 841,178. (Cl. 100—47.)



1. A sugar mill comprising a base, a housing mounted thereon, three crushing rolls and the shafts for the same, said housing having a pocket and an inclined slot, a bearing for one of the roll shafts mounted in the pocket, bearings for the two other roll shafts mounted in said inclined slot, a cap at the upper end of the slot, and bolts extending through the cap, housing and base, parallel to the plane passing through the axes of the shafts in said slot.

2. A sugar mill comprising a housing, three crushing rolls and shafts for the same mounted in triangular arrangement with their axes parallel, said housing having a slot, bearings for two of the roll shafts mounted in said slot, a cap at the outer end of the slot, and bolts extending through the cap and housing parallel to and on each side of the plane passing through the axes of the shafts in the slot.

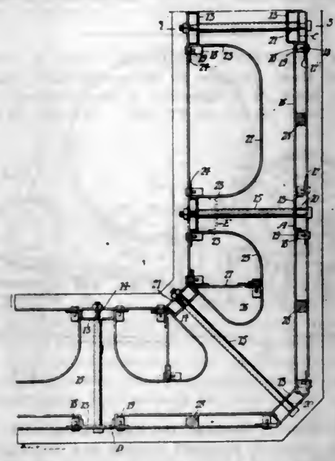
1,109,933. STANCHION. FREDERICK W. MOLDENHAUER and BENJAMIN G. EDGERTON, Oconomowoc, Wis., assignors to Wisconsin Stable Equipment Company, Oconomowoc, Wis. Filed Jan. 26, 1914. Serial No. 814,326. (Cl. 119—150.)

1. A stanchion comprising an overhead frame member and a sill, a bracket having a central channel and apertured side flanges, a clip connecting one end of the bracket with the frame member, a block, a swivel depending therefrom, bolts fitted into selected pairs of the flange apertures for securing the block, a saddle head having a bolt connected side web, a link connecting the bolt and the block swivel, a stanchion member rigidly secured to the saddle, means connecting the lower end of the stanchion member and the sill, a stanchion member hingedly secured to the lower end of the first mentioned stanchion member, and locking means connecting the free end of the hinged stanchion member and the saddle-head.

2. A stanchion comprising an overhead frame member and a sill, a bracket having a central channel and apertured side flanges, a clip connecting one end of the bracket with the frame member, a block, a swivel depending therefrom, bolts connecting the block to selected pairs of the flange apertures, a saddle in link connection with the block, and stanchion members carried by the saddle.

1,109,934. FORM FOR MONOLITHIC WALLS. JOHN W. MULDOON, New York, N. Y. Filed June 19, 1912. Serial No. 704,519. (Cl. 25—131.)

1. A form for monolithic wall construction including a skeleton frame having vertical channel members and longitudinal angle members detachably secured together and plates arranged alternately with said channel members and each having its body portion spaced from said frame and having marginal flanges in engagement with and parallel to the side flanges of said channel members and detachably secured to said angle members, the inner faces of said plates being substantially flush with the webs of said channel members.



2. A mold for monolithic wall construction including a plurality of longitudinal frame members and a series of vertical mold wall sections independently detachably secured thereto, each alternate wall section being bowed or bent inwardly and having parallel marginal portions projecting toward said frame members and means for securing the remaining wall sections at different distances from said frame members and in engagement with the parallel marginal portions of successive first-mentioned mold wall sections.

3. A mold for monolithic wall construction including a plurality of longitudinal frame members and a series of vertical mold wall sections independenty detachably secured thereto, each alternate wall section being bowed or bent inwardly and having parallel marginal portions projecting toward said frame members and means for securing the remaining wall sections with either face toward said frame members and in engagement with the parallel marginal portions of successive first-mentioned mold wall sections.

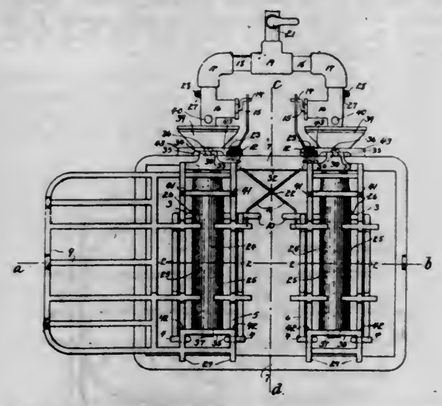
4. A mold for monolithic wall construction including a plurality of mold wall sections, each alternate section having its edges extending outwardly substantially parallel to each other and means for securing the other of said sections between the opposed edge portions of the first mentioned sections and at varying positions inwardly between said parallel edge portions.

5. A mold for monolithic wall construction including longitudinal extending angle irons and a plurality of mold wall sections, each alternate section being bowed inwardly from said angle irons and having its edges detachably secured to the latter and the intermediate wall sections being in the form of vertically disposed channel members between the adjacent edges of said bowed sections and detachably secured to said angle irons independently of the attachment of said bowed sections.

1,109,935. DOUBLE-BURNER FLAT-IRON HEATER FOR TWO IRONS. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Sentinel Automatic Gas Appliance Co., New Haven, Conn., a Corporation. Filed Feb. 27, 1914. Serial No. 821,598. (Cl. 126—234.)

1. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, valve-operating members normally standing above the plane of the burners for operation by flat-irons when the same are placed over the burners, and operating connections between the said members and valves, the valve of one burner being connected with the valve-operating member of the other burner, and vice versa, for the cross-control of the burners.

2. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, valve-operating members normally standing above the plane of the burners for opgration by flat-irons when the same are placed over the burners, and two operating-levers connecting the said members and valves and crossed for the cross operstion of the valves by the flat-irons.



3. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, pivotal valve-operating members having flat-iron arms normally extending above the burners for operation by flat-irons, and crossed connections between the said members and valves for the cross control of the valves by flat-irons.

4. In a double-burner flat-iron heater, the combination with two burner-frames placed side by side, of burners located beneath the respective frames, normally open valves connected with the said burners, valve-operating members normally standing above the plane of the burner-frames, and crossed connections between the said members and valves for the cross operation of the latter by flat-irons.

5. In a double-burner flat-iron heater, the combination with two burner-frames placed side by side, of burners located beneath the said frames, pivotal valve-operating members normally extending above the plane of the burner-frames, and two crossed valve-operating members connecting the said members with the respective valves for the cross control of the latter by the former.

[Claims 6 to 11 not printed in the Gazette.]

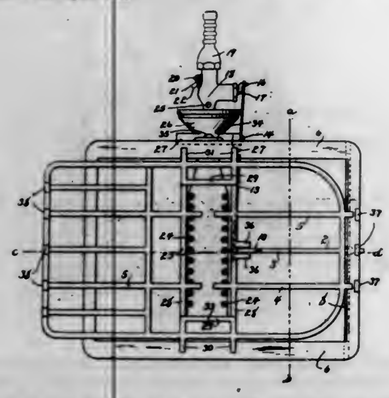
1,109,936. SINGLE-BURNER FLAT-IRON HEATER. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Sentinel Automatic Gas Appliance Co., New Haven, Conn., a Corporation. Filed Mar. 27, 1914. Serial No. 827,530. (Cl. 126—234.)

1. In a gas-burning flat-iron heater, the combination with a grill, of a burner located beneath the same, a valve for the burner, a flat-iron operated valve-operating member normally rising above the plane of the grill in position to be cleared by a flat-iron when the same is in position to be heated, and means for connecting the said valve and member for automatically closing the former by the depression of the latter.

2. In a gas-burning flat-iron heater, the combination with a grill, of a burner located beneath the same, a valve for the burner, a pivotal flat-iron operated valve-operating lever pivoted below the grill and normally rising above the plane thereof in position to be cleared by a flat-iron when the same is in position to be heated, means connecting the said valve and lever for automatically closing the former by the depression of the latter, and a spring normally maintaining the lever in its elevated position.

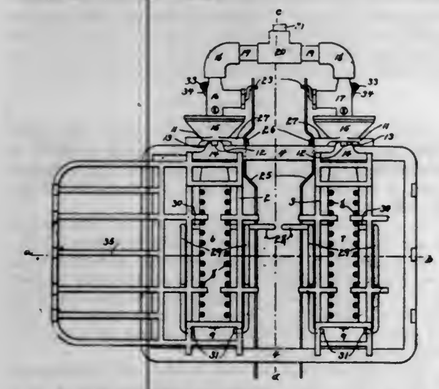
3. In a gas-burning flat-iron heater, the combination with a grill comprising a shut-off section, a storage section, and an intermediate heating section, of a burner

located below the said heating section, valve for the burner, pilot-light connection between the valve and the burner, a valve-operating member normally projecting above the plane of the grill in position to be cleared by a flat-iron when the same is in position to be heated, connection between the said valve which is normally open, and the said member, and a spring for maintaining the said member in its normally elevated position, whereby when a flat-iron is placed upon the said member to depress it the valve will be closed and the flame in the burner extinguished.



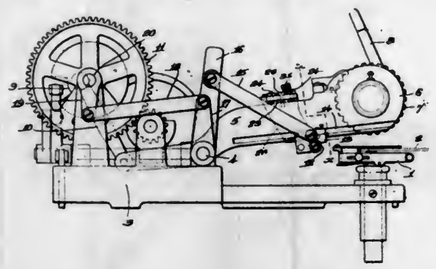
4. In a gas-burning flat-iron heater, the combination with a grill, of a burner, a valve therefor, a valve-operating lever pivoted beneath the grill and normally extending above the plane thereof in position to be cleared by a flat-iron when the same is in position to be heated, a valve-actuating lever between the said valve-operating lever and valve, and a spring normally maintaining the valve-operating lever in its elevated position and the valve open.

1,109,937. GAS-BURNING FLAT-IRON HEATER. Ross M. G. Phillips, West Haven, Conn., assignor to The Sentinel Automatic Gas Appliance Co., New Haven, Conn., a Corporation. Filed Mar. 27, 1914. Serial No. 827,531. (Cl. 126—234.)



In a gas-burning flat-iron heater, the combination with a horizontally arranged grill, of a pair of burners located side by side below the said grill, a pair of valve-operating members located below the said grill but having parts normally extending above the same, a pair of normally closed valves connected with the respective burners at the rear ends thereof, and a pair of valve-actuating levers located below the said grill between the said burners and connecting the respective valve-operating members and valves for the opening of the latter upon the depression of the said members by the appropriate placing of flat-irons upon the grill, the forward ends of the said levers being extended into position for their independent manual operation.

1,109,938. PRINTING-MACHINE. Fred A. Putnam, Melrose, Mass., assignor to Markem Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 5, 1912. Serial No. 713,261. (Cl. 101—83.)



1. In a printing machine, the combination with a base, of an arm pivotally mounted thereon and carrying at its end a printing head having type characters, means on the base for vibrating the arm, an ink reservoir sustained by the arm between the pivotal point thereof and the printing head and provided with a discharge port through which the ink flows by gravity, an ink roll, and means actuated by the arm-vibrating mechanism to move the roll toward and from the type characters and across said port.

2. In a printing machine, the combination with a base, of an arm pivotally mounted thereon, a printing head having type characters sustained on the arm at the end thereof, means on the base for vibrating said arm, an ink reservoir sustained by the arm between the pivotal point thereof and the printing head and provided with a discharge port, an ink roll carrier slidably mounted on the arm, an ink roll sustained by said carrier, and means actuated by the arm-vibrating mechanism to move the ink roll carrier longitudinally of the arm.

3. In a printing machine, the combination with a horizontally-extending vibrating arm carrying at its end a printing head having type members, of an ink roll situated beneath and sustained by said arm and movable longitudinally thereof, an ink reservoir also carried by said arm and provided with a discharge port situated so that the ink will flow therethrough by gravity, and means to move the ink roll toward and from the type members and across said port.

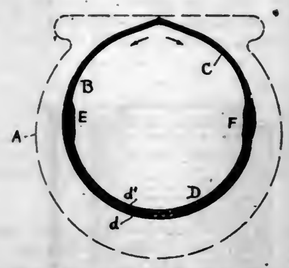
4. In a printing machine, the combination with a pivotally-mounted arm having a forked portion, of a printing head having type characters sustained by said arm, an ink reservoir situated between and fixedly secured to the arms of the fork and provided with a discharge port and an ink roll movable toward and from the type characters and across said port.

5. In a printing machine, the combination with a base, of an arm pivotally mounted thereon and having a forked portion, a printing head carried by said arm at the end of the forked portion thereof, an ink reservoir situated between the branches of the forked portion of the arm and provided in its under side with a discharge port, means on the base for vibrating the arm, an ink roll carrier slidably mounted on the arm, an ink roll sustained by said carrier for conveying ink from said reservoir to said printing head, and means actuated by the arm-vibrating mechanism for operating said ink roll carrier.

[Claims 6 and 7 not printed in the Gazette.]

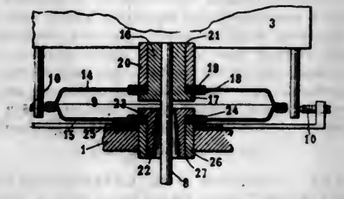
1,109,939. INNER TUBE. Walter M. Reason, Pontiac, Mich. Filed Jan. 15, 1914. Serial No. 812,211. (Cl. 152—13.)

1. As a new article of manufacture, an inner tube for double tube pneumatic tires consisting of a rim side elastic solely on the line of the cross section and an outer tread side joined thereto and elastic solely longitudinally and means for uniting the two sections to form an air-tight joint, substantially as described.



2. As a new article of manufacture, an inner tube for double tube pneumatic tires constructed with the larger circumferential part of said tube elastic circumferentially but non-elastic in cross section, and the inner, or smaller, circumferential part non-elastic circumferentially but elastic in cross section, substantially as described.

1,109,940. ELECTRICAL APPARATUS. Henry E. Reeve, New York, N. Y. Filed Feb. 17, 1911. Serial No. 609,193. (Cl. 177—7.)



1. In a device of the character described, a diaphragm consisting of two flexible plates connected at their peripheries, flanged bushings passing through said plates and having their flanges between said plates, flexible washers on said bushings between said flanges and said plates, flexible washers on said bushings outside of said plates and collars, clamping the plates between the flexible washers against the flanges of the bushings, said washers extending substantially beyond the edges of the flanges and collars respectively and a transmitting lever secured to one bushing and passing through the other bushing.

2. In a construction of the character described, a bushing, a transmitting lever passing therethrough, a flexible metallic plate, a flange on said bushing, flexible washers arranged on opposite sides of the plate and a collar on said bushing for clamping said flexible washers and plate against said flange, said washers extending a substantial distance beyond said flange and collar respectively.

3. A construction of the character described comprising a casing having an opening, a transmitting lever passing through said opening in said casing, a flexible metal plate means for connecting its periphery to said casing and means for connecting the central portion of said plate to said transmitting lever, said means including flexible washers on both sides of said plate and means for clamping said washers and plate, said washers extending outward a substantial distance beyond the clamping means.

4. In apparatus of the character described, a flexible phosphor-bronze diaphragm, and a member connected thereto by a water and gas tight joint including spring phosphor-bronze washers on opposite sides of the diaphragm.

5. The combination with a casing and a vibrating lever passing therethrough, of a flexible connection between the lever and casing comprising, a thin flexible metallic diaphragm, means for connecting its peripheral portion with the casing, rigid means carried by the lever and gripping opposite faces of the diaphragm and thin, flexible metallic washers lying flat against the opposite faces of the diaphragm and interposed between the said rigid clamping means, and the respective faces of the diaphragm, said flexible washers extending substantially beyond the rigid clamping means to elastically support the diaphragm and thereby upon vibration of the lever to reduce the deflection of the diaphragm from the plane of the rigid clamping means.

[Claim 6 not printed in the Gazette.]

1,109,941. RADIATOR. Herman Reis and Erhardt Behringer, New York, N. Y. Filed July 23, 1912, Serial No. 711,090. Renewed Oct. 16, 1913. Serial No. 795,577. (Cl. 62—28.)

A radiator unit comprising a polygonal tube having similarly hooked lips upon all sides and both ends thereof, the bends of the lips upon each end of the tube being arranged in the same plane and the distances between the said lips and the respective sides of the tube being the same upon all sides and both ends.

1,109,942. WATCHMAKER'S TOOL. Albert F. Robbins, Waltham, Mass., assignor to Henry Zimmern & Company, New York, N. Y., a Corporation of New York. Filed June 11, 1914. Serial No. 844,410. (Cl. 81—6.)

1. A tool comprising in part a pair of spring jaws provided with openings, a stem, and a spring-actuated sleeve slidably mounted on said stem and provided with shouldered pins extending through the openings in said jaws for holding the latter in their closed position.

2. A tool of the character described comprising a tube, a stem passing through said tube, a spring contained within said tube and around said stem for moving the latter in one direction, a cap threaded onto one end of said tube and bearing against the end of said stem for moving the latter in the opposite direction, spring-actuated jaws secured to said tube, and means for retaining said jaws in their closed position.

3. A tool of the character described comprising a tube, a movable stem extending through said tube, spring jaws secured to said tube and provided with openings, and a spring-actuated sleeve slidably fitting on said stem and provided with shouldered pins extending through openings in said jaws to retain the later in their closed position.

1,109,943. RAILWAY-SWITCH. ADOLF V. SCHARWENKA, New York, N. Y. Filed June 10, 1914. Serial No. 844,130. (Cl. 104—12.)

1. In an apparatus of the character set forth, a shaft, segmental pinions thereon having the teeth of one in advance angularly of the other, a slide for each of said pinions, having racks adapted to be engaged with such teeth to move said slides, means for partially rotating said shaft, and a plurality of switch-points and connections to the latter from said slides.

2. In an apparatus of the character set forth, a shaft, segmental pinions thereon having the teeth of one in advance angularly of the other, a slide for each of said pinions, having racks adapted to be engaged with such teeth to move said slides, means for partially rotating said shaft, a plurality of switch-points and connections from the latter to said slides, and means actuated by the movement of said shaft for automatically locking and releasing said slides.

3. In an apparatus of the character set forth, a shaft, segmental pinions thereon having the teeth of one in advance angularly of the other, a slide for each of said pinions, having racks adapted to be engaged with such teeth to move said slides, means for partially rotating said shaft, a plurality of switch-points and connections to said switch-points from said slides, and a locking means for said shaft arranged to require manual operation to release said shaft prior to a movement of the latter.

4. In an apparatus of the character set forth, a shaft, a plurality of switch-points, means actuated by the partial rotation of said shaft for moving such points, a two-part lever loosely mounted on said shaft and having its arms arrangerd to lie side by side to be thrown as one, or separated to be thrown separately, a lug on said shaft, and a notch in each of such arms, adapted to engage said lug and thereby partially rotate said shaft.

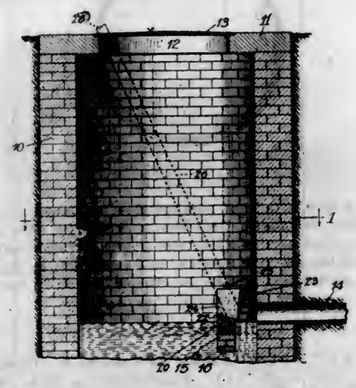
5. In an apparatus of the character set forth, a shaft, segmental pinions thereon having the teeth of one in advance angularly of the other, a slide for each of said pinions, having racks adapted to be engaged with such teeth to move said slides, movable dogs arranged to lock and release said slides, means for partially rotating said shaft, a plurality of switch-points, connections to the latter from said slides, and means actuated by said shaft for automatically holding said dogs in engagement with said slides, and permitting their disengagement therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,109,944. TRAP FOR CATCH-BASINS. FRED SCHULENBURG, River Forest, Ill. Filed Feb. 7, 1914. Serial No. 817,125. (Cl. 182—10.)

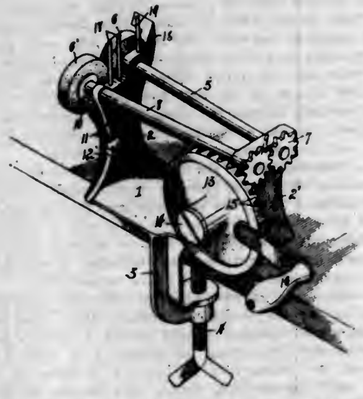
1. The combination with a catch-basin, of an outlet conduit leading from the basin at a distance above the bottom thereof, a trap consisting of a vertical wall supported within and on the walls of the basin at a distance from the bottom of the basin and at a distance from the inner end of said conduit and having a rectangular opening in its upper portion, a cover extending from the upper portion of said wall to the wall of the casing above the conduit and having a rectangular opening in communication with the opening in said wall, an angular block having in its angle between the side edges of the block an opening provided with downwardly inclined walls, and a key removably located in said opening and formed to fit the same.

2. The combination with a catch basin, of an outlet conduit leading from the basin at a distance above the bottom thereof, a trap consisting of a vertical wall supported within and on the walls of the basin at a distance from the bottom of the basin and at a distance from the inner end of said conduit and having a downwardly extended opening in its upper portion, a cover extended from the upper portion of said wall to the wall of the casing above the conduit and having an opening in communication with the opening in said wall, a block having between its side edges an opening provided with downwardly inclined walls, and a key removably located in the last named opening and formed to fit the same.



3. The combination with a cylindrical catch basin, of an outlet conduit leading therefrom at a distance above its bottom, a segmental trap supported within and on the wall of the basin with its lower edge at a distance from the bottom thereof and with its upper portion located above the inner end of the conduit, said trap having in its upper portion a tapered opening extended at its lower end below the upper surface of the conduit, and a downwardly tapered key removably located in said opening.

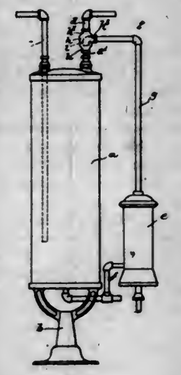
1,109,945. GEARING FOR KNIFE-SHARPENERS. GEORGE J. SEISS, Toledo, Ohio. Filed June 5, 1912. Serial No. 701,880. (Cl. 74—41.)



1. In combination, a driven gear, a drive gear mounted with its axis disposed substantially at right angles to and below the axis of the driven gear and having crown teeth in loose mesh with the teeth of the driven gear and disposed in tangential relation to the circumference of a circle intermediate the axis and periphery of the drive gear and of a length sufficient to engage advance contiguous driven gear teeth when driving in one direction but disposed relative to the driven gear to abut the contiguous driven gear teeth at the ends of the teeth of the drive gear when the motion is reversed.

2. In combination, a pair of driven spur gears, a shaft for supporting each of said spur gears, the shaft of one of the said spur gears being movable at one end with respect to the shaft of the other spur gear, a spring for normally pressing the said movable shaft toward the shaft of the other spur gear, a drive gear mounted with its axis disposed at substantially a right angle and below the axes of the spur gears and having crown teeth in loose mesh with the teeth of the spur gear having the movable shaft and disposed in tangential relation to the circumference of a circle intermediate the axis and periphery of the drive gear and of a length sufficient to engage advance contiguous driven spur gear teeth when driving in one direction but disposed relative to the spur gear to abut the contiguous spur gear teeth at the ends of the drive gear when the motion is reversed.

1,109,946. WATER CONNECTION. ELMER S. STACK, West Somerville, Mass. Continuation of application Serial No. 722,432, filed Sept. 26, 1912. This application filed July 31, 1913. Serial No. 782,387. (Cl. 126—362.)



1. The combination of a tank, a heater, means for conducting water to the tank, a connection between the lower part of the tank and the heater, a delivery pipe leading from the tank, and a coupling in said pipe having a lateral branch connected to the heater, said coupling having internal means so constructed and arranged as to obstruct direct passage of water from said branch to said delivery pipe, and to permit the water issuing from said branch to enter said pipe without passing into the tank.

2. The combination of a tank, a heater, means for conducting water to the tank, a connection between the lower part of the tank and the heater, a delivery pipe leading from the tank, and a coupling in said pipe having a lateral branch connected to the heater, said coupling having a passage from said lateral branch to said delivery pipe, having means for deflecting toward the tank the water issuing from the branch in its flow to the delivery pipe, and having a passage in its interior around the end of said deflecting means.

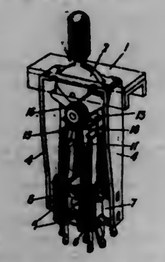
3. The combination of a tank, a heater having an inlet connected with the lower part of the tank, a delivery pipe leading from the tank, a pipe leading from the heater, and a coupling connecting said pipes, having a passage arranged to permit flow of water from the heater to the delivery pipe and away from the tank without first entering the tank, and having means for deflecting the flow from the heater toward the tank.

4. The combination of a tank, a heater having an inlet connected with the lower part of the tank, a delivery pipe leading from the tank, a pipe leading from the heater, and a coupling connecting said pipes, said coupling having an internal passage between the respective pipes offset toward the tank, but entirely outside of the tank, and the delivery pipe having an intervening passage between said offset passage and the tank.

5. The combination of a tank, a heater having an inlet connected with the lower part of the tank, a delivery pipe leading from the tank, a pipe leading from the heater, and a coupling connecting said pipes, said coupling being provided with a baffle between its inlet from the heater and its outlet to the delivery pipe so arranged as to cause water flowing from the tank to oppose flow from the heater, and at the same time to provide a passage within the coupling from the heater to the outwardly running delivery pipe.

[Claims 6 to 9 not printed in the Gazette.]

1,109,947. SWITCH-KEY. GERARD PIETER TROMP, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 10, 1914. Serial No. 817,782. (Cl. 179—176.)



1. In a key switch, the combination with a pair of normally closed contact springs, of a roller adapted to engage one of said springs to separate said contacts, the engaged portion of said spring being formed into a normally closed resilient loop, said roller in its engagement with said loop first acting against the resilience of said loop to absorb the inertia of said roller and then acting against the pressure of said switch spring to open the contacts.

2. In a key switch, a group of contact springs embracing a master contact member, an operating lever, a loop shaped portion on said master contact member, said loop having an extension thereon, a shoulder formed where said loop is made in said contact member against which said extension engages under pressure of said operating lever.

3. In a key switch, a group of contact springs embracing a master contact member, an operating device, a resilient loop shaped portion on said master contact member, said portion being normally engaged by said operating device, causing said loop to be closed while said resilient portion is engaged by said operating device.

4. In a key switch, a group of contact springs embracing a master contact member, an operating device, said master contact member having a resilient loop shaped portion, said portion being normally engaged and closed by said operating device, said loop on said portion having a gap at its neck when said top portion is disengaged by said operating device, whereby a cushioning effect is obtained to absorb the shock of said operating device when said operating device is returned from an operated to normal position.

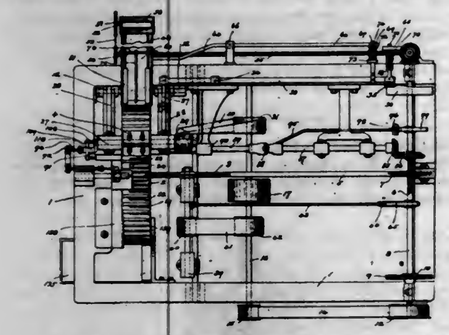
5. A master spring contact member having a loop shaped portion, said loop shaped portion having an extension thereon, and said contact member having a shoulder formed where said loop is made, said shoulder functioning as a stop for said extension when said loop is compressed.

[Claim 6 not printed in the Gazette.]

1,109,948. MACHINE FOR MAKING CLOTHES-PINS. EDWARD W. TURNER and HERMAN S. REAMS, Richmond, Va., assignor to Richmond Cedar Works, Richmond, Va., a Corporation of Virginia. Filed May 17, 1909. Serial No. 496,401. (Cl. 144—14.)

1. In a machine for making clothes pins, a cutter, a carrier to present the pin blanks to the cutter, means to conduct the blanks toward the carrier, a presser-foot mounted to reciprocate vertically, a plunger mounted below the path of the blanks to reciprocate longitudinally of the path of the blanks, and support the forward blanks

and means for actuating the presser and the plunger whereby the latter is withdrawn and the presser pushes a blank downward into the path of the plunger and the latter engages the blank and presents it to the carrier.



2. In a machine for making clothes pins, a cutter, a carrier to present pin blanks to the cutter, ways to conduct the blanks toward the carrier, a support for blanks extending toward the carrier, a presser-foot mounted to reciprocate vertically past the end of the ways, a plunger mounted to reciprocate in the direction of the path of the blanks, projecting beyond the ways during part of its traverse so as to support the forward blanks, and means for actuating the presser and plunger whereby the blanks are moved by the presser into the path of the plunger and moved forward to the carrier, propelled by the plunger.

3. In a machine for making clothes pins, a cutter, a carrier having seats for blanks, means for moving the carrier to present the blanks to the cutter, ways upon which the blanks move toward the carrier, means for supplying blanks to the ways whereby they are formed in a line thereon, a stop for the blanks in line with those on the ways, spaced from the end of the ways by a distance greater than the diameter of a blank, a presser mounted to move vertically between the stop and the ways, a plunger mounted to move toward and from the carrier, and means for actuating the presser and the plunger.

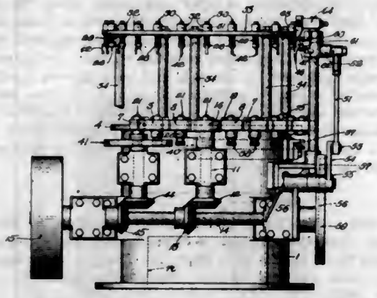
4. In a machine for making clothes pins, a cutter, a carrier having seats, means for actuating the carrier to present the blanks to the cutter, ways, means for supplying blanks to the ways and moving them along the same, a support for the blanks extending from a point beneath the ways to a point adjacent the carrier, a stop beyond the ways spaced therefrom a distance greater than the diameter of a blank, a plunger mounted to reciprocate along the ways and extending, during part of its traverse, beyond the ways to support the forward blanks, and means for reciprocating the plunger whereby the blanks are dropped one at a time into its path and advanced into place on the carrier.

5. In a machine for making clothes pins, a cutter, a carrier and means for actuating the carrier to present the blanks to the cutter, ways, means for supplying blanks to the ways and moving them along the ways, a stop beyond the ways, a plunger mounted to reciprocate longitudinally of the ways and extending beyond the same to support the forward blanks, a presser mounted to move downward between the ways and stop, and means for reciprocating the plunger to release the blanks one at a time, and means for actuating the presser when the plunger is withdrawn to push the released blank downward in the path of the plunger.

[Claims 6 to 18 not printed in the Gazette.]

1,109,949. MACHINE FOR CUTTING AND STRIPPING YARN FROM BOBBINS. THOMAS P. WALSH, Boston, Mass., assignor to Walsh-Baker Corporation, Portland, Me. Filed Dec. 17, 1909. Serial No. 533,667. (Cl. 118—26.)

1. In a machine of the kind described, means for entering beneath the yarn on a bobbin and cutting outward transversely through the yarn for the removal of the yarn from the bobbin, the cutting means having provision for preventing injury to the bobbin from the cutting operation.



2. In a machine of the kind described, means for entering beneath the yarn on a bobbin and cutting outward transversely through the yarn for the removal of the yarn from the bobbin, the cutting means having provision for preventing injury to the bobbin from the cutting operation, and separate means for stripping the severed strands of yarn from the bobbin.

3. In a machine of the kind described, means for cleaning the yarn from a bobbin, including a yarn-cutter to cut transversely through the bunch of yarn, and stripping means for removing the severed strands of yarn from the bobbin.

4. In a machine of the kind described, a rotary bobbin carrier containing means for maintaining the bobbin in upstanding position while the yarn is being removed, and cutting means operating to cut through the yarn on the bobbin with a downward movement whereby gravity tends to aid and coöperate with the position of the bobbin and the direction of movement of the cutting means in the removal of the yarn from the bobbin.

5. In a machine of the kind described, a rotary bobbin carrier, and means for cutting the yarn remnants from the bobbin, said carrier including means for holding the bobbin in an upright position while the yarn is being cut through by the cutting means and operating means for said cutting means.

[Claims 6 to 35 not printed in the Gazette.]

1,109,950. SIGNALING APPARATUS. AUGUST ANDRÉN, Brooklyn, N. Y., assignor, by mesne assignments, to Elevator Supply & Repair Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 26, 1909. Serial No. 474,275. (Cl. 177—336.)

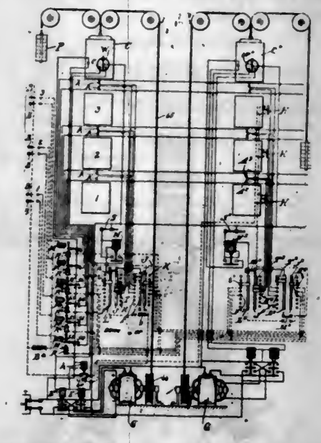
1. In an elevator car signaling apparatus, the combination of a signaling device, means for automatically and selectively restoring the signal, and a centrifugal governor operated by the car and controlling said restoring means.

2. In an elevator car signaling apparatus, the combination of a signaling device, and means for automatically and selectively restoring a signal governed by the stopping of a car.

3. In an elevator signaling apparatus in combination, signaling means, means for setting the same, up and down restoring circuits, a normally open switch, and means controlling the same governed by the stopping of the car, and circuit-shifting switch mechanism connecting said first switch with said circuits alternately.

4. In an elevator signaling apparatus in combination, signaling means, means for setting the same, up and down restoring circuits, a normally open switch, means controlling the same governed by the stopping of the car, circuit-shifting switch mechanism connecting said first switch with said circuits alternately, and means operated by the car and adapted to select the proper restoring circuits.

5. In signaling apparatus, the combination of devices for signaling a car to stop at a station, means for automatically restoring the device to its normal position governed by the stopping of the car, and circuits and a signal for another car whereby a car passing the station does not



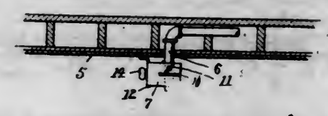
prevent the cars following from receiving the stop signal.

[Claims 6 to 19 not printed in the Gazette.]

1,109,951. RAIL-JOINT. THOMAS ANSLEY, Lowry City, Mo. Filed Sept. 26, 1913. Serial No. 792,006. (Cl. 239—6.)

In a rail joint, a joint chair comprising a base having a centrally arranged seat upon which two rails are adapted to rest, the base provided with upwardly extending side flanges, one of said flanges terminating in an inclined edge which is adapted to underlie the heads of the rails and which is formed with an inclined inner face which overlies the rail receiving portion of the base and which contacts with the base flanges of the rail, the opposite side of the chair having its inner face sloping downwardly and being beveled from one end of the chair to its opposite end, the said face terminating in a longitudinally extending shoulder, the inner wall of which being longitudinally straight and adapted to be contracted by the longitudinal edges of the base flanges of the rails, the said beveled wall being formed with a depression which enters an opening provided in the shoulder and which passes through the base of the chair, a wedge block, said block being shaped to engage within the fishing spaces of the rails and having its upper edge gradually and slightly inclined from one of its ends to its opposite end, the outer face of the block being shaped to agree with the downwardly beveled and longitudinally inclined wall of the chair, and being further provided with a depression which is adapted to register with the depression in the said wall, and a locking key passing through the registering depression in the shoulder and base of the joint chair.

1,109,952. SAW-GUIDE FOR GAS-PIPES. CHARLES H. ARMSTRONG, Bridgeport, Conn. Filed Apr. 13, 1914. Serial No. 831,450. (Cl. 29—67.)



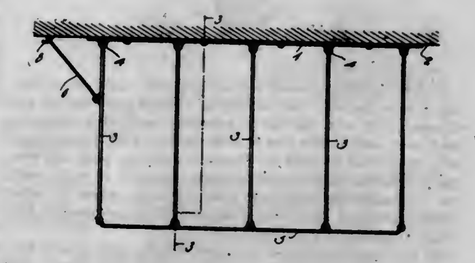
1. In a saw guide of the class described, the combination of a block having a round hole therethrough for the reception of a pipe, and a slot in the block forming a runway for a saw and intersecting the hole for the pipe and a set screw in the block for securing the same to the pipe.

2. In a saw guide of the class described the combination of a block having a hole therethrough for the reception of a pipe, a slot in the block forming a runway for a saw and intersecting the hole for the pipe, and a removable bushing for the said pipe.

3. In a saw guide of the class described, the combination of a block having a hole therethrough for the reception of a pipe, a slot in the block forming a runway for a saw and intersecting the hole for the pipe, means for securing the said block to the pipe, and adjustable means attached to the block for setting the same at a given distance from a wall or ceiling.

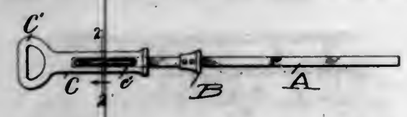
4. In a saw guide of the class described, the combination of a block having a hole therethrough for the reception of a pipe, a slot in the block forming a runway for a saw and intersecting the hole for the pipe, means for securing the said block to the pipe, a removable bushing seated in the hole for the pipe, and an adjustable stop secured to the said block.

1,109,953. COLLAPSIBLE RACK. LYDIA F. B. ARNOLD, Oshkosh, Wis. Filed Oct. 14, 1912. Serial No. 725,734. (Cl. 211—17.)



In combination with a support, of a rack composed of flat parallel side members, one of said members being secured to said support, the other being spaced therefrom, said spaced member having its extremities slightly rounded, end bars rectangular in cross section and disposed edgewise, said bars having their extremities hingedly connected with the rounded extremities of said spaced members and with said support, intermediate cross bars similarly formed and disposed, the latter having their ends hingedly connected at points equidistant on said members, said bars and members being in the same plane and forming when extended into open position a cornerless rectangular rack and when folded the flat faces of the bars and side members contact and occupy a comparatively small space, a rotatable hook secured to the support for engagement with one end of the hinged spaced member, a combined brace and link, one end of which is movably secured to one of said end bars, and a hook projecting from the support and adapted to be engaged with an eye formed on the free end of said brace, whereby the former is held in an open and rigid position.

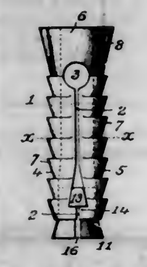
1,109,954. CAKE-KNOCKER FOR OIL-MILLS. JOHN W. BANKS, Torreon Coah, Mexico. Filed Nov. 14, 1912. Serial No. 731,360. (Cl. 100—52.)



1. A cake knocker for oil mills, comprising a relatively thin stripper blade of approximately even thickness throughout its length and having a driving lug thereon adapted to contact with the edges of the oil cakes within the boxes in which they are formed, and means connected to said blade for jarring said driving lug to loosen the oil cakes from the boxes.

2. A cake knocker for oil mills, comprising a relatively thin blade of approximately even thickness throughout its length, a driving lug secured thereon intermediate its ends, the blade on opposite sides of said driving lug being adapted as a stripper blade and a handle support respectively, and a weighted handle mounted to slide on said handle portion and adapted to percussively engage said handle portion to transmit shocks to said driving lug.

1,109,955. EXPANSION-BOLT. ARTHUR C. BARRETT, Chicago, Ill. Filed Mar. 6, 1914. Serial No. 822,819. (Cl. 85—2.4.)



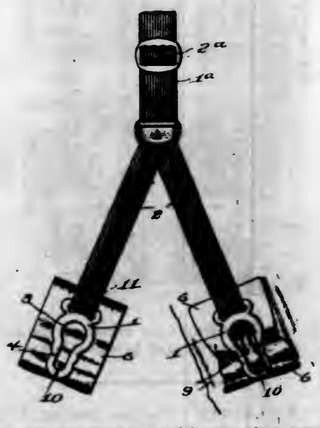
1. The combination of a longitudinally split sleeve having a bore the rear end of which is outwardly flared, and an expander nut having a tapering periphery engaging said rear end of the sleeve and formed with longitudinal slits extending to near its forward end, the said nut having a tapering screw-threaded bore adapted to coact with the correspondingly formed point of a lag-screw to effect an expansion of said nut as the lag-screw is screwed into place, substantially as set forth.

2. The combination of a longitudinally split sleeve having a bore the rear end of which is outwardly flared, and an expander nut having a tapering periphery engaging said rear end of the sleeve and formed with longitudinal slits extending to near its forward end and with lateral lugs having movement in the slits between the branches of the sleeve, the said nut having a tapering screw-threaded bore adapted to coact with the correspondingly formed point of a lag-screw to effect an expansion of said nut as the lag-screw is screwed into place, substantially as set forth.

3. The combination of a longitudinally split sleeve having a bore the rear end of which is outwardly flared, and an expander nut having a cylindrical forward end, a tapering rear end and a bore having a cylindrical forward portion and a tapering screw-threaded rear portion, the said nut being formed with longitudinal slits extending to near its forward end, substantially as set forth.

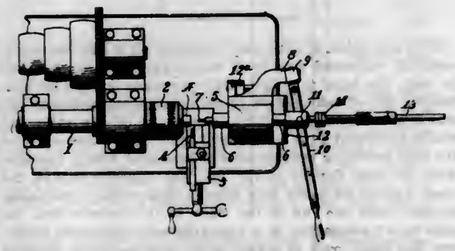
4. The combination of a longitudinally split sleeve having a bore the rear end of which is outwardly flared, and an expander nut having a cylindrical forward end, a tapering rear end, and a bore having a cylindrical forward portion and a tapering screw-threaded rear portion, the said nut being formed with longitudinal slits extending to near its forward end, and with lateral lugs having movement in the slits between the branches of the sleeve, substantially as set forth.

1,109,956. GARMENT-SUPPORTER. MARY E. LORD BERGEN, Brooklyn, N. Y. Filed Sept. 27, 1913. Serial No. 792,133. (Cl. 24—245.)



A hose protector for loop and button-clasp garment supporters, comprising a clasp, a supporter webbing, a piece of textile material of greater length and width than the clasp and folded upon itself centrally lengthwise, the ends of the material being turned inwardly and stitched to the supporter webbing at the intersection of said webbing and the top of the clasp, and the folded portion of the material being stitched central thereof to the bottom of the clasp, so as to form a fullness in said material between the two secured ends thereof, substantially as set forth.

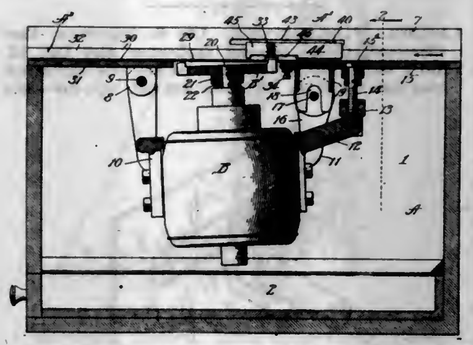
1,109,957. CENTERING ATTACHMENT FOR CUTTING-OFF MACHINES. HARRY BOWEN, Jackson, Mich., assignor to The Holton Company, Jackson, Mich., a Corporation of Michigan. Filed Mar. 21, 1913. Serial No. 755,838. (Cl. 29—33.)



1. In a machine of the character described, a bed, a bearing having pivotal connection with the bed and provided with a laterally directed arm, a centering tool holder slidable in the bearing and carrying a centering tool at its inner end, the outer end of the holder being bifurcated, and a lever pivotally connected in the bifurcation of the holder and having slidable connection with the arm of the bearing to operate the centering tool holder and to shift said bearing on its pivot.

2. In a machine of the character described, a bed, a block mounted on the bed, a bearing having pivotal connection with said block, a centering tool holder slidable in the bearing and carrying a centering tool at its inner end, and a lever pivotally connected to the holder and having slidable connection with the bearing to operate the centering tool holder and to move said bearing on its pivot away from said block, the block having a groove and the bearing having a tongue to fit in the groove to hold the bearing against lateral movement upon approaching this centering tool holder.

1,109,958. MAIL-OPENING MACHINE. CLYDE J. BRYANT, Chicago, Ill., assignor of one-half to John P. Wallis, Chicago, Ill. Filed Nov. 29, 1912. Serial No. 734,029. (Cl. 164—60.)



1. In a mail-opening machine, the combination of an envelop-guide adapted to permit envelops to be passed therethrough on edge, and a rotary cutter-wheel having laterally-projecting teeth adapted to remove successive sections from the lower edge-portion of envelops passed through said guide, said teeth separated by slots extending through the cutter-wheel.

2. In a machine of the character set forth, the combination of an envelop-guide adapted to permit envelops to be passed therethrough on edge, and a coacting rotary cutter-wheel having an inclined axis and having its peripheral portion equipped with inclined teeth separated by inclined slots extending through the wheel.

3. In a machine of the character set forth, the combination of an envelop-guide adapted to permit envelops to be passed therethrough on edge, and a co-acting rotary cutter-wheel having an inclined axis and equipped with laterally-projecting inclined teeth separated by slots extending through the wheel, said teeth having oblique shearing-edges presenting an advance-point at the upper outer corners of the teeth.

4. In a machine of the character set forth, the combination with an envelop-guide having its base-portion provided with a transverse slot, of a rotary cutter-wheel having an inclined axis and provided at its peripheral portion with laterally-projecting shearing-blades formed integrally with the wheel and separated from each other by slots, said slots being inclined to the plane of the wheel and obliquely disposed with relation to the radii of the wheel.

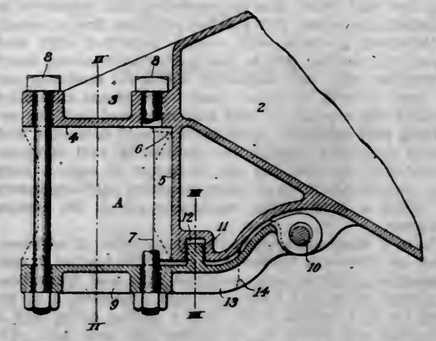
5. In a machine of the character set forth, the combination with an envelop-guide, of a rotary cutter-wheel equipped with laterally-projecting shearing-blades, and an adjustably-secured, stationarily-mounted shear-member associated with said envelop-guide and disposed near one lateral wall thereof.

[Claims 6 to 21 not printed in the Gazette.]

1,109,959. JOURNAL-BOX-SECURING MECHANISM. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Aug. 5, 1913. Serial No. 783,021. (Cl. 105—243.)

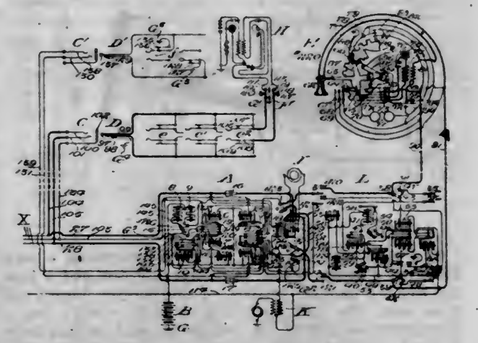
1. In journal box securing mechanism, a truck side frame having a journal box seat, and an inflexible plate adapted to support the journal box, the said plate being secured to the frame by a loose pivot at one of its ends and being supported at its other end by box-securing bolts.

2. In journal box securing mechanism, a truck side frame having a journal box seat, a journal box seated thereon, a plate loosely pivoted to the side frame and secured to the box and to the frame by vertically-extending bolts, and a coöperating engagement between the plate and the side frame, other than its pivotal connection thereto, adapted to receive side and end thrust strains from the journal box and to relieve the pivotal connection from such thrusts.



3. In journal box securing mechanism, a truck side frame having journal box seat, and a plate secured to the under side of the frame, the said frame and plate being apertured for reception of a plurality of bolts and having a recess and projection engagement to prevent twisting and endwise movement of the box.

1,109,960. AUTOMATIC TELEPHONE-TESTING SYSTEM. WILSON L. CAMPBELL, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Apr. 1, 1907. Serial No. 365,650. (Cl. 179—16.)



1. An automatic telephone exchange system comprising a connector switch, telephone lines terminating at said switch, means by which an attendant may cause said connector switch to seize any one of said lines, condensers in the said connector, and means controlled by the said attendant for shunting or short-circuiting said condensers, whereby a conductively continuous circuit is afforded for testing purposes.

2. An automatic telephone exchange system comprising a connector switch, telephone lines terminating at said switch, means for rendering one or more of said lines busy, means adapted to prevent seizure of a busy line by said connector when the latter is used by a subscriber, mechanism under the control of an attendant for causing said connector switch to seize any one of said telephone lines, and means under the control of the attendant for enabling the connector to seize a busy line.

3. An automatic telephone exchange system comprising

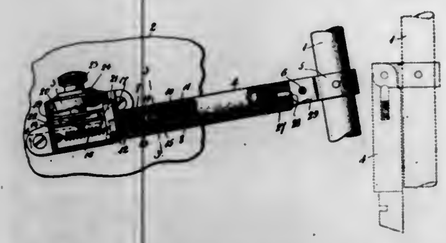
telephone lines, means for rendering one or more of said lines busy, an automatic connector, means for preventing seizure of a busy line by a connector when the latter is used by a subscriber, a manual switchboard, and means controllable from the said switchboard for causing the connector to seize a busy line.

4. An automatic telephone exchange system comprising telephone lines, an automatic connector, a trunk line leading to said connector, means by which calling subscribers may use said trunk line for operating said connector to establish connection with a called telephone line, a manual switchboard provided with a jack connected with said trunk line, another jack on said switchboard having direct connection with said connector, means for rendering one or more of said telephone lines busy, means controlled through the medium of said first-mentioned jack for operating said connector, condensers in said connector, and means controlled through the medium of said last-mentioned jack for enabling the connector to seize a busy line, and for shunting or short-circuiting said condensers to afford a conductively continuous circuit for testing purposes.

5. In a telephone system, the combination of telephone lines, an automatic connector, a trunk line leading to said connector, a spring jack connected with said trunk line, a special trunk line leading to said connector, a spring jack for said special trunk line, a calling device and a telephone and means for connecting the same with said first-mentioned jack, and suitable instrumentalities controllable through the medium of said last-mentioned jack for enabling the connector to seize a busy telephone line and establish a conductively continuous circuit for testing purposes.

[Claims 6 to 31 not printed in the Gazette.]

1,109,961. AUTOMOBILE-LOCK. ROLAND CAVICCHI, Quincy, Mass. Filed June 28, 1913. Serial No. 776,221. (Cl. 70—90.)



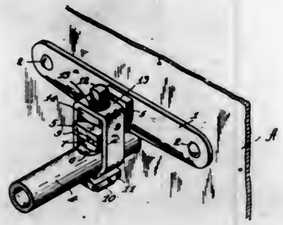
1. A device of the class described comprising a movable arm, a keeper shaped to receive said arm and a locking member movable relative to said keeper toward and from said arm and comprising a body member and a spring-pressed locking pin carried by said locking member and yieldable relative thereto to permit the insertion of the arm in the keeper but normally positioned to retain said arm when inserted.

2. A locking device comprising a keeper, an arm movable to engage the keeper and interlock therewith in such a manner as to prevent relative movement in one direction, a locking member movable relative to the keeper and comprising a body member and a spring-pressed locking pin movable relative to said body member to engage the movable arm and retain it in interlocking engagement with the keeper and means for controlling the locking member.

3. A device of the class described comprising an arm adapted to be connected to a lever, a keeper shaped to receive the arm, a locking member movable relative to said keeper and toward and from said arm when said arm is in position in said keeper, and comprising a body member and a spring-pressed locking pin carried by said body member yieldable to permit insertion of the arm in the keeper while the body member is in position toward said arm, but positioned to retain said arm when inserted, and means controlling said locking member.

4. A device of the class described comprising an arm adapted to be pivotally connected to a lever in such a manner that it is capable of movement to operative and inoperative positions, a keeper shaped to receive said arm and interlock therewith to prevent longitudinal or lateral movement of said arm, means to lock said arm in said keeper comprising a slidable member and a spring-pressed pin carried by said slidable member and movable relative thereto.

1,109,962. PIPE-SUPPORT. LEE S. CHADWICK, East Cleveland, Ohio. Original application filed Oct. 25, 1913, Serial No. 797,217. Divided and this application filed Mar. 30, 1914. Serial No. 828,422. (Cl. 248—36.)



1. In a pipe support, the combination with a pipe having a flattened portion, of a member that is secured to such flattened portion, a supporting plate having a lateral projection extending over said member, and a device for clamping the pipe, the member and the projection together.

2. In a pipe support, the combination with a pipe having a flattened portion, of a member upon said flattened portion, a supporting plate having a lateral projection extending over said member, an L-shaped reinforcing member fitted within the angle between the body portion of the supporting plate and the aforesaid projection, and a device for clamping the pipe, the first mentioned member, and the projection with its reinforcing member together.

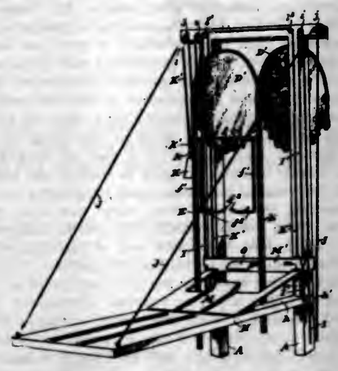
3. In a pipe support, the combination with a pipe having a flattened portion, of a supporting plate having a lateral projection extending over such flattened portion of the pipe, an L-shaped reinforcing member fitted within the angle between the body portion of the supporting plate and the aforesaid projection, and a clamping device for securing the pipe and the projection with its reinforcing member together.

4. In a pipe support, the combination with a pipe having a flattened portion, of a member upon said flattened portion, a supporting plate having a lateral projection extending over said member, and a clamping device for holding the pipe, the member and the projection together, said device comprising an inverted, substantially U-shaped strap having a flat central portion extending in a plane parallel to the plane of the aforesaid projection, and means interposed between and tending to force apart the flat central portion of the aforesaid strap and the lateral projection of the above mentioned plate, the free ends of the aforesaid strap being secured together on the side of the pipe opposite its flattened portion.

5. In a pipe support, the combination, with a pipe having a flattened portion, of a member upon said flattened portion, a supporting plate having a lateral projection extending over said member, and a clamping device for holding the flattened portion of the pipe against the projection, said device comprising an inverted, substantially U-shaped strap having a flat central portion extending in a plane parallel to the plane of the aforesaid projection, a set screw extending therethrough and bearing against the projection, and a nut threaded upon the screw and bearing against the underneath surface of the flat portion of the strap, the free ends of the aforesaid strap being secured together on the side of the pipe opposite its flattened portion.

[Claim 6 not printed in the Gazette.]

1,109,963. FREIGHT-HANDLING APPARATUS. JOHN T. CLARK, New York, N. Y. Filed Dec. 15, 1910. Serial No. 597,431. (Cl. 193—8.)



1. In a freight handling apparatus, an endless carrier, a discharging platform extending outwardly therefrom, hoisting mechanism coöperating with the platform for adjusting the latter in a vertical direction and with relation to the endless carrier, means separate from the hoisting mechanism for raising or lowering the outer end of the discharging platform whereby said platform may be positioned in inclined relation to the carrier, and means for transferring a load on the carrier to said discharging platform.

2. In a freight handling apparatus, an endless carrier, a plurality of package holders thereon, a discharging platform in coöperative relation to said carrier, a directing platform positioned above the discharging platform and coöperating therewith in discharging a load, said directing platform and the discharging platform being so arranged that one of said platforms is capable of a limited edgewise movement relative to the other platform, and means whereby a load may be delivered from the package holders to the directing platform and thence to the discharging platform.

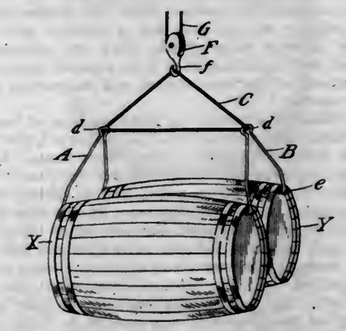
3. In a freight handling apparatus, an endless carrier, a discharging platform in coöperative relation to said carrier, a directing platform positioned above and inclined relative to the discharging platform, said platforms being so related to each other that the discharging platform may shift its position in a horizontal direction with reference to the inclined directing platform, means for adjusting the discharging platform, and means whereby the load on the endless carrier may be delivered upon the directing platform.

4. In a freight handling apparatus, a frame, an endless carrier supported on said frame, pivoted package holders on said endless carrier, a discharging platform, a directing platform independent of the discharging platform and in coöperative relation thereto, said directing platform being slidably mounted on the frame for vertical movement relative thereto, and means coöperating with the frame and carrier whereby packages may be delivered from the package holders to the directing platform.

5. In a freight handling apparatus, an endless carrier, a discharging platform extending outwardly therefrom, a directing platform inclined relative to, and resting upon, said discharging platform, means carried by the directing platform for transferring a load from said endless carrier to the directing platform, and means whereby the discharging and directing platforms may be raised and lowered relative to said endless carrier.

[Claims 6 to 11 not printed in the Gazette.]

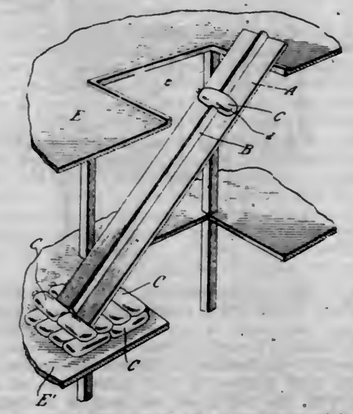
1,109,964. DEVICE FOR HANDLING FREIGHT IN PACKAGES. JOHN T. CLARK, New York, N. Y. Original application filed Aug. 9, 1910, Serial No. 576,353. Divided and this application filed Oct. 21, 1911. Serial No. 655,882. (Cl. 57—11.)



1. In a sling of the class described, the combination of a plurality of rigid load-engaging members each having upwardly converging arms and provided at their lower ends with upwardly facing hooks or claws, said load-engaging members being positioned to span the space between two barrels of a load and the hooks or claws of each member being adapted for engagement with the respective barrels at the ends thereof, a single flexible loop loosely engaged with the upper portions of said load-engaging members, and a fall line detachably connected to the upper part of the loop at a point between, and equidistant from, the rigid load-engaging members.

2. In a sling of the class described, the combination of two substantially triangular load-engaging members each composed of rigid material and each provided at the upper part with an eye and at the lower parts thereof with upwardly pointing claws, a single flexible loop running loosely through the eyes of the respective load-engaging members, said load-engaging members being positioned to span two barrels of a load, and a fall line connected with the loop so as to exert stress thereon between the load-engaging members so that the load-engaging members will draw the components of the load into contact with each other.

1,109,965. LOADING AND UNLOADING DEVICE. JOHN T. CLARK, New York, N. Y. Filed Oct. 21, 1911. Serial No. 655,883. (Cl. 193—29.)



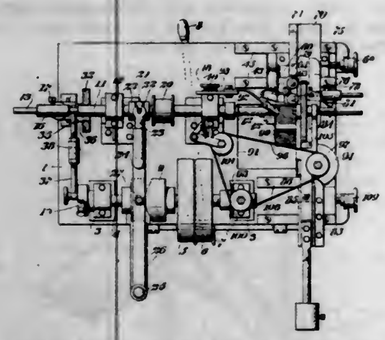
1. An inclined slideway for handling bags of loose material, embodying an imperforate base member, and a guiding and retaining member positioned lengthwise of

said base member and substantially intermediate the side edges of said member, the upper surface of the base member being substantially continuous at the respective sides of the guiding and retaining member so as to be exposed for frictional contact with the bag of material, whereby a bag of material deposited upon the slideway becomes indented by contact with the guiding and retaining member so that said bag of material will closely hug said member when sliding down the slideway, the weight of said bag of material being imposed upon the exposed surfaces of the base member and the guiding and retaining member.

2. An inclined slideway for handling bags of loose material, embodying an imperforate base member, the respective side edges of which are free from flanges and the upper surface of which is exposed for frictional engagement with the bags of material, and a guiding and retaining member positioned lengthwise of said base member and substantially intermediate the side edges thereof, said guiding and retaining member extending upwardly from the base member, whereby a bag containing loose material and deposited upon the slideway becomes indented by contact with the guiding and retaining member so that said bag of material will hug closely to said member when sliding down the slideway, the weight of said bag of material being imposed upon the exposed surfaces of the base member and the guiding and retaining member.

3. An inclined slideway for handling bags of loose material, embodying an imperforate base member, the respective side edges of which are free from flanges and the upper surface of which is exposed for frictional engagement with the bags of material, and a guiding and retaining member positioned lengthwise of said base member and substantially intermediate the side edges thereof, said guiding and retaining member being substantially semi-cylindrical in shape and extending upwardly from the base member, whereby a bag containing loose material and deposited upon the slideway becomes indented by contact with the guiding and retaining member so that said bag of material will hug closely to said member when sliding down the slideway, the weight of said bag of material being imposed upon the exposed surfaces of the base member and the guiding and retaining member.

1,109,966. CORK-CUTTING MACHINE. PETER CODINA, Hoboken, N. J., assignor to Mir, Codina & Marques, Hoboken, N. J., a Firm. Filed Dec. 4, 1913. Serial No. 804,719. (Cl. 144—23.)



1. In a cork cutting machine, the combination of a main shaft, a feed shaft, connections between said main shaft and feed shaft to intermittently rotate said feed shaft, a mandrel, a cutter carried by said mandrel, means to reciprocate said mandrel lengthwise, independent means to rotate said mandrel, a feed roller mounted on and turning with the feed shaft and adapted to engage the stock on its underside in line with said mandrel and cutter, a complemental gravity feed roller adapted to engage the stock on its upper side in line with the mandrel and cutter, feed wheels arranged at right angles to the axes of the feed rollers and adapted to engage one side of the work or stock in advance of the feed rollers, a work or stock supporting mechanism adapted to support the work or stock against the thrust of the mandrel and the action of said feed wheels, and means to drive the feed wheels from the feed shaft.

2. In a cork cutting machine, the combination of a main shaft, a feed shaft arranged parallel with the main shaft, connections between said shafts for intermittently rotating said feed shaft, a mandrel arranged above and in parallelism with the feed shaft, a punch or cutter carried by said mandrel, means connecting said main shaft and mandrel to reciprocate the mandrel lengthwise, independent means to rotate the mandrel, a suitable work or stock supporting mechanism, including a pair of rollers engaging the upper and lower sides of the stock in line with said mandrel and its cutter, a pair of feed wheel shafts, feed wheels thereon adapted to engage one side of the stock in advance of the cutter and supporting rollers, means connecting the pair of feed wheel shafts to cause them to turn in the same direction, and gearing interposed between the main feed shaft and one of the feed wheel shafts to actuate said pair of feed wheel shafts.

3. In a cork cutting machine, the combination of a main shaft, a mandrel and a cutter thereon, stationary bearings for said mandrel, a main feed shaft arranged below and in vertical alinement with the mandrel, a vertically adjustable cross-head in which said feed shaft is mounted and by which its elevation may be varied, a gear wheel fixed to one end of said feed shaft, means on the other end of said feed shaft connected with the main shaft by which the feed shaft may be given an intermittent rotation, means connected with the main driving shaft for varying the speed of the feed shaft, a work or stock feeding mechanism, and a horizontally adjustable carrier for said work or stock feeding mechanism.

4. In a cork cutting machine, the combination of a main driving shaft, a rotary reciprocating cutter mandrel arranged in fixed bearings, a main feed shaft arranged below and in parallelism with the cutter mandrel, a vertically adjustable cross-head in which said feed shaft is supported and adjustable longitudinally, a horizontally adjustable arm, a bearing therein for said feed shaft in which it is fixed against independent longitudinal movement, the adjustment of the arm serving to adjust the feed shaft longitudinally, work or stock feed wheels mounted in said horizontally adjustable arm, a gear wheel on the main feed shaft, and transmission gearing also carried by the adjustable arm, including a gear wheel meshing with the gear wheel on the main feed shaft and transmitting the intermittent motion of the main feed shaft to the work or stock feed wheels and permitting independent adjustment of the main feed shaft and the work or stock feed wheels.

5. In a cork cutting machine, the combination of a driving shaft, a cutter mandrel mounted in fixed bearings, means driven from the main shaft for reciprocating the cutter mandrel, independent means for rotating said mandrel, a main feed shaft arranged below and in parallelism with the cutter mandrel, means actuated by the main shaft for imparting an intermittent step-by-step motion to the said feed shaft, a feed roller mounted on said feed shaft and engaging the underside of the stock in line with the cutter, a gear wheel connected with and driven by the feed shaft, a pair of work or stock feeding wheels adapted to engage one side of the stock in advance of the cutter and said feed roller, shafts therefor, gearing interposed between one of said feed wheel shafts and the gear wheel on the main feed shaft, and means to connect the pair of feed wheel shafts to cause them to turn in the same direction.

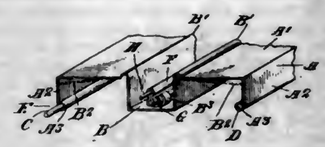
[Claims 6 to 8 not printed in the Gazette.]

1,109,967. CLOTHES-PIN. HENRY F. CONDON, De Kalb, Ill. Filed Nov. 15, 1912, Serial No. 731,510. Renewed Jan. 28, 1914. Serial No. 815,077. (Cl. 24—261.)

A clothes pin comprising a single wire bent to form a resilient hinge with arms extending therefrom, said arms converging for a distance then diverging and provided with rebent portions which follow back along said diverging portions, and for a distance on said converging

portions, then converging toward each other, and finally having their ends adjacent each other overlapping and lying in a common plane, substantially as described.

1,109,968. TOY CONSTRUCTION. JOSHUA L. COWEN, New York, N. Y. Filed Apr. 22, 1912. Serial No. 692,336. (Cl. 191—23.)



1. A roadway for toy electric railways formed of integral sheet metal sections each section having substantially flat track portions upon which the wheels of the vehicle are adapted to roll, and a conduit between said track portions, a rail attached to the bottom of said conduit adapted to serve as a curent conveying means and also as a guiding means for the toy vehicle, said track portions and rail being provided with attaching means for mechanically and electrically connecting the sections together.

2. A roadway for toy electric railways formed of integral sheet metal sections each section having substantially flat track portions upon which the wheels of the vehicle are adapted to roll, side walls depending from the track portions upon which the roadway is adapted to rest and a conduit between said track portions, a rail within said conduit below the surface of the track portions and insulated therefrom adapted to serve as a current conveying means and also as a guiding means for the toy vehicle, said track portions and rail being provided with attaching means for mechanically and electrically connecting the sections together.

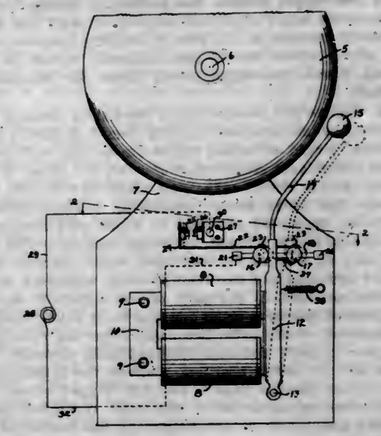
3. A toy construction comprising a sheet metal roadway formed as a separate interchangeable section having a track portion, a conduit formed integrally therewith, the upper portions of which extend above the surface of the roadway, said roadway being adapted to serve as a contact member from which the current is conducted to the vehicle, a rail supported in said conduit, and attaching means at the end of the section for connecting with an adjacent section.

4. A toy construction comprising a sheet metal roadway formed as a separate interchangeable section having a track portion, a conduit formed integrally therewith, the upper portions of which extend above the surface of the roadway, said roadway being adapted to serve as a contact member from which the current is conducted to the vehicle, a rail supported in said conduit, and insulating material located between said rail and the surface of said conduit.

5. A toy construction embodying a sheet metal roadway and a conduit formed therein below the surface thereof, a rail supported in the conduit, said rail having a socket at each end, an extended member fastened in each socket disposed mainly at one side of the median line of the rail, and insulating material located between the conduit and said rail.

[Claims 6 to 8 not printed in the Gazette.]

1,109,969. ELECTRIC BELL. WILLIAM J. COOK and MARTIN W. BREUER, Denver, Colo., assignors to The Cook Railway Signal Company, Denver, Colo., a Corporation of Colorado. Filed May 24, 1912. Serial No. 699,448. (Cl. 177—7.)



1. An electric bell, comprising a resonating member, an electro-magnet, an armature for said magnet, means for normally holding said armature away from said magnet, a tappet carried by said armature, a circuit make and break device operable by said armature, said circuit make and break device comprising a movable member, separated members to which said movable member is secured, a bar located in the circuit of said electro-magnet and upon which bar said separated members are slidable, the said armature passing between said separated members and adapted to engage one of said separated members to shift the movable member of the circuit make and break device into the circuit closing position, whereby the armature is drawn to the electro-magnet and the tappet caused to strike the resonating member, the said armature adapted to engage the other separated member during its movement toward the electro-magnet to move the said movable member of the said circuit make and break device to the circuit breaking position, whereby the armature is allowed to be drawn away from the said electro-magnet and carry the tappet therewith.

2. An alternating current electric bell, comprising a resonating member, an electro-magnet, an armature for said electro-magnet, means for normally holding said armature away from said electro-magnet, a tappet carried by said armature, means operable by said armature for alternately closing and breaking the circuit through said electro-magnet, comprising a movable contact member, separated members to which said movable contact member is secured, a bar located in the circuit and upon which said separated members are movable, the armature passing between said separated members and adapted to engage one of said separated members to shift the movable contact member into the circuit closing position, whereby the armature is drawn to the electro-magnet and the tappet caused to strike the resonating member, the said armature engaging the other separated member during its movement toward the electro-magnet to move the movable contact member to the circuit breaking position, whereby the armature is allowed to be drawn away from the electro-magnet and carry the tappet therewith away from the resonating member.

3. An electric alarm, comprising a resonating member, a tappet for said resonating member, electro-magnetic means for operating said tappet, means operable by the movement of said tappet for alternately breaking and closing the circuit through said electro-magnetic means, comprising a movable contact member, separated members to which said movable contact member is secured, a bar upon which said separated members are movable, the

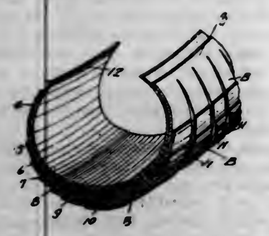
movement of the tappet in one direction operating upon one of said separated members to shift the movable contact member into the circuit closing position, whereby the tappet is operated upon by the electro-magnetic means to cause the same to strike the resonating member, the movement of the tappet toward the resonating member operating upon the other separated member to shift the movable contact member to the circuit breaking position, and means which when the electro-magnetic means is deenergized draws the tappet away from the resonating member.

4. An electric bell, comprising a resonating member, an electro-magnet, an armature for said electro-magnet, a tappet carried by said armature, means for holding said armature away from said electro-magnet when the latter is deenergized, and a circuit make and break device, said circuit make and break device comprising a longitudinally movable bar, separated members to which said longitudinally movable bar is secured, a member located in the circuit of said electro-magnet and upon which member said separated members are movable, the said separated members being arranged in the path of the armature, one of said separated members being adapted to be acted upon by the movement of the armature away from the said electro-magnet to shift the said longitudinally movable bar into the circuit closing position, whereby the armature is drawn to the electro-magnet and the tappet caused to strike the resonating member, the other separated members being adapted to be acted upon by the movement of the said armature toward the electro-magnet to shift the said longtudinally movable bar to the circuit breaking position, whereby the armature is allowed to be drawn away from the said electro-magnet and carry the tappet therewith away from the resonating member.

5. An electric bell, comprising a resonating member, an electro-magnet, an armature for said electro-magnet, means for normally holding said armature away from said electro-magnet, a tappet carried by said armature, a circuit make and break device operable by the movement of said armature, said circuit make and break device comprising a longitudinally movable bar, separated members to which said bar is secured, a member located in the circuit of said electro-magnet and upon which member said separated members are movable, the said separated members being adjustable to vary their distance apart, the said armature passing between said separated members and adapted to engage one of said separated members to shift said longitudinally movable bar into the circuit closing position, whereby the armature is drawn to the electro-magnet and the tappet caused to strike the resonating member, the said armature being adapted to engage the other separated member during its movement toward the said electro-magnet to move the said longitudinally movable bar to the circuit breaking position, whereby the said armature is allowed to be drawn away from the said electro-magnet and carry the tappet therewith away from the resonating member.

[Claims 6 to 8 not printed in the Gazette.]

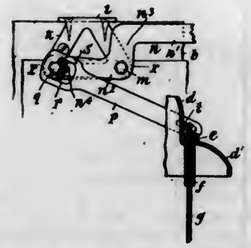
1,109,970. PNEUMATIC TIRE. ALFRED A. DENNIS, Grand Rapids, Mich. Filed July 20, 1912. Serial No. 710,647. (Cl. 152—18.)



1. A guard and support for pneumatic tires comprising a hollow circumferentially and peripherally curved shoe and a strip centrally thickened between the side edges thereof, said strip being transversely cut from adjacent one side edge to adjacent the other side edge but leaving the side edges for a short distance inwardly uncut, said cuts occurring at spaced apart intervals in the length of said strip, and the said strip being secured on the outer surface of the shoe, substantially as and for the purpose set forth.

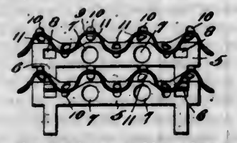
2. A guard and support for pneumatic tires comprised of a hollow circumferentially and peripherally curved shoe and a strip formed of a built up series of superposed layers of fabric material, said layers of fabric material decreasing in width with each layer whereby there is formed a strip centrally thickened between the side edges thereof, a series of transverse cuts being made in said strip from adjacent one side edge of the strip to adjacent the other side edge thereof but terminating short of the side edges, and said strip being secured to the shoe on the outer side thereof substantially as described.

1,109,971. FLUSHING APPARATUS. JOHN DENTON, Paterson, N. J. Filed Mar. 6, 1913. Serial No. 752,323. (Cl. 4—5.)



The herein described mechanism for actuating the siphon-starting means of a flushing apparatus including, in combination, a vertical supporting wall, a pair of levers arranged parallel with and close to one vertical surface of said wall and side by side, close to each other, and a bracket secured to said wall and affording a fulcrum support for the levers, one lever being fulcrumed at one end and projecting downwardly at an incline and being adapted to be connected with said starting means at its other end, and the other lever having a short arm projecting substantially horizontally in one direction from the fulcrum of said other lever and coupled with the fulcrum portion of the first lever and also having an angular power-applying arm projecting from the fulcrum of said other lever first upwardly and then in a direction relatively opposite to that in which the short arm projects, substantially as described.

1,109,972. PNEUMATIC TIRE. LESLIE DUNN, New Orleans, La., assignor to Hercules Tire Company, New Orleans, La., a Corporation of Louisiana. Filed Nov. 17, 1911, Serial No. 660,938. Renewed Feb. 9, 1914. Serial No. 817,667. (Cl. 152—16.)

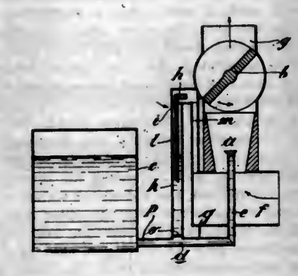


A pneumatic tire having a rubber shoe portion with an endless chain of peripherally-spaced links embedded therein, said several links comprising perforated base plates provided with spacing lugs, pivotal connections between said several lugs and the adjacent plates of said endless chain, and radial webs flanged along straight lines across said plates, said webs being provided with corrugations extending from such base straight lines past both sides of said pivotal connections.

1,109,973. WHEEL-TIRE. LOUIS DUVAL, Newton, Mass. Filed Aug. 27, 1913. Serial No. 786,842. (Cl. 152—8.)

The wheel-tire herein described consisting of a plurality of loop-springs attached at their inner ends to the rim and disposed substantially radially with respect to the wheel, a circular band to which the outer ends of said springs are attached and by which they are held in fixed relative positions with respect to each other, a plurality of leaf-springs arranged within and secured to the loop-springs, and means for movably supporting the inner ends of said leaf springs, said means including brackets secured to the wheel rim, pins supported in said brackets and projected at right angles to the axis of the wheel, the leaf springs having openings of greater length than the diameter of the pins, the thickness of the springs at their point of connection to the pins being less than the free length of said pins.

1,109,974. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. JULES FAGARD, Liege, Belgium. Filed Jan. 9, 1912. Serial No. 670,213. (Cl. 48—155.1.)



1. In a carbureter for internal combustion engines, the combination of a casing, a hydrocarbon reservoir, a main nozzle, an auxiliary nozzle, conduits connecting the reservoir and nozzles, and a throttle valve controlling the discharge of vapor from the casing, the connections between the reservoir and nozzles automatically rendering the auxiliary nozzle operative only when the throttle valve is positioned to cause an engine connected with the carbureter to run at less than its normal speed.

2. In a carbureter for internal combustion engines, the combination of a casing, a hydrocarbon reservoir, a main nozzle, an auxiliary nozzle, a conduit for supplying hydrocarbon from the reservoir to both nozzles, and means interposed between said conduit and the auxiliary nozzle whereby the latter is automatically rendered inoperative when the main nozzle is exposed to the suction created by normal speed of the engine connected with the carbureter and is alone operative when starting the engine.

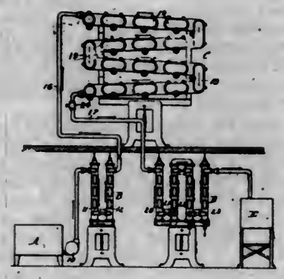
3. In a carbureter for internal combustion engines, the combination of a casing, a hydrocarbon reservoir, a main nozzle, an auxiliary nozzle, a conduit for supplying hydrocarbon from the reservoir to both nozzles, and means for retarding the passage of hydrocarbon from the supply conduit to the auxiliary nozzle, whereby said auxiliary nozzle is automatically rendered inoperative when the main nozzle is exposed to the suction created by normal speed of the engine to which the carbureter is connected.

4. In a carbureter for internal combustion engines, the combination of a casing, a hydrocarbon reservoir, a main nozzle having a supply conduit connected with the reservoir, a branch conduit connected with said supply conduit, an auxiliary nozzle having its fuel supply pipe extending into said branch conduit, a throttle valve controlling discharge of vapor from the casing, and means controlling the passage of hydrocarbon through said supply conduit whereby when the throttle is positioned to cause an engine connected with the carbureter to operate at or above normal speed the amount of hydrocarbon entering the branch conduit will be insufficient to permit operation of the auxiliary nozzle.

5. A carbureter for internal combustion engines comprising in combination with the principal nozzle, an auxiliary nozzle receiving its fuel from the principal supply pipe with which it communicates by a plug having a small orifice; the principal nozzle being carried by a conical plug secured in place by a screwed member which is provided with a recess which can be engaged with the projecting ends of the plugs of the principal nozzle, of the auxiliary nozzle, of the tube leading to the latter from the supply pipe, and of the helix for increasing the resistance to the flow of fuel through certain parts of the principal supply pipe.

[Claims 6 and 7 not printed in the Gazette.]

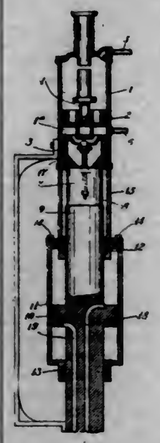
1,109,975. PASTEURIZING APPARATUS. HARVEY FELDMEIER and CHARLES B. DALZELL, Little Falls, N. Y., assignors to D. H. Burrell & Company, Little Falls, N. Y. Filed June 9, 1911. Serial No. 632,128. (Cl. 210—1.)



1. In a pasteurizing apparatus, the combination with a heater and a cooler, of an interposed holder which is independent of said heater and cooler and which consists of a tube through which the liquid flows from the heater to the cooler and which is of such length that the heated liquid in flowing through the holder occupies the necessary time for pasteurization and of such cross sectional area that practically all particles of the liquid flow through such area in the same direction and with the same speed.

2. In a pasteurizing apparatus, the combination with a tubular heater and a tubular cooler, of an interposed holder which is independent of said heater and cooler and which consists of a tube through which the liquid flows from the heater to the cooler and which is of such length that the heated liquid in flowing through the holder occupies the necessary time for pasteurization and of such cross sectional area that practically all particles of the liquid flow through such area in the same direction and with the same speed, said heater, holder and cooler forming a continuous flow passage through which the milk flows in a confined stream.

1,109,976. TREATING-CHAMBER FOR STERILIZING-MACHINES. WILLIAM B. FENN, Columbus, Ohio, assignor to The Wedoit Company, Columbus, Ohio, a Corporation of Ohio. Filed Nov. 25, 1910, Serial No. 594,138. Renewed Feb. 2, 1914. Serial No. 816,087. (Cl. 99—2.)



1. In apparatus for treating materials, the combination with a chamber, and means in connection therewith for applying a treating material, of a vertically stationary column for supporting a vessel containing material to be treated, a sleeve movable on said column, and means for raising said sleeve against the aforesaid chamber to inclose a vessel supported on said column.

2. In apparatus for treating materials, the combination with a chamber, and means in connection therewith for applying a treating material, of a vertically stationary column for supporting a vessel containing material to be treated, a sleeve movable on said column, means including a cylinder movable on said column, a piston on said column within the cylinder and ducts for admitting and exhausting fluid pressure at opposite ends of said cylinder to elevate said sleeve against the aforesaid chamber to inclose a vessel supported on said column.

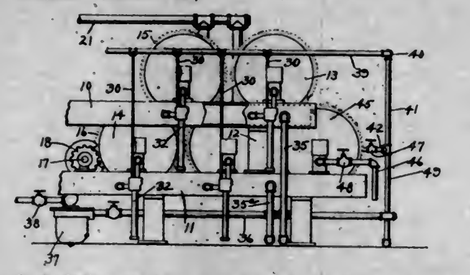
3. In apparatus for treating materials, the combination with a chamber, and means in connection therewith for applying a treating material, of a vertically stationary column for supporting a vessel containing material to be treated, a sleeve movable on said column, means including a cylinder movable on said column, a piston on said column within the cylinder, and a duct for admitting fluid pressure to an end of said cylinder to cause the same to move said sleeve against said chamber to inclose a vessel supported on said column.

4. In apparatus for treating materials, the combination with a chamber, and means in connection therewith for applying a treating material, of a vertically stationary column for supporting a vessel containing material to be treated, a sleeve movable on said column, means including a cylinder movable on said column, and a piston on said column within the cylinder, said column provided with a duct for admitting fluid pressure to an end of said cylinder to cause the same to move said sleeve against said chamber to inclose a vessel supported on said column.

5. In apparatus for treating materials, the combination with a chamber, and means in connection therewith for applying a treating material, of a vertically stationary column for supporting a vessel containing material to be treated, a sleeve movable on said column and means including a cylinder movable on said column and a piston on said column within the cylinder, said column provided with ducts for conveying a fluid pressure to the opposite ends of said cylinder to reciprocate the same with reference to said chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,109,977. DRYING-MACHINE. WILLIAM R. FILES, Providence, R. I. Filed July 14, 1913. Serial No. 778,881. (Cl. 34—48.)



1. A drying machine comprising a plurality of rotatable heating cans, means for admitting steam thereto, an exhaust main communicating with the discharge end of said cans, means for separating the steam and vapor from the entrained water as it is exhausted from each of said cans, a modifying can arranged to coöperate with the other cans, and a draft pipe for receiving the separated steam and vapor and conducting it into said modifying can.

2. A drying machine comprising a plurality of rotatable heating cans, means for admitting steam thereto, an exhaust main communicating with the discharge end of said cans, means for separating the steam and vapor from the entrained water as it is exhausted from each of said cans, a modifying can arranged to coöperate with the other cans, a draft pipe for receiving the separated steam and vapor and conducting it into said modifying can, an open ended discharge pipe leading from said latter can, and valves in said inlet and discharge for controlling the temperature in said latter can.

3. A drying machine comprising a plurality of rotatable heating cans, means for admitting steam thereto, an exhaust main communicating with the discharge end of said cans, means for separating the steam, air and vapor from the entrained water immediately upon being exhausted from each of said cans, a modifying can arranged to coöperate with the other cans, a draft pipe for receiving the separated steam, air and vapor and conducting it into said modifying can, and means whereby the temperature in said last-mentioned can may be controlled.

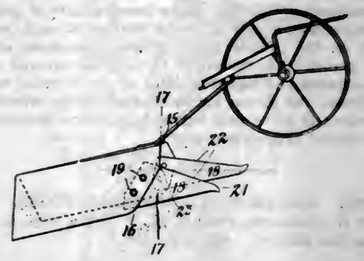
4. A drying machine comprising a plurality of rotatable heating cans, means for admitting steam thereto, an exhaust main communicating with the discharge end of said cans, a separating chamber connected direct to the discharge from each of said cylinders for separating the steam, air and vapor from the entrained water, a modifying can arranged to coöperate with the other cans, a draft pipe for receiving the separate steam, air and vapor from all of said chambers and conducting it into said modifying can, and valves controlling both the inlet and discharge to and from said modifying cylinder.

5. A drying machine comprising a plurality of rotatable heating cans, means for admitting steam thereto, an exhaust main communicating with the discharge end of said cans, a separating chamber connected direct to the discharge from each of said cylinders for separating the steam, air and vapor from the entrained water, a modifying can arranged to coöperate with the other cans, a draft pipe for receiving the separated steam, air and vapor from all of said chambers and conducting it into said modifying can, valves controlling both the inlet and discharge to and from said modifying cylinder, and an open ended discharge pipe leading from said latter cylinder.

[Claims 6 and 7 not printed in the Gazette.]

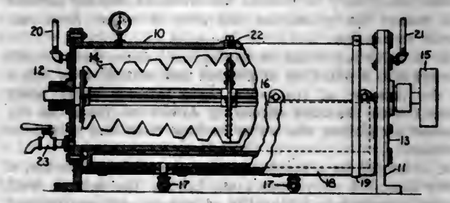
1,109,978. CULTIVATOR-SHIELD. SAMUEL M. FIREBAUGH, Vici, Okla. Filed Nov. 4, 1913. Serial No. 799,219. (Cl. 97—18.)

1. A cultivator shield comprising a guard plate adapted to be drawn by a cultivator, and having at its front end a forwardly extending plant lifting blade removably secured to the inner face of said guard plate, said blade being formed of sheet material, of triangular shape, and having its lower edge projecting along a line parallel to but raised above the lower edge of said guard plate, and its upper edge extending upwardly and rearwardly at an angle and joining said guard plate at an obtuse angle with the front edge thereof.



2. A cultivator shield comprising a guard plate adapted to be drawn by a cultivator and having at the front end a forwardly projecting plant lifting blade, the main body of which blade lies in the same plane as said guard plate, but the engaging end of which is bent laterally on a curved line from said main body and away from the stalks of the plants being cultivated, whereby digging of the point of said projection into the earth is prevented, and large plants are reached and lifted at a point sufficiently removed from the stalk to prevent uprooting or breaking.

1,109,979. MANUFACTURE OF VARNISH. STANLEY E. FORD, Scotia, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 4, 1913. Serial No. 758,832. (Cl. 134—81.)

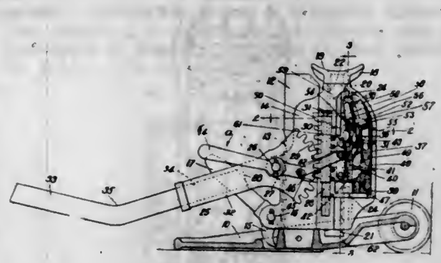


The process of making varnish which consists in confining an oxidizable varnish forming liquid in a chamber under oxodizing conditions, applying heat to the liquid, and agitating the same so as to reduce it to a fine spray.

1,109,980. LIFTING-JACK. WILLIAM H. FORREST, Boston, Mass., assignor, by direct and mesne assignments, to Excel Jack Mfg. Co., a Corporation of Maine. Filed Feb. 10, 1913. Serial No. 747,260. (Cl. 57—100.)

1. A lifting jack having, in combination, a standard, a carrier adjustable vertically relatively to said standard, a rest slidably arranged on said carrier, teeth on said rest, a lever pivoted on said carrier, a pawl operatively connected with said lever adapted to be moved thereby to engage the teeth on said rest and to elevate said rest several teeth at one stroke of said lever, a stop pawl adapted to hold said rest in the positions to which it is moved by said pawl, and normally inactive means adapted to be operated by a limited movement of said lever to alternately disengage said pawl and said stop pawl from said teeth, whereby said rest may be lowered tooth by tooth.

2. A lifting jack having, in combination, a carrier, a slide adapted to be moved vertically relatively to said carrier, a rest, means to reciprocate said rest relatively to said carrier, including a forked lever pivoted on said carrier, segmental gears arranged at the extremities of said forked end of said lever, racks on said slide adapted to engage said segmental gears respectively, teeth on said rest, and a pawl on said slide adapted to engage said teeth.



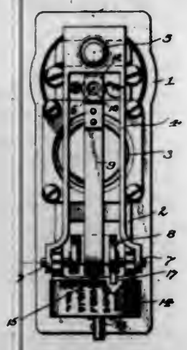
3. A lifting jack having, in combination, a carrier, a slide adapted to be moved vertically relatively to said carrier, a rest, a stem depending from said rest and engaging said carrier and said slide, teeth on said stem, a lever adapted to reciprocate said slide, a pawl carried by said slide adapted to engage said teeth to elevate said rest during the upward reciprocations of said slide, a stop pawl on said carrier to engage said teeth and support said rest during the downward reciprocations of said slide, means to yieldingly retain said pawl in contact with said teeth, a rocker arm pivotally connected with said stop pawl, a tripping plate adapted to rock said rocker arm and means carried by said pawl adapted to engage said tripping plate during the downward reciprocations of said slide and disengage said pawl from said teeth, said means also adapted to engage said rocker arm during the upward reciprocations of said slide and disengage said stop pawl from said teeth whereby said rest may be lowered tooth by tooth.

4. A lifting jack having, in combination, a carrier, a slide adapted to be moved vertically relatively to said carrier, a rest, a stem depending from said rest having slidable engagement with said carrier, teeth on said stem, a lever adapted to reciprocate said slide, a pawl carried by said slide adapted to engage said teeth to elevate said rest during the upward reciprocations of said slide, a stop pawl on said carrier to engage said teeth and support said rest during the downward reciprocations of said slide, a rocker arm pivotally connected with said stop pawl, a tripping plate adapted to rock said rocker arm, means carried by said pawl adapted to engage said tripping plate during the downward reciprocations of said slide to disengage said pawl from said teeth, said means also adapted to engage said rocker arm during the upward reciprocations of said slide to disengage said stop pawl from said teeth, and means to move said tripping plate into its operative position.

5. A lifting jack having, in combination, a carrier, a slide adapted to be moved vertically relatively to said carrier, a rest, a stem depending from said rest having slidable engagement with said carrier, teeth on said stem, a lever adapted to reciprocate said slide, a pawl carried by said slide adapted to engage said teeth to elevate said rest during the upward reciprocations of said slide, a stop pawl on said carrier to engage said teeth and support said rest during the downward reciprocations of said slide, a rocker arm pivotally connected with said stop pawl, a tripping plate adapted to rock said rocker arm, means carried by said pawl adapted to engage said tripping plate during the downward reciprocations of said slide to disengage said pawl from said teeth, said means also adapted to engage said rocker arm during the upward reciprocations of said slide to disengage said stop pawl from said teeth, and means to move said tripping plate into its operative position and to lock the same therein.

[Claims 6 and 7 not printed in the Gazette.]

1,109,981. THERMOSTAT AND LIKE DEVICE. CHARLES L. FORTIER, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1913. Serial No. 798,492. (Cl. 236—8.)



1. A valve for thermostats and the like comprising a tubular port and a celluloid valve adapted to seat against the end thereof.

2. A valve for thermostats and the like comprising a tubular port and a transparent valve adapted to seat against the end thereof.

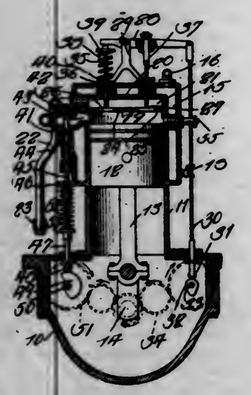
3. A valve for thermostats and the like comprising a tubular port and a transparent celluloid valve adapted to seat against the end thereof.

4. The combination in a pressure motor control device having a leak port, of a thermostatic bar adapted to bend with variations in temperature and having an aperture in line with said leak port; and a transparent valve seat mounted on said bar at said aperture and adapted to seal said port to certain positions of said bar.

5. The combination in a pressure motor control device having a leak port, of a thermostatic bar adapted to bend with variations in temperature and having an aperture in line with said leak port; and a celluloid valve seat mounted on said bar at said aperture and adapted to seal said port in certain positions of said bar.

[Claims 6 to 17 not printed in the Gazette.]

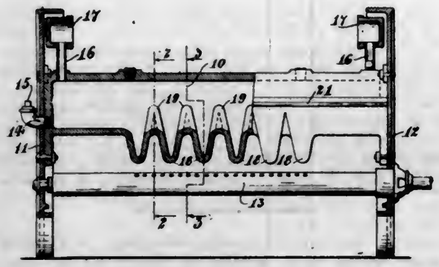
1,109,982. INTERNAL-COMBUSTION ENGINE. THOMAS L. FRATES, Livermore, Cal. Filed Mar. 11, 1913. Serial No. 753,577. (Cl. 123—90.)



1. In an internal combustion engine, a water jacketed cylinder, a fresh gas space between the bottom of said water jacket and head of said cylinder, a pair of oppositely disposed valves located in said head and controlling the passage of gas from said space into said cylinder, a lever pivoted between and serving to simultaneously open said valves, tension means for simultaneously closing said valves, and means for actuating said lever.

2. In an internal combustion engine, a cylinder having a transverse diaphragm in the head forming a fresh gas passage and a combustion chamber, a piston working in said combustion chamber, there being a pair of ports in said diaphragm, a pair of valves seating in said ports, a bracket on the cylinder head between the stems of said valves, a rock lever fulcrumed on said bracket and operatively connected on opposite sides of the fulcrum to said valve stems, and means for rocking said lever whereby to simultaneously move said valves in opposite directions to seal or unseal both of said ports.

1,109,983. BOILER FOR STEAM-RADIATORS. WILLIAM H. GIESELER, Passaic, N. J. Filed Oct. 4, 1913. Serial No. 793,304. (Cl. 122—233.)

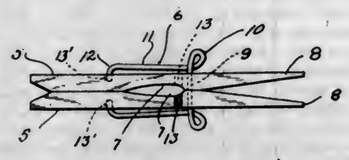


1. A boiler for radiators having the bottom wall thereof formed in a plurality of pockets the outer surface of the latter being wavy to present an extended heating surface and means for permitting the flow of water from one pocket to another.

2. A boiler for radiators having the bottom wall thereof formed into a plurality of pockets and separated by walls in the interior of the boiler, said interior walls being formed with channels extending downward from the top thereof permitting the water to flow from one pocket to another.

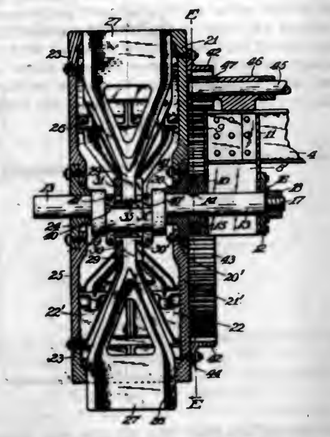
3. A heater for a steam radiator comprising a burner, a boiler mounted above the same having the bottom wall thereof formed into a plurality of pockets and longitudinal flanges extending outward from the longitudinal walls of the boiler.

1,109,984. CLOTHES-PIN. LEODA GUENETTE, Fitchburg, Mass. Filed Apr. 30, 1913. Serial No. 764,625. (Cl. 24—255.)



A clothes pin comprising a pair of jaws formed intermediate of their ends with slots extending inwardly at an angle from opposed edges and coacting to form a bore, a spring comprising an intermediate portion positioned in the bore, coils formed at the ends of said intermediate portion and arms extending from the coils and bearing against the outer surfaces of the jaws.

1,109,985. TRACTION-WHEEL. ARTEMUS N. HADLEY, Indianapolis, Ind. Original application filed Aug. 12, 1910, Serial No. 576,822. Divided and this application filed Apr. 5, 1911. Serial No. 619,001. (Cl. 21—210.)



1. A driving wheel including a hollow cylindrical portion and two webs in the extreme ends of the cylindrical portion, the outer faces of the webs being flush with the ends respectively, a plurality of blades in the cylindrical portion and movable relatively thereto and to various degrees of radial angularity and blade-controlling means inclosed by the cylindrical portion and the webs and connected with and guiding the blades longitudinally and also to various degrees of radial angularity.

2. A driving wheel including a hollow cylindrical portion and two webs in the extreme ends of the cylindrical portion, each web having a hub an axle mounted in the hubs, a plurality of blades in the cylindrical portion and movable relatively thereto and to various degrees of radial angularity and blade-controlling means inclosed by the cylindrical portion and webs and their hubs and coöperating with the axle and the cylindrical portion independently of the hubs for moving the blades to various degrees of radial angularity.

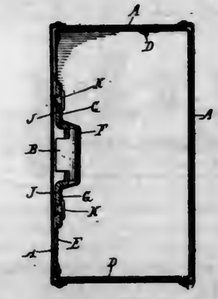
3. In a traction wheel, the combination of an axle provided with a fixed collar having sockets radially arranged in its periphery, a nut on the axle opposite to and at a distance from the collar, two hubs rotatable on the axle, two plates fixed on the two hubs respectively, and a slotted rim fixed on the two plates, with a frame member receiving the axle between the collar and the nut and rigidly held thereby, blades between said plates extending movably through the slotted rim, and means coöperating with the axle for controlling the movement of the blades.

4. In a traction wheel, the combination of an axle having an off-set portion, two opposing collars rotatably mounted on said off-set portion and having each a plurality of radially arranged lugs thereon extending toward the lugs of the opposite collar, and a plurality of blades having shanks that are pivotally connected to the two collars, a shank being movable between two lugs and against one lug of each collar for rotating the collars, with a hub rotatable on the axle adjacent the off-set portion, and a slotted rim mounted on the hub and guiding the blades.

5. In a traction wheel, the combination of a four-part sectional collar provided with radially extending lugs and having transverse pivot holes therein between the portions of the lugs that are relatively close together, the sections of the collar being secured together, a plurality of blades having shanks provided each with trunnions on opposite sides thereof extending into opposite pivot holes of the collar, an axle having an eccentrical portion that is rotatable in the collar, and two guide collars secured on said eccentrical portion at opposite sides of said sectional collar, with a hub rotatable on said axle adjacent said eccentrical portion, and a slotted rim mounted on the hub and guiding the blades.

[Claims 6 to 15 not printed in the Gazette.]

1,109,986. CONVEYER. JAMES R. HARRISON, Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Nov. 17, 1913. Serial No. 802,176. (Cl. 193—6.)



1. A grain conveyer comprising a pipe, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe, a maximum cross section substantially equal to that of the pipe and a chain in the pipe and outside the buckets, said chain provided with bucket attachments and said bucket side indented to receive such attachments.

2. A grain conveyer comprising a pipe rectangular in cross section, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum rectangular cross section substantially equal to that of the pipe and a chain in the pipe outside the buckets, said chain provided with bucket attachments and said bucket side indented to receive such attachments.

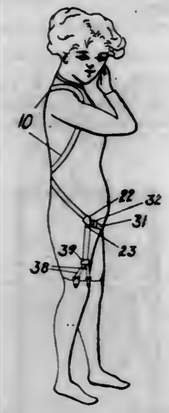
3. A grain conveyer comprising a pipe, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum cross section substantially equal to that of the pipe and a chain in the pipe outside the bucket, one end of said chain provided with lateral bucket attachments and said bucket-side indented deeply midway to receive the enlargements on the chain links and less deeply toward its ends to receive the lateral bucket attachments on the links.

4. A grain conveyer comprising a pipe rectangular in cross section, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum rectangular cross section substantially equal to that of the pipe and a chain in the pipe outside the bucket, one end of said chain provided with lateral bucket attachments and said bucket-side indented deeply midway to receive the enlargements on the chain links and less deeply toward its ends to receive the lateral bucket attachments on the links.

1,109,987. SUPPORT. SYVERT A. HESLA, Butler, Minn. Filed Oct. 9, 1911. Serial No. 653,571. (Cl. 2—93.)

The combination with a single length of webbing having a portion arranged to pass across the back of the wearer below the shoulders, said webbing being continued in front of the shoulders of the wearer and extending backward therefrom and down the wearer's back, the downwardly extending portions being crossed and having their ends brought around the wearer's body and continued in front thereof; of an abdomen-supporting cross strap connecting the two ends of the webbing, a slide securing the downwardly extending portions of the webbing together between the wearer's shoulders, and a second slide below the

last mentioned slide and securing said downwardly extending portions at their crossing point and to the center



of the first mentioned portion of the webbing, said slides being adjustable to and from each other.

1,109,988. CUTTER-HEAD. LOUIS F. HESS, Ansted, W. Va., assignor to Hess Dustless Mining Machine Company, Ansted, W. Va. Filed Nov. 9, 1912. Serial No. 730,480. (Cl. 125—14.)

1. A cutter head for a mining machine, having a spiral rib comprising front and rear faces, the rear face slanting from the outer edge of one convolution of the front face toward the inner edge of an adjoining convolution of the front face, the rear face being concaved toward the axis of the head.

2. A cutter head for a mining machine, having a spiral rib comprising front and rear faces, the rear face being concaved toward the axis of the head and away from a line joining the outer edge of one convolution of the front face with the inner edge of an adjoining convolution of the front face.

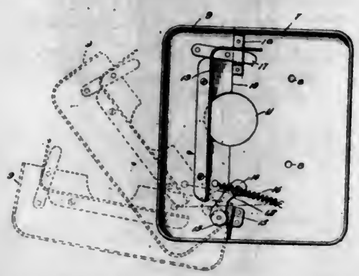
3. A cutter head for a mining machine, having a spiral rib the rear face of which is concaved toward the axis of the head and is tapered circumferentially of the head toward the forward end of the head.

4. A cutter head for a mining machine, having a spiral rib comprising front and rear faces, the rear face being concaved toward the axis of the head and away from a line joining the outer edge of one convolution of the front face with the inner edge of an adjoining convolution of the front face, the rear face being tapered circumferentially of the head toward the forward end of the head.

1,109,989. SEWING-MACHINE. RICHARD K. HOHMANN, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed May 5, 1913. Serial No. 765,420. (Cl. 112—29.)

1. In a sewing machine, the combination with stitch forming mechanism, of a cloth plate divided on substantially the line of the stitches, one of the parts being adapted to move away from the other horizontally to furnish access to the mechanism below the plate, a link pivotally connected to the under surface of said parts across said division line at an angle at the rear of the stitch forming mechanism, and means in advance of said stitch forming mechanism for interlocking said parts when brought together.

2. In a sewing machine, the combination with stitch forming mechanism, of a cloth plate divided on substantially the line of the stitches, one of the parts being adapted to move away from the other horizontally to furnish access to the mechanism below the plate, a link pivotally connected to the under surface of said parts across said division line at an angle at the rear of the stitch forming mechanism, one of said parts being provided with a socket on its under surface in advance of said stitch forming mechanism, and a projection on the other part engaging and fitting in said socket when the parts are brought together.



3. In a sewing machine, the combination with stitch forming mechanism, of a cloth plate divided on substantially the line of the stitches, one of the parts being adapted to move away from the other horizontally to furnish access to the mechanism below the plate, a link pivotally connected to the under surface of said parts across said division line at an angle at the rear of the stitch forming mechanism, the division line between said parts being at an angle to the line of stitches at one point arranged to so guide the parts when moved together that the link at the rear will be turned to its limit and the parts will be clamped together.

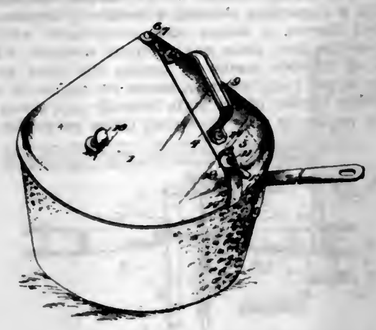
4. In a sewing machine, the combination with stitch forming mechanism, of a cloth plate divided on substantially the line of the stitches, one of the parts being adapted to move away from the other horizontally to furnish access to the mechanism below the plate, a link pivotally connected to the under surface of said parts across said division line at an angle at the rear of the stitch forming mechanism, the division line between said parts being at an angle to the line of stitches at one point arranged to so guide the parts when moved together that the link at the rear will be turned to its limit and the parts will be clamped together; and separate means in advance of the stitch forming mechanism for interlocking and frictionally holding said parts.

5. In a sewing machine, the combination with stitch forming mechanism, of a cloth plate divided on substantially the line of the stitches, one of the parts being adapted to move away from the other horizontally to furnish access to the mechanism below the plate, a link pivotally connected to the under surface of said parts across said division line at an angle at the rear of the stitch forming mechanism, the division line between said parts at the stitch forming mechanism being on the arc of a circle, and means in advance of said arc for interlocking the parts.

[Claims 6 and 7 not printed in the Gazette.]

1,109,990. COVER FOR UTENSILS. HOMER E. HOLMES, Burlington, Vt. Filed Dec. 28, 1912. Serial No. 739,140. (Cl. 53—8.)

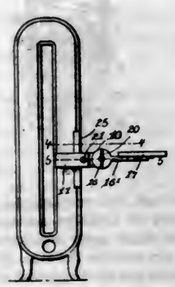
1. A cover for the purpose described, comprising a flexible disk having a slit extending from the center of the periphery thereof, one of the portions of the disk formed by the slit adapted to overlap the other portion, a cam pivotally mounted on the overlying portion, a clamping member between the cam and the overlying portion and having a slot through which the pivot of the cam passes, the upper end of the clamping member turned outwardly to form a cam-engaging surface, and the lower end of the said member turned inwardly upon the inner face of the underlying portion, whereby the overlying and underlying portions are clamped in their adjusted position.



2. A cover for the purpose described, comprising a flexible disk having a slit extending from the center to the periphery thereof, one of the portions of the disk formed by the slit adapted to overlap the other portion, a cam pivotally mounted on the overlying portion, a clamping member between the cam and the overlying portion and having a slot through which the pivot of the cam passes, and a lateral extension against which the cam surface engages and the lower end of the said member turned inwardly upon the inner face of the underlying portion.

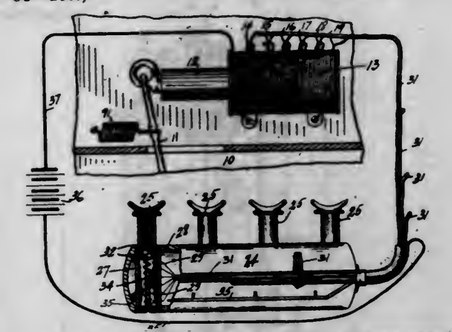
3. A cover for the purpose described, comprising a flexible disk having a slit extending from the center to the periphery thereof, one of the portions of the disk formed by the slit adapted to overlap the other portion, a cam pivotally mounted on the overlying portion, a clamping member between the cam and the overlying portion and having a slot through which the pivot of the cam passes and said clamping member having an inwardly turned lower end engaging the inner face of the underlying portion, substantially as shown and described.

1,109,991. FOOT-REST FOR RADIATORS. DONALD D. JAMES, Newton, Mass. Filed Aug. 9, 1912. Serial No. 714,266. (Cl. 155—9.)



A foot rest attachment for steam or hot water radiators including a clamp comprising a pair of bowed spring jaws for embracing engagement with the coil of the radiator, a foot plate adjustably mounted on the clamp, integrally formed bearing bosses on the spring jaws, a bolt passed through the bosses and the jaws for clamping the jaws to the radiator, and vertical fingers formed on the inner faces of the clamping jaws and extending above and below the jaws, said steadying fingers having their inner longitudinal faces transversely concaved and engaging with the front portion of the coil of the radiator and on each side of the forward rib thereof so that the jaws are prevented from vertical rocking movement thereon.

1,109,992. CONTROLLER FOR AUTOMATIC MUSICAL INSTRUMENTS. ALEXANDER JAMESON, Indianapolis, Ind., assignor to F. R. Henshaw, Indianapolis, Ind., trustee. Filed May 26, 1910. Serial No. 563,527. (Cl. 84—160.)



1. A manipulator for automatic musical instruments comprising a plurality of motors each having a movable member adapted to engage and operate a controlling member of the musical instrument and each comprising means for establishing a multiplicity of positions of said movable member, and a controlling member, said controlling member comprising a plurality of independently movable members each capable of occupying a multiplicity of positions, and means controlled by each of said last mentioned movable members in its multiplicity of positions for causing the movable members of the corresponding motors to occupy the corresponding one of its multiplicity of positions.

2. A manipulator for automatic musical instruments comprising a plurality of motors each consisting of an air cylinder, a piston mounted therein, and a valve variably positionable to variably control the flow to and from the cylinder; means carried by the piston for engaging and operating a controlling member of the musical instrument; a hand-portable controller transportable to and from a point distant from the plurality of motors and comprising a plurality of independently movable members, and intermediate connections between each of said independently movable members and a valve of a motor for controlling the positon of such valve.

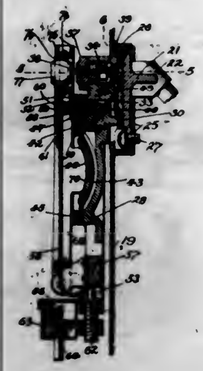
3. The combination, with a musical instrument, mechanical means for automatically sounding the same, and a plurality of controller members capable of occupying a multiplicity of positons by which the operation of the mechanical automatic sounding mechanism may be controlled, of a hand-piece having a plurality of independently-movable controlling members each capable of occupying a multiplicity of positions and intermediate connections between the several controlling members of the hand-piece and corresponding controller members of the musical instrument, whereby manipulation of the hand-piece member will control the operation of the instrument.

4. The combination, with a musical instrument, mechanical means for automatically sounding the same, and a plurality of controller members capable of occupying a multiplicity of positions by which the operation of the mechanical automatic sounding mechanism may be controlled, of a hand piece having a movable controlling member capable of occupying a multiplicity of positions, and intermediate connections between the controlling member of the hand-piece and corresponding controller member of the musical instrument, whereby manipulation of the hand-piece member will control the operation of the instrument.

1,109,993. THERMOSTAT AND LIKE DEVICE. CARL F. JOHNSON, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1913. Serial No. 798,603. (Cl. 236—8.)

1. A vent port for pressure motor control devices comprising a threaded vent tube and a needle valve member

formed integrally therewith and adjustable by the rotation of said tube to control the supply of air to be vented through said tube.



2. A vent port for pressure motor control devices having a motor chamber, said port comprising a threaded vent tube adapted to vent air from said motor chamber, a valve member formed on the inner end of said tube and adjustable by the rotation thereof to control the supply of air to said chamber, and an elastic packing adapted to permit the necessary movement of said vent tube to adjust said valve.

3. The combination of a pipe head adapted to be mounted in an aperture in a wall; a wall plate adapted to be rigidly supported on said wall over said aperture, and itself provided with an aperture to receive said pipe head; releasable connections adapted to hold said pipe head rigidly to said wall plate; and an automatic control device responsive to changes in atmospheric conditions supported solely upon said pipe head.

4. The combination with a pressure motor control device including a motor and a control valve, of an arm adapted to be moved by said motor and operatively connected with said control valve; and a threaded member axially adjustable by a turning movement and having a lateral extension adapted to serve as a limit stop for the movement of said arm and movable into and out of operative relation therewith by said turning movement.

5. The combination with a control device including a motor and a control valve; of a pivoted arm adapted to be moved by said motor and operatively connected to said control valve; and a screw having a laterally extending flange adapted to limit the movements of said arm and cut away at one portion to release said arm by a partial turning of said screw.

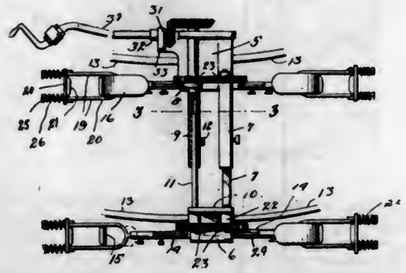
[Claims 6 to 9 not printed in the Gazette.]

1,109,994. MILKING-MACHINE. ALBERT KLEIN, Cody, Wyo. Filed Dec. 3, 1913. Serial No. 804,429. (Cl. 31—96.)

1. A milking machine comprising a base portion, a shaft journaled on said base portion, journaled stub shafts adjacent each end of the first shaft having geared connection therewith, teat engaging members extending from the base portion and each comprising a stationary and a reciprocable member and connections between the reciprocable members and the shafts for actuating said members upon rotation of the shafts.

2. A milking machine comprising base members, an extensible bar connecting said members, a shaft comprising two sections having their adjacent ends adjustably connected and each journaled on a base member, stub shafts journaled on the base members, intermeshing gear wheels between the stub shafts and the main shafts, teat engaging members held in adjustable spaced relation to the base members, said teat engaging members including reciprocable elements and extensible rods engaging said elements and having connections with the said gear wheels whereby rotation thereof will reciprocate the rods.

3. In a milking machine, a teat engaging member comprising a supporting element, a stationary vertical plate secured thereto, a second plate reciprocable with relation to the first plate and pivotally mounted intermediate of its ends, means for moving the upper portions of the second plate inwardly, means for resiliently urging the lower portion of the plate inwardly and means tending to resiliently urge the second plates outwardly.

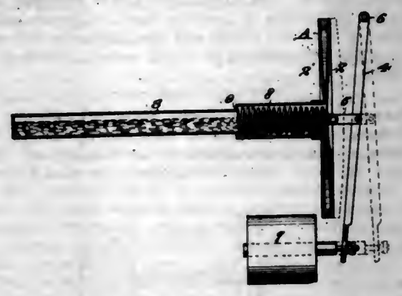


4. In a milking machine, a teat engaging member comprising a suporting element, a stationary vertical plate secured thereto and having its upper portion inwardly directed, a leaf spring depending from said upper portion, a reciprocable plate, a member pivotally connected to the upper end of the reciprocable plate and to the lower portion of the leaf spring, a reciprocable actuating bar terminating in a yoke straddling the vertical bar and slidably passed through the intermediate side portions of the reciprocable bar, heads at the free ends of said yoke and springs disposed between said heads and the reciprocable plate.

1,109,995. SPRING-TIRE. JAHN KRAVCAK, Paterson, N. J. Filed Oct. 7, 1913. Serial No. 793,862. (Cl. 152—8.)

In a vehicle wheel, the combination of a rigid annular rim, a tire formed of yielding material and surrounding the rim, said tire being open continuously on the inside, having its edges secured to the rim, and forming with the latter a continuous space, elongated plates arranged in a series around the axis of the wheel and each extending longitudinally of and embedded in and wholly enveloped by the tread portion of the tire and having at each end a threaded stud protruding from said tire radially inwardly, bearing members o arranged within said space against the inner face of the tire each opposite a plate and penetrated by the studs thereof, nuts screwed on said studs and holding each bearing member against the inner face of the tire, other bearing members r fixed respectively opposite the first bearing members to the rim, the bearing members o and r respectively having inwardly and outwardly projecting bosses, and spiral springs arranged between each two bearing members o and r and each fitted at its ends over the bosses thereof.

1,109,996. THERMOSTAT. FREDERICK J. P. KUHLMANN, San Francisco, Cal., assignor to Economy Electric Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Oct. 14, 1912. Serial No. 725,655. (Cl. 177—128.)



1. In a thermostat, a pair of flexible disks connected to form an expansible chamber, a horizontal tube closed at its outer end and having its inner end open and rigidly connected to one of the disks at the center of the latter so as to communicate with the interior of the chamber, a shoulder on the interior of the tube intermediate the ends of the latter, a coil spring on the interior of the tube abutting the shoulder at one end and having its opposite end engaging the other disk, a body of liquid in the tube and chamber common to each, a lever located opposite to the other disk, a connection between the last named disk and the lever, and a switch in connection with the lever.

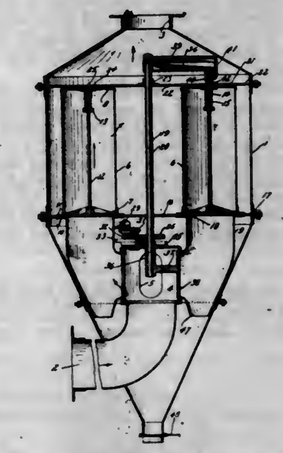
2. In a thermostat, a pair of flexible disks connected to form an expansible chamber, a horizontally disposed tube closed at its outer end and having its inner end open and rigidly connected to one of the disks at the center of the latter so as to communicate with the chamber interior, a body of liquid in the tube and chamber with the surface of the liquid disposed below the top portions of the tube and chamber so as to permit of the formation of a vacuum in the tube and throughout the length thereof and in the chamber in the parts of the tube and chamber unoccupied by the liquid, whereby to normally hold the disks in compressed position, a switch, and a connection between the other disk and the switch.

1,109,997. AIR-PURIFYING APPARATUS. GUIDO E. LON, Chicago, Ill., assignor to Pneumatic Conveyor Company, Chicago, Ill. Filed May 27, 1912. Serial No. 699,851. (Cl. 83—47.)

1. An air-purifying apparatus comprising a plurality of movable members, a fabric member supported from each of said movable members, an arm adapted to be presented, successively, to each of said movable members, a ratchet adapted to co-act with said arm and agitate said movable members, said arm and said ratchet being mounted upon concentric shafts, and means for driving one of said shafts continuously and the other of said shafts intermittently.

2. An air-purifying apparatus comprising a plurality of movable members, a fabric member supported from each of said movable members, an arm adapted to be presented, successively, to each of said movable members, a stud upon said arm adapted to engage said movable members, a ratchet adapted to engage said stud and thereby agitate said movable members, a shaft upon which said ratchet is carried, a shaft upon which said arm is carried, one of said shafts being disposed within the other, a continuously-driven power shaft, means to convert rotation of said power shaft into intermittent motion of said arm-bearing shaft, and means to convert motion of said power shaft into continuous rotation of said ratchet-bearing shaft.

3. An air-purifying apparatus comprising a container, a diaphragm therewithin provided with perforations, a plurality of members also therewithin each formed of fabric and each in registration with one of the perforations in the diaphragm, a chamber also provided with perforations, channels connecting the perforations in the chamber with the perforations in the diaphragm, means within the chamber for predeterminedly closing the perforations therein, and an exit in each of said channels below said diaphragm.

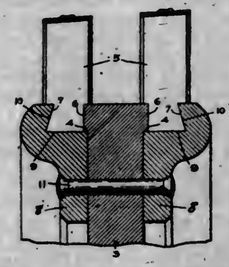


4. An air-purifying apparatus comprising a container, a diaphragm therewithin provided with perforations, a plurality of members also therewithin each formed of fabric and each in registration with one of the perforations in the diaphragm, a chamber also provided with perforations, channels connecting the perforations in the chamber with the perforations in the diaphragm, means within the chamber adapted predeterminedly to close the perforations therein, an exit in each of said channels below said diaphragm, and a shaft adapted to produce actuation of the fabric members.

5. An air-purifying apparatus comprising a container, a diaphragm therewithin provided with perforations, a plurality of members also therewithin each formed of fabric and each in registration with one of the perforations in the diaphragm, a chamber also provided with perforations, channels connecting the perforations in the chamber with the perforations in the diaphragm, means within the chamber adapted predeterminedly to close the perforations, therein, an exit in each of said channels below said diaphragm, and a shaft adapted to produce actuation of the fabric members, said means within the chamber being actuated also by said shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,109,998. TURBINE-ROTOR. LOUIS C. LOEWENSTEIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1914. Serial No. 846,412. (Cl. 121—57.)



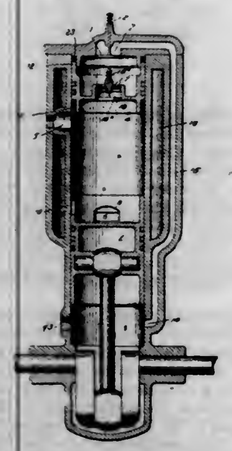
1. In a turbine, a bucket wheel comprising a web member having shoulders formed on opposite sides adjacent its periphery, clamping members each having an undercut rab-

bet which engages the shoulders, and buckets having their bases clamped between the web and the members, said buckets having beveled faces which coöperate with the undercut rabbet.

2. In a turbine, a bucket wheel comprising a web member having shoulders formed on opposite sides adjacent its periphery, clamping members each having an undercut rabbet, which engages the shoulders and forms a groove with the outer faces of the web having one straight side and one undercut side, said buckets having their bases formed to fit said groove.

3. In a turbine, a bucket wheel comprising a web member having shoulders formed on opposite sides adjacent its periphery, buckets having their bases formed with one straight side and one beveled side with the straight side taking against the side of the web, clamping members each having an undercut rabbet which fit against the sides of the web under the shoulders with the undercut rabbets forming a seat for the bottom and beveled sides of the bucket bases, and means for fastening the members to the web.

1,109,999. INTERNAL-COMBUSTION ENGINE. CLARENCE C. LONGARD, Halifax, Nova Scotia, Canada. Filed Nov. 24, 1913. Serial No. 802,667. (Cl. 123—73.)

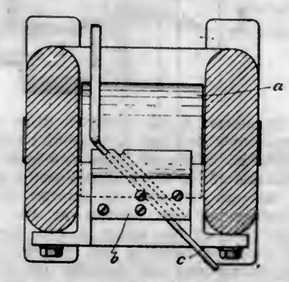


1. In an internal combustion engine, a cylinder, a main piston and an auxiliary piston; the cylinder being divided by the main piston into an explosion chamber and a compression chamber and having an inlet port for explosive mixture communicating with the compression chamber and further having an inlet port communicating with the chamber back of the auxiliary piston and an exhaust port communicating with the chamber between the pistons, a conduit intermediate the compression chamber and the port that communicates with the chamber back of the auxiliary piston, non-return means controlling said conduit, a port for leading explosive mixture from the chamber back of the auxiliary piston to the chamber between the pistons, and non-return means for controlling said port.

2. In an internal combustion engine, a cylinder, a main piston and an auxiliary piston; the cylinder being divided by the main piston into an explosion chamber and a compression chamber and having an inlet port for explosive mixture communicating with the compression chamber and further having an inlet port communicating with the chamber back of the auxiliary piston and an exhaust port communicating with the chamber between the pistons, a conduit intermediate the compression chamber and the port that communicates with the chamber back of the auxiliary piston, non-return means controlling said conduit, a port for leading explosive mixture from the chamber back of the auxiliary piston to the chamber between the pistons, non-return means for controlling said port, and apertured means in said port for preventing back firing.

3. The combination in an internal combustion engine, of a cylinder having an exhaust port and an ignition chamber, a main piston movable in the cylinder and having an inward extension in which is an aperture to register with the exhaust port and another aperture to register with the ignition chamber, and an auxiliary piston arranged in the cylinder and having an annular recess to receive said extension of the main piston and also having an end extension of its own adapted to snugly enter a recess in the cylinder.

1,110,000. METAL-WORKING. DAVID B. MARWICK, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 24, 1913. Serial No. 756,319. (Cl. 80—51.)



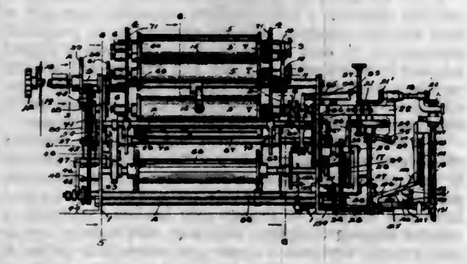
1. The herein described method which consists in feeding stock from the front of a pair of reducing rolls at an acute angle to their axes.

2. The herein described method which consists in passing stock between a pair of reducing rolls in a direction which is generally transverse to their axes, and feeding said stock to said rolls at an acute angle to their axes.

3. In an apparatus of the character described, the combination with reducing rolls rotating on their axes in opposite directions, of means for feeding stock to said rolls from the front at an acute angle to their axes.

4. In an apparatus of the character described, the combination with a pair of reducing rolls rotating on their axes in opposite directions, of a stock feeding guide arranged in front of said rolls and at an acute angle to their axes.

1,110,001. AUTOMATIC ROLL-CHANGER FOR MUSICAL INSTRUMENTS. FRANK L. MCCORMICK, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Sept. 21, 1912. Serial No. 721,586. (Cl. 84—180.)



1. The combination of a traveling carrier adapted to carry a plurality of music rolls, a take-up roll, means for alternately driving the take-up roll and one of the music rolls, and automatic means for intermittently advancing said carrier to bring different music rolls in operative relation to the take-up roll.

2. The combination of a rotatable carrier adapted to carry a plurality of music rolls, a take-up roll, means for alternately driving the take-up roll and one of the

music-rolls, and automatic means for intermittently rotating said carrier.

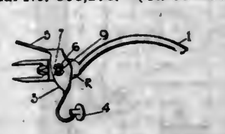
3. The combination of a rotatable carrier adapted to carry a plurality of music rolls, a take-up roll, means for alternately driving the take-up roll and one of the music-rolls, automatic means for intermittently rotating the roll carrier, and means for locking the carrier in position after each movement thereof.

4. The combination of a rotatable carrier adapted to carry a plurality of music-rolls, a take-up roll, means for alternately driving the take-up roll and one of the music-rolls, transfer means for delivering the ends of the music sheets to the take-up roll, means for intermittently rotating the roll-carrier, and locking means for the carrier controlled by said transfer means.

5. The combination of a rotatable carrier adapted to carry a plurality of music rolls, a take-up roll, means for alternately driving the take-up roll and one of the music-rolls, means for intermittently rotating the roll-carrier, locking means for the carrier, and transfer means for delivering the ends of the music sheets to the take-up roll, said transfer means controlling said locking means and operating to release the same on the return stroke of the transfer means.

[Claims 6 to 47 not printed in the Gazette.]

1,110,002. EYEGLASS-MOUNTING. FREDERICK W. NOLTE, Victoria, British Columbia, Canada. Filed Dec. 12, 1913. Serial No. 806,276. (Cl. 88—50.)



1. In an eye glass mounting the combination of a bridge having a laterally extended end; a nose guard lever, the bridge end and lever being shaped the one to embrace the other and having each a slot formed therein, the slot in one being at an angle to the slot in the other; and a spring bent to form two arms passing through said slots.

2. In an eye glass mounting the combination of a bridge having a laterally extended end; a nose guard lever shaped to embrace the bridge end, the bridge end and lever having each a slot formed therein, the slot in one being at an angle to the slot in the other; and a spring bent to form two arms passing through said slots.

3. In an eye glass mounting the combination of a bridge having a laterally extended end with a slot formed therein; a nose guard lever shaped to embrace the bridge end and having a slot formed therein at one side at an angle to the slot in the bridge end and a round opening in the other; and a spring bent to form two arms passing through said slots.

1,110,003. PORTABLE PULLING-MACHINE. CHARLES HERMAN OVERLY and OWEN ALONZO THOMPSON, Independence, Kans., assignors of one-fourth to William Welch Curtain, Independence, Kans., and one-fourth to Thomas George Laney, Erie, Kans. Filed Nov. 14, 1913. Serial No. 801,018. (Cl. 57—129.)

1. The combination in a pulling machine with its mast and winding mechanism, of a movable journal support for said winding mechanism, brake drums included in the winding mechanism, brake bands applied to said drums, and a single means for actuating the braking device and bodily moving the winding mechanism.

2. The combination in a pulling machine with its mast, of a winding device movably supported on said mast including a brake drum, means for breaking said drum, and said means adapted to bodily move the winding device.

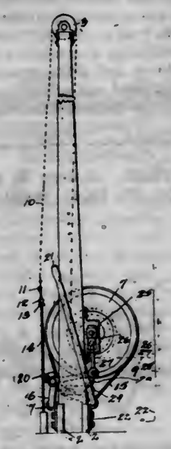
3. The combination in a pulling machine with its mast, of a spring supported winding device including brake drums, a pair of crank shafts, brake bands over said drums and attached to said shafts, a lever attached to one shaft, a lever arm fixed to the other shaft, and a pivoted link connecting said arm and lever, whereby the braking movement of the lever may be continued to bodily move the winding device.

4. The combination with a mast having slotted brackets attached thereto, and movable journal blocks, of a winding device supported in said journal blocks and including brake drums, brake bands on said drums, crank shafts mounted on the mast and attached to said bands, a lever fixed on one shaft, a lever arm fixed on the other shaft, and a link pivotally connecting said arm and lever.

5. The combination with a mast, of a carriage including a bolster having seats thereon, an interlocking bar fixed to said mast and revolubly connected with said seats.

[Claims 6 and 7 not printed in the Gazette.]

1,110,004. PULLING-MACHINE. CHARLES HERMAN OVERLY and OWEN ALONZO THOMPSON, Independence, Kans., assignors of one-fourth to William Welch Curtain, Independence, Kans., and one-fourth to Thomas George Laney, Erie, Kans. Filed Apr. 15, 1914. Serial No. 831,948. (Cl. 57—129.)



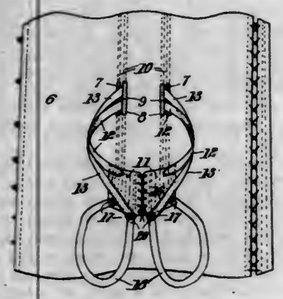
1. The combination in a pulling machine with its mast and winding mechanism, of movable journal supports for said winding mechanism, breaking means for the winding mechanism, and means connected with the braking means for bodily moving the winding mechanism in its journal bearings.

2. The combination in a pulling machine with its mast of a winding drum and its brake and movable journals for said drum, means for actuating the brake, and connections from said actuating means adapted to bodily move the winding drum after the brake has been applied.

3. The combination in a pulling machine with its mast, of a winding device supported in movable bearings, braking mechanism, the operating lever for said braking mechanism, a rock bar actuated from the operating lever, and links connecting said bar with the movable winding mechanism.

4. The combination in a pulling machine with its mast, of a winding mechanism movably supported on said mast and including brake drums, means for braking said drums, a pair of slidable bearings for the winding mechanism, a rock bar connected with said bearings, and connections between said rock bar and the brake operating mechanism.

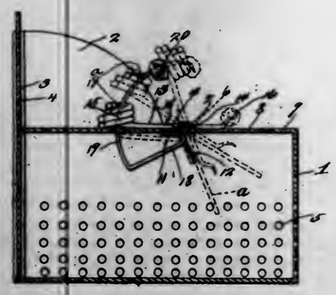
1,110,005. CORSET. CHRISTINE PETERSEN, Evanston, Ill. Filed Feb. 17, 1914. Serial No. 819,222. (Cl. 2—73.)



1. The combination of a corset having vertical slits in the back part thereof, and an abdominal supporter located within the front part of the corset, said supporter having upper and lower straps extending from each end thereof through said slits and adjustably connected together at the back, the lower straps extending along the lower edge of the supporter, and said upper and lower straps crossing each other at an angle, whereby the lower straps, in front, are uppermost at the back.

2. The combination of a corset, and an abdominal supporter comprising side pieces connected together at the front, upper and lower crossed straps connected to each of said side pieces and extending rearwardly therefrom, the lower strap extending diagonally across the lower part of each of said pieces, and thigh straps one end of which is connected to the front end of said lower strap and the other end of which is connected to the rear lower corner of said side piece.

1,110,006. RAT-TRAP. ALBERT R. PETERSON, Minden, Nebr. Filed Mar. 27, 1914. Serial No. 827,633. (Cl. 43—24.)

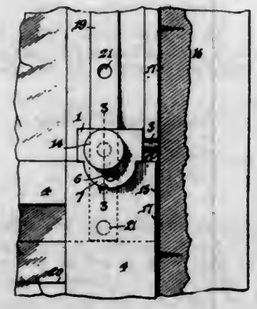


1. An animal trap comprising a receptacle having a closure member at one end and an opening in its top portion adjacent the opposite end, a trap member pivoted adjacent said opening and adapted to swing therethrough into said receptacle, a rod secured to the trap member having a gravity actuating member at one end acting to close the trap member, and a bait attaching means at the other end.

2. A rat trap comprising a receptacle having a closure member at one end and an opening in its top portion adjacent the opposite end, said receptacle having a recess in its top, a trap member pivoted adjacent said opening and seated in said recess when closed, a rod carried by the trap member terminating at one end in a gravity coil, and a bait attaching means at the opposite end, a rod on which said trap member is pivoted, a rod connected to the pivot rod and having a segmental portion passing through the top of the receptacle and through the gravity coil and terminating in a second bait attaching means, said segmental portion acting as a guide for the coil and a guide for the trap member.

3. A rat trap comprising a receptacle having a closure member at one end and an opening in its top portion adjacent the opposite end, said receptacle having a recess in its top, a trap member pivoted adjacent said opening and seated in said recess when closed, a rod carried by the trap member terminating at one end in a gravity coil, and a bait attaching means at the opposite end, a rod on which said trap member is pivoted, a rod connected to the pivot rod and having a segmental portion passing through the top of the receptacle and through the gravity coil and terminating in a second bait attaching means, said segmental portion acting as a guide for the coil and a guide for the trap member, said rod attached to the pivot rod acting to move with the trap member for a partial movement, and means to permit the trap member on its further movement to move independently, thereby causing the gravity coil to dislodge the second bait.

1,110,007. WINDOW-SASH LOCK. MARK NOBLE PUTNAM, Wichita, Kans. Filed May 20, 1914. Serial No. 839,885. (Cl. 16—52.)

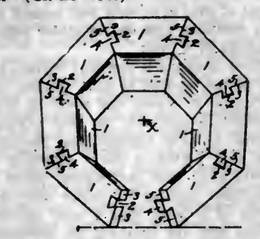


1. A sash lock comprising a casing having horizontal bores or openings intersecting each other, a laterally movable slidable bolt mounted in one of the bores or openings and provided with a rack, an operating bolt mounted for sliding and rotary movement in the other bore and provided with a pinion meshing with the rack of the laterally movable bolt, and a fixed projection engaging with the operating bolt to lock the same against sliding movement while the same is being rotated to actuate the laterally movable bolt, said operating bolt having a cut away portion engaging the said projection and permitting a sliding movement of the operating bolt when the laterally movable bolt is at the limit of its movement in an outward direction.

2. A sash lock comprising a casing having bores or openings intersecting each other, a laterally movable slidable bolt mounted in one of the bores or openings and provided with a rack, an operating bolt mounted for sliding and rotary bolt mounted for sliding and rtary movement in the other bore or opening and provided with a pinion meshing with the rack of the laterally movable bolt, and means coacting with the operating bolt for locking the same against sliding movement until the said operating bolt, through its rotation, has carried the laterally movable bolt completely to the engaging position thereof, said means permitting a sliding movement of the operating bolt when the laterally movable bolt is in the said engaging position.

3. A sash lock comprising a casing having bores or openings intersecting each other, a laterally movable slidable bolt mounted in one of the bores or openings and provided with a rack, an operating bolt mounted for sliding and rotary movement in the other bore or opening and provided with a pinion meshing with the laterally movable bolt, and means coacting with the operating bolt for locking the same against sliding movement while it is being rotated to actuate the laterally movable bolt.

1,110,008. STAVE PORCH-COLUMN. WILLIAM R. RIPLEY, Tacoma, Wash. Filed Oct. 24, 1911. Serial No. 656,441. (Cl. 20—97.)

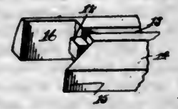


1. A conical stave column comprising a plurality of similar, tapered staves, each dovetailed to the adjoining staves, the beveled sides of each stave being radial to a circle of less diameter than the assembled column whereby, previous to the insertion of the last stave, the remainder of the column may be so arranged that the space for the last stave may be such that its widest part may correspond to the smaller end of said stave, so that said end may register with and engage the interfitting parts of the staves on each side to permit the introduction and driving to place of the said last stave.

2. A conical stave column, comprising a plurality of similar, tapered staves, each having a sliding undercut interlocking engagement with the adjoining staves, the beveled sides of each stave being radial to a circle of less diameter than the assembled column whereby, previous to the insertion of the last stave, the remainder of the column may be so arranged that the space for the last stave may be such that its widest part may correspond to the smaller end of said stave, so that said end may register with and engage the interfitting parts of the staves on each side to permit the introduction and driving to place of the said last stave.

3. The method of constructing a conical stave column formed of a plurality of exactly similar staves, each stave being tapered, beveled, and dovetailed to fit each other; comprising connecting the dovetailed portion at the narrow end of one stave with the dovetailed portion of the broad end of the preceding stave, and sliding the stave along the preceding stave until they occupy corresponding positions, the beveled sides of each stave being radial to a circle of less diameter than the assembled column whereby previous to the insertion of the last stave, the remainder of the column may be arranged so that the space for the last stave may be such that its widest part may correspond to the smaller end of said last stave; and the insertion in said space of the last similar stave whereby the column is brought to size.

1,110,009. JOINT FOR WINDOW-SASHES AND THE LIKE. CHARLES F. RITTER, Fairview, Okla. Filed Oct. 4, 1910. Serial No. 585,274. (Cl. 20—92.)

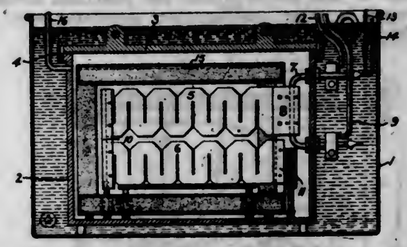


A detachable joint for window sashes and the like, including a member having a bifurcated end and having a tenon between the furcations and shorter than the furcations, a second member disposed between the furcations and having a socket in which the tenon is engaged, and a screw removably engaged through the second member and into the tenon.

1,110,010. SILICON-STEEL. WILLIAM E. RUDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1912. Serial No. 705,251. (Cl. 148—23.)

1. The process of reducing the hysteresis of silicon steel, which consists in removing the impurities from the steel at a high temperature.

2. The process of reducing the hysteresis action of silicon steel, which consist in removing the oxygen from the steel at a high temperature.



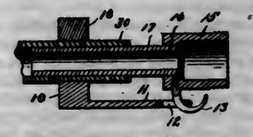
3. The process of reducing the hysteresis action of silicon steel, which consists in causing a coalescence of the normal small grains of this material into larger grains and removing the oxygen from the same.

4. The process of reducing the hysteresis action of silicon steel, which consists in subjecting the same to oxygen removing conditions at a high temperature.

5. The process of annealing silicon steel, which consists in subjecting the material to a high temperature under a gas pressure at or below the dissociation pressures of the oxids in the said material for the prevailing temperature.

[Claims 6 to 11 not printed in the Gazette.]

1,110,011. METAL PIPE AND HOSE CONNECTION. ALFRED SCHNEIDER, Birmingham, Ala. Filed June 11, 1913. Serial No. 773,094. (Cl. 137—28.)



In a hose and pipe coupling, a pipe connection having a stud thereon, a bifurcated clamping member having a concaved surface and an apertured arm thereon in engagement with said stud, a second bifurcated clamping member pivotally connected to said first clamping member, an arcuate cam seat formed externally with said member having a concaved surface, a link pivoted to one of said clamping members, a handle pivotally connected to the link, a cam formed with the handle adapted to engage said cam seat when the link is engaged with said second bifurcated member for tightening said clamping members upon a pair of hose sections.

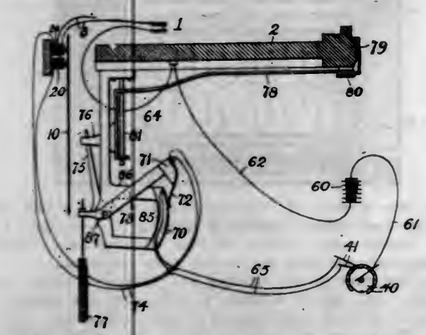
1,110,012. TIMBRE-CONTROLLER FOR ELECTRICAL MUSICAL INSTRUMENTS. MELVIN L. SEVERY, Arlington Heights, and GEORGE B. SINCLAIR, Winthrop, Mass., assignors to Choralcelo Manufacturing Company, a Corporation of Maine. Filed Aug. 7, 1905. Serial No. 273,202. (Cl. 84—131.)

1. The combination with sonorous bodies tuned to notes of the musical scale, of impulse-producing and delivering means normally individual to each body, said impulses being equal in frequency respectively to the vibrational frequency of the fundamental of the sonorous body normally associated therewith, and means operative at will for delivering to said bodies impulses of frequencies higher than the fundamental frequencies of said bodies.

2. The combination with sonorous bodies tuned in musical relationship, of means for normally delivering to said bodies impulses equal in frequencies to the vibrational-frequencies of their fundamentals, and means operative at will for delivering to certain of said bodies impulses normally delivered to others of said bodies having higher pitches, thereby producing tones of different qualities.

3. The combination of sonorous bodies tuned in musical relationship, electromagnets for actuating said bodies, means for delivering electric pulsations to said electro-

magnets corresponding in frequencies to the vibrational-frequencies of the fundamentals of their associated bodies, and means provided with an indicator for switching to certain of said electromagnets the pulsations normally delivered to other electromagnets associated with the bodies of higher pitches.

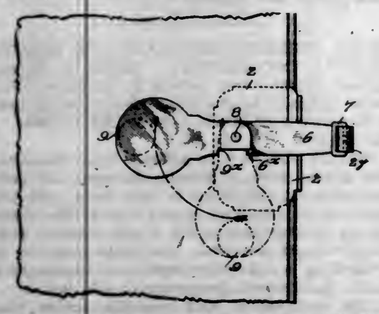


4. The combination of sonorous magnetically attractive bodies tuned in musical relationship, electromagnets for vibrating said bodies, means for delivering electric pulsations to said electromagnets, the pulsations delivered to each electromagnet corresponding in frequency to the fundamental vibrations of the body associated therewith, and means operative at will adapted for delivering to certain of said electromagnets electric pulsations of frequencies higher than the fundamental frequencies of their associated sonorous bodies.

5. The combination of sonorous bodies tuned in musical relationship, electric means for vibrating said bodies and switching means for said electric means, said switching means comprising a multiplicity of contacts arranged in transverse and longitudinal rows, brushes corresponding in number and arrangement to said transverse rows, means for moving said brushes along said transverse rows, and connections between said brushes and electric means and between the latter and the contacts in one of the longitudinal rows, the last-mentioned contacts being wired to certain contacts in each of the other longitudinal rows.

[Claims 6 to 23 not printed in the Gazette.]

1,110,013. COMBINED BOOK-MARK AND LEAF-TURNER. WILLIAM F. SILLIMAN, Cleveland, Ohio. Filed July 16, 1913. Serial No. 779,311. (Cl. 11—12.)



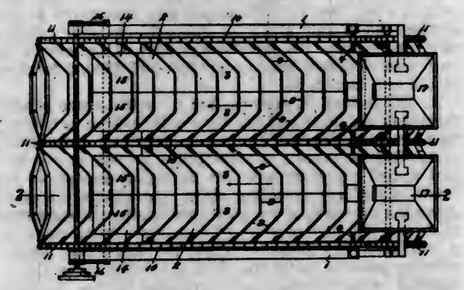
1. In a combined book mark and leaf turner, an upright, spring means for securing said upright to the cover of the book, an arm carried by said upright and adjustable vertically thereon, and a plate pivoted to said arm and provided with a pad arranged to frictionally engage the leaves of the book.

2. In a combined book mark and leaf turner, an upright, a pair of spring plates secured to said upright, said spring plates being arranged to clamp the cover of the book for holding the upright in position, an arm having a collar adjustably secured to said upright and movable toward and away from said plates, and a plate pivotally connected at one end of said arm, said last named plate being provided with a resilient pad on its under side arranged to engage the leaves of a book.

3. In a combined book mark and leaf turner, an upright, a pair of spring plates secured to said upright, said spring plates being arranged to clamp the cover of the book for holding the upright in position, an arm having a collar adjustably secured to said upright and movable toward and away from said plates, a plate pivotally connected at one end of said arm, said last named plate being provided with a resilient pad on its under side arranged to engage the leaves of a book, and a stop member carried by said adjustable arm for limiting the movement of the pivoted plate.

4. In a combined book mark and leaf turner, an upright, a pair of spring plates secured to said upright, said spring plates being arranged to clamp the cover of the book for holding the upright in position, an arm having a collar adjustably secured to said upright and movable toward and away from said plates, said arm being disposed at right angles to the edge of the book and arranged to extend over the leaves of the book, a plate pivotally connected at one end of said arm, said last named plate being provided with a resilient pad on its under side arranged to engage the leaves of a book, and means for limiting the movement of the pivoted plate.

1,110,014. BEAN-SEPARATING MACHINE. CHARLES E. SMITH, Saginaw, Mich. Filed Oct. 23, 1913. Serial No. 796,857. (Cl. 130—18.)



1. A bean separating machine comprising a supporting frame, an adjustable longitudinally inclined table having a laterally inclined surface and movable scraper blades having a straight back and diagonally disposed sides disposed above said table, for the purpose set forth.

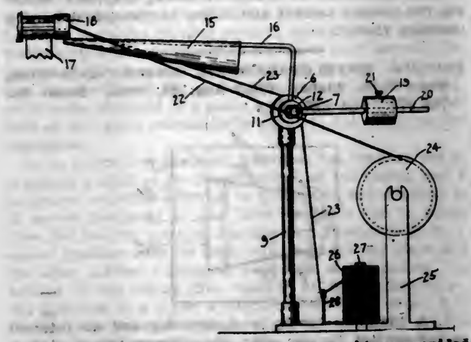
2. A bean separating machine comprising a supporting frame, a longitudinally inclined table having laterally sloping sides supported thereby, a vertical adjusting device located at one end of said table and winged scraper blades arranged in close spaced relation to form a conveyer disposed above said table and adapted to move downwardly along said table, for the purpose set forth.

3. In a bean separating machine, the combination with a suitable feeding device; of a longitudinally inclined table having laterally sloping upper surfaces, means for vertically adjusting the upper end of said table; a second longitudinally inclined table hingedly connected to said first-mentioned table and having laterally sloping upper surfaces and a bean scraping conveyer comprising spaced blades having a straight back and diagonally opposed side wings integral therewith adapted to move downwardly along the upper surfaces of said tables, for the purpose set forth.

4. The combination of a main inclined table having laterally sloping surfaces; an auxiliary table having laterally sloping surfaces hingedly connected to said main table; and a conveyer disposed above said tables and adapted to move downwardly thereon comprising drive chains and a plurality of closely spaced scraper blades having straight backs and diagonally disposed sides, the ends of said sides secured to said drive chain and the lower edges of said blade being shaped to conform to the laterally sloping surfaces of said table.

5. The combination of a main inclined table having laterally sloping surfaces, an adjusting screw for vertically adjusting the upper end of said main table to change the longitudinal inclination thereof; an auxiliary table having laterally sloping surfaces hingedly connected to said main inclined table, means for vertically adjusting the lower end of said auxiliary table for changing the longitudinal inclination thereof; and a conveyer disposed above said table and adapted to move downwardly thereon, comprising a plurality of closely spaced scraper bladea having straight backs and diagonally disposed sides and having their lower edges shaped to conform to the laterally sloping surfaces of the said table, for the purpose set forth.

1,110,015. AUTOMATIC FEEDING DEVICE. WILLARD G. STAPLES, Newburyport, Mass. Filed Apr. 8, 1912. Serial No. 689,208. (Cl. 28—21.)



1. A feeding mechanism for twisting machines provided with intermittently-acting releasing means, comprising a material supply, a wheel for holding the material under tension, a friction clutch preventing said wheel from rotation, a junction point feeler for controlling said clutch whereby the wheel is released and the material fed forward into the twisting machine.

2. A feeding mechanism for twisting machines provided with intermittently-acting releasing means comprising rotatable means for holding the material to be twisted under tension, a clutch in connection therewith normally preventing said rotatable means from rotation and means adapted to be acted upon by the twisting material at the junction point, as it travels back and forth, to release said clutch.

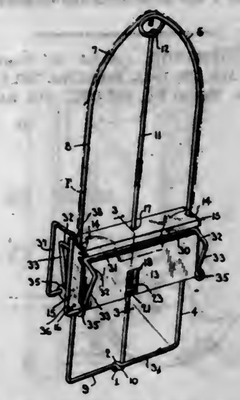
3. A feeding mechanism for twisting machines provided with intermittently-acting releasing means comprising rotatable means for holding the material to be twisted under tension, frictional means for holding said rotatable means against rotation, and means engaging and controlled by the twisting material for releasing said frictional means to permit said material to be fed into a twisting machine.

4. A feeding mechanism for twisting machines provided with intermittently-acting releasing means comprising a wheel for holding the material under tension, a friction clutch to hold said wheel against rotation and means operated upon by the material at the point of junction where the strands of material are twisted together for releasing said clutch from time to time to permit said material to be fed forward by said wheel.

5. A feeding mechanism for twisting machines provided with intermittently-acting releasing means comprising rotatable means for holding the material to be twisted under tension, a friction clutch and a horizontally-moving sleeve in connection with the clutch for holding said rotating means against rotation and means controlled by the downward pressure of the strands of material twisting together to release said clutch.

[Claims 6 to 8 not printed in the Gazette.]

1,110,016. FUR-STRETCHER. GEORGE WILBER THORPE, Geneva, N. Y. Filed Nov. 6, 1913. Serial No. 799,545. (Cl. 149—21.)



1. A fur stretcher comprising a skeleton frame having a head at one extremity for engaging one end of the fur, a movable member consisting of a block slidably mounted on said frame and having grooves across both side faces, clamps hingedly connected with the lower corners of the block and having jaws registering with said grooves, and means for holding the jaws in the grooves, for the purpose set forth.

2. A fur stretcher comprising a skeleton frame having a head at one extremity for engaging one end of the fur, a movable member consisting of a block slidably mounted on said frame and having grooves across both side faces, plates secured to the ends of said block and having perforated ears projecting beyond its side faces at its lower corners, clamping jaws having feet pivotally mounted in the perforations of said ears, said jaws having gripping portions registering with said grooves, and means for rocking the clamps on their pivots to throw the gripping portions of the jaws into such grooves.

3. A fur stretcher comprising a skeleton frame having a head at one extremity for engaging one end of the fur, a movable member consisting of a block slidably mounted on said frame and having grooves across both side faces, plates secured to the ends of said block and having perforated ears projecting beyond its side faces at its lower corners; on one side of the block a clamping member of stiff wire having a jaw co-acting with said groove, arms at its ends having feet with their lower extremities pivoted in the perforations of said ears, and one of the feet carried thence upward in an arm; and at the other side of said block a similar clamp whose upwardly extending arm has an inturned hook adapted to engage the arm of the first-named clamp, for the purpose set forth.

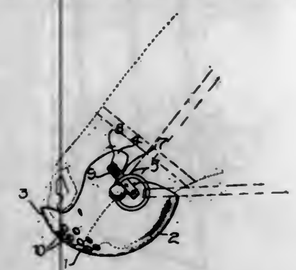
4. A fur stretcher consisting of a frame member made of stiff wire comprising three substantially parallel bars connected by cross arms at their lower ends and the side bars bent inward at their upper ends into a head and united by an integral eye with which the upper end of the intermediate bar connects; and a movable member slidably mounted on said frame, a latch for holding it in adjusted position, and clamps on its side faces for engaging the fur.

5. A fur stretcher consisting of a frame member made of stiff wire comprising three substantially parallel bars connected by cross arms at their lower ends and the side bars bent inward at their upper ends into a head and united by an integral eye with which the upper end of the intermediate bar connects; and a movable member having guides engaging said bars and consisting of a block notched in its lower edge around the intermediate guide; a latch disposed within said notch and pivotally connected at one end with the block, its body having a slot loosely engaging said intermediate bar, a spring between the latch and

block and throwing said slot into biting engagement with said bar, and clamps mounted on opposite faces of the block for grasping the fur.

[Claims 6 and 7 not printed in the Gazette.]

1,110,017. PROTECTOR. ALVA A. ULRICH, Epping, N. D. Filed Apr. 23, 1913, Serial No. 763,125. Renewed June 4, 1914. Serial No. 843,090. (Cl. 54—80.)



A protector including a dome shaped body formed of one continuous piece of sheet metal, having a plurality of perforations therein, an arcuate extension formed integral at one side of said body, ears formed on said body and arranged in spaced relation with the side edges of the extension to provide slots for the reception of the ends of a bit, pivoted levers carried by the arcuate extension each having a slot formed in one end thereof, and pivoted buttons carried by the ears and arranged to be inserted through said slots and engaged with the levers to retain the same in their locked position and securely fasten the protector to a horse's nose.

1,110,018. BAG-HOLDER. ISAAC L. VAN SCHOIACK, Sugar Grove, Ill. Filed June 5, 1913. Serial No. 771,932. (Cl. 57—37.)

1. A bag holder including a hollow supporting standard, a vertical spindle fitting in the standard and adjustable upwardly and downwardly therein, means for securing the spindle in its vertical adjustment, a rotary hopper provided at the bottom with a chute, and a bearing bracket having spaced sides supporting the hopper, said bracket receiving and mounted for rotary movement on the upper end of the vertical spindle.

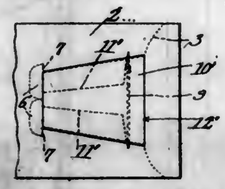
2. A bag holder including a hollow vertical supporting standard, a vertically adjustable spindle mounted in the standard and projecting therefrom, clamping means mounted on the standard and engaging the spindle for securing the same in its adjustment, a bearing bracket having spaced upper and lower bearings mounted for rotary movement on the upper end of the spindle, a rotary hopper supported by the bearing bracket, and means for securing the bearing bracket in its rotary adjustment.

3. A bag holder including a support having a vertical spindle provided with a reduced terminal journal, a bearing bracket having upwardly extending arms and provided with spaced upper and lower horizontal portions having alined bearing openings of different diameters to fit the reduced terminal journal of the spindle and the latter at a point below the said journal, and a hopper supported by the arms of the bearing bracket.

4. A bag holder including a support, a vertical spindle projecting upwardly from the support and provided with a horizontal flange having a plurality of perforations, a bearing bracket having spaced upper and lower bearing portions mounted on the spindle, the lower bearing portion being arranged adjacent to the said flange, a fastening device carried by the bearing bracket and arranged to engage the perforations of the flange to secure the bracket in its adjustment, and a hopper supported by the bearing bracket.

5. A bag holder including a hopper provided at the lower portion with a chute, a bearing bracket comprising an upper approximately U-shaped member embracing the chute and secured to the same at opposite sides thereof, and a lower tapered member having inclined sides connected at their upper ends to the bottom of the U-shaped member, the U-shaped and tapered members having spaced bearing openings, and a support having a spindle receiving the bearing bracket and fitting in the spaced bearing openings thereof.

1,110,019. ENVELOP-CLOSURE. JOSEPH CALVIN WEBB, Twin Falls, Idaho. Filed Aug. 21, 1913. Serial No. 785,978. (Cl. 229—84.)



1. A container having a closure flap and an internal pocket carried by one side, the closure flap having a tapered tongue, the free end of the tongue having a longitudinal slit forming tabs yieldable in the plane of the tongue, the tabs having laterally projecting hooks, the pocket having its inner end open and having its edges converging toward the inner end, to press the tabs together when the tongue is inserted, whereby the hooks will snap over the inner end of the pocket when the tongue is forced home.

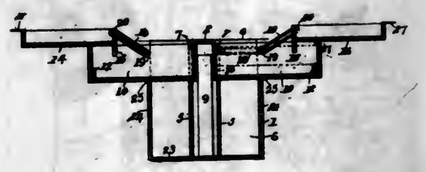
2. A container having a closure flap provided with a tongue, and an internal pocket embodying a member having side lips, the lips being bent back and secured to one wall of the container, the tongue being insertible through the pocket, and the tongue having catches to slide along the edges of the pocket and to snap over the inner end thereof.

3. An envelop having a slot in one side adjoining the mouth, the other side having a closure flap provided with a tongue insertible through the slot, the first mentioned side having an inturned flap complementing the closure flap and provided with an extension, the side edges of the extension having lips, the lips being bent back and attached to the first mentioned side, the said extensions forming an open ended pocket to receive the tongue, and the tongue having catches slidable along the edges of the pocket and adapted to snap over the inner end thereof.

1,110,020. COMBINATION TRUNK AND SAMPLE-CASE. SAMUEL T. WHITAKER, Columbus, Ga., assignor of one-third to Thomas W. Bates and one-third to Edward B. Reed, Columbus, Ga. Filed June 28, 1911. Serial No. 635,824. (Cl. 190—17.)

1. In a device of the class described, the combination of a casing having guiding means, and a receptacle having coöperating means engaging the guiding means of the casing for enabling bodily reciprocal and pivotal movement of the receptacle, the casing being formed with a cut-away portion in one of its walls sufficient for causing the upper edge of the wall at the cut-away portion to lie

in a plane below the plane of the upper edge of the guiding means of the casing a distance substantially equal to the depth of the receptacle, and the receptacle being adapted to be swung laterally from a vertical position when its coöperating guiding means is at the upper terminus of the guiding means of the casing to a substantially horizontal position in contact with the upper edge of the wall at the cut-away portion.



2. In a device of the class described, the combination of a casing, a plate at the upper portion of the casing, and a receptacle movably mounted in the casing and adapted to be moved vertically in part past the plate and to swing from the vertical position laterally to a substantially horizontal position with its inner edge beneath the plate and its outer portion resting on a portion of the casing, the portion of the casing thus engaged by the receptacle being disposed in a plane a distance below the under face of the plate substantially equal to the depth of the receptacle.

3. In a device of the class described, the combination of a casing, a plate at the upper portion of the casing, and a receptacle movably mounted in the casing and adapted to be moved vertically in part past the plate and to swing from the vertical position laterally to a substantially horizontal position with its inner edge beneath the plate and its outer portion resting on a portion of the casing, the portion of the casing thus engaged by the receptacle being disposed in a plane a distance below the under face of the plate substantially equal to the depth of the receptacle, said receptacle extending beyond the portion of the casing on which it rests a distance greater than the distance between such portion of the casing and the inner edge of the receptacle.

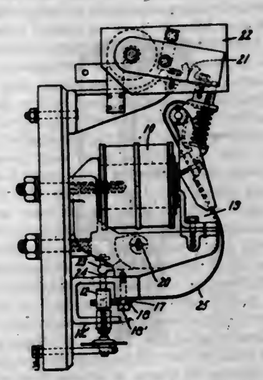
4. In a device of the class described, the combination of a casing, and a receptacle bodily movably mounted therein, the casing being formed with guide-ways disposed laterally with respect to the receptacle and the receptacle being formed with guiding pins projecting laterally into said guide-ways and adapted to enable vertical reciprocation of the receptacle limited in an upward direction by the engagement of the pins with the guide-ways, the said receptacle being adapted to be swung thence on the pins as a pivot to a horizontal position resting on a portion of the casing.

1,110,021. ELECTRICALLY-CONTROLLED SWITCH. HAROLD E. WHITE, Glen Ridge, N. J., assignor to General Electric Company, a Corporation of New York. Filed July 15, 1912. Serial No. 709,498. (Cl. 175—281.)

1. An electromagnetic relay comprising a core, an energizing element therefor consisting of a conducting strip having a perforation through which the core moves, circuit connections to said strip whereby two branch circuits are formed around the perforation, and means for changing the path for the branch circuits so as to change the effect thereof upon the core.

2. An electromagnetic relay comprising a core, an energizing element therefor consisting of a conducting strip having a pair of circuit terminals and a perforation for said core between the terminals and in alinement therewith, a third terminal out of alinement, and means for changing connections from one of said terminals to said third terminal.

3. An electromagnetic relay comprising a core, an energizing element therefor consisting of an elongated conducting strip having a circuit terminal at each end and a perforation for the core intermediate the terminals and in alinement therewith, a projection on said strip opposite the perforation provided with a third circuit terminal, and means for changing the connections from one of said terminals to said third terminal.

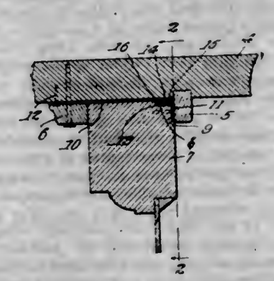


4. An electromagnetic relay comprising an electro-magnet having a core and an energizing element therefor, said element consisting of a conducting strip having a perforation through which the core moves, circuit connections to said strip whereby two branch circuits are formed around the perforation one of which is effective upon the core and the other substantially ineffective, and means for changing the path for the branch circuits so as to vary the effect upon the core.

5. An electromagnetic relay comprising an electro-magnet having a core and an energizing element therefor, said element consisting of a conducting strip having a perforation through which the core moves, circuit connections to said strip whereby two branch circuits are formed around the perforation one of which is effective on the core and the other substantially ineffective, and means for changing the path for the branch circuits so as to decrease the effect of the effective branch circuit.

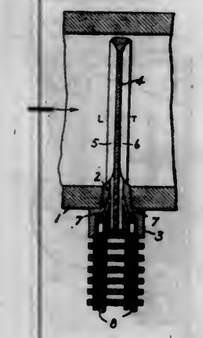
[Claim 6 not printed in the Gazette.]

1,110,022. METAL WEATHER-STRIP. JAMES ACE WHITTEMORE, Grand Rapids, Mich., assignor of one-half to Abraham J. Seys, Grand Rapids, Mich. Filed Feb. 24, 1913. Serial No. 750,358. (Cl. 20—69.)



In combination with a window jamb, and a sash, the stile of the sash having a rabbet; a strip having one edge secured to the jamb and having an offset portion at its free edge fitting in the rabbet, the free edge of the strip being reflexed toward the jamb, and an angle strip having one flange secured to the face of the stile of the sash and having its other flange overlapping the aforesaid reflexed edge, the edge of the latter flange being reflexed toward the sash to interlock slidably with the aforesaid reflexed edge within the rabbet.

1,110,023. NOZZLE-PLUG FOR FLOW-METERS. JAMES WILKINSON, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 5, 1912. Serial No. 701,888. (Cl. 73—167.)



1. A nozzle plug for flow meters comprising a screw threaded base that is adapted to be threaded into an opening in the main carrying the fluid to be metered, and a long narrow pin extending from said base which has narrow grooves extending from end to end, said grooves facing in opposite directions and separated by a partition, the base being provided with conduits extending therethrough connecting respectively with the grooves.

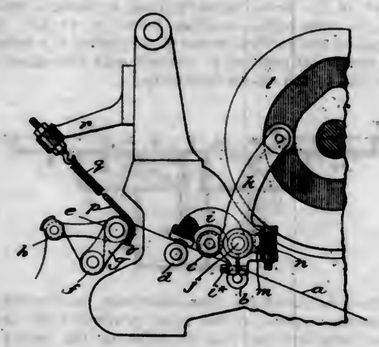
2. A nozzle plug for flow meters comprising a screw threaded base that is adapted to be threaded into an opening in the main carrying the fluid to be metered, and a long narrow pin that is formed integral with the base and gradually decreases in cross-section from the base toward its outer end and has narrow grooves on opposite sides which extend from end to end of the pin and are separated from each other by a partition forming an integral part of the plug, the base being provided with independent conduits that communicate respectively with said grooves.

3. A nozzle plug for flow meters comprising a screw threaded base that is adapted to be threaded into an opening in the main carrying the fluid to be metered, and a long narrow pin that is formed integral with the base and gradually decreases in cross-section from the base toward its outer end, said pin having a greater dimension in the direction of flow of the fluid than in a direction perpendicular thereto and provided with oppositely facing narrow grooves extending longitudinally thereof and separated at their adjacent sides by a partition forming an integral part of the pin, the base being provided with independent conduits that extend therethrough into the pin and communicate with the said grooves.

4. A nozzle plug for flow meters, comprising a screw threaded base that is adapted to be threaded into an opening in the main carrying the fluid to be metered, and a long narrow pin that is formed integral with the base and provided with narrow grooves on opposite sides extending longitudinally thereof and which are separated from each other on their adjacent sides by a partition forming an integral part of the plug, said partition being provided with a small opening connecting the grooves near their outer ends, the base being provided with independent conduits extending therethrough and communicating with the grooves for conveying fluid to a meter.

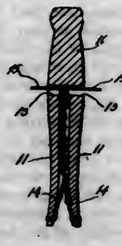
1,110,024. SEWING-MACHINE FOR BOOTS AND SHOES. JOSEPH WILLIAM WILSON, Northampton, England. Filed June 8, 1912. Serial No. 702,542. (Cl. 112—20.)

In a sewing machine, a thread take-up consisting of a swinging arm and means for giving to the take-up its spring tendency in the required direction, comprising a flexible connection laid around the hub of the swinging arm and attached thereto, and a spring attached to the



end of the flexible connection and to a fixed point, substantially as described.

1,110,025. CLOTHES-PIN. JOSEPH H. YEAGER, Green, Kans. Filed May 18, 1914. Serial No. 839,341. (Cl. 24—255.)

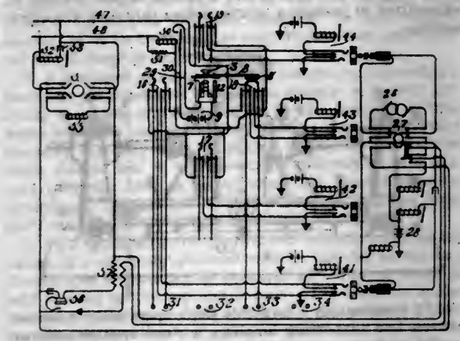


The combination with a kerfed clothes pin, the legs of which are formed with notches at their upper ends, of a pair of leaf springs disposed within the kerf and secured at their lower ends to the lower ends of the legs of the pin, and laterally directed finger pieces on the upper ends of the spring extending outwardly through the said notches.

1,110,026. LEVEL. CHRISTIAN C. ZARS, Addison, Ill. Filed Sept. 18, 1913. Serial No. 790,518. (Cl. 33—215.)

A level including a body having an enlarged intermediate portion provided with a transverse cylindrical passage therethrough and having a longitudinal slot therein communicating with the passage, a removable closure for said slot, a shoulder at each end of the passage, glass disks closing the ends of said passage, a contractible shaft journaled at its end in said disks beneath said slot and holding said disks against said shoulders, a depending weight upon said shaft, pointers on the shaft, and dials provided with scales confined in said opening in the rear of said pointers.

1,110,027. TELEPHONE SWITCHING SYSTEM. WILLIAM AITKEN, Liverpool, England. Filed Oct. 24, 1910. Serial No. 588,645. (Cl. 179—42.)



1. In a telephone switching system, an exchange; a branch exchange; a trunk line extending therebetween; a plurality of extension lines radiating from said branch exchange; a plurality of line jacks, one associated with each of said extension lines; a switching mechanism at said branch exchange and associated with said trunk line, said extension lines being normally in contact with their respective line jacks through said switching mechanism, said switching mechanism being adapted to selectively remove one of said extension lines from connection with its respective line jack and place said extension line in connection with said trunk line; electromagnetic means associated with said switching mechanism whereby said extension line is maintained in connection with said trunk line during traffic over such connection, and whereby said extension line may be automatically released from connection with said trunk line and restored to connection with its respective line jack at the termination of said traffic.

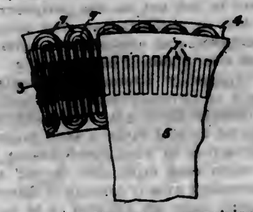
2. In a telephone switching system, an exchange; a branch exchange; a trunk line extending therebetween; a plurality of extension lines radiating from said branch exchange; a line jack associated with each of said extension lines; an electromagnetic switch mechanism at said branch exchange and associated with said trunk line; said line jacks being normally connected with their respective extension lines through said switch mechanism, said switch mechanism being adapted to selectively remove one of said extension lines from connection with its respective line jack and place said extension line in connection with said trunk line; said electromagnetic switch mechanism being further adapted to maintain said extension line in connection with said trunk line during traffic over such connection and to automatically disconnect said extension line from said trunk line, and restore said extension line to connection with its respective line jack at the instant of termination of said traffic.

3. In a telephone switching system, an exchange; a branch exchange; a plurality of trunk lines extending therebetween; a plurality of extension lines radiating from said branch exchange; a plurality of switching mechanisms at said branch exchange, one associated with each of said trunk lines; a plurality of line jacks, one associated with each of said extension lines, said line jacks being normally connected through each of said switching mechanism in multiple with their respective extension lines, each of said switching mechanisms being adapted to selectively remove one of said extension lines from connection with its respective line jack and place said extension line in connection with said trunk line; electromagnetic means associated with each of said switching mechanisms whereby said extension line is maintained in connection with said trunk line during traffic over such connection, and whereby said extension line may be automatically released from connection with said trunk line and restored to connection with its respective line jack at the termination of said traffic.

4. In a telephone switching system, a plurality of exchanges; a branch exchange, trunk lines extending between said exchanges and said branch exchange; a plurality of extension lines radiating from said branch exchange; a plurality of electromagnetic switch mechanisms at said branch exchange, each of said switch mechanisms being associated with one of said trunk lines respectively; a line jack associated with one of each of said extension lines, said line jacks being normally connected through each of said switch mechanisms in multiple with their respective extension lines; said electromagnetic switch mechanism being adapted to selectively remove any one of said extension lines from connection with its associated line jack and place said extension line selectively in connection with any one of said trunk lines; said electromagnetic switch mechanism being further adapted to maintain said extension line in connection with said trunk line during traffic over such connection, and further to automatically release said extension line from said trunk line and restore said extension line to connection with its respective line jack at the termination of said traffic.

5. In a telephone system, a switching device consisting of a shaft capable of rotary and longitudinal movements; a contact artuating member carried by said shaft and partaking of its movements; a group of spring contacts lying adjacent to the circular path of said contact actuating member; means for manually rotating said shaft to select one of said group; means for moving said shaft longitudinally to cause said contact actuating member to engage the springs of said group; an electromagnet adapted to hold said shaft in its engaging position, and means controlled over a connected telephone line for deënergizing said magnet to release said shaft, substantially as described.

1,110,028. HIGH-FREQUENCY ALTERNATOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 19, 1911. Serial No. 655,480. (Cl. 171—252.)



1. A high frequency alternator comprising an inductor adapted to be driven at high speed and having a large number of magnetic poles, a stator having slots adjacent to the inductor poles, the number of stator slots bearing to the number of inductor poles the ratio $\frac{N}{L}$, said ratio being greater than 1 and less than 2, and a winding carried in the stator slots having its adjacent coils displaced by a distance equal to N slots.

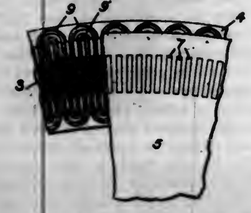
2. A high frequency alternator comprising an inductor adapted to be driven at high speed and having a large number of magnetic poles, a stator having slots adjacent to the inductor poles, the number of stator slots bearing to the number of inductor poles the ratio $\frac{N}{n}$, said ratio being greater than 1 and less than 2, and a plurality of windings carried in the stator slots each having its adjacent coils displaced by a distance equal to N slots, said windings being connected together to form the armature winding of the alternator.

3. A high frequency alternator, comprising an inductor adapted to be driven at high speed and having a large number of magnetic poles, a stator having slots adjacent to the inductor poles, the number of stator slots being greater than, but less than twice, the number of magnetic poles, and a winding carried in the stator slots having its adjacent coils displaced by a distance equal to a multiple of the distance between the adjacent inductor poles.

4. A high frequency alternator comprising an inductor adapted to be driven at high speed and having a large

number of magnetic poles, a stator having slots adjacent to the inductor poles, the number of stator slots being greater than, but less than twice, the number of magnetic poles, and a plurality of windings carried in the stator slots each having its adjacent coils displaced by a distance equal to a multiple of the distance between adjacent inductor poles, said windings being connected together to form the armature winding of the alternator.

1,110,029. HIGH-FREQUENCY ALTERNATOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 19, 1911, Serial No. 655,480. Divided and this application filed Dec. 7, 1912. Serial No. 735,357. (Cl. 171—252.)



1. A rotor for a high frequency alternator comprising a solid magnetic inductor adapted to be driven at high speed and having approximately radial slots whereby magnetic poles are adapted to be formed between said slots, said slots extending near to, but not to, the periphery whereby the periphery is left as a continuous ring integral with the rest of the inductor.

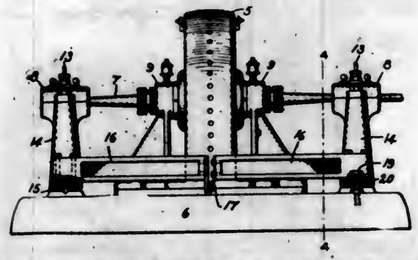
2. A rotor for a high frequency alternator comprising a solid magnetic inductor adapted to be driven at high speed and having approximately radial slots whereby magnetic poles are adapted to be formed between said slots, said slots extending near to but not to, the periphery whereby the periphery is left as a continuous ring integral with the rest of the inductor, and non-magnetic solid blocks filling said slots from side to side of said inductor.

3. A high frequency alternator, comprising a stator carrying a pair of circumferentially extending laminated rings having opposite faces lying in adjacent radial planes, a winding carried in said faces, a solid magnetic inductor adapted to be driven at high speed having its periphery extending between said faces and having approximately radial slots extending axially through it opposite said faces whereby magnetic poles are adapted to be formed between said slots, said slots extending near to, but not to, the periphery whereby the periphery is left as a continuous ring integral with the rest of the inductor, and non-magnetic solid blocks filling said slots from side to side of said inductor.

4. A high frequency alternator, comprising a stator carrying a pair of circumferentially extending laminated rings having opposite faces lying in adjacent radial planes, a winding carried in said faces, a solid magnetic inductor adapted to be driven at high speed having its periphery extending between said faces and having approximately radial slots extending axially through it opposite said faces whereby magnetic poles are adapted to be formed between said slots, said slots extending near to, but not to the periphery whereby the periphery is left as a continuous ring integral with the rest of the inductor, and non-magnetic solid blocks, of the same thickness as the inductor where it is slotted, riveted into said slots so as to fill them evenly with the sides of the inductor.

1,110,030. BEARING. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 19, 1911, Serial No. 655,480. Divided and this application filed Dec. 7, 1912. Serial No. 735,358. (Cl. 64—25.)

1. In combination a rotatable shaft operatively mounted between two supporting bearings, a rotor member secured to said shaft between said bearings, each of said bearings tending normally to limit longitudinal movement of the shaft but being mounted to yield under a longitudinal expansion of the shaft, and means whereby upon the longitudinal expansion of the shaft a thrust on one bearing is transmitted to produce a corresponding thrust on the other bearing.



2. In combination a rotatable shaft operatively mounted between two supporting bearings, a rotor member secured to said shaft between said bearings, a pivotally mounted pillow block for each bearing whereby the bearing can be moved through a small angle, a beam rigidly secured to each pillow block, and means for yieldingly connecting said beams to each other.

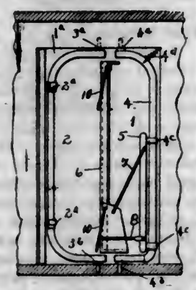
3. In combination a rotatable shaft operatively mounted between two supporting bearings, a movably mounted pillow block for each bearing, a beam secured to each pillow block, said beams extending from the pillow blocks toward each other, and means for yieldingly connecting the adjacent ends of said beams.

4. In combination a rotatable shaft operatively mounted between two supporting bearings, each of said bearings tending normally to limit longitudinal movement of the shaft, means for mounting said bearings so as to permit a longitudinal expansion of the shaft, beams secured to each bearing and extending toward each other, and means for yieldingly connecting the adjacent ends of said beams.

5. In combination a rotatable shaft operatively mounted between two supporting bearings, a rotor member secured to said shaft between said bearings, each bearing comprising a pillow block and a self-aliming bearing member operatively carried thereby, means for pivotally mounting each pillow block whereby it yields under a longitudinal thrust of the shaft, and means whereby a movement of one pillow block is transmitted to produce a corresponding movement of the other pillow block.

[Claims 6 to 11 not printed in the Gazette.]

1,110,031. COMBINED WARDROBE AND BED-RECEPTACLE. ROBERT H. ANDERSON, San Diego, Cal., assignor to Ruth B. Anderson, San Diego, Cal. Filed Feb. 3, 1913, Serial No. 745,778. Renewed Jan. 29, 1914. Serial No. 815,158. (Cl. 5—18.)



1. A combined wardrobe and bed receptacle comprising a receptacle provided with a doorway, a U shaped support pivoted centrally in said doorway and a door pivotally mounted thereon, another U shaped support pivoted in said doorway adapted for attaching a folding bed thereto.

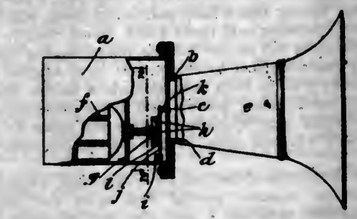
2. A combined wardrobe and bed receptacle comprising a receptacle provided with a door-way, a bed support pivotally mounted to the top and bottom walls and near the center of said door-way, a door support pivotally mounted centrally in said door-way to the top and bottom walls thereof, and a door pivotally mounted on said support adapted to be reversed on said support and close said opening on its inner or outer surfaces.

3. A combined wardrobe and bed receptacle comprising a wardrobe provided with an opening therein, a support pivotally mounted in said opening to the top and bottom walls near the center thereof, another support pivotally mounted centrally in said opening to the top and bottom walls thereof and a door pivotally mounted to said support near the side so as to allow the door to reverse around said support and close said opening near the inner surface or the outer surface of said wardrobe.

4. In a combined wardrobe and bed receptacle the combination of a wardrobe provided with an opening in the wall thereof and a plurality of supports pivotally mounted in said opening to the top and bottom walls near the center thereof, the one adapted for the pivotal mounting of a folding bed and the other for a door.

5. In a combined wardrobe and bed receptacle the combination of a wardrobe or receptacle provided with an opening in the one side thereof, a U shaped support pivotally mounted to the top and bottom walls of said opening adapted to swing in said opening, bearings mounted on the vertical portion thereof adapted to be attached to the head-board of a bed, another U shaped support similarly mounted in said opening, a plurality of collars mounted on said support, a plurality of bearings mounted thereon and a door rigidly mounted near its one side on said bearings adapted when swung on said support to close said opening at its inner or outer side.

1,110,032. MECHANICAL HORN. OSCAR C. ARLITZ, New York, N. Y., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Mar. 3, 1911. Serial No. 611,961. (Cl. 116—1.)



1. In a mechanical horn, a flexible diaphragm, a flexible vibratory impact member, one end of which is normally spaced away from and adapted to engage and flex said diaphragm, a support for the other end of said vibratory member independent of the vibratory portion of the diaphragm, a striking member adapted to engage said vibratory member intermediate its ends and force it into engagement with said diaphragm whereby the flexibility of said impact member will permit it to have return movement with the diaphragm independently of said striking member, and means actuating said striking member.

2. In a mechanical horn, a flexible diaphragm, a flexible vibratory impact member, one end of which is normally spaced away from and adapted to engage and flex said diaphragm, a support for the other end of said vibratory member independent of the vibratory portion of the diaphragm, a striking member having a succession or series of rises thereon adapted to engage said vibratory member intermediate its ends and force it into engagement with said diaphragm whereby the flexibility of said member will permit it to have return movement with the diaphragm independently of said striking member, and means actuating said striking member.

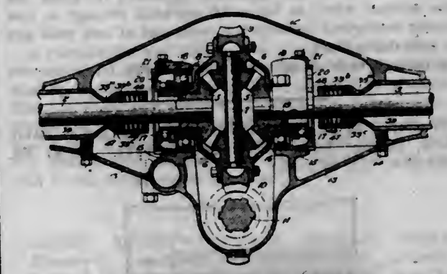
3. In a mechanical horn, a flexible diaphragm, a flexible vibratory impact member normally spaced away from and one end of which is adapted to engage and flex said diaphragm, a support for the other end of said vibratory member independent of the vibratory portion of the diaphragm, a striking member having a succession or series of rises thereon adapted to engage said vibratory member intermediate its ends, whereby said vibratory member is adapted to automatically return to its normal position within the operative plane of said striking member and the end of said impact member engaging and flexing the diaphragm, is adapted to pass said normal position under the control of said diaphragm irrespective of the position of said striking member, and means actuating said striking member.

4. In a mechanical horn, a flexible diaphragm having a central wear stud thereon, a vibratory impact member spaced away from said diaphragm, one end of which member carries a stud adapted to engage the stud upon said diaphragm, a support for the other end of said member independent of the vibratory portion of the diaphragm, a striking member adapted to engage said vibratory member intermediate its ends and force it into engagement with said diaphragm, and means actuating said striking member.

5. In a mechanical horn, a flexible diaphragm, a vibratory impact member, one end of which is adapted to engage and flex said diaphragm, a fixed support for the other end of said vibratory member independent of the vibratory portion of the diaphragm, a striking member adapted to engage said vibratory member adjacent to its support and force it into engagement with said diaphragm whereby small displacement of said vibratory member at the point of engagement with said striking member secures a large displacement thereof at the point of engagement with the diaphragm, and means actuating said striking member.

[Claims 6 to 8 not printed in the Gazette.]

1,110,033. POWER-TRANSMITTING MECHANISM. WALTER C. BAKER, Cleveland, Ohio. Filed Mar. 11, 1912, Serial No. 682,951. Renewed May 9, 1914. Serial No. 837,581. (Cl. 74—34.)



1. In mechanism of the class described, driven shaft sections, differential mechanism interposed between said shaft sections, a worm gear for driving said differential mechanism, a housing within which said elements are arranged, a worm arranged within said housing and in mesh with said worm gear, a load bearing within said housing adjacent to one end of said worm, a pair of oppositely disposed combined load and thrust bearings arranged within said housing adjacent to the other end of said worm, a drive shaft for the worm mounted in said bearings and means on said drive shaft for clamping said bearings and worm together.

2. In mechanism of the class described, driven shaft sections, differential mechanism interposed between said shaft sections, a worm gear for driving said differential mechanism, a housing within which said elements are arranged, a worm arranged within said housing and in mesh with said worm gear, a load bearing within said housing adjacent to one end of said worm, a pair of oppositely disposed combined load and thrust bearings arranged within said housing adjacent to the other end of said worm, a drive shaft for the worm mounted in said bearings, and means for adjusting the component parts of each of said combined load and thrust bearings relative to each other within said housing.

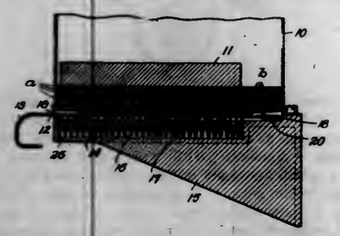
3. In mechanism of the class described the combination of a housing, a worm gear rotatably mounted in said housing, a worm for driving said worm gear, a load bearing within the housing adjacent to one end of said worm, bearings within the housing adjacent to the other end of said worm for taking both the load and thrust, a drive shaft for the worm mounted in said bearings, said worm being connected to said drive shaft to rotate therewith and to move longitudinally relative thereto, sleeves on said drive shaft between the ends of said worm and the adjacent bearing, said sleeves being movable longitudinally relative to said drive shaft, said drive shaft being screw-threaded adjacent to the points where it is mounted in said bearing, and nuts engaging the screw threaded portions of said drive shaft and positioning the bearings and the worm on said shaft therebetween.

4. In mechanism of the class described the combination of a housing, a worm gear rotatably mounted in said housing, a worm for driving said worm gear, a load bearing within the housing adjacent to one end of said worm, bearings within the housing adjacent to the other end of said worm for taking both the load and thrust, a drive shaft for the worm mounted in said bearings, sleeves on said drive shaft between the ends of said worm and the adjacent bearing, said drive shaft being screw-threaded adjacent to the points where it is mounted in said bearing, nuts engaging the screw-threaded portions of said drive shaft and positioning the bearings and the worm on said shaft therebetween, and a cap adjustably mounted in the casing surrounding the drive shaft and engaging the adjacent bearing for adjusting it within the casing.

5. A housing, differential driving mechanism within said housing, a pair of driven shaft sections connected at their inner ends to said differential mechanism and extending in opposite directions through said housing, axle tubes surrounding said drive shaft sections, connected to said housing and extending freely into the interior thereof, the inner section of each tube being free to move within the housing and reduced in diameter to closely fit about the drive section which is normally extended through it, and packing interposed between the inner end of said tube and the said drive shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,110,034. PAPER-CUP DISPENSER. EDWARD C. BALDWIN, Boston, Mass. Filed Oct. 3, 1911. Serial No. 652,674. (Cl. 211—8.)

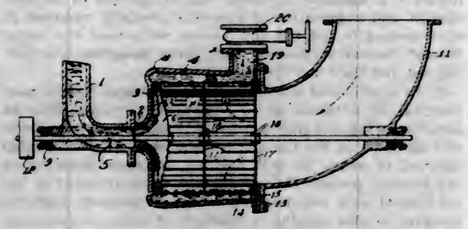


1. An apparatus of the character described, comprising a holder to contain a pile of flat paper cups, said holder fitting the pile to prevent edgewise movement thereof and having a delivery slot for the lowermost cup, a slide having a pusher at a distance from the rear wall of the holder whereby said pusher cannot engage the rearmost portion of the cup, means for actuating said slide, and means for automatically raising the lowermost cup above the delivery slot when the slide is in normal position.

2. An apparatus of the character described, comprising a holder for a pile of blanks, said holder having a delivery slot, a slide for supporting the pile of blanks and having a pusher, lifters to raise the lowermost blank above the delivery slot when the slide is in its rear position, and means for permitting said lifters to drop at the beginning of the outward movement of the slide.

3. An apparatus for dispensing elongated paper cups which are closed at one end and have one side longer than the other to form a projecting lip, said apparatus comprising a holder for a pile of the cups, the holder having a delivery slot, and a slide having a pusher near its rear end in position to bear against the inner face of a cup lip without sliding the cup, whereby outward movement of the slide will cause said pusher to engage the edge of the shorter side of the cup and slide said cup bottom first out through said slot, said pusher having its acting portion irregularly formed to continuously engage a correspondingly shaped edge of said shorter side of the cup.

1,110,035. ROTARY CONDENSER OR ABSORBER. GEORGE B. BASKERVILL, Jr., Birmingham, Ala. Filed Aug. 22, 1913. Serial No. 786,200. (Cl. 62—31.)



1. In an apparatus of the character described, a chamber, means to deliver a flowing stream of liquid tangentially to the inner peripheral wall of said chamber which has a liquid outlet, a rotating vane bearing element which forces the flowing liquid by centrifugal force against the chamber wall to form a space therein surrounded by and exposed to a whirling mass of constantly changing liquid under pressure, and a pipe for conducting vapor or gas which opens into said space, substantially as described.

2. In an apparatus of the character described, a stationary chamber having liquid inlet and outlet ports, rotating vanes therein between said ports which travel close to the chamber wall and act on the body of liquid flowing therethrough to concentrate it by centrifugal force against the inner chamber wall to form and maintain a hollow whirling mass of continuously flowing fluid under pressure, and a gas conducting pipe which opens into the space at the center of said whirling mass, as and for the purposes described.

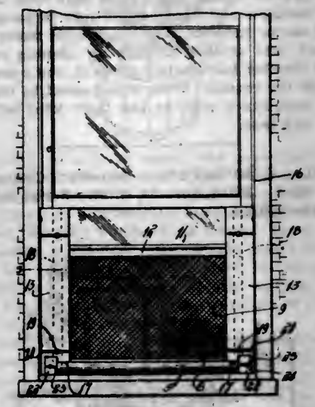
3. In an apparatus of the character described, a stationary cylindrical chamber having fluid inlet and outlet ports at opposite ends and a gas inlet port disposed centrally of one end, and a rotor concentric with and rotatable within said chamber and which carries a series of narrow closely spaced vanes which act on the fluid passing through the chamber to hold it by centrifugal force against the chamber wall, said gas inlet port being arranged to deliver the gas into the center of the fluid lined chamber, said fluid being adapted to seal the first mentioned ports, as and for the purposes described.

4. In an apparatus of the character described, an elongated cylindrical chamber having inlet and outlet ports for liquid which flows lengthwise therethrough, a concentric rotating element in said chamber adapted to rotate in juxtaposition to its inner wall and in contact with the liquid therein to cause it to travel spirally along the cylinder, said element extending lengthwise of the cylinder between said ports and being designed to permit free access of the gas to the liquid, and a gas conducting pipe which opens into the central space in the chamber surrounded by said rotating element and the body of the liquid acted on thereby, substantially as described.

5. In a means for uniting a liquid under pressure with a gas under less pressure, a cylindrical chamber, means to supply liquid to the peripheral wall of said chamber, centrifugal means which act on and maintain said liquid under pressure while it is flowing through said chamber, said centrifugal means acting to force the liquid way from the center of the chamber to form a space, and pipe means for conducting gas having a lower pressure than the liquid which opens into such space, said centrifugal means having spaced openings therein which permit the gas and liquid to unite, substantially as described.

[Claim 6 not printed in the Gazette.]

1,110,036. WINDOW-SCREEN. GABRIEL F. BORN, Gnadenhutten, Ohio. Filed June 11, 1913. Serial No. 773,116. (Cl. 156—39.)

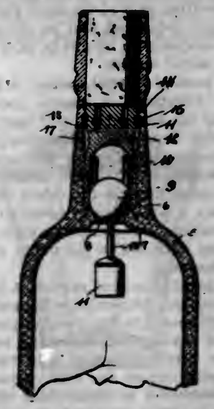


1. The combination with a window frame, of a sash mounted therein, a housing secured to a transverse member of the frame, screen material extending from the housing to the sash, the ends of the housing being extended inwardly, a plate secured to each side of the frame and extended inwardly and provided with a cutaway portion for receiving the extended ends of the housing, a bar carried by the inner edge of the plate and laterally adjustable with relation thereto, the said bar being provided on one face with a cutaway portion forming with the edge of the plate a vertical recess for slidably receiving the edge of the screen, the said bar being cut away at its lower end to receive the extended end of the housing, and a plate carried by the lower end of the first-mentioned plate and adjustable laterally to engage the outer face of the extended end of the housing.

2. The combination with a window frame, of a sash mounted therein, a housing secured to a transverse member of the frame, screen material extending from the housing to the sash, the ends of the housing being extended inwardly, a plate secured to each side of the frame and extended inwardly and provided with a cutaway portion for receiving the extended ends of the housing and a plate carried by the first-mentioned plate and adjustable laterally to engage the outer face of the end of the housing.

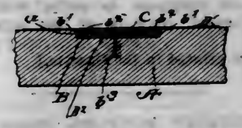
1,110,037. NON-REFILLABLE BOTTLE. RICHARD C. BRADSHAW and THOMAS A. GARVEY, St. Louis, Mo. Filed July 3, 1913. Serial No. 777,298. (Cl. 215—65.)

In a non-refillable bottle, the combination of an annular enlargement formed on the lower end of the inner periphery of the neck, a pendant valve seating on said enlargement, a guard comprising a cylindrical member disposed within the neck and seated also on the enlargement and provided with a bore for receiving the valve, means for automatically locking the guard in place upon its insertion in the bottle neck, the intermediate portion of the periphery of the guard being provided with a circumscribing depression, the wall of the guard adjacent the bore being provided with a plurality of vertically extending slots opening upon the depression and the guard being further provided with a plurality of bores extending inwardly



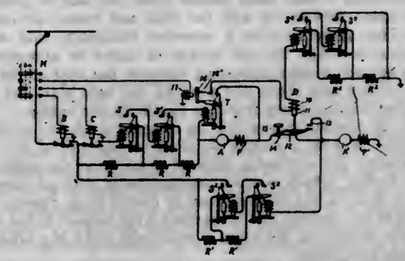
from the depression and then upwardly to the top face thereof.

1,110,038. LABEL-HOLDER AND RETURN-LABEL. THOMAS W. BURNS, La Crosse, Wis. Filed Feb. 11, 1914. Serial No. 818,089. (Cl. 40—10.)



A label holder and return label comprising, an open top receptacle let into the package flush with the surface thereof, a flexible sheet-like cover adapted to be sprung into the receptacle to close the open top thereof and lie within the plane thereof and duplicate labels one of which is of a size to be pasted to the package and overlie the entire label holder and the other label being adapted to be held in the holder under the cover.

1,110,039. SERIES-PARALLEL CONTROL SYSTEM. EUGENE R. CARICHOFF, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 15, 1913. Serial No. 761,241. (Cl. 172—179.)



1. In a series parallel control system, a pair of electric motors, electromagnetic means for connecting said motors in series or in parallel, a resistance for the motors in the series position, additional resistances one for each motor in the parallel position, and electromagnetic switches having their operating windings in the motor circuit for controlling said resistances.

2. In a series parallel control system, a pair of electric motors, resistances for the motors, electromagnetic switches having their operating windings in the motor circuit for short circuiting said resistances, and means whereby said motors are connected first in series and then in parallel with a resistance in circuit in each position without opening the motor circuit.

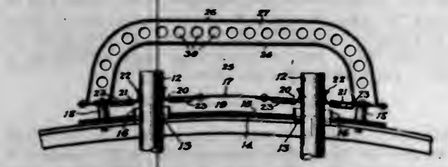
3. In a series parallel control system, a pair of electric motors, a series resistance, a master controller, means controlled thereby for connecting said motors and resistance in series with each other, electromagnetic switches having their operating windings in the motor circuit for cutting said resistance out of circuit, means for connecting the motors in parallel through the closed contacts of said resistance switches, a resistance in series with each motor in the parallel position, and electromagnetic switches having their operating windings in the motor circuit for cutting out said resistances.

4. In a series parallel control system, a pair of electric motors, a resistance for the motors in the series position, a resistance for each motor in the parallel position, electromagnetic switches having their operating windings in the motor circuit for short circuiting said resistances, and means whereby said motors are first connected in series with the series resistance in circuit and then in parallel with a resistance in series with each motor without opening the motor circuit.

5. In a series parallel control system, a pair of electric motors, a resistance for the motors in the series position, a resistance for each motor in the parallel position, electromagnetic switches having their operating windings in the motor circuit for short circuiting said resistances, and an electromagnetic switch for connecting the motors in parallel with a resistance in series with each motor through the closed contacts of the series resistance switches.

[Claim 6 not printed in the Gazette.]

1,110,040. EXHAUST-MUFFLER. HENRI G. CHATAIN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1913. Serial No. 783,529. (Cl. 121—116.)



1. In combination, a cab, an internal combustion engine located therein, a muffler mounted on the roof of the cab, comprising a base plate spaced from the roof to form an air space between it and the roof and walls carried by the base plate forming a chamber therewith, said walls having openings for the escape of gases to atmosphere, and conduit means projecting through the roof of the car and across said space and through the base plate for conveying exhaust gases from the engine to the muffler.

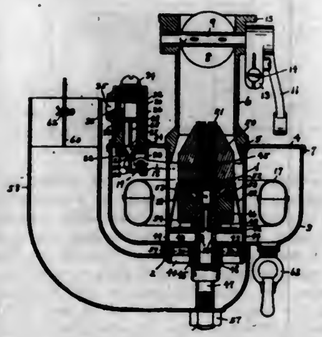
2. In combination, a cab, an internal combustion engine located therein, a muffler mounted on the roof of the cab, a conduit for conveying exhaust gases from the engine to the muffler, which conduit communicates with an opening in a wall of the muffler, and a device that closely surrounds the conduit and is movable with respect to the wall of the muffler to maintain a relatively tight gas joint between said parts.

3. In combination, a cab, an internal combustion engine located therein, a muffler mounted on the roof of the cab, a body of heat resisting material between the roof and muffler, there being an opening therein through which the conduit conveying gases can pass, a conduit that is rigidly attached to the engine and extends through the roof, the heat resisting material and the base of the muffler, and yielding means for making a relatively gas tight joint between the conduit and base of the muffler.

4. In a muffler adapted to be mounted on a cab roof and comprising a base, a perforated wall above the base, end walls uniting the perforated wall and the base, said walls and base forming a chamber, a cover for the perforated wall, there being a chamber between the two, means permitting the gases to escape to atmosphere from this last named chamber, and a conduit that projects through the base for conveying exhaust gases to the first mentioned chamber.

5. In a muffler adapted to be mounted on a cab roof and comprising a base, one or more perforated walls above the base forming chambers, a cover for the outer wall and separated therefrom by a chamber, said walls and cover being supported by the base, walls that form the ends of all the chambers and have perforations to permit exhaust gases to escape from the chamber directly under the cover, a conduit that extends through an opening in the base into the chamber immediately above it, and a means which surrounds the conduit, slides with respect to the base and acts to maintain a relative gas tight joint between said conduit and base.

1,110,041. CARBURETER. GILBERT CHRISTIAN, Detroit, Mich. Filed Nov. 24, 1913. Serial No. 802,592. (Cl. 48—155.2.)



1. In a carbureter, the combination of a cylindrical mixing chamber, a cylindrical fuel nozzle therein having a circumferential discharge opening, means for supplying liquid fuel thereto, and a series of yieldable vanes mounted in the mixing chamber below the fuel discharge opening with their lower ends in engagement with the shell and their upper ends in engagement with the nozzle.

2. In a carbureter, the combination of a mixing chamber, a fuel nozzle therein having a discharge opening below its upper end, and a series of yieldable vanes mounted in the mixing chamber so as to incline toward the nozzle and with their upper ends normally in engagement with the nozzle at the discharge opening so as to direct a current of air against said discharge opening.

3. In a carbureter, the combination of a cylindrical mixing chamber, a cylindrical fuel nozzle therein having a circumferential discharge opening, and a series of yieldable vanes mounted in the mixing chamber and extending up to and ending at said discharge opening and together normally constituting a frusto-conical shell.

4. In a carbureter, the combination of a mixing chamber, a cylindrical fluid nozzle therein having a circumferential discharge opening, means for supplying liquid fuel to the nozzle, and yieldable means for directing a current of air against said nozzle at the discharge opening, said means comprising a series of upwardly extending plates whose upper ends normally engage the nozzle at said discharge opening.

5. In a carbureter, the combination of a cylindrical mixing chamber, a fluid nozzle therein having a narrow discharge opening in a plane at right angles to the axis of the chamber, and yieldable means for directing the air that passes through the chamber against said nozzle at the discharge opening, said means comprising vanes extending downwardly and outwardly from said discharge opening.

[Claim 6 not printed in the Gazette.]

1,110,042. COVER FOR FRUIT-BASKETS. RAYMOND P. CLARK, Rochester, N. Y. Filed Jan. 20, 1913. Serial No. 743,089. (Cl. 217—124.)

1. In a cover for a fruit basket, the combination of a frame composed of two annular layers of greater width than thickness, the width of said layers being sufficient to extend the layers for a substantial distance into the radius of the basket whereby a support is formed for the fruit when the basket is inverted, one of said layers breaking joint with the other layer, and a layer of transparent fabric occupying the open center of said annular layers and having its edge confined therebetween, all of the said parts being securely fastened together.

2. In a cover for a fruit basket, the combination of a frame composed of two annular layers of greater width than thickness, the width of said layers being sufficient to extend the layers for a substantial distance into the radius of the basket whereby a support is formed for the fruit when the basket is inverted, each of said layers comprising two sections, one of said layers breaking joint with the other layer and each of said layers having its joints substantially at right angles to the other layer, and a sheet of transparent material occupying the open center of said layers and having its edge confined therebetween, all of said parts being securely fastened together.

3. In a cover for a fruit basket, the combination of a frame composed of two annular layers of greater width than thickness, the width of said layers being sufficient to extend the layers for a substantial distance into the radius of the basket whereby a support is formed for the fruit when the basket is inverted, a sheet of foraminous material occupying the open center of said layers and having its edge confined between the layers, and strips fastened to one of said layers and extending thereacross and across each other, all of said parts being securely fastened together.

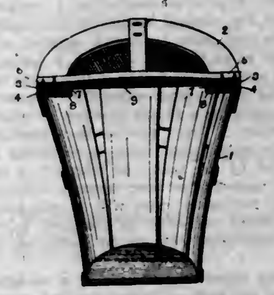
4. The combination in a cover for a fruit basket of an annular frame, a circular piece of tarlatan fastened therein, cross strips fastened to said frame and extending across each other, an opening between the end of one of said strips and the frame, a cover piece for filling the annular opening in said frame capable of movement into and out of place through the opening between said strip and said frame.

5. In a cover for a fruit basket, the combination of a frame composed of two annular layers of greater width than thickness, the width of said layers being sufficient to extend the layers for a substantial distance into the radius of the basket whereby a support is formed for the fruit when the basket is inverted, and a layer of transparent cloth occupying the open center of said layers and having its edge confined between the layers, all of said parts being securely fastened together.

[Claims 6 to 8 not printed in the Gazette.]

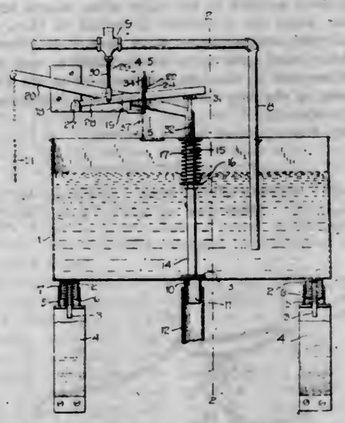
1,110,043. CUSHION-PAD FOR COVERS FOR FRUIT-BASKETS. RAYMOND PEARCE CLARK, Rochester, N. Y. Filed Jan. 29, 1914. Serial No. 815,215. (Cl. 217—124.)

1. A cover for a fruit basket consisting of an annulus of sufficient width to project a substantial distance into the radius of the basket, said annulus having an open center and having an annular cushion pad on its bottom whose radial projection is greater than that of the annulus whereby the cushion extends into the open center of said annulus and past the wall of the central opening thereof.



2. A cover for a fruit basket, consisting of an annulus of sufficient width to project a substantial distance into the radius of the basket, said annulus having an open center and having an annular cushion pad on its bottom, whose inner edge extends past the wall of the opening in the annulus and for a distance into said opening.

1,110,044. FLUSHING APPARATUS FOR TOILET-BOWLS. JOHN V. CUNNIFF, ROBERT E. WILLIAMS, and JOHN E. HEALY, Fall River, Mass. Filed July 2, 1913. Serial No. 777,077. (Cl. 4—5.)



1. In a flushing apparatus, the combination with a receptacle resiliently supported for vertical movement and provided with an inlet valve and an outlet valve, means for opening the outlet valve, means for holding said outlet valve open, a pivoted lever connected to the inlet valve stem, means for releasing said holding means and for raising the lever to open the inlet valve upon upward movement of the receptacle, a trip member adapted to engage said lever to maintain the same in raised position, and a flexible member secured to the trip member and to the receptacle for releasing the trip member upon downward movement of the receptacle.

2. A flushing apparatus comprising a receptacle resiliently mounted for vertical movement and provided with an outlet valve and an inlet valve, a lever pivoted to a fixed object and connected to the outlet valve for actuating the same, means for automatically holding the outlet valve in open position, a lever pivoted to a fixed object and connected to the inlet valve for actuating the same, means for raising the inlet valve lever when the recep-

tacle is raised to open the inlet valve, said inlet valve lever being adapted during its upward movement to release the holding means of the outlet valve lever, a trip member adapted to engage said inlet valve lever when it is raised to hold the same in raised position, and means for releasing the trip member upon downward movement of the receptacle.

3. A flushing apparatus comprising a receptacle resiliently mounted for vertical movement and provided with an inlet valve and with an outlet opening, a vertically movable outlet valve for said opening, a lever pivoted to a fixed object and secured to the outlet valve to raise the same, a pivoted trip member adapted to engage said lever and hold the same in a raised position, a lateral arm on said trip member, a lever pivoted to a fixed object and disposed under said lateral arm, a vertically adjustable member carried by the tank and adapted to engage and raise the last named lever upon upward movement of the tank, whereby the outlet valve will be released, said last named lever being connected to the inlet valve to open it upon the lever being raised, and means for closing the valve.

4. A flushing apparatus comprising a receptacle resiliently mounted for vertical movement and provided with outlet and inlet valves, a lever pivoted to a fixed object and connected to the outlet valve for actuating the same, a lever pivoted to a fixed object and connected to the inlet valve for actuating the same, means for automatically holding the outlet valve in open position, means for moving the inlet valve lever to open and close the valve when the receptacle is raised or lowered and said lever being adapted, during its movement to release said holding means of the outlet valve lever.

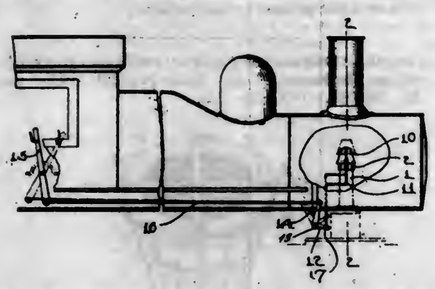
5. In a flushing apparatus, an inlet mechanism comprising the combination with a receptacle resiliently supported for vertical movement and an inlet valve, of a pivoted lever secured to the valve stem, means for raising the lever when the receptacle is raised to thus open the valve, a trip member adapted to engage said lever when it is raised and hold it in raised position, and a flexible member secured to the trip member and to the receptacle for releasing the trip member upon downward movement of the receptacle.

[Claim 6 not printed in the Gazette.]

1,110,045. SHOE-PROTECTOR. MICHAEL W. DALTON, Chicago, Ill. Filed May 12, 1913. Serial No. 767,239. (Cl. 36—72.)

A shoe protector arranged to fit and cover all of the upper portion of a shoe from the sole of said shoe upward to a predetermined height above said sole, said protector being formed with an open side; adjusting means comprising overlapped and underlapped edge portions of said protector and lacing means therefor along said open side; shank eyelets formed through said protector through which said lacing means is extended across the bottom of the shank of said shoe; toe eyelets formed through said protector one at either side of the toe portion of said shoe; metal lacing means having one of its ends secured to an end of said lacing means the other end of said metal lacing means being passed through one of said toe eyelets and across the bottom of the toe portion of said shoe and having its free end secured in the opposite one of said toe eyelets; and securing means whereby the free end of said lacing means is secured to said protector.

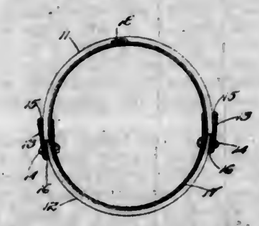
1,110,046. VARIABLE EXHAUST CONTROL. JOHN K. DEEM, Richmond, Ind. Filed Dec. 14, 1912. Serial No. 736,794. (Cl. 110—152.)



1. In a locomotive provided with a fire-box, a stack carried by said locomotive, of an exhaust control comprising a stand placed below said stack, a cap formed of flexible sections, a band, said flexible sections fixedly secured to said band and capable of being drawn together to constitute a substantially dome-like housing, a funnel slidably mounted over said flexible sections and adapted to move vertically thereof and also adapted to draw the upper ends of said sections closely together and constitute means for regulating the size of the discharge opening of said stand, said flexible sections being arranged in an inner and outer tier, said outer tier of sections fitting over the joint of the several sections between the inner tier of sections, thereby constituting a yieldable and smoke tight casing for preventing the escape of smoke or gas through the sides of the casing and at the same time constituting means for allowing a free lateral expansion and a free contraction of said sections for controlling the discharge of steam from said stand through said stack, and means for moving said slidably mounted funnel vertically for regulating the distance between the discharge opening of said stand and the lower end of said stack.

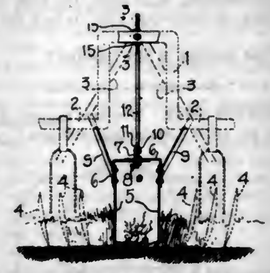
2. In a locomotive provided with a fire-box, a stack carried by said locomotive, of a stand positioned below said stack, collapsible means carried by said stand for increasing and decreasing the size of the discharge opening of said stand, a vertical movable funnel fitting over said collapsible means, and means for moving said funnel vertically for decreasing the distance between said discharge opening of said stand and the lower opening of said stack.

1,110,047. CULVERT. JAMES P. DOLAN, Revere, Mass., assignor to Penn Metal Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 15, 1914. Serial No. 832,023. (Cl. 61—9.)



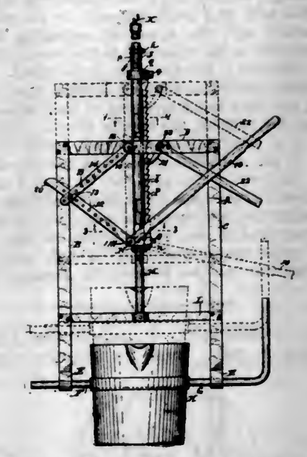
The improved culvert comprising a lower half and an upper half of corrugated metal, longitudinal members secured to each side of one half, said longitudinal member having its lower edge composed of a plurality of thicknesses of metal whereby a space for the reception of the upper half is left between the inner edge of the longitudinal member and the outer edge of the half to which it is secured, said inturned edge forming a support for the other half, bolts or rivets securing said longitudinal member and a flexible retaining member passing about said upper and lower halves.

1,110,048. SHIELD-HOLDER FOR CULTIVATORS. GEORGE HATCH FLINT, Bellflower, Ill. Filed Apr. 29, 1914. Serial No. 835,195. (Cl. 97—13.)



The combination with the arch of a cultivator, an eye bolt removably arranged in the crest of the arch, a threaded rod extending through the eye bolt having an eye formed upon its lower end, jam nuts arranged upon the threaded rod and upon opposite sides of the bolt, a pair of shields arranged in spaced parallel relation and braced at their rear ends, angle irons secured to the sides of the shield and extending over the top thereof, an eye bolt extending through the angle irons, jam nuts arranged upon the eye bolt and arranged upon opposite sides of the angle irons, and the eye of the threaded rod being connected in the eye bolt whereby the shields are held against lifting.

1,110,049. LADLE-HOLDER. MAX W. GOLDBERG, Brillion, Wis. Filed May 28, 1914. Serial No. 841,426. (Cl. 22—82.)



1. A portable ladle holder comprising a portable support, means comprising an extensible sleeve for adjusting the length of said support, a ladle holding frame mounted on said support, and means for raising and lowering said frame on said support.

2. A portable ladle holder comprising a portable support, supporting means comprising a telescoping member adjustably secured to said support, a ladle holding frame mounted on said support, means for raising and lowering said frame on said support and means for securing said frame in raised or lowered position on the support.

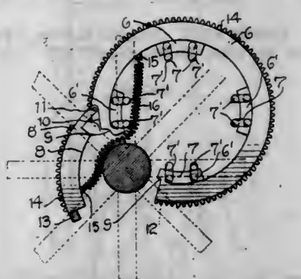
3. A portable ladle holder comprising a portable support, a ladle holding frame mounted on said support, a plurality of levers pivotally mounted on said support, a plurality of levers pivotally mounted on said frame and pivotally secured to the levers on said support and means for operating said levers on the support and frame to raise or lower the frame on the support.

4. A portable ladle holder comprising a support, a ladle holding frame slidably mounted on said support, means for guiding the frame, a plurality of levers pivotally mounted on said support, a plurality of levers pivotally mounted on said frame and pivotally secured to the levers on said support and means for operating the levers on the support and frame to raise or lower the frame on the support.

5. A portable ladle-holder comprising a portable support, a ladle holding frame slidably mounted on said support, means for raising or lowering said frame on said support, a rack rigidly secured to said support, a locking dog pivotally secured to said frame for engagement with the rack to lock the frame against downward movement on the support.

[Claims 6 to 12 not printed in the Gazette.]

1,110,050. MACHINE ELEMENT. EMANUEL E. GUINGRICH and CHRISTIAN L. MILLER, Carlock, Ill. Filed Aug. 16, 1913. Serial No. 785,100. (Cl. 74—28.)



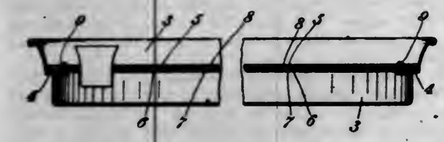
1. A detachable gear wheel for wheeled vehicles, comprising a rim section having a portion thereof cut away to receive an axle, a segment pivoted to one end of the cut-away portion and extending thereacross to provide a substantial continuation of the gear teeth, said segment being formed at its free end with a shoulder, and the adjacent end of the rim section being formed with a shoulder adapted to coact with the first-named shoulder, a spring secured to the under surface of the segment and to the inner surface of the section, and means carried by the section for securing it to adjacent wheel spokes, whereby said section may be fixedly clamped in a position concentric with the axle.

2. A detachable gear for wheeled vehicles comprising a gear section having a cut away portion, a gear segment pivoted to said section to swing across said cut away portion, means resiliently urging said segment into closing position, off-set blocks formed at spaced intervals on the gear section and adapted to engage against wheel spokes and each provided with bores disposed transversely of the adjacent spoke on either side thereof, a plate adapted to engage against the other face of the spoke and to extend on either side thereof, and J-bows having their shanks passed through the ends of said plates and having their bills disposed in the bores of the off-set blocks whereby the gear may be fixedly clamped in a position concentric with the axle and spaced from the wheel.

1,110,051. COMMUNION-SERVICE TRAY. WILLIAM S. HARPSTER, Columbus, Ohio, assignor, by mesne assignments, to Clarence A. Hill, Columbus, Ohio. Filed Apr. 19, 1911, Serial No. 621,986. Renewed Feb. 5, 1914. Serial No. 816,841. (Cl. 65—53.)

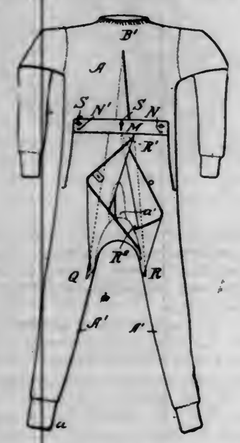
1. In an individual communion service tray, a glass holder including in combination a metal sheet provided with an aperture, a sheet of absorbent paper backed by a sheet of non-absorbent stiff paper, said absorbent sheet being located between said metal sheet and the non-absorbent sheet, said absorbent and non-absorbent sheets provided with apertures of smaller diameter than that

of the metal sheet and all of said apertures coinciding vertically, and means for holding said sheets together, substantially as described.



2. In an individual communion service tray, a glass holder including two flat metallic sheets provided with coinciding apertures, combined with a sheet of absorbent paper, and a sheet of stiff non-absorbent paper, said paper sheets provided with glass receiving apertures coinciding with each other and with the apertures of the metallic sheets but of smaller diameter than the apertures of the metallic sheets, and means for holding said sheets together.

1,110,052. UNION SUIT. NATHAN HATCH, Albany, N. Y. Filed Dec. 20, 1913. Serial No. 807,825. (Cl. 2—144.)



1. A union suit comprising a body portion and leg portions, the structure having an opening in and confined to the back thereof, said opening extending between a point situated substantially midway of the shoulder blades and points at each side of the back situated substantially at the hip portions, through which opening the body of the wearer is inserted to place the garment thereupon.

2. A union undergarment, comprising a body portion, leg portions, the body portion extending from the neck substantially to the waist line thereof, and the leg portions extending from the lower extremities to the waist line, these portions being integral with each other and the back of the garment being separated on a horizontal line substantially at the waist line, and also on a medial line of the back from the first mentioned line to a point substantially between the position of the shoulder blades.

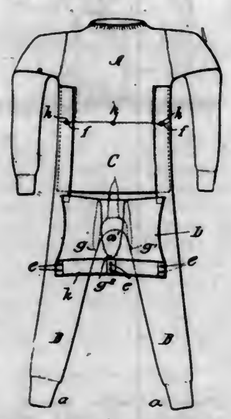
3. In a union suit, a body portion, having a vertical slit at the back thereof from a point between and adjacent to the shoulder blades to a point adjacent to the rear of the seat, and having a transverse slit to the extremities of which is secured the lower portion of the seat flap, which extends up to a point substantially at the waist line, the free ends of the flaps thus formed being detachably secured the one to the other.

4. A union suit having its front substantially integral from top to bottom, and its back provided with separate and independent back and seat flaps, having means thereon to detachably secure the one to the other at their free ends, as and for the purpose described.

5. A union suit having its front substantially integral from top to bottom, and its back provided with flaps by means of substantially vertical and substantially horizontal slits intersecting each other, the flaps being secured one to the other at their free ends, as and for the purpose described.

[Claim 6 not printed in the Gazette.]

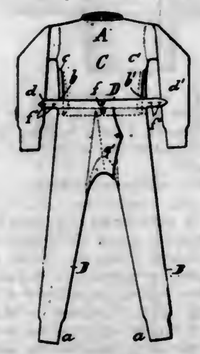
1,110,053. UNION SUIT. NATHAN HATCH, Albany, N. Y. Filed Dec. 20, 1913. Serial No. 807,826. (Cl. 2—144.)



1. A union suit comprising a body portion and leg portions, having a vertical slit at each side from a point adjacent to the arm to a point adjacent to the hip, and the back provided with two oppositely extending flaps which are secured one to the other and to the main portion of the garment adjacent to the side slits as described.

2. A union suit comprising an integral front and a slitted back, the slits being arranged at each side thereof up and down the body of the wearer from a point adjacent the arm to a point adjacent the hip, across the garment from hip to hip, said slits forming an opening situated entirely in the rear of the garment, to form a back flap, a seat flap, each of the flaps being separated from each other at the medial line, and fastening means on the flaps for detachably securing the one to the other, the said flaps when closed covering the said opening through which the body of the wearer is inserted to place the garment thereupon.

1,110,054. UNION SUIT. NATHAN HATCH, Albany, N. Y. Filed Jan. 5, 1914. Serial No. 810,323. (Cl. 2—144.)



1. A union suit, comprising a body portion and leg portion, the structure having an opening in the back confined to a position substantially at and above the waistline and below the arms thereof, the base of said opening being substantially at the waist line extending from just above the position of the hip joints, through which the body of the wearer is inserted to place the garment thereupon.

2. A union suit having a front body portion, leg portions, seat and hip portions, and an upper back portion, all of which portions are substantially integral with each other, and a flap situated substantially above the waistline forming the central back portion, the free ends of said flap having vertical and horizontal dimensions substantially as described.

3. A union suit comprising a substantially integral front body portion, leg portions, seat and hip portions and upper back portions, the central back portion having a flap, a belt portion and means for adjustably and detachably securing the free end of the flap to the belt and the belt to the front body portion.

4. In a union suit having an opening in the back confined to a position substantially at a point above the waistline and below the arms thereof, a fixed seat portion, a belt portion secured thereto having tabs or flaps at each end, means for adjustably and detachably securing the belt to the front and sides of the garment.

1,110,055. UNION SUIT. NATHAN HATCH, Albany, N. Y. Filed Apr. 16, 1914. Serial No. 832,181. (Cl. 2—144.)

1. In a combination-garment comprising a substantially integral front body portion, leg portions seat and hip portions and upper back portions, the central back portion consisting of a flap which overlaps at its lower edge, the upper part of the seat portion, a belt or band portion along the lower edge of the back flap and means for detachably securing the lower part of the back flap to the back and sides of the garment substantially at the waist line thereof.

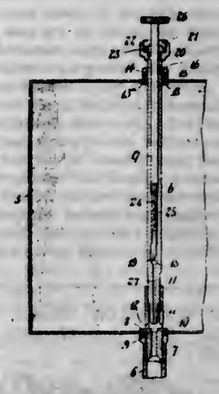
2. In a union suit, a fixed seat portion and a back flap extending substantially over the lower portion of the back, a belt or band portion secured to the lower edge of the back flap, having tabs or flaps at each end, means for adjustably and detachably securing the lower portion of the back flap to the upper part and outside of the fixed seat portion and the tabs or flaps to the front and sides of the garment.

1,110,056. PAD. CHARLES M. HATCHER, Seattle, Wash. Filed Apr. 21, 1913. Serial No. 762,609. (Cl. 101—75.)

1. In a device of the character described, a tray, a body mounted on the tray for free movement, a central yielding support for the body bearing on the tray, and cushioning members carried by the body in spaced relation with one another and with the central support and being normally free of the tray but adapted for engaging the latter.

2. In a device of the character described, a pad body, a yielding means normally forming the sole support for said pad body, and auxiliary yielding supporting means for said pad body arranged to act subsequently to the initial portion of the movement of said pad body on said first yielding means.

1,110,057. RESERVE-SUPPLY TANK. AUGUST W. H. HELBERG, Gardnersville, Nev. Filed June 9, 1911. Serial No. 632,172. (Cl. 158—46.5.)



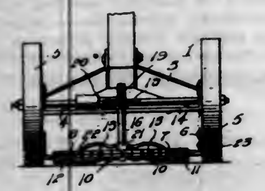
1. The combination, with a fuel tank having alined openings therein, of a nipple mounted in one of said openings and having an orifice therein contiguous to the bottom of said tank, an outer hollow valve stem mounted in the other opening in said tank, and engaging said nipple to normally close the communication between the latter and the interior of the tank, said outer hollow valve stem being provided with an orifice communicating with the interior of the tank, and an inner valve stem movable longitudinally in the outer valve stem and adapted for closing communication between the orifice in the latter and said nipple.

2. The combination, with a fuel supply tank having alined openings therein, of a nipple having a valve seat and an orifice in communciation with the interior of said tank, an outer hollow valve stem mounted in the other opening in said tank and connected to said nipple and adapted to normally engage the valve seat therein for closing communication between the interior of said tank and said nipple, said outer valve stem being provided intermediate the ends thereof with a valve seat and an orifice contiguous to said seat and communicating with the interior of the tank, and an inner valve stem adapted to engage the seat in the outer stem for closing communication between the interior of the tank and said nipple.

3. A valve for fuel tanks including a member formed with a discharge port, a lateral opening leading thereto and a valve seat intermediate said port and opening, a hollow stem operable in said member and coöperating with the valve seat, said stem being formed above the member with a lateral opening and formed below said opening with a valve seat, and a rod operable in the stem to coöperate with the valve seat therein to control the stem opening.

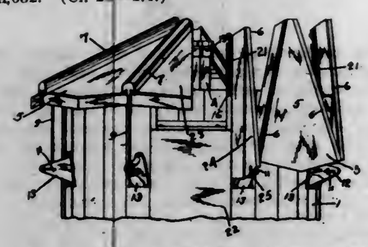
4. A valve for fuel tanks including a member formed with a discharge port, a lateral opening leading thereto and a valve seat intermediate said port and opening, a hollow stem operable in said member and coöperating with the valve seat, said stem being formed above the member with a lateral opening and formed below said opening with a valve seat, a rod operable in the stem to coöperate with the valve seat therein to control the stem opening, and means arranged to resist relative movement between said rod and said hollow stem.

1,110,058. LAWN-MOWER. SAMUEL D. HURLEY, Lake Como, N. J. Filed Apr. 30, 1913. Serial No. 764,627. (Cl. 56—19.)



A lawn mower comprising a frame consisting of side plates, a drive shaft supported by the side plates, vertically spaced bars having their ends connected to the side plates, the lowermost bar having an arcuate bar carried thereby, a series of cutting teeth formed upon the front edge of said bar, a shaft journaled in the vertically spaced bars, a wheel fixed to the lower end of said shaft and having its periphery provided with cutting teeth adapted to coact with the first named teeth to cut the grass, means connecting said shaft to rotate said wheel, plates connected to the lowermost bar and having fingers formed upon certain of their edges, said fingers serving to hold the grass to be cut in proper relation with the teeth formed upon the arcuate bar to be severed by the cutting teeth of said wheel.

1,110,059. ROOF FOR SILOS. BARTON M. HEADLEY, Pataskala, Ohio. Filed Oct. 17, 1913. Serial No. 795,632. (Cl. 20—1.4.)



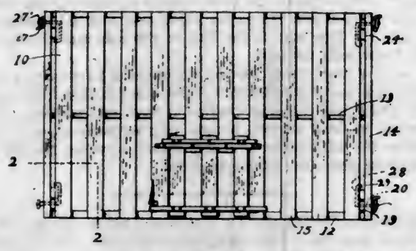
1. A silo comprising a tank body, a roof formed of a plurality of substantially triangular sections, vertical guide rods carried by the side of said tank body in spaced relation thereto, the upper ends of said guide rods being bent inwardly to engage the silo body and threaded for adjustable connection therewith, brackets for supporting the lower ends of said rods, said brackets being slotted for the free inward or outward movement of the lower connection of said rods, and hinge members carried by said roof sections slidable on said rods.

2. A silo comprising a tank body, a center post, a plurality of substantially triangular roof sections, latchets pivotally carried by the upper ends of said sections to lock them to said center post, guide rods carried by the side of said body, and hinge members carried by said sections and slidable on said rods to permit movement downward of said sections said guide rods limiting such downward movement that the upper portion thereof projects above the silo body, said latches being reversible about their pivotal connections to engage the silo body when the sections are in their lowered positions.

3. A silo comprising a tank body, a roof formed of a plurality of substantially triangular sections, vertical guide rods carried in slightly spaced relation to the side of said tank body, the upper ends of said rods being horizontally adjustable, attaching means for the lower ends of said rods permitting a horizontal movement, hinge members carried by said sections and slidable on said rods, and means for locking said sections in lowered upright positions.

4. A silo comprising a tank body, a chute on the outside of said body, a roof formed of a plurality of substantially triangular sections, the section above said chute being divided into two sections, and means connecting said sections to the tank body permitting vertical movement downward when said sections are raised to upright positions, the connecting means for said divided section also permitting a pivotal movement outward of the parts thereof to lie adjacent the sides of said chute.

1,110,060. FOLDING CRATE. MARSHALL A. KERBY, Florence, Ala. Filed Jan. 25, 1912, Serial No. 673,316. Renewed Jan. 29, 1914. Serial No. 815,289. (Cl. 217—47.)



1. A crate of the class described comprising a top section including end pieces projecting downwardly therefrom, and having longitudinal slots therein, a bottom section having sides including corner posts pivoted thereon inwardly of the end piece of the top and adapted to fold into parallel relation to the bottom and within the top, guide means carried by the upper ends of the posts and slidable in the slots, end members pivoted on the bottom foldable closely thereagainst and movable to erect position between the sides, and means to secure the parts in erected position.

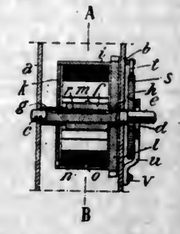
2. A crate of the class described comprising a top section including side stringers, a middle stringer and end cross pieces having longitudinal slots therein, a bottom section including side stringers, end cross pieces and an intermediate cross piece, transverse slats on the top and longitudinal slats on the bottom, end members pivoted on the bottom to fold closely thereagainst between the intermediate and respectively adjacent outer cross pieces, side members pivoted on the bottom within the side stringers of the top, and above the pivots of the end members and adapted to fold into parallel relation with the bottom thereover, guide members carried by the side members and engaged in the slots of the cross pieces of the top, said sides being of a length to fit within the cross pieces of the top, and means to secure the parts in erected position.

3. In a device of the class described, the combination with the top having guide slots, and the bottom having pivoted sides and ends, of guide and clamping members carried by the sides each comprising a shank portion revoluble in the side members and slidable in the slots and a laterally extended head portion inwardly thereof adapted to be turned laterally to engage over the end members, and means for drawing the head outwardly and securing it against the end for retention thereof against inward movement.

4. In a device of the class described, the combination with a top having transverse guide slots at the ends, a bottom, side members pivoted thereon, and end members pivoted on the bottom between the side members and adapted to be elevated between the side members at times; of guide and clamp members carried by the sides and slidable in the slots, and comprising each a threaded shank portion engaged revolubly in the end of one side and projected slidably through one of the slots, a laterally turned head portion on its inner end adapted to engage inwardly of and transversely of the adjacent edge portion of an end member to hold it against inward movement, and means for securing the clamp members in engaged position.

5. In a crate of the class described, a top including end cross pieces having slots longitudinally thereof extending therethrough, a bottom including end cross pieces within those on the top, end members hinged on the bottom and adapted to be positioned above the adjacent cross pieces and against the cross pieces on the top, and side members pivoted on the bottom, their ends lying with the cross pieces of the top, adapted to receive the end members therebetween when elevated, and adapted to fold thereover and upon the end cross pieces of the bottom, and guide and clamp members carried by the sides at each end, engaged slidably in the slots of the top pieces each having a laterally extended head portion adapted to engage over the bottom cross piece when the device is folded, and means for securing the guide and clamp members in engaged position.

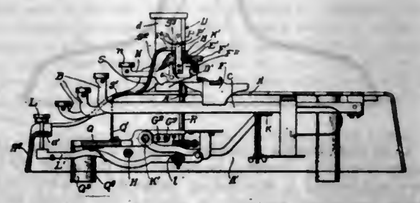
1,110,061. REMOVABLE SPRING-HOUSING FOR CLOCKS. HERBERT KIENZLE, Schwenningen-on-the-Neckar, Germany. Filed Apr. 2, 1914. Serial No. 828,951. (Cl. 58—86.)



1. An axially removable winding spindle for clocks, provided with a recess and with stops at each side of said recess, a separate clutch member located in said recess and adapted to engage said stops so as to compel said clutch member to move lengthwise in unison with the spindle as the latter is shifted inwardly or outwardly, and a sleeve surrounding said spindle and adapted to be connected therewith by said clutch member.

2. In clutch mechanism, a spindle provided with a recess whose inner wall is plane and extends continuously across the spindle to form a double-acting cam, a sleeve mounted on said spindle loosely, and a separate clutch member interposed between the spindle and the sleeve at said recess and having unobstructed travel on the said plane wall transversely from one end of said recess to the other.

1,110,062. TYPE-WRITING-MACHINE FRAME. THERON L. KNAPP and CLAYTON C. HARTING, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 23, 1914. Serial No. 813,820. (Cl. 197—186.)



1. In a typewriting machine, the combination with substantially horizontal key-levers, of a machine base comprising side walls, a front wall, and a horizontal top wall made integral with each other, said top wall extending between the rear parts of the side walls and over the rear parts of the key-levers, and the parts of the side walls forward of the top wall and also the front wall being provided, at their upper margins, with inwardly extending flanges, forming an open space in which the forward ends of the key-levers are located, and a horizontal frame member, extending transversely between said side walls at a distance rearwardly from the front wall, said frame member being located at a distance below the level of the flanged upper margins of the side and front walls and beneath the forward parts of the key-levers.

2. In a typewriting machine, the combination with substantially horizontal key-levers, of a machine base comprising side walls, a front wall, and a horizontal top wall made integral with each other, said top wall extending between the rear parts of the side walls and over the rear parts of the key-levers, and the parts of the side walls forward of the top wall and also the front wall being provided, at their upper margins, with inwardly extending flanges, forming an open space in which the forward ends of the key-levers are located, and a horizontal frame member, extending transversely between said side walls at a distance rearwardly from the front wall, said plate being located at a distance below the level of the flanged upper margins of the side and front walls and beneath the forward parts of the key-levers, and being provided with integral, rearwardly extending bracket arms affording supports or bearings for operative parts of the machine located beneath the key-levers.

3. In a typewriting machine, the combination with substantially horizontal key-levers, of a machine base, comprising side and front walls and a horizontal top wall made integral with each other, said top wall extending between the rear parts of the side walls and over the rear parts of the key-levers, and a horizontal frame plate extending transversely between the side walls at a distance below the upper margins of the latter and beneath the forward ends to the key-levers, said frame plate being attached at its ends to the side walls and affording supports or bearings for the operative parts of the machine located at the forward part of the same beneath the key-levers.

4. In a typewriting machine, the combination with substantially horizontal key-levers, of a machine base, comprising side and front walls and a horizontal top wall made integral with each other, said top wall extending between the rear parts of the side walls, and over the rear parts of the key-levers, a horizontal frame plate extending transversely between the side walls at a distance below the upper margins of the latter and beneath the forward ends of the key-levers, said frame plate being attached at its ends to the side walls, and a slotted guide plate for the key-levers attached at its lower edge to, and rising from, said transverse frame plate.

5. In a typewriting machine, the combination with substantially horizontal key-levers, of a machine base, comprising side and front walls, and a horizontal top-plate made integral with each other, said top wall extending between the rear parts of the side walls and over the rear parts of the key-levers, and the parts of the side walls forward of the top wall and the said front wall forming an open space in which the forward ends of the key-levers are located, and a frame plate extending transversely between the forward parts of the side walls below the level of said flanges and beneath the forward ends of the key-levers; said side walls being provided with downwardly facing shoulders to which the ends of the said frame plate are secured.

[Claims 6 to 12 not printed in the Gazette.]

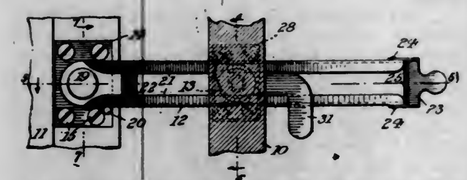
1,110,063. PNEUMATIC TOOL. PAUL KOROKNAY, Lyndora, Pa. Filed Apr. 24, 1912. Serial No. 692,857. (Cl. 121—21.)

In a device for the purpose set forth, a tool rotating mechanism comprising a rotatable tool holder adapted to be impacted by a piston and formed with interior threads, an interiorly threaded sleeve mounted against said holder and formed with peripheral ratchet teeth, a cylindrical hollow member mounted in and engaging with the threads of said sleeve and formed on its inner face with spiral grooves, a hollow tubular piston guide arranged within and secured to the threads of said holder and provided with grooves forming a continuation of the grooves of said member, said guide positioned against said member, pivoted pawls engaging with said ratchet teeth to prevent rotation of said sleeves in one direction, and a piston capable of reciprocation through said guide and member,

and being provided with ribs traveling through said grooves and rotating said sleeve on the up-stroke of said

piston, the piston and tool holder being adapted to rotate on the down-stroke of the piston.

1,110,064. WINDOW. MAX LANDE, Brooklyn, N. Y. Filed June 12, 1913. Serial No. 773,164. (Cl. 20—52.)



A window provided with a pair of arms pivoted to each side of the window frame, said arms being composed of metal strips having a pair of inwardly extending longitudinal flanges to form upper and lower longitudinal guide grooves and ways between said flanges, a sash, pivots carried thereby and projecting into the ways, and rollers mounted on the ends of the pivots and engaging the grooves.

1,110,065. RADIATOR AND METHOD FOR MANUFACTURING THE SAME. TORBJÖRN LINGA, Thor, Iowa. Filed July 20, 1910. Serial No. 572,799. (Cl. 237—18.)

1. A spiral radiator comprising a pair of sheets united at their edges, one of said sheets having a longitudinal corrugation dividing the radiator into a pair of chambers, one of said chambers being connected at one end with the inlet opening and the other at the same end with the outlet opening of said radiator, and the two chambers connected with each other at the end removed from the inlet and outlet openings, substantially as described.

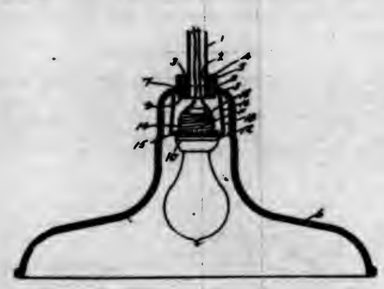
2. A spiral radiator comprising a pair of sheets united at their edges, one of said sheets having a plurality of spacing corrugations, and a longitudinal corrugation dividing the radiator casing into a pair of chambers, the two chambers connected at one end with the inlet and outlet openings respectively and with each other at the end removed from said openings, substantially as described.

3. A radiator comprising a pair of sheets united at their edges, one of said sheets having a longitudinal corrugation thereby dividing the radiator into a pair of chambers, said casing being in the form of a spiral, the two chambers connected at the outer end of the spiral with inlet and outlet openings respectively and with each other at the inner end of the spiral, substantially as described.

4. A radiator comprising a pair of spaced sheets united at their edges and having the interspace divided into two communicating chambers by a partition extending longitudinally from one end to a point sufficiently removed from the other end to afford a cross passage, an inlet to one of the chambers and an outlet from the other chamber at the end remote from the cross passage, the pair of sheets being bent into a spiral, substantially as described.

5. A radiator comprising a pair of sheets united at their edges and spaced apart by corrugations extending inwardly from one of the sheets, the interspace divided into two communicating chambers by a corrugation extending longitudinally from one end to a point sufficiently removed from the other end to afford a cross passage, an inlet to one of the chambers and an outlet from the other at the end remote from the cross passage, the pair of sheets being bent into a spiral with the inlet and outlet end exteriorly arranged.

1,110,066. SHADE AND SOCKET HOLDER. WILLIAM FONTAINE LITTLE, Nepperhan, N. Y., assignor to The Baltimore Enamel & Novelty Company, Baltimore, Md., a Corporation of Maryland. Filed Nov. 13, 1912. Serial No. 731,093. (Cl. 240—115.)



1. In combination a conduit having a threaded end, a sleeve internally threaded to engage the thread of the conduit and having a shoulder or flange at its lower end, a shade having an aperture to receive the portion of the sleeve above the flange so the shade rests on the shoulder, the sleeve being externally threaded above the abutment, a nut adapted to be passed over the upper end of the sleeve and threaded to engage the external thread thereon.

2. In combination a conduit having a threaded end, a sleeve internally threaded to engage the thread on the conduit and having an abutment or flange at its lower end, a shade having an aperture to admit the sleeve, so the shade rests on the abutment, the sleeve being externally threaded above the abutment, a nut adapted to be passed over the upper end of the sleeve and engage the thread, a lamp socket and a multiple armed bracket, consisting of a ring encircling the sleeve above the flange and below the aperture in the shade, the ring having depending arms, the lower ends of the arms having gripping members for engaging the socket.

3. In combination a conduit having a threaded end, a sleeve internally threaded to engage the thread of the conduit and having an abutment or flange at its lower end, a shade having an aperture to receive the portion of the sleeve above the abutment, the sleeve being externally threaded above the abutment, a nut adapted to be passed over the upper end of the sleeve and engage the thread, a lamp socket and a multiple armed bracket consisting of a ring encircling the sleeve above its flange and below the aperture in the shade and having depending arms, the lower ends of the arms having gripping members for engaging the socket, the latter having a threaded member and an abutment between which the gripping members are clamped.

4. In combination a conduit, a sleeve to fit on the end of the conduit and means for removably securing the sleeve on the conduit, the sleeve having an abutment at its lower end, a shade having an aperture to fit and receive the upper end of the sleeve above the abutment so the shade rests on the abutment and means engaging the upper portion of the sleeve for clamping the shade against the abutment.

5. In combination a conduit, a sleeve having a support at its lower end and adapted to fit on the end of the conduit and means for removably securing the sleeve, a shade having an aperture to receive the upper end of the sleeve so it rests on the support, the shade having in the aperture a soft metal eyelet or sleeve and means for forcing the shade down against its support compressing the eyelet whereby a tight joint is formed.

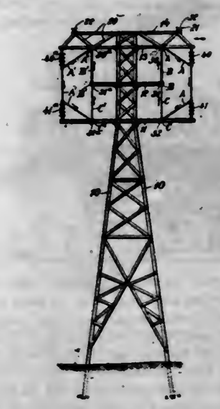
[Claims 6 to 8 not printed in the Gazette.]

1,110,067. PNEUMATIC ENGINE OR TOOL. JOSEPH D. MACDONALD, Butte, Mont. Filed Jan. 13, 1912. Serial No. 671,049. (Cl. 121—21.)

1. In a pneumatic hammer, the combination of a shell or casing; a tube in direct communication with a source of fluid supply under pressure; a collar carried by the tube; means for securing the tube in place within one end of the shell; a fixed abutment carried by the tube intermediate its length and dividing the bore of the tube into two parts; a hammer-piston mounted on the tube and abutment and movable thereon, said piston being formed with two chambers, a rear relatively large one to function with the abutment, and a smaller outer one adapted to coöperate with the forward portion of the tube; and a series of ports arranged in said tube and piston to permit the air to pass into and from the chambers and to and from the space between the rear of the piston and the collar, whereby the hammer-piston will be caused to reciprocate and deliver blows.

2. In a pneumatic hammer, the combination of a shell or casing; a tubular member secured in one end thereof; a fixed abutment carried by said member; a tubular extension projecting forwardly from said abutment, said member and said extension each having a port formed therein adjacent the abutment; a collar located adjacent the inner end of the tube and located between the tube and shell and forming a second abutment; a hammer-piston comprising a large and a small tubular section with a piston ring located at the junction of said sections, said ring being larger than the larger tubular section and making a close fit with the interior of the shell; a sleeve secured to the inner end of the piston and working over the tubular member aforesaid; and ports formed in the piston, adapted to coöperate with the ports aforesaid to cause the air to travel through the hammer to actuate the same.

1,110,068. TRANSPOSITION-TOWER. LESTER A. MAGRAW, Macon, Ga. Filed Mar. 8, 1913. Serial No. 752,880. (Cl. 173—81.)



1. A transposition tower for electric circuit conductors comprising a support, a plurality of cross arms thereon, strain insulators extending from both sides of the arms at a like distance from the support and other strain insulators, extending toward each other from some of the arms at a different distance from the support.

2. A transposition tower for electric circuit conductors comprising a support, three parallel cross arms thereon, the intermediate one of which is shorter than the others, strain insulators extending from both sides of the intermediate arm near one of its ends, corresponding strain insulators extending from both sides of the longer cross arms and other strain insulators extending toward each other from different parts of said longer cross arms.

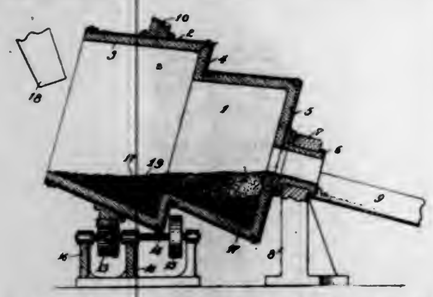
3. A transposition tower for electric circuit conductors comprising a substantially vertical supporting member, three horizontal cross arms thereon the intermediate one of which is shorter than the others, strain insulators extending laterally from both sides of the intermediate arm near its end, corresponding strain insulators extending from both sides of the upper and lower arms directly above and below the insulators of the intermediate arm, and other strain insulators near the ends of the longer cross arms extending toward each other, whereby an electric circuit conductor may approach one side of the tower, being connected to one of the laterally extending strain insulators of one of the cross arms, and depart from the opposite side of the tower by being secured to the extremity of another laterally extending insulator on the opposite side of another arm.

4. The combination with a plurality of substantially parallel electric transmission circuit conductors, of means for supporting and transposing the conductors that comprises two oppositely extending groups of strain insulators above one another and laterally offset guiding means, one of the conductors extending from the top insulator of one group to the bottom insulator of the opposite group and being held a fixed distance from the other conductors by said offset guiding means.

5. A transposition tower for electric circuit conductors comprising a support, a plurality of cross arms thereon, a plurality of strain insulators extending in substantially opposite directions from the arms and adapted to support the circuit conductors in their normal relation and other strain insulators extending from the arms at an angle to the first named insulators and arranged to transpose the conductors at the tower and to maintain said conductors fixed distances from one another.

[Claim 6 not printed in the Gazette.]

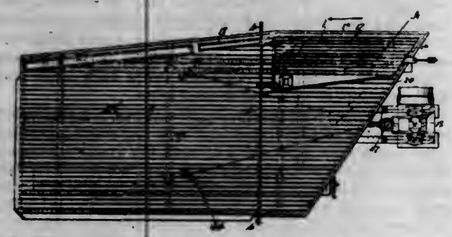
1,110,069. PEBBLE GRINDING-MILL. HOWARD D. McLEOD, Cleveland Heights, Ohio. Filed July 2, 1908. Serial No. 441,555. (Cl. 83—9.)



1. A grinding mill having a rotary body formed of a plurality of connected members, one of said members having its axis eccentric with respect to the longitudinal axis of said body, and means for rotating said body.

2. A grinding mill having an inclined rotary body, said body comprising a pair of members, the front member being provided with an inwardly directed flange at its rear end and the rear member being connected to the inner periphery of said flange and being provided at its rear end with an inwardly projecting flange having a discharge outlet, the axis of rotation of said body being eccentric with respect to the axis of the rear member, and means for rotating said body.

1,110,070. ORE-CONCENTRATING TABLE. HOWARD D. McLEOD, Cleveland Heights, Ohio. Filed May 16, 1910. Serial No. 561,602. (Cl. 83—88.)



1. The combination, with an ore classifying table, of a feeder therefor comprising a plane table mounted above and independently of said main table and provided with longitudinal riffles, the riffles of said tables being substantially parallel and said tables being inclined transversely of their riffles in opposite directions, the lower side of said feeder table being above and adjacent to the higher side of said main table, means for imparting to said main table a horizontal differential vibration in the direction of its riffles, and means for imparting to said feeder table a horizontal, differential vibration in the direction of its riffles, such differentials being in opposite directions.

2. The combination, with an ore classifying table having a general diagonal inclination and means for reciprocating the same in a direction oblique to such line of inclination, of a feeder therefor comprising a second table supported thereabove and having a general diagonal inclination opposite to that of the main table, means for imparting to said feeder table a horizontal differential vibration opposite to and independent of the motion of said main table, the direction of movement of said main table and feeder table being substantially parallel, means for delivering mixed granular and slimy material to said feeder table, and means for adjusting the angle of said feeder table independently of said main table whereby the coarser and more granular material will be delivered to said main table adjacent its head end, and the slimes adjacent one of the sides thereof.

3. The combination, with an ore-classifying table having longitudinal riffles and means for imparting to said table a differential, horizontal vibration in the direction of said riffles, of a feeder therefor comprising a plane table supported above said main table and also having longitudinal riffles substantially parallel to those of the main table, means for imparting thereto a horizontal, differential, vibration in a direction parallel to its riffles and opposite to the vibration of said main table, and means for supplying granular ore and water to that part of the feeder table which is nearest the discharge side of said main table, the direction of the differential of feeder table vibrations being such as to discharge concentrate and liquid at points of said main table farthest from the discharge side for such concentrate and liquid respectively.

4. The combination, with an ore classifying table having a slope in two directions and means for reciprocating the same longitudinally whereby granular material may be delivered over one of its end edges and watery material over one of its side edges, of a feeder table also having a slope in two directions and supported above said main table, the slope of said feeder table being opposite to that of the main table, means for delivering mixed granular and pulverized material together with water to the lower end of said feeder table, and means for imparting to said feeder table a reciprocation independent of and opposite to the reciprocation of said main table, the direction of motion of said feeder table being substantially parallel to that of the main table, and said feeder table having longitudinal riffles substantially parallel to the direction of its motion, whereby the more granular of said material will be delivered to said main table at the portion farthest removed from the discharge end for said granular material and said watery material may be delivered to said main table at a point farthest removed from the discharge portion for such material.

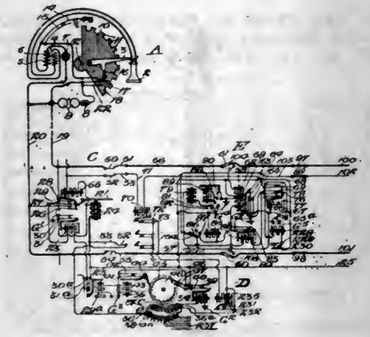
5. The combination, with an ore classifying table having a general diagonal inclination and means for reciprocating the same in a direction oblique to the line of inclination, of a feeder therefor comprising a second table supported thereabove and having a general inclination opposite to that of the main table, said second table having corrugations or riffles substantially parallel with the direction of movement of said main table, said feeder table being disposed over the lower end and higher side of the main table and having its discharging end presented toward the lower end of said main table, means for delivering mixed material together with water to the lower end of said feeder table, and means for imparting to said feeder table a differential reciprocatory movement substantially parallel to the direction of its corrugations or riffles, such reciprocatory movement being opposite to and independent of that of the main table, whereby the coarser and heavier material will be delivered to the main table at the portion farthest removed from the discharge end for concentrates, and the finer and lighter material at the portion farthest from the tailings discharge.

[Claims 6 to 8 not printed in the Gazette.]

1,110,071. AUTOMATIC TRUNKING SYSTEM. EDWARD A. MELLINGER, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 10, 1909. Serial No. 501,260. (Cl. 179—18.)

1. In a telephone exchange trunking system, a plurality of groups of subscribers' stations, a set of trunks for each group, another set of trunks common to all of the groups, means normally precluding use of said common trunks, and means serving to automatically render said common trunks available for service whenever all of the trunks of any group are in use.

2. In a telephone exchange trunking system, a subcentral station having the substations thereof divided into a plurality of groups, as many sets of trunks leading to said subcentral station as there are groups, another set of trunks leading to said subcentral station, said last set being common to all of the groups, means normally precluding use of said common trunks, and means serving to automatically render said common trunks available for service whenever all of the trunks of any group are in use.



3. In a telephone exchange trunking system, subscribers' stations divided into a plurality of groups, a trunking switch at the central station for each subscriber, a set of trunks terminating only in the switches of one group, another set of trunks terminating only in the switches of another group, a third set of trunks terminating in the switches of all of the groups, means normally precluding use of said common trunks, and means serving to automatically render said common trunks available for service whenever all of the trunks of any group are in use.

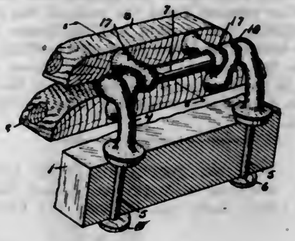
4. In a telephone exchange trunking system, subscribers' stations divided into groups, a set of five trunks for one group, a set of five trunks for another group, a set of five trunks common to all of the groups, whereby each subscriber has access to any one of ten trunks, five of which are individual to one group and five of which are common to all of the groups, means normally precluding use of said common trunks, and means serving to automatically render said common trunks available for service whenever all of the trunks of any group are in use.

5. In a telephone exchange trunking system, a group of subscribers' stations, another group of subscribers' stations, a set of trunks for one group, a set of trunks for the other group, a third set of trunks common to both groups, a master switch and trunking switches controlled thereby for use by the subscribers of one group, a master switch and trunking switches controlled thereby for use by the subscribers of the other group, whereby the trunks that are common to the two groups are subject to automatic selection by more than one master switch, each master switch operating independently of the other, means normally precluding use of said common trunks, and means serving to automatically render said common trunks available for service whenever all of the trunks of any group are in use.

[Claims 6 to 23 not printed in the Gazette.]

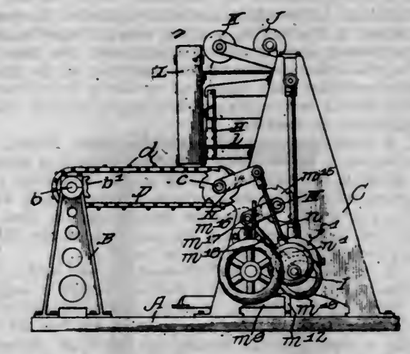
1,110,072. CLOSET-SEAT STRUCTURE. CHARLES A. MILLER, Sturgis, Mich. Filed Mar. 14, 1912. Serial No. 683,764. (Cl. 4—18.)

1. A closet seat having a transverse bore therethrough near the rear edge thereof, a plurality of bores at right angles to the rear edge of said seat and intersecting said transverse bore at right angles, hinge knuckles having dowel pins screw threaded therein, said powel pins being seated in said last named bores, the inner ends of said dowel pins being provided with transverse apertures, a powel rod disposed through the transverse apertures in the inner ends of said powel pins, said dowel rod being disposed in the transverse bore and being provided with an enlarged head at one end and a screw nut at the other disposed in suitable counter bores, a pintle on which said hinge members are pivoted and brackets secured to the bowl of the closet, said brackets being provided with sockets having their inner ends enlarged, said pintle having its ends enlarged to seat the enlarged end of said brackets, all coacting substantially as described for the purpose specified.



2. A closet seat having a transverse bore therein near the rear edge thereof and a plurality of bores at right angles to the rear edge of said seat and intersecting said transverse bore at right angles, hinge structures provided with dowel pins disposed in said last named bores, transverse apertures in said dowel pins, a dowel rod disposed in said transverse bore and passing through the transverse apertures in said dowel pins, a pintle on which said hinge members are pivoted, and brackets secured to the bowl of the closet and carrying said pintle, all coacting substantially as described for the purpose specified.

1,110,073. MACHINE FOR MAKING WIRE-BOUND SHIPPING-RECEPTACLES. JULIUS J. MILLER, St. Joseph, Mich., assignor to William P. Healy, Chicago, Ill. Filed July 5, 1912. Serial No. 707,766. (Cl. 147—1.)



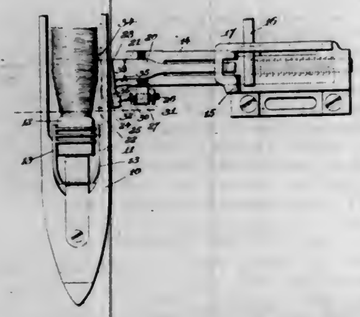
1. A machine for making wire bound shipping receptacles, comprising fastener driving mechanism, instrumentalities for supplying binding wires to said mechanism, means for holding the materials in position to receive the fasteners, whereby each fastener secures a binding member and a head of the receptacle to the side walls thereof, and a device for causing the rotation of said means, whereby the side walls are successively received thereon, and to permit the successive insertion of fasteners circumferentially of said receptacle, said means being constructed to engage only the outside of the receptacle.

2. In a machine for making shipping receptacles, means for feeding slats or staves, means for feeding and fastening one or more binding members to said slats intermediate their ends, means beyond the said feeding means for winding the slats and binding member or members attached thereto, and means for feeding and fastening an

outer binding member along the ends of the slats while on said winding means.

3. In a machine for making shipping receptacles, means for feeding slats or staves, means for feeding and fastening one or more binding members to said slats intermediate their ends, means beyond the feeding means for winding the slats and binding member or members attached thereto, and means for feeding and fastening an outer binding member along the ends of the slats while on said winding means, said winding means being provided with devices for holding end pieces within the receptacle while the same is being formed, these end pieces being held in position to be fastened within the receptacle by the same devices that fasten the outer binding members to the slats.

1,110,074. FILLING-DETECTOR FOR AUTOMATIC LOOMS. WILLIAM A. MITCHELL, Lowell, Mass. Filed Nov. 22, 1913. Serial No. 802,566. (Cl. 139—85.)



1. A filling detector for automatic looms having, in combination, a feeler having a portion adapted to engage the filling in the shuttle, a filling supply controller, and an equalizing determinator for regulating the time at which the feeler shall cause the operation of the filling supply controller, said feeler and equalizing determinator having pivotal movements at right angles to each other, substantially as described.

2. A filling detector for automatic looms having, in combination, a feeler having a portion adapted to engage the filling in the shuttle, a filling supply controller, and a determinator having two portions for engagement with bobbin and shuttle surfaces for determining the time at which the feeler shall cause the operation of the filling supply controller, substantially as described.

3. A filling detector for automatic looms having, in combination, a feeler having a portion adapted to engage the filling in the shuttle, a filling supply controller, a filling determinator having two portions, the one for engaging a portion of the bobbin, the other for engaging the surface of the shuttle, conjointly operating to fix the time when the feeler shall cause an operation of the filling supply controller, substantially as described.

4. A filling detector for automatic looms having, in combination, a feeler having a portion adapted to engage the filling in the shuttle, a filling supply controller, a pivotally mounted equalizing determinator for regulating the time at which the feeler shall cause an operation of the filling supply controller, and means for adjusting the determinator, substantially as described.

5. A filling detector for automatic looms having, in combination, a detector slide, a feeler pivotally mounted on the slide having a portion adapted to engage the filling in the shuttle, a filling supply controller, and an equalizing determinator mounted on the slide for regulating the time at which the feeler shall cause the operation of the filling supply controller, substantially as described.

[Claim 6 not printed in the Gazette.]

1,110,075. GARMENT-WEIGHT. ALBERT MORLEY, Three Oaks, Mich., assignor to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Apr. 4, 1914. Serial No. 329,462. (Cl. 2—124.)

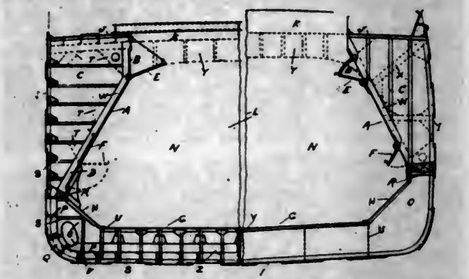
A garment weight comprising a single piece of material having a plurality of weights secured thereto, a cover inclosing said strip of material and weights and a cord interposed between said weights and said covering and disposed at the lower edge of said cover.

1,110,076. INCANDESCENT ELECTRIC LAMP. DENNIS JOSEPH O'BRIEN, San Francisco, Cal., assignor, by mesne assignments, to Straight Filament Lamp Company, a Corporation of New York. Filed June 14, 1905. Serial No. 265,276. (Cl. 176—29.)

1. An incandescent electric lamp comprising a glass tube, a plurality of filaments therein, metallic anchors for said filaments secured in outwardly-projecting glands of the tube, metallic caps over said anchors and glands, means for placing the caps pertaining to one filament in the electric circuit, and a flexible metallic band capable of connecting two or more filaments through their respective caps at one end of the tube.

2. An incandescent electric lamp comprising a glass tube, a plurality of filaments placed off center and held in parallelism therein, a plurality of peripheral contacts located opposite the ends of said filaments, anchors connecting said filaments with said contacts, and a flexible connector adapted to encircle one series of contacts at either end of said tube and place any one or all of the contacts of the series in the electric circuit.

1,110,077. CONSTRUCTION OF SHIPS AND OTHER VESSELS. JOSEPH R. OLDHAM, Cleveland, Ohio. Filed Nov. 28, 1913. Serial No. 803,491. (Cl. 114—73.)



1. In a steel bulk-cargo vessel having a water bottom with lower side tanks, longitudinal bulkheads extending diagonally inward from the top of the water ballast tanks at sides to the deck at the sides of the hatchways, throughout the cargo holds, the upper part of said bulkheads being perforated to form chutes to admit bulk cargo into the side holds, with apertures at the lower part of said bulkheads to emit the cargo into the main molds, substantially as and for the purpose specified.

2. In a steel bulk-cargo vessel, longitudinal screen bulkheads extending diagonally upward and inward from the top of water ballast tanks, to which they are connected near the sides of the holds above the upper turn of bilge, said bulkheads having gateways forming chutes for filling the side holds, and apertures in the lower part of said bulkheads for emitting cargo from the side to the central holds, with doors, chains and fasteners substantially as and for the purpose set forth.

3. In a steel vessel for carrying bulk cargoes, the combination of longitudinal screen bulkheads extending diagonally upward from the top of side water ballast tanks to the deck, to which they are secured at the sides of hatchways, with ports near the deck forming chutes for directing the cargo from the central to the side holds, and with apertures near the bottom of said bulkheads to emit the cargo into the central holds to be unloaded, substantially as and for the purpose specified.

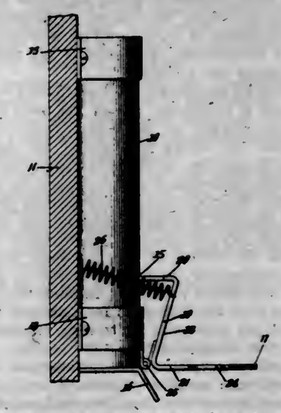
4. A steel vessel for carrying coal or grain cargoes, the combination of longitudinal bulkheads extending diagonally downward and outward from the deck at sides of hatchways to above the bilges, forming central and side cargo holds, and connecting with the downward and inward diagonal extension of the upper bottom, with bilge futtocks and intercostal bars between the longitudinal frames, angle cross bars, stiffening channel bars, main transverse and side-holds transverse bulkheads, substantially as and for the purpose set forth.

5. A ship's hull having channel bar longitudinal frames supporting the shell and decks, with steel plate transverse bulkheads secured by angle bars within the side holds, the combination of longitudinal bulkheads extending diagonally from the top of water ballast tanks at sides to the deck at hatchways, with cargo ports near the top and near the bottom of said longitudinal bulkheads, channel and angle bar stiffeners, bracket and knee plates, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

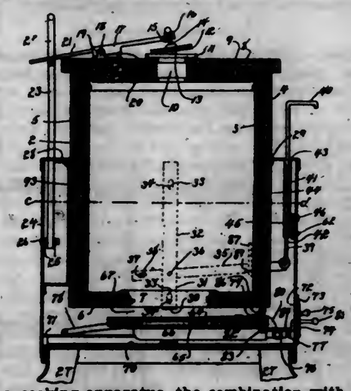
1,110,078. WHIP-HOLDER. FRANK J. OLSHEFSKY and JAMES J. REMDY, Jersey City, N. J. Filed Apr. 14, 1914. Serial No. 831,786. (Cl. 21—129.)

In a whip holder having a socket, and means comprising clips for securing the socket to a vehicle, and a plate secured to the lower end of the socket, said plate having an inclined rearwardly projecting arm; the combination of a substantially Z-shaped integral lever hinged at its lower angle to a lug provided on the socket, adjacent the projecting arm, said projecting arm serving as a stop for the lever, said lever having at the free end of its upper horizontal portion, a plurality of teeth movably disposed in a slot provided transversely of the wall of the



socket, whereby the butt of a whip may be engaged and secured in the socket, the lower horizontal arm of the lever being adapted to serve as a foot lever whereby the whip may be released, and two spiral springs each having one end secured to each side of the Z-shaped lever near its upper portion, and connected at the opposite end to the body of the vehicle at opposite sides of the socket; so that the teethed member of the lever is normally in position for removably engaging the whip.

1,110,079. COOKING APPARATUS. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn., a Corporation. Filed Apr. 6, 1914. Serial No. 829,996. (Cl. 126—39.)



1. In a cooking apparatus, the combination with a casing, of a food-container and a preheater one of which parts is movable with respect to the other, spacing-mechanism located within the casing for holding the said movable part in spaced relation to the other part, automatic mechanism co-acting within the casing with the said spacing-mechanism for controlling the releasing function thereof the said spacing and automatic mechanisms being constructed and organized to make the setting of the automatic mechanism a condition precedent to the holding action of the spacing mechanism, and means for manually forestalling the action of the automatic-mechanism in releasing the said spacing-mechanism.

2. In a cooking apparatus, the combination with a casing, of a vertically movable food-container, a preheater, spacing-mechanism located within the casing for holding the said container in spaced relation above the said preheater, automatic mechanism co-acting within the casing with the said spacing-mechanism for controlling the releasing function thereof the said spacing and automatic mechanisms being constructed and organized to make the setting of the automatic mechanism a condition precedent to the holding action of the spacing mechanism, and means for manually forestalling the action of the timing-mechanism in releasing the container.

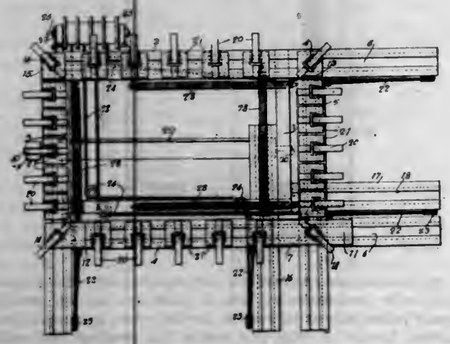
3. In a cooking apparatus, the combination with a food-container and a preheater, one of the said parts being movable with respect to the other, spacing-mechanism located within the casing for holding the said movable part in spaced relation to the other part, the said spacing mechanism including a latch, automatic mechanism co-acting with the said latch, for controlling the releasing function of the said spacing-mechanism the said spacing and automatic mechanisms being constructed and organized to make the setting of the automatic mechanism a condition precedent to the holding action of the spacing mechanism, and means projecting through the said casing and co-acting with the said latch for manually forestalling the action of the automatic controlling mechanism in releasing the said movable part.

4. In a cooking apparatus, the combination with a casing, of a vertically movable food-container, a preheater, spacing-mechanism for holding the food-container above the preheater in spaced relation thereto including a latch, automatic mechanism controlling the releasing function of the spacing-mechanism, and a pin mounted in the said latch and projecting through the casing for forestalling the action of the said automatic mechanism in releasing the container.

5. In a cooking apparatus, the combination with a food-container, of a preheater, one of the said parts being movable with respect to the other, spacing-mechanism for holding the movable part in spaced relation to the other part, and automatic mechanism controlling the releasing function of the spacing-mechanism, the said spacing and automatic mechanisms being constructed and organized to make the setting of the automatic mechanism a condition precedent to the holding action of the spacing-mechanism.

[Claims 6 to 16 not printed in the Gazette.]

1,110,080. DRYING-FRAME. WILLIAM B. SHEPERD, Urbana, Ohio. Filed May 18, 1911. Serial No. 627,983. (Cl. 45—24.)



1. A drying frame of the character described consisting of a plurality of members, means for expanding said frame, fastening devices carried by said members, and a fastening device at each corner of said frame and occupying a fixed relation thereto, said frame member fastening devices and said corner fastening devices defining a rectangle.

2. In a drying frame of the character described having two movable members, a part mounted adjacent to said frame and operatively connected to said movable members, whereby said parts is capable of simultaneously moving said members to expand said frame, fastening devices carried by said members, and yieldable means connected at one end to said movable members, said means being adapted to be put under tension when said frame is expanded and thereby tend to contract the same.

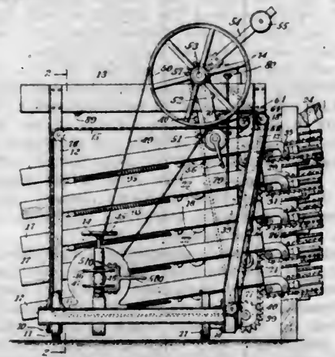
3. A device of the character described consisting of a plurality of members, means for expanding said frame, fastening devices carried by said frame members, and a fastening device at each corner of said frame and so arranged that one is stationary, one movable longitudinally of said frame, one movable transversely thereto, and one movable diagonally, during the expansion of said frame, and all of them occupying a fixed relation to their respective corners during said expansion, said frame member fastening devices and said corner fastening devices defining a rectangle.

4. A drying frame comprising two fixed members, two movable members, fastening devices secured to said members in substantially the same horizontal plane, a drum arranged at one side of said frame, cables having one end of each secured to said drum and the other end to one of said movable members, whereby the winding of said cables on said drum will simultaneously adjust said movable members relatively to each other and to said fixed members, and a fastening device at each corner of said frame and occupying a fixed relation thereto during the expansion of said frame.

5. A drying frame of the character described having two fixed members and two intersecting movable members, means for simultaneously adjusting said movable members relatively to each other and to said fixed members and thereby expanding said frame longitudinally and laterally, yieldable means connected to said fixed members and to said movable members, said last mentioned means being adapted to be put under tension when said frame is expanded and adapted to contract said frame when desired, and fastening means adjustably connected to said movable members near their point of intersection.

[Claims 6 to 11 not printed in the Gazette.]

1,110,081. RETORT-DISCHARGING MACHINE. JOHN J. SIMMONDS, Iola, Kans., assignor to The Simmonds Engineering Company, Iola, Kans., a Corporation of Kansas. Filed Mar. 9, 1914. Serial No. 823,331. (Cl. 75—154.)



1. A furnace discharging machine, comprising a truck movable along a trackway, a frame carried by said truck, a carriage movable across said frame, and a plurality of plungers dapted for entry into retort tubes of a furnace, said plungers being advanced or retracted by movement of said carriage, each of said plungers carrying an endless chain forming a scraper, and means on said truck for driving said scraper chains while in their respective retorts.

2. A furnace discharging machine, comprising a frame, a carriage movable horizontally across said frame, plungers actuated by said carriage and movable outward and upward to enter inclined retorts of a furnace and power driven chains on said plungers for cleaning the retorts simultaneously with the advance of the plungers thereinto.

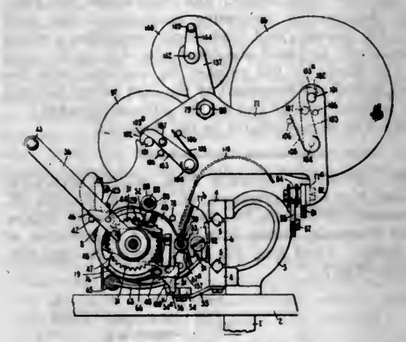
3. A machine for cleaning the residue from spelter furnace retorts, comprising a plunger movable progressively into a retort, an endless chain carried by said plunger and provided with scrapers and power driven means for actuating said chain simultaneously with advancement of said plunger into its retort.

4. In a machine for discharging spelter furnace retorts, a plunger, mechanical means for progressively advancing said plunger into its retort, scraping means carried by said plunger and including an endless chain and a power driven chain for actuating said scraper chain to clean the retort simultaneously with the advancement of the plunger thereinto.

5. In a machine for discharging furnace retorts, the combination of a plurality of plungers arranged one above another, an endless conveyer carried by each plunger and provided with scrapers, means for advancing said plungers simultaneously into their respective retorts, and a common driving means for said chains operable simultaneously with the forward advance of the plungers.

[Claims 6 to 16 not printed in the Gazette.]

1,110,082. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 2, 1912. Serial No. 668,869. (Cl. 197—132.)



1. In a typewriting machine, the combination of a platen having work sheets arranged at opposite ends and partially overlapping at about the middle of the platen, and means for advancing each of the work sheets independently of the other and also for advancing the work sheets together, said means including a paper feeding device arranged opposite one of the end portions of the platen to assist in advancing one of the work sheets, and a second paper advancing device arranged near the opposite end portion of the platen to assist in advancing the other work sheet independently of the first named work sheet, both said devices being outside of the overlapping portions of said work sheets.

2. In a typewriting machine, the combination of a platen having work sheets arranged at opposite ends and partially overlapping at about the middle of the platen, a transfer strip being interposed between the overlapping portions and means for advancing the two work sheets independently of each other and for advancing the work sheets and transfer strip together, said means including a paper feeding device arranged opposite one of the end portions of the platen to assist in advancing one of the work sheets, a second paper advancing device arranged near the opposite end portion of the platen to assist in advancing the other work sheet independently of the first named work sheet, both said devices being outside of the overlapping portions of said work sheets, and a third paper advancing device for the transfer strip, said third device being opposite the overlapping portions of the work sheets.

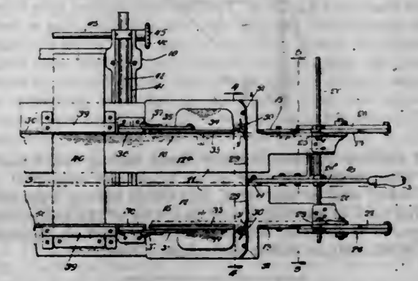
3. In a typewriting machine, the combination of a platen having work sheets arranged at opposite ends and partially overlapping at about the middle of the platen, a transfer strip being interposed between the overlapping portions, and means for advancing the work sheets and transfer strip simultaneously through line space distances and for advancing either work sheet separately through either a single line space distance or continuously through a plurality of line space distances.

4. In a typewriting machine, the combination of two platen elements arranged end to end, means for guiding two work sheets over said platen elements in overlapping arrangement, and means operative automatically to couple said two platen elements together.

5. In a typewriting machine, the combination of two platen sections arranged end to end, means for guiding two work sheets over said platen sections in overlapping arrangement and means operating automatically at a predetermined point in the travel of the carriage to couple said platen sections together.

[Claims 6 to 27 not printed in the Gazette.]

1,110,083. BREAD WRAPPING AND SEALING MACHINE. FRANK STREICH and PAUL E. FRANKE, Joliet, Ill., assignors to Union Wrapping Machine Company, Joliet, Ill., a Corporation of Illinois. Filed Nov. 19, 1913. Serial No. 801,783. (Cl. 93—2.)



1. A wrapping machine, comprising a table for receiving the articles to be wrapped, oppositely disposed, bottom flap folders, first side flap folders and top flap folders supported thereon, an operating lever and operative connections between said flap folders and operating lever, there being a limited amount of lost motion in the connections between the first side flap folders and operating levers, whereby the bottom and top flap holders may be actuated simultaneously, and the first side flap folders may be actuated thereafter by and from said operating lever.

2. A wrapping machine, comprising a table for receiving the articles to be wrapped, oppositely disposed, vertically reciprocable, bottom flap folders, first side flap folders moveable thereacross, and vertically reciprocable, top flap folders, an operating lever, operative connections between said botom flap folders, side flap folders and operating lever on one side of its fulcrum, and operative connections between said top flap holder and said operating lever on the other side of its fulcrum.

3. A wrapping machine, comprising a table for supporting the articles to be wrapped, oppositely disposed bottom flap folders, first side flap folders and top flap folders supported by said table, operating mechanism therefor, and transversely extending, oppositely disposed second side flap folders, fulcrumed between their ends upon said table between the bottom flap folders and top flap folders, and lying in the path of movement of the article from the bottom flap folders to the top flap folders.

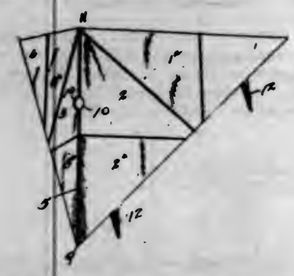
4. A wrapping machine, comprising a table for receiving the articles to be wrapped, oppositely disposed bottom flap folders normally projecting above said table, and guided to move down therefrom, a pair of oppositely dis-

posed, first side flap folders supported on said table in alinement with the bottom flap folders, manually actuated levers fulcrumed below the table, and connected to said bottom flap folders, a rock lever connected to each side flap folder, and connecting means on said levers engaging said rock levers, and operating to rock the rock levers and therewith reciprocate the first side flap folders over the bottom flap folders to fold the first side flaps across the end of the article.

5. A wrapping machine, comprising a table for receiving the articles to be wrapped, oppositely disposed, bottom flap folders at the sides of the table, each having means for guiding it to move vertically manually operated, operating means fulcrumed at the underside of the table and connected to said bottom flap folders, and a spring for raising said operating means and yieldingly holding the same in raised position and therewith holding the bottom flap folders in raised position to engage and fold up the bottom flaps of the wrapper.

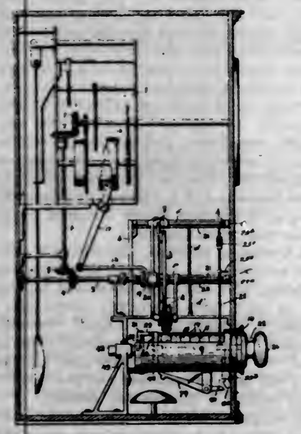
[Claims 6 to 17 not printed in the Gazette.]

1,110,084. SHIELD. STEVEN SZALKAY, Flint, Mich. Filed Feb. 10, 1914. Serial No. 817,893. (Cl. 89—36.)



A foldable portable metallic shield having two triangular sides hinged together at an angle and supported on the lower edge of said sides, said shield having a porthole at the apex of the angle, and each side of the shield comprised of a series of hinged triangular sections, whereby the shield may be folded into compact form.

1,110,085. TIME-RECORDER. CHARLES E. TOMLINSON, Syracuse, N. Y., assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Aug. 10, 1911. Serial No. 643,286. (Cl. 234—46.)



1. The combination of a recording machine, a card holder detachable from the machine, the machine having a passage for the card holder, and mechanism for automatically determining successive positions of the card holder in the passage, said mechanism being arranged to be operated by the card holder during the movement thereof into the passage, substantially as and for the purpose described.

2. The combination of a card holder for an individual record card of recording machines having card guides, the holder being detachable from the machine, and mechanism for automatically determining successive positions of the card holder relatively to the guide of the recording machine, said mechanism comprising means carried by the card holder and a coöperating member carried by the machine, substantially as and for the purpose specified.

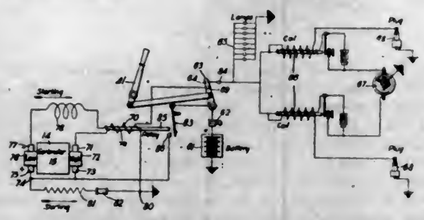
3. The combination of a recording machine, a card holder detachable from the machine, and mechanism for automatically determining successive positions of the card holder in the passage, said mechanism being arranged to be operated by the card holder during the movement thereof into the passage, and a portion of said mechanism being carried by the card holder and being successively shiftable, substantially as and for the purpose set forth.

4. The combination of a card holder for an individual record card of recording machines having card guides, the holder being detachable from the machine and mechanism for automatically determining successive positions of the card holder relatively to the guide of the recording machine, said mechanism comprising means including a successively shiftable part carried by the card holder, substantially as and for the purpose described.

5. The combination of a recording machine, a card holder detachable from the machine, the machine having a passage for the card holder, and mechanism for automatically determining successive positions of the card holder in the passage, said mechanism comprising a series of consecutively arranged shoulders provided on the card holder, and means in the passage for coacting with the shoulders during the movement of the card holder into the passage, substantially as and for the purpose specified.

[Claims 6 to 60 not printed in the Gazette.]

1,110,086. POWER SYSTEM FOR AUTOVEHICLES. RICHARD VARLEY, Englewood, N. J., and WALTER W. MACFARREN, Pittsburgh, Pa., assignors to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 15, 1911. Serial No. 644,252. (Cl. 171—315.)



1. In a power system, an engine, a dynamo, a battery, apparatus whereby said dynamo may actuate the engine, means for supplying through a circuit, energy from the battery to the dynamo, means for controlling said circuit connections between the battery and the dynamo, manual means for actuating said controlling means and for bringing the said apparatus into connection with the dynamo, mechanism for automatically effecting further movement of the manual means, and means for causing the engine to drive the dynamo and dependent for operation upon said last named movement of the manual means.

2. In a power system, an engine, a dynamo, a battery, apparatus whereby said dynamo may actuate the engine, means for supplying through a circuit, energy from the battery to the dynamo, means for controlling said circuit connections between the battery and dynamo, manual means for actuating said controlling means and for bringing the said apparatus into connection with the dynamo, mechanism for automatically effecting further movement of the manual means, and means for causing the engine to drive the dynamo and dependent for operation upon the speed of the engine and upon said last named movement of the manual means.

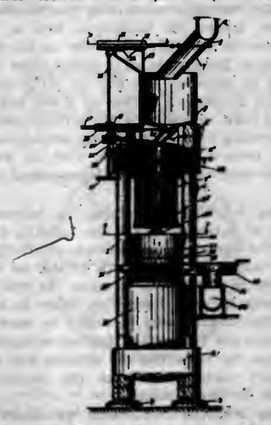
3. In a power system, an engine, a dynamo, a battery in circuit with the dynamo, movable switch means for controlling the application of current from the battery to the dynamo, apparatus whereby the dynamo may actuate the engine, manual means for moving the switch means, means associated with the manual means, for bringing the said apparatus into operative connection with the engine, means automatically dependent upon the speed of the engine, for moving the manual means to a position to break the circuit for energizing the dynamo from the battery, and for bringing the said apparatus out of driving connection with the engine, and means whereby the engine may drive the dynamo.

4. In a power system, an engine, a dynamo, a battery, apparatus whereby the dynamo may actuate the engine, manual means for bringing the apparatus into operative connection with the dynamo and engine, movable switch means for effecting circuit connections between the battery and dynamo, and connected with the said manual means, whereby energizing of the dynamo by the battery is effected when the dynamo is connected to said apparatus, means for automatically moving the manual means to break said circuit connections and to disconnect the dynamo and said apparatus, and means whereby the engine may drive the dynamo.

5. In a power system, an engine, a dynamo, a battery, apparatus whereby the dynamo may actuate the engine, manual means for bringing the apparatus into operative connection with the dynamo and engine, movable switch means for effecting circuit connections between the battery and dynamo, and connected with the said manual means, whereby energizing of the dynamo by the battery is effected when the dynamo is connected to said apparatus, means for automatically moving the manual means to break said circuit connection and to disconnect the dynamo and said apparatus, means whereby the engine may drive the dynamo, and means associated with the switch means for establishing a charging circuit between the dynamo and battery.

[Claims 6 to 15 not printed in the Gazette.]

1,110,087. OIL-PRESS. GUS J. WAGNER and MYRON H. HOPKINS, Grand Rapids, Mich., assignors to The O. & W. Thum Company, Grand Rapids, Mich. Filed Jan. 10, 1914. Serial No. 811,427. (Cl. 100—50.)



1. In a structure of the class described, the combination of a frame member, columns supported thereon, a top member supported on said columns and carrying a head block, said top member and head block having a passage therethrough, a hydraulic cylinder supported on said frame member, a piston or ram working in said cylinder, a body member carried by said ram, a hopper supported on said top member, a lower chute connecting said hopper with said passage through said top member, an upper chute delivering material to said hopper, a slide in said upper chute, a suitably supported guideway, a rack mounted in said guideway and connected to said slide, a suitably journaled shaft, a segmental gear on said shaft in mesh with said rack, a slide in said lower chute, a rack mounted in a suitable guideway, a segmental gear on said shaft in mesh with said rack, a plug closing the lower end of said passage through said top member and said head block, a rod extending upwardly through said passage and connected at its lower end to said plug, a drum mounted on said shaft, a cam slot in said drum, a suitably pivoted lever having one end connected to said rod and the other end working in said cam slot, upper and lower perforated pressing rings seated on said body member, and means for moving the lower ring from its seat to remove the oil cake therefrom, all coacting substantially as described and for the purpose specified.

2. In a structure of the class described, the combination of a frame member, columns supported thereon, a top member supported on said columns and carrying a head block, said top member and head block having a passage therethrough, a hydraulic cylinder supported on said frame member, a ram working in said cylinder, a body member carried by said ram, a hopper supported on said top member, a lower chute connecting said hopper with said passage through said top member, an upper chute delivering material to said hopper, a slide in said upper chute, a slide in said lower chute, a plug closing the lower end of said passage through said top member and said head block, a rod extending upwardly through said passage and connected at its lower end to said plug, means for reciprocating said slide in said upper chute to open the same, means for reciprocating the slide in the lower chute, means for actuating said rod to open and close the passage through said block, a common operating means therefor so connected therewith that when the upper chute is open the lower chute and the passage through said block will be closed, upper and lower pressing rings seated on said body member, and means for moving the lower ring from its seat to remove the oil cake therefrom, all coacting substantially as described and for the purpose specified.

3. In a structure of the class described, the combination of a frame member, columns supported thereon, a top member supported on said columns and carrying a head block, said top member and head block having a passage therethrough, a hydraulic cylinder supported on said frame member, a ram working in said cylinder, a body member carried by said ram, a hopper supported on said top member, a lower chute connecting said hopper with said passage through said top member, an upper chute delivering material to said hopper, means for controlling the flow of material through said upper chute, means actuated by said first named means for controlling the flow of material through said passage, whereby, when the passage through said upper chute is open, the passage through said head block is closed, upper and lower pressing rings seated on said body member, and means for moving the lower ring from its seat to remove the oil cake therefrom, all coacting substantially as described for the purpose specified.

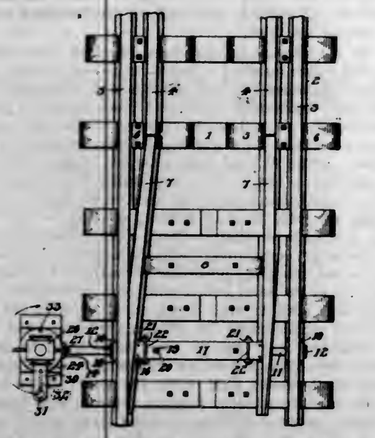
4. In a structure of the class described, the combination of a frame member, columns supported thereon, a top member supported on said columns and carrying a head block, said top member and head block having a passage therethrough, a hydraulic cylinder supported on said frame members, a ram working in said cylinder, a body member carried by said ram, a hopper supported on said top member, a chute connecting said hopper with said passage through said top member, means for controlling the flow of material through said chute, upper and lower pressing rings seated on said body member, and means for moving the lower ring from its seat to remove the oil cake therefrom, all coacting substantially as described for the purpose specified.

5. In a structure of the class described, the combination of a frame member, columns supported thereon, a top

member supported on said columns and carrying a head block, said top member and head block having a passage therethrough, a hydraulic cylinder supported on said frame members, a ram working in said cylinder, a body member carried by said ram, upper and lower pressing rings seated on said body member, a passage through said top member and said block delivering material into said pressing rings, and means for moving the lower ring from its seat to remove the oil cake therefrom, all coacting substantially as described for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

1,110,088. SWITCH-THROWING DEVICE. FLORYAN WAJDA, East Hammond, Ind., assignor of one-half to Barney J. Glinski, Chicago, Ill. Filed Nov. 27, 1912. Serial No. 733,839. (Cl. 104—25.)

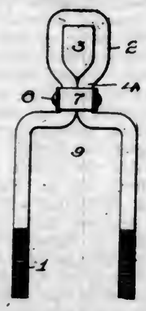


1. In a switch throwing device the combination with rails and switch tongues, of bars connecting said switch tongues, a depending pin carried by one of said bars, a shaft revolubly supported beneath said rails and having a spiral groove to receive said pin, a pin wheel carried by one end of said shaft, a switch stand at the same end of said shaft, a rotary member rotatably mounted in said post, a sector gear carried by said rotary member and engaging said pin wheel for actuating the latter thereby rocking the shaft to shift the pin and move said tongues, and means carried by said rotary member for engaging said post and locking said rotary member in adjusted position.

2. In a switch throwing device, the combination with rails and switch tongues, of T bars carried by said switch tongues, bars connecting said T bars, a shaft rotatably mounted beneath said rails and having a spiral groove formed therein, a pin carried by one of said bars and extending in the groove of said shaft, a pin wheel carried by one end of said shaft, a switch stand at the same end of said rotary member, a rotary member rotatably mounted in said post, a sector gear carried by said shaft and engaging said pin wheel for actuating the latter thereby rocking the shaft to shift the pin to move said tongues, a handle supported from said rotary member to facilitate moving said rotary member, and a latch in connection with said handle for engaging said post and locking said rotary member in adjusted position.

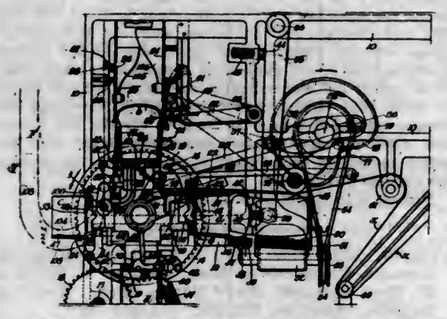
1,110,089. COMPOUND HOE. JOHN WAROCZKY, Duquesne, Pa. Filed Aug. 13, 1913. Serial No. 784,647. (Cl. 55—39.)

A hoe made of a flat bar having the ends thereof beveled and bent upon itself to have the opposing portions thereof constitute a loop terminating in a neck with the end portions of said bar extending outwardly in opposite directions from the lower terminus of the neck and further extending downwardly providing a pair of spaced tines, and a collar surrounding the opposing portions of the bar constituting the neck, the said opposing portions of said



bar constituting the neck being provided with interengaging ribs, and a rivet passing through the collar and the neck between the said ribs for securing the elements together.

1,110,090. WRAPPING-MACHINE. GEORGE W. WATSON, Nashua, N. H., assignor to Nashua Card Gummed and Coated Paper Company, Nashua, N. H., a Corporation of Massachusetts. Filed May 18, 1912. Serial No. 698,264. (Cl. 93—7.)



1. A wrapping machine comprising an intermittently rotatable carrier, means for holding a web or strip of wrapping material in position relatively to an article in the carrier to cause the article as it moves from one position to another to advance the web or strip and to be partially inclosed therein, a cutter to sever the web or strip after it has been advanced by the article, independent means for performing further wrapping operations, and a transferrer for removing the article and its associated wrapper from the carrier to the said independent wrapping means.

2. A wrapping machine comprising an intermittently rotatable series of carriers, means for holding a web or strip of wrapping material in position relatively to an article in each carrier to cause each article as it moves from one position to another to advance the web or strip and to be partially inclosed therein, a cutter to sever the web or strip after it has been advanced by each article, independent means for performing further wrapping operations, and means for removing the articles and their associated wrappers successively from the carrier to the said independent wrapping means.

3. A wrapping machine comprising an intermittently rotatable series of carriers, means for pushing articles to be wrapped successively into said carriers, means for holding a web or strip of wrapping material in position relatively to an article in the carrier to cause the article as it moves from one position to another to advance the web or strip and to be partially inclosed therein, a cutter to sever the web or strip after it has been advanced by the article, independent means for performing further wrapping operations, and means for removing the articles and their associated wrappers successively from the carrier to the said independent wrapping means.

4. A machine of the character described, having an intermittently movable series of carriers for the articles to be wrapped, recesses being provided between the carriers of the series, grippers movable with the carriers, said grippers being mounted in said recesses to grasp a strip of wrapping material at one side of the article in a carrier, and means operable in said recesses for severing the strip at another side of the article.

5. In a machine of the character described, an intermittently rotatable series of carriers, wrapper grippers movable with the carriers, means for actuating said grippers to cause them to grasp the wrapper material at one step of rotation, a cutter for severing the material at another step of rotation, and means for causing the release of said material at the last mentioned step of rotation.

[Claims 6 to 35 not printed in the Gazette.]

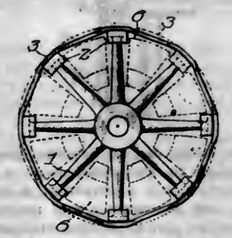
1,110,091. STAPLE. FRANKLIN R. WHITE, Waterbury, Conn. Filed Jan. 9, 1911. Serial No. 601,677. (Cl. 85—32.)

1. A staple made from a blank of sheet metal having the shape of a lozenge, and comprising a head of a single thickness of metal, and two tapering cone-shaped prongs extending at an angle from said head, the diameter of said prongs at their bases being greater than the thickness of the blank from which the staple is formed, substantially as described.

2. A staple made from a blank of sheet metal and comprising a head portion the thickness of which corresponds with the thickness of the blank, and two cone-shaped prongs extending at an angle from said head portion, the diameter of said prongs at their bases being greater than the thickness of the head portion of the staple, substantially as described.

3. A staple made from a blank of sheet metal having the shape of a lozenge, and comprising a rounded head portion, the thickness of which is equal to the thickness of the blank, and two tapering cone-shaped prongs extending at an angle from said head portion, the diameter of said prongs at their bases being greater than the thickness of the blank from which the staple is formed, substantially as described.

1,110,092. METHOD OF MANUFACTURING WHEELS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Oct. 30, 1912. Serial No. 728,547. (Cl. 29—174.)



1. The method of making wheels which consists in making a spider or center of desired size, making separately a rim normally of inadequate length, and assembling the two parts thus formed, the rim being given, permanently, the desired length and shape by expanding it mechanically.

2. The method of making wheels which consists in making separately a spider or center of desired size and a rim normally undersized and assembling the two parts thus formed, the rim being given, permanently, the desired form and size by expanding it mechanically.

3. The method of making wheels which consists in making a spider or center of desired size, making a rim of less than desired size and approximately circular form, assembling and revolubly holding the two parts, the rim being forcibly expanded to proper size, and marginally flanging the rim while rotating the assembled parts.

4. The method of making wheels which consists in making a spider or web center finished at its points of juncture with a rim, making a distinct rim unfinished as to form and size, mechanically stretching said rim to finished size and outline, joining the rim to the center, and flanging the rim marginally.

5. The method of making wheels which consists in making a spider of desired diameter, independently making an undersized rim, mechanically stretching the rim to exact size and form, and permanently fixing it to the spider or center at suitable points.

1,110,093. IMITATION HOUSE. EDWIN C. YAUCK, Rochester, N. Y., assignor to Rochester Photo Press, Rochester, N. Y., a Corporation of New York. Filed Dec. 4, 1913. Serial No. 804,612. (Cl. 46—37.)

1. An imitation house comprising a blank forming a bottom wall and two side walls provided with tongues along their vertical edges, two other side walls having tongues along their vertical edges interlocked with the first mentioned tongues, and a top wall interlocking with all of the side walls.

2. An imitation house comprising a blank forming a bottom wall and two side walls having projections along their vertical edges, two other side walls having projections along their vertical edges interlocking with the first-named projections and also having gable extensions, and a ridge roof formed in one piece and interlocking with all of the side walls.

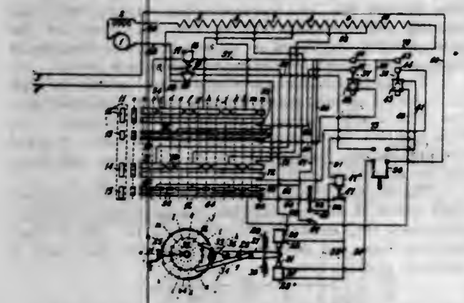
3. An imitation house comprising a blank forming a bottom wall and two side walls with extensions along their vertical edges cuneal in form, two other side walls having extensions fitting between the first-named extensions to interlock with the latter and also having gable extensions and a ridge roof interlocked with the gable extensions and overhanging the other side walls to prevent the outward movement of the latter.

1,110,094. SYSTEM OF CONTROL FOR ELECTRIC MOTORS. EMERSON S. ZUCK, Cleveland, Ohio, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1911. Serial No. 600,571. (Cl. 172—288.)

1. The combination with a controller comprising relatively stationary and movable coöperating members, of automatic selectively controlled electro-responsive means for alternately advancing the movable member through its successive steps.

2. The combination with a controller comprising relatively stationary and movable coöperating members, of automatic electro-responsive means for alternately ad-

vancing the said movable member through successive operating positions, said means comprising a plurality of actuating electro-magnets and a pawl-and-ratchet mechanism.



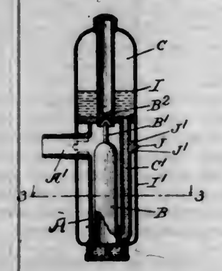
3. The combination with a controller comprising relatively stationary and movable coöperating members, of an electro-responsive means for automatically actuating the movable member step-by-step through successive operating positions, said means comprising a pawl-and-ratchet mechanism and a plurality of electro-magnets which are selectively energized according to current conditions of the motor circuit.

4. The combination with a controller comprising relatively stationary and movable coöperating members, of selectively controlled electro-responsive means of advancing the movable member through its successive positions, said means being dependent upon the current conditions of the motor circuit.

5. The combination with a controller comprising relatively stationary and movable coöperating members, of automatic electro-responsive means embodying a plurality of electromagnets for alternately advancing said movable member step-by-step through successive operating positions.

[Claims 6 to 14 not printed in the Gazette.]

1,110,095. AIR-VALVE. EVERETT P. ALLEN, Chicago, Ill.; Mary A. Allen, executrix of said Everett P. Allen, deceased, assignor to Dole Valve Company, of Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1906. Serial No. 306,120. (Cl. 237—19.)



1. An air valve comprising a casing adapted to be connected with a radiator, a passageway leading therefrom through which the air and steam from the radiator escape, an expansion chamber mounted upon said casing at the end thereof so that the escaping air and steam come into contact therewith after passing through said casing, a float in said casing adapted to control said passageway, a connection between said expansion chamber and said casing through which liquid may be moved from one to the other as the fluid in said expansion chamber expands and contracts.

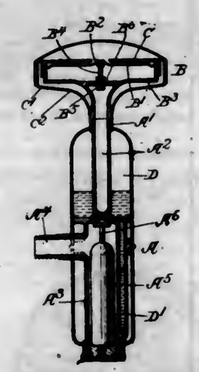
2. An air valve comprising a casing adapted to be connected with a radiator, a passageway leading from said casing through which the air and steam from the radiator pass, a float within said casing controlling said passageway, an expansion chamber acted upon by the heat from the air or steam passing through said passageway and adapted to control the position of said float, said float shutting off the air or steam from the expansion chamber when in its operative position.

3. An air valve, comprising a float chamber, and an air chamber in communication therewith below the line of flotation thereof, said float chamber being provided with an inlet adapted to be placed in communication with a radiator and with an oulet passageway, a float, and a valve carried thereby for governing the inlet to said passageway, said passageway being so arranged with respect to said air chamber that the medium in the passageway may affect the thermal condition of the contents of the air chamber.

4. An air valve comprising a casing having an admission opening, a float located in said casing, said casing provided with a passage way through which air or steam may escape from the casing, said float adapted when in one position to close the entrance to said passage way, a controlling device for said float provided with a part surrounding said passage way, said part arranged to be acted upon by heat after it escapes past the entrance of said passage way controlled by said float.

5. An air valve comprising a casing having a passageway through which air or steam may escape a float therein controlling said passageway, said float adapted when in one position to close said passageway said passageway located above the float, an air chamber above the float arranged so that heat which escapes through the passageway will heat said air chamber, and a communication between said air chamber and the casing containing the float, and extending below the line of flotation of said float.

1,110,096. AIR-VALVE FOR HEATING SYSTEMS. EVERETT P. ALLEN, Chicago, Ill.; Mary A. Allen, executrix of said Everett P. Allen, deceased, assignor to Dole Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 26, 1906. Serial No. 307,976. (Cl. 237—19.)



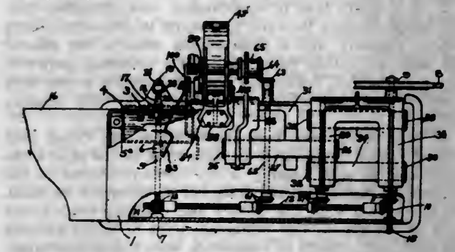
1. A valve for steam heating systems, provided with a passageway leading to the atmosphere, a compression chamber surrounding said passageway, a diaphragm extending across said passageway and provided with an opening, a controlling part associated with said diaphragm and adapted to control said opening, said controlling part directly engaging the diaphragm and having a part in the plane thereof, the diaphragm being moved by variations in pressure in the system so as to open the communication to the atmosphere when the system is in operation and close it when the system is out of operation, so as to prevent air from entering the system and a float chamber below said compression chamber, a float in said float chamber adapted to control the passageway leading to the atmosphere, the compression chamber communicating with the float chamber below the line of flotation thereof.

2. A valve for steam heating systems, provided with a passageway connecting the system with the atmosphere, a compression chamber surrounding said passageway, a diaphragm across said passageway provided with an opening leading to the atmosphere, a controlling part loosely mounted on a support and adapted to control said opening, the diaphragm being moved to and from said part responsive to variations in pressure in the system, a float chamber below said compression chamber, a float in said float chamber, the compression chamber connecting with the float chamber below the line of flotation thereof.

3. A valve for steam heating systems comprising a casing having a conduit leading from the system to the atmosphere, two controlling devices for said conduit, one responsive to variations in heat and comprising a compression chamber surrounding said conduit, a float chamber below said compression chamber communicating therewith, a float in said float chamber provided with an engaging part adapted to close said conduit, the other responsive to variations in pressure, and comprising a diaphragm having an aperture therein, a support associated therewith, a controlling part loosely mounted in said support and toward which the diaphragm moves when the pressure in the system is relieved and which closes said aperture.

4. A valve for steam heating systems comprising a casing, a conduit leading from the system to the atmosphere through said casing, a tube inclosed in the casing and forming a part of said conduit, said tube having a controlling valve at each end thereof, a float located below said tube and controlling one end thereof, and a compression chamber surrounding said tube, a float chamber below said compression chamber in which said float is located and a connection between said compression chamber and said float chamber.

1,110,097. STAMP-APPLYING AND ENVELOP-SEALING MACHINE. FRED R. ALLEN, Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, a Corporation of Massachusetts. Filed June 26, 1909. Serial No, 504,521. (Cl. 216—3.)



1. In a machine of the class described the combination with envelop moistening and sealing mechanism, a stamp carrier, mechanism for applying the stamp to the envelop, means whereby said envelop may be positioned under the stamper, and a lever extending out over the path of the movement of the envelop and into the path of movement of a hand advancing the envelop whereby said mechanism may be manually controlled when the envelop is positioned to receive the stamp.

2. In a machine of the class described the combination with envelop moistening and sealing mechanism, a stamp carrier, mechanism for applying the stamp to the envelop, a stop finger in the path of the advancing envelop for positioning the same beneath said applying mechanism, and means located in the path of movement of a hand advancing the envelop whereby said mechanism may be manually controlled when the envelop is positioned to receive the stamp.

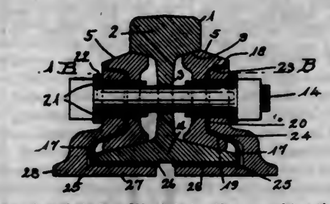
3. In a machine of the class described the combination with envelop moistening and sealing mechanism, a stamp carrier, mechanism for applying the stamp to the envelop, means in the path of the advancing envelops, means in the path of the advancing envelops for positioning the same under said applying mechanism, and means located in the path of movement of a hand advancing the envelop whereby said mechanism may be readily controlled by the hand that feeds the envelop when said envelop is in position to receive the stamp.

4. In a machine of the class described the combination with envelop moistening and sealing mechanism, a stamp carrier, mechanism for applying the stamp to the envelop, means whereby said envelop may be positioned under said applying mechanism, and a lever extending into the path of movement of the hand that feeds the envelop whereby said applying mechanism may be actuated when the envelop is in position to receive the stamp.

5. In a machine of the class described the combination with envelop moistening and sealing mechanism, a stamp carrier, mechanism for applying the stamp to the envelop, a stop finger in the path of the advancing envelop for positioning the same beneath said applying mechanism, and a lever extending into the path of movement of the hand that feeds the envelop whereby said applying mechanism may be actuated when the envelop is in position to receive the stamp.

[Claims 6 to 22 not printed in the Gazette.]

1,110,098. INSULATED RAIL-JOINT. JOHN H. ALLEN, Verona, N. J. Filed Nov. 16, 1911. Serial No. 660,562. (Cl. 239—5.)



1. In an insulated rail joint, the combination with meeting rail ends, of filler angles on opposite sides thereof each having a vertical web adapted to rest at its lower edge on the rail base and having at its upper edge a head with a bearing surface which slopes inwardly toward the rail ends and is adapted to wedge beneath the head of the rail, said head of the filler angle projecting outwardly from its said web away from the rail and providing an under bearing surface which also slopes inwardly toward the rail ends, insulating plates outside said filler angles extending over the said last-mentioned bearing surfaces and beneath the rail ends, connecting members overlapping the meeting rail ends each having a vertical portion adapted to bear at its upper edge against said under bearing surface of a filler angle head with its outer side substantially in the vertical plane of the outer edge of said head, each connecting member also having a base portion adapted to extend under the rail ends, and means for clamping the rail ends between said filler angles insulating plates and connecting members.

2. In an insulated rail joint, the combination with meeting rail ends, of filler angles on opposite sides thereof each having a vertical web adapted to rest at its lower edge on the rail base and having at its upper edge a head with a bearing surface which slopes inwardly toward the rail ends and is adapted to wedge beneath the head of the rail, said head of the filler angle projecting outwardly from its said web away from the rail and providing an under bearing surface which also slopes inwardly toward the rail ends, insulating plates outside said filler angles extending over the said last-mentioned bearing surfaces and beneath the rail ends, connecting members overlapping the meeting rail ends each having a vertical portion adapted to bear at its upper edge against said under bearing surface of a filler angle head with its outer side substantially in the vertical plane of the outer edge of said head, each connecting member also having a base portion

adapted to extend under the rail ends and an intermediate portion extending vertically upward from said base portion and then inclinedly inward and upward to the lower edge of the web, and means for clamping the rail ends between said filler angles insulating plates and connecting members.

3. In an insulated rail joint, the combination with meeting rail ends, of filler angles on opposite sides thereof each having a vertical web with a head and base at its upper and lower edges respectively providing bearing surfaces which converge inwardly toward the rail ends and are adapted to engage the head and base of the rail, respectively, said head and base of the filler angle projecting outwardly from its said web away from the rail and providing facing bearing surfaces which converge toward the web, insulating plates outside said filler angles extending over said last-mentioned bearing surfaces, connecting members overlapping the meeting rail ends each having a vertical portion adapted to bear at its upper and lower edges against said last-mentioned outer bearing surfaces of a filler angle with the outer edges of the head and base thereof, its outer side substantially in the plane of each connecting member also having a base portion adapted to extend under the rail ends and an intermediate portion extending vertically upward from said base portion and then inclinedly inward and upward to the lower edge of the web, and means for clamping the rail ends between said filler angles insulating plates and connecting members.

1,110,099. LAMP-SOCKET. VINCENT G. APPLE, Dayton, Ohio, assignor to the Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 8, 1914. Serial No. 830,370. (Cl. 173—328.)

1. The combination in an incandescent lamp socket, of an insulating base part; a metallic cylinder, surrounding a part of the base and providing one contact for the lamp, said cylinder having a portion of its periphery cut away; a plate, curved to conform to the curvature of the cylinder mounted on said base part in the cut away portion of the cylinder and spaced at all points from said cylinder; a central lamp contact, within said body part; means, connecting said central contact with the plate; and means, for the attachment of conductors to the plate and to the cylinder.

2. The combination in an incandescent lamp socket, of an insulating base part; a metallic cylinder, surrounding a part of the base and providing one contact for the lamp, said cylinder having a portion of its periphery cut away to expose the base part; a plate, curved to conform to the curvature of the cylinder, mounted on said base part in the cut away portion of the cylinder, and spaced at all points from said cylinder; a central lamp contact, within said body part; means, connecting said central contact with the plate; and strips, cut from said plate and cylinder and bent inwardly to provide conductor-connecting parts.

3. The combination in an incandescent lamp socket, of an insulating base part; a metallic cylinder, surrounding a part of the base and providing one contact for the lamp, said cylinder having a portion of its periphery cut away to expose the base part; a plate, curved to conform to the curvature of the cylinder, mounted on said base part in the cut away portion of the cylinder, and spaced at all points from said cylinder; a central lamp contact, within said body part; means, connecting said central contact with the plate; and strips, cut from said plate and cylinder and bent inwardly to provide conductor-connecting parts, said base part being cut away to receive said inwardly bent strips, said base part, having openings extending therethrough and registering with the said conductor connecting parts.

4. The combination in an incandescent lamp socket, of an insulating base part; a metallic cylinder, surrounding a part of the base and providing one contact for the lamp, said cylinder having a portion of its periphery cut away; a plate, curved to conform to the curvature of the cylinder mounted on said base part in the cut away portion of the cylinder and spaced at all points from said cylinder; a central lamp contact, within said body part; means, connecting said central contact with the plate; means, for the attachment of conductors to the plate and to the cylinder; and an insulating sheath, surrounding said cylinder and plate.

1,110,100. TOY FIGURE. CLEMENT AMBASH and NATHAN MORGENSTERN, Brooklyn, N. Y. Filed Jan. 30, 1914. Serial No. 815,567. (Cl. 46—40.)

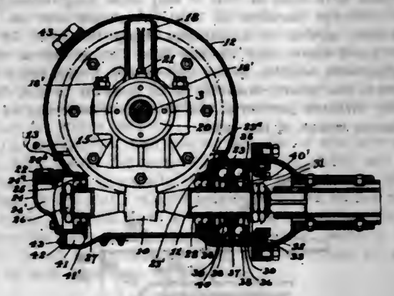
1. In a toy figure in combination, two miniature electric lamps forming the eyes, an electric device for lighting up the eyes, and a sounding device in direct connection with the electric device adapted to be simultaneously operated with the electric device when the eyes are lighted up.

2. In a teddy bear in combination, two miniature electric lamps forming the eyes, an electric device with electirc source, contacts, and a push button close to the skin of the bear, all within the trunk, and a sounding device in direct mechanical connection with the electric source both adapted to be simultaneously operated by one pressing action.

3. In a teddy bear, mechanism within the trunk comprising a push button with housing close to the skin, a circuit-closer in said housing, a dry battery secured to the housing, a depressible sounding device in direct mechanical connection with the battery and reaching close to the back of the trunk, two miniature electric lamps forming the eyes, and circuits in connection with the circuit-closer, the lamps being thus adapted to be lighted up separately by a gentle pressure on the button, and the sounding device simultaneously operated by a heavier pressure on said button, and the sounding device alone by pressure exerted on the back of the trunk.

1,110,101. POWER-TRANSMITTING MECHANISM. WALTER C. BAKER, Cleveland, Ohio. Filed Oct. 8, 1913. Serial No. 794,003. (Cl. 74—36.)

1. In mechanism of the class described, the combination of a housing, a worm gear rotatably mounted in said housing, a driving shaft, a worm on said driving shaft meshing with said worm gear, a load bearing adjacent one end of said driving shaft and longitudinally movable within and supported by said housing, bearings for taking both load and thrust adjacent the other end of said drive shaft and longitudinally movable within and supported by said housing, and means for connecting said drive shaft with worm thereon and all said bearings together as a drive shaft unit, whereby said unit as an entirety is longitudinally adjustable to and fro within said housing.



2. In mechanism of the class described, the combination of a housing, a worm gear rotatably mounted in said housing, a worm for driving said worm gear, a driving shaft which carries said worm, a load bearing adjacent one end of said drive shaft and longitudinally movable with said shaft within and supported by said housing, bearings for taking both load and thrust arranged within said housing adjacent the other end of said drive shaft and longitudinally movable with said shaft within and supported by said housing, means connecting said drive shaft with worm thereon and all of said bearings together as a drive shaft unit, and means removable at will from said housing for determining the position of said drive shaft unit therein.

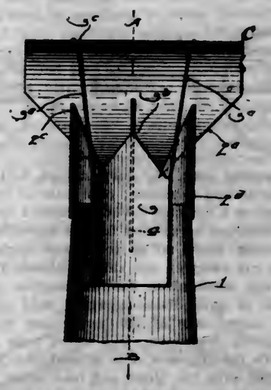
3. In mechanism of the class described, the combination of a housing, a worm gear rotatably mounted in said housing, a worm for driving said worm gear, a driving shaft which carries said worm, a load bearing adjacent one end of said drive shaft and longitudinally movable with said shaft within and supported by said housing, bearings for taking both load and thrust arranged within said housing adjacent the other end of said drive shaft and longitudinally movable with said shaft within and supported by said housing, means connecting said drive shaft with worm thereon and all of said bearings together as a drive shaft unit, and means removable at will from said housing for determining the position of said drive shaft unit therein, including a washer and an adjustment collar, one arranged at either side of said thrust bearing.

4. In mechanism of the class described, the combination of a housing, a worm gear rotatably mounted in said housing, a driving shaft having a worm formed integrally therewith and meshing with said worm gear, a load bearing adjacent one end of said driving shaft and longitudinally movable within and supported by said housing, bearings for taking both load and thrust adjacent to the other end of said drive shaft and longitudinally movable within and supported by said housing, and means for connecting said drive shaft with worm thereon and all said bearings together as a drive shaft unit, whereby said unit as an entirety is longitudinally adjustable to and fro within said housing.

5. In mechanism of the class described, the combination of a housing, a worm gear rotatably mounted in said housing, a driving shaft having a worm formed integrally therewith and meshing with said worm gear, a load bearing adjacent one end of said driving shaft and longitudinally movable within and supported by said housing, bearings for taking both load and thrust adjacent to the other end of said drive shaft and longitudinally movable within and supported by said housing, said driving shaft being screw threaded adjacent the points at which it is supported near either end by said bearings, and nuts fitting said screw threaded portions of the drive shaft and connecting together said shaft and the bearings thereon as a unit which is longitudinally adjustable to and fro within said housing.

[Claims 6 to 21 not printed in the Gazette.]

1,110,102. CHIMNEY CAP AND VENTILATOR. ALTON A. BARTLETT, San Diego, Cal. Filed June 19, 1912. Serial No. 704,565. (Cl. 98—4.)



1. A chimney cap and ventilator, comprising a chimney or ventilator connecting piece, a hood piece formed into a vertical tube and a horizontal hood, a small tube mounted concentrically therewith in the vertical tube portion thereof provided with oppositely disposed deflectors extending from said tube into the open ends of said horizontal hood portion, and central deflectors mounted between said smaller tube and said vertical tube portion of said hood piece and extending transversely into the horizontal hood portion of said hood piece.

2. A chimney cap and ventilator, comprising a chimney or ventilator connecting piece, a hood piece comprising a vertical tube telescopically mounted on said connecting piece and provided with an extended horizontal hood, a smaller tube mounted concentrically therewith in the vertical tube portion thereof provided with oppositely disposed deflectors extending from said tube into the open ends of said horizontal hood portion and connected to said hood portion near its top.

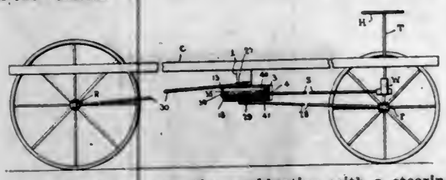
3. A chimney cap and ventilator, comprising a chimney or ventilator connecting piece adapted for the top end of a chimney or ventilator, a hood piece formed into a vertical tube and a horizontal hood telescopically mounted on the top end thereof, a smaller tube mounted concentrically therewith in the vertical tube portion, provided with oppositely disposed deflectors extending from said tube into the open ends of said horizontal hood portion and central deflectors mounted between said smaller tube and said vertical tube portion of said hood piece and extending transversely into the horizontal hood portion of said hood piece.

4. A chimney cap and ventilator, comprising a chimney connecting piece, adapted to fit over the top end of a chimney and diminishing in size upwardly, a hood piece formed into a vertical tube portion, and a horizontal hood portion, said vertical tube portion extending upwardly into the open end of said hood portion, a smaller tube mounted concentrically therewith in the vertical tube portion and extending some distance below the same, provided with oppositely disposed diamond shaped deflectors extending from the upper end of said tube into the open ends of said horizontal hood portion and attached thereto, and oppositely disposed central deflectors mounted between said smaller tube and said vertical tube portion of said hood piece and extending transversely into the horizontal portion of said hood piece above the top of said smaller tube.

1,110,103. STEERING-GEAR. CHARLES E. BAUDER, Galeton, Pa. Filed July 24, 1913. Serial No. 781,014. (Cl. 21—193.)

1. In a steering gear, the combination with a steering mechanism including a pinion; of a pair of superimposed disks mounted on a common pivot and having toothed sectors on their contiguous faces engaging said pinion, cross

bars carried by said disks, and reach rods connected with said cross bars and adapted to be connected with the axles of the vehicles.



2. In a steering gear, the combination with a steering mechanism including a pinion; of a pair of superimposed disks mounted on a common pivot supported by the chassis and having inturned peripheral flanges oppositely rabbeted at their meeting edges so as to engage each other, the flanges being cut away at one side to permit the entrance of the steering mechanism, toothed sectors on the contiguous faces of said disks engaging said pinion, cross bars on the upper side of the uppermost disk and the lower side of the lowermost, and reach rods respectively connected with the opposite ends of said bars and adapted to be connected with the front and rear axles.

3. In a steering gear, the combination with a steering mechanism including a pinion; of a pair of superimposed disks mounted on a common pivot supported by the chassis and having inturned peripheral flanges oppositely rabbeted at their meeting edges so as to engage each other, means for holding said edges in sliding engagement, the flanges being cut away to permit the entrance of the steering mechanism, toothed sectors on the contiguous faces of said disks engaging said pinion, and connections between the uppermost disk and one axle and between the lowermost disk and the other axle, for the purpose set forth.

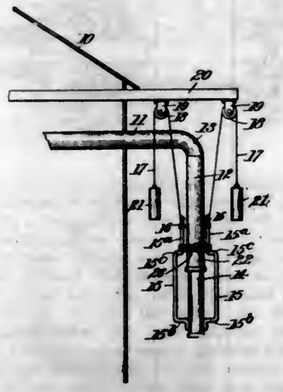
4. In a steering gear, the combination with a steering mechanism including a shaft and a pinion fast thereon; of a pair of superimposed disks mounted on a common pivot supported by the chassis and having peripheral flanges disposed in sliding contact with each other and shouldered on their outer faces, the flanges being cut away to permit the entrance of said shaft, toothed sectors on the contiguous faces of said disks engaging opposite sides of said pinions, connections between the uppermost disk and one axle and the lowermost disk and the other axle of the vehicle, and a ring having inturned flanges at its edges engaging above the shoulder of the uppermost disk and below the shoulder of the lowermost disk, and pierced with a hole for the passage of said shaft.

5. In a steering gear, the combination with a steering mechanism including a shaft and a pinion fast thereon; of a pair of superimposed disks mounted on a common pivot supported by the chassis and having peripheral flanges disposed in sliding contact with each other and shouldered on their outer faces, the flanges being cut away to permit the entrance of said shaft, toothed sectors on the contiguous faces of said disks engaging opposite sides of said pinion, connections between the uppermost disk and one axle and the lowermost disk and the other axle of the vehicle, and a two-part ring whose uppermost member has an inturned flange at its upper edge engaging over the shoulder of the flange of the upper disk and whose lowermost member has an inturned flange at its lower edge engaging beneath the shoulder of the flange of the lower disk, outturned flanges on both members, and means for detachably connecting these flanges, the ring having a hole for the passage of said shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,110,104. CONVEYER FOR UNLOADING COTTON OR THE LIKE. JOHN BELDEN BLESSING, Randlett, Okla. Filed Feb. 9, 1914. Serial No. 817,533. (Cl. 193—10.)

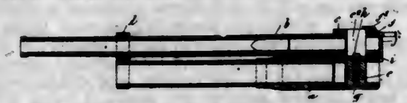
1. The combination of a suction tube of a gin mill or the like including a downwardly directed portion, a telescoping sleeve connected with the downwardly extending portion of said tube, arms connected with the telescoping sleeve adjacent the outer end of the latter and extending upwardly adjacent the downwardly directed portion of the tube and at their upper ends deflected inwardly toward said downwardly directed portion of the tube to provide shoulders and at their extremities having eyes, a band provided with eyes so that it may slide longitudinally of said deflected portions of said arms and rest on said shoulders, means to adjustably clamp the band on the first-named sleeve and thereby hold the extension sleeve in adjustable relation to the first-named sleeve, and means to draw the sleeve inwardly with relation to the downwardly directed portion of the tube upon loosening of said fastening means of the band.



2. The combination of a suction tube of a gin mill or the like, including an elbow, a telescoping sleeve connected with the elbow of said sleeve, an extension sleeve telescoping with the aforesaid sleeve, arms connected with the extension sleeve adjacent the outer end of the latter and extending upwardly adjacent the first named sleeve and at their upper ends deflected inwardly toward the first named sleeve to provide shoulders, a band provided with eyes so that the band may slide longitudinally on the deflected portions of said arms and rest on said shoulders, means to adjustably clamp the band on said first-named sleeve and thereby hold the extension sleeve in adjustable relation to the first-named sleeve, and means connected to said deflected portions of said arms to draw the supplemental sleeve inwardly with relation to the first named sleeve upon loosening of the fastening means.

3. The combination of a suction tube of a gin mill having a downwardly directed sleeve, a telescoping sleeve extension connected with the aforesaid sleeve, a plurality of arms connected to the extension sleeve and having shoulders at their inner ends, a band embracing said first-mentioned sleeve and having eyes in which said arms above their shoulders are adapted to slide, said eyes forming shoulders adapted to coöperate with the shoulders of the arms, means for fastening the band in fixed position on the first mentioned sleeve, and means connected to said arms to draw the supplemental sleeve inwardly with relation to the first-named sleeve upon loosening of the fastening means.

1,110,105. BREECH-LOADING GUN. EMILE BOURDELLES, Paris, France, assignor to Schneider & Cie., Paris, France, a joint-stock Company. Filed Mar. 20, 1914. Serial No. 826,057. (Cl. 89—24.)



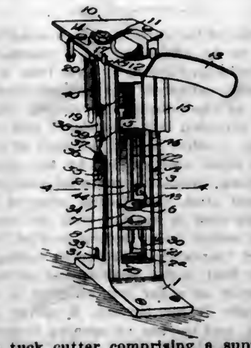
1. In combination, a double barrel breech loading gun, a rectilinearly movable breech block adapted to close the breech of either barrel, and means for moving said block into closing position for either barrel.

2. In combination, a double barrel breech loading gun, breech block housings formed in the walls of said barrels and in line with each other, a breech block movable in said housings adapted to close either breech, and means for moving said block into closing position for either barrel.

3. In combination, two gun barrels, one of which is provided with means for receiving the second barrel and retaining the same in parallel relation to itself, breech block housings in the walls of said barrels arranged in line with each other, a breech block movable in said housings, and means for moving the breech block into closing position for either barrel.

4. In combination, two gun barrels, one of which is provided with means for receiving the second barrel and retaining the same in parallel relation to itself, breech block housings in the walls of said barrels arranged in line with each other, a breech block movable in said housings, means for moving the breech block into closing position for either barrel, and stops limiting the movement of said block in both directions of movement.

1,110,106. CIGAR-TUCK CUTTER. GEORGE W. BOWMAN, York, Pa. Filed June 27, 1914. Serial No. 847,743. (Cl. 131—37.)



1. A cigar tuck cutter comprising a support arranged to be held in a position inclined from the vertical and provided with means for trimming or cutting the tuck end of a cigar, an adjustable rest arranged to support the cigar on its tip end, a cigar seat mounted on the support, and connections whereby said seat is moved to discharge the cigar when trimmed, said seat being provided with means serving to position the cigar on the rest and to positively engage the cigar when the seat is moving to discharge position.

2. A cigar tuck cutter, comprising an inclined support having a longitudinal opening, a pivoted knife, a cigar rest carried by the support and adjustable to the different lengths of cigars to be trimmed, a hinged seat adapted to close over the opening of the support, a cigar engaging arm carried by the seat above the rest, and means for operating the seat from the knife.

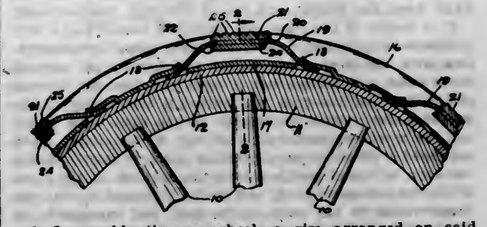
3. The combination with a cigar tuck cutter having an inclined support, a cigar rest, and a movable cutting knife, of a cigar seat pivotally supported and adapted to normally close the opening, a lever mechanism mounted on the support for operating said cigar seat from the movable knife, said mechanism having a lost motion connection with said knife whereby said cigar seat is swung outwardly only as said knife completes its stroke.

4. The combination with a cigar cutter having a movable knife, of a movable cigar seat normally disposed to support a cigar in position to be cut by said knife, an operating mechanism between the knife and seat, said mechanism including a series of connected levers, and a spring connection between one of the levers and one of the levers of the said knife for normally maintaining the seat in supporting position, and adapted upon completion of the knife stroke to operate said levers whereby to move said seat out of cigar supporting position.

5. The combination with a cigar cutter including an inclined support having a cigar receiving opening, and having cutting knives, of a cigar seat comprising a plate having hinge eyes formed on one edge thereof, said seat being slightly grooved longitudinally, a pintle carried by the support and engaging said eyes for pivotally maintaining said seat in position to close the opening in the support, said seat provided with a longitudinal central slot therein, said seat being provided adjacent its hinged edge with a second longitudinally disposed slot, a plate having a thumb screw extending through last said slot whereby said plate may be held in adjusted position longitudinally of said seat, a curved cigar engaging arm carried by said plate, and means for swinging said seat on its pivot for ejecting a cigar from the cutter.

[Claims 6 to 10 not printed in the Gazette.]

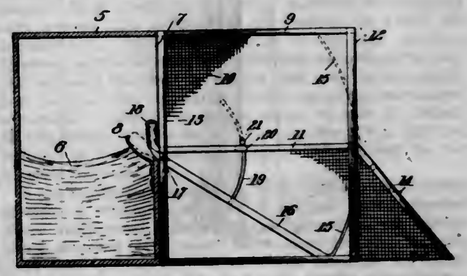
1,110,107. NON-SKIDDING DEVICE. JAMES BROPSON, Cleveland, Ohio. Filed Dec. 14, 1912. Serial No. 736,700. (Cl. 152—2.)



1. In combination, a wheel, a rim arranged on said wheel, a resilient tire mounted on said rim, a band arranged on said rim adjacent to said tire, said band being provided with a series of tongues arranged in pairs, the tongues of each pair of tongues extending toward each other, a series of bow-shaped springs disposed around said band and having their ends extending in under the tongues on said band and traction devices mounted on said springs and adapted to engage the surface over which the said wheel travels.

2. In combination, a wheel, a rim arranged on said wheel, tires mounted on said rim at each side thereof so as to leave a space between said tires, a band mounted between said tires and provided with side flanges adapted to abut against the sides of the tires, said band being provided with a series of tongues, which said tongues are arranged in pairs with the tongues of each pair of tongues extending toward each other, a series of bow-springs disposed around said plate and having their ends extending in under the tongues on said plate and traction blocks mounted on said springs and adapted to engage the surface over which said wheel travels.

1,110,108. HEN'S NEST. DANIEL R. BURNS, near Wildorado, Tex. Filed Aug. 12, 1913. Serial No. 784,464. (Cl. 119—50.)



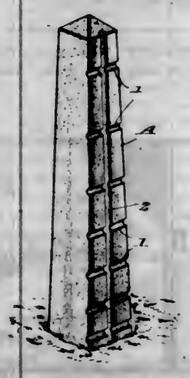
1. A device of the character described comprising a nest compartment having an opening at its upper front portion, a trap compartment disposed adjacent the nest compartment and communicating with the latter and open at its front, a partition in the trap compartment forming

a floor, a door for the opening at the front of the trap compartment, a pair of arms secured to the door and mounted on pivots on the trap compartment with the arms projecting into said nest compartment, a weight connecting the free ends of the arms which weight is depressed under the weight of the fowl stepping on it and which causes said arms to move on their pivots to throw said door over the opening at the front of the trap compartment and hold the door in closed position, curved arms connected to the aforesaid arms and projecting through said floor partition, a bar connected to the free ends of the second mentioned arms and arranged in the path of the fowl so that when the fowl leaves the nest and enters the trap compartment said bar is engaged by the fowl which causes the door and its arms to overcome the influence of said weight, the door thereby moving downwardly to permit the fowl to leave the trap nest, a ladder leading to the opening at the front of the trap compartment, and a shield to keep the nest material away from the weight and out of the trap compartment.

2. A device of the character described comprising a nest compartment, a trap compartment having communication with the nest compartment and having an opening in its front, a weighted door to open and close the opening at the front of the trap compartment, the weight of the weighted door being engageable by the fowl upon entering the nest compartment, and the weight itself when engaged by the fowl upon entering the nest itself holding the door in closed position over the opening at the front of the trap compartment, and means arranged in the trap compartment in the path of the fowl and engageable by the fowl upon leaving the nest compartment and entering the trap compartment to cause the door to overcome the influence of the weight and move to open position with relation to the opening at the front of the trap compartment.

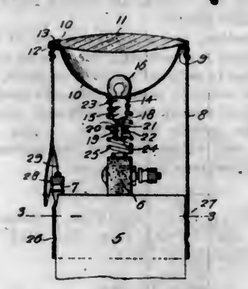
3. A device of the character described comprising a nest compartment, a trap compartment having communication with the nest compartment and provided at its upper portion with an opening for the entrance and exit of fowls, a partition in the trap compartment forming a floor and having openings adjacent its side edges, a door for the opening at the front of the trap compartment, weighted arms secured to the door pivotally connected to the next compartment, arms secured to the aforesaid arms and projecting through the aforesaid openings of the platform, and a bar connected to the free ends of the second mentioned arms.

1,110,109. FENCE-POST. JAMES CARRIGAN, Afton, Iowa. Filed Feb. 28, 1914. Serial No. 821,734. (Cl. 256—57.)



The combination with a fence comprising a plurality of strand and a plurality of stay wires connected thereto, of a post provided on its face with a plurality of notches to receive the strand wires of the fence and having a groove formed longitudinally thereof to receive one of the stay wires of the fence, and clamp wires received around the post and the ends thereof secured to the strand wires for holding the stay wires within the groove, and the strands in the notches for preventing any longitudinal movement of the strand and stay wires.

1,110,110. FLASH-LIGHT. WILLIAM EDW. COMPO, Toledo, Ohio. Filed Feb. 19, 1914. Serial No. 819,730. (Cl. 240—8.5.)



1. In a device of the class described comprising a metal tube adapted to be positioned on a standard sized dry cell, a metal reflector carried by said tube, a lens carried by the tube and positioned over the reflector, a threaded sleeve carried by the reflector, an electric light bulb having its shank threaded into said sleeve and extending beyond the same, a coiled spring threaded at one end onto said sleeve, a metal stud carried by the opposite end to said coiled spring, insulating material positioned between said spring and stud, said spring adapted to maintain one end of said stud in contact with the contact on the bulb shank, a second coiled spring carried by said stud, and in contact therewith, said second spring being insulated from the first spring, said second spring when said tube is positioned on a dry cell, adapted to contact with the positive pole of the battery, a spring tab punched from said tube, and leaving an opening therein, said tube adapted to be positioned on a cell so that the negative pole of the cell is brought into said opening, in position to be contacted by said tab when pressure is put upon the latter, said tube provided with a bead and lugs for maintaining the same in position on the cell, said tube adapted to be rotated relative to said cell to bring one edge of said opening in contact with said negative pole for maintaining a steady light.

2. A device of the class described comprising a metallic tube, a reflector carried thereby, a lens carried by said tube above the reflector, a threaded neck carried by said reflector, an electric light bulb having a shank positioned in said neck, a spring threaded at one end onto said neck, a metal stud carried by the opposite end of said spring, said stud being insulated from said spring, a second spring carried by said stud, in contact therewith but insulated from first said spring, a spring tab stamped from said tube, and means for positioning said tube on a dry cell.

3. The combination with a standard sized dry cell, of a bulb, a tube supporting said bulb, means for detachably securing said tube on the cell, means for throwing said bulb at will into circuit with said cell when the tube is in one position with relation to the cell, said tube being adjusted with relation to the cell, and means for throwing said bulb into contact circuit with said cell when said tube is shifted into another position.

4. A device of the class described including a dry cell, an electric light bulb movable relatively to the cell, means for constantly maintaining electrical communication between one pole of the bulb and cell, and means for establishing electrical communication between the other pole of the bulb and cell at will when the bulb is in one position relative to the cell, and constantly when the bulb is in another position relative to the cell.

5. A device of the class described including a cell, an electric light bulb movable relatively to said cell, a support for the bulb, means for establishing electrical communication between the light support and one pole of the cell, said bulb being in communication with its support, and means for maintaining constant electrical communication between the other pole of the light and cell irrespective of the position of the light relative to the cell, said means including a metallic stud having a head at one end, an insulating sleeve surrounding said stud and having an insulating flange abutting the stud head, a spring engaging said insulating sleeve at one end and said bulb support at the other end, for maintaining the stud head in contact with said other pole of the bulb, an insulating collar on said stud, a head on said stud, opposite the headed end thereof, and a spring having one end connected with the stud between said insulating collar and last said head, the opposite end of said spring contacting with the said other pole of the cell.

[Claims 6 and 7 not printed in the Gazette.]

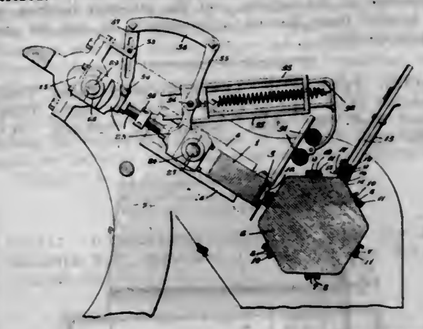
1,110,111. WINDOW CURTAIN AND SHADE BRACKET. OSCAR W. COOPER, Tuxedo, N. Y. Filed Dec. 18, 1913. Serial No. 807,376. (Cl. 156—24.)

1. A tripartite window shade and curtain pole bracket of the character designated comprising a strip of sheet metal having lateral extensions forming means of attachment and lateral extensions forming shade roller bracket arms bent over at right angles to the length of the strip, the upper portion of said blank being bent over to form a curtain pole bracket and socket, and a brace secured to the underside of said bole bracket and to the adjacent upright portion of the blank as and for the purpose described.

2. A tripartite window shade and curtain pole bracket of the character designated, comprising a strip of sheet metal having lateral extensions forming means of attachment and lateral extensions forming shade roller bracket arms bent over at right angles to the length of the strip, the portions of the blank adjacent to said shade roller bracket arms being bent inward to position said bracket arms forward and stiffen the structure, and the upper portion of said blank being bent over to form a cudtain pole bracket and socket, and a brace secured to the under side of said pole bracket and to the adjacent upright portion of the blank as and for the purpose described.

1,110,112. MACHINE FOR PRINTING RULERS. WILLIAM G. CROSS, Seneca Falls, N. Y. Filed Nov. 16, 1911. Serial No. 660,598. (Cl. 101—83.)

1. In a printing machine, a type carrying element, a movable carrier for the articles to be printed, the carrier being provided with means formed with a channel for receiving the articles, the channel extending transversely of the direction of movement of said means with the carrier, and said means being also formed with a shoulder overhanging the bottom of the channel at the advance side of the channel and means for effecting relative movement of the type carrying element and the carrier to effect printing on the face of the article, which face projects from under the shoulder overhanging the bottom of the channel, substantially as and for the purpose described.



2. In a printing machine, a type carrying element, a movable carrier for the articles to be printed, a magazine for delivering articles to the carrier, the carrier being provided with means formed with a channel for receiving the articles, the channel extending transversely of the direction of movement of said means with the carrier, and said means being also formed with a shoulder overhanging the bottom of the channel at the advance side of the channel, and with a shoulder at the rear side ofthe channel and projecting above the first-mentioned shoulder, the second named shoulder being arranged to engage the lowermost article in the magazine and push the same therefrom into the channel, such article sliding under the first-mentioned shoulder and being held in the channel thereby during the printing operation, substantially as and for the purpose specified.

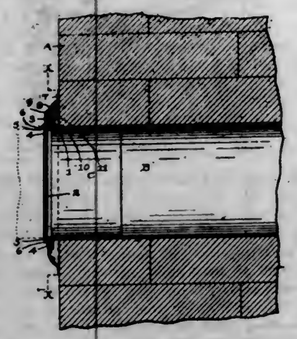
3. In a printing machine, a type carrying element, a movable carrier for the articles to be printed, the carrier being provided with means formed with a channel for receiving the articles, the channel extending transversely of the direction of movement of said means with the carrier, and said means being formed with a shoulder overhanging the bottom of the channel at the advance side of the channel, the bottom of the channel being inclined and opening through the upper face of said means whereby the channel is adapted to receive articles of different widths and the overhanging shoulder holds said articles in position, and means for effecting relative movement of the type carrying element and the carrier, one toward and from the other to effect the printing at a predetermined point on the face of the article, which face projects from under said shoulder, substantially as and for the purpose set forth.

4. In a printing machine, a type carrying element, a rotatable carrier for articles having beveled faces which receive the printing impressions, the carrier being provided with means for holding the articles with their beveled faces upward and being rotatable for carrying said articles into and out of the position in which the beveled faces thereof are exposed to the type carrying element, and means for intermittently actuating the carrier to bring the beveled faces of said articles into printing position, the actuating means including mechanism adjustable to shift the carrier about its axis to change the stopping position thereof to compensate for different inclines of the beveled faces, substantially as and for the purpose described.

5. In a printing machine, a reciprocating type carrying element, a rotatable carrier for articles having beveled faces which receive the printing impressions, the carrier being provided with means for holding the articles with their beveled faces upward and being rotatable for carrying said articles into and out of the position in which the beveled faces thereof are exposed to the type carrying element, means for intermittently actuating the carrier to bring the beveled faces of said articles into printing position, the actuating means including mechanism adjustable to shift the carrier about its axis to change the

stopping position thereof to compensate for different inclines of the beveled faces, and means for adjusting the throw of the printing element to compensate for different thicknesses of the articles and the different inclines of the beveled faces thereof, substantially as and for the purpose specified.

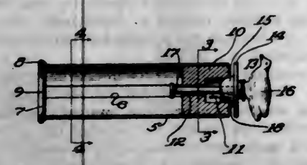
1,110,113. FLUE-STOP. LEWIS B. CROUT, Ogden, Utah, assignor of one-half to Roger L. Connor, Ogden, Utah. Filed Oct. 25, 1913. Serial No. 797,248. (Cl. 126—319.)



1. In a chimney-flue stop, the combination with a thimble held firmly within the flue and having its forward end protruding therefrom and formed thereat with an outwardly projecting peripheral flange, a circular flue-closing plate bearing with its marginal portion against the front face of the flange, a separable retaining collar embracing the marginal portion of the plate and provided with a series of apertures, and a series of separately operated tongues pivotally conected to the said flange and adapted to pass through the apertures independently of the plate to lock the collar detachably to the flange as set forth.

2. In a flue-stop, the combination with a thimble having its forward end protruding from the flue and formed thereat with an outwardly projecting flange, a circular flue-closing plate having its marginal portion bearing against the front face of the flange, a separable collar embracing the marginal portion of the plate and formed at its inner marginal portion with an annular recess interlocked with a correspondingly formed shoulder on the plate, said collar being provided with a series of uniformly spaced apertures, a plurality of clamps each consisting of a base-plate attached to the rear face of the flange and formed with a spring-lip, and a tongue pivoted at one end to the base-plate to bear on the spring-lip and adapted to pass through an aperture in the collar, whereby its free end portion is caused by the action of the spring-lip to bear on the outer face of the collar as set forth.

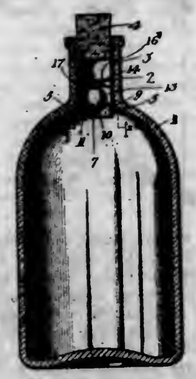
1,110,114. SOUNDING TOY. CURTIS L. CRUVER, Chicago, Ill. Filed Dec. 26, 1912. Serial No. 738,523. (Cl. 46—46.)



1. A sounding toy comprising a cylinder having a longitudinal slot therein, a cap closing one end of said cylinder, a head closing the other end of said cylinder, said head having a recess in its outer side, an operating device positioned adjacent to the outer side of said head, and comprising a circular boss projecting into said recess and being adapted to be rotated in light frictional engagement with the walls thereof to create a whistling sound, a handle rigid with said boss for turning the latter, and a pin adapted to form a loose rotatable connection between said boss and said head.

2. A sounding toy comprising a piece of sheet metal rolled to form a cylinder, the meeting edges of the metal being spaced apart to form a slot extending from end to end of the cylinder, a sheet metal cap fixed to and closing one end of the cylinder, a wooden head fitting into the opposite end of the cylinder, a staple bridging said slot and driven into said head for securing the latter in place, said head having a recess in its outer face and having a guide opening extending from the bottom of said recess to the inner side of said head, a device to cooperate with said head comprising a stem movably mounted in said guide opening and having an enlargement at its inner end, a semi-spherical boss fixed to the outer end of said stem and projecting into the outer end of said recess, and a handle fixed to said boss for rotating said boss in frictional engagement with the walls of said recess to produce a sound.

1,110,115. NON-REFILLABLE BOTTLE. HERMAN C. DEGNER, Los Angeles, Cal. Filed Dec. 1, 1910. Serial No. 595,155. (Cl. 215—69.)

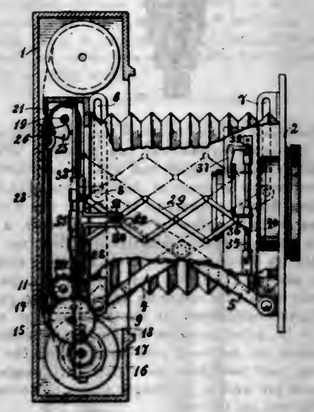


1. The combination of a bottle provided with a cylindrical neck member having ports adjacent its inner end communicating with the interior of the bottle, a valve member formed with a cylindrical wall sliding in said cylindrical neck member and provided with means to close and open said ports, said valve member being provided with a central concave portion and with arms connecting said concave portion with said cylindrical wall, forming passages through the valve member between said arms, said arms extending obliquely from the cylindrical wall of the valve member toward the inner end thereof, a stop member extending across the neck and having passages, and a weight within the cylindrical neck member between the said stop member and said valve member.

2. A bottle provided with a cylindrical neck member projecting inwardly into the interior of the bottle and closed at its inner end, said cylindrical neck member having ports in its side wall adjacent to its inner end, a valve member formed with a cylindrical wall sliding within the cylindrical wall of said neck member and operating to close or open said ports, said valve member having a central portion formed with a concave seat on its outer face, and having arms connecting said central portion with the cylindrical wall of the valve member, forming passages through the valve member between said arms, a stop member extending across the cylindrical neck member and having passages, and a weight within the cylindrical member between said stop member and said valve member.

3. A bottle provided with a cylindrical neck member projecting inwardly into the interior of the bottle and closed at its inner end, said cylindrical neck member having ports in its side wall adjacent to its inner end, a valve member formed with a cylindrical wall sliding within the cylindrical wall of said neck member and operating to close or open said ports, said valve member having a central portion formed with a concave seat on its outer face, and having arms connecting said central portion with the cylindrical wall of the valve member, forming passages through the valve member between said arms, a stop member extending across the cylindrical neck member and having passages, and a weight within the cylindrical member between said stop member and said valve member, said arms of the valve member being convexly curved on their outer face.

1,110,116. PHOTOGRAPHIC APPARATUS FOR FILMS. PAUL DIETZ, Brooklyn, N. Y., assignor to New Ideas Manufacturing Company Inc., New York, N. Y. Filed June 28, 1913. Serial No. 776,213. (Cl. 95—32.)



1. A photographic apparatus for films, consisting of partly stationarily mounted and partly movable mechanism composed of rigid elements comprising an intermediate connection adapted to place the entire mechanism in condition for exposure by the single operation of drawing out the movable mechanism thereof, and moving a full film portion by returning said movable mechanism.

2. A photographic apparatus for films, consisting of partly stationarily mounted and partly movable mechanism composed of rigid elements, comprising a movable objective plate, and an extensible intermediate connection between the said mechanism and objective plate adapted to place the entire mechanism in condition for exposure by the single operation of completely moving in the mechanism and drawing out the objective plate.

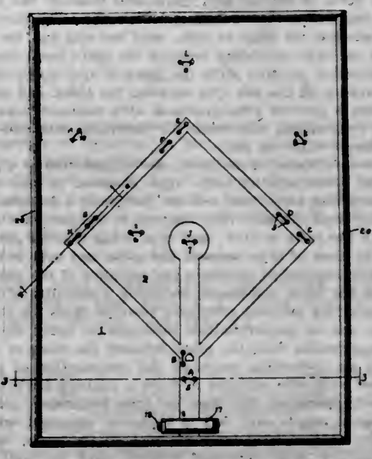
3. A photographic apparatus for films, consisting of partly stationarily mounted and partly movable mechanism composed of rigid elements, comprising a movable objective plate, an extensible intermediate connection between the said mechanism and objective plate adapted to place the entire mechanism in condition for exposure by the single operation of completely moving in the mechanism and drawing out the objective plate, and means for preventing exposure until the objective plate has been completely drawn out.

4. A photographic apparatus for films, consisting of partly stationarily mounted and partly movable mechanism composed of rigid elements, comprising a movable objective plate, means in connection with said mechanism and objective plate for placing the camera in condition for exposure by completely pushing in and drawing out the objective plate, means for rendering inactive the mechanism for placing the camera in position for exposure, and means for moving a complete film portion when said mechanism is inactive.

5. A photographic apparatus for films, consisting of partly stationarily mounted and partly movable mechanism composed of rigid elements, comprising means for placing a new film portion before the opening, a movable objective plate on the camera, means in connection with said mechanism and objective plate adapted to place the camera in condition for exposure by the single operation of pushing in and drawing out the objective plate, and means for preventing exposure of the new film portion until the objective plate has been completely drawn out.

[Claims 6 to 14 not printed in the Gazette.]

1,110,117. GAME APPARATUS. WILLIAM DRENNAN, Brooklyn, N. Y. Filed Mar. 9, 1914. Serial No. 823,438. (Cl. 46—61.)



1. A game board having a plurality of yielding loops upon its upper face and normally contacting therewith throughout their lengths and a plurality of wedge shaped game pieces adapted to be inserted in said loops.

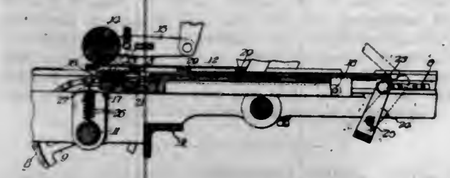
2. A game board having upon its upper face, a representation of a base ball diamond, a resilient loop rising from said board at each player's position, said loops contacting with said upper face of the board throughout their lengths, and a plurality of game pieces having wedge shaped bases adapted to be passed beneath said loops.

3. A game board having upon its upper face a representation of a base ball diamond, said board having a pair of openings at each player's position, a flexible element passing through said openings and forming a loop at each player's position, one end of said element being rigidly connected with said board, a tensioning device on the other end of said flexible element and a number of game pieces for insertion beneath said loops.

4. The combination with a game board having upon its face, a representation of a base ball diamond, of a back stop behind the catcher's position, said back stop being pivoted to said board and being adapted to be struck by a ball passing over the home plate, whereby said back stop will be rocked around its pivot.

5. A game board having upon its upper face, a representation of a base ball diamond, said board having a pair of openings at each player's position, a flexible element passing through said openings and forming a loop at each player's position, one end of said element being rigidly connected with said board, a tensioning device on the other end of said flexible element, a number of game pieces for insertion beneath said loops and a pivotally supported back stop behind the representation of the home plate and being adapted to be rocked upon its pivot when hit with a ball.

1,110,118. ADDRESSING-MACHINE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Original application filed Apr. 5, 1912, Serial No. 688,635. Divided and this application filed July 23, 1912. Serial No. 711,112. (Cl. 101—1.)

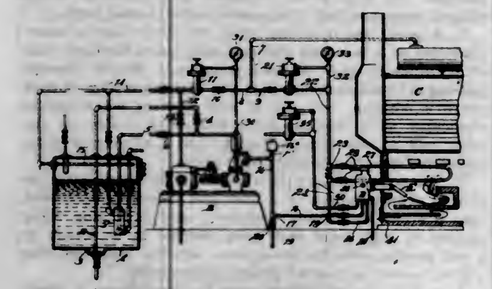


1. In an addressing machine, the combination of a plate carrying addresses composed of lines of type supported by the plate to extend both above and beneath the plate, a movable bed provided with parallel ribs to support the plate between the lines of type, said bed ribs and the portion of the type extending beneath the plate being tapered in a direction parallel with the lines of type to facilitate the entrance of the bed ribs between the lines, and means including a pivoted yoke provided with inclined faces and means coöperating therewith for elevating said bed into engagement with the plate.

2. In an addressing machine, the combination of a plate provided with parallel slots, type disposed in said slots and projecting above and beneath the plate, a movable bed provided with parallel ribs adapted to support the plate between the rows of type, said type being tapered parallel with the lines of type beneath the plate and said bed ribs being also tapered to facilitate the entrance of the bed ribs between the lines, and means including a plurality of pairs of coöperating inclined relatively movable faces for elevating the bed at predetermined intervals to bring the ribs into engagement with the plate between the rows of type.

3. In an addressing machine, the combination of a bed provided with ribs adapted to form a support for a printing device between the lines of type thereof, a pivoted yoke upon which said bed is mounted provided with a plurality of parallelly inclined faces on its lower side, a reciprocatory slide arranged beneath said bed and provided with correspondingly inclined faces adapted to engage said inclined faces of the bed, and means for actuating said slide to raise and lower said bed.

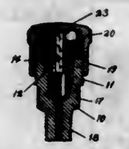
1,110,119. OIL-BURNING SYSTEM. EMANUEL W. DUNN, San Francisco, Cal. Filed Feb. 8, 1912. Serial No. 676,343. (Cl. 236—6.)



1. The combination in an oil burning, steam generating system, with a boiler, its furnace and a burner therein, of a source of oil supply, a pump connected thereto, and to the burner, apparatus for delivering steam from boiler to pump and burner, regulators in said apparatus for proportioning steam pressure at the pump and at the burner, one of said regulators being controlled by oil discharged from the pump, said apparatus including means for superheating the steam to burner and utilizing the heat to vary the temperature of the oil before entering the burner.

2. The combination in an oil burning system, of an oil burner, an oil supply conductor connected to the burner, a boiler in which steam pressure is generated by combustion at the burner, a pump operated by steam from said boiler, an automatic governor connected to the discharge side of the pump, pipes in which the governor is mounted connecting the boiler and pump, said governor controlling the speed of pump by varying steam supply thereto inversely to oil discharge pressure, connections between the steam supply pipe and the burner, said connection including a chamber surrounding the oil feed conductor whereby the oil is raised in temperature before mixing at the burner tip, and a governor in the steam supply pipe to burner connection whereby the pressure ratio between the oil and steam at the burner is automatically maintained.

1,110,120. GREASE-CUP. ROBERT EHRLICH, Baltimore, Md. Filed Jan. 26, 1914. Serial No. 814,456. (Cl. 184—48.)



1. A grease-cup of the character described comprising an interiorly threaded cylindrical cap provided with a corrugated flange near its upper end, and an exteriorly threaded cup, adapted to be screwed one onto the other, a three-cornered pin firmly secured to the inner top wall of said cap, means for strengthening this connection, a shoulder within the bore of said exteriorly threaded cup, a spring resting with its lower edge upon said shoulder and with its outer face against the inner wall of said bore and having its free ends extending inwardly at an angle to each other, bent in tight engagement at the apex of the angle and adapted to be pried asunder by the introduction of the wedge shaped pin between said ends during the screwing of said cap onto said cup, for frictionally engaging two sides of said pin and to yieldingly resist the rotary movement of the cap on the cup.

2. A grease-cup of the character described comprising an interiorly threaded cylindrical cap threaded with a corrugated flange near its outer upper end, and an exteriorly threaded cup adapted to be secured one onto the other, a three-cornered pin firmly secured to the inner top wall of said cap, a strengthening plate for strengthening this connection, a shoulder within the bore of said exteriorly threaded cup, a nut-shaped part and a threaded flange integrally made with said cup and both provided with a bore communicating with the bore of the cup, a spring resting with its lower edge upon said shoulder and with its outer face against the inner walls of said bore in the upper part of said cup, and having its ends extending inwardly at an angle to each other, with the apex of said angle vertically above the bore of said nut-shaped part and lower flange formed by the tightly engaging separated ends of said spring, adapted to be pried asunder by the introduction of the pointed wedge-like operating pin between said ends during the screwing of said cap onto said cup, for frictionally engaging two sides of said pin and to yieldingly resist the rotary movement of the cap on the cup.

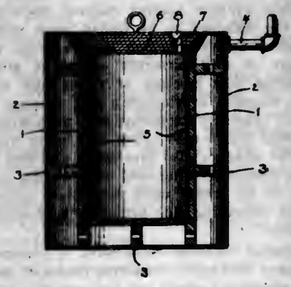
1,110,121. BOOT AND SHOE. FRANK F. ENO, Boston, Mass., assignor to Eno Welt Shoe Company, a Corporation of Massachusetts. Filed May 7, 1914. Serial No. 837,054. (Cl. 36—17.)

1. A boot or shoe arranged for the subsequent attachment of a second welt and an outer sole, consisting of an inner sole, a welt or strip of material secured to the outer face of the inner sole by fastening means located in close proximity to the outer edge of both such inner sole and welt, the inner edge of said welt being free from such inner sole, and an upper permanently secured to the free inwardly extending portion of said welt or strip.

2. In a boot or shoe, the combination of an upper, an inner sole, a strip or welt of material secured to the edge of the inner sole so as to leave said welt with a free inwardly extending portion, fastening means securing the upper to said strip or welt, and a second welt strip secured by additional fastening means to said first mentioned welt or strip and upper.

3. In a boot or shoe, the combination of an inner sole, a strip or welt of material secured to the outer face of the inner sole in close proximity to the outer edge of both the welt and inner sole so as to leave the inner edge of such welt free from the inner sole, a shoe upper, fastening means for securing said upper to the free inwardly extending portion of said strip or welt, a second welting strip, additional means for fastening such second welting strip to the upper and said first-mentioned strip or welt, an outer sole and means for fastening it to said second welting strip.

1,110,122. METHOD OF AND APPARATUS FOR ANNEALING METALS. FREDERICK HART FECHTIG, Wilmington, N. C. Filed Aug. 27, 1913. Serial No. 786,914. (Cl. 148—14.)



1. The herein described method of annealing metals which consists in introducing hot metal into a chamber having double walls and a pressure exhaust, exhausting the air from between the walls, closing the chamber and keeping the metal in the closed chamber until cooled.

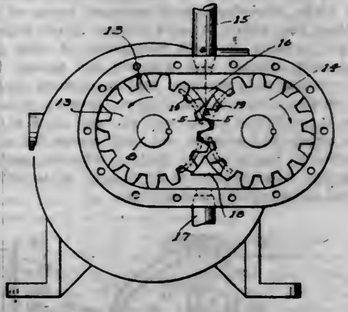
2. The herein described apparatus for annealing metals, consisting of a double walled chamber adapted to contain the metal, means for relieving pressure in the metal receiving chamber, and a cover for said chamber.

3. The herein described apparatus for annealing metals, a chamber having double walls adapted to contain the metal to be treated, means for relieving fluid pressure within the chamber, a cover for said chamber and having the air exhausted from between the walls of the chamber.

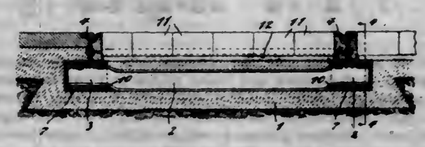
4. The herein described apparatus for annealing metals, a chamber having double walls adapted to contain the metal, a cover for said chamber, a valve to relieve pressure in the chamber and having the air exhausted from between the walls.

1,110,123. AIR-COMPRESSOR. ADOLPH F. FELLER, Berkeley, Cal. Filed Nov. 13, 1911. Serial No. 659,887. (Cl. 230—30.)

A motor of the geared type comprising a casing and guide plates therefor, said plates having substantially flat inner surfaces, two intermeshing gears mounted within said casing, said casing being provided with an inlet and an outlet on opposite sides of the point of contact between the teeth of said gears, a pair of baffles of similar shape disposed in front of said inlet and said outlet respectively, and adapted to direct fluid onto the teeth of both of said gears equally, said baffles being provided with a pair of curved surfaces adapted to make rubbing contact with the ends of the teeth on each of the gears, and said guide plates being provided with two pairs of segmental grooves one pair on each side of the line joining the centers of rotation of the two gears, each of said grooves extending from a point on a line with the ends of the teeth of one of the gears near the line of connection between the centers of the gears to a point beyond said baffles and in free communication with either said inlet or said outlet.



1,110,124. RAIL-SUPPORTING STRUCTURE. CHARLES M. GIDANSKI, New York, N. Y. Filed May 12, 1913. Serial No. 767,113. (Cl. 238—3.)



1. A rail tie having cantaliver ends substantially parallel to but out of alinement with the main portion of the tie.

2. A rail tie comprising an I-beam having an cantaliver end substantially parallel to but out of alinement with the main portion of the tie.

3. In combination, a substantially unyielding road bed, a tie rigidly supported by said road bed, said tie having an offset end free for deflection under load and rails forming a rail joint which is supported directly by said offset end.

4. In combination, a substantially unyielding road bed, a tie having an offset end, said tie being rigidly supported by the foundation, the offset end being free for deflection under load and a rail mounted on said end.

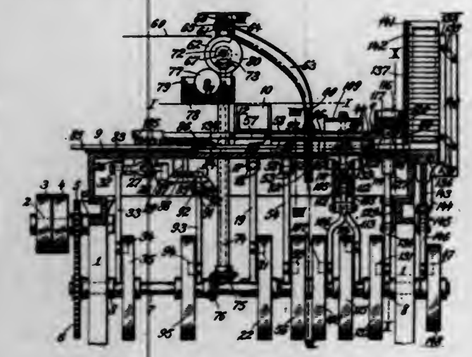
5. In combination, a substantially unyielding road bed, track rails and supporting ties therefor, said ties being embedded in said road bed, said road bed being formed with recesses surrounding the ends of the ties, said track rails being supported on said ends out of contact with said road bed.

[Claims 6 to 11 not printed in the Gazette.]

1,110,125. PACKAGING-MACHINE. FELIPE GIROUD, deceased, New York, N. Y., by Edith Elmira Chapman, executrix, New York, N. Y., assignor to Package Machinery Company, a Corporation of Massachusetts. Filed Oct. 18, 1913. Serial No. 795,955. (Cl. 93—4.)

1. A packaging machine comprising a wrapper folding channel having upper and lower plates and two vertically reciprocating folders, each of said folders having a vertical plate adapted to move past side edges of said upper

and lower channel plates; a plunger having upper and lower forwardly extending plates secured to its forward end, the width of said plunger plate extensions being less than the space between said vertical plates forming part of said vertically reciprocating folders; means whereby articles are brought to rest between said plunger plate extensions; means for supporting a wrapper between said wrapper folding channel and the forward ends of said plunger plate extensions, said wrapper being of greater width than the width of said plunger plate extensions; means for causing forward movement of said plunger, whereby said articles and wrapper are moved forward to rest between said wrapper folding channel plates and said vertically reciprocating folders, thereby causing the wrapper to be folded upon said plunger plate extensions between which said articles rest; and means for actuating said vertically reciprocating folders, whereby portions of the wrapper overhanging said plunger plate extensions are folded substantially as described.



2. A packaging machine comprising a wrapper folding channel having upper and lower plates and two vertically reciprocating folders, each of said folders having a vertical plate adapted to move past side edges of said upper and lower channel plates, a reciprocating plunger having upper and lower forwardly extending plates secured to its forward end, the width of said plunger plate extensions being less than the space between said vertical plates forming part of said vertically reciprocating folders, a second plunger having reciprocating movements in range with and at right angles to those of the first named plunger; means whereby a series of articles are brought to rest in front of said second plunger; means for actuating said plungers, whereby the second plunger moves said articles forward to rest between said plunger plate extensions; a stationary vertical wall serving to check travel of several of said articles, whereby the articles are compressed into a compact bunch; means for supporting a wrapper between said wrapper folding channel and the forward ends of said plunger plate extensions, said wrapper being of greater width than the width of said plunger plate extensions; said plunger actuating means then causing forward movement of the first named plunger, whereby said articles and wrapper are moved forward to rest between said wrapper folding channel plates and said vertically reciprocating folders, thereby causing the wrapper to be folded upon said plunger plate extensions between which said articles rest; and means for actuating said vertically reciprocating folders, whereby portions of the wrapper overhanging said plunger plate extensions are folded substantially as described.

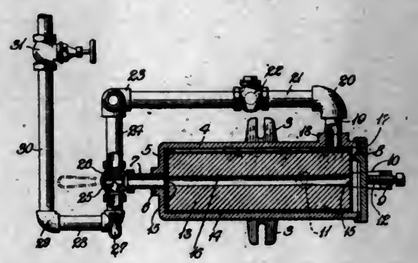
3. A packaging machine comprising a wrapper folding channel having upper and lower plates and projections extending inward from two vertical sides thereof, said inwardly extending side projections having right angularly extending plates of less height than the space between the upper and lower plates of said wrapper folding channel; a plunger having upper and lower plates secured to its forward end, the width of said plunger plate extensions being less than the space between said plate extensions of said inwardly extending side projections; means whereby articles are brought to rest between said plunger plate extensions; means for supporting a wrapper between said wrapper folding channel and the forward ends of said plunger plate extensions, said wrapper being of greater width than the space between said plate extensions of said inwardly extending side projections; means for causing forward movement of said plunger, whereby said articles and wrapper are forced into said wrapper folding channel, thereby causing portions of the wrapper to be folded upon said plunger plate extensions between which said articles rest, said limited height of said plate extensions of said inwardly extending side projections permitting free passage of upper and lower overhanging portions of the wrapper; and two vertically reciprocating folders causing said overhanging portions of the wrapper to be folded upon said plate extensions of said inwardly extending side projections of said wrapper folding channel.

4. A packaging machine comprising a plunger having upper and lower forwardly extending plates at its forward end, means whereby articles are brought to rest between said plunger plate extensions, a wrapper folding channel having upper and lower plates and projections extending inward from the two vertical sides thereof, and said inwardly extending projections being of less height than the space between the upper and lower plates of said wrapper folding channel; means for supporting a wrapper between said wrapper folding channel and the forward ends of said plunger plate extensions, said wrapper being of greater width than the space between said inwardly extending side projections and the width of said plunger plate extensions; means for causing forward movement of said plunger, whereby said articles and wrapper are forced into said wrapper folding channel, thereby causing portions of the wrapper to be folded upon said plunger plate extensions between which said articles rest, said limited height of said inwardly extending side projections permitting free passage of upper and lower portions of the wrapper overhanging said plunger plate extensions; said inwardly extending side projections having plate extensions which said upper and lower overhanging portions of the wrapper also overhang; and two vertically reciprocating folders causing said overhanging portions of the wrapper to be folded upon said plate extensions of said inwardly extending side projections of said wrapper folding channel.

5. A packaging machine comprising a plunger having upper and lower forwardly extending plates at its forward end, means whereby articles are brought to rest between said plunger plate extensions, a wrapper folding channel having upper and lower plates and projections extending inward from the two vertical sides thereof, and said inwardly extending projections being of less height than the space between the upper and lower plates of said wrapper folding channel; means for supporting a wrapper between said wrapper folding channel and the forward ends of said plunger plate extensions, means for applying paste to certain marginal portions of said wrapper, and means for guiding said paste coated wrapper to said wrapper supporting means, said wrapper being of greater width than the space between said inwardly extending side projections and the width of said plunger plate extensions; means for causing forward movement of said plunger, whereby said articles and wrapper are forced into said wrapper folding channel, thereby causing portions of the wrapper to be folded upon said plunger plate extensions between which said articles rest, said limited height of said inwardly extending side projections permitting free passage of upper and lower portions of the wrapper overhanging said plunger plate extensions; said inwardly extending side projections having plate extensions which said upper and lower overhanging portions of the wrapper also overhang; and two vertically reciprocating folders, one of said folders adapted to fold one of said overhanging portions of the wrapper against said plate extensions of the inwardly extending side projections of said wrapper folding channel and the other folder adapted to fold said paste coated marginal portion of the wrapper against said portion of the wrapper folded against said plate extensions of the inwardly extending side projections of said wrapper folding channel.

[Claims 6 to 14 not printed in the Gazette.]

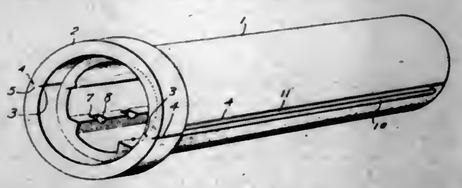
1,110,126. PIPE-CLEANSER. SAMUEL GRAHAM, Detroit, Mich. Filed Dec. 4, 1913. Serial No. 804,584. (Cl. 225—12.)



1. In a pipe cleanser, the combination with means for supplying water under pressure, of a detergent holder in communication with said means, said holder comprising a casing, a container arranged therein and having the ends thereof provided with openings, a solid detergent snugly enveloped by said container and having a longitudinal bore alining with the openings in the ends of said container and through which water passes to contact only with the walls of the bore, a detachable cap closing an end of said casing, means carried by said cap for spacing said container therefrom, and means for controlling the passage of water through said holder.

2. In a pipe cleanser, the combination with means for supplying water, of a container having the ends thereof provided with concentric openings, one of which is adapted to receive water and the other to discharge water, and a solid detergent snugly engaged by the walls and ends of said container, said detergent having a longitudinal bore formed therein communicating with the openings in said container and adapted to have the walls thereof washed by water whereby quantities of the solid detergent are carried off in solution.

1,110,127. SEPARABLE EARTHEN INSULATING PIPE-CONDUIT. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Sept. 30, 1912. Serial No. 723,206. (Cl. 137—75.)



1. A conduit of the character specified, said conduit having a plurality of pairs of oppositely arranged longitudinally extending cuts, the pairs of cuts being spaced apart at angular distances of 180° and the members of each pair being on opposite sides of the conduit wall, the members of each pair of cuts inclining inwardly and downwardly toward each other and the aggregate width of each pair being approximately one-half the thickness of the conduit wall, each of the said cuts having its side walls plane and converging toward the inner edge of the cut, each pair of cuts being at an angle of approximately 90° from the central line of the bottom of the conduit, said conduit having an internal longitudinally extending rib above each of the cuts, and an outwardly extending rib below each of the outer cuts, the last named ribs having flat approximately horizontal upper faces, and the said faces being at the lower side wall of the external cuts.

2. A conduit of the character specified, said conduit having a plurality of pairs of oppositely arranged longitudinally extending cuts, the pairs of cuts being spaced apart at angular distances of 180° and the members of each pair being on opposite sides of the conduit wall, the members of each pair of cuts inclining inwardly and downwardly toward each other, each of the said cuts having its side wall plane and converging toward the inner edge of the cut, each pair of cuts being at an angle of approximately 90° from the central line of the bottom of the conduit, said conduit having an internal longitudinally extending rib above each of the cuts, and an outwardly extending rib below each of the outer cuts, the last-named ribs having flat approximately horizontal upper faces, and the said faces being at the level of the lower side walls of the external cuts.

3. A conduit of the character specified, said conduit having a plurality of pairs of oppositely arranged longitudinally extending cuts, the pairs of cuts being spaced apart at angular distances of 180° and the members of each pair being on opposite sides of the conduit wall, the members of each pair of cuts inclining inwardly and downwardly toward each other, each of the said cuts having its side walls plane and converging toward the inner edge of the cut, each pair of cuts being at an angle of approximately 90° from the central line of the bottom of the conduit, said conduit having a reinforcing rib adjacent to each cut, the ribs adjacent to the outer cuts being below the said cuts and having their upper faces at the side walls of the said cuts, and the ribs adjacent to the inner cuts being above the cuts.

4. A conduit of the character specified, said conduit having a plurality of pairs of oppositely arranged longitudinally extending cuts, the pairs of cuts being spaced apart at angular distances of 180° and the members of each pair being on opposite sides of the conduit wall, the members of each pair of cuts inclining inwardly and downwardly toward each other, each of the said cuts having its side wall plane and converging toward the inner edge of the cut, each pair of cuts being at an angle of approximately 90° from the central line of the bottom of the conduit, said conduit having a reinforcing rib adjacent to each cut, the upper faces of the ribs at the outer cuts being at the lower side walls of the said cuts.

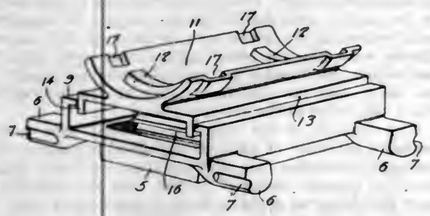
5. A conduit of the character specified, said conduit being partially separated into upper and lower halves by means of pairs of oppositely arranged cuts in its wall, the members of each pair of cuts inclining inwardly and downwardly toward each other and being of greatest width at the face of the wall, said conduit having a reinforcing rib adjacent to each cut, the ribs adjacent to the inner cuts being above the same and the ribs adjacent to the outer cuts being below the same, and having their upper faces adjacent to the lower side walls of the said cut.

[Claims 6 to 8 not printed in the Gazette.]

1,110,128. PIPE-SUPPORT. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Aug. 11, 1913. Serial No. 784,129. (Cl. 137—75.)

1. In a pipe support comprising a cradle for engaging a conduit and a saddle for engaging the pipe to be supported, and the roller arranged between the saddle and the cradle, the saddle, the cradle and the roller having interengaging teeth extending transversely of the length of the pipe to be supported for permitting the saddle to move longitudinally of the cradle, of ribs on the cradle at each side thereof and extending upwardly alongside the saddle at each side thereof and having internally extending flanges, and depending ribs at the sides of the saddle depending below the flanges of the cradle and having outwardly extending ribs intermediate their ends for engaging the ribs of the cradle.

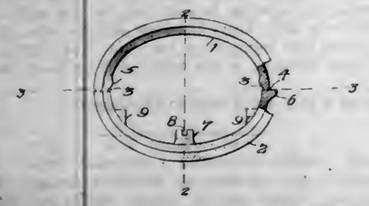
2. In a pipe support comprising a cradle for engaging a conduit and a saddle for engaging the pipe to be supported, and the roller arranged between the saddle and the cradle, the saddle, the cradle and the roller having interengaging teeth extending transversely of the length of the pipe to be supported for permitting the saddle to move longitudinally of the cradle, of ribs on the cradle at each side thereof and extending upwardly alongside the saddle at each side thereof and having internally extending flanges, and depending ribs at the sides of the saddle depending below the flanges of the cradle and having outwardly extending ribs for engaging the ribs of the cradle.



3. In a pipe support comprising a cradle for engaging a conduit and a saddle for engagement by the pipe to be supported and the roller arranged between the saddle and the cradle, the saddle, the cradle and the roller having interengaging teeth extending transversely of the length of the pipe to be supported for permitting the saddle to move longitudinally of the cradle, of ribs depending from the sides of the saddle and ribs extending upwardly from the sides of the cradle, said ribs lapping upon each other at each side of the support, and the ribs at each side of the support having lateral flanges arranged one above the other to prevent upward movement of the saddle with respect to the cradle.

4. In a pipe support comprising a cradle for engaging a conduit and a saddle for engagement by the pipe to be supported and the roller arranged between the saddle and the cradle, of ribs depending from the sides of the saddle and ribs extending upwardly from the sides of the cradle, said ribs lapping upon each other at each side of the support, and the ribs at each side of the support having lateral flanges arranged one above the other to prevent upward movement of the saddle with respect to the cradle.

1,110,129. SEPARABLE INSULATING EARTHEN CONDEIT. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Aug. 22, 1913. Serial No. 786,110. (Cl. 137—75.)



1. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinal extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane, and each of the last-named ribs having spaced pairs of notches, the notches of one rib registering with the notches of the other rib and the first rib having a transverse opening below the level of the bottom of the groove between each alternate pair of notches for the purpose specified.

2. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinally extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane, and each of the said last-named ribs having spaced pairs of notches, the notches of one rib registering with the notches of the other rib.

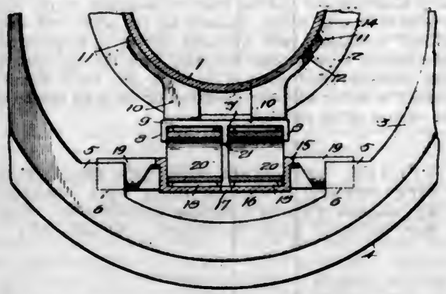
3. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinally extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane.

4. A conduit of the character specified having an elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinally extending supporting rib near each end of its long axis and having a central supporting rib between the first-named ribs.

5. A conduit of the character specified having an elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinally extending supporting rib near each end of its long axis and having a central supporting rib between the first-named ribs, the central rib having a longitudinally extending groove in its upper face.

[Claims 6 and 7 not printed in the Gazette.]

1,110,130. PIPE-SUPPORT. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Apr. 18, 1914. Serial No. 832,790. (Cl. 137—75.)



1. A pipe support for supporting insulated pipes in conduits, comprising a saddle provided at each side edge with a depending flange and at its center with a depending longitudinally extending rib, and between each flange and the rib with a longitudinal series of transverse rack teeth, the teeth of the series registering, said saddle having a plurality of pairs of chairs on its upper face, the pairs being at the ends of the saddle and the members of the pairs being spaced apart transversely of the saddle, the upper ends of the chairs being curved to fit the periphery of the pipe, each chair having a transverse slot at its upper end for engagement by a tie band, a cradle having a depressed pocket provided with a plurality of series of rack teeth registering with the teeth of the saddle, a roller arranged between the saddle and the cradle at each side of the central rib and meshing with the adjacent series of teeth of the saddle and the cradle, said cradle having at each end an arc-shaped extension adapted to engage a shaft to support the cradle.

2. A pipe support for supporting insulated pipes in conduits, comprising a saddle provided on its under face with longitudinally extending series of rack teeth, the series registering, the saddle having upon its upper face a plurality of pairs of chairs, the members of the pairs being at opposite sides of the saddle, the upper ends of each pair of chairs being curved to fit the periphery of the pipe and each chair having an upwardly and outwardly extending leaf for engaging the pipe, the cradle having a depressed pocket provided with a series of rack teeth registering with each series of the cradle, a roller having teeth for engaging the several series, and connecting the saddle to the cradle, said cradle having at each end an arc-shaped extension adapted to engage a shaft to support the cradle, the saddle having depending flanges at its side edges for engaging the ends of the roller to limit the lateral movement of the saddle.

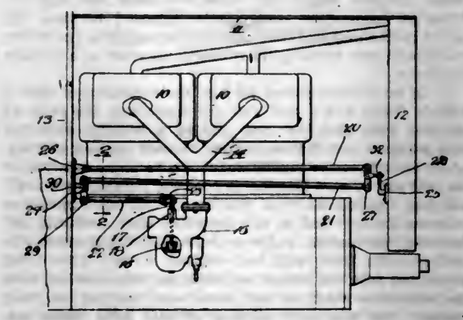
3. A pipe support for supporting insulated pipes in conduits, comprising a saddle provided on its under face with longitudinally extending series of rack teeth, the series registering, the saddle having upon its upper face a plurality of pairs of chairs, the members of the pairs being at opposite sides of the saddle, the upper ends of each pair of chairs being curved to fit the periphery of the pipe and each chair having an upwardly and outwardly extending leaf for engaging the pipe, the cradle having a depressed pocket provided with a series of rack teeth registering with each series of the cradle, a roller having teeth for engaging the several series, and connecting the saddle to the cradle, said cradle having at each end an arc-shaped extension adapted to engage a shaft to support the cradle.

4. A pipe support for supporting insulated pipes in conduits, comprising a saddle provided on its under face with longitudinally extending series of rack teeth, the series registering, the saddle having upon its upper face a plurality of pairs of chairs, the members of the pairs being at opposite sides of the saddle, the upper ends of each pair of chairs being curved to fit the periphery of the pipe, the cradle having a depressed pocket provided with a series of rack teeth registering with each series of cradle, a roller having teeth for engaging the several series, and connecting the saddle to the cradle, said cradle having at each end an arc-shaped extension adapted to engage a shaft to support the cradle.

5. In a pipe support for supporting insulated pipes in conduits, a saddle comprising a plate having at each side edge a depending flange and having a plurality of series of rack teeth on its under face, the saddle having upon its upper face a plurality of pairs of chairs, the pairs being near the ends of the saddle and the members of the pairs being spaced apart transversely of the saddle, the upper ends of the chairs being curved to fit the periphery of the pipe, each chair having an upwardly and outwardly extending curved leaf for engaging the pipe, and provided with a slot for engagement by a tie band.

[Claims 6 to 9 not printed in the Gazette.]

1,110,131. AUTOMATIC REGULATOR FOR CARBURETERS. WILLIAM W. GREEN, Niles, Mich. Filed Nov. 10, 1913. Serial No. 800,085. (Cl. 48—155.1.)

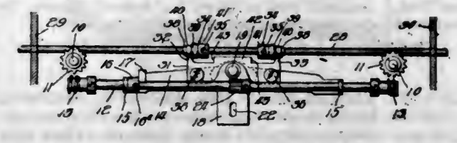


1. Means for automatically regulating needle valve-controlled carbureters for internal combustion enginges of motor vehicles, comprising a plurality of contractible and expansible rods, one of which has a fixedly supported end, motion multiplying levers connecting said rods and a crank on the needle valve stem, connected to and operated by the rod farthest removed from the rod having the fixed end.

2. Means for automatically regulating valve-controlled carbureters for internal combustion engines, comprising expansible and contractible members, one of which has a fixed end, operative connections therebetween, a stop for limiting movement of said members in one direction, and a connection between one of said members and the controlling valve of the carbureter.

3. Means for automatically regulating valve-controlled carbureters for internal combustion engines, comprising a plurality of contractible and expansible rods, one of which has a fixed end, throw increasing levers for said rods, one of which is carried by a yieldable support, a stop for limiting the movement of said rods, and an operative connection between the last one of said rods and the valve of the carbureter.

1,110,132. RIBBON-ACTUATING MECHANISM FOR TYPE-WRITERS. GEORGE J. GRIFFITHS and CHARLES H. RODERICK, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 19, 1914. Serial No. 813,065. (Cl. 197—151.)



1. In a typewriting machine, a ribbon-spool actuating mechanism embracing two gear-pinions, a rotative actuating shaft mounted for oscillatory motion about an axis transverse to its axis of rotation, and provided with gears adapted for alternate engagement with and disengagement from said gear pinions, an endwise movable operating rod mounted to slide endwise in the machine-frame, and means for transmitting motion from said rod to the actuating shaft, to give swinging movement to the latter in the endwise movement of the rod, comprising two cam-members, and two movable fingers in contact with the same, said cam-members and associated fingers being located at opposite sides of the axis of oscillation of the actuating shaft.

2. In a typewriting machine, a ribbon-spool actuating mechanism embracing two gear pinions, a rotative actuating shaft mounted for oscillatory motion about an axis transverse to its axis of rotation, and provided with gears adapted for alternate engagement with and disengagement from said gear-pinions, an endwise movable operating rod mounted to slide endwise in the machine-frame and projecting at its ends beyond the opposite outer surfaces of said frame, and means for transmitting motion from said rod to the actuating shaft, to give swinging movement to the latter in the endwise movement of the rod, comprising two cam-members carried by said rod, and two movable fingers in contact with the same, said cam-members and associated fingers being located at opposite sides of the axis of oscillation of the actuating shaft.

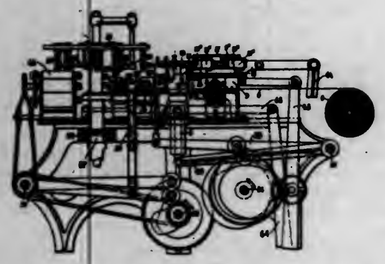
3. In a typewriting machine, actuating mechanism for the ribbon-spool shafts, comprising two gear-pinions through which said spool-shafts are given rotary movement, a rotative actuating shaft, a bearing member for said shaft, mounted to oscillate on an axis transverse to the axis of rotation of said actuating shaft, said shaft being provided with gears adapted to be moved into and out of engagement with the said gear-pinions by the oscillatory movement of the shaft, an endwise movable rod provided with two cams located at opposite sides of the axis of oscillation of the bearing-member and fingers on the bearing member acting on said cam-members, whereby the endwise movement of said rod will effect oscillatory movement of said bearing member and actuating shaft.

4. In a typewriting machine, actuating mechanism for the ribbon-spool shafts, comprising two gear pinions through which said spool-shafts are given rotary movement, a rotative actuating shaft, a bearing member for said shaft, mounted to oscillate on an axis transverse to the axis of rotation of said actuating shaft, said shaft being provided with gears adapted to be moved into and out of engagement with the said gear-pinions by the oscillatory movement of the shaft, an endwise movable actuating rod mounted to slide endwise in the machine frame and projecting at its ends beyond the opposite outer faces of said frame, and means for transmitting motion from said rod to the bearing-member to give oscillatory movement to the latter in the endwise movement of the rod, comprising a cam-member on the rod and a finger on the bearing member adapted for contact with said cam-member.

5. In a typewriting machine, actuating mechanism for the ribbon-spool shafts, comprising two gear-pinions through which said spool-shafts are given rotary movement, a rotative actuating shaft mounted for oscillatory movement about an axis transverse to its axis of oscillation and provided with gears adapted to be moved into and out of engagement with said gear-pinions by the oscillatory movement of the shaft, an endwise movable rod provided with two cams located at opposite sides of the axis of oscillation of the bearing-member, fingers on the bearing-member acting on said cam-members, said rod being resilient and adapted for lateral flexure, to maintain said cams in contact with said fingers.

[Claims 6 and 7 not printed in the Gazette.]

1,110,133. TABLET-WRAPPING MACHINE. FREDERICK GROVER, Leeds, England, assignor to The Forgrove Machinery Company Limited, Leeds, England. Filed July 8, 1913. Serial No. 777,806. (Cl. 93—2.)



1. In a machine for folding a rectangular wrapper about a rectangular tablet, and in combination, a frame-work, a reciprocating carriage therein adapted to receive and convey a tablet, means for supporting horizontally a rectangular wrapper below the said tablet in the said carriage when the latter is adjacent the forward end of its travel, an upper and a lower plunger located respectively above and below the said tablet in the said carriage when the latter is in the position aforesaid, means for operating said plungers to cause the lower plunger to rise beneath the wrapper to support the tablet and then to cause both the upper and lower plungers to descend and carry the said tablet and wrapper therewith, a trough member having a forwardly projecting lid and a slide carried in guides between the ends of which lid and slide the said tablet and wrapper pass during the descent of the tablet to fold upwardly the sides of the wrapper against the sides of the tablet, means for then folding down one side of the wrapper over the top of the tablet, means for advancing the tablet through the said trough member to fold down the opposite side of the wrapper on the top of the tablet, means for folding down the upper projecting ends of the wrapper onto the ends of the tablet, means for tucking in the rear and forward corners of the wrapper against the ends of the tablet, and means for folding the then outstanding flaps of the wrapper against the under surface of the tablet.

2. In a machine for folding a rectangular wrapper about a rectangular tablet, and in combination, a frame-work, a wrapper receptacle, a revoluble carriage, a plurality of sets of transfer members secured to the revoluble carriage, a reciprocating carriage, means for actuating the same, means for actuating the revoluble carriage so as to cause the transfer members to take a wrapper from the receptacle and place the same beneath a tablet in the said reciprocating carriage when the latter is adjacent the forward end of its travel, an upper and a lower plunger located respectively above and below the said tablet in the said carriage when the latter is in the position aforesaid, means for operating said plungers to cause the lower plunger to rise beneath the wrapper to support the tablet and then to cause both the upper and lower plungers to descend and carry the said tablet and wrapper therewith, a trough member having a forwardly projecting lid and a slide carried in guides, between the ends of which lid and slide the said tablet and wrapper pass during the descent of the tablet to fold upwardly the sides of the wrapper against the sides of the tablet, means for then folding down one side of the wrapper over the top of the tablet, means for advancing the tablet through the said trough member to fold down the opposite side of the wrapper on the top of the tablet, means for folding down the upper projecting ends of the wrapper onto the ends of the tablet, means for tucking in the rear and forward corners of the wrapper against the ends of the tablet, and means for folding the then outstanding flaps of the wrapper against the under surface of the tablet.

1,110,134. MOTOR-VEHICLE CONSTRUCTION. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Dec. 21, 1910, Serial No. 598,540. Divided and this application filed May 18, 1914. Serial No. 839,234. (Cl. 21—90.)

1. In an electric motor vehicle, the combination with a vehicle frame, a wheeled support for the front end of said frame, and a wheeled support for the rear end of said frame including a rear axle having a housing with live axle sections and differential mechanism incased thereby, of a ball and socket universal joint supported by said frame, an electric motor arranged entirely between said ball and socket joint and said differential mechanism and having its armature shaft disposed longitudinally of said frame, the said universal joint being arranged in alinement with the armature shaft of said motor and supporting the motor from its front end, gearing connections between the rear end of said armature shaft and said differential mechanism, and a rigid support between the motor casing and said rear axle housing whereby the motor casing and axle housing always move together as a unitary structure.

2. In an electric motor vehicle, the combination with a vehicle frame and a rear axle for supporting the same at its rear end, said rear axle having a housing with live axle sections and differential mechanism incased thereby, of an electric motor rigidly connected to and supported at its rear end by said housing and having its armature shaft disposed longitudinally of the frame, gearing connections between the rear end of said armature shaft and said differential mechanism, and a universal joint supporting the motor at its front end, one element of said joint being connected with the motor and arranged in alinement with the armature shaft of the motor and entirely in front thereof, and the other element of said joint being connected to said frame.

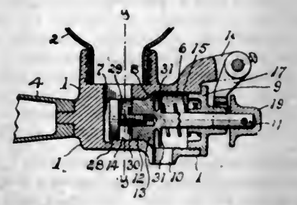
3. In an electric motor vehicle, the combination with a rear axle mechanism including a housing with live axle sections and differential mechanism incased thereby, and a vehicle frame yieldingly supported upon said housing, of a universal joint suspended from said frame to move relatively thereto and arranged in the vertical longitudinal plane of said differential mechanism, an electric motor arranged entirely between said universal joint and said rear axle mechanism, said motor being supported at its front end by said universal joint, and having the axis of its armature shaft extending through said universal joint, a driving connection between the rear end of said armature shaft and said differential mechanism, and a rigid connection between said motor and said rear axle housing, whereby the motor casing and axle housing always move together as a unitary structure.

4. In an electric motor vehicle, the combination with a vehicle frame, a wheeled support for the front end of said frame, and a wheeled support for the rear end of said frame including a drive axle having a housing with live axle sections and differential mechanism incased thereby, of an electric motor having its armature shaft arranged longitudinally of said frame, gearing connections between said armature shaft and said differential mechanism, means connecting the motor casing and axle housing together so that they will swing together up and down and laterally relatively to said frame as a unitary structure, a ball and socket universal joint disposed co-axially with the armature shaft of said motor and entirely at one end of said motor, the said ball being connected to move with said motor casing about the axis of said armature shaft, and means connecting said socket and said frame.

5. In an electric motor vehicle, the combination with a vehicle frame, a wheeled support for the front end of said frame, and a wheeled support for the rear end of said frame including a drive axle having a housing with live axle sections and differential mechanism incased thereby, of an electric motor having its armature shaft arranged longitudinally of said frame, gearing connections between said armature shaft and said differential mechanism, means connecting the motor casing and axle housing together so that they will move together longitudinally and laterally of said frame as a unitary structure, a ball and socket universal joint disposed co-axially with the armature shaft of said motor and entirely at one end of said motor, the said ball being connected to move with said motor casing about the axis of said armature shaft, and means swingably connecting said socket to said frame.

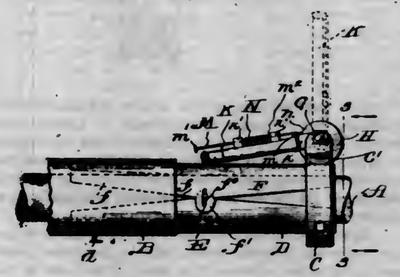
[Claims 6 to 14 not printed in the Gazette.]

1,110,135. LIQUID-SOAP HOLDER. JAMES F. HENDERSON, Detroit, Mich., assignor to National Soap Holder Co., Detroit, Mich., a Corporation of Michigan. Filed Dec. 18, 1911, Serial No. 666,540. (Cl. 221—105.)



In a liquid soap holder, the combination of a casing having a bore formed therein providing communicating inner and outer chambers, said outer chamber having a discharge opening and said inner chamber a large inlet opening, a receptacle arranged above said casing and having a wide outlet communicating with the inlet opening of the inner chamber of said casing, a valve member extending into the inner chamber and in proximity to the edge thereof, said member having a tapered portion adapted to seat at the junction of said inner and outer chamber, an adjustable head carried by the inner end of said member and spaced from the inner end of the inner chamber of said casing and coöperating with said member in providing an annular slot capable of having its area increased and decreased by adjusting said head, said slot being in communication with the inlet opening of the inner chamber of said casing and adapted to receive material from the inlet opening and the space between said head and the end wall of said inner chamber, a spring in the outer chamber to normally hold said valve member in a closed position, a stem on the valve member extending outward through the end of the outer chamber for moving the valve member against the action of said spring, and a peripheral flange on said stem in parallelism with the end of said member and shielding said spring as said member is seated.

1,110,136. APPARATUS FOR HOLDING PAPER-ROLLS. JOSEPH HUNDHAUSEN, Schofield, Wis., assignor of one-half to Albert Kahn, Wausau, Wis. Filed Apr. 22, 1914. Serial No. 833,739. (Cl. 242—72.)



1. A device for connecting hollow cores to a shaft, comprising a collar adapted to slip over said shaft, two holding members loosely pivoted together and having their heels projecting into said collar, gripping jaws near the forward end of said holding members, and a cam journaled in said collar and adapted to press the heels of said jaws toward each other, substantially as described.

2. A device for connecting hollow cores to a shaft, comprising a collar adapted to slip over said shaft, two holding members loosely pivoted together and having their heels projecting into said collar, said holding members being provided with fulcrums adapted to engage said shaft, gripping jaws near the forward end of said holding members, and a cam journaled in said collar and adapted to press the heels of said jaws toward each other, substantially as described.

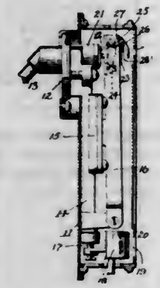
3. A device for connecting hollow cores to a shaft, comprising a collar adapted to slip over said shaft, two holding members loosely pivoted together and having their heels projecting into said collar, gripping jaws near the forward end of said holding members, and an eccentric journaled in said collar and adapted to press the heels of said jaws toward each other, with means for turning said eccentric, substantially as described.

4. A device for connecting hollow cores to a shaft, comprising a collar adapted to slip over said shaft, two holding members loosely pivoted together and having their heels projecting into said collar, said holding members being provided with fulcrums adapted to engage said shaft, gripping jaws near the forward end of said holding members, and an eccentric journaled in said collar and adapted to press the heels of said jaws toward each other, with means for turning said eccentric, substantially as described.

5. A device for connecting hollow cores to a shaft, comprising a collar adapted to slip over said shaft, two holding members loosely pivoted together and having their heels projecting into said collar, gripping jaws near the forward end of said holding members, and an eccentric journaled in said collar and adapted to press the heels of said jaws toward each other, with means for turning said eccentric, said means comprising a lever hinged to the pivot of said eccentric, and a ratchet and pawl connection between said lever and said eccentric, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,110,137. THERMOSTATIC CONTROL DEVICE. CARL F. JOHNSON, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 19, 1914. Serial No. 825,819. (Cl. 236—8.)



1. The combination with a motor actuated control device including a responsive element, a motor controlled thereby, a pilot valve, and a quick throw device forming an operative connection between said motor and valve, of an indicator adapted to be actuated by the operation of said quick throw device to indicate the position of the pilot valve.

2. The combination with a motor actuated control device including a responsive element, a motor controlled thereby, a pilot valve, and a quick throw device forming an operative connection between said motor and valve, of an indicator adapted to be actuated by the movement of said pilot valve under the influence of said quick throw device.

3. The combination with a motor actuated control device including a responsive element, a motor controlled thereby, an actuator adapted to be moved by said motor, a pilot valve and a quick throw device forming an operative connection between said actuator and valve, of an indicator mounted on said actuator and adapted to be operated by the operation of said quick throw device to indicate the position of the pilot valve.

4. The combination with a motor actuated control device including a responsive element, a motor controlled thereby, a pivoted motor arm adapted to be moved by said motor, a pilot valve, and a quick throw device forming an operative connection between said arm and valve; of a case provided with an aperture; and an indicator dial having indicating legends, pivoted on said motor arm and adapted to be moved by the actuation of said quick throw device under movements of said arm to present one or another legend at said aperture to indicate the position of said pilot valve.

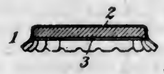
5. The combination with a motor actuated control device including a responsive element, a motor controlled thereby, a pivoted motor arm adapted to be moved by said motor, a pilot valve, and a quick throw device forming an operative connection between said arm and valve; of a case provided with an aperture; and an indicator dial having indicating legends, pivoted on said motor arm and adapted to be engaged and moved by a portion of said pilot valve to present one or another legend at said aperture and indicate the position of said pilot valve.

[Claim 6 not printed in the Gazette.]

1,110,138. VESSEL-SEAL. JOHN A. JONES, New York, N. Y. Filed Oct. 16, 1909. Serial No. 522,941. (Cl. 215—10.)

1. A vessel seal, comprising a flanged metal cap having at its inner side a cavity constituting a mold space, and a molded layer of compressible and expansible solid sealing material formed under pressure in said cap and forced by said pressure into intimate union with the cap to form a unitary article.

2. A vessel seal, comprising a flanged metal cap having at its inner side a cavity constituting a mold space, and a molded layer of compressible and expansible solid composition sealing material formed under pressure in said cap and forced by said pressure into intimate union with the cap to form a unitary article.



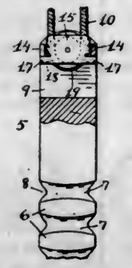
3. A vessel seal, comprising a flanged metal cap having at its inner side a cavity constituting a mold space, and a molded layer of compressible and expansible solid composition cork formed under pressure in said cap and forced by said pressure into intimate union with the cap to form a unitary article.

4. A vessel seal, comprising a flanged metal cap having at its inner side a cavity constituting a mold space, and a layer of sealing composition molded in said cap under pressure and forced by said pressure into intimate union with the cap, said composition being a substantially homogeneous but soft elastic and readily compressible body of solid gas-tight cork made up of granules permanently united with one another and with the metal cap by thin coatings of a binder, said body being also substantially incapable of being dissolved, disintegrated or distorted by pasteurization.

5. A vessel seal, comprising a flanged metal cap having at its inner side a cavity constituting a mold space, and a layer of sealing composition molded in said cap under pressure and forced by said pressure into intimate union with the cap, said composition being a substantially homogeneous but soft elastic and readily compressible body of solid gas-tight cork made up of granules permanently united with one another and with the metal cap by thin coatings of a binder, said body being also substantially incapable of being dissolved, disintegrated or distorted by pasteurization and substantially incapable of shrinkage when in use.

[Claim 6 not printed in the Gazette.]

1,110,139. SASH-BALANCE. JOHN T. JONES, Longview, Tex. Filed Feb. 14, 1914. Serial No. 818,814. (Cl. 16—20.)



In a sash balance, the combination with a weight having at its upper portion a recess having a lateral opening, and stop means at the upper portion of said recess, of a laterally insertible and removable pulley frame designed to be first passed into said recess through said lateral opening and then raised in said recess, said pulley frame having in raised position engagement with said stop means to prevent movement of said frame out of said recess to limit the upward movement of said frame in said recess.

1,110,140. METHOD OF MAKING FIBER SHEETS. LEWIS N. JONES, Elsmere, Del. Filed Jan. 28, 1914. Serial No. 815,053. (Cl. 154—34.)

1. The method which consists in the formation of a laminated sheet of parchmentized material; washing said sheet to remove the chemicals therein; and thereafter drying the sheet, the edges of said sheet being beveled at some time between its formation and the drying operation.

2. The method which consists in superposing a series of layers of parchmentized paper to form a laminated sheet; washing said sheet to remove the chemicals therefrom; beveling the edges of the sheet; and thereafter drying the sheet.

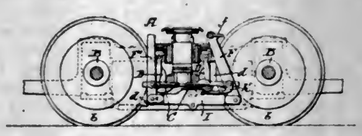
3. The method which consists in forming a laminated sheet of parchmentized fibrous material; subjecting said sheet to a plurality of washing operations to remove the chemicals therefrom; beveling the edges of the sheet between two of the washing operations; and thereafter drying the sheet.

4. The method which consists in chemically treating vegetable fiber in sheet form to vulcanize the same; forming a sheet from a series of layers of said chemically treated material; washing said sheet to remove the chemicals therefrom; beveling the edges of the sheet; and thereafter drying the sheet.

5. The method which consists in forming a cylinder of layers of parchmentized paper; cutting said cylinder parallel with its axis to form a laminated sheet; washing said sheet to remove the chemicals therefrom; beveling the edges of the sheet; and drying the sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,110,141. SLACK-ADJUSTER FOR CAR-BRAKES. LOUIS A. KLING, Elizabeth, N. J., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 20, 1912. Serial No. 698,579. (Cl. 188—50.)



1. The combination in a slack adjuster for car brakes, of two brake levers; means for operating one brake lever; a casing attached to one of said levers and a toothed bar attached to the other lever; a pawl pivotally mounted on the casing adapted to hold the bar in the position to which it is adjusted; an additional pawl; means connecting the last mentioned pawl with the operating brake lever so that said pawl is moved when the brakes are applied; a head swiveled to the casing so that on detaching the bar from its brake levers, the casing can be inverted to allow the pawls to drop clear of the teeth of the rack bar.

2. The combination in a slack adjuster for car brakes, of two brake levers; means for actuating one of said levers; a casing attached to one of said levers; a rack bar mounted in the casing and attached to the other lever; two pawls pivotally mounted in the casing; one pawl being set in advance of the other; a rock shaft in the casing having two arms; a pivot pin extending from one arm to the other; three pawls mounted on the pin and arranged to engage the teeth of the rack bar; said pawls being set one in advance of another; an arm attached to the rock shaft on the outside of the casing; a link connecting the arm to the lever which is attached to the casing, said casing having an opening therein; and a cap closing said opening.

1,110,142. CHRISTMAS-TREE HOLDER. LUTHER E. PINER, Chicago, Ill. Filed May 12, 1913. Serial No. 766,917. (Cl. 211—38.)

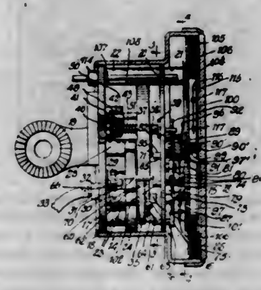
1. A tree holder, comprising a base, a water receptacle mounted on said base and adapted to receive the lower end of the trunk of a tree, a plurality of bracing members connected with said base, said bracing members extending upwardly from said base and over and above said receptacle, the upper end portions of said bracing members being resilient, radially movable and adapted to be spread apart by the trunk of a tree upon the insertion of the same therebetween and to yieldingly bear against the trunk of said tree above the plane of said base; and means connecting said receptacle with said base for holding said receptacle from lateral movement on said base.

2. A tree holder, comprising a base, a water receptacle mounted on said base and adapted to receive the lower end of the trunk of a tree, a plurality of bracing members connected with said base at the outer margin thereof, said bracing members extending upwardly and inwardly from said base and over and above said receptacle, the upper end portions of said bracing members being resilient, radially movable and adapted to be spread apart by the trunk of a tree upon the insertion of the same therebetween and to yieldingly bear against the trunk of said tree above said receptacle, an upright member secured to the bottom wall of said receptacle and adapted to engage the lower end of the trunk of said tree, for preventing lateral movement thereof with respect to said base, and means connecting said receptacle with said base for holding said receptacle from lateral movement on said base.

3. A device of the character described, comprising a base, a bracing member connected with and rising from said base, said member including radially movable, resilient parts adapted to surround and to yieldingly engage the trunk of a tree above the plane of said base, and a water receptacle mounted on said base and in which the lower end of the trunk is located, said base being provided with integral upright parts adapted to engage the side walls of said receptacle.

4. A device of the character described, comprising a base, a plurality of elastic bracing members rising from said base, the upper end portions of said bracing members being radially movable and adapted to be spread apart upon the insertion of the trunk of a tree therebetween and to yieldingly engage the trunk of said tree, a water receptacle mounted on said base within said bracing members and in which the lower end of said trunk is adapted to be located, said base being provided with upright parts adapted to engage said receptacle and hold the same from lateral movement on said base, and means engaging the lower end of said trunk, to prevent lateral movement thereof with respect to said base.

1,110,143. SPEEDOMETER. ARTHUR F. POOLE, Chicago, Ill. Filed Apr. 12, 1911. Serial No. 620,594. (Cl. 73—123.)



1. In a speedometer, in combination, a revolving cam, means for revolving said cam, a movable dog carried by said cam and having an active and an inactive position, a time element for moving said dog from its active to its inactive position, and setting means advanced by said dog when it is in its active position.

2. In a speedometer, in combination, a revolving cam, means for revolving said cam, a movable dog carried by said cam and having an active and inactive position, a time element controlling the position of said dog, means for moving said dog to its inactive position, setting means advanced by said dog in its active position, and setting means for said dog.

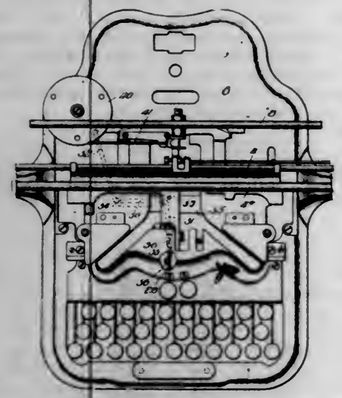
3. In a speedometer, in combination, a revolving cam, means for revolving said cam, a movable dog carried by said cam and having an active and an inactive position, a time element controlling the position of said dog, setting means advanced by said dog in its active position, a one-way clutch for said setting means, and indicating means, the position of which is determined by said setting means, said setting means and indicating means being connected.

4. In a speedometer, in combination, a revolving cam, means for revolving said cam, a movable dog carried by said cam and having an active and an inactive position, a time element controlling the position of said dog, setting means moved by said dog when in its active position once in every revolution thereof, a clutch for holding said setting means in position, said dog releasing said clutch during each revolution, and indicating means, the position of which is determined by said setting means.

5. In a speedometer, in combination, a revolving cam, means for revolving said cam, a movable dog carried by said cam and having an active and an inactive position, a time element controlling the position of said dog, setting means moved by said dog when in its active position once every revolution thereof, a clutch for holding said setting means in position, said dog releasing said clutch during each revolution, indicating means, the position of which is determined by said setting means, and a clutch for holding said indicating means in position, said dog releasing said last-named clutch during each revolution thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,110,144. COLUMN-STOP MECHANISM FOR TYPE-WRITING MACHINES. CHARLES CLARENCE POOLE, Winnetka, Ill., assignor to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 19, 1914. Serial No. 812,958. (Cl. 197—64.)



1. In a typewriting machine, the combination of a base-frame, key-levers mounted thereon, a shift-frame, a paper-carriage movable on the shift-frame, a spring-barrel mounted on the base-frame, column-stop mechanism for releasing the carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever mounted on the shift-frame, brake-mechanism adapted to act on the spring-barrel, and means for actuating the brake-mechanism embracing motion-transmitting means mounted on the base-frame at a distance below the said key-lever, and a vertically arranged link having pivotal connection at its upper end with said key-lever and at its lower end with the motion-transmitting means, the upper end of said link being movable forwardly and backwardly with the said key-lever in the shifting movement of the shift-frame.

2. In a typewriting machine, the combination of a base-frame, key-levers, a shift-frame, a paper-carriage movable on the shift-frame, a spring-barrel mounted on the base-frame, and column-stop mechanism for releasing the carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever mounted on the shift-frame, brake-mechanism mounted on the base-frame and acting on the spring-barrel, and means for actuating the brake-mechanism embracing a motion-transmitting lever mounted on the base-frame below the said key-lever, said lever having a vertically swinging arm located below the said key-lever, and a vertically arranged link pivoted at its upper end to said key-lever and at its lower end to the said arm, the upper end of said link being movable forwardly and backwardly with the said key-lever in the shifting movement of the shift-frame.

3. In a typewriting machine, the combination of a hollow base consisting of a horizontal top-wall and side walls, key-levers located below the level of the top-wall, a shift-frame mounted on the base above the top-wall, a paper-carriage mounted on the shift-frame, means actuating the carriage for letter-spacing, embracing a spring-barrel mounted on the top-wall of the base, a column-stop key-lever mounted on the shift-frame, brake-mechanism for the spring-barrel, and means for actuating said brake-mechanism from the column-stop key-lever, comprising a pivoted actuating lever mounted within the hollow base below the said key-lever, and having vertically swinging arms, one of which extends forwardly to a point vertically below the said key-lever, and the other of which extends rearwardly to a point below the brake-mechanism, a vertically arranged link having pivotal connection at its upper end with the said key-lever, and at its lower end with the forwardly extending arm of the actuating lever, and means for transmitting motion from the rearwardly extending arm of said actuating lever to the brake mechanism.

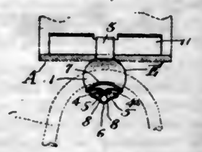
4. In a typewriting machine, the combination with a hollow base having a top-wall, of a shift-frame, a paper-carriage mounted on the shift-frame, means actuating the carriage for letter-spacing, embracing a spring-barrel mounted on the rear part of the base above the top-wall, a column-stop key-lever mounted on the shift-frame, a brake-member connected with the top plate of the base and adapted to bear against the lower surface of the spring-barrel, a pivoted actuating lever mounted on the machine frame below the top plate and having vertically swinging arms, one of which extends forwardly to a point below the column-stop key-lever and the other of which extends rearwardly to a point below the spring-barrel, a vertically arranged link pivotally connected at its upper end with said key-lever and at its lower end with the forwardly extending arm of the actuating lever, and a vertically arranged rod connected at its lower end with the rearwardly extending arm of said actuating lever and extending upwardly through the top-plate of the base, with its upper end in position to act on said brake-member.

1,110,145. CORD-EYE FOR CORD-BACK SUSPENDERS. GEORGE E. PRENTICE, New Britain, Conn. Filed Dec. 9, 1913. Serial No. 805,627. (Cl. 241—19.)

1. A cord eye comprising a housing having side walls and a socket aperture at its lower end, and a rocker in said housing, said rocker having a cord support at its upper end and a shank on its under side loosely engaging said socket aperture.

2. A cord eye comprising a housing having side walls, a platform at its lower end provided with a socket aperture, a rocker in said housing having a cord support at its upper end and a shank on its under side loosely engaging said socket aperture, and said housing having an outer inclosing wall covering and protecting, said socket aperture and the end of the shank on the rocker.

3. A cord eye comprising a housing having side walls, an end wall from the two opposite edges of which said side walls rise, and two wings extending from the other two edges of said end wall and folded toward each other to form with the end wall a socket chamber; a socket aperture through the top of said socket chamber, and a cord supporting rocker having a shank on its under side loosely fitting said socket aperture and extending therethrough into the socket chamber.

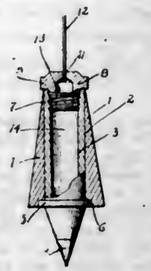


4. A cord eye comprising a housing having side walls, an end wall from the two opposite edges of which said side walls rise, and two wings extending from the other two edges of said end wall and folded toward each other to form with the end wall a socket chamber, a socket aperture through the top of said socket chamber, and a cord supporting rocker having a shank on its under side loosely fitting said socket aperture and extending therethrough into the socket chamber, the end of said shank being formed with a head within said socket chamber to prevent the shank from being dislodged from said socket aperture.

5. A cord eye comprising a housing made of a single piece of sheet metal forming side walls, an end wall from the two opposite edges of which said side walls rise, and two wings extending from the other two edges of said end wall and bent upwardly and inwardly into the housing and made with a socket aperture, said wings and end wall constituting a socket chamber, and a rocker made of a single piece of sheet metal the ends of which are bent toward each other and downwardly to form a shank on the under side of the rocker, said shank extending through said socket aperture into the socket chamber.

[Claim 6 not printed in the Gazette.]

1,110,146. PLUMB-BOB. JOSEPH S. RICE, Andalusia, Pa. Filed Aug. 29, 1910. Serial No. 579,373. (Cl. 33—216.)



1. A plumb bob consisting of a pair of hollow members, one within the other, the outer of said members having its wall thicker at the bottom than at the top, the inner of said members being hollow, and a solid point projecting from said outer member, and a cap screw threaded into the upper end of said inner member whereby said members are held together.

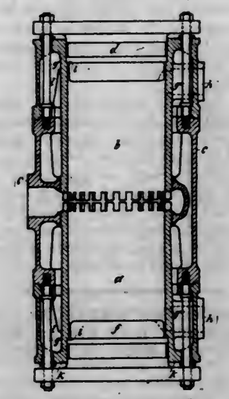
2. A plumb bob consisting of a pair of hollow members, one within the other, the outer of said members having its wall thicker at the bottom than at the top, the bottom of said outer member having a recess, a flange on said inner member adapted to seat in said recess, and a cap for said inner member adapted to hold said members together.

3. A plumb bob consisting of a pair of hollow members, one within the other, the outer of said members having its wall thicker at the bottom than at the top, the bottom of said outer member having a recess, a flange on said inner member adapted to seat in said recess, and a cap for said inner member adapted to hold said members together, said cap being larger in diameter than the upper end of said outer member.

1,110,147. OIL-BURNER. FRANK L. SALTZMAN and ERNEST J. CROCKETT, Oakland, Cal. Filed June 19, 1912. Serial No. 704,695. (Cl. 158—75.)

A tubular burner nozzle for oil and the like comprising in combination, an outer casing, an inlet at one end of said casing for the introduction of steam, an outlet on the opposite end of said casing for the production of a flame, and an oil pipe entering said casing at the same end as the steam and extending nearly to the other end thereof, said oil pipe being provided with apertures opening substantially at right angles to the axis of the nozzle, and a cylindrical member closing the end of said oil tube and being intermediate said apertures and said outlet, said cylindrical member substantially filling the cross section of said nozzle, except for spiral grooves in its face through which oil and steam may escape.

1,110,148. CYLINDER. KARL SCHWARZ, Nuremberg, Germany, assignor to Maschinenfabrik Augsburg, Nurnberg A.-G., Nuremberg, Germany. Filed Mar. 18, 1913. Serial No. 755,069. (Cl. 123—61.)



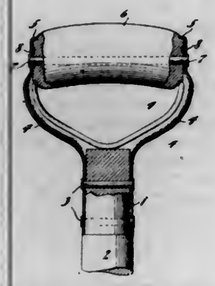
1. A cylinder for double acting two-cycle internal combustion engines composed of two parts, each part consisting of a single piece having an end portion to form a water jacket, and a separate middle portion in the outer wall, two covers for the cylinder ends, and long screw bolts passing each through one cover, the end portion of one cylinder part and a portion of the water jacket and being secured in the middle portion of the water jacket wall.

2. A cylinder for double acting two-cycle internal combustion engines composed of two parts, each part consisting of a single piece having an end portion to form a water jacket, and a separate middle portion in the outer wall, two covers for the cylinder ends, long screw bolts passing each through one cover, the end portion of one cylinder part and a portion of the water jacket and being secured in the middle portion of the water jacket wall, and flanges connecting the outer and inner cylinder walls.

3. A cylinder for double acting two-cycle internal combustion engines composed of two parts, each part consist-

ing of a single piece having an end portion to form a water jacket, and a separate middle portion in the outer wall, two covers for the cylinder ends, and long screw bolts passing each through one cover, the end portion of one cylinder part and a portion of the water jacket and being secured in the middle portion of the water jacket wall, flanges connecting the outer and inner cylinder walls, and ribs reinforcing the said flanges to aid in the transmission of strain.

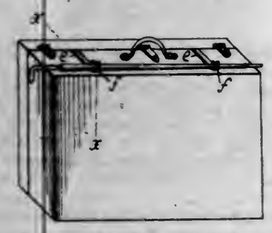
1,110,149. TOOL-HANDLE. FREDERICK SKELTON and WALTER E. SKELTON, Hamilton, Ontario, Canada, assignors of one-third to Edward W. McCarty, New York, N. Y. Filed Nov. 15, 1913. Serial No. 801,118. (Cl. 55—116.)



1. A D handle for tools comprising a single piece of sheet metal having a cylindrical split lower portion curved to form a stem receiving socket, two semi-tubular arms integral with and curving upwardly from the upper portion of the socket, the longitudinal edges of the semi-tubular arms and portions of the upper edges of the socket being folded inwardly against the adjoining surfaces of the arms and socket and forming continuous reinforcements from the end of one arm to that of the other across the upper edge of the socket.

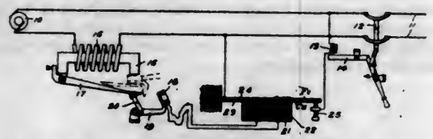
2. A handle for tools comprising, in combination with a stem and hand-grip, a bifurcated sheet-metal member having a stem-receiving socket provided with a single longitudinal slit, two arms integral with the socket and folded along substantially their central longitudinal lines and branching from the upper end of the socket and having their longitudinal edges turned inwardly against their sides, and an inwardly open substantially cup-shaped member on the end of each arm adapted to receive and embrace the respective end of the hand-grip.

1,110,150. TRAVELER'S UMBRELLA-CARRIER. JOSEPH F. SLAVIN and JOHN MENDEL, New York, N. Y. Filed June 30, 1913. Serial No. 776,555. (Cl. 190—60.)



An umbrella carrier adapted for use with a suit case, comprising a holder including a pair of parallel transversely positioned arms having hook portions for engagement with the jaws of the case, a clasp located at the end of each arm, one of the clasps being of smaller diameter than the other to grasp an umbrella, a lateral bar extending from each of the arms, a coupling to slidingly connect the bars together, and stops to admit the movement of the bars.

1,110,151. PROTECTIVE DEVICE. HALFDAN A. STEEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 22, 1911. Serial No. 639,967. (Cl. 175—270.)



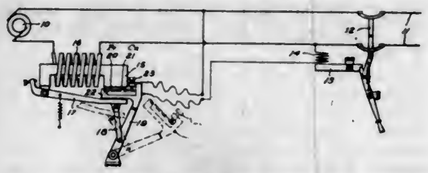
1. In an electrically operated time element device, an exciting coil, an armature movable thereby upon sufficient energization thereof, and a secondary coil which upon a movement of the armature by the exciting coil is rendered operative as the secondary of a transformer of which the exciting coil is the primary.

2. In combination, a core, a movable armature therefor, a primary coil wound on said core, a secondary coil, said secondary coil being movable by said armature into and out of position to have currents induced therein.

3. In an electrically-operated time element device for a circuit-breaker, an electromagnet comprising a current-carrying coil, and a secondary coil normally non-inductively related to said first coil and automatically inductively related thereto in response to the passage of current of a predetermined value in said first coil.

4. In apparatus for actuating a time element device, a magnetic element, a current-carrying coil associated with said magnetic element, an electric circuit comprising a coil normally non-inductively related to said magnetic element and means operatively related to said first coil for rendering said second coil operative to absorb energy derived from said magnetic element on the passage of current of a predetermined value through said first coil.

1,110,152. ELECTROMAGNETICALLY-OPERATED THERMOSAT. HALFDAN A. STEEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 22, 1911. Serial No. 639,968. (Cl. 175—270.)



1. In combination, a metal thermostat, an alternating current magnet, the thermostat being movable into and out of effective position relative to said magnet for the production of eddy currents in the metal thereof.

2. In combination, a firmly supported thermostatic element which is distorted on being heated, an alternating current magnet and an armature therfor adapted to be drawn toward a pole face of said magnet, said thermostatic element being movable into the magnetic field of said magnet and armature to cause the production of eddy current in the thermostatic element and the heating of the same, and a contact coöperating with said thermostatic element, the engagement of said contact with said thermostatic element depending upon the amount of distortion of said thermostatic element.

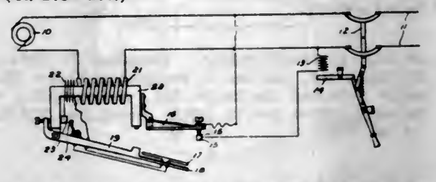
3. In a circut interrupting device, a thermostat, and an electromagnet comprising a current carrying coil, means operatively related to said coil to move said thermostat into position to be heated by energy derived from said coil upon predetermined current flow in said coil.

4. In a circuit interrupting device, a thermostat, and an electromagnet comprising a current-carrying coil, said electromagnet being effective upon flow of current of a predetermined value in said coil to move said thermostat into position to be heated by energy derived from said coil.

5. A thermostatic relay, comprising a magnetizing coil, a movable thermostat, and means operated by said coil upon sufficient energization thereof for moving said thermostat into a position to be heated by the energy taken by said coil.

[Claims 6 to 9 not printed in the Gazette.]

1,110,153. THERMOSTAT. HALFDAN A. STEEN, Milwaukee, Wis., asignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 22, 1911. Serial No. 639,970. (Cl. 175—270.)



1. In a circuit protecting device, a thermostat, a heating coil therefor, said heating coil being movable relatively to the thermostat, and means responsive to abnormal conditions in the circuit to be protected for moving the heating coil into proximity to the thermostat.

2. In combination, a thermostat, a heating coil therefor carrying a current which varies in the same sense as does that in the circuit to be protected, and means for moving said heating coil relatively to the thermostat.

3. In combination, a thermostat, a heating coil therefor, said heating coil being movable relatively to the thermostat, a device for moving said heating coil into proximity to the thermostat when the current in a circuit to be protected reaches an abnormal value, and a coil in inductive relation to said device for energizing said heating coil.

4. In combination, a thermostat, a heating coil therefor, and means for controlling the distance between the heating coil and thermostat by variations in the current in a circuit to be protected.

5. In combination, a thermostat, a heating coil therefor, and means for controlling both the distance between the heating coil and the thermostat and the current in the heating coil by variations in the current in a circuit to be protected.

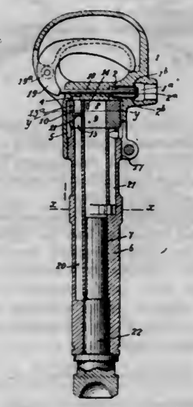
[Claims 6 to 8 not printed in the Gazette.]

1,110,154. GARMENT-CLASP. MORRIS STEINBERG, Duluth, Minn. Filed June 5, 1911. Serial No. 631,373. (Cl. 24—258.)

1. A garment clasp comprising two spring members permanently associated, one of said members having a circular opening, an inwardly convexed portion carried by the other member and of a size to extend through the opening in the first member, a lever pivoted to the member carrying the convexed portion and having a cam face adapted to engage the other member and force the two members together and the lower free end of said lever having a cup-shaped portion adapted to receive the convexed portion of the member and that portion of the garment thereon.

2. A garment clasp comprising two spring members permanently associated, one of said members having a circular opening surrounded by an outwardly extending flange, an inwardly convexed portion carried by the other member and adapted to extend through the opening beyond the flange, a lever pivoted to the member carrying the convexed portion and having a cam face adapted to engage the other member and force the two members together, and the lower free end of the said lever having a cup-shaped portion adapted to receive the flange and convexed portion of the member and that portion of the garment thereon.

1,110,155. PNEUMATICALLY-OPERATED PERCUSSIVE HAND-TOOL. CLEMENT HENRY STEVENS, Las Palmas, Grand Canary, Canary Islands, assignor of one-half to Summers Hunter, Wallsend-on-Tyne, England. Filed July 7, 1913. Serial No. 777,750. (Cl. 121—20.)



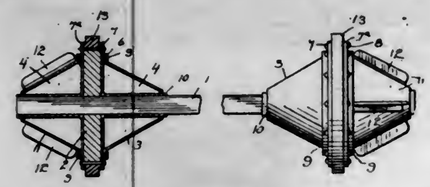
1. In a pneumatically-operated hand tool, the combination of a hollow cylinder having an air chamber and a passageway leading therefrom; members located within said air chamber and centrally bored to axially register with the hollow cylinder and provide therewith a piston working chamber; a piston operable in said chamber; said members provided with a recess, and having ports communicating with said piston working chamber and said passageway; and an air-controlled valve automatically operable in said recess to alternately open and close said ports whereby to operate the piston, and said piston working chamber having an exhaust opening, substantially as described.

2. In a pneumatically-operated hand tool, the combination of a hollow cylinder having an air chamber and a passageway leading therefrom to the head end of the cylinder; members located within said air chamber and having a plurality of registering apertures providing air ports, said ports communicating with said cylinder passageway and the piston working chamber at the other end of the cylinder, and a recess between said members communicating with said ports; a piston; a valve operable within said recess; the ports for admitting air to said passageway having openings of relatively less cross section than the opening to the ports for admitting air to said other end of the cylinder whereby to produce variable pressure on said valve and effect the actuation of the same during the reciprocation of the piston; and said piston working chamber having an exhaust opening, substantially as described.

3. In a pneumatically-operated hand tool, the combination of a cylinder providing a piston working chamber and having an air chamber, and a passageway providing communication between the air chamber and the piston chamber; a controlling valve for said air chamber; a piston operable in the piston chamber; a pair of blocks located within said air chamber and having registering pairs of ports and registering ports intermediate said pairs of ports, the adjacent faces of said blocks being cut away to provide a recess providing communication be-

tween the middle and inner pair of said ports; a plate valve mounted to operate within said recess and automatically operable to open and close communication between said ports whereby to admit compressed air into said piston working chamber, and said piston chamber having an exhaust opening, substantially as described.

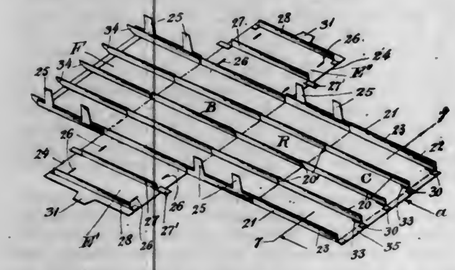
1,110,156. WHEEL. JAMES W. STEWART, Bartonville, Ill. Filed Dec. 23, 1913. Serial No. 808,344. (Cl. 115—19.)



1. A buoyant wheel comprising a disk, frusto-conical air tight containers on opposite sides of said disk, propeller vanes on one of said containers, rings for securing the containers in place on opposite sides of the disk and a tire secured between said rings.

2. A buoyant propeller wheel for auto-vehicles comprising a rectangular tubular bearing through which the axle is designed to extend, a disk mounted on said axle, frusto-conical air containing elements, secured one at each side of said disk, said containers having propeller vanes connected thereto, rings secured on opposite sides of said disk for holding the air containers in place, and a tire disposed between said rings.

1,110,157. SHIPPING-CASE. ROBERT J. STEWART, Mount Clemens, Mich. Filed Apr. 5, 1911. Serial No. 618,900. (Cl. 220—8.)



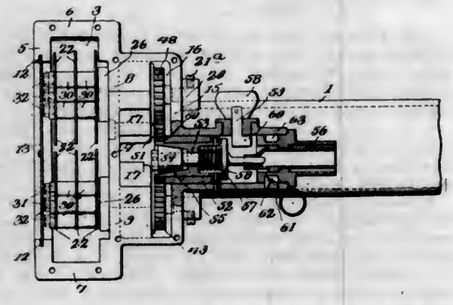
1. A packing case comprising a pair of foldable adjacent wall sections formed of a single piece of sheet metal, each of said sections being crimped to form closed-in ribs traversing both sections, said ribs being cut at the fold line, adjacent rib ends being moved out of longitudinal alinement to permit folding of the sections with the continuity of the rib line of the folded sections substantially maintained.

2. A packing case having one or more of its inclosing walls crimped to form inwardly-projecting ribs, means for holding said rib-crimps against opening, and a partition plate having channeled side edges detachably engaging said ribs to form separate compartments in the case.

3. A packing case comprising alined adjacent wall-sections formed of a single piece of sheet metal, each of said sections being crimped to form inward ribs traversing all of said sections, said ribs being cut at the fold line, adjacent rib ends being moved out of longitudinal alinement to permit folding of the sections without materially affecting the continuity of the rib line of the folded sections, the edge of one end-section overlapping the margin of the opposite end-section, and means integral with the first named section for holding said sections in assembled position.

4. A packing case comprising alined adjacent wall and cover-sections formed of a single piece of sheet-metal, each of said sections being crimped to form inward ribs traversing all of said sections, said ribs being cut at the fold line, adjacent rib ends being moved out of longitudinal alinement to permit folding of the sections without materially affecting the continuity of the rib line of the folded sections, the margin of the cover-section overlapping the edge of the opposite wall-section and having slots, and tabs on said wall section passing through said slots and bent over the cover section for holding both sections in locked position.

1,110,158. COTTON-PICKER. THEODORE E. STRAUS, Baltimore, Md., assignor to Worthington Cotton Harvester Company, Baltimore, Md., a Corporation of Delaware Filed Oct. 2, 1912. Serial No. 723,519. (Cl. 56—117.)



1. A picking device comprising a casing having a picking mouth and intake passage, a rotating carrier mounted in said casing at one side of said picking mouth, a plurality of supports mounted in and supported by said carrier and projecting longitudinally therefrom into said picking mouth, and picker teeth mounted on said supports.

2. A packing device comprising a casing having a picking mouth and an intake passage, a rotating carrier mounted in said casing at one side of said picking mouth, picker supports mounted in and supported by said carrier and projecting longitudinally therefrom and picking fingers carried by said supports, said carrier having means for holding said fingers rigid while the cotton is being removed from the boll, and for releasing said fingers while the cotton is being stripped from said fingers.

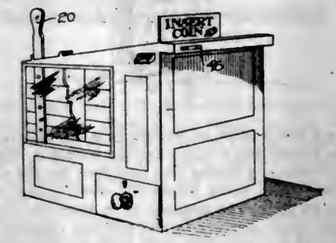
3. A picking device comprising a casing having a picking mouth and intake passage, a rotating carrier mounted in said casing at one side of said picking mouth, supports mounted in and supported by said carrier and projecting longitudinally therefrom into said said picking mouth, picker teeth mounted on said supports, and stripping devices for stripping the cotton from the fingers in said intake passage.

4. A picking device comprising a casing having a picking mouth and an intake passage, a rotating carrier mounted in said casing at one side of said picking mouth, picker supports mounted in and supported by said carrier and projecting longitudinally therefrom and picking fingers carried by said supports, said carrier having means for holding said fingers rigid while the cotton is being removed from the boll, and for releasing said fingers while the cotton is being stripped from said fingers, and stripping devices for stripping the cotton from said fingers in said intake passage.

5. A picking device comprising a casing having a picking mouth extending transversely of the casing, and an intake passage connected therewith, a picking device at each side of said intake passage, each picking device including a rotating carrier located at one side of the picking mouth, picker finger supports mounted in each carrier and projecting into the mouth, a plurality of picker fingers mounted on each support, and means for stripping the cotton from the picker fingers in said intake passage.

[Claims 6 to 13 not printed in the Gazette.]

1,110,159. CHANGE-MAKER. JOSEPH S. STRICKLER, Aliquippa, Pa. Filed Sept. 30, 1913. Serial No. 792,664. (Cl. 133—2.)



1. A device of the character described comprising a casing, a wall extending transversely through said casing, a lever hingedly secured adjacent said wall, two sets of plungers slidably mounted on said wall, one set of plungers being pivotally connected to the lever, projections formed on each of the plungers in the second mentioned set, levers pivotally mounted adjacent the lower edge of the wall, each of said levers being of a different length, a second set of levers coöperating with the first mentioned levers, ejectors slidably mounted adjacent the bottom of the casing, projections secured to each of said ejectors, coin stacks in direct alinement with the forward ends of the ejectors, means to conduct the coins to their respective stacks, the second set of levers being adapted to coöperate with the projections on the ejectors and force the bottom-most coin from its position beneath the coin stacks when the device is operated.

2. In a device of the character described a casing, coin assorting plungers slidably mounted in said casing, lever operating plungers directly opposite the coin assorting plungers and slidably mounted in said casing, coin conducting tubes adjacent the lever operating plungers, coin stacks at the lower ends of said tubes, a plurality of levers pivotally secured to said casing and adapted to be operated by the plungers, levers coöperating with the first mentioned levers, ejectors operated by the second mentioned levers and adapted to force the bottom-most coins from their position in the stacks, a cash drawer slidably mounted in the bottom of the casing, and a sweep adapted to be operated on each operation of the device and cause the topmost coin in each of the coin stacks to be deposited in the cash drawer after said stacks have attained a predetermined height.

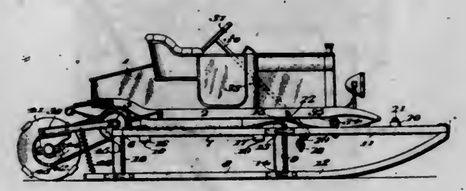
3. In a device of the character described a casing, means in said casing to assort coins of different denominations, coin conveying tubes coöperating with the assorting means, coin stacks at the lower ends of the coin conveying means, means operated by the assorting means to eject the bottom-most coins from their positions in the coin stacks, a cash drawer slidably mounted in the casing, a sweep adapted to sweep the top-most coins from their positions in the coin stacks after said stacks have attained a certain height, and means to operate said sweep upon each operation of the device.

4. In a device of the character described a casing, coin assorting means in said casing, coin conveying tubes co-operating with the coin assorting means, coin stacks at the lowermost extremities of the coin conveying tubes, means to eject the lowermost coins from their positions in the stacks, a cash drawer slidably mounted in the casing, a sweep adapted to force the topmost coins from their positions on the stacks after they have attained a certain height, an operating lever pivotally secured to the casing and extending upwardly through a slot therein, and means secured to said operating lever to cause the peed to operate when the device is in use.

5. In a device of the character described a casing, coin assorting means mounted in said casing, coin stacks mounted in said casing and coöperating with the coin assorting means, coin ejectors slidably mounted beneath the coin stacks and adapted to force the bottom-most coins from their positions therein, a sweep slidably mounted across the top of the coin stacks, a cash drawer slidably mounted in the casing, said sweep being adapted to sweep the topmost coins from their positions on the coin stacks and into the money drawer after the same have attained a predetermined height, a train of levers and links adapted to operate said sweep and means to return the ejectors to their normal positions upon the completion of each operation.

[Claims 6 to 10 not printed in the Gazette.]

1,110,160. AUTOMOBILE SLED. DELBERT N. TANNER, Great Falls, Mont. Filed May 27, 1913. Serial No. 770,194. (Cl. 21—96.)



An automobile sled comprising a pair of side runners each embodying a front section and a rear section, said sections being connected for relative turning movement on a vertical axis, manually controlled steering means for imparting such movement to said sections, the front runner sections being connected by pivotally attached bars, the rear runner sections being also connected by pivotally attached bars, a bar terminally connected with the jointed ends of the front and rear runner sections, and a steering shaft connected with the last named bar for turning said sections relatively to each other.

1,110,161. GREEN-CORN SPOON. ALBERT TAUBERT, New York, N. Y. Filed Oct. 25, 1913. Serial No. 797,222. (Cl. 30—22.)

1. In a corn spoon of the character described, a bowl portion formed with a tubular end substantially the width of a grain of corn, said tubular end having a V-shaped notch arranged therein, and the walls of the notch being formed sharpened for providing a shearing action when the spoon is forced into an ear of corn, said bowl portion being comparatively long in proportion to its width.

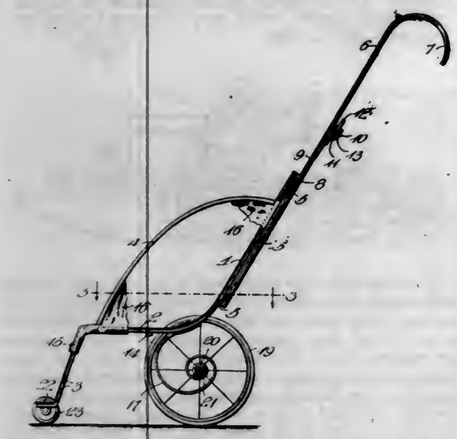
2. In a corn spoon of the character described, a tubular member having a diameter substantially of the width of a grain of corn formed with a pair of V-shaped notches in one end, each of said notches having a pair of cutting edges, said tubular member being comparatively long in respect to its width.

3. In a corn spoon of the character described, a tubular member having a diameter substantially the width of a grain of corn formed with a cut-away portion extending for almost the entire length of the tubular member, and a pair of notches at one end, one of said notches being on the same side as said cut-away portion, and the other of said notches being on the opposite side, each of said notches having sharpened edges, said tubular member being long in proportion to its width.

4. In a device of the character described, a tubular member having a diameter substantially the width of a grain of corn formed with a notch in one end, said notch having the walls thereof sharpened, and a pressing rod arranged in said tubular member, said tubular member being long in proportion to its width.

5. In a device of the character described, a tubular member having a diameter substantially the width of a grain of cron formed with a cut-away portion intermediate the ends for removing cut grain, and a notch at the extreme ends, said notch being formed with walls provided with cutting edges, said tubular member being long in proportion to its width.

1,110,162. GO-CART. HENRY TAYLOR, Chicago, Ill. Filed Nov. 20, 1913. Serial No. 802,111. (Cl. 21—83.)



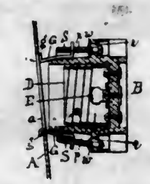
1. A go cart comprising side members adapted to collapse toward each other, an operating rod disposed between said members and links pivoted at their inner ends to said operating rod and at their outer ends to said side members, said operating rod being extended upwardly and formed into a hook shaped handle.

2. A go car comprising L-shaped side bars, the horizontal portions thereof forming seat supports and the upright extensions thereof forming back supports, an upright operating bar disposed between said upright extensions and having a hook shaped handle at its upper end, links pivoted at their outer ends to said upright extensions and at their inner ends to said operating bar, inclined brace bars pivoted at their outer ends to said upright extensions and coacting means carried by the inner ends of said brace bars and by said operating bar for locking said brace bars to said operating bar thus holding said L-shaped side bars in extended positon.

3. A go cart comprising L-shaped side bars, the horizontal portions thereof forming side supports and the upright extensions thereof forming back supports, an upright operating bar disposed between said upright extensions and having a hook shaped handle at its uper end, links pivoted at their outer ends to said upright extensions and at their inner ends to said operaitng bar, a stop secured to said operating bar and having upright fingers spaced from said bar, inclined brace bars pivoted at their outer ends to said upright extensions, a bolt passing through their inner ends and extending between said fingers and a nut on said bolt.

4. A go cart comprising side members, toggle links connecting the same, means for holding said links extended and an upright connecting bar for operating said links, said bar having a hook shaped handle at its upper end, stub axles carried by said side members, toggle links connecting said stub axles and means for holding the toggle links connecting said stub axles in an extended position.

1,110,163. ELECTRIC-LAMP RECEPTACLE FOR SIGNS. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 25, 1910. Serial No. 594,188. (Cl. 173—339.)



1. As a new article of manufacture, an electric sign receptacle comprising a body carrying within it lamp receiving terminals, and having also terminals for the wires, and provided with gripping means for securing the receptacle to the sign plate, and adapted to be inserted through the sign plate from the rear in any position rotarily, together with means for actuating said gripping means to secure said receptacle to the sign plate and hold the same against rotation.

2. An electric sign receptacle, comprising a body carrying within it lamp-receiving terminals, and having also wire terminals, clamps carried by the receptacle with outwardly projecting claws to be inserted through the sign plate from the rear to grip the sign plate between the claws and the receptacle, and means for adjusting the claws.

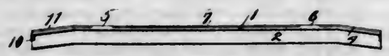
3. An electric sign receptacle, comprising a body carrying within it lamp-receiving terminals and having also wire terminals, clamps carried by the receptacle with outwardly projecting claws to be inserted through the sign plate from the rear to grip the sign plate between the claws and the receptacle, with adjusting screws to advance and retract the clamps.

4. An electric sign receptacle, comprising an insulating body carrying within it lamp-receiving terminals and having also wire terminals, inclined guiding grooves in the outer face of the body, clamps in said grooves, with claws to grip the front of the sign plate and to be inserted through a hole in the sign plate from the rear, and means to advance and retract the clamps.

5. An electric sign receptacle, comprising an insulating body of cup form with a head and shoulder at its forward end and containing within its lamp-receiving terminals, wire terminals at the rear of the receptacle, clamps with outwardly projecting claws to be inserted with the head of the receptacle through the sign plate from the rear, and means to adjust the clamps to grip the sign plate between the claws and the shoulders of the receptacle.

[Claims 6 to 15 not printed in the Gazette.]

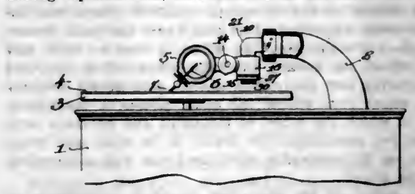
1,110,164. METALLIC TIE. JAY FRED TOWNSEND, Pittsburgh, Pa. Filed Sept. 19, 1913. Serial No. 790,748. (Cl. 238—5.)



A railroad tie comprising a head, portions of the upper face thereof being inclined, and with the ends of said tie downwardly-inclined, depending lips provided at the ends of said inclined portions and a longitudinally-extending web depending from said head.

1,110,165. PHONOGRAPH. CHARLES P. TRUNDY, Boston, Mass. Filed Dec. 10, 1913. Serial No. 805,736. (Cl. 181—3.)

1. A connection tube for a hill-and-dale phonograph having one end adapted to be connected with the tone tube and the other end adapted to be connected with the sound box, said tube having an elbow located in a vertical plane at one end and an elbow located in a plane at right angles thereto at the other end and intermediate means whereby said sound box is permitted to have free movement during reproduction, substantially as described.

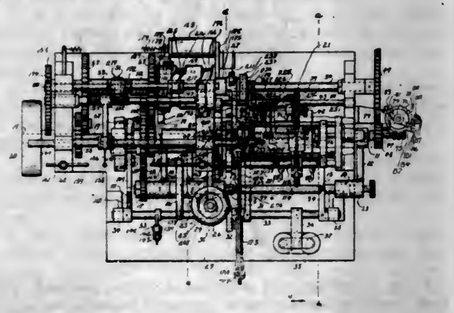


2. A connection tube for hill-and-dale phonographs having a vertical plane elbow at the tone tube end, a horizontal plane elbow at the sound box end, a vertical axis joint near the tone tube end and a horizontal axis joint between the vertical axis joint and the sound box, substantially as described.

3. A connection tube for hill-and-dale phonographs having one end adapted to be connected to the tone tube, the other end adapted to be connected to a sound box, said tube being provided with a vertical axis joint near its tone tube end with a ball bearing support for the connection tube associated therewith and with a horizontal axis joint between the vertical axis joint and the sound box, substantially as described.

4. A connection tube for hill-and-dale phonographs having one end adapted to be connected to the tone tube, the other end adapted to carry the sound box provided with a vertical axis low-friction joint near the tone tube end, said vertical axis joint comprising an enlargement on one portion of the tube and a transversely apertured member on the other portion of the tube received in said enlargement so as to permit the free passage of sound waves therethrough without material obstruction, substantially as described.

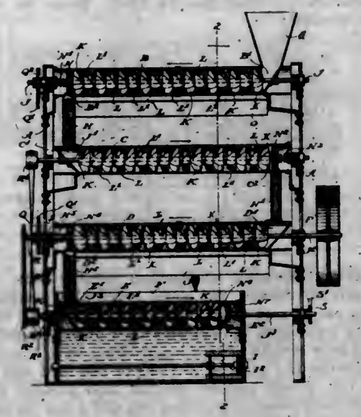
1,110,166. MACHINE FOR PRODUCING ELECTRICAL COILS. CHARLES R. UNDERHILL and DUANE J. KELSEY, New Haven, Conn., assignors to The Acme Wire Co., New Haven, Conn. a Corporation. Filed Sept. 30, 1912. Serial No. 723,069. (Cl. 242—10.)



A machine for producing electric coils having a wire-traverse and a tape-traverse differentiated in the speed of their travel, means for utilizing the tape in the interruptions of its traverse for the production of spirally wound end-closures, a series of cams forming a cycle operating during the interruptions of the traverse of the tape for shifting and feeding the tape and reversing the traverse of the wire and tape, and electrically controlled means for shunting the cams forming this cycle into operation.

1,110,167. MACHINE FOR REMOVING PULP FROM COCOA AND OTHER PULPY BERRIES. JOSÉ MARCELINO URGELLÉS, Baracoa, Cuba. Filed June 16, 1913. Serial No. 774,007. (Cl. 83—30.)

1. A machine of the class described, comprising a series of fixed drums arranged one above the other and having their inlet and exit ends arranged alternately on opposite sides of the machine, a feed hopper at the inlet end of the uppermost drum, chutes connecting the exit end of one drum with the inlet end of the next drum below, revoluble feeding members and spiral rubbing and spiral feeding members arranged alternately in each of the said drums, the uppermost and third drum being perforated, and a chute beneath each of the said perforated drums and extending to one side of the machine.



2. A machine of the class described, comprising a series of fixed drums arranged one above the other and having their inlet and exit ends arranged alternately on opposite sides of the machine, a feed hopper at the inlet end of the uppermost drum, chutes connecting the exit end of one drum with the inlet end of the next drum below, revoluble feeding members and rubbing and feeding members arranged alternately in each of the said drums, a washing tank filled with water and in which the lowermost drum is submerged, the lowermost drum and sundry of the other drums being perforated, and chutes beneath the perforated drums and extending to one side of the machine.

3. A machine of the class described, comprising a series of fixed drums arranged one above the other, and having their inlet and exit ends arranged alternately on opposite sides of the machine, a feed hopper at the inlet end of the uppermost drum, chutes connecting the exit end of one drum with the inlet end of the next drum below, revoluble feeding members and rubbing and feeding members arranged alternately in each of the said drums, a washing tank filled with water and in which the lowermost drum is submerged, the lowermost. the next to the lowermost and the uppermost drums being perforated, and chutes beneath the uppermost and next to the lowermost drums and extending to one side of the machine and an elevator extending into the said washing tank at the exit end of the lowermost drum to receive the cleaned berries from the latter and carrying the same out of the washing tank.

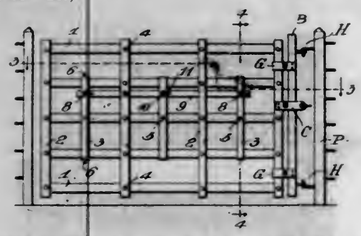
4. A machine of the class described, provided with a drum, a shaft in the said drum, revoluble feeding members on the said shaft, two sets of revoluble rubbing and feeding members secured on the said shaft and alternating with the said feeding members, the rubbing and feeding members being arranged alternately one to the other throughout the length of the shaft, each of the said feeding members having a hub and spiral uninterrupted blades extending radially from the said hub and each of the said rubbing and feeding members having a hub and spiral blades radially divided, and means for adjustably securing the said members to the said shaft.

5. A machine of the class described, provided with a drum, a revoluble shaft in the drum, feeding members on the shaft and each formed of a hub and spiral blades, and two sets of rubbing and feeding members on the shaft and arranged alternately with each other, and with the feeding members, each rubbing and feeding member being

formed of a hub and spiral blades, the members of one set having their blades divided from the peripheral face to within a short distance of the hub and the members of the other set having their blades divided from the peripheral face to the hub to form fan-shaped arms.

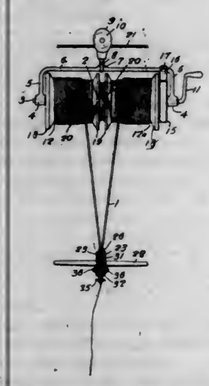
[Claim 6 not printed in the Gazette.]

1,110,168. GATE. RANDALL T. VAN VALKENBURG, Washington, D. C. Filed Nov. 28, 1913. Serial No. 803,535. (Cl. 39—18.)



A gate comprising longitudinal parallel bars, vertical bars pivoted thereto, flat metal brace bars centrally pivoted to one of said longitudinal bars and having their upper and lower ends bent substantially upon themselves and hooked over certain of said longitudinal bars, a connecting rod between the parallel portions of one bent end of said brace bar, a bolt passing through said parallel portions and the intervening connecting rod and a nut on said bolt for drawing said parallel portions into binding contact with the opposite sides of the said longitudinal bars.

1,110,169. FIRE-ESCAPE. JAMES FLOYD VICKERS, Colusa, Cal. Filed June 24, 1913. Serial No. 775,456. (Cl. 227—22.)



1. A device of the character specified, comprising an endless cable, a support for the cable, said support comprising a grooved wheel over which the cable passes, a shaft on which the wheel is journaled, reels on the shaft on each side of the pulley for receiving the cable when not in use, and an anchoring and controlling device for engagement by the cable, said device comprising a wheel over which the cable passes, a supporting frame for the wheel, said frame having oppositely extending handles, a brake shoe for engaging the wheel, means for moving the shoe toward and from the wheel, and a belt having its ends detachably connected with the said frame.

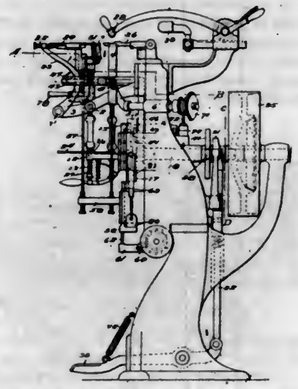
2. A device of the character specified, comprising an endless cable, a support for the cable, said support comprising a grooved wheel over which the cable passes, a shaft on which the wheel is journaled, reels on the shaft on each side of the pulley for receiving the cable when not in use, and an anchoring and controlling device for engagement by the cable, said device comprising a wheel over which the cable passes, a supporting frame having handles, a brake movable toward and from the wheel, and means for operating the brake.

3. A device of the character specified, comprising an endless cable, a grooved wheel over which the cable passes, a hanger for supporting the wheel, a reel on each side of the wheel for holding the cable when not in use, and an anchoring and controlling device, said device comprising a wheel over which the cable passes, a supporting frame in which the wheel is journaled and provided with handles for permitting the frame to be held, and brake mechanism in connection with the frame and coöperating with the wheel.

4. A device of the character specified, comprising an endless cable, a track, a hanger in which the wheel is journaled, reels coaxial with the wheel at each side thereof for holding the cable when not in use, a crank connected with the reels for rotating the same to wind up the cable, and an anchoring and controlling device comprising a wheel over which the cable passes, a frame in which the wheel is journaled, said frame having means for permitting the same to be held, and a brake in connection with the frame.

5. In a device of the character specified, the combination with the endless cable and the wheel over which the cable passes, of means for supporting the cable when not in use, said means comprising a reel on each side of the wheel, a shaft upon which the reels and the wheel are journaled, said reels having flanges at their inner ends, and the flanges having notches for permitting the passage of the cable to wind upon the reels, and a hanger for the shaft.

1,110,170. PULLING-OVER MACHINE. HEINRICH WALTHER, Weissenfels, Germany, assignor to The Firm of Nollesche Werke Ernst Nolle, Weissenfels, Germany. Filed Apr. 20, 1907. Serial No. 369,326. (Cl. 12—4.)



1. In a pulling over machine, a wiper provided with tack receiving holes, pincers journaled beneath the wiper, and means for moving the pincers obliquely with respect to the wiper.

2. In a machine of the class described, tacking mechanism including tack drivers, a wedge movable into position to prevent actuation of the drivers, and a spring acting to normally hold the wedge out of such position.

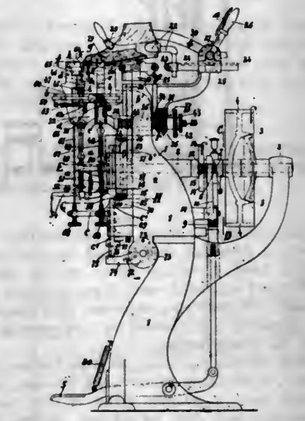
3. In a machine of the class described, tacking mechanism including tack drivers, a wedge movable into position to prevent actuation of the drivers, a hand lever for moving the wedge, and a spring acting to normally hold the wedge out of such position.

4. In a pulling over machine, a plurality of pincers for gripping and stretching the upper, means for adjusting the pincers longitudinally of the last, a plurality of tack drivers, means for suppressing the operation of the tack drivers while the upper is under tension, to avoid fastening the latter in false position, and a handle for actuating the means for suppressing the operation of the tack drivers.

5. In a device of the class described, the combination with side pincers, of means for forcibly adjusting the side pincers longitudinally of the last, toe pincers, a toe wiper extending on either side of the toe pincers, tacking means associated with the side pincers, and a plurality of tacking drivers associated with the toe wiper and toe pincers.

[Claim 6 not printed in the Gazette.]

1,110,171. LASTING AND NAILING MACHINE. HEINRICH WALTHER, Weissenfels, Germany, assignor to The Firm of Nollesche Werke, Ernst Nolle, Weissenfels, Saxony, Germany. Filed Dec. 10, 1906, Serial No. 347,129. Renewed Apr. 29, 1914. Serial No. 835,334. (Cl. 12—4.)



1. In a machine of the class described, pivoted pincer carriers, of pincers slidably mounted in the pivoted carriers, means for positively tilting the carriers and separate means for moving the pincers downward.

2. In a machine of the class described, pivoted pincer-carriers, pincers slidably mounted in the said carriers and nailing rods likewise slidably mounted in the pivoted carriers.

3. In a machine of the class described, pivoted pincer carriers, pincers and nailing rods, both slidably mounted in the carriers, and wiper plates mounted upon the carriers.

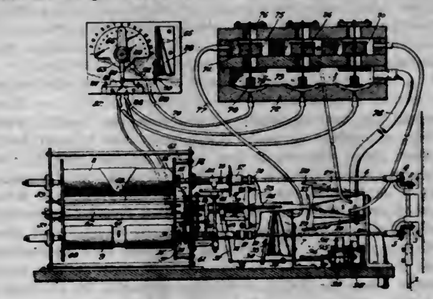
4. In a machine of the class described, pivoted pincer carriers, pincers slidably mounted in the said carriers, and springs supporting the pincers upon the pivoted carriers.

5. In a machine of the class described, pivoted pincer carriers, pincers slidable in the said carriers and comprising stationary and movable jaws, racks slidably mounted adjacent the movable jaws, gear teeth upon the movable jaws interengaging with the racks, and a vertically moving part engaging the racks and adapted to close first the pincers and then to pull them down.

[Claims 6 to 15 not printed in the Gazette.]

1,110,172. SELECTIVE SHEET-WINDING MECHANISM FOR PIANO-PLAYERS. RUSSELL I. WILCOX, Milwaukee, Wis., assignor of one-half to Adolph Hoeffler, Milwaukee, Wis. Filed Jan. 28, 1914. Serial No. 814,880. (Cl. 84—161.)

1. In an automatic piano, the combination with a perforated music sheet comprising a plurality of separate pieces arranged in series with intervals between them, of winding drums on which said sheet is mounted, means for operating said drums forward and backward, and means for selecting and playing any particular piece on the sheet comprising perforations in the intervals between said pieces, and pneumatic mechanism responsive to said last named perforations.



2. In an automatic piano, the combination with a perforated music sheet comprising a plurality of separate pieces arranged in series, of winding drums on which said multiple sheet is mounted, means for operating said drums forward and backward, means for driving them in each direction at a rapid rate of speed until a particular piece is reached, and means for driving them at playing speed thereafter and in one direction only.

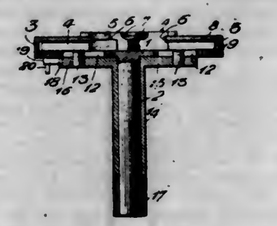
3. In an automatic piano, the combination with two parallel winding drums, of driving shafts, clutches for connecting said shafts with the spindles of said drums, an indicator capable of being shifted from one to another of a plurality of positions, and means for automatically determining which clutch shall be engaged when said indicator is shifted.

4. In an automatic piano, the combination with two parallel winding drums, of a multiple music sheet mounted thereon containing a plurality of pieces of music, an indicator capable of being set by hand for denoting the particular piece to be played, and means controlled by said indicator for automatically winding said sheet forward or backward until the selected piece is reached, and for playing it thereafter.

5. In an automatic piano, the combination with two winding drums, of a chuck shaft connected to each drum, a driving shaft in line with each chuck shaft, clutches for connecting said shafts, a clutch lever engaging both clutches, and means for automatically tilting said lever to throw one or the other of said clutches into engagement.

[Claims 6 to 18 not printed in the Gazette.]

1,110,173. WATCHMAKER'S TOOL. JOSEPH W. WOODARD, Washington, D. C., assignor of one-half to George W. Smithson, Washington, D. C. Filed Feb. 27, 1914. Serial No. 821,450. (Cl. 81—6.)



1. A tool of the class described comprising a head member, jaws adjustable radially thereon, a rotatable disk applied to the under face of said head member and having connection with said jaws to actuate the latter, the peripheral edge of said disk having ratchet teeth thereon, a spring pawl carried on the under face of said head member and engaging the ratchet teeth on said disk to retain the jaws in any adjusted position, and a finger piece on said pawl to operate the same.

2. A tool of the class described comprising a head member, a plurality of jaws movable radially thereon and each

provided with an upstanding projection adjacent to the inner end thereof, the inner opposed faces of said projections being offset in stepped arrangement to accommodate objects of various sizes therebetween, means for actuating said jaws on the head, and additional means for retaining the same in any adjusted position thereon.

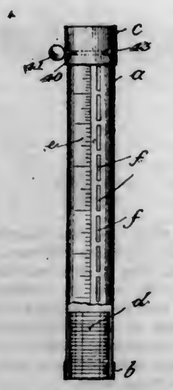
3. A tool of the class described comprising a head member having a plurality of radial grooves in the top face thereof, the bottom walls of said grooves having slots therein extending through the bottom face of said head member, jaws slidable in said radial grooves and having depending studs thereon extending through the aforesaid slots of said head member, means for retaining said jaws in position on the head member, a disk member rotatably mounted on the under face of said head member and also having a plurality of slots and receiving said depending studs therein, whereby to actuate said jaws on the head member when the disk is rotated, and means for retaining said disk and correspondingly the jaws in any adjusted position.

4. A tool of the class described comprising a head member having a plurality of radial slots formed therein, jaw members operatively mounted on said head member and having depending studs thereon operating in said radial slots, a depending stem formed on the under face of said head member, a sleeve rotatably mounted on said stem and having a disk formed on the upper end thereof abutting the underface of said head member, said disk being provided with a plurality of slots arranged in planes intersecting the planes of the aforesaid radial slots, and also receiving said depending studs therein, whereby to actuate said jaws upon the rotation of said sleeve, and means in connection with the head member and disk to retain the latter and parts connected therewith in any adjusted position.

5. A tool of the class described comprising a head member provided with a plurality of radial slots, a plurality of jaw members slidably mounted thereon and having depending studs operating in said radial slots, a depending stem formed centrally on the under face of said head member, a sleeve rotatably mounted on said stem and having a disk formed on the upper end thereof abutting the under face of said head member, said disk being also provided with a plurality of slots arranged successively in planes at right angles to one another and having the planes thereof intersecting the planes of the radial slots, the slots in said disk also receiving the depending studs of the jaws therein whereby to adjust the latter upon the rotation of said sleeve and disk, and means in connection with said head member and disk to retain the latter and parts connected therewith in any adjusted position.

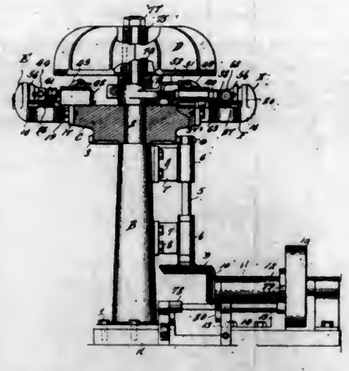
[Claims 6 and 7 not printed in the Gazette.]

1,110,174. COIN-TUBE. ERNST ZANDER, Strassburg, Germany. Filed June 15, 1912. Serial No. 703,956. (Cl. 133—7.)



In a device of the character described, a cylindrical coin-collecting tube suitable for vending-machines, having an apertured coin-receiving cap on one end, and a secure but removable closure on the other end the cap secured to the tube by a destructible seal, said tube being adapted when said cap is removed to be inserted in the corresponding part of a coin-counting machine.

1,110,175. HEEL-MAKING MACHINE. CHARLES E. ALLARD, Haverhill, Mass. Filed Aug. 5, 1913. Serial No. 783,106. (Cl. 12—50.)



1. In a heel making machine, the combination of a supporting frame, a revoluble turret head thereon, means for revolving said head, a circular series of heel clamps carried by said head and each embodying opposed and relatively movable lift-justifying members and heel-compressing means including a reciprocatory compressing plunger, and plunger-operating means.

2. In a heel making machine, the combination of a supporting frame, a revoluble turret head thereon, means for revolving said head, a circular series of heel clamps carried by said head and each embodying opposed and relatively movable lift-justifying members and heel-compressing means including a reciprocatory compressing plunger, and a cam for operating said plunger.

3. In a heel making machine, the combination of a supporting frame, a revoluble turret head thereon, means for revolving said head, a circular series of heel clamps carried by said head and each embodying opposed and relatively movable and lift-justifying members and heel-compressing means including a reciprocatory compressing plunger, and a stationary cam for operating said plunger.

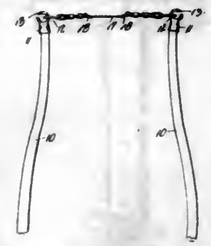
4. In a heel making machine, the combination of a supporting frame, a revoluble turret head thereon, means for revolving said head, a circular series of heel clamps carried by said head and each embodying opposed and relatively movable lift-justifying members, heel-compressing means including a reciprocatory compressing plunger and an independent detent for holding said plunger in compressing position, and plunger-operating means.

5. In a heel making machine, the combination of a supporting frame, a revoluble turret head thereon, means for revolving said head, a circular series of heel clamps carried by said head and each embodying lift-justifying members, heel-compressing means including a compressing plunger and a detent for holding said plunger in compressing position, plunger-operating means, and means for tripping said detent.

[Claims 6 to 31 not printed in the Gazette.]

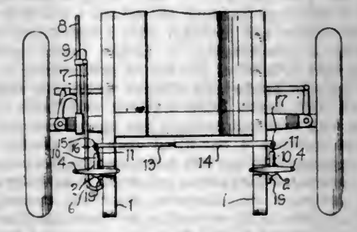
1,110,176. SHAFT ATTACHMENT. WILLIAM T. ARMSTRONG, Canton, Minn. Filed Nov. 12, 1912. Serial No. 730,830. (Cl. 21—36.)

Guard hooks for vehicle shaft guards comprising in combination, a hook of ring-like form atached to the end of each shaft and disposed horizontally when the shafts are in a normal position, each ring-like hook being interrupted to form a normally open entrance throat for attachment of the guard and the throat of each hook being disposed laterally outwardly of the longitudinal axis of the shaft to thereby form relatively long and relatively short shanks for each hook, the long shank having a large circular head lying transversely of the axis of its respective shaft and forming a shield, and a guard having flexible



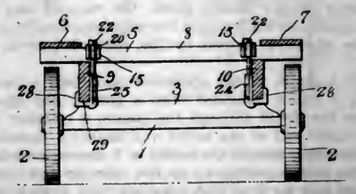
end members provided with wedge shaped openings longitudinally disposed with respect to the longitudinal axis of the guard and adapted to be forced over said circular heads and into engagement with the long shanks of each hook, substantially as described.

1,110,177. DIRIGIBLE LAMP FOR VEHICLES. GEORGE R. BAKER, Vernon, Tex. Filed Apr. 11, 1914. Serial No. 831,205. (Cl. 240—62.)



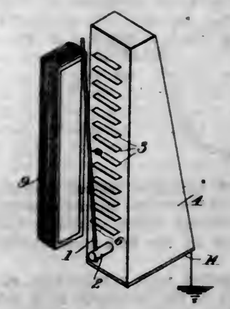
A device of the class described including a pair of revoluble lamp supports, a horizontal rod having its ends pivotally connected adjacent the upper ends of said supports, a sleeve arranged upon the lower end of each of the supporting posts and having angularly disposed extensions formed thereon, said extensions having a screw threaded opening, a threaded rod having an eye formed upon one end adjustably arranged within said opening, and a connecting rod having a hooked end, said connecting rod having its hooked end connected in said eye and the opposite end connected to the steering rod.

1,110,178. BRACING-IRON. JAMES B. BANKSON, Canton, S. D. Filed Mar. 27, 1914. Serial No. 827,701. (Cl. 21—74.)



The combination with cross pieces and longitudinal sleepers of a hay frame, of an angled block having diagonally extending reinforcing braces formed upon the face of one side plate thereof and converging into a lug substantially centrally of the face of the side plate, said lug being provided with a screw threaded bore extending therethrough, a second side plate extending parallel with said first named side plate forming a recess for the reception of the sleepers of the hay frame, said second named side plate forming a rubbing iron for the wheels of the vehicle upon which the hay frame is mounted, a bolt adjustably mounted within said screw threaded bore, a second angle block slidably mounted upon said bolt for engagement with the cross arms of the hay frame for securely binding the sleepers and the cross arms in proper position for forming a hay frame.

1,110,179. LIGHTNING-ARRESTER. EDWARD BENNETT, Olmstead, Utah. Filed Aug. 26, 1908, Serial No. 450,358. Renewed Feb. 6, 1914. Serial No. 817,055. (Cl. 175—30.)



1. A lightning arrester including in combination, spaced electrodes forming a spark gap, one of said electrodes including conductors located at a plurality of spaced intervals along said electrodes and suitable resistance connecting said conductors, whereby the travel of the arc along the electrodes inserts in the circuit an increasing resistance.

2. A lightning arrester including in combination, spaced electrodes forming a spark gap, one of said electrodes including projecting conductors located at a plurality of spaced intervals throughout the entire length of the electrodes, and suitable resistance connecting said conductors whereby the travel of the arc along the electrodes inserts in the circuit an increasing resistance.

3. A lightning arrester including in combination, spaced electrodes one of which is connected with a transmission line, and the other of which is connected with the ground, said electrode connected with the ground including projecting conductors located at a plurality of spaced intervals extending throughout the length of the electrode, a casing surrounding said electrode, said casing being open at the top and bottom, a fan located at the bottom of the casing for causing a circulation of air through the casing, whereby the arc is caused to travel rapidly along the electrodes.

4. A lightning arrester comprising relatively long and short diverging terminal members, a resistance connected to the shorter terminal member, and a plurality of overlapping conductors that are connected at intervals to the resistance and constitute an extension of the shorter terminal member.

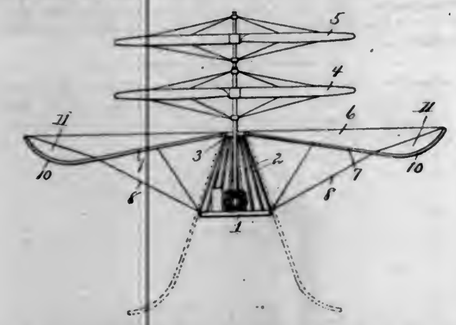
5. A lightning arrester comprising relatively long and short diverging terminal members, a resistance connected to the shorter terminal member, a plurality of over-lapping conductors that are connected at intervals to the resistance and constitute an extension of the shorter terminal member, said conductors being separated from the longer terminal member by air spaces, the width of which differ as the distance between the same and the shorter terminal member increases.

[Claims 6 to 8 not printed in the Gazette.]

1,110,180. PARACHUTE FOR HELICOPTERS. EMILE BERLINER, Washington, D. C. Original application filed July 11, 1910, Serial No. 571,448. Divided and this application filed Oct. 6, 1911. Serial No. 653,216. (Cl. 244—21.)

1. A parachute shaped like a Japanese parasol, with the edges thereof curved upwardly.

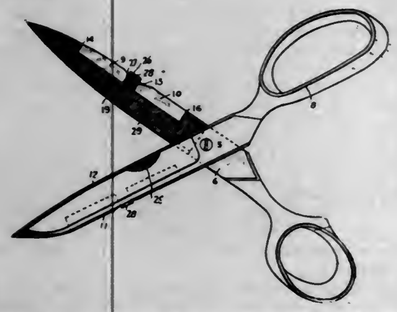
2. A parachute having the edges thereof curved upwardly thereby forming a circumferential trough, which causes a partial vacuum at the outer edges of the parachute during the descent thereof.



3. A parachute having a central cone-shaped portion, the lower edges of which are curved upwardly, forming a circumferential trough which causes a partial vacuum at the outer edge of the parachute during the descent thereof.

4. The combination with a helicopter, of a parachute therefor attached to the helicopter at a point above the operator, said parachute when closed having its lower edges extending to a point below the platform of the helicopter, and said parachute having windows formed therein.

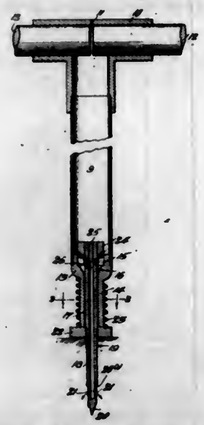
1,110,181. SCISSORS. JACOB L. BITZ, Coldwater, Mich., assignor of one-half to Harrison L. Milnes, Coldwater, Mich. Filed July 24, 1913. Serial No. 780,914. (Cl. 30—13.)



In a pair of scissors, a lever blade having two projections spaced apart to form a transverse guideway therebetween, the forward projection being also spaced from the outer end of the lever blade, there being grooves in the edges of the projections, a cutting member having two openings for receiving the projections, and with a resilient locking member normally disposed between the openings, for moving in the guideway, a flange on the resilient locking member for normally engaging the back of the lever blade, and guide members on the cutting member, for moving in the grooves.

1,110,182. WEED-DESTROYER. CLAYTON O. BLANDIN, WILLIAM T. DAVIS, and WILLIAM A. REYNOLDS, Denver, Colo. Filed Aug. 27, 1913. Serial No. 786,936. (Cl. 47—37.)

1. A device of the character described comprising a barrel, a sleeve carried thereby and provided with a compartment and with a cylindrical portion, a hollow needle extending through said cylindrical portion, a piston carried by said needle and adapted to fit into said compartment for the purpose of forcing a destructive liquid therefrom, said needle being provided with openings through which said liquid is discharged, and means for actuating said piston so as to forcibly expel a charge of said liquid.



2. A device of the character described comprising a barrel for holding a destructive liquid, a T mounted upon said barrel and provided with a vent, arms connected with said T to facilitate handling the device, a sleeve mounted upon said barrel and provided with a cylindrical portion and with a compartment, a hollow needle extending through said cylindrical portion of said sleeve, a piston carried by said needle and adapted to fit into said compartment, said needle being provided with holes communicating with said compartment and further provided with discharge openings, a nut fitted upon said needle, and a spring engaging said nut and said sleeve for the purpose of forcibly actuating said piston relatively to said sleeve.

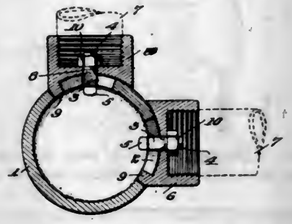
3. A device of the character described, comprising a barrel, a T detachably secured to the barrel and having a vent, arms secured to the T, a sleeve mounted upon the barrel and having the upper end of its bore enlarged to form a chamber, a hollow needle in the sleeve and extending through the same, said needle having a conical point and provided with lateral openings at its upper end communicating with the chamber and at its lower end with discharge openings adjacent the point, the needle being externally threaded intermediate of its ends, a nut on the threaded portion of the needle, and a spring surrounding the sleeve between a shoulder thereon and the nut.

4. A device of the character described, comprising a barrel provided with a handle and having a reduced lower end and a chamber at the junction of the said reduced end with body of the barrel, a hollow needle extending through the reduced lower end of the barrel and having apertures adjacent its ends, a piston on the upper end of the needle and adapted to enter the said chamber, an enlargement on the needle below the reduced end of the barrel, and a spring between the enlargement of the needle and the shoulder formed by the reduced portion of the barrel.

5. In a device of the character described, a barrel for holding a liquid, provided with a nozzle, and means for ejecting the liquid through the nozzle, a cylinder secured to the upper end of the barrel and having a threaded portion projecting beyond the barrel, a T having an internally threaded neck screwing on to the cylinder and internally threaded end portions and provided with a vent intermediate of its ends, and handles screwing into the said end portions of the T.

1,110,183. RAIL-FITTING. HARRY J. BONHAM, Los Angeles, Cal. Filed Oct. 30, 1913. Serial No. 798,249. (Cl. 189—36.)

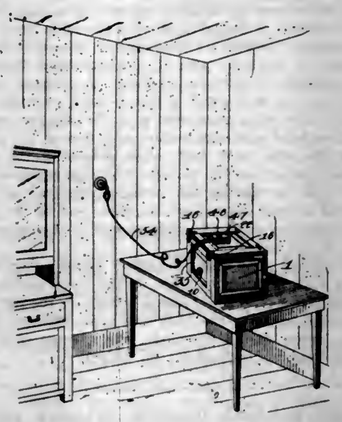
1. A device of the character specified, comprising a hollow spherical member provided with a slot, a socket for the slot, the socket having its inner end concave to fit the surface of the said member and having a central opening for registering with the slot, and a lug at one side for engaging the end of the slot, and a bolt passing through the slot and opening, said bolt having a head transverse to the slot, and a polygonal stem fitting the slot to prevent rotation of the bolt, and a nut engaging the outer end of the bolt.



2. A device of the character specified, comprising a spherical connecting member provided with a slot in its wall, a socket for the slot, the socket having its inner end concave to fit the surface of the member and having a central opening, a bolt passing through the slot and the opening, said bolt having a head transverse to the slot, and a stem fitting the slot to prevent rotation of the bolt, and means for preventing rotation of the socket.

3. A device of the character specified, comprising in combination a connector and a member to be connected, the connector having a slot and the member to be connected having a lug for engaging the slot at one end thereof, and a bolt passing through the slot and the member to be connected for clamping the said member to the connector.

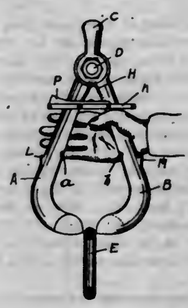
1,110,184. FIRELESS COOK-STOVE OR COOKER. EDMUND L. BROWN and MORTON MURPHY, Janesville, Wis., assignors to The Caloric Company, Janesville, Wis. Filed July 26, 1913. Serial No. 781,373. (Cl. 219—35.)



1. In a fireless cooker or cookstove the combination with a cooking compartment, a tube projecting therefrom, of a circuit breaking casing provided with a valve seat having a depending neck fitting over the upper end of said tube, a vertical slidable valve carried within said valve seat, said valve seat provided with a transversely extending discharge aperture, said casing provided with a base having a channel formed therein and communicating with said transversely extending aperture for permitting the discharge of steam from said casing when said vertical slidable valve is moved upwardly, a switch, electrical heating means carried within said compartment, means for supplying an electric current through said switch to said heating means, and a trigger normally holding said switch in a closed position and adapted to release said switch as said vertical slidable valve is moved upwardly.

2. A circuit breaker comprising a casing provided with a transparent side, a base, said base provided with a valve seat having a depending neck adapted to fit over a tube, a vertical slidable valve positioned within said valve seat and carrying a resilient knob, said valve seat provided with a transversely extending aperture, said base provided with a transversely extending channel communicating with said aperture, a switch pivotally mounted within said casing, an operating handle carried by said switch for facilitating the manual operation thereof, a spring normally exerting an upward pressure upon said switch and adapted to force the same to an inoperative position, a trigger pivotally mounted within said casing and provided with an abrupt shoulder portion, said switch provided with a bracket having a projecting end, said projecting end adapted to fit under said abrupt shoulder, a laterally extending finger carried by said trigger and adapted to limit the swing of said trigger in one direction, a projecting foot carried by said trigger and engaging said resilient knob whereby said trigger will be swung upwardly as said valve is moved upwardly for automatically releasing said switch at a predetermined point.

1,110,185. RELEASE SAFETY-HOOK. WILLIS BROWN, ALEXANDER CHARLES EDGAR BROWN, and THOMAS BODEN MERRY, Adelaide, South Australia, Australia. Filed Mar. 12, 1913. Serial No. 753,744. (Cl. 24—241.)

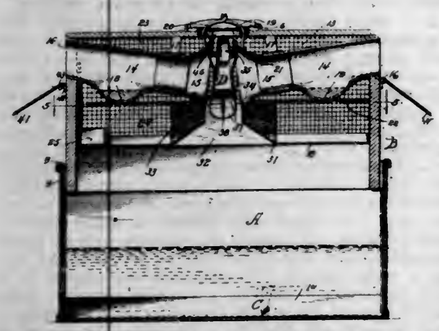


1. In an improved release safety hook having two side members pivoted together and to a shackle at their upper ends and having their lower ends turned inwardly and halved together and overlapped, a spring housed between the said side members and tending to open them, and a locking ring encircling the said side members and slidable thereon so that when in its lower position the side members are held closed but when in its upper position the side members may be opened by the spring, the said locking ring carrying a pivoted catch adapted to engage notches in the faces of the side members when the locking ring is in its lower position.

2. A device of the character described, comprising a pair of pivoted and spring pressed members having substantially hook-shaped ends adapted to overlap one another, a ring freely slidable on said members, and a member mounted on the ring and adapted to project between and into engagement with the said members.

3. A device of the character described, comprising a pair of hinged side members formed with overlapping hook ends, each of said side members being formed with a notch intermediate its length and with a stop adjacent said notch, spring means for acting on said side members for tending to open the same, an encircling loop member designed to engage said side members and rest against said stops for holding said side members together, and a pivotally mounted catch formed with a projection adapted to fit into the notches in said side members for locking the said loop member against movement.

1,110,186. ELECTRIC RAT-EXTERMINATOR. JAMES W. M. CARMICHAEL, Wellsburg, W. Va. Filed June 20, 1913. Serial No. 774,822. (Cl. 43—34.)



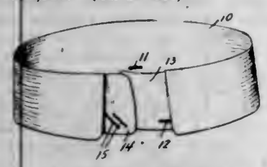
1. The combination of a tank provided with a lid, with a cage of such size as to be stored in the tank when not in use, a plurality of hangers removably positioned on the body of the tank when the lid is open to support the cage in the upper portion of the tank, and a removable tray in the bottom of the tank for removing the exterminated rats.

2. The combination of a tank, a tray therein having upright bridles forming handholds, a cage adapted to be positioned in the tank between the said bridles, and means for supporting the cage in operative position at the top of the tank.

3. A cage comprising a body, entrance passages leading into the body, metallic pieces at the inner ends of the passages, one piece being spaced from the other, a pendant bait holder mounted between the metallic pieces and movable into engagement with either, and sharp downwardly extending teeth fixed on the bottom of the bait holder.

4. The combination of a tank adapted to hold water, a tray arranged within the tank and normally resting on the bottom thereof, a cage of such size as to be inclosed in the tank and adapted to nest in the tray, the ends of the cage being spaced from the ends of the tank, members fastened to the ends of the tray and extending upwardly between the ends of the tank and cage, said members being of less length than the depth of the tank, and a cover for the tank.

1,110,187. ADJUSTABLE NECKWEAR. GEORGE WASHINGTON COOPER, New York, N. Y. Filed Aug. 13, 1913. Serial No. 784,524. (Cl. 2—69.)

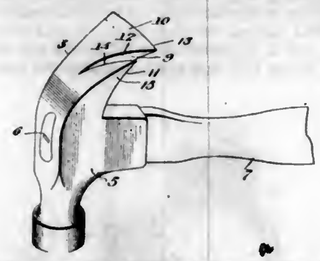


1. A fabric neck-encircling article of apparel having overlapped end portions, one of said end portions being provided with a buttonhole and the other end portion being provided with inclined buttonholes spaced apart in parallel relation and slanted in the direction in which strain is exerted thereon.

2. A flexible and washable article of neckwear having a rear button engaging member and coöperating buttonholes at its end portions certain of said buttonholes being spaced apart in substantially parallel relation and extended diagonally of the length of the article in the direction in which strain is exerted thereon.

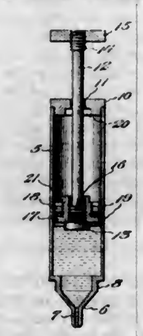
1,110,188. HAMMER. EMERSON CURRIE, Vancouver Heights, British Columbia, Canada. Filed Nov. 26, 1913. Serial No. 803,254. (Cl. 145—44.)

A tool of the class described, comprising a head having a diagonally arranged slot defining a claw consisting of relatively long and short members respectively, and said long member having a broad end portion of relative maxi-



mum width to provide a cutting edge for the tool and terminating in a line with the outer edge of said short member.

1,110,189. SYRINGE. CLAUDE R. DODGE, Reno, Nev. Filed Dec. 3, 1910. Serial No. 595,409. (Cl. 128—25.)



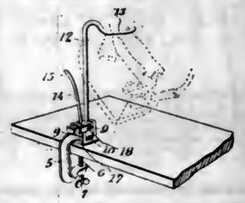
1. In a syringe, a hollow cylindrical body having a contracted perforated end and an opposite open end, the intermediate portion of the body between the ends being of uniform diameter, removable caps closing the perforated and open ends of the body and of corresponding diameter to the intermediate portion thereof, a plunger working through one of said caps, a piston head movable in the body and detachably connected with the plunger, means on the piston head and engageable with one of the caps for holding the said head fast when detaching the plunger therefrom, means on the plunger and engageable with one of said caps for holding said plunger retracted within the body, and a knob carried by the outer end of the plunger of corresponding diameter with respect to the intermediate portion of the body.

2. A syringe, comprising a body, a piston working therein, caps closing opposite ends of the body and of corresponding size to the body, and a handle on the piston of a size corresponding to the body and caps, whereby on forcing the piston within the body, the syringe will have a uniform diameter throughout its length.

1,110,190. SAD-IRON HOLDER. CLAUDE R. DODGE, St. George, Utah. Filed July 25, 1913. Serial No. 781,184. (Cl. 68—27.)

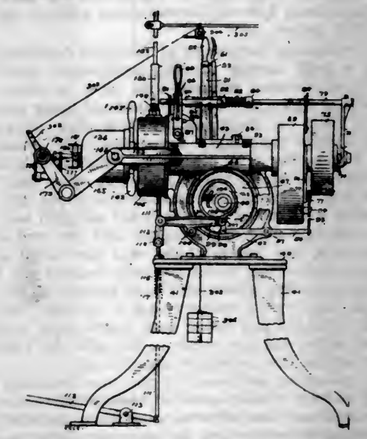
1. The combination with a clamp, of spaced parallel ears formed on one limb of the clamp, a swinging member pivotally connected between the ears, an upright engaged in the member and having a free hook end, an arm mounted in the said member at one side of the upright, and means swingingly connected to the member and engageable with one of the ears for locking the said member against swinging movement.

2. The combination with a clamp, of spaced parallel ears formed on one limb of the clamp, a swinging member pivotally connected between the ears, an upright engaged in the member and having a free hook end, an arm mounted in the said member at one side of the upright, means swingingly connected to the member and engageable with one of the ears for locking the said member against swinging movement, means mounted in the clamp for securing it to a support, and a pivot for connecting the first-named means to the member and also for securing the upright and arm in the said member.



3. The combination with a clamp, a member having a free hook end, an arm on the member to coöperate with the same to form a substantially V-shaped fork for receiving the cord of an electric sad iron, and means for locking the member and arm in upright supporting relation on the clamp.

1,110,191. HAT-CROWN-POUNCING MACHINE. JAMES F. DORAN, Danbury, Conn. Filed Mar. 18, 1911. Serial No. 615,228. (Cl. 223—30.)



1. A machine of the character described, comprising a rotatable hat support, a traversing tool, means for constantly reciprocating said tool to cause the same to operate on the surface of a hat mounted on said support, and automatic means for varying the speed of reciprocation of the tool.

2. A machine of the character described, comprising a rotatable hat support carried by a driving shaft, a tool for operating on the surface of a hat mounted on said support, and means including a treadle for shifting the axis of rotation of the support relatively to the axis of the driving shaft.

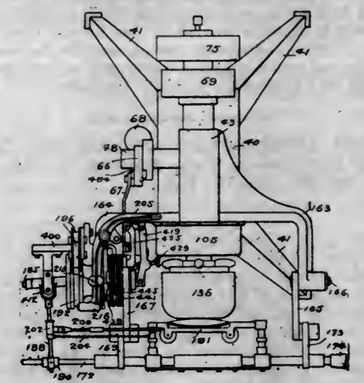
3. A machine of the character described, comprising a rotary hat support, a reciprocating tool, a facing strip for said tool, and automatic means for feeding said strip.

4. A machine of the character described, comprising a rotary hat support, a traversing reciprocating tool, facing strip for said tool, and means for feeding said strip during the traversing movements of said tool.

5. A machine of the character described, comprising a rotatable support carrying a hat block, a pouncing pad adapted to operate thereon, means for automatically traversing said pad on the hat from band to tip, rolls for carrying a strip of operating material, and means for automatically feeding the strip from one roll to the other for the purpose of supplying new operating material to the pouncing pad as required.

[Claims 6 to 90 not printed in the Gazette.]

1,110,192. HAT-CROWN-POUNCING MACHINE. JAMES F. DORAN, Danbury, Conn. Filed May 25, 1911. Serial No. 629,310. (Cl. 223—30.)



1. A machine of the character described, comprising a rotatable hat support, a traversing tool, means for reciprocating said tool relatively to the hat, and means for varying the length of the stroke of said tool during its traversing movements.

2. A machine of the character described, comprising a rotatable hat support, a tool, means for reciprocating said tool, and automatic means for reducing the length of the reciprocations when the tool is operating on the "square" of the hat.

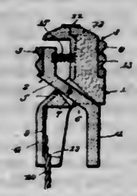
3. A machine of the character described, comprising a rotatable hat support, a tool, means for reciprocating the tool, and means for automatically varying the length of the reciprocations for different portions of the hat.

4. A machine of the character described, comprising a rotatable hat support, a tool, means for reciprocating the tool, means for varying the length of the reciprocations of the tool when operating on different portions of the hat, and means for also varying the speed of such reciprocations.

5. A machine of the character described, comprising a rotatable hat support, a tool, means for reciprocating the tool, means for automatically varying the pressure of the tool on different portions of the hat, and means for varying the length of the reciprocations of the tool.

[Claims 6 to 39 not printed in the Gazette.]

1,110,193. ATTACHMENT-PLUG. EUGENE E. DOUGHERTY, San Bernardino, Cal. Filed Feb. 14, 1914. Serial No. 818,755. (Cl. 173—360.)

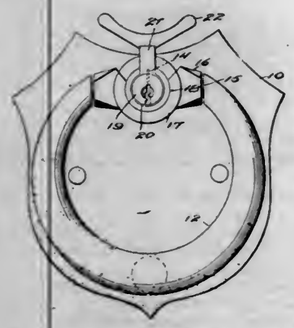


1. In an attachment plug, a jaw comprising offset limbs and a central portion having a slot formed therein and a second jaw embodying offset limbs and a central portion pivoted within the slot in the central portion of the first-mentioned jaw whereby the jaws may be moved rela-

tively to each other scissors fashion, the adjacent limbs of the jaws at one end of the plug being adapted to enter the socket, and contacts carried by one of the jaws at the socket engaging extremity thereof.

2. In an attachment plug, a jaw comprising offset limbs and a central portion having a slot formed therein and a second jaw embodying offset limbs and a central portion pivoted within the slot in the central portion of the first-mentioned jaw whereby the jaws may be moved relatively to each other scissors fashion, the adjacent limbs of the jaws at one end of the plug being adapted to enter the socket, contacts carried by one of the jaws at the socket engaging extremity thereof, and means interposed between the socket engaging extremities of said jaws and holding said extremities normally expanded.

1,110,194. COMBINED LOCK AND KNOCKER. CHARLES E. C. EDEY, Tacoma, Wash. Filed Oct. 17, 1913. Serial No. 795,769. (Cl. 70—91.)



1. In a device of the class described, a bolt, a rotary member for operating the bolt, locking means for the bolt, a locking cylinder controlling such means, a pivoted device, and means for mounting the pivoted device and the rotary member, said rotary member carrying the locking cylinder such mounting means comprising a tubular member having oppositely located lugs and an open ended longitudinal slot at one end between the lugs, permitting access to the rotary member.

2. In a device of the class described, a bolt, a latch member carried thereby, mechanism including a rotary device for operating the bolt, a locking cylinder within the rotary device, means for operating the rotary device when released, and means for mounting the latter and for mounting a pivoted member such mounting means comprising a tubular member having oppositely located lugs and an open ended longitudinal slot at one end between the lugs, permitting access to the rotary member.

3. In a device of the class described, a bolt, a latch member carried thereby, mechanism including a roll-back for operating the bolt, a sleeve connected with the roll-back, means including a slotted sleeve for operating the sleeve first mentioned, a locking cylinder within the slotted sleeve, a thumb member immediately above the locking cylinder, projecting through the slotted sleeve at an angle to its main axis and arranged for rotating the slotted sleeve, a bolt locking device, and means for operating the latter from the locking cylinder.

4. In a device of the class described, a bolt, means including a slotted rotary device for operating the bolt, a thumb member for operating the rotary device, a tubular member for mounting the rotary member, trunnions carried by the tubular member, a pivoted ring-like member connected with the trunnions, said member last mentioned having a portion cut away to permit of such connection and the thumb member being located adjacent to the cut-away portion, a locking cylinder within the slotted rotary device, and means connected with the cylinder for retaining the bolt against operation by the device last mentioned.

5. In combination with a knocker and means including a plate and a sleeve for mounting the knocker, of a latch, means for operating the latch by the rotation of said sleeve, locking means concentric with the sleeve, and an independent locking device for the sleeve mounted on the plate on the side opposite to that on which the knocker is located.

1,110,195. RULE. FRANK M. ERWIN, Louisville, Ky. Filed July 25, 1913. Serial No. 781,186. (Cl. 33—107.)

1. A measuring instrument of the class described comprising a body having parallel longitudinal edges and plane upper surfaces adjacent said edges provided with longitudinal scales thereon, the said body being provided medially with a longitudinally extending dove-tailed groove, a slide including a dove-tailed body loosely engaged within the said groove for longitudinal sliding movement and lateral wings projecting from said dove-tailed body and overlapping the graduated surfaces, the said slide being constructed of transparent material and having a cross hair adapted to register with the graduations of the scale, and yieldable means for normally forcing the beveled side edges of the dove-tailed body into snug engagement with the corresponding walls of the said dove-tailed groove.

2. A measuring instrument of the class described comprising a body having parallel longitudinal edges and plane upper surfaces adjacent said edges provided with longitudinal scales thereon, the said body being provided medially with a longitudinally extending dove-tailed groove, a slide including a dove-tailed body loosely engaged within the said groove for longitudinal sliding movement and lateral wings projecting from said body portion and overlying the graduated surfaces, the said slide being constructed of transparent material and having a cross hair adapted to register with the graduations of the scales, the bottom of the said dove-tailed groove being provided with a second medially disposed and longitudinally extending groove, the body portion of the slide being provided with a medial recess in its inner face registering with the last-named body groove, and a spring engaged within the said recess of the slide for frictional contact within the last-named body groove.

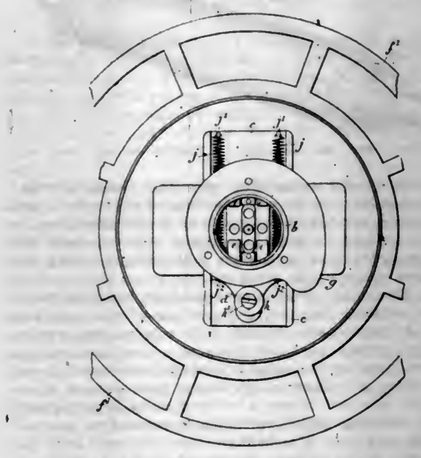
3. A measuring instrument of the class described comprising a body having parallel longitudinal edges and plane upper surfaces adjacent said edges provided with longitudinal scales thereon, the said body being provided medially with a longitudinally extending dove-tailed groove, a slide including a dove-tailed body loosely engaged within the said groove for longitudinal sliding movement and lateral wings projecting from said body portion and overlying the graduated surfaces, the said slide being constructed of transparent material and having a cross hair adapted to register with the graduations of the scales, the bottom of the said dove-tailed groove being provided with a second medially disposed and longitudinally extending groove, the body portion of the slide being provided with a medial recess in its inner face registering with the last-named body groove, and a longitudinally bowed leaf-spring having its terminals engaged within the slide recess and having its medial portion in contact within the last-named body groove.

1,110,196. TRACTION-WHEEL. JAMES FAIR, near San Jose, Cal. Filed Aug. 8, 1910, Serial No. 576,153. Renewed May 14, 1914. Serial No. 838,620. (Cl. 21—216.)

A traction wheel comprising a hub, spokes radiating therefrom, flat circular rims carried by said spokes, said rims being relatively wide in a radial direction of the wheel and relatively narrow in an axial direction of the wheel, said rims provided with radial slots, and flat transverse obliquely set blades engaging in said slots with their extremities projecting beyond the rims, said

blades being relatively wide in a radial direction of the wheel and relatively narrow in a circumferential direction of the wheel, the tread portion of the blades being substantially flush with the tread portion of the rims.

1,110,197. OPHTHALMOMETER. WILLIAM GOWLLAND and CHARLES S. GOWLLAND, Croydon, England. Filed Oct. 31, 1910. Serial No. 590,088. (Cl. 88—20.)



1. In ophthalmometers, the combination with the prism-carrying means, of abutments thereon, cams for operating the prism-carrying means, and means for keeping the abutments and cams in engagement with one another.

2. In ophthalmometers, the combination with the prism-carrying means, of flexible cams for operating same, and means for actuating the cams.

3. In ophthalmometers, the combination with the prism-carrying means, of cams for operating the same, the path of said cams being adjustable, and means for actuating the cams.

4. In ophthalmometers, the combination with the prism-carrying means, of registering-wheels arranged one on each side of same and concentrically with the horizontal tubular portion thereof, and flanges on the inner faces of said registering-wheels and overlapping one another.

5. In ophthalmometers, the combination with the horizontal tubular portion thereof of a registering wheel arranged concentrically therewith, and a light-transmitting scale carried by an openwork part of said registering-wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,110,198. METALLIC RAILROAD-TIE. FURNEY F. GREEN, Coalgate, Okla. Filed Nov. 25, 1913. Serial No. 803,017. (Cl. 238—5.)

1. A metallic railway tie including a body having longitudinal and transverse ribs, certain of said transverse ribs coöperating to form a pocket, the longitudinal ribs intersecting the pocket, means for supporting a rail at one side of the pocket, a brace plate for engaging one side of the supported rail, and spaced fingers depending from the plate and insertible into the pocket at the sides of the longitudinal ribs.

2. A metallic railway tie including a body having longitudinal and transverse ribs, certain of said transverse ribs coöperating to form a pocket, the longitudinal ribs intersecting the pocket, means for supporting a rail at one side of the pocket, a brace plate for engaging one side of the supported rail, and spaced fingers depending from the plate and insertible into the pocket at the sides of the longitudinal ribs, said longitudinal ribs having notched upper ends for the reception of the brace plate.

3. A metallic railway tie including a body having a group of transverse rail supporting ribs, longitudinal ribs in the body, certain of said transverse ribs coöperating to form a pocket intersected by the longitudinal ribs, the upper edges of the longitudinal ribs being notched within the pocket, a wear plate fitted upon and receiving the upper edges of the group of transverse ribs, a brace plate for engaging one side of a rail, said plate having spaced fingers projecting into the pocket and at the sides of the longitudinal ribs, the upper end walls of the slots formed between the fingers being seated in the notches.

4. A metallic railway tie including a body having a group of transverse rail supporting ribs, longitudinal ribs in the body, certain of said transverse ribs coöperating to form a pocket intersected by the longitudinal ribs, the upper edges of the longitudinal ribs being notched within the pocket, a wear plate fitted upon and receiving the upper edges of the group of transverse ribs, a brace plate for engaging one side of a rail, said plate having spaced fingers projecting into the pocket and at the sides of the longitudinal ribs, the upper end walls of the slots formed between the fingers being seated in the notches, an insulating plate for engagement by the brace plate and including a web, an upper flange, and a U-shaped base, another insulating plate U-shaped in cross section, the two insulating plates being mounted on the wear plate, and a rail having its base flanges projecting into the U-shaped plates and fitting snugly against the web and top flange.

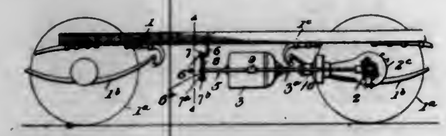
5. A railway tie including a body having a transverse pocket, longitudinal ribs intersecting the pocket and having notched upper edges within the pocket, a wear plate, a spacing strip upon the wear plate and having depending terminals for lapping the sides of the tie, a brace plate at one side of the wear plate for engaging one side of a rail, fingers depending from the plate and into the pocket at the sides of the longitudinal ribs, the upper end walls of the slots between the fingers being adapted to be seated in the notches, and additional rail securing means mounted on the tie, the wear plate being disposed between the brace and said securing means.

[Claim 6 not printed in the Gazette.]

1,110,199. MOTOR-VEHICLE CONSTRUCTION. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 21, 1910. Serial No. 598,540. (Cl. 21—90.)

1. In electric motor vehicle construction, the combination of a vehicle frame, a rear axle, including a housing and live axle sections, springs for supporting the said frame upon the axle, a pair of arms rigidly connected to said rear axle housing and extending forwardly therefrom, means for yieldingly supporting said arms at their front ends, compression springs between the yieldingly supported ends of the arms and the vehicle frame, an electric motor arranged between the said arms and having direct shaft

drive connection with and at right angles to the live axle sections of said rear axle, and devices for rigidly connecting the motor to the arms at points thereon intermediate the rear axle and their yieldingly supported ends, whereby the motor, drive connections, arms and rear axle housing must always move together as a unitary structure.



2. In electric motor vehicle construction, the combination of a vehicle frame, a front axle and wheels supporting the front end of said frame, a rear axle including a housing and live axle sections, springs interposed between said axle housing and the frame, rear drive wheels on the live axle sections, a pair of arms each rigidly connected at its rear end to the rear axle-housing and at its front end having movable connection with the said frame, an electric motor arranged between and rigidly secured at opposite sides to said arms, the armature shaft of said motor being arranged at right angles to said rear axle, and a drive shaft interposed between the rear end of said armature shaft and the said rear axle to transmit power one from the other whereby the motor, drive connections, arms and rear axle housing must always move together as a unitary structure.

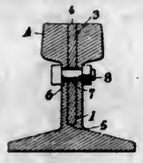
3. In electric motor vehicle construction, the combination of a vehicle frame, a rear axle, including a housing and live axle sections, springs interposed between said frame and axle, an electric motor, a driving connection between said motor and the live sections of said rear axle including a drive shaft alined with the armature shaft of the motor and a compensating gear, a pair of arms arranged upon opposite sides of the motor, the said arms being rigidly connected at one end to the said rear axle housing and extending therefrom forwardly beyond the motor, compression springs interposed above and below the said arms arranged at or near the front ends thereof and permitting the arms to move upwardly and downwardly, and devices for rigidly connecting the motor to the said arms whereby the motor, drive connections, arms and rear axle housing must always move together as a unitary structure.

4. In electric motor vehicle construction, the combination of a vehicle frame, a rear axle including a housing and live axle sections, springs interposed between said frame and axle, an electric motor a driving connection between said motor and the live sections of said rear axle, including a drive shaft alined with the armature shaft of the motor, and a compensating gear, a pair of arms arranged upon opposite sides of the motor, the said arms being rigidly connected at one end to the said rear axle housing and extending therefrom forwardly beyond the motor, a yoke or device for rigidly connecting the arms together forward of the motor, compression means for movably supporting the said yoke or device, and permitting movement of the said connected ends of the arms relative to the vehicle frame upwardly and downwardly, and devices for rigidly connecting the motor to the said arms, whereby the motor, drive connections, arms and rear axle housing must always move together as a unitary structure.

1,110,200. RAIL-JOINT. ELWIN H. HALL, Pawnuska, Okla. Filed Nov. 22, 1911, Serial No. 661,731. Renewed Feb. 12, 1914. Serial No. 818,370. (Cl. 239—13.)

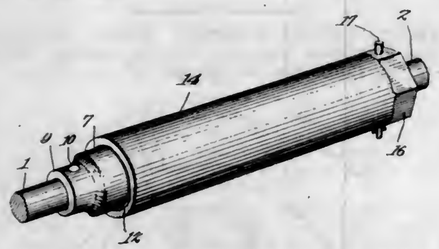
1. Rail sections having recessed ends, a reversible rail tread plate having parallel surfaces adapted to be singly presented to form a tread surface at the joint between the rail sections, the said tie plate having elongated slots therein, and fastening devices extending through the rail sections and through the said elongated slots in the tie plate.

2. Rail sections having recessed ends, a reversible rail tread plate having parallel surfaces adapted to be singly presented to form a tread surface at the joint between the rail sections, the said recesses having walls of V-configura-



tion, the said tie plate having recesses receiving the V-portions on the walls of the first recesses, and fastening devices connecting the rail sections with the tie plate.

1,110,201. TURNBUCKLE. WILLIAM HARDICK, Cadillac, Mich., assignor of one-half to Leroy A. Ogden, Grand Rapids, Mich. Filed Feb. 13, 1914. Serial No. 818,544. (Cl. 85—36.5.)



1. A turnbuckle comprising oppositely threaded rods; a tube receiving the threaded portions of the rods; a primary sleeve secured to one rod and spaced therefrom to receive the tube; a secondary sleeve threaded upon the primary sleeve; and means for detachably securing the secondary sleeve to the other rod.

2. A turnbuckle comprising oppositely threaded rods; a tube receiving the threaded portions of the rods and provided intermediate its ends with a polygonal, wrench receiving portion, each rod being of a common diameter from its inner end to a point beyond the corresponding end of the tube; a primary sleeve spaced from one rod to receive the tube and having a reduced collar engaging said rod; a securing device permanently connecting the collar with said rod; a secondary sleeve threaded onto the outer face of the primary sleeve and having a collar embracing the other rod closely, the collar being of externally polygonal contour; a tapered pin passed through the collar of the secondary sleeve and through the last specified rod; and a securing pin extending through the tapered pin and coöperating with the collar of the secondary sleeve to hold the tapered pin in place.

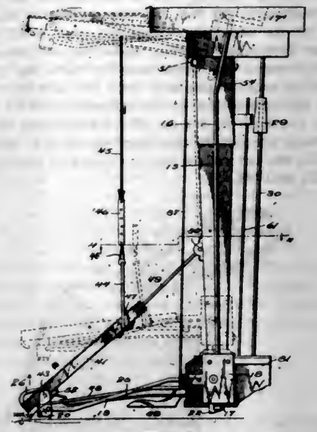
3. A turnbuckle comprising oppositely threaded rods; a tube receiving the threaded portions of the rods; a primary sleeve surrounding one rod and spaced therefrom to receive the tube; a secondary sleeve surrounding the other rod and receiving the end of the primary sleeve; and separate means for securing the sleeves to the respective rods, one of said means being releasable.

1,110,202. PEDAL. JUSTUS HATTEMER, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y., a Corporation of New York. Filed Apr. 18, 1913. Serial No. 762,044. (Cl. 84—169.)

1. The combination with a piano player, of pedals slidable vertically relative thereto, means to latch the pedals in lowered position, and means whereby to manually lift the pedals, said lifting means unlatching the latching means.

2. The combination with a piano; of guides disposed beneath the piano and vertical for the major portion of their length but having their upper portions deflected to

the rear, blocks slidable upon the guides and their deflected portions, and a pedal supporting structure carried by the blocks.



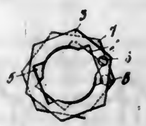
3. The combination with a piano, of guides extending downwardly therefrom, a cross bar connecting the lower extremities of the guides, a pedal supporting structure slidable upon the guides, a latch carried by the supporting structure capable of engaging under the cross bar, a manual lever pivoted upon the pedal supporting structure, and means connecting the manual lever with the latch.

4. The combination with a piano, of guides extending downwardly therefrom, a pedal supporting structure slidable upon some of said guides, a counter weight slidable upon other of said guides and cables connected to the supporting structure and the counterweight whereby the counterweight counterbalances the supporting structure.

5. The combination with a piano, of guides extending downwardly therefrom, a winding drum adjacent the tops of the guides, a pedal supporting structure slidable upon some of said guides, cables extending from said supporting structure to the drum, a counterweight slidable upon others of said guides, and a cable extending from the counterweight to said drum.

[Claims 6 and 7 not printed in the Gazette.]

1,110,203. NUT AND BOLT CONSTRUCTION. CHARLES AUSTIN HAYDEN, Gorham, N. H. Filed Apr. 23, 1913. Serial No. 763,147. (Cl. 151—15.)



1. The combination with a bolt provided with a mutilated threaded portion, of a plurality of nuts provided with mutilated threaded apertures extending therethrough, means for holding the threaded portions of said nuts out of alinement to preserve the continuity of the nut threads, and means for locking the said nuts against rotation with respect to the said bolt.

2. The combination with a bolt provided with a mutilated threaded portion, of a plurality of nuts provided with mutilated threaded apertures extending therethrough and means including a locking washer for locking the said nuts against rotation with respect to the said bolt.

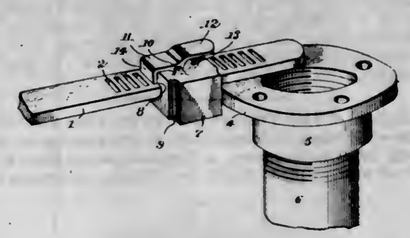
3. The combination with a bolt provided with a mutilated threaded portion, of a plurality of nuts provided with mutilated threaded apertures extending therethrough, means for holding the threaded portions of said nuts out of alinement to preserve the continuity of the nut threads, and means including a locking washer non-rotatably engaging the said bolt adapted to hold the said nuts against rotation with respect to the said bolt.

4. The combination with a bolt provided with a mutilated threaded portion, of a plurality of nuts provided with mutilated threaded apertures extending therethrough, and means for holding the threaded portions of said nuts out of alinement to preserve the continuity of the nut threads, and a locking washer adapted to non-rotatably and slidably engage the bolt and to slidably and non-rotatably engage one of said nuts to hold said nuts and bolt against relative rotation.

5. In a device of the class described, a bolt provided with a mutilated threaded portion, a plurality of nuts provided with mutilated threaded apertures extending therethrough, means for holding the threaded portions of said nuts out of alinement to preserve the continuity of the nut threads, a locking washer adapted to non-rotatably and slidably engage said bolt, said washer provided with projecting lips adapted to register and fit between the mutilated portions of said bolt and said nut, to thereby prevent the relative rotation of the said nuts and bolt.

[Claims 6 to 15 not printed in the Gazette.]

1,110,204. WRENCH. HENRY C. HIEN, Webb City, Mo. Filed Mar. 17, 1914. Serial No. 825,335. (Cl. 81—90.)

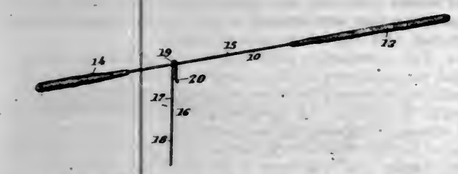


1. A flange wrench comprising a lever having a projecting finger at one of its ends, a rectangular block slidably mounted upon the lever and removable therefrom, said block having arcuate corners which are provided with longitudinally extending teeth, and spring pressed means upon the block co-acting with the lever for locking the block upon the lever.

2. A wrench for applying and removing flanged sleeves to and from pipes comprising a flat rectangular lever having one of its ends provided with a projecting finger to fit an opening in the sleeve, said lever having its outer face provided with a series of spaced transverse indentures, a removable and reversible rectangular block arranged for slidable movement upon the lever, ears upon the block, a substantially L-shaped dog pivoted to the ears, a spring between the tail of the dog and the block and the angular toothed portion of the dog adapted to lie against one of the faces of the block and engaged in one of the indentures.

3. A wrench for applying and removing flanged sleeves to and from pipes comprising a flat rectangular lever having one of its ends provided with a projecting finger to fit an opening in the sleeve, said lever having its outer face provided with a series of spaced transverse indentures, a rectangular block having a rectangular opening adjacent one of its faces to permit of the block being arranged upon the lever and from either of the ends of the block, the said block having arcuate corners which are provided with longitudinal teeth to engage with the flange of the sleeve, a spring pressed dog carried by the block and having a flat toothed portion which is adapted to contact with one of the ends of the block and engaged in one of the indentures of the lever.

1,110,205. PYROTECHNICAL TOY. AARON JEDEL, New York, N. Y. Filed May 22, 1914. Serial No. 840,344. (Cl. 102—20.)



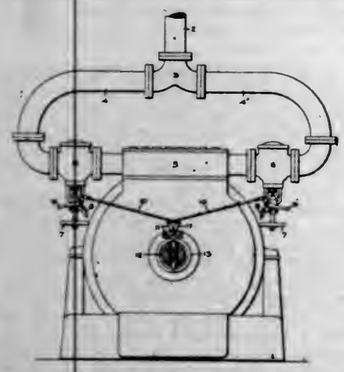
1. As a new article of manufacture, a pyrotechnical toy comprising a rod having portions thereof coated and an uncoated portion, and a handle for connecting with the uncoated portion of the rod and adjustable thereon whereby the distances between one end of the rod and the handle and the other end of the rod and the handle can be varied.

2. In a pyrotechnical toy, the combination with a rod having its ends coated with a pyrotechnical compound and its intermediate portion free from the compound, of a handle comprising a straight handle portion and a hook formed by bending one end of the straight handle portion upon itself, said hook being adapted for adjustable engagement with the uncoated portion of the rod whereby the distances between the ends of the rod and the handle can be varied.

3. In a pyrotechnical toy, the combination with a rod having coated and uncoated portions, of a compound handle for connection with the uncoated portion of the rod and whereby the handle can be held in frictional engagement with the rod or in sliding engagement therewith.

4. In a pyrotechnical toy, a rod having coated and uncoated portions, and a handle for connection with the uncoated portion of the rod and movable in the plane of its length.

1,110,206. TWIN THROTTLE-VALVE FOR ENGINES. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1913. Serial No. 788,574. (Cl. 136—11.)

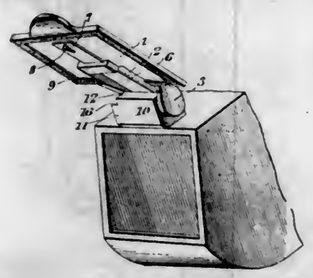


1. The combination with an elastic fluid engine having a valve chest, of two supply conduits connected to the chest in parallel to each other trough either of which motive fluid may pass thereto, an emergency throttle valve in each branch, and means for tripping said valves.

2. The combination with an elastic fluid engine having a valve chest, of a fluid supply conduit connected thereto and divided into two parallel branches through either of which motive fluid may pass to the engine, an emergency throttle valve in each branch, and a single emergency governor controlling both valves.

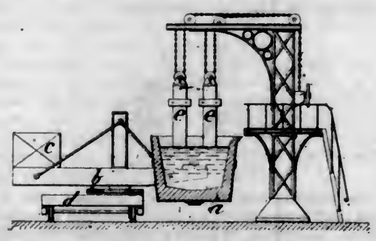
1,110,207. JOURNAL-BOX LID. CHARLES H. KASCH, Davenport, Iowa. Filed Jan. 21, 1914. Serial No. 813,581. (Cl. 64—23.)

1. A journal box having a hinge projection formed thereon, said projection including a flat forward portion, a flat upper portion at right angles to the forward portion, spaced fingers forming the rear wall of the projection, said projection being formed with a longitudinal opening and being cut away beyond one of the fingers to form a receiving recess, a lid for the box having a hinge pintle secured at its respective terminals, and a lid and being otherwise free of connection therewith, the connection between one end of the pintle and the lid being in the form of a disk of greater diameter than the opening in the projection, the connection at the opposite end of the pintle being in the form of a web, of a size to pass through the longitudinal opening in the hinge projection, and a spring secured to the lid and having its free end bearing between the pintle and lid.



2. A journal box having a hinge projection formed thereon, said projection including a flat forward portion, a flat upper portion at right angles to the forward portion, spaced fingers forming the rear wall of the projection, said projection being formed with a longitudinal opening and being cut away beyond one of the fingers to form a receiving recess, a lid for the box having a hinge pintle secured at its respective terminals to the lid and being otherwise free of connection therewith, the connection between one end of the pintle and the lid being in the form of a disk of greater diameter than the opening in the projection, the connection at the opposite end of the pintle being in the form of a web, and a spring secured to the lid and having its free end bearing between the pintle and lid, the relative upper portion of the projection being formed with a longitudinal slot of a size to permit the passage therethrough of the web and communicating with the opening in the projection.

1,110,208. PROCESS OF ELECTRICALLY TREATING, MELTING, AND REFINING METALS. CHARLES ALBERT KELLER, Paris, France. Filed Aug. 12, 1902. Serial No. 119,385. (Cl. 204—64.)



1. The process of electrically treating, melting and refining metals, consisting in moving a suitable receptacle to two or more furnaces and collecting the products of metallurgical operations in said receptacle, lowering electrodes into the collected products while in a state of fusion, and subjecting the said products to the action of an electric current of sufficient strength to further heat and refine them.

2. In the treatment of steel, the process of mixing the products from a number of furnaces, which consists in introducing them in a molten condition into a single receptacle, and maintaining the mass molten in said receptacle by heat from an electric current, removing portions only of the composite molten contents of the receptacle without entirely emptying the same, and successively replenishing the receptacle with fresh additions.

3. In the treatment of steel, the process which consists in introducing the steel in a molten condition into a receptacle, and maintaining it molten in said receptacle by the heat from an electric current, said process being carried on without the use of a flame or other oxidizing method of heating, whereby desulphuration and conservation of the oxidizable additions are favored.

4. In the art of converting cast iron or the like into high-grade or "crucible" steel, the method which consists in transferring steel produced in any ordinary furnace or operation into an electric furnace, and finally treating the steel in said electric furnace to deoxidize it and making any desired addition thereto.

5. In the art of converting cast iron or the like into high-grade or "crucible" steel, the method which consists in transferring steel produced in any ordinary furnace or operation into an electric furnace, with removal of the superfluous slag, and finally transforming it in said electric furnace into the desired product.

[Claim 6 not printed in the Gazette.]

1,110,209. GUN-CLIP. GEORGE P. KIRCHNER, Rifle, Colo., assignor of one-half to P. J. Englebrecht, Rifle, Colo. Filed Apr. 14, 1914. Serial No. 831,801. (Cl. 42—71.)

1. A gun clip including a body, means for securing the body within the opening of a skeleton stock, and cartridge holders carried by the said body.

2. A gun clip including a body designed to fit within the opening of a skeleton stock and conforming to the configuration of the same, means for securing the body to a skeleton stock, and cartridge holders carried by the body.

3. A gun clip including a body designed to be arranged within the opening of a skeleton stock and tapered to conform to the configuration of the same, clamps consisting of sleeves adapted to embrace the upper and lower portions of a skeleton stock, and provided with spaced terminals secured to the side faces of the said body, and cartridge holders carried by the body.

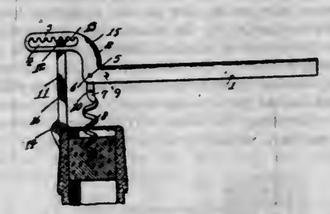
4. A gun clip including a body designed to be arranged within the opening of a skeleton stock, means for securing the body to a skeleton stock, and cartridge holders arranged in rows at the side faces of the body and located between the upper and lower portions of the skeleton stock.

5. A gun clip including a body designed to be arranged within the opening of a skeleton stock and composed of separate side plates or members, means for securing the body to a skeleton stock, and longitudinal rows of cartridge holders mounted on the said plates or members at the outer faces thereof.

[Claim 6 not printed in the Gazette.]

1,110,210. CORKSCREW. JOHN H. KISSINGER, Spokane, Wash. Filed Oct. 3, 1913. Serial No. 793,227. (Cl. 65—51.)

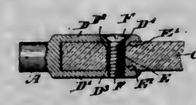
1. A cork screw comprising spaced parallel members forming a lever, each of said members being curved upwardly adjacent one end and having a portion extended forwardly therefrom, said forwardly extended portions having longitudinally disposed slots, the upper wall of said slots being formed with alined recesses opening in a downward direction, an arm adjustable in said slots and adapted for interchangeable engagement with said recesses, said arm forming a fulcrum for said lever, and a cork screw pivoted between said members rearwardly of said arm as described.



2. A cork extractor comprising a lever of substantially U-form having an upwardly and forwardly extending bifurcated end portion, the parallel members of said bifurcated end portion having alined longitudinally disposed slots, the upper wall of each slot being provided with downwardly opening recesses, an extracting element pivoted to said lever below said bifurcated end portion, a fulcrum arm supported by and slidably adjustable on the lower walls of said slots and adapted for interchangeable engagement with said recesses for the purpose specified.

3. A cork extractor comprising a lever formed from sheet metal into substantially U-form and having upwardly and forwardly extending bifurcated end portions, an extracting element pivotally supported on said lever below said bifurcated end portion and adapted to be folded rearwardly between the parallel side members of the lever, a fulcrum arm pivotally mounted between the members of said bifurcated end portion and adapted to be swung upwardly and over between said members to folded position, and means for retaining said element and arm in folded position.

1,110,211. FASTENING. DALLTOR WALDEMAR KOLLE, Portland, Oreg. Filed Feb. 18, 1914. Serial No. 819,462. (Cl. 88—47.)



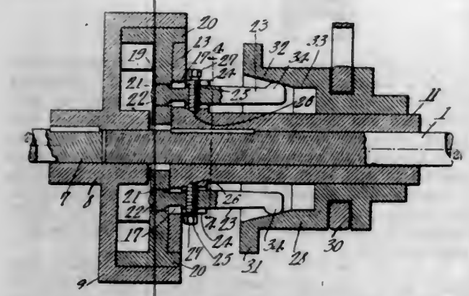
In a fastening, the combination of a lens provided with a round aperture having conical countersunk ends, a post provided with apertured ears straddling the said lens, the inner faces of the said ears being provided with frusto-conical flanges fitting into the said countersunk ends of the lens aperture, one of the said ears and its flange being provided with an interior screw thread and the other ear being apertured and countersunk at its outer face, and a screw passing through the countersunk apertured ear with its head in the countersink, loosely through the aperture of the lens and screwing into the threaded ear.

1,110,212. CLUTCH. VICTOR R. KOONTZ, Waynesboro, Pa. Filed Mar. 21, 1913. Serial No. 756,039. (Cl. 192—4.)

1. A clutch, including two shafts disposed in axial alinement, a drum constituting one clutch member keyed upon and rotatable with one shaft, a sleeve having a disk keyed upon and rotatable with the second shaft, a plurality of radially disposed clutch members carried by said disk for engagement with the clutch member of the first shaft, levers carried by the sleeve, a sliding lever actuating member carried by the sleeve, said levers being connected to the sleeve by an adjustable connection whereby the gripping action of the members may be regulated, and coöperable means carried by both clutch members and operably connected to the sliding lever actuating member for directly connecting the shafts.

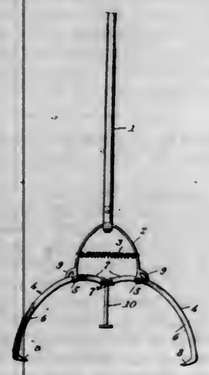
2. A clutch, including two shafts disposed in axial alinement, a drum constituting one clutch member keyed

upon and rotatable with one shaft, a sleeve having a disk keyed upon and rotatable with the second shaft, a plurality of radially disposed clutch members carried by said disk for engagement with the clutch member of the first shaft, levers carried by the sleeve, a sliding lever actuating member carried by the sleeve, said levers being connected to the sleeve by an adjustable connection whereby the gripping action of the member may be regulated, and coöperable means carried by the drum and disk and operably connected to the sliding lever actuating member for directly connecting the shafts after the lever actuating member has been actuated to its full extent.



3. A clutch, including two shafts disposed in axial alinement, a drum constituting one clutch member keyed upon and rotatable with one shaft, a sleeve having a disk keyed upon and rotatable with the second shaft, a plurality of radially disposed clutch members carried by said disk for engagement with the clutch member of the first shaft, a plurality of levers, one lever to each clutch member carried by the sleeve, a sliding lever actuating member carried by the sleeve, each lever being connected intermediate of its ends to the sleeve by an adjustable connection whereby the gripping action of the clutch members may be regulated, the lever actuating member having a socket for receiving one end of each lever, said socket having an inclined wall terminating in a reduced cylindrical end for engaging the ends of the levers to operate said levers, and coöperable means carried by the drum and disk and operably connected to the lever actuating member to connect the shafts directly, said means coöperating when the ends of the levers are projected into the cylindrical end of the socket.

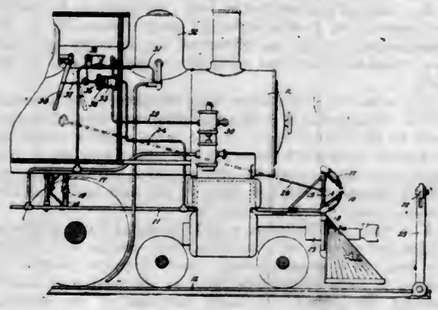
1,110,213. FISH-SPEAR. FRANK D. KRATOCHWILL, Boscobel, Wis. Filed June 10, 1913. Serial No. 772,810. (Cl. 43—6.)



1. A fish spear comprising a handle, a bowed spring fork carried by the handle, a pair of curved impaling jaws having long and short arms, the long arms of said jaws being provided with impaling points at their outer ends and said jaws being pivoted at the points of intersection of their arms to the ends of the fork, a coiled spring connecting the arms of the fork, a forwardly projecting trigger rod pivoted to the inner ends of the short arms of the jaws, and stop lugs upon the ends of the fork for limiting the opening movement of the jaws and for spreading the fork arms whereby the spring is placed under tension, the construction being such that when the jaws are opened the inner ends of the short arms of the jaws will lie in advance of the pivotal connections between the jaws and fork arms.

2. A fish spear comprising a handle, a fork carried by the handle, said fork being of bowed formation and made of spring metal, a pair of curved impaling jaws having long and short arms, the long arms of said jaws being provided with impaling points at their outer ends and said jaws being pivoted at the points of intersection of their arms to the ends of the spring fork, a coiled spring conecting the ends of the spring fork, a coiled spring connecting the arms of the fork, a forwardly projecting trigger rod pivoted to the inner ends of the short arms of the jaws, and outwardly and forwardly curved stop lugs upon the ends of the fork, in rear of the pivots of the jaws and extending forwardly on arcs eccentric to said pivots so as to be in the paths of opening movement of the jaws, said lugs serving as stops to limit the opening movement of the jaws and also as connections for transmitting pressure from the jaws to the fork arms when the jaws are opened to spread said fork arms, whereby the coiled spring is placed under tension, the construction being such that when the jaws are open the inner ends of the short arms of the jaws will lie in advance of the pivotal connections between the jaws and fork arms.

1,110,214. AUTOMATIC TRAIN-STOP. WILLIAM E. LAWN, Rochester, N. Y., assignor to Automatic Railroad Appliances Company, Inc., Rochester, N. Y., a Corporation of New York. Filed Aug. 16, 1913. Serial No. 785,027. (Cl. 246—59.)



1. In an automatic train stop, the combination with the usual air line, of an auxiliary air device including flexible members and a detachable coupling therefor, means to support the coupling members in normal operative position in a vertical plane at the side of and parallel to the side of the locomotive and in the form of an arc of a circle with the convexity toward the front, and an obstacle adapted to be set simultaneously with the setting of the signal at a danger point and adapted to lie at right angles to the plane of the coupling members and to be struck thereby to disconnect said coupling members.

2. In an automatic train stop, the combination with the usual air line, of an auxiliary air line including flexible coupling members and a coupling therefor, said coupling members occupying a normal position in the arc of a circle with the convexity thereof toward the front, and an obstacle adapted to be set at a danger point in accordance with the danger signal and adapted to be struck by the coupling to serve to force the coupling toward the center of curvature of the arc of said coupling members to automatically disconnect the coupling.

3. In a device of the class set forth, the combination with the usual air line, of an auxiliary air line including a rigid member and flexible members connected therewith, coupling means attached to said flexible members and serving to normally connect them together in curved position, the convexity of the curve being toward the front, a supporting bracket for the flexible coupling members journaled upon the rigid portion of the auxiliary air line, and means under the control of the engineer for swinging the bracket and flexible members around the axis of said rigid member, substantially as set forth.

4. In a device of the character set forth, the combination with the usual main air line, of an auxiliary air line comprising a rigid vertical pipe member, means to secure said pipe member in fixed position, a pair of flexible coupling members normally connected in a curve with the convexity thereof forward; a supporting bracket journaled upon said vertical pipe member, means to swing the supporting bracket around the axis of the rigid member to change the position of the coupling members, and a pair of intermediate flexible pipe conections between the aforesaid flexible members and the rigid pipe member, substantially as set forth.

5. In an automatic train stop, the combination with the usual train line, a throttle lever and sanding devices, of an auxiliary air pipe including coupling members, an obstacle adapted to be struck by the coupling members to part the same when the danger signal is set and thereby releasing the air from the system of air pipes, an auxiliary cylinder in connection with the air pipes and normally charged with compressed air therefrom, a flexible member having its ends connected to the throttle lever and said sanding devices, and means connecting the intermediate portion of the flexible member and said auxiliary cylinder and serving to shut off the steam and start the flow of sand simultaneously with the operation of the brakes incident to the release of air from the train line.

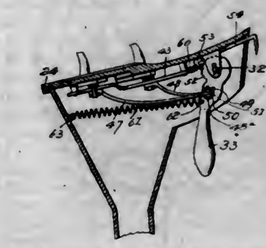
1,110,215. DRIP-RECEPTACLE FOR UMBRELLAS. CHARLES J. MADONNA, New York, N. Y. Filed Dec. 13, 1913. Serial No. 806,510. (Cl. 135—48.)

1. A drip receptacle for umbrellas, comprising a cup having an exterior annular recess and provided with an attaching hub at its bottom, and apertures in the said bottom and leading to the exterior of the hub, clamping means in the said hub for clampingly engaging the umbrella stick, a collar having an exterior annular recess and clamping means on the inside for engaging the umbrella stick, and a tubular covering attached at one end in the recess of the said cup and at the other end in the recess of the said collar.

2. A drip receptacle for umbrellas, comprising a cup having a hub and apertures in its bottom leading to the exterior of the hub, clamping means in the hub for engaging the umbrella stick, a collar having clamping means on its interior, springs connecting the cup with the collars, and a tubular covering of flexible material secured to the cup and collar.

3. A drip receptacle for umbrellas, comprising a cup having an attaching hub at its bottom, and apertures in the said bottom and leading to the exterior of the hub, clamping means in the said hub for engaging the umbrella stick, a sleeve held on the said hub, a collar slidingly engaging the said sleeve and provided with interior clamping means engaging the sleeve to hold the collar in any position on the sleeve, flat springs connecting the said cup with the said collar, and a tubular covering of flexible material attached to the said cup and collar and stretched over the said springs.

1,110,216. SHOE-BLACKING STAND. WALTER T. MAHIN, Harrisburg, Pa. Filed Jan. 7, 1914. Serial No. 810,805. (Cl. 15—58.)



1. In a blacking stand, a suitably supported head, a face plate thereon, means for securing the face plate to the head, a guide bar, means for mounting the guide bar on the face plate, coupling plates, sectional clamps pivotally mounted on the coupling plates, means on the head for lifting the pivotal portions of the clamps, means on the coupling plates guided by the guide bar, links connected to the coupling plates, a rocking bar to which the links are connected, a lever in which the rocking bar is rockably mounted, means for pivotally mounting the lever on the face plate, and means for holding the lever at different positions of adjustment.

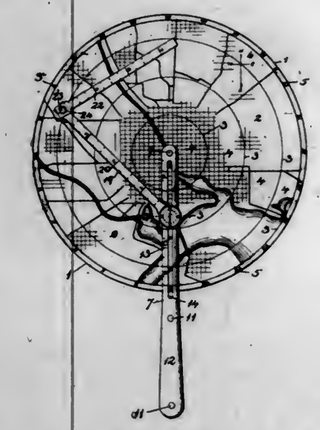
2. In a blacking stand, a suitably supported head, a face plate thereon, a guide bar having slots therein, said guide bar being carried by the face plate, connecting plates having projections extending into the slots of the guide bar, sectional clamps pivotally connected to the connecting plates, the said sectional clamps having their outer ends pivoted with relation to the inner ends, means for guiding the clamps with relation to the face plate, means on the face plate for engaging the pivoted portions of the clamps to elevate the same, and means for operating the clamps.

3. In a blacking stand, a suitably supported head, a face plate thereon, a guide bar having slots therein, said guide bar being carried by the face plate, connecting plates having projections extending into the slots of the guide bar, sectional clamps pivotally connected to the connecting plates, the sectional clamps having their outer ends pivoted with relation to the inner ends, means for guiding the clamps with relation to the face plate, means on the face plate for engaging the pivoted portions of the clamps to elevate the same, a lever pivotally connected to the face plate, links pivotally connected to the connecting plates, a rocking bar to which the links are pivoted, said lever having an aperture for the reception of the rocking bar, teeth on the lever, and a detent for engaging the teeth thereof.

4. In a blacking stand, a suitably supported head, a face plate thereon, a guide bar having slots therein, said guide bar being carried by the face plate, connecting plates having projections extending into the slots of the guide bar, sectional clamps pivotally connected to the connecting plates, the sectional clamps having their outer ends pivoted with relation to the inner ends, means for guiding the clamps with relation to the face plate, means on

the face plate for engaging the pivoted portions of the clamps to elevate the same, a lever pivotally connected to the face plate, links pivotally connected to the connecting plates, a rocking bar to which the links are pivoted, said lever having an aperture for the reception of the rocking bar, teeth on the lever, a detent for engaging the teeth thereof, a projection on the guide bar for guiding the detent, and means for holding the detent normally in engagement with the teeth of the lever.

1,110,217. CHART OR MAP. ALLEN B. MAULL, Baltimore, Md. Filed May 21, 1912. Serial No. 698,770. (Cl. 35—6.)



1. The combination with a map or chart, of a locating arm pivotally connected thereto, and a scale arm adjustably connected with said locating arm.

2. The combination with a map or chart, of a locating arm pivotally connected thereto, and a scale arm having one end adjustably connected with said locating arm.

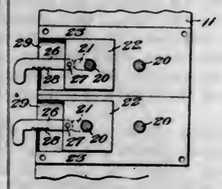
3. In a device of the character described the combination with a chart, of a locating arm pivotally connected to the chart and a second arm pivotally carried by and movable independently of the said locating arm and said second pivoted arm also having a scale.

4. The combination with a map or chart, of a locating arm pivotally connected thereto, and a scale arm having one end adjustably connected with the locating arm between the ends of the latter.

5. The combination with a map or chart, of a locating arm pivoted at one end thereto, and a scale arm having one end adjustably connected to said locating arm between the pivot and the free end thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,110,218. CRUSHING-MILL. CHARLES G. MAYER, Jr., Durango, Colo. Filed Feb. 4, 1911. Serial No. 606,556. (Cl. 83—12.)



1. A mill of the class described, comprising a body having its front wall provided with vertically disposed slots, a pair of rollers journaled in the body, blocks slidable on the ends of the body and adapted to receive the journal ends of one of the pair of said rollers, means for adjusting the said single roller and comprising combined lock and operating arms directly pivoted at one end of said blocks and having their opposite ends projecting through said vertical slots of the front wall of the body whereby to move and regulate the adjustment of said blocks, said arms being provided with a plurality of notches adapted for interchangeable engagement with the lower edge of the vertical slot, and removable plates covering the said blocks and forming a housing therefor as described.

2. A mill of the class described, comprising a body having front, rear and end walls, said front walls having vertically disposed slots, guideways formed on the exterior of the said end walls, a pair of rollers arranged within the body, the journaled ends of one of said rollers being mounted in elongated slots in the said end walls, blocks slidable in said guideways and provided with openings in registry with said elongated slots and adapted to receive the journal ends of the said single roller and means connected with the blocks and movable through said vertical slots of the casing for adjusting said rollers as described.

1,110,219. FLEXIBLE ROLL-TOP OR SHUTTER FOR FIREPROOF CABINETS, &c. LEROY V. METZGAR, Elkhart, Ind. Filed Apr. 16, 1914. Serial No. 832,272. (Cl. 189—56.)

1. A flexible roll-top or shutter comprising rigid overlapping metallic sections made of seamless drawn metal tubing, the sections of said shutter each being provided with hollow extensions overlapping similar extensions on the adjoining sections, and metallic means for uniting said sections to form a flexible shutter.

2. A flexible roll-top or shutter comprising rigid overlapping metallic sections made of seamless drawn metal tubing filled with a heat-insulating material, the sections of said shutter each being provided with hollow extensions overlapping similar extensions on the adjoining sections, and metallic means for uniting said sections to form a flexible shutter.

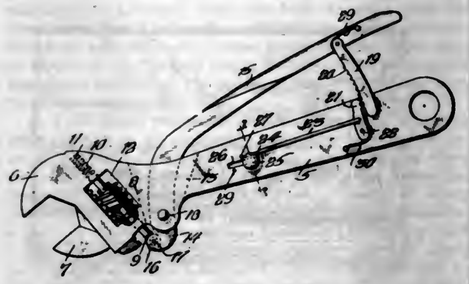
3. A flexible roll-top or shutter for fireproof cabinets and similar structures comprising rigid overlapping metallic sections made of seamless drawn metal tubing, the sections of said shutter each being provided with hollow extensions overlapping similar extensions on the adjoining sections, said sections being provided with openings near their inner sides in alinement with each other, and a flexible metallic cable extending through said openings and uniting said sections.

4. A flexible roll-top or shutter for fireproof cabinets comprising rigid overlapping metallic sections, each of said sections being made up of a seamless drawn metal tube having a central portion of uniform thickness and having at the top of one side and the bottom of the other extensions arranged to overlap corresponding extensions on the adjacent sections, said sections being filled with heat-insulating material and having openings near their inner sides in alinement with each other, and a flexible metallic cable extending through said opening and surrounded by said heat-insulating material.

5. A fireproof shutter or roll-top section made of rigid seamless drawn metal tubing having a central portion of substantially uniform thickness and having at the top of one side and the bottom of the other side thereof extensions adapted to overlap the corresponding extensions of other sections when used in such shutter or roll-top construction, substantially as described.

[Claim 6 not printed in the Gazette.]

1,110,220. WRENCH. LEANDER WALTER MILLSAP, Jr., Woodland, Cal. Filed Apr. 2, 1914. Serial No. 829,027. (Cl. 81—85.)



1. A wrench comprising a handle having a fixed jaw at one end thereof, a movable jaw adjustable with relation to the fixed jaw, a worm for adjusting the movable jaw, a pin on which said worm is journaled, said pin at one end extending into a recess in the handle, a spring in said recess bearing against the pin and adapted to maintain the jaw and worm at the outer end of their movement, a lever having its forward end bent downwardly, said lever at its forwardly bent end extending through an opening in said handle, said lever having its extreme front end slightly off-set and pivoted to the lower end of said pin, said lever near last said pivot point being pivoted to the wrench, a rack bar pivoted to the handle of the lever near the rear end thereof, and depending alongside said wrench handle, a dog pivoted to the wrench handle and adapted to normally engage said rack bar, a link pivoted to said dog, a button adjustable longitudinally of the handle, said link extending through said button at its forward end, and springs for normally maintaining said rack bar and detent in position to engage each other.

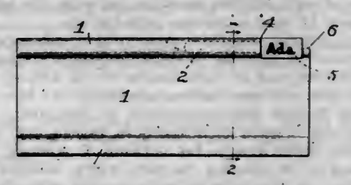
2. A wrench comprising a handle having a fixed jaw secured thereon, a movable jaw, a pin, a worm thereon whereby said movable jaw may be adjusted, a spring bearing against said pin for normally holding said worm and movable jaw at the outer extreme of their movement, a lever pivoted to said handle, said pin pivoted at its lower end to said lever, a rack bar carried by the lever, a detent carried by the wrench handle and adapted to normally engage said rack bar, and means for moving said detent out of engagement with said rack bar.

3. A wrench comprising a handle having a fixed jaw formed at one end thereof, a movable jaw, means for loosely adjusting said movable jaw, a lever pivoted to the handle, said lever being connected to said jaw adjusting means, means for normally holding said movable jaw at the outer extreme of its movement, a rack bar pivoted to the lever handle, a dog pivoted to the wrench handle and adapted to engage the rack bar, a link connected to the dog, and means for operating the link at will for releasing the dog.

1,110,221. ADDRESS-PLATE AND INDEX-TAB THEREFOR. DWIGHT P. MONTAGUE, Chattanooga, Tenn., and ULYSSES GRANT LEE, Chicago, Ill., assignors to Montague Mailing Machinery Co., a Corporation of Tennessee. Substitute for application filed Oct. 3, 1911, Serial No. 652,605. Renewed June 14, 1913, Serial No. 773,759. This application filed Jan. 9, 1914, Serial No. 811,272. (Cl. 129—16.)

1. An address plate having a rolled marginal portion provided with a terminal opening axially in line with the recess in the margin, and a tab having a portion inserted in the terminal opening and extending longitudinally from the terminus of the rolled margin within the recess formed by the said rolled margin, substantially as described.

2. An address plate having a turned or rolled margin cut away at one point and presenting a terminal opening axially in line with the recess within the rolled margin and a tab located at the cut away portion of the margin and having a portion inserted in said terminal opening and extending lengthwise of and within the rolled margin, substantially as described.



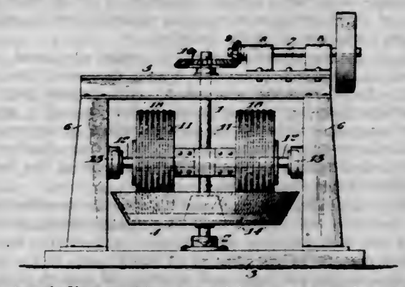
3. In combination with an address plate having a rolled margin cut away at one corner of the plate presenting an opening, and an index tab held at said cut away corner removably by a portion thereof inserted in the said opening and extending lengthwise of the plate, substantially as described.

4. In combination with an address plate having a rolled margin partly cut away presenting a terminal opening axially in line with the recess in the said margin, and a tab held by the rolled margin and being located wholly within the line of the outer edge of the plate extended, substantially as described.

5. In combination an address plate having a rolled margin cut amay at one point presenting a terminal opening axially in line with the recess within said margin and a tab having a part inserted in the said terminal opening and extending longitudinally of the recess in the margin, the other part of said tab occupying the cut away part and overlapping a portion of the plate which forms a backing therefor.

[Claims 6 to 9 not printed in the Gazette.]

1,110,222. GRINDING MACHINERY. JACQUES MORAT, Yonkers, N. Y. Filed Nov. 18, 1910. Serial No. 593,067. (Cl. 83—45.)



1. A grinding-machine comprising a pan and a roller mounted to work in connection with said pan in such a manner that a sliding horizontal motion takes place between the two, and said roller provided with circumferential grooves in which the material being ground is packed and held.

2. A grinding-machine comprising a grinding face having recesses therein, and a rotary grinding member mounted to have sliding horizontal motion over said grinding face and provided with circumferential grooves in its working face, said recesses and grooves formed and disposed to receive and hold the material being ground.

3. A grinding-machine comprising a pan and a roller mounted in such a manner that in its passage over the pan a sliding horizontal grinding motion takes place between the two, said pan having recesses in the face thereof, and grooves formed circumferentially on the face of the roller, said recesses adapted to receive and hold the material being ground.

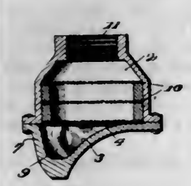
4. A grinding machine, comprising a pan and a roller, said roller mounted to travel over the face of the pan in such a manner that a sliding horizontal grinding action takes place between the two, said pan having recesses in the face thereof, grooves formed circumferentially around

the roller, said recesses and grooves so formed that the material being ground is received and held therein to form a grinding surface, and means for transmitting movement to one of said grinding members, whereby the roller will be caused to come in contact with the pan.

5. A grinding machine, comprising a pan mounted to be capable of rotation, a roller revolubly mounted adjacent the pan and at right angles to the axis of rotation of the pan, said pan having recesses in the face thereof, grooves formed circumferentially in the roller, said recesses and grooves constructed to receive and hold the material being ground for forming a grinding surface, and means for rotating the pan, which, through the engagement of the material being treated with the roller, causes the roller to revolve and transmit a sliding horizontal grinding motion to the material in the pan.

[Claim 6 not printed in the Gazette.]

1,110,223. MIXING DEVICE FOR FLUIDS. THOMAS W. MORSE, Paterson, N. J., assignor, by mesne assignments, to The Heath Method Company, Newark, N, J., a Corporation of New Jersey. Filed Apr. 11, 1911. Serial No. 620,480. (Cl. 48—180.)



1. A mixing chamber circular in plan having substantially an entire end wall inclined from the sides of the chamber to an inlet passage disposed at the deepest portion of the chamber, and entering said chamber tangential to the circular wall of the chamber.

2. A mixing chamber having a series of spaced commingling elements extending across the same, the end wall of the chamber opposed to said commingling elements having the contour of one convolution of a gradually expanding helicoid, the axis of which is eccentric to the axis of the mixing chamber, the mixing chamber being formed with an inlet opening disposed at the initial termination of the helicoid.

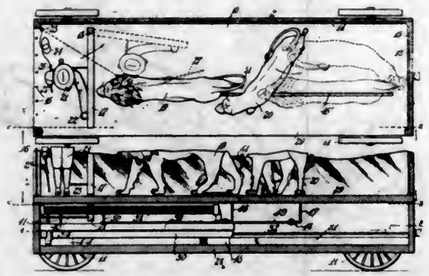
3. In a mixing device, a mixing chamber provided with an end wall and having an inlet passage opening through said end wall, entering said chamber tangentially, and entering the mixing chamber at an acute angle to the outer surface of the end wall, and a screen of spaced elements extending across the chamber at right angles to the axis thereof, the inner surface of the end wall having a helicoidal contour, the axis of the helicoid being eccentric to the axis of the chamber and said surface gradually and continuously approaching the screen as it extends from the inlet opening.

4. In a mixing device, a mixing chamber, spaced commingling elements disposed within the chamber and extending across the same in a plane at right angles to the axis of the chamber, said chamber having a surface opposed to the commingling elements, said surface having the contour of one convolution of a helicoid, the axis of which is eccentric to the axis of the chamber and formed with an inlet passage opening at the initial point of said helicoid, the pitch of the helicoidal surface constantly decreasing from said initial point.

5. A circular mixing chamber having an end wall whose inner surface approximates a portion of a convolution of an expanding helicoid and having an inlet opening disposed between the terminations of the helicoid, said opening having a diameter approximately equal to the diameter of the initial portion of the helix, and the mixing chamber having an outlet larger in area than the inlet.

[Claims 6 to 10 not printed in the Gazette.]

1,110,224. FIGURE TOY. JAMES WELLSLEY MURRAY, St. George, New Brunswick, Canada. Filed Sept. 13, 1913. Serial No. 789,636. (Cl. 46—40.)



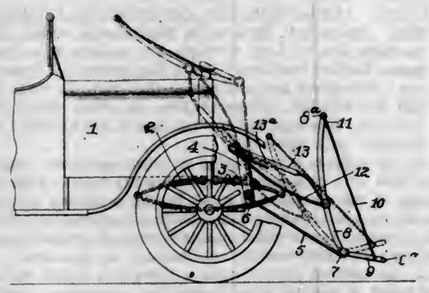
1. In a device of the chaarcter set forth, the combination of a frame, a plurality of figures movably mounted therein, a door between one of the figures and the others, and means to swing the door open and cause the appearance of said one figure with respect to the others and simultaneously therewith to cause the backward movement of said others.

2. In a device of the character set forth, the combination with a cage having a floor, of a door above the floor, a pivot post for the door journaled in the floor, a figure of a keeper secured to the door on one side thereof, a pair of animal figures on the other side of the door, and means below the floor and acting therethrough to cause the door to swing open to present the keeper to the supposed view of the animals and the simultaneous receding movement of the animals away from the keeper, substantially as set forth.

3. In a device of the character set forth, the combination of a pair of animal figures, one of said figures being mounted for pivotal movement around the axis of one hind foot, means to positively move the other of said figures rearwardly, the later mentioned figure being provided with a spring tail adapted to engage against the first mentioned figure to cause the same to swing around its axis, and other means to cause both the animals to spring quickly forwardly to normal position.

4. In a device of the character set forth, the combination of a sage, a false bottom for the cage, a plurality of movable figures above the false bottom, and mechanism for moving the figures, said mechanism being located below the false bottom and acting therethrough, said mechanism including a reciprocating carriage acting directly upon said mechanism, a slide in proximity to the carriage, a catch serving to connect the carriage temporarily to the slide, and means to automatically connect and disconnect said catch.

1,110,225. LIFE-GUARD FOR AUTOMOBILES. GEORGE A. PARMENTER, Cambridge, Mass. Filed Sept. 16, 1913. Serial No. 790,066. (Cl. 105—252.)



1. A fender or life guard for motor vehicles, comprising a pair of substantially upright bars, means for adjustably

connecting said bars to the front end of a motor vehicle, supports projecting forward and downward from the lower ends of said bars, a fender comprising a rigid substantially L-shaped frame pivotally mounted upon the front ends of said supports, a resilient connection between the upper portion of said fender frame and the upper ends of said bars, and locking means to prevent the rebound of the upper portion of the fender frame after it has been forced backwardly.

2. A life guard for motor vehicles comprising a pair of bars adapted to be adjustably connected to a motor vehicle, supporting members pivotally connected at their rear ends to the lower ends of said bars, and projecting forwardly and downwardly therefrom, a fender or scoop pivotally connected to the forward ends of said members, a pair of curved leaf springs pivotally connecting said fender above its point of pivotal support with the upper ends of said bars and a ratchet bar pivotally connected to the portion of the fender above its point of pivotal support and coöperating with a suitable pin to hold the fender against rebound, substantially as described.

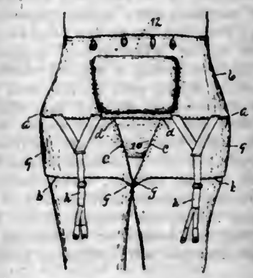
3. In combination with a motor vehicle, a fender or scoop, a pair of links pivotally connected at their rear ends with the motor vehicle, and at their front ends with the lower portion of the scoop, a second pair of links above and substantially parallel with the first named links and pivotally connected respectively with the motor vehicle and with the fender, and rigid stop means for positively limiting the downward movement of the fender while permitting free upward folding movement thereof.

4. In combination with a motor vehicle, a fender or scoop, a pair of links pivotally connected respectively to the lower portion of the scoop and the front of the motor vehicle, a pair of links of resilient material above and substantially parallel with said first named links, and pivotally connected respectively with the fender and the front of the motor vehicle, and a ratchet bar extending between the fender and a stationary part on the motor vehicle, and operatively connected to said parts respectively, its points of connection being coincident with the points of pivotal connection of said resilient links whereby upward folding of the fender is permitted without derangement of the connections.

5. In combination with a motor vehicle, a fender or scoop, a pair of substantially parallel elements pivotally connected at their front ends with the scoop and at their rear ends with the vehicle, thereby permitting upward and rearward folding of the scoop, one of said elements being a resilient element, and means coöperating with one of the elements for positively limiting the downward movement of the fender, substantially as described.

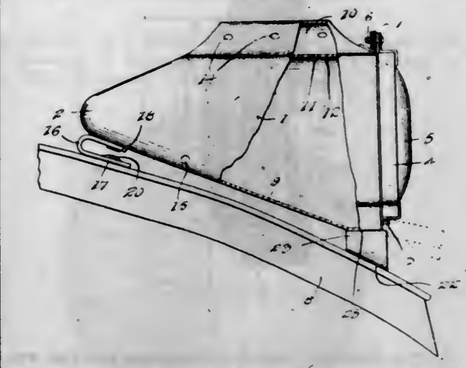
[Claims 6 to 8 not printed in the Gazette.]

1,110,226. ABDOMINAL SUPPORTER. LORI M. PAYNE, Omaha, Nebr. Filed Nov. 30, 1912. Serial No. 734,305. (Cl. 2—188.)



A supporter comprising a bandage adapted to encircle the body of the wearer, at and above the waist line, means for adjustably connecting the ends of the bandage, a plurality of hip and thigh members secured to the lower edge of the bandage, their front end portions being spaced apart near their upper edges and approaching each other at their lower edges, said lower edges forming a continuous portion for encircling each thigh, and a V-shaped device conformable to the figure, connecting the spaced ends of the hip and thigh portions with each other and connecting diagonally each spaced end with the lower edge or waist line of the bandage below the direct line of strain produced by the means connecting the ends of the bandage.

1,110,227. VEHICLE FENDER-LIGHT. FRANK R. PIKE, Ontario, Cal. Filed Apr. 2, 1914. Serial No. 829,074. (Cl. 240—7.)



1. In combination with a fender and a lamp, of a bracket secured to the fender, said bracket having diagonally arranged slots, bolts passing through said slots and the front portion of lamp, and means securing the rear portion of the lamp to the fender.

2. In combination with a fender and a lamp, of a bracket secured to the fender and provided with diagonally arranged slots, means passing through the slots and engaging the lamp, a bolt secured to the fender, and a bracket secured to the lamp and having a forked portion engaging said bolt.

3. In combination with a fender and a lamp, of a bracket secured to the fender and provided with upwardly turned ends, said ends being provided with diagonally arranged slots, a headed bolt secured on the fender, a bracket secured to the lamp and provided with a downwardly and forwardly extending portion slotted to engage under the head of said bolt, and bolts passing through said slots and engaging the lamp.

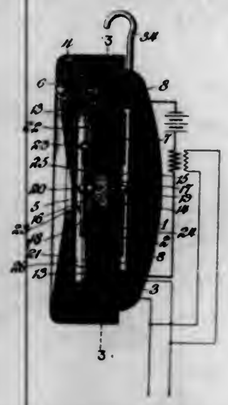
1,110,228. TELEPHONE-RECEIVER. ANDREW PLECHER, Las Animas, Colo. Continuation of application Serial No. 606,298, filed Feb. 3, 1911. This application filed Mar. 29, 1912. Serial No. 687,066. (Cl. 179—104.)

1. A telephone receiver provided with a diaphragm having central and marginal vibratory portions with a support between said central and marginal portions and with the marginal portion wholly free, and a magnet in inductive relation to the marginal free portion of the diaphragm.

2. A telephone receiver provided with a diaphragm having central and marginal vibratory portions with a support between said central and marginal portions and with the marginal portion wholly free, and a magnet in inductive relation to the marginal free portion of the diaphragm, said magnet being of annular form and constructed to act on the diaphragm adjacent the periphery thereof.

3. In a receiver, a diaphragm provided with a support between the central and marginal portions and having its marginal portions free to vibrate, an electro-magnet in inductive relation to the free marginal portions of the diaphragm, circuit controlling means connected to the central portion of the diaphragm and adapted to be included in a local charged circuit, and a coil included in circuit with the circuit controlling means and located in inductive relation to the magnet controlling the diaphragm.

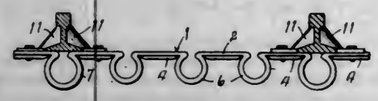
4. A telephone receiver provided with a diaphragm having a microphonic element connected to the central portion of the diaphragm with the marginal portions of the diaphragm wholly free to vibrate, and an induction coil in inductive relation to the marginal, freely vibratory portions of the diaphragm with one winding adapted to be connected to a line circuit and the other winding included in the circuit with the microphonic element and adapted to be connected up to a local charge circuit.



5. In a telephone receiver, a diaphragm provided with peripheral tongues tuned to respond to different rates of vibration, and a magnet in inductive relation to said tongues.

[Claims 6 to 32 not printed in the Gazette.]

1,110,229. RAILROAD-TIE. WILLIAM V. POLICK, Tacoma, Wash. Filed May 1, 1914. Serial No. 835,715. (Cl. 238—5.)

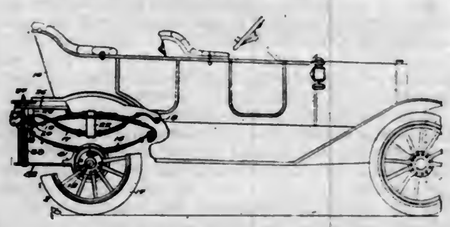


1. A device of the character described comprising a body portion, a plurality of centrally located, longitudinally extending slots formed in the body portion, depressions formed laterally of the body portion and in direct alinement with the slot, a plurality of loops formed in the under side of the body portion, the walls of said depressions being bent downwardly and being provided with notches, and rail clamps adapted to be secured to the tie and held from longitudinal movement by the notches.

2. In a device of the character described, a body portion formed of a single sheet of material, said body portion being provided with a plurality of longitudinally extending, centrally located slots, a plurality of depressed portions formed integral with the body portion, said depressed portions being in direct alinement with the longitudinal slots, a plurality of loops formed integral with the body portion, between the slots, said loops extending transversely across the tie, rail clamps adapted to coöperate with the tie, the walls of the slots being provided with notches, and T bolts extending through the slots and the rail clamps, the heads of said T bolts engaging the notches to eliminate any danger of the rail coming out of alinement.

3. A device of the character described comprising a body portion formed of a single sheet of material, a plurality of transversely extending loops formed of the body portion and projecting downwardly therefrom, said body portion being provided with a plurality of longitudinal slots intermediate the loops, said longitudinal slots being centrally located with relation to the lateral extremities of the body portion, depressed portions formed integral with the tie at its lateral edges, said depressed portions being extended longitudinally of said tie, and being in direct alinement with the slots, the walls of the slots being bent downwardly and having a plurality of notches formed therein, rail clamps, tongues formed on the rail clamps and adapted to enter the slots, and T bolts adapted to extend through the rail clamps to firmly hold the same in position on the tie, said T bolts being adapted to seat in the notches to prevent longitudinal movement of the rail clamps with relation to the tie.

1,110,230. COMPOUND RECOIL-SPRING FOR VEHICLES. DUANE L. POTTER, Scranton, Pa. Filed Jan. 4, 1913. Serial No. 740,251. (Cl. 21—50.)



1. In a device of the class described, a vehicle body, an axle, a plurality of springs carried by the axle, a supplementary spring connected with each of the springs first mentioned, means for connecting one end of each supplementary spring with the body, a spring extending transversely of the body and connecting the opposite ends of the supplementary springs with each other, and a means connected with the body and with the axle, and arranged to modify the tension of certain of the aforesaid springs, said means last mentioned including a spring having connection with the axle, a rod connected with the spring and means for controlling the movement of the rod and spring with reference to the body and limiting the movement of the latter in one direction.

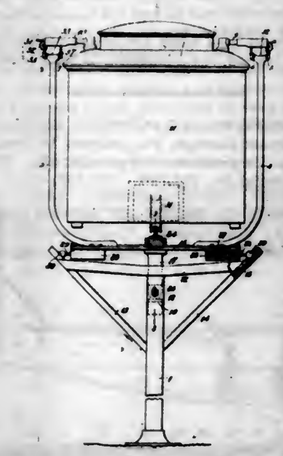
2. In a device of the class described, a vehicle body, an axle, a plurality of springs carried by the axle, a supplementary spring connected with each of the springs first mentioned, means for connecting one end of each supplementary spring with the body, a spring extending transversely of the body and connecting the opposite ends of the supplementary springs with each other, and an adjustable means connected with the body and with the axle, and arranged to modify the tension of certain of the aforesaid springs, said means last mentioned including a spring having connection with the axle, a rod connected with the spring and means for controlling the movement of the rod and spring with reference to the body and limiting the movement of the latter in one direction.

3. In a device of the class described, a vehicle body, an axle, springs carried by the axle, said springs having elliptical form, a supplementary spring connected with each of the springs first mentioned, the central portion of the supplementary spring being located adjacent the main axis of the elliptical spring, a spacing member connecting the supplementary spring with the elliptical spring, means connecting corresponding ends of the elliptical springs with each other, and independent means connecting the body with the axle, the means last mentioned including a principal spring, a device secured to the body and provided with an opening therein, a rod connected with the spring and passing through said opening, a supplemental spring between the device secured to the body and the principal spring, and means for preventing movement of the rod in one direction with reference to the device last mentioned.

4. In a device of the class described, a body, an axle, a plurality of springs carried thereby, a supplementary spring associated with each of the aforesaid springs, and having connection at one end with the body, a hanger for connecting the supplementary springs with the remaining springs, a spring extending transversely of the body at the rear and having connection with the supplementary springs, a collar carried by the axle, a coil spring rigidly connected with the collar, a stem carried by the upper end of the coil spring, and means for adjustably supporting the stem with reference to the body.

5. In a device of the class described, a body, an axle, a plurality of springs mounted thereon, a supplementary spring connecting each of the aforesaid springs with the body, means connecting corresponding ends of the supplementary springs with each other at the rear of the body, a device carried by the axle, a resilient device connected therewith, a coil spring connected with the resilient device, a stem carried by the latter, an adjustable member for varying the tension of the coil spring, a second coil spring carried by the stem, a device carried by the body and arranged to guide the said stem, the second coil spring being located between the device and the coil spring first mentioned, and having greater resiliency than the latter.

1,110,231. MONORAIL SYSTEM. CHARLEY W. PUTNAM, Allendale, Ill. Filed Jan. 28, 1914. Serial No. 814,940. (Cl. 105—234.)



1. In a monorail system of the class described, a plurality of posts, an adjustable track arranged on said posts, and means connected with said track for causing the swaying of the car on said track to be resiliently resisted and controlled.

2. In a monorail system for railways, a plurality of supporting posts, an adjustable track arranged on said posts, bracing means connected with said track for limiting the swaying movement of cars on said track, bracing members connected with each of said posts for bracing said track, and resilient means associated with said track and engaging said last mentioned bracing means for resiliently resisting any vibrating movement of said track.

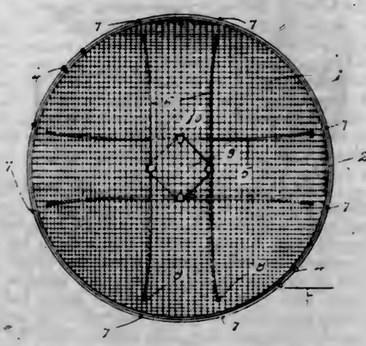
3. In a device of the class described, a plurality of posts, a pair of diverging members mounted on each of said posts, a transverse connecting member for connecting and binding together the outer ends of said bracing members, a track structure resting on each of said posts, said track structure including a plurality of tranaverse braces for preventing side movement of the track, a rail arranged on said track structure for supporting a car, and bracing members connected with said cross member for bracing the car arranged on said rail.

4. In a device of the class described, a railway comprising a plurality of supporting posts, a cross member arranged on each of said posts, an adjustable track mounted on said posts, means for limiting the lateral vibrating movement of said track, a spring pressed plunger arranged adjacent each end of said cross member for resiliently resisting the vibration of said track, a rail arranged on said track, and bracing arms mounted on said cross member adapted to receive the swaying motion of a car arranged on said rail.

5. In a device of the class described, the combination with a supporting track provided with a pair of upstanding bracing members and guiding cables, of a swinging arm arranged upon a car, said swinging arm comprising a body, a pair of guiding rollers, means for shifting one of said rollers, and means for locking the arm in any desired position.

[Claims 6 and 7 not printed in the Gazette.]

1,110,232. FLY-SHIELD. TJEBBE G. RAVELING and RUDOLPH H. RAVELING, Buffalo, N. D. Filed Aug. 1, 1913. Serial No. 782,541. (Cl. 54—80.)



1. A device of the character described comprising a ring, a dome shaped body portion secured to said ring, said dome shaped body portion being composed of a wire mesh, supporting wires extending downwardly from the ring on the interior of the mesh for a portion of their length, and lying outside thereof for the remaining distance, and a plate secured to the inside of the body portion at its lowermost extremity and having ears formed thereon and arranged to engage the wires to hold the mesh and wires firmly in place.

2. A device of the character described comprising a ring, a dome shaped body portion secured to said ring, said dome shaped body portion being composed of a wire mesh, supporting wires secured to the ring at spaced intervals, said supporting wires being arranged to lie partly on the inside and partly on the outside of the wire mesh, and a plate at the lower extremity of the dome shaped body portion and having ears formed thereon to engage the wires and hold the whole together.

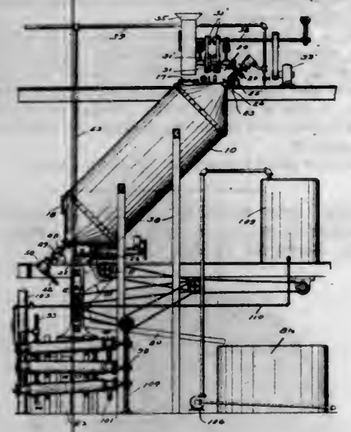
3. In a device of the character described, a ring, a dome shaped body portion secured to said ring, said dome shaped body portion being composed of a wire mesh, and supporting wires secured to the ring, said supporting wires being arranged to lie partly on the inside and partly on the outside of the wire mesh.

4. In a device of the character described, a ring, a dome shaped body portion secured to said ring, said dome shaped body portion being composed of a wire mesh, supporting wires secured to the ring, said supporting wires being arranged to lie partly on the inside and partly on the outside of the wire mesh, and a plate at the lower end of the dome shaped body portion to hold the supporting wires firmly in place.

1,110,233. PAPER-PULP MACHINERY. JESSE D. RICE, Piedmont, Cal. Filed Oct. 8, 1912. Serial No. 724,646. (Cl. 92—7.)

1. In a paper pulp making machine, the combination with a plurality of heaters, heating pipes positioned within said heaters, conveyers for conducting material from said heaters, and discharge means carried by the conveyers

for separating the liquid discharged from said heaters from the pulp discharged from the said heaters.



2. In a paper pulp making machine, the combination with a plurality of heaters comprising casings, a plurality of heating pipes positioned in said casings, said heating pipes adapted to be rotated within said casings for stirring the contents thereof, conveyer means associated near the bottom of said casings for conveying material discharged from said casings to the desired point, and discharge chutes associated with said conveyers for separating the liquid discharged from said casings from the pulp discharged therefrom.

3. In a paper pulp making machine, the combination with a plurality of heating casings, a plurality of heater pipes carried within said casing, each of said casings provided with conical ends, journals carried at the conical ends of such casing, supporting pipes engaging said first mentioned pipes and passing through said journals, and means for feeding steam through said supporting pipes and into said first mentioned pipes for heating the same.

4. In a paper pulp making machine, the combination with a plurality of heaters, a conveyer positioned below said heaters, means for cutting off the feed of said conveyers from either one of said heaters, discharge chutes coöperating with said conveyer for receiving and separating the discharge from said heaters, and squeezing rollers coöperating with said chutes for separating the liquid from the pulp discharged from said conveyer.

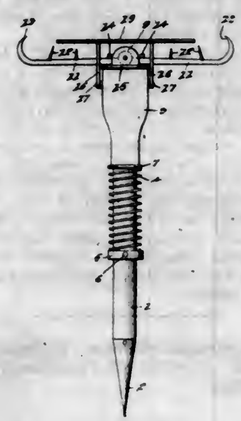
5. In a paper pulp making machine, the combination with a plurality of heaters, a conveyer associated with said heaters, chutes coöperating with said conveyers for partially separating the liquid from the pulp, squeezing rollers coöperating with said chutes for separating the pulp from the liquid discharged from said heaters, and evaporators coöperating with said chute and squeezing rollers for receiving the discharged liquid for evaporating the same and causing the liquid to be discharged in a semi-solid condition.

[Claim 6 not printed in the Gazette.]

1,110,234. FISH-GRAPPLE. WELLINGTON A. B. RICHARDSON, Forks of the Salmon, Cal. Filed Apr. 27, 1914. Serial No. 834,808. (Cl. 43—6.)

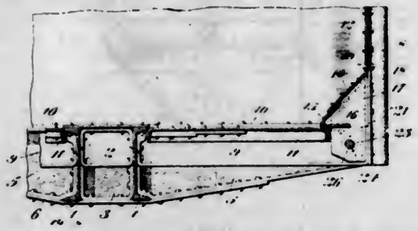
1. A fish grapple comprising a shank, a sliding head mounted on the shank, a spring encircling the shank and bearing against the head, grapple jaws pivotally connected to the shank at its end, pivoted triggers for holding the jaws of the grapple open and a contact rod connected to the triggers.

2. A fish grapple comprising a shank, a collar connected to the shank, a spring surrounding the shank and bearing at one end against the said collar, a sliding head against which said spring bears, grapple jaws pivoted to the shank and provided with stop lugs to limit the closing action of said jaws, arms pivoted to the sliding



head, triggers on said arms for engaging the jaws, and a transverse contact rod connected to said arms.

1,110,235. DUMPING-CAR CONSTRUCTION. RALPH V. SAGE, Westmont borough, Pa., assignor to Cambria Steel Company, a Corporation of Pennsylvania. Filed June 10, 1913. Serial No. 772,746. (Cl. 105—14.)

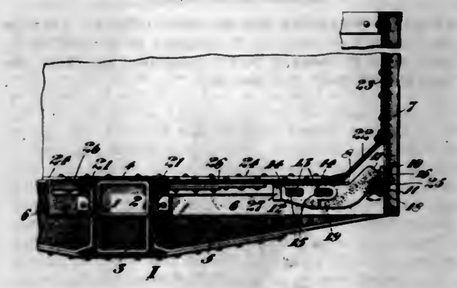


1. In a car of the character described, provided with a plurality of drop bottom doors, a longitudinal center sill to which said doors are hinged, plate girder sides, bolsters and intermediate cross bearers attached to said sill, extending outwardly therefrom and attached to the plate girder sides, longitudinal door operating shafts extending through perforations in the outer ends of the cross bearers and bolsters, each of said plate girder sides having a vertical upper portion with stakes attached thereto and extending below the same, and a lower inwardly inclined portion forming the bottom chord member thereof, a plurality of flanged brackets each having a vertical web spaced apart from the cross bearers or bolsters with their flanges attached to the downwardly extending portions of the stakes and to the said inclined portion and depending therefrom, and journals formed in said depending portions of the brackets adapted to revolubly support the door operating shafts independent of the cross bearers and bolsters.

2. In a car of the character described, provided with a plurality of drop bottom doors, longitudinal center sills to which said doors are hinged, plate girder sides, bolsters and intermediate cross bearers attached to said sills, extending outwardly therefrom and attached to the plate girder sides, longitudinal door operating shafts extending loosely through perforations in the outer ends of the cross bearers and bolsters, each of said plate girder sides having a vertical upper portion with stakes attached thereto and extending below the same and a lower inwardly inclined portion with a bent plate attached to its lower edge forming the bottom chord member thereof, a plurality of flanged brackets each having a vertical web spaced apart from the cross bearers or bolsters with their flanges attached to the downwardly extending portions of the stakes and to the said inclined portion and depending therefrom, and journals formed integral in said depending portions of the brackets adapted to revolubly support the door operating shafts independent of the cross bearers and bolsters.

3. In a car of the character described, provided with a plurality of drop bottom doors, longitudinal center sills to which said doors are hinged, plate girder sides, bolsters and intermediate cross bearers attached to said sills, extending outwardly therefrom and attached to the plate girder sides, longitudinal door operating shafts extending loosely through perforations in the outer ends of the cross bearers and bolsters, each of said plate girder sides having a vertical upper portion with stakes attached thereto and extending below the same, and a lower inwardly inclined portion with a bent V shaped plate attached to its lower edge forming the bottom chord member thereof, a plurality of flanged brackets each having a vertical web spaced apart from the cross bearers or bolsters with their flanges attached to the downwardly extending portions of the stakes and the said inclined portion and depending therefrom, slits formed in the outer ends of the cross bearers and in one of the legs of the V shaped plate through which the web of the flanged brackets pass, journals formed integral in said depending portions of the brackets adapted to revolubly support the door operating shafts independent of the cross bearers and bolsters, and a stiffening angle attached to the lower end of each side stake and to the outer end of each cross bearer substantially as described.

1,110,236. CAR CONSTRUCTION. RALPH V. SAGE, Westmont borough, Pa., assignor to Cambria Steel Company, a Corporation of Pennsylvania. Filed June 20, 1913. Serial No. 774,853. (Cl. 105—14.)



1. In a car of the character described, a plate girder side, a plurality of upright stakes extending downwardly below the lower edge of the web of said side, a plurality of cross transoms and bolsters extending transversely of the car attached to the lower ends of the stakes aforesaid, the upper portions of the outer ends of said transoms being downwardly inclined, a trough-shaped bottom chord member arranged obliquely and secured to the lower portion of the web of the plate girder side and to the cross bearers and transoms aforesaid and extending longitudinally of the said car, whereby the car is braced and a space provided for the door operating shaft and mountings.

2. In a car of the character described, provided with center sills and plate girder sides, a plurality of transoms and bolsters extending transversely of the cars and secured by their inner ends to the center sills, the upper portions of the outer ends of the said transoms and bolsters being downwardly inclined, a plurality of upright stakes secured to the plate girder sides extending downwardly below the lower edge of the web of the same and attached to the outer extremities of the cross transoms and bolsters aforesaid, a trough shaped shedding member secured by one edge to the plate girder side, inclined inwardly and downwardly therefrom, and secured to the transoms and bolsters and forming the bottom chord member for the plate girder side, and a door operating shaft mounting in the opening thereby provided.

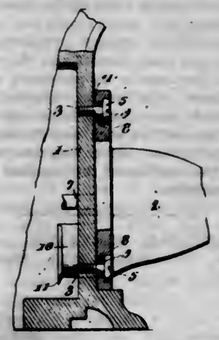
3. In a car of the character described, plate girder sides provided with a plurality of stakes attached thereto, with their lower ends depending therefrom, cross bearers and transoms extending transversely of the car, the extremities of the same being attached to the lower ends of the stake, a downwardly and inwardly sloping trough-shaped shedding member extending longitudinally of the car, and secured to the lower part of the plate girder side and to the cross bearers and transoms aforesaid and forming the bottom chord member for the plate girder side, a bracket attached to the lower ends of each of the stakes and to the outer end of each of the cross bearers and transoms, bearings secured to said brackets and a longitudinally extending operating shaft mounted in said bearings.

4. In a car of the character described, provided with center sills and plate girder sides, cross bearers and transoms secured to the said center sills extending transversely of the car, a plurality of stakes attached to and extending below the plate girder sides and secured to the extremities of the cross bearers and transoms aforesaid, an angular bracket connected to the lower end of each of the said stakes and to the corresponding cross bearers and transoms, journal bearings mounted on said brackets, floor strips secured to the tops of the cross bearers and transoms and projecting laterally therefrom, swinging doors hinged to the center sill, a door operating shaft mounted in the bearings aforesaid and provided with operating locking mechanism adapted to close and open the doors.

5. In a car of the character described provided with plate girder sides, a plurality of cross bearers and transoms extending transversely of the floor framing, said plate girder having a bottom chord composed of a trough-shaped member with inclined flanges, one of which is secured to the lower edge of the plate girder, the other flange being secured to the cross bearers and transoms, thereby providing a shedding surface and a space for the door operating shaft and mountings.

[Claims 6 to 11 not printed in the Gazette.]

1,110,237. MEANS OF ATTACHING WORK-SUPPORTS OF SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 16, 1911. Serial No. 654,839. (Cl. 112—29.)



1. The combination with a standard, of a frame or casing carried thereby and projecting laterally therefrom, a plurality of devices carried by one of the parts and bearing against the other for adjusting the angular position of the longitudinal axis of the projecting part relative to the standard, and means for fixedly securing said casing or frame to said standard in its various adjusted positions.

2. The combination with a standard, of a work support carried thereby and projecting laterally therefrom, both said work support and standard having operating shafts mounted therein, a plurality of devices spaced around said

shaft in the work support, and at a distance therefrom, each of said devices being adapted to bear against the standard for adjusting the angular position of the work support with respect to the standard whereby said shafts are placed in proper coöperative relation to each other, and means for fixedly securing the work support to the standard in its various adjusted positions.

3. The combination of a standard, a work support carried thereby and projecting laterally therefrom, both said work support and standard having coöperating shafts mounted therein, means for fixedly securing the work support to said standard, and a plurality of adjustable devices carried by one of said parts and bearing against the other, whereby the angle of the work support relative to the standard may be varied.

4. In combination with a standard and a work support, both containing shafts adapted to coöperate with each other, adjustable bushings carried by one of said parts and bearing against the other to alter the position of said parts, and screws or similar devices passing from the work support into said standard through said bushings, for fixedly holding said work support on the standard.

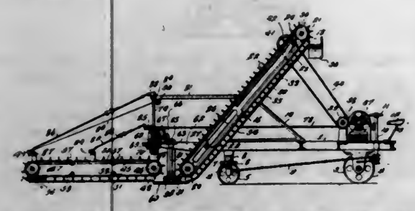
5. In combination with a standard and work support to be secured together, said work support having internally screw-threaded openings, bushings screwed therein with their outer faces within the plane of the outer end of said openings, screws passing through said bushings into the standard, the heads being out of contact with the bushings.

[Claims 6 to 8 not printed in the Gazette.]

1,110,238. MACHINE FOR MAKING ORNAMENTAL ROOFING-STRIPS. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed Apr. 14, 1914. Serial No. 831,870. (Cl. 81—189.)

A machine for cutting rectangular openings in a roofing strip consisting of a pair of rolls one above the other, one having punches or cutters projecting from its periphery between the ends thereof and the other being hollow and having openings in its periphery registering with the punches, both rolls having cylindrical peripheries adapted to contact continuously from end to end with the material acted on, and at each end throughout their circumferences, the hollow roll having an inner tapered or conical hub for the delivery of the punched out pieces, substantially as described.

1,110,239. PORTABLE ELEVATOR. JOHN STEEVER, Plymouth, Pa. Filed Dec. 6, 1913. Serial No. 805,129. (Cl. 193—8.)



1. In a portable elevator of the class described, a wheeled truck frame, an endless elevator carried thereon, an endless scraper operating in a substantially horizontal plane, and a rotary disk conveyer which receives the material from the scraper and delivers said material to said elevator.

2. In a portable elevator of the class described, a wheeled truck frame, an endless elevator carried thereon, an endless scraper operating in a substantially horizontal plane, and a rotary disk conveyer which receives the material from the scraper and delivers said material to said elevator, said disk conveyer operating in an approximately horizontal plane.

3. In a portable elevator of the class described, a wheeled truck frame, an endless elevator carried thereon, an endless scraper operating in a substantially horizontal plane, and a rotary disk conveyer which receives the material from the scraper and delivers said material to said elevator, said disk conveyer being supported by and movable with the frame of said endless elevator.

4. In a portable elevator of the class described, a wheeled truck frame, a longitudinally adjustable endless elevator carried thereon, an endless scraper operating in a substantially horizontal plane, and a vertically adjustable rotary disk conveyer which receives the material from the scraper and delivers said material to said elevator.

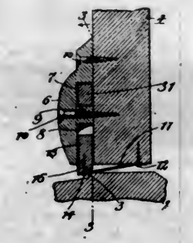
5. In a portable elevator of the class described, a wheeled truck frame, an endless elevator carried thereon, an endless scraper operating in a substantially horizontal plane, a rotary disk conveyer which receives the material from the scraper and delivers said material to said elevator, said disk conveyer operating in an approximately horizontal plane, and a non-rotating guard located above said disk conveyer.

[Claims 6 to 9 not printed in the Gazette.]

1,110,240. [WITHDRAWN.]

1,110,241. [WITHDRAWN.]

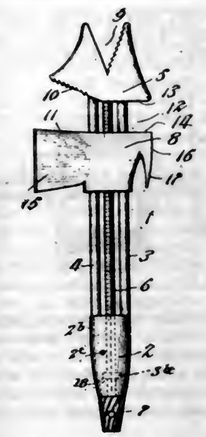
1,110,242. WEATHER-GUARD FOR DOORS. CLINTON D. TABOR, New Dorp, N. Y., assignor of one-half to Albert Schrafft, Newark, N. J. Filed Dec. 26, 1911. Serial No. 667,795. (Cl. 20—69.)



1. A weather guard for doors comprising a flexible strip adapted to be secured at one of its longitudinal edges to the lower edge of a door, and means for pressing the opposite free edge of said strip against a corner on the threshold of the door upon closing the latter comprising a vertically movable bar mounted on the door and secured at its lower edge to said strip and provided with a beveled face in line with said corner.

2. The combination of a door frame having an upright jamb and a threshold, a door hinged on said jamb to swing vertically, a casing secured to said door and forming therewith an upper horizontal guideway and a lower horizontal guideway, a presser bar movable vertically in said lower guideway, a flexible metal weather strip secured to the presser bar, a bracket arranged centrally on the casing and provided with a part extending across the lower guideway and having a vertical slot and a pivot pin, a projection on said presser bar engaging with said slot, a rock lever having a pivot opening which receives said pin, two horizontal feet on opposite sides of its pivot bearing against said presser bar, a vertical shifting arm projecting across the upper guideway provided with a tappet, and a plunger sliding in said upper guideway and engaging at one end with said tappet and at its opposite end with an abutment on the frame jamb.

1,110,243. WRENCH. ARTHUR E. TILLISON, Belton, Mont. Filed July 24, 1908. Serial No. 445,212. (Cl. 81—170.)



A wrench comprising a handle having a pair of fixed parallel guide rods extending therefrom, a fixed jaw secured to the outer ends of said rods, a screw coextensive with said guide rods and interposed between and having its outer end mounted to freely revolve in said fixed jaw, the movable jaw slidable on said guide rods and having a threaded passage receiving said screw, the guide rods serving to hold the sliding jaw against rotation on said screw and to maintain coacting position of said sliding jaw relatively of said fixed jaw, a member revolubly mounted at one end of the handle fixed to the inner end of said screw, the forward end of said handle forming a stop to hold the sliding jaw against movement on to said handle, the handle comprising intermediate body members formed on the ends of said rods, and having a passage therethrough for the inner end of said screw, side members detachably connected with said body members and a disk mounted in the handle and fixed on the screw and having portions respectively extending into the intermediate and side members and free to revolve therein.

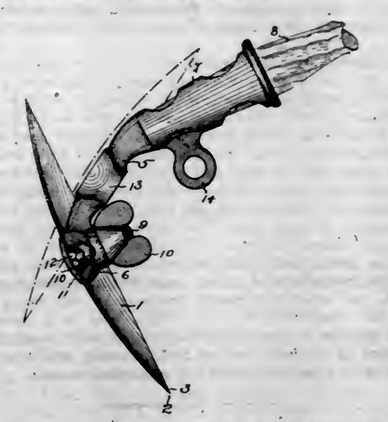
1,110,244. IMPLEMENT OF AGRICULTURE. BALDWIN VALE, Alameda, Cal. Filed Mar. 17, 1913. Serial No. 755,017. (Cl. 55—38.)

1. An agricultural implement of the character described comprising a shank provided with a plurality of sockets angularly disposed with respect to each other, and all of them out of alinement with the axis of said shank, a concavo convex disk, and means for securing said disk at its center to either of said sockets.

2. An agricultural implement of the character described comprising a shank the body of which is deflected in a continuous line to form a plurality of angularly disposed portions each provided with a socket, a concavo-convex disk, and means for securing said disk at its center to either of said sockets.

3. An agricultural implement of the character described comprising a shank having a socket in one end, the other end being formed at an angle to said socket and also having a socket therein, and an angularly disposed member between said sockets and provided with a third socket, a concavo-convex disk, and means for securing said disk at its center to either of the sockets of said angularly disposed portions.

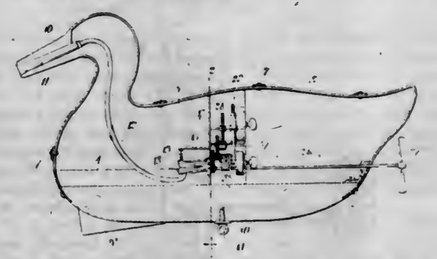
4. An agricultural implement of the character described comprising a shank provided with a plurality of sockets angularly disposed with respect to each other, and a third socket arranged in a plane at right angles to the plane of the first mentioned sockets, a disk, and means for securing said disk to either of said sockets.



5. An agricultural implement of the character described comprising a concavo-convex disk, a shank attached to the concave side of said disk, a handle attached to said shank, said handle being offset from the center of said disk, and substantially at a right angle to the cutting edge thereof.

[Claim 6 not printed in the Gazette.]

1,110,245. DECOY. AMOS C. VAUGHAN, Anadarko, Okla. Filed Apr. 7, 1914. Serial No. 830,228. (Cl. 43—2.)



1. A decoy comprising a body, a pneumatic call, a bellows mechanism for supplying air to operate the call, a vibrating lever for actuating said mechanism, a wheel having spaced series of pins, embodying a plurality of pins in each series, for vibrating said lever a predetermined number of times at predetermined intervals, means for holding said wheel from motion, a clock work mechanism for actuating the wheel, and means controlled by said clock work mechanism for releasing the wheel at predetermined periods for action.

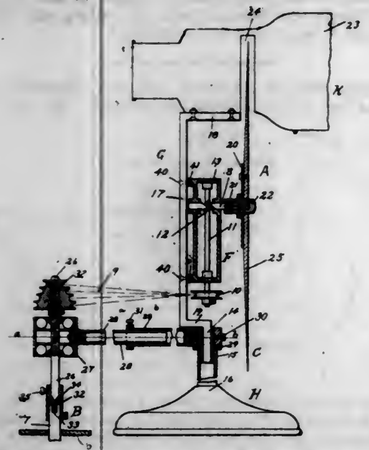
2. A decoy comprising a hollow body, a pneumatic call, bellows mechanism for sounding the call, a propeller, a shaft carrying said propeller, a clock-work mechanism, means actuated thereby for continuously driving the propeller shaft, and means actuated thereby for intermittently actuating the bellows mechanism.

3. A decoy comprising a body, a pneumatic call, a bellows mechanism for supplying air to operate the call, a vibrating lever for actuating said mechanism, a wheel having spaced series of pins for vibrating said lever a predetermined number of times at predetermined intervals, means for holding said wheel from motion, a clock work mechanism for actuating the wheel, said mechanism including a cam, and a cam actuated by the clock work mechanism for controlling said holding means.

1,110,246. FISHING-TACKLE. ARTHUR VIERS and ROBERT D. SCOTT, Red Lodge, Mont. Filed Jan. 12, 1914. Serial No. 811,722. (Cl. 43—7.)

In a fishing tackle, the combination of a line, a hook member comprising a shank constituting a piercing element, and connecting means intermediate the shank and the line comprising a hook portion bent back upon its main portion to form a yielding clamp, said shank being clamped by the hook portion to frictionally hold the hook member in alinement with the connecting means.

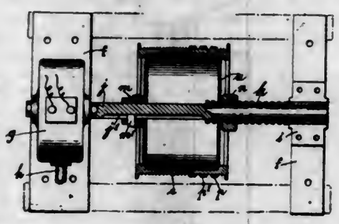
1,110,247. STEREOPTICON. RICHARD A. WHITEHEAD, Los Angeles, Cal. Filed Aug. 17, 1911. Serial No. 644,684. (Cl. 88—27.)



1. Apparatus of the character described, comprising a base, a standard rising from the base and comprising an upright foot, a further upright portion connected with the foot, and top and bottom portions extending angularly with relation to the upright foot and the further upright portion, said bottom portion constituting the means of connection between the foot and the further upright portion; picture projecting means mounted upon said top portion, drive means, a picture record shaft, and operative connections between the drive means and picture record shaft; said operative connections being mounted upon the further upright portion of the standard, and including a transmission shaft operatively connected with the picture record shaft and extending at an angle thereto and having its axis in coincidence with the axis of said upright foot of said standard.

2. Apparatus of the character described, comprising a base, a standard rising from the base and comprising a vertical foot and top and bottom horizontal portions and an intermediate vertical portion connected with the foot, picture projecting means mounted upon the top horizontal portion of the standard, drive means, a picture record, and operative connections between the drive means and the picture record; said operative connections being mounted upon the vertical portion of the standard and including a shaft upon which the picture record is mounted and a transmission shaft operatively connected therewith and extending at an angle thereto and having its axis in extension of the axis of said vertical foot of said standard.

1,110,248. DRIVING MECHANISM FOR ELEVATORS AND THE LIKE. LEONARD ATWOOD, Farmington, Me. Filed Apr. 3, 1913. Serial No. 758,578. (Cl. 57—22.)



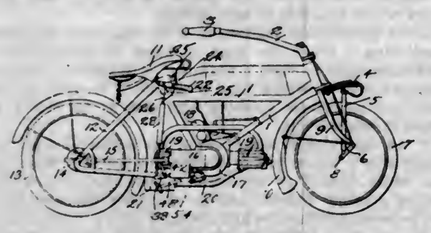
1. Driving mechanism for elevators, lifts and hoisting apparatus, comprising a hoisting drum with threaded hub and helical rope groove, ropes in said groove around the drum, a driving shaft splined to the drum, and a permanently fixed, exteriorally threaded feed shaft, loosely on the driving shaft and engaging the threaded hub of the drum.

2. Driving mechanism for elevators, lifts, and hoisting apparatus, comprising a driving shaft with longitudinal spline groove in its inner portion, a permanently fixed, exteriorally threaded feed shaft loosely on the driving shaft, a hoisting drum threaded on the feed shaft and having a helical rope groove, ropes in said groove around the drum, a hub on the drum with slot and a feather therein traveling in the spline groove.

3. Driving mechanism for the hoisting drum of elevators and lifts, comprising a drum, a driving shaft splined to the drum, a hub on the drum with feather traveling in the spline groove, a second hub on the drum with interior thread, and a permanently fixed feed shaft with an exterior thread in operative engagement with the inner thread of said second hub.

4. In driving mechanism for elevators and lifts, a hoisting drum with helical groove, ropes in the said groove wound around the drum for avoiding the raising of dead weight, a driving shaft splined to the drum, a stationary feed shaft loosely on the inner end portion of the driving shaft, and an interiorly threaded hub on the drum engaging the thread of the feed shaft.

1,110,249. VARIABLE-SPEED TRANSMISSION MECHANISM FOR MOTOR-CYCLES. ROBERT L. BAILEY, Portland, Oreg., assignor to A. L. MacLeod, Portland, Oreg. Original application filed Feb. 19, 1912, Serial No. 678,472. Divided and this application filed May 6, 1912. Serial No. 695,407. (Cl. 74—58.)



1. The combination, in a transmission device, of a drive shaft, a lever movable to a selected position, means co-

operating with said lever for storing up energy adapted to be exerted in either direction of movement of the lever, a rod connected with said means, mechanism operated by the movement of said rod coöperating with said drive shaft to effect the change of speed, means engaging said rod to hold the same against movement, and means for shifting said engaging means out of engagement for releasing the rod and permitting movement thereof to a position corresponding with the desired speed.

2. The combination, with a drive shaft and a driven element, of shiftable power transmission means adapted to be reciprocally shifted to a plurality of positions for transmission of power at variable speeds, means for shifting said transmission means, means for storing power for exerting pressure on said transmission shifting means while the transmission means is positioned for transmitting power at one speed tending to shift the same in either direction of movement of the transmission shifting means to a position for transmitting power at another speed, and releasable locking means for locking the transmission shifting means against action.

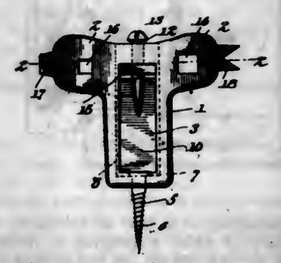
3. The combination, with a drive shaft and a driven element, of shiftable power transmission means adapted to be reciprocally shifted to a plurality of positions for transmission of power at variable speeds, means for shifting said transmission means, means for storing power for exerting pressure on said transmission shifting means while the transmission means is positioned for transmitting power at one speed tending to shift the same in either direction of movement of the transmission shifting means to a position for transmitting power at another speed, releasable locking means for locking the transmission shifting means against action, and means for releasing the locking means.

4. The combination, in a transmission device, of a drive shaft, a lever movable to a selected position, means coöperating with said lever for storing up energy adapted to be exerted in either direction of movement of the lever, a rod connected with said means, mechanism operated by the movement of said rod coöperating with said drive shaft to effect the change of speed, means engaging said rod to hold the same after it has been moved to a position to correspond with the desired speed, and means including pressure members coöperating with said last named means to render the latter operative on the application of pressure to said pressure members.

5. The combination of a drive shaft, a pivoted lever movable to a selected position, means comprising springs and plungers coöperating with said lever for storing up energy adapted to be exerted in either direction of movement of the lever, a rod connected with said means, mechanism operated by the movement of said rod coöperating with said drive shaft to effect the change of speed, means engaging said rod to hold the same after it has been moved to a position to correspond with the desired speed, and means coöperating with said last named means to render the latter operative.

[Claims 6 to 28 not printed in the Gazette.]

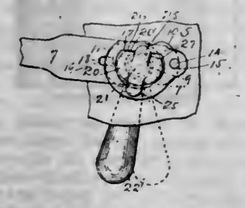
1,110,250. SCREW. JAMES BOYN, Chicago, Ill. Filed May 20, 1914. Serial No. 839,851. (Cl. 85—41.)



1. In a device of the class described, the combination with a rotatable element having a head, of a body having an opening therein for the reception of the said element, a securing member mounted movably within the body and having one edge adapted for engagement with the head to secure the element against movement within the body, the said securing member being longitudinally movable with respect to the said element, and an operating screw adjustably mounted within the body in axial alinement with the securing member for engagement with the end thereof opposite to the edge engaged with the said element.

2. In a device of the class described, the combination with a rotatable element having a head, of a body provided with an elongated slot and with an opening therein in registration with one end of the slot for the reception of the said element, the side walls of the said slot being provided with longitudinal grooves, and a securing member mounted within the body slot with its side edges slidably engaged within the grooves, one end of the securing member being adapted for engagement with the head of the said element to secure the same against movement within the body, the body being provided further with an opening in communication with the opposite end of the said slot for passage of the securing member therethrough.

1,110,251. FLUSH-VALVE-OPERATING MECHANISM. JOHN W. BRAGGER, Watertown, N. Y., assignor to J. B. Wise, Inc., Watertown, N. Y., a Corporation of New York. Filed Nov. 24, 1913, Serial No. 802,697. Renewed July 18, 1914. Serial No. 851,816. (Cl. 4—5.)



1. In a flush tank operating device, an operating shaft piercing the wall of the tank, a plate mounted on the inside of the tank and provided with a fulcrum center concentric to said shaft and with a pin at one side of said shaft, a flush valve operating lever mounted on said fulcrum center and provided with a perforation at the opposite side of said shaft, a cam-lever pivoted on said pin and provided with a stud which engages the perforation in said operating lever, and a cam mounted on the operating shaft and interlocking with said cam-lever.

2. A device of the class described, comprising a valve lever disposed in a tank, a plate in the tank provided with a hollow hub pivotally supporting one end of said valve lever, said plate having a fulcrum-pin spaced from said hub, a cam-lever pivoted at one end on said fulcrum-pin and provided with an opening having a cam-face and at its opposite end with a stud engaging a hole in said valve lever, a cam loosely fitting the opening in said cam-lever normally contacting with said cam-face, a shaft journaled in said hub and connected to said cam, and means for rotating said shaft.

3. A device for operating flush valves, comprising a plate mounted on the inside of the tank and provided with a hollow hub to receive an operating shaft and with a fulcrum-pin at one side of said hub, a lever mounted at one end on said hub, the opposite end connected to a valve-lift, a cam-lever pivoted on said pin and provided with a stud which engages a hole in said lever at the opposite side of said hub, and an operating shaft journaled in said hub and carrying a cam in operative engagement with said cam-lever.

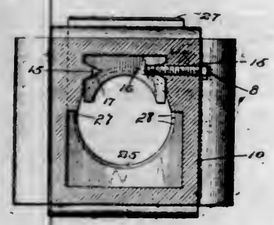
4. In a flush valve operating mechanism, a plate mounted inside the tank and provided with a hub arranged concentric to a perforation in the tank and a fulcrum center at one side of said hub, a valve lever pivoted on said hub, a cam-lever for actuating said valve lever, said cam-lever mounted at one end on said fulcrum, the opposite end provided with a pin which engages a hole in the valve

lever forwardly of the said hub, an operating shaft journaled in the perforation of the tank and piercing said hub, a cam connected to the inner end of said shaft and engaging said cam-lever intermediate its ends adapted when rocked by said shaft to lift said cam-lever.

5. In a flush valve operating mechanism, the combination with a plate mounted inside the tank provided with a hollow hub, and a bushing piercing the wall of the tank and supporting said plate, of a valve lever pivoted at one end on said hub, the opposite end connecting with a valve lift-rod, a cam-lever having its fulcrum at one side of said hub, the forward end of said cam-lever provided with a stud inserted in a hole in said valve lever at the opposite side of said hub, a shaft journaled in said bushing, a cam mounted on the inner end of said shaft and interlocked with said cam-lever, and a handle secured to the outer end of said shaft for rocking said shaft and said cam.

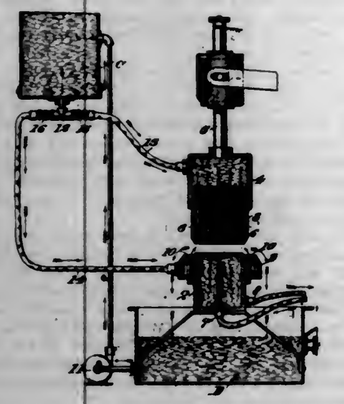
[Claims 6 to 8 not printed in the Gazette.]

1,110,252. CAR JOURNAL-BOX. THOMAS J. BUNCH, Hugo, Va. Filed Dec. 21, 1911. Serial No. 667,191. (Cl. 64—20.)



A car journal box having an opening in its front, a closure for such opening, a brass within the box, tongue-and-groove connections between the sides of the box and edges of the brass, a screw passing removably inward through one side wall and one tongue of the box with its tip extending partway across and standing in front of the brass, and a jam nut on the screw outside the box.

1,110,253. MEANS FOR PRODUCING OSCILLATING CURRENTS OF HIGH FREQUENCY. ALFRED H. COHEN, San Francisco, Cal. Filed Feb. 3, 1913. Serial No. 745,832. (Cl. 250—38.)



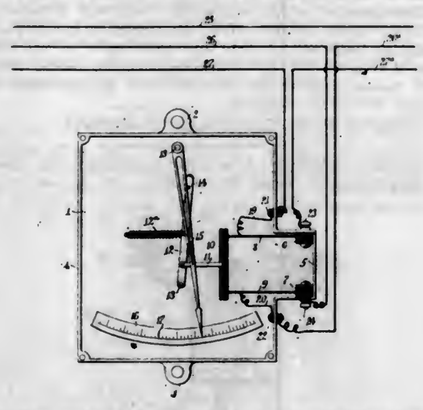
1. In a spark gap apparatus of the character described, opposed electrodes having parallel surfaces between which electrical discharges are caused to pass, one of said electrodes having parallel passages made through it, and the other having an annular chamber with openings converging toward the first-named electrode, a container for an imperfectly conducting liquid, pipes connecting the container with each of the passages and openings, and cocks by which the proportionate discharge of the liquid may be regulated.

2. In a spark gap apparatus of the character described, opposed electrodes having parallel surfaces between which electrical discharges are caused to pass, one of said electrodes having parallel passages made through it, and the other having an annular chamber with openings converging toward the first-named electrode, a container for an imperfectly conducting liquid, pipes connecting the container with each of the passages and openings, cocks by which the proportionatee discharge of the liquid may be regulated, a secondary container mounted below the electrodes adapted to catch the liquid which escapes from the space formed between the electrodes, and means for returning the liquid from the secondary container to the supply container.

3. In a spark gap apparatus of the character described, a carbon electrode, a metal electrode having a face parallel with that of the carbon electrode, means for separating the electrodes, a hollow ring surrounding the metal electrode, and secured to the same, a plurality of upwardly and inwardly inclined discharge passages formed in said ring, a container for an imperfectly conducting liquid, a pipe connecting the container with the hollow ring, and a valve on said pipe to control the flow of liquid.

4. A spark gap apparatus of the character described, a carbon electrode, a metal electrode having a face parallel with that of the carbon electrode, means for separating the electrodes, a hollow ring surrounding the metal electrode, and secured to the same, a plurality of upwardly and inwardly inclined discharge passages formed in said ring, a cylinder in which the carbon electrode is mounted, a space formed in the cylinder above said electrode, a plurality of passages formed in said electrode communicating with the cylinder space and the lower face of the electrode, a container for an imperfectly conducting liquid, pipes connecting the container with the cylinder space and hollow ring, cocks by which the proportionate discharge of liquid may be regulated, a secondary container mounted below the electrodes adapted to catch the liquid which escapes from the space formed from between the electrodes, and means for retaining the liquid from the secondary container to the supply container.

1,110,254. MAXIMUM-DEMAND ELECTRIC METER. LEANDER HULL CONKLIN, East Orange, N. J. Filed Nov. 16, 1910. Serial No. 592,629. (Cl. 171—308.)



1. The combination of a pair of thermally expansible conductors, each of which is adapted to receive current flowing in one leg of a circuit, one end of each of the conductors being fixed, the free ends of the conductors being connected by a bar of insulating material, an index frictionally mounted on a suitable support and adapted to swing through a suitable angle, a lever movably supported adjacent the index, means connecting the said lever and the said insulating bar, a pin on said lever adapted for engagement with the index, whereby when the conductors expand through the heating effects of the currents passing through them, the said lever will be moved, contraction of the said conductors moving the said pin out of engagement with the said index, the index being left in the position to which it was brought.

2. The combination of a pair of thermally expansible conductors, one end of each being fixed in position, each conductor being adapted to be placed in one leg of a suitable circuit, an insulating bar connecting the conductors, a needle pivotally supported in position and adapted to be moved through different angles, a lever pivotally supported adjacent the needle, a link connecting the lever and the said bar, together with means carried by the lever and adapted to engage the needle whereby the same is moved when the expansion of the said conductors moves the said lever through the medium of the link, contraction of the conductors moving the link and with it the lever out of engagement with the needle, the needle being left in the postion to which it was moved.

3. The combination of a fixed pair of thermally expansible conductors supported in position, each of which is adapted to be placed in an electric circuit, a bar connecting the said conductors, a lever, a link connecting the bar and the lever, a spring having one end thereof in engagement with the lever, the other end thereof being fixed, a needle, and means on the lever adapted to engage the needle whereby the same is moved when the lever is moved through the conjoint action of the expansion of the said conductors, due to the currents flowing through them and the said spring, contraction of the said conductors moving the lever and with it the said means thereon out of engagement with the needle, the needle being left in removed position.

4. The combination of a pair of thermally expansible conductors, each of which is adapted to be placed in an electric circuit, the conductors being fixed in position, one end of each of the conductors being connected by a bar of insulating material, a lever, the point of pivotal support thereof being adjacent one end, a link connecting the said bar and the lever, a spring in engagement with the lever, the other end of the spring being fixed, a pin on the lever, an index frictionally carried on a suitable support whereby, when the said conductors are lengthened by the heating effect of the currents, the lever will be moved and the pin thereon will engage the index to move the same in one direction, contraction of the said conductors moving the lever against the tension of the said spring and carrying the pin on the lever out of engagement with the index, the index being left in the position to which it is brought.

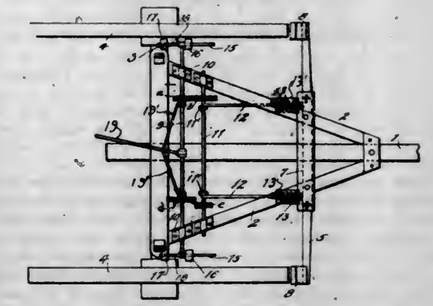
5. The combination of a pair of thermally expansible conductors, each of which is adapted to receive current flowing in one leg of a circuit, one end of each of the conductors being fixed, the front ends of the conductors being connected by a bar of insulating material, an index, a support therefor, a member movably supported adjacent the index, means connecting the said member and the said insulating bar, and means on the member for engagement with the index so that when the conductors expand through the heating effects of the current passing through them, the said member will be moved to impart a movement to the index.

[Claims 6 to 8 not printed in the Gazette.]

1,110,255. VEHICLE-BRAKE. CHARLES JACKSON DALE, Toms Creek, Va. Filed Dec. 17, 1913. Serial No. 807,255. (Cl. 21—9.)

1. Braking mechanism for a vehicle comprising a brake member, an operating lever for said member normally inactive when in stable equilibrium and operable to apply the brake member when its center of gravity is shifted, and a gravity actuating member carried by said lever and movable to unbalance the lever upon movement of the vehicle down grade.

2. Braking mechanism for a vehicle comprising a brake member, an operating lever operatively connected with said brake member and having an upright portion and an arm extending at an angle from one side of the same, and means adapted to travel on said arm away from the upright portion for actuating the lever upon movement of the vehicle down grade, the lever having another arm extending angularly from its other side, and counterbalance means on the latter arm for maintaining the lever normal and movable in a direction with respect to the means on the first mentioned arms in actuating the lever.



3. Braking mechanism for a vehicle comprising a brake member, an operating lever operatively connected with said brake member and having an arm extending therefrom, means adapted to travel on said arm in one direction whereby to overbalance and thereby actuate the lever upon movement of the vehicle down grade, said means being movable in the opposite direction when the vehicle again reaches level, and means carried by the lever for automatically normalizing the same on movement of the actuating means in the last mentioned direction and adapted to maintain the lever in normally inactive position.

4. Braking mechanism for a vehicle comprising a braking member disposed contiguous to the vehicle wheels, an operating lever operatively connected with said braking member and having an arm extending longitudinally of the vehicle, a weight member movable along said arm to actuate the lever upon movement of the vehicle down grade, said lever having a second arm extending in the opposite direction to the first-mentioned arm, and counterbalanced means disposed on the second-mentioned arm adapted to coöperate with the weight member aforesaid to maintain the lever in normal inactive position.

5. Braking mechanism for a vehicle comprising a brake member, operating means for said brake member comprising a lever, means for automatically actuating said lever proportionate to the degree of declivity on movement of the vehicle down grade, a transverse shaft movable longitudinally, means intermediate the shaft and the brake member for controlling the extent of actuation of said brake member, and means for moving the shaft to vary its relation with respect to the controlling means according to the load carried by said vehicle.

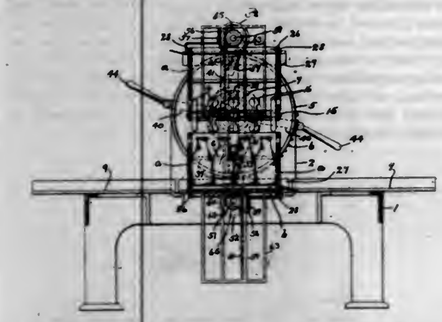
[Claims 6 to 8 not printed in the Gazette.]

1,110,256. BOTTLE-HANDLING APPARATUS. EDMUND DALGLEISH, Lakewood, Ohio, assignor to The Chase Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 17, 1913. Serial No. 801,437. (Cl. 214—11.)

1. In an apparatus of the character described, the combination of a stationary frame, a rotatable frame mounted on said stationary frame, a crate carrying frame arranged at each end of said rotatable frame, said crate-carrying frames being oppositely disposed and means for rotating said rotatable frame.

2. In an apparatus of character described, the combination of a stationary frame, a rotatable frame mounted in said stationary frame, said rotatable frame comprising a centrally arranged bottle guiding frame and a crate-car-

rying frame arranged at each side of said bottle-guiding frame and oppositely disposed, and means for rotating said rotatable frame.



3. In an apparatus of the character described, the combination of a stationary frame, a rotatable frame mounted in said stationary frame, said rotatable frame comprising a centrally arranged bottle-guiding frame and a pair of crate-receiving frames, the said crate-receiving frames being mounted at the ends of the said rotatable frame and being oppositely disposed so that the tops of the said crate-receiving frames are adjacent to the said bottle guiding frame and means for engaging with and forcing the bottles in one crate through said bottle-guiding frame into the other crate.

4. In an apparatus of the character described, the combination of a stationary frame, said stationary frame being provided with standards, a track carried by each standard, a rotatable frame mounted in each stationary frame, said rotatable frame comprising a bottle-guiding frame and two crate-carrying frames, said crate-carrying frames being oppositely disposed and mounted at each side of the bottle-guiding frame and rollers mounted on said crate-carrying frame and adapted to have traction on the said tracks on the said standards.

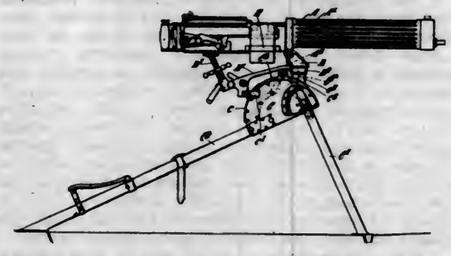
5. In an apparatus of the character described, the combination of a stationary frame, said stationary frame being provided with standards, a circular guideway formed on the inner face of each of said standards, a straight guideway communicating with each circular guideway near the base of the standard, a rotatable frame mounted between said standards, the bearings for said frame being arranged at the centers of said circular guideways, said frame comprising a bottle-guiding frame and two oppositely disposed crate-carrying frames, rollers carried by said crate-carrying frames, the rollers on the upper crate-carrying frame extending into the said circular guideways and the rollers on the lower crate-carrying frame extending into the straight guideways, means for raising the lower crate-carrying frame so as to bring the rollers thereon into the circular guideways and means for rotating said rotatable frame.

[Claims 6 to 8 not printed in the Gazette.]

1,110,257. AUTOMATIC GUN MOUNTING. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, London, England, assignors to Vickers Limited, Westminster, England. Filed Feb. 20, 1914. Serial No. 819,864. (Cl. 89—40.)

1. In a tripod gun mounting, the combination with the front legs and trail thereof, the member to which said legs and trail are connected, the crosshead in which the gun is trunnioned, and the member carrying the elevating gear, of means for enabling the crosshead to be moved relatively to said second member through an angle of 180 degrees to bring the rear end of the gun contiguous to the said front legs for enabling the gun to be elevated through large angles with the rear end of the mechanism casing between the front legs.

2. In a tripod gun mounting, the combination with the front legs and the trail thereof and the casing to which said legs and trail are connected, of a curved guide on said casing, a sliding member mounted on said guide, a socket forming part of said member, a crosshead in which the gun is trunnioned, a training pivot on said crosshead, and means for enabling said crosshead and the gun to be moved about said pivot through an angle of 180 degrees to bring the rear end of the gun contiguous to the said front legs and thereby enable the gun to be elevated through large angles with the rear end of the mechanism casing between the front legs.



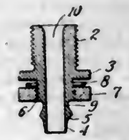
3. In a tripod gun mounting, the combination with the front legs and the trail thereof and the casing to which said legs and trail are connected, of a curved guide on said casing, a sliding member mounted on said guide, a training arc carried by said member, a crosshead in which the gun is trunnioned, a rearwardly extending arm engaging with said training arc, elevating gear carried by said arm and clamping means between said crosshead and said arm for at will holding said parts rigid with one another or enabling the crosshead to be moved in an approximately horizontal plane through an angle of 180 degrees to bring the rear end of the gun contiguous to the said front legs and thereby enable the gun to be elevated through large angles with the rear end of the mechanism casing between the front legs.

4. In a tripod gun mounting, the combination with the front legs and the trail thereof and the casing to which said legs and trail are connected, of a curved guide on said casing, a sliding member mounted on said guide, a training arc carried by said member, a socket forming part of said member, a crosshead in which the gun is trunnioned, a rearwardly extending arm engaging with said training arc, a training pivot on said crosshead disposed in said socket, elevating gear carried by said arm and clamping means between said crosshead and said arm for at will holding said parts rigid with one another or enabling the crosshead to be moved about said training pivot through an angle of 180 degrees to bring the rear end of the gun contiguous to the said front legs and thereby enable the gun to be elevated through large angles, with the rear end of the mechanism casing between the front legs.

5. In a tripod gun mounting, the combination with the front legs and the trail thereof and the casing to which said legs and trail are connected, of a curved guide on said casing, a sliding member mounted on said guide, a training arc carried by said member, a socket forming part of said member, a crosshead in which the gun is trunnioned, a rearwardly extending arm engaging with said training arc, a training pivot on said crosshead disposed in said socket, elevating gear carried by said arm, a clamping screw carried by said arm for engagement with the crosshead, said screw when in the disengaged position enabling the crosshead and the gun to be moved about the training pivot through an angle of 180 degrees to bring the rear end of the gun contiguous to the front legs of the tripod and thereby enable the gun to be elevated through large angles with the rear end of the mechanism casing between the front legs.

1,110,258. EYELET-SETTING DEVICE. FREDERICK S. GLINES, Swampscott, Mass., assignor to Lorens Muther, Newton, Mass. Filed Apr. 27, 1914. Serial No. 834,589. (Cl. 218—15.)

1. The combination of a punching and eyelet setting device for setting eyelets in one or more of the layers of a plurality of layers of material, comprising a punch and a setting device having a projecting setting shoulder; a contracted portion above the setting shoulder; and an adjustable shoulder contiguous to said contracted portion.



2. A device for setting eyelets in one of a plurality of layers of a flexible material, said device comprising a projecting setting shoulder; a contracted portion above the setting shoulder; and means constituting an adjustable shoulder contiguous to said contracted portion.

3. A device for setting eyelets in one of a plurality of layers of a flexible material, said device comprising a setting device having a projecting setting shoulder; a contracted portion above the setting shoulder; an adjustable device contiguous to said contracted portion; and a frictional spring for maintaining said adjustable device in its adjusted position.

4. A device for setting eyelets in one of a plurality of layers of a flexible material, comprising a setting device having a projecting setting shoulder; and adjustable means above said setting shoulder for varying the distance between said setting shoulder and the underside of said adjustable means.

1,110,259. ELECTRIC-LINE-APPARATUS PROTECTOR. PETER K. HIGGINS, Los Angeles, Cal., assignor to Frederick R. Parker, Chicago, Ill. Filed Oct. 22, 1903, Serial No. 178,140. Renewed July 22, 1913. Serial No. 780,571. (Cl. 175—215.)

1. In a protector for electric circuits, having a thermal core containing fusible material therein; an envelop of carbon surrounding said thermal core and separated therefrom by a dielectric.

2. The combination with an electrothermal protector having a thermal core and separate thermally-releasable retaining means under control thereof, of an envelop of conducting material surrounding the said core and separated from the body thereof by a thin dielectric member to provide a high-potential electricity arrester.

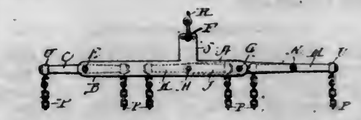
3. The combination with an electrothermal protector having a resistance heater and separate thermally-releasable retaining means under control thereof, of a conductor surrounding the heater and closely associated with the body thereof to provide a high-potential electricity arrester.

4. A high-potential electricity arrester having a dielectric member of celluloid provided with many small perforations therethrough to scatter the discharge through the arrester.

5. In a high-potential electricity arrester having electrodes of solid material, a dielectric member of heat-susceptible material with provisions for permitting the discharge of electricity through air, interposed between the said electrodes whereby the latter are permitted to come together upon the softening of the dielectric member.

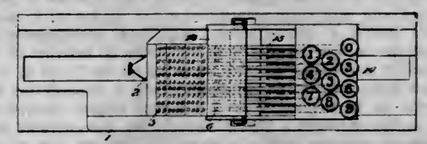
[Claims 6 to 13 not printed in the Gazette.]

1,110,260. SWINGLETREE AND ATTACHMENT. HILDEBRAND TERTIUS HILL, Takapuna, Auckland, New Zealand. Filed Dec. 23, 1910. Serial No. 599,047. (Cl. 21—76.)



In a draft equalizer, the main draft frame comprising two transverse bars, connected together in spaced relation one above the other, a swingletree pivotally secured to said frame adjacent one end thereof, between said transverse bars, and a pivoted link, located between the center of said draft frame and the end thereof opposite to said swingletree, for making connection between said draft frame and the device to be drawn, in combination with a subsidiary draft frame comprising two transverse bars connected together in spaced relation one above the other, and a pair of swingletrees pivotally secured to the opposite ends of said subsidiary frame, between said transverse bars, said subsidiary frame being pivotally secured to the end of said main frame opposite to that to which said swingletree is secured, when three draft animals are to be used, but being removable therefrom for use by itself when only two draft animals are to be used, as and for the purposes set forth.

1,110,261. APPARATUS FOR PERFORATING RECORD-CARDS. HERMAN HOLLERITH, Washington, D. C. Filed Feb. 4, 1914. Serial No. 816,533. (Cl. 164—113.)



1. In a record-perforating apparatus, the combination with a traveling card-support and controlling means therefor, of a plurality of punches arranged in a row, a punch-actuating member, a series of devices capable of being positioned between said member and said punches, a series of levers for controlling said devices, keys for manipulating said levers, an electric circuit, an electro-magnet in said circuit for controlling said member and said card-support controlling means, and circuit closing contacts controlled by said keys.

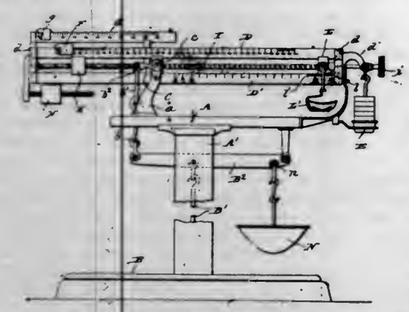
2. In a record-perforating apparatus, the combination with a traveling card-support and an escapement mechanism therefor, of a plurality of punches arranged in a row, a punch-actuating member, a series of devices capable of being positioned between said member and said punches, a series of levers for controlling said devices, keys for manipulating said levers, an electric circuit, an electro-magnet in said circuit for controlling said member and said escapement, and circuit closing contacts controlled by said keys.

3. In a record-perforating apparatus, the combination with a traveling card-support and an escapement mechanism therefor, of a plurality of punches arranged in a row, a punch-actuating member, a series of devices carried by said member and capable of being positioned between the latter and said punches, a series of keys for controlling said devices, an electric circuit, an electro-magnet in said circuit for controlling said member and said escapement, and circuit closing contacts controlled by said keys.

4. In a record-perforating apparatus, the combination with a traveling card-support and escapement mechanism therefor, of a plurality of punches arranged in a row, a rocking member, a series of slidable blocks carried by said rocking member and capable of being positioned to engage the punches, a series of levers engaging said blocks, keys

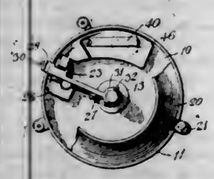
for manipulating said levers, an electric circuit, an electro-magnet in said circuit having its armature connected to said rocking member, said escapement mechanism being controlled by said armature, and circuit closing contacts controlled by said keys.

1,110,262. WEIGHING AND COUNTING SCALE. JOSEPH HOPKINSON, Dayton, Ohio, assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 4, 1912. Serial No. 681,330. (Cl. 73—3.)



A counting and weighing scale comprising a platform, a draft rod extending upwardly from said platform, an intermediate lever to which said draft rod is pivotally connected, a pivoted beam, a link connecting said pivoted beam and intermediate lever, the pivotal axis of the beam and link connection being fixed with relation to each other, and said beam embodying a bar graduated to indicate weight, a sliding weight indicating counterpoise on said bar, a bar graduated in multiples of articles to be counted, a carriage movably mounted on the beam to register with the last named graduations, a receiver for articles to be employed as a counter weight, suspended from the carriage, a balance weight for the carriage and receiver mounted on the beam on the opposite side of the beam axis, operating connections intermediate the carriage and its balance weight whereby they are moved simultaneously toward and from the beam axis in opposite directions to maintain the balance of the scale, a counterpoise cup suspended from the end of the beam on which said carriage is mounted, and a supplemental receiver for articles to be counted suspended from the intermediate lever.

1,110,263. COIN-HANDLING APPARATUS. SAMUEL P. HUNTINGTON, New Haven, Conn. Filed Jan. 29, 1912. Serial No. 674,130. (Cl. 133—8.)



1. In a coin handling device, a rotary carrier having a coin-receiving seat, a pawl arranged to ride over said carrier in the path of said seat and having the forward portion of its face inclined to the plane of said carrier and formed of hard, smooth material, and a spring tending to move said pawl toward said seat and cause it to engage the face of a coin in said coin seat and to engage the edge of a coin not properly seated in said coin seat.

2. In a coin handling device, a rotary plate having a coin-receiving aperture, a pawl of rigid material arranged above the path of said aperture and having its forward edge beveled, and a spring tending to move said pawl into said aperture when the latter is brought into alinement therewith and resisting the tendency of said pawl to ride over any coin which may project above that portion of said plate adjacent to said aperture.

3. In a coin handling device, a coin receptacle comprising a rotary inclined plate having a coin-receiving aperture, a supporting member arranged beneath said plate to retain the coin within said aperture and having a discharge opening, a pawl of rigid material movably mounted above the path of said coin-receiving aperture, and a spring tending to move said pawl into said aperture and resisting the tendency of said pawl to ride over any coin which may project above the surface of said plate adjacent to said aperture.

4. In a coin handling device, a coin receptacle comprising a rotary inclined plate having a coin-receiving aperture, a supporting member arranged beneath said plate to retain the coin within said aperture and having a discharge opening, a pawl of rigid material movably mounted above the path of said coin-receiving aperture, and a spring tending to move said pawl into said aperture and resisting the tendency of said pawl to ride over any coin which may project above the surface of said plate adjacent to said aperture, and a spring-actuated ejector arranged above the discharge opening of said supporting member and adapted to forcibly enter the aperture in said rotary plate when said aperture is moved into alinement with said discharge opening.

5. In a coin handling device, a rotary plate having a coin-receiving aperture, a supporting member arranged beneath said plate to support a coin in said aperture and having a discharge opening, and a spring-actuated ejector mounted above said discharge opening, bearing normally upon said rotary plate and adapted to forcibly enter said coin-receiving aperture when the latter is moved into alinement with said discharge opening.

[Claims 6 to 10 not printed in the Gazette.]

1,110,264. DETACHABLE SHOE-HEEL. FRANCIS A. ISAACSON, Madrid, Iowa. Filed Oct. 13, 1913. Serial No. 795,169. (Cl. 36—36.)

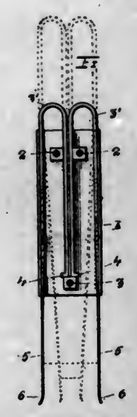
1. A detachable heel lift, comprising a body of elastic material, a plate therein, spaced from the top and bottom and sides thereof, provided with pairs of holes and curved screw threaded rods extended through said pairs of holes from below, one arm of each rod being designed to engage a shoe heel and the other being screw threaded and extended above said body.

2. A detachable heel lift, comprising a body of elastic material, a plate therein, a screw threaded device on said plate extending upwardly therefrom having a part serving as a spacing block, and a coacting screw-threaded device designed to be in a shoe heel for securing the detachable heel lift to a shoe.

3. A detachable heel, comprising a body of elastic material, a plate therein, spaced from the top and bottom and sides thereof and provided with pairs of holes, curved screw threaded rods extended through said pairs of holes from below, one arm of each rod extending upwardly almost to the upper surface of said body, and the other arm extending above the body, and detachable engaging means on the upper ends of the latter arms.

4. In a device of the class described, the combination of a shoe having a heel portion with a detachable heel lift, comprising a body of elastic material, a plate therein, spaced from the top and bottom and sides thereof and provided with pairs of holes, curved screw threaded rods extended through said pairs of holes from below, one arm of each rod being designed to engage a shoe heel and the other being screw threaded and extended above said body and a plurality of internally screw threaded cylinders embedded in said shoe heel and formed with flat enlarged heads having slots to receive a screw driver, said cylinders being received on said screw threaded ends.

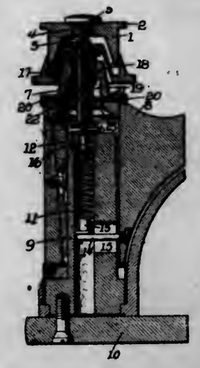
1,110,265. CORK-EXTRACTOR. FRANK JANOUCH, Lincoln, Nebr. Filed June 17, 1913. Serial No. 774,183. (Cl. 65—46.)



1. A cork extractor comprising a casing consisting of side portions, securing devices connecting the side portions together, members movably mounted in the casing and limited in their movements by the said securing devices, and points carried by the said members.

2. A cork extractor, comprising a casing consisting of side members, securing devices connecting said side members together, U-shaped members slidably mounted in the casing and having heads in the path of movement of which the said securing devices are located, and points carried by the said U-shaped members.

1,110,266. MICROMETER ADJUSTING MECHANISM FOR MICROSCOPES AND OTHER DEVICES. PAUL H. F. KAUFMANN, North Tonawanda, N. Y. Filed Nov. 19, 1908, Serial No. 463,364. Renewed Jan. 2, 1914. Serial No. 810,042. (Cl. 88—39.)



1. In an adjustment device for microscopes and other instruments, an adjusting member, a base member, a speed reducing member intermediate the adjusting member and the base member and carrying a sleeve threaded both internally and externally and having threaded engagement with the base member and a separate revoluble sleeve between the adjusting member and the speed reducing member.

2. In an adjustment device for microscopes and other instruments, an adjusting member, a base member, a speed reducing member intermediate the adjusting member and the base member and a non-revoluble sleeve interposed between the adjusting member and the speed reducing member and threaded both internally and externally and having separate threaded engagement with the adjusting member and the speed reducing member.

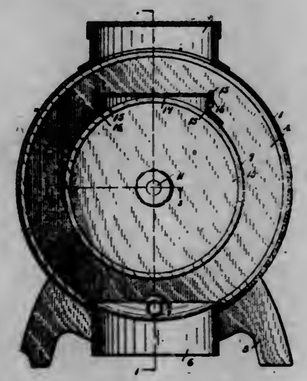
3. In an adjustment device for microscopes and other instruments, a base member, a speed reducing member having threaded engagement with the base member, an adjusting member and a non-rotatable member interposed between and having threaded engagement with both the speed reducing member and the adjusting member.

4. In an adjustment mechanism for microscopes and other instruments, a revoluble adjusting member, a revoluble speed reducing member and a non-revoluble member interposed between the revoluble adjusting member and the revoluble speed reducing member.

5. In an adjustment device for microscopes and other instruments, a revoluble member having a stem, a base member, a speed reducing member intermediate the revoluble member and the base member and having threaded engagement with the base member, and a non-revoluble sleeve interposed between the revoluble member and the speed reducing member.

[Claims 6 to 13 not printed in the Gazette.]

1,110,267. PROCESS OF MAKING CONFECTIONS. JOHN L. KELLOGG, Battle Creek, Mich. Filed Dec. 10, 1913. Serial No. 805,795. (Cl. 127—4.)



1. The process of making confections consisting in exposing shredded or flaked cereal, while such material is being agitated, to the action of jets of steam, adding powdered saccharine material thereto, further exposing the mixture to the action of jets of steam, molding said material into bricks of suitable shape and size and drying said bricks.

2. The process of making confections consisting in exposing shredded or flaked cereal, while such material is being agitated, to the action of jets of steam, adding powdered saccharine material to said shredded or flaked cereal, further exposing the mixture to the action of jets of steam and molding said material into bricks of suitable shape and size.

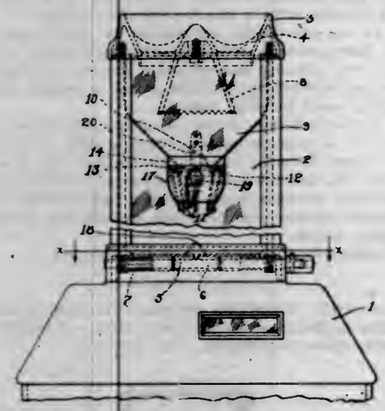
3. The process of making confections consisting in exposing shredded or flaked cereal, while such material is being agitated, to the action of jets of steam, adding saccharine material thereto, and further exposing the mixture to the action of jets of steam.

4. The process of making confections, consisting in exposing flaked or shredded cereal to the action of steam, mixing powdered saccharine material with said cereal, further exposing the mixture to the action of steam, molding the product into bricks of any desired shape or size, and drying said bricks.

5. The process of making confections, consisting in exposing flakes or shredded cereal to the action of steam, mixing powdered saccharine material with said cereal, and further exposing the mixture to the action of steam.

[Claims 6 to 8 not printed in the Gazette.]

1,110,268. FARE-BOX. PHILIP J. MITTEN, Oakwood Village, Ohio, assignor to The Recording Register and Fare Box Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 28, 1914. Serial No. 821,650. (Cl. 232—62.)



1. In a device of the character described, a receptacle to receive coins, a deflector mounted in said receptacle and having a single opening to permit the passage of coins therethrough, and guards mounted adjacent to said opening and so supported and arranged that the tilting of said receptacle in any direction will cause one or more of said guards to extend across said opening.

2. In a device of the character described, a receptacle to receive coins, a deflector mounted in said receptacle and having an opening to permit the passage of coins therethrough, and guard fingers loosely supported on four sides of said opening, whereby the tilting of said receptacle in any direction will cause one or more of said guards to extend across said opening.

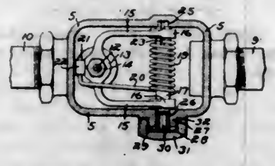
3. In a device of the character described, a receptacle to receive coins, a deflector having downwardly converging walls terminating in an opening, guard fingers pivotally mounted on said deflector and projecting beneath said opening, said guard fingers being so mounted and arranged that when said receptacle is tilted in any direction one or more of said fingers will move by gravity across said opening.

4. In a device of the character described, a receptacle to receive coins, a deflector mounted in said receptacle and comprising an inverted truncated cone having its smaller end open, an annular series of guard fingers loosely mounted about said opening and depending beneath the same, whereby the tilting of said receptacle will cause one or more of said fingers to extend across said opening.

5. In a device of the character described, a receptacle to receive coins, a deflector mounted in said receptacle and having downwardly flared walls, a second deflector mounted in said receptacle and having downwardly converging walls, said second deflector being arranged beneath the first-mentioned deflector and having a discharge opening arranged centrally of the first-mentioned deflector and of a diameter less than the diameter of the lower portion of said first-mentioned deflector, and guard fingers so mounted and arranged adjacent to said opening that the movement of said receptacle in any direction from an upright position will cause one or more of said fingers to extend across said opening.

[Claims 6 to 11 not printed in the Gazette.]

1,110,269. VALVE. JAMES F. MOYNIHAN, West Newton, Mass. Filed May 31, 1913. Serial No. 770,885. (Cl. 137—92.)



1. A device of the class described comprising, in combination a casing having an inlet, an outlet, and a valve seat therebetween, a valve, a spring tending to move said valve toward said seat, means to guide and support said valve in its movement toward said seat, and a heat-sensitive element normally supporting and holding said valve away from its seat against the tension of said spring and independently of the support afforded by the guiding means.

2. A device of the class described comprising, in combination, a casing having an inlet, an outlet, and a valve seat therebetween, a valve, means tending to move said valve toward said seat, a heat-sensitive element normally holding said valve away from its seat, means to guide said valve, and means permitting said guiding means to be removed from its place without disturbing said valve.

3. A device of the class described comprising, in combination, a casing having an inlet, an outlet, and a valve seat therebetween, a valve, means tending to move said valve toward said seat, a heat-sensitive element normally holding said valve away from its seat, a spindle on which said valve is mounted to move toward and from said seat, and means permitting the removal of said spindle without disturbing said valve.

4. A device of the class described comprising, in combination, a casing having an inlet, an outlet, and a valve seat therebetween, a valve, a spring tending to move said valve toward said seat, a heat-sensitive element normally holding said valve away from said seat, a spindle on which said valve is mounted to move toward and from said seat, and means permitting the removal of said spindle and spring without disturbing said valve.

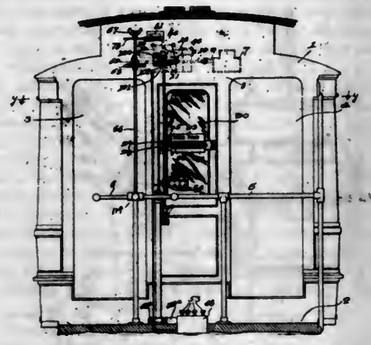
5. A device of the class described comprising, in combination, a casing having an inlet, an outlet and a valve seat therebetween, a valve, a spring tending to move said valve toward said seat, a heat-sensitive element normally holding said valve away from said seat, a spindle about which said spring is coiled and on which said valve is loosely mounted to move toward and away from said seat, and means to hold said spindle against rotation.

[Claims 6 to 17 not printed in the Gazette.]

1,110,270. OPERATING MECHANISM FOR FARE REGISTERS AND INDICATORS. WILFRED I. OHMER, Dayton, Ohio, assignor to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Sept. 8, 1908. Serial No. 452,130. (Cl. 235—44.)

1. A car, a fare register mounted therein, a shaft connected to said register and having two movements, one to set said register to cause it, when operated, to register a selected fare, and the other to operate said register to cause it to register a fare, conductor-operated devices to impart to said shaft one of its said movements to set the register, and passenger-actuated devices to impart to said shaft the other of its movements to operate the register to register a fare.

2. A car, a fare register mounted therein, a shaft connected to said register and having two movements, one to set said register to cause it, when operated, to register a selected fare, and the other to operate said register to cause it to register a fare, conductor-operated electrical devices to impart to said shaft one of its said movements to set the register, and passenger-actuated devices to impart to said shaft the other of its movements to operate the register to register a fare.



3. A car provided with a platform, a fare register mounted therein, a shaft connected to said register and having two movements, one to set said register to cause it, when operated, to register a selected fare, the other to operate said register to cause it to register a fare, conductor-operated devices manipulated from the platform to impart to said shaft one of its movements, to set the register, and passenger-actuated devices also manipulated from the platform to impart to said shaft the other of its movements, to operate the register to register a fare.

4. A car, a fare register mounted therein, a shaft having a rotating and reciprocating movement, the former to set the register to cause it, when actuated, to register a selected fare, and the latter to operate said register to cause it to register a fare, conductor-operated electrical devices including magnets and their circuits, operating first to set devices corresponding with a particular fare and second to rotate said shaft, whereby the conductor sets the register for a particular fare, and passenger-operated devices to reciprocate said shaft to register a fare.

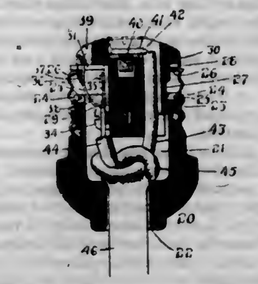
5. A car, a fare register mounted therein, a shaft having a rotating and reciprocating movement, the former to set the register to cause it, when actuated, to register a selected fare and the latter to operate said register to cause it to register a fare, conductor-operated electrical devices, manipuated from the platform, including magnets and their circuits, operating first to set devices corresponding with a particular fare and second to rotate said shaft, whereby the conductor sets the register for a particular fare, and passenger-operated devices also manipulated from said platform, to reciprocate said shaft to register a fare.

[Claims 6 to 60 not printed in the Gazette.]

1,110,271. SWIVEL ATTACHMENT-PLUG. CLARENCE D. PLATT, Bridgeport, Conn. Filed Feb. 26, 1914. Serial No. 821,134. (Cl. 173—348.)

1. An attachment plug of the character described comprising a screw shell having an annular flange, an insulating base having threaded engagement therewith and provided with a recess, said shell and base being permanently secured together by indenting the shell into the recess, and a second member comprising an insulating body, a contact ring and terminal formed integral, a binding screw securing the terminal and ring to the body, and a locking spring secured to the terminal and adapted to engage the flange on the shell to lock the members together.

2. An attachment plug of the character described, comprising a screw shell having an annular flange, an insulating base permanently secured thereto, a second insulating member having an anchor plate molded therein, a binding screw engaging said plate, an integral contact ring and shell terminal, a binding screw securing said terminal and ring to the second member and a locking spring secured to the terminal and adapted to engage the flange on the screw shell.

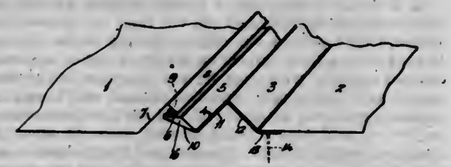


3. An attachment plug of the character described, comprising a screw shell having an annular flange, an insulating base permanently secured to the shell, a cap member having a flange and a body which passes through the screw shell and into the base member, a contact ring and shell terminal secured to the body and a locking spring secured to said terminal and adapted to engage the flange of the screw shell, the contact ring being forced into wiping contact with the flange on the screw shell by the flange on the cap member when connection is made.

4. A two member swivel attachment plug comprising a screw shell having an annular flange, an insulating base permanently secured thereto, a second insulating member having a flange at its upper end with a finger recess therethrough, and a locking spring attached to said second insulating member and adapted to engage the flange of the screw shell to secure the parts together and extending into the recess for manipulation by the operator.

5. An attachment plug of the character described comprising a screw shell having an annular flange, an insulating base secured thereto, a second insulating member having a recess extending through the top thereof, and a locking spring carried by said second member and curved downward and then upward into the recess and provided with a catch adapted to engage the flange on the screw shell, pressure on the spring acting to unlock the members.

1,110,272. SHEET-METAL ROOFING. EDWIN R. PROBST, Covington, Ky., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky., a Corporation of Kentucky. Filed Feb. 7, 1913. Serial No. 746,767. (Cl. 108—22.)

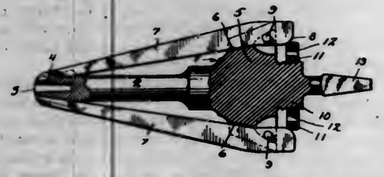


1. A sheet-metal roofing comprising metal plates each having along one longitudinal edge an inverted V crimp that upwardly and outwardly extends into a short slanting member and thence into a short horizontal member or flange materially elevated above the level of the body of the sheet and slightly below the level of the apex of the said crimp and along its other longitudinal edge with an outwardly and upwardly slanting extension or member that downwardly extends into a short inclined member, thence into a short horizontal inwardly-disposed member that coincides with said short horizontal member or flange along the opposite edge of the sheet, thence downwardly extends in a slanting or curved line of a lesser pitch than that of the said short slanting extension along the opposite edge of the sheet, thence extending into an inverted V

crimp to underlie the inverted V crimp of the opposite edge of the sheet and thence into a horizontal foot or flange and adapted to receive the fastening-nails, the said first-described formation along one edge of the sheet being adapted to be engaged with the second-described structure along the opposite edge of a contiguous sheet that is to be interlocked therewith, an elevated lapping closure or seam being provided in the joint where the short horizontal extension or elevated flange lies beneath and contacts with the short, horizontal inwardly-disposed extension, and a vent passage or chamber being provided beneath the lock-seam formed by said short elevated horizontal contacting or lapped extensions.

2. A sheet-metal roofing comprising contiguous sheets or plates having in their overlapping completed joints a pair of adjacent parallel inverted-V crimps, a horizontally-lapped closure or seam in one of the said crimps adjacent the apex thereof, a vent-passage made in the said one of the crimps beneath said horizontally-lapped closure or seam, and a pair of adjoining, independent vent-passages provided in the joint within the other or adjacent capping inverted-V crimp.

1,110,273. REAMER. WASHINGTON L. SANTMYERS and ROY L. HEPNER, Strasburg, Va. Filed May 5, 1914. Serial No. 836,559. (Cl. 77—72.)



1. A reamer comprising a central spindle, a frusto-conical shell formed on the rear of said spindle, a plurality of blades disposed in axial slots therein, and means operable longitudinally on said spindle and engaging the ends of said blades for clamping them in said slots.

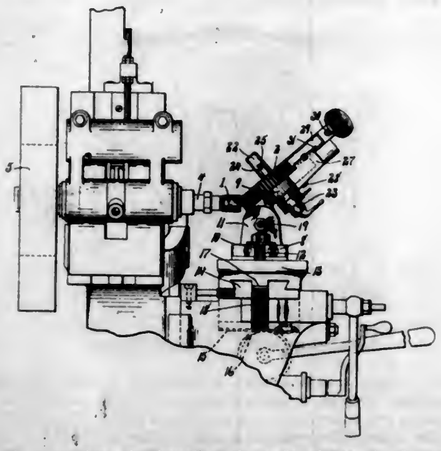
2. A reamer comprising a central spindle, a frusto-conical shell formed on the rear of said spindle, a plurality of blades disposed in axial slots in said shell and having pivotal relation thereto, and means on said spindle for forcing the ends of said blades outwardly for engaging the other ends of said blades upon the spindle.

3. A reamer comprising a central spindle, a frusto-conical shell formed on the rear of said spindle, a head on the front end of said spindle, a plurality of blades disposed in axial slots in said shell, and means operable longitudinally on said spindle for clamping said blades in said slots and in slots on said head.

4. A reamer comprising a central spindle, an enlarged frusto-conical shell formed on the rear end thereof and provided with slots, a plurality of cutting blades disposed in said slots, a head formed on the front end of said spindle and provided with slots for the reception of the front ends of said blades, pins extending through said blades and engaging the inner periphery of said shell, the upper inner portion of said blades being beveled so as to allow for clamping, and means for clamping said blades, said means comprising a screw-threaded extension on said spindle and a disk threaded thereon and engaging the beveled portions of the rear ends of said blades, said disk having two holes passing therethrough for the reception of a suitable tool for tightening the disk.

5. A reamer comprising a central spindle, an enlarged frusto-conical shell formed on the rear end thereof and provided with slots, a plurality of cutting blades disposed in said slots, a head formed on the front end of said spindle and provided with slots for the reception of the front ends of said blades, pins extending through said blades and engaging the inner periphery of said shell, and means for clamping said blades, said means comprising a screw-threaded extension on said spindle and a plate threaded thereon and engaging the lower portions of the rear ends of said blades.

1,110,274. APPARATUS FOR FORMING THE ENDS OF GEAR-TEETH. GEORGE W. SPONABLE, Syracuse, N. Y., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 11, 1906, Serial No. 311,019. Renewed Sept. 6, 1910. Serial No. 580,629. (Cl. 90—11.)



1. A machine for beveling the ends of gear teeth comprising means for supporting the gear, metal-removing means movable relatively to said supporting means and means for causing said metal-removing means to move relatively to said supporting means in a path diverging from end and side faces meeting at a corner of the gear tooth being operated upon, and intersecting a lengthwise portion of said corner, and for causing said metal-removing means in the aforesaid movement thereof to engage with the corner portion of said tooth and remain out of engagement with the portions of said faces contiguous to such corner and thereby form on the tooth an end surface extending substantially in a radial direction and at an angle to said end and side faces, substantially as and for the purpose set forth.

2. A machine for beveling the ends of gear teeth comprising means for supporting the gear, metal-removing means revoluble relatively to said supporting means about a fixed axis and means for causing said metal-removing means to move about its axis relatively to said supporting means in a path diverging from end and side faces meeting at a corner of the gear tooth being operated upon, and intersecting a lengthwise portion of said corner for engaging minor portions only of said meeting end and side faces, and for causing said metal removing means to remain out of engagement with major portions of said faces, whereby a surface is provided on the end of the tooth extending substantially in a radial direction and at an angle to said end and side faces, substantially as and for the purpose specified.

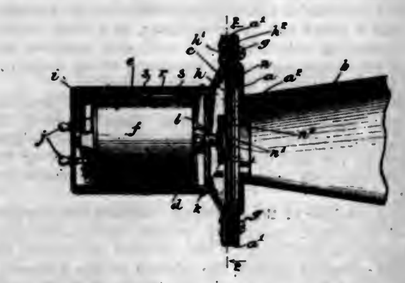
3. A machine for beveling the ends of gear teeth comprising means for supporting the gear against rotation during the beveling operation, metal-removing means movable relatively to said supporting means and means for causing said metal-removing means to move relatively to said supporting means in a path diverging from end and side faces meeting at a corner of one gear tooth being operated upon, and also diverging from end and side faces meeting at the opposite corner of a second gear tooth being operated upon, and intersecting a lengthwise portion of each of said corners, and for causing said metal-removing means in the aforesaid movement thereof to engage with the corner portions only of said te th and remain out of engagement with the portions of said faces contiguous to such corners and thereby provide the two teeth operated upon with end surfaces extending substantially in radial directions and at angles to said end and side faces, substantially as and for the purpose set forth.

4. A machine for forming the ends of gear teeth comprising a support for a gear, rotary cutting means and means for causing said cutting means to move in an arc of a circle inclosing a plurality of teeth of the gear carried by the support and engaging a corner of one of the plurality of teeth and an opposite corner of another of such plurality of teeth and to move out of engagement with contiguous portions of the end and side faces meeting at said corners and thereby form the two engaged teeth with end surfaces extending substantially in a radial direction and at an angle to said end and side faces of said two engaged teeth, substantially as herein specified.

5. A machine for forming the ends of gear teeth comprising a support for a gear, a tool having internal cutting means, and means for causing said cutting means to move in a path diverging from end and side faces meeting at a corner of the tooth being operated upon and intersecting a lengthwise portion of said corner, and to move into engagement with said corner and out of engagement with the portions of said faces contiguous to such corner and thereby form the tooth with an end surface extending substantially in a radial direction, and at an angle to said end and side faces, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

1,110,275. MECHANICAL HORN. ERNEST J. WILLIS, New York, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Feb. 6, 1912. Serial No. 675,836. (Cl. 116—1.)



1. A mechanical horn, embodying therein a flexible diaphragm, a flexible impact member supported in a fixed position relative to, and adapted to be forced into engagement with and to flex, said diaphragm, a contact carried by said impact member adjacent to its point of engagement with the diaphragm, a rotary striker member adapted to engage said contact and force said impact member into engagement with said diaphragm, and means actuating said striker member, said impact member being stiffened or reinforced between said contact and the point thereof engaging the diaphragm, whereby the full force of the striker member is imparted to the diaphragm through said stiffened portion.

2. A mechanical horn, embodying therein a flexible diaphragm, a flexible impact member supported in a fixed position relative to, and adapted to be forced into engagement with, and to flex, said diaphragm, a contact carried by said impact member adjacent to its point of engagement with the diaphragm, a rotary striker member having thereon a plurality or sequence of contacts spaced apart one from the other whereby said contact carried by said impact member may pass between said contacts upon said striker member, and the reflex action of said diaphragm is permitted, and means actuating said striker member, said impact member being stiffened or reinforced between said contact and the point thereof engaging the diaphragm, whereby the full force of the striker member is imparted to the diaphragm through said stiffened portion.

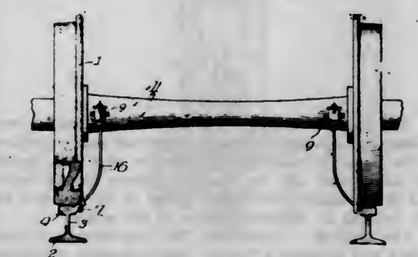
3. A mechanical horn, embodying therein a flexible diaphragm presenting a plane surface adapted to be engaged by an impact member, a flexible impact member supported in a fixed position relative to, and adapted to be forced into engagement with and to flex, said diaphragm, a contact carried by said impact member adjacent to its point of engagement with the diaphragm, a rotary striker member adapted to engage said contact and force said impact member into engagement with said diaphragm, and means actuating said striker member, said impact member being stiffened or reinforced between said contact and the point thereof engaging the diaphragm, whereby the full force of the striker member is imparted to the diaphragm through the said stiffened portion.

4. A mechanical horn, embodying therein a flexible diaphragm, a rotary striker member, a flexible impact member between said striker member and said diaphragm and adapted to be forced into engagement with said diaphragm by said striker member, said striker member acting upon said impact member eccentrically of said diaphragm, and said impact member between the point of engagement of the striker member therewith, and the point of its engagement with the diaphragm, being stiffened or reinforced, whereby the full force of the blow delivered by said striker member is imparted to the diaphragm.

5. A mechanical horn embodying therein a diaphragm, a cam rotor disposed adjacent thereto and means for effecting vibration of said diaphragm upon the rotation of said rotor, said means including a flexible member having operative engagement with the diaphragm at the center of the latter and one end supported adjacent the periphery of the diaphragm, and a contact carried by said member adjacent to its point of engagement with the diaphragm, said member being stiffened or reinforced between said contact and the point thereof engaging the diaphragm.

[Claims 6 to 9 not printed in the Gazette.]

1,110,276. WHEEL-FLANGE LUBRICATOR. JOSEPH M. WOODS and FREDERICK E. M. GIESEBRECHT, Chicago, Ill. Filed June 6, 1913. Serial No. 772,036. (Cl. 184—3.)



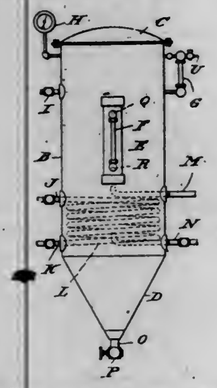
1. A lubricating apparatus, comprising a cup to store the lubricant, a pipe or tube extending therefrom, a nipple in connection with the said pipe, said nipple terminating at a point adjacent the crotch formed between the tire and the flange of a wheel, and a plunger within the nipple, said plunger being provided with a conduit through which the lubricant is adapted to pass, one end of said conduit being normally closed by the wall of the nipple, said plunger being adapted to be unseated upon engagement with the rail, and means for applying pressure upon the lubricant retained within the apparatus.

2. A lubricating apparatus, comprising a cup to store the lubricant, a pipe or tube extending therefrom, a nipple in connection with said pipe, said nipple terminating at a point adjacent the crotch formed between the tire and the flange of a wheel, and a plunger within the nipple, said plunger being provided with a conduit through which the lubricant is adapted to pass, one end of said conduit being normally closed by the wall of the nipple, said nipple being formed with a beveled seat and said plunger being provided with a beveled head adapted to coöperate with said seat, said plunger being provided with a conduit, one mouth of which is normally closed by the wall of the nipple, said mouth being adapted to be exposed when said head is forced off said seat, and means for applying pres-

sure upon the lubricant which is retained within the apparatus.

3. A lubricating apparatus, comprising a cup to store the lubricant, a pipe or tube extending therefrom, a nipple in connection with said pipe, the discharge end of said nipple being closely adjacent the flange of the wheel, said nipple being provided with two interior chambers of unequal diameters, a plunger provided with a conduit through which the lubricant is adapted to pass, the main body of said plunger being received within the chamber of smaller diameter, and one end of said conduit being adapted to be normally closed by the wall of said chamber, a head upon said plunger received within the larger of said chambers, means for forcing lubricant under pressure from said cup and into the larger of said chambers, and means for forcing the plunger inwardly into said nipple to a point where said normally-closed conduit end will be in conection with the larger of said chambers.

1,110,277. RECOVERY OF INGREDIENTS FROM WOOL-SCOURING AND ANALOGOUS LIQUORS. WILLIAM GEORGE ABBOTT, Jr., Wilton, N. H. Filed Jan. 2, 1913. Serial No. 739,597. (Cl. 87—6.)



1. The method of separating the constituents of wool scouring and analogous liquors, which consists in subjecting the liquor to heat under pressure until the lighter fatty substances and the heavier greases become segregated in the liquor, the former rising to the top and the latter settling in coagulated form to the bottom.

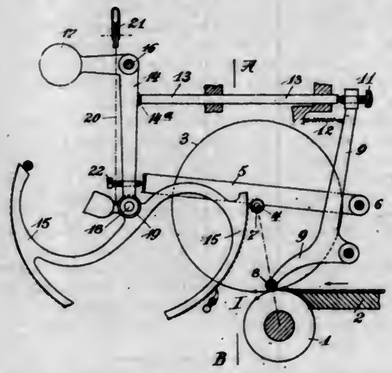
2. The method of separating the constituents of wool scouring and analogous liquors, which consists in heating the liquor to about 165° centigrade under pressure until the lighter and heavier greasy substances have separated in the liquor, the former rising to the top and the latter settling in coagulated form to the bottom.

3. The method of separating the constituents of wool scouring and analogous liquors, which consists in subjecting the liquor to heat under pressure until the lighter fatty substances and the heavier greases become segregated in the liquor on cooling, the former rising to the top and the latter settling in coagulated form to the bottom.

4. The method of separating the constituents of wool scouring and analogous liquors, which consists in heating the liquor to about 165° centigrade under pressure until the lighter and heavier greasy substances segregate in the liquor on cooling, the former rising to the top and the latter settling in coagulated form to the bottom.

1,110,278. MACHINE FOR MEASURING THE SURFACE OF LEATHER OR THE LIKE. AUGUST ABEL, Frankfort-on-the-Main, Germany, assignor to Maschinenfabrik Moenus A.-G., Frankfort-on-the-Main, Germany. Filed Jan. 27, 1914. Serial No. 814,834. (Cl. 33—124.)

1. In a machine of the character described the combination, with measuring wheels adapted to roll over the leather to be measured, a feed roller and transmission gear, of feeler rolls, means connecting said feeler rolls with said measuring wheels arranged for automatically establishing and interrupting the engagement of the measuring wheels with the aforesaid transmission gear.



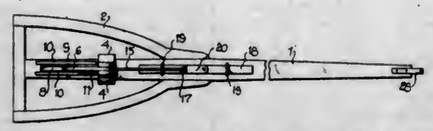
2. In a machine of the character described the combination, with measuring wheels consisting of two halves, of feeler rolls arranged each between the said two halves of such measuring wheels and means connecting said feeler rolls with said measuring wheels.

3. In a machine of the character described the combination, with a feeler roll and a segment, of a lever mechanism connecting said feeler roll with said segment and adapted for converting a small movement of the feeler roll into a larger movement of the said segment.

4. In a machine of the character described the combination, with segments, levers wherein these segments are pivoted, measuring wheels and pinions thereon, of weights provided on the said levers and adapted for moving the aforesaid segments toward the pinions of the measuring wheels.

5. In a machine of the character described the combination of segments, measuring wheels, pinions thereon, levers provided with weights and adapted for moving the aforesaid segments toward the pinions of the measuring wheels, feeler rolls, means connecting said feeler rolls with said levers, said connecting means adapted to convert a small movement of said feeler rolls into a large movement of said segments, toward and away from said pinions.

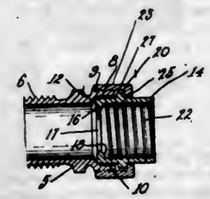
1,110,279. DRAFT-EQUALIZER. FRANK H. ALBEE, Driscoll, N. D. Filed Mar. 9, 1914. Serial No. 823,554. (Cl. 21—76.)



1. In combination with a draft pole, of vertically disposed levers pivotally connected to such pole and projecting above and below the same, rearwardly directed rigid links pivotally mounted between the opposite extremities of the lever and having their free extremities contacting with the adjacent faces of the pole, such faces of the pole being provided with longitudinally disposed grooves to receive the free extremities of the links, longitudinally directed parallel guide straps carried by such faces of the draft pole at opposite sides of the grooves, pins disposed transversely through the free extremities of the rigid links and disposed between the draft pole and the guide straps, a sliding clevis mounted upon one face of the pole, a connection between such sliding clevis and one of the links, and a rod operatively connected with the second link and provided with engaging means.

2. In combination with a draft pole, of vertically disposed levers pivotally connected to such pole and projecting above and below the same, rearwardly directed rigid links pivotally mounted between the opposite extremities of the lever and having their free extremities contacting with the adjacent faces of the pole, such faces of the pole being provided with longitudinally disposed grooves to receive the free extremities of the links, longitudinally directed parallel guide straps carried by such faces of the draft pole at opposite sides of the grooves, pins disposed transversely through the free extremities of the rigid links and disposed between the draft pole and the guide straps, a sliding clevis mounted upon one face of the pole, a connection between such sliding clevis and one of the links, a rod operatively connected with the second link and provided with engaging means, and coacting means carried by the rod and the pole serving to hold the sliding clevis against movement in one direction.

1,110,280. UNION. PHILIP ALLEN, Providence, R. I. Filed Oct. 22, 1913. Serial No. 796,617. (Cl. 137—28.)



1. In a hose connection, the combination of a pipe tail piece provided with exterior threads upon its end, and provided with a longitudinal recess in the same end, an inclined seat at the inner end of the recess, a hose tail piece, an annular shoulder upon an intermediate portion of the hose tail piece, said hose tail piece being provided with internal coarse threads, a coupling ring provided with threads adapted to engage the threads upon the pipe tail piece, and an annular shoulder upon the ring adapted to engage the shoulder upon the hose tail piece.

2. In a hose coupling, the combination of a pipe tail piece provided with external threads upon one end, and provided with external threads upon the opposite, inner end, and provided with a longitudinal recess in the inner end, a bevel seat in the inner end of the pipe tail piece, a hose tail piece slidably mounted in the first tail piece having an end adapted to abut against the seat, an inclined annular shoulder in the inner end of the hose tail piece, the latter piece being provided with internal coarse threads, an annular shoulder upon the exterior of the hose tail piece, a coupling ring provided with internal threads adapted to engage the threads upon the inner end of the pipe tail piece, and a shoulder upon the coupling ring adapted to engage the shoulder upon the hose tail piece.

1,110,281. TOOL-HOLDER. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed July 17, 1913. Serial No. 779,601. (Cl. 29—96.)

1. A tool holder having a tool recess therein, a bottom wall, and side walls on either side of said recess, a boss extending across the top of said recess, and a cam piece housed within said boss.

2. A tool holder having a tool recess longitudinally therein, a cam piece, and a recess longitudinally of said tool holder for containing said cam piece.

3. A tool holder having a tool recess therein, a cam piece, a recess longitudinally of said tool holder for containing said cam piece, a bore at right angles to said cam-piece recess and a clamping plate within said bore, intermediate said cam piece and a tool within said holder.

4. A tool holder having a tool receiving recess therein and side walls at either side of said recess, means for clamping a tool against the lower side of said recess, and means in one of said side walls for pressing a tool against the side wall at the other side of said recess.

5. A tool holder having a tool receiving recess therein and side walls at either side of said recess, means for clamping a tool against the lower side of said recess, and means in one of said side walls for pressing a tool against the side wall at the other side of said recess, said means being flush with the outer face of said side wall.

[Claims 6 to 8 not printed in the Gazette.]

1,110,282. PATTERN FOR CIRCULAR SAND MOLDS. LEVI J. ASKEW and WILLIAM A. MASTERS, Birmingham, Ala., assignors of fifty-six and two-thirds one-hundredths to said Askew, thirty-three and one-third one-hundredths to said Masters, and ten one-hundredths to James Barton, Birmingham, Ala. Filed Mar. 2, 1914. Serial No. 822,026. (Cl. 22—18.)

1. The combination with a flask, of a cylindrical pattern located therein and formed by longitudinal sections, and mechanism for simultaneously rotating and expanding or contracting said pattern sections radially, substantially as described.

2. The combination with a flask, of a sectional pattern therein, a rotatable support for the pattern, means for operating the support, lugs carried by the pattern section, spiders coöperating with the lugs, and means for moving the spiders lengthwise the lugs in the rotation of the pattern, the connection of the spiders and lugs serving to move the sections with relation to each other during such operation of the spiders.

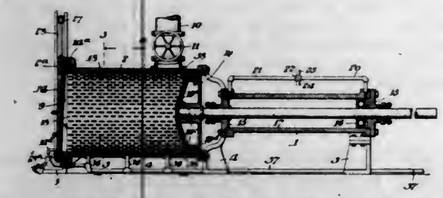
3. The combination with a flask, of a sectional pattern arranged therein, means for rotating the pattern, spaced lugs carried by each pattern section, a spider connecting similar lugs of each section, said lugs being formed with downwardly and inwardly inclined slots connected with the spider, an operating rod secured to the spider, the lower terminals of the rod being threaded, and a fixed member coöperating with the threaded end of the rod.

4. A rotatable pattern divided into sections on longitudinal planes intersecting its axis of rotation, a shaft for imparting rotary movement to the pattern, and mechanism for expanding the pattern sections radially during the rotation of the pattern.

5. A cylindrical pipe pattern divided into longitudinal sections, mechanism within the pattern for rotating it, and means to gradually expand the pattern during its rotation.

[Claims 6 to 14 not printed in the Gazette.]

1,110,283. SEPARATOR MECHANISM. GEORGE D. BEASTON, Philadelphia, Pa. Filed Dec. 15, 1913. Serial No. 806,680. (Cl. 100—50.)



1. In apparatus of the character described, a press cylinder having an imperforate head gate provided with drainage means, a ram provided with drainage means, and means for reciprocating said ram in said cylinder.

2. In apparatus of the character described, a press cylinder having an imperforate head gate provided with drainage channels, a ram having a forwardly projecting tapered part, and means for reciprocating said ram in said cylinder.

3. In apparatus of the character described, a press cylinder having drainage means, a reciprocating imperforate head gate for said cylinder, said gate having drainage means, a ram having a forwardly projecting conical part, said ram having drainage means, and means for reciprocating said ram in said cylinder.

4. In apparatus of the character described, a cylinder provided adjacent to an end thereof with wedge shaped ways on opposite sides of said end, a wedge shaped seat at the bottom of said end and a wedge shaped member at the top of said end, in combination with an end gate having wedge shaped guides movable in said wedge shaped ways, a wedge shaped bottom part movable in said seat, and a wedge shaped top part adapted to fit said wedge shaped member.

5. In apparatus of the character described, a ram cylinder having drainage means, an imperforate head gate for said cylinder and having drainage means, a ram in said cylinder and having drainage means, a power cylinder having heads at opposite ends thereof, a piston adapted to reciprocate in said power cylinder, and a piston rod bearing in said heads and connecting said piston and ram.

[Claims 6 to 8 not printed in the Gazette.]

1,110,284. WELL-CASING. EHME H. BIENHOFF, Kensington, Kans. Filed Jan. 6, 1914. Serial No. 810,613. (Cl. 166—6.)

1. A well casing section comprising an annular wall made up of blocks arranged in superimposed relation, each of said blocks being formed with an opening, and a screen removably secured in the opening.

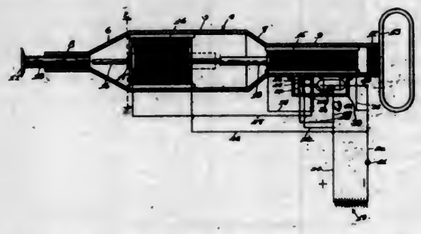
2. A well casing section comprising an annular wall made up of blocks arranged in superimposed relation, each of said blocks being formed with an opening, and a screen removably secured in the opening, said screen being formed with projections having hook terminals to extend through the opening and engage the inner surface of the block.

3. A well casing section comprising an annular wall made up of blocks arranged in superimposed relation, each of said blocks being formed with an opening, a screen removably secured in the opening, and a driving shoe having a relatively broad bearing surface to receive the lower row of blocks and a cutting edge arranged below said bearing surface.

4. A well casing section comprising an annular wall made up of blocks arranged in superimposed relation, each of said blocks being formed with an opening, a screen removably secured in the opening, a driving shoe having a relatively broad bearing surface to receive the lower row of blocks, and a cutting edge arranged below said bearing surface, said cutting edge being arranged beyond the bearing surface.

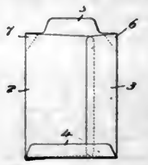
5. A well casing section comprising an annular wall made up of blocks arranged in superimposed relation, each of said blocks being formed with an opening, a screen removably secured in the opening, a driving shoe having a relatively broad bearing surface to receive the lower row of blocks, a cutting edge arranged below said bearing surface, a connected plate bearing upon the upper edge of the section, tie rods uniting said bearing plate and shoe, and brace rods uniting said rod and shoe.

1,110,285. ELECTRICALLY-OPERATED HAMMER. FRANK E. BRIXIUS, Manitowoc, Wis., assignor of one-half to George P. Brunner, Manitowoc Rapids, Wis. Filed Apr. 19, 1913. Serial No. 762,320. (Cl. 172—126.)



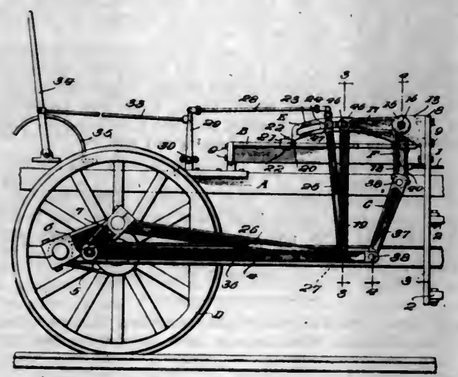
In apparatus of the character described, a tubular casing adapted to be conveniently handled by a single operator and having a central enlarged portion provided with laterally contracted forward and rear end portions, the forward laterally contracted end portion being adapted to be held in one hand of the operator, a reciprocatory tool mounted within the forward laterally contracted portion, a relatively strong solenoid winding disposed within the central enlarged portion of the tubular casing, a relatively weak solenoid winding arranged within the rear laterally contracted end portion of the tubular casing, a reciprocatory core common to both solenoid windings to engage the tool, an electric motor mounted upon the rear end portion of the tubular casing with its armature shaft extending longitudinally of and parallel with the laterally contracted rear end portion, circuits connected with the solenoid windings, circuit opening and closing devices connected in the circuits and with the armature shaft for rotation thereby, means for connecting said motor in the circuits, and a transverse handle connected with the free end of the rear laterally reduced end portion of the tubular casing.

1,110,286. PAPER DRINKING-CUP. BENJAMIN F. BROWN, Fitchburg, Mass., assignor to The Brown Bag Filling Machine Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Aug. 29, 1911. Serial No. 646,652. (Cl. 229—1.)



A drinking cup comprising a flat paper bag presenting a front ply and a back ply with an unobstructed space between, a lip projecting from the central portion of the edge of one ply outwardly from the mouth of the bag, said lip and last mentioned ply having an even continuous surface, and means for directly connecting and closing the said two plies at the mouth end between said projecting lip and the side edges of the bag to cause the mouth opening to be materially narrower than the bag, whereby liquid in the bag may run over the outwardly projecting bag lip without spilling at the sides.

1,110,287. STEAM-ENGINE VALVE-GEAR. WILLIAM SHERMAN BROWN, Knoxville, Tenn. Filed Aug. 14, 1913. Serial No. 784,735. (Cl. 121—98.)



1. In a steam engine valve gear, the combination of a valve stem, a rocking member connected with said stem, means for bodily moving said rocking member forward and backward, and other means in operative relation with the outer side of a drive wheel for rocking said rocking member, substantially as described.

2. In a steam engine valve gear, the combination of a valve stem, a rocking member connected with said stem, means in operative relation with a drive wheel for bodily moving said rocking member forward and backward, and other means also in operative relation with the outer side of a drive wheel for rocking said rocking member, substantially as described.

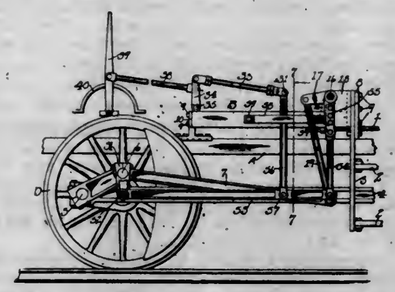
3. In a steam engine valve gear, the combination of a valve stem, a first movable member, means in operative relation with the outer side of a drive wheel and with said movable member for moving the latter, a second movable member on said first movable member and connected with the valve stem, and means also in operative relation with a drive wheel and with said second movable member for moving the latter, substantially as described.

4. In a steam engine valve gear, the combination of a valve stem, a rocking member connected with said stem, means in operative relation with a drive wheel and reversing mechanism for variably bodily moving said rocking member forward and backward, and other means also in operative relation with a drive wheel and with said rocking member for rocking the latter, substantially as described.

5. In a steam engine valve gear, the combination of a valve stem, reversing mechanism, a rocking member connected with said stem, means in operative relation with said reversing mechanism for bodily moving said rocking member forward and backward, and other means in operative relation with the outer side of a drive wheel for rocking said rocking member, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,110,288. LOCOMOTIVE VALVE-GEAR. WILLIAM SHERMAN BROWN, Knoxville, Tenn. Filed Jan. 17, 1914. Serial No. 812,778. (Cl. 121—99.)



1. In a locomotive valve gear, the combination of reversing mechanism, a valve stem, a reciprocatory transmission member in operative relation with said valve stem, a rod having its rear end at the outside of the drive wheel and having an orbital path concentric to the drive wheel axis and being coupled to said transmission member, and a fulcrum member coupled to said rod, and a supporting member for said fulcrum member, said supporting member being in operative relation with said reversing mechanism for forward and rearward movement and with the drive wheel for up and down movement relative to the locomotive frame, substantially as described.

2. In a locomotive valve gear, the combination of reversing mechanism, an auxiliary crank, an auxiliary rod coupled to said crank, an approximately upright transmission link having its lower end coupled to the auxiliary rod and having its upper end in operative relation with the distributing valve, a fulcrum link having its lower end coupled to said auxiliary rod, and means for supporting said fulcrum link at its upper end, said supporting means being in operative relation with said reversing mechanism for forward and rearward movement and with the drive wheel for up and down movement relative to the locomotive frame, substantially as described.

3. In a locomotive valve gear, the combination of reversing mechanism, an auxiliary crank, an auxiliary rod coupled to said crank, an approximately upright fulcrum link coupled by its lower end to the auxiliary rod between the ends of the latter and having its upper end coupled to said reversing mechanism, an approximately upright transmission link having its lower end coupled to the forward end of the auxiliary rod and having its upper end in operative relation with the bell-crank, and means for supporting said fulcrum link at its upper end, said supporting means being in operative relation with said reversing mechanism for forward and rearward movement and with the drive wheel for up and down movement relative to the locomotive frame, substantially as described.

4. In a locomotive valve gear, the combination of reversing mechanism, an auxiliary crank, an auxiliary rod

coupled to said crank, an approximate upright fulcrum link coupled by its lower end to the auxiliary rod between the ends of the latter and having its upper end coupled to said reversing mechanism, an approximately upright transmission link having its lower end coupled to the forward end of the auxiliary rod and having its upper end in operative relation with the bell-crank, a supporting bar having one end supported on the axial line of the driver and having its other end supported by the locomotive frame, and means supported by said supporting bar and supporting said fulcrum link and being in operative relation with the reversing mechanism, substantially as described.

5. In a locomotive valve gear, the combination of reversing mechanism, an auxiliary crank, auxiliary rod coupled to said crank, an approximately upright fulcrum link coupled by its lower end to the auxiliary rod between the ends of the latter and having its upper end coupled to said reversing mechanism, an approximately upright transmission link having its lower end coupled to the forward end of the auxiliary rod and having its upper end in operative relation with the bell-crank, and an approximately upright rocking member supporting said fulcrum link and being in operative relation with a driver for up and down movement proportional to the relative up movements of the driver, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

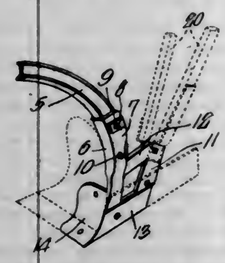
1,110,289. PROCESS OF MAKING FORMALDEHYDE. HEINRICH VON HOCHSTETTER, Constance, Germany, assignor to Perth Amboy Chemical Works, New York, N. Y., a Corporation of New Jersey. Original application filed Jan. 9, 1913, Serial No. 741,106. Divided and this application filed Apr. 28, 1914. Serial No. 834,886. (Cl. 23—24.)

1. The process of making formaldehyde consisting in conducting a mixture of air and methyl alcohol vapor at a suitable temperature over a metal with which a metal of the platinum group is associated, the vapor mixture being caused to contact with each of said metals.

2. The process of making formaldehyde consisting in conducting a mixture of air and methyl alcohol vapor at a suitable temperature over metallic silver with which a metal of the platinum group is associated, the vapor mixture being caused to contact with each of said metals.

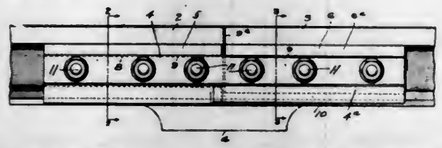
3. The process of making formaldehyde consisting in conducting a mixture of air and methyl alcohol vapor at a suitable temperature over metallic silver with which metallic rhodium is associated, the vapor mixture being caused to contact with each of said metals.

1,110,290. PLOW. EDWARD B. JAMES, Cordele, Ga. Filed Sept. 12, 1911. Serial No. 648,918. (Cl. 97—21.)



In a plow, a frog provided with a standard of U-shaped cross section, a plow beam having its rear end curved downwardly and pivoted between the sides of the standard, the sides of the standard having arcuate slots therein curved about the pivotal point of the beam, a bolt carried by the beam and passing through the said slots, the faces of the sides of the standards being smooth with the exception of a series of small outer indentures beyond each end of one of the said slots, and elongated washers mounted upon the ends of the bolt over the said slots, one washer having a single small circular spur adjacent one end thereof the distance between the bolt and spur being less than half the distance between the two series of indentures, and the said washer being rotatable when the bolt is loosened, in order that the spur may engage either series of indentures.

1,110,291. INSULATED RAIL-JOINT. JOHN R. KELLER, Crafton, Pa., assignor to the Rail Joint Company, New York, N. Y., a Corporation of New York. Filed June 4, 1914. Serial No. 843,044. (Cl. 239—5.)



1. In a rail joint, the combination with the meeting ends of rail sections, of a splice bar formed of a plurality of interlocking members each extending along both rail ends and having upper and lower rail engaging faces, and insulation disposed between said interlocking members.

2. In a rail joint, the combination with the meeting ends of rail sections, of a splice bar formed of a plurality of interlocking members having upper and lower faces directly engaging the rails, and insulation disposed between said interlocking members and between one of said member and a rail.

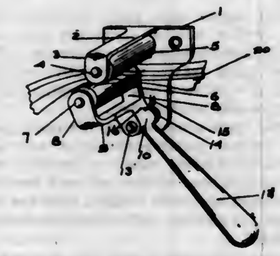
3. In a rail joint, the combination with the meeting ends of rail sections, of a splice bar formed of a plurality of interlocking members having upper and lower faces directly engaging the rails, and insulation disposed between said interlocking members and between one of said members and a base flange of a rail.

4. In a rail joint, the combination with the meeting ends of rail sections, of a splice bar formed of a plurality of interlocking members having alining upper rail engaging faces and one of which has a lower rail engaging face, and insulation disposed between said members and between one of said members and a rail face.

5. In a rail joint, the combination with the meeting ends of rail sections, of a splice bar formed of a plurality of interlocking members each extending along both rail ends and each of which is provided with upper and lower rail engaging faces, and insulation disposed between said interlocking members.

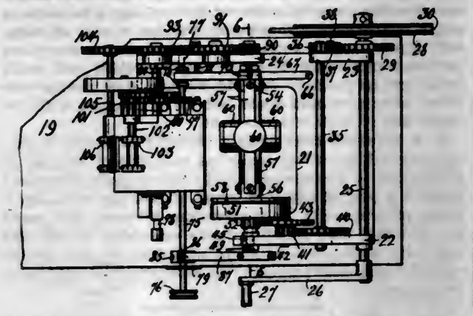
[Claims 6 to 19 not printed in the Gazette.]

1,110,292. TOWEL-WRINGER. JOSEPH KUGEL, Cincinnati, Ohio. Filed July 25, 1913. Serial No. 781,156. (Cl. 68—32.)



In a towel wringer of the class described, a bracket, capable of attachment to a support, an arm extending from said bracket, an upper roller mounted in said arm, a forked handle, a lower roller pivoted in said arm, a forked handle, the handle pivoted to the lower part of said bracket so that the lower roller can be brought up to and away from the upper roller.

1,110,293. SPEED-CONTROLLER. EUGENE EARL NORTON, Bridgeport, Conn., assignor, by mesne assignments, to Rudolph Dugan, Roslyn, N. Y. Filed Oct. 13, 1908. Serial No. 457,469. (Cl. 74—45.)



1. The combination with a driven machine of a rotary shaft therefor, a driving shaft, a governor shaft journaled adjacent to the driving shaft, a fly wheel on the governor shaft, gearing interposed between the said fly wheel and driving shaft, a disk sleeve and a grooved sleeve slidably supported on the governor shaft, flexible bands connecting the sleeves, the outer face of the disk sleeve bearing against the opposing face of the fly wheel, weights on the flexible bands, an adjusting lever, pins extending from the latter engaging the grooved sleeve, means to directly move the adjusting lever to different positions, and gearing interposed between the governor shaft and the rotary shaft of the driven machine.

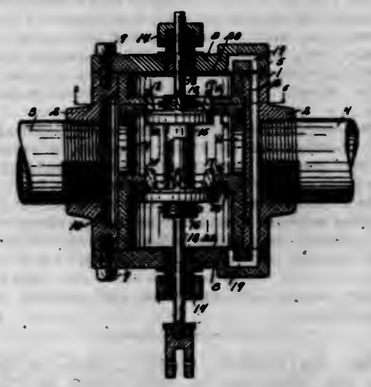
2. The combination with a driven machine of a rotary shaft therefor, a driving shaft, a governor shaft journal adjacent to the driving shaft, a fly wheel journal on the governor shaft, gearing interposed between the said fly wheel and driving shaft, a disk sleeve and a grooved sleeve slidably supported on the governor shaft, flexible bands connecting the sleeves, the outer face of the disk sleeve bearing against the opposing face of the fly wheel, weights on the flexible bands, an adjusting lever, pins extending from the latter engaging the grooved sleeve, an adjusting rod engaged with the adjusting lever to directly move it in opposite directions, a disk having a notch on the said rod, a spring latch in the path of the said notch, and gearing interposed between the governor shaft and the rotary shaft of the driven machine.

3. The combination with a driven machine of a rotary shaft, a speed controller for the machine, a base plate for the controller, a frame on the base plate, side plates extending from the frame, a driving shaft journaled in the side plates, a sleeve in one of the side plates, a governor shaft with one end journaled in one of the side plates and the other end thereof fastened in said sleeve, a fly wheel journaled on the governor shaft, gearing interposed between the fly wheel and the driving shaft, a grooved sleeve and a disk sleeve slidably supported on the governor shaft, flexible bands connecting the sleeves, weights fastened to the bands, a post extending up from the frame, an adjusting lever with a central oval portion and an opening at its swinging end pivoted on said post, an adjusting rod with threads at one end engaging a threaded opening in one of the said plates of the frame, a bracket extending from the base plate supporting the other end of the adjusting rod, a disk having a notch on the said rod, a spring latch supported on the base plate, a projection on the spring latch in the path of the notch on the said disk, a train of gearing connecting the said driving shaft with the rotary shaft of the driven machine, and a pair of disks on the adjusting rod which straddle the adjusting lever to directly move it in opposite directions.

4. In a speed controller the combination of a driving shaft, a governor shaft journaled adjacent thereto, a fly wheel journaled on the governor shaft, a train of gearing between the driving shaft and the fly wheel, a disk sleeve and a second sleeve slidably supported on the governor shaft, the disk sleeve with its outer face located to bear against a face of the fly wheel, a collar fastened to the governor shaft located to bear against the outer face of the second sleeve, flexible bands connecting the sleeves, weights on the bands, an adjusting lever in connection with the second sleeve, a stop pin in the path of the adjusting lever and means to directly adjust said lever.

5. In a speed controller the combination of a frame, a driving shaft journaled in the frame, an abutting sleeve journaled in said frame, a governor shaft with one end journaled in one side of said frame and the other end fastened in said abutting journal sleeve, a fly wheel journaled on the governor shaft, a pinion extending from the outer face of the fly wheel, the outer face of the latter abutting against the abutting journal sleeve, a disk sleeve and a second sleeve slidably supported on the governor shaft, the disk sleeve with its outer face located to bear against the inner side face of the fly wheel, a collar fastened to the governor shaft located to bear against the outer face of the second sleeve, flexible bands connecting the sleeves, weights on the bands, an adjusting lever in connection with the second sleeve, a stop pin in the path of the adjusting lever and means to directly adjust said lever.

1,110,294. FLUID-REGULATOR. JOHN E. OSMER, Boone, Iowa, assignor to The Fisher Governor Company, Marshalltown, Iowa, a Corporation. Filed Jan. 25, 1913. Serial No. 744,239. (Cl. 50—26.)



1. In a fluid regulator, the combination with the valve casing having a cylindrical bore open at each end, said casing being provided with lateral openings for inlet and discharge; removable heads for said casing; a removable cylindrical valve cage provided with a pair of spaced valve seat holders with valve seats therein, said cage having ports opening between said valve seats, there being an annular passage surrounding said valve cage and communicating with said cage ports and with one of said casing openings, said casing being provided with a longitudinal passage communicating with the other casing opening, said casing heads being provided with passages opening into the ends of the valve cage and communicating with said longitudinal passage; a pair of disk valves provided with wings having sliding engagement with said valve seat holders; a valve stem having a central engagement upon which said valves are threaded, there being a spacing sleeve between said valves; lock nuts for said valves, the ends of the stem being extended through the casing heads and provided with suitable packing glands; and a pressure actuated member having operative connection to said valve stem.

2. In a fluid regulator, the combination with the valve casing having a cylindrical bore open at each end, said casing being provided with lateral openings for inlet and discharge; removable heads for said casing; a removable cylindrical valve cage provided with spaced valve seats, said cage having ports opening between said valve seats,

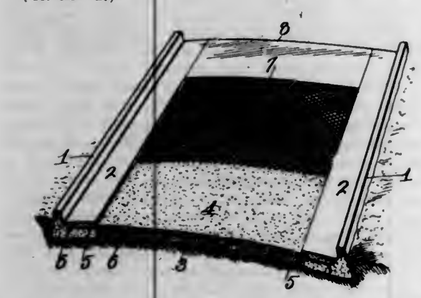
there being an annular passage surrounding said valve cage and communicating with said cage ports and with one of said casing openings, said casing being provided with a longitudinal passage communicating with the other casing opening, said casing heads being provided with passages opening into the ends of the valve cage and communicating with said longitudinal passage; a pair of disk valves; a valve stem; and a pressure actuated member having operative connection to said valve stem.

3. The combination with the valve casing open at each end, said casing being provided with lateral openings for inlet and discharge; heads for said casing; a valve cage provided with spaced valve seats, said cage having ports opening between said valve seats, there being an annular passage surrounding said valve cage and communicating with said cage ports and with one of said casing openings, said casing being provided with a longitudinal passage communicating with the other casing opening, said casing heads being provided with passages opening into the ends of the valve cage and communicating with said longitudinal passage; a pair of valves provided with wings having sliding engagement with said valve seat holders; and a stem for said valves.

4. The combination with the valve casing open at each end, said casing being provided with lateral openings for inlet and discharge; heads for said casing; a valve cage provided with spaced valve seats, said cage having ports opening between said valve seats, there being an annular passage surrounding said valve cage and communicating with said cage ports and with one of said casing openings, said casing being provided with a longitudinal passage communicating with the other casing opening, said casing heads being provided with passages opening into the ends of the valve cage and communicating with said longitudinal passage; a pair of valves; and a stem for said valves.

5. The combination with the valve casing provided with lateral openings for inlet and discharge, a removable valve cage provided with spaced valve seats, said cage having ports opening between said valve seats, there being an annular passage surrounding said valve cage and communicating with both of said cage ports and with one of said casing openings, said casing being provided with a longitudinal passage communicating with the other casing opening and with the ends of the valve cage, and a pair of valves coacting with said valve seat provided with a common stem.

1,110,295. PAVEMENT. VICTOR L. PHILLIPS, Kansas City, Mo. Filed Oct. 24, 1912. Serial No. 727,555. (Cl. 94—1.)



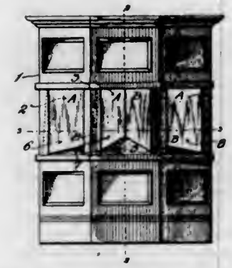
1. A pavement, comprising curbings, a plurality of layers of paving material spread from curbing to curbing, a foraminous metal reinforcement interposed between a pair of the layers, and a series of rods interposed between said pair of the layers and engaging the said reinforcement and provided with hooks embedded in the said curbings.

2. A pavement, comprising a plurality of layers of paving material, the bottom layer having a roughened upper surface, a foraminous metal reinforcement resting upon the roughened layer and embedded in the top layer, and rods extending transversely between the layers and under the reinforcement and provided with upwardly projecting spurs engaging interstices of such reinforcement.

3. A pavement, comprising a curbing, a plurality of layers of paving material adjacent the curbing, a foraminous metal reinforcement interposed between a pair of adjacent layers, and a series of transverse rods interposed between a pair of the layers and each provided with hooks embedded respectively in said curbing and paving material, certain of said hooks being also engaged with the interstices of such reinforcement.

4. A pavement comprising a plurality of layers of paving material, a curbing bordering each side of said layers of material, a foraminous metal reinforcement interposed between a pair of adjacent layers of said material, and a series of transverse rods extending between said curbs and provided with terminal hooks embedded therein and also with a plurality of spurs embedded in said paving material and engaged with the interstices of said reinforcement.

1,110,296. DISPLAY APPARATUS. JOHN I. WILEY, Los Angeles, Cal. Filed May 1, 1913. Serial No. 764,922. (Cl. 88—15.)



1. In a display apparatus, a cabinet having one or a plurality of openings in the front, one or a plurality of groups of mirrors perpendicularly disposed and suspended within said cabinet, said mirrors severally consisting of two mirrors having their rear edges in substantially the same plane and their reflecting surfaces toward each other, said two mirrors of each group being adjustable relatively to each other and having their greatest divergence toward said opening or openings, and a suitable support for objects below said mirrors, said support being movable to admit of the insertion of objects of various thicknesses.

2. In a display apparatus, a cabinet having a plurality of openings, a plurality of groups of mirrors within said cabinet severally consisting of two mirrors, perpendicularly disposed, and hinged together, said two mirrors of each group having their reflecting surfaces toward and being adjustable relatively to each other, a support for opaque and transparent objects, a source of illumination for the opaque objects, and a source of illumination for the transparent objects.

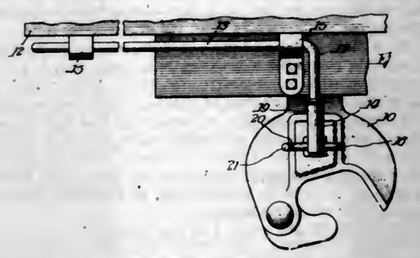
3. In a display apparatus, a cabinet having a plurality of openings, a plurality of groups of perpendicular mirrors disposed within said cabinet and forming two sides of a regular triangular prism, said mirrors facing each other and being hinged together whereby to vary the angle of the mirrors, the greatest divergence of said mirrors being toward said openings, and mirrors within said cabinet to make the objects reflected from the front of the cabinet visible from the rear.

4. In a display apparatus, a cabinet having a plurality of openings, a plurality of groups of mirrors within said cabinet, severally consisting of two mirrors hingedly connected and forming two sides of a regular triangle, the greatest divergence of said mirrors being toward said openings, and a base in said cabinet arranged to support objects, said base being below and movable relatively to said mirrors.

5. In a display apparatus, a cabinet having a plurality of openings, a plurality of groups of mirrors within said cabinet severally consisting of two mirrors hingedly connected and forming two sides of a regular triangle, the greatest divergence of said mirrors being toward said openings, a source of illumination for the cabinet, and a base arranged to support objects, said base being movable and of graduated thickness to enlarge or diminish the aperture between the bottom of the mirrors and the base.

[Claims 6 to 8 not printed in the Gazette.]

1,110,297. UNCOUPLING DEVICE. CHARLES A. CARSCADIN and GEORGE A. WOODMAN, Chicago, Ill., assignors of one-third to Raymond C. Dudley, Chicago, Ill. Filed May 18, 1912. Serial No. 698,129. (Cl. 213—59.)



1. An uncoupling device for railway cars comprising a section having an arm substantially extending outwardly horizontally therefrom, the said section being adapted to be secured to a car to dispose the said arm above the locking pin of the coupler, and a section adapted to freely telescope with the said arm and having an element depending therefrom beneath the telescopic connection between said arm and section adapted to be attached to the locking pin of the coupler, the telescopic connection between the said sections being of sufficient length to prevent removal of the parts of the device without removal of the device from the car or the locking pin from the coupler and permitting the said sections to be disconnected should the drawbar or coupler be pulled from the car.

2. An uncoupling device for railway cars comprising an operating rod adapted to be secured to a car and having an arm extending outwardly at substantially right angles to the body portion of the rod, a sleeve engaging said arm and freely movable thereon, and an element connected to said sleeve beneath its engagement with said arm and connecting said sleeve to the locking pin of the coupler and preventing removal of the sleeve from said arm when the parts are operatively arranged upon a car.

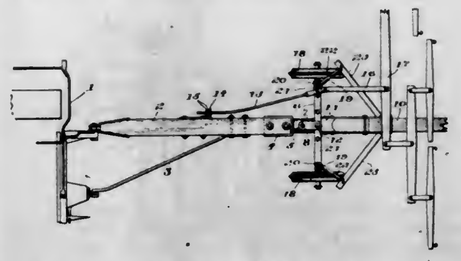
3. An uncoupling device for railway cars comprising an operating rod adapted to be secured to a car and having an arm extending outwardly at substantially right angles to the body portion of the rod, a sleeve engaging said arm and freely movable thereon, and a rigid member connected to said sleeve beneath its engagement with said arms and connecting said sleeve and the locking pin of the coupler and preventing removal of the sleeve from said arm when the parts are operatively arranged upon a car.

4. An uncoupling device for railway cars comprising an operating rod adapted to be secured to a car and having an arm extending outwardly at substantially right angles to the body portion of the rod, a sleeve embracing said arm and freely movable thereon, and an element slidably engaging said sleeve and connecting it to the locking pin of the coupler and preventing removal of the sleeve from said arm when the parts are operatively arranged upon a car.

5. An uncoupling device for railway cars comprising a rod having an arm bent outwardly substantially horizontally at right angles thereto, said rod being adapted to be secured to a car to dispose said arm over the locking pin of the coupler, a sleeve loosely engaging said arm over said locking pin and freely movable on said arm, and a hook pivotally connected to said sleeve beneath the engagement of said sleeve and arm to depend beneath said sleeve and engage with the locking pin of the coupler when the parts are operatively positioned.

[Claims 6 to 13 not printed in the Gazette.]

1,110,298. TONGUE-TRUCK. CLINTON A. HAGADONE, Western Springs, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Jan. 27, 1913. Serial No. 744,400. (Cl. 21—204.)



1. In a tongue truck, a stub tongue having a cylindrical longitudinally protruding end, and a truck axle member journaled on said end.

2. In a tongue truck, a stub tongue having a cylindrical longitudinally extending portion, a truck axle journaled thereon, and means operatively connecting said cylindrical portion and axle and limiting the relative angular movement of the parts.

3. In combination, an implement, a stub tongue connected with said implement, said stub tongue having a longitudinally disposed cylindrical portion at the front end thereof, and a tongue truck including an axle member, a bearing block forming part of said axle member and having the cylindrical portion of said stub tongue journaled therein whereby said axle member may rock about said cylindrical portion in the direction of the length thereof in a plane at right angles with the line of draft of the machine.

4. In combination, an implement, a stub tongue connected therewith, said stub tongue having a longitudinally disposed cylindrical portion at the front end thereof, a tongue truck including an axle member, a cylindrical bearing block forming part of said axle member and having the cylindrical portion of said stub tongue journaled therein whereby said axle member may rock about the cylindrical portion of the tongue, and means operatively connecting said bearing block and the cylindrical portion of said tongue and limiting the relative movement of the parts.

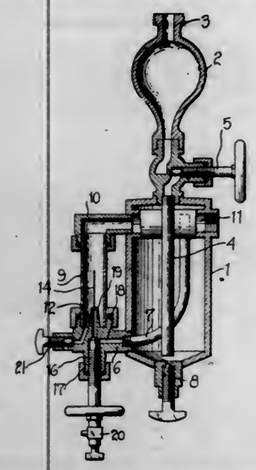
5. In combination, an implement, a stub tongue connected with said implement, a member in one end of which the end of said tongue is seated having a longitudinally extending cylindrical portion on its opposite end, an axle member having a cylindrical portion telescopically receiving said first mentioned cylindrical portion, and means angularly movable with respect to the cylindrical portion of said tongue limiting the angular movement of the cylindrical portion of said axle with respect to said tongue and holding the parts in assembled relation.

[Claim 6 not printed in the Gazette.]

1,110,299. LUBRICATOR. JOHN J. COSTELLO, Jr., Scranton, Pa., assignor of one-half to Michael A. McGinley, Scranton, Pa. Filed Mar. 7, 1914. Serial No. 823,144. (Cl. 184—96.)

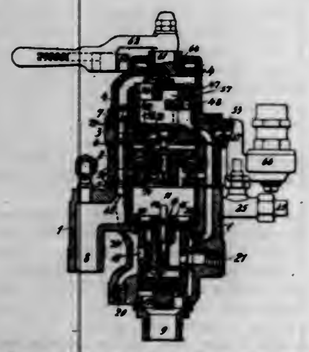
A device of the character described including a casing, a sight feed member, a tube carried by the casing projecting within the sight feed member, a valve member adjustable through the casing and adapted to control the flow through the tube, said valve member being provided with an axial opening throughout its entire

length, independently operable means carried by the outer extremity of the valve member for controlling the flow therethrough, and an elongated member projecting through the tube, the lower extremity of said member being secured to the valve member within the bore



thereof, said elongated member being provided in close proximity to the outer end of the valve member with an inwardly disposed offset whereby the major portion of the elongated member is positioned substantially at the axial center of the bore of said valve member.

1,110,300. FLUID-PRESSURE BRAKE APPARATUS. MURRAY CORRINGTON, New York, N. Y., assignor, by mesne assignments, to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 10, 1905. Serial No. 264,599. (Cl. 188—7.)



1. In a fluid-pressure brake system, the combination, with a train-pipe normally charged with pressure, of apparatus on an engine and apparatus on a car capable of operation by a reduction of train-pipe pressure to apply brakes and means capable of operation by a single handle under control of the engineer for alternately holding brakes applied on the engine while releasing brakes on the car, and vice versa.

2. In a fluid-pressure brake system, the combination of mechanism on a car and mechanism on an engine automatically operative to apply brakes on a reduction of pressure in a train-pipe, and mechanism capable of operation by a single handle under control of the engineer for, at one time, alternately releasing brakes on the engine while holding brakes applied on the car, and vice versa, and, at another time, applying and releasing brakes conjointly on the engine and car.

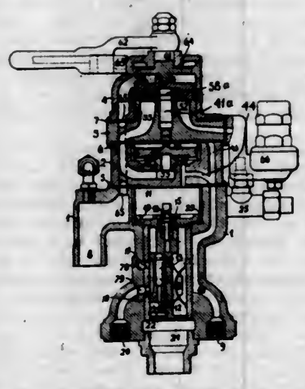
3. The combination, with a brake-cylinder, an auxiliary reservoir and a triple valve on a car, of a brake-cylinder, an auxiliary reservoir and a valve device automatically operative to apply brakes on an engine and a valve mechanism capable of operation by the engineer through a single handle for controlling said apparatus on car and engine, and for applying and releasing brakes, at one time alternately and at another time conjointly between engine and car.

4. In a fluid-pressure brake system, the combination, with a triple valve and a brake-cylinder on a car, a valve device automatically operative to apply brakes and a brake-cylinder on an engine, of means capable of operation by a single handle under control of the engineer for alternately releasing the brakes on the engine while the brakes on the car are set, and for holding brakes applied on the engine while releasing on the car.

5. In a fluid-pressure brake system, the combination, with a triple valve and a brake-cylinder on a car, a valve device automatically operative to apply brakes and a brake-cylinder on an engine, of means, capable of control by the engineer through the movement of one handle for operating said triple and automatic valve device to application and release or normal positions, and for alternately releasing and applying brakes on the engine while the triple on the car is, respectively, in positions for applying and for releasing brakes.

[Claims 6 to 27 not printed in the Gazette.]

1,110,301. FLUID-PRESSURE BRAKE APPARATUS. MURRAY CORRINGTON, New York, N. Y., assignor, by mesne assignments, to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 16, 1907. Serial No. 392,968. (Cl. 188—7.)



1. In a fluid pressure brake system the combination, with an automatic train pipe line a triple valve, an auxiliary reservoir and a cylinder containing a piston whose movements cause brakes to be applied and released on an engine, of an automatic brake valve controlling passages leading, respectively, to the train line, to the exhaust port of said engine triple valve and to said engine cylinder and capable in one position of opening the passage to the train line, in another position of opening passages to the train line and to the triple valve exhaust port and in a third position of admitting pressure through said engine cylinder passage to said cylinder.

2. In a fluid pressure brake system, the combination, with an automatic train pipe line a triple valve, an auxiliary reservoir and a cylinder containing a piston for applying and releasing brakes on an engine, of an automatic brake valve controlling independent passages leading, respectively, to the exhaust port of said engine triple valve and to said engine cylinder and capable of

opening said passages in different positions and releasing engine brakes either directly or through the engine triple exhaust port.

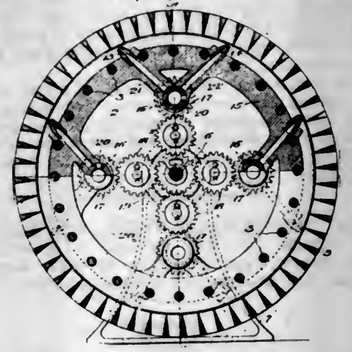
3. In a fluid pressure brake system, the combination, with an automatic train pipe line a triple valve an auxiliary reservoir and a cylinder containing a piston for causing application and release of brakes on an engine, of an automatic brake valve controlling independent passages leading, respectively, to the exhaust port of said engine triple valve and to said cylinder and capable of releasing engine brakes either directly or through the triple exhaust passage, and of admitting pressure to said cylinder in another position.

4. The combination on an engine of a triple valve and an automatic brake valve capable of movement to three positions, in one of which pressure is admitted directly to a cylinder containing a piston for applying and releasing brakes, in another of which pressure is released directly from said cylinder and in the third of which pressure is released from said cylinder through the exhaust port of the engine triple valve.

5. The combination, with a train line and an automatic brake valve having an equalizing piston, of ports leading, respectively, to said piston and to said train line and a single port in the valve for venting pressure from said piston and from said train line in different positions of the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,110,302. ROTARY ENGINE. LOUIS S. FLATAU, St. Louis, Mo., assignor of one-half to Dudley C. Wray, St. Louis, Mo. Filed Mar. 27, 1912. Serial No. 686,512. (Cl. 121—60.)



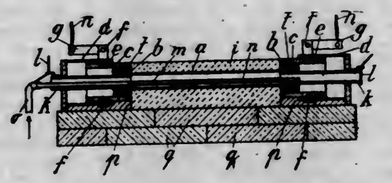
1. A rotary engine comprising an inner expansion chamber having nozzles which discharge radially therefrom, of a wheel mounted to turn on the hubs of said chamber and having vanes in position to receive the impact from the nozzles, and means for controlling the discharge from said nozzles.

2. A rotary engine comprising an expansion chamber, a wheel mounted to rotate about said expansion chamber, a plurality of reverse and positive drive nozzles in said chamber adapted to discharge against said wheel, a plurality of valves and each valve controlling the discharge from a reverse and a positive nozzle, whereby either the positive or reverse nozzle will be discharged at a time, means for connecting the several valves together, and means for operating all of the valves simultaneously.

3. A rotary engine comprising an expansion chamber, and a wheel incasing said chamber and provided with radially-disposed vanes at the periphery thereof, said vanes tapering to a thin edge toward the center and having concave surfaces.

4. A rotary engine comprising an expansion chamber, a wheel mounted to rotate about said expansion chamber, a plurality of reverse and positive drive nozzles in said chamber adapted to discharge against said wheel, a plurality of valves and each valve controlling the discharge from a reverse and a positive nozzle, whereby either the positive or reverse nozzle will be discharged at a time, and means for operating all of the valves simultaneously.

1,110,303. METHOD OF MANUFACTURING ALLOYS OF TUNGSTEN AND OTHER HIGHLY-REFRACTORY METALS RELATED TO IT. HANS KREUSLER, Wilmersdorf, near Berlin, Germany, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Aug. 25, 1908. Serial No. 449,752. (Cl. 75—1.)



1. A metallic alloy containing more than sixty per cent. of metal of the tungsten-molybdenum group and more than one per cent. of nickel, and having the property of ductility.

2. A metallic alloy containing ninety-five per cent. to seventy-five per cent. of tungsten, not more than fifteen per cent. of nickel and not more than ten per cent. of another metal, and having the property of ductility.

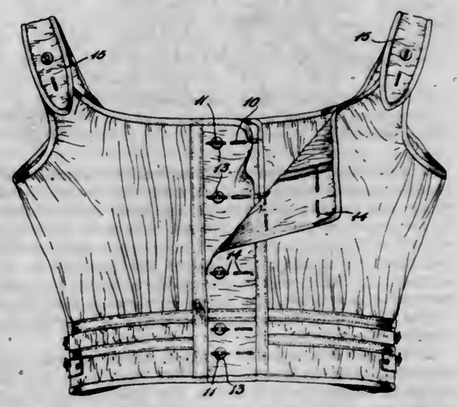
3. A metallic alloy containing eighty-five per cent. to ninety-five per cent. of tungsten and fifteen per cent. to five per cent. of nickel, and having the property of ductility.

4. A metallic alloy containing ninety per cent. of tungsten and not less than five per cent. of nickel, and having the property of ductility.

5. A metallic alloy consisting of ninety per cent. of tungsten, five per cent. of nickel and five per cent. of iron, and having the property of ductility.

[Claims 6 to 10 not printed in the Gazette.]

1,110,304. GARMENT. SARAH LIPTON, Brooklyn, N. Y. Filed Apr. 1, 1914. Serial No. 828,723. (Cl. 2—98.)



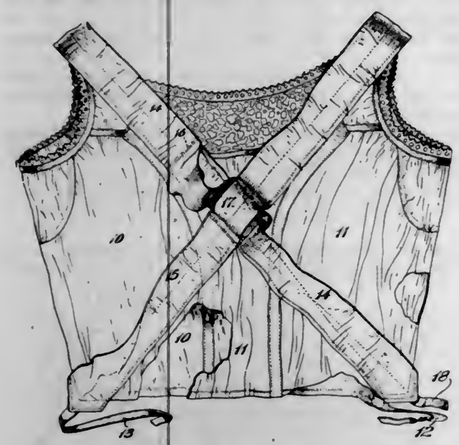
1. An expansible garment having complementary fastening devices for engagement with each other, one of which is movable relative to the garment in the direction of the desired expansion of the garment, a runner or guide for said movable fastening device attached to the garment and upon which said fastening device is slidably mounted, and a plurality of seats in the garment for respectively holding said movable fastening device in its

different adjusted positions and in either of which it is adapted for engagement by the other complementary fastening device.

2. An expansible garment having complementary fastening devices, one of which is adjustable in the direction of the desired expansion of the garment, a tape terminally attached to the garment and upon which said fastening device is slidably mounted, and a series of seats or openings parallel with the tape, said seats being respectively adapted for holding said fastening device in its adjusted positions, and through which the same may be projected for engagement by the other complementary fastening device and may be withdrawn for adjustment.

3. An expansible garment having complementary fastening devices, one of which is adjustable in the direction of the desired expansion of the garment and which consists of a button, a slack tape terminally attached to one surface of the garment and having the button slidably mounted for adjustment thereon, and a plurality of slots or buttonholes arranged in the garment parallel with the tape for engagement with that portion of the tape which is adjacent to the fastening device at any desired adjustment thereof, and through which slots or buttonholes the button may be projected from the surface to which the tape is attached to the other surface, whereby said button is held for engagement by the other complementary fastening device, said slot or buttonhole being adapted to permit withdrawal of the button for readjustment.

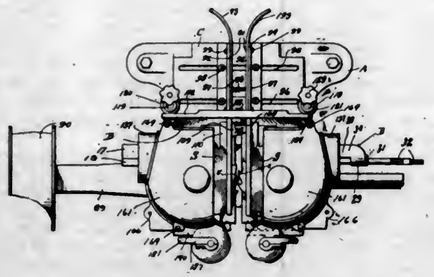
1,110,305. GARMENT. SARAH LIPTON, Brooklyn, N. Y. Filed Apr. 1, 1914. Serial No. 828,724. (Cl. 2—98.)



1. A garment adapted for dimensional adjustment having overlapping triangular flaps with their bases located at the side lines of the garment, and their apices located at the lower or waist line thereof, said flaps being provided with intersecting straps at their upper edges extending from the shoulder portions of the garment to the apices of the flaps, said straps having a running engagement with each other, and means for securing said apices of the flaps with their attached straps in the desired relative positions.

2. A garment adapted for dimensional adjustment having overlapping triangular flaps with their bases located at the side lines of the garment, and their apices located at the lower or waist line thereof, said flaps being provided with intersecting straps at their upper edges extending from the shoulder portions of the garment to the apices of the flaps, said straps having a running engagement with each other, one of said straps being extended through a guide loop of the other, and draw tapes extended respectively from the apices of the flaps and from the extremity of the loose strap.

1,110,306. RESAWING-MACHINE. ALCANZO D. NEWCOMB, Norfolk, Va., assignor to Auxiliary Re-Saw Corporation, Norfolk, Va. Filed Apr. 15, 1913. Serial No. 761,332. (Cl. 143—4.)



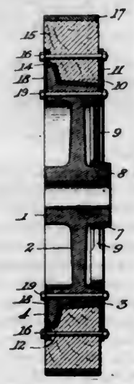
1. The combination with a main frame, of a pair of vertically, laterally and angularly adjustable saws rotating in opposite directions in substantially the same plane and describing intersecting cutting paths, and mechanism for driving the saws.

2. The combination with a support, of oppositely rotating interlapping saws describing cutting paths in substantially the same plane, and means for driving the saws.

3. The combination with a main frame, of a tilting frame carried thereby, a pair of sliding frames mounted on the tilting frame, a screw shaft connected with each sliding frame for sliding the latter on the tilting frame, a vertically disposed saw arbor carried by each sliding frame, a rotary saw carried by each saw arbor, means for longitudinally adjusting the saw arbors, and means for driving the saw arbors to cause the saws to rotate in opposite directions in substantially the same plane and describe intersecting cutting paths.

4. The combination with a support, of a pair of oppositely rotating saws geared together and having interlapping teeth describing intersecting cutting paths in substantially the same plane, and means for simultaneously tilting both the saws while maintaining their operative relation.

1,110,307. CONVERTIBLE WHEEL FOR MILITARY AND OTHER TRUCKS. AMBROSE C. G. WILLIAMS-FOOTE, Denver, Colo. Filed Aug. 12, 1913. Serial No. 784,450. (Cl. 21—154.)



1. A convertible wheel as specified, comprising a track wheel, a roadway wheel surrounding the same and having a hub adapted to fit upon the track wheel hub, and means for removably securing the roadway wheel to the track wheel.

2. In a convertible wheel as specified, the combination with a track wheel, of a roadway wheel having a band portion which surrounds and rests upon the tread portion of said track wheel, and a hub connected with said band portion adapted to surround the hub of the track wheel, and means for removably securing the roadway wheel to the track wheel.

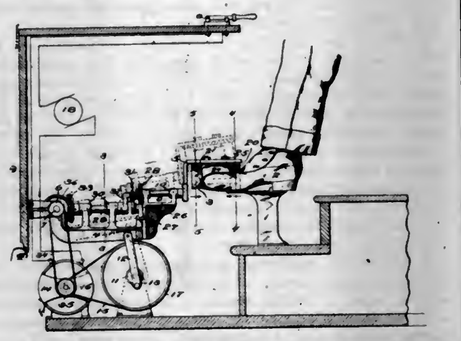
3. In a convertible wheel as specified, the combination with a track wheel, of a roadway wheel comprising an annular flanged band surrounding the tread of the track wheel, a hub which surrounds the track wheel hub, and spokes connecting said band and surrounding hub, a felly supported by the flanged band, a tire on said felly, and bolts for removably securing the roadway wheel to the track wheel.

4. In a convertible wheel as specified, the combination with a track wheel surrounding the same, comprising a flanged metal band of a form to surround the tread and flange of said track wheel, an annular housing surrounding and inclosing the outer edge of the track wheel rim, a hub surrounding the track wheel hub, and integral spokes connecting the said surrounding hub and the annular housing, a felly supported by said flanged rim and having a tire thereon, bolts which pass through the flanges of said rim and through the felly, and bolts which pass through the tread rim of said track wheel and through the end wall of said annular housing.

5. In a convertible wheel as specified, the combination with a track wheel, of a frame, comprising a flanged band which surrounds the tread and flange of said track wheel, a hub which surrounds the track wheel hub and integral spokes which connect said surrounding hub and flanged band, a felly supported by said flanged rim, having a tire thereon, radial plates disposed at regular intervals over the inner face of said track wheel, and the inner flange of said flanged band, bolts which pass through the outer ends of said plates, the said flanges and the felly, and bolts which pass through the inner ends of said plates, the rim of said track wheel, and the said frame.

REISSUES.

13,797. SHOE-POLISHING MACHINE. CHARLES F. BURKHART, New York, N. Y. Filed May 16, 1913. Serial No. 768,171. Original No. 1,051,387, dated Jan. 28, 1913, Serial No. 692,244. (Cl. 15—61.)



1. A shoe polishing machine comprising a rubbing band provided at its edges with thickened parts, and a support for said band having bars each of which has a longitudinal undercut channel adapted to receive the thickened part at one edge of the band.

2. A shoe polishing machine comprising a rubbing band provided at its edges with thickened parts, and a support for said band having bars, each of which has a longitudinal undercut channel adapted to receive the thickened part at one edge of the band, the front end of said channels being turned downwardly.

3. A shoe polishing machine comprising a rubbing band having a normally horizontal rear part and a downwardly turned front part, and means for supporting and moving said band in engagement with a shoe to be polished.

4. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, a support for said band, a rock shaft on which said support is mounted and which turns about a normally horizontal longitudinal axis, and means for raising and lowering said shaft.

5. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, and a support for said band comprising a major oscillating section which turns about a fixed horizontal axis and a minor section which carries said band and which is pivotally connected with said major section by a joint, the axis of which is arranged at right angles to said fixed axis.

6. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, a support for said band, a rock shaft upon which said support is mounted and which is pivoted to turn about a normally horizontal longitudinal axis, and means for raising and lowering said shaft comprising a rotatable crank, and a link connecting said crank and said support.

7. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, a vertically swinging main supporting arm, a horizontal driving shaft which is journaled in fixed bearings, and about which said main arm turns, an auxiliary oscillating supporting arm pivoted on the main arm at right angles to the axis of said shaft, and means for operating said auxiliary arm by motion derived from said shaft.

8. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, a vertically swinging main supporting arm, a horizontal driving shaft which is journaled in fixed bearings and about which said main arm turns, an auxiliary oscillating supporting arm pivoted on the main arm at right angles to the axis of said shaft, and means for operating said auxiliary arm by motion derived from said shaft comprising a rock shaft journaled on said main arm and carrying said auxiliary arm, a reciprocating gear rack guided to move transversely on said main arm and meshing with a pinion on said rock shaft, an intermediate rotating shaft journaled on the main arm, a pair of intermeshing bevel gears connecting the driving and intermediate shafts, and a link connecting said gear rack with a crank on said intermediate shaft.

9. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, and means for supporting said band constructed to permit the same to be wrapped around said shoe and comprising a flexible bow having its opposite ends secured to opposite ends of the band, and an oscillating support connected with said bow between the ends thereof.

10. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, and means for supporting said band constructed to permit the same to be wrapped around said shoe and comprising an oscillating arm arranged above the band, front and rear bow springs secured transversely to said arm, and longitudinal fastening bars connected with opposite ends of said band and each connected with one of the corresponding ends of the springs.

11. A shoe polishing machine comprising a rubbing band adapted to engage with a shoe to be polished, and means for supporting said band constructed to permit the same to be wrapped around said shoe and comprising an oscillating arm arranged above the band, front and rear bow springs secured transversely to said arm, and longitudinal fastening bars connected with opposite ends of said band and each connected with one of the corresponding ends of the springs, said front spring being stiffer than said rear spring.

12. In a shoe polishing machine, a rubbing band and a holder connected at spaced points to the band and bent to curve one edge of the band downwardly.

13. In a shoe polishing machine, a rubbing band, a yielding holder connected to the band at spaced points, the said holder being bent to produce a downwardly turned edge of the rubbing band.

14. In a shoe polishing machine, a frame comprising a plurality of yielding members of different tension, and means to secure a rubbing band to the extremities of the members.

15. In a shoe polishing machine, a holder comprising a plurality of members, the extremities of which are yieldable toward each other and of different tensions, and means to secure a rubbing band to the extremities of the members.

16. In a shoe polishing machine, a rubbing band, a strip adapted to engage the rubbing band adjacent its extremities and a plurality of yielding members of different tension connected to the strip at spaced points.

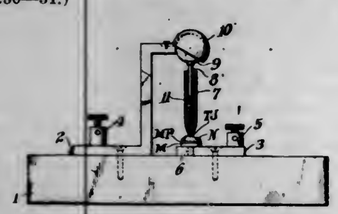
17. In a shoe polishing machine, an arched holder, a rubbing band carried by the holder and means to oscillate the holder and band about a center between the axis and periphery of the arch.

18. In a shoe polishing machine, a curved holder, a rubbing band carried by the holder, and means to oscillate the holder upon an arc of less radius than the radius of curvature of the holder.

19. In a shoe polishing machine, a holder, a rubbing band carried by the holder and capable of curvature when in operation, and means to oscillate the holder and rubbing band upon an arc of less radius than the radius of curvature of the band.

20. In a shoe polishing machine, a frame comprising a plurality of yielding members of different tensions; and means to secure a rubbing band to said members.

13,798. MEANS FOR RECEIVING INTELLIGENCE COMMUNICATED BY ELECTRICAL WAVES. GREENLEAF WHITTIER PICKARD, Amesbury, Mass., assignor, by mesne assignments, to Wireless Specialty Apparatus Company, Boston, Mass., a Corporation of New York. Filed Mar. 9, 1912. Serial No. 682,829. Division of original Patent No. 836,531, dated Nov. 20, 1906, and application Serial No. 342,465, filed Nov. 8, 1906. Original No. 877,451, dated Jan. 21, 1908, Serial No. 401,856. (Cl. 250—31.)



1. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual electrical conductors operatively in substantially perfect contact with each other, said conductors having different degrees of resistivity, and coöperatively having high resistivity, at least one of said conductors having high resistivity; in combination with a mass of fusible metal supporting said high resistance conductor, and a supporting receptacle for said fusible metal.

2. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual electrical conductors of different degrees of resistivity, and coöperatively having high resistivity, at least one of which conductors possesses high resistivity; in combination with a spring which operatively holds the said conductors in substantially perfect small-areaed electrical contact with each other; and a freely movable non-threaded support for said spring to permit a variation of contact pressure within wide limits of substantially perfect contact pressure, and thereby slightly vary the area of the minute electrical contact.

3. Means for receiving intelligence communicated by electric waves, which comprises a rectifying member in contact with a conductor of different material, in combination with a mass of readily fusible metal in which said rectifying member is firmly embedded and in good electrical and large-areaed contact.

4. Means for receiving intelligence communicated by electric waves, which comprises a rectifying member in contact with a conductor of different material, in combination with a mass of readily fusible metal in which said rectifying member is firmly embedded and in good electrical and large-areaed contact, and a receptacle for receiving the liquefied mass of fusible metal and holding the same after it has cooled and solidified.

5. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting of a substantially plane area, of a manually movable contact-point-carrier, having an end which is directed toward said contact surface, but which is structurally independent thereof, and has free transverse movement relative thereto; a guide with which said carrier has movable relation under said manual control, said guide being movably supported at a point remote from the free end of the carrier, whereby the guide and carrier may be bodily moved, and said free end of the carrier be moved into various different positions relative to said contact surface; and a helical spring operatively mounted between said guide and carrier to press the latter toward said contact surface, said spring being carried with said guide and carrier into their various different positions.

6. In a converter or rectifier for feeble alternating or oscillatory currents, the combination with a rectifying conductor, of a different conductor in contact therewith, means for supporting one of said members to permit manual movement of it to select contacts between the two members on different parts of the rectifying member, and a helical spring mounted coaxially with said manual member and bodily movable therewith.

7. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting of a substantially plane area, of a manually movable contact-point-carrier, having an end which is directed toward said contact surface, but which is structurally independent thereof, and has free transverse movement relative thereto; a guide with which said carrier has movable relation under said manual control, said guide having a ball joint remote from the free end of the carrier whereby said free end may be manually moved into all positions relative to said contact surface; and a helical spring operatively mounted between said guide and carrier to press the latter toward said contact surface, said spring being carried with said guide and carrier into their various different positions.

8. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting of a substantially plane area and possessing slight irregularities, of a contact point therefor, having an end which is directed toward said contact surface, but which is structurally independent thereof; a helical spring constructed and arranged to press the contact point against the contact surface; and means, combined with the spring, to permit the manual alteration of the contact junction from one point to another of the irregular contact surface of the rectifying conductor.

9. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a mass of fusible metal, of a rectifying conductor mounted therein and having exposed therefrom a contact surface consisting of a substantially plane area; and a cooperating contact directed toward said contact surface; said fusible metal mass and said coöperating contact having relative movement permitting the manual alteration of the contact between the coöperating contact and the surface of the rectifying conductor.

10. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a mass of fusible metal, of a rectifying conductor embedded therein, but having exposed therefrom a contact surface consisting of a substantially plane area possessing slight irregularities; a manually movable contact-carrier having an end directed toward said contact surface; a guide with which said carrier has sliding relation, said guide being pivoted to permit the movement of the carrier into various different positions relative to the rectifier contact surface; and a helical spring mounted between said guide and said carrier, permitting the carrier to be slid away from the irrgular contact surface, and pressing the contact against said surface when the carrier is manually permitted to return toward said surface.

11. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting substantially of a plane area; of a coöperating contact member therefor; means for movably supporting one of said members to permit the manual selection of the contact junction between them; and a helical spring, combined with said means, and bodily movable with one of said members and acting to press them into good contact with each other.

12. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting substantially of a plane area; of a coöperating contact member operatively located substantially at right angles to said surface, one of said members being movably and resiliently mounted, whereby such member may be removed from contact with the other, and replaced with a different contact junction, and in good contact therewith.

13. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor, having a contact surface consisting of a substantially plane area; of a coöperating contact point therefor having an end which is directed toward said plane surface and which is structurally independent thereof to permit free relative transverse movement; and means to permit the manual alteration of the location of the contact junction of the two conductors in the plane of the contact surface of the rectifying conductor.

14. Means for receiving intelligence communicated by electro-magnetic waves, which comprises the combination with a rectifying conductor having a contact surface consisting substantially of a plane area; of a coöperating contact making small areaed electrical contact therewith; means for fixing one of said contacts from movement toward the other; and means, including a spring, to permit the other conductor to move to and from and transversely of the other.

15. Means for receiving intelligence communicated by electromagnetic waves, which comprises two individual massive electrical conductors of different degrees of resistivity and coöperatively having high resistivity, at least one of which conductors having high resistivity; in combination with a supporting member having a telescopic joint with one of said conductors; a spring operatively located within the telescopic joint to hold the two conductors in substantially perfect contact with each other; and means to permit the manual alteration of the location of the contact junction of the two conductors.

16. In a detector device of the character described, a cup, a detector member, conducting material holding said detector member in said cup, a second detector member, said first detector member having a surface exposed toward second detector member, means for pressing said detector members into substantially perfect contact, and means permitting movement of said second detector member to any part of said exposed surface of said first detector member.

DESIGNS.

46,354. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. CHARLES A. BENNETT, New Milford, Conn., assignor to The E. H. H. Smith Silver Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 30, 1914. Serial No. 854,188. Term of patent 7 years.

The ornamental design for a handle for spoons, forks or similar articles, substantially as shown.

46,355. ROD END OR VASE FOR METAL BED-FRAMES. CHARLES BOLTE, Jersey City, N. J., assignor to Mersereau Metal Bed Company, a Corporation of New Jersey. Filed June 26, 1914. Serial No. 847,540. Term of patent 7 years.

The ornamental design for a rod end or vase for metal bed frames, as shown.

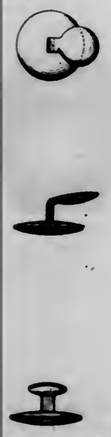
46,356. SPINDLE FOR METAL BED-FRAMES. CHARLES BOLTE, Jersey City, N. J., assignor to Mersereau Metal Bed Company, a Corporation of New Jersey. Filed June 26, 1914. Serial No. 847,541. Term of patent 7 years.

The ornamental design for a spindle for metal bed frames as shown.

46,357. TABLE. HARLOW R. BROWN, Yonkers, N. Y., assignor to Philip Strobel & Sons, Inc., New York, N. Y. Filed July 13, 1914. Serial No. 850,832. Term of patent 7 years.

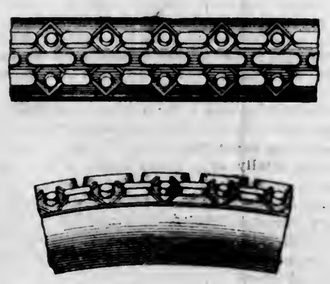
The ornamental design for a table, as shown.

46,358. COLLAR-BUTTON. ALMOND L. CARLOW, Providence, R. I. Filed July 13, 1914. Serial No. 850,831. Term of patent 7 years.



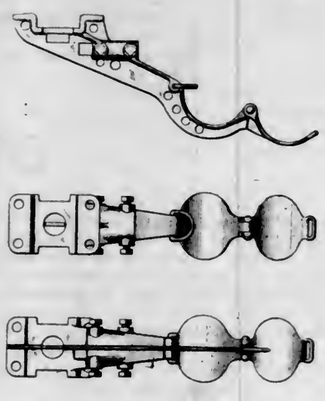
The ornamental design for a collar button, as shown.

46,359. VEHICLE-TIRE. GEORGE W. DAUM and GEORGE W. SHIVELEY, Jeannette, Pa. Filed July 30, 1914. Serial No. 854,189. Term of patent 14 years.



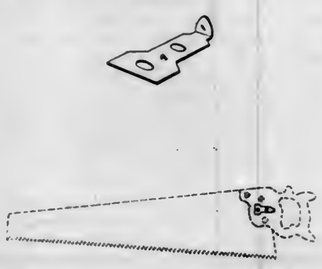
The ornamental design for a vehicle tire as shown.

46,360. TIRE-SUPPORTING BRACKET FOR AUTOMOBILES. GRANT F. DISCHER, Milwaukee, Wis., assignor to Garage Equipment Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed June 10, 1914. Serial No. 844,353. Term of patent 7 years.



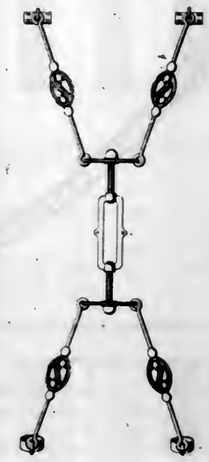
The ornamental design for a tire supporting bracket for automobiles, substantially as shown.

46,361. SAW ATTACHMENT. WILLIAM D. FOSS, Centralia, Wash. Filed May 11, 1914. Serial No. 837,949. Term of patent 14 years.



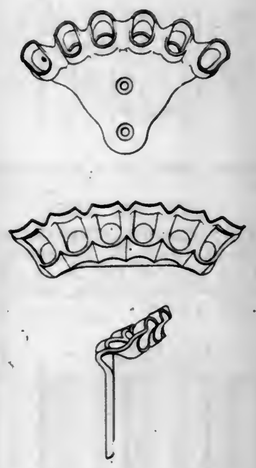
The ornamental design for a saw attachment, as shown.

46,362. SUPPORT FOR SOUNDING-BOARDS. GODFRIED J. GAUL, Chicago, Ill., assignor to Daprato Statuary Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1914. Serial No. 845,943. Term of patent 14 years.



The ornamental design for a support for sounding boards as shown.

46,363. FLAG-HOLDER. WILLIAM J. HELLER, Easton, Pa. Filed Feb. 28, 1914. Serial No. 821,813. Term of patent 14 years.

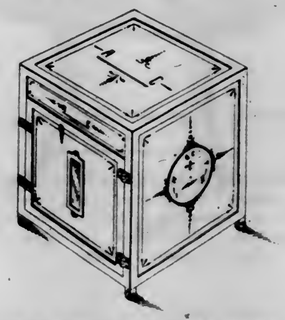


The ornamental design for a flag holder, as shown.

46,364. SPOON, FORK, OR SIMILAR ARTICLE. HENRIK HILLBOM, Wallingford, Conn., assignor to R. Wallace & sons Mfg. Co., Wallingford, Conn., a Corporation. Filed June 3, 1914. Serial No. 842,785. Term of patent 7 years.

The ornamental design for a spoon, fork or similar article, as shown.

46,365. DOUGH-RAISING CABINET. ARABELLA R. HORLICK, Racine, Wis. Filed June 6, 1914. Serial No. 843,586. Term of patent 7 years.



The ornamental design for a dough raising cabinet as shown.

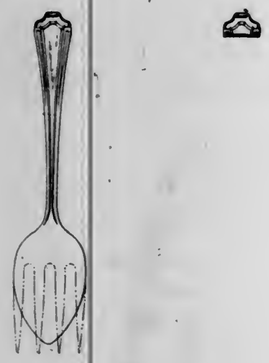
46,366. MUSICAL INSTRUMENT. FRANK KORDICK, Chicago, Ill., assignor to Regal Musical Instrument Co., Chicago, Ill., a Corporation of Illinois. Filed July 10, 1914. Serial No. 850,268. Term of patent 7 years.

The ornamental design for a musical instrument as shown.

46,367. RUBBER TIRE. JOHN S. MCCLURG, Newark, Ohio, assignor to The Pharis Tire & Rubber Company, Newark, Ohio, a Corporation of Ohio. Filed July 13, 1914. Serial No. 850,835. Term of patent 7 years.

The ornamental design for a rubber tire, as shown.

46,368. SPOON, FORK, OR SIMILAR ARTICLE. BURTON D. MYERS, Wallingford, Conn., assignor to The Simeon L. and George H. Rogers Co., Wallingford, Conn., a Corporation. Filed July 13, 1914. Serial No. 850,836. Term of patent 7 years.

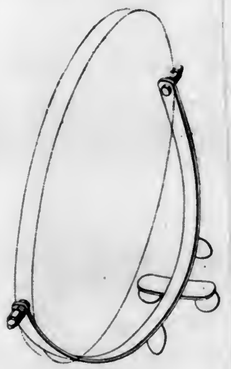


The ornamental design for a spoon, fork or similar article, as shown.

46,369. WATCH-CHAIN. JAMES E. RAMEY, Oakland, Cal. Filed July 18, 1914. Serial No. 851,830. Term of patent 3½ years.

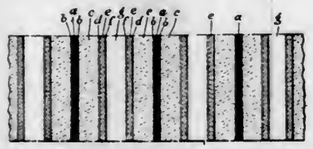
The ornamental design for a watch chain, as shown.

46,370. MIRROR-STAND. PERCY R. SEAMON, Boston, Mass., assignor to Portland Sales Company, Boston, Mass., a Corporation of Massachusetts. Filed May 22, 1913. Serial No. 769,303. Term of patent 7 years.



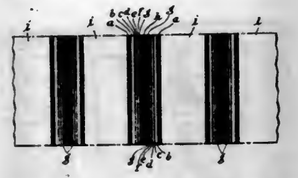
The ornamental design for a mirror stand as shown and described.

46,371. COTTON PONGEE SHIRTING. BRYAN HERBERT SMITH, New York, N. Y., assignor to Clarence Whitman & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 3, 1914. Serial No. 848,950. Term of patent 3½ years.



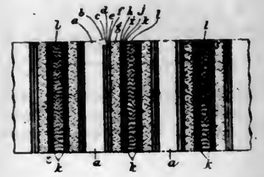
The ornamental design for cotton pongee shirtings, as shown and described.

46,372. COTTON PONGEE SHIRTING. BRYAN HERBERT SMITH, New York, N. Y., assignor to Clarence Whitman & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 3, 1914. Serial No. 848,951. Term of patent 3½ years.



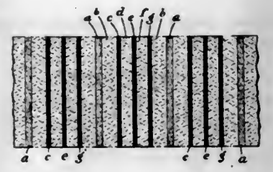
The ornamental design for cotton pongee shirtings, as shown and described.

46,373. COTTON PONGEE SHIRTING. BRYAN HERBERT SMITH, New York, N. Y., assignor to Clarence Whitman & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 3, 1914. Serial No. 848,952. Term of patent 3½ years.



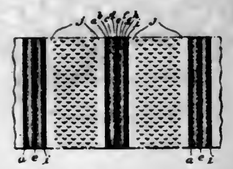
The ornamental design for cotton pongee shirtings, as shown and described.

46,374. COTTON PONGEE SHIRTING. BRYAN HERBERT SMITH, New York, N. Y., assignor to Clarence Whitman & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 3, 1914. Serial No. 848,953. Term of patent 3½ years.



The ornamental design for cotton pongee shirtings, as shown and described.

46,375. COTTON PONGEE SHIRTING. BRYAN HERBERT SMITH, New York, N. Y., assignor to Clarence Whitman & Co., Inc., New York, N. Y., a Corporation of New York. Filed July 3, 1914. Serial No. 848,954. Term of patent 3½ years.



The ornamental design for cotton pongee shirtings, as shown and described

46,376. MEDAL OR SIMILAR ARTICLE. MARIE CLEMENT STAUB, Worcester, Mass. Filed June 10, 1914. Serial No. 844,379. Term of patent 14 years.

The ornamental design for a medal or similar article, as shown.

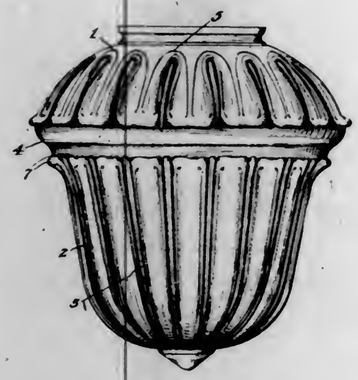
46,377. TABLE. GEORGE P. STROBEL, New York, N. Y. Filed July 13, 1914. Serial No. 850,833. Term of patent 7 years.

The ornamental design for a table, as shown.

46,378. TABLE. GEORGE P. STROBEL, New York, N. Y. Filed July 13, 1914. Serial No. 850,834. Term of patent 7 years.

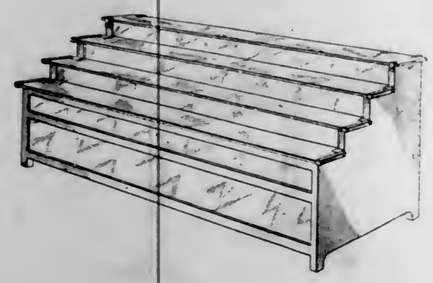
The ornamental design for a table, as shown.

46,379. SHADE. JAMES HARVEY STRONG, Steubenville, Ohio, assignor to Gill Brothers Company, Steubenville, Ohio, a Corporation of West Virginia. Filed May 29, 1914. Serial No. 841,923. Term of patent 7 years.



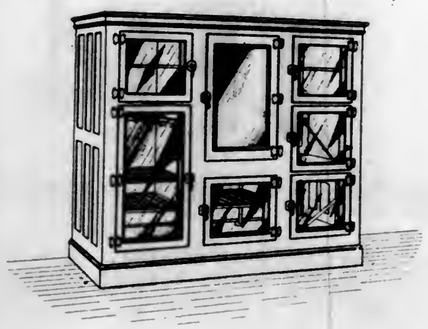
The ornamental design for shade in the form of a pendant acorn, the top part of the shade corresponding to the acorn cup and having a greater radius of curvature than the lower portion which corresponds to the protruding end of the nut, both the top and bottom portions being fluted, the flutes being in the vertical planes including the axis of the shade, the flutes on the upper and lower portions being connected in pairs by looped portions at their upper ends, the shade being formed with a central zone separating the upper and lower portions and in effect forming the lower edge of the acorn cup, substantially as shown and described.

46,380. DISPLAY-CABINET. THEODORE R. TREIBER, Kansas City, Mo. Filed July 21, 1913. Serial No. 780,405. Term of patent 14 years.



The ornamental design for a display cabinet, as shown.

46,381. REFRIGERATOR. CHARLES OSCAR ULLIN, Kendallville, Ind., assignor to McCray Refrigerator Company, Kendallville, Ind., a Corporation of Indiana. Filed June 22, 1914. Serial No. 846,695. Term of patent 7 years.

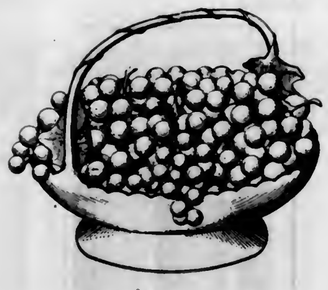


The ornamental design for a refrigerator as shown.

46,382. COMBINED BUTTON-HOOK AND BOTTLE-OPENER. BERNARD VALENZUELA, Oakland, Cal. Filed May 25, 1914. Serial No. 840,946. Term of patent 14 years.

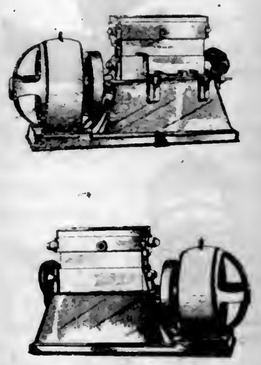
The ornamental design for a combined button hook and bottle opener, as shown.

46,383. DISH AND FRUIT SIMULATION. ANNA E. WHITMORE and PERCIS A. WHITMORE, Nokomis, Ill. Filed July 17, 1914. Serial No. 851,651. Term of patent 3½ years.



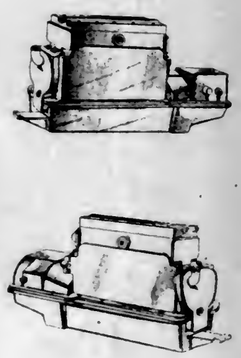
The ornamental design for a dish and fruit simulation, as shown.

46,384. FRAME FOR A STATIONARY EXPLOSION-ENGINE AND CONNECTED DYNAMO. ALEXANDER WINTON, Cleveland, Ohio. Filed June 19, 1914. Serial No. 846,207. Term of patent 14 years.



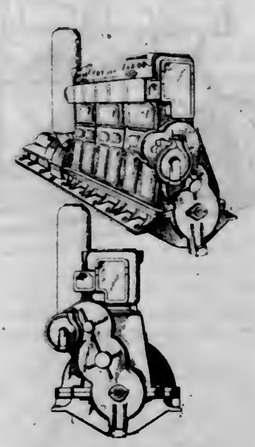
The ornamental design for a frame for a stationary explosion engine and connected dynamo, as shown.

46,385. FRAME FOR A MARINE EXPLOSION-ENGINE AND TRANSMISSION-CASING. ALEXANDER WINTON, Cleveland, Ohio. Filed June 19, 1914. Serial No. 846,208. Term of patent 14 years.



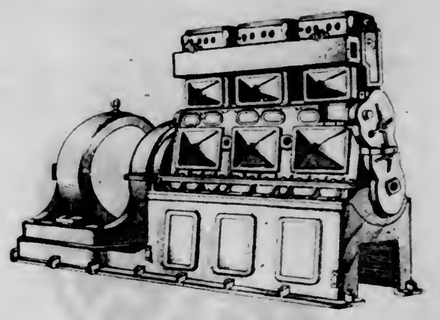
The ornamental design for a frame for a marine explosion engine and transmission casing, as shown.

46,386. FRAME FOR A MARINE EXPLOSION-ENGINE AND TRANSMISSION-CASING. ALEXANDER WINTON, Cleveland, Ohio. Filed June 19, 1914. Serial No. 846,209. Term of patent 14 years.



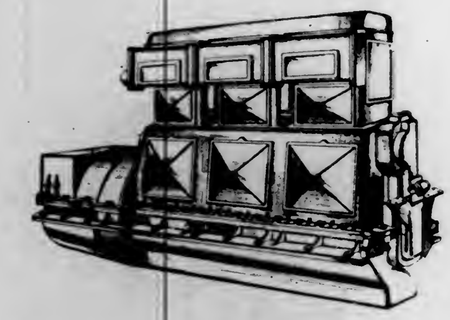
The ornamental design for a frame for a marine explosion engine and transmission casing, as shown.

46,387. COMBINED FRAME FOR EXPLOSION-ENGINE AND CONNECTED DYNAMO. ALEXANDER WINTON, Cleveland, Ohio. Filed June 25, 1914. Serial No. 847,321. Term of patent 14 years.



The ornamental design for a combined frame for explosion engine and connected dynamo, as shown.

46,388. FRAME FOR A MARINE EXPLOSION-ENGINE AND CONNECTED TRANSMISSION-CASING. ALEXANDER WINTON, Cleveland, Ohio. Filed June 20, 1914. Serial No. 846,398. Term of patent 14 years.



The ornamental design for a frame for a marine explosion engine and connected transmission casing, as shown.

46,389. BODY AND HOOD OF CHILDREN'S CARRIAGES. WILLIAM P. LAYTON, Chicago, Ill., assignor to Garrett Go-Cart & Carriage Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1914. Serial No. 839,182. Term of patent 14 years.

The ornamental design for a body and hood of children's carriages, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 8, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 51,920. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Sept. 22, 1910.

Particular description of goods.—Soap.
Claims use since Apr. 26, 1910.

Ser. No. 53,008. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 29, 1910.

No claim is made of exclusive right to the use of the several names appearing upon the picture of a tree independent of and apart from their respective position and location upon the branches of the tree.

Particular description of goods.—Coal-Tar, Derivatives Thereof, and Coal-Tar Products.
Claims use since Mar. 16, 1904.

Ser. No. 53,321. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMAS F. RYAN, Oak Ridge, Va. Filed Dec. 16, 1910.

Particular description of goods.—Flours, Meals, Brans, Grits, and Middlings of Wheat, Corn, Rye, Barley, and Buckwheat.
Claims use since Dec. 6, 1910.

Ser. No. 55,964. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES W. PATTERSON, New York, N. Y. Filed Apr. 25, 1911.

Particular description of goods.—Candy and Chewing Gum.
Claims use since the 10th day of May, 1909.

Ser. No. 57,679. (CLASS 37. PAPER AND STATIONERY.) F. SOENNECKEN, Bonn, Germany. Filed July 17, 1911.

Particular description of goods.—Pencils, Steel Pens, Penholders Made of Vulcanite, Thumb-Tacks, Stencils for Engrossing, India-Ink Cups, Drawing-Inkstands, Drawing-Tacks, Drawing-Tack Pullers, Inkstands, Press-Copying Paper in Rolls, Copying-Paper in Sheets, Strips of Paper Having Gummed Faces, Blotting-Board, Blank Covers for Books, Copying-Boards, Rubber-Filled Copying-Cloths, Copying-Covers for Inclosing Copying-Sheets in the Press, Copying-Pads, Copying-Rolls, Blotting-Paper, Blotting Desk-Pads, Damp-Trays for Rubber Copying-Cloth, Trays for Penholders, Easels for Penholders, Hand-Rests, Paper-Weights, Moisteners for Labels and Stamps, Moisteners for Copying-Sheets, Moisteners for Copying-Cloths, Bowls and Trays for Pins, Paper-Fasteners, Stencil-Disks, Loose-Leaf Ledgers, Loose-Leaf Ring-Books, Cardboard, Textile, and Imitation-Leather Post-Card Files, Rulers, Letter-Clips, Letter-Books, Letter and Paper Clips, Office-Ticklers for the Reception of Papers Calling for Prompt Attention and Adapted to be Carried in the Pocket or Placed on the Desk, Letter-Openers, Damping-Trays, and Moisteners.
Claims use since the 2d day of October, 1894.

Ser. No. 63,189. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT J. YOUNG, Milwaukee, Wis. Filed Apr. 29, 1912.

Gli-Co-Lax

Particular description of goods.—A Medicinal Compound for Regulating the Liver and Stomach.
Claims use since Nov. 13, 1911.

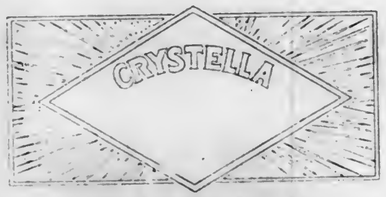
Ser. No. 63,761. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) E. WERTHEIMER & CIE., Paris, France. Filed May 24, 1912.

Particular description of goods.—Soaps.
Claims use since Sept. 16, 1909.

Ser. No. 63,788. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRIDLEY MEDICINE COMPANY, Boston, Mass. Filed May 25, 1912.

Consisting of a portrait of Thomas M. Gridley, deceased.
Particular description of goods.—A Blood-Purifier.
Claims use since 1898.

Ser. No. 65,335. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ELLA GIROD, New York, N. Y. Filed Aug. 19, 1912.



Particular description of goods.—A Glass-Cleaning Compound in the Form of a Soft Paste.
Claims use since the 8th day of August, 1912.

Ser. No. 65,417. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ROOS MANUFACTURING COMPANY, Chicago, Ill. Filed Aug. 26, 1912.

The words "Fragrant Cedar Moth Kill" being disclaimed, also words "Trade Mark."
Particular description of goods.—A Moth-Repellent.
Claims use since Aug. 1, 1912.

Ser. No. 67,157. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. H. MCGEARY AND H. R. MCGEARY, Apollo, Pa. Filed Nov. 27, 1912.

Particular description of goods.—Salve.
Claims use since June 1, 1912.

Ser. No. 68,617. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) EHRICH & GRAETZ, Berlin, Germany. Filed Feb. 19, 1913.

Petromax

Particular description of goods.—Oil, Gas, and Benzin Lamps and Lanterns, Gas-Burners, Metal Reflectors, Metal Shades, Lamp-Galleries, Supports for Incandescent Mantles, Supports for Reflectors, Smoke-Bells, Lamp and Lantern Guards, Counterweights, Lamp-Pendants, Lamp-Brackets, Coronas, Candelabra, Chandeliers, Gas-Standards, and Gas-Lighters.
Claims use since the 5th day of November, 1910.

Ser. No. 68,919. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JESSE FRENCH PIANO & ORGAN COMPANY, St. Louis, Mo. Filed Mar. 8, 1913.

MELOTONE

The body of each letter of the mark is gold color and the border-line is black.
Particular description of goods.—Pianos and Player-Pianos.
Claims use since Sept. 28, 1911.

Ser. No. 70,105. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ALFRED J. STAHL, New York, N. Y. Filed Apr. 28, 1913.

MILLENNIUM

Particular description of goods.—Silk Textile Goods and Namely Upon What is Known in the Trade as Broad Silks.
Claims use since Apr. 1, 1913.

Ser. No. 70,794. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MANUFACTURERS AND RETAILERS COMPANY, Chicago, Ill. Filed May 31, 1913.

MARCO

Consisting of the word "Marco."
Particular description of goods.—Soap, Cleanser, and Metal-Polish.
Claims use since June 5, 1912.

Ser. No. 71,129. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN J. JENKINS, Los Angeles, Cal. Filed June 16, 1913.

KIDSOILGO

Particular description of goods.—Glove-Cleaning Compounds.
Claims use since June, 1912.

Ser. No. 71,351. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CARSON, PIRIE, SCOTT & Co., Chicago, Ill. Filed June 25, 1913.

The portrait is fanciful.
Particular description of goods.—Bleached Gauze.
Claims use since about Dec. 28, 1912.

Ser. No. 71,752. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROWE EDWARD KIDDER, Kansas City, Mo. Filed July 16, 1913.

HOUSEHOLD PRIDE

Particular description of goods.—Wheat-Flour.
Claims use since March, 1892.

Ser. No. 71,929. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAD & PAPER COMPANY, Holyoke, Mass. Filed July 24, 1913.

Particular description of goods.—Blank Books for Educational Purposes, and Especially Blank Spelling-Books, Composition-Books, and Drawing-Tablets.
Claims use since on or about July 1, 1913.

Ser. No. 71,940. (CLASS 33. GLASSWARE.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed July 24, 1913.

URN-O-LITE

Particular description of goods.—Glass Lamps, Glass Globes, Glass Shades, Glass Reflectors, and Glass Bowls for Illuminating Purposes.
Claims use since May 1, 1912.

Ser. No. 71,942. (CLASS 33. GLASSWARE.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed July 24, 1913.

PANELEX

Particular description of goods.—Glass Lamps, Glass Columns, Glass Bases, Glass Supports, Glass Globes, Glass Shades, Glass Reflectors, and Glass Bowls for Illuminating Purposes.
Claims use since Apr. 1, 1913.

Ser. No. 72,005. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) DANIEL HIRSCH, New York, N. Y. Filed July 28, 1913.

Wintest

Particular description of goods.—Umbrellas.
Claims use since June 1, 1913.

Ser. No. 72,011. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NAUMKEAG STEAM COTTON CO., Salem, Mass. Filed July 28, 1913.

IROQUOIS

Particular description of goods.—Sheets.
Claims use since January, 1911.

Ser. No. 72,180. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HORACE WILCOX, Wakefield, R. I. Filed Aug. 5, 1913.

Fenogen

Particular description of goods.—An Antiseptic Lotion, Tooth-Paste, and Cold-Cream.
Claims use since Sept. 9, 1912.

Ser. No. 73,136. (CLASS 39. CLOTHING.) TURRO'Y CIA. S. EN C., Habana, Cuba. Filed Sept. 30, 1913.

PONS SHOE COMPANY & CIA

No claim is made to the use of the words "Shoe Company & Ca."
Particular description of goods.—Leather Boots, Shoes, and Slippers.
Claims use since Apr. 25, 1901.

Ser. No. 73,147. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EAGLE SUSPENDER AND BELT COMPANY, Philadelphia, Pa. Filed Oct. 1, 1913.

EAGLE

Particular description of goods.—Garment Waist-Belts.
Claims use since about January, 1903.

Ser. No. 73,541. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BALSTONE COOKE & CO., LTD., Manchester, England. Filed Oct. 22, 1913. Under ten-year proviso.

The picture therein being fanciful and no claim to the exclusive use of the word "Velvet" being made.
Particular description of goods.—Velvets, Velvettas, Velveteens, Corduroys, Moleskins, Beaverteens, and other Fustian Cloths.
Claims use since about July 9, 1881.

Ser. No. 74,138. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM P. HADEN, Paris, Tex. Filed Nov. 22, 1913.

Particular description of goods.—Blind-Staggers Cure for Stock.
Claims use since Oct. 11, 1913.

Ser. No. 74,142. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD A. MCGINNIS, Pittsburgh, Pa. Filed Nov. 22, 1913.

Particular description of goods.—Mentholated Egg-Shampoo Cream.
Claims use since Feb. 1, 1911.

Ser. No. 74,317. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOCIÉTÉ ANONYME DES ETABLISSEMENTS ROUZAUD "A LA MARQUISE DE SÉVIGNÉ" CHOCOLAT DE ROYAT, Royat les Bains, France. Filed Dec. 2, 1913.

A la Marquise de Sévigné

Particular description of goods.—Chocolates, Chocolate Tablets, Granulated Chocolate, Chocolate Sweetmeat, Melting-Chocolate, Milk-Chocolate, Fruit Sweetmeat, Fruit Confection, Fruit Paste, Sugar Candy, and Barley-Sugar.
Claims use since the 3rd June, 1904.

Ser. No. 74,748. (CLASS 17. TOBACCO PRODUCTS.) RANDOLPH ROSE, Chattanooga, Tenn. Filed Dec. 20, 1913.

BLACK ARMOR

Particular description of goods.—Cigars.
Claims use since Mar. 26, 1913.

Ser. No. 74,749. (CLASS 17. TOBACCO PRODUCTS.) RANDOLPH ROSE, Chattanooga, Tenn. Filed Dec. 20, 1913.

SILVER ARMOR

Particular description of goods.—Cigars.
Claims use since Mar. 26, 1913.

Ser. No. 74,750. (CLASS 17. TOBACCO PRODUCTS.) RANDOLPH ROSE, Chattanooga, Tenn. Filed Dec. 20, 1913.

GOLD ARMOR

Particular description of goods.—Cigars.
Claims use since Mar. 26, 1913.

Ser. No. 74,762. (CLASS 17. TOBACCO PRODUCTS.) JOHN T. STER AND SONS, Louisville, Ky. Filed Dec. 20, 1913.

Particular description of goods.—Cigars and Smoking-Tobacco.
Claims use since on or about Apr. 5, 1870.

Ser. No. 74,769. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. V. WEBSTER, Colombo, Ceylon. Filed Dec. 20, 1913.

Particular description of goods.—Teas.
Claims use since February, 1888.

Ser. No. 74,985. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GREAT WESTERN REMEDY CO., Davenport, Iowa. Filed Jan. 6, 1914.

SAN-I-TARE

Particular description of goods.—A Cleaner for Removing Dirt, Grease, or Stains.
Claims use since Dec. 18, 1913.

Ser. No. 75,042. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) E. WERTHEIMER ET CIE., Paris, France. Filed Jan. 8, 1914.

ELEKTRA

Particular description of goods.—Toilet Soap.
Claims use since Apr. 20, 1901.

Ser. No. 75,062. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE MONTZ, Louisville, Ky. Filed Jan. 9, 1914.

Applicant hereby disclaims the right to the exclusive use of the words "Magic White Soap will make your woolens soft & sweet" and "Magic White Soap has no equal for washing with hard water."
Particular description of goods.—Soaps.
Claims use since Aug. 15, 1898.

Ser. No. 75,156. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN SYRUP & MANUFACTURING CO., Tacoma, Wash. Filed Jan. 13, 1914.

Particular description of goods.—A Table Syrup Made of Cane-Sugar, Maple-Sugar, and Corn-Syrup.
Claims use since Jan. 1, 1913.

Ser. No. 75,193. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT K. DRAPER, Chicago, Ill. Filed Jan. 15, 1914.

NO-LEAK-O

Particular description of goods.—A Compound for Making Waterproof Cotton and Woolen Fabrics or Leather.
Claims use since Dec. 1, 1913.

Ser. No. 75,325. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 21, 1914.

Particular description of goods.—Milk, Condensed Milk, Cream, Evaporated Milk, and Buttermilk.
Claims use since Jan. 1, 1865.

Ser. No. 75,595. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM SCHOTTEN COFFEE COMPANY, St. Louis, Mo. Filed Jan. 31, 1914. Under ten-year proviso.

Schotten's

Particular description of goods.—Tea, Coffee, Spices, Flavoring Extracts for Foods, Table-Relish, and Mustard.
Claims use since about Jan. 2, 1847.

Ser. No. 75,811. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) AMERICAN TRIPOLI COMPANY, Seneca, Mo. Filed Feb. 10, 1914.

O.G.ROSE

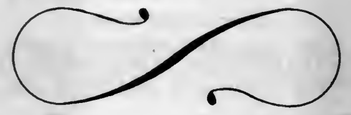
Particular description of goods.—Tripoli Flour.
Claims use since July 23, 1902.

Ser. No. 75,849. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) MARINE TORCH COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Feb. 11, 1914.

MARINTO

Particular description of goods.—Gas-Torches and Search-Lights.
Claims use since Jan. 21, 1914.

Ser. No. 76,154. (CLASS 28. JEWELRY AND PRECIOUS METAL WARE.) SCHARLING & CO., Newark, N. J. Filed Feb. 25, 1914.



Particular description of goods.—Candlesticks, Comports, Nappies, Cologne-Bottles, Water Sets, Hair-Receivers, Decanters, Sherbert-Glasses, Grape-Fruit Dishes, Flasks, Lemon-Plates, Plateaus, Tea Sets, Talcum-Boxes, Butter-Dishes, Atomizers, Flame Wind-Breaks, Smokers' Pipes, Drinking-Glasses, Flower-Dishes, Cigar-Tubes, Desk Sets, Cracker-Jars, Cigarette-Tubes, Vases, Cigar-Jars, Umbrella-Handles, Corkscrews, Ash-Trays, Cane-Handles, Toilet Sets, Match-Box Holders, Coin-Holders, Manicure Sets, Thermometers, Flat Ware, Photo-Frames, Barometers, Hollow Ware, Calendars, Cigarette-Cases, Belt-Buckles, Vanity-Cases, Cases for Traveling-Clocks, Frames for Desk-Clocks, and Card-Cases Plated With and Made of Precious Metal.
Claims use since May 1, 1913.

Ser. No. 76,401. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HIKE-DIRT MANUFACTURING CO., LTD., Grove City, Pa. Filed Mar. 6, 1914.

HIKE-DIRT

Particular description of goods.—Cleaning Compound.
Claims use since Nov. 15, 1913.

Ser. No. 76,772. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KYRAN KELLY, Detroit, Mich. Filed Mar. 19, 1914.

The signature shown being a facsimile of the applicant's. Applicant disclaims the exclusive right to the use of a picture of a standing horse.
Particular description of goods.—A Preparation for the Treatment of Sore Shoulders, Galls, Collar-Boils, Summer-Sores, Scratches, Rope-Burn, Grease-Heels, Scabby Legs, Thrush, Quittor, Inflamed or Bloody Corns, Fistula, Sprains and Bruises, Interfering-Sores, Scalds, Blood-Poison, and All External Diseases of Domestic Animals.
Claims use since Nov. 20, 1913.

Ser. No. 76,913. (CLASS 44. DENTAL, MEDICAL AND SURGICAL APPLIANCES.) THE AUTO-GRAV MANUFACTURING AND MEDICAL COMPANY, Denver, Colo. Filed Mar. 25, 1914.

AUTO-GRAV

Particular description of goods.—Syringes.
Claims use since Jan. 1, 1914.

Ser. No. 76,973. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RHEINSTROM BROS., Cincinnati, Ohio. Filed Mar. 26, 1914.

Except the words "Trade Mark," exclusive right to the use of which is hereby disclaimed.
Particular description of goods.—Cherries, Pineapple, and Grape-Fruit.
Claims use since Jan. 1, 1895.

Ser. No. 77,069. (CLASS 37. PAPER AND STATIONERY.) NATIONAL BINDING MACHINE COMPANY, New York, N. Y. Filed Mar. 30, 1914.

NATIONAL

Particular description of goods.—Gummed Paper Strips.
Claims use since February, 1914.

Ser. No. 77,370. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL WILHELM CAMPHAUSEN, Steglitz, near Berlin, Germany. Filed Apr. 10, 1914.

Tryen

Particular description of goods.—Medicinal Preparations for Internal and External Use, Composed of a Compound of Iodin, Sulfur, and Chinolin, Disinfectants, Antiseptics, Salves, and Mouth-Washes.
Claims use since Dec. 1, 1913.

Ser. No. 77,489. (CLASS 37. PAPER AND STATIONERY.) L. & C. HARDTMUTH, Budweis, Austria-Hungary. Filed Apr. 15, 1914.

Particular description of goods.—Lead-Pencils, Tracing-Paper, and Tracing-Cloth.
Claims use since Oct. 25, 1913.

Ser. No. 77,598. (CLASS 39. CLOTHING.) SKAPERDAS & Co., New York, N. Y. Filed Apr. 20, 1914.

Lynxine

Particular description of goods.—Fur Collars, Collarets, Scarfs, and Muffs.
Claims use since on or about Mar. 31. 1914.

Ser. No. 77,664. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES. (STANDARD PNEUMATIC ACTION COMPANY, New York, N. Y. Filed Apr. 22, 1914.

Particular description of goods.—Pneumatic Actions and Pumps for Musical Instruments.
Claims use since May 1, 1912.

Ser. No. 77,984. (CLASS 37. PAPER AND STATIONERY.) NATIONAL PAPETERIE COMPANY, Springfield, Mass. Filed May 4, 1914.

Russelworth Lawn

The word "Lawn" being hereby disclaimed.
Particular description of goods.—Writing-Paper and Envelops.
Claims use since on or about Sept. 15, 1913.

Ser. No. 78,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AACHEN CHEMICAL COMPANY, Pierre, S. D., and Chicago, Ill. Filed May 11, 1914.

OXELINE

Particular description of goods.—An Antiseptic Disinfectant, Same Being a Chemical Compound in the Form of a Paste.
Claims use since Apr. 1, 1913.

Ser. No. 78,186. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALFRED G. BELDEN, New York, N. Y. Filed May 11, 1914.

Russianola

Particular description of goods.—Pure Russian Mineral Product for Treatment of Intestinal Disorders, Indigestion, and other Diseases of the Bowels and Stomach.
Claims use since Apr. 1, 1914.

Ser. No. 78,209. (CLASS 28. JEWELRY AND PRECIOUS METAL WARE.) THE STRATHMORE COMPANY, Providence, R. I. Filed May 11, 1914.

STRATHMORE SILVER

No claim being made to the right to the exclusive use of the word "Silver."
Particular description of goods.—Buckles, Brooches, Rings, Buttons, Chains, Lockets, and other Articles of Personal Adornment Commonly and Colloquially Known by the Trade Name of "Jewelry," and Picture-Frames, Plates, Platters, Salvers, Casters, Knives, Forks, Spoons, and other Articles Commonly and Colloquially Known by the Trade Name of "Silver Hollow Ware," or "Silver Flat-Ware," Made by Said Strathmore Company and Known as "Strathmore Silver."
Claims use since Jan. 1, 1912.

Ser. No. 78,274. (CLASS 17. TOBACCO PRODUCTS.) HENRY BECKER, St. Louis, Mo. Filed May 14, 1914.

Lindell

Particular description of goods.—Cigars.
Claims use since on or about Sept. 13, 1895.

Ser. No. 78,417. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GALEY & LORD, New York, N. Y. Filed May 20, 1914.

RADIOLA

Particular description of goods.—Piece Goods Made from Cotton and Chemically-Treated Wood Fiber.
Claims use since May 12, 1914.

Ser. No. 78,505. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PEET BROS. MFG. Co., Kansas City, Kans. Filed May 23, 1914.

Ben-Hur

Particular description of goods.—Soap.
Claims use since July 1, 1902.

Ser. No. 78,603. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CLEMENT RESTEIN COMPANY, Philadelphia, Pa. Filed May 28, 1914. Under ten-year proviso.

CLEMENT RESTEIN COMPANY
TRADE BELMONT MARK
PHILADELPHIA

The words "Clement Restein Company," "Trade Mark," and "Philadelphia" are disclaimed.
Particular description of goods.—Fiber and Rubber Packings.
Claims use since Jan. 30, 1895.

Ser. No. 78,690. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIAMOND CHEMICAL CO., Brooklyn, N. Y. Filed June 1, 1914.

MALTO-FERRIN

Particular description of goods.—A Tonic Remedy.
Claims use since November, 1913.

Ser. No. 78,697. (CLASS 38. PRINTS AND PUBLICATIONS.) THE FLETCHER COMPANY, Philadelphia, Pa. Filed June 1, 1914.

The word "Philadelphia" is disclaimed.
Particular description of goods.—Weekly Magazines.
Claims use since May 1, 1914.

Ser. No. 78,787. (CLASS 17. TOBACCO PRODUCTS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

FAIRCREST

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since January, 1912.

Ser. No. 78,788. (CLASS 17. TOBACCO PRODUCTS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

LAKESIDE

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since February, 1910.

Ser. No. 78,794. (CLASS 17. TOBACCO PRODUCTS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

LA PREMURA

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since March, 1912.

Ser. No. 78,798. (CLASS 17. TOBACCO PRODUCTS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

EL CONEXO

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.
Claims use since November, 1911.

Ser. No. 78,838. (CLASS 38. PRINTS AND PUBLICATIONS.) LUMMUS COTTON GIN CO., Columbus, Ga. Filed June 5, 1914.

THE AIR BLAST COTTON GINNER

Particular description of goods.—A Monthly Publication.
Claims use since May 13, 1913.

Ser. No. 78,850. (CLASS 17. TOBACCO PRODUCTS.) ARIS ZOGRAPHOS, New York, N. Y. Filed June 5, 1914.

TURKISH GLORIES

The words "Turkish Glories."
Particular description of goods.—Cigarettes.
Claims use since May 20, 1914.

Ser. No. 78,865. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JOHN S. HOY, Albany, N. Y. Filed June 6, 1914.

"ALBNEE"

Particular description of goods.—Boilers.
Claims use since May 4, 1914.

Ser. No. 78,866. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JOHN S. HOY, Albany, N. Y. Filed June 6, 1914.

COLUMBIA

The word "Columbia" forming no part of said mark.
Particular description of goods.—Boilers.
Claims use since May 4, 1914.

Ser. No. 78,867. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JOHN S. HOY, Albany, N. Y. Filed June 6, 1914.

HANDCO

Particular description of goods.—Boilers.
Claims use since Jan. 1, 1913.

Ser. No. 78,871. (CLASS 17. TOBACCO PRODUCTS.) HAFFORD JONES, Tampa, Fla. Filed June 6, 1914.

NIGHT RIDER

Particular description of goods.—Smoking-Tobacco and Snuff.
Claims use since May 9, 1914.

Ser. No. 78,895. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE TORONTO RUBBER CO., Toronto, Ohio. Filed June 6, 1914.

AE-ONITE

Particular description of goods.—Rubber Tires, Rubber Packing, Inner Tubes, Rubber Valves, Dredger-Sleeves, Rubber Hose, Rubber Belting, and Rubber Automobile-Tires.
Claims use since March, 1913.

Ser. No. 78,897. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE TORONTO RUBBER CO., Toronto, Ohio. Filed June 6, 1914.

AE-ONITE

Particular description of goods.—Rubber Mats and Rubber Matting.
Claims use since March, 1913.

Ser. No. 78,951. (CLASS 17. TOBACCO PRODUCTS.) LILLY, DUNGAN & CO., Baltimore, Md. Filed June 10, 1914.

Fleur-de-lis

Particular description of goods.—Cigars, Little Cigars, Cigarettes, and Smoking and Chewing Tobacco.
Claims use since Dec. 3, 1913.

Ser. No. 78,965. (CLASS 38. PRINTS AND PUBLICATIONS.) SMART SHOPS PUBLISHING CO., INC., New York, N. Y. Filed June 10, 1914.

SMART SHOPS

Particular description of goods.—Periodicals Published Weekly.
Claims use since May 15, 1914.

Ser. No. 79,038. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) MARINE TORCH COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed June 12, 1914.

RES-Q-LITE

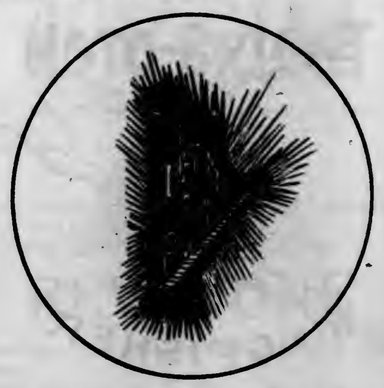
Particular description of goods.—Gas-Torches and Search-Lights.
Claims use since May 15, 1914.

Ser. No. 79,087. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MARIE T. STRATTON, New York, N. Y., assignor to C. Bruno & Son, Inc., New York, N. Y., a Corporation. Filed June 13, 1914. Under ten-year proviso.

STRATTON'S

Particular description of goods.—Gut Strings for Musical Instruments.
Claims use since 1854.

Ser. No. 79,088. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MARIE T. STRATTON, New York, N. Y., assignor to C. Bruno & Son, Inc., New York, N. Y., a Corporation. Filed June 13, 1914.



Particular description of goods.—Stringed Musical Instruments and Gut Strings for Musical Instruments.
Claims use since 1874.

Ser. No. 79,140. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) E. W. CONKLIN & SON, INC., Binghamton, N. Y. Filed June 16, 1914.

BINGO

Particular description of goods.—Grass, Field, and Agricultural Seeds.
Claims use since Dec. 31, 1892.

Ser. No. 79,143. (CLASS 38. PRINTS AND PUBLICATIONS.) ROBERT W. SATTERFIELD, Cleveland, Ohio. Filed June 16, 1914.

Particular description of goods.—Cartoons and Drawings.
Claims use since about April, 1907.

Ser. No. 79,144. (CLASS 11. INKS AND INKING MATERIALS.) RUSSIA CEMENT COMPANY, Gloucester, Mass. Filed June 16, 1914.

SIGNET

Consisting of the word "Signet."
Particular description of goods.—Type-Writer Ribbons and Carbon-Paper.
Claims use since Dec. 15, 1913.

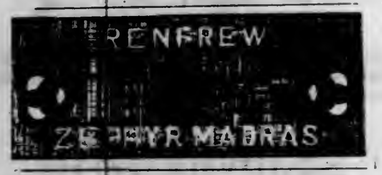
Ser. No. 79,188. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARK FISHER, SONS & Co., Montreal, Canada. Filed June 18, 1914.

Particular description of goods.—Serges, Cheviots, Coatings, Overcoatings, and Plain and Fancy Worsteds and Woolen Suitings.
Claims use since July, 1906.

Ser. No. 79,193. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HAWKEYE OIL COMPANY, Waterloo, Iowa. Filed June 18, 1914.

No claim being made to the exclusive use of the words "Brands" and "The Hawkeye Oil Co. Incorporated" and "Faultless."
Particular description of goods.—Vegetable-Oil Soap, Mechanics' Soap, and Metal-Polish.
Claims use since January, 1908.

Ser. No. 79,247. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RENFREW M'F'G Co., Adams, Mass. Filed June 20, 1914.



The words "Adams," "Mass.," "Zephyr," and "Madras" being disclaimed, the designs and lettering being shown in gilt upon a black band label with gilt border, no claim being made to the exclusive use of the words "M'f'g. Co."
Particular description of goods.—Cotton Piece Goods.
Claims use since the 1st day of August, 1909.

Ser. No. 79,251. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WAUKESHA ROXO COMPANY, Milwaukee, Wis. Filed June 20, 1914.

ROXO

Particular description of goods.—Mineral Water and Ginger-Ale.
Claims use since Apr. 1, 1907.

Ser. No. 79,259. (CLASS 37. PAPER AND STATIONERY.) CHARLES DRURY JACOBS, INC., New York, N. Y. Filed June 22, 1914.

Drury

Particular description of goods.—Writing-Paper and Wrapping-Paper.
Claims use since May 8, 1914.

Ser. No. 79,261. (CLASS 17. TOBACCO PRODUCTS.) THEO. KELLER COMPANY, Houston, Tex. Filed June 22, 1914.

BIG BEN

Particular description of goods.—Cigars.
Claims use since May 19, 1914.

Ser. No. 79,272. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RICHMOND RADIATOR COMPANY, New York, N. Y. Filed June 22, 1914.

Warmth
for your home

Particular description of goods.—Coal, Wood, or Gas Boilers, Warm-Air Furnaces and Registers, Steam and Hot-Water Radiators.
Claims use since Feb. 11, 1914.

Ser. No. 79,361. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed June 25, 1914.

L.F.&C

Particular description of goods.—Pocket-Knives, Carving-Knives, Table-Knives, Orange-Knives, Fruit-Knives, Butter-Knives, Grape-Fruit Knives, One-Arm-Man Knives, Pie-Knives, Lemon-Knives, Children's Knives, Cake-Knives, Bread and Butter Knives, Medium Knives, and Dessert-Knives Having Silver-Plated Blades or Handles or Mounting of Gold, Silver, or other Precious Metals.
Claims use since January, 1914.

Ser. No. 79,377. (CLASS 17. TOBACCO PRODUCTS.) RESHID SADI, New York, N. Y. Filed June 25, 1914.

SOFTA

Particular description of goods.—Cigars, Cigarettes, Cheroots, Cut and Uncut Tobacco.
Claims use since May 1, 1914.

Ser. No. 79,389. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HUGH G. MACWILLIAM, New Rochelle, N. Y. Filed June 26, 1914.

President

The word "President."
Particular description of goods.—Suspenders.
Claims use since Jan. 1, 1897.

Ser. No. 79,396. (CLASS 37. PAPER AND STATIONERY.) JOHN BLAUL'S SONS CO., Burlington, Iowa. Filed June 27, 1914.

Liner

Particular description of goods.—Wrapping-Paper, Toilet-Paper, Tissue-Paper, Writing-Paper, Writing-Tablets, Drawing-Tablets, and Envelops.
Claims use since Mar. 19, 1914.

Ser. No. 79,403. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) COLGATE & Co., Jersey City, N. J., and New York, N. Y. Filed June 27, 1914.

MOTO-BRIGHT

Particular description of goods.—Soaps and Soap Powders.
Claims use since the 23d of June, 1914.

Ser. No. 79,420. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) AMERICAN HONE Co., Olean, N. Y. Filed June 29, 1914.

REVSHONE

Particular description of goods.—Artificial Abrasive Stones.
Claims use since Apr. 20, 1914.

Ser. No. 79,428. (CLASS 38. PRINTS AND PUBLICATIONS.) MILLER FREEMAN, Seattle, Wash. Filed June 29, 1914.

THE WASHINGTON FARMER

Particular description of goods.—A Weekly Publication.
Claims use since June 1, 1914.

Ser. No. 79,429. (CLASS 38. PRINTS AND PUBLICATIONS.) MILLER FREEMAN, Seattle, Wash. Filed June 29, 1914.

The Oregon Farmer

Particular description of goods.—A Weekly Publication.
Claims use since June 1, 1914.

Ser. No. 79,520. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) McMANIS & SMITH, Seattle, Wash. Filed July 2, 1914.

Particular description of goods.—Pharmaceutical Preparation for Use as a Curative for Disorders of the Blood.
Claims use since June 15, 1914.

Ser. No. 79,539. (CLASS 37. PAPER AND STATIONERY.) NASHUA CARD GUMMED & COATED PAPER COMPANY, Nashua, N. H. Filed July 3, 1914.

INDIAN BRAND

No claim being made to the exclusive use of the word "Brand."
Particular description of goods.—Gummed Paper.
Claims use since June 15, 1911.

Ser. No. 79,542. (CLASS 38. PRINTS AND PUBLICATIONS.) POPULAR MECHANICS COMPANY, Chicago, Ill. Filed July 2, 1914.

POPULAR MECHANICS MAGAZINE

The word "Magazine" being disclaimed.
Particular description of goods.—A Monthly Magazine.
Claims use since January, 1902.

Ser. No. 79,589. (CLASS 17. TOBACCO PRODUCTS.) WATERBURY CIGARETTE COMPANY, New York, N. Y. Filed July 6, 1914.

ASTHMAL

Particular description of goods.—Cigarettes.
Claims use since May 1, 1914.

Ser. No. 79,612. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCIENTIFIC MATERIALS COMPANY, Pittsburgh, Pa. Filed July 7, 1914.

ANALOID

Analoid.
Particular description of goods.—Prepared Chemical Compounds of Reagents in Tablet Form, the Particular Description of Goods Being Solid Bodies of Chemical Compounds Made Up with an Appropriate Binding Medium and of Accurately-Measured Mass and Composition.
Claims use since about June 1, 1914.

Ser. No. 79,627. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CEDAR-SWEEP CO., Los Angeles, Cal. Filed July 8, 1914.

CESCO

Particular description of goods.—Sweeping Compounds.
Claims use since June 3, 1914.

Ser. No. 79,638. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH LASKOWITZ, Washington, D. C. Filed July 8, 1914.

AVIATION-SUBWAY

Particular description of goods.—Metal and Wood Polish.
Claims use since July 7, 1914.

Ser. No. 79,678. (CLASS 17. TOBACCO PRODUCTS.) CHARLES L. MOORMAN, Dayton, Ohio. Filed July 9, 1914.

WANMOR

Particular description of goods.—Cigars.
Claims use since Nov. 1, 1912.

Ser. No. 79,679. (CLASS 39. CLOTHING.) MERSKY BROS. SHOE CO., Lynn, Mass. Filed July 9, 1914.

Little Buoy

Particular description of goods.—Girls' Shoes Made Wholly or in Part of Leather and Cloth.
Claims use since Dec. 1, 1912.

Ser. No. 79,727. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES HEBENDEEN MILLING COMPANY, Chicago, Ill. Filed July 11, 1914.

YEAST-FOOD

"Yeast-Food."
Particular description of goods.—Wheat-Flour.
Claims use since June 22, 1914.

Ser. No. 79,812. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) B. HELLER & COMPANY, Chicago, Ill. Filed July 15, 1914.

OZO

Particular description of goods.—Washing-Powder, Cleanser, Waste-Pipe Cleaner, Beer-Pipe Cleaner, and House and Hand Cleaner.
Claims use since Aug. 18, 1910.

Ser. No. 79,871. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FORST MFG. CO., New York, N. Y. Filed July 17, 1914.

Suedette

Comprising the word "Suedette."
Particular description of goods.—Belts, Girdles, and Sashes for Personal Wear.
Claims use since January, 1914.

Ser. No. 79,941. (CLASS 38. PRINTS AND PUBLICATIONS.) MILLER FREEMAN, Seattle, Wash. Filed July 20, 1914.

The Idaho Farmer

Particular description of goods.—A Farming-Journal Issued Semimonthly.
Claims use since June 1, 1914.

Ser. No. 80,033. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) NORTON COMPANY, Worcester, Mass. Filed July 24, 1914.

Alundum

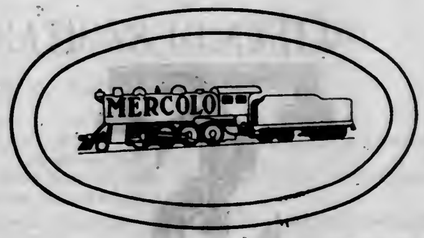
Particular description of goods.—Heat-Refractory Materials Consisting of Alumina, Silicon-Carbid, or Mixtures of Either of These Materials with a Ceramic Bonding Material.
Claims use since May, 1911.

Ser. No. 80,035. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) NORTON COMPANY, Worcester, Mass. Filed July 24, 1914.

Crystolon

Particular description of goods.—Heat-Refractory Materials Consisting of Alumina, Silicon-Carbid, or Mixtures of Either of These Materials with a Ceramic Bonding Material.
Claims use since May, 1911.

Ser. No. 80,058. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICH ARD KELLY, New York, N. Y. Filed July 25, 1914.



Particular description of goods.—Compounds for Cleaning Boilers and the Like.
Claims use since July 7, 1914.

Ser. No. 80,112. (CLASS 10. FERTILIZERS.) WILSON & TOOMER FERTILIZER COMPANY, Jacksonville, Fla. Filed July 27, 1914.

Alkideal

Particular description of goods.—Fertilizers.
Claims use since June 1, 1914.

Ser. No. 80,141. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE STARR WHITE, INCORPORATED, Yonkers, N. Y.; Danbury, Conn., and Los Angeles, Cal. Filed July 28, 1914.

VALENS

Particular description of goods.—Disinfectants.
Claims use since June 1, 1914.

Ser. No. 80,154. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. LAWRENCE & Co., Chicago, Ill. Filed July 29, 1914.

GETS-IT

Particular description of goods.—A Remedy for Corns, Callouses, Warts, Bunions, and for Allaying Inflammation of the Skin.
Claims use since Feb. 23, 1911.

Ser. No. 80,189. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SMOKE-COAL ECONOMIZER CORPORATION, Baltimore, Md. Filed July 30, 1914.

"ECYLA"

Particular description of goods.—A Compound for Application to Fuel.
Claims use since May 12, 1914.

Ser. No. 80,252. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) STAUDT & Co., Berlin, Germany, and Boston, Mass. Filed Aug. 1, 1914.

Particular description of goods.—Hides.
Claims use since on or about Jan. 1, 1909.

Ser. No. 80,365. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MACKIE & COY, DISTILLERS, LTD., Glasgow, Scotland. Filed Aug. 6, 1914. Under ten-year proviso.

Particular description of goods.—Scotch Whisky.
Claims use since Mar. 20, 1890.

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TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 8, 1914.

99,531. BLENDED COFFEE. ACKER, MERRALL & CONDIT COMPANY, New York, N. Y.
Filed April 27, 1914. Serial No. 77,761. PUBLISHED JUNE 30, 1914.

99,532. COMPOSITION FLOOR-TILES OF LINOLEUM OR OTHER MATERIAL CONTAINING CORK OR WOOD-PULP. ARMSTRONG CORK & INSULATION COMPANY, Pittsburgh, Pa.
Filed February 28, 1914. Serial No. 76,229. PUBLISHED JULY 7, 1914.

99,533. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed June 2, 1914. Serial No. 78,725. PUBLISHED JULY 7, 1914.

99,534. SELF-SWINGING CRADLES. THE AUTOMATIC CRADLE MFG. CO., Stevens Point, Wis.
Filed June 6, 1914. Serial No. 78,853. PUBLISHED JULY 7, 1914.

99,535. LADIES' NECKWEAR AND NECKSCARFS. GEORGE W. BARLOW, Jr., New York, N. Y.
Filed May 13, 1914. Serial No. 78,231. PUBLISHED JULY 7, 1914.

99,536. NAPPED COTTON GOODS AND NAPPED COTTON GOODS OF BLANKET CONSTRUCTION. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,674. PUBLISHED JULY 7, 1914.

99,537. QUILTS. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,676. PUBLISHED JULY 7, 1914.

99,538. COTTON RUGS AND TEXTILE BATH-MATS. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,678. PUBLISHED JULY 7, 1914.

99,539. ROBE-FLANNEL IN THE PIECE. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,680. PUBLISHED JULY 7, 1914.

99,540. CHEESE. ANNA J. BLACKLEY, Philadelphia, Pa.
Filed April 17, 1914. Serial No. 77,518. PUBLISHED JUNE 30, 1914.

99,541. BREAD. CHARLES OTHO BOGGS, San Francisco, Cal.
Filed April 23, 1914. Serial No. 77,672. PUBLISHED JUNE 30, 1914.

99,542. COFFEE. BOWERS BROTHERS INC., Richmond, Va.
Filed April 11, 1914. Serial No. 77,403. PUBLISHED JUNE 30, 1914.

99,543. MEDICINE FOR DISORDERS OF THE DIGESTIVE TRACT. MAX I. BRANDT, New York, N. Y.
Filed May 22, 1914. Serial No. 78,463. PUBLISHED JULY 7, 1914.

99,544. BREAD. ERNEST R. BRAUN, Pittsburgh, Pa.
Filed April 4, 1914. Serial No. 77,195. PUBLISHED JUNE 30, 1914.

99,545. LEATHER SHOES. BUCK BROS. & Co., Louisville, Ky.
Filed April 17, 1914. Serial No. 77,517. PUBLISHED JULY 7, 1914.

99,546. WHEAT-FLOUR. CADICK MILLING COMPANY, Grandview, Ind.
Filed April 28, 1914. Serial No. 77,823. PUBLISHED JUNE 30, 1914.

99,547. TABLES. CARROM-ARCHARENA CO., Ludington, Mich.
Filed April 25, 1914. Serial No. 77,741. PUBLISHED JULY 7, 1914.

99,548. COFFEE. CHASE & SANBORN, Boston, Mass.
Filed November 7, 1913. Serial No. 73,854. PUBLISHED JUNE 30, 1914.

99,549. REMEDY FOR DISORDERS OF THE STOMACH AND BOWELS. MATHIAS CHILA, Whiting, Ind.
Filed June 5, 1914. Serial No. 78,828. PUBLISHED JULY 7, 1914.

99,550. ORANGES AND GRAPE-FRUIT. LEWIS T. CLAWSON, Wiersdale and Plymouth, Fla., and Brooklyn, N. Y.
Filed March 14, 1914. Serial No. 76,636. PUBLISHED JUNE 30, 1914.

99,551. LIQUID AND POWDERED PERFUMES. COLGATE & Co., Jersey City, N. J., and New York, N. Y.
Filed March 25, 1914. Serial No. 76,923. PUBLISHED JULY 7, 1914.

99,552. FERTILIZERS. COLUMBIA GUANO Co., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,233. PUBLISHED JULY 7, 1914.

99,553. FERTILIZERS. COLUMBIA GUANO Co., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,234. PUBLISHED JULY 7, 1914.

99,554. FERTILIZERS. COLUMBIA GUANO Co., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,236. PUBLISHED JULY 7, 1914.

99,555. FERTILIZERS. COLUMBIA GUANO Co., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,237. PUBLISHED JULY 7, 1914.

99,556. FERTILIZERS. COLUMBIA GUANO Co., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,435. PUBLISHED JULY 7, 1914.

99,557. ARNICA SALVE, CARBOLIC SALVE, CORN-PAINT, AND CORN-PLASTER. THE CONSOLIDATED DRUG CO. INC., Washington, D. C.
Filed April 27, 1914. Serial No. 77,768. PUBLISHED JULY 7, 1914.

99,558. BLACKBERRY CORDIAL. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,936. PUBLISHED JULY 7, 1914.

99,559. BLACKBERRY CORDIAL. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,939. PUBLISHED JULY 7, 1914.

99,560. BLACKBERRY CORDIAL. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,941. PUBLISHED JULY 7, 1914

99,561. FURNITURE-POLISH. Co-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,944. PUBLISHED JULY 7, 1914.

99,562. MACHINE-OIL. Co-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,950. PUBLISHED JULY 7, 1914.

99,563. MACHINE-OIL. Co-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,952. PUBLISHED JULY 7, 1914.

99,564. WHEAT-FLOUR. THE CRESCENT MILL & ELEVATOR Co., Denver, Colo.
Filed March 5, 1914. Serial No. 76,352. PUBLISHED JUNE 30, 1914.

99,565. WHEAT-FLOUR. THE CRESCENT MILL & ELEVATOR Co., Denver, Colo.
Filed March 5, 1914. Serial No. 76,353. PUBLISHED JUNE 30, 1914.

99,566. ANTITOXIN CHEWING-GUM. WILLIAM F. CUTLER, San Francisco, Cal.
Filed April 7, 1914. Serial No. 77,268. PUBLISHED JULY 7, 1914.

99,567. CANNED BAKED BEANS AND TOMATOES. FREEMAN G. DAVIS, Lewiston, Me.
Filed March 30, 1914. Serial No. 77,054. PUBLISHED JUNE 30, 1914.

99,568. CERTAIN NAMED FOODS. D. DE BERNARDI & Co., San Francisco, Cal.
Filed March 10, 1914. Serial No. 76,491. PUBLISHED JUNE 30, 1914.

99,569. CORN-OIL. EDIBLE SEED OILS COMPANY, INC., New York, N. Y.
Filed March 25, 1914. Serial No. 76,927. PUBLISHED JUNE 30, 1914.

99,570. CORN-OIL. EDIBLE SEED OILS COMPANY, INC., New York, N. Y.
Filed March 25, 1914. Serial No. 76,928. PUBLISHED JUNE 30, 1914.

99,571. MEN'S AND BOYS' TROUSERS. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,803. PUBLISHED JULY 7, 1914.

99,572. LAUNDRY-WASHING MACHINES. FAIRBANKS, MORSE & COMPANY, Chicago, Ill.
Filed April 30, 1914. Serial No. 77,879. PUBLISHED JULY 7, 1914.

99,573. OLIVE-OIL. F. GARBINI E FIGLI, Lucca, Italy, assignor to Luigi Garbini, Lucca, Italy.
Filed February 4, 1914. Serial No. 75,670. PUBLISHED JUNE 30, 1914.

99,574. FARINACEOUS COMPOUND WITH FRUIT FLAVORINGS. THE FRUIT PUDDINE Co., Baltimore, Md.
Filed April 1, 1914. Serial No. 77,125. PUBLISHED JUNE 30, 1914.

99,575. LINOLEUMS. GERMANIA IMPORTING Co., New York, N. Y.
Filed May 29, 1914. Serial No. 78,655. PUBLISHED JULY 7, 1914.

99,576. MERCERIZED COTTON PIECE GOODS. CHAS. K. GLEASON, Philadelphia, Pa.
Filed May 19, 1911. Serial No. 56,469. PUBLISHED JULY 7, 1914.

99,577. COLD-CREAM, MASSAGE GREASELESS CREAM, FACE-POWDER, AND PEROXID OF HYDROGEN. THOS. A. GOODMAN, St. Louis, Mo.
Filed February 4, 1914. Serial No. 75,674. PUBLISHED JULY 7, 1914.

99,578. WEISS BEER, SODA-WATERS, SELTZER WATERS, GINGER-ALES, MINERAL WATERS. JOHN GRAF COMPANY, Milwaukee, Wis.
Filed June 2, 1914. Serial No. 78,745. PUBLISHED JULY 7, 1914.

99,579. CHOCOLATE, CHOCOLATE LIQUORS, AND COCOA. HENRY HEIDE, New York, N. Y.
Filed March 18, 1914. Serial No. 76,738. PUBLISHED JUNE 30, 1914.

99,580. MALT BEVERAGES. THE JOSEPH HENSLER BREWING COMPANY, Newark, N. J.
Filed April 27, 1914. Serial No. 77,777. PUBLISHED JULY 7, 1914.

99,581. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed May 5, 1914. Serial No. 78,005. PUBLISHED JULY 7, 1914.

99,582. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed May 5, 1914. Serial No. 78,008. PUBLISHED JULY 7, 1914.

99,583. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed May 5, 1914. Serial No. 78,010. PUBLISHED JULY 7, 1914.

99,584. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed May 5, 1914. Serial No. 78,011. PUBLISHED JULY 7, 1914.

99,585. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed May 7, 1914. Serial No. 78,054. PUBLISHED JULY 7, 1914.

99,586. HOSE-SUPPORTERS. CHRISTINA J. HIGLEY, New York, N. Y.
Filed May 2, 1914. Serial No. 77,957. PUBLISHED JULY 7, 1914.

99,587. DRYING-CABINETS. THE HILL-CANTON DRYER COMPANY, Canton, Ohio.
Filed May 26, 1913. Serial No. 70,661. PUBLISHED JULY 7, 1914.

99,588. REMEDY FOR VENEREAL DISEASES. MARTIN HONAKER, Sen., Honaker, Va.
Filed June 11, 1912. Serial No. 64,120. PUBLISHED JULY 7, 1914.

99,589. RUBBER BOOTS AND SHOES AND RUBBER-SOLED SHOES. HOOD RUBBER COMPANY, Watertown, Mass.
Filed June 8, 1914. Serial No. 78,907. PUBLISHED JULY 7, 1914.

99,590. PERSPIRATION-POWDERS, TALCUM POWDERS, TOILET CREAMS, HAND-LOTIONS, AND BATH SALTS. HOT SPRINGS CHEMICAL COMPANY, Chicago, Ill., assignor to Chemical Specialty Company, Chicago, Ill., a Corporation of Illinois.
Filed July 3, 1913. Serial No. 71,513. PUBLISHED JULY 7, 1914.

99,591. PREPARATION FOR THE TREATMENT OF CONSUMPTION AND DISEASES OF THE THROAT AND LUNGS. JESSE M. HUTCHINS, Lake Charles, La.
Filed May 28, 1914. Serial No. 78,610. PUBLISHED JULY 7, 1914.

99,592. CANDY. IMPERIAL CANDY Co., Seattle, Wash.
Filed March 30, 1914. Serial No. 77,063. PUBLISHED JUNE 23, 1914.

99,593. CERTAIN PHARMACEUTICAL PREPARATIONS AND REMEDIES FOR CERTAIN NAMED DISEASES. INDIANA CHEMICAL COMPANY, Jonesboro, Ind.
Filed May 8, 1914. Serial No. 78,129. PUBLISHED JULY 7, 1914.

99,594. CERTAIN NAMED PLUMBING AND STEAM-FITTING SUPPLIES. H. W. JOHNS-MANVILLE Co., New York, N. Y.
Filed November 29, 1913. Serial No. 74,259. PUBLISHED JULY 7, 1914.

99,595. REMEDIES FOR NEURALGIA. SOLOMON F. JOWERS, Rockford, Ala.
Filed April 12, 1912. Serial No. 62,857. PUBLISHED JULY 7, 1914.

99,596. CANNED SALMON. KADIAK FISHERIES Co., Seattle, Wash.
Filed May 1, 1914. Serial No. 77,924. PUBLISHED JUNE 30, 1914.

99,597. CANNED SALMON. KADIAK FISHERIES Co., Seattle, Wash.
Filed May 1, 1914. Serial No. 77,925. PUBLISHED JUNE 30, 1914.

99,598. CANNED SALMON. KADIAK FISHERIES Co., Seattle, Wash.
Filed May 1, 1914. Serial No. 77,926. PUBLISHED JUNE 30, 1914.

99,599. DRESS-SUIT CASES AND TRAVELING-BAGS. KATZ BROTHERS LEATHER GOODS Co., New York, N. Y.
Filed April 15, 1914. Serial No. 77,492. PUBLISHED JULY 7, 1914.

99,600. STEEL FURNITURE. THE KEYLESS LOCK Co., Indianapolis, Ind.
Filed March 20, 1914. Serial No. 76,796. PUBLISHED JULY 7, 1914.

99,601. CAKE. WILFRED A. LA BONTEE, St. Louis, Mo.
Filed April 20, 1914. Serial No. 77,592. PUBLISHED JUNE 30, 1914.

99,602. HOSIERY. J. W. LANDENBERGER & Co., Philadelphia, Pa.
Filed June 11, 1914. Serial No. 79,004. PUBLISHED July 7, 1914.

99,603. HOSIERY. J. W. LANDENBERGER & Co., Philadelphia, Pa.
Filed June 11, 1914. Serial No. 79,005. PUBLISHED JULY 7, 1914.

99,604. HOSIERY. J. W. LANDENBERGER & Co., Philadelphia, Pa.
Filed June 11, 1914. Serial No. 79,006. PUBLISHED JULY 7, 1914.

99,605. HOSIERY. J. W. LANDENBERGER & Co., Philadelphia, Pa.
Filed June 11, 1914. Serial No. 79,007. PUBLISHED JULY 7, 1914.

99,606. BRASS, COPPER, GOLD, AND SILVER. ABRAHAM LEVY, New York, N. Y.
Filed May 26, 1914. Serial No. 78,559. PUBLISHED JULY 7, 1914.

99,607. BISCUIT. LOOSE-WILES BISCUIT COMPANY, Boston, Mass.
Filed May 4, 1914. Serial No. 77,979. PUBLISHED JUNE 30, 1914.

99,608. CANDY. THE ROBT. F. MACKENZIE Co., Cleveland, Ohio.
Filed January 29, 1914. Serial No. 75,532. PUBLISHED JUNE 30, 1914.

99,609. PORTLAND CEMENT. MARQUETTE CEMENT MANUFACTURING Co., Chicago and Oglesby, Ill.
Filed February 14, 1914. Serial No. 75,901. PUBLISHED JULY 7, 1914.

99,610. WOOLEN PIECE GOODS AND TAILORS' TRIMMINGS—VIZ., LININGS. MASON & HANSON, New York, N. Y.
Filed May 6, 1914. Serial No. 78,031. PUBLISHED JULY 7, 1914.

99,611. WOOLEN PIECE GOODS AND TAILORS' TRIMMINGS—VIZ., LININGS. MASON & HANSON, New York, N. Y.
Filed May 7, 1914. Serial No. 78,087. PUBLISHED JULY 7, 1914.

99,612. BREWERS' DRIED GRAINS. MILWAUKEE GRAINS & FEED COMPANY, Milwaukee, Wis.
Filed April 24, 1914. Serial No. 77,730. PUBLISHED JUNE 30, 1914.

99,613. SELF-RISING WHEAT-FLOUR. MODEL MILL COMPANY, Johnson City, Tenn.
Filed March 25, 1914. Serial No. 76,942. PUBLISHED JUNE 30, 1914.

99,614. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 30, 1914. Serial No. 77,073. PUBLISHED JUNE 23, 1914.

99,615. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 18, 1914. Serial No. 77,563. PUBLISHED JUNE 30, 1914.

99,616. BISCUIT AND CANDY. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed May 8, 1914. Serial No. 78,134. PUBLISHED JUNE 30, 1914.

99,617. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed May 8, 1914. Serial No. 78,135. PUBLISHED JUNE 30, 1914.

99,618. PREPARATIONS FOR THE PREVENTION OF VENEREAL DISEASES. JEFFERSON D. NIFONG, Colorado Springs, Colo.
Filed March 17, 1914. Serial No. 76,716. PUBLISHED JULY 7, 1914.

99,619. SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed June 21, 1912. Serial No. 64,304. PUBLISHED JULY 7, 1914.

99,620. FRESH ORANGES, LEMONS, LIMES, AND GRAPE-FRUIT. ORANGE GROWERS CASH ASSOCIATION, Redlands, Cal.
Filed May 1, 1912. Serial No. 63,241. PUBLISHED JUNE 30, 1914.

99,621. CERTAIN NAMED FOOTWEAR. OUTING SHOE Co., Boston, Mass.
Filed April 17, 1914. Serial No. 77,542. PUBLISHED JULY 7, 1914.

99,622. STRAW HATS. PACIFIC COMMERCIAL COMPANY, Manila, Philippine Islands, and New York, N. Y.
Filed April 21, 1914. Serial No. 77,634. PUBLISHED JULY 7, 1914.

99,623. MOTOR-VEHICLES. PALMER & SINGER MANUFACTURING COMPANY, New York, N. Y.
Filed December 24, 1914. Serial No. 74,828. PUBLISHED JULY 7, 1914.

99,624. ROASTED COFFEE. CHARLES T. PARIS, Chattanooga, Tenn.
Filed May 8, 1914. Serial No. 78,137. PUBLISHED JUNE 30, 1914.

99,625. REFRIGERATORS. THE PIPER COOLING AND PRESERVING COMPANY, Jackson, Mo.
Filed April 28, 1914. Serial No. 77,846. PUBLISHED JULY 7, 1914.

99,626. CREAM, MILK, AND BUTTER. CHAS. S. POPE & SONS, Manchester, Me.
Filed April 29, 1914. Serial No. 77,868. PUBLISHED JUNE 30, 1914.

99,627. TOOL-STEEL. HORACE T. POTTS & Co., Philadelphia, Pa.
Filed April 18, 1914. Serial No. 77,567. PUBLISHED JULY 7, 1914.

99,628. LADIES' AND CHILDREN'S RIBBED COTTON KNITTED VESTS, PANTS, UNION SUITS, AND CORSET-COVERS. CHARLES A. POWELL, Whitesboro, N. Y.
Filed April 17, 1914. Serial No. 77,552. PUBLISHED JULY 7, 1914.

99,629. FURNITURE AND AUTOMOBILE POLISHES. QUEEN CITY SPECIALTY COMPANY, Buffalo, N. Y.
Filed August 4, 1913. Serial No. 72,159. PUBLISHED JULY 7, 1914.

99,630. COMPOUND TO FREE BOILERS AND THEIR SUPPLY-WATER OF ALL KINDS OF SEDIMENTS. MAX PHILIPP REINHARDT, London, England.
Filed July 16, 1913. Serial No. 71,776. PUBLISHED JULY 7, 1914.

99,631. CERTAIN NAMED HOUSEHOLD LINEN. REMY, SCHMIDT & PLEISSNER, New York, N. Y.
Filed February 28, 1913. Serial No. 68,787. PUBLISHED APRIL 14, 1914.

99,632. RUBBER SOLES FOR BOOTS AND SHOES. REVERE RUBBER COMPANY, Providence, R. I., and Chelsea, Mass.
Filed June 5, 1914. Serial No. 78,846. PUBLISHED JULY 7, 1914.

99,633. CHOCOLATES. REYMER & BROTHERS, INCORPORATED, Pittsburgh, Pa.
Filed May 5, 1914. Serial No. 78,002. PUBLISHED JUNE 30, 1914.

99,634. MEN'S AND BOYS' HOSIERY. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed April 20, 1914. Serial No. 77,596. PUBLISHED JULY 7, 1914.

99,635. CERTAIN NAMED MATERIALS FOR MAKING WOMEN'S HAT AND BONNET FRAMES. WILLIAM ROSENFIELD, Philadelphia, Pa.
Filed May 19, 1914. Serial No. 78,397. PUBLISHED JULY 7, 1914.

99,636. SWEATERS. CHARLES BROADWAY ROUSS, New York, N. Y.
Filed April 23, 1913. Serial No. 70,020. PUBLISHED JULY 7, 1914.

99,637. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,260. PUBLISHED JULY 7, 1914.

99,638. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,261. PUBLISHED JULY 7, 1914.

99,639. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,445. PUBLISHED JULY 7, 1914.

99,640. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,447. PUBLISHED JULY 7, 1914.

99,641. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,448. PUBLISHED JULY 7, 1914.

99,642. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,449. PUBLISHED JULY 7, 1914.

99,643. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,451. PUBLISHED JULY 7, 1914.

99,644. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,457. PUBLISHED JULY 7, 1914.

99,645. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed June 2, 1914. Serial No. 78,753. PUBLISHED JULY 7, 1914.

99,646. RUBBER WATER-BOTTLES, FOUNTAIN-SYRINGES, AND ICE-CAPS. RUBBER SUNDRIES COMPANY, Cleveland, Ohio.
Filed March 16, 1914. Serial No. 76,707. PUBLISHED JULY 7, 1914.

99,647. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed June 9, 1914. Serial No. 78,936. PUBLISHED JULY 7, 1914.

99,648. WHEAT-FLOUR. SAXONY MILLS, St. Louis, Mo.
Filed April 23, 1914. Serial No. 77,710. PUBLISHED JUNE 30, 1914.

99,649. MACARONI PRODUCTS. SCARPELLI BROS., Spokane, Wash.
Filed May 4, 1914. Serial No. 77,991. PUBLISHED JUNE 30, 1914.

99,650. BEER. ARNOLD SCHONEGG, Ambridge, Pa.
Filed June 13, 1914. Serial No. 79,090. PUBLISHED JULY 7, 1914.

99,651. BREAD. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed March 5, 1914. Serial No. 76,383. PUBLISHED JUNE 30, 1914.

99,652. BREAD. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed May 4, 1914. Serial No. 77,992. PUBLISHED JUNE 30, 1914.

99,653. GLOVES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed June 6, 1914. Serial No. 78,886. PUBLISHED JULY 7, 1914.

99,654. CHLORID OF LIME, CONCENTRATED LYE, AND POWDERED BORAX. THE SINCLAIR MANUFACTURING COMPANY, Toledo, Ohio.
Filed April 18, 1913. Serial No. 60,907. PUBLISHED JUNE 10, 1914.

99,655. REMEDIES FOR CERTAIN NAMED DISEASES, AND COLD-CREAM. SMITH MANUFACTURING CO., Atlanta, Ga., and Jacksonville, Fla.
Filed January 21, 1913. Serial No. 68,045. PUBLISHED JULY 7, 1914.

99,656. CERTAIN ARTICLES MADE OF ACETYL CELLULOSE IN MASS FORM LIKE CERTAIN NAMED MATERIALS. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed July 18, 1913. Serial No. 71,845. PUBLISHED JULY 7, 1914.

99,657. LAUNDRY BLUING. HARRY M. SPAHR, Baltimore, Md.
Filed May 6, 1914. Serial No. 78,037. PUBLISHED JULY 7, 1914.

99,658. FRESH GRAPE-FRUIT, ORANGES, KUMQUETS, PINEAPPLES, AVOCADO OR ALLIGATOR PEARS, AND STRAWBERRIES. THE ST. LUCIE FRUIT CO., Southport, Conn., and Stuart, Fla.
Filed June 25, 1913. Serial No. 71,369. PUBLISHED JUNE 30, 1914.

99,659. BEER. STANDARD BREWING CO., New Orleans, La.
Filed June 11, 1914. Serial No. 79,014. PUBLISHED JULY 7, 1914.

99,660. GASOLENE, NAPHTHA, REFINED OIL FOR ILLUMINATING, HEATING, POWER PURPOSES, LUBRICATING-OIL, FUEL-OIL, ENGINE-DISTILLATE. STANDARD OIL COMPANY OF LOUISIANA, Baton Rouge, La.
Filed April 2, 1914. Serial No. 77,163. PUBLISHED JULY 7, 1914.

99,661. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed April 29, 1914. Serial No. 77,864. PUBLISHED JUNE 30, 1914.

99,662. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed April 29, 1914. Serial No. 77,865. PUBLISHED JUNE 30, 1914.

99,663. NEEDLES FOR HAND-SEWING. SUCCESS NOVELTY ADS CO., INC., New York, N. Y.
Filed May 22, 1914. Serial No. 78,481. PUBLISHED JULY 7, 1914.

99,664. CHEESES. PAUL SUSSMAN, New York, N. Y.
Filed May 6, 1914. Serial No. 78,038. PUBLISHED JUNE 30, 1914.

99,665. OLEOMARGARIN. EMIL TAUBE, Philadelphia, Pa.
Filed May 1, 1914. Serial No. 77,939. PUBLISHED JUNE 30, 1914.

99,666. SCRATCH FEED, CHICK FEED, MIDDLINGS, AND CRACKED CORN. TIOGA MILL & ELEVATOR COMPANY, Waverly, N. Y
Filed April 25, 1914. Serial No. 77,758. PUBLISHED JUNE 30, 1914.

99,667. CERTAIN WINDING-MACHINES, AND PARTS THEREOF. UNIVERSAL WINDING COMPANY, Providence, R. I., and Boston, Mass.
Filed May 25, 1914. Serial No. 78,541. PUBLISHED JULY 7, 1914.

99,668. MIXTURE OF DOMESTIC AND IMPORTED CHEESES SEASONED WITH HUNGARIAN SWEET PEPPERS. VIENNA DELICATESSEN CO., Atlantic City, N. J.
Filed February 18, 1914. Serial No. 76,020. PUBLISHED JUNE 30, 1914.

99,669. PACKAGE ROASTED COFFEE. WEST COAST GROCERY COMPANY, Tacoma, Wash.
Filed February 24, 1914. Serial No. 76,125. PUBLISHED JUNE 20, 1914.

99,670. VALVES, AND MORE PARTICULARLY ATMOSPHERIC EXHAUST RELIEF-VALVES. C. H. WHEELER MANUFACTURING COMPANY, Philadelphia, Pa.
Filed May 26, 1914. Serial No. 78,571. PUBLISHED JULY 7, 1914.

99,671. CERTAIN NAMED PLIERS, NIPPERS, PINCERS, WRENCHES, AND TROWELS. WIEBUSCH & HILGER, LIMITED, New York, N. Y.
Filed May 26, 1914. Serial No. 78,569. PUBLISHED JULY 7, 1914.

99,672. AUTOMOBILES. FRANCIS A. WOODS, Chicago, Ill., assignor to Woods Mobilette Company, Chicago, Ill., a Corporation of Arizona.
Filed January 17, 1912. Serial No. 60,876. PUBLISHED JULY 7, 1914.

99,673. FERTILIZERS. THE ROBERT A. WOOLDRIDGE COMPANY, Baltimore, Md.
Filed May 23, 1914. Serial No. 78,508. PUBLISHED JULY 7, 1914.

99,674. RUBBER BOOTS AND SHOES. WOONSOCKET RUBBER COMPANY, Woonsocket, R. I.
Filed June 12, 1913. Serial No. 71,081. PUBLISHED JULY 7, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,048. PEGS FOR BOOTS AND SHOES. WYMAN FLINT, Bellows Falls, Vt.
Registered April 1, 1884. Renewed April 1, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

W. A. LAWRENCE & SON *v.* THE LICKING CREAMERY COMPANY.

Decided July 3, 1914.

1. TRADE-MARKS — REPRESENTATION OF A COW FOR CHEESE—VALID.

"I am inclined to hold that if Lawrence & Son can clearly establish priority of adoption of the representation of a cow as a trade-mark for cheese and show continuous use from 1876 to the present time such mark should be held valid. Such long-continued use by a user of a trade-mark should resolve all doubts as to its validity in favor of the user."

2. SAME—"CHEESE" AND "MILK, ICE-CREAM, CREAM, AND BUTTER" NOT GOODS OF THE SAME DESCRIPTIVE PROPERTIES.

Cheese *Held* not to constitute goods of the same descriptive properties as milk, ice-cream, cream, and butter.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR CHEESE.

Messrs. Duell, Warfield & Duell for W. A. Lawrence & Son.

Mr. John H. Siggers and *Mr. E. G. Siggers* for The Licking Creamery Company.

NEWTON, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences sustaining the opposition of W. A. Lawrence & Son to the registration by The Licking Creamery Company of its trade-mark for ice-cream, butter, milk, cream, and cheese.

The Lawrence mark was registered first in January, 1881, and reregistered under the ten-year proviso in 1906, and is for the figure of a cow on Neufchâtel and cream cheese. The mark of applicant, The Licking Creamery Company, as shown in the labels, consists of the picture of a cow, above which is a scroll bearing the words "Our Silent Partner and Our Products." In front of the cow are pictures of vessels containing ice-cream, milk, butter, etc. These are all surrounded by an elliptical figure with the name of the applicant and its place of business therein.

The Lawrences, the opposers, object to the representation of a cow in applicant's mark, and the briefs and the decision below have been directed to

determining the point whether or not the Lawrences as opposers have the right under the statute to prevent any one using the picture of a cow in any form on cheese.

After a careful review of all the record it would appear that three main points are involved in the decision of this case.

First, is any one entitled to the exclusive use of the representation of a cow broadly for cheese? Judge Thompson, in the case of *Lawrence & Son* v. *Sharpless*, (203 Fed. Rep., 762,) decided in a carefully considered opinion, a copy of which is an exhibit of record, that no one could appropriate the figure of a cow broadly as a trade-mark for any dairy product—

> because the symbol of a cow is generic in that it is descriptive of the class of products produced of the milk of the cow. * * * All dealers in dairy products * * * could with equal truth represent the cow as the source of their product. Surely the figure of a cow could not be exclusively appropriated by a dealer in milk or cream. A dealer could not sell milk as cow milk or cream as cow cream and claim exclusive rights under that name; nor could he adopt the figure of a cow as a trade-mark for milk or cream. As butter and cheese are both produced from milk and cream, it follows, I think, that the figure of a cow or the word "cow" is not capable of exclusive appropriation by any dealer or manufacturer for butter or cheese.

It is true the court granted Lawrence & Son an injunction against the Sharpless Company prohibiting the use of the Sharpless label on cheese, but it is plain from the decision that the injunction was granted on the ground of unfair competition. since Sharpless Company had copied even the color and general outlines of Lawrence & Son's label.

The decision of the court of appeals on this point (208 Fed. Rep., 886) leaves open the question of whether any one could appropriate the figure of a cow broadly for cheese.

In the English case of *Jones* v. *Soulby* (33 Ch. D., 392) it was held:

> Why a pig should not be, according to English law, a distinctive mark for lard or something made out of a pig, I do not know. Supposing you tanned pigskin into leather. I do not know why a pig should not be a good trade-mark for tanned pig's hide.

I am inclined to hold that if Lawrence & Son can clearly establish priority of adoption of the representation of a cow as a trade-mark for cheese and show continuous use from 1876 to the present time, such mark should be held valid. Such long-con-

tinued use by a user of a trade-mark should resolve all doubts as to its validity in favor of the user.

The second point raised in this case is whether or not Neufchâtel cheese, the goods of the opposer, Lawrence & Son, is of the same descriptive properties as the applicant's, The Licking Creamery Company's goods—viz., ice-cream, milk, butter, cream, and cheese.

The answer to this question has an important bearing in this case for the reason that if milk, cream, butter, and cheese belong to the same class of goods Lawrence & Son really have no exclusive right to the representation of a cow at all. Judge Thompson in his decision, *supra*, held that the Sharpless Company or its predecessors in business had used the figure of a cow on butter since 1838. Sharpless & Company registered their mark January 28, 1913, No. 90,062, stating that their mark had been used since March 1, 1838, on butter. This was long before any use alleged by the opposer, Lawrence & Son, of this mark on cheese.

Judge Thompson, in his decision above referred to, however, held decisively that butter and cheese were not goods of the same descriptive properties. The Office practice has generally been to regard butter and cheese as being in different classes of goods, however. In *ex parte Barber & Co.* (81 MS. Dec., 221) the Assistant Commissioner has held that they were of the same descriptive character; but in the case of *Von Glahn & Son* v. *Lawrence & Son*, interference No. 35,751, in view of Judge Thompson's decision, *supra*, and the concessions by the parties to the interference, I dissolved said interference without deciding whether butter and cheese would generally be held as having the same descriptive properties, and in *Borden Ice-Cream Co.* v. *Borden Condensed Milk Co.* (201 Fed. Rep., 510) it was held that ice-cream and cheese were not goods of the same descriptive character.

I do not see, therefore, on what possible ground Lawrence & Son can successfully oppose the use by the applicant of its mark on anything except cheese, for if cheese and butter belong to the same class of goods it would appear that Sharpless Company, and not Lawrence & Son, would be the owners of this trade-mark. On the other hand, if butter and cheese are different classes of goods, then Lawrence & Son have no ground for opposing the registration of applicant's mark for milk, ice-cream, cream, or butter.

The third point to be considered is whether or not Lawrence & Son have established priority of use of this mark on cheese in view of the record in the present case.

The proofs on behalf of Lawrence & Son mainly depend upon the testimony of Theodore F. Lawrence, the surviving partner of W. A. Lawrence & Son, who was born about 1863, and in 1876, therefore, was only thirteen years old. He says, (p. 9, Lawrence & Son's Rec.:)

> We commenced to mark our goods on the outside of the cases as early as August, 1876.

He does not give any satisfactory reason for definitely fixing this date, although he is quite positive that the Lawrence firm began using this picture of a cow about 1876 on cheese. This witness, as brought out in cross-question 177, was attending school at Chester, N. Y., in 1876, and while he was in and out of the factory very frequently his testimony is not entirely convincing as to what he remembered about the adoption of this trade-mark, in which as a boy thirteen years old he would be very likely to have little interest. Still his testimony, taken with the statement in the Lawrence registration, No. 8,147, that this mark had been in use for four years from August, 1890, will be considered as fairly establishing a use of this mark on cheese by Lawrence & Son in 1876.

The Licking Creamery Company has attempted to establish a date of use of a cow as a trade-mark for cheese by a third party prior to 1876 and continuous use to 1909, through Mende Brothers, who registered their trade-mark of a cow for hand-made or German cheese in 1882, No. 9,713, and in that registration they state that they had used the mark continuously for sixteen years, which carries it back to 1866.

The principal witness of The Licking Creamery Company was Frank Mende, fifty-five years old in 1913, and who was therefore born in 1858, and in 1874 was sixteen years old. He testifies that he worked in the factory of Mende Brothers from 1874 until 1886. In answer to questions 33, 34, and 35, he states, in effect, that the cheeses were not marked, but the boxes in which the cheeses were shipped were marked with a brush in blue ink, and the mark was the figure of a cow. The only date that he fairly establishes is in his answer to questions 50 and 51, wherein he states that he was living in Philadelphia at the time of the Centennial of 1876, and by this event he fixed definitely in his mind working with Mende Brothers, principally in the office. At that time the boxes in which handcheeses were shipped were stenciled in blue ink with stencils representing a cow.

There are other parts of Mende's testimony indicating that his memory of other incidents happening about the same time was quite defective.

The testimony of Charles H. Mende does not strengthen that of Frank Mende in definitely establishing the use of the Mende mark on cheese prior to the use of the cow on cheese by Lawrence & Son.

This testimony of the Mendes is too vague and uncertain to deprive Lawrence & Son of priority in the adoption of this mark for cheese. If the contest were between the Mendes and Lawrence & Son, the proofs of priority of adoption would be quite evenly balanced; but in the present case the Mendes are third parties. They have no interest in this mark, since they have discontinued the use of it, and it is therefore thought that all doubt as to priority should be resolved in favor of Lawrence & Son as between them and the Mendes, and with this view it must be held that Lawrence & Son are entitled to the representation of a cow for cheese, since there is no question but that they have continuously used the mark since their date of adoption.

It is held, therefore, that the opposition of Lawrence & Son should be sustained so far as cheese is concerned, but so far as milk, cream, ice-cream, and butter are concerned their opposition should be dismissed, and to this extent the decision of the Examiner of Interferences is affirmed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Daley patent, No. 644,664, for an underfeed furnace, *Held* valid and infringed. *Underfeed Stoker Co. of America* v. *Westinghouse Mach. Co.*, 214 Fed. Rep., 587.

(U. S. D. C.) The Taliaferro and Raynard patent, No. 709,184, for a tin-plate-cleaning machine, *Held* valid and infringed. *Taliaferro* v. *Washington Tin Plate Co.*, 214 Fed. Rep., 583.

(U. S. C. C. A.) The Wood patent, No. 790,609, for a shaft-hanger, construed and *Held* not infringed. *T. B. Wood's Sons Co.* v. *Valley Iron Works*, 214 Fed. Rep., 581.

(U. S. C. C. A.) The Rowntree patent, No. 935,929, for a passenger-car of the so-called "pay-as-you-enter" class, tried to the court. The judgment of the lower court affirmed. *Prepayment Car Sales Co.* v. *Orange County Traction Co.*, 214 Fed. Rep., 576.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 2, 1914.

Alfred Hodge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Milton Bradley Co., 43 Cross street, Springfield, Mass., for registration of a trade-mark and trade-mark registered December 12, 1899, No. 33,871, to Alfred Hodge, 108 Broad street, New York, N. Y., and a notice of such declaration sent by registered mail to said Alfred Hodge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Alfred Hodge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1914.

Progressive Product Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of S. Strunz & Son, Nos. 708 to 716 Bingham street, Pittsburgh, Pa., for registration of a trade-mark and trade-mark registered May 30, 1893, No. 23,142, to the Progressive Product Company, of Jersey City, N. J., and New York, N. Y., and a notice of such declaration sent by registered mail to said Progressive Product Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Progressive Product Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Kennard & Oudesheys, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Capital City Dairy Co., of West First avenue and Perry street, Columbus, Ohio, for registration of a trade-mark and trade-mark registered August 16, 1881, No. 8,571, to Kennard & Oudesheys, of Baltimore, Md., and a notice of such declaration sent by registered mail to said Kennard & Oudesheys at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kennard & Oudesheys, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Sallie P. Ayres, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Cereo Company, of Tappan, N. Y., for registration of a trade-mark and trade-mark registered February 25, 1902, No. 37,850, to Sallie P. Ayres, of 1331 F street, Washington, D. C., and a notice of such declaration sent by registered mail to said Sallie P. Ayres at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Sallie P. Ayres, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 19, 1914.

The Great Golden Seal Drug Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Styron-Beggs Company, of 37 South Fourth street, Newark, Ohio, for registration of a trade-mark and trade-mark registered November 22, 1887, No. 14,954, to The Great Golden Seal Drug Co., of Chicago, Ill., and the Office having failed to secure proof of service upon The Great Golden Seal Drug Co. at the said address within the time allowed for that purpose, notice is hereby given that unless The Great Golden Seal Drug Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 206—No. 3. TUESDAY, SEPTEMBER 15, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
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Arkansas	2	1	Ohio	57	11
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Colorado	12	3	Oregon	8	1
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Montana	1	.....	Philippine Islands	.....	.....
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TO RESIDENTS OF FOREIGN COUNTRIES.

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Italy	1	1			
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Drawings of Foreign Patents.

(Order No. 2,096.)

Department of the Interior,
United States Patent Office,
Washington, D. C., January 21, 1914.

In addition to the data required to be given by Rule 66 the Examiner, when citing foreign patents, will include a statement identifying the particular figures of the drawings relied upon as showing the anticipating structure. If the drawing of the foreign patent as issued comprises a single sheet, the Examiner will say: "(One sheet)." If the drawings of the foreign patent as issued comprise more than a single sheet, the particular figures and number of sheets will be indicated.

The purpose of this order is to give applicants and attorneys information respecting foreign patents cited as references, so that photographic copies thereof may be ordered without unnecessary correspondence and delay.

THOMAS EWING,
Commissioner of Patents.

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 12, 1914.

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232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 2	Aug. 4	785
107	5. Bookbinding; Harvesters; Jewelry; Music.	May 15	July 3	477
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	July 21	614
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	June 1	July 7	622
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	Aug. 10	1223
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pump.	Mar. 16	June 1	712
235	10. Carriages and Wagons	Apr. 24	July 6	1152
164	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 26	Aug. 18	246
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 7	June 16	1195
349	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 5	July 15	536
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 6	Aug. 14	433
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 9	July 20	952
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	July 11	778
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 10	Aug. 10	236
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 11	Aug. 3	238
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 8	July 23	326

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	June 8	July 18	446
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 22	July 8	502
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 11	July 27	248
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 18	July 24	506
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 21	Aug. 14	602
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 29	July 25	239
106	26. Electricity, Generation; Motive Power.	Nov. 26	June 12	938
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 3	July 9	542
65	28. Internal-Combustion Engines	May 15	July 3	643
147	29. Cooperage; Fire-Escapes; Ladders; Rools; Wheelwright-Machines; Wooden Buildings; Wood-Sewing; Wood-Turning; Wood-working; Woodworking-Tools.	July 8	July 16	446
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 17	Aug. 6	400
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 22	July 14	338
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 4	Aug. 1	754
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	Aug. 6	380
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 25	July 8	353
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 24	Aug. 3	626
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 27	July 11	827
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 24	July 9	911
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Mar. 23	July 17	910
321	39. Water Distribution	Apr. 20	July 15	535
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 17	Aug. 13	1054
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 8	July 28	463
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 22	July 11	397
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 14	Aug. 3	296

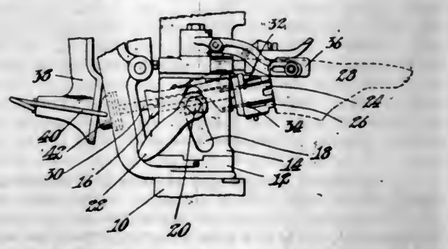
Oldest new case, Nov. 26; oldest amended, June 1.
Total number of applications awaiting action 25,243

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 20	July 25	1210
	Designs	Aug. 5	Aug. 26	196
	Labels and Prints	Aug. 13	Aug. 3	82

PATENTS

GRANTED SEPTEMBER 15, 1914.

1,110,308. ASSEMBLING-MACHINE. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 26, 1910. Serial No. 589,206. (Cl. 12—4.)



1. In a machine of the class described, the combination of an upright last support, a last, and a double tack driver located with relation to said last in position to drive two tacks into the rear face of a shoe mounted on the last, said double tack driver being adjustable as to height in a curved path conforming approximately to the shape of the rear face of the shoe.

2. In a machine of the class described, the combination of a last, and a double tack driver located with relation to said last in position to drive two tacks into the rear face of a shoe mounted on the last, said double tack driver being adjustable in the direction of the height of the last in a curved path, the concavity of which faces the last.

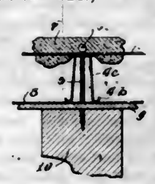
3. In a machine of the class described, the combination of a last, and fastening inserting mechanism comprising two tack nozzles spaced apart in the direction of the height of the last and adjustable in the direction of the height of the last in paths conforming approximately to the shape of the rear face of the last.

4. In a machine for assembling parts of boots or shoes, the combination of a last and means for simultaneously inserting a plurality of fastenings in the rear face of a shoe mounted upon said last, said fastening inserting means being adjustable relatively to the last in a vertically curved path.

5. In a machine of the class described, the combination of a last and a pair of rigidly connected tack nozzles mounted for simultaneous vertical and horizontal movements of adjustment relative to said last.

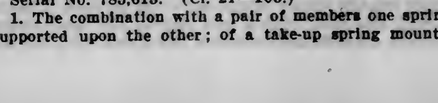
[Claims 6 to 9 not printed in the Gazette.]

1,110,309. STUCCO CONSTRUCTION. JOSEPH BRISTOW, Jr., Oak Park, Ill. Filed Mar. 9, 1912. Serial No. 682,606. (Cl. 72—118.)



Means for attaching plastic material to a supporting structure, consisting of a sheet metal furring member having an outer bearing face and outwardly curved edges, and with slots formed in said bearing face, nails passing through said slots and adapted to engage the supporting structure to hold said strips in place, portions of said nails projecting beyond the bearing face of said strips and bent into hook form, and perforated metal lathing applied to the bearing face of said strips and adapted to engage said nails and to be engaged by the bent over portions of said nails.

1,110,310. ROTARY DISTRIBUTING VALVE-BODY. DAVID H. COLES, New York, N. Y., and FREDERICK CHARAVAY, Jersey City Heights, N. J., assignors to Requa Motor Company, a Corporation of New York. Original application filed May 13, 1910, Serial No. 561,035. Divided and this application filed Jan. 19, 1912. Serial No. 672,049. (Cl. 123—190.)



1. A rotatable valve-body having an exteriorly round, bearing surface; a lengthwise extending chamber the opposite end walls of which are each formed with an inlet port and the circumferential side wall of which is formed with a plurality of exit ports, the circumferential wall of the valve-body having a depressed portion opposite each exit port and a circumferentially extending groove communicating therewith in combination with a valve casing having an interior cross-sectionally-round lengthwise-extending chamber for the valve body, and exteriorly to said chamber another lengthwise-extending chamber inclosing the wall of the interior chamber; the walls of said chambers being ported for the purposes described.

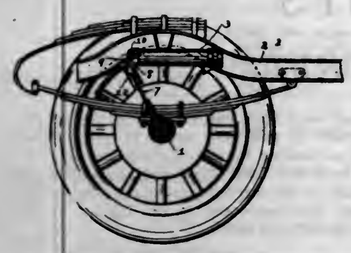
2. A rotatable valve-body formed with exteriorly round bearing surface portions and between its ends with a lengthwise extending chamber provided with a plurality of inlet ports spaced apart and a plurality of exit ports spaced apart and in staggered relation one to another; the circumferential wall being depressed opposite each exit port and spaced apart therefrom by intervening wall bearing portions of the valve-body in combination with a valve casing having an interior cross-sectionally-round lengthwise-extending chamber for the valve body, and exteriorly to said chamber another lengthwise-extending chamber inclosing the wall of the interior chamber; the walls of said chambers being ported for the purposes described.

3. The combination with a rotatable valve-body formed with exteriorly-round bearing surface portions, and between its ends with a lengthwise-extending chamber provided with a plurality of inlet-ports spaced apart, and a plurality of exit-ports spaced apart and in staggered relation one to another; the circumferential wall being depressed opposite each exit-port and spaced apart therefrom by intervening wall-bearing portions of the valve-body; of a casing comprising an exterior gas-chamber ported for connection with a plurality of engine cylinders, and an interior rotary valve chamber ported for communication with said exit ports.

1,110,311. REBOUND-BRAKE FOR SPRING-VEHICLES. WILLIAM G. COX, Albany, N. Y. Filed Aug. 20, 1913. Serial No. 785,615. (Cl. 21—105.)

1. The combination with a pair of members one spring-supported upon the other; of a take-up spring mounted

upon one of said members; a belt-connection between said take-up spring and the other of said members; and belt-clamping-mechanism automatically actuated by the tension of the belt.



2. The combination with a pair of members one spring-supported upon the other; of a take-up spring mounted upon one of said members; a belt-connection between said take-up spring and the other of said members; and belt-clamping-mechanism engageable with the belt between said take-up spring and said other member, said belt-clamping-mechanism being automatically actuated directly by the belt under tension.

3. The combination with a pair of members one spring-supported upon the other; of a take-up spring, and belt-clamping-mechanism mounted upon one of said members; and a belt-connection between said take-up spring and the other of said members, said clamping-mechanism comprising a support over which the belt slides, and a clamping-lever engageable with one side of the belt to force the belt against said support, and having a member in engagement with the opposite side of said belt in the path between said support and said other member.

4. The combination with a pair of members one spring-supported upon the other; of a cylinder mounted upon one of said members; a coil-spring confined within said cylinder; a belt connected at one end with said coil-spring and at the other end with the other of said members; and belt-clamping-mechanism engageable with said belt between said spring and the other member, said clamping mechanism having a movable member over which said belt passes adapted to be automatically actuated by the tension of the belt.

5. The combination with a pair of members one spring-supported upon the other; of a take-up spring, and clamping-mechanism mounted upon one of said members; and a belt composed of a plurality of separate plies connecting said take-up spring with the other member and changing direction at the clamping-mechanism, said clamping-mechanism comprising a support over which the belt changes direction and a clamping-member coöperative with said support, automatically operated by the tension of the belt.

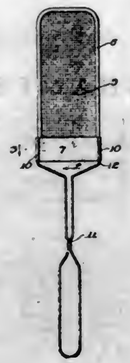
[Claim 6 not printed in the Gazette.]

1,110,312. DEVICE FOR KILLING INSECTS. CURTIS L. CRUVER, Chicago, Ill. Filed Mar. 31, 1913. Serial No. 757,775. (Cl. 43—1.)

1. A fly swatter comprising a flexible member, a sheet metal base having two side portions between which one end of said member is held, said base having barrels at opposite ends, and a handle having a pair of arms extending into and rigidly clamped in said barrels.

2. A fly swatter comprising a flexible member, a sheet metal base having two sides between which one end of said member lies, and a handle having two arms, said base having barrels at its ends to receive said arms, said barrels acting to secure the handle to the base and further acting to clamp said flexible member to the base.

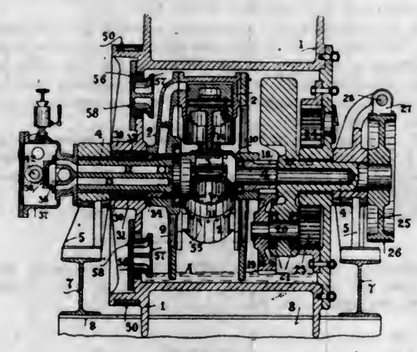
3. A fly swatter comprising a flexible member, a sheet metal base having two sides between which one end of said member lies, one of said sides being longer than the other and the former having barrels at its ends, a handle having two arms lying in said barrels, said arms bearing against the ends of the shorter side of the base, and said barrels and ends being compressed to clamp the edges of said flexible member and said arms tightly to the base.



4. A fly swatter comprising a sheet of wire screening, a binding at the edges of said screening, a sheet metal base folded to provide two sides between which one end of said screening lies, one of said sides being longer than the other and the former having integral barrels at its opposite ends, a wire handle having two arms lying in said barrels, said arms bearing against the ends of the shorter side of said base, and said barrels and adjacent parts being compressed to clamp said arms and the edges of the said screening to securely fix all the parts together.

5. A fly swatter comprising a flexible member, an integral sheet metal base providing two sides between which one end of said member is held, a handle having a pair of arms extending at an angle to the base and lying at opposite ends of said base, and a single means at each end of the base for engaging said arms to secure them to said base and for preventing said sides from spreading apart.

1,110,313. WINDING AND HAULAGE DRUM. CARL DAVENPORT, Sheffield, England. Filed Nov. 29, 1913. Serial No. 803,663. (Cl. 57—86.)



1. A winding or haulage drum comprising a hollow revoluble drum, a stationary shaft, a gear wheel revoluble on said shaft adjacent one end thereof, the other end of said shaft being hollow, supports for such shaft, said shaft being provided with a fixed crank pin, a multi-cylinder motor housed in the drum and comprising revolving cylinders and revolving disks, said gear wheel being operatively connected to one of said disks, movable pistons in said cylinders and piston rods working on the fixed crank pin, fluid supply passages, exhaust passages, external valve gear controlling the fluid supply, and gear wheels operatively connected to said first mentioned gear wheel and to said drum and being all inclosed within the drum through which the motor actuates the drum, as set forth.

2. A winding or haulage drum comprising a drum casing, a shaft support at one end, a fixed crank shaft support at the other end, a fixed crank shaft supported in said supports, a multi-cylinder motor, including revolving disks, and revolving cylinders and pistons within the cylinders, piston rods connecting the pistons with the fixed crank shaft, fluid supply and exhaust channels in the fixed crank shaft support, a fluid control means outside governing the fluid pressure, and gear wheels within the drum casing and actuated by the motor, said gear wheels operatively engaging said drum, said gear wheels being disposed about the shaft support.

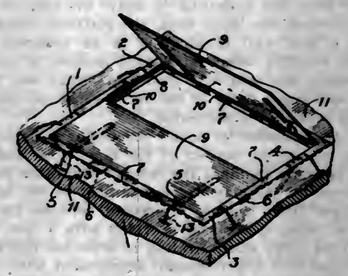
3. A winding or haulage drum having a drum casing, a solid shaft at one end, a bored crank shaft at the other, supports therefor, a fixed crank pin, revoluble disks carried on said solid and said bored shafts, cylinders supported by the disks, pistons therein and connecting rods between the pistons and fixed crank pin, inlet and outlet passages in the crank shaft, exterior fluid control devices, and means to pack the revoluble disk upon the bored portion of the fixed crank shaft comprising movable packing pieces and a spring and gear wheels between the motor and drum and inclosed by the latter as described.

4. A winding or haulage drum comprising a drum casing, a shaft at one end, a fixed bored crank shaft, supports for such shafts, revolving disks within the drum and supported on said shafts, a fixed crank pin, and converging cylinders around the crank pin, pistons in said cylinders and connecting rods connecting the pistons to the fixed crank pin, passage ways in the crank shaft, valve control gear external to the drum and controlling the fluid pressure, inclosed gear wheels actuated by the motor and by which the drum is rotated, a movable sleeve packing one of the disks and a spring holding the same up to its work, and movable cover on the drum casing, as described.

5. A winding or haulage drum comprising a hollow drum, supports therefor, a stationary supporting shaft, a gear wheel adjacent one end thereof, said shaft being provided with a fixed crank pin, rotating disks supported by the shaft, multi-cylinders between the disks, pistons in said cylinders operatively connected to said fixed crank pin, fluid supply channels cut in the other end of said fixed shaft, fluid control devices external to the drum, gear wheels within the drum operatively connected to said first mentioned gear wheel and actuated by the motor working around the shaft, said gear wheels driving the drum, a clutch arrangement in connection at the gear wheel end of the hollow drum, and means for clutching and unclutching the same, as described.

[Claim 6 not printed in the Gazette.]

1,110,314. UNIVERSAL DOOR-FRAME. WILLIAM F. EICHFELD, Milwaukee, Wis. Filed Dec. 10, 1913. Serial No. 805,673. (Cl. 189—46.)



1. A door frame comprising corner members, intermediate members adapted to interfit therewith, door stops on said corner and intermediate members adapted to register with one another, and means anchoring said corner members in a building structure.

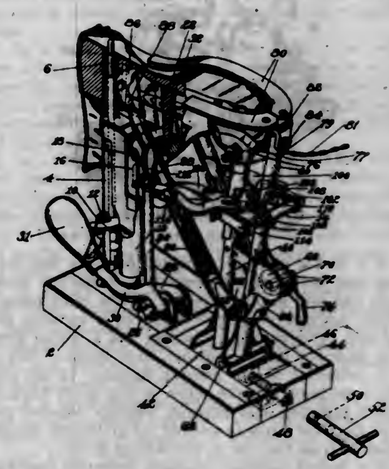
2. In a device of the class described corner members, offset portions on the extremities thereof, intermediate members adapted to fit over said offset portions to lie flush with the main portion of said corner members, means anchoring said corner members in the building structure, and door stops secured on said corner members and said intermediate members adapted to lie in proper alinement with one another.

3. In a device of the class described corner members, intermediate members adapted to interfit therewith and join said corner members together, anchoring means pivoted to said corner members to be embedded in the building structure, and hinges on certain of said members to receive a door attached thereon.

4. A door frame comprising interchangeable corner members, intermediate members adapted to join the same together, offset portios on said corner members adapted to interfit with said intermediate members, and stops on said corner and intermediate members adapted to abut one another in alinement when said door frame is set up.

5. In a device of the class described corner members, members similar in cross-section to said corner members adapted to interfit therewith to join the same together, hinged members on certain of said members to permit a door to be attached thereon, and means on said corner and intermediate members to limit the movement of said door.

1,110,315. LASTING APPARATUS. JOHN A. ELDRIDGE, Acton, Me., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1911. Serial No. 658,155. (Cl. 12—7.)



1. A lasting apparatus having, in combination, a support for an assembled shoe, and clamping means arranged to hold an unwelted upper in pulled-over position including a clamping member arranged to be actuated over the shoe bottom at the toe into holding relation with the upper after the upper has been pulled lengthwise, and continuous side members pivoted to said clamping member and arranged to be actuated subsequently over the shoe edge at the ball of the shoe to secure the upper in transversely stretched condition.

2. A lasting apparatus having, in combination, a support for an assembled shoe, and clamping means arranged to hold an unwelted upper in pulled-over position, comprising a toe clamp arranged to be actuated lengthwise of the shoe at the end of the toe into holding relation with the upper upon the toe end of the shoe bottom, and side clamps pivotally connected with the toe clamp and adapted to swing inwardly over the sides of the shoe bottom to position for holding the corners of the toe and sides of the upper in transversely stretched condition.

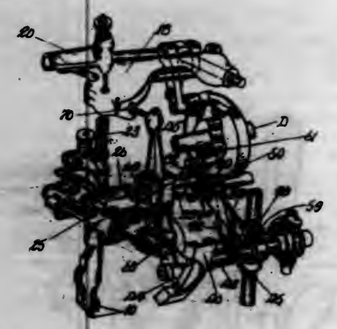
3. A lasting apparatus having, in combination, a support for an assembled shoe, and clamping means arranged to hold the upper in pulled-over position, including members adapted to be held down against the shoe bottom and between which and the insole or last bottom the upper may be pulled or tightened over the last and then automatically held by said clamping members, and resilient means for holding said members, down against the upper.

4. In an apparatus of the class described, the combination of a heel pin, a toe rest, a wiper support, wipers pivoted thereto and extending to the shank, and resilient means for depressing the shank ends of the wipers.

5. A device of the class described, having in combination, a jack for supporting the heel and toe portions of a last, a wiper support arranged for adjustment to and from the toe rest, wiper plates pivoted to said support, bent to conform to the spring of the last and extending to the shank portion thereof, and resilient means for depressing the shank portion of the wiper plates.

[Claims 6 to 20 not printed in the Gazette.]

1,110,316. LASTING-MACHINE. FREDERICK WILLIAM FARRAR, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 16, 1911. Serial No. 644,477. (Cl. 12—2.)



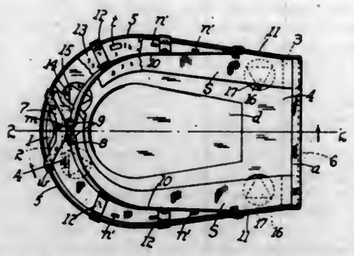
1. In a lasting machine, a lasting device, a cam for operating said device, and an operative connection between the cam and said device including a lever comprising two relatively movable parts fulcrumed on a common pivot, one of said parts having a chamber and a spring pressed plunger mounted in the chamber, said chamber and said plunger extending in the general direction of the length of said lever part, and the other of said parts having an abutment engaging said plunger whereby relative movement of the lever parts is allowed for yieldingly transmitting motion from the cam to the lasting device.

2. In a lasting machine, grippers, operating mechanism for the grippers including means for turning the grippers and means for moving them laterally, a two-part lever through which the said movements are effected, the said lever being mounted for oscillation about a fixed pivot and having its parts hinged together to permit of relative movement about the said pivot, means for positively moving one part of the lever about the said pivot and a spring pressed plunger seated in the other part of the lever and arranged to engage the positively operated part of the lever to cause the said movements of the grippers to be yieldingly effected.

3. In a lasting machine, grippers, operating mechanism for the grippers including means for turning the grippers and means for moving them laterally, a two-part lever through which the said movements are effected, and a spring pressed plunger carried by one part of the lever and engaging the other part thereof to cause the said movements to be yieldingly effected, the said lever parts being provided with a rule hinge connection at their inner ends to cause the return movement of the lever to be positively effected.

4. In a lasting machine, the combination with grippers and operating mechanism for the grippers including means for turning the grippers and means for moving them laterally, of the two-part lever 80 through which the said movements are effected, said lever being mounted for oscillation about a fixed pivot and comprising the arm 82 and the arm 84 hinged together to permit of relative movements about the said pivot, means for positively moving the lever arm 82 about the said pivot, the abutment 94 on the lever arm 82 and a spring pressed plunger 90 seated in the lever arm 84 and arranged to engage the abutment 94 on the lever arm 82 upon movement of the lever arm 82 in a direction to effect the said movements of the grippers.

1,110,317. HORSE-OVERSHOE. CHARLES E. FERCIOT, St. Louis, Mo. Filed Jan. 2, 1914. Serial No. 809,928. (Cl. 168—30.)



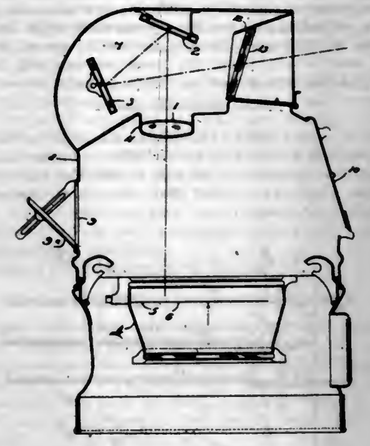
1. A horse over-shoe comprising a platform for the support of the shod hoof of the animal, a rim on the platform bounding the front and sides of the inner shoe, abutments at the rear of the platform for engaging the rear ends of the inner-shoe, bands leading from the rear portions of the rim and embracing the hoof and following the contour thereof, means at the free ends of the bands for tightening the same about the hoof, a member hinged to the front of the over-shoe and adapted to be coupled to the bands, said hinged member being provided with a cam formation operating to engage the inner shoe and draw the abutments at the rear end of the over-shoe into firm contact with the corresponding ends of the inner shoe, when said member is secured to the bands.

2. An over-shoe for calked inner shoes comprising a supporting platform provided with openings for the free passage therethrough of the toe and heel calks of the inner shoe, a flange or rim on the platform for engaging the front and sides of the inner shoe, forwardly and upwardly inclined hoof bands leading from the rear of the sides of the rim aforesaid, a coupling and tightening screw for drawing the free ends of the bands together, a member hinged to the front of the rim and adapted to be anchored to the screw aforesaid, a cam formation on said member adjacent to its hinge axis adapted to engage the inner shoe and operating to draw the rear of the over-shoe toward the inner shoe, the platform being provided with a rear wall terminating in an inwardly deflected flange whereby when the hinged member is anchored as aforesaid, the said rear wall and flange hug the terminals and upper faces of the inner shoe and displacement of the over-shoe is prevented.

3. An over-shoe for horses comprising a platform adapted to engage the bottom of the inner shoe and provided with openings to admit the calks of said inner shoe, means for securing the platform to the hoof of the animal, and a hinged front member interposed between the platform and securing means and provided with a cam formation about its hinge axis operating to draw the inner shoe and over-shoe into firm frictional engagement with the swinging of said hinged member inwardly.

4. An over-shoe for horses comprising a platform for supporting the inner shoe and provided with openings for the passage of the toe and heel calks of the inner shoe, a marginal flange and rear wall on the platform for engaging the front, sides, and back of the inner shoe, bands leading from the rear portions of the sides of the flange, forward over the hoof, means for drawing the free ends of the bands together, a flange formed on the rear wall of the platform for engaging the upper face of the inner shoe, and a member hinged in front to the flange and provided with a cam formation at the hinge axis engaging the front of the inner shoe and operating to draw the over-shoe into firm engagement with the inner shoe, with the coupling of the free end of said hinged member to the front ends of the bands aforesaid.

1,110,318. MARINER'S COMPASS. MICHAEL B. FIELD and DONALD RENFREW, Glasgow, Scotland. Filed Jan. 5, 1914. Serial No. 810,486. (Cl. 88—1.)



1. The combination with a mariner's compass comprising a bowl containing a card and a lubber mark, of a removable hood surmounting the bowl, a darkened chamber in optical communication with the interior of said hood and an optical system including magnifying and reflecting means for presenting to the observer looking into said chamber an image of said lubber mark and part of said card.

2. The combination with a mariner's compass comprising a bowl containing a card and a lubber mark of a removable binnacle hood surmounting the bowl, a darkened chamber having an aperture, said chamber being sustained by said hood and in optical communication with the interior of said hood, and an optical system including magnifying and reflecting means for presentation of an image of part of said card, said image being visible through said aperture.

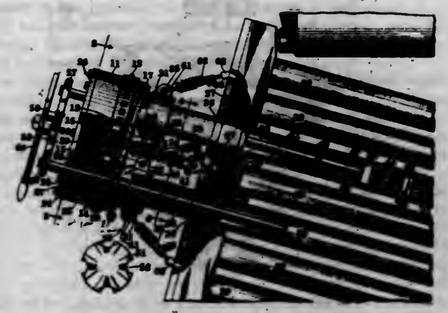
3. In combination with a mariner's compass comprising a bowl containing a card and a lubber mark, a binnacle hood having an aperture for inspection of the lubber mark and the entire compass card, a darkened chamber in optical communication with the interior of the said hood, said chamber having an aperture, and an optical system including reflecting means within said chamber for reflecting through said aperture an image of the lubber mark and part of the compass card.

4. In combination with a mariner's compass comprising a bowl containing a card, a closure for the upper end of said bowl, said closure including two chambers the wall of one of which is light and the wall of the other of which chambers is dark, said chambers being in optical communication with one another, and said second chamber having an aperture, and optical devices for presenting an image visible through said aperture of part of said card.

5. The combination with a compass binnacle hood having an aperture for inspection of the compass card, of a chamber supported by said hood, said chamber having an aperture, and an optical system including magnifying and reflecting means, said reflecting means being contained within said chamber and adapted to present an image of part of said card, said image being visible through the aperture in said chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,110,319. TUBE-CLEANER. ALBERT F. FROUSSARD, St. Louis, Mo. Filed Dec. 6, 1912. Serial No. 735,245. (Cl. 83—64.)



1. In a tube cleaning device, the combination with an outer rotary member, of an inner stationary member, a plurality of shafts carried by said inner member and arranged to simultaneously enter a plurality of tubes, tube cleaning tools carried by said shafts, and means for communicating motion from said outer member to said tool shafts.

2. In a tube cleaning device, the combination with an outer rotary member, of an inner stationary member, arms adjustably carried by said inner stationary member, shafts slidingly mounted in said arms, tube cleaning tools carried by said shafts, and means for communicating motion from said outed member to said tool shafts.

3. In a tube cleaning device, the combination with an outer rotary member, of an inner stationary member, arms adjustably carried by said inner member, a plurality of shafts carried by said arms and adapted to simultaneously enter a plurality of tubes, tube cleaning tools carried by said shafts, and means for communicating motion from said outer member to said tool shafts.

4. In a tube cleaning device, the combination with an outer rotary member provided with an internal gear, of an inner stationary member, shafts slidingly mounted in said inner member, tube cleaning tools carried by said shafts, and gear wheels engaging with said internal gear and driving said tool shafts.

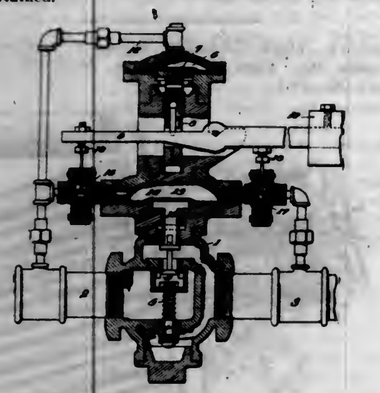
5. In a tube cleaning device, the combination with an outer rotary member provided with an internal gear, of an inner stationary member, a plurality of shafts carried by said inner member and arranged to simultaneously enter a plurality of tubes, tube cleaning tools carried by said shafts, and gear wheels for engaging with said internal gear and driving said shafts.

[Claims 6 to 16 not printed in the Gazette.]

1,110,320. GAS RELIEF-VALVE. LOUIS B. FULTON, Pittsburgh, Pa., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 23, 1913. Serial No. 775,351. (Cl. 137—53.)

1. A gas relief valve comprising, in combination, a main valve normally held to its seat by pressure at the inlet side thereof, a gas-chamber having movable means for effecting the unseating of said main valve, an inlet valve for said chamber controlling communication between the latter and the inlet side of the main valve, an outlet valve for said chamber controlling communication between the latter and the outlet side of the main valve, and actuating means for alternately acting upon said inlet and outlet valves and arranged to open the inlet-valve and

close the outlet valve under a predetermined pressure at the inlet side of the main valve and to open the outlet valve and close the inlet valve when the desired reduction in pressure on the inlet side of the main valve has been obtained.



2. A gas relief valve comprising, in combination, a main valve normally held to its seat by pressure at the inlet side thereof, a gas-chamber having movable means for effecting the unseating of said main valve, an inlet valve for said chamber, an outlet valve therefor controlling a connection between said gas-chamber and the outlet side of said main valve, actuating means for said inlet and outlet valves arranged to open the inlet-valve and close the outlet-valve under a predetermined pressure at the inlet side of the main valve and to open the outlet valve and close the inlet valve when the desired reduction in pressure on the inlet side of the main valve has been obtained, and adjustable means for timing the opening and closing of said valves.

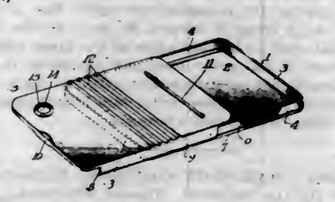
3. A gas relief valve comprising, in combination, a main valve normally held to its seat by pressure at the inlet side thereof, a gas-chamber having movable means for effecting the unseating of said main valve, an inlet valve for said chamber, an outlet valve therefor, a connection between said gas-chamber and the outlet side of said main valve, said outlet-valve being located in said connection, a lever for alternately unseating said inlet and outlet valves, said inlet-valve being normally seated, a connection between said gas-chamber and the inlet side of said main-valve in which said inlet-valve is located, and actuating means for said lever constructed and arranged to be operated by pressure from the inlet side of said main-valve.

4. A gas relief valve comprising, in combination, a main valve normally held to its seat by pressure at the inlet side thereof, a gas-chamber having movable means for effecting the unseating of said main valve, an inlet valve for said chamber, an outlet-valve therefor, a lever for alternately unseating said valves, a second gas-chamber having movable means for actuating said lever to unseat said inlet-valve and seat said outlet-valve, and a pipe connecting said second gas-chamber with the inlet side of the main-valve to allow the pressure on said inlet side to enter said gas chamber.

5. A gas relief valve comprising, in combination, a main valve normally held to its seat by pressure at the inlet side thereof, a gas-chamber having movable means for effecting the unseating of said main-valve, an inlet valve for said chamber, an outlet-valve therefor controlling a connection between said gas-chamber and the outlet side of said main valve, a lever for alternately unseating and seating said valves, a second gas-chamber having movable means for actuating said lever to unseat said inlet-valve and seat said outlet-valve, and a pipe connecting said second gas-chamber with the inlet side of the main-valve to allow the pressure on said inlet side to enter said gas chamber.

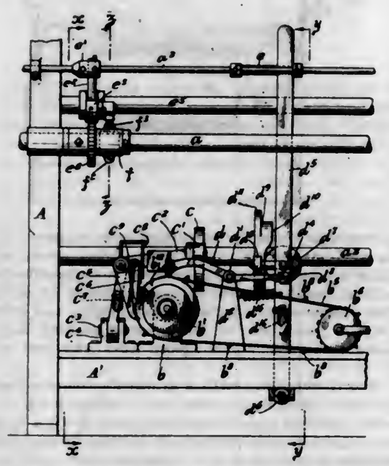
[Claims 6 and 7 not printed in the Gazette.]

1,110,321. MATCH-BOX. JESSE M. GARLINGTON, Ottawa, Ill. Filed Dec. 29, 1913. Serial No. 809,176. (Cl. 206—33.)



The combination with a box having a tray shaped base section and a lid, of grooves formed in the base section at the juncture of the sides with the bottom, and downwardly extending lips on the lid engaging with the said grooves, for sliding engagement therewith, one of the side walls near its end being cut away substantially to the bottom of the base section to provide a finger recess.

1,110,322. PATTERN-CONTROLLED STOP MECHANISM FOR KNITTING-MACHINES. ALBERT GEE, Oak Lane, Pa., assignor of one-half to William Park Moore, Elkins Park, Pa. Filed Mar. 30, 1914. Serial No. 828,297. (Cl. 66—7.)



1. In a knitting machine, an automatic regulating and controlling mechanism of the character described, comprising a shaft having a cam, a rocker-arm having a roller and two pawls, two ratchets, said roller actuated by said cam and said pawls at predetermined periods actuating said ratchets, a sprocket and chain, said sprocket connected with one of said ratchets and operating said chain, provided with lugs for at predetermined periods tripping one of said pawls, a pivoted shifting device controlling means to release said device and shift and reset the same and means to release the power, substantially as and for the purposes described.

2. In a knitting machine, a mechanism of the character described, comprising a rotatable cam-shaft, a rocker-arm having a roller and two pawls, two ratchets and a sprocket connected with one of said ratchets, said cam operating said roller and said rocker-arm causing said pawls at predetermined periods to engage said ratchets, a shifting device adapted to engage means to release said device, springs for shifting and a cam for resetting said device and a sprocket-chain having a series of lugs adapted to respectively trip one of said pawls, substantially as and for the purposes described.

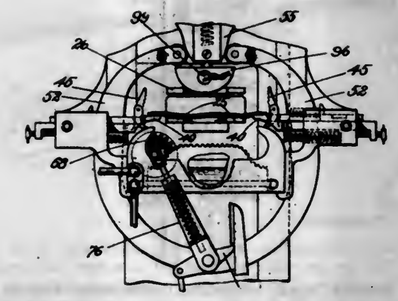
3. In a knitting machine, a mechanism of the character described, comprising a rotatable cam-shaft, a rocker-arm having a roller and two pawls, two ratchets and a sprocket connected with one of said ratchets, said cam operating said roller and said rocker-arm permitting said pawls at predetermined periods to engage said ratchets, a pivoted shifting device, comprising a rocking latch-hook adapted to engage a complemental hook for releasing said device, a cam for shifting and resetting said device and a rod for transmitting motion to power means of the machine for releasing said power, substantially as and for the purposes described.

4. A knitting machine having mechanism of the character described and with a shifting device, a rod operated on by said device and having a lug arranged to release a pawl provided with pins and a lug, and said pins adapted to respectively engage a ratchet mounted on the main-shaft of the machine to prevent retrograde movement of the same, and a friction-brake having ears adapted to engage the lug of said pawl to stop the machine, and said brake mounted on said main-shaft, substantially as and for the purposes described.

5. In a knitting machine, an automatic regulating and controlling mechanism of the character described, comprising a rotatable cam-shaft, a rocker-arm having a roller and two pawls, two ratchets, one having a deep notch, a sprocket connected with one of said ratchets, said roller actuated by said cam, and said pawls at predetermined periods actuating one or both of said ratchets, a shifting device, and a chain carrying lugs operating to trip one of said pawls and to shift said device, substantially as and for the purposes described.

[Claims 6 to 9 not printed in the Gazette.]

1,110,323. METHOD OF MANUFACTURING BOOTS AND SHOES. BENJAMIN J. HAMILTON, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed May 22, 1911, Serial No. 628,642. Divided and this application filed Aug. 9, 1912. Serial No. 714,221. (Cl. 12—142.)



1. That improvement in methods of making shoes which includes, as preliminary steps preparatory to lasting, confining the margin of the forepart of the vamp at opposite edges, effecting a relative movement of the confined and the unconfined portions of said forepart in a direction transverse to the plane of the confined portion to stretch and shape the unconfined portion to a forepart form while retaining the unconfined portion entirely within the boundary of the inner edge of the confined portion, allowing the vamp to set until it acquires the shape of the form, and then freeing it from the form; and subsequently assembling the upper and an innersole upon a last and then stretching and shaping to a last those portions of the upper not shaped in the preliminary operation and folding inwardly over the last bottom the portion of the vamp which was confined during said preliminary operation.

2. That improvement in methods of making shoes which consists in confining the margin of the forepart of a vamp and shaping the vamp locally over the high part of the toe by pressing it at that point away from the plane of the confined portion of the margin while the other parts of the unconfined portion of the vamp are free from frictional resistance which would retard them from stretching, and continuing the pressure to force other parts of the unconfined portions away from said plane and shape them to other portions of the top face of a forepart form.

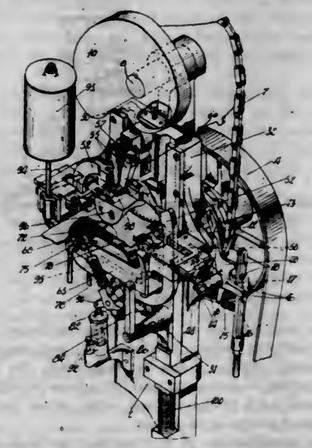
3. That improvement in methods of making shoes which consists in spreading the forepart of a vamp and confining its margin, applying moisture to the unconfined portion only, pressing the unconfined portion out of the plane of the confined portion to stretch it and shape it to the contour of the engaging face of the presser, and applying heat to the portion being pressed upon until it has set or acquired the shape of the presser.

4. That improvement in methods of making shoes which includes, as a preparation for lasting the shoe, confining the margin of the forepart of the vamp of a shoe upper and pressing the unconfined portion of the vamp in the presence of heat and moisture out of the plane of the confined portion to stretch it and shape it to the contour of the engaging face of the presser and continuing the pressure until the engaged portion of the vamp has set or acquired the shape of the presser and then releasing the vamp; and subsequently assembling the shaped upper with an innersole upon a last and lasting the shoe by stretching the marginal portion of the vamp over the edge of the last and fastening it to the innersole on the last bottom.

5. That improvement in methods of making shoes which includes, as a preparation for lasting the shoe, confining the margin of the forepart of the vamp, pressing the unconfined portion out of the plane of the confined portion by pressure applied to the outer face of the vamp and acting to shape it reversely or wrong side out approximately to the contour which it is to have in the completed shoe; and then freeing the vamp; and subsequently turning the shaped vamp right side out, assembling it with an innersole upon a last and lasting the shoe.

[Claims 6 to 17 not printed in the Gazette.]

1,110,324. UPPER-STRETCHING MACHINE. BENJAMIN J. HAMILTON, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 22, 1911, Serial No. 628,642. Renewed Jan. 30, 1914. Serial No. 815,542. (Cl. 12—97.)



1. A machine for preparing upper materials for lasting having, in combination, grippers arranged to engage the vamp at opposite edges of the forepart, means for actuating said grippers in opposite directions in the same horizontal plane to permit the vamp to be stretched in a single plane, and a form between which and the vamp there is relative movement perpendicular to the direction of the stretching movement to shape the vamp.

2. A machine for preparing upper materials for lasting having, in combination, a plurality of pairs of grippers arranged to engage the forepart of the vamp at opposite edges, an equalizer connected with the pairs of grippers at each edge, and means acting through said equalizers for moving the grippers in the same horizontal plane to stretch the upper in a plurality of lines extending across the vamp from edge to edge.

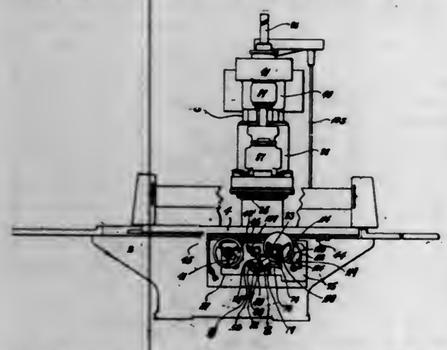
3. A machine for preparing upper materials for lasting having, in combination, two pairs of grippers engaging the forepart of the vamp at each edge, an equalizer connecting each two pairs of grippers, guiding means for directing the movement of all the grippers in the same horizontal plane, levers acting through the equalizers to move the grippers, and a wedge for forcing the levers apart to effect the stretching of the upper.

4. A machine for preparing upper materials for lasting having, arranged for engagement with the forepart of a vamp at each lateral edge thereof, two pairs of grippers to stretch the upper in two lines extending transversely across the vamp, one line being located adjacent to the tip seam and the other line being located adjacent to the throat of the vamp, an equalizer connecting the grippers that engage the same edge of the vamp, and power actuating mechanism operating through said equalizers to effect stretching of the upper and arranged to come automatically to rest with the upper held under tension by the grippers.

5. A machine for preparing upper materials for lasting having, arranged for engagement with the forepart of the vamp at each lateral edge thereof, two pairs of grippers to stretch the upper in two lines extending transversely across the vamp, one line being located adjacent to the tip seam and the other line being located adjacent to the throat of the vamp, an equalizer connecting the grippers that engage the same edge of the vamp, and operating means acting through said equalizers to cause the grippers to stretch the upper and hold it under tension.

[Claims 6 to 62 not printed in the Gazette.]

1,110,325. METAL-WORKING MACHINE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 30, 1914. Serial No. 815,477. (Cl. 51—12.)



1. The combination of a traveling carriage, main and auxiliary driving mechanisms therefor, and mechanism for automatically reversing the carriage when the main driving mechanism is in action and for automatically stopping the carriage at a predetermined point, when the auxiliary driving mechanism is in action.

2. The combination of a traveling carriage, main and auxiliary driving mechanisms for the carriage and mechanism comprising means movable with the carriage, for automatically effecting reverse movement of the carriage when the main driving mechanism is in action and for automatically stopping the carriage at a predetermined point, when the auxiliary driving mechanism is in action.

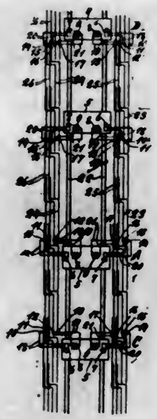
3. The combination of a traveling carriage, main and auxiliary driving mechanisms therefor, mechanism for automatically reversing the carriage when the main driving mechanism is in action and for automatically stopping the carriage at a predetermined point, when the auxiliary driving mechanism is in action, and means for positively preventing the main and auxiliary driving mechanisms being simultaneously in action.

4. The combination of a reciprocatory carriage, a rotary shaft, two power transmitting members loose on the shaft connected with and adapted to move the carriage in opposite directions, a clutch member for alternately clutching the power transmitting members to the shaft on the movement of said clutch member oppositely from its neutral position, main driving mechanism for the carriage, auxiliary driving mechanism for the carriage, and means for putting the main or the auxiliary driving mechanism into power-transmitting relation with said clutch member.

5. The combination of a reciprocatory carriage, two power transmitting members connected with and adapted to move the carriage in opposite directions, controlling mechanism for alternately putting said power transmitting members in action, main driving mechanism for the carriage, auxiliary driving mechanism for the carriage to operate the same at a higher speed than the main driving mechanism, and mechanism for putting the main or the auxiliary driving mechanism into power transmitting relation with said controlling mechanism to drive the carriage.

[Claims 6 to 23 not printed in the Gazette.]

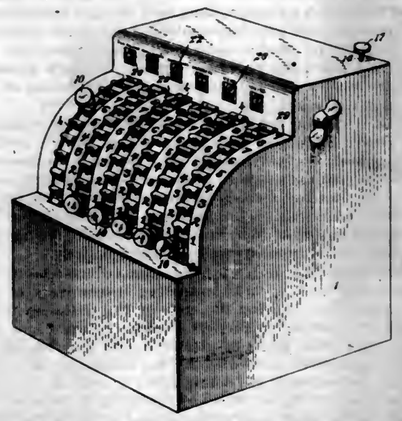
1,110,326. RAILWAY SAFETY APPLIANCE. JAMES L. HOFFMAN, Camas, Idaho. Filed Jan. 6, 1914. Serial No. 810,589. (Cl. 246—26.)



A railway signal comprising independent electric circuits carried by the train, each circuit including a source of electric energy, contacts carried by the train and connected to the respective circuits, independent electro-responsive signal devices carried by the train, contacts carried by the train and electrically connected to the respective signal devices, sectional conductors mounted along the road-bed, said conductors being arranged in pairs, there being a pair of conductors for the contacts of each of the aforesaid circuits and a pair of conductors for the contacts of each of the aforesaid signal devices, each pair of conductors being offset intermediate the ends of a section, the conductors of the respective circuit contacts being parallel to the conductors of the corresponding contacts of the signal devices for a portion of a section, and in alinement for the remainder of the section.

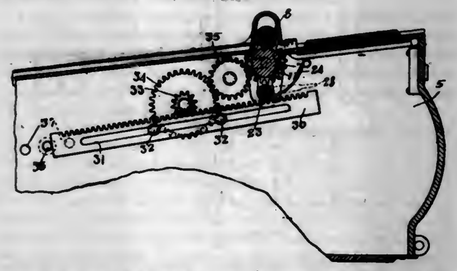
1,110,327. ADDING-MACHINE. FRED MADSEN and FRED G. WANDREY, Wautoma, Wis. Filed July 9, 1912. Serial No. 708,531. (Cl. 235—81.)

In an adding machine, the combination of a casing; a shaft mounted therein; a series of computing wheels loose on said shaft; a ratchet wheel combined with each computing wheel; a series of leaf springs mounted within said casing and engaged with said ratchet wheels for holding the same against retrograde movement; an angle



bar rotatably mounted in said casing parallel with said shaft, said springs normally resting upon one of the flat faces of said bar; and means for rocking said bar to cause one of its corners to raise said springs and disengage the same from said ratchets.

1,110,328. MANIFOLDING DEVICE. AXEL MALM, Dayton, Ohio, assignor to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 8, 1913. Serial No. 752,864. (Cl. 11—36.)



1. In a manifolding device, the combination, with feed rollers, and means to positively actuate one of said rollers, of coöperating devices to limit the movement of said positively actuated roller, one of said devices being supported independently of and operatively connected with said actuating means and having movement sufficient to permit said roller to make more than one revolution.

2. In a manifolding device, the combination, with feed rollers, and means to positively actuate one of said rollers, of coöperating stop devices to control the movement of said feed rollers, and a geared connection between one of said stop devices and said positively actuated roller, whereby said roller may make more than one revolution for each movement of said stop device.

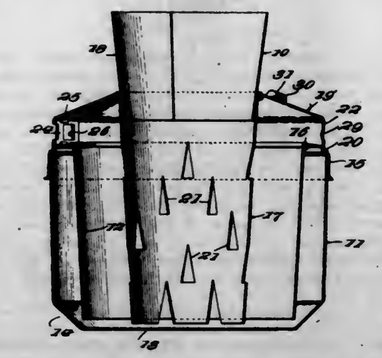
3. In a manifolding device, the combination, with feed rollers, and means to positively actuate one of said rollers, of coöperating stop devices to control the movement of said feed rollers, and a geared connection between one of said stop devices and said positively actuated roller, whereby said roller may make more than one revolution for each movement of said stop device, and means to regulate the movement of said stop device.

4. In a manifolding device, the combination, with paper feeding means comprising a feed roller, and means for rotating said roller, of a bar mounted for limited sliding movement, a stop to limit the movement of said bar, and a connection between said bar and said roller to cause the movement of said roller to be controlled by the movement of said bar.

5. In a manifolding device, the combination, with feed rollers, and means to positively actuate one of said rollers, of a geared rack mounted for sliding movements, a geared connection between said rack and said positively actuated roller, and a stop to limit the movement of said rack in one direction.

[Claims 6 and 7 not printed in the Gazette.]

1,110,329. OIL-BURNER. HENRY A. MARKS, Winterhaven, Fla. Filed Aug. 7, 1913. Serial No. 783,584. (Cl. 158—91.)



1. The combination with an oil container, of a burner suspended within the container and including an outer member, an inner member spaced from the outer member to form an intermediate air passage, the inner member having its side walls provided with apertures from its lower end to substantially a level with the upper end of the outer member and both the members having their lower ends open.

2. An oil burner including an outer tubular member adapted to be suspended within an oil container, an inner perforated tubular member spaced from the outer member to form an intermediate draft passage, the members being unconnected and open at their lower ends, and a flue forming an upper continuation of the inner tubular member.

3. The combination with an oil container, of a cover therefor, and a tubular member opening at its upper end through said cover, said cover and tubular member having draft openings, the draft openings of the tubular member being triangular in shape and each with one angle uppermost.

4. The combination with an oil container, of a cover therefor, and a tubular member opening at its upper end through said cover, said cover and tubular member having draft openings, the draft openings of the tubular member being triangular in shape, arranged in staggered vertically spaced apart series with the upper ends of one series extending above the lower ends of the next higher series.

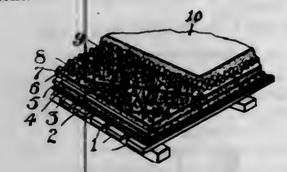
5. In an orchard heater, a container having a substantially vertical side wall and a bottom the marginal edge of which is inclined upwardly to merge with the side wall at an angle thereto, and a burner suspended within the container and closing the top thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,110,330. COMPOSITE ROOFING. FRANKLIN J. MCCLASKEY, Pittsburgh, Pa. Filed Nov. 12, 1912. Serial No. 730,915. (Cl. 108—6.)

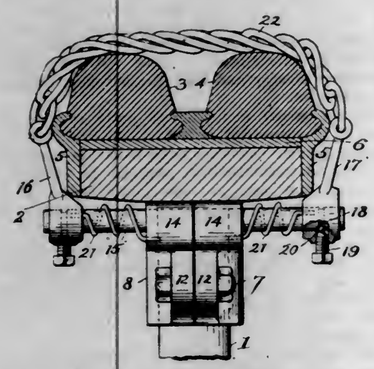
1. In a composite roofing, superposed layers of adhesive waterproof material, a layer of coarse material adherent to the top of the adhesive waterproof material,

an open metal reinforcement on the coarse material, and a layer of Portland cement combined with coarse material poured on the first named coarse material, and through and over the reinforcement the coarse material containing large fragments firmly anchored in the Portland cement on one side of the reinforcement and extending through the open metal reinforcement, and anchored in the Portland cement on the other side of the reinforcement.



2. In a composite roofing, superposed layers of adhesive waterproof material, a layer of coarse material adherent to the top of the adhesive waterproof material, an open metal reinforcement on the coarse material, and a layer of Portland cement combined with coarse material poured on the first named coarse material, and through and over the reinforcement, and fire-proof material in contact with the lowest layer of the adherent waterproof material the coarse material containing large fragments firmly anchored in the Portland cement on one side of the reinforcement and extending through the open metal reinforcement, and anchored in the Portland cement on the other side of the reinforcement.

1,110,331. ANTISLIPPING DEVICE FOR WHEELS. JOHN C. MCLEAN, Lakewood, Ohio. Filed Feb. 14, 1912. Serial No. 677,517. (Cl. 152—14.)



1. In a traction device for vehicle wheels, the combination with a chain adapted to extend transversely over the tire, and means for securing the ends of the chain upon the wheel, said chain being of greater length than the transverse length of the tire, whereby the chain may be moved along a restricted portion of the tread of the tire when the chain is between the wheel and the road, of means operatively connected with the chain and the wheel acting to throw the chain forward upon the tire in the direction of rotation of the tire when the chain passes from between the road and the tire.

2. In a traction device for vehicle wheels, the combination of the chain extending transversely of the tire, means for securing the ends of the chain upon the wheel, of resilient means operatively connected to the chain and the wheel, the said chain being of greater transverse length than the tire whereby the chain may be moved against the action of the resilient means along a restricted portion of the tread of the wheel when the chain is between the wheel and the road, the said resilient means acting to throw the chain forward upon the tire in the direction of the rotation of the wheel when the chain passes from between the wheel and the road.

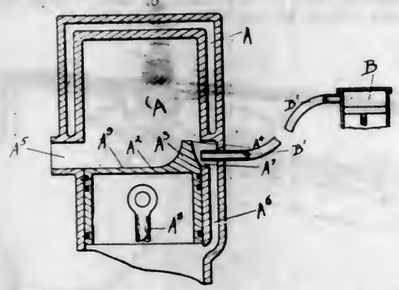
3. In a traction device for vehicle wheels, the combination with a support adapted to be secured upon a portion of the wheel and a chain passing over the tire transversely thereof, means for securing opposite ends of the chain to the support, of means operatively connected with the chain and wheel for normally urging the chain forward upon the tire of the wheel in the normal direction of rotation of the wheel.

4. In a traction device for vehicle wheels, the combination with a support adapted to be secured upon a portion of the wheel, a chain passing over the tire transversely thereof, means for securing the opposite ends of the chain to the support, of resilient means operatively connected with the chain and the support and normally urging the chain forward upon the tire of the wheel in the normal direction of rotation of the wheel.

5. In a traction device for use upon vehicle wheels, the combination with a chain extending transversely of the tire, means for securing the ends of the chain upon the wheel, of a spring operatively secured to the chain and wheel, said chain being of greater length than the transverse length of the tire whereby the chain may be moved against the action of the spring along a restricted portion of the tread of the wheel when the chain is between the wheel and the road, said spring acting to throw the chain forward upon the tire in the direction of rotation of the tire when the chain passes from between the wheel and road.

[Claims 6 to 9 not printed in the Gazette.]

1,110,332. INTERNAL-COMBUSTION ENGINE. FREDERICK FRASER MILLER, Napanee, Ontario, Canada. Filed Nov. 14, 1913. Serial No. 801,095. (Cl. 123—73.)

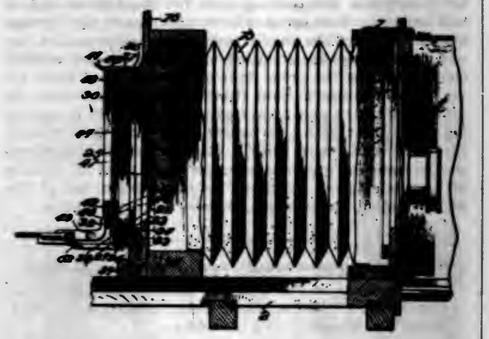


1. In an internal combustion engine, the combination with the cylinder provided with an inlet port through which the fuel is designed to be received, of a piston having a wing extending across the top face, a projection extending from the wing opposite the inlet port of the cylinder whereby the incoming stream of fuel is deflected with a swirling motion toward each side of the cylinder, as and for the purpose specified.

2. In an internal combustion engine, the combination with the cylinder provided with an inlet port through which the fuel is designed to be received, of a piston having a wing extending across the top face, a wedge shaped projection extending from the wing, the apex of the projection being opposite the inlet port of the cylinder whereby the inflowing stream of fuel is divided and directed to flow upwardly toward each side of the cylinder, as and for the purpose specified.

3. In an internal combustion engine, the combination with the cylinder provided with an inlet port through which the fuel is designed to be received, of a piston having a wing extending across the top face, a wedge shape projection having curved sides extending from the wing, the apex of the projection being opposite the inlet port of the cylinder whereby the inflowing stream of fluid is divided to flow upwardly with a whirling motion toward each side of the cylinder, as and for the purpose specified.

1,110,333. SHIFTING CAMERA-BACK. SELEST E. MOINE, Tulia, Tex. Filed Feb. 25, 1913. Serial No. 750,692. (Cl. 95—37.)



1. In a camera back, a back-plate having an opening, a supporting frame mounted for transverse adjustment upon the back-plate, light excluding slides adjustably mounted within the said supporting frame, and a plate holder removably supported by the said frame, and having a sight opening of a width greater than the width of the opening in the back-plate.

2. In a camera back, a back-plate having an opening, a supporting frame mounted for transverse adjustment upon the back-plate and having a sight opening of a width greater than the opening in the back-plate, a holder for a sensitized medium supported by the said frame and having a sight opening approximately of the same size as the opening in the frame, and a light excluding slide adjustably mounted in the opening in the frame and coöperating with the said back-plate to exclude light from the plate-holder when the plate holder and frame are in position projecting beyond the said back-plate.

3. In a camera back, a support for a holder for the sensitized medium adjustably mounted upon the back, and means for adjusting the support including a rod carried thereby, a clutch device slidably mounted upon the rod, means for moving the said clutch device, and means for clutching the same with the rod.

4. In a camera back, a support for a holder for the sensitized medium, adjustably mounted upon the back, and means for adjusting the support including a rod carried by the support, a clutch member slidably mounted upon the rod, a clutch dog carried by the same member and arranged to coöperate with the member in gripping the rod, means for moving the clutch dog into engagement with the rod, and means for moving the said clutch member.

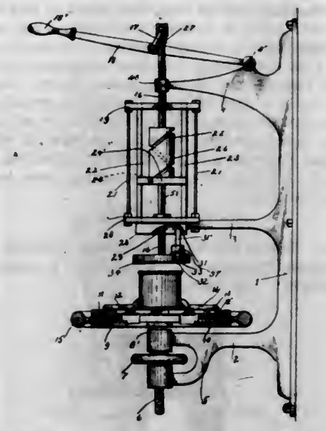
5. In a camera back, a support for a holder for the sensitized medium adjustably mounted upon the back, means for adjusting the support including a rod carried by the support, a clutch member slidably mounted upon the rod, a clutch dog carried by the said member and arranged to coöperate with the said member in gripping the rod, means normally holding the dog out of engagement with the rod, means for moving the dog into such engagement, and means for moving the clutch member.

[Claims 6 and 7 not printed in the Gazette.]

1,110,334. CAN-OPENING MACHINE. JOSEPH F. MORAN, Park Ridge, N. J. Filed Oct. 8, 1909. Serial No. 521,766. (Cl. 30—3.)

1. A can opener comprising a member, a knife normally incased in said member, a rotatable member, means actuated by said rotatable member to cause said knife to penetrate a can and to move around it, and means for actuating said rotatable member.

2. In combination a frame, a can holder at one end thereof, a vertically-disposed shaft, a cross-piece fixedly mounted on the frame carrying a projecting pin, a sleeve fixed on said shaft formed with a spirally wound groove at the bottom of which the pin fits, means for moving said sleeve downwardly to rotate it, a carrier mounted on said shaft and rotated by said sleeve, an upright knife normally held in said carrier, means for projecting said knife through said carrier as the latter rotates, and means for automatically retracting said knife.



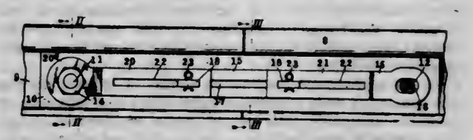
3. A device of the kind described comprising a standard, a can holding device at the lower end thereof, a carrier having a vertical slot, a knife normally held in said slot, and having a spring engaged shank projecting above said carrier, a vertically disposed shaft upon which said carrier is mounted, means for rotating said carrier, means actuated by said rotating carrier to depress said projecting shank, and a vertically-movable actuator for said first-named means.

4. In combination, a standard, a can holding device at the lower end thereof, a carrier having a vertical slot, a knife held in said slot and having a shank projecting above said carrier, a roller carried at the top of said shank, a fixed annular member having a cam recess in which said roller moves, means for rotating said carrier, said knife being depressed after the roller is released from the recess, said released roller contacting with the bottom of said member to hold the knife depressed, a vertically moving actuator for said rotating means, and means for automatically retracting said knife.

5. In a device of the character described, the combination of a rotatable carrier, a tubular member mounted therein having an upper enlarged bore, a non-rotatable member having a cam recess, a tubular plunger held at the upper end of said bore, an upper roller mounted on said plunger riding against the surface of the cam recess, said carrier formed with a vertical slot, said tubular member having an under bore registering with said slot, a knife normally disposed in said registering recesses and having a shank fitting the upper end of the plunger, and a spring coiled around said shank and disposed in said plunger and tubular member.

[Claims 6 and 7 not printed in the Gazette.]

1,110,335. NUT-LOCK. THOMAS M. MOSEWOOD, Elizabeth, N. J. Filed Apr. 27, 1914. Serial No. 834,802. (Cl. 151—54.)

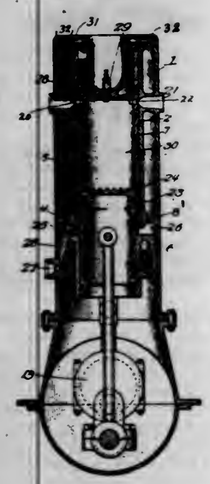


1. A device of the character described comprising a pair of bolts disposed parallel with each other, a nut engaging each of said bolts, a locking lever carried by each bolt

and provided with a straight portion extending outwardly from the bolt, the straight portions extending toward each other and located in a common plane, a strap link engaging said bolts, and means for detachably securing said straight portions to said stop links.

2. A device of the character described comprising a pair of bolts disposed parallel with each other, a nut engaging each of said bolts, a locking lever carried by each bolt and provided with a straight portion extending outwardly from the bolt, the straight portions extending toward each other and located in a common plane, a strap link engaging said bolts, a pair of lugs disposed intermediate said bolts and secured upon said strap link, each of said locking levers being provided with a slot through which one of said lugs extends, and a cotter pin extending through each lug for holding the adjacent locking lever in engagement with the lug.

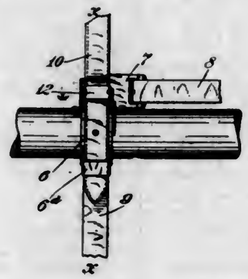
1,110,336. INTERNAL-COMBUSTION ENGINE. OSCAR L. NEISLER, Chicago, Ill. Filed Mar. 7, 1913. Serial No. 752,560. (Cl. 123—71.)



1. An internal combustion engine comprising a cylinder of different diameters at respectively opposite ends, a head for the smaller end of said cylinder, the larger end thereof being open, a tubular member fitting the smaller end of said cylinder and having an annular piston flange fitting the larger end thereof, exhaust ports in the wall of the smaller end of the cylinder adapted to register with exhaust openings in said tubular member as the latter reaches the limit of its stroke into said smaller end of said cylinder, said piston flange coacting with the shoulder at the inner end of the larger end portion of the cylinder to provide a charge compression chamber, inlet ports in said tubular member adapted to pass said shoulder as said member reciprocates, a trunk piston for said tubular member controlling said inlet ports and adapted to open the same to admit a charge from said compression chamber while said exhaust openings register with the exhaust ports and as said trunk piston attains the outer limit of its movement, there being a passage in the inner wall of the smaller end of said cylinder extending from said shoulder to the point to which the inlet ports travel for maintaining the latter in communication with said compression chamber.

2. In an internal combustion engine, a cylinder having its respective ends of different diameters and affording an annular abutment between the parts of different diameter, a tubular member fitting the smaller end of said cylinder and having an annular piston flange fitting the larger end and coacting with said abutment to provide a charge compressing chamber, trunk piston within said member, a crank shaft having two diametrically opposed cranks and connected with said member and said trunk piston respectively for simultaneously reciprocating the latter in respectively opposite directions, a head for the smaller end of said cylinder, there being exhaust openings in the circumferential wall of the smaller end of the latter and in the said tubular member arranged to register as said tubular member attains the inner limit of its movement, there being inlet openings in said tubular member controlled by said trunk piston and uncovered by the latter as it reaches the outer limit of its movement and while said exhaust ports are open, there being a passage for the compressed charge from the compressing chamber to point of location of said inlet ports relatively to the smaller end of the cylinder when the same are uncovered by said piston.

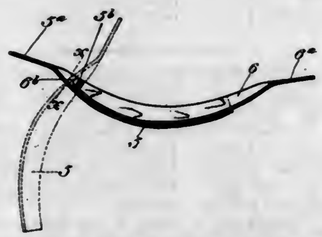
1,110,337. SAFETY-LOOP. ELZA A. NELSON, Dexter, Ohio, assignor to The Pomeroy Novelty Company, Pomeroy, Ohio, a Corporation of Ohio. Filed Dec. 7, 1911. Serial No. 664,363. (Cl. 54—50.)



1. In a shaft loop, the combination of a hold back loop, a channeled shaft encircling ring connected therewith said ring having notches in its walls or flanges, a leather lining of open ring form seated within the channel of the ring, studs projecting from said ring, a permanent loop also projecting from the ring, and a movable loop also projecting from said ring adjacent the hold back loop and arranged to be removably held in said notches by the shaft, substantially as described.

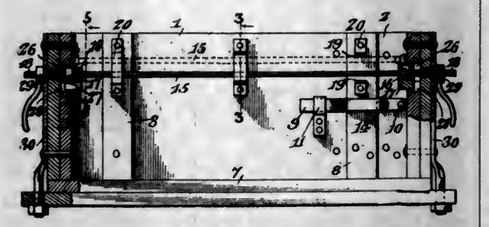
2. In a shaft loop, in combination, a channeled metallic ring, a flexible leather lining therefor, studs projecting from said ring, a permanent loop also projecting from said ring and a sliding loop connected with said ring and projecting therefrom, said loop being adapted to be slid between the leather lining and the ring, substantially as and for the purpose explained.

1,110,338. BREAST-BOW FOR HARNESS. ELZA A. NELSON, Dexter, Ohio, assignor to The Pomeroy Novelty Company, Pomeroy, Ohio, a Corporation of Ohio. Filed Dec. 7, 1911. Serial No. 664,364. (Cl. 54—59.)



A breast bow for harness comprising, in combination, two pieces of sheet metal curved longitudinally and of U-form in cross section to fit one within the other and around the breast of a horse, said pieces being open at the sides adjacent the horses' breast, the outer of said pieces having a transverse pin and the inner piece having a hook cut in its wall to engage said pin, said pieces also having shank extensions 5^a and 6^a which lie and move in a plane substantially coinciding with the plane in which the said longitudinally curved pieces lie and move.

1,110,339. END-GATE FASTENER. GEORGE T. NICHOLS, Gainesville, Tex. Filed June 25, 1912. Serial No. 705,836. (Cl. 21—21.)



1. An end gate fastener including a main rod designed to be mounted on an end gate and being of a length to extend entirely across the same, and an adjustable end rod adapted to be carried by each side of a wagon body, one of the said rods having a socket piece closed at the bottom and provided at the top with an entrance opening enlarged at the rear portion of the socket piece and the other rod having a head of a size to pass through the entrance opening and fitting in the socket piece and adapted to be drawn into tight engagement with the front portion thereof, said socket piece and head being carried into and out of engagement with each other by vertical bodily movement of one of the rods.

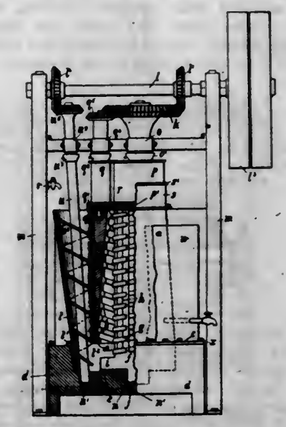
2. The combination with a wagon body and an end gate, of socket pieces adjustably mounted on the sides of the wagon body, a transverse rod carried by the end gate and movable upwardly and downwardly thereon to simultaneously engage its terminals with and disengage them from the socket pieces, and a device mounted on the end gate and arranged to receive and engage the rod for holding the same in an elevated position out of engagement with the socket pieces.

3. The combination with a wagon body and an end gate, of socket pieces adjustably mounted on the sides of the wagon body, a transverse rod carried by the end gate and movable upwardly and downwardly thereon to engage its terminals with and disengage them from the socket pieces, and a bracket mounted on the end gate and provided with a vertical opening receiving the rod, one of the walls of the opening being provided with a lower seat to receive the rod and having an upper engaging portion for holding the rod in an elevated position.

4. The combination with a wagon body and an end gate, of a transverse rod mounted on the end gate and movable upwardly and downwardly and provided with terminal engaging portions, means mounted on the sides of the wagon body and arranged to engage with the terminal portions of the main rod when the latter is at the limit of its downward movement, and a bracket mounted on the end gate and having a lower seat to receive the transverse rod when the same is engaged with the said means and provided with an upper engaging portion for holding the transverse rod elevated.

5. The combination with a wagon body, and an end gate, of socket pieces adjustably mounted on the sides of the wagon body, a transverse main rod extending across the end gate and carried by the same and having a limited vertical bodily movement independent of the end gate to simultaneously engage its terminals with and disengage them from the said socket pieces, and spaced guides mounted on the end gate and receiving the transverse main rod.

1,110,340. MACHINE FOR TREATING RUBBER. LEONIDAS NORZAGARAY, London, England, assignor to The Economic Rubber Washing Machine Co., Limited, London, England, a Corporation of England. Filed Dec. 11, 1911. Serial No. 665,111. (Cl. 18—2.)



1. In a machine of the class described, a conical feeding tube, a worm operating therein, a spirally threaded vessel of a shape partly conical and partly circular, communicating with said tube, a spirally threaded cylinder rotatable within said vessel, said cylinder having vertical teeth and a lateral tooth thereon, a large roller immediately above the cylinder provided with a toothed cutting wheel, a smaller roller adjacent said large roller and also provided with a toothed cutting wheel, a collar partly surrounding these rollers, provided with an outlet, a perforated pipe on said collar, and means for simultaneously rotating said spirally threaded cylinder and said worm.

2. In a machine of the class described, a conical feeding tube having an opening in the lower end thereof, a worm operating in said tube, a spirally threaded vessel communicating with the opening in said feeding tube, a spirally threaded cylinder rotatable within said vessel, said cylinder having vertical teeth and a lateral tooth thereon, a pair of rollers above the cylinder provided with intermeshing toothed cutting wheels, and a collar partly surrounding these rollers provided with an outlet, means on said collar for supplying liquid to said vessel, and means for simultaneously rotating said spirally threaded cylinder and said worm.

3. In a machine of the class described, a conical feeding tube, having an opening in the lower end thereof, a worm operating in said tube, a spirally threaded vessel communicating with the opening in said feeding tube, a spirally threaded cylinder rotatable within said vessel, said cylinder having vertical teeth and a lateral tooth thereon, a pair of rollers above the cylinder, cutting means on said rollers separating said rollers apart, and a collar partly surrounding these rollers provided with an outlet, means on said collar for supplying liquid to said vessel, and means for simultaneously rotating said spirally threaded cylinder and said worm.

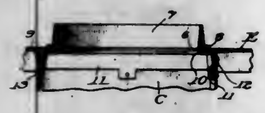
4. In a machine of the class described, a conical feeding tube, having an opening in the lower end thereof, a worm operating in said tube, a spirally threaded vessel communicating with the opening in said feeding tube, a spirally threaded cylinder rotatable within said vessel, said cylinder having vertical teeth and a lateral tooth thereon, a pair of rollers above the cylinder provided with interchangeable toothed cutting wheels, and a collar partly surrounding these rollers provided with an outlet, means on said collar for supplying liquid to said vessel, and means for simultaneously rotating said spirally threaded cylinder and said worm.

5. In a machine of the class described, a conical feed-

ing tube, a worm operating therein, a spirally threaded vessel of a shape partly conical and partly circular, communicating with said tube, a spirally threaded cylinder rotatable within said vessel, said cylinder having vertical teeth thereon, a large roller above the cylinder, a smaller roller adjacent said large roller, one of said rollers being provided with a toothed cutting wheel separating said rollers apart, and means for simultaneously rotating said spirally threaded cylinder and said worm.

[Claims 6 to 8 not printed in the Gazette.]

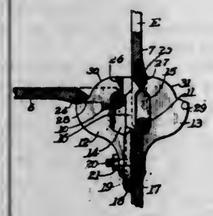
1,110,341. STEEL RANGE. GEORGE E. PICKUP, Newark, Ohio, assignor to The Wehrle Company, Newark, Ohio, a Corporation of Ohio. Filed May 14, 1913. Serial No. 767,681. (Cl. 126—1.)



1. In a stove, the combination with a flue and a top plate having an opening therein above said flue, of a cap comprising a platelike portion lying beneath said top plate and having an opening therethrough registering with the opening in the top plate, said cap further having a depending flange fitting in the upper end of said flue, and a pipe collar positioned above said top plate and separate from said plate and from said cap, said collar having a flange overlying the edge of the opening in the top plate, the interior of the opening in said top plate being greater than the opening in said cap and in the interior of said collar.

2. In a stove, the combination with a flue, and a top plate having an opening therein above said flue, of a cap separate from said top plate and flue and having a depending flange fitting said flue, said cap being positioned beneath said top plate and having an opening therein, and a pipe collar above and separate from said top plate and said cap and being suitably secured in place.

1,110,342. SHELVES AND SUPPORTING MEANS THEREFOR. GEORGE E. PICKUP, Newark, Ohio, assignor to The Wehrle Company, Newark, Ohio, a Corporation of Ohio. Filed May 14, 1913. Serial No. 767,682. (Cl. 126—334.)



1. The combination of a support, a shelf mounted thereon for pivotal movement and arranged to occupy either a horizontal or a vertical position, a cam on said support sloping downwardly and toward said support, and a coöperating cam on the lower portion of said shelf arranged to be moved into coöperative relation to the first cam before the shelf reaches its vertical position, whereby the shelf will be automatically swung into such vertical position.

2. The combination of a supporting frame, a pair of brackets mounted thereon and having vertically elongated recesses, a shelf having trunnions extending into said recesses, a cam on the upper portion of one of said brackets, the face of said cam sloping downwardly and toward said supporting frame, and a cam on said shelf above its trunnion, said cams being arranged to be brought into coöperative relation before the shelf reaches its vertical position, whereby the shelf will be automatically swung by said cams into such vertical position.

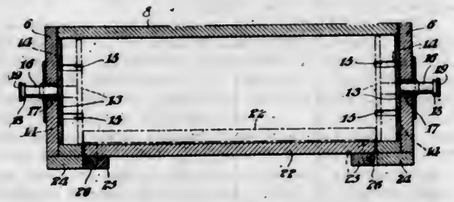
3. In a stove, the combination of a support having vertically elongated recesses, a shelf having a pair of trunnions extending into said recesses, said shelf being arranged to occupy either a horizontal or a vertical position, and coöperating cam portions on said support and said shelf arranged to hold the shelf in its vertical position, said cam portions acting to raise the shelf when pulled outwardly whereby to disengage said cam portions and permit the shelf to swing down into horizontal position.

4. In a stove, the combination of a vertical supporting wall, a pair of brackets secured to one face thereof, a swinging shelf, trunnions and vertically elongated openings coöperating to pivotally connect said shelf to said brackets, said brackets having stop portions arranged to engage the shelf to support it in its horizontal position and having cam faces at their upper ends extending downwardly and toward said supporting wall, and coöperating cam portions on said shelf, the engagement of said cam portions tending to swing said shelf into its vertical position.

5. In a stove, the combination of a vertical supporting wall having offset portions providing recesses on one face and bosses on its other face, a pair of brackets seated in said recesses, a second pair of brackets mounted on said bosses, means to secure said brackets to said wall, said wall having an opening therein, a pair of swinging shelves, means for pivotally connecting one of said shelves to one pair of said brackets to permit the shelf to lie in said opening flush with the wall when in its vertical position, and means pivotally connecting the other shelf to the other pair of brackets to permit the shelf to lie alongside said wall with its inner face adjacent to the face of the other bracket, said pivot means being so arranged that the line of direction of each shelf will fall between the axes of the pivot means, whereby the shelves will be held by gravity in their vertical position.

[Claim 6 not printed in the Gazette.]

1,110,343. CIGAR-PACKAGING DEVICE. GUSTAF A. T. PLOMGREN, Ardmore, and MAURICE GOLD, Philadelphia, Pa. Filed June 25, 1913. Serial No. 775,627. (Cl. 131—18.)



1. In a cigar packaging device, the combination of a box, two pressing walls within the box and movable toward and from each other, a lever fulcrumed at one end of the box, means operated by said lever to move one pressing wall inwardly, a lever fulcrumed at the other end of the box, means operated by the last named lever to move the other pressing wall inwardly, and a bar connecting said levers, said box having a wall having one edge hinged to the body of the box and the opposite edge held in place by said bar in one position thereof.

2. In a cigar packaging device, the combination of a box, two pressing walls within the box and movable toward and from each other, a lever fulcrumed at one end of the box, means operated by said lever to move one pressing wall inwardly, a lever fulcrumed at the other end of the box, means operated by the last named lever to move the other pressing wall inwardly, and a bar connecting said levers, said box having a wall having one edge hinged to the body of the box and the opposite edge held in place by said bar in one position thereof, and said box having a third pressing wall opposite to the hinged wall and movable toward and from the same.

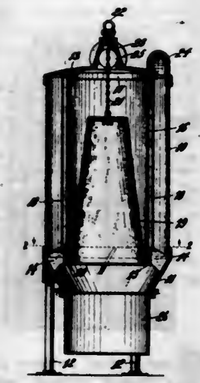
3. In a cigar packaging device, the combination of a box, two pressing walls within the box and movable toward and from each other, a lever fulcrumed at one end of the box, means operated by said lever to move one pressing wall inwardly, a lever fulcrumed at the other end of the box, means operated by the last named lever to move the other pressing wall inwardly, a bar connecting said levers, said box having a wall having one edge hinged to the body of the box and the opposite edge held in place by said bar in one position thereof, said box having a third pressing wall opposite to the hinged wall and movable toward and from the same, and a movable stop when in one position preventing outward movement of said third pressing wall and when in another position permitting outward movement of said third pressing wall.

4. In a cigar packaging device, the combination of a supporting structure, a pair of substantially parallel walls one of which is movable toward the other, and a pair of independently movable stops pivoted to said structure and adapted to engage the ends of said movable wall and prevent outward movement thereof.

5. In a cigar packaging device, the combination of a supporting structure, a pair of substantially parallel walls one of which is movable toward the other, and a longitudinally pivoted stop bar parallel to said movable wall and when in one position preventing outward movement of the movable wall and when in another position permitting outward movement of the movable wall.

[Claims 6 to 15 not printed in the Gazette.]

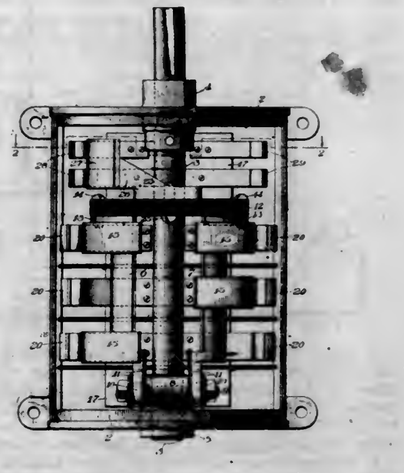
1,110,344. DUST-SEPARATOR. RAY W. PRESTON, Connersville, Ind., assignor to United Vacuum Appliance Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 24, 1913. Serial No. 763,186. (Cl. 83—48.)



1. A dust separator comprising an exterior chamber, an interior chamber, a dust collector comprising a hopper adjacent the lower end of the exterior chamber, a ring adjacent the lower end of the interior chamber, supporting means for the ring comprising a plurality of downwardly inclined deflecting members mounted in the hopper, an inverted strainer bag and means for securing said bag within the interior chamber above the dust collector.

2. A dust separator, comprising a cylindrical casing, an inner cylinder concentric therewith forming an annular passageway between them, a cover for the casing, a hopper-shaped base on which the casing is mounted, inwardly projecting ribs on the base, an internally flanged ring supported by the ribs and having the inner cylinder fitting therein, a bucket detachably secured to the base, an inlet pipe on the cover tangential to the annular passageway, an outlet pipe on the cover leading from the space within the inner cylinder, and an inverted strainer bag with its mouth secured to the flange of the ring.

1,110,345. ELECTRIC SWITCH. GUSTAVE B. REISBACH, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 1, 1909. Serial No. 499,448. (Cl. 172—179.)



1. In an electric switch, in combination, a member movable in opposite directions, reversing switch contacts thereon, an insulating disk mounted on said movable member, an auxiliary contact member secured on said insulating disk and arranged with its contact surface spaced from the insulating disk and said reversing switch contacts, said auxiliary contact member adapted to close one of two parallel circuits when said movable member is moved in either direction.

2. In an electric switch, in combination, a member movable in opposite directions, reversing switch contacts thereon, an insulating disk mounted on said movable member, an auxiliary contact member secured on said insulating disk and arranged with its contact surface spaced from the insulating disk and said reversing switch contacts, said auxiliary contact member adapted to close one of two parallel circuits after the reversing switch contacts have been operated.

3. In an electric switch, in combination, a frame, an insulating base in said frame, contact fingers arranged on said base, a drum rotatably mounted in said frame, having reversing switch contacts thereon, coöperating with certain of said contact fingers to vary the circuit connections of a motor, an insulating disk at one end of said drum, an auxiliary contact member secured to said disk away from said drum and having its contact surface spaced from said disk, said auxiliary contact adapted to coöperate with certain of said contact fingers to close one of two parallel circuits after the reversing switch contacts have engaged their respective contact fingers.

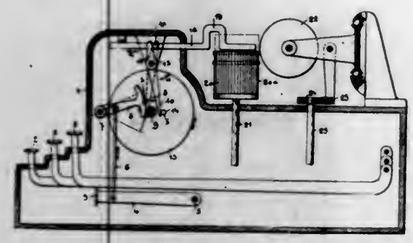
4. In an electric switch, in combination, a frame, an insulating base in said frame, contact fingers arranged on said base, a shaft rotatably mounted in said frame, drum sections secured on said shaft, reversing switch contacts arranged on said drum sections and coöperating with certain of said contact fingers for varying the circuit connections of a motor, an insulating disk on said shaft adapted to support one end of said drum, an auxiliary contact member on said insulating disk away from said drum and having its contact surface spaced from said disk, said auxiliary contact portion adapted to engage certain of said contact fingers to complete one of two parallel circuits after the motor connections have been made.

5. In an electric switch, in combination, a member movable in opposite directions, reversing switch contacts thereon, an insulating disk mounted on said movable member, an auxiliary contact member secured on said insulating disk and arranged with its contact surface spaced

from the insulating disk and said reversing switch contacts, said auxiliary contact being adapted to close one of two parallel circuits when moved in either direction.

[Claims 6 to 10 not printed in the Gazette.]

1,110,346. TYPE-WRITING MACHINE. ADOLF REISSER, Vienna, Austria-Hungary. Filed Apr. 30, 1914. Serial No. 835,399. (Cl. 197—53.)



1. A typewriting machine with a closed housing, operating mechanism inside the housing and a type carrier and paper carrier outside the housing, and an independent member projecting through the closed housing and as a transmitting member between the operating mechanism inside the closed housing and the type carrier outside.

2. A typewriting machine with a closed housing, a striking member rotatable about an axle inside the housing, a type carrier outside the housing and a member passing through the closed housing and as a transmitting member between the striking member and type carrier.

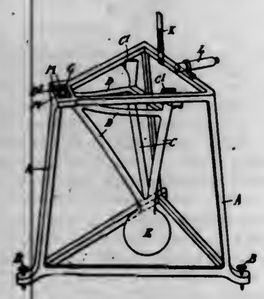
3. A typewriting machine with a closed housing, a type carrier outside the housing, and a member projecting through the closed housing and cranked outside, said member serving as a transmitting member between the operating mechanism inside the casing and the type carrier.

4. A typewriting machine with a closed housing, a striking member inside the housing, a transmitting member projecting through the housing, levers in the housing between the striking member and transmitting member, and a type carrier outside the closed housing.

5. A typewriting machine with a closed housing, a type carrier outside the housing and operating mechanism inside the housing, an independent member between the operating mechanism and type carrier and projecting through the housing, a striking member in the housing and a pressure lever having arms of unequal length between the striking member and the member projecting through the housing wall.

[Claims 6 to 10 not printed in the Gazette.]

1,110,347. TRIM-INDICATOR FOR SHIPS. RICHARD CADWALADR ROBERTS, Wymeswold, England. Filed Sept. 10,1913. Serial No. 789,105. (Cl. 88—14.)



1. In a trim indicator, the combination, with a frame adapted to partake of the motion of the ship, of a lever pivotally supported by the frame, a weight which holds the lever relatively stationary in the frame, and an oscillatory indicating mirror pivotally supported between the said lever and frame.

2. In a trim indicator for ships, the combination of a framing, a weighted lever suspended in or on said frame, and optical indicator mechanism with a mirror which is connected to and tilted by a movement of the lever relatively to the frame, substantially as described.

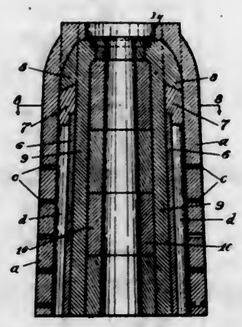
3. In a trim indicator for ships, the combination of a framing, a weighted lever suspended in or on said frame, a fixed scale, and optical indicator mechanism consisting of a telescope with a cross wire, and a mirror which is connected to and tilted by a movement of the lever relatively to the frame, substantially as described.

4. In a trim indicator for ships, the combination of a framing, a weighted lever suspended in or on said frame, a mirror which is supported on the frame and the free end of one member of said lever respectively so that it is tilted by a movement of the latter relatively to the frame, a fixed scale, and a telescope with a cross wire, substantially as described.

5. In a trim indicator for ships, the combination of a framing, a weighted lever suspended in said framing, a mirror connected to and tilted by said lever, a fixed scale, and a telescope with cross wire, said scale and telescope being so disposed that an image of the scale can be seen in the mirror on looking through the telescope and the position of the cross wire on said image be observed, substantially as described.

[Claim 6 not printed in the Gazette.]

1,110,348. APPARATUS FOR MAKING INGOT-MOLDS. CHARLES G. ROBINSON, Pittsburgh, Pa., assignor to Wheeling Steel Casting Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Sept. 10, 1913. Serial No. 789,164. (Cl. 22—140.)



1. An apparatus for casing unitary steel ingot molds having stripper lugs formed thereon, said apparatus including a unitary metal mold, a centrally disposed core, and core blocks disposed within said mold near the upper end and on opposite sides thereof and adapted to form the under side of the lugs on the ingot mold, the remaining portion of the said lugs being formed by the walls of said unitary metal mold.

2. In an apparatus for making ingot molds, the combination of an outer wall or mold, a core centrally disposed therein, core blocks disposed in the upper portion of said mold, vertically disposed cores arranged in said mold between the inner wall of said mold and the first mentioned core to form air spaces within the wall of said mold on opposite sides, said mold having vents leading from the said air spaces to the exterior.

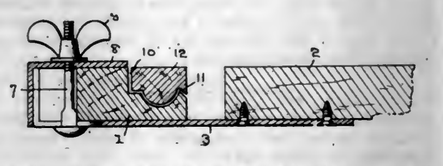
3. In an apparatus for making ingot molds, the combination of an outer wall or mold, a core centrally disposed therein, core blocks disposed in the upper portion of said mold, vertically disposed cores arranged in said mold between the inner wall thereof and said first mentioned core to form an air space in the wall of said mold on each of the opposite sides, said air spaces extending from said core blocks to the lower end of said mold, and said mold having vents leading from said air spaces to the exterior.

4. In an apparatus for making ingot molds, the combination of an outer wall or mold, a core centrally disposed therein, core blocks disposed in the upper portion of said mold vertical cores disposed in supporting relation to said core blocks and arranged between the inner wall of said mold and the first mentioned core.

5. In an apparatus for making ingot molds, the combination of a unitary mold of cast steel, a core centrally disposed therein forming the cavity in which the ingot is cast, core blocks disposed in the upper portion of said cast steel mold constituting formers for the under surface of the stripper lugs on said ingot mold, vertically disposed cores arranged within said cast steel mold between the outer wall of the centrally disposed core and the inner wall of the cast steel mold whereby spaces are formed within the latter for the reception of the molten metal forming the ingot mold, said cast steel mold having vents leading from said spaces to the exterior.

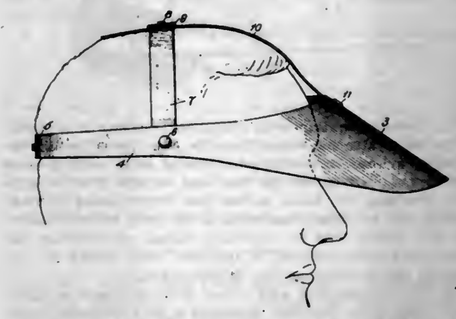
[Claims 6 and 7 not printed in the Gazette.]

1,110,349. EMBROIDERY-FRAME AND SUPPORT THEREFOR. MATILDA ROSS, Tacoma, Wash. Filed Oct. 23, 1913. Serial No. 796,946. (Cl. 45—24.)



An embroidery frame having secured thereto, metallic fastening members the ends thereof being slotted and having a portion of their slotted ends turned upwardly, combined with L-shaped members each provided with a central aperture in its body portion; a bolt provided with a winged nut; said fastening members being operatively mounted on the ends of the end members of said frame to permit of said end members being movably held in spaced relation to each other upon the side members of the frame.

1,110,350. EYE-SHADE. JOHN P. SCHNEIDER, Chicago, Ill. Filed Aug. 27, 1913. Serial No. 786,864. (Cl. 128—11.)

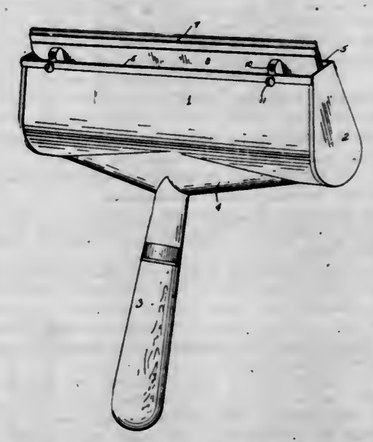


1. In an eye shade a vizor in combination with means for preventing lateral and downward displacement of the vizor comprising a band adapted to pass over the head of a wearer from side to side, and a relatively stiff strip connecting said band with the rear edge of the vizor adapted to space the rear edge of the vizor from the forehead of the wearer.

2. In an eye shade a vizor in combination with a band attached to the vizor adapted to extend around the head of a wearer to prevent lateral displacement of the vizor, a second band having its ends attached to the first band adapted to pass over the head of a wearer from side to side to prevent downward displacement of the vizor, and a relatively stiff strip connecting the second band with the vizor and adapted to space the rear edge of the vizor from the forehead of the wearer.

3. In an eye shade, a vizor in combination with means for preventing lateral and downward displacement of the vizor comprising a band adapted to pass over the head of a wearer from side to side, and a relatively stiff metal strip connecting said band with the rear edge of the vizor adapted to space the rear edge of the vizor from the forehead of the wearer.

1,110,351. PAINTER'S TOOL. OSCAR SCHORN, Cleveland, Ohio, assignor of one-half to John P. Weigel, Cleveland, Ohio. Filed Mar. 7, 1912. Serial No. 682,327. (Cl. 15—59.)

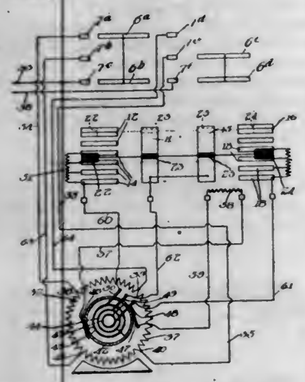


1. In a device of the character described, the combination with a receptacle having upwardly extending uninterrupted sides terminating abruptly in spaced lips which define an upwardly opening elongated mouth, of a squilgee projecting partly within and partly without said mouth and extending substantially the length thereof, but occupying only a part of its width, the interior of said receptacle being devoid of projections or pockets and being spaced from said squilgee at all points.

2. In a device of the character set forth, the combination with a reservoir member having upwardly converging sides terminating abruptly in spaced lips which define an upwardly opening elongated mouth, and also having substantially vertical end pieces, of a squilgee projecting partly within and partly without said mouth and spaced from both lips thereof and also spaced from the bottom of the reservoir, said squilgee extending from one end of said reservoir to the other, and a handle projecting from a part of said reservoir member removed from said mouth.

3. In a device of the character described, in combination, an elongated reservoir member having upwardly converging substantially flat sides, and substantially vertical ends, the upper edges of said sides terminating in lips which define an elongated upwardly opening mouth, metallic blocks mounted between said lips at points removed from said ends and having squilgee receiving slots, a squilgee having a rigid portion secured in said slots and extending from end to end of said mouth, said rigid portion being partly within and partly without the plane of said mouth and spaced from both of said lips, the outer portion of said squilgee being flexible, means for detachably securing said squilgee in said slots, and a handle secured to said reservoir member at a point removed from said mouth.

1,110,352. ALTERNATING-CURRENT-MOTOR CONTROLLER FOR ELEVATORS. ARTHUR SIMON, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 21, 1907. Serial No. 358,665. (Cl. 172—289.)



1. In combination, a motor adapted to operate as a repulsion motor and as an induction motor and a controller for starting said motor as a repulsion motor and thereafter automatically establishing connections for causing the same to operate as an induction motor, said controller interrupting said latter connections in starting said motor.

2. In combination, a motor adapted to operate as a repulsion motor and as an induction motor, and a controller whereby said motor may be started as a repulsion motor and after the lapse of a predetermined interval of time be gradually and automatically caused to operate as an induction motor.

3. In combination, a motor adapted to operate as a repulsion motor and as an induction motor, and a controller mechanically independent of the motor to start the same as a repulsion motor and subsequently automatically cause the same to operate as an induction motor.

4. In combination, a motor adapted to operate as a repulsion motor and as an induction motor and a stationary and mechanically independent controller adapted to automatically change the circuit connections of the motor to cause the motor to operate as an induction motor after being started as a repulsion motor.

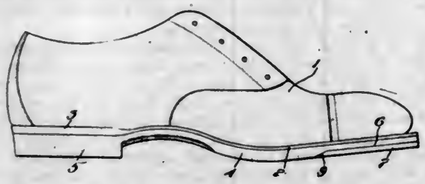
5. In combination, a motor adapted to operate as a repulsion motor and as an induction motor; a switch adapted to start the motor as a repulsion motor; a controller adapted to control the operation of the motor as an induction motor; and mechanically operating connections whereby said controller is automatically caused to operate the motor as an induction motor after said switch has been operated to start the motor as a repulsion motor.

[Claims 6 to 33 not printed in the Gazette.]

1,110,353. RUBBER-SOLED SHOE. CHARLES B. SLATER, Boston, Mass., assignor of one-half to Flexible Rubber Goods Co., Salisbury, Conn., a Corporation of Connecticut. Filed Sept. 19, 1913. Serial No. 790,625. (Cl. 36—32.)

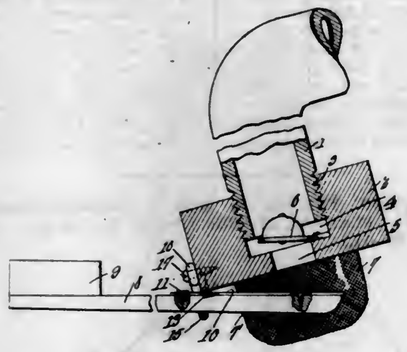
1. A boot or shoe having a rubber sole applied thereto formed with a recess across the entire tread face at the toe portion, said recess having a beveled face slanting transversely of the shoe bottom, and a leather sole piece having a corresponding bevel and slant overlapping the rubber sole, and of substantially equal thickness to the depth of said recess, both rubber sole and leather sole piece being secured to the shoe by stitching.

2. A rubber sole for a shoe comprising a main body portion conforming substantially to the outline of the shoe sole to which it is to be applied, said main body portion having a thickened tread portion to the rear of and spaced apart from the tip, the tip of said main body portion being at a higher elevation than the tread surface of said thickened portion, the forward edge of said thickened tread portion being oblique to the center line of the sole and being beveled back.



3. A shoe construction, comprising a rubber sole portion conforming to the sole outline of the shoe and secured thereto, said rubber sole portion having a relatively thickened tread portion arranged under the ball portion of the shoe and terminating to the rear of the forward end, and a leather filler piece or tip covering the forward end of said sole portion forward of said thickened tread portion, said tip portion conforming in outline to that part of the tip of the sole portion forward of said thickened tread, the forward edge of said thickened tread portion being oblique to the center line of the sole and being beveled back, the rear edge of the leather tip conforming to the bevel of the forward edge of the rubber sole portion and being secured thereto.

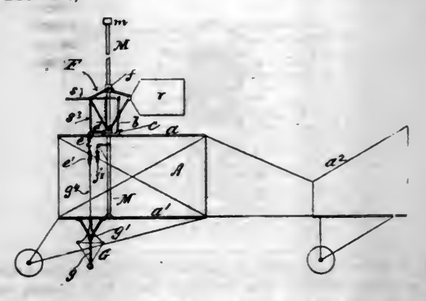
1,110,354. FLOAT-VALVE FOR PUMPS. JAMES R. SMITH, Howell, Ind. Filed Mar. 2, 1914. Serial No. 821,995. (Cl. 103—86.)



1. The combination with a foot valve casing of a pump, of a float valve for controlling the inlet port thereof, including a lever, a flexible port closing strip carried upon the upper surface of the free end of the lever, means for attaching the same to the foot valve casing to constitute the pivoting connection of the float actuated lever to the casing, and an auxiliary means surrounding the float lever and attached to the foot valve casing for relieving the strain upon the flexible strip.

2. The combination with a foot valve casing of a pump, of a float valve therefor, including a float actuated lever, a strip of flexible material attached to the upper surface of the free end thereof for movement to and from the port of the foot valve casing, said strip being of greater width than the lever, fastenings for attaching the projecting edges of the strip to the under side of the foot valve casing and at the fulcrum point of the lever, and a metal bail attached to the forward edge of the foot valve casing and surrounding the float lever to relieve the strain upon the flexible strip.

1,110,355. AEROPLANE. PHILIP H. SMITH, Pawling, N. Y. Filed Oct. 7, 1913. Serial No. 793,790. (Cl. 244—21.)



1. In combination, an aeroplane, a mast carried by said aeroplane, a frame slidably mounted on said mast, releasable means for locking said frame in normal position, an auxiliary plane pivotally mounted on said frame, releasable means for locking said auxiliary plane parallel to the main plane surface, and a rudder mounted on said frame.

2. In combination, an aeroplane, a mast carried by said aeroplane, a frame slidably mounted on said mast, releasable means for locking said frame in normal position, an auxiliary plane pivotally mounted on said frame, releasable means for locking said auxiliary plane parallel to the main plane surface, and a rudder mounted on said frame; said rudder being formed with hinged expandable rear sections, for the purpose described.

3. In combination, an aeroplane, a mast carried by said aeroplane, a slidable frame mounted on said mast, an auxiliary plane pivotally mounted on said frame, a rudder mounted on said frame, releasable means for retaining said frame in its normal position, and means for automatically releasing said frame consisting of a spring bolt, a gravity pendulum supported upon a universal joint formed with lateral arms, and flexible means connecting said arms with said spring bolt whereby when the aeroplane is tilted at a prescribed angle the auxiliary plane will be released for the purpose described.

4. In combination, an aeroplane, a mast carried by said aeroplane, a frame slidably mounted on said mast, releasable means for locking said frame in normal position, an auxiliary plane pivotally mounted on said frame, releasable means for locking said auxiliary plane parallel to the main plane surface, a rudder mounted upon said frame, and means for turning said auxiliary plane into parallelism with the main plane surface after its release, for the purpose set forth.

5. In combination, an aeroplane, a mast mounted thereon, a frame slidable on said mast, releasable means for securing said frame in its normal position, an auxiliary plane mounted upon an axis pivotally supported on said frame, locking arms secured to said axis, and a spring bolt and cam release arranged to act in conjunction with said arms to lock one while releasing the other, thereby setting the parts in such manner that the auxiliary plane may be released by the withdrawing of a single bolt as and for the purpose set forth.

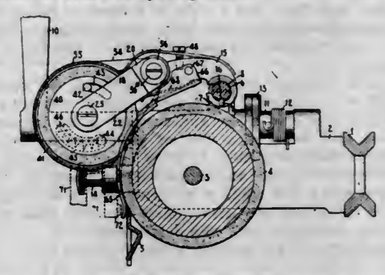
[Claims 6 to 9 not printed in the Gazette.]

1,110,356. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed May 7, 1913. Serial No. 766,026. (Cl. 197—180.)

1. In a machine of the character described, the combination of a platen, a paper feed roller, and a line numbering wheel actuated from said paper feed roller.

2. The combination of a platen, a paper feed roller, and line numbering wheels actuated from said paper feed roller and having lost motion connection therewith.

3. The combination of a platen, means for printing on said platen, means for turning said platen for line spacing, and a line numbering wheel located above the printing line and turned by a rolling action against the paper at each actuation of said line spacing means.

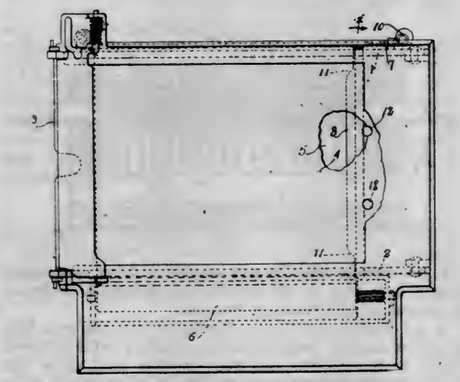


4. The combination of a platen, means for writing on said platen, line spacing means, a roller pressed into contact with the paper and arranged to be turned at each actuation of said line spacing means, and line numbering devices operated by said roller.

5. The combination of a platen, printing instrumentalities, line spacing means, a paper finger, and line numbering devices adjustable with said paper finger along said platen.

[Claims 6 to 26 not printed in the Gazette.]

1,110,357. CARBON-PAPER PROTECTOR. MILTON C. STERN, Dayton, Ohio, assignor to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 19, 1914. Serial No. 812,966. (Cl. 11—36.)



1. In a device of the character described, the combination, with a supporting table, a plurality of webs of paper extending over said table, and transfer paper interleaved between said webs, of a protector arranged near the point of initial contact between said webs and said transfer paper to prevent projecting edges on said webs from injuring said transfer paper, and supported independently of said transfer paper.

2. In a device of the character described, the combination, with a supporting table, a plurality of webs of paper extending over said table, and transfer paper interleaved between said webs, of a protector having an edge arranged adjacent to one of said webs in advance of the point of initial contact between said webs and said transfer paper and supported independently of said transfer paper.

3. In a device of the character described, the combination, with a supporting table, a plurality of webs of paper extending over said table, and transfer paper interleaved between said webs, of a protector arranged between adjacent webs, extending transversely thereto and having a portion located adjacent to and in advance of the edge of

said transfer paper, and supported independently of said transfer paper.

4. In a device of the character described, the combination, with a supporting table, a plurality of webs of paper extending over said table, and transfer paper interleaved between said webs, and a strip of protecting material extending transversely to said webs, overlapping the edge of said transfer paper and supported independently of said transfer paper.

5. In a device of the character described, the combination, with a supporting table, a plurality of webs of paper extending over said table, and transfer paper interleaved between said webs, of a strip of protecting material extending transversely to said webs, overlapping the edge of said transfer paper, and supported independently of said transfer paper said strip of material having one edge arranged to engage projecting parts of said webs in advance of the edge of said transfer material.

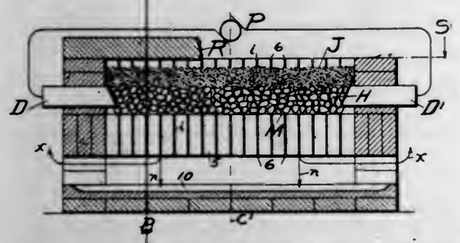
[Claims 6 to 9 not printed in the Gazette.]

1,110,358. PAINT COMPOSITION. FERDINAND STERNBERG, New York, N. Y., assignor of one-half to John Folcz, New York, N. Y. Filed Dec. 30, 1913. Serial No. 809,479. (Cl. 134—58.)

1. A paint composition containing green ultramarine, verdigris, pulverized copper, indigo blue, and violet aniliu in substantially the proportions set forth.

2. A paint composition containing green ultramarine 100 parts, verdegris 25 parts, finely powdered copper 15 parts, indigo blue 25 parts, and prepared violet aniliu 5 parts.

1,110,359. ELECTRIC ZINC-FURNACE WITH INTEGRAL CONDENSER. CHARLES VICTOR THIERRY, Paris, France. Filed May 21, 1913. Serial No. 768,917. (Cl. 204—64.)



1. An electric zinc furnace having a fume condensing system contained in the longitudinal side-walls and sole or bottom of the reaction chamber.

2. An electric zinc furnace having at the sides of a bed-of-carbon resistor longitudinally extending walls between which is located the reaction chamber and below the resistor a sole or bottom, each of the walls and the bottom being provided with a plurality of fissures the ends of which open respectively to the reaction chamber and to atmosphere.

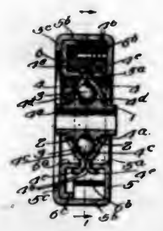
3. A combined electric zinc furnace and condenser in which the longitudinal side-walls and sole or bottom of its reaction chamber are provided with a plurality of spaces or fissures opening respectively to the said chamber and to atmosphere.

4. In the metallurgy of zinc an electric furnace having a carbon resistor adapted to support a superimposed charge of reacting material bounded by pierced walls in which zinc fume is condensed and from which the residual fume and gases escape directly to atmosphere.

5. An electric zinc furnace having a carbon resistor arranged so that a charge of reacting material can be placed on the resistor in physical contact with retaining walls which are provided with a plurality of horizontally disposed continuous condensing channels, ducts, slits or fissures that lead directly from the reaction chamber to atmosphere.

[Claims 6 to 8 not printed in the Gazette.]

1,110,360. ROLLER. WALTER WARE, Chicago, Ill. Filed Jan. 31, 1914. Serial No. 815,604. (Cl. 46—52.)



1. A roller comprising a central shaft having an annular raceway, balls in said raceway, twin race plates, one on each side of the balls, said race plates having outwardly facing flanges at their periphery, a body portion having an inwardly faced flange engaging the outwardly facing flange of the adjacent raceway, a side plate having an inwardly facing flange engaging the outwardly facing flange on the remaining race plate, said body portion having a tread and engaging said side plate to hold it against movement in one direction, and spacing means for holding said side plate against movement in the opposite direction.

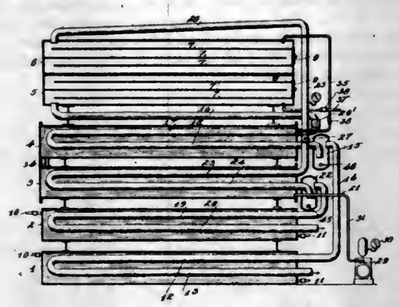
2. A roller comprising a central shaft having an annular raceway, balls in said raceway, twin race plates, one on each side of the balls, said race plates having flaring outwardly facing flanges at their periphery, a body portion having an inwardly facing flange making a wedge fit with the outwardly facing flange of the adjacent race plate, a side plate having an inwardly facing flange making a wedge fit with the outwardly facing flange of the remaining race plate, a leg on said side plate engaging the opposite side of said body portion to limit the wedging action upon said race plates, and means on said body portion for retaining the side plate.

3. A roller comprising a central shaft having an external raceway, balls in said raceway, twin race plates, one on each side of the balls, and two elements having approximately cylindrical flanges concentric with the shaft and engaging said race plates on opposite sides thereof, one of said two elements constituting a body portion having a side wall and a tread, and the other constituting a side plate, the full thickness of said body portion being rimmed over the periphery of the side plate for retaining the side plate and spacing means for holding the side plate against inward movement.

4. In a roller, the combination of a pair of twin race plates having concave surfaces facing toward each other to form a raceway, balls in said raceway, a central shaft passing through said plates concentrically thereto, said plates having flanges at their periphery facing outwardly, a body portion having a tread and a substantially cylindrical inwardly facing flange engaging the outwardly facing flange upon one of said race plates, a side plate having an inwardly facing flange engaging the outwardly facing flange on the other of said race plates, said side plate fitting into the tread of the body portion and being held thereby against movement in one direction and spacing means for holding said side plate against movement in the opposite direction, said body portion and side plate thereby retaining the race plates in alinement with each other.

5. In a roller, the combination of a central shaft having an external raceway, balls in said raceway, twin race plates, one on each side of the balls, and two elements engaging said race plates on opposite sides thereof to hold them together, one of said two elements constituting a body portion provided with a tread and the other constituting a side plate located within said tread, said body portion having a flange engaging the outside of the side plate for retaining it, and said side plate having spacing means for holding it in engagement with said flange, said race plates, body portion and side plate all being of sheet metal and each having full thickness of metal throughout its entire configuration.

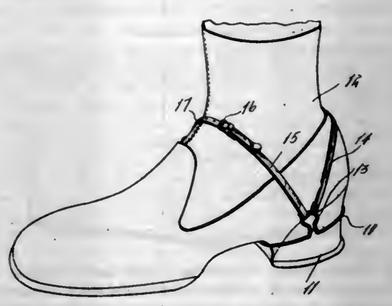
1,110,361. APPARATUS FOR REFINING PETROLEUM. MURRAY H. WARREN, Mexico, Mexico. Filed Nov. 17, 1913. Serial No. 801,375. (Cl. 196—8.)



1. An apparatus for refining petroleum, comprising a plurality of condensers, a plurality of exchangers, a plurality of communicating stills, a series of longitudinally-disposed baffles within each of said stills, each of which projects from one end of the still and terminates a distance away from the opposite end to provide a tortuous path for the oil, and supply it in thin streams or films, means for supplying oil to the exchangers, means for conveying oil from the exchangers to the stills, means for supplying superheated steam under high pressure to the stills, and means for conveying the lighter and heavier vapors from the stills to the condensers.

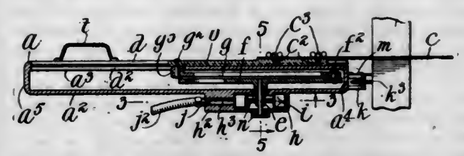
2. An apparatus for refining petroleum, comprising a plurality of condensers, a plurality of exchangers, a plurality of communicating stills, a series of longitudinally-disposed baffles within each of said stills, each of which projects from one end of the still and terminates a distance away from the opposite end to provide a tortuous path for the oil, and supply it in thin streams or films, means for supplying oil to the exchangers, means for conveying oil from the exchangers to the stills, means for supplying superheated steam under high pressure to the stills, means for conveying the lighter and heavier vapors from the stills to the condensers and traps co-acting with the latter means for carrying off the waters of condensation.

1,110,362. OVERSHOE-RETAINER. JOHN R. WHITAKER, Kimball, Nebr. Filed Nov. 7, 1913. Serial No. 799,726. (Cl. 36—7.)



An overshoe retainer comprising a ring adapted to fit closely about that portion of the heel of an overshoe including the heel breast, the opposite sides of said ring adapted to engage the opposite sides of the heel portion of said overshoe having formed integral therewith upstanding loops, a strap connected at its opposite ends to said loops and adapted to extend upwardly therefrom and closely about the rear end portion of said heel portion of said overshoe, and adjustably connected straps secured to said loops and adapted to extend over the instep of the shoe of the wearer.

1,110,363. MECHANICAL HANDSAW. PRINCE EDWARD WHITE, Perth Amboy, N. J. Filed Nov. 19, 1913. Serial No. 801,791. (Cl. 143—68.)

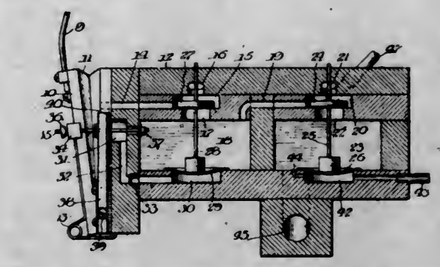


1. In a hand saw device, a frame, a wheel mounted therein, means for turning said wheel, a slide mounted in said frame and operated by said wheel, and a saw connected with said slide and adapted to be projected beyond one end of the frame, said end of the frame being also provided with a spur wheel having spring projected bearings and at one side of which is a toothed blade beyond which the wheel is normally projected.

2. A mechanical saw comprising an oblong frame composed of parallel side members, one side member of said frame being provided with a housing, a shaft mounted in said housing and extending into said frame, a wheel mounted on the said shaft between the side members of the frame, a guide way provided on the other side member, a slot placing said guide way in communication with the inside of the frame, a slide mounted in said guide way, a link provided in said frame and having a part which extends through said slot and is connected to said slide, the link being also connected to the wheel, a saw detachably connected with one end of said slide, and means for operating said shaft.

3. A mechanical saw comprising an oblong frame composed of parallel side members, one side member of said frame being provided with a housing, a shaft mounted in said housing and extending into said frame, a wheel mounted on the said shaft between the side members of the frame, a T-shaped guide way provided on the opposite side member, a slot placing said guide way in communication with the inside of the frame, a T-shaped slide mounted in said guide way, a link provided in said frame and having a part which extends through said slot and is connected to said slide, the link being also connected to the wheel, a saw detachably connected to said slide, and means for operating said shaft.

1,110,364. PNEUMATICALLY-ACTUATED MUSICAL INSTRUMENT. PETER WIGGEN, Chicago, Ill., assignor to Oscar Nelson, Chicago, Ill. Filed Nov. 20, 1912. Serial No. 732,446. (Cl. 84—206.)

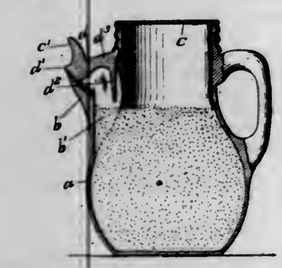


1. In a musical instrument, a valve chest, a pneumatic connected thereto, a vibrator carried by the said pneumatic, an exhaust pipe from which air is being drawn, a valve alternately connecting the interior of the pneumatic with the outer air and with the interior of the valve chest, a pneumatically controlled valve for connecting the interior of the valve chest with the exhaust pipe, and another valve actuated by the movement of the pneumatic to effect the return of the first mentioned valve to its normal position.

2. In a musical instrument, a valve chest, a pneumatic connected thereto, a vibrator carried by the pneumatic, a reciprocable valve within the valve chest, the said valve controlling a passage between the interior of the valve chest and the pneumatic, a diaphragm connected to the said valve and positioned above a chamber, a pivoted valve controlled by the movement of the said pneumatic, and comprising a pair of valve disks adapted to connect the chamber below the diaphragm with the outer air when said pneumatic is inflated and to connect said chamber with the exhaust pipe when the pneumatic is deflated, and a pneumatically controlled valve for disconnecting the valve chest from the outer air and connecting it to a source of suction.

3. In a musical instrument, the combination with a valve chest, of a pneumatic connected thereto, a vibrator carried by the pneumatic, a reciprocable valve within the valve chest, the said valve controlling a passage between the interior of the valve chest and the pneumatic, a diaphragm connected to the said valve and positioned above a chamber, another valve controller by the movement of said pneumatic and comprising a pair of valve disks adapted to connect the chamber below the diaphragm with the outer air when said pneumatic is inflated and to connect said chamber with the exhaust pipe when the pneumatic is deflated, another pneumatic, a damper mounted thereon, the last named pneumatic adapted to raise the damper from the instrument, and a pneumatically controlled valve for disconnecting the valve chest from the outer air and connecting it to a source of suction.

1,110,365. MEASURING-CONTAINER FOR SUGAR. BRADFORD L. WILLIAMS, Camden, N. J. Filed Nov. 8, 1913. Serial No. 799,867. (Cl. 221—98.)



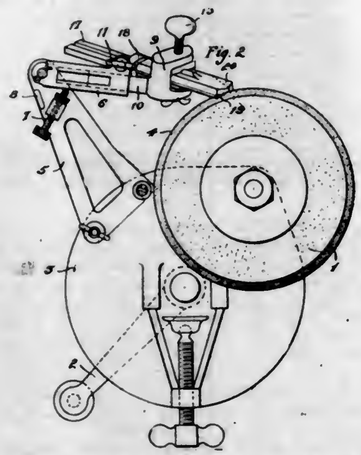
A container jug having a removable cap and a spout, in combination with a measuring device seated within the mouth of said spout, said cap forming the hinged connection of said jug with said device, which latter is provided with a catch and with a projection, said projection adapted to separate a definite quantity of material in the said spout in the tilting of said jug, substantially as and for the purposes described.

1,110,366. FLAT-DRILL-GRINDING APPARATUS. JOHN S. WINCRANTZ, Pittsburgh, Pa., assignor to Samuel S. Newman, Pittsburgh, Pa. Filed June 10, 1914. Serial No. 844,182. (Cl. 51—7.)

1. In combination in apparatus for grinding an undercut on a flat drill, a disk grinding wheel having its corner beveled, and a clamping means for holding a flat drill inclined downwardly and transversely of the plane of rotation of the drill so that one face thereof at the end of the drill engages the beveled portion of the wheel.

2. In combination in apparatus for grinding an undercut on a flat drill, a disk grinding wheel having its corner beveled, an arm mounted to swing vertically, and a clamping device adjustable rotatably upon said arm, and adapted to hold the drill downwardly and transversely inclined with respect to the grinding wheel with its face at the end of the drill in engagement with the beveled portion of the wheel.

3. In combination in apparatus for grinding an undercut on a flat drill, a disk grinding wheel having its corner beveled, an arm mounted to swing vertically, and a clamping device adjustable longitudinally and rotatably with respect to said arm and adapted to hold the drill downwardly and transversely inclined with respect to the grinding wheel with its face at the end of the drill in engagement with the beveled portion of the wheel.

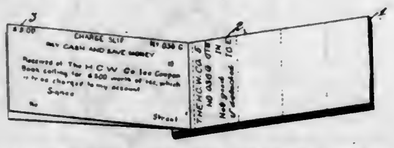


4. In combination in apparatus for grinding an under cut on a flat drill, a disk grinding wheel having its corner beveled, and a clamping means for holding a flat drill comprising an arm swinging in a plane parallel to the plane of rotation of the wheel, and a holder for the drill having a stem supported for rotary adjustment on the arm and adapted to hold the drill in a position inclined obliquely with respect to the plane of rotation of the wheel and with one of the faces of the drill at its end in engagement with the beveled portion of the wheel.

5. In combination in apparatus for grinding an undercut on a flat drill, a disk grinding wheel having its corner beveled, and an adjustable clamping means for holding a flat drill inclined obliquely with respect to the axis of rotation of the wheel and with respect to the plane of rotation of the wheel so that one face of the drill at the end thereof lies over the beveled portion of the wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,110,367. COUPON-BOOK. HARRY C. WOOD, Cincinnati, Ohio. Filed Sept. 5, 1911. Serial No. 647,757. (Cl. 11—15.)



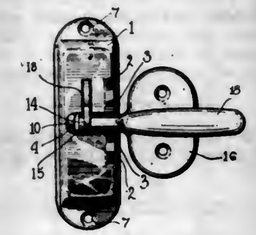
1. A coupon book, comprising leaves each divided into separable coupons of a redeemable value, and a leaf having one side representing a certificate of obligation, the reverse side divided into a series of coupons, said leaf unitarily detachable from the book for certificate use, and serially separable for coupon use.

2. A coupon book, comprising leaves each divided into separable coupons of a redeemable value, and a leaf having one side representing a certificate of obligation, the reverse side divided into a series of coupons, said leaf unitarily detachable from the book for certificate use, and serially separable for coupon use, with all coupons and face of the certificate of obligation bearing like identifying means.

3. A book, having a leaf with one of its sides representing a certificate of obligation, unitarily detachable from the book on a credit purchase of the book, and serially separable for coupon use of redeemable discount valve on a cash purchase of the book.

4. A book having a detachable leaf, one side sub-divided into coupons and separable from each other, the opposite side of the leaf representing an instrument of obligation for the purchase value of the book on a credit transaction and the coupons discount values thereof and redeemable by the purchase of the book on a cash transaction, and the book, coupons and face of the instrument of obligation bearing like identifying means.

1,110,368. LATCH. LEONARD A. YOUNG, Detroit, Mich. Filed June 12, 1914. Serial No. 844,636. (Cl. 70—119.)



1. A latch comprising a striker member, a casing having guide lugs for the striker, a spring having oppositely disposed arms mounted in the casing, a pair of oppositely disposed latch plates pivotally engaged at the outer ends in the spring arms respectively, with their inner ends in rolling contact and in the path of motion of the striker, and a keeper on one of the latch plates adapted to retain the striker when the latter has entered the casing and passed the line of the pivot centers of the latch plates, the latter coöperating with the spring to yieldingly force the striker inward when so engaged.

2. A latch comprising a striker, a casing provided with guiding means for receiving the striker, a spring member in the casing having a pair of oppositely disposed arms, a pair of oppositely disposed latch members pivotally and detachably interlocking with the spring arms near the outer ends and in rolling contact near their inner ends which lie in the path of the striker, a keeper on one of the latch members for engaging the striker, the latch members and spring coöperating to yieldingly maintain an inward pressure on the striker when the latter has passed the line of pivotal connections between the spring and the latch members, and means in sliding engagement with the latch members for maintaining them in alined relation.

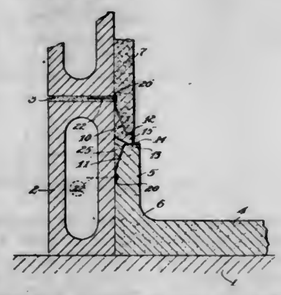
3. A latch comprising a striker, a casing having guiding means and a receiving slot for the striker, a spring in the casing having oppositely disposed arms, latch plates each bearing against a spring arm near the outer end and in rolling contact at the inner ends thereof, substantially in the path of the striker, and a keeper for engaging the striker, adapted to coöperate with the arms and spring to force the striker yieldingly inward when it has passed the line of attachment of the latch plates and springs arms.

4. A latch comprising a striker, a casing having a receiving slot therefor, guide projections on the casing adjacent the slot, a spring secured between its ends in the casing and provided with oppositely extending arms, and a pair of latch plates detachably fulcrumed near their outer ends on the spring arms with their inner end portions in rolling contact and in the path of the striker, said arms being adapted to grip an inserted striker and force it yieldingly inward when the striker has passed the line of pivotal attachment of the latch plates and springs.

5. A latch comprising a striker, a casing having a receiving slot therefor, guide projections on the casing adjacent the slot, a spring secured between its ends in the casing and provided with oppositely extending arms, a pair of latch plates detachably fulcrumed near their outer ends on the spring arms with their inner end portions in rolling contact in the path of the striker, said arms being adapted to grip an inserted striker and force it yieldingly inward when the striker has passed the line of pivotal attachment of the latch plates and springs, and a thumb piece on one of the latch members extending through the casing on the side of the latch plate fulcrumed opposite the guide slots.

[Claims 6 to 10 not printed in the Gazette.]

1,110,369. COMBINED PLASTER AND CEMENT BASE-SCREED. ARTHUR G. BAGNALL and JAMES A. TAYLOR, Cleveland, Ohio. Filed Feb. 28, 1914. Serial No. 821,649. (Cl. 72—125.)



1. A plaster and cement base screed for walls, consisting of a pair of converging webs, outwardly extending flanges at the adjacent margins of said webs, a wall portion at the margin of one of said flanges and adapted to lie in the plane of the plaster, a fold integral with the edge of the other web and adapted to overlie the top of the cement base, said fold being integral with the edge of said wall portion, and means to secure said webs to a wall.

2. A plaster and cement base screed for walls formed from a single piece of sheet metal and comprising a pair of converging apertured webs having perforated securing lips at their outer edges and also having at their adjacent edges a pair of outwardly extending flanges of different widths, the outer margin of one flange extending from the plane of said lips to a distance equal to the thickness of the plaster coat and the other to a distance equal to the thickness of the cement base, and the outer margins of said flanges being connected by integral portions adapted to form the angle between the plaster and base.

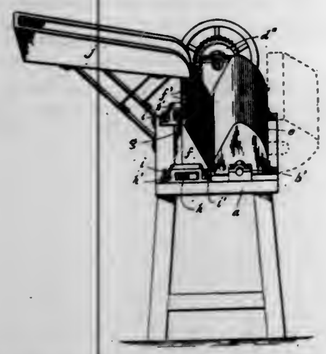
3. A plaster and cement base screed for walls, formed from sheet metal and comprising a pair of converging apertured webs having securing portions at their outer edges and forwardly extending flanges at their adjacent edges, one of said flanges having a wall portion defining the thickness of the plaster and the other flange having a straight edge defining the top of the cement base, said wall portion and said straight edge portion being integrally connected and the apertures in one web being staggered with respect to those in the other web so as to maintain the plaster and cement keys out of contact with each other.

4. A plaster and cement base screed for walls, formed from sheet metal and comprising a pair of converging apertured webs having securing portions at their outer edges and forwardly extending substantially parallel flanges at their adjacent edges, one of said flanges having a wall portion defining the thickness of the plaster and the other flange having a greater width than said first flange and connected thereto by an integral angular portion adapted to guide a molding tool.

1,110,370. VEGETABLE-TOPPING MACHINE. CHARLES P. BAKER, Painesville, Ohio. Filed May 25, 1911. Serial No. 629,317. (Cl. 146—9.)

1. In a vegetable topping machine, the combination with a rotary member of a plurality of straight wide blades pro-

vided thereon, a casing covering the upper portion of the rotary member, means for rapidly rotating said member, a non-rotatable, semi-resilient member against which the blades are adapted successively to strike during their rotation and a spring-mounting yieldingly holding the said parts in position for engagement, substantially as set forth.



2. In a vegetable topping machine, the combination with a rotary member, of a plurality of straight wide blades provided thereon to insure a fan-like action, a train of gears for rapidly rotating said member, a casing partially inclosing said member, a non-rotatable, semi-resilient member against which the blades are adapted to strike in succession during their rotation, and resilient adjusting means for the latter, substantially as set forth.

3. In a vegetable topping machine, the combination with a rotary member, of a plurality of straight wide blades provided thereon to insure a fan-like action, a train of gears for rapidly rotating said member, a casing partially inclosing said member affording means for supporting the vegetables above the blades, and plurality of non-rotatable, semi-resilient members positioned at opposite sides of the machine and adapted to be successively engaged by each of the blades during their rotation, substantially as set forth.

4. In a vegetable topping machine, the combination with a rotary member, a plurality of blades thereon, means for driving said member, a casing or cover positioned over said member, an adjustable co-acting part against which the blades are adapted to strike, a sheet-metal receptacle, and means for rocking the receptacle, substantially as set forth.

5. In a vegetable topping machine, the combination with a rotary member provided with a plurality of blades of a train of gears for rapidly rotating said member, a casing partially inclosing said member from above and adapted to support the vegetables, and non-rotatable co-acting parts provided on either side thereof, whereby the capacity of the machine may be increased, substantially as set forth.

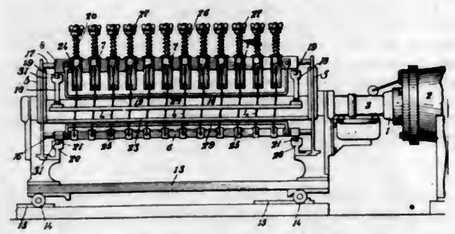
[Claims 6 and 7 not printed in the Gazette.]

1,110,371. BRICK-CUT-OFF TABLE. JAMES G. BARBOUR, Canton, Ohio. Filed Apr. 22, 1912. Serial No. 692,298. (Cl. 25—108.)

1. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, bars slidably mounted upon said shafts, cut-off wires carried by said bars, tracks carried by said cut-off table, said tracks adapted to longitudinally reciprocate said bars.

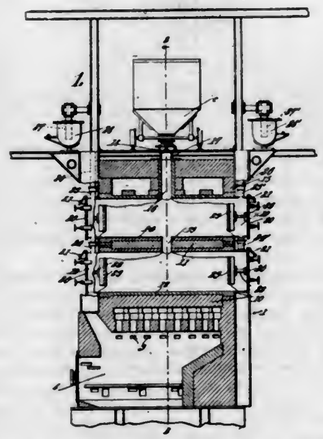
2. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, bars slidably mounted upon said shafts, cut-off wires carried by said bars, tracks carried by said cut-off table, pins secured to said slidable bars, said pins adapted to move upon said tracks, said tracks adapted to simultaneously reciprocate the upper and lower slidable bars in opposite directions.

3. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, sleeves longitudinally slidable upon said shafts, cut-off wires carried between said upper and lower sleeves, upper and lower tracks carried



by said cut-off table, said tracks provided with oppositely disposed grooves, pins secured to the slidable sleeves, said pins adapted to move in the grooves of the tracks for the purpose of reciprocating said slidable sleeves.

1,110,372. GAS-PRODUCER. THOMAS B. BENNER, Cortland, N. Y. Filed Mar. 21, 1914. Serial No. 826,369. (Cl. 48—101.)



1. A gas producer, having a plurality of superposed retorts, such retorts being in communication with each other through a fuel charging port, and the upper retort being provided with a main charging port coaxial with the port of the lower retort.

2. A gas producer, having a plurality of superposed retorts, such retorts being in communication with each other through a fuel charging port, and the upper retort being provided with a main charging port coaxial with the port of the lower retort, and the respective ends of the retort being in communication with each other and constituting a gas receptacle and directing means.

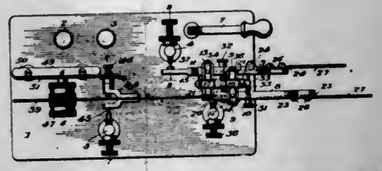
3. A gas producer, having a plurality of superposed retorts, such retorts being in communication with each other through a fuel charging port, and the upper retort being provided with a main charging port coaxial with the port of the lower retort, and the respective ends of the retort being in communication with each other and constituting a gas producer and directing means, a pipe leading from the gas receptacle and directing means of the upper retort at each end thereof, and a hydraulic main into which said pipe leads.

4. A gas producer, having a plurality of superposed retorts, such retorts being in communication with each other through a fuel charging port, and the upper retort being provided with a main charging port coaxial with the port of the lower retort, and means disposed in each end of the retorts forming a gas receiving chamber, the chamber of the upper retort being in communication with a similar chamber of the retort below.

5. A gas producer, having a plurality of superposed retorts, such retorts being in communication with each other through a fuel charging port, and the upper retort being provided with a main charging port coaxial with the port of the lower retort, means disposed in each end of the retorts forming a gas receiving chamber, the chamber of the upper retort being in communication with a similar chamber of the retort below, a pipe led from the chamber of the upper retort, and a hydraulic main in communication with such pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,110,373. TELEGRAPH-KEY. ROYAL L. BOULTER, Los Angeles, Cal. Filed Sept. 2, 1913. Serial No. 787,696. (Cl. 178—82.)



1. In a telegraph transmitter, the combination with an operating key, of a vibrator connected thereto and movable therewith, a leaf or ribbon spring connected to and movable with the key, whereby said key, vibrator and leaf or ribbon spring are adapted to move together as an entirety, a contact carried by the leaf or ribbon spring, and means carried by said leaf or ribbon spring adapted to coöperate with the vibrator and arranged and adapted so that said vibrator is adapted to deliver taps thereon.

2. In a telegraph transmitter, the combination with a pivoted key lever, of a vibrator blade secured thereto and movable therewith and provided with an opening, a ribbon or leaf spring secured to the key lever and disposed within the opening of the vibrator blade, a tapping head carried by a free part of the leaf or ribbon spring and loosely embracing a portion of the vibrator blade, a contact carried by said tapping head, and a tapping member carried by said head and adapted to cooperate with the vibrator, whereby the vibrator is adapted to impart taps to said head.

3. In a telegraph transmitter, the combination with an operating key, of a leaf spring secured thereto and carried thereby and having a free part, and adjustable means for tensioning the free part of said spring to thereby yieldingly hold the operating key.

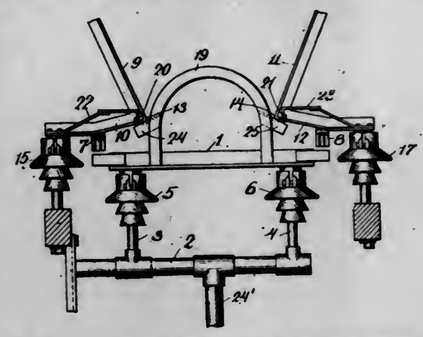
4. In a telegraph transmitter, the combination with an operating key, of a leaf spring secured thereto and having a free part, a coil spring coöperating with the free part of said leaf spring, and an abutment for said coil spring.

5. In a telegraph transmitter, the combination with an operating key, of a leaf spring secured thereto and having a free part, an adjustable finger, and a coil spring interposed between said finger and a free part of said leaf spring.

[Claim 6 not printed in the Gazette.]

1,110,374. ELECTRICAL SWITCH. AUGUSTUS JESSE BOWIE, Jr., San Francisco, Cal. Filed Jan. 23, 1906. Serial No. 297,433. (Cl. 175—282.)

1. The combination with a switch, having main contacts adapted to be moved into and out of engagement, of a pair of diverging arc-breaking horns associated with said contacts, a blade-like conducting bridge extending between said horns and forming an upwardly extending gradually narrowing conducting path between them, and mechanism for separating the bridge and the horns after the main contacts are opened, whereby upon the breaking of the circuit two arcs are formed between the bridge and the horns, and by the upward movement of the arcs and the downward movement of the bridge, are finally merged into a single arc which is carried up the horns and distended to break it; substantially as described.



2. The combination with a switch comprising main contacts adapted to be moved into and out of engagement, of a pair of diverging arc-breaking horns associated with said contacts, a gradually narrowing conducting bridge extending between said horns, following contacts adapted to maintain connection with the bridge until after the main contacts are opened, and mechanism for withdrawing the bridge from between the horns, whereby the two arcs are formed at the following contacts and transferred to the horns and by the upward movement of the arcs and the downward movement of the bridge are finally merged into a single arc which is carried up the horns and distended to break it; substantially as described.

3. The combination with two diverging arc-breaking horns, of switch terminals near the bases of said horns, a bar adapted to engage with said terminals and an arc-shaped guide mounted on said bar and extending between the bases of said horns into such relation thereto that as the bar and the horns are separated to break the circuit two substantially horizontal arcs are formed between the horns and the guide, and these arcs are finally merged into a single arc which is carried up the horns and distended to break it; substantially as described.

4. The combination with two diverging arc-breaking horns, of switch terminals near the bases of said horns, a bar adapted to engage with said terminals, a conducting guide mounted on said bar and extending between the bases of said horns, said guide decreasing in width as it leaves said bar, and following contacts adapted to maintain connection with said guide until after the main contacts are opened, whereby the circuit is broken between the following contacts and the guide to form two arcs which by the upward movement of the arcs and the downward movement of the bridge are finally merged into a single arc which is carried up the horns and distended to break it; substantially as described.

5. The combination with a switch having relatively movable contacts, of diverging arc-breaking horns formed of magnetic material; substantially as described.

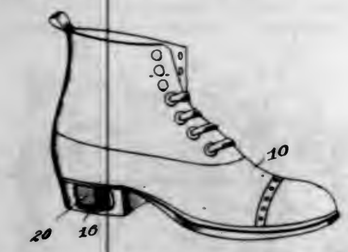
[Claims 6 to 10 not printed in the Gazette.]

1,110,375. SPRING-HEEL FOR BOOTS AND SHOES. CHARLES BUDAI and JÓZSEF SZÉNÁSI, Chicago, Ill. Filed Mar. 17, 1914. Serial No. 825,279. (Cl. 36—38.)

1. The combination with a shoe sole, of a spring-heel, plates formed with confronting struck-up portions, each having a perforation, blocks conforming to the shape of the heel and secured respectively to the sole and lower lift or tread of the heel to secure said plates in position, a coil spring having the ends of its upper and lower convolutions secured in said perforations, and a flexible sheet connecting said blocks and concealing said spring.

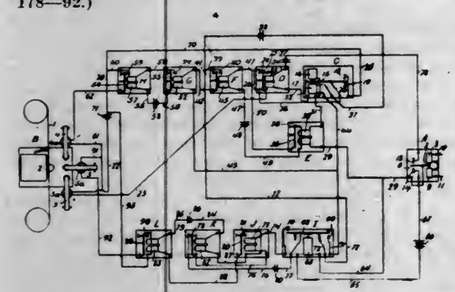
2. In combination a sole and a tread member having a chamber therebetween, struck up circular plates secured

to the adjacent faces of said tread member and sole and having peripheral perforations therethrough, a helical spring seated between said struck up portions of said



plates and having its ends passed beneath said struck up portions, and blocks mounted upon said plates and encircling said spring ends and struck up portions.

1,110,376. AUTOMATIC TELEGRAPH SYSTEM. DUNCAN HENRY CAMERON, North Sydney, Nova Scotia, Canada. Filed Aug. 21, 1913. Serial No. 785,874. (Cl. 178—92.)



1. An automatic tape perforating receiver for telegraph systems, comprising a receiving relay having a line wire connection and responsive to current of opposite polarity, a tape perforator including dash, dot and space perforating means electro-magnetically operated, and electrical devices and connections between the receiving relay and perforator for recording on the tape dots, dashes and spaces in the order received by the receiving relay.

2. In an automatic tape perforating receiver for telegraph systems, the combination of a receiving relay for receiving dot, dash and space currents, a perforator having separate electro-magnetically operated means for perforating dots, dashes and spaces in a tape, a circuit opened and closed by the receiving relay by the dot and dash current impulses, means responsive only to the dot impulses to energize the dot perforator, means responsive only to the dash current impulses for operating the dash perforating means, a circuit opened and closed by the space currents passing through the receiving relay, and means controlled by the last mentioned circuit for operating the space perforating means.

3. In an automatic tape perforating receiver for telegraph systems, the combination of a receiver including relay operated by incoming dot and dash and space current impulses, a circuit closed by the said relay when responding to dot or dash current impulses, separate dot and dash current responsive relays in the said circuit, a dot cut-in and cut-out relay also in the said circuit, a tape perforator including dot and dash and space perforating means, a circuit controlled by the dot current responsive relay for operating the dot perforating means, a circuit controlled by the dash current responsive relay for operating the dash perforating means and also for controlling the said dot cut-in and cut-out relay to open the circuit of the dot perforating means, a space current circuit controlled by the said receiving relay, and means responsive to the current flowing in the last mentioned circuit for operating the space perforating means.

4. In an automatic tape perforating receiver for telegraph systems, the combination of a receiving relay, a circuit controlled thereby through incoming dot and dash current impulses, dot and dash current responsive relays in the said circuit, a dot cut-in and cut-out relay having a circuit-closing magnet in the said circuit and a circuit opening magnet, a dot perforating means, a circuit therefor controlled by the said dot responsive relay and the closed circuiting magnet of the dot cut-in and cut-out relay, a circuit controlled by the dash responsive relay for energizing the open-circuiting coil of the dot cut-in and cut-out relay, and a dash perforating means controlled by the last mentioned circuit.

5. In an automatic tape perforating receiver for telegraph systems, the combination of a tape perforator having separate dot and dash perforating means, a receiver for the incoming dot and dash current impulses and including a single make-and-break device, a circuit controlled by the said device, separate dot and dash current responsive relays having their magnets in the said circuit and including circuit opening and closing contacts, a dot cut-in and cut-out polar relay consisting of cut-in and cut-out coils and an unbiased movable contact operated by said coils, said cut-in coil being arranged in the said circuit, a circuit including the dot perforating means and closed by the movable contacts of the dot responsive relay when the latter is deënergized and of the cut-in and cut-out relay when the cut-in coil thereof is energized, a relay controlled by the contacts of the dash responsive relay when the latter is operated only by the dash current impulses in the first mentioned circuit, a circuit controlled by the last mentioned relay and including the cut-out coil of the dot cut-in and cut-out relay for moving the contact of the latter to open circuit position, and means controlled by the last mentioned circuit for operating the dash perforating means.

[Claims 6 and 7 not printed in the Gazette.]

1,110,377. PLANT-PROTECTOR. ARTHUR B. COWLES, Rochester, N. Y. Filed Apr. 17, 1912. Serial No. 691,265. (Cl. 47—28.)

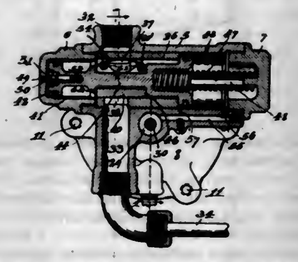
1. As an article of manufacture, a plant protector comprising a sheet of material which contains an insecticide and which is provided with a plurality of slits, one of said slits extending outwardly through the edge of the sheet and all of said slits meeting at a common point and providing flexible tongues which lie closely together so as to prevent the passage of insects through the sheet between the tongues and whereby the eggs of the insects are deposited upon and retained on the flat sheet of material.

2. A plant protector composed of a flat sheet of material containing an insecticide and whose body portion is adapted to lie flat upon the ground and which is provided with a plurality of slits providing a plurality of tongues whose outer ends are adapted to lie flat on the ground and whose inner ends are adapted to be bent out of the plane of the body to singly embrace plants of various sizes, said slits lying so closely together as to prevent passage of insects through the sheets between the tongue whereby the insect eggs are caused to remain on the body of the flat sheet of material including the outer ends of said tongues rather than on the ground adjacent the root of the plant.

1,110,378. RELIEF-VALVE FOR STEAM-CYLINDERS. JOHN HEBER COYNE, Toronto, and JOSEPH JAMES WORDEN, St. Thomas, Ontario, Canada. Filed Jan. 8, 1913. Serial No. 740,780. (Cl. 121—14.)

1. In a relief valve mechanism for steam cylinders, the combination with a conduit for saturated steam between

the boiler and steam cylinder, of a valve controlling said conduit, a differential-piston motor for actuating said valve, the piston unit of said motor being constantly subject to boiler pressure on both sides of both piston heads thereof and normally in equilibrium thereunder, and means set in operation by a suction effect in the engine cylinder for destroying the condition of equilibrium of said piston unit.



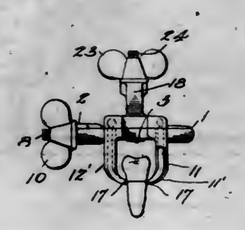
2. In a relief valve mechanism for steam cylinders, the combination with a conduit for saturated steam between the boiler and steam cylinder, of a valve controlling said conduit, a differential-piston motor for actuating said valve, the piston unit of said motor being constantly subject to boiler pressure on both sides of both piston heads thereof and normally in equilibrium thereunder, a control valve governing the position and movements of said differential piston unit, and a normally idle diaphragm motor called into action by a suction effect in the engine cylinder for opening said control valve.

3. In a relief valve mechanism for steam cylinders, the combination with a conduit for saturated steam between the boiler and steam cylinder, of a valve controlling said conduit, a differential piston motor for actuating said valve, the piston unit of said motor being constantly subject to boiler pressure on both sides of both piston heads thereof and normally in equilibrium thereunder, a spring acting upon said piston unit to prevent jarring thereof and maintain the same normally in valve closing position, a control valve governing the position and movements of said differential piston unit, and a normally idle diaphragm motor called into action by a suction effect in the engine cylinder for opening said control valve.

4. In a relief valve mechanism for steam cylinders, the combination with a conduit for saturated steam between the boiler and steam cylinder, of a valve controlling said conduit, a differential piston motor for actuating said valve, the piston unit of said motor being constantly subject to boiler pressure and normally in equilibrium thereunder, a diaphragm chamber, a diaphragm therein exposed to atmospheric pressure on one side thereof, a suction pipe from the engine cylinder communicating with said diaphragm chamber on the other side of said diaphragm, a passage leading from said diaphragm chamber and communicating with the cylinder of said differential piston motor on opposite sides of the larger piston thereof through relatively small and large ports, respectively, a spring acting on said diaphragm in a direction to oppose atmospheric pressure thereon and a control valve in said passage adapted to be opened by said diaphragm under atmospheric pressure upon the creation of a suction effect in said suction pipe.

5. In a relief valve mechanism for steam cylinders, the combination with a conduit for saturated steam between the boiler and steam cylinder, of a valve controlling said conduit, a differential piston motor for actuating said valve, the piston unit of said motor being constantly subject to boiler pressure and normally in equilibrium thereunder, a diaphragm chamber, a diaphragm therein exposed to atmospheric pressure on one side thereof, a suction pipe from the engine cylinder communicating with said diaphragm chamber on the other side of said diaphragm, a passage leading from said diaphragm chamber and communicating with the cylinder of said differential piston motor on the inner and outer sides of the larger piston thereof through relatively small and large ports, respectively, a diaphragm stud secured centrally to said diaphragm, a spring engaging said diaphragm stud in a direction to oppose atmospheric pressure on said diaphragm, and a control valve normally closing communication between said passage and said diaphragm chamber, said control valve having a projection adapted to be struck by the inner end of said diaphragm stud to unseat said control valve under the action of atmospheric pressure on said diaphragm upon the creation of a suction effect in said suction pipe.

1,110,379. DENTAL INSTRUMENT. THOMAS DAY CRAIG, Albia, Iowa. Filed Jan. 17, 1914. Serial No. 812,791. (Cl. 32—10.)



1. The combination in a dental instrument having pivoted lever arms and spaced angular depending heads thereon, of movable clutching jaws in said heads, and means for moving said jaws, for the purpose described.

2. The combination with a pair of pivoted arms having spaced angular depending heads, of clutching jaws movable in said heads, and a lever mechanism for moving said jaws as described.

3. The combination with a pair of lever arms formed with heads approximately at right angles thereto, slidable clutching jaws in said heads, a pivot for said arms, and a lever to actuate said jaws having its fulcrum on said pivot.

4. The combination with a pair of lever arms formed with heads at approximately right angles thereto, slidable jaws in said heads, a pivot for said arms having a fulcrum head, and an actuating lever for said jaws having a socket and interlocked with said fulcrum head.

5. The combination with a pair of lever arms formed with slotted heads at approximately right angles thereto, slidable jaws in said heads, and a pivot for said arms having a fulcrum head and annular groove, of an actuating lever having a socket over said fulcrum head, and a retaining pin engaging said groove.

[Claims 6 to 9 not printed in the Gazette.]

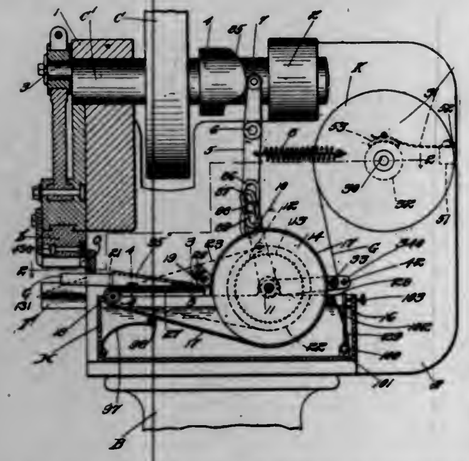
1,110,380. MOISTENING ATTACHMENT FOR CORNER-STAYING MACHINES. CHARLES H. CROWELL, Swampscott, Mass. Filed Feb. 13, 1913. Serial No. 748,078. (Cl. 93—56.)

1. An attachment for corner staying machines comprising a feed roll, an idler roll, an apron carried by said rolls, a stationary shaping die adjacent the said apron, and by which the strip is folded as it advances, a presser roll between which and the said apron the stay strip passes, and mechanism to cause rotation of the said feed roll to feed the stay strip.

2. In a stay strip moistening machine, the combination of a feed roll, an idler roll, an apron carried by said rolls with a combined shaping die and moisture retainer for shaping and retaining said strip in moistened condition, and feeding mechanism for rotating said apron and causing said stay strip to be fed through said combined shaping die and moisture retainer.

3. In a stay strip moistening machine, the combination of cutting mechanism, a moisture container, a moisture applying apron, a pair of rolls carrying said apron, moisture retaining means for keeping the stay strip in

a moistened condition located between one of said rolls and said cutting mechanism, said apron feeding stay strip through said retainer to said cutting mechanism.

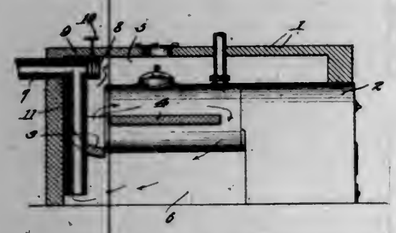


4. In a stay strip moistening machine, the combination of cutting mechanism, means located apart from said cutting mechanism for applying moisture to the stay strip and for feeding it to the cutting mechanism, and means for retaining the strip in a moistened condition between the point of application of moisture to the strip and the cutting mechanism.

5. In a machine of the character described, the combination of a feed roll, an idler roll, an apron carried by said rolls, a combined shaping die and moisture retainer located adjacent the surface of the apron, and means for rotating the rolls to cause stay strip to be fed through the combined shaping die and moisture retainer.

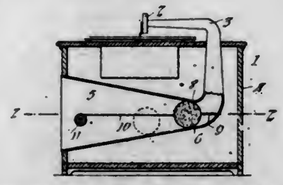
[Claims 6 to 9 not printed in the Gazette.]

1,110,381. DRAFT APPLIANCE. JOHN E. T. DICKINSON, Beatrice, Nebr. Filed Apr. 13, 1914. Serial No. 831,667. (Cl. 110—100.)



In combination, a boiler, a casing inclosing the same, a partition between the rear ends of the boiler and casing and baffles between the sides of the boiler and casing, the partition and baffles dividing the space within the casing into upper and lower auxiliary combustion chambers, there being openings at the forward ends of the baffles establishing communication between the said auxiliary combustion chambers, the rear end of the boiler communicating with the upper auxiliary combustion chamber, a draft flue communicating with the upper auxiliary combustion chamber, a damper for controlling the passage from the upper auxiliary combustion chamber into the said flue, and a supplemental flue connected to the aforementioned flue and communicating with the lower auxiliary combustion chamber.

1,110,382. SOUND-MODIFIER. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 9, 1910. Serial No. 596,536. (Cl. 181—27.)



1. In combination, a sound conveyer, a sound modifier mounted within said conveyer, and means comprising a rotatable bobbin and a flexible connection between said bobbin and modifier for moving said modifier into different positions in said conveyer, substantially as described.

2. In combination, a sound conveyer, a sound modifier mounted within said conveyer, resilient means tending to hold said modifier in one position in the air passage in said conveyer, means comprising a rotatable bobbing and a flexible connection between said bobbin and modifier for moving said modifier into other positions in said conveyer, and means normally preventing rotation of said bobbin, substantially as described.

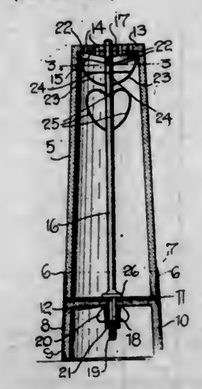
3. In combination, a sound conveyer, a sound modifier mounted within said conveyer, resilient means tending to hold said modifier in one position in the air passage in said conveyer, means comprising a rotatable bobbin and a flexible connection between said bobbin and modifier for moving said modifier into other positions in said conveyer, and friction means for preventing rotation of said bobbin, substantially as described.

4. In combination, a sound conveyer, a sound modifier of a material permitting the passage of sound vibrations therethrough but with diminished intensity mounted within said conveyer, and means comprising a rotatable bobbin and a flexible connection between said bobbin and modifier for moving said modifier into different positions in said conveyer, substantially as described.

5. In combination, a sound conveyer, a sound modifier mounted within said conveyer, resilient means tending to hold said modifier in one position in the air passage in the said conveyer, and means comprising a rotatable bobbin and a flexible connection between said bobbin and modifier for moving said modifier into other positions in said conveyer, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

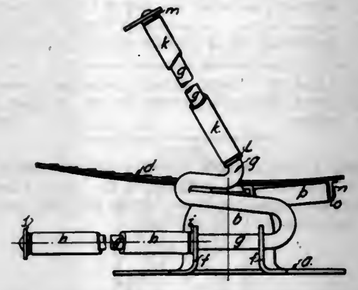
1,110,383. CONDIMENT-HOLDER. EDWARD F. FLANAGAN, Washington, D. C. Filed July 30, 1913. Serial No. 782,081. (Cl. 65—57.)



1. The combination with a condiment holder having a perforated end wall, of an agitator rotatably mounted in said holder and including a central stem, a plurality of blades radiating from the stem and having scraping engagement with said perforated end wall, and curved wires connecting the outer extremities of said blades to the stem, said wires serving to brace the blades and also operating to break up the condiment into a comminuted state.

2. The combination with a condiment holder having a perforated end wall, of an agitator including a central stem rotatably mounted at one of its ends in said perforated end wall, a plurality of radiating blades fixed at their inner ends to the stem and having scraping engagement with the perforated wall of the holder, wires connecting the outer extremities of said blades to the stem, additional radially disposed wires connecting the latter wires to the stem, said wires bracing the blades and preventing their distortion by contact with the end wall of the holder in the longitudinal movement of the agitator stem with respect thereto, and an additional series of bowed wires secured to the stem inwardly of said first-named wires, all of said wires operating to divide the condiment into a comminuted state when the agitator is rotated.

1,110,384. SHOE-POLISHING APPARATUS. WILLIAM H. GAGGINS, Philadelphia, Pa. Filed Feb. 7, 1913. Serial No. 746,690. (Cl. 15—58.)



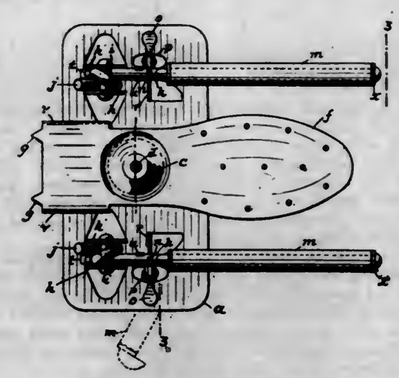
1. A shoe polishing apparatus comprising a foot-rest and a pair of cloth guides one on each side thereof, each cloth guide comprising a lower longitudinally extending cloth-engaging member turnable on its axis and an upper cloth-engaging member fixed relatively to the longitudinally extending member and therefore adapted to be moved into either a lateral position or an upwardly extending position.

2. A shoe polishing apparatus comprising a foot-rest and a pair of cloth guides one on each side thereof, each cloth guide comprising a rod having a lower cloth-engaging portion extending longitudinally and turnable on its axis beyond its rear end bent successively forwardly, rearwardly and upwardly, said upwardly bent portion forming a second cloth-engaging member and being adapted, by the turning of the longitudinally extending portion of the rod, to be moved into a laterally extending position.

3. A shoe polishing apparatus comprising a foot-rest and a pair of cloth guides one on each side thereof, each cloth guide comprising a lower longitudinally extending rod member turnable on its axis and a second rod member fixed relatively to, and extending from the rear of, the lower rod member and angularly inclined relatively thereto and therefore adapted to be moved into either a lateral position or an upwardly extending position in the turning of the longitudinally extending rod member on its axis.

4. A shoe polishing apparatus comprising a foot-rest and a pair of cloth guides one on each side thereof, each cloth guide comprising a rod having a lower longitudinally extending cloth engaging portion bent beyond its rear end successively forwardly, rearwardly and upwardly, bearings on which the longitudinally extending portion of the rod is turnable on its axis, a roller sleeved on the longitudinally extending portion of the rod, in front of said bearings, a projection on the longitudinally extending portion of the rod in front of said roller, a roller sleeved on the upwardly extending portion of said rod, and a projection on the rod above the last named roller.

1,110,385. SHOE-POLISHING APPARATUS. WILLIAM H. GAGGINS, Philadelphia, Pa. Filed Aug. 8, 1913. Serial No. 783,665. (Cl. 15—58.)



1. A shoe polishing apparatus comprising a foot rest, a support for the foot rest comprising means permitting the foot rest to be moved to different angular positions, and a pair of cloth guides on opposite sides of the foot rest, said guides being mounted to move from a substantially longitudinal and horizontal position toward an upright position adjacent to the heel of the shoe.

2. A shoe polishing apparatus comprising a foot rest, a support for the foot rest including a universal joint permitting the foot rest to be moved into any angular position, and a pair of cloth guides on opposite sides of the foot rest, said guides being pivotally mounted opposite the rear end porton of the foot rest to enable them to swing from a substantially horizontal position alongside the front part of the shoe toward an upright position adjacent to the heel of the shoe.

3. A shoe polishing apparatus comprising a foot rest and a pair of cloth guides on opposite sides thereof, said guides being mounted to move from a substantially longitudinal and horizontal position toward an upright position, means limiting the upward movement of the guides, and means independent of the foot-rest and manually releasable, to hold the guides in their horizontal position.

4. A shoe polishing apparatus comprising a foot rest and a pair of cloth guides on opposite sides thereof, each guide extending longitudinally from opposite the front portion of the foot rest rearwardly and thence bent successively downwardly and rearwardly, the last named rearward extensions being pivotally mounted on transverse axes, and manually releasable means engaging the last named rearward extensions and adapted to hold the working front ends of the guides in a horizontal position.

5. A shoe polishing apparatus comprising a foot rest and a pair of cloth guides on opposite sides thereof, said guides being mounted to move from a substantially longitudinal and horizontal position toward an upright position and manually releasable spring-actuated latches adapted to engage the guides when they are swung down into their horizontal position.

[Claims 6 and 7 not printed in the Gazette.]

1,110,386. SHOE-REST. WILLIAM H. GAGGINS, Philadelphia, Pa. Original application filed Aug. 8, 1913, Serial No. 783,665. Divided and this application filed Oct. 14, 1913. Serial No. 795,048. (Cl. 15—58.)

1. A shoe rest comprising a hollow support having a rounded outer surface, a plate for supporting the shoe, and a cup and a flanged plate depending from the shoe plate,

said cup having a rounded inner surface slidable upon the rounded outer surface of the support, and said flanged plate extending within the hollow support and adapted to engage the latter's inner surface.

2. A shoe rest comprising a hollow support open at the top and having a rounded outer surface adjacent to the top, a plate for supporting the shoe, a cup depending from the shoe plate having a rounded inner surface resting upon the rounded outer surface of the support, and a member within the hollow support connected with the shoe plate through the open top of the hollow support and adapted to engage the latter's inner surface.

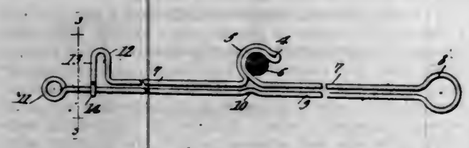
3. A shoe rest comprising a hollow support, a plate for supporting the shoe, a cup depending from the shoe plate, said cup located outside the hollow support and movable relatively thereto, a plate within the hollow support connected with the shoe plate, said inner plate being elastic and flanged to contact with the inner surface of the hollow support.

4. A shoe rest comprising a hollow support open at the top and having a rounded contour adjacent to the top, a plate for supporting the shoe, a cup depending from the shoe having a rounded inner surface slidably resting upon the rounded outer surface of the support, a plate within the hollow support connected with the shoe plate through the open top of the hollow support, the last named plate having flanges adapted to engage the rounded inner surface of the hollow support.

5. A shoe rest comprising a support having a part thereof presenting a spherically curved surface, a plate for supporting the shoe, and means depending from the plate having a part thereof presenting a spherically curved surface conforming to the spherically curved surface of the support and arranged to have a limited sliding movement thereupon in every direction.

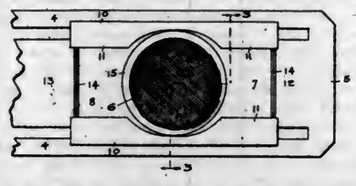
[Claim 6 not printed in the Gazette.]

1,110,387. TROUSERS-HOLDER. LAURIE GATES and THOMAS F. GRAHAM, Tampa, Fla. Filed Dec. 6, 1913. Serial No. 805,109. (Cl. 211—13.)



A device of the class described comprising an upper longitudinal member, said longitudinal member struck upwardly intermediate its ends and bent to form a curved supporting hook, the upstruck portions of the upper longitudinal member defining a notch of limited length therebetween, a lower longitudinal member, a spring loop connecting the upper and lower longitudinal members at one end, the said lower longitudinal member provided with an upstruck portion registering with and adapted to enter the notch defined by the upstruck portions of the upper longitudinal member, the remote end of the upper longitudinal member bent to form a hook, the adjacent end of the lower longitudinal member adapted to engage said hook, the lower longitudinal member, spring loop, upper longitudinal member and supporting hook lying in a common plane, and the offset hook of the upper longitudinal member adapted to register with the spring loop of the next adjacent hanger.

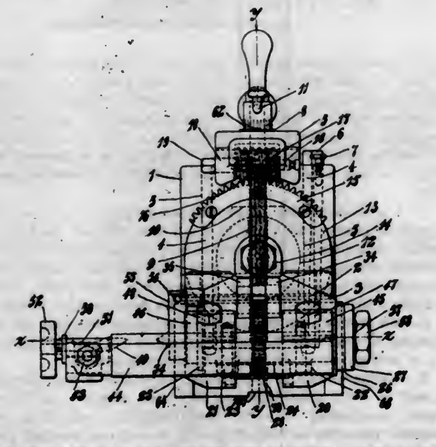
1,110,388. JOURNAL-BOX. JOHN T. HAY, Union City, Ind. Filed Apr. 11, 1913. Serial No. 760,482. (Cl. 64—10.)



1. In a journal box for rotary shafts, a pair of bearing brasses each having two sides which are substantially tangent to the cylindrical bearing surface of the shaft, all of said sides being in parallel planes, shims contacting the bearing brassea a connecting-rod frame within which the boxes are mounted filling plates between the bearing brasses and shaft and the frame, said filling plates having flanges to overlap the frame and flanges to overlap the brasses and shims.

2. A journal box for a rotary shaft said shaft having a pair of annular flanges to receive bearing brasses between them, in combination with a pair of bearing brasses each having two sides which are substantially tangent to the cylindrical bearing surface of the shaft, all of said sides being in parallel planes, oil cavities in a plurality of said sides, a connecting-rod frame within which the boxes are mounted and filling-plates between the bearing brasses and frame, said plates having flanges to overlap the brasses and frame and an oil hole through the upper frame member and upper filling-plate into the oil cavities in the bearing brasses.

1,110,389. ATTACHMENT FOR MACHINE-TOOLS. HAROLD L. JEFFERY, Fort Thomas, Ky., and ALBERT E. SCHUCHERT, Norwood, Ohio. Filed Aug. 29, 1913. Serial No. 787,307. (Cl. 90—58.)



1. In a device of the character described, a work spindle, means comprising separate journals for the work spindle, adjusting means fixed on the work spindle between the journals, and means limiting the work spindle against end play in its journals but removable to allow the work spindle to be reversed in said journals and in its fixed relation with said adjusting means.

2. In a device of the character described, a work spindle, means comprising separate journals for the work spindle, adjusting means adapted to be fixed on the work spindle in different locations therealong and located between the journals of the work spindle, and means on said work spindle for limiting end play thereof, one of the means being removable to allow the work spindle to be

reversed endwise in its bearings and in its fixed relation with said adjusting means.

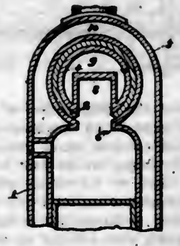
3. In a device of the character described, a work spindle, means comprising separate journals for the work spindle, a worm gear fixed on the work spindle concentric with it between said journals for adjusting said work spindle angularly and capable of being fixed on said work spindle at different locations therealong, and means on said work spindle bearing against opposite sides of the means comprising the journals to limit end play of the work spindle in its journals, one of said means being removable and allowing withdrawal of the work spindle from its journals and from the worm gear between the journals, whereby the work spindle may be reversed endwise in its journals and its fixed relation with said worm wheel.

4. In a device of the character described, a work spindle, means for mounting said spindle on a machine whereby said spindle is angularly adjustable around its axis, means for holding work in said work spindle, and an arm having a projection across the axis of said spindle and capable of adustment parallel with said axis.

5. In a device of the character described, a work spindle, means for mounting said spindle on a machine whereby said spindle is angularly adjustable around its axis, means for holding work in said spindle, an arm parallel to the axis of said spindle having a projection across said axis, means permitting adjustment of said arm parallel to said axis, a center carried in said projection concentric with said axis, and means for adjusting said center in said arm parallel with said axis.

[Claims 6 to 16 not printed in the Gazette.]

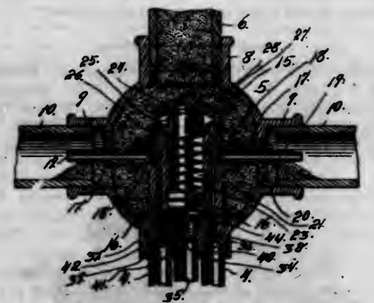
1,110,390. COMBUSTION-ENGINE. WILLIAM A. JEX, Rochester, N. Y. Filed June 16, 1913. Serial No. 773,971. (Cl. 123—59.)



1. In a combustion engine, the combination with a series of cylinders having ports; of a valve casing extending along said series said casing having ports respectively in communication with the ports in the cylinders, through a fixed tubular valve cylinder having diagonal passageways therethrough so located as to connect the ports in the cylinders with the ports in the casing, the entrance and exit to said diagonal passageways being arranged in different planes with packing rings interposed between them to prevent the escape of the fuel longitudinally; the ports of adjacent cylinders being united at the casing; said fixed tubular valve cylinder being chambered to admit a cooling fluid, a rotary valve cylinder interposed between the fixed tubular valve cylinder and the valve casing with ports in its periphery so located as to throw the ports in the cylinders successively into communication with the ports in the valve casing through the diagonal passageways in the fixed valve cylinder.

2. In a combustion engine, the combination with a series of cylinders having inlet and outlet ports; of a valve casing extending along said series and having intake and exhaust ports respectively in communication with the ports in said cylinders through a fixed tubular valve cylinder having diagonal passageways therethrough so located as to connect the inlet ports in the cylinders with the intake ports in the valve casing and the outlet ports in the cylinders with the exhaust ports in the valve casing, the respective ports of adjacent cylinders being united at the valve casing, the entrance and exit to said passageways being arranged in the different planes with packing rings interposed between them to prevent the escape of the fuel longitudinally; said fixed tubular valve cylinder being chambered to admit a cooling fluid, a rotary valve cylinder interposed between the fixed tubular valve cylinder and the valve casing with ports in its periphery so located as to throw the inlet and outlet ports in the cylinders successively into communication with the intake and exhaust ports in the valve casing respectively through the diagonal passageways in the fixed tubular valve cylinder, substantially as described.

1,110,391. TRACK-SANDER FOR LOCOMOTIVES. RICHARD KETT, Denver, Colo., assignor of one-half to Adolph H. Flucken, Denver, Colo. Filed Nov. 28, 1913. Serial No. 803,416. (Cl. 105—263.)



1. In a track sander for locomotives, the combination with a source of sand, a receptacle in communication therewith, and a conduit leading from the receptacle to the track, of a member located within the receptacle and rigidly connected therewith, the said member having a cavity, a piston therein, a valve connected with the piston and adapted to cut off communication between the source of sand supply and the receptacle, a spring for normally holding the valve open, and means for introducing steam to the said cavity on the opposite side of the piston from the spring, whereby the piston is actuated to close the valve, the cavity being in communication with the receptacle by a port which is uncovered by the valve-closing movement of the piston to allow the steam to enter the receptacle.

2. The combination with a sand distributing receptacle having an inlet opening and an outlet conduit, of a valve arranged within the said receptacle and movable to close said opening, but normally spring-retained in the open position, a chamber, a piston therein connected with the valve, and means for introducing fluid to the chamber on the opposite side of the piston from the spring, to actuate the piston to close the valve, and a port forming a communication between the said chamber and receptacle, the port being uncovered by the fluid-actuated movement of the piston to allow the fluid to enter the receptacle and pass through the said distributing conduit.

3. The combination with a sand distributing receptacle, having an inlet opening, a valve movable to close said opening, a spring for normally-retaining the valve in the open position, a chamber, a piston therein connected in operative relation with the valve, and means for introducing fluid to the chamber under pressure to actuate the piston and close the valve against the action of its spring, the chamber being in communication with the receptacle by a port which is uncovered by the valve-closing movement of the piston to allow the fluid to enter the receptacle.

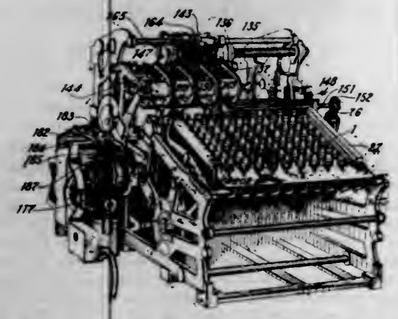
4. The combination with a sand distributing receptacle, having an inlet opening, of a chamber located within the receptacle, a piston therein, a valve within the receptacle and movable to close the inlet opening, a spring for normally retaining the valve in the open position, the piston being connected in operative relation with the valve, means for introducing fluid to said chamber to actuate the piston against its spring to close the valve, the cham-

ber having a port leading to the receptacle which is uncovered by the valve-closing movement of the piston to allow the fluid to enter the receptacle, and a sand distributing conduit leading from the receptacle, and through which the said fluid passes.

5. The combination with a sand distributing receptacle having an inlet opening, said receptacle, mounted upon the locomotive, and a conduit leading therefrom to the track, of a valve within the receptacle, and movable to close the inlet, a chamber within the receptacle, and in communication therewith by a port, a fluid inlet to the chamber, a piston normally spring-held between the fluid inlet and the said port, an operative connection between the piston and the valve, and means for introducing fluid through the said fluid inlet to the chamber under sufficient pressure to actuate the piston and uncover said port.

[Claims 6 and 7 not printed in the Gazette.]

1,110,392. CASH-REGISTER. CHARLES F. KETTERING and WILLIAM A. CHRYST, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed May 26, 1909. Serial No. 498,549. (Cl. 235—2.)



1. In an accounting machine, the combination with a plurality of totalizing devices each comprising a plurality of denominational elements, of differential mechanism and means for differentially actuating the same, intermediate alined actuators adapted to transmit the differential movement of the differential mechanism to each of the elements of any one of the totalizing devices, and means for positioning the intermediate actuators so that any desired one of the totalizing devices will be operated upon operation of the differential mechanism.

2. In an accounting machine, the combination with a plurality of totalizing devices, of differential mechanism and means for actuating the differential mechanism, intermediate alined actuators, each of said intermediate actuators comprising a broad gear and a narrow gear, and means for positioning the intermediate actuators so that any desired one of the totalizers will be operated upon the operation of the differential mechanism.

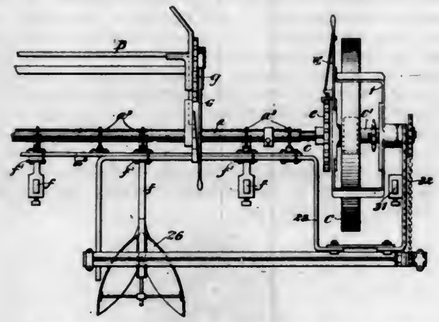
3. In an accounting machine, the combination with a plurality of totalizing devices, of differential mechanism and means for differentially actuating the same, intermediate actuators, each of said intermediate actuators comprising a broad gear and a narrow gear secured together, the broad gear meshing with the differential mechanism, the narrow gear adapted to mesh with an element of any one of the totalizers and means for moving the intermediate actuators in an axial direction for the purpose of causing the narrow gears of the actuators to be brought to operative relation with any desired totalizer.

4. In an accounting machine the combination with a plurality of totalizing devices of differential mechanism, means for actuating the differential mechanism, intermediate actuators, each of said intermediate actuators comprising a broad gear and a narrow gear, one of said gears adapted to mesh with the differential mechanism, and the other of said gears adapted to mesh with an element of any one of the totalizers, and means for shifting the intermediate actuators in a longitudinal direction for the purpose of operatively connecting the differential mechanism with any desired totalizer.

5. In an accounting machine, the combination with a plurality of totalizing devices, said totalizing devices so arranged that the elements of like denominations of the totalizers are arranged in groups, differential mechanism, means for actuating the differential mechanism, intermediate actuators comprising a plurality of broad gears, each of which gears carries a narrow gear but of greater diameter than the broad gears, the broad gears arranged to mesh with the differential mechanism and the narrow gears arranged to meah with the totalizers, and means for shifting the intermediate actuators in an axial direction for the purpose of meshing the same with any desired totalizer.

[Claims 6 to 51 not printed in the Gazette.]

1,110,393. CULTIVATING-MACHINE. WILLIAM LATHAM, Kiambu, Nairobi, British East Africa. Filed Aug. 21, 1912. Serial No. 716,166. (Cl. 97—35.)



1. In a cultivator, the combination of a main transverae cylindrical frame member, a member parallel therewith and adapted to rock thereon, blade shanks secured to said parallel member, a forked frame fixed to said main frame member at each end, a traveling wheel in each said forked frame and centered eccentrically in relation to said main frame member, a laterally arranged frame member projecting rearwardly and clipped to said parallel member and formed yoke shaped to pass around the wheel and centered at its outer end to the outside of the forked frame, and means for angularly adjusting the wheel center bearings in relation to the said main frame member.

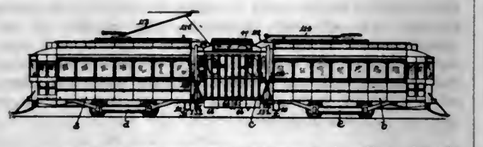
2. In a cultivator, the combination of a main transverse hollow cylindrical frame member, a member parallel therewith and adapted to rock thereon, blade shanks secured to said parallel member, a bar adapted to slide in the main frame member at each end, a forked frame fixed to said bar at each side of the machine, means for fixing said bar in said main frame member, a traveling wheel in each said forked frame and centered eccentrically in relation to said main frame member, a laterally arranged frame member on each side of the machine projecting rearwardly and clipped to said parallel member so as to extend laterally with the said sliding bar, said frame being yoke shaped to pass around the wheel and centered at its outer end to the outside of the forked frame, and means for angularly adjusting the wheel center bearings in relation to said main frame member.

3. In a cultivator, the combination of a main cylindrical frame member, a member angularly adjustable thereon, a forked sectoral frame fixed on each side of the said frame member, a traveling wheel centered in each said forked frame eccentrically in relation to said main frame member, a laterally arranged frame member behind the main frame member and carried around the walls to the outside of the said forked frames, and means for varying the angle of the wheel centers in relation to the main cylindrical frame member substantially as described.

4. In a cultivator, the combination of a main hollow cylindrical frame member, a member at the rear thereof and angularly adjustable thereon, means for angularly adjusting the said member in relation to the main frame member, a bar telescoping into said main hollow cylindrical frame member at each side, a forked sectoral frame fixed to said bar at each side of the machine, means for fixing said forked frames at differently laterally extended positions, a traveling wheel centered in each forked frame eccentrically in relation to said main cylindrical member, a member laterally arranged on each side of the machine and clipped to said angular adjustable member, said members being carried around the walls to the outside of the said forked frames and laterally extensible with the walls, and means for varying the angle of the wall centers in relation to the main cylindrical frame member.

5. In a cultivator, the combination of a main transverse hollow cylindrical frame member, a parallel bar loosely secured to the same, blade shanks fixed to said bar, a telescopic member carrying a traveling wheel on an angle at each end of the said main frame member, means for fixing the said telescopic member in said main frame member on different laterally extended positions, a rearwardly extended member clipped to said parallel bar at each side of the longitudinal center of the machine, and adapted to slide laterally with the traveling wheels, and means for angularly adjusting the wheel centers in relation to the main frame member.

1,110,394. RAILWAY-CAR. JOHN LINDALL, Boston, Mass. Filed Apr. 19, 1912. Serial No. 691,869. (Cl. 105—19.)



1. In a railway car, in combination, a plurality of main car body units mounted on trucks capable of being run on tracks having curves of substantially short radii without an abnormal overhang, and an intermediate car body unit pivoted to the adjacent ends of said main car body units to be supported thereby and to move laterally with relation thereto, said intermediate unit being provided with movable doors in its side and with means within it for forming passages leading to and from the main units.

2. In a railway car, in combination, a plurality of main car body units mounted on trucks capable of being run on tracks having curves of substantially short radii without an abnormal overhang, and an intermediate car body unit provided with a floor supporting frame and with side and end walls and a roof erected upon said frame, said end walls having openings leading to openings in the ends of the main units, and said floor supporting frame having substantially central projecting end portions extended under the ends of the main units and pivoted thereto.

3. In a railway car, in combination, a plurality of main car body units, each of maximum unit length and capable of traveling on a track having a curve of short radius without an abnormal overhang, trucks to support said main units, and an intermediate car body unit interposed between said main units and pivotally secured thereto to be supported thereby and to move laterally with relation thereto.

4. In a railway car, in combination, a plurality of main car body units provided with openings in their adjacent ends, and an intermediate car body unit having a floor supporting frame and a roof erected upon the same, means for pivoting said frame to said main units to permit of lateral movement of one with relation to the other, and to support said intermediate car body unit by said main units, and trucks capable of being run on tracks having curves of short radii and upon which said main units are mounted.

5. In a railway car, in combination, a plurality of main car body units, each of maximum unit length and capable of traveling on a track having a curve of short radius without an abnormal overhang, trucks to support said main units, and an intermediate car body unit interposed between said main units and provided in its side with a common entrance leading to the main units and with separate exits from said main units, and means to close said entrance and exits.

[Claims 6 to 24 not printed in the Gazette.]

1,110,395. PROCESS OF PRODUCING ARMOR-PLATES FOR WARSHIPS AND OTHER STEEL ARTICLES WITHOUT CASE-HARDENING. ANGELO LUCERTINI, Terni, Italy. Filed Apr. 22, 1910. Serial No. 556,988. (Cl. 29—180.)

1. A process for producing armor plates and other steel articles comprising the following steps: cooling and reheating the ingot preparatory to rolling, rolling the ingot, heating and cooling the rolled plate so as to transform the metal from a granular to a fibrous structure, reducing the plate approximately to the required shape and size, heating one side of the plate to a high temperature for hardening, and heating the other side to a low temperature for toughening and quenching the plate.

2. A process for producing armor plates and other steel articles comprising the following steps: cooling the ingot gradually and uniformly throughout its whole mass, heating the ingot to a high temperature and gradually cooling it, heating the ingot to a temperature which is lower than the before mentioned temperature and is maintained for some hours after which the ingot is heated and then rolled, heating and cooling the rolled plate so as to transform the metal from a granular to a fibrous structure, reducing the plate approximately to the required shape and size, heating one side of the plate to a high temperature for hardening and heating the other side to a low temperature for toughening, and quenching the plate.

3. A process for producing armor plates and other steel articles comprising the following steps: heating the ingot at a high temperature, heating the same at a low temperature, rolling the ingot, annealing the rolled plate at a high temperature, annealing the same at a low temperature, reducing the plate approximately to the required shape and size, heating one side of the plate to a high temperature for hardening and heating the other side to a low temperature for toughening.

4. A process for producing armor plates and other steel articles comprising the following steps: heating the ingot at a high temperature, heating the same at a low temperature, rolling the ingot, heating and cooling the rolled plate so as to transform the metal from a granular to a fibrous structure, reducing the plate approximately to the required shape and size, planing and grinding the plate on one face, heating the face which has been planed and ground to a high temperature for hardening and heating the other side to a low temperature for toughening.

5. A process for producing armor plates and other steel articles comprising the following steps: taking an ingot of steel; heating to about 1150° C., rolling the ingot in several passes; lowering the temperature of the rolled plate to 400° C.; raising the temperature of the plate to about 590–610° C.; annealing the plate at about 600° C.; heating one side of the plate for hardening and the other side for developing toughness and quenching the plate.

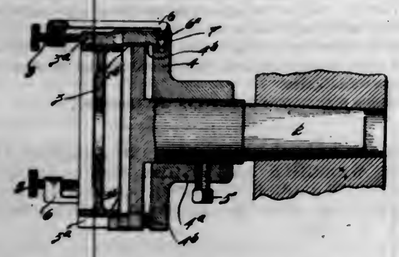
[Claims 6 to 9 not printed in the Gazette.]

1,110,396. GEAR-TRUING CHUCK. CHARLES J. MARKS, New Brunswick, N. J. Filed Nov. 26, 1913. Serial No. 803,097. (Cl. 29—139.)

1. A chuck comprising a plurality of members, one of said members having teeth to receive the teeth of a gear, the other member having means to bear against the gear, and means for retaining said gear securely upon said members.

2. A chuck comprising a pair of members concentrically disposed, one of said members having teeth disposed

relatively to the teeth of a gear, the other member having teeth adapted to bear against the teeth of the gear, and means to retain the gear securely in said members.



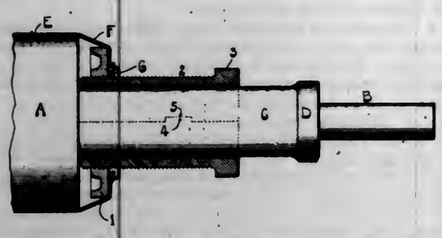
3. A chuck comprising a pair of members concentrically disposed, one of said members having teeth disposed relatively to the teeth of a gear, said teeth on their inner surfaces being outwardly tapered to bear upon the solid portion of the gear, the other member having teeth adapted to bear against the teeth of the gear, and means to retain the gear securely in set position.

4. A chuck comprising a plurality of members concentrically disposed, one of said members having teeth adapted to pass between teeth of a gear, the other member having teeth disposed between teeth of the first named member and adapted to bear against the opposed face of the gear, and means to retain said gear upon said members.

5. A chuck comprising a plurality of members concentrically disposed, one of said members having teeth adapted to pass between teeth of a gear, the other member having teeth disposed between teeth of the first named member and adapted to bear against the opposed face of the gear, means to secure said members together, and clamping means carried by one of the members to retain the gear in the chuck.

[Claims 6 to 10 not printed in the Gazette.]

1,110,397. ATTACHMENT FOR LITHOGRAPHING-PRINTING-PRESS ROLLERS. JOSEPH MARTINI, St. Louis, Mo. Filed Sept. 12, 1913. Serial No. 789,411. (Cl. 101—76.)

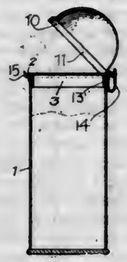


1. A roller of the character described having a neck at an end of its body, a sleeve rotatably mounted on said neck, a take up ring having screw thread engagement with said sleeve, and a covering on said roller having one of its ends fitted to said take up ring.

2. A roller of the character described having a neck at an end of its body and an abutment adjacent to said neck, a sleeve surrounding said neck and rotatably fitted to said abutment, said sleeve being provided with external screw threads, a traveling take-up device screwed onto said sleeve, and a covering on said roller having one of its ends secured to said traveling take up device, the said sleeve being operable against said abutment so as to move the traveling take up device away from the body of the roller.

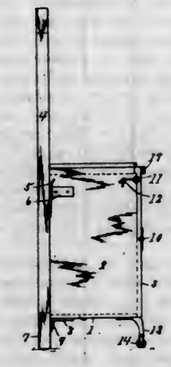
3. A roller of the character described having a body and a neck extending from an end of said body, a screw sleeve rotatably mounted on said neck, a take up ring surrounding the inner end portion of said screw sleeve, a covering for the body of the roller having one of its ends contracted and laced over the outer face of said take up ring, said screw sleeve being extended through the take up ring and provided with a wrench receiving member near its outer end.

1,110,398. SALT-SHAKER. JOHN M. MORAN, Miami, Fla. Filed Sept. 15, 1913. Serial No. 789,833. (Cl. 65—45.)



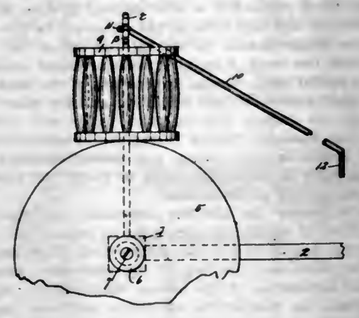
A device of the class described including a body having a beading formed around its upper end, a removable cap arranged within the upper end of the body and provided with a plurality of perforations, a cover hingedly secured to the body, and provided with an offset annular portion adapted to engage over the beading on the body when the cover is in its closed position, a resilient catch member carried by the body and adapted to engage over the offset portion on the cover to retain the cover in its closed position, an outwardly projecting lug carried by the hinged portion of the cover, and a U-shaped spring member having one end secured to the body and its other free end arranged in spaced relation with the hinge and adapted to yieldably engage the lug to retain said cover in an open or a closed position.

1,110,399. DISPLAY DEVICE FOR DOORS. JOHN M. NUNN, Sherman, Tex. Filed Apr. 9, 1914. Serial No. 830,827. (Cl. 211—25.)



In a display device for doors comprising a light rectangular receptacle open at one side, the other side divided horizontally through the center and joined by hinges, rendering the upper portion of the side foldable outwardly, the foldable portion being secured in a closed position to the ends by hooks attached thereto, and means for removably securing the receptacle to a door, such means comprising metal clips secured to the stiles of a door, together with rectangular bent metal plates secured to the ends of the receptacle and adapted to engagement with the clips, as herein set forth.

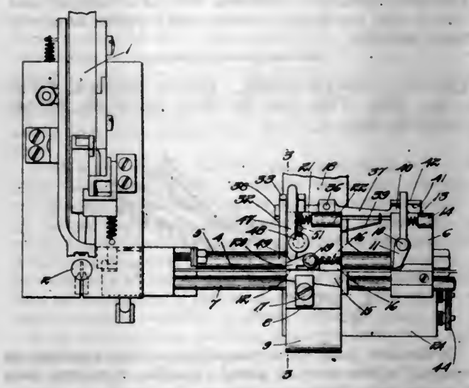
1,110,400. TOY. RICHARD PAUL, Enumclaw, Wash. Filed Sept. 3, 1913. Serial No. 787,866. (Cl. 46—48.)



1. In an article of the class described, the combination of an apertured axle and its wheels, of a wire parallel to the axle and bent at right angles at each of its ends, and loosely entering the apertures in the axle, drums rotatably mounted upon the bent ends of the said wire and between the axle and the horizontal portion of the said wire, a tongue rigid with the said axle, a straight wire having one of its ends rigidly connected to the said tongue and its opposite end connected to the horizontal portion of the first mentioned wire, whereby frictional contact between the said drums and wheels is adjustably secured.

2. In an article of the class described, the combination of the axle and its wheels, of a tongue rigid with the said axle, a wire frame work loosely mounted upon the said axle, and having vertical portions which form spindles, drums rotatably mounted upon the said spindles, resilient means upon the said tongue and connected to the said frame work whereby the said drums are adjustably and yieldingly forced into frictional contact with the peripheries of the said wheels.

1,110,401. WIRE-FEED DEVICE. GEORGE W. PERKINS, Boston, Mass., assignor to Heaton Peninsular Button Fastener Company, Boston, Mass., a Corporation of Maine. Filed Oct. 7, 1913. Serial No. 793,859. (Cl. 140—130.)



1. In a wire feed device, a reciprocable feed block having a rest on which the wire is supported, a dog pivoted to said feed block, said dog having a serrated face which normally engages the wire, and clamps it to the feed block, and means for holding said dog in engagement with the wire during the forward movement of the feed block.

2. In a wire feed device, a reciprocable feed block having a rest on which the wire is supported, a dog pivoted to said feed block, said dog having a face which normally lies parallel with the wire and is formed with a plurality of teeth transversely of said face which engage with said wire, and means for normally holding said dog with its teeth in engagement with the wire.

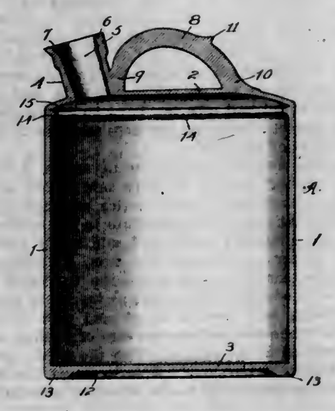
3. In a wire feed device, a reciprocable feed block having a rest on which the wire is supported, a dog pivoted to said feed block, said dog having a serrated face which normally engages the wire, a pivoted lever having one arm which engages the back of said dog to hold it in gripping engagement with the wire, a spring which holds said lever in yielding engagement with said dog, a reciprocable actuating member which moves said feed block, a yielding tension connection between said actuating mechanism and said feed block which yields to resistance to the onward movement of the feed block and permits the continued movement of said actuating mechanism, and tripping mechanism which is actuated by the said continued movement of the actuating mechanism to release from said dog said lever which holds the dog in engagement with the wire.

4. In a wire feed device, a reciprocable feed block having a rest on which the wire is supported, a dog pivoted to said feed block, said dog having a serrated face which normally engages the wire and having an inclined back, a pivoted lever having one arm formed with a rounded end which engages the inclined back of said dog to hold it in gripping engagement with the wire, a spring which holds said lever in yielding engagement with said dog, a reciprocable actuating member which moves said feed block, a yielding tension connection between said actuating mechanism and said feed block which yields to resistance to the onward movement of the feed block and permits the continued movement of said actuating mechanism, and tripping mechanism which is actuated by the said continued movement of the actuating mechanism to release from said dog said lever which holds the dog in engagement with the wire.

5. In a wire feed device, a reciprocable feed member having pivoted thereto a dog having a face parallel with the path of movement of the wire and formed with a plurality of serrations transverse of the path of movement of the wire which engage with the wire and clamp it to the feed block, and means for reciprocating said feed block.

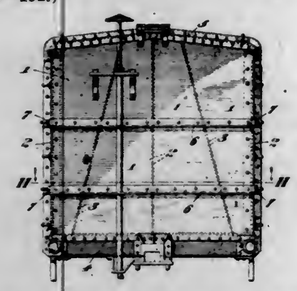
[Claims 6 to 8 not printed in the Gazette.]

1,110,402. JUG OR SIMILAR VESSEL. WILLIAM H. REDINGTON, Evanston, Ill. Filed Feb. 2, 1912. Serial No. 675,035. (Cl. 215—73.)



As a new article of manufacture, a jug comprising a hollow vessel, a spout therefor communicating with the interior thereof, and an annular rib projecting from the interior wall of said vessel in position to prevent sediment from passing off with the liquid.

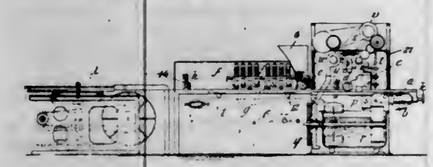
1,110,403. METALLIC BOX-CAR. RALPH V. SAGE, Columbus, Ohio. Filed May 1, 1914. Serial No. 835,591. (Cl. 105—192.)



1. A railway car, having its ends constructed from a plurality of metal plate sections of varying width, said plates being attached together along their meeting edges by means of integral inturned flanges, which act as the inside stiffening members of the car, flanges end-braces extending horizontally across the outer ends of the car and attached thereto.

2. In a railway car, having its ends constructed from a plurality of metal plate sections of varying width, said plates being attached together along their meeting edges by means of vertical and inclined integral inturned flanges which act as the inside stiffening members of the car, flanged end-braces extending horizontally across the outer ends of the car with their ends bent at right angles and attached to the sides of the car.

1,110,404. APPARATUS FOR MOLDING CHOCOLATE OR THE LIKE CONTAINING PRESERVED FRUITS, ALMONDS, OR OTHER HARD BODIES. EMILE LOUIS ALFRED SAVY, Paris, France. Filed Aug. 19, 1911. Serial No. 644,977. (Cl. 107—1.)



1. The combination of a mold, an apparatus to receive said mold comprising guiding means for the mold, means to fill the mold with chocolate arranged adjacent to the guiding means, a device adapted to feed hard bodies to the mold also arranged adjacent the guiding means, and means arranged to act on the material in said mold to thoroughly knead and mix the hard bodies in the chocolate, said means comprising members movable at an angle to the surface of the molds.

2. The combination of a series of molds, a trackway therefor, driving devices to move said molds along the trackway, a chocolate feeding device mounted above the track and arranged to feed chocolate to the molds, means to heat said chocolate feeder and said molds while adjacent the feeder, a container for nuts, a feeding device adjacent the container and above the trackway to feed nuts to the chocolate in the molds as the latter pass along the trackway, said feeding means and said driving device being connected so that the rate of feeding the nuts is proportioned to the rate at which the molds are driven by said feeding device, and means to knead the nuts and chocolate together in the molds arranged adjacent to the track.

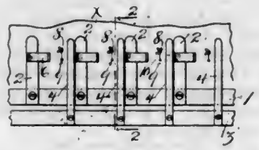
3. The combination of a track, molds formed to fit one against the other to move along the track, driving devices to move the molds along the track, a casing, said track passing through said casing by suitable openings, means to keep the interior of said casing at a constant temperature high enough to melt chocolate, a chocolate feeding means in said casing adjacent to the trackway to feed chocolate to the molds, a nut feeding device adjacent the track connected to said driving devices to operate therewith and feed nuts to the chocolate in the molds at a rate proportionate to the rate at which the molds move along the track, a shaking table arranged under the track provided with means to operate it to shake the molds filled with chocolate and nuts as they pass along the track, an endless belt mounted under said track to return any material falling therefrom to said chocolate feeding means in said casing, and means mounted adjacent the track to enter the molds to knead the chocolate and nuts together in the molds.

4. In a device for molding chocolate and nuts, the combination of molds, an apparatus to receive the molds comprising means to fill the molds with chocolate, and means to place nuts on top of the chocolate, means to keep said apparatus at the proper temperature, together with means for mixing the chocolate and nuts together in the molds.

5. In a molding apparatus, the combination of a trackway, molds adapted to move along said trackway, and means mounted adjacent said trackway to enter the molds and mix the material which the molds are adapted to contain as said molds move along the trackway.

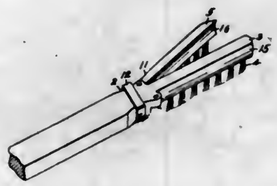
[Claims 6 to 18 not printed in the Gazette.]

1,110,405. DEVICE FOR HOLDING THREADS IN EMBROIDERING-MACHINES. MORRIS SCHOENFELD, Rorschach, Switzerland. Filed May 21, 1910. Serial No. 562,600. (Cl. 112—33.)



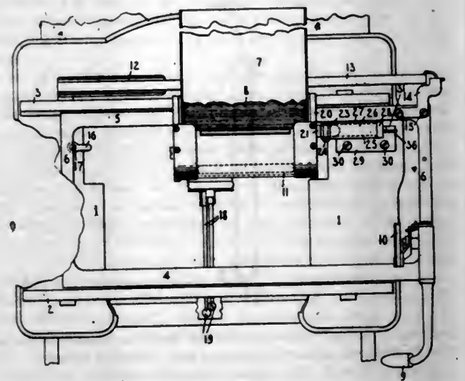
In an embroidering machine, a plurality of means for stitching a fabric, a plurality of fingers mounted on a common support, said fingers being arranged near the several sewing threads and arranged to coöperate with the several threads between the stitching means and the fabric, resilient members on said fingers, and coöperating thread engaging members mounted on a common support and arranged to coöperate with said resilient members to hold the several threads, said supports being relatively movable.

1,110,406. TOOTH-BRUSH. EDWARD SCHRECK, Columbus, Ohio. Filed May 26, 1913. Serial No. 769,845. (Cl. 15—39.)



A sanitary tooth brush comprising a handle portion, an integral bristle carrying prong extending forwardly from a central point of the front end of said handle portion, a projecting apertured shoulder on the front end of said handle portion to each side of said prong, supplemental bristle carrying members, a projecting apertured shoulder on one end of each of said supplemental members adapted to be pivotally attached to said first named shoulders whereby said members are swingable outwardly in the plane of the handle, and means adapted to lock said pivoted members in abutting relation with said prong.

1,110,407. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Original application filed Mar. 8, 1913, Serial No. 752,848. Divided and this application filed June 20, 1913. Serial No. 774,761. (Cl. 197—63.)



1. In a typewriting machine, the combination of a carriage; and automatically operating means for arresting the carriage at different points at successive movements of the carriage, said means comprising a plurality of stops fixed on the part of the machine which supports such stops, a coacting stop, and automatically operating means for controlling said coöperative stop to enable it to engage the plurality of stops successively at successive movements of the carriage.

2. In a typewriting machine, the combination of a carriage; and automatically operating means for arresting the carriage at different points at successive movements of the carriage, said means comprising a plurality of stops fixed on the part which supports such stops, a co-acting stop, and automatically operating means co-acting with said coöperative stop for controlling and enabling it to engage the plurality of stops successively at successive movements of the carriage, said controlling means being operated by said co-acting stop.

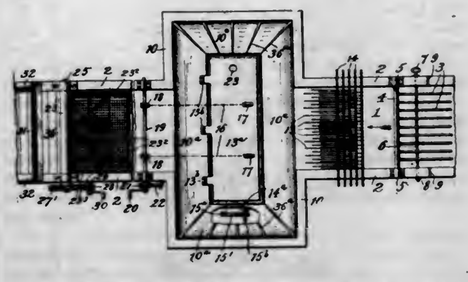
3. In a typewriting machine, the combination of a carriage; and automatically operating means for arresting the carriage at different points at successive movements of the carriage, said means comprising a plurality of stops, a co-acting stop, and automatically operating means coöperating with and controlling said co-acting stop to prevent it from co-acting with different of the plurality of stops at successive movements of the carriage to thus determine with which of the plurality of stops the co-acting stop may coöperate at each movement of the carriage.

4. In a typewriting machine, the combination of a carriage; and automatically operating means for arresting the carriage at different points at successive movements of the carriage, said means comprising a plurality of stops, a co-acting stop, a shield coöperative with said co-acting stop to prevent it from coöperating with certain of the plurality of stops, and means by which said shield may be automatically shifted to determine with which of the plurality of stops the co-acting stop may co-act.

5. In a typewriting machine, the combination of a carriage; and automatically operating means for arresting the carriage at different points at successive movements of the carriage, said means comprising a plurality of stops, a co-acting stop, a shield coöperative with said co-acting stop to prevent it from coöperating with certain of the plurality of stops, and means by which said co-acting stop is rendered effective to shift said shield and thereby determine with which of the plurality of stops the co-acting stops may co-act and thus vary the position of arrest at successive movements of the carriage.

[Claims 6 to 26 not printed in the Gazette.]

1,110,408. FLUME-CLEANING APPARATUS. FRIEDRICH GUSTAV STRITZEL, Washington, D. C. Filed Apr. 29, 1913. Serial No. 764,304. (Cl. 210—16.)



1. In a water flume, and in combination, a pivotally supported manually operable trash collecting and removing screen arranged normally within and across the flume, and inclined forwardly, means for swinging the screen upwardly on its pivot thereby carrying the collected material on the face of the screen out of the flume, and means in the flume immediately in advance of the screen for collecting and preventing accumulation of non-floating substances on the lower edge of the screen.

2. In a water flume, and in combination, a pivotally supported trash collecting and removing screen arranged normally within the flume at a forwardly inclining angle, the lower forward edge of the screen being adjacent the bottom of the flume, manually operable means for swinging the screen upwardly thereby carrying the collected material out of the flume, a settling chamber in the bottom of the flume in advance of the screen, said settling chamber being constructed and arranged to collect and prevent the accumulation of sand and the like adjacent the lower edge of the screen whereby the screen may be readily elevated and means arranged in advance of the screen for intercepting large bodies and preventing the same from accumulating on the screen, substantially as described.

3. In a flume and in combination, a swinging screen, pivotally supported at its upper end above the flume and having its body part located within the flume at an angle, means for swinging the screen upwardly, a floor in the rear of the screen, and a stop arranged rearwardly of the pivotal point of the screen whereby when the screen engages the stop, the material collected on the screen will be deposited on the floor, substantially as described.

4. In a flume, and in combination, a pivotally supported screen extending into and across the flume at a forward incline, means for swinging the screen forwardly on its pivot, a yielding stop arranged rearwardly of the screen, and in the path of the screen as it swings on its pivot whereby the material lodged on the face of the screen will be dislodged therefrom, and a collecting surface arranged below the stop.

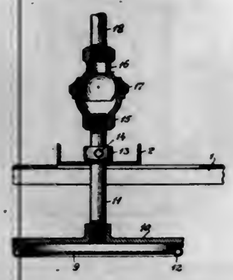
5. In a flume, and in combination, a swinging screen pivotally supported at its upper edge above the flume and having its body part projecting into and across the flume at a forward incline, a stop arranged above the flume and in the rear of the pivotal connection for the screen, said stop comprising a cross bar and yielding means for maintaining the cross bar in normal position and a surface below the stop for collecting material dislodged from the screen upon its contact with the stop.

[Claim 6 not printed in the Gazette.]

1,110,409. SUCTION LIFTING APPARATUS. DANIEL MANSON SUTHERLAND, Jr., Trenton, N. J., assignor to The Agasote Millboard Co., Ewing, N. J., a Corporation of New Jersey. Filed Dec. 20, 1911. Serial No. 666,896. (Cl. 57—9.)

1. A suction lifting apparatus comprising a transportable horizontal frame, a plurality of suction elements, each of said elements being loosely supported by said frame.

whereby each element may swing laterally from the frame in any direction and may move vertically therein, and conduits adapted to connect said elements with an exhauster, substantially as and for the purpose described.



2. A suction lifting apparatus comprising a frame having an aperture, a suction element comprising a pipe extending loosely through the aperture in said frame, a main conduit, and a flexible branch conduit connecting said pipe with said main conduit whereby the element may have sliding and rocking movement with respect to the frame, substantially as and for the purpose described.

3. A suction lifting apparatus comprising a frame having apertures, a plurality of suction elements each comprising a pipe extending loosely through an aperture in said frame, a main conduit and flexible branch conduits connecting said pipes with said main conduit whereby the elements may each have sliding and rocking movement with respect to the frame, substantially as and for the purpose described.

4. A suction lifting apparatus comprising a frame having an aperture therein, a suction element comprising a pipe of smaller diameter than said aperture and extending through said aperture, a collar secured to said pipe above said aperture whereby said element is slidably and swingingly supported by said frame and a flexible connection for placing said element in communication with an exhauster, substantially as and for the purpose described.

5. A suction lifting apparatus comprising a frame, a suction element slidably and swingingly supported from said frame, a main suction conduit, a flexible connection comprising a universal joint and a plurality of pipe sections and hinge joints, for connecting said element with said conduit, whereby said element may move axially and swingingly with respect to said frame and said main suction conduit, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,110,410. BULKHEAD-DOOR. HORACE H. THAYER, Jr., Wilmington, Del. Filed June 3, 1914. Serial No. 842,615. (Cl. 114—117.)

1. In a door for partitions, a partition having an opening providing a door-way, two doors closing the doorway and inclosing between them a space, and means connected with said space to regulate the air pressure therein.

2. In a door for partitions, a partition provided with an opening, two doors for said opening and means for creating a partial vacuum between them to maintain them closed.

3. In a door for partitions, a partition having an opening providing a door-way, two doors closing the doorway and inclosing between them a space, a pipe communicating with said space, means connected with the pipe to produce a partial vacuum within said space, and means to determine the pressure therein.

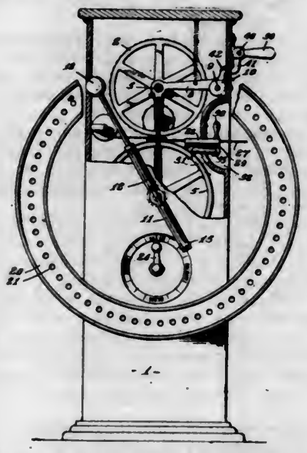
4. In a door for partitions, a partition provided with an opening, two doors for said opening, gaskets against which said doors are adapted to pass, and means for creating a partial vacuum between said doors, thereby causing the doors to press against their gaskets.

5. In a door for partitions, a partition provided with an opening, two doors for said opening and means for

creating a partial vacuum between them to maintain them closed, and means for destroying said vacuum at will.

[Claims 6 to 10 not printed in the Gazette.]

1,110,411. TIME-RECORDER. CHARLES E. TOMLINSON, Syracuse, N. Y., assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed May 2, 1910. Serial No. 558,792. (Cl. 234—46.)



1. In a time recorder and in combination, a printing couple comprising a printing element and a platen carrying a record receiving sheet, an inclosing case having a passage therein registering with the space normally between the printing element and the sheet carried by the platen and into which a card may be inserted for interposing the same between the printing element and said sheet, and means for effecting the movement of one member of the printing couple toward the other for making an imprint, said means including a handle designed to occupy a plurality of angular positions and to be operated in any one of said positions for effecting printing on the sheet or the said card, substantially as and for the purpose described.

2. In a time recorder, the combination of a printing couple including two members, one a time printing element and the other a rotatable drum arranged with its periphery opposed to the time printing element and adapted to support a record sheet thereon, an inclosing case formed with a card passage alined with the space normally between the printing element of the printing couple and the record sheet, for permitting a card to be inserted between said parts and to rest on the record sheet on the drum, and means for effecting relative movement of the members of the printing couple upon the insertion of a card in said passage irrespective of the position of any point on the record sheet relatively to the printing line, substantially as and for the purpose specified.

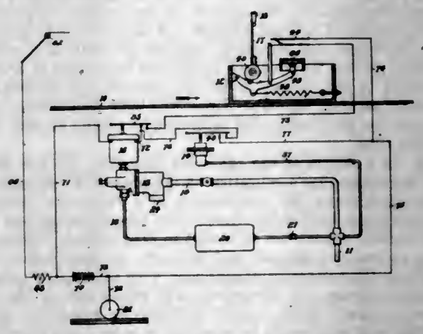
3. In a time recorder, the combination of a printing couple including two members, one a printing element and the other means for supporting a record sheet, an inclosing case formed with a card passage alined with the space normally between said members of the printing couple, to permit a card to be inserted between said members and rest on the record sheet on said supporting means as a platen, and two independent means for effecting printing movement of the members of the printing couple, substantially as and for the purpose set forth.

4. In a time recorder, the combination of time printing wheels, a record supporting drum for coöperating with the wheels and rotatable about its axis and movable lengthwise thereof, a card receiver between the drum and the printing wheels, and means for shifting the card receiver for bringing different portions of the card therein to the impression point, substantially as and for the purpose described.

5. In a time recorder, the combination of two members, one a time printing element and the other a drum movable about the axis, the drum being arranged with its periphery opposed to the time printing element and normally spaced apart from the time printing element, one of said two members being movable relatively to the other to effect the printing operation, and an inclosing case formed with a card passage alined with the space normally between the periphery of the drum and the time printing element, and a card guide shiftable in a direction parallel to the axis of the drum, substantially as and for the purpose described.

[Claims 6 to 29 not printed in the Gazette.]

1,110,412. APPARATUS FOR THE CONTROL OF RAILWAY CARS OR TRAINS. PER UTNE, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Sept. 7, 1911. Serial No. 648,116. (Cl. 246—59.)



1. In combination, a train pipe, means for opening said train pipe, an electromagnetic device for controlling said means, a circuit controller controlled by said electromagnetic device and operating after the device has become deenergized to keep it deënergized, and means responsive to the fluid pressure in said train pipe for rendering said circuit controller ineffective to control the electromagnetic device.

2. In combination, a train pipe, means for opening said pipe, an electromagnetic device for controlling said means, a circuit for said electromagnetic device, means for opening said circuit, a contact controlled by said device for keeping the circuit open after it has been opened, and means responsive to the fluid pressure in said train pipe for rendering said contact ineffective to control the circuit.

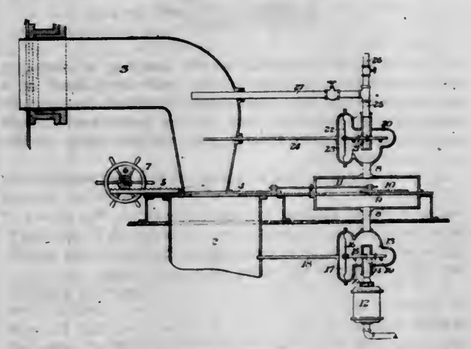
3. In combination, a train pipe, means for opening said train pipe, an electromagnetic device for controlling said means, a contact operatively connected with said device for controlling the device, and means responsive to the fluid pressure in said train pipe for rendering said contact ineffective to control said electromagnetic device.

4. In combination, a train pipe, means for opening said pipe, a device controlled by said opening means for retaining said opening means in the opening position, and means responsive to the fluid pressure in the train pipe for rendering said device ineffective to control said opening means.

5. In an apparatus for the control of fluid pressure brakes, the combination of a train pipe, an exhaust port in the train pipe, an electro-magnet for the control of the exhaust port, a circuit controller operated by the electro-magnet, a movable member connected with the train pipe and responsive to variations of pressure therein, a circuit controller operated by said member, a circuit for the electro-magnet including a source of current and the circuit controller operated by the electro-magnet, means for controlling said circuit, and a branch circuit around the circuit controller operated by the electro-magnet and including the circuit controller operated by the movable member.

[Claims 6 to 11 not printed in the Gazette.]

1,110,413. APPARATUS FOR MEASURING THE FLOW OF FLUIDS. THOMAS B. WYLIE, Pittsburgh, Pa. Filed June 5, 1911. Serial No. 631,489. (Cl. 73—68.)



1. The method of measuring the volume of flow of a fluid, which consists in causing it to flow through a controllable opening, causing another fluid to flow through another controllable opening having its area definitely proportioned to the area of the first named opening, maintaining a difference in the pressures at opposite sides of the last named opening which is proportional to the difference is pressures at the opposite sides of the first named opening, and measuring the fluid which flows through the second opening; substantially as described.

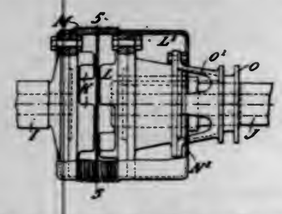
2. Apparatus for measuring the flow of fluid, comprising a conduit for the fluid to be measured, said conduit having a restricted portion, another conduit for another fluid, two chambers which are respectively connected to the first named conduit at opposite sides of its restricted portion, a pressure plate in each of said chambers, said plates being respectively exposed on one side to the action of the pressures existing in the portions of the first named conduit to which their chambers are connected, a valve carried by one of the plates and controlling the flow of fluid through the second conduit into said chamber, a valve connected to the other plate and controlling the flow of fluid out of that chamber, a measuring opening between the two chambers, and means for

measuring the flow through the second conduit; substantially as described.

3. Apparatus for measuring the flow of fluid, comprising a conduit for the fluid to be measured, said conduit having a restricted opening, another conduit for another fluid and having a measuring portion, a valve controlling said restricted opening, another valve controlling the measuring portion of the second conduit and connected to the first named valve, and means for maintaining at opposite sides of said measuring portion a difference in pressure which is proportional to the difference in pressure between opposite sides of the restricted portion of the first conduit; substantially as described.

4. Apparatus for measuring the flow of fluids, comprising a conduit for the fluid to be measured, another conduit for another fluid, a measuring device for the second fluid, connected valves to control the flow of both fluids, means for maintaining proportionate differences of pressure at opposite sides of the two valves, and a temperature recorder arranged to measure the temperature of one of the fluids; substantially as described.

1,110,414. SYNCHRONIZING DEVICE FOR FACILITATING THE COUPLING OF ROTATING SHAFTS. ALFRED FERNANDEZ YARROW, Stirling, Scotland. Filed June 10, 1913. Serial No. 772,928. (Cl. 116—31.)



1. A device for facilitating the coupling of rotating shafts comprising the combination with each shaft of a member rotating therewith, said members rotating in proximity to each other and having permanent helices upon the peripheries thereof, said helices being of the same pitch and sense.

2. In a coupling for rotating shafts the combination with each shaft to be coupled of a clutch member thereon and of a sleeve adapted to rotate therewith, the sleeve of each shaft being arranged to rotate adjacent to the sleeve of the other shaft, and each being provided on its periphery with a helix of the same pitch and sense.

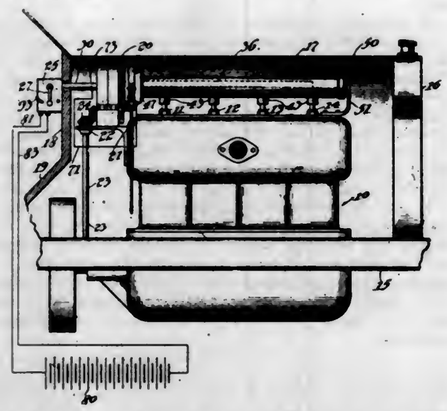
3. A device for facilitating the coupling of a plurality of rotating shafts, comprising a member rotatably connected with each shaft, said members rotating in proximity to each other and each having a spiral line permanently marked upon the periphery thereof, said spiral lines being of the same pitch and sense.

4. A device for coupling a plurality of rotating shafts, comprising a clutch member for each shaft, and a cylinder rotatably connected to each shaft, the cylinders of the two shafts being arranged to rotate adjacent to each other and being provided on their peripheries with spiral lines of the same pitch and sense.

5. In a coupling for rotating shafts the combination with each shaft of a clutch member rotating therewith, a member also adapted to rotate therewith, the members of the two shafts being arranged to rotate adjacent to each other, and a spiral line of the same pitch and sense on each of said members.

1,110,415. APPARATUS FOR PRODUCING IGNITION-SPARKS WITHIN CYLINDERS OF INTERNAL-COMBUSTION ENGINES. FRANK A. ZIKA, Evanston, Ill., assignor of one-half to James E. Barry, Chicago, Ill. Filed Dec. 8, 1913. Serial No. 805,237. (Cl. 123—167.)

1. In a device of the character described, for use with an engine having a plurality of cylinders and corresponding spark plugs, the combination of a removable conductor-carrying insulating element for removable support on an engine; a plurality of conductors, suitable for the spark plugs of the engine, carried by said element; laterally extending terminals, one for each conductor, for engagement with said spark plugs, respectively; a rotating current distributer and means for effectively changing the circumferential positions of said conductors with reference to the rotating conductor of the distributer to vary the spark time.



2. In a device of the character described, for use with an engine having a plurality of cylinders and corresponding spark plugs, the combination of a longitudinally extending, removable, conductor-carrying, insulating element for removable support on an engine; a plurality of conductors, suitable for the spark plugs of the engine, embedded in said insulating element; laterally extending, yielding, terminals, one for each conductor, for engagement with said spark plugs, respectively; a rotatable current distributer means for energizing said conductors consecutively, and means for a rotating current distributer and means for effectively changing the circumferential positions of said conductors with reference to the rotating conductor of the distributer to vary the spark time.

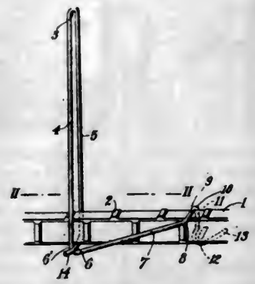
3. In a device of the character described, for use with an engine having a plurality of cylinders and corresponding spark plugs, the combination of a conductor-carrying, insulating element, for support on an engine; conductors terminating at one end thereof and laterally at longitudinal intervals, for respective engagement with said spark plugs; current distributing means, for energizing said conductors in consecutive order; an intervening, oscillatable means, between said distributer and said conductors, and means for oscillating said intermediate means to vary the spark time.

4. In a device of the character described, for use with an engine having a plurality of cylinders and corresponding spark plugs, the combination of a removable conductor-carrying, insulating element, for removable support on an engine; conductors embedded in said element terminating at one end thereof, and laterally at longitudinal intervals, for respective engagement with said spark plugs; yielding means for connecting said conductors to the respective spark plugs; current distributing means for energizing said conductors in consecutive order; and intervening oscillatable means carrying a connector for each conductor intervening between said distributer and said conductors and means for oscillating said intervening means.

5. In a device of the character described, for use with an engine having a plurality of cylinders and suitable spark plugs, the combination with an insulating, conductor-carrying element to be mounted on an engine; a series of high potential conductors embedded in said element, terminating at one end thereof in a common plane, and terminating, respectively, at longitudinal intervals substantially coextensive with the separation of said plugs; means rotatable about the same axis as that of said element, for consecutively energizing said conductors and means for removably holding said element in its axial position.

[Claims 6 to 8 not printed in the Gazette.]

1,110,416. STIRRUP FOR REINFORCED CONCRETE. ASHER ATKINSON, New Brunswick, N. J., assignor, by mesne assignments, to Henry B. Newhall, Littleton, N. H. Filed Dec. 24, 1910. Serial No. 599,118. (Cl. 72—112.)



1. In a stirrup for concrete construction, a bar, a resilient loop projecting upwardly from the bar, one arm of said loop bent substantially half around said bar and then rearwardly, the other arm of said loop bent to an acute angle, the rearwardly projecting portion of the first-named arm adapted to engage the acute angle of the second named arm.

2. In a device of the class described comprising in combination, a bar, a stirrup comprising a loop extending upwardly from a point below said bar and having two arms, one of said arms provided with means thereon for effecting a camming engagement with the other below said bar whereby the said arms are caused to engage with the sides of said bar, an extension on one of said arms along one side of the bar, a loop on said extension at a distance from the first mentionel loop adapted to engage a projection on said bar to prevent the same from slipping lengthwise thereof, and means on said second mentioned loop to aid in maintaining the first mentioned loop snug against the under side of said bar.

3. In a stirrup for reinforcing concrete, comprising an upwardly extending resilient loop adapted to engage a bar, one of the arms of said loop bent at an angle and extending forwardly and having means thereon to engage the bar, the other of said arms bent at an angle and adapted to engage the first mentioned arm at the angle thereof.

4. A stirrup comprising a loop mounted upon and projecting upwardly from a bar, said loop formed by a plurality of resilient arms, an extension on one of said arms and a second loop substantially of U-shaped formation on said extension adapted to engage said bar, said arms adapted to be separated in placing said loop over said bar and one of said arms having means thereon for effecting a camming engagement with the other after being placed thereon to support the loop.

5. In a stirrup for reinforcing concrete, comprising an upwardly extending resilient loop adapted to engage a bar, one of the arms of said loop bent at an angle and extending forwardly and having means thereon to engage the bar, the other of said arms bent at an angle and adapted to engage the first mentioned arm.

[Claim 6 not printed in the Gazette.]

1,110,417. PROCESS FOR MAKING PHONOGRAPH-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Original application filed May 25, 1909, Serial No. 498,357. Divided and this application filed Sept. 7, 1912. Serial No. 719,094. (Cl. 18—48.5.)

1. The process of molding sound records which comprises forming a smooth non-porous surface portion in contact with the surface of a mold and forming a spongy porous backing or body for said surface by causing the material for said backing or body to harden while causing the same to foam copiously, substantially as described.

2. The process of molding sound records which comprises forming a smooth non-porous surface portion from fluid material in contact with the surface of a rotating mold and forming a spongy porous backing or body for said surface portion by causing the material for said backing or body to harden while causing the same to foam copiously during the rotation of the mold, substantially as described.

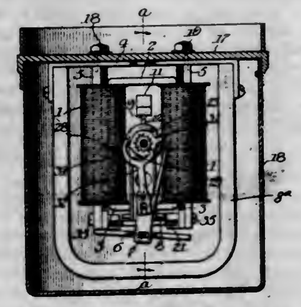
3. The process of molding sound records, consisting in introducing into a mold substances which react on application of heat to form an infusible condensation product, supplying heat sufficient to cause the reaction to ensue to form a record having a smooth non-porous record surface, and rendering the backing of the record porous by the copious evolution of dissociation gases, substantially as described.

4. The process of molding sound records, consisting in mixing together a phenol resin with more than sufficient aldehyde to combine therewith without evolution of gas, and heating the same in a rotating mold to form centrifugally without counteracting pressure, a record having a smooth outer surface while rendering the body of the record porous by the evolution of gases, substantially as described.

5. The process of molding sound records, consisting in mixing together a phenol resin and a small percentage of a final product solvent element with more than sufficient aldehyde to combine therewith without evolution of gas, and heating the same in a rotating mold to form centrifugally without a counteracting pressure, a record having a smooth outer surface while rendering the body of the record porous by the evolution of gases, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,110,418. SELECTOR. WILLIAM S. BURNETT, Milwaukee, Wis., assignor to Morse Code Signal Company, Milwaukee, Wis. Filed Aug. 26, 1912. Serial No. 717,082. (Cl. 177—332.)



1. A device of the character described having a winding, two armatures under the control of said winding in independent magnetic circuits, a circuit controlling device under the control of one armature, means under the control of the second armature to mechanically control the first aforesaid armature, and means under the control of said first armature to shift said means.

2. A device of the character described having a winding, two armatures under the control of said winding, a circuit controlling device under the control of one armature, and

movable means under the control of the second armature to mechanically control the first aforesaid armature, said movable means having a projection and said second armature having an auxiliary arm adapted to engage said projection when said movable means is in a given position to prevent further operative movement of said second armature.

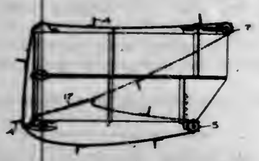
3. A device of the character described having a winding, two armatures under the control of said winding, a circuit controlling device under the control of one armature, movable means under the control of the second armature to mechanically control the first aforesaid armature, said movable means having means operable when said movable means is in a given position to control said second armature, and means whereby said first armature controls said movable means to release its control over the second aforesaid armature.

4. A device of the character described having a winding, two armatures under the control of said winding, a circuit controlling device under the control of one armature, means under the control of the second armature to mechanically control the first aforesaid armature, and means controlled by said first armature when said first aforesaid means is in a given position to shift said first aforesaid means to normal.

5. A device of the character described having a winding, two armatures under the control of said winding, a circuit controlling device under the control of one armature, means under the control of the second armature to mechanically control the first aforesaid armature, and a projection on said first armature to prevent the restoration of said first aforesaid means to normal during actuation of said first armature.

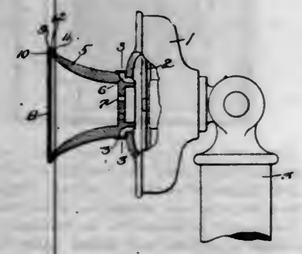
[Claims 6 to 11 not printed in the Gazette.]

1,110,419. SECTIONAL TROUGH. FRANCIS W. CARPENTER, St. Paul, Minn. Filed Jan. 22, 1912. Serial No. 672,730. (Cl. 193—15.)



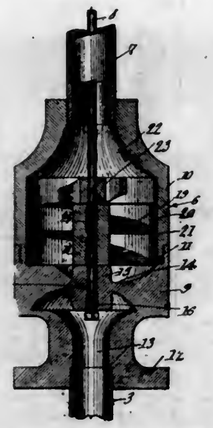
A trough of the class described comprising a plurality of sections hinged together, an endless carrier extending through said trough and a spring tensioned chain secured to the inner end of one of the trough sections and adapted to be hooked to said carrier whereby to hold the slackened portion of the carrier suspended between the trough sections when the sections are folded together.

1,110,420. MICROPHONE ATTACHMENT FOR TELEPHONES. HANS W. CHRISTENSEN, Boston, Mass. Filed Mar. 19, 1913. Serial No. 755,307. (Cl. 179—185.)



A microphone attachment for telephone, transmitters having a flaring mouthpiece and an air passage at the base of said mouthpiece comprising a thin metallic vibratory diaphragm, a non-vibratory rim having oppositely disposed flanges to engage said diaphragm and the mouthpiece of a telephone, in combination with a band to seal the air passages between the mouthpiece and the shell of the transmitter.

1,110,421. CENTRIFUGAL PUMP. ALBERT N. COOPER, Albuquerque, N. Mex. Filed Feb. 9, 1914. Serial No. 817,650. (Cl. 103—43.)



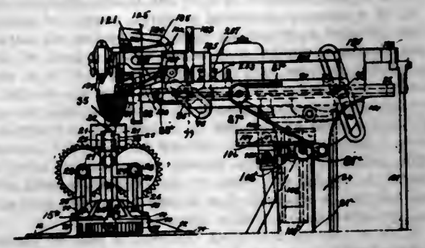
1. A centrifugal pump, having a two-part casing provided with a reduced inlet and outlet, the upper part having a cylindrical chamber; a stationary guiding spiral carried in the lower part and having its hub disposed in spaced relation to and concentrically of the inlet, a rotatory shaft journaled in the hub and extending concentrically of the outlet, a hub attached to the shaft, an elevating spiral carried by the last hub and mounted for rotation within the chamber of the casing, and a confining and reinforcing rim attached to the periphery of the elevating spiral, said rim being in close proximity to the wall of the chamber.

2. A centrifugal pump, having a two-part casing provided with a reduced inlet and outlet, the upper part having a cylindrical chamber, a stationary guiding spiral carried in the lower part and having its hub disposed in spaced relation to and concentrically of the inlet, a rotatory shaft journaled in the hub and extending concentrically of the outlet, a hub attached to the shaft, an elevating spiral carried by the last hub and mounted for rotation within the chamber of the casing, a confining and reinforcing rim attached to the periphery of the elevating spiral, said rim being in close proximity to the wall of the chamber, and a fixed hub mounted in the upper part of the casing and coöperating with the hub of the lower part to properly support the shaft.

1,110,422. LASTING-MACHINE. JOSEPH E. CRISP, Somerville, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 6, 1894. Serial No. 531,031. (Cl. 12—6.)

1. The combination, with means for positioning a shoe, comprising an upper and insole on a last, of stitch-forming mechanism including a needle, and means for actuating the needle operating to cause the needle to penetrate the margin of the upper and enter the upper surface of the insole, raise a loop therefrom and emerge from the same surface, and angularly displace the needle to draw the thread through the loop and the margin of the upper, substantially as described.

2. The combination, with a needle having a straight shank and a curved and pointed tip, of means for causing the tip of the needle to penetrate the surface of an insole while the shank is inclined upwardly, acting to swing the shank downwardly during the passage of the tip through the insole surface so as to cause the tip to move in a curve conforming to the curvature of the tip and raise a loop of the insole material on its surface, substantially as described.



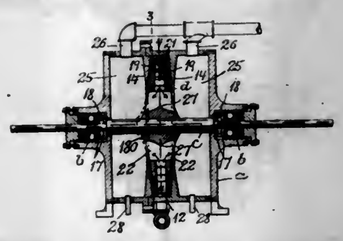
3. The combination of lasting mechanism acting to secure the upper of an unlasted shoe to an insole, means to trim the margin of the upper, and pincers to seize the margin of the upper extending beyond the insole and hold it for the operation of said trimming means, substantially as described.

4. The combination of sewing mechanism including means for piercing the margin of the upper of an unlasted shoe for the reception of the stitch, a knife for trimming the margin of the upper, said upper piercing and trimming means being mounted on a common carrier, and pincers to seize the upper and hold it for the operation of said knife, substantially as described.

5. The combination of a needle bar and needle, angularly movable guides in which the needle bar reciprocates, and connected mechanism for simultaneously advancing the needle bar in the guides and moving the guides angularly, substantially as described.

[Claims 6 to 58 not printed in the Gazette.]

1,110,423. TURBINE. CHARLES F. CROMMETT and ORRIN J. CROMMETT, Chelsea, Mass. Filed Nov. 10, 1913. Serial No. 800,050. (Cl. 121—60.)



1. A turbine comprising a casing having a circular rotor chamber and a nozzle tangential to the inner wall of the rotor chamber, and adapted to direct a working agent thereinto, a shaft journaled in said casing, and a rotor on said shaft having tangential buckets at its periphery formed and arranged to receive the impact of the working agent and to deflect the same inwardly toward the rotor axis and an exhaust conduit formed to guide the deflected working agent first inwardly in a plane perpendicular to the axis, and then outwardly from opposite sides of the rotor in paths substantially parallel with and in close proximity to the axis, said conduit being formed to permit the expansion of the working agent during its inward passage through the rotor, the casing also having exhaust chambers of uniform size at opposite sides of the rotor.

2. A turbine comprising a casing having a circular rotor chamber and a nozzle tangential to the inner wall of the rotor chamber, and adapted to direct a working agent thereinto, a shaft journaled in said casing, and a rotor on said shaft having tangential buckets at its periphery formed and arranged to receive the impact of the working agent and to deflect the same inwardly toward the rotor axis and an exhaust conduit formed to guide the deflected working agent first inwardly in a plane perpendicular to the axis, and then outwardly from opposite sides of the rotor in paths substantially parallel with and in close proximity to the axis, said conduit being formed to permit the expansion of the working agent during its inward passage through the rotor, the casing also having exhaust chambers of uniform size at opposite sides of the rotor, gas outlets at the upper portions of said chambers, and liquid outlets at the lower portions of the chambers.

3. In a turbine of the character described, a rotor comprising an elongated shaft-receiving hub, flanges projecting outwardly from the hub and forming the sides of an annular exhaust conduit portion which is open at the periphery of the rotor and has its bottom formed by the hub, said annular portion being in a plane perpendicular to the rotor axis and increasing in width from its outer margin inwardly, lateral exhaust conduit portions extending in opposite directions from the bottom of said annular portion through the sides of the hub in close proximity to the axis and substantially parallel therewith, and tangential buckets in said annular conduit portion formed and arranged to deflect a working agent into said conduit.

4. In a turbine of the character described, a rotor comprising an elongated shaft-receiving hub, flanges projecting outwardly from the hub and forming the sides of an annular exhaust conduit portion which is open at the periphery of the rotor and has its bottom formed by the hub, said annular portion being in a plane perpendicular to the rotor axis and increasing in width from its outer margin inwardly, lateral exhaust conduit portions extending in opposite directions from the bottom of said annular portion through the sides of the hub in close proximity to the axis and substantially parallel therewith, and tangential buckets in said annular conduit portion formed and arranged to deflect a working agent into said conduit, the buckets being curved and having concave deflecting faces.

5. A turbine comprising a casing having a rotor chamber, a nozzle tangential to the wall of the rotor chamber, and adapted to direct a working agent thereinto, and exhaust chambers at opposite sides of the rotor chamber, a shaft journaled in the casing, and a rotor on said shaft having tangential buckets at its periphery formed and arranged to receive the impact of the working agent and to deflect the same inwardly toward the rotor axis, and an exhaust conduit adapted to guide the deflected working agent first inwardly in a plane perpendicular to the rotor axis and then laterally from opposite sides of the rotor and simultaneously into said exhaust chambers, said conduit increasing in width from its outer margin inwardly to permit the expansion of the working agent.

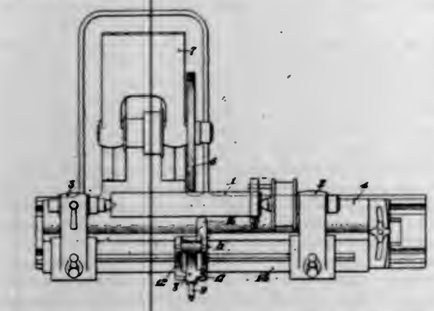
[Claim 6 not printed in the Gazette.]

1,110,424. TRUING-TOOL HOLDER FOR GRINDING-MACHINES. WILLIAM S. DAVENPORT, New Bedford, Mass., assignor to Morse Twist Drill & Machine Company, New Bedford, Mass., a Corporation of Massachusetts. Filed Apr. 18, 1910. Serial No. 556,047. (Cl. 125—6.)

1. A mechanism for truing the wheels of grinding machines, having, in combination, a grinding wheel support and work supporting table relatively movable to transfer the point of operation along the work, work carrying centers on the work table and a truing tool holder having provision for engaging the truing tool with the grinding wheel while the grinding wheel is in grinding relation to the work carried by the centers whereby the wheel may be trued without removal of the work or variation in the adjustment of the machine.

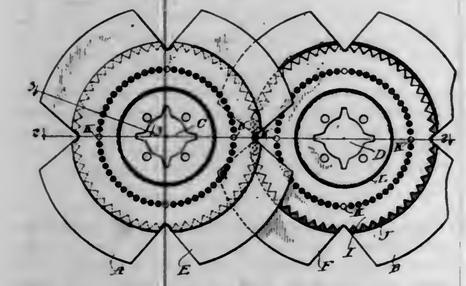
2. A mechanism for truing the wheels of grinding machines, having, in combination, a grinding wheel support and work supporting table relatively movable to transfer the point of operation of the grinding wheel along the work, work carrying centers on the work table, a truing tool carrier mounted on the work table, and means for adjusting the tool to true the wheel while the wheel is in grinding relation to the work carried by the centers.

3. A mechanism for truing the wheels of grinding machines, having, in combination, a grinding wheel support and work supporting table relatively movable to transfer the point of operation of the grinding wheel along the work, work carrying centers on the work table, a truing tool carrier on the work supporting table mounted for movement into and out of working position, and means for actuating the carrier to move the truing tool toward or from the grinding wheel when the carrier is in working position.



4. A mechanism for truing the wheels of grinding machines, having, in combination, a base, means for securing the base to the work supporting table of the grinding machine, a truing tool carrier on the base movable into and out of working position over the work supported on the work carrying centers of the table, and an actuating device for operating the carrier to move the tool toward or from the grinding wheel when the carrier is in working position.

1,110,425. STRIPPER-BLADE FOR TOBACCO-STEMMING MACHINES. GEORGE F. ECKART, Chicago, Ill., assignor to Automatic Stemmer Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 9, 1912. Serial No. 735,726. (Cl. 131—57.)



1. In a stripper disk for tobacco stemming machines having a recess in which the stem of the leaf is adapted to be received and through which it is adapted to be drawn for separating the lamina therefrom, a member removably secured to said disk and provided with a recess having sharp edged walls adapted to shear the lamina from the stem of the leaf, said recesses of said disk and said member being relatively so disposed that the sharp edges of the latter are presented to the leaf received in and drawn through said recesses.

2. In a stripper disk for tobacco stemming machines having a recess in which the stem of the leaf is adapted to be received and through which it is adapted to be drawn for separating the lamina therefrom, means removably secured to said disk and having sharp shear edges bordering the edges of said recess of said disk and adapted to shear the lamina from the stem of the leaf as said stem is drawn through said recess.

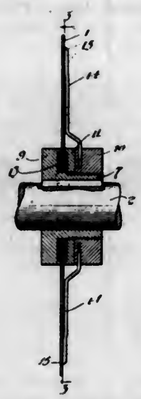
3. In a tobacco stemming machine having a pair of stripper disks provided in their edges with recesses adapted to receive the stem of a leaf and to become opposed to form an opening through which said stem is adapted to be drawn, means removably secured to said disks presenting sharp shear edges bordering the recesses therein and adapted, when said stem is drawn through the opening formed by said recesses to strip the lamina from the leaf.

4. In a tobacco stemming machine, a pair of stripper disks adapted to rotate in opposite direction on parallel axes and overlapping each other along a part of their peripheral portions, said disks each provided with an equal number of equally spaced peripheral recesses adapted to become successively opposed to form openings through which the stem of the leaf to be stripped is adapted to pass, a member removably secured to each disk provided with peripheral recesses having sharp shear edges arranged to border the edges of the recesses in said disks and adapted, when said stem is drawn through said opening, to separate the lamina therefrom.

5. In a tobacco stemming machine, a pair of stripper disks adapted to rotate in opposite direction on parallel axes and overlapping each other along a part of their peripheral portions, said disks each provided with an equal number of equally spaced peripheral recesses adapted to become successively opposed to form openings through which the stem of the leaf to be stripped is adapted to pass, a member removably secured to each disk provided with peripheral recesses, of a number constituting a multiple of the number of recesses in each disk, said recesses of said member having sharp shear edges and relatively arranged so that said edges of the recesses therein registering with the recesses of the disk border the latter and separate the lamina from the stem as the latter is drawn through said opening.

[Claims 6 to 11 not printed in the Gazette.]

1,110,426. STRIPPER MECHANISM FOR TOBACCO-STEMMING MACHINES. GEORGE F. ECKART, Chicago, Ill., assignor to Automatic Stemmer Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 9, 1912. Serial No. 735,727. (Cl. 131—57.)



1. In a machine of the class described, the combination with a pair of shafts rotatable in opposite directions, of a pair of coacting peripherally notched stripper disks mounted upon said respective shafts, each disk being movable both radially and circumferentially with respect to the shaft upon which it is mounted; a plurality of spring members adapted to hold each disk concentric with its shaft; and guiding means for restricting the motion of each disk with respect to its shaft to a substantially radial movement.

2. In a machine of the class described, the combination of a pair of oppositely rotatable members, a pair of disks carried by the same having coacting peripheral recesses, spring members tending to maintain the disks concentric with their respective carrying members, and a guide for restricting the motion of each disk with respect to its carrying member; the said guide being secured at one end to one of said parts and having slidable engagement at its other end with the other part.

3. A machine of the class described, including a pair of oppositely rotatable shafts, a pair of disks having coacting peripheral recesses carried thereby, a plurality of springs interposed between each disk and its shaft, and tending to maintain said parts concentric, and flexible members engaged with said respective parts for yieldingly resisting relative rotary movement thereof.

4. A machine of the class described, including a pair of oppositely rotatable shafts, a pair of disks having coacting peripheral recesses carried by said shafts, a plurality of springs interposed between said members for maintaining the same concentric, and a plurality of flexible members slidably engaged with one of said parts and secured to the other thereof for resisting relative rotary movement thereof.

5. In a machine of the class described, the combination of a pair of oppositely rotatable members, a disk carried by each, said disks having coacting peripheral recesses, spring members tending to maintain each disk concentric with its carrying member, and a plurality of flexible members each having radially slidable engagement with one of said parts and secured to the other thereof for resisting relative rotary movement of each disk and its carrying member.

[Claims 6 to 11 not printed in the Gazette.]

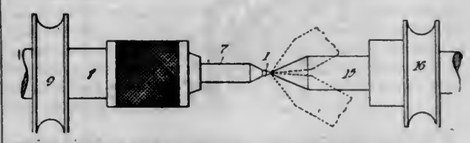
1,110,427. RESILIENT WHEEL. OLOF A. ECKRE, Minneapolis, Minn. Filed May 19, 1913. Serial No. 768,563. (Cl. 21—187.)

1. In a hub and axle construction, the combination with the axle, of vertically elongated guide plates rigidly secured to the axle and spaced apart, a pair of bearing disks having vertically elongated slots and mounted on the axle in contact, one with each of said guide plates, said plates and the respective disks having tongue and groove connections a hub having bearing surfaces coöperating with said disks and rotatable thereon, and buffer springs located between the axle and said disks and continuously tending to move said disks downwardly with respect to the axle.

2. An axle, a pair of guide plates rigidly secured to the axle and spaced apart, bearing disks having a tongue and groove connection with said guide plates and provided with longitudinal slots to receive said axle, said bearing disks having peripheral bearing surfaces, and a hub mounted between said guide plates and having bearing surfaces coöperating with said bearing disks, said bearing disks having inwardly projecting flanges connected together, a flanged sleeve mounted on the axle, and buffer springs located between said flanges and said flanged sleeve.

3. An axle, a pair of guide plates rigidly secured to the axle and spaced apart, bearing disks having a tongue and groove connection with said guide plates and provided with longitudinal slots to receive said axle, said bearing disks having peripheral bearing surfaces, and a hub mounted between said guide plates and having bearing surfaces coöperating with said peripheral bearing surfaces, said bearing disks having inwardly projecting flanges connected together, a flanged sleeve mounted on the axle, and buffer springs located between said flanges and said flanged sleeve, said guide plates forming closures for the outsides of the elongated slots of said bearing disks whereby the space between said guide plates within said hub may be kept filled with a suitable lubricant.

1,110,428. PROCESS OF FORMING PHONOGRAPH-STYLI. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 23, 1910. Serial No. 551,128. (Cl. 51—10.)

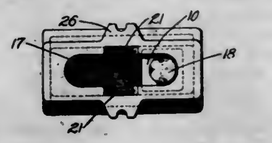


1. The process of forming phonograph styli and the like which consists in substantially inclosing a small piece of very hard material within a holder of comparatively soft material, grinding the end of the holder and inclosed piece to a cone shape, and then rounding the point of the piece while still secured in the holder, substantially as described.

2. The process of forming phonograph styli and the like which consists in substantially inclosing a small piece of very hard material within a holder of comparatively soft material, grinding the end of the holder and inclosed piece to a cone shape, and then rounding the point of the piece by causing relative rotation and oscillation of the holder with the piece therein and a tool in engagement with said point, substantially as described.

3. The process of forming phonograph styli and the like which consists in securing a small piece of very hard material in a holder of comparatively soft material in such a manner as to substantially inclose the piece therein, lapping the end of the piece to a flat end surface, grinding the sides of the piece adjacent said end surface to a cone shape tapering down to the remaining portion of said end surface and then rounding the said end, substantially as described.

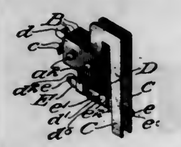
1,110,429. INSERT FOR CONCRETE CONSTRUCTION. WILLIAM T. ENGLISH, Hyde Park, Mass. Filed Jan. 3, 1910. Serial No. 535,950. (Cl. 72—101.)



1. An insert for concrete construction for removably receiving a bolt head, having shoulders for engaging beneath the bolt head, the continuity of said shoulders being interrupted by oppositely disposed recesses which in the crosswise direction admit the bolt head when inclined, and in a direction lengthwise of the shoulders are shorter than the sides of the bolt head, whereby the head of the bolt may be inserted to place through the recesses by inclining the bolt to the direction of the length of the shoulders, and whereby the bolt head when in holding position presents engaging surface to the shoulders longer than the interrupting length of the recesses.

2. A metallic insert for concrete construction, for removably seating and supporting a square-headed bolt, comprising a hollow elongated body having an elongated T slot in its lower face for receiving the bolt head, the supporting shoulders of the T slot being interrupted by oppositely disposed recesses for a portion of their length less than the side of the bolt head, and of a depth sufficient to admit the bolt head transversely of the shoulders, whereby the lower engaging surfaces of the bolt head when in supported position are longer than the recessed interruption in the supporting shoulders, and whereby the bolt can be removed from the insert only by inclining it in a direction lengthwise of the shoulders and withdrawing the opposite edges of the bolt head obliquely through the said recesses.

1,110,430. ELECTRICAL RELAY. JOHN ERICKSON, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Nov. 28, 1906. Serial No. 345,432. (Cl. 175—321.)



1. A relay provided with a removable and slidable holder having platinum contacts and flexible circuit-closing springs adapted to be pressed into engagement with the said platinum contacts by the energizing of the relay.

2. A relay comprising a removable contact member, a spring mounting from which the said contact member is readily removable, and a movable circuit-closing member adapted to be pressed into engagement with the said contact member by the energizing of the relay.

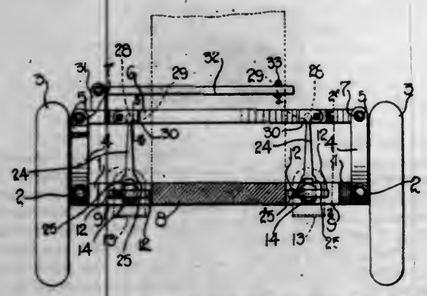
3. A relay comprising a spring mounting having opposed clamping or recessed gripping portions, a holder removably inserted in said clamping or gripping portions, a contact carried by said holder, and a circuit-closing member adapted to be pressed into engagement with the said contact by the energizing of the relay.

4. In a relay, the combination of a spring mounting, a contact member removably inserted in said spring mounting, and a circuit-closing member adapted to be pressed into engagement with the said contact member.

5. A relay provided with a group of switch springs and contacts which are removable therefrom as a unit, including a removable contact member and a spring mounting for the same, and a circuit closing contact adapted to be pressed into contact therewith.

[Claims 6 to 15 not printed in the Gazette.]

1,110,431. MOVABLE HEADLIGHT FOR AUTOMOBILES. WALDEN W. FINK, Castlewood, Va. Filed Apr. 8, 1914. Serial No. 830,448. (Cl. 240—62.)

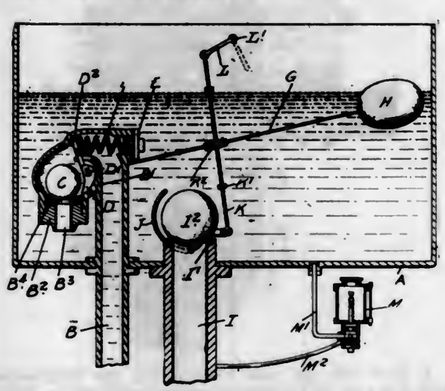


1. A device of the class described including the hood of a motor vehicle having brackets extending outwardly therefrom, rotatable standards carried thereby, connecting rods having their outer ends bifurcated to form spaced ears, said ears being disposed upon opposite sides of the standards and loosely connected thereto, an actuating rod, and movable means for normally retaining the inner ends of the connecting rods in contact with the actuating rod, means carried by the hood to support said rods when in an inoperative position, and steering mechanism connected with the actuating rod whereby to rotate said standards upon the actuation of the steering mechanism.

2. A device of the class described including the hood of a motor vehicle having brackets extending outwardly therefrom, rotatable standards carried thereby, connecting rods having their outer ends bifurcated to form spaced ears, said ears being disposed upon opposite sides of the standards and loosely connected thereto, an actuating rod, means for removably connecting the inner ends of the first rods with the actuating rod, spring arms carried by the hood and adapted to receive the inner ends of the connecting rods, whereby to retain the standards against rotation, and steering mechanism connected with the actuating rod whereby to rotate the standards upon the actuation of the steering mechanism.

3. A device of the class described including rotatable standards, transverse pins carried by the lower ends of said standards, rods having their outer ends bifurcated to form spaced ears having alined slots formed therein to receive said pins, the inner ends of each of said rods being provided with a spherical portion, a connecting rod having spaced sockets formed therein to receive the spherical ends of the first rods, and movable plates arranged over the upper open ends of said sockets to removably retain the ends of the first rods therein.

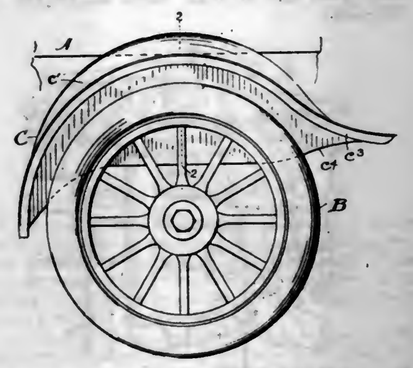
1,110,432. FLUSHING-TANK. WILLIAM ALEXANDER FRASER, Georgetown, Ontario, Canada. Filed Nov. 29, 1912. Serial No. 734,024. (Cl. 137—104.)



In a flushing tank, the combination with the flushing pipe and inlet pipe the inlet pipe having an elbow at the top forming a valve chamber and an outlet orifice, a ball and seat therefor at the bottom of the valve chamber, of a shifting lever pivoted on a suitable fulcrum pin and an arm connected to said pin and having a float thereon, said shifting lever and valve being interposed betwen the pressure or intake end of said inlet pipe and said seat, a passage leading from the upper end of said chamber, an adjustable plug in said passage, and a spiral spring disposed between the upper end of said lever and said plug.

1,110,433. FENDER. ARTHUR L. GARFORD, Elyria, Ohio., assignor to The Garford Company, Elyria, Ohio, a Corporation of Ohio. Filed Mar. 20, 1911. Serial No. 615,479. (Cl. 21—23.)

In combination, in a vehicle, a vehicle body, a rear wheel and fender, the body having a recess portion in its side opposite the rear wheel, and the fender having a body substantially flat in cross section and provided at a distance from both ends and from both edges with an upwardly bowed corrugation adapted to accommodate the top of the wheel, the inner side edge of the fender extending into said recess of the body and substantially all the said corrugation being exterior to said recess.

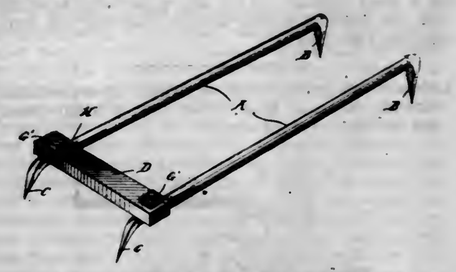


1,110,434. BOOK FOR CHILDREN. RAYMOND H. GARMAN, Chicago, Ill. Filed Oct. 29, 1913. Serial No. 798,132. (Cl. 35—9.)

1. A child's book comprising a plurality of pages, each provided with illustrative matter, and each having formed therein perforations arranged in a line, the perforations on one page being offset with respect to the perforations of the next adjacent page whereby a backing is provided beneath each perforation, members arranged to seat in said perforations, said members having characters on the face thereof whereby, when selected of said members are positioned in selected of said perforations, temporary reading matter is supplied to the page, substantially as described.

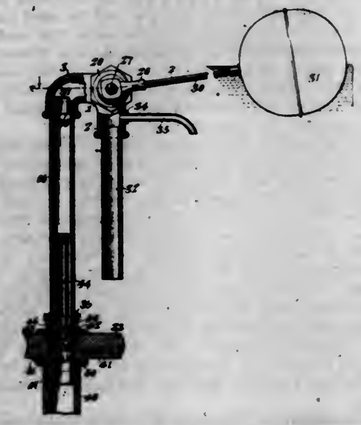
2. A child's book comprising a plurality of pages, each provided with illustrative matter, and each having perforations formed therein arranged in a line, the perforations on one page being offset with respect to the perforations on the next adjacent page whereby the solid portions between the perforations on one page aline with the perforations on the next adjacent page and form a backing beneath said latter perforations, members adapted to seat in said perforations, each member having a character on the surface whereby, when selected of said members are positioned within selected of said perforations, temporary reading matter is added to the page, substantially as described.

1,110,435. ANCHORING DEVICE. MICHAEL F. GATELY, Winslow, Nebr. Filed Jan. 23, 1913. Serial No. 743,819. (Cl. 21—8.)



The anchoring device herein shown and described, consisting of a pair of parallel bars having at one end a right-angled disposed barb and at their other end an outwardly and downwardly inclined barb and having flat faces adjacent said inclined barbs, a flat cross piece resting on said flat faces of the bars and having one end rigidly secured to one bar and its other end adjustably secured to the other bar, said cross piece engaging the structure to be anchored and the pair of bars receiving said structure entirely therebetween.

1,110,436. BALL-COCK FOR FLUSH-TANKS. EDWARD A. GEHRKE, Lincoln, Nebr. Filed Sept. 22, 1913. Serial No. 791,065. (Cl. 137—104.)

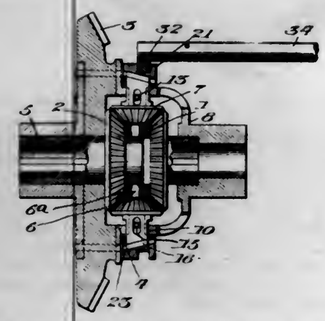


1. In combination with a flush tank, of a coupling section piercing the bottom of the flush tank and having means for engaging the same and provided with an interior flange having an opening, a main vertical tube mounted within the upper portion of the coupling section and having its upper end interiorly and exteriorly threaded, a strainer engaging the interior threads of the main tube, a ball cock mounted on the upper end of the main tube and engaging the exterior threads thereof, and an inner vertical tube mounted in the opening of the said flange and extending into the lower portion of the main vertical tube and spaced therefrom to form a catch basin, said inner vertical tube being provided above the flange with a drain opening.

2. The combination with a flush tank, of a coupling section piercing the bottom of the flush tank and provided with means for engaging the same and having an upper projecting portion, said upper projecting portion being provided with an interior flange having an opening, a main vertical tube mounted in the upper projecting portion of the coupling section and seated upon the said flange, and an inner vertical tube secured in the opening

of the said flange and extending upwardly into the main vertical tube and arranged in spaced relation with the same to form a catch basin, said inner vertical tube having a drain opening and the said tubes being removable from the coupling section without detaching the latter from the flush tank.

1,110,437. TRANSMISSION-GEARING. ROBERT GOLDEN, Meehan Junction, Miss. Filed July 3, 1913. Serial No. 777,177. (Cl. 74—34.)



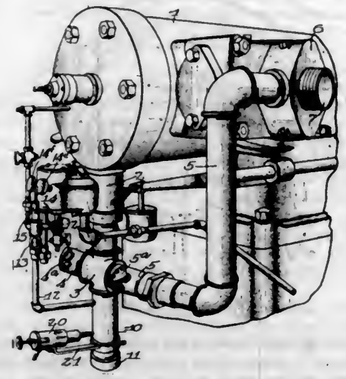
1. The combination with opposed gears, a wheel adapted to be rotated, pinions interposed between said gears, and spindles carried by said wheel, on which said pinions are loosely mounted, said pinions having interior notches and said spindles having recesses and key-fasteners therein; of keys mounted in said recesses and on said fasteners and having inner end portions movable into and out of the pinion notches and also having inclined T-heads at their outer ends, and a laterally-movable ring surrounding the keys and having notches receiving the radially-disposed portions of the keys and also having inclined cam grooves receiving the T-heads of the keys.

2. The combination with opposed gears, a wheel adapted to be rotated, pinions interposed between said gears, and spindles carried by said wheel, on which said pinions are loosely mounted, said pinions having interior notches and said spindles having recesses and key-fasteners therein; of keys mounted in said recesses and on said fasteners and having inner end portions movable into and out of the pinion notches and also having inclined T-heads at their outer ends, a laterally-movable circumferentially-grooved ring surrounding the keys and having notches receiving the radially-disposed portions of the keys and also having inclined cam-grooves receiving the T-heads of the keys, an endwise movable rod having a portion disposed in the circumferential groove of the ring, and means for moving said rod.

3. The combination with opposed gears, a wheel adapted to be rotated, pinions interposed between said gears, and spindles carried by said wheel, on which said pinions are loosely mounted, of keys constructed and arranged in one position to lock the pinions to said spindles, and in another position to render the pinions loose on the spindles, and means for moving the keys from one position to the other and vice versa.

4. The combination with a transmission gearing comprising opposed beveled gears, a wheel loose with respect to said gears and adapted to be connected with a motor and having a lateral annular flange, recessed spindles connected with said flange, interiorly notched pinions loosely mounted on said spindles, and a housing section connected to said flange and having key-receiving recesses and also having exterior guide ribs; of a laterally-movable flange guided on said ribs and having notches in its inner side and inclined cam recesses communicating with said notches, and endwise-movable keys arranged in the key-receiving recesses of the spindles and housing section and extending through the notches in the ring and having inclined T-heads disposed in the inclined cam recesses of the ring.

1,110,438. INTERNAL-COMBUSTION ENGINE. WARREN W. GORE, Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 20, 1912. Serial No. 692,179. (Cl. 123—122.)



1. In an internal combustion engine the combination with the engine cylinder and intake of a reservoir adapted to supply heavy oil to said intake, a cross communicating with said intake, a retort communicating with said cross, a valved duct leading from said reservoir to said retort and two ducts leading to said cross for supplying air thereto, one of said ducts leading from the atmosphere and the other being adapted to supply heated air to said cross.

2. In an internal combustion engine the combination with the engine cylinder and intake of a reservoir adapted to supply heavy oil to said intake, a retort, a valved duct leading from said reservoir to said retort, means for supplying air to said intake, and means for controlling the amount and the temperature of the air admitted to said intake.

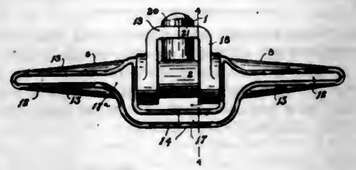
3. In an internal combustion engine the combination with the engine cylinder and intake of a reservoir adapted to supply heavy oil to said intake, a retort, a valved duct leading by gravity from said reservoir to said retort, a duct leading to said intake from the atmosphere, a damper in said duct, a drum open to the atmosphere and encircling the engine exhaust, a duct leading from said drum to said intake, and a damper in the last mentioned duct.

4. In an internal combustion engine the combination with the engine cylinder and intake of a reservoir adapted to supply heavy oil to said intake, a cross communicating with said intake, a pipe leading downward from said cross and having a closure at the end, a valved duct leading by gravity from said oil reservoir to said pipe, a heater for said pipe, an air duct open to the atmosphere leading to said cross, a damper on said air duct, a drum at the engine exhaust, a duct leading from said drum to said cross, and a damper in the last mentioned duct, all coöperating in the manner and for the purpose described.

1,110,439. SUCTION CLEANING-NOZZLE. CHARLES L. GOUGHNOUR, Canton, Ohio, assignor to The United Electric Company, Canton, Ohio, a Corporation of Ohio. Filed Feb. 9, 1912. Serial No. 676,567. (Cl. 15—60.)

1. A suction cleaning tool including a tubular handle having a cross tube on its end, and a nozzle having two approximately conical sections swiveled by their base ends on the ends of the cross tube substantially coaxial therewith, there being longitudinal slots in the lower side of the conical sections.

2. A suction cleaning tool including a tubular handle having a cross tube on its end, and a nozzle having two hollow sections swiveled by their inner ends on the ends of the cross tube and substantially coaxial therewith, there being longitudinal slots in the lower side of the hollow sections, and the hollow sections being joined by a slotted hollow yoke in front of the cross tube communicating with the slots and cavities of the hollow sections.



3. A suction cleaning tool including a tubular handle having a cross tube on its end, and a nozzle having two sections swiveled by their inner ends on the ends of the cross tube substantially coaxial therewith, there being longitudinal slots in the lower side of the nozzle sections, and feet on the rear side thereof.

4. A suction cleaning tool including a tubular handle having a cross tube on its end, and a nozzle having two approximately conical sections swiveled by their base ends on the ends of the cross tube substantially coaxial therewith, there being longitudinal slots in the lower side of the conical sections, and the conical sections being joined by a slotted hollow yoke in front of the cross tube communicating with the slots and cavities of the conical sections, and there being feet on the rear side thereof.

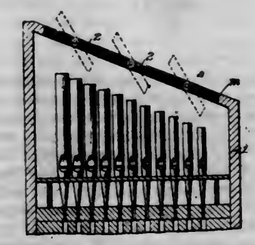
1,110,440. INSERT FOR CONCRETE CONSTRUCTIONS. WILLIAM H. HONISS, Hartford, Conn., assignor to William T. English, Hyde Park, Mass. Filed Jan. 3, 1910. Serial No. 535,972. (Cl. 72—101.)

1. An insert for concrete construction, for removably seating the head of a bolt, comprising a hollow elongated body provided with guiding surfaces for the sides of the bolt head, and having lengthwise extending oppositely disposed flanges in its lower face, the distance between the flanges being less than any transverse width of the bolt head, said flanges being similarly notched at opposite places, so that the bolt head may be inserted when two of its corners are in line with said notches, the outer side or base of the notch being of less length than any side of the bolt head, so that when the bolt head has been inserted and seated by a one-eighth turn, the sides of the bolt head will rest upon the flanges and overlap the notches of said flanges, whereby removal of the bolt is prevented except when the bolt has been partially rotated to bring the corners of the head in alinement with said notches.

2. A metallic insert for concrete construction for removably seating and supporting a square bolt head, provided with longitudinally extending parallel flanges for supporting the under side of the bolt head, and having guiding surfaces approximately fitting the opposite sides of the bolt head to prevent it from turning when seated, and having a wider space above the guiding surfaces to enable the bolt head to be turned to its intended seating position, the said shoulders and the said guiding surfaces being provided with oppositely disposed recesses approximately fitting any two diagonally opposite corners of the bolt head, whereby the bolt head may be entered and seated by pushing its diagonally opposite corners up through said notches, turning the said bolt head in either direction approximately 45 degrees and dropping its parallel sides into place between the said guiding surfaces, and whereby the under engaging surfaces of the bolt head bridge the said notches when seated over them, thus preventing direct removal of the bolt heads when in working position at any portion of the length of the insert.

3. A metallic insert for concrete construction for removably seating a bolt head, comprising a hollow elongated body provided wtih internal supporting shoulders for the under side of the bolt head, and outwardly inclined guiding surfaces above the shoulders for the opposite squared sides of the bolt head to prevent it from turning when seated, the said shoulders and guiding surfaces being also provided with oppositely disposed V-shaped notches loosely conforming to the diagonally opposite corners of the bolt head, whereby the bolt head may be entered and seated in the insert by passing its diagonally opposite corners upwardly through said notches, then turning the head approximately 45 degrees, and then lowering it to its seating position upon the said shoulders and between the said guiding surfaces.

1,110,441. SHUTTER FOR SOUND-PROOF BOXES. ROBERT HOPE-JONES, North Tonawanda, N. Y., assignor to Rudolph Wurlitzer Mfg. Company, North Tonawanda, N. Y., a Corporation of New York. Filed Aug. 5, 1910. Serial No. 575,630. (Cl. 84—23.)



1. The combination with an organ swell box having an opening, of a plurality of movable shutters controlling the opening each provided with edges adapted to coöperate with those of adjacent shutters, said edges of the shutters being each formed with a plurality of alternately disposed ribs and shallow recesses.

2. The combination with an inclosure having an opening, the edges of the inclosure surrounding the opening being provided with alternately disposed ribs and recesses, of a closure fitting said opening having its edges similarly provided with alternately disposed ribs and recesses, said closure coöperating with the inclosure so that when it is in closed position the edges of the ribs of the closure engage the edges of the corresponding ribs of the inclosure.

3. The combination with an inclosure having an opening, the edges of the inclosure surrounding the opening being provided with a plurality of grooves, of a closure for the opening having a plurality of grooves provided in its edges and coöperating with the first mentioned grooves to provide a plurality of enlarged recesses between said parts when the closure is in closed position.

4. The combination with a box which is substantially sound proof having the walls provided with an opening, of a plurality of pivoted shutters for closing the opening, said shutters being provided along their meeting edges with a plurality of alternately disposed ribs and recesses said ribs and recesses of adjacent shutters being adapted to coöperate when the shutters are closed to form a plurality of separated expansion chambers.

5. The combination with an organ swell box having the walls provided with an opening, of a plurality of pivoted shutters for closing the opening having their meeting edges beveled, said edges being provided with a plurality of longitudinally extending grooves spaced apart, those in one shutter coöperating with those in the other to form expansion chambers at opposite sides of the meeting line of the shutters.

[Claims 6 to 11 not printed in the Gazette.]

1,110,442. LOW-WATER-ALARM DEVICE FOR BOILERS. LAWRENCE R. JONES, Wheaton, Ill. Filed June 14, 1913. Serial No. 773,822. (Cl. 236—16.)

1. In a boiler-alarm device, the combination of a casing extending into the boiler to a point below the normal water level and communicating with the exterior through a single opening in the boiler shell, a valve within the boiler for opening and closing communication between the interior of said casing and the interior of the boiler, means extending longitudinally through said casing for operating the valve and a fusible member located within the casing and removable therefrom through the casing.

2. In a low water alarm of the character described, the combination with the boiler shell, of a casing supported by such shell and extending into the boiler below the normal water level, a valve controlling communication between the interior of said casing and the interior of the boiler, a valve stem extending through said casing to the exterior thereof, an alarm tube extending to a point within the casing and removable therethrough, and a fusible element, located below the normal water level, normally closing said alarm tube.

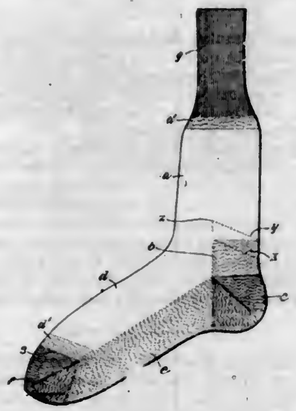
3. In a low water alarm of the character described, the combination of a casing adapted to be secured to the shell of a boiler, a valve at one extremity of said casing, controlling the communication of the interior of said casing with the interior of the boiler, a hollow valve stem extending through said casing to the exterior thereof, a removable alarm tube extending through the hollow valve stem, a fusible member normally closing the inner end of said alarm tube and positioned within said casing, whereby the opening and closing of the valve controls the communication of the boiler-contained fluid with the fusible member.

4. In a device of the character described, the combination of a tubular casing, a valve casing carried by the lower end thereof, a hollow valve within said casing, a valve stem extending through said casing, a tube extending through said hollow valve stem and at its lower end entering the hollow valve, a fusible plug normally closing the lower end of said tube, a bushing adapted to engage the shell of a boiler surrounding said valve stem and engaging the casing to carry the same, packing means between the bushing and valve stem, a valve handle carried by said stem, and packing means between the alarm tube and the hollow valve stem.

5. In a low water alarm of the character described, the combination of a valve positioned within the shell of a boiler, a hollow valve stem extending through said shell to the exterior thereof, a removable alarm tube extending through the hollow valve stem, a fusible member normally closing the inner end of the alarm tube and positioned within the valve, whereby the opening and closing of the valve controls the communication of the boiler contained fluid with the fusible member.

[Claims 6 to 10 not printed in the Gazette.]

1,110,443. SEAMLESS STOCKING AND PROCESS OF KNITTING THE SAME. EDWARD E. KILBOURN, WILLIAM E. SMITH, and ISAAC W. KILBOURN, New Brunswick, N. J., assignors to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Filed Sept. 23, 1909. Serial No. 519,202. (Cl. 66—4.)



1. The herein described process of knitting a seamless stocking having narrowed and widened heel and toe pockets, which consists in knitting the leg of the stocking by circular knitting with a tight stitch, then knitting the heel pocket by reciprocating knitting, and narrowing and widening, then knitting the top portion of the foot with a tight stitch, and knitting the sole portion of the foot with sufficiently longer stitches, to make it of greater length than the corresponding portion of the top of the foot, and then knitting the toe pocket by reciprocating knitting and narrowing and widening, whereby the strain in use will be greater over the top of the foot and front of the ankle than around the heel and toe and along the sole, thereby shaping the stocking to conform to the foot and preventing distortion of the heel and toe pockets and the formation of wrinkles in the instep and ankle portions.

2. The herein described process of knitting a seamless stocking having narrowed and widened heel and toe pockets, which consists in knitting the leg of the stocking by circular knitting with a fine thread and a tight stitch, then knitting the heel pocket by reciprocating knitting and narrowing and widening, then knitting the upper part of the foot with a fine thread and a tight stitch and knitting the sole portion as a heavier fabric and with sufficiently longer stitches to make the sole portion of greater length than the corresponding portion of the top of the foot, and then knitting the toe pocket by reciprocating knitting and narrowing and widening, whereby the strain on the fabric in use is greater over the top of the foot and front of ankle than around the heel and toe and along the sole, thus shaping the stocking to conform to the foot and preventing distortion of the heel and toe pockets, and the formation of wrinkles in the instep and ankle portions.

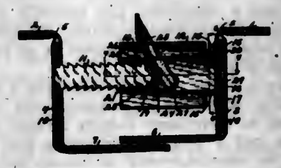
3. The herein described process of knitting a seamless stocking having narrowed and widened heel and toe pockets, which consists in knitting the leg of the stocking by circular knitting with a fine thread and a tight stitch, then knitting the heel pocket by reciprocating knitting and narrowing and widening, then knitting the upper part of the foot with the fine thread and a tight stitch and knitting the sole portion with said fine thread with the addition of a splicing thread and lengthening the stitches of the spliced sole portion to make the sole portion sufficiently longer than the corresponding part of the top of the foot, and then knitting the toe pocket by reciprocating knitting and narrowing and widening whereby the strain on the fabric, in use, will be greater over the top of the foot than around the heel and toe and along the sole, thus shaping the stocking to the foot and preventing distortion of the heel and toe and the formation of wrinkles in the instep and ankle portion.

4. The herein described process of knitting a seamless stocking, which consists in knitting the leg portion by circular knitting with a fine thread and with a tight stitch, knitting the heel pocket with a heavier thread by reciprocating knitting and narrowing and widening and with a longer stitch than the leg portion, knitting the foot portion by circular knitting, knitting the top of the foot of the light thread and with the tight stitch and simultaneously knitting the sole portion of the light thread and a reinforcing thread, and with a sufficiently longer stitch than that of the top of the foot to make the sole portion longer than the corresponding portion of the top of the foot and knitting the toe pocket of heavier thread by reciprocating knitting and narrowing and widening and with a longer stitch than the leg portion and top of the foot, whereby the strain on the fabric in use will be greater on top of the foot than around the heel and toe and along the sole thus shaping the stocking to the foot and preventing distortion of the toe and heel, and the formation of wrinkles in the instep and the ankle portion.

5. The herein described process of knitting a seamless stocking, which consists in knitting the leg portion by circular knitting with a fine thread and with a tight stitch, knitting the heel pocket with a heavy thread by reciprocating knitting and narrowing and widening and lengthening the stitch beyond that of the leg portion, knitting the top of the foot with the light thread and tight stitch and knitting the sole portion as a heavier fabric, and lengthining the stitches sufficiently to make the sole portion longer than the corresponding top portion of the foot, and knitting the toe pocket of heavier thread by reciprocating knitting and narrowing and widening and lengthening the stitches, the thread in the heel and toe being thicker than that used in the sole portion, and the stitches in the heel and toe being of greater length than those in the sole portion, whereby the strain on the fabric, in use, will be greater over the top of the foot than around the toe and heel and along the sole thus shaping the stocking to the foot and preventing distortion of the heel and toe and the formation of wrinkles in the instep and ankle portion.

[Claims 6 to 10 not printed in the Gazette.]

1,110,444. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. REINHOLD KRUMMING, Milwaukee, Wis. Filed Dec. 10, 1913. Serial No. 805,798. (Cl. 129—13.)



1. In a binder, the combination of a pair of binding members, a double ratchet member mounted on one of said binding members, a support mounted on the other binding member to receive said ratchet member, said support being formed of sheet metal folded into a rectangular housing, the lower ends of its side walls being shouldered at each edge, the lower ends of its end walls being offset inwardly to said side wall shoulders and provided with securing tongues arranged through slots in said binding member, a pair of spring pawls having shoulders at their lower ends arranged in said support with their lower ends between the shoulders of its side walls and the offsets of its said end walls and with the upper edges of their shoulders engaging the lower edges of said side walls, and a pawl lever arranged through said lever slot in said support and pivoted on one side thereof, said lever being provided with a cam having laterally projecting pawl engaging lugs disposed between said pawls to coact therewith, the pawl on the lever side being cut away at one edge to accommodate the lever.

2. In a binder, the combination of a pair of binding members, a double ratchet member mounted on one of said binding members, a support mounted on the other binding member to receive said ratchet member, said support being formed of sheet metal folded into a rectangular housing, the lower ends of its side walls being shouldered at each edge, the lower ends of its end walls being offset inwardly to said side wall shoulders and provided with securing tongues arranged through slots in said binding member, a pair of spring pawls having shoulders at their lower ends arranged in said support with their lower ends between the shoulders of its side walls and the offsets of its said end walls and with the upper edges of their shoulders engaging the lower edges of said side walls, and a pawl lever pivoted within said support.

3. In a binder, the combination of a pair of binding members, a double ratchet member mounted on one of said binding members, a support mounted on the other binding member to receive said ratchet member, said support being formed of sheet metal folded into a rectangular housing, the lower ends of its side walls being shouldered at each edge, the lower ends of its end walls being offset inwardly to said side wall shoulders, the end wall having the free edge being cut away at its free edge to provide a lever slot, a pair of spring pawls having shoulders at their lower ends arranged in said support with their lower ends between the shoulders of its side walls and the offsets of its said end walls and with the upper edges of their shoulders engaging the lower edges of said side walls, and a pawl lever arranged through said lever slot in said support and pivoted on one side thereof, said lever being provided with a cam having laterally projecting pawl engaging lugs disposed between said pawls to coact therewith, the pawl on the lever side being cut away at one edge to accommodate the lever.

4. In a binder, the combination of a pair of binding members, a double ratchet member mounted on one of said binding members, a support mounted on the other binding member to receive said ratchet member, said support being formed of sheet metal folded into a rectangular housing, the lower ends of its side walls being shouldered at each edge, the lower ends of its end walls being offset inwardly to said side wall shoulders, a pair of spring pawls having shoulders at their lower ends arranged in said support with their lower ends between the shoulders of its side walls and the offsets of its said end walls and with the upper edges of their shoulders engaging the lower edges of said side walls, and a pawl lever pivoted within said support.

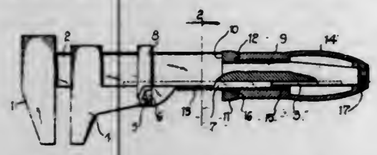
5. In a binder, the combination of a pair of binding members, a ratchet member mounted on one of said binding members, a support mounted on the other binding member, said support being formed of sheet metal, the lower ends of its side walls being shouldered, the lower end of one end wall being offset inwardly to said side wall shoulder, one wall being cut away at its free edge to provide a lever slot, a spring pawl having shoulders at its lower end arranged in said support with its lower end between the shoulder of the side walls and the offset of the said end wall and with the upper edge of its shoulders engaging the lower edges of said side walls, and a pivoted pawl release lever arranged through said lever in said support.

[Claims 6 to 18 not printed in the Gazette.]

1,110,445. WRENCH. GEORGE F. KUNZE, Sleepy Eye, Minn., assignor of one-half to Solomon A. Wooldrik, Sleepy Eye, Minn. Filed Mar. 30, 1914. Serial No. 828,308. (Cl. 81—168.)

1. A wrench comprising a stationary jaw having a rearwardly extending shank, a sliding jaw having an angular

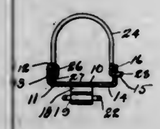
transverse slot formed in the inner end thereof, an arm slidingly engaged upon said shank and having an angular extension at its forward end for engagement in said slot, a band mounted upon the inner end of said sliding jaw to inclose said extension in the angular slot, and a handle rotatably mounted upon the inner end of said shank and operatively engaged with said arm, whereby upon rotation of said handle said sliding jaw will be moved longitudinally of said shank.



2. A wrench comprising a stationary jaw having a rearwardly extending shank projecting therefrom, the inner face of said shank having a longitudinally extending groove formed therein, a sliding jaw mounted upon said shank, said jaw having an angular transverse slot formed in the inner end thereof, an arm slidingly engaged in said groove, the forward end of said arm having an angular extension for engagement in said slot, a band mounted upon the inner end of said sliding jaw to inclose said extension in said angular slot, one face of said arm projecting outwardly of the groove and being threaded, and a handle rotatably mounted upon the inner end of said shank, said handle being interiorly threaded for engagement with the threads on said arm, as and for the purpose described.

3. A wrench comprising a stationary jaw having a rearwardly extending shank projecting therefrom, said shank having a longitudinal groove formed in its inner face, a sliding jaw mounted upon said shank, the inner end of said jaw having a transversely extending angular slot formed therein, an arm having an angular extension at its forward end for engagement with the angular slot, said arm being slidably disposed in the longitudinal groove in the shank, the inner end of said shank being formed with a reduced portion on one side thereof forming a shoulder, a ferrule mounted on the reduced portion of said shank to engage the shoulder and encircle said arm, a handle rotatably mounted upon the reduced portion of said shank and having its inner end engaged with said ferrule, said handle being interiorly threaded for engagement with the threads on said arm, and means mounted on the inner extremity of said shank for engagement against the inner end of said handle to prevent longitudinal movement thereof upon said shank, as and for the purpose described.

1,110,446. HEAD-DRESS-RETAINING DEVICE. ALBERT LANGE, Providence, R. I., assignor to George S. Kelley Company, Inc., Providence, R. I., a Corporation of Rhode Island. Filed Oct. 3, 1912. Serial No. 723,740. (Cl. 24—85.)

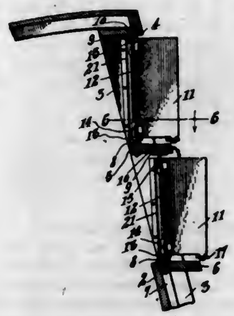


1. A head dress retaining device comprising an elongated body portion having two oppositely disposed laterally extending arms, one of said arms being provided with a longitudinal tongue-like extension, a ribbon retaining yoke of resilient material having a cross bar at one end around which said tongue-like extension is bent to retain said yoke, said yoke having means at the other end to engage the other arm of said body, and means connected to said body for detachably connecting the device to the hair of the wearer.

2. A head dress retaining device comprising an elongated body portion having two oppositely disposed laterally extending arms, a ribbon retaining yoke of resilient material having a cross bar at one end around which one of said arms is bent to retain said yoke, said yoke having means at the opposite end adapted to engage and be retained by the other arm of said body, and means connected to said body for detachably connecting the device to the hair of the wearer.

3. A head dress retaining device comprising an elongated body portion having two oppositely disposed laterally extending arms, a ribbon retaining yoke of resilient material having a cross bar at one end around which one of said arms is bent to retain said yoke, said yoke having means at the opposite end adapted to engage and be retained by the other arm of said body, said yoke having an extension projecting beyond the cross bar and engaging the inner face of the first mentioned arm to provide a tension on the yoke, and means connected to said body for detachably connecting the device to the hair of the wearer.

1,110,447. VENTILATOR FOR STOCK-CARS. TYRE E. LINDSEY, Rome, Ga. Filed Nov. 13, 1913. Serial No. 800,838. (Cl. 98—22.)



1. In a device of the character described, a frame comprising vertical posts and longitudinal bars, and a plurality of vanes pivoted at their rear edges to said longitudinal bars, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

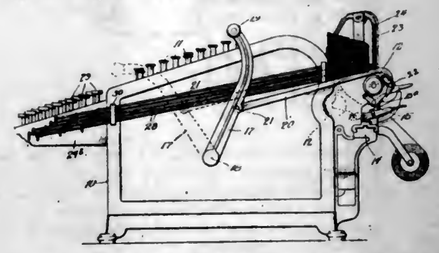
2. In a device of the character described, a frame comprising vertical posts and longitudinal bars, a plurality of transversely curved rectangular vanes pivoted at their inner corners between said longitudinal bars, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

3. In a device of the character described, a frame comprising vertical posts, and longitudinal bars, rectangular vanes pivoted at their inner corners between said longitudinal bars, and a connecting link pivotally mounted on said vanes for simultaneously actuating the same, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

4. In a device of the character described, a frame comprising vertical posts and longitudinal bars, rectangular vanes pivoted at their inner corners between said longitudinal bars, and a weighted connecting link pivoted to said vanes for simultaneously actuating the same, the pivotal line of said vanes being disposed at an angle to the vertical plane of said frame, whereby said weighted link will cause said vanes to normally stand at right angles to said frame.

5. In a device of the character described, a frame comprising vertical bars, longitudinal bottom and top bars, and an intermediate bar, pivot studs carried by the upper sides of said bottom and intermediate bars near their inner edges, bearings carried by the lower sides of said top and intermediate bars near their outer edges, a plurality of vanes having bearing studs on the inner corners of their upper ends, and cup bearings on the inner corners of their lower ends, said cup bearings resting on the pivot studs of said bottom and intermediate bars, and the pivot studs on said vanes resting within the socket bearings in the lower sides of said top and intermediate bars, the disposition of said bearings and studs causing the vanes to normally stand at right angles to said frame.

1,110,448. TYPE-WRITING ATTACHMENT FOR ADDING-MACHINES. FRED F. MAIN, Chicago, Ill., assignor to John T. Underwood, Brooklyn, N. Y. Filed Jan. 16, 1911, Serial No. 602,785. Renewed Oct. 9, 1911. Serial No. 653,757. (Cl. 235—60.)



1. The combination with an adding machine having an operating shaft, of a typewriting machine and a platen common to the printing mechanism of said adding machine and typewriting machine, said platen being operatively connected to said operating shaft of the adding machine, whereby it is brought into printing position relative to either machine by the movements of said shaft.

2. The combination with an adding machine having a rocking element, of a typewriter having an oscillatory platen common to the printing mechanism of said adding machine and typewriter, said platen being operatively connected with said rocking element of said adding machine, whereby it is moved into printing position relatively to either machine by the movement of said rocking element.

3. The combination with an adding machine, its operating shaft, and a typewriting machine, of a movable carriage having a platen common to the printing mechanism of said adding machine and typewriting machine, and operative connections between said platen and said operating shaft of the adding machine capable of moving said platen into printing position relative to either machine when said shaft is actuated through its arc of movement.

4. The combination with an adding machine, its operating crank, and a typewriting machine, of a movable carriage having a platen common to the printing mechanism of both machines, and a link slidably connected to said carriage and actuated by said operating crank of the adding machine, the movement of said link from one position to another being arranged to bring the platen into printing position relative to either machine.

5. The combination with an adding machine, its operating shaft, and a typewriting machine, of a traveling carriage, and a platen common to the printing mechanism of both machines said platen being carried by the carriage, and operatively connected with said shaft of the adding machine, whereby it may be moved into the printing position for either machine.

[Claims 6 to 20 not printed in the Gazette.]

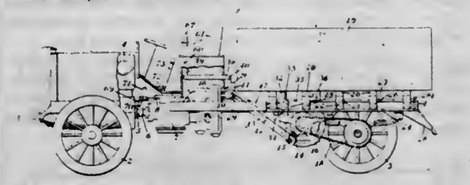
1,110,449. CERAMIC MATERIAL. ANDREW MALINOVSZKY, Chicago, Ill., assignor to Harry H. Randolph, Chicago, Ill. Filed Mar. 13, 1912. Serial No. 683,533. (Cl. 106—11.)

1. As a new article of manufacture, ceramic material made from substances containing oxid of earth metal; oxid of alkali metal; finely divided silica in the eutectic ratio to form the silicates of said earth metal and said alkali metal; and a relatively coarse material adapted to form the framework of the ceramic product and infusible at the temperature of formation of said silicates; substantially as described.

2. As a new article of manufacture, ceramic material made from substances containing alumina, oxid of alkali metal, finely divided silica in the eutectic ratio to form the silicates of the aluminum and said alkali metal, and a relatively coarse material adapted to form the framework of the ceramic product and infusible at the temperature of formation of said silicates, substantially as described.

3. As a new article of manufacture, ceramic material made from substances containing alumina, 10 to 20%, oxid of alkali metal 2.5 to 4%, finely divided silica in the eutectic ratio to form the silicates of the aluminum and said alkali metal, and relatively coarse silica adapted to form the framework of the ceramic product, substantially as described.

1,110,450. DUMPING-WAGON. CHARLES MATTHEWS MANLY, Freeport, N. Y. Filed Oct. 11, 1911. Serial No. 654,130. (Cl. 21—20.)



1. In a vehicle, the combination of a frame, a body, mounted on said frame for pivotal movement relatively thereto, means for driving the vehicle comprising an hydraulic transmission mechanism, means for moving said body relatively to said frame comprising a fluid pressure operated mechanism, and connections between said mechanism and said transmission mechanism for conveying fluid under pressure to said operating mechanism and returning it therefrom to said transmission.

2. In a vehicle, the combination of a frame, means for driving the vehicle comprising an hydraulic variable speed gear, a body for the vehicle mounted on the frame for pivotal movement relatively thereto, means for moving the body relatively to the frame comprising a cylinder and piston operatively connected respectively with the frame and the body, and means for delivering fluid under pressure from said hydraulic gear to said cylinder and for returning said fluid from the cylinder to said gear.

3. In a vehicle, the combination of a frame, a dumping body mounted thereon for movment relatively thereto, a driving mechanism for said vehicle comprising an hydraulic variable speed gear, a mechanism for operating said dumping body comprising an operating cylinder and piston therein, fluid connections with the opposite ends of said cylinder, and means for simultaneously connecting one end of said cylinder with the pressure side of said variable speed gear, and the opposite end of said cylinder with the exhaust side of said speed gear.

4. In a vehicle, the combination of a frame, a dumping body mounted thereon for movement relatively thereto, a driving mechanism for said vehicle comprising an hydraulic variable speed gear, a mechanism for operating said dumping body comprising an operating cylinder and piston therein, fluid connections with the opposite ends of said cylinder, and means for connecting either end of said cylinder with the pressure side of said transmission and simultaneously connecting the other end of said cylinder with the exhaust, or low-pressure, side of said speed gear.

5. In a vehicle, the combination of a frame, comprising longitudinal side members formed of channel iron having its bottom flange wider than its top flange, a body, rollers on which said body is mounted adapted to travel on said bottom flange, said rollers being arranged in pairs with the rollers of one pair spaced apart to lie between the said flanges, the other of said rollers being spaced to pass between the inner edges of said upper flanges, and stops between said flanges adjacent the rear ends of said frame members.

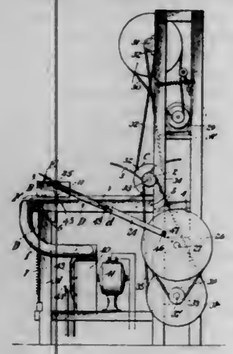
[Claim 6 not printed in the Gazette.]

1,110,451. PNEUMATIC TIRE FOR VEHICLES. ISAAC S. MCGIEHAN, London, England. Filed May 15, 1911. Serial No. 627,315. (Cl. 152—13.)

1. A pneumatic tire composed of a fabric carcass or foundation and a tread portion composed of layers of rubber filled fabric of different widths formed into a crescent band united thereto by an interposed film of softer rubber, all homogeneously vulcanized substantially as described.

2. A reconstructed pneumatic tire consisting of a suitable carcass or foundation in combination with a substantially non-stretchable fabric band tread portion united to the said carcass by means of an intermediate film of quick-curing rubber as herein specified.

1,110,452. PLUME-DRYING APPARATUS. HOMER METHOT, Red Bank, N. J. Filed Sept. 29, 1913. Serial No. 792,318. (Cl. 34—44.)



1. A feather drying machine comprising a beater, a feather-holding carriage movable toward and from the beater, and means for directing a heated blast of air against the feathers simultaneously with the beating thereof.

2. A feather drying machine comprising a beater, a feather-holding carriage movable toward and from the beater whereby the latter acts on one side of the feather, and means for directing heated air through the feathers from the opposite side.

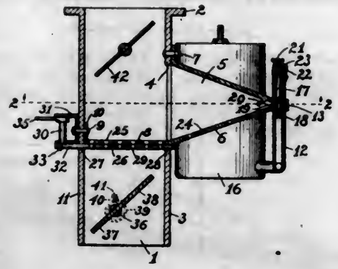
3. A feather drying machine comprising an apron, a feather-holding carriage movable over the apron, a beater, for beating the feathers while supported by the apron, and means for directing a blast of air between the apron and feathers and through the latter.

4. A feather drying machine comprising a rotary beater, a flexible apron disposed adjacent the beater, and a feather-holding carriage movable toward and from the beater to feed the feathers between the latter and apron.

5. A feather drying machine comprising a beater for acting on a plurality of feathers, a carriage for holding a plurality of feathers, means for moving the carriage toward and from the beater, and a device for directing a blast of air against all the feathers in the carriage during the beating of the feathers.

[Claims 6 to 12 not printed in the Gazette.]

1,110,453. CARBURETER. OLNEY B. MONOSMITH, Lorain, Ohio. Filed July 7, 1913. Serial No. 777,637. (Cl. 48—168.)



1. In a carbureter, the combination with an air passage of a plate arranged transversely therein, the plate being provided with perforations, means for supplying a volatile fluid to a surface of the plate, and means for uniformly controlling the area of said perforations in the plate, substantially as described.

2. In a carbureter, the combination with an air passage, of a plate arranged transversely therein, the plate being provided with perforations, the perforations having tapering sides and being larger at the opposite surface of the plate from the direction of the air current in said air passage to produce a venturi action, and means for supplying a volatile fluid to the surface of said plate having the larger areas of said tapering perforations, substantially as described.

3. In a carbureter, the combination with a vertical air passage, of a plate arranged transversely therein, the plate being provided with perforations, the perforations having tapering sides and being larger at the upper surface of the plate, means for supplying a volatile fluid to the upper surface of said plate, and means for controlling the area of said perforations in the plate, substantially as described.

4. In a carbureter, the combination with a vertical air passage, of a plate arranged transversely therein, the plate being provided with perforations, the perforations having tapering sides and being larger at the upper surface of the plate, means for supplying a volatile fluid to the upper surface of said plate, a slide plate below the first mentioned plate and in contact therewith, the slide plate being perforated to normally aline with the perforations in the first mentioned plate, and means for actuating the slide plate to control the area of the perforations in the first mentioned plate, substantially as described.

5. In a carbureter, the combination with an air passage, of a box projecting laterally therefrom and communicating therewith, one side of the box being provided with perforations, and means for supplying the inner surface of the perforated side of the box with a volatile fluid, substantially as described.

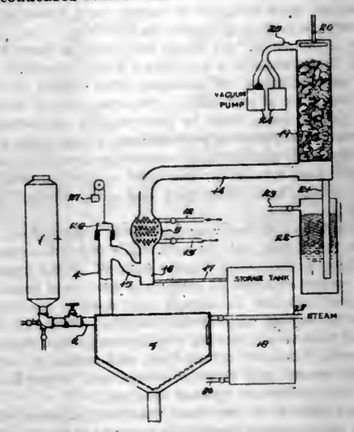
[Claims 6 to 15 not printed in the Gazette.]

1,110,454. RECLAIMING WASTE PRODUCTS IN THE MANUFACTURE OF SULFITE FIBER. HUGH K. MOORE and ROBERT B. WOLF, Berlin, N. H. Filed Dec. 30, 1913. Serial No. 809,525. (Cl. 92—2.)

1. The herein described process of recovering sulfur dioxid, which consists in removing the air from a blow pit, discharging the contents of a digester into said blow pit, separating and recovering the pulp, condensing by surface condensation the vapors arising from said blow pit, and recovering the sulfur dioxid.

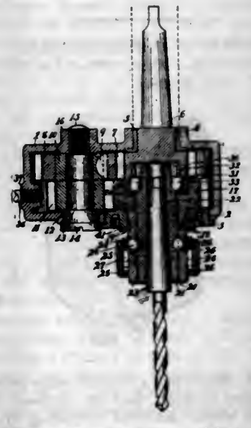
2. The herein described process of recovering sulfur dioxid, which consists in filling a blow pit with steam to remove the air therefrom, discharging the contents of a pulp digester into the steam-filled blow pit, condensing by surface condensation the vapors arising from the blow pit, and thereby separating them from the sulfur dioxid, and recovering the sulfur dioxid.

3. The herein described process of recovering sulfur dioxid, which consists in first filling an open blow pit with steam to remove the air therefrom, then closing the pit and connecting the same with an air pump, then discharging the contents of a pulp digester into said pit, and condensing the vapors rising from the blow pit, and recovering the uncondensed sulfur dioxid.



4. The combination with a digester and a blow pit, of a vomit stack leading from the blow pit and having a removable cap, a condenser connected to the vomit stack, and means for filling the blow pit with steam.

1,110,455. SPEED-REDUCING CHUCK FOR DRILL-PRESSES. ARNE T. NELSON, Detroit, Mich. Filed Oct. 11, 1913. Serial No. 794,544. (Cl. 77—55.)



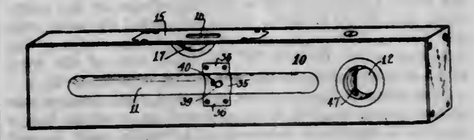
1. A variable speed chuck comprising a gear case, a main driving gear journaled therein and having a shank for connecting with a drill press spindle, transmitting gears journaled in said case, one of which meshes with said driving gear, a driven gear journaled in said case in mesh with one of said transmitting gears and having an apertured sleeve for the reception of a drill collet projecting through said gear case, means carried by said driving gear for engaging said collet, means carried by the sleeve of said driven gear for engaging and disengaging said collet, and means for locking said gear case against rotation.

2. A variable speed chuck comprising a gear case containing a driving gear having a shank for attachment to the spindle of a drill press, a driven gear having a sleeve for the reception of a drill collet, transmitting gears journaled in said gear case and meshing with said driving and driven gears, means carried by said driven gear for effecting a driving engagement with said collet, and means for retaining said gear case against rotation.

3. A drill chuck comprising a case, a shank for connection with a driving spindle journaled in said case, a sleeve having an aperture for the reception of a drill collet extending from said case, means carried by said shank for effecting a driving connection with said drill collet, and means carried by said sleeve for detachably engaging said collet against withdrawal from said sleeve.

4. A drill chuck comprising a case carrying a shank for attachment to the spindle of a drill press, a sleeve journaled in said case and having an aperture for the reception of a drill collet, means carried by said driving shank for effecting a locking engagement with said drill collet, and means carried by said sleeve for engaging and disengaging said collet in contact with, and for withdrawal from said sleeve.

1,110,456. ELECTRICALLY-LIGHTED LEVEL AND PLUMB. WILLIAM EDWARD O'BRIEN, Providence, R. I. Filed June 28, 1913. Serial No. 776,405. (Cl. 240—8.4.)



1. In a device of the class described, the combination of a supporting stock having a cavity therein, a bubble tube in the cavity and visible from the exterior, a lamp adjacent the bubble tube, a ring yieldingly supporting said lamp, reflecting means for the lamp, a cell for supplying current to the lamp and having spring contact terminals, one of which is directly in contact with one of the terminals of the lamp, and means for connecting the other contact terminal of the cell in contact with the lamp, said means comprising a bar adapted to engage said other contact terminal and accessible from the exterior and adapted to be releasably locked in closed position.

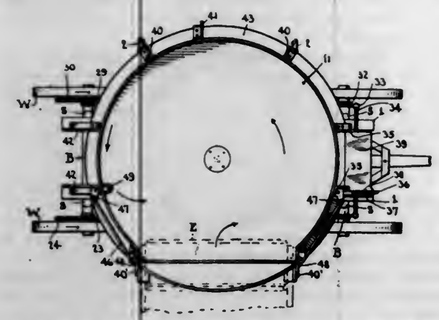
2. In a device of the class described, the combination of a supporting stock having a cavity therein, a bubble tube, a tubular member for holding the bubble tube, said tubular member having openings at its opposite sides to expose the bubble tube, one of said exposed parts of the bubble tube being visible from the exterior, a lamp adapted to illuminate the other exposed portion of the bubble tube, and means for supplying current to the lamp.

3. In a device of the class described, the combination of a supporting stock having a cavity therein, a bubble tube supported in the cavity and visible from the exterior, a lamp in the cavity adapted to illuminate the bubble tube, a cupped reflector and holder for the lamp having a flange, an elastic ring engaging the flange of said holder and yieldingly supporting the lamp and holder, a cell provided with spring contact terminals, one of which is constantly connected to one of the lamp terminals, and means for connecting the other spring contact terminal of the cell to the other lamp terminal and adapted to releasably lock the contact terminal in connected relation with the lamp terminal.

1,110,457. ROTARY BARGE FOR GRAIN-HEADERS. JETHRO PEOPLES, Arlington, Kans. Filed Apr. 24, 1913. Serial No. 763,361. (Cl. 21—20.)

1. In a barge of the character described, a supporting frame mounted on a wheeled running gear, a cylindrical grain receptacle revolubly mounted on an upright axis on said frame and adapted to receive the grain discharged from a header, a wind shield having inwardly inclined walls rising from the frame and disposed above the upper edge of said cylinder, means to evenly distribute the grain in the receptacle, and means whereby the latter is geared

to and revolved by the supporting wheels of the running gear.

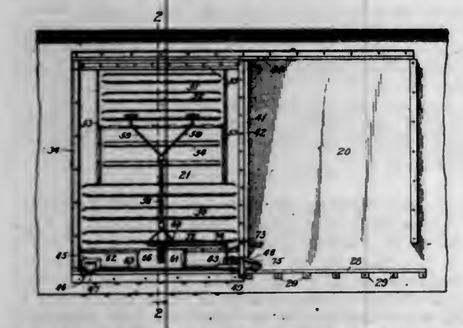


2. A barge of the character described comprising a supporting frame adapted to be mounted on a wagon bed, a cylindrical receptacle mounted on a vertical axis on said frame, means whereby said receptacle is revolved, doors in one side of said receptacle, a wind shield fixedly carried by the frame around and above the upper edge of the receptacle, said shield inclining inwardly toward its upper edge and having in one side thereof an opening, and a grain-deflecting roller mounted on the inner side of the wind shield adjacent said opening, for the purpose set forth.

3. A barge of the character described comprising a supporting frame adapted to be mounted on a wagon bed, a cylindrical receptacle mounted on a vertical axis on said frame, means whereby said receptacle is revolved, doors in one side of said receptacle, a wind shield fixedly carried by the frame around and above the upper edge of the receptacle, said shield inclining inwardly toward its upper edge and having in one side thereof an opening, standards rising from the frame and having their upper ends deflected inward toward a common center and connected with said shield, and a ball pivotally connected at its extremities with said standards and having its center adapted to bridge said opening, for the purpose set forth.

4. A barge of the character described comprising a supporting frame adapted to be engaged with a wagon bed, a receptacle revolubly mounted on said frame, means whereby said receptacle is revolved, doors arranged in one side of said receptacle, a wind shield supported around and above the upper edge of the receptacle, said shield inclining inwardly toward its upper edge and having in one side thereof an opening, an elevator connecting ball adapted to be swung across said opening, and a grain deflecting roller revolubly mounted on the inner side of the wind shield.

1,110,458. CAR-DOOR. EDWARD POSSON, Chicago, Ill. Filed Oct. 31, 1912. Serial No. 728,872. (Cl. 20—27.)



1. In a device of the class described, a main door, a vertically sliding sub-door on the upper part of the main door, a horizontally sliding sub-door below, a depending handle pivoted on the upper sub-door and having a depending tongue adapted to engage the lower sub-door, and means to lock the handle in position.

2. In a device of the class described, a main door, a vertically sliding sub-door on the upper part of the main door, a second sub-door below, a depending handle secured to the upper sub-door, a socket secured to the main door, said handle having a part adapted to engage said socket and another part adapted to engage said lower sub-door, and means to lock said handle in position.

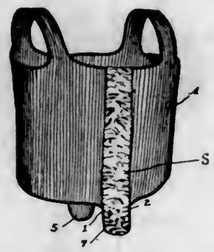
3. In a device of the class described, a door with an opening therethrough, a sub-door for said opening, a handle for manipulating the sub-door, said handle carrying a projection with a perforation therethrough, a socket attached to the main door to receive said projection, said socket having registering perforations, a bolt to go through said registering perforations, operating means attached to said bolt, and means to lock said operating means and thereby secure said main door and said sub-door against opening.

4. In a device of the class described, a main door, a sub-door on the upper part of said main door, a second sub-door below, a depending handle secured to the upper sub-door, a socket attached to said main door, said handle having a part adapted to engage said socket, another part adapted to engage said lower sub-door, said first named part and said socket having registering perforations, operating means attached to the bolt, and means to lock said operating means and thereby secure said main door and both of said sub-doors against opening.

5. In a device of the class described, a door with an opening therethrough, a sub-door for said opening, a handle for manipulating the sub-door, a projection from the handle with a perforation therethrough, a socket attached to the main door to receive said projection, said socket having registering perforations, a bolt to go through said registering perforations, a handle attached to the bolt, an operating handle to manipulate the main door, and means to lock the operating handle over the bolt handle and thereby secure the main door and the sub-door against opening.

[Claims 6 and 7 not printed in the Gazette.]

1,110,459. INFANT'S UNDERGARMENT. ELIZABETH R. ROYCE, Cambridge, Mass. Filed Apr. 9, 1914. Serial No. 830,687. (Cl. 2—98.)

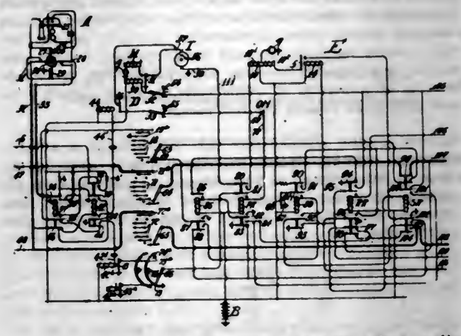


1. A garment comprising a knitted body portion, means to which another garment may be secured, and a reinforcing strip of woven material extending from said securing means a substantial distance across said garment, said strip being attached "full" when the garment is in an unstretched condition.

2. A garment comprising a knitted body portion, a tab projecting therebelow, and a reinforcing strip of woven material extending from said tab substantially to the top of the garment, said strip being attached "full" when the garment is in an unstretched condition.

3. A garment comprising a knitted body portion, a tab projecting therebelow, and a reinforcing strip of woven material extending from the stab substantially to the top of the garment, said strip being so secured to the garment as to be "full" when the knitted portion is unstretched and to be taut when said knitted portion is stretched.

1,110,460. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. FRED SCHOENWOLF, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Apr. 15, 1908. Serial No. 427,225. (Cl. 179—18.)



1. A telephone system including a calling line, a line selector to make connection therewith, a relay for said selector, an actuating magnet therefor in a circuit controlled by said relay, means controlled by current over said line to effect a step toward energizing said relay, and independently actuated means for thereon actuating said relay and magnet in proper sequence.

2. A telephone system including a calling line, a line selector to make connection therewith, a relay for said selector, an actuating magnet therefor in a circuit controlled by said relay, means controlled by current over said line to effect a step toward energizing said relay, independently actuated mechanism at the exchange, a pair of contacts having connections alternately changed by said mechanism, one of said contacts being included in the circuit for said magnet, and a circuit for energizing said relay including the other of said contacts.

3. A telephone system including telephone lines, a selective switch to connect with said lines, a relay for initiating travel of said switch, a circuit for said relay, mechanism operating responsive to current over said lines to close one contact in the circuit of said relay, and independently actuated means at the exchange, operated independent of any control of the telephone lines for closing another contact in said circuit.

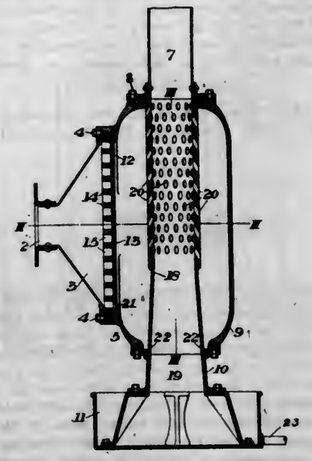
4. A telephone system including telephone lines, a selective switch to connect with said lines, a relay for initiating travel of said switch, a circuit for said relay, mechanism operating responsive to current over said lines to close one contact in the circuit of said relay, a second contact in said circuit, and independently actuating mechanism at the exchange, operated independent of any control of the telephone lines, alternately opening and closing said contact.

5. A telephone system including a selective switch, a magnet controlling travel thereof, a circuit therefor, a relay controlling a contact of said circuit, and interrupter means adapted to transmit energizing current to said relay to cause it to close said contact, said means also comprising time correlated mechanism to thereafter actuate said magnet.

[Claims 6 to 42 not printed in the Gazette.]

1,110,461. EXHAUST-CONDENSER FOR STEAM-EXHAUST PIPES. JOSEPH M. SEARLE, Pittsburgh, Pa. Filed Mar. 31, 1908. Serial No. 424,319. (Cl. 261—2.)

1. A vertically disposed steam exhaust pipe having a condenser at its lower end, said pipe extending a suitable distance above the condenser and communicating with said condenser at its lower end for admitting steam from the condenser to the pipe, said condenser having an inlet opening for the steam, the condenser also having an opening to the atmosphere at its lower end for admitting air at atmospheric temperature to the condenser and pipe to reduce the temperature of the steam and cause condensation of the steam before it reaches the top of the pipe; substantially as described.



2. A vertically disposed steam exhaust pipe having a discharge to the atmosphere at its upper end, a condenser connected to said pipe at its lower end, said condenser having inner and outer chambers, there being an inlet to the condenser for the steam, the pipe extending a suitable distance above the condenser, the condenser also having an opening to the atmosphere at its lower end for the admission of air at atmospheric temperature, there being a plurality of upwardly extending openings in the inner wall of the condenser to permit the steam to pass from the outer chamber to the inner chamber, which openings act as injectors for drawing the air through the bottom of the condenser into contact with the steam for condensing the same; substantially as described.

3. A vertically disposed steam exhaust pipe having a condenser connected to its lower end, said condenser consisting of a chamber connected with the exhaust intake pipe, a cylindrical member in said chamber opening into the exhaust pipe and having a plurality of upwardly extending openings for admitting steam from the chamber to the cylindrical member, said cylindrical member being open to the atmosphere at its lower end to admit air at atmospheric temperature thereto by the injector action of the upwardly extending openings, the commingling of the air with the steam within the cylindrical member and exhaust pipe causing the same to condense before it reaches the top of the pipe, and a receptacle at the lower end of said cylindrical member for the water of condensation from the condenser, substantially as described.

4. A vertically disposed steam exhaust pipe having a condenser connected to its lower end, said condenser consisting of a chamber connected with the exhaust intake pipe, a cylindrical member in said chamber opening into the exhaust pipe and having a plurality of upwardly extending openings for admitting steam from the chamber to the cylindrical member, said cylindrical member being open to the atmosphere at its lower end to admit air at atmospheric temperature thereto by the injector action of the upwardly extending openings, the commingling of the air with the steam within the cylindrical member and exhaust pipe causing the same to condense before it reaches the top of the pipe, a separating diaphragm within said chamber, and a receptacle at the lower end of said cylindrical member for the water of condensation from the condenser; substantially as described.

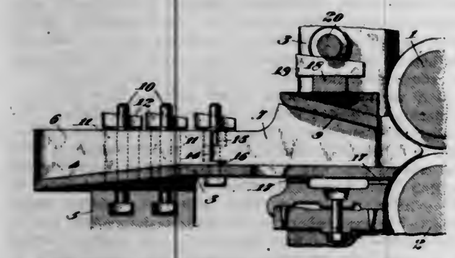
5. The combination with a vertically disposed steam exhaust pipe of a condenser connected to the lower end of said exhaust pipe, said condenser having a chamber provided with an inlet connection for exhaust steam, a cylindrical member or tube extending vertically through

the chamber and communicating with the exhaust pipe at its upper end and open to the atmosphere at its lower end, there being a plurality of rows of upwardly extending openings through said cylindrical member for admitting steam from the chamber to the cylindrical member, and a drip pan at the lower end of said cylindrcial member for receiving the water of condensation from the condenser and exhaust pipe; substantially as described.

1,110,462. BUTTON. EDGAR SHANTZ, Rochester, N. Y. Filed Dec. 5, 1910. Serial No. 595,595. (Cl. 24—101.)

A button having a head of fragile material and a rigid wire eye extending from the rear side of the head, said button comprising a one piece blank of a non-moldable fragile substance provided with an undercut recess opening out through the rear face of the blank, the front face of the blank being imperforate, a wire bent to form a loop and having its ends extending into the recess and moldable material cast in said recess through the opening in the rear face of the blank, and extending about the ends of the wire and filling the recess, whereby the ends of the loop are rigidly connected to the fragile blank, substantially as and for the purpose described.

1,110,463. ROLLING-MILL GUIDE. JOHN W. SHEPERDSON, Harrisburg, Pa. Original application filed Nov. 13, 1912, Serial No. 731,077. Divided and this application filed May 16, 1914. Serial No. 838,996. (Cl. 80—51.)



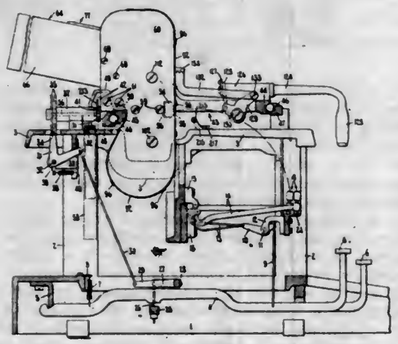
1. An entering guide for rolling mills comprising a base the outer end of which is inclined and provided with a plurality of tapered side guides upwardly projecting therefrom, swinging side guides pivoted to the inner ends of the side guides aforesaid, and means for adjustably securing the same in position.

2. An entering guide for rolling mills comprising a base provided with a plurality of side guides projecting upwardly therefrom, swinging guides pivoted to the inner ends of the side guides aforesaid, a cover mounted on the inner ends of each of the pairs of swinging guides, and means for adjustably securing the same in position.

3. An entering guide for rolling mills comprising in combination with the rolls, a base, the outer portion of which inclines upwardly toward the rolls, a plurality of tapered side guides formed integral with, and projecting above, said inclined base, a plurality of swinging side guides pivoted to the inner ends of the side guides aforesaid, the upper edges of said swinging side guides being downwardly inclined toward the rolls, covers mounted on said inclined upper edges, and means for adjustably securing the same in position.

4. An entering guide for rolling mills comprising in combination with the rolls, a base, the inner portions of which are adapted to register with, and are contiguous to, the lower surfaces of the roll passes, the outer portion of said base being inclined downwardly in a direction away from the rolls, a plurality of tapered side guides formed integral with, and projecting upwardly from, the outer portion of said base, the thicker ends of said side guides being nearer the rolls, a plurality of swinging side guides pivoted to the thicker inner ends of the tapered side guides aforesaid, the inner portions of the upper edges of said swinging guides being downwardly inclined toward the rolls, covers mounted on said inclined upper edges and means for adjustably securing same in position, the whole forming a plurality of adjustable openings tapering in both directions toward the roll passes.

1,110,464. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Mar. 8, 1913. Serial No. 752,848. (Cl. 197—130.)



1. In a typewriting machine, the combination of key actuated printing instrumentalities, and means for feeding a work sheet in a flat condition to the printing line in a curved path, said means including line spacing devices for effecting a step-by-step line spacing movement of the work sheet.

2. In a typewriting machine, the combination of key actuated printing instrumentalities, a support for a plurality of work sheets, and means for feeding said sheets successively from said support to the printing line in a curved path and while the work sheets remain in a flat condition, said means including line spacing devices for effecting a step-by-step line spacing movement of the work sheet.

3. In a typewriting machine, the combination of a carriage, a support for a plurality of work sheets, said support being carried by the carriage, means for feeding the work sheets successively from said support to the printing line while the sheets remain in a flat condition, and means for causing each sheet in its movement to the printing line to describe a curved path.

4. In a typewriting machine, the combination of a movable platen, means for controlling the letter space movement of said platen, and means for feeding work sheets up and around said platen while the sheets remain in a flat condition.

5. In a typewriting machine, the combination of a platen, key actuated printing instrumentalities, and means for feeding work sheets around beneath the platen and up in front of the same while the work sheets remain in a flat condition, said means including devices which engage the work sheet only near the side edges thereof.

[Claims 6 to 92 not printed in the Gazette.]

1,110,465. RAILROAD-TIE. HENRY A. SNOW, Denver, Colo., assignor of one-half to George E. Trailes, Denver, Colo. Filed Dec. 18, 1913. Serial No. 807,511. (Cl. 238—5.)

1. In a railroad tie, the combination with a trough-shaped body, of a rail support arranged therein, a retaining plate carried by one side of the tie body and adapted to engage one of the base flanges of a rail, said retaining plate extending over a portion of the rail support to hold the latter within the body, and a locking member arranged at the opposite side of the rail and adapted to engage the other base flange of the rail, said retaining plate and locking member coöperating to hold the rail upon said support.

2. In a railroad tie, the combination with a trough-shaped body, of a rail support arranged therein, a retaining plate carried by one side of the tie body and provided with a holding flange adapted to project over and engage one of the base flanges of a rail, said retaining plate extending over a portion of the rail support to hold the latter within the body, and a locking member arranged at the opposite side of the rail and adapted to engage the other base flange of the rail, said locking member being slidably mounted on the tie body.

3. In a railroad tie, the combination with a trough-shaped body, of a rail support arranged therein, a retaining plate carried by one side of the tie body and provided with a holding flange adapted to project over and engage one of the base flanges of a rail, said retaining plate extending over a portion of the rail support to hold the latter within the body, and a locking member arranged at the opposite side of the rail and also provided with a locking flange adapted to engage the other base flange of the rail, said retaining plate and locking member coöperating to hold the rail upon said support.

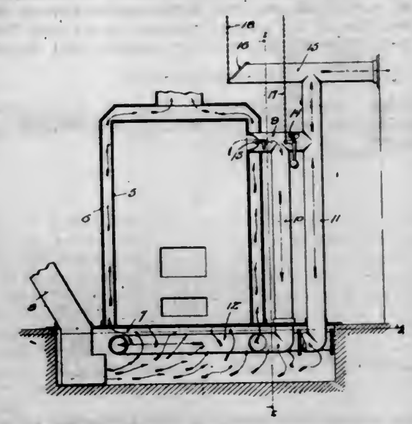
4. In a railroad tie, the combination with a trough-shaped body, of a rail support arranged therein, a retaining plate carried by one side of the tie body and bent over the opposite side thereof, whereby to extend over one end of said rail support, said retaining plate being adapted to engage one of the base flanges of a rail, and a locking member arranged at the opposite side of the rail and extending over the opposite end of said support, said locking member being adapted to engage the other base flange of the rail, said retaining plate and locking member coöperating to hold the rail upon said support and also to protect the latter.

5. In a railroad tie, the combination with a trough-shaped body, of a rail support arranged therein, a retaining plate carried by one side of the tie body and extending over one end of said rail support, said retaining plate having a depending stop adapted to extend over the contiguous end of the rail-support, said retaining plate being also adapted to engage one of the base flanges of a rail, and a locking member arranged at the opposite side of the rail and extending over the opposite end of said support, said locking member having a depending stop extending over the end of the support contiguous to the locking member, the locking member being adapted to engage the other base flange of the rail and coöperating with the retaining plate to hold the rail upon said support and also to protect the latter.

[Claims 6 to 10 not printed in the Gazette.]

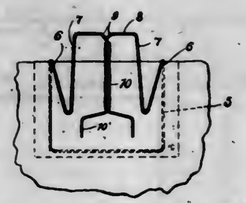
1,110,466. FURNACE FOR HOT-AIR HEATING SYSTEMS. JOHN C. STILLMAN, Milwaukee, Wis., assignor of one-fourth to Edwin S. Stillman, one-fourth to Halbert E. Keitner, and one-fourth to Frederick O. Rossiter, Milwaukee, Wis. Filed Sept. 16, 1912. Serial No. 720,684. (Cl. 126—117.)

1. The combination of a hot-air furnace mounted over a cold-air pit and having a damper-controlled horizontal upper smoke flue leading outward from the combustion-chamber through the furnace-jacket, a horizontal smoke-duct in communication with a chimney and connected with the upper end of the smoke-flue, a horizontal circulating flue in said pit, an exposed vertical flue connecting said smoke-flue with one end of the circulating flue, and another exposed vertical flue connecting the other end of said circulating flue and the outer end of the smoke-flue with said smoke-duct.



2. The combination of a hot-air furnace mounted over a cold-air pit and having an upper horizontal smoke-flue extending from the combustion-chamber outward through the furnace-jacket, a horizontal smoke-duct in communication with a chimney and connected with the upper end of the smoke-flue, a horizontal circulating flue in said pit, an exposed vertical flue connecting said smoke-flue with one end of the circulating flue, another exposed vertical flue connecting the other end of said circulating flue and the outer end of the smoke-flue with said smoke-duct, and dampers in the smoke-flue in opposite directions from the first of said vertical flues.

1,110,467. TAG-HOLDING DEVICE. MARY E. TOWLES, Hubbard, Tex. Filed Apr. 27, 1914. Serial No. 834,734. (Cl. 40—11.)



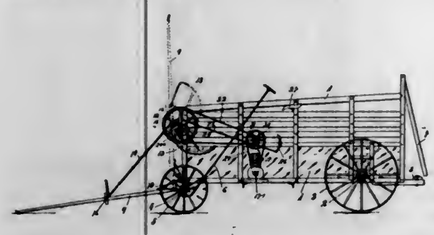
A device of the character described, comprising a section of wire bent to form an open ticket engaging frame and at the open end of the frame inwardly and longitudinally extending clamping arms disposed within the open frame, the wire extending outwardly and longitudinally from the free inner ends of the clamping arms and the end portions thereof twisted together and extending inwardly and longitudinally of the open frame, the end portions of the wire diverging from the inner end of the twisted portion to form a forked fabric engaging and holding device provided with laterally extending fabric penetrating elements.

1,110,468. SURGICAL NEEDLE. JOSEPH S. TURNER, Los Angeles, Cal. Filed Feb. 6, 1911. Serial No. 606,767. (Cl. 128—44.)

In a surgical needle, a suitably shaped point, a square shank on said needle, an eye through said needle, the axis

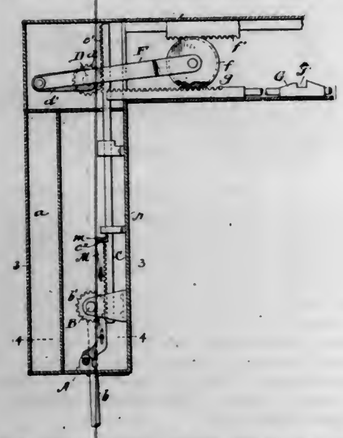
of the eye lying in the plane of two opposite edges of the rectangular shank, a groove extending from each end of the eye to the rear end of the needle, whereby the construction of the grooves removes the material from the rectangular shank only at two opposite edges thereof.

1,110,469. SHOCK-LOADER. JOHN F. VALLENTYNE, Minneapolis, Minn. Filed Nov. 11, 1911. Serial No. 659,760. (Cl. 56—62.)



In a loader, the combination with a carrying vehicle and a loading fork hinged to the front end thereof, of a transverse shaft on the front portion of the vehicle body, toothed eccentrics on said shaft, fork lifting chains connected to said eccentrics working on the teeth thereof, an engine carried by said vehicle, a loose wheel on said shaft continuously driven from said engine, a clutch for connecting said shaft to said engine driven wheel, at will, and an automatic trip for tripping said clutch out of action when said fork has reached a predetermined elevation.

1,110,470. LOCK-BOX MECHANISM FOR JAIL-CELLS. JAMES H. VAN DORN and JOHN T. WHITEHOUSE, Cleveland, Ohio, assignors to The Van Dorn Iron Works Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 18, 1913. Serial No. 785,274. (Cl. 39—94.)



1. In jail construction, the combination of the sliding doors of a row of cells, means operable from the end of said row for simultaneously opening and closing all of said doors, and a lock box having a door, with means which prevent the closing of the lock box door until the door operating mechanism has been moved to the door closing position and which prevents the door operating mechanism from moving from said position while the lock box door is closed.

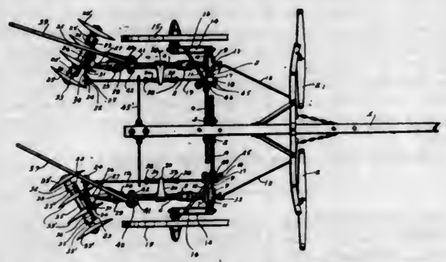
2. In jail construction, the combination of the sliding doors of a row of cells, means operable from the end of said row for simultaneously opening and closing said doors, which means include an operating lever, and a lock box having a door, with a sliding bolt in said lock box adapted to be projected into the path of said operating lever, and a forwardly sliding bar whose front end is in the path of the lock box door, and mechanism connecting said bolt and bar and compelling their simultaneous movement one out and one in.

3. In jail construction, the combination of the sliding doors of a row of cells, means operable from the end of said row for simultaneously opening and closing said doors, which means include an operating lever, and a lock box having a door, with a sliding bolt in said lock box adapted to be projected into the path of said operating lever, and a forwardly sliding bar whose front end is in the path of the lock box door, and mechanism connecting said bolt and bar and compelling their simultaneous movement one out and one in, a latch acting to prevent the inward movement of said bar, and means operable by the door operating mechanism as it moves to the door closing position for withdrawing said latch.

4. In jail construction, the combination of the sliding doors of a row of cells, means operable from the end of said row of cells for simultaneously opening and closing said doors, which means include an operating lever, and a lock box having a door, with a sliding bolt in said lock box adapted to be projected into the path of said operating lever, a forwardly sliding bar whose front end is in the path of the lock box door, mechanism connecting said bolt and bar and compelling their simultaneous movement one out and one in, a latch acting to prevent the inward movement of said bar, means operable by the door operating mechanism as it moves to the door closing position for withdrawing said latch, and a spring acting to draw said bolt inward when the lock box door is opened.

5. In jail construction, the combination of the sliding doors, of a row of cells, a train of mechanism operable from the end of said row of cells for simultaneously opening and closing said doors, and a lock box having a door, with a bolt movable into and out of the path of a member of the train of door operating mechanism, a movable device which projects into the path of the door of the lock box, mechanism connecting said device and bolt and compelling their simultaneous movement one out and one in, a latch acting to prevent the outward movement of the bolt, and means operable by a part of the train of door operating mechanism as it moves in the door closing direction for withdrawing said latch.

1,110,471. CULTIVATOR. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Feb. 21, 1914. Serial No. 820,135. (Cl. 97—37.)



1. In a cultivator, a beam, means to pivotally support the beam, a yoke, a gang of disks connected to the yoke, means to pivotally connect said yoke to the beam, an arm on the beam, a bar pivotally connected to the beam support and passed through said arm, spring means between the arm and bar to tension the latter, and means to pivotally connect the bar to the yoke.

2. In a cultivator, a beam, means to pivotally support the beam, a yoke, a gang of disks connected to the yoke, means to pivotally connect said yoke to the beam, an arm on the beam, a bar pivotally connected to the beam support and passed through said arm, a pair of springs on the bar engaging opposite sides of the arm whereby the gang will be tensioned when set either for an in or an out throw, and means to pivotally connect the bar to the yoke.

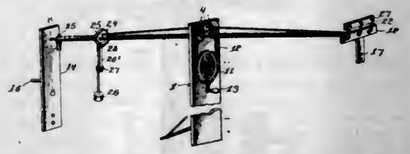
3. In a cultivator, a beam, means to pivotally support the beam, a yoke, a gang of disks connected to the yoke, means to pivotally and reversibly connect said yoke to the beam, an arm on the beam, a bar pivotally connected to the beam support and passed through said arm, a pair of springs on the bar engaging opposite sides of the arm, means to pivotally connect the bar to the yoke to provide for an in throw of the gang, and other means connected to the yoke to provide a pivotal connection with said bar when the gang is adjusted for an out throw.

4. In a cultivator, a beam, means to pivotally support the beam, a yoke, means to pivotally and reversibly connect the yoke to the beam, a gang of disks connected to the yoke, a rod pivoted to the beam supporting means, a pin in connection with said rod rotatably supported by the yoke, an arm connected to the yoke and having an offset portion to enable said pin to be secured thereto when said yoke is reversed, and spring means to tension said rod.

5. In a cultivator, a beam, means to pivotally support the beam, a yoke, means to pivotally and reversibly connect the yoke to the beam, a gang of disks connected to the yoke, a rod pivoted to the beam supporting means, a pin in connection with said rod rotatably supported by the yoke, an arm connected to the yoke and having an offset portion to enable said pin to be secured thereto when said yoke is reversed, a rigid arm on the beam in slidable connection with the rod, and a pair of coil springs on the rod having their outer ends connected to the rod and having their inner ends abutting said rigid arm on opposite sides thereof.

[Claims 6 to 8 not printed in the Gazette.]

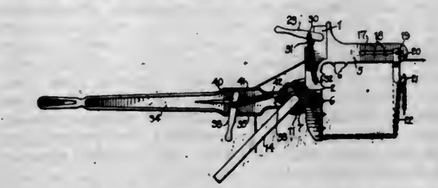
1,110,472. ROPE-MACHINE. FRANK J. WEISER, Norwood, Minn. Filed Aug. 13, 1912. Serial No. 714,913. (Cl. 28—2.)



1. A rope making machine comprising in combination a movable main twisting frame, triangularly disposed hubs journaled therein, gear teeth carried by the hubs, strand engaging rings carried by the hubs, means engaging the gear teeth to rotate said hubs, a standard mounted adjacent the main frame and upon one side thereof, a hook carried by the standard for engaging the rope, an upright supported adjacent the other side of the main twisting frame, said standard and main twisting frame being adapted for movement toward the upright, a plurality of hand cranks carried by the upright, hooks carried by the hand cranks and adapted to engage strands for forming a rope, and a strand guide adapted to engage the strands between the standard and main twisting frame, as and for the purpose set forth.

2. A rope making machine comprising in combination a movable main twisting frame, hubs journaled in the frame and arranged in triangular relation, gears formed integral with the hubs, a master gear mounted upon said frame, a chain connecting the gears and master gear, slots formed in the hubs, rings operable in said slots to clamp the strands in the hubs, a standard supported adjacent one side of the twisting frame, a hook rotatably mounted upon the standard for engaging the rope strands, said main frame and standard being adapted for movement toward the upright, an upright mounted adjacent the twisting frame and upon its opposite side, a plurality of cranks carried by the upright, hooks formed upon the cranks for engaging separate strands for forming a rope, a strand guide for engaging the strands between the standard and main twisting frame, as and for the purpose set forth.

1,110,473. WIRE-STRETCHER. NEWTON WHITESEL and FREDERICK WHITESEL, Watertown, Nebr. Filed May 11, 1914. Serial No. 837,848. (Cl. 39—51.)

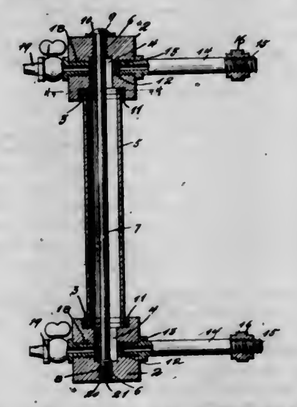


1. In a wire stretcher, a head including a pair of post engaging arms disposed at right angles to each other, having their inner faces provided with spurs, and one of the arms being furnished with a longitudinal slot having one of its walls formed with seats, a hook carried by the latter arm and having a pin to engage the seats, a grooved sheave carried by the other arm, a lever for actuating the sheave, a chain secured to the periphery of the sheave and having its links arranged to engage with the hook, and wire retaining and wire stretching means carried by the head.

2. In a wire stretcher, a head provided with a pair of post engaging arms, a horizontally disposed hook carried by one of the arms, a holding dog pivoted within the head, one of the walls of the head being provided with an entrance throat, a spring drawn lever pivotally connected with the dog, a grooved sheave carried by one of the arms and embodying pawl and ratchet mechanism, a chain having one end secured to the sheave and its other end arranged to be brought into engagement with the hook, and wire retaining and wire stretching means carried by the head.

3. In a wire stretcher, a head having one of its walls provided with an entrance throat, a spring drawn holding dog pivotally mounted in the head, a plurality of arms carried by the head, each of which is provided on its inner face with spurs, and one of the arms being furnished with a longitudinal slot formed with a seat, a hook having a pin projecting through the slot and arranged to engage with the seat, a grooved sheave carried by the other arms and embodying pawl and ratchet mechanism, a chain carried by the sheave and arranged to have its links engaged with the hook, a lever provided with a shaft to which the sheave is rigidly secured, and wire stretching means pivoted upon the sheave carrying shaft.

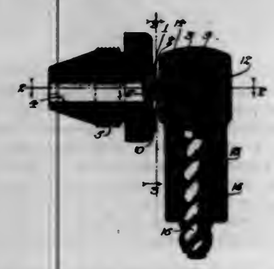
1,110,474. OIL-GAGE. JOHN N. BAGLEY, Superior, Nebr. Filed Feb. 9, 1914. Serial No. 817,643. (Cl. 72—54.)



An oil gage of the class described comprising a pair of heads, each head provided with a shallow pocket and with a reduced comparatively deep socket communicating with said pocket, said head also provided with a threaded pas-

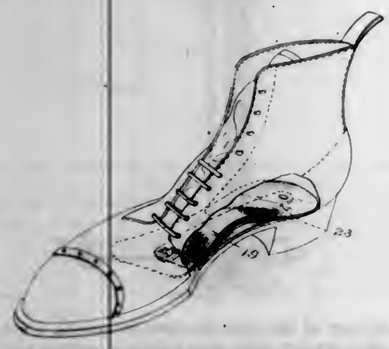
sage extending therethrough and communicating with one end of said socket, said head also provided with an alined threaded opening and threaded bore, a glass tube having its ends extending into said shallow pockets, the side portions of said tube being positioned at a spaced distance from the side portions of the pocket, compressible gaskets positioned within said pockets and binding upon the side portions of the pockets and the outer portions of the tube, a screw passing through said tube and said heads and detachably engaging one of said threaded passages whereby the gage will be held in an assembled position, and feed pipes and drain cups carried by said threaded openings and threaded bores.

1,110,475. ELECTRIC-CONDUCTOR COUPLING. FREDRICK BAIER, Chicago, Ill., assignor, by mesne assignments, to The Swiss Magneto Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 10, 1911, Serial No. 620,229. Renewed July 27, 1914. Serial No. 853,416. (Cl. 173—269.)



An electric conductor coupling for spark plugs and the like comprising an elongated, insulating holder having a transversely disposed, internally threaded, closed-bottomed pocket at one end, and a longitudinal bore for receiving an insulated conductor extending inwardly from its opposite end, said bore having a reduced inner portion for the bared end of the conductor opening into the inner end of said pocket, a cylindrical, metallic socket member adjustably threaded into said pocket and having a flat, unobstructed, inner end face arranged to engage the bared end of the conductor and clamp the same against the bottom wall of said pocket and a ball member having a longitudinally split stem provided with an enlarged head detachably engaging said socket member, the walls of said socket member being solid and having a seat for said ball member enlarged at its inner end, substantially as described.

1,110,476. ARCH-SUPPORT. ALEXANDER E. BLOCK, St. Louis, Mo. Filed Dec. 14, 1911. Serial No. 665,857. (Cl. 36—71.)



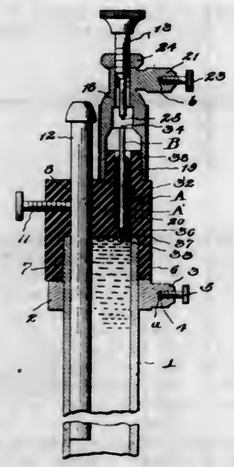
1. In an arch support, the combination of a flexible body member; a series of superimposed and overlapping pockets formed on the lower face of the body-member; a tension-bar pivotally secured at one of its ends to the lower face of the body member and extending longitudinally beneath said pockets, means for adjustably locking the free end of said tension-bar at a point upon the lower face of the body member, and an insert slidably secured to and mounted upon said tension-bar.

2. In an arch support, the combination of a flexible body member provided with heel pockets and superimposed and overlapping side pockets; one or more inserts removably seated in said pockets; a tension-bar extending longitudinally beneath said side pockets; means for adjustably securing the tension-bar to the lower face of the body member, and an insert slidably secured to and mounted upon said tension-bar.

3. In an arch support, the combination of a flexible body member provided with a pocket upon its lower face; an insert adapted to be removably seated in said pocket; a tension-bar adjustably secured to the lower face of the body member and provided with an elongated opening; a secondary insert adapted to fit between the tension-bar and the lower face of said pocket; a pin mounted in said secondary insert; and means for securing said pin in place within said elongated opening.

4. In an arch support, a flexible body member; a tension-bar provided with an elongated opening and mounted upon the lower face of the body member; an insert adapted to be seated between the body member and the tension-bar; and a pin fixed in said insert and extending through said elongated opening to secure the insert to the tension-bar.

1,110,477. THERMOSTAT. JULIUS BORKEL, Philadelphia, Pa. Filed Dec. 1, 1913. Serial No. 804,100. (Cl. 177—302.)



1. In an electric thermostat operated by the expansion of liquid, a circuit closing float consisting of a metallic rod and a body of non-oxidizable material surrounding the same, in combination with electric conductors and contacts making circuit through said rod, expensible liquid under and in contact with said float and a fixed part having a bore fitting the float in which the latter moves.

2. A circuit-closing float for a thermostat consisting of a body of non-ozidizable material having a longitudinal central bore and a metallic rod fitted into said bore and provided with contacts on its ends extending beyond said body, in combination with a fixed part having a bore fitting said body, in which bore said float moves up and down, a mercury receptacle below said bore which communicates with the latter by means of a hole of less diameter than said bore, and devices adapted to make circuit through said contacts and rod, the lower contact of said float being of sufficient length to extend down through said hole into said receptacle and of sufficiently small diameter to penetrate below the surface of the mercury.

3. A float having a non-oxidizable surface and provided with a longitudinal interior part of heavier material than that of which it is mainly composed and adapted to make electrical contact at both ends, in combination with a fixed part having a bore in which said float moves up and down, a column of conducting liquid arranged immediately under said bore, means for raising and lowering said float, and conductors adapted to make electrical circuit through said rod, the lower contact of said float being adapted to extend down below said bore and to penetrate below the surface.

4. A float for thermostats consisting of a body of non-oxidizable material adapted to retain its form, texture and smoothness and having a central bore, and a metallic rod fitted into said bore and extending through the float at both ends, and having a lower contact sufficiently elongated and of sufficiently reduced diameter to penetrate readily below the surface of mercury, in combination with a mercury column arranged below said bore and means for preventing the descent of the body of the float into the mercury.

5. A float for thermostats consisting of a bakelite body, a steel rod within the same and contacts set into the ends of said rod the lower contact being of considerable length and reduced diameter for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,110,478. FUSE. WILLIAM J. BRITT, Jr., St. Louis, Mo., assignor to Killark Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 15, 1913. Serial No. 806,820. (Cl. 175—273.)

1. In a renewable fuse of the class stated, the combination with a tubular casing open at its end, said casing being provided adjacent its end with a pair of diametrically opposite openings, of a terminal-blade operatively disposed lengthwise partly interiorly and exteriorly of said casing and adapted for electrical connection interiorly of said casing with a fusible member, said blade being transversely provided with a perforation, a blade-securing pin detachably securing said blade and casing in coöperative relation, said pin extending loosely through said perforation and removably projecting at its ends into said openings and thereby removably engaging with said blade and casing, and a slotted end-cap removably fitting on the end of said casing over the projecting portion of said blade, said cap providing a removable closure for the end of the casing and removably holding said pin in its said blade-securing position; substantially as described.

2. In a renewable fuse of the class stated, the combination with a tubular casing open at its end, said casing being provided adjacent its end with a pair of diametrically opposite openings, of a terminal-blade having relatively broad flat opposite faces operatively disposed lengthwise partly interiorly and exteriorly of said casing and adapted for electrical connection interiorly of said casing with a fusible member, said blade being transversely provided with a perforation at right angles to the said faces thereof, a blade-securing pin detachably securing said blade and casing in coöperative relation, said pin extending loosely through said perforation and removably projecting at its ends into said opening and thereby removably engaging with said blade and casing, and a slotted end-cap removable fitting on the end of said casing over the projecting portion of said blade, said cap providing a removable closure for the end of the casing and removably holding said pin in its said blade-securing position; substantially as described.

3. In a renewable fuse of the class stated, the combination with a tubular casing open at its end, said casing being provided adjacent its end with a pair of diametrically opposite openings, of a terminal-blade having relatively broad flat opposite faces operatively disposed lengthwise partly interiorly and exteriorly of said casing and adapted for electrical connection interiorly of said casing with a fusible member, said blade being transversely provided with a perforation at right angles to the said faces thereof, a blade-securing pin detachably securing said blade and casing in coöperative relation, said pin extending loosely through said perforation and removably projecting at its ends into said openings and thereby removably engaging with said blade and casing for centering said blade longitudinally of said casing, and a flanged slotted end-cap removably fitting on the end of the casing over the projecting portion of said blade, said cap providing a removable closure for the end of the casing and removably holding said pin in its said blade-securing position; substantially as described.

4. In a fuse of the class stated, a tubular casing provided adjacent its end with a pair of diametrically opposite openings, a terminal-blade having relatively broad flat opposite faces, said blade being transversely provided with a perforation at right angles to the said faces thereof, a blade-securing pin extending loosely through said perforation and removably projecting at its ends into said openings, blade-centering members having their inner ends bearing upon the flat faces of said blade and their outer ends removably projecting into said openings and thereby engaging with the wall of said casing, and means on the casing for removably holding said pin and blade-centering means in operative position; substantially as described.

5. In a fuse of the class stated, a tubular casing provided adjacent its end with a pair of diametrically opposite openings, a terminal-blade having relatively broad flat opposite faces, said blade being transversely provided with a perforation at right angles to the said faces thereof, a blade-securing pin extending loosely through said perforation and removably projecting at its ends into said openings, tubular blade-centering members loosely fitting on said pin on opposite sides of said blade, said members having their inner ends bearing upon the flat faces of said blade and their outer ends removably projecting into said openings and thereby engaging with the wall of said casing, and means on the casing for removably holding said pin and blade-centering means in operative position; substantially as described.

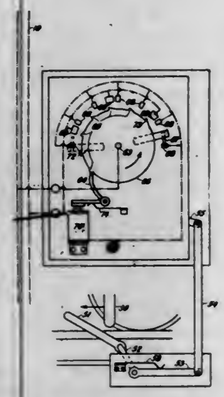
[Claims 6 to 8 not printed in the Gazette.]

1,110,479. ELECTRIC SIGNALING SYSTEM. ANDEAS BULL, Brooklyn, N. Y. Original application filed June 25, 1910, Serial No. 568,781. Divided and this application filed June 29, 1911. Serial No. 636,090. (Cl. 177—353.)

1. In a signaling system, the combination with a line circuit and a source of electric energy, of a central apparatus having means for producing electric impulses in the line circuit, a plurality of transmitters; each transmitter including a movable member 66, electromagnetic means operable by said impulses for controlling the movement of said member, means 69 operable through said member for controlling the line current during one or more periods following any of said impulses, and electromagnetically operable means controlled by the line current during said periods.

2. In a signaling system, the combination with a line circuit and a source of electric energy, of a central apparatus having means for producing a number of electric impulses in the line circuit, a plurality of transmitters; each transmitter including a movable member 66, electromagnetic means operable by said impulses for controlling the movement of said member, means 69 operable through said member for controlling the line current during a number of prearranged periods; each of said periods following one of said impulses, and electromagnetically operable means controlled by the line current during said periods.

3. In a signaling system, the combination with a line circuit and a source of electric energy, of a central apparatus, a plurality of transmitters; each transmitter including a movable member 66, means adapted to be set for moving said member, means operated by line current produced by said central apparatus and adapted to control the movement of said member after the first means have been set, means 69 operated through said member for controlling the line current during one or more periods following an operation of said movement controlling means, electromagnetic means operable by line current due to the operation of said current controlling means, and a set of selectable devices controllable by said electromagnetic means; each of said devices being operable at a different time.



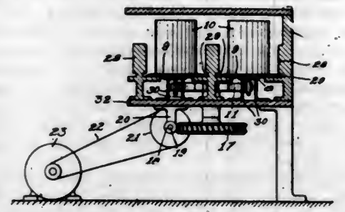
4. In a signaling system of the character described, the combination with a line circuit and a source of electric energy, of a central apparatus having means for producing electric impulses, a plurality of transmitters; each transmitter including a movable member 66, means adapted to be operated by said impulses for controlling the movement of said member, means 69 operated through said member for controlling the line current during a plurality of periods; said periods having a distinct time order relative to one or more of said impulses; said time order depending on the adjustment of said current controlling means, and means controlled by the line current during said periods.

5. In a signaling system of the character described, the combination with a line circuit and a source of electric energy, of a central apparatus having means for producing electric impulses, a plurality of transmitters; each transmitter including a movable member 66, driving means for moving said member at a prearranged rate, means operable by impulses produced by said central apparatus for controlling the movement of said member, means controlled by said member for closing the line circuit during prearranged phases of said movement for the purpose of producing current impulses having a distinct time relation to said electric impulses, electromagnetic means operable by said current impulses, a set of devices operated selectively by said electromagnetic means, and a set of combination bars; each combination bar responding to the operation of a distinct group of said devices.

[Claims 6 to 9 not printed in the Gazette.]

1,110,480. CONVEYER. FRANK W. BURPEE, Bellingham, Wash. Filed Jan. 21, 1914. Serial No. 813,404. (Cl. 193—2.)

1. In a conveyer of the class described, the combination with a plurality of sprocket wheels mounted upon vertically-disposed axes, of a chain belt, a plurality of diamond-shaped carrier plates secured to the upper edge of said belt, and a supporting track-way comprising oppositely-disposed confronting angle-plates upon the upper edges of which the said carrier plates are slidably supported, and vertically-disposed guideways grooved on their inner sides to receive the ends of said plates.



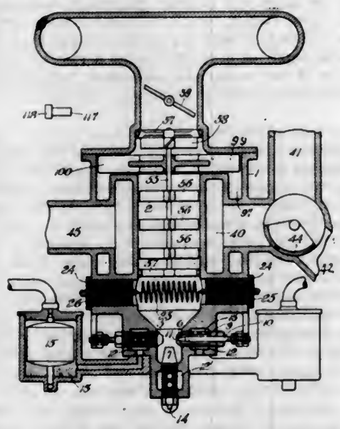
2. The combination with the frame of the exhaust box of canning apparatus provided with grooved side guides, of sprocket wheels mounted upon vertically-disposed axes, a chain belt engaging said wheels, a series of diamond-shaped carrier-plates secured to the upper edge of said belt, and a supporting track-way comprising oppositely-disposed confronting angle plates upon the upper parallel edges of which the said carrier-plates are slidably supported to bring their ends into horizontal alinement with the grooves of said side guides.

1,110,481. PROCESS OF OBTAINING NITRATES AND NITRITES FROM NITRATE-NITRITE MIXTURES. EMIL COLLETT, Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab Christiania, Norway. Filed Feb. 9, 1911. Serial No. 607,614. (Cl. 23—13.)

1. The process of producing nitrates and nitrites from a nitrite-nitrate mixture which comprises, treating said mixture with nitric acid, adding to the evolved gas a limited quantity of oxygen sufficient to oxidize the nitric oxid of said gas to nitrogen trioxid, and absorbing the resulting gas in an alkaline absorbent.

2. The process of producing pure nitrite and pure nitrate from a nitrite-nitrate mixture by treating the mixture with nitric acid to obtain nitrous gases and a residuum consisting of pure nitrate which comprises, mixing said nitrous gases with a limited amount of oxygen in the form of air, and absorbing the gas mixture in an alkaline absorbent, the oxygen content of said gases being so regulated as to provide for the combining of said nitrous gases with the absorbent to form nitrite only.

1,110,482. CARBURETER. GUY B. COLLIER, Kinderhook, N. Y. Filed May 23, 1913. Serial No. 769,371. (Cl. 48—155.2.)



1. A carbureter, having in combination, a central mixing chamber, a fuel nozzle opening into the bottom of the mixing chamber, an air nozzle arranged to atomize the jet from the fuel nozzle, a heating jacket surrounding the mixing chamber, a supplemental air intake chamber surrounding the heating jacket and opening into the upper portion of the mixing chamber, and a throttle valve controlling the admission of the mixture to the intake manifold.

2. A carbureter comprising a mixing chamber, a throttle valve, fuel and air nozzles located in the lower portion of the mixing chamber and arranged to atomize the fuel, a resistance coil supported in the mixing chamber above the nozzles, means for completing an electric circuit through the coil to cause the coil to impart heat to the atomized mixture, and means for varying the resistance in the circuit in accordance with the throttle.

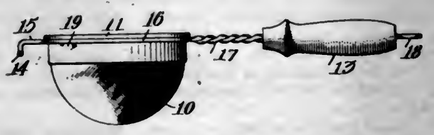
3. A carbureter comprising a mixing chamber, a heating jacket surrounding the mixing chamber, an annular air chamber surrounding the heating jacket and opening into the upper portion of the mixing chamber, a throttle valve, a valve for admitting air to the air chamber when the throttle valve is nearly closed, a supplemental valve for admitting air to the air chamber, and means for opening the supplemental valve in accordance with the opening of the throttle valve.

4. A carbureter, comprising fuel and water nozzles supported horizontally, an air nozzle supported vertically beneath the first mentioned nozzles, a needle valve supported in each of the nozzles, and means for adjusting the nozzles toward and from one another.

5. A carbureter, having, in combination, a mixing chamber, a fuel nozzle, a water nozzle, an air nozzle arranged to atomize the jets from the fuel and water nozzles, a throttle valve, and means for increasing the fuel and air jets as the throttle is opened and for opening the water nozzle at a predetermined point in the opening of the throttle valve.

[Claims 6 to 18 not printed in the Gazette.]

1,110,483. STRAINER. HAMMOND B. DOUGLAS, Worcester, Mass., assignor to Woods-Sherwood Company, a Corporation of Massachusetts. Filed May 4, 1912. Serial No. 695,140. (Cl. 210—16.)

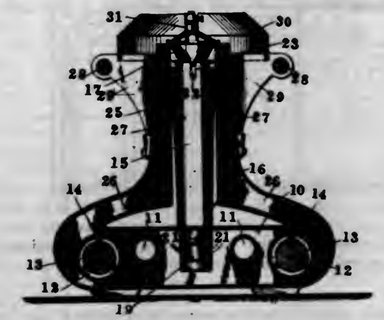


As an article of manufacture, a utensil of the class described consisting of a strainer member embodying a strainer and an annular band attached to the upper edge of the strainer, this band being provided with an outwardly extending flange at its upper edge, and a handle member consisting of a single strand of wire bent upon itself to form a pair of semi-circular members 16 which embrace the band of the strainer member at a point under the flange thereon, said semi-circular members terminating short of each other at one side and both extended outwardly and bent downwardly to form a rest, while at the diametrically opposite point said members are twisted permanently together to form a handle or stem, said band being provided below said semi-circular members with outwardly bent integral means serving to lock said semi-circular members on said band.

1,110,484. WATER-HEATER. FREDERICK GIRTANNER, St. Louis, Mo. Filed Apr. 10, 1912. Serial No. 689,860. (Cl. 126—360.)

1. In a water heater, the combination with a combustion chamber adapted to be submerged in the water to be heated, of water tubes passing laterally through said combustion chamber, weights for overcoming the buoyancy of the heater, said weights being arranged within said water tubes, so as to allow the circulation of the water, a burner for said combustion chamber, and inlet and outlet passages for said chamber.

2. In a water heater, the combination with a combustion chamber adapted to be submerged in the water to be heated, of water tubes passing laterally through said combustion chamber, weights in said water tubes, said weights being provided with lugs for spacing the same from the walls of the tubes, and a burner for said combustion chamber.



3. In a water heater, the combination with a combustion chamber adapted to be submerbed in the water to be heated, of inlet and outlet passages for said combustion chamber, a burner, a supply pipe for said burner, and a removable hood for the outlet of said combustion chamber, said hood being slotted for the passage of the supply pipe.

4. In a water heater, the combination of a combustion chamber adapted to be submerged in the water to be heated, a tube communicating with the central portion of the combustion chamber forming a passage for the insertion and removal of the burner, a burner supported in the central portion of the combustion chamber and removable through the said tube, a tapering air supply tube communicating with the combustion chamber at a point adjacent to the burner, and two outlet conduits for the combustion chamber communicating with the said chamber on opposite sides of the burner and at points removed in a horizontal direction from the burner.

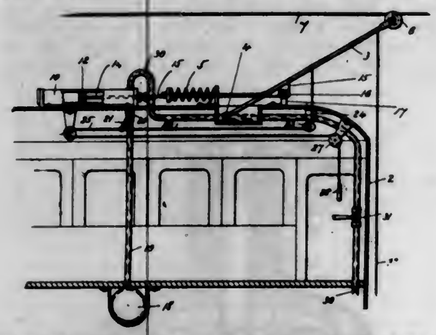
5. In a water heater, the combination of a horizontally extending box-like combustion chamber, a tube communicating with said chamber at the center of its upper portion and forming a passage for the insertion and removal of the burner, a burner supported in the central portion of the combustion chamber and removable through said tube, a tapering air supply tube communicating with the combustion chamber at a point adjacent to the burner, two outlet conduits communicating with the combustion chamber at points removed in a horizontal direction from the burner, and water tubes extending through the combustion chamber.

1,110,485. SAFETY ATTACHMENT FOR TROLLEY-POLES. EDGAR C. GOSSETT and ERNEST E. GOSSETT, Jackson, Ga. Filed Oct. 14, 1913. Serial No. 795,136. (Cl. 191—90.)

1. The combination, with a car body, and a trolley pole pivoted thereto and provided with means for moving it upwardly; of a cylinder for compressed air secured to the car body and provided with a piston and a piston-rod, a flexible connection between the piston-rod and the trolley pole, an inlet valve secured to the cylinder, and a flexible connection operatively connecting the inlet valve with the trolley pole, whereby the inlet valve is opened when the trolley leaves the line wire to cause the piston to pull down the trolley pole.

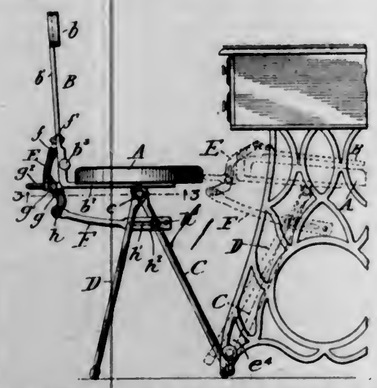
2. The combination, with a car body, and a trolley pole pivoted thereto and provided with means for moving it upwardly; of a cylinder for compressed air secured to the car body and provided with a piston and a piston-rod, a flexible connection between the piston-rod and the trolley pole, an inlet valve secured to the cylinder, an outlet valve for compressed air operated by hand and connected to the said cylinder, means for closing the air inlet valve by

hand, and a flexible connection operatively connecting the inlet valve with the trolley pole, whereby the inlet valve is



opened when the trolley leaves the line wire to cause the piston to pull down the trolley pole.

1,110,486. CHAIR FOR SEWING-MACHINES AND THE LIKE. FREDERICK HAYES HAGNER, Corpus Christi, Tex., assignor of one-half to Frederick W. Davis, Pine Plains, N. Y. Filed June 29, 1911. Serial No. 636,104. (Cl. 155—22.)



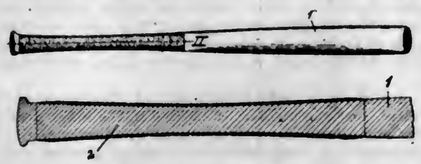
1. A folding chair for sewing machines and the like comprising a seat, a rear leg fixed to the same, a front leg pivoted to the seat, a hinged downwardly and forwardly folding backs associated with the seat, and connecting means between the back and said forward leg, which holds the back upright only when the chair legs are spread apart, said means comprising pivoted links one of which has a slotted connection with said forward leg to allow for an angular change between said forward leg and said seat when the chair is folded and the other of which has a loose connection with the rear of the seat, and is pivoted to the back.

2. The combination with a sewing machine or the like having seats in the standards thereof, of a horizontal connecting bar having offset end portions adapted to be freely set in and removed from said seats, and a chair comprising a seat, a front leg and rear legs associated therewith, said front leg adapted to be pivotally and removably connected to and seated upon the intermediate portion of said bar.

1,110,487. BAT. JOHN A. HILLERICH, Louisville, Ky., assignor to J. F. Hillerich & Son Company, Incorporated, Louisville, Ky. Filed Aug. 21, 1913. Serial No. 786,010. (Cl. 46—4.)

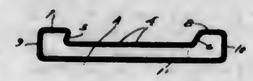
1. A bat having its handle covered with cork under tension and applied on the exterior of the full circumference of the handle, substantially as set forth.

2. A bat having applied to the exterior of the full circumference of the handle cork under tension, the end



edges of which are tapered to the surface of the handle, substantially as set forth.

1,110,488. MEMORANDUM OR PAD HOLDER. SIDNEY D. INSCHO, Shelby, Ohio. Filed Sept. 19, 1913. Serial No. 790,669. (Cl. 11—11.)



1. A device of the class described, comprising a back, a plate provided with an elongated bearing attached to said back along the upper edge thereof, a ball provided with an elongated journal located in said elongated bearing having upwardly and outwardly extending portions to engage the vertical ends of the pad and side portions bent at an angle to the outwardly extending portions; said ball having a part upon which the pad is mounted and which connects said side portions to engage the pad sides.

2. A device of the class described comprising a back, a plate provided with an elongated bearing attached to said back along the upper edge thereof, a ball made of wire formed to provide an elongated journal portion; thence bent from the journal portion, upwardly, outwardly and laterally and a part connecting the lateral portions to provide means for mounting the pad upon said ball.

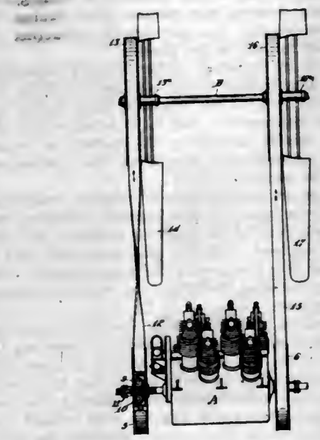
3. A device of the class described comprising a back, a plate provided with an elongated transverse bearing attached to said back, a ball made of wire comprising a journal portion and portions contiguous therewith bent upwardly; thence outwardly; thence at right angles with the journal, a part connecting the right angle bends arranged parallel with the journal; said right angles of said ball being disposed to provide for automatically locking the pad to the back and to release it therefrom by swinging the pad to or from said back.

4. A pad holder consisting of a base, and locking means thereon having a lower portion directly pivoted to the base and a second free portion which is movable toward and away from the base, and connecting means for said parts to engage the vertical end and the sides of the pad whereby when the locking means is engaged with the pad and moved to seat the latter on the base, the pad will be automatically locked to the base.

5. A pad holder consisting of a base, and locking means pivoted thereon and formed to engage the vertical end and the sides of the pad to prevent endwise and lateral movement respectively of the pad except when the pad is raised up from the base to move the locking means out of engagement with the pad end and sides.

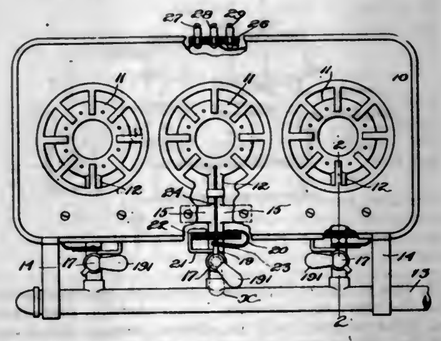
1,110,489. AERONAUTICAL POWER PLANT. HENRY W. JACOBS, Topeka, Kans. Filed Mar. 18, 1912. Serial No. 684,511. (Cl. 244—25.)

1. An aeronautical power plant, comprising a pair of propellers arranged one in advance of the other and to revolve about coincident axes, each propeller being provided with an enlarged pulley or wheel, the propellers being of equal size with the pitch of the rearward propeller greater than that of the forward propeller, power-producing means located beneath the axes of the propellers, means whereby said power producing means is operatively connected with the pulley or wheel of each propeller so that the latter may be independently and oppositely driven, and means intermediate of said power producing means and the second mentioned means whereby all the power generated may be imparted to either one of said propellers.



2. An aeronautical power plant, comprising a number of propellers arranged one in front of the other and revolving about the same axis with the pitch of one propeller greater than the pitch of the other propeller, a source of power consisting of a number of power units arranged beneath the axis, driving means intermediate of the source of power and each propeller whereby the propellers are driven independently, and means whereby the driving means connected with either propeller may be effected and the power generated by all the units imparted to a single propeller.

1,110,490. ELECTRIC-LIGHTING SYSTEM. LEROY R. JEWETT, Lynn, Mass. Filed July 5, 1913. Serial No. 777,388. (Cl. 175—116.)



1. An electric lighting system for gas comprising a burner; an electrical circuit to convey electricity in adjacency to said burner to light the gas; and a valve to control the flow of gas to said burner, which valve, when moved beyond the full open position for the flow of gas to said burner, makes said circuit.

2. An electric lighting system for gas comprising a burner; an electrical circuit including an induction coil for conveying electricity in adjacency to said burner to light the gas; and a valve to control the flow of gas to said burner, which valve, when moved beyond the full open position for the flow of gas to said burner, makes the circuit through the primary of said coil and also makes the circuit through the secondary of said coil.

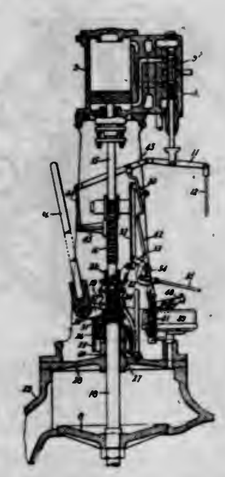
3. An electric lighting system for gas comprising a burner; an electrical circuit including an induction coil for conveying electricity in adjacency to said burner to light the gas; and a valve to control the flow of gas to said burner, which valve, when moved beyond the full open position for the flow of gas to said burner, makes the circuit through the primary of said coil and also makes the circuit through the secondary of said coil, one terminal acting as a stop to limit the movement of said valve in one direction.

4. An electric lighting system for gas comprising a burner; an electrical circuit to convey electricity in adjacency to said burner to light the gas; a valve to control the flow of gas to said burner, which valve, when moved beyond the full open position for the flow of gas to said burner, makes said circuit; and automatic means to return said valve to full open position.

5. An electric lighting system for gas comprising a burner; an electrical circuit to convey electricity in adjacency to said burner to light the gas; a valve to control the flow of gas to said burner, which valve, when moved beyond the full open position for the flow of gas to said burner, makes said circuit; and a spring to return said valve to full open position.

[Claims 6 to 11 not printed in the Gazette.]

1,110,491. GOVERNING MECHANISM FOR MIXED-PRESSURE TURBINES. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 5, 1912. Serial No. 718,673. (Cl. 121—118.)



1. In combination, a valve biased to closed position controlling a supply of motive fluid to a prime mover, a member for operating said valve, a governor for said member, a latching device connecting the member to the valve stem, said latching device moving with the member and stem in response to the governor, means adapted to be moved into engagement with and to operate upon said latching device to release the same in any position thereof, and an emergency governor for moving said means.

2. The combination with a valve controlling a supply of motive fluid to a prime mover, a motor for operating said valve and a governor controlling the motor, said motor and said valve being detachably connected and the valve tending to close when the connection is released, of a member parallel to the path of movement of said detachable connection, and an emergency governor for actuating said member to release the connection.

3. The combination of a valve controlling a supply of motive fluid to a prime mover, a motor for operating said valve having its piston rod in line with the valve stem, the

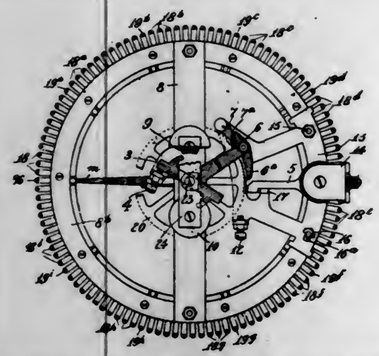
piston rod and the valve stem being detachably connected and the valve tending to close when the connection is released, a governor controlling said motor, means for releasing the detachable connection, and emergency governing means for actuating said means to cause said connection to be released.

4. In a mixed pressure turbine, the combination with a balanced low pressure valve, of an operating motor having a piston rod in line with the stem of said valve, a spring catch connecting said rod and stem, a bar parallel to the path of movement of said catch, an emergency governor for actuating said bar to detach said catch, and a dash-pot for checking the drop of the valve.

5. In a mixed pressure turbine, the combination with a balanced low-pressure valve, of an operating motor having a piston rod in line with the stem of said valve, a sleeve secured to said stem and provided with one or more lugs, a spring catch on the rod coöperating with said lugs, an emergency governor, a bar having a parallel-ruler motion connected to said governor and adapted to trip said catch, a bell-shaped portion on said sleeve, and a head on the valve casing coöperating therewith to form a dash-pot.

[Claims 6 to 11 not printed in the Gazette.]

1,110,492. SELECTOR-SWITCH FOR AUTOMATIC EXCHANGES. WILLIAM KAISLING, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Apr. 15, 1908. Serial No. 427,256. (Cl. 179—27.5.)



1. A selective switch comprising contacts arranged in groups, and an electromagnet and associated stop mechanism for producing long step travel of said switch to select a group and short step travel to select contacts of a group.

2. A selective switch including contacts arranged in groups, a driving pawl, and a magnet and associated stop mechanism for effecting long strokes of said pawl to cause said switch to select the group and short strokes of said pawl to select contacts of the group.

3. A selective switch including electromagnetic means for producing the travel thereof, an armature for said magnet having a definite actuating distance, and coöperating electromagnetic means for altering said distance of actuation.

4. In a selective switch, the combination with a switch-driving armature, of an electromagnetically adjustable stop adapted to alter the effective stroke of said armature.

5. A selective switch including contacts arranged in groups, movable contact-makers for engaging said contacts, a magnet for said switch, an armature for said magnet for producing long steps of said contact-makers to select a group, and an electrically adjustable stop for altering the operation of said armature, enabling it to effect short steps of said switch to select an individual contact of a group.

[Claims 6 to 41 not printed in the Gazette.]

1,110,493. PROCESS FOR TREATING ANODE RESIDUES. EDWARD KELLER, Perth Amboy, N. J. Filed Apr. 17, 1913. Serial No. 761,814. (Cl. 75—17.)

1. The process of treating anode residue containing copper and precious metals, which consists in adding concentrated sulfuric acid to the residue, then baking the same until substantially dry, and finally extracting the sulfate of copper formed in the process.

2. The process of treating anode residues containing copper and precious metals, which consists in adding concentrated sulfuric acid to the residues, then baking the same at a high temperature and in a substantially dry condition, and finally dissolving the sulfate of copper formed in the process and separating the undissolved residues from the solution.

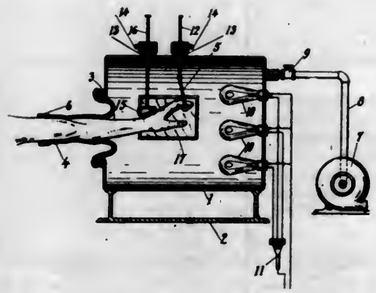
3. The process of treating anode residues containing copper and precious metals, which consists in adding concentrated sulfuric acid to the residues sufficient in quantity to dampen without rendering the same fluid, and in baking the same at a temperature of approximately 450° F., and finally separating therefrom the sulfate of copper formed in the process.

4. The process of treating anode residues containing copper and precious metals, which consists in removing the liquor content from the residues, adding concentrated sulfuric acid sufficient in quantity to convert the copper content into soluble sulfate without rendering the residues liquid in character, subjecting the acid treated residues to a relatively high temperature, whereby the sulfatizing process is completed and the residues left in a substantially dry condition, and finally agitating the residues with water in the presence of heat for the extraction of the soluble copper content.

5. The process of treating anode residues containing copper and precious metals, which consists in adding concentrated sulfuric acid in quantity insufficient to render the mass liquid, then baking the mass at a relatively high temperature, and simultaneously agitating the same, and finally separating the copper and precious metal contents.

[Claim 6 not printed in the Gazette.]

1,110,494. THERAPEUTIC APPARATUS. JOHN H. KELLOGG, Battle Creek, Mich. Filed July 13, 1912. Serial No. 709,122. (Cl. 174—177.)

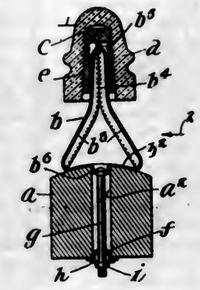


1. In a structure of the class described, the combination of a chamber; air exhausting means therefor, said chamber being provided with an opening through which the member treated may be inserted; a flexible sleeve for said opening; means for securing said sleeve to the member; and an adjustable swinging member support within said chamber.

2. In a structure of the class described, the combination of a chamber provided with an opening through which the member treated may be inserted; a flexible sleeve for said opening; air exhausting means for said chamber; a swinging support mounted for adjustment in said chamber; and a second support adjustably mounted at the rear of said swinging support to engage a member therein.

3. In a structure of the class described, the combination of a chamber provided with an opening through which the member treated may be inserted; a flexible sleeve for said opening; air exhausting means for said chamber; a support mounted for adjustment; and a second adjustable support mounted at the rear of the other support to engage a member therein.

1,110,495. INSULATOR-SUPPORT. FRANK P. KOBERT, New Haven, Conn., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn., a Corporation of Connecticut. Filed June 21, 1913. Serial No. 774,954. (Cl. 173—321.)



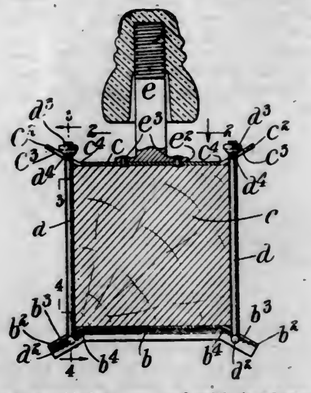
1. The herein described insulating bracket attachment for electric wires designed for use in connection with a cross arm having a large vertical bore, said attachment comprising a body portion having a base provided with a countersunk member adapted to fit in the top of said bore, a countersunk washer adapted to fit in the bottom of said bore, and a bolt passed through the top countersunk member in the base of the bracket attachment and through said bore and the bottom countersunk washer.

2. The combination with a cross arm having a vertical bore of an insulating bracket attachment for electric wires, said attachment comprising a triangular body portion composed of a base adapted to fit transversely on said arm, and converging side members brought together and projected to form a shank, the base being provided centrally with a countersunk member adapted to fit in the top of said bore, a countersunk washer placed on the bottom of said arm and filling in the bottom of said bore, and a bolt passed centrally through the countersunk member in the base of the bracket and through the bottom washer, and by which the attachment is secured to said arm.

1,110,496. INSULATOR-SUPPORT FOR ELECTRIC WIRES. FRANK P. KOBERT, New Haven, Conn., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 10, 1914. Serial No. 811,315. (Cl. 173—321.)

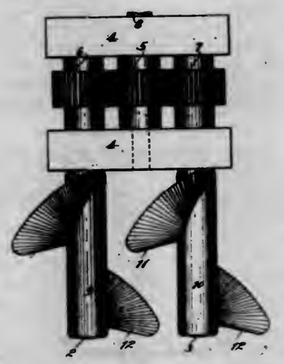
1. The herein described means for securing insulators to the arm of a telegraph pole or other support, comprising a frame consisting of a bottom member, a top member, and two side rods, said side rods being provided at one end with nuts, and being passed through the end portions of the top and bottom members, said end portions of said top and bottom members being also provided with means whereby the operation of tightening said nuts will tighten the top and bottom members on the top and bottom surfaces of said arm and also draw said rods in close contact with the sides of said arm.

2. The herein described means for securing insulators to the arm of a telegraph pole or other support comprising a frame consisting of a top member, a bottom member and side members, the bottom member extending transversely of the bottom of said arm and being longer than the transverse dimensions of said arm, and the end portions thereof being curved downwardly and provided with longitudinal slots, and the top member extending transversely across the top of said arm and being longer than the transverse dimensions thereof, and the end portions of said top member being curved upwardly and provided with central slots, and the side members consisting of rods passed through the slots in the end portions of said



members and provided at one end with heads and at the other end with nuts.

1,110,497. PROPELLER MECHANISM. JOSEPH KONITZKO, San Francisco, Cal. Filed July 15, 1913. Serial No. 779,110. (Cl. 115—37.)



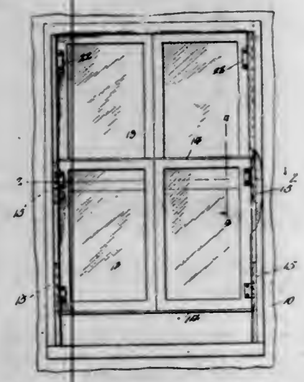
1. In a screw propeller mechanism, a pair of spaced propeller shafts, a pair of blades on each shaft, the blades of each shaft being axially spaced and located on diametrically opposite sides of the shaft, the blades being of such length that in rotation thereof same will have their outer ends pass in close proximity to the opposite shaft and means to rotate the shafts in unison and in the same direction so as to at all times cause two diagonally opposed blades to extend into the space between the shafts.

2. In a screw propeller mechanism, a pair of spaced propellers, and means for driving said propellers in unison and in the same direction, the blades of the propellers being of such length that the free ends thereof in their rotation pass the hubs of the opposing blades in close proximity thereto, the blades being arranged in approximate parallelism and completely overlapping in their rotation, whereby the swirl created by a blade revolving in one direction is destroyed by the opposing blade which sweeps entirely across and throughout the area of the swirl created by the first named blade.

1,110,498. WINDOW. CATHERINE D. KOONS, St. James, Mo. Filed June 3, 1912. Serial No. 701,295. (Cl. 20—48.)

1. In a window, a frame having vertical sash guide ways, a pair of sash frames each having its outer vertical rail engaging one of said guide ways, and the inner vertical rails meeting when the sash frames are in a closed

position, relatively thin metallic strips extending along the upper and lower rails of the sash frames and having terminal ends bent to engage the outer vertical rails of said sash frames and slide in said guide ways, said terminal ends extending along the vertical rails for a relatively limited distance upwardly and downwardly, respectively, and hinged devices for said sash frames for hinging the same to said terminal ends, substantially as described.



2. In a window, a window frame having vertical sash guide ways, a pair of sash frames slidable in said guide ways, and independent upper and lower members engaging the upper and lower rails on said sash frames and said guide ways and hingedly connected with the vertical rails on said sash frames, substantially as described.

1,110,499. FOOT-OPERATED ELEVATOR. RICHARD LABORDA, San Francisco, Cal., assignor of one-half to Peter Cuellas, San Francisco, Cal. Filed Feb. 9, 1914. Serial No. 819,111. (Cl. 187—1.)

1. A foot operated elevator comprising a tubular member; an open frame portion secured to the tubular member; a wheel rotatably mounted within the open frame portion; a suitable rope within the tubular member and arranged to engage the circumference of the wheel; means arranged to engage the wheel and rotate the same in a forward direction and to control the rotation of the said wheel in a reverse direction.

2. A foot operated elevator comprising a tubular member; an open frame portion of vertically disposed parallel members having suitable hubs therein and secured to the tubular members; a driving shaft rotatably mounted within the hubs; a wheel rotatably mounted upon the driving shaft; a suitable rope inserted through the tubular member and arranged to engage the circumference of the wheel; the said driving shaft being arranged to engage the wheel and rotate the same when rotated in a forward direction, and to release from connection with the said wheel and to frictionally engage the same when the said shaft is rotated in a reverse direction.

3. A foot operated elevator comprising a tubular member having one or more seats secured thereto; an open frame portion formed of vertically disposed members having recessed hubs integral therewith, one of the said hubs having a female thread therein; a driving shaft rotatably mounted within the recessed bearings and having an annular collar near one end and a threaded clutch member near the other end thereof, the said threads on the clutch member being arranged to engage the female threads of the hub and move the said driving shaft longitudinally; a wheel having a clutch sleeve rigidly secured within the hub thereof rotatably mounted upon the driving shaft between the collar and the clutch member thereon, the said clutch member on the driving shaft being arranged to engage the clutch member on the wheel and rotate the same when the said driving shaft is rotated in a forward direction and to release the said clutch and frictionally engage the said wheel against rotation when the driving shaft is rotated in a reverse direction; and a suitable rope inserted through the tubular member and arranged to engage the circumference of the wheel.

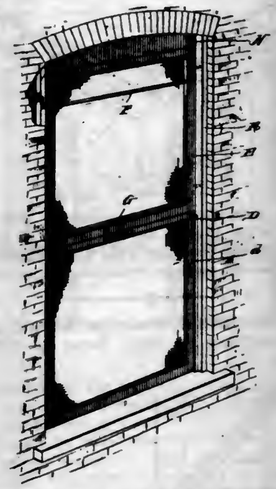
4. A foot operated elevator comprising a tubular member; one or more seats secured to the tubular member; an open frame portion formed of vertically disposed parallel members having recessed hubs integral therewith, one of the hubs having a quadruple female thread therein; a driving shaft rotatably mounted within the recessed hubs and having an annular collar near one end and a clutch member having quadruple male threads arranged to engage the female threads of the hub secured near the other end thereof; a wheel having ratchet teeth near the rim thereof and a clutch sleeve rigidly secured within the hub thereof, the said wheel being rotatably mounted between the annular collar and the clutch member on the driving shaft; a suitable rope inserted within the tubular member and arranged to engage the circumference of the wheel; a pawl pivotally secured to the frame portion and arranged to engage the teeth on the wheel and prevent the rotation thereof in a reverse direction; means for disengaging the pawl; the said driving shaft being arranged to cause the clutch thereon to engage the clutch on the wheel and to rotate the said wheel when the said driving shaft is rotated in a forward direction, and to disengage the clutch on the driving shaft from the clutch on the wheel and to frictionally engage the wheel between the annular collar on the driving shaft and one of the hubs of the frame portion for the purpose of controlling the rotation of the wheel when the driving shaft is rotated in the reverse direction.

1,110,500. WINDOW-SCREEN. HUGH F. LATIMER, Hyattsville, Md. Filed Mar. 31, 1910. Serial No. 552,598. (Cl. 156—14.)

1. The combination, with a window frame, a lower screen, and means for guiding the lower screen vertically in the window frame, of an upper screen arranged to lie normally in the same plane with the lower screen and means for hanging the upper screen to the frame in a manner to allow it to be displaced out of the path of the lower screen.

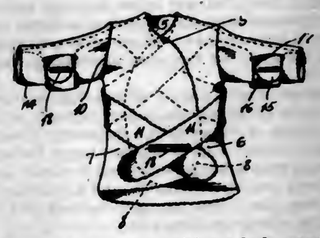
2. The combination, with a window frame, a lower screen, and means for guiding the lower screen vertically in the window frame, of an upper screen arranged to lie normally in the same plane with the lower screen and detachable means for hanging the upper screen to the frame in a manner to allow it to be displaced out of the path of the lower screen.

3. The combination, with a window frame, a lower screen, and means for guiding the lower screen vertically in the window frame, of an upper screen arranged to lie normally in the same plane with the lower screen, means for hanging the upper screen to the frame in a manner to allow it to be displaced out of the path of the lower screen, and means for locking the upper and lower screens together in their normal positions.



4. The combination, with a window frame, a lower screen, and means for guiding the lower screen vertically in the window frame, of an upper screen, arranged to lie normally in the same plane with the lower screen, journal bearing devices secured to the window frame, journal bearing devices secured to window screen, and hangers having their ends bent in opposite directions, one end of each hanger being inserted in a journal bearing device on the screen and the other end in a journal bearing device in the window frame.

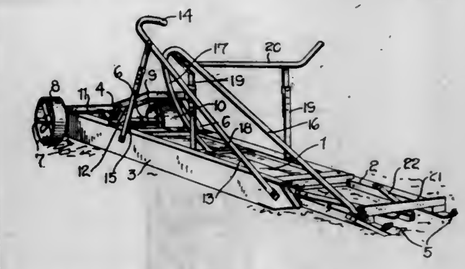
1,110,501. UNDERSHIRT. LULU SKINNER LEE, Los Angeles, Cal. Filed Sept. 30, 1912. Serial No. 723,066. (Cl. 2—41.)



1. An undergarment, comprising a body member formed of a single piece of material and adapted to overlap at the front thereof when worn, the upper portions of said body member terminating in extension straps adapted to cross each other at the back thereof and encircle the waist of said body member to secure the same together when worn, and shoulder extension flaps forming sleeves, said flaps being provided with tongues and each flap at one side thereof being provided with a slot, said tongues adapted to enter said slots for securing the extension flaps together to form tubular sleeves.

2. An undergarment comprising a body member formed of a single piece of material and adapted to overlap at the front thereof when worn, the upper portions of said body member terminating in extension straps adapted to cross each other at the back thereof and encircle the waist of said body member to secure same together when worn, shoulder extension flaps forming sleeves, and means on said extension flaps for securing the flaps together to form tubular sleeves.

1,110,502. CORN-CUTTER. CLYDE N. LIKES, Kendallville, Ind., assignor of one-half to Otto E. Likes, Kendallville, Ind. Filed Aug. 16, 1913. Serial No. 785,182. (Cl. 56—103.)

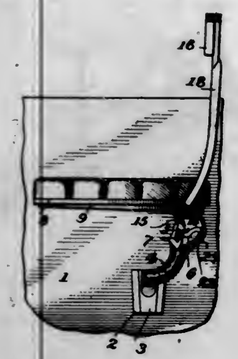


1. A device of the class described comprising a platform, a trio of runners mounted thereon, one of said runners being arranged angularly with respect to another of said runners to provide a throat portion on one side of the former, a cutter arranged across the rear end of said throat portion, a pair of upwardly inclined and rearwardly converging guide arms mounted on the runners forming said throat portion, the rear ends of said guide arms being bent inwardly to form a bending contrivance for the device and means for vertically adjusting said guide arms with respect to the platform.

2. A device of the class described comprising a platform, a trio of runners mounted thereon, a pair of said runners being arranged parallel and the other of said runners being disposed angularly with respect to one of the aforesaid runners to provide a throat portion on one side of the device, a cutter arranged across the rear end of said throat portion, an arm pivotally secured at its forward end to the outer side of the last mentioned runner, forming the portion of the throat, said arm being disposed rearwardly and upwardly and having its extreme rear end curved inwardly, an adjustable supporting arm engaged with the last mentioned runner and said arm, an additional arm pivotally secured to the other runner of the throat portion and inclined upwardly and rearwardly, the free end of said last mentioned arm being bent inwardly and downwardly and adjustably secured to the platform, a pair of vertically adjustable supporting arms secured on the upper faces of the aforesaid pair of parallel runners, one of said adjustable arms being connected to the last mentioned upwardly and rearwardly inclined arm, and a transverse bar connected to the upper portions of said adjustable arms.

3. A device of the class described comprising a platform, a trio of runners mounted thereon, a pair of said runners being arranged substantially parallel and the other of said runners being disposed angularly with respect to one of the aforesaid runners to form a throat portion on the device, an axle mounted on the rear end portion of the platform and projecting beyond the last mentioned runner, a pair of supporting wheels carried on said axle, one of said wheels being disposed beyond the last mentioned runner and the other of said wheels being disposed in a space between the first mentioned pair of runners, a strap formed of angle iron secured to the rear end of the last mentioned runner of the trio of runners, said strap being distorted angularly to project over the last mentioned supporting wheel and supporting the last mentioned end on the outer runner of the pair of runners, a fender for said last mentioned supporting wheel secured to said platform and to the strap forward of the wheel, an additional strap secured to the aforesaid strap intermediate of its ends and also secured to the last mentioned runner of the trio of runners intermediate of the latter, said strap being angular in cross section and extending diagonally across the rear end of the throat portion of the device, a knife blade secured to the last mentioned strap, and a pair of directing and bending arms secured to the runners forming the throat portion of the device.

1,110,503. FOLDING SEAT. ALLEN LOOMIS, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 15, 1909. Serial No. 478,033. (Cl. 155—22.)



1. The combination with a side wall of a vehicle body, and a support attached to and projecting from the inner face of said wall, said support forming with the wall a space adapted to receive a seat, of a seat having a single pivotal connection with said support and when in position for use extending over a portion of said space, the connection between the support and seat permitting the latter to be turned by a single movement into a substantially vertical position in said space.

2. In a device of the class described, the combination with the side wall of a vehicle, of a support adjacent thereto, a seat having on its underside a pivotal connection with said support diagonally arranged with reference to said seat when upright and when horizontal, said connection being beneath the seat when the latter is horizontal and on the opposite side of the seat from the adjacent side wall of the vehicle when the seat is in upright position.

3. The combination with a side wall of a vehicle body, and a support attached to and projecting from the inner face of said wall, of a cushioned seat pivotally connected with said support and adapted by a movement about the axis of the pivotal connection with said support to be turned from operative position to substantially vertical position with its cushioned face adjacent the side wall of the vehicle body, and a back hinged to the seat and extending above the same when the parts are in folded position.

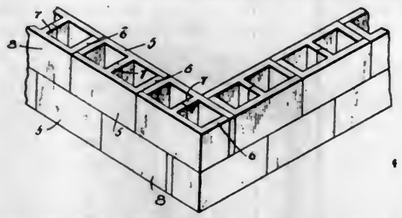
4. In a device of the class described, the combination with a wall, of a supporting arm secured thereto extending upwardly and outwardly therefrom, a diagonally arranged pivot bearing on the end of said arm, a seat, a diagonally arranged pivot bearing on said seat engaging and coöperating with the bearing on said arm, and coöperating stops on said bearings to support the seat in horizontal position.

5. In a device of the class described, the combination with a wall, of a supporting arm secured thereto extending upwardly and outwardly therefrom, a diagonally arranged pivot bearing on the end of said arm, a seat, a diagonally arranged pivot bearing on said seat engaging and coöperating with the bearing on said arm, coöperating stops on said bearings to support the seat in horizontal position, and a folding back for said seat having extensions engaging stops to support the back in vertical position when the seat is horizontal.

[Claims 6 to 16 not printed in the Gazette.]

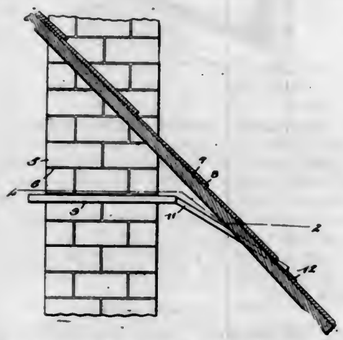
1,110,504. F-SHAPED BUILDING-BLOCK. MATHIAS LUTGEN, Dubuque, Iowa. Filed Apr. 24, 1913. Serial No. 763,391. (Cl. 72—39.)

A building section consisting of two F-shaped blocks and two L-shaped blocks, said F-shaped blocks being oppositely disposed and having their respective end extensions in contact with the middle extensions of each other, so as to form a rectangular body having oppositely extending



projections, said L-shaped blocks being each fitted with one of its wings against an end of one of the F-shaped blocks and having its other wing fitted against the inner surface of the end portion of the other said block.

1,110,505. CHIMNEY. JAMES H. MCKAY, Forest City, Iowa. Filed May 24, 1913. Serial No. 769,656. (Cl 108—26.)



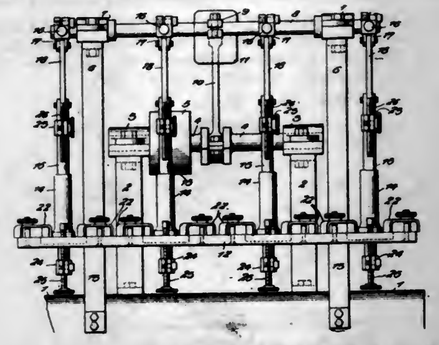
1. A brick chimney, a roof through which the chimney extends, a substantially horizontal trough surrounding the chimney a short distance below the roof, said trough having a circumferential lip extending inwardly between two courses of brick, and an inclined spout extending from the trough through the roof and discharging exteriorly on the latter.

2. A chimney constructed of brick set in courses with intermediate layers of mortar, a roof through which the chimney extends, a substantially horizontal trough surrounding the chimney a short distance below the roof and having a circumferential lip extending inwardly into the mortar between two layers of brick, and a discharge spout extending from the trough through the roof and having a terminal lip connected therewith.

1,110,506. TRIPLE-VALVE-GRINDING MACHINE. PETER E. MCSWEENEY, Springfield, Mo. Filed May 7, 1914. Serial No. 836,994. (Cl. 51—4.)

1. In a machine of the character described, a stationary support having a series of openings arranged therein at predetermined intervals, a shaft mounted for oscillation above said support and in longitudinal relation thereto, means to oscillate said shaft, arms projecting from the latter, rods guided through the openings in said table and having a link connection with said arms, supplemental arms disposed in spaced relationship upon said rods above and below said table, and means on said supplemental rods for the connection of additional members thereto.

2. In a machine of the class described, a table having openings arranged therein at predetermined points, a shaft mounted for oscillation thereabove, means for oscillating said shaft, a plurality of arms projecting forwardly therefrom and adjustably connected thereto, rods guided through the openings in said table and having connection with the outer ends of said arms to reciprocate with respect to the table upon the oscillation of said shaft, additional arms carried on said rod above and below said table and means on said additional rods for the connection of additional members thereto.



3. In a machine of the class described, a stationary table having a plurality of openings arranged at predetermined intervals therein, a shaft mounted for oscillation thereabove, means for oscillating said shaft, a plurality of arms adjustably connected with said shaft and projecting forwardly therefrom, a plurality of rods guided through the openings in said table, guide sleeves mounted on said table around the openings therein and receiving said rods therethrough, linking members suitably connecting the upper ends of said rods with the outer ends of said arms on the oscillating shaft, whereby to reciprocate said rods as the shaft oscillates, and means mounted on said rods for the connection of additional members thereto to reciprocate with the same.

4. In a machine of the class described, a table having a plurality of openings arranged at predetermined intervals therein, a shaft mounted for oscillation thereabove, means for oscillating said shaft, arms adjustably connected with said shaft and projecting forwardly therefrom, a plurality of rods loosely disposed through the openings in said table and adjustably connected to the outer ends of said arms, an additional arm carried on each of said rods above and below said table, and adjustable means carried on the ends of said additional arms for the support of an additional member therebetween for reciprocation with said rods.

5. In a machine of the class described, a stationary table having a plurality of openings arranged at predetermined intervals therein, a guide sleeve vertically disposed above each of said openings, a shaft mounted for oscillation thereabove, means for oscillating said shaft, a plurality of arms adjustably connected to said shaft and projecting forwardly therefrom, rods movable vertically through said sleeves and the openings in said table, means for pivotally and adjustably connecting the upper ends of said rods to the outer ends of said arms, a pair of additional arms connected to each of said rods, one being disposed above and the other below said table, and adjusting means connected to the outer end of each of said additional arms whereby to secure an additional member between each pair thereof for reciprocation with the rod carrying the same.

[Claims 6 to 8 not printed in the Gazette.]

1,110,507. SURF-ANCHOR. LORING W. MYERS, Lubec, Me. Filed May 21, 1914. Serial No. 840,090. (Cl. 102—34.)

1. An anchor embodying a hollow shank having one end open and longitudinal channels at said end, a plug engaged in said end of the shank, flukes having angular portions at their butt ends and fitting within the said channels, and a binder embracing the said angular portions.

2. An anchor comprising a shank, a runner including a pair of sections surrounding the shank and having coöperating angular terminal portions, and a bail having eyes engaged over the respective coöperating terminal portions.

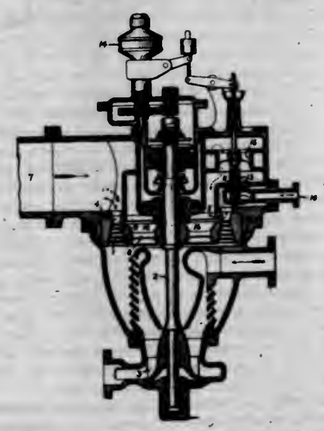
3. An anchor including a shank, a runner slidable thereon and comprising a pair of arcuate sections having coöperating angular terminal portions, a line attaching bail having eyes engaging the respective coöperating terminal portions, and retaining elements engaged from the free ends of the respective angular terminal portions to hold the sections of the runner together and to hold the eyes of the bail in place.

4. An anchor having a hollow shank having flukes at one end, and having an oil outlet at the fluke end.

5. An anchor comprising a hollow shank having flukes at one end, the fluke end of the shank being open, and a removable closure attached to the fluke end of the shank and having a restricted oil outlet.

[Claims 6 to 8 not printed in the Gazette.]

1,110,508. ELASTIC-FLUID TURBINE. CHARLES HENRY NAYLOR, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed June 26, 1913. Serial No. 775,856. (Cl. 121—118.)



1. In a turbine, the combination of a casing, a supply conduit, a bladed rotor in the casing having a fluid conveying passage that is independent of and shunts the blades, devices for discharging fluid against the blades, and a valve controlled conduit for shunting the motive fluid around said blades and devices and into the passage in the rotor.

2. In a turbine, the combination of a casing, inlet and discharge conduits therefor, a bladed rotor in the casing

having a fluid conveying passage located between its shaft and blades, devices for discharging low pressure motive fluid against the blades, a valve controlled conduit for shunting motive fluid around said blades and devices and into the passage of the rotor, and means for admitting motive fluid to the rotor from a separate source when the first named supply is deficient.

3. The combination with a high pressure engine and a casing containing a rotary condenser therefor, of a bladed rotor therein to which the low pressure steam is freely admitted on its way to the condenser, a by-pass in the casing around the rotor for permitting low pressure steam to pass directly to the condenser without acting on the rotor, valve means controlling it, an inlet for supplying high pressure steam to the turbine rotor, controlling valve means therefor, and a governor controlling both the valve means aforesaid so that when the supply of low pressure steam becomes excessive it is by-passed to the condenser and so that when said supply is insufficient high pressure steam is admitted.

4. The combination with a high pressure engine and a casing containing a rotary condenser therefor, of a turbine rotor mounted in the casing for driving the condenser, means for directing the exhaust from the engine to the rotor, a by-pass which shunts the directing means, a valve controlling said by-pass, and means for opening said valve to shunt any excess of exhaust steam above that required to drive the turbine rotor, directly to the condenser.

1,110,509. MARKING-TAG. FREDERICK C. NOYES, Alexis, Ill. Filed Nov. 10, 1913. Serial No. 800,202. (Cl. 40—25.)

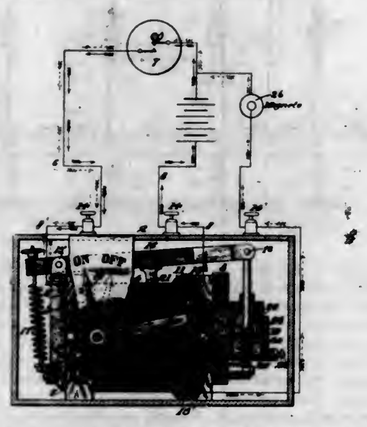
1. A marking tag of the class described comprising a strip doubled upon itself and having the sections thereof secured together to form a body, a stiffening member secured between the sections of the body at one end of the same, and prongs projecting from the other end of said body adapted to be received in said stiffening member upon the doubling of the body upon itself.

2. A marking tag of the class described comprising a strip doubled upon itself and having the sections thereof secured together to form a body, a block of flexible material secured between the sections of the body at one end of the same to form a stiffening member therein, and a U-shaped wire member also secured between the sections of said body and having the arms thereof projected slightly from the end thereof opposite that at which the stiffening member is disposed, said last mentioned projecting portions being designed to form laterally extending prongs.

3. A marking tag of the class described comprising a strip doubled upon itself and having the sections thereof secured together to form a body member, a flexible block secured between the sections of said body member at the free ends thereof, one face of said block being provided with a U-shaped groove, and a U-shaped wire member secured between the sections of said body, the base portion of said wire member being received in the groove of said block and the outer ends of the arms thereof being projected slightly beyond the opposite end of the body and designed to form laterally extending prongs.

4. A marking tag of the class described comprising a strip doubled upon itself and having the sections thereof secured together to form a body, a block of flexible material secured between the sections of the body at one end thereof to form a stiffening member therein, said stiffening member being disposed at the end of the body formed by the free end portions of the sections of the strip, whereby to space one end of said block from the looped portion of said strip, and a U-shaped wire member secured between one face of said block and one section of the doubled strip having the arms thereof projected through the loop in the doubled strip, the free ends of said arms being bent laterally to form prongs and one section of the doubled strip and the adjacent face of the block being scored to receive the prongs therein when the strip forming the body is bent upon itself.

1,110,510. TIME-CONTROLLED CIRCUIT-BREAKER. LOUIS S. PETERS, Alameda, Cal., assignor of one-third to Frederick E. Collins, Oakland, Cal. Filed Nov. 27, 1912. Serial No. 733,836. (Cl. 161—25.)



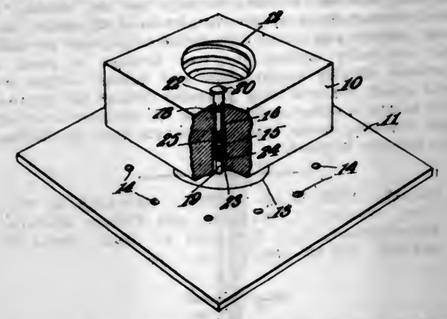
1. A time controlled circuit breaker including a magnet in series with a circuit to be broken, a stationary vertical plate at one side of the magnet, a switch arm having a T-shaped head pivoted at one end to said plate so as to oscillate vertically, contacts on the plate to engage the respective free ends of said T-shaped head, spring means which engage the top and bottom faces of said arm to hold the latter out of engagement with the contacts, an armature pivoted between its ends to the upper end of one of the magnet poles, a coil spring connected to the rear end of said armature and to the lower end of said pole piece, a member projecting downwardly from said armature and adapted to have its free end engage said arm at a point between its ends, and cushioning means between the front end of said armature and the opposite magnet pole and connected to the latter.

2. A time controlled circuit breaker including a magnet in series with a circuit to be broken, a pivoted switch arm arranged at one side of the magnet, a contact at one side of the magnet to engage said arm, an armature pivoted between its ends to one of the magnet poles, a spring connected to the rear end of the armature and to said magnet pole, a member projecting downwardly from said armature and being for engagement with said arm at a point between the ends of the arm, and retarding means supported by the opposite magnet pole and connected to the front end of the armature.

3. A time controlled circuit breaker including a magnet in series with a circuit to be broken, a pivoted switch arm, a pair of spaced independent contacts between which the free end of the arm oscillates, an armature pivotally mounted above said arm in spaced relation thereto, a member projecting downwardly from said armature and adapted to engage said arm adjacent its free end, and retarding means connected to the free end of the armature.

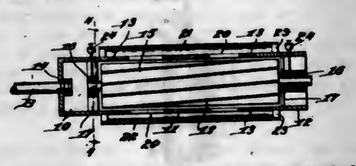
1,110,511. NUT-LOCK. ALVA A. RATCLIFF, Versailles, Mo., assignor of one-half to Thomas P. Bond, Versailles, Mo. Filed Dec. 8, 1910. Serial No. 596,282. (Cl. 151—40.)

The combination with an apertured base washer, of a nut having a bore extending therethrough at a point removed from the bolt receiving opening in the nut, the outer end portion of the bore being provided with opposed longitudinal grooves, a spring controlled locking pin insertible into the bore and having a head at its outer end and a flattened portion adjacent the head, providing diametrically opposed longitudinal ribs extending up to the head, said ribs being adapted to be seated in the grooves



to hold the pin against rotation, that portion of the pin between its inner end and the ribs being of uniform diameter to permit its insertion through the bore in the nut, the head on the pin being adapted to rest upon the nut and to close the spaces at the sides of the flattened portion of the pin when the pin is seated in the bore.

1,110,512. MUFFLER. ERNEST C. RODWICK, Ukiah, Cal. Filed Mar. 23, 1912. Serial No. 685,663. (Cl. 123—194.)

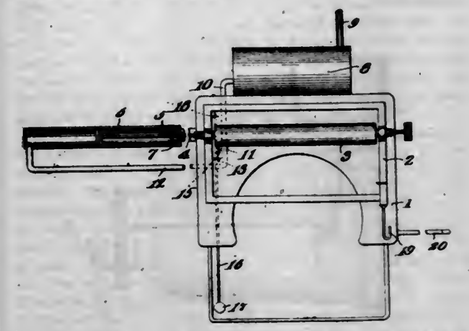


1. A silencer for the exhaust of an engine including an inner perforate sectional casing, an outer concentric casing disposed in spaced relation thereto, a rotatable member disposed within said inner casing, said member having a plurality of spirally arranged parallel uniformly spaced apart blades arranged thereupon, and a bearing arranged upon the interior of each end section of the inner casing, said bearing providing a journal for said rotatable member, as and for the purpose set forth.

2. In a device of the character described, the combination of a pair of concentric casings held in spaced relation, the inner casing thereof being perforate and composed of a plurality of independent casing sections, a rotary member journaled within said inner casing, the said rotary member having a plurality of spirally arranged uniformly spaced apart blades extending from the periphery thereof, and a bearing arranged within each end section of said inner casing for said rotary member, as and for the purpose set forth.

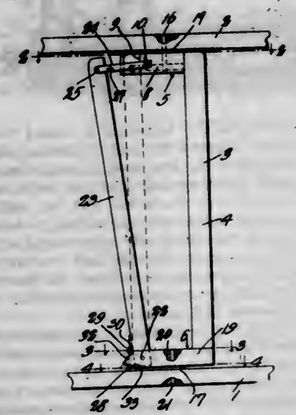
3. In a device of the character described, the combination of a pair of concentric casings held in spaced relation, the inner casing comprising a plurality of independent and detachably connected casing sections, a rotary member journaled within said inner casing, said inner casing being perforated to communicate with said outer casing, the said rotary member having a plurality of spirally arranged uniformly spaced apart blades extending therefrom, bearings arranged, one within each end section of said inner casing, said bearings providing a journal for said rotary member, an exhaust pipe connected at one end to said inner casing whereby the force of the exhaust gases will impart rotary movement to said rotary member, an outlet pipe connected to said inner casing at the opposite end thereof, said exhaust gases being discharged through both the said perforations and said outlet pipe, as and for the purpose set forth.

1,110,513. TYPE-WRITER. JABEZ M. SMITH, Malvern, Ark. Filed May 6, 1914. Serial No. 836,742. (Cl. 197—67.)



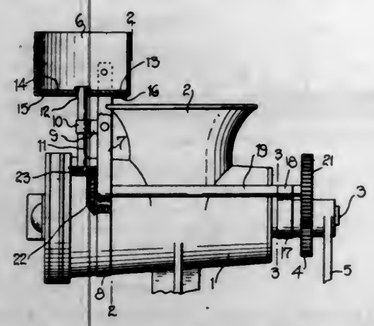
In a typewriting machine, the combination of a frame, a carriage mounted thereon for transverse reciprocation, a platen mounted in the carriage for rotation, said platen being provided with a shaft extension upon one end thereof, said shaft extension constituting a piston rod, a piston connected to the free end of said rod, a pneumatic cylinder surrounding the piston and disposed co-axially with the platen, a bracket connected to the free end of the cylinder and to the frame for supporting the cylinder, said cylinder being provided with an intake port through its lower end and with an air relief port at its opposite end, an air supplying pipe connected to the air supplying port, an air reservoir connected to said pipe, a spring closed valve connected in said pipe, and a key actuated lever operable from the key board of the typewriter and connected to the valve for operating the same in opposition to the spring.

1,110,514. STANCHION. LOREN B. SPAULDING, Perkinsville, Vt. Filed Apr. 7, 1913. Serial No. 759,503. (Cl. 119—150.)



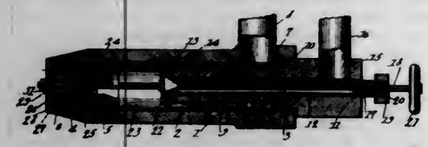
In a stanchion, a pivotally mounted frame including spaced members; a fetter pivoted between the spaced members for movement into open and closed positions with respect to the frame; a tongue applied to the fetter; a securing element connecting the tongue with the fetter; a support and fixed projections on the support with which projections the tongue engages when the fetter is in an open position, the tongue retiring between the spaced members when the fetter is in an open position, whereby the spaced members will act as lateral braces for the tongue and prevent a movement of the tongue on the securing element.

1,110,515. SEASONING ATTACHMENT FOR MEAT-CHOPPING MACHINES. ALBERT STURGIS, Griffin, Ind. Filed Apr. 13, 1914. Serial No. 831,555. (Cl. 17—20.)



In combination with a meat chopper a seasoning attachment comprising a rotatable shaft, a bracket detachably connected to one end of the machine for supporting one end of said shaft, a second bracket detachably connected to the other end of the machine for supporting the opposite end of said shaft, standards connected to said second bracket, a dropping device for seasoning supported upon said standards, means for operatively connecting the first mentioned end of said shaft with the operating shaft of the machine, and means for operatively connecting the second mentioned end of the shaft with the dropping device, whereby upon rotation of the operating shaft of the machine, the dropping device is actuated.

1,110,516. OIL-BURNER. RICHARD A. TERRY, Roanoke, Va. Filed June 23, 1914. Serial No. 846,847. (Cl. 158—77.)



1. A hydrocarbon burner including a casing having a pressure fluid inlet adjacent one end, a contracted outlet opening adjacent its other end and a socket next outside the contracted outlet opening, a nozzle projecting into the casing into the first mentioned end, an adjustable stem passing through the nozzle and casing, a valve and spreader carried by the stem and coöperating with the discharge end of the nozzle, the stem and contracted outlet opening having interengaging portions for guiding the stem for longitudinal movement, and a spreader carried by the stem within the said socket.

2. A hydrocarbon burner including a casing having a pressure fluid inlet adjacent one end, a contracted outlet opening adjacent its other end and a socket next outside the contracted outlet opening, a nozzle projecting into the casing from the first mentioned end, an adjustable stem passing through the nozzle and casing, a valve and spreader carried by the stem and coöperating with the discharge end of the nozzle, a collar mounted on the stem within the contracted outlet opening, pins engaging through the collar and stem, and engaging the walls of the said contracted outlet opening to guide the stem for longitudinal movement, a spreader engageable upon the stem and seatable against the said collar within the said socket, and retaining means engageable with the stem for holding the last mentioned spreader seated against the collar.

3. In a burner, a casing having an outlet opening adjacent one end and socket next outside the said opening, a stem extending through the said opening, a seat element disposed within one portion of the said socket and closing the same, and a spreader mounted upon the stem and fitting slidably against the said seat element.

4. A burner including a casing having an outlet opening adjacent one end and a socket next outside the said opening, a stem extending through the said opening, a seat element fitting within one portion of the socket, the seat element and casing having interengageable portions for removably holding the seat element in place, a spreader slidably engaging the seat element within the said socket, the stem being journaled through the spreader and having a collar against which the spreader is seated, and retaining means engaged upon the stem for holding the spreader in place.

1,110,517. POST-HOLE AUGER. BENJAMIN G. WATKINS, WALTER P. WATKINS, and TAYLOR WATKINS, Elizabethtown, Ky. Filed May 17, 1912. Serial No. 698,020. (Cl. 255—66.)

1. An earth auger including in combination, a semi-cylindrical member of a circumference approximately 216 degrees having an extending dished sector-shaped cutter blade continued from one longitudinal edge of said member and ending at a point marking the center of said cylindrical member, an obliquely extending flange of gradually decreasing width starting from the other longitudinal edges of said member, an access opening being formed between said flange and blade and said longitudinal edge bulging outwardly at its union with said blade, and a spanner having a handle socket secured to said cylindrical member at the end opposite of said flange and blade.

2. An earth auger including in combination, a semi-cylindrical member from one edge of which extends a dished secton shaped cutting blade with an adjacent obliquely extending flange of gradually decreasing width extending from the opposite edge, an access opening being formed between said flange and blade, and a handle secured to said cylindrical member.

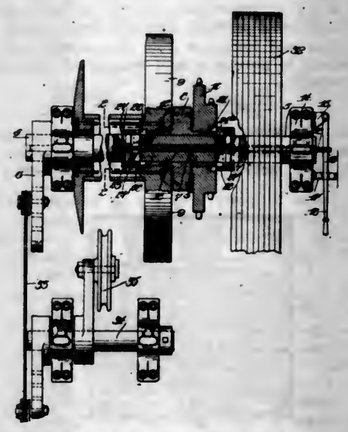
1,110,518. PENCIL-HOLDER. OSCAR WERNER, Los Angeles, Cal. Filed Oct. 20, 1913. Serial No. 796,209. (Cl. 24—11.)

1. A pencil holder, comprising a substantially tubular member open at both ends and having a pocket flap engaging means, and a positive locking means formed thereon adapted to be operated by the insertion of a pencil in said holder, whereby the pencil after insertion in the holder will maintain the holder in a locked relation to the pocket flap and the pencil in a frictional engagement with the holder.

2. A pencil holder, comprising a substantially tubular body member provided at the top thereof with a garment engaging hook, a spring finger formed on the body member adjacent the top thereof, said finger being bent inwardly and lying within said body member, the end of said finger projecting outwardly from said body member and toward the inner surface of the garment hook, whereby when the holder hook is in place on a garment pocket and a pencil is inserted in the holder the end of the finger will be forced into the fabric of the garment pocket so as to maintain the holder in a locked relation to the garment.

3. A pencil holder, comprising a substantially tubular body member open at both ends, said member being provided near the lower end thereof with an indentation adapted to act as a pencil stop, said member also being provided near the top thereof with a garment engaging hook, a spring finger formed on the body member adjacent the top thereof, said finger being bent inwardly and lying within said body member, the end of said finger projecting outwardly from said body member and toward the inner surface of the garment hook, whereby when the holder hook is in place on a garment pocket and a pencil is inserted in the holder the end of the finger will be forced into the fabric of the garment pocket so as to maintain the holder in a locked relation to the garment.

1,110,519. CLUTCH. WILSON B. WIGLE, Los Angeles, Cal., assignor of one-third to William F. Scott, Taft, Cal., and one-third to John H. McBride, Los Angeles, Cal. Filed Sept. 2, 1913. Serial No. 787,683. (Cl. 192—9.)

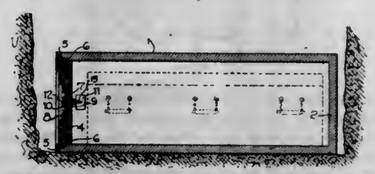


1. A clutch mechanism for drilling rigs, comprising a shaft and bearings therefor, an intermediate bearing for said shaft having concentric sleeves formed thereon, means to support a bull wheel and sand reel pinion upon said sleeves independent of said shaft, clutch members carried on said shaft adapted to engage said bull wheel or sand reel pinion, and means operable through a bore in said shaft to operate said clutch members.

2. A clutch mechanism, comprising a slotted shaft having a central bore communicating with said slots and extending therethrough, a plurality of toothed sleeves mounted adjacent said slots, members mounted adjacent said shaft and adapted to be engaged by said teeth on said sleeves, connecting means between the walls of said toothed sleeves mounted in said slot, a rod connecting said connecting means mounted in and extending beyond the end of said central bore, in said shaft and means to move said rod to move said toothed sleeves.

3. A clutch mechanism for bull wheel shafts, comprising a shaft having a plurality of slots transversely formed therein, and a bore extending from said slots concentrically within said shaft to one end thereof, sleeved bearings adapted to support said shaft, a bull wheel adapted to be supported on a pair of said sleeves on said bearings, a sand reel connection mounted on another of said sleeves of said bearing, each of said wheels being provided with notches adapted to engage clutch members, sleeved clutch members mounted adjacent said slots on said shaft, means to connect said pairs of clutch members, a rod adapted to connect said clutch member connections, and means to positively reciprocate said rod to operate said clutch members to alternately engage or disengage said bull wheel and sand reel pinion from said shaft.

1,110,520. BURIAL-VAULT. IRA E. WOODARD, Dunkirk, Ind. Filed Apr. 5, 1913. Serial No. 759,238. (Cl. 72—7.)



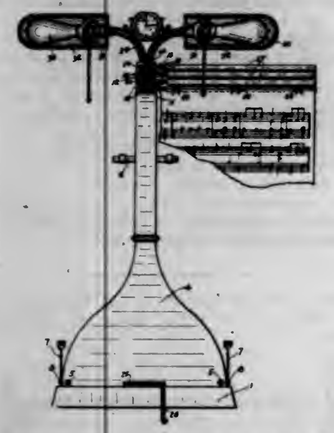
A burial vault, comprising a housing provided with a closure sealed in position thereon, said closure being provided with a valve seat therein, a valve mounted in connection with the seat in said closure, a stem for said valve loosely disposed through said closure and having longitudinal grooves therein, and a head on the inner end of said stem having recesses therein to which the grooves in said stem lead, said valve being sealed in its seat after the air has been extracted from the housing.

1,110,521. MUSIC-LEAF TURNER. FREDERICK ACKERMAN and JAMES H. SULLIVAN, Vancouver, British Columbia, Canada. Filed Mar. 6, 1914. Serial No. 822,876. (Cl. 84—17.)

1. A music leaf turner comprising a base, a plurality of tubular members vertically supported on said base and rotatable thereon, the said tubular members being rotatably disposed within each other, independent toothed members carried on the lower ends of the said tubular members, a stop member carried by each said toothed member, independent spring socket members adapted to be detachably secured to the upper ends of the said tubular members, leaf engaging arms adapted to engage the said spring sockets, a revoluble toothed cylinder means for rotating the cylinder whereby said cylinder is adapted to be carried into mesh with the said toothed members of the tubular members whereby the said tubular members are rotated successively one after the other, and against the periphery of said cylinder the stop members bear both in their normal and final position and means for actuating the said toothed cylinder, as and for the purpose specified.

2. A music leaf turner comprising a plurality of vertically disposed tubular members each of which is rotatable within the other, a support for the lower end of the innermost tubular member, independent toothed members carried on the lower ends of the said tubular members, a stop carried by each said toothed member, independent spring socket members adapted to be detachably secured

to the upper ends of the tubular members, leaf engaging arms adapted to engage the said spring socket members, a revoluble toothed cylinder means for rotating the cylinder whereby said cylinder is adapted to be carried into mesh with the said toothed members of the tubular members whereby the said tubular members are rotated successively one after the other, and against the periphery of said cylinder the stop members bear both in their normal and final position, a pinion carried by the said toothed cylinder, a gear engaging said pinion, and a lever for actuating the said gear, as and for the purpose specified.

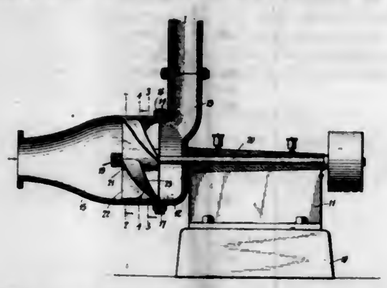


3. In a music leaf turner, the combination with a suitable base and a plurality of tubular members vertically supported on said base and rotatable thereon, the said tubular members being rotatably disposed within each other, of a plurality of leaf engaging arms each of which is adapted to be detachably secured to a corresponding tubular member, independent toothed members carried on the lower ends of the said tubular members, stops carried by the said toothed members, a revoluble toothed cylinder means for rotating the cylinder whereby said cylinder is adapted to successively rotate the said toothed members, and against the periphery of said cylinder the stop members bear both in their normal and final position, a pinion carried by the said toothed cylinder, a gear engaging said pinion, and a lever for actuating the said gear, as and for the purpose specified.

4. A music leaf turner comprising, in combination, a base, a plurality of post members secured to said base and extending upwardly therefrom, a plate carried on the upper ends of said posts and secured thereto, said plate being provided with a central circular opening, a plurality of vertical tubular members extending through the said circular opening and rotatably supported on said base, an independent toothed member carried by each tubular member on the lower end thereof, a stop carried by said toothed member, an independent spring socket member carried by each tubular member and adapted to be detachably secured toward the upper ends thereof, a leaf engaging arm for each spring socket, said arms being adapted for attachment to a sheet of music, a toothed cylinder adapted to be revoluble between the aforesaid plate and the base, and means for rotating the cylinder and to successively engage and rotate the said toothed members, a pinion carried by the said toothed cylinder, a gear engaging said pinion, a lever for actuating said gear, and means for guiding the said tubular members centrally, as and for the purpose specified.

5. In a music leaf turner, a plurality of turnable members, music leaf supporting arms and a segmental gear portion carried by each member, actuating segmental gear portions designed to be carried into mesh with the segmental gear portions of the turnable members, actuating means carrying the said actuating segmental gear portions successively into mesh with the gear portions of the turnable members so that one portion engages with each gear, a stop portion extending radially from each actuating gear portion and a co-acting portion with which the radial stops engage to limit the movement of the turnable members, as and for the purpose specified.

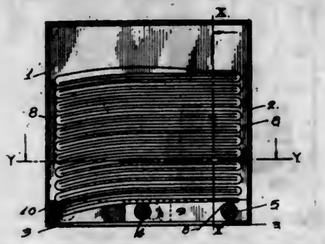
1,110,522. PUMP. RALPH B. ACKERMAN, El Moro, Colo. Filed Aug. 30, 1910. Serial No. 570,700. (Cl. 103—43.)



1. The combination with a cylinder, having a tapered end, flanges formed upon the opposite end of said cylinder, a bar extending transversely of the cylinder adjacent the major end thereof, a cap, a flange formed upon said cap, said flange being secured to the flange formed upon the major end of said cylinder, a plate closing one end of said cap, a sleeve extending radially from said cap in spaced relation from the open end thereof, a sleeve extending axially from said cap, said sleeve being provided with a bore having contracted ends producing an interior passage, a shaft journaled in said sleeve and engaging the contracted ends of the bore thereof and extending in spaced relation to the walls of said passage, means for rotating said shaft, and a rotor keyed to said shaft within the cylinder, said rotor consisting of a hub, a series of helical blades carried by said hub and each provided with a terminal flange tapering in height and thickness from the entrant edge rearward whereby to provide a fluid channel of gradually increasing capacity, said shaft engaging the transverse bar located within the cylinder substantially as and for the purposes set forth.

2. An impeller for pumps consisting of a rotor having a hub, a series of helical blades carried by said hub, each of said blades being provided with a terminal flange tapering in height and thickness from the entrant edge rearward whereby to provide a fluid channel of gradually increasing capacity.

1,110,523. PAPER-TOWEL CONTAINER. GUSTAV A. AICHER and SOLOMON LAZAR, San Francisco, Cal. Filed Apr. 2, 1914. Serial No. 830,318. (Cl. 211—29.)



1. A paper towel container comprising a rectangular box having bottom strips and a space between the said strips; a reciprocating frame slidably mounted within the container; and rollers rotatably secured to the said frame and adapted to support paper towels within the container and to move with the towel being withdrawn from the said container.

2. A paper towel container comprising a rectangular box having longitudinal bottom strips and a space between the said strips and transverse grooves within each end of the container; a reciprocating frame slidably mounted within the grooves; and rollers rotatably secured to the reciprocating frame and adapted to support paper towels within the container and to move with the towel being withdrawn from the said container.

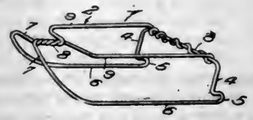
3. A paper towel container comprising a rectangular box having bottom strips and a space between the said strips and transverse grooves within each end of the container and near the bottom thereof; a reciprocating frame slidably mounted within the grooves and transversely to the bottom strips; and parallel rollers rotatably secured to the reciprocating frame and parallel with the bottom strips and adapted to support paper towels within the container and to move with the towel being withdrawn from the said container.

1,110,524. NON-SKID LINK. MIHAEL ALAKSIN, Beaver Falls, Pa. Filed May 4, 1914. Serial No. 836,174. (Cl. 152—14.)

1. A non-skid link comprising a substantially arch-shaped resilient single piece strip having integral oppositely diverging tread strips connected with each other intermediate the ends of said strip, outwardly-projecting sharpened calks upon said tread strips, and said strip provided with bolt-receiving perforations adjacent its opposite free ends.

2. A non-skid link substantially arch-shaped in cross-section and comprising end strip members, diverging tread strips integrally secured to said strip members and adapted for engaging the tread portion of a tire, and locking means engaging said strip members.

1,110,525. SLED. FRANK ANDRUSZKIEWICZ, Easthampton, Mass. Filed Mar. 30, 1914. Serial No. 828,292. (Cl. 21—94.)



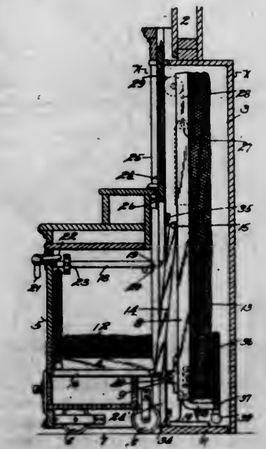
1. A sled formed of a single strand of metal bent to include runners, a transverse member continuing from the rear portions of said runners, and top rails formed also from continuations of the runners and engaged with the transverse member.

2. A sled formed of a single strand of metal designed to form runners, a transverse bar continuing from the rear portions of said runners, the forward portions of the runners being bent upwardly and thence inwardly and intertwined, the intertwined portion being extended rearwardly and the sections of the wire then spread and continued rearwardly to form top rails for the device.

3. A sled formed of a single strand of metal bent to form an upper transverse bar, the portions of the metal continuing from said bar being bent downwardly and then forwardly to form runners, the portions of the metal continuing from the forward ends of said runners being bent upwardly and inwardly and then intertwined to extend rearwardly, the portion of the metal being then spread outwardly and bent rearwardly for engagement with the rear transverse bar, whereby to form top rails for the sled.

4. A sled formed of a single strand of metal bent to form an upper transverse bar, the portions of the metal continuing from said bar being bent downwardly, rearwardly and thence forwardly to form runners, the portions of the metal continuing from the forward ends of the runners being bent upwardly and inwardly for engagement with one another whereby to form a forward transverse connection, the portions continuing from the last mentioned connection being spread and continued rearwardly to form top rails, said top rails having engagement with the rear transverse bar.

1,110,526. DISAPPEARING BED. JOHN C. BEACH and HENRY W. BEACH, San Francisco, Cal. Filed Dec. 22, 1913. Serial No. 808,133. (Cl. 5—18.)



1. A disappearing bed comprising the combination of a relatively fixed closet structure and a movable cabinet structure or truck forming a movable front thereof, each having a section of the bed-frame and each section carrying a section of mattress, and means connecting the truck and the bed-frame section in the closet whereby said bed-frame sections may be moved into horizontal alinement for use.

2. The combination with a recess or closet structure, of a section of a bed-frame foldably mounted in the recess, and a complementary section of bed-frame horizontally movable toward and from the recess to form, when the bed sections are in horizontal alinement, a complete, full-length bed structure.

3. The combination with a closet structure, of a section of a bed-frame foldably mounted in the structure, a complementary section of bed-frame horizontally movable toward and from the closet structure to form, when the bed sections are in horizontal alinement, a complete, full-length bed structure, and means connecting the horizontally movable bed section and the tiltable bed section whereby they automatically coöperate to move into horizontal alinement and to right angular position for non-use.

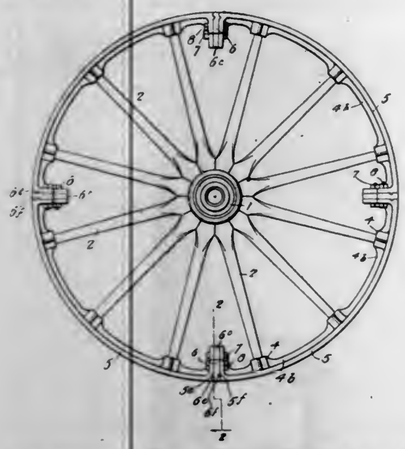
4. The combination with a closet structure, of a section of a bed-frame foldably mounted in the structure, a complementary section of bed-frame horizontally movable toward and from the closet structure to form, when the bed sections are in horizontal alinement, a complete, full-length bed structure, means connecting the horizontally movable bed section and the tiltable bed section whereby they automatically coöperate to move into horizontal alinement and to right angular position for non-use, and a counterbalancing means for upwardly operating the tiltable bed-frame.

5. The combination with a recess or closet, of a bed-frame divided into a plurality of sections, one of which is tiltably mounted in the recess and the other of which is

horizontally movable toward and from said recess, and means connecting said bed-frame sections whereby they automatically coöperate to form a bed-frame of full length when in a horizontal position.

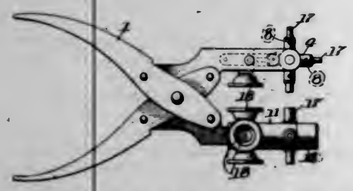
[Claims 6 to 17 not printed in the Gazette.]

1,110,527. COMBINED TIRE AND FELLY. LINWOOD BECKHAM, Apache, Okla. Filed Jan. 22, 1912. Serial No. 672,714. (Cl. 21—167.)



In a combined tire and felly, the combination with a plurality of tire sections, said sections being offset at their meeting ends, one of the offset ends having a rib formed thereon and the other of the offset ends having a groove formed therein, said offset ends having inner and outer alining openings formed therein, bolts extending through said openings, a spacing block slidable between said offset ends, said spacing block having slots formed therein in alinement with the outer openings in the offset ends of the tire sections, for the purpose of receiving the outer bolts, said spacing block having an opening therein in alinement with the inner openings for receiving the inner bolt, a rib formed upon the spacing block for engagement with the groove in one offset end, and a groove formed upon the spacing block for receiving the rib on the opposite offset end.

1,110,528. TURRET-PLIERS. HELGE A. BORRESEN, Marquette, Mich. Filed Oct. 14, 1907. Serial No. 397,329. (Cl. 164—122.)



1. A pair of pliers having coöperating jaws, a cylinder mounted longitudinally upon one of said jaws and adapted for rotation thereon, a plurality of cup shaped dies extending from the periphery of said cylinder, and a plurality of tools extending from the periphery of said cylinder.

2. A pair of parallel pliers having a jaw, a member extending longitudinally thereover and rotatable thereon, a plurality of tools extending from the periphery of said member and located at different distances from the fulcrum of said pliers, a second jaw provided with a plurality of rotatably mounted tools complementary to the tools carried by the said first mentioned member, said last aforesaid series of tools being rotatable in the plane of said second jaw, and means for adjusting said last mentioned tools in proper relation to said first mentioned tools, so as to aline therewith at all positions of the jaws.

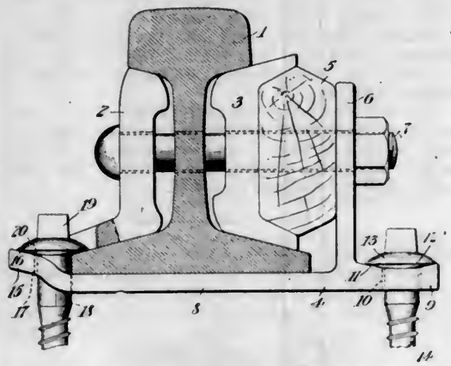
3. A device of the class described having jaws, a plurality of tools associated with one of said jaws, a plurality of dies also associated with said jaw, means upon which said tools and dies are mounted, said means being rotatably mounted about said jaw to rotate about an axis longitudinally of said jaw, and means coöperating with said tools and dies mounted on the other jaw.

4. A pair of pliers having coöperating jaws, a cylinder mounted longitudinally upon one of said jaws and adapted for rotation thereon, a plurality of tools extending from the periphery of said cylinder, a plurality of dies also extending from the periphery of said cylinder, and a plurality of rotatably mounted tools on the other jaw to coöperate with the first aforesaid tools.

5. A pair of pliers having coöperating jaws, a cylinder mounted longitudinally upon one of said jaws and adapted for rotation thereon, a plurality of tools extending from the periphery of said cylinder, and a plurality of rotatably mounted tools on the other jaw to coöperate with the first aforesaid tools, the tools mounted upon said second jaw being rotatable in the central plane of the jaws.

[Claims 6 to 9 not printed in the Gazette.]

1,110,529. ROLLED SHOE-ANGLE. BANCROFT G. BRAINE, New York, and WILLIAM J. BRADLEY, Troy, N. Y., assignors to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed June 11, 1914. Serial No. 844,570. (Cl. 239—6.)



1. A shoe angle for rail joints whose base member is provided with an upwardly bent rolled inner edge portion having a spike receiving hole and an upper inclined spike-head bearing surface disposed at the outer side of said hole.

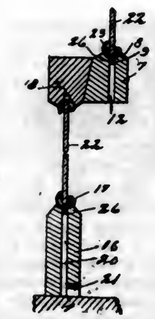
2. A shoe angle for rail joints provided at the inner edge portion of its base member with a rolled toe-flange bent to present at its upper side an inclined outer spike-head bearing.

3. A shoe angle for rail joints provided at the inner edge of its base member with a spike hole and with a rolled toe-flange having a reverse bend to present an inclined spike-head bearing beyond the outer side of the hole.

4. A shoe angle for rail joints provided at the inner edge portion of its base member with an upwardly bent rolled toe-flange of the same thickness as the remaining portion of the base member and presenting at its upper side an outer spike-head bearing.

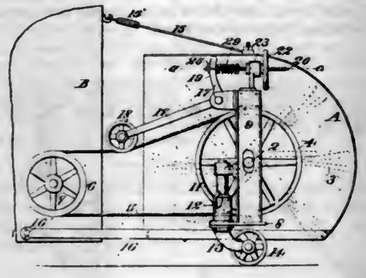
1,110,530. PUTTYLESS WINDOW SASH AND PANE HOLDER. SAMUEL T. BROCK, Mount Vernon, Ohio. Filed Dec. 4, 1912. Serial No. 734,942. (Cl. 20—56.4.)

A window pane receiving tube, having a slot formed along one side thereof, the edges of said slot being bent inwardly to provide gripping flanges, said edges being slitted at intervals and the offset portions between said



slits being bent outwardly, whereby air may circulate through said tube, and means for holding the tube in position.

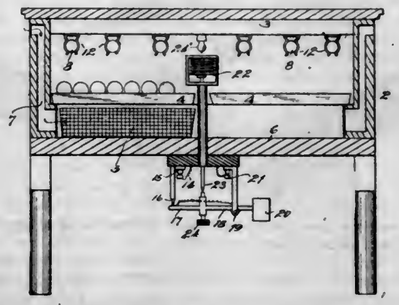
1,110,531. STREET-SWEEPING TRAILER. CHARLES H. BUTLER, Oakland, Cal. Filed Nov. 24, 1913. Serial No. 802,622. (Cl. 15—17.)



In a street sweeper, a vehicle, a driving pulley thereon, a trailer housing having pivoted connection to the vehicle, a rotary brush in the housing, a driving belt for the brush passing around said driving pulley, vertical uprights secured to the sides of said housing, caster wheel supports for the housing carried by the uprights and having their axes in vertical alinement with the axis of said brush, means for maintaining the housing in a vertical position, said means comprising a bell crank lever pivoted to one of said uprights, a wheel carried by one arm of said lever and engaging the belt, a bearing mounted on the upper end of said last mentioned upright, a threaded rod passing through said bearing and secured to the other arm of the lever, resilient means between said arm and said bearing, and a hand wheel for advancing or withdrawing said rod.

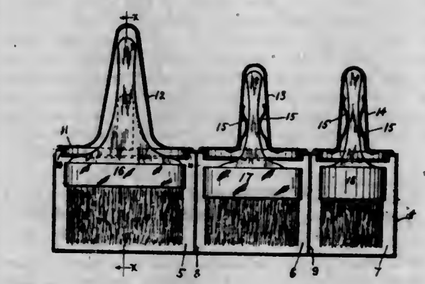
1,110,532. INCUBATOR. LYMAN C. BYCE, Petaluma, Cal. Filed Sept. 30, 1913. Serial No. 792,602. (Cl. 219—19.)

In an electrical incubator, a chamber having a similar combined air inlet and outlet at each end thereof and located in a common plane adjacent to the plane of the top of the incubator, a series of spaced independent cores disposed beneath the under face of the top, said cores extending transversely of the length of the incubator and entirely across the width thereof and having electric conductors wound thereabout, the coils of the conductor being widely separated at the centers of the cores and being



closely related at the ends of the core whereby to provide maximum heat at the bounding walls of the chamber.

1,110,533. BRUSH-RECEPTACLE. JACOB G. CARMICHAEL, Seattle, Wash. Filed June 11, 1913. Serial No. 772,989. (Cl. 91—63.)

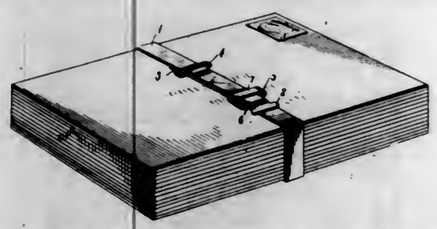


A receptacle for brushes comprising a case adapted to contain water and the bristle portion of a brush, a cover provided with a downwardly projecting annular portion and a flange of greater diameter than said annular portion to adapt it to cover an opening in the top side of said receptacle, said cover being further provided with an upwardly extending portion which forms an inclosed chamber that is adapted to receive the handle of a brush, and two oppositely disposed flat springs whose lower ends are each secured to the underside of said cover and each of which flat springs is curved and disposed to project upwardly within said chamber with its upper end in engagement with the wall of said chamber whereby the handle of a brush may engage with the convex surfaces of said springs thus suspendingly to support said brush.

1,110,534. PACKAGE-BAND. WILLIAM J. CHAMBERLAIN, Walnut Ridge, Ark. Filed Apr. 1, 1912. Serial No. 687,758. (Cl. 24—17.)

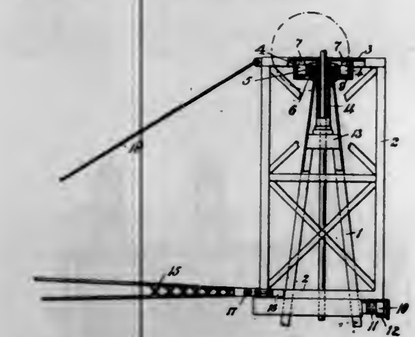
A band of the class described formed from a strip of pliable sheet metal having one of its ends formed with laterally extending ears, an elongated ring pivotally connected to its other end, said ears being adapted to pass through the ring when the band is folded, a slide freely movable from end to end of said strip and consisting of a pair of closed loops, one of said loops being greater in size than the other, the smaller loop being adapted to slidably receive the body of the strip, while the larger loop is adapted to engage one end of the strip after the same is passed through said ring and is bent upon the body of said strip, and in alinement with the remaining portion

thereof and adjusted upon a package, said ears being of such dimensions as to prevent passage thereof through



the smaller loop to prevent loss of the loops when the band is in its inoperative position.

1,110,535. WIND-TURBINE. JOSEPH GERSHOM CHILDS, Willesden Green, London, England. Filed Oct. 24, 1910, Serial No. 588,885. Renewed Feb. 9, 1914. Serial No. 817,669. (Cl. 170—8.)



1. In a wind turbine the combination of a tower, a turbine head rotating upon and inclosing the top of said tower, a turbine wheel journaled in said head, journal roller bearings at the top and bottom of said head surrounding said tower and a covering inclosing said roller bearings and protecting them from exposure.

2. In a wind turbine the combination of a tower, a turbine head rotating upon and inclosing the top of said tower, a turbine wheel journaled in said head, roller bearings carried by said head spaced apart at the top and bottom of said head and surrounding said tower, a thrust bearing taking the weight of said head and flanged boxings carried by said head and totally inclosing said roller bearings and serving as a protection for them against the weather.

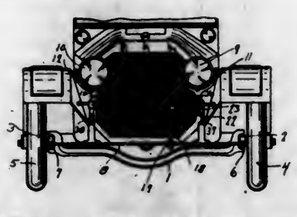
3. In a wind turbine the combination of a tower, a turbine head rotating upon and inclosing the top of said tower, a turbine wheel journaled in said head, roller bearings between said head and said tower surrounding the tower, a central sleeve fitted to said head, a thrust bearing supporting said sleeve and head, a spherical seating to said thrust bearing and covers carried by said head and protecting said roller bearings from exposure.

4. In a wind turbine the combination of a tower, a turbine head rotatably mounted thereon, two ears projecting therefrom, a pivot passing between said ears, a girder on said pivot and between said ears, stays for maintaining said girder in position with regard to said head, and a controlling vane carried on said girder.

5. In a wind turbine the combination of a tower, a rotatable head thereon, girders extending laterally from said head, transverse members secured to said girders, shafts bearing vane plates secured in said transverse members, said vane plates being non-centrally mounted so as to be rotatable in opposite directions by wind pressure.

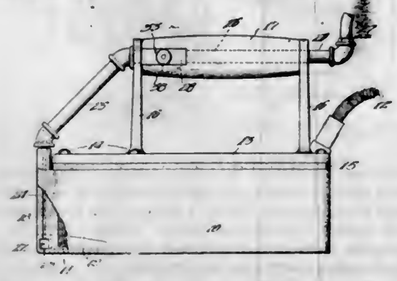
[Claims 6 to 21 not printed in the Gazette.]

1,110,536. HEADLIGHT-TURNING MEANS. EDWARD O. CLARK, Spokane, Wash., assignor of one-third to Edward A. Moye, Spokane, Wash. Filed Nov. 17, 1913. Serial No. 801,535. (Cl. 240—62.)



In a head light turning means for automobiles, connected head lights, a sleeve fixed to the running gear with its axis upright, a fork for one of said lights having a shank extending through and revolubly mounted in said sleeve, a locking member rotatably mounted on said shank, wheel steering means connected with said member to shift the lights, said shank having a locking pin and said member being notched to engage said pin and lock said shank and member against independent rotation with respect to each other, a spring normally acting to shift said member into locking engagement with said shank and said member having a cam engaging extension projecting horizontally and radially outwardly from the periphery of the sleeve, and a cam having a spindle projecting eccentrically therefrom and journaled in said fixed sleeve to rotate about an axis at right angles to the axis of said sleeve to engage the periphery of said cam against said extension to disengage said member from said shank, and said cam being provided with a handle for operation thereof, substantially as described.

1,110,537. TAILOR'S IRON. ALEXANDER DURAND, Los Angeles, Cal. Filed Sept. 20, 1913. Serial No. 790,943. (Cl. 68—26.)



1. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion provided with a cavity therein, said cavity having minute openings communicating with the face of the iron, means for supplying liquid to said cavity, a cover secured to said body portion provided with a handle, and means located in said handle for controlling the supply of liquid to said cavity.

2. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion and partially separated therefrom by a series of heat insulating openings, said rib also being provided with an inclosed cavity having minute openings communicating with the face of the iron, controllable means for supplying liquid to said cavity, and handle means for said iron.

1,110,538. RESILIENT TIRE. CHARLES FENDEIS, New York, N. Y. Filed Sept. 8, 1913. Serial No. 788,668. (Cl. 152—8.)

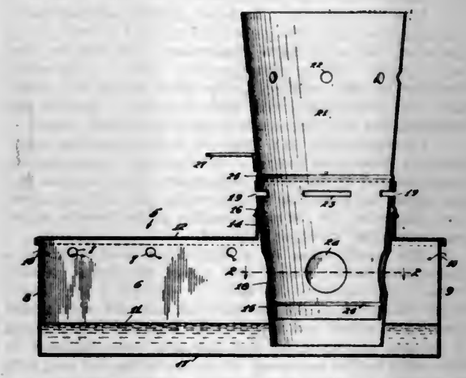
1. In a resilient tire, the combination with a plurality of transverse tire sections having grooves in their abutting faces, of metal rings arranged in said grooves and having their ends overlapped at the inner face of the tire, and a resilient sleeve for each of said rings.

2. In a resilient tire, the combination with a plurality of transverse tire sections having interior recesses opening on the inner face of the tire, said sections also having grooves in their abutting faces, of bowed springs fitted in said recesses, and metal rings arranged in said grooves, said bowed springs being arranged alternately with said rings.

3. In a resilient tire, the combination with a plurality of transverse tire sections having interior recesses opening on the inner face of the tire, of bowed springs fitted in said recesses and having their ends turned out under the inner portions of the tire sections, said sections and springs having alined grooves and notches respectively in their abutting faces, and separate interlocking means arranged in said alined grooves and notches.

4. In a resilient tire, the combination with a plurality of transverse tire sections having interior recesses opening on the inner face of the tire, of bowed springs fitted in said recesses and having their ends turned out under the inner portions of the tire sections, said sections and springs having alined grooves and notches respectively in their abutting faces, metal rings arranged in said grooves and notches, and a band passed through said rings for binding them to a wheel rim.

1,110,539. ORCHARD-HEATER. CHARLES D. FILSTEAD, Los Angeles, Cal., assignor of two-thirds to Samuel B. Hampton, Corona, Cal. Filed Oct. 29, 1913. Serial No. 798,024. (Cl. 158—91.)



1. An orchard heater, comprising a receptacle provided with draft openings, an apertured cover therefor, a sleeve having openings adapted to fit within the aperture in said cover, and a burner stack having openings adapted to be supported within said sleeve, the openings in the inclosed portions of the sleeve and stack adapted to be brought into or out of register.

2. An orchard heater, comprising a receptacle having draft openings therein and an opening in the cover thereof, an apertured sleeve supported within said opening in said cover and projecting within and without said receptacle, and an apertured burner stack adapted to fit within said sleeve and be moved therein, arranged to have certain of its apertures register with the apertures in said sleeve.

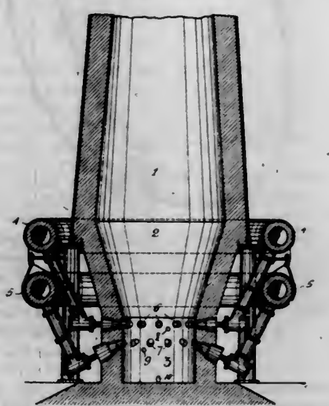
3. An orchard heater, comprising a metallic fuel receptacle having a plurality of draft openings disposed above the normal fuel line within said receptacle, an apertured cover therefor having a flange, a sleeve of tubular form supported in said flanged aperture of said cover and projecting within the fuel within said receptacle and having a plurality of openings in its walls, a tubular burner stack having a plurality of rows of openings therein adapted to fit within said sleeve and project upwardly therefrom, certain of said rows of openings registering with the apertures in said sleeve, and means to move said burner stack in relation to said sleeve to regulate the passage of gases through the registering rows of openings.

4. An orchard heater, comprising a fuel receptacle provided with draft openings, an apertured cover therefor, a sleeve adapted to fit within said apertured cover and extending above and below the aperture in said cover and having a plurality of openings within the receptacle, and a burner stack adapted to fit within said sleeve having a plurality of openings adapted to be brought into and out of registration with the before-mentioned openings in the sleeve to regulate the passage of gases from without the stack in the receptacle into the burner stack, and a row of openings in the sleeve without the receptacle, and a row of openings in the stack without the receptacle adapted to be brought into and out of registration to regulate the passage of air into the stack from without the receptacle.

5. An orchard heater, comprising a receptacle having draft openings therein and an opening in the cover thereof, an apertured sleeve supported within said opening in said cover and projecting within and without said receptacle, and an apertured burner stack adapted to fit within said sleeve and be moved therein, arranged to have certain of its apertures register with the apertures in said sleeve.

[Claim 6 not printed in the Gazette.]

1,110,540. PROCESS OF SMELTING AND PURIFYING IRON. GUSTAVE R. GEHRANDT, Chicago, Ill. Filed June 14, 1913. Serial No. 773,593. (Cl. 75—14.)



1. The herein described process of producing a purified iron which consists in smelting the ore, collecting the smelted ore in the hearth of the smelting furnace and in causing an air-blast to enter the smelted iron and to enter and pierce the same at an angle oblique to the level of the smelted iron, said air-blast being passed through the iron simultaneously as the supply of iron in the hearth is replenished by freshly smelted iron from above.

2. The herein described process of producing a purified iron which consists in smelting the ore, collecting the molten mass thus obtained in a receptacle beneath the ore, and in causing an air-blast to enter and pierce said molten mass at a point adjacent the top level of said mass and to travel obliquely to the level of said mass, said air-

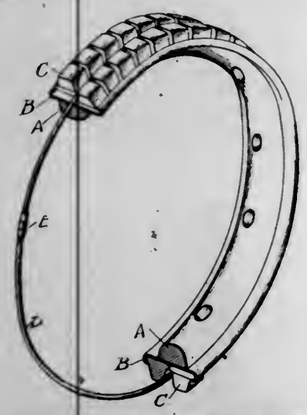
blast being passed through the molten mass before the same is withdrawn from the receptacle.

3. The herein described process of producing a purified iron which consists in smelting the ore, collecting the reduced molten iron in the smelting apparatus, and in causing an air-blast to enter the molten iron near the upper level of the body thereof, and in further causing said air-blast to pass through said iron while the same still remains in the receptacle within which it has been collected.

4. The herein described process of producing a purified iron consisting in smelting the ore, collecting the reduced ore in the hearth of the smelting furnace, and in causing an air-blast to enter and pierce the iron at a point adjacent the upper level of the iron, said air-blast being passed through the iron in the hearth simultaneously as the supply of iron in the hearth is replenished by freshly smelted iron from above.

5. The herein described process of producing a purified iron which consists in smelting the ore, collecting the reduced molten iron in the smelting apparatus, in causing an air-blast to enter the molten iron near the upper level of the body thereof, in further causing said air blast to pass through said molten iron while the same still remains in the receptacle within which it has been collected, and in causing another air blast to enter intermediate the upper level of the reduced molten iron and the body of the ore.

1,110,541. TIRE. EDWARD R. HEWITT, Ringwood, N. J., assignor to Hewitt Motor Company, New York, N. Y., a Corporation of New York. Filed Aug. 28, 1909. Serial No. 515,017. (Cl. 152—9.)



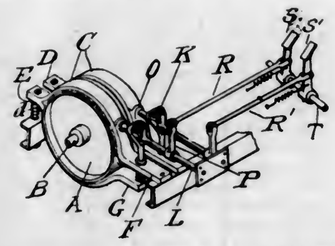
1. In combination with a clencher rim, a tire composed of a plurality of interchangeable blocks provided with relatively rigid bases disposed on the rim in a plurality of circumferential rows between the clenchers, the total transverse width of the base members of the rows of blocks being equal substantially to the width of the rim, and adjustable means disposed operatively between the base members of adjacent rows of blocks to force the same into locking engagements with the clenchers of the rim.

2. In combination with a clencher rim, a tire composed of a plurality of interchangeable blocks provided with relatively rigid bases having yielding treads and disposed on the rim in a plurality of circumferential rows between the clenchers, the total transverse width of the base members of the rows of blocks being equal substantially to the width of the rim, a circumferential rod disposed operatively between the base members of adjacent rows of blocks and means to take up on said rod to force the blocks into locking engagement with the clenchers of the rim.

3. In a sectional or block tire, a unit including a rubber body portion, fabric molded in the base thereof, a plurality of rods near the base thereof projecting beyond the main portion of the blocks, a metal base covering the bottom of said block, upturned edges on said base embracing or clenching protruding base extensions of said rubber blocks and embracing the projecting ends of said rods.

4. In a sectional or block tire separate rubber sections, a flat metallic base for each rubber section having upturned sides affording permanent attachment to the section, stiff material embedded in the base of said sections and in part projecting therefrom and engaged by the upturned edges of said sections, means on the base of each section and means on the face of the rim having a tight fit with the means on the base of each block whereby the latter may be held in temporary position for assembling.

1,110,542. CONTROLLING MECHANISM. EDWARD R. HEWITT, Ringwood, N. J., assignor to Hewitt Motor Company, New York, N. Y., a Corporation of New York. Filed May 2, 1907, Serial No. 371,457. Renewed Sept. 15, 1909. Serial No. 517,916. (Cl. 74—13.)



1. In combination in a brake or clutch operating mechanism, a brake-band having a free end and a fixed end, an operating rod in operative engagement with the free end, the fixed end coöperating with the rod as a guide therefor, and means for actuating said operating rod, said means coöperating with the rod as a second and positive guide to hold the same against lateral and twisting movement whereby the alinement of the parts of the brake-band is preserved.

2. In combination in a brake or clutch operating mechanism, a brake-band having a fixed end, and a free end, an operating rod in operative engagement with the free end and provided with a cam aperture, and a rocker shaft mounted in fixed relation to the fixed end of the brake-band, and coöperating with said aperture to insure a true axial movement of the operating rod.

3. In combination in a brake or clutch operating mechanism, a brake-band having a fixed end and a free end, an operating rod in operative engagement with the free end and provided with a cam aperture, and a rocker shaft mounted in fixed relation to the fixed end of the brake-band and coöperating with said aperture to actuate the operating rod and insure a true axial movement thereof.

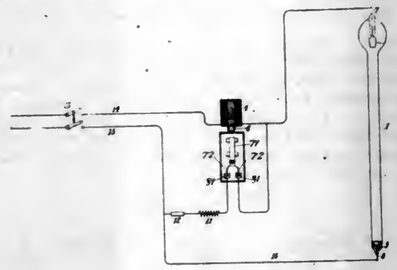
4. In combination in a brake or clutch operating mechanism, a brake-band having a free end and a fixed end, an operating rod in operative engagement with the free end and means for actuating said operating rod, said means coöperating with the rod as a positive guide therefor to insure true axial movement thereof.

5. The combination in a controlling mechanism of a brake-band having a fixed end, a free end and a yielding support intermediate the ends, an operating rod operatively connected to the free end and provided with a cam opening, a rocker arm coöperating with the cam opening to actuate the operating rod, the arm being disposed to give quick initial movement of the operating rod and slow final movement with proportionate greater leverage.

[Claims 6 to 10 not printed in the Gazette.]

1,110,543. STARTING AND CONTROLLING DEVICE FOR ELECTRIC VAPOR APPARATUS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 11, 1902. Serial No. 102,336. (Cl. 176—45.)

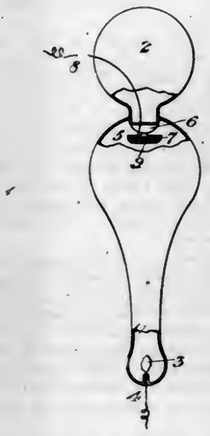
1. The combination with an electrical translating device and a reactance device in series therewith, of a shunt across the circuit between the translating device and the reactance device, and a snap or quick-break switch in said shunt, the reactance device being placed in operative relation to the switch, so as to operate the same when the main circuit is closed.



2. The combination with an electric gas lamp, of an electro-magnetically actuated circuit interrupter having its contacts in multiple with the lamp and its magnet coil or coils in the supply circuit with the lamp and adapted to hold the interrupter contacts open by the current flowing through the lamp while lamp is in action.

3. The combination with an electric gas lamp connected with a low potential source of energy through a circuit of self-induction of sufficient value to furnish a high potential current proper for starting said lamp, an interrupter for said circuit of induction having its contacts in multiple with the lamp, and an electromagnet for actuating said interrupter, said electromagnet having its coils connected to the supply circuit and adapted to hold the interrupter contacts open by the current flowing through the lamp while the lamp is in action.

1,110,544. ELECTRODE FOR VAPOR APPARATUS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 7, 1904. Serial No. 202,013. (Cl. 176—50.)



1. In a gas or vapor electric apparatus, an electrode consisting in part of a cooled solid material located inside the apparatus and in part of a vaporizable material.

2. In a gas or vapor electric apparatus, an electrode consisting in part of a cooled solid material located inside the apparatus and in part of a vaporizable material, the material of the solid portion of the electrode being capable of being wetted by the vaporizable material of the electrode.

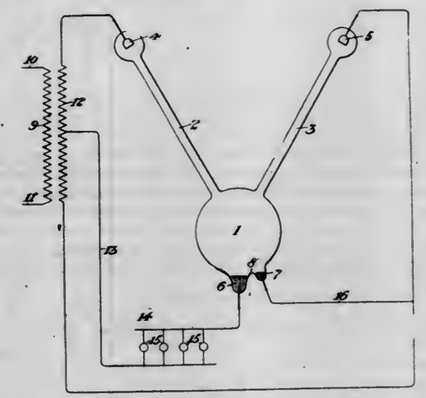
3. In a gas or vapor electric apparatus, an electrode consisting in part of solid material formed into a cup or plate opening into the interior of the apparatus, and in part of a volatilizable material, in combination with means for cooling the solid portion of the electrode.

4. In a gas or vapor electric apparatus, an electrode consisting of solid material inclosed within the apparatus, the said solid material having a surface of vaporizable material.

5. In a gas or vapor electric apparatus, an electrode consisting of solid material inclosed within the apparatus and having a surface of vaporizable material, in combination with means for continuously renewing the said surface.

[Claims 6 to 18 not printed in the Gazette.]

1,110,545. ELECTRIC VAPOR APPARATUS AND METHOD OF OPERATING THE SAME. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Filed Jan. 11, 1906. Serial No. 295,538. (Cl. 176—42.)



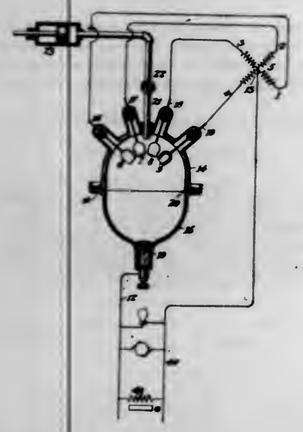
1. A rectifier for alternating current including an exhausted container having anode chambers, an anode at the remote end of each chamber and a cathode, the distance between any two anodes by way of any possible current path greatly exceeding that between either anode and the cathode.

2. A rectifier for alternating currents including a hermetically sealed exhausted container having long and narrow spreading upwardly extending tubular portions, and a vaporizable cathode in the said container, together with solid anodes at the remote ends of the said tubular portions adapted for connection to the terminals of an alternating current source whereby the starting resistance of the said tubular portions is added to the negative electrodes starting reluctance of the anodes.

1,110,546. DIRECTIONAL-CURRENT ARRESTER. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Feb. 3, 1903, Serial No. 141,661. Divided and this application filed June 13, 1907. Serial No. 378,710. (Cl. 371—253.)

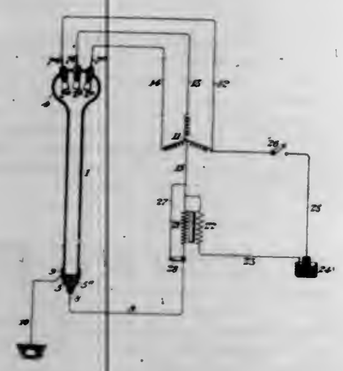
1. In a system of electrical distribution the combination with a quarter phase alternating source and a direct current work circuit of a vapor rectifier comprising four anodes and a vaporizable cathode and connections from the terminals of said source to said anodes, from the neutral point of said source to said work circuit and from the cathode of said rectifier to said work circuit, of an inductance in shunt to said work circuit.

2. In a system of electrical distribution, the combination with a source of polyphase alternating current, a direct current work circuit and a polyphase mercury vapor rectifier between said source and said work circuit, of an inductive shunt for said work circuit whereby current flows through said rectifier independently of the operation of the devices in said work circuit.



3. In a system of electrical distribution comprising an alternating source and a mercury vapor rectifier and a direct current work circuit, means for maintaining continuity of current regardless of the operation of translating devices in said work circuit, said means consisting of an inductance and connections from the terminals of said inductance respectively to the mains of said work circuit.

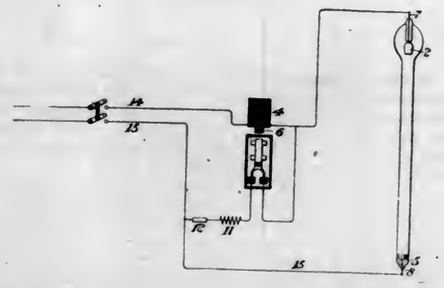
1,110,547. METHOD OF TRANSMITTING AND UTILIZING ELECTRIC CURRENTS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 5, 1901, Serial No. 54,485. Divided and this application filed Jan. 14, 1909. Serial No. 472,185. (Cl. 176—45.)



1. Means for starting a vapor electric apparatus comprising a plurality of anodes, a vaporizable cathode and a container therefor, said means consisting of an alternating supply connection from said supply to said anodes and a connection from an intermediate point of said supply to said cathode and a starting band adjacent said cathode connected to earth.

2. Means for starting a vapor electric apparatus comprising a plurality of anodes, a vaporizable cathode and a container therefor, said means consisting of an alternating supply connection from said supply to said anodes and a starting band adjacent said cathode connected to earth.

1,110,548. STARTING AND CONTROLLING DEVICE FOR ELECTRIC VAPOR APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 11, 1902, Serial No. 102,336. Divided and this application filed Dec. 10, 1910. Serial No. 596,601. (Cl. 176—45.)



1. The combination with an electrical translating device requiring an initial current of high potential and a reactance device in series therewith, of a shunt across the circuit between the translating device and the reactance device, an automatic switch adapted to cause a continuous succession of makes and breaks, and a time cut-out in the circuit of the reactance device.

2. The combination with an electric vapor lamp requiring an initial current of relatively high potential, a shunt around the said lamp, means for holding the shunt open when the lamp is in operation, and time cut-out for breaking the shunt circuit when it remains closed for a predetermined period.

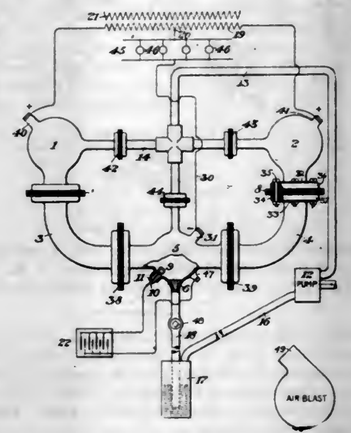
3. The combination with a gas or vapor electric apparatus requiring an initial or starting current of relatively high potential, and a reactance device in series therewith, of a shunt across the circuit between the vapor apparatus and the reactance device, an oil circuit breaker or vibrator in said shunt, and a time cut-out breaking the shunt circuit after the vibrator has operated a predetermined length of time, the said circuit breaker or vibrator and the said reactance device being placed in such relation to each other that the reactance device will actuate the said circuit breaker or vibrator whenever the vapor apparatus fails or ceases to operate.

4. In an electric system, an electric vapor lamp, a main switch controlling the circuit thereof, a reactance device in series with the lamp, a shunt across the circuit between the reactance device and the lamp, a switch in the shunt circuit controlled by the reactance device, a time cut-out controlling the shunt circuit, the switch and the reactance device being so combined that when the reactance device is energized the circuit of the switch will be broken, and when reactance device is deënergized, the switch circuit will be closed.

5. A vapor device comprising an exhausted container, electrodes in said container, included in the main operating circuit of the device, one of such electrodes being a vaporizable liquid electrode, automatic means for connecting the electrodes when no current flows in the device and automatic means for breaking the conductive connection between the said electrodes, said last named means including a magnet coil whereby said coil acts as an inductive resistance to the main circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,110,549. VAPOR-CONVERTER. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 20, 1908, Serial No. 422,218. Renewed Feb. 10, 1911, Serial No. 607,874. Divided and this application filed July 19, 1911. Serial No. 639,258. (Cl. 175—354.)

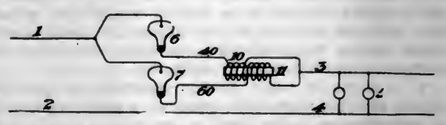


1. A rectifier for alternating current, comprising a container having separated parts of good conducting material as the electrodes, and hollow portions of quartz connecting the electrode portions and secured thereto, the whole forming an hermetically sealed container.

2. A mercury vapor apparatus comprising an exhausted container and a liquid cathode therein, said apparatus being exhausted to a high degree of purity, and a relatively long downwardly projecting tubular connection between said cathode and the atmosphere, in combination with means for starting a flow of current in said apparatus, said means including a supplemental anode and means for temporarily raising the level of the cathod into contact with said supplemental anode.

3. A mercury vapor apparatus comprising an exhausted container and a liquid cathode therein, said apparatus being exhausted to a high degree of purity, and a relatively long downwardly projecting tubular connection between said cathode and the atmosphere, in combination with means for starting a flow of current in said apparatus, said means including a supplemental anode and means for temporarily raising the level of the cathode into contact with said supplemental anode, said last named means consisting of an open receptacle inclosing one end of said tubular connection to the atmosphere.

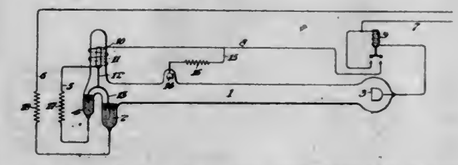
1,110,550. MULTIPLE OPERATION OF TRANSLATING DEVICES. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed May 23, 1903, Serial No. 158,456. Divided and this application filed Apr. 27, 1912. Serial No. 693,753. (Cl. 171—253.)



1. The combination with a plurality of parallel gas or vapor rectifiers, each including an exhausted container and suitable electrodes, including a cathode, of connections between the several cathods, and a common direct current main, each of said connections including an inductance, and connections for completing the circuit through a suitable load and an alternating current source. the inductances being inductively related to each other.

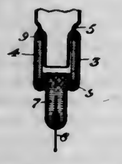
2. The combination with a plurality of parallel gas or vapor rectifiers, each including an exhausted container and suitable electrodes, including a cathode, of connections between the several cathodes, and a common direct current main, each of said connections including a balanced inductance, and connections for completing the circuit through a suitable load and an alternating current source, the inductances being inductively related to each other.

1,110,551. STARTING AND OPERATING VAPOR ELECTRIC DEVICES. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 25, 1905. Serial No. 257,309. (Cl. 176—49.)



The combination in an electric vapor apparatus, of main positive and negative electrodes, a supplemental or starting positive electrode, an intermediate positive electrode, resistances external to the device through which the respective starting and intermediate positive electrodes are connected with the working positive electrode, and an automatic cut-out for severing said connections.

1,110,552. VAPOR ELECTRIC DEVICE. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 1, 1905. Serial No. 267,980. (Cl. 176—44.)



1. The combination of a liquid electrode in a gas or vapor apparatus, an insulating wall therefor with a protecting cylinder for said wall, together with an inner cylinder integral with the walls for holding the protecting cylinder in position.

2. An electrode for a gas or vapor electric apparatus comprising a fluid conducting material and a loose protecting shield for the wall of the vessel adapted to permit free passage of current in one direction—the shield being located between balls adapted to relieve the shocks of handling or transportation.

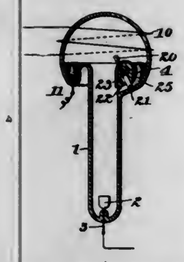
3. In a vapor electric apparatus having a vaporizable reconstructing electrode, an electrode chamber having an over hanging wall and a tube of insulating material surrounding the active electrode surface and lying behind said over hanging wall.

4. In a vapor electric apparatus an exhausted container, a vaporizable reconstructing electrode and a vertically restrained insulating tube within said container surrounding the operating portion of the electrode and means for directing the vapor path within said tube.

5. In a vapor electric apparatus an exhausted container, a vaporizable reconstructing electrode and a vertically restrained insulating tube within said container surrounding the operating portion of the electrode and means for preventing the passage of current outside said tube.

[Claim 6 not printed in the Gazette.]

1,110,553. STARTING DEVICE FOR MERCURY-VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Nov. 24, 1903, Serial No. 182,443. Divided and this application filed July 1, 1905. Serial No. 267,983. (Cl. 176—45.)



1. In a gas or vapor electric apparatus, a suitable container, electrodes therein one of which is a conducting fluid, leading-in wires electrically connected with said electrodes, a valve controlling the flow of the said fluid, and means whereby the valve can be operated for causing a stream of the fluid to pass between the electrodes.

2. In a gas or vapor electric apparatus, a suitable container, electrodes therein one of which is a conducting fluid, leading-in wires connected with the said electrodes, a valve controlling the flow of the said fluid, and automatic means whereby the valve can be operated for causing a stream of the fluid to pass between the electrodes.

3. In a gas or vapor electric apparatus, a suitable container, electrodes therein one of which is a conducting fluid, leading-in wires electrically connected to the said electrodes, a valve controlling the flow of the said fluid, and electro-magnetic means whereby the valve can be operated for causing a stream of mercury to pass between the electrodes.

4. In a gas or vapor electric apparatus, a suitable container, electrodes therein one of which is of mercury, leading-in wires electrically connected with said electrodes, a valve controlling the flow of said mercury, and means whereby the valve can be operated for causing a stream of mercury to pass between the electrodes.

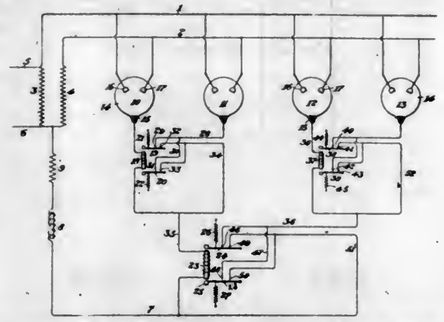
5. In a gas or vapor electric apparatus, a container having two electrodes one being of conducting liquid located above the other in a suitable pocket or receptacle, the said pocket or receptacle being provided with an opening for permitting an outflow of conducting liquid therefrom to the lower electrode, a piston adapted to approximately close the said opening, and means for operating the piston.

[Claims 6 to 12 not printed in the Gazette.]

1,110,554. SYSTEM OF ELECTRICAL DISTRIBUTION BY VAPOR-CONVERTERS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 23, 1906. Serial No. 302,343. (Cl. 171—253.)

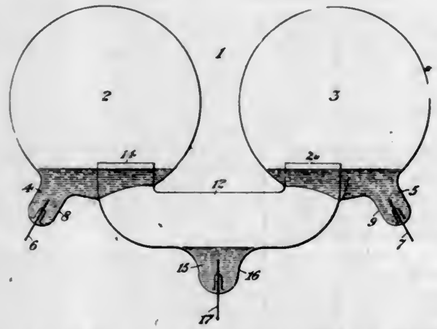
1. The combination with a source of alternating current, a plurality of groups of mercury vapor rectifiers fed from said source and a common direct current work circuit fed by the rectifiers, of means for causing the cessation of current in one group of said rectifiers to connect the direct current main from a second group of rectifiers to the work circuit, together with means in each of the above named groups whereby a cessation of current in one rectifier connects the lead of the direct current electrode of another rectifier in the same group to the direct current bus bars, all of said means being located in the portion of the system traversed by direct current.

2. The combination with a source of alternating current, a plurality of mercury vapor rectifiers fed from said source, and a common direct current work circuit fed by the said rectifiers, of means for connecting the direct current lead of one of said rectifiers to the work circuit when the rectified current of another rectifier is less than



one limiting current value or greater than a second limiting current value, said means being located in the lead of the direct current electrode of the last named converter.

1,110,555. VAPOR ELECTRIC DEVICE. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 1, 1905, Serial No. 267,981. Renewed Feb. 19, 1907. Serial No. 358,243. (Cl. 176—42.)



1. In a gas or vapor electric apparatus, a container having multiple symmetrical condensing chambers, a connecting portion having projections extending into the said chambers, positive electrodes located within the respective condensing chambers, and a negative electrode located within the connecting portion.

2. In a gas or vapor electric apparatus, a container having multiple condensing chambers, a tubular connection between the chambers, a positive electrode in each chamber, and a negative electrode in the said connection, the tubular connection being extended within the condensing chambers through the positive electrodes, and above the surface thereof.

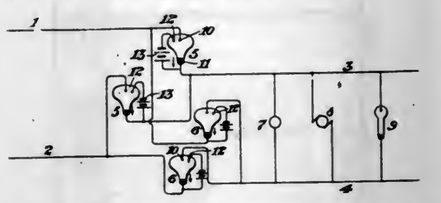
3. In a gas or vapor electric apparatus, a container having multiple condensing chambers, a positive electrode in each chamber, and a negative electrode in a well below the chambers, the well being formed by a tubular connection, the ends of which extend through the positive electrodes within the condensing chambers, and above the surface of the said positive electrodes.

4. In a gas or vapor electric apparatus, a container having multiple condensing chambers, a positive electrode in each chamber, and a negative electrode in a well below the chambers, and tubular connections leading from the negative electrode through the positive electrodes to points above the surface thereof.

5. In a vapor electric apparatus, an exhausted envelop having a plurality of anodes each located in a separate chamber, a cathode, and a tube forming a portion of the said envelop and confining the discharge from the cathode and extending past the openings in the walls of the chambers containing the anodes.

[Claims 6 and 7 not printed in the Gazette.]

1,110,556. ELECTRICAL DISTRIBUTION SYSTEM. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed May 2, 1903, Serial No. 155,308. Divided and this application filed June 9, 1910. Serial No. 566,045. (Cl. 171—253.)



1. In a system of electrical distribution in which current from an alternating source is rectified for use in a direct current receiving circuit, the combination with a plurality of rectifiers characterized by a high starting resistance which starting resistance substantially disappears in a given direction upon the establishment of current flow in that direction, alternating supply mains, connections between said rectifiers and said supply mains and means for overcoming the initial starting resistance of each of said rectifiers in a predetermined direction, of connections for passing rectified currents to the receiving circuit and means for returning such rectified currents to one supply main or the other after traversing the receiving circuit, said means consisting of two like current conducting devices connected in series across the mains and connected at their common point to the work circuit.

2. In a system of electrical distribution in which single phase currents are rectified for a receiving circuit through the agency of vapor rectifiers, the combination with vapor rectifiers adapted to withdraw successive impulses of current from the single phase alternating mains, and starting means therefor, of means for passing said current waves through the receiving circuit, means for returning said waves to the proper single phase main, said last named means consisting of two current transmitting devices connected in series across the alternating current mains and at the common point to the receiving circuit.

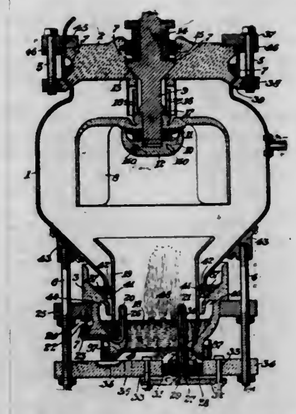
3. The combination with a source of alternating electric currents, of a supply system connected therewith, a direct current work circuit, and gas or vapor devices interposed between the said supply system and the said work circuit, such devices being provided with means for maintaining conditions which permit the flow of current between the supply circuit to one side of the work circuit in one direction only and between the other side of the work circuit and the supply circuit in opposite direction only.

4. The combination with a source of alternating electric currents, of a work circuit, means for transmitting the successive positive currents from the source to one side of the work circuit, and means for transmitting the successive negative currents through the other side of the said work circuit to the source and affording a return path for the successive currents through the work circuit, such means consisting of gas or vapor devices provided with means for maintaining a condition which permits the transmission as described.

5. In a system of electrical distribution, the combination with a single phase alternating source and a direct current work circuit, of two vapor electric devices, each comprising an exhausted container, a main anode and a main vaporizable cathode, each of said rectifiers constituting means for rectifying a train of current impulses from said alternating source for said work circuit and for separating the rectifying operations of the several trains of current impulses, means for connecting one of said anodes to one side of said source and for connecting the other anode to the other side of said source, a common connection from said cathode to one side of said work circuit and means providing a return circuit from the other side of said work circuit for the impulses alternately received from the opposite sides of the source, whereby the impulses from each anode find a complete return circuit through the source.

[Claims 6 to 10 not printed in the Gazette.]

1,110,557. MERCURY-VAPOR RECTIFIER. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Jan. 3, 1911. Serial No. 600,443. (Cl. 175—354.)



1. A container for mercury vapor apparatus comprising a cap perforated for a lead wire, a metal ring or section supporting said cap piece and adapted to transfer heat from within to without the container, a porcelain ring section supporting and insulating said metal section and a metal base cap sealing said container.

2. A container for a mercury vapor apparatus comprising a cap piece perforated for a lead wire, a metal ring section supporting said cap piece and adapted to transfer heat from within to without the container, a porcelain ring section supporting and insulating said metal section, and a metal base cap sealing said container, the said porcelain section being perforated.

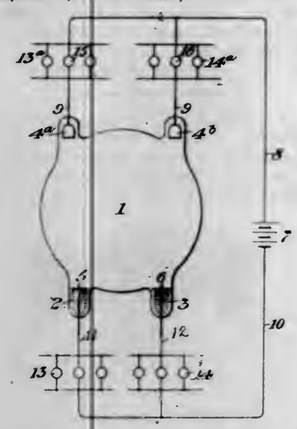
3. A container for mercury vapor apparatus comprising a cap piece perforated for a lead wire, a metal ring-section supporting said cap piece and adapted to transfer heat from within to without the container, a porcelain ring section supporting and insulating said metal section, a metal base cap sealing said container, and an auxiliary anode supported by said base cap and provided with means for making electrical connection therewith.

4. A container for a mercury vapor apparatus comprising a cap piece perforated for a lead wire, a metal ring-section supporting said cap piece and adapted to transfer heat from within to without the container, a porcelain ring section supporting and insulating said metal section and a metal base cap sealing said container, in combination with mercury seals for hermetically sealing the joints between the cap-piece and the ring section and the metal base.

5. A container for a mercury vapor apparatus comprising a porcelain cap piece perforated for a lead wire, a metal ring-section supporting said porcelain cap piece and adapted to transfer heat from within to without the container, a porcelain ring section supporting and insulating said metal section and a metal base cap sealing said container.

[Claims 6 to 15 not printed in the Gazette.]

1,110,558. VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed May 13, 1904, Serial No. 207,757. Divided and this application filed Jan. 4, 1912. Serial No. 669,342. (Cl. 171—253.)



1. A vapor electric apparatus having a plurality of positive electrodes, and a negative electrode, in combination with a separate work circuit connected with each positive electrode.

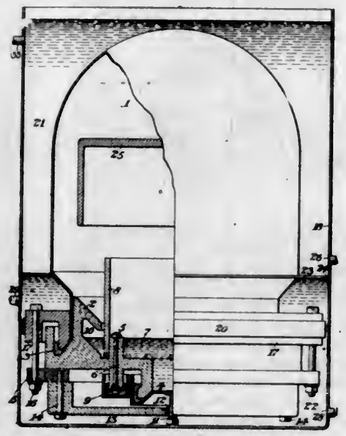
2. A vapor electric apparatus having a plurality of positive electrodes, and a negative electrode, in combination with a generator supplying current to the apparatus, one pole of such generator being connected to the negative electrode and the other pole thereof being connected in multiple to several positive electrodes.

3. A vapor electric apparatus having a plurality of positive electrodes, and a negative electrode, in combination with a generator supplying current to the apparatus, one pole of such generator being connected to the negative electrode and the other pole thereof being connected in multiple to several positive electrodes through separate work circuits.

1,110,559. VAPOR ELECTRIC LAMP AND CONNECTIONS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 19, 1903, Serial No. 148,504. Divided and this application filed Jan. 10, 1912. Serial No. 670,358. (Cl. 176—42.)

A vapor electric device comprising a vertical tubular portion, a condensing chamber at the top thereof, a solid anode within the said chamber and a plurality of vaporizable cathodes disposed at intervals within the vertical tube, the said vaporizable electrodes being connected together outside the tube.

1,110,560. VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 3, 1911, Serial No. 600,443. Divided and this application filed Apr. 3, 1912. Serial No. 688,172. (Cl. 175—354.)



1. A vapor rectifier consisting of a case of conducting material, a positive electrode, a liquid negative electrode, means for insulating the said electrodes from the case and an insulating sleeve or cylinder projecting below and above the surface of the liquid and means for initiating a flow of current from the positive electrode to that portion of the liquid electrode lying inside of said sleeve or cylinder.

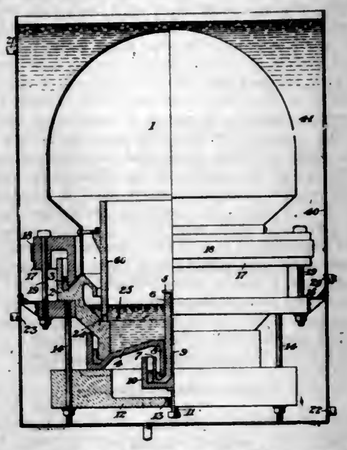
2. A vapor rectifier consisting of a case of conducting material, a positive electrode, a liquid negative electrode, means for insulating the said electrodes from the case, an insulating sleeve or cylinder projecting below and above the surface of the liquid, and means for initiating a flow of current from the positive electrode to that portion of the liquid electrode lying inside of said cylinder or sleeve, and an auxiliary electrode also located within said sleeve or cylinder.

1,110,561. VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 3, 1911, Serial No. 600,443. Divided and this application filed Apr. 3, 1912. Serial No. 688,173. (Cl. 175—354.)

1. The combination in a mercury vapor rectifier, of an anode near the top thereof, a mercury cathode near the bottom theerof, means operated at a selected temperature for cooling the upper portion of the container and independent means operated at a slightly lower temperature for cooling the bottom portion of the container, whereby condensation of vapor within the container occurs at the lower part thereof.

2. A container for a mercury vapor rectifier, comprising an upper condensing portion, a lower cathode portion, an intermediate insulating portion provided with a reëntrant coil, and a mercury cathode at the lower portion of the container, whereby condensed mercury is prevented from flowing along the wall of said insulating portion.

3. A mercury vapor rectifier comprising a container, the upper portion of said container being of metal operating as a main anode, the lower portion of said container being also of metal, a mercury cathode resting thereon and an intermediate material in combination with a single centrally located auxiliary anode mounted on an insulating tube passing through said metal base portion, whereby electrical connection to said auxiliary anode can be made from an external circuit.

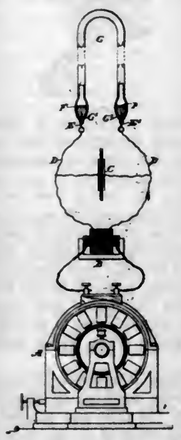


4. A cooling means for a vapor rectifier, comprising a tank, an upper chamber therein and means for cooling said upper chamber, a lower chamber and separate means for cooling said lower chamber, in combination with a diaphragm between the chambers serving to prevent the interfering of the upper and the lower cooling means.

5. A case for a mercury vapor rectifier, having three parts consisting of two conducting portions and an insulating band therebetween, in combination with an insulating auxiliary electrode lead passing through one of said conducting portions.

[Claims 6 to 12 not printed in the Gazette.]

1,110,562. ELECTRICAL PRODUCTION OF LIGHT. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 11, 1898, Serial No. 677,199. Divided and this application filed May 2, 1912. Serial No. 694,648. (Cl. 176—42.)



1. The method of operating gas or vapor electric lamps having a mercury cathode and an anode therein which consists in applying to the electrodes an electric potential exceeding 500 volts per foot of luminous column.

2. The method of operating gas or vapor electric lamps having a mercury cathode and an anode therein, the dimensions of the lamp being approximately 1 foot in length and ¼ inch in diameter which consists in applying to the electrodes an electric potential exceeding 500 volts per foot of luminous column.

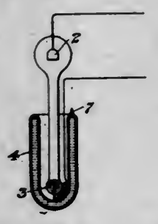
3. The combination of a vapor electric lamp, comprising an exhausted container, a vaporizable electrode material therein, said lamp operating at a relatively high vapor pressure, and special means for automatically bringing the vapor pressure in said lamp from the low pressure inoperative condition to the high pressure operating condition.

4. The combination of a vapor electric lamp comprising an exhausted container, a vaporizable electrode material therein, said lamp operating at a relatively high vapor pressure, and special means for automatically bringing the vapor pressure in said lamp from the low pressure inoperative condition to the high pressure operating condition, said means comprising a resonating electrostatic capacity connected with the supply circuit to the lamp.

5. The method of operating electric apparatus comprising an hermetically sealed container, a mercury cathode and an anode, said container being exhausted to a high degree of purity which consists in raising the temperature of the cold lamp until the starting resistance falls and then maintaining the tube at a vapor density requiring at least 500 volts per foot of tube.

[Claims 6 and 7 not printed in the Gazette.]

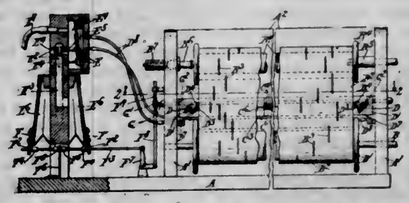
1,110,563. LIGHT-TRANSFORMING COMPOSITION. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 3, 1901, Serial No. 54,179. Divided and application filed Sept. 15, 1908, Serial No. 453,187. Divided and this application filed Oct. 20, 1913. Serial No. 796,169. (Cl. 134—1.)



1. A light transforming material comprising a solution of rhodamin carried in a body of fish glue.

2. A light transforming material constituted by a fluorescent dye carried in a body of fish glue.

1,110,564. PIANO-PLAYER. FRED J. HILL, Chicago, Ill. Filed Dec. 10, 1910. Serial No. 596,570. (Cl. 84—161.)



1. A player piano having a tracker plate at all times in contact with the note sheet and means for bodily displacing it in a path inclined to its longitudinal axis.

2. A player piano having a tracker plate and automatic means for diagonally moving it, said tracker plate being at all times in contact with the note sheet.

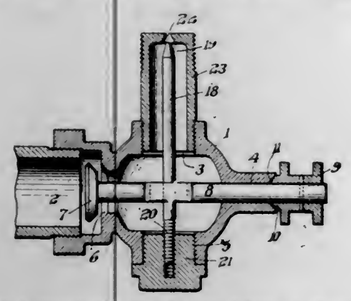
3. A player piano having a tracker range and a tracker plate and means for moving it in a path inclined to its longitudinal axis thereon, said tracker plate being at all times in contact with the note sheet, said range and plate being provided with registering note ducts.

4. A player piano having a tracker range, a tracker plate thereon, and means for automatically, diagonally moving it, said tracker plate being at all times in contact with the note sheet, said range and plate being provided with registering note ducts.

5. A player piano having a fixed tracker range and a tracker plate and means for sliding it diagonally thereon, said tracker plate being at all times in contact with the note sheet, said range and plate being provided with registering note ducts.

[Claims 6 to 27 not printed in the Gazette.]

1,110,565. VALVE. WILLIAM KANE, Philadelphia, Pa. Filed Dec. 1, 1913. Serial No. 803,867. (Cl. 137—4.)



1. In a device of the character stated, a hollow valve body having an inlet and an outlet therein, a valve member adapted to control said inlet, a stem secured to said valve member and projecting exterior of said valve body, means connected to the extended portion of said stem for causing said valve to shift from one position to another, and means independent of the valve and its operating means to proportion the area of said outlet in accordance with the pressure at said inlet, said proportioning means being normally concealed within said valve body.

2. In a device of the character stated, a hollow valve body having an inlet and an outlet therein, a valve member adapted to control said inlet, a stem secured to said valve member and projecting exterior of said valve body, means connected to the extended portion of said stem for causing said valve to shift from one position to another, said means embodying a gravity actuated mechanism, a needle valve adjustably mounted within said valve body for varying the area of said outlet in accordance with the pressure at said inlet, and means for fixing said needle valve in adjusted position and concealing said needle valve within said valve body.

3. In a device of the character stated, a hollow body having an inlet and an outlet therein, a valve member adapted to control said inlet, a stem secured to said valve member and projecting exterior of said valve body, said stem being slidably mounted in said body and having a slot therein, gravity controlled means for positively shifting said valve from one position to another, a needle valve passing through said slot and adjustably mounted for varying the area of said outlet, and means secured to said valve body for fixing said needle valve in adjusted position, and concealing said needle valve within said body.

4. In a device of the character stated, a hollow valve body having an inlet and an outlet therein, a valve member adapted to control said inlet, a stem secured to said valve member and projecting exterior of said valve body, means carried by the extended end of said stem for sealing the joint between said stem and said valve body in open position of said valve, means connected to the extended portion of said stem, for causing said valve to shift from one position to another, said means embodying a gravity actuated mechanism for positively actuating said stem and holding the same fixed in either open or closed position of said valve, a needle valve adjustably mounted in said valve body for varying the area of said outlet in accordance with the pressure of said inlet, and means for fixing said needle valve in adjusted position and concealing said needle valve within said valve body.

5. In a device of the character stated, a hollow valve body having an inlet and an outlet therein, a valve member adapted to open and close said inlet, a stem for said valve member slidably mounted in said valve body, said parts being arranged so that the pressure is back of the valve in closed position, said stem projecting exterior of said valve body and having a slot therein in alinement with said outlet, a grooved spool fixed to the extended portion of said stem, an eccentric mechanism operating in said groove to shift said stem in either direction, a weighted arm secured to said extension for positively actuating said parts and holding said valve in either open or closed position, a needle valve adjustably mounted within said valve body and passing through said slot, and means for fixing said needle valve in adjusted position and concealing said needle valve within said valve body.

[Claims 6 and 7 not printed in the Gazette.]

1,110,566. CLIMBING DEVICE. RICHARD LABOHDA, San Francisco, Cal., assignor of one-half to Peter Cuellas, San Francisco, Cal. Filed Apr. 27, 1914. Serial No. 835,310. (Cl. 227—8.)

1. A climbing device comprising a tube having offset ends; a pulley rotatably mounted on the tube; a suspended rope passing through the tube and around the pulley; and oscillating pedals loosely secured to the tube and adapted to engage and rotate the pulley and cause the same to climb the rope when either pedal is moved downward.

2. A climbing device comprising a tube having offset ends; a pulley rotatably mounted on the tube; a suspended rope passing through the tube and around the pulley; and oscillating pedals loosely secured to the tube and adapted to engage and rotate the pulley and cause the same to climb the rope when either pedal is moved downward and to release the said pulley when either pedal is moved upward.

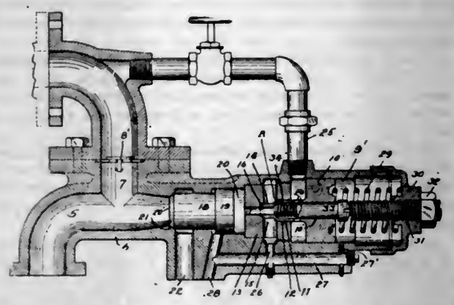
3. A climbing device comprising a tube having offset ends; a pulley rotatably mounted on the tube; a suspended rope passing through the tube and around the pulley; oscillating pedals losely secured to the tube and adapted to engage and rotate the pulley and cause the same to climb the rope when either pedal is moved downward and to release the said pulley when either pedal is moved upward; and means for normally raising the pedals.

4. A climbing device comprising a tube having offset ends; a pulley rotatably mounted on the tube; a suspended rope passing through the tube and around the pulley; oscillating pedals loosely secured to the tube and adapted to engage and rotate the pulley and cause the same to climb the rope when either pedal is moved downward and to release the said pulley when either pedal is moved upward; means for normally raising the pedal; and means operated by the pedals and adapted to engage the hub of the pulley for the purpose of controlling the reverse rotation thereof.

5. A climbing device comprising a tube having offset ends; a sleeve rotatably mounted in the tube; a pulley secured to the sleeve; a shaft rotatably mounted within the sleeve; pedals loosely mounted upon the shaft; and means adapted to operatively connect each pedal with the pulley when the said pedals move downward and to release the pedals from the pulley when the said pedals are moved upward.

[Claims 6 to 9 not printed in the Gazette.]

1,110,567. UNLOADER-VALVE. CHESTER B. MCAULAY, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Aug. 6, 1913. Serial No. 783,370. (Cl. 103—89.)



1. In a valve structure of the class described, the same comprising a valve casing formed with a channel for connection to a source of fluid supply under pressure and to a pressure accumulating chamber for containing fluid under pressure, a fluid escape channel formed in said casing, a valve open at its forward end to the pressure in said first mentioned channel and controlling a communication from said first mentioned channel to said fluid escape channel and seated to close said communication by the pressure of the fluid against the rear of the same, and means operated by the fluid in the first mentioned channel on the same attaining a determinable pressure for cutting off the fluid pressure to the rear of said valve and for releasing the same from in rear of the valve to permit the fluid pressure in said first mentioned channel to act directly on and unseat said valve and escape through said fluid escape channel.

2. In a valve structure of the class described, the same comprising a valve casing formed with a channel for connection to a source of fluid supply under pressure and to a pressure accumulating chamber for containing fluid under pressure, a fluid escape channel formed in said casing, a valve exposed at its forward end to the pressure in said first mentioned channel and controlling a communication from said first mentioned channel to said fluid escape channel, a fluid connection from said first mentioned channel to a point in rear of said valve for admitting fluid under pressure to the rear of said valve for seating the same, means operated in one direction by the pressure of the fluid in said first mentioned channel on the same attaining a determinable pressure for cutting off the fluid pressure to the rear of said valve and for releasing the same from the rear of said valve to permit the fluid pressure in said first mentioned channel to act directly on and unseat said valve and escape through said fluid escape channel, and spring pressed means for operating said last mentioned means in the opposite direction on the reducing of said fluid pressure below a determinable pressure.

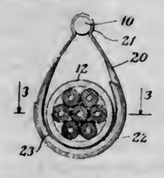
3. In a valve structure of the class described, the same comprising a valve casing formed with a channel for connection to a source of fluid supply under pressure and to a pressure accumulating chamber for containing fluid under pressure, a fluid escape channel formed in said casing, a valve exposed at its forward end to the pressure in said first mentioned channel and controlling a communication from said first mentioned channel to said fluid escape channel, a fluid connection leading from said first mentioned channel to a point in rear of said valve, a piston in said fluid connection, a spring for normally maintaining said piston seated to permit the flow of the fluid to the rear of said valve to maintain the same seated, said piston being unseated by the pressure of the fluid in the first mentioned channel on the same attaining a given pressure to act directly on and cut off the flow of the fluid pressure to the rear of said valve and for releasing the same from the rear of said valve, to permit the fluid pressure in said first mentioned channel to unseat said valve and escape through said fluid escape channel.

4. In a valve structure of the class described, the same comprising a valve casing provided with a channel for connection to a source of fluid supply under pressure and to a pressure accumulating chamber for containing fluid under pressure, a fluid escape channel formed in said casing, a pressure controlled valve exposed at its forward end to the pressure in said first mentioned channel and controlling a communication from said first mentioned channel to said fluid escape channel, a fluid connection leading from said first mentioned channel to a point in rear of said valve, and a pressure operated valved piston for controlling the flow of the fluid from said fluid connection to the rear of said valve.

5. In a valve structure of the class described, the same comprising a valve casing provided with a channel for connection to a source of fluid supply and to a pressure accumulating chamber for containing fluid under pressure, a fluid escape channel formed in said casing, a pressure operated valve exposed at its forward end to the pressure in said first mentioned channel and controlling a communication from said first mentioned channel to said fluid escape channel, a fluid connection leading from said first mentioned channel to a point in rear of said valve, a fluid pressure escape channel formed in said casing at the rear of said valve, and a spring seated pressure operated valved piston in said casing and adapted when seated for admitting a flow of fluid from said first mentioned channel through said connection to the rear of said valve for seating the same and when unseated for cutting off the flow of the fluid to the rear of said valve and for opening the pressure escape channel at the rear of said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,110,568. CABLE-HANGER. JOHN EDWARD OGDEN, Brooklyn, N. Y. Filed Jan. 11, 1913. Serial No. 741,381. (Cl. 248—33.)

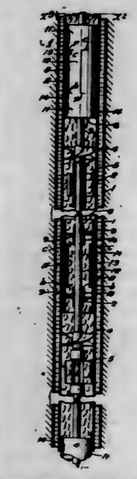


1. A cable hanger comprising a single punching or stamping of resilient sheet metal formed to compose a loop adapted to engage a messenger wire, and a pair of similar hooks curved toward each other extending from opposite ends of the loop and having correspondingly curved cross-sections whereby they are adapted to be

forced oppositely around a cable and sprung into an interlocking position.

2. A cable hanger comprising a single punching or stamping of resilient sheet metal formed to compose a clamping loop adapted to grip a messenger wire, and a pair of sister hooks having correspondingly curved cross-sections, distended from the loop and adapted to be forced oppositely around a cable and sprung into an interlocking position in which the hooks are nested together.

1,110,569. SELF-CENTERING HYDRAULIC BEARING FOR PUMP-SHAFTS. JAMES R. PALMER and FENN H. PALMER, San Bernardino, Cal. Filed Aug. 19, 1913. Serial No. 785,557. (Cl. 103—43.)



1. In a hydraulic bearing for a shaft within tubing containing liquid, curved surfaces concentric with, spaced from, fixed to and revolving with the shaft and spaced from the tubing, and means to force liquid between said surfaces and the tubing.

2. In a hydraulic bearing for a shaft within tubing containing liquid substantially as set forth, a sleeve fixed to the shaft and revolving therewith and having curved surfaces concentric with the shaft and spaced apart from the shaft and tubing, and also having means to act upon the liquid to force the same into the space between said concentric curved surfaces and the tubing.

3. The hydraulic bearing for a shaft within tubing containing liquid substantially as set forth comprising a sleeve fixed to the shaft and having curved surfaces spaced from and concentric with the tubing, and means revolving with the shaft to force liquid into the space between said surfaces and the tubing.

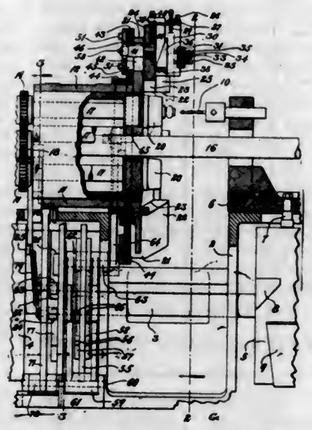
4. The combination with tubing filled with water and a shaft inside the tubing, of cylindric faces symmetrically disposed between and spaced apart from the shaft and tubing, and means rotating with the shaft to force liquid into the space between said faces and the tubing.

5. The combination with a shaft and tubing around the shaft adapted to convey liquid, of a cylindrical sleeve fixed to the shaft and provided with cylindric faces slightly spaced apart from the tubing, and means carried by the sleeve to force liquid from the interior of the sleeve into the spaces between said faces and said tubing.

[Claims 6 to 9 not printed in the Gazette.]

1,110,570. SCREW-MACHINE. GEORGE B. PICKOP, Hartford, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 24, 1913. Serial No. 802,591. (Cl. 29—37.)

1. In a machine of the class described, the combination of a plurality of carriers, a main cam, individually adjustable auxiliary cams for imparting to said carriers varying movements, and means for transferring the effect of the main cam to the auxiliary cams.



2. In a machine of the class described, the combination of a plurality of carriers, individually adjustable cams for imparting to said carriers varying movements, an oscillatory member on which the cams are mounted, and means for operating said oscillatory member at an approximately uniform speed.

3. In a machine of the class described, the combination of a plurality of slides, individually adjustable cams for imparting to said slides varying movements, a ring on which said cams are mounted, and means for oscillating said ring.

4. In a machine of the class described, the combination of a plurality of slides, a main cam, a ring, individually adjustable auxiliary cams supported by said ring, for imparting to said slides varying movements, and means operative by said main cam for operating said ring.

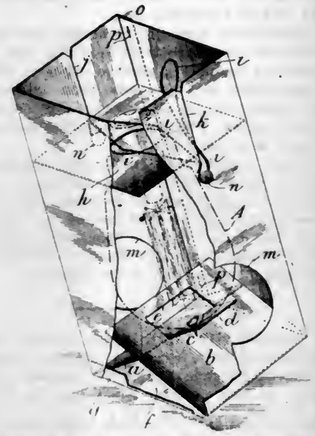
5. In a machine of the class described, the combination of a plurality of slides arranged in annular order, main cam, a support, individually adjustable cams on said support, for imparting to said slides varying movements, and means for transferring the effect of the main cam to the auxiliary cams.

[Claims 6 to 8 not printed in the Gazette.]

1,110,571. STORAGE AND TRANSIT OF INCANDESCENT ELECTRIC LAMPS. GERALD POULTON, London, England. Filed Nov. 11, 1912. Serial No. 730,686. (Cl. 229—89.)

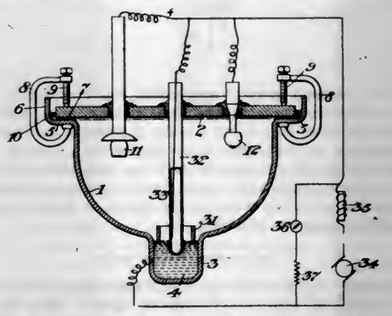
1. Means for enveloping incandescent electric lamps, comprising a wrapper, a flap constituting an extension of one wall having a projecting and perforated tongue producing shoulders at a distance from the hinge thereof greater than half the width of the adjacent walls and a flap constituting an extension of the opposite wall having an opening therein producing a single intermediately disposed shoulder at a similar distance from the adjacent walls, the said flaps being adapted to be turned into the wrapper to cause the tongue to enter the opening until the shoulders engage and lock one flap at an angle to the other thereby providing intersecting surfaces for supporting the lamp at its pip end.

2. Means for enveloping incandescent electric lamps comprising a wrapper open at one end, a flap, constituting an extension of one wall at the other end having a projecting and perforated tongue producing shoulders at a distance from the hinge thereof greater than half the width of the adjacent walls, a flap constituting an extension of the opposite wall having an opening therein producing a single intermediately disposed shoulder at a similar distance from the adjacent walls, the said flaps being adapted to be turned into the wrapper to cause the tongue to enter the opening until the shoulders engage and lock one flap at an angle to the other thereby providing intersecting surfaces supporting the lamp at its pip end and a third flap constituting an extension of one of the walls adjacent to both flaps aforesaid, adapted to close this end of the wrapper and protect the flaps.



3. In means for enveloping incandescent electric lamps, the combination with an open ended wrapper having slits in opposite walls at the open end and a support near the other end for a lamp to rest upon and a self adjusting removable collar therein adapted to be passed over the cap of the lamp leaving the said cap exposed free to enter a test socket of a twin thread adapted to be passed along the slits in the wrapper so as to bear upon the collar at opposite sides of the cap whatever the position of the latter, so as to exert a distributed pressure upon the collar preventing tilt and pressing the lamp upon its support, and means for securing the ends of such thread to the wrapper.

1,110,572. GAS OR VAPOR CONVERTER DEVICE. MAX VON RECKLINGHAUSEN, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 12, 1903. Serial No. 180,965. (Cl. 175—354.)



1. The combination with a metallic vessel and a metallic cover or cap therefor, of a positive electrode supported below the said cap, a rod constituting the direct means of support, an insulating tube surrounding the said rod and a stuffing box surrounding the said tube, and means for pressing the insulating tube upon both inside and outside by packings of heat-resisting material whereby both insulation and support are provided for the positive electrode.

2. In a vapor converter, a metallic receptacle, an electrode contained therein and in contact therewith, positive electrodes electrically insulated therefrom, and a mercury seal between the positive electrodes and the container.

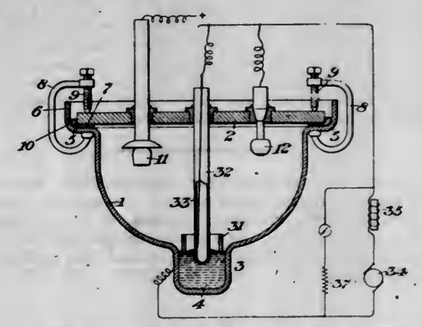
3. In a vapor converter having a positive electrode and a metallic support therefor provided with a stem liable to become highly heated during operation, a tube surrounding the said stem also in danger of excessive heating during the operating period, in combination with a packing of heat resisting material interposed between the stem and the tube.

4. In a vapor converter having a positive electrode and a metallic support therefor provided with a stem liable to become highly heated during operation, a tube surrounding the said stem also in danger of excessive heating during the operating period, in combination with a packing of heat resisting material interposed between the stem and the tube and protected by a liquid seal.

5. In a vapor electric apparatus, the combination of a vaporizable electrode, an anode and means for preserving the anode from contact with particles of vaporizable material condensed and falling in said apparatus.

[Claims 6 to 9 not printed in the Gazette.]

1,110,573. GAS OR VAPOR CONVERTER DEVICE. MAX VON RECKLINGHAUSEN, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Nov. 12, 1903, Serial No. 180,965. Divided and this application filed Oct. 20, 1910. Serial No. 588,166. (Cl. 175—354.)



1. A vapor electric apparatus comprising a metal container, a mercury cathode therein and an insulating shield separating the operating portion of the surface of said electrode from said container.

2. A mercury vapor apparatus comprising an exhausted container of metal and a cathode therein, together with means for preventing the negative spot from reaching the surface of the container.

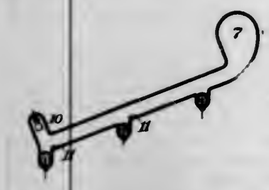
3. A vapor electric apparatus comprising an exhausted container, a cathode therein, an insulating ring surrounding a portion of the surface of the said cathode and extending above said cathode, together with means for exciting said cathode at the portion of its surface lying within said ring.

4. A vapor electric apparatus comprising an exhausted container of metal, an electrode of liquid material capable of wetting to some degree the surface of said container and means for restraining the operating current at the surface of the said electrode from reaching the wall of said container.

1,110,574. ELECTRODE FOR GAS OR VAPOR ELECTRIC APPARATUS. MAX VON RECKLINGHAUSEN, Paris, France, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Feb. 14, 1903, Serial No. 143,317. Divided and application filed Feb. 5, 1907, Serial No. 355,845. Divided and this application filed Apr. 29, 1911. Serial No. 624,105. (Cl. 176—42.)

1. A mercury vapor apparatus comprising an exhausted container, said container having a tubular portion making

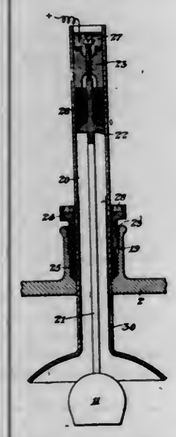
an oblique angle to the horizontal and a condensing chamber located at the upper end of the inclined portion, a mercury electrode at the lower end of said container and at least one electrode located on the under side of said tubular portion intermediate between said condensing chamber and said first named electrode.



2. A vapor electric apparatus comprising an exhausted container, said container including an inclined portion making an oblique angle with a vertical, a condensing chamber at the upper end thereof draining into said inclined portion, a plurality of electrodes therefor, one being a mercury electrode at the other end of said inclined portion located to receive the condensation passing through said inclined portion, the remaining mercury electrodes being located above said first named electrode in the said inclined position.

3. A mercury vapor apparatus comprising an exhausted container, said container including two tubular portions making an oblique angle with a horizontal, a plurality of electrodes therein, one being a mercury electrode located in a pocket below the other electrodes and communicating with both said tubular portions, the other electrodes being located in said extensions and at least one of said electrodes so located being a solid anode.

1,110,575. VAPOR ELECTRIC APPARATUS. MAX VON RECKLINGHAUSEN, Paris, France, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Nov. 12, 1903, Serial No. 180,965. Divided and this application filed June 13, 1913. Serial No. 773,381. (Cl. 176—42.)



1. In a vapor electric apparatus the combination with an exhausted container, an anode therein, and a supporting stem for said anode, of an insulating piece insulating said stem from said container and protecting the length of said stem within said container, said anode covering the end of said insulating piece.

2. In a vapor converter the combination with a hollow electrode and its leading-in conductor, of an insulating tube surrounding the conductor and having its end surrounded by the electrode.

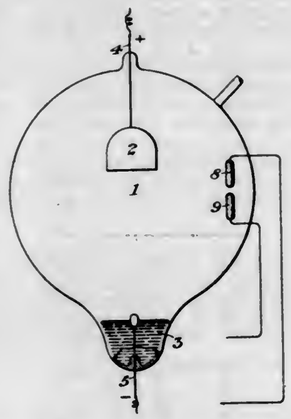
3. In a vapor electric apparatus the combination with an exhausted container, an anode therein, and a supporting stem for said anode, of an insulating piece insulating said stem from said container and protecting the length of said stem within said container, said electrode protecting the end of said insulating piece.

4. The combination with an exhausted container and electrodes therein, a supporting body for one of said electrodes and an insulating surface exposed within the container separating said electrode from said container whereby a portion of the said surface is covered and protected from actions within the container and an undeteriorated area is secured.

5. In a vapor apparatus, a conducting container, said container being exhausted to a high degree, an electrode therein, and insulating material between said container and said electrode, together with means for maintaining a portion of the surface of the insulating material exposed to the exhausted space, in effective condition.

[Claims 6 and 7 not printed in the Gazette.]

1,110,576. MEANS FOR IMPROVING A VACUUM. MAX VON RECKLINGHAUSEN, Suresnes, France, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 29, 1913. Serial No. 781,896. (Cl. 176—42.)

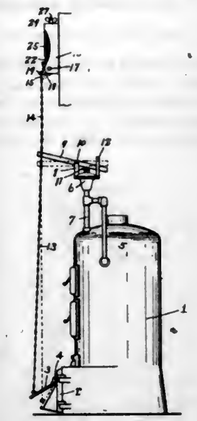


In a vacuum electric apparatus, the combination with an hermetically sealed and exhausted envelop and suitable electrodes therein, of a body of metallic boron therein shaped as an electrode for an electric arc, a second electrode coöperating therewith, together with electrical means for temporarily passing current from said boron to said coöperating electrode whereby the boron is heated and the residual gases are absorbed.

1,110,577. AIR-DAMPER RELEASE FOR FURNACES. SAMUEL B. REMINGTON, Adrian, Mich. Filed Dec. 11, 1912. Serial No. 736,058. (Cl. 236—6.)

1. In an automatic release for air dampers, a pressure actuated diaphragm, a pivoted lever connected to said diaphragm to be actuated thereby, a pivotally mounted detent, a spring for restraining said detent, means for varying the tension of said spring, means for detachably connecting said detent to said lever to permit a disengagement of said parts as the lever moves upon its pivot in one direction, an air damper, and means connecting said air damper to said lever.

2. In an automatic release for air dampers, a pivotally mounted detent, a spring detachably connected to said detent, an adjusting screw in engagement with said spring, a buffer to cushion the recoil of the detent, a pivoted lever, means for detachably connecting said lever to said detent, a diaphragm connected to said lever to impart movement thereto, a hinged air damper, and means connecting said damper to said lever.



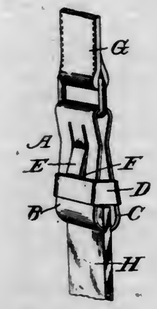
1,110,578. HANGER FOR TROLLEY-WIRES. HERMANN SCHÜTTE, Pittsburgh, Pa. Filed Mar. 2, 1909. Serial No. 480,962. (Cl. 191—40.)

1. A hanger for trolley-wires, comprising a loop-shaped link for receiving the messenger-cable said link having upwardly-projecting ends above the cable, means for clamping said ends together, and a hanger-rod provided with a loop-shaped upper end pivotally suspended from the lower portion of the link and with means at its lower end for connecting it with the ear or clamp of a trolley-wire.

2. A hanger for trolley-wires, comprising a loop-shaped link having inwardly-projecting portions forming a seat for the messenger-cable, upwardly-projecting ends above the cable, clamping means for the upper ends of the link, and a hanger-rod provided with a loop-shaped portion at its upper end pivotally connected with the lower end of the loop-shaped link and with means at its lower end for connecting it with the ear or clamp for the trolley-wire.

3. A suspension-clip for the hangers of wires, comprising a loop-shaped body for receiving the loop-shaped end of the hanger-rod, a curved middle portion or seat for the messenger-cable, and projecting upper ends one end being provided with a bent-out portion and the other with a lip, and a clamping screw and nut connecting the upper ends, said bent-out portion and lip serving for locking the head of the screw-bolt and the screw-nut in position.

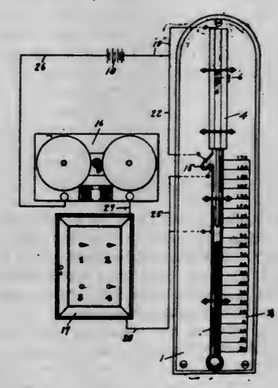
1,110,579. CLASP. FREDERICK SEEBER, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,781. (Cl. 24—260.)



1. A clasp comprising opposing jaws normally spread but adapted to yield toward each other, a clamping band mounted to slide simultaneously along both jaws, and a resilient tongue integral with one of said jaws for retaining said band in either locked or unlocked position.

2. As an article of manufacture, a clasp comprising an integral gripping member having opposing jaws and a locking tongue cut from one of said jaws, and a clamping band mounted to slide simultaneously along both jaws and over said tongue, the latter serving to retain said band in either a locked or unlocked position.

1,110,580. TEMPERATURE-ALARM APPARATUS. HENRY R. SHIRLEY, St. Paul, Minn., assignor of one-half to James A. Ferris, Rossland, Canada. Filed Feb. 10, 1913. Serial No. 747,323. (Cl. 177—302.)

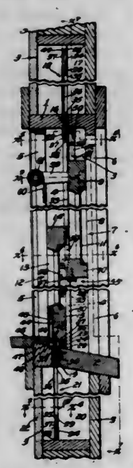


1. A temperature alarm apparatus comprising in combination, a thermometer, a contact element having a shank projecting into and closely fitting the interior of the tube of said thermometer and having a flattened portion forming with said tube a restricted passage to permit rising of the mercury in said tube along said shank, said tube having a pocket to permit overflow of the mercury therein, and a circuit including a source of supply of current and a signal device with one terminal of the circuit connected with said contact element and the other terminal disposed in the path of rise of the mercury in said tube, and branch conductors from said circuit having terminals disposed in spaced relation with respect to each other in said pockets, said conductors being adapted to permanently close the circuit when the mercury rises to a predetermined point, substantially as described, and connections to the said branch conductors.

2. A temperature alarm apparatus comprising in combination, a thermometer, a contact element having a shank

projecting into and closely fitting the interior of the tube of said thermometer and having a flattened portion, forming in conjunction with said tube, a restricted passage to permit the rising of the mercury in said tube along said shank, an adjusting device, means carried by said shank for engaging said adjusting device, whereby the projection of said shank into said tube may be varied, a pocket in said tube to permit the overflow of the mercury into said pocket, a circuit including a source of current supply and an indicating signal device, said circuit having one terminal connected with said contact element and the other terminal disposed in the path of rise of the mercury in said tube, branch conductors disposed in spaced relation with respect to each other in said pocket, said conductors being adapted to permanently close the circuit when the mercury rises to a predetermined point, and an audible signal device connected in conjunction with the aforesaid indicating signal device.

1,110,581. DISAPPEARING-SCREEN WINDOW. CLINTON E. SOMERS, Los Angeles, Cal assignor to Elmer T. Galley, Los Angeles, Cal. Filed Mar. 12, 1913. Serial No. 753,823. (Cl. 156—14.)



1. In disappearing screen windows, the combination of wire screen with a frame for said screen, said frame comprising a metal reinforcing border that has a concaved inner periphery forming a hook, and wood lining fillets fitting said hook and adapted to bind said screen into the concaved periphery of said metal frame.

2. In disappearing screen windows, the combination of wire screen with a reinforced frame for said screen, said frame comprising on one side a sheet metal reinforcing portion, said metal reinforcing portion having lock miter joints near its corners, and the other side of said frame comprising wood lining fillets which coöperate with the said metal portion and serve to bind the screen onto same.

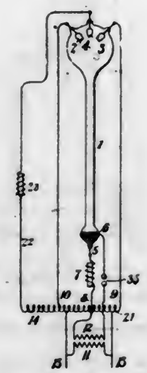
3. In disappearing screen windows, the combination of wire screen with a frame for said screen, said frame comprising a metal reinforcing border that has a concaved periphery, and wood lining fillets adapted to bind said screen into the concaved periphery portion of said metal frame, said frame also having U-shaped guiding means bent outward from its sides.

4. In disappearing screen windows, the combination of a sill having a sill passage, a thin screen frame adapted to pass through said sill passage into a concealed position, a sash having a bottom rail that is grooved on its lower edge, a thin metal weather strip mounted on said sill and outside said sill passage, the upper edge of said screen frame and said weather strip being adapted to extend up into the groove in said bottom rail when the sash is on the sill.

5. In a window, the combination of a top and bottom sash, and a fly-guard comprising a fly proof material, and resilient means for reinforcing said material.

[Claims 6 to 8 not printed in the Gazette.]

1,110,582. SINGLE-PHASE GAS OR VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed June 13, 1903. Serial No. 161,282. (Cl. 176—45.)



1. In a system of electrical distribution the combination with a mercury vapor apparatus requiring a critical starting strain, an alternating supply therefor and means for impressing such critical strain upon such apparatus, of means for varying the relative time of the application of said critical strain, such means including a potential raising transformer and an exciting circuit therefor consisting of phase controlling means in series with the transformer primary across the alternating current supply and a second phase controlling means in shunt thereto.

2. In a system of electrical distribution the combination with a mercury vapor apparatus requiring a critical starting strain, an alternating supply therefor and means for impressing such critical strain upon such apparatus, of means for varying the relative time of the application of said critical strain, such means including a potential raising transformer and an exciting circuit therefor together with an inductance in series therewith across the said source and a resistance in shunt thereto.

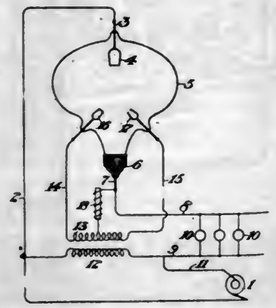
3. A starting system, comprising a mercury vapor device, a cathode therein, a starting band for applying a critical strain to said cathode, a transformer for applying a high voltage to said starting band and means for supplying said transformer from the mains supplying the vapor device and means for varying the phase of current supplied by said transformer relative to the supply circuit.

4. A starting system comprising a mercury vapor device, a cathode therein, a starting band for applying a critical strain to said cathode, a transformer for applying a high voltage to said starting band and means for supplying said transformer from the mains supplying the vapor device and means for varying the phase of current supplied by said transformer relative to the supply circuit, said last named means including resistance and inductance in shunt and in series with the primary winding of said transformer.

5. A starting system for a mercury vapor apparatus having a cathode requiring a critical starting strain, comprising means for applying a high voltage impulse to said cathode, said means including a transformer connected to the source supplying said vapor electric device and means for controlling the phase of the voltage of said transformer, such means comprising serially connected devices for determining the general phase of the magnetizing current of said transformer and a shunt circuit of different characteristics from said primary winding for adjusting the phase of the current in said primary winding to lag or to lead as required.

[Claim 6 not printed in the Gazette.]

1,110,583. ELECTRICAL DISTRIBUTION SYSTEM. PERCY H. THOMAS, Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 4, 1903. Serial No. 171,881. (Cl. 171—253.)



1. In a system of electrical distribution in which currents from an alternating source are rectified for use in a direct current work circuit through the agency of a vapor electric rectifier comprising an exhausted container, a plurality of anodes and a cathode therein, the method of sustaining the activity of the cathode and maintaining the rectifier in operative condition independently of work currents, which consists in rectifying a limited quantity of energy from the source within the container independently of the work currents and passing the direct currents thus produced through the cathode of the work currents.

2. In a system of electrical distribution in which currents from an alternating source are rectified for use in a direct current work circuit through the agency of a vapor electric rectifier comprising an exhausted container, a plurality of anodes and a cathode therein, the method of sustaining the activity of the cathode and maintaining the rectifier in operative condition independently of work currents, which consists in deriving energy from a source of alternating potential, transforming this energy to produce alternating electric current which is electrically independent of the work current, rectifying the electrically independent energy so derived within the main container and passing the rectified current through the main cathode whereby this cathode is maintained in active condition.

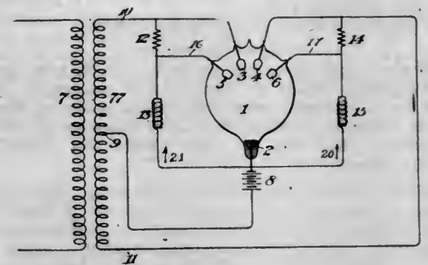
3. In a system of electrical distribution, the combination with a vapor converter having a negative electrode and a plurality of positive electrodes, or sets of positive electrodes, of two electric circuits both connected to the negative electrode and each connected with a separate positive electrode or set of positive electrodes, one of the said circuits constituting the transmission circuit and the other being connected with an alternating source and means including said vapor converter for maintaining a continuous flow of current from said last named circuit.

4. In a system of electrical distribution, a transmission circuit including a vapor converter having a negative electrode and a plurality of positive electrodes, in combination with means for keeping the negative electrode in operative condition, such means consisting of an independent alternating current source, in combination with means for rectifying current from said last named source in the said vapor rectifier.

5. The combination with a vapor converter, of a supply circuit, and a work circuit between which the converter acts as a transmitting medium, and an independent circuit including an alternating source, the converter having a negative electrode common to the work circuit and the independent circuit, and having a plurality of positive electrodes for each of the said circuits.

[Claims 6 to 13 not printed in the Gazette.]

1,110,584. MEANS FOR KEEPING VAPOR-CONVERTERS ALIVE. PERCY H. THOMAS, East Orange, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 24, 1903. Serial No. 186,489. (Cl. 171—253.)



1. In a circuit containing a vapor converter requiring to be kept alive and having a negative electrode, one or more main positive electrodes and one or more supplemental positive electrodes, the method of supplying current through the converter from an alternating current source at the natural zero point in the supply, which consists in accumulating an inductive charge during one alternation in shunt to the converter and discharging the energy at the appropriate time through the supplemental electrode and the negative electrode.

2. In a circuit containing a vapor converter requiring to be kept alive and having a negative electrode, one or more main positive electrodes and one or more supplemental positive electrodes, the method of supplying current through the converter from an alternating current source at the natural zero point in the supply, which consists in causing current to pass through a path including a main positive electrode and the negative electrode during one alternation, accumulating an inductive charge during the same alternation in shunt to the converter, and discharging the energy accumulated in the charge at the appropriate time through a path including a supplemental electrode and the negative electrode.

3. In a system of electrical distribution, comprising a source of alternating current supply, a direct current work circuit, and an interposed vapor converter, the method of keeping the converter alive and maintaining a continuous supply of current in the work circuit, which consists in applying to the converter alternately from opposite terminals of the supply source impulses of like phase representing a fractional part of the electro-motive-force of the supply, and, at times of the natural zero for the said impulses, applying to the converter impulses accumulated substantially from the entire electro-motive-force of the supply.

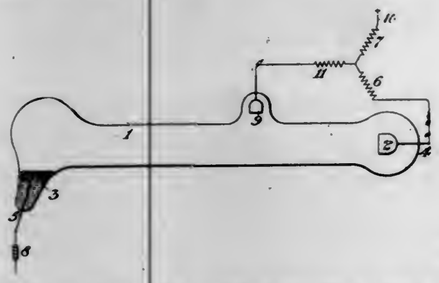
4. In a system of electrical distribution, comprising a source of alternating current supply, a direct current work circuit including a source of counter-electro-motive-force, and an interposed vapor converter, the method of keeping the converter alive and maintaining a continuous supply of current in the work circuit, which consists in applying to the converter alternately from opposite terminals of the supply source impulses of like phase representing a fractional part of the electro-motive-force of the supply, simultaneously accumulating an inductive charge under the influence of substantially the entire electro-motive-force of the supply, at times of the natural zero for the said impulses, emptying the said charge through the converter.

5. In a system of electrical distribution, comprising a source of alternating current supply, a direct current work circuit including a source of counter-electro-motive-force.

and an interposed vapor converter, the method of keeping the converter alive and maintaining a continuous supply of current in the work circuit, which consists in applying to the converter alternately from opposite terminals of the supply source impulses of like phase representing a fractional part of the electro-motive-force of the supply, simultaneously accumulating an inductive charge under the influence of substantially the entire electromotive-force of the supply and, at times of the natural zero for the said impulses, emptying the said charge through the converter, and simultaneously affecting the discharge current by a resistance preventing its flow through the wrong path.

[Claims 6 to 22 not printed in the Gazette.]

1,110,585. CONTROLLING DEVICE FOR VAPOR APPARATUS. PERCY H. THOMAS, East Orange, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 14, 1904. Serial No. 203,077. (Cl. 176—49.)



1. In a vapor electric apparatus having the main negative and the main postive electrode and circuit connections to the members of said pair, a plurality of supplemental positive electrodes located adjacent to the light-giving path between the members of the pair and adapted to be connected to the main circuit by shunts containing resistance.

2. In a vapor electric apparatus having a pair of electrodes and circuit connections to the members of said pair, a plurality of supplemental electrodes located adjacent to the light giving path between the members of the pair and connected to the main circuit by shunts containing resistance, together with a common resistance traversed by current to any of the positive electrodes.

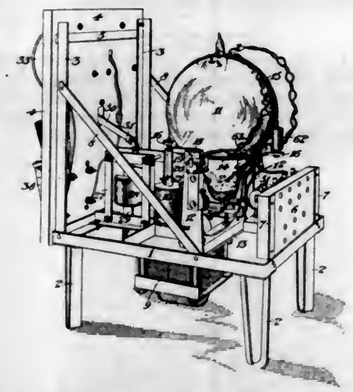
3. In a vapor electric apparatus having a pair of electrodes and circuit connections to the members of said pair, a plurality of supplemental electrodes located adjacent to the light-giving path between the members of the pair and connected to the main circuit by shunts containing resistance.

4. In a vapor electric apparatus having a pair of electrodes and circuit connections to the members of said pair, a plurality of supplemental electrodes located adjacent to the light-giving path between the members of the pair and connected to the main circuit by shunts containing resistance together with a resistance in the lead to one of the main electrodes.

5. In a vapor electric apparatus having a pair of electrodes and circuit connections to the members of said pair, a plurality of supplemental electrodes located adjacent to the light giving path between the members of the pair and connected to the main circuit through resistance.

1,110,586. MERCURY-VAPOR OUTFIT AND CIRCUITS THEREFOR. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 30, 1905. Serial No. 252,797. (Cl. 176—48.)

1. In a vapor converter, a plurality of positive electrodes, a main negative electrode, a supplemental electrode, and means for making the said supplemental electrode temporarily negative with respect to the main negative electrode.



2. In a vapor converter, a plurality of positive electrodes, a main negative electrode, a supplemental electrode, means for making the said supplemental electrode negative with respect to the main negative electrode, and means for afterward shifting the converter, so as to make the said supplemental electrode positive with respect to the main negative electrode.

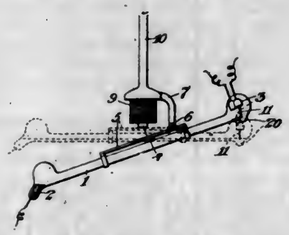
3. The combination with a vapor converter provided with a plurality of positive electrodes, a main negative electrode and a supplemental electrode, of a coil for tilting the converter to bring the main negative electrode into temporary contact with the supplemental electrode, such coil being located in shunt to the short circuit temporarily formed by the said contact whereby the coil is deënergized during the continuance of said short circuit.

4. In a vapor converter, electrodes, and means for causing a temporary connection between the electrodes and subsequently a separation thereof, such means consisting of a tilting magnet and connections whereby said magnet is deënergized during the continuance of said short circuit.

5. In a vapor electric apparatus, main electrodes, and a supplemental electrode, means for making the said supplemental electrode temporarily a negative electrode, such means including a tilting magnet traversed by current through the supplemental electrode, the said tilting magnet acting as an inductance in the said circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,110,587. ALTERNATING-CURRENT VAPOR-LAMP. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed May 11, 1905. Serial No. 259,953. (Cl. 176—45.)



1. A mercury vapor lamp comprising a movable container for mercury, a plurality of positive electrodes in said container, and a negative electrode therein, the said electrodes being included in the main operating circuit of the lamp, and means operated by the main current adapted to move the said container so as to make and break metallic connection between the negative electrode and at least one of the positive electrodes, such means comprising a magnet coil in series with the lamp.

2. A vapor electric lamp having multiple positive electrodes and a conducting liquid negative electrode, a transformer having its primary connected with a source of alternating current and its secondary suitably connected to the said electrodes, in combination with a ballast device in the primary circuit.

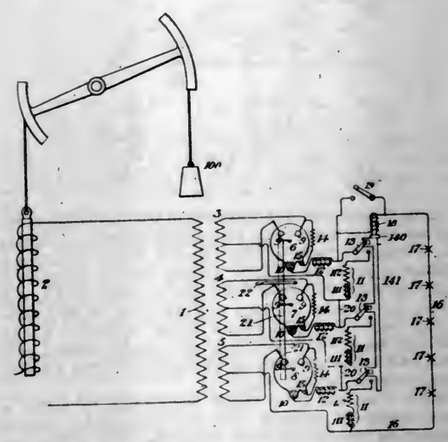
3. A vapor electric lamp having multiple positive electrodes and a conducting liquid negative electrode, a transformer having its primary connected with a source of alternating current and its secondary suitably connected to the said electrodes, in combination with an inductance in the primary circuit.

4. A vapor electric lamp having multiple positive electrodes and a conducting liquid negative electrode, a transformer having its primary connected with a source of alternating current and its secondary suitably connected to the said electrodes, in combination with a ballast device and an inductance in the primary circuit.

5. In a mercury vapor apparatus operated from an alternating current source, including an exhausted container and electrodes therefor, and adapted to be started by connection and disconnection of the electrodes, the combination of circuit connections for the passing of current initially through the container from the source, and automatic means energized by the source for tilting the container.

[Claims 6 to 28 not printed in the Gazette.]

1,110,588. OPERATION OF VAPOR-CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 1, 1905. Serial No. 276,672. (Cl. 171—253.)



1. The combination of a plurality of vapor converters having suitable electrodes, supply transformer windings, connections between said converters and said transformer windings and series connections between said converters, with starting circuits for the several converters, together with automatic means for discontinuing said starting circuits.

2. The combination of a plurality of serially connected vapor converters, an alternating current supply circuit and a work circuit, with an inductive starting shunt controlled by resistance connected across the load circuit.

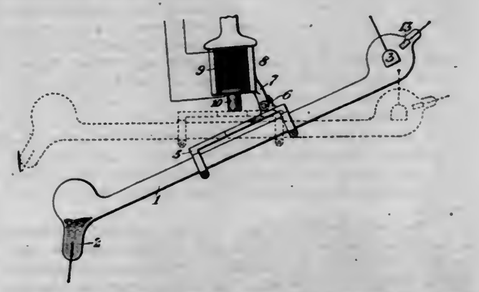
3. In a system of electrical operation the combination of a plurality of vapor converters including exhausted containers and adapted to be started by mechanical movement thereof, and motion-permitting mountings for said containers, with means for producing simultaneous movement of the said containers together with series connections between the converters, starting connections and automatic means for interrupting said starting connections upon the initiation of normal operation.

4. In a system of electrical distribution, constant current translating devices supplied from an alternating current source, vapor converters, individual means for starting the vapor converters constituting as a whole a shunt across the work circuit and means for connecting in series electromotive forces derived from the said vapor converters for supplying said translating devices.

5. In a system of electrical distribution, the combination with a plurality of mercury vapor rectifiers, each including an exhausted container and a vaporizable cathode and suitable alternating sources therefor, of a work circuit, series connections between the rectifiers, each connection including an inductance, and connections between the rectifiers and the work circuit, together with separate starting shunts around the several rectifiers.

[Claims 6 and 7 not printed in the Gazette.]

1,110,589. ALTERNATING-CURRENT VAPOR DEVICE. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 27, 1905. Serial No. 280,254. (Cl. 171—253.)



1. In a vapor device of the tilting type having a plurality of positive electrodes and a negative electrode of conducting liquid, wherein the device is started into operation by the rupture of a stream or layer of conducting liquid connecting the negative electrode and one or more of the positive electrodes, means for supplying current through the lamp for starting and operating, means for causing a plurality of breaks in the starting circuit during a single tilting of the device, and means depending upon the form of the starting circuit for preventing the extinguishment of the device on the reëstablishment of the metallic circuit through the device.

2. In a vapor electric apparatus in which energy is derived from an alternating current source and in which starting is accomplished by breaking a current carrying circuit within the vacuum, the method of starting, which consists in tilting the container for the purpose of starting while overcoming the negative electrode reluctance by the breaking of a current carrying contact within the vacuum and causing the number of such makes and breaks to greatly exceed the number of tilting motions.

3. In a vapor electric apparatus in which energy is derived from an alternating current source containing a conducting liquid and in which a separation of a current carrying circuit within the vacuum is utilized for breaking down the negative electrode resistance, the method of starting, which consists in permitting the force of bravity to act on a portion of the conducting liquid thus producing a high velocity, causing this velocity to produce a number of makes and breaks within the vacuum and utilizing a favorable break to start the apparatus.

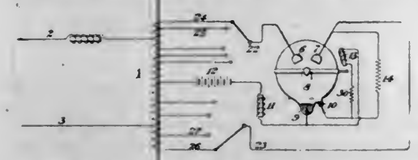
4. In a vapor electric apparatus in which starting is accomplished by a plurality of circuit interruptions within the container, the method of limiting the starting current which consists in applying a higher supply voltage to the

normal operating electrodes than to the circuit of the starting electrode.

5. In a vapor device having a plurality of positive electrodes, one of which is a starting electrode, a source of alternating current, connected to the working electrodes and also connected to the starting electrode at a point of intermediate potential.

[Claims 6 to 12 not printed in the Gazette.]

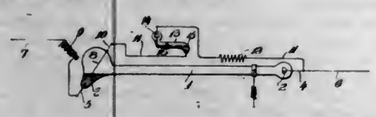
1,110,590. REGULATION OF SYSTEMS OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Continuation of application Serial No. 161,282, filed June 13, 1903. This application filed Sept. 27, 1905. Serial No. 280,256. (Cl. 171—253.)



1. The combination with a vacuum rectifier including a plurality of anodes and a cathode in an exhausted container, an alternating current transformer winding acting as a supply therefor, a direct current work circuit and a connection from said cathode through said direct current work circuit to an intermediate point of said winding, of a series of taps near the terminals of said windings relatively widely spaced near one terminal and relatively narrowly spaced near the other, and means for connecting said anodes respectively to the two sets of taps independently and means traversed by currents from both anodes for steadying the resultant current flowing from the two anodes.

2. The combination with a vacuum rectifier, including a suitable negative electrode and suitable positive electrodes, of a source consisting of a transformer winding, a direct current work circuit, a connection from the negative electrode through said direct current work circuit to the middle point of said transformer winding and connections from the positive electrodes to the outer portions of said winding, of means for adjusting the point of connection of cone of the leads from the positive electrodes independently of that of the other anode thus producing unbalanced electromotive forces on the two positive electrodes, together with an inductance in the direct current circuit whereby a relatively large quantity of energy is stored from the higher voltage positive, thus steadying the current flow.

1,110,591. METHOD OF AND APPARATUS FOR STARTING VAPOR DEVICES. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 24, 1906. Serial No. 349,270. (Cl. 176—46.)



1. An electrical translating device, adapted to operate on a current of known potential and requiring an initial current of relatively higher potential for starting, in combination with an inductance and an unstable, vapor electric device, adapted to vary and interrupt a flow of current in said inductance and thereby supplying the higher potential.

2. An electrical translating device adapted to operate on a current of known potential and requiring an initial current of relatively higher potential for starting, and a reactance device in series therewith, in combination with a self-restoring current shifting device in shunt to said translating device, constructed and arranged for unstable, discontinuous operation, thereby to interrupt said shunt circuit and to develop in said reactance device a higher potential for starting said translating device.

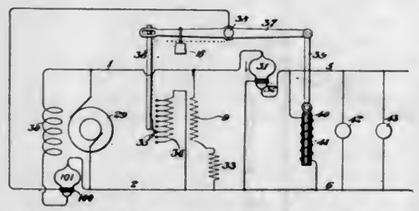
3. A vapor electric apparatus and a reactance in series therewith, in combination with a second vapor electric apparatus in series with said reactance, and in parallel to said first named apparatus, together with a resistance for rendering unstable the operation of said second vapor electric apparatus.

4. A vapor electric apparatus comprising an inclosure, main electrodes, and a supplemental positive electrode, and a reactance in series therewith, in combination with a second vapor electric apparatus in series with said reactance and supplemental positive, and in parallel to said first named apparatus, together with a resistance for rendering unstable the operation of said second vapor electric apparatus.

5. A vapor electric apparatus and a reactance in series therewith, in combination with a second vapor electric apparatus in parallel to said first named apparatus and in series with said reactance device, together with means for rendering unstable the operation of said second vapor electric apparatus.

[Claims 6 to 24 not printed in the Gazette.]

1,110,592. SYSTEM OF DISTRIBUTION BY VAPOR ELECTRIC CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Feb. 17, 1903, Serial No. 143,760. Divided and application filed June 16, 1905, Serial No. 265,501. Divided and this application filed June 14, 1907. Serial No. 378,896. (Cl. 171—253.)



1. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply, the combination with a vapor electric device requiring a reinforced potential to start current flow, of means for applying such reinforced potential to said device and means for varying the time of application of said reinforced potential, together with means responsive to the delivered energy for controlling said varying means, said means for applying reinforced potential including a transformer with a variable ratio.

2. In a system of electrical distribution in which a work circuit is supplied from an alternating current source, the combination with a generator in which the control of the delivered energy is obtained through variation of the field excitation and an exhausted electric device controlling the supply of energy to said field excitation, said device requiring a reinforced potential for starting, of means for varying the time of application of said reinforced potential, together with means for controlling said variation in response to the load energy.

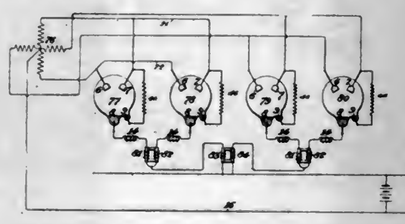
3. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply, the combination with a generator including a direct current field coil and an exhausted electric device adapted to supply impulses of direct current to said field coil from said generator, said device requiring a reinforced potential in starting, of means for utilizing the energy of the generator for reinforcing the potential on the said device at a suitable time in each cycle of the supply.

4. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply, the combination with a generator including a direct current field coil and an exhausted electric device adapted to supply impulses of direct current to said field coil from said generator, said device requiring a reinforced potential in starting, of means for utilizing the energy of the generator for reinforcing the potential on the said device at a suitable time in each cycle of the supply, said means including a static transformer.

5. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply, the combination with a generator including a direct current field coil and an exhausted electric device adapted to supply impulses of direct current to said field coil from said generator, said device requiring a reinforced potential in starting, of means for utilizing the energy of the generator for reinforcing the potential on the said device at a suitable time in each cycle of the supply, together with means responsive to energy in the receiving circuit for varying the time of application of said reinforced potential.

[Claims 6 to 8 not printed in the Gazette.]

1,110,593. SYSTEM OF DISTRIBUTION BY VAPOR ELECTRIC CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed June 22, 1905, Serial No. 266,375. Divided and this application filed June 14, 1907. Serial No. 378,897. (Cl. 171—253.)



1. In a system of electrical distribution the combination with a plurality of vapor electric recifiers having the property of requiring an excess voltage to transfer current flow from starting circuits to normal operating circuits, an alternating supply and a common work circuit of means for connecting said rectifiers in parallel between said supply and said work circuit and means in one of said parallel rectifier circuits for causing current flow therein developed on the other rectifier circuit when in non-operating condition.

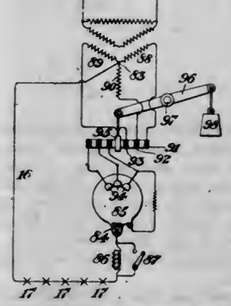
2. In a system of electrical distribution the combination with a plurality of vapor electric rectifiers having the property of requiring an excess voltage to transfer current flow from starting circuits to normal operation circuits, an alternating supply and a common work circuit of means for connecting said rectifiers in parallel between said supply and said work circuit and means in one of said parallel rectifier circuits for causing current flow therein developed on the other rectifier circuit when in non-operating condition, said means including separate coils included in the parallel circuits and wound upon a common core.

3. In a system of electrical distribution the combination with a plurality of vapor electric rectifiers having the property of requiring an excess voltage to transfer current flow from starting circuits to normal operating circuits, an alternating supply and a common work circuit of means for connecting said rectifiers in parallel between said supply and said work circuit and means in one of said parallel rectifier circuits for causing current flow therein developed on the other rectifier circuit when in non-operating condition, in further combination with sustaining coils in each of the parallel rectifier circuits.

4. In a system of electrical distribution the combination with a polyphase source, a plurality of vapor electric rectifiers requiring an excess voltage for transferring current from starting circuits to the main operating circuit, means for connecting rectifiers in groups in several phases in the polyphase source, means for passing all rectified current to an intermediate point of the source, means located in each of the circuits of the parallel rectifiers for building up the requisite transfer voltage on any non-operating rectifiers of this system and for controlling the distribution of currents between operating rectifiers.

5. In a system of electrical distribution, the combination with a plurality of vapor electric devices, each including a completely exhausted container and suitable electrodes, one of which is a vaporizable reconstructing cathode, of a plurality of alternating supply mains carrying voltages of different phases, connections for obtaining rectified current from each of the supply mains through one of said devices, together with positive means for securing parallel operations of said rectified currents, consisting of voltage absorbing and voltage interchanging means traversed by rectified current of the several devices.

1,110,594. OPERATION OF VAPOR-CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Continuation in part of application Serial No. 140,353, filed Jan. 24, 1903. Divided and application filed Sept. 1, 1905, Serial No. 276,672. This application filed Oct. 23, 1907. Serial No. 398,708. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with a polyphase mercury vapor rectifier, comprising an hermetically sealed and completely exhausted container, a vaporizable reconstructing cathode, adapted to deliver direct currents to a work circuit, and a plurality of anodes therein, of a polyphase source connected by its terminals to the anodes of the said rectifier and from an intermediate point to the cathode thereof through the work circuit, and a constant current regulator including a coil carrying intermittent direct current in the lead of each anode and a common movable core for the said coils.

2. The combination with a mercury vapor rectifier having three anodes receiving intermittent direct current and a single cathode delivering direct current and a constant current regulator therefor, comprising three coils electrically independent but coöperating upon a common core and each traversed by the intermittent current to one of the anodes, of means for balancing the resultant pull of the coils for all positions of the core.

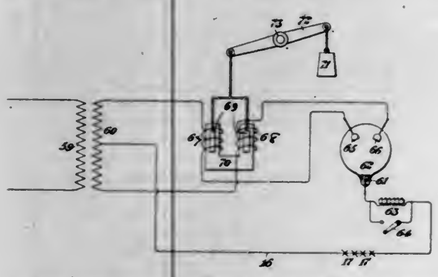
3. The combination with a constant direct current work circuit, of a vapor rectifier comprising an hermetically sealed and completely exhausted container including a plurality of anodes and a vaporizable reconstructing cathode therein, of means for absorbing excessive supply voltage, automatically adjustable in response to energy flow in the receiving circuit comprising inductance coils traversed individually by intermittent direct current supplied to said rectifier and a core for said coils.

4. In a system of electrical distribution, the combination with a polyphase source, a direct current work circuit, and a mercury vapor rectifier including an exhausted container, suitable electrodes therefor, of a single movable counterweighted core controlled in position by the mutual action of the several phases of the supply and the counter weight.

5. In a system of electrical distribution, the combination with a polyphase source, a polyphase vacuum rectifier and a direct current work circuit supplied therefrom, of a symmetrical polyphase regulator having an inductance coil connected between each terminal of the source and an anode and a single mechanical means for balancing the magnetic force of said coils in all positions for a given current.

[Claims 6 and 7 not printed in the Gazette.]

1,110,595. OPERATION OF VAPOR-CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Sept. 1, 1905, Serial No. 276,672. Divided and this application filed Aug. 7, 1908. Serial No. 447,410. (Cl. 171—253.)



1. The combination with an alternating current supply, a vacuum rectifier, a choke coil and work circuit receiving direct current from said rectifier, of connections from the terminals of the source to the rectifier and from an intermediate point of the source to the rectifier through said coil and work circuit, together with impedance coils with movable cores in the first named leads and mechanical means for balancing the pull on said cores at a predetermined current.

2. In a system of electrical distribution, the combination with an alternating current source, a vacuum converter comprising an hermetically sealed and completely exhausted container, a vaporizable reconstructing cathode and a plurality of anodes therein and connections from the anodes to the terminals of the source and from the cathode to an intermediate point of the source, said connection including a sustaining device, of symmetrical coils in the first named connections, together with movable cores for said coils attached together and having the sum of the individual forces produced thereon by a predetermined current balanced for all positions by a mechanical force.

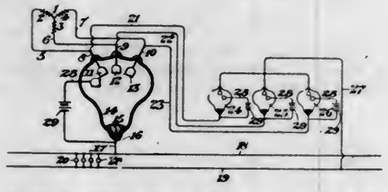
3. In a system of electrical distribution, the combination with an alternating current source, a vacuum rectifier, comprising an hermetically sealed and completely exhausted container, a vaporizable reconstructing cathode and a plurality of anodes therein, and an impedance coil having a movable core in each lead, its magnetic pull for a definite current being balanced against an equal mechanical force, of a work circuit and suitable connections from the anodes to the terminals of the source and from the cathode to an intermediate point of the source, together with suitable sustaining means.

4. In a system of electrical distribution wherein constant current translating devices are supplied from an alternating current source through a transformer and through one or more vapor converters, means for regulating the supply to the translating devices on the secondary side of the transformer, such means consisting of separate coils interposed between each terminal of the secondary and a vapor converter and a regulating device operated by the said coils for securing constant current in the consumption circuit.

5. In a system of electrical distribution, the combination with a source of alternating electric power, a vapor rectifier comprising an exhausted container, a plurality of anodes and a vaporizable cathode therefor, and connections from said source to said electrodes, of impedances adjustable through the mechanical movement of parts thereof in the leads of the several anodes and means for mechanically inter-linking such movements in the several impedances, together with a work circuit in the connection from the cathode to the source.

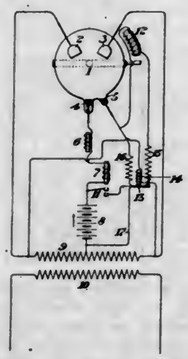
[Claims 6 and 7 not printed in the Gazette.]

1,110,596. SYSTEM OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 21, 1903, Serial No. 139,875. Renewed Feb. 21, 1907, Serial No. 358,727. Divided and this application filed Sept. 9, 1908. Serial No. 452,241. (Cl. 176—42.)



In a gas or vapor electric device comprising a suitable container, a plurality of electrodes acting as anodes therein, a vaporizable electrode acting as cathode therein, a supplementary electrode nearer said cathode than the main anodes, the space including said electrodes being completely exhausted.

1,110,597. STARTING DEVICE FOR VAPOR-CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed May 11, 1905, Serial No. 259,956. Divided and this application filed Sept. 24, 1909. Serial No. 519,380. (Cl. 176—48.)

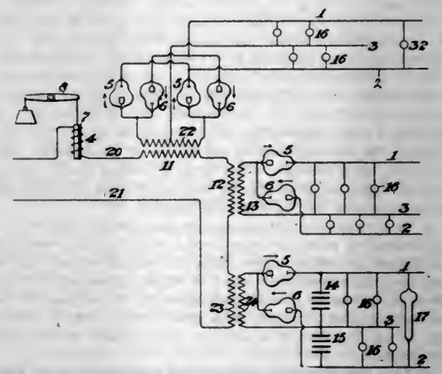


1. The combination with a mercury vapor rectifier, comprising an exhausted container, two main anodes, a vaporizable cathode and a vaporizable supplemental electrode, adapted to contact with the said main cathode on a tilting of the rectifier, an alternating supply circuit, a direct current receiving circuit containing an apparatus having a counter electromotive force and suitable connections therefor, of means for producing tilting of the rectifier whereby contact is produced between the main cathode and the supplemental electrode, connections for permitting the said counter electromotive force to pass current from the main cathode to the supplemental electrode during the connection between these electrodes, means responsive to this current adapted to permit a separation of the electrodes upon this current flow, thus reënergizing the said tilting means, whereby a second contact and separation is produced between the electrodes.

2. The combination with a mercury vapor rectifier, comprising an exhausted container, two main anodes, a vaporizable cathode and a vaporizable supplemental electrode adapted to contact with the said main cathode on a tilting of the rectifier, an alternating supply circuit, a direct current receiving circuit containing an apparatus having a counted electromotive force and suitable connections therefor, of means for producing tilting of the rectifier whereby contact is produced between the main cathode and the supplemental electrode, connections for permitting the said counter electromotive force to pass current from the main cathode to the supplemental electrode during the connection between these electrodes, means adapted to permit a separation of the electrodes upon the passage of this current, thus reënergizing the said tilting means, whereby a second contact and separation is produced between the electrodes, together with means for interrupting the tilting operation responsive to the establishment of normal current flow.

3. The combination with a mercury vapor rectifier, comprising an exhausted container, two main anodes, a vaporizable cathode and a vaporizable supplemental electrode adapted to contact with the said main cathode on a tilting of the rectifier, an alternating supply circuit, a direct current receiving circuit containing an apparatus having a counter electromotive force and suitable connections therefor, of means adapted to tilt the rectifier when the supplemental electrode is not in contact with the main cathode and for releasing the rectifier upon contact between said electrodes, together with means for permitting the counter electromotive force to pass current within the container from the main cathode to the supplemental electrode.

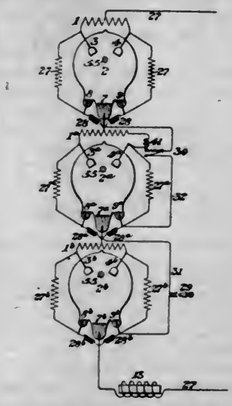
1,110,598. ALTERNATING AND DIRECT CURRENT ELECTRIC DISTRIBUTION. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 24, 1903, Serial No. 140,353. Divided and application filed May 6, 1903, Serial No. 155,923. Divided and this application filed June 13, 1910. Serial No. 566,540. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with an alternating supply, means for rendering the current from said supply of constant value and a plurality of alternating transformers connected in series in said constant current circuit, of means for supplying receiving circuits from said transformers, means for separately rectifying the current from the secondaries of said transformers for use in said individual receiving circuits whereby constant direct current is obtained therein and means for utilizing storage batteries for supplying current at constant potential to translating devices in one of said receiving circuits.

2. In a system of electrical distribution, the combination with an alternating supply, means for rendering the current from said supply of constant value and a plurality of alternating transformers connected in series in said constant current circuit, of means for supplying receiving circuits from said transformers, means for rectifying the current from the secondaries of said transformers for use in said individual receiving circuits, said last named means including mercury vapor rectifiers characterized by an exhausted container and a plurality of electrodes therein whereby constant direct current is obtained therein and means for utilizing storage batteries for supplying current at constant potential to translating devices in one of said receiving circuits.

1,110,599. MEANS FOR STARTING VAPOR-CONVERTERS IN SERIES. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 8, 1907, Serial No. 361,266. Divided and this application filed Dec. 21, 1910. Serial No. 598,577. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with three serially connected mercury vapor rectifiers, a work circuit, an alternating supply, and connections between said rectifiers and between said rectifiers and said work circuit, of a starting circuit for one of said rectifiers connecting the cathode of a second rectifier to a starting electrode in said first named rectifier, a shunt around the third rectifier and a starting electrode with connection to the supply in each of said first named and said third named rectifiers.

2. In a system of electrical distribution, the combination with three serially connected mercury vapor rectifiers, a work circuit and connections between said rectifiers and between said rectifiers and said work circuit, of a starting circuit for one of said rectifiers connecting the cathode of a second rectifier to a starting electrode in said first named rectifier, a shunt around the third rectifier and a starting electrode with connection to the supply in each of said first named and said third named rectifiers and cut-outs in said starting circuits.

3. In a system of electrical distribution the combination with a plurality of serially connected rectifiers, each comprising an exhausted container, main anodes, a cathode and a starting anode therein, an alternating supply for

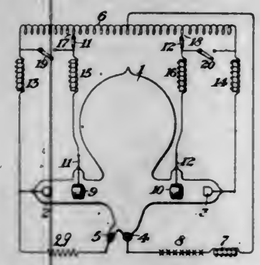
each rectifier and a connection from said source to said starting anode, of starting means comprising shunts to all but one rectifier and means for interrupting said shunts in succession.

4. In a system of electrical distribution the combination with a plurality of serially connected rectifiers, each comprising an exhausted container, main anodes, a cathode and a starting anode therein, an alternating source for each rectifier and a connection from said supply to said starting anode, of starting means comprising shunts to all but the first of the rectifiers and automatic means for opening said starting shunts.

5. In a system of electrical distribution, the combination of a plurality of vapor electric rectifiers, each comprising an exhausted container, main anodes and a main cathode therein and a starting electrode, a work circuit, connections between said rectifiers and between said rectifiers and said work circuit, a connection between a starting electrode of one rectifier and its source of current and a shunt on another rectifier connecting the cathode of said first named rectifier to the starting electrode of said second named rectifier.

[Claims 6 and 7 not printed in the Gazette.]

1,110,600. VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 6, 1911. Serial No. 664,169. (Cl. 176—44.)



1. In a vapor rectifier comprising an exhausted container, lateral tubes extending from said main container main anodes therein and a vaporizable cathode in said container and protecting anodes interposed between said cathode and said main anodes in said tubes and means for energizing said protecting anodes from a circuit capable of supplying only a limited amount of energy.

2. In a system of electrical distribution, the combination with an alternating source, a receiving circuit, a vapor rectifier comprising an exhausted container, main anodes and a cathode therein and connections from the terminals of said source to said anodes for securing the passage of a continuous current from said cathode through said work circuit to said supply, of an additional anode located between said main anode and said cathode and connections from an intermediate point of the source to said additional anode.

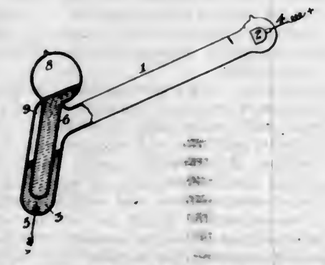
3. In a system of electrical distribution, the combination with an alternating source, a receiving circuit, a vapor rectifier comprising an exhausted container, main anodes and a cathode therein and connections from the terminals of said source to said anodes and means for securing the passage of a continuous current from said cathode through said work circuit to said supply, of an additional anode connected between said main anode and said cathode and connections from an intermediate point of the source of said additional anode and a current limiting device in the lead of said additional anode.

4. In a system of electrical distribution, the combination with a mercury vapor rectifier comprising an exhausted container, main anodes therein, located in tubular extensions of said container, a main cathode therein and supplemental anodes consisting of conducting coatings on the inside of said tubular extensions located between said anodes and said cathode but nearer said cathode than are said main anodes and means for energizing the main anodes and means for energizing said supplemental anodes at a lower potential.

5. In a system of electrical distribution, the combination with a mercury vapor rectifier comprising an exhausted container, main anodes therein, located in tubular extensions of said container, a main cathode therein and supplemental anodes consisting of conducting coatings on the inside of said tubular extensions located between said anodes and said cathode but nearer said cathode than are said main anodes and means for energizing the main anodes and means for energizing said supplemental anodes at a lower potential and means for varying the phase of said last named means.

[Claims 6 and 7 not printed in the Gazette.]

1,110,601. COOLING DEVICE FOR VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 28, 1904, Serial No. 200,284. Divided and this application filed Apr. 27, 1912. Serial No. 693,564. (Cl. 176—43.)



1. In a vapor electric lamp characterized by an exhausted container and suitable electrodes, one being a vaporizable cathode, the method of operation which consists in providing supplemental cooling surface for cooling the cathode as distinguished from the surface of the container and providing an intermediate medium or heat conductor for transferring heat from the cathode to the supplemental surface.

2. In a vacuum vapor electric apparatus adapted to produce light, the method of controlling the spectrum of emitted light, which consists in passing electric current through the apparatus by the production of vapor therein, adding a permanent gas adapted in character to supplement the spectrum of the vapor, but insufficient in quantity to balance the total quantity of vapor naturally produced and removing the natural excess of vapor by maintaining the general region wherein the vapor is produced at a temperature below the normal temperature and corresponding to the pressure of the vapor when not in excess.

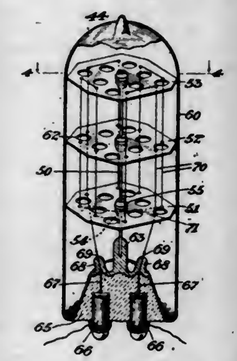
3. In a vapor electric apparatus, the combination with a vaporizable electrode adapted to develop under natural conditions an excess of condensable gas or vapor, and a relatively non-condensable gas or vapor, of means for preventing the development of an excess of condensable gas or vapor, such means consisting of a cooling device entering the vaporizable electrode, and permitting the natural temperature in the light giving portion.

4. In a vapor electric apparatus, the combination with a disintegrating electrode capable of developing under natural conditions an excess of condensable gas or vapor, and a relatively non-condensable gas or vapor, of means for condensing the excess immediately upon the liberation of the condensable gas or vapor, such means consisting of a cooling device in close proximity to the surface of the said electrode.

5. In a vapor electric apparatus, the combination with a disintegrating electrode capable of developing under natural conditions an excess of condensable gas or vapor and a relatively non-condensable gas or vapor, of means for condensing the excess immediately upon the liberation of the condensable gas or vapor, such means consisting of a tube in intimate relation with the condensable gas or vapor, and containing a suitable liquid.

[Claim 6 not printed in the Gazette.]

1,110,602. VAPOR ELECTRIC APPARATUS ADAPTED FOR OPERATION IN SERIES. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Nov. 22, 1906, Serial No. 344,545. Divided and this application filed Jan. 24, 1913. Serial No. 743,920. (Cl. 219—63.)



1. A ballast device comprising a sealed envelop containing a nonoxidizing gas and a ballast therein consisting of substantially straight lengths of wire operated at a critical temperature, serially disposed, said lengths being arranged close to the walls of the container and substantially parallel therewith.

2. A ballast device comprising a sealed envelop containing a nonoxidizing gas and a ballast therein consisting of substantially straight lengths of wire operated at a critical temperature, serially disposed, said lengths being arranged close to the walls of the container substantially parallel therewith and with each other.

3. A ballast device consisting of a conductor operated at a critical temperature disposed with various portions of its length adjacent other portions of its length, all effectively operating portions thereof being substantially parallel with the wall of the container and with each other.

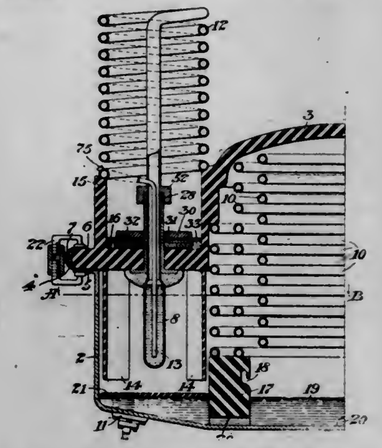
4. A ballast device consisting of a conductor operated at a critical temperature disposed with various portions of its length adjacent other portions of its length, all effectively operating portions thereof being close to and substantially parallel with the walls of the container.

5. A ballast device comprising a sealed envelop containing a nonoxidizing gas, a ballast support comprising transverse members extending approximately into engagement with the walls of the container at suitable points, a spacing member for said transverse members, and a ballast wire operated at a critical temperature led back and forth upon said transverse members, adjacent the walls of the container and approximately equidistant therefrom.

[Claims 6 to 14 not printed in the Gazette.]

1,110,603. MERCURY-VAPOR APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 3, 1913. Serial No. 745,787. (Cl. 175—354.)

1. A mercury vapor rectifier comprising an exhausted container, including a hollow lower portion, and an insulating dome shaped upper portion, an active cathode in the central portion of said container, a plurality of main anodes in the outer portion of said container and an interposed coil of cooling tubes between said cathode and said anodes.



2. A mercury vapor rectifier comprising an exhausted container, including a hollow lower portion, and an insulating dome shaped upper portion, an active cathode in the central portion of said container, a plurality of main anodes in the outer portion of said container and an interposed coil of cooling tubes between said cathode and said anodes, said cooling coil being of conducting material and being maintained at a potential negative with respect to that of the cathode.

3. A mercury vapor rectifier comprising an exhausted container, including a hollow lower portion, and an insulating dome shaped upper portion, an active cathode in the central portion of said container, a plurality of main anodes in the outer portion of said container and an interposed coil of cooling tubes between said cathode and said anodes, and means for maintaining said coil at a potential below that of the cathode, said means consisting of a resistance coil with taps shunted on the receiving circuit of said rectifier and a connection from said shunt to said cooling coil.

4. A mercury vapor rectifier comprising a container composed principally of conducting material, a plurality of anodes therein, a cathode therein and a cooling coil of conducting material electrically insulated therefrom.

5. A mercury vapor rectifier comprising an exhausted container having a series of anodes therein in combination with an insulating flange with a wide opening therein surrounding each anode, the openings in the several chambers formed by the flange being faced in the same direction along a line connecting the anodes.

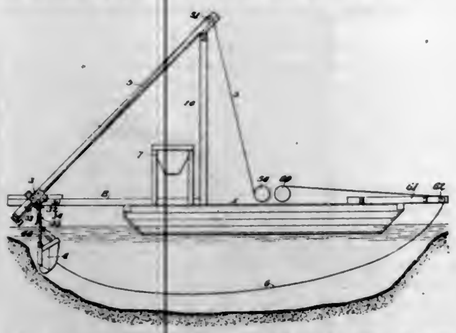
[Claims 6 to 8 not printed in the Gazette.]

1,110,604. EXCAVATING DEVICE. WILLIAM C. WEEKS, Vancouver, British Columbia, Canada. Filed Feb. 19, 1913. Serial No. 749,544. (Cl. 37—19.)

1. An excavating device comprising an elevated machinery-supporting platform, a drag bucket, a main-haul line attached to the bucket, a back-haul line also attached to the bucket, a guide for the back-haul line located at one end of the platform to lead the back-haul line beneath the platform, a guide for the main-haul line located beyond the other end of the platform, and means for moving said latter guide upward and inward over that end of the platform.

2. An excavating device comprising a float having a projecting guide-supporting member at each end, a drag bucket, a main-haul line secured to the bucket, a back-haul line also secured to the bucket, a guide for the back-haul line carried by said projecting member at one end of the float, a guide for the main-haul line and means for supporting the said guide from said projecting member

at the other end of the platform, to move said guide in an inclined path over the end of said platform.



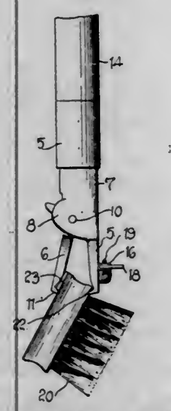
3. An excavating device comprising a float, a drag bucket, a main-haul line, a back-haul line, guides for said lines supported from and beyond opposite ends of the float and adjacent the water line and means for shifting the guide for the main-haul line upward and inward to a point over the float.

4. An excavating device comprising a float, a drag bucket, a main-haul line, a back-haul line, a guide for the back-haul line located to lead the said line beneath the float, an inclined trackway having its lower end extending beyond the other end of the float, a carriage adapted to travel upon said trackway, and a guide for the main-haul line supported upon said carriage.

5. An excavating device comprising a float, a drag bucket, a main-haul line, a back-haul line, means for conducting the back-haul line beneath one end of the float, an inclined trackway having its lower end beyond the other end of the float and its upper end above the float, a fixed guide for the main-haul line at the upper end of the trackway, a carriage movable along the trackway and carrying a guide for the main-haul line, and means for locking the carriage to the lower end of the trackway when desired.

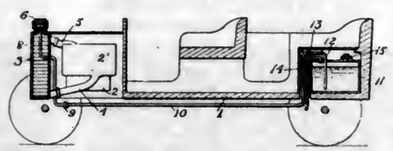
[Claims 6 and 7 not printed in the Gazette.]

1,110,605. BRUSH. MINNIE C. WILBURN, Cripple Creek, Colo., assignor of one-half to Peter H. Hansen, Cripple Creek, Colo. Filed Mar. 9, 1914. Serial No. 823,633. (Cl. 15—54.)



A brush including a head having bristles connected to one face thereof, said head having a longitudinal groove formed in its forward face, and a longitudinally extending strip secured to the back face of said head, said groove and strip being adapted to receive the clamping elements of a brush holder.

1,110,606. WATER-CIRCULATING MEANS FOR INTERNAL-COMBUSTION ENGINES. THOMAS C. YOUNG, Glendale, Cal. Filed July 29, 1913. Serial No. 781,759. (Cl. 123—170.)

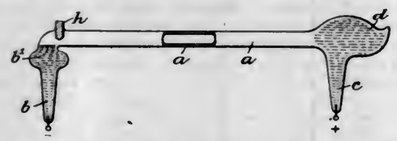


1. The combination with the water jacket of an internal combustion engine, and a radiator connected to said water jacket, provided with a filler cap and with an overflow outlet below said cap, of a receiver for containing a body of water, said receiver being open to communication with the atmosphere, and an overflow pipe leading from said overflow outlet of said radiator and communicating with the receiver below the level of the water therein, said overflow pipe and receiver being lower than the overflow outlet from the radiator, to allow flow of water from said outlet to the receiver by gravity, to receive the overflow and steam from the radiator when the water therein boils, and to feed the overflow and condensed steam back to the radiator when it cools.

2. The combination with the water jacket of an internal combustion engine, and a radiator connected to said water jacket, provided with a filler cap and with an overflow outlet below said cap, of a receiver for containing a body of water, and an overflow pipe leading from said overflow outlet of said radiator, and opening into the body of water in the receiver, said receiver being provided with a vent at its upper portion, and said overflow pipe and receiver being lower than the outlet from the radiator, to allow flow of water from the said outlet to the receiver by gravity.

3. The combination with the water circulating system for an internal combustion engine, of an overflow pipe therefor, and a receiver open to atmospheric pressure and connected to said overflow pipe to receive the discharge from said pipe when the water in the system boils and to retain the discharge and feed it back into the system when the latter cools, said overflow pipe and receiver being lower than the overflow outlet from the water circulating system to said overflow pipe, to allow flow of water from said overflow outlet to the receiver by gravity.

1,110,607. VAPOR ELECTRIC APPARATUS. CHARLES ORME BASTIAN, London, England, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Dec. 19, 1905, Serial No. 292,480. Divided and this application filed Dec. 5, 1913. Serial No. 804,818. (Cl. 176—42.)



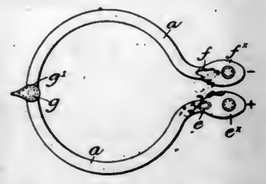
1. In a burner for vapor electric apparatus, electrodes of vaporizable material between which a continuous column of mercury extends when the current is not flowing, and means for causing the said column of vaporizable material to break at a regular point for starting current flow.

2. In a burner for vapor electric apparatus, mercury electrodes between which, when the current is not flowing, there is a continuous column of mercury, and means for predetermining the point at which the rupture of the said column for starting purposes shall take place.

3. In a burner for vapor electric apparatus, mercury electrodes between which, when the current is not flowing, there is a continuous column of mercury, and means for predetermining the point at which the rupture of the said column for starting purposes shall take place, such means consisting of a definitely located stricture of said vapor tube.

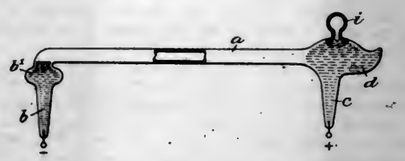
4. In a burner for vapor electric apparatus, mercury electrodes between which, when the current is not flowing, there is a continuous column of mercury, and means for predetermining the point at which the rupture of the said column for starting purposes shall take place, such means consisting of a definitely located stricture of said vapor tube, the stricture itself being formed by the insertion of a piece of glass or other material, as indicated.

1,110,608. ELECTRIC VAPOR APPARATUS. CHARLES ORME BASTIAN, London, England, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 27, 1913. Serial No. 744,306. Divided and this application filed Dec. 5, 1913. Serial No. 804,819. (Cl. 176—42.)



In a burner for a vapor electric apparatus in which volatilizable electrodes are held within a tube and in which, when the current is not flowing, there is a continuous column of mercury filling the tube between the electrodes, means for breaking the column at a predetermined point and for cushioning the volatilizable material, such means consisting of a chamber located above the tube and connected with the bore of the said tube.

1,110,609. VAPOR ELECTRIC APPARATUS. CHARLES ORME BASTIAN, London, England, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Dec. 19, 1905, Serial No. 292,480. Divided and this application filed Dec. 5, 1913. Serial No. 804,820. (Cl. 176—42.)

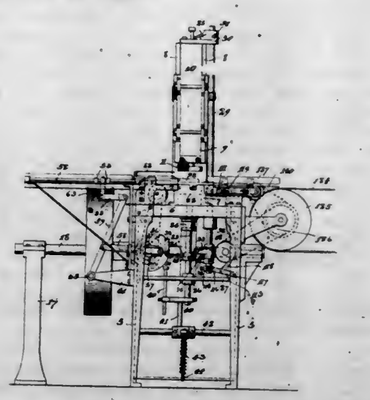


1. In a burner for a vapor electric apparatus, a tube, vaporizable electrodes inclosed therein, means for retaining the vaporizable material during operation, such means consisting of a receptacle, a chamber or space connected with such receptacle and normally sealed by the volatizable material to form an air-trap.

2. In a burner for a vapor electric apparatus, a tube, vaporizable electrodes inclosed therein, means for retaining the vaporizable material during operation, such means consisting of a receptacle, a chamber or space connected with such receptacle and normally sealed by the mercury to form an air-trap.

1,110,610. SOAP-PRESS. BENJAMIN H. BECKER and JOHN CIESLA, Chicago, Ill., assignors to James S. Kirk & Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1912. Serial No. 733,299. (Cl. 25—7.)

1. In a soap-press, the combination of a matrix, and a lower die-member having a depending stem, of means for raising said lower die-member to eject a stamped cake from said matrix and allowing it to fall, means for cushioning the fall of said lower die-member, and means for positively forcing said die-member downwardly in the event of its failure to fall.



2. In a soap-press, the combination of a matrix-pocket, an upper die, a reciprocatory stem carrying said upper die, a reciprocatory member adapted to operate said stem, a spring interposed between said reciprocatory member and said stem, a lower die in said pocket, a reciprocatory stem for said lower die, operative connections between said reciprocatory stem and said reciprocatory member for raising said lower die in said pocket, and release mechanism permitting the lower die to drop in said pocket.

3. In a soap-press, the combination of a matrix-pocket, an upper die, a reciprocatory stem carrying said upper die, a reciprocatory member adapted to operate said stem, a spring interposed between said reciprocatory member and said stem, a lower die in said pocket, a reciprocatory stem for said lower die, a reciprocatory rod operatively connected to said reciprocatory member, an arm on said rod adapted to engage a projection on said lower stem and raise said lower die, and release mechanism synchronized with said reciprocatory member and adapted to disengage the arm from said projection.

4. In a soap-press, the combination of a matrix-pocket, an upper die, a reciprocatory stem carrying said upper die, a reciprocatory member adapted to operate said stem, a spring interposed between said reciprocatory member and said stem, a lower die in said pocket, a reciprocatory stem for said lower die, a reciprocatory rod operatively connected to said reciprocatory member, an arm on said rod adapted to engage a projection on said lower stem and raise said lower die, a spring tending to force said arm into engagement with the projection on said stem, and cam mechanism synchronized with said reciprocatory member and adapted to move said arm against the pull of said spring to disengage said projection and permit said lower stem to return to normal.

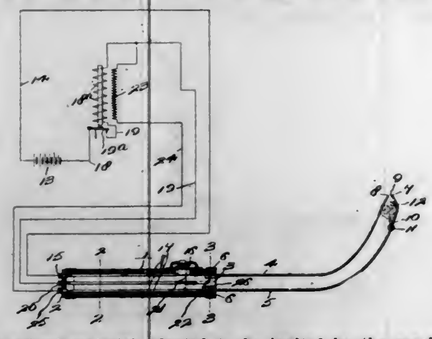
5. In a soap-press, the combination of a matrix-pocket, a lower die member in said pocket and having a depending stem, means for raising said die member and stem to eject the cake of soap therefrom, means for disengaging said raising means from said stem, and means for forcing said stem down to its normal position in said pocket in the event of its failure to fall.

[Claims 6 to 9 not printed in the Gazette.]

1,110,611. IGNITING DEVICE. LAWRENCE E. BRANDON, Derby, Vt., assignor of one-half to Harvey W. Silsby, Derby, Vt. Filed Oct. 16, 1913. Serial No. 795,542. (Cl. 175—116.)

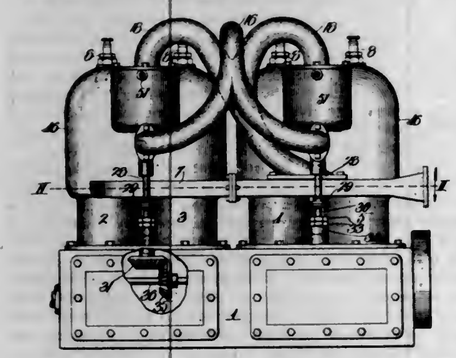
In an igniting apparatus, the combination of a handle; a pair of conductor strips mounted on said handle and spaced at one end to form a spark gap; means for closing and interrupting an electric circuit through said con-

ductor strips and causing sparking at said gap; and a device carried by said strips for holding a saturated mass of



absorbent material adapted to be ignited by the sparks, substantially as described.

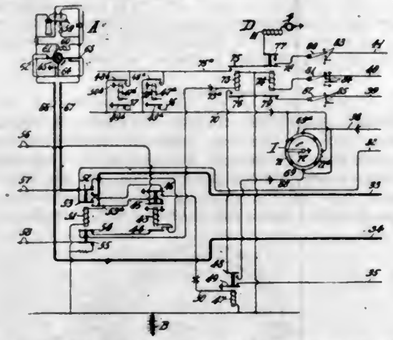
1,110,612. EXPLOSIVE-ENGINE. CHARLES L. COOKSON, Kansas City, Mo. Filed Oct. 30, 1909. Serial No. 525,544. (Cl. 123—190.)



The combination with a plurality of cylinders, each having an inlet port and an exhaust port, of a single valve casing having a plurality of ports registering severally with each of the cylinder ports, a single rotary valve operating within said casing, a transverse partition dividing said valve into an inlet and an exhaust chamber, said valve being provided with axial openings and said casing also having inlet and outlet openings in constant communication respectively with said valve openings, the inlet chamber of said valve being provided with port adapted to register once in each revolution with each of the ports of the valve casing that register with the inlet ports of said cylinders for successively supplying an explosive mixture thereto, and the exhaust chamber of said valve being provided with a port adapted to register once in each revolution with each of the ports of the valve casing that register with the exhaust ports of said cylinders for successively receiving the exhaust from said cylinders, said partition being provided centrally of one of its faces with an angular socket and a valve operating shaft extending axially of the valve through one of said casing openings and the corresponding valve opening into the valve chamber on the socket side of said partition, said shaft having an angular head fitting snugly into said socket.

1,110,613. AUTOMATIC TELEPHONE SYSTEM. ALFRED H. DYSON, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Apr. 15, 1908. Serial No. 427,222. (Cl. 179—18.)

1. A telephone system including a calling line, a line selector to make connection therewith, a relay for said selector, an actuating magnet therefor controlled by said relay, stroke-limiting stop means associated with said magnet and normally in limiting position with respect thereto, means controlled by current over said line to effect a step toward energizing said relay, independently actuated means for thereon actuating said relay and magnet in proper sequence, and means effective to move said stop means from limiting position.



2. A telephone system including telephone lines having contacts at the exchange arranged in groups, a line selector for selecting said lines, a conductor for starting said line selector responsive to initiation of a call from a line of the first group, and a common conductor for the other groups for starting said selector responsive to calls initiated from other groups.

3. In a telephone system, a trunk selecting switch including multiple terminal contacts of trunks arranged in groups, means for causing long steps of said selector to select the group, means for causing short steps of the selector to select contacts of the group selected, contact wipers for said selector normally resting at the first group of contacts, and means for initiating short step travel of said wipers while preventing a preliminary long step selection when contacts of the first group are to be selected.

4. A telephone system including a trunk selecting selector, multiple terminals of trunks included in said selector and arranged in groups, contact wipers of said selector normally engaging the first multiple contact set of the first group, and means for causing said selector to alter the electrical condition of said first contact set to render it busy without changing the selective position of said wipers when a trunk of the first group is to be selected and the first trunk of said group is idle.

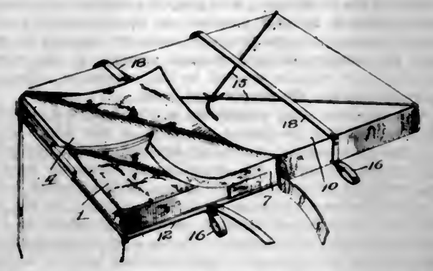
5. The combination with telephone lines, of a line selecting switch adapted to select the calling line, a driving magnet for causing long steps of said switch to select the group and short steps thereof to select the calling line from the group, an electrically adjustable stop adapted to limit the stroke of said magnet and thereby produce short steps of said switch, said stop being normally in stroke limiting position, means for causing a flow of current to withdraw said stop from limiting position when long step travel is to be initiated, and means for terminating said flow to place said stop in its normal limiting position after the group has been selected.

[Claims 6 to 18 not printed in the Gazette.]

1,110,614. LIFE-SAVING APPLIANCE. SAMUEL P. EDMONDS, Catonsville, Md. Filed Nov. 20, 1912. Serial No. 732,473. (Cl. 9—13.)

1. A life-saving appliance, comprising a buoyant, resilient body portion, a water-proof envelop therefor, constituting a pneumatic bag or casing, an outer protective cover for said envelop, and a metal stiffening frame secured within the outer cover along the bottom edge thereof, and holding the same taut across the entire bottom of the body portion.

2. A life-saving appliance, comprising a buoyant, resilient body portion, a water-proof envelop therefor, an outer protective cover therefor, a metal stiffening frame secured to the outer cover along the bottom edge thereof, and holding the same taut across the entire bottom of the body portion, lashings secured to the corners of said frame, and cross-straps secured to intermediate opposite points of the frame and intersecting said lashings, whereby strains on the lash are transmitted to the frame at the intersections of the side and end members thereof, said lashings forming longitudinal bracing members while said cross straps constitute transverse bracing members.

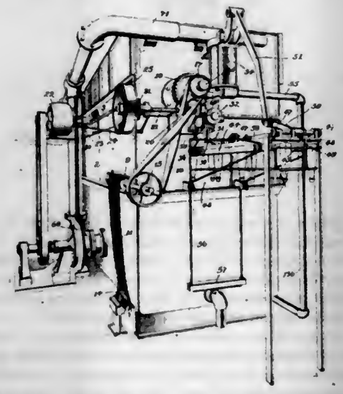


3. A life-saving appliance, comprising a buoyant, resilient, body portion having an inclosing cover or casing, an outer protective envelop therefor, having a pocket extending around the lower edge thereof, having its edges secured to the sides and bottom respectively of the envelop, and a stiffening frame secured within said pocket and holding said envelop taut across the bottom thereof.

4. A life-saving appliance, comprising a buoyant, resilient body portion, a water-proof fabric surrounding the same and having the seams or joints sealed to provide a pneumatic casing, an outer protective cover, and a marginal stiffening frame within said cover and secured along the bottom edges thereof.

5. A life-saving mattress, comprising a buoyant resilient filling of material not readily absorbent of water, and having a suitable cover, an outer protective envelop therefor, and a rigid marginal reinforcing frame extending around the bottom edge of said mattress and secured within said outer protective envelop.

1,110,615. APPARATUS FOR CLEANSING BOTTLES. OTTO EICK, Baltimore, Md. Filed Dec. 26, 1907, Serial No. 408,024. Renewed Mar. 25, 1911. Serial No. 616,882. (Cl. 141—7.)



1. In an apparatus for cleansing bottles, the combination of a tank; means contained within the tank for supporting bottles therein; means for subjecting the bottles to a fluid to cleanse and remove labels therefrom; an endless label-collecting belt passing through and to the outside of the tank; and means for moving said belt, whereby labels which are washed from the bottles will be collected by the belt and carried to the outside of the machine.

2. In an apparatus for cleansing bottles, the combination of a tank; means for holding a series of bottles therein; means for subjecting the bottles within the tank to the action of a cleansing fluid; an endless wire belt passing through the tank and to the outside thereof; and means for moving said belt, whereby the labels washed from the bottles will be caught by the belt and carried to the outside of the machine.

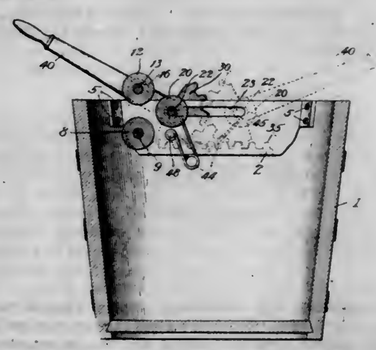
3. In an apparatus for cleansing bottles, the combination of a tank; means contained in the upper portion thereof for holding a series of bottles; means for subjecting the bottles to the action of water or other cleansing fluid; a false floor located within the lower portion of the tank and extending from one end thereof to a point adjacent to the opposite end; a flexible belt located at one end of the tank, a portion of said belt being situated on a level below that of the false floor; and means for advancing the belt, whereby the labels washed from the bottles pass onto the belt and will be carried outside of the machine thereby.

4. In an apparatus for cleansing bottles, the combination of a tank; means contained in the upper portion thereof for holding a series of bottles; means for subjecting said bottles to the action of a cleansing fluid; a partition extending transversely of the tank in the lower portion thereof; a false floor extending from said partition to one end of the tank; a flexible belt mounted in the lower portion of the tank between the partition and the adjacent end of the tank, said belt extending outside of the tank; and means for advancing said belt, whereby the labels washed from the bottles will be caught by the belt and carried to the outside of the machine.

5. In an apparatus for cleansing bottles, the combination of a tank; means contained in the upper portion thereof for holding a series of bottles; means for subjecting said bottles to the action of a cleansing fluid; a cross partition located adjacent to one end of the tank and extending transversely of the lower portion thereof; a false floor extending from said partition to the remote end of the tank, said partition extending upwardly above the height of the floor and provided with an opening at one side above the floor-line and with a second opening below the floor-line; an endless belt extending through the tank and to the outside thereof, a portion of the path of the belt lying below the upper opening in the partition; and means for advancing the belt, whereby the cleansing fluid will pass through the upper opening, through the belt, then back to the main portion of the tank and through the lower opening, and the labels will be caught by the belt and carried to the outside of the machine.

[Claims 6 to 37 not printed in the Gazette.]

1,110,616. MOP-WRINGER. JOSEPH FARGESON, Chicago, Ill. Filed Aug. 26, 1912. Serial No. 716,989. (Cl. 15—12.)

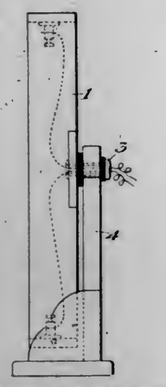


1. In a mop wringer, the combination with a water container, of a pair of parallel horizontal frame members within such water container, a transverse shaft with its

ends fixed in such frame members, a roller journaled on such shaft, horizontal slots in such frame members, a shaft extending through such slots, horizontal flanges on such frame members formed to provide racks, gear segments on the movable shaft meshing with such racks, and a lever fixed to one end of such movable shaft for rotating it.

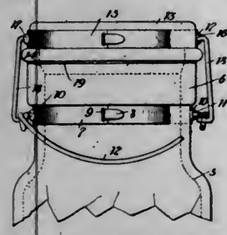
2. In a mop wringer, the combination with a water container, of horizontal frame members near the top of such water container and with their ends secured to its inner wall, racks at the lower margins of such frame members, horizontal slots above such racks, a transverse shaft having its ends supported by such frame members, a roller on such shaft, another shaft having its ends extended through such slots, a roller on such second shaft, springs acting to move it away from such first roller, a handle at one of its ends, and gears at both ends meshing with such racks.

1,110,617. ADJUSTABLE SUPPORT FOR VAPOR-LAMPS. STANWOOD E. FLICHTNER, Englewood, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed July 28, 1904, Serial No. 218,473. Divided and this application filed Jan. 9, 1905. Serial No. 240,272. (Cl. 176—42.)



The combination with a vapor electric lamp, of a vertical frame within which the said lamp is mounted, a standard, and a pivot for the said frame mounted in the said standard, means whereby the frame can be moved in a plane parallel to the front of the frame and a cushion for relieving the shock when the vertical support is restored to its original position.

1,110,618. RECEPTACLE-CAP. JAMES HENRY FOLLEN, Kenosha, Wis. Filed Sept. 23, 1913. Serial No. 791,309. (Cl. 215—41.)

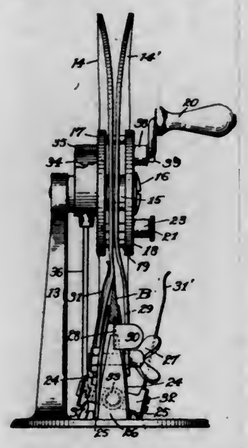


1. A receptacle cap comprising, a plug adapted to fit into the mouth of a receptacle; a member carried by said plug; a similar member carried by the receptacle; a U-shaped eccentric wire member pivotally mounted in said member carried by the receptacle; and members removably associated with said U-shaped eccentric wire member and said member carried by the plug, whereby said plug is secured to the receptacle by said U-shaped wire.

2. A receptacle cap comprising, a plug having a circular shoulder adapted to engage the edge of the mouth of a receptacle; a member removably associated with the plug and positioned above the shoulder, said member having diametrically opposite pockets; a similar member positioned on the receptacle; a U-shaped eccentric wire member positioned in said member on the receptacle; and means carried by said U-shaped member adapted to engage the pockets of said member carried by the plug, whereby said plug is secured to the receptacle, substantially as and for the purpose set forth.

3. A receptacle cap comprising, a plug having a circular shoulder adapted to engage the edge of the mouth of a receptacle; a member removably associated with the plug and positioned above the shoulder, said member having diametrically opposite protuberances, each of which have a central aperture therein; a similar member on the receptacle; a U-shaped member pivotally mounted in the aperture of the protuberances of the said second member mounted on the receptacle, said U-shaped member having eyelets eccentrically mounted with respect to the ends of said U-shaped member engaging the apertures; members having hook-shaped ends adapted to engage the eyelets of the U-shaped member and the apertures of the protuberances of the member mounted on the plug whereby the plug is secured to the receptacle, substantially as and for the purpose set forth.

1,110,619. DEVICE FOR SHARPENING CUTTING INSTRUMENTS. ALFRED FORNANDER, New York, N. Y. Filed July 2, 1912. Serial No. 707,190. (Cl. 51—16.)



1. A device of the class specified, comprising a pair of pliable and rotatable abrasive disks; a fixed blade support projecting between said disks; and means to engage with the outer sides of the disks to cause them to alternately engage with opposite sides of the cutting edge of the blade, substantially as and for the purpose specified.

2. A device of the class specified, comprising a pair of pliable and rotatable abrasive disks; a fixed blade support projecting between said disks; and a pusher to engage with and to cause a portion of one abrasive disk to engage with one side of the cutting edge of the blade alternately with the engagement of a portion of the other abrasive carrying member with the opposite side of the cutting edge of the blade, substantially as and for the purpose specified.

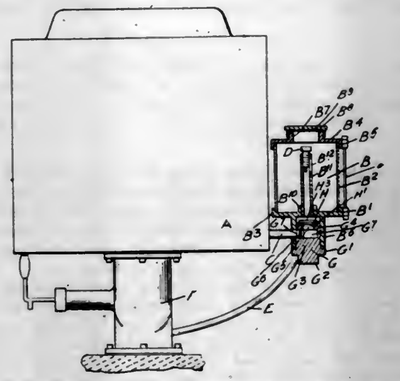
3. A device of the class specified comprising a pair of abrasive carrying disks; means to rotate said disks; a blade support projecting between and separating said disks; a pusher to engage with and cause a portion of one disk to engage with one side of the cutting edge of the blade alternately with the engagement of a portion of the other disk with the opposite side of the cutting edge of the blade; and means to adjust the rotating means whereby to cause different portions of the disks to engage with the blade, substantially as and for the purpose specified.

4. A device of the class specified, comprising a pair of pliable and rotatable face-butted disks; a blade support projecting between and separating the disks to support the blade in a fixed position; and means to rotate the disks and cause the same to alternately engage with opposite sides of a cutting edge of the blade carried by the support.

5. A honing and stropping device for cutting instruments, comprising a pair of pliable and rotatable face-butted disks; a blade support projecting between and separating the disks; means to rotate the disks means actuated by the disk rotating means to bear against and cause the disks to alternately engage with opposite sides of the cutting edge of the blade; said disks and disk rotating means being adjustable relative to said latter means to cause different portions of the disks to engage with the blade.

[Claims 6 to 24 not printed in the Gazette.]

1,110,620. FLUSHING SYSTEM. WILLIAM ALEXANDER FRASER, Georgetown, Ontario, Canada. Filed Nov. 29, 1912, Serial No. 734,026. Renewed May 15, 1914. Serial No. 838,667. (Cl. 4—30.)



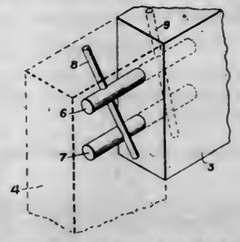
1. In a sanitary device, the combination with the tank and flushing pipe, of a sanitary device for the re-flush water comprising a pipe extending into the tank near the bottom, a base suitably connected to the pipe and provided with a chamber, a pipe leading from below the base to the flushing pipe, a central tube leading from below the chamber upwardly and provided with an orifice in the top, a valve located at the bottom of the tube and above the level of the pipe leading into the bottom of the tank, a casing extending upwardly from the base and a cover for the casing, as and for the purpose specified.

2. In a sanitary device, a tank, a flushing pipe a receptacle comprising a base provided with a downwardly extending portion forming a chamber, a pipe leading from said chamber into the bottom of the tank, a pipe leading from above the base into the flushing pipe, a central tube leading from the chamber below the base upwardly and provided with an orifice at the top, a casing located on the base and a suitable top for the casing and a valve located beneath the central tube as and for the purpose specified.

3. In a sanitary device, a tank, a flushing pipe a receptacle comprising a base provided with a downwardly extending portion forming a chamber, a pipe leading from said chamber into the bottom of the tank, a pipe leading from above the base into the flushing pipe, a central tube leading from the chamber below the base upwardly and provided with slots near the top, a set screw fitting into the top of the tube and designed to regulate the side of the slots a casing and a suitable top for the casing and a valve located beneath the central tube as and for the purpose specified.

4. In a sanitary device, a tank, a flushing pipe a receptacle comprising a base provided with a downwardly extending portion forming a chamber, a tube leading from said chamber into the bottom of the tank, a pipe leading from above the base into the flushing pipe, a central tube leading from the chamber below the base upwardly and provided with an orifice at the top, a casing located on the base, a suitable top for the casing, a disk valve provided with suitable legs, a valve support provided with a threaded portion fitting into the bottom of the extension of the boss forming the chamber and having upwardly extending legs forming circumferential openings designed to be located on a level with the pipe leading into the tank and having an annular top upon which the valve normally rests as and for the purpose specified.

1,110,621. JOINT. JOSEPH A. GABEL, Chehalis, Wash. Filed Apr. 9, 1912. Serial No. 689,534. (Cl. 20—92.)



1. A door comprising a stile and a rail having an interengaging connection, and a fastening pin having a double inclination extending downwardly into the stile from the top into engagement with and beyond said connection, said pins being of sufficient length to extend substantially across the upper portion of the stile from front to back as well as across the transverse median vertical plane of the stile, whereby splitting of the stile is obviated.

2. A door comprising a stile and a rail, dowel pins spaced above each other and secured in the stile and rail, and a fastening pin extending downwardly into the stile from the top and engaging one of said dowels on one side and the other dowel on the opposite side, said pin being of sufficient length to extend substantially across the upper interior portion of the stile from front to back.

3. A door comprising a stile and a rail, dowel pins spaced above each other and secured in the stile and rail, and a fastening pin extending downwardly into the stile from the top and engaging each of said dowel pins, one on one side and the other on the opposite side, said pin being inclined to both the vertical and horizontal planes and of sufficient length to extend substantially across the transverse median vertical plane of the stile.

1,110,622. COLLAR-SUPPORTER. ALBERT GELOW, Three Oaks, Mich., assignor to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Feb. 16, 1914. Serial No. 818,878. (Cl. 2—91.)

1. A collar supporter comprising a single section of wire-like material bent into outlined crescent form and centrally separable struts between the upper and lower members of the crescent outline to maintain said members in spaced relation.

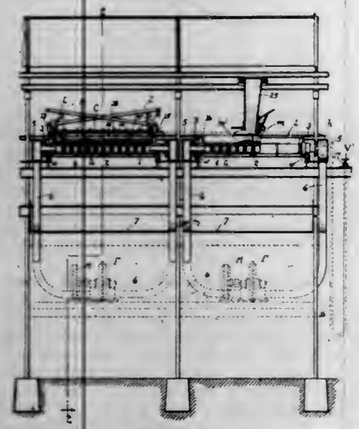
2. A collar supporter comprising a single section of pliable wire-like material bent into outlined crescent form and integral struts between the upper and lower members of the crescent outline, said struts comprising centrally separable parallel strands of wire-like material.

3. A collar supporter comprising a single section of pliable wire-like material bent into outlined crescent form

and integral struts between the upper and lower members of the crescent outline, said struts comprising centrally separable parallel strands of wire-like material and the ends of which are twisted together.

4. A collar supporter comprising a single section of crinkled wire-like material bent into outlined crescent form and centrally separable struts between the upper and lower members of the crescent outline to maintain said members in spaced relation.

1,110,623. SINTERING APPARATUS. JOHN E. GREENAWALT, Denver, Colo. Filed June 24, 1912. Serial No. 705,495. (Cl. 75—134.)



1. In a sintering apparatus, a receptacle having a perforated support for the charge, an exhauster for drafting gases through the charge and through the perforated support, igniting means adapted to be superposed over the charge, and means for projecting the ignition fuel across the surface of the charge in paths substantially parallel to said surface and transverse to the flow of the gases drafted through the charge whereby the entire surface of the charge is simultaneously ignited.

2. In a sintering apparatus, a receptacle having a perforated support for the charge, an exhauster for drafting gases through the charge and through the perforated support, igniting means adapted to be superposed over the charge, and means for projecting the ignition fuel across the surface of the charge in paths substantially parallel and in proximity to, said surface and transverse to the flow of the gases drafted through the charge, whereby the entire surface of the charge is simultaneously ignited.

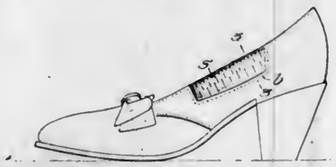
3. In a sintering apparatus, a receptacle having a perforated support for the charge, an exhauster for drafting gases through the charge and through the perforated support, a hood positioned over the receptacle and forming a low ignition chamber above the charge sealed at the sides against the influx of atmospheric cross-currents, and means for filling said chamber with flame to cause a substantially simultaneous ignition of the entire surface of the charge.

4. In a sintering apparatus, a receptacle having a perforated support for the charge, an exhauster for drafting gases through the charge and through the perforated support, a hood positioned over the receptacle and forming a low ignition chamber over the charge sealed at the sides against the influx of atmospheric cross-currents, means for projecting streams of ignition fuel through the walls of the hood directly over, and in planes substantially parallel to, the surface of the charge and transverse to the general direction of flow of the gases drafted through the charge, and means for admitting combustion-supporting gases through the roof of the hood to supply oxygen to the ignition fuel.

5. In a sintering apparatus, a receptacle having a perforated support for the charge, an exhauster for drafting gases through the charge and its support, igniting means adapted to be superposed over the charge, and means for effecting an even distribution of ignition fuel over the entire surface of the charge to bring about a simultaneous ignition of the charge over said surface.

[Claims 6 to 18 not printed in the Gazette.]

1,110,624. NON-SLIPPING LOW SHOE. GAETANO GUIFFRE, Capitol View, Md. Filed June 12, 1914. Serial No. 844,692. (Cl. 36—51.)



1. A low shoe having along its upper marginal edge an insert composed of an elastic rubber webbing extensible in the direction of its length, combined with and inclosed within a casing of flexible leather to form a protecting sheath both inside and outside the shoe, said external casing being formed with transverse slits.

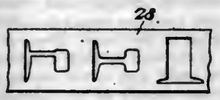
2. A low shoe having along its upper marginal edge an insert composed of an elastic rubber webbing extensible in the direction of its length, combined with and inclosed within a casing of flexible leather to form a protecting sheath both inside and outside the shoe, said external casing being formed with transverse slits, some of the slits being disposed to cross the folded edge of the sheath and the lower edge of the insert being stitched to the body of the shoe.

3. As a new article of manufacture, an insert for the marginal edges of low shoes, consisting of a longitudinally extensible elastic rubber webbing inclosed within and provided with an external protective casing of flexible leather slitted transversely to the longitudinal axis of the elastic webbing.

4. As a new article of manufacture, an insert for the marginal edges of low shoes, consisting of a longitudinally extensible elastic rubber webbing inclosed within and provided with an external protective casing of flexible leather slitted transversely to the longitudinal axis of the elastic webbing, some of the slits crossing the fold or bend of the casing and the other edge of the casing being connected together to retain the elastic webbing.

1,110,625. ROLLING-MILL. WILLIAM J. HALSALL, Greenfield, Ind. Filed Nov. 8, 1913. Serial No. 799,836. (Cl. 164—70.)

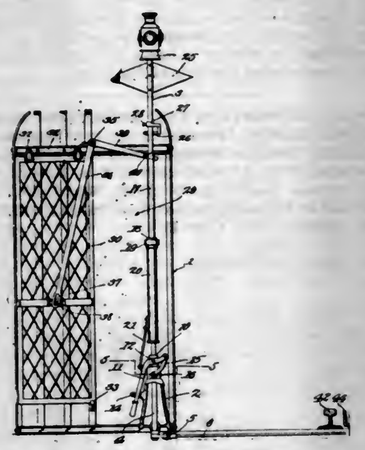
1. In a rolling mill, a pair of coöperating rollers having shearing edges and provided with trunnions, bearing blocks for said trunnions, housings for said blocks, means for preventing longitudinal movement of one of said rollers, a screw extending through an aperture in said housing and threaded into one of the bearing blocks of the other roller and a pair of screws threaded through said housings adjacent the first said screw and bearing against the end of said block.



2. In a rolling mill, a roller provided with a pair of peripheral shearing edges, a second roller provided with a shearing edge coöperating with one of the shearing edges on the first-mentioned roller, said second mentioned roller having a threaded extension, an auxiliary section threaded upon said extension and provided with a shearing edge coöperating with the second shearing edge of the first mentioned roller and means for adjusting the first mentioned shearing roller, substantially as described.

3. In a rolling mill, a pair of coöperating rollers provided with coöperating shearing edges, trunnions on said rollers, housing at the ends of said rollers, bearing blocks in said housings for said trunnions, coöperating means on said trunnions and said blocks to prevent independent longitudinal movement of said trunnions relatively to said blocks, the bearing blocks of one of said rollers being provided with grooves extending at right angles to the direction of the roller, keys adjustably secured to said housings and engaging in said grooves, means for raising said blocks in the direction of the grooves, and means for adjusting the other of said rollers longitudinally with relation to the first said roller, substantially as described.

1,110,626. SWITCH-THROW. WILLIAM HARDICK, Cadillac, and LEROY A. OGDEN, Grand Rapids, Mich., assignors of one-third to George Johnston, Cadillac, Mich. Filed June 16, 1913. Serial No. 774,014. (Cl. 104—25.)



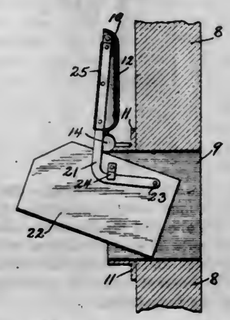
1. In a device of the class described, a switchman's cage having a movable door; door operating means; switch throwing means; coacting members, one of which is operatively connected to the door operating means, the other of which is operatively connected to the throwing means; a locking device interengaging elements on said coacting members, said members being relatively movable to permit the throwing means to engage the locking device; and a member adapted to engage the door operating means to hold the door closed, the last specified member being operatively connected with the throwing means.

2. In a device of the class described, a switchman's cage having a movable door; door operating means; an actuating shaft; an arm on the shaft adapted to engage the door operating means to hold the door closed; a member movable upon the shaft and connected with the door operating means, to close the door and to bring the door operating means into the path of the arm; means for connecting the shaft to a switch point; and mechanism for simultaneously operating the shaft and actuating said member.

3. In a device of the class described, an actuating shaft; a pair of independently movable tubes upon the shaft; interengaging elements upon the tubes; door operating mechanism connected with one tube; means for connecting the shaft with a switch point; and shaft actuating means operatively connected with the other tube to move the same.

4. In a device of the class described, an actuating shaft; means for connecting the shaft with a switch point; a switchman's cage having a movable door; door operating means; a member movable upon the shaft and operably connected with the door operating means; a member on the shaft, coöperating with the door operating means to hold the door closed; a switch throwing mechanism operatively connected with the shaft and with said movable member.

1,110,627. CHUTE FOR GLAZED WINDOWS. WILLIAM V. HEINZ, La Salle, Ill. Filed Apr. 10, 1913. Serial No. 760,123. (Cl. 193—33.)



1. In a device of the class described, a window casing, a sash hinged to the casing for opening or closing the window, a chute slidably mounted within the casing arranged to lie either entirely within the casing or projecting partly out of the casing, and a pair of suitable links having one end pivoted to the inner portion of the chute and the other end pivoted to the swinging part of the sash, the parts being so constructed and arranged that the upturning of the sash about its hinges will cause the chute to move from its position entirely within the casing to its position partly projecting out of the casing.

2. In a device of the class described, a window casing, a glazed sash hinged to the casing for opening or closing the window, a chute slidably mounted within the casing arranged to lie either entirely within the casing or partly projecting out of the casing, suitable links connecting the chute to a swinging part of the sash, and a suitable fender for the glazed sash carried by the links, parts being so constructed and arranged that the swinging of the sash to and fro on its hinged connection with the casing will cause the fender and the chute to move into and from their operative positions.

3. In a device of the class described, a window casing, a glazed sash on the casing, pivoted to open and close, a chute slidably mounted within the casing arranged to lie either entirely within the casing or projecting partly out of the casing, a pair of suitable links having one end pivoted to the chute and the other end pivoted to the swinging part of the sash, and stops on the chute to engage the links and cause the chute to be tilted when the sash is upturned to the vertical.

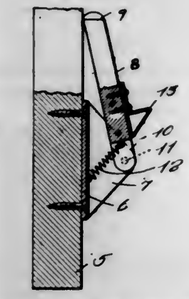
4. In a device of the class described, a window casing, a sash frame hinged to the casing, a chute slidably mounted within the casing, a pair of suitable links having one

end pivoted to the chute near its inner end and the outer end pivoted to the swinging part of the sash frame and a locking means to automatically lock the sash frame when it is swung to an open position.

5. In a device of the class described, a window casing, a sash frame hinged to the casing, a chute slidably mounted within the casing and adapted to lie either entirely within the casing or partly projecting out of the casing, a pair of angle links having one end pivoted to the chute near its inner end and the other end pivoted to the swinging part of the sash frame and suitable stops on the chute to engage the links, whereby the chute is moved outwardly and tilted upwardly in the casing by the upturning of the sash and is moved inwardly and restored to its prone position by the downturning of the sash.

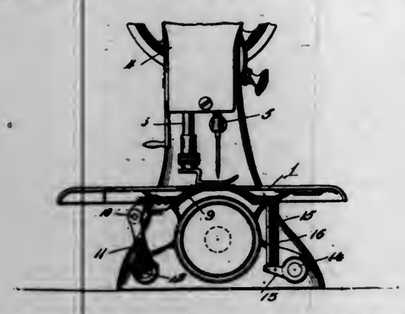
[Claims 6 and 7 not printed in the Gazette.]

1,110,628. DOOR-CHECK. LOYD R. HENDRIX, Savannah, Ga. Filed May 2, 1913. Serial No. 765,070. (Cl. 16—82.)



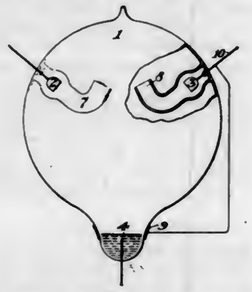
A door check comprising a vertically disposed bracket including a pair of outwardly extending parallel spaced lugs, a pawl having one end bifurcated, outwardly extending pintles on the ends of said furcations journaled in the outer ends of the lugs and a retractile spring having one end secured to the bracket and the other end secured to the pawl between the furcations.

1,110,629. FEED MECHANISM FOR SEWING-MACHINES. RICHARD K. HOHMANN, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed May 5, 1913. Serial No. 765,418. (Cl. 112—8.)



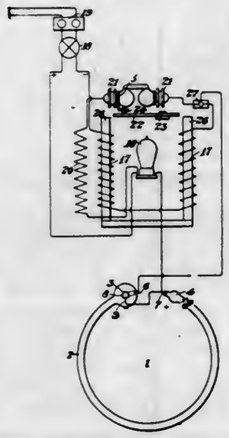
In a sewing machine, the combination with a drive shaft, of stitch forming mechanism, a cloth plate, a cloth feeding member below said plate adapted to be raised through an opening therein to engage the under surface of the cloth, a rock shaft below said plate on one side, an upwardly extending arm on said shaft pivoted at its upper end to one end of said member to reciprocate it longitudinally, a rock shaft on the opposite side of the machine below said plate, an arm operated by said second rock shaft extending in a substantially horizontal position, link connection between said horizontal arm and the free end of said feed member to raise and lower said member, a horizontal arm secured to said first mentioned rock shaft, an upwardly extending longitudinally movable link pivoted to said horizontal arm at its lower end and having separated parallel arms on its upper end, a slide block mounted on said parallel arms, an eccentric secured to said drive shaft and working in said slide block, a controlling link pivoted at its lower end to said longitudinally movable link between its ends, and a bell crank having one arm accessible from the outside of the machine and the other arm pivoted at its end to the upper end of said controlling link whereby the controlling link may be adjusted to various positions approaching one parallel to the longitudinally movable link.

1,110,630. HIGH-TENSION VAPOR-CONVERTER. FREDERICK H. VON KELLER, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 5, 1905. Serial No. 290,352. (Cl. 176—42.)



In a vapor electric apparatus, the combination of an inclosing chamber, a negative electrode, a plurality of positive electrodes, tubular inclosing chambers for the positive electrodes having their orifices directed away from each other within the chamber, the portions of the tubes surrounding the electrodes being of greater cross section than the remaining portions of the tube.

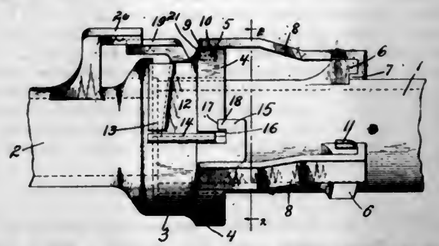
1,110,631. APPARATUS FOR OPERATING MERCURY-VAPOR LAMPS. FREDERICK H. VON KELLER, Berlin, Germany, assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Aug. 6, 1908, Serial No. 447,213. Divided and this application filed Mar. 12, 1913. Serial No. 753,678. (Cl. 176—45.)



1. In an electric circuit, a translating device capable of operation upon a certain minimum voltage, in combination with an inductance in series therewith a quick break circuit controller for the inductance circuit, and means for automatically closing and opening said circuit controller for starting or renewing the action of the translating device when the current falls below a minimum operating voltage.

2. In an electric circuit, a translating device capable of operating upon a certain minimum voltage, in combination with an inductance in series therewith, a quick break circuit controller for the inductance circuit, and means independent of the temperature of the translating device for automatically closing and opening said circuit controller for starting or renewing the action of the said device when the current falls below a minimum operating voltage.

1,110,632. REPAIR-COUPLING. EUGENE J. KELLY, Washington, D. C. Filed Jan. 9, 1914. Serial No. 811,193. (Cl. 137—28.)



1. A repair coupling, comprising a pipe having a cut-away section, a collar adapted to be received in the cut-away portion, interlocking means on the collar and cut-away section to hold the collar in position, and means for drawing the sections together and locking them in position.

2. A repair coupling, comprising a supplemental section adapted to be received between the pipe sections, a cut-away portion in one pipe section to receive the supplemental section, and flanges on the cut-away section and supplemental section for holding the supplemental section in position.

3. A repair coupling for pipe, comprising a section formed with a cut-away portion and an overhanging arm, and a supplemental section adapted to be received in the cut-away portion and formed with an arm adapted to be received within the overhanging arm.

4. A repair pipe coupling, consisting of a section having a cut-away portion, said cut-away section having undercut lugs near its outer edges, and a supplemental section adapted to be received in the cut-away portion and formed with lugs on its lower edges to be received in the undercut lugs of the pipe section.

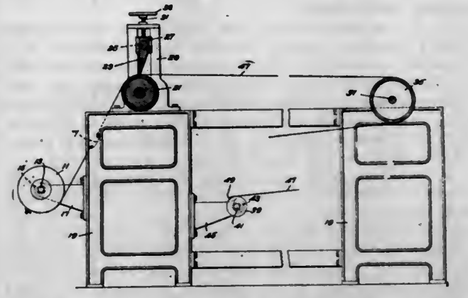
5. A repair pipe coupling, comprising a pipe section having a cut-away portion an overhanging arm and flanges on its sides, a supplemental section to be received in the cut-away portion and having an arm to be received within the overhanging arm and flanges to engage the sides of the pipe.

[Claim 6 not printed in the Gazette.]

1,110,633. MACHINE FOR FEEDING FABRICS AND THE LIKE. CARL J. LANDIN, Boston, Mass., assignor to Clifton Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Oct. 17, 1910. Serial No. 587,399. (Cl. 242—74.)

1. In a machine of the class described the combination of take-up means; an apron for conducting the leading end of a strip of material from the feeding-in end of the machine to said take-up means; an apron for conducting the trailing end of said strip and the leading end of a succeeding strip of material to said take-up means; and means for detachably connecting said aprons to said strips.

2. In a machine of the class described the combination of take-up means; flexible means for conducting the leading end of a strip of material to said take-up means; flexible means for conducting the trailing end of said material to said take-up means; and means for detachably connecting both of said flexible means with said material, whereby the flexible means for conducting the trailing end of one strip may be left in the machine in readiness to conduct the leading end of a succeeding strip.



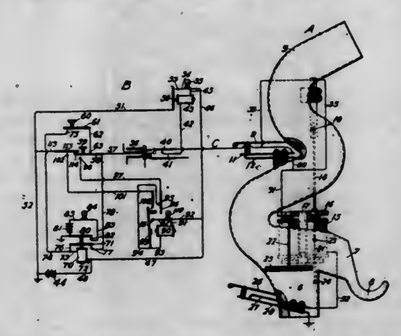
3. In a machine of the class described the combination of take-up means; and aprons having provision for detachable connection with the opposite ends of a strip of material for conducting the leading and trailing ends of the latter through the machine to said take-up means.

4. In a machine of the class described the combination of let-off means; take-up means; aprons for conducting the leading and trailing ends of a strip of material from one to the other; and means for detachably connecting said aprons with said strip whereby the trailing apron may remain in the machine in readiness to lead a succeeding strip from said let-off to said take-up means.

5. In a machine of the class described the combination of take-up means; an apron for conducting material thereto; a hook for connection with said apron; a clamp strip for detachably securing an end of said material in said hook; and means connecting said strip to said hook having provision permitting movement of said strip to and from clamping position without separation from said hook.

[Claims 6 to 11 not printed in the Gazette.]

1,110,634. TELEPHONE SYSTEM. FRANK A. LUNDQUIST, Chicago, Ill., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 14, 1912. Serial No. 731,323. (Cl. 179—6.5.)



1. In a telephone system, the combination of a telephone line, a source of current therefor, an electromagnet at a substation controlling the disposition of a deposited coin, circuit closers at the central office for connecting said source of current to said electromagnet over the telephone line, means at the central office for insuring the continuancy of said circuit independently of said circuit closer, and means at the substation adapted to open said circuit independently of said circuit closers.

2. In a telephone system, the combination of a telephone line, a source of current therefor, an electromagnet at a substation controlling the disposition of a deposited coin, a circuit closer at the central office for connecting said source of current to said electromagnet over the telephone line, a branch circuit for said circuit closer and means in said branch circuit made operable by said circuit closer for insuring the continuancy of said circuit independently of said circuit closer.

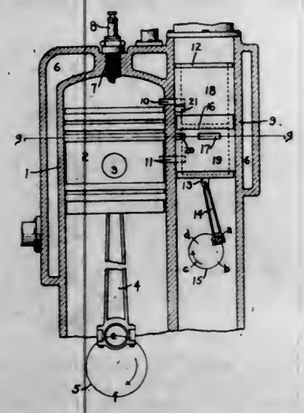
3. In a telephone system, the combination of a telephone line, a source of current therefor, an electromagnet at a substation controlling the disposition of a deposited coin, a circuit closer at a central office for connecting said source of current to said electromagnet over the telephone line, and means at the central station made operable by actuating said circuit closer for disconnecting said source of current from said telephone line.

4. In a telephone system, the combination of a coin chute at a substation having deposit and refund channels, coin arresting means in said chute, movable obstructions in the deposit and refund channels, an electromagnet controlling the operation of said arresting means and said obstructions, a telephone line from the central office to said electromagnet at a substation, a source of current therefor, manual means at a central office for completing a circuit for said source of current and said electromagnet through said telephone line, electromagnetic means at the central office for holding said circuit closed after the operation of said manual means, and coin operated means at the substation for controlling the operation of said electromagnetic means.

5. In a telephone system, the combination of a coin chute at a substation having deposit and refund channels, coin arresting means in said chute, movable obstructions in the deposit and refund channels, an electromagnet controlling the operation of said arresting means and said obstructions, a telephone line from a central office to said electromagnet at a substation, a source of current therefor, manual means at the central office for completing a circuit from said source of current to said electromagnet over said telephone line, and electromagnetic means at the central office for opening said circuit after the actuation of said manual means.

[Claims 6 to 11 not printed in the Gazette.]

1,110,635. PISTON-VALVE FOR EXPLOSIVE-ENGINES. LAURENCE C. MALTBY, Dayton, Ohio. Filed Aug. 11 1913. Serial No. 784,171. (Cl. 123—75.)

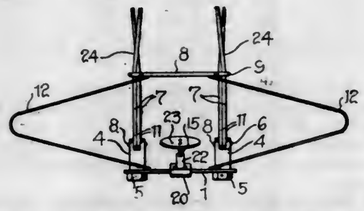


1. In an explosive engine, a main cylinder, a piston movable therein, a crank shaft driven by said piston, a valve cylinder adjacent to and connected with said main cylinder, a piston movable therein, ports in said valve piston, and split rings encompassing said valve piston through which said ports extend to closely communicate with corresponding ports in the main cylinder, each ring having a circumferential hollowed-out portion in each of its facing edges, said circumferential portions being located opposite each other, and a pin set in the valve piston and extending upwardly between said circumferential portions to prevent lateral movement of the ring, substantially as described.

2. In an internal combustion engine, a main cylinder, a piston movable therein, a main exhaust port in said cylinder located slightly above the uppermost point of the stroke of said piston, a main inlet port in said main cylinder located below the main exhaust port at a point to be opened by said main piston at the lowermost point of its stroke, a valve cylinder, a single valve piston movable therein, and inlet and exhaust ports in said valve piston adapted to register with their corresponding ports in the main cylinder as the valve piston is actuated, substantially as described.

3. In an internal combustion engine, a main cylinder, a piston movable therein, a main exhaust port in said cylinder located slightly above the uppermost point of the stroke of said piston, a main inlet port in said main cylinder located below the main exhaust port at a point to be opened by said main piston only at the lowermost point of its stroke, a valve cylinder, a crank-operated piston valve movable therein, and inlet and exhaust ports in said piston valve adapted to register with their corresponding ports in the main cylinder as the piston valve is actuated, substantially as described.

1,110,636. ANIMAL-TRAP. WILLIAM J. MCPHERSON, Lafontaine, Kans. Filed Nov. 5, 1913. Serial No. 799,368. (Cl. 43—23.)

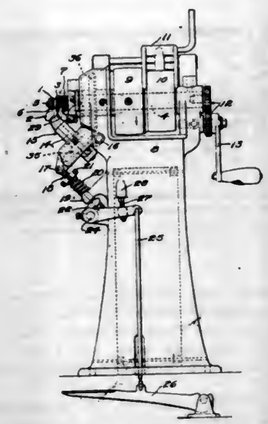


A trap comprising a body member, relatively movable reversely disposed curved jaws pivotally engaged therewith adjacent the opposite extremities of the body, said jaws being laterally bent so that the opposed faces thereof at the points of intersection are opposite to the opposed faces at the points of pivot, substantially U-shaped side bars connected to the corresponding jaw at each extremity of the body, the bases of such side bars being outwardly disposed relative to the jaws with which they are connected and being offset relative thereto, means for imparting forcible movement to the jaws in one direction, and means coacting with one of the side bars for controlling the action of such operating means.

1,110,637. MACHINE FOR MOLDING OR BENDING SHOE-SOLES. WILLIAM C. MEYER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 10, 1909. Serial No. 532,307. (Cl. 12—22.)

1. A machine for molding or bending shoe soles, having, in combination, two coöperating rolls constructed and arranged to bend the margin of the sole away from the plane of the body of the sole, means for obtaining an adjustment of one of the rolls axially, and a work guide for determining the distance at which the sole is bent from the edge of the sole arranged between the rolls to engage the edge of the sole and adjustable axially and transversely with respect to said last mentioned roll, substantially as described.

2. A machine for molding or bending shoe soles comprising a roll, a shaft upon which said roll is mounted, with provision for axial adjustment of said roll, including a screw passing through said roll and threaded into the forward end of said shaft, and adjusting nuts threaded on the forward end of said shaft, substantially as described.



3. A machine for molding or bending shoe soles, having, in combination, two coöperating rolls constructed and arranged to bend the marginal portion of the sole away from the plane of the body of the sole, a shaft upon which one of said rolls is mounted with provision for axial adjustment of the roll, a second shaft upon which the other of said rolls is mounted, means for supporting said shafts at an inclination to each other, and a work guide for determining the distance at which the sole is bent from the edge of the sole arranged between the rolls to engage the edge of the sole and adjustable axially of said first roll and transversely with relation to both of said rolls, substantially as described.

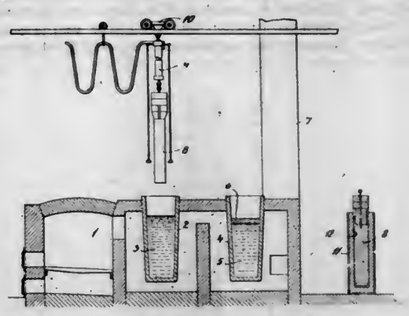
4. A machine for molding or bending shoe soles, having, in combination, two coöperating rolls constructed and arranged to bend the marginal portion of the sole from the plane of the body of the sole, a shaft upon which one of said rolls is mounted, a second shaft upon which the other of said rolls is mounted arranged below and at an angle to said first shaft, a casing pivoted to the frame and supporting said second shaft, a gear carried by said first shaft, a second gear carried by said second shaft meshing with said first gear and arranged adjacent the pivotal point of said casing and between said point and the second roll, means acting on said casing to press the second roll yieldingly toward said first roll, a lever connected with said casing, a treadle, and connections from the treadle to said lever whereby the rolls may be separated manually to introduce the work therebetween, substantially as described.

5. A machine for molding or bending shoe soles comprising two coöperating rolls, shafts on which said rolls are respectively mounted, a work guide adjustable axially of one of said rolls and transversely with relation to both of said rolls, means to adjust said guide including a sleeve in which said guide is adjustably mounted, and an adjustable slide on which said sleeve is carried, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,110,638. METHOD OF MAKING CLAD METALS. JOHN F. MONNOT, Paris, France, assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1910. Serial No. 553,049. (Cl. 91—70.3.)

1. The process of protecting molten metals consisting in first reducing a suitable halogen salt to a fluid condition by heat and then reducing the metal to be protected to a fluid condition by heat beneath the surface of said halogen salts.



2. The method of plating iron or steel, cast or malleable, consisting in first reducing in a suitable crucible a suitable halogen salt to a fluid state by heat, then reducing below the surface of said salt the metal or metals to form a bath to a fluid condition by heat and protecting the same beneath the surface of the halogen salt and then immersing the metal to be plated first through the halogen salt into the said metal bath, and from the metal bath through the halogen salt to the atmosphere, substantially as set forth.

3. The method of protecting molten metals consisting in first reducing a suitable chlorid to a fluid condition by heat and then reducing the metal to be protected to a fluid condition by heat beneath the surface of the said chlorid.

4. The method of protecting molten metals consisting in first reducing chlorid of sodium to a fluid condition by heat, and then reducing the metal to be protected to a fluid condition by heat beneath the surface of the said chlorid of sodium.

5. The method of producing clad metal articles which consists in maintaining a bath of molten coating metal under cover of a layer of molten flux, and then immersing the metal article to be coated through such molten flux into the molten metal therebeneath, and then withdrawing such metal article through the molten flux to the atmosphere, the film of flux adhering to the article when so withdrawn protecting the metallic film formed on the surface of said article by contact of such surface with the molten meal, and finally casting against the surface so protected a further layer of molten coating metal and permitting the molten metal so cast to solidify against such surface, the protective film of flux on the surface against which the molten metal is so cast being displaced by the molten metal as it contacts with such surface.

1,110,639. ROTARY TOOL FOR DEEP WELLS. CLAUDE MOORE, Taft, Cal. Filed Sept. 15, 1913. Serial No. 789,818. (Cl. 255—35.)

1. An instrument for imparting a rotary motion within a well casing comprising a rotary driver, a vertically reciprocable stem extending coaxially through said driver, said stem and driver having parts coengaging each other in the reciprocating movement of the stem, one of said parts being helical, and means surrounding the stem, and arranged to engage said casing to prevent rotation of the stem while permitting its reciprocating movement.

2. An instrument for imparting a rotary motion within a well casing comprising a rotary driver, a vertically reciprocable stem extending coaxially through said driver, said stem and driver having parts coengaging each other in the reciprocating movement of the stem, one of said parts being helical, a guide, and wedges carried by the guide and arranged to engage the internal surface of the casing to prevent rotary movement of the stem.

3. An instrument for imparting a rotary motion within a well casing comprising a rotary driver, a vertically reciprocable stem extending coaxially through said driver, said stem and driver having parts co-engaging each other

in the reciprocating movement of the stem, one of said parts being helical, a guide, spring fingers carried by the guide and arranged to contact with the inner surface of the casing, wedges carried by the guide and arranged to engage the internal surface of the casing to prevent rotary movement of the stem.

4. An instrument for imparting a rotary motion within a well casing comprising a rotary driver, a vertically reciprocable stem extending coaxially through said driver, said stem and driver having parts coengaging each other in the reciprocating movement of the stem one of said parts being helical, a guide, and two series of oppositely directed wedges carried by the guide and arranged to engage the internal surface of the casing to prevent rotary movement of the stem.

5. An instrument for imparting a rotary motion within a well casing comprising a rotary driver, a vertically reciprocable stem extending coaxially through said driver, said stem and driver having parts coengaging each other in the reciprocating movement of the stem, one of said parts being helical, a guide, and wedges carried by the guide and having convex teeth and arranged to engage the internal surface of the casing to prevent rotary movement of the stem.

[Claim 6 not printed in the Gazette.]

1,110,640. PNEUMATIC TIRE. WILLIAM EDGAR MUNTZ, London, England. Filed Dec. 23, 1912. Serial No. 738,357. (Cl. 152—13.)

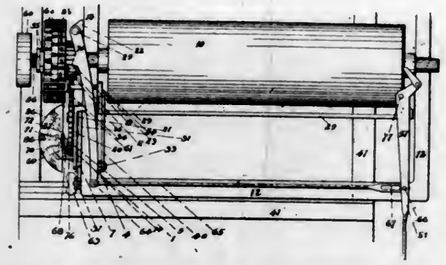
A wheel tire having a foundation fabric consisting of natural silk incorporated with india rubber of usual formation, substantially as described.

1,110,641. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor, by mesne assignments, to Chicago Title and Trust Company, trustee, a Corporation of Illinois. Filed Dec. 17, 1909. Serial No. 533,725. (Cl. 197—189.)

1. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, indicating means operated from the platen, and means between said indicating means and said line-space devices, independent of the operating connection between the indicating means and the platen, for controlling the operation of said indicating means.

2. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, indices operated from the platen to indicate successive positions of the sheet, and means between said indices and said line-space devices independent of the platen for controlling the operation of said indices.

3. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, a revoluble member actuated from the platen under the direct control of said line-space devices, and indicating means called into operation through said member.

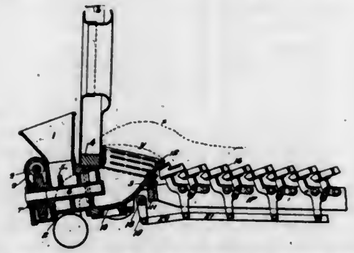


4. In a typewriting machine, in combination, a line-space lever, a platen actuated from said lever, an operative member actuated from the platen under the direct control of said line-space lever, and indices called into operation through said member to indicate the progress of the sheet.

5. In a typewriting machine, in combination, a line-space lever, a platen actuated from said lever, an operative member actuated from the platen under the direct control of said line-space lever, and an audible signaling means called into operation through said operative member.

[Claims 6 to 28 not printed in the Gazette.]

1,110,642. FURNACE-RETORT. DAVID F. NISBET, Crafton, Pa. Filed Nov. 17, 1910. Serial No. 592,847. (Cl. 110—44.)

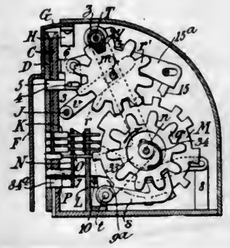


1. In combination with a furnace, a retort extending continuously along the inner side of the front wall of the furnace, comprising a shelf terminating inwardly in an upwardly inclined extension designed to mass the fuel over and around the twyers, means for feeding fuel into the retort at different localities through a plurality of openings in the front wall of the furnace, along the line of the retort, a series of twyers arranged between the fuel feeding devices having their openings below the level of the upper edge of the shelf, and means for admitting air to the twyers in adequate quantity for the proper combustion of the volatile hydrocarbons contained in the fuel.

2. In combination with a furnace, a retort extending continuously along the inner side of the furnace wall and having a shelf terminating inwardly in an upwardly inclined extension for the purpose of causig the fuel to mass over and around the twyers, a plurality of twyers spaced along the length of the retort having their openings below the level of the upper edge of the shelf, means for admitting air to the twyers, and means between the spaced twyers for feeding fuel into the retort.

3. In combination with a furnace, a retort extending continuously along the inner side of the furnace wall and having a shelf upwardly inclined in the direction of the movement of the fuel so as to cause the fuel to mass over and around twyers, a plurality of twyers spaced along the length of the retort having their openings below the level of the upper edge of the shelf, means for feeding fuel to the retort through openings between the said twyers, and means for supplying air to the twyers.

1,110,643. RECORDING APPARATUS. JOHN ROYDEN PEIRCE, New York, N. Y. Filed July 2, 1908. Serial No. 441,618. (Cl. 234—35.)



1. The combination with a meter the reading of which increases continuously, of punching mechanism adapted at each operation to indicate the difference between the present reading and the last previous reading of the meter and means for automatically returning said mechanism to its zero position after each operation.

2. The combination with a meter the reading of which increases continuously, of punching mechanism which is automatically set up in correspondence to the meter reading and adapted at each operation to indicate the difference between the present reading and the last previous reading of the meter and to be automatically returned to its zero position.

3. In apparatus for indicating the increase in reading of a meter, including meter mechanism, a set of laterally immovable punches and laterally movable operating mechanism therefor which is automatically set up in correspondence to the meter reading and adapted to operate said punches to indicate at each operation the increase in reading of the meter since the previous operation.

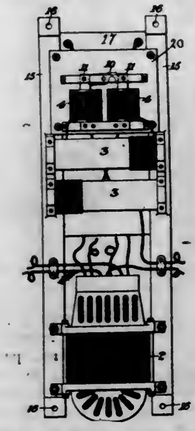
4. In a machine of the class described, punching mechanism including a set of punches fixed against lateral movement and movable operating mechanism therefor adapted to be controlled by the position of a meter, and a lock normally preventing the operation of said actuating mechanism and adapted to be unlocked only by a special key.

5. In a machine of the class described, punching mechanism including a set of punches fixed against lateral movement and movable operating mechanism therefor adapted to be controlled by the position of a meter, a lock normally preventing the operation of said actuating mechanism, and means adapted for engagement by a key and for operating said punch-operating mechanism by the turning of such key.

[Claims 6 to 21 not printed in the Gazette.]

1,110,644. RECTIFIER FOR LAMPS. JOSEPH C. POLE, New York, N. Y., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 4, 1910. Serial No. 575,411. (Cl. 171—253.)

1. The combination with a single phase supply and direct current translating devices, of an intermediate transformer, a mercury vapor rectifier comprising an hermetically sealed exhausted container, two main anodes, a starting anode and a liquid cathode therein, said two last named electrodes being adapted to make and break contact through movement of the container and separate inductance coils connected between the anodes and the terminals of the secondary of said transformer, of a coil connected by one terminal to the lead of said cathode and by the other terminal to the middle point of said transformer secondary through said translating devices and a magnet coil, and an armature for tilting said container in response to alternating current through said last named coil and a starting circuit to said starting anode shunting said rectifier, together with a cut out having its coil inserted in the lead of said cathode and responsive to current therein, the contacts of said cut out being inserted in said starting circuit.



2. In a system of electrical distribution in which direct current translating devices are fed from an alternating source, through a mercury vapor rectifier having suitable anodes and a cathode, means for steadying and controlling current flow, said means consisting of separate inductance coils in the leads of said anodes, a tilting coil in the lead of said cathode and a cut out also inserted in the said lead.

3. In a system of electrical distribution in which direct current translating devices are fed from an alternating current source through a mercury vapor rectifier having suitable anodes and a cathode, a starting electrode within the rectifier for breaking down the original negative electrode reluctance, a shunt circuit including the said starting electrode and the main negative electrode and an automatic cut-out for the branch circuit.

4. The combination with a vacuum electric apparatus comprising an exhausted container and suitable electrodes therefor between which, when of opposite signs, current is adapted to pass, and a tilting magnet in the neighborhood thereof, the field of which is liable, when un-restrained, to have a deflecting effect upon the current in the vacuum apparatus, of a plate or barrier of magnetic material inserted between said magnet and said apparatus.

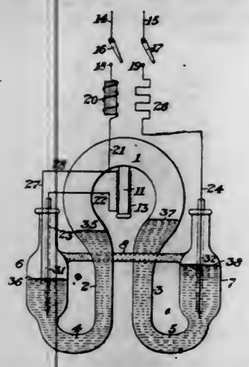
5. The combination with a vacuum electric apparatus comprising an exhausted container and suitable electrodes therefor between which, when of opposite signs, current is adapted to pass, and a tilting magnet in the neighborhood thereof, the field of which is liable, when un-restrained, to have a deflecting effect upon the current in the vacuum apparatus, of an iron shield inserted between said magnet and said apparatus.

1,110,645. MERCURY-VAPOR APPARATUS. JOSEPH C. POLE, New York, N. Y., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 5, 1912. Serial No. 718,652. (Cl. 176—42.)

1. In a mercury vapor lamp comprising a luminous portion, enlargements at opposite ends thereof, and mercury in said luminous portion and said enlargements, in combination with a cross tube connecting the enlargements, the said cross tube being provided with constrictions.

2. In a mercury vapor lamp comprising a luminous tube, a leg on either side thereof, an enlargement on each leg, and mercury in said luminous tube and partly filling the enlargements, the enlargements being joined to the main luminous tube by connecting tubes terminating at the top

in conical seats for valves, all in combination with rods of iron or other suitable metal adapted to serve as valves for said seats.

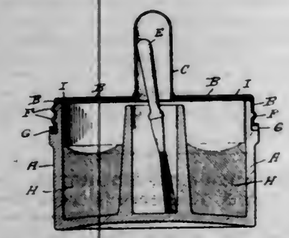


3. In a mercury vapor lamp comprising a luminous tube, a leg on either side thereof, an enlargement on each leg, and mercury in said luminous tube and partly filling the enlargements, the enlargements being joined to the main luminous tube by connecting tubes terminating at the top in conical seats for valves, all in combination with rods of iron or other suitable metal adapted to serve as valves for said seats, and capable of forming ground joints therewith.

4. In a mercury vapor lamp comprising a luminous tube, a leg on either side thereof, an enlargement on each leg, and mercury in said luminous tube and partly filling the enlargements, the enlargements being joined to the main luminous tube by connecting tubes terminating at the top in conical seats for valves, all in combination with rods of iron or other suitable metal adapted to serve as valves for said seats, and means for holding the rods to their seats.

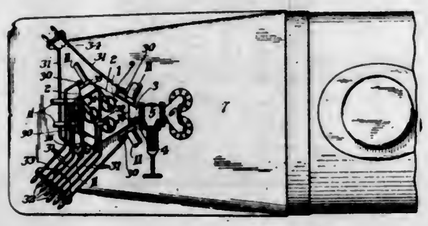
5. In a mercury vapor lamp comprising a luminous tube, a leg on either side thereof, an enlargement on each leg, and mercury in said luminous tube and partly filling the enlargements, the enlargements being joined to the main luminous tube by connecting tubes terminating at the top in conical seats for valves, all in combination with rods of iron or other suitable metal adapted to serve as valves for said seats, and detachable means for holding the rods to their seats.

1,110,646. PASTE-CUP AND SIMILAR VESSEL. WILLIAM H. REDINGTON, Evanston, Ill. Filed Oct. 16, 1913. Serial No. 795,419. (Cl. 215—84.)



A cup for paste or the like substance comprising a body of vitreous material having a neck formed with a thread and a shoulder below such thread, in combination with a metallic cover having a horizontal surface extending over the neck and a vertical flange provided with screw-threads to engage the threads on the neck and depending a vertical distance about equal to the vertical height of the neck, a lower packing ring resting on the shoulder and an upper packing ring between the top surface of the neck and the inner horizontal surface of the cover whereby when the edge of such flange engages the lower packing ring the upper packing is not sealed on the surface of the neck but when the lower packing ring is removed and the cover screwed down to its full extent the upper packing ring is compressed upon the upper surface of the neck and thereby produces a seal at that point.

1,110,647. STEAM-DISTRIBUTING HEAD. SAMUEL S. RIEGEL, Scranton, Pa., assignor to Patterson-Allen Engineering Company, a Corporation of New York. Filed May 28, 1914. Serial No. 841,423. (Cl. 136—11.)



1. In a device of the character stated, the combination of a boiler, with a steam box-shaped distributing head arranged upon the boiler above the fire-box end and provided with a plurality of openings, a conduit opening at one end into said head and at the other end into the steam space of a boiler, a valve device to control steam passing through the conduit, a plurality of bushings each removably secured in a different one of said openings, each of said bushings having a port therethrough, a valve carried by each bushing for controlling the port and removable with the bushing, means carried by the bushings for controlling the opening and closing of the respective valves and also removable with the bushing, and separate operating means leading to a distance for independently actuating the several controlling means.

2. In a device of the character stated, the combination of a steam boiler, with a steam distributing head provided with a plurality of openings mounted upon the upper part of the boiler, a valve controlled conduit connecting said head with the steam space of said boiler, a bushing removably secured in each of said openings, said bushings each having a port therethrough, a valve carried by each bushing, means for controlling the opening and closing of the respective valves, and operating means exterior of said bushings and head for independently actuating the several controlling means.

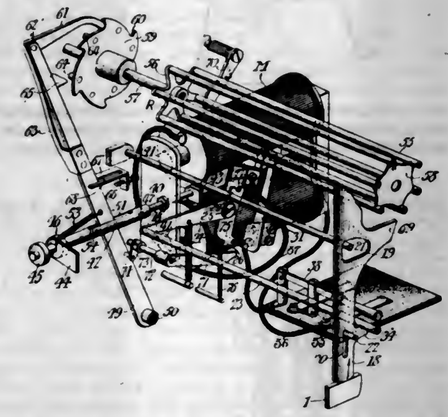
3. In a device of the character stated, the combination of a steam boiler, with a steam distributing head provided with a plurality of openings mounted upon the steam boiler, a valve controlled conduit connecting said head with the steam space of said boiler, a bushing removably secured in each of said openings, said bushings each having a port therethrough, a valve seat on the inner face of each bushing, an arm mounted for swinging movement on each bushing and having a valve piece adapted to coact with the valve seat to open and close the port, a spindle secured to said arm and journaled in and extending through said bushing, and means exterior of said head and bushing and connected to the respective spindles for independently actuating the several valve pieces.

4. In a device of the character stated, the combination of a steam boiler, a steam distributing head provided with a plurality of openings mounted upon the boiler, a conduit connecting said head with the steam space of said boiler, a separate bushing removably secured in each of said openings, said bushings each having a port therethrough and a valve seat on the inner face of each bushing, an arm mounted for swinging movement on each bushing having a valve piece adapted to coact with the valve seat to open and close the port, means for holding said valve pieces pressed against their respective seats, a spindle journaled in each bushing for operating the valve, and separate means exterior of said bushing and head and connected to the respective spindles for independently actuating the several valve pieces from a distance.

5. In a device of the character stated, the combination of a steam boiler, a steam distributing head provided with a plurality of openings mounted upon said boiler, a conduit connecting said head with the steam space of said boiler, a bushing removably secured in each of said openings and having a port therethrough and a valve seat on the inner face of said bushing, an arm mounted for swinging movement at the inner end of said bushing, a valve piece carried by said arm and adapted to coact with said valve seat to open and close said port, and means exterior of said bushing and head and extending through the bushing and connected to said arm for operating it.

[Claims 6 to 11 not printed in the Gazette.]

1,110,648. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 19, 1913. Serial No. 749,297. (Cl. 197—14.)



1. In a typewriting machine, the combination of a key lever, a type bar, a lock for the type bar, a device operated directly by the key lever to release the lock, and electro-responsive means controlled by said device to actuate the type bar.

2. In a typewriting machine, the combination of a type bar, a lock therefor, a key lever, means operated directly by the key lever to release the lock, and a power device to operate the type bar.

3. In a typewriting machine, the combination of a key lever, a type bar, an intermediate member operable by the key lever in one direction, a lock for the type-bar released by said member, and means controlled by said intermediate member during such operation to move said member in a different direction and thereby operate the type bar.

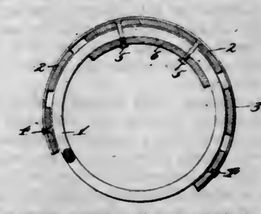
4. In a typewriting machine, the combination of a key lever, a type bar, a lock for the type-bar, a floating lever operable by the key lever in one direction to release the lock, and means controlled by the floating lever during said operation to move said floating lever in a different direction and thereby actuate the type bar.

5. In a typewriting machine, the combination of a key lever, a type bar, an intermediate member moved bodily by the key lever, a motor set into operation by said member to impart an angular movement to said member, and type bar actuating means operated by said member during said angular movement.

[Claims 6 to 73 not printed in the Gazette.]

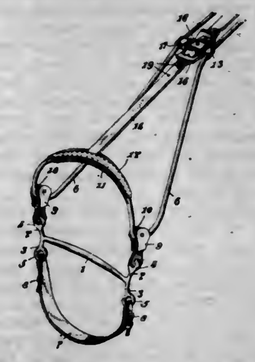
1,110,649. RESILIENT TIRE. WILLIAM SCACE, Pittsfield, Mass. Filed Aug. 16, 1913. Serial No. 785,053. (Cl. 152—8.)

A spring tire comprising a circumferentially extending series of coil springs, a plurality of spaced apart yieldable rims arranged around the tread and sides of said springs, said springs forming the core of said tire, a concavo-convex inner yieldable band engaging the inner circumference



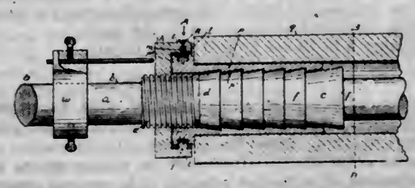
of said springs, a plurality of flexible strips secured to all of the said rims, and means whereby the rims disposed along the tread of said springs are secured to said concavo-convex yieldable band.

1,110,650. HORSE-CHECKING DEVICE. WILLIAM E. SELL, Canton, Ohio, assignor to The Sell Horse Goods Company, Canton, Ohio, a Corporation of Ohio. Filed May 21, 1910. Serial No. 562,731. (Cl. 54—16.)



In a horse checking device of the character described, the combination of a bit provided with T-heads, transversely disposed eyes provided upon the lower extremities of said T-heads and laterally disposed eyes provided upon the upper extremities of said T-heads, blocks pivoted to said upper eyes and adapted for universal movement, said blocks provided with grooved pulleys, bit straps located through the pivoted blocks and under the grooved pulleys, the upper extremities of said bit straps joined together forming a nose band, a chin rest secured to the lower eyes and located below the bit and bit strap, an adjustable strap connected to said nose band, a looped holder fixed upon said adjusting strap and adapted for adjustment thereon, and loops carried by said holder, said bit straps slidably mounted through said loops, whereby the nose band is held in predetermined adjustment upon the nose of the horse.

1,110,651. CLUTCH FOR PAPER-SPOOLS. WILLIAM SHEAHAN, Oregon City, Oreg. Filed Apr. 22, 1911. Serial No. 622,826. (Cl. 242—72.)



1. The combination with a shaft, of a non-rotatable sleeve longitudinally slidable on said shaft; one end of said sleeve provided with a peripheral thread and the

opposite end being made cone-faced; a nut on the threaded end of the sleeve; segmental wedges each formed bevel faced on the interior whereby it is adapted to ride on the cone faced exterior of said sleeve; means for engaging the outer ends of said wedges with the nut; and means for automatically engaging said nut with said wedges, when by reason of looseness the latter rotate on the sleeve with the spool.

2. The combination with a shaft, of a non-rotatable sleeve longitudinally slidable on said snaft; one end of said sleeve provided with a peripheral thread and the opposite end being made cone-faced; a nut on the threaded end of the sleeve; segmental wedges each formed bevel faced on the interior whereby it is adapted to ride on the cone faced exterior of said sleeve; means for engaging the outer ends of said wedges with the nut; means for automatically engaging said nut with said wedges, when by reason of looseness the latter rotate on the sleeve with the spool; and means limiting the longitudinal movement of the sleeve on the shaft.

3. The combination with a shaft, of a sleeve longitudinally slidable on said shaft; the shaft and the core of said sleeve made with engaging faces preventing the latter rotating on the shaft; one end of said sleeve provided with a peripheral thread and the opposite end being made with a series of peripheral conical steps; a nut on the threaded end of the sleeve; segmental wedges each formed with a series of bevel faced portions on the interior whereby it is adapted to ride on the cone faced exterior of said sleeve; said wedges formed with a peripheral flange at the outer ends and whereby they are engaged with the flange of said nut; means for automatically engaging said nut with said wedges, when by reason of looseness the latter rotate on the sleeve with the spool; and means limiting the longitudinal movement of the sleeve on the shaft.

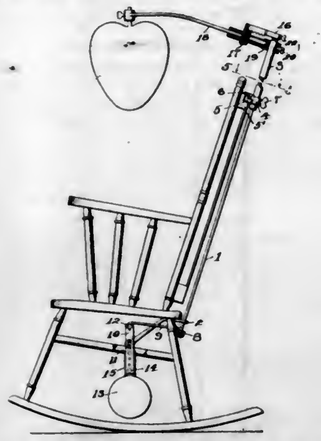
4. The combination with a shaft, of a sleeve longitudinally slidable on said shaft; the shaft and the core of said sleeve made with engaging faces preventing the latter rotating on the shaft; one end of said sleeve provided with a peripheral thread and the opposite end being made with a series of peripheral conical steps; a nut on the threaded end of the sleeve; segmental wedges each formed with a series of bevel faced portions on the interior whereby it is adapted to ride on the cone faced exterior of said sleeve; said wedges formed with a peripheral flange at the outer ends and whereby they are engaged with the flange of said nut; said peripheral flange of the nut being provided with a spring-controlled lock pin and the outer flange of one of said wedges being provided with a related cavity for the purpose set forth; and means limiting the longitudinal movement of the sleeve on the shaft.

5. The combination with a shaft, of a sleeve longitudinally slidable on said shaft; the shaft and the core of said sleeve made with engaging faces preventing the latter rotating on the shaft; one end of said sleeve provided with a peripheral thread and the opposite end being made with a series of peripheral conical steps; a nut on the threaded end of the sleeve; segmental wedges each formed bevel faced on the interior whereby it is adapted to ride on the cone faced exterior of said sleeve; said wedges formed with a peripheral flange at the outer ends and whereby they are engaged with the flange of said nut; said peripheral flange of the nut being provided with a spring-controlled lock pin and the outer flange of one of said wedges being provided with a related cavity for the purpose, set forth; and means limiting the longitudinal movement of the sleeve on the shaft.

[Claims 6 to 10 not printed in the Gazette.]

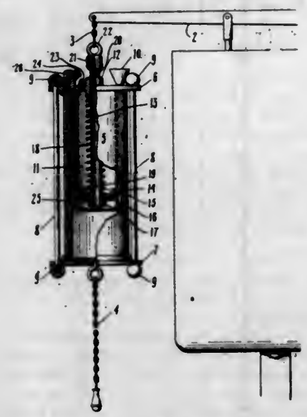
1,110,652. FAN ATTACHMENT FOR ROCKING-CHAIRS. WILLIAM W. SHIRLEY, Buffalo, N. Y. Filed Nov. 10, 1913. Serial No. 800,020. (Cl. 230—7.)

In an automatic fan attachment for rocking chairs, the combination of a bracket adapted to be secured beneath the chair-seat, a weighted lever pivoted to said bracket, a substantially upright rock shaft supported on the back of the chair and provided with a rock arm, a connection extending from said rock arm to said weighted lever, a gear segment secured to the upper portion of said rock



shaft, and a substantially horizontal fan-shaft extending forwardly from the upper portion of said upright shaft, the fan-shaft having a pinion which engages said segment.

1,110,653. ATOMIZER. WALTER J. SMART, New York, N. Y. Filed July 18, 1912. Serial No. 710,328. (Cl. 128—2.)



1. In combination with a flushing mechanism of a toilet cistern including a pull-chain, an atomizer comprising a pair of concentric cylinders, one constituting an atomizing liquid container and the other a fluid pressure cylinder, a piston operably associated with the fluid pressure cylinder, means for connecting the liquid container and said piston with the pull-chain of said mechanism, a discharge pipe for said liquid container provided with a discharge nozzle and a discharge nozzle for said fluid pressure cylinder, said nozzles being angularly disposed with respect to each other.

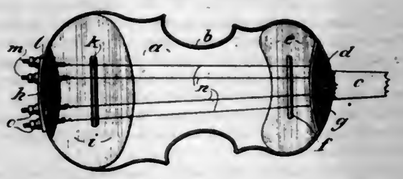
2. In combination with the flushing mechanism of a toilet cistern, an atomizer comprising a liquid container, a fluid pressure cylinder concentrically disposed with respect to said liquid container, connected head and base members supporting and holding said liquid container and fluid pressure cylinder in proper relative position, a piston mounted with respect to said head, a spring interposed between said head and piston normally holding the piston in its retracted position, an outlet provided with a discharge nozzle for said liquid container, a juxtaposed discharge nozzle for said fluid pressure cylinder, and means for connecting the piston rod and the base member with the flushing mechanism.

3. In combination, an atomizer comprising a liquid container, a fluid pressure cylinder concentrically disposed within the liquid container, a top member for the liquid container and fluid pressure cylinder, a base member for the liquid container, connecting means for said top and base, a piston provided with a hollow piston rod affording communication between the fluid pressure cylinder and the atmosphere, telescopically mounted with respect to said top, a compression spring interposed between the top and the piston normally holding it in its inoperative position, a discharge outlet for the liquid container comprising a pipe with its inlet near the bottom of the container, a discharge nozzle for said outlet, a juxtaposed discharge nozzle for said fluid pressure cylinder angularly disposed with respect to the discharge nozzle of the liquid container, and connecting means for the piston and base member for operating the mechanism.

4. In a device of the character described, the combination of a liquid receptacle provided with an outlet nozzle, a pull-chain connected thereto, an air chamber provided with an outlet nozzle depending within the liquid receptacle, a piston for said air chamber, means connecting said piston for suspending it in operative position, and a spring within said air chamber between the piston head and one end of the chamber for retracting the parts to normal position preparatory to their atomizing operation.

5. In a device of the character described the combination of a movably mounted liquid receptacle provided with a discharge nozzle, an air cylinder fixed to the said receptacle and provided with a discharge nozzle in juxtaposition to the discharge nozzle of the liquid receptacle, a piston within the air cylinder, a piston rod connected to said piston and telescopically mounted with respect to said air cylinder, a spring coöperatively associated with said piston and tending normally to resist telescopic movement of said rod, and means coöperatively associating the device with the flushing mechanism of a toilet cistern, said means including a connection between the piston rod and the said flushing mechanism whereby air pressure may be created upon the movement of the liquid receptacle and cause a simultaneous discharge of air and liquid from the device.

1,110,654. VIOLIN. JOHN R. SPEER, Paterson, N. J. Filed Apr. 18, 1913. Serial No. 761,939. (Cl. 84—44.)



1. A violin comprising a body provided with the usual accessories, in combination with spaced sound boards supported at each end of the body within said body and lying in the same plane, a string bridge on each of said sound boards, and auxiliary strings passing over said bridges and connected to the body.

2. A violin including in combination, four supplemental sympathetic strings arranged in the interior of the body and means operated from without the body to tune the auxiliary strings to sympathize with the usual outside strings, in combination with two short sound-boards arranged within the body of the violin, one at each end and supplemental bridges, one located upon each of said sound-boards, over which said auxiliary strings are stretched, the central portion of the space in the violin being unoccupied, save by the usual sound-post and the auxiliary sympathetic strings which pass through said space, all substantially as shown and described.

3. A violin including in combination two supplemental sound-boards, supports for the same, two supplemental bridges and four auxiliary sympathetic strings passing over said bridges and sound-boards; an arch-shaped metal plate with openings therein through which one end of each of said strings is passed and knotted; an adjusting bar secured to the other end of each of said strings and passing to the exterior of the body, all arranged in the interior of the violin, the central portion of the space within the voilin being unoccupied save by the usual sound-post and the auxiliary sympathetic strings which pass through said space, and an independent means outside of the body for moving each bar, all arranged substantially as shown and described.

4. A violin including in combination, with the hollow body and the outside strings extending over the top thereof, a bridge and the other usual outside accessories, of four auxiliary strings arranged within the said body, the inside strings G and D to be tuned to harmonize with the strings G and D on the outside and the inside strings A and E to be tuned an octave lower than the outside strings A and E; two short sound-boards arranged in the same horizontal plane, one at each end of the interior of the body, a bridge mounted on each of said sound-boards, a support under each of said sound-boards, one end of each auxiliary string suitably secured at one end of the interior of the body, the strings passing over said bridges and sound-board longitudinally through the central portion of the hollow body of the voilin, screw-bars —*m*— to which the other ends of the auxiliary strings are secured, the block —*h*— and the metal plate —*l*— through which said screws pass to the exterior of the body and thumb nuts mounted on said screws on the outside of the body, all constructed and arranged substantially as shown and described.

5. In a violin, the combination, with the hollow body and the outside strings, of auxiliary strings arranged within the said body, two short sound-boards —*e*— and —*i*— arranged within the said body at the end thereof, supports —*s*— for the same, bridges —*f*— and —*k*— mounted on each of said short sound-boards, reinforcing blocks —*d*— and —*h*—, an arch-shaped metal plate —*g*— provided with openings through which the ends of the said auxiliary strings are passed and knotted, slots in the block —*d*— adapted to receive said knotted ends, said auxiliary strings passing longitudinally over the bridge —*f*— and over the bridge —*k*—, screw-bars —*m*— to which the other ends of the auxiliary strings are secured, openings through the block —*h*— to permit the screw-bars —*m*— to pass outside of the violin a metal plate provided with openings for the passage of said screw-bars and thumb-nuts —*o*—, adapted to coöperate with the metal plate —*l*— and screw-bars —*m*—, substantially as shown and described and for the purposes specified.

1,110,655. TOY RAILROAD. THOMAS CARL SPELLING, New York, N. Y. Filed June 8, 1914. Serial No. 843,766. (Cl. 104—111.)

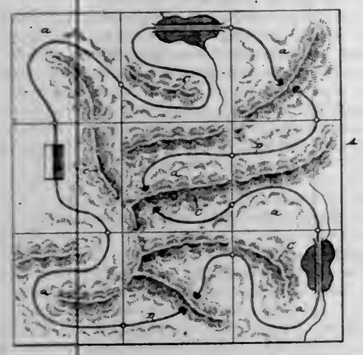
1. In a toy railroad, a base supporting suitable track members, said base having topographical representations bordering the track members formed by integral portions of said base.

2. In a toy railroad, a base supporting suitable track members, said base having topographical representations bordering the track members formed by integral portions of said base, the base being of sheet metal, and said integral portions being pressed therefrom.

3. In a toy railroad, a sectional base supporting suitable track members, said base having topographical representations bordering the track members formed by integral portions of said base.

4. In a toy railroad, a sectional base supporting suitable track members, said base having topographical representations bordering the track members formed by inte-

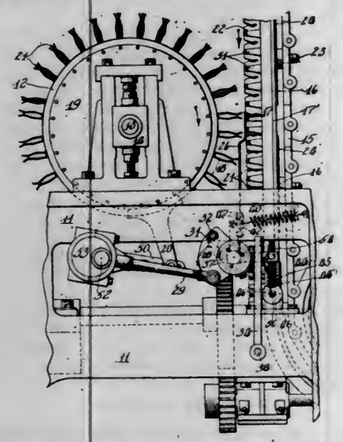
gral portions of said base, the base being of sheet metal, and said integral portions being pressed therefrom.



5. In a toy railroad, a base formed with integral depressed portions constituting a road bed having parallel side walls, of track members laid in said depressed portions and having web portions lying directly against said side walls, in combination with means for securing the track members side walls in said engaging relation, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,110,656. CELL-CASE MACHINE. JOSEPH STARMAN, Cedar Rapids, Iowa, assignor to North Star Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1911. Serial No. 610,089. (Cl. 93—38.)



1. In a transferring mechanism for cell case machines, a conveyer, trays adjacent thereto, means for moving said trays, and means for transferring filler elements from said conveyer to said trays, said means being actuated quickly in its transferring movement and slowly in the reverse direction.

2. In a transferring mechanism for cell case machines, a rotary conveyer, and endless series of assembling trays adjacent thereto, means for moving said trays past said conveyer, and oscillatory means for transferring filler elements from said conveyer to said trays, said means being actuated more speedily in one direction than the other.

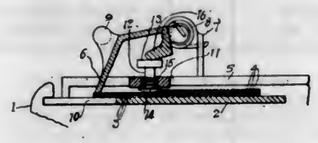
3. In a cell case machine, the combination of a rotary conveyer; trays adjacent thereto; fingers between said conveyer and trays; a rock shaft on which said fingers are mounted; a spring to actuate said shaft in one direction; and other means to actuate said shaft in the opposite direction.

4. In a cell case machine, the combination of a rotary conveyer for carrying filler elements; an endless set of filler assembling trays adjacent thereto; means for moving said trays; a plurality of transferring fingers adapted to actuate between said conveyer and trays; a rock shaft on which said fingers are mounted; a spring attached to actuate said shaft in one direction; and other means comprising ratchet and pawl mechanism to actuate said shaft in the opposite direction.

5. In a cell case machine, the combination of a rotary conveyer; a chain of trays passing adjacent to said conveyer; fingers positioned between said conveyer and trays; a rock shaft on which said fingers are mounted; bearings for said shaft; a ratchet hub element rigidly attached to said shaft; pawl elements co-acting with said ratchet element, the pivot for one being fixed and the other reciprocatory; and separate elements tending to oscillate said shaft in opposite directions.

[Claims 6 to 16 not printed in the Gazette.]

1,110,657. TENSION DEVICE FOR AUTOGRAPHIC REGISTERS. MILTON C. STERN and AXEL C. V. MALM, Dayton, Ohio, assignors to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 19, 1914. Serial No. 812,904. (Cl. 11—36.)



1. In an autographic register having a writing table, a supporting member extending transversely of said register at the forward end of said writing table, plungers mounted for vertical movement in substantially the plane of said supporting member, springs tending to move said plungers toward the paper on that portion of said writing table which projects beneath said member, and a blade pivotally mounted on said register and arranged to engage the paper close to said plungers.

2. In an autographic register having a writing table, a supporting member extending transversely of said register adjacent to said writing table, a spring pressed plunger mounted on said supporting member and having at its lower end a shoe provided with a curved face to engage said paper, and a blade pivotally mounted on said register to engage the paper close to said supporting member.

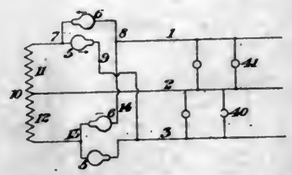
3. In an autographic register, the combination with a table to support webs of paper, vertically movable tension devices supported above said table and arranged to engage said paper on said table, and a blade pivotally mounted on said register, arranged to engage the paper near said tension devices and having a part adapted to engage said tension devices to move the same in positive engagement with said paper when said blade is moved into engagement with said paper.

4. In a device of the character described, a main frame, a table carried thereby to support webs of paper, vertically movable tension devices arranged to engage said paper, and a blade pivotally mounted on said frame in the rear of said tension devices, extending forwardly above the same, having its cutting edge arranged to engage the paper in front of said tension devices and having a part to engage said tension devices and move them toward the paper when the blade is moved toward the paper.

5. In an autographic register having a writing table, a plurality of tension devices arranged close to the forward end of said writing table, and a blade pivotally mounted on said register and arranged to engage the paper in front of said tension devices, and a part connected with said blade in front of the axis thereof to engage the tension devices when the blade engages the paper.

[Claims 6 to 9 not printed in the Gazette.]

1,110,658. THREE-WIRE SYSTEM OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 21, 1903, Serial No. 139,957. Divided and this application filed Oct. 9, 1909. Serial No. 521,949. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with a source of single phase alternating current having an intermediate point, a direct current work circuit and two vapor rectifiers, each including an exhausted container and two main electrodes, one a main anode and the other a re-constructing vaporizable cathode, of connections from the terminals of the source to said main anodes and from the cathodes to the work circuit, and a connection from the work circuit to the said intermediate point, whereby the current impulses occurring in one container are rectified independently of those in the other container.

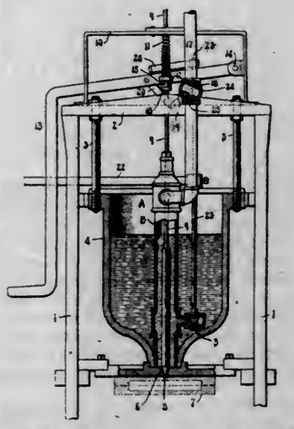
2. In a system of electrical distribution, the combination with an alternating supply, a direct current work circuit having a positive main and a negative main and means for passing positively directed impulses from the several terminals of the said supply to said positive main and for suppressing oppositely directed current impulses in said supply, said means depending upon the starting reluctance of electrodes in a vacuum space, separate containers inclosing said electrodes and a connection between said negative main and an intermediate point of said supply.

3. In a system of electrical distribution, the combination with an alternating supply having a neutral point and a plurality of terminals, a direct current work circuit having a positive main and a negative main and means for passing current impulses out of each supply terminal during the period of positively directed electro motive force at said terminal to said positive main and for suppressing current flow at said terminal at other times, said means depending upon the starting resistance of an electrode in a vacuum space, of separate containers for said electrodes and a connection from said negative main to said neutral point.

1,110,659. CASTING APPARATUS. WILLIAM C. URBAN, Granite City, Ill., assignor of one-half to Hoyt Metal Company, St. Louis, Mo., a Corporation. Filed Feb. 13, 1913. Serial No. 748,097. (Cl. 22—69.)

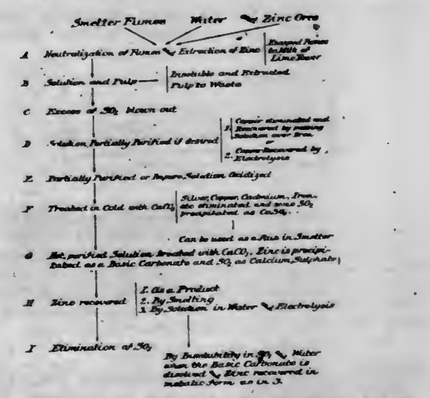
1. A casting apparatus comprising a melting pot, a pressure tube adapted to communicate with said melting pot, said tube having a closure at its upper end and having its lower end secured to the middle portion of the bottom of said melting pot, means for opening and closing communication between said tube and melting pot, a closure for the bottom of said tube located at the bottom of said melting pot, said closure having a discharge port through which molten metal may be discharged downwardly from said tube and melting pot, a vertically movable discharge valve at the bottom of said tube for opening and closing said discharge port, a valve stem secured to said valve and extending through the closure at the upper end of said tube, a spring tending to hold said valve upon its seat, and means for operating said valve stem.

2. A casting apparatus, comprising a melting pot, a pressure tube arranged within and adapted to communicate with said melting pot, an admission valve for opening and closing communication between said pressure tube and melting pot, the apparatus being provided with a discharge port through which molten metal may be discharged from said pressure tube into a die, a discharge valve adapted to open and close said discharge port, said discharge valve being separate from and having no direct connection with said admission valve, and the admission valve being operable to open and close communication between said pressure tube and melting pot while the discharge valve is closed.



3. A casting apparatus, comprising a melting pot, a pressure tube arranged within and adapted to communicate with said melting pot, an admission valve for opening and closing communication between said pressure tube and melting pot, the apparatus being provided with a discharge port through which molten metal may be discharged from said pressure tube into a die, a discharge valve adapted to open and close said discharge port, said discharge valve being separate from and having no direct connection with said admission valve, and the admission valve being operable to open and close communication between said pressure tube and melting pot while the discharge valve is closed; combined with means for automatically locking said discharge valve in its closed position while the admission valve is in its open position.

1,110,660. PROCESS FOR ARRESTING SULFUROUS GASES AND FUMES AND UTILIZING THE HEAT AND GASES CONTAINED THEREIN. CHARLES S. VADNER, Salt Lake City, Utah. Filed Oct. 29, 1913. Serial No. 797,949. (Cl. 75—18.)



1. The process of recovering zinc and other metals from naturally oxidized and sufficiently roasted sulfid ores containing zinc and other metals which consists in spraying the finely ground pulp of said ores into sulfurous gases,

eliminating the copper contained therein by passing the solution over iron, oxidizing the solution, treating same in the cold with finely pulverized calcium carbonate, whereby the ferric hydrate reacts with arsenic and eliminates same from the solution as ferric arsenite, reheating the solution and precipitating the zinc as a basic carbonate by means of additional finely pulverized calcium carbonate.

2. The process which consists in recovering zinc and other metals from naturally oxidized or sufficiently roasted sulfid ores containing zinc and other metals by spraying the finely ground pulp of said ores into smelter fumes containing sulfurous gases, eliminating the copper contained therein by passing the solution over metallic iron, oxidizing and treating the solution in the cold with finely pulverized calcium carbonate whereby the ferric hydrate formed reacts with the arsenic and eliminates same from the solution as ferric arsenite.

3. The process which consists in recovering zinc and other metals from naturally oxidized or sufficiently roasted sulfid ores containing zinc and other metals by spraying the finely ground pulp of said ores into smelter fumes containing sulfurous gases, eliminating the copper contained therein by passing the solution over metallic iron, oxidizing the solution and eliminating the other metals except zinc by precipitating same in the cold by means of a sufficient quantity of finely pulverized calcium carbonate, reheating the solution and precipitating the zinc as a basic carbonate by means of additional finely pulverized calcium carbonate.

4. The process which consists in recovering zinc and other metals from naturally oxidized or sufficiently roasted sulfid ores containing zinc and other metals except zinc by spraying the finely ground pulp of said ores into smelter fumes containing sulfurous gases, eliminating the copper therein by passing the solution over metallic iron, oxidizing the solution and eliminating the other metals by precipitating same in the cold by means of a sufficient quantity of finely pulverized calcium carbonate and reheating the solution and precipitating the zinc as a basic carbonate by means of finely pulverized calcium carbonate, and dissolving the basic zinc carbonate in sulfur dioxid and water and electrolyzing the solution whereby the zinc is recovered in metallic form.

5. The process which consists in recovering zinc and other metals from naturally oxidized or sufficiently roasted sulfid ores containing zinc and other metals by spraying the finely ground pulp of said ores into smelter fumes containing sulfurous gases, oxidizing the solution and ridding the solution of the other metals contained therein by precipitating the same in the cold by means of a sufficient quantity of finely pulverized calcium carbonate.

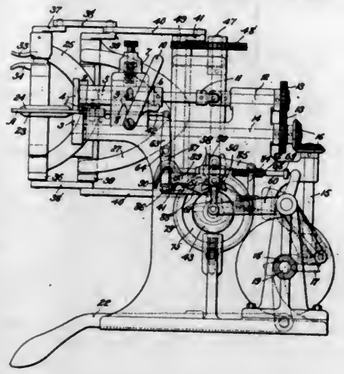
[Claims 6 to 10 not printed in the Gazette.]

1,110,661. SHEET-METAL BOX. FREDERICK WESTERBECK, St. Louis, Mo. Filed Jan. 27, 1913. Serial No. 744,387. (Cl. 220—6.)

In a sheet metal box, a body having a wall provided with a bead extending throughout less than the complete circumference of the box body, an end of the bead being inclined inwardly at the gap between the ends of the bead; and a cover having a flange frictionally engaging the wall of the box body above the bead, the said flange being provided with a depending tongue located in said gap.

1,110,662. CONTROLLING MECHANISM FOR AUTOMATIC MACHINES. ERASTUS E. WINKLEY, Lynn, Mass. Filed Aug. 20, 1908. Serial No. 449,409. (Cl. 12—27.)

1. An automatic machine, having, in combination, a tool, feeding means for causing a relative travel of the tool along the work in the direction of the periphery of a form, and mechanism other than the form and controlled by the curvature of the form for relatively swinging the feeding means and work in either direction to cause the path of travel of the tool along the work to correspond to the contour of the form, substantially as described.



2. An automatic machine, having, in combination, a tool, means for moving the work to transfer the point of operation of the tool along the work in the direction of the periphery of a form, and mechanism other than the form and controlled by the curvature of the form for relatively moving the tool and work in either direction to correct the angular relation between the tool and work as the point of operation progresses along the work, substantially as described.

3. An automatic machine, having, in combination, a tool, feeding means acting to transfer the point of operation of the tool along the work in the direction of the periphery of a form, and mechanism other than the form and controlled by the curvature of the form acting to automatically swing the work in either direction in accordance with the curvature of the form, substantially as described.

4. A feeding mechanism for automatic machines, having, in combination, a gage arranged to engage the periphery of a form, a feeler arranged to engage the form, feeding means for causing a relative travel of the gage and feeler along the periphery of the form, and mechanism controlled by the feeler for relatively swinging the feeding means and form in either direction to keep the gage and form in contact, substantially as described.

5. An automatic machine, having, in combination, means for operating on the work, means for feeding the work to transfer the point of operation of the operating means along the work, and means controlled by a contour of the work for relatively swinging the work and operating means in either direction in accordance with the curvature of said contour, substantially as described.

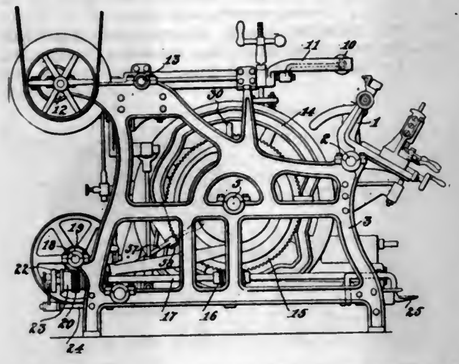
[Claims 6 to 41 not printed in the Gazette.]

1,110,663. SOLE-LEVELING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,501. (Cl. 12—34.)

1. A sole leveling machine having, in combination, a leveling device, a shoe supporting jack, mechanism for changing the relative longitudinal position of the leveling device and jack, and additional mechanism for automatically varying the duration of the leveling action upon different portions of the shoe sole.

2. A sole leveling machine having, in combination, a leveling device, a jack, mechanism for changing the relative longitudinal position and lateral inclination of the leveling device and jack, and additional mechanism for automatically varying the duration of the leveling action upon different portions of a shoe sole.

3. A sole leveling machine having, in combination, a leveling device, a shoe supporting jack, mechanism for securing a relative longitudinal movement of the leveling device and jack, and means for automatically stopping said mechanism for predetermined intervals to cause the leveling device to operate for an increased length of time upon certain portions of the sole.

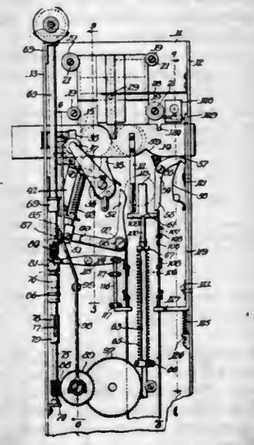


4. A sole leveling machine having, in combination, a leveling device, a jack, mechanism for changing the relative longitudinal position and lateral inclination of the leveling device and jack, and additional mechanism for automatically stopping the relative longitudinal movement during the continuous operation of the machine and for maintaining the relative lateral inclination of the roll and jack constant while the jack is stationary.

5. A sole leveling machine having, in combination, a leveling device, a shoe supporting jack, mechanism for moving the jack longitudinally beneath the leveling device, and means for automatically stopping said mechanism for a predetermined length of time during the leveling operation to vary the extent of the leveling action upon different portions of the sole.

[Claims 6 to 13 not printed in the Gazette.]

1,110,664. COIN-CONTROLLED LOCK. AMOS A. WYCKOFF, Santa Cruz, Cal., assignor of one-half to Edward L. Williams, Santa Cruz, Cal. Filed Aug. 7, 1913. Serial No. 783,519. (Cl. 194—1.)



1. In a coin-controlled lock, the combination of a locking bolt, mechanism for operating said bolt, a coin-releasable device for normally preventing locking movement of said bolt, and a coin-releasable device for normally preventing unlocking movement of said bolt, said devices being arranged to be successively released by a single coin upon initial movement of said bolt in opposite directions respectively.

2. In a coin-controlled lock, the combination of a locking bolt, means positioned to engage one edge of the bolt for holding said bolt in locked position, means positioned to engage the opposite edge of the bolt for holding said bolt in unlocked position, and mechanism for operating said bolt, said mechanism being adapted, through the intermediary of a coin upon movement in opposite directions, to release said respective holding means and permit operation of said bolt.

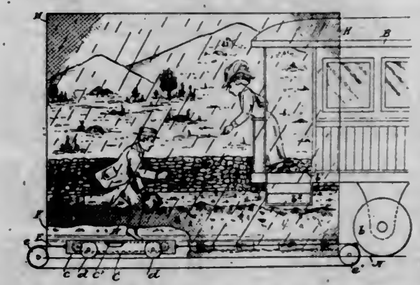
3. In a coin-controlled lock, the combination of a locking bolt, a device normally holding said bolt against locking movement, a device normally holding said bolt against unlocking movement, means for operating said bolt, said holding devices being arranged to be successively released by a coin upon initial movement of said bolt operating means, and means for withdrawing said coin from operative relation to said device which holds the bolt in locked position, after said bolt has remained in locked position a predetermined period of time.

4. In a coin-controlled lock, the combination of a locking bolt, means for operating the same, a latch normally holding said bolt against unlocking movement, means acting through the intermediary of a coin for releasing said latch upon initial unlocking movement of said bolt, and means for controlling the position of a coin in the lock so that said coin is disposed in inoperative relation to said latch releasing means after the lock has been locked a predetermined time.

5. In a coin-controlled lock, the combination of a locking bolt, means for operating the same, a device normally holding said bolt against locking movement, said device being adapted to be released through the intermediary of a coin, a latch normally holding said bolt against unlocking movement, means operating through the intermediary of a coin to release said latch upon initial unlocking movement of the bolt, movement of said bolt from unlocked to locked position being adapted to position a deposited coin in coöperative relation with said last mentioned means, and means for permitting said coin to withdraw from coöperative relation with said means after said bolt has remained in locked position a predetermined period of time so that said latch releasing means can be operated only through the intermediary of a subsequently deposited coin.

[Claims 6 to 38 not printed in the Gazette.]

1,110,665. ILLUSION APPARATUS FOR THEATRICAL AND AMUSEMENT PURPOSES. TIMOTHY R. BARRETT, Bordentown, N. J. Filed Mar. 30, 1911. Serial No. 617,978. (Cl. 46—70.)



1. In an illusion apparatus, the combination with a foreground and a background, of a treadmill positioned intermediate said foreground and background, and a movable simulated vehicle or car provided with means for the accommodation of a performer, such simulated vehicle or car being provided with carrying wheels adapted to run upon the stage and said car or vehicle being movable at will toward and from the treadmill.

2. In an illusion apparatus, the combination with a foreground and a background, of a wheeled vehicle or car provided with means for the accommodation of a performer, said vehicle or car being positioned intermediate the foreground and the background and being movable at will across the stage, a wheeled treadmill adjacent to said car or vehicle, and means operatively connected with said treadmill and operable at will for moving said treadmill toward and from the car or vehicle.

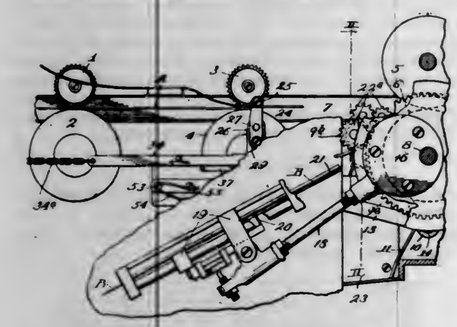
3. In an illusion apparatus, a background, a foreground, a wheeled vehicle positioned intermediate the background and the foreground, a treadmill adjacent to the wheeled vehicle, and means for bodily moving said treadmill relative to the wheeled vehicle, said wheeled vehicle being movable at will relative to the treadmill.

4. In an illusion apparatus, a stage setting embodying a simulated vehicle and a treadmill movable relative to each other, a background screen at the rear of the stage setting, means for projecting a series of pictures in rapid succession against said background screen, a substantially invisible screen positioned in front of the stage setting, through which screen the stage setting is visible to the audience, and separate means for projecting a series of pictures in rapid succession against the substantially invisible screen.

5. In an illusion apparatus, a translucent background screen and means for projecting pictures in rapid succession against it, a substantially invisible foreground screen composed of open mesh fabric, means for projecting a series of like views in rapid succession against the foreground screen, and a stage setting positioned intermediate the background screen and the foreground screen, said stage setting being exposed to the view of an audience through the foreground screen.

[Claims 6 to 12 not printed in the Gazette.]

1,110,666. ATTACHMENT FOR MAILING-MACHINES. HENRI W. BILTZ, Kansas City, Mo. Filed Mar. 30, 1914. Serial No. 828,243. (Cl. 216—12.)



1. In a machine of the character described, a stamp feed carriage, a mail-matter controlled mechanism to time the movements of said carriage, and means to adjust said mechanism to change the time of movement of the carriage.

2. In a machine of the character described, a stamp feed carriage, a mail-matter controlled finger to time the movements of said carriage, and means to adjust said finger to change the time of movement of the carriage.

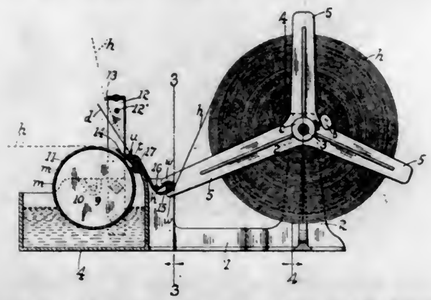
3. In a machine of the character described, a stamp feed carriage, a mail-matter controlled element, a cam carrying said element and adapted to time the movements of said carriage, said cam being actuated by said element, and means to adjust said cam to change the time of movement of the carriage.

4. In a machine of the character described, a stamp feed carriage, a mail-matter controlled element, a lever controlled by said element and adapted to time the movements of said carriage, and means to adjust said element to change the time of movement of the lever.

5. In a machine of the character described, a stamp feed carriage, a mail-matter controlled element to time the movements of said carriage, means to adjust said element to change the time of movement of the carriage, a dog for holding said element at different points of adjustment, and means for securing said dog at different points of its adjustment.

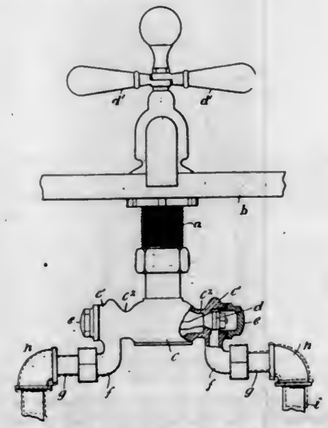
[Claims 6 to 10 not printed in the Gazette.]

1,110,667. GUMMED-TAPE-MOISTENING MACHINE. SAMUEL BROWN, St. Louis, Mo. Filed Nov. 3, 1913. Serial No. 798,916. (Cl. 91—14.)



In a machine of the character described, a liquid container, a moistening drum thereon, an apron secured to one of the container walls and spaced from the drum, a resilient guide-sheet for the tape spaced from, and positioned outside of, the container wall carrying the apron, and forming a passageway with said wall for the traverse of the tape, the wall aforesaid being provided with a groove disposed across the path of travel of the tape, the guide-sheet having a portion bent toward said groove and terminating at its free end in a lip bearing against a wall of the groove whereby the tap passing between said wall and lip is constrained to move or is normally directed away from, the apron and from the moistening drum, means for securing the opposite and fixed end of the guide-sheet across the path of travel of the tape, a cutter disposed lengthwise across the drum and above the same, and at a suitable distance from the apron and above the outlet from the passageway aforesaid, the parts operating substantially as, and for the purpose set forth.

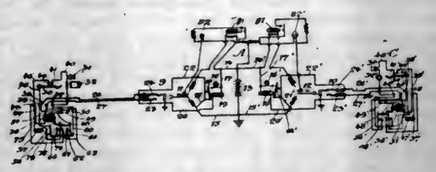
1,110,668. LAVATORY-FITTING. WILLIAM BUNTING, Jr., Brookline, Mass. Filed Oct. 23, 1911. Serial No. 656,107. (Cl. 137—28.)



1. A lavatory fitting comprising a discharge casing adapted to be rigidly mounted in the lavatory and having an inlet casing rigidly connected thereto, said inlet casing having a valve chamber and an inlet elbow connected to the under side of said chamber, said elbow extending downwardly and laterally therefrom and being constructed to yield vertically with relation to said casing, and a supply-pipe connection for the end of said elbow, substantially as described.

2. A lavatory fitting comprising a casing having a pair of oppositely disposed valve chambers, an inlet elbow connected to the under side of each chamber and extending downwardly and laterally therefrom, each elbow being constructed to yield vertically with relation to said casing, and a supply-pipe connection for the end of each elbow, substantially as described.

1,110,669. COIN-COLLECTOR FOR TELEPHONES. ARTHUR E. CASE, Chicago, Ill., assignor to Delta Electric Company, Marion, Ind., a Corporation of Indiana. Filed Aug. 8, 1912. Serial No. 714,019. (Cl. 179—6.5.)



1. A toll-telephone system comprising an exchange, a sub-station, a connecting line, a coin collecting device, and means and connections for controlling the coin-device to cause it to refund the deposited coin when the calling-line is disconnected at the exchange before the subscriber disconnects the sub-station at the sub-station.

2. A toll-telephone system comprising an exchange, a sub-station, a connecting line, a coin collecting device, a coin-controlled switch at the sub-station, and means and connections for controlling the coin-device to cause it to refund the coin when the calling-line is disconnected at the exchange before the subscriber disconnects the sub-station at the sub-station.

3. A toll-telephone system comprising an exchange, a sub-station, a connecting line, a coin collecting device at the sub-station, a coin-controlled line-signal at the exchange, and means and connections for controlling the coin-device to refund the deposited coin, when the line is disconnected at the exchange, before the subscriber disconnects the sub-station at the sub-station.

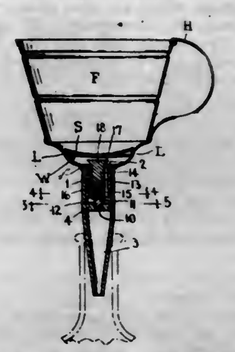
4. A toll-telephone system comprising an exchange, a sub-station, a connecting line, a coin collecting device at the sub-station, a coin-controlled line-signal at the exchange, and means and connections for operating the coin-device to automatically refund the deposited coin when the line is disconnected at the exchange, before the subscriber disconnects the sub-station at the sub-station.

5. A toll-telephone system comprising an exchange, a sub-station including a telephone-set and a switch-hook, a connecting line, a coin-collecting device at the sub-station, and means and connections for controlling the coin-device to refund a coin when the calling line is disconnected at the exchange before the subscriber places the receiver of the telephone-set on the switch-hook.

[Claims 6 to 18 not printed in the Gazette.]

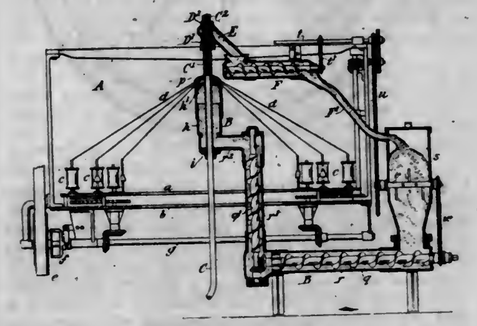
1,110,670. FUNNEL. HENRY M. CASE, Syracuse, N. Y. Filed Sept. 12, 1912. Serial No. 720,050. (Cl. 226—33.)

The herein described self closing funnel comprising a cylindrical nipple having at its top an annular flange formed with a cone-shaped valve seat, a funnel body attached to said flange, a movable spout having a tapered lower end to seat in the neck of a bottle and a cylindrical upper end to receive and slide on said nipple, a cross bar fixed in the intermediate portion of the spout and having a centrally arranged screw threaded opening, a cone-shaped valve to engage said seat and formed on its bottom with a cylindrical stem of less diameter than the nipple, the lower end of said stem having a cylindrical socket, a plug having a shouldered enlargement between its ends and a lower externally threaded end to screw into the opening in said cross bar, the upper end of said plug being formed with a longitudinally extending slot and



being cylindrical and of less size than the socket in said valve stem into which latter it projects, and a pin passed transversely through the lower end of the stem and the slot in said plug, said pin being of less diameter than the width of the slot in said plug, substantially as shown and for the purpose set forth.

1,110,671. MANUFACTURE OF RUBBER HOSE. HENRY ZENAS COBB, Winchester, Mass. Filed Mar. 26, 1912. Serial No. 686,304. (Cl. 154—6.)



1. The process of making hose which consists in braiding yarns into an ascending tubular textile web while introducing a dense plastic material upwardly directly beneath the braiding point, and feeding such material at such rate as to maintain a mass thereof surrounding the braiding point where the yarns pass through such mass on their way to form the web, and finally removing an excess of such material from the surface of the web.

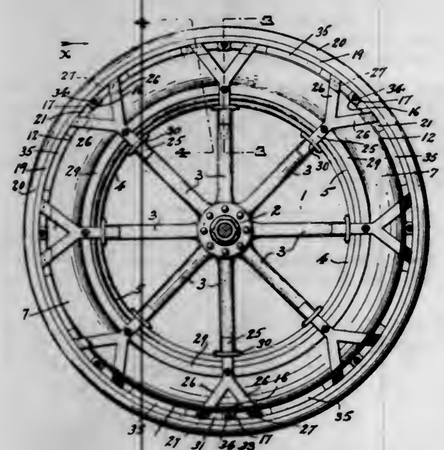
2. The process of making hose which consists in braiding yarns into an ascending tubular textile web while introducing a dense plastic material directly beneath the braiding point, and maintaining a mass of such material through which the yarns pass on their way to form the web, whereby the yarns are impregnated with such material, then smoothing the material carried on the surface of the web, and finally removing the excess of such material from the web.

3. An apparatus for making hose comprising means for braiding an ascending tubular textile web, and means for simultaneously introducing a dense plastic material directly beneath the braiding point, adapted to maintain a mass of such material intersected by the yarns, whereby the yarns pass through such mass on their way to form the web, means for smoothing the material carried on the

surface of the web, and means for subsequently removing the excess of such material from the web.

4. An apparatus for making hose comprising means for braiding an ascending tubular textile web, and means for simultaneously introducing a dense plastic material directly beneath the braiding point, comprising a coating chamber through which the core passes, located with its top just beneath the converging yarns, and forcing means for feeding the material into such chamber at such rate as to maintain a mass of material overlying the chamber and intersected by the yarns.

1,110,672. RESILIENT TIRE FOR VEHICLE-WHEELS. GIROLAMO CONCATO, Perth Amboy, N. J., assignor of three-twentieths to Anthony J. Ferretti, Cliffside, N. J., three-twentieths to Anthony J. Perrone, Palisades, N. J., and two-twentieths to Charles H. Kayser, West Orange, N. J. Filed Dec. 9, 1913. Serial No. 805,666. (Cl. 152—33.)



1. The combination with the outer casing of a pneumatic tire of a metallic band affixed to the outer circumference thereof, transverse yoke-pieces secured to said band and provided at their ends with outwardly extending lugs, one of said lugs being rigidly and the other pivotally connected with said yoke-pieces, a metallic tread, means on the inner side of said tread adapted to be embraced by said yoke-pieces, and means for securing said yoke-pieces in such embracing relation.

2. The combination with the outer casing of a pneumatic tire of a metallic band affixed to the outer circumference thereof, transverse yoke-pieces secured to said band and provided at their ends with outwardly extending lugs, one of said lugs being rigidly and the other pivotally connected with said yoke-pieces, a metallic tread, means on the inner side of said tread adapted to be embraced by said yoke-pieces, means for securing said yoke-pieces in such embracing relation, retaining-elements connected with said metallic tread, and guard plates secured to said vehicle wheel with which said retaining elements coöperate.

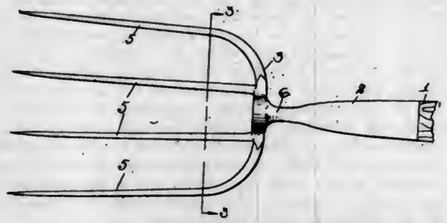
3. The combination with the outer casing of a pneumatic tire of a metallic band affixed to the outer circumference thereof, transverse yoke-pieces secured to said band and provided at their ends with outwardly extending perforated lugs, one of said lugs being rigidly and the other pivotally connected with said yoke-pieces, a metallic tread, longitudinal ribs connected with the inner side of said metallic tread having perforations adapted to register with the perforations of said lugs of the yoke-pieces and a cutaway portion for embracing said yoke-pieces, a bolt adapted to be passed through the perforations of said lugs and said ribs, a nut adapted to be secured upon said bolt to prevent its withdrawal, a plurality of exteriorly disposed retaining elements, a circular-member for interconnecting said retaining-elements, each retaining element having a forwardly projecting portion, said ribs of said metallic tread having a transverse opening in which said projecting portion is received, means for securing said projecting portion against withdrawal from said opening, a plurality of guard-plates adapted to be secured to a vehicle wheel, and said guard-plates having hatches through which the free ends of said retaining elements pass, said hatches being of a size to permit a limited lateral movement of said retaining-element in any direction.

4. The combination with the outer casing of a pneumatic tire of a metallic band affixed to the outer circumference thereof, transverse yoke-pieces secured to said band and provided at their ends with outwardly extending perforated lugs, one of said lugs being rigidly and the other pivotally connected with said yoke-pieces, a metallic tread, longitudinal ribs connected with the inner side of said metallic tread having perforations adapted to register with the perforations of said lugs of the yoke-pieces and a cutaway portion for embracing said yoke-pieces, a bolt adapted to be passed through the perforations of said lugs and said ribs, and a nut adapted to be secured upon said bolt to prevent its withdrawal, retaining-elements connected with said metallic tread, and guard plates secured to said vehicle wheel with which said retaining elements coöperate.

5. The combination with the outer casing of a pneumatic tire of a metallic band affixed to the outer circumference thereof, transverse yoke-pieces secured to said band and provided at their ends with outwardly extending perforated lugs, one of said lugs being rigidly and the other pivotally connected with said yoke-pieces, a metallic tread, longitudinal ribs connected with the inner side of said metallic tread having perforations adapted to register with the perforations of said lugs of the yoke-pieces and a cutaway portion for embracing said yoke-pieces, a bolt adapted to be passed through the perforations of said lugs and said ribs, a nut adapted to be secured upon said bolt to prevent its withdrawal, a plurality of exteriorly disposed retaining elements, a circular-member for interconnecting said retaining-elements, each retaining element having a forwardly projecting portion, said ribs of said metallic tread having a transverse opening in which said projecting portion is received, means for securing said projecting portion against withdrawal from said opening, a plurality of guard-plates adapted to be secured to a vehicle wheel, and said guard-plates having hatches through which the free ends of said retaining elements pass, said hatches being of a size to permit a limited lateral movement of said retaining-element in any direction.

[Claims 6 and 7 not printed in the Gazette.]

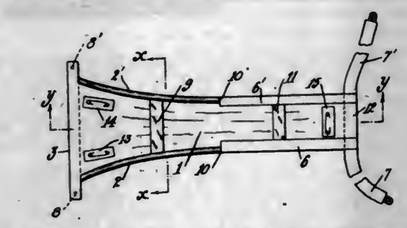
1,110,673. AGRICULTURAL IMPLEMENT. WARREN H. COWDERY, Cleveland, Ohio, assignor to The American Fork and Hoe Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 6, 1914. Serial No. 843,435. (Cl. 55—2.)



1. A fork having a curved neck, a head having a bend formed centrally therein, said head being attached at the center of such bend to said neck and extending transversely with respect to said neck, the portion of said head lying on either side of said neck being offset from, and lying in a different plane with respect to, said neck, and tines attached to said head and extending outwardly therefrom.

2. A fork having a curved neck formed into a socket adapted to receive a straight handle, a head having a bend formed centrally therein, said head being attached at the center of such bend to said neck and extending transversely with respect to said neck, the portion of said head lying on either side of said neck being offset from, and lying in a different plane with respect to, said neck, and tines attached integrally to said head and extending outwardly therefrom, the curve in said neck and the offset in said head due to the bend therein positioning said tines in proper relation to said handle.

1,110,674. CATAMENIAL APPLIANCE. JOHN B. DES ROSIERS, Providence, R. I. Filed Feb. 11, 1914. Serial No. 818,033. (Cl. 128—5.)



1. A catamenial appliance having a body of soft, pliable material, round tubular edges attached longitudinally to the sides of the forward portion of said body; flat elastic edges attached longitudinally to the sides of the rearward portion of said body, joined in prolongation to said round, tubular edges, transverse elastic strips connecting said round longitudinal edges and said flat longitudinal edges, free from the body; means for holding interior fasteners on said band; flat elastic lateral edges at each end of said band, one exceeding the other in length and means for connecting corresponding ends of said front and rear lateral edges to form a belt.

2. A catamenial appliance formed of a band of pliable material, the front portion of said band extending outwardly from the intermediate line of said band; round tubular cushions on said outwardly extending forward edges; flat elastic edges attached laterally to the rearward portion of said body in prolongation of said outwardly extending forward edges; transverse elastic strips connecting said outwardly curved longitudinal edges and said flat longitudinal edges, said transverse strips being free from said band; means on the interior of said band to hold fastenings interior to said band; flat elastic lateral edges at each end of said band, said front lateral edge greatly exceeding said rearward lateral edge in length, and means for connecting corresponding ends of said front and rear elastic lateral edges to form a belt.

3. A catamenial appliance having a body of soft, pliable material; round cushioned edges attached longitudinally to said body; flat elastic edges attached longitudinally to said body in rearward prolongation of said round cushioned edges; transverse elastic strips connecting said round longitudinal edges and said flat longitudinal edges free from the body; inserts on the interior of said band carrying fasteners; flat elastic lateral edges at each end of said band, one greatly exceeding the other in length, and means for connecting corresponding ends of said lateral edges to form a belt.

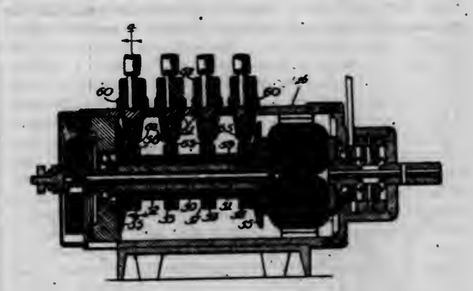
1,110,675. PROCESS OF OBTAINING ALUMINIUM FLUORID. CHARLES A. DOREMUS, New York, N. Y. Filed Apr. 2, 1914. Serial No. 829,014. (Cl. 23—13.)

1. The process of obtaining aluminium fluorid from its solutions, which consists in the application of heat to said solution contained in a closed vessel, substantially as described.

2. The process of obtaining aluminium fluorid having variable amounts of water of crystallization, or none thereof, by heating, in a closed vessel, a solution of such aluminium fluorid, the proportion of water of crystallization diminishing according as the temperature applied is raised, substantially as described.

3. The process of obtaining hydrous aluminium fluorid in crystalline form, which consists in heating, in a closed vessel, a solution of aluminium fluorid, and stirring the same while heating continues, substantially as described.

1,110,676. ELECTRIC DISTRIBUTER. LOUIS J. FLINT, South Whitley, Ind., assignor to Grip Nut Company, a Corporation. Filed Jan. 10, 1912. Serial No. 670,470. (Cl. 123—167.)



1. In a distributing device, a rotary structure comprising in combination a central conducting shaft, an insulating sleeve surrounding said shaft, a metallic envelop surrounding said sleeve, a body of insulating material surrounding said envelop, and distributing fingers spaced longitudinally of said shaft supported by said material.

2. In a distributing device, a rotary structure comprising a central conducting shaft, an insulating sleeve surrounding said shaft, a metallic envelop surrounding said sleeve, an integral body of insulating material surrounding said envelop, said material having embedded therein a plurality of distinct rings and a rod threaded through all of said rings.

3. In a device of the class described in combination, a revolving element comprising a body of insulating material, a rod carried within said material, and a series of rings each provided with projecting pieces mounted on said rod, said projections being flush with the surface of said material.

4. In a device of the class described in combination, a casing provided with a series of apertures, contact points mounted in said apertures, a revolving element provided with a set of revolving contacts, and sleeves slidably mounted on said stationary contact points for coöperating said revolving contacts.

5. In a device of the class described in combination, a metallic case provided with apertures therein, a revolving element provided with contact points mounted in said case, separate insulating plugs mounted in said apertures, and conducting sleeves provided with contact points mounted in said plugs.

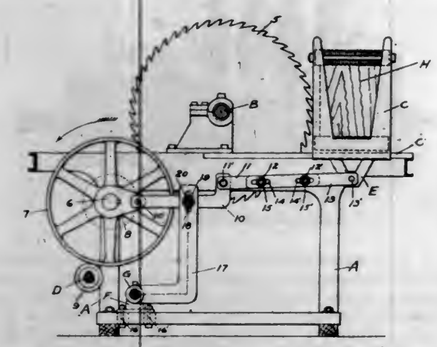
[Claims 6 to 10 not printed in the Gazette.]

1,110,677. MECHANICAL MOVEMENT. FRED W. FLUHRER, Mayger, Oreg. Filed Dec. 30, 1912. Serial No. 739,351. (Cl. 74—5.)

1. A mechanism for a gradual forward and a quick return of a reciprocating member on a horizontal plane, comprising a link system consisting of a first member, a second member having one end pivoted on one end of the first member and its opposite end pivoted on a reciprocating member movable horizontally, a rocking shaft pivotally secured below the link system, means to allow said shaft to be moved longitudinally with the link system and to be secured in a correlated position therewith, a reciprocating arm having its lower end rigidly secured on said rocking shaft, means to pivotally secure the upper end of the reciprocating arm upon the first member of the link system in a correlated position with respect to said system and its attached reciprocating member, substantially as described.

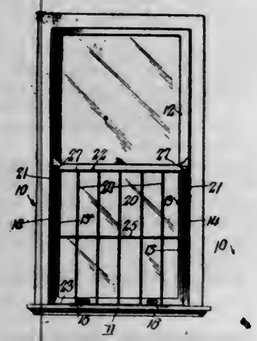
2. A mechanism for a gradual forward and a quick return of a reciprocating member on a horizontal plane, comprising a link system consisting of a first member, a second member of two parts, means to secure said parts to each other to make the second member of a desired

length, said second member having one end pivoted on one end of the first member and its opposite end pivoted on a reciprocating member movable horizontally, a rocking shaft pivotally secured below the link system, means to allow said shaft to be moved longitudinally with the link system and to be secured in a correlated position there-



with, a reciprocating arm having its lower end rigidly secured on said rocking shaft, means to pivotally secure the upper end of the reciprocating arm upon the first member of the link system in a correlated position with respect to said system and its attached reciprocating member, substantially as described.

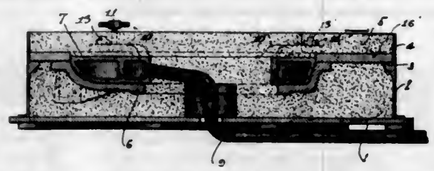
1,110,678. WINDOW-GUARD. BENJAMIN FRANKLIN, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,902. (Cl. 20—71.)



1. A window guard adapted to be secured at the inside of a window comprising in combination with the window sill and the lower window sash, an open frame, a covering for the said frame, means for detachably engaging the bottom of said frame with said window sill, vertically extending guide members on said window sash, and devices at or near the upper end of said frame adapted for locking and guiding engagement with said guide members.

2. A window guard adapted to be secured at the inside of a window comprising in combination with the window sill and the lower window sash, an open frame, a grating covering said frame, apertured plates fixed to said window sill, the said window sill being provided with recesses below said plates, means provided at the bottom of said frame for engagement in the apertures of said plates, vertically extending slotted channel bars fixed to said sash, the slots in said channel bars being closed at their upper ends and being enlarged at said upper ends, and devices provided at the top of said guard frame adapted for insertion through the enlarged upper ends of said slots and for locking and guiding engagement within said slots when said window sash is raised.

1,110,679. MOLDING-FLASK. PETER FRAY, Tampa, Fla. Filed Dec. 16, 1913. Serial No. 806,947. (Cl. 22—103.)



1. A device of the character described comprising the combination with a molding flask, of a conduit adapted to be disposed adjacent the member to be cast, said conduit, being provided with an inlet and outlet and means for adjusting the position of said conduit, within said flask, as described.

2. A device of the character described comprising the combination with a molding flask, of a conduit adapted to be disposed therein adjacent the member to be cast, said conduit being provided with an inlet and outlet, projecting arms on said conduit, and set screws projecting through said arms and impinging against a portion of said flask whereby the position of said conduit may be adjusted by the movement of said set screws, as described.

3. A device of the character described comprising the combination with a molding flask, of a conduit adapted to be disposed therein adjacent the member to be cast, said conduit being provided with an inlet and outlet, projecting arms on said conduit, said arms projecting through the sides of said flask, and means mounted on said flask and adapted to engage said arms to hold said conduit in fixed position, and means for adjusting the position of said conduit, as described.

1,110,680. TOOL FOR USING DENTAL FLOSS. FREDERICK O. GAMBLE, Chicago, Ill. Filed Nov. 20, 1912. Serial No. 732,412. (Cl. 132—12.)

1. A device for the purpose indicated, comprising two members and a pivot at which they are connected, each having a handle and a spreading arm extending in opposite directions from the pivotal connection, said handle and arm of each member being at the same side of a plane which contains the axis of the pivot and which extends between the two handles, whereby the approach of the handles separates the spreading arms; a bobbin mounted upon one member, the spreading arms having terminal thread guides to receive the thread from the bobbin, and thread clamps on the spreading arms, respectively, back of the thread guides.

2. A device for the purpose indicated, comprising two members and a pivot at which they are connected, each having a handle and a spreading arm extending in opposite directions from the pivot, the handle and arm of each member being at the same side of a plane which contains the axis of the pivot and which extends between the two handles, whereby the approach of the handle separates the spreading arms, the handles being offset from each other in the direction of the axis of their pivotal connection to permit them to pass by each other, the pivot being a stud mounted upon one member having a head, and a portion

back of the stud oblong in cross-section, the other member having a pivot bearing whose diameter is equal to the longer dimension of said oblong portion, and a slot leading into said bearing whose width is less than the longer and adapted to accommodate the shorter dimension of said oblong portion, said longer dimension and said slot being positioned on the respective members transversely to each other at all operative positions of the device.

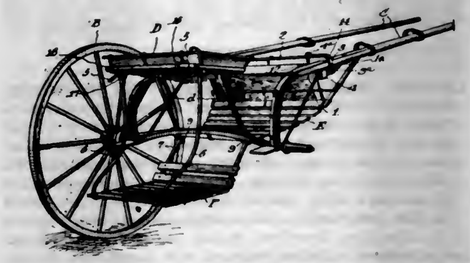
3. A device for the purpose indicated, comprising two members and a pivot at which they are connected, each having a handle and a spreading arm extending in opposite directions from the pivot, the spreading arms being directly opposed to each other in their respective paths of their movement about the pivot axis, the handle and arm of each member being at the same side of a plane which contains the axis of the pivot and which extends between the two handles, whereby the approach of the handle separates the spreading arms the handles being offset from each other in the direction of the axis of their pivotal connection to permit them to pass by each other, the pivot being a stud mounted upon one member having a head and a portion back of the stud oblong in cross-section, the other member having a pivot bearing whose diameter is equal to the longer dimension of said longer portion, and a slot leading into said bearing whose width is less than the longer and adapted to accommodate the shorter dimension of said oblong portion, this longer dimension and said slot being positioned on the respective members at an angle to each other greater than the angle between the handles at the closed position of the spreading arms; whereby the handles must be lapped past each other in order to bring said slot and longer dimension in alinement.

4. A device for the purpose indicated, comprising two pivotally-connected members each having a handle and a spreading arm extending in opposite directions from the axis of said connection, said handle and arm of each member being at the same side of the plane which contains said axis and which extends between the two handles; a bobbin mounted for turning about said axis, each spreading arm having a terminal thread guide and clamps on each arm back of the thread guides.

5. A device for the purpose indicated comprising two members and a pivot at which they are connected, each having a spreading arm and an operating handle; each of the spreading arms having a thread guide; thread clamps mounted upon the spreading arms, respectively, back of the thread guides, each clamp having a stem extending through the arm, said stems being opposed to each other between the arms and of such length that they meet when the spreading arms approach each other within a predetermined distance, and springs which hold the thread clamps against the arms to clamp the thread.

[Claims 6 and 7 not printed in the Gazette.]

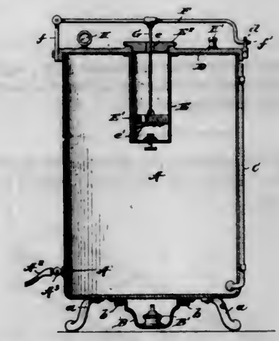
1,110,681. ROAD-CART. GEORGE GERSTENSLAGER, Wooster, Ohio. Filed Feb. 20, 1913. Serial No. 749,722. (Cl. 21—56.)



1. In a horse cart, in combination with the seat and front platform thereof, a detachable rear platform having a pair of supporting arms at each end thereof; hooks on said arms, respectively; a pair of clips adapted to detachably secure the hooks of one pair of said supporting arms to said front platform; a pair of clips adapted to detachably secure the hooks of the other pair of said supporting arms to said seat, and means for disengaging said hooks from said clips, substantially as set forth.

2. In a horse cart, in combination with the seat and the front platform thereof, a detachable rear platform having a pair of upwardly extended arms at each end thereof, hooks on said arms, respectively; a pair of clips secured to said front platform and adapted to admit a corresponding pair of hooks projected from the inner end of said rear platform when the latter is lowered outwardly, and to secure said hooks in said clips when elevated outwardly; a pair of clips secured to said seat and adapted to admit a corresponding pair of hooks projected from the outer end of said rear platform when the latter is elevated to normal position; and a manually operable spring lever extended through said seat clips, respectively, to engage said hooks therein, substantially as set forth and for the purpose specified.

1,110,682. DISPENSING-CAN. BENJAMIN GOOCH, Scio, Oreg. Filed Oct. 23, 1912. Serial No. 727,426. (Cl. 221—77.)



In a device of the character described, a tank adapted to contain a liquid, said tank being open at its upper end and being provided with a liquid outlet pipe in communication with the lower portion thereof, a closure removably secured to the upper end of said tank, an air pump cylinder depending from said closure and in communication with the upper portion of said tank, a piston adapted to work in said air pump cylinder, a relatively short upright extending upwardly from one edge of the closure, a pump operating lever pivotally connected to the top of said upright, and extending transversely entirely across the closure, a collar mounted on said operating lever, a piston rod extending from said piston and pivotally connected to said collar, a pivoted locking pin secured to the closure at the opposite end and adapted to swing over the free end of the operating lever to lock the same to the closure so as to form a handle for the receptacle.

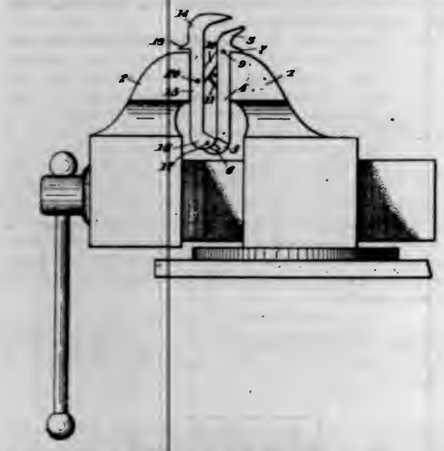
1,110,683. VISE. FRANK J. GOODWIN, Lexington, Ky. Filed July 1, 1914. Serial No. 848,391. (Cl. 81—38.)

1. A finishing vise adapted to be held between the jaws of a common vise and comprising a lower jaw and an upper jaw adapted to be moved toward each other, a link pivotally connecting both of said jaws and a spring adapted to normally hold said jaws apart.

2. A finishing vise adapted to be held between the jaws of a common vise and comprising an upper jaw and a lower jaw, one of said jaws provided with an inclined slot, a pin carried by the other of said jaws and located within said inclined slot, a link pivotally connecting said vise and a spring adapted to normally hold said jaws apart.

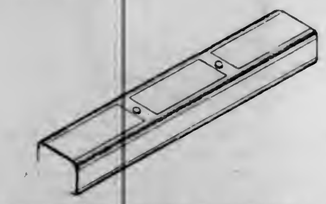
3. A finishing vise adapted to be held between the jaws of a common vise and comprising an upper jaw and a lower jaw adapted to be moved toward each other, one

of said jaws provided with an arm having an inclined slot therein, the other of said vises provided with an arm carrying a pin, said pin located within said inclined slot,



a link pivotally connecting said arms and a spring carried by one of said arms and bearing against said link to normally hold said jaws apart.

1,110,684. RAILROAD-TIE. GEORGE H. HARDMAN, Fall River, Mass. Filed Jan. 22, 1913. Serial No. 743,526. (Cl. 238—3.)

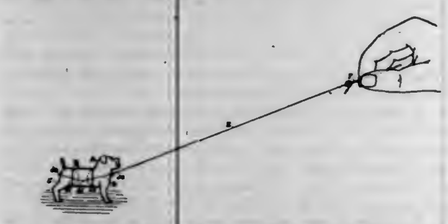


1. A railroad tie composed of small trees, saplings, or branches, and asphalt, placed in a mold and forced by pressure to desired form and density.

2. A railroad tie, composed of small trees, saplings, or branches, and asphalt, together with an interlocking frame, placed in a mold and forced by pressure into desired form and density.

3. A railroad tie which comprises a body of trees, saplings or branches with asphalt compressed into a homogeneous mass, together with frames at the top and bottom, and bolts which connect said frames.

1,110,685. MECHANICAL FIGURE TOY. CHARLES J. W. HAYES, Rochester, Mich. Filed Oct. 16, 1913. Serial No. 795,501. (Cl. 46—40.)



1. A mechanical figure toy comprising, a fore part, a hind part and a wire journaled in and bent between the said fore and hind parts and extending through one of the said parts to a source of motion, substantially as specified.

2. In a mechanical figure toy, the combination of a fore part having supporting members, a hind part having supporting members, a middle part jointed with the said fore and hind parts and an actuating means comprising a plurality of journals connected together in angular relation.

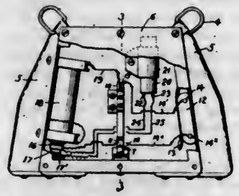
3. A mechanical figure toy comprising, a plurality of figure parts adapted to rest upon and slide but not roll on a display surface, a crooked actuating member upon which the said figure parts are disposed in diversity of angular operative relation and means operatively connecting the said actuating member with a source of motion, substantially as specified.

4. In a mechanical figure toy, the combination of an actuating wire having a portion of its length at an angle to its axis of rotation and a figure-part journaled on said portion and adapted to bear upon a display surface whereby it is constrained to execute peculiar movements when said actuating wire is turned, substantially as specified.

5. In a mechanical figure toy, the combination of a plurality of figure-parts, a rotative actuating element engaging a plurality of said figure-parts, a manipulator adapted to be rolled between the thumb and finger, and a flexible rotative transmission element connecting said manipulator and said actuating element whereby rotative motion is transmitted to said actuating element, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,110,686. VETERINARY APPLIANCE. ELLSWORTH HEFLIN and WILLIAM J. ROBERTS, Red Oak, Iowa. Filed Oct. 14, 1913. Serial No. 795,086. (Cl. 119—145.)



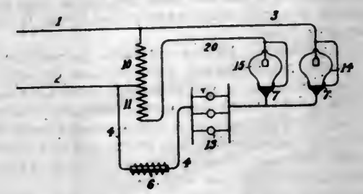
1. A stallion shield or protector, consisting of a casing formed or suitable metal and adapted to be supported in proper position to the animal, a pivoted contact plate mounted in said metal casing and formed with an engagement head, a battery arranged in one side of the casing, a spring clip for detachably securing the battery, contact means in circuit with said battery, a condenser and an induction coil also in circuit with the battery and contact means.

2. A stallion shield or protector, consisting of a metal casing adapted to be supported in proper position upon the animal and consisting of contact plates and a plate pivoted in said casing and having an engagement head and a contact trigger to operate upon the spring contact plates, contact means operated by the animal, a battery and induction coil included in the circuit in connection with said contact means, and a condenser also arranged in said circuit.

1,110,687. ELECTRICAL DISTRIBUTION BY ALTERNATING CURRENTS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 25, 1903, Serial No. 154,304. Divided and this application filed June 4, 1903. Serial No. 160,034. (Cl. 171—253.)

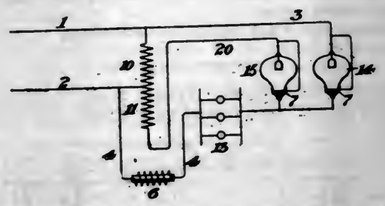
1. The combination with a gas or vapor electric device of the character described, having two positive electrodes and a common negative electrode, of a transformer having the terminals of its primary coil connected with one of the positive electrodes and the negative electrode, and the respective terminals of the secondary connected with the remaining positive electrode and the negative electrode.

2. The combination with a gas or vapor electric device of the character described, having two positive electrodes and a common negative electrode, of a transformer having the terminals of its primary coil connected with one of



the positive electrodes and the negative electrode, and the respective terminals of the secondary connected with the remaining positive electrode and the negative electrode, and an inductive resistance in circuit with the device.

1,110,688. ELECTRICAL DISTRIBUTION BY ALTERNATING CURRENTS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Apr. 25, 1903, Serial No. 154,304. Divided and this application filed Mar. 21, 1911. Serial No. 615,913. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with a single phase source and a direct current receiving circuit, of two vacuum rectifiers, each comprising an exhausted container, and suitable electrodes therein, one of which is a vaporizable reconstructing cathode, connections from one terminal of the supply to an anode of one rectifier and connections from the other terminal of the supply to an anode in the other rectifier and connections for return currents from the cathodes to the supply through the work circuit, together with means for exciting the said cathodes.

2. In a system of electrical distribution, the combination with a source of alternating current and a direct current work circuit, of a plurality of vapor rectifiers, each comprising an exhausted container with suitable electrodes therein, one being a vaporizable re-constructing cathode, means for connecting each supply terminal with a separate rectifier and means for returning rectified currents from the several cathodes through the work circuit to the source, in combination with exciting means for the several rectifiers.

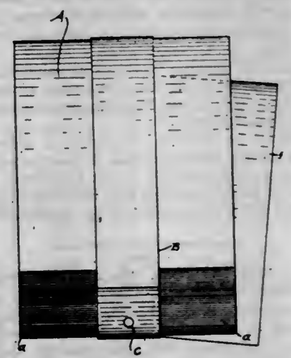
3. In a system of electrical distribution, the combination with a source of alternating current and a direct current work circuit, of a plurality of vapor rectifiers, each comprising an exhausted container with suitable electrodes therein, one being a vaporizable re-constructing cathode, means for connecting each supply terminal with a separate rectifier and means for returning rectified currents from the several cathodes through the work circuit to the source, in combination with exciting means for the several rectifiers and an inductance in series with the work circuit.

4. In a system of electrical distribution, the combination with a source of alternating current supplied with terminals and an intermediate point and a direct current receiving circuit, of a plurality of vapor rectifiers, each comprising an exhausted container with suitable electrodes therefor, one of which is vaporizable and re-constructing, a connection for each of said rectifiers between a terminal of the supply and a terminal of the receiving circuit, the said work circuit being connected to the vaporizable electrode of each rectifier, and a connection from the other terminal of the receiving circuit to the intermediate point of the supply, in combination with exciting means for said rectifiers whereby said vaporizable electrodes are excited as cathodes.

5. In a system of electrical distribution the combination with a source of alternating current, an auto transformer, and a direct current receiving circuit, of a plurality of vapor rectifiers, each comprising an exhausted container with suitable electrodes therefor, at least one of which is vaporizable and re-constructing, connections for each of said rectifiers between a terminal of the supply and a terminal of the receiving circuit, the said work circuit being connected to the vaporizable electrode of each rectifier and a connection from the other terminal of the receiving circuit to an intermediate point of the auto-transformer in combination with exciting means for said rectifier whereby said vaporizable electrodes are excited as cathodes and an impedance traversed by current in the receiving circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,110,689. TOILET-PAPER ROLL. FRANK H. HOBERG, Green Bay, Wis. Original application filed Feb. 10, 1908, Serial No. 415,702. Divided and this application filed Apr. 26, 1909. Serial No. 492,271. (Cl. 206—57.)

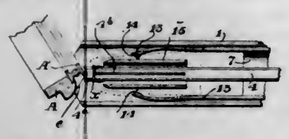


A paper package comprising a series of superposed sheets of tissue paper, said package being folded transversely with the end margins of the inner sheet lapped together throughout their length and with the inner sheet exposed for withdrawal laterally from between the folded sides of the package, in combination with a narrow wrapper band of suitable flexible material, extending about the outer surface of the outer sheets; said wrapper and the end of the inner sheets being centrally perforated to receive a retaining pin or wire, and the edge margins of the sheets being wholly uncovered at the side of the package toward which the inner sheets successively discharge; said wrapper being also secured to the end margins of the sheets, substantially as described.

1,110,690. DEVICE FOR PLACING TRAVELERS ON RINGS OF SPINNING-MACHINES. AMBROSE P. HURT, Anderson, S. C., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business at Rockford, Ill., as Barber-Colman Company. Filed June 21, 1909. Serial No. 503,494. (Cl. 29—84.)

1. In a device for placing travelers on the rings of spinning machines, in combination, a body comprising a portion shaped to engage the ring, a carrier within said body adapted to slidably support a series of travelers,

the discharge end of said carrier being arranged close to the ring-engaging portion, and means adapted to engage a traveler on said carrier and spring it onto the flange of the spinning ring, the said parts being so related that said means first causes the traveler to straddle the nearer edge of said flange and then springs the traveler over the farther edge of said flange.



2. In a device for placing travelers on the rings of spinning machines, the combination of a hollow casing carrying a portion shaped to engage the ring, a rod disposed longitudinally within said casing and adapted to slidably support a series of travelers, the discharge end of said rod being arranged close to the ring-engaging portion, and means adapted to engage the foremost traveler of said series and move the traveler into position to first straddle the nearer edge of the spinning ring flange, and then spring over the farther edge of said flange.

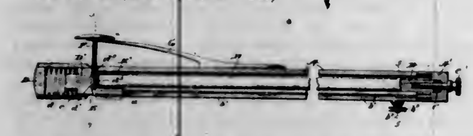
3. In a device for placing travelers, the combination of a tubular casing having a portion shaped to engage a spinning ring, a rod disposed longitudinally within said casing and adapted to slidably support a series of travelers, a spline extending along said rod and engaging the casing, the travelers straddling said spline, and means slidably mounted in said casing and adapted to engage the foremost traveler on said rod and force it onto the flange of the spinning ring.

4. A device for placing travelers on spinning rings, comprising means for obliquely presenting a traveler to a spinning ring, and means to force the traveler onto the ring while so presented.

5. A device for placing travelers on spinning rings, comprising means for supporting a traveler adjacent to a ring and in a plane inclined to the horizontal, and means to force the traveler onto the ring while so supported.

[Claims 6 to 21 not printed in the Gazette.]

1,110,691. DEVICE FOR PLACING TRAVELERS ON THE RINGS OF SPINNING-MACHINES. AMBROSE P. HURT, Anderson, S. C., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business at Rockford, Ill., as Barber-Colman Company. Filed June 21, 1909. Serial No. 503,495. (Cl. 29—84.)



1. In a device for placing travelers, in combination, a tubular casing longitudinally grooved upon its outer side to receive a flange of a spinning ring; a rod disposed longitudinally within said casing and adapted to slidably support a series of travelers, one end of said rod being adjacent to said grooved portion and being unobstructed so that travelers may move off said end; a spring-pressed member positioned adjacent said end and adapted to prevent the accidental escape of travelers therefrom; and means adapted to engage a traveler and move it past said spring-pressed member and onto the spinning ring.

2. In a device for placing travelers, in combination, a tubular casing longitudinally grooved upon its outer side to receive a flange of a spinning ring; a rod disposed longitudinally within said casing and adapted to slidably support a series of travelers, one end of said rod being adjacent to said grooved portion and being unobstructed so that the travelers may be moved freely off said end; a spring-pressed member adjacent said end adapted to prevent the accidental escape of travelers therefrom, said member having a cam surface; and a slide arranged to engage said cam surface and move said member away to permit the escape of a traveler from the device, said slide being adapted to engage such traveler and spring it onto the spinning ring flange.

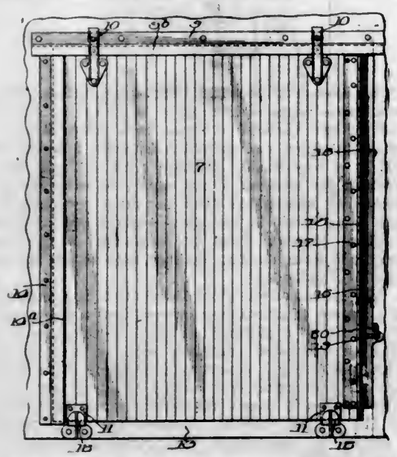
3. In a device for placing travelers, in combination, a hollow casing longitudinally grooved upon its outer side to receive a flange of a spinning ring; a traveler-carrying rod within said casing; one end of said rod being adjacent to said grooved portion a spring-pressed head slidable in said casing adjacent said end of the rod and preventing accidental escape of travelers from said rod, and means for ejecting travelers from said casing.

4. In a device for placing travelers, in combination, a hollow casing; a traveler-carrier within said casing, a spring-pressed head slidably mounted within said casing adjacent to the end of said traveler-carrier for preventing accidental escape of the travelers therefrom; and means for ejecting a traveler from said casing.

5. In a device for placing travelers, in combination, a tubular casing longitudinally grooved upon its outer side to receive a flange of a spinning ring; a traveler-carrying rod disposed longitudinally within said casing, the cross-sectional form of said rod corresponding generally to the interior form of travelers; means for preventing accidental escape of travelers from the discharge end of the rod, said end of the rod being adjacent to said groove; and means moving transversely of the rod for ejecting a traveler, said ejecting means moving from the side of said rod opposite said groove.

[Claims 6 to 8 not printed in the Gazette.]

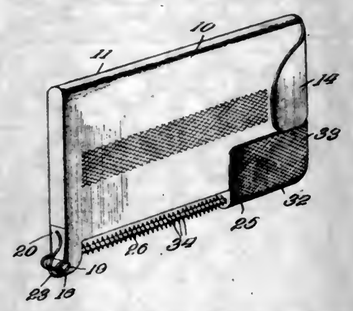
1,110,692. CAR-DOOR. FRANK JAGER, Chicago, Ill. Filed Oct. 21, 1912. Serial No. 726,948. (Cl. 20—26.)



In a railway box car, the combination with the doorway frame and its opening, of a door body to close the opening and having its rear edge beveled to form an inclined surface, and a movable lock and closure member pivoted on the door to swing inwardly against the said inclined surface and having a portion thereof offset to bear against and engage the doorway frame.

1,110,693. MATCH-BOX. LUTHER M. JENNINGS and JOHN P. JENNINGS, Star, Va. Filed Feb. 7, 1914. Serial No. 817,303. (Cl. 206—27.)

1. A device of the character described including a casing formed with a delivery opening, a shiftable ejector mounted upon the casing and adapted to engage one at a time matches contained within the casing to project said matches through the delivery opening, said ejector including a stem arranged exteriorly of the casing, and a closure for the delivery opening, said closure being disconnected from the stem and shiftable to open position thereby as the ejector is actuated.



2. A device of the character described including a casing formed with a delivery opening, a lateral extension formed on the casing adjacent the delivery opening, said extensions terminating in spaced upstanding ears, a cover plate mounted on the extension and pivotally supported intermediate said ears, a spring carried by the extension and engaging said cover plate, said plate being normally adapted to close the delivery opening and a shiftable ejector mounted upon the casing, said ejector including a stem shiftable to engage the cover plate and adapted to move the cover plate to open position as the ejector is actuated.

3. A device of the character described including a casing formed with a delivery opening, an extension formed on the casing adjacent the delivery opening, a cover plate pivotally mounted upon the extension and normally adapted to close the delivery opening, and an ejector slidably mounted upon the casing, with its free extremity extending through the extension and arranged to move the cover plate to open position as the ejector is actuated, the extension forming a guide for the adjacent extremity of the ejector.

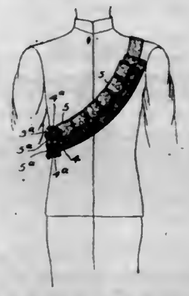
4. A device of the characer describd including a casing formed with a delivery opening and slotted to receive an ejector, a spring pressed closure for the delivery opening and an ejector slidably mounted upon the casing and adapted to move the closure to open position as the ejector is actuated, said ejector including a stem formed with a foot extending through the slot within the casing, said foot having shoulders formed thereon adapted to engage against the inner face of the casing and an operating sleeve mounted upon the stem.

5. A device of the character described including a casing formed with a delivery opening, an extension formed on the casing adjacent said opening, a spring pressed cover plate pivotally mounted on the extension and normally adapted to close the delivery opening, an ejector slidably mounted upon the casing, said ejector including a stem adapted to move the cover plate to open position upon the actuation of the ejector and an operating sleeve, and a spring mounted upon the stem intermediate the extension and the sleeve, said spring acting to hold the ejector in normal position.

[Claims 6 to 9 not printed in the Gazette.]

1,110,694. WOVEN BANDOLEER. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 11, 1914. Serial No. 831,292. (Cl. 224—22.)

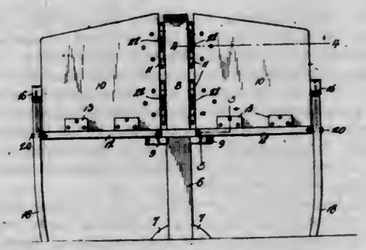
1. A woven bandoleer comprising a pocket-web woven with integral pockets or pouches in two longitudinal series or groups, such groups or series separated by an intervening space, and said pocket-web also formed, as woven, with a natural and permanent longitudinal edgewise curvature, and a patch-pocket piece attached to the pocket-web at the said space between the respective groups or series.



2. A woven bandoleer comprising a pocket-web woven with integral pockets or pouches and with a longitudinal edgewise curvature, and also having in the back-wall of a pocket or pouch a housing slit formed in the weaving, said slit opening toward the concave edge of the bandoleer and extending only part-way down the depth of the pocket or pouch, with a cover or flap having its attaching end occupying the said housing slit and making contact with the bottom of said slit.

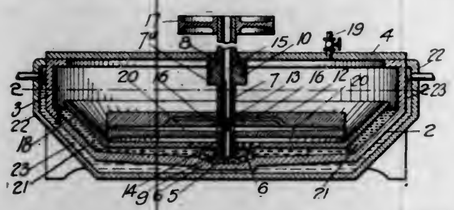
3. A woven bandoleer comprising a pocket-web woven with integral pockets or pounches and with a longitudinal edgewise curvature, and also having in the back-wall of a pocket or pouch a housing slit formed in the weaving, said slit opening toward the concave edge of the bandoleer, and extending only part-way down the depth of the pocket or pouch, with a cover or flap having its attaching end occupying the said housing slit and making contact with the bottom of said slit, said pocket-web reinforced at and adjacent its convex margin to thereby strengthen and reinforce the bottoms of the pockets or pouches.

1,110,695. FOLDING SETTEE. PHILIP A. JOHNSON, Springfield, Oreg. Filed Nov. 12, 1912. Serial No. 730,842. (Cl. 155—13.)



A settee having unconnected seat members and a back rest for each seat member, each of said seat members being hinged to its back rest for upward movement against its back rest independently of the other seat member, a standard intermediate said seats, said backs being mounted from said standard for inward folding movement subsequent to folding of the seats whereby the seats may lie in juxtaposed relation to the back rests when the back rests have been folded, springs to urge the back rests to folded position, stops on the standard for engagement by the back rests for limitation of unfolding movement, means to support the seats in unfolded position including ledge members, on which the seat members rest, one on each side of the standard, one set of said members having keys and the other set of said members having recesses receiving said keys, said standard having a seat section thereon intermediate and above the ledges fixed with respect to the standard to join the seats and arranged to practically abut the inner edges of the seats and have its upper surface flush with the upper surfaces of the seats whereby a continuous smooth seat surface is provided.

1,110,696. CENTRIFUGAL COMPRESSOR. JOHN W. KITTREDGE, Boulder, Colo. Filed Dec. 2, 1911. Serial No. 663,485. (Cl. 230—14.)



1. An air-compressor comprising an air-tight housing, partially filled with liquid, a rotary, hollow shaft divided into two compartments, the lower one of which communicates with the lower portion of said housing, while the upper one is in communication with the atmosphere, and a disk fixed on said shaft and provided with open-ended ducts which at their inner ends communicate with the lower compartment and whose outer ends are in the periphery of the disk, and with passages connecting the upper compartment with the said ducts at points remote from their inner ends.

2. An air compressor comprising an air-tight housing partially filled with liquid, a disk mounted to rotate within the same, and provided with open-ended ducts of small diameter which at their inner ends communicate with the lower portion of the housing and whose opposite ends are in the periphery of the disk, and a conduit for the supply of air, the said disk having passages which connect said conduit with the ducts at points remote from both their ends.

3. An air-compressor comprising an air-tight housing partially filled with liquid, a disk mounted to rotate within the same and provided with open-ended ducts of small diameter which at their inner ends communicate with the lower portion of the housing and whose opposite ends are in the periphery of the disk, and a conduit for the supply of air, the said disk having passages which connect said conduit with the ducts at points remote from their inner ends.

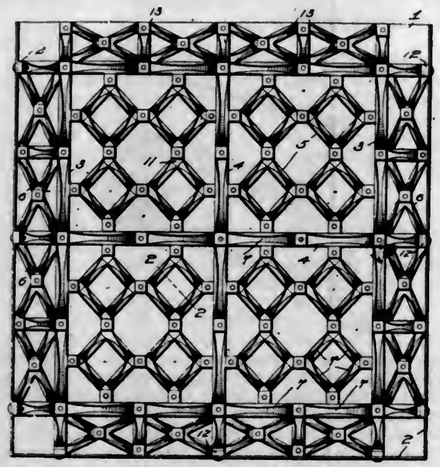
4. An air-compressor comprising an air-tight housing partially filled with liquid, a disk mounted to rotate within the same and provided with open-ended ducts of small diameter which at their inner ends communicate with the lower portion of the housing and whose opposite ends are in the periphery of the disk, a deflector interposed between the periphery of the disk and the wall of the housing, and a conduit for the supply of air, said disk having passages which connect said conduit with the ducts at points remote from their inner ends.

5. An air-compressor comprising an air-tight casing, a disk having a rotary movement within the same and provided with radial, open-ended ducts which, at their inner ends, communicate with the lower portion of the housing, while their outer ends are in the periphery of the disk, and a conduit for the supply of air, the said disk having passages connecting said conduit with said ducts at points remote from their inner ends, and the said housing being partially filled with liquid, the level of which extends above the outer ends of said ducts when the liquid is at rest.

[Claims 6 to 10 not printed in the Gazette.]

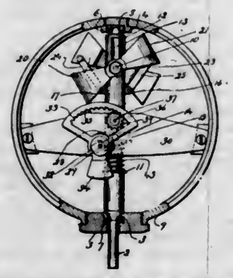
1,110,697. OVEN-BRACE. MAX M. KOCH, Cleveland, Ohio. Filed Aug. 2, 1913. Serial No. 782,680. (Cl. 126—19.)

1. The combination of a sheet-metal oven plate having bent portions, and a rigid brace arranged against the plate and having bars arranged at angles to each other and spaces between the bars, and also having downwardly arched ribs on the bars and angularly disposed end portions on the bars, arranged against and connected to the bent portions of the oven plate; the arched ribs on the bars being spaced apart and the portions of the bars between the ribs being connected to the oven plate at intervals throughout the area thereof.



2. The combination of a sheet-metal oven plate having bent portions, a rigid brace arranged against the plate and having bars arranged at angles to each other and spaces between the bars and also having downwardly arched ribs on the bars, and angularly disposed end portions on the bars, arranged against and connected to the bent portions of the oven plate, and further having a channeled portion; the arched ribs on the bars being spaced apart and the portions of the bars between the ribs being connected to the oven plate at intervals throughout the area thereof, a flue strip the edge of which is disposed in said channeled portion, and means connecting said strip with the oven plate and the brace.

1,110,698. SPEED-MEASURE. FRANCIS N. LAMBERT, New Britain, Conn. Filed May 7, 1914. Serial No. 836,928. (Cl. 73—123.)



1. A speed measure comprising a rotatable shaft, a sleeve slidably mounted on said shaft to turn therewith, a rod carried by the shaft, a pair of reversely inclined governor heads mounted on said rod, said heads each connected with said sleeve, an indicator pointer, and connections between the pointer and sleeve whereby the movement of the sleeve will turn the pointer.

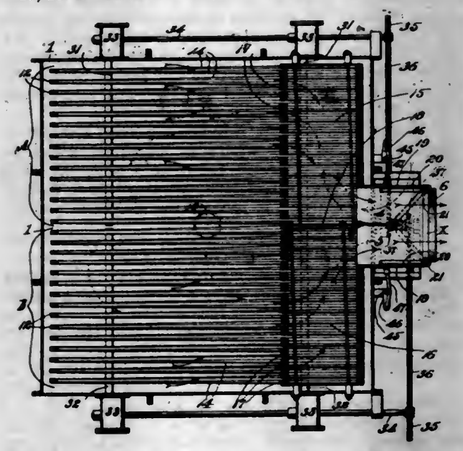
2. A speed indicator comprising a vertically arranged rotatable shaft, a sleeve mounted on said shaft and formed on opposite sides with slots, a transverse rod fixed to said shaft and projecting outward through said slots, reversely inclined governor heads mounted on opposite ends of said rod, said governor heads each wedge shaped and each connected with said sleeve, springs bearing at opposite ends on opposite heads, an indicating pointer, and connections between the sleeve and pointer whereby the pointer will be moved with the sleeve.

3. A speed measure comprising a vertically arranged shaft, said shaft provided with a shoulder, a sleeve mounted on said shaft and formed near its upper end on opposite sides with slots, a rod fixed to said shaft and projecting through said slots, a governor head fixed to each end of said rod, links connecting each of the heads with the said sleeve, a spring between the shoulder on the shaft and the lower end of the sleeve, said sleeve formed with a groove, a counterbalanced finger extending into said groove, a segmental rack connected with said finger and moved therewith, a pinion adapted to be moved by said rack, and a pointer moved by said pinion.

4. A speed measure comprising a vertically arranged shaft, said shaft provided with a shoulder, a sleeve slidably mounted on said shaft to turn therewith, a rod fixed to said shaft, a governor head fixed to each end of said rod, links connecting each of the heads with the said sleeve, a spring between the shoulder on the shaft and the lower end of the sleeve, said sleeve formed with a groove, a counterbalanced finger extending into said groove, a counterbalanced segmental rack connected with said finger and moved therewith, a pinion adapted to be moved by said rack, and a pointer moved by said pinion.

5. A speed measure comprising a vertically arranged shaft, said shaft provided with a shoulder, a sleeve slidably mounted on said shaft to turn therewith, a rod fixed to said shaft, a governor head fixed to each end of said rod, links connecting each of the heads with the said sleeve, a spring between the shoulder on the shaft and the lower end of the sleeve, said sleeve formed with a groove, a counterbalanced finger extending into said groove, a counterbalanced segmental rack connected with said finger and moved therewith, a pinion adapted to be moved by said rack, and a counterbalanced pointer moved by said pinion.

1,110,699. DUST-COLLECTOR. HENRY LECHTENBERG, Quincy, Ill., assignor to W. T. Lechtenberg. Filed Apr. 29, 1914. Serial No. 835,119. (Cl. 83—47.)



1. A dust collector provided with filtering devices each having an outlet opening through which air is discharged during the filtering operations and also during cleaning operations, and a suction fan, each of said filtering devices being provided with a suction chamber for conducting air toward said suction fan during the filtering operations as well as during cleaning operations, a suction pipe common to both of said suction chambers leading from said suction chambers to said suction fan, combined with valves, arranged in said suction chambers, adapted to close communication between the suction chambers and said suction pipe, each of said suction chambers being provided with a normally closed inlet port, located adjacent to one of said valves, for the admission of air at a point between one of the filtering devices and said suction pipe.

2. A dust collector provided with filtering devices each having an outlet opening through which air is discharged during the filtering operations and also during cleaning operations, and a suction fan, each of said filtering devices being provided with a suction chamber for conducting air toward said suction fan during the filtering operations as well as during cleaning operations, a suction pipe common to both of said suction chambers leading from said suction chambers to said suction fan, combined with valves, arranged in said suction chambers, adapted to close communication between the suction chambers and said suction pipe, each of said suction chambers being provided with a normally closed inlet port, located adjacent to one of said valves, for the admission of air at a point between one of the filtering devices and said suction pipe, said valves being adapted to open and close said inlet ports.

3. A dust collector provided with filtering devices each having an outlet opening and a suction chamber communicating with said outlet opening, the dust receiving sides of said filtering devices being in open communication with each other, a suction fan for drawing air through each of said suction chambers during the filtering operation, each of the suction chambers being provided with an inlet port for the admission of air from the exterior of the filtering device and a closure normally closing said inlet ports, said closure being movable to close said outlet device at a point beyond said inlet port thereby opening said inlet port so as to permit the flow of air through said inlet port and through the filtering devices successively to the said suction fan.

4. A dust collector comprising a housing having an inlet opening for the admission of a dust laden air current and a plurality of outlet passageways, a valve adapted to prevent the admission of air at said inlet opening, filtering devices between said inlet opening and the outlet passageways, the dust receiving sides of said filtering devices being in open communication with each other, suction chambers communicating with said outlet passageways adapted to receive air flowing from said filtering devices, an exhaust fan for drawing air through said suction chambers and the filtering devices associated therewith, each of said suction chambers being provided with an inlet port for the admission of air from the exterior of said housing, closures normally closing said inlet ports, each of said closures being movable to close a suction chamber at a point between its inlet port and said exhaust fan so as to deflect the air from an open inlet port into one of said filtering devices and through another of the filtering devices to said exhaust fan.

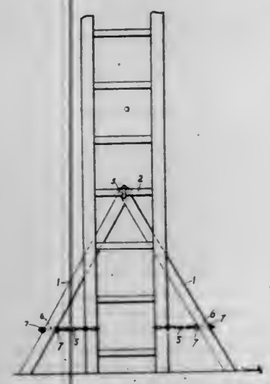
5. A dust collector comprising a housing having an inlet opening for the admission of a dust laden air current, a plurality of filtering devices arranged in said housing, each of said filtering devices being provided with an outlet passageway through which filtered air is discharged and the filtering devices being in open communication with each other so that a current of air may flow from one filtering device to the other, suction chambers communicating with said outlet passageways, an exhaust fan for drawing air through said suction chambers at the same time to move dust to all of said filtering devices, each of said suction chambers being provided with an inlet port for the admission of air from the exterior of said housing, means for closing either of said suction chambers to prevent air from flowing outwardly through the outlet passageways of either of the filtering devices thereby deflecting the air from one of said inlet ports, through the filtering devices successively and to said suction fan, said means including valves which normally close said inlet ports, the said valves being adapted to lie across the suction chambers at points between the inlet ports and said suction fan.

1,110,700. LADDER-SUPPORT. ALBUR JOSÉ LE VEY. London, England. Filed Nov. 3, 1913. Serial No. 798,986. (Cl. 228—5.)

1. A detachable ladder support comprising two props, means for clamping the upper ends of the props to one of

the rungs of a ladder, and means for limiting the lateral spreading of said props, said means consisting of tension members connecting the props to the sides of the ladder.

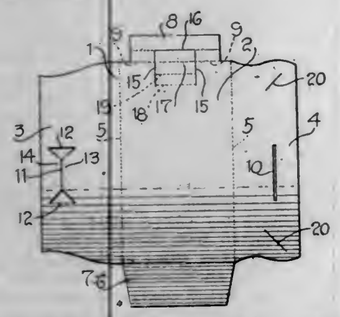
2. A detachable ladder support comprising two props, means for clamping the upper ends of the props to one of the rungs of a ladder, and means for limiting the lateral spreading of said props, said means consisting of tension members, with means for adjusting the effective length thereof.



3. A detachable ladder support comprising two props each having a hole near its lower end, means for clamping the upper ends of the props to one of the rungs of a ladder, members attached to the sides of the ladder and each having one end passing through the holes in the props, and means for adjustably attaching the said ends of the members to said props.

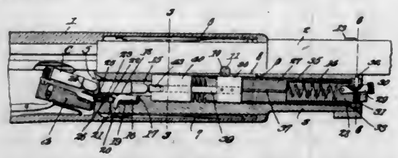
4. A detachable ladder support comprising two struts each having a hole near its lower end, means for clamping the upper ends of the struts to one of the rungs of a ladder, members attached to the sides of the ladder, an eye-bolt attached to the free end of each chain, said eye-bolts passing through the holes in the struts, and nuts on said eyebolts, at both ends of the holes, said nuts being adapted for adjusting the position of the eyebolts in the holes.

1,110,701. SHIRT-PROTECTOR. EDWARD D. MCCAHEY, Seattle, Wash. Filed Feb. 16, 1914. Serial No. 819,027. (Cl. 229—87.)



A folder of the character described comprising a front wall, top and bottom flaps formed thereon and foldable inwardly against the rear face thereof, an outwardly disposed tab struck from an end portion of the front wall and the adjacent end flap and foldable inwardly against the rear face of the front wall, said line of fold being intermediate of the length of the tab, side flaps formed on the sides of the front wall and foldable inwardly in overlapping relation to one another to provide a rear wall, one of the side flaps being provided with a slot and with terminal oppositely inclined slits and the other being slotted and cut-away to form a pair of tabs for engagement with the slot, the slits being engaged by the free corners of the latter tabs.

1,110,702. REPEATING FIREARM. ADOLPHUS C. MCCLURE, Keithville, La. Original application filed Dec. 17, 1912, Serial No. 737,307. Divided and this application filed Aug. 1, 1913. Serial No. 782,508. (Cl. 42—49.)

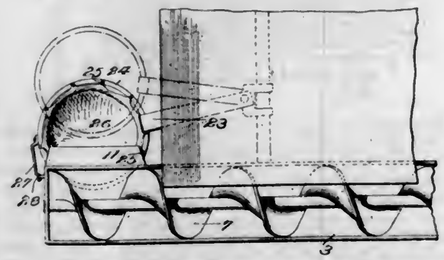


1. A fire-arm, including a stock, a receiver, the forward end of which is constructed in the form of a socket, a barrel, a magazine, the adjacent faces of the barrel and magazine being flattened for co-extensive engagement, means for holding the barrel and magazine relative to each other when separated from the receiver, coacting means carried by the socket of the receiver and the barrel and magazine for locking the barrel and magazine to the receiver, and two oppositely disposed springs mounted within the socket of the receiver for engaging the barrel and magazine respectively to hold the same toward each other.

2. A fire-arm, including a stock, a receiver, the forward end of which is constructed in the form of a socket, a barrel, a magazine, the adjacent faces of the barrel and magazine being flattened for co-extensive engagement, means for holding the barrel and magazine relative to each other when separated from the receiver, the adjacent faces of the barrel and magazine being provided with a transversely disposed aperture, a removable pin insertible through the receiver transversely of the socket and through the apertured portion of the magazine and barrel for locking the parts together, and two oppositely disposed springs mounted within the socket of the receiver for engaging the barrel and magazine respectively to hold the same toward each other.

3. A repeating fire arm, having a receiver, a barrel, a magazine retaining tube carried by the barrel, a flexible resilient cartridge magazine insertible within the tube from the outer end thereof, and co-acting means carried thereby and the tube for locking the magazine against outward displacement.

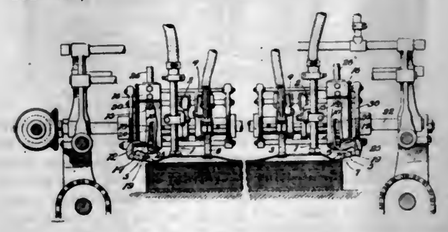
1,110,703. GRAIN-SAVER. VENCESLAUS F. MIKOLASEK, Lankin, N. D. Filed Oct. 15, 1912. Serial No. 725,846. (Cl. 56—126.)



1. In a grain saving device for harvesters, the combination of a harvester deck, a beam beneath the same, a trough connected to the lower side edge of the harvester deck and having a discharge spout at its rear end, a hook engaging over said beam, a rearwardly extending offset on one side of said hook, an arm pivoted to said offset and extending therefrom normally to a point adjacent the discharge spout, a receptacle holder at the rear end of said arm, and means for connecting said holder to the trough.

2. A grain saving attachment for harvesters consisting of a trough provided at its rear end with a downwardly and laterally extending discharge spout, brackets secured to said trough and adapted to be secured to the lower side edge of a harvester deck, and means for supporting a receptacle beneath the discharge spout of the trough with a portion of the receptacle extending laterally from the trough at the rear edge of the harvester deck.

1,110,704. SHEET FEED OR SEPARATOR. WILLIAM F. MINNICK, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed June 27, 1913. Serial No. 776,166. (Cl. 101—40.)



1. In a sheet feed or separator, means for forming buckles in the topmost sheet of a pile of stock, comprising two oppositely disposed buckiers adapted to rest on top of the pile at the extreme edges thereof and having on their undersides projections extending below the plane of the top surface of the topmost sheet for engaging opposite side edges thereof at right angles of said top, and means for simultaneously moving said bucklers toward each other to cause said projections to positively engage said side edges of the topmost sheet to produce buckles therein.

2. In a sheet feed or separator, means for forming buckles in the topmost sheet of a pile of stock, comprising two oppositely disposed bucklers adapted to rest on top of the pile at the extreme edges thereof and having on their undersides projections extending below the plane of the top surface of the topmost sheet for engaging opposite side edges thereof at right angles to said top, and means for simultaneously moving said bucklers toward and away from each other, said bucklers constantly resting on the top of the pile and said projections positively engaging said side edges of the topmost sheet as the bucklers are moved toward each other to buckle the sheet.

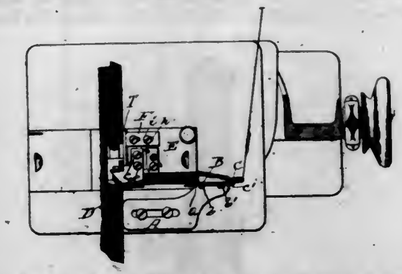
3. In a sheet feed or separator, in combination, a buckler designed to rest on the top of a pile of stock and having means for engaging the edge of the topmost sheet of such pile at right angles to the top of the pile, a carrier for said buckler, and means engaging said carrier for moving it inwardly and outwardly relatively to the edge of the pile while the buckler remains in constant engagement with the latter.

4. In a sheet feed or separator, in combination, a buckler designed to be reciprocated relatively to the edge of a pile of stock and having means for engaging the edge of the topmost sheet of such pile at right angles to the top of the pile, a carrier for said buckler, means engaging said carrier for moving it inwardly and outwardly relatively to the edge of the pile, and means acting on the last mentioned means for imparting a relatively quick movement thereto in moving the buckler inwardly to engage the stock.

5. In a sheet feed or separator, in combination, a buckler designed to be moved relatively to the edge of a pile and having means for engaging the edge of the topmost sheet of the pile, a carrier for said buckler, said carrier having a diagonally positioned slot, and a reciprocating member movable on a straight line and extended into said slot for shifting said carrier.

[Claims 6 to 8 not printed in the Gazette.]

1,110,705. BINDER. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,429. (Cl. 112—1.)



1. In a binding device, guiding walls forming a guiding space for the binding strip, the delivery end of said device being formed oblique to the path of movement of the edge of the fabric, and means operable in a direction parallel to said delivery end for adjusting the area of said guiding space.

2. In a binding device having its delivery end formed oblique to the path of movement of the edge of the fabric to be bound, and having a guiding space for the binding strip, and means for adjusting the width of said guiding space and maintaining the delivery end of the binding device free from projecting parts; substantially as described.

3. In a binding device having its delivery end formed oblique to the path of movement of the edge of the fabric to be bound and having a guiding space for the binding strip, means operable upon the upper and lower edges of the binding strip and adjustable in a direction parallel to the delivery end of the binder for adjusting the width of the space for the binding strip; substantially as described.

4. The combination in a sewing machine, of a needle, a throat plate, a cloth plate slide, a binding device mounted on said cloth plate slide and movable therewith, an adjustable stop carried by said cloth plate slide, and cooperating with said throat plate for positioning the binder relative to the needle.

5. In a sewing machine, a needle, a cloth plate, a sliding plate mounted thereon a binding device attached to said sliding plate, an adjustable stop attached to the sliding plate, said sliding plate, binding device and adjustable stop adapted to move laterally to and from the needle; substantially as described.

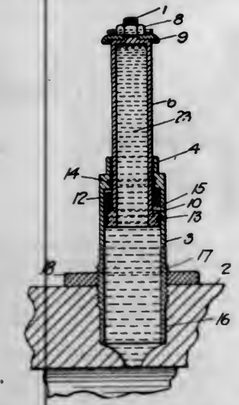
[Claims 6 to 20 not printed in the Gazette.]

1,110,706. LUBRICATOR. JOHN MORROW, Denver, Colo. Filed Apr. 9, 1913. Serial No. 759,871. (Cl. 184—45.)

1. In a lubricator, an oil-receptacle composed of two telescoping members the inner one of which is closed at its outer end and open at its opposite end, and the outer one of which is open at its outer end which is adapted for insertion into an opening of a bearing to which the lubricator is applied, the said inner member having a plunger-portion within the outer member, and a relatively large, hollow stem the interior of which is adapted to constitute a substantial portion of the lubricant containing receptacle, and the outer member having a neck of reduced diameter through which the said stem extends, a spring disposed between the said plunger-portion and the shoulder formed around the said neck, for moving the inner member inwardly against the reststance of a body of fluid with which the receptacle is filled, and packings applied around the said plunger portion and within the said neck whereby an air cushion between the two members is produced.

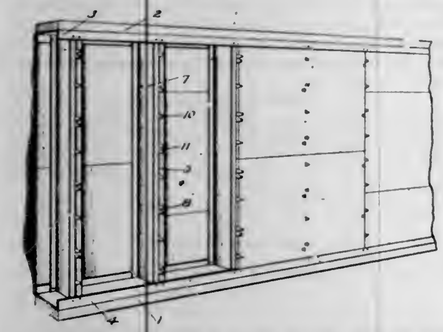
2. In a lubricator, an oil-receptacle composed of two telescoping members the inner one of which is closed at its outer end and open at its opposite end, and the outer

one of which is open at its outer end which is adapted for insertion into an opening of a bearing to which the lubricator is applied, the said inner member having a plunger-portion slidingly fitted within the outer member, and a relatively large, hollow stem the interior of which is adapted to constitute a substantial portion of the lubri-



cant-containing receptacle, and the outer member having a neck of reduced diameter in which said stem is slidingly fitted, and a spring disposed between the said plunger portion and the shoulder formed around the said neck, for moving the inner member inwardly against the resistance of a body of fluid with which the receptacle is filled.

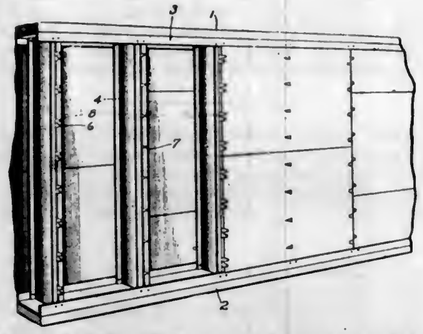
1,110,707. BUILDING-PARTITION. JAMES MULARKEY, Kansas City, Mo., assignor of one-half to James P. Sprague, Kansas City, Mo. Filed Dec. 9, 1913. Serial No. 805,617. (Cl. 72—46.)



A partition comprising studding having fastening members permanently secured thereto, each fastening member being formed from a single piece of sheet metal, having a single point at one end and a double point at the opposite end, with the single and double points alternating at the same side of the partition.

1,110,708. BUILDING-PARTITION. JAMES MULARKEY, Kansas City, Mo., assignor to James P. Sprague, Kansas City, Mo. Filed Apr. 15, 1913, Serial No. 761,186. Renewed Jan. 29, 1914. Serial No. 815,284. (Cl. 72—118.)

1. In a partition, studs comprising a first series of alternate studs having a plurality of prongs projecting therefrom on the same side of said partition, and a second series of alternate studs intermediate said first series having prongs projecting therefrom on the same side of said partition as the prongs on said first series of studs and plaster board overlying said studs, said boards having their ends abutting against the prongs on said first series of studs and their body portions penetrated by said prongs on said second series of studs, and all of said prongs having their ends bent over the face of said boards, for the purpose set forth.



2. In a partition, studs comprising alternate studs having a plurality of paired prongs projecting therefrom on the same side of said partition and intermediate studs having prongs projecting therefrom on the same side of said partition as said paired prongs, and plaster board overlying said studs, said boards having their ends abutting against said paired prongs and their body portions penetrated by said prongs on said intermediate studs, and all of said prongs having their ends bent over the face of said boards, for the purpose set forth.

3. In a partition, the combination with studs having attaching members projected therefrom, the attaching members on one stud having paired prongs projected from one face and single prongs from the opposite face, the arrangement of the prongs on adjacent studs being reversed, plaster boards applied to said studs and having their body portions penetrated by the single prongs and their ends locked by members of the double prongs on alternate studs, the ends of the boards on one side of the partition being in transverse alinement with the central portions of the boards on the opposite sides of the partition, substantially as and for the purpose set forth.

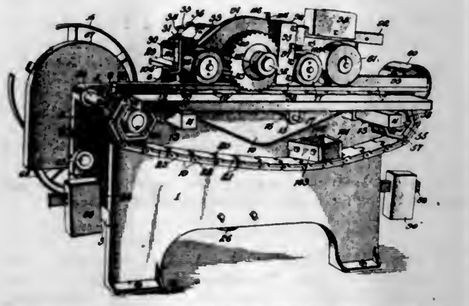
4. In a partition, a stud comprising attaching members, each formed from a single piece of sheet metal, having one end slit to provide prongs, and the opposite end having a single pointed prong, the paired prongs having laterally turned and spaced anchoring lips and the single prongs being flat, for the purpose set forth.

5. In a partition, a stud comprising attaching members, each formed from a single piece of sheet metal, having one end provided with prongs having laterally pointed lips extending in opposite directions, and the opposite end of the strip having a single pointed but unbent prong, all of the lipped prongs being extended from one face of the stud and the single prongs from the opposite face, substantially as set forth.

1,110,709. CHAIN-FEED SAW. ARTHUR W. NELSON, Williamsport, Pa., assignor, by mesne assignments, to Waldemar Giertsen, Chicago, Ill. Filed Nov. 29, 1911. Serial No. 663,094. (Cl. 143—49.)

1. In a chain feed sawing machine, a table for supporting the work, a feeding chain arranged at one side of the table and comprising an endless series of flat solid metallic links hinged together end to end, each link having a longitudinally grooved active face plane throughout and with the grooves of the links alined throughout the chain, and a saw located above the active run of the feeding chain in close proximity thereto and adapted to have its teeth enter the grooves of the links to a depth below the top of the supporting table, whereby the saw teeth are caused to cut entirely through material lodged on the said chain.

2. In a chain feed sawing machine, a supporting frame, a table carried thereby, the supporting frame and table having coacting guideways, a feeding chain running in the guideways and composed of an endless series of one-piece flat metallic links hinged together at the ends and each link having a plane active face provided with a series of longitudinal parallel grooves extending the full length of the links and the plane faces of the links being movable in substantially the plane of the top of the table, and means for carrying a series of saws above and in close proximity to the active run of the feeding chain with the teeth of the saws entering the grooves of the chain to a depth below the top of the table, whereby the saw teeth are caused to cut entirely through material lodged on the said chain.



3. In a circular saw chain feed sawing machine, a feeding chain composed of an endless series of one-piece flat metallic links, each hinged at its ends to the meeting ends of the next adjacent links and having a plane longitudinally grooved saw receiving working face with the grooves in the working faces of the links alining throughout the chain.

4. In a circular saw chain feed sawing machine, a feeding chain composed of an endless series of one-piece flat metallic links, each hinged at its ends to the meeting ends of the next adjacent links and having a plane longitudinally grooved saw receiving face with the grooves in the working faces of the links alining throughout the chain, and a longitudinal tongue provided on each link along one side of the chain.

5. In a chain feed sawing machine, a supporting frame, and an elongated table carried therein in spaced relation thereto, the frame and the table being each provided with an undercut guiding groove, a feeding chain comprising an endless series of one-piece flat metallic links hinged end to end and at the edges entering the said grooves, each link of the chain having a plane active face with a laterally extended series of closely associated longitndinal grooves therein and alining with the grooves of the adjacent links throughout the length of the chain, and a gang of saws located above the feed chain and adapted to have the teeth thereof enter the groove in the chain to a depth below the top of the supporting table, whereby the saw teeth are caused to cut entirely through material lodged on the said chain.

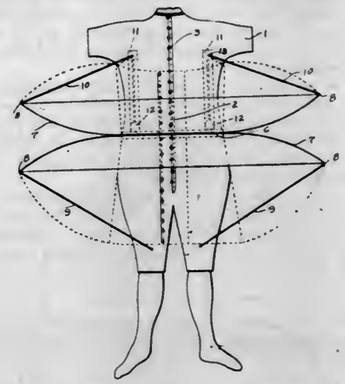
[Claims 6 to 10 not printed in the Gazette.]

1,110,710. AERIAL LIFE-SAVING DEVICE. DAVID WILLIAMS OGILVIE, Balboa, Canal Zone. Filed Mar. 13, 1913. Serial No. 754,080½. (Cl. 244—21.)

1. A device of the character described including a garment, reversely related parachute members secured to the garment at substantially the waist-line thereof, and means interposed between the outer marginal portions of the parachute members and the garment for limiting the movement of such members away from the garment.

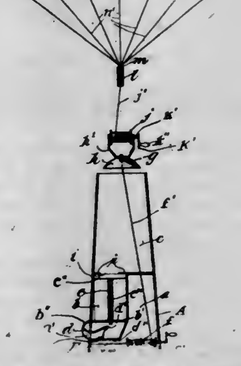
2. A device of the character described including a garment, reversely related parachute members secured to the garment at substantially the waist-line thereof, and means interposed between the outer marginal portions of the parachute members and the garment for limiting the movement of such members away from the garment, certain of such means being slidably engaged with the garment.

3. A device of the character described including a garment, a parachute member secured thereto, vertically disposed housings carried by the garment, weighted members



freely movable within the housings, and flexible connections between such weighted members and the marginal portions of the parachute.

1,110,711. PARACHUTE APPARATUS. DAVID WILLIAMS OGILVIE, Balboa, Canal Zone. Filed Mar. 13, 1913. Serial No. 754,153. (Cl. 244—21.)



1. A device of the class described comprising a barrel including an upper compartment and a lower compartment, a bell within the upper compartment, a parachute connected with the bell, said upper and lower compartments being separated by a transverse partition having an opening therein, means within the lower compartment for forcing the air therefrom to eject the bell and parachute from the barrel, means for limiting outward movement of the bell, and means for locking against operation the means within the lower compartment.

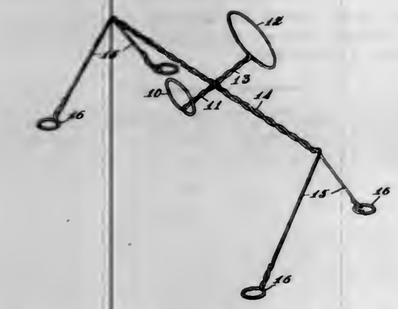
2. A device of the class described comprising a barrel having a transverse partition and an open upper end, the lower portion of the barrel being divided into two compartments, a piston within one compartment, the transverse partition above said compartment being provided with an air escape opening, a bell within the upper compartment and engaged over said opening in the transverse partition a parachute carried by said bell, a trigger within said lower compartment and having one end secured to the lower wall of the latter, the opposite end of said trig-

ger projecting through the wall of the barrel, said trigger having a nose intermediate its ends and normally engaged with the piston to retain the same in its lowermost position, means for forcing the piston upwardly to compress the air beneath the bell and eject the same with the parachute from the barrel upon disengagement of the nose of the trigger with said piston, and means for limiting outward movement of the bell.

3. A device of the character described comprising a barrel, a bell within the barrel, a parachute connected to said bell, pneumatic means for ejecting the bell and parachute from within the barrel, and means for limiting the outward movement of the bell, such means also serving to return the bell within the barrel.

4. A device of the character described comprising a barrel, a bell insertable within the barrel, a rotatable drum carried by the bell, a parachute, a flexible connection between the parachute and drum, and means for ejecting the bell from within the barrel.

1,110,712. NURSING-BOTTLE SUPPORT. JOHN B. PHELPS, Birmingham, Ala. Filed Oct. 29, 1913. Serial No. 797,937. (Cl. 248—41.)



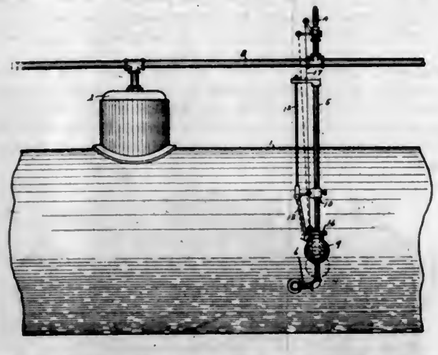
1. A nursing bottle support comprising a bar, means for supporting said bar, an arm carried across said bar and adapted to be adjusted thereabout into various positions, and bottle engaging means carried upon the ends of said arm.

2. A nursing bottle support comprising a single bar, adjustable legs mounted on the ends of the bar for supporting the same, a cross-arm mounted on the bar and adapted to swing thereabout for adjustment into various horizontal positions, and bottle receiving loops on the opposite ends of said cross-arm.

3. A nursing bottle support comprising two lengths of wire each of which is looped and twisted for a short distance at its middle portion to receive the opposite ends of a bottle, the free ends of the wires being twisted together in pairs and projecting oppositely and horizontally at right angles to the looped and twisted portions, the extremities of the wires diverging downwardly to provide spaced apart pairs of legs for supporting the device.

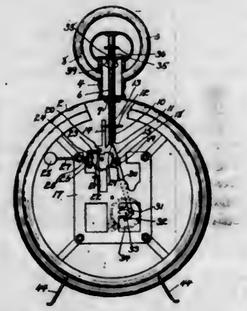
1,110,713. ALARM DEVICE. JOEL E. PRIESTER, Harrisburg, Tex. Filed Feb. 10, 1914. Serial No. 817,898. (Cl. 236—15.)

In a device of the character described, the combination with a boiler, of a steam line leading therefrom, a steam whistle carried by said line, a hollow pipe whose lower end is inwardly turned and tapped into the wall of said boiler, a closure for the upper end of said pipe, and arm integral with and extending laterally from said closure, a spherical weight slidably mounted upon said pipe, and having an annular flange upon its upper side, a cord one end of which is attached to said weight, and the other end of which is attached to the whistle lever, a rod whose upper end is adjustably secured to the free end of said arm, a hinge member adjustably secured on said pipe, a link, one end of which is pivoted to the lower end of said rod and the other end of which is pivoted to said hinge member and a hook integral with and depending from said



link and whose free end engages under said flange and normally holds the weight in an elevated position.

1,110,714. INTERMITTENT AND LONG ALARM CLOCK. JAMES R. PUTNAM, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed May 7, 1914. Serial No. 836,941. (Cl. 58—18.)



1. In a convertible alarm-clock, the combination with the case thereof, of an alarm-mechanism convertible for sounding an intermittent alarm or a long alarm and adapted to be shut off altogether, and an alarm-controlling member mounted in the said case and coacting with the said alarm-mechanism for shutting it off altogether or causing it to sound a long or an intermittent alarm, or vice versa.

2. In a convertible alarm-clock, the combination with the case thereof, of an alarm-mechanism including an alarm-converting lever, and an alarm-controlling member mounted in the said case, co-acting at its inner end with the said lever and projecting at its outer end through the case for manual operation, whereby the said lever may be positioned to shut off the alarm altogether or for the sounding of an intermittent alarm, or a long alarm, or vice versa.

3. In a convertible alarm-clock, the combination with the case thereof, of an alarm mechanism including an alarm-converting lever, a rotary alarm-controlling member mounted in the said case and, an alarm-converting cam mounted upon the said rotary alarm-controlling member and co-acting with the said lever for positioning the same for the sounding of an intermittent alarm, or a long alarm, or vice versa.

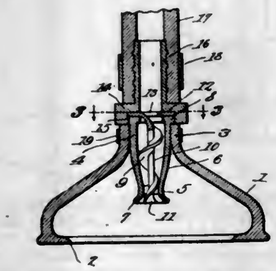
4. In a convertible alarm-clock, the combination with the case thereof, of an alarm-mechanism including an alarm-converting lever provided with an operating-arm, an alarm-shut-off finger, an intermittent-alarm finger, a shut-off arm, and an intermittent-alarm arm; and a longitudinally movable and rotatable alarm-controlling member

mounted in the clock-case and co-acting with the said operating-arm and with the said shut-off arm of the said lever.

5. In a convertible alarm-clock, the combination with the case thereof, of an alarm-mechanism including an alarm-converting lever, a longitudinally movable and rotatable alarm-controlling member mounted in the said case and provided at its inner end with a cam co-acting with the said lever for positioning the same for the sounding of an intermittent alarm, or a long alarm, and vice versa.

[Claims 6 to 9 not printed in the Gazette.]

1,110,715. DRAIN-PIPE FLUSHER. DANIEL J. REESE, Scranton, Pa. Filed June 5, 1914. Serial No. 843,291. (Cl. 4—1.)



1. In a device of the character described, a bell, a nozzle projecting thereinto, the nozzle being contracted adjacent its inner end and the inner end of the nozzle being flared, and a spiral member mounted within the nozzle and conforming to the interior thereof, the inner end of the spiral member being flared within the flared inner end of the nozzle.

2. In a device of the character described, a bell, a nozzle projecting thereinto, a spiral member disposed within the nozzle and having a portion at its outer end seating against the outer end of the nozzle, and means engaged to the outer end of the nozzle for clamping the said portion thereagainst.

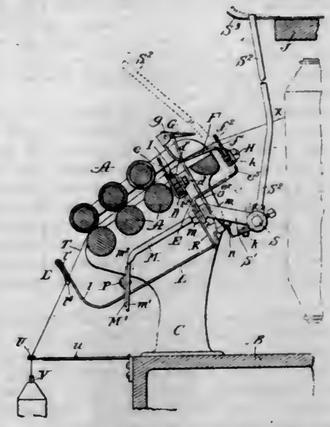
3. In a device of the character described, a bell, a nozzle projecting thereinto, a spiral member disposed within the nozzle and having a ring at its outer end seating against the outer end of the nozzle, and a socket nut threaded upon the outer end of the nozzle to clamp the said ring thereagainst, and having a hose attaching nipple.

1,110,716. ROVING-CLAMP FOR SPINNING-MACHINES. GUS F. ROBERTS, Fries, Va. Filed Mar. 11, 1914. Serial No. 823,963. (Cl. 118—17.)

1. The combination with the drawing rolls of a spinning machine, of a clamp for the roving in rear of the rolls, a drop wire having a thread-engaging end formed by bending the wire to provide a loop through which the thread freely passes and a free yielding portion for closing the loop at its upper end.

2. The combination with the drawing rolls of a spinning machine of a clamp for the roving in rear of the rolls, a drop wire having a thread-engaging end formed by bending the wire to provide three vertical portions, the middle one of which extends to a position between the other two.

3. The combination with the drawing rolls of a spinning machine of a clamp for the roving in rear of the rolls, a drop wire having a thread engaging end in front of the rolls which is so balanced as to merely make lateral contact with the thread without exerting a vertical strain thereon, bearings in which the drop wire is mounted to move about an axis transverse to the axes of the drawing rolls, connections between the drop wire and the clamp whereby the latter is normally held out of engaging position with the roving but which allows the clamp to engage the roving when the thread issuing from the rolls breaks, and means for adjusting said bearings vertically to raise and lower the thread-engaging end of the drop wire.

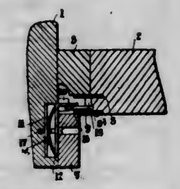


4. The combination with the drawing rolls of a spinning machine of a clamp for the roving in rear of the rolls, a drop wire having a thread-engaging end in front of the rolls, a rear bearing for the drop wire and a front bearing for said wire, comprising a stationary member and a vertically adjustable member through which the wire extends.

5. The combination with the drawing rolls of a spinning machine of a clamp for the roving in rear of the rolls, a drop wire having a thread-engaging end in front of the rolls, a rear bearing for the drop wire and a front bearing for said drop wire, comprising a bar having a downwardly extending front portion and a vertically adjustable plate carried by said front portion.

[Claims 6 to 11 not printed in the Gazette.]

1,110,717. WINDOW. THOMAS JAMES ROUSSEL, Hamilton, Ontario, Canada. Filed Dec. 22, 1913. Serial No. 808,191. (Cl. 20—49.)



1. In a revolving sash window the combination with the sash and frame, of weatherstrips, each comprising suitably spaced parallel bars, laterally adjustable brackets secured to the sides of the frame, each having an inwardly turned end, a pin on the inner face of each inwardly turned end, and links pivotally connected between the bars of the weatherstrip intermediately of the length of the same and pivotally connected to the inwardly turned end of the corresponding bracket.

2. In a revolving sash window the combination with the sash and frame, of weatherstrips, each comprising suitably spaced parallel bars, laterally adjustable brackets secured to the sides of the frame, each having an inwardly turned end, a pin on the inner face of each inwardly turned end, links pivotally mounted between the bars of each weatherstrip intermediately of the length of the same and having a longitudinal slot in each, said pin inserted into said slot of the corresponding link.

3. In a revolving sash window the combination with the sash and frame, of weatherstrips, each comprising suitably spaced parallel bars, plates secured in the sides of the frame, brackets, each having an inwardly turned end, and

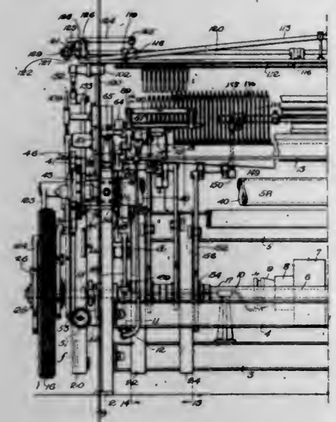
a pin secured on the inner face of each inwardly turned end, a leaf spring interposed between each bracket and the corresponding plate, a screw extending through each bracket, leaf spring, and threaded through the corresponding plate, links pivotally connected between the bars of each weatherstrip intermediately of the length of the same, said links having longitudinal slots therein, and said pins inserted into said slots.

4. In a revolving sash window the combination with the sash and frame, of weatherstrips, plates secured in the sides of the frame, brackets, each having an inwardly turned end, and a pin secured on the inner face of each end, a leaf spring interposed between each bracket and the corresponding plate, a screw extending through each bracket, leaf spring, and threaded through the corresponding plate, links pivotally connected to each weatherstrip intermediately of the length of the same, said links having longitudinal slots therein, and said pins inserted into said slots.

5. In a revolving sash window the combination with the sash, and a frame, of weatherstrips, brackets secured to the sides of the frame, each having an inwardly turned end, a pin on the inner face of each end, links pivotally mounted on each weatherstrip intermediately of the length of the same, each of said links having a longitudinal slot therein, and said pins inserted into said slots.

[Claims 6 to 8 not printed in the Gazette.]

1,110,718. NET-MACHINE. DAVID HENRY SAUNDERS, Gloucester, Mass., assignor, by mesne assignments, to Herbert E. Hounsell, Limited, Bridgeport, England, a Corporation of Great Britain. Filed July 19, 1909, Serial No. 508,273. Renewed Mar. 12, 1914. Serial No. 824,317. (Cl. 66—6.)



1. A net making machine comprising two series of thread carriers knot tying means, and organized means for moving both of said series of carriers in succession forward past the knot tying position and rearward above said position.

2. A net making machine comprising a pair of shuttle supports spaced apart, two series of shuttles, adapted at times to be supported by said supports, means for moving forward one of said series of shuttles from one of said supports to the other of said supports, and means for moving the other of said series of shuttles out of the paths of the advancing shuttles.

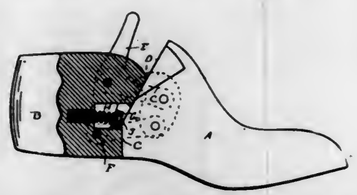
3. A net making machine comprising a pair of shuttle supports spaced apart, a series of shuttles, means for moving said shuttles horizontally from one to the other of said supports, and means for moving said shuttles vertically with respect to both of said supports.

4. A net making machine comprising a pair of shuttle supports spaced apart, a series of shuttles, means for moving said shuttles from one to the other of said supports, and means movably mounted with respect to said shuttle supports for moving said shuttles vertically from one of said supports and toward the other of said supports.

5. A net machine comprising a pair of shuttle supports spaced apart, a series of shuttles, means for moving said shuttles forward from one to the other of said supports, and means for moving said shuttles in the reverse direction through a different path of movement.

[Claims 6 to 43 not printed in the Gazette.]

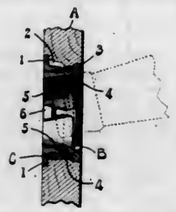
1,110,719. LAST. JOHN C. SCHELTER, Rochester, N. Y., assignor to Fitz-Empire Double Pivot Last Company, Auburn, Me., a Corporation of Maine. Filed May 8, 1913. Serial No. 766,252. (Cl. 12—136.)



1. A transversely divided last having its parts movably joined together, interlocking members mounted in said parts, one movable and provided with a spring supporting lug above the pivot point, the last part supporting said movable member being provided with an enlarged lug receiving recess, a spring supported in said last part and adapted to extend into said recess and engage said lug, and means for holding said spring upon said lug.

2. A transversely divided last having its parts movably joined together, interlocking members mounted in said parts, one movable and provided with a spring supporting lug above the pivot point, the last part supporting said movable member being provided with an enlarged lug receiving recess, and a spring supported in said last part and adapted to extend into said recess and engage said lug, said lug being provided with a socket adapted to receive and hold the free end of said spring in engagement with said lug.

1,110,720. BOTTLE-CAP REMOVER. JOSEPH R. SCHULTZ, St. Louis, Mo. Filed Apr. 10, 1914. Serial No. 830,875. (Cl. 65—46.)



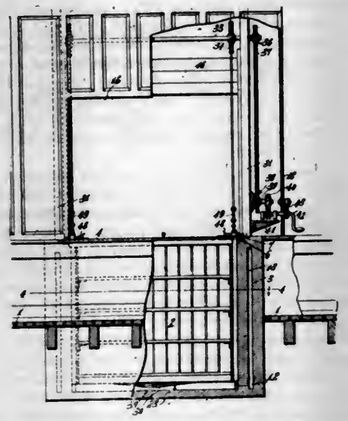
1. A bottle cap remover comprising a ring adapted to be mounted in an opening in a suitable support, the said ring having a member interiorly thereof adapted to be engaged by a bottle cap, and a retainer ring fitted to said first mentioned ring by which the latter is held in said opening.

2. A bottle cap remover comprising a ring adapted to be located in an opening in a support, the said ring having interiorly thereof a plurality of spaced members for engaging a bottle cap, and a retainer ring fitted to said first mentioned ring to hold it in the opening of said support.

3. A bottle cap remover comprising a flanged ring adapted to be mounted in an opening in a support, the said ring having interiorly thereof a member adapted to be engaged by a bottle cap, and a flanged retainer ring fitted to said first mentioned ring, the flanges of said rings being adapted to impinge against the walls of the support in which the cap remover is mounted.

4. A bottle cap remover comprising a ring adapted to be mounted in an opening in a suitable support, the said ring being provided with an internal member adapted to be engaged by a bottle cap and with a stop adapted to limit the movement of a neck of a bottle in said ring, and a retainer ring fitted to said first mentioned ring adapted to hold it in position in the opening in the support.

1,110,721. COMBINED BOOKCASE AND VAULT THEREFOR. THOMAS JAMES SCOTT, Winchester, Tenn. Filed Sept. 20, 1913. Serial No. 790,860. (Cl. 45—1.)



A combined bookcase and vault therefor, comprising a desk platform having an opening, a vault whose upper end terminates at the opening in the desk platform, a book case vertically movable within the vault, guides on the inner walls of the vault that hold the ends of the book-case spaced from the wall ends, guides on the book-case that co-act with the vault guides, supports that extend up from the platform at each end of the vault and which include two guides, the said book-case including a top whose edges form members that close over the space between the book-case and the vault sides when the book-case is lowered into the vault, the said top edges also having guide grooves for engaging the guides on the vertical supports when the book-case is elevated, and means operative above the platform for raising and lowering the book-case.

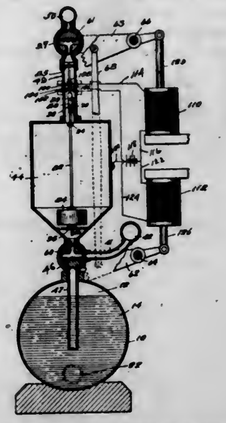
1,110,722. POWER SYSTEM. MELVIN L. SEVERY, Arlington Heights, Mass. Filed June 25, 1913. Serial No. 775,678. (Cl. 138—18.)

1. A power system, comprising a receptacle containing two fluids under pressure, said fluids being of different specific gravities, the lighter of said two fluids being employed to store energy and the heavier of said fluids being employed to utilize said energy, and means for supplying said heavier fluid to said receptacle against said pressure.

2. A power system, comprising a generator which creates a pressure of a relatively light fluid in a receiver, and a relatively heavy fluid subjected to said pressure for circulation to utilize the energy from said generator, and means for returning said relatively heavy fluid to said receiver against said pressure.

3. A power system comprising a prime member arranged to create a pressure in a receiver, a secondary member arranged to use a fluid under pressure from said receiver, and means for returning said used fluid to said receiver under said pressure to be repeatedly used.

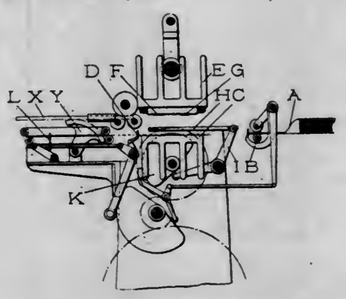
4. A power system, comprising means containing two fluids of different specific gravities, means for compressing the lighter of said fluids, means for utilizing the heavier of said fluids, and means for returning said heavier fluid to said first-named means against the pressure of said lighter fluid.



5. A power system, comprising a receptacle containing a liquid and a gas in communication, means for compressing said gas into said receptacle, means for utilizing said liquid for propulsion, and means for returning said liquid to said receptacle while under pressure.

[Claims 6 to 10 not printed in the Gazette.]

1,110,723. PRINTING-MACHINE. GEORG SPIESS, Leipzig-Reudnitz, Germany. Filed Mar. 7, 1913. Serial No. 752,744. (Cl. 101—20.)



1. In combination in a printing machine of the class described, a printing head, a plurality of printing forms located side by side and stationary thereon, means for alternately rendering ineffective the printing forms independently thereof, and means for bringing said printing forms into printing operation at different points on the sheet to be printed during a single passage thereof through the machine.

2. In combination in a printing machine of the class described, a printing head, a plurality of printing forms thereon, a platen, masking means for alternately rendering ineffective the printing forms, and sheet feeding means for bringing said printing forms into printing operation at different points on the sheet to be printed during a single passage thereof through the machine.

3. In combination in a printing machine of the class described, a printing head, a plurality of printing forms thereon, a platen, a withdrawable carrier thereon, and masking means operable alternately upon the printing forms.

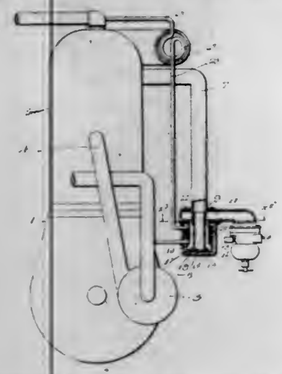
4. In combination in a printing machine of the class described, a printing head, a plurality of printing forms thereon, a platen, an oscillatory frame between the head

and the platen, and a masking sheet carried by said frame for allowing only one printing form to print at a time.

5. In combination in a printing machine of the class described, a printing head, a plurality of printing forms thereon, a platen, a frame between the head and the platen, a masking sheet, and elastic suspending means for suspending said sheet from said frame.

[Claims 6 and 7 not printed in the Gazette.]

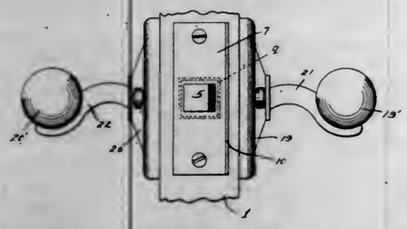
1,110,724. CARBURETING MEANS FOR USE WITH HEAVY FUELS. ALFRED C. STEWART, Los Angeles, Cal. Filed Sept. 16, 1913. Serial No. 790,014. (Cl. 123—122.)



1. In combination with an internal combustion engine provided with an exhaust and having a water jacket, a water circulating system for receiving heated water from the water jacket, carbureting means comprising a means for supplying a mixture of air and liquid fuel, heating means for applying heat to said mixture of air and fuel, a pipe communicating with the water circulating means and with said heating means to supply heat to the said heating means from the circulating water, and means for applying heat to the water in said pipe to heat the same above the temperature of the water jacket of the engine.

2. In combination with an internal combustion engine provided with an exhaust and having a water jacket, a water circulating system for receiving heated water from the water jacket, and carbureting means comprising a means for supplying a mixture of air and liquid fuel, heating means for applying heat to said mixture of air and fuel and a pipe communicating with the water circulating means and with said heating means to supply heat to the said heating means from the circulating water, said pipe including a heating means exposed to the heat of the exhaust of the engine for superheating the water in said pipe.

1,110,725. DOOR-LOCK. ALFRED STONE, Elmhurst, Cal. Filed Mar. 11, 1914. Serial No. 823,993. (Cl. 70—42.)



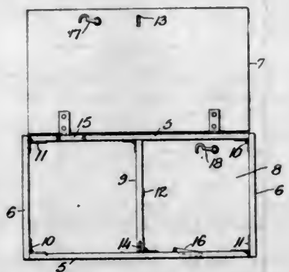
1. In a lock of the character described comprising the combination with a casing, of a latch pivotally mounted adjacent the outer end thereof, a slotted bar pivotally secured to said latch, a spindle slidable through said casing, an inclined surface on said spindle, a roller pivotally mounted in said slotted bar, said roller being adapted to contact with said inclined surface, spring means mounted adjacent the inner end of said casing and serving as a guide for the other end of said slotted bar, and pivotally mounted handles, adapted to move to and from the door and impart a sliding movement to said spindle.

2. In a lock of the character described comprising in combination with a casing mounted in the door, of a latch pivotally mounted in said casing, a slotted bar pivotally attached to said latch, a spring pivotally attached to the rear end of said bar, a spindle slidable through the slot in said bar and through openings in said door and casing, operative connections between said spindle and the door handles, said handles being pivotally mounted to move to and from said door, said operative connections comprising an eye bolt in threaded engagement with one end of said spindle and pivotally attached to the handle adapted to be pulled, a screw engaging the other end of said spindle and contacting with the handle adapted to be pushed, an inclined surface on the side of said spindle, a roller pivotally mounted in said slotted bar and contacting with said inclined surface and spring means for holding said handles in their normal position.

3. In a lock of the character described comprising a casing, a latch pivotally mounted in the outer end thereof, a slotted bar pivoted to said latch, a spindle slidable through the walls of said casing, an inclined surface on said spindle, said surface contacting with said bar to withdraw said latch handles adjustably connected to said spindle and adapted to impart a reciprocating movement thereto, notches in said reciprocating parts, and spring actuated lock plates adapted to move into said notches to prevent the movement of said reciprocating parts.

4. In a lock of the character set forth comprising a casing, a latch, a sliding spindle mounted in said casing and adapted to operate said latch, locking means on each side of said casing comprising a plate movable across the path of said sliding spindle, a spring urging such movement, a catch formed in said plate, a shoulder on said button adapted to engage the catch of said plate when said button is raised, spring means for raising said button, an arm on said plate adapted to contact with the beveled end of a key and to be moved thereby to withdraw said plate from the path of said sliding parts.

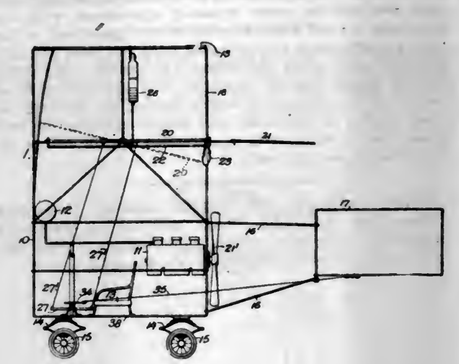
1,110,726. FOLDING CRATE. JOHN SZUTH, New York, N. Y., assignor of one-fourth to Geza Kocsis, New York, N. Y. Filed July 11, 1913. Serial No. 778,587. (Cl. 217—14.)



1. In folding crates, the combination with sides, end pieces, bottom, top and partition adapted to fold upon each other, of pivoted fingers on the edges of the sides, and hooks on the top and bottom to engage the fingers when the crate is folded.

2. In folding crates, the combination with end pieces, of sides; top and bottom hinged to the sides and fitting between the end pieces, a partition hinged to a side, a catch connecting the partition with the bottom, fingers on the edges of the sides, and hooks on the top and bottom to engage the fingers when the crate is folded.

1,110,727. FLYING-MACHINE. JOHN SZUTH, New York, N. Y. Filed July 11, 1913. Serial No. 778,588. (Cl. 244—29.)



1. In a flying machine, the combination with a frame comprising a horizontal and a depending structure, of a stationary plane at the top of the horizontal structure, a similar tiltable plane at the bottom of the horizontal structure, a lever and connections for oscillating the latter plane, and an engine and propeler in the depending structure.

2. In a flying machine, the combination with a T-shaped frame, of a stationary plane at the top of the horizontal part of the frame and a tiltable plane pivoted at the lower part of the same, ailerons at the end of the latter plane, automatic means between the planes for operating the ailerons, a stationary plane at the rear of the tiltable plane, a rudder at the rear of the vertical member of the frame, and an engine and propeller in the latter member.

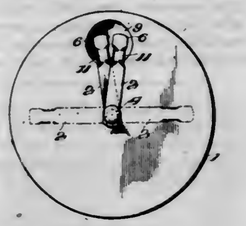
3. In a flying machine, the combination with a T-shaped frame, of a stationary plane at the top of the horizontal section of the frame and a tiltable plane pivoted at the middle of its sides in the lower part of said section, a stationary plane at the rear of the tiltable plane, a pivoted rudder at the rear of the vertical part of the frame, an engine and propeller in the latter section, ailerons with baffiers at the ends of the tiltable plane, and a hanging weight in the horizontal section of the frame to operate the ailerons.

4. In a flying machine, the combination with a frame and stationary plane, of a centrally pivoted tiltable plane beneath the stationary plane, automatically operated ailerons at the ends of the tiltable plane, a rudder, a lever having arms connected with the tiltable plane, a sleeve on the lever and having arms connected with the rudder, and an engine and propeller.

5. In a flying machine the combination with a frame having a stationary plane at the top of the same, of a centrally pivoted tiltable plane beneath the stationary plane, floats at the lower end of the frame, a rudder, ailerons at the end of the tiltable plane, a swinging weight and cords for operating the ailerons, a lever with arms for operating the tilting plane, cords connecting the arms and the plane, a sleeve around the lever and adapted to be rotated, arms on the sleeve, cords connecting the arms with the rudder, and motor and propeller.

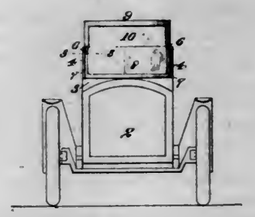
1,110,728. CAN-OPENER. HENRY TILL, Los Angeles, Cal. Filed Jan. 2, 1913. Serial No. 739,921. (Cl. 220—67.)

The combination with a container having a sealing top struck inwardly to provide a recess or seat and outwardly to provide a hollow stud spaced from the seat, of a resilient member perforated at one end to engage over the stud, the stud being headed to pivotally secure said member in place, and a piercing point carried by the free



end of the resilient member and adapted to normally seat in the recess.

1,110,729. WIND-SHIELD FOR AUTOMOBILES. CHARLES H. TOWNSEND, Berkeley, Cal. Filed Nov. 18, 1913. Serial No. 801,621. (Cl. 21—148.)



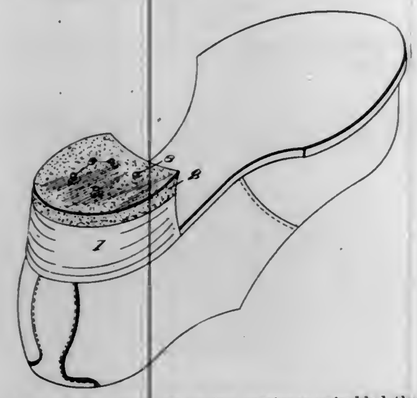
1. A wind-shield consisting of a pair of vertical guide posts which are each provided on their front faces with a pair of spaced channels, a pair of members of substantially U-shape in cross-section arranged on the exterior of said front faces of the posts and having their outer legs arranged in the respective inner channels of the posts and having rack teeth on their inner legs, pinions carried by the inner sides of the guide posts and meshing with said teeth, a transparent element connected at its ends to said members, a second pair of members of substantially L-shape in cross-section arranged on the exterior of said front faces of the posts and having one of their legs arranged in the respective outer grooves of the posts and having their opposite legs rabbeted, and a transparent element having its ends arranged in said rabbeted legs.

2. A wind-shield consisting of a pair of vertical guide posts which are each provided on their front faces with a pair of spaced channels, a pair of inner members arranged on the exterior of the front faces of the posts and having portions slidably arranged in the inner of said channels and having portions which are disposed adjacent to the inner side faces of said posts and which have rack teeth, pinions connected to said inner side faces of the posts and meshing with said teeth, a transparent element connected to said members and extending over and in front of the pinions and over the front faces of the posts, a pair of outer members arranged exterior to the outer faces of said posts and having portions arranged in the respective outer grooves, said outer members having rabbeted portions which extend beyond and over the outer face of said transparent element, and a transparent element having its ends arranged in said rabbeted portions of the outer member.

3. A wind-shield consisting of a pair of vertical guide posts which are each provided on their front faces with a pair of spaced channels, a pair of inner and a pair of outer members each arranged exterior to the outer faces of the posts, the inner members having portions which slide in the inner grooves and the outer members having portions which are arranged in the outer grooves, the

outer members having parts which extend beyond the inner members, one of said inner members having a part which extends over the inner side face of the adjacent post, means to raise and lower said last named part from the inner side face of the post, a transparent element connected to said parts of the outer members, and a transparent element connected to said inner members.

1,110,730. RESILIENT HEEL. JOHN G. TUFFORD, Elyria, Ohio, assignor of one-sixth to Carl H. Ingwer, one-sixth to Arthur G. Smith, and one-twelfth to William C. Smith, Elyria, Ohio. Filed July 21, 1913. Serial No. 780,290. (Cl. 36—35.)



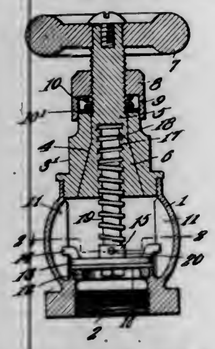
1. A cushion heel lift having washers embedded therein near its center portion and each of segmental form, the washers being arranged with their chordal edges presented toward the edge of the lift.

2. A cushion heel lift divided by a plurality of intercommunicating channels into a group of suction areas.

3. A cushion heel lift having a concave attaching face formed with a groove having a line of extent substantially parallel to the margin of the lift and having other channels intersecting each other and communicating with the first mentioned channel.

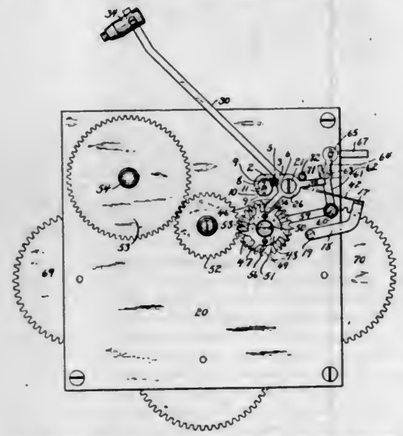
4. A cushion heel lift having its attaching face provided with a suction area located substantially centrally thereof, and washers embedded in the lift and located in a series extending around the said area and located relatively close thereto, the washers at their sides which are located nearer the margin of the lift being straight edged.

1,110,731. VALVE. JAMES WALP, Allentown, Pa. Filed Jan. 10, 1911. Serial No. 601,836. (Cl. 137—4.)



In a device of the character described, a casing having a valve seat, a bonnet engaged with the casing, and having a conical bore and an upper reduced circular portion, a stem passing through and projecting from the bonnet and having a lower conical head to fit snugly within the said bore, a non-rotatable valve seatable upon the said valve seat and in screw threaded engagement with the said head, a hand wheel secured to the upper end of the stem, an adjustable nut threaded onto the stem intermediate the hand wheel and bonnet and having a depending annular apron slidably engaging over the said reduced portion of the bonnet, a washer seated on the said reduced portion of the bonnet and snugly engaging the said apron, and a coiled wire compression spring seated between the washer and nut.

1,110,732. STRIKE AND CHIME CLOCK. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed May 25, 1914. Serial No. 840,852. (Cl. 58—13.)



1. In a strike and chime clock, the combination with the chime-hammers thereof, of a chime-train for operating the same, an hour-strike train, and means for operating the chime-hammers thereby independently of their operation by the chime-train.

2. In a strike and chime clock, the combination with the chime-hammers thereof, of a chime-train for operating the same, an hour-strike train, and a coupling-arm hourly operated by the hour-strike train and extending under one or more of the chime-hammers for operating the same independently of their operation by the chime-train.

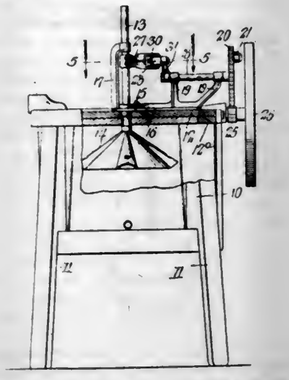
3. In a strike and chime clock, the combination with the chime-hammers thereof, of a chime-train for operating the same, an hour-strike hammer, an hour-strike train for operating the same, and a coupling-arm combined with the hour-strike hammer and extending under one or more of the chime-hammers for operating the same from the hour-strike train independently of the operation by the chime-train.

4. In a strike and chime clock, the combination with the chime-hammers thereof, of a chime-train for operating the same, an hour-strike train, an hour-strike hammer, a stud upon which the several chime-hammers and hour-strike hammer are mounted in series for independent operation thereupon, and coupling-means combined with the hour-strike hammer for hourly coupling therewith one or more of the chime-hammers to cause their operation by the hour-strike train independently of their operation by the chime-train.

5. In a strike and chime clock, the combination with the chime-hammers thereof, of a chime-train for operating the same, an hour-strike hammer, an hour-strike train for operating the same, a coupling-arm carried by the hour-strike hammer and arranged to lift one or more of the chime-hammers concurrently with the lifting of the hour-strike hammer, and a stud upon which all of the said hammers are mounted for oscillation and which extends parallel with the said coupling-arm.

[Claim 6 not printed in the Gazette.]

1,110,733. OPERATING MECHANISM FOR WASHING-MACHINES. WILLIAM H. WYMAN, Oshkosh, Wis., assignor to John G. Seelig, Ripon, Wis. Filed Aug. 12, 1912. Serial No. 714,592. (Cl. 74—14.)



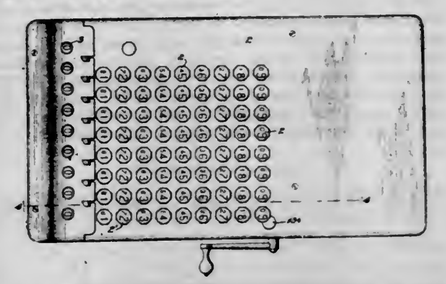
1. In combination with an operating shaft capable of both vertical and rotary reciprocation, a continuously rotatable, horizontal shaft, in a plane with said operating shaft and having one end spaced therefrom, a crank-arm fixed to that end of the said horizontal shaft, a horizontal crank-pin fixed to said crank arm and extending toward said operating shaft, a horizontal radial arm fixed to said operating shaft and extending toward said horizontal shaft, said arm being bifurcated at its end to provide vertically spaced parallel, horizontally extending bearing surfaces, and means operatively connecting said crank-pin with said arm providing for rotative and horizontal reciprocatory bearing of said crank-pin between said bearing surfaces.

2. In combination with an operating shaft capable of both vertical and rotary reciprocation, a continuously rotatable, horizontal shaft in a plane with said operating shaft and having one end spaced therefrom, a crank-arm fixed to that end of the said horizontal shaft, a herizontal crank-pin fixed to said crank arm and extending toward said operating shaft, a horizontal radial arm fixed to said operating shaft and extending toward said actuating shaft, said arm being bifurcated at its end to provide vertically spaced, parallel, horizontal bearing surfaces, a block having bearing between said bearing surfaces, and means providing vertical journals for said block adapting it for rotary oscillatory movement about a vertical axis, said crank pin having rotative and horizontal reciprocatory bearing in said block.

1,110,734. CALCULATING-MACHINE. KURT F. ZIEHM, Chicago, Ill., assignor to Felt & Tarrant Manufacturing Company, a Corporation of Illinois. Filed Mar. 3, 1914. Serial No. 822,140. (Cl. 235—82.)

1. In a multiple-order key-driven calculating machine, in combination: accumulator mechanism including numeral wheels; column actuators by means of which the motion of a key is communicated to the accumulator mechanism; denominational series of unitary keys which are provided with means moving constantly with the key button for actuating both the said column actuators and a locking mechanism; and said locking mechanism normally holding the column actuators inoperative; substantially as specified.

2. In a multiple-order key-driven calculating machine, in combination: accumulator mechanism including numeral wheels; column actuators by means of which the motion of a key is communicated to the accumulator mechanism; denominational series of unitary keys the stems of which are provided with means substantially rigid with the key button for actuating both the said column actuators and a locking mechanism; and said locking mechanism normally holding the column actuators inoperative; substantially as specified.



3. In a multiple-order key-driven calculating machine, in combination: adding mechanism including numeral wheels; denominational series of unitary keys provided with means moving constantly with the key button for actuating both the said adding mechanism and the locking mechanism; and said locking mechanism adapted to lock a key, after its adding movement, against a further adding movement until the key has been restored to normal position, the locking being ordinally controlled by a single key in each of said orders; substantially as specified.

4. In a multiple-order key-driven calculating machine, in combination: adding mechanism including numeral wheels; denominational series of unitary keys for actuating both the said adding mechanism and the two reverse locking mechanisms; and said two reverse locking mechanisms guarding a key against mis-manipulation during its first movement and during its return movement, respectively; one of said locking mechanisms acting on the adding mechanism independently of the key; substantially as specified.

5. In a multiple-order key-driven calculating machine, in combination: accumulator mechanism including numeral wheels; denominational series of unitary keys which are provided with means substantially rigid with the key button for actuating both the said accumulator mechanism and a locking mechanism; and said locking mechanism adapted to lock the accumulator mechanism and through the accumulator mechanism to lock a key after a complete adding movement of said key, against a further adding movement of said key, until the key has been restored to normal position; substantially as specified.

[Claims 6 to 21 not printed in the Gazette.]

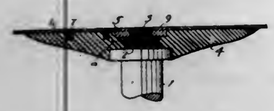
1,110,735. RAIL TIE AND JOINT. ALONZO ZIMMERMAN, Ansted, W. Va. Original application filed Aug. 5, 1913, Serial No. 783,133. Divided and this application filed Oct. 30, 1913. Serial No. 798,349. (Cl. 238—5.)

1. In a device of this character, two longitudinal and spaced plates, the upper edges of the two plates adjacent one end being provided with arms disposed at diverging angles to the plates and terminating in cylindrical and parallel terminals, said terminals being disposed to engage a bonding plate and the two webs of adjacent rails at the joint of the rails, and manually controlled means

mounted between the plates for clamping and engaging the outer ends of the bases of the two rails and for locking them against the divergent arms.

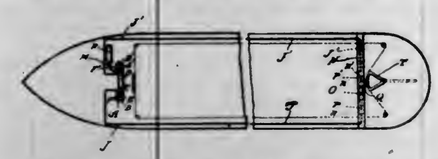
2. In a device of this character, two longitudinal and spaced plates, the upper edges of the two plates adjacent one end being provided with arms adjacent at diverging angles to the plates and terminating in cylindrical and parallel terminals, said terminals being disposed to engage a bonding plate and the two webs of adjacent rails at the joint of the rail, manually controlled means mounted between the plates for clamping and engaging the outer ends of the bases of the two rails and for locking them against the divergent arms, and coöperating means carried upon the opposite ends of the plates and the manually controlled means for engaging the other rail and locking the same upon the plates and in coactive relation to the rail joint.

1,110,736. SAWING-MACHINE. STEPHEN H. AUSTIN, San Francisco, Cal. Filed July 24, 1912. Serial No. 711,257. (Cl. 143—155.)



In a sawing machine, a mandrel, a terminal portion of which has a threaded inner portion and a reduced oppositely threaded outer portion, a saw collar screwed on said inner portion, and having a central recess, a circular saw secured to said collar, and a jam nut in said recess and screwed on said outer portion, said mandrel, collar and jam nut being wholly on one side of the outer surface of the saw.

1,110,737. RUDDER-INDICATOR. CHARLES A. BENHAM, Cleveland, Ohio, and HUGH MCLAUGHLIN, Superior, Wis. Filed Mar. 8, 1913. Serial No. 752,810. (Cl. 116—31.)

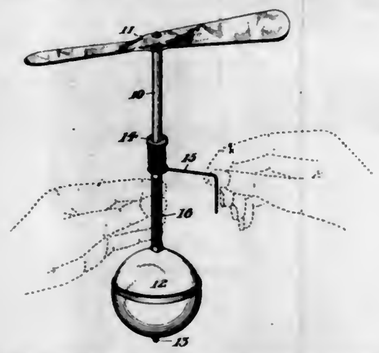


1. A rudder indicator for vessels the combination with the rudder of a double cylinder suitably mounted near the steering wheel, a double cylinder located and suitably mounted near the rudder, pipes filled with oil connecting the corresponding ends of said cylinders, a pointer connected with the forward cylinder, and an operative connection between the after cylinder and the rudder whereby the pointer through the action of the cylinders and the oil moves with the rudder and indicates its position, substantially as and for the purpose specified.

2. A rudder indicator for vessels the combination with the rudder of a double cylinder suitably mounted near the steering wheel, a double cylinder suitably mounted near the rudder, pipes filled with oil connecting the corresponding ends of said cylinder, a pointer connected with the forward cylinder, a dial suitably marked and mounted near said pointer, and an operative connection between the after cylinder and the rudder whereby the pointer through the action of the cylinder and the oil moves with the rudder and indicates its position, substantially as and for the purpose specified.

3. In a rudder indicator for vessels the combination with the rudder of a double cylinder suitably mounted near the steering wheel, a double cylinder suitably mounted near the rudder, pipes filled with oil connecting the corresponding ends of said cylinders, an oil tank connected with said pipes, a pointer connected with the forward cylinder, a spring check valve between said pipes and the oil tank whereby upon an excess of pressure being produced in either side of the cylinders the oil is permitted to flow back into the tank until such excess of pressure is relieved, substantially as and for the purpose specified.

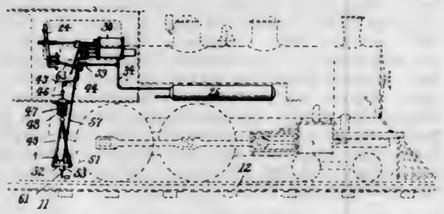
1,110,738. FLYING AND SPINNING TOY. JOZSEF BERECZ, Bridgeport, Conn. Filed Mar. 25, 1914. Serial No. 827,160. (Cl. 46—32.)



1. A toy comprising a shaft, an elevating propeller at one end and a hollow top at the other end thereof, a spool positioned substantially centrally of the shaft, a winding cord mounted upon said spool and a freely revoluble split sleeve journaled upon said shaft between said spool and top.

2. A device of the class described comprising a hollow spherical top, a spinning point and a shaft secured in alinement with each other extending from diametrically opposite points upon said top, a propeller blade secured to the free end of said shaft, an integral central spool upon said shaft, a split sleeve journaled between said spool and top, and a cord wound upon said spool and adapted for unwinding simultaneously with the revolving of said shaft.

1,110,739. AUTOMATIC TRAIN-STOP. WERNER BEUTEL, Bridgeport, Conn. Filed Mar. 1, 1913. Serial No. 751,476. (Cl. 246—59.)



1. In an automatic railway locomotive stop, the combination with a suitable contacting device secured to a road bed, of a cylinder pivotally connected to the locomotive and having oppositely disposed arms, a piston arm mounted in the cylinder to engage said contacting device and adapted to swing with the cylinder to pass the contact, air pressure connections with the cylinder for holding said piston arm extended for engagement with the contacting device, a spring for withdrawing the piston arm when the air pressure is removed and mechanism connected with the oppositely disposed arms of the cylinder for removing said air pressure.

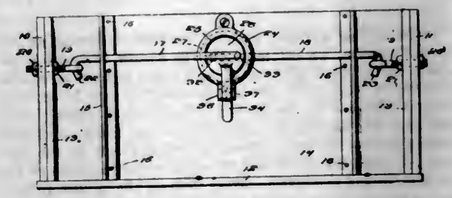
2. In an automatic railway locomotive stop, the combination of a movable contacting device secured to a road bed, of an air cylinder pivotally attached to the locomotive and adapted to be swung forward and backward, a piston and arm mounted in the cylinder to engage said contacting device and adapted to swing with the cylinder, pressure actuated means for holding said arm extended for engagement with the contacting device, means for retracting the arm when the air pressure is removed, and mechanism connected with the swinging cylinder for removing said air pressure.

3. An automatic railway locomotive stop, comprising a suitable contacting device secured to a road bed, an air pressure cylinder pivotally hung to the locomotive, an arm mounted in the cylinder and adapted to engage said contacting device and adapted to swing rearward with the cylinder to pass the contact, air pressure actuated means for holding said arm extended for engagement with the contacting device, a spring actuated slide valve for controlling said pressure actuated means, means for retracting the arm when the air pressure is removed, and mechanism connected with the swinging arm to control the slide valve for relieving said air pressure.

4. In an automatic railway locomotive stop, the combination with a suitable contacting device secured to a road bed, of a throttle valve lever, a spring actuated slide valve for controlling the operation of the throttle valve lever, a pivotal arm carried by the locomotive to engage said contacting device and adapted to swing back to pass the contact, a latch for holding the slide valve in inoperative position, connections with said swinging arm to release the slide valve, air pressure actuated means for holding said arm extended for engagement with the contacting device, and means for retracting the arm when the air pressure is removed by engagement with and the operation of the arm.

5. In an automatic railway locomotive stop, the combination with a suitable contacting device secured to a road bed, of a throttle valve lever, an air pressure operating means for operating the throttle lever, a spring actuated slide valve for controlling said air pressure operating means, a cylinder pivoted to swing upon the locomotive, an arm carried by the cylinder to engage said contacting device and adapted to swing with the cylinder to pass the stop, a connection between the said cylinder and the spring actuated slide valve to release the latter, air pressure actuated means for holding said arm extended for engagement with the contacting device, and means for retracting the arm when the air pressure is removed.

1,110,740. END-GATE. HARRY L. BISBING, Clermont, Iowa. Filed June 4, 1913. Serial No. 771,655. (Cl. 21—21.)



1. A device of the class described comprising a casing adapted to be attached to an end gate and having an opening in its front face surrounded by a stop flange, a member mounted for rotation in said casing and against said stop flange, an arm extending from said rotative member and through the opening of the casing, rods connected to said rotative member at opposite sides thereof and adapted to be detachably coupled to the opposite sides of a wagon body, and a holding member engaging said arm.

2. An end gate operator comprising an annular casing adapted to be attached to an end gate and having a marginal recess in one side and an annular stop flange, a member mounted for rotation in said casing and bearing against said stop flange, an arm extending from said rotative member and externally of said casing, a rod connected to said rotative member externally thereof at one side of its center and adapted to be detachably coupled to a wagon body at one side thereof, another rod extending through the recess of the annular casing and connected to the rotative member internally thereof and at the opposite side of its center and adapted to be detachably coupled to a wagon body at the opposite side thereof.

3. A device of the class described comprising a casing adapted to be attached to an end gate and having an opening in its front face surrounded by a stop flange and with depending stops spaced apart, a member mounted for rotation in said casing and against said stop flange, an arm extending from said rotative member and through the opening in the casing and adapted when in one position to engage between said spaced stops, and rods connected to said rotative member at opposite sides thereof and adapted to be detachably coupled to the opposite sides of a wagon body.

1,110,741. COATING PROCESS. EUGENE BLOCH, New York, N. Y. Filed Mar. 2, 1912. Serial No. 681,285. (Cl. 91—68.)

1. The process of coating surfaces, such as concrete and the like, comprising alkaline materials which comprises applying thereto a fluent priming composition containing gum Pontianak.

2. The process of coating surfaces, such as concrete and the like, comprising alkaline materials which comprises applying thereto a fluent priming composition containing gum Pontianak, and thereafter applying a main coating of fluent material.

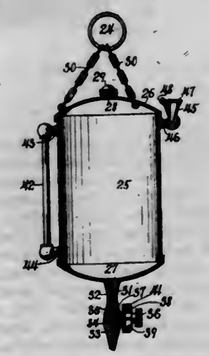
3. The process of coating surfaces, such as concrete and the like, comprising alkaline materials which comprises applying thereto a fluent priming composition containing gum Pontianak, and thereafter applying a main coating of another fluent material.

4. The process of coating surfaces, such as concrete and the like, comprising alkaline materials which comprises applying thereto a fluent priming composition containing gum Pontianak and another gum coating material free of saponifiable matter.

5. The process of coating surfaces, such as concrete and the like, comprising alkaline materials which comprises applying thereto a fluent priming composition containing gum Pontianak, and another gum coating material free of saponifiable matter, and thereafter applying a main coating of fluent material.

[Claims 6 and 7 not printed in the Gazette.]

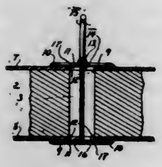
1,110,742. ANESTHETIC-DISPENSER. SACKS BRICKER, Washington, D. C. Filed Oct. 15, 1913. Serial No. 795,218. (Cl. 137—4.)



An anesthetic dispenser comprising a body having a chamber for containing the anesthetic, and a depending dispensing tube through which the anesthetic gravitates in minute drops, having an upper longitudinal hair-like

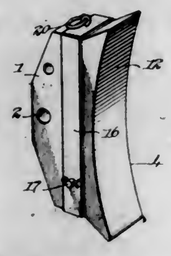
bore, a lower longitudinal hair-like bore offset from the upper bore, a transverse connecting hair-like bore, and a half-casing rim formed as a boss on one side of the dispensing tube, provided with a peripheral segmental slot at the front side of the rim and a thumb-screw having an enlarged screw-threaded portion working in the dispensing tube and a hair-like needle valve controlling the transverse connecting bore, and a circular indicator disk having markings on its periphery and located within the half-casing rim.

1,110,743. REEL FOR STRIP MATERIAL. JOHN J. BUCHANAN, Waterbury, Conn., assignor to The Narrow Fabric Corporation, Orange, Conn., a Corporation. Filed Dec. 1, 1913. Serial No. 803,934. (Cl. 242—70.)



In a reel for strip material, the combination with a spool having a central hole, of relatively large disks applied to the respective ends of the spool and formed with central openings concentric with the hole in the spool, washers concentrically applied to the outer faces of the respective disks and each formed with a handle-slot; and with a pair of positioning-fingers extending into the central openings of the disks and forming abutments for centering the same, a handle-strap passing through the spool and through slots of the respective washers for binding them together, and a handle applied to one end of the said strap.

1,110,744. BRAKE-SHOE. HARRISON J. CAMP, New Berlin, N. Y. Filed Mar. 10, 1914. Serial No. 823,748. (Cl. 188—28.)



1. A brake shoe including a stationary and a removable shoe section, a detachable fastening member arranged to straddle the respective sections and to engage the said sections throughout their entire length, and means holding the fastening member immovable relatively to the respective sections, as and for the purpose set forth.

2. A brake shoe including a stationary and a removable shoe section, each of the said sections being longitudinally grooved, a fastening member arranged to straddle the respective sections, the said member being adapted to fit the respective grooves to hold the said sections immovable relatively to each other, and means holding the fastening member in place, as and for the purpose set forth.

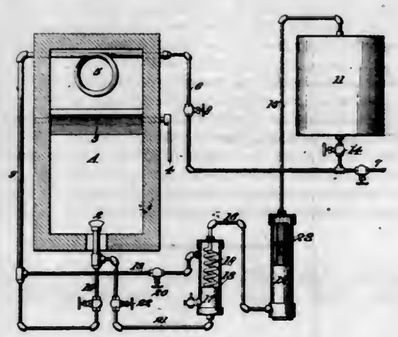
3. In a separable brake shoe, a head portion having a groove extending longitudinally thereof, a shoe portion having a groove extending longitudinally thereof, and a fastening member having flanges fitting the respective grooves for maintaining the said two portions rigid one with the other, as and for the purpose set forth.

4. In a separable brake shoe, a head portion, a shoe portion, the said head portion having a recess formed therein, an enlargement formed upon said shoe portion, said enlargement fitting said recess to lock the said two portions against longitudinal movement, one independent of the other, and a fastening member adapted for engagement with the said head and shoe for locking same against movement in any direction other than longitudinal, as and for the purpose set forth.

5. In a separable brake shoe, a head portion having a longitudinal groove formed therein, a shoe portion having a longitudinal groove formed therein, the said head portion and shoe portion being engageable one with the other, the engaging surface of the said head portion having a recess formed therein, an enlargement upon said shoe portion fitting said recess, the engagement between the said enlargement and the walls of the said recess preventing longitudinal movement of either the head or shoe independent of the other, and a fastening member having flanges adapted for engagement with the respective grooves aforesaid for locking the said head and shoe against movement in any direction other than longitudinal, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,110,745. OIL-BURNING SYSTEM. LLOYD D. COLLAR, Yreka, Cal. Filed Feb. 25, 1914. Serial No. 820,859. (Cl. 158—36.)

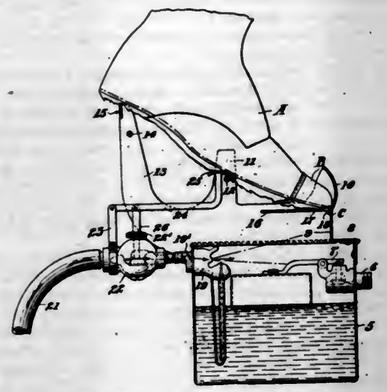


1. In an oil burning system, a furnace having an oil burner therein, an oil tank, an oil heater interposed between the oil tank and burner and being located in spaced relation to the tank and independent of the latter and closely adjacent to the burner, a connection leading from the tank and having a coiled part in the heater and connected to the burner, a steam generating coil in the furnace, common means to supply water under pressure to the oil tank at the base of the latter to raise the oil and to supply water to said steam generating coil, and common means connected to the coil to both supply steam to the burner and to the heater.

2. In an oil burning system, a furnace having an oil burner and a steam generating coil therein, an oil tank, an oil heater interposed between the tank and burner, and connected to each and being located in spaced relation to the tank and independent of the latter, a connection between the steam generating coil and the burner, and a connection between the oil heater and said first named connection to supply steam to the oil heater.

3. In an oil burning system, a furnace having an oil burner and a steam generating coil therein, an oil tank, an oil heater located exteriorly of the tank and being independent of the tank and communicating with the latter and with the burner, a connection between the steam generating coil and the burner, and means to both feed water to the steam generating coil and to feed water under pressure to the oil tank at the base of the latter to raise the oil in the tank to feed the oil to the heater.

1,110,746. MOISTENING-MACHINE. FRANK B. COMINS, Sharon, Mass. Filed June 6, 1912. Serial No. 702,061. (Cl. 12—1.)



1. A moistening machine of the nature described comprising atomizing means, a spray receiving chamber having a receptacle arranged to receive the toe portion of a shoe, and means for deflecting said spray toward the undertoe portion of a partially lasted shoe located in said receptacle.

2. A moistening machine of the nature described comprising at atomizer, means for sustaining a partially lasted shoe adjacent to said atomizer and means for guiding the atomized moisture to the toe portion of said shoe.

3. A moistening machine of the nature described comprising a frame, a deflector mounted on said frame and provided with a tongue, a receptacle extending above said tongue and arranged to receive the toe portion of a partially lasted shoe, and means for directing moisture toward said deflector.

4. A moistening machine of the nature described comprising a water supply, an atomizer coöperating therewith, and a frame mounted adjacent said atomizer and having means adapted to receive the toe portion of a partially lasted shoe, said sustaining means having a slot through which portions of the material of said shoe may extend.

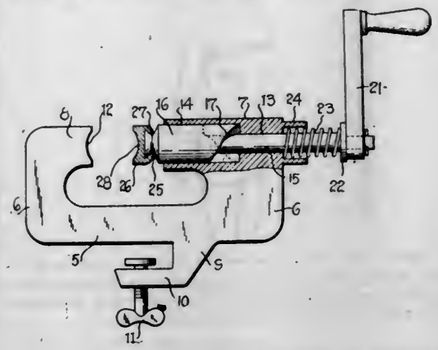
5. A moistening machine of the nature described comprising a water chamber having an opening in its top, a shoe supporting frame mounted above said opening and having a deflector, an atomizer mounted on said water chamber and having a valve and a pressure supply pipe, a pivoted lever adapted to be moved by the weight of a partially lasted shoe, and means operated by the movement of said lever for operating said atomizer valve.

[Claim 6 not printed in the Gazette.]

1,110,747. NUTCRACKER. EDWARD DATO, Fort Worth, Tex. Filed Feb. 18, 1914. Serial No. 819,542. (Cl. 146—3.)

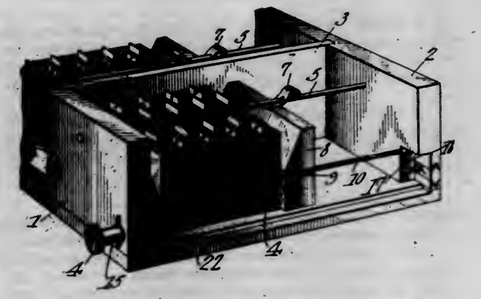
1. A nut cracker comprising a body provided with a head and a tail stock and means for securing the body to a support, the head stock being provided with a longitudinal bore the inner end of which is counterbored and provided with oppositely disposed cam surfaces, a shaft engaging the bore and having a head engaging the counterbore and provided with oppositely disposed cams to coact with those in the counterbore, means for normally holding the head spaced from the tail stock, and means for imparting rotary motion to the shaft.

2. A nut cracker comprising a body embodying a head and a tail stock and means for securing the body to a suitable support, the head stock being provided with a longitudinal bore, the inner end being counterbored, and terminating in oppositely disposed cam surfaces, a shaft extending at one end beyond the outer end of the head stock and having its other end provided with a head projecting



beyond the inner end of the head stock and formed with oppositely disposed cam surfaces to coact with those of the counterbore, a cap rotatably mounted upon the inner end of the head, a spring carried by the outer end of the shaft and bearing against the head stock, and a crank mounted on the outer end the shaft and against which the spring bears to hold the shaft normally in a retracted position.

1,110,748. CARD-INDEX BOX. WILLIAM W. DAY, Washington, D. C. Filed Apr. 15, 1913. Serial No. 761,333. (Cl. 129—16.)



1. A card index box open at one side its entire height above the bottom, and a vertically swinging rod extending longitudinally across the open side of the box.

2. A card index box open at one side, a rod secured longitudinally across the top of the box, and a vertically swinging rod secured longitudinally across the open side of the box.

3. A card index box open at one side, a rod secured longitudinally across the top of the box, a follower operating on said rod, and a vertically swinging rod secured longitudinally along the open side of the box.

4. A card index box open at one side, a rod secured longitudinally across the top of the box, a bow-shaped spring member operating on the rod, a follower secured to the spring member, and a vertically swinging rod secured longitudinally along the open side of the box.

5. A card index box open at one side, a rod secured longitudinally across the top of the box, a vertically swinging rod secured longitudinally across the open side of the box, and means for locking said rod in position.

[Claims 6 to 12 not printed in the Gazette.]

1,110,749. LADY'S UNDERGARMENT. OLIVE JOHNSON, DE BLIEUX, Chicago, Ill. Filed Feb. 9, 1914. Serial No. 817,620. (Cl. 2—41.)

A lady's one piece armless undershirt, comprising a closely fitting body portion, terminating at its upper edge in a continuous knitted elastic band adapted to pass over the breasts and under the armpits of a wearer.

1,110,750. RESILIENT TIRE FOR MOTOR-CARS AND OTHER VEHICLES. HERMAN DIAMANT, county of Middlesex, England. Filed May 7, 1914. Serial No. 836,953. (Cl. 152—1.)

1. A hollow resilient tire provided on each inner side with an annular radially perforated projecting flange, the two flanges being connected by rigid links and bolts said bolts passing through the links and the holes in the flanges.

2. A hollow resilient tire having an annular projecting flange on each inner side, and links fastened on the outer side of one flange and on the inner side of the other flange.

1,110,751. STEP-BY-STEP MECHANISM. MARTIN J. DONER, Chicago, Ill., assignor, by mesne assignments, of one-half to C. F. Dynes, Chicago, Ill. Original application filed Nov. 2, 1908, Serial No. 460,461. Divided and this application filed Jan. 15, 1912, Serial No. 671,264. Renewed Feb. 13, 1914. Serial No. 818,608. (Cl. 74—54.)

1. A step-by-step mechanism comprising a ratchet member provided with two sets of oppositely disposed ratchet teeth and an intervening guide portion, a reciprocatory pawl actuating member operatively mounted adjacent to said ratchet member and having one end arranged to engage the guide portion of the latter, a double ended gravity pawl member having bodily movable connection with said pawl actuating member, the ends of said pawl member moving in unison, stops upon said ratchet member arranged to engage said double ended pawl at the end of a predetermined number of movements of the ratchet member in each direction to effect the shifting of the pawl actuating member on its movable connection whereby said connection is shifted from one side to the other of the center of gravity of the pawl and said pawl thereby adapted to alternately operatively engage with said series of ratchet teeth.

2. A step-by-step mechanism comprising a ratchet block, having ratchet teeth and provided with a longitudinally extending guide way, a pitman traveling in said guide way, means for actuating said pitman, a pawl member adapted to engage the teeth of said ratchet member, and means carried by said pawl member for yieldably holding the latter in a given position during a predetermined movement in the travel of said pitman.

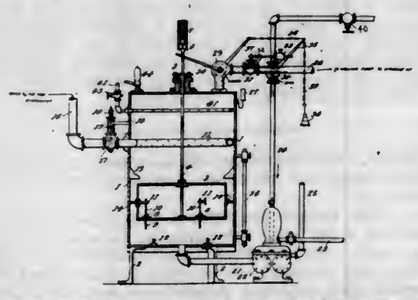
3. A step-by-step mechanism comprising a ratchet block, having two series of oppositely disposed ratchet teeth and provided with a longitudinal extending guide-way, a pitman having a down-turned end engaging said guide-way, a pawl member mounted on said pitman and having oppositely disposed pawls for engaging said teeth, a spring member for holding said double ended pawl in a given position during a predetermined travel of the pitman, and means for reversing the position of said pawl member against the action of said spring.

4. A step-by-step mechanism comprising a ratchet block having two oppositely disposed sets of ratchet teeth, a pitman member and means for driving same, a gravity pawl structure having teeth at its ends for coöperating with the respective ratchet teeth sets, said gravity pawl structure having longitudinally shiftable pivot connection with said pitman to either side of its center of gravity whereby the heavier end of said pawl will coöperate with the corresponding set of ratchet teeth to shift said ratchet member, and a stop at each end of said ratchet member for effecting shifting of said pivoted connection at the end of a predetermined number of shiftings of said ratchet member by said pawl structure.

5. A step-by-step mechanism comprising a ratchet block having two oppositely disposed sets of ratchet teeth, a pitman member and means for driving same, a gravity pawl structure having teeth at its ends for coöperating with the respective ratchet teeth sets, said gravity pawl structure having longitudinally shiftable pivot connection with said pitman to either side of its center of gravity whereby the heavier end of said pawl will coöperate with the corresponding set of ratchet teeth to shift said ratchet member, a stop at each end of said ratchet member for effecting shifting of said pivoted connection at the end of a predetermined number of shiftings of said ratchet member by said pawl structure, and means for yieldingly locking the pivot connection after shifting thereof.

[Claim 6 not printed in the Gazette.]

1,110,752. EVAPORATING-ACCELERATOR. EFFINGHAM C. DUN, Vista Alegre, Santiago, Cuba. Filed May 3, 1911. Serial No. 624,731. (Cl. 103—86.)



1. A receiver having a fluid inlet and a fluid outlet, and a float within said receiver having a valve controlled communication between the interior of the receiver and the interior of the float and a valve controlled communication between the interior of the float and the exterior of the receiver.

2. In a device of the character described, the combination of a receiver provided with an inlet, a float arranged within the receiver, a tubular stem carried by the float and establishing communication between the interior thereof and the exterior of the receiver, a valve controlling the communication between the interior of the float and the interior of the receiver, and means for withdrawing air from the receiver.

3. In a device of the character described, the combination of a receiver provided with an inlet, a float arranged within the receiver, a tubular stem establishing communication between the interior of the float and the exterior of the receiver, the said float having an opening in the bottom thereof, a valve controlling the opening and provided with means whereby it is moved from its seat when the float is depressed, means for withdrawing air from the receiver, and means for withdrawing water from the receiver.

4. In a device of the character described, the combination of a receiver provided with an inlet, a float arranged within the receiver and having an opening in the bottom thereof, a tubular stem carried by the float and establishing communication with the interior of the same and the exterior of the receiver, a check valve in the tubular stem permitting the entrance of air but preventing the outflow thereof, a valve controlling the opening in the bottom of the float, the said valve being provided with a stem by means of which it is lifted from its seat when the float is depressed, means for withdrawing air from the receiver, and means for withdrawing water from the receiver.

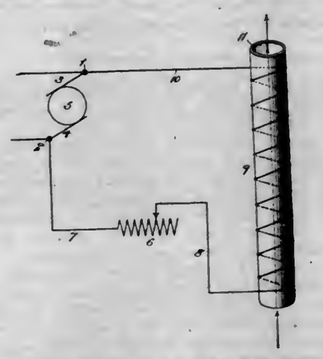
5. In a device of the character described, the combination of a receiver provided with an inlet, a float arranged within the receiver and provided with a valve controlled opening which is automatically opened at a predetermined position of the float, a tubular stem carried by the float and establishing communication between the interior thereof and the exterior of the receiver, means for withdrawing air from the receiver, valve controlled means for withdrawing water from the receiver, and an operative connection between the tubular stem of the float and the means for withdrawing air and water.

[Claims 6 to 9 not printed in the Gazette.]

1,110,753. HOSE-SUPPORT. MARY B. DUNAGAN. Portland, Oreg. Filed Jan. 30, 1913. Serial No 745,279. (Cl. 24—246.)

A device of the character described including a loop having spaced side portions and formed with a restricted neck portion, a button arranged for engagement by said neck portion, a relatively wide locking tongue pivotally connected to the loop opposite the neck portion, and a longitudinally extending tooth formed on the inner face of the tongue adjacent the free extremity thereof, said tooth being provided with oppositely inclined faces and when the tongue is in locking position being disposed between the side portions of the loop in the path of the button and held by said side portions from lateral movement, said oppositely inclined faces being adapted to ride over the side portions of the loop when the tongue is manually turned and providing a relatively sharp edge at the inner extremity of the tooth adapted to bite into the adjacent portion of a fabric engaged by the button.

1,110,754. METHOD OF PRODUCING PREDIGESTED FOOD. CHESTER B. DURYEA, New York, N. Y. Filed Feb. 17, 1910. Serial No. 544,501. (Cl. 99—11.)



1. The method of producing a predigested edible product comprising first, providing a modified starch and second subjecting it to the action of an electric current for the purpose of further conversion.

2. The method of producing a predigested edible product comprising first, providing a purified modified starch and second, subjecting it to the action of an electric current for the purpose of further conversion.

3. The method of producing a predigested edible product comprising first, providing a purified modified starch, second, cooking it, and third, subjecting it to the action of an electric current for the purpose of further conversion.

4. The method of producing a predigested edible product comprising first, providing a modified starch, second, cooking it, third, subjecting it to the action of an electric current for the purpose of further conversion, and fourth, refining the product.

5. The method of producing a predigested edible product comprising first, providing a purified modified starch, second, cooking it, third, subjecting it to the action of an electric current for the purpose of further conversion, and fourth, refining and concentrating the product.

[Claims 6 to 9 not printed in the Gazette.]

1,110,755. PROCESS FOR PRODUCING SYRUPS AND SUGARS. CHESTER B. DURYEA, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,672. (Cl. 127—10.)

1. The process of producing syrups, sugars and the like, comprising first, providing crude green starch, second, cooking it, and third, saccharifying the cooked starch by association with an extract of unmalted grain.

2. The process of producing syrups, sugars and the like, comprising first, providing crude green starch, second, modifying it, third, cooking the modified starch, and fourth, saccharifying the cooked modified starch by association with an extract of unmalted grain.

3. The process of producing syrups, sugars and the like, comprising first, providing crude green starch, second, modifying it, third, purifying the modified starch, fourth, cooking the purified modified starch, and fifth, saccharifying the cooked purified modified starch by association with an extract of unmalted grain.

4. The process of producing syrups, sugars and the like, comprising first, providing crude green starch, second, modifying it, third, purifying the modified starch, fourth, cooking with acid the purified modified starch, fifth, neutralizing the cooked, purified, modified starch, and sixth, saccharifying the neutralized, cooked, purified, modified starch by association with an extract of unmalted grain.

5. The process of producing syrups, sugars and the like, comprising first, providing crude green starch, second, modifying it, third, purifying the modified starch, fourth, cooking with acid the purified modified starch, fifth, neutralizing the cooked, purified, modified starch, sixth, sac-

charifying the neutralized, cooked, purified, modified starch by association with an extract of unmalted grain, and seventh, refining and concentrating the saccharified starch paste.

[Claims 6 to 8 not printed in the Gazette.]

1,110,756. PROCESS OF PRODUCING MALTOSE. CHESTER B. DURFEA, New York, N. Y. Filed Mar. 27, 1913. Serial No. 757,272. (Cl. 127—10.)

1. A process of making maltose comprising providing thick boiling starch, modifying said starch, purifying the modified starch, cooking the purified modified starch paste under acidic conditions, neutralizing the cooked purified modified starch paste, saccharifying the neutralized cooked purified modified starch paste by enzymic action, and finally refining and concentrating the product.

2. A process of making moltose comprising providing thick boiling starch, modifying said starch and its associated impurities, purifying the modified starch, cooking the purified modified starch paste under acidic conditions, neutralizing the cooked purified modified starch paste, saccharifying the neutralized cooked purified modified starch paste by enzymic action, and finally refining and concentrating the product.

3. A process of making maltose comprising providing thick boiling starch, modifying said starch, re-running the modified starch, cooking the purified modified starch paste under acidic conditions, neutralizing the cooked purified modified starch paste, saccharifying the neutralized cooked purified modified starch paste by enzymic action, and finally refining and concentrating the product.

4. A process of making maltose comprising providing thick boiling starch, modifying said starch by the "in suspension" process, re-running the modified starch, cooking the purified modified starch paste under acidic conditions, neutralizing the cooked purified modified starch paste, saccharifying the neutralized cooked purified modified starch paste by enzymic action, and finally refining and concentrating the product.

5. A process of making moltose comprising providing thick boiling starch, modifying said starch, purifying the modified starch, cooking the purified modified starch paste at a concentration of about 14°–18° Bé. and under acidic conditions and neutralizing the cooked purified modified starch paste, saccharifying the neutralized cooked purified modified starch paste by enzymic action, and finally refining and concentrating the product.

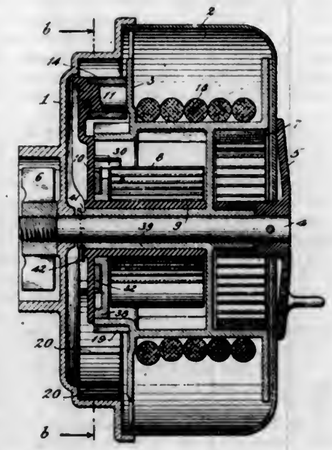
[Claims 6 to 25 not printed in the Gazette.]

1,110,757. TROLLEY-RETRIEVER. CHARLES I. EARLL, New York, N. Y. Filed Sept. 13, 1907. Serial No. 392,783. (Cl. 191—93.)

1. In a trolley retriever the combination with two relatively movable members one constituting a drum and the other a normally stationary member, an intermediate member and a power spring secured to said intermediate member and to one of the other of said members, of a ratchet and pawl connection between said intermediate member and the other of said members to which said power spring is attached, and means actuated by turning the drum in a direction to wind up the power spring to bring said ratchet and pawl connection into engagement.

2. In a trolley retriever, the combination with two relatively movable members consisting respectively of a drum adapted to receive the trolley rope and a normally stationary member, of an intermediate member, a power spring connecting said intermediate member with one and a releasable lock connecting it with the other of said relatively movable members during the winding of the power spring, of a stop mechanism adapted to limit the amount to which said power spring may be wound up, and means mounted on the member to which the outer end of said power spring is connected engaging said power spring intermediate its ends to actuate the said stop mechanism.

3. In a trolley retriever the combination with two relatively movable members consisting respectively of a drum adapted to receive the trolley rope and a normally stationary member, an intermediate member, a power spring connecting said intermediate member with one and a releasable lock connecting it with the other of said relatively movable members during the winding of said power spring, of a lock releasing mechanism adapted to release said releasable lock, and means mounted on the member to which the outer end of said power spring is connected engaging said power spring intermediate its ends to operate said lock releasing mechanism.



4. In a trolley retriever the combination with two relatively rotatable members and a retrieving spring connecting said members, of means adapted to press said relatively rotatable members together with a predetermined pressure to produce a frictional resistance to their relative rotation.

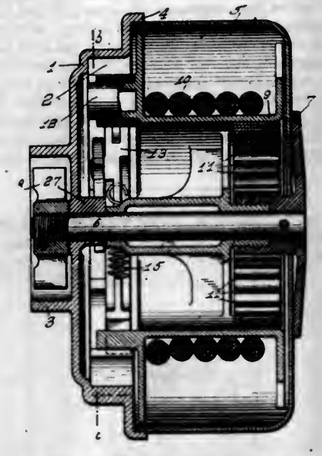
5. In a trolley retriever the combination with two relatively rotatable members consisting respectively of a drum adapted to receive the trolley rope and a normally stationary member, and a rotatable intermediate member, of a power spring connecting said intermediate member with one of said relatively rotatable members, a locking mechanism adapted in its normal position to lock said intermediate member to the one of said relatively rotatable members to which said power spring is connected to retain the spring from unwinding, and to lock said intermediate member to the other relatively rotatable member to put the power spring into retrieving action, the said locking mechanism including means engaged by the drum to restore said locking mechanism to its normal position when the drum is first turned in the direction to unwind rope therefrom after said retrieving action.

[Claims 6 to 25 not printed in the Gazette.]

1,110,758. TROLLEY-CATCHER. CHARLES I. EARLL, New York, N. Y. Filed Mar. 20, 1909. Serial No. 484,654. (Cl. 191—95.)

1. In a trolley catcher the combination with a case, of a drum adapted to receive the trolley rope rotatably mounted in said case, a slack-absorbing spring adapted to rotate said drum to wind the trolley rope thereon, a lock pivotally mounted on the drum adapted to engage the case, and a centrifugal pawl pivotally mounted on the lock adapted to engage the case and to thereby cause said lock to engage the case.

2. In a trolley catcher, the combination with a case, of a drum rotatably mounted therein, a slack-absorbing spring adapted to rotate said drum for winding the trolley rope thereon, a lock mounted on said drum adapted to engage said case for locking the drum when rotated in the opposite direction, and means adapted to engage the case for moving said lock into locking position when the drum is quickly rotated in said opposite direction, said means maintaining engagement with the case until the drum is rotated a predetermined amount by said spring.



3. In a trolley catcher the combination with a case of a drum rotatably mounted therein, a spring adapted to rotate said drum for winding the trolley rope thereon, a lock mounted on said drum and adapted to engage said case for locking the drum against rotation in the opposite direction, centrifugal means carried by the drum and adapted by engagement with said case to move said lock to operative position, and means operating to prevent a return movement of the centrifugal means until after the lock has been returned to normal position.

4. In a trolley catcher the combination with a drum, of a centrifugal pawl adapted to rotate with said drum and to move to an engaging position when the drum is quickly rotated, a spring connected to said pawl and means for varying the stress in said spring at the engaging position of said pawl at different points in its revolution to compensate for the influence of gravity.

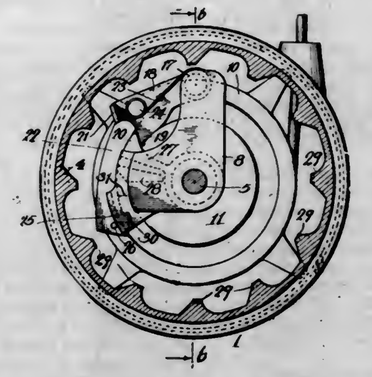
5. In a trolley catcher the combination with a case, of a drum rotatably mounted in said case, a slack-absorbing spring adapted to rotate said drum to wind up the trolley rope thereon, means connected with the drum adapted to engage the case when the drum is quickly rotated in the rope-unwinding direction and to check the rotation of the drum after the drum has rotated a predetermined amount in said direction following the engagement of said means with the case, and to remain in engagement with the case until the drum has turned a like amount in the rope-winding direction, said means comprising a centrifugal pawl and a yielding connection between said centrifugal pawl and the drum.

[Claims 6 to 16 not printed in the Gazette.]

1,110,759. TROLLEY-RETRIEVER. CHARLES I. EARLL, New York, N. Y. Filed June 17, 1909. Serial No. 502,744. (Cl. 191—93.)

1. In a trolley retriever the combination with a drum, of a tension spring adapted to act upon said drum to cause it to taken in the slack trolley rope, a power spring adapted to rotate the drum and normally wound up to a degree more than sufficient to overcome the upward pull of the trolley pole, means for automatically releasing said power spring on a sudden pull of the trolley rope whereby said spring is put into action and for limiting the amount of its action, including means for retaining the drum in the position to which it is carried by momentum after the power spring has ceased to act.

2. In a trolley retriever the combination with three relatively movable members, one constituting a drum, another a stationary member and the third an intermediate, of a power spring having one end secured to said intermediate and the other end to one of the other of said members, a locking means between said intermediate and said member to which said power spring is secured adapted to retain said power spring in its normally wound up condition and a retaining means between said intermediate and said other member to retain said power spring after the release of said locking means and the unwinding of said power spring a predetermined amount, said locking means including means operating between said intermediate and the member not secured to said power spring permitting said drum to rotate in a direction to wind up trolley rope and opposing its rotation in a direction to unwind trolley rope when said retaining means is in action.



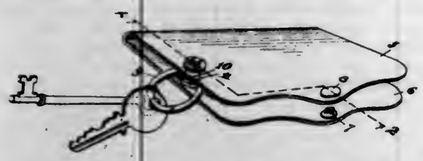
3. In a trolley retriever the combination with a drum adapted to receive the trolley rope, a power spring and mechanism by which said power spring is adapted to be automatically thrown into action on a sudden pull of the trolley rope to rotate the drum to wind up the trolley rope, of means for limiting the action of the power spring and causing it to cease to act before it has completely relaxed, and means governed by said mechanism for retaining the drum in the position to which it is carried by momentum after the power spring has ceased to act.

4. In a trolley retriever the combination with three relatively movable members, one constituting a drum for the trolley rope, another a normally stationary member and the third an intermediate member, said drum and said intermediate being concentrically and rotatably mounted, of a power spring connecting said intermediate member with one of the other of said members, and a stop acting between said intermediate and the member connected with it by the power spring, adapted to limit their relative rotation in both directions and means acting between said intermediate and the said member not connected to said power spring, permitting a forward and preventing a backward relative movement, whereby the drum will be caused to turn by momentum and wind up and retain a certain amount of the trolley rope after the power spring has ceased to act upon it.

5. In a trolley retriever the combination with three relatively movable members, one constituting a drum for the trolley rope, another a normally stationary member and the third an intermediate member, said drum and said intermediate being concentrically and rotatably mounted, of a power spring connecting said intermediate member with one of the other of said members, and a stop acting between said intermediate and the member connected with it by the power spring, adapted to limit the unwinding of said power spring and a ratchet and pawl connection between said intermediate and the said member not connected with the power spring permitting their relative rotation in one direction and preventing it in the opposite direction, when the power spring has reached the limit of its unwinding.

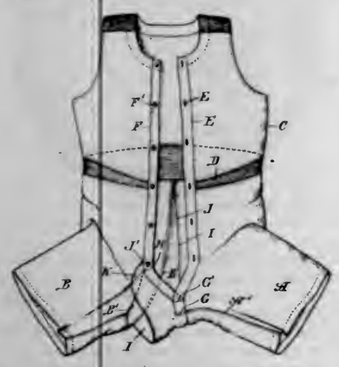
[Claims 6 to 13 not printed in the Gazette.]

1,110,760. KEY-POUCH. GEORGE B. EASTON, Los Angeles, Cal. Filed Dec. 22, 1913. Serial No. 808,103. (Cl. 150—40.)



In a key purse, the combination with the leaves of the purse, of a detachable key-ring retaining post, interiorly threaded end projections on said post passing through the purse leaves, and removable fastening plates engageable with the projections on the binding post.

1,110,761. UNDERGARMENT. MILTON S. ERLANGER, New York, N. Y., assignor to The B. V. D. Company, a Corporation of Delaware. Filed Feb. 6, 1914. Serial No. 816,885. (Cl. 2—144.)



1. An undergarment having a permanently closed crotch and a front opening extending downwardly from the neck opening to a point adjacent to the crotch, and a posterior opening extending from a point near the waist line at the rear to a point above the crotch in front and above the lower end of said front opening.

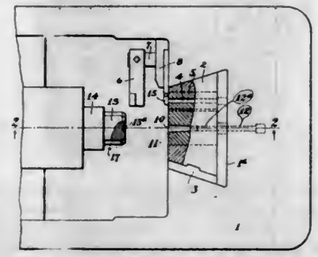
2. A union suit having a front opening from the neck to a point adjacent to the crotch, the fabric forming the edges of said opening being permanently united in the crotch and a second opening extending from the waist line at the rear to a point at the front of the garment nearer the neck than the crotch and a flap adapted to cover said second opening.

3. An undergarment having a permanently closed crotch and a front opening extending adjacent thereto, and a posterior opening extending from a point near the waist line at the rear to a point above the crotch at the front, so that the two openings extend one beyond the other at the front of the garment, a flap for covering said posterior opening having its one end secured in said garment adjacent to the waist line at the rear and its other end located adjacent to the terminating end of said posterior opening at the front of the garment and a row of stitches inclined downwardly relatively to said front opening for securing said other end of said flap in the garment.

4. An undergarment having a permanently closed crotch, a front opening extending downwardly from the neck opening to a point below the waist line, a posterior opening extending from a point near the waist line at the rear to a point above the crotch at the front of the garment and a flap for covering said posterior opening having its opposite ends and one edge secured in the garment and its other edge free, said free edge of said flap extending to a point at the front of the garment above the crotch and out of longitudinal alinement with said front opening.

5. An undergarment having permanently closed crotch and a front opening extending downwardly from the neck opening to a point below the waist line, a posterior opening extending from a point near the waist line at the rear to a point above the crotch at the front of the garment, the two openings being out of longitudinal alinement at the front of the garment, a flap for covering said posterior opening having its one end secured in said garment adjacent to the waist line at the rear and its other end located adjacent to the terminating end of said posterior opening at the front of the garment and a row of stitches inclined downwardly relatively to said front opening for securing said other end of said flap in said garment at the front thereof.

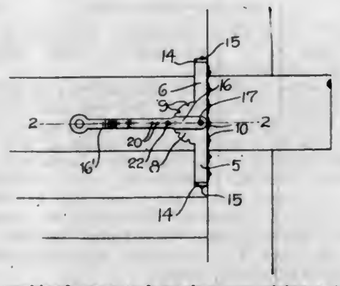
1,110,762. METHOD OF MAKING TAPER PINS. THOMAS FERRY, Cleveland, Ohio. Filed July 21, 1911. Serial No. 639,757. (Cl. 29—148.)



1. The method of making taper pins, consisting in (1) simultaneously cutting and moving a blank of suitable length, and holding the same in front of a constricted blank receiving opening, (2) driving the same into said opening and forming a reduced projecting portion at the mouth of said opening, (3) forming an upset fin portion from said reduced head, (4) ejecting the same from said constricted opening, (5) rounding the smaller end thereof, and (6) removing said upset fin portion and rounding.

2. The method of making taper pins, consisting in, (1) simultaneously cutting and moving a blank of suitable length from a wire and holding the same in front of a blank receiving and taper pin forming opening, (2) driving the same into said opening and forming a reduced projecting head at the larger end thereof, (3) upsetting said reduced head into a fin portion, (4) ejecting said blank, (5) conveying said blank through suitable blank guide and holding mechanism and rounding the smaller end thereof, (6) conveying and holding said blank through suitable guide and holding mechanism, and (7) removing said fin portion in suitable shaving and rounding mechanism.

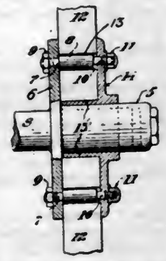
1,110,763. ADJUSTABLE GAGE AND MARKER. EMANUEL FITZ, Astoria, Ill. Filed Sept. 22, 1913. Serial No. 791,192. (Cl. 33—33.)



1. A combined gage and marker comprising a bar consisting of flanges extending at right angles to one another, one of said flanges having a series of cutter disks pivotally mounted thereon, a pair of gage arms mounted on said bar, and a handle pivotally and adjustably mounted on the other of said flanges and extending at right angles to the flange having the cutter disks thereon.

2. A combined gage and marker comprising a bar consisting of two flanges extending at right angles to one another, a series of cutter disks pivotally mounted on one of the flanges, a handle mounted on the other flange and extending at an angle to the flange having the cutter disks thereon, and a gage arm carried on each end of the flanged bar, said handle having an offset lower surface extending in a plane parallel with the major portion of the handle and coinciding with the cutter edges of the disks.

1,110,764. DEMOUNTABLE WHEEL. WILLIAM H. J. FITZGERALD, Braintree, Mass., assignor to E-Z Rim Company, a Corporation of Massachusetts. Filed Apr. 22, 1914. Serial No. 833,767. (Cl. 21—31.)



A demountable wheel comprising a hub having a flange, a series of shouldered bolts fixed in said flange and having reduced outer members screw threaded at their ends and rectangular between the screw threads and the enlargements, in combination with a wheel having a series of spokes furnished with perforations adapted to be received on said studs, a collar to receive the ends of said spokes furnished with a flange having rectangular perforations to receive the rectangular portions of said stud members, and a series of nuts adapted to be screwed onto the said stud members.

1,110,765. COATING PROCESS. JEROME W. FRANK, New York, N. Y. Filed Feb. 27, 1912. Serial No. 680,242. (Cl. 91—68.)

1. The process of treating surfaces comprising calcareous or alkaline materials which comprises coating the same with a primer coating of a composition of organic coating materials free from saponifiable substances.

2. The process of treating surfaces comprising calcareous or alkaline materials which comprises coating the same with a primer coating of a composition of organic coating materials free from saponifiable substances and thereafter applying another coating.

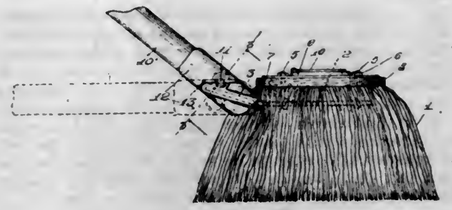
3. The process of treating surfaces comprising calcareous or alkaline materials which comprises freeing an organic material of saponifiable substances, converting the residue into a fluent composition with a suitable solvent and applying the composition to such a surface as a primer coat.

4. The process of treating surfaces comprising calcareous or alkaline materials which comprises freeing an organic material of saponifiable substances, converting the residue into a fluent composition with a suitable solvent and applying the composition to such a surface as a primer coat and thereafter applying another coating of coating material.

5. The process of treating surfaces comprising calcareous or alkaline materials which comprises coating the same with a primer coating of an organic material free from saponifiable substances and thereafter applying another coating of a different coating material.

[Claims 6 to 9 not printed in the Gazette.]

1,110,766. MOP AND BRUSH. FRANK H. FRENCH, Preston, Iowa. Filed Apr. 3, 1913. Serial No. 758,709. (Cl. 15—24.)



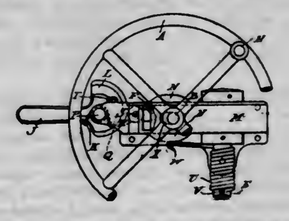
1. In a brush, a brush member; a pair of prongs mounted thereon; a handle; a pair of inwardly recessed clamp pieces adapted laterally to engage opposite sides of the handle, and having opposed recesses angularly arranged with respect to the handle in their inner faces to receive the said prongs and engage the same with the handle, and means for forcing the said clamp pieces toward the said handle.

2. In a brush, a brush member; a pair of prongs mounted thereon; a handle; a pair of inwardly recessed clamp pieces adapted laterally to engage opposite sides of the handle, and having opposed angular recesses in their inner faces to receive the said prongs and engage the same with the handle, and means for forcing the said clamp pieces toward the said handle; the said prongs and recesses so positioned relative to the cleaning member and the handle respectively, as to change the angle between the handle and the cleaning member upon an interchanging of the prongs adjacent to the respective clamp pieces.

3. In a brush or mop, a ring, the ends thereof extended outwardly to form parallel arms angularly disposed relative to the plane of the ring; a brush member carried by the ring; a handle, a pair of inwardly concave clamps secured to opposite sides thereof, each of said clamps provided on its inner surface with a recess, the said arms positioned in the recesses between the respective clamps and the said handle; the said recesses being angularly disposed with respect to the axis of the handle.

4. In a brush or mop, a ring of spring metal, the ends thereof extending outwardly to form parallel arms angularly disposed relative to the plane of the ring; a brush member carried by the ring; a handle, a pair of inwardly concave clamps secured to opposite sides thereof, each of said clamps provided on its inner surface with a recess, the said arms positioned in the recesses between the respective clamps and the said handle; the said recesses being angularly disposed with respect to the axis of the handle.

1,110,767. BRAKE. HENRY FRESH, Cumberland, Md. Filed July 14, 1913. Serial No. 778,907. (Cl. 188—54.)



1. The combination, a brake staff, a gear wheel thereon, a worm, a movable bearing for the worm, an operating cam therefor, and a roller on which the cam acts to move the worm bearing and worm.

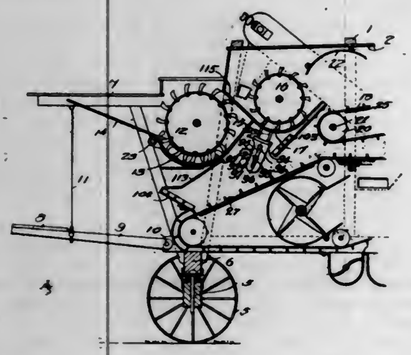
2. In combination, a brake staff, a gear wheel thereon, a worm, a movable bearing for the worm, a pivoted cam, and a coiled spring on the cam shaft tending to hold the cam in normal position or to return it to such position.

3. A brake-worm bearing comprising side members with shaft openings, an extension with a cam receiving slot, an anti-friction roller, there being also bearings to hold the shaft of the roller so that the roller will project into said slot.

4. In combination, a brake staff, a gear wheel thereon, an operating worm therefor, a bearing for the worm comprising a member having a slot narrow at its outer end and wider at its inner end, forming intermediate lugs or shoulders to engage the back of the rim of the operating cam to draw the worm from the wheel for disengagement.

5. In combination, a brake staff, a gear wheel, a worm, an operating cam, a torsion spring operating on the cam to automatically reëngage the worm and gear and to continuously force the cam against the opposing member thereby preventing lost motion and taking up wear.

1,110,768. THRESHING-MACHINE. SAMUEL G. GEORGE, Conrad, Mont. Original application filed Nov. 4, 1912, Serial No. 729,198. Divided and this application filed Mar. 26, 1913. Serial No. 756,996. (Cl. 130—27.)



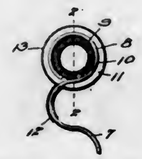
1. In a threshing machine provided with separating mechanism and with an elevator for lifting the unthreshed grain from the separating mechanism, a pair of cylinders arranged with their axes parallel and one in rear of the other, the rear cylinder being of greater length than the first cylinder, and the first cylinder delivering directly to the second cylinder, and a concave coöperating with each cylinder, the elevator delivering to the second cylinder, the first cylinder being of greater diameter than the second cylinder.

2. In a threshing machine provided with separating mechanism and with an elevator for lifting the unthreshed grain from the separating mechanism, a pair of cylinders arranged with their axes parallel and one in rear of the other, the rear cylinder being of greater length than the first cylinder, and the first cylinder delivering directly to the second cylinder, and concave coöperating with each cylinder, the elevator delivering to the second cylinder.

3. In a threshing machine, a cylinder, a concave cooperating therewith, a second cylinder arranged behind the first cylinder and at a higher level, said second cylinder being of greater length than the first cylinder, a concave coöperating with the second cylinder, said first-named concave having alternately arranged longitudinally extending series of teeth and gratings, the second concave having longitudinally extending alternate series of teeth and gratings, said teeth being adjustable toward and from the cylinder.

4. In a threshing machine, a plurality of cylinders arranged one behind the other and with their axes parallel, the front cylinder delivering directly to the rear cylinder, said rear cylinder being of greater length than the first cylinder.

1,110,769. COLLAR-SUPPORTER. ALEXANDER M. GREAN, New York, N. Y., assignor to Grean Shoulder Form & Pad Company, New York, N. Y., a Corporation of New York. Filed June 11, 1912. Serial No. 703,073. (Cl. 2—91.)



1. A collar supporter, comprising a serpentine body of resilient wire having a curved terminal and a continuous ring of rubber-like material having the curved terminal of the body embedded therein and completely inclosing the end of the wire, said ring constituting a terminal securing eye for the supporter, a yielding terminal cushion, and a covering for the end of the wire that is impervious to moisture.

2. A collar supporter, comprising a serpentine body of resilient wire having a curved terminal and a continuous ring of rubber-like material having the curved terminal of the body embedded therein and completely inclosing the end of the wire, said ring constituting a terminal securing eye for the supporter, a yielding terminal cushion and a covering for the end of the wire that is impervious to moisture, and a fabric covering surrounding the ring and inclosing the material thereof.

3. A collar supporter, comprising a sinuous severed length of resilient wire, a covering for said wire, and a closed ring-shaped terminal for each end of said supporter, comprising an arc-shaped bend at the severed end of said wire, and a yielding eyelet completely inclosing said arc-shaped bend.

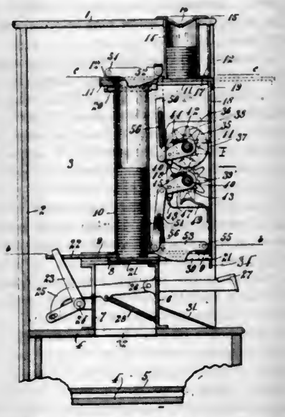
4. A collar supporter, comprising a sinuous wire having a curved terminal, a yielding eyelet having a substantially tubular wall that incloses the curved terminal of the wire, and a continuous covering inclosing the wire and eyelet.

1,110,770. CHUCK. JOHN H. GREAVES and CHARLES G. LUCAS, Newport News, Va. Filed Apr. 16, 1913. Serial No. 761,592. (Cl. 29—119.)

1. In a chuck, the combination with a hollow drill spindle, of a block arranged to slide therein, and coöperating means on said block and spindle for locking the block in its adjusted position, said means comprising a row of openings in one wall only of the spindle, and means carried by said block for detachable engagement with the walls of said openings.

2. In a chuck, the combination with a hollow drill spindle, of a block arranged to slide therein, and coöperating means on said block and spindle for holding the block in its adjusted position, said means comprising a row of openings in the wall of the spindle, and a spring-pressed pin mounted in said block.

1,110,771. COIN-RECEPTACLE. JAMES B. GRIMES, Dayton, Ohio, assignor to The Ingle System Company, Dayton, Ohio. Filed Dec. 29, 1913. Serial No. 809,195. (Cl. 133—5.)



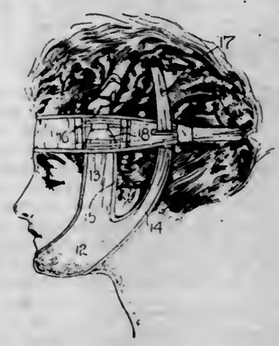
1. In a device of the type specified, the combination of a tubular receptacle adapted to receive coin, an injector mounted adjacent to the mouth of said tubular member and adapted to deposit coin into said tubular member, a cam pivoted at the mouth of said tubular receptacle and actuated by each coin entering said tubular receptacle, an ejector mounted adjacent to the discharge end of said tubular receptacle and adapted to eject coin from the discharge end, a cam pivoted in the path of said ejected coin and actuated thereby, a counter movable in opposite direction simultaneously with the injection and ejection of coin to and from said tubular member, and connections between said cams and said counter whereby the coins are added to and subtracted from said counter.

2. In a device of the type specified, the combination of a tubular receptacle, an injector adapted to deposit coins into said receptacle, a cam pivoted in the path of said coins, a counter adapted to record the value of said coins, counter-actuating means connected to said cam, an ejector adapted to discharge the coins from said receptacle, a cam pivoted in the path of the coins moved by said ejector, and counter-actuating means connected to said last named cam and adapted to impart backward movement to said counter to subtract from the value of the coins previously recorded on said counter by the injected coin.

3. In a device of the type specified, a coin tube, an ejector adapted to deposit coins in said tube, a cam adapted to be actuated by each injected coin, counter-actuating means connected to said cam, an ejector adapted to discharge coins from said tube, a second cam adapted to be actuated by each ejected coin, a second-counter-actuating means connected to said last named cam, and a counter movable in opposite directions connected to both counter-actuating means.

4. In a device of the character specified, the combination of a series of tubular members adapted to receive and deliver coins, a series of lever cams mounted at the tops of said tubes, a series of slidable injectors adapted to deposit coins into said tubes and to cause said coins to actuate said cam levers, a series of cam levers adjacent to the bottom of said tubes, a series of slidable ejectors adapted to deliver coins from said tubes and to cause said delivered coins to actuate said last named cam levers, a counter adapted to record the value of the coins delivered to and discharged from said tubes, and connections between said counter and both series of cam levers.

1,110,772. APPLIANCE FOR REMOVING FACIAL DEFECTS. MARTHA J. GUNDERMAN, Boulder, Colo. Filed Jan. 31, 1914. Serial No. 815,808. (Cl. 128—3.)



1. A device of the class described including an elongated body bifurcated at each end to form spaced tabs, and securing straps fastened to the outer ends of said tabs, a retaining strap including a body having longitudinal spaced slots at each end thereof, through which the securing straps on one of the aforesaid tabs extend and the ends of said body having a second set of longitudinal slots formed at the ends of said retaining strap through which the securing straps upon the other tabs extend, as and for the purpose set forth.

2. A device of the class described including an elongated body bifurcated at each end to form spaced tabs, and securing straps fastened to the outer ends of said tabs, a retaining strap including a body having its ends tapering to form end tabs, straps secured to the outer ends of said tabs whereby the strap may be applied to the head of the wearer, said retaining strap having spaced longitudinal straps at each end of the body, through which one set of securing straps on the first body extend, and the tabs at the ends of said retaining straps having a second set of longitudinal slots through which the securing straps on the second set of tabs of the first body extend, as and for the purpose set forth.

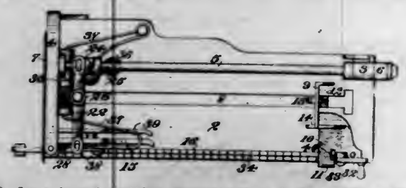
3. A device of the class described including an elongated body bifurcated at each end to form spaced tabs, and securing straps fastened to the outer ends of said tabs, a retaining strap including an elongated body having elongated slots formed in each end thereof and adapted to receive therethrough the securing straps upon the outer ends of the aforesaid tabs, as and for the purpose set forth.

4. A device of the class described including an elongated body bifurcated at each end to form spaced tabs, securing straps fastened to the outer ends of said tabs, a retaining strap including a body having longitudinal slots in each end thereof and adapted to receive therethrough the straps upon the ends of said tabs, as and for the purpose set forth.

1,110,773. BREAD-CUTTER. JULES HABRIE, San Francisco, Cal. Filed Nov. 4, 1912. Serial No. 729,207. (Cl. 146—12.)

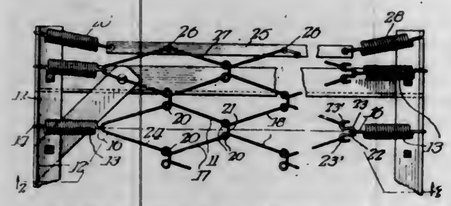
1. In a bread cutting apparatus, a bed having a longitudinal slot and a channel parallel to the slot, a pusher having a part which projects down through the slot and having lugs which engage the under face of the bed on opposite sides of the slot, a toothed bar in the channel, an arm extending transversely from the pusher and overlying the bar and connected thereto and having its free or outer end extended downwardly and inwardly to engage the outer side edge and under face respectively of the

bed, cutting means, and means operated by the movement of the cutting means to advance the bar by engagement with the teeth thereof.



2. In a bread cutting apparatus, a bed, a side wall extending upwardly from the bed to engage the side of a loaf of bread, a detachable upwardly extending wall arranged in spaced relation to the inner face of the first named wall to engage the side of a loaf of bread, means to rigidly connect the second named wall to the first named wall, a rotary cutter, and means to mount the cutter whereby the latter will completely sever a slice from the loaf when the latter is engaged with the second named wall and will but partially sever a slice from the loaf when the latter is engaged with the first named side wall.

1,110,774. BED-SPRING FABRIC. HENRY F. HAGER, Chicago, Ill., assignor of one-half to Joseph H. Kosnick, Chicago, Ill. Filed Jan. 26, 1914. Serial No. 814,288. (Cl. 245—5.)



1. A bed-spring fabric of the diamond or half diamond link type, comprising a plurality of interengaged units each comprising a pair of diverging legs connected at their adjacent ends to a pair of outwardly extending and coiled loops connected by a bar, the other ends of said legs being engaged in the loops of two similar units.

2. A bed-spring fabric of the diamond or half diamond link type, comprising a plurality of interengaged units each comprising a pair of diverging legs, the adjacent ends of said legs being connected to a pair of outwardly extending coiled loops connected together by a tension bar, and the other ends of said legs being engaged in adjacent loops of two similar units.

3. A bed-spring fabric of the diamond or half diamond link type, comprising a plurality of interengaged units, one of said units comprising a pair of diverging legs connected at their adjacent ends to a pair of coiled loops, and a straight tension bar connecting said loops and disposed at right angles to the axis of said unit, the other ends of said legs being engaged with adjacent loops of two similar units.

4. A bed-spring fabric of the diamond or half diamond link type, comprising a plurality of interengaged units, one of said units being provided with diverging legs coiled at their adjacent ends into loops, and a tension bar connecting said loops and disposed beneath said legs, the other ends of said legs being engaged with adjacent loops of two similar units.

5. A bed-spring fabric of the diamond or half diamond link type, comprising a plurality of interengaged units arranged in rows, one of said units comprising a pair of diverging legs connected to a pair of outwardly extending connected coiled loops at their adjacent ends, said loops being connected by a rigid bar, the other ends of said legs being connected in adjacent loops of two similar units of an adjacent row.

[Claim 6 not printed in the Gazette.]

1,110,775. PROCESS OF PRODUCING COLORING-MATTER FOR PAPER-MAKING AND SIMILAR MANUFACTURES. JACOB HAHN, Buffalo, N. Y. Filed Oct. 8, 1913. Serial No. 793,979. (Cl. 134—82.)

1. The described process for producing coloring matter for paper making and similar manufactures, consisting in thoroughly mixing pigment with rosin size in the presence of water, and subjecting the same to the precipitating action of a suitable salt.

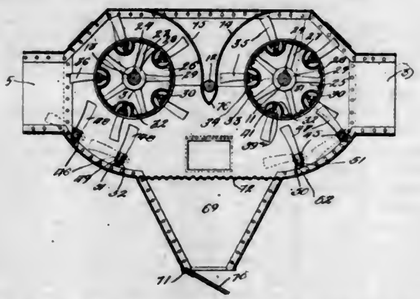
2. The described process for producing coloring matter for paper making and similar manufactures, consisting in thoroughly mixing pigment with rosin size in the presence of water, subjecting the same to the precipitating action of a suitable salt, and separating the supernatant liquid therefrom.

3. The described process for producing coloring matter for paper making and similar manufactures, consisting in thoroughly mixing pigment with rosin size in the presence of water, subjecting the same to the precipitating action of a suitable salt, separating the supernatant liquid therefrom and washing the precipitate with water to remove the excess of salt and impurities, if any.

4. The described process for producing coloring matter for paper making and similar manufactures, consisting in thoroughly mixing pigment with rosin size in the presence of water, subjecting the same to the precipitating action of a suitable salt, separating the supernatant liquid therefrom, washing the precipitate with water to remove the excess of salt and impurities, if any, and expelling the wash water from the precipitate.

5. The described process for producing coloring matter for paper making and similar manufactures, consisting in thoroughly mixing pigment with rosin size in the presence of water, subjecting the same to the precipitating action of a suitable salt, separating the supernatant liquid therefrom, washing the precipitate with water to remove the excess of salt and impurities, if any, expelling the wash water from the precipitate and drying the product.

1,110,776. BOLL BREAKER AND CLEANER. JOHN W. HALE and JOHN I. GALEY, Grand Prairie, Tex. Filed May 8, 1914. Serial No. 837,188. (Cl. 13—19.)



1. In a cotton boll breaking machine, a casing, a pair of cylinders mounted in bearings therein, one in each end of the casing, said cylinders having beating arms, a pair of shafts journaled adjacent and below each cylinder provided with beaters, means for rocking said shafts to adjust the beaters in different positions, screening means in the casing below and between the cylinders, and a refuse box below the screening means.

2. In a cotton boll breaking machine, a casing, a pair of cylindrical beaters, one journaled in each end of the casing, a pair of shafts journaled in the casing below and adjacent each cylindrical beater and provided with cotton beating arms, means for rocking said shafts simultaneously, for simultaneously adjusting the beating arms in different positions, screening means below and between the cylindrical beaters, and a trash box below the screening means.

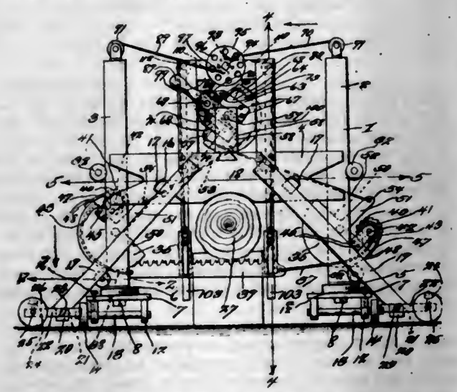
3. In a cotton boll breaking machine, a casing, a pair of cylindrical beaters, one journaled in each end of the

casing, a pair of shafts journaled in the casing below and adjacent each cylindrical beater and provided with cotton beating arms, means for rocking said shafts simultaneously, for simultaneously adjusting the beating arms in different positions, screening means below and between the cylindrical beaters, and a trash box below the screening means, and means for deflecting an air current downwardly and between said cylinders.

4. In a cotton boll breaking machine, a casing, a pair of cylindrical revoluble beaters, one journaled in each end of the casing, a pair of shafts mounted in each end of the casing below and adjacent each cylindrical beater and provided with beating arms adapted to intermesh with the arms of the cylindrical beaters, the shafts of each pair having link connections, both pairs of shafts having link connections, an operating lever connected to the second link connection, for manually rocking said shafts simultaneously for adjusting the beating arms in different positions, screening means below and between the cylindrical beaters, and a refuse box below the screening means.

5. In a cotton boll breaking machine, a casing, a pair of cylindrical revoluble beaters, one journaled in each end of the casing, a pair of shafts mounted in each end of the casing below and adjacent each cylindrical beater and provided with beating arms adapted to intermesh with the arms of the cylindrical beaters, the shafts of each pair having link connections, both pairs of shafts having link connections, an operating lever connected to the second link connection, for manually rocking said shafts simultaneously for adjusting the beating arms in different positions, screening means below and between the cylindrical beaters, and a refuse box below the screening means, said casing having a removable hood to permit the cylindrical beaters to be removed, said hood having a pair of concaved deflectors merging to an apex between the revoluble beaters and partially surrounding the same, to direct current of air downwardly and between the cylindrical beaters.

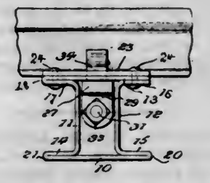
1,110,777. CROSSCUT-SAWING APPARATUS. NIELS HANSEN, Stanwood, Wash. Filed Apr. 5, 1913. Serial No. 759,068. (Cl. 143—65.)



1. In a log sawing apparatus, a saw blade mounted so as to be reciprocated, and a single rocking device having connections with each end of the saw blade for reciprocating the blade, said connections including oscillatory members, and means for adjusting the oscillatory members vertically.

2. In a log sawing apparatus, a frame having adjustable saw guides, a saw blade mounted in the guides so as to be reciprocated, a single rocking device mounted in bearings of the frame super-imposed above the saw, said frame having additional guides, oscillatory members adjustably mounted in said additional guides, one beyond each end of the saw, connections to the ends of the blade, which connections in turn are adjustably connected to the oscillatory members, additional connections to the upper portions of the oscillatory members, which additional connections are adjustably connected to the single rocking member, and means for adjusting the oscillatory members vertically.

1,110,778. RAILWAY-RAIL TIE AND RAIL-FASTENER. EVANS N. HARRIS, Frazer, Mo. Filed Dec. 17, 1913 Serial No. 807,274. (Cl. 238—5.)



1. A metal railway tie formed from a single plate bent to shape and including body members extending in parallel relation, and vertical webs, the webs being directed outwardly at their edges and extending in parallel relation with the body members, and fastening means uniting one out-turned edge with one of the body members.

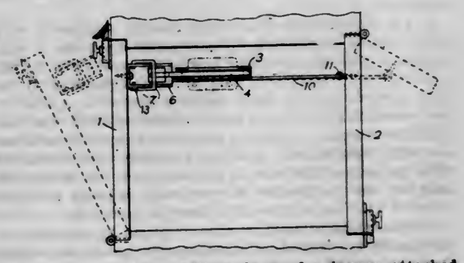
2. A metal railway tie formed from a single plate bent to shape and including body members extending in parallel relation, and vertical webs spaced apart, the webs being out-turned at their edges and extending in parallel relation with the body members, all but one of the laterally directed portions being integral with the body members, and fastening means uniting the remaining out-turned portion with one of the body members.

3. A metal railway tie formed from a single plate bent to shape and including upper and lower members continuous from side to side and from end to end and extending in parallel relation and vertical webs spaced apart, the webs being out-turned at their edges and extending in parallel relation to the upper and lower members.

4. A metal railway tie formed from a single plate bent to shape and formed with a bottom, vertical webs spaced apart and a top, the webs being out-turned at their lower edges and extending in parallel relation to the bottom and out-turned at their upper edges and extending in parallel relation to the top, and fastening means uniting one out-turned edge of one of the webs to the top.

5. A metal railway tie formed from a single plate bent to shape and formed with a bottom, vertical webs spaced apart and a top, the webs being out-turned at their lower edges and extending in parallel relation to the bottom and out-turned at their upper edges and extending parallel relation to the top, rail engaging stops bearing over said top, and fastening devices extending through said rail engaging stop and through the top of the tie and the out-turned edes of the webs.

1,110,779. DEPOSIT AND COLLECTION RECEPTACLE. JACOB HARTMAN, Rochester, N. Y. Filed Mar. 27, 1914. Serial No. 827,673. (Cl. 232—41.)

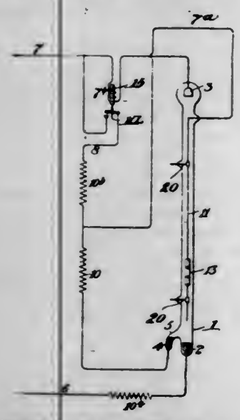


1. The combination with a door, of a keeper attached thereto, a latch engageable with said keeper a pivoted lifter to disengage the latch therefrom, and a detent

mounted on the door and operated by the latch and engaging between the latch and the keeper to prevent the same reëngaging the keeper after being released therefrom, said detent being actuated by opening the door to release the latch and permit the same to reëngage the keeper when the door is again closed.

2. The combination with a door, of a keeper projecting on the inside thereof, a pivoted gravity latch engageable with said keeper, a gravity detent pivoted above the keeper and located in the path of movement of the head of the latch, and adapted to be lifted by the latch when the latter is lifted, and means to release the latch and cause the same to lift and pass and engage above the detent, whereby reëngagement of the latch with the keeper is prevented until after the door is opened.

1,110,780. ELECTRIC VAPOR APPARATUS. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 17, 1905. Serial No. 255,950. (Cl. 176—46.)



1. The combination of a positive electrode, a negative electrode, a temporary or starting positive electrode and a container including the parts thus named, with a solid conductor extending through a portion of the container into proximity with the negative electrode at one end and the main positive electrode at the opposite end, and sleeves strung upon the said solid conductor, leaving contacts between the sleeves, as and for the purpose described.

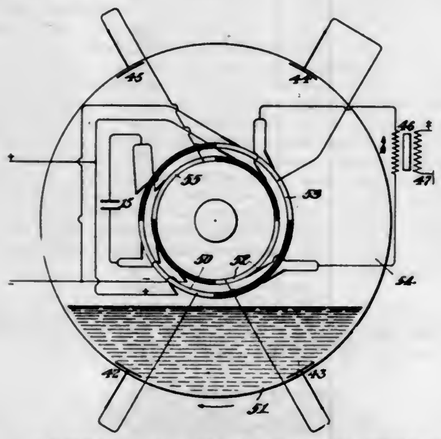
2. The combination in a vapor electric apparatus of a main positive electrode, a main negative electrode, a supplemental positive electrode located in proximity to the negative electrode, a main supply circuit connected to the main positive and the main negative electrodes, a conducting connection from said supplemental positive electrode to the main supply circuit, resistances in said connection and a second supplemental positive electrode also connected with the main supply circuit through a portion of said resistance.

3. The combination in a vapor electric apparatus of a main positive electrode, a main negative electrode, a supplemental positive electrode located in proximity to the negative electrode, a main supply circuit connected to the main positive and the main negative electrodes, a conductive connection from said supplemental positive electrode to the main supply circuit, a resistance in said connection, a second supplemental positive electrode also connected with the main supply circuit through a portion of said resistance, and means for automatically opening the connections with the supplemental positive electrode.

4. The combination in a vapor electric apparatus of a main positive electrode, a main negative electrode, a supplemental positive electrode located in proximity to the negative electrode, a main supply circuit connected to the main positive and the main negative electrodes, a conductive connection from said supplemental positive electrode to the main supply circuit, a resistance in said connection, a second supplemental positive electrode also connected with the main supply circuit through a portion of said resistance, and means for automatically opening the connections with the supplemental positive electrode by reason of the current flowing to the main positive electrodes.

5. The combination in a vapor electric device, of a container, a working positive electrode and a working negative electrode therein an interposed internally located solid conductor, a connection therefrom with the main positive electrode and a resistance interposed in said connection and means for interrupting the said connection by the passage of current between the working electrodes.

1,110,781. CIRCUIT-BREAKER. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed May 1, 1905, Serial No. 258,148. Divided and this application filed Sept. 6, 1912. Serial No. 718,792. (Cl. 171—253.)

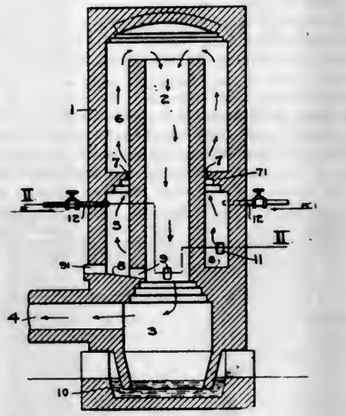


1. In a system of electrical distribution the combination with a direct current source, an alternating receiving circuit, and a vapor device comprising an exhausted container and suitable electrodes therein, of means for connecting the terminals of the source to the mains of the receiving circuit through said vapor device so that current will flow in one direction to the receiving circuit, means for connecting the terminals of the source to the mains of the receiving circuit through said vapor device in the opposite direction and means for interrupting the flows of current alternately established by said two first named means after a definite period of time, said means operating periodically as described.

2. In a system of electrical distribution the combination with a direct current source, an alternating receiving circuit, and a vapor device comprising an exhausted container and suitable electrodes therein, means for connecting the terminals of the source to the mains of the receiving circuit to determine current flow, periodically in opposite directions, through the vapor device to the receiving circuit; means coöperating with said first named means for periodically interrupting each current flow at a definite period of time after it is established in either direction by the said first named means.

1,110,782. PROCESS OF PRODUCING GAS. JULES H. HIRT, El Paso, Tex., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 14, 1910. Serial No. 543,726. (Cl. 48—206.)

1. In the art of producing gas, causing an ignited mixture of gas-forming combustible material and air to swirl and to have an upward travel while in motion, causing the upper portions of said swirling mixture to contract at a point adjacent the axis of the swirling mixture, and introducing moisture to the mixture near said point of contraction.



2. In the art of producing gas, causing an ignited mixture of gas-forming combustible material and air to swirl and to have an upward travel while in motion, causing all the outer upper portions of said swirling mixture to contract centripetally of the swirling mixture and subsequently taking off gas for use.

3. In the art of producing gas, causing an ignited mixture of gas-forming combustible material and air to swirl and to have an upward travel while in motion, causing the upper portions of said swirling mixture to contract at a point adjacent the axis of the swirling mixture, and reducing the temperature of the mixture near said point of contraction.

4. In the art of producing gas, causing an ignited mixture of gas-forming combustible material and air to swirl and to have an upward travel while in motion, causing the upper portions of said swirling mixture to move centripetally, and reducing the temperature of the upper portions of said mixture.

5. In the art of producing gas, causing an ignited mixture of gas-forming combustible material and air to swirl and to have an upward travel while in motion, causing the upper portions of said swirling mixture to contract at a point adjacent the axis of the swirling mixture, and introducing an endothermic agent to the mixture near said point of contraction.

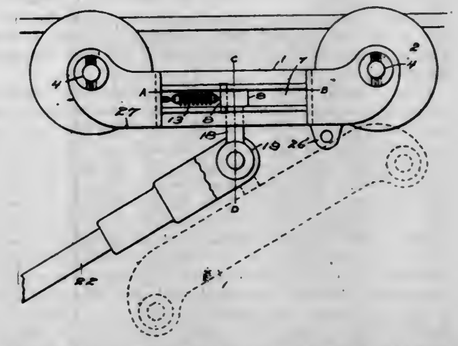
[Claim 6 not printed in the Gazette.]

1,110,783. TROLLEY-WHEEL. JOHN WILTSHIRE HOMER, Greencastle, Pa. Filed June 9, 1913. Serial No. 772,672. (Cl. 191—58.)

1. A current collecting device comprising a body portion, a pair of trolley wheels mounted upon said body portion, a block moving with the trolley pole adapted to engage the body portion at two points when the pole and body portion are in alinement, and means interposed between the block and body portion for alining the body portion with the trolley pole.

2. A current collecting device, comprising a body portion provided with a pair of trolley wheels, a pivot block secured to the trolley pole and adapted to engage one of two points of the body portion as the pole turns and to engage both points when the pole and body portion are in alinement, and means interposed between the block and body portion for alining the body portion with the trolley pole.

3. A current collecting device comprising a body portion provided with a pair of trolley wheels, a block moving with the trolley pole provided with a pair of fulcrums, a pair of pivot points formed on the body portion both of which are adapted to be engaged by the fulcrums of the block when the pole and the body portion are in alinement, and means interposed between the block and body portion adapted to move the body portion in alinement with the trolley pole.

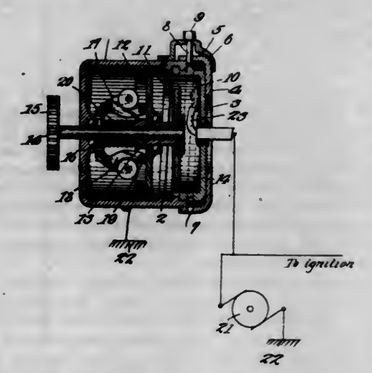


4. A current collecting device comprising a hollow body portion provided with a trolley wheel on each end thereof, a block guided within the hollow portion and adapted to move with the trolley pole, and means interposed between the block and body portion adapted to turn the body portion in alinement with the trolley pole.

5. A current collecting device comprising a hollow body portion and provided with trolley wheels on each end thereof, a block provided with a pair of fulcrums slidably mounted and guided within the hollow portion of the body, a pair of pivots carried by the body portion adapted to engage the fulcrums of the block when the pole and body portion are in alinement, and means interposed between the pole and body portion adapted to aline the body with the trolley pole, the block being secured to the trolley pole.

[Claims 6 to 12 not printed in the Gazette.]

1,110,784. SPEED-CHECK. FRANK S. HOWELL, New Rochelle, N. Y. Filed Feb. 25, 1914. Serial No. 821,105. (Cl. 175—310.)



1. In a speed check, a centrifugally controlled switch including a casing, a revoluble disk, a governor for shifting the disk along its axis of rotation, a contact in the path of the disk, and a cap closing one end of the casing, said cap being movable to adjust the contact to vary the gap between the contact and disk.

2. In a speed check, a centrifugally controlled switch including a casing, a revoluble disk, a governor for shifting the disk along its axis of rotation, a contact in the path of the disk, a cap closing one end of the casing, said cap being movable to adjust the contact to vary the gap

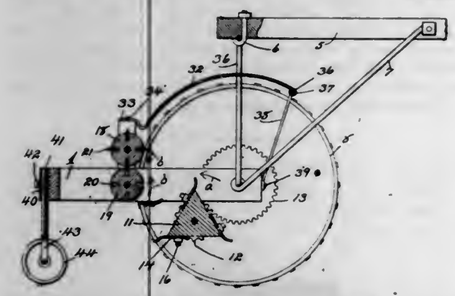
between the contact and disk, and means upon the casing and cap for indicating the extent of adjustment of the contact.

3. In a speed check a centrifugally controlled switch including a casing, a disk mounted for rotation therein, a centrifugal governor for shifting the disk along its axis of rotation, means for rotating the disk and governor, a revoluble cap adjustably engaging the casing, and a contact carried thereby and projecting into the path of the disk, said cap being revoluble to vary the gap between the contact and disk.

4. In a speed check a centrifugally controlled switch including a casing, a disk mounted for rotation therein, a centrifugal governor for shifting the disk along its axis of rotation, means for rotating the disk and governor, a revoluble cap adjustably engaging the casing, a contact carried thereby and projecting into the path of the disk, said cap being revoluble to vary the gap between the contact and disk, and coöperating means upon the cap and casing for indicating the speed at which the device is set.

5. In a speed check a centrifugally controlled switch including a casing, a disk mounted for rotation therein, a centrifugal governor for shifting the disk along its axis of rotation, means for rotating the disk and governor, a revoluble cap adjustably engaging the casing, a contact carried thereby and projecting into the path of the disk, said cap being revoluble to vary the gap between the contact and disk, and coöperating means upon the cap and casing for locking said cap against rotation.

1,110,785. COTTON-STALK PULLER AND CUTTER. JOHN E. HUBERT and HENRY J. HUBERT, Cooper, Tex. Filed May 29, 1914. Serial No. 841,807. (Cl. 55—66.)



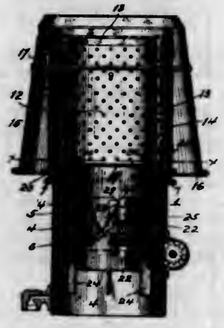
1. A stalk puller and chopper comprising a frame, traction wheels therefor, a revoluble puller mounted in bearings of said frame, said puller being triangular in cross section and provided with plates upon its flat surfaces having teeth projecting beyond and adjoining the corners of the triangular shaped puller, a tooth blade secured to the frame with which the teeth of the revoluble puller intermesh, and means of connection between said revoluble puller with one of the traction wheels for imparting revoluble motion to the puller.

2. In a cotton stalk puller and chopper, a frame, traction wheels therefor, chopping rollers mounted on the frame, a revoluble stalk puller and cutter mounted in bearings of said frame, said puller comprising a body member triangular in cross section, plates secured to the flat faces of the triangular body and having teeth projecting beyond and adjoining the corners of the triangular body, a blade secured to the under portion of the frame having teeth with which the teeth of said plates intermesh, gear connections between the chopping rollers and one of the traction wheels, and gear connections between the puller and the other traction wheel.

3. In a cotton stalk puller and chopper, a frame, traction wheels therefor, a revoluble stalk puller and cutter mounted in bearings of said frame, said puller comprising a body member triangular in cross section, plates adjustably secured to the flat faces of the triangular body and having teeth projecting beyond and adjoining the corners of the triangular body, and gear connections between the revoluble puller and one of the traction wheels to impart motion thereto.

4. In a cotton stalk puller and chopper, a frame, traction wheels therefor, chopping rollers mounted on the frame, a revoluble stalk puller and cutter mounted in bearings of said frame, said puller comprising a body member triangular in cross section, plates adjustably secured to the flat faces of the triangular body and having teeth projecting beyond and adjoining the corners of the triangular body, a blade secured to the under portion of the frame having teeth with which the teeth of said plates intermesh, gear connections between the chopping rollers and one of the traction wheels, and gear connections between the puller and the other traction wheel, a shield or hood mounted on the frame and arching forwardly, the teeth of the plates on the puller being disposed at angles to the body of the plates.

1,110,786. HYDROCARBON-BURNER. WALTER E. HUENEFELD, Cincinnati, Ohio, assignor to The Huenefeld Company, Cincinnati, Ohio. Filed Oct. 10, 1912. Serial No. 724,971. (Cl. 158—88.)



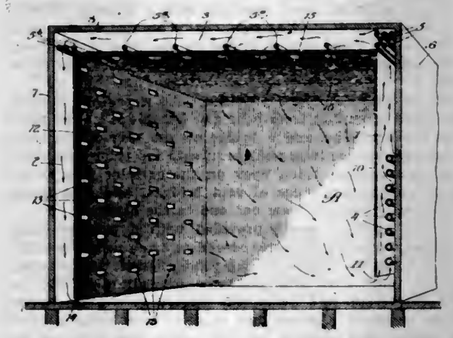
1. In a hydrocarbon burner, the combination with a wick tube member, of foraminated shells forming a combustion chamber over the wick tube member, a cap at the lower end of the inner of said shells, a plurality of separated wick limiting devices integral with said cap and normally disposed above the wick tube member and means for raising and lowering the combustion chamber member and the limiting devices carried thereby.

2. In a hydrocarbon burner, the combination with a wick tube member provided with inner and outer seats at the upper end, of concentric foraminated shells above said wick tube member and adapted to rest on said seats, said shells forming a combustion chamber between them, and a cap secured to and forming the bottom of the inner shell, said cap provided on its periphery with a plurality of radial lugs entering the combustion chamber and disposed in the wick path.

3. In a hydrocarbon burner, the combination of a wick tube member comprising concentric tubes, one of said tubes having an outer annular seat at its upper end, and the other tube having an inner elevated annular seat, a combustion chamber comprising concentric foraminated shells forming a combustion chamber, the outer shell adapted to rest on the outer seat of the wick tube member, and a cap secured to the lower end of the inner shell and adapted to rest on the inner elevated seat on the inner tube of the wick tube member, said cap having a plurality of radial fingers projecting outwardly beyond the wall of said inner shell and constituting wick limiting means.

4. In a hydrocarbon burner, the combination with a wick tube member provided at its upper end with an outer flange and with an inwardly projecting flange, of a combustion chamber member comprising concentric shells, the outer of said shells adapted to seat on the outer flange of the wick tube member, a cap rigidly secured to the inner shell, said cap adapted to rest on the inner flange of the wick tube member, a depending tube secured at its upper end to said cap and passing through the opening formed by said inner flange, whereby said flange and tube will guide the vertical movement of the combustion chamber member, and means within the wick-tube member cooperating with said depending tube for effecting the raising and lowering of the combustion chamber member.

1,110,787. KILN. CHARLES HULTGREN, Chicago, Ill., assignor to Wenborne-Karpen Dryer Co., Chicago, Ill., a Corporation of West Virginia. Filed Oct. 30, 1911. Serial No. 657,648. (Cl. 34—19.)



1. A kiln of the character described, comprising a drying-chamber flanked by an up-draft flue having an inlet-passage from the bottom of the drying-chamber and flanked also by a return down-draft flue having a foraminous wall, a return top-flue joining the up-draft flue and down-draft flue, means whereby the air in the up-draft flue is heated so that an upward flow is produced in the flue, and a cooling device in the path of the heated air flowing toward the drying chamber, for the purpose set forth.

2. A kiln of the character set forth, comprising a drying-chamber having an up-draft flue at one side, a down-draft flue at another side and a cross-draft flue at the top, the inner walls of said down-draft flue and cross-draft flue having openings therein to admit the air to the drying-chamber and the up-draft flue having communication at its bottom with the drying-chamber, and heating means in the up-draft flue.

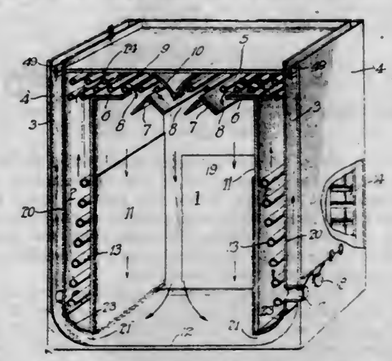
3. A kiln of the character set forth, comprising a drying-chamber having an up-draft flue at one side, a down-draft flue at another side and a cross-draft flue at the top, the inner walls of said down-draft flue and cross-draft flue having openings therein to admit the air to the drying-chamber and the up-draft flue having communication at its bottom with the drying-chamber, heating means in the up-draft flue, and cooling means in one of the return flues.

4. A kiln of the character set forth, comprising a drying-chamber having an up-draft flue at one side, a down-draft flue at another side and a cross-draft flue at the top, the inner walls of said down-draft flue and cross-draft flue having openings therein to admit the air to the drying-chamber and the up-draft flue having communication at its bottom with the drying-chamber, heating means in the up-draft flue and cooling means in the space at the junction of the up-draft and cross-draft flues.

5. A kiln comprising a drying-chamber, and up-draft flue at one side of the drying chamber and a cross-draft flue surmounting said chamber, said last-named flue having openings in its inner wall and said first-named flue having an inlet near its bottom, heating means whereby the air in the up-draft flue is heated so that an upward flow is produced in the flue, and a cooling device in the path of the heated air flowing toward said drying chamber, for the purpose set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,110,788. DRYING-ROOM. CHARLES HULTGREN, Chicago, Ill., assignor, by mesne assignments, to Wenborne-Karpen Dryer Co., a Corporation of West Virginia. Filed Oct. 21, 1912. Serial No. 727,002. (Cl. 34—19.)



1. In a device of the class described, the combination of a drying chamber, an inlet flue communicating therewith at the top, an updraft outlet flue communicating with said drying chamber at the bottom, and means in one of said flues for heating the air in said inlet flue and for reheating the air in said outlet flue to increase the draft in said drying chamber.

2. In a device of the class described, the combination of a drying chamber, an inlet flue communicating therewith at the top, an updraft outlet flue communicating with said drying chamber at the bottom, and means for heating the air in said inlet flue and for heating the air in said outlet flue near the bottom thereof to increase the draft in said drying chamber.

3. In a device of the class described, the combination of a drying chamber, an updraft inlet flue communicating therewith at the top, means for heating the air in said inlet flue, and an updraft outlet flue communicating with said drying chamber at the bottom, said inlet and outlet flues having a common wall of metal adapted to heat the air in said outlet flue and thereby increase the rate of air movement.

4. In a device of the class described, the combination of a drying chamber, an updraft inlet flue communicating therewith at the top, means for heating the air in said inlet flue, and an updraft outlet flue communicating with said drying chamber at the bottom, said inlet and outlet flues being co-extensively with each other lengthwise of the drying chamber and having a common wall of metal adapted to heat the air in said outlet flue and thereby increase the rate of air movement.

5. In a device of the class described, the combination of a drying chamber, updraft inlet flues at opposite sides thereof, a distributing chamber above said drying chamber and communicating with the upper ends of said updraft inlet flues and also communicating with the upper part of said drying chamber, heating means in said updraft inlet flues, and updraft outlet flues located at opposite sides of said drying chamber and communicating therewith at its lower part.

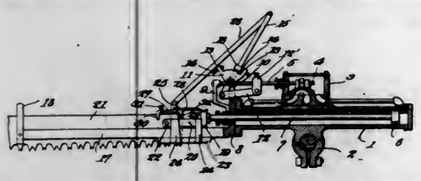
[Claims 6 to 14 not printed in the Gazette.]

1,110,789. DRAG-SAW MECHANISM. WILLIAM L. HURLEY, Svensen, Oreg. Filed Aug. 27, 1913. Serial No. 786,948. (Cl. 20—68.)

1. In a device of the character described, a guide, a cross head working upon the guide, a saw fulcrumed to the cross head and working within the guide, and a leaf spring coöperating with the upper edge of the saw and the top of the cross head for yieldingly depressing the saw.

2. In a device of the character described, a guide, a cross head working therealong, a saw fulcrumed to the cross head and working within the guide, an adjustable member mounted upon the inactive edge of the saw and a

leaf spring carried by the said member and having its free end engaging the cross head to yieldingly depress the saw.

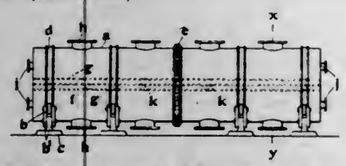


3. In a device of the character described, a guide, a cross head working therealong, a saw fulcrumed to the cross head and working within the guide, a lever fulcrumed to the saw, a leaf spring attached to the lever and having its free end engaging the cross head, and means carried by the lever and engaging the saw for swinging the lever against the tension of the spring.

4. In a device of the character described, a guide, a cross head working therealong, a saw fulcrumed to the cross head and working within the guide, a lever having a bifurcated portion at one end straddling the inactive edge of the saw and fulcrumed to the saw and having a bifurcated portion at its free end straddling the said edge of the saw, a leaf spring secured to the lever and having its free end engaging the cross head, and a jam screw carried by the lever and engaging the said edge of the saw.

5. In a device of the character described, a body, a pair of parallel guide bars carried thereby and projecting therefrom, a reciprocatory member carried by the body and having a cross head movable along the upper edges of the guide bars, the cross head having a fork whose arms are slidable upon the upper edges of the guide bars, the fork arms having depending webs slidably engaging the remote sides of the guide bars, and the webs having shoes engaging the lower edges of the guide bars, a yoke connecting the free ends of the guide bars, and a saw disposed snugly between the guide bars and having one end pivoted between the said fork arms.

1,110,790. APPARATUS FOR MAKING AND FILTERING SOLUTIONS, APPLICABLE IN THE EXTRACTION OF METALS FROM ORES AND FOR LIKE PURPOSES. PERCY CLAUDE CAMERON ISHERWOOD, Bushey Heath, England. Filed June 26, 1914. Serial No. 847,501. (Cl. 75—86.)



1. Apparatus for making and filtering solutions applicable in the extraction of metals from ores and for like purposes comprising a rotatable casing divided longitudinally by a partition into compartments, a filter plate for each of said compartments, a solution discharge outlet on the inner side of each of such plates, and manholes to each compartment on the outer side of such plate for charging and discharging the compartments, substantially as described.

2. Apparatus for making and filtering solutions applicable in the extraction of metals from ores and the like purposes, comprising a rotatable casing divided longitudinally by a partition into compartments, a filter plate within said compartments, and a solution discharge outlet on the inner side of said filter plate respectively, substantially as described.

1,110,791. ANCHOR FOR ARTIFICIAL TEETH. JAMES W. IVORY, Philadelphia, Pa. Filed Nov. 4, 1913. Serial No. 799,137. (Cl. 32—9.)

1. An anchor for an artificial tooth composed of a plate having limbs thereon angularly to each other, one of said limbs being integral with the portion of the plate comprising the other limb and being cut-out and turned-up from the same.

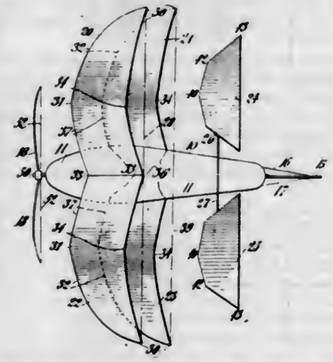
2. An anchor for an artificial tooth composed of a plate having limbs thereon angularly to each other, one of said limbs being integral with the portion of the plate comprising the other limb and being cut-out and turned-up from the same, and a facing portion on the end portion of the plate extending from the angle of said limbs to the biting end of the tooth.

3. An artificial tooth provided with a passage therein, the same extending from near the biting end of the tooth into the lap ridge, and a bridge on the rear of the tooth over said passage intermediate of said lap ridge and biting end.

4. An artificial tooth provided with a passage therein, the same extending from near the biting end of the tooth into the lap ridge, and a bridge on the rear of the tooth over said passage intermediate of said lap ridge and biting end, said passage being open on the exterior face of the tooth on opposite sides of said bridges, and said bridge widening outwardly from one end to the other.

5. An artificial tooth provided with a passage longitudinally therein, the same extending from near the biting edge of the tooth into the lap ridge thereof, and a bridge on the tooth over said passage intermediate of the terminals thereof, and an anchor formed of a plate having limbs angularly thereon, one of said limbs being adapted to occupy said passage, and the other limb being on the exterior of the tooth and adapted to abut said bridge.

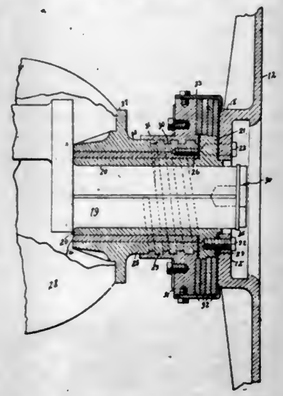
1,110,792. AEROPLANE. ADOLF JACOBY, New York, N. Y. Filed May 26, 1914. Serial No. 841,032. (Cl. 244—12.)



1. An aeroplane, comprising a body, a vertical rudder at the rear end thereof, a propeller at the forward end thereof, four planes connected with the body portion, said planes being arranged in two pairs, the planes of the upper pair being located forward of and overlapping the planes of the lower pair, one at each side of the machine, each of said planes being convexly upwardly curved, and having its inner end at the connection with the body-portion at a lower elevation than its tip, each of said planes being convexly forwardly curved, and tapered toward its tip, the two tips of opposite planes, and the rearmost point of connection with the body, being located on a straight line, and horizontal rudders, one at each side of the body portion, between the planes and the vertical rudder, each of said horizontal rudders being operable independently of the other.

2. An aeroplane, comprising a body, a vertical rudder at the rear end thereof, a propeller at the forward end thereof, four planes connected with the body portions, said planes being arranged in two pairs, the planes of the upper pair being located forward of and overlapping the planes of the lower pair, one at each side of the machine, each of said planes being convexly upwardly curved ,and having its inner end at the connection with the body-portion at a lower elevation than its tip, each of said planes being convexly forwardly curved, and tapered toward its tip, the two tips of opposite planes, and the rearmost point of connection with the body, being located on a straight line, and horizontal rudders, one at each side of the body portion, between the planes and the vertical rudders being operable independently of the other, and the blades of said propeller being straight for approximately one-half their length, and convexly forwardly curved and inclined at approximately 25° for the remainder of their length.

1,110,793. FRICTION DRIVING MECHANISM. MERRILL L. JENKINS, Harvey, Ill., assignor to Buda Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1912. Serial No. 685,100. (Cl. 74—26.)



1. The combination with a shaft, of a sleeve on the shaft provided with a flange portion, a disk carried by the flanged sleeve, means for advancing and retracting the said disk comprising an internally threaded movable member about the sleeve and a stationary threaded member interposed therebetween, with means fitting about the said flanged portion and in coöperative relation with the said shaft member.

2. In a motor vehicle, the combination of a motor, a shaft therefor, a friction driving disk slidably mounted on the shaft, a driven wheel, means for moving the driving disk into and out of engagement with the driven wheel comprising a shift member and one or move movable rings interposed between the shift member and the driving disk.

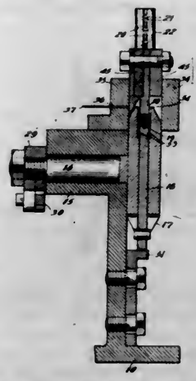
3. The combination with a motor and its shaft, of a driven wheel, a driving disk on said shaft, means about said shaft for advancing the disk relatively of the shaft to engage the wheel, said means comprising a bearing member flanged for purposes of attachment to the motor casing whereby it is held against communicated movement, and a thrust device turnable on said bearing member to advance the disk.

4. In combination, a shaft, a driving disk slidably mounted on the shaft, a driven wheel, means to move the driving disk relatively of the shaft into and out of driving engagement with the driven wheel comprising a shift member positioned to the rear of the disk and a thrust bearing interposed therebetween and coöperating with the shift member to advance and retract the disk, substantially as described.

5. In a motor vehicle, the combination of an engine, a shaft therefor having a squared end, a bearing member, a sleeve mounted on the squared end of the shaft within the bearing member, a driving disk carried by the sleeve, a driven wheel, a shift member mounted on the bearing member adapted to move the driving disk into and out of engagement with the driven wheel, a plurality of relatively movable members mounted on the sleeve between the shift member and the driving disk, and a casing mounted on the shift member and inclosing the plurality of movable members.

[Claims 6 to 17 not printed in the Gazette.]

1,110,794. BUTTON-ATTACHING MACHINE. ALLEN JOHNSTON, Ottumwa, Iowa. Filed Sept. 26, 1913. Serial No. 791,955. (Cl. 218—8.)



1. A machine of the character described including, in combination: an oscillatable member movable from one position to another and having a period of rest at each position, means for feeding a button to said member, a staple driver mounted on and carried by said member, a staple former coöperable with said member after the button has been fed and when the latter is in one position to form a piece of wire passed through the eye of the button into a staple, a clenching die coöperable with said driver when said member is in its other position, and mechanism for oscillating said member, substantially as specified.

2. A machine of the character described including, in combination: an oscillatable disk; a staple driver slidably mounted on said disk; a staple former coöperable with said disk when the latter is in one position to thereby form a staple from a piece of wire; a clenching die cooperable with said driver when the disk is in another position, said disk having a recess therein in which a button having a staple through its eye is adapted to be carried from the first named position to the second named position, substantially as specified.

3. A machine of the character described including, in combination: automatically operated wire feeding and cutting means, a member having a recess therein adapted to be positioned adjacent the wire cutting means, means for feeding a button into said recess, and a staple former cooperable with said member and movable into said recess to form a staple from a cut piece of wire, the staple passing through the eye of a button and said recess having grooves therein adapted to receive the formed staple, substantially as specified.

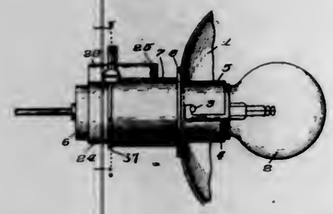
4. A machine of the character described including, in combination: a chute arranged to contain buttons to be fed by gravity, a member located adjacent the lower end of said chute and having a yieldably mounted rigid bar therein, said bar having a recessed end adapted to receive a button head, wire feeding and cutting mechanism, and a former coöperable with said member to bend a cut piece of wire passing through the eye of a button into a staple, the former also coöperating with said yieldably mounted bar to yieldingly clamp a button during the staple forming operation, substantially as specified.

5. A machine of the character described including, in combination: a recessed member; a staple driver slidably

mounted on said member, said driver having its ends slotted and adapted to receive the eye of a button; a yieldingly mounted bar having an end recessed and adapted to receive the head of a button; and a former coöperable with said recessed member to form a staple from a piece of wire passing through the eye of a button, said former also coöperating with said bar to yieldingly clamp a button therebetween during the staple forming operation, substantially as specified.

[Claims 6 to 17 not printed in the Gazette.]

1,110,795. FOCUSING LAMP-SOCKET. GEORGE C. KNAUFF, Chicago, Ill. Filed Feb. 16, 1914. Serial No. 819,007. (Cl. 240—44.)



1. A socket including relatively rotatable and relatively slidable main and auxiliary casings, one thereof equipped with a knife-edge formation disposed in a plane substantially transverse of the axis of the casings, the other thereof equipped with a formation extending longitudinally thereof and intercepting the said plane, and means for relatively rotating the said sockets to force the said formations into engagement with each other.

2. A socket including a pair of casings relatively movable longitudinally and circumferentially of each other, the said casings equipped respectively with formations extending substantially transversely of each other, and spring means connecting the casings and relatively rotating the latter to force the said formations into engagement with each other.

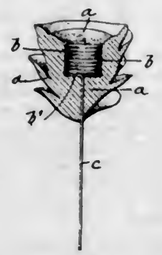
3. A focusing socket including a pair of slidably interfitting cylindrical casings, one thereof equipped with a web extending substantially longitudinally thereof, the other thereof equipped with a knife-edge formation transversely of and adapted to engage the said web, the said casings being relatively partially rotatable to bring the said knife-edge formation out of engagement with the said web; and spring means connecting the said casings and normally holding the said web in engagement with the said knife-edge formation.

4. A focusing socket including a pair of slidably interfitting cylindrical casings, one thereof equipped with a web extending substantially longitudinally thereof, the other thereof equipped with a knife-edge formation transversely of and adapted to engage the said web, the said casings being relatively partially rotatable to bring the said knife-edge formation out of engagement with the said web; and spring means connecting the said casings and normally holding the said web in engagement with the said knife-edge formation, the said knife-edge formation being disposed obliquely with respect to the common diameter of the casings passing through the point of contact between the knife-edge formation and the said web.

5. A focusing socket including a pair of slidably interfitting cylindrical casings, one thereof equipped with a web extending substantially longitudinally thereof, the other thereof equipped with a knife-edge formation disposed substantially at right angles to the common axis of the said casings and adapted to engage the edge of the said web, the said casings being relatively movable about their common axis to bring the said web and knife-edge formation into or out of engagement, and means for holding the said web in engagement with the said knife-edge formation.

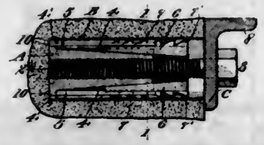
[Claims 6 to 10 not printed in the Gazette.]

1,110,796. CANDLE-HOLDER. MAX KNORPP, New York, N. Y., assignor to Knorpp Candy Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 17, 1913. Serial No. 748,879. (Cl. 248—42.)



A candle-holder, comprising an exterior ornamental body of plastic material having a socket, a candle-holding socket formed of a closely-wound helically-arranged wire, the convolutions of which laterally contact with each other, and snugly fit the socket of the ornamental body, the top of the wire socket being substantially flush with the top of the ornamental body socket, said wire being bent at the lower end of the socket radially and horizontally inwardly to the central part of the wire socket, and fitting snugly the bottom of the socket of the ornamental body, and then bent to extend outwardly away from the wire socket longitudinally thereof in a straight-line extension forming a stem integral with the wire socket, and extending through the bottom of the ornamental body for securing the wire socket and ornamental body together.

1,110,797. EXPANSION-BOLT. ROBERT R. KNOX, San Francisco, Cal. Filed Oct. 14, 1913. Serial No. 795,151. (Cl. 85—2.4.)



1. An expansion bolt comprising an expander with inclined seats, wedges retained in said seats against side movement and slidably thereon, means for advancing the expander axially to spread the wedges when engaged by a contiguous fixed surface, and means attached to the expander for temporarily holding the wedges upon the expander.

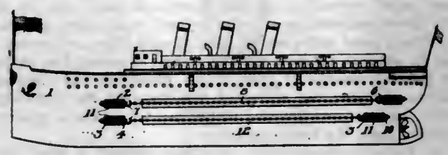
2. An expansion bolt comprising an expander with inclined seats, wedges retained in said seats against side movement and slidable thereon, means for advancing the expander axially to spread the wedges when engaged by a contiguous fixed surface, and means attached to the expander for temporarily holding the wedges upon the expander, said latter means comprising springs free to overlap the wedges.

3. An expansion bolt comprising an expander with inclined seats, wedges retained in said seats against side movement and slidable thereon, means for advancing the expander axially to spread the wedges when engaged by a contiguous fixed surface, and means attached to the expander for temporarily holding the wedges upon the expander, said wedges having seats for springs.

4. An expansion bolt comprising a body part with inclined seats and corner ribs forming side walls of the seats, a plurality of wedges with arcuate surfaces substantially aggregating a circle encompassing the body part and being separated by the corner ribs, and means for advancing the body part.

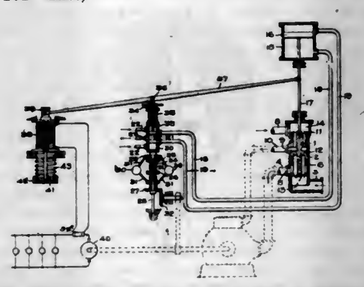
5. An expansion locking device comprising an expander having longitudinally extending grooves therein, said grooves formed with inclined bottoms and having shoulders at the shallow ends of the grooves, removable tapered blocks slidable in said grooves, a series of teeth formed on the upper faces of said blocks with their outer ends terminating on a level with the outer periphery of the expander, locking teeth formed on the blocks with their outer ends projecting beyond the outer ends of the other teeth, threads formed on the expander and a complementary part fitted on the threads.

1,110,798. YIELDABLE REINFORCEMENT FOR VESSELS. JOSEPH KRALIK, Belleville, Ill. Filed Apr. 15, 1913. Serial No. 761,400. (Cl. 114—219.)



A yieldable reinforcement for vessels embodying longitudinal and transversely arranged yieldable braces comprising members adapted to be secured to the sides of a vessel, fenders disposed between the said members said members having mounted therein spring tie rods and flexible connections arranged longitudinally of the fenders and conecting said tie rods.

1,110,799. REGULATING MIXED-PRESSURE TURBINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 15, 1911. Serial No. 608,755. (Cl. 171—226.)



1. The combination with a prime mover, and valve mechanism for controlling the admission of motive fluid to the prime mover, of a fluid-actuated motor for actuating the valve mechanism, a valve for controlling the supply of motive fluid to the motor, a movable seat for the valve, a device responsive to the speed of the prime mover, and a device responsive to the driven load on the prime mover, one of said devices being connected to the valve and the other to the seat.

2. The combination with a prime mover, and valve mechanism for controlling the admission of motive fluid to the prime mover, of a fluid-actuated motor for actuating the valve mechanism, a valve for controlling the supply of motive fluid to the motor, a movable ported seat for the valve, means for adjusting the valve and seat relative to each other, a device responsive to the speed of the prime mover, a device responsive to the driven load on the prime mover, one of said devices being connected to the valve and the other to the seat, and means for preventing overtravel of the motor.

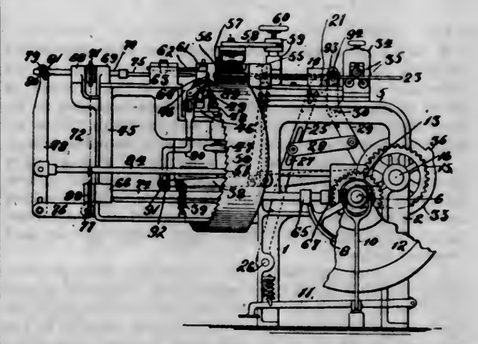
3. In combination, a prime mover, an electric generator driven by the prime mover, valve mechanism for controlling the admission of motive fluid to the prime mover, a fluid-actuated motor for actuating the valve mechanism, a valve for controlling the supply of motive fluid to the motor, a movable ported seat for the valve, a device responsive to the speed of the prime mover, and a device responsive to the current generated by the electric generator, one of said devices being connected to the valve and the other to the seat.

4. In combination, an electric generator, a mixed pressure turbine driving the generator and having a valve mechanism for controlling the flow of exhaust and live steam to said turbine, a motor for actuating said valve mechanism, a pilot valve for said motor, a casing for said pilot valve adapted to be moved in response to changes in the speed of said turbine, a current coil in circuit with said generator and having a movable core, and a lever pivoted to a moving part of said motor, to said pilot valve and to the core of said current coil.

5. The combination with a prime mover, and valve mechanism for controlling the admission of motive fluid to the prime mover, of a fluid-actuated motor for actuating the valve mechanism, a valve mechanism for the motor comprising a valve member and a movable seat member, a device responsive to the speed of the prime mover, a device responsive to the driven load on the prime mover, means connecting one of the valve members to a moving part of the motor and to one of said devices, and a connection between the other valve member and the other device.

[Claims 6 to 10 not printed in the Gazette.]

1,110,800. MACHINE FOR INSERTING WIRES IN THE RIM-ENGAGING PORTION OF SOLID TIRES. CURT KUENTZEL, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 22, 1913. Serial No. 796,591. (Cl. 1—1.)



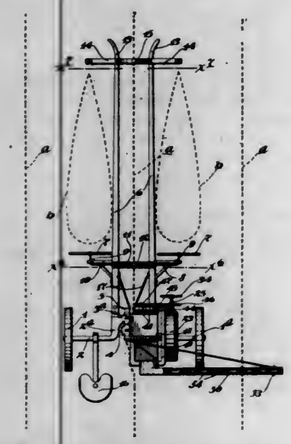
1. A machine for embedding cross wires in the rim-engaging portions of a tire comprising an annularly-shaped drum constituting a supporting means for a tire, a guide provided with an opening and arranged to engage the lateral face of the tire while on said drum, a roller engaging the tread portion of the tire while mounted on said drum, a drill adapted to pass through said opening in said guide and to form openings transversely in the supported tire, and means for inserting a fastener in said opening after the withdrawal of said drill.

2. A machine for embedding cross wires in the rim-engaging portions of a tire comprising an annularly-shaped drum constituting supporting means for a tire, a drill adapted to form an opening transversely in the tire, pivotal means to support said drum to permit its revolution by a step-by-step movement, and further to permit the drum to be positioned at different angles with respect to the axial line of the drill, and means for inserting a fastener in said opening after the withdrawal of said drill.

3. A machine for embedding cross wires in the rim-engaging portions of a tire comprising an annularly-shaped drum constituting a supporting means for the tire, a guide engaging the lateral face of the tire and provided with an opening, a pressure roll engaging the tread of the tire for holding it on the drum, a drill adapted to pass through the opening in said guide and to form openings transversely in the supported tire, a pivotal support for said drum to permit it to be positioned at different angles with respect to

the axial line of the drill while permitting its revolution, mechanism for imparting to said drum a step-by-step revolution, and means for inserting a fastener in said opening after the withdrawal of said drill.

1,110,801. CORN-HARVESTER. LOUIS LARSEN, Lambertson, Minn. Filed Nov. 4, 1912. Serial No. 729,317. (Cl. 56—113.)

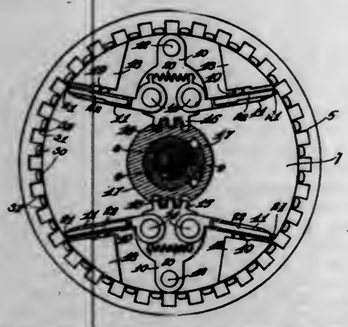


1. In a corn harvester, the combination with coöperating snapping rollers, set, one completely in advance of the other and in a vertical plane parallel to the direction of travel of the machine, of husking rollers arranged to receive from said snapping rollers, and gathering plates arranged to deliver corn stalks between said snapping rollers.

2. In a corn harvester, the combination with an axle, having an arch section, of coöperating snapping rollers, journaled bodily within said arch section, husking rollers arranged to receive from said snapping rollers, and gathering plates arranged to deliver corn stalks between said snapping rollers.

3. In a corn harvester, the combination with an axle, having an arch section, of coöperating snapping rollers, journaled in said arch section, set, one completely in advance of the other and in a vertical plane parallel to the direction of travel of the machine, husking rollers arranged to receive from said snapping rollers, and gathering plates arranged to deliver corn stalks between said snapping rollers.

1,110,802. PAWL-AND-RATCHET MECHANISM. PETER G. LEDEBOER, Chicago, Ill. Filed Dec. 16, 1913. Serial No. 807,024. (Cl. 74—16.)



1. The combination of a swinging member, a pawl pivoted to said member, a toothed member engageable by the pawl when the first-mentioned member is swung, and an auxiliary pawl carried by the first-mentioned pawl and normally projecting from the tip thereof.

2. The combination of a swinging member, a pawl pivoted to said member, a toothed member engageable by the pawl when the first-mentioned member is swung, and an auxiliary pawl carried by the first-mentioned pawl, the tip of the first-mentioned pawl being beveled to an edge, and the auxiliary pawl being on one side of said edge and projecting in advance thereof.

3. The combination of a swinging member, a pawl pivoted to said member, a toothed member engageable by the pawl when the first-mentioned member is swung, an auxiliary pawl carried by the first-mentioned pawl, the tip of the first-mentioned pawl being beveled to an edge, and the auxiliary pawl being on one side of said edge and projecting in advance thereof, yielding means opposing the swing of the first-mentioned pawl in one direction, and yielding means opposing the rearward movement of the auxiliary pawl, the last-mentioned yielding means having a greater tension than the first-mentioned.

4. The combination of a swinging member, a pawl pivoted to said member, a toothed member engageable by the pawl when the first-mentioned member is swung, an auxiliary pawl carried by the first-mentioned pawl, the tip of the first-mentioned pawl being beveled to an edge, and the auxiliary pawl being on one side of said edge and projecting in advance thereof, the teeth of the aforesaid member having raised portions on one side in the path of the auxiliary pawl, and the ends of said raised portions being beveled to converge inwardly of the tooth.

1,110,803. FAN. MALVIN LICHTER, New York, N. Y. Filed July 5, 1913. Serial No. 777,536. (Cl. 230—33.)

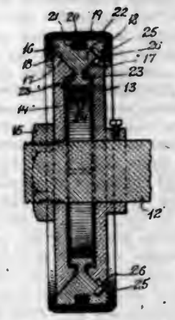
1. A fan having a paper blade formed with a covered recess extending into the body thereof and exposing an unbroken area on each side, a handle of uniform thickness engaging said blade along its lower edge and sides, and a reinforcing rib embedded partially in said handle and said blade.

2. A fan comprising a composite blade consisting of outer leaves and stiffening members interposed between, a flat handle adapted to embrace the lower portion of said blade, and a reinforcing strip embedded in said handle and extending into said stiffening members, said blade representing a level uniform surface upon both sides.

3. A fan comprising a composite blade consisting of outer leaves and stiffening members interposed between, a flat handle adapted to embrace the lower portion of said blade, a reinforcing strip embedded in said handle and extending into said stiffening members, said blade presenting a level uniform surface upon both sides, and an impervious coating covering said handle.

1,110,804. EXPANSIBLE WHEEL. HENRY C. LITTLE, Newton, Mass. Filed Mar. 25, 1912. Serial No. 686,211. (Cl. 51—17.)

1. A wheel of the character stated comprising a shaft, a hub composed of two opposed circular members one rigidly attached to the shaft and the other adjustable laterally on the shaft, means for confining the adjustable member in its adjusted positions, the peripheries of said hub members being beveled, the bevels of said peripheries being oppositely disposed, an annular rim composed of a series of independent segmental members provided with beveled sides complemental to said beveled peripheries, and a continuous contractile elastic tire having a cover of abrasive material embracing said rim, said hub and segmental members being provided with complemental means located between the beveled portions and the shaft for limiting outward movement of said segmental members.



2. A wheel of the character stated comprising a shaft, a hub composed of two opposed circular members one rigidly attached to the shaft and the other adjustable laterally on the shaft, means for confining the adjustable member in its adjusted positions, an annular rim composed of a series of independent segmental members located between said hub members, said segmental members and said hub members being provided with complemental means for effecting radial adjustment of said segmental members, and a continuous contractile tire having a cover of abrasive material surrounding said rim, said hub and said segmental sections being provided with means for limiting outward movement of said segmental sections, said limiting means being located between said shaft and said radial adjusting means.

3. A wheel of the character stated comprising a shaft, a hub composed of two opposed circular members one rigidly attached to the shaft and the other adjustable laterally on the shaft, means for confining the adjustable member in its adjusted positions, an annular rim composed of a series of independent segmental members located between said hub members, said segmental members and said hub members being provided with complemental means for effecting radial adjustment of said segmental members, a continuous contractile tire having a cover of abrasive material surrounding said rim, said hub and said segmental sections being provided with means for limiting outward movement of said segmental sections, said limiting means being located between said shaft and said radial adjusting means, said tire and segmental sections being provided with complemental means for preventing relative lateral movement.

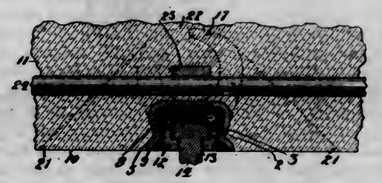
4. A wheel of the character stated comprising an annular rim, an annular elastic tire thereon constituting a pad, means for expanding the rim and permitting its contraction by the pad, and a pad cover embracing the pad, the cover being of greater width than the pad so that its edges are caused to contract by the expansion of the pad to form inclined flexible flanges projecting from opposite edges of the pad and preventing edgewise displacement of the cover in either direction.

1,110,805. ELECTRIC SAD-IRON. EMIL C. LOETSCHER, Dubuque, Iowa. Filed Aug. 31, 1911. Serial No. 647,119. (Cl. 219—25.)

1. A resistance ribbon, provided with oppositely extending transverse slots forming oppositely extending transverse strips, the resistance ribbon being folded upon itself between its ends by bending one of the transverse strips thereof upon itself between its ends, for providing a substantially triangular member including overlapping portions of substantial length, the longitudinal portions of the resistance ribbon which extend from the overlapping portions being slightly longitudinally bent, and an insulating plate adapted to be passed between the overlapping portions of the said strip and provided with a longitudinally extending slot to receive the bent portion of the said strip.

2. A resistance ribbon provided with oppositely extending transverse slots forming oppositely extending transverse strips, the resistance ribbon being folded upon itself between its ends by bending one of the transverse strips thereof upon itself between its ends for providing a substantially triangular member including overlapping portions of substantial length, and an insulating plate arranged between the overlapping portions near the bent portion of said strip.

1,110,806. ANCHOR FOR CONCRETE WORK. ALFRED P. LOHMANN, Akron, Ohio. Filed Dec. 23, 1913. Serial No. 808,311. (Cl. 72—105.)



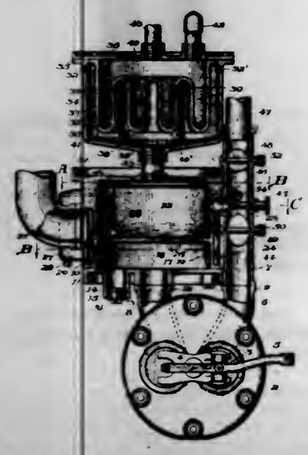
1. An anchoring device for the purpose set forth comprising a body portion adapted to be secured in a concrete structure and with its lower face approximately flush with the face of the wall of said structure, said body portion provided with a pair of upwardly and outwardly-projecting prongs positioned on opposite sides of said body portion and at opposite ends, said prongs projecting outwardly both laterally and longitudinally beyond the normal outlines of said body.

2. An anchoring device for use in connection with concrete structures comprising a body portion adapted to be positioned in a structural self-hardening material with one face thereof approximately flush with the surface of said material, said face provided with a recess extending in said body portion and with the faces adjacent to the opening thereof inclined to constitute a seat for a shiftable member, a member with the sides thereof each provided with inclined faces at an angle to each other, whereby said member may be seated on the inclined faces of said recess, said body portion further provided with a pair of upwardly and outwardly-projecting prongs positioned on the opposite sides of said body portion and at opposite ends thereof, said prongs projecting outwardly both laterally and longitudinally beyond the normal outline of said body portion.

3. An anchoring device for the purpose set forth comprising a body portion provided with a recess in its lower face, the side walls of said recess inclining toward the lower face of the body portion and also inclined toward each other to constitute a wedge-shaped abutment, a coupling member provided with inclined side faces arranged in said recess and to seat on the inclined side wall of said

body portion, whereby said member is wedged between said walls when supporting an object, said body portion furthermore provided at its upper portion with a pair of upwardly and outwardly-projecting prongs positioned on opposite sides of said body portion and at opposite ends thereof, said prongs projecting outwardly both laterally and longitudinally beyond the normal outlines of said body portion.

1,110,807. VAPORIZER FOR INTERNAL-COMBUSTION ENGINES. CHARLES E. LUCKE, New York, and WILLIAM EVERETT VER PLANCK, Schenectady, N. Y., assignors, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed July 3, 1911. Serial No. 636,717. (Cl. 123—133.)



1. A vaporizer for internal combustion engines including, in combination, a boiler adapted to contain a limited amount of liquid fuel, means for maintaining a predetermined level of liquid in said boiler, said boiler having a surrounding heat receiving chamber open to the atmosphere, an engine cylinder provided with intake and exhaust ports, said heat receiving chamber communicating with said exhaust port, a vapor condenser arranged above said boiler and having free communication with the upper level thereof and with the atmosphere, and a separate mixing chamber having a valve controlled port communicating directly with said boiler and with said cylinder intake port.

2. A vaporizer for internal combustion engines including, in combination, a boiler adapted to contain a limited amount of liquid fuel, means for maintaining a predetermined level of fuel in said boiler, said boiler having a raised bottom and a surrounding heat receiving chamber extending below said bottom and above the level of liquid in said boiler, an engine cylinder provided with intake and exhaust ports, said heat receiving chamber communicating with said exhaust port, a vapor condenser arranged above said boiler, and an open pipe connection between the bottom of said condenser and the upper part of said boiler, the upper part of said condenser being in free communication with the atmosphere, and a mixing chamber attached to the side of said boiler and having a valve controlled port communicating with the upper level thereof and with said intake port.

3. A vaporizer for internal combustion engines including, in combination, a boiler adapted to contain a limited amount of liquid fuel, means for maintaining a predetermined level of liquid in said boiler, a source of heat supply communicating with said boiler, a vapor condenser having an opening in its bottom in free communication with the upper part of said boiler and other openings in its walls at its upper level in free communication with the atmosphere, a water vessel arranged within said condenser, the bottom of said vessel having vertical interior walls forming vertical chambers that are open at their lower ends, a baffle secured to the bottom of said condenser, surrounding the opening therein that communicates with said boiler and projecting into the chamber in said water vessel, an engine cylinder, and a mixing chamber communicating therewith and with said boiler.

4. A vaporizer for internal combustion engines including, in combination, an engine cylinder having intake and exhaust passages communicating therewith, a boiler mounted upon said cylinder and adapted to contain a limited amount of liquid fuel, means for maintaining a predetermined level of liquid in said boiler, said boiler having a surrounding chamber communicating with said exhaust passage, a vapor condenser arranged above said boiler and having an open pipe connection therewith, said condenser having free communication at its upper level with the atmosphere, a water vessel arranged within said condenser and having vertical interior walls forming chambers that are open at their lower ends, a cylindrical baffle secured to the bottom of said condenser surrounding said open pipe connection, having its open upper end extending into the chamber formed in the bottom of said water vessel, said baffle having openings near the lower ends of its walls permitting the condensed vapor to flow back to the boiler, a mixing chamber connected with one side of said boiler and communicating with said engine cylinder, and a valve controlled port communicating with said mixing chamber and the upper level of said boiler.

5. A vaporizer for internal combustion engines including, in combination, an engine cylinder having intake and exhaust passages, a boiler, means for maintaining a predetermined level of liquid fuel in said boiler, a base plate secured to the lower end of said boiler, there being an intervening space between the bottom of said boiler and said plate, an opening in said plate communicating with said exhaust passage, an annular chamber surrounding said boiler and communicating with the space below the bottom thereof and with the atmosphere, a mixing chamber connected with said boiler, the inner wall of said mixing chamber forming part of the outer wall of said annular chamber whereby the exhaust gases come in direct contact with the inner wall of said mixing chamber, a valve controlled port communicating with said mixing chamber and said boiler, and a vapor condenser having free communication with the upper part of said boiler and the atmosphere.

[Claims 6 to 8 not printed in the Gazette.]

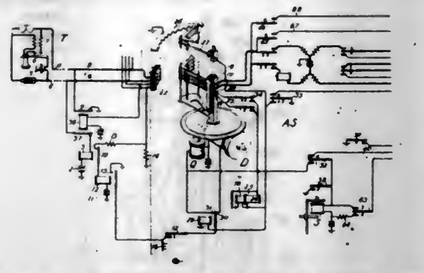
1,110,808. PREPARATION FOR REFACING AND HARDENING FLATTENING-STONES AND CLAY PRODUCTS. FELIX MALHERBE BASILE, Jumet, Belgium. Filed Sept. 16, 1913. Serial No. 790,124. (Cl. 134—45.)

A fireproof composition for coating surfaces exposed to intense heat consisting of silicate of sodium, silicate of potassium, linseed oil, water, finely comminuted clay, red lead, finely comminuted metallic lead, and pulverized talcum in about the proportions set forth.

1,110,809. AUTOMATIC CALL-DISTRIBUTER SYSTEM. FRANK R. MCBERTY, Antwerp, Belgium, assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 6, 1913. Serial No. 740,497. (Cl. 179—18.)

1. In a switching system the combination with a plurality of incoming lines, an outgoing line and switching apparatus for connecting said incoming lines with said outgoing line, of means operating in case a plurality of simultaneous connections are established by the said lines for permitting only one connection to remain.

2. In a switching system the combination with a plurality of incoming lines, an outgoing line and switching apparatus for connecting said incoming lines with said outgoing line, of means operating in case a plurality of simultaneous connections are established by the said lines for permitting only one connection to remain, said means comprising a relay for each incoming line, and a common circuit for said relays adapted to permit only one relay to remain energized therein.

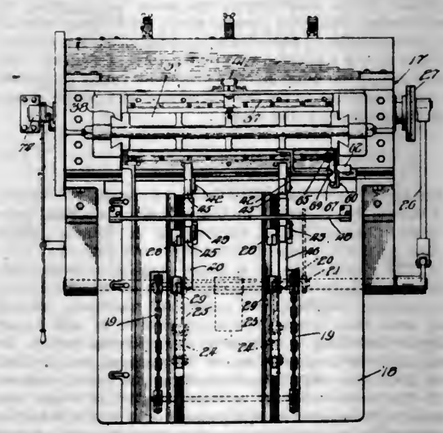


3. In a telephone system the combination with a plurality of incoming lines, an outgoing line and switching apparatus for connecting said incoming lines with said outgoing line, of means operating in case a plurality of simultaneous connections are established by the said lines for permitting only one connection to remain, said means comprising a relay for each incoming line, a common circuit for said relays adapted to permit only one relay to remain energized therein, each of said relays having two windings, one of which is an energizing winding and the other a holding winding, and means for switching said holding winding into parallel with the corresponding windings of other simultaneously energized relays.

4. A multiple switching system comprising means for establishing simultaneously a plurality of connections to a single line and means for thereupon adjusting the switching apparatus so that one connection only may remain.

5. A switching system, comprising means for establishing simultaneously a plurality of connections to a single line and for holding said connections momentarily, and means for thereupon adjusting the switching apparatus so that all but one of the connections will be interrupted.

1,110,810. METAL-SHEARING MACHINE. CHARLES D. MCDONALD, Chicago, Ill., assignor to McDonald Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 6, 1914. Serial No. 816,919. (Cl. 164—21.)



1. In a machine of the class described, the combination of shearing mechanism, a primary feed mechanism moving continuously in one direction, a secondary feed mechanism having a reciprocating movement, said secondary feeding mechanism acting to carry the work from the point of delivery by the first feeding mechanism, into position to be acted upon by the shearing mechanism, substantially as described.

2. In a machine of the class described, the combination of shearing means, feeding means, said feeding means acting in each instance to carry the work beyond the shearing means a distance equal to the width of a blank, said means including a spring pressed member beyond the shearing means engaged and moved by the work, gage members, said spring pressed member acting to force the work back against the gage member after the work has been fully fed forward whereby it is centered with respect to the shearing means, substantially as described.

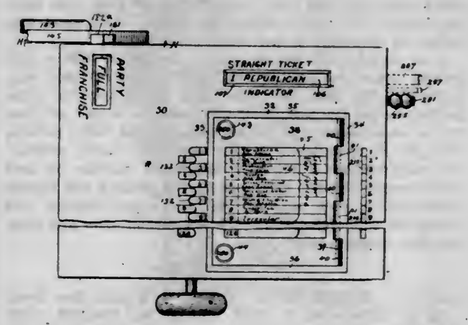
3. In a machine of the class described the combination of companion cutting means spaced apart a distance equal to the width of a blank, feeding means, said feeding means acting to place the work beyond the shearing mechanism a distance equal to the width of a blank whereby a plurality of blanks are formed at the single action of the shearing mechanism, substantially as described.

4. In a machine of the class described, the combination of companion cutting means spaced apart a distance equal to the width of a blank, feeding means, said feeding means acting to feed the work beyond the shearing mechanism a distance equal to the width of a blank whereby a plurality of blanks are formed at a single action of the shearing mechanism, said feeding means including a spring pressed member beyond the shearing means arranged to be engaged and moved by the work, gage members, said work being forced against the gage members by the spring pressed member after the feeding movement is completed whereby it is centered with respect to the shearing mechanism, substantially as described.

5. In a machine of the class described, the combination of companion cutting means spaced apart a distance equal to the width of a blank, means for feeding the work forward in the order of a first feeding step and a second feeding step, the first feeding step placing the work a distance beyond the shearing mechanism equal to the width of a blank whereby two blanks are cut by the first shearing operation, the second step carrying the remainder of the work a distance whereby a strip is placed on each side of the shearing mechanism each equal in width to the width of a blank whereby three blanks are produced by the second shearing operation, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,110,811. VOTING-MACHINE. JOHN HOWARD MCELROY, Chicago, Ill. Filed Apr. 10, 1901. Serial No. 55,251. (Cl. 235—54.)



1. In a voting machine, the combination with candidate registers arranged in office groups, of straight ticket mechanism for simultaneously setting for operation any desired candidate registers of the different groups irrespective of their position or location in the groups, and means for subsequently operating the registers so set.

2. In a voting machine, the combination with candidate registers arranged alphabetically in office groups, of straight ticket mechanism for simultaneously setting for operation the registers in each group devoted to the candidates of any desired party, and means for subsequently operating the registers so set.

3. In a voting machine, the combination with a plurality of candidate registers, of means for throwing them into office groups of any desired size containing any desired number of registers from two up, and straight ticket mechanism for simultaneously effecting the operation of all the registers of the candidates of any party.

4. In a voting machine, the combination with a plurality of candidate registers, of means for throwing them into office groups of any desired size containing any desired number of registers from two up, straight ticket mechanism for simultaneously effecting the operation of all the registers of the candidates of any party, and means for adjusting said straight ticket mechanism so as to include any desired registers in any desired party.

5. In a voting machine, the combination with plural series of candidate registers, of a single straight ticket mechanism adapted to be set to cause the simultaneous operation of all the candidate registers of any one party that may be selected at a single operation depending upon the setting of said mechanism, and means for setting said mechanism.

[Claims 6 to 117 not printed in the Gazette.]

1,110,812. FOLDING COT-BED. ABRAHAM S. MEADOFF, New York, N. Y., assignor to Suspension Bed Spring Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 13, 1913. Serial No. 784,474. (Cl. 5—5.)

1. A portable cot bed adapted to be folded into a very narrow space comprising two narrow central side supports forming each two rigid legs, a rectangular brace secured to the top portion of each support, a pair of cross braces underneath the rectangular braces, means in connection with the rectangular braces and cross braces to impart a cushion effect, and folding bed frames connected at each side of the rectangular braces.

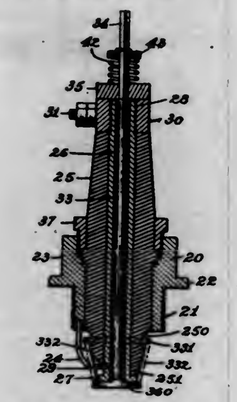
2. A portable cot bed adapted to be folded into a very narrow space comprising two narrow central side supports forming each two rigid legs, a rectangular brace secured to the top portion of each support, a pair of cross braces underneath the rectangular braces, bolts passing through the rectangular braces and cross braces, stationary supports below for said bolts, and springs on said bolts bearing against the cross braces, and folding bed frames connected at each side of the rectangular braces.

3. A portable cot bed adapted to be folded into a very narrow space comprising two narrow central side supports forming each two rigid legs, a rectangular brace secured to the top portion of each support, a pair of cross braces underneath the rectangular braces, bolts passing through the rectangular braces and cross braces, stationary supports below for said bolts, and springs on said bolts bearing against the cross braces, folding bed frames connected at each side of the rectangular braces, and means for supporting the bed frames when open and locking them when folded.

1,110,813. SPARK-PLUG. EDWARD J. NOBLE, New York, N. Y. Filed Oct. 5, 1912. Serial No. 724,028. (Cl. 123—169.)

1. A spark plug, having a sparking terminal, a cleaning device for the terminal rotatably mounted on the plug and movable into and out of contact with the terminal, and means for locking the cleaning device to the plug against accidental rotation, said means engaging the cleaning device to sesure it only when the same is out of contact with the sparking terminal.

2. A spark plug, having a sparking terminal, a cleaning device for the terminal rotatably mounted on the plug and movable into and out of contact with the terminal, and means for locking the cleaning device against accidental rotation, said means comprising detachably interlocking parts carried respectively by the plug and cleaning device and interlocking only when the cleaning device is out of contact with the sparking terminal.



3. A spark plug having a sparking terminal at its inner end, a cleaning device comprising a shaft rotatably mounted in the plug and projecting from both ends thereof, a cleaning finger mounted on the inner end of the shaft and movable therewith into and out of contact with the terminal, and detachably interlocking devices carried by the outer end of the plug and shaft for securing said shaft against rotation, said devices interlocking only when the cleaning finger is out of contact with the terminal.

4. A spark plug having a sparking terminal at its inner end, a cleaning device comprising a shaft rotatably mounted in the plug and projecting from both ends thereof, a cleaning finger mounted on the inner end of the shaft and movable therewith into and out of contact with the terminal, and a spring-pressed device longitudinally slidable upon the outer end of the shaft and having a detachable interlocking engagement with the plug for holding the shaft against rotation.

5. A spark plug having a sparking terminal, a cleaning device comprising a shaft rotatably mounted in the plug and projecting from both ends thereof, a cleaning finger mounted on the inner end of the shaft and operating on the terminal, the outer portion of the shaft being angular in cross section, a disk slidably mounted on the angular portion of the shaft and detachably interlocking with the outer end of the plug, another disk mounted on said shaft in spaced relation to the first mentioned disk, and a spring interposed between the disks.

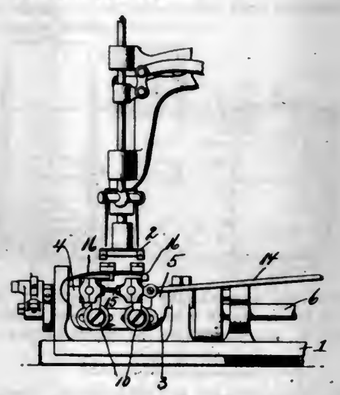
[Claims 6 to 12 not printed in the Gazette.]

1,110,814. LOOPER-SUPPORT. FRANCIS S. NORTH, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 12, 1911. Serial No. 654,328. (Cl. 112—5.)

1. The combination of a looper support, a looper carrier, a stud mounted on said support on which said carrier is pivotally mounted, and means for positively holding said stud from lateral movement relative to said looper support including a reversible plate having means for engaging said stud, and means for engaging and holding said plate from endwise movement on said looper support.

2. The combination of a looper support, a looper carrier, a stud mounted on said support on which said carrier is pivotally mounted, said looper support being slotted to receive said stud, a plate having an aperture therein fitting said stud, and means whereby said plate is held from lateral movement relative to said support.

3. The combination of a looper support, a looper carrier, a stud on said support on which said carrier is pivotally mounted, said support being slotted to receive said stud, a plate having an aperture therein fitting said stud, and means for holding said plate from lateral movement relative to said support, said aperture in said plate being located nearer one end thereof than the other, whereby the reversing of said plate adjusts said stud for the looper carrier relative to said support.

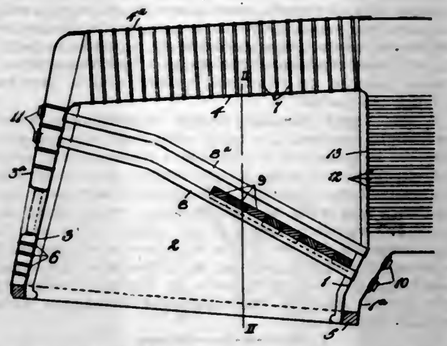


4. The combination of a looper support, a looper carrier, a stud on said support on which said carrier is pivotally mounted, a plate having an opening therein surrounding said pivot stud, said support having integral members for preventing lateral movement of said plate.

5. The combination of a looper support, a looper carrier, a stud on said support on which said carrier is pivotally mounted, a plate having an opening therein surrounding said pivot stud, said support having integral members for preventing lateral movement of said plate, the opening in said plate being located at one side the center thereof, whereby the reversing of said plate adjusts the looper carrier stud relative to said support.

[Claim 6 not printed in the Gazette.]

1,110,815. LOCOMOTIVE-FIRE-BOX CONSTRUCTION. LE GRAND PARISH, New York, N. Y. Filed June 15, 1914. Serial No. 845,079. (Cl. 122—71.)

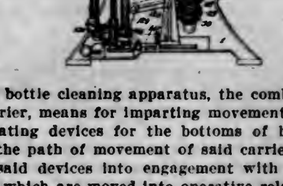


1. A locomotive fire-box comprising in combination with water spaces, a plurality of circulating tubes extending rearwardly and upwardly from one water space to another and arranged in two rows, spaced one substantially above the other, with the tubes in substantial parallelism whereby an arch brick wall supported on any of the tubes can be accessibly and removably supported thereby.

2. A locomotive fire-box comprising in combination with water spaces, a plurality of circulating tubes extending rearwardly and upwardly from one water space to another and arranged in two rows, one above the other, and an arch wall supported on the tubes of the lower row and extending rearwardly from a point adjacent the forward end of the tubes a portion of the distance to the rear water space, the said wall protecting the tubes of the upper row from direct contact with the intense heat but subjecting said tubes to the action of the hot gases passing from the rear of the wall forwardly above the wall.

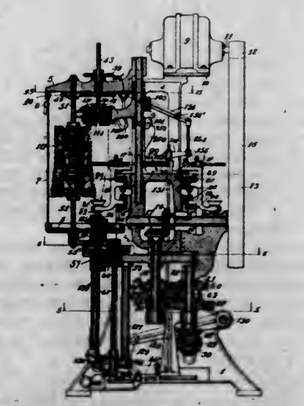
3. A locomotive fire-box comprising in combination with water spaces, a plurality of circulating tubes extending rearwardly and upwardly from one water space to another and arranged in two rows, spaced one above the other with the tubes in substantial parallelism and one located above the other whereby an arch brick wall can be accessibly and removably supported on one of the rows of tubes.

1,110,816. SAFETY-RECEPTACLE FOR MERCHANDISE. JOHN I. PENNINGTON, Baltimore, Md. Filed Mar. 12, 1914. Serial No. 824,131. (Cl. 232—41.)



A receptacle provided with a gravity latch pivotally secured thereto, a housing for said latch having an elongated slot in its wall through which one arm of said latch extends, a member on the door of the receptacle engaged by said latch and having a member constructed to raise the latch, and also to secure it in engagement with the first member, and a member engaging the opposite end of the latch and extending through the wall of the receptacle to disengage the latch.

1,110,817. BOTTLE-CLEANING APPARATUS. BRYAN D. PINKNEY, Cleveland, Ohio, assignor to The Loew Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 2, 1908, Serial No. 455,792. Renewed May 18, 1914. Serial No. 839,438. (Cl. 141—7.)



1. In a bottle cleaning apparatus, the combination of a bottle carrier, means for imparting movement to said carrier, operating devices for the bottoms of bottles interposed in the path of movement of said carrier, means for bringing said devices into engagement with the bottoms of bottles which are moved into operative relation thereto by the carrier, a cleaning device for each bottle which is in operative relation to one of the former devices, means whereby the cleaning device may be moved, and means independent of the bottle for automatically limiting said movement according to the length of the bottle.

2. In a bottle cleaning apparatus, the combination of a bottle carrier, means for imparting movement to said carrier, bottle-operating devices interposed in the path of

movement of said carrier, means for automatically bringing said devices into engagement with the bottles which are moved into operative relation thereto by the carrier, a cleaning device for the interior of each bottle which is in operative relation to the former devices, means whereby the cleaning device may be moved, and means independent of the bottle for automatically limiting said movement according to the distance through which said device can pass without obstruction.

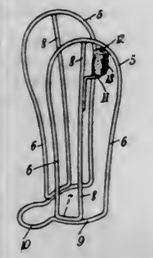
3. In a cleaning apparatus for bottles of varying lengths, the combination of a bottle support, a device for cleaning the interior of a bottle on said support, means whereby the cleaning device may be moved, and means independent of the bottle for automatically limiting said movement according to the distance between its starting point and an obstruction provided by the bottle.

4. In a cleaning apparatus for bottles of varying lengths, the combination of a bottle support, a device for cleaning a bottle on said support, means whereby the cleaning device may be moved, and means independent of the bottle for automatically limiting said movement according to the length of the bottle.

5. In a bottle cleaning apparatus, the combination of a plurality of bottle supports, a plurality of cleaning devices corresponding to said supports, a carrier for each of said devices, a frame common to all of said carriers, means for reciprocating said frame toward and from the bottle supports, and breakable connections between said frame and said carriers.

[Claims 6 to 60 not printed in the Gazette.]

1,110,818. SPECULUM. FRANK E. P'POOL, Snyder, Tex. Filed Oct. 3, 1911, Serial No. 652,483. Renewed July 29, 1914. Serial No. 853,920. (Cl. 128—24.)



1. A speculum such as described, having a plurality of resilient wire-constructed skeleton sides, said sides being connected at the forward end by a resilient loop disposed perpendicular to the axis of the speculum to normally spread apart the said sides; and a bracket support mounted upon one of said sides to extend between the said sides to receive a detergent or medicinal article.

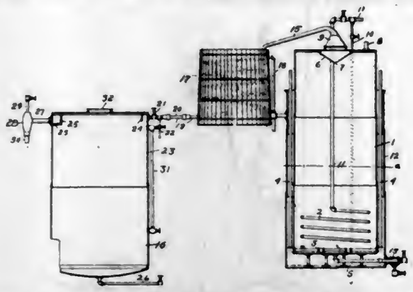
2. A speculum such as described having separable sides constructed from spring wire and united at one end to form a handle, said handle adapted to spread said sides apart; and a supporting bracket extended from the sides of the speculum to the intermediate space between when said sides are spread, said bracket adapted to support a detergent or medicinal article.

1,110,819. PROCESS OF PRODUCING PURE TURPENTINE. THOMAS WILLIAMS PRITCHARD, Wilmington, N. C. Filed Sept. 3, 1912. Serial No. 718,435. (Cl. 203—4.)

1. The herein described process of producing pure turpentine by distillation of turpentine containing impurities which consists in drawing through it air warmed to a temperature not substantially above 212° F. and condensing the vapor drawn off with the air.

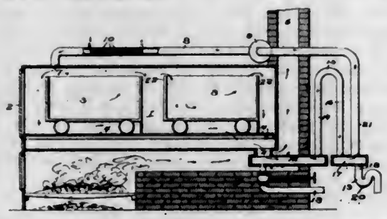
2. The herein described process of producing pure turpentine by distillation of turpentine containing impurities which consists in warming the impure turpentine to a temperature not substantially above 212° F. drawing air through it and condensing the vapor carried off with the air.

3. The herein described process of producing pure turpentine by distillation of turpentine containing impurities which consists in warming the impure turpentine to a



temperature not substantially above 212° F., drawing through it air heated to a temperature not substantially above 212° F., and condensing the vapors carried off with the air.

1,110,820. PROCESS OF DISTILLATION. THOMAS W. PRITCHARD, Wilmington, N. C., and MILTON C. WHITAKER, New York, N. Y. Filed Nov. 12, 1912. Serial No. 730,997. (Cl. 203—6.)



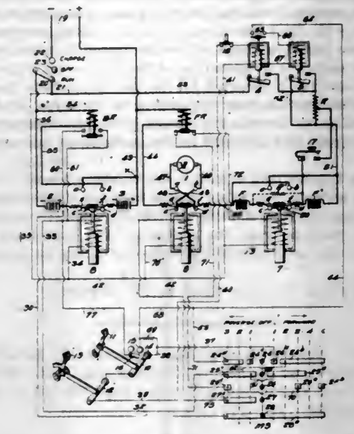
1. The herein described process of distillation which consists in so charging a retort with wood or other non-liquid material in fragments or pieces in a container that space for circulation of gases is left between the charge and the walls of the retort and the material is kept from contact with said walls, heating the retort, withdrawing the gases and vapors produced by the action of the heat in the charge, condensing a portion of the vapors and equalizing the heat throughout the charge by returning uncondensed gases to the retort and causing them to circulate through the charge.

2. The herein described process of distillation which consists in so charging a retort with wood or other non-material in fragments or pieces in a container that space for circulation of gases is left between the charge and the walls of the retort and the material is kept from contact with said walls, heating the retort, withdrawing the gases and vapors produced by the action of the heat in the charge, cooling the gases and vapors so withdrawn to condense the vapors, heating the uncondensed gases and equalizing the heat throughout the charge by returning the heated gases to the retort and circulating them through the charge.

1,110,821. MOTOR-CONTROLLER. GUY R. RADLEY, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 3, 1912. Serial No. 701,404. (Cl. 171—179.)

1. In a motor controller, in combination, batteries for supplying power, means for commutating said batteries from parallel to series including governing means insuring against establishment of series connections except under normal power conditions and a controller adapted to be set to cause operation of said commutating means automatically to establish series conections for said batteries upon restoration of normal power conditions following an abnormal power variation.

2. In a motor controller, in combination, batteries for supplying power, electro-responsive means for connecting said batteries in either series or parallel relation, electro-responsive means responsive to prevent operation of said former means to establish series connections, and a master controller adapted to be set to cause automatic operation of said first-mentioned means when said second-mentioned means becomes ineffective.



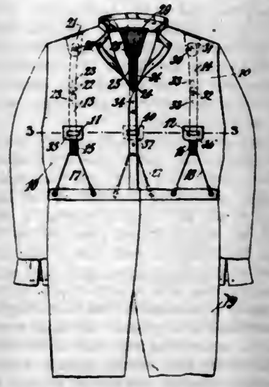
3. In a motor controller, in combination, storage batteries for supplying power, electro-responsive means adapted when deënergized to connect said batteries in series and upon response to connect the same in parallel, and automatic means tending to maintain said electro-responsive means energized so long as certain electrical conditions prevail.

4. In motor controller, in combination, storage batteries for supplying power, electro-responsive means adapted when deënergized to connect said batteries in series and upon response to connect said batteries in parallel, and a controller for said means.

5. In a motor controller, in combination, storage batteries for supplying power, means for connecting said batteries in either series or parallel, and an electro-responsive governing device for said means included in circuit upon the establishment of parallel connections and disconnected from circuit upon the establishment of series connections.

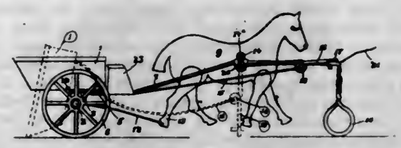
[Claims 6 to 31 not printed in the Gazette.]

1,110,822. SHIRT. ANTON REZNICEK, Jersey City, N. J. Filed Nov. 17, 1913. Serial No. 801,440. (Cl. 2—96.)



A shirt having inside front tabs dependent from the shoulders, an inside back tab dependent from the yoke, two front chest slots disposed vertically below said shoulder tabs, a back slot disposed vertically below said back tab, independent adjustable front straps detachably connected with said front tabs at the shoulders and provided with looped ends depending through said front chest slots outside the shirt, an independent adjustable back strap detachably connected with said back tab at the shoulders and having a loop depending through said back slot outside the shirt, and suspender ends looped through the loops of said straps outside the shirt body and adapted to engage the trousers buttons, said chest slots being disposed above the connections of the suspender ends with the loops of said straps.

1,110,823. TOY. OLIVER M. RHODES, Canton, Ohio. Filed Mar. 14, 1914. Serial No. 824,602. (Cl. 46—45.)



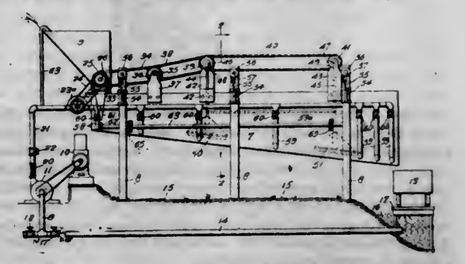
1. In a toy of the class described, a pivoted box mounted upon a traveling frame, said box pivoted intermediate its ends, a tongue having pivotally connected thereto a rocking body, means for rocking said body by the movement of the toy, a lever provided at its outer end with a retaining hook, said retaining hook adapted for engagement with the tongue, and said lever pivotally connected at its opposite end to said tongue, a cord connected intermediate the ends of the lever and to the forward end of the pivoted box, and means for supporting said tongue.

2. In a toy of the class described, the combination of an axle provided with a crank and traveling wheels, a box located above the axle and pivoted intermediate its ends, a tongue provided with a pivoted lever, means for holding the free end of the lever to the tongue and a cord connected to said lever and to the forward end of the pivoted box, and means for supporting said tongue.

3. In a toy of the class described, the combination of a traveling frame provided with a tongue, a lever pivoted intermediate the ends of the tongue, said lever provided with a hook adapted to engage the tongue, a box pivoted intermediate its ends and a cord connected to the lever intermediate its ends and to the forward end of the pivoted box, and means for supporting said tongue.

4. In a toy of the class described, the combination of a traveling frame provided with a tongue, a lever pivoted intermediate the ends of the tongue, said lever provided with a hook adapted to engage the tongue, a box pivoted intermediate its ends and a cord connected to the lever and to the forward end of the pivoted box, and means for supporting said tongue.

1,110,824. SLUICE AND ORE CONCENTRATOR. CLARENCE SLOCUM RICHARDSON, Los Angeles, Cal. Filed Aug. 26, 1913. Serial No. 786,686. (Cl. 83—88.)



1. In an ore concentrator, the combination of a sluice box, means for suspending said sluice box in order to enable the same to swing, a pipe for conveying water into said sluice box, said pipe having a flexible section, ore

agitating mechanism carried by said sluice box, and mechanism controllable by the flow of water into said sluice box for actuating said agitating mechanism.

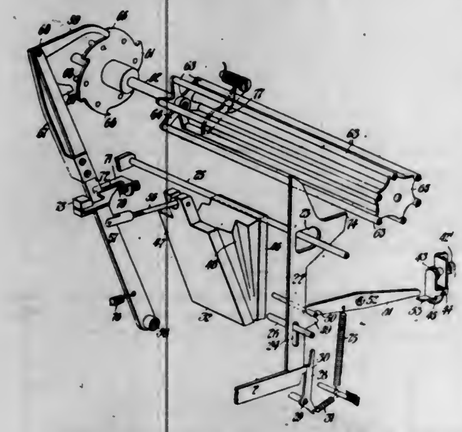
2. An ore concentrator comprising a pump, means for actuating the same, a flexible pipe section connected with said pump, a distributing pipe connected with said flexible pipe section, a sluice box carrying said distributing pipe, means for suspending said sluice box in order to enable the latter to be swung, a motor connected with said distributing pipe and adapted to be actuated by the flow of fluid therethrough, a feed roller mounted within said hopper, and connections from said feed roller to said motor for enabling said motor to actuate said feed roller.

3. An ore concentrator comprising a sluice box, means for mounting said sluice box so as to permit the same to swing, means for feeding ore and water into said sluice box, crank shafts supported by said sluice box and provided with crank pendulum bars suspended from said cranks, a pitman connecting the pendulum bars, rake heads carried by said pendulum bars and located within said sluice box, and means controllable by the flow of the fluid into said sluice box for actuating said crank shafts.

4. In a concentrator of the character described, a sluice box having a slanting bottom provided with a plurality of transverse grooves, and a plurality of riffle pans and fluid supply pipes disposed in said grooves and alternating throughout the series thereof.

5. In a concentrator of the character described, a sluice box having a slanting bottom provided with a series of transverse alternately wedge shaped and semi-circular grooves, riffle pans removably seated in the wedge shaped grooves, and valved fluid supply pipes disposed in the semi-circular grooves and alternating with the riffle pans throughout the series.

1,110,825. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 10, 1913. Serial No. 753,224. (Cl. 197—15.)



1. In a typewriting machine, the combination of type bars, devices selectively settable into positions to form actuating means for their type bars, means to automatically lock said devices in such positions, and an intermittently operated pneumatic motor brought into operation by the setting of said devices to operate said devices and thereby actuate the type bars, said devices being unlocked during the operation of the motor and thereby permitted to return to their initial positions.

2. In a typewriting machine, the combination of a key lever, a type bar, a lock for the type bar, a device operated by the key lever to release the lock, and a pneumatic motor controlled by said device to actuate the type bar.

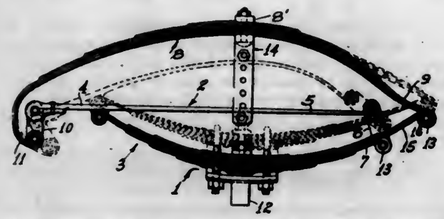
3. In a typewriting machine, the combination of a key lever, a type bar, an operating bar supported on the key lever and operable by the key lever in one direction, and pneumatic means controlled by such operation to move said operating bar in a different direction and thereby operate the type bar.

4. In a typewriting machine, the combination of a rotary driver, a pneumatic motor, key levers, a valve operated by said levers to effect the operation of the motor, means operated by the motor to impart a step-by-step rotation to the driver in response to operation of the key levers, type bars, devices selectively operated by the key levers into position to transmit motion from the driver to the type bars, and individual locks for the key levers set by the operation of the key levers and released by the selectively operated devices.

5. In a typewriting machine, the combination of a rotary driver, a bellows, operating means between the bellows and driver, type bars, manually controlled selective means to transmit motion from the driver to the type bars, and locks to hold said selective means stationary in operative position.

[Claims 6 to 35 not printed in the Gazette.]

1,110,826. VEHICLE-SPRING. PERCIVAL L. ROOKLEDGE and GEORGE W. GILLESPIE, Cambria, Cal.; said Gillespie assignor to said Rookledge. Filed Sept. 25, 1911. Serial No. 651,287. (Cl. 21—101.)



1. The combination with a half elliptic spring, of a lever spring fulcrumed to one end of the half elliptic spring, and having a short and a long arm; the long arm being resilient; a shackle connecting the end of the long arm with the other end of the half elliptic spring; a second half elliptic spring connected at one end with the same end of the half elliptic spring as the resilient arm, and a shackle connecting the short arm of the lever spring with the other end of the second half elliptic spring.

2. The combination with a half elliptic spring, of a lever spring fulcrumed to one end of the half elliptic spring and having a short and a long arm; the long arm being resilient; a shackle connecting the free end of the long arm with the other end of the half elliptic spring; another half elliptic spring connected at one end with the same end of the first half elliptic spring as the resilient arm; a shackle connecting the short arm of the lever spring with the other end of the second half elliptic spring, and a vertically adjustable bumper to contact with the resilient arm of the lever spring.

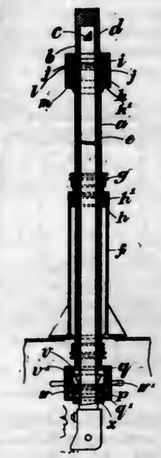
3. The combination with a half elliptic spring, of a lever spring fulcrumed to one end of the half elliptic spring, and having a short and a long arm; the long arm being resilient; a shackle connecting the end of the long arm with the other end of the half elliptic spring; a supported body connected at one end with the same end of the half elliptic spring as the resilient arm, and a shackle connecting the short arm of the lever spring with said supported body.

4. The combination with a half elliptic spring, of a lever spring fulcrumed to one end of the half elliptic spring, and having a short and a long arm; the long arm being resilient; a shackle connecting the end of the long arm with the other end of the half elliptic spring; a supported body having a spring member connected at one end with the same end of the half elliptic spring as the resilient arm, and a shackle connecting the short arm of the lever spring with the spring member of said supported body.

5. The combination with a half-elliptic spring, of a supported body above such spring, a lever spring fulcrumed between the half-elliptic spring and the supported body to resist approach and separation of said half-elliptic spring and said supported body, and a duplex bumper for contact with the lever spring at parts of the approaching and separating movements of the supported body and half-elliptic spring and means to adjust the bumper to limit said movements.

[Claims 6 to 11 not printed in the Gazette.]

1,110,827. PERISCOPE FOR SUBMARINE AND SUBMERSIBLE CRAFT. BEDRICH ROSENBAUM, Dumbarton, Scotland. Filed June 17, 1913. Serial No. 774,099. (Cl. 114—16.)



1. A periscope having, in combination, a vertically adjustable outer protecting tube, an inner periscope tube having the head only thereof arranged to project beyond the outer tube, and a watertight joint between said tubes.

2. A periscope having, in combination, a vertically adjustable outer protecting tube, an inner rotatable tube having the head only thereof arranged to project beyond the outer tube, and a water tight joint between said tubes and at the top of the outer tube.

3. A periscope having, in combination, an inner periscope tube, an outer tube and a joint between the tubes which, when the periscope is under water, can be tightened and, when the head of the periscope is out of the water, can be relieved.

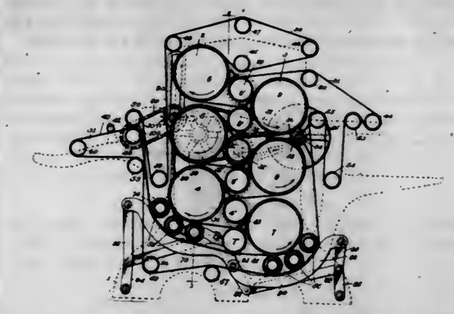
4. A periscope having, in combination, an outer tube, an inner tube carrying the optical parts and the head of which projects beyond the inner tube and a joint between the inner and outer tubes which, when the periscope is under water, can be tightened and, when the head of the periscope is out of the water, can be relieved.

5. A periscope having, in combination, an outer tube, an inner tube carrying the optical parts and the head of which projects beyond the inner tube and a flexible joint between the inner and outer tubes which, when the periscope is under water, can be tightened and, when the head of the periscope is out of the water, can be relieved.

[Claims 6 to 31 not printed in the Gazette.]

1,110,828. IRONING-MACHINE. CHARLES WILLIAM SADLER, Windsor Locks, Conn. Filed May 26, 1913. Serial No. 769,874. (Cl. 68—9.)

1. In an ironing machine of the class described, a frame, a plurality of series of ironing cylinders, the cylinders of one series rotating in an opposite direction to the cylinders of the other series, means for heating said cylinders, a pressure roller for the lowermost cylinder in each series, an independent apron for each series of cylinders for guiding material to be ironed around said cylinders, a series of transfer rollers for guiding said aprons, and means for transferring said material to be ironed from one series of cylinders to the other, said means and the position of said apron causing said material to be engaged by one of said cylinders on one side and then on the opposite side by the next cylinder and so on through the machine, whereby the material to be ironed alternately engages cylinders of said series and is ironed on opposite sides.



2. In an ironing machine of the class described, a plurality of series of ironing cylinders, said series being arranged parallel, an independent apron for each of said series, independent driving means for each of said aprons, driving means for said cylinders, and means for causing the article being ironed to be transferred from the first cylinder of one series to the first cylinder of the second series and from thence to the second cylinder of the first series, and so on through the entire machine whereby the article being ironed is engaged on opposite sides by certain of the cylinders.

3. In an ironing machine of the class described, a plurality of ironing cylinders, feeding and guiding aprons passing around said cylinders, said aprons feeding article to be ironed to said cylinders, and from one cylinder to the other, means for driving said aprons, and means for driving the cylinders at a higher rate of speed than said aprons whereby the articles being ironed will be polished.

4. In an ironing machine of the class described, a pair of rows of ironing cylinders, a single row of driving rollers, there being one roller for each cylinder, an apron for each row of cylinders, said aprons passing over each alternate driving roller, and a knife arranged adjacent each of said cylinders for causing an article passing thereover to be transferred to the apron passing over one of said driving rollers whereby the article may be carried to the next cylinder in the adjacent row.

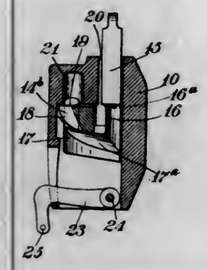
5. In an ironing machine of the class described, a plurality of ironing cylinders, a plurality of pressure rollers for cylinders, a substantially arc-shaped arm arranged adjacent each of said cylinders for supporting said pressure rollers, resilient means for connecting said pressure rollers with said arms, a toggle connected with the outer end of each of said arms, a link connected with each of said toggles for operating the same, whereby said arms are raised and lowered for allowing various thicknesses of material to be passed between the pressure rollers and the cylinders, means for simultaneously operating said rollers, and a continuously moving member for moving said means and holding the same in one of its extreme positions whereby said pressure rollers are held against said cylinders or out of contact therewith.

[Claims 6 to 12 not printed in the Gazette.]

1,110,829. CAR-COUPLING. CHARLES SCHLARED, Columbus, Ohio, assignor of one-half to Moses H. Neil, Columbus, Ohio. Filed Feb. 24, 1914. Serial No. 820,397. (Cl. 213—10.)

1. In a car coupling, the combination with a drawhead and a horizontally swinging knuckle having a heel, a

locking pin having a body portion and an extension and means in the drawhead for compelling a rectilinear vertical movement of said locking pin, said means also permitting an axial oscillating movement of the body portion of said locking pin, said body portion having a shoulder to rest on the heel of the knuckle and said extension also having a shoulder to rest on the heel of the knuckle to support the same in position to permit opening of the knuckle, the resting point of the shoulder of the extension being below the horizontal plane of the resting point of the first mentioned shoulder, and means in the drawhead to automatically cause said locking pin to horizontally oscillate on the axis of the body portion of the locking pin into setting position when the pin is raised.

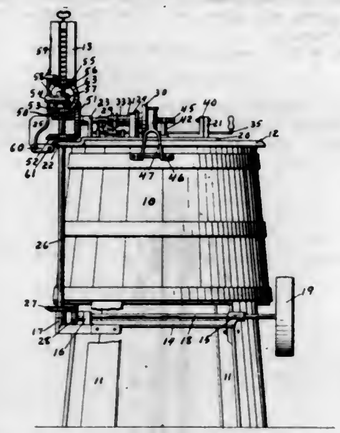


2. In a car coupling, the combination with a drawhead and a horizontally swinging knuckle having a heel, a locking pin having a body portion and an extension and means in the drawhead for compelling a rectilinear vertical movement of said locking pin, said means also permitting an axial oscillating movement of the body portion of said locking pin, said body portion having a shoulder to rest on the heel of the knuckle and said extension also having a shoulder to rest on the heel of the knuckle to support the same in position to permit opening of the knuckle, the resting point of the shoulder of the extension being below the horizontal plane of the resting point of the first mentioned shoulder, means in the drawhead to automatically cause said locking pin to horizontally oscillate on the axis of the body portion of the locking pin into setting position when the pin is raised, and said coupling pin also provided with a cam surface between the body portion of the pin and said extension to actuate the knuckle to throw the same to open position when the pin is raised beyond the setting position.

1,110,830. GEARING DEVICE FOR WASHING-MACHINES AND WRINGERS. GEORGE SEEDS, Newton, Iowa, assignor to Newton Disc Plow Company, Newton, Iowa, a Corporation of Iowa. Filed Dec. 5, 1912. Serial No. 735,137. (Cl. 74—50.)

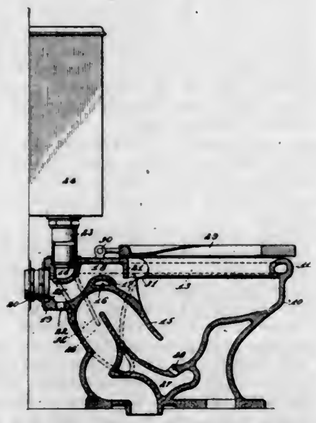
1. In a device of the class described, the combination of a support, a hinged member thereon, a bracket provided with horizontal bearings in line with each other and with an extension, one end of which is in line with said horizontal bearings, with an extension designed to form a support, with vertical bearings in line with each other, a bracket on said hinged member having an extension pivoted to the extension on said first bracket in line with said horizontal bearings, a second bracket on said hinged member forming a vertical bearing and provided with guides for a rack bar, said second bracket on said hinged member being provided with an extension forming a bearing line with the horizontal bearings on said first bracket.

2. In a device of the class described, the combination of a support, a hinged member thereon, a bracket on said support, said bracket having formed thereon horizontal bearings in line with each other and having an extension, one end of which is in line with said horizontal bearings, a shaft mounted in said horizontal bearings, a crank wheel having an extended hub formed thereon loosely mounted on said horizontal shaft, a vertical shaft mounted on said support, a beveled gear on said vertical shaft, a beveled gear on said horizontal shaft in mesh with said first beveled gear, a bracket on said hinged member pivoted to the extension on said first bracket, in line with said horizontal bearings, a second bracket on said hinged member, said last named bracket being provided with guides



having a rack bar and with an extension forming a bearing for said hub, a rack bar slidably mounted in said guides, a link pivoted to said rack bar and to said crank wheel, and a clutch member mounted on said second horizontal shaft, slidably but non rotatably and designed to coact with the clutch member on said hub.

1,110,831. WATER-CLOSET. JOSEPH W. SHARP, Jr., Philadelphia, Pa., assignor to Haines, Jones & Cadbury Inc., Philadelphia, Pa. Filed May 13, 1914. Serial No. 838,303. (Cl. 4—22.)



1. A bowl of the character described, having an up-leg constituting a part of the rear wall of the bowl, a flushing rim extending around the bowl and terminating at either side of the up-leg whereby to provide an elongated bowl opening, supply ducts for the opposite ends of said rim, and a separate supply duct for the up-leg and rear bowl wall.

2. A bowl of the character described having a U-shape flushing rim terminating at the opposite sides of the rear wall of the bowl whereby to provide an elongated opening at the top of the bowl, a separate supply duct for each arm of the U-shape flushing rim, and independent flushing means for the rear wall of the bowl discharging between the ends of said U-shape rim.

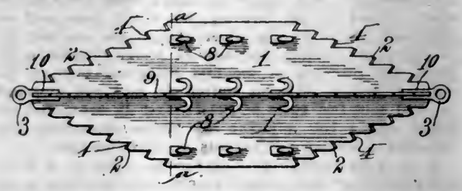
3. A bowl of the character described having a U-shape flushing rim terminating at the opposite sides of the rear wall of the bowl, means for supplying water to the flushing rim, and independent flushing means for the rear wall of the bowl discharging between the ends of said U-shape rim.

4. A device as specified having a hopper, a flushing rim at the upper edge of the hopper terminating at the opposite sides of the rear wall of the hopper, independent supply passages leading to the opposite sides of the flushing rim, a flushing chamber located at the top of the rear wall of the hopper, and an independent supply passage leading to said flushing chamber.

5. A device as specified having a bowl, an upleg constituting a part of the rear wall of the bowl, a flushing rim extending around the bowl and terminating at the opposite sides of the upleg whereby to provide an elongated bowl opening, supply ducts for the opposite ends of said rim, a supply duct for the upleg, a flushing chamber located adjacent to the top of said upleg and an independent supply duct for said flushing chamber.

[Claims 6 to 12 not printed in the Gazette.]

1,110,832. SEWER-AGITATOR. ANDREW W. SHIRK, Dayton, Ohio. Filed Aug. 25, 1913. Serial No. 786,610. (Cl. 182—2.)



1. A sewer-cleaning device, comprising a plurality of blades extending at right angles to each other, the longitudinal edges of said blades being tapered inwardly toward the ends, and said tapered edges being provided with individual cutting edges which incline forwardly, said device having attachment means on the ends thereof, substantially as specified.

2. In a sewer-cleaning device, the combination of a plurality of oblong plates united throughout their longitudinal axes and providing a series of blades extending at right angles, the longitudinal edges of said blades being tapered inwardly to their ends and said tapered edges being provided with cutting edges lying in angles to the plane of said blades, and grappling hooks arranged on said blades, substantially as specified.

1,110,833. SECTIONAL FLOORING. JOHN QUINCY SMITH and ARCHIE B. HOOVER, Paola, Kans. Filed Oct. 7, 1913. Serial No. 793,913. (Cl. 20—6.)

1. In sectional knock down flooring, floor joists, floor sections, having bottom cleats, and detachable means of conection between said joists and said sections having engagement with said cleats to simultaneously draw the floor sections laterally together and down to the joists.

2. In sectional knock down flooring, floor joists, floor sections, having bottom cleats, and detachable hooked bolts having seats in the bottom cleats and carrying rods engaging the joists to simultaneously draw the floor sections laterally together and down to the joists.

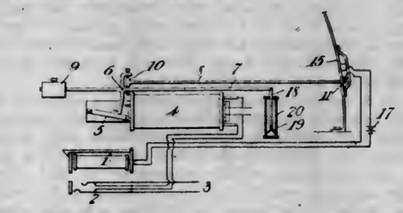
3. In sectional knock down flooring, floor joists, floor sections, having bottom cleats, rods engaging said joists, bolts engaging the rods and having hooked free ends seated in said cleats, and adjustable nuts upon the other ends of said bolts whereby the floor sections may be simultaneously drawn laterally together and down to said joists.

4. In sectional knock down flooring, floor joists, floor sections having bottom cleats and tongue and grooved ends and sides, said cleats having seats therein, rods engaging said joists, bolts engaging said rods and having hooked free ends engaging said seats upon endwise movement of the floor sections to simultaneously engage the tongue and grooved ends of meeting sections, and nuts threaded upon the other ends of said bolts and adjustable to simultaneously draw the floor sections laterally together to engage the tongue and grooved sides of meeting sections, and down to said joists.

5. In sectional knock down flooring, floor joists, floor sections, and detachable means of connection between said joists and said sections to simultaneously draw the floor sections together and down to the joists, embodying rods extending transversely through the joists, bolts engaging perforations of said rods and extending at right angles thereto, and adjusting nuts threaded upon the bolts.

[Claims 6 and 7 not printed in the Gazette.]

1,110,834. SELECTIVE SYSTEM. SIDNEY CHARLES SNOW, Blakesburg, Iowa. Filed Dec. 12, 1913. Serial No. 806,226. (Cl. 179—28.)



1. A selector device comprising an electromagnet, an armature, levers connected to said armature capable of vertical and lateral movement, and circuit controlling mechanism operated by said levers.

2. A selector comprising an electromagnet, an armature, a lever connected to said armature and operated thereby, means for causing the end of said lever to travel in a predetermined path, and a circuit controlling device in said path adapted to be operated by said lever.

3. A selective system comprising an electromagnet, circuit controlling means comprising a lever actuated by said magnet and having a freely movable end, a guide for said end, and a circuit together with its associated equipment controlled by said circuit controlling device, substantially as described.

4. A selective system comprising an electromagnet, circuit controlling means actuated thereby, said means comprising a slotted plate member carrying contact mechanism, and a movable member in said slotted plate operated by said electromagnet, substantially as described.

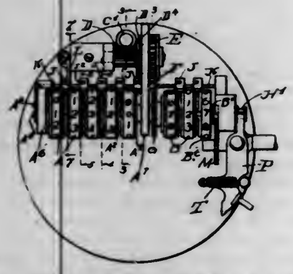
5. In a selective system, an electromagnet, an armature therefor, a lever connected to said armature and movable therewith, a second lever connected to said first lever and movable independently thereof, means connected to said levers to regulate the rapidity of change of motion thereof and circuit controlling means operated by said second lever.

[Claims 6 to 8 not printed in the Gazette.]

1,110,835. ODOMETER-TRAIN. JOHN K. STEWART, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, of Virginia. Filed Aug. 26, 1912. Serial No. 717,001. (Cl. 235—144.)

1. In a revolution counter comprising a plurality of dial wheels and means whereby they are serially geared together, driving means normally engaging the initial wheel of such series for actuating the train, auxiliary driving means adapted for manual operation and standing normally disengaged from the train, and means for disengaging the regular driving means from said intitial

wheel without affecting the serial connection of the dials, and simultaneously connecting said auxiliary means therewith to permit manual setting of the dials to any desired reading.



2. In a revolution counter comprising a casing, a plurality of dial wheels and means whereby they are serially geared together, driving means normally engaging the initial wheel of such series for actuating the train, auxiliary driving means extending outside said casing and adapted for manual operation and standing normally disengaged from the train, and shifting means also extending outside the casing arranged for disengaging the regular driving means from said initial wheel without affecting the serial connection of the dials, and simultaneously connecting said auxiliary means therewith to permit manual setting of the dials to any desired reading.

3. In a revolution counter comprising a series of dial wheels rotatably mounted upon a common shaft, gears associated with said dial wheels, respectively, idler pinions rotatably and slidably mounted on a parallel shaft in mesh with said gears for serially connecting the dial wheels to one another, and driving means engaging the initial wheel of the train, means for shifting said dial wheels with their idlers longitudinally of their respective axes of rotation for disengagement from said driving means and manually operable driving means, adapted for connection with the initial wheel of the train at such shifted position for re-setting the dials to any desired reading at will.

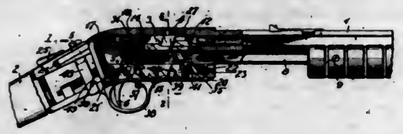
4. In an odometer train comprising a plurality of dial wheels co-axially mounted, and a series of idler gears positioned for operatively connecting adjacent dial wheels of the train; an arbor for said dial wheels; a shaft for the idlers, one end of said shaft being bent; bearing lugs apertured to receive said arbor and shaft, one of said bearings having a notch extending transversely from its shaft-receiving aperture to accommodate the bent end of said shaft, the arbor being formed near its end with a circumferential groove, and a hook-shaped locking plate secured to the said bearing lug with its hook engaging the groove of the arbor and with its opposite end covering the notch which lodges the bent end of the shaft.

1,110,836. OIL-CUP. GUSTAF BERNHARD SUNDELL, Stockholm, Sweden. Filed May 10, 1913. Serial No. 766,817. (Cl. 184—88.)

1. An oil cup comprising a pivoted cap member and a cup member, said members being provided with interfitting portions, one of said interfitting portions being provided with an integral tongue adapted to exert a pressure upon the other of said portions, whereby the cap member is maintained in closed position.

2. The combination with an oil cup, of a cover provided with a flange which telescopes with the top of the cup, the flange being slitted to provide a tongue substantially within the confines of the flange, and adapted to bear through a substantial portion of its extent, against the telescoping portion of the cup.

1,110,837. TAKE-DOWN REPEATING FIREARM. CARL G. SWEBILIUS and HANS THEODOR RICHARD HANITZ, New Haven, Conn., assignors to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed May 11, 1914. Serial No. 837,698. (Cl. 42—17.)



1. In a take-down repeating firearm, a barrel portion, a stock portion, a separable receiver comprising one part including a top plate and two depending side plates rigidly connected with the barrel, the other part comprising a tang arranged to be located between the two side plates of the first mentioned part, said tang being rigidly connected with the stock, a separable hinge for operatively connecting the two receiver parts at one end of the receiver, and a bolt for operatively connecting said parts at the other end of the receiver.

2. In a take-down repeating firearm, a barrel, a stock, a separable receiver comprising one part including a top plate and two depending side plates rigidly connected with the barrel, the other part comprising a tang arranged to be located between the two side plates of the first mentioned part, said tang being rigidly connected with the stock, a hook at the forward end of the tang and an abutment carried by the other part of the receiver for receiving and holding said hook, a wedge connection between the rear end of the first mentioned part of the receiver and the adjacent end of the tang and arranged to hold said two parts of the receiver in assembled position, and a bolt adjacent said wedge connection and assisting in holding said parts in operative relation.

3. In a take-down repeating firearm, a barrel, a stock, a separable receiver comprising one part including a top plate and two depending side plates rigidly connected with the barrel, the other part comprising a tang arranged to be located between the two side plates of the first mentioned part, said tang being rigidly connected with the stock, a hook at the forward end of the tang and an abutment carried by the other part of the receiver for receiving and holding said hook, a wedge connection between the rear end of the first mentioned part of the receiver and the adjacent end of the tang and arranged to hold said two parts of the receiver in assembled position, and a spring latch bolt adjacent said wedge connection and assisting in holding said parts in operative relation.

4. In a take-down repeating firearm, a barrel, a stock, a separable receiver comprising one part including a top plate and two depending side plates rigidly connected with the barrel, the other part comprising a tang arranged to be located between the two side plates of the first mentioned part, said tang being rigidly connected with the stock, a hook at the forward end of the tang and an abutment carried by the other part of the receiver for receiving and holding said hook, a wedge connection between the rear end of the first mentioned part of the receiver and the adjacent end of the tang and arranged to hold said two parts of the receiver in assembled position, and a bolt carried by the stock portion adjacent said wedge connection and assisting in holding said parts in operative relation.

5. In a take-down repeating firearm, a barrel, a stock, a separable receiver including one part rigidly connected to the barrel and the other part rigidly connected to the stock, the barrel portion of the receiver including a top plate and two spaced side plates depending therefrom, a breech block, a locking bolt and cartridge carrier housed within the space between said plates, a guide connection between the breech block and the inside wall of the receiver, a tubular magazine underneath the barrel and entering the front of the receiver, a reciprocating action rod adjacent the magazine and likewise entering the front of said part of the receiver, a hammer, trigger and safety sear arranged to coöperate between the hammer and the action rod, said parts being carried by that part of the receiver rigidly connected to the stock, means for detachably connecting the two parts of the receiver at the front end and at the rear end thereof.

[Claims 6 to 14 not printed in the Gazette.]

1,110,838. PORTABLE HYDRAULIC STRETCHER. EDWARD TAYLOR, Owensboro, Ky. Filed Mar. 27, 1914. Serial No. 827,669. (Cl. 21—118.)

1. In a stretcher, a truck, a lift on said truck, a longitudinal support connected with said lift, a stretcher supported by said longitudinal support, means in the lift for effecting vertical adjustments, means in the support permitting lateral adjustments.

2. In a stretcher, a truck, having a frame composed of two longitudinal pieces, two arched end pieces and two intermediate arcuate ribs, a lift mounted on said ribs, a laterally adjustable stretcher supported by said lift.

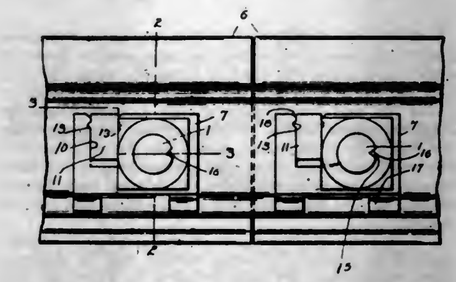
3. In a stretcher, a truck, composed of a frame and a tranaversely disposed wheel supporting member directed upward at each side of the truck and, then bent back on its self to form suitable means of connection to the wheels, wheels connected to said wheel supporting member, swiveled casters at each end of the truck, a lift supported in the middle of the truck, a vertically and laterally adjustable stretcher supported by said lift.

4. In a stretcher, a truck, a lift on said truck, a stretcher carried by said lift, means permitting the stretcher to be moved laterally to either side of the truck, a device for automatically locking the stretcher in the center of the truck.

5. In a stretcher, a truck having channels, means permitting lateral movement of the stretcher, said means comprising depending slotted members operating on rollers mounted in said channels, a locking device for holding the stretcher stationary on its truck.

[Claim 6 not printed in the Gazette.]

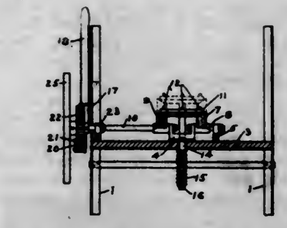
1,110,839. NUT-LOCK. WILLIAM T. THURSTON, Quincy, Mass., assignor of one-fourth to John J. Lawlor, Concord, Mass., and one-fourth to Frank L. Jones, Melrose, Mass. Filed Dec. 23, 1913. Serial No. 808,457. (Cl. 151—62.)



1. In a device of the character described a bolt having a longitudinal groove formed therein, a washer plate mounted upon said bolt and having a dove-tailed slot formed therein, a nut locking block having a dove-tailed portion formed integral therewith and adapted for engagement with the dove-tailed slot in said washer plate, a rib formed upon said washer plate and adapted for engagement with the groove in said bolt, said dove-tailed slot provided with grooves in its opposed walls, said dove-tailed portion of said locking block having ribs formed thereon adapted for engagement with the grooves whereby the locking block is held in locked engagement with the washer plate and a pair of spaced arms formed integral with the washer plate.

2. A nut lock comprising a rectangular washer plate having an opening therethrough adjacent one end to receive a bolt and a dove tailed slot formed from one longitudinal edge and extending to a point approximately centrally thereof, a nut locking block having a dove tailed portion formed integral therewith, said dove tailed slot having grooves in its opposed faces disposed adjacent the open end of said slot, said dove tailed portions having ribs thereon arranged to fit within said grooves, the upper edges of said dove-tailed slot being cut away, and a pair of curved integral and spaced arms formed on the lower edge of said plate, said nut locking block extending beyond the outer face of said plate and adapted to engage a nut.

1,110,840. GEARING. THOMAS EDWIN UNKS, Sandusky, Ohio. Filed July 15, 1912. Serial No. 709,571. (Cl. 74—50.)



1. In a device of the type set forth, a frame, an idler cam shaped segmental gear mounted thereon, an operating shaft having a cam-shaped segmental gear also mounted on the frame and rigidly connected to said shaft, a master gear in mesh with both of said segmental gears, a spring held shaft depending therefrom, a member connected to the operating shaft, a hand lever connected to said member, said member having a depending arm, a gear wheel, a connecting rod connected at its ends to said arm and said last named wheel, and a fly wheel having a pinion in mesh with said last named gear wheel; said mechanism being adapted to impart a combined oscillating and vertical movement to the spring held shaft.

2. In a device of the type set forth, a frame, an idler segmental gear journaled on the frame, an operating shaft having a segmental gear rigidly connected therewith, a master gear in mesh with both of said segmental gears and having a spring held shaft depending therefrom, a member connected to the operating shaft, a fly-wheel, and means to operate said fly-wheel from said member; said mechanism being adapted to impart a combined vertical and oscillating movement to the spring held shaft.

3. In a device of the type set forth, a vertically movable spring held master gear, and means in mesh with said gear for supporting the same and for imparting alternating rotary and vertical movement thereto.

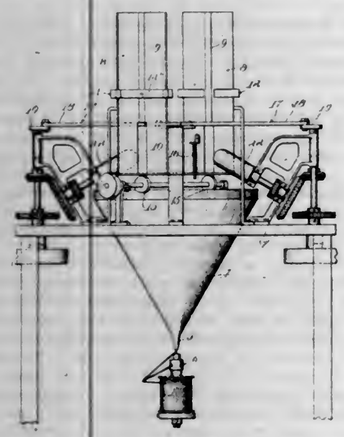
1,110,841. SLIDING CASEMENT-WINDOW. WILLIAM VENSKE, Minneapolis, Minn. Filed June 1, 1914. Serial No. 841,983. (Cl. 20—44.)

1. The combination with a window frame, of a casement window sash connected to said frame at one side by a hinge permitting lateral swinging and vertical sliding movements thereon, and at its other side, connected to said window frame by the following elements, to-wit, a joint strip on said sash, a joint strip on said window frame, and a supplemental joint strip on the said latter noted joint strip, the joint strip on said sash being engageable with both of the other noted joint strips, and the said

supplemental joint strips, when the sash is in one extreme position, being slidable to release the joint strip on said sash.

2. The combination with a window frame, of a casement window sash connected to said frame at one side by a hinge permitting lateral swinging and vertical sliding movements thereon, and at its other side, connected to said window frame by the following elements, to-wit, two joint strips secured on said window frame, one extending from top to bottom thereof and the other from top to about half way to bottom of said frame, of a supplemental joint strip movable from top to bottom of the window frame and having interlocking sliding engagement with both of said relatively fixed joint strips, and a joint strip on said sash having a sliding engagement with the relatively short joint strip on said frame, and with the said sliding supplemental joint strip, the joint strip on said sash being removable with said sash to a point below the relatively short joint strip on said frame, and said supplemental joint strip being slidable upward to a point above the joint strip on the lower sash.

1,110,842. GRASS-TWINE MACHINE. OSSIAN T. WAITE, Oshkosh, Wis., assignor to Waite Grass Carpet Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Oct. 18, 1912. Serial No. 726,518. (Cl. 28—21.)



1. In a device of the class described, the combination with a twine forming mechanism, of a funnel-shaped conduit leading thereto, a series of holders arranged about said conduit and having their inner ends overlying said conduit, a set of feed rolls for each holder arranged at approximately right angles to a radial line extending from the discharge end of said conduit, horizontally disposed means for selecting and delivering wisps of grass from said holder to said feed rolls, and means operatively connected for reciprocating said selecting means, substantially as described.

2. In a device of the class described, the combination with a twine forming mechanism, of a funnel-shaped conduit leading thereto, a series of holders arranged about said conduit and having their inner ends overlying said conduit, a set of feed rolls for each holder arranged at approximately right angles to a radial line extending from the discharge end of said conduit, horizontally disposed means for selecting and delivering wisps of grass from the holders to said feed rolls, means operatively connected for reciprocating said selecting means, and means for leveling the ends of the grasses contained within the holder, substantially as described.

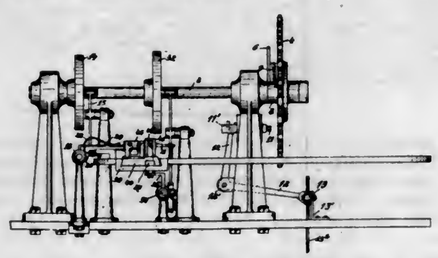
3. In a device of the class described, the combination of a series of holders arranged to support grasses in a vertical position therein, means for leveling the lower ends of said grasses, a set of feed rolls for each holder, a single funnel-shaped receptacle into which said feed rolls discharge said rolls having their axial centers arranged at approximately right angles to a radial line extending from the discharge end of said receptacle, and means for delivering wisps of gasses from said holders to said feed rolls, substantially as described.

4. In a device of the class described, the combination with a twine forming mechanism, of a funnel-shaped conduit leading thereto, a series of holders arranged about said conduit and having their inner ends overlying the same, said holders being adapted to support grasses vertically therein, means for leveling the lower ends of the grasses contained within the holder, a set of feed rolls for each holder, said rolls being disposed at approximately right angles to a radial line extending from the discharge end of said holder, and means for selecting and delivering wisps of grass from said holder to said feed rolls, substantially as described.

5. In a device of the class described, the combination of a series of holders adapted to support grasses vertically therein, the floor of each of said holders sloping in a downward direction toward the forward end thereof, means for forcing the grasses toward the forward ends of said holders, a set of feed rolls for each holder, a common receptacle into which said feed rolls discharge, and means for selecting and delivering wisps of grass from said holders to said feed rolls, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,110,843. FEEDING MECHANISM FOR BUTTON-SEWING MACHINES. HEINRICH WALDES, Wrschowitz, near Prague, Austria-Hungary. Filed July 9, 1913. Serial No. 778,051. (Cl. 112—32.)



1. Device for feeding parts of spring pressed buttons singly to the needle of a sewing machine and for intermittently transporting the band of fabric to which the said parts are to be attached comprising a feed guideway to receive the said button part, a slide to move the same under the needle of the sewing machine, a second slide over which the band passes, a clamping device to periodically clamp said band to the slide, a shaft having cam disks thereon to operate said slides, a driving gear loosely mounted on said shaft and means for locking said gear to its shaft.

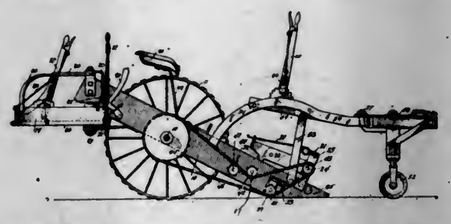
2. Device for feeding parts of spring pressed buttons singly to the needle of a sewing machine and for intermittently transporting the band of fabric to which the said parts are to be attached comprising a feed guideway to receive the said button part, a slide to move the same under the needle of the sewing machine, a second slide over which the band passes, a clamping device to periodically clamp said band to the slide, a shaft having cam disks thereon and means for intermittently rotating the same a single rotation, sliding bars reciprocated by said cam disks, and connections between said bars and slides to operate the slides to transport the button part to sewing position and to transport the band and means for releasing the band clamp at the end of each feeding operation.

3. Device for feeding parts of spring pressed buttons singly to the needle of a sewing machine and for intermittently transporting the band of fabric to which the said parts are to be attached comprising a feed guideway to receive the said button part, a slide to move the same under the needle of the sewing machine, a second slide over which the band passes, a clamping device to periodically clamp said band to the slide, a shaft having cam disks thereon and means for intermittently rotating the same a single rotation, sliding bars reciprocated by said cam disks, and connections between said bars and slides to operate the slides to transport the button part to the needle and to transport the band, means for releasing the band clamp at the end of each feeding operation and an adjustable connection between the band transporting slide and its operating bar.

4. In a button sewing machine, the combination of a button feed mechanism, a button strip feed mechanism, a cam shaft provided with a longitudinal groove, cam disks on said cam shaft for actuating said mechanisms respectively, and a clutch device on said cam shaft comprising a pulley loose thereon and provided with a recess in its hub, an oscillatory segmental coupling bolt disposed in the groove of said cam shaft and adapted to turn axially to engage or release said pulley and provided with a radial arm having a limited arc-movement, a spring engaging said arm and normally holding said segmental rod in engagement with said hub, a movable stud and means for thrusting and retracting said movable stud into and out of the path of said radial arm.

5. A button feed mechanism for a sewing machine comprising a main guideway having a button rest at one end adapted to hold a button in position to be stitched, a slide in said guideway movable parallel with the feed of the material and provided with an upward stud, a stationary lifting cam adjacent to said slide, a guideway disposed laterally to the main guideway, an auxiliary slide therein adapted to push a button therefrom into the main guideway, an endwise reciprocatory slide bar disposed parallel to the feed of the material and provided with stops, means for intermittently reciprocating said bar, a bell crank lever whereof one end engages said auxiliary slide and the other end is engaged by said slide bar between said stops, and a spring depressed arm pivoted on said slide bar and adapted to engage the upward stud of said main slide during the movement of said bar and to be released therefrom by said cam during said movement.

1,110,844. CABBAGE-HARVESTER. ALVA SMITH WARREN, Batavia, N. Y. Filed July 24, 1913. Serial No. 780,977. (Cl. 56—1.)



1. In a cabbage harvester, a frame movable forwardly, a presser member having a lower portion adapted to move rearwardly for holding down a vegetable to be harvested, harvesting means disposed below and at the rear of the forward portion of the presser member, and means for moving the presser member rearwardly substantially at the same rate of speed that the frame is moved forwardly.

2. In a cabbage harvester, a frame movable forwardly, a knife carried by the frame, a presser member disposed adjacent the knife and means for moving a lower portion of the presser member rearwardly and relatively to the frame substantially at the same rate of speed that the frame is moved forwardly.

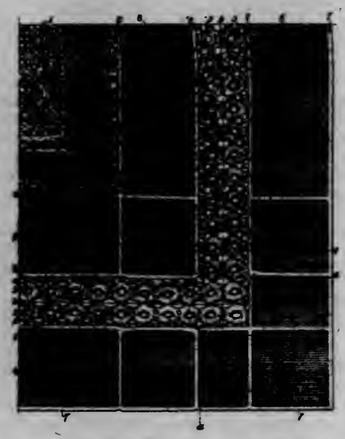
3. In a cabbage harvester, a frame, two shafts spaced apart, a presser belt disposed around the shafts for engaging and holding a cabbage in position to be cut, means for rotating one of the shafts for moving a lower portion of the presser belt rearwardly of the frame substantially at the same rate of speed that the frame is moved forwardly, and means adjacent the presser belt for cutting a cabbage.

4. In a cabbage harvester, a main frame movable in one direction, an auxiliary frame pivoted to the main frame, a member movable on the auxiliary frame, resilient means for holding the auxiliary frame downward relatively to the main frame and with the member against a cabbage to be cut, and means for cutting the cabbage.

5. In a cabbage harvester, a frame movable forwardly, two shafts spaced apart, one in front of the other, a presser belt disposed around the shafts for engaging and holding a cabbage in position to be cut, means for cutting the cabbage and means for rotating the forward shaft to move its front portion down and rearwardly substantially at the same rate of speed that the frame is moved forwardly.

[Claims 6 to 23 not printed in the Gazette.]

1,110,845. LACE FABRIC AND METHOD OF MAKING SAME. JAMES WATERFIELD, Philadelphia, Pa., assignor to Quaker Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 2, 1913. Serial No. 787,702. (Cl. 2—146.)



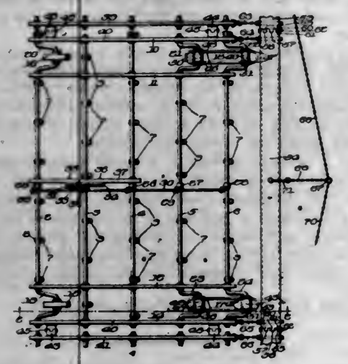
1. The method described of producing a two-ply bordered curtain with integral lace edge, which consists in first making a single ply blank wherein a border portion is provided consisting of duplicated and reversely arranged formation of the lace edge, then bringing all of said duplicated elements into register with each other by a folding of one on the other, and finally applying a line of stitching to secure them together.

2. The method described of producing a two-ply bordered curtain with integral lace edge which consists first making a single-ply blank with a border portion consisting of a duplicated and reversely arranged formation of the lace edge interposed between and in parallelism with duplicated like courses of netting, each of said courses having a selvage edge; then bringing all of said duplicated elements into register by a folding of one on the other, and finally applying lines of stitching to secure them together along said selvage edges.

3. An article of manufacture which consists of a single ply curtain body having a two ply border formed by dupli-

cated and reversely arranged lace portions, superimposed one on the other, all in register, secured together by stitching and forming thereby a lace edge integral with said border.

1,110,846. FOLDING HARROW. ERIK W. WAYNERT, Mason, Wis. Filed Nov. 15, 1913. Serial No. 801,102. (Cl. 55—93.)

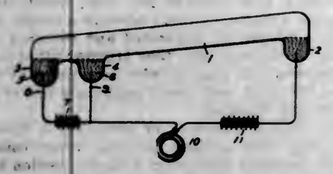


1. The combination with a plurality of harrow sections constructed and aranged to fold up on a middle section, of wheels on said middle section, and means for simultaneously tilting said wheels, tilting the harrow teeth of said section into a substantially horizontal position and applying a moderate brake for said wheels, said wheels being normally supported on said harrow and tilted into position to support said harrow partly.

2. The combination with a harrow consisting of a middle section and side sections, of means for folding said side sections over said middle section, wheels carried by said middle section, braking means also carried by said middle section, and a lever constructed and arranged to throw the weight of said middle section upon said wheels and braking means, and to simultaneously tilt out of the way, the teeth of said middle section.

3. The combination with a harrow, of a series of rotatively mounted tooth-bars, a portion thereof having bent crank portions on which wheels and runners are journaled, the wheels and runners normally supported by said harrow, and a lever for rotating all of said tooth-bars simultaneously.

1,110,847. OPERATING VAPOR ELECTRIC APPARATUS FROM AN ALTERNATING-CURRENT SOURCE. EZECHIEL WEINTRAUB, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 18, 1902. Serial No. 127,834. (Cl. 171—253.)



1. The combination with a vapor electric lamp, of an alternating current circuit connected to terminals thereof, and a source of direct current also connected to terminals of the lamp so as to set up ionized vapor in the lamp whereby a conducting path is furnished for waves of the said alternating current of one polarity only.

2. The combination of a vapor electric lamp, a source of alternating electro-motive force connected to terminals of said lamp and insufficient of itself to set up a discharge in the lamp between said terminals, and means for permitting waves of current of one polarity only, from said source to flow in said lamp.

3. The combination of a vapor electric lamp, a source of alternating electro-motive force connected to terminals of the lamp and incapable of itself either of initiating or of maintaining a flow of energy in said lamp between said terminals, and separate means for rendering the lamp a conductor for current from said source.

4. The combination of a vapor electric lamp, a source of alternating electro-motive force connected to terminals of said lamp, and means for projecting ionized vapor into the vicinity of said terminals, which vapor serves as a carrier to initiate and to maintain an electric discharge at the expense of energy derived from said source.

5. An alternating current rectifier comprising an exhausted envelop through which the alternating electro-motive force is insufficient of itself to initiate a flow of current, and electrical means for rendering said envelop conductive for currents of one direction only.

[Claims 6 to 26 not printed in the Gazette.]

1,110,848. VARIABLE-RESISTANCE DEVICE. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 18, 1911. Serial No. 644,803. (Cl. 179—190.)

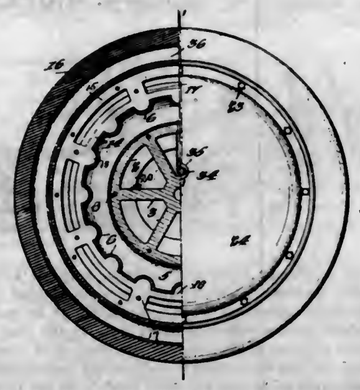
1. In a variable resistance device, the combination of a resistance-varying material comprising boron associated with carbon, current connections therefor, and means for exerting a variable pressure upon said material.

2. In a microphone, a resistance-varying element containing boron in the elemental state, and a conductive element associated therewith.

3. In a microphone, a conductive contact material consisting of boron combined with carbon.

4. In a microphone, a diaphragm, a resistance-varying material consisting of carbon and boron, and current connections making said material part of an electric circuit.

1,110,849. SPRING-WHEEL. HERBERT A. WHEELING, Carthage, Mo. Filed June 14, 1912. Serial No. 703,641. (Cl. 152—46.)



1. A resilient wheel comprising a central wheel-like part having an elongated hub that is screw-threaded and

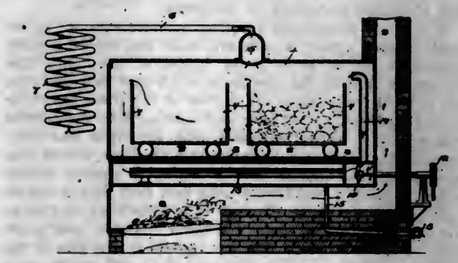
a rim connected with the hub, an intermediate pneumatic tire supported upon the said rim, an outer tread tire, an annular frame between the two tires and connecting them, and a protecting housing for the intermediate pneumatic tire formed of side plates having hub sections screwed upon the hub of the central part of the wheel, and other side plates secured to the annular frame between the tires, and shaped to surround the intermediate tire but not to interfere with the free movements thereof, the two sets of side plates having overlapping engagement with each other and being free to move with reference to each other.

2. A wheel comprising a central hub part, an outer tire, an intermediate annular frame, a rigid circular support secured to the hub part of the wheel and having an exposed serrated peripheral edge, and a removable annular plate adapted to be secured rigidly to the said intermediate frame, and having a serrated edge adapted to engage with the serrated edge of the said rigid support and to serve to hold in working position the intermediate frame and outer tire and also to unite the said frame with the hub whereby torque movements are communicated from one of these to the other.

3. A resilient wheel comprising a central wheel-like part, an intermediate pneumatic tire secured to the rim thereof, an outer tire, an annular frame between the tires, a housing inclosing the pneumatic tire, and a dust cover for the outer face of the wheel consisting of an outwardly dished plate secured at its edges to the said annular frame between the tires.

4. A resilient wheel comprising a central wheel-like part, an intermediate pneumatic tire secured to the rim thereof, an outer tire, an annular frame between the tires, a housing inclosing the pneumatic tire, a dust cover for the outer face of the wheel consisting of an outwardly dished plate secured at its edges to the said annular frame between the tires, and another dust cover for the inner face of the wheel consisting of a rigid outer section secured to the said annular frame and an inner section of flexible material between the said rigid outer section and the hub of the central wheel-like part.

1,110,850. PROCESS OF DISTILLATION. MILTON C. WHITAKER, New York, N. Y. Filed Nov. 12, 1912. Serial No. 730,934. (Cl. 203—6.)



1. The herein described process of distillation which consists in so charging a retort with wood or other non-liquid material in fragments or pieces in a container that space for circulation of gases is left between the charge and the walls of the retort and the material is kept from contact with said walls, heating the retort, and equalizing the temperature throughout the charge by mechanically stirring the gases and vapors within the retort.

2. The herein described process of distillation which consists in so charging a retort with wood or other non-liquid material in fragments or pieces in a container that space for circulation of gases is left between the charge and the walls of the retort and the material is kept from contact with said walls, heating the retort, and equalizing the temperature throughout the charge by stirring the gases and vapors within the retort by withdrawing them from one part of the retort and returning them to another part thereof.

1,110,851. HOSE-SUPPORTER. ALBERT MONROE WILSON, Cherokee, Iowa. Filed Oct. 25, 1912. Serial No. 727,719. (Cl. 24—245.)

1. In an article of the class described, a button plate having a slot and a button, a flexible member having an opening through which the button is disposed, the flexible member being then disposed through the slot.

2. In an article of the class described, a button plate having a slot and a button, a flexible member having an opening through which the button is disposed, the flexible member being disposed over the button, and through the slot.

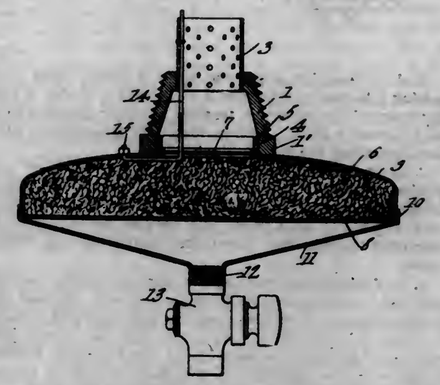
3. In an article of the class described, a button plate having a slot and a button, a flexible member through which the button is disposed, the flexible member being disposed over the button, with the flexible member from each side of the button extending to and through the slot.

4. In an article of the class described, a button plate having a slot and a button, a flexible member having an opening through which the button is disposed, the flexible member being disposed over the button and a portion of the button plate, and then through the slot.

5. In an article of the class described, a button plate having a button and two slots, a flexible member having an opening through which the button is disposed, the flexible member being disposed over the button and through both slots.

[Claims 6 and 7 not printed in the Gazette.]

1,110,852. FILTER. JOHN F. WISE, Onawa, Iowa. Filed Dec. 9, 1913. Serial No. 805,604. (Cl. 210—16.)

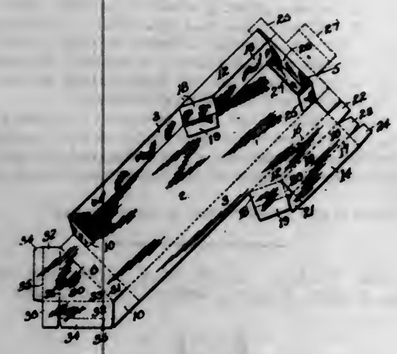


1. A filter, including a supporting member, a perforated sleeve disposed in the inlet end thereof and adapted to project above the bottom of the receptacle being emptied, a filtering chamber carried at the opposite end of the supporting member, and a vent tube projecting through and above the perforated tube.

2. A filter, including a tapered and hollow exteriorly screw threaded supporting member, a perforated tube disposed in the reduced end thereof for projection above the bottom of the receptacle being drained, a filter material carrying casing insertible within the lower end of the supporting member and in communication therewith to receive the liquid passing through the tube and supporting member, and a venting tube disposed to project through the supporting member and perforated tube, the lower outer end of said venting tube being exteriorly of the filter material carrying member.

3. A filter, including a hollow frusto-conical member provided with exterior screw threads, a perforated tube connected in the reduced end thereof and in communication with the interior of the supporting member, a filter material carrying member composed of two sections, the upper section of which is provided with a central sleeve for engagement with the opposite end of the supporting member to the perforated tube, a filtering material holding and perforated screen carried in the lower end of the upper section, the lower section maintaining the same in proper relation thereto, and a venting tube disposed within the supporting member and projecting through and above the perforated tube, the outer end of the venting tube being extended exteriorly of the upper section of the filter material carrying member.

1,110,853. FOLDED-BLANK BOX. WILLIAM WOLFE, Oakbrook, Pa., assignor to The Nolde & Horst Co., Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 6, 1913. Serial No. 752,272. (Cl. 206—7.)



1. A rectangular box made up of a folded blank comprising a bottom portion and a wall portion having a folding inverted-box extension forming a hollow platform upon said bottom portion; and an insertible false-bottom piece for supporting the folded blank.

2. A rectangular box made up of a folded blank comprising a bottom portion and a wall portion having a folding inverted-box extension forming a hollow platform, with projecting tabs upon said bottom section; and an insertible false-bottom piece for supporting the folded blank.

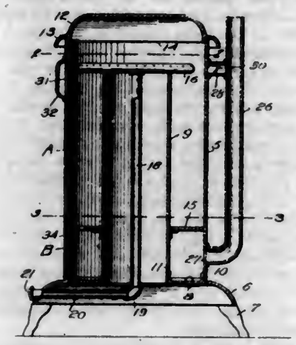
3. A folded-blank rectangular box comprising bottom, end-wall, and side-wall portions, one of said end-wall portions having an inverted-triangular-box extension forming a hollow platform in the main box, and one of said side-wall portions having a rectangular box extension forming a folded hollow platform in the main box for a portion of its length; and an inserted false-bottom key-piece.

4. A folded-blank rectangular box comprising bottom, end wall and side wall portions, one of said side-wall portions having a folding rectangular-box extension forming a hollow platform in the main box extending part way of its length and provided with a diagonally-closed end intermediate of the end walls of the main box, and a separately fitted support for said extension substantially conforming in shape to the folded-blank rectangular box.

5. A tray like receptacle made up of sheet material in two separately formed parts, one of said parts comprising a bottom portion and a wall portion having a folding inverted box like extension forming a hollow platform upon said bottom portion, the other of said parts being separately fitted to and retaining the first said part in its folded form.

[Claim 6 not printed in the Gazette.]

1,110,854. STOVE. JOHN C. ZIEGLER, Wichita Falls, Tex. Filed Mar. 30, 1914. Serial No. 828,248. (Cl. 126—85.)



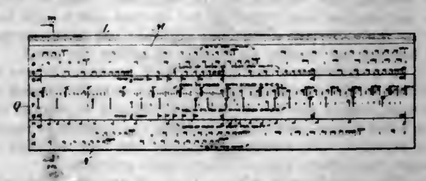
1. A stove having a hollow cylindrical body, an air tube disposed concentrically with the body and spaced equally on all sides therethrough, a base having an annular flat portion forming the bottom of the stove, upstanding flanges provided on said base, the lower end of said body portion and tube being secured to said flanges, said tube extending through an opening in said base, a burner disposed upon the upper end of said tube, said burner overhanging the tube on all sides, a feed pipe disposed axially within said tube, a plurality of hollow arms connecting said feed pipe to said burner, a cover on said body portion, said body portion having an opening therein in alinement with said burner, a door for normally closing said opening, an annular ring secured within said body portion at the lower end thereof and in spaced relation to the body, said ring disposed between the body portion and air tube, and forming a partition to divide the stove into upper and lower compartments, said ring having a series of openings in one side thereof, a draft pipe connected to said body and opening into the lower chamber below the partition and on the opposite side of the stove from the openings in said ring, a hollow sleeve connecting the upper portion of the body with the draft pipe in alinement with said burner, and a damper positioned in the sleeve.

2. A stove comprising a hollow cylindrical body, an air tube disposed axially within said body and spaced equally therefrom, on all sides, a leg supported base, said base having an annular flat portion to which said body and tube are secured for forming the bottom of the stove, said tube extending through said base and opening into the outside atmosphere, a burner disposed upon said tube and overhanging the same on all sides within the body, a feed pipe connecting said burner with a source of supply, hollow arms connecting said burner with said feed pipe, a top on said body, a partition disposed within the body and forming the same into an upper and lower chamber, said partition having a series of openings therein in one side of the tube, a draft pipe connected to said stove and opening into the lower chamber, means for allowing a draft between the upper chamber and the draft pipe, and means for regulating said draft.

3. A stove comprising a base having an annular flat portion, a hollow cylindrical body disposed on said flat portion, an air tube disposed within said body and extending through said flat portion and secured thereto, a burner disposed on said air tube within the body, a feed pipe connected with said burner and disposed within said tube, a draft pipe connected to said body portion at the lower end thereof and adapted to create a downward draft around the tube, means disposed within the body portion for retarding said downward draft, and means for creating a direct draft between the body and the draft pipe and means for regulating said last draft.

4. A stove providing a combustion chamber, a stove body surrounding the combustion chamber, an air tube disposed concentrically with the body and forming the inner wall of the combustion chamber, a burner disposed on the air tube within the chamber, a feed pipe disposed within the air tube and connected at one end to said burner and at the opposite end to the fuel supply, a leg supported base having a central opening, means for securing the air tube to the base at the central opening and for securing the body to the base near the periphery of the latter, said base forming a closure for the lower end of the combustion chamber, a top disposed on the stove body and forming a closure for the upper end of said chamber, said body, base, top and air tube adapted in combination to prevent ingress of air into the combustion chamber at any point except through the central opening and air tube, a draft pipe communicating with the lower end of the combustion chamber adapted to create a down draft therethrough, means for establishing a direct draft between the upper end of said chamber and the draft pipe, means for regulating last said draft, a ring disposed within the chamber between said body and air tube and above the connecting point of the draft pipe and lower end of the chamber and forming a partition dividing the chamber into two compartments, said ring having openings therein on the opposite side of the stove from the draft pipe, said ring adapted to retard the down draft and direct the same to said opposite side of the stove and through the openings against the stove bottom, means for preheating all the air used to support combustion before admission to the combustion chamber, and means for preventing the introduction of cold air at any point subsequently to the ignition of the burner.

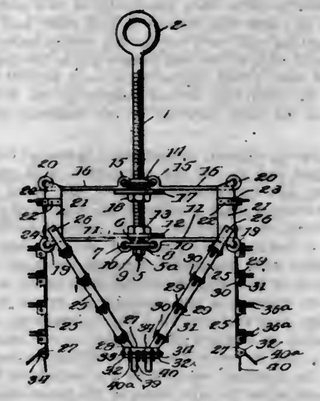
1,110,855. SLIDE-RULE. CHARLES D. ALLAN, Chicago, Ill. Filed Mar. 19, 1914. Serial No. 825,742. (Cl. 235—70.)



1. A slide-rule consisting of two fixed bars and a movable slide interposed between them, having two independently coacting series of scales, relating to the flow of fluids in conduits, arranged for the solution of two forms of equations in which five different variables appear, three of which variables appear in both forms of equation, and each of the other two variables appear in only one of the forms of equation, but have a common exponent, each of the two fixed bars of the rule having two logarithmic scales graduated to read the values of two of the variables appearing in both forms of equation, and on the slide two scales each graduated to read the values of the third remaining variable common to both forms of equation, and on the slide a third scale, graduated to read the values of one of the two variables with common exponent not appearing in both forms of equation, when coacting with the two logarithmic scales on one fixed bar and one of the other scales on the slide, the same graduations on said third scale of the slide serving to read the values of the other of the two variables with common exponent, when coacting with the two logarithmic scales on the other fixed bar and the remaining other scale on the slide, the graduations on the said third scale on the slide in each case representing a different character of quantity measured by a different system of units, substantially as described.

2. A slide-rule consisting of relative movable members having coacting scales one of which comprises lines of graduation indicating consecutive sizes of commercial material and additional lines of graduation indicating sizes of material which would produce a mechanical effect which is a mean between the same mechanical effect produced by the two consecutive commercial sizes between which they are located, substantially as described.

1,110,856. CHIMNEY-SWEEPER. CHARLES E. ANDERSON, Crystal Falls, Mich. Filed May 1, 1914. Serial No. 835,694. (Cl. 15—41.)



1. A chimney cleaner, comprising a threaded rod having at its upper end an eye for connection with supporting mechanism, the opposite end of the rod being reduced, said rod having a plain portion at the inner end of the reduced portion, the remainder of the reduced portion being threaded, a bearing ring journaled on the plain portion and provided with transverse openings arranged at angular intervals of 90° with respect to each other, a link engaging each opening, a nut threaded on to the rod above the bearing ring and provided with transverse openings corresponding in number and position to the openings of the ring, a link for each opening, each link having an eye engaging the opening, washers on the rod above the bearing ring and below the nut, nuts on the inner sides of the washers, each of the links having an eye at its outer end and the upper links registering with the lower links, a pair of plates connecting the eyes of the adjacent links, a bar pivoted to the lower end of each plate, the bars of the plates in the same plane converging downwardly, a plate connecting the converging ends of each pair of bars, and a series of cleaning devices supported by each bar and each of the last-named plates, and a similar cleaning device supported by each pair of first-named plates, each of the cleaning devices comprising a rod bent upon itself to form a body, and a pair of parallel arms, each consisting of two portions arranged at an angle with respect to each other and connected by a bearing coil, each bar having spaced pairs of bearing lugs and each of the last-named plates having similar lugs at its ends, a bolt supported by each pair of lugs, the coils of the cleaning devices engaging the bolts, and weights on the body portions of the cleaning devices of the bars.

2. A chimney cleaner comprising a threaded rod having at its upper end an eye for connection with supporting mechanism, the opposite end of the rod being reduced, said rod having a plain portion at the inner end of the reduced portion, the remainder of the reduced portion being threaded, a bearing ring journaled on the plain portion and provided with transverse openings arranged at angular intervals of 90° with respect to each other, a link engaging each opening, a nut threaded on to the rod above the bearing ring and provided with transverse openings corresponding in number and position to the openings of the ring, a link for each opening, each link having an eye engaging the opening, washers on the rod above the bearing ring and below the nut, nuts on the inner sides of the washers, each of the links having an eye at its outer end and the upper links registering with the lower links, a pair of plates connecting the eyes of the adjacent links, a bar pivoted to the lower end of each plate, the bars of the plates in the same plane converging downwardly, a plate

connecting the converging ends of each pair of bars, and a series of cleaning devices supported by each bar and each of the last-named plates, each of the cleaning devices comprising a rod bent upon itself to form a body, and a pair of parallel arms each consisting of two portions arranged at an angle with respect to each other and connected by a bearing coil, each bar having spaced pairs of bearing lugs and each of the last-named plates having similar lugs at its ends, a bolt supported by each pair of lugs, the coils of the cleaning devices engaging the bolts, and weights on the body portions of the cleaning devices of the bars.

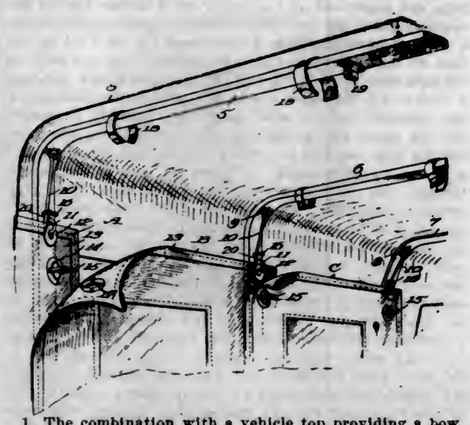
3. A chimney cleaner, comprising a threaded rod having at its upper end an eye for connection with supporting mechanism, the opposite end of the rod being reduced, said rod having a plain portion at the inner end of the reduced portion, the remainder of the reduced portion being threaded, a bearing ring journaled on the plain portion and provided with transverse openings arranged at angular intervals of 90° with respect to each other, a link engaging each opening, a nut threaded on to the rod above the bearing ring and provided with transverse openings corresponding in number and position to the openings of the ring, a link for each opening, each link having an eye engaging the opening, washers on the rod above the bearing ring and below the nut, nuts on the inner sides of the washers, each of the links having an eye at its outer end and the upper links registering with the lower links, a pair of plates connecting the eyes of the adjacent links, a bar pivoted to the lower end of each plate, the bars of the plates in the same plane converging downwardly, a plate connecting the converging ends of each pair of bars, and a series of cleaning devices supported by each bar and each of the last-named plates, and a similar cleaning device supported by each pair of the first-named plates.

4. A chimney cleaner, comprising a threaded rod having at its upper end an eye for connection with supporting mechanism, the opposite end of the rod being reduced, said rod having a plain portion at the inner end of the reduced portion, the remainder of the reduced portion being threaded, a bearing ring journaled on the plain portion and provided with transverse openings arranged at angular intervals of 90° with respect to each other, a link engaging each opening, a nut threaded on to the rod above the bearing ring and provided with transverse openings corresponding in number and position to the openings of the ring, a link for each opening, each link having an eye engaging the opening, washers on the rod above the bearing ring and below the nut, nuts on the inner sides of the washers, each of the links having an eye at its outer end and the upper links registering with the lower links, a pair of plates connecting the eyes of the adjacent links, a bar pivoted to the lower end of each plate, the bars of the plates in the same plane converging downwardly, a plate connecting the converging ends of each pair of bars, and a series of cleaning devices supported by each bar and each of the last-named plates.

5. A chimney cleaner comprising a rod having means at one end for engagement by supporting mechanism, a bearing ring journaled on the rod near the opposite end, a nut threaded on to the rod intermediate its ends and adjustable toward and from the bearing ring, series of links pivoted to the nut and to the ring and extending radially therefrom, the links of the nut registering with the links of the ring, a pair of plates connecting the registering links and pivoted to the links at their ends, a bar pivoted to each plate, the bars of the plates in the same plane converging toward their lower ends, a plate connecting the converging ends of each pair of bars, a series of cleaning devices supported by each bar, a series of cleaning devices supported by each of the last-named plates, and a cleaning device supported by each pair of plates, means adjustable on the rod below the nut and above the rings for engaging the links to make the said link rigid, each of the cleaning devices comprising portions extending at an angle to each other and connected at the junction of the said portions.

[Claims 6 to 14 not printed in the Gazette.]

1,110,857. VEHICLE-CURTAIN. CLARENCE S. APPLAS, Moline, Ill. Filed Oct. 31, 1913. Serial No. 798,518. (Cl. 21—62.)



1. The combination with a vehicle top providing a bow, of a screw eye secured to the inside curvature of the bow, an arm pivotally connected at one end to said screw eye and having a loop at its opposite end, a curtain having an eye in one corner in which said loop is engaged, a hook on the inside of the bow below the curvature to engage said arm when the curtain is in position for use, a turn button on said bow for holding the curtain against the bow below the hook, a pair of straps secured to the bow for holding the curtain to the underside thereof when the curtain has been rolled up for storage and a turn button on the underside of the bow adjacent one of the straps, for holding the curtain previously to rolling the same.

2. In a vehicle top including a bow, an arm pivoted at one end to the curvature of the bow, a curtain carried by the arm, means carried by the bow adapted to engage the arm when in one position for holding the curtain in operative position, and means carried by the bow adapted to engage the curtain when in inoperative position.

3. The combination with a bow, of an arm connected therewith, a curtain connected to said arm, means below the connecting point of the bow and arm for engaging said arm and holding the same and consequently said curtain against the bow when the curtain is in position for use, and means for stowing said curtain when the same is not in use.

4. The combination with a bow, of an arm pivoted to the curvature thereof, a curtain connected to one end of said arm, said arm adjacent last said end being bent to lie flat against the bow when the curtain is in position for service, and means for engaging said arm to hold the same against said bow when the curtain is in position for service.

5. In a vehicle top, the combination with a bow of a curtain carrying bracket swinging between position for stowing the curtain and position for using the same, and means for engaging said bracket to hold the same against said bow when in last said position, for maintaining the curtain against the bow.

1,110,858. CALENDAR. PAUL ARMSTRONG, New York, N. Y. Filed Sept. 28, 1912. Serial No. 722,941. (Cl. 40—107.)

1. A calendar comprising a foundation board provided with a fixed horizontal weekday indicator, and a plurality of vertical shiftable weekrow tablets bearing on their faces the monthday numbers for the respective weeks, each tablet having said numbers for a given week arranged in a vertical series, and individual suspension means severally connecting the upper ends of said vertical weekrow tablets with said foundation board opposite the respective day names indicated by said horizontal weekday indicator.

2. A calendar comprising a foundation board provided with a fixed horizontal weekday indicator, a plurality of vertical shiftable weekrow tablets having on their opposite faces monthday numbers for the respective weeks, each tablet having said numbers for a given week arranged in

vertical series of each face, and duplex suspension means severally connecting the upper ends of said vertical weekrow tablets with said foundation board opposite the respective day names indicated by said horizontal weekday indicator and adapted to expose either face of said tablets.

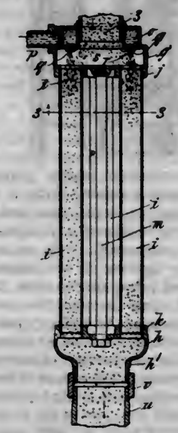
1,110,859. INSTRUMENT FOR REMOVING THE HIDES OR SKINS FROM CARCASSES OF CATTLE, SHEEP, OR OTHER ANIMALS. HARRY MOSS ASHTON, Coburg, Victoria, Australia. Filed Mar. 31, 1914. Serial No. 828,459. (Cl. 17—13.)

1. In a tool of the kind described, the combination with a handle and revoluble shaft passing therethrough, of a front member attached to the handle, a revoluble plate mounted to turn in the front member, knives adjustable to position adjacent the periphery of the revoluble plate, means for turning the said revoluble plate from the shaft passing through the handle, a back member connected to the said front member, a disk having a serrated edge mounted to turn freely in the said back member and adapted to co-act with the edge of the front member to form a guide for the tool in the use of the same, and means for adjusting the back member and revoluble disk mounted thereon to position relatively to the front member and revoluble plate.

2. In a tool of the kind described, the combination with a handle and a revoluble shaft passing therethrough, of a front member attached to the handle, an annular plate, a thimble secured to the annular plate, the said annular plate and thimble being mounted to turn in the said front plate, a knife plate secured to the said thimble and adapted to turn therewith, knives attached to the said knife plate adjacent its periphery, means for turning the said annular plate, thimble and knife plate from the shaft passing through the said handle, a back member, and a disk having a serrated edge mounted to turn freely in the said back member and adapted to co-act with the edge of the front member to form a guide for the tool in the use thereof.

3. In a tool of the kind described, the combination with a handle and a revoluble shaft passing therethrough, of a front member attached to the handle, an annular plate, a thimble secured to the annular plate, the said annular plate and thimble being mounted to turn in the said front plate, a knife plate secured to the said thimble and adapted to turn therewith, knives attached to the said knife plate adjacent its periphery, a gear connection between the said thimble and the said shaft passing through the said handle, a back member, a disk having a serrated edge mounted to turn freely in the said back member, and adapted to co-act with the edge of the front member to form a guide for the tool, and a pin passing through the said thimble, adjustable therein, and bearing against a portion of the said back member to determine the position thereof and the said disk mounted therein relative to the said front member and knife plate.

1,110,860. VACUUM-PRODUCER. CHARLES HENRY ATKINS, Springfield, Mass., assignor to Kleen-Sweep Manufacturing Company, Springfield, Mass. Filed Dec. 5, 1910. Serial No. 595,592. (Cl. 230—13.)

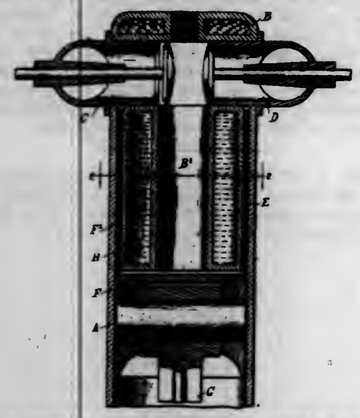


1. In a vacuum producer, the combination with a stand-pipe having connections for the floor implement, of an exhausting device comprising an upper header member provided with an enlarged suction chamber having a large and capacious inlet in open communication with the stand-pipe, a fluid chamber in communication with a source of water supply under pressure, and a jet nozzle arranged to jet the water across the suction chamber, a lower header member in open communication with the suction chamber of the upper header member, and an outlet connecting with the lower header member, said outlet connection having an open vent.

2. In a vacuum producer, the combination with the stand-pipe having connections for the floor implement, of an exhausting device comprising upper and lower hollow header members and a plurality of discharging tubes connecting the opposite headers and in communication therewith, the lower header also having a single member in communication with a waste pipe connection, and the upper header also having a suction chamber in open communication with the stand-pipe and with the upper ends of said tubes, said upper header member also having a fluid chamber in communication with a source of water supply under pressure and provided with jet nozzles having conical openings and lying in axial alinement with the upper ends of the tubes and arranged to jet the water across the suction chamber into the tubes.

3. In a vacuum producer, the combination with a stand-pipe having connections for the floor implement, of an exhausting device including a header member in communication with a source of water supply under pressure and provided with an enlarged suction chamber having a capacious inlet in open communication with the standpipe, an outlet connection having an open vent, a pipe with parallel walls therein providing communication between the suction chamber and said outlet connection, and means for passing a jet of water directly across the capacious suction chamber and into the said pipe.

1,110,861. INTERNAL-COMBUSTION ENGINE. JAMES MINER BAILEY, Buenos Aires, Argentina. Filed July 10, 1912. Serial No. 708,571. (Cl. 123—193.)



1. An internal combustion engine provided with a cylinder, a cylinder head provided with a cylindrical combustion chamber open at both ends and extending into the said cylinder, the combustion chamber having an integral water jacket surrounding the same and extending from the top to the bottom of the combustion chamber, the said water jacket being spaced from the cylinder wall to form an annular space between the said water jacket of the combustion chamber and the cylinder, and a piston mounted to reciprocate in the said cylinder below the said water jacket and the combustion chamber, and having a tubular extension passing into the said annular space.

2. An internal combustion engine provided with a cylinder, a cylinder head provided with a combustion chamber of cylindrical form open at both ends and extending into the said cylinder, the combustion chamber having a water jacket surrounding the same throughout its length, and spaced from the cylinder wall to form an annular space between the water jacket of the combustion chamber and the cylinder, a piston mounted to reciprocate in the said cylinder below the water jacket and the combustion chamber and having a tubular extension passing into the said annular space, and packing rings held exteriorly on the said water jacket of the combustion chamber near the lower end thereof and in engagement with the inner face of the said tubular piston extension.

3. An internal combustion engine provided with a cylinder, a cylinder head held on the outer end of the cylinder and provided with a combustion chamber open at both ends, and a water jacket surrounding the combustion chamber, the water jacketed combustion chamber extending into the upper end of the cylinder and spaced from the inner surface thereof to provide an annular space between the water jacket of the combustion chamber and the cylinder, packing rings held exteriorly on the water jacket of the combustion chamber near the inner end thereof, and a piston mounted to reciprocate in the said cylinder below the water jacketed combustion chamber and having a tubular extension of a length exceeding the stroke of the piston, the said tubular piston extension extending into the said annular space and engaging the packing rings, the said cylinder head having a valve controlled inlet and a valve controlled outlet extending horizontally above the water jacketed combustion chamber and opening into said head above the open top of the combustion chamber at opposite sides thereof.

4. In an internal combustion engine, a cylinder, a cylinder head provided with a depending cylindrical combustion chamber open at both ends and extending into the upper end of the cylinder, a cylindrical water jacket surrounding the combustion chamber and spaced from the inner surface of the cylinder wall to form with the latter an annular space, a piston mounted to reciprocate in the said cylinder below the water jacket and the combustion chamber and having a tubular extension passing into the said annular space, the said cylinder head having a valve controlled inlet and a valve controlled outlet opening into the cylinder head at opposite sides of the combustion chamber above the open top thereof.

5. An internal combustion engine provided with a cylinder, a cylinder head provided with a water jacketed combustion chamber extending into the cylinder and spaced from the inner surface thereof, the combustion chamber being open at both ends, a piston mounted to reciprocate in the said cylinder below the water jacketed combustion chamber and having a tubular extension passing into the said space, the cylinder head having a valve controlled inlet and a valve controlled outlet opening into the head above the open top of the combustion chamber.

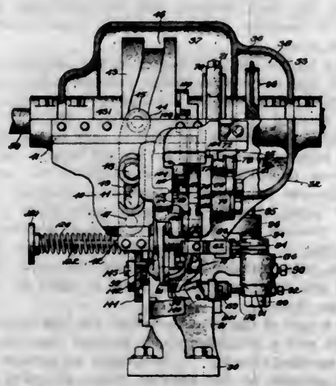
1,110,862. STOPPERING CROWN OR CAP FOR BOTTLES AND THE LIKE. WILLIAM BAILEY, Birmingham, England, assignor to The Crown Cork and Seal Co., Baltimore, Md. Original application filed Nov. 22, 1909, Serial No. 529,471. Divided and this application filed Mar. 31, 1910. Serial No. 552,703. (Cl. 215—9.)

1. The herein described article comprising a metallic crown or cap having a downwardly extending outside flange adapted to engage with the neck of the bottle, and a compressible sealing disk located therein, said sealing disk being covered with foil wrapped over its exposed face and over its edge, and upon its rear face, substantially as described.

2. The described article consisting of a crown or cap and a sealing disk therein, said disk being covered with foil corrugated on its exposed face and extending over the edge and upon the rear face of the disk, substantially as described.

3. The herein described article comprising a metallic crown or cap having a downwardly extending outside flange adapted to engage with the neck of the bottle, and a compressible sealing disk located therein, said sealing disk being covered with flexible waterproof material wrapped over its exposed face and over its edge, and upon its rear face.

1,110,863. CHAIN-STITCH SHOE-SEWING MACHINE. HARRIS A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 19, 1907. Serial No. 407,143. (Cl. 112—20.)



1. In a welt shoe sewing machine having its needle arranged to enter the work tangentially with relation to the bottom of the sole and from the margin toward the body of the sole, a welt guide shaped to impart an angle to the welt and arranged to hold the welt so that the needle will penetrate in said angle, and a work gage having a broad welt-engaging surface arranged to brace the inner lip of the welt against the backward pull of the needle and its thread.

2. In a shoe-sewing machine, a welt guide, a work gage at one side of the welt guide, and a curved hooked needle arranged to enter the work from the welt side between said guide and gage, said needle being movable laterally from said guide toward the gage for feeding the work, said gage having a broad surface for engaging the stitched welt above the line of the stitches on the side from which the needle enters to resist the backward pull of the needle.

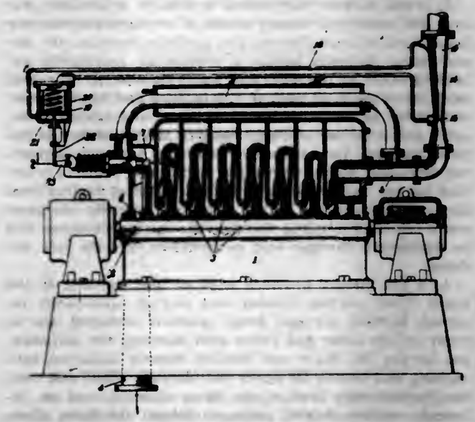
3. In a welt shoe sewing machine having a curved oscillatory needle arranged to enter the work tangentially with relation to the bottom of the sole and from the margin toward the body of the sole, a welt guide and a work gage arranged to engage the welt at opposite sides of the needle, said gage having a surface arranged to engage the inner lip of the welt to brace the same against the backward pull of the needle and its thread, and a surface arranged to engage the outer lip of the welt to brace the same against the subsequent inclined pull of the needle thread.

4. In a welt shoe sewing machine having a curved oscillatory needle arranged to enter the work tangentially with relation to the bottom of the sole and from the margin toward the body of the sole, and two welt-engaging members arranged to brace the welt on opposite sides of the needle, each of said welt-engaging members having a surface arranged to brace the inner lip of the welt to brace the same against the backward pull of the needle and its thread, and each having a surface arranged to brace the outer lip of the welt against the subsequent inclined pull of the needle thread.

5. In a welt shoe sewing machine having a curved oscillatory needle arranged to enter the work tangentially with relation to the bottom of the sole and from the margin toward the body of the sole, a welt guide and a work gage affixed to each other and arranged to engage the welt at opposite sides of the needle, said guide and gage each having a welt-engaging surface arranged to brace the inner portion of the welt and each having a surface at an angle to the first-mentioned surface to brace the outer portion of the welt.

[Claims 6 to 15 not printed in the Gazette.]

1,110,864. CENTRIFUGAL COMPRESSOR. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 25, 1912. Serial No. 727,650. (Cl. 230—11.)



1. In combination a centrifugal compressor having a discharge line, a demand measuring device, an engine operated by compressed fluid from said discharge line, and means controlled by said demand measuring device to supply fluid to said engine from said discharge line in an amount inversely proportionate to the demand.

2. In combination a centrifugal compressor having a discharge line, a demand measuring device, an engine operated by compressed fluid from said discharge line and operatively connected with said compressor, and valve mechanism operated from said demand measuring device to supply fluid from said discharge line to said engine in an amount inversely proportionate to the demand.

3. In combination, a centrifugal compressor having a discharge line, a demand measuring device in said discharge line supplying two fluid pressures whose difference varies with the demand, an engine operated by fluid from said discharge line and operatively connected with said compressor, valve mechanism for controlling the flow of fluid from said discharge line to said engine, valve motor mechanism for controlling said valve, and fluid connections for conveying the two pressures from said demand measuring device to said valve motor mechanism for operating said valve motor mechanism.

4. In combination, a centrifugal compressor, having a discharge line, a Venturi tube in said discharge line, an engine operated by fluid from said discharge line, and operatively connected with said compressor, valve mechanism for controlling the flow of fluid from said discharge line to said engine, a valve motor comprising a cylinder and piston for operating said valve, and fluid passages leading from the throat and discharge of said Venturi tube to opposite ends of said cylinder to move said motor piston as the discharge through said Venturi tube varies.

5. In combination a centrifugal compressor having a discharge line, a demand measuring device, an engine operated by compressed fluid from said discharge line, means controlled by said demand measuring device to supply fluid to said engine from said discharge line in an amount inversely proportionate to the demand and means to heat said fluid before it is admitted to said engine.

[Claims 6 to 9 not printed in the Gazette.]

1,110,865. ADJUSTABLE BED. WILLIAM F. BARBER, Des Moines, Iowa. Filed Feb. 25, 1914. Serial No. 821,057. (Cl. 5—4.)

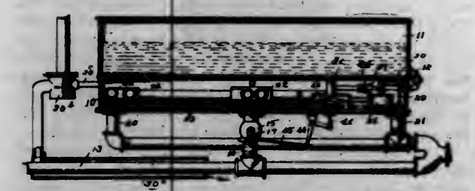
1. An adjustable bed comprising the side rails, the foot and head boards having openings to receive the side rails, and a threaded rod swivelly mounted in each post of each foot and head board and thread through the side rail for adjusting each end of each side rail.

2. An adjustable bed comprising foot and head boards having corner posts, each being provided with elongated openings, side rails having detachably pointed stubs passing through said elongated openings, said stubs having

plates covering said elongated opening and provided with straps surrounding and slidably mounted upon said posts, a threaded rod swivelly mounted in each post and threaded through each stub, whereby each end of each side rail may be adjusted independently.

3. An adjustable bed comprising foot and head boards having corner posts, each being provided with elongated openings, side rails having detachably jointed stubs passing through said elongated openings, said stubs having plates covering said elongated opening and provided with straps surrounding and slidably mounted upon said posts, a threaded rod swivelly mounted in each post and threaded through each stub, whereby each end of each side rail may be adjusted independently, transverse bracing means between the opposing stubs of the opposite side rail, bracing means between said plates and the stubs, said posts having sockets in which the threaded rods are swiveled, and means for adjusting each rod independently.

1,110,866. VAPORIZER. JAMES BARELS, Des Moines, Iowa. Filed Aug. 28, 1911. Serial No. 646,439. (Cl. 48—107.)



1. In a device of the class described, the combination of a receptacle, a radiator therein, means for supplying heat to the radiator, said radiator being spaced apart from the bottom of the receptacle, an absorbent cover for the radiator completely surrounding it, an absorbent material in contact with the absorbent cover and filling the space between the absorbent cover and the bottom of the receptacle, means for supplying liquid fuel into the receptacle, and means for automatically limiting the height of the liquid fuel so that it will not at any time completely cover the radiator, for the purposes stated.

2. In a device of the class described, the combination of a suitable receptacle, means for introducing gasolene in limited quantities into it, a vapor outlet pipe, a radiator within the receptacle comprising a central coupling, an engine exhaust pipe communicating with the coupling, and a number of radiator sections communicating with said central coupling and each provided with a number of pipes so arranged that the length of passageway from the coupling to the discharge end of each radiator section is exactly the same, and discharge pipes communicating with the ends of said radiator sections.

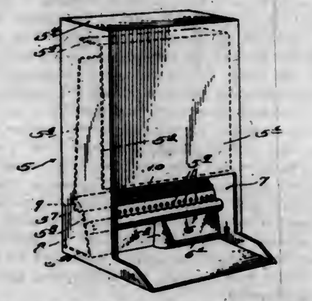
3. In a device of the class described, the combination of a suitable receptacle, a radiator therein, means for conducting heated vapors from an engine to said radiator, a discharge pipe for the radiator, a gasolene inlet pipe for the receptacle, a valve on said gasolene inlet pipe, a float for operating said valve, a vapor discharge pipe for the receptacle, and a weighted lever arranged to coöperate with the float to close the valve in the gasolene supply pipe when the receptacle is tilted from a horizontal position.

4. In a device of the class described, the combination of a suitable receptacle, a radiator therein, means for conducting heated vapors from an engine to said radiator, a discharge pipe for the radiator, a gasolene inlet pipe for the receptacle, a valve on said gasolene inlet pipe, a float for operating said valve, a vapor discharge pipe for the receptacle, a weighted lever arranged to coöperate with the float to close the valve in the gasolene supply pipe when the receptacle is tilted from a horizontal position, and means for automatically forcing gasolene in limited quantities into the interior of the receptacle against the pressure of the vapor therein.

5. In a device of the class described, the combination of a suitable receptacle, a radiator therein, means for conducting heated vapors from an engine to said radiator, a discharge pipe for the radiator, a gasolene inlet pipe for the receptacle, a valve on said gasolene inlet pipe, a float for operating said valve, a vapor discharge pipe for the receptacle, a weighted lever arranged to coöperate with the float to close the valve in the gasolene supply pipe when the receptacle is tilted from a horizontal position, and means for automatically forcing gasolene in limited quantities into the interior of the receptacle against the pressure of the vapor therein, said means comprising a pressure regulator, a stem connected therewith and arranged to be reciprocated upon the fluctuation of the pressure regulator, and a pump device connected with said stem.

[Claims 6 to 8 not printed in the Gazette.]

1,110,867. GAS-FURNACE. BENJAMIN C. BARTLEBAUGH, Wheeling, W. Va. Filed May 11, 1914. Serial No. 837,916. (Cl. 126—87.)



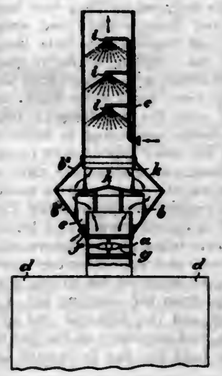
1. A gas furnace having open-ended internal, vertical air and flame channels arranged one in front of the other, and an internal, vertical mixing channel arranged behind the flame channel and with which the latter channel and the air channel communicate at their upper ends; and a burner arranged beneath the lower end of said flame channel, the lower end of the mixing channel being in communication with the burner space directly adjacent the flame, whereby the gaseous mixture will be discharged from the said mixing channel directly into the flame.

2. A gas furnace having internal, front, intermediate and rear vertical channels in communication at their upper ends; and a burner located beneath the lower end of the intermediate channel, the rear channel extending below the intermediate and front channels and communicating with the burner space directly opposite the burner apertures.

3. A gas furnace partitioned internally to produce vertical air, flame and mixing channels arranged successively from front to back thereof, the partition between the air and flame channels having a horizontal, rearwardly extending offset at its upper end which terminates in spaced relation to the rear wall of the furnace and to the upper end of the partition between the flame and mixing channels; and a burner arranged beneath the lower end of the flame channel, the last-named partition having a depending extension which is arranged behind and projects below said burner and is provided with a series of perforations disposed opposite the burner apertures, whereby the gaseous mixture descending through the mixing chamber will be discharged through said perforations directly into the flame.

4. A gas furnace provided with an inlet opening at the lower front portion thereof and having open-ended internal, vertical air and flame channels arranged one in front of the other and above said opening, the air channel having its lower end located directly adjacent said opening and having its upper end laterally offset and communicating with that of the flame channel, and an internal, vertical channel arranged behind the flame channel, with which the upper ends of the latter and the air channel communicate; and a burner arranged beneath the lower end of said flame channel, the lower end of the mixing channel communicating with the burner space directly adjacent the flame, whereby the gaseous mixture will be discharged from said mixing channel directly into the flame.

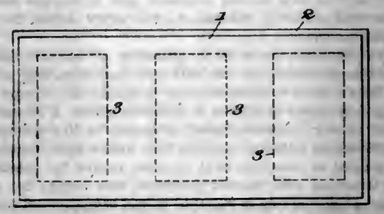
1,110,868. ARRANGEMENT FOR PRECIPITATING DUST BY MEANS OF WATER. GEORG J. BAUER, Frankfort-on-the-Main, Germany, assignor to Simon Bühler & Baumann, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 8, 1913. Serial No. 799,947. (Cl. 98—43.)



1. A device of the character described comprising an inlet tube forming a passage for dust laden air, means for imparting a rotary movement to said air in its passage through said tube, an exhaust tube, a double cone shaped purification chamber connected with said inlet and exhaust tubes whereby the velocity of the rotating air is reduced, a splash dish in said purification chamber and nozzles in said exhaust tube whereby water is squirted into the path of the air and a screen of water is formed in said purification chamber about the end of the exhaust tube and a second screen of water is formed about the periphery of said splash dish, the latter causing the rotating air to pass first through said second screen and then through said first screen into said exhaust tube.

2. The combination of an inlet tube forming a passage for dust laden air, means for imparting a rotary movement to said air, a purification chamber connected with said inlet tube and adapted to reduce the velocity of the air, an exhaust tube connected with said chamber and means for forming a plurality of screens of water in said purification chamber through which said rotating air successively passes in its passage to said exhaust tube.

1,110,869. STENCIL CARD OR SHEET AND PROCESS OF PRODUCING SAME. FRANK D. BELKNAP, New York, N. Y., and EDWIN DRAYTON BELKNAP, East Orange, N. J. Filed June 2, 1910. Serial No. 564,619. (Cl. 101—131.)



1. As a new article of manufacture, a stencil sheet for use in producing duplicate copies of typewritten matter which consists of a thin sheet of paper of loose texture, treated with successive solutions of gelatin, glycerin and bichromate of potash and having the character to be reproduced indented in the film of treating solution carried by said paper, the paper being left intact.

2. As a new article of manufacture, a stencil sheet for use in producing duplicate copies of typewritten matter which consists of a thin sheet of paper of loose texture, treated with successive solutions of gelatin, glycerin and an alkaline bichromate and having the characters to be reproduced indented in the film of treating solution carried by said paper, the paper being left intact.

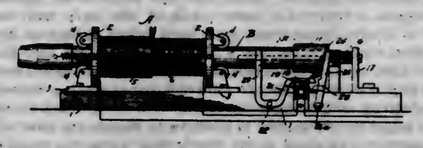
3. As a new article of manufacture, a stencil sheet for use in producing duplicate copies of typewritten matter which consists of a thin sheet of paper of loose texture, treated with successive solutions of gelatin, glycerin and bichromate of potash and cut in such form as to be adapted to be placed in a typewriter.

4. As a new article of manufacture, a stencil sheet for use in producing duplicate copies of typewritten matter which consists of a thin sheet of paper of loose texture treated with successive solutions of gelatin, glycerin and bichromate of potash and mounted on a frame adapted to be placed in a typewriter.

5. The process of forming a sheet for use in the production of stencils by type pressure which includes the following steps: first, depositing an even film of colloidal material on a thin loose fibered paper, and second, subjecting said film to the action of a coagulant.

[Claims 6 to 9 not printed in the Gazette.]

1,110,870. ELECTRIC BELL-RINGER. WILLIAM VREELAND BERGEN and GROVER CLEVELAND COMBS, Hillsboro, Oreg. Filed Apr. 5, 1913. Serial No. 759,108. (Cl. 177—7.)



1. A bell ringer comprising an electro-magnet, a hammer element actuated thereby in one direction, means for moving the hammer element on its return stroke, a circuit for the electro-magnet, a switch for the said circuit including a movable member, means on the hammer element for engaging the movable member of the switch to open the circuit, and a latch for engaging the switch member to hold the same in open circuit position during the return stroke of the hammer element and released from the movable member of the switch by the said means on the hammer element to permit the circuit to close, said means being disposed and movable between the movable member and the latch.

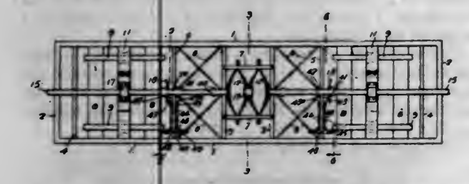
2. A bell ringer comprising an electro-magnet, a hammer element actuated thereby in one direction, means for moving the hammer element on its return stroke, a circuit for the electro-magnet, a switch for the said circuit including a movable member, means on the hammer element for engaging the movable member of the switch to open the circuit, a latch for engaging the switch member to hold the same in open circuit position during the return stroke of the hammer element and released from the movable member of the switch by the hammer element to permit the circuit to close, and a spring connected with the latch and with the movable member of the switch to maintain the switch closed during the striking stroke of the hammer element, and to maintain the latch engaged with the movable member of the switch during the major part of the return stroke of the hammer element.

3. A bell ringer comprising a reciprocatory hammer element, electrical means for moving the same on the striking stroke, a switch including a contact-carrying lever, a latch arranged to hold the lever in open circuit position, a member on the element to engage the lever at the forward end of the striking stroke, to open the circuit and to strike the latch at the rear end of the return stroke to release the latch from the lever, and a guiding device for

preventing the hammer element from turning, whereby said member on the hammer element is maintained in operative relation with the lever and latch.

4. A bell ringer comprising a magnet, a hammer element operated thereby, a switch controlling the circuit of the magnet and including a movable element, a device carried by the hammer element to impart a blow to the said movable element of the switch for quickly opening the same, and a latch disposed in the path of the device to be released thereby and operatively connected with the movable element of the switch to engage with and hold such element in open circuit position during the major portion of the return stroke of the hammer element.

1,110,871. CAR-GEAR EQUIPMENT. COLUMBUS HOUCK BISHOP, El Reno, Okla. Filed Sept. 25, 1913. Serial No. 791,767. (Cl. 188—17.)



1. In combination with the body of a car and the trucks at the ends of the body, of coupling bars mounted for sliding movement and in alinement and extending beyond the cars at the ends thereof, said bars being adapted for connection with coupling heads at their outer ends, springs arranged between the inner ends of the bars and normally forcing them away from each other, means in connection with each bar for limiting its movement in either direction, brake mechanism in connection with each truck, a lver at the inner side of each truck for operating the said mechanism, and a cross bar rigid with each coupling bar and below the same, and in position to engage the lever and to operate the same to set the brakes when the coupling bar is moved inwardly, and means in connection with each coupling bar for locking the bar with the brakes in set or released position, each of the said means comprising a pair of slide rods mounted for sliding movement on the frame toward and from the coupling bar, a block at the inner end of each slide rod, each coupling bar having shoulders for engagement by the blocks of the respective rods to hold the bars in inward or outward position, a lever pivoted to the frame at the outer ends of the rods, a pivotal and sliding connection between each lever and the rod, for moving the rod longitudinally when the lever is swung.

2. In combination with the body of a car and the trucks at the ends of the body, of coupling bars mounted for sliding movement and in alinement and extending beyond the cars at the ends thereof, said bars being adapted for connection with coupling heads at their outer ends, springs arranged between the inner ends of the bars and normally forcing them away from each other, means in connection with each bar for limiting its movement in either direction, brake mechanism in connection with each truck, a lever at the inner side of each truck for operating said mechanism and a cross bar rigid with each coupling bar and below the same, and in position to engage the lever and to operate the same to set the brakes when the coupling bar is moved inwardly, and means in connection with each coupling bar for locking the bar with the brakes in set or released position, each of the said means comprising slide rods mounted for sliding movement toward and from the coupling bar, each bar having shoulders for engagement by the inner ends of the rods to hold the bar in inward or outward position, and means for alternately moving the rods in opposite directions.

3. In combination with the body of a car and the trucks at the ends of the body, of coupling bars mounted for sliding movement and in alinement and extending beyond the cars at the end thereof, said bars being adapted for connection with coupling heads at their outer ends, springs arranged between the inner ends of the bars and normally forcing them away from each other, means in connection with each bar for limiting its movement in either direction, brake mechanism in connection with each truck, a lever at the inner side of each truck for operating the said mechanism, and a cross bar rigid with each coupling bar and below the same, and in position to engage the lever and to operate the same to set the brakes when the coupling bar is moved inwardly, and means in connection with each coupling bar for locking the bar with the brakes in set or released position.

4. In combination with the body of a car and the trucks at the ends of the body, of coupling bars mounted for sliding movement and in alinement and extending beyond the cars at the end thereof, said bars being adapted for connection with coupling heads at their outer ends, springs arranged between the inner ends of the bars and normally forcing them away from each other, means in connection with each bar for limiting its movement in either direction, brake mechanism in connection with each truck, a lever at the inner side of each truck for operating the said mechanism, and a cross bar rigid with each coupling bar and below the same, and in position to engage the lever and to operate the same to set the brakes when the coupling bar is moved inwardly, a lever for each coupling bar, each lever being pivoted intermediate its ends at the side of the car and approximately parallel with the bar, a pair of blocks mounted for sliding movement on the frame toward and from the coupling bar, a connection between each block and the adjacent end of the lever for moving the block, and shoulders on the bar for engagement by the blocks to hold the bar in inward or outward position.

5. In combination with the body of a car and the trucks at the ends of the body, of coupling bars mounted for sliding movement and in alinement and extending beyond the cars at the end thereof, said bars being adapted for connection with coupling heads at their outer ends, springs arranged between the inner ends of the bars and normally forcing them away from each other, means in connection with each bar for limiting its movement in either direction, brake mechanism in connection with each truck, a lever at the inner side of each truck for operating the said mechanism, and a cross bar rigid with each coupling bar and below the same, and in position to engage the lever and to operate the same to set the brakes when the coupling bar is moved inwardly, said bars being arched transversely and having their convex faces toward the levers, to permit lateral movement of the lever with respect to the bar without disengagement therefrom.

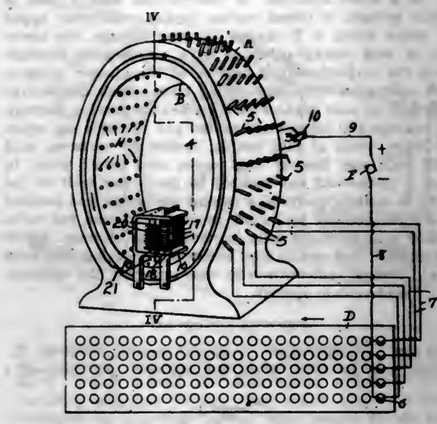
[Claims 6 and 7 not printed in the Gazette.]

1,110,872. ELECTRIC DISPLAY SYSTEM. CHARLES FRANK BORSCHNECK, Knoxville, Pa. Filed Jan. 11, 1913. Serial No. 741,368. (Cl. 177—348.)

1. In combination with a plurality of electric lamps, contact members in circuit with the corresponding one of said lamps, said members being mounted in annular series, a second series of contact members adjacent to said first series adapted to be extended to contact with said first members to complete said circuits, means for extending and retracting said second members, and means for moving one of said series in relation to the other series, for the purpose described.

2. In combination with a plurality of electric lamps, contact members in circuit with the corresponding one of said lamps, said members being arranged in groups and said groups being arranged in annular series, a second series of contact members also arranged in like groups in annular series adjacent to said first series and adapted to be extended to complete said circuits, means for extending and retracting said second members, and means for moving one of said series in relation to the other series, for the purpose described.

3. In combination with a plurality of electric lamps, contact members arranged in annular series in circuit with the corresponding one of said lamps, a second contact member adapted to be extended to contact with individuals of said series, means for extending and retracting said second member, and means for establishing a rotary relationship between said series and said second member for the purpose described.



4. In combination with a plurality of electric lamps, switching apparatus comprising contact members arranged in a plurality of annular series in circuit with the corresponding one of said lamps, a contact connected to all of said lamps and adapted to be extended to contact with the members of said series of contacts, an electric magnet adapted to control the extension of said second contact, and means for establishing a rotary relationship between said series of contacts and said second contact, for the purpose described.

5. In an electric traveling display device, the combination of a plurality of lamps; a switching device comprising contact members arranged in a plurality of annular series in circuit with the corresponding one of said lamps, other annular series of contacts adjacent to said first named series and extensible into contact therewith, means for rotating one of said sets of annular series of contacts, an electro-magnet for each of said last named series of contacts and controlling the extension of the same; and an energizing electric circuit for each of said magnets.

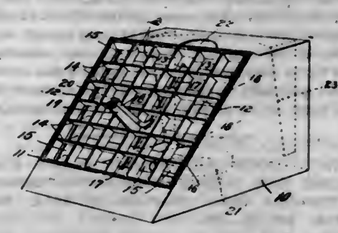
[Claims 6 to 10 not printed in the Gazette.]

1,110,873. KEY-RING. JAMES H. BOYE, Chicago, Ill., assignor to The Boyle Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1913. Serial No. 799,698. (Cl. 59—98.)

A key-ring comprising a member having a shank and oppositely curved branches extending from the shank and having their free ends extending for a short distance beyond each other, thus affording ring-sections, said ring-sections having their outer edge-portions separated at an overlapping point affording a mouth enabling a key to be introduced, and each ring-section being off-set to afford a recess adjacent the extremity of the companion ring-section.

1,110,874. EGG-CANDLING DEVICE. FRIEND C. BRAKE, Edgerton, Minn. Filed May 26, 1913. Serial No. 769,844. (Cl. 99—6.)

1. An egg-candling device comprising a box having an opening in its front wall, a partitioned egg holder adapted to be removably supported in said opening and comprising a large number of individual egg-compartments each of which is open at top and bottom, an egg-retaining plate hinged to the bottom of each tier of compartments, and manually operated means to shift and latch said plates.

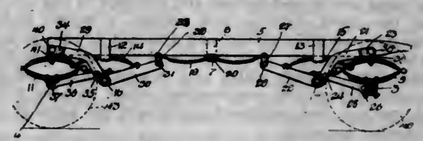


2. An egg-candling device comprising a box having a forwardly and downwardly inclined front wall, said wall having a rectangular opening therein, a partitioned egg holder adapted to rest within said opening in an inclined position, a series of egg-retaining plates, one for each tier of compartments, said plates being hingedly attached to the egg holder, means for turning said plates simultaneously, and a keeper for said turning means.

3. An egg-candling device comprising a box having an opening in its front wall, a partitioned egg holder adapted to be removably supported in said opening and comprising a large number of individual egg-compartments each of which is open at top and bottom, an egg-retaining plate hinged to the bottom of each tier of compartments, a manually operated means to shift and latch said plates, said plates being of less width than the egg-compartments in order to provide gaps for passage of light through the eggs when the plates are in egg-retaining position.

4. An egg-candling device comprising a box having a forwardly and downwardly inclined front wall, said wall having a rectangular opening therein, a partitioned egg holder adapted to rest within said opening in an inclined position, a series of egg-retaining plates, one for each tier of compartments, said plates being hingedly attached to the egg holder and being of less width than the compartments in order to provide gaps for passage of light through the eggs when the plates are in egg-retaining position, means for turning the plates simultaneously, and a keeper for said turning means.

1,110,875. SHOCK-ABSORBER FOR MOTOR-VEHICLES. ROSS M. BRASINGTON, Marietta, Ohio. Filed Mar. 28, 1914. Serial No. 827,838. (Cl. 21—101.)

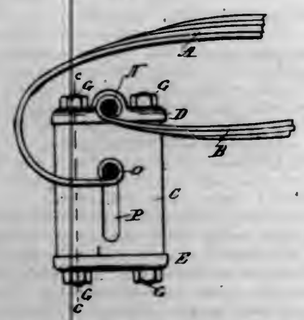


1. A shock absorber comprising front and rear springs connected with the axles of a vehicle, intermediate springs connected with the body of the vehicle, levers pivotally connected with said intermediate springs and with the front and rear springs and links connecting said levers to said axles, and longitudinally extending springs adapted to be carried by the body of the vehicle and pivotally connected to said levers.

2. A shock absorber comprising intermediate springs suspended from the body of a vehicle, a pair of pivoted levers adapted to be arranged at each side of the body of the vehicle and having their pivots supported from said springs, spring and link connections between the levers of each pair, front and rear springs adapted to be supported upon the front and rear axles of the vehicle, means for pivotally connecting said levers to said front and rear springs, and pivoted link connections between said levers and said axles.

3. A shock absorber comprising intermediate springs supported from each side of a vehicle body, a pair of pivoted two armed levers adapted to be arranged at each side of the vehicle body, means supported from said springs and constituting pivots for said levers, the levers of each pair being oppositely disposed, spring and link connections between the inner arms of the levers of each pair, link connections between the outer arms of said levers and the axles of the vehicles, front and rear vehicle springs adapted to be mounted upon the axle of the vehicle, and means for pivotally connecting the free ends of the outer arms of said levers to said front and rear springs.

1,110,876. SHOCK-ABSORBER. JULIUS BROCCOLIN, Cleveland, Ohio, assignor of one-half to Richard Atkinson, Cleveland, Ohio. Filed Feb. 24, 1914. Serial No. 820,488. (Cl. 21—50.)



1. In a shock absorber, in combination, a closed casing, a plunger reciprocable therein, and provided with lateral extensions, guide rods for said plunger extending through openings in said lateral extensions, said guide rods secured in the upper and lower walls of said casing, the lower wall of said casing provided with a guide opening in which the lower extremity of said plunger moves, compression springs in said case encircling said guide rods, underneath said lateral extensions of the plunger, a spring engaging member secured to the upper wall of said casing, and a second spring engaging member secured to said plunger, the walls of said casing having vertical slots through which said second spring engaging member passes.

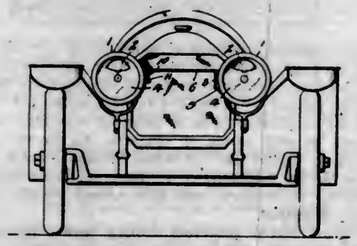
2. In a shock absorber, the combination with a pair of springs for a vehicle, and a pair of closed casings, of a T shaped plunger reciprocable in each casing, a member engaging one of said springs and attached to and connecting the upper walls of said casings, a second member engaging the other spring, and attached to said plungers in said casings, the vertical walls of said casings provided with slots through which said second spring engaging member passes, and compression springs inclosed within said casings, and positioned underneath the heads of said T headed plungers.

3. In a shock absorber, a closed casing, a T shaped plunger reciprocable therein, guide rods passing through the lateral extensions of said plunger and secured in the said casing, and forming guides for said extensions, and the lower wall of said casing provided with a guide opening through which the lower end of said plunger passes, springs inclosed within said casing and encircling said guide rods, a rod secured to the upper wall of said casing and a second rod secured to said plunger, said casing provided with vertical slots through which said second rod operates, a spring secured to each rod exterior of said casing, and means for securing the extremities of said rods.

4. In a shock absorber, in which all operated parts are inclosed, a closed casing, a plunger reciprocable within the casing, and provided with lateral extensions, springs inclosed between said extensions, and the lower wall of said casing, a spring engaging rod secured to the upper wall of the casing, and a second spring engaging rod secured to said plunger, the wall of said casing provided with an elongated opening through which said second rod operates, and means for guiding said plunger within said casing.

5. In a shock absorber, in combination with a pair of vehicle springs, a closed casing having removable upper and lower walls, a T shaped plunger therein, the lower wall of said casing provided with an opening through which the vertical central portion of the plunger reciprocates, springs within said casing upon which the lateral extensions of said plunger rest, guide rods passing through said springs and lateral extensions and through the upper and lower walls of said casing, means for securing said guide rods and thereby said upper and lower walls in place, a horizontal rod secured to the upper wall of the casing in central position, a second horizontal rod secured to said plunger and projecting through said case, the walls of said case provided with vertical slots through which said parallel rod passes, and means for securing said rods in said casing, said horizontal rods engaging the extremities of said vehicle springs.

1,110,877. HEADLIGHT. CHARLIE BROWN, Glencoe, Ill. Filed Nov. 29, 1913. Serial No. 803,826. (Cl. 240—45.)

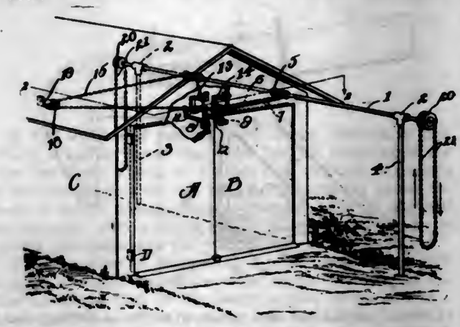


1. A headlamp of the character specified comprising a reflector, a rod located in the rear of the reflector and supported in the lamp body, means for turning such rod, and a deflector or shade arranged within the reflector above the light and having connection at its rear end with the before mentioned rod through an opening formed in the reflector, said deflector conforming approximately to the shape of the reflector when thrown upward to admit of the maximum illuminating capacity of the light.

2. In combination, side headlamps provided with a reflector, a rod mounted in the lamp body in the rear of the reflector and having internally threaded sockets at its ends, a deflector arranged within the reflector of each lamp and connected at its inner end with the rod, cap screws threaded to the outer sockets of the rods, a connecting rod threaded to the inner sockets of the lamp rods, two arms secured to said connecting rod, a spring connecting one of such arms to a part of the machine or lamp support, and an operating cord or like part attached to the other arm and extending within convenient reach of the driver.

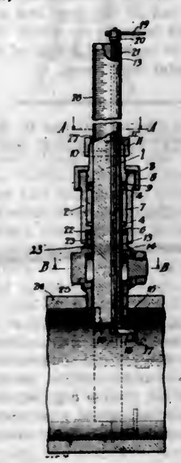
1,110,878. APPARATUS FOR OPENING AND CLOSING DOORS, GATES, &c. FRANK D. BROWN and JULIUS H. WERLING, Huntington, Ind. Filed Aug. 27, 1913. Serial No. 786,991. (Cl. 39—95.)

1. In a device for operating a pair of doors, the combination of a rotatable shaft, means for rotating said shaft in either direction, spaced reels fixed on said shaft, both located on that side of shaft toward which the adjacent door opens, two pulleys suitably mounted adjacent to the doors when in closed position, two brackets, mounted one on each door and at right angles to faces of the doors, a third pulley suitably mounted near the door opposite said shaft when said door is in open position, a pair of flexible members connected to a reel, coöperating with said brackets and said two pulleys to close the doors, a third flexible member connected to a second reel and coöperating with the bracket on the adjacent door to open said adjacent door, a fourth flexible member connected to said second reel, coöperating with said third pulley and the bracket on the opposite door, to open said opposite door.



2. In a device for operating a door, the combination of a rotatable shaft, rotating means for said shaft, spaced reels fixed on said shaft, both located on that side of the shaft toward which the door opens, a pulley suitably mounted adjacent to said door when closed, a bracket mounted on said door and at right angles to its face, a flexible member connected to a reel, coöperating with said pulley and said bracket to close the door, a second flexible member connected to a second reel coöperating with said bracket to open the door.

1,110,879. CALIPERS. WILLIAM R. BROWN, Chicago, Ill., assignor to Municipal Supply Co., a Corporation of Illinois. Filed Jan. 11, 1913. Serial No. 741,439. (Cl. 33—143.)



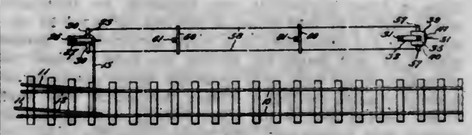
1. A caliper of the class described, comprising a member adapted to be inserted through an aperture in the side wall of a pipe, a rod revolubly mounted in said member, a substantially T-shaped part carried by said rod with the transverse portion of said part substantially parallel with said rod, and means for revolving said rod so as to shift said gage part into and out of position for permitting the opposite ends of said transverse portion to engage the walls of said pipe when said member is shifted.

2. A caliper of the class described comprising a supporting member, a bar slidably mounted therein, means for securing said supporting member on a pipe in position to have said bar inserted through a passage therein, and a substantially T-shaped gage part carried by said bar, with the transverse portion of said part substantially parallel with said bar, said bar being shiftable longitudinally for causing the opposite ends of said portion to abut against respectively opposite sides of said pipe.

3. A caliper of the class described, comprising a supporting member, a bar slidably mounted therein, means for securing said supporting member on a pipe in position to have said bar inserted through a passage therein, a substantially T-shaped gage part carried by said bar, with the transverse portion of said part substantially parallel with said bar, said bar being shiftable longitudinally for causing the opposite ends of said portion to abut against respectively opposite sides of said pipe, and means on said supporting member adapted to be shifted for clamping said bar thereto.

4. A caliper of the class described, comprising a supporting member, a bar slidably mounted therein, means for securing said supporting member on a pipe in position to have said bar inserted through a passage therein, a substantially T-shaped gage part carried by said bar, with the transverse portion of said part substantially parallel with said bar, said bar being shiftable longitudinally for causing the opposite ends of said portion to abut against respectively opposite sides of said pipe, and means adapted to shift said gage part into and out of position for abutting against said pipe.

1,110,880. SWITCH-SIGNAL. EARL F. BRUMBAUGH, Colwich, Kans. Filed Aug. 16, 1912. Serial No. 715,480. (Cl. 246—41.)



1. In combination, suitably supported upper and lower arms, a pliable connection depending from said upper arm, a lantern secured to said connection having a socket in its base, a bearing carried by said lower arm, a shaft revolubly held within said bearing and entering said socket, a collar secured to said shaft to hold the same within said bearing, a signal blade secured to the lower end of said shaft, a pinion secured to said shaft, a pintle held to said lower arm adjacent to said shaft, a gear sector revolubly held upon said pintle having oppositely directed arms, said sector meshing with said pinion, and operating connections extending from said arms.

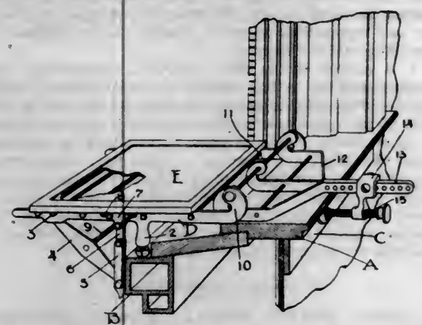
2. In combination, suitably supported upper and lower arms, a hook carried by said upper arm, a chain removably secured to said hook, a lantern housing, said chain being swiveled to the upper end of said lantern housing, said lantern housing having an angular socket in its base, a rock shaft passing through said lower arm, a collar secured to said rock shaft to hold the same to said lower arm, a pinion fixed to said rock shaft, a pintle secured to said lower arm adjacent to said rock shaft, a gear sector held upon said pintle, said gear sector meshing with said pinion; and means to actuate said gear sector.

3. A device of the character described comprising suitably supported upper and lower arms, a lantern housing a pliable connection extending from said lantern housing and secured to said upper arm, a bearing secured to said lower arm, a rock shaft mounted in said bearing and engaging said lantern, a semaphore blade secured to the lower end of said rock shaft, a pinion fixed to said rock shaft, a pintle secured adjacent to said rock shaft, a gear sector revolubly carried by said pintle, and meshing with said gear, and means to actuate said gear sector.

1,110,881. WORKMAN'S SCAFFOLD. HORMISDAS E. BRUNELLE, St. Paul, Minn. Filed May 31, 1913. Serial No. 770,944. (Cl. 20—87.)

1. A window scaffold comprising in combination, a platform, a frame supporting said platform, an adjustable means carried by said frame in position to be set in con-

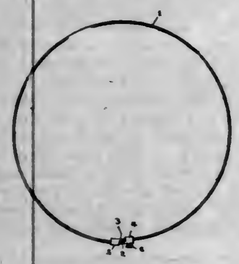
tact with the inner face of a wall, an extensible means carried by said frame for bracing the latter against the outer face of the wall, said extensible means consisting of rearwardly extending braces pivoted to said frame, toggle connections between the free ends of said braces and said frame, longitudinally slidable brackets carrying the frame-ends of said toggle connections and bearing-feet formed on the lower ends of said toggle connections for contact with the face of the wall.



2. A window scaffold comprising in combination, a platform, a frame supporting said platform, an adjustable means carried by said frame in position to be set in contact with the inner face of a wall, an extensible means carried by said frame for bracing the later against the outer face of the wall, said extensible means consisting of foldable toggles having a sliding connection with said frame, bearing feet on the lower ends of said toggles for contact with a wall-face, and braces extending from the lower ends of said toggles to the outer ends of said frame.

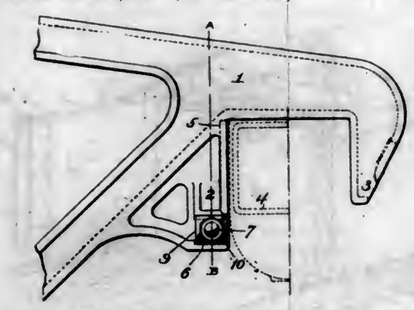
3. A window scaffold comprising in combination, a platform, a frame supporting said platform, an adjustable means carried by said frame in position to be set in contact with the inner face of a wall, an extensible means carried by said frame for bracing the latter against the outer face of the wall, said extensible means consisting of braces pivoted to the outer end of said frame, and extending to points adjacent the outer wall face, toggle levers having their lower ends connected to the free ends of said braces, bearing feet on said toggle levers for contact with the wall face, and brackets carried by the upper ends of said toggle levers, and having longitudinally slidable connections with said frame.

1,110,882. ADJUSTABLE BAKING-RING. DAVID BUSCH, Washington, D. C. Filed Feb. 24, 1914. Serial No. 820,551. (Cl. 53—6.)



A cylindrical baking ring consisting of a single uniform strip of elastic material, having parallel edges and continuous smooth faces, and at each end a loop, the strip passing through these loops, the strip bearing against the loops, adjustable therethrough, and held in adjustable position by the pressure upon the loops.

1,110,883. CAR-TRUCK SIDE FRAME. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed May 2, 1914. Serial No. 836,043. (Cl. 105—243.)

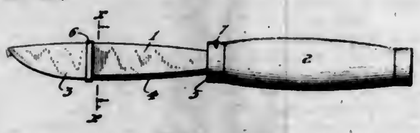


1. The combination of a truck side frame having pedestal jaws, one of which is provided on its side face with an open recessed seat accessible when the journal box is in place and a member fitting in said recessed seat and held in place by a bolt, said member being in a position to engage a flange of a journal box in the event of derailment.

2. The combination of a truck side frame having pedestal jaws one of which is provided with a recessed seat on each side face, a bolt the head of which has bearing in one of said recessed seats, and a washer on said bolt and mounted in the other recessed seat, the said head and washer being in positions to engage the flanges of a journal box and prevent its separation from the truck in the event of derailment.

3. The combination of a truck side frame having pedestal jaws one of which is longer than the other, the longer jaw being provided with a recessed seat in its side face adjacent the lower end of the jaw, and a member fitting in said seat and held in place by a bolt, the said member being in a position to engage a flange of a journal box in the event of accidental derailment.

1,110,884. PARING-KNIFE. OSSIE H. BUTLER, Chicago, Ill. Filed July 11, 1913. Serial No. 778,438. (Cl. 30—20.)



1. In combination, a knife blade; a handle on said blade; a ferrule on said handle; a guard integral with said ferrule, having a portion extending inwardly from said ferrule toward said blade and a portion spaced parallel with, close to and back of the cutting edge of said blade; and a loop extending around said blade intermediate the ends of the latter and formed integrally with said guard, substantially as described.

2. In combination, a knife blade; a handle on said blade; a ferrule on said handle; a guard integral with said ferrule, having portions extending inwardly from said ferrule toward said blade and a portion spaced parallel with, close to and back of the cutting edge of said blade, said last mentioned portion being arcual in cross section and disposed substantially perpendicular to said blade; and a loop extending around said blade intermediate the ends of the latter and formed integrally with said guard, substantially as described.

1,110,885. PROCESS OF MAKING SHOES. HARRY G. CALEF, Haverhill, Mass. Filed Apr. 13, 1914. Serial No. 831,357. (Cl. 12—142.)

1. The method of making shoes which consists in yieldingly supporting the edge-portion of the heel-seat of the shoe above the level of the support for the middle portion of the heel of the sole and leveling said heel-seat edge-portion by forcing the same onto said yielding support.

2. The method of making shoes which consists in providing a flexible supporting plate, for the heel-seat of the shoe, concavely curved on its side next the seat to provide a yielding support for the edge-portion thereof above the level at which it supports the middle portion of the heel of the sole, and leveling said heel-seat edge-portion by forcing the same onto the edge-portion of said plate.

3. The method of making shoes which consists in yieldingly supporting the edge-portion of the heel-seat of the shoe above the level of the middle portion of the sole by a flexible stiffener of flat material and molded so that it is concaved on its side next the heel-seat, leveling said heel-seat edge-portion by forcing the same onto the edge-portion of the stiffener and then attaching the heel to the heel-seat and at the same time drawing the middle portion of the heel of the sole into the concavity in the base of the heel and bending inwardly the edge-portion of the sole, and causing the counter to be drawn inwardly to contract the shoe opening.

1,110,886. TELLTALE FOR BOTTLES AND THE LIKE. CHARLES A. CANDA, Elizabeth, N. J. Filed July 15, 1913. Serial No. 779,132. (Cl. 215—112.)

1. In combination, a receptacle having a neck having a continuously smooth inner face; and a slightly elastic, easily deformable flexible tell-tale placed in and directly engaging said neck and held in said neck by direct friction only and adapted when forced downwardly to expand to a diameter larger than the neck and to be permanently deformed or torn if withdrawn through the neck.

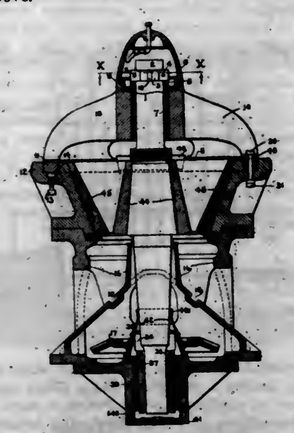
2. In combination, a receptacle having an interiorly smooth neck; and a one piece tell-tale comprising a thin slightly elastic sheet of flexible metal having a smooth continuous upper face and a long flaring skirt.

3. In combination, a receptacle having an interiorly smooth neck; and a one piece tell-tale comprising a thin slightly elastic sheet of flexible metal having a smooth continuous upper face and a long flaring skirt, said tell-tale being relatively long in the direction of its axis and being easily permanently deformed.

4. In combination, a receptacle having an interiorly smooth neck; and a one piece tell-tale comprising a thin slightly elastic sheet of flexible metal having a smooth continuous upper face and a long flaring fluted skirt, the limit of elasticity of said tell-tale being slight so that when the tell-tale is considerably deformed, it does not regain its approximate original shape.

1,110,887. GYRATORY CRUSHER. THOMAS W. CAPEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 3, 1909. Serial No. 493,636. (Cl. 83—10.)

1. In a crusher, a plurality of superposed annular members, one of said members having a circular groove formed therein on an upright axis one of the opposite sides of which being tapered and an upper member thereof coacting with a lower member thereof at the opposite sides of said groove, and bolts directly coacting with the upper and the lower members for forcing said members together axially, said coaction at the tapered side of the groove serving to generate a radial pressure at the remaining side of the groove.



2. In a crusher, a plurality of superposed annular members, an upper member thereof coacting with a lower member thereof at a set of curved surfaces having a common upright axis, a block having wedge ends coacting with one of said members whereby said member is moved radially in contact with the other of said members, and a bolt for driving said block into position.

3. In a crusher, a shell having a groove therein having an inner tapered curved surface and an outer cylindrical surface, a spider having arms and arc shaped bases, said bases having inner and outer curved surfaces corresponding to said groove surfaces, wedge blocks forcing between the ends of said bases and lying in said groove, and bolts for driving said blocks to spread the bases into tight contact with the outer wall of said groove.

4. In a crusher, a plane diaphragm at the discharge end of said crusher for protecting working parts and having a continuous groove formed in its upper side, and a lining in sections, the individual sections being formed with ribs fitting said continuous groove.

5. In a crusher, a diaphragm spanning the crusher discharge for protecting working parts, and a lining in sections therefor, the sections at the edge of the diaphragm being formed with side walls coacting with the crusher wall.

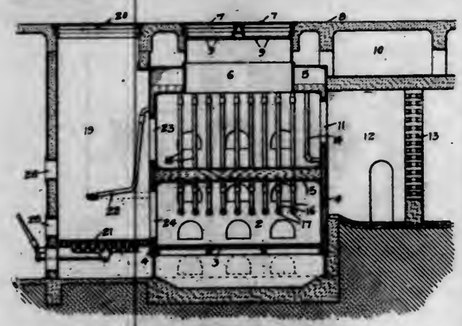
1,110,888. INCINERATOR. FREDERICK W. CAPPELEN, Minneapolis, Minn., assignor to Decarie Incinerator Company, Hopkins, Minn., a Corporation of Minnesota. Filed Mar. 24, 1911. Serial No. 616,763. (Cl. 122—2.)

1. The combination, in an incinerator with a combustion chamber formed with a water space in its walls, of a header consisting of a pipe communicating at its ends with the water space in the opposite walls of the combustion chamber, tubular grate bars extending outwardly from said header and communicating with said water space, and means preventing contact of the material with the walls of said chamber.

2. The combination, in an incinerator having a fuel grate and a filling opening, of a grate for the refuse material having substantially horizontal side portions and a raised central portion, said raised central portion dividing the material deposited through said filling opening and directing it upon said side portions, and means preventing contact of the material with the walls of said incinerator.

3. The combination, in an incinerator, with a combustion chamber, having water spaces in its walls, of a fuel grate and a filling opening, a garbage grate arranged above said fuel grate and consisting of a centrally arranged

header, tubular grate bars extending outwardly therefrom and forming a circulating means between said water spaces and said header and vertical tubes connecting the outer portions of said outwardly extending tubular grate bars with the top of said combustion chamber, and preventing contact of the material with the walls of said combustion chamber.

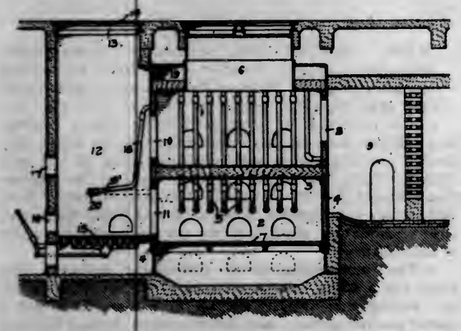


4. The combination, in an incinerator with a combustion chamber having a fuel grate and a filling opening and a water space, of a garbage grate arranged above said fuel grate and comprising a water circulating header extending across said combustion chamber, water circulating tubes extending from said header to said water space, a portion of said tubes preventing contact of the material with the walls of said chamber.

5. The combination, in an incinerator having a fuel grate and a filling opening and circulating chambers, of a header extending across the combustion chamber of said incinerator beneath said filling opening and having its ends communicating with said circulating chambers, pipes depending from said header and having outwardly extending, horizontal portions also communicating with circulating chambers in the walls of said incinerator, said header operating to divide the material falling thereon and direct it outwardly upon the horizontal portions of said pipes and means preventing the material falling on the horizontal portions of said pipes from contacting with the walls of said incinerator.

[Claims 6 to 9 not printed in the Gazette.]

1,110,889. INCINERATOR. FREDERICK W. CAPPELEN, Minneapolis, Minn., assignor to Decarie Incinerator Company, Hopkins, Minn., a Corporation of Minnesota. Filed Mar. 24, 1911. Serial No. 616,764. (Cl. 110—17.)

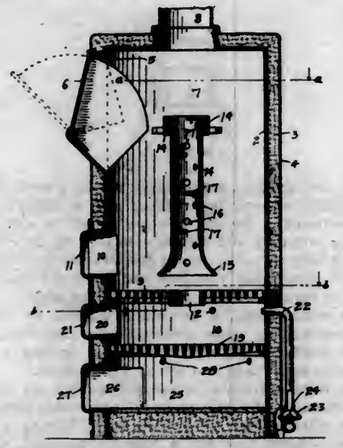


1. An incinerator having a fuel grate and a filling opening and a flue for the products of combustion, a garbage grate, a paper combustion chamber having flues in its walls leading respectively to the spaces above and below said garbage grate, said paper combustion chamber having a filling opening and a fuel grate, and a grate for the light material suspended within said paper combustion chamber and depending between said chamber and the flue leading to the space above said garbage grate.

2. The combination, with an incinerator, of a paper combustion chamber having a fuel grate and an exit flue opening in its wall above said grate, a second grate suspended from said wall above said flue opening and depending below the same and spaced therefrom and having a substantially horizontal portion projecting into said combustion chamber and spaced from said fuel grate, whereby the products of combustion on said fuel grate will have a free passage around the material to be destroyed to said exit flue.

3. An incinerator having a fuel grate and a filling opening and a flue for the products of combustion, a garbage grate, a paper combustion chamber having flues in its walls leading respectively to the space above and below said garbage grate, said paper combustion chamber having a fuel grate opposite the opening leading to the space beneath said garbage grate, a second grate arranged in front of and near the flue opening leading to the space above said garbage grate and depending within said paper combustion chamber to a point above said fuel grate, whereby free passage for the products of combustion on said fuel grate may be had around the material on said second grate to the exit flue above said garbage grate, and the wall of said incinerator having stoking holes on a level substantially with said fuel grate and with said second grate.

1,110,890. INCINERATOR. FREDERICK W. CAPPELEN, Minneapolis, Minn., assignor to Decarie Incinerator Company, Minneapolis, Minn. Filed Aug. 2, 1912, Serial No. 712,887. Renewed May 31, 1913. Serial No. 771,082. (Cl. 110—18.)



1. An incinerator comprising a casing having a chamber provided with a filling opening and a flue leading therefrom, a grate disposed in the lower portion of said incinerating chamber and having a central opening, a hood disposed above said opening and having holes in its walls, the lower end of said hood being spaced from said grate and flared or bell-shaped to direct the material away from said opening, and gas burners extending through said casing beneath said grate.

2. An incinerator comprising a casing having an incinerating chamber provided with a filling opening and a flue for the products of combustion, a grate arranged in the lower part of said incinerating chamber and having an unobstructed central opening leading from the space beneath said grate to said incinerating chamber, and a hood supported above said unobstructed opening and spaced therefrom and having a series of holes in its walls, said hood being adapted to deflect the material discharged into said incinerating chamber outwardly, away from said opening.

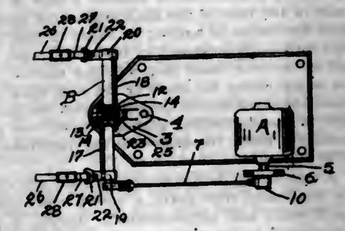
3. An incinerator comprising a casing having an incinerating chamber provided with a filling opening and a flue for the products of combustion, a grate arranged in the lower part of said incinerating chamber and having an opening therethrough, a hood supported above said grate opening and operating to direct the material laterally, away from said opening, and a series of burners arranged in the wall of said casing beneath said grate and adapted to direct the flames inwardly toward said central opening and horizontally with respect to said grate.

4. An incinerator comprising a casing having an incinerating chamber provided with a filling opening and a flue for the products of combustion, a grate arranged in the lower part of said incinerating chamber and having a central opening, a hood supported above said central opening and spaced therefrom and having a series of holes in its walls, and baffle plates provided in said hood and projecting partially across the same in staggered relation to one another.

5. An incinerator comprising a casing having an incinerating chamber provided with a filling opening and a flue for the products of combustion, a grate disposed in the lower part of said incinerating chamber and having a central unobstructed opening, an elongated hood, cylindrical in form, supported above the opening in said grate and spaced therefrom and open at each end, the walls of the lower end of said hood flaring outwardly to direct the material falling thereon to the outer portions of the grate, said hood extending upwardly above the lower portions of said filling opening and the walls of said hood having a series of holes therein and gas burners arranged to direct flames horizontally beneath said grate and upwardly through the bars thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,110,891. MASSAGE APPARATUS. DE FOREST B. CATLIN, Mankato, Minn. Filed Dec. 31, 1913. Serial No. 809,786. (Cl. 128—16.)

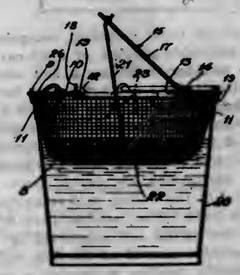


1. Massage apparatus, comprising, in combination, a reciprocable arm mounted between its ends to swing in substantially a horizontal plane, a pair of rack bars slidable along the sides of said operating arm, a pinion having teeth meshing with the teeth of said rack bars, means for turning said pinion to slide said rack bars, a support in which said pinion and operating arm are journaled, holders carried by the outer ends of said rack bars to which the ends of a massage device are adapted to be connected to receive reciprocating motion and means for reciprocating said operating arm, said rack bars coöperating with said operating arm and being adapted to vary the distance of said holders from the axis on which said operating arm is journaled to regulate the length of stroke imparted to said massage device.

2. Massage apparatus, comprising, in combination, a reciprocable arm, a pair of rack bars slidable along the sides of said operating arm, said operating arm having a recess between its ends, the sides of which form guides for said rack bars, a pinion having teeth meshing with the teeth of said rack bars and provided with means by which it can be turned to move said rack bars along the sides of said operating arm, a support in which said operating arm is journaled between its ends, holders to which the ends of a massage device are adapted to be connected secured to the outer ends of said rack bars and forming guides over said operating arm for the longitudinal movement of said rack bars, means for reciprocating said operating arm on its axis and means for holding the rack bars in longitudinally adjusted position on said operating arm, said rack bars being adapted by their longitudinal movement to vary the stroke imparted to said massage device by said reciprocable arm.

3. Massage apparatus, comprising, in combination, a reciprocable arm journaled between its ends to reciprocate on an axis, a pair of bars slidable along opposite sides of said operating arm, guides on said arm for said bars, holders to which the ends of a massage device are adapted to be connected secured to the outer ends of said bars, means for sliding said bars on said arm to vary the distance between said holders, a support in which said operating arm is journaled, means for reciprocating said arm and means for holding said bars in adjusted position on said arm, said bars being adapted by their adjustment to vary the length of stroke imparted by said arm to said massage device.

1,110,892. PAIL-TOP. KINGMAN N. CATHER, Chicago, Ill., assignor of one-half to Cornelius J. Dirckx, Chicago, Ill. Filed Nov. 4, 1913. Serial No. 799,124. (Cl. 43—28.)



1. A device of the class described, comprising a depending body portion of flexible foraminous material and a top section secured thereto, said top section consisting of a horizontal portion and a skirt of flexible material vertically depending therefrom, said horizontal portion having an opening, a cover for said opening, and means for drawing the depending skirt to a desired size, substantially as described.

2. A device of the class described, comprising a depending bag-like portion of open-weave fabric and a top section secured thereto, said top section consisting of a horizontal portion and a skirt of flexible material vertically depending therefrom, said horizontal portion having an opening therein, a metal frame about the opening a cover for said opening, having a fabric body, a metal frame for said body, and means for drawing the depending skirt to a desired size, substantially as described.

3. A device of the class described, comprising a depending bag-like portion of open-weave fabric and a top section secured thereto, said top section consisting of a horizontal portion and a skirt of flexible material vertically depending therefrom, said horizontal portion having an opening therein, a cover for said opening, means for drawing the depending skirt to a desired size, and means for drawing the bottom of the bag-like portion toward said opening, substantially as described.

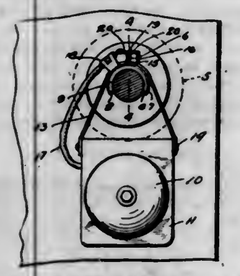
4. A device of the class described, comprising a depending bag-like portion of open-weave fabric and a top section secured thereto, said top section consisting of a horizontal portion and a skirt of flexible material vertically depending therefrom, said horizontal portion having an opening therein, a cover for said opening, means for drawing the depending skirt to a desired size, and means for drawing the bottom of the bag-like portion toward said opening when said cover is lifted, substantially as described.

5. A device of the class described, comprising a depending bag-like portion of open-weave fabric and a top section secured thereto, said top section consisting of a horizontal portion and a skirt of flexible material vertically depending therefrom, said horizontal portion having an opening

therein, a cover for said opening, a cord connected to said cover and the bottom of the bag-like section, whereby, when the cover is lifted, the bottom of the bag-like portion is pulled upwardly toward said opening, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,110,893. DOOR-ALARM. CECIL P. CAULKINS, New London, Conn. Filed Sept. 16, 1913. Serial No. 790,051. (Cl. 177—314.)

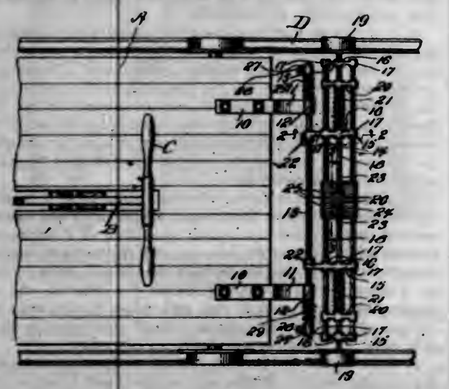


1. An alarm of the class described, comprising the combination with a rotatable member, of a pin carried thereby, a non-rotatable member including a bell circuit, contact points in the circuit, said contact points being normally held apart by the pin and said pin adapted upon rotation of the rotatable member to release the contact points.

2. An alarm of the class described, comprising the combination with a door knob, of a finger fixed thereon, a casing, a strap suspending the casing from the knob, a bell circuit carried by the casing, said strap forming a part of the circuit, a connection forming part of the circuit extending from the casing and supported by the strap, a spring contact member carried at the free end of the connection and normally tending to engage a portion of the strap and said finger adapted to engage the contact to hold it spaced from the strap.

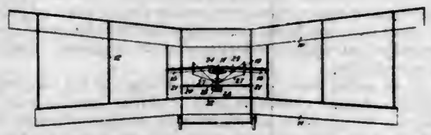
3. An alarm of the class described comprising the combination with a door knob, of a finger fixed thereto, a strap hung over the knob, a casing carried by the strap, a portion of the strap being cut away and bent upwardly to form a finger, a connection extending from the casing and terminating in a contact member resiliently tending to engage the strap finger and the first-mentioned finger normally engaging the contact member to hold it spaced from the strap finger.

1,110,894. TRACK-GAGE ATTACHMENT FOR HAND-CARS. PELHAM E. CAUTHORN, Denver, Colo. Filed Apr. 28, 1914. Serial No. 834,991. (Cl. 33—146.)



A gage attachment for hand cars comprising a frame, means adapted to be mounted on the car and swingingly supporting the said frame, a gage plate carried by the frame and having indicia thereon, gage rods slidably supported in the frame and having pointers traversable over the gage plate, gage wheels journaled at the outer ends of the said rods, means for extending the said rods away from each other, guide pieces in the frame and supporting the said rods, the said means on the car having rest portions for the said frame when swung to inoperative position.

1,110,895. AEROPLANE. HENRY L. COAKLEY, New York, N. Y. Filed Apr. 7, 1914. Serial No. 830,313. (Cl. 244—29.)



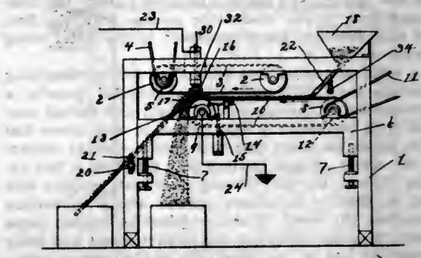
1. The herein described biplane comprising upper and lower main supporting planes, the upper plane being longer than the lower plane, each plane comprising a pair of laterally extending wings arranged at an angle to each other, the wings of the upper plane projecting upwardly, the wings of the lower plane projecting downwardly, and each wing on one side of the machine lying in a plane substantially parallel to the wing on the other plane on the opposite side of the machine, a main supporting frame, a pair of controlling planes adjacent each other and journaled upon the main supporting frame at the rear of the main planes, and means to manipulate the controlling planes so as to produce either a right or left hand spiral effect upon the entire machine with respect to its longitudinal axis.

2. In an aeroplane, the combination of a frame, a rigid main supporting plane secured thereto, a pair of controlling planes in the rear of the main supporting plane journaled upon the frame on axes at an angle to each other, a horizontal rock shaft journaled in the main frame, a shaft journaled in the rock shaft perpendicular thereto, a hand device to rotate either the shaft or the rock shaft or both at the same time, and cables extending from the perpendicular shaft to the controlling planes whereby the controlling planes are made responsive to the rotations of the two shafts aforesaid.

3. In a controlling device for aeroplanes, the combination of a horizontal rock shaft, a rotary shaft journaled in the rock shaft and perpendicularly thereto, a pair of pulleys connected to the rotary shaft on opposite sides of the rock shaft and in parallel planes, a pair of controlling planes remote from the rock shaft and pivoted on axes at an angle to each other and lying in substantially the same plane as the rock shaft, a lever arranged perpendicularly with respect to each controlling plane extending to both sides thereof, and a pair of cables operating over said pulleys, the ends of one cable being connected to the lower ends of said controlling plane levers and the ends of the other cable being connected to the upper ends of said levers.

4. In a controlling device for aeroplanes, the combination of a rock shaft journaled on a fixed horizontal axis transversely of the machine, a rotary shaft journaled in the rock shaft and perpendicularly thereto, a hand wheel secured to the upper end of the rotary shaft, a pair of pulleys of equal size arranged parallel to each other at equal distances on opposite sides of the rock shaft and secured to the rotary shaft, a pair of controlling planes mounted on horizontal axes in the rear of the rock shaft, a lever secured to each plane perpendicularly thereto and extending above and below its axis, a cable extending around one end of said pulleys and having its ends connected to the lower ends of the controlling plane levers, and another cable extending around the other pulley and having its ends cross and connected to the upper ends of said levers, substantially as set forth.

1,110,896. ELECTROSTATIC SEPARATOR. HARRY COMSTOCK, Mineville, N. Y. Filed June 9, 1911. Serial No. 632,184. (Cl. 83—49.)



1. In a static separating apparatus, and in combination, an electrostatically charged plate; means for carrying material to be separated into the field of said plate; and traveling means interposed between said material and said electrostatically charged plate for preventing contact of the material with said plate, and for carrying out of the static field material attracted by said plate.

2. In a static separating apparatus, and in combination, a belt of non-conductive material; an electrostatically charged plate supported above the lower stretch of said belt; means for moving said belt; and means for carrying material to be separated beneath said belt into the field of said plate.

3. In a static separating apparatus, and in combination, a belt of non-conductive material; an electrostatically charged plate supported above the lower stretch of said belt; means for moving said belt; and an electrostatically charged belt beneath said non-conductive belt for carrying material to be separated into the field of said plate.

4. In a static separating apparatus, and in combination, a belt of non-conductive material; an electrostatically charged plate supported above the lower stretch of said belt; means for moving said belt; an electrostatically charged roll beneath said belt and plate; and a conveying-belt of conductive material passing around said roll in electrical connection therewith.

5. In a static separating apparatus, and in combination, a belt of non-conductive material; an electrostatically charged plate supported above the lower stretch of said belt; means for moving said belt; an electrostatically charged belt beneath said non-conductive belt for carrying material to be separated into the field of said plate; and means whereby one of said belts can be adjusted toward and from the other.

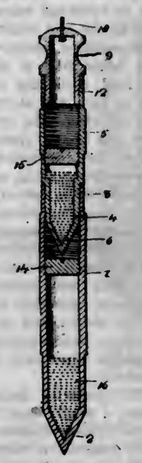
[Claims 6 to 10 not printed in the Gazette.]

1,110,897. PLUMB-BOB. LAWRENCE R. COMSTOCK, Ardmore, Okla. Filed Mar. 14, 1914. Serial No. 824,801. (Cl. 33—216.)

1. A plumb bob comprising a plurality of cylindrical sections, each having its lower end pointed and being provided in its upper end with a threaded socket, the lower end portion of one section being reduced and externally threaded for reception within the socket of the other section, and a line-attaching, suspension cap having a threaded lower end adapted to be engaged within the socket of either body section.

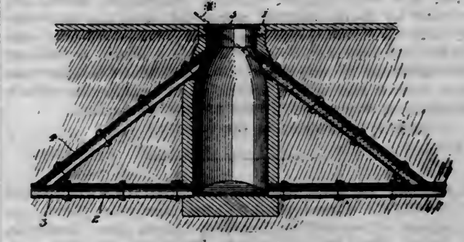
2. A plumb bob comprising a plurality of cylindrical sections, each having its lower end pointed and being provided in its upper end with a threaded socket, the lower end portion of one section being reduced and externally threaded for reception within the socket of the other section, a line-attaching, suspension cap having a threaded lower end adapted to be engaged within the socket of either body section, and an internally threaded protective sleeve adapted to be fitted onto the lower reduced end of the body section.

3. A plumb bob comprising a plurality of hollow cylindrical sections, each having its lower end pointed and its upper end opened and threaded interiorly to provide a socket, the lower end portion of one section being reduced and externally threaded for reception within the socket of the other section, a line-attaching, suspension cap having



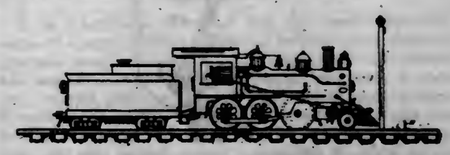
a threaded lower end adapted to be engaged within the socket of either body section, and a closure plug adapted to be threaded into the socket of either body section, each section being adapted to receive a load of heavy substance.

1,110,898. SEWER CONSTRUCTION. JAMES M. CONKLE, Beaver Falls, Pa. Filed Jan. 16, 1913. Serial No. 742,448. (Cl. 182—10.)



In sewer construction, the combination with a vertically disposed structure providing a man-hole closed at its bottom and open at its top, a cover for closing said top, longitudinally extending and oppositely disposed sewer pipes opening into said man-hole at the bottom thereof, a Y-connection forming a part of each of said pipes, and a pair of downwardly inclined and oppositely disposed pipes opening at their lower ends in said connections, said pipes having their upper end opening into said man-hole near the top thereof.

1,110,899. SAFETY DEVICE FOR LOCOMOTIVES. JAMES W. CONOVER, Houston, Tex. Filed Feb. 8, 1913. Serial No. 747,128. (Cl. 246—59.)



1. A device of the character described comprising a motor fixed to a locomotive, a shaft operatively connected therewith, a means for locking said shaft and motor against rotation, a manual means for securing said locking

means against disengagement from the shaft, an operative connection between the shaft and the throttle controlling mechanism of the locomotive whereby said controlling mechanism is actuated when said locking means is released and said motor and shaft are set in motion.

2. A device for stopping a locomotive comprising a motor carried by the locomotive, a shaft operatively connected with said motor, a locking mechanism carried by the motor adapted to lock the shaft against rotation, a manual means for securing said locking means against disengagement from the shaft, operative connections between the shaft and the controlling mechanism of the locomotive, said connections being operated by the shaft when the shaft is released for operation by said motor.

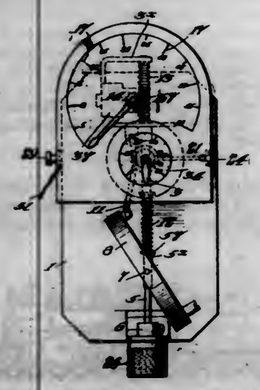
3. A device of the character described comprising a motor carried by a locomotive, an operative means connected with said motor, a locking mechanism adapted to lock said operative means against rotation, a manually operated device for securing said mechanism against disengagement from the said operative means, operative connections between said means and the controlling mechanisms of the locomotive, said connections being operated by said operative means when said means is released for operation by said motor.

4. A device of the character described for stopping a locomotive comprising a motor fixed to said locomotive, a rotatable means operatively connected with the motor, a locking mechanism adapted to lock said means against rotation, a manually operated device for securing said mechanism against disengagement from the said operative means, operative connections between said means and the controlling mechanisms of the locomotive, said connections being operated by said operative means when said means is released for operation by said motor and means for releasing said locking mechanism.

5. A device of the character described comprising a motor fixed to a locomotive, a rotatable shaft operatively connected with the motor, a locking mechanism adapted to lock said shaft against rotation, controlling mechanism carried by the locomotive, means for operating said controlling mechanism, said means being connected with said shaft and operated thereby when the shaft is released for operation by said motor, so as to simultaneously close the throttle and set the brakes, all in combination with a mechanism for releasing said locking mechanism.

[Claim 6 not printed in the Gazette.]

1,110,900. SPEED MEASURING AND CONTROLLING DEVICE. JAMES HENRY CORE, Nashville, Tenn., assignor of one-half to Elizabeth Harris Core, Nashville, Tenn. Filed Mar. 14, 1913. Serial No. 754,230. (Cl. 175—310.)



1. A speed measuring and controlling device comprising a rotatable shaft, a sleeve slidably mounted thereon, a centrifugal device carried by said shaft and having connection with the sleeve, a disk carried by said sleeve and movable along the shaft therewith, a circular contact disk having a conducting portion of varying width on one side thereof arranged to be engaged by said disk, and means for rotating the contact member to vary the time of engagement of the conducting portion with the first named disk during a given movement of the latter along the shaft.

2. A speed measuring and controlling device comprising a rotatable shaft, a sleeve slidably mounted thereon, a centrifugal device carried by said shaft and having connection with the sleeve, a disk carried by said sleeve and movable along the shaft therewith, and a circular contact disk, the center of said contact disk being on a line extending through the axis of said shaft, said contact disk having an interior insulating portion and a conducting rim portion, the width of said conducting portion being greatest along one radius of the contact wheel and being progressively less on the other radii of the contact wheel.

3. A speed measuring and controlling device comprising a rotatable shaft, a sleeve slidably mounted thereon, a centrifugal device carried by said shaft and having connection with the sleeve, a disk carried by said sleeve and movable along the shaft therewith, a circular contact disk, the center of said contact disk being on a line extending through the axis of said shaft, said contact disk having an interior insulating portion and a conducting rim portion, the width of said conducting portion being greatest along one radius of the contact wheel and being progressively less on the other radii of the contact wheel, and means for revolving the contact wheel to bring predetermined parts of the conducting portion in engagement with said disk.

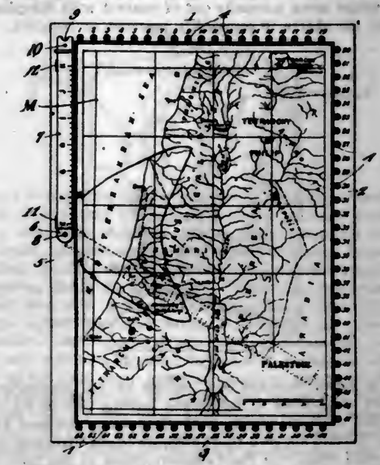
4. A speed measuring and controlling device comprising a rotatable shaft, a sleeve slidably mounted thereon, a centrifugal device carried by said shaft and having connection with the sleeve, a disk carried by said sleeve and movable along the shaft therewith, a circular contact disk, the center of said contact disk being on a line extending through the axis of said shaft, said contact disk having an interior insulating portion and a conducting rim portion, the width of said conducting portion being greatest along one radius of the contact wheel and being progressively less on the other radii of the contact wheel, means for revolving the contact wheel to bring predetermined parts of the conducting portion in engagement with said disk, said means comprising a shaft for the contact wheel, a gear on said contact wheel shaft, a key shaft arranged to receive the key, and a gear between said key shaft and said first named gear.

5. A speed measuring and controlling device comprising a rotatable shaft, a sleeve slidably mounted thereon, a centrifugal device carried by said shaft and having connection with the sleeve, a disk carried by said sleeve and movable along the shaft therewith, a circular contact disk, the center of said contact disk being on a line extending through the axis of said shaft, said contact disk having an interior insulating portion and a conducting rim portion, the width of said conducting portion being greatest along one radius of the contact wheel and being progressively less on the other radii of the contact wheel, means for revolving the contact wheel to bring predetermined parts of the conducting portion in engagement with said disk, said means comprising a shaft for the contact wheel, a gear on said contact wheel shaft, a key shaft arranged to receive the key, a gear between said key shaft and said first named gear, a dial having indicating members, and a hand rigidly secured to the contact wheel shaft.

[Claim 6 not printed in the Gazette.]

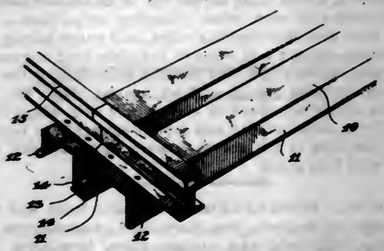
1,110,901. DEVICE FOR LOCATING PLACES ON MAPS. ORA E. COWLES, Barton, Vt. Filed July 3, 1912. Serial No. 707,621. (Cl. 35—6.)

A map having characters along its margin, and an arm pivoted to the map; the arm having an index at its free end and being provided with graduations, the arm comprising slidably connected parts, permitting the index at the free end of the arm to be brought into coincidence with the respective characters thereby to position the arm properly, and permitting each graduation on one of



the slidably connected parts to assume different positions longitudinally of the arm.

1,110,902. ROADWAY CONSTRUCTION FOR TOY CARS. JOSHUA L. COWEN, New York, N. Y. Filed May 31, 1913. Serial No. 770,896. (Cl. 238—5.)



1. A roadway for toy cars, comprising inverted sheet metal channel members extending transversely of the roadway, upon which rails are adapted to be placed said channel members having longitudinal walls, and means for coupling the adjacent walls of adjacent channel members together.

2. A roadway for toy cars, comprising inverted sheet metal channel members, upon which rails are adapted to be placed, the walls of said members having upturned flanges, and a coupling member provided with means for engaging the flanges of adjacent walls to couple the channels together.

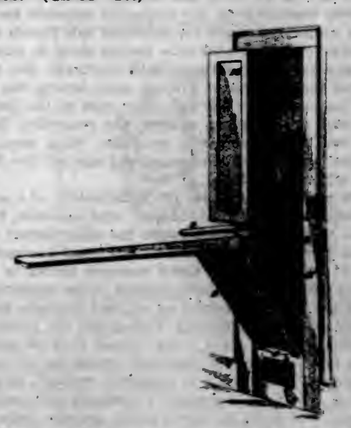
3. A roadway for toy cars, comprising inverted sheet metal channels upon which rails are adapted to be placed the walls of said channels having upturned flanges, and a coupling member having overturned portions engaging the flanges of adjacent walls to couple the channels together.

4. A roadway for toy cars, comprising spaced sheet metal sections upon which rails are adapted to be placed and extending transversely of the roadway and provided with flanges formed thereon, and a coupling member having overturned portions engaging the adjacent flanges of adjacent sections.

5. A roadway for toy cars, comprising inverted sheet metal channels upon which rails are adapted to be placed extending transversely of the roadway, and having upturned flanges formed at their edges, and a coupling member having overturned edges engaging the adjacent flanges of adjacent channels.

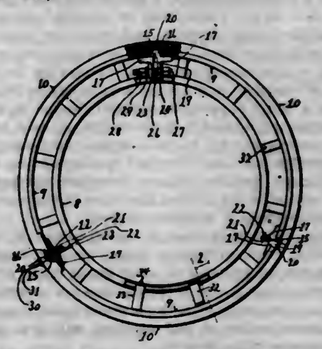
[Claim 6 not printed in the Gazette.]

1,110,903. IRONING-BOARD CABINET. CHESTER R. COX, Berkeley, Cal. Filed July 22, 1912. Serial No. 710,960. (Cl. 68—10.)



In a device of the character described, a receptacle having a hinged, transversely swinging door at the top, and a door hinged at the bottom to open outwardly and downwardly, said doors closable to form a continuous paneled front for the receptacle, a jamb on each side of the receptacle having a vertical channel in the lower part, an ironing board having a cylindrical rear end, projecting at each side forming journals slidable in the channels of the jambs, the upper ends of the channels forming stops for said journals, and said board being turnable to project horizontally when opened, the lowermost door forming a fulcrum and an angular brace to support the outer end of the board when extended, an angular brace to support the outer end of the board when extended, an apertured retaining spring pressing against the cylindrical rear end of the board, and a pin in said end of the board adapted to engage the aperture in the spring when registering therewith.

1,110,904. EMERGENCY-TIRE. SAMUEL DAVIDSON, Detroit, Mich. Filed Oct. 24, 1912. Serial No. 727,479. (Cl. 152—23.)

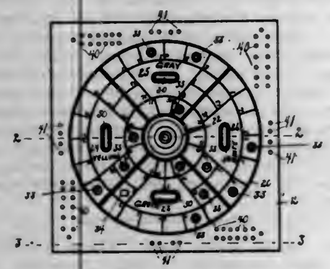


1. In a sectional emergency tire, the combination of a series of complementary segmental integral steel channels, brackets secured to each channel between the ends thereof and extending inwardly and formed to bear upon a wheel rim, an end plate secured to each end of each channel independently of the brackets and closing said end and having apertures for the reception of tread-retaining rods and also having inward extensions to afford means for interlocking together the contiguous ends of adjacent sections, and the end plate at one end of each segmental channel having a hood comprising a rib projecting length-

wise of the channel and inclosing the top of the outer face of said plate, the plate at the other end of each segmental channel having an outer flat surface, tread-retaining rods extending lengthwise of the respective channels for engaging the respective treads for retaining said treads in their respective channels, said rods having each at one end a head and extending through said apertures, the head of each rod bearing against the end plate having the hooded outer face, and nuts for the other ends of the respective rods, said nuts bearing against the respective flat surfaced end plates, and said segments being arranged so that the hooded end of one engages against the flat end of the adjacent section.

2. In an emergency tire, the combination of a series of complementary segmental integral steel channels, brackets secured to each channel between the ends thereof and extending inwardly and formed to bear upon a wheel rim, a series of complementary tread members seated in the respective channels, end plates secured to the respective ends of said channels independently of said brackets and closing said ends and affording anchorages for tread-retaining rods, each end plate being formed with an integrally formed inward extension affording means for interlocking together contiguous ends of adjacent sections, and tread-retaining rods for the respective channels and tread members, each rod being anchored at its opposite ends to the end plates at opposite respective ends of its steel channel.

1,110,905. GAME APPARATUS. LEONARD W. DAVIS, Herkimer, N. Y., assignor to Lulu Davis, Herkimer, N. Y. Filed Jan. 15, 1914. Serial No. 812,192. (Cl. 46—21.)



1. In a game apparatus, a board, a given figure on said board, said figure comprising an annular space, said annular space being divided into quarters, said quarters being subdivided into thirteen smaller spaces, numbers marked in said spaces, and men for moving about on said spaces, whereby to count seven or a multiple thereof.

2. In a game apparatus, a board, basins in said board for holding pegs, and a given figure on said board, said figure comprising an annular space, said annular space being divided into quarters, said quarters being subdivided into thirteen smaller spaces, numbers marked in said spaces, and men for moving about on said spaces, whereby to count seven or a multiple thereof.

3. In a game apparatus, a board, basins in said board for holding pegs, aluminum lining for said basins, and a given figure on said board, said figure being divided into four spaces, said spaces being further subdivided into smaller spaces, and numbers on said smaller spaces, whereby the combination of said numbers will give the sum of seven or a multiple thereof.

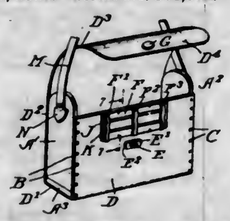
1,110,906. LETTER-SHEET BUNCHER AND HOLDER. CALEB PINKNEY DEAL, Atlanta, Ga. Filed Sept. 15, 1913. Serial No. 789,944. (Cl. 129—1.)

1. A sheet buncher and holder of the character described comprising a flat base plate having two of its adjacent edges disposed in right-angular relation, solid wings of resilient sheet material projecting inwardly from said right-angularly disposed edges and extending inwardly approximately one-third of the length or width of the plate to permit them to be readily grasped by the hand and pressed downwardly to clamp sheets within the device, said wings being normally out of contact with the plate to permit the sheets to be readily inserted or removed.

2. A sheet buncher and holder of the character described comprising a base plate having two of its edges disposed at right angles, said plate being recessed at the corner formed by said right-angular edges, clamping wings connected with said right-angular edges of the base plate and spaced a suitable distance above the same, said wings having their ends adjacent to the recessed corner of the base plate correspondingly recessed and having their inner edges turned upwardly to facilitate the insertion of the sheets between the wings and base plate.

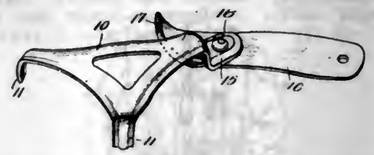
3. A sheet buncher and holder of the character described comprising a base plate having two of its edges disposed at right angles to each other, clamping wings formed integral with said right-angular edges, said wings having their portions adjacent said edges of the plate bent downwardly at right angles where they join the said edges of the plate thereby forming square surfaces against which the edges of the sheets are trued or evened, and said wings having their free ends rounded and turned upwardly to facilitate the insertion of the sheets between said clamping wings and said base plate.

1,110,907. BOOK-CARRIER. ANTONIO DEAN and FRANCESCO DE MARINIS, New York, N. Y., assignors to Abraham Dalidansky and Antonio Dean, New York, N. Y. Filed Nov. 17, 1913. Serial No. 801,564. (Cl. 224—47.)



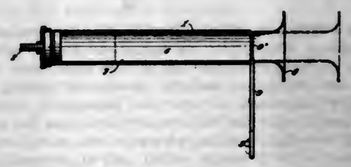
A book carrier comprising ends of rigid material, a front, bottom, back, top and flap in one continuous sheet of flexible material, the front, bottom, and back being secured to said ends leaving only the top and flap to be opened and closed as required, the upper edge of each rigid end being semi-circular and the closing material of the top normally on a larger radius than said semi-circular tops of the ends to hold the carrier normally partially open when such is permitted, means covered by said flap when in its closed position for securing small articles on the exterior of the front so as to expose such means for the reception or delivery of such articles or to cover and protect the same, and a smooth flap-fastening and a supporting strap for engaging over the head of the user, all adapted to hold books without distorting strains and also by the gentle swelling of the semi-flexible front and back to receive and carry larger loads than would be otherwise practicable.

1,110,908. JAR-OPENER. FRED W. DICKERMAN, Boston, Mass. Filed Apr. 26, 1913. Serial No. 763,825. (Cl. 65—26.)



As a new article of manufacture, a jar opener comprising a body formed of a single piece of material and having a triangular shape to provide three relatively diverging arms, integral depending gripping members formed by bending the free ends of two of the arms downwardly, a depending flange formed on the other arm, with the said flange and said gripping members being equi-distantly spaced apart and said flange being offset to provide a horizontal portion, and a lever having a cam-like cutting edge and mounted to swing on the said flange, the cutting edge of the said lever being eccentric to the point of pivotal connection of the lever with the flange and with the cutting edge of the lever adapted to project between a jar and the cover thereof when the gripping members are in gripping engagement therewith so that the said cover can be removed from the said jar by an upward pressure on the free end of the said lever.

1,110,909. GREASE-GUN-FILLING DEVICE. WILLIAM HOVEY EDMUNDS, Leesburg, Va. Filed Jan. 12, 1914. Serial No. 811,647. (Cl. 221—78.)



1. A filler device of the class described comprising a shell, a rotatable filler member operable in said shell for filling the same and moving the contents therealong, and manipulative means for rotating the filler member to permit withdrawal of the same away from the contents introduced into the shell thereby.

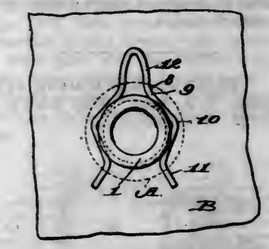
2. A filler device of the class described comprising a shell, a ladle member operable in said shell to fill the same, said member being of a cross sectional area substantially conforming to the cross section of the shell, and a handle member connected to the ladle member and operable to rotate said ladle member to permit withdrawal of the same away from the contents and out of the shell.

3. The combination, with a receptacle for grease, of a shell adapted to be inserted therein and having a slot at one side, a rotatable member operable in the shell for transferring the contents of the same into the receptacle aforesaid upon withdrawal of the shell therefrom, and actuating means for said rotatable member extending through the slot.

4. A filler device for grease guns comprising a hollow tubular member having a slot at one side and a rotatable ladle member operable in said tubular member for filling the same, said ladle member comprising actuating means extending through the slot for manipulating the ladle member whereby the latter may be rotated into a position for withdrawal of the same through the slot.

5. A filler device for grease guns, comprising a tubular member having a slot at one side thereof, and a ladle member comprising a part operable in said tubular member for expelling grease therefrom and means for withdrawing the same through said slot.

1,110,910. SIGN. CALEB ELLIOT, Clinton, Iowa. Filed May 29, 1911. Serial No. 629,975. (Cl. 240—111.)



1. In a sign, in combination, a plate having an opening, a lens having a shank which is inserted through the opening and having a shoulder circumscribing the shank and which fits snugly within the opening, the under face of the lens adjacent the shoulder being fashioned to bear against the plate, the shank having an annular groove immediately adjacent the shoulder which groove has a cross section that provides a cam face, and a lens locking key composed of a section of resilient wire fashioned to provide coacting legs which are engaged in the groove at opposite sides thereof and lie partly in the groove and partly against the plate, said legs acting on the cam face and tending to draw the lens inwardly and to cause a secure contacting engagement between the underface of the lens and the portion of the plate adjacent thereto.

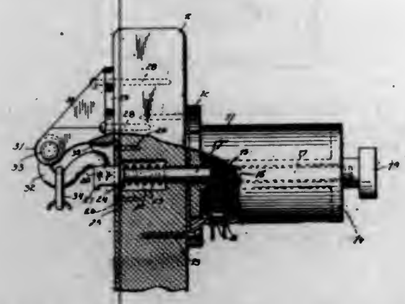
2. In a sign, in combination, a plate having an opening, a lens having a shank which is inserted through the opening, having a shoulder circumscribing the shank, and having a groove immediately adjacent the shoulder, the latter fitting snugly within the opening, the shank having an annular groove immediately adjacent the shoulder which groove has a cross section that provides a cam face, and a lens locking key composed of a section of resilient wire fashioned to provide coacting legs which are engaged in the groove in the shank at opposite sides thereof and lie partly in the groove and partly against the plate, said legs acting on the cam face and tending to draw the lens inwardly and to cause a secure contacting engagement between the underface of the lens and the portion of the plate adjacent thereto, the legs also acting on the plate and tending to produce a slight displacement thereof into the first named groove.

3. In a sign, in combination, a plate having an opening, a lens having a shank which is inserted through the opening, having a shoulder circumscribing the shank, and having a groove immediately adjacent the shoulder, the latter fitting snugly within the opening, the shank having an annular groove immediately adjacent the shoulder which groove has a curved cross section, and a lens locking key composed of a section of resilient wire fashioned to provide coacting legs which are engaged in the groove in the shank at opposite sides thereof, and lie partly in the groove and partly against the plate, said legs acting on the plate and tending to produce a slight displacement thereof into the first named groove.

4. In a sign, in combination, a plate having an opening, a lens having a reduced shank which is inserted through the opening, having a shoulder circumscribing the shank, and having a groove adjacent the shoulder, the latter fitting snugly within the opening, the shank having an annular groove adjacent the shoulder which groove has a cross section that provides a cam face and a lens locking key which consists of a section of resilient wire fashioned to provide resilient legs, each leg having an intermediate bend and an out-turned extremity, the connected inner portions of the legs extending at an angle from the bends and having a relatively close association, the legs engaging in the groove in the shank at opposite sides thereof and lying partly in the groove and partly against the plate, the legs acting on the cam face and tending to draw

the lens inwardly and to cause a secure contacting engagement between the underface of the lens and the portion of the plate adjacent thereto, the legs also acting on the plate and tending to produce a slight displacement thereof into the first named groove.

1,110,911. ELECTRIC DETACHING APPARATUS. SOLOMON ENDEL, U. S. Navy. Filed June 9, 1913. Serial No. 772,729. (Cl. 119—113.)



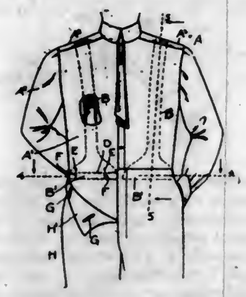
1. A detaching apparatus comprising a base, a solenoid secured to one side of said base, the base being formed with a transverse opening, a trigger rod extending through said solenoid and opening, a block secured to one end of said trigger rod, an apertured plate fitting over said opening, a lip formed upon the block for engagement with said plate, whereby the movement of the trigger rod in one direction is limited, spring means for holding the trigger rod normally in extended position, and a pivoted supporting member adapted to be released by a movement of the trigger rod when the solenoid is energized.

2. In an electric detaching apparatus the combination with a base having a transverse opening extending therethrough, of a solenoid secured to one side of the base in alinement with said opening, a trigger rod extending through the solenoid and the opening in the base, an apertured plate secured to the base and extending across one end of said opening, a block secured to one end of the trigger rod and sliding through said apertured plate, the block being formed with a lip for engagement with said plate, whereby the movement of the trigger rod in one direction is limited, spring means for holding the trigger rod normally in extended position, and a pivoted supporting member adapted to be held in operative position by engagement with said block.

3. In an electric detaching apparatus, the combination with a base, of a solenoid secured to one side thereof, a trigger rod extending through said solenoid and base, said base being recessed around the trigger rod, a block formed upon the forward end of said rod and adapted to be withdrawn partly within said recess, spring means housed within the recess for holding said rod normally in its extended position, and a supporting member pivoted at one end and adapted to be held in an operative position by engagement with said block.

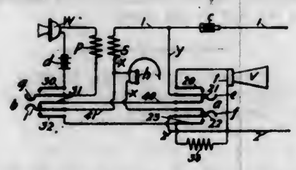
1,110,912. SHIRT AND TROUSERS SUPPORT. JAMES ARMSTRONG ERWIN, Atlanta, Ga. Filed Dec. 23, 1912. Serial No. 738,198. (Cl. 2—96.)

A shirt comprising a body having a yoke, front and rear straps permanently secured at their upper ends to the front and rear of the yoke at the shoulders, the said front and rear straps extending freely from the yoke at the inside of the shirt for the greater portion of their length and having their lower ends widened and permanently fastened to the inner side of the shirt body by stitches, and the widened portions of the straps being provided adjacent opposite sides with upper and lower button-holes which



also extend through the shirt body, all for the purpose described.

1,110,913. TRAIN-DESPATCHER'S TELEPHONE-CIRCUIT. HENRY C. EGERTON, Passaic, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 17, 1912. Serial No. 697,905. (Cl. 179—81.)



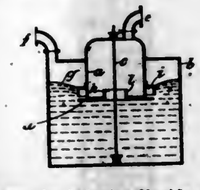
1. In a telephone station, line conductors, a transmitter and primary winding of an induction coil, a secondary winding for said induction coil, a high impedance receiver and a low impedance receiver, means for placing either said high impedance or said low impedance receiver in circuit across said line conductors, and means for connecting said secondary winding in series with said low impedance receiver or in parallel with said high impedance receiver.

2. In a telephone circuit of the character described, line conductors, a local transmitter circuit including a transmitter, battery, and the primary winding of an induction coil, a secondary winding for said induction coil, a high impedance receiver, a low impedance receiver, means for placing either said high impedance or said low impedance receiver in circuit across said line conductors, and means for placing said secondary winding either in series with said low impedance receiver or in parallel with said high impedance receiver and simultaneously closing said local transmitter circuit.

3. In a telephone circuit of the character described, line conductors, a local transmitter circuit including a transmitter, battery, and the primary winding of an induction coil, a secondary winding for said induction coil, a high impedance receiver, a low impedance receiver, a switch for placing either said high impedance receiver or said low impedance receiver in circuit across said line conductors, and a second switch for operatively connecting said secondary winding in series with said low impedance receiver or in parallel with said high impedance receiver.

4. In a telephone circuit of the character described, at one station, two parallel main line branches and the local circuit of a telephone transmitter including a primary coil; and in one of said branches a secondary coil, a shunt circuit therefor and a head telephone, in the second branch a loud speaking telephone, in combination with a switch adapted, when operated, to open the first branch, close the second branch and break a shunt circuit around said secondary coil, and a switch adapted, when operated, to close a break point in the first branch, break said shunt circuit at a second point, and close the local circuit.

1,110,914. APPARATUS FOR BRINGING LIQUIDS AND GASES OR VAPORS INTO CONTACT WITH EACH OTHER. WALTHER FELD, deceased, Linz, Germany, by Karl Emil Markel, administrator, London, England. Filed July 18, 1914. Serial No. 851,805. (Cl. 48—141.)



1. In apparatus for bringing liquids and gases into contact with each other, the combination with a liquid-containing vessel, of a gas supply bell dipping into the liquid and a device rotatable in the liquid in proximity to the lower part of the said bell to cause gas to be drawn from the said bell and atomized in the liquid, substantially as described.

2. In apparatus for bringing liquids and gases into contact with each other, the combination with a liquid containing vessel, of a stationary gas supply bell dipping into the liquid and a device rotatable in the liquid in proximity to the lower part of the said bell to cause gas to be drawn from the said bell and atomized in the liquid, substantially as described.

3. In apparatus for bringing liquids and gases into contact with each other, the combination with a liquid containing vessel, of a stationary gas supply bell dipping into the liquid, an auxiliary bell surrounding said first mentioned bell and a device rotatable in the liquid in proximity to the lower part of said bells to cause gas to be drawn therefrom and atomized in the liquid.

4. In apparatus for bringing liquids and gases into contact with each other, the combination with a liquid-containing vessel, of a gas supply bell dipping into the liquid and a device rotatable in the liquid in proximity to the lower part of the said bell to cause gas to be drawn from the said bell and atomized in the liquid, and means in combination with said rotating device tending to circulate the liquid from the lower portion of the vessel toward the upper surface thereof, substantially as described.

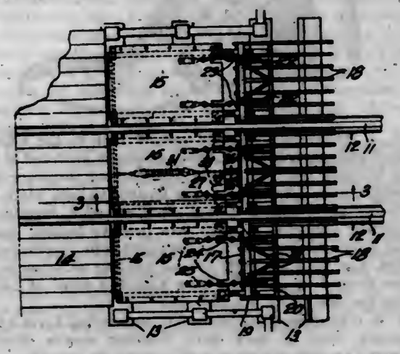
5. In apparatus for bringing liquids and gases into contact with each other, the combination with a liquid-containing vessel, of a gas supply bell dipping into the liquid and a device rotatable in the liquid in proximity to the lower part of the said bell to cause gas to be drawn from the said bell and atomized in the liquid, together with projections on the edge of the said bell, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,110,915. CATTLE-GUARD. MOISE FILION, St. Jean Port-Joli, Quebec, Canada, assignor to The Canadian Railway Gate Manufacturing Company, St. Jean Port-Joli, Quebec, Canada. Filed May 29, 1914. Serial No. 841,955. (Cl. 256—15.)

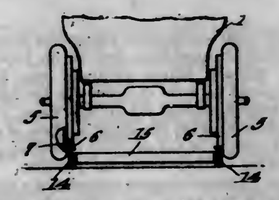
1. The combination with a railway track and crossing of tread plates pivoted at their ends adjacent the crossing, barriers pivoted adjacent the free ends of the tread plates, links pivotally connected to the barriers, links pivotally connected to the tread plates and to the barrier links, a lever arm carried by the barrier, a telescopic spring carrier fixedly mounted at one end and connected at the other end to the barrier lever, and means for returning the tread plates to normal position independently of the barrier spring.

2. The combination with a railway track and crossing of tread plates pivoted at their ends adjacent said crossing, a transverse shaft adjacent the free ends of said tread plates, bars of angle section rigidly connected at right angles to said shaft and forming a barrier, said bars being doubled at each side of the rails and midway between the rails to form bars of T section, transverse tie members connecting the bars adjacent the shaft and intermediate the ends, diagonal braces, short bars secured between said transverse bars adjacent the sides of the barrier sections, links pivoted between said short bars and adjacent long bars, links pivoted to the tread plates and to the extremities of said barrier links, a spring connected between a fixed point and the barrier and arranged to maintain the same normally in depressed position, and springs arranged to maintain the tread plates normally in elevated position independently of the action of the barrier springs.



3. The combination with a track and crossing of tread plates pivoted at their ends adjacent the crossing, barriers pivoted adjacent the free ends of the tread plates, connecting means between said tread plates and barriers arranged to operate same in opposite directions, a pair of diverging arms carried by the barrier, a barrier operating spring fixedly mounted at one end, a flexible connection between the other end of said spring and one of the barrier arms passing over the extremity of the other arm whereby the spring exerts substantially uniform leverage on the barrier through an angle of approximately 180 degrees of barrier movement.

1,110,916. AUTO-TIRE-SAVING DEVICE. CHARLES J. FISK and EDWARD LINDBLOM, Bismarck, N. D. Filed Mar. 9, 1914. Serial No. 823,527. (Cl. 21—154.)

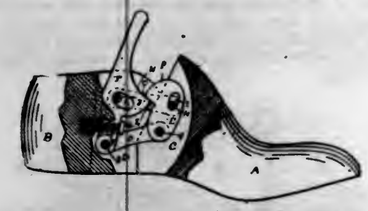


In a device of the class described, a felly; a rim surrounding the felly and projecting laterally beyond the felly; circumferentially spaced blocks lodged in the angle defined by the felly and the laterally projecting portion of the rim; an auxiliary rim abutting against the lateral, outer faces of the blocks and spaced thereby from the felly; securing elements passing through the auxiliary rim, and the blocks and entering the felly; and a yieldable tire carried by the first specified rim and extended radially beyond the circumference of the auxiliary rim.

1,110,917. LAST. AMOS G. FITZ, Auburn, Me., assignor to Fitz-Empire Double Pivot Last Company, Auburn, Me., a Corporation of Maine. Filed Apr. 9, 1913. Serial No. 759,840. (Cl. 12—136.)

1. A transversely divided last, a kerf in the adjacent end of each part, the kerfs of the two parts being arranged to register, bonding means pivotally mounted at each end in said last parts, and interlocking members po-

sitioned one in each of said kerfs and provided with positively interlocking shoulders, said interlocking members operating independently of said bonding means, one of said members being movable in the part in which it is mounted, said interlocking shoulders being positioned above the pivot point of said movable member.



2. A transversely divided last, a kerf in the adjacent end of each part, bonding means pivotally mounted at each end in said last parts, and interlocking members independent of said bonding means located in said kerfs, said interlocking members being provided with interlocking shoulders arranged to come into positive locking engagement when the last parts are brought into lengthened position, and with similarly curved guiding surfaces on the edges thereof arranged to have a sliding point of contact when the last parts are unlocked.

3. A transversely divided last, registering kerfs in the adjacent ends of each part, bonding means pivotally mounted at each end in said last parts, interlocking members provided with shoulders arranged to positively interlock when the parts are in lengthened position and with curved guiding edges arranged to have a sliding point of contact when the last parts are in shortened position and a spring tending to force one member toward the other.

1,110,918. HULL FOR HYDROAEROPLANES. CARL HOWARD FLINT, New York, N. Y. Filed May 17, 1913, Serial No. 768,252. Renewed July 24, 1914. Serial No. 852,933. (Cl. 114—66.5.)

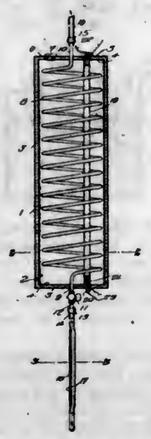
1. A hull for hydro-aeroplanes comprising a body formed with longitudinally extending fins at its bottom and a plurality of inclined planes arranged one behind the other and disposed between said fins for producing a lifting effect in transit through the air and water, there being reëntrant pockets between the upper portion of each plane and the lower portion of the adjacent preceding plane, said fins being located entirely below the pockets.

2. A hull for hydro-aeroplanes comprising a body having a pointed bow, a flat stern, fins extending longitudinally of the body at the sides thereof, and a plurality of inclined planes forming the bottom of the body between the fins, said inclined planes disposed one behind the other and the upper end of each plane being shaped to form with the lower end of the adjacent plane a reëntrant pocket, said fins being located entirely below said planes and pockets.

1,110,919. ELECTRIC HEATER. HUGH A. GAMBLE, Greenville, Miss. Filed Feb. 20, 1913. Serial No. 749,627. (Cl. 219—38.)

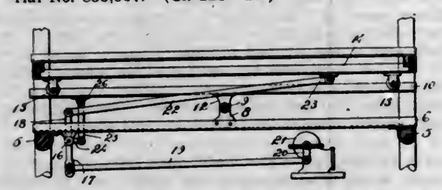
1. In a heater of the character specified, a receptacle for liquid comprising inner and outer casings arranged in spaced relation, and a filling of non-heat conducting material between the casings, the receptacles having a filling opening and being designed to receive a heating coil, and a tubular structure extending from one end of the receptacle to the other and opening at the ends of the receptacle for receiving an electrical heating device.

2. In a heater of the character specified, a spiral coil having a general cylindrical form, the ends of the coil being at the axis of the cylindrical figure described by the coils, a nipple at each end of the coil for engagement by



flexible conducting pipes, a valve interposed between one of the nipples and the adjacent end of the coil, and a flexible pipe engaging the nipple at the end adjacent to the valve casing and provided with a thermometer for indicating the temperature of the liquid flowing therefrom.

1,110,920. VIBRATORY BED. ADELBERT R. GIBSON and GEORGE H. FERGUSON, Los Angeles, Cal. Filed Mar. 18, 1912, Serial No. 684,606. Renewed Aug. 8, 1914. Serial No. 855,907. (Cl. 128—16.)



1. In an apparatus of the character described, a frame, a mattress thereon, and means on the frame for imparting an undulatory motion to the mattress.

2. In apparatus of the character described, a frame, a frame, a mattress thereon, and means on the frame for imparting a reciprocating and rocking motion to the mattress.

3. In apparatus of the character described, a frame, a mattress thereon, and means on the frame for imparting a reciprocating and undulatory motion to the mattress.

4. In apparatus of the character described, a frame, a mattress thereon, means on the frame for laterally reciprocating and rocking the mattress and for producing a wave motion at its margins during the rocking and reciprocating movements.

5. In apparatus of the character described, a bed-stead, cross bars thereon, a longitudinally disposed pivotal shaft centrally along the cross bars, a rocking frame thereon, a laterally movable mattress-supporting frame on said rocking frame, and means for imparting a reciprocating and rocking motion to said mattress-supporting frame.

[Claims 6 and 7 not printed in the Gazette.]

1,110,921. VALVE MECHANISM FOR GAS-ENGINES. WILLIAM A. GILL, Portland, Oreg., assignor of one-half to Fred A. Cook, Portland, Oreg. Filed Sept. 21, 1912. Serial No. 721,698. (Cl. 123—188.)

1. In a valve mechanism, a valve chamber, two approximately semicylindrical valves reciprocating in such chamber; means for operating the valves; and means for preventing the passage of gas between the inner faces of the valves, said means adapted to hold said valves against their seats.

2. In a valve mechanism, a valve chamber, two approximately semicylindrical valves reciprocating in such chamber, the inner faces of such valves adapted to slide against each other, means for operating the valves, and means for preventing the passage of gas between the inner faces of the valves, said last mentioned means adapted to hold said valves against their seats.

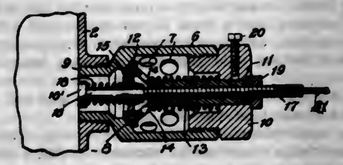
3. In a valve mechanism, a valve chamber, two approximately semicylindrical valves reciprocating in such chamber side by side; means for operating the valves; a plate movably seated in the inner face of one of said valves and adapted to bear on the opposed face of the other valve; and means for causing said plate to bear constantly against the opposed face of the other valve.

4. In a valve mechanism, a valve chamber, two approximately semicylindrical valves reciprocating in said chamber side by side; means for operating the valves; means for preventing the passage of gas between the inner faces of the valves; said means adapted to hold said valves against their seats; valve stems; and means for connecting the stems with the valves adapted to permit the latter lateral movement.

5. In a valve mechanism, a valve chamber, two approximately semicylindrical valves reciprocating in said chamber side by side; means for operating the valves; a plate movably seated in the face of one of said valves and adapted to bear on the opposed face of the other valve; means for causing said plate to bear constantly against the opposed face of the other valve; valve stems; and means connecting the stems with the valves adapted to permit the latter lateral movement.

[Claims 6 to 9 not printed in the Gazette.]

1,110,922. AIR-INLET DEVICE FOR EXPLOSIVE-ENGINES. EDWARD J. GOODYEAR, Wilkinsburg, Pa. Filed Dec. 31, 1913. Serial No. 809,663. (Cl. 48—180.)



1. The combination with an explosive engine intake pipe, and a carbureter, of two normally closed valves for admitting air to the intake pipe independently of the carbureter and of each other, one valve adapted to be opened by suction within the pipe, and means for opening the other valve.

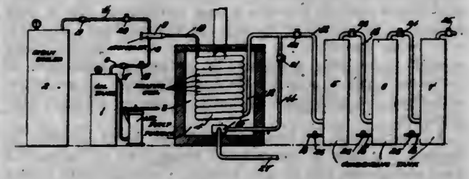
2. The combination with an explosive engine intake pipe, and a carbureter, of two normally closed valves adapted, respectively to open inwardly and outwardly for admitting air to the intake pipe independently of the carbureter and of each other, the inwardly-opening valve adapted to be opened by suction within the intake pipe, and means for opening the outwardly-opening valve.

3. The combination with an explosive engine intake pipe, and a carbureter, of a normally closed valve for admitting air to the intake pipe independently of the carbureter, and a normally closed supplemental valve mounted on the first mentioned valve and adapted to be opened by suction within the pipe for admitting air to the latter independently of said first mentioned valve and independently of the carbureter.

4. The combination of an explosive engine intake pipe, a manually operated air-admission valve in communication with the pipe, and an inwardly opening spring-closed air admitting valve mounted on the manually operated valve and adapted to be opened by suction within the pipe.

5. The combination with an explosive engine cylinder and a carbureter in communication therewith, of a manually operated air admitting valve in communication with the cylinder independently of the carbureter, and an inwardly opening spring-closed suction operated air admitting valve carried by the manually operated valve.

1,110,923. PROCESS OF TREATING HEAVY HYDROCARBON OILS. CHARLES J. GREENSTREET, Denver, Colo. Filed Mar. 13, 1911. Serial No. 614,125. (Cl. 196—21.)



1. The process of procuring light hydrocarbons from crude oil which consists in keeping a pipe system at a temperature above one thousand degrees Fahrenheit, said system being clear of obstructions tending to retard the flow of the oil, passing such oil continuously through said pipe system while commingled with steam in such proportion that the resulting product is capable of burning with a bluish flame, and then permitting such product to condense.

2. The process of treating crude oil which consists in submitting a current of said oil commingled with steam to a heat in excess of one thousand degrees Fahrenheit, igniting a portion of the hot products, varying the proportion of oil and steam until the test flame becomes bluish, and then condensing the remaining product.

3. The process of treating crude oil which consists in submitting a current of said oil commingled with steam to a heat in excess of one thousand degrees Fahrenheit, igniting a portion of the hot products, varying the proportions of oil and steam until the test flame becomes bluish, and then fractionally condensing the remaining product.

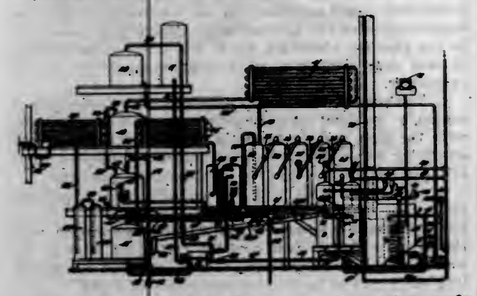
4. The process of treating crude oil which consists in submitting a current of said oil commingled with steam to a cherry red heat, igniting a portion of the hot products, varying the proportions of oil and steam until the test flame becomes bluish, and then condensing the remaining product.

5. The process of treating crude oil which consists in passing steam through a heating coil at a heat in excess

of one thousand degrees Fahrenheit, and thence through a test burner, injecting a small proportion of oil into the steam before it enters said heating coil and progressively increasing said proportion until the uncondensed product burns with a bluish flame, and then fractionally condensing the remainder of the product resulting from the treatment of the mixture of oil and steam in such proportion.

[Claims 6 and 7 not printed in the Gazette.]

1,110,924. PROCESS OF TREATING HEAVY HYDROCARBON OILS. CHARLES J. GREENSTREET, Webster Groves, Mo. Filed May 13, 1912. Serial No. 696,891. (Cl. 196—26.)



1. The improvement in the process of treating crude oil which consists in passing steam under pressure through a long continuous coil of pipe kept at a substantially cherry temperature and injecting crude oil into said steam on the inlet side of the coil, said coil being free from obstructions and abrupt angles.

2. The improvement in the process of treating crude oil which consists in passing a continuous current of commingled steam and oil through a long continuous coil of pipe kept at a substantially cherry red temperature, said current being unobstructed and moving at a velocity rapid enough to prevent a deposit of carbon or formation of permanent gas in appreciable quantity such as would result from the prolonged exposure of the oil at such temperature.

3. The process of treating crude oil which consists in forcing a stream of commingled steam and oil through a long continuous coil of pipe kept at a substantially cherry red temperature, the exposure of the oil being such as would result from the use of a coil of pipe one hundred feet long and an inch and a half diameter and free from obstructions, the pressure on the oil supply being fifty pounds per square inch, such oil being injected into the pipe coil under a stream pressure of one hundred pounds per square inch.

4. The process of treating crude oil which consists in maintaining a long coil of continuous pipe at a substantially cherry red temperature, passing steam through said coil in a continuous and unobstructed stream, injecting oil into the stream on the inlet side of said coil and condensing the oil beyond the outlet end of said coil, the exposure of the oil being such as would result from a live steam pressure of one hundred pounds per square inch and a pressure on the oil supply of fifty pounds per square inch when the coil is a pipe of one and one half inches in diameter and one hundred feet long.

5. The process of treating heavy hydrocarbon oil which consists in maintaining a long coil of continuous pipe at a substantially cherry red temperature, passing steam through said coil in a continuous and unobstructed stream, injecting oil into the steam on the inlet side of said coil and condensing the oil beyond the outlet end of said coil, the exposure of the oil being such as would result from a live steam pressure of one hundred pounds per square inch and a pressure on the oil supply of fifty pounds per square inch when the coil is a pipe of one and one half inch diameter and one hundred feet long.

[Claims 6 to 10 not printed in the Gazette.]

1,110,925. PROCESS OF MANUFACTURING OLEFINS AND THEIR OXIDATION PRODUCTS. CHARLES J. GREENSTREET, Webster Groves, Mo. Filed June 7, 1912. Serial No. 702,176. (Cl. 196—26.)

1. The process of manufacturing olefins which consists in forcing mineral oil commingled with steam through a long coil of continuous pipe at a substantially cherry red heat, and repeating the operation upon the resultant product.

2. The process of treating crude oil which consists in forcing it commingled with steam through a long continuous coil of pipe at a substantially cherry red heat, and oxidizing the olefin ingredients of the resulting product.

3. The process of treating crude oil which consists in forcing it commingled with steam through a long continuous coil of pipe at a substantially cherry red heat, oxidizing the olefin ingredients of the resulting product, and separating the oxidation product by fractional distillation.

1,110,926. FURNACE AND FUEL-FEEDING DEVICE THEREFOR. CHARLES J. GREENSTREET, Webster Groves, Mo. Filed Sept. 26, 1912. Serial No. 722,383. (Cl. 110—105.)

1. A feeding apparatus for comminuted fuel comprising a hopper having an opening in its front wall adjacent to its bottom, a pair of doors arranged above said bottom and spaced therefrom, said doors being movable to vary the width of the opening between them, a series of flights arranged across said bottom below said doors, means for moving said flights toward the front wall of said hopper to control the passage of fuel through the opening therein, and means for causing an air current to pass beneath said bottom and across the opening in said wall.

2. A feeding apparatus for comminuted fuel comprising a hopper having an opening in its front wall adjacent to its bottom, a pair of doors arranged above said bottom and spaced therefrom, said doors being movable to vary the width of the opening between them, a series of flights arranged across said bottom below said doors, means for moving said flights toward the front wall of said hopper to control the passage of fuel through the opening therein, means for causing an air current to pass beneath said bottom and across the opening in said wall, a passage having one end opening into the air and the other end terminating in a delivery duct, and means for drawing air through said passage and commingling it with said air current.

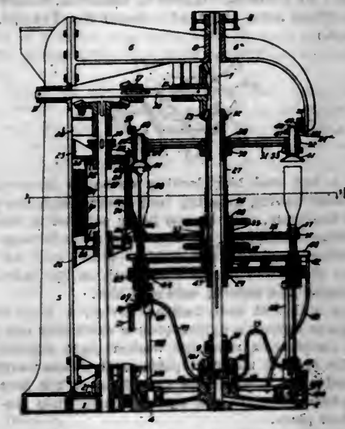
3. In an apparatus for burning comminuted fuel, a furnace having an elongated combustion chamber, one end of said combustion chamber having an outlet for the products of combustion and the other end thereof having a fuel inlet duct, and means for forcing a constant stream of air and commingled particles of coal dust through said inlet duct, said means comprising a blower, an air inlet duct for said blower, and mechanical means for feeding fuel continuously into said blower inlet duct, said fuel feeding means comprising a hopper having an adjustable bottom opening, and a fixed bottom below said adjustable bottom opening, said hopper having an end opening above said fixed bottom, said end opening being located above said blower inlet duct, and means movable across said fixed bottom for transferring said fuel through said end opening into said blower inlet duct in a thin sheet.

4. An apparatus for feeding and burning comminuted fuel comprising a combustion chamber having a fuel inlet opening and an outlet opening for the products of combustion, a fire wall in said combustion chamber between said inlet and outlet openings, a blower having a delivery pipe communicating with said inlet opening, and means for feeding fuel in a substantially uniform sheet into said blower, said means comprising a hopper for said fuel, a flat bottom therefor having an elongated opening extending entirely across one end thereof, a wide endless conveyer having flights arranged to move the fuel endwise of said bottom and through said opening, means for actuating said conveyer, and a passage for air current crossing said elongated opening and discharging into the inlet of said blower whereby said fuel is uniformly commingled with air and delivered to said furnace.

5. An apparatus for feeding and burning comminuted fuel comprising a combustion chamber having a fuel inlet opening, a blower having a delivery pipe communicating with said inlet opening, and means for feeding fuel in a substantially uniform sheet into said blower, said means comprising a hopper for said fuel having a fixed bottom and an adjustable gate spaced above it, said hopper having an elongated opening extending across one end thereof below said gate, and a passage for air currents crossing said elongated opening and discharging into the inlet of said blower, said passage having an adjustable air inlet opening.

[Claims 6 to 10 not printed in the Gazette.]

1,110,927. BOTTLE-CLEANING APPARATUS. JOHN R. GRUETTER, Cleveland, Ohio, assignor to The Loew Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 30, 1910. Serial No. 552,386. (Cl. 141—7.)



1. In a bottle cleaning apparatus, the combination of a carrier, means for rotating the same, an endless brush having a concave surface located in the path of travel of said carrier and of the bottles thereon, means for driving said brush, and means for automatically rotating the bottles on the carrier so as to cause their surfaces to move in the same direction as the portion of the exterior brush adjacent thereto during the entire time of their treatment thereby.

2. In a bottle cleaning apparatus, the combination of a bottle carrier, means for driving the same, an endless brush having a surface presented toward said carrier, means for driving said brush, gears whereby the bottles on said carrier may be rotated, and a segmental gear adjacent to said brush and arranged to engage the bottle-rotating gears.

3. In a bottle cleaning apparatus, the combination of a bottle carrier, means for driving the same, an endless brush having a surface presented toward the carrier, means for driving said brush, gears whereby bottles on the carrier may be rotated, and a segmental gear located adjacent to said brush and having a yielding end portion adapted to engage the bottle-rotating gears.

4. In a bottle washing apparatus, the combination of a bottle carrier, means for driving the same, a brush located in operative relation to the carrier and arranged to operate on the exteriors of the bottles carried thereby, gears whereby bottles on the carrier may be rotated, a gear located adjacent to the brush and arranged to engage the bottle-rotating gears, and means whereby the engagement between the bottle-rotating gears and the latter gear may be cushioned.

5. In a bottle cleaning apparatus, the combination of a carrier, means for rotating the same, a flexible endless brush arranged to present a concaved surface toward the carrier, a gear adjacent to said brush and having a pivoted end, a spring for said end of the gear, and gears for bottles on the carrier arranged to engage the pivoted end of the first-mentioned gear.

[Claims 6 to 22 not printed in the Gazette.]

1,110,928. PROCESS FOR MATURING IMMATURE AND FROST-BITTEN COTTON-BOLLS. JOHN B. HALL, Philadelphia, Pa. Filed Oct. 24, 1912, Serial No. 727,499. Renewed Mar. 2, 1914. Serial No. 822,075. (Cl. 47—36.)

1. The herein described process of maturing immature or frost bitten cotton bolls, which consists in artificially contracting the fiber of the shell of a cotton boll, and next expanding the fibers of the cotton contained therein into a natural state.

2. The process of maturing immature or frost bitten cotton bolls, which consists in artificially applying to a cotton boll, a moisture absorbing composition, contracting the fiber of the shell of said boll, and lastly expanding the fibers of the cotton contained therein into a mature state.

3. The herein described process of maturing immature or frost bitten cotton bolls, which consists in applying to such bolls a maturing composition, composed of talcum and starch, said composition being adapted to adhere to said bolls and cause the same to artificially mature and open.

4. The herein described process of maturing immature or frost-bitten cotton bolls, which consists in applying to such bolls a maturing composition composed of talcum, starch and a granular detritus with texture coarser than clay and finer than gravel, said composition being adapted to adhere to said bolls and to cause the same to artificially mature and open.

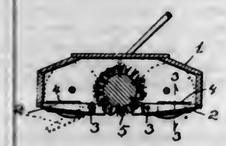
5. The process of maturing immature or frost bitten cotton bolls, which consists in artificially and gradually contracting the exterior of the boll, so as to open the same, and simultaneously expanding the fibers of the cotton into their natural or matured condition.

[Claims 6 to 8 not printed in the Gazette.]

1,110,929. CARPET-SWEEPER ATTACHMENT. JENNIE HAMMOND, Farmingdale, N. Y. Filed July 2, 1913. Serial No. 777,133. (Cl. 15—60.)

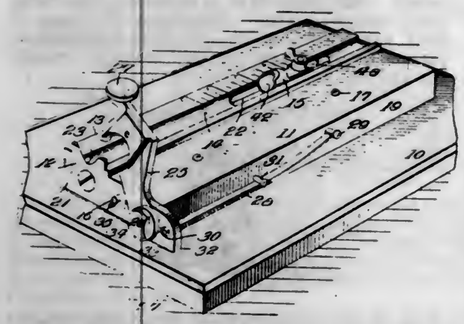
1. The combination with a carpet sweeper having an open bottom casing and a dust pan mounted between the end walls of said casing, of an absorbent cloth strip stretched over the top of said pan, said strip having ends extending between the ends of the pan and the end walls of the casing, a stop device at each extremity of said strip, and means of lengthwise adjustment of said strip.

2. The combination with a carpet sweeper having a dust pan, of an attachment comprising an absorbent cloth



strip stretched over the open top of said pan and exposed upon both sides to the dust.

1,110,930. LOCKING DEVICE FOR CIGAR-CUTTERS. GEORGE E. HARRISON, Philadelphia, Pa., assignor of one-half to Barclay S. Pittenger, Philadelphia, Pa. Filed Nov. 25, 1913. Serial No. 802,962. (Cl. 131—37.)



1. A cigar cutter including a fixed knife, a movable knife, a lineal gage member, and means operatively connected to the gage member for normally locking the movable knife in inoperative position.

2. A cigar cutter including a fixed knife, a movable knife, a lineal gage member, and spring-pressed means operatively connected to the gage member for normally locking the movable knife in inoperative position.

3. A cigar cutter including a movable knife, a fixed knife, a lineal gage member, and spring-pressed means for normally locking the movable knife in inoperative position, said means being operatively connected to the gage member and movable longitudinally therewith.

4. A cigar cutter including a bed-block, a fixed knife, a movable knife, a lineal gage movable longitudinally of the said bed-block, a locking rod adjustably connected to the gage and movable longitudinally of the bed-block, and yieldable means for normally holding the locking rod in locking relation to the movable knife whereby the movable knife is normally locked in inoperative position.

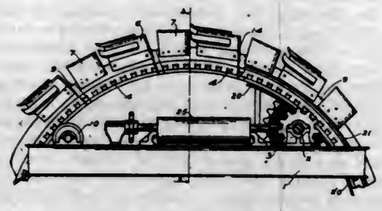
5. A cigar cutter including a fixed knife, a movable knife, a lineal gage, a locking rod adjustably connected to the gage and movable therewith, and yieldable means for normally holding the locking rod in operative relation to the movable knife, said locking rod being movable into inoperative position upon the movement of the gage member away from the fixed knife.

[Claims 6 to 19 not printed in the Gazette.]

1,110,931. EXCAVATOR. ANDERSON C. HECK, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed Aug. 22, 1913. Serial No. 786,157. (Cl. 37—29.)

1. In an excavator, the combination of a wheel having flanges, the outer edges of the said flanges being inclined toward each other, buckets comprising semi-circular sheets removably secured to the said flanges, side buckets located alternately to the first named buckets and along the periphery of the said wheel and removably secured to one of the said flanges.

2. In an excavator, the combination of a wheel having flanges, the outer edges of the said flanges being inclined toward each other, buckets comprising semi-circular sheets removably secured to the said flanges, said buckets located alternately to the first named buckets and along the periphery of the said wheel and removably secured to the said flanges, shields extending along the inner edges of the flanges and from a point below the horizontal diameter of the wheel to the dumping point of the bucket, a conveyer for conveying the material from the said buckets.



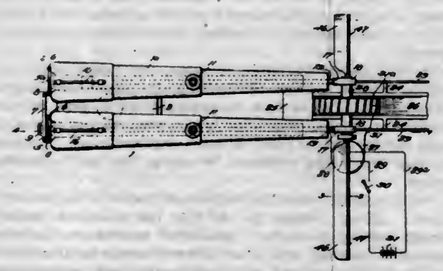
3. In an excavator, the combination of an excavator wheel, a plurality of buckets secured to the said wheel, a plurality of side buckets located alternately to the first named buckets and along the periphery of the said wheel, clearance knives located on the side opposite to the said side buckets and alternate with the first named buckets.

1,110,932. NUT-LOCK. HARRY E. HENDRIX, Willow Lake, S. D. Filed June 19, 1913. Serial No. 774,713. (Cl. 151—13.)

1. In a nut and bolt locking device, a non-rotatable washer plate having a spring tongue extending out of the plane of the plate, said tongue being reduced in thickness and forming a shoulder, an unlocking plate having a central opening receiving the washer plate, and an offset tongue on the unlocking plate disposed on the base of the spring tongue and against said shoulder.

2. In a nut and bolt locking device, a non-rotatable washer plate having a spring tongue extending out of the plane of its plate, a rotatable washer plate disposed concentrically around the first plate, and means carried by the second plate disposed in the plane of the first plate and arranged to move the spring tongue into the plane of said first plate.

1,110,933. PROJECTILE. LOUIS FRANK HERING, Pomona, Cal., assignor of one-half to Alfred Konjetzky, Pomona, Cal. Filed June 30, 1914. Serial No. 848,263. (Cl. 102—29.)



1. A device of the character specified, comprising a wheel, a shaft upon which the wheel is journaled, said shaft having at each end a longitudinally extending blade,

a hub at the center of the wheel and extending on both faces thereof and journaled on the shaft, sleeves journaled on the ends of the hub at opposite sides of the wheel, means for launching the wheel and connected parts through the air, said means comprising guns arranged with their bores parallel, a plunger in each gun, each plunger having a plunger rod extending through the muzzle of the gun and beyond the said muzzle, and having a yoke at its outer end, a spring for returning each plunger, each gun having an exhaust opening intermediate its ends, a bracket connecting the muzzles of the guns and having a track rail in vertical alinement with the axis of each gun, each yoke having grooved wheels running on the adjacent track rail, and means for imparting rotation to the wheel before it is discharged, said means comprising a motor, a disk connected with the motor, and a disk rigid with the sleeve and engaging the disk of the motor.

2. A device of the character specified, comprising a wheel, a shaft upon which the wheel is journaled, said shaft having at each end a longitudinally extending blade, a hub at the center of the wheel and extending on both faces thereof and journaled on the shaft, sleeves journaled on the ends of the hub at opposite sides of the wheel, means for launching the wheel and connected parts through the air, said means comprising guns arranged with their bores parallel, a plunger in each gun, each plunger having a plunger rod extending through the muzzle of the gun, and beyond the said muzzle, and having a yoke at its outer end, a spring for returning each plunger, each gun having an exhaust opening intermediate its ends, a bracket connecting the muzzles of the guns and having a track rail in vertical alinement with the axis of each gun, each yoke having grooved wheels running on the adjacent track rail.

3. A device of the character specified, comprising a wheel, a shaft upon which the wheel is journaled, said shaft having at each end a longitudinally extending blade, a hub at the center of the wheel and extending on both faces thereof and journaled on the shaft, sleeves journaled on the ends of the hub at opposite sides of the wheel, means for launching the wheel and connected parts through the air, and means for imparting rotation to the wheel before it is discharged, said means comprising a motor, a disk connected with the motor, and a disk rigid with the sleeve and engaging the disk of the motor.

4. A device of the character specified, comprising a wheel, a shaft upon which the wheel is journaled, said shaft having at each end a longitudinally extending blade, a hub at the center of the wheel and extending on both faces thereof and journaled on the shaft, sleeves journaled on the ends of the hub at opposite sides of the wheel, and means for launching the wheel and connected parts through the air.

5. In a device of the character specified, a launching device comprising a pair of cylinders having exhaust openings intermediate their ends arranged with their bores in parallelism, a plunger in each cylinder and adapted to be moved longitudinally thereof by expanding gases, a spring for returning each plunger, a rod connected with each plunger and extending beyond the cylinder and having a yoke at its outer end, a spring for returning each plunger, a track rail in vertical alinement with the axis of each cylinder, each yoke having wheels running on the adjacent track rail, and said yokes being adapted to engage the article to be launched.

[Claims 6 to 9 not printed in the Gazette.]

1,110,934. INSULATOR. EDWARD M. HEWLET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 20, 1907. Serial No. 369,245. (Cl. 173—366.)

1. An insulator having means for connecting conductors to opposite sides thereof and means for diverting rain from either side thereof while the other side is exposed to the washing action of the rain.

2. An insulator having a central portion provided with means on opposite sides for connecting thereto metallic parts subject to difference of electrical potential, and a rain deflector surrounding said central portion and adapted to maintain a dry region in all paths of possible leakage from one metallic part to the other.

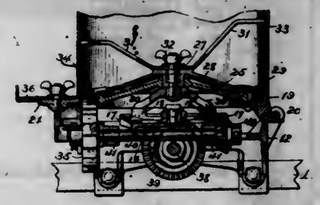
3. An insulator having a central portion provided on opposite sides with means for connecting thereto metallic parts subject to difference of electrical potential, a disk portion surrounding said central portion, and a flange projecting from one side of said disk portion and adapted to maintain a dry region in all paths of possible leakage from one metal part to the other.

4. An insulator having a central portion provided with means for connecting conductors of different potentials to opposite sides thereof, a disk portion, and oppositely flaring peripheral flanges on said disk portion.

5. An insulator having a central portion provided with means for connecting conductors of different potentials to opposite sides thereof, an integral disk portion, oppositely flaring flanges at the periphery of said disk, and circular ribs between said flanges and the central portion.

[Claims 6 to 14 not printed in the Gazette.]

1,110,935. PLANTER. EDWARD M. HEYLMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Apr. 28, 1914. Serial No. 834,962. (Cl. 111—32.)



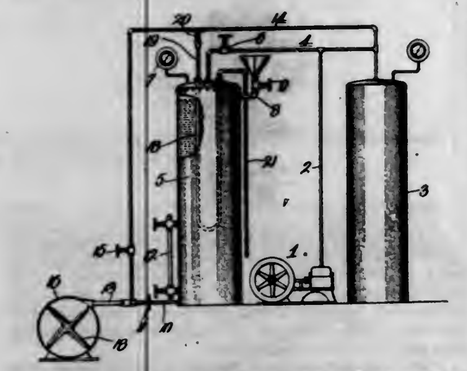
1. In a planter, the combination with a main frame, of a base frame secured thereto, a horizontal gear wheel mounted on the base frame, a base ring, a toothed agitator disk mounted on said base ring, driving connections between said gear wheel and agitator disk, a driving shaft mounted in the base frame, a pinion secured to said shaft and meshing with the gear wheel, a second shaft mounted in the base frame in a different horizontal plane from that of the driving shaft, a feed wheel on said second shaft, and a pinion on said second shaft meshing with said gear wheel, said last-mentioned pinion being smaller than the first-mentioned pinion, whereby the feed-wheel will be driven at greater speed than that of the agitator disk.

2. In a planter, the combination with a base frame, of a base frame, a shaft mounted therein, a feed wheel on said shaft, means for rotating said shaft and feed wheel rapidly, a horizontal agitator wheel having teeth movable over the feed wheel, each of said teeth having a curved forward edge and a beveled lower face, and means for rotating said agitator disk.

1,110,936. FEATHER-TREATING APPARATUS. SIGMUND S. HIRSCH and ISAAC E. SHANE, Kansas City, Mo. Filed June 21, 1912. Serial No. 705,092. (Cl. 91—45.)

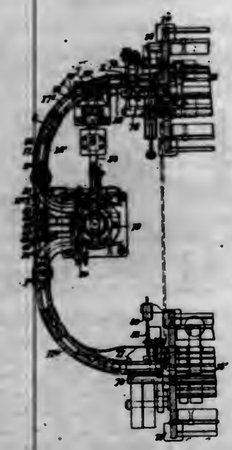
1. In an apparatus for treating feathers, the combination of a conduit, means for creating a current of air

through the conduit to convey the feathers therethrough and means for discharging atomized oil into the conduit, and upon the feathers while in transit through the conduit.



2. In an apparatus for treating feathers, the combination of a conduit, means within the conduit for creating a current of air to convey feathers therethrough and agitate the feathers while in transit, and means for discharging atomized oil into the conduit and upon the feathers therein.

1,110,937. HACKLING-MACHINE. VICTOR HUGLO, Lille, France. Filed Feb. 18, 1913. Serial No. 749,258. (Cl. 13—2.)



1. In a holder of the kind described for fiber hackling machines the combination of a lower plate, carrying means on its outside, an upper plate, interlocking means provided at the ends of said plates, locking and tightening members carried by the said upper plate on its outer side and means allowing of the said locking and tightening members being actuated, substantially as and for the purpose set forth.

2. In a holder for fiber hackling machines, the combination with a lower plate, of trapeze shaped staples at each end thereof and provided with wedge shaped openings therethrough, an upper plate, a notch in each of the end edges of said upper plate and adapted to receive the staples of the lower plate, and means for forcing the plates together to cause the plates to engage.

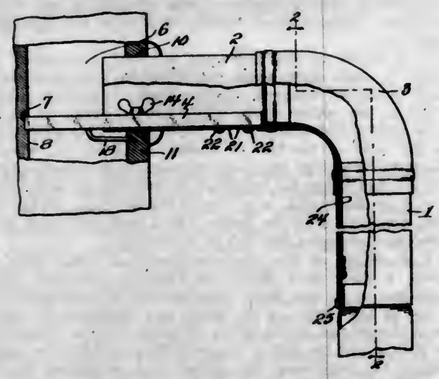
3. In a holder for fiber hackling machines, the combination with an upper and a lower plate, of a central projection upon said upper plate and provided with a central depression, an axial centrally located guide tube in said depression, a plurality of staples upon said lower plate, a plurality of bolts upon said upper plate adapted to engage said staples, and means for forcing the plates together to cause the plates to engage.

4. In a holder for fiber hackling machines, the combination with an upper and a lower plate, of staples provided with openings upon the lower plates, a central projection upon said upper plate, a centrally located guide tube upon said upper plate, lock bolts on said upper plate, means secured to the upper plate adapted to guide the lock bolts in line with the openings of said staples, a lug upon each of the lock bolts projecting outwardly therefrom, tail pieces upon each of said lock bolts at their inner ends, said tail pieces being inserted in said guide tube and superposed therein, a flange upon said central projection of the upper plate and spaced from the surface of said plate, and means for engaging said flanges to control the parts.

5. In a fiber hackling machine, the combination with fiber holders, comprising upper and lower plates, of tightening means therefor, a plurality of spaced rails, said rails forming a connecting track placed at a height equal to the height of the lowered heads of a hackling machine, a plurality of tenons on the lower plate of said holder adapted to be guided in said track, and means for actuating said holders along said track.

[Claims 6 to 15 not printed in the Gazette.]

1,110,938. ADJUSTABLE STOVEPIPE-HOLDER. JOHN W. JAMES, Price, Utah. Filed Sept. 26, 1913. Serial No. 792,015. (Cl. 126—318.)



1. A pipe holder comprising a member having a longitudinal slot, a second member slidably mounted therein, a breast engaging device mounted on the second member and having a portion extending through and terminating below said slot, the said second member being adjustable to bring said portion into engagement with the breast of the chimney, and means for holding said member in adjusted position.

2. A pipe holder comprising a member having a longitudinal slot, a second member slidably mounted therein, a breast engaging device mounted for rocking movement on said last mentioned member and having a portion extending through and terminating below said slot, said second member being adjustable to bring said portion into engagement with the breast of the chimney, and means for holding said member against sliding movement.

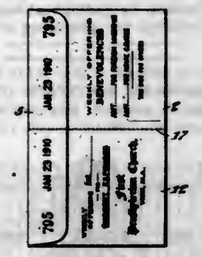
3. A pipe holder comprising a member having a longitudinal slot, a second member slidably mounted therein, a breast engaging device mounted for rocking movement on said last mentioned member and yieldably connected therewith, and having a portion extending through and terminating below said slot, said second member being adjustable to bring said breast engaging device into engagement with the chimney, and means for holding said member in adjusted position.

4. A pipe holder comprising a member having a longitudinal slot, a second member slidably mounted therein, means for holding said member against sliding movement, and a breast engaging device mounted on said last mentioned member and having a portion extending through and terminating below said slot, said member being adjustable to bring said portion into engagement with the breast of the chimney, in combination with a pipe section having means slidable in said slot and adjustable against the member and operable to hold the latter and said pipe section connected with each other.

5. A pipe holder for chimneys comprising a member extending through the pipe opening in the breast of the chimney, means adjustably mounted on said member and extending into the vertical flue and lying against the breast thereof, and yieldable means bearing against the first means and operable to permit said member to be tilted thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,110,939. ENVELOP. ARCHER G. JONES, Richmond, Va., assignor to The Duplex Envelope & Printing Co., Inc., Richmond, Va. Filed May 4, 1910. Serial No. 559,338. (Cl. 229—72.)

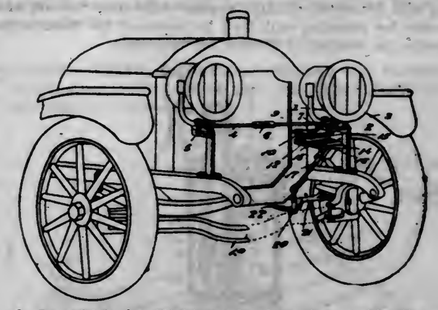


As an article of manufacture, a twin envelop comprising a body having main, end and upper flaps connected together, the end flaps folded inward upon the body and the main flap superimposed upon the end flaps, said main flap being of a length equal to the length of the body, an adhesive upon the end flaps for connecting the main flap thereto, and an adhesive strip formed upon the main flap through the transverse center thereof whereby the main flap is connected to the body portion through the center for forming a pocket on each side of the adhesive strip, said main flap presenting a smooth outer surface throughout its entire length for receiving the necessary printing matter for designating the object of the respective pockets to insure the insertion of the proper matter in the desired pocket, the upper flap having a gummed inner surface whereby it can be connected to the main flap for closing the pockets, and a line of fracture being formed through the central portion of the envelop and gummed strip whereby the two compartments or pockets can be separated without unsealing or mutilating either pocket.

1,110,940. HEADLIGHT FOR AUTOMOBILES. CHARLES E. JONES, South Auburn, Nebr., assignor of one-half to Verne W. Coons, South Auburn, Nebr. Filed Aug. 8, 1913. Serial No. 783,779. (Cl. 240—62.)

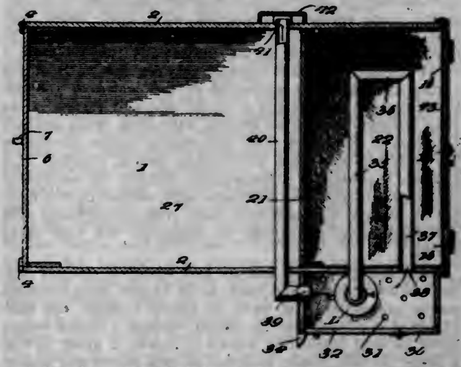
1. In a vehicle headlight mechanism the combination of a lamp support, a plate having a guide of zigzag form with its end portions of similar formation and inclining in opposite directions from a medial point, means projecting from the lamp support and entering the guide of the plate, and means for imparting a sliding movement to the plate to effect angular adjustment of the lamp support in each direction.

2. In headlight mechanism for automobiles and kindred machines and vehicles the combination of a lamp support having a projection, a plate having a slot of zigzag form with its end portions of similar construction and oppositely inclined from a medial point, said plate being reversible and adapted to have the projection of the lamp support arranged to operate in the slot thereof, and means for imparting a sliding movement to the plate to effect angular adjustment.



3. In vehicle headlight mechanism the combination of a lamp support, a pivoted arm having the lamp support mounted upon its free end, a plate provided with a guide of substantially zigzag form and having its end portions of similar outline, a slide having the plate connected therewith, a guide receiving the slide and directing the same in its reciprocating movements, and connecting means between the slide and steering mechanism to impart a reciprocating movement to such slide.

1,110,941. BROODER. NYLA Q. KELSO, Tulsa, Okla., assignor of one-half to John D. Wynn, Tulsa, Okla. Filed Sept. 25, 1913. Serial No. 791,838. (Cl. 119—34.)

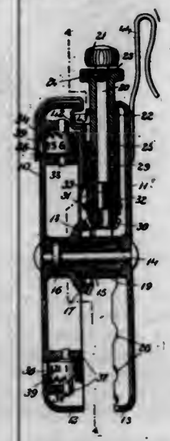


A brooder comprising a casing, a partition wall therein dividing the casing into a heating and a scratching chamber, a beater box applied to one side wall of the casing, a source of heat within said box, a flue leading from said source through the adjacent wall of said casing to the heating chamber and returning to terminate in the last mentioned side wall, whereby to return the products of combustion to said box after heating said heating chamber, and a second flue leading from said beater box through the adjacent side wall of the casing to extend transversely across the scratching chamber, the opposite and outer end of said last mentioned flue terminating in the opposite side wall of the casing.

1,110,942. REGISTER. ADOLPH W. KEMPNER, New York, N. Y. Filed Oct. 24, 1913. Serial No. 797,052. (Cl. 235—121.)

1. In a pocket golf register, the combination with a casing having a face portion with indications designating the number of holes to be played and numbers indicating the grand total of strokes; of a stem carried by the casing, a pointer movably carried by the casing and cooperating with the last-mentioned indications and opera-

tively connected to the stem, said stem to be moved thereby coöperating with the first-mentioned indications, a plurality of movable cylindrical dials carried by the casing and journaled at right angles to the axis thereof, and means for stepping said dials by means of the stem to indicate the number of strokes for each hole.

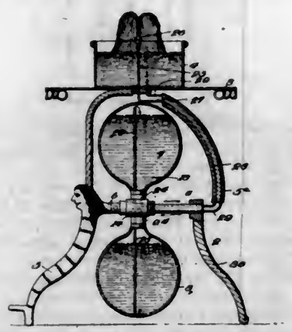


2. In a meter for golf scores, a casing embodying front and back walls spaced apart, the face portion of the casing having indications designating the number of holes in a course and a dial designed to permit a registration of the total number of strokes in the course, a plurality of cylinders each rotatably supported with their bases parallel with the axis of the casing and visible through the casing, said cylinders having indications thereon from 1 to 12 inclusive, a stem movable between the walls of the casing and rotatably supported at the center of the latter, a pointer coöperating with the dial and geared to the stem whereby it may be shifted, said stem being adapted for inward movement, and coöperating means carried by the cylinders and stem for causing partial rotation of a cylinder disposed in justaposition thereto for advancing the same one unit and simultaneously indicating the number of strokes for each hole, said stem coöperating with the first-named indications to designate the hole being played.

3. In a register for keeping golf scores, a circular casing including front and back walls having edge portions, means connecting said walls in spaced relation, the edge of one of said walls having spaced recesses, a pinion snugly fitted on said connecting means to rotate, a guide having a sleeve portion loosely mounted on said connecting means, a pinion rotatably carried by said guide and disposed in mesh with the first-named pinion, a sleeve slidably engaged with said guide and designed to spring into said recesses and held against movement with respect to the casing, a stem carried by the sleeve for independent rotation and simultaneous sliding movement, said stem being keyed to the second-named pinion whereby rotation may be imparted to the first-named pinion, a pointer carried by the last-named pinion and movable over one face of the casing, a dial coöperating with said pointer to designate the grand total of strokes, said front wall having spaced flanges with communicating openings, cylinders rotatably journaled in said flanges at spaced points adjacent to the openings and having numbers thereon, one edge wall of each cylinder having beveled teeth, and a projection carried by the sleeve and coöperating with said teeth to cause partial rotation of a cylinder disposed adjacent thereto upon inward displacement of the stem to indicate the number of strokes for each hole, and means normally holding said stem and sleeve outward and the projection spaced from the adjacent cylinder.

4. In a register for keeping golf scores, a circular casing including front and back walls having edge portions, means connecting said walls in spaced relation, the edge of one of said walls having spaced recesses, a pinion snugly fitted on said connecting means to rotate, a guide having a sleeve portion loosely mounted on said connecting means, a pinion rotatably carried by said guide and disposed in mesh with the first-named pinion, a sleeve slidably engaged with said guide and designed to spring into said recesses and held against movement with respect to the casing, a stem carried by the sleeve for independent rotation and simultaneous sliding movement, said stem being keyed to the second-named pinion whereby rotation may be imparted to the first-named pinion, a pointer carried by the last-named pinion and movable over one face of the casing, a dial coöperating with said pointer to designate the grand total of strokes, said front wall having spaced flanges with communicating openings, cylinders rotatably journaled in said flanges at spaced points adjacent to the openings and having numbers thereon, one edge wall of each cylinder having beveled teeth, and a projection carried by the sleeve and coöperating with said teeth to cause partial rotation of a cylinder disposed adjacent thereto upon inward displacement of the stem to indicate the number of strokes for each hole, there being indications on one face of the casing designating the number of holes in the course, said stem and sleeve coöperating with said indications alined with respect to the recesses to indicate the hole being played.

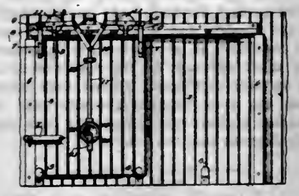
1,110,943. AUTOMATIC FOUNTAIN. WILLIAM G. KENDALL and CARL SCHONERT, Newark, N. J. Filed Aug. 22, 1913. Serial No. 786,187. (Cl. 137—107.)



1. A fountain of the character described comprising a supporting frame, a fixed hub projecting centrally from said frame, oppositely disposed containers rotatably mounted upon said hub, said hub being tapered exteriorly and being formed with a pair of longitudinally extending ducts, both extending inward from the same end of the hub, each duct extending laterally at its inner end to the circumference of the hub, said extensions being offset from each other, said hub being also formed with a transversely extending air duct arranged at an inclination to the longitudinal axis of the hub, a bushing surrounding and rotatable upon the hub and having oppositely disposed nipples engaging each with one of the containers, each nipple being provided with a pair of ducts adapted to register with the ducts of the hub, one of said ducts contained in each nipple having extending therefrom a pipe leading into the interior of the corresponding container and discharging adjacent the opposite end of the container, a basin mounted upon the top of said frame, a vertically arranged discharge pipe disposed within the basin and extending above the same, a return pipe extending from the lower portion of the basin, a pipe communicating with one of the ducts of the fixed hub and communicating with the discharge pipe, and a pipe communicating with the other duct of the fixed hub and communicating with the return pipe of the basin.

2. A fountain of the character described comprising a supporting frame including legs and a top, a fixed hub mounted upon opposed legs of the frame, said hubs being tapered exteriorly and being formed with a pair of longitudinally extending ducts both extending inward from the same end of the hub, each duct extending laterally at its inner end to the circumference of the hub, said extensions being offset from each other, said hub being also formed with a transversely extending air duct arranged at an inclination to the longitudinal axis of the hub, a bushing having a tapered interior face surrounding and rotatable upon the hub and having oppositely disposed nipples, oppositely disposed containers with which said nipples engage, each nipple being provided with a pair of ducts adapted to register with the ducts of the hub, one of said ducts contained in each nipple having extending therefrom a pipe leading into the interior of the corresponding container and discharging adjacent the opposite end of the container, a basin mounted upon the top, a vertically arranged discharge pipe disposed within the basin and extending above the same, a return pipe extending from the lower portion of the basin, a curved member forming a part of the frame and having ducts with which the return pipe and discharge pipe communicate, a pipe communicating with one of the ducts of said curved member and with one of the ducts of the fixed hub, and a pipe communicating with the other duct of the curved member and with the other duct of the fixed hub.

1,110,944. DOOR-HANGER. CHESTER E. KINARD, Cooper, Tex., assignor to The Cooper Automatic Car Door Co., Cooper, Tex. Filed May 7, 1914. Serial No. 836,987. (Cl. 16—157.)



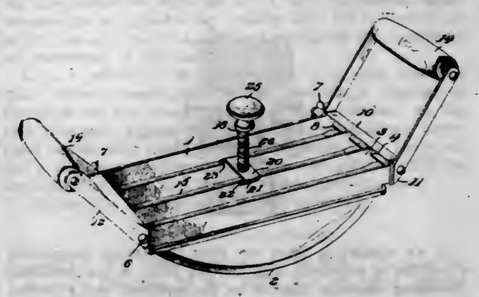
The combination with a sliding door, guides for the lower end thereof, a track, and supporting rollers adapted to travel thereon, of levers pivotally connected at one end to said door and carrying the journals for said rollers intermediate their ends, links pivoted to the free ends of said levers, a connecting rod pivoted to said links, a ring on said connecting rod and an eccentric journaled on said door and operating within said ring for raising or lowering said lever for the purpose set forth.

1,110,945. LID-LIFTER. WALTER R. KINSMAN, Red Bank, N. J., assignor of one-half to Charles E. Chapin, Milford, Conn. Filed Dec. 3, 1913. Serial No. 804,487. (Cl. 65—32.)

1. A lid lifter formed of a single length of spring wire and comprising handle portions provided at one end with substantially V-shaped jaw members terminating in angularly disposed fingers and connected at their other ends by a coil spring.

2. A lid lifter for use in connection with lids having knobs, and formed of spring wire and comprising handle portions provided at one end with substantially V-shaped jaw members terminating in angularly disposed feet and connected at their other ends by a coil spring, said jaws adapted for gripping the shank of the knob and said feet adapted for contacting with the top of the lid for the purpose set forth.

1,110,946. MEAT-CHOPPER. EUGENE A. LAHIÈRE, Washington, D. C. Filed Mar. 12, 1914. Serial No. 824,232. (Cl. 17—22.)



1. In a chopper of the class described, blades provided at their ends with openings, spacing sleeves disposed between the blades, bolts secured through the said openings in the blades and through the spacing sleeves and holding the blades in assembled relation, and handles each provided with spaced portions and a connecting portion connecting the portions of the handles extending transversely above the ends of the blades and the said spaced portions projecting at their lower ends beside the end ones of the blades and having the said bolts secured through their said ends, the cutting edges of the blades being curved and the handles being inclined upwardly and outwardly from the said blades.

2. In a chopper of the class described, blades provided at their ends with openings, spacing sleeves disposed between the blades and registering with the openings, a handle including spaced portions, a grip and a connecting portion extending between the lower ends of the spaced portions, the said handle further including ears located one at each end of the connecting portion and having openings registering with the openings in the outer ones of the blades, and bolts secured through the openings in the blades, through the spacing sleeves and through the said ears upon the handles, the connecting portions of the handles resting upon the backs of the blades.

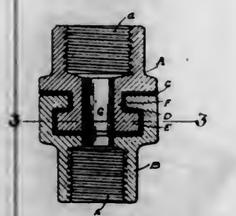
3. In a device of the class described, spaced blades, a cleaner plate having slots through which the blades project, the blades having shoulders against which the said cleaner plate is arranged to normally rest, a plunger connected with the plate, and a spring assembled with the plunger and normally holding the same in elevated position and with the plate in contact with the said shoulders.

4. In a device of the class described, spaced blades, a cleaner plate having slots through which the blades project, a supporting plate removably mounted upon the backs of the two adjacent ones of the blades, a plunger working through the said supporting plate and connected with the cleaner plate, and means yieldably holding the cleaner plate in elevated position, the supporting plate being rotatable upon the plunger, and being of a width less than the distance between the said blades, whereby to permit of the removal of the cleaner plate and its associated parts from the chopper proper.

5. In a device of the class described, spaced blades, one of said blades having its back formed with a slot and the other blade being provided with a keeper, a supporting plate having one end overturned and pivotally and removably fitted in the said slot, the other end of the supporting plate being provided with a latch portion engageable with the keeper, a cleaner plate having slots through which the blades project, a plunger connected with the cleaner plate and operable to move the said plate

up and down upon the blades, and a spring upon the plunger yieldably holding the same in elevated position, the supporting plate being rotatable upon the plunger and of a width less than the distance between the said blades.

1,110,947. INSULATING-JOINT AND PROCESS OF MAKING THE SAME. HENRY J. LAMPERT, Chicago, Ill. Filed Jan. 26, 1911. Serial No. 604,822. (Cl. 173—365.)



1. An insulating joint for electric fixtures comprising a member of relatively high melting point, a heat-resisting insulating material applied to the member, and a second member of relatively low melting point cast on to and interlocked with the first member.

2. An insulating joint for electric fixtures comprising a member of relatively high melting point, a vitreous heat-resisting and insulating material applied thereto, and a second member of relatively low melting point cast upon and interlocked with the first member and inclosing the insulating material.

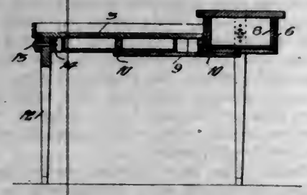
3. An insulating joint for electric fixtures comprising a member of relatively high melting point and provided with a head, an insulating material applied to the head, and a second member of relatively low melting point cast upon and interlocked with the head.

4. An insulating joint for electric fixtures comprising two members cast together and interlocked, one of which members has a relatively high melting point and the other a relatively low melting point, the metal of relatively high melting point being provided with a head and the metal of relatively low melting point being provided with a socket to inclose the head, and a heat-resisting insulating material interposed between the union at the head and socket.

5. An insulating joint for electric fixtures composed of a metal having a relatively high melting point and provided with a polygonal head, a heat-resisting insulating material applied to the head, and a second member having a relatively low melting point cast upon the head and interlocked therewith.

[Claims 6 to 11 not printed in the Gazette.]

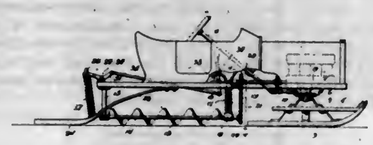
1,110,948. SECTIONAL TYPE-WRITER DESK. JAMES GILBERT LANGDON, Baltimore, Md. Filed Aug. 20, 1913. Serial No. 785,650. (Cl. 45—93.)



1. In a sectional typewriter desk, a pair of table members, one of said table members being disposed below the other and being detachably secured to the other on either side thereof, said lower table member being provided with a detachable leg and a detachable end rail adapted to be placed at the opposite end of said lower table member, reversible means secured to the bottom of said table members for securing the two table members together and a pair of legs for one of said table members.

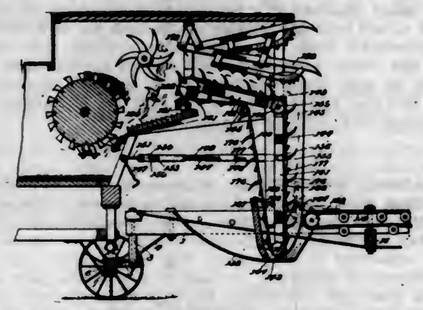
2. In a sectional typewriter desk, a rectangular oblong table member provided with a side and an end rail, a raised table member disposed at right angles to said first named table member, a connecting member adapted to be secured to the bottoms of both of said table members for holding them together, said connecting member being reversible so as to permit of attachment of the oblong member on either side of said raised table member, said oblong table member being provided with sockets at both ends and having a table leg arranged to enter either of said sockets, and a pair of legs secured to said raised table member.

1,110,949. MOTOR-SLEIGH. LUTHER MELANKTON LINDAL, Otto, Manitoba, Canada. Filed Mar. 17, 1914. Serial No. 825,296. (Cl. 21—47.)



A motor sleigh comprising a platform, an engine mounted thereon, a plurality of spiral blade propellers arranged in spaced relation to each other at opposite sides of the center of the platform and beneath the latter, said propellers revolving on horizontal axes, shafts for said propellers geared to and driven by the engine shaft, runners supporting the forward end of said platform, runners supporting the rear end of said platform, a manually controlled rock shaft adjacent to the rear end of said platform, arms on said rock shaft, thrust rods extending upwardly from the rear runners through said arms, and coiled expansion springs encircling said rods and serving to yieldingly depress said rear runners.

1,110,950. AUTOMATIC FEEDER FOR THRESHING-MACHINES, &c. GUY C. LONG, Timber Lake, S. D. Filed July 25, 1913. Serial No. 781,235. (Cl. 193—14.)



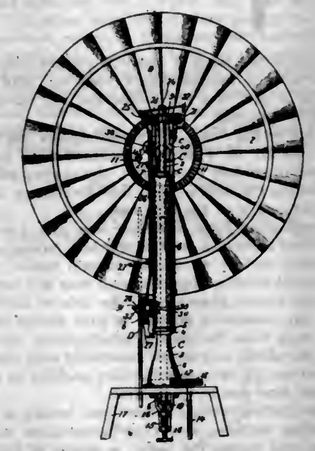
1. The combination of a boot, series of lifting fingers arranged to travel over the bottom of the boot and upwardly therefrom, connections between the series of fingers, means for swinging said fingers in inoperative position as they approach the bottom of the boot, and means for swinging the fingers to operative position as they rise from the bottom of the boot.

2. The combination of a boot, an elevator frame hung above and extending into the boot, a tripping guide secured to the rear guide of the elevator frame and extending to near the bottom of the boot, a guide rail secured to the front side of the elevator frame, endless chains mounted on the elevator frame, rocking rods carried by said chains, fingers projecting from said rods and adapted to engage the tripping guide, and triggers projecting from the rod at an angle to the fingers and adapted to ride on the guide rail.

3. The combination of a boot, endless chains moving in proximity to the bottom of the boot and upwardly therefrom, buckets carried by said chains to move over the bottom of the boot, series of fingers carried by the chains and arranged alternately with the buckets, means for rendering said fingers inoperative as they move toward the bottom of the boot, and means for projecting the fingers to operative position as they move upwardly from the boot.

4. The combination of an elevator frame, a tripping guide thereon, endless chains mounted on the frame, inwardly projecting sleeves on one of the chains provided with annular slots, rods journaled in said sleeves, and fingers projecting from said rods, the fingers at the ends of the rods playing in the said slots and arranged to engage the tripping guide.

1,110,951. WINDMILL. CHARLES LEWIS LONSINGER, Walbonding, Ohio. Filed Sept. 19, 1913. Serial No. 790,641. (Cl. 170—39.)



1. A windmill comprising oppositely rotating vane wheels, a supporting structure, a member mounted to turn thereon and supporting said wheels, a gearing connecting the wheels together and transmitting power therefrom, a guiding vane connected with the member and having a limited movement independently thereof, coacting means on the member and support for turning the member on the latter, and means for operatively connecting the means on the member to either of the said wheels to receive motion therefrom when the guiding vane moves relatively to the said member, whereby the wheels are maintained at right-angles to the wind.

2. A windmill comprising a support, a tubular member mounted to turn thereon, vane wheels mounted on the member, a gearing connecting the wheels together, a shaft receiving power from the gearing, a guide vane mounted on the member and having a limited movement independently thereof, gear teeth on the support, a worm arranged to engage the gear teeth, a connection between the worm and guiding vane whereby the former moves with the latter when the vane shifts with respect to the said member, and normally non-meshing bearing elements between the worm and each wheel, whereby the worm is turned to maintain the wheels faced to the wind.

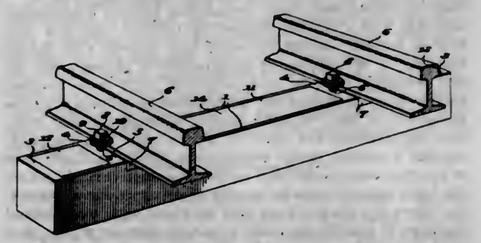
3. A windmill comprising a supporting standard, a sleeve mounted thereon, gear teeth on the standard, a worm arranged to engage the teeth, a movable support for the worm, means for shifting the support to engage and disengage the worm and teeth, vane wheels mounted on the sleeve and rotating in opposite directions, a gearing between the wheels, gear wheels connected with the vane wheels, pinions connected with the worm and normally out of mesh with the said gear wheels, a guide vane connected with the sleeve to have a limited independent movement and operatively connected with the said movable support for the worm to actuate the support for engaging either pinion of the worm with its coacting gear wheel.

4. A windmill comprising a tubular supporting standard, a sleeve mounted thereon, oppositely-rotating vane wheels mounted on the sleeve, bevel gears connected with the wheels, a bevel gear arranged to mesh with the first-mentioned gears, a shaft connected with the last mentioned gear rotatably and axially movable in the standard, a guiding vane connected with the sleeve, and connecting means between the said shafts and guiding vane for throwing the latter into and out of operative position by the longitudinal movement of the shaft.

5. In a windmill, the combination of a vane wheel, a shaft driven thereby and axially movable, a supporting structure for the wheel, a guiding vane mounted on the said structure, a rack movable by the longitudinal movement of the said shaft, a pinion meshing with the rack, and a connection between the pinion and guiding vane for throwing the latter into and out of operative position.

[Claims 6 to 8 not printed in the Gazette.]

1,110,952. TIE FOR RAILWAY-RAILS. ORSMER H. MACKEY, Marlboro, N. Y. Filed Apr. 29, 1914. Serial N. 835,243. (Cl. 238—5.)



1. A tie for railway rails including an outer casing comprising sides, ends and a bottom, blocks integrally formed with the sides and bottom, said blocks having their upper faces formed with channels which pass through the sides of the casing, a plastic filler within the compartments provided between the blocks and ends of the casing, cushion members within the channels and adapted to receive rails, and bolts engaging threaded openings in the blocks and having their heads contacting with the base flanges of the rails when the said rails are arranged upon the cushions.

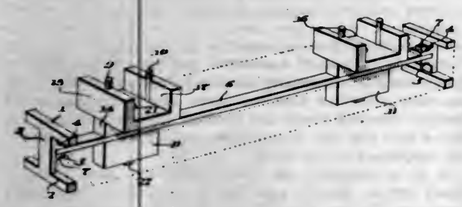
2. A tie for railway rails including an outer casing comprising sides, ends and a bottom, the sides and bottom being comparatively thin in comparison to the ends, blocks integrally formed with the sides and bottom, said blocks having their upper faces formed with channels which pass through the sides of the casing, a plastic filler within the compartments provided between the blocks and ends of the casing, cushion members within the channels and adapted to receive rails, and bolts engaging threaded openings in the blocks and having their heads contacting with the base flanges of the rails when the said rails are arranged upon the cushions.

1,110,953. TIE. ORSMER H. MACKEY, Marlboro, N. Y. Filed May 1, 1914. Serial No. 835,717. (Cl. 238—3.)

1. A plastic tie having a metallic reinforcement including H-shaped heads which are arranged at the ends of the tie, a web connecting the central member of the heads extending longitudinally within the tie, the said web having anchor members depending therefrom and transversely arranged rail blocks positioned thereon, said rail blocks being provided with longitudinal channels, a cushion member within each of the channels and adapted to receive the rail, bolt members projecting from the rail blocks to the opposite sides of the channels, and nuts for the bolts.

2. In a tie of the class described, a body of plastic material, H-shaped heads embedded within the body and ar-

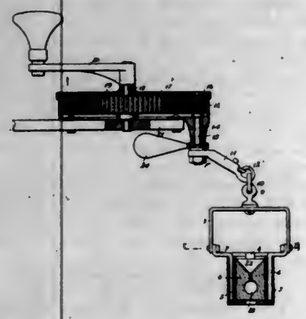
ranged flush with the ends, a web connecting the heads, metallic blocks extending above the body and having a central flange connected with the web, and means for securing rails upon the blocks.



3. In a tie of the class set forth, a plastic body having a metallic reinforcement including H-shaped heads which are arranged within the ties at the ends thereof, a web comprising a bar removably connected with the heads, said web having downwardly extending anchor members, rail blocks having rail receiving channels connected with the web, bolt members upon the rail blocks, and nuts for the bolts.

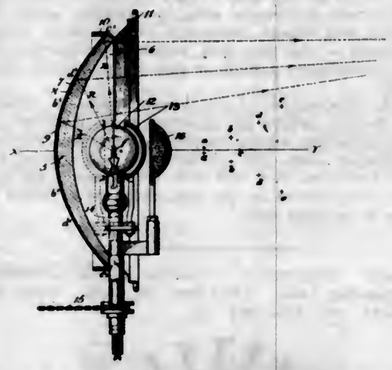
4. In a tie of the class set forth, a plastic body, a metallic reinforcement having a plastic body, said reinforcement including ends, each comprising parallel rectangular members and a central connecting member, the said connecting member having its inner face formed with spaced brackets, a rod extending longitudinally through the tie and arranged between and connected with each bracket, anchor members within the tie disposed in contact with the under-face of the rod, bolts passing through the said members and through the rod, rail blocks, said rail blocks including a central flange which rests upon the upper face of the rod, said blocks each having openings through which the bolts pass, the blocks having their upper faces projecting above the plastic body and provided with longitudinal channels to receive the rails, a cushion member within each of the channels, and nuts for the bolts contacting with the flanges of the rails.

1,110,954. DENTAL CASTING-MACHINE. MORTON MAIER, New York, N. Y. Filed Nov. 7, 1913. Serial No. 799,691. (Cl. 22—65.)



In a dental casing machine, a bucket having longitudinal reinforcing rods therein forming spacers for a mold carrier; a mold carrier therein; lateral extensions from said bucket; a bail pivotally secured to said lateral extensions whereby said bucket is adapted to swing in said bail on a substantially horizontal axis; a substantially vertical shaft; means for rotating said shaft; a substantially horizontal arm secured to said shaft; and means at the free end of said arm adapted to secure said bail but leaving to it the freedom to swing on said arm, said bail being so positioned on said arm that the swinging axis of said bucket is substantially perpendicular to the axis of said shaft.

1,110,955. PROJECTING-LAMP. CARLE A. MATISSE and ALBERT C MATISSE, New York, N. Y. Filed Dec. 9, 1913. Serial No. 805,654. (Cl. 240—45.)



1. In a projecting lamp, a convexo-concave lens having the convex surface formed into a reflector, said convex surface being a part of a paraboloid and the concave surface that of a spheroid.

2. In a projecting lamp, a concavo-convex mirror lens the convex surface of which is generated by a parabola, and the concave surface by a circle, the convex surface of the lens forming the mirror, said lens decreasing in thickness from the center to the periphery.

3. In a projecting lamp, a mirror lens and a source of light associated therewith, said mirror lens having a paraboloid reflecting surface so related to said source of light that the central portion of said mirror lens will reflect the rays from the source angularly to the axis of said mirror lens, while the remaining portion of said mirror lens will reflect the rays from the source substantially parallel to the axis of the same; and means associated with the source of light whereby the rays substantially parallel to the axis of the mirror lens can be eliminated.

4. In a projecting lamp, a mirror lens having a paraboloidal reflecting surface; a concave mirror axial with said mirror lamp and facing the same; a source of light positioned intermediate said mirror lens and concave mirror and substantially in the focus of said reflecting surface of said mirror lens; and means for moving said concave mirror between said source of light and said mirror lens whereby the rays from said source of light to said mirror lens are intercepted by said concave mirror.

5. In a projecting lamp, a mirror lens having a paraboloidal reflecting surface; a concave mirror axial with said mirror lens and facing the same; a source of light positioned intermediate said mirror lens and concave mirror, said light being substantially in the focus of the reflecting surface of said mirror lens and the center of said concave mirror; and means whereby said concave mirror can be placed intermediate said source of light and said mirror lens, thereby forming a reflector for said source of light from the lamp and intercepting the rays to said mirror lens.

[Claims 6 and 7 not printed in the Gazette.]

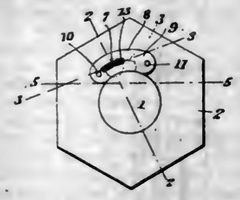
1,110,956. ARTIFICIAL BAIT. WILLIAM F. MCBRIDE, Warsaw, Ind. Filed Feb. 4, 1914. Serial No. 816,493. (Cl. 43—30.)

1. An artificial bait comprising a hollow elastic body, said body being open at its rear end and having a longitudinally extending slot in its underside communicating with said open rear end of the body, a frame member disposed mainly within the body and having a portion arranged to overlie said slot, and an angularly bent terminal at the rear of said frame member formed to provide a forwardly projecting hook normally concealed within the body and disposed adjacent to and in line with said longitudinally extending slot.

2. An artificial bait comprising a hollow elastic body open at its rear end, said body being provided with slots on opposite sides of its fore portion and open at its tail portion and provided in its bottom with a slot communicating with the open tail portion, a frame member inclosed within the hollow body and to which the body is attached, hooks normally inclosed within the body and carried by the frame member and disposed in line with said slots and adapted to be projected therethrough when the body is compressed, and a leader connected with the frame member.

3. An artificial bait comprising a hollow elastic body, said body being open at its rear end and having a longitudinally extending slot in its underside communicating with said open rear end, the said body also having longitudinally extending slots in its sides mainly in advance of its transverse center, a frame member extending longitudinally within the body, a hook at the rear end of said frame member projecting forwardly into the body adjacent of and in line with the bottom slot, and opposed hooks upon the frame member depending within the body and disposed adjacent to and in line with the side slots, and a leader connected with the forward end of the frame member.

1,110,957. LOCK-NUT. ARDEE MCGEHEE, Shreveport, La. Filed Mar. 10, 1914. Serial No. 823,768. (Cl. 151—25.)



1. A bolt and a nut therefor, said nut having one of its faces formed with a pocket which communicates with its bore and which has an inclined rear wall to provide one of the ends of the pocket of a greater depth than its opposite end, a spherical member within the pocket adapted to be contacted by the threads of the bolt to retain the same within the deep portion of the pocket when the nut is screwed in one direction upon the bolt, a plate arranged upon the outer face and closing the pocket, said plate having a tongue arranged within the bore of the nut and contacting with the ball.

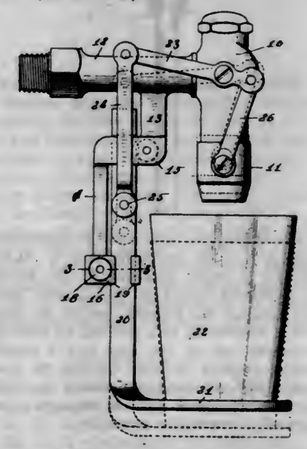
2. A bolt and a nut therefor, said nut having one of its faces formed with a pocket which communicates with its bore and which has an inclined rear wall to provide one of the ends of the pocket of a greater depth than at the opposite end, a spherical member within the pocket and contacting with the rear wall thereof, a plate arranged over the pocket and upon the nut, said plate having an apron arranged within the pocket at the bore of the nut and contacting with the spherical member, and a spring arranged within the pocket and adapted for projecting the spherical member from the deep toward the shallow end of the pocket and into frictional engagement with the threads of the bolt.

3. A bolt and a nut therefor, said nut having one of its faces formed with a pocket which communicates with its bore and which has an inclined rear wall to provide one of the ends of the pocket of a greater depth than the depth of the opposite end, and a ball within the pocket and contacting with the rear wall thereof, a plate secured to the nut and closing the pocket, said plate having an inwardly extending apron which extends within the pocket in the bore of the nut and which engages with the ball to retain the ball within the pocket, the plate being slitted to provide a spring tongue, the said tongue being arranged within the pocket and adapted to contact with the ball to force the same from the deep end of the pocket toward the shallow end thereof.

4. A bolt and a nut therefor, said nut having a pocket which communicates with its bore, said pocket having incurved end walls, one of which is of a greater width than the second wall and an inclined rear wall connecting the end walls, the deeper end of the pocket being formed with a notch, a spherical member within the pocket and engaging with the rear wall thereof, a plate having an inner curved edge secured to the nut and closing the pocket, said inner curved edge of the plate having an inwardly extending apron which is arranged within the pocket at the bore of the nut and which contacts with the spherical member to limit the movement of the said member within the pocket, the said plate having an elongated opening, one of the end walls of which is formed with an inturned spring tongue which is extended within the pocket and which rests within the notch in the deeper end of the pocket when the ball is arranged in the said deep end and which is adapted to project the ball toward the reduced end of the pocket to force the same into tight engagement with the threads of the bolt.

5. In combination with a bolt and a nut therefor, said nut having a pocket which communicates with its bore, and a movable lock arranged within the pocket, of a plate secured to the nut over the pocket, said plate being constructed of spring material and being slitted, and the portion of the metal between the slits being bent to within the pocket to provide a spring tongue which contacts with and projects the locking element into engagement with the threads of the bolt.

1,110,958. RECEPTACLE-ACTUATED COCK. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill., assignors to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed Aug. 22, 1913. Serial No. 786,189. (Cl. 137—4.)



1. In combination with a self-closing cock, of a bracket mounted on the cock, a vertically movable support slidable on the bracket, and valve opening means connected to said support for opening the valve of the cock upon the downward movement of the support.

2. In combination with a self-closing cock having a movable nozzle, a bracket mounted on the cock, an arm movable vertically in the bracket and having a shelf upon its lower end projecting beneath said nozzle and adapted for the support of a receptacle, a lever hinged upon the side of the cock body, a link connecting one end of the lever to said arm, and a second link connecting the opp-

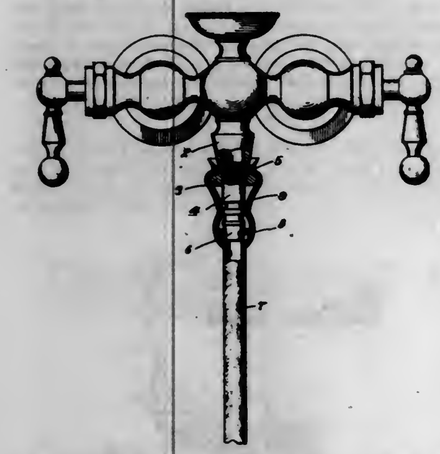
site end of the lever to said nozzle whereby the movement of said shelf operates said nozzle to open the cock.

3. In combination with a self-closing cock having a vertically movable nozzle, normally held down to close the cock, a bracket on the cock, a movable shelf guided by the bracket, and means connecting the shelf to said nozzle whereby upon the movement of the shelf said nozzle is raised to open said cock.

4. In combination with a self-closing cock having a vertically movable nozzle normally depressed to close the cock, a pair of levers hinged at either side of the cock above the nozzle, links connecting one end of the levers to the nozzle, a bracket depending from the cock, a vertically movable arm in the bracket having a shelf upon its lower end adapted for the reception of a receptacle, and links connecting the opposite ends of said levers to said vertically movable arm whereby upon the downward movement of said shelf said levers are rocked and raise said nozzle.

5. In combination with a self-closing cock, a bracket on the cock having a vertical guide-way thereon, a receptacle support mounted in the guide-way and adapted to move vertically therein beneath the nozzle of the cock, and a connection between the support and the cock whereby to open the latter upon the downward movement of the support.

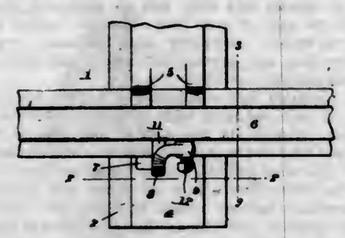
1,110,959. BATH-TUB SILENCER. GABRIEL A. NIEWIARDOWSKI, Cleveland, Ohio. Filed Feb. 25, 1914. Serial No. 821,059. (Cl. 137—4.)



In apparatus of the class described in combination with a faucet having a spout provided with a diametrically enlarged portion, a nipple attached to the faucet spout and having a tapered discharge end, a hose having one end arranged around the tapered end of the nipple and provided with a distending ring forming an annular flange around the intake end of the hose and a substantially tubular elastic coupling member having its lower portion engaging with and arranged around the intake end of the hose and its upper portion engaged around the enlarged portion of the faucet spout.

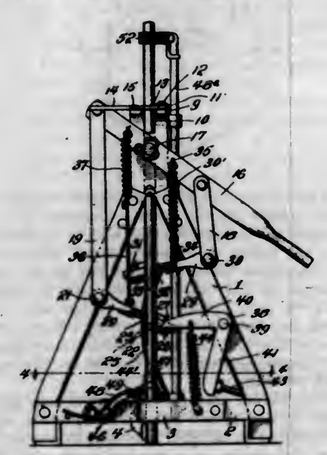
1,110,960. STEEL CROSS-TIE. RAYMOND G. PECK and SAMUEL J. KOCHER, Lagrange, Ind. Filed May 5, 1914. Serial No. 836,577. (Cl. 238—4.)

1. In a device for the purpose set forth, a tie comprising an I beam having integrally formed spring rail engaging clips and a rail engaged by the clips, said tie having its head provided with opening spaced from the clips, a gripping and securing member including a lower portion provided with a toe and a finger spaced from the toe and inserted within the opening and rotated to bring its finger into engagement with the base flange of the rail and its toe into engagement with the underface of the tie head, and an adjustable element associated with the said member and adapted to contact with the web of the rail.



2. In a device for the purpose set forth, a rail including a head having integrally formed rail engaging clips and a rail engaged by the clips, the said head being formed with an I-shaped slot spaced from its rail engaging clip, a gripping and securing member including a body having an angularly disposed head, the said body being provided with an angular extension which is slotted to provide a toe, and a finger spaced from the toe, the said body adapted to be inserted within one of the openings of the slot and turned to be brought into engagement with the side walls of the second opening of the slot and to bring its toe below the head and its plunger over the base flange of the rail, the head of said member being provided with a threaded opening, and a threaded member passing through the opening for contacting with the web of the rail.

1,110,961. APPARATUS FOR RAISING OR LOWERING PUMP-PIPES. CHARLES H. REUTER, Hoxie, Kans. Filed June 8, 1912. Serial No. 702,597. (Cl. 57—98.)

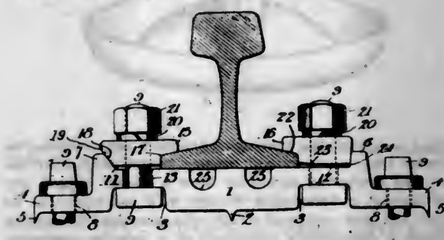


1. In an apparatus for raising and lowering pump pipes, a frame, alternately reciprocating clamps, a lever pivoted on the frame and operatively connected with said clamps, springs carried by the lever, hooks carried by the clamps and removably fitted to said springs, means connected with the clamps adjacent the free ends thereof for operatively connecting the clamps together, and a yieldable member for causing the positive gripping of one of the clamps prior to the disengagement of the other of said clamps.

2. In an apparatus for raising and lowering pump pipes, superposed reciprocating clamps, means for operatively connecting the clamps together, operating means for said clamps, springs carried by said means and adapted for detachable engagement with said clamps, and a yieldable member disposed in contacting proximity to one of said clamps for causing the positive gripping of the latter with the pipe prior to the disengagement of the other of said clamps.

3. In an apparatus for raising and lowering pump pipes, superposed reciprocating clamps, means for operatively connecting the clamps together, operating means for said clamps, springs carried by said means and adapted for detachable engagement with said clamps and an adjustable yieldable member for causing a positive gripping of the latter with the pipe prior to the engagement of the other of said clamps.

1,110,962. TIE-PLATE. JOHN V. W. REYNDERS, Steelton, and ARTHUR F. NELSON, Harrisburg, Pa. Filed June 15, 1914. Serial No. 845,128. (Cl. 238—2.)



1. A tie plate having a transverse channel on its upper face for receiving the rail foot, a portion of the surface of which channel is provided with serrations, in combination with a rail foot engaging clip having an indented or serrated face for engagement with said serrated portion.

2. A tie plate having a transverse rolled channel on its upper face included between parallel ribs, one of said ribs having an inclined inner face provided with serrations, in combination with a clip having a rabbeted edge for engaging the rail foot and opposite beveled serrated edge, and a bolt for forcing the clip between said flange and the rail foot with its serrated face in engagement with a rib on the inclined face of said flange.

3. A tie plate, a body portion provided with grooves rolled in the under face thereof, lateral horizontal flanges, a channel rolled in its upper face between upwardly directed flanges beyond the grooves in its lower face, notches in the edges of the plate in said channel and grooves, said channel having ribs at each side of the rail seat, in combination with clips having grooved faces arranged for engagement with said ribs and means to force said clips between the rail foot and sides of the channel.

4. A rolled tie plate blank having a channel in its upper face wider than the rail foot to be supported therein, parallel grooves in its lower face, and lateral flanges.

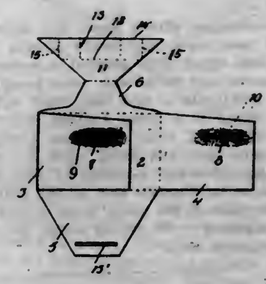
5. A rolled tie plate blank having a channel on its upper faces wider than the rail-foot to be seated therein, said channel formed between parallel flanges, parallel grooves on the underface of the plate substantially opposite the sides of the channel and horizontal securing flanges having cutting ribs on their lower outer edges.

[Claim 6 not printed in the Gazette.]

1,110,963. KEYHOLE-GUIDE. JOE ROBINSON, Matteawan, N. Y. Filed Dec. 17, 1913. Serial No. 807,280. (Cl. 70—16.)

The combination with a lock, of a key-hole guide consisting of a frusto-pyramidal shell having a key-hole at its smaller terminal, the shell being arranged in registration with the key-hole of the lock, end walls formed at the upper and lower edges of the body member and extending at right angles to the plane of the outer edges of the body member and in the direction of the lock, apertured portions extending outwardly at right angles to the end walls for securing the body member to the supporting surface, a lug extending laterally from one apertured portion and in parallel spaced relation to the adjacent end wall, said lug being provided with a longitudinal bore, a pivot pin extending through the bore, and a closure plate having its upper terminal pivoted on the outer terminal of the said pin and bearing against the outer terminal of the said lug.

1,110,964. ENVELOP. LLOYD ROVELL, Harriette, Mich. Filed Dec. 19, 1910. Serial No. 597,997. (Cl. 229—82.)



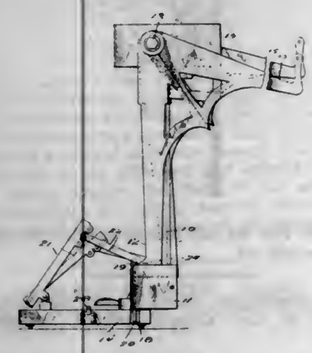
An envelop having overlapped flaps provided with alined slots, a sealing flap, and a triangular extension carried by the sealing flap and folded on itself in a longitudinal direction and immediately at the middle of said extension, the extension having intermediate transverse weakened lines and outer transverse weakened lines, the said extension being folded on itself from said transverse lines whereby the folded portions define pockets at the ends of the extension, the pocket forming portions being disposed relatively so that the pocket at one end receives the opposite pocket end of the extension, the distance between the intermediate weakened lines being equal to the length of the slots so that the extension in its folded condition may be extended through said slots, as and for the purpose specified.

1,110,965. PLAYER-GRAND PEDAL. JUSTIN O. SCHWARZ, New York, and GUSTAVE BJORKLAND, Steinway, N. Y., assignors to Hardman, Peck & Co., New York, N. Y., a Corporation of New York. Filed Oct. 11, 1913. Serial No. 794,724. (Cl. 84—169.)

1. The combination with a piano lyre having a base block provided with upright holes, and levers carried by the lyre and adapted to operate the pneumatic mechanism; of a pedal support including a base adapted to be passed under said block and having sockets to register with the holes therein, bolts removably mounted in said holes and adapted to engage said sockets, pedals carried by the support, and means for detachably connecting the pedals with the levers.

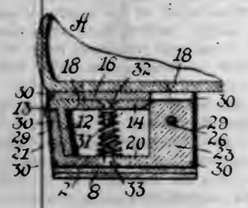
2. The combination with a piano lyre having a base block provided with upright holes, and levers carried by

the lyre and adapted to operate the pneumatic mechanism; of a pedal support including a base adapted to be passed under said block and having sockets to register with the holes therein, bolts removably mounted in said holes and adapted to engage said sockets, heads at the upper ends of said bolts, pedals pivoted on said support, links pivoted to the pedals and adapted to fold under the same when not in use, the free ends of the links having notches, and pins in said levers with which the notches are adapted to engage, for the purpose set forth.



3. The combination with a piano lyre including a head block and a base block, and levers pivoted to the head block with their upper arms adapted to operate the pneumatic mechanism and their lower arms hanging alongside the lyre to points above said base block and there provided with pins; of a pedal support including a base adapted to be passed under said base block, means for connecting said base and block when in operative correlation, pedals pivotally mounted on said support, and links pivoted to said pedals and having notches adapted to engage the pins on the lower arms of said levers, said links being adapted to be turned under the pedals when the device is not in use.

1,110,966. SHOE-HEEL. DEMETER M. SEVERA, Mishawaka, Ind. Filed May 7, 1914. Serial No. 836,977. (Cl. 36—38.)



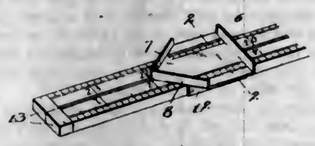
1. In a spring heel for shoes, an upper section, said upper section comprising a flat upper wall carrying depending side walls open at their front ends, a lower section substantially cup-shaped arranged to receive the upper section and provided with a block at its front end, a pivot pin for connecting the front ends of the upper section to the block, cushioning means interposed between the two sections, and a flexible covering for the sections.

2. A spring heel comprising an upper section and a lower section, the upper section formed of an inverted cup-shaped member open at its forward end, the lower section formed of a cup-shaped member arranged to receive the upper section and carrying a block at its front end, a pivotal connection between the block and the front end of the upper section, cushioning means interposed between the two sections, and a flexible covering for the sections arranged to limit the movement of the sections.

1,110,967. CUSPIDOR. HENRY M. SILVEIRA, Cambridge, Mass. Filed Jan. 7, 1914. Serial No. 810,851. (Cl. 4—38.)

In a cuspidor, the combination with a base forming an annular tray, of a vertical tubular holder carried by the base and projecting upwardly from a medial bulged portion thereof, a flared neck formed with the holder at its upper end and communicating with the tubular portion thereof, a destructible receptacle of a cup-like configuration supported within the said holder, a destructible frusto-conical member supported on the said flared neck and having its lower end perforated and depending within the said destructible receptacle lying within the holder, tabs carried by the said receptacle and projecting exteriorly of the said holder to lie between the wall of the said neck and the said frusto-conical member, whereby said tabs will be protected from contact with matter injected into the said receptacle and tabs carried by the said frusto-conical member and projecting exteriorly of the said flared neck.

1,110,968. RULE ATTACHMENT. THOMAS W. SOUTHARD, Williamsport, Pa. Filed Mar. 3, 1913. Serial No. 751,906. (Cl. 33—173.)



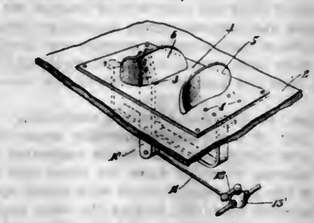
An attachment for pocket-rules consisting of a resilient, sheet metal blank having a base flange at one end, and a right-angular flange at the other end, and formed with a pair of parallel slits, the portions of said blank defined by said slits being bent outwardly from the body of the blank in the opposite direction from said flanges but being inclined toward each other, to produce a pair of spring clamping flanges for engagement with the opposite side edges of the rule.

1,110,969. IMPLEMENT FOR OPENING BOXES. EDWARD E. STACY, Onawa, Iowa. Filed Sept. 9, 1913. Serial No. 788,902. (Cl. 145—21.)

An implement of the class described comprising a hollow handle bar, a tool having a wedge shaped blade and a stem, the latter being slidably mounted within the hollow handle, a pin carried by the stem and having a length coextensive with the maximum diameter of the handle member, the projecting ends of the pin beyond the stem being mounted in diametrically opposed slots formed wholly within the length of the hollow handle member to permit a limited movement of the tool with respect to the hollow handle member in both directions, and a driving member slidably mounted upon the hollow handle member

and having an enlarged terminal portion to coöperate with the wedge shaped blade.

1,110,970. FOOT-OPERATED CONTROL DEVICE FOR AUTOMOBILES AND THE LIKE. JOHN ATKINSON STAPLES, Newburgh, N. Y. Filed Feb. 9, 1914. Serial No. 817,435. (Cl. 74—81.)



1. A foot operated control device for automobiles comprising a stationary and a movable member, provided with opposed faces, between which the foot is inserted, means adapted to connect said movable member to the part to be controlled, and retracting means for the movable member, whereby the movable member may be actuated by inserting the foot between the said members to a greater or less extent, and whereby the resistance of the retracting means is transferred across the foot to the stationary member.

2. A foot operated control device for automobiles comprising a stationary and a movable member provided with opposed faces, one of said faces being inclined with respect to the other, means adapted to connect said movable member to the part to be controlled, and retracting means for said movable member, whereby the foot may be inserted to a greater or less extent between the opposed faces of said members with a wedging action to hold the movable member in different adjusted positions, and the resistance of the retracting means will be transmitted across the foot to the stationary member.

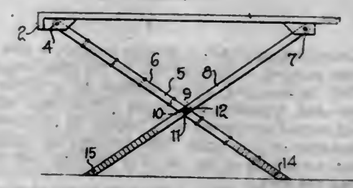
3. A foot operated control device for automobiles, comprising a stationary and a movable member provided with opposed vertically disposed faces, one of said faces being vertically inclined with respect to the other, means adapted to connect the movable member to the part to be controlled, and retracting means for said movable member, whereby the foot may be moved vertically between the opposed faces of said members with a wedging action to hold the movable member in different adjusted positions, and the pressure of the retracting means will be transmitted across the foot to the stationary member.

4. A foot operated control device for automobiles, comprising a stationary and a movable member, provided with opposed vertically disposed faces, one of said faces being horizontally inclined with respect to the other, means adapted to connect the movable member to the part to be controlled, and retracting means for said movable member, whereby the foot may be moved horizontally between said members with a wedging action to hold the movable member in different adjusted positions, and the pressure of the retracting means will be transmitted across the foot to the stationary member.

5. A foot operated control device for automobiles comprising a stationary and a movable member provided with opposed vertically disposed faces, one of said faces being vertically and horizontally inclined with respect to the other, means adapted to connect said movable member to the part to be controlled, and retracting means for said movable member, whereby the foot may be inserted between the opposed faces of said members and moved vertically and horizontally with a wedging action to hold the movable member in different adjusted positions, and the pressure of the retracting means will be transmitted across the foot to the stationary member.

[Claims 6 to 15 not printed in the Gazette.]

1,110,971. IRONING-BOARD. CHARLES STEIN, Fall Creek, Wis. Filed Feb. 24, 1914. Serial No. 820,635. (Cl. 228—32.)



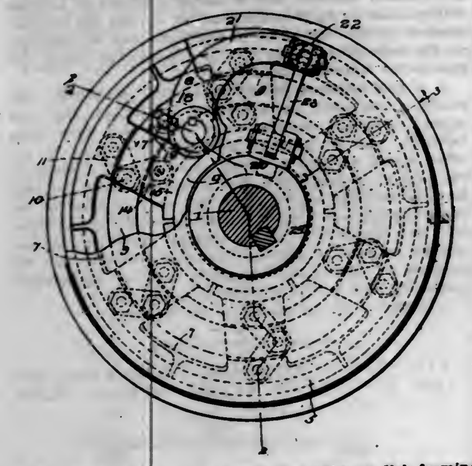
1. A device of the character described comprising a board, a step-ladder having corresponding extremities of its side members pivotally engaged therewith adjacent an end thereof, such side members intermediate their length and in close proximity to their free extremities being provided with alining openings, elongated members pivotally connected with the board adjacent the opposite end thereof and being provided with alining openings intermediate their length and in close proximity to the free extremities thereof, the openings of the elongated members being adapted to register with the openings in the side members of the ladder, and a retaining means adapted to be directed through the alined openings of the elongated members and the side members of the step-ladder whereby the same are maintained in requisite assemblage.

2. A device of the character described comprising a board, a step-ladder having corresponding extremities of its side members pivotally engaged therewith adjacent an end thereof, such side members intermediate their length and in close proximity to their free extremities being provided with alining openings, elongated members pivotally connected with the board adjacent the opposite end thereof and being provided with alining openings intermediate their length and in close proximity to the free extremities thereof, the openings of the elongated members being adapted to register with the openings in the side members of the ladder, and a retaining means adapted to be directed through the alined openings of the elongated members and the side members of the step-ladder whereby the same are maintained in requisite assemblage, such retaining member being common to each of the side members of the step-ladder and its coacting elongated member.

1,110,972. FRICTION-CLUTCH. HOPKIN THOMAS, Catasauqua, Pa., assignor of one-half to William R. Thomas, Sr., Catasauqua, Pa. Filed Dec. 9, 1912. Serial No. 735,869. (Cl. 192—8.)

1. In a friction clutch, a driving member having concentric flanges, a driven member comprising a set of shoes adjacent each flange, toggle joints interposed between the

opposite shoes of the sets of shoes, the axes of the toggle links forming the toggle joints passing to one side of the center of the flanges, a ring connected to the toggle joints and means for actuating the ring.



2. In a friction clutch, a driving member, a disk forming a driven member, a ring carried by the disk, toggle joints actuated by the ring, shoes adapted to grip the driving member and engaging the toggle joints, said shoes held against lateral movement with respect to the driven member, the axes of the toggle links forming the toggle joints passing to one side of the center of the ring, and means for rotating the ring.

3. In a friction clutch, a driving member, a driven member, a ring carried by the driven member, expansible means connected to the ring adapted to expand and engage the driving member as the ring rotates, a pin carried by the ring, a lever pivoted to the driven member, one arm of which engages the pin, and means for moving the other end of the lever to rotate the ring.

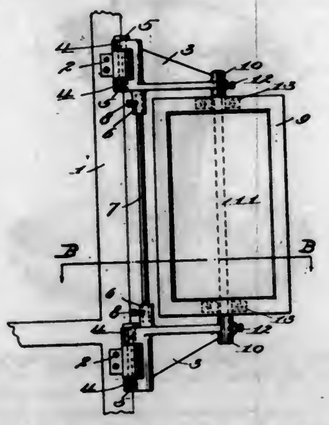
4. In a friction clutch, a driving member having flanges integral therewith, a disk, lugs formed integral therewith, adjacent sides of adjacent lugs being parallel, shoes provided with means for guiding the same between the lugs, said shoes being adapted to engage the flanges, and means carried by the disk adapted to move the shoes relative to each other.

5. In a friction clutch, a driving member having concentric flanges integral therewith, a rotatable disk, a ring carried by the disk, shoes engaging the flanges, lugs carried by the disk and located between the shoes to guide the same, pairs of toggle links pivoted to the ring, one toggle link of each pair being pivoted to a shoe engaging the outer flange, the other toggle of each pair being pivoted to a shoe engaging the inner flange, and means for rotating the ring.

[Claims 6 to 13 not printed in the Gazette.]

1,110,973. BRACKET FOR PIVOTALLY SUPPORTING SIGNS, MIRRORS, AND SIMILAR DEVICES. MOSES TISCHLER, New York, N. Y. Filed Oct. 19, 1910. Serial No. 587,980. (Cl. 45—97.)

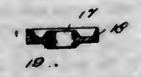
1. A swinging support for signs, mirros and similar devices comprising, in combination, a pair of bracket members, each bracket member embodying as a unit forks, a bearing block between said forks, and a pivot pin turnably connecting said forks and bearing block, said bracket members being also formed with sockets, the socket of one bracket member being opposed to and in alinement with the socket of the other bracket member, a rod independent of the pivot pins for said bracket members and having its ends seated and secured rigidly but detachably in the sockets of the respective bracket members and forming a rigid connection between said members which spaces them axially and insures turning of said members in unison about their respective pivot pins, and a device supported by the outer ends of and revolubly mounted between said bracket members on an axis parallel to the pivot pins of the latter.



2. A bracket of the class described comprising, in combination, a pair of arms, hinges pivotally supporting said arms, the hinge pintles being in alinement, each arm having adjacent to the respective hinge pintle a socket the opening in which faces the other arm, a spacing bar having its ends seated and secured rigidly in said sockets of the respective arms, a rod extending between and rigidly connecting the outer ends of said arms, and an object pivotally mounted on said rod and turnable about the same as an axis.

3. A bracket of the class described comprising, in combination, a pair of arms, hinges pivotally supporting said arms, each arm having adjacent to its respective hinge a socket the opening in which faces the other arm and the outer ends of the arms being formed with alined apertures, a pair of parallel rods, one having its ends seated and secured rigidly in said sockets, and the other rod having its ends secured rigidly in the alined apertures at the ends of the arms and an object arranged between the arms and pivoted to turn on one of said rods as an axis.

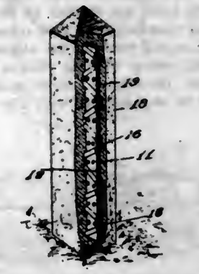
1,110,974. WATER-GAGE. WILLIAM RAMSEY VAN BUSKIRK, Paterson, and JOHN ALLEN COOPER, Jersey City, N. J.; Elmira Van Buskirk administratrix of said Van Buskirk, deceased. Filed May 10, 1912. Serial No. 696,429. (Cl. 73—54.)



A gasket adapted to be used in water gages comprising a disk having a peripheral flange at one side only and a central opening, said disk having flanges surrounding said opening and located respectively on the opposite sides, the last mentioned flanges being of the same diameter and being beveled at their outer edges.

1,110,975. STAPLE-RETAINER. LEE M. VANCE, Davis, Cal., assignor, by direct and mesne assignments, to The Vance Company, Incorporated, Davis, Cal., a Corporation of California. Filed Oct. 10, 1912. Serial No. 725,094. (Cl. 256—54.)

1. A staple retainer including plates, each plate having diagonally disposed and oppositely arranged straight channels pressed into one face thereof, said channels having their converging extremities longitudinally spaced upon the plates and being adapted to coincide in the assembled position thereof with their channel faces confronting, said coinciding channels forming medially disposed grooves adapted to receive the extremities of a staple, and means for securing the plates together.



2. A staple retainer including plates having channels formed therein, said channels coinciding in the assembled position of the plates to form medially disposed grooves, said grooves being oppositely arranged in angular relation upon the plates, alternate grooves being parallel, the converging extremities of said grooves being longitudinally spaced upon the plates and adapted to receive the extremities of a staple, and means for securing the plates together.

3. A reversible staple retainer including plates secured together and having oppositely arranged angularly disposed grooves formed medially thereof, alternate grooves being parallel.

1,110,976. PLUMB-STOCK. JOHN J. WARTMAN, New York, N. Y. Filed Apr. 12, 1913. Serial No. 760,710. (Cl. 33—213.)

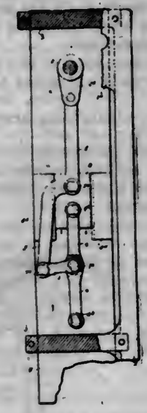
In a plumb stock, spaced ears mounted thereon, a casing consisting of side portions having lugs located between the ears, said lugs having their inner surfaces in close contact with each other, a clamping device passing transversely through the ears and lugs and a bubble tube retained between the side portions of the casing.

1,110,977. MECHANICAL MOVEMENT. WILLIAM H. WELCH, Cleveland, Ohio, assignor to The Cleveland Machine & Manufactory Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 9, 1913. Serial No. 778,101. (Cl. 74—14.)

1. In a mechanical movement, a main slide, a driving shaft provided with a crank, a movable guide or slide, a pair of toggle link members, one of which is connected to said guide or slide and the other of which is connected to said main slide, a lever member pivotally mounted on said guide or slide and connected to said crank of said driving shaft, and means for connecting said lever member to said toggle links.

2. A mechanical movement, comprising a support, a main slide carried thereby, a crank shaft, an auxiliary slide adapted to reciprocate in line with said main slide, a lever member connected to said crank shaft and fulcrumed to said auxiliary slide, a pair of toggle links one of which is pivotally connected to said auxiliary slide and the other to said main slide, and a connecting link connecting said lever member to said toggle links.

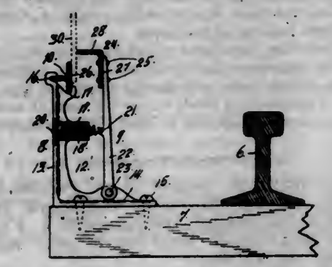
3. In a mechanical movement, the combination with a main slide and an auxiliary slide adapted to reciprocate in a common direction; of a driving shaft, and lever and toggle link members pivotally connected to said auxiliary slide and driving shaft and to said auxiliary slide and said main slide, respectively, said lever member and said toggle links being connected along the common line of the reciprocation of said slides whereby said main slide is caused to dwell during a portion of the revolution of said driving shaft.



4. In a mechanical movement, the combination with a driving shaft, and a main slide and an auxiliary slide mounted to reciprocate in a common direction; of a pair of toggle links pivotally connected at their outer ends to said main and auxiliary slides and in line with the reciprocation of the latter, and a lever member fulcrumed to said auxiliary slide on a line common to pivot connections at the outer ends of said toggle links and connected to the inner ends of the latter whereby said main slide will be caused to dwell during an arc of the revolution of said driving shaft.

5. In a mechanical movement, the combination of a crank and a main slide; of an auxiliary slide or guide mounted on and adapted to move in the direction of the latter, a connecting lever pivoted midway of its ends on said auxiliary slide or guide and having its pivoted portion movable in the direction of said main slide and connected at one end to said crank, and a link connected to said main slide and the opposite end of said lever.

1,110,978. HOUSED CONTACT FOR RAILWAY SIGNALING SYSTEMS. BENJAMIN F. WOODING, Denver, Colo. Filed July 15, 1912. Serial No. 709,326. (Cl. 246—26.)



1. A track contact comprising two members spaced at their extremities to receive a train device, the spaced portions of the two members being rigidly mounted, one of the members being spring-retained in close proximity to the other member between the spaced terminals of the contact and adapted to be moved away from the other member by the interposition of the train device.

2. A track contact composed of two members spaced at their extremities and rigidly mounted to receive and guide

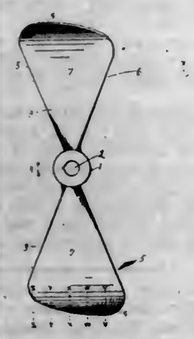
a train device, the portions of the contact intermediate the spaced terminals being parallel with the track, the parallel part of one member being rigidly supported, while the parallel part of the other member is yieldingly mounted and equipped with a housing portion normally overlapping its companion member.

3. A track contact composed of two members spaced at their extremities and rigidly mounted at their extremities, one of the members intermediate the spaced terminals being mounted on spring arms whereby it is yieldingly drawn toward its companion member.

4. A track contact composed of two members spaced at their extremities and rigidly mounted at their extremities to receive and guide a train device, the two parts intermediate the spaced terminals being arranged substantially parallel with each other and with the track and at substantially equal heights, upright rigid brackets upon which the parallel portion of one member is supported, and spring-held arms upon which the parallel portion of the other member is supported.

5. A track contact composed of two members having spaced rigidly mounted terminals to receive and guide a train device, the parts of the said members intermediate the terminals being parallel with each other, rigid brackets upon which the parallel portion of one member is supported, and pivoted arms upon which the parallel portion of the other member is supported, and springs connecting the pivoted arms of the one member with the rigid brackets of the other member.

1,110,979. SCREW-PROPELLER. JOHN P. AGAN, Louisville, Ky., assignor of one-third to William A. Shumate and one-third to Frederick J. Lerch, Louisville, Ky. Filed July 25, 1913. Serial No. 781,123. (Cl. 170—170.)



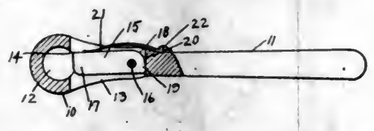
1. A propeller comprising a hub and a blade, said blade having an incurvate tip extending, with a diminishing pitch, across the end of the blade.

2. A propeller comprising a hub and plurality of blades pitched at transverse inclinations on lines oblique to the axial line of said hub, and having incurvate tips extending with a diminishing pitch across the ends of said blades presenting portions adapted to discharge rearwardly therefrom.

1,110,980. WRENCH. FRED R. ALLEN, Providence, R. I., assignor, by direct and mesne assignments, to Allen Wrench & Tool Company, Providence, R. I., a Corporation of Rhode Island. Filed Dec. 6, 1912. Serial No. 735,206. (Cl. 81—61.)

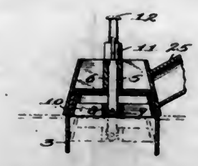
1. A wrench comprising a body portion having an operating handle, and a substantially circular bore, an approximately rectangular tongue pivotally mounted at one end in said body with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being square, and an abutment coöperating with the squared corner of said tongue to limit its motion in one direction, and a spring holding said torque normally in engagement with said abutment.

2. A wrench comprising a body portion having an operating handle, said body portion being provided with a substantially circular bore, and a recess communicating therewith, an approximately rectangular tongue pivotally mounted at one end in said recess with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being squared, the end of said recess forming an abutment coöperating with the squared corner of said tongue to limit pivotal movement in one direction, and a spring holding said tongue normally in engagement with the end wall of said recess.



3. A wrench comprising a body portion having an operating handle, and a substantially circular bore, an approximately rectangular tongue pivotally mounted at the end in said body with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being square, and an abutment coöperating with the squared corner of said tongue to limit its motion in one direction, and a spring holding said tongue normally in engagement with said abutment, and a removable socket having a reduced portion to enter said recess.

1,110,981. MOP-HOLDER. ROBERT E. ANDREWS, Mount Gilead, N. C., and GEORGE REID ANDREWS, New York, N. Y. Filed Nov. 21, 1913. Serial No. 802,303. (Cl. 15—56.)

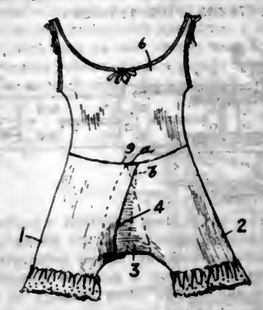


1. In a mop holder, the combination of inner and outer members having complemental clamping surfaces adapted to grip the mop between them; a pair of sockets connected to said members in superposed relation, the lower socket having a cross-pin therein, a bolt passing through said sockets and pivoted at its lower end upon said pin, and a device movably mounted on said bolt and adapted to be tightened against the upper socket to force the inner holder member into the outer holder member.

2. In a mop holder, the combination of inner and outer ring-like members provided with complemental clamping surfaces adapted to grip the mop between them, each of said members having a strap extending centrally thereacross and formed with a central socket; a bolt passing through said sockets and pivoted in one of them; and a device carried by said bolt and adapted to be tightened against the other socket to force the inner holder member into the outer holder member.

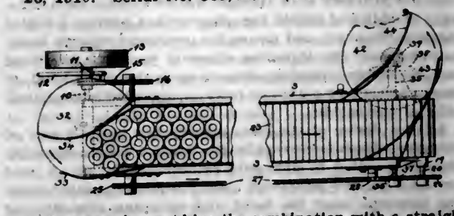
1,110,982. WEARING-APPAREL. EDWARD AXFORD, Germantown, Pa. Filed May 6, 1913. Serial No. 765,742. (Cl. 2—144.)

An article of apparel comprising a body and leg portions said body portion provided with an opening extending from a point in the rear, near the waist line, downwardly through the crotch and up the front, one side of the body portion extending inside the other body portion, and overlapped thereby; the free edge of the overlapping portion extending downwardly in substantially the vertical median line of the garment, and a single continuous flap, completing the crotch closure, said flap extending from the underlying body portion and projecting a substantial distance beyond the vertical median line of the garment so as



to be held between the overlapping body portion and the body of the wearer.

1,110,983. CANNING MACHINERY. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Oct. 26, 1910. Serial No. 589,128. (Cl. 126—272.)



1. In a canning machine the combination with a straight casing having a heating chamber, of a straight endless carrier extending through the casing and of sufficient width to accommodate a plurality of cans on their ends; means for moving the carrier through the casing; means for crowding cans onto the said carrier by pushing those at the rear against those in front to spread the cans crosswise of the straight carrier and means for removing the spread cans from the carrier and arranging all of them in one single file.

2. In a canning machine the combination with a casing having a heating chamber, of a straight endless carrier extending through the chamber and of sufficient width to accommodate a plurality of cans on their ends; means for moving the carrier through the chamber; means movable in a direction transverse to the movement of said straight carrier for crowding cans onto the latter by pushing those at the front by those at the rear to spread the cans over the said straight carrier, and means for removing the spread cans from the straight carrier and arranging all of them in one single file.

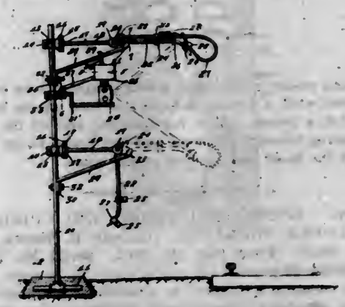
3. In a canning machine the combination with a casing having a heating chamber, of a straight endless carrier extending through the chamber and of sufficient width to accommodate a plurality of cans on their ends; means for moving the carrier through the chamber; means movable in a direction transverse to the movement of said straight carrier for crowding cans onto the latter by pushing those at the front by those at the rear to spread the cans over the said straight carrier and means also movable in a direction transverse to the movement of said straight carrier for removing the spread cans from the latter and arranging them all in one single file.

4. In a canning machine the combination with a casing having a heating chamber, of a straight endless carrier extending through the chamber of sufficient width to accommodate a plurality of cans on their ends; means for moving the carrier through the chamber; rotatable means for crowding filled cans onto the said straight carrier by pushing those cans at the front by those at the rear to spread the cans crosswise of the straight carrier and means for removing the spread cans from the straight carrier.

5. In a canning machine the combination with a casing having a heating chamber, of a straight endless carrier extending through the chamber and of sufficient width to accommodate a plurality of cans on their ends; means for moving the carrier through the chamber; rotatable means for crowding filled cans onto the said straight carrier by pushing those cans at the front by those at the rear to spread the cans crosswise of the straight carrier and rotatable means for removing the spread cans from the straight carrier and arranging all of them in one single file.

[Claims 6 to 8 not printed in the Gazette.]

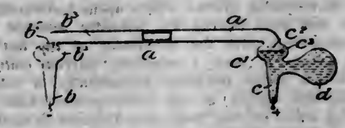
1,110,984. TRAIN-ORDER CRANE. JAMES ANSLEY BALLENTINE, Collinsville, Ala. Filed Dec. 20, 1913. Serial No. 807,965. (Cl. 258—23.)



1. A train order delivering device comprising a standard, arms comprising a sleeve, said sleeve engaging said standard, one end of said sleeve being bifurcated, a link having an enlarged head at one end, said head positioned between said bifurcated ends of said sleeve, a pin passing through said bifurcated ends and said head whereby said links may be moved horizontally, said link having its upper end bifurcated, a second link provided with an enlarged head, positioned between bifurcated ends of said first mentioned link, a pin passing through said bifurcated ends of said head whereby said second link may be moved in a vertical plane, a support carried by said standard adapted to engage said second link, and means carried by said second link whereby an order may be delivered.

2. A train order delivering device comprising a support, arms carried by said support, said arms comprising a link capable of horizontal movement, and a second link capable of vertical movement, brackets having downwardly extending feet secured to said standard, said bracket having one end terminating in spring fingers, said spring fingers adapted to support said link capable of vertical movement, and means carried by said link capable of vertical movement whereby an order may be delivered.

1,110,985. VAPOR ELECTRIC APPARATUS. CHARLES ORME BASTIAN, London, England, assignor to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Original application filed Dec. 19, 1905, Serial No. 292,480. Divided and this application filed Jan. 27, 1913. Serial No. 744,306. (Cl. 176—42.)

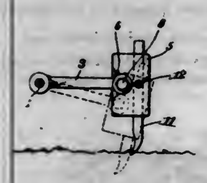


1. In a vapor electric lamp, a vapor tube having a positive and a negative mercury electrode, the tube having a

diameter not exceeding the critical diameter at which the surface tension of mercury will be overcome by gravity when the tube is in its operative position.

2. In a vapor electric lamp, a vapor tube having a positive and a negative electrode of vaporizable material, the diameter of the tube and the surface tension of the vaporizable material serving to restrain the said material from flowing in a liquid condition through the tube.

1,110,986. HARROW-TOOTH MOUNT. CARL BERG, Brooklyn, N. Y., assignor to James W. Beard, New York, county, N. Y. Filed Jan. 27, 1914. Serial No. 814,768. (Cl. 55—7.)



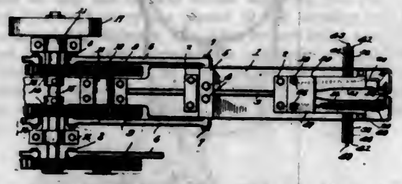
A tooth mount comprising a link adapted to be pivotally connected with a frame, a head provided at its side and edge with a recess which receives the end of the link, a bolt passing through the head and link and a tooth passing through the head and carried by the same.

1,110,987. SPRING STRUCTURE AND UPHOLSTERING-COVER THEREFOR. GEORGE B. BRINK, Plymouth, Mich. Filed July 19, 1912. Serial No. 710,515. (Cl. 155—25.)

1. In a device of the character described, a base frame comprising a metallic member provided with oppositely disposed outwardly directed flanges which form a continuous surrounding groove which opens outwardly horizontally, said metallic member also having an inwardly directed flange of less width than the width of said other flanges and with the lowermost of the aforesaid flanges forming a relatively narrow continuous groove which opens inwardly horizontally under the lowermost of the first mentioned flanges, a filling of wood which is substantially rectangular in cross section fitted tightly in the outer groove, and spring supporting wires having their ends disposed in said inner groove, said last-mentioned flange of the base frame being directed inwardly with relation to the groove at intervals to clamp the ends of said wires in the inwardly opening groove.

2. In a device of the character described, a base frame comprising a sheet metal member provided with outwardly directed oppositely disposed flanges which form a continuous surrounding groove which opens outwardly horizontally, and also having an inwardly directed flange which coöperates with the lowermost of the outwardly directed flanges to form a relatively narrow continuous groove which opens inwardly horizontally, a filling of wood disposed tightly in the outer groove, and spring supporting wires having their ends disposed in said inner groove, the last-mentioned flange being upset at intervals to clamp the ends of the said wires in the inwardly opening groove.

1,110,988. BOBBIN CLEANER AND POLISHER. LAFAYETTE HOLT, Burlington, N. C., assignor of one-half to Eugene Holt, Burlington, N. C. Filed June 3, 1913. Serial No. 771,513. (Cl. 118—26.)



1. In a device of the class described, a bobbin magazine; stripping mechanism operating at the discharge end of the magazine; bobbin advancing means coöperating with the stripping mechanism; and a movable closure carried by the magazine, the closure being adapted to open in the direction of travel of the bobbin advancing means.

2. In a device of the class described, a base; a yieldable stripping mechanism carried by the base; and bobbin advancing means located within the contour of the stripping mechanism and operating at times in engagement with the stripping mechanism to open the same, and at times independently of the stripping mechanism.

3. In a device of the class described, a pair of stripping elements provided with straight-walled notches each defining a plurality of bobbin engaging contact points; a bobbin engaging element; and means for producing relative movement between the stripping elements upon the one hand and the bobbin engaging element upon the other hand, to cause the contact points to trace straight paths longitudinally of the bobbin.

4. In a device of the class described, a base; a pair of stripping elements carried by the base; a bobbin engaging plunger mounted to slide with respect to the base; a head having a limited movement upon the plunger; interengaging elements upon the head and stripping elements for effecting a separation of the stripping elements; and resilient means moving the stripping elements toward each other.

5. In a device of the class described, stripping mechanism; a bobbon supporting head movable toward and away from the stripping mechanism and having a shoulder; a plunger on which the head is mounted for limited sliding movement; means for retracting the plunger and the head to cause the bobbin to drop upon the shoulder in the path of the plunger, and for advancing the plunger with respect to the head and toward the stripping mechanism.

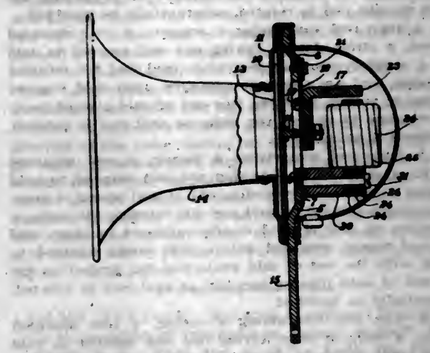
[Claims 6 to 9 not printed in the Gazette.]

1,110,989. AUTOMOBILE-HORN. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Continuation of application Serial No. 695,386, filed May 6, 1912. This application filed Sept. 27, 1913. Serial No. 793,080. (Cl. 177—7.)

1. In an automobile horn, the combination of a frame, a sonorous member in said frame, an angle armature for causing said member to sound a signal, one limb of said armature adapted to operate upon said member, a contact on such limb, electromagnetic means for acting upon the other limb of said armature, a flexible member connected at each end to said frame, and a contact upon said flexible member adapted to coöperate with the contact upon the armature.

2. In an automobile horn, the combination of a frame, a sonorous member, an angle armature, one limb of which is adapted to operate said member to cause the same to sound a signal, a contact on such limb, a spring for connecting said armature to said frame, electromagnetic means adapted to operate upon the other limb of said armature to actuate the same, a spring connected at each end to said frame, and a contact carried by said spring adapted to coöperate with the contact upon the armature.

3. In an automobile horn, the combination of a frame, a sonorous member, an anvil on said sonorous member, an angle armature, one limb of which is adapted to strike said anvil when the armature is vibrated, a contact on said limb, a spring for connecting said armature to said frame, electromagnetic means for operating upon the other limb of the armature to actuate such armature, a flexible spring connected at each end to said frame, and a contact carried by said spring intermediate its ends adapted to coöperate with the contact upon the armature.

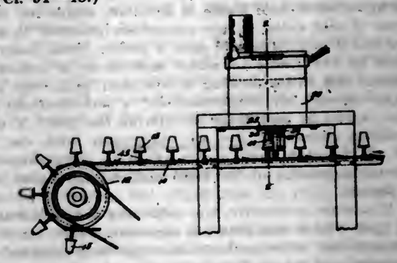


4. In an automobile horn, the combination of a frame plate dished at its upper part, an opening in the bottom of the dished part, a sonorous diaphragm mounted over the top of the dished part, an armature adapted to operate upon said diaphragm connected to the edge of the opening in the bottom of the dished part, and a magnet adapted to operate upon the armature connected to the bottom of the dished part adjacent the edge of the opening therein.

5. In an automobile horn, the combination of a main frame member, dished at the top thereof, a sonorous diaphragm mounted over the top of the dished portion, said dished portion having an opening in the bottom thereof, an armature connected to the edge of the opening, a spring for connecting the armature to the edge of the opening, a magnet for operating said armature, means for connecting said magnet upon the bottom of the dished portion and near the edge of the opening therein, and means for spacing said magnet from such bottom.

[Claims 6 to 21 not printed in the Gazette.]

1,110,990. MACHINE FOR SEALING BOTTOM PIECES IN PAPER CUPS. HERBERT F. PROVANDIE, Melrose, Mass., assignor to American Water Supply Company of New England, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1913. Serial No. 787,429. (Cl. 91—43.)

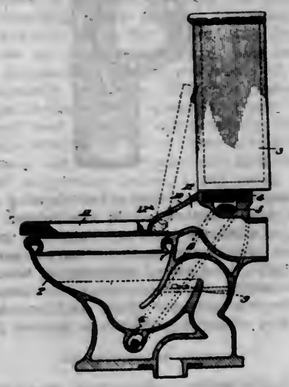


In a machine for sealing bottom pieces of paper cups, the combination with an endless flexible carrier, a plurality of cup forms arranged thereon in inverted position, means for moving the carrier, a reservoir arranged above the carrier, a delivery nozzle depending from the reservoir, a valve arranged above the delivery nozzle and including a case having a chamber and a series of distinct points of communication with the reservoir, the valve being operative in the chamber, a weighted valve rod rising from the valve, and means on the endless carrier to actuate said valve in opposition to the weight.

1,110,991. PROCESS OF REGULATING THE TEMPERATURE OF COMBUSTION. JOHN M. RUSBY and JOHN HAWLEY TAUSSIG, Philadelphia, Pa., assignors to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 27, 1909. Serial No. 535,178. (Cl. 158—117.5.)

The process of regulating the temperature effect of combustion which consists in burning a mixture of undiluted air and undiluted homogeneous producer gas, and adding to the burning products thereof a diluent consisting of incombustible products of combustion.

1,110,992. WATER-CLOSET. JOSEPH W. SHARP, Jr., Philadelphia, Pa., assignor to Haines, Jones & Cadbury Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1908. Serial No. 458,803. (Cl. 4—21.)



1. A water closet having a siphon passage, a supply passage, and a vent; and a refill chamber the top of which extends upwardly into the vent passage above the top of the bowl and the vent outlet to form a dam between the bowl and vent.

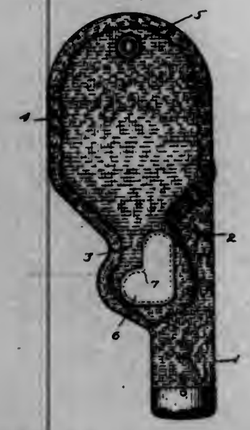
2. A water closet having siphon passage, a supply passage having a jet opening to said siphon passage, a vent, a refill chamber having a jet connection with said supply passage and a top wall which projects upwardly into the vent passage above the top of the bowl to form a dam between the bowl and vent.

3. A water closet bowl having a substantially U-shaped seat opening rearwardly, a raised tank seat at the rear of the bowl and an integral bowl projection sloping upwardly from the bowl rim to the tank seat so as to span the U-shaped seat and forming an abutment.

4. A closet bowl having an upward projection at its rear and provided with siphon and supply passages, and a separate refill chamber having bowl flushing openings in its front wall and located in said bowl projection above the normal water level of the bowl, the said siphon passage and refill chamber having jet connections with said supply passage, the said refill chamber connection delivering at the bottom of the refill chamber.

5. A closet of the character described for use with low-down tanks having a bowl and a ventilating passage leading from the bowl in a straight line through the ware, the point of discharge of said passage being at the back of the ware, the lower wall of the ventilating passage near its forward end being raised to a point above the level of the top of the bowl, said passage being lowered abruptly from the highest point of said wall to the plane of the top of the bowl, and a low-down tank connection seated in the ware over said abruptly lowered portion of the passage whereby to dispose said connection below the highest point of discharge.

1,110,993. HOLSTER FOR AUTOMATIC PISTOLS. EUGENE A. SISSON, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 23, 1914. Serial No. 833,084. (Cl. 224—2.)



The combination with a woven holster, of a guard-pad composed of felt, mounted within the holster upon one wall thereof, adjacent the position occupied by the latching device for the cartridge-magazine of an automatic pistol contained within the holster, operating to hold the said wall and the pistol apart from each other, shaped to accommodate the exposed part of the said latching device and outstanding adjacent said part to protect the latter.

1,110,994. TAPE-REEL. NATHANIEL ROE, Patchogue, N. Y. Filed Oct. 16, 1913. Serial No. 795,421. (Cl. 242—84.8.)

1. A tape reel comprising a support, a reel mounted thereon, means for rotating said reel, a strip of tape having one end secured to said reel, and means lying normally in the path of movement of the means for rotating said reel for projecting the end of said rotating means as said reel is rotated, substantially as specified.

2. A tape reel comprising a support, a reel mounted thereon, a strip of tape having one end secured to said reel, a pivoted member secured to said reel for rotating the same, and a fixed member arranged upon said support coöperating with said pivoted member for projecting the latter as said reel is rotated, substantially as specified.

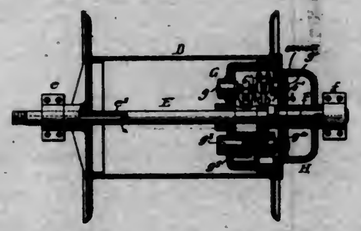
3. A tape reel comprising a support, a reel mounted thereon, a strip of tape having one end secured to said reel, a member pivotally secured to said reel for rotating the same, and an abutment arranged upon said support adapted to engage with the free end of said pivoted member, whereby to project the same as said reel is rotated, substantially as specified.

4. A tape reel comprising a casing, a reel mounted therein, a strip of tape having one end secured to said reel and its other end extending out of said casing, a member pivotally secured to said reel for rotating the same, a projection on said pivoted member adapted to enter said reel, and means arranged within said casing adapted to engage with the end of said projection for projecting the free end of said pivoted member as said reel is rotated, substantially as specified.

5. A tape reel comprising a casing, a reel mounted therein, a strip of tape having one end secured to said reel, a crank pivotally secured at one end to said reel, a handle provided at the free end of said crank and adapted to be folded into said reel, and cam means provided within said casing adapted to engage with the end of said handle for projecting the free end of said crank when said reel is rotated, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,110,995. REEL FOR MINE-LOCOMOTIVES. GEORGE C. ABBE, Lansdowne, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 23, 1911. Serial No. 610,245. (Cl. 242—9.)



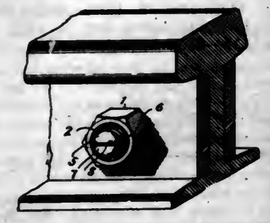
1. In a mine locomotive, the combination of a frame, axles upon which said frame is mounted, means for driving one of said axles, an air compressor mounted on said frame and driven from said axle, a hollow drum, bearings carried by the frame in which said drum is rotatably mounted, said drum forming a combined cable reel and storage chamber for compressed air, a self-contained air engine carried by said drum for driving the latter, a pipe or conduit connecting the air compressor with the interior of the drum, and means affording communication between the interior of the drum and the air engine carried thereby.

2. In a mine locomotive, the combination with a frame, axles upon which said frame is mounted, means for driving one of said axles, and an air compressor mounted on said frame and driven from said axle, of a hollow drum forming a combined cable reel and storage chamber for compressed air, an air engine mounted in one end of said drum and rotating therewith, gears driven thereby, spindles on which the drum is mounted, one of said spindles being hollow and opening into the drum for the passage of air under pressure from the compressor; the ports of said engine being in direct communication with the interior of said drum, said engine acting as a pump during rotation of the reel as the cable is paid out and acting to drive the drum to coil the cable thereon, and fixed gearing carried by the frame of the structure for engagement by the gearing driven by the engine.

3. The combination of a hollow drum forming a combined cable reel and storage chamber for compressed air, a spindle upon which one end of said drum is mounted for rotation, a spindle rotatable with the drum for the opposite end of the same, fixed supports for said spindles, and an air engine for driving said drum mounted in one end of the latter and in communication with the compressed air chamber formed by said drum.

4. The combination of a hollow drum forming a combined cable reel and storage chamber for compressed air, a spindle upon which one end of said drum is mounted for rotation, a spindle rotatable with the drum for the opposite end of the same, means for supplying said drum with air under pressure, fixed supports for said spindles, an air engine for driving said drum mounted in one end of the latter and in communication with the compressed air chamber formed by said drum, a fixed frame disposed at the engine end of said drum, an internal gear carried by said frame, and a pinion driven by said engine and meshing w... said gear.

1,110,996. NUT-LOCK. MAURICE ACKERMAN, Washington, D. C., assignor of two-fifths to Samuel Krucoff, Washington, D. C. Filed Aug. 8, 1913. Serial No. 783,751. (Cl. 151—9.)



1. A nut-lock, comprising a longitudinally slit bolt, a nut having an undercut groove in its outer portion or face, and a dog engaging the slit in the bolt and having its ends projecting outwardly beyond the bolt and curved in the direction of that rotation of the nut necessary to apply the nut to the bolt, said ends located in said groove and engaging the bottom of said groove to resist the removal of the nut.

2. In a nut-lock, a nut having an undercut smooth bottomed groove in its outer portion or face, a bolt slitted longitudinally, and a spring dog arranged in said slit and having curved ends located wholly within the groove and adapted to spring into frictional engagement with said smooth bottom and capable of being disengaged therefrom by further curvature in the same direction by means of an independent tool.

3. A nut-lock, comprising a longitudinally slit bolt, the edges of the slit being grooved, a nut provided within its outer face with an undercut groove, and an S spring located in said groove and engaging the slit in the bolt and the bottom of the groove in the nut.

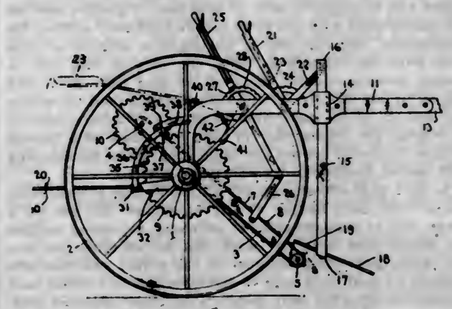
1,110,997. RAILROAD-SWITCH. APPLETON M. CALHOUN, Columbus, Ga. Filed Jan. 22, 1913. Serial No. 743,626. (Cl. 104—25.)

1. In a railroad switch, the combination of a lead rail, a plurality of spring and hand actuated tie rods, connected together so that they are actuated simultaneously and pivotally secured in the said lead rail, a crank shaft with a plurality of crank arms of different radius, with means for pivotally connecting the said crank arms to the said spring and hand actuated tie rods, substantially as shown and described.

2. In a railroad switch, the combination of cross ties with metal friction plates, main rails, a lead rail, tie rods pivotally connected thereto, means for adjustment of the said tie rods and the said lead rail, a shaft having crank arms of varying radius, adjustable rods connecting the said crank arms to the said tie rods and lead rail, resilient members engaging the said tie rods, means for controlling

the tension of the said resilient members, means for conveniently shifting the said lead rail from one position to the other, and means for locking and releasing the said lead rail in and from the desired position, substantially as shown and described.

1,110,998. CARRIER AND DUMP FOR PEANUT-DIGGERS. WILLIAM C. GREEN, Comanche, and HARDY HESTAND, Chickasha, Okla. Filed Aug. 4, 1913. Serial No. 782,990. (Cl. 214—1.)

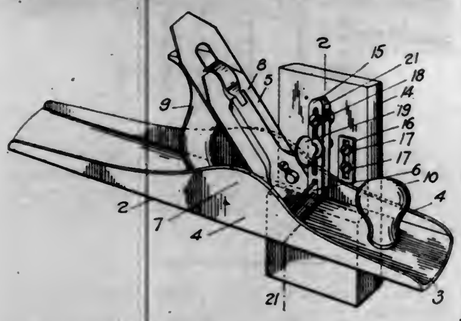


In a machine of the class described, the combination of a frame, supporting wheels therefor, horizontal arms projecting rearwardly from the frame and having bearings, a cross bar mounted to rock in said bearings and having its intermediate portion provided with a series of spaced rearwardly projecting supporting fingers, one end of said cross bar being bent upwardly at right angles and the other end bent upwardly and forwardly into a curved arm having a beveled lug on its upper extremity, a coiled spring between said right-angular arm and the frame to elevate said supporting fingers, a bell crank catch lever pivoted at its angle on the frame and having a rearwardly projecting arm notched to engage the beveled lug on said curved arm, a downwardly and rearwardly extending foot lever having its front end pivoted to the frame, a link connecting the intermediate portion of the foot lever with the other arm of the bell crank and a coiled spring between the foot lever and the frame to maintain the notched arm of the bell crank in operative position.

1,110,999. GAGE ATTACHMENT FOR PLANES. THEODORE J. KINTNER, Denver, Colo. Filed Apr. 9, 1913. Serial No. 759,868. (Cl. 145—20.)

1. In a gage attachment for planes having a transverse rib, a body part having a seat to engage the sole of a plane, and at opposite sides of said seat, a guiding surface for engagement with the work and an abutment surface for engagement with the side of the plane, a member on said body part for engagement with the edge of said side, and an adjustable member on said body part, having at one of its ends a slit adapted to receive the said rib of the plane.

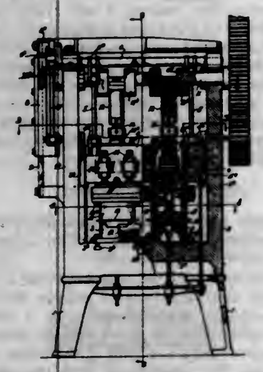
2. In a gage attachment for planes having a transverse rib, a body part having a seat to engage the sole of a plane, and at opposite sides of said seat, a guiding surface for engagement with the work and an abutment surface for engagement with the side of the plane, and two members adjustable on said body part and adapted to respectively engage the edge of the said side and straddle the said rib of the plane.



3. In a gage attachment for planes having a transverse rib, a body part having a seat to engage the sole of a plane, and at opposite sides of said seat, a guiding surface for engagement with the work and an abutment surface for engagement with the side of the plane, a member on said body part for engagement with the edge of said side, a second member slidably mounted on said body part, and having in one of its ends a slit which is adapted to receive the said rib of the plane and which has a slanting surface to engage the upper edge of said rib when said second member is moved toward the same, and means for securing said second member in its adjusted positions.

4. In a gage attachment for planes having a transverse rib, a body part having a seat to engage the sole of a plane, and at opposite sides of said seat, a guiding surface for engagement with the work and an abutment surface for engagement with the side of the plane, two members slidable on said body part in the direction of its seat, and means for securing said members in their adjusted positions, one of said members being adapted to engage the edge of the side of a plane and the other having a slit adapted to receive the said rib of the same.

1,111,000. DRAWING-PRESS. WILLIAM H. WELCH, Cleveland, Ohio, assignor to The Cleveland Machine & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 8, 1913. Serial No. 783,782. (Cl. 113—46.)



1. In a drawing press, a compound blank holder slide consisting of a main slide, and a plurality of independent auxiliary slides adjustably mounted therein.

2. In a drawing press, a compound blank holder slide consisting of a main slide, blank holder frames mounted therein, and blank holders detachably connected to said blank holder frames.

3. In a drawing press, a blank holder slide, a plurality of blank holder frames adjustably mounted therein, and a plurality of blank holders detachably carried by said blank holder frames beneath said blank holder slide.

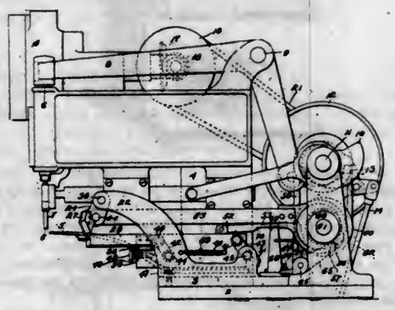
4. In a drawing press, a compound blank holder slide or cross head consisting of a main slide, hollow blank holder frames adjustably mounted therein, blank holders detachably connected to said frames, and plungers mounted within said blank holder frames and blank holders.

5. In a drawing press, a frame, a blank holder cross head slidably mounted therein, blank holder frames adjustably mounted within said cross head, blank holders carried by said frames beneath said cross head, and plunger frames and plungers mounted in and adapted to reciprocate within the said blank holder frames and blank holders respectively.

[Claims 6 to 11 not printed in the Gazette.]

REISSUES.

13,799. HEEL-SEAT-JOINTING MACHINE. LOUIS G. FREEMAN, Cincinnati, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 28, 1912. Serial No. 717,612. Original No. 1,019,145, dated Mar. 5, 1912, Serial No. 443,261. (Cl. 12—67.)



1. A jointing machine, consisting of scarfing mechanism and nail driving mechanism arranged to operate upon the shoe with the shoe in different respective positions, and a supporting jack for the shoe, said parts being juxtaposed so as to scarf the welt-ends and nail the scarfed ends without removing the shoe from the jack or releasing the manipulative hold on the shoe.

2. In a jointing machine, scarfing mechanism to scarf the ends of the welt, nail driving mechanism to nail the scarfed welt-ends, positioning means for engaging and maintaining the welt and upper in fixed relation to the nail driver, and a supporting jack, the nail driver and positioning means being located ahead of the scarfing mechanism and the jack mounted to move from one to the other, the distance of said nail driver and positioning means ahead of the scarfing mechanism being such as to cause the scarfed shoe properly to engage said positioning means immediately upon being swung with the jack forward away from scarfing position, whereby the operator is enabled to maintain his manipulative hold upon the loose leather about the joint until the jointing operation is completed.

3. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and mounted for movement toward and from the plane of action of the scarfing mechanism, and scarfing mechanism coöperating with said rest in scarfing the welt-end thus supported on said rest.

4. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and for movement to carry the work from position of presentation into welt scarfing position, a pivoted scarfing knife mounted to swing approximately tangentially to the welt-supporting surface of said rest, and means for swinging said knife.

5. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and mounted for movement lengthwise of the shoe to carry the work into and out of the path of the scarfing mechanism, and scarfing mechanism coöperating with said rest in scarfing the welt-end thus supported on said rest, said rest having projecting portions extending over the bottom of the shoe in position to guard the latter against being accidentally cut by said scarfing mechanism.

6. In a jointing machine, movably mounted welt rests for receiving beneath them the heel end of a shoe and supporting above them the opposite ends of the welt, scarfing mechanism for scarfing the two welt-ends thus supported and means actuated by the movement of said rests to cause the operation of the scarfing mechanism.

7. In a jointing machine, opposite welt rests for receiving beneath them the heel end of a shoe and supporting above them the opposite ends of the welt, said rests being arched with their outer edges depending to conform approximately to the rounded bottom of the shoe, and scarfing mechanism for scarfing the two welt-ends thus supported obliquely.

8. In a jointing machine, a welt scarfing means, a welt supporting blade into operative relation to which the shoe is to be moved endwise and by the engagement of which with the end of the inseam the longitudinal position of the shoe relative to the scarfing means may be determined, additional means for positioning the shoe longitudinally in case the shoe is not stopped in the proper position by the engagement of the inseam with the welt supporting blade, power driven actuating mechanism, and connections where through said mechanism may be started by pressure of the shoe applied through either said blade or said additional positioning means.

9. In a jointing machine, scarfing mechanism, means for supporting the welt-ends in position to be scarfed thereby, actuating means for said scarfing mechanism, and tripping means for setting the latter in operation actuated by the moving of the shoe into operative position.

10. In a jointing machine, scarfing mechanism, means which is mounted for upward movement by pressure exerted through the shoe tending to press the shoe stock down into position for the shoe to be treated and which is arranged to extend under and support the welt ends in position to be scarfed, actuating means for said scarfing mechanism, and tripping means arranged to be actuated by movement of said welt end supporting means by the shoe after pressure has been applied to compress the shoe stock between said supporting means and the last bottom.

11. In a jointing machine, scarfing mechanism, actuating mechanism therefor, including a clutch, a heel stop arranged to have a predetermined movement to permit the shoe to reach correct operative relation to the scarfing mechanism, and tripping mechanism actuated by the movement of said heel stop for tripping said clutch when the shoe reaches a predetermined operative relation to the scarfing mechanism.

12. In a jointing machine, scarfing mechanism, actuating mechanism therefor, including a clutch, a movable heel stop, tripping mechanism actuated by the movement of said heel stop when engaged by a shoe for tripping said clutch, and means for automatically restoring said tripping mechanism into position to limit the scarfing mechanism to one operation for one movement of the heel stop.

13. In a jointing machine, skiving mechanism, a movable heel stop, operating means for said skiving mechanism, including a clutch, a detent normally restraining the clutch, a trigger movable with said heel stop for releasing said detent, automatic means to restore said detent to clutch-restraining position, and means for automatically moving said trigger out of the path of said detent as soon as the latter has been tripped.

14. In a jointing machine, a scarfing knife, and a welt rest for supporting the welt-end in position to be scarfed, said welt-rest being movably supported and normally occupying a forward and downward position with relation to its operative supporting position.

15. In a jointing machine, a scarfing knife, a welt rest for supporting the welt-end in position to be scarfed, said welt rest being movably supported and normally occupying a forward and downward position with relation to its operative supporting position, and means in position to be engaged by the shoe for moving said welt rest into operative position by the movement of the shoe.

16. In a jointing machine, scarfing mechanism, and nail driving mechanism, combined with a jack support for the shoe provided with spring raising means for giving the jack an upward tendency at all times with relation to the scarfing mechanism, and locking mechanism for said jack actuated in timed relation to the nail driving movements of the nail driver for locking said jack against the action of its spring when a nail is to be driven.

17. In an apparatus for use in removing surplus material at and adjacent to the two end portions of the welt of a lasted and welted shoe, welt end rests inclined transversely in opposite directions downwardly and outwardly and between which and the shoe there is provision for relative movement lengthwise of the shoe to bring the rests into welt supporting relation to the welt ends, combined with welt end scarfing knives mounted for movement lengthwise of the shoe in a similarly inclined relation to the plane of the shoe bottom.

18. In an apparatus for use in removing surplus material at and adjacent to the two end portions of the welt of a lasted and welted shoe, welt end rests formed to support the two ends of the welt at the same time in positions to be cut, said rests being arranged to project forwardly over the shoe bottom toward the welt ends, and being shaped to receive an arched shank between the welt ends.

19. A welt butting machine having, in combination, a welt butting knife, and shoe positioning means arranged to engage the shoe bottom before the shoe reaches welt butting position and to guide and control the movement of the shoe into operative relation to the knife.

20. A welt butting machine having, in combination with a welt butting knife, shoe positioning means arranged to engage the shoe between the welt and the innersole and to be moved with the shoe for guiding the shoe into predetermined relation to the path of the knife.

21. A machine of the class described having, in combination, means for removing surplus material from a shoe bottom, and a guard mounted on the machine for movement in a predetermined path and arranged to receive the shoe in a position remote from said means and to be moved with the shoe to guide and direct movement of the shoe into operative relation thereto.

22. A machine of the class described having, in combination, means for operating on a shoe bottom, a shield for the shoe bottom mounted on the machine for movement in a predetermined path and arranged to receive the shoe in a position remote from said means and to be moved in a predetermined path with the shoe into operative relation to said means.

23. A machine of the class described having, in combination, a welt butting knife, a welt end rest movable from and toward the path of the knife and arranged to receive the welt end while in a position remote from the knife and to move with the work into the path of the knife and to support the welt end during the welt butting operation effected by the knife.

24. A machine of the class described having, in combination, a welt butting knife, and a welt end rest movable from and toward the path of the knife and comprising a thin edged plate formed and arranged to be introduced between the shoe bottom and an end portion of the welt which is to be severed while said rest is away from

the knife and to move with the shoe to carry the welt into the path of the knife and to protect the shoe bottom from injury by the knife during the welt butting operation.

25. A machine of the class described having, in combination, means for operating on a welted shoe, a welt supporting abutment 5 that is constructed and arranged to engage the shoe in the crease between the upper and the welt and to be automatically moved upwardly together with the shoe when the shoe is pressed against the edge of the abutment, a shoe support, and power driven means for raising the support in time relation to the operation of said first mentioned means.

26. A heel-seat jointer, comprising stationary positioning means to engage the shoe between the welt and upper in position to press against the adjacent line of stitches and stretch the upper over the last, means for driving a tack to retain the upper while held thus stretched, and means for lifting the shoe against said engaging means and thereby compressing the upper between the engaging means and the last adjacent to the tack receiving point.

27. A heel-seat jointer, comprising a projecting arm secured to the machine, having a thin wide end shaped and arranged to engage the upper beneath the welt, tacking mechanism including a nozzle, said engaging end of the arm being located immediately below and approximately in line with the tack delivering end of said nozzle, and means operating in time relation with the tacking mechanism for raising the shoe and the shoe engaging end of the arm until the shoe is clamped against the nozzle.

28. A heel-seat jointer, comprising a projecting arm secured to the machine, tacking mechanism, the engaging end of said arm and the delivery point of said tacking mechanism approximately coinciding and being relatively adjustable, said engaging end of the arm being in position to permit a lasted shoe upper and welt to be pushed thereover for stretching a loose portion of the upper tightly over a last in position to receive a tack from said tacking mechanism while so held stretched, and power driven means for forcing the shoe in a direction to cause said engaging end of the arm to press the upper against the last during the tacking operation.

29. A heel-seat jointer, comprising a positioning member having an engaging end to enter beneath the welt to press the upper forward over the last, said end being unyielding to forward pressure of the shoe and yielding to vertical pressure of the shoe, tack-delivering means located approximately in vertical alinement with the extremity of the engaging end of said member, a shoe support movable toward or from the engaging end of said member, and power driven means for imparting vertical movement to said support while the shoe is in engagement with said member.

30. In a machine for working over a last the portions of shoe stock adjacent to the ends of the inseam, means for engaging the shoe in the welt crease, means for engaging the shoe bottom, said two means being constructed and arranged for successive engagement with the shoe, a driver for inserting a tack to secure the parts while they are held by the engaging means, and power driven mechanism for moving the shoe toward the driver prior to the tacking operation.

31. In a machine for working over a last the portions of shoe stock adjacent to the ends of the inseam, the combination with a suitable shoe support, of means for engaging the shoe in the welt crease to tighten the upper over the last, said means being constructed and arranged for automatic movement upwardly under endwise pressure against it, additional means positioned to operate upon the shoe at the end of said upward movement of the engaging means, and means for locking the shoe support to hold the shoe in position to receive the operation of said additional means.

32. In a machine for working an upper over a last, a lasting device for engaging the shoe stock in the welt crease combined with tack-driving means, said lasting device being constructed and arranged to move the shoe automatically toward the tack-driving means when pressure is applied in the direction for forcing the upper over the last, and additional means for maintaining the shoe in position for the tacking operation.

33. In a machine of the class described, tack-driving means, combined with a lasting device located below the tack-driving means and comprising a spring arm adapted to engage a welted shoe in the welt crease and constructed and arranged to lift the shoe toward the tacking means by the pressure applied in forcing the upper into lasted position, and means for maintaining the shoe in said uplifted position to receive the operation of the tacking means.

34. A machine of the class described having, in combination, means for working into lasted position the upper of a welted shoe adjacent to the end of the inseam and the end of the row of heel seat tacks, said means being constructed and arranged to engage the shoe stock between the upper and the welt and tighten the upper about the last, means for securing the upper while it is held in tightened condition, a movable shoe support, and means for moving said support and the engaging means into the field of operation of the securing means.

35. A machine of the class described having, in combination, a tacker, means for working into lasted position the upper of a welted shoe adjacent to the end of the inseam and the end of the row of heel seat tacks, said means being constructed and arranged to engage the shoe stock between the upper and the welt and force the upper inwardly over the edge of the last and upwardly toward the tacker and to hold the upper under tension while it is fastened by the tacker, a shoe support, and additional means for maintaining said support and the shoe in position for the tacking operation.

36. A machine of the class described having, in combination, means constructed and arranged to engage a welted shoe in the inseam at the rear end thereof and tighten the shoe stock at the rear end of the inseam inwardly over the last bottom relatively to the upper and welt in the shank and fore part of the shoe, a tacker arranged relatively to said tightening means to fasten the shoe stock while it is held under tension, a shoe support, and means for moving said support toward the tacker in time relation to the operation of the tacker.

37. A machine for gathering in and holding the upper materials of a lasted welt shoe at the inner ends of the heel seat and for securing said materials, consisting of a tacking device, a frame, a resilient arm mounted on the frame, the free end of said arm being in position to permit a lasted shoe upper and welt to be pushed thereover for stretching the upper over a last in position to receive a tack from said tacking mechanism while so held stretched, and additional means for maintaining the shoe and said arm in position for the tacking operation.

38. In a machine for working into lasted position the upper of a welted shoe adjacent to the ends of the inseam and the row of heel seat tacks, means constructed and arranged to engage the shoe in the welt crease and force the welt and upper inwardly over the shoe bottom, combined with tack driving means arranged relatively to said engaging means to drive a tack into the stock while it is held by the engaging means, and a last support constructed and arranged for turning movement to present opposite sides of the shoe successively to said engaging and tack driving means.

39. In a machine for working into lasted position the upper of a welted shoe adjacent to the ends of the inseam and the row of heel seat tacks, means constructed and arranged to engage the inseam and force it inwardly from the edge of the last, combined with a tacker, said tacker and engaging means being relatively movable to permit the shoe stock to be tacked while it is held by the engaging means, and power driven means for effecting said relative movement to bring the shoe and the tacker into operative relation.

40. A machine for working upon a welted shoe, comprising means constructed and arranged for taking slack from the upper of a lasted and welted shoe between a rear end of the inseam and the adjacent end of the row of heel seat tacks, means for securing the upper in its tightened position, a shoe support movable to present the shoe to said first named means, and means for moving said support toward said securing means.

41. A machine for working upon a lasted and welted shoe, comprising means including a blade with a short acting edge to apply local pressure to the shoe between a rear end of the inseam and the adjacent end of the row of heel seat tacks for taking slack from the upper, said means being constructed and arranged to hold the upper in its tightened position to permit it to be secured, a shoe support, and power driven means for moving said support in a direction to cause the blade to press the shoe upper upon the last.

42. In a machine for working upon a welted shoe, devices constructed and arranged to engage the shoe stock to tighten the upper about the last and position the butt end of the welt over the shoe bottom, combined with means arranged to drive a tack for securing the upper and welt, a shoe support, and means for moving said support toward the tacker and for operating the tacker in time relation to the movement of said support.

43. In a machine for working over a last the portions of shoe stock adjacent to the ends of the inseam, means for engaging the shoe in the welt crease, means for engaging the shoe bottom, said two means being constructed and arranged to permit the use of the first means to force the upper and welt upwardly and their coöperation to force the upper and welt inwardly over the edge of the last, and shoe supporting means constructed and arranged for movement to present the shoe to said first named means and then to both of said means.

44. In a machine for working over a last the portions of shoe stock adjacent to the ends of the inseam, means for engaging the shoe in the welt crease to tighten the upper over the last, said machine being constructed and arranged to permit relative turning movement of the engaging means and the shoe to cause the engaging means to wipe the upper over the last bottom at the rear of the seam, means for supporting the shoe in position to receive said wiping operation, and means arranged with reference to said support for securing the upper in overworked position.

45. In a machine of the class described, means shaped to extend into the crease between the welt and upper for forcing the shoe stock over the last, said means being arranged for upward movement with the shoe, combined with an abutment for the shoe, power driven means for moving the shoe upwardly into engagement with said abutment, and means for driving a tack to secure the shoe stock.

46. In a machine of the class described, a member constructed and arranged to engage a shoe in the crease between the upper and welt for forcing the shoe stock over the last bottom, an abutment arranged for engagement with the shoe to force the shoe stock down upon the last bottom and hold it in position to be fastened, and power driven means for forcing the shoe against said abutment.

47. In a machine of the class described, a member constructed and arranged to engage a shoe in the crease between the upper and welt for forcing the shoe stock over the last bottom, an abutment arranged for engagement with the shoe to force the shoe stock down upon the last bottom, power driven means for forcing the shoe against said abutment, and means for driving a tack at a point adjacent to the abutment to secure the shoe stock.

48. A machine of the class herein described having, in combination, means for supporting a lasted and welted shoe, means arranged to engage in the crease between the upper and the welt adjacent to its end to tighten the upper, and means to fasten the upper, said shoe support having provision for presenting the shoe with one welt end in position to be fastened and for movement of the shoe thereafter to present the other welt end in position to be fastened by the same fastening means.

49. A machine of the class described having, in combination, means for operating on a welted shoe, a blade arranged to extend into the welt crease and to be moved by pressure of the shoe from a shoe receiving position to a position for said means to operate on the shoe bottom, and power driven means for moving the shoe in a direction to effect said pressure upon the blade.

50. A machine of the class herein described having, in combination, means for positioning a butt end of the welt of a lasted and welted shoe, means for beveling the welt, means for tacking down the welt, said means being arranged to operate on a shoe in different positions of the shoe, and a support which is movable to present the shoe to one and then to another of said means.

51. A machine of the class herein described having, in combination, a knife arranged to cut the welt, a rest to support the welt against the cutting action of the knife, a tacker to fasten the end of the welt, and a shoe support movable to shift the shoe from operative relation to the knife into operative relation to the tacker.

52. A machine of the class herein described having, in combination, means for supporting the two butt ends of the welt of a lasted and welted shoe, means for beveling said two ends simultaneously, welt butt tacking means arranged to tack the two ends of the welt successively, and a support for the shoe arranged to permit movement for presenting one welt butt and then the other to said tacking means.

53. A machine of the class herein described having, in combination, means for butting a welt, means for pressing the welt end inwardly, and means for inserting a tack adjacent to the welt end while the pressure is maintained, said butting means and said tacking means being arranged adjacent to each other to permit the shoe to be conveniently moved for presentation to the butting means and then to the tacking means.

54. A machine of the class herein described having, in combination, a shoe support, welt butting means, means to position the welt end transversely of the shoe bottom, and welt end fastening means, said support having provision for movement of the shoe to present it to the butting means and then for further movement of the shoe angularly to present first one welt butt and then the other welt butt to the fastening means.

55. A machine of the class herein described having, in combination, means for butting the opposite ends of a welt simultaneously, means for engaging the welt crease laterally to press the welt end inwardly, and means to fasten the shoe stock on one side of the shoe while the welt is so pressed inwardly and then to fasten the stock on the other side of the shoe after the shoe has been turned through 180° and the welt end on said other side has been pressed inwardly by the said crease engaging means.

56. A machine of the class herein described having, in combination, a welt rest to underlie the welt ends for the abutting operation, a welt butter, a separate welt positioner to press the welt inwardly over the shoe bottom into position to be fastened, and a welt tacker.

57. A machine of the class herein described having, in combination, rests for the two ends of the welt, of a welted shoe, coöperating cutters, and a single welt end tacker to which the two sides of the shoe are presented successively.

58. A machine of the class herein described having, in combination, rests for the two ends of the welt of a welted shoe, coöperating cutters for the two welt ends, a single transversely acting positioning means for the welt and a single tack driving means to which the two sides of the shoe are presented successively for positioning and fastening the two welt ends.

59. A machine of the class herein described having, in combination, means for butting a welt, means for tightening the upper over the last bottom adjacent to the end of the welt, means for tacking the upper, and a shoe support by which the shoe can be moved to present one welt end and then the other to the same tacking means.

60. A machine of the class herein described having, in combination, means for butting a welt, means for tightening the upper over the last bottom in the region of the welt end, and a tacker adapted to fasten the upper and the welt end, said machine being constructed and

arranged to permit movement of the shoe from operative relation to the butting means into position for the welt butt on one side to be tacked and then for the welt butt on the other side of the shoe to be tacked.

61. A machine of the class herein described having, in combination, a welt butter, and a work rest constructed and arranged to extend under the welt end and mounted for movement to cause the welt butter to do its work.

62. A machine of the class herein described having, in combination, a welt butter, actuating mechanism therefor, a movable welt rest, and means arranged to be operated by the movement of the rest to start the actuating mechanism.

63. A machine of the class herein described having, in combination, a welt butter, actuating mechanism therefor, a welt rest formed to support the welt end at an angle to the path of the butter to cause the welt to be butted on a bevel and movable to carry the welt toward the path of the butter.

64. A machine of the class herein described having, in combination, a welt butter, actuating mechanism therefor, a guard for the shoe, and means for directing and controlling movement of the guard to guide the shoe from position of presentation thereto to welt butting position.

65. A machine of the class herein described having, in combination, a welt butter, suitable actuating mechanism therefor, and a welt rest arranged to extend under the welt butt between the welt and the shoe bottom and position the welt at an inclination to the path of the butter and adsped for movement with the shoe from a position of presentation into welt butting position.

66. A machine of the class herein described having, in combination, a welt butter, and a welt rest mounted for movement backwardly and upwardly from shoe receiving position to position for the shoe to be operated upon by the butter.

67. A machine of the class herein described having, in combination, welt butters, and welt end rests normally occupying a shoe receiving position below and in front of their operative position and mounted upon parallel links for movement upwardly and backwardly by the shoe into the path of the welt butters.

68. A machine of the class herein described having, in combination, a welt butter, a rest to support the welt for the action of the butter, said rest normally occupying a position below the butter to facilitate the positioning of the welt thereover, and means arranged to be caused to start the butter into operation in response to a movement of the rest.

69. A machine of the class herein described having, in combination, a welt butter and a welt butt tacker arranged to operate on the shoe in different positions of the shoe, and a shoe support arranged to present the shoe for the butting and the tacking operations successively.

70. A machine of the class herein described having, in combination, a welt butter, a welt butt tacker, and a shoe support constructed and arranged to sustain the shoe yieldingly for the butting operation and unyieldingly for the tacking operation.

71. A machine of the class herein described having, in combination, a welt butter and a welt butt tacker arranged to operate on a shoe in different positions of the shoe, a shoe support constructed and arranged to present the shoe for the butting and the tacking operations, and operating mechanism for lifting the support to compress the stock against the tacker prior to the insertion of the tack.

72. A machine of the class herein described having, in combination, a welt butter and a welt butt tacker arranged to operate respectively on a shoe in different positions of the latter, and a shoe support arranged to uphold the shoe in operative relation to the butter and to the tacker.

73. A machine of the class herein described having, in combination, a welt butter and a welt butt tacker arranged to operate respectively on a shoe in different positions of the latter, and a shoe support arranged to uphold the shoe in operative relation to the butter and to the tacker, said machine having provision for giving automatically different qualities to the upholding of the shoe to the butter and to the tacker.

74. A machine of the class herein described having, in combination, a welt butter and a welt butt tacker arranged to operate respectively on a shoe in different positions of the latter, a shoe support arranged to uphold the shoe in operative relation to the butter and to the tacker, and operating means connected with the butter and with the tacker and adapted to be connected with the support for lifting it toward the tacker.

75. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt, and welt end rests inclined transversely in opposite directions downwardly and outwardly.

76. A welt butting machine having, in combination, means for removing surplus material and adjacent to the two end portions of the welt, and welt end rests and guards extending in advance thereof to protect the shoe bottom from injury by said means.

77. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end portion of the welt, a welt rest, and a guard movable with the shoe into operative relation to said means and arranged to protect the shoe from injury by said means.

78. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt, guards covering the middle portion of the shoe bottom, and welt end rests extending from the guards laterally on each side and having a width to support, for the action of said means, the welt ends of shoes varying widely in breadth.

79. In a welt butting apparatus, resting and positioning devices for the two butt end portions of the welt of a shoe, and a shoe guide and guard arranged relatively thereto to engage the shoe bottom inside the inseam and under which the shoe can slide into operative relation to said devices.

80. A welt butting machine having, in combination with a welt butting knife, shoe positioning means arranged to engage the shoe bottom before the shoe reaches welt butting position and to guide the shoe in its movement toward the path of the knife, and adjustable means for predetermining the extent of that movement.

81. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt, and welt rests mounted for movement by the shoe from shoe receiving position to operative relation to said means.

82. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end of a welt, and a welt end rest mounted for movement with the shoe from shoe receiving position to operative relation to said means.

83. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt, and welt rests mounted for movement upwardly and backwardly from shoe receiving position to operative position.

84. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end of a welt, and a welt rest mounted for movement perpendicularly to the plane of the shoe bottom and also in a direction lengthwise of the shoe from shoe receiving position to position for the welt to be butted.

85. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end portion of the welt, and a welt rest arranged to be moved by pressure of the shoe from a shoe receiving position to a position for said means to operate on the welt.

86. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end portion of the welt, and a welt rest mounted for movement upwardly and backwardly from shoe receiving position while maintaining constant angular relation to said means.

87. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the end of the welt, a movable welt rest, and mechanism arranged to be set into operation by the movement of the rest for causing said means to do its work.

88. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the ends of the welt, welt rests arranged for movement by the shoe, and a clutch arranged to be closed by the movement of said rests to cause said means to operate.

89. A welt butting machine having, in combination, a welt butter, a welt rest movable from a shoe receiving position to operative relation to the butter, and driving mechanism for the butter arranged to be started automatically during said movement.

90. A welt butting machine having, in combination, welt butting means, welt resting means movable from a shoe receiving position to an operative relation to the butting means, and means actuated automatically by said movement to cause the butting means to do its work.

91. A welt butting machine having, in combination, a support, a carrier pivoted on said support substantially over the welt butting point on the shoe, a blade mounted in said carrier at an inclination to its length, and means to actuate the carrier to cause the blade to sever the welt by movement in an arc substantially tangential to the plane of the lower face of the body of the welt.

92. A welt butting machine having, in combination, a support, a carrier pivoted on said support substantially over the welt butting point on the shoe, a blade mounted in said carrier at an inclination to its length, a welt rest formed and arranged to determine the plane in which the welt end will be supported for cutting, and means to actuate the carrier and its blade in an arc substantially tangential to the plane of the body of the welt.

93. A welt butting machine having, in combination, means to position a shoe, and means for removing surplus material at the end of the welt, said two means being constructed and arranged to produce on the welt a bevel inclined lengthwise and transversely of the welt.

94. A welt butting machine having welt butting blades for the two ends of the welt arranged to cut lengthwise of the welt and having their cutting edges at acute angles to the median vertical plane of the machine.

95. A welt butting machine having welt butting blades for the two ends of the welt arranged to cut lengthwise of the welt and having their cutting edges inclined downwardly and outwardly from the middle.

96. A belt butting machine having a welt butting knife and a carrier on which the knife is mounted in a position oblique with relation to both the vertical transverse plane and a longitudinal plane of the machine, combined with means for actuating the knife.

97. A welt butting machine having two welt butting knives for beveling simultaneously opposite ends of the welt of a shoe, and a carrier on which the knives are mounted in a position oppositely inclined to the vertical longitudinal plane of the machine.

98. In a welt butting apparatus resting and positioning devices arranged to be inserted under the two butt end portions of the welt of a shoe by a relative movement of the shoe and said devices lengthwise of the shoe, said devices having welt supporting surfaces oppositely inclined to the vertical longitudinal plane of the apparatus.

99. In a welt butting apparatus resting and positioning devices arranged to be inserted under the two butt end portions of the welt of a shoe by a relative movement of the shoe and said devices lengthwise of the shoe, said devices having their lower faces which lie adjacent to the shoe oppositely inclined downwardly and outwardly with relation to the vertical longitudinal plane of the apparatus.

100. A welt butting machine having, in combination, cutting means, driving mechanism, a stop adapted to be actuated by contact with the shoe to start the driving mechanism, and means for effecting adjustment to vary the relation of the cutting means and the shoe at the time when the driving mechanism shall be started.

101. A welt butting machine having, in combination, welt butters, driving mechanism therefor, a stop to be displaced by the shoe to start the driving mechanism, and means whereby adjustment of the welt butters and the stop can be effected to vary the point of operation of the butters on the shoe.

102. A welt butting machine having, in combination, means for operating on the shoe, driving mechanism therefor, a contact member to be engaged by the shoe for starting the driving mechanism when the shoe is in position to be operated upon, and means for adjusting the contact member and the said means for operating on the shoe to change the point on the shoe at which said operating means will act.

103. A welt butting machine having, in combination, a welt butter, a welt butt tacker, and means constructed and arranged to give yielding support to the shoe for the operation of one of said devices and unyielding support to the shoe for the operation of the other device.

104. A welt butting machine having, in combination, a welt butter, a welt butt tacker, actuating mechanism for said devices, a shoe support, and means operatively connected with said actuating mechanism for locking the support when one of said devices is operative, said locking means being inoperative when the other device is acting.

105. A welt butting machine having, in combination, a welt butter, a welt butt tacker, a yieldingly sustained shoe support adapted to present the shoe to each of said devices, and driving mechanism for lifting the support automatically when one of said devices is operating and arranged to leave the support at rest when the other device is operative.

106. A machine of the class described, comprising means constructed and arranged to engage a shoe in the welt crease to tighten the upper over the last, a tacker, a shoe support, and means for relatively actuating the shoe support and said other means to compress the shoe stock upon the last bottom between the upper tightening and the tacking operations.

107. A machine of the class described, comprising means to engage the shoe between the welt and upper in position to press against the adjacent line of stitches and stretch the upper over the last, means for driving a tack to retain the upper while thus held, and means to uplift the shoe against the tack driving means immediately prior to the insertion of the tack.

108. A machine of the class described having, in combination with means for operating on a welted shoe, a plate having an edge formation to engage the shoe between the welt and the upper, and parallel link supports for the plate arranged to guide and control movement of the plate from shoe receiving position upwardly and backwardly into operative relation to said means.

109. A welt butting machine having, in combination, a welt butter, actuating mechanism therefor including a clutch, and means arranged to operate during the presentation of the shoe for automatically tripping and resetting the clutch.

110. A welt butting machine having, in combination, a welt butter, actuating mechanism therefor including a clutch, a welt rest, and means arranged to be operated during the movement of the shoe from position of presentation to the welt rest into operative relation to the welt butter for automatically tripping the clutch to start the butter.

111. A machine of the class described having, in combination, means to butt a welt, means to press inwardly over the shoe bottom the stock adjacent to the end of the welt, means to tack the stock to secure it while it is so pressed, said butting and tacking means being arranged for operation on a shoe occupying different positions in the machine, and means which sustains the shoe while the welt is being butted and is adapted for operation thereafter to effect compression of the stock substantially perpendicular to the plane of the shoe bottom before the insertion of the tack.

112. A machine of the class described having, in combination, means to butt simultaneously the two ends of the welt of a welted shoe, means to tighten the upper over the last bottom adjacent to a butt end of the welt, means to secure the upper in tightened relation to the

last on the two sides of the shoe successively, and means to compress the shoe stock against the last bottom adjacent said end of the welt in time relation to each of the two successive securing operations on the same shoe.

113. A machine of the class described having, in combination, means for removing surplus material from a shoe bottom, and a pivotally mounted guard arranged to receive the shoe in a position below said means and movable upwardly to guide and direct movement of the shoe into operative relation to said means.

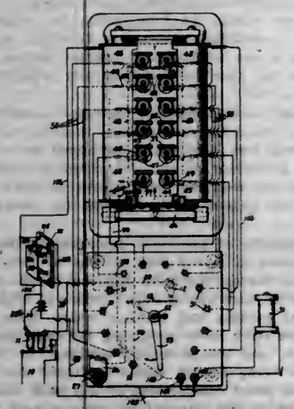
114. A machine of the class described having, in combination, means for operating on a shoe bottom, a pivotally mounted shield for the shoe bottom arranged to receive the shoe in a position remote from said means and to be moved upwardly and backwardly in a predetermined path with the shoe into operative relation to said means.

115. A machine of the class described having, in combination, a cutter, and means for positioning the bottom of a shoe in effective relation to said cutter constructed and arranged to control approach of the shoe to the cutter longitudinally and vertically while maintaining the same angular relation of the bottom of the shoe to the cutter and arranged to receive the shoe in a position remote from the cutter and to move simultaneously upward and backward to bring the shoe into the field of operation of the cutter.

116. A machine of the class described having, in combination, welt butting mechanism, shoe positioning means movable to present the shoe in position for the welt to be butted by said mechanism, and operating means for said mechanism arranged to be actuated without further attention upon the part of the operative when the shoe has been presented in welt butting position.

117. A machine of the class described having, in combination, power operated welt butting mechanism, a clutch for controlling the actuation of said mechanism, shoe positioning means movable to present the shoe in position for the welt to be butted by said mechanism, and clutch actuating means movable in time relation to the movement of the shoe positioning means to cause the welt butting mechanism to be operated after the shoe has been presented in welt butting position.

13,800. AUTOMATIC SIGNAL-OPERATOR. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to The Hall Switch & Signal Company, a Corporation of Maine. Filed July 22, 1913. Serial No. 780,584. Original No. 1,024,444, dated Apr. 23, 1912, Serial No. 458,204. (Cl. 177—381.)



1. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, circuits connecting the devices aforesaid, and line setting means adapted to prevent operation of said arrester at will, substantially as described.

2. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, a freeing device, circuits connecting the devices aforesaid, and line setting means adapted to prevent operation of said arrester at will, substantially as described.

3. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, circuits connecting the devices aforesaid, and means for altering said circuits at will for rendering the arrester inoperative, substantially as described.

4. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic electro-magnetic arrester therefor, a pause controller comprising a number of switches, circuits connecting said switches with said arrester, and a line setting switch for controlling all of said circuits, substantially as described.

5. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, electromagnetic resetting means for said pause controller and appropriate circuits for automatically operating said resetting device after each operation of the automatic sender, substantially as described.

6. A device of the class described comprising in combination an automatic sender of electrical impulses, an arrester therefor, an automatic circuit breaker in circuit with said arrester, an electro-magnet for controlling said circuit-breaker, an automatic switch actuated by said sender, circuits between said switch and said magnet, and means operating only on prolonged energizing of said magnet for actuating said circuit-breaker, substantially as described.

7. A device of the class described comprising in combination an automatic sender of electrical impulses, an arrester therefor, a freeing device for said arrester and a checking device for indicating the progress of said freeing device, substantially as described.

8. A device of the class described comprising in combination an automatic sender of electrical impulses, an arrester therefor, a freeing device for said arrester comprising a ratchet wheel and means for advancing the same step by step, and a checking device comprising a pointer actuated by said ratchet wheel and a graduated dial behind said pointer, substantially as described.

9. A device of the class described comprising in combination an automatic sender for normally producing electric impulses in rapid succession, clockwork including an escapement for actuating said sender, a device for engaging said escapement to stop the clockwork, an electromagnet for controlling said last named device, manually controlled circuit closers, a selecting switch moving with said clockwork, and circuits connecting said devices to permit said circuit closers and selecting switch to control the operation of said magnet, substantially as described.

10. In a system of the kind described, an automatic sender of electrical impulses, a clock-work for actuating said sender including an escapement having a reciprocating extension, an electro-magnet near said clock-work, a pivoted finger adapted to move into and out of the path of movement of said extension, an armature for said magnet arranged to actuate said finger, a circuit closer connected to the clock-work and circuits including said magnet and said circuit closer.

11. In a device of the class described, an automatic sender of electrical impulses comprising a circuit closer and a toothed wheel for controlling the same, a switch arm adapted to turn with said toothed wheel, a series of terminals over which said arm is adapted to move, an arrester for the sender, a pause controller, and circuits including said arm and terminals for controlling action of said arrester, substantially as described.

12. In combination with an automatic sender of electrical impulses and an arrester therefor, a pause controller comprising a series of switches, operating keys therefor, a common resetting means for said keys, an electro-magnet for actuating said means, and an automatic switch operated by said sender in circuit with said magnet for controlling it, substantially as described.

13. In combination with an automatic sender of electrical impulses and an arrester therefor, a pause controller comprising a series of switches, operating keys therefor, a sliding resetting plate under said keys adapted when pushed to return them to normal, an electro-magnet having its poles extending along the two sides of the pause controller keys, a pivoted armature controlled by said magnet and adapted to push said sliding plate, and means for energizing said magnet at the end of each operation of said sender, substantially as described.

14. In combination with an automatic sender of electrical impulses and an arrester therefor, a pause controller comprising pairs of spring terminals, keys for controlling the same, a selecting switch operated by said sender and comprising a series of separate contacts, individual connections between one of each pair of spring terminals and a corresponding one of said separate contacts, and a common electric connection between a single one of said contacts and all the remaining spring terminals, substantially as described.

15. In a system of the class described, a pause controller comprising a row of pairs of spring terminals, an operating stem for each pair, each stem having a shoulder, a common resetting plate through holes in which all of said stems pass, springs normally tending to lift said stems, means on each stem for actuating the spring terminals when the stem is depressed, and a leaf spring for each stem each adapted to catch over the shoulder on its appropriate stem, said leaf springs engaging the common resetting plate, substantially as described.

16. In combination with an automatic sender of electrical impulses, an arrester and a pause controller, a freeing device including an electro-magnet in circuit with said sender, a ratchet wheel having one short tooth and impelled by said magnet, a retaining pawl, a movable support normally causing said pawl to engage only the upper part of the ratchet teeth, means adapted to act on prolonged energization of said magnet to release said pawl from said support, and means for returning said ratchet wheel to normal after a predetermined movement of the freeing device.

17. In combination with an automatic sender of electrical impulses, an arrester and a pause controller, a freeing device including an electro-magnet in circuit with said sender, a ratchet wheel having one short tooth and impelled by said magnet, a spring tending to return said wheel to normal, a retaining pawl normally engaging the tooth behind the short tooth on said wheel, a movable support normally holding said pawl just out of the range of movement of said short tooth, retarded means adapted to act on prolonged energization of said magnet to release said pawl from said support, and means actuated by said ratchet wheel at the end of its prescribed movement for forcing the retaining pawl laterally out of engagement with the ratchet wheel, substantially as described.

18. In combination with an automatic sender of electrical impulses, an arrester and a pause controller, a freeing device including an electro-magnet in circuit with said sender, a ratchet wheel having one short tooth and impelled by said magnet, a spring tending to return said wheel to normal, a retaining pawl, a movable support normally causing said pawl to engage only the upper part of the ratchet teeth, slow-moving means released by energizing said magnet adapted to release said pawl from said support, a circuit-opening switch adapted to be operated by said slow-moving means at the end of its complete movement, and means for returning said ratchet wheel to normal after a predetermined movement of the freeing device, substantially as described.

19. In a system of the class described, a freeing device comprising an impelling magnet, a ratchet wheel actuated thereby and having one short tooth, a spring for returning said wheel to normal, a retaining pawl, a movable support normally holding said pawl just out of the range of said short tooth, a retarded mechanism tending to move into position to free said pawl from said support and means actuated by said magnet for alternately releasing and restraining said retarded mechanism and permitting the same to act upon said support when the period of release is sufficiently prolonged, substantially as described.

20. In a system of the class described, a freeing device comprising an impelling magnet, a ratchet wheel actuated thereby, a spring for returning said wheel to normal, a retaining pawl, a pivoted lever carrying said pawl and mounted so as to be laterally movable for releasing the wheel, and means upon the side of the wheel adapted to impinge against said lever for moving it laterally, substantially as described.

21. In a system of the class described, a freeing device comprising an impelling magnet, a ratchet wheel actuated thereby, a spring for returning said wheel to normal, a retaining pawl, a pivoted lever carrying said pawl and mounted so as to be movable laterally to free said wheel, and adjustable means secured to the wheel for causing lateral movement of said pawl, substantially as described.

22. In a system of the class described, a freeing device comprising an impelling magnet, a ratchet wheel actuated thereby, a spring for returning said wheel to normal, a retaining pawl, a pivoted lever carrying said pawl and mounted so as to be movable laterally to free said wheel and a plate pivoted close to said ratchet wheel upon its shaft and provided with an inclined portion adapted to cause lateral movement of said pawl by impinging against said lever, substantially as described.

23. In a selective calling device, means for impressing a plurality of impulses on a line some of them being prolonged, means for determining which of said impulses are to be prolonged and automatic means terminating the prolonged impulses.

24. In a calling device, means for impressing a plurality of impulses on a selector circuit to operate signals at different points on said circuit in response to a prolonged impulse on said circuit, means for determining which and how many of said impulses are to be prolonged and automatic means terminating the prolonged impulses.

25. In a call device the combination of an impulse controlling device, a plurality of individual operating devices, one for each call, means interposed between said operating devices and said impulse mechanism to selectively control the operation of said impulse mechanism.

26. In a selective call device a relay for impressing impulses on a line, circuits controlling said relay, keys for selecting some of said circuits and a common contact means for closing the controlling circuits.

27. In a selective call device, a relay for impressing impulses on a line, an operating circuit for said relay, controlling circuits for said relay, means for selecting said controlling circuits and means for closing said operating and controlling circuits.

28. In a selective call device a relay for impressing a plurality of impulses on a circuit some of which impulses are prolonged, circuits for said relay, means in some of said relay circuits for determining which and how many of said impulses are to be prolonged and the length thereof, and means for closing said circuits whereby a plurality of calls may be made successively and automatically.

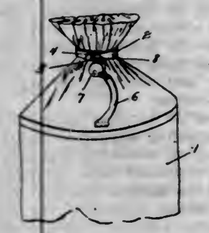
13,801. MAIL-POUCH. RICHARD S. TWISS, Edgerton, Va. Filed June 2, 1914. Serial No. 842,522. Original No. 1,092,962, dated Apr. 14, 1914, Serial No. 805,255. (Cl. 150—15.)

1. The combination with a pouch and an encircling band having interengaging extremities, of a handle member comprising a flexible portion permanently secured at one end to the pouch; and a lock portion carried at the end opposite the secured end and adapted to secure the interengaging extremities.

2. The combination with a pouch having a flexible part encircled by a band having interengaging extremities, of a handle member permanently secured to the pouch at a distance spaced from the interengaging parts and embodying a lock adapted to coact with the interengaging parts.

3. The combination with a pouch and an encircling

band completely embracing the bag and having overlapping interengaging extremities; of a handle permanently secured at one end to the bag and having in its length a lock adapted to interengage with the interengaging extremities.



4. The combination with a pouch comprising a body portion and a flexible neck portion adapted to be gathered together for closing, of a member adapted to hold such neck portion in closed position; and a handle having one end secured to the pouch and carrying at the opposite end means for interengaging with the closure holding member.

5. The combination with a pouch and a band adapted to encircle the pouch and constrict the opening, of a handle secured to the pouch; and a lock carried by the handle adapted to secure together the ends of the band and secure the pouch in constricted condition.

6. The combination with a pouch and a band of less length than the circumference of the pouch and having interengaging extremities, of a handle secured to the pouch and embodying a lock adapted to engage the interengaging extremities of the band.

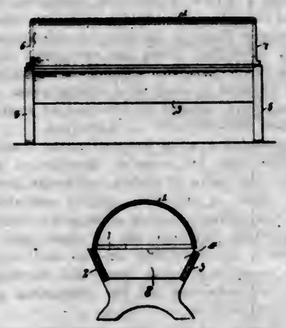
7. A pouch having a strap for holding the mouth thereof in closed position, said strap having hasp and staple engaging means, a handle comprising a chain section secured to the pouch, a flexible cover over said section, a lock connected with the free end of the chain section and having a pivoted ball adapted to pass through said staple.

DESIGNS.

46,390. SUN-DIAL. JULIA STANDISH ALEXANDER, Highbridge, N. Y. Filed July 20, 1914. Serial No. 852,068. Term of patent 7 years.

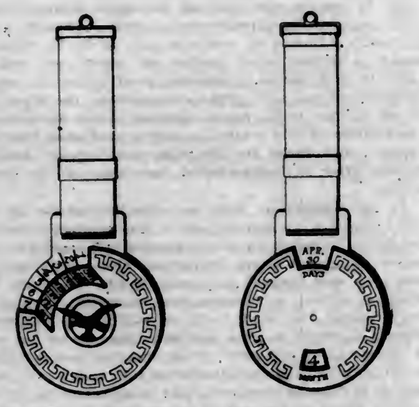
The ornamental design for a sun-dial, as shown.

46,391. DISPLAY-CABINET. HERBERT A. AUSTIN, Boston, Mass. Filed Feb. 15, 1913. Serial No. 748,734. Term of patent 7 years.



The ornamental design for a display cabinet, as shown and described.

46,392. WATCH-FOB. CARL ROB. BLOMBERG, Chicago, Ill. Filed Apr. 17, 1914. Serial No. 832,645. Term of patent 3½ years.

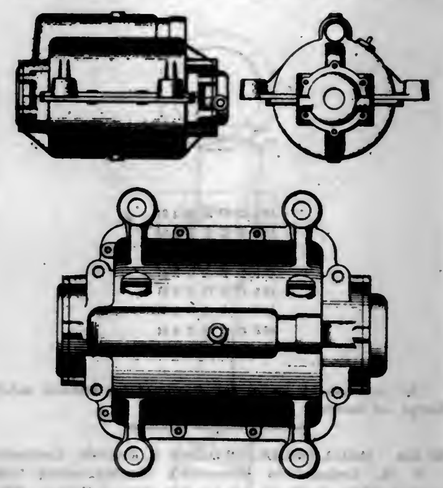


The ornamental design for a watch fob, as shown.

46,393. BADGE. DANIEL M. BRADY, New York, N. Y. Filed July 27, 1914. Serial No. 853,499. Term of patent 7 years.

The ornamental design for a badge as shown.

46,394. CASING FOR REVERSE-GEARS. HENRY A. BUDDE, Manchester, Conn. Filed July 18, 1914. Serial No. 851,831. Term of patent 14 years.

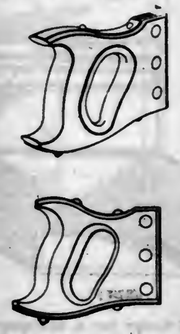


The ornamental design for casing for reverse gears as shown.

46,395. SPOOL-HOLDER. JAMES M. CORDELL, Lima, Ohio. Filed July 25, 1914. Serial No. 853,177. Term of patent 14 years.

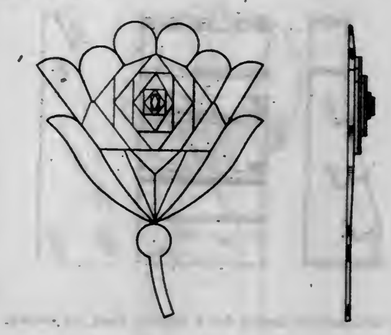
The ornamental design for a spool holder, as shown.

46,396. SAW-HANDLE. JEROME C. DIETRICH, Galt, Ontario, Canada. Filed Sept. 20, 1913. Serial No. 790,950. Term of patent 14 years.



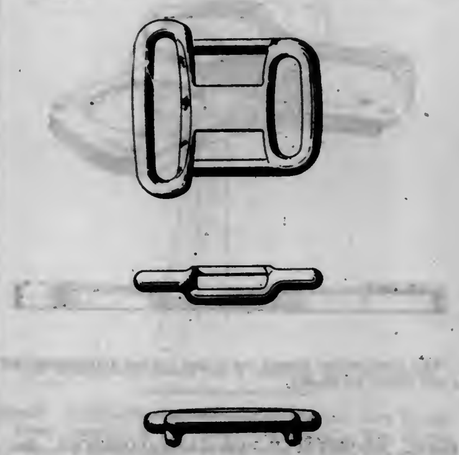
The ornamental design for saw handle, as shown.

46,397. ARTIFICIAL FLOWER. WILLIAM WALDMAN, New York, N. Y., assignor to The S. Herbert Cut Glass Company, New York, N. Y., a Corporation of New York. Filed July 10, 1914. Serial No. 850,269. Term of patent 3½ years.



The ornamental design for an artificial flower, as shown.

46,398. TURNBACK LOOP FOR HARNESS. THOMAS A. FOX, Newark, N. J., assignor to The Steffens-Amberg Co., Newark, N. J., a Corporation of New Jersey. Filed Aug. 9, 1913. Serial No. 783,945. Term of patent 7 years.

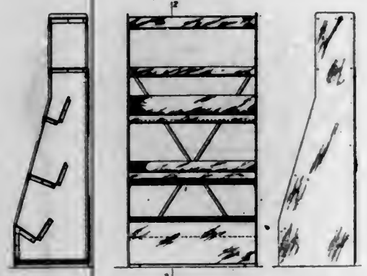


The ornamental design for a turn-back loop for harness, as shown.

46,399. MEDAL, MEDALLION, OR WATCH-CHARM. LAURA GARDIN, Westport, Conn. Filed July 24, 1914. Serial No. 852,914. Term of patent 14 years.

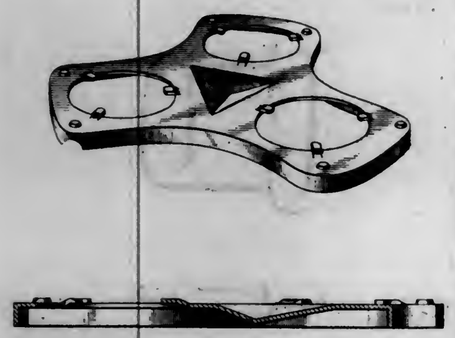
The ornamental design for a medal, medallion, or watch charm, as shown.

46,400. DISPLAY-RACK. FRANCIS W. GIBSON, West Roxbury, Mass. Filed July 7, 1914. Serial No. 849,599. Term of patent 3½ years.



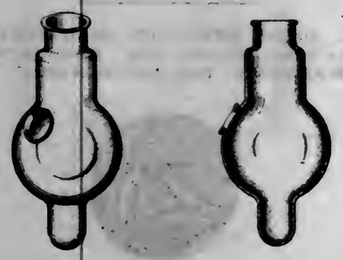
The ornamental design for a display rack, as shown.

46,401. GAS-SAVING ATTACHMENT FOR GAS-STOVES. CHARLES HUBER, New York, N. Y., assignor, by mesne assignments, to Triplex Manufacturing Co., Incorporated, a Corporation of New York. Filed June 1, 1914. Serial No. 842,320. Term of patent 7 years.



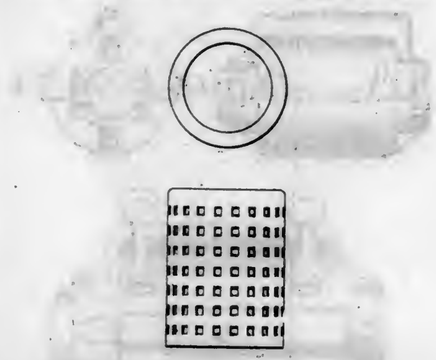
The ornamental design for a gas saving attachment for a gas stove, as shown.

46,402. RECEPTACLE FOR GAS-VAPORIZERS. RAYMOND A. KIEFER, Ramsey, N. J. Filed July 23, 1914. Serial No. 852,687. Term of patent 14 years.



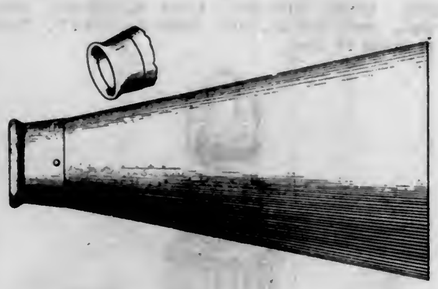
The ornamental design for a receptacle for gas vaporizers, substantially as shown.

46,403. BONNET FOR MINERS' SAFETY-LAMPS. ERNEST F. KOEHLER, Marlboro, Mass. Filed July 17, 1914. Serial No. 851,650. Term of patent 7 years.



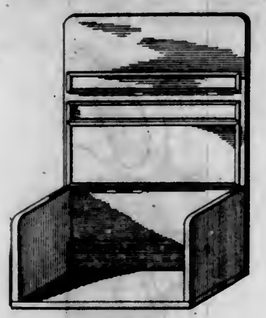
The ornamental design for a bonnet for miners' safety lamps, as shown.

46,404. MEGAPHONE. WILLIAM S. LOUGEE, Rochester, N. H., assignor to Kennebunk Manufacturing Company, Kennebunk, Me., a Corporation of Maine. Filed Dec. 14, 1911. Serial No. 665,820. Term of patent 7 years.



The ornamental design for a megaphone, as shown.

46,405. NEWSPAPER-DISPENSING DEVICE. FRANK P. MACLENNAN, Topeka, Kans. Filed July 25, 1914. Serial No. 853,172. Term of patent 7 years.



The ornamental design for a newspaper dispensing device, as shown.

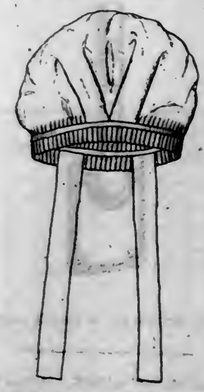
46,406. JOINT-RAKER. JAMES W. MILLER, Johnson City, Tenn. Filed July 8, 1914. Serial No. 849,856. Term of patent 14 years.

The ornamental design for a joint raker, substantially as shown.

46,407. POISON-BOTTLE. ANNA J. MOSS and CLARA L. MOSS, Collingswood, N. J. Filed June 18, 1914. Serial No. 845,942. Term of patent 14 years.

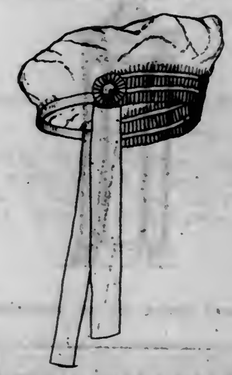
The ornamental design for a poison bottle as shown.

46,408. BATHING-CAP. JAMES A. MURRAY, New Haven, Conn., assignor to The Seamless Rubber Co., New Haven, Conn., a Corporation. Filed June 3, 1914. Serial No. 842,781. Term of patent 3½ years.



The ornamental design for a bathing cap, as shown.

46,409. BATHING-CAP. JAMES A. MURRAY, New Haven, Conn., assignor to The Seamless Rubber Co., New Haven, Conn., a Corporation. Filed June 3, 1914. Serial No. 842,782. Term of patent 3½ years.



The ornamental design for a bathing cap, as shown.

46,410. BATHING-CAP. JAMES A. MURRAY, New Haven, Conn., assignor to The Seamless Rubber Co., New Haven, Conn., a Corporation. Filed June 3, 1914. Serial No. 842,783. Term of patent 3½ years.

The ornamental design for a bathing cap, as shown.

46,411. MATCH-CASE. FRANK J. NAGOSKI, Memphis, Tenn. Filed May 19, 1914. Serial No. 839,655. Term of patent 7 years.

The ornamental design for a match case, as shown.

46,412. ADVERTISING-KIOSK. HENRY W. NEWMAN, New York, N. Y. Filed July 20, 1914. Serial No. 852,075. Term of patent 14 years.

The ornamental design for an advertising kiosk, as shown.

46,413. LINING FOR BURIAL-CASKET LIDS. JOHN F. OBR, Cincinnati, Ohio, assignor to The Cincinnati Coffin Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 31, 1911. Serial No. 641,642. Term of patent 7 years.

The ornamental design for a lining for burial casket lids, as shown and described.

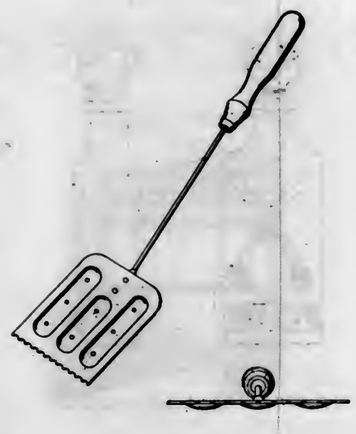
46,414. POCKET-KNIFE. MAX PEBES, Solingen, Germany. Filed July 23, 1913. Serial No. 780,798. Term of patent 3½ years.

The ornamental design for a pocket-knife, as shown.

46,415. MIDDY WAIST OR BLOUSE. HARRY SCHWARZ, St. Louis, Mo. Filed Feb. 2, 1914. Serial No. 816,104. Term of patent 3½ years.

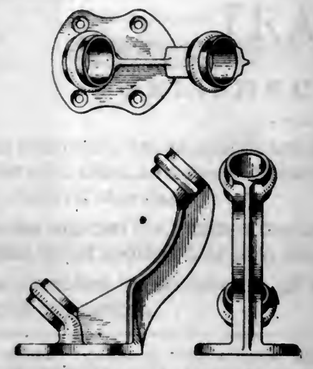
The ornamental design for a middy waist or blouse, substantially as shown.

46,416. PANCAKE-TURNER. ALLEN C. SELLECK, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,560. Term of patent 14 years.



The ornamental design for a pan cake turner as shown.

46,417. FLAGSTAFF-HOLDER. HERBERT C. TICE, Newburgh, N. Y. Filed July 17, 1914. Serial No. 851,648. Term of patent 14 years.

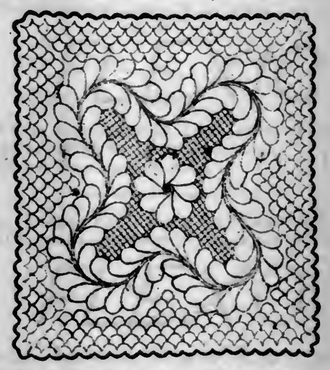


The ornamental design for a flag staff holder, as shown.

46,418. LAMP SHADE AND REFLECTOR. HERMAN F. VOSHARDT, Chicago, Ill., assignor to Friedley-Voshardt Company, Chicago, Ill., a Corporation of Illinois. Filed June 5, 1914. Serial No. 843,315. Term of patent 3½ years.

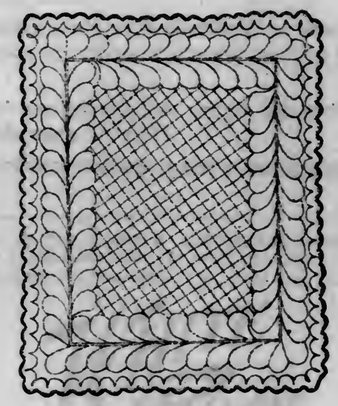
The ornamental design for a lamp shade and reflector as shown.

46,419. QUILT. IONA WILKINSON, Ligonier, Ind., assignor to Wilkinson Quilt Company, Ligonier, Ind., a Corporation of Indiana. Filed July 27, 1914. Serial No. 853,492. Term of patent 14 years.



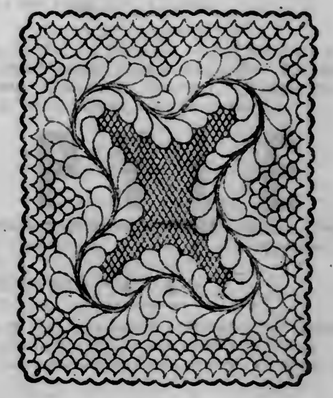
The ornamental design for a quilt as shown.

46,420. QUILT. IONA WILKINSON, Ligonier, Ind., assignor to Wilkinson Quilt Company, Ligonier, Ind., a Corporation of Indiana. Filed July 27, 1914. Serial No. 853,490. Term of patent 14 years.



The ornamental design for a quilt as shown.

46,421. QUILT. IONA WILKINSON, Ligonier, Ind., assignor to Wilkinson Quilt Company, Ligonier, Ind., a Corporation of Indiana. Filed July 27, 1914. Serial No. 853,491. Term of patent 14 years.



The ornamental design for a quilt as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 15, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 40,676. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMAN W. FABER, St. Louis, Mo. Filed Feb. 19, 1909.

CARBOZINE

Particular description of goods.—Sprudel Salts, Antiseptic Tablets, Ointment, and Surgical Dressing.
Claims use since April, 1895.

Ser. No. 62,778. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Apr. 9, 1912.

Particular description of goods.—Toilet-Paper.
Claims use since Oct. 2, 1911.

Ser. No. 64,961. (CLASS 39. CLOTHING.) SEARLE MANUFACTURING CO., Troy, N. Y. Filed July 27, 1912.

FLEXIC

Particular description of goods.—Collars, Cuffs, and Shirts Made of Textile Material.
Claims use since Aug. 1, 1911.

Ser. No. 64,962. (CLASS 39. CLOTHING.) SEARLE MANUFACTURING CO., Troy, N. Y. Filed July 27, 1912.

FLEXO

Particular description of goods.—Collars, Cuffs, and Shirts Made of Textile Material.
Claims use since Nov. 5, 1910.

Ser. No. 65,208. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETIT SALT COMPANY, Milwaukee, Wis. Filed Aug. 12, 1912.

WHITE ROCK

Particular description of goods.—Table-Salt.
Claims use since July, 1912.

Ser. No. 67,135. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELI LILLY & COMPANY, Indianapolis, Ind. Filed Nov. 26, 1912.

PANASTASE

Particular description of goods.—A Medicinal Compound for Use as a Stomach Remedy.
Claims use since Nov. 4, 1912.

Ser. No. 67,721. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PYLE-NATIONAL ELECTRIC HEADLIGHT COMPANY, Chicago, Ill. Filed Jan. 4, 1913. Under ten-year proviso.

PYLE

Particular description of goods.—Electric Headlights, Driving, Connecting, Controlling, and Operative Devices Therefor.
Claims use since Jan. 1, 1895.

Ser. No. 69,236. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAMSDELL DRUG COMPANY, New York, N. Y. Filed Mar. 21, 1913.

SAVONOL

Particular description of goods.—Shampooing Preparations.
Claims use since 1897.

Ser. No. 69,237. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAMSDELL DRUG COMPANY, New York, N. Y. Filed Mar. 21, 1913.

Particular description of goods.—Face-Powder, Talcum Powder, Tooth-Powder, Tooth-Wash, Toilet Water, Toilet Lotion, Cologne, and Hair-Tonic.
Claims use since August, 1909.

Ser. No. No. 69,240. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAMSDELL DRUG COMPANY, New York, N. Y. Filed Mar. 21, 1913.

KUMTIC

Particular description of goods.—Toilet Lotion and Headache-Powders.
Claims use since 1893.

Ser. No. 69,532. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. W. & A. P. HOWARD & CO., LTD., Corry, Pa. Filed Apr. 2, 1913.

GLEN-OAK

No claim being made to the word "Oak" alone.
Particular description of goods.—Sole-Leather.
Claims use since about Oct. 1, 1912.

Ser. No. 70,662. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DR. HEY HERB HEALTH CO., Gowanda, N. Y. Filed May 26, 1913.

FRAUENWOHL

Particular description of goods.—Tonics for the Female Reproductive Organs.
Claims use since Mar. 5, 1910.

Ser. No. 74,132. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Nov. 22, 1913.

Particular description of goods.—Toilet-Paper.
Claims use since August, 1912.

Ser. No. 74,262. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Nov. 29, 1913.

J-M

Particular description of goods.—A Liquid Compound Which Removes and Prevents Scale in Steam-Boilers.
Claims use since May 1, 1913.

Ser. No. 74,493. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) EDWARD KORN, New York, N. Y. Filed Dec. 10, 1913.

KORN

Particular description of goods.—Artificial Leather.
Claims use since the 1st day of November, 1913.

Ser. No. 74,696. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME MILLING CO., Oklahoma, Okla. Filed Dec. 20, 1913.

GOLD DRIFT

Particular description of goods.—Wheat-Flour.
Claims use since May 22, 1912.

Ser. No. 74,855. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BEL ZORA COMPANY, Pierre, S. D., and Minneapolis, Minn. Filed Dec. 27, 1913.

Particular description of goods.—Face-Creams, Complexion-Powders, Rouge, Toilet Waters, Perfumes, Shampoos, Dentifrice, Cough-Syrup, Baby-Syrup, Kidney and Bladder Remedy, (Pills,) Vegetable Laxative, Family Laxative and Purgative Pills, Cold and Grippe Tablets, Headache-Tablets, and Pain-Relief.
Claims use since July 1, 1911.

Ser. No. 75,494. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGER ELIOT FRY, London, England. Filed Jan. 28, 1914.

Particular description of goods.—Decorative Textile Fabrics of Linen, Cotton, Silk, and Wool or Combinations of Linen and Cotton, Linen and Silk, and Silk and Wool Having the Design Either Printed Thereon or Woven Therein Used in Upholstery.
Claims use since Nov. 1, 1913.

Ser. No. 75,569. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CONSOLIDATED SOAP CO., Cincinnati, Ohio. Filed Jan. 31, 1914.

SEPTEMBER MORN

Particular description of goods.—Toilet Soap.
Claims use since Mar. 20, 1912.

Ser. No. 75,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MICHINOVA CHEMICAL COMPANY, Detroit, Mich. Filed Feb. 11, 1914.

PANDEAU

Particular description of goods.—Salves, Aromatic Castor-Oil, Liniments, Pile-Ointment, Syrup Hypophosphites Compound, Vermicides, Laxatives, Dental Cream, Cold-Cream, Vanishing Cream, Talcum Powder, Antiseptics, and Preparations for the Treatment of Gout, Rheumatism, Neuralgia, Pleurisy, Headache, Nasal Affections, Asthma, La Grippe, Hay-Fever, Catarrh, Croup, Colds, Coughs, Sore Throat, Tonsilitis, Quinsy, Bronchitis, Abrasions, Bruises, Burns, Chapped Hands, Cold-Sores, Cracked Lips, Cuts, Lacerations, Sprains, Dizziness, Indigestion, Biliousness, Corns, Warts, Sore and Tender Feet, Excessive Perspiration, and Diseases of the Eyes, Bladder, Blood, Bowels, Kidneys, Liver, Lungs, Nerves, Skin, and Stomach.
Claims use since Jan. 5, 1914.

Ser. No. 76,159. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALKA-PINE CHEMICAL CO., Tacoma, Wash. Filed Feb. 26, 1914.

Alka-Pine

Particular description of goods.—Alkaline Antiseptic Solutions.
Claims use since Nov. 10, 1913.

Ser. No. 76,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MORRIS M. GOODENOUGH, Jr., Seattle, Wash. Filed Feb. 26, 1914.

Excella

Particular description of goods.—Toilet Cream.
Claims use since Feb. 17, 1913.

Ser. No. 76,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. W. HORNER AND COMPANY, LIMITED, Chester-le-Street, England. Filed Feb. 27, 1914.

Particular description of goods.—Bonbons, Toffees, Caramels, Chocolates, and Candies.
Claims use since Aug. 12, 1912.

Ser. No. 76,211. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. W. HORNER AND COMPANY, LIMITED, Chester-le-Street, England. Filed Feb. 27, 1914.

MERMAID

Particular description of goods.—Bonbons, Toffees, Caramels, Chocolates, and Candies.
Claims use since Aug. 31, 1910.

Ser. No. 76,457. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ARNOLD L. TRACHTE, Madison, Wis. Filed Mar. 7, 1914.

The PROGRESSIVE

Particular description of goods.—Tank-Heaters.
Claims use since Sept. 1, 1912.

Ser. No. 76,778. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROCHESTER BAKING CO., Rochester, N. Y. Filed Mar. 19, 1914.

BIG BEN BREAD

No claim being made to the word "Bread."
Particular description of goods.—Bread.
Claims use since Mar. 7, 1914.

Ser. No. 76,810. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE COLORADO RADIUM PRODUCTS COMPANY, Denver, Colo. Filed Mar. 21, 1914.

RAYODINE

Particular description of goods.—Radio-Active Salve or Poultice.
Claims use since March, 1914.

Ser. No. 76,837. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BUCKEYE FURNACE & CLOTHES DRYER CO., Cleveland, Ohio. Filed Mar. 23, 1914.

BUCKEYE

Particular description of goods.—Furnaces and Stoves Employing Coal or Gas as a Fuel.
Claims use since Apr. 1, 1912.

Ser. No. 77,051. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHIOZZA & TURCHI, Pontelagoscuro and Ferrara, Italy. Filed Mar. 30, 1914.

SALUTIS
CHIOZZA & TURCHI
PONTELAGOSCURO

Disclaiming the words "Chiozza & Turchi" and "Pontelagoscuro."
Particular description of goods.—Soap, Soap Cream, Soap Powder, and Like Detergents.
Claims use since the year 1901.

Ser. No. 77,264. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) W. A. ANDERSON & Co., New York, N. Y. Filed Apr. 7, 1914.

SPEEKER

Particular description of goods.—Advertising Devices in the Form of Combination, Composite, or Built-Up Signs, &c.
Claims use since Feb. 7, 1914.

Ser. No. 77,281. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE P. HUTCHINS, Lomontville, N. Y. Filed Apr. 7, 1914.

OLD MANOR HOUSE

Particular description of goods.—Hams, Bacon, Smoked Beef, and Sausage.
Claims use since Mar. 1, 1914.

Ser. No. 77,282. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE P. HUTCHINS, Lomontville, N. Y. Filed Apr. 7, 1914.

NUTLEDGE FARMS

Particular description of goods.—Hams, Bacon, Smoked Beef, Sausage, Butter, Fresh Fruits and Vegetables, and Raw Potatoes.
Claims use since June, 1910.

Ser. No. 77,389. (CLASS 39. CLOTHING.) PERFECTION OVERGAITER COMPANY, Winooski and Burlington, Vt. Filed Apr. 10, 1914.

RESTEZE

Particular description of goods.—Shoes and the Like Made of Felt, Wool, Skin, Leather, or other Similar Materials.
Claims use since Jan. 1, 1914.

Ser. No. 77,432. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) E. CARRÉ COMPANY, Mobile, Ala. Filed Apr. 13, 1914.

Fosko

The word "Fosco" being lined for red.
Particular description of goods.—A Soft Drink.
Claims use since Apr. 15, 1905.

Ser. No. 77,760. (CLASS 39. CLOTHING.) ALLEN-FOSTER-WILLETT Co., Lynn, Mass. Filed Apr. 27, 1914.

The Yankee Girl

Particular description of goods.—Ladies' and Misses' Boots and Shoes Made Wholly or in Part of Leather and Cloth.
Claims use since Apr. 5, 1914.

Ser. No. 77,782. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HAVEN E. JACOBSON, New York, N. Y. Filed Apr. 27, 1914.

AU-TO-WASH

Particular description of goods.—A Washing Compound.
Claims use since Aug. 1, 1913.

Ser. No. 77,871. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. E. SMITH, Newport News, Va. Filed Apr. 29, 1914.

SYRCLE

Particular description of goods.—A Salve for Old Sores, Boils, Incipient Cancers, and Piles.
Claims use since about Mar. 1, 1914.

Ser. No. 77,938. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SINCARNA COMPANY, INC., Baldwin, N. Y. Filed May 1, 1914.

SIN-CAR-NA

Particular description of goods.—Vegetable Extracts and Bouillon-Cubes.
Claims use since Mar. 18, 1914.

Ser. No. 78,028. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK LIVORA, Philadelphia, Pa. Filed May 6, 1914.

Particular description of goods.—Relishes.
Claims use since Feb. 23, 1914.

Ser. No. 78,256. (CLASS 38. PRINTS AND PUBLICATIONS.) PRINTERS' INK PUBLISHING COMPANY, Jersey City, N. J., and New York, N. Y. Filed May 13, 1914.

PRINTERS' INK

Particular description of goods.—A Weekly Publication.
Claims use since July 15, 1888.

Ser. No. 78,358. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MITCHELL & DILLON COAL CO., Chicago, Ill. Filed May 18, 1914.

BLUE BANNER

Particular description of goods.—Coal.
Claims use since July, 1911.

Ser. No. 78,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLAIR MILLING COMPANY, Atchison, Kans. Filed May 22, 1914.

Particular description of goods.—Flour, More Particularly Self-Rising Pancake-Flour.
Claims use since Nov. 17, 1913.

Ser. No. 78,483. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, Jersey City, N. J., and Kansas City, Mo. Filed May 22, 1914.

Said trade-mark consists of the words "Golden Ring," surrounded by a band of orange color, the band bounded on its outer and inner margins by a narrow strip of dark-blue color.
Particular description of goods.—Wheat-Flour.
Claims use since Oct. 7, 1910.

Ser. No. 78,563. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PFISTER & VOGEL LEATHER CO., Milwaukee, Wis. Filed May 26, 1914.

FARMUSE

Particular description of goods.—Leather in Unmanufactured Form.
Claims use since May 1, 1912.

Ser. No. 78,595. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TADAJIRO TAMAKI, Seattle, Wash. Filed May 27, 1914.

Particular description of goods.—Diastase Tablets.
Claims use since Feb. 1, 1912.

Ser. No. 78,636. (CLASS 39. CLOTHING.) BRIEDE & ROGOVSKY, Chicago, Ill. Filed May 29, 1914.

Particular description of goods.—Men's Clothing—Namely, Coats, Vests, Trousers, and Overcoats.
Claims use since about Mar. 16, 1914.

Ser. No. 78,726. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN BEET SUGAR COMPANY, Denver, Colo. Filed June 2, 1914.

Particular description of goods.—Beet-Sugar.
Claims use since Apr. 4, 1914.

Ser. No. 78,760. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WITT & WITT, Boons Path, Va. Filed June 2, 1914.

Particular description of goods.—A Preparation for the Treatment of Cancers.
Claims use since Apr. 1, 1914.

Ser. No. 78,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERNATIONALE CACAOFABRIEKEN LIMITED, Amsterdam, Netherlands. Filed June 3, 1914.

J. & C. Blooker

The signature shown being the signature of J. & C. Blooker in the facsimile handwriting of Dirk Blooker.
Particular description of goods.—Cocoa, Chocolate, and Cocoa-Butter.
Claims use since Aug. 23, 1894.

Ser. No. 78,781. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) UNITED DRUG COMPANY, Boston, Mass. Filed June 3, 1914.

KLENZO

Particular description of goods.—Soap.
Claims use since prior to Apr. 1, 1914.

Ser. No. 78,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK D. GAYLORD, Sodus, N. Y. Filed June 4, 1914.

WHITE BIRCH

Particular description of goods.—Canned Fruits and Vegetables.
Claims use since July 1, 1913.

Ser. No. 78,816. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL GROCER COMPANY, Detroit, Mich. Filed June 4, 1914.

NAGROCO

Particular description of goods.—Canned Fruits and Vegetables, Dried Fruits and Vegetables, Canned, Dried, Smoked, Pickled, and Otherwise-Preserved Fish; Preserves and Jellies, Coffee, Tea, Candy, Wheat-Flour, Pickles, Table Sauces, Catsup, Prepared Mustard, Cotton-Seed Salad-Oil, Salad-Dressing, Horse-Radish, Spices, Sugar, Maple-Syrup, Molasses, Seasonings and Herbs and Flavoring Extracts for Foods; Peanut-Butter, Olives, Mince-Meat, Vinegar, Olive-Oil, Fruit Mixture, and Cheese.
Claims use since about June 8, 1906.

Ser. No. 78,852. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed June 6, 1914.

Particular description of goods.—Fancy White Shorts.
Claims use since Mar. 3, 1914.

Ser. No. 78,876. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MASTER CAR BUILDERS' ASSOCIATION, Chicago, Ill. Filed June 6, 1914.

Particular description of goods.—Rubber Hose Applied in the Connections of Railroad-Vehicles.
Claims use since July, 1913.

Ser. No. 78,910. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MAISON BLANCHE COMPANY, New Orleans, La. Filed June 8, 1914.

Kant-e-Kloth

Exclusive use of the word "Kloth" is hereby expressly disclaimed.

Particular description of goods.—Piece Goods.

Claims use since Aug. 1, 1913.

Ser. No. 78,915. (CLASS 38. PRINTS AND PUBLICATIONS.) BORGENICHT, KORNREICH & Co., New York, N. Y. Filed June 9, 1914.

Particular description of goods.—A Monthly Periodical.

Claims use since May 25, 1914.

Ser. No. 78,940. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE CARLBERT MFG. CO., New York, N. Y. Filed June 10, 1914.

GONDOLA SILVER

The rectangular figure appearing on the drawing and the word "Silver" are hereby disclaimed.

Particular description of goods.—Picture-Frames and Serving-Trays Plated with Precious Metal.

Claims use since Jan. 2, 1914.

Ser. No. 78,968. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SNOW'S FOUNTAINS INC., New York, N. Y. Filed June 10, 1914.

Particular description of goods.—Soda-Water, Iced Soft Drinks, Syrup and Flavoring Extracts Used in the Making of Soft Drinks, and Mineral Waters.

Claims use since May 1, 1913.

Ser. No. 79,175. (CLASS 17. TOBACCO PRODUCTS.) PENN TOBACCO CO., Wilkes-Barre, Pa. Filed June 17, 1914.

Particular description of goods.—Smoking and Chewing Tobacco.

Claims use since on or about the 4th day of June, 1914.

Ser. No. 79,231. (CLASS 17. TOBACCO PRODUCTS.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1914.

MARITANA

"Maritana."

Particular description of goods.—Plug, Twist, Fine Cut, and Smoking Tobacco, Cigars, and Cigarettes.

Claims use since about 1874.

Ser. No. 79,342. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SETHNESS COMPANY, Chicago, Ill. Filed June 24, 1914.

Casco

Particular description of goods.—Flavoring Extracts for Foods, Ice-Cream, and Flavorings Therefor.

Claims use since 1911.

Ser. No. 79,344. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRINGFIELD PROVISION CO., Nashua, N. H., and Chicopee, Mass. Filed June 24, 1914. Under ten-year proviso.

OXFORD

Particular description of goods.—Meat Products, and Particularly Bacon, Including Clear Bellies, Ham, Including Staffordshires, "Picnics," and "Cumberlands," Sausage, Pressed Cooked Meat Made of Pork Products, Frankfurts, Bologna, and Barrel-Pork.

Claims use since July, 1891.

Ser. No. 79,346. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN A. WEATHERALL, San Angelo, Tex. Filed June 24, 1914.

The picture being that of Virginia Lee Weatherall.

Particular description of goods.—A Preparation for the Treatment of Dandruff.

Claims use since Jan. 1, 1914.

Ser. No. 79,370. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OPPENHEIMER CASING CO., Chicago, Ill. Filed June 25, 1914.

Particular description of goods.—Sausage-Casings of Various Kinds.

Claims use since June 1, 1914.

Ser. No. 79,409. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARSON & PERRY, Shelbyville, Mo. Filed June 27, 1914.

Carry Hog Medicine

No claim is made for the exclusive use of the words "Hog Medicine."

Particular description of goods.—A Remedy for the Purpose of Removing Worms from the Intestines of Hogs, Purifying the Blood, and Evacuating the Bowels, Thereby Rendering Such Animals Immune to a Great Degree from the Diseases Which Afflict Them.

Claims use since May 1, 1914.

Ser. No. 79,411. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. H. LAWRENCE & COMPANY, New Orleans, La. Filed June 27, 1914.

FAVORITE

Particular description of goods.—Codfish, Hake, and Pollack in Boxes and Mackerel in Wooden Packages.

Claims use for about fifteen years.

Ser. No. 79,432. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LYNCH-TAYLOR PRODUCE CO., INC., North Yakima, Wash. Filed June 29, 1914.

PENNANT

Particular description of goods.—Fresh Apples.

Claims use since Aug. 1, 1912.

Ser. No. 79,468. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PHARMACAL DRUG COMPANY, Buffalo, N. Y. Filed June 30, 1914.

THIRSTOP

Particular description of goods.—Powders for Making Soft Drinks.

Claims use since Apr. 21, 1914.

Ser. No. 79,504. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) MILES F. BIXLER, Cleveland, Ohio. Filed July 2, 1914.

Particular description of goods.—Gold-Filled Wrist-Bracelets, Watch-Chain and Watch-Fob Swivels, Picture-Lockets, Cuff Link-Buttons, Necktie-Clasps, Necktie-Pins, Bar-Pins, Collar-Pins, and Brooches.
Claims use since October, 1906.

Ser. No. 79,506. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. J. BADENOCH CO., Chicago, Ill. Filed July 2, 1914.

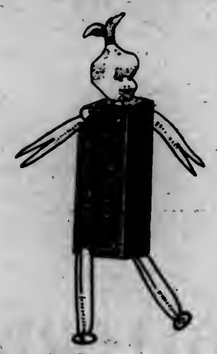
Particular description of goods.—Horse Feed.
Claims use since June 25, 1914.

Ser. No. 79,535. (CLASS 17. TOBACCO PRODUCTS.) OLGA KOHLBERG, El Paso, Tex. Filed July 3, 1914.

Particular description of goods.—Cigars.
Claims use since Apr. 1, 1913.

Ser. No. 79,543. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RECKITTS (U. S. A.), LTD., New York, N. Y. Filed July 3, 1914.

CUBIE



Particular description of goods.—Blue and Laundry Articles Containing Blue.
Claims use since May 7, 1914.

Ser. No. 79,573. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM T. JAMES, Chicago, Ill. Filed July 6, 1914.

TRI

Particular description of goods.—A Preparation for Cleaning and Washing the Mouth, Gums, Palate, Tonsils, Larynx, Throat, and Nasal Passages.
Claims use since June 27, 1914.

Ser. No. 79,581. (CLASS 17. TOBACCO PRODUCTS.) PENN TOBACCO CO., Wilkes-Barre, Pa. Filed July 6, 1914.

HONEY-MOON

Particular description of goods.—Smoking and Chewing Tobacco.
Claims use since on or about the 4th day of June, 1914.

Ser. No. 79,600. (CLASS 17. TOBACCO PRODUCTS.) GILMOR & HARRISON, Baltimore, Md. Filed July 7, 1914.

Gilmor's

Consisting of the word "Gilmor's" in the handwriting of John Gilmor.
Particular description of goods.—Cigarettes and Smoking-Tobacco.
Claims use since about Dec. 1, 1913.

Ser. No. 79,611. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. S. STEINER, New York, N. Y. Filed July 7, 1914.

Particular description of goods.—Hops.
Claims use since September, 1889.

Ser. No. 79,640. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MUELLER CHEMICAL COMPANY, Berkeley, Cal. Filed July 8, 1914.

CYTOS

Particular description of goods.—Antiseptic and Prophylactic Liquids for External and Internal Use in the Treatment of the Skin and Blood, Especially Externally in the Form of a Salve, Lotion, or Wash in Treatment of Infections, Sores, Irritations, Inflammations, Bruises, and Congestions, and Internally as a Wash, Gargle, or Medicinal Element Stomatically or Intestinally.
Claims use since July, 1899.

Ser. No. 79,745. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARTHUR CHEMICAL CO., New Haven, Conn. Filed July 13, 1914.

KOLORENE

Particular description of goods.—Coloring Material for Straw Hats.
Claims use since June 1, 1908.

Ser. No. 79,841. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CAUTO TREE COTTON CO., Augusta, Me., and Shelton, Conn. Filed July 16, 1914.

CAUTO

Particular description of goods.—Cotton.
Claims use since Jan. 20, 1913.

Ser. No. 79,876. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HEFEFABRIK EMMERTHAL, GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Emmerthal, near Hameln, Germany. Filed July 17, 1914.

Fermentin

Consisting in the word "Fermentin."
Particular description of goods.—A Remedy for Diabetes, Furunculosis, Gout, Skin Affections, Leucorrhea, and Constipation.
Claims use since Oct. 7, 1913.

Ser. No. 79,881. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) LARTER & SONS, New York, N. Y., and Newark, N. J. Filed July 17, 1914. Under ten-year proviso.

LARTER

Particular description of goods.—Studs, Buttons, Pins, Fobs, Lockets, and Similar Articles of Personal Adornment Made in Whole or in Part of Precious Metal.
Claims use since 1894.

Ser. No. 79,943. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. SCHRADER CO., Jacksonville, Fla. Filed July 20, 1914.

Balls of Juice

Particular description of goods.—Citrus Fruits.
Claims use since the 1st day of May, 1914.

Ser. No. 79,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY CO., Gulfport, Miss. Filed July 20, 1914.

Particular description of goods.—Stock Food.
Claims use since July 1, 1914.

Ser. No. 79,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY CO., Gulfport, Miss. Filed July 20, 1914.

BULL WHIP

Particular description of goods.—Stock Food.
Claims use since July 1, 1914.

Ser. No. 79,971. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE REESE CO., INC., Memphis, Tenn. Filed July 21, 1914.

SCENT-I-SEPTIC

Particular description of goods.—Perfumed Antiseptic Bath-Tablets.
Claims use since Feb. 1, 1914.

Ser. No. 79,986. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HANSON & VAN WINKLE COMPANY, Newark, N. J. Filed July 22, 1914.

CROWN H·V·W

Particular description of goods.—Galvanizing-Salts.
Claims use since June 19, 1914.

Ser. No. 79,998. (CLASS 39. CLOTHING.) DR. DENTON SLEEPING GARMENT MILLS, Centerville, Mich., and Toledo, Ohio. Filed July 23, 1914.

The picture shown being that of Margaret E. Thomas.
Particular description of goods.—Children's Sleeping-Garments.
Claims use since July, 1908.

Ser. No. 80,006. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOWAN-LENNING-BROWN CO., Duluth, Minn. Filed July 23, 1914.

NU-JELL

Particular description of goods.—A Gelatinous Dessert-Powder.
Claims use since Apr. 1, 1914.

Ser. No. 80,037. (CLASS 39. CLOTHING.) JOHNSTON & LARIMER DRY GOODS CO., Wichita, Kans. Filed July 24, 1914.

SENSIBLE

Comprising the word "Sensible."
Particular description of goods.—Overalls, Jackets, Jumpers, and Work-Shirts.
Claims use since May, 1914.

Ser. No. 80,041. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH W. SCHLOSS, New York, N. Y. Filed July 24, 1914.

50/50

Particular description of goods.—Cigarettes, Cigars, Stogies, Chewing-Tobacco, and Smoking-Tobacco.
Claims use since July 21, 1914.

Ser. No. 80,046. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) Yozo Co., Chattanooga, Tenn. Filed July 24, 1914.

YOKO

Particular description of goods.—Salve, Bath-Ammonia, Shampoo Preparation, Tooth-Liquid, Tooth-Paste, Tooth-Powder, Mouth-Wash, Cold-Cream, Massage-Cream, Foot-Powder, Freckle-Lotion, Hair-Tonic, Talcum Powder, Toilet Water, Cologne, Lilac Perfume, and an Antiseptic.
Claims use since May 22, 1914.

Ser. No. 80,162. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUMFORD CHEMICAL WORKS, Providence, R. I. Filed July 29, 1914. Under ten-year proviso.

HORSFORD'S ACID PHOSPHATE
COUNT RUMFORD.

Particular description of goods.—A Solution of Phosphates, Mainly Calcium in Phosphoric Acid, Remedies for Disorders of the Digestive Organs and Nervous System, Baking-Powders, Phosphate Acid, and Acid Phosphates.
Claims use since prior to the year 1880.

Ser. No. 80,197. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD BURNHAM, Chicago, Ill. Filed July 31, 1914.

Particular description of goods.—Perfumes, Rouge, Toilet Water, Lotions, Face-Cream, Face-Powder, Turkish-Bath Oil, Shampoo-Powder, Nail-Enamel, Depilatories, Hair-Curling Fluid, Tooth-Powder, Blackhead and Pimple Lotion, Blackhead-Cream, Scalp Treatment, Ointment for Treating Corns, and Hair-Tonic.
Claims use since about the month of May, 1908.

Ser. No. 80,288. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH B. BOYLE, Westminster, Md. Filed Aug. 4, 1914.

"ITZGRATE"

Particular description of goods.—Foot-Powder.
Claims use since Apr. 21, 1914.

Ser. No. 80,312. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed Aug. 5, 1914.

SUN-KIST

Particular description of goods.—Pineapple-Juice and Grape-Juice.
Claims use since Apr. 9, 1912.

Ser. No. 80,331. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MERCK & Co., New York, N. Y. Filed Aug. 5, 1914.

PHOTOL

Particular description of goods.—A Photographic Developer.
Claims use since July 30, 1914.

Ser. No. 80,372. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEWTON N. READ, Owosso, Mich. Filed Aug. 6, 1914.

Consisting of a facsimile of the applicant's signature and portrait.
Particular description of goods.—A Preparation for Tuberculosis.
Claims use since the year 1879.

Ser. No. 80,605. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) H. W. HUGULEY CO., Boston, Mass. Filed Aug. 17, 1914.

Particular description of goods.—Whisky.
Claims use since the 1st day of July, 1914.

Ser. No. 80,606. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) H. W. HUGULEY CO., Boston, Mass. Filed Aug. 17, 1914.

Bulletin

Particular description of goods.—Whisky.
Claims use since July 1, 1914.

Ser. No. 80,609. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

LA MODE

Particular description of goods.—Dress-Forms.
Claims use since February, 1912.

Ser. No. 80,610. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

Martha Washington

Particular description of goods.—Dress-Forms.
Claims use since May, 1912.

Ser. No. 80,611. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

CROWN

Particular description of goods.—Dress-Forms.
Claims use since September, 1912.

Ser. No. 80,612. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

MARVEL

Particular description of goods.—Dress-Forms.
Claims use since December, 1911.

Ser. No. 80,613. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

PREMIER

Particular description of goods.—Dress-Forms.
Claims use since May, 1912.

Ser. No. 80,614. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

IMPERIAL

Particular description of goods.—Dress-Forms.
Claims use since September, 1912.

Ser. No. 80,617. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

REGENT

Particular description of goods.—Dress-Forms.
Claims use since February, 1912.

Ser. No. 80,618. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

Independent

Particular description of goods.—Dress-Forms.
Claims use since August, 1912.

Ser. No. 80,619. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

IDEAL

Particular description of goods.—Dress-Forms.
Claims use since February, 1914.

Ser. No. 80,620. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

LA MODISTE

Particular description of goods.—Dress-Forms.
Claims use since November, 1912.

Ser. No. 80,623. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MAJESTIC DRESS FORM COMPANY, Chicago, Ill. Filed Aug. 17, 1914.

KAY-DEE

Particular description of goods.—Dress-Forms.
Claims use since May, 1914.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 15, 1914.

99,675. POWDER FOR CLEANING CERTAIN NAMED MATERIALS. ABOLISHER CHEMICAL COMPANY, Buffalo, N. Y.
Filed March 11, 1914. Serial No. 76,525. PUBLISHED JULY 7, 1914.

99,676. MILLBOARDS. THE AGASOTE MILLBOARD CO., Trenton, N. J.
Filed June 11, 1914. Serial No. 78,990. PUBLISHED JULY 7, 1914.

99,677. WHEAT-FLOUR. WM. ALTEN CO., INC., New York, N. Y.
Filed June 6, 1914. Serial No. 78,851. PUBLISHED JULY 14, 1914.

99,678. FERTILIZER. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed November 3, 1913. Serial No. 73,767. PUBLISHED DECEMBER 23, 1913.

99,679. SUBSTANCE FOR CLEANING AND POLISHING CERTAIN NAMED MATERIALS. AMERICAN CLEANSER COMPANY, Haoke Ranch, near Boerne, Tex.
Filed March 23, 1914. Serial No. 76,835. PUBLISHED JULY 14, 1914.

99,680. SAWS. E. C. ATKINS & COMPANY, Indianapolis, Ind.
Filed May 27, 1913. Serial No. 70,685. PUBLISHED JULY 14, 1914.

99,681. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. HARRIET HUBBARD AYER, New York, N. Y.
Filed June 24, 1913. Serial No. 71,330. PUBLISHED NOVEMBER 18, 1913.

99,682. WHEAT-FLOUR. BAY STATE MILLING CO., Winona, Minn.
Filed June 6, 1914. Serial No. 78,856. PUBLISHED JULY 14, 1914.

99,683. CHEWING-GUM. THE BEE BEE CONFECTION COMPANY, Dayton, Ohio.
Filed April 1, 1914. Serial No. 77,115. PUBLISHED JULY 14, 1914.

99,684. CIGARS, CIGARETTES, AND SMOKING AND CHEWING TOBACCO. LOUIS BLASE, Philadelphia, Pa.
Filed March 31, 1914. Serial No. 77,092. PUBLISHED JUNE 30, 1914.

99,685. OINTMENT. HARRY L. BLOW, Tuckerton, N. J.
Filed February 10, 1914. Serial No. 75,813. PUBLISHED JULY 7, 1914.

99,686. ALARM-CLOCKS. GEORGE BORGFELDT & CO., New York, N. Y.
Filed May 15, 1914. Serial No. 78,302. PUBLISHED JULY 7, 1914.

99,687. BREAD. NINIAN E. BYERS, New York, N. Y.
Filed June 1, 1914. Serial No. 78,681. PUBLISHED JULY 14, 1914.

99,688. RAISINS. CALIFORNIA ASSOCIATED RAISIN CO., Fresno, Cal.
Filed May 13, 1914. Serial No. 78,232. PUBLISHED JULY 14, 1914.

99,689. COOKING AND HEATING STOVES AND COOKING-RANGES. CAMERON STOVE CO., INC., Richmond, Va.
Filed March 27, 1913. Serial No. 69,374. PUBLISHED JUNE 30, 1914.

99,690. WHEAT-FLOUR. THE CANADIAN MILL AND ELEVATOR COMPANY, El Reno, Okla.
Filed May 28, 1914. Serial No. 78,599. PUBLISHED JULY 7, 1914.

99,691. MEDICINE FOR ASTHMA, BRONCHITIS, AND HAY-FEVER. ROBERT P. CARSON, Manitou, Colo.
Filed May 9, 1914. Serial No. 78,148. PUBLISHED JULY 14, 1914.

99,692. OLIVE-OIL. THE CASERTA WINE CO., New York, N. Y.
Filed May 25, 1914. Serial No. 78,516. PUBLISHED JULY 7, 1914.

99,693. BOND WRITING-PAPER. THE CHATFIELD & WOODS COMPANY, Cincinnati, Ohio.
Filed May 18, 1914. Serial No. 78,349. PUBLISHED JULY 14, 1914.

99,694. MONTHLY AND WEEKLY PERIODICALS. CHAUTAUQUA INSTITUTION, Chautauqua and New York, N. Y., and Chicago, Ill.
Filed May 2, 1914. Serial No. 77,952. PUBLISHED JUNE 30, 1914.

99,695. KINEMATOGRAPHIC APPARATUS. CIE GLE DE PHONOGRAPHES, CINEMATOGRAPHES ET APPAREILS DE PRECISION, Paris, France.
Filed October 18, 1911. Serial No. 59,213. PUBLISHED MARCH 26, 1912.

99,696. CHOCOLATE CANDY. THE GEORGE CLOSE COMPANY, Cambridge, Mass.
Filed March 23, 1914. Serial No. 76,841. PUBLISHED JULY 14, 1914.

99,697. CHEMICAL DRIER FOR FERTILIZERS. COBB COUNTY CHEMICAL MINING CO., Atlanta, Ga.
Filed May 29, 1914. Serial No. 78,646. PUBLISHED JULY 7, 1914.

99,698. SELF-RISING FLOUR. CONSOLIDATED GROCERY COMPANY, Pensacola, Jacksonville, and Tampa, Fla.
Filed June 6, 1914. Serial No. 78,859. PUBLISHED JULY 14, 1914.

99,699. POWER TRANSMISSION AND CONVEYER BELTS. THE CONTINENTAL SUPPLY COMPANY, Youngstown, Ohio.
Filed January 7, 1914. Serial No. 74,999. PUBLISHED JUNE 30, 1914.

99,700. FURNITURE-POLISH. CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name American Drug Mfg. Co., Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,942. PUBLISHED JULY 7, 1914.

99,701. FURNITURE-POLISH. CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name American Drug Mfg. Co., Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,943. PUBLISHED JULY 7, 1914.

99,702. MACHINE-OIL. CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name American Drug Mfg. Co., Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,953. PUBLISHED JULY 7, 1914.

99,703. METAL-POLISH, GLOVE- AND CLOTHES-CLEANERS IN POWDERED OR LIQUID FORM, AND SOAPS. CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name American Drug Mfg. Co., Jackson, Tenn.
Filed July 7, 1913. Serial No. 71,557. PUBLISHED JULY 14, 1914.

99,704. SEMI-ANNUAL PUBLICATION OF A RECORD OF ENFORCED COLLECTIONS, TRADE ABUSES, AND REFUSALS OF CREDIT. THE CREDIT CLEARING HOUSE, Jersey City, N. J., and New York, N. Y.
Filed May 1, 1914. Serial No. 77,912. PUBLISHED JUNE 30, 1914.

99,705. FRUIT-JAR RINGS. SAMUEL CUPPLES WOODEN WARE COMPANY, St. Louis, Mo.
Filed May 2, 1914. Serial No. 77,950. PUBLISHED JUNE 30, 1914.

99,706. SALTED PEANUTS, PISTACHIO-NUTS, SALTED ALMONDS, STUFFED DATES, AND FILBERTS. CURTIS AND HOOD CONFECTIONERY CO., Chicago, Ill.
Filed March 25, 1914. Serial No. 76,921. PUBLISHED JULY 7, 1914.

99,707. MOTOR-TRUCKS. THE DART MANUFACTURING COMPANY, Waterloo, Iowa.
Filed April 8, 1914. Serial No. 77,303. PUBLISHED JULY 7, 1914.

99,708. POPPING-CORN. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed May 18, 1914. Serial No. 78,350. PUBLISHED JULY 14, 1914.

99,709. POPPING-CORN. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed May 18, 1914. Serial No. 78,351. PUBLISHED JULY 14, 1914.

99,710. CIGARS, CHEROOTS, CIGARETTES, AND CHEWING AND SMOKING TOBACCOS. DORR CIGAR FACTORY, Augusta, Ga.
Filed December 28, 1912. Serial No. 67,622. PUBLISHED JULY 7, 1914.

99,711. DRESSING FOR ALL DULL LEATHER. DULLENE MFG. COMPANY, Philadelphia, Pa.
Filed April 18, 1914. Serial No. 77,557. PUBLISHED JULY 7, 1914.

99,712. SELF-RISING FLOUR. THE DUNLOP MILLING CO., Clarksville, Tenn.
Filed June 6, 1914. Serial No. 78,860. PUBLISHED JULY 14, 1914.

99,713. RUBBER SHEET-PACKING AND ROUND GASKET-TUBING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,271. PUBLISHED JUNE 30, 1914.

99,714. FIBROUS SHEET-PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,272. PUBLISHED JUNE 30, 1914.

99,715. RUBBER AND DUCK PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,273. PUBLISHED JUNE 30, 1914.

99,716. ASBESTOS PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,274. PUBLISHED JUNE 30, 1914.

99,717. RUBBER SHEET-PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,276. PUBLISHED JUNE 30, 1914.

99,718. ASBESTOS SHEET-PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,277. PUBLISHED JUNE 30, 1914.

99,719. ASBESTOS SHEET-PACKING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,278. PUBLISHED JUNE 30, 1914.

99,720. RUBBER SHEET-PACKING AND ROUND GASKET-TUBING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,279. PUBLISHED JUNE 30, 1914.

99,721. CERTAIN NAMED SUPPLIES USED IN MAKING PIANOS AND OTHER MUSICAL INSTRUMENTS. ESTATE OF CHARLES F. GOEPEL, New York, N. Y.; Fannie J. Goepel, executrix of Charles F. Goepel, deceased.
Filed May 10, 1913. Serial No. 70,348. PUBLISHED JULY 7, 1914.

99,722. BLANK FORMS FOR USE IN MAKING UP ABSTRACTS OF TITLE TO REAL ESTATE. THE ESTES TITLE INDEXES COMPANY, Little Rock, Ark.
Filed June 11, 1914. Serial No. 78,998. PUBLISHED JULY 7, 1914.

99,723. CANDY. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,799. PUBLISHED JULY 14, 1914.

99,724. CANDY. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,801. PUBLISHED JULY 14, 1914.

99,725. CANDY. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,809. PUBLISHED JULY 14, 1914.

99,726. COVERED GLASS CONTAINERS—VIZ., PITCHERS, BOTTLES, JUGS, JARS, AND TANKARDS. ALBERT H. FRANKEL, New York, N. Y.
Filed January 23, 1914. Serial No. 75,382. PUBLISHED JULY 7, 1914.

99,727. FOUNTAIN-PENS AND THE PARTS THEREOF. GEM FOUNTAIN PEN CORPORATION, New York, N. Y.
Filed May 26, 1913. Serial No. 70,658. PUBLISHED JULY 7, 1914.

99,728. GLASS LAMPS, COLUMNS, BASES, SUPPORTS, GLOBES, SHADES, REFLECTORS, AND BOWLS FOR ILLUMINATING PURPOSES. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed July 24, 1913. Serial No. 71,944. PUBLISHED JULY 7, 1914.

99,729. CATARRH MEDICINE. JAMES M. GEORGE, Amarillo, Tex.
Filed April 16, 1914. Serial No. 77,530. PUBLISHED JULY 14, 1914.

99,730. REMEDY FOR SORE THROATS, STIFF NECKS, AND PAINS IN THE CHEST. GOOS-OLENE CO., Superior, Wis.
Filed April 15, 1914. Serial No. 77,488. PUBLISHED JULY 7, 1914.

99,731. MONTHLY PUBLICATION. MAX GREENBERG & Co., New York, N. Y.
Filed May 7, 1914. Serial No. 78,073. PUBLISHED JULY 7, 1914.

99,732. COFFEE. J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y.
Filed May 23, 1914. Serial No. 78,498. PUBLISHED JULY 7, 1914.

99,733. FRESH AND CANNED PINEAPPLES. GRIFFITH-DURNEY CO., San Francisco, Cal.
Filed March 25, 1914. Serial No. 76,933. PUBLISHED JULY 14, 1914.

99,734. TEAS AND COFFEES. THE GROCERS COFFEE CO., Indianapolis, Ind.
Filed April 3, 1914. Serial No. 77,176. PUBLISHED JULY 14, 1914.

99,735. SYRUPS FOR TABLE USE. GEORGE A. HAGENI, New Orleans, La.
Filed February 25, 1914. Serial No. 76,139. PUBLISHED JULY 7, 1914.

99,736. CANNED PINEAPPLE. HAWAIIAN PINEAPPLE CO., LTD., Honolulu, Hawaii.
Filed May 1, 1914. Serial No. 77,922. PUBLISHED JULY 14, 1914.

99,737. CANDY. HAWLEY & HOOPS, New York, N. Y.
Filed June 6, 1914. Serial No. 78,870. PUBLISHED JULY 14, 1914.

99,738. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. JOSIAH HEAVENRIDGE, Canon City, Colo.
Filed May 9, 1914. Serial No. 78,166. PUBLISHED JULY 14, 1914.

99,739. CHOCOLATE CANDY. HEIT-MILLER-LAU CO., Fort Wayne, Ind.
Filed May 15, 1914. Serial No. 78,304. PUBLISHED JULY 14, 1914.

99,740. OLIVE-OIL. G. F. HEUBLEIN & BRO., Hartford, Conn.
Filed June 1, 1914. Serial No. 78,698. PUBLISHED JULY 14, 1914.

99,741. MOUSE, RAT, ANIMAL, GAME, FLY TRAPS, AND CERTAIN POULTRY APPLIANCES. HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,831. PUBLISHED JUNE 30, 1914.

99,742. CERTAIN LIGHTING APPARATUS AND PARTS THEREOF, HEATING STOVES AND RANGES, NOT ELECTRICAL. HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,832. PUBLISHED JULY 7, 1914.

99,743. TOILET PREPARATION USED AS A LIQUID SOAP FOR SHAMPOOING THE HAIR AND BATHING PURPOSES. HISCOX BROS. CO., Patchogue, N. Y.
Filed January 14, 1914. Serial No. 75,179. PUBLISHED JULY 7, 1914.

99,744. COMPOSITION IN SHEET FORM FOR USE IN MAKING WASHERS, GASKETS, PACKING, AND THE LIKE. HUDSON MECHANICAL RUBBER COMPANY, Trenton, N. J., and New York, N. Y.
Filed January 3, 1913. Serial No. 67,690. PUBLISHED JUNE 30, 1914.

99,745. HARNESS-OIL DRESSING. THE HUTCHINSON OIL COMPANY, Hutchinson, Kans.
Filed April 22, 1914. Serial No. 77,651. PUBLISHED JULY 14, 1914.

99,746. TEA. KENZO IKEDA, New York, N. Y.
Filed May 7, 1914. Serial No. 78,080. PUBLISHED JULY 14, 1914.

99,747. PRESSED AND BLOWN TABLE-GLASSWARE. IMPERIAL GLASS COMPANY, Bellaire, Ohio.
Filed March 17, 1913. Serial No. 69,102. PUBLISHED JUNE 30, 1914.

99,748. CERTAIN NAMED GLASSWARE FOR TABLE USE. IMPERIAL GLASS COMPANY, Bellaire, Ohio.
Filed February 18, 1914. Serial No. 76,000. PUBLISHED JULY 7, 1914.

99,749. INTERNAL-COMBUSTION ENGINES AND PARTS THEREOF. INTERNATIONAL HARVESTER CORPORATION, Chicago, Ill.
Filed August 1, 1913. Serial No. 72,102. PUBLISHED OCTOBER 14, 1913.

99,750. MACARONI. FRANCESCO IZZO & FIGLIO, Torre Annunziata, near Naples, Italy.
Filed March 10, 1914. Serial No. 76,498. PUBLISHED JULY 14, 1914.

99,751. COFFEE. JELLICO GROCERY COMPANY, Jellico, Tenn.
Filed March 5, 1914. Serial No. 76,362. PUBLISHED JULY 14, 1914.

99,752. CANNED SALMON. KADIAK FISHERIES CO., Seattle, Wash.
Filed May 14, 1914. Serial No. 78,279. PUBLISHED JULY 14, 1914.

99,753. TEA. THE C. D. KENNY CO., Baltimore, Md.
Filed March 5, 1914. Serial No. 76,364. PUBLISHED JULY 7, 1914.

99,754. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa.
Filed May 27, 1914. Serial No. 78,582. PUBLISHED JULY 7, 1914.

99,755. SQUABS. HARRY B. KLEINE, Covington, Ky.
Filed March 16, 1914. Serial No. 76,686. PUBLISHED JULY 7, 1914.

99,756. EMULSION OF PORT-WINE AND OLIVE-OIL. F. KOREF & COMPANY New York, N. Y.
Filed June 26, 1913. Serial No. 71,378. PUBLISHED NOVEMBER 11, 1913.

99,757. SELF-RISING FLOUR. MOSE H. LAND MILLING COMPANY, Marshall, Mo.
Filed May 21, 1914. Serial No. 78,441. PUBLISHED JULY 7, 1914.

99,758. METAL-POLISH. JOHN H. LAWRENCE, Washington, D. C.
Filed April 3, 1914. Serial No. 77,183. PUBLISHED JULY 14, 1914.

99,759. LICE AND FLY DESTROYER. GEORGE W. LEWIS & SON, Westboro, Mass.
Filed June 9, 1913. Serial No. 70,977. PUBLISHED JULY 14, 1914.

99,760. CANDY. THE FREDERICK W. LIPPS COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed May 9, 1914. Serial No. 78,171. PUBLISHED JULY 7, 1914.

99,761. MEDICAL COMPOUNDS FOR THE DIGESTIVE ORGANS. DR. LONERGAN'S, Pittsburgh, Pa.
Filed March 22, 1913. Serial No. 69,255. PUBLISHED JULY 14, 1914.

99,762. BISCUIT. LOOSE-WILES BISCUIT COMPANY, Boston, Mass.
Filed May 27, 1914. Serial No. 78,584. PUBLISHED JULY 7, 1914.

99,763. CANDIES. LOVELL & COVEL COMPANY, Boston, Mass.
Filed May 22, 1914. Serial No. 78,475. PUBLISHED JULY 7, 1914.

99,764. CANDIES. LOVELL & COVEL COMPANY, Boston, Mass.
Filed May 22, 1914. Serial No. 78,476. PUBLISHED JULY 7, 1914.

99,765. CANDIES. LOVELL & COVEL COMPANY, Boston, Mass.
Filed May 22, 1914. Serial No. 78,477. PUBLISHED JULY 7, 1914.

99,766. CIGARETTES. GODFREY S. MAHN, New York, N. Y.
Filed February 18, 1914. Serial No. 76,010. PUBLISHED JUNE 30, 1914.

99,767. PERFUMERY. MELLIER COMPANY-PERFUMER, St. Louis, Mo.
Filed June 20, 1912. Serial No. 64,286. PUBLISHED JULY 14, 1914.

99,768. FILMS FOR THE SO-CALLED LIVING PHOTOGRAPHS. MESSTERS-PROJECTION G. M. B. H., Berlin, Germany.
Filed December 13, 1912. Serial No. 67,391. PUBLISHED JANUARY 13, 1914.

99,769. COFFEE AND TEA. MEYER, FOOTE & DAYTON CO., Rochester, N. Y.
Filed March 23, 1914. Serial No. 76,865. PUBLISHED JULY 7, 1914.

99,770. CERTAIN NAMED FLOOR CLEANING AND POLISHING DEVICES. MILWAUKEE SALES CO., Milwaukee, Wis.
Filed April 9, 1914. Serial No. 77,351. PUBLISHED JULY 7, 1914.

99,771. DATES. A. W. MORRIS CO., New York, N. Y.
Filed May 22, 1914. Serial No. 78,480. PUBLISHED JULY 7, 1914.

99,772. CANDIES. THE NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed March 22, 1911. Serial No. 55,239. PUBLISHED JULY 14, 1914.

99,773. MONTHLY PERIODICAL. NIAGARA PAPER MILLS, Lockport, N. Y.
Filed March 22, 1913. Serial No. 69,264. PUBLISHED MAY 5, 1914.

99,774. CLEANSER. THE NORMAN COMPANY, Philadelphia, Pa.
Filed May 11, 1914. Serial No. 78,202. PUBLISHED JULY 14, 1914.

99,775. SOAP. NUWAY MANUFACTURING CO., Souderton, Pa.
Filed April 27, 1914. Serial No. 77,809. PUBLISHED JULY 7, 1914.

99,776 TOILET SOAP SOLON PALMER, New York, N. Y.
Filed April 30, 1914. Serial No. 77,895. PUBLISHED JULY 7, 1914.

99,777. MACARONI, NOODLES, SPAGHETTI, SOUP MARKS. PANAMA MACARONI COMPANY, Los Angeles and Culver City, Cal.
Filed March 31, 1914. Serial No. 77,109. PUBLISHED JULY 14, 1914.

99,778. PRINTING AND WRITING PAPERS. PARSONS PAPER CO., Holyoke, Mass.
Filed March 21, 1914. Serial No. 76,823. PUBLISHED JULY 14, 1914.

99,779. TOILET-PAPERS. PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y.
Filed May 13, 1914. Serial No. 78,252. PUBLISHED JULY 14, 1914.

99,780. COFFEE. POWELL-SANDERS CO., Spokane, Wash.
Filed June 1, 1914. Serial No. 78,711. PUBLISHED JULY 14, 1914.

99,781. STEAM AND HOT-WATER BOILERS AND RADIATORS. PRESSED METAL RADIATOR COMPANY, Pittsburgh, Pa.
Filed April 10, 1914. Serial No. 77,390. PUBLISHED JULY 7, 1914.

99,782. STEAM AND HOT-WATER BOILERS AND RADIATORS. PRESSED METAL RADIATOR COMPANY, Pittsburgh, Pa.
Filed April 10, 1914. Serial No. 77,391. PUBLISHED JUNE 30, 1914.

99,783. FLAVORING EXTRACTS FOR FOODS. PRICE FLAVORING EXTRACT COMPANY, Chicago, Ill.
Filed February 10, 1914. Serial No. 75,825. PUBLISHED JULY 7, 1914.

99,784. SOAP. THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio.
Filed April 30, 1914. Serial No. 77,894. PUBLISHED JULY 14, 1914.

99,785. YEAST. PURITY YEAST COMPANY, Beresford, S. D.
Filed June 3, 1914. Serial No. 78,777. PUBLISHED JULY 14, 1914.

99,786. INTERNAL DISINFECTANTS FOR URIC-ACID DIATHESIS AND GENITAL URINARY INFLAMMATIONS. J. D. RIEDEL AKTIENGESELLSCHAFT, Berlin, Germany.
Filed August 19, 1913. Serial No. 72,422. PUBLISHED NOVEMBER 18, 1913.

99,787. OINTMENTS AND SALVES. ROMEO RINALDI, Jersey City, N. J.
Filed December 27, 1913. Serial No. 74,854. PUBLISHED JULY 14, 1914.

99,788. TOOTH-POWDER, TOOTH-PASTE, TOOTH-WASH, AND FACE-CREAM. JOHN W. ROBB, Philadelphia, Pa.
Filed May 23, 1914. Serial No. 78,506. PUBLISHED JULY 14, 1914.

99,789. CASE-HARDENING MATERIALS. RODMAN CHEMICAL COMPANY, East Pittsburgh, Pa.
Filed May 14, 1914. Serial No. 78,286. PUBLISHED JULY 14, 1914.

99,790. CIGARS. RANDOLPH ROSE, Chattanooga, Tenn.
Filed December 20, 1913. Serial No. 74,747. PUBLISHED JULY 7, 1914.

99,791. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,258. PUBLISHED JULY 7, 1914.

99,792. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 13, 1914. Serial No. 78,259. PUBLISHED JULY 7, 1914.

99,793. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,455. PUBLISHED JULY 7, 1914.

99,794. PRUNES. SANTA ROSA CURED FRUIT ASSOCIATION, Santa Rosa, Cal.
Filed April 17, 1914. Serial No. 77,549. PUBLISHED JULY 14, 1914.

99,795. TEA. SCHORN & BROWER, New York, N. Y.
Filed May 21, 1914. Serial No. 78,460. PUBLISHED JULY 7, 1914.

99,796. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. JOSEPH C. SCHROEDER, St. Louis, Mo.
Filed January 29, 1913. Serial No. 68,190. PUBLISHED MARCH 17, 1914.

99,797. SELF-RISING WHEAT-FLOUR. SCHULTZ, BAUJAN & CO., Beardstown, Ill.
Filed June 6, 1914. Serial No. 78,887. PUBLISHED JULY 14, 1914.

99,798. BREAD. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed June 6, 1914. Serial No. 78,889. PUBLISHED JULY 14, 1914.

99,799. CIGARS. SCHWAB BROS. & BAER, INC., New York, N. Y.
Filed April 27, 1914. Serial No. 77,814. PUBLISHED JUNE 30, 1914.

99,800. CORNMEAL. THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo.
Filed March 30, 1914. Serial No. 77,114. PUBLISHED JULY 14, 1914.

99,801. CERTAIN NAMED PUBLICATIONS. THEODORE L. SHAW, Chicago, Ill.
Filed February 12, 1914. Serial No. 75,877. PUBLISHED JUNE 30, 1914.

99,802. CANDIES. THE SHELBY CANDY & MFG. CO., Shelby, Ohio.
Filed May 28, 1914. Serial No. 78,622. PUBLISHED JULY 7, 1914.

99,803. DISINFECTANTS, DEODORANTS, PERFUMES, AND POROUS HOLDERS THEREFOR. SHOEMAKER & BUSCH, Philadelphia, Pa.
Filed May 18, 1914. Serial No. 78,369. PUBLISHED JULY 14, 1914.

99,804. WHEAT-FLOUR, MORE SPECIFICALLY, SELF-RISING FLOUR. SLATER MILL & ELEVATOR COMPANY, Slater, Mo.
Filed May 11, 1914. Serial No. 78,207. PUBLISHED JULY 14, 1914.

99,805. WHEAT-FLOUR. SLATER MILL AND ELEVATOR COMPANY, Slater, Mo.
Filed May 11, 1914. Serial No. 78,208. PUBLISHED JULY 14, 1914.

99,806. WHEAT-FLOUR. J. ALLEN SMITH & COMPANY, Knoxville, Tenn.
Filed June 6, 1914. Serial No. 78,885. PUBLISHED JULY 14, 1914.

99,807. SOAP. SOCIÉTÉ ANONYME DES SAVONS DE MARSEILLE, Marseille, France.
Filed March 29, 1913. Serial No. 69,435. PUBLISHED JULY 14, 1914.

99,808. PHARMACEUTICAL PRODUCT OBTAINED FROM DIGITALIS-LEAVES. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed July 18, 1913. Serial No. 71,842. PUBLISHED JULY 14, 1914.

99,809. PHARMACEUTICAL PRODUCT PREPARED FROM THE BLOOD OF ANIMALS OR ANIMAL SUBSTANCE. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed January 20, 1914. Serial No. 75,315. PUBLISHED JULY 7, 1914.

99,810. CONDENSED MILK. SOUTH HOLLAND MILK CORPORATION, New York, N. Y.
Filed June 1, 1914. Serial No. 78,714. PUBLISHED JULY 14, 1914.

99,811. BROOD-COOP. PAUL J. SPEICHER, Gaston, Ind.
Filed May 9, 1914. Serial No. 78,175. PUBLISHED JULY 7, 1914.

99,812. REMEDY FOR THE HAIR AND SCALP. SPENCER & WASHINGTON, Atlantic City, N. J.
Filed May 12, 1914. Serial No. 78,266. PUBLISHED JULY 14, 1914.

99,813. COMPOUND OXYGEN FOR TREATMENT, BY INHALATION, OF CHRONIC DISEASES. STARKEY & PALEN, Philadelphia, Pa.
Filed August 6, 1913. Serial No. 72,194. PUBLISHED JANUARY 20, 1914.

99,814. CIGARS, CIGARETTES, CHEROOTS, AND MANUFACTURED TOBACCO. SWAAB, SAN & MARQUSEE, Philadelphia, Pa.
Filed April 18, 1914. Serial No. 77,571. PUBLISHED JUNE 30, 1914.

99,815. SOAP. HENRY TATRO, Burlington, Vt.
Filed May 11, 1914. Serial No. 78,211. PUBLISHED JULY 14, 1914.

99,816. FIREPROOF TIMBER. THE TIMBER FIREPROOFING COMPANY, LIMITED, London, England.
Filed April 28, 1914. Serial No. 77,849. PUBLISHED JULY 7, 1914.

99,817. ENVELOPS. HENRY TRENCHARD, Jr., New York, N. Y.
Filed May 28, 1914. Serial No. 78,629. PUBLISHED JULY 7, 1914.

99,818. CANNED SALMON. UNION FISHERMEN'S COOPERATIVE PKG. CO., Astoria, Oreg.
Filed May 19, 1914. Serial No. 78,402. PUBLISHED JULY 14, 1914.

99,819. CERTAIN NAMED ORNAMENTAL DESIGNS FOR COLLEGES AND FRATERNITIES. UTLEY'S INC., Holyoke, Mass.
Filed March 8, 1913. Serial No. 68,932. PUBLISHED JUNE 30, 1914.

99,820. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed May 28, 1914. Serial No. 78,630. PUBLISHED JULY 7, 1914.

99,821. TRADE PERIODICAL. THE VANITY FAIR PUBLISHING COMPANY, INC., New York, N. Y.
Filed April 4, 1914. Serial No. 77,225. PUBLISHED JUNE 30, 1914.

99,822. PREPARATION FOR TREATING MALARIA AND SIMILAR DISEASES AND PNEUMOCOCCUS INFECTION. VEREINIGTE CHININFABRIKEN ZIMMER & CO. GES. MIT BESCHRÄNKTER HAFTUNG, Frankfort-on-the-Main, Germany.
Filed November 24, 1913. Serial No. 74,176. PUBLISHED JULY 14, 1914.

99,823. CANDY. WARD-OWSLEY CO., Aberdeen, S. D.
Filed May 26, 1914. Serial No. 78,574. PUBLISHED JULY 7, 1914.

99,824. GRASS, VEGETABLE, FLOWER, AND FARM SEEDS. WEEBER & DON, New York, N. Y.
Filed May 7, 1914. Serial No. 78,118. PUBLISHED JULY 7, 1914.

99,825. CERTAIN NAMED FOODS. THE WEIDEMAN CO., Cleveland, Ohio.
Filed March 26, 1914. Serial No. 76,985. PUBLISHED JULY 14, 1914.

99,826. SELF-PLAYING PIANOS, ORGANS, AND ORCHESTRIONS. M. WELTE & SONS, INC., New York, N. Y.
Filed April 21, 1914. Serial No. 77,641. PUBLISHED JULY 14, 1914.

99,827. WOOD-PULP AND PAPER-PULP. WEST VIRGINIA PULP PRODUCTS CO., New York, N. Y.
Filed March 13, 1914. Serial No. 76,623. PUBLISHED JUNE 30, 1914.

99,828. BREAD. WILLIAMS BAKING COMPANY, Newark, N. J.
Filed May 9, 1914. Serial No. 78,179. PUBLISHED JULY 14, 1914.

99,829. SHAVING-CREAM. HENRY A. WISE WOOD, New York, N. Y.
Filed April 6, 1912. Serial No. 62,697. PUBLISHED JULY 7, 1914.

99,830. CANDY. JOHN G. WOODWARD & CO. (INC.,) Council Bluffs, Iowa.
Filed June 6, 1914. Serial No. 78,901. PUBLISHED JULY 14, 1914.

99,831. COFFEE, TEAS, AND SPICES. THE WOOLSON SPICE COMPANY, Toledo, Ohio.
Filed April 8, 1914. Serial No. 77,328. PUBLISHED JULY 14, 1914.

99,832. PRINTING-PLATES. WILLIAM JOHN YEOELL, Philadelphia, Pa.
Filed June 4, 1914. Serial No. 78,820. PUBLISHED JULY 7, 1914.

LABELS

REGISTERED SEPTEMBER 15, 1914.

17,960.—*Title:* "ALADDIN POLISH." (For Liquid Polish.) ALADDIN SPECIALTY CO., Chicago, Ill. Filed July 9, 1914.

17,961.—*Title:* "AUGERMEIER'S PEERLESS LINIMENT." (For Liniment.) JOHN A. AUGERMEIER, Jr., Elberfeld, Ind. Filed February 9, 1914.

17,962.—*Title:* "BARKER'S ROUP REMEDY FOR POULTRY." (For a Remedy for Roup in Poultry.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

17,963.—*Title:* "BARKER'S GAPE REMEDY." (For a Remedy for Gapes in Chickens.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

17,964.—*Title:* "BARKER'S HEALING OINTMENT." (For Ointment.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

17,965.—*Title:* "BARKER'S SPECIAL POULTRY REMEDY." (For a Remedy for Diseases of Poultry.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

17,966.—*Title:* "BARKER'S VEGETABLE HORSE, CATTLE AND POULTRY MEDICINE POWDER." (For Medicines for Horses, Cattle, and Poultry.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

17,967.—*Title:* "BARKER'S LICE POWDER." (For a Lice-Powder for Poultry.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed August 20, 1914.

17,968.—*Title:* "SWEET PEPSIN SALTS." (For Sweet Pepsin Salts.) JOHN J. CRONAN, Denver, Colo. Filed July 13, 1914.

17,969.—*Title:* "HOMOGENIZED LAURENTIA MILK." (For Homogenized Milk.) FLOYD E. CRYDER, Minneapolis, Minn. Filed April 27, 1914.

17,970.—*Title:* "I-NEED-A." (For Cigars.) CHAS. DOERR, Jr., St. Louis, Mo. Filed August 3, 1914.

17,971.—*Title:* "EC-ZENE SKIN SOAP, BEST FOR THE NURSERY, TOILET AND BATH." (For Soap.) EC-ZENE COMPANY, St. Paul, Minn. Filed July 25, 1914.

17,972.—*Title:* "GOLDEN ROD. (For Butter.) GEO. R. ELDRIDGE CO., Detroit, Mich. Filed July 10, 1914.

17,973.—*Title:* "3 IN 1." (For Blackberry Ginger and Brandy.) FIALLA & EPPLER, INC., New York, N. Y. Filed August 13, 1914.

17,974.—*Title:* "ONE MINUTE SILVER CLEANER." (For a Cleaning and Polishing Compound.) LLEWELLYN W. ESTES, Washington, D. C. Filed July 24, 1914.

17,975.—*Title:* "PORTALES GEMS." (For Cantaloups.) R. W. GEES COMMISSION CO., Kansas City, Mo. Filed May 18, 1914.

17,976.—*Title:* "J. REYES Y CIA." (For Sherry-Wine.) PAUL GELPI & SONS, New Orleans, La. Filed August 22, 1914.

17,977.—*Title:* "BERWICK BRAND DRY GIN." (For Gin.) PAUL GELPI & SONS, New Orleans, La. Filed August 22, 1914.

17,978.—*Title:* "J. REYES Y CA." (For Jerez Wine.) PAUL GELPI & SONS, New Orleans, La. Filed August 22, 1914.

17,979.—*Title* "DE LIGHT OF THE WORLD." (For Dynamos.) ALFRED W. HOCCHIN, Kirkwood, N. J. Filed August 13, 1914.

17,980.—*Title:* "SUGAR-VALLEY MINERAL WATER." (For Mineral Water.) LACEY MCCLASKEY, Bloomfield, Ky. Filed August 24, 1914.

17,981.—*Title:* "BRAUMEISTER BIER." (For Beer.) INDEPENDENT MILWAUKEE BREWERY, Milwaukee, Wis. Filed August 19, 1914.

17,982.—*Title:* "QUICK RELIEF LUNG BALSAM." (For Medicine.) QUICK RELIEF REMEDY COMPANY, Long Island City, N. Y. Filed July 25, 1914.

17,983.—*Title:* "ROBERT SMITH'S PHILADA. BROWN STOUT." (For Stout.) THE ROBERT SMITH ALE BREWING CO., Philadelphia, Pa. Filed August 3, 1914.

17,984.—*Title:* "THE LONE STAR ADJUSTABLE DRAFT HAME." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed June 18, 1914.

17,985.—*Title:* "NO. 568 ALL STEEL HAME CONCORD DANDY." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed August 26, 1914.

17,986.—*Title:* "NO. 568 ALL STEEL HAME CONCORD HIGH TOP." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed August 26, 1914.

17,987.—*Title:* "NO. 568 ALL STEEL HAME CONCORD FAVORITE." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed August 26, 1914.

17,988.—*Title:* "QUEEN CITY." (For Beer.) THE WETTERER BREWING CO., Cincinnati, Ohio. Filed July 28, 1914.

17,989.—*Title:* "ROYAL SEAL." (For Beer.) THE WETTERER BREWING CO., Cincinnati, Ohio. Filed July 28, 1914.

17,990.—*Title:* "ROOKWOOD." (For Enamel.) THE A. WILHELM COMPANY, Reading, Pa.; New York, N. Y., and Boston, Mass. Filed June 18, 1914.

17,991.—*Title:* "ROOKWOOD." (For Enamel.) THE A. WILHELM COMPANY, Reading, Pa.; New York, N. Y., and Boston, Mass. Filed June 18, 1914.

PRINTS

REGISTERED SEPTEMBER 15, 1914.

3,720.—*Title:* "BUDWEISER HONORED BY ALL NATIONS." (For Beer.) ANHEUSER BUSCH BREWING ASSN., St. Louis, Mo. Filed July 18, 1914.

3,721.—*Title:* "B. V. D. 1914 YOUTH'S UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed August 25, 1914.

3,722.—*Title:* "CRITERION UNDERWEAR. COOL COMFORTABLE CORRECT." (For Ladies' Underwear.) SPENCER G. EASTON, Philadelphia, Pa. Filed August 1, 1914.

3,723.—*Title:* "THE DENBY GIRL." (For Cigars.) JOHN FENDRICH, Evansville, Ind. Filed April 4, 1914.

3,724.—*Title:* "UTOPIA LUSTROUS EMBROIDERY FLOSSES." (For Embroidery-Floss.) HENRY E. FRANKENBERG COMPANY, New York, N. Y. Filed July 18, 1914.

3,725.—*Title:* "KELLY DOMESTIC SCIENCE TABLE." (For Tables.) F. F. HANSELL & BRO., LTD., New Orleans, La. Filed July 13, 1914.

3,726.—*Title:* "SUN RIZE." (For Bread.) THOMAS G. HOBBS, Norfolk, Va. Filed January 28, 1913.

3,727.—*Title:* "LOWNEY'S BREAKFAST COCOA." (For Cocoa.) WALTER M. LOWNEY CO., Boston, Mass. Filed August 15, 1914.

3,728.—*Title:* "MANHATTAN." (For Petticoats.) MANHATTAN PETTICOAT CO., INC., New York, N. Y. Filed July 17, 1914.

3,729.—*Title:* "WHEN P. A. SPEAKS BE A GOOD LIST'NER!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,730.—*Title:* "THERE'S PEACE IN EVERY PUFF!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,731.—*Title:* "PHOTOPLAST." (For an Apparatus for the Production of Scenic Effects.) CHARLES E. SCHNEIDER, doing business under the name and style of The Photoplast Company, New Haven, Conn. Filed August 24, 1914.

3,732.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,733.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,734.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,735.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,736.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,737.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,738.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed August 21, 1914.

3,739.—*Title:* "DRINK HOLLANDER BEER." (For Beer.) THE CONRAD SEIPP BREWING CO., Chicago, Ill. Filed Aug. 21, 1914.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE CONRAD SEIPP BREWING COMPANY.

Decided July 7, 1914.

TRADE-MARKS—GEOGRAPHICAL.

The word "Hollander" as applied to beer *Held* geographical, and therefore not registrable.

ON APPEAL.

TRADE-MARK FOR BEER.

Mr. Frank F. Reed and *Mr. Edward S. Rogers* and *Messrs. Browne & Phelps* for the applicant.

NEWTON, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the word "Hollander" as a trade-mark for beer.

The Examiner has based his refusal on the ground that the word "Hollander" is geographically descriptive, indicating that the beer is manufactured in Holland or in accordance with a method for manufacturing Holland beer, the term "Hollander" being in the same category as "American," which has been held invalid in *American Wine Company* v. *Kohlman* (158 Fed. Rep., 830) and *Wolf Bros. & Co.* v. *Hamilton-Brown Shoe Company*, (165 Fed. Rep., 413, etc.)

Applicant contends very strenuously that "Hollander" is less descriptive than "American," citing as an example that it is proper to speak of "American" shoes or "American" beer, but not "Hollander" shoes or "Hollander" beer.

While this distinction between these words undoubtedly exists, the word "Hollander" points too strongly to Holland. Indeed, the use of this word on beer would point so decidedly to Holland that its significance as pointing to the manufacturer would be practically overshadowed, and the decision of the Examiner of Trade-Marks seems to be right and is affirmed.

EX PARTE THE YALE & TOWNE MANUFACTURING CO.

Decided July 17, 1914.

TRADE-MARKS—"YALE" FOR BOLT-OPERATING MACHINES—REGISTRABLE UNDER THE TEN-YEAR PROVISO OF TRADE-MARK ACT.

The word "Yale" *Held* registrable as a trade-mark under the ten-year proviso of the Trade-Mark Act.

ON APPEAL.

TRADE-MARK FOR AUTOMATIC BOLT-OPERATING MACHINES, PULLEY BLOCKS AND HOISTS.

Mr. Henry A. Seymour for the applicant.

NEWTON, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register under the ten-year proviso of the trade-mark statutes the word "Yale" as a trade-mark for bolt-operating machines, etc.

The Examiner bases his rejection upon the prohibition contained in the amendment of January 8, 1913, to the trade-mark statutes:

SEC. 5. That no mark by which the goods of the owner of the mark may be distinguished from other goods of the same class shall be refused registration as a trade-mark on account of the nature of such mark unless such mark—

(*a*) Consists of or comprises immoral or scandalous matter.

(*b*) Consists of or comprises the flag or coat of arms or other insignia of the United States or any simulation thereof, or of any State or municipality or of any foreign nation, or of any design or picture that has been or may hereafter be adopted by any fraternal society as its emblem, or of any name, distinguishing mark, character, emblem, colors, flag, or banner adopted by any institution, organization, club, or society which was incorporated in any State in the United States prior to the date of the adoption and use by the applicant: *Provided*, That said name, distinguishing mark, character, emblem, colors, flag, or banner was adopted and publicly used by said institution, organization, club, or society prior to the date of adoption and use by the applicant: *Provided*, That trade-marks which are identical with a registered or known trade-mark owned and in use by another and appropriated to merchandise of the same descriptive properties, or which so nearly resemble a registered or known trade-mark owned and in use by another and appropriated to merchandise of the same descriptive properties as to be likely to cause confusion or mistake in the mind of the public or to deceive purchasers shall not be registered: *Provided*, That no mark which consists merely in the name of an individual, firm, corporation, or association not written, printed, impressed, or woven in some particular or distinctive manner, or in association with a portrait of the individual, or merely in words or devices which are descriptive of the goods with which they are used, or of the character or quality of such goods, or merely a geographical name or term, shall be registered under the terms of this act: *Provided further*, That no portrait of a living individual may be registered as a trade-mark except by the consent of such individual, evidenced by an instrument in writing: *And provided further*, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant, or his predecessors from whom he derived title, for ten years next preceding February twentieth, nineteen hundred and five: *Provided further*, That nothing herein shall prevent the registration of a trade-mark otherwise registrable because of its being the name of the applicant or a portion thereof.

From the exhibits filed in this case it appears that the applicant's mark "Yale" has been the subject of litigation in many suits and has been repeatedly upheld as a valid mark. Applicant has furthermore registered the mark in the principal foreign countries, has vigorously asserted its rights to the mark against infringers, and it is now an exceedingly valuable mark.

It is inconceivable that Congress in passing a trade-mark statute could have intended to prevent this applicant from registering this word.

Every one familiar with trade-marks knows how difficult it is to define what is known as technical

marks so as to distinguish all of them from *quasi* marks, which often receive protection on the ground of unfair competition. Congress has attempted to draw a line between such marks in the present trade-mark statute. The debates on the statute when it was pending before Congress, as well as the amendments to the statute, all clearly show that the intention of Congress was to provide a place for registration of those marks known as "technical" trade-marks and then to provide for registration of some other marks which, although not coming up to the standard of technical trade-marks, yet had, by their long use prior to the date of the passage of the statute of February 20, 1905, become recognized as pointing unmistakably to some manufacturer or dealer as its owner by right of such long use. And this statute should be interpreted with this clear intention of Congress in view, because the intention of Congress is so clear and the difficulty of framing a statute to carry out this intention is so apparent. As was quoted with approval in *Cahn, Belt & Company*, (122 O. G., 354; 27 App. D. C., 173:)

> The intent is the vital part, the essence of the law, and the primary rule of construction is to ascertain and give effect to that intent. "The intention of the legislature in enacting a law is the law itself, and must be enforced when ascertained, although it may not be consistent with the strict letter of the statute. Courts will not follow the letter of a statute when it leads away from the true intent and purpose of the legislature and to conclusions inconsistent with the general purpose of the act." (*Lewis Sunderland Statutory Construction*, sec. 633.)

The various decisions on this trade-mark statute since its passage bear out the rule of interpretation above annunciated, notably the decision of the Supreme Court in *Thaddeus Davids Co.* v. *Davids et al.*, (202 O. G., 952,) wherein it was pointed out that, although the statute provided—

> that nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act.

this proviso did not authorize the registration of immoral or scandalous matter or the flags of countries as trade-marks, not because the *wording* of the statute was not broad enough to allow the registration of scandalous matter or the flags of countries, but because it clearly was not the intention of Congress to authorize the registration of these things as trade-marks.

On the other hand, this decision held, in effect, that it was the intent of Congress to provide for the registration of *names* of individuals which, although not ordinarily registrable, would be registrable if they had been exclusively used ten years before the passage of the statute; hence the Court upheld the registration of "Davids," a mere surname, under this ten-year proviso of the statute.

It would seem to be an absurd and silly distinction to hold that Congress should have provided for the registration of the name of an individual which had been in use for ten years and not provide for the registration of the name of a corporation which had been used in good faith for ten years.

It is held, therefore, that the Congress never intended to preclude the registration of the names of corporations which had been used in good faith, as has the word "Yale" by this applicant, for ten years prior to February 20, 1905.

Furthermore, if it was the intention of Congress in the trade-mark statute to provide for the registration of all technical trade-marks and certain other non-technical trade-marks which had been in use for more than ten years prior to the statute, it is very clearly the duty of the Office to construe the statute strictly, if by a broad construction the clear intent of Congress is not carried out. Applying this rule to the present case, the word "Yale" is not the entire name of Yale University, but is only the prominent part thereof, and this statute therefore should not be construed to prevent this applicant from registering "Yale" because it was only the prominent feature of the name of the university. In other words, to carry out the intent of Congress a strict construction should be followed, if by so giving it the intention rather than the wording of the statute is carried out.

It must be held, therefore, that under the showing made by the record in this case applicant's mark should be registered, and the decision of the Examiner of Trade-Marks is overruled.

EX PARTE MUMFORD.

Decided June 30, 1914.

1. DIVISION—ELEMENTS OF THE CLAIM SHOULD NOT BE IGNORED.

   In making a requirement of division one of the elements of the claim cannot be ignored. If the Examiner is of the opinion that the combination including that element is old and the invention lies only in one of the elements, he should cite references to show the old combination and reject the claims.

2. PATENTABILITY—IN RE MCNEIL CONSTRUED.

   The decision in *in re McNeil* (100 O. G., 2178; 20 App. D. C., 294) is based on the ground that the coaction between the improved element of the combination and the other elements thereof was not different from that between the corresponding elements of the old combination. If the new element coacts with the other elements of the combination in a different manner from the corresponding elements of the old combination and a new result is obtained thereby, the decision does not apply.

ON PETITION.

APPARATUS FOR HOISTING AND CONVEYING MATERIALS.

Mr. Paul A. Blair for the applicant.

WHITEHEAD, *Assistant Commissioner:*

This case is before me on petition that, in the exercise of the supervisory authority of the Commissioner, the Examiner be directed to withdraw his requirement of division. The petition also states that for the purpose thereof the statutory right of appeal is waived.

Division was required between claim 12 and the remaining claims. The invention relates to means for handling material, and a carriage is provided adapted to move on an elevated cable which can be so manipulated as to raise and lower the carriage. Claim 12 includes the cable and the specific form of carriage, but does not state that the carriage can be raised and lowered by the cable, as do the other claims. The Examiner held that the mere inclusion of the cable did not alter the nature of the invention and that claim 12 was in effect merely a claim for a carriage which was adapted to move on a cable; that such a carriage forms a subject of invention separate from the combination of a carriage and a cable by which it is raised and lowered.

A requirement of division is reviewable in the first instance on appeal to the Examiners-in-Chief, and the mere fact that the applicant waives his right of appeal does not warrant the consideration on petition. If such were the case, an applicant could bring any question of merits to the Commissioner by waiving his right of appeal. In the present case, however, the question is rather one of the form of the Examiner's action than of merits.

In making a requirement of division one of the elements of a claim cannot be ignored. Claim 12 purports to be for a combination of the cable and the carriage, and the question for the Examiner to determine was whether that combination, assuming it to be a valid one, was for an invention separate from that covered by the remaining claims. If so considered, division could not properly have been required, but the Examiner was of the opinion that the claim was not patentable because the combination of a cable and a carriage was old, and therefore the invention, if any, lay in the carriage, he should have cited references to show the old combination and rejected the claim under the authority of *in re McNeil* (100 O. G., 2178; 20 App. D. C., 294,) and *in re Hawley*, (121 O. G., 691; 26 App. D. C., 324,) in which it was held that where a combination of elements is old no new combination is made by merely improving one of the elements of the old combination. It is to be noted, however, that these decisions are predicated upon the ground that in the structures under consideration the coaction between the improved element of the combination and the other elements thereof was not different from that between the corresponding elements in the old combination. Obviously, if the new element coacts with the other elements of the combination in a different manner from the corresponding elements of the old combination and a new result is obtained thereby the decisions referred to do not apply. In other words, a new and patentable combination may be made, although only one of the elements of the old combination is changed.

In the present case applicant contends that his carriage is not designed for general use with overhead cables, but is especially adapted for use with a cable such as shown in the present application, by which it is raised and lowered, since this carriage cannot pass the supports, but can be detached from the cable and placed between any two supports where it is desired to raise the material.

The petition is granted to the extent indicated.

ADJUDICATED PATENTS.

(U. S. D. C.) The Edison reissue patent, No. 13,329, (reissue of Reissue No. 12,037, original No. 589,168,) *Held* valid and infringed as to claims 1, 2, 3, and 5 and not infringed as to claim 4. *Motion Picture Patents Co.* v. *Laemmle*, 214 Fed. Rep., 787.

(U. S. D. C.) The Cowen patent, No. 642,813, for a machine for cleaning rubber, *Held* not infringed. *Cowen* v. *Boston Woven Hose & Rubber Co.*, 214 Fed. Rep., 806.

(U. S. D. C.) The Cowen patent, No. 642,814, for a process of cleaning rubber, *Held* void for lack of patentable invention. *Cowen* v. *Boston Woven Hose & Rubber Co.*, 214 Fed. Rep., 806.

(U. S. C. C. A.) The Barrell patent, No. 636,482, for a drier-felt for paper-machines, *Held* valid and infringed. *Fitchburg Duck Mills* v. *Barrell*, 214 Fed. Rep., 777.

(U. S. D. C.) The Daley patent, No. 644,664, for a furnace, *Held* valid and infringed. *Underfeed Stoker Co. of America* v. *Riley*, 214 Fed Rep., 799.

(U. S. C. C. A.) The disk strain-insulator covered by Patent No. 904,370 to Steinberger *Held* to have been invented by Hewlett, who was entitled to the patent. *General Electric Co.* v. *Steinberger*, 214 Fed. Rep., 781.

Foreign Patents, Trade-Marks, Etc.—Taxes, Fees, Etc.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 9, 1914.

This Office has been unofficially notified regarding the payment of taxes, fees, etc., on patents, trade-marks, etc., in certain foreign countries as follows:

Austria-Hungary.—That a moratorium has been passed under which taxes, etc., can be paid after their due date, the extent of this moratorium, however, not being given.

Germany.—That a three months' extension from August 1, 1914, has been allowed on all matters relating to the payment of taxes, the filing of fees, and the prosecution in general of patents, designs, and trade-marks, and that the German consular agents in the United States will probably receive such money as may be necessary to pay taxes that are due and other fees relating to patents or trade marks.

France.—That a decree has been issued as follows:

From and after August 1, 1914, and until a date to be fixed by decree upon the cessation of hostilities the legal periods within which holders of patents, under penalty of forfeiture of all their rights, must pay the annual taxes upon their patents are suspended.

This suspension is applicable also to the payment required to be made upon the filing of any application for a patent of invention or certificate of addition.

Likewise suspended for the same time are the periods provided for by the acts referred to either for the working of a patented invention in France or for the cessation of such working, the holder of the patent being in either case exempt from showing cause in order to benefit by such suspension.

The foregoing provisions are not applicable to patents which prior to August 1, 1914, had incurred the forfeiture provided for by existing laws.

From and after August 1, 1914, are suspended—

1. The periods granted to holders of certificates of guaranty issued upon the occasion of expositions organized in France at the instance of the administration or under its patronage to claim the protection of which their discoveries, designs, models, or trade-marks are legally susceptible;

2. The period during which a person depositing (or filing) a design or model is entitled to require the maintenance of his deposit, either with publicity or in secret form.

This decree is applicable in Algiers.

Great Britain.—That an act has been passed as follows:

1. (1) The power of the Board of Trade under section eighty-six of the Patents and Designs Act, 1907, and section sixty of the Trade-Marks Act, 1905, to make rules and to do such things as they think expedient for the purposes therein mentioned shall include power to make rules and to do such things as they think expedient for avoiding or suspending in whole or in part any patent or license granted to and the registration of any trade-mark the proprietor whereof is a subject of any State at war with His Majesty and any proceedings on any application made by any such person under either of the said acts and for extending the time within which any act or thing may or is required to be done under those acts.

(2) In relation to rules made under this act the provisions of subsection (3) of section sixty of the Trade-Marks Act, 1905, shall not apply.

(3) If the rules made under this act so provide, the rules or any of them shall have effect as from the passing of this act.

2. This act may be cited as the Patents, Designs, and Trade-Marks (Temporary Rules) Act, 1914.

3. This act and the rules made thereunder shall continue in force during the continuance of the present state of war in Europe and for a period of six months thereafter and no longer.

THOMAS EWING,
Commissioner.

Disclaimer.

1,102,620.—*Charles T. Westlake*, St. Louis, Mo. CENTER-BOLSTER FOR SIX-WHEEL CAR-TRUCKS. Patent dated July 7, 1914. Disclaimer filed September 5, 1914, by the assignee, *Double Body Bolster Company.*

Enters this disclaimer—

"To these claims in said specification which are numbered 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, and 12, and which are in the following words, to wit:

"1. A center bolster for six wheel trucks comprising a rectangular frame the central portion of which is arched to accommodate the center axle of the truck, and arms projecting laterally from the corners of said frame, which arms are box-shape in cross section, and the outer ends of which are adapted to coöperate with the wheel pieces of the truck frame.

"2. A bolster for six wheel trucks comprising a body formed of pairs of flanged side and end members the central portions of which side members are arched to accommodate the center axle of the truck, and arms integral with and projecting outwardly from the ends of said body, which arms are box-shape in cross section.

"3. A center bolster for six wheel trucks comprising a pair of longitudinally disposed parallel flanged members the central portions of which members are arched to accommodate the center axle of the truck, a pair of transversely disposed parallel flanged members, and arms integral with and projecting outwardly from the end portions of said pairs of parallel members and which arms are box-shape in cross section.

"5. A center bolster for six wheel truck frames cast in a single piece and comprising a rectangular frame, the sides of which are arched to accommodate the center axle of the truck, an inverted U-shaped member connecting the arched portions of the sides of said frame, arms projecting laterally from the corners of said frames, which arms are box-shape in cross section, and hollow members integral with the outer ends of said arms, which hollow members coöperate with the wheel pieces of the truck frame.

"6. In a center bolster for six wheel trucks, a pair of longitudinally disposed members, the central portions of which are arched to accommodate the center axle of the truck, an inverted U-shaped member connecting the arched portions of said longitudinally disposed members, a pair of transversely disposed members uniting the ends of said longitudinally disposed members, and laterally projecting arms at the ends of said longitudinally disposed members, which arms are box-shape in cross section.

"7. In a center bolster for six wheel trucks, a pair of longitudinally disposed members, the central portions of which are arched, a pair of transversely disposed members uniting the ends of said longitudinally disposed members, laterally projecting arms at the ends of said longitudinally disposed members, which arms are box-shape in cross section, and side bearing members on the arched portions of said longitudinally disposed members.

"8. In a center bolster for six wheel trucks, a pair of longitudinally disposed members, the central portions of which are arched, a pair of transversely disposed members uniting the ends of said longitudinally disposed members, laterally projecting arms at the ends of said longitudinally disposed members, which arms are box-shape in cross section, a transversely disposed member integral with and arranged between the central portions of said longitudinally disposed members and a center bearing on said last mentioned transversely disposed member.

"9. In a center bolster for six wheel trucks, a pair of longitudinally disposed members, the central portions of which are arched, a pair of transversely disposed members uniting the ends of said longitudinally disposed members, laterally projecting arms at the ends of said longitudinally disposed members, which arms are box-shape in cross section, a transversely disposed member integral with and arranged between the central portions of said longitudinally disposed members, and side bearing members on the arched portions of said longitudinally disposed members.

"10. A center bolster for six wheel car trucks, formed in a single piece and comprising a frame, a center bearing thereon, side bearings on the sides of the frame, and arms projecting laterally from the ends of said frame, which arms are box-shape in cross section.

"11. A center bolster for six wheel car trucks, formed in a single piece and comprising a frame a center bearing thereon, side bearings on said frame, arms projecting laterally from the ends of said frame, which arms are box-shape in cross section, and hollow members on the ends of said arms, which hollow members are adapted to coöperate with the side frames of the car truck.

"12. A center bolster for six wheel trucks comprising a frame having side and end pieces, the central portions of the side pieces being arched to accommodate the center axle of the truck, side bearings on said arched side pieces, a member connecting the arched portions of the side pieces, a center bearing on said member arms projecting laterally from the corners of said frames, which arms are box-shape in cross section, and are adapted to coöperate with the wheel pieces of the truck frame, and said arms being provided with recesses which form brake head clearance spaces."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 2, 1914.

Alfred Hodge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Milton Bradley Co., 43 Cross street, Springfield, Mass., for registration of a trade-mark and trade-mark registered December 12, 1899, No. 33,871, to Alfred Hodge, 108 Broad street, New York, N. Y., and a notice of such declaration sent by registered mail to said Alfred Hodge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Alfred Hodge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1914.

Progressive Product Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of S. Struns & Son, Nos. 708 to 716 Bingham street, Pittsburgh, Pa., for registration of a trade-mark and trade-mark registered May 30, 1893, No. 23,142, to the Progressive Product Company, of Jersey City, N. J., and New York, N. Y., and a notice of such declaration sent by registered mail to said Progressive Product Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Progressive Product Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
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OF THE
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Total..... 884

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	2	North Carolina	2	.....
Arizona	3	.....	North Dakota	5	.....
Arkansas	1	.....	Ohio	55	6
California	42	3	Oklahoma	5	.....
Colorado	9	.....	Oregon	8	.....
Connecticut	21	.....	Pennsylvania	79	5
Delaware	.....	.....	Rhode Island	7	.....
Florida	2	1	South Carolina	1	.....
Georgia	2	.....	South Dakota	5	.....
Idaho	3	.....	Tennessee	3	5
Illinois	85	17	Texas	12	.....
Indiana	16	1	Utah	1	.....
Iowa	14	2	Vermont	1	.....
Kansas	8	1	Virginia	1	1
Kentucky	2	.....	Washington	17	.....
Louisiana	7	1	West Virginia	4	2
Maine	2	2	Wisconsin	13	4
Maryland	6	1	Wyoming	1	.....
Massachusetts	29	2			
Michigan	20	3	Alaska, District of	.....	.....
Minnesota	15	2	Canal Zone	1	.....
Mississippi	2	.....	District of Columbia	3	.....
Missouri	26	4	Hawaii Territory	.....	.....
Montana	2	.....	Philippine Islands	1	.....
Nebraska	8	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	.....	2	U. S. Navy	.....	.....
New Jersey	37	4			
New Mexico	4	.....	Total to residents of the United States	717	98
New York	108	20			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	1	.....	Newfoundland	.....	.....
Belgium	.....	.....	New South Wales	2	.....
British India	.....	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	8	1	Queensland	.....	.....
Canary Islands	.....	.....	Rhodesia	1	.....
Cuba	1	1	Roumania	.....	.....
Denmark	.....	.....	Scotland	1	1
Dominican Republic	.....	.....	South Australia	.....	.....
Dutch East India	.....	.....	Spain	.....	.....
England	12	3	Sweden	1	.....
France	5	2	Switzerland	1	2
Germany	5	4	Transvaal, South Africa	2	.....
Greece	.....	.....	Victoria	2	.....
Guatemala	.....	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	4	1			
Japan	1	.....	Total to residents of foreign countries	52	15
Mexico	2	.....			

Amendments.

RULE 73. In every amendment the exact word or words to be stricken out or inserted in the application must be specified and the precise point indicated where the erasure or insertion is to be made. All such amendments must be on sheets of paper separate from the papers previously filed, and written on but one side of the paper. Erasures, additions, insertions, or mutilations of the papers and records must not be made by the applicant.

Amendments and papers requiring the signature of the applicant must also, in case of assignment of an undivided part of the invention, be signed by the assignee. (Rules 6, 107.)

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 19, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 1	July 6	601
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 24	July 22	703
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Aug. 17	Sept. 10	109
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 2	July 25	780
167	5. Bookbinding; Harvesters; Jewelry; Music.	May 20	July 27	472
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	July 22	619
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 6	July 22	606
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	Aug. 18	1237
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 26	June 5	706
235	10. Carriages and Wagons	Apr. 30	July 11	1128
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 30	Aug. 27	111
222	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 20	July 1	1182
239	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 16	July 15	538
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 6	Aug. 20	407
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 9	Aug. 1	961
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	July 16	774
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 10	Aug. 11	231
227	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 20	Aug. 7	226
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces	June 8	July 25	305

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Sales; Undertaking.	June 17	July 23	451
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 27	July 17	537
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 29	Aug. 4	239
379	23. Accounting; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 18	Aug. 3	497
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 25	Aug. 19	596
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 10	Aug. 10	262
106	26. Electricity, Generation; Motive Power.	Nov. 26	June 12	949
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 3	Aug. 8	556
65	28. Internal-Combustion Engines	May 21	July 20	678
147	29. Coopering; Fire-Escapes; Ladders; Rools; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	July 15	July 24	479
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 19	Aug. 12	419
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 27	Aug. 3	343
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 5	Aug. 11	762
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	Aug. 6	401
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 14	July 22	364
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 24	Aug. 19	629
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 30	July 15	815
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 28	July 18	909
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	July 20	857
321	39. Water Distribution	Apr. 20	July 16	529
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 23	Aug. 14	1110
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 13	Aug. 12	479
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 27	July 21	397
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 15	Aug. 15	263

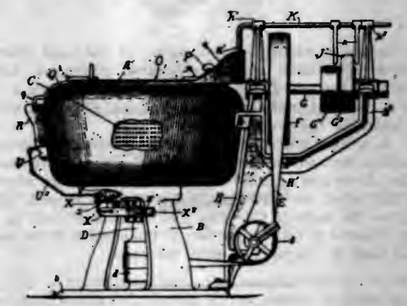
Oldest new case, Nov. 26; oldest amended, June 12.
Total number of applications awaiting action 25,351

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 25	July 25	1332
	Designs	Aug. 5	Aug. 26	201
	Labels and Prints	Sept. 5	Sept. 1	91

PATENTS

GRANTED SEPTEMBER 22, 1914.

1,111,001. PNEUMATIC-CONTROLLED LOCK FOR CENTRIFUGAL-EXTRACTOR COVERS. WILLIAM BARTHOLOMEW and FRITZ BALZER, Chicago, Ill., assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Feb. 20, 1913. Serial No. 749,603. (Cl. 127—3.)



1. In a centrifugal extractor, the combination with a rotating member, of a cover for inclosing said rotating member, a fluid pressure actuated latching mechanism for locking said cover closed, and automatic means for mechanically controlling the supply and exhaust of fluid pressure to and from said latching mechanism for actuating the same to lock the cover closed during the movement of said rotating member.

2. In a centrifugal extractor, the combination with a rotating member, of a cover for inclosing said rotating member, a fluid pressure actuated latching mechanism for locking said cover closed, valve mechanism for controlling the supply and exhaust of fluid pressure to and from said latching mechanism, and means automatically operating said valve mechanism to effect the locking of the cover during the operation of the extractor and the unlocking of the cover when the operation of the extractor is discontinued.

3. In a centrifugal extractor, the combination with a rotating member, of a cover for inclosing said member, latching mechanism for locking said cover closed, a cylinder having a reciprocating piston therein to which said latching mechanism is operatively connected, valve mechanism for controlling the supply and exhaust of fluid pressure to and from said cylinder and means for automatically operating said valve mechanism to actuate said latching mechanism to lock the cover closed during the operation of the extractor and to unlock said cover when the operation of the extractor is discontinued.

4. In a centrifugal extractor, the combination with a rotating member, of a cover for inclosing said member, a spring for automatically unlocking said latching mechanism when the extractor is not in operation, fluid pressure actuated means for operating said latching mechanism against the tension of said spring to lock the cover closed and valve mechanism automatically operated to supply fluid pressure to said means during the operation of the extractor.

5. In a centrifugal extractor, the combination with a rotating member, of a cover for inclosing said member, a spring for automatically unlocking said latching mechanism when the extractor is not in operation, fluid pressure actuated means for operating said latching mechanism against the tension of said spring to lock the cover closed during the operation of the extractor, and valve mechanism automatically operated by a moving part of the extractor for controlling the supply of fluid pressure from a source thereof to said fluid pressure actuating means.

[Claims 6 to 12 not printed in the Gazette.]

1,111,002. STENCIL. ARTHUR B. BOSTWICK, Brooklyn, N. Y. Filed Dec. 30, 1907. Serial No. 408,559. (Cl. 101—134.)

1. A stencil consisting of a plate having portions thereof cut away to form a design, said cut-away portions separating parts of the plate from the main portion thereof, a fabric secured on the back of the plate to hold the said separated portions in proper position in relation to the main portion of the plate, and means to separate and confine inks or colors placed on said fabric.

2. A stencil consisting of a plate having portions thereof cut away to form a design, said cut-away portions separating parts of the plate from the main portion thereof, a fabric secured on the back of the plate to hold the said separated portions in proper position in relation to the main portion of the plate, means adapted to separate and confine inks or colors placed on said fabric, a non-porous strip back of said fabric, and a pad on the back of the non-porous strip.

3. A stencil cut out to form a continuous line separating a portion of the plate from the main part thereof, means for holding the separated portion in place, but permitting the ink to flow to form a continuous line, an ink retaining pad separated into parts corresponding to the colors to be printed, said pad being located on the back of said stencil.

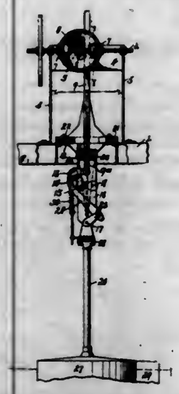
4. In a stencil, an inked pad consisting of a series of layers of ink retaining material, said pad being cut into parts, the edges of the parts being cemented together, whereby the ink on one portion of the pad will not run into the ink on another portion of the pad.

5. A stencil cut to form a continuous line separating a portion of the plate from the main part thereof, means for holding the separated portion in place and so located as to be above the under surface of the plate, an ink retaining pad divided into parts corresponding to the colors to be printed, the edges of the different parts being coated with a cement or other ink resisting material, said pad being located on the back of said stencil.

1,111,003. WAVE-MOTOR. DAVID K. BRYSON, Pittsburgh, Pa., assignor to The United States Wave Power Company, Cleveland, Ohio, a Corporation of South Dakota. Filed July 11, 1913. Serial No. 778,455. (Cl. 253—11.)

1. In combination, a shaft, a rack-bar, connection between said rack-bar and shaft for converting reciprocatory

movements of one into rotary movements of the other, a pendulous buoy mounted for rotary, vertical and swinging movements, and swiveled connection between said buoy and rack-bar for permitting the buoy to turn relative to said bar and for imparting reciprocatory movements to said bar from the various movements of the buoy.



2. In combination, a shaft, a reciprocatory member, means for converting the reciprocatory movements of said member into rotary movements of the shaft, a vertically movable swinging part, a buoy pivotally suspended from said part, and means connecting said part and member for moving the member with said part and buoy when the latter is vertically reciprocated and for imparting reciprocatory movements to said member relative to said buoy and part when the buoy is swung.

3. In a wave motor, a rotatable part, a reciprocatory movable member having driving connection with said part, a vertically movable element, a buoy swingingly suspended from said element, and link and lever connection between said member and buoy and carried by said element for converting the swinging movements of the buoy into reciprocatory movements of said member and for causing the member to have rising and falling movements with the buoy.

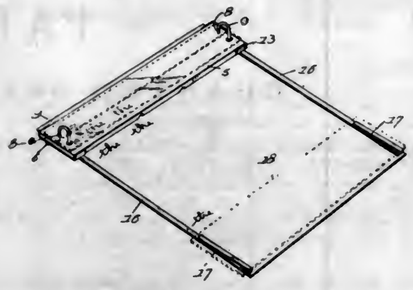
4. In a wave motor, a rotatable element, a rack-bar, connection between said bar and element for communicating rotary movements to one from reciprocatory movements of the other, a part capable of reciprocatory movements with and relative to said bar, a buoy swingingly suspended from said part and connection between said buoy and rack-bar for causing said buoy, part and bar to have reciprocatory movements in unison and for converting the swinging movements of the buoy into reciprocatory movements of said bar, which movements are relative to the part.

5. In a wave motor, a rotatable element, a reciprocatory member, means for converting the reciprocatory movements of said member into continuous movements of said element, a reciprocatory movable part, a pendulum lever carried by said part and having a buoy at its lower end, a second lever carried by said part and connected to said reciprocatory member, and connection between said levers for imparting reciprocatory movements to said member from swinging movements of the pendulum lever, said member, part and levers having reciprocatory movements in unison upon a vertical movement of the lever buoy.

[Claims 6 to 21 not printed in the Gazette.]

1,111,004. COPY-HOLDER. ROBERT HENRY BUTLER, La Crosse, Wis. Filed Oct. 4, 1913. Serial No. 793,427. (Cl. 35—8.)

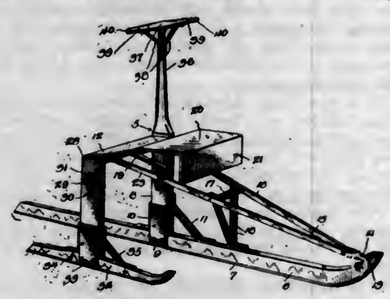
1. In a copy holder, a head, means on the head for holding copy, a plate on the under surface of the head, near each end, arms pivotally mounted under the head and adapted to extend from the side edge thereof parallel with each other, means on the plates for engaging the arms and limiting their movement, and a strip of material supported by the arms and adapted to cover a portion of the paper on which writing is to be done.



2. In a copy holder, a head, means on the head, adapted to hold copy, arms extending parallel therefrom, means carried by the outer ends of the arms for covering a portion of the paper and limiting the exposed area, and means for retaining the arms in position.

3. In a copy holder, a head, plates secured to the head, shoulders formed on the plates, arms pivotally connected to the plates and adapted to engage the shoulders whereby the said arms are held in parallel relation to each other, clips on the ends of the arms and an element held by the clips adapted to cover a portion of the surface of the paper being used in conjunction with the copy.

1,111,005. SLED. CARL J. CARLSON, Chicago, Ill., and JOHN LINDBERG and ERIC LINDBERG, Kane, Pa. Filed May 18, 1914. Serial No. 839,291. (Cl. 21—94.)



1. A sled having a stationary and an adjustable runner, an upright secured to one runner, a cross bar secured to the upright, means carried by the cross bar for supporting the adjustable runner, the said means serving to brace the cross bar.

2. A sled comprising a pair of runners one being adjustable, an upright secured to one runner, a cross bar secured to the upright, braces for the cross bar, a seat carried by the cross bar, a supporting leg adjustable relative to the bar, a runner secured thereto, and means for locking the leg against movement.

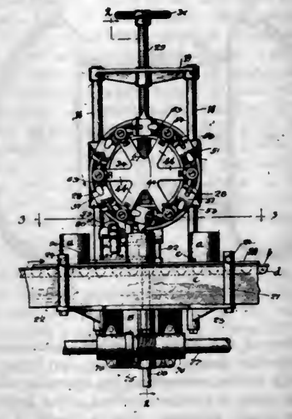
3. The combination in a sled, with a cross bar, an upright secured thereto, a seat carried by the cross bar, a brace bar secured to the cross bar and upright, said brace bar being bent to produce a leg supporting member, a leg adjustable thereon, and runners secured to the upright and leg.

4. In a sled the combination with a cross bar, of an upright and a leg, runners carried by the upright and leg, means for placing the runners in different planes, a seat carried by the cross bar, the upright being extended above the seat, and a handle bar attached to the upright.

5. In a sled the combination with a cross bar, an upright secured thereto, a leg adjustable thereon, runners carried by the upright and leg, a ledge secured to the cross bar, a seat secured to the ledge, braces connecting the cross bar and upright with the runners, and a flange formed upon the seat and resting upon the braces.

[Claim 6 not printed in the Gazette.]

1,111,006. TIPPING-MACHINE. CLARENCE F. COLBERT, Hoopeston, Ill. Filed May 9, 1912. Serial No. 696,080. (Cl. 113—91.)



1. In a tipping-machine, the combination of a sleeve, a vertically rotating carrier on the sleeve, a series of tipping devices pivotally connected to said carrier to cause them to rotate therewith, means for feeding cans to said devices, mechanism for feeding solder to the tipping-devices, means for supplying fuel to said sleeve and means for guiding the tipping devices in their rotation, said carrier having ducts therein for conducting fuel from the sleeve to said devices.

2. In a tipping machine the combination of a vertically rotatable carrier, a series of tipping devices pivotally mounted to swing vertically on the carrier, means for feeding cans in a longitudinal line to said devices, and mechanism for feeding solder to said devices, the pivotal movement of said devices relatively to the carrier permitting the tipping devices to remain in contact with the can by gravity during a portion of each revolution of the carrier.

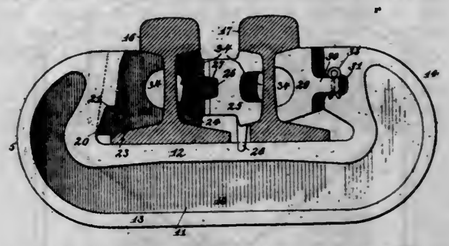
3. In a tipping machine the combination of a vertically rotatable carrier, a series of tipping devices pivotally mounted to swing vertically on the carrier, means for feeding cans in a longitudinal line to said devices, means for constantly supplying fuel to said devices, guide means for said devices for a portion of their movement, and mechanism for feeding solder to said devices, the pivotal movement of said devices relatively to the carrier permitting the tipping devices to remain in contact with the cans by gravity during the portion of the revolution of the carrier in which the tipping devices are not guided by the guide means.

4. In a tipping machine the combination of a vertically rotatable carrier, a series of tipping devices pivotally mounted to swing vertically on the carrier, means for feeding cans in a longitudinal line to said devices, and mechanism for feeding solder to said devices, the pivotal movement of said devices relatively to the carrier permitting the tipping devices to remain in contact with the cans during a portion of each revolution, and guide means for the tipping devices formed to release them for independent vertical movement by the cans during a part of each revolution.

5. In a tipping machine, the combination of a vertically rotatable carrier, a series of tipping devices pivotally mounted to swing vertically on the carrier, means for feeding cans in a longitudinal line to said devices, means for constantly supplying fuel to said devices, mechanism for feeding solder to said devices, the pivotal movement of said devices relatively to the carrier permitting the tipping devices to remain in contact with the cans during a portion of each revolution, and vertical guide means for the tipping devices formed to release them for independent vertical movement by the cans during a part of each revolution.

[Claims 6 to 23 not printed in the Gazette.]

1,111,007. GUARD-RAIL CLAMP. JOHN S. CRAWFORD, Reading, Pa., assignor to Reading Specialties Company, Reading, Pa., a Corporation of New Jersey. Filed June 24, 1914. Serial No. 846,928. (Cl. 239—18.)

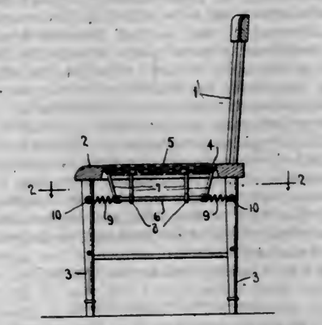


1. A guard rail clamp comprising a yoke with upwardly and inwardly curved ends, one of which is provided with a vertical recess and a horizontal shoulder, a clamp block provided with a rib fitting in said recess and with a shoulder fitting under said shoulder formed on the end of said yoke, a sectional filler block to space the rails, and a wedge engaging the other end of said yoke.

2. A guard rail clamp comprising a yoke having upwardly and inwardly curved ends one of which is widened and provided with a vertical recess and with a horizontal shoulder, a clamp block fitting under said shoulder and provided with a flange fitting in said vertical recess, a sectional filler block for spacing the rails, and a wedge engaging the narrow end of the yoke.

3. A guard rail clamp comprising a yoke having upwardly and inwardly curved ends, a clamp block engaging one end of said yoke, a sectional filler block for spacing the rails, and a wedge engaging the other end of said yoke, the end of said yoke engaging the clamp block being wider than that engaging said wedge.

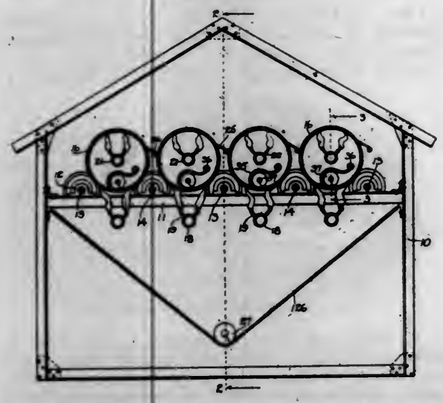
1,111,008. SPRING-BOTTOM FOR CHAIRS. JACOB T. CROCKER, Mulberry, Ark. Filed Apr. 1, 1912. Serial No. 687,674. (Cl. 155—25.)



The combination with a chair and resilient bottom therefor, of a skeleton supporting rectangular shaped frame located below said bottom, angularly disposed depending links movably secured to said bottom the lower ends of said links being adapted to slidingly support the frame, supporting rods for connecting the legs of the chair, and coiled springs connecting the corners of the frame and the supporting rods located adjacent to the

links, said springs being in parallel vertical planes with the depending links whereby the supporting rectangular frame is yieldingly and movably held in proper position in respect to the seat of the chair.

1,111,009. LAMPBLACK-MACHINE. WILLIAM H. DAVIS, Muncie, Ind. Filed Nov. 6, 1913. Serial No. 799,635. (Cl. 134—65.)



1. A lampblack machine including a revoluble tube, a burner pipe located longitudinally beneath the tube for depositing lampblack on the outer surface thereof, a burner pipe extending longitudinally through the tube for depositing lampblack on the inner surface thereof, and means for scraping the lampblack from said tube.

2. A lampblack machine including a revoluble tube, a burner pipe located longitudinally beneath the tube for depositing lampblack on the outer surface thereof, a burner pipe extending longitudinally through the tube for depositing lampblack on the inner surface thereof, and separate scrapers for removing the lampblack from the outer and inner surfaces of said tube respectively.

3. A lampblack machine including a revoluble tube, a burner pipe extending longitudinally through said tube and provided with nozzles for directing flames against the interior surface of the tube, a fixed rod extending through said tube, and a scraper pivoted on said rod with the free edge thereof resting by gravity upon the inner surface of the tube for scraping the lampblack therefrom.

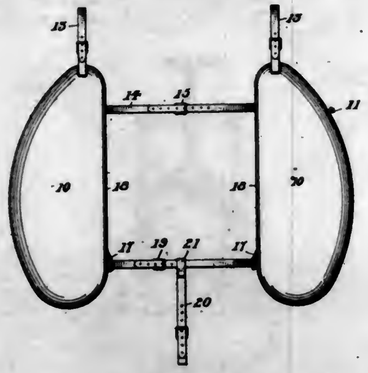
4. A lampblack machine including a revoluble tube, a burner pipe extending longitudinally through said tube and provided with nozzles for directing flames against the interior surface of the tube, a fixed rod extending through said tube below a horizontal plane through the tube, and a scraper pivoted upon said rod with the free edge thereof resting by gravity on the inner surface of said tube below a central horizontal plane therethrough.

5. A lampblack machine including a revoluble tube, a burner pipe extending longitudinally through said tube and provided with nozzles for directing flames against the interior surface of the tube, means extending longitudinally through said tube for scraping the lampblack from the internal surface of the tube, and means for conveying the lampblack from within said tube to the ends thereof for discharging the same.

[Claims 6 to 9 not printed in the Gazette.]

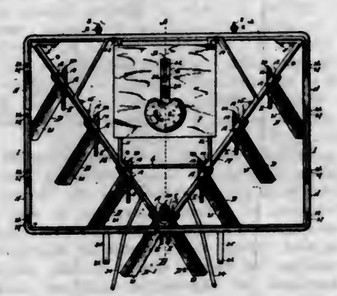
1,111,010. LIFE-PRESERVER. JOSEPH DEPTA, Passaic, N. J. Filed June 19, 1914. Serial No. 846,081. (Cl. 9—17.)

1. A device of the class described, comprising two pneumatic floats provided with arm sockets at the tops thereof adapted for positioning beneath the arms of the wearer, retaining straps secured to said floats adjacent said sockets and adapted to be secured around the wearer's arms, a chest-encircling strap secured between said floats, loops secured to the opposite inner flat surfaces of said floats, a waist belt slidably-positioned through said loops and adapted for encircling the wearer's waist, and a retaining strap slidably connecting the front and rear portions of said waist belt and adapted to be secured between the legs of the wearer.



2. A device of the class described, comprising shield-shaped pneumatic floats having top cut-away portions, arm-encircling straps connecting the opposite sides of said cut-away portions, a chest-encircling strap rigidly-secured between the upper portions of said floats, a waist belt strap slidably attached to the lower portions of said floats at opposite points upon their inner faces, and a retaining strap slidably-secured to said waist belt adapted to restrain said floats against upward movement upon the wearer's body.

1,111,011. FARM IMPLEMENT. GEORGE LIVINGSTONE DODDS, Winnipeg, Manitoba, Canada. Filed Dec. 8, 1913. Serial No. 805,331. (Cl. 55—60.)



1. A farm implement comprising a runner supported rectangular frame, a triangular frame inclosed by and secured to said rectangular frame, the base of said triangle at the front and the vertex at the rear, cultivator attachments arranged in spaced relation to each other along and below the sides of said triangle, and their standards secured to the sides thereof, whereby said attachments are adapted to follow each other upon spaced apart and parallel lines, each of said attachments comprising a landside, a point and a horizontally disposed diagonally extending blade, said attachments traveling slightly below the surface of the earth, their landsides defining the distance between their lines of travel, their points uprooting stubble and similar obstructions, and their blades extending across the spaces between said lines of travel and separating the surface from the subsoil, and redepositing said surface soil without ridging, and means regulating the depth of said attachments below the surface of the soil.

2. A farm implement comprising a rectangular outer frame, and a triangular inner frame surrounded by and secured to said outer frame with its base to the front and its vertex to the rear, the sides of said triangle adapted to carry cultivator attachments their standards secured thereto, each of said attachments consisting of three integral parts, a landside, a point and a horizontally disposed laterally extending blade, said attachments being distributed in pairs, a member of each pair pertaining individually to each of said sides and being similarly disposed thereto, the first of said pairs located contiguous to the base of said triangle, their points projecting forwardly, their landsides disposed in alinements with the line of draft of said implement, and their blades extending outwardly, said first pair of attachments being followed at regular distances apart by similarly disposed and secured pairs of attachments, the last of said pairs being located at the vertex of said triangular frame with their landsides adjoining each other, the blades of each of said pairs of attachments traveling just below the surface of the ground and extending across to the ground covered by the blades of the preceding pair, said attachments collectively working all the soil passed over by said outer frame.

3. A farm implement comprising a substantially rectangular outer frame, a triangular frame disposed within and secured to said rectangular frame, the base of said triangle at the front and its vertex at the rear, a three sided rectangular frame within said triangular frame, the corners of said three sided frame secured to the sides of said triangular frame and the longitudinal sides of said three sided frame running to the front bar of said outer frame and being secured thereto, and being then turned back in brace fashion and secured to the sides of said triangular frame, said outer and triangular frames being thereby braced to and from each other and their relative positions to each other insured, said triangular frame being adapted to carry a plurality of cultivator attachments, adapted to work the surface of the soil without ridging it, said outer frame being carried by runners adjustable to or from said frame to regulate the depth of said cultivator attachments in the soil, and said implement being adapted to be tilted forward and downward on said runners to allow the points of said cultivator attachments to enter the soil.

4. A farm implement comprising a rectangular outer frame and a triangular frame surrounded by, suitably braced, and secured thereto, said triangular frame carrying cultivator attachments adapted to work the surface of the ground without ridging it, said outer frame being carried by runners adjustable as to height to regulate the depth of said attachments in the soil, and having runners on its upper side adapted to carry it when it is overturned, and by which it may be moved from place to place with said cultivator attachments in inoperative position.

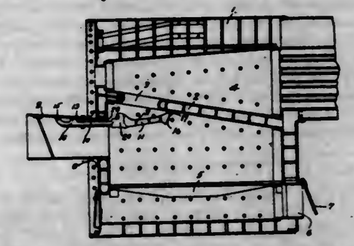
1,111,012. SHOULDER-SHIELD. PETER F. DUNIGAN, Bloomfield, N. J. Filed Feb. 26, 1914. Serial No. 821,846. (Cl. 2—190.)

1. A combined shoulder shield and article retaining device, comprising a plate member bent to the contour of the shoulder, article retaining means formed on an edge of said member, said retaining means being constructed to permit access to the article for easy removal thereof, a covering to incase said member, and means to retain the device upon the shoulder.

2. A combined shoulder shield and article retaining device comprising a metallic plate bent at approximately right-angles and adapted to straddle the shoulder, a vertically disposed retaining flange formed by an upturned edge of each angle-portion and being spaced from each other, a covering incasing the plate and flange, and means to retain said device on the shoulder.

3. A device of the character described comprising a plate of sheet material, a flange formed on said plate and laterally extending therefrom, said plate being bent transversely to fit over the shoulder, and said flange being cut-away adjacent to the bent portion of the plate so that the edge of the cut-away portion will extend substantially at a tangent thereto.

1,111,013. STRAW-RETARDER FOR STRAW-BURNING FURNACES. ROBERT LEVI DUTCHER, Spokane, Wash. Filed Apr. 28, 1913. Serial No. 764,134. (Cl. 110—5.)



1. In a straw burning furnace, the combination of a straw chute and a structure adapted to act as a straw retarder having arms projecting into the furnace and adjustably supported on the upper wall of said straw chute and a mounting for said retarder adapted to hold the same in a series of different positions relative to the longitudinal axis of the straw chute.

2. In a straw burning furnace, the combination of a straw chute, a supporting member provided with a longitudinal slot and having lugs adapted to engage the inner surface of said chute, a bolt for holding said member and said lugs against the inner upper surface of said chute, said bolt projecting through said slot and said supporting member being adjustable on said bolt, and arms supported from said member.

3. A straw retarder comprising in combination, a supporting member provided with downwardly depending webs forming an inverted trough or channel, said webs being interrupted at points situated at opposite ends of said member whereby air may pass through said trough, and arms supported by said member having an inverted channel shape, said arms being so positioned as to receive air from certain of the apertures in said web.

4. A straw retarder comprising in combination, a supporting member provided with a shank-like portion and having a portion set at substantially right angles to said shank portion, said last mentioned portion being provided with lugs projecting upwardly from its upper surface and turned parallel thereto so as to provide a recess between themselves and the upper surface of said last mentioned portion, and arms provided with lugs adapted to fit into said recesses and be held by said first mentioned lugs.

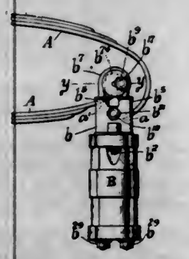
5. The combination of a boiler provided with a fire box, a water leg in said fire box provided with an aperture therethrough, a straw chute for introducing straw into said fire box beneath said aperture, and a straw retarding structure adjustably mounted on said straw chute and projecting into said fire box immediately beneath said aperture, said structure being provided with upwardly projecting tips at its inner end adapted to contact with the upper surface of the water leg and to thus limit the adjustment of said structure.

[Claim 6 not printed in the Gazette.]

1,111,014. RAILWAY SIGNAL DEVICE. LUTHER B. EDGECOMB, Traverse City, Mich., assignor of one-half to Bernhard Sundeen, Traverse City, Mich. Filed June 24, 1913. Serial No. 775,547. (Cl. 246—21.)

A night signal for dangerous curves in a railway track including in combination with an arcuate section of railway track, lamps disposed on opposite sides of said track, and a means operated by a train for actuating each lamp, said means including a clockwork mechanism, a cam carried by said mechanism having a notch in the periphery, a pair of standards, a rod pivoted on one of said standards and adapted to be depressed by a train and projecting through a slot in the other of said standards, and having a hooked terminal engaging in said notch, a helical spring exerting a downward pull upon said rod between said standards for normally holding said terminal engaged in said notch, an electrical stationary contact adjacent said slot, an electrical contact on said rod having a rubbing contact with said fixed contact upon release of said terminal from said notch by depression of said rod by a train, and a source of current connected with one terminal of the lamp and one of said contacts, the other contact being connected with the other terminal of the lamp.

1,111,015. SHOCK-ABSORBER FOR MOTOR-CAR SPRINGS. WILLIAM EVANS, Oak Lane, Pa., assignor to William Evans, John H. Evans, and Robert Evans, a Firm of Philadelphia, Pa., trading as John Evans' Sons. Filed Jan. 30, 1914. Serial No. 815,348. (Cl. 21—50.)



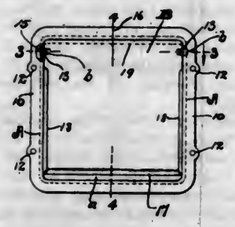
1. A shock absorber provided with a strap having a part to engage a complemental disk and having a bolt arranged to lockingly hold said member together and a bolt carrying an eccentric with locking means in connection therewith, in combination with car spring terminal bearings in connection with said bolts and helical springs supportingly held in operative position by said strap, substantially as and for the purposes described.

2. A shock absorber, comprising a casting in which is journaled an inverted U-shaped grooved and ribbed strap, a complemental disk adapted to be lockingly engaged by said strap and embraced by a cross-belt and a bolt carrying an eccentric having removable means located adjacent thereto for lockingly holding said eccentric in any position given in connection with said bolt, in combination with a spring having terminal bearings engaged by said bolts and helical springs arranged within each other and supportingly held in operative relation within a two part housing slidable one part within the other and supported in position by said strap, substantially as and for the purposes described.

3. The combination with a car spring having terminal bearings, bolts engaging said bearings, an inverted U-shaped locking strap and disk carried on one extremity of one of said bolts and an eccentric carried on the other bolt and locked to position against movement a casting and helical springs held below said casting and supported in operative position by said strap, substantially as and for the purposes described.

4. A car spring the terminal members of which are in frictional contact with cross bolts, a casting and a strap the legs of which are journaled in said casting and carry a two part slidable housing for helical springs supportingly held in operative position by said strap, said cross bolts respectively carrying a ribbed disk to engage and lock with a complemental portion of said strap and an eccentric lockingly held to one of said bolts by a series of insert pins, substantially as and for the purposes described.

1,111,016. DELIVERY-FACILITATING DEVICE FOR BUILDINGS. CHARLES FOHMAN, Cleveland, Ohio. Filed Dec. 22, 1913. Serial No. 808,295. (Cl. 189—46.)



1. In a delivery-facilitating device of the character indicated, an upright door-case, and a door for said door-case, the door-case being split at its top portion from the inner end to the outer end of the door-case and being provided in each side portion thereof and in proximity to the top of the door-case with a hole arranged horizontally and in line endwise with the corresponding hole in the other side portion of the door-case, and the door being provided with pivotal members engaging said holes, the outer end-portion of one of said pivotal members being provided with a sloping surface which faces in the direction of the top edge of the door.

2. In a delivery-facilitating device, an upright door-case, and a door for said door-case, the door-case being split at its top portion from the inner end to the outer end of the door-case and being provided in each side portion thereof and in proximity to the top of the door-case with a hole arranged horizontally and in line endwise with the corresponding hole in the other side portion of the door-case, the door being provided with pivotal members engaging said holes, and each side portion of the door-case being provided in its inner side with a recess which extends from the aforesaid hole in said side portion to the inner end of the door-case and is reduced in depth toward said hole.

3. In a delivery-facilitating device, an upright door-case, and a door for said door-case, the door-case being split at its top portion from the inner end to the outer end of the door-case and being provided in each side portion thereof and in proximity to the top of the door-case with a hole arranged horizontally and in line endwise with the corresponding hole in the other side portion of the door-case, the door being provided with pivotal members engaging said holes, the outer end-portion of one of said pivotal members having a sloping surface which faces in the direction of the top edge of the door, and each side portion of the door-case being provided in its inner side with a recess which extends from the aforesaid hole in said side portion to the inner end of the door-case and is reduced in depth toward said hole.

4. In a delivery-facilitating device, a substantially vertically arranged and substantially quadrangular door-case, and a door for said door-case, which door is pivotally connected to the upper portion of the door-case and arranged to swing in a vertical plane and endwise of the door-case and inwardly in opening, the door-case being provided at the upper side of its bottom portion with an upwardly projecting flange which extends between the side portions of the door-case and is arranged between the inner extremity of the door-case and a point centrally between the inner and outer ends of the door-case, the door being arranged to abut at its outer side against the inner side of said flange, and each side portion of the door-case being provided with a flange arranged at the outer side of the door and extending upwardly from the adjacent end of the first-mentioned flange into proximity to the axis of the door.

1,111,017. BACK FOR BRAKE-SHOES. JOSEPH D. GALLAGHER, Glen Ridge, N. J., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed May 2, 1913. Serial No. 765,009. (Cl. 188—82.)

1. A back for a brake shoe provided with a key lug, said key lug being formed with side walls and a top, and transverse face plates extending substantially across said back.

2. A back for a brake shoe constructed with a key lug, said lug being provided with side and top plates, and with vertical transverse face plates extending substantially to the outer edges of said back.

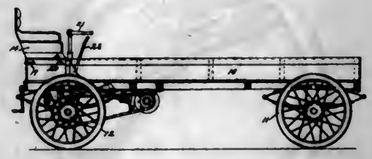
3. A back for brake shoes constructed with a key lug, said key lug being provided with side walls and a top plate and with vertical transverse face plates of greater length than the width of said key lug.

4. A back for brake shoes constructed with a key lug, said key lug being formed of side walls and a top plate, and with vetical transverse face plates of substantially equal height and of greater length than the width of said key lug.

5. A back for brake shoes constructed with an integral key lug, said key lug comprising side walls and a top plate, and vertical transverse face plates formed integral with said key lug and of substantially the same height and of greater length than the width of said key lug.

[Claims 6 to 20 not printed in the Gazette.]

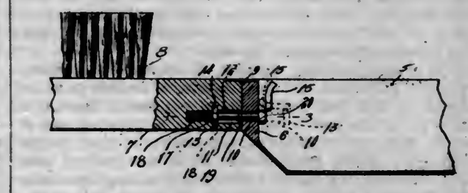
1,111,018. AUTOMOBILE. CECIL E. GIBSON, Indianapolis, Ind. Filed Apr. 16, 1910, Serial No. 555,866. Renewed July 29, 1914. Serial No. 853,972. (Cl. 21—90.)



1. An automobile including a vehicle body open from end to end for the receipt of merchandise or the like, front and rear wheels and axles for supporting said vehicle body, an engine at the extreme rear end of the automobile body and substantially over the rear axle, a driver's seat located over the engine and opening into the bed, and means near the seat for controlling the engine and the direction of the automobile.

2. An automobile including a bed adapted to receive merchandise, an engine at the rear end of said bed for driving the automobile, a driver's seat located over the engine and opening into the bed, and means for operating and controlling the automobile which are located outside the bed, whereby the bed will be free from the seat to the front end for the receipt of merchandise.

1,111,019. TOOTH-BRUSH. JOHN E. HAMILTON, Smithton, Pa. Filed Aug. 27, 1913. Serial No. 787,018. (Cl. 15—39.)

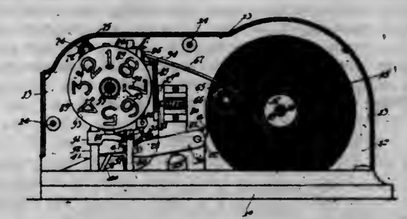


1. A folding tooth brush comprising a head portion, a handle casing hinged thereto, alining openings in the abutting ends of the casing and head portion, a shaft passed through said openings and said shaft provided with means operative upon rotation thereof for locking the handle and head against relative movement.

2. A folding tooth brush comprising a head portion, a handle casing hinged thereto, and adapted to abut thereagainst, the abutting end of the casing being provided with a bore and the adjacent end of the head being provided wth an opening having an oblong cross section and enlarged adjacent its inner end, a shaft mounted in the bore and having a head slidable in the opening and adapted upon rotation when at its inner limit of movement in the opening to seat in the enlarged portion.

3. A folding tooth brush comprising a head portion, a handle casing hinged thereto and adapted to abut thereagainst, the abutting ends of the casing and head being provided with alining bores, a shaft mounted in the bore of the casing and adapted to enter the bore of the head and be rotated to lock the head and casing against relative movement, a spring-pressed plunger in the bore of the head and a handle pivoted to the end of the shaft within the casing, as and for the purpose described.

1,111,020. TICKET-PRINTING MACHINE. FREDERICK W. HOEFER, Freeport, Ill. Filed Mar. 6, 1913. Serial No. 752,263. (Cl. 101—187.)



1. In a ticket-printing machine, in combination, a horizontally elongated housing, means in one end of said housing for supporting a roll of paper, vertical guide means in the opposite end of said housing, a bracket mounted for vertical rectilinear reciprocation along said guide means, a horizontal shaft rotatably mounted in said bracket, a printing wheel fixed on said shaft and having a plurality of types on its periphery, a handle fixed on said shaft for rotating said shaft and for vertically sliding said bracket, said handle extending outside of said housing, a stationary horizontal impression element positioned beneath said printing wheel and adapted to coöperate with the latter in printing, means located between the roll of paper and said impression element for intermittently feeding the web from said roll onto said impression element, and means for severing the web to form tickets.

2. In a machine of the character described, the combination of a stationary impression element having a horizontal surface, a printing device mounted for vertical reciprocation above said surface, means for supporting a roll of paper, a feed table over which the web from said roll extends, a pivoted lever directly engaged by said printing device and carrying a pivoted feed dog for en-

gaging the web on said feed table and feeding it onto said surface, a stationary knife blade fixed on said impression element, a pair of arms pivoted at one end on said feed table, a knife blade carried by the opposite ends of said arms, said web being fed between said blades, and a projection on said printing device arranged to swing said arms downwardly to sever the web.

3. In a ticket-printing machine, in combination, a base, a vertical guide post mounted therein, a bracket slidably mounted on said post and having a horizontal bearing, a rotary shaft mounted in said bearing, a printing wheel fixed on said shaft and having a plurality of types on its periphery, a handle fixed on said shaft for rotating said wheel and vertically sliding said bracket, an approximately horizontal feed table, a bell-crank lever pivoted at its angle above said feed table, and a feed dog pivoted on the downwardly extending arm of said lever and coöperating with said table to feed the web of paper, the laterally extending arm of said bell-crank lever engaging with said bracket and being operable by the vertical movement of said bracket.

4. In a ticket-printing machine, in combination, printing means including a stationary element having a horizontal impression surface and having a slot in said surface, said printing means further comprising a printing device vertically movable above said surface, means for placing tickets on said surface, a rock shaft mounted in said element and having an arm arranged to be directly engaged by said vertically movable printing device to rock said shaft in one direction, a spring tending to rock the shaft in the opposite direction, and an ejector dog fixed on said shaft and projecting through said slot to engage the printed tickets and eject them.

5. In a ticket-printing machine, in combination, a base having a horizontal impression element and having a vertical guide adjacent to said element, a bracket mounted for vertical reciprocation on said guide above said element, a rotary horizontal shaft mounted in said bracket, a printing wheel fixed on said shaft, a handle fixed on said shaft for rotating said printing wheel and for vertically sliding said bracket, means for supporting a roll of paper, a feed table over which the web from said roll extends, a bell-crank lever pivoted above said feed-table, and engaging with said bracket for operation thereby, a feed-dog pivoted on said bell-crank lever and coöperating with said feed-table, a stationary knife-blade between said feed-table and said impression element, a movable knife blade, and a lug on said bracket arranged to engage said movable knife blade and push it downwardly to sever the web.

[Claims 6 to 14 not printed in the Gazette.]

1,111,021. FIREPROOF MATERIAL. CHARLES HOSS, St. Louis, Mo., assignor of one-half to Harry J. Shaller, St. Louis, Mo. Filed Oct. 9, 1912. Serial No. 724,709. (Cl. 106—30.)

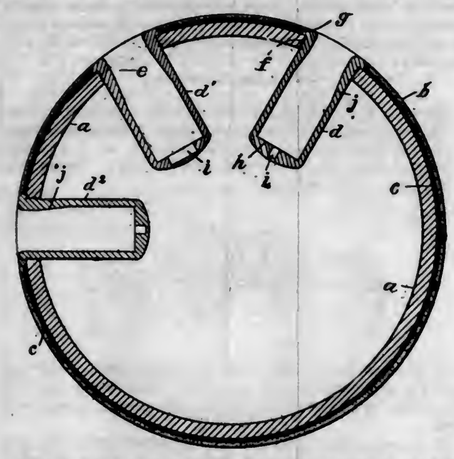
1. A fireproof material comprising the following ingredients mixed in approximately the portions specified: sawdust, 46 parts, silicate of sodium, 26 parts, soapstone, 22 parts, and water, six parts.

2. A fireproof material consisting of a molded mixture comprising the following ingredients: approximately one-half sawdust, approximately one-fourth soapstone, water and zinc silicate.

1,111,022. BOWLING-BALL WITH COMPOSITION COATING AND GRIPPING-SOCKETS. JOHN W. HYATT, Newark, N. J. Filed Oct. 24, 1913. Serial No. 797,020. (Cl. 46—4.)

1. A bowling ball having a metallic body with a layer relatively elastic fibrous material cemented thereto, and a continuous layer of relatively non-elastic composition adherent to the fibrous layer, and having a density and texture adapted to be turned to a spherical shape in a lathe.

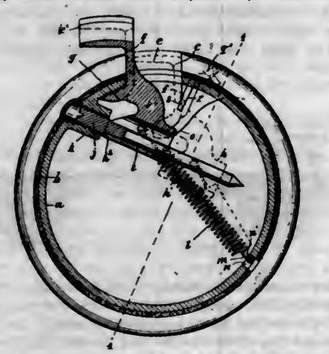
2. A bowling ball having a hollow metallic body with a plurality of sheets of fibrous material overlapping one another upon its surface and secured to one another and to the said surface by adhesive cement, and a continuous layer of relatively non-elastic homogeneous composition adherent to the fibrous layer, and of density adapted to be turned in a lathe.



3. A bowling ball having a hollow metallic body with a continuous layer of homogeneous and relatively non-elastic composition coating adherent thereto, sockets threaded in holes in the shell of the hollow body and having each a collar exterior to the thread and contacting with such shell and flush with the surface of the composition coating.

4. A bowling ball having a hollow metallic body with threaded apertures to receive grip-sockets, and a continuous layer of relatively non-elastic homogeneous composition coating adherent thereto, and grip sockets with thread to fit the threaded holes and having each a collar penetrating through the composition coating to the metallic shell and flush externally with the said coating, substantially as herein set forth.

1,111,023. BOWLING-BALL WITH SELF-CONTAINED HANDLE. JOHN W. HYATT, Newark, N. J. Filed Oct. 24, 1913. Serial No. 797,021. (Cl. 46—4.)



1. A bowling ball having a spherical metallic shell with a doorway in one side and a handle comprising a door fitted to the doorway and having a hand-piece attached thereto, the ball having means to guide the hand-piece when moved outwardly and laterally to admit the bowler's fingers, such means guiding the inner side of the hand-piece to contact with one edge of the doorway.

2. A bowling ball having a spherical metallic shell with a doorway in one side and a finger-hole at one edge of the doorway, a handle comprising a door fitted to the doorway and having a hand-piece attached to its inner side, and a pocket in the handle adjacent to the door, in line with the finger hole, the ball having means to guide the hand-piece when moved outwardly and laterally to admit the bowler's fingers at one edge of the doorway, a spring for retracting the handle, and a spring-latch in the finger-hole arranged to engage the shank of the door, and to yield when the finger is inserted in the finger-hole to engage the pocket and draw the handle outwardly.

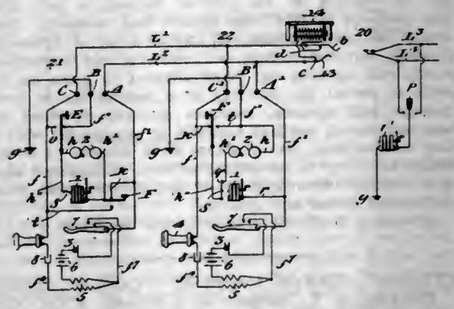
3. A bowling ball having a spherical metallic shell with a doorway in one side, a handle having a door fitted to move into and out of such doorway and having lugs projected within the shell, inclined guide-rods within the shell extended through the lugs and causing the handle to move obliquely from the doorway when drawn outward, and a spring for normally drawing the door into the doorway.

4. A bowling ball having a spherical metallic shell with a doorway in one side, a handle having a door fitted to move into and out of such doorway and having lugs projected within the shell, inclined guide-rods within the shell extended through the lugs and causing the door to move obliquely from the doorway when drawn outward, a spring for drawing the door into the doorway when the ball is thrown, and means for locking the door in the doorway when thus retracted.

5. A bowling ball having a spherical metallic shell with an oblong doorway in one side, a door fitted to move into and out of such doorway and having lugs projected within the shell and carrying a hand-piece, inclined guide-rods within the shell extended through the lugs and causing the door to move obliquely from the doorway when drawn outward, a stop upon the handle to bear upon one edge of the doorway when the door is drawn out, and a corresponding stop for the lugs upon the guide-rod, whereby the hand-piece is supported firmly upon the ball when throwing the same.

[Claims 6 to 11 not printed in the Gazette.]

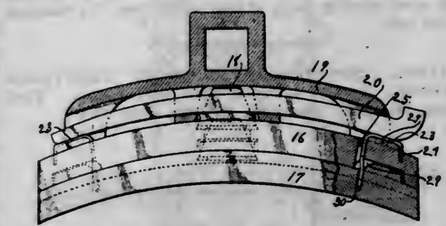
1,111,024. TWO-PARTY TELEPHONE SYSTEM. HENRY F. JOECKEL, Camp Point, Ill. Filed Feb. 15, 1912. Serial No. 677,668. (Cl. 179—28.)



1. The combination, in a two-party local battery magneto telephone system, a central station, a metallic circuit leading therefrom normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit; said bridges being however normally interrupted at the switch hook, an annunciator at each of said substations normally connected to ground one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto in normally open circuit at each substation and means at each substation to disconnect the annunciator from its normal circuit and at the same time to place the magneto selectively in circuit with the annunciator of the other substation or in circuit with the annunciator of the central station, and means at the central station to selectively signal either substation upon their respective sides, substantially as described.

2. The combination, in a two-party local battery magneto telephone system, a central station, a metallic circuit leading therefrom normally closed at said station by an annunciator, two substation talking sets bridged into the said metallic circuit; said bridges being however normally interrupted at the switch hook, an annunciator at each of said substations normally connected to ground one from one side of the metallic circuit the other from the other side of the metallic circuit, a magneto in normally open circuit at each substation and means at each substation to cut the annunciator out of circuit at the substation and to place the magneto at the same selectively in circuit with the annunciator of the other substation or in circuit with the annunciator of the central station, and means at the central station to selectively signal either substation upon their respective sides, substantially as described.

1,111,025. BRAKE-SHOE. HARRY JONES, Suffern, N. Y., assignor to Edward H. Fallows, New York, N. Y. Filed Nov. 11, 1910. Serial No. 591,849. (Cl. 188—28.)



1. A brake shoe having a key lug located near its middle portion and projecting beyond the rear face thereof; and two holding members located one at either end of said shoe and projecting beyond the forward face thereof.

2. In a device of the class described, a brake shoe comprising a single unitary structure continuous throughout its entire length; a second brake shoe comprising a single unitary structure continuous throughout its entire length resting upon said first mentioned shoe; means for securing said shoes together at their middle portions; and means independent of said first mentioned means for securing the end portions of said shoes together.

3. A brake shoe having a key lug located near its middle portion and embedded in the material of the shoe, said key lug having an enlarged base provided with an opening and said brake shoe having a passage communicating with said opening; and two holding members located one at either end of said shoe and extending from the rear face thereof through openings provided in said shoe and terminating beyond the forward face thereof.

4. In a device of the class described, a brake shoe; a second brake shoe resting upon said first mentioned shoe and secured thereto at its middle portion; and two holding members located one at either end of said first mentioned shoe and projecting beyond the forward face thereof and which holding members engage the end portions of said second shoe to thereby form additional securing means for holding said shoes together.

5. In a device of the class described, a brake shoe; a second brake shoe resting upon said first mentioned shoe and secured thereto at its middle portion; and two holding members located one at either end of said first mentioned shoe and extending from the rear face of said shoe through openings provided therein and into openings provided in said second shoe.

[Claims 6 to 11 not printed in the Gazette.]

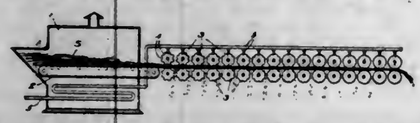
1,111,026. DRAWER-GUIDE. ROBERT H. KROOS, Sheboygan, Wis. Filed May 24, 1913. Serial No. 769,545. (Cl. 45—77.)

1. In combination with a casing having a drawer opening and a slidable drawer therefor having beveled edges, of guide members therefor comprising guide casings of

triangular form in cross section and having openings in their upper angled faces adjacent to the beveled drawer edges, some of said openings being of elongated form to permit a rolling movement of balls which project through the openings, and balls mounted within the casings and engaging two sides of the casing and projecting through the openings and being engaged by the adjacent beveled edges of the drawer.

2. A drawer guide, comprising a strip of right-angled material, a cover strip therefor having angled side edges which slidably engage the side edges of the right-angled strip, said cover also having an elongated opening, and a ball positioned within the space formed by the angled strip and the cover and engaging two side walls of the angled strip and projecting through the cover opening, said cover opening being of less width than the diameter of the ball.

1,111,027. METHOD OF SECURING VEGETABLE FIBER. JOSEPH LACROIX, Fall River, Mass. Filed Oct. 25, 1913. Serial No. 797,321. (Cl. 13—5.)



1. The method of isolating the fibers of flax, ramie, hemp and the like consisting in heating the straw and subsequently mechanically disintegrating the matter associated with the fiber while maintaining the straw in hot condition.

2. The method of isolating the fiber of flax, ramie, hemp and the like consisting in heating the straw and in subsequently subjecting the straw to rubbing while maintaining it hot.

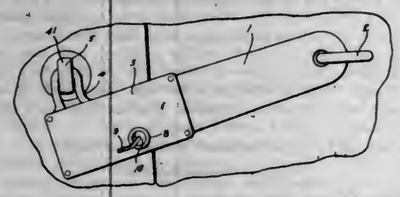
3. The method of isolating the fiber of flax, ramie, hemp and the like consisting in heating the straw and subsequently in successively working it between hot rolls of increasing fineness to free the fiber.

4. The method of isolating the fiber of flax, ramie, hemp and the like consisting in heating the straw and subsequently in subjecting the straw to progressive crushings while maintaining it hot.

5. The method of isolating the fiber of flax, ramie, hemp and the like consisting in heating the straw and subsequently freeing the fiber by mechanism having heated, straw contacting elements.

[Claims 6 to 9 not printed in the Gazette.]

1,111,028. HASP-LOCK. OTTO S. MURPHY, Peoria, Ill. Filed Aug. 1, 1913. Serial No. 782,454. (Cl. 70—5.)



1. A lock of the character described, including a shank portion and a body portion, said body portion having an opening in the bottom thereof, a bolt slidably mounted in said body portion and normally held across said opening, tumblers pivotally mounted on said bolt having portions normally in engagement with a stop or abutment, said tumblers being adapted to be actuated by a key to be withdrawn from engagement with said abutment whereby the bolt may be withdrawn from its position across said opening.

2. A lock of the character described, including a shank portion and a body portion, said body portion having an opening in the bottom thereof, a bolt slidably mounted in said body portion and normally held across said opening, tumblers pivotally mounted on said bolt having portions normally in engagement with a stop or abutment, and having a recess or opening therein, said tumblers being adapted to be actuated by a key to be withdrawn from engagement with said abutment whereby the bolt may be withdrawn from its position across said opening, said stop or abutment being adapted to enter said recess or opening in said tumblers.

3. A lock of the character described, including a shank portion and a body portion, said body portion having an opening in the bottom thereof, a bolt slidably mounted in said body portion and normally held across said opening, means for guiding said bolt in its movement between its locked and unlocked positions, tumblers pivotally mounted on said bolt having portions normally in engagement with a stop or abutment, said tumblers being adapted to be actuated by a key to be withdrawn from engagement with said abutment whereby the bolt may be withdrawn from its position across said opening.

4. A lock of the character described, including a shank portion and a body portion, said body portion having an opening in the bottom thereof, a bolt slidably mounted in said body portion and normally held across said opening, means for guiding said bolt in its movement between its locked and unlocked positions, said means including spaced pins, lugs or extensions on said body portion engaging said bolt and an extended lug or rib, said bolt having a recess or groove into which said extended lug or rib fits and slides, tumblers pivotally mounted on said bolt having portions normally in engagement with a stop or abutment, said tumblers being adapted to be actuated by a key to be withdrawn from engagement with said abutment whereby the bolt may be withdrawn from its position across said opening.

5. A lock of the character described, including a shank portion and a body portion, said body portion having an opening in the bottom thereof, a bolt slidably mounted in said body portion and normally held across said opening, said bolt having a toe or extension pivotally mounted thereon and normally held in position across said opening but being adapted to move on its pivot to permit the entrance of a locking lug or hook through said opening, tumblers pivotally mounted on said bolt having portions normally in engagement with a stop or abutment, said tumblers being adapted to be actuated by a key to be withdrawn from engagement with said abutment whereby the bolt may be withdrawn from its position across said opening.

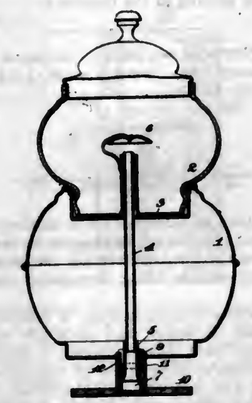
[Claims 6 to 11 not printed in the Gazette.]

1,111,029. COFFEE-MACHINE. CHARLES NELSON, Brooklyn, N. Y., assignor to S. Sternau & Co., New York, N. Y., a Copartnership composed of Sigmund Sternau and Lionel Strassburger. Filed Apr. 24, 1907. Serial No. 369,922. (Cl. 53—3.)

1. In a coffee machine, the combination with a receptacle having an open-ended chamber communicating therewith, of a percolator within the chamber, the said chamber and percolator being secured together by interacting screw threads, a groove, and a passage affording communication between the receptacle and the chamber, the said passage being formed across the screw threads.

2. A percolator for a coffee machine which comprises a tube and a member secured thereto, the said member having a vertical groove and a spiral groove communicating therewith, the two grooves constituting a liquid passage in combination with a heating chamber which forms one wall of the passage.

3. A percolator for a coffee machine which comprises a tube and a member secured thereto, the said member having a vertical groove on one side and a spiral groove on the other, and means for allowing communication between the vertical and spiral grooves.

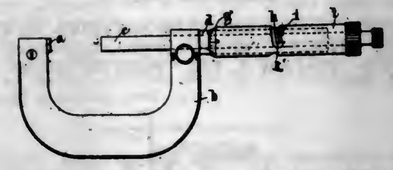


4. A percolator pot comprising a main chamber, a heating chamber, a percolator tube fitting into said chamber, and means between the outer wall of the lower end of said tube and the inner wall of said heating chamber providing a tortuous passage between said main and heating chambers.

5. In a percolator pot, a main chamber, a heating chamber, a percolator tube fitting into said heating chamber, the outer wall of the lower end of said tube being so constructed as to form with the inner wall of said heating chamber a tortuous passage between said main and heating chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,111,030. MICROMETER-GAGE. WILLIAM O'BRIEN, London, England. Filed July 26, 1912. Serial No. 711,751. (Cl. 33—166.)



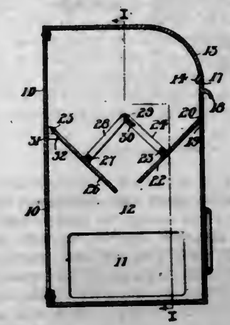
1. A micrometer gage comprising a stationary member upon which is engraved or otherwise suitably marked a plurality of scales each of which corresponds to a different unit of measurement, and a single rotary member having a corresponding number of scales thereon calibrated in such a manner that each scale corresponds to the unit adopted for the corresponding scale upon the stationary member, the latter being provided with a number of zero register marks for one of the scales upon the movable member.

2. A micrometer gage comprising a stationary member upon which is engraved or otherwise suitably marked a plurality of scales each of which corresponds to a different unit of measurement, and a single rotary member having a corresponding number of beveled edges thereon on each of which is marked a scale calibrated in such a manner as to correspond to the unit adopted for the corresponding scale upon the stationary member, the latter being provided with a number of zero register marks for one of the scales upon the movable member.

3. A micrometer gage comprising a stationary member upon which are engraved or otherwise suitably marked two scales each of which corresponds to a different unit of measurement, and a single rotary member also having two scales thereon calibrated in such a manner as to correspond to the unit adopted for the corresponding scale upon the stationary member, the latter having a number of zero register marks for one of the scales upon the movable member.

4. A micrometer gage comprising a stationary member upon which are engraved two scales each of which corresponds to a different unit of measurement and a single rotary member surrounding the stationary member and having its forward edge beveled with a scale marked thereon to suit the unit adopted for one scale upon the stationary member, and a spiral slot also formed with a beveled edge upon which is marked a scale corresponding to the unit adopted for the other scale upon the stationary member, the latter being provided with a number of zero register marks for the scale marked upon the spiral slot.

1,111,031. MAIL-BOX. JOHN PETRI, Elberta, Ala. Filed May 1, 1914. Serial No. 835,648. (Cl. 232—48.)



A mail box comprising a casing having an entrance slot in the front wall thereof, a closure lid for said slot trunnioned in the casing adjacent the lower edge of said slot, a rearwardly projecting plate integral with said lid and positioned within said casing, a guide plate pivoted to the rear wall of the casing and adapted to underlap said rearwardly projecting plate in spaced parallel relation thereto when said lid is in its open position, pivotal connecting links pivoted to the upper faces of said plates, and limiting stops carried by the rear wall of the casing beneath said guide plate and having inclined faces adapted for contacting said guide plate when the lid is in its closed position.

1,111,032. PIPE-VISE SUPPORT. WILLIAM ALFRED PIKE, Medford, Mass. Filed May 17, 1913. Serial No. 768,227. (Cl. 81—41.)

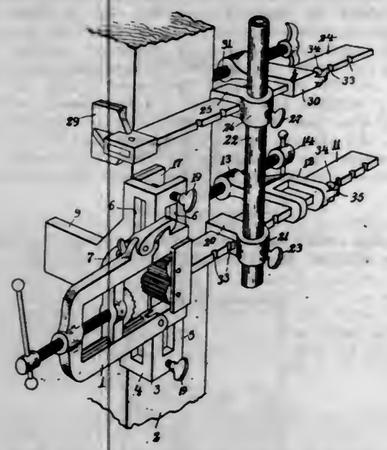
1. A pipe vise support comprising an upright having an arm, a bar rigidly extended from the upright at right angles to said arm, a sleeve adjustable along said bar, and a clamping screw carried by said sleeve to oppose said arm, said upright having means for the ready attachment of a pipe vise thereto.

2. A pipe vise support comprising an upright having a padded arm and a bar rigidly extended from the upright at right angles to the padded surface of said arm, a sleeve adjustable along said bar, and a clamping screw carried by said sleeve to oppose said padded surface, said upright having means for the easy attachment of a pipe vise thereto.

3. A pipe vise support comprising an upright having a padded arm and a bar rigidly extended from the upright at right angles to the padded surface of said arm, said bar being notched along an edge, a sleeve slidably mounted on said bar and having an ear, a wire loop pivoted in said ear and adapted to be swung into any one of said notches for locking the sleeve at different points on said bar, and a clamping screw carried by said sleeve to oppose said padded surface, said screw having a padded plate at its operative end.

4. A pipe vise support comprising an upright having two surfaces at right angles to each other, each surface

being slotted for receiving the fastening bolts of a pipe vise, an arm rigid with the upright parallel with one of said surfaces, and clamping means opposed to said arm.



5. A pipe vise support comprising an upright having two surfaces at right angles to each other each adapted to have a vise attached thereto, an arm rigid with the upright parallel with one of said surfaces, clamping means connected with the upright for opposing said arm, and claimping devices at the ends of the upright adjustable toward an object between said arm and clamping means.

[Claims 6 and 7 not printed in the Gazette.]

1,111,033. CONTACT-WHEEL FOR SIGNAL-CIRCUITS. WILLIAM O. POWERS, Jr., Ossining, N. Y., assignor of one-half to Postal Telegraph-Cable Company, New York, N. Y., a Corporation of New York. Filed Apr. 23, 1914. Serial No. 833,874. (Cl. 177—378.)

1. A contact wheel for signal circuits provided with a series of partially completed teeth around its periphery and a thin web forming the periphery of the wheel and closing the spaces between the teeth, portions of said web being readily removable, whereby the teeth may be completed.

2. A contact wheel for signal circuits formed with partially completed teeth around its periphery and a thin, continuous integral web forming a smooth continuous periphery of the wheel and closing the spaces between the teeth, said web being readily removable and the teeth completed.

3. A contact wheel provided with a series of apertures extending transversely through it near its periphery and a continuous periphery formed by a thin web of metal, said web forming a portion of the wall of the apertures.

4. A contact wheel for signal circuits formed with groups of completed teeth around its periphery, and groups of teeth having the tooth spaces closed by means forming a smooth continuous periphery between the groups of completed teeth and in the plane of the periphery of the wheel.

5. A contact wheel for signal circuits formed with a series of completed teeth around its periphery, and a series of teeth having the tooth spaces closed by means forming a smooth continuous periphery between the series of completed teeth and in the plane of the periphery of the wheel.

[Claim 6 not printed in the Gazette.]

1,111,034. TUFTING-WASHER. WILLIAM F. ROBERTSON, Cincinnati, Ohio. Filed Apr. 21, 1914. Serial No. 833,407. (Cl. 85—50.)

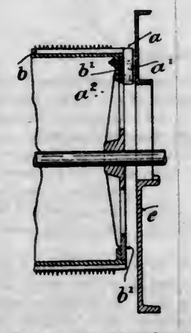
1. As an article of manufacture, a tufting washer having a peripheral edge turned to one side to carry it out of engagement with the fabric forming the back of the upholstering, said washer being corrugated inside of said edge.

2. As an article of manufacture, a tufting washer depressed between its center and periphery to give it increased rigidity, said washer having a peripheral edge turned to one side to carry it out of engagement with the fabric forming the back of the upholstering, said washer being corrugated inside of said edge and said turned edge of the washer forming an inclosing housing.

3. As an article of manufacture, a tufting washer depressed between its center and periphery to give it increased rigidity, said washer having a peripheral edge turned to one side to carry it out of engagement with the fabric forming the back of the upholstering, and said washer having a central opening and a strengthening rib surrounding said opening.

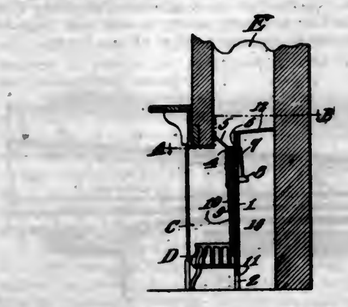
4. The combination with a tufting button having a head and shank, of a washer having an opening to admit said shank, said washer having a substantially convexed surface corrugated between the center and circumference and adapted to directly engage the backing of upholstering and having a peripheral edge turned to one side and away from the backing and adapted to form an inclosing housing into which the shank of the button may be turned, substantially as and for the purposes described.

1,111,035. WASTE AND LIKE BREAKING OR CARDING MACHINE. WILHELM ROTHE, Reichenbach, Germany. Filed Aug. 5, 1913. Serial No. 783,013. (Cl. 19—22.)



In combination in a waste breaking machine a casing with fixed vertical end walls and closed bearings and in which the material passes forward parallel to the walls of the casing, a spiked breaking cylinder, vertical end walls to such cylinder revolving close to the fixed walls of the casing, flat knives fixed to the vertical walls of the revolving breaking cylinder and revolving in close proximity to the vertical walls of the casing to cut down accumulations of waste slashing through the fibrous material and causing such accumulations to fall vertically or at right angles to the axis of the cylinder all as described and shown.

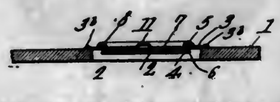
1,111,036. FIREPLACE ATTACHMENT. WILLIAM H. SLAPPEY, Hopewell, Ala. Filed May 26, 1913. Serial No. 769,988. (Cl. 126—130.)



1. The combination with a chimney having a fireplace opening and a grate, of a vertical back plate back of the grate, courses of fire bricks supported upon the front vertical face of the back plate, the upper courses overhanging the grate, a damper loosely mounted in a seat formed by the top course of inclined fire bricks and the extended upper part of the back plate, and movable into and out of position across that portion of the chimney between the front wall thereof and the back plate, the lower end of the back plate having an opening for the passage of air to the rear of said plate and a rearwardly extending plate adjustably mounted upon the rear face of the back plate and adapted to engage the back wall of the chimney, there being openings at the sides of said rearwardly extending plate for the passage of gases entering under the back plate.

2. The combination with a chimney having a fireplace opening and a grate, of a vertical back plate back of the grate, courses of fire bricks supported upon the front vertical face of the back plate, the upper courses overhanging the grate, a tiltable damper supported by the upper course and movable into and out of position across that portion of the chimney between the front wall thereof and the back plate, the lower end of the back plate having an opening for the passage of air to the rear of said plate, and a rearwardly extending plate adjustably mounted upon the rear face of the back plate and adapted to engage the back wall of the chimney, there being openings at the sides of said rearwardly extending plate for the passage of gases entering under the back plate.

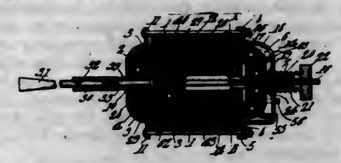
1,111,037. PRIVY-SEAT. BERTRAM C. SMITH and WILLIAM J. STEVENSON, Groveton, Tex. Filed Dec. 20, 1913. Serial No. 807,972. (Cl. 4—18.)



A seat of the type described, comprising a plate having an opening, the plate being struck upwardly around the periphery of the opening to define an inverted, trough-shaped bead, the inner edge of which forms a downwardly extended flange; and a lid, the periphery of which is formed into an S-shaped bead, the outer portion of which forms a trough-shaped recess receiving the bead on the plate, the inner portion of which forms a rib depending below the body of the lid and engaging the flange, the flange extended below the rib.

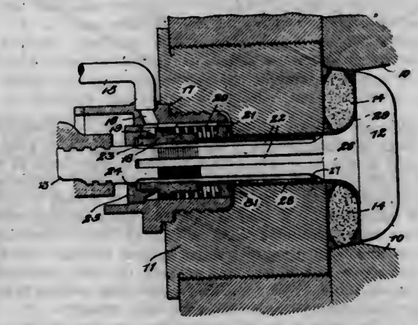
1,111,038. MAGNETIC VIBRATOR. FRANK V. SMITH, Floriston, Cal. Filed Nov. 28, 1911. Serial No. 662,951. (Cl. 172—126.)

1. In a device of the class described, a supporting structure including an electro-magnet; a tappet; an armature on the tappet and responsive to the electromagnet; and spaced elements mounted upon the tappet adjustably and engaging the armature, to adjust the position of the armature with respect to the electromagnet, said elements being slidably received in the supporting structure to form bearings for the tappet.



2. In a device of the class described, a supporting structure including an electro-magnet; a yoke in which one end of the electromagnet is engaged; a cover secured to the yoke; a tappet slidable in the cover; an armature upon the tappet, responsive to the electromagnet; a primary nut threaded upon the tappet and constituting an abutment for one side of the armature, the primary nut being slidable in the yoke, and being engaged in the yoke against rotation; and a secondary nut threaded upon the tappet, and adapted to bind the armature against the primary nut, the secondary nut being slidably mounted in the cover.

1,111,039. ORDNANCE. WILLIAM D. SMITH, Washington, D. C. Filed June 27, 1913. Serial No. 776,142. (Cl. 89—26.)



1. In a breech loading gun of the character described, the combination with a breech block, of a mushroom head movably mounted thereon, a gas check interposed between the mushroom head and the breech block, and a sleeve extending into the breech block and having an enlarged inner end interposed between the mushroom head and the gas check.

2. In a breech-loading gun of the character described, the combination with a breech block, of a mushroom head located at the inner end of the breech block and having a spindle slidably mounted in said breech block, a gas check interposed between the mushroom head and the breech block, and a sleeve surrounding the spindle and having an enlarged inner end interposed between the mushroom head and the gas check.

3. In a breech-loading gun of the character described, the combination with a breech block, of a mushroom head having a spindle extending into the breech block, a sleeve surrounding the spindle and movable therewith, a gas check interposed between the mushroom head and the breech block, and another sleeve surrounding the first sleeve and bridging the joint between the gas check and breech block.

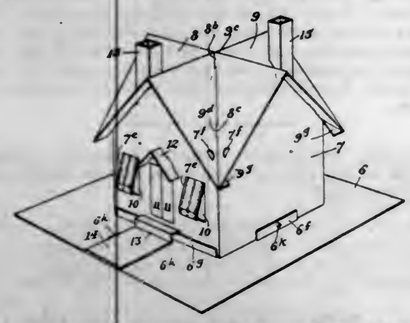
4. In a breech-loading gun of the character described, the combination with a breech block, of a mushroom head having a spindle extending into the breech block, a sleeve surrounding the spindle and movable therewith, a gas check interposed between the mushroom head and the breech block, and another sleeve surrounding the first sleeve and bridging the joint between the gas check and

the breech block, said latter sleeve having an inner flared end that is interposed between the mushroom head and the gas check.

5. In a breech-loading gun of the character described, the combination with a breech block, of a mushroom head having a spindle slidably mounted in the breech block, said spindle being provided with fluid-conducting channels, a sleeve surrounding the spindle and extending over the channels, said sleeve being movable with the spindle, a gas check interposed between the mushroom head and the breech block, and another sleeve surrounding the first sleeve and bridging the joint between the gas check and the breech block, said latter sleeve being held against forward movement.

[Claims 6 to 11 not printed in the Gazette.]

1,111,040. KNOCKDOWN BUILDING STRUCTURE. RALPH M. STALKER, Bogota, N. J. Filed Nov. 25, 1913. Serial No. 802,859. (Cl. 46—37.)



1. In a knockdown building structure, the combination of a body member having walls and a plurality of gable ends, and a pair of separate roof members each made of a single piece of sheet material, one of said roof members being provided with a folding line extending across it and with a substantially X shaped slot, the other of said roof members being provided with a folding line extending across it and with a narrow waist portion through which said last mentioned folding line extends, the roof members being crossed and fitted upon said gable ends so that said folding lines are in substantially the same plane.

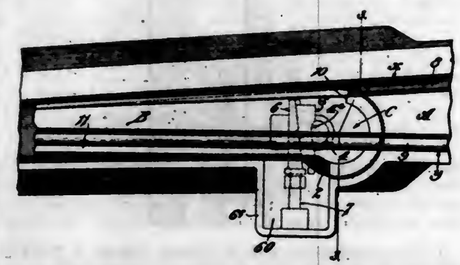
2. In a knockdown building structure, the combination of a body member having walls and gable ends, and a pair of separate roof members each made of a single piece of sheet material and having a folding line across it, one of said roof members having a slot through which its folding line extends, the other of said roof members having a narrow waist portion through which its folding line extends, said waist portion being shaped to fit into said slot when said roof members are fitted together and crossed, said roof members being provided with self-locking fastenings for holding said roof members together when they are in position to fit upon said gable ends, and means for locking said roof members to said gable ends.

1,111,041. TONGUE-SWITCH. EDWIN H. STEEDMAN, St. Louis, Mo. Filed Jan. 24, 1914. Serial No. 814,197. (Cl. 104—115.)

1. A tongue switch comprising a body part and a tongue having a tapered pivotal bearing portion that is offset or arranged eccentric with relation to the center line of the tongue, said body part having an undercut pocket for receiving said pivotal bearing portion.

2. A tongue switch comprising a body part, a tongue mounted on same and provided at its heel end with a pivotal bearing portion that comprises a substantially conical-shaped part, said pivotal bearing portion being offset or arranged eccentric with relation to the center line of the tongue, and a pocket in said body part that receives and conforms to the shape of the pivotal bearing portion of the tongue.

3. A tongue switch comprising a body part, a movable tongue mounted on same and provided at its heel end with an offset or eccentrically-disposed pivotal bearing portion whose base or bottom face is of greater dimensions than its top face, and an undercut pocket in said body part for receiving the pivotal bearing portion of the tongue.

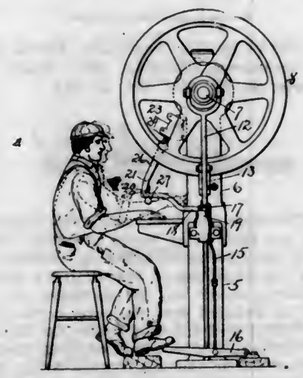


4. A tongue switch comprising a body part, a movable tongue mounted on same and provided at its heel end with an offset or eccentrically-disposed pivotal bearing portion whose base or bottom face is of greater dimensions than its top face, an undercut pocket in said body part for receiving the pivotal bearing portion of the tongue, and means coöperating with said tongue to hold the pivotal bearing portion of same seated in the pocket in said body part.

5. A tongue switch comprising a body part, a movable tongue mounted on same and provided at its heel end with an offset or eccentrically-disposed pivotal bearing portion whose base or bottom face is of greater dimensions than its top face, an undercut pocket in said body part for receiving the pivotal bearing portion of the tongue, a depending device on the under side of the tongue, and means arranged under the tongue and coöperating with said device for holding the tongue seated in the pocket provided for same in said body part.

[Claims 6 to 12 not printed in the Gazette.]

1,111,042. SAFETY DEVICE FOR POWER-OPERATED MACHINES. ELMER B. STONE, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 30, 1913. Serial No. 764,592. (Cl. 164—107.)



1. In combination with the work performing member of a machine, manually actuated means for controlling the operations of said member, a support, a safety member movably mounted on the support and located in position to be necessarily engaged and moved by the person of the operator in manipulating the work, and means connected with said safety member to control the operation of said manually actuated controlling means.

2. In combination with the driving member of a machine, manually actuated means for controlling the operations of said member, a support, a safety member movably mounted on the support in position to be necessarily engaged and moved by the person of the operator in manipulating the work, and means connected with said safety member to control the operation of said manually actuated controlling means.

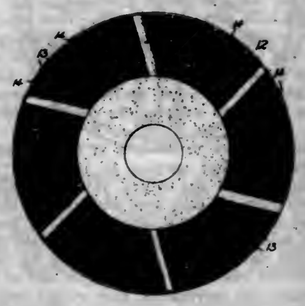
3. In combination with the work performing member of a machine, manually actuated means for controlling the operations of said member, a lock to prevent operation of said manually actuated means, a support, a safety member movably mounted on the support in position to be necessarily engaged by the person of the operator in manipulating the work, and a connection between said safety member and said lock to operate the latter.

4. In combination with the work performing member of a machine and the means for operating said member, means for preventing its operation, a support, a safety member mounted upon the support in position to be necessarily engaged and moved by the person of the operator in manipulating the work, and means connected with said safety member and operated thereby to control the operation of the means for preventing operation of said member.

5. In combination with the work performing member or a machine, means for driving said member, means for connecting said driving means with and for disconnecting it from said work performing member, manually actuated means for controlling the operations of said connecting and disconnecting means, a lock for said controlling means, and means connected with said lock to operate it and located in position to be necessarily engaged by the person of the operator in the regular operation of manipulating the work.

[Claims 6 to 16 not printed in the Gazette.]

1,111,043. MILLSTONE. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed Nov. 25, 1910. Serial No. 594,196. (Cl. 83—3.)



1. A composite millstone comprising blocks of hard abrasive material and a metallic filling in which said blocks are embedded, combined with one or more metal bands or hoops encircling the millstone, and a plurality of inwardly flaring or outwardly tapering metal blocks also embedded in the metal filling at the back of the peripheral portion of the millstone and permanently attached to one of said bands or hoops, for strongly securing the said band or hoop to the periphery of the millstone, the said blocks being also adapted for attachment to the millstone carrier.

2. A composite millstone comprising blocks of hard abrasive material and a metallic filling in which said blocks are embedded, combined with one or more metal bands or hoops encircling the millstone, and a plurality of inwardly flaring or outwardly tapering metal blocks also embedded in the metal filling at the back of the peripheral

portion of the millstone and permanently attached to one of said bands or hoops, for strongly securing the said band or hoop to the periphery of the millstone, the said blocks being also adapted for attachment to the millstone carrier, and an interior set of inwardly flaring or outwardly tapering metal blocks also embedded in the said metallic filling at the back of the millstone and adapted for attachment to the millstone carrier.

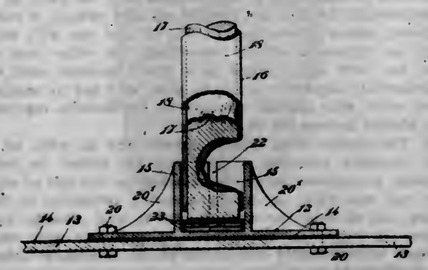
3. A composite millstone comprising blocks of emery stone, a metallic filling in which said blocks are embedded, and binding hoops or bands, said emery blocks being artificially shaped at their peripheral outer face portions to conform to the curvature of the said binding hoops or bands, or approximately so, the said millstone also comprising inwardly flaring or outwardly tapering metallic holding blocks embedded in the metallic filling at its peripheral back portions and permanently attached to one of said hoops or bands.

4. A composite millstone comprising blocks of emery stone, a metallic filling in which said blocks are embedded, and binding hoops or bands, said emery blocks being artificially shaped at their peripheral outer face portions to conform to the curvature of the said binding hoops or bands, or approximately so, the said millstone also comprising inwardly flaring or outwardly tapering metal holding blocks embedded in the metallic filling at its peripheral back portion and permanently attached to one of said hoops or bands, and other metal inwardly flaring or outwardly tapering holding blocks embedded in said metallic filling between the periphery of the stone and its central part, said metal blocks being adapted for attachment to the millstone carrier.

5. A composite millstone comprising blocks of hard abrasive material and a metallic filling in which said blocks are embedded, combined with one or more metal bands or hoops encircling the millstone, and a plurality of inwardly flaring or outwardly tapering metal blocks also embedded in the metal filling at the back of the peripheral portion of the millstone and provided with flanges by which they are permanently attached to one of said bands or hoops, for strongly securing the said band or hoop to the periphery of the millstone, the said blocks being also adapted for attachment to the millstone carrier.

[Claims 6 to 9 not printed in the Gazette.]

1,111,044. SCREEN OR SEPARATOR. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 5, 1914. Serial No. 810,435. (Cl. 83—56.)



1. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material which might otherwise accumulate in the bottom of such cup or socket.

2. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material

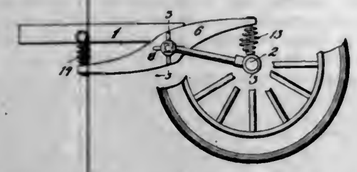
which might otherwise accumulate in the bottom of such cup or socket, and a foot plate integral with said cup or socket and by which said socket is mounted on said screen.

3. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and regulating disks or washers adapted to be loosely inserted in said cup or socket.

4. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material which might otherwise accumulate in the bottom of such cup or socket, and regulating disks or washers adapted to be loosely inserted in said cup or socket.

5. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material which might otherwise accumulate in the bottom of such cup or socket, a foot plate integral with said cup or socket and by which said socket is mounted on said screen, and bracing webs integral with said foot plate and said cup or socket for steadying the latter on the former.

1,111,045. VEHICLE-SPRING. GEORGE W. TIBBITS, Los Angeles, Cal. Filed Aug. 26, 1913. Serial No. 786,807. (Cl. 21—101.)



1. The combination with a chassis and an axle, of a plate connected with said chassis, a bar pivotally mounted on said plate, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said spring with said chassis, and means to move said bar in engagement with said plate to frictionally regulate the pivotal movement of said bar.

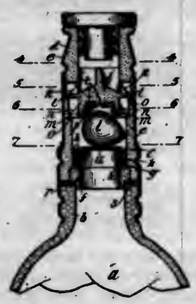
2. The combination with a chassis and an axle, of a substantially straight bar pivoted on said chassis, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar with said chassis in a direct manner, and an intermediate regulable means to move said bar in engagement with said chassis whereby to frictionally regulate the pivotal movement of said bar.

3. The combination with a chassis and an axle, of a bar pivotally mounted at or near its center on said chassis, a compression spring attached to one end of said bar and said axle, an extension spring connected to the other end of said bar and directly to said chassis, and means to cause an engagement of said bar with said chassis to frictionally control the pivotal movement thereof proportionably with the load.

4. The combination with a chassis and an axle, of a plate connected with said chassis, a bar pivotally mounted on said plate, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar directly with said chassis, means to cause a frictional engagement of said bar with said chassis, and means to rigidly connect the axle with said chassis.

5. The combination with a chassis and an axle, of a plate connected with said chassis, a bolt extending through said plate, a bar pivotally mounted on said bolt, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar with said chassis, a spring on said bolt, a radius rod connecting said chassis with said axle, and means on said bolt to cause a frictional engagement of said bar with plate.

1,111,046. NON-REFILLABLE BOTTLE. JACOB A. ULMAN, Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Nov. 30, 1910. Serial No. 594,945. (Cl. 215—69.)



1. In a non-refillable bottle the combination of a valve and seat therefor interposed between the bottle body and neck, a weight resting upon and having a curved surface in contact with the upper end of said valve, and a contracted air passage through said valve in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

2. In a non-refillable bottle the combination of a valve and seat therefor interposed between the bottle body and neck, a pear shaped weight resting upon the upper end of said valve, and a contracted air passage through said valve, in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

3. In a non-refillable bottle the combination of an inverted cup-shaped valve and seat therefor interposed between the bottle body and neck, a pear-shaped weight resting on the upper end of said valve, and a contracted air passage through said valve in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

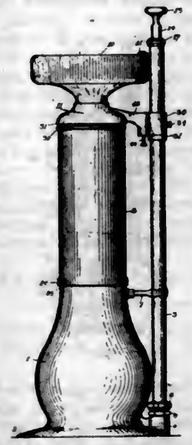
4. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and adapted to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, said valve having a contracted air passage, a weight normally resting upon the upper end of the valve and controlling its movements, said weight being in line with the air passage and having a curved surface in contact with the valve, and means above the weight for limiting the movements thereof, substantially as described.

1,111,047. RESERVOIR-CUSPIDOR. HENRY E. WEBER, Canton, Ohio, assignor to The Weber Dental Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 30, 1910. Serial No. 579,696. (Cl. 4—40.)

1. A cuspidor including a reservoir, a bucket resting upon the rim of the reservoir and having a depending flange overlapping said rim, and a laterally swinging bowl supported above the bucket.

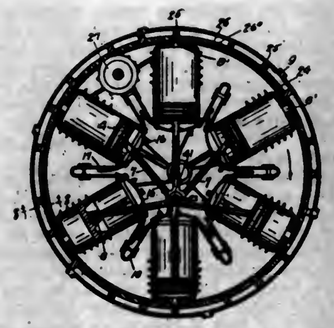
2. A cuspidor including a bucket, a bell-shaped bracket independently supported above and normally covering the bucket and a bowl mounted on the bracket.

3. A cuspidor including a bucket, a bell shaped bracket independently supported above and normally covering the



bucket, and a bowl mounted on the bracket and having a discharge pipe depending freely from the body of the bracket to discharge into the bucket.

1,111,048. REVOLVING-CYLINDER GAS-ENGINE. GUSTAVE ADOLPH WENDT, Spokane, Wash. Filed Mar. 31, 1913. Serial No. 757,818. (Cl. 123—44.)



1. A gas engine comprising in combination, a plurality of explosive cylinders mounted with their axes in a given plane, a tube having communication with all of said cylinders, valve means mounted within said tube adapted to control the inlet and exhaust of said cylinders, and means for moving said valve means longitudinally of said tube.

2. A gas engine comprising in combination, a plurality of explosive cylinders, said cylinders being mounted in a given plane at right angles to the axis of rotation, a tube surrounding the outer end of said cylinders and having communication with each of them, said tube also being provided with apertures serving as exhaust ports, means for introducing explosive mixture into said tube, and a valve structure mounted in said tube adapted to control the admission of explosive mixture into said cylinders and the exhaust of gases therefrom, said valve structure comprising piston member dividing the space within said tube into inlet, explosion and exhaust chambers, the total number of said chambers being equal to three times the number of cylinders plus three.

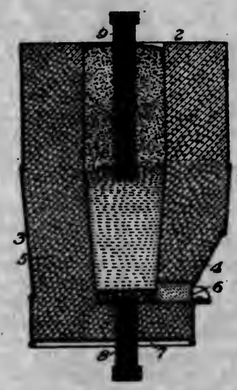
3. A gas engine comprising in combination, a plurality of explosive cylinders mounted in a given plane at right angles to the axis of rotation, a tube surrounding the outer end of said cylinders and communicating with each of them, said tube being provided with ports for communicating with said cylinders and also with ports for exhaust purposes, a valve structure mounted within said tube comprising ring sections 26 contacting with the inner face of said tube and pistons 25 dividing the space within said tube into inlet, explosion and exhaust chambers, said chambers being arranged in sets of three and there being one more set than there are explosion cylinders, and means for moving said valve structure relatively to said tube in a direction opposite to the direction of rotation of the engine.

4. An explosion engine comprising in combination, a plurality of explosive cylinders arranged radially about the axis of rotation, a tube surrounding the outer ends of said cylinders and having communication therewith, a valve structure mounted within said tube for governing the inlet and exhaust of said cylinders, said valve structure comprising ring sections bearing against the face of said tube and having recesses therein, pistons separating the space within said tube into chambers and having operative connection with said ring sections, and a sprocket wheel extending through an aperture in said tube and having operative engagement with the recess of said ring sections whereby said valve structure is operated.

5. An explosion engine comprising in combination, a central cylindrical casing, a plurality of explosion cylinders mounted radially around said casing, a hollow ring surrounding the outer ends of said cylinders and having ports communicating therewith and having other ports serving as exhaust ports therefor, a sleeve valve mounted within said ring for controlling the admission of explosive mixture and exhaust of gases from said cylinders, means for operating said sleeve valve, means for forcing explosive mixture into the interior of said casing, and valve means for controlling the admission of explosive mixture from said casing into said ring.

[Claims 6 and 7 not printed in the Gazette.]

1,111,049. METHOD OF REDUCING ORES. RAYMOND S. WILE, Pittsburgh, Pa. Filed Dec. 2, 1913. Serial No. 804,202. (Cl. 204—63.)



1. The method of reducing ores, which consists in continuously maintaining a deep slag bath by passing an electric current vertically through the central portion of the bath, feeding ore into the upper portion of the bath, and maintaining said bath at an approximately constant depth and of a relatively high density whereby the ore is held above the bath for a sufficient period to volatilize to a maximum extent the volatilizable materials, if any, in the ore; substantially as described.

2. The method of reducing ores, which consists in forming a deep slag bath, feeding ore into the upper portion of the bath, and passing an electric current through the central portion of the bath, maintaining the bath at a substantially constant depth and of a relatively high density whereby the ore is held above the bath for a

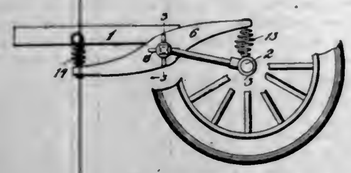
which might otherwise accumulate in the bottom of such cup or socket, and a foot plate integral with said cup or socket and by which said socket is mounted on said screen.

3. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and regulating disks or washers adapted to be loosely inserted in said cup or socket.

4. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material which might otherwise accumulate in the bottom of such cup or socket, and regulating disks or washers adapted to be loosely inserted in said cup or socket.

5. The combination with a wire mesh screen and an impact bar through which percussive jarring action may be imparted to said screen, of a cup or socket adapted to receive the lower end of said impact bar, and which is provided with openings for the escape of fine material which might otherwise accumulate in the bottom of such cup or socket, a foot plate integral with said cup or socket and by which said socket is mounted on said screen, and bracing webs integral with said foot plate and said cup or socket for steadying the latter on the former.

1,111,045. VEHICLE-SPRING. GEORGE W. TIBBITS, Los Angeles, Cal. Filed Aug. 26, 1913. Serial No. 786,807. (Cl. 21—101.)



1. The combination with a chassis and an axle, of a plate connected with said chassis, a bar pivotally mounted on said plate, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said spring with said chassis, and means to move said bar in engagement with said plate to frictionally regulate the pivotal movement of said bar.

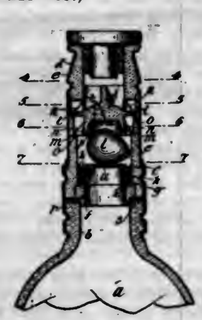
2. The combination with a chassis and an axle, of a substantially straight bar pivoted on said chassis, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar with said chassis in a direct manner, and an intermediate regulable means to move said bar in engagement with said chassis whereby to frictionally regulate the pivotal movement of said bar.

3. The combination with a chassis and an axle, of a bar pivotally mounted at or near its center on said chassis, a compression spring attached to one end of said bar and said axle, an extension spring connected to the other end of said bar and directly to said chassis, and means to cause an engagement of said bar with said chassis to frictionally control the pivotal movement thereof proportionably with the load.

4. The combination with a chassis and an axle, of a plate connected with said chassis, a bar pivotally mounted on said plate, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar directly with said chassis, means to cause a frictional engagement of said bar with said chassis, and means to rigidly connect the axle with said chassis.

5. The combination with a chassis and an axle, of a plate connected with said chassis, a bolt extending through said plate, a bar pivotally mounted on said bolt, a compression spring connecting one end of said bar with said axle, an extension spring connecting the other end of said bar with said chassis, a spring on said bolt, a radius rod connecting said chassis with said axle, and means on said bolt to cause a frictional engagement of said bar with plate.

1,111,046. NON-REFILLABLE BOTTLE. JACOB A. ULMAN, Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Nov. 30, 1910. Serial No. 594,945. (Cl. 215—69.)



1. In a non-refillable bottle the combination of a valve and seat therefor interposed between the bottle body and neck, a weight resting upon and having a curved surface in contact with the upper end of said valve, and a contracted air passage through said valve in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

2. In a non-refillable bottle the combination of a valve and seat therefor interposed between the bottle body and neck, a pear shaped weight resting upon the upper end of said valve, and a contracted air passage through said valve, in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

3. In a non-refillable bottle the combination of an inverted cup-shaped valve and seat therefor interposed between the bottle body and neck, a pear-shaped weight resting on the upper end of said valve, and a contracted air passage through said valve in line with said weight and arranged to be closed thereby, said passage connecting the body and neck in the closed position of the valve.

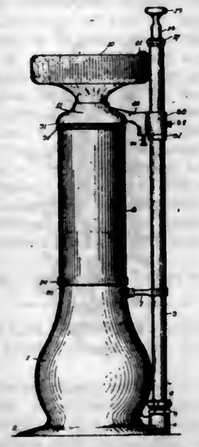
4. The combination, in the neck of a bottle, of a valve-seat having a central opening in line with the neck-opening, an inverted cup-shaped valve normally resting at its lower edge on said seat and closing the opening therein and adapted to tilt upon and then move bodily away from said seat when the bottle is tilted to pouring position, said valve having a contracted air passage, a weight normally resting upon the upper end of the valve and controlling its movements, said weight being in line with the air passage and having a curved surface in contact with the valve, and means above the weight for limiting the movements thereof, substantially as described.

1,111,047. RESERVOIR-CUSPIDOR. HENRY E. WEBER, Canton, Ohio, assignor to The Weber Dental Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 30, 1910. Serial No. 579,696. (Cl. 4—40.)

1. A cuspidor including a reservoir, a bucket resting upon the rim of the reservoir and having a depending flange overlapping said rim, and a laterally swinging bowl supported above the bucket.

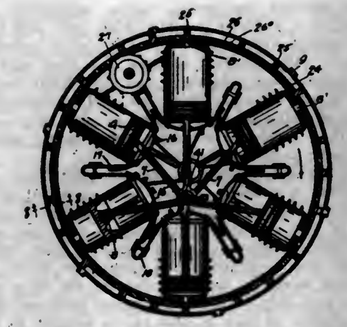
2. A cuspidor including a bucket, a bell-shaped bracket independently supported above and normally covering the bucket and a bowl mounted on the bracket.

3. A cuspidor including a bucket, a bell shaped bracket independently supported above and normally covering the



bucket, and a bowl mounted on the bracket and having a discharge pipe depending freely from the body of the bracket to discharge into the bucket.

1,111,048. REVOLVING-CYLINDER GAS-ENGINE. GUSTAVE ADOLPH WENDT, Spokane, Wash. Filed Mar. 31, 1913. Serial No. 757,818. (Cl. 123—44.)



1. A gas engine comprising in combination, a plurality of explosive cylinders mounted with their axes in a given plane, a tube having communication with all of said cylinders, valve means mounted within said tube adapted to control the inlet and exhaust of said cylinders, and means for moving said valve means longitudinally of said tube.

2. A gas engine comprising in combination, a plurality of explosive cylinders, said cylinders being mounted in a given plane at right angles to the axis of rotation, a tube surrounding the outer end of said cylinders and having communication with each of them, said tube also being provided with apertures serving as exhaust ports, means for introducing explosive mixture into said tube, and a valve structure mounted in said tube adapted to control the admission of explosive mixture into said cylinders and the exhaust of gases therefrom, said valve structure comprising piston member dividing the space within said tube into inlet, explosion and exhaust chambers, the total number of said chambers being equal to three times the number of cylinders plus three.

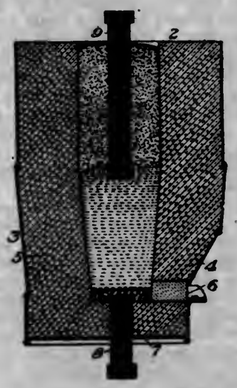
3. A gas engine comprising in combination, a plurality of explosive cylinders mounted in a given plane at right angles to the axis of rotation, a tube surrounding the outer end of said cylinders and communicating with each of them, said tube being provided with ports for communicating with said cylinders and also with ports for exhaust purposes, a valve structure mounted within said tube comprising ring sections 26 contacting with the inner face of said tube and pistons 25 dividing the space within said tube into inlet, explosion and exhaust chambers, said chambers being arranged in sets of three and there being one more set than there are explosion cylinders, and means for moving said valve structure relatively to said tube in a direction opposite to the direction of rotation of the engine.

4. An explosion engine comprising in combination, a plurality of explosive cylinders arranged radially about the axis of rotation, a tube surrounding the outer ends of said cylinders and having communication therewith, a valve structure mounted within said tube for governing the inlet and exhaust of said cylinders, said valve structure comprising ring sections bearing against the face of said tube and having recesses therein, pistons separating the space within said tube into chambers and having operative connection with said ring sections, and a sprocket wheel extending through an aperture in said tube and having operative engagement with the recess of said ring sections whereby said valve structure is operated.

5. An explosion engine comprising in combination, a central cylindrical casing, a plurality of explosion cylinders mounted radially around said casing, a hollow ring surrounding the outer ends of said cylinders and having ports communicating therewith and having other ports serving as exhaust ports therefor, a sleeve valve mounted within said ring for controlling the admission of explosive mixture and exhaust of gases from said cylinders, means for operating said sleeve valve, means for forcing explosive mixture into the interior of said casing, and valve means for controlling the admission of explosive mixture from said casing into said ring.

[Claims 6 and 7 not printed in the Gazette.]

1,111,049. METHOD OF REDUCING ORES. RAYMOND S. WILE, Pittsburgh, Pa. Filed Dec. 2, 1913. Serial No. 804,202. (Cl. 204—63.)

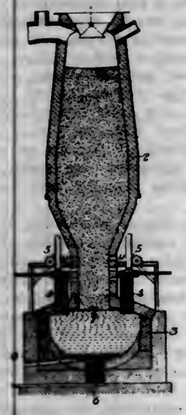


1. The method of reducing ores, which consists in continuously maintaining a deep slag bath by passing an electric current vertically through the central portion of the bath, feeding ore into the upper portion of the bath, and maintaining said bath at an approximately constant depth and of a relatively high density whereby the ore is held above the bath for a sufficient period to volatilize to a maximum extent the volatilizable materials, if any, in the ore; substantially as described.

2. The method of reducing ores, which consists in forming a deep slag bath, feeding ore into the upper portion of the bath, and passing an electric current through the central portion of the bath, maintaining the bath at a substantially constant depth and of a relatively high density whereby the ore is held above the bath for a

sufficient period to volatilize to a maximum extent the volatilizable materials, if any, in the ore, and affording a free escape for the volatilized materials through the in-feeding ore and at the top of the furnace; substantially as described.

1,111,050. APPARATUS FOR REDUCING ORES. RAYMOND S. WILE, Pittsburgh, Pa. Original application filed Dec. 15, 1913, Serial No. 806,692. Divided and this application filed Feb. 3, 1914. Serial No. 816,194. (Cl. 204—64.)



1. An electric furnace having a shaft and an enlarged crucible at the base of the shaft, said crucible having a depth greater than the diameter of the bottom opening of the shaft into the crucible, upper and lower electrodes in the crucible, and means for maintaining a bath level in the crucible sufficiently high to cause it to surround and protect the portions of the upper electrodes which are within the crucible; substantially as described.

2. An electric furnace having a shaft and an enlarged crucible at the base of the shaft, said crucible having a depth greater than the diameter of the bottom opening of the shaft into the crucible, upper and lower electrodes in the crucible, the upper electrodes being movable relatively to the lower electrode or electrodes, and means for maintaining a bath level in the crucible sufficiently high to cause it to surround and protect the portions of the upper electrodes which are within the crucible; substantially as described.

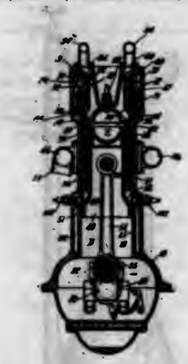
3. An electric furnace having a shaft and an enlarged crucible at the base of the shaft, said crucible having a depth greater than the diameter of the bottom opening of the shaft into the crucible, upper and lower electrodes in the crucible, the upper electrodes extending into the crucible at points to one side of the shaft, and being movable vertically, and means for maintaining a bath level in the crucible sufficiently high to cause it to surround and protect the portions of the upper electrodes which are within the crucible; substantially as described.

4. An electric furnace having a crucible provided with a feed-in-opening at its top, and having at least two upper electrodes and at least one lower electrode, the upper and lower electrodes being normally separated from each other by vertical distances greater than the diameter of said feed opening, all the electrodes being normally at substantially equal distances from each other; substantially as described.

5. An electric furnace having a crucible provided with a feed-in-opening at its top, said crucible having at least two upper electrodes and at least one lower electrode, which are all normally spaced at substantially equal distances from each other, and are connected to different conductors of a multi-phase circuit; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,111,051. INTERNAL-COMBUSTION ENGINE. FREDERIC R. BARKER, Brookline, Mass. Filed June 25, 1913. Serial No. 775,623. (Cl. 123—190.)



1. An internal combustion engine embodying, in its construction, a cylinder provided with inlet and exhaust ports, a piston arranged in said cylinder, a rotating reciprocatory valve adapted to open and close said ports, rolls mounted on said valve, rotating means for said valve including a sleeve aurrounding said valve and provided with longitudinal slots adapted to receive said rolls and permit a longitudinal movement of said valve relatively to said sleeve, means to rotate said sleeve, a cam, and rolls on said valve adapted to engage said cam to reciprocate said valve during the rotary movements imparted thereto by said sleeve.

2. An internal combustion engine embodying, in its construction, a cylinder provided with inlet and exhaust ports, a piston arranged in said cylinder, a rotating reciprocatory valve adapted to open and close said ports, a gear surrounding said valve and operatively connected thereto, means to rotate said gear, and instrumentalities rendered effective by the rotation of said gear adapted to impart a combined rotating reciprocating movement to said valve to open and close said ports.

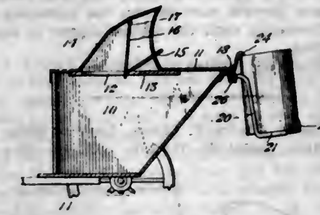
3. An internal combustion engine embodying, in its construction, a plurality of parallelly arranged cylinders provided with inlet and exhaust ports, a piston arranged in each of said cylinders, a cylindrical valve for each of said cylinders adapted to be operated to open and close said ports, engine driven means adapted to rotate one of said valves, means to rotatably connect the other of said valves to said driven valve, and means rendered effective by the rotation of each of said valves adapted to impart a reciprocatory movement to said valves respectively.

4. An internal combustion engine embodying, in its construction, a casing having a cylindrical chamber, a portion of which constitutes an explosion cylinder provided with inlet and exhaust ports, said casing also having an annular recess formed therein concentric with said cylindrical chamber, a rotary member arranged in said recess and provided with oppositely disposed longitudinal slots, means to rotate said member, a cylindrical valve arranged in said cylindrical chamber provided with openings adapted to aline with said inlet and exhaust ports, means on said valve adapted to engage said rotary member within said longitudinal slots, a cylinder head adapted to close the end of said cylinder and said annular recess, said cylinder head having a depending cylindrical member provided with a cylindrical chamber constituting an explosion cylinder having inlet and exhaust ports, a cylindrical valve arranged in said first named cylindrical chamber surrounding and adapted to fit said depending cylindrical member, said valve having openings adapted to register with the ports for said explosion cylinders respectively, a stationary serpertine cam on said depending member, means to rotate said valve, means on said valve adapted to engage said cam to reciprocate said valve during the rotary movements thereof, and a piston having bearing members adapted to engage said cylinders respectively and receive explosion impulses therefrom.

5. An internal combustion engine embodying, in its construction, a plurality of sets of parallelly arranged cylinders arranged in a row and in close proximity to each other, each of said sets including a pair of co-axially arranged cylinders, one of which is smaller than the other, each of said cylinders having oppositely disposed inlet ports and oppositely disposed exhaust ports, a piston for each of said sets of cylinders, said pistons having bearing members for said large and smaller cylinders respectively, a sleeve valve interposed between the large and smaller cylinders of each of said sets, said valves having openings adapted to register with said inlet ports, and instrumentalities adapted to impart a rotating reciprocatory movement to said valves to open and close said ports.

[Claims 6 and 7 not printed in the Gazette.]

1,111,052. REFUSE-VEHICLE. JOSEPH BART, New York, N. Y. Filed June 5, 1913. Serial No. 771,925. (Cl. 214—1.)



1. In a refuse vehicle, the combination with a body having an inclined rear wall, of a removable cover having an opening provided with a gravity operated closure, a bail-like frame pivoted to the sides of the body and adapted to move in an arcuate path over the body, means to secure a receptacle to the frame, and means on said inclined rear wall to support the bail-like frame in a plane below that of the cover.

2. A refuse vehicle provided with a cover having an opening, an oscillatory bail-like member pivotally mounted on the vehicle at the sides thereof to move longitudinally over the vehicle body, a receptacle frame secured to said oscillatory member to hold a receptacle in a fixed position thereon, a hood for said opening and having an entrance on a line substantially parallel with the longitudinal axis of the vehicle and in the path of movement of said receptacle frame, said hood operating to house a receptacle carried by said frame when in a dumping position, and means at the side of the vehicle to move said oscillatory member toward and from said hood.

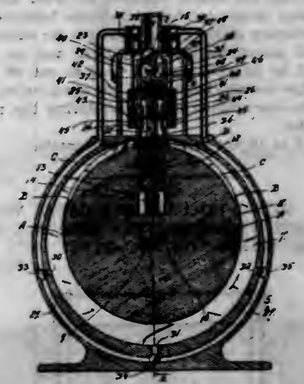
3. A refuse vehicle of the dumping type provided with oscillatory bail-like frame pivotally mounted to the sides of the body near one end thereof, brackets at the rear of the vehicle and below the discharge mouth thereof to serve as a rest for the bail-like frame, a receptacle holder secured substantially central of said bail-like frame to be carried thereby, said holder comprising a plurality of depending parallel spaced arms united to form a base whereby a portable receptacle may be positioned to rest on the base and between the arms, means on said base to engage the receptacle, and means on the bail-like frame to engage the top of a receptacle to hold the same during the movement of the bail-like frame over the vehicle body.

4. A refuse vehicle comprising a body, a bail-like frame pivotally mounted on and adapted to oscillate over the body, a receptacle holder comprising a plurality of spaced arms terminating in a base, a spring actuated catch carried by said frame between said spaced arms and adapted to engage the upper end of a receptacle to rigidly secure the same in transit, and means to oscillate said frame.

5. A refuse vehicle comprising a body, a removable cover having a charging opening near the forward end thereof, a bail-like frame pivoted to the sides of the body, said cover being provided with a longitudinally inclined hood having an opening toward the rear of the vehicle, gravity operated means suspended intermediate the ends of said hood to normally close the opening, and means on the frame to rigidly hold a receptacle during pivotal movement of the frame over the body and to direct the receptacle to dump its contents in said hood.

[Claim 6 not printed in the Gazette.]

1,111,053. ROTARY ENGINE. THOMAS J. BIGGS, Oak Creek, Colo. Filed Jan. 7, 1914. Serial No. 810,694. (Cl. 121—69.)



1. In a rotary engine the combination with a casing of a rotor eccentrically mounted therein and having a crescent shaped enlargement on one side whose point of maximum depth reaches the wall of the chamber at the point of minimum separation from the rotor, a blade carried by the rotor and spring-held in engagement with the inner surface of the wall of the casing, said position of the blade being coincident with that of the greatest radial depth of the rotor, and a valve for controlling the inlet and exhaust of the casing chamber and forced outwardly to the closed position by the enlargement of the rotor.

2. In a rotary engine the combination with a casing of a rotor eccentrically mounted therein and having a crescent shaped enlargement on one side whose point of maximum depth reaches the wall of the chamber at the point of minimum separation from the rotor, a blade carried by the rotor and spring-held in engagement with the inner surface of the wall of the casing, said position of the blade being coincident with that, of the greatest radial depth of the rotor, and a valve for controlling the inlet and exhaust of the casing chamber and forced outwardly to the closed position by the enlargement of the rotor, the said enlargement having cavities on opposite sides of the blade to equalize the pressure on both sides of the latter after the said valve is closed.

3. In a rotary engine the combination with a casing of a rotor eccentrically mounted therein and having a crescent shaped enlargement on one side which is centrally interrupted by a radial recess, a blade located in said recess and spring-actuated to tangentially engage the inner surface of the wall of the casing at all times, and a valve spring-actuated to enter the casing for controlling the inlet and exhaust of the motive fluid, said valve being actuated by the crescent shaped enlargement of the rotor for closing purposes before the rotor reaches the position where the outer extremity of its blade is flush with its surface.

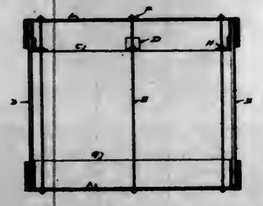
4. In a rotory engine the combination with a casing, of a rotor eccentrically mounted therein and having a crescent shaped enlargement on one side which is centrally interrupted by a radial recess, a blade located in said recess and spring-actuated to tangentially engage the inner surface of the wall of the casing at all times, and a

valve spring-actuated to enter the casing for controlling the inlet and exhaust of the motive fluid, said valve being actuated by the crescent shaped enlargement of the rotor for closing purposes before the rotor reaches the position where the outer extremity of its blade is flush with its surface, the rotor having cavities in its enlargement on opposite sides of the blade to balance the pressure after the closing of the valve when the rotor is traveling in either direction.

5. In a rotary engine the combination with a casing of a rotor eccentrically mounted therein and having a spring-actuated blade tangentially engaging the inner surface of the walls of the casing a main valve controlled by the rotor, means for controlling the inlet and exhaust of motive fluid from the casing chamber in front and rear of the blade and means located at suitable intervals around the circumference of the casing chamber for shunting relatively small quantities of motive fluid, and an auxiliary valve acted on by said shunted fluid to cut off the fluid supply to the casing chamber via the main valve, whereby the rotor is operated on expansion during the remainder of the stroke.

[Claims 6 to 10 not printed in the Gazette.]

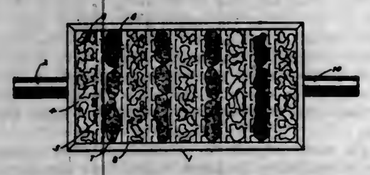
1,111,054. METAL COLLAPSIBLE CASE. WILLIAM H. BONNEVILLE, Philadelphia, Pa. Filed Apr. 19, 1913. Serial No. 762,303. (Cl. 220—17.)



1. In a metal collapsible case, the combination of opposite heads comprising a metal cap plate and an endless U piece, or stave seat, metal staves which interlock longitudinally by means of a double fold seam and having each end disposed in the endless U piece, or stave seat, and securing rods extending between said heads on the inside of the case.

2. In a metal collapsible case the combination of metal cap plates forming the outside of the heads with endless metal U pieces, or stave seats, inside the periphery of the cap plates, or heads, into which the stave ends are disposed, with the opposite heads drawn together by round head shouldered bolts passing through holes in the heads, or metal cap plates, and through holes in the lower leg of metal angles welded to the inside edge of the U pieces, or stave seats, said rods being held in position by means of lock nuts.

1,111,055. PROCESS OF REGENERATING AIR. HECTOR R. CARVETH, Niagara Falls, N. Y., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Aug. 15, 1911. Serial No. 644,170. (Cl. 167—3.)



1. The process of regenerating air consisting in passing the exhaled air in a closed circuit first over a regenerating agent, then over a hydrating agent and then over a regenerating agent.

2. The process of regenerating air consisting in passing the exhaled air in a closed circuit first over a regenerating agent, then over a hydrating agent, and then over other masses of the regenerating agent and the hydrating agent arranged alternately until the desired degree of regeneration is reached.

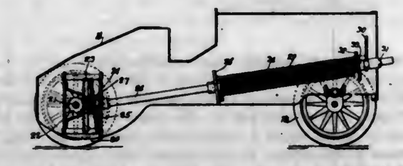
3. The process of regenerating air consisting in passing the exhaled air in a closed circuit first over a peroxid of an alkali metal, then over a hydrating agent and then over other masses of the peroxid of the alkali metal and the hydrating agent arranged alternately until the desired degree of regenerating is reached.

4. The process of regenerating air consisting in passing the exhaled air in a closed circuit first over a mixture of the peroxids of the alkali metals, then over a hydrating agent, and then over other masses of a mixture of the perioxids of the alkali metals and the hydrating agent arranged alternately until the desired degree of regeneration is reached.

5. The process of regenerating air consisting in passing the exhaled air in a closed circuit first over a mixture of a peroxid of an alkali metal and a peroxid of an alkali earth metal, then over a hydrating agent, and then over other masses of said peroxid mixture and the hydrating agent arranged alternately until the desired degree of regeneration is reached.

[Claims 6 to 9 not printed in the Gazette.]

1,111,056. TOY. DAVID P. CLARK, Dayton, Ohio. Filed July 9, 1913. Serial No. 778,170. (Cl. 46—48.)



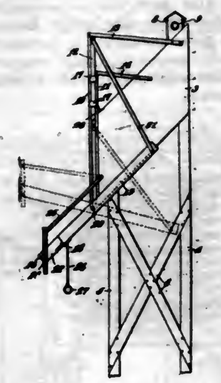
1. In a toy, the combination, with an axle, and wheels secured thereto, of a shaft extending longitudinally of said toy, a driving member mounted at the end of said shaft, rotatable relatively thereto and operatively connected with said axle, a detent mounted at the other end of said shaft to hold it against rotation in one direction, a spring coiled about said shaft and connected at its opposite ends with said driving member and said shaft, respectively, and means to rotate said shaft.

2. In a toy, the combination with an axle and wheels therefor, of a rotatable shaft extending longitudinally of said toy, a spring coiled about said shaft, means for winding said spring, a detent to hold one end of said spring against unwinding movement and a driving connection between the other end of said spring and said axle, said connection comprising a shaft extending longitudinally of said spring and disconnected from the first-mentioned shaft.

3. In a toy, the combination, with an axle and wheels secured thereto, of driving gearing connected with said wheels, a shaft connected with said driving gearing and extending longitudinally of said toy, a coiled spring extending longitudinally of said toy and connected at one end to said shaft and having means at the other end thereof for winding the same and for holding the same against unwinding movement, and a support for said spring extending longitudinally thereof.

4. In a toy, the combination, with an axle, and wheels secured thereto, of driving gearing connected with said wheels, a shaft connected with said driving gearing and extending longitudinally of said toy, a second shaft having one end hollow to receive the end of the first-mentioned shaft and having its other end rotatably supported, a spring coiled about said second shaft and having one end secured to the first-mentioned shaft and having a winding device connected with the other end thereof, and means to hold said last-mentioned end of said spring against unwinding movement.

1,111,057. SEED-HOPPER. WILLIAM H. COURSEY, Brownsboro, Tex. Filed Nov. 6, 1913. Serial No. 799,576. (Cl. 193—45.)



1. A hopper comprising a bin, means for supplying grain or seed thereto, said bin provided with a lower discharge opening, a door slidably mounted in front of said opening, a chute pivotally secured to the said bin below said discharge opening, the sides of said chute extended beyond the said pivotal connection thereof, links extending between the two side projections and the said door, the raising and lowering of the chute causing the closing and opening of said bin discharge outlet.

2. A hopper comprising a bin with a lower discharge opening, a door slidably mounted in front of said opening, a chute pivotally secured to said bin below said discharge opening, rearwardly extending arms carried by said chute, links pivotally secured to the door and to the rear extremities of said arms, the raising and lowering of the chute causing the closing and opening of said bin discharge outlet, respectively.

3. A device for hoppers comprising a movable chute, a check secured to the lower extremity of said chute, a supporting structure for said chute, and means engaging the supporting structure and check, holding said check in fixed relation with respect to the vertical limiting the check to translatory motion and positively preventing a rotatory motion.

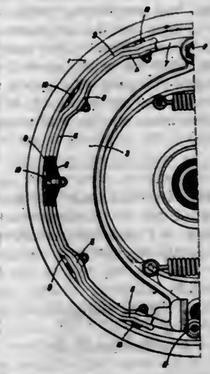
4. Apparatus of the class described comprising a chute, a check disposed below and in front of the lower extremity thereof, and links pivotally secured to the check and to a supporting structure mounting said check for parallel motion.

5. Apparatus of the class described including a chute, a stop positioned below and in front of said chute adapted to check the material passing therefrom, means pivotally supporting said chute, links pivotally secured to said supporting means and to the upper extremity of said stop mounting the same for parallel motion and automatically holding the same in a vertical position.

1,111,058. FRICTION-BRAKE. ROBERT DELAUNAY-BELLEVILLE, St. Denis, France, assignor to Societe Anonyme Des Automobiles Delaunay-Belleville, St. Denis, France. Filed June 30, 1913. Serial No. 776,661. (Cl. 74—13.)

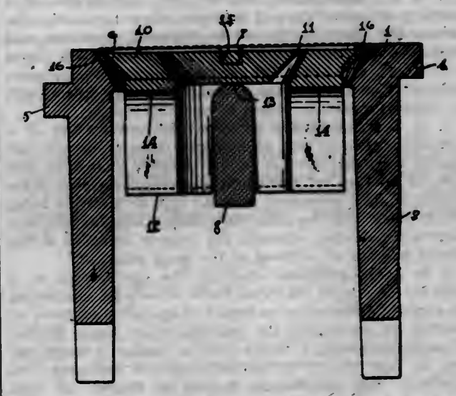
1. A friction brake comprising a brake drum, a shoe cooperating therewith provided with an odd number of depressions, a brake lining on said shoe, and fastening devices for securing the lining to the shoe at said depressions.

2. A friction brake comprising a brake drum, a shoe cooperating therewith, a brake lining on said shoe, said shoe provided with a central depression, and a depression disposed at either side thereof whereby the lining may be secured to the shoe at said depressions and placed under uniform tension throughout its length by first securing



the lining at the end depressions and then at the central depression.

1,111,059. GRATE-BAR. JOHN H. DIETZ, Cleveland, Ohio. Filed Apr. 18, 1914. Serial No. 832,771. (Cl. 126—167.)



1. A grate bar provided in its top with an opening; a support adjacent the opening; and a block designed to control the opening, the block being provided at different vertical and diametrical positions on its under side with rests alternatively engaging the support.

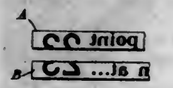
2. A grate bar provided in its top with an opening; a bar extending diametrically across, but below, the opening; and a block designed to control the opening, the block being provided at different vertical and diametrical positions on its under side with downwardly opening slots alternatively engaging the bar.

3. A grate bar provided in its top with an opening having a beveled wall; a bar extending diametrically across, but below, the opening, the opening having two recesses in its wall adjacent the respective ends of the bar; and a block conforming in contour with the opening and having a beveled edge, the block being provided at different vertical and diametrical positions on its under side with slots alternatively engaging the bar, and being provided on its periphery with sets of diametrically opposite lugs adapted alternatively to contact with the wall of the opening, the sets of lugs being formed at different vertical positions corresponding with the slots, and the lower set lying in the recesses when the other lugs are in contacting position.

4. A grate, comprising a plurality of grate bars respectively provided at each side with a longitudinally ex-

tending flange and the under surface of one flange lying approximately in a plane with the upper surface of the other flange, the under surface of the higher flange of each bar overlying and contacting with the upper surface of the lower flange of the adjacent bar, each bar having a plurality of openings in its top; a support in each bar extending adjacent to the several openings; and a plurality of blocks designed to control the respective openings, each block being provided at different vertical and diametrical positions on its under side with slots alternatively engaging the adjacent support.

1,111,060. TYPOGRAPHICAL MACHINE. PHILIP TELL DODGE, Washington, D. C., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 29, 1912. Serial No. 687,012. (Cl. 199—7.)



1. In a typographical machine, the combination of a plurality of sets of type or matrices, those of one set containing the upper portion of an extended character, and those of another set containing the complementary lower portion of such character, and a single selecting means therefor, the successive operation of which delivers the type or matrices consecutively from the several sets.

2. In a typographical machine, the combination of a plurality of sets of type or matrices, those of one set containing the upper portion of an extended character, and those of another set containing the complementary lower portion of such character, and a single storing means therefor, whereby the type or matrices of the several sets are stored together in proper consecutive order.

3. In a typographical machine, the combination of a plurality of sets of type or matrices, those of one set containing the upper portion of an extended character, and those of another set containing the complementary lower portion of such character, the said type or matrices being all provided with the same distributing combination, and distributing devices, whereby the type or matrices of the several sets are all released at the same point.

4. In a typographical machine, the combination of a plurality of sets of matrices, those of one set containing the upper portion of an extended character, and those of another set containing the complementary lower portion of such character, a single storing means wherein the type or matrices of the several sets are arranged consecutively, and distributing devices to deliver the type or matrices of the several sets to the storing means in proper consective order.

5. In a typographical machine, the combination of a plurality of sets of matrices, those of one set containing the upper portion of an extended character, and those of another set containing the complementary lower portion of such character, a single means for storing the matrices of the several sets in consecutive order, a single selecting means to deliver the type or matrices successively therefrom, and distributing devices to restore the type or matrices to the single storing means in proper consecutive order.

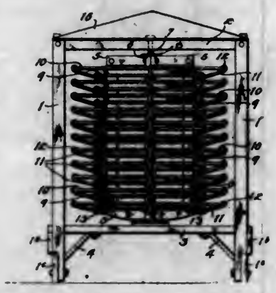
[Claim 6 not printed in the Gazette.]

1,111,061. SEED-CORN RACK. EDWARD ERICSON, Vermillion, S. D. Filed Mar. 11, 1914. Serial No. 824,018. (Cl. 34—26.)

1. A seed corn rack including a supporting frame, a skeleton drum pivotally mounted upon the frame to turn about a vertical axis, a series of annular shelves projecting from the periphery of the skeleton drum, and a guard band surrounding the skeleton drum at the inner end of each shelf.

2. A seed corn rack including a supporting frame, a skeleton drum pivotally mounted upon the frame to turn about a vertical axis, and a series of superposed annular shelves surrounding the skeleton drum, each of the said shelves being formed of a series of spaced concentric rings.

3. A seed corn rack including a supporting frame, a skeleton drum pivotally mounted upon the frame to turn about a vertical axis and constructed at the periphery thereof with a series of upright strips, bracket arms projecting outwardly from the strips in annular rows, and a plurality of spaced concentric rings supported by each row of the bracket arms to provide a series of superposed annular shelves.

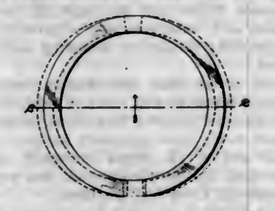


4. A seed corn rack including a supporting frame, a skeleton drum pivotally mounted upon the frame to turn about a vertical axis and constructed at the periphery thereof with a series of upright strips, bracket arms projecting from the said upright strips in annular rows, a plurality of spaced concentric rings supported by each annular row of bracket arms so as to provide a series of superposed shelves, and a guard band surrounding the skeleton drum at the inner end of each shelf.

5. A seed corn rack including a supporting frame, a skeleton drum pivotally mounted upon the supporting frame to turn about a vertical axis and including heads formed of intersecting bars having the ends thereof connected by upright strips, arms projecting radially from the upright strips and arranged in annular rows, a plurality of concentric rings supported by each row of the arms so as to provide a plurality of superposed shelves, and a guard band surrounding the skeleton frame at the inner end of each shelf.

[Claim 6 not printed in the Gazette.]

1,111,062. PISTON-PACKING FOR GAS-ENGINES. ALEXANDER GIRTANNER, St. Louis, Mo., assignor of one-half to Joseph H. Reeder, St. Louis, Mo. Filed Feb. 12, 1912. Serial No. 676,925. (Cl. 121—108.)



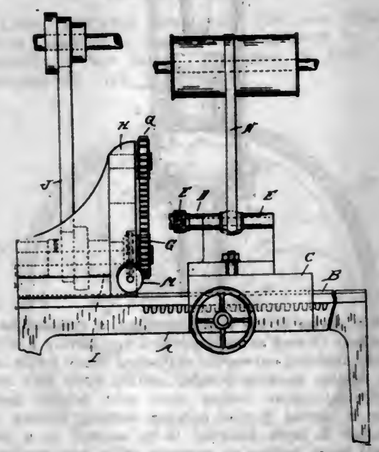
As a new article of manufacture, a packing constructed of two concentric rings whose combined cross section is substantially rectangular, and whose meeting faces are disposed at oblique angles, each of said rings having separated ends and said separated ends being positioned out of registration with each other, each of said rings being constructed of elastic material so that the inner ring will at all times be yieldingly held to the outer ring and the outer ring be held against the inner wall of the cylinder in which the packing is used.

1,111,063. PACKING-RING FOR PISTONS. ALEXANDER GIRTANNER, St. Louis, Mo. Filed Feb. 19, 1914. Serial No. 819,649. (Cl. 121—108.)

The combination with a piston provided with an annular groove, of a packing ring composed of two parts placed side by side in said groove, each of said parts being divided by an inclined slot to produce overlapping points,

the co-acting points of the two parts extending in opposite directions.

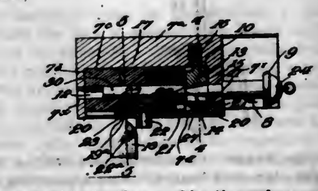
1,111,064. METHOD OF TRUING GEARS. JULIUS V. GUDMAND-HOYER, Detroit, Mich., assignor of one-half to Harley H. La Vercombe, Detroit, Mich. Filed Jan. 23, 1914. Serial No. 813,031. (Cl. 51—4.)



1. The method of truing gears, comprising the holding and centering a gear by a series of gears in mesh therewith distributed about its periphery, driving one of said gears to impart rotary motion to the supported gear, and truing the bore of the supported gear during rotation thereof.

2. The method of truing gears, comprising the supporting of the gear in mesh with a series of gears distributed about its periphery, adjusting one of said gears to take up all lost motion, rotating of one of said gears to impart similar movement to all of the gears, and truing the bore of the supported gear during rotation thereof.

1,111,065. SEAL-LOCK. SAMUEL F. HAPPEL, Bethlehem, Pa. Filed Jan. 19, 1914. Serial No. 813,002. (Cl. 70—23.)



1. In a seal-lock, the combination of a casing formed with a pin receiving opening and a seal recess intersecting said opening, a pin operating in the opening and engaging a seal in the recess, means for locking the pin, and a slide through which the seal passes, said slide having means for releasing the locking means when the seal is destroyed.

2. In a seal-lock, the combination of a casing provided with a seal engaging pin, a spring actuated latch block for locking the pin in the casing, and means only actuated when a seal is destroyed for moving the latch block to permit withdrawal of the pin.

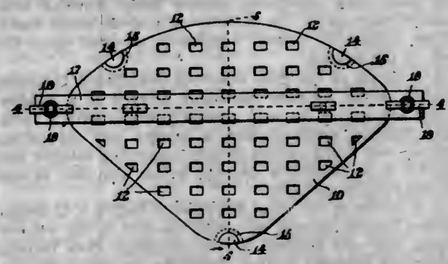
3. In a seal-lock, the combination of a casing formed with a pin receiving opening and a seal receiving opening which intercepts the pin opening, a slide formed with an opening which registers with the seal recess and through which a seal extends, said plate having a second opening adapted to register with the seal receiving recess to permit a destroyed seal to be removed from the casing, a cam on the slide, a pin operating in the pin receiving opening, and means for locking the pin in the casing, said latter means being operated by the cam to permit withdrawal of the pin.

4. In a seal-lock, the combination of a casing comprising two sections, said casing having a pocket, a pin opening, a recess, and a slot, the pin opening intersecting the recess and the pocket, a latch block in the pocket, said latch block having an opening, the wall of which is inclined, a spring for normally holding the latch block in one position, a pin in the pin opening, said pin having a beveled portion, and a shoulder adjacent thereto, said beveled portion engaging the inclined wall of the opening.

5. In a seal-lock, the combination of a casing having a longitudinal opening, a pocket and a transverse recess intersecting the longitudinal opening, a latch block in the pocket, said block having an opening, a pin operating in the longitudinal opening in the casing and the opening in the block, said pin having a shoulder which, when the pin is in one position, abuts against the block to lock said pin in position, a slide having an opening which registers with the recess in the block to receive a seal pierced by the pin, said slide having a second opening adapted to register with the recess in the casing when the slide is moved, to remove a broken seal from the recess, and means between the slide and the block to move the latter away from the shoulder on the pin, to permit withdrawal of the latter to release the broken seal.

[Claims 6 and 7 not printed in the Gazette.]

1,111,066. METHOD OF MAKING HATS. WILLIAM H. HASTINGS, Malden, Mass., assignor to Merrimac Hat Company, Amesbury, Mass., a Corporation of Massachusetts. Filed Mar. 6, 1914. Serial No. 823,257. (Cl. 2—108.)



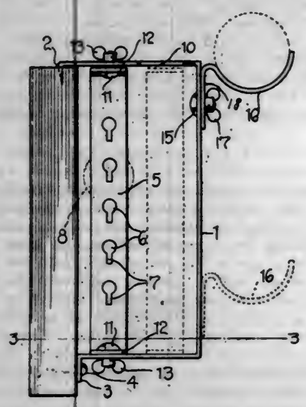
1. The method of treating hats consisting of subjecting the hat to pressure between two perforated plates and then immersing the same in a bath of liquid adapted to act upon the surfaces not subjected to pressure and change the color thereof.

2. The method of treating hats, consisting of folding the hat flat, clamping the same between two perforated plates, and then immersing the hat thus clamped in a bath of liquid adapted to act upon the unclamped portions of the hat and change the color thereof.

3. The method of treating hats consisting of subjecting the hat to pressure between two plates having registering perforations and then immersing the same in a bath of liquid adapted to act upon the exposed surfaces of the hat.

4. The method of treating hats consisting of holding the inner surfaces of the hat together by clamping the hat between two perforated plates to exclude liquid from the inside of the hat, and then immersing the clamped hat in a liquid adapted to act on the surfaces of the hat exposed by said perforations.

1,111,067. WINDOW-FIXTURE. ORA J. HEATH, Springfield, Ohio. Filed Dec. 8, 1913. Serial No. 805,383. (Cl. 156—24.)



1. A device of the class described including a substantially U-shaped bracket, having a spur member at one end and an outwardly projecting perforated flange at the other end, a supporting member adjustably mounted within the bracket and a second supporting member adjustably mounted upon the body of the bracket.

2. A device of the class described including a U-shaped bracket having an elongated slot formed in the end portions thereof, a supporting member having outwardly projecting perforated flanges and adjusting bolts carried by said flanges and adapted to be movably arranged within said slots as and for the purpose set forth.

3. A device of the class described including a U-shaped bracket having an elongated slot formed in the end portions thereof, a supporting member having outwardly projecting perforated flanges and adjusting bolts carried by said flanges and adapted to be movably arranged within said slots, said supporting member being provided with suitable bearings for the spindles of a shade roller and a second supporting member adjustably mounted upon the body of the bracket.

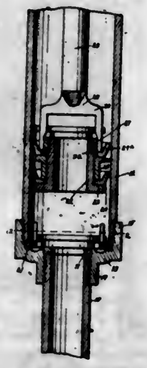
4. A device of the class described including a U-shaped bracket having its ends removably secured to a window casing and having its body portion provided with a vertically disposed elongated slot, a curtain pole supporting member, and a bolt carried by said supporting member and adapted to be adjustably disposed within said slot, as and for the purpose set forth.

5. A device of the class described including a U-shaped bracket having its ends removably secured to the window casing, said end portions having elongated slots therein, supporting members having outwardly projecting flanges, bolts carried thereby and adjustably arranged within said slots, the body portion of said bracket being provided with an elongated slot, a curtain pole supporting member, a bolt carried thereby and adjustably mounted within said slot, as and for the purpose set forth.

1,111,068. PUMP. JOSEPH J. HESS, New Hampton, Iowa. Filed Aug. 11, 1913. Serial No. 784,427. (Cl. 103—80.)

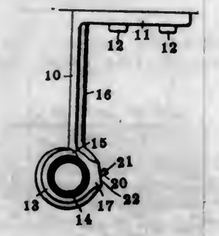
1. In a device of the class described, the combination of a pipe, a valve seat formed thereon, a fitting mounted on said pipe, a cylinder detachably secured to said fitting, a ring mounted between said fitting and said cylinder, said ring having at its inner edge on opposite sides upwardly extending guide yokes closed at their upper ends, said ring being also provided with a notch beneath one of said guide yokes, and a valve designed to coöperate with said seat, said valve having formed on opposite sides laterally extending lugs, said lugs being received between the arms of said guide yokes.

2. In a device of the class described, a cylinder screw threaded at its upper end, a collar mounted on said screw threaded portion, a block having on opposite sides downwardly extending bifurcated arms, said arms being provided with inward extensions, the arms on the opposite sides of said block receiving the said collar, said extensions being below said collar, means for preventing downward movement of said arms with relation to said collar, and a valve designed to coact with the upper end of said cylinder, said valve being provided on opposite sides with laterally extending lugs received between the bifurcated arms on the opposite sides of said block.



3. In a device of the class described, a cylinder having a valve seat formed at its upper end and having a circumferential, annular, outwardly extending flange at its lower end, a flexible packing member resting upon said flange, a cylindrical collar resting upon said flexible packing member, a second flexible packing member resting upon said collar, a block designed to be secured to a piston rod, said block having on opposite sides downwardly extending bifurcated arms, said arms having inward extensions at their lower ends, said extensions resting upon the upper flexible packing member, and a collar detachably mounted on the upper end of said cylinder above the said extension, and a valve having laterally extending lugs formed on opposite sides and received between the members of said bifurcated arms.

1,111,069. PIPE-HANGER. LOUIS A. HOERR, St. Louis, Mo. Filed Apr. 19, 1913. Serial No. 762,306. (Cl. 248—31.)



1. In a pipe hanger, the combination with a member embracing the pipe, said hanger having an opening extending laterally through it, and a wedging member adapted to be driven through said opening between said pipe and hanger to lock said parts together.

2. In a pipe hanger, the combination with a member embracing the pipe, said member having an opening extending laterally through it and communicating with a tapered groove, and a wedging member adapted to be driven through said opening and into said groove.

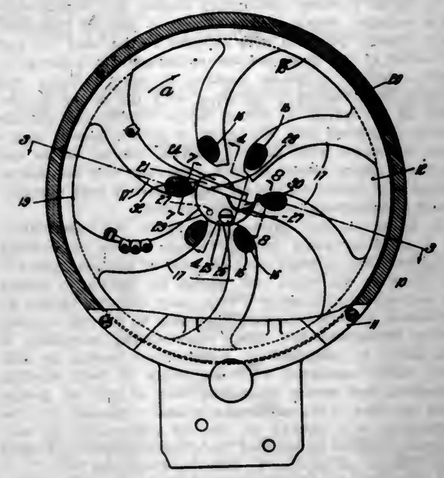
3. In a pipe hanger, the combination with a member extending spirally around the pipe, said hanger having an opening extending laterally through it, of a wedging member adapted to be driven through said opening between said pipe and hanger to lock said parts together.

4. In a pipe hanger, the combination with a member extending spirally around the pipe, said hanger having an opening extending laterally through it and communicating with a tapering groove, and a wedging member adapted to be driven through said opening and into said groove.

5. In a pipe hanger, the combination with a member adapted to embrace a pipe, said member having an opening extending laterally through it, of a headed wedging member adapted to be driven through said opening, the surface of said hanger adjacent to said opening being at an angle to the head of said wedging member.

[Claim 6 not printed in the Gazette.]

1,111,070. HOPPER. RICHARD P. JENNINGS, Somerville, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed May 29, 1914. Serial No. 841,934. (Cl. 218—17.1.)



1. A hopper having, in combination, a receptacle for hooks and the like, a raceway, the upper end thereof inclined at an angle to a horizontal plane and projecting into said receptacle, a rotary picker plate with a plurality of blades arranged to deliver hooks from their inner ends to said upper end of said raceway and a guard for said raceway having an inclined upper edge and a lower edge concentric with said picker plate and projecting at one end thereof adjacent to and beneath the upper end of said raceway.

2. A hopper having, in combination, a receptacle for hooks and the like, a raceway, the upper end thereof inclined at an angle to a horizontal plane and projecting into said receptacle, a rotary picker plate with a plurality of blades arranged to deliver hooks from their inner ends to said upper end of said raceway and a guard for said raceway having an inclined upper edge and a lower edge concentric with said picker plate projecting at one end thereof adjacent to and beneath the upper end of said raceway, the upper end of said raceway being formed on a curve concentric with said picker plate and forming a continuation of said lower edge of said guard.

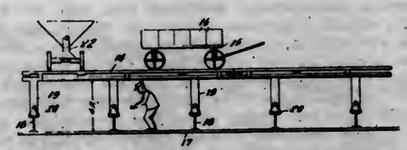
3. A hopper having, in combination, a receptacle for hooks and the like, a raceway, the upper end thereof inclined at an angle to a horizontal plane and projecting into said receptacle, a rotary picker plate with a plurality of blades arranged to deliver hooks from their inner ends to said upper end of said raceway and a guard for said raceway having an inclined upper edge and a lower edge concentric with said picker plate and projecting at one end thereof adjacent to and beneath the upper end of said raceway, said guard having a depression in its inner face inclined laterally from said outer edge toward the interior of said receptacle.

4. A hopper having, in combination, a receptacle for hooks and the like, a raceway, the upper end thereof inclined at an angle to a horizontal plane and projecting into said receptacle, a rotary picker plate with a plurality of blades arranged to deliver hooks from their inner ends to said upper end of said raceway and a guard for said raceway having the lower edge thereof concentric with said picker plate and projecting at one end thereof adjacent to and beneath the upper end of said raceway.

5. A hopper having, in combination, a receptacle for hooks and the like, a raceway, the upper end thereof inclined at an angle to a horizontal plane and projecting into one end of said receptacle adjacent to the center of said end, a rotary picker plate with a plurality of blades arranged to deliver hooks from their inner ends to said upper ends of said raceway and a guard for said raceway having an inclined upper edge and having a notch in its rear face into which said upper end of said raceway projects, the lower edge of said guard being concentric with said picker plate and projecting at one end thereof adjacent to and beneath the upper end of said raceway.

[Claims 6 to 9 not printed in the Gazette.]

1,111,071. METHOD OF DISTRIBUTING BUILDING MATERIALS. ERNEST V. JOHNSON, Chicago, Ill. Filed Dec. 2, 1912. Serial No. 734,431. (Cl. 214—1.)



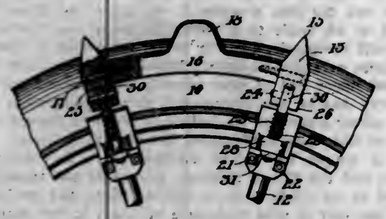
1. The method of distributing building materials during the construction of a building, which consists in providing a platform upon the frame of the building at a sufficient height above the horizontal floor beams to permit laborers to work beneath said platform, elevating a quantity of said materials in a transportable carrying vehicle to said platform, moving said vehicle over said platform to adjacent appropriate points of distribution and delivering said materials to said points with a shiftable gravity conveyer, substantially as specified.

2. The method of distributing building materials during the construction of a building, which consists in providing a platform upon the frame of the building at a sufficient height above the floor beams to permit laborers to work under said platform, elevating a quantity of said materials in a transportable carrying vehicle, moving said vehicle over said platform to adjacent appropriate points of distribution and distributing said materials to said points by gravity, substantially as specified.

3. The method of distributing building material during the construction of a building, which consists in providing a platform upon the frame of the building at sufficient height above the floor beams to permit laborers to work under said platform and adjacent a delivery elevator shaft, loading said materials in a suitable transportable carrying vehicle, moving said vehicle on to said elevator and from said elevator to said platform, moving said vehicle along said platform to appropriate points of distribution, and distributing said materials to said points by gravity, substantially as specified.

4. The method of distributing building materials during the construction of a building, which consists in providing a platform extending substantially around the walls of the building and at a sufficient height above the floor beams to permit laborers to work under said platform, elevating a quantity of said materials in a transportable carrying vehicle, moving said vehicle about said platform, and distributing said material by gravity to appropriate location, substantially as specified.

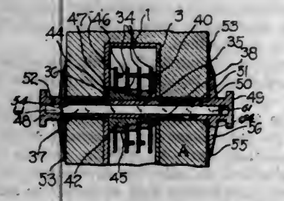
1,111,072. NON-SKID DEVICE. JOSEPH KOPECZKY, Racine, Wis. Filed Apr. 2, 1914. Serial No. 829,024. (Cl. 152—14.)



1. A device of the class described comprising block members rigidly secured to the wheel felly and having projecting perforated lugs, arch-shaped end bars adapted to seat upon the tread portion of a tire and having outwardly projecting ribs, connecting bars between said end bars at opposite sides of the tire and having outwardly projecting ribs, swinging rods upon said end bars positioned through the perforations of said lugs and cushioning springs upon said rods and seated upon said lugs.

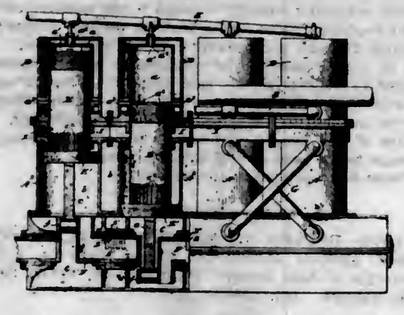
2. A device of the class described comprising arch-shaped end bars adapted to seat upon a tire and having outwardly projecting transversely positioned ribs, removable side bars secured between said end bars and positionable upon opposite sides of the tire and having outwardly projecting longitudinally positioned ribs, said end bars having inward projections at each end thereof and provided with slots in said projections, swinging rods having heads pivoted in said slots, blocks having inner faces adapted to engage the wheel rim, felly and spokes, locking means for said blocks, outwardly projecting lugs carried by said blocks and having projections therethrough, said rods slidably positioned through the perforations of said lugs and encircling springs upon said rods seated between the ends of said rods and the outer faces of said lugs.

1,111,073. PERMUTATION-LOCK. JOHN F. KREYČIK, Lynch, Nebr. Filed Dec. 19, 1913. Serial No. 807,770. (Cl. 70—53.)



A device of the character described including a casing and a permutation mechanism arranged therein, said mechanism comprising a rod extended through the casing and projecting beyond opposite sides thereof, a cylindrical element mounted on the rod within the casing, a sleeve loosely mounted on the cylindrical element and provided with means coacting with the casing to hold the sleeve against axial rotation, the periphery of the sleeve being stepped longitudinally, a tumbler mounted on each step of the sleeve, annular members surrounding the sleeve and interposed between the tumblers to maintain said tumblers against undue movement longitudinally of said sleeve but permitting the tumblers to have independent axial rotation, an arm projecting from the cylindrical element and overlying one of the tumblers, and coacting pins carried by the tumblers, one of said pins being carried by the arm of the cylindrical member and directed through the adjacent tumbler whereby said tumbler will be maintained normally against movement independently of said cylindrical member.

1,111,074. INTERNAL-COMBUSTION ENGINE. JUSTUS C. LAWLER, Trinidad, Colo. Filed May 23, 1911. Serial No. 628,032. (Cl. 123—50.)



1. In an internal combustion engine, the combination of a suitable casing having therein a pair of cylinders, each cylinder provided with an inlet at the head end and an outlet at the crank end, means for igniting a charge in each cylinder, a piston working in each cylinder and having an extension coöperating with the casing to provide an air pump, a mixing device having its mixture outlet connected with the inlets of both cylinders, and a duct connected with the inlet of the mixing device and with the engine casing in such a manner that the mixing device will receive all the air compressed by both pumping pistons throughout the strokes thereof.

2. In an internal combustion engine, the combination of a suitable casing having therein a pair of working cylinders each provided with an inlet at the head end and an outlet at the crank end, means for igniting a charge in each cylinder, a piston within each cylinder having an extension coöperating with the casing to provide a pump acting throughout the entire reciprocating movement of the piston to compress air, a carbureter having its mixture outlet connected with the inlets of both working cylinders, and means connecting both of said air pumps with the inlet of the carbureter in such a manner that the carbureter will receive all the air compressed by both pumping pistons throughout the strokes thereof and while said pistons are moving in opposite directions.

3. In an internal combustion engine, the combination of a casing having therein a pair of working cylinders, provided with inlet ports at their head ends, and exhaust ports at the crank ends of the cylinders, means for igniting a charge in each of said cylinders, a pair of pump cylinders, a piston within each working cylinder, a piston in each pumping cylinder connected with a piston in a working cylinder, an inlet for admitting air to each pump cylinder, connections between the pump cylinders within the casing and extending from one side of the piston in each cylinder to the opposite side of the piston in the other, a carbureter having its mixture outlet directly connected with the inlet ports of both working cylinders, and direct connections between the carbureter and both pump cylinders said pistons in the pumping cylinders acting throughout their entire reciprocating movement to compress the air supplied to said carbureter.

4. In an internal combustion engine, the combination of a pair of working cylinders, provided with inlet and exhaust ports at the head and crank ends of the working cylinders respectively, means for igniting a charge in each of said cylinders, a pair of pump cylinders in alinement with and of greater diameter than the working cylinders, a piston within each working cylinder having an extension terminating in an enlarged head within the alined pump cylinder, an inlet for admitting air to each pump cylinder on the opposite side of the head of the piston therein from the working cylinder, connections between the pump cylinders, extending from one side of the piston head in each cylinder to the opposite side of the piston head in the other, whereby said pistons in the pump cylinder may act throughout their reciprocating movement to compress air, a carbureter having its mixture outlet directly connected with the inlet ports of both working cylinders, and direct connections between the carbureter and both pump cylinders the carbureter receiving all the air compressed by both pumping pistons throughout the stroke thereof and while the pumping pistons are moving in opposite directions.

5. In an internal combustion engine, the combination of a casing having therein two sets of alined working and pumping cylinders, the former each having inlet and exhaust ports, means for igniting a charge in each working cylinder, a carbureter having its mixture outlet connected with the inlets to both working cylinders and its air inlet connected with a supply duct, a piston in each working cylinder having an extension constituting a piston in the alined pump cylinder, the body of each piston having formed therein a passage adapted in one position to connect its pump cylinder with the air supply duct of the carbureter, an inlet for air in each pump cylinder, and ducts connecting the pump cylinders and each extending from one side of the piston in one of said cylinders to the opposite side of the piston in the other said cylinder.

[Claims 6 to 17 not printed in the Gazette.]

1,111,075. BED-SPRING. WILLIAM LEWIS, Utica, N. Y. Filed Dec. 24, 1910. Serial No. 599,130. (Cl. 5—29.)

1. The combination in a bed spring of a series of coils at the edge of the bed, having two sections, the upper of which is cone shaped and tapers toward the lower and the lower of which is formed of comparatively small convolutions, coils in the balance of the bed of greater height and composed of three sections, the upper and lower of which are cone shaped and taper toward each other, the middle section of which is of smaller convolutions, braces connecting the upper junction points of said three section coils and the junction points of the two section coils and braces connecting the junction points of adjacent two section coils, and braces connecting the lower junction points of the three section coils, and cross bars depressed between their ends to support the higher coils and supporting the said two section coils at the raised ends.

2. The combination in a bed spring of a series of coils at the edge of the bed having two sections, the upper of which is cone shaped and tapers toward the lower and the lower of which is formed of comparatively small convolutions, coils in the balance of the bed of greater height and composed of three sections, the upper and lower of which are cone shaped and taper toward each other and the middle section of which is of smaller convolutions, braces connecting the upper junction points of said three-section coils and the junction points of the two-section coils and cross bars depressed between said ends to support the higher coils and supporting the said two-section coils at the raised ends.

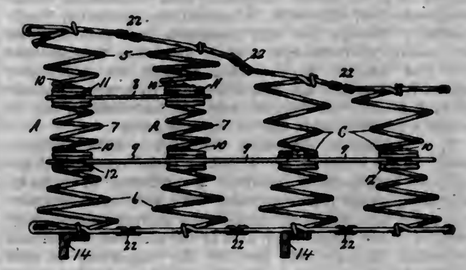
3. The combination in a bed spring of a series of coils at the edge of the bed having two sections, the upper of which is cone shaped and tapers toward the lower and the lower of which is formed of comparatively small convolutions, coils in the balance of the bed of greater height, braces connecting the junction points of the two-section coils and intermediate points upon said higher coils and cross bars depressed between their ends to support the higher coils and supporting the said two-section coils at the raised ends.

4. The combination in a bed spring of a series of coils at the edge of the bed having two sections, the upper of which is cone shaped and tapers toward the lower and the lower of which is formed of comparatively small convolutions, coils in the balance of the bed of greater height, braces connecting the junction points of the two section coils and intermediate points upon said higher coils, braces connecting adjacent intermediate points upon said higher coils and cross bars depressed between their ends to support the higher coils and supporting the said two-section coils at the raised ends.

5. A triple deck spring for spring beds comprising coaxial end and intermediate sections, the end sections being conical and tapered toward the intermediate section and the intermediate section of smaller diameter than the larger ends of the conical end sections, and separate floating brace bars interlocked with the junctions of the end sections with the intermediate section.

[Claim 6 not printed in the Gazette.]

1,111,076. BED-SPRING. WILLIAM LEWIS, Utica, N. Y. Original application filed Dec. 24, 1910, Serial No. 599,130. Divided and this application filed Apr. 25, 1914. Serial No. 834,316. (Cl. 5—29.)



1. The combination in a bed spring of three-section coils of similar material throughout, the upper and lower sections of which are cone-shaped and taper toward each other, the middle section of which is cylindrical in form, and of smaller convolutions, coils of two cone-shaped sections tapering toward each other, braces connecting the junctions of the sections of the adjacent two-section coils, braces connecting similar junctions of the sections of three-section coils and braces connecting the junctions of two-section coils to one of the junctions of the adjacent three-section coils.

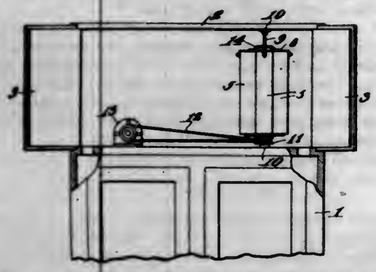
2. In a spring bed, a set of three-section coils, a separate set of two-section coils, floating brace bars connecting corresponding junctions of the sections of the first-named set, and additional brace bars connecting the junctions of two of the sections of the first-named set with the junctions of the sections of the separate set.

3. In a spring bed, a set of triple-deck springs, a separate set of two-deck springs, floating brace bars connecting the lower decks of the springs of both sets, and a separate brace bar connecting the upper and intermediate decks of the first-named set.

4. In a spring bed, a plurality of sets of triple-deck coil springs, separate sets of double-deck coil springs, the lower and upper sections of each deck being conical with their smaller ends adjacent, floating brace bars connecting the upper ends of the sections of the lower decks of both sets, and a separate floating brace bar connecting the lower ends of the upper deck sections of the first-named set, the middle deck sections of said first-named set being of relatively small diameter and having their opposite ends engaged with the adjacent brace bars.

5. In a spring bed, a set of triple-deck coils having their upper deck sections conical and their middle deck sections of relatively smaller diameter than the larger ends of the conical sections, floating brace bars connecting the junctions of the upper and middle deck sections with each other and separate floating brace bars connecting the junctions of the lower and middle sections with each other.

1,111,077. COOLER FOR REFRIGERATORS. CHARLES W. MCCOY, Winnipeg, Manitoba, Canada, assignor of three-eighths to William J. Gibson and two-eighths to William R. Rundle, Winnipeg, Canada. Filed Apr. 26, 1913. Serial No. 763,874. (Cl. 62—134.)



1. In an apparatus of the class described, the combination of a refrigerant receptacle with outstanding wings communicating therewith, a central flue extending longitudinally through the said receptacle and providing an air passage therethrough, a shaft extending through said flue and adapted to rotatably support the receptacle, means for rotating the said receptacle to bring the wings thereof forcibly in contact with the surrounding air to create a positive draft and to cool the same.

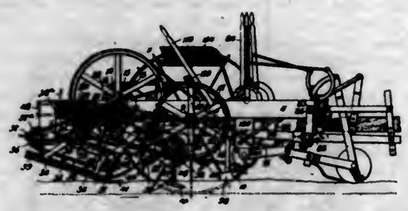
2. A refrigerant receptacle including a main compartment with a central flue extending therethrough and positioned substantially vertical, a plurality of radially extending wings communicating with said main compartment and with the longitudinal axes thereof substantially parallel to the longitudinal axis of the said flue, and means extending through said flue for the supporting of said receptacle.

3. In an apparatus of the class described, a main compartment provided with a central flue extending therethrough, a shaft extending through said flue, and means engaging the said shaft and the said compartment for securing the said compartment thereto, radially extending wings communicating with the main compartment and with their longitudinal axes substantially parallel to the said shaft and with the walls of said wings lying in planes parallel to the shaft and the axis of rotation of the said receptacle, and a cover at the upper extremities of the said wings adapted to maintain the same in a sealed condition.

4. An apparatus of the class described, comprising a sealed refrigerant receptacle, said receptacle including a plurality of radial wings in open communication therewith, a central open ended longitudinal flue extending through said receptacle, a shaft extending through said flue, means for holding said shaft in a vertical position, means engaging said receptacle and said shaft for supporting the receptacle out of contact with adjacent objects and to permit the circulation of air through the said flue, the adjacent surfaces of the walls of the radial wings forming reëntrant angles, the said walls acting to cool the air in contact therewith and to set up a circulation of air downwardly past the said walls and up through the central flue.

1,111,078. BEET-HARVESTER. HAMILTON DUNBAR MEEK, Polk, Iowa. Filed Feb. 28, 1911. Serial No. 611,475. (Cl. 55—9.)

1. In a beet harvester, means for loosening the dirt about the beets in the ground, means for lifting the beets from the ground, and means for shifting the dirt loosening means and the dirt lifting means laterally with reference to the direction of travel of the machine.



2. In a beet harvester, plows for loosening the dirt about beets in the ground, a picker for lifting the beets from the ground, and means for shifting both the plows and the picker laterally with reference to the direction of travel of the machine.

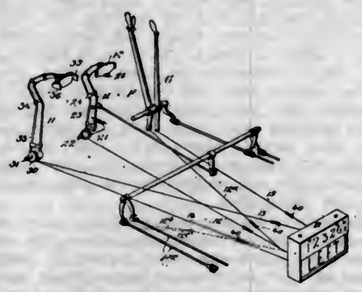
3. In a beet harvester, means for loosening the dirt about the beets in the ground, means for lifting the beets from the ground, means for shifting the dirt losening and the dirt lifting means laterally with reference to the direction of travel of the machine, and means for elevating and lowering the dirt loosening and beet lifting means with reference to the ground.

4. In a beet harvester, a picker, means for elevating and lowering the picker with reference to the ground, and means for shifting the picker laterally with reference to the line of travel of the machine, the means for elevating and lowering picker participating in the lateral movement thereof.

5. In a beet harvester, a rotatable picker provided with an actuating shaft, pivot supports for the shaft, elevating and lowering means for said pivot supports for elevating and lowering the shaft with reference to the ground, and means participating in the movement of the supports and capable of movement independently thereof for imparting to the shaft movement in the direction of the length of the latter.

[Claims 6 to 25 not printed in the Gazette.]

1,111,079. SIGNALING MECHANISM FOR AUTOMOBILES. EDGAR J. MEYER, New York, N. Y.; Eugene Meyer, Jr., and Walter E. Meyer, New York, N. Y., executors of said Edgar J. Meyer, deceased. Filed Jan. 10, 1911. Serial No. 601,851. (Cl. 116—31.)



1. The combination of a signal plate, guides for the plate, an arm to operate the plate, a pedal of a vehicle, a flexible connection connected with and extending from said pedal to said arm for operating said signal plate, and means on said pedal guiding said connection along the pedal to move coincidentally therewith.

2. The combination of a vehicle, a signal movably supported thereby, devices for operating the signal to display and conceal the signal, the vehicle having a pedal separate from the signal, and devices carried by said pedal and controlling said first named devices for operating said signal independently of the operation of the pedal.

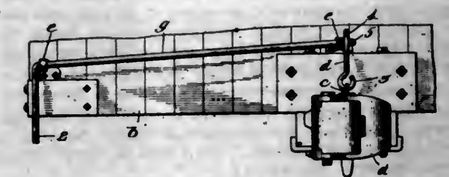
3. The combination of a signal, devices for operating the same to display and conceal the signal, a brake pedal of a vehicle, devices carried by said pedal and controlling said first named devices for operating said signal independently of the operation of the pedal, brake mechanism controlled by said pedal, and means connecting the brake mechanism with said signal for operating the latter by said brake mechanism.

4. The combination of a vehicle, a signal movably supported thereby, devices for operating the signal to display and conceal the signal, the vehicle having a pedal separate from the signal, a member carried by said pedal and movable independently thereof, and means actuated by said member and controlling said signal-actuating devices for operating said signal independently of the operation of said pedal.

5. The combination of a vehicle, a signal plate movably supported thereby, devices for operating the same to display and conceal the plate, the vehicle having a pedal, a movable member carried by the pedal, and a connection between the movable member and the devices of the signal plate for operating the latter, said connection permitting the pedal to be operated without operating the signal.

[Claims 6 to 20 not printed in the Gazette.]

1,111,080. CAR-COUPLING UNCOUPLING DEVICE. MATTHEW J. MORGAN, Chicago, Ill. Filed Dec. 15, 1911. Serial No. 666,077. (Cl. 213—59.)



In combination, a car, a coupler, a horizontal rotatable rod secured to the end of the car, said rod having at its inner end an arm projecting outwardly over the coupler, a closed eye upon said arm, a single link connecting said arm and the lock of said coupler, said link being provided at one end with a vertically elongated loop which fixedly secures said link to and normally extends a distance above and below the closed eye in the projecting arm to permit longitudinal movement of the coupler without strain on said outwardly projecting arm and having at its other end a hook which engages an eye in the coupler lock, said hook being formed as an open eye whereby the lock and link may be attached or detached without removing said lock from the coupler or removing said rod from the end of the car or detaching said link from the rod, substantially as described.

1,111,081. MOWING-MACHINE. ADIS MORRIS, Indianola, Iowa. Filed Nov. 30, 1912. Serial No. 735,002. (Cl. 56—75.)

1. In a mowing machine, the combination of an axle, a crank shaft, a pinion on the crank shaft, two gear wheels in mesh with the pinion on the crank shaft and on opposite sides thereof, and means for operatively connecting both of the gear wheels with the main axle to run in opposite directions and at the same speed.

2. In a mowing machine, the combination of a main axle, a crank shaft, a beveled pinion on the crank shaft, two beveled pinions in mesh with the beveled pinion on the crank shaft and on opposite sides thereof, an internal gear wheel fixed to the axle, a pinion in mesh with the internal gear and operatively connected with one of the beveled gear wheels, a gear wheel fixed to the axle, a pinion in mesh therewith and operatively connected with the other of said beveled gear wheels, the proportions of said gearing devices being such as to operate both the beveled gear wheels at the same speed.

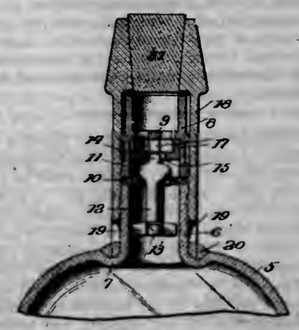
3. In a mowing machine, the combination of a main axle, a crank shaft, a beveled pinion on the crank shaft, two beveled pinions in mesh with the beveled pinion on the crank shaft and on opposite sides thereof, an internal gear wheel fixed to the axle, a pinion in mesh with the internal gear and operatively connected with one of the beveled gear wheels, a gear wheel fixed to the axle, a pinion in mesh therewith and operatively connected with the other of said beveled gear wheels, the proportions of said gearing devices being such as to operate both the beveled gear wheels at the same speed, and a clutch device for the beveled pinion on the crank shaft.

4. In a mowing machine, the combination of a crank shaft, means for rotating it, a crank wheel thereon, a pitman member connected to the crank wheel, a sliding support pivotally connected to the other end of said pitman member, a casing in which the sliding support is mounted, said casing being provided with an extension for inclosing the crank wheel and the said pitman member, a partition in said casing, a second pitman member pivotally connected with the sliding member and extended through said partition, and a third pitman member pivotally connected with the second pitman member and designed to be connected to a sickle bar, said sliding member being provided with openings through which oil may freely pass.

5. In a mowing machine, the combination of a main frame, a crank shaft rotatably mounted in the main frame, a crank wheel thereon, a crank case connected with the main frame and having a part to surround the crank wheel and also having a cylindrical extension having one end communicating with the crank case and the other end being open toward the sickle bar of the mowing machine, a partition fixed within the cylindrical portion and provided with a stuffing box, a sliding perforated disk within the cylindrical casing, a pitman member pivotally connected to the sliding disk and also connected to the crank wheel, a pitman member fixed to the sliding disk and extended through the stuffing box in the partition, a second sliding member between the partition and the end of the casing toward the sickle bar, and a third pitman member pivoted to said sliding member and designed to be pivotally connected to a sickle bar, said crank case and the cylindrical casing being designed to hold a quantity of oil and said perforated sliding support being designed to permit the oil to flow freely through it, for the purposes stated.

[Claim 6 not printed in the Gazette.]

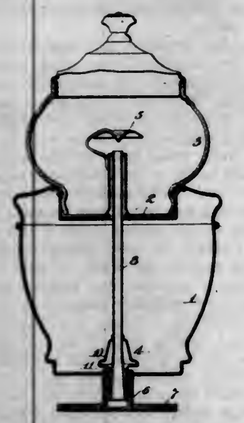
1,111,082. NON-REFILLABLE BOTTLE. JOHN D. MULVEHILL, Spokane, Wash. Filed Feb. 19, 1914. Serial No. 819,612. (Cl. 215—103.)



In a non-refillable bottle having a neck, in combination a disk valve seat of relatively soft material positioned at

the top of said neck, a valve casing resting on said valve seat, a gravity actuated valve of generally globular shape within said casing and coacting with said valve seat, a perforated diaphragm in said casing protecting said valve, a perforated member between the diaphragm and the valve seat for protecting said valve, having a perforation adapted to guide the valve in its movement, and a cap adapted to fit over said casing having a threaded connection with the neck of the bottle and having its lower end permanently secured to the body of the bottle.

1,111,083. COFFEE-MACHINE. CHARLES NELSON, Brooklyn, N. Y., assignor to S. Sternau & Co., New York, N. Y., a Copartnership composed of Sigmund Sternau and Lionel Strassburger. Filed Apr. 24, 1907. Serial No. 369,923. (Cl. 53—3.)



1. A percolator for coffee machines having a central open-ended tube and a horizontally corrugated member adjacent to one end of the tube and surrounding the same, in combination with a heating chamber surrounding the corrugated member.

2. A percolator for coffee machines having a central open-ended tube, a horizontally corrugated member adjacent to one end of the tube, and surrounding the same and a chamber above the corrugated portion, in combination with a heating chamber surrounding the corrugated portion.

3. The combination of a receptacle with an open-ended heating chamber, a percolator, the said percolator having a horizontally corrugated member surrounding its lower end and extending into the chamber.

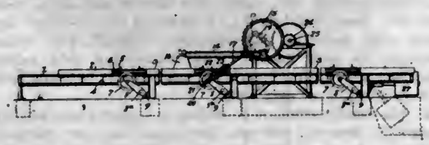
4. The combination of a receptacle with an open-ended heating chamber of circular cross-section, a percolator, the said percolator having a member of elliptical cross-section extending into the chamber providing passages between the walls of such member and chamber.

5. The combination of a receptacle with an open-ended heating chamber of circular cross-section, a percolator, the said percolator having a corrugated member of elliptical cross-section surrounding its lower end and extending into the chamber.

1,111,084. STIRRER OR CONVEYER. DAVID J. NEVILL, Denver, Colo., assignor to The Stearns-Roger Manufacturing Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 28, 1912. Serial No. 686,782. (Cl. 193—11.)

1. In a stirrer or conveyer, a support comprising a plurality of inclined rocker arms, links pivotally connecting said rocker arms to form a parallelogrammic supporting structure, means to oscillate said supporting structure, a rake on said support, a trackway and coöperating wheels serving to mount the rake on the support for reciprocatory movements independent of the support, and means to reciprocate the rake.

2. In a stirrer or conveyer, a support comprising oscillatory rock arms, means connecting said rock arms to cause the same to oscillate in unison, a rake mounted on said support for longitudinal reciprocation independent of the support, means to reciprocate the rake, means to impart a complete oscillation to the rock arms during the non-conveying stroke of the rake, said means adapted to permit said rock arms to remain at rest in their lowermost position during the conveying stroke of the rake, and means to resiliently check the downward movement of the rock arms and to hold said rock arms in their lowermost position during the said conveying stroke of the rake.



3. In a stirrer or conveyer, a support comprising oscillatory rock arms, means connecting said rock arms to cause the same to oscillate in unison, a rake mounted on said support for longitudinal reciprocation independent of the support, a rotary member, a connection between the rake and said rotary member whereby the latter reciprocates the rake, support actuating means connecting said rotary member with said support, a slotted connection between said means and said support whereby the rock arms are raised and lowered during the non-conveying stroke of the rake and are permitted to remain stationary during the conveying stroke of the rake, means to resiliently check the downward movement of the rock arms and to hold the same in their lowermost position during the conveying stroke of the rake, and resilient means associated with said support actuating means.

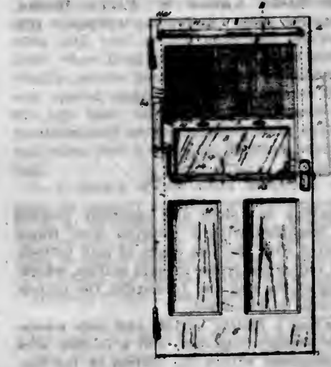
1,111,085. CASTER. BERNHARD H. NOELTING, Nebraska City, Nebr., assignor to Faultless Caster Company, a Corporation of Nebraska. Filed June 24, 1912. Serial No. 705,427. (Cl. 16—4.)

A pintle mount of the class described embracing a strap of spring metal stamped to U shape, and affording substantially parallel integral arms, said strap having a pintle aperture through the middle thereof to receive the upper end of the pintle therethrough, and inwardly struck, longitudinally slotted tongues integral with said arms at points above the lower ends thereof, and arranged in overlapping relation, and through which said pintle also passes.

1,111,086. FASTENER FOR WINDOW-SCREENS. JOSEPH M. OLSON, Canadjan, Tex. Filed July 9, 1913. Serial No. 777,995. (Cl. 16—119.)

A sash fastener comprising sockets adapted to be secured to a window frame, vertically disposed rods detachably connected with said sockets, said rods having shouldered recesses therein and catches adapted to be mounted upon the window sash for engaging recesses in said rods, substantially in the manner set forth.

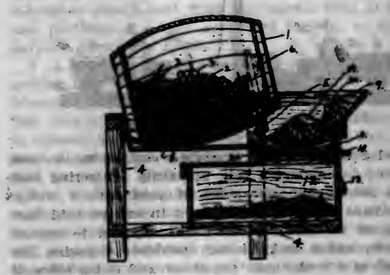
1,111,087. HOLLOW DOOR. JOSEPH M. OLSON, Chicago, Ill. Filed Oct. 15, 1913. Serial No. 795,192. (Cl. 156—39.)



1. A hollow door, a sash slidably mounted in said door, a roller mounted on brackets supported by said door, a screen fabric mounted on said roller and adapted to slide within the hollow door, means for detachably securing the lower edge of said screen to said sash, and means for supporting the sash in its closed position, said means comprising an elongated strip adapted to be bodily moved transverse to its length under the lower edge of said sash.

2. A hollow door having a slot in its upper and inner face, a sash slidably mounted in said door, a roller mounted on said door adjacent said slot, a screen attached to said roller and adapted to slide through said slot and within said door, means for detachably securing the lower edge of said sash, and means for supporting said sash in porting said sash in its closed position, said means comprising an adjustable stop mounted at the lower edge of the sash opening in said door and adapted to pass bodily under the lower edge of said sash.

1,111,088. FRUIT-DISPLAY CABINET. ARTHUR R. OVERFIELD, Buffalo, N. Y. Filed Apr. 17, 1913. Serial No. 761,774. (Cl. 211—9.)

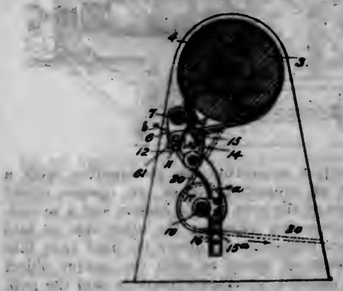


1. In a frint display cabinet, a frame adapted to support a barrel in an inclined position, a pivoted barrel-support hinged upon said frame, a hopper, slidable bottom to said hopper, a wire basket within said hopper, above said slidable bottom and a slidable drawer in said frame below said hopper.

2. In a frint display cabinet, a fruit receptacle, a supporting frame, a pivoted receptacle support, a hopper on said frame in front of said receptacle, a slidable bottom to said hopper, a sieve positioned below said hopper adapted to hold granular material.

3. In a frint display cabinet, a fruit receptacle, a supporting frame for said receptacle pivoted on said frame, a bin positioned in front of said frame, a removable bottom to said bin and a sieve positioned within said bin over said removable bottom.

1,111,089. SELF-ACTING AND SELF-REGULATING BRAKE MECHANISM. CLYDE F. PARKER, Portland, Oreg. Filed Mar. 21, 1914. Serial No. 826,240. (Cl. 57—84.)



1. In a brake mechanism, a brake drum, a brake band around the drum, a knuckle lever device connecting the ends of the brake band, and a separate operating member connected one with each of two of the elements of the knuckle lever device.

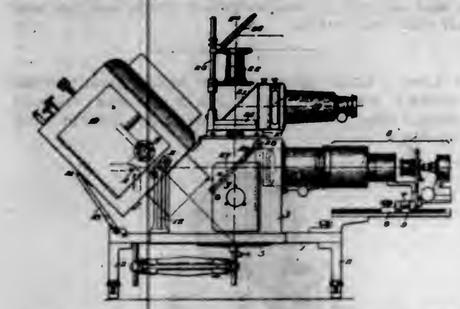
2. In a brake mechanism for cable carrying drums, the combination with the cable drum having a brake surface; of a brake band taking around the said surface, a knuckle lever device connecting the ends of the brake band, and an operative connection between the said cable and one of the elements of the knuckle lever device for tightening the brake band according to the tension on the cable.

3. In a brake mechanism for cable carrying drums, the combination with the cable drum having a brake surface; of a brake band taking around the said surface, a knuckle lever device connecting the ends of the brake band, an operative connection between the said cable and one of the elements of the knuckle lever device for tightening the brake band according to the tension on the cable, and a separate controlling member connected with the knuckle lever device for actuating the brake band independently of the aforementioned operative connection.

4. In a brake mechanism of the character stated; a cable carrying drum, said drum including an annular brake flange, a device comprising a pair of interengaging bell crank levers, a brake band that takes around the drum flange, the ends of which separately join with the two bell crank levers, a cable guide on one of the bell crank levers around which takes the cable as it passes from the drum, said device operating to apply the brake band when tension is on the cable, and manually operated means for shifting the device to overcome the tension on the cable to release the drum.

5. In a brake mechanism of the character stated, a hoisting drum having a central annular brake band receiving flange, a separate cable connected to each end of the drum, a device consisting of a pair of bell crank levers, one of which has pendent forked extensions, a brake band around the drum flange, one end of which connects to one bell crank lever, and the other end to the other bell crank lever, one of the bell crank levers including a forked member that interengages with one element of the other bell crank lever, cable sheaves mounted on the aforesaid pendent forked extensions, over which the cables from the drum pass and which form the pulling element for shifting the said devices to apply the brake band when tension is on the cables, and a hand lever connected with the bell crank lever having the forked member for rocking the said crank lever to shift the said devices to release the brake.

1,111,090. MULTIPLE PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 12, 1913. Serial No. 789,530. (Cl. 88—24.)



1. In a projection apparatus the combination with a primary system of projection lenses, an opaque object holder at one side of the axis of said system and a secondary system of projection lenses at the other side of said axis, of a lantern adjustable to direct its light rays into the primary system of lenses or onto the opaque object holder, and two parallel reflectors adjustable into the path of the light rays, one for deflecting the light rays emitted by the lantern in its first position into the secondary lens system and the other for deflecting the light rays received from the opaque object holder into said primary system of lenses when the lantern is adjusted into its second position.

2. In a projection apparatus, the combination with two systems of projection lenses and a source of illumination adjustably mounted to direct the rays of light emanating therefrom either in the direction of one of said lens systems or in an angular direction to one side of said axis, of an opaque object holder receiving the light rays projected in the last mentioned direction, and an adjustable reflector having two faces, one of which is interposed in the path of the light rays when directed toward the first mentioned lens system to direct them into the second lens system, the other of said faces receiving the reflected light rays from the opaque object holder and deflecting them into the first mentioned lens system.

3. In a multiple projection apparatus, the combination with a primary and secondary system of projection lenses arranged with their axes intersecting and an opaque object holder arranged in the plane of the two lens systems, of a source of illumination adjustable to direct its light rays either into the primary lens system or onto the opaque object holder, and a member adjustable relatively to the point of intersection of the axes of the two lens systems having one reflecting surface for intersecting light rays directed toward the primary lens system and deflecting them into the secondary lens system and another reflecting surface for receiving light rays from the opaque object holder and directing them into the primary lens system.

4. In a multiple projection apparatus, the combination with primary and secondary systems of lenses arranged with their axes intersecting and means for reflecting light rays disposed in the axis of the secondary system of lenses, of a lantern mounted in alinement with the primary system of lenses and adjustable to direct its rays onto said reflecting means, and a member carrying two reflecting surfaces adjustable into positions to alternately close one or the other of said lens systems against the passage of light rays and also adapted to be positioned relatively to their two axes to cause the secondary lens system to be illuminated when the lantern is in its first mentioned position and the primary lens system to receive reflected light rays when the lantern is moved into its second position of adjustment.

5. In a projection apparatus, the combination with two systems of projection lenses, arranged to project, respectively, images of objects disposed vertically and horizontally, of a source of light comprising means for directing the beam of light rays in an upward direction for both lens systems, a mounting carrying said two lens systems and means for effecting a relative movement between said mounting and said light source to illuminate one or the other of said lens systems.

[Claims 6 to 11 not printed in the Gazette.]

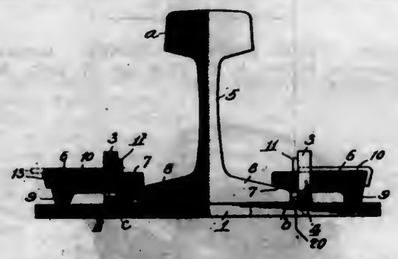
1,111,091. HAND-BAG. GEORGE W. PAULI, Boston, Mass. Filed Oct. 15, 1908. Serial No. 457,811. (Cl. 190—49.)

1. A hand-bag having flat sides and centrally creased ends and bottom, combined with a skeleton wire frame having sides connected with the side edges of said bottom, and a hinged pintle rod at the crease of said bottom, whereby to permit folding of the bag and to distend the bottom thereof when the same is expanded.

2. A hand-bag having a folding bottom and ends whereby the sides may be brought together, and a folding wire skeleton stiffener contained within the bottom of the bag, for spreading the bottom out flat when opened, said stiffener being provided with a pintle and a finger on one of the members overlying the other member to form a stop to prevent depression of its central portion below the plane which it occupies when opened.

3. The combination with a hand-bag having a folding bottom and ends, of a stiffener frame having the outline of the said bottom when such bottom is spread out, said frame being of wire skeleton construction and consisting of a pintle and two frame members having eyes pivotally mounted upon said pintle, one of said members having its end wrapped about the pintle and carried over the adjacent part of the other member in position to form a stop when the members are in the same plane.

1,111,092. TIE-PLATE. EDWARD POSSON, Chicago, Ill. Filed Sept. 21, 1911. Serial No. 650,517. (Cl. 238—2.)



1. A device of the class described comprising a base plate adapted to support a rail, upwardly projecting lugs adapted to lie at opposite sides of said rail, a wedge adapted to pass through an aperture in one of said lugs and having an inclined lower surface adapted to engage the rail base, and a lock having shoulders engaging the outer end of said wedge and the inner and outer sides of said lug.

2. A device of the class described comprising a base plate having lugs projecting from the upper side thereof, said base plate being adapted to support a rail between said lugs, one of said lugs projecting upwardly and inwardly to conform to the base of said rail, and the other lug having an aperture extending therethrough transversely of said rail, a wedge adapted to pass through said aperture and engage the base of said rail, and a lock having shoulders engaging the outer end of said wedge and the inner and outer sides of said lug.

3. A tie plate comprising a base formed of rolled metal and adapted to support a rail, integral lugs connected with said base at one edge and formed by severing the other edges from said base plate and bending said lugs upwardly on the connected edge, said lugs being perforated and adapted to lie at opposite sides of said rail, and wedges adapted to pass through the perforations and having inclined lower surfaces to engage the rail base.

4. A tie plate comprising a base formed of rolled metal and adapted to support a rail, integral lugs connected with said base at one edge and formed by severing the other edges from said base plate and bending said lugs upwardly on the connected edge, said lugs being perforated and spaced apart a distance greater than the width of the rail base, wedges adapted to pass through the perforations and having inclined lower surfaces to engage the rail base, and a shim to position said rail between said lugs.

5. A device of the class described comprising a base plate to support a rail, upwardly projecting lugs adapted to lie at opposite sides of a rail, wedges adapted to pass through apertures on said lugs and having inclined surfaces to engage the rail base, and a lock engaging the inner face of said lug and the outer end of said wedge.

[Claims 6 and 7 not printed in the Gazette.]

1,111,093. LENS-TEMPERATURE EQUALIZER. WALTER G. PREDDEY, San Francisco, Cal. Filed Mar. 24, 1914. Serial No. 826,912. (Cl. 88—57.)

1. A lens temperature equalizer comprising a heat absorbing lens housing, said lens housing consisting of sufficient volume to absorb heat from and impart heat to the peripheral portions of a lens contained therein, as and for the purpose herein set forth.

2. A lens temperature equalizer comprising a heat absorbing lens housing, said lens housing providing for lens retention, and said lens housing consisting of sufficient volume to absorb heat from and impart heat to the peripheral portions of a lens contained therein, as and for the purpose herein set forth.

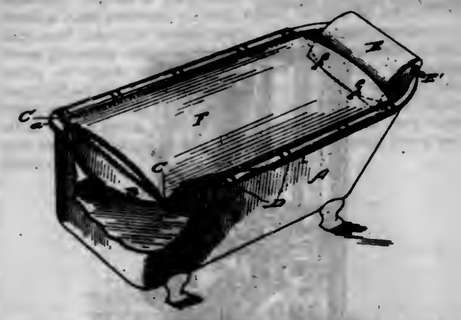
3. A lens temperature equalizer comprising a heat absorbing lens housing, said lens housing providing for lens retention, said lens retention being expansive and contractive, and said lens housing consisting of sufficient volume to absorb heat from and impart heat to the peripheral portions of a lens contained therein, as and for the purpose herein set forth.

4. A lens temperature equalizer comprising a heat absorbing lens housing, said lens housing having a duct through the same, said duct providing for lens retention, and said lens housing consisting of sufficient volume to absorb heat from and impart heat to the peripheral portions of a lens contained therein, as and for the purpose herein set forth.

5. A lens temperature equalizer comprising a heat absorbing lens housing, said lens housing having a duct through the same, said lens housing consisting of sufficient volume to absorb heat from and impart heat to the peripheral portions of a lens contained therein, as and for the purpose herein set forth.

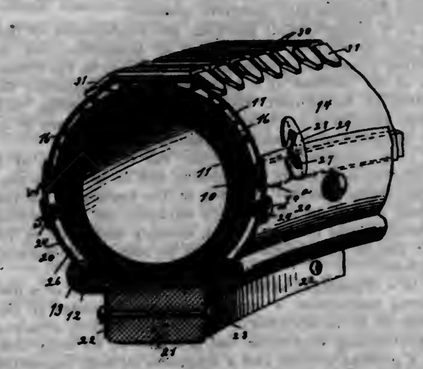
[Claims 6 to 9 not printed in the Gazette.]

1,111,094. BATH-TUB APPLIANCE. FREDERICK C. RUHM, Detroit, Mich., assignor of one-half to Charles Nelson, Detroit, Mich. Filed Jan. 21, 1914. Serial No. 813,405. (Cl. 4—13.)



In an appliance of the character described, a tub, a supporting sheet perforated for the passage of vapor, adapted to be suspended within the tub above the water level therein, a rod secured to each side of said sheet, a plurality of hooks secured to the rods to engage the walls of the tub, a covering apron secured to the sheet, and a pneumatic cushion engaged to one end of the sheet adapted when deflated to be folded back against the latter.

1,111,095. TIRE-PROTECTOR. AUGUSTE RIEMANN, New York, N. Y. Filed Mar. 7, 1914. Serial No. 823,079. (Cl. 152—16.)



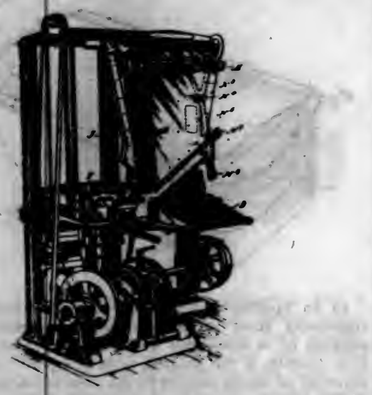
1. A tire protector comprising a metal casing fitted against the inner side of a tire tube, a flexible strip fitted against the outer side of said tube and having gored longitudinal edges which are overlapped by the longitudinal edges of the casing, sectional buttons secured to the strip at opposite sides of the gores, coöperating buttons secured to the casing, and clasps engaging the buttons of the strip and casing.

2. A tire protector comprising a flexible strip adapted to encompass one portion of a tire tube, an overlapping metal casing adapted to encompass another portion of said tube, means for securing the strip to the casing, and resilient plugs projecting from the inner faces of the strip and casing into contact with the tube.

1,111,096. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 8, 1911. Serial No. 625,725. (Cl. 199—7.)

1. In a typographical machine, the combination of a distributing mechanism, a plurality of magazines and a supporting frame therefor provided with means to engage and support the magazines by their upper ends so as to

hold them in suspended condition, the said frame being mounted in the framework of the machine at a point immediately adjacent the distributing mechanism and movably arranged so as to bring any selected magazine into operative relation thereto.



2. In a typographical machine, the combination of a distributing mechanism, a plurality of magazines, a supporting frame therefor and mounted in the framework of the machine at a point immediately adjacent the distributing mechanism and provided with means to engage and support the magazines by their upper ends so as to hold them in suspended condition, and means for moving said frame bodily in a horizontal direction to bring any selected magazine into operative position.

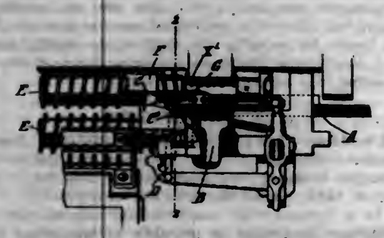
3. In a typographical machine, the combination of distributing mechanism, a plurality of magazines and an overlying supporting frame therefor mounted in the framework of the machine at a point immediately adjacent the distributing mechanism, the said magazines being each slidably supported by their upper ends in said frame so as to be independently removable therefrom.

4. In a typographical machine, the combination of a distributing mechanism, a magazine and an overlying supporting frame therefor mounted in the framework of the machine at a point immediately adjacent the distributing mechanism, said magazine being slidably supported by its upper end in said frame so as to be removable edgewise therefrom.

5. In a typographical machine, the combination of a distributing mechanism, a supporting frame mounted in the framework of the machine at a point immediately adjacent the distributing mechanism and provided on its under side with a grooved portion and a magazine slidably supported by its upper end in said grooved portion so as to be readily removable from the frame.

[Claim 6 not printed in the Gazette.]

1,111,097. TYPOGRAPHICAL MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 26, 1912. Serial No. 733,586. (Cl. 199—7.)



1. In a typographical machine, the combination of type or matrices formed with projecting ears and movable toward and through the distributing mechanism in the same direction, and means for supporting the type or matrices by their ears, the said projecting ears being located at the rear side of the type or matrices to permit their disengagement from the supporting means with their rear faces in the same vertical plane irrespective of their body thickness.

2. In a typographical machine, the combination of distributing mechanism, a line of type or matrices formed with projecting ears and movable toward the distributing mechanism in the same direction as that of their travel therethrough, and supporting means comprising a device to arrest the type or matrices by their ears, said projecting ears being located at the rear side of the type or matrices to permit their individual separation from the line with their rear faces in the same vertical plane irrespective of their body thickness.

3. In a typographical machine, the combination of distributing mechanism, a line of type or matrices formed with projecting ears located at their rear side and movable toward the distributing mechanism in the same direction as that of their travel therethrough, a finger to disengage the type or matrices individually from the line, and a device to arrest the movement of the line by engagement with the ears of the leading type or matrix, whereby all the type or matrices will be disengaged from the line with their rear faces substantially in the same vertical plane irrespective of their body thickness.

4. In a typographical machine, the combination of distributing mechanism, a line of type or matrices formed with projecting ears at their rear side and movable toward the distributing mechanism in the same direction as that of their travel therethrough, a device to arrest the movement or the line by engagement with the ears of the leading type or matrix, a finger to detach the leading type or matrix from the line, and a member to prevent the disengagement of more than one type or matrix at a time.

5. In a typographical machine, the combination of a line of type or matrices having projecting ears, a lifting finger to detach the leading type or matrix therefrom, and a fixed member located above the ear of the next type or matrix to prevent the detachment of more than one type or matrix at a time.

[Claims 6 to 8 not printed in the Gazette.]

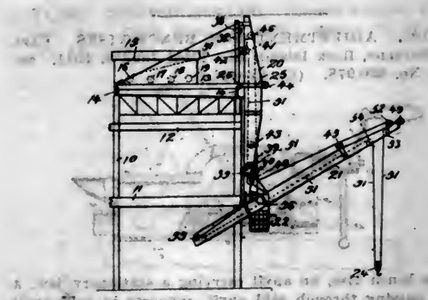
1,111,098. TYPE OR MATRIX. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Original application filed Nov. 26, 1912, Serial No. 733,586. Divided and this application filed Mar. 28, 1914. Serial No. 827,794. (Cl. 199—12.)

1. A type or matrix adapted for circulation in a typographical machine, wherein it travels in one direction during composition and in the opposite direction during distribution, the said type or matrix being formed with projecting ears of less thickness than that of its body, and the said ears being located at that side of the type or matrix which in its normal position is the leading one during composition and the following one during distribution.

2. A type or matrix adapted for circulation in a typographical machine, wherein it travels in one direction during composition and in the opposite direction during distribution, the said type or matrix being formed with projecting ears and a distributing combination, both of less thickness than that of its body and located in the same plane and at that side thereof which in its normal position is the leading one during composition and the following one during distribution.

3. A type or matrix adapted for circulation in a typographical machine, wherein it travels in one direction during composition and in the opposite direction during distribution, the said type or matrix being formed with projecting ears of less thickness than that of its body and located at that side of the type or matrix which in its normal position is the leading one during composition and the following one during distribution, and the said ears having one of their faces lying in the same plane as the aforesaid side or face of the type or matrix.

1,111,099. FREIGHT-HANDLING CRANE STRUCTURE. HARRY SAWYER, Muskegon, Mich. Filed May 19, 1913. Serial No. 768,665. (Cl. 212—10.)



1. In an apparatus for handling freight, an elevated support, a vertically movable supporting member mounted adjacent to the edge of said elevated support, means for raising and lowering said member, a boom pivotally suspended intermediate its ends from and supported by said vertically movable member, to permit one end of said boom to extend underneath said elevated support, and a trolley operating from end to end of said boom.

2. In an apparatus for handling freight, a vertically movable supporting member, a boom wholly supported by said member and pivotally suspended intermediate its ends from the lower end thereof, a trolley operating from end to end of said boom, means for raising and lowering said vertically movable support and a guide for said supporting member during its movements.

3. In an apparatus for handling freight, a vertically movable member, a boom pivotally suspended therefrom, means for raising and lowering said member and a guide for said member during its vertical movements, said guide mounted to yieldingly resist the thrust of the overhang boom.

4. In an apparatus for handling freight, a vertically movable member, an overhanging boom pivotally suspended from such member, means for raising and lowering said vertically moving member and means for yieldingly resisting the side thrust of the overhanging boom.

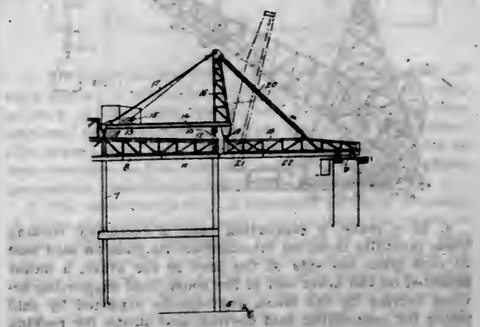
5. In an apparatus for handling freight, a vertically movable member, an overhanging boom pivotally suspended therefrom, means for raising and lowering said member and yieldingly mounted means for engaging said vertically movable member to resist the thrust due to the overhang of said boom.

[Claims 6 to 18 not printed in the Gazette.]

1,111,100. FREIGHT-HANDLING APPARATUS. HARRY SAWYER, Muskegon, Mich. Filed May 19, 1913. Serial No. 768,666. (Cl. 212—10.)

1. In an apparatus for handling freight, an elevated structure having a track system including spur sections, a crane frame movable transversely of said spur sections, a boom pivotally suspended from said crane frame, a plurality of track sections carried by and extending longitudinally of the boom and respectively adapted to register with said spur sections, and a track portion also carried by the boom and movable to coöperate with any one of said track sections.

2. In an apparatus for handling freight, an elevated structure having a suspended overhead track system including spur sections, a crane frame carried by said structure and movable transversely of said spur sections, a boom pivotally suspended from the crane structure, a plurality of track sections suspended from and extending longitudinally of said boom and adapted to be brought into register with said spur track sections to coöperate therewith, and a track portion also suspended from said boom and movable to coöperate with any one of said track sections.



3. In an apparatus for handling freight, an elevated structure having a track system, including spur sections suitably spaced apart, a crane frame mounted to move in a direction transverse to the length of the spur sections, a vertically swinging boom suspended from said crane frame, a plurality of track sections carried by and extending longitudinally of said boom and suitably spaced apart, said track sections coöperating with the spur sections when brought into register therewith by shifting said crane frame, and a track section carried by the boom, and movable to register with any desired one of said track sections.

4. In an apparatus for handling freight, a track system, a crane frame, a boom carried thereby, a plurality of track sections carried by the boom, said crane frame being movable relatively to the track system to bring the track sections and track system into coöperative relation, and a track portion carried by the boom and independently movable to coöperative relation with any one of the track sections.

5. In an apparatus for handling freight a track system, a crane frame, a vertically swinging boom pivotally suspended from the crane frame, a plurality of track sections carried by the boom, said crane frame being movable to shift said track sections relatively to the track system, and an independent track portion carried by the boom, and movable into coöperative relation with respect to any desired track section.

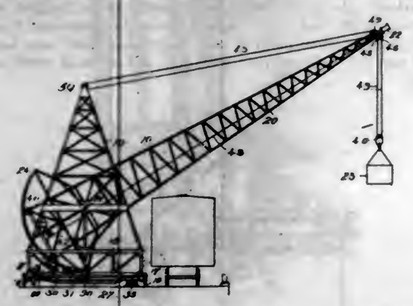
[Claims 6 to 20 not printed in the Gazette.]

1,111,101. CRANE. HARRY SAWYER, Muskegon, Mich. Filed July 11, 1913. Serial No. 778,424. (Cl. 212—8.)

1. In a crane, a supporting base, a vertically rocking boom carried thereby to rock from one side of the base to the other, load supporting devices mounted on the boom, means for operating said devices, means carried by the base to rock said boom and means to cause the load to move in a substantially straight line during the rocking movements of the boom.

2. In a crane, a supporting base carrying trunnions, a vertically rocking boom having bearings for said trunnions, load supporting devices carried by said boom, a hoisting motor mounted on and arranged to counterbalance said rocking boom, connections operated by said motor and leading to said supporting devices to operate the same, and means carried by the supporting base to rock said boom.

3. In a crane, a supporting base, a vertically rocking boom pivotally mounted on said base, to rock from one side of the base to the other, load supporting devices carried by the boom, means for operating said devices, a motor carried by the base, connections operated by said motor to rock said boom and means to cause the load to move in a substantially straight line during the rocking movements of the boom.

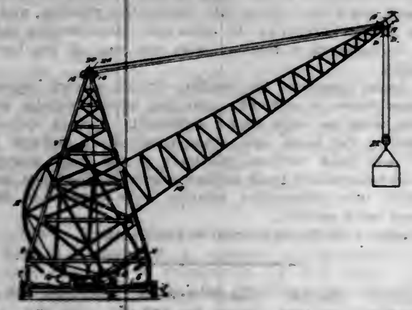


4. In a crane, a supporting base, a vertically rocking boom pivotally mounted intermediate its ends on said base to rock from one side of the base to the other, a motor mounted on the lower end of the boom, load supporting devices carried by the boom, connections actuated by said motor for controlling said devices, and means for rocking said boom.

5. In a crane, a supporting base, a vertically rocking boom pivotally mounted on said base to rock from one side of the base to the other, load supporting devices carried by the boom, means for operating said devices, including cable connections, guides for said connections operating to cause the same to move the load in a substantially straight line during the rocking movements of the boom and power operated mechanism for rocking said boom.

[Claims 6 to 23 not printed in the Gazette.]

1,111,102. ROCKING-BOOM CRANE. HARRY SAWYER, Muskegon, Mich. Filed Aug. 6, 1913. Serial No. 783,384. (Cl. 212—8.)



1. In a crane, a supporting base, a vertically swinging boom having circular track segments at its lower end arranged to rest and to be supported on said base, load supporting devices carried by said boom, and means mounted on said base to operate said load supporting devices.

2. In a crane, a supporting base having circularly arranged guides, a vertically swinging boom having circular track segments at the lower end thereof arranged to rest upon said guides and forming a support for said boom, load carrying devices mounted on said boom, and means for operating said load carrying devices.

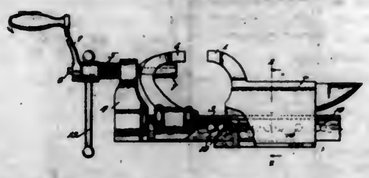
3. In a crane, a supporting base, a boom having circular track segments at its lower end resting upon said base and forming supports for said boom, said boom mounted to rock vertically from one side to the other of said base, load carrying devices suspended from the free end of said boom, and means for operating said load carrying devices.

4. In a crane, a supporting base having circularly arranged supporting guides, a boom having segment tracks at its lower end and arranged to rest on said guides to support said boom thereon, load carrying devices mounted on the boom, and a motor mounted on the supporting base to operate said load carrying devices.

5. In a crane, a boom having circular track segments at the base thereof circular guides upon which said segments rest for rocking movement thereon, load carrying devices suspended from said boom, means for operating said load carrying devices, said boom mounted to rock upon said guides.

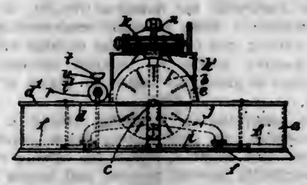
[Claims 6 to 17 not printed in the Gazette.]

1,111,103. ADJUSTMENT FOR BENCH-VISES. CARL E. SHIELDS, Rock Island, Ill. Filed June 3, 1911. Serial No. 630,978. (Cl. 81—27.)



In a bench vise, an anvil carrying a stationary jaw, a T-bar passing through said anvil, supports in said anvil supporting the vertical web of said bar and bearing beneath the flanged portion of said bar, a pin and hole adjustment for adjusting the position of said bar with respect to said support, a standard rigidly mounted upon one end of said bar, a movable jaw slidably mounted upon said bar, and a threaded rod passing through said standard and attached to said movable jaw, whereby said jaw may be adjusted with respect to said standard.

1,111,104. APPARATUS FOR DYEING TEXTILE MATERIALS. WILLIAM R. SMITH, Buffalo, N. Y., assignor to Buffalo Leather Co., Buffalo, N. Y., a Corporation of West Virginia. Filed Mar. 1, 1913. Serial No. 751,484. (Cl. 8—18.)



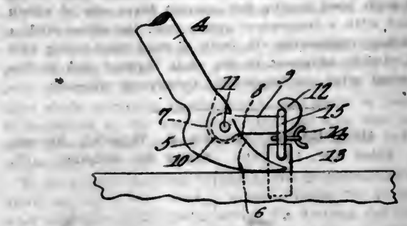
1. A dyeing apparatus comprising a closed tank adapted to contain a bath of dye liquor, means for admitting steam to the lower portion of the tank below the level of the dye liquor, and an air pump outside the tank having a suction pipe communicating with the top of the tank and another pipe discharging into the lower portion of the tank below the level of the dye liquor, said air pump forcing agitating air into the dye liquor and returning thereto the mixture of air, steam and particles of dye liquor collected at the top of the tank.

2. A dyeing apparatus comprising a closed tank adapted to contain a bath of dye liquor, an air pump having its inlet connected with the top of the tank and its outlet connected with the bottom of the tank and adapted to discharge air into the bath, means adapted to conduct steam into the bottom of the tank and discharge the same into the bath, and means for introducing fresh dye material into the steam conducting means whereby the fresh material is uniformly distributed through the bath by the steam.

3. A dyeing apparatus comprising a closed tank, a twyer having a plurality of outlets communicating with the bottom of the tank, an air pump having its inlet connected with the top of the tank and its outlet connected with one of the twyer outlets, and a steam conduit connected with another twyer outlet.

4. A dyeing apparatus comprising a closed tank, a twyer having a plurality of outlets communicating with the bottom of the tank, an air pump having its inlet connected with the top of the tank and its outlet connected with one of the twyer outlets, a steam conduit connected with another twyer outlet, said conduit being provided with a dye receptacle having a valved dye inlet, and with valves whereby the conduit may be closed to permit the insertion of dye material in said receptacle.

1,111,105. LOG-DOG PULLER. JOSEPH SONGNE, Jeanerette, La. Filed Sept. 5, 1913. Serial No. 788,333. (Cl. 145—44.)



An extracting implement embodying a lever having a cam at its lower end and a recess above the tip of the cam, the tip of the cam being bifurcated, there being an abutment between the said recess and the bifurcation, and a hook having its butt end pivoted within the said recess, the shank of the hook being arranged to contact with the abutment to support the hook at an angular position above the tip of the cam, and the bill of the hook being turned away from the cam.

1,111,106. MATRIX FOR LINE-CASTING MACHINES. HUGH ALFRED SPARLING, New Orleans, La., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 9, 1910. Serial No. 565,953. (Cl. 199—12.)

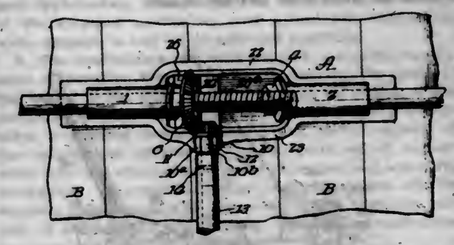
1. A matrix adapted for circulation in a typographical machine and beveled or chamfered at its upper end to facilitate its guiding during circulation.

2. A matrix adapted for circulation in a typographical machine and formed on its edges with guiding ears, the said ears being beveled or chamfered at their upper ends to facilitate the guiding of the matrix during circulation.

3. A matrix adapted for circulation in a typographical machine, and beveled or chamfered at both its upper and lower ends to facilitate its guiding during circulation.

1,111,107. TIGHTENING MEANS FOR SILOS, TANKS, AND THE LIKE. CHARLES F. SPRAY, Chicago, Ill., assignor to Lugtite Mfg. Co., Forreston, Ill., a Corporation of South Dakota. Filed May 17, 1913. Serial No. 768,274. (Cl. 217—95.)

1. The combination with a structure, of a plurality of split bands; a connection adjustably connecting the ends of each of said split bands; and a sectional actuating means adapted to operate any one of said adjustable connections independently from a position at the base of said structure, substantially as described.



2. The combination with a structure, of a plurality of split bands; a connection adjustably connecting the ends of each of said split bands; and a manually operative sectional shaft adapted to operate any one of said adjustable connections, said shaft being formed so that one or more sections may be removed and the remaining sections operatively connected, substantially as described.

3. The combination with a structure having a plurality of vertically spaced split bands surrounding the same, of means adjustably connecting the ends of each of said bands, a manually rotatable sectional shaft adapted for coöperation with each of said connecting means for manually operating the latter to vary the distance between the band ends engaged thereby, the sections of said shaft being releasably connected for varying the length of said shaft to accommodate the same for operating any one of said connecting means by an operator stationed at the base of said structure, substantially as described.

4. A tightener of the class described comprising a base frame, a hooped tightener rod, means on said base frame to receive each end of said rod, a toothed gear threaded over one of the ends of said rod and abutting one of said means, a laterally disposed post on said frame, there being an open topped seating in said post, a toothed pinion having a shank fitting said seat and meshing with said gear, and an articulated actuating shaft fixed to said shank, whereby when said shaft is rotated in one direction said rod will be tightened and when rotated in the opposite direction said pinion will be caused to climb the teeth of said gear and become removed from said seating.

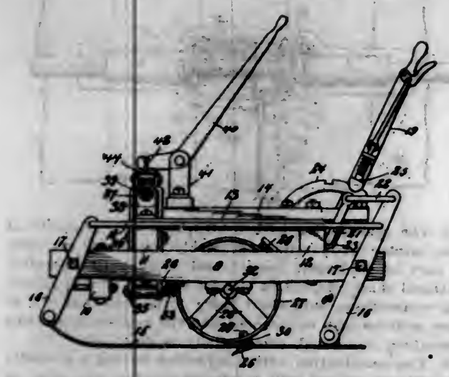
5. A tightener of the class described comprising a base frame, upstanding lugs at either end thereof, a hooped tightener rod having its ends passed through said lugs, one of said lugs having a higher elevation than the other, so that that end of said rod will pass over the opposite end thereof when overlapping the same, a toothed gear threaded over the end of higher elevation and abutting against its lug, a laterally disposed post on said frame, there being an open topped seating in said post, a toothed pinion having a shank fitting said seat and meshing with said gear, and an articulated actuating shaft fixed to said shank, whereby when said shaft is rotated in one direction said rod will be tightened and when rotated in the reverse direction said pinion will be caused to climb the teeth of said gear and become removed from said seating.

[Claims 6 and 7 not printed in the Gazette.]

1,111,108. WEED-CUTTER. JAMES A. TALBOT, Walla Walla, Wash. Filed Apr. 23, 1914. Serial No. 833,924. (Cl. 55—61.)

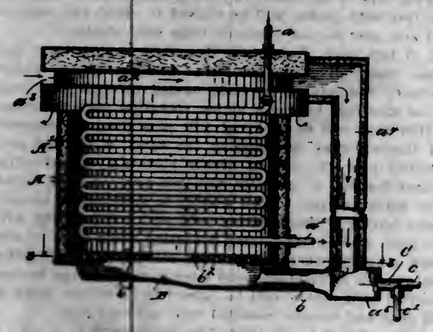
1. A weed cutter comprising a supporting frame, a circular series of cutting blades, a rotatable support for said blades carried by the supporting frame, said blades successively coming into operative position when the support rotates, a pivoted hanger, an abutment carried by the hanger, said abutment being in the path of the blades and locking the support against rotation when engaged by a blade, at which time another blade of the series is in operative position, a stem extending from the hanger and having an abutment, a spring coiled around the stem

and having one end engaging the abutment thereof, an abutment for the other end of the spring, a hand lever carried by the supporting frame, and a flexible connection between the hand lever and the hanger.



2. A weed cutter comprising a supporting frame, a circular series of cutting blades, a rotatable support for said blades carried by the supporting frame, said blades successively coming into operative position when the support rotates, hangers pivoted on the supporting frame on opposite sides thereof to swing transversely of said frame, abutments carried by the hangers, said abutments being in the path of the blades adjacent to the ends thereof, and locking the support against rotation when engaged by a blade, at which time another blade of the series is in operative position, and means for swinging the hangers to withdraw the abutments to allow the support to rotate to swing the last-mentioned blade out of operative position and to bring another blade into operative position.

1,111,109. LIQUID-FUEL BURNER. JAMES J. TRACY, Jr., Cleveland, Ohio. Filed Dec. 3, 1909. Serial No. 531,120. (Cl. 158—29.)



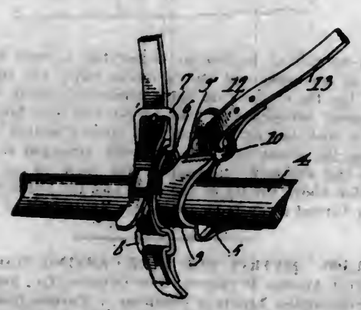
1. A liquid fuel burner, comprising a hollow cylindrical casing forming a combustion chamber, an apertured plate at one end of said casing, a burner body below said apertured plate and forming therewith a mixing chamber, an inlet tube connected laterally to said mixing chamber, an atomizer disposed to discharge into said inlet tube, connections for respectively supplying liquid fuel and superheated steam to said atomizer; a conduit opening laterally into said inlet tube adjacent to said atomizer; and means for heating air and supplying such heated air to said conduit.

2. A liquid fuel burner, comprising a hollow cylindrical casing forming a combustion chamber, an apertured plate at one end of said casing, a burner body below said apertured plate and forming therewith a mixing chamber, an inlet tube connected laterally to said mixing chamber, an atomizer disposed to discharge into said inlet tube; connections for respectively supplying liquid fuel and superheated steam to said atomizer; and a conduit closing the end of said casing and forming therewith such combustion chamber, said conduit being connected laterally to said inlet tube.

1,111,110. DENTIST'S TOOL. JACOB TROST, New York, N. Y. Filed May 22, 1913. Serial No. 769,130. (Cl. 32—10.)

A dentist's tool of the class described, said tool being provided with jaws having flat contact faces one of which is provided with a transverse groove and the other with a corresponding transverse rib, both of said jaws being also provided closely adjacent to the ends thereof and in the faces thereof with corresponding transverse grooves.

1,111,111. HOLDBACK. GEORGE R. WARNER, Snover, Mich. Filed Apr. 15, 1914. Serial No. 832,024. (Cl. 54—5.)



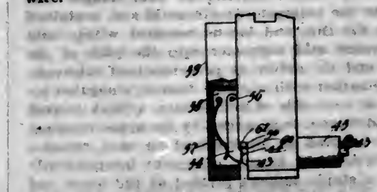
1. A thill attachment comprising an ovate acuminate loop, and a strap holding member carried by the upper acuminate portion thereof, said strap holding member provided with an angularly disposed slot therein, the angularity being taken with respect to the longitudinal axis of said loop, the side edges of said loop extending upwardly and rearwardly,

2. A device of the class described, comprising a loop formed of a single length of material, said material being bent in substantially ovate acuminate contour, and a triangular shaped strap securing member carried by and secured to the upper acuminate portion of said loop, said strap securing member provided with an angularly disposed slot therein, the angularity being taken with respect to the longitudinal axis of said loop, the side edges of said loop extending upwardly and rearwardly.

1,111,112. WIRE-STAPLING MACHINE. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed June 9, 1905. Serial No. 264,377. (Cl. 1—2.)

1. In a wire stapling machine, the combination with an anvil provided with a wire seat, a former for forming the wire over said anvil, and a driver for driving the staple after it is formed, of a wire guide contiguous to the anvil, and arranged to be engaged by the wire for holding the wire in position in its seat on the anvil and means for shifting the guide.

2. In a wire stapling machine, the combination with an anvil having a wire seat, a former for forming the staple over the anvil, and a driver for driving the staple, of a beveled wire guide having its bevel arranged to be engaged by the wire as it moves into its seat on the anvil, for forcing the wire to its proper position in said seat and means for moving the guide out of engagement with the wire.



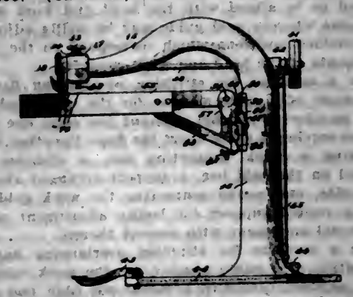
3. In a wire stapling machine, the combination with an anvil having a wire seat, a former for forming the staple over the anvil, and a driver for driving the staple, of a wire guide arranged at the side of the anvil and at the end of said wire seat, so as to be struck by the advance end of the wire as it emerges from the side of the anvil and means for moving said guide.

4. In a wire stapling machine, the combination with an anvil having a wire seat, a former for forming the staple over the anvil, having grooves for the ends of the staple, a wire guide arranged contiguous to the anvil in position to be impinged by the wire for forcing the wire into line with said grooves and means for moving the guide out of engagement with the wire.

5. In a wire stapling machine, the combination with an anvil having a wire seat, a staple former for forming the wire over the anvil, and a driver for driving the staple, of a wire guide arranged contiguous to the anvil and having a beveled face arranged to be struck by the wire for guiding the wire into its proper position upon said seat, and a beveled shoulder arranged to be struck by the staple former, whereby the wire guide will be forced out of the way to permit the staple former to operate.

[Claim 6 not printed in the Gazette.]

1,111,113. STAPLING-MACHINE FOR BOXES, CASES, AND THE LIKE. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 1, 1910. Serial No. 541,200. (Cl. 1—2.)



1. The combination with a work support, of a stapling mechanism, a driving mechanism coöperating therewith, means for adjusting said stapling mechanism at various angles to said driving mechanism, at the same time maintaining the timing of said stapling mechanism aforesaid, and means for adjusting said work support to alline the same with the stapling mechanism in its adjusted positions.

2. The combination of a main support, a work support adjustably mounted on the main support, stapling mechanism mounted upon the main support for adjustment about an upright axis to vary the angle at which the staples are driven to the edge of the work, and means for adjusting the work support transversely with respect to the axis of movement of the stapling mechanism.

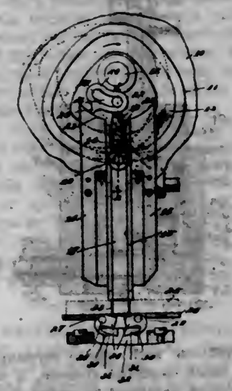
3. The combination of a main support, a work support adjustably mounted on the main support, stapling mechanism mounted upon the main support for adjustment about an upright axis to vary the angle of the staple to the edge of the work, means for adjusting the work support transversely with respect to the axis of movement of the stapling mechanism, and means for locking the work support in any of its adjusted positions.

4. The combination of a work support, a stapling mechanism coöperating therewith, means whereby the angle of the staple to the edge of the work may be varied, means including meshing gears for operating the stapling mechanism, a housing inclosing said gears, means outside of the housing for shifting one of the gears out of engagement with the other of said gears to render said operating mechanism inoperative during the adjustment of the stapling mechanism, and means accessible from the outside of the housing for securing the stapling mechanism in any of its adjusted positions.

5. The combination of a stapling mechanism, means whereby the angle of the staple to the edge of the work may be varied, means including meshing gears for operating the stapling mechanism, means for shifting one of the gears out of engagement with the other gear to render said operating mechanism inoperative during the adjustment of the stapling mechanism, and means for securing the stapling mechanism in its adjusted position.

[Claims 6 to 23 not printed in the Gazette.]

1,111,114. STAPLE FORMING AND DRIVING MECHANISM. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 1, 1910. Serial No. 541,210. (Cl. 1—7.)



1. The combination of a staple driver, guides for the driver, clenching mechanism coöperating with the driver, a rotatable cam, and a link pivotally connected to the driver and having a pin and slot connection with the cam, said slot being extended transversely of the link, and struck in an arc described from the center of rotation of the cam, a portion of said link being constructed and arranged to engage and ride upon the top of the said guide.

2. The combination of a staple driver, guides for the driver, clenching mechanism coöperating with the driver, a rotatable cam, a link pivotally connected with the driver, the free end of the link being provided with an enlarged laterally projecting portion having a slot therein struck on an arc described from the center of rotation of the cam, and a crank pin supported by the cam extending into and freely movable in the slot, said enlargement being provided with a portion arranged to engage and move upon a portion of the said guides for holding the slotted end of the link in position.

3. The combination of a staple driver, clenching mechanism coöperating therewith, a cam, a link connecting the driver with the cam whereby the movement of the cam will operate the driver, said link having a loose connection

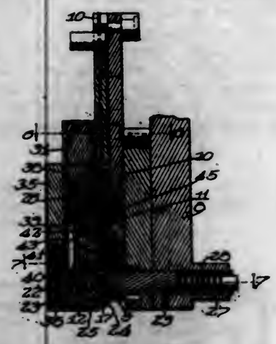
with the cam whereby the cam will move independently with respect to the driver during a portion of the movement of the cam, and means for supporting the end of the link remote from the driver during such independent movement of the cam.

4. The combination of a staple driver, clenching mechanism coöperating therewith, a cam, a link connecting the driver with the cam whereby the movement of the cam will operate the driver, said link having a loose connection with the cam whereby the cam will move independently with respect to the driver during a portion of the movement of the cam, and means other than the cam for supporting the end of the link remote from the driver during such independent movement of the cam.

5. The combination of a staple driver, clenching mechanism coöperating therewith, a cam, a link connecting the driver with the cam whereby the movement of the cam will operate the driver, said link having a loose connection with the cam whereby the cam will move independently with respect to the driver during a portion of the movement of the cam, and a stationary support for supporting the end of the link remote from the driver during such independent movement of the cam.

[Claims 6 to 9 not printed in the Gazette.]

1,111,115. WIRE STITCHING OR STAPLING MACHINE. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 16, 1911. Serial No. 644,374. (Cl. 1—7.)



1. The combination with staple forming and driving members, of a block mounted thereon, a staple support pivoted to said block arranged to swing at predetermined intervals into the path of said forming and driving members, and a spring actuated plunger mounted in said block and arranged to bear against said staple support for imparting a movement thereto when the path of swing of said staple support is unobstructed.

2. The combination with staple forming and driving members, of a block coöperating with and located adjacent thereto, a support pivoted to said block, and a spring actuated plunger mounted within said block parallel to one of the vertical faces thereof and arranged to operate against said support to force the same into the path of movement of the staple forming and driving members at predetermined intervals.

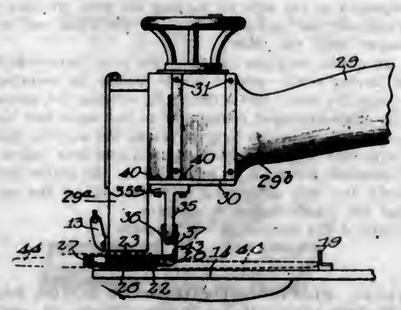
3. The combination with staple forming and driving members, of a block coöperating with and located adjacent thereto, a support pivoted to said block, a spring-actuated plunger mounted within said block and arranged to operate against said support and force the same into the path of movement of the staple forming and driving members at predetermined intervals, and means for limiting the movement of said plunger.

4. The combination with a frame, of a staple former and driver mounted therein, a cap secured to said frame provided with a projection having a longitudinal passage therein, said passage having a transverse enlargement at the lower terminal thereof, a hanger mounted for reciprocation in said passage, means for reciprocating said hanger from the former aforesaid, a staple supporter pivotally connected to the lower end of said hanger and mounted within the enlargement aforesaid and contained wholly within the cap, and means mounted within said hanger for forcing said supporter into the path of the staple former and the driver at predetermined intervals.

5. The combination with a staple former, elongated recesses formed on each side of said former, a block located adjacent to said former, lugs carried by the upper terminal of said block adapted to be received in said recesses whereby the former may have a movement independently of said block, a staple support pivoted at the lower end of said block, and automatic means contained entirely within said block whereby said staple support is caused to swing into the path of said former at predetermined intervals.

[Claims 6 and 7 not printed in the Gazette.]

1,111,116. WORK-GUIDE. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 7, 1912. Serial No. 676,090. (Cl. 1—2.)



1. The combination with a support, of a head carried thereby for adjustment, a work support adjustable to correspond to the adjustments of said head, a work guide arranged to be alined with the head and work support, and means whereby said guide may be bodily adjusted to predetermined positions which correspond to the various adjustments of the head and work support.

2. In a machine for stitching overlapping flaps, the combination of a guide member for the work, embodying spaced members connected adjacent one edge, one of said members serving to space apart the flaps, the other member comprising a work supporting bar, a clencher block arranged on the said bar, a support arranged above the work guide, and means connecting the work guide with the last recited support for bodily adjustment and for free pivotal movement with respect thereto.

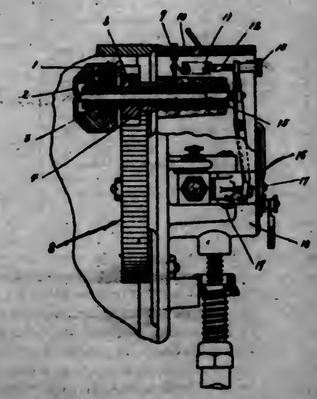
3. In a machine for stitching overlapping flaps, the combination of a guide member for the work embodying spaced members connected adjacent one edge, one of said members serving to space apart the flaps, the other member comprising a work supporting bar, a clencher block arranged on the said bar, a support arranged above the work guide, and means connecting the work guide with the last recited support for free pivotal movement with respect thereto about a substantially horizontal pivot.

4. In a machine for stitching overlapping flaps, the combination of a guide member for the work embodying spaced members connected adjacent one edge, one of said members serving to space apart the flaps, the other member comprising a work supporting bar, a clencher block arranged on the said bar, a support arranged above the work guide, means connecting the work guide with the last recited support for free pivotal movement with respect thereto and about a substantially horizontal pivot, and means for limiting such pivotal movement.

5. In a machine for stitching overlapping flaps, the combination of a guide member for the work, embodying spaced members connected adjacent one edge, one of said members serving to space apart the flaps, the other member comprising a work supporting bar, a clencher block arranged on the said bar, a support arranged above the work guide, and means connecting the work guide with the last recited support for pivotal movement with respect thereto and about a substantially horizontal pivot, the said means also embodying means whereby the work guide may be bodily adjusted with respect to the last recited support and secured in its adjusted position.

[Claims 6 to 14 not printed in the Gazette.]

1,111,117. COMBINED GOVERNOR AND VALVE-GEAR FOR VAPOR-ENGINES. GEORGE W. WILLIAMS, Dundas, Ontario, Canada. Filed Nov. 22, 1913. Serial No. 802,572. (123—113.)



1. The combination with an engine casing having the usual half time gear therein, a detachable casing secured to the engine casing said detachable casing carrying a bearing, a sleeve mounted in said bearing, pinions for rotating said sleeve and meshing with said half time gear, a pin extending through said sleeve, centrifugally actuated weights for imparting endwise movement to said pin through said sleeve, a valve controlling lever actuated by said pin.

2. The combination with an engine casing having the usual half time gear therein, a detachable casing secured to the engine casing said detachable casing carrying a bearing, a sleeve mounted in said bearing, pinions for rotating said sleeve and meshing with said half time gear, a pin extending through said sleeve, centrifugally actuated weights for imparting endwise movement to said pin through said sleeve, a valve controlling lever actuated by said pin, said lever being pivoted to the last named casing whereby said sleeve, pinion, pin, and lever, are bodily removable with said casing.

3. The combination with a main engine casing having a gear wheel located therein, said gear wheel being driven from the engine shaft, of an auxiliary movable casing secured to the exterior face of the first named casing, said first named casing having an opening formed in the wall thereof over which the auxiliary casing fits, said auxiliary casing having a bearing, a sleeve mounted to rotate in said bearing, a pinion mounted upon said sleeve to impart rotation thereto, said pinion meshing with said gear wheel, a pin endwise movable in said sleeve, centrifugally actuated weights pivoted to said sleeve and carrying portions which bear against the end of said pin, the opposite end of said pin bearing against a valve controlling lever pivotally mounted in said casing and spring means for controlling said lever and against the tension of which said pin acts, said spring means, said valve controlling lever, sleeve, and pinion being all bodily removable with said auxiliary casing substantially as shown and described.

1,111,118. PULLEY AND BLOCK THEREFOR. HERBERT E. WILLIAMSON, San Francisco, Cal. Filed Nov. 19, 1913. Serial No. 801,847. (Cl. 57—34.)

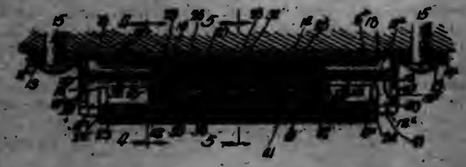
1. A pulley block having separable parts of which one has an inward and upward extension terminating in an upwardly extending apertured portion, and the other has an inwardly extending lip, the edge of which is adjacent to, but spaced from, said extension.

2. A pulley block having separable parts of which one has an inward extension terminating in upwardly extending means for suspending the pulley block, and the other has in inwardly extending lip, the inner edge of which is adjacent to, but spaced from, said extension.

3. A pulley block comprising two separable parts and a shaft connecting them at their centers, said parts having inward extensions having integral parts of which one is apertured and the other has an integral radially extending hook removably extending through said aperture to prevent relative rotary movement in either direction of the two parts of the block.

4. A pulley block having separable parts of which one has an inward extension terminating in upwardly extending means for suspending the pulley block, and the other has an inwardly extending lip, the inner edge of which is adjacent to, but spaced from, said extension, and a shaft connecting them at their centers, said parts having inward extensions having integral parts engaging each other and preventing relative rotary movement in either direction of the two parts of the block.

1,111,119. ANTIFRICTION SIDE BEARING. EDWIN S. WOODS and ARNOLD A. WEIGEL, Chicago, Ill.; said Weigel assignor to said Woods; Albert G. Welch executor of said Woods, deceased. Filed Nov. 8, 1912. Serial No. 730,127. (Cl. 64—64.)



1. In a side bearing of the class described, a casing open at top and bottom and a movable cover-plate for one of said openings adapted to be inserted through the other opening thereof.

2. In a side bearing of the class described, a casing open at top and bottom, a fixed cover-plate at one open side of said casing and a movable cover plate at the other open side of said casing adapted to be inserted through the first named open side thereof, and antifriction means interposed between said cover plates.

3. In a side bearing of the class described, a casing open at top and bottom, a fixed cover plate on top of said casing, a movable cover plate for the bottom of said casing, adapted to be inserted through the open top thereof, means

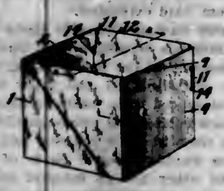
providing sliding bearing of said movable cover plate in said casing, and antifriction means interposed between said cover plates.

4. In a side bearing of the class described, a casing open at top and bottom, a fixed cover plate on top of said casing, and a movable cover plate for the bottom of said casing adapted to be inserted through the open top thereof, said casing and said movable cover plate being provided with interengaging parts for supporting said movable cover plate in sliding relation with said casing, and antifriction means interposed between said cover plates.

5. In a side bearing of the class described, a casing open at top and bottom and having side and end walls, a fixed cover plate on top of said casing and a movable cover plate for the bottom of said casing adapted to be inserted through the open top thereof, the said walls of said casing being provided with longitudinally extending tracks with which said movable cover plate is adapted to engage, said cover plate being provided with stops adapted to limit the withdrawal of said cover plate from said casing longitudinally in either direction, and antifriction means interposed between said cover plates.

[Claims 6 to 14 not printed in the Gazette.]

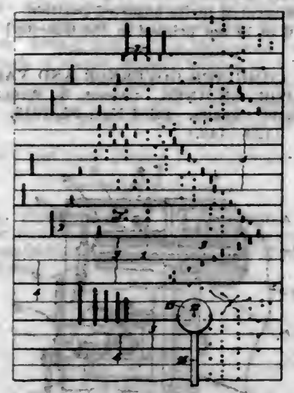
1,111,120. BOX. JOHN WOOSTER, Dowagiac, Mich. Filed June 22, 1912. Serial No. 705,248. (Cl. 229—16.)



1. A knockdown or collapsible box formed of a blank consisting of a straight strip having a portion thereof wider than the rest of said strip, the narrow portion of said strip being scored transversely to provide side wall portions, and an end flap on the outer end of the narrow portion of said blank, the wide portion of said strip being scored transversely to provide a bottom portion and bottom extensions on either side thereof, an end flap on the outer end of said wide portion of the strip, and a connecting member between the inner bottom extension and the inner side wall portion, the said connecting member being scored diagonally from the top of the inner side wall extension to the inner end of the narrow portion of the strip, the outer bottom extension being provided with tongues on its edges, the outer end flap of said extension being also provided with a tongue, a slot in one of the side wall portions adapted to receive the tongue of said flap, slots in the adjacent side wall portions adapted to receive the tongues on the edges of said outer bottom extension, said narrow portion of the strip being folded along the transverse scorings to form the side walls of the box, said connecting member being folded along its diagonal scoring, the inner bottom extension being folded over one of the side walls, the outer bottom extension being folded over the opposite side wall with the tongue of said flap in engagement with the slot in said side wall, all coacting substantially as described for the purpose specified.

2. A knockdown box formed of a blank comprising a straight strip scored transversely to form side wall portions, an end flap for the outer side wall portion of the blank, a bottom portion with bottom extensions at each side thereof, an end flap for the outer bottom extension, and a connecting member between the inner bottom extension and the inner side wall portion, said member being scored diagonally from the top of the inner bottom extension to the bottom edge of said member, the outer bottom extension being provided with tongues on its edges, the flap of said extensions being also provided with a tongue, said connecting member being folded on the diagonal scoring, the inner bottom extension being folded over one of the side walls engaging said first named end flap, the outer bottom extension flap being folded over one of the side walls, said wall having a slot for the tongue of said flap, the adjacent side walls being slotted to receive the tongues on the edges of said outer bottom extension.

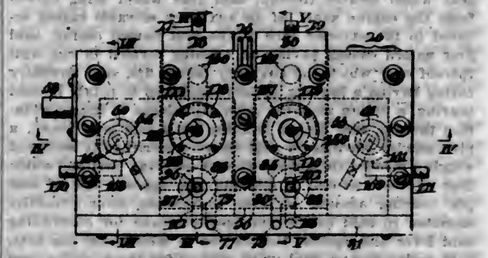
1,111,121. NOTE-SHEET. PHILIP WURST, Jr., Philadelphia, Pa., assignor to The Auto-Manual Piano Action Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 17, 1904. Serial No. 208,370. (Cl. 84—162.)



1. A note sheet for self-playing musical instruments having apertures arranged in longitudinal sequence thereon for controlling the playing devices, said sheet having transverse lines of different character alternately arranged thereon, said lines being located on said sheet in such relation to said apertures as to accord with the accented and unaccented impulses of the music respectively, and also in such relation to a predetermined point in the field of vision of the operator that said lines when passing said point indicate to the operator the proper period at which to manipulate the controlling devices in accordance with said accented and unaccented impulses of the music.

2. A note sheet for self-playing musical instruments, having apertures arranged in longitudinal sequence thereon for controlling the playing devices, and having transverse lines of different character alternately arranged and located with relation to said apertures in accordance with the accented and unaccented pulses of the music, and also having symbols arranged upon said lines, to designate the successive positions of the speed controlling mechanism proper for correspondence with said pulses, substantially as set forth.

1,111,122. AUTOMATIC MUSICAL INSTRUMENT. PHILIP WURST, Jr., Philadelphia, Pa., assignor to The Auto-Manual Piano Action Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 18, 1908. Serial No. 433,416. (Cl. 84—160.)



1. The combination, with the strings and hammers, and with pneumatic playing mechanism for said hammers, including a tracker-board and perforated sheet; of a movable damping device adapted to be temporarily interposed between the hammers and strings; pneumatic actuating mechanism for shifting said damping device; and pneumatic actuating means whereby said actuating mechanism may be controlled by auxiliary perforations in said sheet.

2. The combination, with the strings and hammers, and with pneumatic playing mechanism for said hammers, including a tracker-board and perforated sheet; of a plurality of movable damping devices adapted to be temporarily interposed between the hammers and strings, in selected groups; a plurality of pneumatic actuating mechanisms for independently shifting the several damping devices; and pneumatic actuating means whereby said actuating mechanisms may be respectively controlled by independent groups of auxiliary perforations in said sheet.

3. The combination, with the strings and hammers, and with pneumatic playing mechanism for said hammers, including a tracker-board and perforated sheet; of a movable damping device adapted to be temporarily interposed between the hammers and strings; pneumatic actuating mechanism for shifting said damping device; pneumatic actuating means whereby said actuating mechanism may be controlled by auxiliary perforations in said sheet; and pneumatic actuating means whereby said actuating mechanism may be manually controlled by the operator.

4. The combination with strings and hammers, and with pneumatic playing mechanism for said hammers, including a tracker board and perforated sheet; of a movable damping device adapted to be temporarily interposed between the hammers and strings; pneumatic actuating mechanism for shifting said damping device, including a main valve; and a pneumatic actuating means including an auxiliary valve controlled by perforations in the sheet for operating said main valve.

5. The combination with strings and hammers and with pneumatic playing mechanism for said hammers including a tracker board and perforated sheets; of a movable damping device adapted to be temporarily interposed between the hammers and strings; pneumatic actuating mechanism for shifting said damping device, including a main valve; a pneumatic actuated means including an auxiliary valve controlled by perforations in the sheet for operating said main valve; and pneumatic actuating means whereby said actuating mechanism may be manually controlled by the operator.

1,111,123. TIMING DEVICE. WILHELM J. J. ZELLIN and FRANCIS P. HUYCK, Toledo, Ohio; said Huyck assignor to said Zellin. Filed Mar. 13, 1914. Serial No. 824,535. (Cl. 161—15.)

1. In combination, a rotatable element, manually controlled gear mechanism operable to impart successive movements to said element, the period of one movement determining the period of a later movement, and signal means automatically operable at a predetermined point in the later period of movement.

2. In combination, a rotatable element, a gear mechanism operable to impart differentially timed movements in first one and then another direction to said element, and means operable to stop said mechanism at a predetermined point in the movement of said element in one direction.

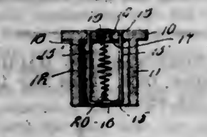
3. In combination, a rotatable element, mechanism operable to impart successive differentially timed movements to said element, the period of one movement determining the period of another, and means automatically operable to stop the element driving action of said mechanism at a predetermined point in one movement of the element.

4. In combination, a movable element, mechanism operable to impart successive timed movements to said element, the period of one movement being more or less uncertain and determining the period of a later movement, and means automatically operable to stop the element driving action of said mechanism at a predetermined point in the later period of movement of said element.

5. In combination, a movable element, manually controlled mechanism mechanically operable to impart successive timed movements to said element, the period of one movement being more or less uncertain and determining the period of a later movement of said element, and means automatically operable to stop the element driving action of said mechanism at a predetermined point in the later period of movement of said element.

[Claims 6 to 40 not printed in the Gazette.]

1,111,124. LUBRICATING DEVICE. MATTHEW H. ARNOLD, Butte, Mont. Filed Oct. 19, 1912. Serial No. 726,796. (Cl. 184—89.)



1. In a device of the class described, an integral plug comprising a threaded sleeve portion and a head carried thereby, said plug being apertured, a closure for said aperture, guiding means comprising rods depending from said head in the direction taken by said sleeve, said closure being slidably mounted on said rods, and means to normally maintain said closure in position closing said aperture.

2. In a device of the class described, a plug, said plug being provided with a lubricating aperture, a yoke comprising arms carried by said plug, a cap mounted on said yoke and adapted to close said aperture, and means carried by said yoke to normally retain said cap in closing position.

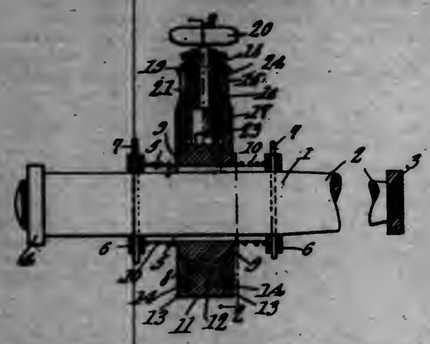
3. In a device of the class described, a plug, said plug being provided with a lubricating aperture, a yoke comprising arms depending from and secured to said plug, a cap slidably mounted upon the arms of said yoke, and means carried by said yoke and adapted normally to retain said cap in closing position with respect to said lubricating aperture.

4. In a device of the class described, a plug comprising an externally threaded cylindrical sleeve carrying a flanged head at one end, said head being provided with a lubricating aperture, a yoke comprising rods carried by said plug, a cap mounted on said yoke and having an upwardly extending portion adapted to close said aperture, and means carried by said yoke to normally retain said cap in closing position.

5. In a device of the class described, a plug, said plug comprising a depending sleeve and a flanged head, said head being apertured, a yoke comprising arms carried by said head and extending downwardly therefrom, and a cap slidably carried by said yoke and adapted to close the aperture in said cap.

[Claims 6 to 9 not printed in the Gazette.]

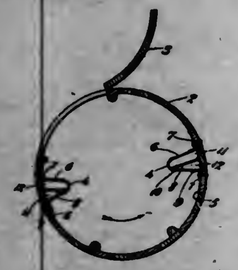
1,111,125. PAWL-AND-RATCHET DEVICE. WOOTEN L. BAUMANN, Coalinga, Cal. Filed Mar. 14, 1914. Serial No. 824,742. (Cl. 74—16.)



1. In a device of the character described, a spindle, a ratchet wheel feathered thereon, shock springs mounted upon the spindle and holding the ratchet wheel therebetween, a body rotatably mounted upon the ratchet wheel, and a pawl carried by the body and coöperable with the ratchet wheel.

2. In a device of the character described, a spindle having a feather at one portion, collars mounted upon the spindle at the ends of the feather, a ratchet wheel slidable upon the spindle between the collars and engaging the feather, springs disposed between the ratchet wheel and collars, a body rotatably mounted upon the ratchet wheel, and a pawl carried by the body and coöperable with the ratchet wheel.

1,111,126. LAUNDRY-WASHING MACHINE. JOHN W. BERCAW, Hamilton, Ohio. Filed May 19, 1913. Serial No. 768,501. (Cl. 68—18.)

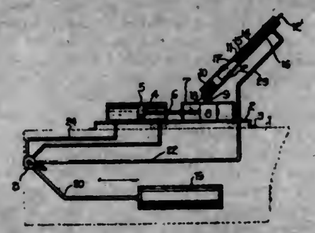


1. An attachment for a washing machine comprising a base, a hollow rib thereon formed with water inlet and outlet orifices, and a single member hinged to the base with its free end extending into the clothes-engaging end of said rib and swinging from one side to the other of said hollow rib when the base revolves around an axis.

2. An attachment for a washing machine comprising a segmental imperforate base, a hollow rib thereon formed with inlet and outlet orifices near the base and clothes-engaging rounded end respectively, and a single valve-functioning member pivoted to an intermediate portion of the base within the chamber formed by said rib, with its free end movable from one side of the chamber to the other in relation to said orifices.

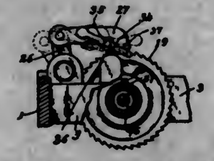
1,111,127. TROLLEY-POLE. WILLIAM BLOCKER, Jackson, Miss. Filed Nov. 12, 1913. Serial No. 800,600. (Cl. 191—50.)

1. A device of the class described including a car, a supporting platform upon the top thereof, a cylinder mounted upon one end of the platform, a casing mounted upon the other end, pistons slidably mounted within said cylinder and casing, a rod connecting said pistons, arms projecting upwardly from the casing, a socket pivotally mounted between said arms, a coil spring connecting the piston within the casing with said socket, a trolley pole mounted in the outer end of the socket and means for reciprocating said pistons to swing the pole to an operative position.



2. A device of the class described including a car, a cylinder mounted thereon, a casing arranged adjacent the cylinder, pistons mounted for sliding movement within the cylinder and casing, arms projecting upwardly from the casing, a socket member having its lower end pivotally mounted between said arms, a coil spring connecting the socket with the piston in the casing, a tubular pole mounted in the upper end of said socket, a supporting rod mounted for reciprocating movement within the outer end of the pole, a trolley wheel upon the outer end of the rod, means for reciprocating said rod within the pole to disengage the trolley wheel from the wire and additional means for reciprocating said pistons within the cylinder and casing whereby the pole will be swung to an operative position.

1,111,128. PAWL-AND-RATCHET MECHANISM. ERNEST C. BOWERS, Kalamazoo, Mich., assignor, by mesne assignments, to National Standard Company, Niles, Mich., a Corporation of Michigan. Filed Dec. 17, 1912. Serial No. 737,233. (Cl. 74—54.)



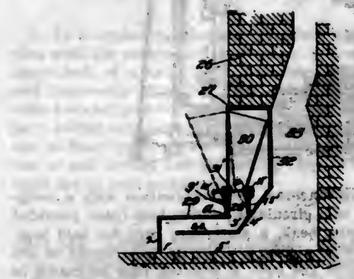
1. In a pawl and ratchet mechanism the combination with the frame of a ratchet wheel, a pawl, a rock shaft having an arm on which said pawl is mounted, a member pivotally mounted on said pawl, a stop on said pawl coacting with said member to support it in its operation and constituting a rest to support it in its inoperative position, and a cam on said frame with which said member on said pawl coacts when said member is in operative position to hold the pawl out of engagement with the ratchet during a part of its work stroke and permit it to engage with the ratchet during another part of its work stroke, all coacting for the purpose specified.

2. In a pawl and ratchet mechanism the combination with the frame of a ratchet wheel, a pawl, a rock shaft having an arm on which said pawl is mounted, a member pivotally mounted on said pawl, a stop on said pawl coacting with said member, and a cam on said frame with which said member on said pawl coacts when said member is in operative position to hold the pawl out of engagement with the ratchet during a part of its work stroke and permit it to engage with the ratchet during another part of its work stroke, all coacting for the purpose specified.

3. In a pawl and ratchet mechanism, the combination with the frame, of a ratchet wheel, a pawl, a member pivotally mounted on said pawl, a stop on said pawl coacting with said member to support it in its operative position, and a cam on said frame with which said member on said pawl coacts when in operative position to hold the pawl out of engagement with the ratchet during a part of its work stroke and permit it to engage with the ratchet during another part of its work stroke, all coacting for the purpose specified.

4. In a pawl and ratchet mechanism, the combination with the frame, of a ratchet wheel, a reciprocating pawl, a pawl control member mounted on said pawl for adjustment to and from operative position, and a cam on said frame with which said control member when in operative position coacts as the pawl is actuated on its work stroke to hold the pawl out of engagement with the ratchet teeth during a part of its work stroke, all coacting for the purpose specified.

1,111,129. WOOD-GAS GENERATOR AND BURNER. WILLIAM L. BOXALL, Perry, Cal. Filed Aug. 10, 1909. Serial No. 512,254. (Cl. 126—10.)



1. In combination, a combustion chamber having a radiating front and having a front wall bent down from said radiating front, a horizontal shelf spaced apart from the front wall and dividing the combustion chamber into upper and lower horizontal passages, a slanting floor extending upwardly and rearwardly from said shelf, a downwardly expanding throat having a front wall resting on the radiating front and having a rear wall resting on the slanting floor, there being a draft inlet in the front wall of the throat, and an upwardly expanding hopper fastened to the top of the throat.

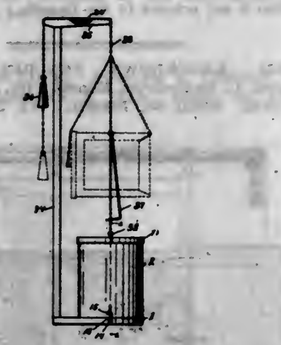
2. The combination with means forming a fireplace opening, of a combustion chamber in the lower part of said opening and provided with an inlet, a hopper pivotally mounted in said opening and adapted to discharge fuel into the inlet and to be tilted out from said opening, and means closing the lower end of the hopper from the fireplace opening, said means being operated by tilting of the hopper.

3. The combination, of means forming a combustion chamber having an inlet and having upper and lower passages, a flue having its lower end opening into said lower passage, a slanting floor for the inlet at the rear of the upper passage between said passage and the lower end of the flue, an open bottom throat communicating with the inlet and having one of its walls resting upon the slanting floor, and a hopper mounted on the top of said throat.

4. In combination, a combustion chamber having a radiating front and having a front wall bent down from said radiating front, a horizontal shelf spaced apart from the front wall and dividing the combustion chamber into upper and lower horizontal passages, a slanting floor extending upwardly and rearwardly from said shelf, a downwardly expanding throat having a front wall pivotally seated on the radiating front and having a rear wall designed to rest on the slanting floor, there being a draft inlet in the front wall of the throat, and an upwardly expanding hopper fastened to the top of the throat.

5. The combination with a chimney having a flue and a fireplace opening therefor, of a combustion chamber having a radiating front that extends out from said opening and having a front wall bent down from said radiating front, a horizontal shelf spaced apart from the front wall and dividing the combustion chamber into upper and lower horizontal passages, a slanting floor extending upwardly and rearwardly from said shelf, a back wall extending up from the slanting floor and separating the opening from the flue, a downwardly expanding throat having a front wall pivotally seated on the radiating front and having a rear wall designed to rest on the slanting floor, there being a draft inlet in the front wall of the throat, and an upwardly expanding hopper fastened to the top of the throat and designed to close into the opening and to open outward from said opening.

1,111,130. COOKER. ALLEN P. BOYER, Goshen, Ind. Filed Sept. 2, 1909. Serial No. 515,893. (Cl. 126—265.)



1. In a cooker, the combination of a suitable insulated base, having a central depression and conical exterior; an alcohol burner, arranged on the said base; suitable spiders or heat plates with supporting legs the lower of which rests on the said base and containing passage ways, which plates are suitably conformed to receive and support a cooking utensil; a dome consisting of an inner and outer shell of metal with suitable insulation between, conformed to fit the conical exterior of said base; means of supporting the said dome above the said base for the admission of air to the burner and for circulation of the products of combustion; a counterbalance consisting of a weight and connecting cable or chain, connected to the central part of the dome of said heater; and a hook secured to the said cable above the said heater and arranged to engage the bottom of the said dome to hold it in a horizontal position when elevated, all coacting substantially as described and for the purpose specified.

2. In a cooker, the combination of a suitable insulated base, having a central depression and conical exterior, an alcohol burner, arranged on the said base; suitable spiders or heat plates with supporting legs the lower of which rests on the said base, which plates are suitably conformed to receive and support a cooking utensil; a dome consisting of an inner and outer shell of metal with suitable insulation between, conformed to fit the conical exterior of said base; a counterbalance consisting of a weight and connecting cable or chain, connected to the central part of the dome of said heater; and a hook secured to the said cable above the said heater and arranged to engage the bottom of the said dome to hold it in a horizontal position when elevated, all coacting substantially as described and for the purpose specified.

3. In a cooker, the combination with a suitable base; of a suitable burner arranged on said base; suitable spider or heat plates with supporting legs the lower of which rests on the said base and arranged above the said burner; a heat-retaining dome fitted to the said base; a counterbalance for the said dome consisting of a suitable weight and cable connected thereto; and a hook secured to the said cable above said dome and arranged to engage the bottom of said dome to hold it in horizontal position when elevated, all coacting for the purpose specified.

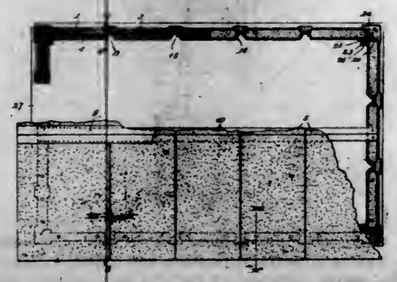
4. In a cooker, the combination with a suitable base, of a suitable burner arranged on said base; a heat-retaining dome fitted to the said base; a counterbalance for the said dome consisting of a suitable weight and cable

connected thereto; and a hook secured to the said cable above said dome and arranged to engage the bottom of said dome to hold it in horizontal position when elevated, all coacting for the purpose specified.

5. In a cooker, the combination with a suitable base, of a suitable burner arranged on said base; a heat-retaining dome fitted to the said base; means of supporting a cooking utensil in said dome; a counterbalance for the said dome consisting of a suitable weight and cable connected thereto; and a hook secured to the said cable above said dome and arranged to engage the bottom of said dome to hold it in horizontal position when elevated, all coacting for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,111,131. KNOCKDOWN CONCRETE BUILDING. WALTER C. BROUGHTON, Kansas City, Mo. Filed Apr. 23, 1913. Serial No. 763,051. (Cl. 72—1.)



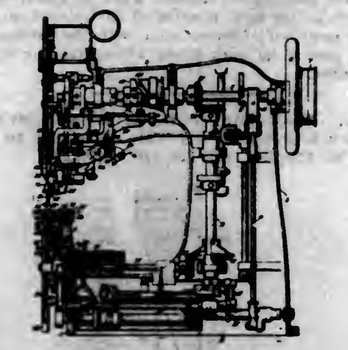
1. In a building of the character described, end walls and side walls; angle bars at the corners of said walls, said angle bars having holes therein, tie members extending through the walls and the holes in said angle bars, means to engage said tie members to lock the whole together, corner slabs abutting the angle-bars and overlapping the adjacent ends of the walls, plates abutting the inner corners of the walls, and bolts embedded in the corner slabs and secured to said plates, substantially as described.

2. In a building of the character described, a plurality of wall slabs, tie-members extending through said wall slabs and projecting therefrom, channel-bar pilasters interposed between the wall slabs and provided with holes to receive the projecting ends of the tie-members, said channel-bar pilasters being unobstructed at their rear sides and having their front sides set in from the front sides of the wall slabs, and concrete slabs removably-secured to the front sides of the channel-bars and overlapping the adjacent sides of the wall slabs.

1,111,132. STITCH-FORMING MECHANISM. OTIS E. BROWN, Brockton, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 19, 1911. Serial No. 655,518. (Cl. 112—28.)

1. In a sewing machine, the combination with a reciprocating needle, and a needle-thread take-up with means for imparting to the latter an operative stitch-setting movement for each reciprocation of the needle, of a circularly moving loop-taker, a lower-thread case journaled in and in eccentric relation with the loop-taker, means for restraining said thread-case against rotation, and actuating means adapted to impart to said loop-taker a plurality of rotations for each reciprocation of the needle, the eccentricity of said thread-case being so disposed that in the rotation of the loop-taker the thread-case is moved bodily in opposition to the stitch-setting action of the take-up.

2. In a sewing machine, the combination with a reciprocating needle, of a circularly moving loop-taker provided with a loop-seizing beak, a stationary race for said loop-taker, a movable wearing piece mounted in said race to afford a bearing member for the loop-taker and having on one side an upper-thread clearance recess, actuating means for said loop-taker, and means for operating said wearing-piece to position its clearance recess rearward of loop-seizing position in substantially the cast-off position of the loop-taker and advancing the same in the direction of movement of the loop-taker as the beak of the latter reaches its loop-seizing position.



3. In a sewing machine, the combination with a reciprocating needle, of a circularly moving loop-taker provided with a loop-seizing beak, a stationary race for said loop-taker provided with a fixed bearing lip interrupted on the loop-seizing side of the race, a wearing ring journaled in said race to afford a bearing member acting in conjunction with said bearing lip to sustain and guide the loop-taker and having on one side an upper-thread clearance recess, actuating means for said loop-taker, and means for oscillating said wearing ring to position its clearance recess alternately at opposite sides of the loop-seizing position of the loop-taker.

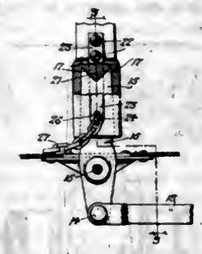
4. In a sewing machine, the combination with a reciprocating needle, of a circularly moving loop-taker provided with a loop-seizing beak, a stationary race for said loop-taker provided with a fixed bearing lip interrupted on the loop-seizing side of the race, a wearing ring journaled in said race to afford a bearing member acting in conjunction with said bearing lip to sustain and guide the loop-taker and having on one side an upper-thread clearance recess, actuating means for said loop-taker, and means connected with the loop-taker actuating means for imparting oscillatory movements to said wearing ring and timed to move the part thereof containing the clearance recess in advance of the loop-taker beak as the latter passes its loop-seizing position.

5. In a sewing machine, the combination with a reciprocating needle, of a circularly moving loop-taker provided with a loop-seizing beak, a stationary race for said loop-taker, a wearing ring journaled in said race to afford a bearing member for said loop-taker and formed with an upper-thread clearance recess, means including a rotary shaft for imparting operative movements to said loop-taker, a crank-pin carried by said shaft, and a connection between said crank-pin and the wearing ring for imparting oscillatory movements to the latter to position its clearance recess alternately at opposite sides of loop-seizing position and in advance of the loop-taker beak when in loop-seizing position.

[Claims 6 to 13 not printed in the Gazette.]

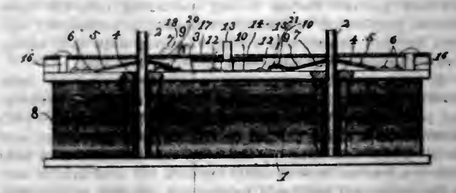
1,111,133. SHAKER-BAR FOR FIRE-GRATES. DAVID BUIASONO, Blue Island, Ill. Filed Jan. 27, 1913. Serial No. 744,512. (Cl. 74—89.)

1. In a shaker mechanism for grate bars, the combination with a rocking lever, of a shaker bar for engagement with said rocking lever and removable therefrom, said shaker bar being provided with a socket having a hole through its wall adjacent its lower end, a spring actuated latch normally projecting through said hole and into said socket to obstruct the entrance of the rocking lever, and means connected to said latch for retracting the same whereby said shaker bar cannot be connected to or detached from said rocking lever without first retracting said latch.



2. In a shaker mechanism for grate bars, the combination with the rocking lever having a V-shaped notch in its upper end, of a hand bar for engagement with said lever and removable therefrom, said hand bar being provided with a socket and with a downwardly projecting, V-shaped part within said socket to enter the notch and the end of the rocking lever, and a spring latch adjacent the lower end of said socket and projecting therein for locking said hand bar to said rocking lever.

1,111,134. LOOSE-LEAF BINDER. FRANK E. CAUFIELD, Jr., Chicago, Ill., assignor of three-eighths to William Nell, Jr., and three-eighths to H. P. Caufield, Chicago, Ill. Filed Dec. 13, 1913. Serial No. 806,479. (Cl. 129—12.)

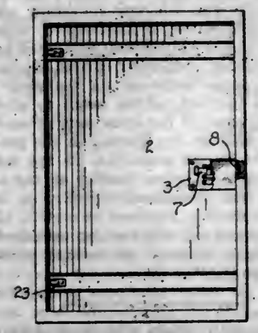


1. The combination in a loose-leaf binder of opposing binding members, one stationary and the other movable, said members being adjustably connected to each other by means of binding posts rigidly attached to one and passing loosely through bores in the other, of locking springs attached to said movable member, the same having bores therein for the reception of said posts, said springs being bent upwardly in planes oblique to that of the member to which they are attached, while the edges of the openings therein are arranged to press normally against the faces of said posts in opposing relation to each other, and a slide arranged to lie beneath the free ends of said springs, said slide having raised portions thereon formed to lift the free ends of said springs when said slide is in an abnormal position.

2. In a loose-leaf binder, the combination of opposing binding members, binding posts rigidly attached to one, while passing loosely through bores in the other, clamping springs attached to said last mentioned member, said springs having bores therein to receive said posts, and being bent in planes oblique to that of said member, the bores in said springs being of greater diameter than that of said posts, one edge in each being arranged to normally engage the post passing therethrough, the springs being in opposing relation to each other and a slide upon said secondary member beneath the free ends of said springs, said slide having raised portions thereon for lifting the free ends of said springs when said slide is in an abnormal position.

3. In a loose-leaf binder, the combination of opposing members, binding-posts rigidly attached to one while passing loosely through bores in the other, the inner faces of said posts being arranged to bear against the inner faces of said bores, clamping springs attached to the upper face of the movable binding member at points at a predetermined distance outside of the binding posts, said springs being arranged in planes oblique to that of said member with the parts outside of said posts bent upwardly and the free ends inclined downwardly and having bores therein larger than the diameter of said posts, the inner edges of said bores being arranged to bear normally against the outer faces of said posts, and a slide mounted upon said movable member between the free ends of said posts with portions thereof beneath the free ends of said springs, said slide having raised portions thereon adjusted to permit said springs to descend to clamping positions or to be released therefrom according as said slide is in one or another extereme position.

1,111,135. DOOR-LOCK. RUDOLPH G. CARLSON, Huntley, Nebr. Filed Jan. 3, 1914. Serial No. 810,244. (Cl. 70—75.)



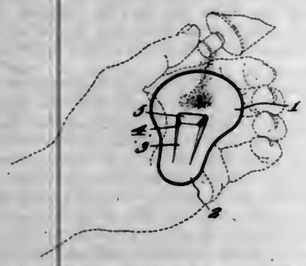
1. In a lock of the class described, a base plate having a key opening therein, a bolt slidably mounted thereon having a notch in the upper edge thereof, spring means engaged with said plate and bolt to normally draw the latter in one direction on the plate, means to limit the sliding movement of the bolt in the last mentioned direction, a depending projection carried on said bolt, an angular member fulcrumed on the plate having one arm thereof depended below said sliding bolt, the opposite arm of said angular member being designed for engagement with the notch in said bolt, spring means in connection with the last mentioned arm of said angular member, and means insertible through the key opening in said plate for engagement with the projection on said sliding bolt to retract the latter, whereby one arm of said angular member may be automatically engaged with the notch therein to retain said bolt in its retracted position against the tension of said spring, the depending portion of said angular arm being also in position to be engaged by the last mentioned means, whereby to release the same of its engagement with said bolt and permit said bolt to be drawn to its initial position, under tension of the spring.

2. In a lock of the class described, a base plate having a key opening therein, a bolt slidably mounted on one face thereof above the key opening, the upper edge of said bolt being provided with a notch arranged at a predetermined point thereon, spring means in connection with the plate and said bolt to normally draw the latter in one direction on the plate, a depending projection carried on the bolt just forwardly of the notch therein, a right-angular member fulcrumed at the junction of its arms to the plate above said bolt, one arm of said member being offset to extend beyond the bolt and depended to a plane below the latter, the opposite arm of said member being designed for engagement with the upper edge of the bolt and with the notch in the latter, spring means in connection with the last mentioned arm of said member whereby to normally retain said arm in engagement with the upper edge of the bolt, said member being so positioned on the plate that the depending arm thereof is in a plane in advance of the plane of the depending projection on the bolt when the

latter is in its normal and extended position, and a key adapted to be inserted in the opening in said plate and adapted for engagement with the depending arm of said angular member and the depending projection on said bolt, said key being designed to retract the bolt against the tension of the spring at certain times and designed for releasing the engagement of the angular member from the bolt at other times to permit said bolt to be disposed to its extended and normal position.

3. In a lock of the class described, a base plate having a key opening therein, a bolt slidably mounted thereon above the key opening and having a notch therein arranged at a predetermined point in the upper edge of the same, spring means in connection with the plate and the bolt to normally dispose the latter in one direction on the plate, means to limit the movement of the bolt in the last mentioned direction on the plate, an angular projection fulcrumed on the plate above the bolt, one arm of which is designed to project below the bolt and the other arm designed for engagement with the upper edge of the bolt and the notch therein, whereby to retain said bolt in its retracted position at predetermined times, spring means in connection with the last mentioned arm of said member, a depending projection carried on said bolt, a pair of locking arms fulcrumed on the plate at points above and below the bolt, spring means to pivotally connect said locking arms to the outer ends of said bolt, and a key insertible through the opening in the plate adapted for engagement with the projection on the bolt and the depending arm of the angular member on the plate to retract said bolt and correspondingly dispose the locking arms to their ineffective positions at certain times to release the engagement of said angular arm from the bolt and correspondingly dispose the locking arms to their effective positions at other times.

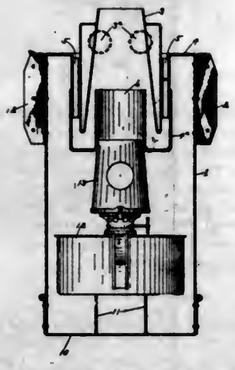
1,111,136. HYGIENIC DISH FOR TOOTH POWDER OR PASTE. BENJAMIN F. COPP, Silver City, N. Mex. Filed Feb. 12, 1914. Serial No. 818,382. (Cl. 221—61.)



1. A tooth powder or paste dish, including a body portion having an extension, the dish being of greatest depth at the center of the body portion and the bottom of the dish being inclined from the center of the body portion to the free end portion of the extension, the extension having a longitudinal depression to receive the bristles of a tooth brush, the bottom of the depression being inclined and being tangential with the free end portion of the extension, the inner end of the depression being relatively deep, extending partially into the body portion, projecting downwardly below the bottom of the said body portion, and the rim of the dish at the free portion of the extension being turned upwardly.

2. A tooth powder or paste dish including an enlarged body portion having a radial extension narrower in width than the diameter of the body portion, the dish being of greatest depth at the center of the body portion and the bottom of the dish being inclined from the center of the body portion to the free end portion of the extension, the extension having a longitudinal depression extending partially into the body portion, the bottom of the depression being inclined and being tangential with the free end portion of the extension, the sides and inner end of the depression being inclined, the inner end of the depression being relatively deep and wide and projecting downwardly below the bottom of the said body portion, and the outer ends of the bottom sides of the depression merging gently into the free end portion of the extension, and the rim of the dish at the free end portion of the extetnsion being turned upwardly.

1,111,137. HEATER. GEORGE CUGLEY, Springfield, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a Corporation of Ohio. Filed July 19, 1913. Serial No. 779,959. (Cl. 237—14.)



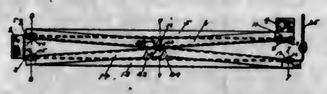
1. In a heating apparatus, a boiler formed with an open center, a boiler jacket, said jacket being formed with a movable portion having a flue extending into the open central portion of said boiler, a heater, a permanent support for said heater, and a flue connected with said heater and communicating with said boiler jacket flue.

2. In a heating apparatus, a boiler having an open central portion, a boiler jacket formed with two telescoping parts, one of which is movable and the other of which is stationary, a flue carried by the movable portion of said boiler jacket and entering the open central portion of said boiler, a heater, a permanent support for said heater, and a flue connected with said heater and adapted to telescope with said boiler jacket flue.

3. In a heating apparatus, a main casing, a boiler jacket connected with said casing, said boiler jacket having a movable telescopic portion, a boiler formed with an open central portion supported in said jacket, a flue connected with the movable portion of said jacket and arranged in the open central portion of said boiler, a heater, a permanent support at the lower end of the main casing for said heater; and a flue connected with said heater adapted to telescope with the said boiler jacket flue.

4. In a heating apparatus, a main casing, a boiler jacket connected with said casing, said boiler jacket having a movable telescopic portion, a boiler formed with an open central portion supported in said jacket, a heater, a permanent support at the lower end of said main casing for said heater, and a flue connected with the movable portion of said jacket and adapted to communicate with said heater, said flue extending into the open central portion of said boiler.

1,111,138. THERMOSTAT. GEORGE CUGLEY, Springfield, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a Corporation of Ohio. Filed July 19, 1913. Serial No. 779,960. (Cl. 236—5.)



1. In a thermostat, a series of four channel-shaped members, the intermediate members being more expansible than the outer members and being arranged back to back and connected together at or near their centers, one of said intermediate members having a pair of notches cut in each of its side walls, and the other of said intermediate members having a single notch cut in each of its side walls intermediate the notches of the other members.

2. In a thermostat, four channel-shaped members arranged in pairs, the ends of the members of each pair being connected together, the intermediate members being placed back to back and connected together near their centers, one of said intermediate members having each of its side walls formed with a pair of notches and the other intermediate member having its side walls formed with a single notch arranged intermediate the notches of the other member, the point of connection between said intermediate members being arranged between the single notch and one of the double notches.

3. In a thermostat, a series of four channel-shaped members arranged in pairs, the intermediate members being of more expansible material than the other members, said intermediate members being oppositely bowed, placed back to back and connected together, one of said intermediate members having each of its side walls formed with a pair of notches and the other of said intermediate members having each of its side walls formed with a single notch intermediate the notches of the other member.

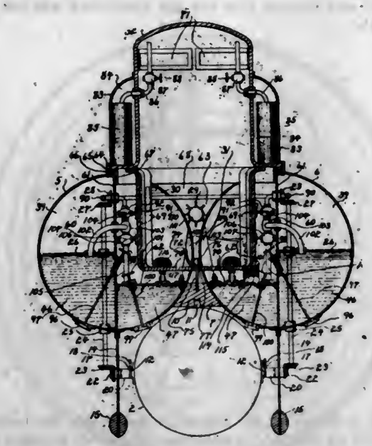
4. In a thermostat, a series of four channel-shaped members arranged in pairs, the ends of the channels of each pair being connected together, the intermediate members being oppositely bowed and placed back to back so as to separate the ends of the members of each pair, each pair of members being connected at one end to a bracket to hold them permanently spaced apart, the opposite ends of the one of said pair of members being also connected to a second bracket and the opposite ends of the other pair of members being left free, the side walls of one of said intermediate members being formed with a pair of notches and the side walls of the other intermediate member being formed with a single notch intermediate the notches of the other member, and means for connecting said intermediate members together at or near their centers between the single notch and one of the double notches.

5. In a thermostat, a series of four metallic channel-shaped members arranged in two pairs, an upper pair and a lower pair; the intermediate members being of more expansible material than the other members and being oppositely bowed and placed back to back, a bracket to which one end of all of said members are connected, a second bracket to which the opposite ends of the upper pair of members are connected, the opposite ends of the other pair being connected to each other, and being otherwise free; the side walls of the bowed member of the upper pair being cut away at the point of connection with said last-mentioned bracket; the side walls of the lower member being cut away at the point of connection with said first-mentioned bracket; the side walls of the lower bowed member being cut away at the point of connection with said lower member; the lower bowed member being formed with a pair of notches and the upper bowed member formed with a single notch arranged intermediate the notches of the lower bowed member; and means for connecting said bowed members together.

1,111,139. TORPEDO-PILOT BOAT FOR AUTOMOBILE TORPEDOES. SLOAN DANENHOWER, Bridgeport, Conn. Filed Oct. 28, 1912. Serial No. 728,250. (Cl. 114—17.)

1. The combination with a self-propelling submersible torpedo-pilot boat having a single central control-compartment opening through the top of the boat, and centrally disposed water-ballast compartments, of an automobile torpedo supported by the boat, independent means operable from the control-compartment for starting the propelling mechanism of the torpedo and for releasing it from the boat, and an escape helmet detachably connected to the boat providing a closure for the opening of said control-compartment.

2. The combination with a self-propelling torpedo-pilot boat having a central control-compartment opening through the top of the boat and provided with parallel fin keels, of an automobile torpedo detachably supported by and between said keels, independent means operable from said compartment for starting the propelling mechanism of the torpedo and for releasing it from the boat, and an escape helmet detachably connected to the boat and forming a closure for said opening.



3. The combination with a self-propelling submersible torpedo-pilot boat having a central control-compartment opening through the top of the boat, of an automobile-torpedo detachably supported below the boat, means operable from said compartment for releasing the torpedo from the boat, means for starting the propelling mechanism of the torpedo, an escape helmet forming a closure for the opening of said control-compartment, and means to supply air to the helmet.

4. The combination with a self-propelling submersible torpedo pilot-boat having a central control-compartment, centrally disposed water-ballast compartments and parallel fin keels extending from the bottom of the boat, of an automobile torpedo detachably supported by and between said keels, means operable from the control-compartment for starting the propelling mechanism of the torpedo, and means also operable from said compartment for releasing the torpedo from the boat.

5. The combination with a self-propelling torpedo-pilot boat having a single central control-compartment opening through the top of the boat, of an automobile torpedo detachably supported below the boat, independent means operable from said compartment for starting the propelling mechanism of the torpedo and for releasing it from the boat, an escape helmet detachably connected to the boat and providing a cover for the opening of said control-compartment, and means operable from said compartment for releasing the helmet.

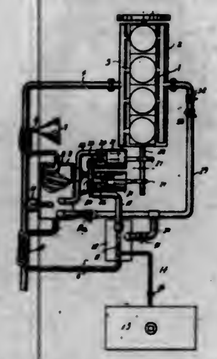
[Claims 6 to 13 not printed in the Gazette.]

1,111,140. GAS-GENERATING SYSTEM. URIAH H. DEERING, Cleburne, Tex. Filed May 19, 1913. Serial No. 768,471. (Cl. 123—133.)

1. In a device of the character described, the combination with an internal combustion engine, of a pump actuated thereby, a gas generating and air mixing tank having its intake communicating with the intake of said pump; a reservoir for explosive fluids, adapted to discharge into said tank, a storage tank for a gaseous explosive fluid having communication with the outlet of said pump, a fluid conducting connection between said storage tank and the inlet of the engine, means for conducting air into the gas generating and air mixing tank, and means for heating the air before its introduction into said tank.

2. In a device of the character described, the combination with an internal combustion engine, of a pump actu-

ated thereby, a gas generating and air mixing tank, having fluid conducting connection with the intake of said pump, a reservoir for an explosive fluid, adapted to discharge into said tank, a storage tank for a gaseous explosive fluid having fluid conducting communication with the outlet of said pump, and means for utilizing the exhaust gases of the engine to heat a current of air and to conduct said current into the gas generating and air mixing tank.



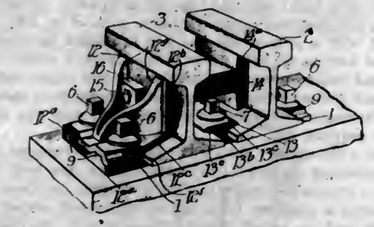
3. In a device of the character described, the combination with an internal combustion engine, of a pump actuated thereby, a gas generating and air mixing tank, with which the intake of said pump has fluid conducting connection, a reservoir for explosive fluids, adapted to discharge into said gas generating and air mixing tank, a storage tank for a gaseous explosive fluid having fluid conducting connection with the outlet of said pump, a fluid conducting connection between said storage tank and the intake pipe of said engine, a pipe communicating with the exhaust port of the engine, and a pipe communicating at one extremity with the atmosphere and at the other with the gas generating and air mixing tank, formed with coils about the pipe communicating with the engine exhaust port, and formed with a coil within the said storage tank.

4. In a device of the character described, the combination with an internal combustion engine, of a pump actuated thereby, a gas generating and air mixing tank, with which the intake of said pump has fluid conducting connection, means for conducting an explosive fluid to the gas generating and air mixing tank, a storage tank for a gaseous explosive fluid, having fluid conducting connection with the outlet of said pump, a fluid conducting connection between said storage tank and the intake pipe of the engine, and a pipe arranged to derive heat from the exhaust gases of the engine, open at one extremity to the atmosphere, and having its other extremity extended into the gas generating and air mixing tank and perforated within said tank, said pipe being formed with a coiled portion within the storage tank.

1,111,141. GUARD-RAIL PLATE. WILLIAM L. DE REMER, Chicago, Ill. Filed Feb. 3, 1911. Serial No. 606,392. (Cl. 239—18.)

1. A guard-rail tie-plate comprising a plate of a length to receive two rails and having intermediate its length spike holes to receive spikes coöperating with inner adjacent sides of the flanges of the two rails, a filler block arranged between the two rails, in combination with a clip adapted to be positioned between the inner adjacent flanges of the rails and having spike holes adapted to register with said intermediate spike holes in the plate, said clip being independent of the block and located in a plane below it.

2. A guard-rail tie-plate comprising a plate of a length to receive two rails and having intermediate its length spike holes to receive spikes coöperating with inner adjacent sides of the flanges of the two rails, a filler block arranged between the two rails, in combination with a clip consisting of a bar having a depending central portion fitting between the inner adjacent flanges of the rail, the remainder of the under surface of the bar being inclined to correspond with the shape of the rail flanges upon which it bears, said clip having spike holes to register with said spike holes in the plate, and independent of and located in a plane below the filler block.



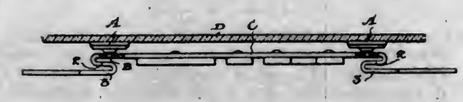
3. A guard-rail tie-plate comprising a plate of a length to receive the running rail and the guard-rail and having near its opposite ends holes for spikes coöperating with the outer sides of the flanges of the two rails, in combination with a brace adapted to coöperate with the outer side of the guard-rail and having spike holes corresponding with the spike holes in that end of the plate, and a filler adjustable in length and adapted to be located between the rails, a shim located between the head and flange of the rail and interposed between the guard rail and brace and a bolt adapted to pass through said rails, brace, filler, and shim.

4. A guard-rail tie-plate comprising a plate of a length to receive the running rail and the guard rail and having near its opposite ends holes for spikes coöperating with the outer sides of the flanges of the two rails, in combination with a brace adapted to coöperate with the outer side of the guard rail and having spike holes corresponding with the spike holes in that end of the plate, and a filler adjustable in length and adapted to be located between the rails, a shim adapted to interlock with the brace and to be interposed between the guard rail and brace.

5. A guard-rail tie-plate comprising a plate of a length to receive the running rail and the guard rail and having near its opposite ends holes for spikes coöperating with the outer sides of the flanges of the two rails, in combination with a brace adapted to coöperate with the outer side of the guard-rail and having spike holes corresponding with the spike holes in that end of the plate, and a filler adapted to be located between the rails, and a bolt passing through said rails, brace and filler said brace having wings, and the bolt having a nut prevented by said wings from turning.

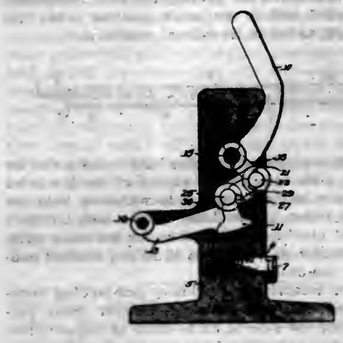
[Claim 6 not printed in the Gazette.]

1,111,142. SUPPORTING MEMBER FOR SIGNS AND NOTICES. JOHN DRAYCOTT, Toronto, Ontario, Canada. Filed Mar. 23, 1914. Serial No. 826,533. (Cl. 40—125.)



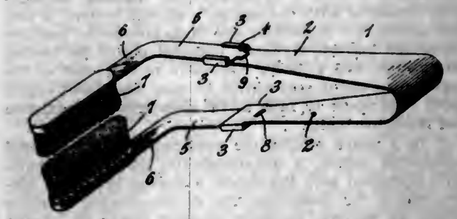
As a new article of manufacture, a metal supporting member for signs or notices; vacuum cups attached thereto and projecting beyond one side thereof, and folded resilient portions, spaced apart from each other and extending from the ends of the supporting member to overlie the front thereof in alinement with the points of attachment of said vacuum cups; said folded portions being spaced apart from said supporting member and extending substantially parallel thereto and designed to be moved toward said supporting member in order to absorb energy as said vacuum cups are being positioned, as set forth.

1,111,143. MACHINE FOR CURVING PRINTING-PLATES. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed July 5, 1913. Serial No. 777,415. (Cl. 153—39.)



A machine for curving printing plates, comprising a frame, a bed thereon provided with a plurality of ribs having their upper faces disposed on an arc and adapted to support a plate to be curved, a shaft above said bed, a bell crank mounted on said shaft, arms pivotally mounted at one end of said frame, a head carried by said arms between the shaft and the bed and a connection between said head and one arm of said bell crank comprising a shaft connected with said bell crank, a shaft connected with said head, a block having segmental bearings interposed between said shafts providing a toggle adapted to force said head toward the bed upon operation of said bell crank, and links disposed over the ends of said shafts to hold the shafts together and retain the block in position.

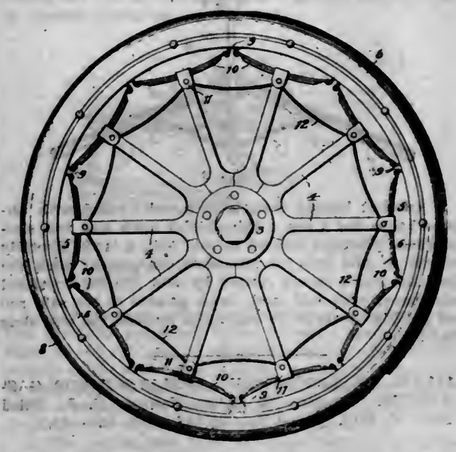
1,111,144. TOOTH-BRUSH. HARRIS EPSTEIN and WILLIAM CILER, New York, N. Y. Filed Oct. 4, 1913. Serial No. 793,342. (Cl. 15—39.)



1. A tooth-brush of the type described consisting of a pair of reversely positioned scouring members provided with shanks adapting them for separate use, a handle of resilient material intermediately bent to form a fork or bifurcation with normally divergent prongs compressible toward each other, and detachable connections between said prongs and the shanks of said scouring members permitting the removal or substitution of either member and the use of the other member alone at option, said connections including inwardly turned flanges on opposite edges of said handle prongs, apertures in the prongs located in advance of said flanges, the free ends of said shanks of the scouring members slidably engaging the flanges on the prongs from the outer ends thereof respectively, and laterally projected tongues on said ends of the shanks insertible in said apertures.

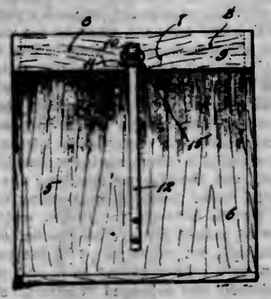
2. A tooth-brush of the type described comprising two scouring members capable of use separately and conjointly, said members being provided with shanks intermediately bent edgewise, both in the same direction, and a handle of flexible material doubled upon itself to form a fork or bifurcation having prongs interchangeably engageable with said shanks, whereby the scouring members may be reversely positioned for use either face to face or back to back and may be pressed together or held apart at will.

1,111,145. VEHICLE-WHEEL. ELIJAH J. FILLINGIM, Pace, Fla. Filed Apr. 5, 1913. Serial No. 759,031. (Cl. 152—28.)



A wheel comprising the combination of spokes, a rim having an inner annular channel, U-shaped springs secured to the rim in the channel and laterally braced by the sides of the channel, leaf-springs having the ends of the spokes bearing thereagainst intermediate their ends and said leaf-springs having their ends pivotally connected to arms of the U-shaped springs, on every spoke at its end a strap enveloping the leaf-spring against which the spoke bears, and braces extending from spoke to spoke and connected to the spokes near their ends.

1,111,146. SHIPPING-CRATE. CHARLES J. FOERSTER, Noser Mill, Mo. Filed Oct. 6, 1913. Serial No. 793,754. (Cl. 217—56.)

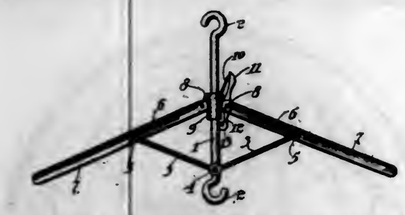


1. In a shipping crate, a head having a notch in its top margin, a strip secured to the head and overlying said notch, a removable lid, a strip secured to said lid removed from its end and arranged to fit into the notch of the head and means for detachably securing the lid to the crate.

2. In a shipping crate, a crate head having at its top margin oppositely inclined planes and a relatively deep notch interjacent the planes, a strip secured to the head overlying said planes and notched coincidentally with the notch of the head, an elastic catch normally occupying said notches, a removable lid, a strip secured to the lid, removed from its end and provided with inclined faces and a projection interjacent the inclined faces, and a keeper on said

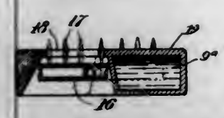
strip for coaction with said catch to hold said lid in place on the crate, substantially as set forth and for the purposes stated.

1,111,147. GARMENT-HANGER. OSCAR FOGDE, Hoquiam, Wash. Filed Apr. 24, 1913. Serial No. 763,339. (Cl. 211—13.)



A garment hanger comprising a rod formed with terminal hooks and a lug, a hub slidable upon said rod, slotted wings pivotally secured to said hub, a latch pivotally secured to said hub for releasable engagement with the aforesaid lug, a spring carried by said hub for frictional engagement with said latch, arms pivoted to the said rod and slidably connected to said wings through the said slots therein.

1,111,148. WATER-HEATING APPLIANCE FOR GAS-STOVES. CHARLES H. GIESE, Newark, N. J. Filed Aug. 16, 1913. Serial No. 785,183. (Cl. 126—53.)



1. In a device such as described, the combination of a casing having a plurality of water passages, and a burner having radial arms the terminals of which engage the casing between said water passages, said casing having apertures formed therein disposed between the water passages and positioned to prevent the contact of flames from the burner with the casing.

2. In a device such as described, a casing having radial water passages, provided with inclined walls and spaced inlet and outlet openings and a burner having radial arms the terminals of which engage the inclined walls of the casing between said water passages, whereby the casing will be supported upon the burner, said casing having radial apertures disposed therein between the radial water passages and above the radial arms of the burner, whereby the flames from said burner will pass through the apertures in the casing out of contact with the inclined walls.

3. In a water heater the combination with a burner including radial arms, of a casing having a plurality of radial water passages, said radial arms engaging the casing between said radial water passages, said casing having apertures formed therein between the radial water passages and positioned to permit passage of the flames from the burner therethrough, out of contact with the walls of said water passages, said casing having inlet and outlet openings formed therein and arranged relatively close to adjacent radial water passages, a partition arranged between the inlet and outlet openings, whereby water will pass into the casing upon one side of the partition and through the radial water passages to the opposite side of the position.

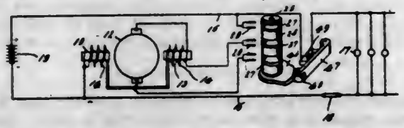
1,111,149. PENHOLDER FOR MULTICOLOR-WRITING. LARS B. HALVERSON, Flandreau, S. D. Filed Sept. 27, 1913. Serial No. 792,158. (Cl. 120—14.)

1. In a multicolor writing pen the combination with an outer pen-holder and a pen in the front end thereof, of an inner pen-holder slidable in the outer holder and having a pen in its front end arranged to project beyond the pen in the outer holder when in its forward position, and means on both holders to prevent rotation of the inner holder within the outer holder, and means for limiting the sliding movement of the inner holder; the front portion of the outer holder being elastic and laterally compressible and provided with means for holding the inner penholder firmly in retracted and in projected position when the outer holder is expanded to its normal condition.

2. A penholder comprising an outer holder and a shorter holder guided to slide to a limited extent within the outer holder, each holder having a socket in which to hold the pen point; said outer holder being elastic and laterally compressible and provided with means for normally gripping the inner holder so as to hold it in any desired endwise relation to the outer holder.

3. A penholder comprising a primary pen-holding member of elastic material and having a tubular front portion with a slit in one side so as to make it compressible and internal fingers extending from the edges of said slit, and a secondary pen-holding member clasped and normally friction held by said fingers, and means for limiting the endwise movement of the secondary member.

1,111,150. CONTROLLER FOR SELF-STARTERS FOR ENGINES. ROBERT H. HASSLER, Indianapolis, Ind., assignor to Nordyke & Marmon Company, Indianapolis, Ind., a Corporation of Indiana. Filed Nov. 23, 1912. Serial No. 733,055. (Cl. 171—313.)



1. In a motor vehicle, the combination of an internal combustion engine, a dynamo-electric machine mechanically connected with the engine, a storage battery, a control switch for conpecting the dynamo-electric machine across the battery, manually operated means for closing said switch, and a device responsive to the speed of the engine for causing said switch to open when said engine speed rises above or falls below predetermined maximum and minimum limits.

2. In a motor vehicle, the combination of an internal combustion engine, a dynamo-electric machine mechanically connected with the engine, a storage battery, a control switch for connecting the dynamo-electric machine across the battery, manually operated means for closing said switch, and a device responsive to the speed of the engine for causing said switch to open when said engine speed rises above a predetermined maximum limit.

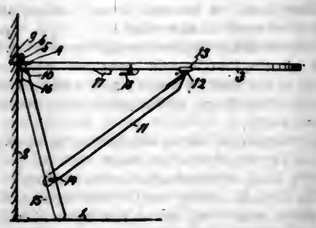
3. In a motor vehicle, the combination of an internal combustion engine, a dynamo-electric machine mechanically connected with the engine, a storage battery, a control switch for connecting the dynamo-electric machine across the battery, manually operated means for closing said switch, a device responsive to the speed of the engine for causing said switch to open when said engine speed rises above or falls below predetermined maximum and minimum limits, an electric lighting circuit supplied from said battery, and means responsive to the current taken by said lighting circuit for raising said maximum limit and lowering said minimum limit in accordance with the amount of current taken by such lighting circuit.

4. In a motor vehicle, the combination of an internal combustion engine, a dynamo-electric machine mechanically connected with the engine, a storage battery, a control switch for connecting the dynamo-electric machine across the battery, manually operated means for closing said switch, a device responsive to the speed of the engine for causing said switch to open when said engine speed rises above a predetermined maximum limit, an electric lighting circuit supplied from said battery, and means responsive to the current taken by said lighting circuit for raising said maximum limit in accordance with the amount of current taken by such lighting circuit.

5. In a motor vehicle, the combination of an internal combustion engine, a dynamo-electric machine mechanically connected with the engine, a storage battery, a control switch for connecting the dynamo-electric machine across the battery, said control switch having an "on" position and an "off" position on each side of such "on" position, manually operated means for closing said switch from one of said "off" positions, and a device responsive to the speed of the engine for causing said switch to open to the other "off" position when said engine speed rises above a predetermined maximum limit and to the first "off" position when said engine speed falls below a predetermined minimum limit.

[Claims 6 to 25 not printed in the Gazette.]

1,111,151. IRONING-BOARD. AXEL W. HEARTMAN, St. Paul, Minn. Filed Apr. 13, 1914. Serial No. 831,680. (Cl. 68—10.)



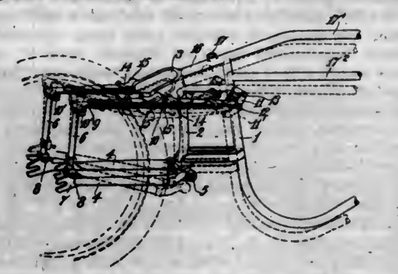
1. In a device of the kind described, an ironing board having one rounded end and one square end, a cleat adapted to be secured to a wall and to hold the square end of the board in a detachable manner, means for supporting said board in level position when attached to the cleat on the wall; said supporting means comprising a yoke-shaped leg of such length that when its upper end touches up under the cleat the lower end will touch the floor some distance from the wall, and a pair of braces pivoted with their lower ends to the lower part of the yoke and having their upper ends hinged underneath the board intermediate the ends thereof.

2. In a device of the kind described, an ironing board having one rounded end and one square end, a cleat adapted to be secured to a wall and to hold the square end of the board in a detachable manner, a yoke-shaped leg of a length to reach from the cleat to a point on the floor some distance from the wall, a yoke-shaped brace pivotally secured with one end near the lower end of the yoke-shaped leg or support and the other end underneath the board near the middle thereof, and means at the under side of the board for engaging and holding the upper end of the leg in folded position in such a manner that the lower end of the leg slants away from and projects beyond the square end of the board.

1,111,152. MOTOR-CYCLE FRAME. CARL O. HEDSTROM, Portland, Conn. Filed Mar. 7, 1914. Serial No. 823,139. (Cl. 208—94.)

1. In a motorcycle construction, the combination with the main frame thereof, and a rearwardly extending fork pivotally attached to the main frame, of a spring pivotally attached at its forward end to the main frame, means to attach the rear end of the spring to the rearwardly extending fork of the vehicle, a block rigidly secured to the center portion of the spring, a yoke-member forming a part of the main frame and pivotally attached to said block, whereby when the vehicle passes through a depression or over an elevation in the roadway, the spring will rotate about the yoke-member and the opposite ends of the spring will be flexed in opposite directions, as described.

2. In a motorcycle, the combination with the main frame, of a fork pivotally attached thereto and extending rearwardly thereof, posts secured to the rear end of said fork and extending upwardly, links pivotally attached to the main frame, springs secured to the links and posts respectively, a portion of the frame being pivotally attached to the center portions of the springs, whereby when the vehicle is in use, the full length of the springs will be flexed, and the opposite ends of said springs will be moved in opposite directions, as described.



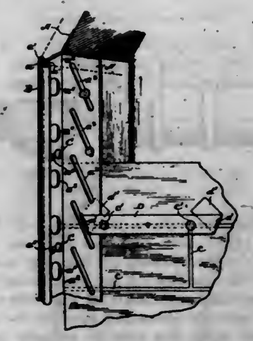
3. A motorcycle frame comprising in combination, a fork pivotally connected to the frame, a post device secured to the rear end of the fork, a movable link member secured to the said frame, a spring member attached at its opposite ends to said post device and said movable link member respectively, and a pivotal connection between the center portion of the spring and the frame.

4. The combination with the main frame of a machine of the class described, a rearwardly extending fork pivotally connected to the main frame, and of a spring, a link pivotally attached to the main frame, a post secured to said fork, said spring being attached to the post and link respectively, and means for pivotally securing the center portion of the spring to the main frame, whereby the full length of the spring will be flexed when vertical movements are imparted to the pivotally connected rear fork, as described.

5. The combination with the framework of a motorcycle or similar machine, having a rearwardly extending yoke portion forming a part of the framework, a rear fork, pivotally connected to the framework in which the rear axle of the vehicle is mounted, a spring pivotally connected at its opposite ends to the framework and rear fork respectively, and means to pivotally connect the center portion of the spring with said yoke, as described.

[Claims 6 and 7 not printed in the Gazette.]

1,111,153. METAL BEAD FOR PLASTERINGS. WILLIAM V. HEINZ, La Salle, Ill. Filed Mar. 11, 1912. Serial No. 682,960. (Cl. 72—121.)



1. In a metal bead of the class described, oppositely arranged duplicate parts A, A, placed in juxtaposed relation to each other, each part having at one edge a right

angular flange, the flanges of adjacent parts being oppositely extended, opposite longitudinal bends a^3 at an angle of about forty-five degrees and opposite flat parts provided with nail holes, in combination with a tubular bead B provided with a longitudinal slot adapted to receive the flanged edges of said parts A A and permit rotation of each in said slot in opposite directions through an arc of about forty-five degrees.

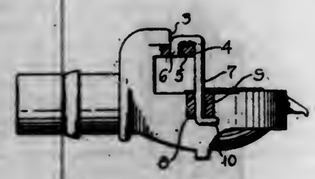
2. In a metal bead of the class described, separate duplicate parts A, A, placed in juxtaposed relation to each other, each part having at one edge a right angular flange, the flanges of adjacent parts being oppositely extended, longitudinal bends a^2, diagonal slots a^3, spaced apart on one side of said longitudinal bends and transverse slots a^4, on the opposite side of said longitudinal bends, and adapted to match one another on the opposite sides of a corner, means for attaching said separate parts together on a corner and a semi-cylindrical tubular bead B provided with a continuous longitudinal slot in its flat side adapted to receive said marginal flanges and slide on the same, its flat side facing toward the wall.

3. In a metal bead of the class described, the opposite duplicate parts A, A, placed in juxtaposed relation to each other, each part having at one edge a right angular flange, the flanges of adjacent parts being oppositely extended, and the slotted tubular part B adapted to slide upon said marginal flanges for securing said parts together in the manner described and permitting said marginal flanges to be rotated in said part B for varying the position of said parts A, A, relatively to the wall to any angle from right angle to a straight line.

4. In a metal bead of the class described, and in combination, duplicate parts A, A, provided with marginal flanges a^1, a^2, placed in juxtaposed relation to each other, and diagonal slots a^3 spaced apart and arranged in a row extending longitudinally of said parts, means for connecting said parts together below said marginal flanges, a clip D provided with diagonal folds d^1 at its ends to match the inclination of the diagonal slots a^3, and the slotted tubular part B, adapted to slide upon said marginal flanges for securing said parts together in the manner described.

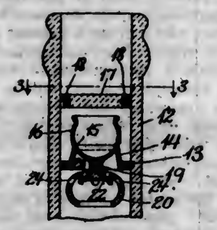
5. In a device of the class described, a tubular bead having an open seam extending the length thereof, a pair of pliant sheet metal wings, each wing having at one of its side margins an integral flange extending throughout the length of the wing, which flanges fit within the bead and the wings extend outwardly through the seam so that the wings may be hingedly connected with the bead and the bead be reinforced throughout its length by said flanges.

1,111,154. STOP-PIN FOR COUPLING-HEADS. JEROME A. HOUSTON, Springfield, Mo. Filed Mar. 21, 1914. Serial No. 826,276. (Cl. 137—89.)



The combination with a coupling head having a perforated ear and a boss provided with an opening, of a pin having a hook formed at one end and adapted to engage with the perforated ear, said hook portion being disposed in parallel relation with the body of the pin, the other end of said pin extending through the opening in the boss and bent upon the boss to securely retain the pin against movement, said end being bent in a direction opposite to the direction in which the hook extends, so as to securely retain the pin in its effective position.

1,111,155. NON-REFILLABLE BOTTLE. CHARLES E. INGLIS, Malden, Mass. Filed Jan. 2, 1913. Serial No. 739,711. (Cl. 215—63.)

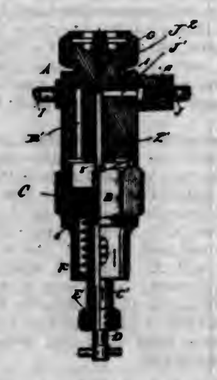


1. A non-refillable bottle comprising a ring secured in the neck of the bottle and forming a valve seat, a cup-shaped valve having its open end extending toward the mouth of the bottle, the closed end of said valve being formed to close the valve seat and having an inwardly projecting stem provided with a stop, and a weight below the valve seat provided with a central orifice in which the said stem has a limited sliding movement, the valve being adapted to be floated to its seat without corresponding movement of the weight.

2. A non-refillable bottle comprising a ring secured in the neck of the bottle and provided with an opening forming a valve seat, a cup-shaped valve having a vent aperture in its bottom, and a vent cover located in said cup-shaped valve.

3. A non-refillable bottle comprising a ring secured in the neck of the bottle and provided with an opening forming a valve seat, a cup-shaped valve having a vent aperture in its bottom, and a vent cover located in said cup-shaped valve, said vent cover having a guiding stem in the vent aperture.

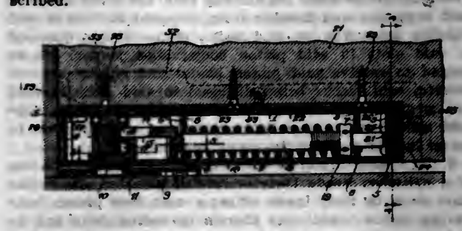
1,111,156. LUBRICATOR. SWEN JOHNSON, Huron, S. D., and JOHN JOHNSON, Missoula, Mont. Filed May 14, 1913. Serial No. 767,701. (Cl. 184—76.)



In a lubricator, the combination with a cylinder and a piston therein having an integral hollow stem, and a body portion provided with a steam inlet and oil passage in communication with the cylinder, of a valve stem adjustable in the piston stem to close the oil passage, and a spring surrounding the piston stem and urging the piston to close the valve in the oil passage.

1,111,157. SPRING-HINGE. WILLIAM J. KEENE, Chicago, Ill., assignor to Chicago Spring Butt Company, Chicago, Ill., a Corporation. Filed Jan. 3, 1911. Serial No. 600,484. (Cl. 16—25.)

1. In a spring hinge, the combination with a hinge frame adapted to be seated in a recessed corner of a door, of a fastening plate adapted to be secured to the edge of the recess, said frame and fastening plate having interlocking lugs arranged to be engaged by the movement of said frame relatively to said fastening plate and fastening devices directly connecting said frame to said plate to thereby hold said lugs interlocked, substantially as described.



2. In a spring hinge, the combination with a hinge frame, adapted to be mounted in horizontal position in the recessed corner of a door, of a fastening plate adapted to be secured to the horizontal edge of the recess, said plate having depending notched lugs at its opposite ends and said frame having interlocking parts arranged to be engaged with said notched lugs in the longitudinal movement of said frame and fastening devices for holding said frame against longitudinal movement, substantially as described.

3. In a spring hinge, the combination with a hinge frame adapted to be seated in the recessed corner of a door, of a fastening plate adapted to be secured to the edge of the recess, said plate having depending notched lugs at its opposite ends and said frame having interlocking parts arranged to be engaged with said notched lugs by the longitudinal movement of said frame, and screws directly connecting said plate and said frame to hold the latter against longitudinal movement, substantially as described.

4. In a double acting spring hinge, the combination of a floor plate having a post and stops on opposite sides of the post, a hinge frame pivotally engaging said post, a spring actuated plunger mounted in said hinge frame and engaging said stops, a fastening plate adapted to be secured to a door, and connecting devices between the opposite ends of said hinge frame and said plate, the connecting devices at one end of said frame and plate being adjustable, substantially as described.

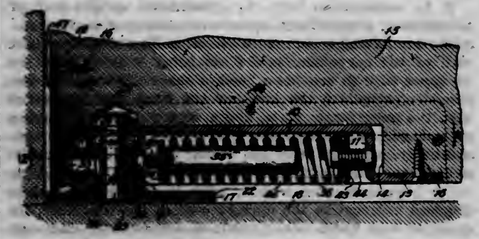
5. In a double acting spring hinge, the combination of a floor plate having a post and stops on opposite sides of the post, a hinge frame pivotally engaging said post, a longitudinally movable spring actuated plunger mounted in said hinge frame and engaging said stops, a fastening plate adapted to be secured to the door, said hinge frame and said plate having interlocking lugs at one end arranged to be engaged by the relative movement of said frame and plate, and fastening screws for adjustably connecting the opposite ends of said frame and plate, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,111,158. SPRING-HINGE. WILLIAM J. KEENE, Chicago, Ill., assignor to Chicago Spring Butt Company, Chicago, Ill., a Corporation. Filed Aug. 23, 1912. Serial No. 716,784. (Cl. 16—25.)

1. A spring hinge comprising a hinge frame, adapted to be seated in the recessed corner of a door, a floor plate, a pivot bolt uniting said frame and floor plate, a collar loosely mounted on said bolt and comprising integral upper and lower portions with an intermediate horizontal recess, studs fixed at their ends to the upper and lower portions of said collar and extending across said recess on opposite sides of said bolt, rollers journaled on said studs and within said recess, a spring actuated plunger having arms at its inner end extending within said recess and engaging said rollers, and adjustable connections between said floor plate and said collar for adjustably rotating the latter on said pivot bolt.

2. A spring hinge comprising a frame adapted to be seated in the recessed corner of a door, a floor plate, a pivot bolt fixed at its lower end to said plate, journaled in said frame and uniting the same to said floor plate, a collar interposed between said floor plate and said frame, said floor plate having a vertical projecting stud extending into the recess in said collar, adjusting screws threaded through the side walls of said recess and engaging said lug, studs carried by said collar on opposite sides of said bolt, and a spring actuated plunger in said frame having arms coöperating with said studs, substantially as described.



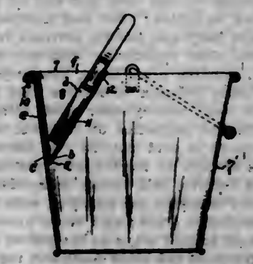
3. A spring hinge comprising a single frame bar adapted to be secured in the recessed corner of a door, a floor plate, a pivot bolt fixed to said plate, and journaled in said frame bar and having a headed end above the same, a collar on said bolt between said frame bar and said floor plate, studs carried by said collar on opposite sides of said bolt, and a spring-actuated plunger having arms coöperating with said studs, substantially as described.

4. A spring hinge comprising a single frame bar adapted to be secured in the recessed corner of a door, a floor plate, a pivot bolt fixed to said plate, and journaled in said frame bar and having a headed end above the same, a collar on said bolt between said frame bar and said floor plate, said collar having an upturned circular flange, a bushing in said frame bar about said bolt, a ball bearing arranged within the planes of said collar and engaging said bushing, studs carried by said collar on opposite sides of said bolt, and a spring-actuated plunger having arms cooperating with said studs, substantially as described.

5. A spring hinge comprising a single frame bar adapted to be secured in the recessed corner of a door, a floor plate, a pivot bolt to said plate, and journaled in said frame bar and having a headed end above the same, a collar on said bolt between said frame bar and said floor plate, a bushing in said frame about said bolt, said collar having a circular flange on its upper face, a concave ring within said flange, bearing balls interposed between said ring and said bushing, studs on said collar on opposite sides of said bolt, and a spring actuated plunger having arms coöperating with said studs, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,111,159. COMBINED STRAINER AND BRUSH-HOLDER. KIRK H. KNOX, Exira, Iowa. Filed July 28, 1913. Serial No. 781,562. (Cl. 91—66.)



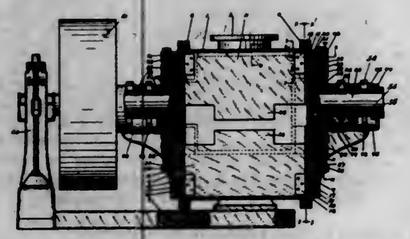
1. The combination with a container having an upright wall with an open top, of a metallic receptacle comprising

an upright imperforate plate bent between its ends to provide a terminal hood, a sheet of wire mesh secured at the edges of its respective sides and bottom to the edges of the respective sides and bottom of the imperforate plate, and a reinforcing strip disposed parallel with the sheet of wire mesh and connected with the ends of the imperforate plate; said receptacle being adapted to have a seating within, with its imperforate plate disposed adjacent to the upright wall of the container, its sheet of wire mesh being inclined downwardly and outwardly with reference to the longitudinal axis of the container, said hood overhanging a part of the upright wall of the container.

2. In combination with the cylindrical, upright wall of a container, a metallic receptacle consisting of an imperforate plate having a curvature corresponding to the upright wall of the container, said plate being bent adjacent to its upper edge to provide a hood, a sheet of wire mesh disposed intermediate the ends of the hood and connected with the imperforate plate, and a reinforcing strip having its ends secured to the imperforate plate and disposed substantially parallel with the sheet of wire mesh intermediate the ends of the hood; said receptacle being adapted to have a seating within, with its imperforate plate disposed adjacent to the upright wall of the container, its sheet of wire mesh being inclined downwardly and outwardly with reference to the longitudinal axis of the container, said hood overhanging a part of the upright wall of said container.

3. A receptacle for the purpose described, comprising a curved, imperforate, metallic plate provided adjacent to its upper terminal with outwardly projecting hooks and having its upper terminal bent to provide a hood overhanging said hooks; a reinforcing strip disposed between and having its ends connected with the ends of the imperforate plate, and a sheet of wire mesh disposed substantially parallel with the reinforcing strip and connected with the lower terminal of said imperforate plate.

1,111,160. ROTARY BLOWER. BERTINIUS LARSEN and WALTER H. PARKIN, Niles, Mich., assignors to National-Standard Company, Niles, Mich. Filed Nov. 15, 1913. Serial No. 801,289. (Cl. 230—30.)



1. In a structure of the class described, the combination of a cylinder, heads therefor having annular groove-like shoe ways in their inner sides; a cast iron piston body having piston blade slots therein extending from end to end of the body, said body being cast integrally with a hub-like projection at one end, the end of said hub-like projection being unslotted; steel end members secured to the ends of said body and having journals integral therewith and radial slots registering with the blade slots of said body and hub-like projections, the projection of one end member being recessed to receive said hub-like projection on said body, said cylinder heads being recessed to receive said hub-like projection on said end members; piston blades disposed in said slots in said piston body; shoe journal blocks slotted to receive said piston blades and rigidly secured thereto, said blocks being disposed in said slots in said end members and provided with journals projecting into said shoe ways; and shoes arranged on said journals to travel in said ways as the piston revolves.

2. In a structure of the class described, the combination of a cylinder, heads therefor having annular groove-like shoe ways in their inner sides; a cast iron piston body having piston blade slots therein extending from end to end of the body, said body being cast integrally with a hub-like projection at one end, the end of said hub-like projection being unslotted; steel end members secured to the ends of said body and having journals integral therewith and radial slots registering with the blade slots of said body, one end member being recessed to receive said hub-like projection on said body; piston blades disposed in said slots in said piston body; shoe journal blocks slotted to receive said piston blades and rigidly secured thereto, said blocks being disposed in said slots in said end members and provided with journals projecting into said shoe ways; and shoes arranged on said journals to travel in said ways as the piston revolves.

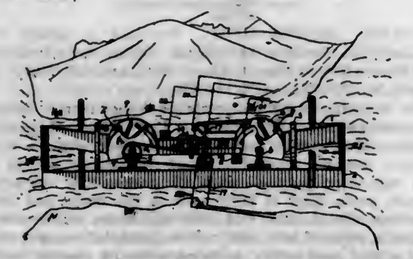
3. In a structure of the class described, the combination of a cylinder, heads therefor having annular groove-like shoe ways in their inner sides; a cast iron piston body having piston blade slots therein extending from end to end of the body, said body being cast integrally with a hub-like projection at one end, the end of said hub-like projection being unslotted; steel end members secured to the ends of said body and having journals integral therewith and radial slots registering with the blade slots of said body and hub-like projections, the projection of one end member being recessed to receive said hub-like projection on said body, said cylinder heads being recessed to receive said hub-like projection on said end members; piston blades disposed in said slots in said piston body; and shoes connected to said blades to travel in said ways as the piton revolves.

4. In a structure of the class described, the combination of a cylinder, heads therefor having annular groove-like shoe ways in their inner sides; a cast iron piston body having piston blade slots therein extending from end to end of the body said body being cast integrally with a hub-like projection at one end, the end of said hub-like projection being unslotted; steel end members secured to the ends of said body and having journals integral therewith, one end member being recessed to receive said hub-like projection on said body; piston blades disposed in said slots in said piston body; and shoes connected to said blades to travel in said ways as the piston revolves.

5. In a structure of the class described, the combination of a cylinder, heads therefor having annular groove-like shoe ways in their inner sides; a piston body having piston blade slots therein extending from end to end; end members secured to the ends of said body and having journals thereon and radial slots registering with the blade slots of said body; piston blades disposed in said slots in said piston body; shoe journal blocks slotted to receive said piston blades and rigidly secured thereto, said blocks being disposed in said slots in said end members and provided with journals projecting into said shoe ways; and shoes arranged on said journals to travel in said ways as the piston revolves.

[Claims 6 to 19 not printed in the Gazette.]

1,111,161. TIDE-MOTOR. GEORGE F. LEMMON, Canton, Ohio. Filed May 8, 1913. Serial No. 766,266. (Cl. 170—105.)



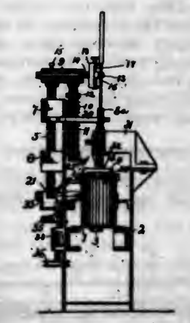
1. A tide motor for supplying electrical energy, comprising a pair of water wheels having their blades arranged whereby one water wheel is actuated only by the flood tide and the other is actuated only by the ebb tide, electrical current generating means operated by the water wheels, storage batteries, a switch for said batteries including a tide actuated blade held normally by the tide in position to open the battery circuit and arranged to automatically assume a position to close the battery circuit during the periods when there is no flow of tide, the generating means and the batteries thereby, in combination, providing a continuous supply of electrical energy, and a floating support for the elements aforesaid.

2. A tide motor for supplying electrical energy, comprising water wheel means actuated by the ebb and flood tides, electrical current generating means operated by the water wheel means, storage batteries, a switch for said batteries including a tide actuated blade held normally by the tide in position to open the battery circuit and arranged to automatically assume a position to close the battery circuit during the periods when there is no flow of tide, the generating means and the batteries thereby, in combination, providing a continuous supply of electrical energy, and a floating support for the elements aforesaid.

3. A tide motor for supplying electrical energy, comprising water wheel means actuated by the ebb and flood tides, electrical current generating means operated by the water wheel means, storage batteries, a switch for said batteries including a pivotally mounted tide actuated blade adapted to assume by gravity during the periods when there is no flow of tide a perpendicular position wherein it closes the battery circuit and normally held by the flowing tide in an inclined position wherein it opens the battery circuit, the generating means and the batteries thereby, in combination, providing a continuous supply of electrical energy, and a floating support for the elements aforesaid.

4. A tide motor for supplying electrical energy, comprising water wheel means actuated by the ebb and flood tides, electrical current generating means operated by the water wheel means, a floating support for said water wheel means and said generating means, storage batteries and a switch for said batteries including a tide actuated blade also mounted on said support and held normally by the tide in position to open the battery circuit and arranged to automatically assume a position to close the battery circuit during the periods when there is no flow of tide, the generating means and the batteries thereby, in combination, providing a continuous supply of electrical energy.

1,111,162. TIPPING-MACHINE. GEORGE A. MARSH, Dixfield, Me. Filed Mar. 4, 1914. Serial No. 822,265. (Cl. 113—91.)



1. In a can tipping machine of the character described the combination of can feeding mechanism, a vertically slidable frame, vertical guides for said frame, a tipping implement pivoted to said frame, a spring for lifting said frame, a lever for depressing said frame and means actuated by the movement of the passing can for operating said lever to depress said frame.

2. In a can tipping machine of the character described, the combination of can feeding mechanism, a vertically slidable frame, vertical guides for said frame, a tipping implement pivoted to said frame, a spring for lifting said frame, a lever for depressing said frame, a pivoted arm connected with said lever to actuate the same and positioned to be acted upon by the side of the passing can.

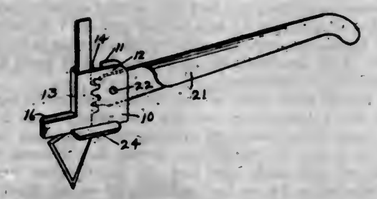
3. In a can tipping machine of the character described, the combination of a can feeding mechanism for feeding a line of cans, a vertically movable frame, a tipping implement pivoted to said frame, a spring for lifting said frame, a lever for depressing said frame, a pivoted arm connected with said lever to actuate the same, a horizontally disposed anti-friction roller on the end of said arm positioned to be acted upon by the side of the passing can, said roller having a flange on its upper end fitting over the edge of the can to hold the same down.

4. In a can tipping machine of the character described, the combination of a can feeding mechanism for feeding a line of cans, a vertically movable frame, a tipping implement pivoted to said frame, a spring for lifting said frame, a lever pivoted between its ends and having one end engaging the frame to depress the same and having on the other end an anti-friction roll, a pivoted arm having a movable end positioned to contact with the side of the passing can and having a bearing surface positioned to contact with said antifriction roll.

5. In a can tipping machine of the character described, the combination of a can feeding mechanism for feeding a line of cans, a vertically movable frame, a horizontally disposed rod adjustably secured in the upper portion of said frame, a tipping implement pivoted at the end of said rod, a spring for lifting said frame, a lever for depressing said frame and means actuated by the passing can for operating said lever to depress the frame.

[Claim 6 not printed in the Gazette.]

1,111,163. CAN-OPENER. CHARLES I. MILLAR, Providence, R. I. Filed June 5, 1913. Serial No. 771,842. (Cl. 30—3.)



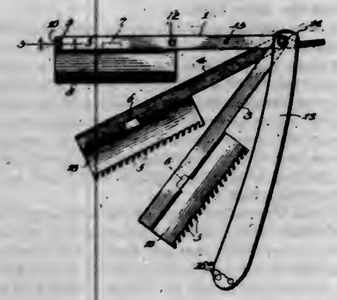
1. A can opener comprising a supporting frame, a blade mounted to be reciprocated therein, said blade having a piercing extension to enter the can and a laterally projecting outwardly turned cutting edge on said extending portion to cut the can on its upward stroke, said blade having a toothed shank, and an operating handle pivoted in said frame and having teeth engaging those of said shank whereby the oscillation of said handle causes said blade to reciprocate in said frame.

2. A can opener comprising a supporting frame, a blade mounted to be reciprocated therein and having a piercing and cutting extension adapted to enter the can, said blade having a laterally extending outwardly turned cutting edge adjacent said piercing extension to cut the can on its upward stroke, said blade having a toothed shank, and an operating handle pivoted in said frame and having teeth engaging those of said shank whereby the oscillation of said handle causes said blade to slide vertically in said frame, said body portion having laterally extended members adapted to support the hand of the operator in forcing the blade through the can.

3. A can opener comprising a hollow body portion constructed of sheet metal having two side walls formed by bending the metal substantially back upon itself leaving a space between, said body portion being adapted to be grasped by the hand of the operator and rest upon the face of the can, a knife blade mounted to be reciprocated between said walls, said blade having a piercing extension to enter the can and laterally projecting outwardly turned

cutting edge on said projecting portion, said blade having teeth on one of its edges, and an operating handle pivotally mounted in said body and having teeth engaging those of said shank whereby the oscillating of said handle imparts a reciprocating movement to said blade to pass into and out of the can to cut the same.

1,111,164. COMBINATION-RAZOR. VOLNEY T. MILLER, Ness City, Kans. Filed June 27, 1913. Serial No. 776,086. (Cl. 30—12.)



1. A combination razor of the character specified having a blade arm and right and left safety guard arms, the said three members being pivotally mounted at the back end of an ordinary razor handle and having a locking device to lock either safety arm to the blade arm as desired, the said locking device consisting of concave safety extensions 18 and lock teats 6 and grooves 7.

2. A combination razor of the character specified having a blade arm 1 and safety arms 3 and 4, the said three members being pivoted to a common razor handle, the blade arm comprising two lips and having a blade locking device 9 and lock post 12 and having grooves 7 in each lip of said blade arm, and the safety arms having safety extensions 18 on the back side of which are lock teats 6, all substantially as described.

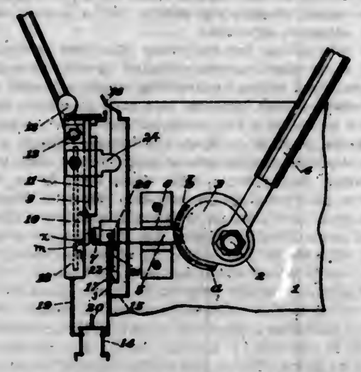
3. A combination razor of the character specified having a blade arm 1 comprising two lips, and safety arms 3 and 4, the said three members pivoted to a common razor handle by a pin, the blade arm having lock grooves 7 in each lip of said blade arm and the safety arms having safety extensions 18, on the back side of which, there are lock teats 6, and on the front edge a series of teeth 5, all substantially as described.

4. A blade arm comprising two long, narrow strips of metal held parallel with each other and having grooves on the under front side of each strip, in combination with a safety appliance of thin resilient metal, said safety appliance comprising two comb plates slightly concave on their underside the long way and having at their back sides lock teats to register with said grooves in the blade arm for the purposes set forth.

1,111,165. APPARATUS FOR ELECTRICALLY FORMING TOES AND HEELS ON HORSESHOES. WILLIAM B. MILLER, Pittsburgh, Pa., assignor to Copper-Die Horseshoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 12, 1910. Serial No. 571,632. (Cl. 219—3.)

1. In a machine for forming the heels and toes upon horse shoes, the combination of a frame, means to hold the blank shoe in operative position, means to convey an electric current to and localize the same at the heels and toes so as to produce a welding temperature at said points, and means to press the heated shoe and calk sufficiently to weld the same, and means to turn the ends of the blank at right angles to form the heels.

2. In an apparatus for forming the heels and toes upon horse shoes, the combination of a frame, a cam mounted in said frame, a die-bar actuated by said cam, a blank holder secured in said frame and adapted to hold the blank shoe in position during the operation, a cam adapted to press the ends of the blank horseshoe, at right angles to the length thereof, and means to convey a current and localize the same at the heels and toes of said blank shoe for the purpose of making sufficient heat to produce a welding temperature therein as described.

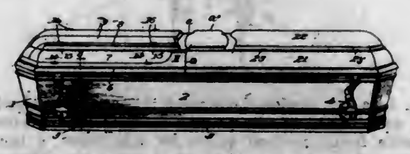


3. In a machine for forming the toes upon horseshoes, the combination of a frame, means for holding a blank shoe in operative position upon the frame, means for heating a portion of the shoe blank to a welding temperature, a die bar mounted upon the frame for forcing a calk against the heated portion of the shoe blank to weld the calk in position thereon, and means upon the die bar for acting upon the heated portion of the shoe blank to form a clip thereon.

4. In a machine for producing horseshoes, the combination of a frame, means for holding a blank shoe in operative position thereon, means for heating a portion of the blank shoe to a welding temperature, a die bar mounted upon the frame, means coöperating with the die bar to force a calk member against the heated portion of the blank shoe, a clip former movably mounted upon the die bar, and means for retaining the clip former in operative position, the clip former serving to act upon the heated portion of the blank shoe to form a clip thereon.

5. In an apparatus for producing horseshoes, the combination of a frame, means for holding a blank shoe in operative position upon the frame, means for heating a portion of the blank shoe to a welding temperature, a die bar, means coöperating with the die bar to force a calk member against the heated portion of the blank shoe, a clip former pivotally mounted upon the die bar and adapted to be swung into an inoperative position, and means for holding the clip former in an operative position, the said clip former being adapted to act upon the heated portion of the blank shoe to form a clip thereon.

1,111,166. BURIAL-CASKET. JOSEPH H. MILLS, Richmond, Ind. Filed Apr. 26, 1909. Serial No. 492,100. (Cl. 27—14.)



1. A burial casket top or cover divided transversely into two parts, one of which is divided longitudinally into a plurality of sections hinged to each other, and the other of which has a removable portion.

2. A burial casket top or cover divided transversely into two parts, one of which is divided longitudinally into a plurality of sections hinged to each other and having an end section separately hinged.

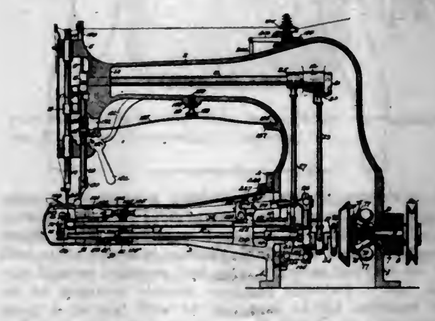
3. A burial casket top or cover divided transversely into two parts, one of which is divided longitudinally into a plurality of sections hinged to each other and the shell of which has a panel hinged longitudinally thereof.

4. A burial casket top or cover divided transversely into two parts, one of which comprises a frame having a transverse piece or bridge and an end section transversely hinged, and a plurality of longitudinal and intermediate sections hinged to each other.

5. A burial casket top or cover divided transversely into two parts, one of which is divided longitudinally into a plurality of sections hinged to each other and the other of which is provided with a hinged panel.

[Claims to 6 to 22 not printed in the Gazette.]

1,111,167. SEWING-MACHINE. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 9, 1909. Serial No. 521,801. (Cl. 112—26.)



1. In a sewing machine, the combination with the frame comprising a hollow standard sustaining a laterally closed work-supporting horn and an overhanging bracket-arm, and a main-shaft journaled in said frame, of a reciprocating needle and means connected with the main-shaft for actuating it, a looper coöperating with said needle and disposed within the work-supporting horn, means connected with the main-shaft for imparting operative loop-seizing movements to said looper, a thread-controller rock-shaft independent of the looper-actuating mechanism and mounted within said work-supporting horn, means connected with the main-shaft within said standard and independently of its connections with the needle and loop-taker for actuating said rock-shaft, thread-controlling means carried by said rock-shaft for acting upon the looper-thread, and means applied to said work-supporting arm for affording access to the thread-controlling means.

2. In a sewing machine, the combination with the frame comprising a laterally closed work-supporting horn and an overhanging bracket-arm, and a main-shaft journaled within and disposed longitudinally of the work-supporting horn, of a reciprocating needle and means connected with the main-shaft for actuating it, a looper coöperating with said needle and disposed within the work-supporting horn, means connected with the main-shaft for imparting operative loop-seizing movements to said looper, a thread-controller rock-shaft disposed within and in transverse relation to the work-supporting horn, means connected with the main-shaft independently of its connections with the needle and the looper for actuating said rock-shaft, thread-controlling means carried by said rock-shaft for acting upon the looper-thread, and means applied to said work-supporting arm for affording access to the thread-controlling means.

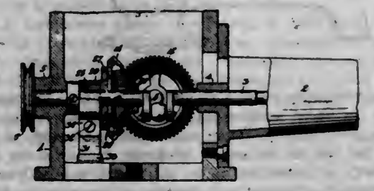
3. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating needle, a coöperating eyed looper, and a looper-supporting shaft, of a rock-shaft, means for actuating said rock-shaft movable differentially of the looper-supporting shaft, a take-up cam-arm extending from one side of said rock-shaft and formed with thread-engaging opposite edges and an intermediate cast-off portion upon the outer extremity, both of said thread-engaging edges being substantially eccentric to said rock-shaft, and thread-guiding eyes disposed upon opposite sides of the path of movement of said take-up cam-arm.

4. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating needle and a coöperating eyed looper, of a rock-shaft, means for actuating said rock-shaft, take-up and pull-off cam-arms with an intermediate thread-nipper actuating cam mounted upon said rock-shaft, said cam-arms being extended each from one side of said rock-shaft and formed with thread-engaging opposite edges and an intermediate cast-off portion upon the outer extremity, a thread-nipper substantially intermediate the take-up and pull-off cam-arms and one of whose thread-engaging jaws is operated by said actuating cam, and a plurality of guide-arms embracing said take-up and pull-off cam-arms and thread-nipper and provided with thread-eyes adapted for disposition in substantial alinement.

5. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating needle and a coöperating eyed looper, of a rock-shaft, means for actuating said rock-shaft, take-up and pull-off cams mounted upon and adapted for relative circular adjustment upon said rock-shaft, an intermediate thread-nipper actuating cam also mounted upon said rock-shaft, a thread-nipper substantially intermediate the take-up and pull-off cams and one of whose thread-engaging jaws is operated by said actuating cam, and a plurality of guide-arms embracing said take-up and pull-off cams and thread-nipper and provided with thread-eyes adapted for disposition in substantial alinement.

[Claims 6 to 10 not printed in the Gazette.]

1,111,168. HAND-WHEEL CLUTCH FOR SEWING-MACHINES. GEORGE E. MOLYNEUX, Bayonne, and FRANK PECH, Elizabeth, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 21, 1911. Serial No. 655,857. (Cl. 192—2.)



1. The combination with a driving element, of a driving clutch-member connected to and movable with the same, a normally stationary driven element, a second clutch-member connected with the driven element and normally disengaged from but adapted for operative engagement with the driving clutch-member, and means applied to the driving element and adapted to turn the same relatively to the driven-element for throwing such clutch-members into operative relation.

2. The combination with a shaft, of a clutch-member fixed thereon, a coöperating clutch-member sustained by and movable upon said shaft relatively to the fixed clutch-member and normally disengaged therefrom, a normally stationary element loosely mounted on said shaft, and means controlled by the turning movement of said loosely mounted element relatively to its supporting shaft for throwing said clutch-members into operative relation to couple said element with the shaft.

3. The combination with a shaft, of a clutch-member fixed thereon, a normally stationary element loosely mounted upon said shaft, a clutch-member connected with the loosely mounted element and adapted for operative engagement with and normally disengaged from the fixed

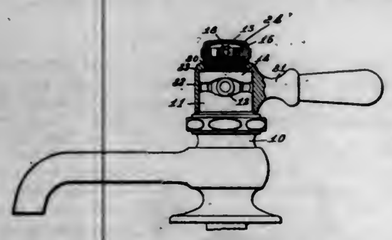
clutch-member, whereby said element may be coupled to the shaft, and controlling means for the second-named clutch-member provided with means for imposing a resistance to its rotation with said shaft.

4. The combination with a shaft, of a clutch-member fixed thereon, a normally stationary element loosely mounted upon said shaft, a clutch-member connected with the loosely mounted element and adapted for operative engagement with and normally disengaged from the fixed clutch-member, whereby said element may be coupled to the shaft, and controlling means comprising a drum loosely mounted upon said shaft, a connection between said drum and the second-named clutch-member and a friction band encircling said drum and detained against rotation therewith.

5. The combination with a shaft, of a clutch-member fixed thereon, a normally stationary element loosely mounted upon said shaft, a friction clutch-member connected with the loosely mounted element and adapted for operative engagement with and normally disengaged from the fixed clutch-member, whereby said element may be coupled to the shaft, controlling means for the second-named clutch-member provided with means for imposing a resistance to its rotation with said shaft, and adjusting means for said friction device to vary the degree of engagement of said clutch device.

[Claims 6 to 9 not printed in the Gazette.]

1,111,169. LEVER-HANDLE FOR SELF-CLOSING WORK. PHILIP MUELLER, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed June 9, 1913. Serial No. 772,646. (Cl. 137—4.)

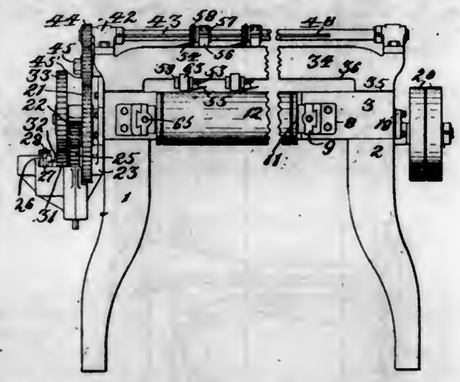


In self closing work, a fixed lower track-way, a movable upper trackway, rollers between the track-ways to raise the upper track-way upon the rotation thereof, a flange upon the top of the upper track-way having teeth in its periphery, a projection above the flange, a hood engaging over said track-ways and having an opening in its top and internal teeth in the wall of the opening for engagement with the teeth of said flange to hold the hood from turning upon the upper track-way, said hood also having a handle projecting therefrom for turning the upper track-way, and a cap threaded upon the said projection and engaging the hood to secure the same to said flange.

1,111,170. SKIVING-MACHINE. EDWARD NALL and WILLIAM C. TYLER, Akron, Ohio, assignors to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed May 13, 1914. Serial No. 838,353. (Cl. 69—16.

1. A skiving machine comprising a supporting table, driving and idler rolls mounted on opposite sides thereof, a traveling belt on said rolls arranged to move over the upper face of said table, a frame positioned above said traveling belt, a carriage adjustable on said frame longitudinally thereof, a knife carried by said carriage and arranged to skive or bevel material fed over said table by said belt, and a pressing member arranged to frictionally engage the upper surface of said material to hold said material in position during the skiving operation.

2. A skiving machine comprising a supporting table, driving and idler rolls on opposite sides thereof, a traveling belt on said rolls arranged to move over the upper face of said table, a frame positioned above said belt, a carriage on said frame adjustable longitudinally thereof, a skiving tool mounted on said carriage and a pressure member arranged to engage material fed by said belt to said skiving tool at a point near where said material is engaged by said skiving tool for holding said material in frictional engagement with said belt.



3. A skiving machine comprising a supporting table, driving and idler rolls on opposite sides thereof, a traveling belt on said rolls arranged to move over the upper face of said table, a shiftable carriage mounted above said belt, an inclined rotary skiving tool mounted on said carriage, and a yieldable pressure member arranged to engage material fed to said tool by said belt at a point where said skiving tool engages said material for holding it in firm contact with said belt.

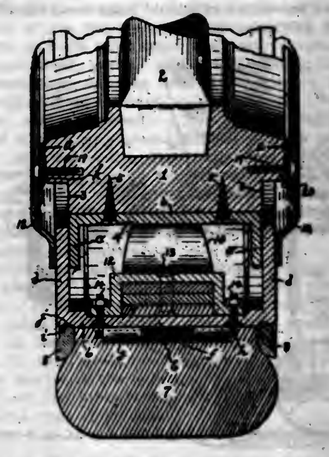
4. A skiving machine comprising a supporting table, driving and idler rolls mounted on opposite sides thereof, a traveling belt on said rolls arranged to move over the upper face of said table, supporting means mounted above said traveling belt, a carriage on said means, said carriage being provided with a skiving tool adapted to skive or bevel material fed to said tool by said belt, a projecting lug on each side of said carriage, and a yieldable member secured to said lugs adapted to frictionally engage the material fed by said belt to said skiving tool.

5. A skiving machine comprising a supporting table, driving and idler rolls mounted on opposite sides thereof, a traveling belt on said rolls arranged to move over the upper face of said table, a supporting frame above said belt, a carriage adjustable on said frame longitudinally thereof and provided with a rotary skiving tool for skiving or beveling material fed to said tool by said belt, and a yieldable member carried by said carriage vertically movable with respect to said carriage and adapted to frictionally engage the material fed by said belt to said skiving tool.

[Claims 6 to 8 not printed in the Gazette.]

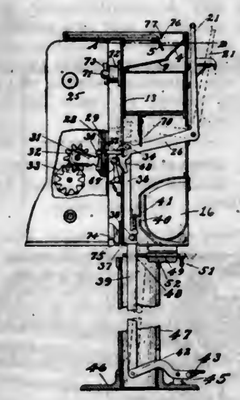
1,111,171. RESILIENT VEHICLE-TIRE. WILLIAM M. NEVOTTI, Omaha, Nebr. Filed May 1, 1913. Serial No. 764,807. (Cl. 152—37.)

A tire of the class described, comprising, in combination with a felly provided with annular recesses in its sides opening on its periphery and having facets on its sides inclined inwardly toward said recesses; a binding-rim upon the felly provided with outwardly-projecting flanges; a bearing-rim having inwardly-projecting flanges for engagement with the flanges of the binding-rim; a tire carried by the bearing-rim; springs disposed between the binding-rim and said bearing-rim; dust-guards formed as flexible, annular rims disposed outwardly of said annular recesses and forming convergent recesses adjacent to the facets of the felly; and a plurality of keepers traversing the dust-guards and convergent recesses for longitudinally adjust-



able mountings in the felly, to move the dust-guards inwardly on said convergent recesses.

1,111,172. HAND AND FOOT OPERATING MECHANISM. JOHN F. OHMER, Dayton, Ohio, assignor to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Oct. 7, 1912. Serial No. 724,274. (Cl. 74—81.)

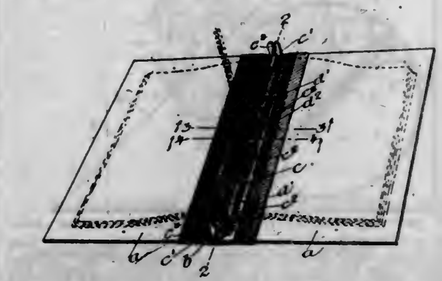


1. In combination, a hand-operative member comprising a bell-crank lever, a foot-operative member including a vertical link bar, a link bar pivoted to the forward end of the hand-operative member and adapted to be freely connected to and disconnected from the vertical link bar of the foot-operative member, and a horizontally slidable plate member engaging the said vertical link bar and adapted to actuate the same in effecting such connection or disconnection.

2. In combination, a hand-operative member including a bell-crank lever, a foot-operative member, a connection between said bell-crank lever and said foot-operative member comprising link bars pivoted respectively to the forward arm of said bell-crank lever and the forward end of said foot member, said link bars having a detachable connection at their adjacent ends, a horizontal slide engaging one of said link bars and controlling said connection and means engaging the forward end of said bell-crank lever and compelling a full operative movement thereof.

3. In combination, a hand-operative member comprising a bell-crank lever, a foot-operative member, a link bar depending from the forward end of said hand-operative member, and having its lower end terminated in a yoke, a vertical link bar extending from said foot-operative member, a pin on said last named link bar over which the yoke fits and thus forms a connection between the said link bars, means for maintaining a frictional engagement between said pin and yoke, and a slidable plate engaging one of said link bars and adapted to effect a connection or disconnection between the same.

1,111,173. TEMPORARY BINDER. NILS F. OLSON, Chicago, Ill. Filed May 29, 1913. Serial No. 770,590. (Cl. 129—38.)



1. A temporary binder comprising a back, and a holding device comprising a plurality of bars, means for removably securing the outer ends of the bars to the back, and means for securing the bars to the back between the ends thereof, said bars being disposed to pass transversely through the back of a book in the folds of sheets to be held.

2. A temporary binder comprising a back strip, a pair of bars, means for removably securing the outer ends of the bars to the back-strip and means for securing the bars to the strip between the end, and adapted to pass through the book or papers to be held.

3. A temporary binder comprising a back-strip, a bar pivotally connected at one end to an intermediate portion of the back-strip, means for removably connecting the other end of the bar to the back-strip, the bar being adapted and disposed to pass transversely through the back of the book or the fold in the papers to be held.

4. A temporary binder comprising a back strip, a plurality of bars each pivotally connected at one end to an intermediate portion of the back-strip, means at the other ends of the bars for removably connecting them to said back-strip, said bars being formed and disposed to pass transversely through the back of a book or the folds of sheets to be held.

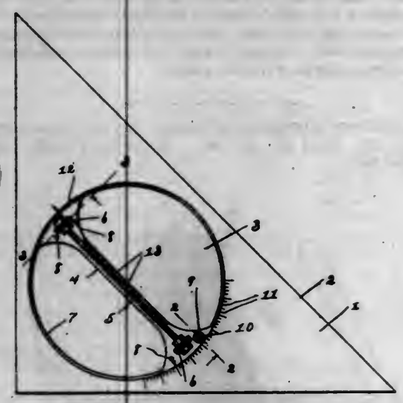
5. A temporary binder comprising a combination of a back-strip, and a bar pivoted to the back-strip near the center thereof, the strip being bent at an angle at one end, and provided with means for locking one end of the bar.

[Claims 6 to 13 not printed in the Gazette.]

1,111,174. DRAFTING INSTRUMENT. PAUL J. OSTRINGER, Schenectady, N. Y. Filed Jan. 25, 1912. Serial No. 673,204. (Cl. 33—109.)

1. In a drafting-instrument, and in combination, a straight-edge; a bearing-frame rotatively mounted upon said straight-edge; a shaft rotatively mounted upon said bearing-frame; a pair of wheels mounted upon said shaft projecting slightly beyond the lower face of said straight-edge; means for securing said bearing-frame in fixed angular relation to said straight-edge and a shouldered pivot-pin adapted to be removably located at one end of the straight-edge in line with its ruling-edge, and to support

said end in an elevated position in which the nearer of said wheels will clear the surface upon which the instrument rests, said instrument having means for indicating step by step the movement of the instrument upon the other of said wheels around said pivot.



2. In a drafting-instrument, and in combination, a straight-edge having at one end an inclined surface provided with a seat; a bearing-frame rotatively mounted upon said straight-edge, a shaft rotatively mounted upon said bearing-frame; a pair of wheels mounted upon said shaft projecting slightly beyond the lower face of said straight-edge; means for securing said bearing-frame in fixed angular relation to said straight-edge; a spring-plate pivoted upon said inclined end of the straight-edge, and adapted to be sprung into and out of said seat; and a shouldered pivot-pin carried by said spring-plate adapted in one position of said plate to project below the lower face of said straight-edge in line with its ruling-edge, and in another position of said plate to be supported above the upper face of said straight-edge.

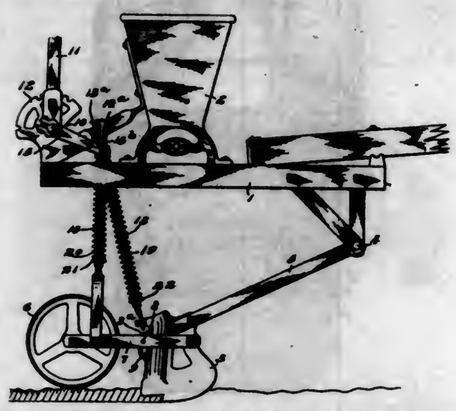
3. In a drafting-instrument, and in combination, a straight-edge; a bearing-frame rotatively mounted upon said straight-edge; a shaft rotatively mounted upon said bearing-frame; and a plurality of wheels fixed upon said shaft projecting slightly beyond the lower face of said straight-edge, said instrument having toothed mechanism for indicating step by step the movement of the instrument on said wheels, said bearing-frame having a straight-edge extending through the axis of the bearing-frame and graduated to correspond with the spacing of said toothed mechanism.

4. In a drafting instrument, and in combination, a body having a ruling-edge, a bearing frame rotatively mounted upon said body, a plurality of wheels rotatively mounted in parallel planes upon said bearing frame and projecting slightly below the lower face of said body, said wheels having substantially V-shaped teeth arranged, those of one wheel opposite those of another wheel, respectively, and adapted to indicate step by step the progressive movement of the instrument, and means associated with said body adapted to hold a portion of the same relatively stationary whereby the entire remainder of the body is adapted to swing around said stationary portion.

5. In a drafting instrument, and in combination, a body having a ruling edge, a bearing frame rotatively mounted in said body, a shaft rotatably mounted upon said bearing frame, a wheel mounted on said shaft projecting slightly below the lower face of said body, a pivot pin mounted on the body adapted to project below the same, said bearing frame being adapted to be turned into register longitudinally with said pivot pin, and means on said instrument for indicating the step by step movement of the instrument around said pivot on said wheel.

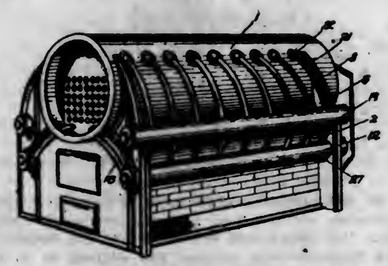
[Claims 6 to 8 not printed in the Gazette.]

1,111,175. SEEDING-MACHINE. FRANK R. PACKHAM and WILLIAM L. BRALEY, Springfield, Ohio, assignors to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Sept. 30, 1912. Serial No. 723,124. (Cl. 111—11.)



In a seeding machine, a pivoted furrow opener, a pivoted covering wheel, a crank arm common to said wheel and opener together with means for operating the same, a swiveled head carried by said crank arm having a pair of apertures arranged in proximity to each other, independent rods pivotally connected to said furrow opener and covering wheel, respectively, and extending loosely through said apertures to permit the rise and fall of said opener and wheel independently of said crank arm, projections on the upper ends of said rods whereby said furrow opener and covering wheel may be simultaneously raised by said crank arm, and springs on said rods adapted to be acted upon by said crank arm to simultaneously and independently exert a pressure upon said furrow opener and covering wheel, the connection between said rods and said crank arm being located the same distance from the pivotal point of said crank arm.

1,111,176. STEAM-GENERATOR. MAXIMILIAN VON PAGENHARDT, Kansas City, Mo. Filed Jan. 19, 1914. Serial No. 812,954. (Cl. 122—195.)



1. The combination with a furnace, of a shell, headers at opposite sides of the shell, inclined conduits leading through the furnace and connected with the headers at opposite sides of the furnace, with the lower end of one conduit communicating with the upper end of the other conduit through the headers whereby circulation is provided between the headers independently of the shell, conduits leading from the lower portion of the shell to the lower portions of the headers, and conduits leading from upper portions of the headers to upper portions of the shell, for the purpose set forth.

2. The combination with a furnace, of a shell, connected headers arranged in vertical, spaced relation at each side of the furnace, feed conduits leading to the lower headers, heating conduits connecting upper and lower headers on opposite sides of the furnace, and means connecting the upper headers with the upper portion of said shell.

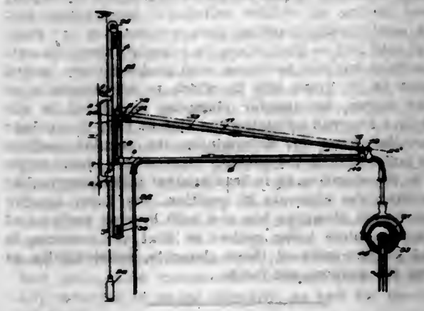
3. The combination with a furnace, of a shell, connected headers arranged in vertically spaced relation at each side of the furnace, conduits connecting the upper and lower headers with upper and lower portions of the shell respectively, heating conduits connecting upper and lower headers on opposite sides of the furnace, feed conduits leading from the shell to the headers.

4. The combination with a furnace, of a shell, headers arranged in vertically spaced relation at each side of the furnace, pipes connecting upper and lower headers on the same side of the furnace, conduits connecting the upper and lower headers with upper and lower portions of the shell respectively, heating conduits connecting upper and lower headers on opposite sides of the furnace, and means for supplying the headers.

5. The combination with a furnace, of a shell, a fixed header arranged longitudinally along each side of the furnace, a freely supported header at each side of the furnace adjacent the fixed header, pipes connecting the headers at the same side of the furnace, conduits connecting the fixed header on one side of the furnace with the loose header on the opposite side, means for supplying the headers, and tubes leading from the upper headers to the upper portion of the shell.

[Claims 6 to 12 not printed in the Gazette.]

1,111,177. DENTAL ENGINE-BRACKET. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed May 27, 1912. Serial No. 699,939. (Cl. 32—21.)



1. In a dental engine bracket the combination with a motor, of a vertically disposed guide, a supporting arm for the motor, a carriage on which the supporting arm is mounted, said carriage being provided with wheels arranged for movement between the walls of said guide, and a counterbalance connected to the carriage.

2. In a dental engine bracket the combination with a motor, of a vertically movable carriage, a supporting arm for the motor mounted on the aforementioned carriage, and a flexible connection between the carriage and the supporting arm.

3. In a dental engine bracket, the combination with a motor, of a vertically movable carriage, an extensible supporting arm for the motor mounted on said carriage, and a flexible connection between the carriage and the extensible supporting arm.

4. In a dental engine bracket, the combination with a motor, of a vertically movable carriage, an extensible supporting arm for the motor including a movable telescoping member, and a flexible device having its ends connected to said movable member and attached between its ends to the carriage.

5. In a dental engine bracket, the combination with a motor, of a vertically movable carriage, an extensible supporting arm for the motor mounted on the carriage and including a movable telescoping member, pulleys arranged on the carriage and on the movable member respectively, and a flexible device passing around said pulleys and having one end fixedly secured at the forward portion of the movable member and the other end adjustably secured at the rear portion of the movable member.

[Claims 6 to 9 not printed in the Gazette.]

1,111,178. ELECTRICAL CONTROLLING APPARATUS. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Nov. 4, 1912. Serial No. 729,370. (Cl. 172—179.)

1. In a controlling apparatus, the combination with a lever, of pivoted spring-operated arms coöperating with said lever, said arms having the edges of their free ends beveled, and vertically movable pins provided with beveled portions adapted to engage said edges on the arms to move the latter out of coöperative relation with the lever.

2. In a controlling apparatus, the combination with a pivoted lever, of pivoted spring-operated arms having opposing converging surfaces coöperating with the lever, additional pivoted spring-operated arms having corrugated surfaces coöperating with the lever, the last mentioned arms having free ends provided with beveled edges, and locking pins vertically movable relatively to said arms and having beveled portions coöperating with said beveled edges to move the arms out of engagement with said lever.

3. In a controlling apparatus, the combination with a pivoted lever, of pivoted spring-operated arms having opposing converging surfaces coöperating with the lever, additional pivoted spring-operated arms having corrugated surfaces coöperating with the lever, and movable locking devices coöperating with the free ends of the last mentioned arms to move them out of engagement with said lever.

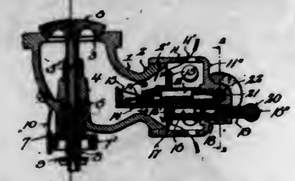
4. In a controlling apparatus, the combination with a pivoted lever having independent projections thereon, of spring-operated arms pivoted on separate axes and having opposing converging surfaces coöperating with one of said projections, additional spring-operated arms having corrugated surfaces, the last mentioned arms being pivoted on the same axis and coöperating with the other of said projections on the lever, and vertically movable locking devices coöperating with the free ends of the last mentioned arms to move them out of engagement with the lever.

5. In a controlling apparatus, the combination with a pivoted lever, of pivoted spring-operated arms having opposing converging surfaces coöperating with the lever, additional pivoted spring-operated arms coöperating with the lever and vertically movable locking devices coöperating with the free ends of the last mentioned arms to move them out of engagement with said lever.

1,111,179. CARBURETER. CLARENCE H. PRATT, Milwaukee, Wis., assignor to Koban Manufacturing Company, Milwaukee, Wis. Filed Feb. 9, 1914. Serial No. 817,478. (Cl. 48—154.1.)

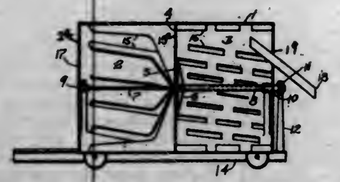
In a carbureter, a housing provided with a mixing chamber having a choke bored intake mouth in communication therewith, the mouth being flared in opposite directions to form a restricted waist-line, and a perforated cap incasing

the said mouth; the combination of a fuel supply nipple carried by the cap having its discharge end in alinement with the restricted waist-line of the mouth, a mutilated hub-sleeve in slidable union with the nipple and extending beyond its discharge end, one side of the sleeve being cut away to form an oil delivery deflector, a tapered valve



plug carried by said hub sleeve adapted to engage the end of the nipple, a solid surface gravity flutter valve extending from the hub-sleeve for regulating the flow of air through the intake mouth, the said valve being provided with a peripheral slot, and a spring-controlled stem having an annular recess engageable with the valve slot.

1,111,180. CONCRETE-MIXER. OLIVER S. RIBLET, Erie, Pa. Filed Jan. 8, 1912. Serial No. 670,032. (Cl. 83—73.)



In a concrete mixer, the combination of a rotatable drum; rollers operating on the periphery of the drum and forming a mounting for said drum; a partition in the drum having an opening therein; a cover for said opening; and means mounted on the drum for supporting the cover, the cover being slidingly mounted relatively to said means, said means maintaining the cover in parallel relation to the partition as it is moved.

1,111,181. TOOL-HOLDER FOR METAL-TURNING LATHES. OLOF NILSSON RIKOF, London, England. Filed Jan. 29, 1914. Serial No. 815,211. (Cl. 29—96.)

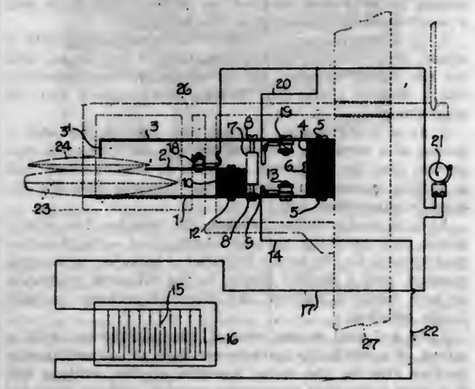
1. A tool holder of the character described, comprising a shank having an oblique cylindrical longitudinal tool slot, a semi-circular packing piece arranged in the front part of said slot so that it can be adjusted about its axis into various angular positions, said packing piece having a groove in its plane side in which to accommodate an angular cutter, an angular clamping bar fitted in the shank in a key-way adjoining the slot so that it can bear against the cutter for determining the angular position of the latter and of the packing piece, and a clamp-screw fitted in the shank so as to bear against said clamping bar for holding the elements in position.

2. A tool holder of the character described, comprising a shank having an oblique cylindrical longitudinal tool slot, a semi-circular packing piece arranged in the front part of said slot so that it can be adjusted about its axis into various angular positions, said packing piece having a groove in its plane side in which to accommodate an angular cutter, an angular clamping bar fitted in the shank in the key-way adjoining the slot so that it can bear against the cutter, and a clamp-screw fitted in the shank so as to bear against said clamping bar, the upper surface of said clamping bar being at right angles to the clamp-screw, the lower surface of the clamping bar being cut so as to determine the inclination at which the cutter and the packing piece are to be held relative to their axes, the clamping bar being reversible for inclining the tool in either direction and exchangeable for varying the angle of inclination.

3. A tool holder of the character described, comprising a shank having an oblique cylindrical longitudinal tool slot, a semi-circular packing piece arranged in the front part of said slot so that it can be adjusted about its axis into various angular positions, said packing piece having a groove in its plane side in which to accommodate an angular cutter, an angular clamping bar fitted in the shank in a key-way adjoining the slot so that it can bear against the cutter for determining the angular position of the latter and of the packing piece, and a clamp-screw fitted in the shank so as to bear against said clamping bar for holding the elements in position, the packing piece having at its front end a shoulder for determining its angular position and for offering additional support to the cutter.

4. A tool holder of the character described, comprising a shank having an oblique cylindrical longitudinal tool slot, a semi-circular packing piece arranged in the front part of said slot so that it can be adjusted about its axis into various angular positions, said packing piece having a groove in its plane side in which to accommodate an angular cutter, an angular clamping bar fitted in the shank in a key-way adjoining the slot so that it can bear against the cutter for determining the angular position of the latter and of the packing piece, and a clamp-screw fitted in the shank so as to bear against said clamping bar for holding the elements in position, the lower bearing surface of the clamping bar and both bearing surfaces of the packing piece being arched so that the pressure is exerted on the ends of these elements, substantially as and for the purpose set forth.

1,111,182. TEMPERATURE-INDICATOR FOR INCUBATORS. MARTIN L. ROUSE, Columbia, Mo. Filed Sept. 22, 1913. Serial No. 791,193. (Cl. 177—128.)

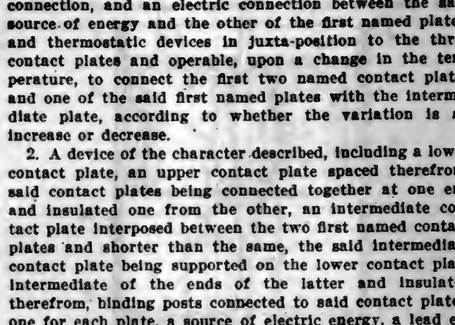


1. A device of the character described, including a pair of contact plates insulated from each other, a third contact plate intermediate of the first named plates and supported on and insulated from one of them, binding posts secured to the respective plates, one for each plate, a source of electric energy, an electric connection between the intermediate plate and the source of electric energy, one of the first named plates being also included in said connection, and an electric connection between the said source of energy and the other of the first named plates, and thermostatic devices in juxta-position to the three contact plates and operable, upon a change in the temperature, to connect the first two named contact plates and one of the said first named plates with the intermediate plate, according to whether the variation is an increase or decrease.

2. A device of the character described, including a lower contact plate, an upper contact plate spaced therefrom, said contact plates being connected together at one end and insulated one from the other, an intermediate contact plate interposed between the two first named contact plates and shorter than the same, the said intermediate contact plate being supported on the lower contact plate intermediate of the ends of the latter and insulated therefrom, binding posts connected to said contact plates, one for each plate, a source of electric energy, a lead extending from one pole thereof to the binding post of the lower contact plate, a lead extending from the other pole of said source of energy to the binding post on the intermediate plate, a shunt lead from the said last named lead to the binding post on the upper plate, a thermostat disposed in juxta-position to the relatively free ends of all of said contact plates and adapted to connect the intermediate plate with the first named plate upon a diminution of the temperature and to connect the intermediate plate with the upper contact plate upon an increase in the temperature.

3. A device of the character described, including a lower contact plate, an upper contact plate spaced therefrom, an intermediate contact plate interposed between the lower and upper contact plates and spaced from both of them, electric circuits in which the contact plates are included, a thermostatic device including a disk interposed between the extremities of the intermediate contact plate and upper contact plate and adapted to contact with the intermediate contact plate upon a diminution in the temperature to electrically connect said intermediate contact plate with the lower contact plate and also arranged, upon an increase in the temperature, to electrically connect the intermediate contact plate with the upper contact plate, said intermediate contact plate being pivotally mounted to swing laterally, as and for the purpose set forth.

1,111,183. INTERNAL-COMBUSTION ENGINE. WILLIAM P. RUBLE, Esmond, N. D. Filed June 16, 1914. Serial No. 845,460. (Cl. 123—61.)



1. In an internal combustion engine, the combination with a working cylinder and an air chest, of cylindrical valves controlling ports connecting the working cylinder with the air chest, roller bearings in which said valves are mounted, a reciprocating block supported by and connected with the valves and controlling the ports therein communicating with the working cylinder, and means for oscillating said valves.

2. The combination with a working cylinder and an air chest, of cylindrical valves at opposite ends of the cylinder controlling the passage of air from the air chest, roller bearings in which said valves are mounted, a reciprocating block supported by the valves and moving therewith as they oscillate and which opens and closes communication between the interior of said valves and the air chest, and means for oscillating the valves.

3. The combination with a working cylinder and an air chest, of hollow cylindrical valves interposed between the cylinder and the chest and each of which is provided with a tooth on its exterior having a passage communicating with the interior of the valve, a reciprocating block in the air chest having recessed opposite ends connecting with the teeth of the valves and controlling the entrance of air thereto, and means for oscillating the valves.

4. The combination with a working cylinder and an air chest, of two hollow cylindrical valves interposed between the cylinder and the chest and each of which is provided with a tooth on its exterior having a passage communicating with the interior of the valve, a reciprocating block in the air chest resting on the cylindrical valves and having recessed opposite ends connecting with the teeth of the valves adapted to close the entrance for air thereto and to separate from the teeth and thus open communication between the interior of the valves and the air chest.

5. The combination with a working cylinder, of an air chest, an oil supply, oscillating valves interposed between the air chest and the working cylinder, mixing chambers in said valves for oil and air, means for controlling the admission of air and oil to the mixing chambers, means for controlling the passage of the mixture from the mixing chambers and valves connected with and operated by the oscillating valves for controlling admission and exhaust to and from the working cylinder.

[Claims 6 to 10 not printed in the Gazette.]

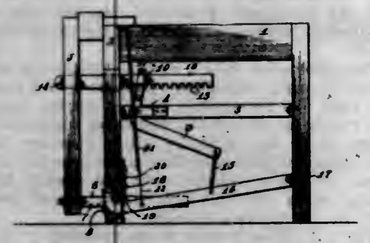
1,111,184. CLASP OR HOLDING DEVICE. BENJAMIN RUHMANN, Newark, N. J. Filed July 11, 1912. Serial No. 708,810. (Cl. 24—170.)

1. A belt-buckle comprising a main frame-piece having side-portions and end-portions and a laterally extending pintle-member having its end-portions connected with the side-portions of said frame-piece, and a clamp-frame pivotally connected with said pintle-member and arranged upon the under side of said main frame-piece, said clamp-frame comprising side portions, a laterally extending draw-bar and a laterally extending clamp-bar, said draw-bar and the clamp-bar being both connected with the side-portions of the clamp-frame and providing an opening for the reception of the free end-portion of the belt-strap, said draw-bar, when the clamp-frame is closed against the under face of the frame-piece, lying against the under face of one end-portion of said frame-piece with the inner marginal edge-portion of the draw-bar beyond the inner marginal edge-portion of the said last-mentioned end-portion of the frame-piece, all arranged so that a pull upon the inserted portion of the belt-strap in a direction away from said end-portion of the frame-piece will cause the belt-strap to be firmly clamped in frictional holding engagement by the inner marginal edge-portion of said end-portion of the frame-piece and the oppositely placed edge-portions of the draw-bar and the clamp-bar of the clamp-frame, substantially as and for the purposes set forth.

2. A belt-buckle comprising a main frame-piece having side-portions and end-portions, perforated hinge-knuckles extending from the lower faces of said side-portions, a pintle-member mounted in said hinge-knuckles, and a clamp-frame pivotally connected with said pintle-member and arranged upon the under side of said main frame-

piece, said clamp-frame comprising side portions, a laterally extending draw-bar and a laterally extending clamp-bar, said draw-bar and the clamp-bar being both connected with the side-portions of the clamp-frame and providing an opening for the reception of the free end-portion of the belt-strap, said draw-bar, when the clamp-frame is closed against the under face of the frame-piece, lying against the under face of one end-portion of said frame-piece with the inner marginal edge-portion of the draw-bar beyond the inner marginal edge-portion of the said last-mentioned end-portion of the frame-piece, all arranged so that a pull upon the inserted portion of the belt-strap in a direction away from said end-portion of the frame-piece will cause the belt-strap to be firmly clamped in frictional holding engagement by the inner marginal edge-portion of said end-portion of the frame-piece and the oppositely placed edge-portions of the draw-bar and the clamp-bar of the clamp-frame, substantially as and for the purposes set forth.

1,111,185. BENCH-VISE. HENRY H. SCHMIDT, Bessie, Okla. Filed Dec. 9, 1913. Serial No. 805,596. (Cl. 81—30.)



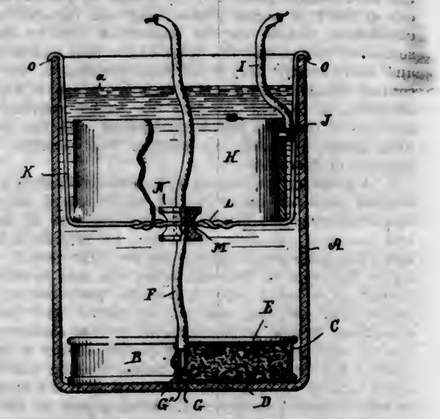
1. A vise comprising, in combination, a fixed jaw and a movable jaw, a lever, a looped guide pivoted to one end of said lever, a draw-bar in said guide and engaging said end of the lever, a pin on said draw-bar bearing against the outer surface of said movable jaw, and means on the other end of said lever for turning the same whereby to reciprocate said draw-bar and cause the pin carried thereby to exert pressure on the movable jaw to close the vise.

2. In a vise having a frame with a fixed jaw, and a movable jaw, upper and lower draw-bars carried by the movable jaw and having notches in their lower edges, a plate carried by the fixed jaw having an opening therethrough for the reception of said lower draw-bar and with which said notches are adapted to engage whereby to adjust the draw-bar, a lever pivoted on said frame having one end engaging the notches of the upper draw-bar, a yoke carried by the lever receiving the inner end of the upper draw-bar, and means for reciprocating said lever whereby to move said upper draw-bar to open and close the vise.

3. In a vise having a frame with a fixed jaw and a movable jaw, means for adjustably and pivotally connecting the lower ends of said fixed and movable jaws, a draw-bar carried upon the upper end of said movable jaw, a lever supported on the fixed jaw, a yoke carried upon the lever engaging the draw-bar to adjustably and pivotally secure the draw-bar to the lever, and means for reciprocating the lever to move said draw-bar whereby to open and close the movable jaw.

1,111,186. GALVANIC BATTERY. CHARLES B. SCHOENMEHL, Waterbury, Conn. Filed July 10, 1913. Serial No. 778,200. (Cl. 204—38.)

1. In a battery of the class described, the combination of a negative element comprising a flat sheet metal container having a perforated cover, a filling of oxid of copper scale within said container, a wire connected to the central portion of said container, a positive element, a wire support for the same and formed of two U-shaped wires having hook like end portions for attachment to the top edge portion of a jar and twisted together to form a central socket, a sleeve seated within the socket to guide the field wire for the negative element, the said support being suspended from the edge portion of the jar and in a way to bring the positive element below the solution line.



2. The combination of an electrode support for supporting a zinc below the solution line and formed of substantially U shaped wires which carry a zinc electrode thereon, the central portions of said wires being connected and shaped to form a central socket to guide a field wire of the battery and having its end portions disposed outward and upward and with hooks formed upon their extremities for attachment to the edge portion of a jar, the whole arranged to insure the suspension of the major portion of the support within a battery jar and below the solution line.

3. A battery element support formed of two pieces of metal the central portions of which are twisted together for connection one with the other and to form a central socket therein, the free end portions of said wires being disposed outward and upward with hooks formed upon their ends for attachment to the edge portions of a battery jar to insure the suspension of the support within the jar and below the solution line, and a guide sleeve mounted within the socket.

4. A battery element support formed of two U shaped wires and comprising a series of hook portions for the engagement of the top edge of a battery jar and comprising an intermediate body portion arranged below the level of the outer and hook portions to support an annular zinc and having said intermediate portions suitably connected together and forming a guide hole through which a wire may be threaded, the whole arranged to support an element within the upper portion of a jar, but below the level of the solution line.

5. A battery element support formed of pieces of wire and a porcelain sleeve the said sleeve being supported by the intermediate connected portions of the wire which encircle the sleeve and are twisted one about the other, the extended portions of said wires being disposed outward to support the battery element and the extremities of said wire being disposed upward and turned over to form hooks to engage the top edge of the jar in a way to suspend the element within the solution below the top line of the same.

1,111,187. CHURN. JAMES B. SELLS, London, Ky. Filed Dec. 5, 1913. Serial No. 804,835. (Cl. 31—30.)

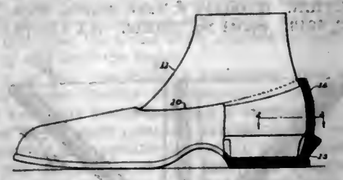
1. In a churn, a support for a reciprocatory rod, a reciprocatory rod, means for associating a churn dash with the reciprocatory rod such means also comprising a support for a mixer, and a mixer maintained by the support.

2. In a churn, a vertical support, a reciprocatory bar associated with the support and with driving means therefor, guides for the reciprocatory bar attached to the support above and below the driving means for the reciprocatory bar, means attached to the support for associating a churn-body therewith, a dasher rod, means for connecting the dasher rod for the churn-body with the reciprocatory bar comprising a member having between the reciprocatory bar and the point of attachment with the dasher rod a support for a vessel, a vessel which is adapted to be maintained by the support and means also attached to the reciprocatory bar for holding the vessel upon its support.

3. In a churn, a vertical standard, means attached to the standard for guiding a reciprocatory bar, a reciprocatory bar, means for reciprocating the bar carried by the standard and operatively connected to the reciprocatory bar, anti-friction rollers attached to the guides and maintained by the different guides at right angles one to the other, a member attached to the reciprocatory bar for connecting the bar to a dasher-rod such member having a part which serves as a support for a vessel and means also attached to the reciprocatory bar for maintaining a vessel upon the support.

4. In a churn, a reciprocatory bar, a member having at one end means for attaching said member with the bar, a clamp on the opposite end of the member for attaching a dasher rod to said member, an intermediate located means for supporting a vessel upon the member and means carried by the bar for engagement with the upper portion of a vessel to retain a vessel in fixed engagement with the reciprocatory bar and the support for the vessel.

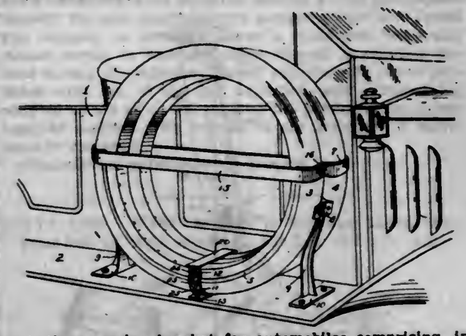
1,111,188. OVERSHOE. JOSEPH T. SIMPSON, Chicago, Ill. Filed May 19, 1913. Serial No. 768,506. (Cl. 36—7.)



1. The combination with an overshoe, of a reinforcing strip of spring metal completely embedded in the walls of the heel of said overshoe, said strip comprising two portions bent at substantially right angles to each other, one of said portions being located in the tread portion of said heel and extending throughout the length thereof and the other of said portions being located in the rear upright wall of said heel midway between the sides thereof and extending throughout the height of said wall.

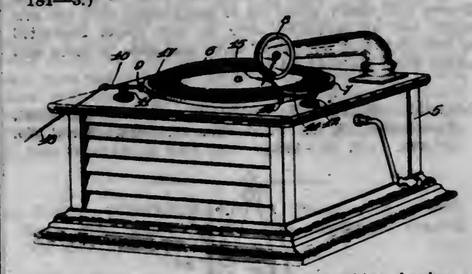
2. The combination with a rubber overshoe, of a strip of spring metal completely embedded in the rubber walls of said overshoe, said strip comprising two portions bent at substantially right angles, one of said portions being located in the tread portion of the heel and extending throughout the length thereof and the other of said portions in the rear upright wall of the heel midway between the sides thereof and extending throughout the height of the wall, and a second reinforcing strip at the corner where the main strip bends from the horizontal to the vertical.

1,111,189. TIRE-BRACKET. WILFRED C. SLY, Cleveland, Ohio. Filed Apr. 25, 1912. Serial No. 693,149. (Cl. 224—29.)



A tire carrying bracket for automobiles comprising, in combination, a continuous semi-circular channel member having a cross section conforming substantially to the exterior of the tire shoe and having a radius of curvature substantially equal to that of said shoe, means for securing said member in an upright position upon the running board of an automobile with its concave side uppermost, and a strap secured to and extending around the upper end of said member.

1,111,190. BURGLAR-ALARM. AXEL STAHL, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 813,145. (Cl. 181—3.)



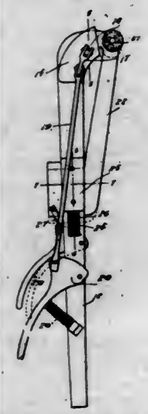
The combination with a talking machine having a sound-box and a turn-table for supporting the record, said turn-table having a marginal abutment, of a lever extending horizontally beneath the sound-box and pivoted to swing in a horizontal plane, said lever when in engagement with the sound box holding the same elevated in inoperative position, and a stud depending from the lever, said stud being in the path of the aforesaid abutment.

1,111,191. PORTABLE SAW-SHARPENER. WILLIAM W. STECKEL, Eastside, Oreg. Filed Aug. 19, 1913. Serial No. 785,527. (Cl. 51—7.)

1. A tool for sharpening saw teeth comprising a shank having an opening receiving the saw tooth, a spring pressed pin engaged through said opening and adapted to pass through an opening in the saw tooth to hold the latter in place, a slide on said shank, an emery wheel carried by said slide, means on said slide for actuating said emery wheel, a spring normally holding said slide in position to dispose said emery wheel out of engagement with the saw tooth, and an operating lever on said shank connected to said slide and serving to move said slide to force said emery wheel against said tooth.

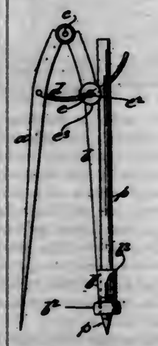
2. A tool for sharpening saw teeth comprising a shank, a retaining plate on one side of said shank connected at the forward edge to said shank by a web, the saw tooth being positioned between said shank and said plate with the heel curving over and bearing upon the top edge of said web and the point disposed below and in advance of said web, a spring pressed pin carried by said shank engaged through an opening in said tooth to anchor the latter, a slide on said shank, a rotary emery wheel on said

slide, and means for moving said slide to dispose said emery wheel in and out of engagement with said tooth.



3. A tool for sharpening saw teeth comprising a shank having an opening receiving the saw tooth, a spring pressed pin engaged through said opening and adapted to pass through an opening in the saw tooth to hold the latter in place, a slide on said shank, an electric motor on said slide, an emery wheel on said slide, an operative connection between said motor and said emery wheel, a spring on said shank normally holding said slide in position to dispose said emery wheel out of engagement with the saw tooth, and an operating lever on said shank connected to said slide and serving to move said slide to force said emery wheel against said tooth.

1,111,192. SCRIBER'S COMPASS. KNUTH STORAKER, Westchester, N. Y. Filed Dec. 18, 1913. Serial No. 807,395. (Cl. 33—149.)



1. In a scriber's compass of the character designated, a segmental arm attached to one leg and extending laterally across one side of the other leg, a loop-screw engaging said segmental arm and extending through said other leg, a nut engaging said loop screw and bearing against said other leg, the latter formed with a slit pencil tube on its outer side, and a nut sleeve engaging with said pencil tube, whereby a pencil may be used of a length sufficient to extend beyond the segmental clamping device as and for the purpose set forth.

2. A scriber's compass of the character designated comprising pivotally connected legs, a segmental arm attached to one leg and extending across a side of the other leg, clamping means on the latter for engaging with said segmental arm, said other leg being also formed with a slit pencil tube in parallelism with its outer side, and a sleeve nut engaging said pencil tube, whereby a pencil may be used of a length sufficient to extend beyond the segmental clamping device as and for the purpose set forth.

1,111,193. BATHING-SUIT. MARY E. STREET, St. Louis, Mo. Filed Feb. 28, 1914. Serial No. 821,747. (Cl. 2—145.)

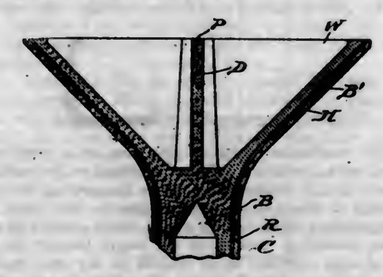
1. A one-piece bathing suit comprising a blouse, a waist-band and trousers, front and back panels depending from the lower portion of the waist-band and covering the split between the trouser members, and fastening means on the waist-band.

2. A one-piece bathing suit comprising a blouse, sleeves therefor provided with slits in the back, a waist-band and trouser members, front and back panels depending from the lower edges of the waist-band and covering the split or open space between the trouser members, and fastening means on the waist-band.

3. A one-piece bathing suit comprising a blouse, a waist-band and trousers, front and back panels covering the split between the trouser members, and an air sack on the back of the blouse.

4. A one-piece bathing suit comprising a blouse, a waist-band and trousers, front and back skirt panels depending from the waist band and operating to cover the split between the trouser members, fastening means on the waist-band, a yoke-piece secured to the inside of the back of the blouse between the arm holes and extending to a point intermediate the bottoms of the arm-holes and the upper edge of the waist-band, the lower edge of the yoke being free from the back of the blouse whereby an open air sack is formed between the yoke and blouse, and sleeves on the blouse having rear slits, as set forth.

1,111,194. REINFORCED-CONCRETE COLUMN CONSTRUCTION. HARRISON S. TAFT, Seattle, Wash. Filed May 22, 1913. Serial No. 769,216. (Cl. 72—76.)



1. A column head, comprising a flaring hollow concrete body, transverse concrete webs integral with said body, and reinforcement arranged in flaring form in the body and transversely in said webs.

2. A column head, comprising a flaring hollow concrete body, transverse concrete webs integral with said body, reinforcement arranged in flaring form in the flaring body and transversely in the webs, said reinforcement consisting of radial members and circumferentially disposed members in the flaring body, and transverse members in said webs.

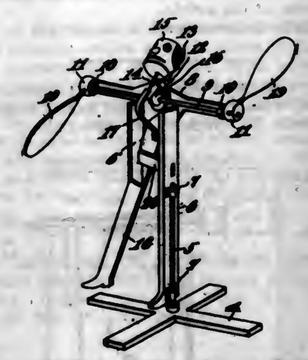
3. A column head, comprising a flaring concrete body, transverse concrete webs integral with said body, reinforcement arranged in flaring form in the flaring body and transversely in the webs, the body reinforcement comprising radial members and circumferentially disposed members which inclose the frame work formed by the radial members.

4. The combination of a concrete column, a column head comprising a flaring hollow concrete body, transverse concrete webs integral with said body, and reinforcement arranged in flaring form in the said concrete body and transversely in the said webs, part of the said reinforcement extending from the head into the column.

5. The combination of a concrete column, a column head comprising a flaring hollow concrete body, transverse concrete webs integral with said body, and reinforcement arranged in flaring form in the flaring body and transversely in the webs, said reinforcement consisting of radial members and circumferentially disposed members in the flaring body and transverse members in the webs, portions of said reinforcement extending from the head into the concrete column.

[Claim 6 not printed in the Gazette.]

1,111,195. CROW-JACK. HARRY THAYER, Sidney, Me. Filed Jan. 19, 1914. Serial No. 813,144. (Cl. 46—14.)



1. A device of the class described comprising a frame, means for pivotally supporting the same to rotate about a vertical axis, a cross bar carried by said frame, a shaft rotatably carried by said cross bar and provided with oppositely extending wind operated blades at its extremities extending in opposite directions, and a head-like block pivotally mounted upon said frame, and means carried by said head block and shaft adapted to oscillate the former by and with the latter.

2. A crow jack comprising a supporting base, a frame rotatably carried thereby and adapted to rotate about a vertical axis, said frame including a horizontally extending cross bar, a shaft rotatably carried by said cross bar and extending substantially horizontal, paddle blades carried at the extremities of said shaft and adapted to be actuated by the wind, a cam carried by said shaft, a head pivotally secured to the said frame and with a portion thereof extending in the path of motion of the said cam and adapted to be oscillated thereby, and means for holding the said portion of the head block in contact with the peripheral surface of said cam.

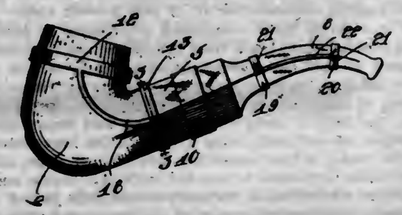
3. A crow jack comprising a frame including a pivoted head adapted to imitate the appearance of a human figure, means for mounting the same to rotate about a vertical axis, and wind operated means carried by the said figure adapted to oscillate the said head.

4. A crow jack comprising a frame including a movable head adapted to imitate the appearance of a human figure, means for mounting the same to rotate about a vertical axis, and wind operated paddle blades carried at the extremities of the arms of the figure and adapted to oscillate the head thereof.

5. A crow jack comprising a supporting base, a frame imitating the legs, body portion, arms and head of a human figure, said frame rotatably secured to the base and adapted to rotate about a vertical axis, a shaft extending along the arms of the said frame and provided with oppositely extending wind actuated paddles at the extremities thereof, the said head pivotally secured to the said frame and adapted to oscillate about a horizontal axis, and means carried by the said shaft adapted to oscillate the head during the rotation thereof, and the said frame provided with one of the legs extended, said extended leg adapted to act as a vane holding the paddle blades in the required position with respect to the direction of movement of the wind.

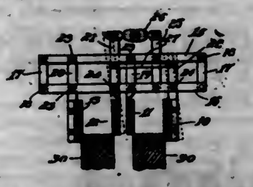
[Claim 6 not printed in the Gazette.]

1,111,196. PIPE. MARVIN G. THOMAS, Basin, Wyo. Filed Jan. 27, 1914. Serial No. 814,716. (Cl. 131—12.)



In a device of the class described, the combination with a pipe formed of a plurality of sections, said pipe comprising a bowl and a body carried thereby, and a stem carried by said body, of a plurality of retaining bands positioned upon said bowl and said body, said bands provided with hinged portions for allowing the same to be placed in their correct position, said bands also provided with clasps for allowing the same to be firmly held upon said bowl and said body; an integral, curved finger formed upon said retaining band for holding the same in spaced relation to each other and in their correct position upon the pipe, whereby said sections of said pipe will be held in firm engagement with each other.

1,111,197. CONCRETE-MOLD. WILLIAM H. TUOHY, Eagle, Wis. Filed Dec. 27, 1913. Serial No. 808,948. (Cl. 25—131.)



1. A concrete mold, comprising a plurality of pairs of mold-boards spaced apart from each other, the mold-boards of each pair being spaced apart to receive concrete between them, a supporting frame transverse to said boards, a plurality of arms on said frame extending below the same and attached to said mold-boards, the arms supporting one of the mold-boards of each pair having pivotal connection with the frame, a connecting member extending between said pivoted arms, and operative means connected with one of said pivoted arms, and adapted to effect the swinging movement of all of said pivoted arms through the medium of said connecting member.

2. A concrete mold, comprising a plurality of pairs of mold-boards spaced apart from each other, the mold-boards of each pair being spaced apart to receive concrete between them, a supporting frame transverse to said boards, a plurality of arms on said frame extending below the same and attached to said mold-boards, the arms supporting one of the mold-boards of each pair of mold-boards having pivotal connection with the frame, a turn-buckle attached at one end with the frame and at its opposite end with one of said pivoted arms, and adapted when expanded and con-

tracted to effect the swinging movement of said last mentioned pivoted arm, and a link extending between said arm adapted to transmit said swinging movement from one to the other of said pivoted arms.

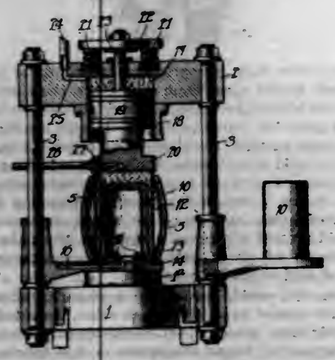
3. A concrete mold, comprising pairs of mold-boards spaced apart from each other, the mold-boards of each of said pairs being spaced apart to receive concrete between them, a transverse supporting frame, pairs of arms on said frame extending below the same and attached to the outer faces of the mold-boards of each pair of mold-boards, one of each pair of arms having pivotal connection with the frame, a link connecting said pivoted arms, one of said pivoted arms projecting above the frame, a rigid arm secured to the frame and projecting above the frame, and a turn-buckle connected at one end with said last mentioned pivoted arm and at its opposite end with said rigid arm and adapted when expanded and contracted to effect the swinging movement of all of said pivoted arms.

4. A concrete mold, comprising a plurality of pairs of mold-boards spaced apart from each other, the mold-boards of each of said pairs being spaced apart to receive concrete between them, a transverse supporting frame consisting of upper and lower, rigidly connected, frame members, two pairs of arms connected with said frame, one of each pair of said arms being pivoted to the lower member of the frame, a link connecting said pivoted arms, and a turn-buckle connected at one end with said frame and in operative connection at its opposite end with one of said pivoted arms above the pivot of the same, and acting on all of the pivoted arms to swing the same into and out of operative position.

5. A concrete mold, comprising two pairs of mold-boards spaced apart from each other, the mold-boards of each of said pairs being spaced apart to receive concrete between them, a transverse supporting frame consisting of upper and lower, rigidly connected, frame members, two pairs of arms connected with the upper and lower members of said frame, one of each of said pairs of arms being pivoted to the lower member of said frame, a link connecting said pivoted arms located adjacent to the upper member of the frame, and a turn-buckle connected at one extremity to the frame and at its other end with one of said pivoted arms, said turn-buckle being adapted, when contracted and expanded, to swing the pivoted arms inwardly and outwardly.

[Claims 6 to 18 not printed in the Gazette.]

1,111,198. APPARATUS FOR SHAPING METAL ARTICLES. FREDERICK G. WACKER, Chicago, Ill., assignor to Charles H. Wacker, Chicago, Ill. Filed Apr. 1, 1912. Serial No. 687,634. (Cl. 113—44.)



1. In an apparatus for shaping a hollow metal article, the combination, with a die, of a bottom support for one end of the article, a core partially filling the interior of such article and immovable therein in operation, a movable head adapted to engage and close the other end of the article, and means for applying fluid pressure to the interior of the article.

2. In an apparatus for shaping a hollow metal article, the combination, with a die, of a bottom support for one end of the article, an imperforate core partially filling the interior of such article, a movable head adapted to engage and close the other end of the article, and means for supplying fluid pressure to the interior of the article.

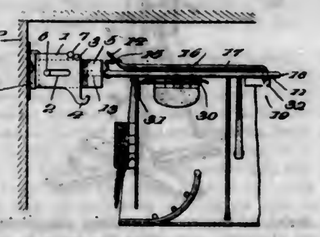
3. In an apparatus for shaping a hollow metal article, the combination, with a die, of a bottom support for one end of the article, a stationary core secured to such support and partially filling the interior of such article, a movable head adapted to close the other end of the article, and means for applying fluid pressure to the interior of the article.

4. In an apparatus for shaping a hollow metal article, the combination, with a die, of a bottom support for one end of the article, a core partially filling the interior of such article, means for heating such core, and means for applying fluid pressure to the interior of the article.

5. In an apparatus for shaping a hollow metal article, the combination, with a die, of a bottom support for one end of the article, a hollow core partially filling the interior of such article, means for supplying steam to the interior of the core, and means for applying fluid pressure to the interior of the article.

[Claims 6 to 20 not printed in the Gazette.]

1,111,199. CLOTHES-RACK FOR SLEEPING-CARS. FRANK W. WALLACE, Chattanooga, Tenn. Filed Oct. 20, 1913. Serial No. 796,263. (Cl. 45—13.)

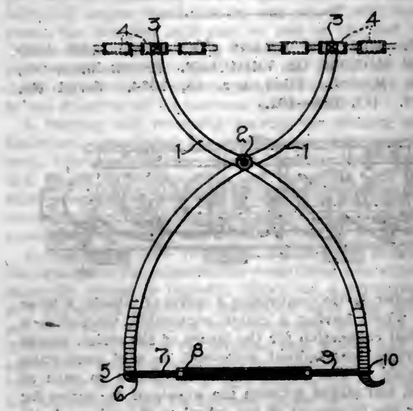


1. The herein described portable clothes rack for sleeping-car berths, the same comprising a shelf consisting of a rectangular frame having cross rods through it, a hook rising from its innermost cross rod, means for attaching this end of the shelf to the partition between berths, and a skeleton holder of smaller dimension than said shelf and having an eye at its inner end adapted to detachably engage said hook, for the purpose set forth.

2. In a clothes rack of the class described, the combination with a U-shaped bracket having a tongue depending from its upper end, and a socket adapted to be secured to the partition between berths; of a block pivotally mounted within said bracket, means for holding the block horizontal or permitting it to hang in a pendent position, a rectangular wire shelf carried by the outer end of said block and having an upstanding hook, and a skeleton framework overlying said shelf and having an eye detachably engaging said hook.

3. In a clothes rack of the character described, the combination of an upright, a socket thereon, a bracket having means coöperating with said socket, said bracket including spaced apart side pieces, the latter having therein longitudinally extending registering slots and provided with an indenture in their upper edge contiguous to one corner thereof, a curved depending extension formed on the lower outer corners of said side pieces, a rack, the latter having cross-bars through it, a block secured to one end of said rack, pintles projecting from two faces of said block, and intended to engage the slots in said side pieces, a cross-bar, spaced from the upper surface of said block and adapted to coöperate with said indentures and with said curved extension, substantially as and for the purpose set forth.

1,111,200. PLIERS. WALTER WARRINER, Fort Wayne, Ind. Filed Nov. 26, 1913. Serial No. 803,269. (Cl. 81—45.)



A tool of the character described comprising intersecting arms pivotally united at their points of intersection, adjacent extremities of such arms being provided with elongated laterally directed pointed extensions, such extensions occupying planes substantially parallel with the plane of the pivot between the arms, the remaining portions of such arms to the point of pivotal engagement being free and unobstructed and adapted to be manually operated, and means coacting with the opposite extremities of the arms for imparting relative movement thereto about their pivot.

1,111,201. PROCESS OF EXTRACTING ZINC FROM ITS ORES OR COMPOUNDS. ERNEST ESTRAM WATTS, Kingston, Ontario, Canada. Filed Nov. 20, 1913. Serial No. 802,128. (Cl. 204—15.)

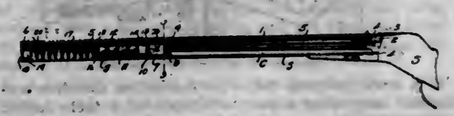
1. A process of extracting zinc which comprises mixing a material containing a high percentage of zinc in a non-elemental condition with a solution of zinc sulfate relatively free from dissolved iron compounds, in proportions to form a thin paste, charging said paste into the anode compartment of an electrolytic cell containing an electrolyte consisting of a highly concentrated solution of zinc sulfate, said solution being relatively free from iron compounds, and then passing a suitable electric current through said cell, whereby the zinc is deposited at the cathodes.

2. A process of extracting zinc electrolytically which comprises first mixing a product high in zinc existing in a non-elemental condition with a sufficient quantity of a solution of a zinc salt to form a paste, said solution being substantially free from iron, charging said paste into the anode compartment of an electrolytic cell containing an electrolyte consisting of a substantially non-ferruginous solution of a zinc salt, passing an electric current through said cell, and thereby depositing metallic zinc at the cathode, the material surrounding the anode being kept separate from the liquid surrounding the cathode.

3. A process of extracting zinc electrolytically which comprises mixing impure zinc oxid substantially free from elemental zinc with a sufficient amount of a solution of zinc sulfate to form a paste, said solution of zinc sulfate being relatively free from dissolved iron compounds, introducing said paste into the anode compartment of an electrolytic cell, containing an electrolyte comprising a solution of zinc sulfate, passing a current of electricity through said cell, thereby depositing metallic zinc at the cathode.

4. A process of separating metallic zinc, which comprises mixing a material containing zinc in a non-elemental condition with a sufficient amount of a solution of zinc sulfate to form thin paste, introducing said paste into the anode compartments of an electrolytic cell containing an electrolyte consisting of a solution of zinc sulfate, containing about 12% of zinc, said electrolyte also containing an organic material capable of rendering the zinc deposit dense and compact, and passing a suitable electric current through said cell, whereby zinc is deposited, at the cathodes.

1,111,202. SILENCER CONSTRUCTION FOR FIRE-ARMS. WALTER E. WESTFALL, Maryville, Mo. Filed May 7, 1914. Serial No. 836,989. (Cl. 89—31.)



1. A gun silencer construction, including in combination with a gun barrel, a tubular silencer casing telescoping with said gun barrel and spaced therefrom to form an annular chamber, and yielding check means arranged in said casing in front of the muzzle of the gun and adapted to deflect exhausting gases into the said annular chamber.

2. A gun silencer construction, including in combination with a gun barrel, a silencer casing entirely surrounding said barrel and spaced therefrom to provide a chamber extending from the breech end to the muzzle, and a check valve unit yieldingly held between the muzzle of the gun and the mouth of the silencer casing and having at one side thereof an initial gas receiving chamber in communication with the chamber formed around the body of the gun barrel.

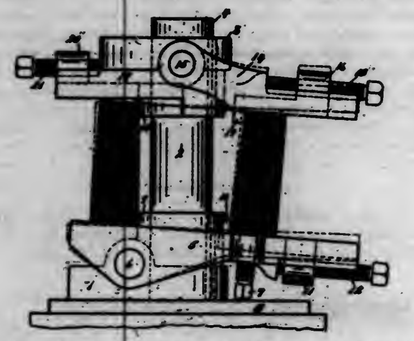
3. A gun silencer construction including in combination with a gun barrel, a silencer casing interiorly threaded at each end, a chambered end plug having a central opening screwed into one end of said casing, while the opposite end receives said gun barrel, means for centering and supporting the muzzle end of the gun barrel within the casing, a check valve slidably arranged between the muzzle of the gun barrel and said end plug, and spring means for maintaining the check valve in its normal position.

4. A gun silencer construction including in combination with a gun barrel, a silencer casing interiorly threaded at each end, a chambered end plug having a central opening screwed into one end of said casing, while the opposite end receives said gun barrel, means for centering and supporting the muzzle end of the gun barrel within the casing, a check valve provided with a plurality of interior baffle members and a central longitudinal passage, said check valve slidably arranged between the muzzle of said gun barrel and the end plug, and spring means interposed between said valve and end plug to maintain the former in its normal position.

5. A gun silencer construction including a gun barrel having a threaded enlargement at its breech end, a silencer casing interiorly threaded at each end and having one end threaded to the threaded enlargement of the gun barrel, a chambered plug having openings secured within the other threaded end of the silencer casing, means within said casing for centering and supporting the muzzle of the gun barrel to hold the latter in spaced relation to the casing to provide a chamber, check means also having a central opening interposed between the muzzle of the gun barrel and the end plug and adapted to deflect exhausting gases into the chamber around the gun barrel, and spring means for maintaining the check valve in position.

[Claims 6 and 7 not printed in the Gazette.]

1,111,203. CLAMPING DEVICE FOR KEY-SEATING MACHINES. WILLIAM JOSEPH WINSTON, Saginaw, Mich., assignor to Mitts & Merrill, Saginaw, Mich., a Corporation. Filed Apr. 25, 1914. Serial No. 834,382. (Cl. 90—59.)



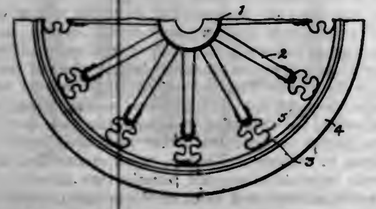
1. A work clamping device for keyseating machines and the like, comprising a post, a tiltable work table having an adjustable clamping lug thereon, an adjustable collar slidably mounted on the post of said machine, a bracket pivoted to said collar, a clamping member movably mounted on said bracket, and means for moving said clamping member along said bracket, for the purposes set forth.

2. In a work-holder for keyseating machines and the like, the combination with a post, a tiltable table and clamping devices carried thereon, of an adjustable collar carried by the post of said machine, a bracket hinged to said collar, a clamping member adjustably mounted on said bracket, means for adjusting said clamping member, an oppositely located bearing member carried by said collar and having means whereby said bearing member may be variously positioned with relation to said post.

3. A work clamping device for keyseating machines and the like, comprising a post, a work table, and means for clamping work thereon, an adjustable collar slidably mounted on the post of said machine, a bracket pivoted to said collar, a clamping member movably mounted on said bracket, and means for moving said clamping member along said bracket.

4. In a work holder for keyseating machines and the like, the combination with a collar, a post, a tiltable table secured thereto and clamping devices carried on said table, of an adjustable collar carried by the post of said machine, a bracket hinged to said collar, a clamping member adjustably mounted on said bracket, means for adjusting said clamping member, an oppositely located bearing member carried by one of said collars and having means whereby said bearing member may be variously positioned with relation to said post.

1,111,204. SPRING-WHEEL. AMANDUS WALFRID YOUNGKVIST, Duluth, Minn., assignor to Easy Auto Wheel Company, Duluth, Minn. Filed Nov. 6, 1913. Serial No. 799,510. (Cl. 152—49.)



A spring wheel comprising a hub and spokes, a felly spaced from the ends of the spokes and springs between the ends of the spokes and the felly, the said springs composed of curvilinear spring metal having the center of their sides drawn inwardly and connected forming two equal coöperating resilient portions carried by the spokes and the felly respectively.

1,111,205. DRIVING MEANS FOR HAND-CARS AND OTHER MOTORS OR VEHICLES. RUBEN ZERTUCHE, Saltillo, Mexico. Filed Apr. 15, 1914. Serial No. 832,061. (Cl. 105—102.)

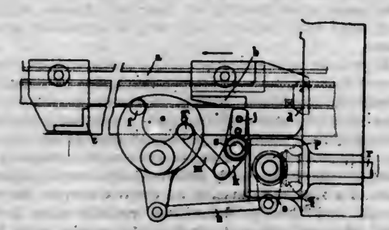
1. A motor device comprising a series of wheels, a lever for each wheel having a clutch connection therewith, a longitudinal connection for the levers of the series, means for imparting longitudinal movement to said connecting means so as to give movement in succession to each of the levers, and means between the wheels of the series for imparting the movement of one wheel to the other wheels of the series, substantially as described.

2. A motor device comprising a series of wheels, a truck or the like supported therefrom, a lever for each wheel having a clutch connection therewith, a single instrumentality connecting the levers, each lever being located on its respective wheel a step removed from that of its neighbor whereby each lever comes into position in succession for operation, and means for oscillating the instrumentality connecting the levers, substantially as described.

3. In a motor device, a series of wheels, a lever for each wheel having a clutch connection, each lever being located differently upon its respective wheel so that as a whole a cycle of movement is made, a bar connecting the levers, means for oscillating the bar comprising a longitudinally movable frame, and links connecting the frame and the bar.

4. A motor device comprising a series of wheels each having a lever with a clutch connection therewith, a platform supported by said wheels, a longitudinally moving frame, rollers supporting the frame, a longitudinally extending bar connecting the wheel levers, links between the frame and bar, springs between the bar and levers, and chain connections between the levers and bar with driving connections between the axles of the several wheels, substantially as described.

1,111,206. DRIVING AND REVERSING GEARING. RICHARD WILKINSON BATEMAN, Leeds, and LOFTUS HANSON BATEMAN, Longsight, Manchester, England. Filed Dec. 30, 1912. Serial No. 739,310. (Cl. 74—59.)



1. A driving and reversing gearing for planing and like machines comprising, in combination, a reversible part, frictional means for bringing said part to rest at the end of each traverse and for reversing its direction of motion, and positive means automatically brought into operation after reversal is completed for driving said part at least in one direction, as set forth.

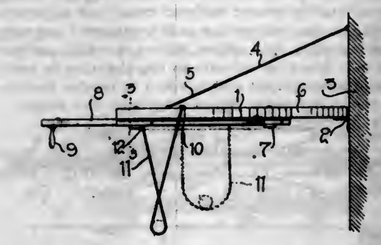
2. Driving and reversing gearing for planing and like machines, comprising, in combination, a reversible part, two sets of operating means upon said reversible part, frictional means controlled by one set of said operating means for bringing said part to rest at the end of each traverse and for reversing its direction of motion, and positive means controlled from the other set of said operating means for driving said reversible part at least in one direction of its traverse, as set forth.

3. Driving and reversing gearing for planing and like machines, comprising, the combination with a reversible part, frictional driving means, positive driving means, and means for controlling said frictional and positive driving means, of two sets of operating means upon the reversible part for giving a main and then a supplementary movement to the said controlling means, as set forth.

4. In driving and reversing gearing for planing and like machines, the combination comprising two wheels continuously driven in opposite directions, a reversible part, two pulleys in operative connection with said reversible part and each operating in conjunction with one of said flywheels, and means for bringing said wheels and pulleys alternately into frictional driving connection with one another, and one at least of said pulleys into positive driving connection with its flywheel, as set forth.

5. In driving and reversing gearing for planing and like machines, in combination, two wheels continuously driven in opposite directions, a reversible part, pulleys concentric with said wheels and in operative connection with said reversible part, bands carried by said wheels and encircling said pulleys, means for actuating said bands, means for establishing a positive driving connection between one at least of said wheels and pulleys, and operating means upon the reversible part for bringing first one of said bands and then the positive driving means into action, as set forth.

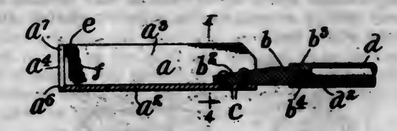
1,111,207. SEED-CORN STRINGER. BERNARD E. BIGGER, Fonda, Iowa. Filed Jan. 31, 1914. Serial No. 815,716. (Cl. 139—32.)



1. A device of the class described including a horizontally mounted supporting board, means whereby to normally retain said board in a horizontal position, staples secured to the upper face thereof and arranged in spaced relation, spaced guide members secured to the under face of the board, an actuating bar movably mounted between said guide members, a handle carried by the bar to actuate the same, spaced lugs carried by said bar, and a string having one end secured to the hook upon one side of the bar and its other end extending upwardly over the supporting bar, and through the spaced staples, thence downwardly and secured to the hook upon the opposite side of the bar, from the first hook, as and for the purpose set forth.

2. A device of the class described including a horizontally mounted supporting board, a bracing rod whereby to normally support said board in a horizontal position, a movable bar arranged beneath said board, spaced hooks secured to the under face of said bar, a cord having one of its ends secured to one of the hooks and its other end passing upwardly over the supporting board, thence downwardly and secured to the hook upon the opposite side of the bar, whereby to provide loops suspended beneath the supporting board and the movable bar, and means whereby to actuate said bar, as and for the purpose set forth.

1,111,208. TOOL FOR DETACHING OBSTRUCTIONS FROM ELECTRIC-WIRE CONDUITS. MAURICE BLUMENTHAL, Brooklyn, N. Y. Filed Jan. 14, 1914. Serial No. 811,988. (Cl. 83—64.)

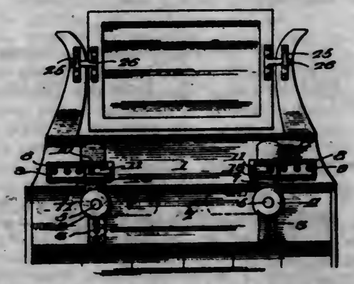


1. A conduit cleaning tool of the class described comprising a body portion having a jar-rod coupling at one end and the opposite end of which is provided with a cutting edge, and with a catch device adapted to engage the coupling of a similar tool lost in a conduit.

2. A conduit cleaning tool of the class described, comprising an oblong box-shaped body portion open at one end and provided with a cutting edge, the opposite end being provided with a jar rod coupling, and the open end being also provided with a catch device adapted to engage the coupling of a similar tool lost in a conduit.

3. A conduit cleaning tool of the class described, comprising an oblong body portion rectangular in cross section and box-shaped in form and open at one end and provided with a cutting edge, the opposite end of the tool being provided with a jar rod coupling head, the open end being also provided with a pivoted catch device adapted to engage the coupling head of a similar tool lost in a conduit.

1,111,209. FURNITURE-FASTENING. WILLIAM W. BOYLE and FRANK MILLER, St. James, Mich. Filed June 26, 1913. Serial No. 775,961. (Cl. 45—88.)

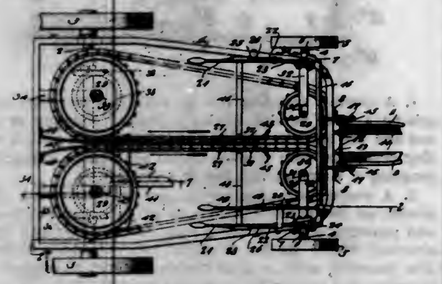


The combination of superposed furniture parts, a fastener member pivotally connected with the back of one part and constructed and arranged to swing vertically in a plane parallel to said back and behind the back of the other part, a fastener member fixed in horizontal position to the back of such other part and having its inner portion offset from said back to afford a space for the reception of the first-named member when swung vertically, and a spring strip carried at the outer side of the offset portion of the second-named member and having a beveled head disposed beyond the inner end of said offset portion; said head being arranged to permit of movement of the first-named member past it and to confine said fastener member in the space between the offset portion of the second-named fastener member and the part to which said member is fixed.

1,111,210. BEET PULLING AND TOPPING MACHINE. WALTER BRANDIS, San Diego, Cal. Filed Dec. 9, 1912. Serial No. 735,778. (Cl. 55—108.)

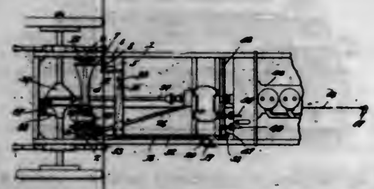
1. In a beet pulling and topping machine, a wheeled supporting frame, beet lifting plows connected therewith, beet pulling and conveying chains comprising links each of which consists of pairs of parallel plates offset inwardly at one end to fit between the ends of the plates of the next adjacent link, said ends having alined apertures, rivets connecting the apertures, resilient beet top gripping blocks

secured between the plates of said links and projecting therefrom whereby the inner faces of said blocks are adapted to coact on the inner stretches of the chains to grip the tops of the beets, a rotary knife in said frame, and means to adjust and hold the beets in such position that the tops will be severed by the knife immediately above the roots of the beets.



2. In a beet pulling machine, the combination with the wheeled frame, the digging mechanism, and two pairs of gears mounted on the frame; of two endless chains whereof each embraces one pair of gears, the latter being so disposed that the inner stretches of the chains lie parallel close to each other and incline upward and rearward, each chain comprising links consisting of spaced plates riveted in pairs to the plates of the adjacent link, and rubber gripping blocks whose bodies lie outside the line of said plate and on the outer side of the chain so that their working faces on the inner stretches of said chain come nearly into contact with each other, the outer portions of said bodies being of reduced length and secured between the plates of the links respectively.

1,111,211. AUTOMOBILE-PULLER. EARTHEN H. CAMFIELD and CHRISTIAN O. NIELSEN, Colorado Springs, Colo. Filed May 29, 1913. Serial No. 770,735. (Cl. 21—90.)



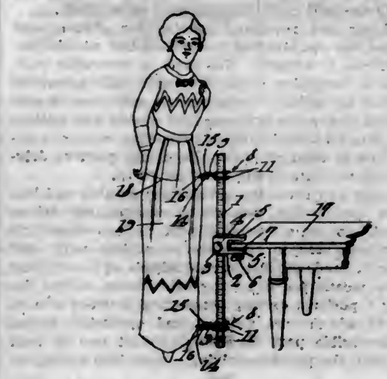
1. In a device of the class described, a frame; a drum movably mounted thereon; a flexible element operatively connected with the drum; driving means operatively connected with the drum; an engine; a clutch operatively connecting the engine with the driving means; a brake controlling the drum; and a single means for actuating the clutch and the brake.

2. In a device of the class described, a frame; a drum movably mounted thereon; a flexible element operatively connected with the drum; driving means; mechanism for producing relative movement between the drum and the driving means to connect and disconnect the drum and the driving means; an engine; a clutch operatively connecting the engine with the driving means; a brake controlling the drum; and a single means for actuating the clutch and the brake.

3. In a device of the class described, a frame; a drum journaled thereon; a flexible element connected operatively with the drum; an engine shaft; an engine connected with the engine shaft; a second shaft operatively connected with the drum; gear wheels upon the shafts; a pinion movable into and out of mesh with the gear wheels; a brake controlling the drum; and a single mechanism controlling both the brake and the pinion.

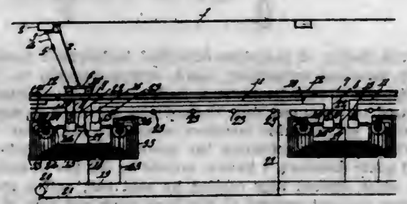
4. In a device of the class described, a frame; a drive shaft journaled thereon; a drum supported for rotation by the frame; a brake controlling the drum; a second shaft journaled on the frame; means for operatively connecting the second shaft with the drum; gear wheels on the shafts; a pinion supported for sliding movement into and out of engagement with the gear wheels; a third shaft supported on the frame; means under the control of the operator for actuating the third shaft; arms projecting from the third shaft; means for operatively connecting one arm with the brake; and means for operatively connecting the other arm with the pinion.

1,111,212. ADJUSTABLE MARKER. ELLA CARDELL, Cincinnati, Ohio. Filed Aug. 19, 1913. Serial No. 785,573. (Cl. 33—9.)



A marking device including an upright measuring stick, a clamp embracing the measuring stick and having means to frictionally engage the same, the clamp having a pair of horizontal vertically-spaced arms projecting to one side to straddle the edge of a table or other support, clamping means carried by one of the said arms, and adjustable slides having means embracing and frictionally engaging the measuring stick, the slides having holding portions projecting in a direction opposite to the direction in which the aforesaid arms project and adapted to receive marking elements, the clamp being disposed between the slides.

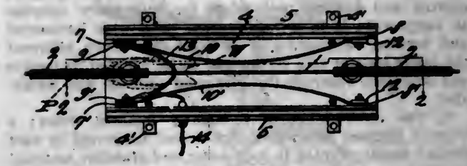
1,111,213. ELECTRIC SIGNAL SYSTEM. ALVA HAYS CAVEN, Youngwood, Pa. Filed Aug. 20, 1912. Serial No. 716,083. (Cl. 246—36.)



1. In an electric signal system for electric railways, an over-head trolley, the traffic rails being the return for the traffic current, one of the traffic rails being divided into blocks with a short rail section intervening at the end of each block, an electromagnet at each end of a block, a conductor connecting the electromagnet at the beginning of said block to the traffic rail, a second conductor connecting both electromagnets, a third conductor connecting the remaining electromagnet to the short rail section at the end of the block, similar electro-magnets and connections in the adjacent block in the rear, a normally open signal circuit in the first named block, while the other rails and a source of electrical energy, a switch controlled by the electromagnet in said rear block adjacent the short rail section between said adjacent blocks for closing the signal circuit paralleling the traffic rails and including signal electromagnet in said rear block opens the circuit therein, means carried by a traveling car constituting a bridging means between the trolley and the short rail section to energize the two electromagnets, a circuit closing means actuated by one electromagnet adjacent said last named short rail section for continuing the energization of the signal circuit as a number of cars in succession enter the block, and a circuit opening means actuated by the other electromagnet adjacent to said last named short rail section to successively open the circuit as the cars leave the block, the last car leaving causing the complete deënergization of the signal circuit.

2. In an electric signal system for electric railways, an over-head trolley, the traffic rails being the return for the traffic current, one of the traffic rails being divided into blocks with a short rail section intervening at the end of each block, an electromagnet at each end of a block, a conductor connecting the electromagnet at the beginning of said block to the traffic rail, a second conductor connecting both electromagnets, a third conductor connecting the remaining electromagnet to the short rail section at the end of the block, similar electro-magnets and connections in the adjacent block in the rear, a normally open signal circuit paralleling the traffic rails and including signals and a source of electrical energy, a switch controlled by the electromagnet in said rear block adjacent the short rail section between said adjacent blocks for closing the signal circuit in the first named block, while the other electromagnet in said rear block opens the circuit therein, means carried by a traveling car constituting a bridging means between the trolley and the short rail section to energize the two electromagnets, a rotary circuit closing means actuated by one electromagnet adjacent said last named short rail section for continuing the energization of the signal as a number of cars in succession enter the block, and a rotary circuit opening means actuated by the other electromagnet adjacent said last named short rail section to successively open the circuit as the cars leave the block, the last car leaving causing the complete deënergization of the signal circuit.

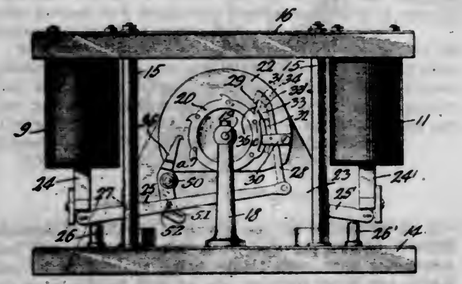
1,111,214. TROLLEY-SWITCH. ALVA HAYS CAVEN, Youngwood, Pa. Filed Nov. 15, 1913. Serial No. 801,184. (Cl. 246—55.)



A device of this character, including a hood, a trolley wire support mounted therein, a trolley wire mounted in the support and incased by the hood, two blocks of insulating material attached to the inner face adjacent the ends of one wall of the hood, a resilient plate having one end connected to one block of insulating material with its body disposed at one side of the trolley wire, the intermediate portion of the plate being curved inwardly to engage one side of the trolley wheel when the wheel is passing through the hood and is in contact with the trolley wire, and a metal plate attached to the remaining block of insulating material and coöperating therewith to form a guide for the free end of the plate.

1,111,215. ELECTROMAGNETIC SWITCH. ALVA HAYS CAVEN, Youngwood, Pa. Filed Dec. 17, 1913. Serial No. 807,296. (Cl. 175—281.)

1. In a circuit controlling device, a base, a solenoid mounted thereupon, a shaft, a ratchet wheel fixed to said shaft, a plate mounted upon the base and disposed about the shaft, a lever operably connected to the core of the solenoid and adapted to be returned to normal position by gravity, a pawl connected to said lever for actuating the ratchet wheel, coöperable means carried by the pawl and plate for guiding the pawl into and out of engagement with the teeth of the ratchet wheel during the energization and deënergization of the solenoid, a switch connected to and carried by the shaft, said coöperable means operating the pawl including a pivoted member mounted within the plate and provided with a lug, and a pin carried by the pawl and disposed to be engaged by and to engage said pivoted member to change the path of movement of the pin and pawl during the oscillation of the pawl by the lever.



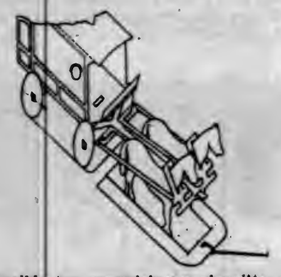
2. In a circuit controlling device for electric railways, a base, two oppositely disposed solenoids mounted thereupon, a shaft mounted for oscillation between the solenoids, two ratchet wheels keyed to said shaft, a plate mounted upon the base and disposed about the shaft, and between the ratchet wheels, two levers, one operably connected to the core of each solenoid and adapted to be returned to normal position by gravity, two pawls, one connected to each lever for actuating its respective ratchet wheel, coöperable means carried by each pawl and the plate for guiding the pawl into and out of engagement with the teeth of its respective ratchet wheel during the energization and deënergization of its respective solenoid, a circuit controlling device connected to and carried by the shaft, said coöperable means for operating the respective pawls, including a pivoted member mounted in the plate and provided with a lug, and a pin carried by each pawl and disposed to be engaged by and to engage said pivoted member to change the path of movement of the pin and pawl during the oscillation of the pawl by the lever.

3. In a circuit controlling device for electric railway signals, a base, two oppositely disposed solenoids mounted thereupon, the cores of said solenoids when the solenoids are deënergized falling by gravity, a shaft mounted for oscillation between the solenoids, a circuit controller carried by the shaft, two toothed ratchets connected to and carried by the shaft, said ratchets being disposed in spaced relation to each other, two levers, one connected to each core of the solenoids and disposed for reciprocatory movement, two pawls, one to each lever for engagement with its respective toothed ratchet, one pawl being disposed to move the shaft in an opposite direction to the other pawl, a plate disposed between both ratchet wheels, coöperable means carried by the pawls and the plate for guiding the pawl into engagement with the ratchet wheel of its respective solenoid is energized and for guiding the same out of engagement with the wheel when the core of its respective solenoid is released to gravity, said coöperable means including a pin carried by the pawl, said plate being provided with a slot for receiving the pin, and a pivoted member mounted in the plate and having an abutment for coaction with the wall of the slot of the plate and with the pin of the pawl to guide the pawl through the pin into and out of engagement with the ratchet wheel.

1,111,216. COLLAPSIBLE CUT-OUT TOY. CLIFFORD C. CHURCH, Grand Rapids, Mich. Filed Oct. 28, 1913. Serial No. 797,862. (Cl. 46—40.)

1. A collapsible toy comprising a plurality of separate scored and printed blanks, provided with interlocking

members and adapted to be folded and fitted together, one of said blanks comprising a vehicle body, another comprising a vehicle running gear and a supporting base therefor, another comprising the wagon tongue and bolsters, another comprising the draft animals and a supporting base therefor, and still another comprising a neck yoke and portions of the harness, substantially as described.



2. A collapsible toy comprising a plurality of separate printed blanks provided with tab members, and corresponding slits, said blanks being adapted to be cut, folded and fitted together, one of said blanks being cut and scored to form the vehicle wheels and a supporting base integral therewith, another cut and scored to form the wagon tongue, wheel axles and bolsters, and adapted to be detachably connected with the first mentioned blank, a third cut and scored to form the vehicle body and adapted to be detachably secured on said second-mentioned blank, a fourth blank cut and scored to form the draft animals with a supporting base integral therewith, a fifth blank cut and scored to form the neck yoke and harness for the animals, the last mentioned blank being adapted to detachably couple said horses and wagon tongue blanks together by an interlocking of their parts, substantially as described.

3. A collapsible toy comprising a plurality of separate printed blanks provided with tab members and corresponding slits, said blanks adapted to be cut out and fitted together, one or more of said blanks cut to form the wheels, or runners, another cut and scored to form the wagon or sleigh tongue, bolsters and step, and adapted to be detachably connected with the first mentioned blank or blanks, another cut and scored to form the vehicle body and adapted to be detachably secured on said second mentioned blank, a fourth blank cut and scored to form two like figures with a supporting base integral therewith, a fifth blank cut and scored to form a neck yoke, the last mentioned blank being adapted to detachably couple said figures and vehicle tongue together and in an upright position by interlocking of their parts, substantially as described.

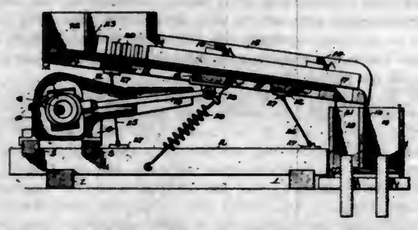
4. A collapsible toy comprising a plurality of separate blanks, provided with tabs and corresponding slits adapted to be cut, folded and fitted together, one of said blanks to form a vehicle body, another comprising two like figures and a supporting base integral therewith, another comprising a harness, and still another comprising an axle, vehicle tongue, bolsters, and fenders or steps, the last mentioned blank adapted to be interlocking with the above mentioned blanks, also forming a support for attaching wheels or runners made from thin material and substantially as described.

5. A toy of the character described, comprising a base blank having the figures of draft animals projecting from opposite sides thereof and foldable to vertical parallel position, and, a cut-out harness engaging such animals for holding them in parallel relation.

[Claims 6 to 9 not printed in the Gazette.]

1,111,217. SCREEN. DAVID COLE, Tucson, Ariz. Filed Feb. 17, 1913. Serial No. 748,892. (Cl. 83—56.)

1. The combination of a slighly inclined screen; means adapted to feed water and granular material to the upper end of said screen; a sluice adapted to cause said water to flow along said screen and maintain the same substantially submerged; means adapted to effect a pulsing flow of said water back and forth through said screen in its flow along the same; and means located adjacent the lower end of said screen adapted to receive and maintain separate the undersize and oversize.



2. The combination of a slightly inclined screen; means adapted to feed water and granular material to the upper end of said screen; a sluice adapted to cause said water to flow along said screen and maintain the same substantially submerged; means operative with greatest intensity adjacent the lower end of said screen adapted to effect a pulsing flow of said water back and forth through said screen in its flow along the same; and means located adjacent the lower end of said screen adapted to receive and maintain separate the undersize and oversize.

3. The combination of a slightly inclined sluice; a slightly inclined screen in said sluice; means adapted to feed water and granular material to the upper end of said screen; obstructing means in said sluice adapted to retard the gravity flow of water therein and maintain said screen substantially submerged; driving and guiding mechanism for said sluice adapted to reciprocate it in a longitudinal path; and means adjacent the lower ends of said screen and sluice adapted to receive and maintain separate the separated undersize and oversize.

4. The combination of a slightly inclined sluice; a slightly inclined screen mounted in and supported by said sluice; means adapted to feed water and granular material to the upper end of said screen; riffles in said sluice beneath said screen adapted to retard the flow of said water and maintain said screen substantially submerged; driving and guiding mechanism for said sluice adapted to reciprocate it in a longitudinal path with horizontal and vertical components of motion; and means adjacent the lower ends of said screen and sluice adapted to receive and maintain separate the separated oversize and undersize.

5. The combination of a slightly inclined sluice; a slightly inclined screen mounted in and supported by said sluice; means adapted to feed water and granular material to the upper end of said screen; riffles in said sluice beneath the said screen adapted to retard the flow of said water and maintain said screen substantially submerged; guiding mechanisms one for each end of said sluice each adapted to constrain the corresponding end to reciprocative motion having horizontal and vertical components, the guiding mechanism for the low or discharge end imparting the greater vertical component; driving mechanism adapted to reciprocate said sluice; and means adjacent the lower ends of said screen and sluice adapted to receive the separated undersize and oversize.

[Claims 6 to 8 not printed in the Gazette.]

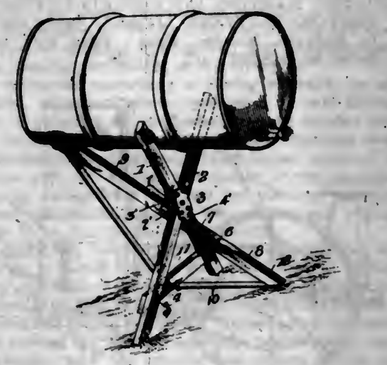
1,111,218. HORSE-COLLAR AND SWEAT-PAD. WILLIAM F. COSTELLO, San Antonio, Tex. Filed Apr. 20, 1914. Serial No. 833,304. (Cl. 54—19.)

1. An article of the class described, comprising a collar with a body portion and rim, a sweat pad extending over the outer surface of the body portion, a reinforcing strip embracing the rim and disposed beneath the extremity of the sweat pad, stuffing material interposed between the sweat pad and collar and stitching extending through the sweat pad, reinforcing band, and rim, and holding the same in fixed relation.

2. The combination with a horse collar including a body portion and outstanding rim, of a sweat pad secured thereto and extending over the outer surface thereof, and a reinforcing band encompassing the rim and extending beyond the line of demarcation thereof, said reinforcing band terminating beneath said sweat pad and beyond said rim and stitched to the former, the opposite extremity of said sweat pad projecting around the outlying extremity of the body portion and stitched thereto.

3. An article of the class described, comprising a substantially ovate-acuminate body portion, a rim at one extremity thereof, an outstanding projection at the other extremity formed by the sewing together of the extremities of the material of which the body portion is formed, a sweat pad extending over the outer surface of the said body portion, one extremity of the sweat pad projecting beyond the line of demarcation of the rim and the opposite extremity extending over the said body portion extension and stitched or sewed thereto, and a reinforcing band embracing the rim and projecting beneath the sweat pad, and stitching extending through the sweat pad, reinforcing band, and the rim, and holding the same in fixed relation.

1,111,219. BARREL-JACK. ALEXANDER R. DAUGHERTY, Kittanning, Pa. Filed Jan. 7, 1914. Serial No. 810,699. (Cl. 248—6.)



1. A barrel jack comprising a member adapted to embrace a barrel, a rearwardly and upwardly extending arm carried by the member and adapted to support the rear end of the barrel, and a forwardly and downwardly extending foot carried by the member and adapted to engage the ground for supporting the said member in a slightly forwardly inclined position.

2. A barrel jack comprising a member adapted to embrace a barrel, a rearwardly extending arm carried by the said member, and adapted to support the rear end of the barrel, and a forwardly and downwardly extending foot carried by the member and of a length less than that of the arm and adapted to engage the ground and adapted to support the member in a slightly forwardly inclined position whereby the barrel is tilted forwardly, substantially as shown and described.

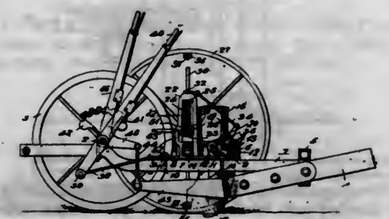
3. A barrel jack comprising a member, adapted to embrace a barrel, an arm extending rearwardly and upwardly from said member and adapted to engage the rear end of a barrel, and a forwardly and downwardly inclined foot carried by the member and of a length less than that of the arm and adapted to engage the ground for supporting said member in a slightly forwardly inclined position.

4. A barrel jack comprising two cross-arms bolted together adjacent their upper ends and between which the barrel is adapted to rest, a brace connected to the lower end of the arms and holding them in their spaced relation, an arm extending transverse the cross-arms and having its longer portion in rear thereof and adapted to support the rear end of the barrel and its forward end engaging the ground and supporting the cross-arms in a slightly forwardly inclined position.

5. A barrel jack comprising a member adapted to embrace a barrel, an arm extending transverse the said member and having its longer portion in rear of said member and adapted to support the end of the barrel and its forward portion engaging the ground and supporting said barrel in a slightly forwardly inclined position.

[Claims 6 to 10 not printed in the Gazette.]

1,111,220. CORN-PLANTER. ALBERT J. FELSMAN, Macomb, Ill. Filed Jan. 22, 1914. Serial No. 813,749. (Cl. 111—6.)



1. A corn planter comprising a main supporting axle, supporting wheels thereon, a pair of seed hoppers, seed shoes for said hoppers and an indicator mounted upon said main frame to move toward and away from said axle in planes strictly at right angles thereto, and manually operated means for moving said hoppers, shoes and indicator as a single unit.

2. A corn planter comprising a main supporting axle, supporting wheels thereon, a pair of seed hoppers, seed shoes therefor, and a combined earth marking and indicating element mounted on said frame to move toward and away from said axle in planes strictly at right angles thereto, and manually operated means for moving the hoppers, the shoes and the combined marking and indicating element as a single unit.

3. A corn planter comprising a supporting axle, supporting wheels thereon, a main frame supported by said axle, a supplemental frame mounted on said main frame to move toward or away from said axle and in a plane strictly parallel therewith, seed hoppers, seed shoes, and an indicator on said supplemental frame, and manually operated means for moving the hoppers, the shoes and the indicator toward and away from said axle as a single unit.

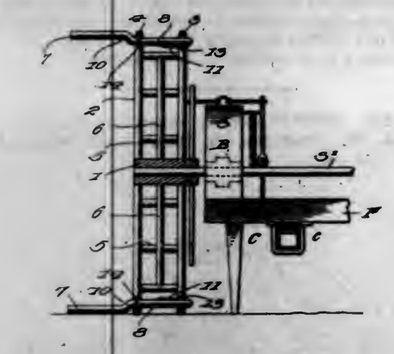
4. A corn planter comprising a supporting axle, supporting wheels thereon, a main frame on said axle, a supplemental frame movably mounted on said main frame toward or away from said axle and in a plane parallel therewith, said supplemental frame carrying a seed hopper, a shoe and a bearing, a shaft in said bearing, a marking wheel on said shaft, a tappet on said marking wheel, a lever pivoted on said frame and projecting into the path of said tappet, connections between said seed hopper and said lever for intermittently dropping seed and means for locking said supplemental frame in its adjusted positions.

5. A corn planter comprising a supporting axle, supporting wheels thereon, a main frame on said axle, a supplemental frame movably mounted on said main frame toward or away from said axle, said supplemental frame

carrying a seed hopper, a seed shoe and an upright guide, a bearing slidable within said guide, a lateral shaft mounted in said bearing, a marking wheel on said shaft, a tappet on said marking wheel, a lever pivotally mounted on said frame, connections between said lever and said seed hopper for intermittently dropping seed, means for locking said supplemental frame in its adjusted positions, and means for yieldingly holding said marking wheel in contact with the ground.

[Claim 6 not printed in the Gazette.]

1,111,221. LAND-MARKER. ALBERT J. FELSMAN, Macomb, Ill. Filed May 18, 1914. Serial No. 839,340. (Cl. 111—24.)



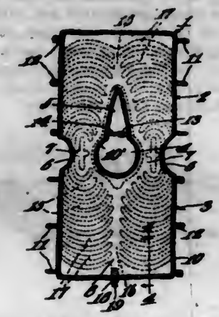
1. The combination with a rotatably mounted wheel, of a marking arm having a portion contacting with the inner surface of its tire and lying transversely thereof, said portion having a radially located opening, a flat spring in contact with the inner side of said portion of the arm and having an opening registering with the opening therein, a fastening element passing through said alined openings and into one edge portion of the tire, and a radial guide on the opposite edge portion of said tire and adapted to guide said arm.

2. The combination with a rotatably mounted wheel, of a marking arm having a portion contacting with the inner surface of its tire and lying transversely thereof, said portion having a radially located opening, a flat spring in contact with the inner side of said portion of the arm and having an opening registering with the opening therein, a fastening element passing through said alined openings and into one edge portion of the tire, and a pair of inwardly extending guide pins on the opposite edge portion of the tire and disposed on opposite sides of the arm.

3. The combination with a rotatably mounted wheel, of a marking arm having a portion contacting with the inner surface of its tire and lying transversely thereof, said portion having a radially located opening, a flat spring in contact with the inner side of said portion of the arm and having an opening registering with the opening therein, a fastening bolt passing through one edge portion of the tire and through the alined openings in the marking arm and the spring, a nut on said bolt and in contact with said spring and a radial guide on the opposite edge portion of the tire and adapted to guide said arm.

1,111,222. JACKET. ELI T. FORRESTER, Hot Springs, S. D. Filed Sept. 29, 1913. Serial No. 792,446. (Cl. 2—190.)

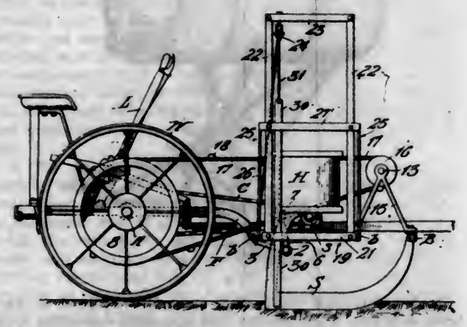
1. A protector including a two ply upright portion, the plies being secured together along transverse lines to provide a vertical passage and a vertical series of transverse pockets between the plies, the pockets leading from the said passage and having their mouths in communication therewith, the mouth portions of the pockets being declined from the said passage, and one of said plies being porous.



2. A protector including an upright portion having a single central vertical passage, and a vertical series of transverse arcuate pockets at each side of and leading from the said passage, the pockets having their mouths in communication with the said passage, and having their intermediate portions lowermost.

3. A jacket including a front and back having a wholly inclosed neck opening therebetween, the front and back of the jacket having a longitudinal passage extending from the lower end of the front to the lower end of the back, and around the said opening, and the front and back each having a vertical series of transverse pockets leading from the said passage, the mouths of the pockets being in communication with the said passage and the mouth portions of the pockets being declined therefrom.

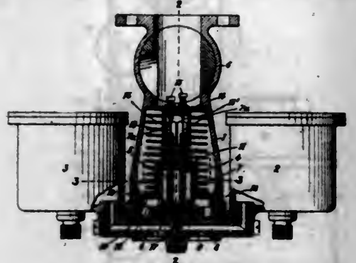
1,111,223. MARKING AND CHECKING ATTACHMENT FOR CORN-PLANTERS. JAMES D. GREEN and WALTER D. KONANTZ, Arcadia, Kans. Filed Feb. 12, 1914. Serial No. 818,298. (Cl. 111—24.)



1. The combination with a planter, of marking bars mounted for a vertically sliding movement on said planter, a rock shaft journaled on said planter, rigid arms near the ends of said rock shaft, a fork rigidly secured to said shaft intermediate said arms, a guide on said planter, a drive wheel on the shaft of said planter, a flexible element passing around said drive wheel and said guide, a plurality of tappets on said flexible element, sheaves revolubly mounted above said marking rods, and flexible connecting elements passing over said sheaves and having their opposite ends connected to said marking rods and the arms on said rock shaft, the fork on said shaft straddling said flexible element.

2. The combination with a planter having a transverse hopper frame, of a U-shaped extension bracket having its arms secured to one end of said hopper frame, standards secured to the inner side of and rising from the cross bar of said bracket, a bar connecting the upper ends of said standards, a U-shaped bracing frame having its cross bar secured to the outer sides of said standards at points intermediate their ends, the arms of said frame inclining downwardly and being secured to said hopper frame, bars secured to the inner sides of said standards and lying in the planes of the cross bars of said bracket and said frame, spaced guide blocks disposed between said bars and the cross bars of said bracket and said frame, a marking rod slidably mounted between said guide blocks, and means for raising said marking rod at intervals.

1,111,224. CARBURETER. BELTON TATTNALL HAMILTON, Finchley, England. Filed Mar. 17, 1913. Serial No. 754,877. (Cl. 48—154.1.)



1. A carbureter comprising a mixing chamber, an air inlet valve, a central tubular projection in said mixing chamber, a plurality of fuel inlets in said tubular projection, passages for different fuel communicating with said inlets, and means operated in accordance with the opening and closing of the air valve for opening and closing the fuel jet openings progressively and simultaneously with the opening and closing of the air valve.

2. A carbureter comprising a mixing chamber, an air inlet valve, a central tubular projection in said mixing chamber, a plurality of fuel inlets in said tubular projection, passages for different fuels communicating with said inlets, and relatively adjustable means operated in accordance with the opening and closing of the air valve for opening and closing the fuel jet openings progressively and simultaneously with the opening and closing of the air valve, for the purpose set forth.

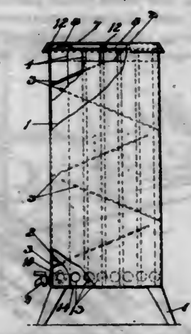
3. A carbureter comprising a mixing chamber, an air inlet valve, a central tubular projection in said mixing chamber, a plurality of fuel inlets in said tubular projection, passages for different fuel communicating with said inlets, and means carried by the air valve for opening and closing the fuel jet openings progressively and simultaneously with the opening and closing of the air valve.

4. A carbureter comprising a mixing chamber, an air inlet valve, a central tubular projection in said mixing chamber, a plurality of fuel inlets in said tubular projection, passages for different fuel communicating with said inlets, and relatively adjustable means carried by the air valve for opening and closing the fuel jet openings progressively and simultaneously with the opening and closing of the air valve.

5. A carbureter comprising a mixing chamber, an air inlet valve, a central tubular projection in said mixing chamber, a plurality of fuel inlets in said tubular projection, passages for different fuel communicating with said inlets, means operated in accordance with the opening and closing of the air valve for opening and closing the fuel jet openings progressively and simultaneously with the opening and closing of the air valve, and removable means for varying the area of the air inlet for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,111,225. RADIATOR. GEORGE H. HORLACHER, Portland, Oreg. Filed Jan. 12, 1914. Serial No. 811,510. (Cl. 219—34.)



The combination with a source of heat, of inner and outer shells adapted to contain a liquid, tubes extending from top to bottom through both shells, and baffling plates within the inner shell.

1,111,226. PEDAL ATTACHMENT FOR PIANOS. ALBERT KLAPPENBACH, San Antonio, Tex. Filed Dec. 16, 1913. Serial No. 807,087. (Cl. 84—24.)

1. An attachment for piano pedals comprising a plate substantially equal in width to the width of the pedal, said plate being bent intermediate of its ends to form a body portion and an upturned end, holding clips embracing the pedal therebetween, projecting therebelow, and contacting with the side edges of said plate, means extending between the clips and disposed intermediate the contacts of the clips with the pedal and with the plate, holding the plate in fixed and adjusted relation with respect to the pedal.

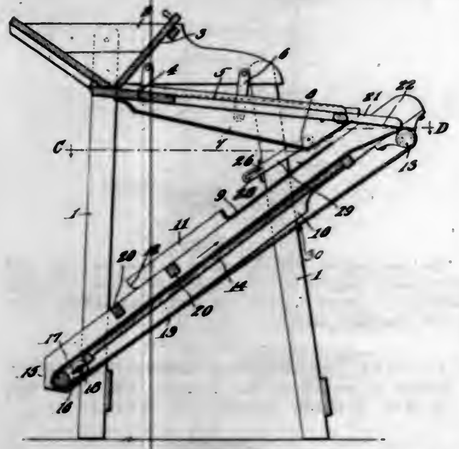
2. An attachment for piano pedals comprising a plate, said plate being bent intermediate its ends to form a shield and a body portion, L-shaped clips engaging the opposite side walls of the pedal, a bolt extending between said clips adapted to draw the same into rigid engagement with the side walls of the pedal, the inwardly extending portions of the clip projecting beneath and engaging the side edges and adjacent portions of the body portion of said shield and drawn into rigid engagement therewith by means of said bolt, said shield held rigidly in position thereby.

3. An attachment for piano pedals, comprising a plate, said plate being bent intermediate its ends to form a shield and a body portion, L-shaped clips engaging the opposite and curved side walls of the pedal, a bolt extending between said clips adapted to draw the same into rigid engagement with the side walls of the pedal, the inwardly extending portions of the clip projecting beneath and engaging the side edges and adjacent portions of the body portion of said shield and drawn into forced contact therewith by said bolt, said shield held rigidly in position thereby, said plate being reversible to hold said shield in an upstanding and depressed position respectively.

1,111,227. SEPARATOR. HENRY MARTINSON, Elbow Lake, Minn. Filed May 15, 1914. Serial No. 838,785. (Cl. 130—18.)

1. A separator including a stationary inclined board, a roller journaled adjacent the upper end of the board,

angularly adjustable arms mounted adjacent the lower end of the board, a roller carried thereby, an endless apron having an upwardly movable upper flight extending along the top of the board, and cross strips fixedly mounted relative to the board and disposed transversely above the apron, said arms being adjustable angularly to adjust the upper flight of the apron toward or from the strips.



2. A separator including a screen, a second screen for receiving tailings therefrom, a hopper for receiving screenings from the first named screen, a spout, means for deflecting said screenings from the hopper to the spout, and upwardly movable means for retarding the gravitation of screenings from the second screen.

3. A separator including a screen, a second screen for receiving tailings therefrom, a hopper for receiving the screenings from the first named screen, a spout, means for deflecting said screenings from the hopper to the spout, and an inclined apron having an upwardly moving upper flight for retarding gravitation of screenings from the second screen.

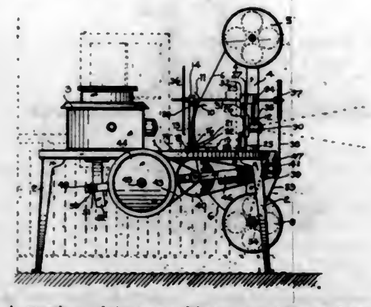
4. A separator including a screen, a second screen for receiving tailings therefrom, a hopper for receiving screenings from the first named screen, a spout, means for deflecting said screenings from the hopper to the spout, and an inclined apron having an upwardly moving upper flight for retarding gravitation of screenings from the second screen, said second screen being adapted to discharge its tailings over and past the upper end of the apron.

1,111,228. BOTTLE-STOPPER. ARTHUR A. MILLER, Kapowsin, Wash. Filed July 14, 1913. Serial No. 779,034. (Cl. 215—51.)

1. A bottle stopper formed from a fabric disk slitted from its outer edge to its center and wound upon itself to form a cone shaped hollow body, the reduced end of which is turned back and covered by wrapping of the fabric to reinforce this end of the stopper, and a reinforcing element adapted to be inserted in the open outer end of the stopper comprising a strip of resilient metal wound upon itself to form a circular coil, said strip having its outer surface roughened and provided on one edge with indentations adapted to form detents and corrugations formed transversely of said strip.

2. A bottle stopper formed from a disk of sheet material slitted from its outer edge to its center and wound upon itself to form a cone-shaped hollow body, the reduced end of which has the edge of the material turned back upon itself and covered by wrapping the material whereby this end of the stopper is reinforced, and a reinforcing element inserted in the open outer end of the stopper.

1,111,229. MOVING-PICTURE MACHINE. HARRY H. MOMYER, Dallas, Tex. Filed Feb. 26, 1913. Serial No. 750,890. (Cl. 88—17.)

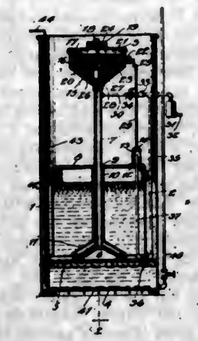


1. A moving picture machine comprising a base, a longitudinal shaft mounted above the base, a rotary shutter upon one end of the shaft, a pulley upon the opposite end of the shaft, a cam wheel mounted upon the shaft, a projector mounted above the base and engaged with the cam wheel, means for feeding a film rearwardly of the projector, a lantern box rearwardly of the film and shutter, the cam wheel causing the projector to move downwardly with each picture upon the film, means for causing upward movement of the projector at the end of each picture projection, and means for driving the pulley.

2. A moving picture machine comprising a base, means for supporting the base, a longitudinal shaft above the base, a cam wheel upon the shaft, a shutter upon the shaft, a pulley upon the shaft, film guides upon the base, means for adjusting the film guides longitudinally of the base, film reels mounted above and below the base, a frame pivoted at one end beneath the base, means for retaining the frame in adjusted position, a film feed roller mounted in the frame, a movable projector mounted above the base and engaged with the cam wheel, drive pulleys carried by the frame, connections between certain of said drive pulleys and the pulley on the longitudinal shaft to rotate the shutter and cam wheel and cause the latter to move the projector in one direction, a lantern box rearwardly of the shutter, and means for returning the projector to normal position.

1,111,230. ACETYLENE-GAS GENERATOR. HENRY O'MEARA, Sioux Falls, S. D. Filed Mar. 19, 1914. Serial No. 825,841. (Cl. 48—53.1.)

1. An acetylene gas generator comprising an upright cylindrical tank having a horizontal partition near its lower end, the central portion of said partition being bulged upwardly, an upright gas discharge tube rising from said upwardly bulged portion and communicating with the tank below the partition, a carbid hopper rigidly mounted on the upper end of said tube, a cylindrical gas bell having a central opening in its top loosely receiving said tube, a sleeve depending from the edge of said opening and loosely encircling said tube, said sleeve having an outwardly flared lower end positioned directly above the upwardly bulged portion of the partition, a valve in the hopper, a crank on the exterior of the hopper for operating said valve, an upright cylindrical extension formed on and communicating with the interior of the gas bell, a chain connected to the upper end of said extension and to said crank, a gas discharge pipe leading from the upper portion of said gas discharge tube through one side of said tank, a branch pipe leading downwardly from said gas discharge pipe and located between the bell and the water tank, said branch pipe extending inwardly beneath the edge of said bell and upwardly therein, the extreme end of said pipe being located within said cylindrical extension, and an outwardly opening check valve located between said branch pipe and the juncture of said gas discharge pipe with said tube.

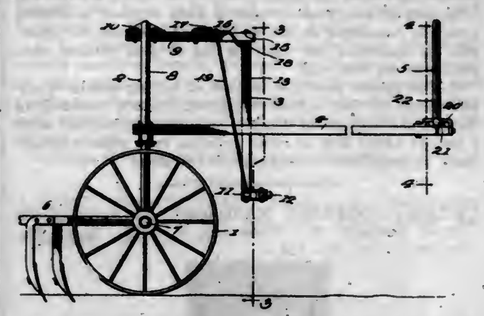


2. In a device of the character described, a hopper having a cone-shaped lower end, a discharge tube in communication with the center of said lower end, a cylindrical guide located within said hopper and having its lower end spaced from said discharge tube, said lower end being open, a hollow boss formed on one side of said cylindrical guide, a supporting tube having its inner end projecting through said hollow boss, a collar formed on said tube and in contact with the outer end of the boss, a nut threaded on the inner end of said tube, an internally threaded boss formed in the adjacent side of the hopper, the outer end of said tube being threaded into said boss and being formed with a stop collar contacting with the inner side of the hopper, a shaft projecting through said supporting tube and having oppositely disposed cranks on its inner and outer ends, the innermost of said cranks being located within said cylindrical guide, a weighted valve in said guide and adapted to close the opening in the lower end of the hopper, a connection between said weighted valve and the adjacent crank arm, a packing nut encircling the outer portion of said shaft and having a threaded engagement with the extreme outer end of the boss formed on said hopper, a packing ring between the adjacent ends of said supporting tube and said packing nut, said adjacent ends being counter-sunk, and means in connection with the outermost of said cranks for oscillating said shaft to actuate the valve.

1,111,231. CULTIVATOR. SHERMAN OVERALL, Mount Vernon, Mo. Filed Apr. 16, 1914. Serial No. 832,296. (Cl. 21—76.)

1. An implement comprising an arched axle, a pair of supporting wheels revolubly mounted thereon, a pair of tongues projecting forwardly from the sides of the arch, a bar projecting rigidly forward from the top of the arch, an arched double-tree pivoted at its upper end to said bar, a curved segment secured at its opposite ends to said double-tree and having a sliding connection with said bar.

2. An implement comprising an arched axle, a pair of supporting wheels revolubly mounted thereon, a pair of tongues projecting forwardly from the sides of the arch, a bar projecting rigidly forward from the top of the arch, an arched double-tree pivoted at its upper end to said bar, a curved segment secured at its opposite ends to the arch of said double-tree and having a sliding connection with said bar, and a pair of inclined brace rods secured at their upper ends to said segment and at their lower ends to said double-tree.

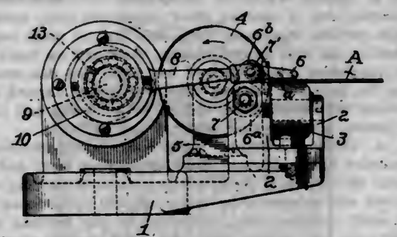


3. An implement comprising an arched axle, a pair of supporting wheels revoluble thereon, a pair of tongues projecting forwardly from the sides of the arch, a bar projecting rigidly forward from the top of said arch, an arched double-tree pivoted at its upper end to said bar and having laterally extending portions on its lower ends, a yoke on said bar, a curved segment secured at its opposite ends to the arch of said double-tree and slidable within said yokes, and a pair of brace bars secured at their lower ends to said lateral portions and at their upper ends to said segment in rear of the arch of said double-tree.

4. An implement comprising an arched axle, a pair of supporting wheels revoluble thereon, a pair of tongues projecting forwardly from said axle, an arched double-tree, a yoke on the forward end of each tongue and an arched neck yoke having laterally projecting portions longitudinally and transversely slidable within said yokes.

5. An implement comprising an arched axle, a pair of supporting wheels revolubly mounted thereon, a pair of tongues projecting forwardly from the sides of the arch, a bar projecting rigidly forward from the top of the arch, an arched double-tree pivoted at its upper end to said bar, bracing connections for said double-tree, and an arched neck yoke longitudinally and laterally slidable upon the forward ends of said tongues.

1,111,232. METHOD OF AND MACHINE FOR FOLDING THE EDGES OF RUBBER SHEETS. JOSEPH E. PERRAULT, Belmont, Mass., assignor to Hood Rubber Co., Watertown, Mass., a Corporation of Massachusetts. Filed Feb. 3, 1914. Serial No. 816,315. (Cl. 12—55.)



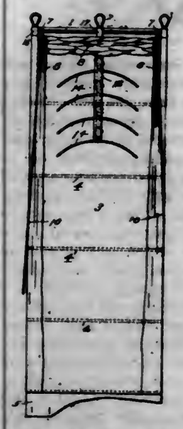
1. In combination a movable support for the stock to be folded, a rotary disk having its edge located in proximity to said support, and arranged to rotate in a plane substantially perpendicular to the edge of the stock, and a presser device moving toward and from the face of said support.

2. In combination a roller support, a rotary folding disk having its edge in proximity to said support and journaled upon an axle lying in a horizontal plane substantially tangential to the upper face of said support, a presser device or hammer adapted to press the material operated upon against said support, and means for oscillating the hammer.

3. In combination a roller journaled upon a horizontal axis, a disk having a smooth edge located in proximity to the upper face of said roller, a presser device or hammer projecting across the upper face of the roller, and having a depending arm pivoted upon a fixed support, a pitman pivotally connected at one end to said arm and an eccentric for operating the opposite end of said pitman, substantially as described.

4. The herein described method of folding sheets of unvulcanized or like adhesive material which consists in causing the edge of the sheet to progressively contact with a smooth edged disk or roller rotating in a plane substantially perpendicular to the edge of the sheet.

1,111,233. PORTABLE WARDROBE. EDMUND MORSE POND, Rutland, Vt. Filed Jan. 9, 1913. Serial No. 741,004. (Cl. 45—118.)



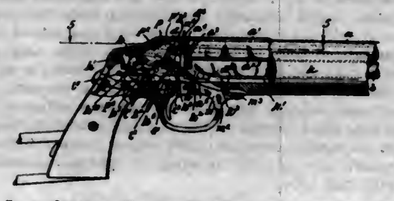
1. A flexible wardrobe comprising in combination a horizontal rod, means for suspending said rod from fixed points on any suitable structure, a backing sheet depending from and distended by said rod, a curtain also depending from said rod and supported by rings adapted to slide on the rod, said curtain being attached to the backing sheet along one side, and an inner curtain also depending from and distended by said rod, but otherwise disconnected from the backing sheet and first mentioned curtain said inner curtain being provided with means for raising and lowering it to and from the horisontal rod.

2. A flexible wardrobe comprising in combination a horizontal rod, a backing sheet supported from said rod, a side curtain suspended from said rod by rings and attached to the side of the backing sheet and an inner curtain supported from said rod but otherwise disconnected from the back and side curtains, said inside curtain being provided with a stiffening rod at its lower end and means for raising and lowering said rod and curtain.

3. A flexible wardrobe comprising in combination a horizontal rod, a backing sheet depending from and distended by said rod, front curtains also depending from the rod and supported by rings adapted to slide on said rod, said curtains being attached to the backing sheet along each edge of the latter, an inner curtain supported from the horizontal rod extending down behind the front curtains and breaking joints therewith, and a flap attached to the bottom edge of the backing sheet, adapted to be turned up over the bottom edges of the front curtains and provided with means for attachment to said curtains when in said upturned position.

1,111,234. FIREARM. EDWARD E. REDFIELD, Glendale, Oreg. Filed Aug. 1, 1913. Serial No. 782,464. (Cl. 42—11.)

1. In a firearm, the combination of a receiver, a barrel longitudinally movable in the receiver, a slide bar also movable longitudinally in the receiver, devices to connect the barrel and slide bar, and a slide lock coöperating directly with the slide bar.



2. In a firearm, the combination of a receiver having a locking shoulder, a barrel movable longitudinally in the receiver, a slide bar also movable longitudinally in the receiver and having a limited movement with respect to the barrel, a slide lock coöperating with the slide bar, and a latch carried by the barrel and actuated by the relative movement of the slide to lock and unlock the barrel.

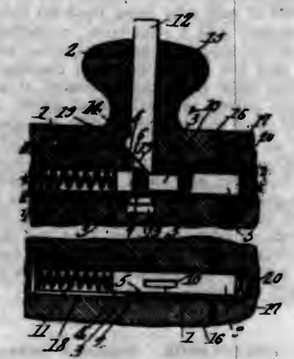
3. In a firearm, the combination of a receiver having a locking shoulder, a barrel movable longitudinally in the receiver, a slide bar also movable longitudinally in the receiver and having a limited movement with respect to the barrel, a slide lock coöperating with the slide bar, and a latch pivotally mounted on the barrel and adapted to engage the shoulder of the receiver, the slide bar having shoulders to engage the latch and actuate it in the relative movement of the slide bar.

4. In a firearm, an ejector which comprises a longitudinally movable rod slitted longitudinally to form a spring member to press laterally against the cartridge.

5. In a firearm, an ejector which comprises a longitudinally movable rod, said rod being slitted longitudinally to form a yielding member and said member provided on its lateral face with a lug to engage the cartridge rim.

[Claims 6 to 18 not printed in the Gazette.]

1,111,235. LATCH. JOHN E. REDIN, Rockford, Ill., assignor of one-half to Charles A. Lindberg, Rockford, Ill. Filed Jan. 2, 1914. Serial No. 810,016. (Cl. 70—42.)



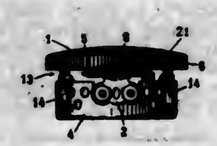
1. In a latch, a tube having diametrically opposite openings, a second tube inserted through the said openings, a latch bolt slidable within the second tube, the first mentioned tube having a longitudinal slot extending from one end beyond the said openings, and a plunger slidable in the other end portion of the first mentioned tube, and having its inner end operatively engaged with the latch bolt, the plunger having a stop engaging in the said slot to limit the movement of the plunger away from the latch bolt.

2. In a latch, a tube having diametrically opposite openings, a second tube inserted through the said openings, a latch bolt slidable in the second tube and having a slot, the first mentioned tube having a longitudinal slot extending from one end and intersecting one of the said openings, and a plunger slidable in the other end portion of the first mentioned tube and having a flat cam portion at its inner end and a stop at the heel of the cam portion engaging the said slot of the first mentioned tube, the tip of the cam portion engaging the said slot of the latch bolt.

3. In a latch, a tube having diametrically opposite openings, a second tube inserted through the said openings, a latch bolt slidable in the second tube, the first mentioned tube having a longitudinal slot extending from one end beyond the said openings, and a plunger slidable in the other end portion of the first mentioned tube and having its inner end portion operatively engaged with the latch bolt, the plunger having a stop engaging within the said slot, and the end of the slot having an offset portion forming a shoulder against which the stop is seatable to retain the plunger in operative engagement with the latch bolt, and to receive the stop when the plunger is turned to withdraw the plunger out of engagement with the latch bolt.

4. In a latch, a tube having diametrically opposite openings, a second tube inserted through the said openings, a latch bolt slidable in the second tube and having a slot, the first mentioned tube having a longitudinal slot extending from one end and intersecting one of the said openings, and a plunger slidable in the other end portion of the first mentioned tube and having a flat cam portion at its inner end and a stop at the heel of the cam portion engaging the said slot of the first mentioned tube, the tip of the cam engaging the said slot of the latch bolt, and the end of the slot having an offset portion forming a shoulder against which the stop is seatable to retain the tip of the cam portion in engagement with the latch bolt slot, and to receive the stop when the plunger is turned to withdraw the tip of the cam portion from the latch bolt slot.

1,111,236. THERMOSTAT. HENRY E. REEVE, New York, N. Y. Filed Jan. 16, 1913. Serial No. 742,336. (Cl. 177—128.)



1. In a thermostat, an insulating base having a central boss extending downwardly and providing a wall for deflecting rising currents of air outwardly and laterally across the under surface of the base, a shield secured to the base, provided with an opening in the bottom thereof to permit currents of air to rise up past the boss and open at the sides to permit the currents of air to flow out laterally at the sides of the shield and thermostatic elements supported beneath the base within the shield, out of contact with the base and disposed in the path of the laterally deflected currents of air so as to be influenced thereby.

2. In a thermostat, a molded insulating base having a central dependent boss integral therewith, a ventilated shield secured to the base and surrounding the dependent boss and curved thermostatic members mounted on the underside of the base and out of contact therewith, the said curved thermostatic members being inclosed within the ventilated shield and passing around on opposite sides of the dependent boss.

3. In a thermostat, an insulating base having its under surface inclined downward and inward and merging into a central dependent boss, whereby moisture on said under surface will flow over the inclined surface on and down the said boss, thermostatic members supported beneath the base and out of contact with the surface of the base, a shield carried by the base inclosing the thermostatic members and provided with an opening in line with the boss to prevent moisture collected on the boss to drip therethrough, and circuit terminals connected to the thermostatic members out of contact with the base and extending outside the shield.

4. In a thermostat, a molded insulating base, circuit terminals anchored therein and projecting from beneath said base, said base having an integral dependent peripheral flange and a groove preventing water from running beneath the base, said flange being cut away over said terminals to divert water laterally thereof.

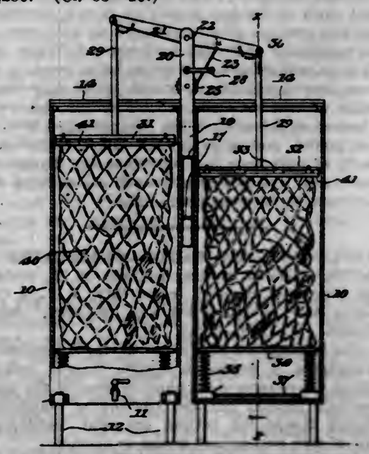
5. In a thermostat, a molded insulating base, circuit terminals anchored therein, thermostatic members connected to said terminals, a ventilated shield surrounding said members but spaced apart therefrom and posts connecting said shield and said base and reinforcing the side walls of said shield.

[Claims 6 to 10 not printed in the Gazette.]

1,111,237. INSECT-TRAP. THOMAS L. RHINEHART, Leadville, Colo. Filed Nov. 22, 1913. Serial No. 802,564. (Cl. 43—22.)

A device of the class described including a cylindrical body, a removable cover at the upper end thereof, an inverted pyramidal shaped member arranged within the lower end and elongated in cross section, the medial portion of said pyramidal member being closed at its upper end to form entrance openings at each end thereof and a removable ring arranged between the lower end of said pyramidal member and the wall of the body, said ring having upturned flanges secured to the body and to the pyramidal member to retain said pyramidal member in position.

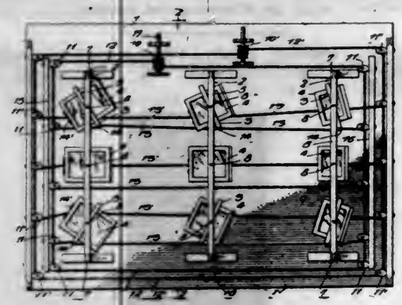
1,111,238. WASHING-MACHINE. AUGUST SCHULTZ, Los Angeles, Cal. Filed May 3, 1913. Serial No. 765,259. (Cl. 68—19.)



In a device of the class described, a receptacle, a basket element having a frame snugly and slidably engaged in

the receptacle, a cover including two elongated oppositely projecting members disposed to be held against reciprocation by the sides of the receptacle, and yoke devices at opposite sides of the basket frame to receive the projecting members slidably therethrough, for removal by reciprocation of the cover on the frame without the receptacle.

1,111,239. DEVICE FOR CONCENTRATING THE RAYS OF THE SUN. HENRY D. SMELSER, West Plains, Mo. Filed Apr. 16, 1914. Serial No. 832,234. (Cl. 126—270.)



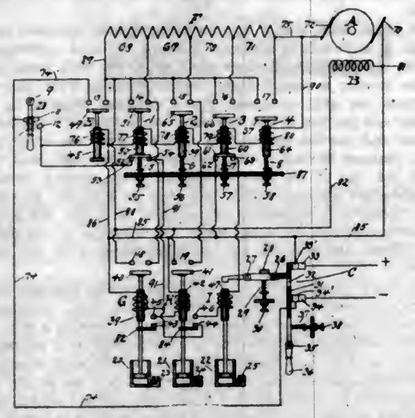
1. A solar device comprising a base, a number of longitudinal rows of reflector supporting frames pivotally mounted upon said base upon vertical axes, a number of reflectors pivotally supported in said frames upon horizontal axes, a pair of guides at each end of each of said rows of frames, a pair of drums spaced laterally from one of the outermost of said rows, endless cables completely encircling said rows of frames, said cables being passed through said guides and wound a number of times around said drums, branch cables extending longitudinally of said longitudinal rows of frames and secured to the lower ends of said reflectors, said branch cables being engaged with certain of said guides and secured to one of said endless cables and other branch cables extending longitudinally of the rows of frames and secured to the sides of said frames, the ends of said last mentioned branch cables being engaged with certain of the remaining guides and secured to the other endless cable.

2. A solar device comprising a base, a number of longitudinal rows of reflector supporting frames pivotally supported on said base upon vertical axes, clamps on one side of each of said frames, reflectors pivotally supported in said frames upon horizontal pivots, clamps on one end of each of said reflectors, a pair of guides at each end of each of said rows of frames, a pair of drums revolubly supported adjacent one of the outermost of said rows, endless cables completely encircling said rows of frames and engaged with said guides, said cables being wound a number of times around said drums, branch cables extending longitudinally of said rows and secured within the clamps on said frames, said branch cables being engaged with certain of said guides, and other branch cables extending longitudinally of said rows and secured in the clamps on said reflectors said last mentioned branch cables being engaged with certain of the remaining guides.

1,111,240. OVERLOAD MOTOR-CONTROLLING APPARATUS. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 16, 1907. Serial No. 388,812. (Cl. 172—288.)

1. The combination of a motor having a sectional starting resistance, a source of electric current, means controlled by the counter-electro-motive force of the motor for successively cutting out the sections of resistance, and additional means for cutting out said resistance upon failure of said first-named means to operate.

2. The combination of an electric motor, having a starting resistance, a source of current supply for the motor, a circuit connected across the brushes of the motor, electro-magnetic means in said circuit for controlling the starting resistance, and additional means dependent upon the load to control the resistance.



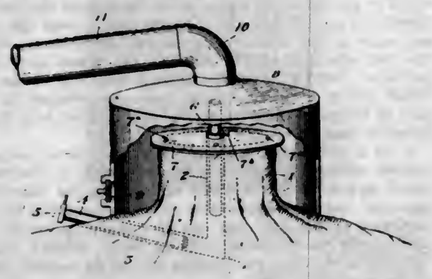
3. The combination of an electric motor having a starting resistance, means for automatically cutting out a portion of said resistance as the speed of the armature increases, and additional means for cutting out a portion of the starting resistance upon failure of the first means to operate.

4. The combination of an electric motor having a sectional starting resistance, automatic means for cutting out a portion of the resistance as the speed of the armature increases, and additional means for cutting out said portion of the resistance upon failure of the first means to operate.

5. The combination of an electric motor having a sectional starting resistance, a plurality of electromagnets operative successively to cut out the sections of resistance as the armature speed increases, and means for cutting out said sections upon failure of the electromagnets to operate.

[Claims 6 to 23 not printed in the Gazette.]

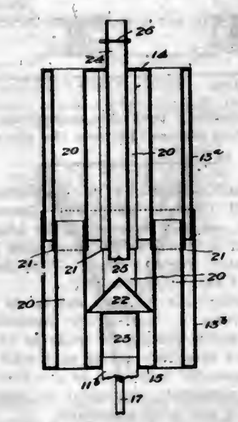
1,111,241. APPARATUS FOR BURNING STUMPS. GEORGE C. SUTTON, ISAAC W. CROWL, and JOHN O. HAMBERG, Priest River, Idaho. Filed Apr. 15, 1913. Serial No. 761,231. (Cl. 110—21.)



1. An apparatus for burning stumps, embodying a pipe extending within the stump and adapted for conveying off the products of combustion from the interior of the stump, and a cap combined with said pipe which is located directly on top of and covering the stump.

2. An apparatus for burning stumps, embodying a pipe extending within the stump and adapted for conveying off the products of combustion from the interior of the stump, a cap combined with said pipe which is located directly on top of and covering the stump, and a draft supplying pipe inserted laterally in the stump.

1,111,242. CONDENSER. GEORGE C. SUTTON, ISAAC W. CROWL, and JOHN O. HAMBERG, Priest River, Idaho. Filed Nov. 18, 1913. Serial No. 801,688. (Cl. 203—6.)



1. A sectional condenser composed of shells, tubes connecting said shells together, means for admitting products of combustion to the condenser, means for taking off smoke and non-condensable gases therefrom, and means for removing the condensables from said condenser.

2. A condenser composed of shells having air draft pipe sections, said shells and air draft pipe sections being fitted together, means for admitting products of combustion to the condenser, means for taking off smoke and noncondensable gases therefrom, and means for removing the condensables from said condenser.

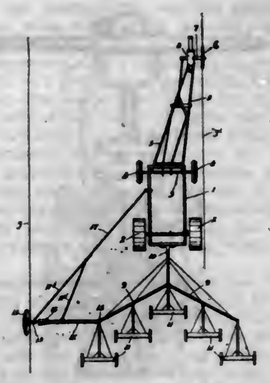
3. A condenser composed of a shell, air draft tubes extending therethrough, means for admitting products of combustion to the interior of the shell, a hood or baffle for spreading the products of combustion as they enter the shell, means for letting off smoke and noncondensable gases from the shell, and means for removing the condensables from said shell.

4. The herein described condenser consisting of shell sections having one end closed and the other end open, each section having an air draft tube, said tubes forming continuations of each other, means for taking off condensables from the condenser, means for taking off smoke and noncondensable gases, means for admitting products of combustion to the shell, and a hood or baffle for spreading the products of combustion as they enter the shell.

1,111,243. GUIDE-FURROW-FORMING ATTACHMENT FOR TRACTION-RIGS. CHARLES S. WHITWORTH, Cedar Falls, Iowa. Filed June 4, 1912. Serial No. 701,501. (Cl. 97—81.)

1. The combination with a traction rig including a traction engine, an agricultural machine drawn thereby, and an automatic engine steering device having a guide-wheel adapted to follow a furrow, said agricultural machine being of a character that will not form a furrow such as will automatically direct the traveling movements of said guide-wheel, of a guide-furrow forming attachment independent of or additional to said agricultural machine applied to said rig and arranged to form a furrow on one trip adapted to be followed by said guide-wheel on a subsequent trip.

2. The combination with a traction rig including a traction engine, an agricultural machine drawn thereby, and an automatic engine steering device having a guide-wheel adapted to follow a furrow, said agricultural machine being of a character that will not form a furrow such as will automatically direct the traveling movements of said guide-wheel, of a guide-furrow forming attachment independent of or additional to said agricultural machine, said attachment comprising an arm attached to said agricultural machine and projecting at one side thereof and provided at its outer end with a furrow forming disk positioned to form a furrow on one trip which is adapted to be followed by said guide-wheel on a subsequent trip.



3. The combination with a traction rig including a traction engine, an agricultural machine drawn thereby, and an automatic engine steering device having a guide-wheel adapted to follow a furrow, said agricultural machine being of a character that will not form a furrow such as will automatically direct the traveling movements of said guide-wheel, of an independent or additional guide-furrow forming attachment applied to said machine and offset laterally thereof to form a furrow on one trip adapted to be followed by said guide-wheel on a subsequent trip, and a wheel supporting the outwardly extending portion of said furrow-forming attachment.

4. The combination with a traction rig including a traction engine, an agricultural machine drawn thereby, and an automatic engine steering device having a guide-wheel adapted to follow a furrow, said agricultural machine being of a character that will not form a furrow such as will automatically direct the traveling movements of said guide-wheel, of a guide-furrow forming attachment independent of or additional to said agricultural machine, said attachment comprising an arm attached to said agricultural machine and projecting at one side thereof and provided at its outer end with a furrow forming disk positioned to form a furrow on one trip which is adapted to be followed by said guide-wheel on a subsequent trip, and a wheel applied to and supporting the outer end of said arm.

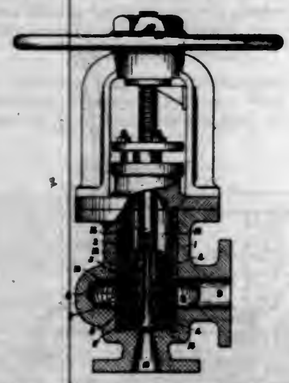
5. The combination with a traction rig including a traction engine, an agricultural machine drawn thereby, and an automatic engine steering device having a guide-wheel adapted to follow a furrow, said agricultural machine being of a character that will not form a furrow such as will automatically direct the traveling movements of said guide-wheel, of a guide furrow forming attachment comprising an arm attached to said rig and projecting at one side thereof, provided at its outer end with a furrow forming disk positioned to form a furrow on one trip which is adapted to be followed by said guide wheel on a subsequent trip, a wheel applied to and supporting the outer end of said arm, and means for raising and lowering the outer end of said arm in respect to said wheel.

[Claims 6 to 14 not printed in the Gazette.]

1,111,244. VALVE. ROBERT WILSON, Deep Gold Mine, Johannesburg, Transvaal, South Africa. Filed Jan. 21, 1913. Serial No. 743,249. (Cl. 137—4.)

1. A valve comprising a casing providing a cylindrical valve chamber, the ends of which are constantly in communication, a piston working therein and fitted at each end with outwardly directed cup packing, an inlet passage opening to one end of the valve chamber, an outlet passage communicating with the interior of the valve chamber by means of a group of relatively small ports in the

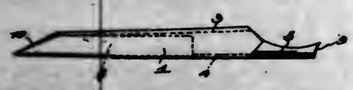
wall of the chamber, such piston covering said ports to close the valve, and being movable away from the inlet passage to put the latter in communication with the ports, and thereby open the valve.



2. A valve comprising a casing providing a cylindrical valve chamber, the ends of which are constantly in communication, a piston working therein and fitted at each end with outwardly directed cup packing, an inlet passage opening to one end of the valve chamber, an outlet passage communicating with the interior of the valve chamber by means of a group of ports in the wall of the chamber, said ports being individually so small that the packing cannot be forced appreciably into them, the wall of the chamber about and on either side of said group of ports forming a continuous and substantially unbroken surface upon which the packing is constantly seated.

3. A valve comprising a casing providing a cylindrical valve chamber, a piston structure working therein and provided at each end with outwardly directed cup packing, an inlet at one end of the casing and directed toward said piston structure, said structure having a longitudinal hole affording communication between the two ends of the valve chamber, the end of said hole toward the inlet passage being flared to a greater diameter than that of the inlet passage.

1,111,245. METHOD OF MAKING SHEARS. EDWARD A. BERG, Bridgeport, Conn. Filed June 18, 1914. Serial No. 845,817. (Cl. 76—104.)



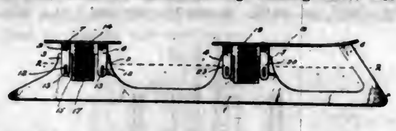
1. The hereindescribed method of making shears which consists in first cutting the blades from sheet metal stock, doubling the tangs of the blades and concaving the heel ends of the tangs, then in forming handles for the thumb and hand, and finally in welding the handles to the concave heel ends of the tang.

2. The hereindescribed method of making shears which consists in first cutting the blades from sheet metal and then in reinforcing the tangs thereof and providing same with concave heel faces, then in forming the handles for the thumb and hand, and finally in welding the handles to the concave heel faces.

3. The herein described method of making shears, which consists in first cutting the blades from sheet metal stock, then thickening the tangs of the blades, then in forming the handles for the thumb and hand, and finally in welding the handles to the heel ends of the thickened tangs.

1,111,246. ICE-SKATE. WILLIAM STEWART BUTTON, Riverside, Cal. Filed Mar. 12, 1912. Serial No. 683,386. (Cl. 46—50.)

In a skate, a runner, upstanding projections formed thereon, a plate, spaced brackets arranged in pairs at the ends of the plate and engaging the opposite sides of the projections, said brackets having alining slots formed



therein, pins extending from the projections through the slots, and a spring disposed between the plate and runner.

1,111,247. COMPOSITION FOR FORMING EXPLOSIVES WITH LIQUID OXYGEN. GEORGES CLAUDE, Paris, France, assignor to Societe L'Air Liquide (Société Anonyme Pour L'Etudes Et L'Exploitation Des Procedes Georges Claude), Paris, France. Filed Jan. 25, 1913. Serial No. 744,237. (Cl. 102—6.)

1. A composition for forming explosives with liquid oxygen, comprising a combustible metallic substance yielding by oxidation innocuous products of combustion, and a light inert substance acting as a solid diluent, the amount of the metallic substance in one liter of the composition being chemically equivalent to from one to six hundred grams of powdered aluminium.

2. A composition for forming explosives with liquid oxygen, comprising a combustible metal in powder form, and a light inert substance acting as a solid diluent, the amount of the powdered metal in one liter of the composition being chemically equivalent to from one to six hundred grams of powdered aluminium.

3. A composition for forming explosives with liquid oxygen, comprising powdered aluminium, and a light inert solid substance acting as a diluent, these constituents being in the proportion of from one hundred to six hundred grams of the powdered metal to each liter of the mixture.

4. A composition for forming explosives with liquid oxygen, comprising powdered aluminium, and a light inert solid substance acting as a diluent, these constituents being in the proportion of from one hundred to six hundred grams of the powdered metal to each liter of the mixture, and means for provoking the ignition of the composition.

5. A composition for forming explosives with liquid oxygen, comprising a combustible metallic substance yielding by oxidation innocuous products of combustion, and a light inert substance, acting as a solid diluent, the amount of the metallic substance in one liter of the composition being chemically equivalent to from one to six hundred grams of powdered aluminium, and a porous bag surrounding the composition to form it into a cartridge.

[Claims 6 to 10 not printed in the Gazette.]

1,111,248. PROTECTIVE SHEATH OR ENVELOP FOR LIQUID-AIR OR LIQUID-OXYGEN EXPLOSIVES. GEORGES CLAUDE, Paris, France, assignor to Societe L'Air Liquide (Société Anonyme Pour L'Etude Et L'Exploitation Des Procedes Georges Claude), Paris, France. Filed Feb. 4, 1913. Serial No. 746,182. (Cl. 102—6.)

1. A protective sheath or envelop for cartridges adapted for explosion by the aid of liquid air or oxygen, comprising an outside layer of inert porous material capable of absorbing the liquid air or oxygen.

2. A protective sheath or envelop for cartridges adapted for explosion by the aid of liquid air or oxygen, comprising a layer of the same material as that used as diluent in the cartridge proper, said layer enveloping the cartridge proper.

3. A protective sheath or envelop for cartridges adapted for explosion by the aid of liquid air or oxygen, comprising a layer of kieselguhr enveloping the cartridge proper.

4. A protective sheath or envelop for cartridges adapted for explosion by the aid of liquid air or oxygen, comprising a wrapper composed of inert porous material capable of absorbing the liquid air or oxygen and an outer envelop of fabric.

5. A protective sheath or envelop for cartridges adapted for explosion by the aid of liquid air or oxygen, comprising a wrapper composed of kieselguhr and an outer envelop of fabric.

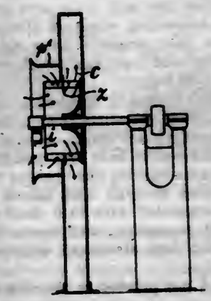
[Claims 6 to 14 not printed in the Gazette.]

1,111,249. GASOLENE-STRAINER. EDWIN C. COURTWRIGHT, Sedan, Kans. Filed Oct. 28, 1913. Serial No. 797,825. (Cl. 210—16.)

1. In a strainer funnel for the uses described, a conical funnel having a rim shaped to allow clamping of a cloth thereon, a cloth clamped thereon, means conforming to the shape and size of the funnel in binding engagement with the cloth therearound, and a basket in form of a cone and including a rim conforming approximately in size and shape to that of the funnel held under the cloth, elemental wires extending downwardly from the rim divergently from the funnel sides converging to a minimum at their lower parts, and stopping short of the funnel body at their lower ends, and means connecting the lower ends of the wires.

2. In a device of the character indicated, a funnel, a basket therein and having an edge portion conforming to the size and shape of the edge of the funnel, a cloth over the basket and projecting there beyond, and a member conformed to the funnel edge fitting tightly over the cloth edges around the funnel, its upper part extending upwardly to form a stop and then upwardly forming a flared funnel extension.

1,111,250. CENTRIFUGAL FAN. SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed May 23, 1913. Serial No. 769,362. (Cl. 230—11.)



1. The combination with a centrifugal fan wheel having an axial intake of a partition carried by the fan wheel and disposed about the neutral part of the fan wheel blades, the negative part of the fan wheel on one side of the partition being exposed to the space from which the air is drawn whereby the air enters the fan wheel both axially and centripetally and the positive part of the fan wheel being disposed on the other side of said partition and discharging the air circumferentially.

2. The combination with a centrifugal fan wheel having an axial intake of a partition carried upon the fan wheel and forming part thereof, said partition being disposed between the ends of the fan wheel blades so as to separate the negative and the positive portions of the blades, the negative part of the fan wheel on one side of said partition being exposed to the space from which the air is drawn, whereby the air enters the fan wheel both axially and centripetally, and the positive part of the fan wheel being disposed on the other side of said partition and discharging the air circumferentially.

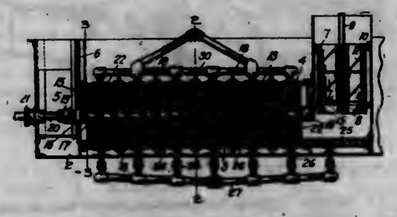
3. The combination with a centrifugal fan wheel having an axial intake of a partition carried by the fan wheel and disposed about the neutral part of the fan wheel blades, the negative part of the fan wheel on one side of the partition being exposed to the space from which the air is drawn and whereby the air enters the fan wheel both axially and centripetally and the positive part of the fan wheel being disposed on the other side of said partition and discharging the air circumferentially, and an external fixed partition encircling the fan wheel and forming an extension of the partition which is on the fan wheel.

4. The combination with a centrifugal fan wheel having an axial intake of a partition carried upon the fan wheel and forming part thereof, said partition being disposed between the ends of the fan wheel blades so as to separate the negative and the positive portions of the blades, the negative part of the fan wheel which is on one side of said partition being exposed to the space from which the air is drawn, whereby the air enters the fan wheel both axially and centripetally, and the positive part of the fan wheel being disposed on the other side of said partition and discharging the air circumferentially, and an external fixed partition encircling the fan wheel and forming an extension of the partition which is on the fan wheel.

5. The combination with a centrifugal fan wheel having an axial intake of a partition carried by the fan wheel and disposed about the neutral part of the fan wheel blades, said partition extending inward to the inner edges of the fan wheel blades, the negative part of the fan wheel on one side of the partition being exposed to the space from which the air is drawn whereby the air enters the fan wheel both axially and centripetally and the positive part of the fan wheel being disposed on the other side of said partition and discharging the air circumferentially.

[Claims 6 to 9 not printed in the Gazette.]

1,111,251. AMALGAMATOR. CHARLES R. DENNISON, Youngstown, Ohio. Filed June 4, 1913. Serial No 771,736. (Cl. 83—67.)



1. An amalgamator comprising a mercury container, a rotary amalgamating element disposed to move through mercury in said container and composed of a shaft, a cylinder concentric therewith and a helical blade the edges of which engage the surface of said shaft and the inner surface of said cylinder whereby to divide the space between the two into a continuous spiral passage, the said cylinder and the said blade being composed of foraminous material, means for feeding ore into an end of said cylinder, and means for the removal of tailings discharged through its opposite end.

2. An amalgamator comprising a mercury container, a rotary amalgamating element disposed to move through mercury in said container and comprising a continuous spiral conduit of foraminous material, means for feeding ore into one end of said conduit, and means for the re-

moval of tailings discharged through the opposite end of the same.

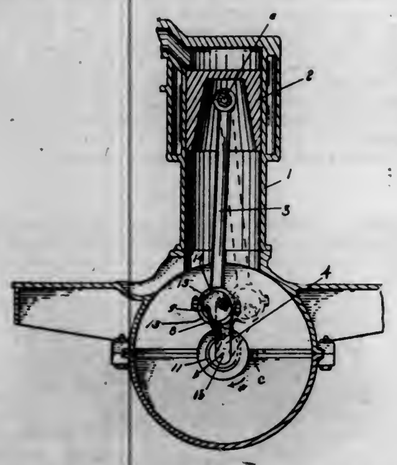
3. An amalgamator comprising a cylindrical casing, a rotary amalgamating element disposed to move through mercury contained in the bottom portion thereof and composed of a continuous spiral conduit of foraminous material, means for feeding ore into an end of said conduit and means for the removal of tailings discharged through the opposite end of the same.

4. An amalgamator comprising a cylindrical casing, a rotary amalgamating element disposed to move through mercury contained in the bottom portion thereof and composed of a continuous spiral conduit of foraminous material, means for feeding ore into an end of said conduit and means for the removal of tailings discharged through the opposite end of the same, the said bottom portion of the casing being spaced from the exterior surface of the said amalgamating element to provide a settling space for the mercury.

5. An amalgamator comprising a container the bottom portion of which constitutes a settling space for mercury, and an amalgamating element of foraminous material rotatably mounted in said container and provided with means for conveying material from one of its ends to the other, the said container having outlets for the discharge of amalgam from the said space, and in its upper portion, inlets for the distribution of mercury over the said rotary element.

[Claims 6 to 8 not printed in the Gazette.]

1,111,252. INTERNAL-COMBUSTION ENGINE. AUBREY I. EAGLE, Stockton, Utah. Filed Aug. 25, 1913. Serial No. 786,583. (Cl. 123—78.)



1. An internal combustion engine consisting of an explosion cylinder; a piston operated therein; a crank shaft; a piston rod pivoted to said piston; strap arms on one end of said rod; an eccentric cam carried in said arms and rotatable on said crank shaft; and means to automatically move said cam on said shaft which means consists of levers pivoted to said cam, and disks mounted on said crank shaft to move said levers.

2. An internal combustion engine consisting of an explosion cylinder; a piston operative therein; a crank shaft; arms on said shaft; disks secured on said shaft and rotatable therewith having a cam track in the face of each; cam levers pivoted on said arms and movable by said disks; a piston rod pivoted to said piston; strap arms on one end of said rod; an eccentric cam carried in said strap arms, rotatable on said crank shaft and having an opening longitudinally therethrough; and a rod in said longitudinal opening connecting said cam levers.

1,111,253. LOUD-SPEAKING TRANSMITTER. HENRY C. EGERTON, Ridgewood, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Oct. 19, 1911. Serial No. 655,568. (Cl. 179—108.)

1. In a telephone transmitter, the combination with a glass diaphragm of carbon containing chambers, soft metal electrodes for said chambers responsive to the vibrations of said glass diaphragm and means for reducing the amplitude of the vibrations of said metal electrodes with respect to the amplitude of vibrations of said glass diaphragm.

2. The combination with a supporting base having an opening therethrough of a transmitter diaphragm mounted thereon, rigidly supported carbon containing chambers carried by said base, laterally separated movable electrodes in said chambers rigidly connected together, and a lever arm for connecting said diaphragm and said electrodes, said lever arm being pivotally supported upon said base and extending through the opening therein.

3. The combination with a supporting base of a transmitter diaphragm mounted thereon, carbon granule containers carried by said base, movable electrodes in said containers, a lever arm connecting said electrodes with said diaphragm, pivotal members for said lever arm carried by said base and flexible supporting members attaching said lever arm to said base.

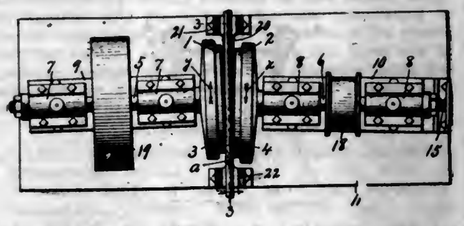
4. The combination with a supporting base of a transmitter diaphragm mounted thereon carbon granule containers, movable electrodes in said containers, a lever arm connecting said electrodes with said diaphragm, pivotal supporting members for said lever arm carried by said base and flexible supporting members attached at one end to said lever arm, said members being extended in opposite directions from said lever arm and having their outer ends attached to said base.

5. The combination with a supporting base having an opening therein of a transmitter diaphragm mounted thereon, carbon granule containers, supporting means for said containers attached to said base and having an opening therein in alinement with the opening in said base, a lever arm extending through said alined openings and having one end connected with said diaphragm, movable electrodes in said containers, and means for connecting said electrodes with each other and with one end of said lever arm.

[Claims 6 and 7 not printed in the Gazette.]

1,111,254. GRINDING AND POLISHING MACHINE. EDMUND L. FRENCH and GEORGE W. STEPHENSON, Syracuse, N. Y., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 16, 1911. Serial No. 627,585. (Cl. 51—10.)

1. In a machine for grinding and sizing round bars, opposed conical grinding disks having radial portions thereof at the rear of their axes substantially parallel, a guide rest between the disks just below the parallel grinding faces, means for revolving the disks in reverse directions and at different speeds, the rear side of the higher speed disk traveling downwardly, and means for adjusting one of the disks axially toward and from the other disk.

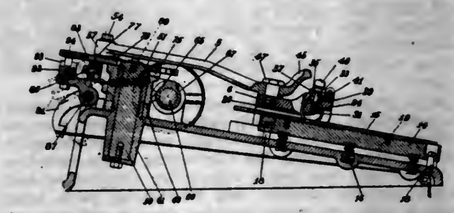


2. In a machine for grinding and sizing round bars, opposed conical grinding disks having radial portions thereof at the rear of their axes substantially parallel, a guide rest between the disks just below the parallel grinding faces, means for revolving the disks in reverse directions and at different speeds, the rear side of the higher speed disk traveling downwardly, and means for adjusting the high speed disk axially.

3. In a machine for grinding and sizing round bars, opposed conical grinding disks having radial portions thereof at the rear of their axes substantially parallel, a guide rest extending continuously from front to rear of and between the disks just below the parallel grinding faces, means for revolving the disks in reverse directions and at different speeds, the rear side of the higher speed disk traveling downwardly, and means for adjusting one of the disks lengthwise of the rest.

4. In a machine for grinding and sizing round bars, opposed conical grinding disks having radial portions thereof at the rear of their axes substantially parallel, a guide rest extending continuously from front to rear of and between the disks just below the parallel grinding faces, means for revolving the disks in reverse directions and at different speeds, the rear side of the higher speed disk traveling downwardly, means for adjusting the high speed disk axially, and separate means for adjusting the low speed disk lengthwise of the rest.

1,111,255. SPLITTING-MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 2, 1908. Serial No. 465,626. (Cl. 12—17.)



1. A machine of the class described, having, in combination, a knife, a carrier therefor, a stock support over which said carrier is movable, a rotatable member for actuating said carrier, mechanism for causing said member to make one revolution and come to rest, a connecting rod, pivots connecting said rod at one end with said carrier and at the other end with said rotatable member, and means for clamping one of said pivots in different adjusted positions.

2. A machine of the class described, having, in combination, a bed for supporting a piece of stock, the location of said stock upon said bed being maintained fixed throughout the operation of the machine, a knife, means for causing relative movement between said knife and bed to produce a flap on said stock, and automatic means operated by said relative movement for causing said flap to be removed.

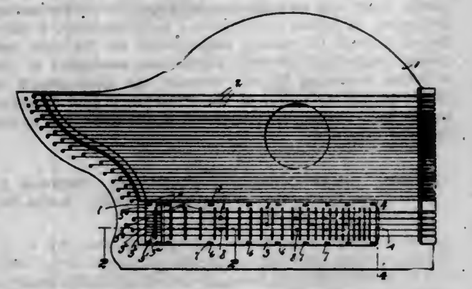
3. A machine of the class described having, in combination, a bed for supporting a piece of stock, the location of said stock upon said bed being maintained fixed throughout the operation of the machine, a knife, means for causing relative movement between said knife and bed to produce a flap on said stock, a gage located in advance of said knife, and automatic means operated by said relative movement for moving said gage toward said bed.

4. A machine of the class described, having in combination, a yielding support for stock, means, including a knife and a gage movable in unison, to produce a flap on stock so supported, and automatic means for causing said flap to be separated from said stock.

5. A machine of the class described, having in combination, a substantially flat bed for supporting stock, means acting to produce a flap on stock so supported, means for causing said flap to be separated from said stock at a given point, and means for varying that point.

[Claims 6 to 39 not printed in the Gazette.]

1,111,256. MUSICAL INSTRUMENT. FRANK GEBS, Long Island City, N. Y. Filed May 20, 1914. Serial No. 839,868. (Cl. 84—80.)



1. In a zither, a resonant body, a finger board having longitudinal slots for the passage of screws into said body, and whereby said board is rendered adjustable on said resonant body.

2. In a zither, a resonant body, a wooden base fixed to the top thereof and a finger board removably and adjustably fixed to said base.

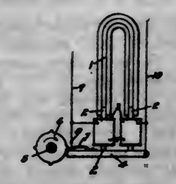
3. In a zither, a resonant body, a sectional finger board, each section being removably and adjustably fixed to said body.

4. In a zither, a resonant body, a finger board having removable frets and removably and adjustably fixed to said body.

5. In a zither, a resonant body, a sectional finger board thereon, the sections being capable of independent longitudinal adjustment and removal.

[Claims 6 to 14 not printed in the Gazette.]

1,111,257. RAILWAY SIGNALING MECHANISM. HENRY A. HOESCHEN, Omaha, Nebr., assignor to Hoeschen Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Original application filed Apr. 3, 1906, Serial No. 309,706. Divided and this application filed Sept. 3, 1912. Serial No. 718,320. (Cl. 177—380.)



1. In a device of the class described, an actuating-shaft, a toothed wheel carried by the shaft, an armature en-

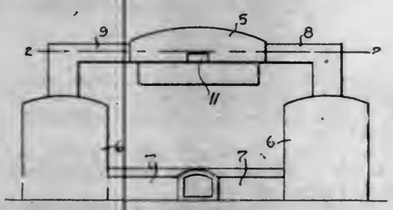
geageable by the toothed wheel, means forming a magnetic circuit through the armature, coils wound upon a part of the magnetic circuit, a line-circuit connected with the coils, a shunt-circuit connected with the coils, and a contact carried by the armature and controlling the shunt-circuit.

2. The combination with actuating mechanism, of a toothed wheel driven by the actuating mechanism, a magneto-electric generator having coils and provided with an armature arranged for reciprocating movement, a line-circuit connected through the coils, a shunt-circuit connected in parallel with the coils, and means for opening said shunt-circuit during movement of the armature in one direction and for closing the shunt-circuit during movement of the armature in the other direction.

3. The combination with a series of actuating devices, of a magneto-electrical generator for each actuating device, said generators each having coils and an armature, a line-circuit connected through the coils of all the generators, a shunt-circuit for the coils of each generator, means driven by each actuating device for moving the armature of the respective generator, and means controlling the shunt-circuits and operated by the respective armature-moving means.

4. The combination with a magneto-electrical generator having coils, and an armature arranged for reciprocating movement, of means for actuating said armature, a main circuit through the coils, a shunt-circuit for the coils, and means controlling the shunt-circuit and controlled by the armature actuating means, whereby the shunt-circuit is closed during movement of the armature in one direction and is open during the movement of the armature in the opposite direction.

1,111,258. GLASS-MELTING FURNACE. THEODOR L. HOLLE, St. Louis, Mo. Filed Apr. 9, 1913. Serial No. 760,005. (Cl. 75—94.)

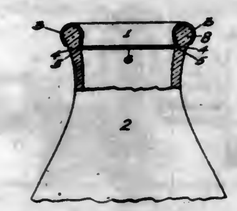


1. A glass melting furnace of the nonreversible regenerative type having burner and down-take flues alternately arranged upon each side of the furnace body and connecting the same with a regenerator, the respective burner and down-take flues upon one side of the furnace being located directly opposite a down-take and burner flue respectively upon the other side of the furnace, substantially as and for the purpose specified.

2. A glass melting furnace having a plurality of burner and outlet flues arranged in opposite relation and opening into each side of the furnace, the flues upon one side of the furnace being so arranged with respect to the corresponding flues on the opposite sides of the furnace whereby the products of combustion are drawn in several directions through the interior of the furnace and equally distributed to the several outlet flues.

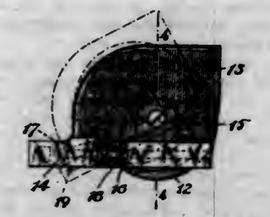
1,111,259. SANITARY BOTTLE-CLOSURE. WILLIAM F. HUFF, Long Beach, Cal., assignor of three thirty-seconds to E. C. Newbury, three thirty-seconds to C. E. Newbury, three-sixteenths to T. J. Deeble, three-sixteenths to C. L. Crandall, and three-sixteenths to F. C. Wilson, Long Beach, Cal. Filed Oct. 22, 1913. Serial No. 796,735. (Cl. 215—14.)

1. The combination of a bottle having an annular shoulder formed in the neck thereof; and a closure disk having an annular groove cut in one side, the outer edge of said groove being adapted to rest upon said shoulder and the inner edge thereof to engage the side of said shoulder for holding said disk firmly in position in said bottle.



2. The combination of a bottle having an annular shoulder formed in the neck thereof; and a closure disk having an annular groove cut in one side, the outer edge of which is adapted to rest upon the top and the inner edge to engage the side of said shoulder; the inner portion of said disk within said groove forming a closure for the neck and the outer portion thereof being bent outwardly and upwardly around the edge of said neck.

1,111,260. PULLEY. NORMAN B. HURD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed July 3, 1914. Serial No. 848,846. (Cl. 16—17.)



1. An overhead pulley construction, comprising a sheave and a sheave carrying element, a base support with means for detachably interlocking said sheave carrying element with said base support by tilting one part relatively to the other.

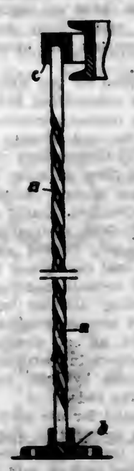
2. An overhead pulley construction, comprising a sheave and a sheave carrying element, a base support with means for detachably interlocking said sheave carrying element with said base support by tilting one part relatively to the other, said means including interlocking lugs and shoulders arranged to be engaged and disengaged by tilting the sheave carrying element relatively to the base support.

3. In an overhead pulley construction, a base support in general of a U-shaped outline, a sheave carrying element arranged to be detachably interlocked therewith and supported thereby, the interlocking means including a lug on said base and a coöperating shoulder on said sheave carrying element, said interlocking parts being engaged when the sheave carrying element and base are in operative position, and being disengaged when said parts are tilted at an angle to the operative position.

4. In an overhead pulley construction, a base in general of U-shaped outline, a supporting ledge at the inner opposite edges of the same, each of said ledges terminating short of the inner end of said base, an interlocking lug near the inner end of said base, said lug having an interlocking shoulder facing the inner end of said base, a sheave carrying element having an upwardly projecting interlocking shoulder arranged to coact with the interlocking lug, said shoulder facing in an opposite direction from said interlocking lug and arranged to be engaged and disengaged therefrom by tilting said sheave carrying element relative to said base.

5. In an overhead pulley construction, a sheave carrying element, a substantially U-shaped base support therefor, said sheave carrying element being arranged to project into the space between the side walls and the end of said U-shaped base, a rigid locking shoulder on the base, and a complementary locking shoulder on said sheave carrying element, said interlocking shoulders coöperating to prevent independent longitudinal movement of the sheave carrying element and the base when the parts are in operative position, said interlocking shoulders being disengageable by tilting the sheave carrying element relatively to the base.

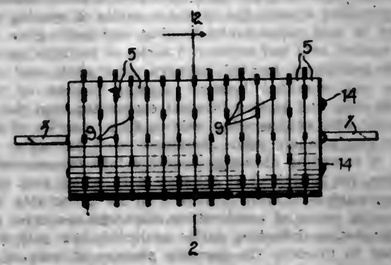
1,111,261. SEPARATOR. CHARLES JAQUET, Strassburg-Königshofen, Germany, assignor to The Firm of Schneider, Jaquet & Cie., G. M. B. H., Strassburg-Königshofen, Germany. Filed Oct. 26, 1911. Serial No. 656,804. (Cl. 83—38.)



1. In a plane separator, the combination of a base, an upright resilient supporting member consisting of a helically twisted bar with the pitch of the twists decreasing toward the center, the lower end of said supporting member being rigidly secured in and upon the base, and a vibratory screen secured upon the upper end of said supporting member.

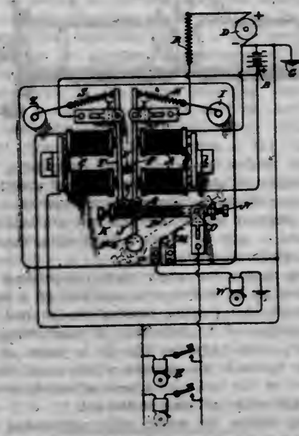
2. In plane separators, a composite pendulum support comprising a plurality of elastic members, the support being so twisted about its longitudinal axis that the cross sectional area is practically the same throughout the length of the support, substantially as set forth.

1,111,262. THRESHING-CYLINDER. HENRY LA RUE, Hyannis, Nebr. Filed Mar. 7, 1914. Serial No. 823,158. (Cl. 130—27.)



The herein described threshing cylinder including a plurality of disks, each of said disks being provided in its opposite faces with recesses opening upon the periphery thereof, the recesses in one face of the disk being arranged in staggered relation to the recesses in the opposite face thereof, threshing teeth adapted to be arranged in the recesses in one face of each disk and to project into the opposed recesses in the face of a contiguous disk, individual securing bolts for the teeth extending through the first named disks, each of the disks being provided with a series of openings inwardly of the teeth receiving recesses, and longitudinally extending tie rods removably disposed through said openings to connect the disks and hold the same against relative movement.

1,111,263. CONSTANT-POTENTIAL ELECTRICAL SYSTEM. DIMMITT ROSS LOVEJOY, Irvington, N. Y. Filed July 19, 1909. Serial No. 508,504. (Cl. 171—314.)



1. A low potential system comprising a storage battery, a low tension working circuit, a relatively high potential source of charging current for said battery, resistance for controlling said charging current, and means for automatically short circuiting said working circuit when the voltage across its terminals rises abnormally.

2. A low potential system comprising a working circuit, a storage battery, a relatively high potential source of charging current, resistance for controlling said charging current, and means for automatically disconnecting said source and said working circuit from said battery and for short circuiting said working circuit when the voltage across its terminals rises abnormally.

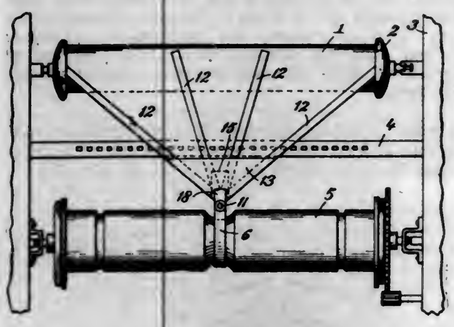
3. A low potential system comprising a working circuit, a storage battery, a relatively high potential source of charging current, resistance for controlling said charging current, and means for automatically disconnecting said source and said working circuit from said battery and for short circuiting said working circuit and for sounding an alarm when the voltage across the terminals of said battery and working circuit rises abnormally.

4. A low potential system comprising a storage battery, a relatively high potential source of charging current, resistance for controlling said charging current, means for automatically connecting and disconnecting said source to and from said battery under normal variations in voltage of said battery, said means acting relatively slowly, and additional means for automatically disconnecting said source from said battery when the voltage across its terminals rises to a value above the fully charged voltage of said battery, said additional means acting relatively quickly by reason of any abnormal condition.

5. A low potential system comprising a working circuit, a storage battery, a relatively high potential source of charging current, resistance for controlling said charging current, means for automatically connecting and disconnecting said source to and from said battery under normal variations in voltage of said battery, and means for automatically short circuiting said working circuit when the voltage across its terminals rises abnormally.

[Claims 6 to 9 not printed in the Gazette.]

1,111,264. ATTACHMENT FOR MUSIC-ROLLS. CHRISTIAN H. MARTIN, Akron, Ohio. Filed Jan. 18, 1913. Serial No. 742,778. (Cl. 84—162.)



1. Attaching means for music rolls, comprising a body portion adapted to be attached to an end of a roll, a plurality of strips extending therefrom across the face of the roll to a point at which said roll has reached its normal width, and a pair of strips alined with margins of said roll and reinforcing the same.

2. Attaching means for music rolls comprising a body portion adapted to be attached to an end of a roll, and means for evenly distributing tension across the face of the roll consisting of a plurality of reinforcing strips extending from said body portion to a point at which said roll has reached its normal width and diverging across the face of the roll, and a pair of similarly extending strips alined with margins of the roll.

3. Attaching means for music rolls comprising a body portion adapted to be attached to an end of a roll, a plurality of strips adapted to extend across the face of the roll to a line at which the roll is of substantially full width, and a pair of strips adapted to be alined with margins of said roll and to reinforce the same to said line, said body portion having secured thereto an elastic member of sufficient length to permit it to be wrapped around said roll and provided with fastening means adapted both to engage with means on said body portion to hold the roll when in wrapped condition and to engage with a take-up roller when the roll is to be unwrapped.

4. Attaching means for music rolls comprising a body portion adapted to be attached to an end of a roll, an elastic member secured thereto and adapted to engage with a take-up roller and by its elasticity to relieve the initial strain upon the roll, and means for evenly distributing the tension transmitted thereby across the face of the roll consisting of a plurality of reinforcing strips extending from said body portion divergently across the face of the roll, and a pair of similarly extending strips alined with margins of the roll.

1,111,265. SILENCER FOR GAS-ENGINES, &c. HIRAM PERCY MAXIM, Hartford, Conn. Filed May 8, 1914. Serial No. 837,105. (Cl. 121—116.)

1. In silencers adapted for use with gas engines or the like, a casing body, a coöperating end member having an inlet opening and an integral internal deflector to direct the exhaust gases around the end of said casing, an internal shell having a series of longitudinal recesses and mounted within said casing to form an inner equalizing chamber, a discharge baffle plate closing one end of said shell, a series of spacing rods located in said recesses and holding said baffle plate and shell against said end member, a series of multiple spirally curved partitions located between said shell and said casing and having integral supporting lugs mounted between spacing sleeves on said spacing rods to form a series of communicating annular whirl chambers each having a plurality of retarding discharge openings into the succeeding chamber, the initial whirl chamber with which said opening communicates being provided on its inner side with an annular series of accelerating discharge apertures having coöperating deflecting guides projecting into said whirl chamber to promote the periodic passages of part of the initial gas impulses into said equalizing chamber, an end member provided with an outlet opening and coöperating with said casing body and held in position thereon by nuts coöperating with extensions on said spacing rods.

2. In silencers adapted for use with gas engines or the like, a casing body, a coöperating end member having an inlet opening and an internal deflector to direct the exhaust gases around the end of said casing, an internal shell having a series of longitudinal recesses and mounted within said casing to form an inner equalizing chamber, a discharge baffle plate closing one end of said shell, a series of spacing rods located in said recesses and holding said baffle plate and shell against said end member, a series of multiple spirally curved partitions located between said shell and said casing and having integral supporting lugs mounted between spacing sleeves to form a series of communicating annular whirl chambers each having a plurality of retarding discharge openings into the succeeding chamber, an end member provided with an outlet opening and coöperating with said casing body and held in position thereon by nuts coöperating with extensions on said spacing rods.

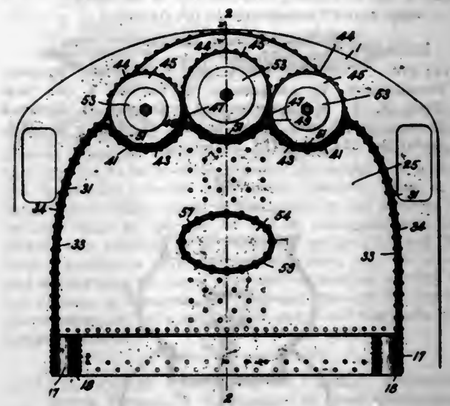
3. In silencers adapted for use with gas engines or the like, a casing body, a coöperating end member having an inlet opening and an internal deflector to direct the exhaust gases around the end of said casing, an internal shell having a series of longitudinal recesses and mounted within said casing to form an inner equalizing chamber, a discharge baffle plate closing one end of said shell, a series of multiple spirally curved partitions located between said shell and said casing and having integral supporting lugs mounted between spacing sleeves on said spacing rods to form a series of communicating annular whirl chambers each having a plurality of retarding discharge openings into the succeeding chamber, the initial whirl chamber with which said opening communicates being provided on its inner side with an annular series of accelerating discharge apertures having coöperating deflecting guides projecting into said whirl chamber to promote the periodic passages of part of the initial gas impulses into said equalizing chamber, an end member provided with an outlet opening and coöperating with said casing body and held in position by extensions on said spacing rods.

4. In silencers adapted for use with gas engines or the like, a casing, a coöperating end member having an inlet opening, an internal shell having a series of longitudinal recesses and mounted within said casing to form an inner equalizing chamber, a discharge baffle plate closing one end of said shell and leaving a restricted annular discharge slot extending around the casing, a series of spacing rods located in said recesses and holding said baffle plate and shell against said end member, a series of multiple spirally curved partitions located between said shell and said casing and mounted between spacing sleeves on said spacing rods and having integral supporting lugs for engagement with said spacing rods to form a series of communicating annular whirl chambers each having a plurality of retarding discharge openings into the succeeding chamber, the initial whirl chamber with which said opening communicates being provided on its inner side with an annular series of accelerating discharge apertures having coöperating deflecting guides projecting into said whirl chamber to promote the periodic passage of part of the initial gas impulses into said equalizing chamber and an end member provided with an outlet opening and coöperating with said casing and held in position by said spacing rods.

5. In silencers adapted for use with gas engines or the like, a casing, a coöperating end member having an inlet opening, an internal shell having a series of longitudinal recesses and mounted within said casing to form an inner equalizing chamber, a plate closing one end of said shell, a series of spacing rods located in said recesses and holding said plate and shell against said end member, a series of multiple spirally curved partitions located between said shell and said casing to form a series of communicating annular whirl chambers each having a plurality of retarding discharge openings, the initial whirl chamber with which said opening communicates being provided on its inner side with a series of accelerating discharge apertures having coöperating deflecting guides projecting into said whirl chamber to promote the periodic passage of part of the initial gas impulses into said equalizing chamber and an end member provided with an outlet opening and coöperating with said casing.

[Claims 6 to 19 not printed in the Gazette.]

1,111,266. FIRE-BOX FOR BOILERS. JAMES M. MCCLELLON, Everett, Mass. Filed Oct. 1, 1909. Serial No. 520,556. (Cl. 122—58.)



1. In a boiler the combination of a series of upright, unitary flexion sections, each having an open side; a chamber at their upper ends with which said sections communicate and are connected; cover means secured to said sections and closing their open sides; and securing means for holding adjacent sides of said sections against distortion movement in the direction of the length of the series thereby to localize the expansion to individual sections.

2. In a boiler the combination of a series of upright, unitary wall sections, each having an open side, said sections being respectively self-sustaining and individually expansible transversely of said series; cover means common to the sections for closing their open sides; and securing means for holding adjacent sides of said sections against distortion movement in the direction of the length of the series thereby to localize the expansion to individual sections.

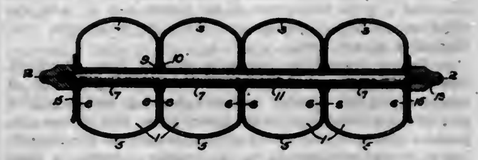
3. In an apparatus of the class described, the combination of a series of upright, unitary wall sections, each having an open side; and cover sheet means secured to said sections and closing their open sides, said sections being respectively self-sustaining and individually expansible transversely of said series.

4. In an apparatus of the class described, the combination of a series of upright, unitary flexion sections, each having an open side; means to secure adjacent sides of said sections together; and cover means secured to said sections and closing their open sides.

5. A fire-box comprising, in combination, a series of upright, unitary flexion sections, each having an open side; means to effect communication through the adjacent sides of said sections; and a cover sheet secured to said sections and closing their open sides.

[Claims 6 to 35 not printed in the Gazette.]

1,111,267. FIRE-BOX, &c. JAMES M. MCCLELLON, Everett, Mass. Filed June 1, 1911. Serial No. 630,553. (Cl. 122—58.)



1. A structure of the class described comprising, in combination, a series of upright sections having portions flexible and self-sustaining transversely to the lengths of the sections, and flattened portions, and means inherent to each section for preventing extension of its flattened portions in the direction of the length of the series.

2. A structure of the class described comprising, in combination, a series of upright sections having flexible portions, each section having independent means for preventing its extension in the direction of the length of the series.

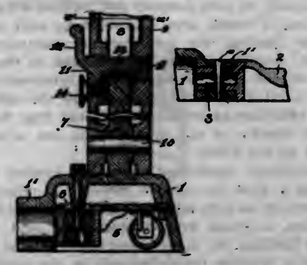
3. A structure of the class described comprising, in combination, a series of upright unitary sections, each having means connecting opposite portions thereof to localize flexion to other portions.

4. A structure of the class described comprising, in combination, a series of upright sections having curved flexible portions and stays connecting other portions thereof and distributed at intervals in the lengths of said sections.

5. A structure of the class described comprising, in combination, a series of upright unitary wall sections having flexible portions and means common to all of said sections for securing them together.

[Claims 6 to 16 not printed in the Gazette.]

1,111,268. GYMNASIUM PARALLEL BARS. PHILIP S. MEDART, St. Louis, Mo., assignor to Fred Medart Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 19, 1914. Serial No. 839,531 (Cl. 46—69.)



1. A base plate for parallel bars comprising a pair of end sections each provided with a pair of longitudinal extensions the vertical faces of which are provided with longitudinal recesses, a pair of intermediate longitudinal rails or sections the vertical faces of which are formed with longitudinal tubular pins adapted to engage the aforesaid recesses, and transverse keys passing through the parts to lock the sections in assembled relation, substantially as set forth.

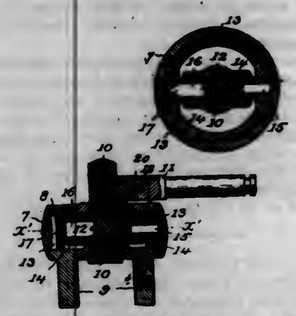
2. In an exercising apparatus of the type described, the combination of a base plate having a plurality of spaced uprights, tubular columns housing said uprights and pivoted thereto at their lower ends, and means disposed a distance above said pivot connections for imparting a pivotal adjustment to the tubular columns in relation to the uprights, substantially as set forth.

3. In an exercising apparatus of the type described, the combination of a base plate having a plurality of spaced uprights, tubular columns housing said uprights and pivoted thereto at their lower ends, and means disposed a distance above said pivot connections for imparting a piv-

otal adjustment to the tubular columns in relation to the uprights, the same comprising a rotary member mounted transversely in each column and having an eccentric wrist pin, and a yoke formation at the upper end of each upright in operative engagement with the wrist pin, substantially as set forth.

4. In an exercising apparatus of the type described, the combination of a base plate having a plurality of spaced uprights, tubular columns housing said uprights and pivoted thereto at their lower ends, and means disposed a distance above said pivot connections for imparting a pivotal adjustment to the tubular columns in relation to the uprights, the same comprising pairs of heads journaled transversely in said columns and having operating handles and eccentric wrist pins, the uprights aforesaid being provided at their upper ends with yoke formations engaging the wrist pins aforesaid, substantially as set forth.

1,111,269. ROWING APPARATUS. PHILIP S. MEDART, St. Louis, Mo., assignor to Fred Medart Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 19, 1914. Serial No. 839,532. (Cl. 46—69.)



1. A frictional resistance means for rowing apparatus, comprising a fixed cup-shaped member, a rock-shaft journaled centrally in said member and formed with an eccentric portion, a crank arm connected to said rock shaft, means for limiting the independent movement of said crank arm, a split friction ring arranged in the cavity of said cup-shaped member, and means intermediate of the eccentric portion of the rock-shaft and the split friction ring for effecting an expansion of said ring with an independent turning of the rock shaft in one direction, substantially as set forth.

2. A frictional resistance means for rowing apparatus, comprising a fixed cup-shaped member, a rock-shaft journaled centrally in said member and formed with an eccentric portion, a crank arm connected to said rock-shaft, means for limiting the independent movement of said crank arm, a split friction ring arranged in the cavity of said cup-shaped member, a cross-head operatively connected to and moving with said ring, a radially movable wedge member having operative engagement at one end with the eccentric portion of the rock-shaft, and at the other end an expanding engagement with the split friction ring, substantially as set forth.

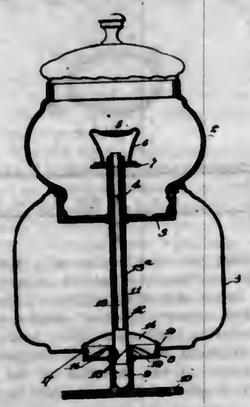
3. A frictional resistance means for rowing apparatus, comprising a fixed cup-shaped member, a rock-shaft journaled centrally in said member and formed with an eccentric portion, a crank arm connected to said rock shaft, an adjustable abutment screw disposed in the path of the crank arm and adapted to regulate the independent movement of the same in one direction, a split friction ring arranged in the cavity of said cup-shaped member, and means intermediate of the eccentric portions of the rock-shaft and the split friction ring for effecting an expansion of said ring with an independent turning movement of the rock-shaft in one direction, substantially as set forth.

4. A frictional resistance means for rowing apparatus comprising a fixed cup-shaped member, a rock-shaft journaled centrally in said member and formed with an eccentric portion, a crank arm connected to said rock shaft, an adjustable abutment screw disposed in the path of the crank arm and adapted to regulate the independent movement of the same in one direction, a split friction ring arranged in the cavity of said cup-shaped member, a cross-head operatively connected to and moving with said rings, a radially moving wedge member having operative engagement at one end with the eccentric portion of the rock-shaft and at the other end an expanding engagement with the split friction ring, substantially as set forth.

5. A frictional resistance means for rowing apparatus, comprising a fixed cup-shaped member, a cap piece therefor, a rock-shaft journaled centrally in said member and formed with an eccentric portion, a crank arm connected to said rock-shaft, a pair of adjustable abutment screws disposed at opposite sides of said crank arm and adapted to regulate the independent movement of the same, a split friction ring arranged in the cavity of said cup-shaped member, and means intermediate of the eccentric portion of the rock-shaft and the split ring for effecting an expansion of said ring with an independent turning movement of the rock-shaft, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,111,270. COFFEE-MACHINE. CHARLES NELSON, Brooklyn, N. Y., assignor to S. Sternau & Co., New York, N. Y., a Copartnership composed of Sigmund Sternau and Lionel Strassburger. Filed May 3, 1907. Serial No. 371,581. (Cl. 53—3.)



1. The combination with the receptacle of a coffee machine, the said receptacle having a recess in the bottom, a heating chamber communicating with the recess and an air chamber covering the recess, said air chamber being so arranged as to form a cavity, said cavity being separated from the receptacle by the chamber, of a percolator communicating with the heating chamber, there being a labyrinthine passage between the receptacle and heating chamber, such passage extending around the air chamber and including the cavity.

2. A coffee machine having a receptacle with a recess in the bottom, there being an outside heating chamber in communication therewith, in combination with a percolator connected to the chamber and having an air chamber lying within the recess, with a labyrinthine passage affording communication between the chamber and receptacle, such passage lying within the recess and located on the outside of the air chamber.

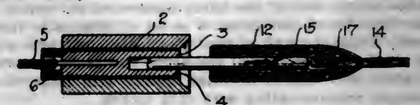
3. A percolator for a coffee machine, which comprises a tube, a circular dished air chamber carried by said tube, a second tube within the first and secured thereto at top and bottom, whereby a longitudinal air chamber between the tubes is produced, one of the tubes being perforated and extending below the air chamber, and a flange adjacent to the perforation.

4. A coffee machine having a receptacle, a heating chamber depending below and of less diameter than the receptacle, a percolator communicating with the heating chamber, an air chamber carried by the percolator, there being a cavity formed by the air chamber and the bottom of the receptacle and a passage in the periphery of the air chamber affording communication between the receptacle and the cavity.

5. A coffee machine having a receptacle, a heating chamber depending below and of less diameter than the receptacle, a percolator communicating with the heating chamber, an air chamber carried by the percolator, there being a cavity formed by the air chamber and the bottom of the receptacle and a passage in the periphery of the air chamber affording communication between the receptacle and the cavity, and there being an opening in the percolator allowing communication between the cavity and the heating chamber.

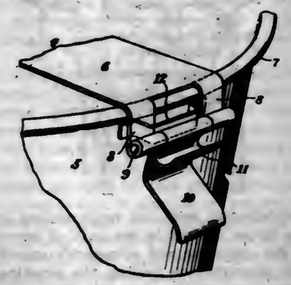
[Claims 6 to 9 not printed in the Gazette.]

1,111,271. JUNCTION-BLOCK. ANDREW PLESH, Windber, Pa. Filed Sept. 17, 1913. Serial No. 790,323. (Cl. 173—338.)



In combination, superimposed blocks provided with registering grooves in the opposed faces thereof, said grooves extending entirely across the blocks, socket members adapted to be inserted between the blocks and within the registering grooves, said socket members being of a length substantially equal to the length of the sockets, insulating rings at the rear of and in alinement with the sockets and adapted to be positioned entirely beyond the blocks, insulation surrounding the sockets and the rings and maintaining the rings in assembled position relative to the sockets, a clamping bolt disposed through the blocks intermediate of the grooves, and plugs coacting with the socket members.

1,111,272. COVER FASTENER OR CLAMP. LAWRENCE R. QUINN, Newark, N. Y., assignor to Reed Manufacturing Company, Newark, N. Y., a Corporation of New York. Filed Apr. 28, 1914. Serial No. 835,056. (Cl. 70—3.)



1. The combination, with a vessel having an outwardly-projecting ledge at its upper edge, and a cross-bar adapted to be supported on the top of the vessel, of a pivotal bearing-member rigidly connected with and supported by, the cross-bar in a position outside of and below said ledge on the vessel; and a clamping-member pivoted on said bearing-member, and comprising a cam-like detent adapted to swing into and out of position beneath said ledge, and a lever rigidly connected with the detent.

2. The combination, with a vessel having an outwardly-projecting ledge at its upper edge, and a cross-bar adapted to be supported on the top of the vessel, of a pivotal bearing-member rigidly connected with, and supported by, the cross-bar in a position outside of and below said ledge on the vessel; and a clamping-member pivoted on said bearing-member, and comprising a cam-like detent adapted to swing into and out of position beneath said ledge, and a lever rigidly connected with the detent, the lever being adapted to lie above and close to the cross-bar when the detent is in operative position.

3. The combination, with a vessel having an outwardly-projecting ledge at its upper edge, and a cross-bar adapted to be supported on the top of the vessel, of a pivotal bearing-member supported by the cross-bar in a position outside of and below said ledge on the vessel; and a clamping-member pivoted on said bearing-member and comprising a single strip of sheet-metal bent to form, at one end, a lever for manual operation, at an intermediate point, a sleeve to embrace the bearing-member, and at the other end, a detent with a convex cylindrical surface adapted to coöperate with the lower surface of said ledge.

4. The combination, with a vessel having an outwardly-projecting ledge at its upper edge, and a cross-bar adapted to be supported on top of the vessel, of a pivotal bearing-member supported by the cross-bar in a position outside of and below said ledge on the vessel; a clamping-member pivoted on said bearing-member, and comprising a detent adapted to swing into and out of position beneath said ledge, and a lever for manual operation of the clamping-member; and means, fixed to the vessel beneath said ledge, for engaging the detent laterally to prevent lateral displacement of the cross-bar.

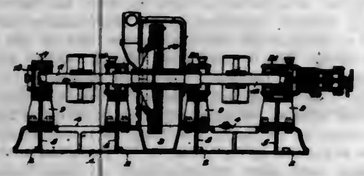
5. The combination, with a vessel having an outwardly-projecting ledge at its upper edge, and a cross-bar adapted to be supported on the top of the vessel, of arms projecting outwardly and downwardly from the end of the cross-bar; a pivot-pin supported by said arms in a position outside of and below said ledge of the vessel; a clamping-member mounted on the pivot-pin, and comprising a detent, hook-shape in cross-section and adapted to swing into and out of position beneath said ledge, and a lever for manual operation of the clamping-member; and a bail-shaped member fixed to the vessel beneath said ledge and adapted to receive the hook-shaped detent when the latter is in operative position.

1,111,273. KNIFE-SHARPENER. PAUL RYBARSKY, Hoboken, N. J. Filed Apr. 28, 1914. Serial No. 834,964. (Cl. 76—86.)

A device of the class described, comprising a handle and a curved shoulder spaced inwardly from one end thereof, a housing substantially rectangular in cross-section mounted upon said handle outwardly of said shoulder upon the same side thereof and having a longitudinal opening therethrough greater than the width of said shoulder in alinement with the said shoulder, sharpening bars having cutting edges positioned crossing each other within the opening of said housing and with their inner ends seated upon said shoulder and spaced from the outer wall of said housing, an opening through the wall of said housing

adjacent to said shoulder, and a set screw threaded in said opening and adapted for engaging the face of the adjacent one of said bars.

1,111,274. ATTRITION-MILL. JOHN S. SORENSEN, Muncy, Pa., assignor to Sprout, Waldron & Company, Muncy, Pa., a Corporation of Pennsylvania. Original application filed Apr. 7, 1911, Serial No. 619,621. Divided and this application filed July 1, 1914. Serial No. 848,344. (Cl. 83—8.)



1. The combination, in an attrition mill, of a base having a series of alined seats at each side thereof for runner-shaft-supports, said seats having alined marginal ribs or abutments for confining such supports therebetween, a plurality of runner-shaft-supports mounted on said seats between and closely engaging said abutments, and runner-shafts each journaled in a plurality of said supports and each carrying a runner having its grinding surface arranged to coact with the grinding surface of the adjacent runner in grinding, whereby said shafts are maintained in axial alinement and the grinding surfaces of said runners kept in parallel relation without tramming.

2. A non-trammable attrition mill comprising a base having a series of alined seats thereon for runner-shaft supports, a series of supports fitting in said seats, alined shafts journaled in bearings on said supports each carrying a runner at one end arranged in coöperative relation to a runner on the adjacent end of the other shaft, and means for securing said supports fixedly in their seats with provision for longitudinal adjustment thereof, whereby said shafts are positively and fixedly maintained in axial alinement and the grinding surfaces of said runners kept in parallel relation without tramming.

3. A base for attrition mills provided at each side thereof with a series of alined bosses on its top adapted to support in axial alinement a plurality of runner-shaft-supports and upstanding shoulders at the outer edges of said bosses arranged in alinement, said bosses and shoulders constituting angular seats for runner-shaft-supports which permit longitudinal movement of the supports when engaged therewith.

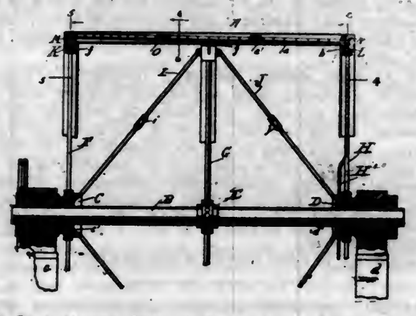
4. A base for attrition mills having longitudinal series of bosses on its top and shoulders at the outer edges of said bosses, the tops of the bosses being smooth and all in the same horizontal plane and the shoulders at each side of the base being arranged in alinement, whereby the bosses and shoulders constitute alined angular seats for runner-shaft supports which permit longitudinal movement of the supports when engaged therewith.

5. A base for attrition mills having a central depending discharge spout and depending transverse ribs on its under side between said mouth and its ends, and provided on its upper side with bosses over said ribs and abutments at the outer edges of said bosses, said bosses and abutments constituting alined angular seats for the runner-shaft supports.

[Claims 6 to 16 not printed in the Gazette.]

1,111,275. FILTER. GEORGE SPENCE, Mexico, Mexico. Filed Aug. 16, 1913. Serial No. 785,070. (Cl. 75—86.)

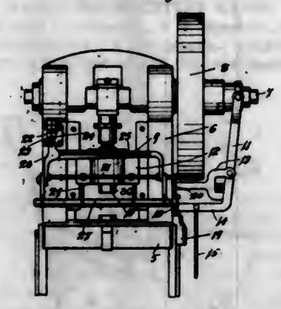
1. In a vacuum filter of the revolving drum type, the combination with the drum periphery and the supporting axle, of vacuum spokes on one side of the drum and compressed air spokes on the other side of said drum, a series of interchangeable, detachable, transversely-disposed filter trays or sections supported on said periphery, and trunnions within which the axle is mounted, said trunnions being formed with longitudinal ports communicating with said spokes.



2. In a vacuum filter of the revolving drum type, the combination with the drum-supporting axle, of vacuum spokes on one side of the drum, compressed air spokes on the other side of said drum, a series of detachable transversely-disposed trays or sections having their ends resting on the outside rims of the drum, and trunnions within which said axle is mounted formed with longitudinal passages communicating with said spokes.

3. In a vacuum filter of the revolving type, a system of conduits for withdrawing the solutions from the lower end of the tray and admitting compressed air to the interior of same at the upper end, said conduits comprising channeled trunnions and the spokes of the drum supporting the two outside rims of the same, on which the ends of the trays rest and communicate with said spokes for the purposes stated.

1,111,276. SAFETY DEVICE FOR POWER-OPERATED MACHINES. ELMER B. STONE, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 9, 1913. Serial No. 805,527. (Cl. 164—107.)



1. In combination with the reciprocating member of a machine, a device located in the path of movement of the person of the operative and necessarily moved thereby in the regular operation of feeding the machine, a lock to prevent operation of the machine, said lock being connected to be operated by said device, and a feeler connected to said device to be moved into the path of movement of said reciprocating member.

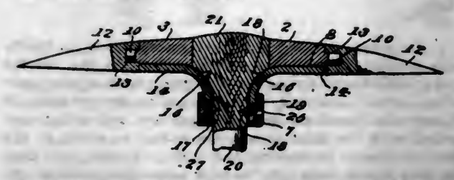
2. In combination with the reciprocating member of a machine, a lock to prevent operation of the machine, a safety device connected with the lock to operate it, said safety device being located in front of the arms of the operative in the regular movement of feeding the machine, and a feeler connected with the safety device to be projected into the path of movement of said reciprocating member in the movement of said safety device.

3. In combination with the reciprocating member of a machine, a clutch operating lever, a lock to prevent movement of the clutch operating lever, a safety device connected with the lock to operate it, said safety device being located in front of and in the path of movement of the arms of the operative in the regular movements in feeding the machine, and a feeler connected with said safety device to be projected in the path of movement of said reciprocating member at each reciprocating movement of the safety device.

4. In combination with the reciprocating member of a machine, a lock to prevent operation of the machine, a safety bar suspended in front of said reciprocating member, a connection between said safety bar and lock to operate the latter, said safety bar being located in front of and in the path of movement of the arms of the operative in the regular movements of feeding the machine, and a feeler connected with said safety bar to be moved thereby into the path of movement of said reciprocating member.

5. In combination with the reciprocating member of a machine, a safety bar suspended for swinging movement in front of said reciprocating member and in front of and actuated by the arms of the operative in the regular movements of feeding the machine, a lock to prevent operation of the machine, a connection between said bar and lock to operate the latter, and a feeler rigidly secured to said safety bar and with its end projecting into the path of movement of said reciprocating member when the bar is at that limit of its movement nearest the reciprocating member.

1,111,277. DETACHABLE-POINT PICK. FRANK P. TRAINOR, Uniontown, Pa. Filed Jan 22, 1913. Serial No. 743,446. (Cl. 125—19.)



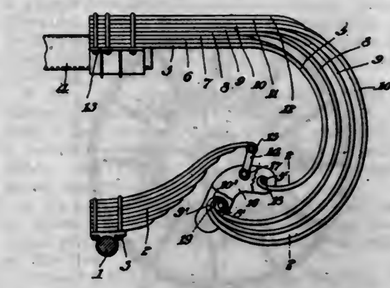
1. A pick comprising a head having oppositely disposed ears constituting a handle socket and oppositely projecting arms each longitudinally recessed on its under face, pick points abutting against the ends of the arms, the adjacent faces of the points and of the arms having one a tenon and the other a mortise for receiving said tenon and each pick point having a tang or extension engaging in said recess, said tang being downwardly extended, and means engaging the downward extensions of the tangs and said ears.

2. A pick comprising a head having oppositely disposed ears constituting a handle socket, the exterior faces of said ears being screw-threaded, said head having oppositely disposed arms, each longitudinally recessed on its under face, the side walls of each recess being under-cut, and each arm formed with a tenon at its end, pick points abutting against the ends of said arms, the base of each point being formed with a mortise to receive the corresponding tenon on the end of the corresponding arm, each point having a tang extending from the base thereof and formed with beveled side edges and engageable with the walls of said recess, the extremity of each tang being downwardly turned to fit between the ears of the handle socket, each downwardly turned portion of the tang being exteriorly screw-threaded, and a nut engageable with the screw-threads of the tang and the ears.

3. A pick comprising a head having oppositely projecting arms, pick points abutting against the ends of the arms, the adjacent end faces of each pick point and the corresponding arm being formed one with a tenon and the other with a mortise receiving the tenon and each pick point having an extension or tang provided with a plurality of studs or prongs, a handle with which said studs or prongs engage, and means engaging the tangs of the pick points and holding the tangs in engagement with the handle and pick points abutting against the head.

4. A pick comprising a head having oppositely disposed segmental ears surrounding an eye and being exteriorly screw-threaded, the ears being spaced from each other, said head being formed with oppositely projecting arms each longitudinally recessed on its under face, the walls of each recess being under-cut, pick points abutting against the ends of said arms, the abutting ends of the arms and points, one having a tenon and the other a mortise to receive the tenon and each pick point having a tang provided for a portion of its length with beveled side edges engaging the under-cut walls of the corresponding recess, the end of the tang being downwardly bent to lie between the said ears and being exteriorly screw-threaded, said end being provided on its inner face with inwardly projecting studs to engage the handle, a handle having its head disposed within the eye of the pick head and embraced by said ears and said tangs, and an interiorly screw-threaded nut engaging the ears of the tangs.

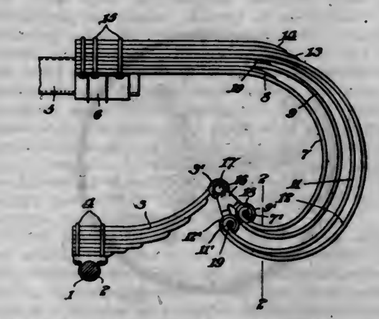
1,111,278. VEHICLE-SPRING. CLAUDE S. VAN SICKEL, Camden, N. J. Filed Jan 6, 1914. Serial No. 810,553. (Cl. 21—50.)



1. The combination with a vehicle body and axle, of means comprising an equalizer connected with one of said parts, and means comprising a plurality of leaf springs having separated sections and connected with the other of said parts, separated sections of leaf springs aforesaid converging to a connection with said equalizer and a leaf spring aforesaid connected with said equalizer in counter-balancing relation to converging sections aforesaid.

2. The combination with a vehicle axle and body, of a leaf spring connected with said axle, an equalizer connected with said leaf spring, a set of spring leaves connected with said body and having separated sections converging to a connection with said equalizer, and a leaf spring connected with said body, normally separated from said converging sections and connected with said equalizer so as to act in counter-balancing relation to said spring leaves having converging sections.

1,111,279. VEHICLE-SPRING. CLAUDE S. VAN SICKEL, Camden, N. J. Filed Jan. 19, 1914. Serial No. 812,889. (Cl. 21—50.)



1. A vehicle spring comprising a pivoted hanger, and spring leaves arranged in sets, each set having leaves with

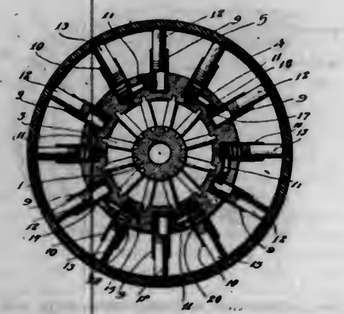
separated sections converging to connections with said hanger.

2. A vehicle spring comprising a leaf spring, a hanger pivotally connected therewith, and spring leaves arranged in several sets each comprising leaves having separated sections converging to a movable connection with said hanger.

3. A vehicle spring comprising a pivoted hanger, nested spring leaves arranged in sets respectively comprising separated leaf sections converging to a common conection with said hanger, and short leaves disposed so as to reinforce spring leaves aforesaid.

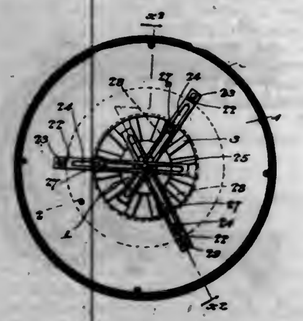
4. A vehicle spring comprising a leaf spring, a hanger pivoted directly thereto, and scroll springs having separate direct pivotal connections with said hanger said hanger having only three points of connection.

1,111,280. RESILIENT WHEEL. AUSTIN C. WHIDDEN, Lancaster, Cal. Filed Oct. 13, 1913. Serial No. 794,860. (Cl. 152—38.)



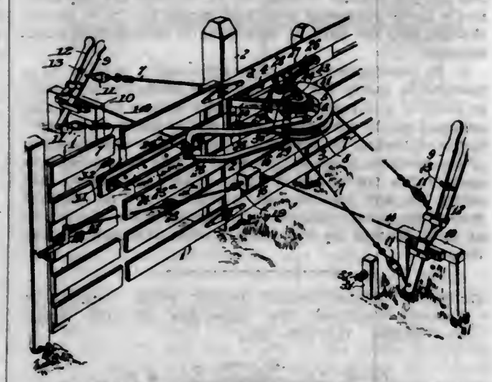
A resilient wheel comprising outer and inner rim members, a plurality of sets of pneumatic devices each comprising a pump cylinder and a spring cylinder arranged one in advance of the other and carried by one of said members, plungers working in said cylinders and engaging the other of said members, each of said pump cylinders being provided with an air inlet and a check valve in said inlet, the pump and spring cylinders of each pneumatic device being connected together and pneumatically disconnected from the other pneumatic device, and a check valve in the pneumatic connection of the pump and spring cylinders of each pneumatic device to allow air to be pumped by the pump cylinder into the corresponding spring cylinder and to be retained in said spring cylinder.

1,111,281. RESILIENT WHEEL. AUSTIN C. WHIDDEN, Lancaster, Cal. Original application filed Oct. 13, 1913, Serial No. 794,860. Divided and this application filed July 13, 1914. Serial No. 850,536. (Cl. 152—48.)



A resilient wheel comprising outer and inner rim members, resilient connections therebetween for resiliently sustaining said inner from said outer member, bars pivotally mounted on said outer member overlapping one another, said bars being longitudinally slotted, a floating pivot engaging in the slots of all said bars, and pins connected to the inner member and having a sliding engagement with the respective bars to provide a resilient connection between said members while allowing lateral movement thereof.

1,111,282. GATE OPENING AND CLOSING MECHANISM. FRANK ZOERKLER, Fryburg, Pa. Filed Aug. 1, 1913. Serial No. 782,401. (Cl. 89—14.)



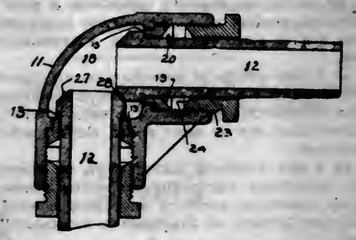
1. In a gate opening and closing mechanism, a fixedly held bracket, a rotatable pulley carried on the bracket and provided with means for connecting with a gate, operating cables connected with the pulley for rotating it in opposite directions, means including a coil spring connected with the bracket and the pulley to assist in the final movement in turning the pulley to open and close the gate and to hold it to its open and closed position, the said means further including a shiftable connection between the spring and the pulley.

2. In a gate opening and closing mechanism, the combination of a horizontally disposed rotatable pulley, a member pivotally connected to the pulley and adapted to be slidably connected to the gate, cables that take around and are made fast to the pulley for imparting reverse motion thereto, a horizontal loop having stop members at the opposite ends fixedly mounted on the rotatable pulley, a spring fixedly secured at one end and having its free end extended over the pulley and provided with a bearing member at the outer end that rides on the loop as the gate moves to the opening or closing direction and engages with the end bearing members of the said loop whereby to hold the gate to its opened and closed position under spring tension.

3. In a gate opening and closing mechanism, a longitudinally extended bail adapted to be mounted on the gate, a horizontally mounted rotatable pulley, brackets projected from the gate framing on which the pulley is mounted, arms secured to the pulley that projects diagonally inward toward the gate, the free end of the arms straddling the bail on the gate and a roller carried between the free ends of the arms for engaging the bail, means operable from the roadway at either side of the gate for rotating the pulley in reverse directions to thereby swing the roller that engages the bail on the gate to open or close the gate, and other means controlled by the reverse movements of the aforesaid pulley for holding the gate to its closed or open positions under spring tension, said other means including a member projected above the pulley and having a curved portion, a spring and a movable connection between said spring and said curved portion, said curved portion having its ends arranged eccentric to the axis of the pulley and adapted to coöperate with said spring to assist in the final opening and closing movement and also serve to retain the gate at either the open or closed position.

4. In a gate closing mechanism, a swingable closure member operating mechanism comprising a rotatable pulley, a movable connection between the pulley and the closure member, a longitudinally extended bail on the closure member with which the traveling connection operates, means for reversely rotating the pulley to thereby swing the gate to its open and closed position, means for holding the closure member to either its closed or open position under spring tension, the said means consisting of a member mounted on the pulley and including a horizontal loop disposed tangentially with respect to the axis of the pulley, a coil spring that extends diagonally over the pulley, one end of which is made fast to the framing on which the closure member is hinged, and a grooved roller on the other end of the spring that engages the loop of the member.

1,111,283. FLEXIBLE METALLIC COUPLING. JOHN R. ALEXANDER, Altoona, Pa. Filed Jan. 22, 1912. Serial No. 672,622. (Cl. 137—34.)



A joint for flexible metallic couplings comprising an elbow casing having angularly related interiorly threaded necks and within said necks being provided with interior annular abutment seats, swivel pipe members loosely arranged within the angularly related necks and provided at their inner end portions with annular shoulders and with relatively broad beveled bearing faces, the said beveled bearing faces of the separate swivel pipe members being arranged in engaging relation, a collar element fitted into each neck and arranged to engage the annular shoulder of the swivel member therein, and an outer packing gland threaded at the outer end portion of each neck.

1,111,284. PLASTIC COMPOSITION. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, East Orange, N. J., a Corporation of New Jersey. Filed Nov. 4, 1910. Serial No. 590,601. (Cl. 106—22.)

1. As a new composition of matter, a tough cohesive product comprising an infusible hard phenolic condensation product in granular form incorporated with and tenaciously bound together by a rubber mass, the granules of the condensation product being thoroughly distributed through the said mass, substantially as described.

2. As a new composition of matter, a tough cohesive product comprising vulcanized rubber having an infusible hard phenolic condensation product in powdered form distributed through the same and tenaciously bound together thereby, substantially as described.

3. As a new composition of matter, a tough cohesive product comprising an elastic gum having distributed therethrough and tenaciously bound together thereby, a hard infusible phenolic condensation product in granular form, substantially as described.

1,111,285. PHENOLIC CONDENSATION PRODUCT AND METHOD OF FORMING SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Original application filed May 14, 1909, Serial No. 496,060. Divided and this application filed June 2, 1911. Serial No. 630,894. (Cl. 106—22.)

1. As a new composition of matter, a solid solution of a phenolic ultimate infusible condensation product and a substance which is practically non-water soluble and non-volatile at room temperatures and which dissolves in such product at an elevated temperature and renders the mass plastic at such temperature, said composition being free from any hydro-halogen acid, substantially as described.

2. As a new composition of matter, a solid body comprising a resinized phenol ultimate reaction product containing a substance which dissolves in such product at an elevated temperature and renders the body plastic at such temperature, the said body being free from any hydro-hologen acid, and infusible and insoluble in alcohol or water, and the said substance being one which is practically non-volatile at room temperatures, whose melting point is substantially lower than its boiling point, and being of such a character and proportion, and so united within said product, as to be substantially incapable of removal from masses of appreciable thickness or size thereof, or by washing the body in comminuted form with water, substantially as described.

3. As a new composition of matter, a solid solution of a phenol formaldehyde ultimate infusible, insoluble condensation product and both water-combining and final product solvent elements, the said composition being free from hydrochloric and other hydro-halogen acids, substantially as described.

4. As a new composition of matter, a solid body, infusible but plastic at a temperature of 350° F., which body is free from any hydro-halogen acid, and comprises a resinized phenol reaction product associated with a stable, non-volatile, non-water-soluble aromatic compound, substantially as described.

5. As a new composition of matter, a solid solution of an ultimate infusible phenolic condensation product and a non-volatile nitronaphtnalene derivative, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,111,286. PROCESS OF PRODUCING INDURATED ARTICLES. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Filed July 14, 1911. Serial No. 638,557. (Cl. 99—12.)

1. The process of indurating porous structures, which consists in first soaking the structure in a solution of hexa-methylene-tetra-amin until the same is impregnated therewith, drying the same free of water, then soaking the structure containing the methylene-amin compound in a solution of a soluble, fusible phenolic condensation product until the same is impregnated therewith, and heating the structure sufficiently to cause a reaction between the said phenolic product and the said hexa-methylene-tetra-amin, and an infusible hard insoluble condensation product accordingly to be formed within the porous structure, substantially as described.

2. The process of indurating porous structures, which consists in determining the quantity of a soluble phenolic condensation product which the structure to be treated will retain upon impregnation therewith from solution, determining the proper quantity of methylene-containing hardening agent for the same, soaking the structure in a solution of the desired hardening agent of such strength and under such conditions as to leave approximately the desired amount of such agent within the pores of the structure, upon drying the same, drying, soaking the structure in the determined solution of the phenolic condensation product, and heating the structure sufficiently to cause a reaction between the said phenolic product and the hardening agent and an infusible, hard insoluble product accordingly to be formed within the porous structure, substantially as described.

3. The process of indurating wood which consists in first soaking the same in a readily-fluid solution of hexa-methylene-tetra-amin until the fiber is impregnated therewith to a desired extent, drying, and then soaking the wood in a solution of a fusible, soluble phenol resin, at a temperature not greater than 210° F., until the same has thoroughly penetrated the structure, and then heat-

ing the wood sufficiently to cause a hardening reaction to take place between the phenol resin and the hexamethylene-tetra-amin within the structure of the wood, substantially as described.

1,111,287. CRESOLIC VARNISH COMPOSITION. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Filed June 12, 1912. Serial No. 703,199. (Cl. 134—26.)

1. A composition of matter comprising a fusible cresol resin which is soluble in all proportions in linseed oil, benzol, turpentine oil, and other varnish oils and hot hydrocarbon oils, substantially as described.

2. A composition of matter comprising a fusible cresol-formaldehyde condensation product having a melting point of from 140° F. to 170° F. and which is soluble in all proportions in linseed oil and turpentine oil, substantially as described.

3. A composition of matter comprising a fusible cresol resin, which is soluble in all proportions in turpentine, linseed oil, Chinese wood oil, and benzol, and which is unchangeable into an infusible product by heating at any temperature less than that of its decomposition, substantially as described.

4. A composition of matter comprising a fusible anhydrous cresol resin, which is unchangeable into an infusible product by heating at any temperature less than that of its decomposition, and is soluble in all proportions in turpentine oil, benzol, linseed oil, Chinese wood oil, and mono-chloro-naphthalene, substantially as described.

5. A composition of matter comprising a fusible cresol resin, a methylene-containing hardening agent therefor, and a solvent for the said ingredients comprising mono-chloro-naphthalene, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,111,288. PRODUCTION OF PLASTIC SUBSTANCES. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Filed Aug. 4, 1913. Serial No. 782,942. (Cl. 106—22.)

1. The process of forming a plastic substance which comprises mixing together phenol, formaldehyde, water and an alkaline earth metal oxid, causing a reaction between the phenol and formaldehyde to form a phenol-alcohol in water solution, neutralizing the solution to precipitate a non-water-soluble salt of the alkaline earth metal, and drying the mass.

2. In a process of forming a plastic substance which comprises the formation of a water-soluble product by causing phenol and a methylene-containing substance to react in the presence of an alkaline earth metal oxid, the steps which consist in neutralizing the said oxid, after the water-soluble product is formed, with a suitable mineral acid to precipitate a non-water-soluble electrically insulating salt, and drying the mass.

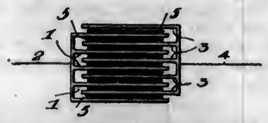
3. The process of forming a plastic substance which comprises causing phenol and formaldehyde to react in the presence of a substantial amount of an alkaline earth metal oxid and water to form a water-soluble product containing phenol alcohols, neutralizing the solution with a mineral acid which will form a water-insoluble insulating compound with the alkaline earth, and precipitate said compound out of the solution, and drying the mass.

4. The process of forming a plastic substance which comprises causing phenol and formaldehyde to react in the presence of a substantial amount of calcium hydrate to form a water-soluble product, neutralizing with carbonic acid and thereby precipitating calcium carbonate from the solution and drying the mass.

5. In a process of forming a plastic substance which comprises causing phenol and formaldehyde to react in the presence of a substantial amount of calcium hydrate to form a water-soluble product, the steps of neutralizing the said hydrate with carbonic acid and thereby precipitating calcium carbonate from the solution and separating the solution from the calcium carbonate by filtration.

[Claims 6 to 14 not printed in the Gazette.]

1,111,289. ELECTRICAL CONDENSER. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Halogen Products Company, Glen Ridge, N. J., a Corporation of New Jersey. Filed Nov. 8, 1913. Serial No. 799,932. (Cl. 250—41.)



1. As a new article of manufacture, an electrical condenser comprising electrically-conducting members separated by insulating members comprising a solid halogen substitution product of a carbo-cyclic hydrocarbon containing one or more closed chains, substantially as described.

2. As a new article of manufacture, an electrical condenser in which the dielectric employed comprises a solid halogen substitution product of a carbo-cyclic hydrocarbon containing one or more closed chains, substantially as described.

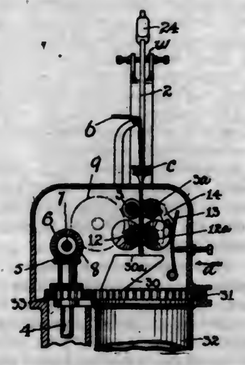
3. As a new article of manufacture, an electrical condenser comprising electrically-conducting members separated by insulating members comprising a solid halogen substitution product of naphthalene, substantially as described.

4. As a new article of manufacture, an electrical condenser comprising electrically-conducting members separated by insulating members comprising a solid halogen substitution product of naphthalene, associated with ortho-cresol resin, substantially as described.

5. As a new article of manufacture, an electrical condenser in which the dielectric employed comprises a solid halogen substitution product of a carbocyclic hydrocarbon containing one or more closed chains, compounded with a small percentage of a phenolic resin miscible therewith, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,111,290. MECHANISM FOR EVENING FIBROUS SLIVERS. ALBERT BIACH and WALTER HAMER, Bolton, England, assignors, by direct and mesne assignments, to Dobson and Barlow Limited, Bolton, England. Filed Nov. 18, 1911, Serial No. 661,062. Renewed May 8, 1914. Serial No. 837,293. (Cl. 118—7.)



1. Mechanism for evening fibrous slivers, comprising drawing rolls including a pair of co-acting tapering or conical rolls, means for actuating said rolls continuously at the same rate of speed, a sliver guide, and means for automatically shifting said guide in a direction substantially parallel to the nip of the rolls under the influence of variations in the thickness of the sliver to direct thicker portions to the larger ends of the rolls and smaller portions to the lesser ends of the rolls.

2. Mechanism for evening fibrous slivers, comprising drawing rolls including a pair of co-acting tapering or conical rolls, means for actuating said rolls continuously at the same rate of speed, a lever pivoted to swing substantially in the plane of the nip of the rolls, and a sliver guide directly carried by said lever to move in the same plane therewith, said lever having a counterbalancing device tending to move the guide toward the smaller ends of the rolls.

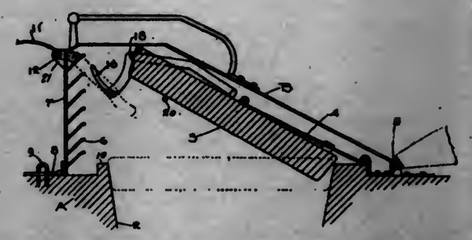
3. Mechanism for evening fibrous slivers, comprising drawing rolls including a pair of co-acting tapering or conical rolls, means for actuating said rolls continuously at the same rate of speed, a lever pivoted to swing substantially in the plane of the nip of the rolls, and a sliver guide directly carried by said lever to move in the same plane therewith, said lever having a counterbalance weight 24 and a pendant arm 25 for the purpose described.

1,111,291. DOOR-CHECK. ALBERT BLIST, Los Angeles, Cal. Filed June 22, 1914. Serial No. 846,704. (Cl. 70—119.)

1. A door check including a frame, a rod on the frame, a spring-pressed inclined plate pivotally mounted on the rod and provided with an extension having slots therein, a second rod on the frame, a third rod passing through said slots, a curved plate mounted on the third rod and disposed in contact with the second rod, and a coil spring arranged on the third rod and having one end portion thereof secured to the curved plate and having the other end portion thereof bearing against said extension.

2. A door check comprising a frame, a rod on the frame, an inclined plate having one end thereof pivotally mounted on the rod and provided with a substantially inverted-U-shaped extension having ears thereon, said ears provided with slots, a second rod on the frame, a coil spring arranged on the second rod and having one end portion thereof in contact with the frame and having the other end portion thereof bearing against said extension, a third rod mounted on the frame, a fourth rod passing through said slots, a curved plate mounted on the fourth rod and disposed in contact with the third rod, and a coil spring arranged on the fourth rod and having one end portion thereof secured to the curved plate and having the other end portion thereof bearing against said extension.

1,111,292. VENTILATING-HOOD. GEBHARD C. BOHN, St. Paul, Minn. Filed Jan. 3, 1912. Serial No. 669,284. (Cl. 62—12.)

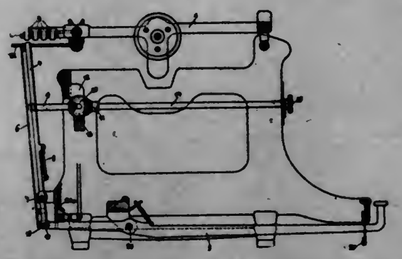


1. In combination with a refrigerator car formed with an opening in its roof, a plug movably fitted to said opening, a ventilating hood covering said opening, a combination deflector plate and indicator pivotally mounted outside the front wall of said hood, and means actuatable from said plug when the same is carried into open position to turn said plate for the purpose set forth.

2. In combination with a refrigerator car having an opening in its roof at one end, a hood covering said opening and having inlet ports in its front wall, a plug fitted to said opening, a deflecting indicator pivotally supported in front of said hood above said ports, and means controlled from the plug when the same is turned in open position to actuate said deflecting indicator for the purpose set forth.

3. In combination with a refrigerator car having an opening in its roof toward one end, a hood covering the same movably supported upon the car roof, a plug fitted to said opening and having hinge connection with said car roof, an indicator movably supported outside the front wall of said hood, and actuating arms connected with said indicator and extending inwardly above said plug but unconnected therewith for the purpose set forth.

1,111,293. TABULATOR FOR TYPE-WRITERS. THEODOR EUGEN BUSCHMANN, Chemnitz, Germany, assignor to The Firm of Wanderer Werke vorm. Winklhofer & Jaenicke Akt.-Ges., Schönau, near Chemnitz, Germany. Filed Nov. 22, 1913. Serial No. 802,575. (Cl. 197—177.)



1. In a tabulating device for typewriters, the combination with a plurality of carrying bars, tabulator stops, stop bars, and a casing containing the stop bars; of a crank disk, rotatable means operable to the right or to the left from the front of the typewriter for rotating said crank disk, a connecting link between the crank disk and casing whereby a predetermined rotational movement of the crank disk adjusts the casing to position the stop bars relatively to the tabulator stops.

2. In a tabulating device for typewriters, the combination wtih a plurality of carrying bars, tabulator stops, stop bars, and a casing containing the stop bars; of a shaft, a notched crank disk at one end thereof, a spring-pressed detent for engaging the notches in the crank disk, a bevel gear wheel on said shaft, an operating shaft, a bevel gear wheel thereon in mesh with the gear wheel on the first mentioned shaft, a knob at the front of the typewriter on the end of the operating shaft for turning the shaft to the right or to the left, a pointer on the operating shaft, an indicator scale for the pointer, and a connecting link between the crank disk and stop bar casing whereby a predetermined rotational movement of the crank disk adjusts the casing to position the stop bars to a predetermined position relatively to the tabulator stops, for the purpose described.

1,111,294. BOTTLE-STOPPER. WILLIAM M. CAMP, Pawtucket, R. I. Filed Aug. 16, 1912. Serial No. 715,448. (Cl. 215—20.)

1. A bottle closure including a cap, an expansible clamping member having one end provided with a hook and an intermediate portion thereof formed with a loop having an extension terminating in an angularly disposed lug constituting a keeper, means carried by the clamping member and adapted to extend across the mouth of a bottle, and a locking lever pivotally mounted on the

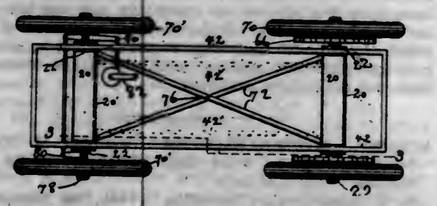
loop and having one portion thereof adapted to engage the hook and another portion thereof movable into engagement with the keeper for clamping said member in contact with the neck of the bottle.

2. As a new article of manufacture, a bottle closure, including a cap, a clamping ring having means for engagement with the mouth of a bottle and formed of a single length of wire having one end thereof bent to form a hook, that portion of the wire opposite the hook being bent to produce a loop and thence extended downwardly and laterally to form an arm terminating in an angularly disposed lug constituting a keeper, and a locking lever having one end thereof pivotally mounted on the loop and provided with a curved portion adapted to engage the hook and draw the two ends of the ring together when the free end of the lever is moved into engagement with the keeper.

3. A cap securing device for bottles including a cap formed with an annular groove, a locking member comprising a strand bent to partially embrace the cap and disposed within the groove of the same, one terminal of said member being bent upon itself to form a loop, the other terminal of said member being bent upon itself and extending beyond the bent portion, the terminal of the extension being disposed at right angles to its body portion, a locking bail embracing the looped portion of said other terminal and extending through the loop of the first mentioned terminal, said locking member being disposed to draw the terminals together and be maintained against movement by the extension of the second-mentioned terminal.

4. A cap supporting device for bottles including a cap formed with an annular groove, the material from which the cap is formed adjacent said groove being resilient, a clamping member comprising a strand of resilient material bent to embrace the cap and disposed within the groove formed therein, one terminal of the said strand being looped, the other terminal of the strand being bent to produce a loop and a straight portion, the terminal of which is disposed at right angles to its body portion, a locking bail embracing the loop of the second-mentioned terminal, said locking bail being disposed to draw the terminals of the clamping member together, the second mentioned terminal of the clamping member holding the locking bail against movement after said terminals have been drawn together.

1,111,295. AUTOMOBILE. LE VERT CLARK, Detroit, Mich. Filed July 26, 1911. Serial No. 640,592. (Cl. 21—90.)



1. In an automobile, a unit, having in combination a prismatic casing or housing portion; a shaft extending longitudinally through and longer than the casing so as to allow suitable connections, outside the casing, to be made on each end of the shaft, with parts coöperating therewith; resilient elements called load springs, inside the casing, carrying the weight; opposing elements, on the other side of the shaft, limiting the rebound of shaft and casing when oscillating relatively to each other in an approximately vertical relation and not otherwise oscillatory radial to said shaft; means operatively connecting the casing to the casing of a substantially similar unit in the same vertical plane, forming a truck member; and means to couple said casing to another truck member, having a pair of units in similar relation, in the same vehicle frame; the shafts of the upper units being connected together by sills on which the vehicle-body rests; together constituting the entire vehicle frame.

2. In an automobile, a unit, having in combination a casing; a shaft extending longitudinally through and longer than the casing; resilient members called load springs, inside the casing operatively supporting the weight; resilient auxiliary members modifying and reinforcing the other load springs on the same side of the shaft and operatively assisting in carrying the weight, only when the casing and shaft are under relatively greater stress than ordinary; opposing elements on the other side of the shaft limiting the rebound of shaft and casing when oscillating relatively to each other; and means to operatively connect said unit to other suitable portions of the frame; together constituting integral parts of the running gear.

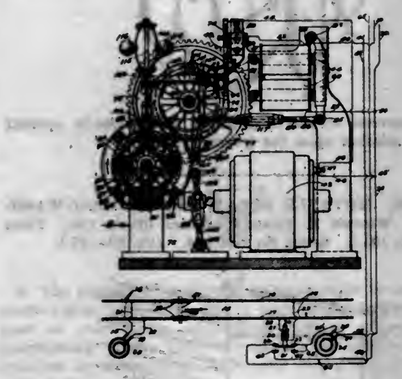
3. In an automobile, a truck having in combination a unit characterized by having a shaft, of a length approximately the width of the vehicle at the place where used; a casing, somewhat shorter than the shaft, through which the shaft extends normally parallel with the long axis of the casing; closures on the ends of the casing through which the shaft freely protrudes, permitting transverse oscillation relatively between the casing and shaft; springs, inside the casing on one side of the shaft, operative, only vertically in service, between the casing and the horizontal plane in which lies the shaft, resiliently sustaining the weight of the vehicle chassis, body and its load, respectively as may be required; opposing buffers, inside the casing on the other side of the said plane, to counter-balance the springs by lessening the shock on rebound during the oscillation of shaft and casing relatively to each other; means for operatively connecting the casing of the unit to the casing of a substantially similar unit; a pair of vehicle ground wheels operatively connected to said shaft; and vehicle body sills operatively connected to said casing.

4. An automobile having in combination two truck members each having a pair of units in horizontal planes one above the other and operatively connected together; each unit being characterized by having a shaft, of a length approximating the width of the vehicle at the place where used; a casing, somewhat shorter than the shaft, through which the shaft extends normally parallel with the long axis of the casing; closures on the ends of the casing through which the shaft freely protrudes permitting transverse oscillation relatively between the casing and shaft; springs, inside the casing on one side of the shaft, operative, only vertically in service, between the casing and the said plane, in which lies the shaft, resiliently sustaining the weight of the vehicle chassis, body and its load, respectively as may be required; oposing buffers inside the casing on the other side of the plane in which lies the shaft, to counter-balance the springs by lessening the shock on rebound during the oscillation of shaft and casing relatively to each other; means for attaching other coöperative parts of the vehicle to the said unit; a pair of vehicle ground wheels operatively connected to each of the lower shafts; a vehicle body operatively connected to the upper shafts; substantially as described.

5. In an automobile, a truck having in combination an axle shaft; a casing, somewhat shorter than the shaft, through which the shaft extends, normally parallel with the long axis of the casing; means for ataching other coöperating parts of the vehicle to the casing and its shaft respectively; a pair of vehicle ground wheels operatively connected to said shaft; distance rods forming two sides of a triangle of which one side of the casing forms the third side, the base; a plurality of which triangles together provide means for holding a counter-shaft at the apex of the triangle; the countershaft, triangles and casing side together constituting coupling members used in joining the truck to another truck in the same frame.

[Claims 6 to 9 not printed in the Gazette.]

1,111,296. ELECTRICAL BLOCK-SIGNALING MECHANISM. WILLIAM J. COOK and MARTIN W. BREUER, Denver, Colo., assignors to The Cook Railway Signal Company, Denver, Colo., a Corporation of Colorado. Filed Jan. 17, 1912. Serial No. 671,687. (Cl. 246—34.)



1. The combination with a semaphore arm, of mechanism for controlling said semaphore arm consisting of a motor, a gear connected in operative relation with the said motor but incapable of transmitting motion thereto, a revolubly mounted shaft to which the said gear is made fast, an internal gear wheel journaled upon the said shaft, a sleeve also journaled upon the said shaft, planetary gears connected with the said sleeve and adapted to mesh with the teeth of the internal gear wheel, another gear made fast to the shaft and also meshing with the said planetary gears, a pinion mounted upon the said sleeve and connected in operative relation with the semaphore arm, a brake band applied to the aforesaid internal gear, electromagnet means connected in operative relation with the said brake band for preventing movement of the internal gear wheel when the said electro-magnetic means is energized and for releasing the said brake band from frictional engagement with the said internal gear wheel when the said electro-magnetic means is deënergized, whereby the semaphore arm is allowed to drop to the danger position, and means connected in operative relation with the aforesaid internal gear wheel and adapted to act upon the brake band for controlling the downward movement of the semaphore arm, substantially as described.

2. In railway signaling apparatus, the combination with a signal, of mechanism for controlling said signal, comprising a motor and brake, and means controlled by said motor and brake in operative relation with the signal to move the latter to the safety position, said means being also controlled by the brake for retarding the movement of the signal to the danger position, electro-magnetic means which when energized applies said brake for supporting the signal in the safety position and which when deënergized allows the signal to move to the danger position, a governor connected in operative relation with the signal and adapted to be actuated by movement of the signal to the danger position, and a connection between the brake and the governor adapted to be acted upon by the governor to apply the brake for retarding the rapid movement of the signal to the danger position.

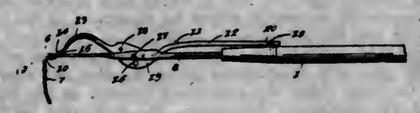
3. In railway signaling mechanism the combination of a signal means for actuating the signal to cause it to assume the safe position, comprising a motor, a shaft connected to be revolved by the said motor but incapable of transmitting motion thereto, a member journaled upon the said shaft, planetary gears carried by the said member, a gear made fast to the shaft and an internal gear wheel journaled upon the shaft, the planetary gears being interposed between the said gear which is made fast to the shaft and the internal gear wheel, an operative connection between the member journaled upon the said shaft and the signal whereby when the shaft is revolved the gear, made fast to the said shaft, is actuated to cause the planetary gear to travel around its orbit when the internal gear wheel is held against movement, and operate the connection between the said member and the signal to move the latter to the safety position, a brake applied to the internal gear wheel, and electromagnetic means which when energized applies the said brake to prevent movement of the said internal gear wheel for maintaining the signal in the safety position. The said electromagnetic means releasing the brake when deënergized to permit the signal to move to the danger position, and a connection between the said brake and the internal gear wheel for applying the brake independent of the electro-magnetic means to retard the rapid movement of the signal to the danger position, substantially as described.

4. In signal mechanism, the combination with a signal, of mechanism for controlling said signal, comprising a motor and brake, and means controlled by said motor and brake in operative relation with said signal and adapted to move the later to the safety position, said means being also controlled by the brake for retarding the movement of the signal to the danger position, a governor connected in operative relation with said signal and adapted to be actuated by the movement of said signal to the danger position, and a toggle connection between the brake and the governor adapted to be acted upon by the governor to apply the brake for retarding the rapid movement of the signal to the danger position.

5. In signal mechanism, the combination with a signal, of mechanism for controlling the said signal, comprising a motor and brake, and means controlled by said motor and brake and in operative relation with the said signal to move the latter to the safety position, said means being also controlled by the brake for retarding the movement of the signal to the danger position, an electro-magnet, a connection between the said electro-magnet and the brake for applying the brake when the electro-magnet is energized and for releasing the said brake when the electro-magnet is deënergized, a governor connected to be operated by the movement of the signal to the danger position, and a connection between the brake and the governor adapted to be acted upon by the governor to apply the brake independently of the electro-magnet for retarding the movement of the signal to the danger position.

[Claims 6 to 16 not printed in the Gazette.]

1,111,297. RAKE-CLEANER. JAMES COYLE, Tremont, Pa. Filed May 20, 1914. Serial No. 839,846. (Cl. 55—146.)



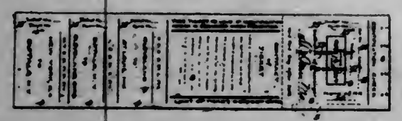
1. The combination with a rake comprising a handle, a head and teeth on the head of a stripping bar having a plurality of teeth receiving apertures therein slidable on said teeth, an operating rod comprising a relatively straight handle portion, a flattened enlarged portion centrally of the ends of the rod and having a curved slot therein and divergent curved and downwardly extended arms at the end of the rod opposite to the handle, said arms being connected with the stripping bar, a pin pivotally connecting the bar with the handle being slidable within the slot in the flattened portion and a transverse pin projecting from either side of the flattened portion

forwardly of and above the pivot to engage the handle of the rake to limit the downward movement of the stripping bar.

2. A rake cleaner comprising a stripping bar having a plurality of teeth receiving apertures therein, an operating rod for the bar comprising a relatively straight handle portion at one end, a flattened enlarged portion intermediate its ends and divergent curved and downwardly extending arm portions at the other end, said arm portions being operatively connected with the stripping bar, said flattened portion being pivoted to a rake handle and provided with a curved slot to receive the pivot pin and means carried by the flattened portion to engage the rake handle to limit the downward movement of the stripping bar.

3. A rake cleaner comprising a stripping bar having a plurality of teeth receiving apertures therein, an operating rod for the bar comprising a relatively straight handle portion at one end, a flattened enlarged portion intermediate its ends and divergent curved and downwardly extending arm portions at the other end, said arm portions being operatively connected with the stripping bar, said flattened portion being pivoted to a rake handle and provided with a curved slot to receive the pivot pin, means carried by the flattened portion to engage the rake handle to limit the downward movement of the stripping bar, and means to hold the stripping bar in normal position in engagement with the head of the rake comprising a hook carried by the rake handle arranged to fit within a transverse groove adjacent the outer end of the handle portion of the operating rod.

1,111,298. RAILROAD-TICKET. ROBERT E. CROWLEY, Galion, Ohio. Filed Dec. 7, 1909. Serial No. 531,859. (Cl. 11—15.)

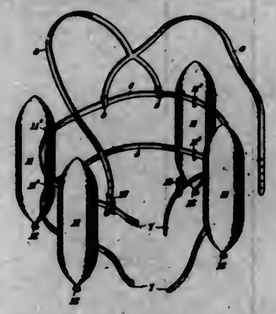


1. A railroad ticket comprising a body portion bearing a contract form, a detachable destination stub connected to one end of the body portion, a detachable identification check connected with the other end of the body portion and provided on one face with designations giving the date and number of the train ticket and passenger's destination, and having on its outer face a rebate form, the said body portion, destination stub, and identification check each bearing identical identification means.

2. A railroad ticket comprising a body portion bearing a contract form and an appropriately designated space for the passenger's signature to be affixed at the time of purchase, destination stubs connected to one end of the body portion, and an initially unsigned identification check detachably connected with the other end of the body portion and bearing upon one face a rebate form provided with appropriately designated spaces for signatures of the conductor and the passenger to constitute an excess fare rebate check, said identification check being provided on its other face with designations giving the date and number of the train ticket, the passenger's location on the train, and the passenger's destination, the said body portion, destination stubs, and identification check each bearing identical identification means.

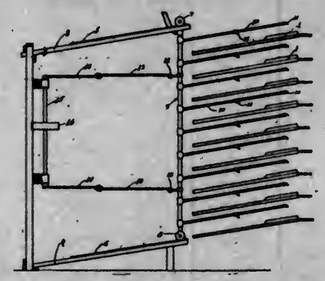
1,111,299. LIFE-PRESERVER. LOUIS CYWAR, Elizabeth, N. J. Filed May 20, 1914. Serial No. 839,783. (Cl. 9—17.)

In a life preserver, a body harness, said body harness comprising a pair of transverse straps provided with detachable connections at their ends, a pair of shoulder straps permanently connected at their rear ends to the upper strap and detachably-connected at their forward ends to said upper strap, and buoyant tanks each provided on its inner side with vertically-alined staples alined with



said transverse straps to maintain said tanks in upright parallel relation upon the wearer's body.

1,111,300. MOVABLE SPRAY FOR MINERAL-WASHING. WILTON E. DARROW, Sutter Creek, Cal. Filed Apr. 2, 1914. Serial No. 828,964. (Cl. 83—87.)



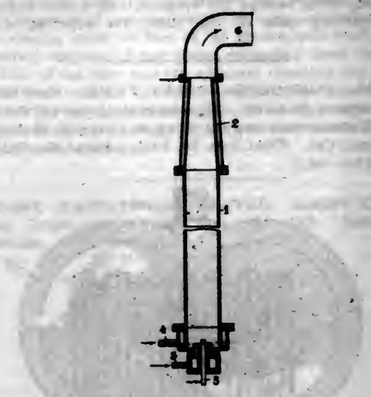
1. A device of the character described comprising the combination of a series of rotating concentrating tables, a plurality of tracks located outside of the series of tables radially with respect to said series of tables and parallel with the closest tables, a supply pipe supported for travel upon said tracks, spray pipes communicating with said supply pipe and projecting over said tables, and means for reciprocating the supply and spray pipes upon said tracks, as described.

2. A device of the character described comprising the combination of a series of rotating concentrating tables, a plurality of tracks located outside the series of tables radially with respect to said series of tables, a supply pipe supported for travel upon said tracks, spray pipes communicating with said supply pipes and projecting over said tables, and means for reciprocating the supply and spray pipes upon said tracks, as described.

1,111,301. PROCESS OF CARRYING OUT CHEMICAL REACTIONS IN GASES BY MEANS OF ELECTRIC ARCS. EMIL EDWIN, MAX HÄHNLE, and BRUNO STRASSER, Ludwigshafen-on-the-Rhine, Germany, assignors to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed July 3, 1913. Serial No. 777,223. (Cl. 204—31.)

1. The process of carrying out chemical reactions in gases by means of electric arcs, which consists in maintaining in the actual zone of reaction an atmosphere of a gas mixture in which the components are present in proportions specially favorable for the reaction in question, and maintaining in the space outside of the actual zone of reaction, a gas atmosphere of a less favorable but more readily obtainable composition.

2. The process of carrying out chemical reactions in gases by means of electric arcs, which consists in introducing into the actual zone of reaction a gas which produces a specially favorable atmosphere while passing in the space outside the reaction zone a less favorable but more readily obtainable gas mixture of another composition than the gas in the actual zone of reaction.



3. The process of producing nitrogen oxids by means of electric arcs, which consists in maintaining in the actual zone of reaction an atmosphere rich in oxygen while maintaining in the space outside of the actual zone of reaction an atmosphere principally consisting of atmospheric air.

4. The process of carrying out chemical reactions in gases by means of long stable electric arcs, which consists in introducing gases of a composition specially favorable for the reaction in question in a direction principally parallel to the arc itself while a less favorable gas mixture of another composition is led with a whirling motion in the space surrounding the actual zone of reaction.

1,111,302. WOOD-PRESERVATIVE. JAMES C. FITZSIMMONS, San Francisco, Cal. Filed June 28, 1913. Serial No. 775,314. (Cl. 99—12.)

1. A wood preservative consisting of a mixture of heavy mineral oil and cresol.

2. A wood preservative consisting of a mixture of oil of asphaltum base of approximately 14° Baumé with approximately 10 per cent. of cresol.

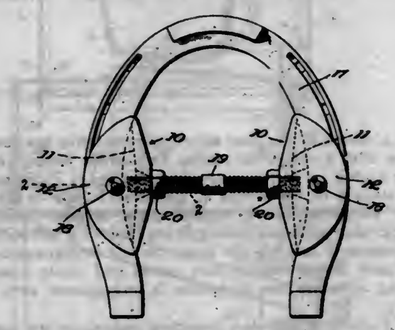
3. A wood preservative consisting of a mixture of oil of asphaltum base of approximately 14° Baumé with approximately 10 per cent. of cresol and having a boiling point of about 200° centigrade.

4. A wood preservative consisting of a mixture of heavy mineral oil having a specific gravity approximately .98 and cresol having substantially the same specific gravity.

1,111,303. HORSESHOE ATTACHMENT. WILLIAM FLEET, Long Branch, N. J. Filed Jan. 20, 1912. Serial No. 672,387. (Cl. 168—30.)

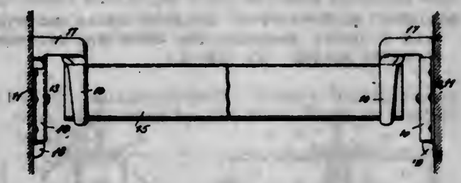
1. An attachment for horseshoes including co-acting clips adapted to be adapted to opposite sides of the shoe, each of said clips including spaced upper and lower walls, and a connecting wall between the upper and lower walls, said connecting wall being curved to oppose the curvature of the adjacent edge of the horseshoe whereby the terminals of the connecting wall will alone engage the edge of the shoe, a screw rod interposed between the clips and having its terminals insertible through the connecting wall thereof into the space defined by the inner faces of the connecting walls and the adjacent edges of the shoe, and independently operable nuts threaded on the screw rod and bearing against the outer faces of the connecting walls.

2. An attachment for horseshoes including co-acting clips adapted to be applied to opposite sides of the shoe, each of said clips including spaced upper and lower walls, and a connecting wall integral with the upper and lower walls, said connecting wall being curved to oppose the curvature of the adjacent edge of the horseshoe whereby the terminal edges of the connecting wall will alone engage the shoe, each of said connecting walls being provided at an approximate central point with a substantially conical aperture, a screw rod interposed between the clips and having its terminals insertible through the conical apertures thereof and into the space which is



included between the inner faces of the connecting walls and the adjacent edges of the shoe, the outer face of each connecting wall having a flat central portion which lies in a plane at right angles to the axis of the conical aperture, those portions of the outer face of each connecting wall which lie between the flattened portions and the terminals of the clips extending at an angle to the flattened portions, and nuts threaded on the screw rod and engageable against the flattened portions of the outer faces of the connecting rod.

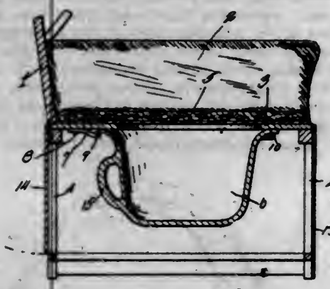
1,111,304. WARDROBE-FIXTURE. JAMES FORRESTER, New York, N. Y. Filed June 21, 1913. Serial No. 775,025. (Cl. 45—37.)



1. In a device of the character set forth, the combination of a pair of socket pieces 10, a pole extending loosely directly between said socket pieces and in the same vertical plane thereof, and a pair of U-shaped brackets 17 having loops 16 parallel to the socket pieces and adapted to receive and support the ends of said pole adjacent the socket pieces and also having shanks 18 parallel to said loops and adapted to be received in said socket pieces.

2. The combination of a plurality of socket pieces arranged in substantially the same horizontal plane, a pole extending between two of said socket pieces, a pair of U-shaped brackets supporting the ends of said pole, each of said brackets having a loop conforming to the end of the pole supported thereby and also having a shank opposite the end of the pole and seated in the adjacent socket piece, an auxiliary pole in the same horizontal plane as the first mentioned pole and arranged at an angle thereto, a loop on the first mentioned pole supporting one end of the auxiliary pole, and a bracket supporting the other end of the auxiliary pole and seated in the third socket piece.

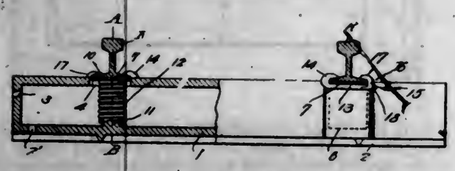
1,111,305. NURSERY-CHAIR. ERNEST CHARLES GLOSENSKY, Coldwater, Mich. Filed May 8, 1914. Serial No. 837,243. (Cl. 4—32.)



1. A device of the class described comprising the combination with a receptacle having an annular flange, and a chair having an apertured seat; or stationary clamp members secured to the bottom of said seat, a pair of spaced guide members, and a curved spring slidably engaged through said guide members and engaged with the body of the receptacle to force the flange thereof into engagement with said clamp member, said spring and clamp member serving to retain the receptacle in engagement with the seat.

2. A device of the class described comprising the combination with a chair having apertured seat; of a pair of stationary clamp members secured upon the lower face of said seat to one side of the aperture thereof for engagement over the annular flange of a receptacle, a pair of spaced guide members, and a curved spring member engaged through said guide members and adapted for engagement with the body of the receptacle to force the opposite portion of the flange thereof beneath the clamp members and cooperate with said clamp members to retain the receptacle in engagement with the under face of the seat around the aperture thereof, said curved spring member having its opposite ends turned at an angle to form stops to prevent the spring member from being withdrawn from the guide members and also limit the movement of the main portion of said spring member in one direction.

1,111,306. RAILWAY-TIE. JAMES E. HENRY and WILLIAM J. HENRY, Reedsville, Pa. Filed May 25, 1914. Serial No. 840,903. (Cl. 238—5.)

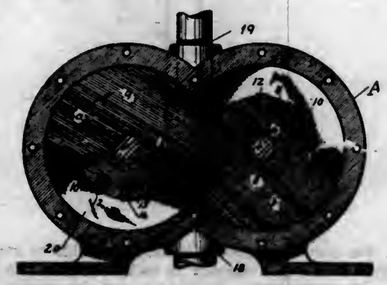


1. A metallic railway tie having openings in the top thereof, there being guide pockets in the walls of the tie at the ends of the openings, a rail supporting chair movable downwardly into each opening, means extending from each chair and slidably mounted within the adjacent pocket, a cushioning element within the tie and under each chair, and means for fastening a rail to the chair.

2. The combination with a hollow metallic railway tie having openings in the top thereof extending throughout the width of the tie, of a chair movable downwardly into each of the openings, there being pockets in the walls of the tie adjacent the ends of the openings, tongues depending from the chairs and slidably mounted in the openings, cushioning means seated within the tie and under and supporting the chairs, and means for fastening rails to the chairs.

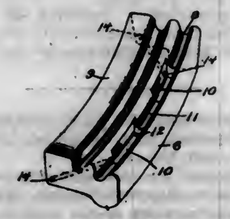
3. The combination with a hollow metallic railway tie having transverse openings in the top thereof, of a chair movable downwardly into each of the openings, tongues depending from the chair, there being pockets in the walls of the tie for the reception of the tongues, a cushioning element within the tie and under each of the chairs for supporting said chairs in raised positions, a rail engaging flange along the outer side of each chair, the ends of the chair projecting beyond the tongues, and means engaging the projecting ends of the chair for securing a rail thereto.

1,111,307. COMPOUND ROTARY PUMP. CHARLES E. HULTGREEN, Oakland, Cal., assignor of one-third to Albert Hammarberg and one-third to Frank F. Hultgreen, Oakland, Cal. Filed July 30, 1913. Serial No. 781,093. (Cl. 103—44.)



In a pump, a casing having an inlet and an outlet, a pair of pistons in the casing, each of said pistons having a smooth uninterrupted large peripheral portion and a substantially semi-circular reduced peripheral portion which forms a single pair of abutments that are peripherally-curved and have concave bases on their inner sides which merge into the peripheries of the reduced portions whereby the outer curved side portion of the abutment of one piston will snugly fit in the concavity at the inner side of the corresponding abutment on the other piston, and a series of packing bars extending across the reduced peripheral portions of each of the pistons, the outermost packing bars being located at the points of juncture of the concave portions of the inner sides of the abutments with said reduced piston portions so as to contact with the adjacent end portion of the larger peripheral portion of the other piston before the abutments are engaged and before they are disengaged from each other.

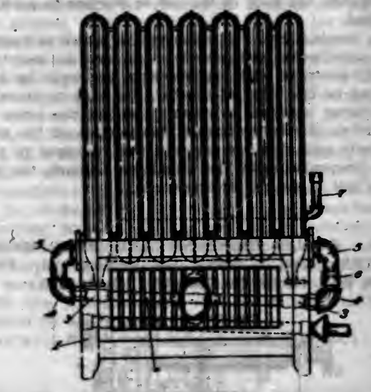
1,111,308. FLANGE-LUBRICATOR FOR RAILROAD-CARS. IRA KINCAID, MARK A. FOOTE, and WARREN H. NEUREITHER, Chicago, Ill. Filed Jan. 23, 1912. Serial No. 672,880. (Cl. 184—3.)



1. A brake shoe for locomotive and car wheels having a flange groove extending longitudinally thereof, and a wheel tread-engaging face, said shoe being formed with a plurality of pockets disposed immediately behind the flange groove and opening thereinto, said pockets being as wide as the width of the flange groove and extending into the shoe to the back wall thereof, said pockets being disposed in superposed spaced relation to each other and separated by an integral web, said pockets extending behind the web at the face of the shoe and being connected by a duct extending through the web, the opposite ends of the shoe being formed with filling ducts disposed at the rear end of the shoe immediately in front of the back thereof, said ducts each extending at an inclination from the adjacent end of the shoe toward the middle of the shoe and into the outer rear corners of the respective pockets.

2. A brake shoe for locomotive car wheels having a flange groove and communicant lubricant containing chambers opening upon the face of the groove, said shoe having oppositely disposed filling ducts extending from the outer side face of the shoe into the adjacent chamber and located one at each end of the shoe, whereby the shoe may be inverted for application to either left or right side wheels without effecting a change in the relation of the ducts to the lubricant chambers.

1,111,309. RADIATOR-SUBHEATER. ALBERT KINDLER, San Diego, Cal. Filed Aug. 25, 1913. Serial No. 786,449. (Cl. 237—17.)



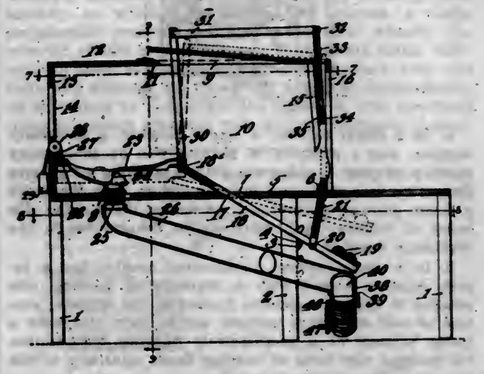
1. A sub-heater for steam radiators comprising a rectangularly shaped support adapted to inclose the lower end of an ordinary steam radiator, means therein for supporting said steam radiator on its legs, a pipe manifold mounted in said sub-heater so that when the radiator is mounted therein said manifold is directly below said radiator, means for connecting the ends of said pipe manifold with the opposite ends of the steam radiator and means mounted below and adjacent to said manifold for heating the same.

2. A sub-heater for ordinary steam radiators comprising a rectangularly shaped support adapted to inclose a portion of the lower end of a radiator so that said radiator may be readily removed therefrom, means mounted therein for supporting the legs of said steam radiator, a pipe manifold mounted in said support at an angle thereto, means for connecting the ends of said pipe manifold with the opposite ends of said radiator and a gas burner mounted below and adjacent to said manifold and parallel thereto.

3. In combination with an ordinary steam radiator, a sub-heater comprising a rectangularly shaped support adapted to inclose a portion of the lower end of said ordinary steam radiator so that said radiator may be readily removed therefrom, a means mounted therein for supporting said legs of said radiator, a pipe manifold mounted therein, means for connecting the ends of said pipe manifold with the opposite ends of said radiator, a gas burner mounted below and adjacent to said manifold adapted for heating said manifold, a grate in the front of said sub-heater and vent means on the top and back side thereof.

4. In a device of the class described the combination of a rectangularly shaped support provided with oblong holes in its upper surface adapted for the insertion of the lower end of an ordinary steam radiator therein, means in said support for supporting the legs of said steam radiator, a pipe manifold mounted therein longitudinally thereof, means for connecting the opposite ends of said manifold with the opposite ends of said steam radiator when in position therein, a pipe gas burner mounted beneath said manifold in said support adjacent thereto, a grate in the front of said support and a vent in the upper end and back side thereof.

1,111,310. HEN'S NEST. JAMES A. LEIGHTON, Esterwood, La., assignor of one-half to Wiley Greenly Sweezy, Crowley, La. Filed May 31, 1912. Serial No. 700,765. (Cl. 119—47.)

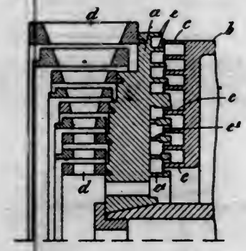


A hen's nest, having a casing, a vertically movable nest disposed therein, a lever pivoted in the casing and having its upper end disposed to engage the under forward edge of the nest, a weight upon the lower end of the lever for normally holding the forward edge of the nest elevated, a weight connected to the rear end of the nest for coacting with the weighted lever to elevate and hold the complete nest in the same plane, a lower door pivoted to the lever adjacent the weighted end thereof and disposed to be moved upwardly into closing position, an upper door mounted to move to and from the lower door, and means connected to the upper door and to the forward edge of the nest, whereby when the nest is occupied, the two doors are moved toward each other, said doors separating when the nest is unoccupied due to the elevation of the nest through the weighted lever.

1,111,311. SHAMPOO-TRAY. DAVID C. LEWIS, Youngstown, Ohio. Filed June 15, 1914. Serial No. 845,183. (Cl. 4—2.)

The herein described shampoo board or tray comprising a standard, means for adjusting said standard vertically, a tray mounted pivotally upon said standard, means for adjusting said tray at various inclination relative to the standard, said tray being gradually reduced in width at its outer end, and having a curved head rest pivoted thereon, upwardly turned flanges at the side of said tray, the latter being provided with a neck opening at one end and a pivoted gate for said neck opening.

1,111,312. SELF-BALANCING DEVICE FOR TURBINES. FREDRIK LJUNGSTRÖM, Stockholm, Sweden, assignor to Aktiebolaget Ljungströms Angturbin, Liljeholmen, Sweden. Filed July 26, 1913. Serial No. 781,362. (Cl. 121—60.)

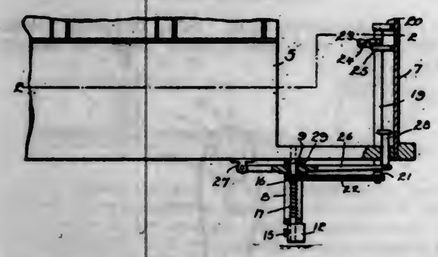


1. In a steam turbine, a rotary member, a stationary member, and a plurality of packing ribs on said rotary member adapted to coöperate with a plurality of grooves formed on said stationary member and to form therewith a steam passage of varying cross-section the packing ribs being of varying depth relatively to the grooves in the stationary member.

2. In a steam turbine, a stationary member and a rotary member formed with a plurality of packing ribs adapted to engage in grooves formed on the opposing surface of said stationary member and to form therewith a steam passage of a progressively varying cross-section the packing ribs being of varying depth relatively to the grooves in the stationary member.

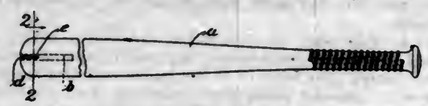
3. A steam turbine comprising a stationary disk and a rotary disk having two series of annular ribs, coöperating with grooves in said stationary disk to constitute two series of packing ribs and to form a passage for the steam, one series of ribs being adapted to become successively opened upon the axial displacement of the rotary disk in the one direction and the other series being adapted to become likewise opened successively upon the axial displacement of the rotary disk in the opposite direction the packing ribs being of varying depth relatively to the grooves in the stationary disk.

1,111,313. SWITCH-THROWING DEVICE. ULYSSES S. MOFFITT, Los Angeles, Cal. Filed Dec. 13, 1913. Serial No. 806,505. (Cl. 104—171.)



The combination with a car, of a throwing device comprising a pair of vertical shafts mounted for longitudinal and rotational movement, a shift block secured to the lower end of each shaft, a pair of horizontal levers pivoted at one end and formed intermediate their ends with openings through which the shafts extend, means for forcing the free ends of said levers downwardly, a sprocket wheel secured to each of the shafts and engaging the underside of the levers, a main vertical shaft, a sprocket wheel secured to said shaft, a sprocket chain connecting said sprocket wheels, spring means for holding the first mentioned shafts normally in their elevated positions, and means for rotating the main shaft.

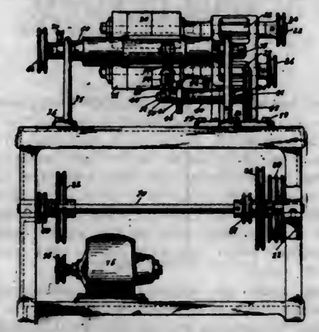
1,111,314. BASE-BALL BAT. JAMES A. MURPHY, Holyoke, Mass., assignor of one-half to B. F. Perkins & Son, Inc., Holyoke, Mass., a Corporation of Massachusetts. Filed May 14, 1913. Serial No. 767,520. (Cl. 46—4.)



1. A baseball bat designed to lessen the effect of "sting" and having its extreme ball-engaging end formed with an axially-arranged opening, a diametrically-arranged slit or kerf intersecting the opening and terminating in the sides of the bat, said slit being of less depth than the depth of the opening, and arranged at an angle to the grain of the wood, whereby the vibrations imparted to a segmental portion of the bat when the ball is struck will be intercepted by the slit and prevented from being transmitted through the body of the bat to the handle-portion, as described.

2. In a baseball bat, the lower end of which is formed with an axially-arranged opening and one or more diametrically-arranged slits intersecting the opening and terminating in the sides of the bat, the edge portions of the slits being rounded to prevent tearing the cover of the ball when the same engages this portion of the slits and whereby said slits are designed and arranged to prevent the transmission of the vibrations through the bat when the ball is struck, as described.

1,111,315. BLADE GRINDING AND SHARPENING MACHINE. LEVI J. ODELL, Los Angeles, Cal. Filed Dec. 18, 1912. Serial No. 737,410. (Cl. 51—16.)



1. In a machine for grinding and sharpening flat blades, a pair of spaced parallel abrading rolls, means for rotating said rolls in unison in opposite directions, a worm-shaft arranged parallel with said rolls, a slotted sleeve rockably mounted on said shaft, longitudinal guide-ways on said sleeve, a block adapted to be inserted through the slot in the sleeve and engaged with the worm-shaft having an extension projecting through the guide-way, blade clamping jaws on said extension, and means for simultaneously rotating the worm-shaft and rocking the sleeve thereon, whereby a blade carried by the clamping jaws will be caused to oscillate between the abrading rolls and at the same time be advanced from one end of the rolls to the other.

2. In a blade grinding and sharpening machine, a worm-shaft, a sleeve rockably mounted thereon having a longitudinal slot, a block having a threaded semi-cylindrical face adapted to be engaged by the worm-shaft, means on said block for carrying blades to be sharpened, means for guiding said block longitudinally of the sleeve, and means for rotating the shaft and rocking the sleeve simultaneously, whereby the block will be advanced by the worm-shaft to give the blade-carrier a combined oscillating and reciprocating movement.

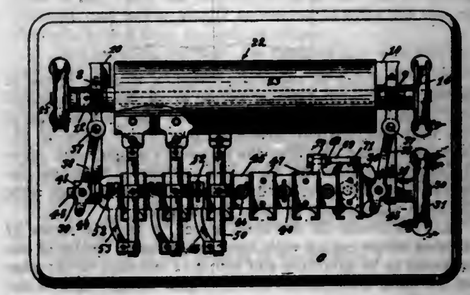
3. In a blade sharpening and grinding machine, a shaft having worm threads throughout a portion of its length, a sleeve rockably mounted on said shaft formed with a longitudinal guide slot and having peripheral extending openings adjacent its ends opposite the unthreaded portions of the shaft, a movable block formed with a semi-cylindrical threaded face and having a projection adapted to be slidably engaged with the guide slot in the sleeve, blade-carrying means on said projection, said block adapted to be in engagement with the threaded shaft through one of the openings in the sleeve and removed from the other opening in the sleeve after being advanced by the worm-shaft, means for rotating said worm-shaft to advance the block, and means for rocking the sleeve, whereby the blade-carrying means will be given an oscillating movement while it is being advanced with the block.

4. In a blade grinding and sharpening machine having a pair of spaced parallel abrading rolls, a blade holder, a block on which said blade holder is mounted, a worm-shaft, means on said block for detachably connecting it to said worm-shaft, an oscillating member having a guide for slidably engaging said block, means for rotating the worm-shaft to advance the block, and means for actuating said oscillating member, whereby the block will be given a rocking movement in conjunction with its advancing movement to move a blade on the blade carrying means in and out of contact with the abrading rolls while the blade is being advanced longitudinally thereof.

5. In a machine for sharpening and grinding flat blades, a pair of spaced parallel cylindrical abrading rolls, a worm-shaft arranged parallel to said rolls, a block adapted to be advanced by the latter in one direction, blade-clamping jaws carried by said block arranged to dispose a blade intermediate the abrasive rolls, and means for supporting and guiding said block adapted to be rocked to move the blade longitudinally in and out of contact with the abrading rolls while said block is being advanced by the worm-shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,111,316. RAZOR-SHARPENING MACHINE. LEVI J. ODELL, Los Angeles, Cal. Filed Feb. 3, 1913. Serial No. 745,764. (Cl. 51—16.)



1. In a razor blade sharpening machine, a pair of spaced stropping rolls, a frame mounted to rock vertically and to reciprocate longitudinally substantially parallel with said rolls, means for supporting a plurality of blades on said frame, a cam, and separately operated means whereby the rotation of said cam will operate to effect alternate rocking and reciprocating movement of said frame.

2. In a razor stropping machine a pair of cylindrical stropping rolls, a frame extending parallel with said rolls, and pivoted to rock vertically, a swinging support for the pivotal bearings of said frame by which said frame can be shifted longitudinally, a plurality of blade-carriers on said frame adapted to position a series of blades intermediate said rolls, a cam shaft, a single grooved cam on said shaft, and separately actuated means whereby the rotation of said cam will operate to effect alternate rocking and reciprocating movement of said frame in both directions.

3. In a razor stropping machine a pair of cylindrical stropping rolls, a blade carrying frame extending parallel with said rolls, a pair of horizontally swinging arms adjacent the ends of said rolls on which said frame is pivotally mounted to rock vertically, a cam shaft, a single cam on said shaft, and separately actuated means engaged by said cam, whereby the frame will be caused to alternately rock vertically and reciprocate longitudinally.

4. In a razor stropping machine the combination with a pair of spaced cylindrical stropping rolls, a frame carrying a plurality of blade holders adapted to position the blades intermediate said stropping rolls, trunnions on the ends of said frame, bearings in which said trunnions are turnably mounted, a pair of arms pivoted to swing horizontally on which said bearings are pivoted, a single peripherally grooved cam, and connections whereby the rotation of said cam will operate to rock said frame vertically to move the blades into alternate contact with said rolls, and whereby the frame will be moved longitudinally on said arms to reciprocate the blades in both directions when in contact with said rolls and longitudinally thereof.

1,111,317. SHOE-LAST. JOHN PACELLI, New York, N. Y. Filed June 7, 1912. Serial No. 702,248. (Cl. 12—139.)

1. As an article of manufacture, a shoe last provided with a shallow cavity in the bottom heel surface thereof, a resilient material filling said cavity and a plate secured to the last for covering and protecting said resilient material in the cavity.

2. As an article of manufacture, a shoe last provided with a shallow cavity in the bottom heel surface thereof, a resilient material and a resilient adhesive composition filling said cavity and a plate secured to the last for covering and protecting said material in the cavity.

3. As an article of manufacture, a shoe last provided with a shallow cavity in the bottom heel surface thereof, a resilient adhesive in combination with other material filling said cavity and a plate secured to the last for covering and protecting said material in the cavity.

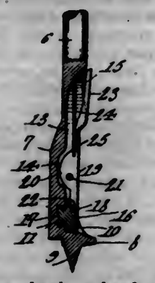
4. As an article of manufacture, a shoe last provided with a shallow cavity in the bottom heel surface thereof, layers of resilient material filling said cavity and a plate secured to the last for covering and protecting said material in the cavity.

5. As an article of manufacture, a shoe last provided with a shallow cavity in the bottom heel surface thereof, layers of resilient material filling said cavity, a resilient adhesive composition interposed between said layers, and a plate secured to the last for covering and protecting said material in the cavity.

1,111,318. AUGER-BIT. JAMES TOHMAS PARKER, Birmingham, Ala. Filed Aug. 3, 1912. Serial No. 713,124. (Cl. 145—127.)

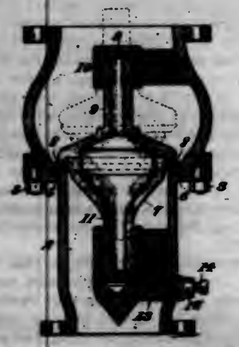
1. An auger embodying a shank having a semicylindrical head, the head having a transverse channel in its flat face and a long narrow groove extending from the channel into the shank, the sides of the groove being flat and parallel, and the inner end of the bottom of the groove being curved to the surface of the shank, a cutter slidable in the channel, a lever coextensive with and fitting snugly between the sides of the groove, the lever having an intermediate lug, a pivot pin passing through the head and said lug, the outer end of the lever being engageable with the cutter, the inner end of the lever being offset outwardly, the lug having an inner kerf flush with the lever, and a

leaf spring having one end fitting in the kerf with the other end engaging the curved portion of the groove.



2. A bit including a shank, a head, a cutter integral with the head, and a screw tip extending from said cutter, there being a transverse guide groove in one face of the head and close to the cutter and a longitudinal groove in said face of the head and opening into the transverse groove, an adjustable cutter slidably mounted in the transverse groove and having a toothed upper edge, a lever fulcrumed in the longitudinal groove and having a toothed lower end, and a spring interposed between the head and lever and seated in the longitudinal groove for holding the upper end of the lever normally projected beyond the shank and for holding the toothed end of the lever normally in engagement with the toothed edge of the slidable cutter to hold said cutter against movement transversely of the plane of movement of the lever, the upper normally projecting end of the lever being depressible into the longitudinal groove to disengage the toothed end of the lever from the slidable cutter.

1,111,319. CENTRIFUGAL-PUMP ATTACHMENT. ALBERT C. PAULSMEIER, Alameda, Cal., assignor to Byron Jackson Iron Works, West Berkeley, Cal., a Corporation of California. Filed July 12, 1912. Serial No. 709,009. (Cl. 103—66.)



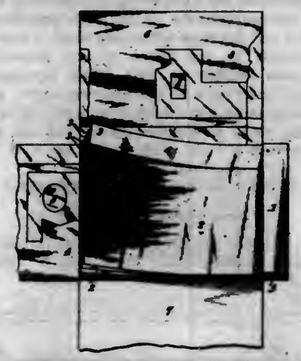
1. An attachment for centrifugal pumps comprising upper and lower tubular sections, a guide member carried by the upper section, a dash pot carried by the lower section, and a reciprocating valve having cylindrical projections from the opposite faces thereof for sliding in said guide member and said dash pot, the said valve being formed to discharge tangentially to the upper section.

2. An attachment for centrifugal pumps comprising upper and lower tubular sections, a guide member carried by the upper section, a dash pot carried by the lower section, a passageway leading from the bottom of the dash pot, means for closing said passageway, and a reciprocating valve having cylindrical projections from the opposite faces thereof for sliding in said guide member and said dash pot, the sides of said valve being substantially tangential to the upper tubular section.

3. An attachment for centrifugal pumps comprising a lower cylindrical section, an upper bulb-shaped section, a valve seat formed on said lower section, a downwardly tapering valve normally seated on said valve seat, projections from the opposite faces of said valve, means carried by the upper section for engaging the projection from the upper face of the valve to guide the same, and a dash pot carried by the lower section and forming a cylinder for the projection from the lower face of the valve, the sides of said valve being substantially tangent to the upper bulb-shaped section.

4. An attachment for centrifugal pumps comprising a lower cylindrical section, an upper enlarged bulb-shaped section, a valve seat formed on the top of the lower section, a valve having a conical lower portion normally seated on said valve seat, a cylindrical projection below the conical portion of said valve, a second cylindrical projection on the upper portion of said valve, and means carried by each of said sections for engaging the respective projections on the valve, the conical sides of said valve forming substantially a continuation of the sides of the upper bulb-shaped section so as to direct the discharge past the valve tangentially of the upper section.

1,111,320. ADVERTISING DEVICE ESPECIALLY ADAPTED FOR THE EXHIBITION OF PAINTS, CALCIMINES, AND SIMILAR MANUFACTURES. HUGH W. PEARSON, New York, N. Y. Filed June 14, 1913. Serial No. 773,582. (Cl. 211—35.)



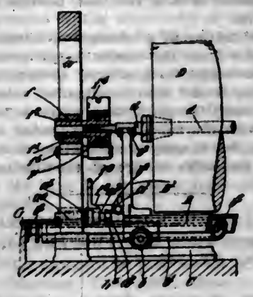
1. In a device of the class stated, a back, a series of leaves coated with different colors or shades of the material to be exhibited, and bound at one edge to one edge of the back, transparent covers hinged to the edges of the back other than at which the leaves are bound, each cover being smaller than the back and adapted to be folded inwardly over the leaves and each provided on its face with different simulations of room furnishings.

2. In a device of the class stated, a back, a series of divided leaves coated with different colors or shades of the material to be exhibited and bound at one edge to one edge of the back, transparent covers hinged to the edges of the back other than that at which the leaves are bound, each cover being smaller than the back and adapted to be folded inwardly over the leaves and each provided on its face with different simulations of room furnishings.

3. In a device of the class stated, a rigid back, a series of leaves coated with different colors or shades of the material to be exhibited and bound at one edge to the back, and a continuous transparent cover smaller than the back hinged to it at an edge other than that at which the leaves are bound and bearing simulations of room furnishings.

1,111,321. PRINTING-MACHINE. OTTO LEONARD RAABE and ARTHUR TERRY, Hayes, England, assignors to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 23, 1913. Serial No. 763,010. (Cl. 242—58.)

1. In a printing machine, the combination of a frame, a printing couple mounted thereon, two carriages movable laterally into and out of operative position relative to said printing couple, and means carried by each of said carriages for supporting a roll of paper thereon during the printing operation for feeding the web to said printing couple.



2. In a printing machine, the combination of a frame, a printing couple mounted thereon, two sets of rails extending laterally of such machine, two carriages each movable along one set of rails into and out of operative position relative to said printing couple, and means carried by each of said carriages for supporting a roll of paper thereon during the printing operation for feeding the web to said printing couple.

3. In a printing machine, the combination with two reel carriages for each printing section adapted to support the reels during the printing operation in position for feeding the web to the printing means, of hydraulic means whereby said carriages can be withdrawn and replaced alternately and means whereby the pressure fluid to the hydraulic means is automatically cut off as the carriages complete their movement.

4. In a printing machine, the combination with two reel carriages for each printing section, adapted to support the reels during the printing operation in position for feeding the web to the printing means, of guides or rails extending from said sections to a re-loading position, means whereby the carriages can be alternately moved along said guides or rails to and from the printing sections and the re-loading position, and means at the re-loading position for moving the reels to and from the said carriages.

5. In a printing machine, the combination with two reel carriages for each printing section, adapted to support the reels during the printing operation in position for feeding the web to the printing means, of guides or rails situated at the floor level of the machine and extending from said sections to a reloading position also situated at the floor level of the machine, means whereby the carriages can be alternately moved along said guides or rails to and from the printing sections and the re-loading position, and lifts at the re-loading position for raising and lowering the reels to and from the carriages.

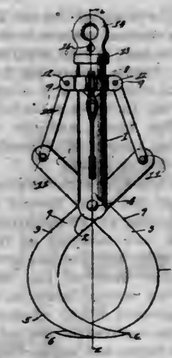
[Claims 6 to 21 not printed in the Gazette.]

1,111,322. LIFTING-TONGS. WELLINGTON RANDALL, Marysville, Wash. Filed Apr. 27, 1914. Serial No. 834,825. (Cl. 57—9.)

1. A pair of tongs comprising a body, jaws pivoted to the body, a member slidably mounted upon the body, links connecting the member and jaws, a jaw closing cable operatively associated with the member, and a jaw opening cable operatively associated with the member.

2. A pair of tongs comprising a body, jaws pivoted to the body, a member slidably mounted on the body, links connecting the member and jaws, a pulley journaled on the body below the member, a jaw opening cable passing under the pulley and attached at one end to the member, and a jaw closing cable operatively associated with the member.

3. A pair of tongs comprising a hollow body, jaws pivoted to the body, a member slidably mounted upon the body, links connecting the member and jaws, a pulley journaled on the body at a point below the member, a jaw opening cable entering the body and passing under the pulley and attached at one end to the member, a pulley journaled on the member, and a jaw closing cable passing under said last named pulley.



4. A pair of tongs comprising a body, a member slidably mounted upon the body, jaws pivoted to the body, links connecting the member and jaws, pulleys journaled on the body below the member, jaw opening cables passing under the pulley and attached to the member, pulleys journaled on the member, and jaw closing cables passing under the last named pulleys.

1,111,323. WINDOW. FRANK LEE RICHARDS and ANDERSON HARRISON SHULL, Farmington, Minn. Filed Dec. 4, 1913. Serial No. 804,607. (Cl. 20—55.)

1. In a window, a window frame having vertical grooves in the stiles thereof at the upper portions, and rabbets in said stiles below and complementary to the said grooves, the said frame presenting inner beads at the front of the grooves, said beads terminating at approximately the horizontal center of the frame and overhanging the rabbets, an upper auxiliary frame having beads on the stiles thereof slidably fitting the said grooves, and a lower auxiliary frame removably fitting in the rabbeted lower portion of the window frame beneath the upper sash, the meeting rails of the auxiliary frames being in vertical alinement and reversely rabbeted.

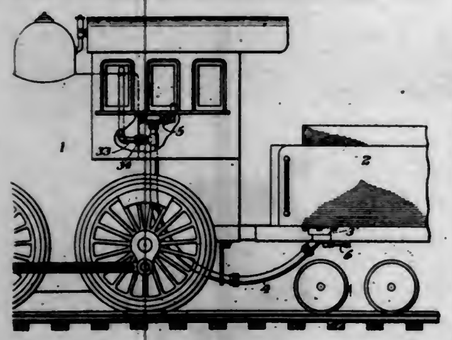
2. In a window, a window frame having the stiles thereof formed with vertical grooves in the upper half and rabbeted at the lower half in line with the grooves, upper and lower auxiliary frames removably fitting the window frame and in vertical alinement with each other, the lower auxiliary frame having its stiles rabbeted reversely to the

rabbets of the window frame, and the upper sash being supported on the top of the lower sash and provided on the stiles thereof with beads slidably fitting the grooves of the window frame.

3. In a window, a window frame having the stiles thereof formed with vertical grooves in the upper half and rabbeted at the lower half in line with the grooves, upper and lower auxiliary frames removably fitting the window frame and in vertical alinement with each other, the lower auxiliary frame having its stiles rabbeted reversely to the rabbets of the window frame, and the upper sash being provided on the stiles thereof with beads slidably fitting the grooves of the window frame.

4. In a window, a window frame having vertical grooves in the upper half of the stiles thereof presenting inner vertical beads terminating at the approximately horizontal center of the frame, and rabbeted at the lower half in vertical alinement with the vertical grooves, the beads overhanging the upper ends of the rabbets, an upper auxiliary frame having vertical beads on the stiles thereof slidably fitting the grooves of the window frame, and the lower auxiliary frame received in the rabbeted lower portion of the window frame and supporting the upper auxiliary frame, the said lower frame having its stiles rabbeted reversely to the rabbets of the window frame and having its upper, outer corners recessed to accommodate the lower terminals of the beads.

1,111,324. TENDER-TANK VALVE. SAMUEL S. RIEGEL, Scranton, Pa., assignor to Patterson-Allen Engineering Co., a Corporation of New York. Original application filed Dec. 26, 1913, Serial No. 808,738. Divided in part and this application filed May 8, 1914. Serial No. 837,123. (Cl. 162—1.)



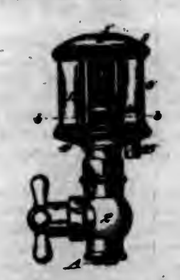
1. The combination of a locomotive and its tender tank, an injector for forcing water into the boiler, a hose for supplying water from the tender tank to the injector, a hand controlled valve between the tender tank and the hose for positively controlling the discharge of water from the tank to the hose but when in closed condition acting as a check valve to permit water to be forced from the hose into the tank, and means for supplying a pressure into the hose between the injector and the valve.

2. The combination of a locomotive and its tender tank, an injector for forcing water into the boiler, a hose for supplying water from the tender tank to the injector, a hand controlled valve between the tender tank and the hose for positively controlling the discharge of water from the tank to the hose but when in closed condition acting as a check valve to permit water to be forced from the hose into the tank, and means for supplying a pressure into the hose between the injector and the valve consisting of a by-pass steam pipe from the boiler for delivering steam into the end of the hose connecting with the injector, and a valve to control the flow of steam therein.

3. The combination of a locomotive, a tank for holding feed water for said locomotive, an injector for forcing water into the locomotive boiler, a hose for supplying water from said tank to the injector, a valve for controlling the discharge of water from said tank to said hose said valve being constructed to act as a check valve permitting water to be forced from the hose into said tank in operative position of said valve but acting as a check valve to prevent flow of water in the opposite direction, and means for supplying a pressure within the hose between said injector and said valve.

4. The combination of a locomotive, a tender, a pipe for supplying water from the tender to the locomotive boiler, a valve on the tender for positively controlling the flow of water from the tender into the pipe but acting as a check valve when closed for permitting water to be forced from the pipe through the valve into the tender, and hand controlled means for causing a circulation of water through the pipe into the boiler or through the pipe into the tender.

1,111,325. SANITARY DRINKING-FOUNTAIN. WESLEY M. ROSE, Sacramento, Cal. Filed June 11, 1913. Serial No. 773,000. (Cl. 137—11.)



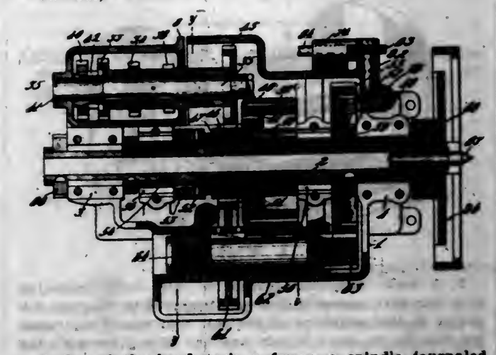
1. In a sanitary drinking fountain, a basin having a drain outlet, a tubular member having an open upper end connected to the basin, a water inlet which communicates with the lower end of the tubular member, said member having an overflow outlet located between its ends and at a point slightly above the basin bottom, a closure for the basin which is located adjacent to the upper end of the tubular member, said closure acting as a guard for the member and having an opening which registers with the tubular member and which allows of the insertion of a drinking tube therethrough so that the tube may be projected into the tubular member below the over-flow outlet of the latter, and a valve controlling the water inlet and formed to permit only such quantity of water to enter the tubular member as will rise a short distance above the overflow outlet.

2. In a sanitary drinking fountain, a basin having a drain outlet, a hollow transparent member seating on the basin, a cap secured to the upper end of said member, a water supplying tube secured to the cap and basin and having overflow outlets arranged above the basin and in close proximity to the latter, the upper end of the tube being open, a member secured to the cap and overlying the open upper end of the tube in spaced relation thereto and having an opening which registers with the tube, and a valve controlling the supply of water to said tube and formed to permit only such quantity of water to enter the tube as will rise a short distance above the overflow outlets.

3. In a sanitary drinking fountain, a basin having a drain outlet, a tubular member having an open upper end connected to the basin, a water inlet which communicates with the lower end of the tubular member, said member having an overflow outlet located between its ends and at a point slightly above the basin bottom, a closure for the basin which is located adjacent to the upper end of the tubular member, said closure acting as a guard for the member and having an opening which registers with the tubular member and which allows of the insertion of a drinking tube therethrough so that the tube may be projected into the tubular member below the overflow outlet of the latter, there being an air inlet for the tubular member located below the closure to prevent liquid from being drawn from the open upper end of the member by suction applied to said member end, and a valve controlling the water inlet and formed to permit only such quantity of water to enter the tubular member as will rise a short distance above the overflow outlet.

4. In a sanitary drinking fountain, a basin having a drain outlet, a hollow transparent member seating on the basin, a cap secured to the upper end of said member, a water supplying tube secured to the cap and basin and having overflow outlets arranged above the basin bottom and in close proximity thereto, the upper end of the tube being open, there being air inlets for the tube located adjacent to the cap to prevent liquid from being drawn from the open upper end of the tube by suction applied to said tube, and a valve controlling the supply of water to said tube and formed to permit only such quantity of water to enter the tube as will rise a short distance above the overflow outlets.

1,111,326. GEARING. WILLIAM L. SCHELLENBACH, Hartwell, Ohio, assignor to The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 4, 1911. Serial No. 663,937. (Cl. 74—58.)



1. In a lathe head-stock, a frame, a spindle journaled therein, a driving element therefor concentric with the spindle and journaled in bearings independent of the spindle to maintain the same free from bearing contact with the spindle, and means intermediate of and connecting said driving element and spindle for neutralizing forces opposed to the forward rotation of the spindle.

2. In a lathe head-stock, a frame, a spindle journaled therein, a driving element concentric with the spindle journaled in bearings independent of the spindle bearings and free from frictional contact therewith, mechanism interposed between said driving element and spindle comprising two members, one in connection with the driving element and the second with the spindle, and a strap connecting said members coupling the drive in one direction of movement between said members and releasing the same in a reverse direction.

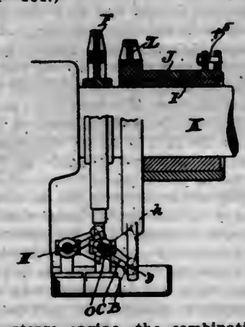
3. In a lathe head-stock, a frame, a spindle journaled therein, a driving element therefor concentric with the spindle and journaled in bearings independent of the spindle and free from bearing contact therewith, coupling means intermediate of the driving element and spindle, connecting said members in one direction of rotation and releasing the same on reverse impulses or partial rotation.

4. In a lathe head-stock, a frame, a spindle journaled therein, a driving element therefor, concentric with the spindle and journaled in bearings independent of the spindle free from contact therewith, coupling means interposed between said driving element and spindle, comprising means positively rotating the spindle in one direction of the driving element, and releasing the same in a reverse rotation, and means for relieving the driving element of spindle strains.

5. In a lathe head-stock, a frame, a spindle journaled therein, a driving element therefor concentric therewith and journaled in bearings independent of the spindle and free from contact with the spindle, coupling means capable of neutralizing forces opposed to the forward rotation of the spindle intermediate of and connecting said driving element and spindle.

[Claims 6 to 15 not printed in the Gazette.]

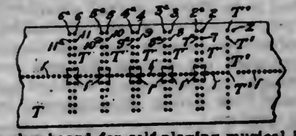
1,111,327. VALVE-GEAR. JAMES ALWARD SEYMOUR, Auburn, N. Y. Filed May 28, 1913. Serial No. 770,300. (Cl. 121—101.)



1. In a steam engine, the combination of a pair of gridiron valves for controlling the admission and cutting off of the steam, a shaft governor controlling the speed of the engine by varying the position of the eccentric used to actuate said pair of valves, a connecting train of mechanism for conveying the motion of said eccentric with branches to each valve, and in each branch a pair of wrist plate motions in series; each wrist plate motion consisting of a driving rocker, a connecting link, and a driven rocker turning upon a fixed stationary shaft or pivot; the driven rocker of the wrist plate motion which is nearer the eccentric and the driving rocker of the wrist plate motion which is nearer the valve being rigidly connected together and pivoted upon said fixed shaft.

2. In a steam engine, the combination of a pair of gridiron valves for controlling the admission and cutting off of the steam, a shaft governor controlling the speed of the engine by varying the position of the eccentric used to actuate said pair of valves, a connecting train of mechanism for conveying the motion of said eccentric including a rocker pin deriving motion from said eccentric, which motion is in a path which, if extended, will pass at some distance from the center of the main shaft upon which the eccentric is situated, said pin being so placed as to distort its motion as received from the eccentric substantially as described; and said connecting train also including branches to each valve and in each branch a pair of wrist plate motions in series; each wrist plate motion consisting of a driving rocker, a connecting link and a driven rocker turning upon a fixed stationary shaft or pivot; the driven rocker of the wrist plate motion which is nearer the eccentric and the driving rocker of the wrist plate motion which is nearer the valve being rigidly connected together and pivoted upon said fixed shaft.

1,111,328. TRACKER-BOARD FOR SELF-PLAYING MUSICAL INSTRUMENTS. FREDERICK WILLIAM SMITH, North Tonawanda, N. Y., assignor to Smith Organ Company, Inc., North Tonawanda, N. Y., a Corporation of New York. Original application filed Sept. 16, 1911, Serial No. 649,772. Divided and this application filed June 26, 1913. Serial No. 775,889. (Cl. 84—165.)



1. A tracker-board for self-playing musical instruments, having a row of note openings and, in addition thereto, a

master opening lying inside the path of travel of the music sheet and adapted to be opened by perforations therein and which controls the sounding of the notes by the note openings.

2. A tracker-board for self-playing musical instruments, having a row of note openings and, in addition thereto, a row of controlling openings, and a master opening lying inside the path of travel of the music sheet, said master opening and controlling openings being adapted to be opened by perforations therein and to jointly control the sounding of the notes by the note openings.

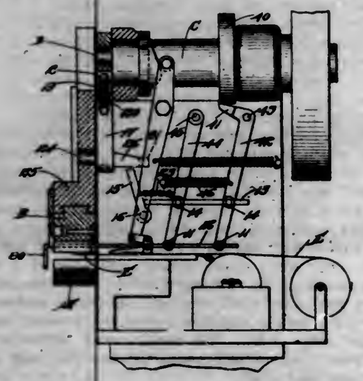
3. A tracker-board for self-playing musical instruments, having a row of note openings, and, in addition thereto, a row of controlling openings extending lengthwise of the tracker-board, another row of controlling openings extending transversely of the tracker-board, and a master opening lying inside the path of travel of the music sheet, said master opening and controlling openings being adapted to be opened by perforations therein and to jointly control the sounding of the notes by the note openings.

4. A tracker-board for self-playing musical instruments, having a row of note openings and, in addition thereto, transversely arranged pairs of rows of controlling openings, and a master opening lying inside the path of travel of the music sheet, said master opening and controlling openings being adapted to be opened by perforations therein and to jointly control the sounding of the notes by the note openings.

5. A tracker-board for self-playing musical instruments, having a row of note openings and, in addition thereto, transversely arranged pairs of rows of supplemental controlling openings, and a single transversely arranged row of main controlling openings.

[Claims 6 and 7 not printed in the Gazette.]

1,111,329. SAFETY DEVICE FOR CORNER-STAYING MACHINES. EUGENE H. TAYLOR, Hyde Park, Mass. Filed Mar. 23, 1914. Serial No. 826,523. (Cl. 164—107.)



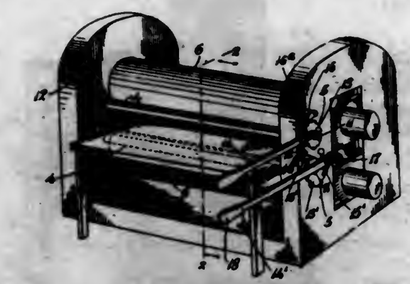
1. The combination with a corner staying machine having upper and lower die members, a connecting rod operating one of said die members of a hand-contact member moving into and out of the space between the die members and means acting on said connecting rod and operated by the said hand-contact member to prevent the dies coming together when the said member is between the dies.

2. The combination with a corner staying machine having upper and lower die members of a connecting rod operating one of said die members, said connecting rod being formed in two parts hinged together, a hand-contact member moving into and out of the space between the die members and connections between said hand-contact member and the connecting rod whereby the said members are caused to swing about said hinge if the hand-contact member is prevented from moving out of the space between the said two die members.

3. In a corner staying machine, the combination with upper and lower die members one of which is formed to have a reëntrant angle, of a hand-contact member forming part of a safety device, a part of said hand-contact member being at times between said dies and being shaped to correspond to the space formed between the dies.

4. In a corner staying machine, the combination with upper and lower die members, of a connecting rod operating one of said die members, said connecting rod being made in two parts hinged together, a hand-contact member moving into and out of the space between the two members, an arm secured to one of the parts of the connecting rod and operating to bend the members of the connecting rod about the hinge connection, a vertical stop normally in the path of movement of the said arm, and connections between the said stop and the hand-contact member by which the stop is moved out of the path of the arm when the hand-contact member is out of the space between the two dies.

1,111,330. SCALE-REMOVER. CHARLES M. TERRY, Gary, Ind. Filed Oct. 24, 1913. Serial No. 797,010. (Cl. 80—1.)



1. A scale removing device for mill rolls, consisting of a bar with eccentric journals mounted in bearings adjacent to the periphery of the roll, and means for rotating the bar to carry it into and out of contact with the roll, said means being located externally to the ends of the rolls, whereby the bar may be actuated while the rolls are in operation.

2. A scale removing device for mill rolls comprising a rolling mill housing, mill rolls journaled in the housing, a bar mounted adjacent to the periphery of a roll and having journals projecting upon the exterior of the housing, and means mounted upon the journals external to the housing and adapted to rotate the bar to bring it into contact with the surface of the roll.

3. In combination in a grinding device for rolls, a pivotally mounted grinding bar, a pivotally mounted operating lever located adjacent to the grinding bar, and means for intermittently connecting the lever with the grinding bar.

4. A roll grinding device comprising a housing, a roll journaled in the housing, a grinding bar pivoted in the roll housings adjacent to the roll, and means for causing the grinding bar to engage the roll, said means comprising a ratchet, a lever mounted adjacent to the ratchet, and a pawl mounted on the lever and engaging the ratchet.

5. A scale remover for rolling the mills comprising a mill housing, a grinding bar pivotally mounted in the mill housing, a ratchet fixed to the grinding bar, a lever pivotally mounted adjacent to the ratchet, a pawl mounted on the lever and engaging the ratchet, and a second pawl mounted on the housing and engaging the ratchet.

1,111,331. EDGER. RAY J. TOWER, Greenville, Mich., assignor of one-half to The Gordon Hollow Blast Grate Company, Greenville, Mich., a Corporation of Michigan. Filed Apr. 27, 1908. Serial No. 429,342. (Cl. 143—37.)

1. The combination with an arbor and a saw shiftable thereon, of a guide parallel to said arbor, a member slidable on said guide having a recess therein below the top portion thereof, whereby said top portion overlies said recess, a detachable arm for coupling said member to said saw, a lever, and an arm on said lever having a part positioned in said recess whereby the lever is pivotally connected to said member.

2. The combination with an arbor and a saw shiftable thereon provided at one side thereof with a thrust collar, of a guide parallel to said arbor, a member slidable on said guide having a wedge-shaped socket opening on one side of the guide member, said slidable member having a terminal recess with the top wall of the member overlying said recess, an arm having a wedge-shaped portion for engaging said socket and bifurcated at its opposite end to engage the thrust collar on said saw, a lever, and an arm on said lever loosely engaging in said recess of the slidable member.

1,111,332. GUN-SIGHT. GUSTAV A. VOIGT, Los Angeles, Cal. Filed Dec. 17, 1913. Serial No. 807,252. (Cl. 33—53.)

1. A gun sight comprising a body member formed of a stem having an axial stem opening therethrough and a body having a body opening located concentrically with and forming an extension of said stem opening, said body having a shallow slot in the face thereof and a groove near the outer edge of said body opening, aperture members sliding in said slot, means for sliding said aperture members, and means co-acting with said groove to hold all the elements of said gun sight together.

2. A gun sight comprising a body member formed of a stem having an axial stem opening therethrough and a body having a body opening located concentrically with and forming an extension of said stem opening, said body having a shallow slot in the face thereof and a groove near the outer edge of said body opening, flat plates sliding in said slot, a cam plate for sliding said plates, and a cover plate fitting into said groove and holding the other elements in operative relation.

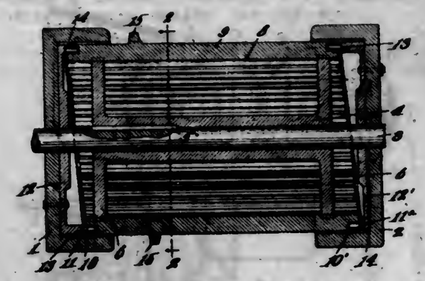
3. A gun sight comprising a body member formed of a stem having an axial stem opening therethrough and a body having a body opening located concentrically with and forming an extension of said stem opening, said body having a shallow slot in the face thereof and a groove near the outer edge of said body opening, flat plates sliding in said slot, a pin in each plate, a cam plate provided with slots for engaging and actuating pins, and a cover plate fitting into said groove and holding the other elements in operative relation.

4. A gun sight comprising a body member having an axial opening therethrough and having a slot at right angles to said opening, aperture members sliding in said slot, and means for sliding said aperture members so formed that the aperture is always concentric with the hole.

5. A gun sight comprising a body member having an axial sight opening therethrough, aperture members mounted to slide in said body member in a plane to which said opening is perpendicular, actuating means for said aperture members, and means for securing said aperture members and said actuating means in said body member.

[Claim 6 not printed in the Gazette.]

1,111,333. WINDING-DRUM. PHILIP H. VOIGT and OSCAR C. KUEHNE, Houston, Tex. Filed Sept. 3, 1913. Serial No. 788,030. (Cl. 242—117.)



1. A device of this character, including a support having two heads; a drum rotatably mounted between the heads and composed of a plurality of longitudinally slidable cable receiving sections, each one of which is provided with a section of a cable guiding flange; and coöperative means carried by each head and in the ends of the sections for imparting successive sliding movement to the sections as the drum is revolved.

2. A device of this character, including a support having two heads; a drum rotatably mounted between the heads and composed of a plurality of longitudinally slidable cable receiving sections, each one of which is provided with a section of a cable guiding flange, and coöperative means carried by each head and the sections for imparting successive sliding movement to the sections as the drum is revolved; said coöperative means including a cam carried by each head of the support and a cam engaging means carried in the end of each section.

3. A device of this character, including a support having two heads, a spool mounted therebetween for rotation, a plurality of staves slidably connected to the periphery of the spool and constituting the cable receiving surface, means carried by each section and constituting a portion of the cable and guiding flange of the drum, and coöperating means carried by the ends of each stave and the heads of the support for imparting successive longitudinal sliding movement to the staves as the spool is rotated.

4. A device of this character, including a support having two heads, a spool mounted therebetween for rotation, a plurality of staves slidably connected to the periphery of the spool and constituting the cable receiving surface, means carried by each section and constituting a portion of the cable and guiding flange of the drum, and cooperating means carried by the end of each stave and the heads of the support for imparting successive longitudinal sliding movement to the staves as the spool is rotated, said coöperating means including a cam mounted in each head of the support, and cam engaging means carried in each end of the staves.

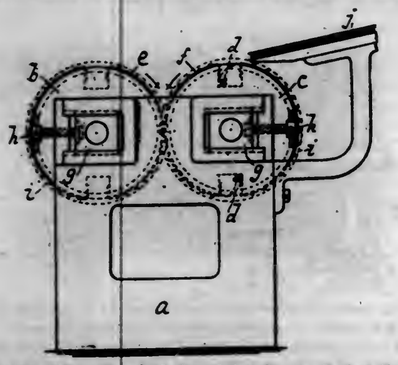
5. In a device of this character, a support, a shaft journaled therein, a sleeve having two disks one at each end thereof constituting the spool of a drum, a plurality of sections, coöperating means carried by the sections and the disks for holding the sections against circumferential movement but permitting longitudinal reciprocatory movement thereof, said sections constituting the cable receiving portion and with the spool constituting a drum, means carried by each stave and coöperating with the same means of the other staves to form a cable guiding means, and cooperating means carried by the staves and the support for imparting successive longitudinal reciprocatory movements to the staves as the drum is revolved.

[Claim 6 not printed in the Gazette.]

1,111,334. EMBOSSING-MACHINE. WILLIAM B. WAIT, New York, N. Y. Filed Nov. 18, 1912. Serial No. 732,079. (Cl. 101—117.)

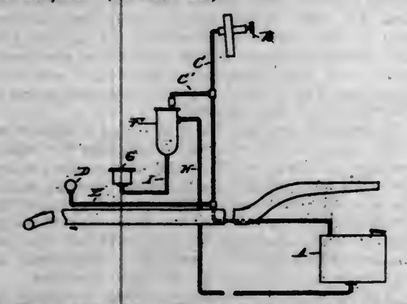
An embossing machine comprising a pair of cylinders, each cylinder having elevations and channels, means for driving the cylinders, a plate having corresponding elevations and channels fitted to each of the cylinders for em-

bossing characters on both sides of a sheet of paper, and elastic means carried in the channels and coöperating with



the elevated portions of the plates for producing the impressions.

1,111,335. FUEL-OIL-DELIVERY SYSTEM FOR MOTOR-VEHICLES. ALFRED E. WALDEN, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed June 11, 1914. Serial No. 844,463. (Cl. 158—36.)



1. The combination with a main tank, of an auxiliary tank at a higher level, a delivery conduit from said main tank to said auxiliary tank, means for supplying air under pressure to said main tank to elevate the oil therefrom to the auxiliary tank, and means controlled by the level of the oil in the auxiliary tank for regulating the air pressure.

2. The combination with a main tank, of an auxiliary tank at a higher level, a conduit for delivering oil from said main tank to said auxiliary tank, means for pumping air to develop a pressure on the oil in said main tank for elevating the same to the auxiliary tank, and means controlled by the level of the oil in said auxiliary tank for venting the air pressure.

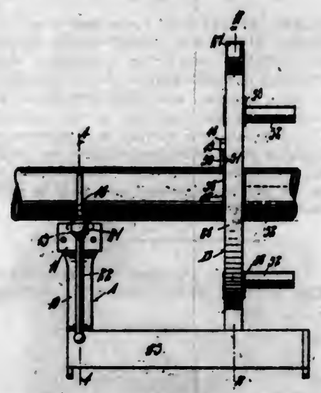
3. The combination with a main tank, of an auxiliary tank at a higher level, a conduit connecting said tanks, means for pumping air and delivering the same to said main tank above the oil therein, a normally closed vent for the air pressure, and means operated by the rise of the level of the oil in said auxiliary tank for opening said vent.

4. The combination with a main tank, of an auxiliary tank at a higher level, a conduit connecting said tanks, an air pump, a conduit for delivering air from said pump to said main tank above the oil therein, said conduit also extending in proximity to said auxiliary tank, and a vent for said conduit opened by the rise of oil in said auxiliary tank above a predetermined level and closed by the falling of the oil below said level.

5. The combination with a main tank, of an auxiliary tank at a higher level, a conduit leading from the bottom of said main tank to the top of said auxiliary tank, a mechanically-driven air pump, a conduit connecting said pump to said main tank above the oil therein, said conduit also extending in proximity to said auxiliary tank, a vent valve communicating with said conduit and adjacent to said auxiliary tank, and a float in said auxiliary tank for opening said vent valve upon the rise of the oil above a predetermined level.

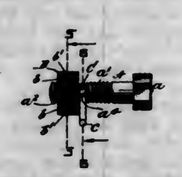
[Claim 6 not printed in the Gazette.]

1,111,336. PIPE-CUTTING MACHINE. GEORGE WALLACE, Niagara Falls, N. Y. Filed Jan. 17, 1913. Serial No. 742,717. (Cl. 81—190.)



In a pipe cutting machine, means for supporting a pipe, pipe cutting means comprising a ring, a circular head rotatably mounted in said ring provided with a central opening and a plurality of radial recesses communicating with said opening, cutter carriers slidably mounted in each recess, bearing plates mounted on the head and spanning said recesses respectively, feed screws rotatably mounted in said bearing plates respectively and having corresponding ends rotatably engaged in sockets formed in the inner wall of said recesses and their other end operatively connected with said carriers whereby the rotation of said screws will move said carriers respectively toward the center of the head, and means for successively rotating said screws to move said carriers toward the center of the head during the rotation of the latter.

1,111,337. PUZZLE. WILLIAM E. WATKINS, Boston, Mass. Filed July 27, 1914. Serial No. 853,408. (Cl. 46—41.)

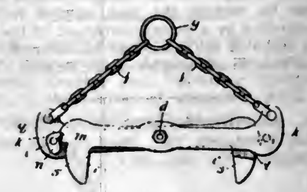


1. The puzzle above described comprising a threaded bolt provided with a circumferential groove, a nut having a limited movement along said bolt, and means movable radially within said nut adapted normally to lie in said groove.

2. The puzzle above described comprising a threaded bolt provided with a circumferential groove forming a neck and a nut provided with chambers, locking members located in said chambers and adapted to move radially therein into said groove to lock said nut and to be thrown outwardly therefrom upon the rapid rotation of said nut to unlock said nut.

3. The puzzle above described comprising a threaded bolt provided with a circumferential groove, a nut having a limited movement along said bolt, and means movable radially within said nut adapted normally to lie in said groove, in combination with a releasable member adapted normally to slide on said bolt and be released when registering with said groove.

1,111,338. TONGS. JOHN W. WATSON, Gary, Ind. Filed Apr. 30, 1913. Serial No. 764,473. (Cl. 57—9.)



1. A device of the character described, comprising pivoted tong arms provided with gripping jaws, means for movably supporting said tong arms, a pawl pivotally mounted on one of said tong arms and adapted to have locking engagement with the other of said tong arms, for holding the tong arms and jaws in open position, and a trip member on the other of said tong arms adapted in the movement of said tong arms relatively to each other to act on said pawl for moving the same out of locking engagement with said tong arms.

2. The combination of pivoted tong arms having diverging end portions provided with gripping jaws, a pawl-engaging shoulder upon a pivoted tong arm member, means for movably supporting the diverging end portions of the tong arms, a pivoted pawl mounted adjacent to and movable into and out of engagement with said pawl-engaging shoulder, for holding the jaws in open position and permitting the movement of the jaws to gripping position, and a pawl-operating member upon and movable with the shouldered tong arm member, for holding the pawl in releasing position in the upward movement of the pawl when the pawl is in position to engage said pawl-operating member.

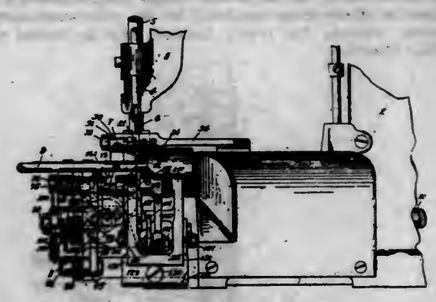
3. In a device of the class described, the combination of pivoted tong arms having diverging end portions and provided with gripping jaws movable to extended and gripping positions, means for movably supporting the diverging end portions of the tong arms, a pawl pivotally mounted upon one of said tong arms and movable into and out of engagement with the other tong arm, and a pawl-operating shoulder upon the last mentioned tong arm and movable into and out of engagement with the pawl and adapted to rotate the pawl into downwardly extending releasing position during the upward movement of the pawl.

4. The combination of pivoted tong arms having diverging end portions provided with gripping jaws, a pawl-engaging shoulder upon at least one of the pivoted tong arm members, means for movably supporting the diverging end portions of the tong arms, and a pivoted pawl mounted adjacent to and having a free pointed end movable into and out of engagement with one of the tong arms, for holding the jaws in open position and permitting the movement of the jaws to gripping position, said pawl having a weighted arm portion adapted to yieldingly hold the pointed end of the pawl in position to engage the adjacent shouldered tong arm member.

5. The combination of pivoted tong arms having diverging end portions provided with gripping jaws, a pawl-operating shoulder upon at least one of the pivoted tong arm members, means for movably supporting the diverging end portions of the tong arms, a pivoted pawl mounted adjacent to and having a free pointed end movable into and out of engagement with one of the tong arms, for holding the jaws in open position and permitting the movement of the jaws to gripping position, said pawl having a weighted arm portion adapted to yieldingly hold the pointed end of the pawl in position to engage the adjacent shouldered tong arm member, and a pawl-operating member upon and movable with the shouldered tong arm member, for holding the pawl in releasing position in the upward movement of the pawl when the pawl is in position to be engaged by said pawl-operating member.

[Claims 6 to 8 not printed in the Gazette.]

1,111,339. COMBINED RUFFLING, TRIMMING, AND OVERSTITCH SEWING MECHANISM. JOHN P. WEIS and ROBERT R. HUGHES, Jr., Nyack, N. Y., assignors to Lucius N. Littauer, Gloversville, N. Y. Filed June 30, 1911. Serial No. 636,185. (Cl. 112—6.)



1. In a sewing machine, the combination of stitching mechanism, feeding mechanism for feeding the work to and past the stitching mechanism and comprising a feed dog and means for operating the same, ruffling mechanism independent of and located in advance of the feeding mechanism and including a ruffling blade and a swinging arm connected thereto located at the feeding end of the machine, means connecting said swinging arm with the feeding mechanism, means effective to adjust the parts of the ruffling mechanism thereby to vary the amount of ruffle or to render the ruffling mechanism ineffective to ruffle, trimming mechanism, stitching mechanism, and means for operating the several mechanisms simultaneously.

2. In a sewing machine having a throat plate, the combination of a ruffler comprising a blade supported below the plane of said plate and projecting upwardly above said plate and downwardly toward the same and in position to operate at the underside of the work, and means for actuating said blade.

3. In a sewing machine having a throat plate, the combination of ruffling mechanism comprising a stripper blade located to work above said plate and a ruffler supported below the plane of said plate and projecting thereabove and downwardly toward said plate for ruffling on the underside of the work, and means for operating said ruffler.

4. In a sewing machine having a throat plate, the combination of ruffling mechanism comprising a stripper blade located to work above said plate, a ruffler supported below the plane of said plate and projecting thereabove and downwardly toward said plate for ruffling on the underside of the work and a stripper blade located below the plane of said plate for coöperating with the ruffler at the underside of the work, and means for operating said ruffler.

5. In a sewing machine having a throat plate, the combination of ruffling mechanism comprising a stripper blade located above said plate and a ruffler supported below the plane of said plate and projecting thereabove for ruffling on the underside of the work, means for operating said ruffler, means for limiting the movement of said ruffler, a stripper blade located below the plane of the throat plate, and means for raising the first stripper blade without affecting the position of the ruffler.

[Claims 6 to 38 not printed in the Gazette.]

1,111,340. COMBINED FISH ROD AND REEL. LOUIS J. WESTNESS, Milwaukee, Wis. Filed May 12, 1913. Serial No. 766,957. (Cl. 43—16.)

1. A device for changing reciprocating motion into rotary motion, comprising a reciprocating member, a rotary member, a pinion connected with the rotary member, a rack member having oppositely positioned sets of rack teeth to engage the pinion on opposite sides thereof alternately by lateral movements of the rack member, a pair

of connecting means for connecting the rack member with the reciprocating member, means for rendering one connecting means or the other ineffective, and means operated by the connecting means for moving the rack member laterally, the direction of lateral movement of the rack member produced by one connecting means being opposite the direction of movement produced by the other connecting means, whereby the rotary member may be turned in either direction.

2. A means for converting reciprocating motion into rotary motion, comprising a reciprocating member, a rotary member, a pinion on the rotary member, a rack member having two sets of rack teeth for engaging the pinion on opposite sides thereof, said rack member being movable laterally to effect the engagement of one set of rack teeth or the other, a slide member, rocker arms carried by the slide member and connected to the rack member, a pair of connecting members connecting the opposite ends of the rocker arms with the reciprocating member, said rocker arms serving to move the rack member laterally to effect a different engagement of the pinion with the rack member in different directions of movement of the reciprocating member, the direction of lateral movement of the rack member produced by one connecting member being opposite to the direction of movement of the rack member produced by the other connecting member, and means for rendering one connecting member or the other ineffective.

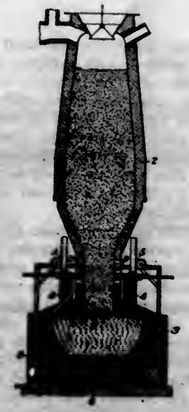
3. A combined rod and reel, comprising a rod member, a reciprocating handle thereon, a reel mounted on the rod member, a transmission mechanism for changing the reciprocal movement of the handle to a continuous rotary movement of the reel, a pair of connectors between the handle and the transmission mechanism, one for producing rotary movement of the reel in one direction and the other for producing rotary movement of the reel in the other direction, and means for connecting the handle with either of the connectors for changing the direction of rotation of the reel.

4. A combined rod and reel, comprising a rod member, a reciprocating handle thereon, a reel mounted on the rod member, a transmission mechanism for changing the reciprocating movement of the handle to a continuous rotary movement of the reel, a pair of connectors between the handle and the transmission mechanism, one for producing rotary movement of the reel in one direction, and the other for producing rotary movement of the reel in the other direction, and means actuated by a rotary movement of the handle for connecting the handle with either of the connectors for changing the direction of rotation of the reel.

5. A combined rod and reel, comprising a tubular rod member, a reciprocating handle thereon, a reel mounted on the rod member, a pinion within the rod member having connection with the reel, a laterally movable rack member having oppositely positioned rack teeth to alternately engage the pinion, means for moving the rack member laterally to engage either series of rack teeth with the pinion, a pair of connecting members connecting the handle with the means for moving the rack member laterally, and means controlled by a rotary movement of the handle for rendering either of the connecting means ineffective.

[Claims 6 to 10 not printed in the Gazette.]

1,111,341. METHOD OF REDUCING ORES. RAYMOND S. WILE, Pittsburgh, Pa. Filed Dec. 15, 1913. Serial No. 806,692. (Cl. 204—63.)



1. The method of reducing ores, which consists in forming a deep bath of slag, feeding ore downwardly into said bath, passing an electric current through the bath between separated electrodes, and maintaining the bath at an approximately constant depth greater than the diameter of the feed-in-opening and at a level which surrounds and protects those portions of the upper electrodes which are within the furnace; substantially as described.

2. The method of reducing ores, which consists in forming a deep bath of slag, feeding ore downwardly into said bath, passing a multi-phase electric current through the bath in different directions between electrodes to thereby maintain an approximately uniform temperature throughout the bath, and maintaining the bath at an approximately constant depth and at a level which surrounds and protects those portions of the upper electrodes which are within the furnace; substantially as described.

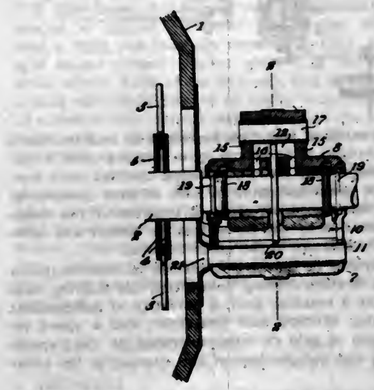
3. The method of reducing ores, which consists in forming a deep bath of slag, feeding an ore charge downwardly into the bath, passing a multi-phase electric current through the bath in different directions between electrodes, and positioning and adjusting the electrodes to cause the different current paths through the bath to have approximately the same resistance; substantially as described.

4. The method of reducing ores, which consists in forming a deep slag bath within a crucible, and substantially filling the crucible, passing an electric current through the bath between upper and lower electrodes, and when the bath has been properly formed, adjusting the upper electrodes to a position in which they dip within the surface portion only of the body of the bath, maintaining the bath at a substantially constant depth and at a level which causes it to surround and protect the portions of the electrodes which are within the crucible, and during the operation feeding ores into the bath out of contact with the electrodes; substantially as described.

5. The method of reducing ores, which consists in maintaining a comparatively deep slag bath, passing an electric current through the bath between electrodes, and feeding an ore charge down into the bath out of contact with the electrodes, the bath having a greater cross sectional area than the cross sectional area of the downwardly feeding ore charge and maintaining said bath at a depth which is also greater than the diameter of the feed-in-opening for the ore charge; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,111,342. JOURNAL-BOX FOR ROTARY MILLS. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 2, 1914. Serial No. 816,017. (Cl. 64—28.)



1. In a mill including a casing, a shaft, and elements rotated within said casing by said shaft, a journal box provided with an oil chamber, bearings for said shaft, lubricant distributing means operating in said chamber and operated by said shaft, and hollow radiating members extending through said chamber, an opening exteriorly of the journal box, said casing being provided with apertures in its axial portion, which apertures register with said hollow radiating members for the purpose described.

2. In combination, a machine casing, a shaft, a journal box carrying bearings for said shaft, said journal box being provided with an oil chamber, said journal box being provided with radiating members extending through said oil chamber and open to the atmosphere at their ends, and means operated by said shaft within said casing adapted to induce a circulation of air in said radiating members.

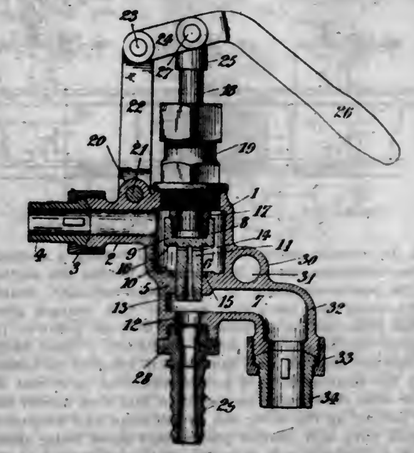
3. In a machine of the class described, a casing, a rotary shaft, a journal box providing bearings for said shaft, said journal box being provided with an oil chamber, said shaft being provided with oil distributing means, tubes extending through said oil chamber and open to the atmosphere and communicating with the interior of said casing, and means operating within said casing adapted to draw air through said tubes.

4. In combination a rotary shaft, a rotary element operated thereby, and a casing inclosing said rotary element and provided with an axially disposed aperture, a journal box providing a bearing for said shaft and provided with an oil chamber, said journal box being provided with an air passage through said oil chamber and communicating with said aperture to permit the circulation of air through said passage by the operation of said rotary element.

1,111,343. JET-PUMP APPARATUS. WALTER E. WOLLHEIM, New York, N. Y., assignor to The Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed May 12, 1914. Serial No. 838,162. (Cl. 162—1.)

1. In a jet pump apparatus having a steam chamber and a water chamber and respective supply connections thereto, a steam nozzle adapted to control the admission of steam to its interior, and means in combination and concentric with said steam nozzle for sealing the outlet of said water chamber, when said apparatus is at rest.

2. In a jet pump apparatus having a steam chamber and a water chamber and respective supply connections thereto, an actuating device adapted to reciprocate a steam nozzle in line of its longitudinal axis, said steam nozzle being adapted to control the admission of steam to its interior, and means in combination with said steam nozzle for sealing the outlet of said water chamber, when the apparatus is at rest.



3. In a jet pump apparatus having a steam chamber and a water chamber and respective supply connections thereto, a steam nozzle adapted to be reciprocated in line of its longitudinal axis and to control the admission of steam to its interior, and means integral with said steam nozzle adapted to seal the outlet of said water chamber, when the apparatus is at rest.

4. In a jet pump apparatus having a steam chamber and a water chamber and respective supply connections thereto, an actuating device adapted to reciprocate a steam nozzle in line of its longitudinal axis, said steam nozzle being adapted to control the admission of steam to its interior and its lower end being piston shaped and adapted to close two coaxial bores in opposite walls of said water chamber and in alinement with a discharge nozzle, when the apparatus is at rest.

5. In a jet pump apparatus having a steam chamber and a water chamber and respective supply connections thereto, an actuating device adapted to reciprocate a steam nozzle in line of its longitudinal axis, said steam nozzle comprising a larger upper and a smaller lower portion, its larger upper portion being adapted to control the admission of steam to the interior of said steam nozzle and its smaller lower portion being arranged to seal the outlet of said water chamber when the apparatus is at rest.

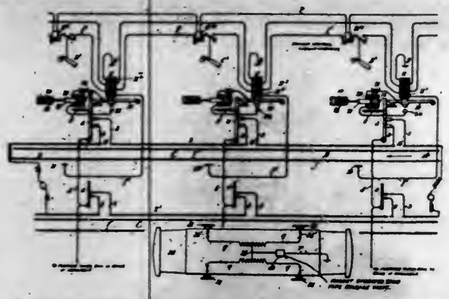
[Claims 6 to 10 not printed in the Gazette.]

1,111,344. ELECTRIC TRAIN-CONTROL SYSTEM. ERNST WOLTMANN, New York, N. Y., assignor to Automatic Train Stop Company, a Corporation of Maine. Filed Dec. 7, 1908. Serial No. 466,253. (Cl. 246—36.)

1. An electric railway system having substantially parallel trackways, a sectional power conductor for each trackway, switches normally joining the ends of the sections of the conductors together into a plurality of unbroken series, one series for each trackway, means for electrically connecting the switches of adjacent trackways, and means operating to open three of said switches at a time, said switches so opened being those at the respective ends of two alined power conductor sections.

2. An electric railway system having substantially parallel trackways, a sectional power conductor for each trackway, switches normally joining the ends of the sections of the conductors together into a plurality of unbroken series, one series for each trackway, means for

electrically joining the switches of adjacent trackways, and means operating to open a plurality of said switches of one series simultaneously, said switches so opened being those at the respective ends of a one less number of alined power conductor sections.



3. An electric train control system having a sectional power conductor, means for normally joining the sections of the power conductor in unbroken continuity, contact pieces along the track-way, each of said contact pieces spaced from and in advance of the division point of two adjacent sections of the power conductor, a train having a collector shoe at one end thereof adapted to contact with the sections of said power conductor, a second collector shoe electrically connected to said first named shoe and located at the other end of the train and adapted to contact with said contact pieces, said shoes being spaced apart a distance less than the distance between a contact piece and the corresponding, division point of the sections of the power conductor and means controlled by the passage of said second named collector shoe over a contact piece for cutting out the section of the power conductor opposite the last named contact piece.

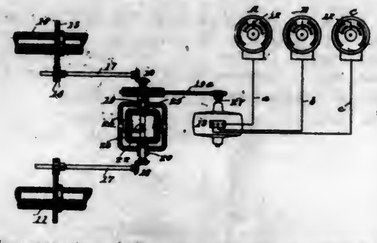
4. An electric train control system having a sectional power conductor, means for normally joining the sections of the power conductor in unbroken continuity contact pieces along the track-way, each of said contact pieces spaced from and in advance of the division point of two adjacent sections of the power conductor, a train having a collector shoe at one end thereof adapted to contact with the sections of said power conductor, a second collector shoe electrically conducted to said first named shoe and located at the other end of the train adapted to contact with said contact pieces, said shoes being spaced apart a distance less than the distance between the contact pieces and the corresponding division points of the sections of the power conductor and means controlled by the passage of said second named collector shoe over one of said contact pieces for cutting out the sections of the power conductor opposite the last named contact piece and the section in advance thereof.

5. An electric train control system having a sectional power conductor, a trackway having block entrances, switches for connecting the ends of said sections in unbroken continuity, normally open circuits, means for closing them, means controlled by each of said circuits when closed for opening three consecutive switches to cut out two adjacent conductor sections, and means in each of said circuits controlled from a distance to open said circuit at a point distinct from the point at which it was closed by said first mentioned means together with means for moving each of said switches to closed position after said circuit has been opened by said means controlled from a distance.

[Claims 6 to 12 not printed in the Gazette.]

1,111,345. SIGNAL APPARATUS. FRANK W. WOOD, Brooklyn, N. Y., assignor to Charles Cory & Son Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 11, 1914. Serial No. 823,926. (Cl. 177—351.)

1. In apparatus of the class described in combination a generator arranged to be driven by a rotating part, a plurality of independent circuits passing through said generator, and a speed indicator in each of said circuits controlled by the current in its circuit and independent of the current in the other circuits.



2. In apparatus of the class described in combination a generator arranged to be driven by a rotating part, a plurality of independent circuits passing through said generator, and a speed indicator in each of said circuits indicating the speed and direction of rotation of the rotating part controlled by the current in its circuit and independent of the current in the other circuits.

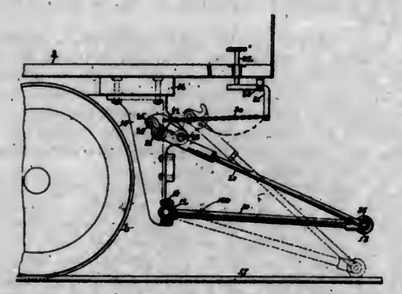
3. In apparatus of the class described in combination a generator, a flexible driving connection for driving said generator from a rotating part, a plurality of independent circuits passing through said generator, and a speed indicator in each of said circuits controlled by the current in its circuit and independent of the current in the other circuits.

4. In apparatus of the class described in combination a plurality of rotating parts, a plurality of indicating devices independent of each other, and means for controlling all of said indicating devices from all of said rotating parts.

5. In apparatus of the class described in combination a plurality of rotating parts, a plurality of indicating devices independent of each other, a driving device for driving said indicating devices, and a differential mechanism for actuating said driving device from said rotating parts.

[Claims 6 to 11 not printed in the Gazette.]

1,111,346. CAR-FENDER. WILLIAM D. WRIGHT, Providence, R. I. Filed May 12, 1913. Serial No. 767,081. (Cl. 105—253.)



1. In a fender for railway cars, in combination, a fender proper, a support to which said fender is pivoted, means for supporting and locking said fender proper in its elevated position comprising a link pivotally connected to the fender proper, a lever pivoted to said support and to which said link is pivotally connected, a stop with which the free end of said lever coöperates, said stop and pivot for said lever being substantially in a center line with the pivotal connection of said link and fender proper in the elevated position of the latter, and the pivotal connection of the upper end of said link with the said lever being at one side of the said center line through the said stop and pivot for said lever, substantially as described.

2. In a fender for railway cars, in combination, a fender proper, a support to which said fender proper is pivoted, a link pivotally connected at its lower end with said fender proper, a lever to which the upper end of said link is pivotally connected, a support to which said lever is pivoted, a stop with which the free end of the lever cooperates and engages with the fender proper in its elevated position, the pivotal connection of said link with the said lever being below a center line through the stop and the pivot for the lever when the lever engages said stop, substantially as described.

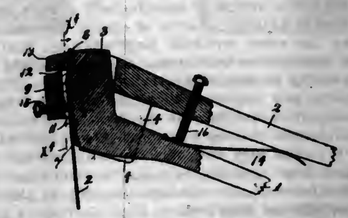
3. In a fender for railway cars, in combination, a fender proper, a support to which said fender proper is pivoted, a rigid link pivotally connected at its lower end with said fender proper, a lever pivoted at one end and provided wtih a hook at its free end, and to which the upper end of said rigid link is pivotally connected at one side of a center line through said hook and the pivot for said lever, and a stop with which said hook coöperates, substantially as described.

4. In a fender for railway cars, in combination, a fender proper, a support to which said fender proper is pivoted, a pivoted lever, a stop with which the free end of said lever coöperates, and rigid means connecting the fender proper with said lever at a point between said pivot and stop and at one side of a center line through said stop and the pivot for said lever, substantially as described.

1,111,347. MARKING-PEN. ANDREW YOUNG, Buffalo, N. Y. Filed July 16, 1912. Serial No. 709,700. (Cl. 120—110.)

A marking pen formed from a single piece of sheet flexible material, bent upon itself longitudinally to provide two flat, spaced parallel members having an open edge and an open feeding discharge outlet for the ink, the opposite edge of the pen being closed by the bend, the outlet end of the pen being disposed at an angle to the side and extending entirely across the pen and an ink retaining element or tongue disposed between the two members of the pen, said tongue being of less thickness than the distance between the parallel members of the pen.

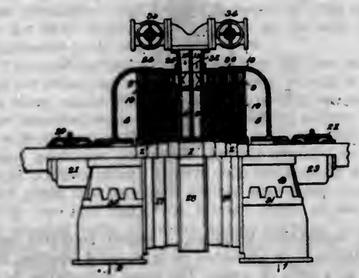
1,111,348. SAW-SET. HANS ANDERSEN, Nymore, Minn. Filed Mar. 3, 1914. Serial No. 822,112. (Cl. 76—64.)



1. A saw-set comprising a pair of fulcrumed levers, one of which carries an anvil block having a saw passage and a working face that is at an angle to said saw passage, and the other of which carries a set bar embracing said anvil block adapted to engage and draw a saw tooth onto the working face of said anvil block.

2. A saw-set comprising a pair of spring-separated levers, one of said levers carrying an anvil block having a pair of diametrically opposite trunnions, and the other of said levers having a pair of side plates embracing said anvil block, said side plates having open seats in which said trunnions are mounted, said anvil block having a saw blade passage, a saw tooth passage, and a working face that is at an angle to said saw blade passage, a set bar carried by said side plates for coöperation with the working face of said anvil block, a set screw carried by one of said levers, for limiting the closing movement of said levers, and a second set screw extending into the said saw blade passage.

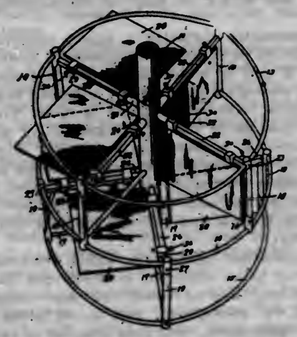
1,111,349. TURBINE. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 27, 1911. Serial No. 668,032. (Cl. 121—58.)



1. A turbine engine comprising a shaft, two sets of blade wheels thereon arranged to drive the shaft in the same direction, a casing, two sets of nozzles carried thereby, outlets at the ends of the casing, a divided inlet intermediate the two sets of blade wheels and nozzles and means for controlling the admission of the motive fluid to either one or both sides of said divided inlet for driving either of the two sets of blade wheels or both sets of blade wheels.

2. A double flow turbine engine having outlets at its ends and an intermediate inlet comprising a divided ring having nozzles through its walls arranged in position to direct the fluid outwardly to the two elements of the engine, and means for controlling the admission of the motive fluid to either one or both sides of said divided ring.

1,111,350. CURRENT-MOTOR. EMERY S. BAYLEY, Spokane, Wash., assignor, by direct and mesne assignments, of one-half to Harrison A. Denney and one-half to Robert T. Laurence. Filed May 12, 1913. Serial No. 767,193. (Cl. 170—121.)



In a current motor, a frame, a vertically disposed shaft rotatable with said frame, a sleeve rotatable in and extending horizontally and radially from said shaft and having an interior of polygonal cross section, a pair of blade shafts having polygonal inner ends non-rotatively fitted in the ends of said sleeve and having shouldered outer ends rotatively journaled in said frame, blades having ears non-rotatively fitted on said blade shafts to dispose the blades at right angles to each other, and means for securing one of the ears of each blade to its blade shaft in abutting relation with one end of said sleeve to prevent longitudinal movement of the blade shafts out of bearing relation with said frame, substantially as described.

1,111,351. SUBMARINE SIGNAL-RECEIVING INSTRUMENT. CHRISTIAN BERGER, New York, N. Y., assignor to Submarine Wireless Company, a Corporation of New York. Filed Nov. 4, 1912. Serial No. 729,538. (Cl. 179—121.)

1. For submarine signaling a signal receiving instrument adapted to be employed in submerged location at the exterior of a ship or vessel, the same comprising in combination, a microphone, and a self-adhering base bearing the microphone, said base adapted to co-act with a complementary portion of the ship's exterior for mutual adherence therewith, whereby the instrument may be held to the ship in submerged location.

2. For submarine signaling a signal receiving instrument adapted to be employed in submerged location at the exterior of a ship or vessel, the same comprising in combination, a microphone, and a self-adhering base bearing the microphone, said base adapted to co-act with any plain-surfaced complementary portion of the ship's exterior for mutual adherence therewith, whereby the instrument may be held to the ship in submerged location.

3. For submarine signaling a signal receiving instrument adapted to be employed in submerged location at the exterior of a ship or vessel, the same comprising in combination, a microphone, and a self-adhering base bearing the microphone, said base adapted to co-act with a complementary portion of the ship's exterior for mutual adherence therewith, whereby the instrument may be held to the ship in submerged location, and exterior conducting means extending from said instrument to above the water line and within the ship for transmitting received signals.

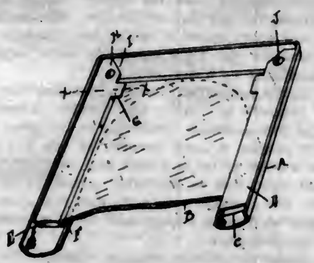
4. For submarine signaling a signal receiving instrument adapted to be employed in submerged location at the exterior of a ship or vessel, the same comprising in combination, a microphone, and a self-adhering base bearing the microphone, said base adapted to co-act with a complementary portion of the ship's exterior for mutual adherence therewith, whereby the instrument may be held to the ship in submerged location, and exterior conducting means extending from said instrument to above the water line and within the ship for transmitting receiving signals and for maintaining the self-adhering character of the instrument.

5. For submarine signaling a signal receiving instrument adapted to be employed in submerged location at the exterior of a ship or vessel, the same comprising in combination, a microphone, and a self-adhering base bearing the microphone, said base adapted to co-act with a complementary portion of the ship's exterior for mutual adherence therewith, whereby the instrument may be held to the ship in submerged location, and said base and microphone designed, fitted and arranged to present an exterior rounded or non-resisting contour.

[Claims 6 to 10 not printed in the Gazette.]

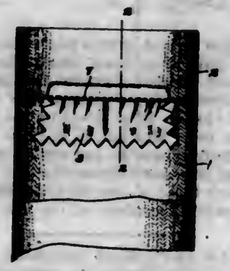
1,111,352. OVEN-DOOR. FRANK K. BERRY, Battle Creek, Mich., assignor to A-B Stove Company, Battle Creek, Mich., a Corporation of Michigan. Filed June 16, 1913. Serial No. 773,995. (Cl. 126—200.)

1. An oven door, comprising a frame, a glass panel seated therein, spacers between the edge of said glass panel and the edge of the frame formed of channel bars, and securing means for said spacers, one of said spacers having a portion of its edge adjacent the edge of the frame bent to extend in substantially the plane of the web portion of the spacer and beyond the edge of the panel to hold the same from disengagement.



2. An oven door, comprising an annular frame having a concavo-convex cross-section, a glass panel seated within said frame, a spacer in the concave portion of said frame interposed between the outer edge thereof and the edge of the panel, and means for securing said spacer to said frame, said spacer being of channel cross-section and having one of its flanges forming an abutment for said panel, a portion of said flange extending substantially in the plane of the web portion of the spacer and beyond the edge of the panel.

1,111,353. STOCKING. MARGARET E. BLESSING, Philadelphia, Pa. Filed Jan. 17, 1914. Serial No. 812,689. (Cl. 2—23.)



1. As a new article of manufacture, a stocking, a sheet of inelastic material, a strip of elastic material normally holding the sheet wrinkled longitudinally, said strip of elastic material secured at one edge only to the stocking, substantially as described.

2. As a new article of manufacture, a stocking having an inwardly turned hem at its upper end, a sheet of inelastic material having a strip of elastic material secured thereto at one edge only and normally holding the sheet wrinkled longitudinally, said elastic strip secured to the stocking between the fold and the body of the stocking, substantially as described.

3. As a new article of manufacture, a stocking, a sheet of inelastic material, a binding tape at one edge of said sheet, an elastic strip secured to the tape and sheet while said strip is expanded, and said elastic strip secured to the stocking with said elastic strip in its contracted position, substantially as described.

1,111,354. CLASP. ARTHUR E. BLOFIELD and JACOB J. LINK, New York, N. Y. Original application filed Apr. 24, 1912, Serial No. 692,861. Divided and this application filed May 12, 1913. Serial No. 767,031. (Cl. 24—251.)

1. A clasp comprising a wedge-shaped operating member having means for connecting a supporting strap thereto at

the smaller end thereof, a pair of gripping jaws hinged together mounted to slide upon one exterior face of said member with the operative ends of said jaws directed toward the larger end of said member, the upper of said jaws having a stirrup extending around the lower jaw and said member, for slidably coacting with the latter to position said jaws and close the same when they move toward the larger end of said wedge member, the said member and jaws being so arranged and proportioned that the operative ends of said jaws, when in closed position, are directly above the large end of said wedge member, substantially as described.

2. A class comprising a pair of gripping-jaws hinged together at one end, one of said jaws being provided with a stirrup directed transversely to the face of said jaw, and a wedge-shaped operating member slidably mounted within said stirrup to reciprocate between the same and the exterior surface of one of said jaws, longitudinally of said jaws, the said parts being so arranged that the large end of said member forms a rigid support for the operative ends of said jaws when the latter are in closed position, and said member being provided at its smaller end with means for connecting a supporting strap thereto so that a pull transmitted therethrough will draw said member through said stirrup to close said jaws, and the weight or pull of the material gripped by said jaws will increase the grip of said jaws, substantially as described.

1,111,355. TRANSMISSION MECHANISM. VITUS A. BOKER, Minneapolis, Minn. Original application filed Aug. 6, 1913, Serial No. 783,293. Divided and this application filed Feb. 5, 1914. Serial No. 816,714. (Cl. 74—26.)

1. The combination with coöperating members, of means for adjusting one of said members in respect to the other, comprising a slide having connections to the adjustable member, a lock for securing said slide in different positions, and a frictionally anchored trip for said lock having a limited movement only in respect to said slide.

2. The combination with coöperating members, of means moving one of said members in respect to the other, comprising a relatively fixed guide, a slide movable on said guide and having connections to the movable member, a pawl and ratchet connection between said slide and guide for locking said slide in different positions, and a pawl trip frictionally anchored to said guide and having a limited movement only in respect to said slide.

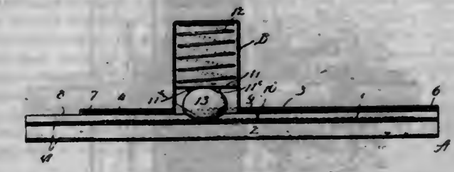
3. The combination with coöperating friction wheels, of means for adjusting one of said friction wheels in respect to the other, comprising a fixed guide having ratchet teeth, a slide mounted on said guide and having a pawl engageable with the ratchet teeth thereof, to lock said slide in different positions, said slide having connections to the movable friction wheel, and a pawl trip frictionally anchored to said guide and having a limited movement only in respect to the said slide.

4. The combination with coöperating friction wheels, of means for adjusting one of said friction wheels in respect to the other, comprising a fixed guide having ratchet teeth, a slide mounted on said guide and having a pawl engageable with the ratchet teeth thereof, to lock said slide in different positions, said slide having connections to the movable friction wheel, and a pawl trip frictionally anchored to said guide and having a limited movement only in respect to the said slide, the ratchet teeth on said guide being grouped with clearance spaces between the groups permitting sufficient movement of said slide to cause the pawl thereof to be released by the said frictionally anchored pawl trip.

5. The combination with coöperating friction wheels, of means for adjusting one of said friction wheels in respect to the other, comprising a fixed guide having ratchet teeth, a slide mounted on said guide and having a pawl engageable with the ratchet teeth thereof, to lock said slide in different positions, said slide having connections to the movable friction wheel, a pawl trip frictionally anchored to said guide and having a limited movement only in respect to the said slide, the ratchet teeth on said guide being grouped with clearance spaces between the groups permitting sufficient movement of said slide to cause the pawl thereof to be released by the said frictionally anchored pawl trip, a spring tending to move said slide in one direction, and a connection for moving said slide in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,111,356. GRATER. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 18, 1914. Serial No. 819,382. (Cl. 146—15.)



1. The combination with a grater-bar equipped with lateral guides, of a slide connected with said guides, and a holder pivotally connected with said slide and equipped with a follower.

2. The combination with a grater equipped with lateral guides, of a slide movable in said guides, means for preventing disengagement of said slide from the guides, and a follower-equipped holder connected with said slide and adapted to be opened to admit a nutmeg, or the like, beneath the follower.

3. The combination with a grater equipped with lateral guides, of a slide movable in said guides, means for preventing disengagement of said slide from the guides, and a follower-equipped holder having a base-portion pivotally connected with said slide and adapted to work in said guides, said base-portion being withdrawable from said guides to permit tilting of the holder.

4. In a device of the character set forth, the combination of a grater-bar, guides surmounting the lateral portions thereof, said guides having their upper walls cut away at one end, a slide movable in said guides, and a follower-equipped holder having a base-portion pivotally connected with said slide and movable in said guides, said base-portion being withdrawable from the guides at the cut-away portions to permit the holder to be tilted.

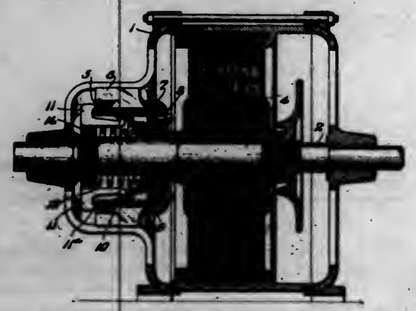
5. In a device of the character set forth, the combination of a grater-bar with perforations therethrough, a subchamber affording a longitudinal channel beneath said grater-bar, lateral guides, a slide movable in said guides, and a nutmeg-holder pivotally connected with said slide and having a base-portion movable in and withdrawable from said guides.

[Claim 6 not printed in the Gazette.]

1,111,357. BUCKET. ANTONIA F. BRANT, Alameda, Cal. Filed Jan. 10, 1914. Serial No. 811,410. (Cl. 15—15.)

A water bucket, having a circular false bottom secured at a uniform height entirely around its edge to the wall of the bucket to form the bottom of the water receptacle, said wall being extended below said bottom, and a circular closure for the extended portion of the wall, forming therewith a receptacle for accessories, said extended portion having a hole therethrough sufficiently large to permit the convenient passage of a man's hand.

1,111,358. SHORT-CIRCUITING DEVICE. EDWARD BRETCH, St. Louis, Mo. Filed Feb. 14, 1914. Serial No. 818,674. (Cl. 172—279.)



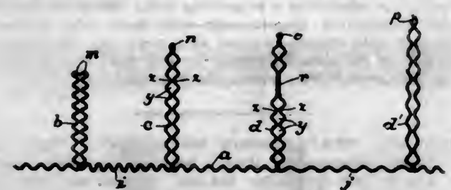
1. In an electric motor, a centrifugal short circuiting device comprising the combination of an armature shaft, commutator segments carried thereon, and having contact faces disposed normal to the shaft, and short circuiting plates carried on said shaft and adapted to coöperate with said commutator segments; said short circuiting plates being of general L-shape and each having one arm directed longitudinally of said shaft and the other arm radially of said shaft, said first mentioned arm being fulcrumed on a member movable longitudinally of the shaft and said radial arm being adapted to coöperate with a contact face of a commutator segment.

2. In a motor, a centrifugal short circuiting device comprising the combination of commutator segments carried by the shaft, and having contact faces disposed normal thereto, a short circuiting member movable longitudinally on the shaft between the same and the commutator segments, a plurality of short circuiting plates each fulcrumed at one end on said short circuiting member and having its free end adapted to coöperate with a face of a commutator segment lying normal to the shaft, and a yielding pressure means coöperating with said short circuiting member and tending to move the same in a direction away from the free ends of said short circuiting plates.

3. In an electric motor, a short circuiting device comprising the combination of a revoluble shaft, short circuiting plates carried by said shaft and each fulcrumed at one end to a short circuiting member movable longitudinally on said shaft, the other end of each of said short circuiting plates being adapted to swing radially from said shaft under centrifugal influence, commutator segments carried by said shaft and having faces extending transversely of said shaft intermediate the extremities of said short circuiting plates, and yielding pressure means tending to move said short circuiting plates on said shaft in a direction opposite their free ends; said free ends of the short circuiting plates being adapted to coöperate with the transversely disposed faces of said commutator segments.

4. In an electric motor, a short circuiting device comprising the combination of a revoluble shaft, commutator segments carried thereon, short circuiting plates carried on said shaft and each fulcrumed at one end radially nearer the shaft than the commutator segments, the other end of each of said short circuiting plates being adapted to move away from said shaft, said commutator segments having faces disposed transversely of said shaft and positioned intermediate the longitudinal extremities of said short circuiting plates and adapted to coöperate with the free ends of said short circuiting plates, and yielding pressure means operable upon the fulcrumed ends of said short circuiting plates to hold the free ends thereof in contact with the commutator segments when said ends are swung away from said shaft.

1,111,359. COLLAR-SUPPORTER. TILLIE J. BROWNING, Philadelphia, Pa. Filed Feb. 2, 1914. Serial No. 815,892. (Cl. 2—91.)

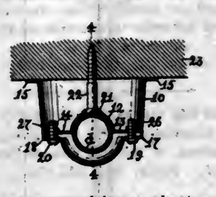


1. A supporter for collars comprising a single neck-encircling frame member and upright arms, composed of a single length of wire of wave form throughout its length and extending successively circumferentially to form a section of the encircling base member, thence upward and downward to form an upright form-maintaining arm, thence circumferentially and upward and downward as before, and so on, the wave-lengths being short relatively to the length of each upright arm and circumferential section so as to provide a number of wave lengths contiguous one to the other in each arm and section, the two sections of each upright arm being twisted upon each other at the junction between the same and the integral neck-encircling member.

2. A supporter for collars comprising a single neck-encircling frame member and upright arms, the same composed of a single length of wire extending successively circumferentially to form a part of the encircling frame member, thence upward and downward to form two separate opposing sections constituting an upright form maintaining arm, thence circumferentially and upward and downward as before, and so on, the upward and downward sections being each of regular wave form and the wave lengths being short relatively to the length of the upright arms so as to provide a number of wave lengths in each of said sections, the two sections of an arm near their upper ends being twisted upon each other to form a terminal thread engaging loop.

1,111,360. TWO-PIECE PIPE-HANGER. LEWIS A. CARPENTER and RICHARD MIDDLETON, Revere, Mass. Filed May 7, 1913. Serial No. 766,039. (Cl. 248—31.)

1. A pipe hanger comprising a sheet metal base member having a hollow body portion open at its rear end and provided at its front end with a wall to close said body portion and having a recess for the reception of a pipe and substantially flat portions on opposite sides of said recess, the bottom wall of the latter having a countersunk opening, and a sheet metal cap member having a recess and substantially flat ears on opposite sides thereof, and means to secure said ears to the flat portions of the end wall of said base member, substantially as described.



2. A pipe hanger comprising a sheet metal base member having a hollow body portion open at its rear end and provided with an outwardly extended flange, said body portion having side and end walls tapering from the rear of said body portion toward its front end and provided with a front wall separated from the rear end of said body portion and having a recess for the reception of a pipe and substantially flat portions on opposite sides of said recess, and a cap member having a recess for the reception of the pipe and ears on opposite sides thereof, and means to secure said ears to the flat portions of the front wall of said base member.

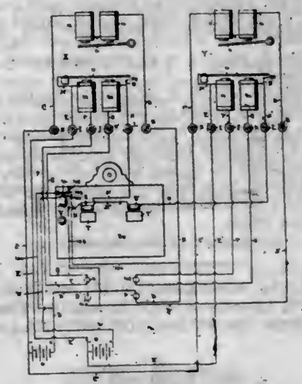
3. A pipe hanger comprising a one piece sheet metal base member having a hollow body portion open at its rear end and provided at its front end with a wall separated from the rear end of the body portion and having a substantially semicircular recess for the reception of a pipe and substantially flat portions on opposite sides of said recess and having side and end walls, and a cap member having a recess for the reception of the pipe and ears on opposite sides thereof, and means to secure said ears to the flat portions of the front wall of said base member, substantially as described.

1,111,361. INSOLE FOR BOOTS AND SHOES. LAURENCE CARR, Richmond, Cal. Filed Apr. 16, 1913. Serial No. 761,468. (Cl. 36—43.)

A removable insole of isinglass for shoes comprising a body portion having a ball section and a heel section, said sections approximating the outline of the interior of the shoe, and a plurality of tongues surrounding the edge portion of said removable insole, said tongues being of an approximately equal length and equal width, and being also approximately twice as deep as broad, said insole being adapted to be removably inserted in the shoe so that said tongues will have a gradual upward curl without creasing so as to exert an outward pressure against the inner faces of the uppers of the shoe, in such manner that no crease will be made in the tongues or body portion of the insole.

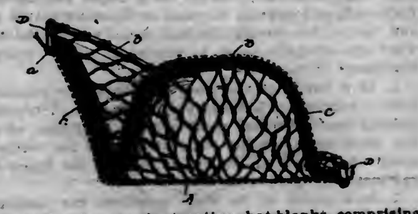
1,111,362. DOOR-RELEASING SYSTEM. JOHN CARRIGAN, Seattle, Wash. Filed May 29, 1913. Serial No. 770,787. (Cl. 189—45.)

1. In a system of the class described, a plurality of doors, fusible means for holding each door in open position, normally locked means for securing said door holding means, mechanical means operable to release said securing means when the fusible connection between the parts of the fusible door holding means is destroyed, a source of electro-motive force, a normally open circuit supplied thereby, electro-magnetic means in said circuit for releasing said securing means to permit the latter to disengage from the door holding means and allow said doors to close, a circuit breaker in said circuit and means actuating said circuit breaker to close said circuit when said securing means is released by said mechanical releasing means.



2. In a system of the class described, a plurality of doors, fusible means for holding each door in open position, securing means for said door holding means, means tending to move said securing means out of operative relation with said door holding means, a source of electro-motive force, a normally open circuit supplied thereby, electro-magnets in said circuit, pivoted armatures associated with said magnets normally locking said securing means in operative position, mechanical means tending to disengage said armatures from said securing means and normally secured against operation by said holding means, a circuit breaker in said circuit, means for actuating said circuit breaker to close said circuit when the fusible connection between the parts of said door holding means of any one or more of said door or doors is or are destroyed and thereby energize the electromagnets and actuate the armatures associated therewith to permit the securing means to be moved from operative relation with the holding means and allow the doors to close.

1,111,363. DEVICE FOR TREATING HAT-BLANKS. WILLIAM F. CHINIQUY and WILLIAM O. WINCH, Chicago, Ill. Filed Mar. 26, 1914. Serial No. 827,302. (Cl. 223—32.)



1. A device for use in treating hat-blanks comprising two superimposed members between which a plurality of hat-blanks are adapted to be retained, said members consisting of a reticulated fabric that is shaped to conform to the finished shape of the hat-blanks.

2. A device for use in treating hat-blanks comprising two superimposed members between which a plurality of hat-blanks are adapted to be retained, said members consisting of a reticulated fabric that is shaped to conform to the finished shape of the hat-blanks, and a metallic binding strip extending around the edges of said fabric.

3. A device for use in treating hat-blanks comprising two superimposed members between which a plurality of hat-blanks are adapted to be retained, said members consisting of a reticulated fabric that is shaped to conform to the finished shape of the hat-blanks, and a metallic binding strip extending around the edges of said fabric, and

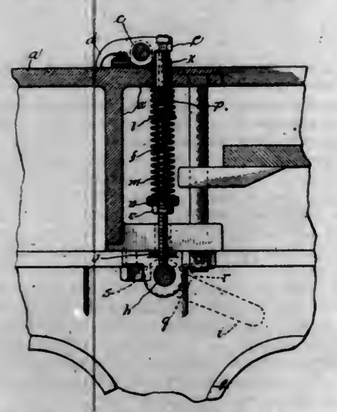
means for securing together the respective edges of said members.

4. A device for use in treating hat-blanks comprising two superimposed members between which a plurality of hat-blanks are adapted to be retained, said members consisting of a reticulated fabric that is shaped to conform to the finished shape of the hat-blanks, and the outer member of which is adapted to be depressed across the crown portion thereof.

5. A device for use in treating hat-blanks comprising two superimposed members between which a plurality of hat-blanks are adapted to be retained, said members consisting of a reticulated fabric that is shaped to conform to the finished shape of the hat-blanks, the outer member of which is adapted to be depressed across the crown portion thereof, and a metallic binding strip extending around the edges of said fabric.

[Claim 6 not printed in the Gazette.]

1,111,364. GRIPPER-FINGER MECHANISM FOR PRESSES. JOHN C. COOK, Chicago, Ill. Filed Apr. 29, 1914. Serial No. 835,064. (Cl. 101—115.)



1. In a device of the class described, the combination with a plate, of a bearing rod supported above the plate, a plurality of fingers independently pivoted on the rod coöperating with the plate, a spring for each finger tending to hold it in engagement with the plate, an eccentric rock-shaft, a headed rod for each finger resting on the rock-shaft and passing through an aperture in the finger, and means for forcing the rod down to lift the fingers when the eccentric shaft is rotated to permit downward movement of the rod.

2. In a device of the class described, the combination with a support, of a finger pivoted thereon, a headed rod passing loosely through an aperture in the finger, an eccentric shaft on which the rod rests, means for rocking the shaft, and spring mechanism for holding the finger in engagement with the support.

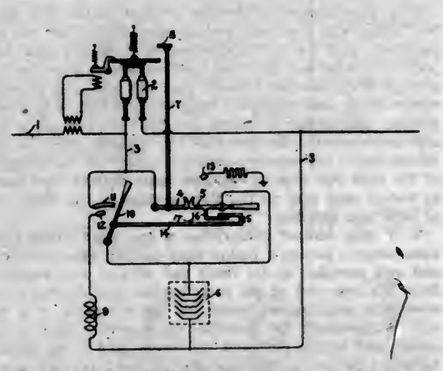
3. In a device of the class described, the combination with a support, of a finger pivoted thereon, a headed rod passing loosely through an aperture in the finger, an eccentric shaft on which the rod rests, means for rocking the shaft, a sleeve surrounding the rod and engaging the under side of the finger, and a helically-coiled expanding spring surrounding the rod and interposed between the lower end of the sleeve and an abutment on the rod.

4. In a device of the class described, the combination with a support, of a finger pivoted thereon, a headed rod passing loosely through an aperture in the finger, an eccentric shaft on which the rod rests, means for rocking the shaft, a sleeve surrounding the rod and engaging the under side of the finger, and a helically-coiled expanding spring surrounding the rod and interposed between the lower end of the sleeve and an abutment on the rod, said abutment consisting of a nut screwed thereon so as to adjust the tension of the spring.

5. In a device of the class described, the combination with a support, of a finger pivoted thereon, a headed rod passing loosely through an aperture in the finger, an eccentric shaft on which the rod rests, means for rocking the shaft, a sleeve surrounding the rod and engaging the under side of the finger, a helically-coiled expanding spring surrounding the rod and interposed between the lower end of the sleeve and an abutment on the rod, and a second spring interposed between the bottom of the sleeve and the support.

[Claim 6 not printed in the Gazette.]

1,111,365. SYSTEM OF DISTRIBUTION. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 30, 1911. Serial No. 617,827. (Cl. 175—294.)



1. In a system of distribution a circuit breaker, an inductance and a capacity in parallel and in a shunt circuit to said circuit breaker, and means for cutting said inductance and then said capacity from said shunt circuit.

2. In a system of distribution a circuit breaker, an inductance and a potential limiting device in parallel and in a shunt circuit to said circuit breaker, and means for cutting said inductance and then said potential limiting device from said shunt circuit.

3. In a system of distribution, in parallel a circuit breaker, inductance and capacity, a switch to open the line to the inductance, and means to cut out the capacity after the opening of the circuit breaker.

4. In a system of distribution, in parallel a circuit breaker, inductance and a potential limiting device, a switch to open the line to the inductance, and means to cut out the potential limiting device after the opening of the circuit breaker.

5. In a system of distribution, in parallel a circuit breaker, inductance and a potential limiting device having a condenser action, a switch to open the line to the inductance, and means to cut out the potential limiting device after the opening of the circuit breaker.

[Claims 6 to 18 not printed in the Gazette.]

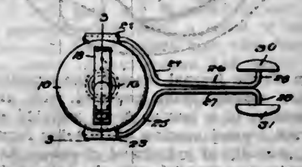
1,111,366. PILE. CHARLES I. DRANE, Walla Walla, Wash. Filed Feb. 24, 1913. Serial No. 750,288. (Cl. 72—81.)

1. A pile comprising a metallic core, a head permanently fastened to the upper end of the core, a driving shoe permanently fastened to the lower end of the core, and a concrete shell rigidly attached to and surrounding the core between the head and the shoe the head covering the upper end of the concrete shell, said core, and its head and shoe being permanently incorporated in and forming a part of the pile and the means whereby the pile is driven.

2. A pile comprising a metallic core, a ring fastened to and encircling the core at the top thereof and having a flange surrounding the ring in spaced relation, and a concrete shell rigidly attached to and surrounding the core and filling at its upper end the space between the aforesaid ring and its flange, said core being permanently incorporated in and forming a part of the pile.

3. A pile comprising a metallic core, a ring fastened to and encircling the core at the top thereof, and having a flange surrounding the ring in spaced relation, a driving shoe fastened to the lower end of the core, and a concrete shell rigidly attached to and surrounding the core and filling at its upper end the space between the aforesaid ring and its flange, and extending at its lower end to the shoe, said core being permanently incorporated in and forming a part of the pile.

1,111,367. CUFF-HOLDER. FRED P. DE WILDE, Van Houten, N. Mex. Filed Dec. 27, 1911. Serial No. 668,152. (Cl. 24—102.)



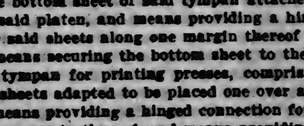
1. A cuff fastener including a sectional casing, each of the sections of said casing being formed with an inwardly disposed portion, a connecting member passing through said inwardly disposed portions, whereby the sections may rotate one upon the other, a pin carried by each of the sections and disposed within the casing, the pin of one section being supported adjacent its periphery and the pin of the other section being supported adjacent its center, a spiral spring, each of said pins being connected to a terminal of said spring, and cuff engaging means supported by each of the sections of the casing.

2. A cuff fastener including a sectional casing, the sections of said casing having their central portions inwardly directed, a connection between the central portions whereby the sections may rotate with respect to each other, the inwardly disposed portions forming a hub, a spring coiled about said hub, a pin carried by one of the sections and disposed adjacent its center and connected to one terminal of said spring, a pin carried by the other of said sections and disposed adjacent its periphery and connected to the other end of said spring, and a button supporting arm supported by each of the sections of the casing.

3. A cuff fastener including a pair of plates formed at their edges with inwardly directed flanges and provided centrally with inwardly directed sleeves, a member passing through the sleeves and connecting the plates, whereby they may rotate with respect to each other, a spring coiled about the sleeves of the plates, said spring having one of its terminals connected to one plate and its other terminal to the other plate, each of the plates being formed with a pintle lug, an arm rotatably supported by each lug, each of said arms being curved to embrace the plates, the arms extending beyond the plates and being normally maintained parallel by the action of the spring, and cuff engaging means arranged on each of said arms.

4. A cuff fastener including a sectional casing, each of the sections being formed with an inwardly disposed portion, a connecting member passing through the inwardly disposed portions, whereby they may rotate one upon the other, a spiral spring, means carried by one of the sections for securing the inner terminal of the spring, means carried by the other section for securing the outer terminal of the spring, and cuff engaging means carried by each section of the casing.

1,111,368. VALVE CUP AND GUIDE. JOSEPH W. DICKINSON, Cranford, N. J., assignor to Schubert Piano Company, New York, N. Y., a Corporation of New York. Filed May 16, 1914. Serial No. 838,915. (Cl. 84—156.)



1. A valve cup having a seat and free ended projections integral therewith for guiding the stems of the valve.

2. A valve cup having an annular straight centering portion merging into a tapered portion terminating in a valve seat.

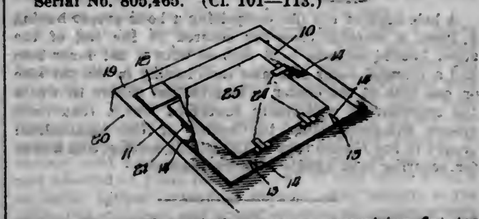
3. A valve cup having an annular straight centering portion merging into a tapered portion, said tapered portion having inwardly extending free ended projections forming a guide for the stem of the valve.

4. A valve cup having an annular straight portion merging into tapered portion, said tapered portion having an inwardly formed portion forming a seat.

5. A valve cup having an annular straight portion merging into a tapered portion, said tapered portion having an inwardly formed portion forming a seat, and projections extending inwardly from said seat and forming a guide for the stem of a valve.

[Claims 6 to 14 not printed in the Gazette.]

1,111,369. TYMPAN FOR PRINTING-PRESSES. SAMUEL E. DITTMAN, New York, N. Y. Filed Dec. 8, 1913. Serial No. 805,465. (Cl. 101—113.)



1. A tympan for printing presses, comprising flat top and bottom sheets of stiff material adapted to be placed one over and upon the other, said tympan being adapted to be placed on the flat face of a printing press platen with the bottom sheet of said tympan attached to the flat face of said platen, and means providing a hinged connection for said sheets along one margin thereof independent of the means securing the bottom sheet to the platen.

2. A tympan for printing presses, comprising top and bottom sheets adapted to be placed one over and upon the other, means providing a hinged connection for said sheets along one margin thereof, and means providing detachable connection for said sheets along those margins thereof at right angles to and parallel with the joined margins of said sheets.

3. A tympan for printing presses, comprising top and bottom sheets adapted to be placed one over and upon the other, and means providing a hinged connection for said sheets along one margin thereof embracing a flap made integral with one of said sheets along one margin thereof and to which the other of said sheets is connected.

4. A tympan for printing presses, comprising top and bottom sheets adapted to be placed one over and upon the other, means providing a hinged connection for said sheets along one margin thereof embracing a flap made integral with one of said sheets and to which the other of said sheets is connected, and means providing detachable connection for said sheets along the non-joined margins thereof.

5. A tympan for printing presses, comprising top and bottom sheets adapted to be placed one over and upon the other, means providing a hinged connection for said sheets along one margin thereof, and means providing detachable connection for said sheets along at least one of the non-joined margins thereof embracing tongues on each of said sheets adapted to be interlocked when said sheets are placed one over and upon the other.

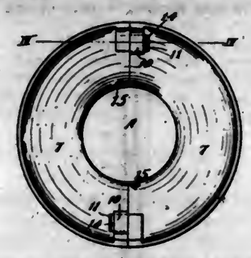
[Claims 6 and 7 not printed in the Gazette.]

1,111,370. BALE-HOOK. JOHN FAIX and SAMUEL FAIX, San Francisco, Cal. Filed Feb. 8, 1913. Serial No. 747,060. (Cl. 57—107.)

A bale hook or the like comprising a hook proper having a stem, a metallic cross-bar secured to the end of the stem, handle sections each formed with a flat inner side and a rounded outer side and each having in the flat side on one side of the center a longitudinal groove in which the cross-bar is portionally contained and a transverse groove extending from the center of the longitudinal groove to the remote edge of the handle section, and means for securing said handle sections together.

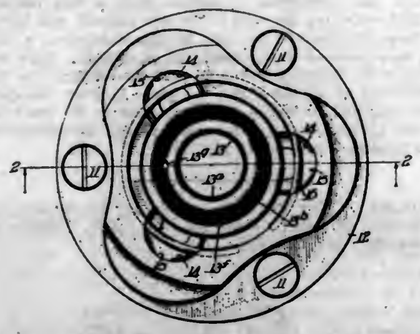
1,111,371. WALL OR CEILING PLATE. VICTOR E. FLODIN, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 30, 1913. Serial No. 787,535. (Cl. 126—317.)

A stamped metal ceiling plate comprising two counterpart, self-locking detachable sections having meeting edges, each section being composed of a semi-circular body portion having a spring loop bent over from a portion thereof adjacent one of the meeting edges, and having one end free, and being provided with a tongue bent over from the other meeting edge and projecting thereboyond, said tongue being also provided with a bead at the extremity thereof, the loop of each section being adapted to receive and hold the tongue of the other section, so that the tongues lie between the loops and the faces of the sections, and the beads on the tongues engage the inner edges of the loops, whereby the sections



are locked together against separation laterally and also longitudinally of the pipe relatively to each other.

1,111,372. ELASTIC BEARING FOR CENTRIFUGAL MACHINES. GORDON F. FOWLER, Oak Park, Ill., assignor to Sears, Roebuck & Company, Chicago, Ill., a Corporation of New York. Filed Mar. 4, 1911. Serial No. 612,172. (Cl. 64—48.)

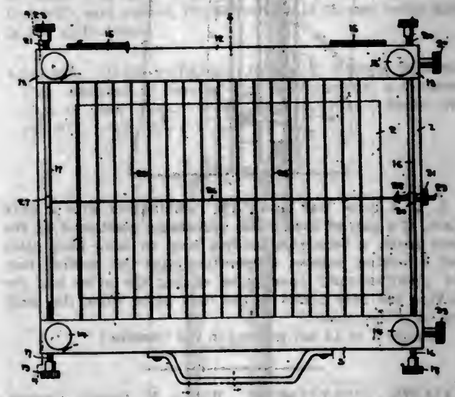


1. In an elastic journal bearing, the combination with a stationary support being provided with an enlarged journal opening, of a bearing block movably mounted in said enlarged journal opening, there being formed in said support a plurality of cylindrical chambers having their axes approximately parallel with the axis of the said enlarged opening and lying beyond the periphery of said opening but having communication therewith, and elastic means comprising coil springs formed from flat pieces of spring metal rolled into cylindrical form and supported in said chambers with the open ends of said springs in close contact with the walls of said chambers and having their peripheral portions approximately midway between their open ends extending into the said enlarged journal opening into contact with said bearing block.

2. In an elastic journal bearing, the combination with a stationary support being provided with an enlarged journal opening, of a bearing block having a journal opening therein and an exterior surface of approximately cylindrical form, there being a plurality of flat surfaces formed on the exterior of the said bearing block, and a plurality of coil springs formed from flat pieces of spring metal rolled into cylindrical form and supported in cylindrical chambers formed in said stationary support beyond the periphery of said journal opening but having communication with said opening whereby portions of said coil springs extend into said journal opening in contact with the aforesaid flattened portions on the bearing block, said coil springs being formed open and having their free ends under elastic tension of the spring metal in said coils in close contact with the walls of said cylindrical chambers in the stationary support.

3. In an elastic journal bearing, the combination with a stationary support being provided with an enlarged journal opening, of a bearing block movably mounted in the said enlarged journal opening, there being formed in said support a plurality of chambers normally lying beyond the periphery of said journal opening but having communication therewith, elastic means comprising coils of spring metal supported in said chambers and having portions of their peripheries extending into said enlarged journal opening in contact with said bearing block, and means for retaining said elastic means in said chambers comprising an open ended metallic coil secured in a peripheral groove around the said enlarged journal opening near the top of the stationary support.

1,111,373. BUTTER-CUTTING MACHINE. LAWRENCE GIVULINOVICH, Seattle, Wash. Filed Feb. 28, 1914. Serial No. 821,717. (Cl. 31—65.)



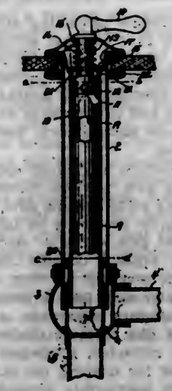
1. In a device of the class described, comprising a base, a platform arranged upon said base, a frame hingedly connected to said base and surrounding said platform, means for operating said frame, a series of cutters supported within said frame, means upon said frame for adjusting the tension of said cutters, and means for yieldably supporting said cutters.

2. In a device of the class described, comprising a base, a platform arranged upon said base, a frame hingedly connected to said base and surrounding said platform, means for operating said frame, a series of parallel and equi-spaced cutters supported within said frame, means upon said frame for adjusting the tension of said cutters, means for yieldably supporting said cutters, and means for adjusting the yieldably supporting means for determining the degree of space between said cutters.

1,111,374. SALAD-DRESSING MIXER. FRED L. GODARD, New York, N. Y., assignor to Ernest M. Currier and Harry E. Roby, New York, N. Y., constituting The Firm of Currier & Roby, New York, N. Y. Filed Feb. 12, 1912. Serial No. 677,020. (Cl. 107—38.)

A mixer for salad dressing, comprising a container having inner concave walls and an aperture at the top of a smaller crossectional area than the largest internal crossectional area of said container, a cover for said container, a mixing device consisting of a shaft adapted to be mounted in bearings formed in said cover and the bottom of said container respectively, a plurality of projecting blades disposed circumferentially about said shaft, and movably mounted with respect thereto, said blades being of sufficient curvature to intersect the radial lines of said container, each of the said blades being hinged on said shaft so as to permit of the same being collapsed and folded upon each other when the said shaft is revolved in one direction and to cause the same to resist folding and be maintained equi-distant from each other when said shaft is revolved in the opposite direction, and each of said blades extending from a point in proximity to the bottom of said container, when inserted therein, to points equally distant above the same, and said blades being provided with a series of upwardly inclined transversely extending apertures, the outer vertical edges of said blades being slightly concave.

1,111,375. BATH AND BASIN WASTE. HENRY F. GOETZ, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed July 16, 1914. Serial No. 851,320. (Cl. 4—24.)



1. A bath or basin waste comprising a tube, a casing coupled with the lower end of said tube, said casing formed with a valve seat, a valve adapted to co-act with said seat, a tubular valve stem coupled with said valve, said valve stem formed with cam slots, a rotatable spindle, a pin carried by the spindle and entering said cam slots, and a spring bearing upon the upper end of the valve stem and tending to force the valve to its seat.

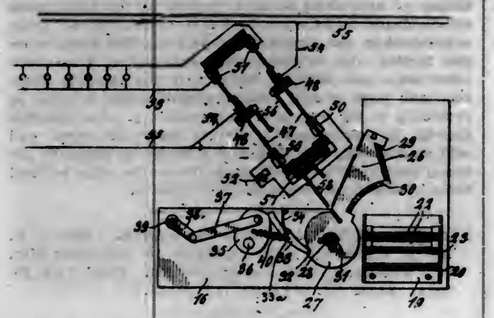
2. A bath or basin waste comprising a tube, a casing coupled with the lower end of said tube, said casing formed with a valve seat, a tubular valve the lower end of which co-acts with said seat, a tubular valve stem with which the tubular valve is connected, said valve stem formed on opposite sides with cam slots, a bonnet connected with the upper end of the tube and adapted to support said tube, a flange also supported by the bonnet and adapted to guide the upper end of said valve stem, a rotatable spindle extending through said bonnet, a pin carried by the lower end of said spindle and engaging with said cam slots, and means for turning said spindle.

1,111,376. FIRE-PREVENTIVE DEVICE FOR MOTION-PICTURE APPARATUS. HAL GOODWIN, Chicago, Ill. Filed Apr. 22, 1913. Serial No. 762,806. (Cl. 88—17.)

1. In a motion picture apparatus a switch controlling the lamp of the apparatus and the lighting circuit of the auditorium, a detent for holding the switch in position to close the lamp circuit, means for throwing the switch to open the lamp circuit and to close the lighting circuit when the detent is tripped, and means including a fusible element for controlling the detent.

2. In a motion picture apparatus, a switch controlling the lamp of the apparatus and the lighting circuit of the

auditorium, a detent for holding the switch in position to close the lamp circuit, means for throwing the switch to open the lamp circuit and to close the lighting circuit when the detent is tripped, means for severing the film, a connection between said means and the aforesaid detent, and a fusible element controlling the severing means.



3. In a motion picture projecting apparatus having a backing plate and a gate between which the film passes, means for severing the film, means for locking said severing means, and a fusible element controlling said locking means, said fusible element being located remote from the film severing means and in proximity to the film passage between the aforesaid backing plate and the gate of the projecting apparatus.

4. In a motion picture projecting apparatus having a backing plate and a gate between which the film passes, a tube at the backing plate and the gate, said tube having an opening which is in proximity to the film passage between said plate and gate, a fusible element in said tube, said element being exposed through the opening in the tube, and means for severing the film, said means being controlled by the aforesaid fusible element.

5. In a motion picture apparatus, a cutter mounted to swing across the film to sever the same, a detent for holding the cutter retracted, a pivoted member engageable with the detent for tripping the same to release the cutter, a rock shaft operatively connected to said member, a fusible element connected to the rock shaft for locking the same and holding the aforesaid member retracted, and a spring connected to said member for actuating the same when the fusible element is ruptured.

[Claim 6 not printed in the Gazette.]

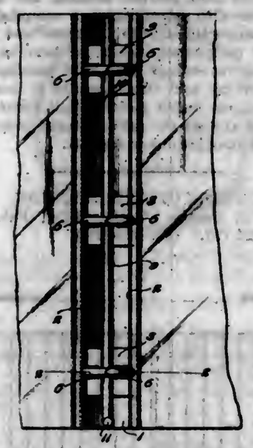
1,111,377. LOOSE-LEAF BINDER. GEORGE W. GOSS, St. Louis, Mo., assignor to Lucena M. Morden, Waterbury, Conn. Filed Jan. 29, 1912. Serial No. 674,078. (Cl. 129—24.)

1. In a loose leaf binder a back plate, a series of base plates adjustably positioned on the back plate, a pair of arms fulcrumed on each base plate each pair of arms uniting to form a binding loop and means coöperating with the pairs of arms for simultaneously moving the same into opened or closed positions.

2. In a loose leaf binder a back plate, a plurality of base plates adjustably arranged on the back plate, a pair of arms fulcrumed on each base plate, which arms unite to form a binding loop and a member arranged between the lower ends of all of the arms for simultaneously moving the same into opened or closed positions.

3. In a loose leaf binder a back plate, a plurality of base plates adjustably positioned thereon, a pair of arms fulcrumed on each base plate, which arms unite to form a binding loop and a rod positioned between the lower ends of all of the arms for simultaneously actuating the same.

4. In a loose leaf binder a back plate, a plurality of base plates adjustably positioned thereon, a pair of arms fulcrumed on each base plate and adapted to form a binding loop and a rod positioned between the lower ends of all the arms, and which rod is adapted to move above and below the plane occupied by the fulcrums of the arms for the purpose of simultaneously opening and closing said arms and locking the base plates to the back plate.



5. In a loose leaf binder the combination with a back plate, of a pair of base plates adjustably positioned on the back plate, a separable binding loop on each base plate and a locking member coöperating with the binding loop for simultaneously opening or closing the same and for locking the base plates to the back plate when the binding loops are closed.

[Claims 6 to 14 not printed in the Gazette.]

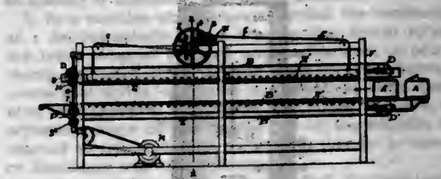
1,111,378. CULTIVATOR. BYRON E. GREGG, Carlyle, Kans. Filed Apr. 30, 1913. Serial No. 764,677. (Cl. 97—37.)

1. In a cultivator the combination of a frame, a block slidable on said frame and having a passage therethrough, a beam pivoted to the frame for movement in a horizontal plane and engaged through the passage in the block, a bracket pivoted to the beam, a second bracket having an adjustable sliding connection with the beam, and a disk gang supported by said brackets.

2. In a cultivator the combination of a main frame, a supplemental frame adjustably pivoted on the main frame for movement in a vertical plane a beam having one end pivotally supported upon the supplemental frame, and its other end slidably engaged with one side of the supplemental frame, said side of the supplemental frame being curved concentrically with respect to the pivot of the beam, means for locking the free end of the beam against sliding movement on the frame, and a disk gang supported from the beam.

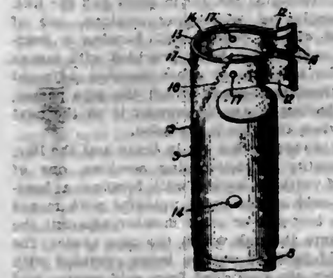
1,111,379. MACHINE FOR PASTING PASTEBOARD PACKAGES. JOHN N. HAHN, Cleveland, Ohio. Filed Oct. 10, 1910. Serial No. 586,217. (Cl. 93—7.)

A machine as described for pasting and drying boxes having two endless aprons oppositely disposed parallel to each other and two frames having rolls at their ends over which said aprons travel, a series of rollers for each apron having bearings in said frames and exposed above the opposed surfaces thereof, means to space said frames apart at varying distances according to the sizes of the boxes to be pasted comprising flexible adjustable suspensory supports for the upper of said frames extending from the middle of the machine to both ends of said frame, and means to jointly operate said aprons at the same rate



of speed and in the same direction, the said aprons being stretched over their respective frames and running in contact with said rollers, the lower of said frames being fixed in the main frame.

1,111,380. PLUG-PULLER. FRANK C. HANKE, Modesto, Cal., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1914. Serial No. 850,677. (Cl. 81—3.)



1. A plug puller comprising a rod having at one end a plug engaging device with opposed parts adapted to engage at either side above the plug head and unyieldingly to pull on the rod, portions of said parts between which the plug enters being resiliently yielding with reference to one another so as to be forced apart by the plug and then spring together.

2. A plug puller comprising a rod having at one end a plug-engaging device adapted to receive the plug sidewise, said device comprising a fork for engaging above the plug head that extends transversely of the rod and is unyielding to a pull on the rod and including yielding means for retaining the plug in the fork.

3. A plug puller comprising a rod having at one end a transversely extending fork for engaging above the plug head that is unyielding to a pull on the rod, portions of said fork between which the plug enters having outwardly divergent surfaces and being resiliently yielding with reference to one another so as to be forced apart by the plug and then spring together and retain it.

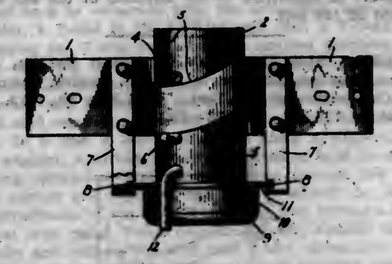
4. A plug engaging device for a plug puller comprising a sleeve portion for receiving a handle and a transversely extending fork for engaging above the plug head attached at its base to one side of the sleeve and opening toward the other side thereof.

5. A plug engaging device comprising a metal tube having a lateral portion near one end cut away to accommodate a plug head and having the portion between the lateral cut and the end bent open to form a transversely extending fork for engaging above the head.

1,111,381. ARC-LIGHT ELECTRODE. WALTER L. HARRADEN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 14, 1912. Serial No. 683,748. (Cl. 176—118.)

1. The method of steadying an arc which consists in causing the current to enter the arc at right angles thereto and in substantially equal branches symmetrical with respect to the same.

2. In combination, an electrode comprising a substantially disk shaped member the face of which forms an arcing surface, means for supporting the electrode, and for conducting the arc current to the edge of the disk shaped portion of the electrode at points removed from and substantially symmetrical with respect to the center of the disk shaped portion.



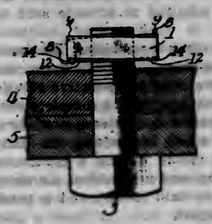
3. In combination, an electrode comprising a substantially disk shaped imperforate member provided with an arcing surface and a portion projecting from the periphery of the disk which is adapted to support the electrode and to convey current to the same.

4. In combination, an electrode comprising a substantially disk shaped portion provided with an arcing surface, and a portion projecting from the periphery of the disk, means comprising said projecting portion for supporting said electrode, and means coöperating with said projecting portion for locking the same in position.

5. An electrode comprising a substantially disk-shaped portion having an arcing surface, and means for conveying current to the edge of the disk by a definite number of paths symmetrically disposed about the disk.

[Claim 6 not printed in the Gazette.]

1,111,382. LOCK-NUT. EDWARD R. HIBBARD, Oak Park, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1910. Serial No. 577,071. (Cl. 151—21.)



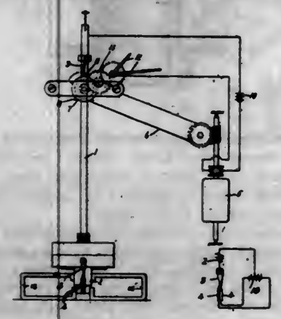
1. A bolt nut, threaded to coöperate with a suitable bolt and given a slight twist extending therethrough, slightly distorting the thread and thus forming the nut with one or more portions on the bearing face bent downward beyond the plane of the face of the nut in the direction of the travel of the same when backed off the bolt, substantially as described.

2. A bolt nut, threaded to coöperate with a suitable bolt, the nut having a slight twist extending therethrough at right angles to its axis, and provided on its opposite faces with parallel central depressions and formed with one or more portions on its bearing face bent downward beyond the plane of the face of the nut in a direction of the travel with the same when backed off the bolt, substantially and for the purpose set forth.

3. A bolt nut, normally formed with a slight twist at right angles to the axis thereof, with a thread cut therein while in its normal position, whereby when the nut is screwed to place upon a structure the thread is slightly distorted as the proximate surface of the nut is straightened and one or more points are abnormally pressed upon the proximate structure in opposition to the direction of the nut when backed off the bolt.

4. A bolt nut, composed of slightly resilient material and normally formed with a slight twist at right angles to the axis thereof, with a thread cut therein while in its normal position, whereby when the nut is screwed to place upon a structure the thread is slightly distorted as the proximate surface of the nut is straightened and one or more points are abnormally pressed upon the proximate structure in opposition to the direction of the nut when backed off the bolt.

1,111,383. ELECTRIC CLOCK. FRANK HOLDEN, London, England, assignor to General Electric Company, a Corporation of New York. Filed Nov. 30, 1912. Serial No. 734,293. (Cl. 58—23.)



1. An electric clock comprising an electric motor having a continuously rotatable member, an electric circuit operatively related to said motor, and a pendulum adapted to control said circuit.

2. An electric clock comprising a clock mechanism, an electric motor having a continuously rotatable member operatively connected to said mechanism, an electric circuit operatively related to said motor, a movable contact included in said circuit and adapted to be actuated by said motor, a second movable contact included in said circuit and coöperating with said first mentioned movable contact, and a pendulum adapted to actuate said second movable contact.

3. An electric clock comprising an indicating mechanism, an electric motor operatively connected to said mechanism, an electric circuit in operative relation to said motor, and a pendulum adapted to complete said circuit when the speed of the motor decreases a predetermined amount.

4. An electric clock comprising an indicating mechanism, an electric motor having a continuously rotatable member for driving said mechanism, an electric circuit operatively related to said motor, and a pendulum adapted to control said circuit.

5. An electric clock comprising an indicating mechanism, an electric motor for driving said mechanism, an electric circuit in operative relation to said motor, a contact wheel in said circuit and driven by said motor, and a pendulum having a contact included in said electric circuit and adapted to engage said contact wheel when the speed of the motor decreases a predetermined amount.

1,111,384. STOVEPIPE. THOMAS M. HOPKINS, Denver, Colo. Filed July 17, 1914. Serial No. 851,568. (Cl. 126—307.)

1. A collapsible stove-pipe for use in tents and the like, comprising a plurality of telescoping sections, one of which is provided with a double wall forming a heat-insulating jacket, said section being provided with means to secure it to the tent-pole or other member adjacent the roof of the structure through which the pipe passes.

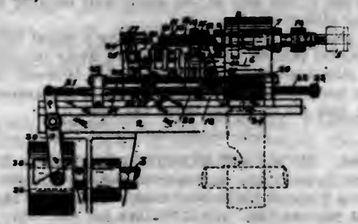
2. A collapsible stove-pipe for use in tents and the like, comprising a plurality of telescoping sections, one of which is provided with a double wall forming a heat-insulating jacket, said section being provided with means to secure it to the tent-polt or other member adjacent the roof of the structure through which the pipe passes, said means also serving to hold the sections together in collapsed condition.

3. A collapsible stove-pipe for use in tents and the like, comprising a plurality of telescoping sections, one of which is provided with a double wall forming a heat-insulating jacket, said section being provided with means to secure it to the tent-pole or other member adjacent the roof of the structure through which the pipe passes, and each section having means to support it on the next adjacent section when the pipe is extended.

4. A collapsible stove-pipe for use in tents and the like, comprising a plurality of telescoping sections, one of which is provided with a double wall forming a heat-insulating jacket, said section being provided with means to secure it to the tent-pole or other member adjacent the roof of the structure through which the pipe passes, the sections below said jacketed section being provided with means whereby they are suspended from said section and from each other, and the section above said jacketed section being provided with means to hold it frictionally in any position in said jacketed section.

5. A collapsible stove-pipe for use in tents and the like, comprising a plurality of telescoping sections, one of which is provided with a double wall forming a heat-insulating jacket, said section being provided with means to secure it to the tent-pole or other member adjacent the roof of the structure through which the pipe passes, the sections below said jacketed section being provided with means whereby they are suspended from said section and from each other, and the section above said jacketed section being provided with means to hold it frictionally in any position in said jacketed section, and also with a cross-bar at its top whereby the sections can be pulled apart.

1,111,385. THREADING MECHANISM FOR MULTIPLE-SPINDLE SCREW-MACHINES. HUGH M. HUNTER, Cleveland, Ohio, assignor to The National Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 15, 1912. Serial No. 725,808. (Cl. 29—37.)



1. In a machine of the class described, the combination of a driving spindle and a nonreversible driven spindle, a clutch member fixed on one of said spindles, a coöperating clutch member slidable on the other of said spindles and adapted to rotate said driven spindle in one direction, lever mechanism in engagement with said slidable clutch member, and adjustable means carried by the bed of the machine and adapted to trip said lever mechanism thereby to connect or disconnect said clutch members.

2. In a machine of the class described, the combination of a driving spindle and a nonreversible driven spindle, the latter adapted to carry a threading tool, a pair of clutch members carried by said spindles and adapted to rotate said driven spindle in one direction, lever mechanism in engagement with one of said clutch members, and adjustable stops carried by the bed of the machine and adapted to trip said lever mechanism thereby to connect or disconnect said clutch members.

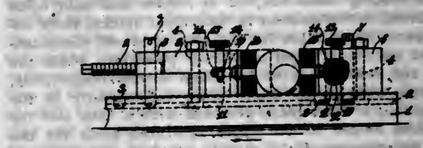
3. In a machine of the class described, the combination of a driving spindle and a driven spindle, the latter adapted to carry a threading tool, a pair of clutch members carried by said spindles, lever mechanism in engagement with one of said clutch members, adjustable stops carried by the bed of the machine and adapted to trip said lever mechanism thereby to connect or disconnect said clutch members, and means independent of said lever mechanism for stopping the rotation of the driven spindle when the clutches are disconnected.

4. In a machine of the class described, the combination of a driving spindle and a driven spindle, the latter adapted to carry a threaded tool, a clutch member fixed on said driving spindle, a coöperating clutch member slidable on said driven spindle and provided with a series of ratchet teeth, a pivoted lever having one end engaging said slidable clutch member, a pivoted lever engaging the opposite end of said first lever, adjustable stops carried on the bed of the machine and adapted to trip said last lever thereby to connect or disconnect said clutch members, and a pawl adapted to engage said ratchet teeth for stopping the rotation of the driven spindle when the clutch members are disconnected.

5. In a machine of the class described, the combination of a driving spindle and a driven spindle, the latter adapted to carry a threading tool, a pair of clutch members carried by said spindles, lever mechanism in engagement with one of said clutch members, adjustable stops carried by the bed of the machine and adapted to trip said lever mechanism thereby to connect or disconnect said clutch members, means for maintaining said clutches in operative engagement, and means independent of said lever mechanism for stopping the rotation of the driven spindle when the clutch members are disconnected.

[Claims 6 to 38 not printed in the Gazette.]

1,111,386. ADJUSTABLE VISE FOR HACKSAWS. AMOS HUTTON, Springfield, Mass., assignor to Massachusetts Saw Works, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 17, 1914. Serial No. 812,726. (Cl. 29—67.)

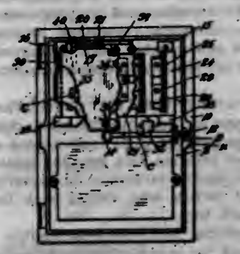


1. In a vise, a bed-plate, a pair of carriages mounted thereon and in opposed relation to each other, means for independently adjusting the carriages, at a plurality of points along the bed-plate, said bed plate having recesses in the bed-plate, a lock-bolt passing through each carriage and engaging a recess in the bed-plate, a carrier mounted upon one of the carriages, means to tightly secure the carrier and its carriage to the bed-plate, means to tightly secure the other carriage to the bed-plate, work-engaging jaws attached to the carrier and the opposite carriage, means for causing said jaws to relatively approach or recede from each other through a range equal to the distance between any adjacent pair of recesses in the bed-plate to grip articles of different sizes, the jaws, one carrier and the opposite carriage formed with interengaging serrations, and means to retain the carrier and its jaw and the opposite carriage and its jaw in locked relation to each other.

2. In a vise for hack saws, a support, a carrier along said support, said carrier having a serrated cylindrical face and a pair of crossed apertures, one thereof communicating with said face, a serrated jaw having a serrated cylindrical back to coöperate with the cylindrical face of the carrier, a T-slot in the back of said jaw, a T-head bolt engaging the T-slot and having a cammed aperture slidably mounted in the aperture communicating with the face of the carrier, another bolt threaded in the other aperture and having an inclined portion for coöperation with said cammed portion all for the purpose described.

3. In a vise, a block adjustable along a support, and the support, a carrier slidably mounted on said block and having cylindrical face, means passing through the block and carrier and engaging the base to adjust the carrier longitudinally of the block, a swiveled jaw, having a cylindrical back and a T-slot therein, a T-bolt slidable in said carrier and coöperating with said T-slot, means for longitudinally moving said bolt, whereby said swiveled jaw may be firmly clamped in adjusted position or released therefrom.

1,111,387. LOCK. CHARLES E. JOHNSON, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed July 15, 1913. Serial No. 779,112. (Cl. 70—18.)



1. In combination with a door or like part, a lock mounted thereon and including tumblers as a part of the lock mechanism, a resetting plate for operating the tumblers, a lever pivotally mounted with one end loosely connected with the resetting plate and the opposite end located to engage an operating member to move the lever, and the operating member located in the path of movement of said lever.

2. In combination with a door or like part, a lock mounted thereon and including tumblers as a part of the lock mechanism, a resetting plate to operate the tumblers, a bell crank lever pivotally secured to the door underneath the resetting plate with one arm located against the side of and loosely attached to said plate and the other arm bent at an angle to pass through the door opening, and a resetting member located on the door frame in the path of movement of said lever.

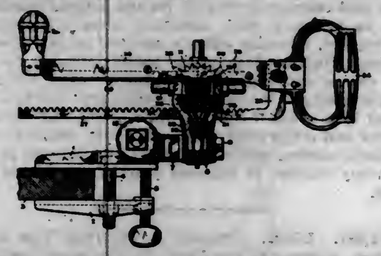
3. In combination with a door or like part, a lock mounted thereon and including a movably mounted bolt throwing plate, a bolt connected therewith, a movably mounted resetting plate, tumblers connected to be operated by said resetting plate, a cam plate projecting from the bolt throwing plate, a resetting lever connected with the resetting plate, and a stud located in the path of movement of said cam plate and said resetting lever to actuate them.

4. In combination in a lock including a bolt, a tumbler plate, tumblers movably mounted in recesses in said plate, a bolt throwing plate resting against the tumbler plate and holding said tumblers in place, said bolt throwing plate being operatively connected with said bolt and carrying members having locking stud recesses and releasing recesses, and means to permit independent change of the releasing recesses with respect to the tumblers.

5. In combination in a lock including a bolt and tumblers to permit operation of the bolt, a bolt throwing plate located to cover said tumblers, operatively connected with said bolt and carrying members having locking stud recesses and releasing recesses, and means to permit independent change of the position of the releasing recesses with respect to the tumblers.

[Claims 6 to 16 not printed in the Gazette.]

1,111,388. CUTTING-TOOL. CHARLES J. JOHNSON, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 31, 1913. Serial No. 745,410. (Cl. 29—75.)



1. In a cutting tool, the combination of rotatably mounted means for gripping the work, means for holding a cutting edge adapted to be reciprocated across the work, and means for rotating said gripping means and the work at least one complete revolution in opposition to the movement of said cutting edge during each full cutting movement of the latter at a speed bearing a constant relation thereto.

2. In a cutting tool, the combination of rotatably mounted means for gripping the work, means for holding a cutting edge adapted to be reciprocated across the work, and means for rotating said gripping means and the work at least one complete revolution in opposition to the movement of said cutting edge during each full movement of the latter each way.

3. In a cutting tool, the combination of a rotatably mounted chuck for holding the work, means for holding a cutting edge adapted to be reciprocated across the work, and toothed gearing connecting said chuck with said holding means whereby the work is positively rotated in opposition to the cutting movement of said edge at a speed bearing a constant relation thereto.

4. In a cutting tool, the combination of rotatably mounted means for gripping the work, means for holding a cutting edge adapted to be reciprocated across the work, and means for rotating said gripping means and the work connected with said holding means so as to be operated by the cutting movement of the same and acting to rotate the work only in opposition to the movement of the cutting edge.

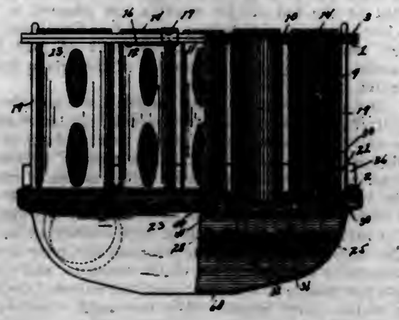
5. In a cutting tool, the combination of a rotatably mounted clutch for the work, a reciprocating cutting edge, and means controlled by the movement of the cutting edge for causing the clutch to make at least one complete revolution during each stroke of the cutting edge.

[Claims 6 to 12 not printed in the Gazette.]

1,111,389. COIN-HANDLING DEVICE. EDWARD G. KASTNER and JOHN E. BENTON, Detroit, Mich. Filed Oct. 6, 1913. Serial No. 793,506. (Cl. 133—5.)

1. A device of the kind described, comprising a series of coin holding tubes held in closely spaced relation, the upper ends of the tubes terminating in the same plane, a coin extractor at the bottom of each tube adapted to remove the lowermost coin therefrom, the tubes alternating in length whereby the extractor of one tube lies below and in contact with the extractor of the two contiguous tubes of shorter length, and a delivery channel so arranged that coins delivered therein are delivered on edge at a central opening.

2. A device of the kind described, comprising a series of coin holding tubes adapted to receive coins of different denominations, an apertured upper and lower plate into which the open upper and lower ends of the tubes extend respectively, the upper ends of the tubes being substantially flush with the upper plate, an extractor at the open lower end of each tube, said tubes alternating in length whereby an extractor for a long tube may operate in contact with the lower surface of the shorter contiguous tubes, thereby enabling the tubes to be positioned in closely spaced relation, a cover hinged to the upper plate provided with coin slots for each individual tube, a spring for each extractor adapted to hold it in retracted position, a delivery channel adjacent the lower ends of the tubes, the said channel being so formed that coins delivered thereinto by the extractors are delivered on edge through a central opening with which the channel is provided.



3. A device of the kind described, comprising a series of coin holding tubes adapted to receive and hold coins of different denominations in individual stacks, an apertured upper and lower plate into which the upper and lower open ends of the tubes extend respectively, the upper ends of the tubes being substantially in the same plane, a cover plate hinged to the upper apertured plate for the tubes, said cover plate having coin slots for each tube, the rear edge of which is provided with an upstanding flange, an extractor at the lower end of each tube, said tubes alternating in length whereby an extractor for a long tube may operate in contact with the lower surface of the extractors for the shorter contiguous tubes thereby enabling the tubes to be positioned in closely spaced relation, a spring for each extractor adapted to hold it in retracted position, and a delivery channel for receiving coins from the extractors, said channel being provided with a central delivery opening.

4. A device of the kind described, comprising a series of coin holding tubes adapted to receive and hold coins of different denominations in individual stacks, there being a plurality of tubes for the coin of lowest denomination, an apertured upper and lower plate into which the upper and lower ends of the tubes extend respectively, the upper ends of the tubes being substantially in the same plane, a cover plate provided with a coin slot for each tube hinged to the upper apertured plate for the tubes, an extractor for each tube at the lower open end thereof, each adapted for the removal of a single coin from its respective tube, said tubes alternating in length whereby an extractor for a long tube may operate in contact with the lower surface of the extractors for the shorter continuous tubes whereby the tubes may be positioned in closely spaced relation, an operating finger for each extractor extending therebelow, a delivery channel into which the extractors deliver the coins, the delivery end of the channel extending below the device a distance not less than the length of the depending operating fingers, and a plate extending from the back of the device and spaced from the operating fingers, said plate extending below the device a distance substantially equal to that of the delivery channel.

5. In a device of the kind described provided with a series of coin holding tubes adapted to receive and hold coins of different denominations in individual stacks, a plurality of tubes for holding five-cent pieces, a single tube for holding dimes, an extractor operating at the lower end of each tube adapted to extract a single coin from each stack, and an extractor for the dime tube adapted to remove two coins therefrom at a single operation, the upper ends of the tubes terminating in the same plane and alternating in length whereby an extractor at the bottom of one of the tubes may overlap the extractor for each of the contiguous tubes.

1,111,390. VALVE. JOHN KELLY, Chicago, Ill. Filed May 27, 1912. Serial No. 700,136. (Cl. 137—4.)

1. A valve device comprising a casing containing a valve-seat, a cage in said casing formed of an outer apertured cylindrical member opening through said valve-seat and into the casing beyond said seat and tubular sections secured in said member and spaced apart at their opposing ends to form a continuous cam-groove therebetween, a valve coöperating with said seat and equipped with an operating stem extending through said cage and casing, and a pin on said stem extending into said cam-groove, for the purpose set forth.

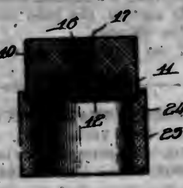
2. A valve device comprising a casing containing an apertured partition, a gasket fitting against said partition and about the opening therein to form a valve-seat, a cage in said casing having an opening in one end thereof at which end it bears against said gasket and registers with the opening in the latter, said cage being formed of inner tubular members and an outer tubular member, said outer member being apertured and said inner members being spaced apart at their opposing ends to form an endless cam-groove therebetween and communicating with the apertures in said outer tubular member, a plug on the casing bearing against the other end of the cage, a valve coöperating with said seat and closing in the direction of the flow of the fluid through said casing, the stem of said valve extending through said gasket, cage and plug and journaled in the latter, and a pin on said stem extending into said cam-groove, for the purpose set forth.

1,111,391. VALVE. STRICKLAND L. KNIGHT, Philadelphia, Pa., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 19, 1913. Serial No. 801,772. (Cl. 137—4.)

1. An operating valve comprising a valve stem having a contracted end and provided in the part thereof of greater diameter with an annular external groove, a valve head or valve proper having a cavity, the wider part of which is adapted to the part of the valve stem of greater diameter and the narrower part of which is adapted to receive the contracted end of the valve stem, there being an annular internal groove in the wall of the wider part of said cavity registering with the groove in the valve stem, and inelastic segments loose within the grooves rendering the stem unremovable, there being end contact between the stem and the valve head adapted to relieve the strain upon the segments.

2. An operating valve comprising a valve head or valve proper having an enlarged part adapted to its seat and a contracted part extending beyond its enlarged part and provided with a cavity the entering part of which is of uniform diameter adapted to receive the valve stem, there being an external groove in the valve stem and registering therewith an internal groove in the wall of the entering part of said cavity, inelastic segments loose within the grooves rendering the stem unremovable, there being end contact between the stem and the valve head adapted to relieve the strain upon the segments.

1,111,392. DENTAL ANVIL OR SWAGE-BLOCK. LOUIS F. KOEHLER, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,089. (Cl. 113—39.)



1. An anvil or swage block comprising a frame having a through opening, a removable and renewable anvil body therein of relatively soft material supported by the walls of the frame, and means for providing an interlocking connection between the frame and body, constructed to permit said body to be driven out of the frame, said frame being provided at one side of its opening with an annular surface or shoulder outwardly over which an adjacent annular part of the anvil body is up-set to interlock the body to said frame.

2. An anvil or swage block comprising a frame formed at one side with a recess, a renewable anvil body of relatively soft material in said recess, said frame being provided with a central opening having at one end an annular shoulder and the body being provided with a lug or extension which extends into said opening and is upset at its end over said shoulder.

3. An anvil or swage block comprising a frame formed at one side with a recess to receive an anvil body, and provided also with a central opening which extends to the side of the frame remote from said recess, and a renewable anvil body of relatively soft material occupying said recess and provided with a lug which enters said opening, the wall of the opening being formed with an annular flaring surface outwardly over which the end of said lug is adapted to be up-set.

1,111,393. COMPOSITE METAL-WORK. LAURENCE S. LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Original application filed June 16, 1910, Serial No. 567,152. Divided and this application filed Nov. 26, 1913. Serial No. 803,123. (Cl. 189—36.)

1. Composite metal work comprising a metallic body and a laterally projecting pin having a head of larger diameter than the pin, said pin being welded to said body by said head.

2. Composite metal work comprising a metallic body and a laterally projecting pin having a head and a substantially square shoulder at the junction of said head and said pin, said pin being welded to said body by said head.

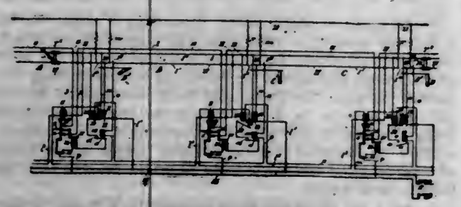
3. Composite metal work comprising two members, one of said members having a rounded head of larger diameter than the body and a square shoulder, said headed member being welded laterally to the other member by the rounded surface of said head whereby a smooth square shoulder is presented at the junction of the two members.

4. Composite metal work comprising a tubular length of metal and a laterally projecting pin provided with a head and a substantially square shoulder at the junction of the pin and head, said pin being welded to said tubular member by said head.

5. Composite metal work comprising two members, one of said members having a rounded head of larger diameter than the body portion, the head being welded to the surface of the other member.

[Claims 6 and 7 not printed in the Gazette.]

1,111,394. ELECTRIC TRAIN-CONTROL SYSTEM. HARRY N. LATEY, New York, N. Y., assignor to Automatic Train Stop Company, a Corporation of Maine. Filed Mar. 5, 1909, Serial No. 481,388. (Cl. 246—36.)



1. In an electric railway system, a sectional power conductor, switches for joining the sections of said conductor in an unbroken series, said switches having a bias for open position, holding means for retaining said switches in closed position, a plurality of normally energized circuits each including at least two electro-magnetic appliances, each of said electro-magnetic appliances controlling one of said holding devices, and means controlled by the presence of two trains spaced apart less than a determined distance for deënergizing one of said normally energized circuits.

2. In an electric railway system, a sectional power conductor, switches for joining the sections of said conductor in unbroken series, said switches having a bias to open position, holding means for retaining each of said switches closed, electromagnetic devices for controlling said holding means, each of said devices comprising several differentially-wound windings, a plurality of normally energized circuits each including windings, one in each of at least two different ones of said devices, train controlled means for deënergizing one of said circuits and thereby opening the switches controlled thereby, and means for restoring said switches to closed position.

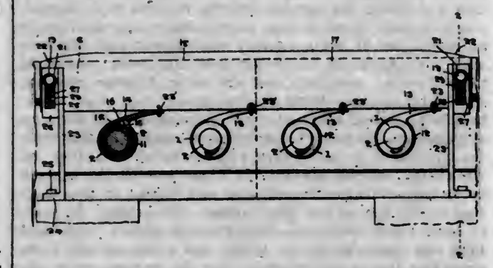
3. In an electric railway system, a sectional power conductor, switches for joining the sections of said conductor together in an unbroken series, said switches having a bias for open position, holding devices for retaining each of said switches in closed position, means comprising a circuit including electro-magnetic appliances through which current normally flows, for controlling a limited number of said holding devices, two separate normally energized auxiliary circuits each having an electro-magnetic device therein, and means controlled by said electro-magnetic devices for interrupting the current flow in said first mentioned circuit, said means interrupting said current flow when both of said electro-magnetic devices are deënergized.

4. In an electric railway system, a sectional power conductor, switches having a bias to open position for joining the sections of said conductor together in an unbroken series, holding means for maintaining said switches closed, means comprising normally energized circuits each including an electro-magnetic device for disengaging one of said holding means, said last mentioned means being inoperative as long as current flows through said circuits, separate auxiliary circuits each having a magnet therein through which current normally flows, said last-named circuits being deënergized by the presence of two trains at determined points along the trackway, and armatures for said magnets, one of which armatures closes one of said first-named circuits and the other of which armatures when attracted holds the first armature in its circuit closing relation.

5. In an electric railway system, a sectional power conductor, switches normally joining the sections together in an unbroken series, differentially wound magnets for controlling said switches, and a plurality of circuits each including winding on each magnet of a group of said magnets through which current normally flows.

[Claims 6 to 8 not printed in the Gazette.]

1,111,395. RAIL-JOINT ATTACHMENT. WILHELM MAUCH and WILHELM KOENIG, Braddock, N. D. Filed Apr. 7, 1914. Serial No. 830,201. (Cl. 239—7.)



1. In a device of the character described including a rail joint and bolts provided therefor, rotatable burs for the ends of said bolts, and means whereby said burs are rotated by the passage of a train.

2. In a device of the character described including a rail joint and bolts provided therefor, rotatable burs threaded on said bolts, lever arms connected to said burs, and means whereby said lever arms are depressed during the passage of a train.

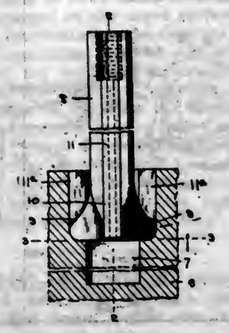
3. In combination with a rail joint including angle bars and bolts provided therefor; of rotatable burs threaded on the ends of said bolts, a ratchet wheel formed integral with said burs, rotatable casings mounted upon said burs, lever arms formed integral with said casings, and means whereby said lever arms are adapted to be depressed during the passage of a train.

4. In a device of the character described the combination with a rail joint and bolts provided therefor; of burs threaded on the ends of said bolts, a movable plate adapted to be depressed during the passage of a train, and means whereby the depression of said movable plate tightens the burs upon the bolts.

5. In a device of the character described the combination with a rail joint and bolts provided therefor; of burs threaded upon the ends of said bolts, a movable plate adapted to be depressed during the passage of a train, means whereby said depression of said movable plate tightens the burs upon the bolts, and resilient means for returning said movable plate to its normal position after the train has passed.

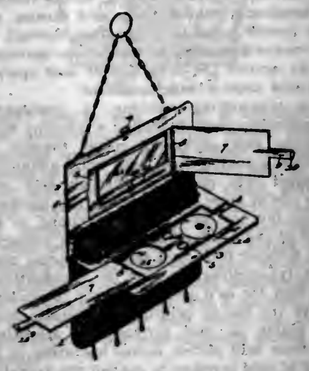
[Claims 6 to 8 not printed in the Gazette.]

1,111,396. REAMER. ANDREW MCARTHUR and WILLIAM PERCY, Lone Tree, Wash. Filed Nov. 13, 1913. Serial No. 800,856. (Cl. 255—62.)



A reamer, having a shank portion; two guide ribs disposed longitudinally thereof at diametrically opposite points adapted to guide the shank along the walls of the hole; two outwardly projecting cutting members at diametrically opposite points at the lower end of the shank and intermediate said longitudinally arranged ribs; said cutting members being adapted to cut longitudinal grooves along the walls of the hole for directing the plane of cleavage while blasting.

1,111,397. COMBINED VANITY-CASE AND MESH-BAG. FRANK C. MILLER, Providence, R. I., assignor to Child & Miller Co., Providence, R. I., a Corporation of Rhode Island. Filed Nov. 3, 1913. Serial No. 798,855. (Cl. 150—34.)



1. In a hand bag, a head portion having a pair of parts and having a depression in one of its parts, and also having a lateral recessed portion which communicates with one end of the depression and extends through the adjacent end of said head portion part, a closure for the depression hinged adjacent to the other end of the latter, and an arm having a snap hook on its free end carried by the closure and adapted to be received in the recessed portion and to have its snap hook engaged with the adjacent end of the head portion part, said closure and arm thereof then extending substantially flush with the inner face of the head portion part.

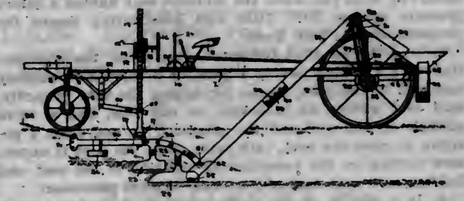
2. In a hand bag, a head portion having a pair of parts and having each of its parts provided with a depression and a closure for each depression hinged to the respective head part and having a snap hook to engage over the adjacent end of the head part.

3. In a hand bag, a head portion formed of two similar parts, one of said parts having a depression, and an openable closure for said depression, said closure extending flush with the inner face of the head part which carries same to thereby allow the inner face of the other head part to contact with the inner face of the first named head part and to completely conceal the closure.

4. In a hand bag, a head portion formed of two parts, one of said parts having a depression, a hinged closure for said depression, and a snap hook carried by the closure to engage over the adjacent end of said head part.

5. In a hand bag, a head portion formed in two parts, one of the parts having a toilet article receiving depression which extends through the inner face of said part, and a closure for said depression, said closure, when the head portion is in closed position, being covered by the inner face of the other part of the head portion.

1,111,398. DITCHING-MACHINE. JOHN H. MOCK, Jetmore, Kans. Filed Sept. 2, 1913. Serial No. 787,739. (Cl. 37—25.)



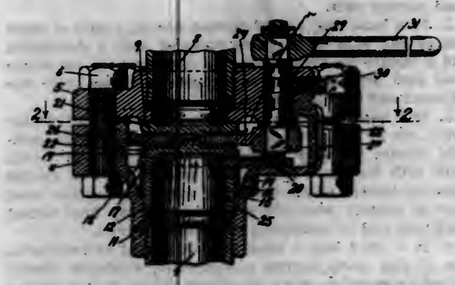
1. A stitching machine providing a frame, a rack bar slidably supported thereby, a beam pivoted to said rack bar, scoops carried by said beam and adapted to collect the earth, a supporting frame, an elevator pivoted at one end to said frame and loosely connected at the opposite end to said beam, a shaft carried by said elevator and extending through slots in the side walls of one of said scoops, means for operating said elevator for removing the earth from said scoops, and means for depositing said earth from the elevator.

2. A ditching machine including a wheel supporting frame, a scoop beam, means for connecting the scoop beam to the frame whereby the beam may be adjusted, a plurality of scoops carried by said beam, an endless conveyer having its lower terminal movably connected to one of said scoops and likewise movably connected to said beam, and means supporting the upper terminal of said conveyer and coacting with said movable connections whereby the angle of inclination of the conveyer may be varied.

1,111,399. VALVE. ALBERT W. MORSE, New York, N. Y., assignor to Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed May 6, 1913. Serial No. 765,735. (Cl. 137—5.)

1. In a device of the character set forth, the combination with a casing having oppositely disposed inlet and outlet ports, of a valve seat for each port, one of said valve seats being movable toward and from the other, means for moving the movable seat toward the other seat,

an arm movable to and from a position between the seats, and valve disks located on opposite sides of the arm and interlocked therewith, said disks having a bearing against each other loosely in the arm, being capable of relative rocking movement and of movement transversely of the arm and coacting respectively with the seats, the movable seat constituting means for properly seating both the disks.



2. In a device of the character set forth, the combination with a casing having oppositely disposed inlet and outlet ports, of a valve seat for each port, said seats having substantially parallel seating surfaces, one of said valve seats being movable toward and from the other, means for moving the movable seat toward said other seat, an arm movable toward and from a position between the seats, and valve disks located on opposite sides of the arm and interlocked therewith and bearing against each other, said disks being capable of relative rocking movement and of movement transversely of the arm and coacting respectively with the seats, the movable seat having a direct pressure against both disks and constituting means for properly seating both disks.

3. In a device of the character set forth, the combination with a casing having a port, of a valve seat slidably mounted in the port, means for urging the seat inwardly, said seat having an extension on one side, and a valve slidable on the seat and the extension to and from a position to close the port, said valve when the port is uncovered resting on the extension at one side of the seat and holding said seat against abnormal inward movement.

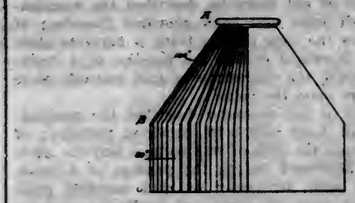
4. In a device of the kind described, a casing having alined inlet and outlet ports and a stationary valve seat surrounding the outlet port, a tubular member slidable in the inlet port and having a valve seat and an outwardly extending flange about its inner end, packing between said tubular member and the adjacent wall of the inlet port, a spring bearing between the flange and the packing and urging the tubular member to movement in an inward direction, and a valve part coöperative with the valve seat of the tubular member.

5. In a device of the kind described, a casing having alined inlet and outlet ports and a stationary valve seat surrounding the outlet port, a tubular member slidable in the inlet port and having a valve seat and an outwardly extending flange about its inner end, packing between said tubular member and the adjacent wall of the inlet port, a spring bearing between the flange and the packing and urging the tubular member to movement in an inward direction, a valve part coöperative with the valve seat of the tubular member, and a second valve part against which the first bears and which in turn bears against the stationary valve seat.

[Claims 6 to 10 not printed in the Gazette.]

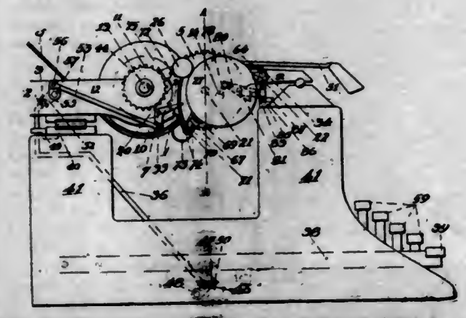
1,111,400. GLASS GLOBE AND REFLECTOR. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 436,868. (Cl. 240—106.)

Transparent glass shades having substantially radial prisms running practically from top to bottom of the shade, the angle of each of said prisms gradually varying in definite parts of its length so as to allow light reflection



from definite parts of its length and light transmission through other definite parts of its length.

1,111,401. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor, by mesne assignments, to Chicago Title and Trust Company, trustee, a Corporation of Illinois. Filed Dec. 20, 1909. Serial No. 534,048. (Cl. 197—189.)



1. In a typewriting machine, in combination, a laterally movable carriage, sheet-advancing means thereon, an operative member actuated from said means, indicating means called into operation through said member, and means operating in the lateral movement of the carriage to control the actuation of said operative member from said sheet-advancing means.

2. In a typewriting machine, in combination, a laterally movable carriage, sheet-advancing means thereon, an operative member actuated from said means, indices called into operation through said member to indicate successive positions of the sheet, and means operating in the lateral movement of the carriage to control the actuation of said operative member from said sheet-advancing means.

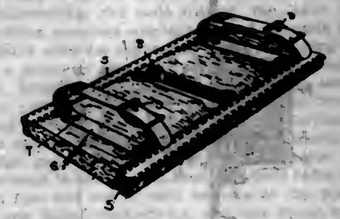
3. In a typewriting machine, in combination, a laterally movable carriage, sheet-advancing means thereon, an operative member actuated from said means, an audible signaling means called into operation through said member, and means operating in the lateral movement of the carriage to control the actuation of said operative member from said sheet-advancing means.

4. In a typewriting machine, in combination, typewriter-mechanism parts including a laterally movable carriage having sheet-advancing means thereon, an operative member actuated from said sheet-advancing means, means called into operation through said member for rendering one or more of said typewriter mechanism parts inoperative for use, and means operating in the lateral movement of the carriage to control the actuation of said operative member from said sheet-advancing means.

5. In a typewriting machine, in combination, printing means, a lock for said printing means to render the same inoperative for use in printing, a laterally movable carriage, a platen on said carriage, an operative member actuated from said platen, means operating in the lateral movement of said carriage to control the actuation of said operative member from the platen, and a universal connection between said lock and said operative member effective to operate said lock from said member in every working position of the carriage.

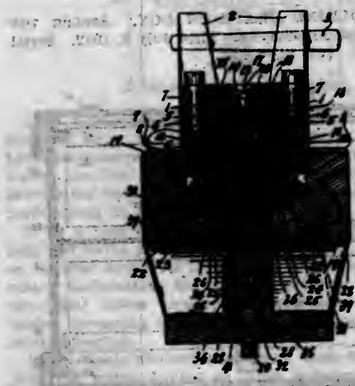
[Claims 6 to 21 not printed in the Gazette.]

1,111,402. HARNESS-PAD. CARL O. NESS, Waterville, Iowa. Filed Sept. 7, 1912. Serial No. 719,210. (Cl. 54—66.)



A pad comprising an unwoven fabric body, flat strengthening stripe arranged on the upper surface of said body and along the longitudinal edges thereof, stitches securing the outer longitudinal edges of said strips to the adjacent edges of the body and materially reducing the thickness of the secured edge of the body, stitches securing the inner edges of the strips to the adjacent portions of the body and forming rounded edges on the latter to prevent chafing, straps disposed transversely of the pad and in spaced relation to the ends thereof, means securing said straps to said body at points adjacent said stripe, and fastening means carried by the free ends of said straps for securing said pad in position.

1,111,403. METAL-BENDING DIE. GEORGE A. OHL, Jr., Newark, N. J., assignor to George A. Ohl & Co., a Corporation of New Jersey. Filed Apr. 8, 1914. Serial No. 830,411. (Cl. 153—33.)



1. In metal bending dies, a pair of oppositely facing oscillatable die-portions, supporting means upon which said die-portions are fulcrumed, a female die-member centrally disposed on said supporting means between said die-portions and toward which the latter swing, pinching-dies fixed in the free ends of said die-portions and alined below the die-surfaces thereof, said pinching-dies coöperating with said female die-member during the bending operations, a vertically movable upper die-member provided with means for operating said oscillatable die-portions when contacting therewith, and a male-die connected with said upper die-member with which the die-surfaces of said oscillatable die-portions coöperate during the bending operations.

2. In metal bending dies, a lower die-member consisting of a bed-plate, oppositely facing oscillatable die-portions fulcrumed on said bed-plate, each oscillatable die-portion having a projection on its upper side, each oscillatable die-portion having die-surfaces at its outer end, pinching-dies secured in the lower marginal edges of the outer end of said oscillatable die-portions, spring-means connected with said bed-plate and engaging said oscillatable die-portions, to maintain the latter in normal initial position, and a female-die having a concave die depression secured to said bed-plate so as to extend longitudinally between said oscillatable die-portions; a vertically movable upper die-member consisting of a bolster, cam-members connected with said bolster having cam-surfaces adapted to engage said projections of said oscillatable die-portions to operate the latter, a hammer-portion connected with each cam-member adapted to engage said hammer-receiving surfaces of said oscillatable die-portions, and a vertically yieldable plunger die mounted on said bolster, said plunger-die having a male-die-portion provided with die-surfaces adapted to coöperate with the die-surfaces of said oscillatable die-portions.

3. In metal-bending dies, a lower die-member consisting of a bed-plate, oppositely facing oscillatable die-portions fulcrumed on said bed-plate having die-surfaces at their outer ends, pinching-dies secured to the lower marginal edges of the outer ends of said oscillatable die-portions, spring-means mounted in said bed-plate and engaging said oscillatable die-portions to maintain the latter in normal initial positions, a stationary female-die secured to said bed-plate and extending longitudinally between said oscillatable die-portions; a vertically movable upper die-member consisting of a bolster, cam means connected with said bolster for engaging and operating said oscillatable die-portions of said lower die-member, and a vertically yieldable plunger die mounted on said bolster, said plunger-die having a male die-portion provided with die-surfaces adapted to coöperate with the die-surfaces of said oscillatable die-portions.

1,111,404. PROTECTOR FOR TIRES. CHARLES A. PETTIE, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,696. (Cl. 152—16.)

1. A tire protector comprising a series of unitary members adapted to be positioned against the surface of a tire in a direction transverse to the circumferential curvature thereof, each member being provided between the side and end edges thereof with a thickened portion which produces a plane tread surface on the exterior of the member, a hook positioned between the ends of each member and extending beyond a side edge thereof, and a slot in each member positioned for engagement with the hook on an adjacent member, whereby the members are flexibly and detachably coupled in series.

2. A tire protector comprising a series of unitary members adapted to be positioned against the surface of a tire transverse to the circumferential curvature thereof, that part of each member between the ends thereof being increased in thickness to produce a plane tread surface exteriorly of the member, a hook positioned on each member between the ends thereof, said hook extending beyond the side edge of the member, and a slot in each member positioned at the opposite side edge from the hook, the length of said slot exceeding the width of the hook whereby the hooks enter the slots of the members to detachably couple the members in series and to enable a certain amount of lost motion to take place between said members.

3. A tire protector comprising a series of unitary members adapted to be positioned against the surface of a tire

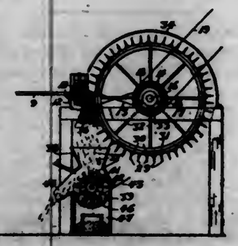
transverse to the circumferential curvature thereof, the middle portion of each member being of greater thickness than the end portions, thereby producing a plane tread surface, the exterior of which tread surface is roughened for increasing the tractive effect of the protector, a hook positioned on each member between the ends thereof, and a slot in each member positioned to receive the hook on an adjacent member, said hooks fitting loosely in the slots to permit the members to have a limited edgewise movement and a rocking lateral movement relative to each other.

4. A tire protector comprising a series of unitary members adapted to be positioned against the surface of a tire transverse to the direction of the circumferential curvature thereof, each member being provided on one side thereof with a hook which extends outwardly from said member at a point intermediate the ends thereof, and each member being further provided with a slot, said slot being positioned adjacent to the opposite side of the member and intermediate the ends thereof, said hook of one member fitting loosely in the slot of an adjacent member and said hook coupling the two members loosely together for permitting a limited twisting movement of said coupled members relative to each other.

5. A tire protector embodying a series of unitary members, and coupling means for loosely connecting said members intermediate the end portions thereof, said coupling means coöperating to secure a limited lost movement between said members and permitting a twisting movement of one member relative to the adjacent members.

[Claims 6 to 19 not printed in the Gazette.]

1,111,405. METHOD OF OBTAINING FIBER FROM COCOANUT-HUSKS. ALEXANDER Z. ROTHSCHILD, San Francisco, Cal. Filed Jan. 17, 1914. Serial No. 812,719. (Cl. 13—5.)



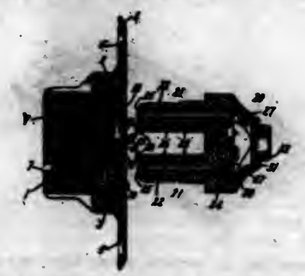
1. The method of obtaining fiber from cocoanut husks which consists in exposing the husk to contact with steam, then powerfully crushing the husk, and then holding each end of the husk alternately while simultaneously picking the remainder thereof.

2. The method of obtaining fiber from cocoanut husks which consists in exposing the husk to contact with steam, then powerfully crushing the husk, and then holding each end of the husk alternately while simultaneously picking the remainder thereof, thereby removing from the husk all except the long fibers, and then dividing the removed portion into short fibers and fine particles.

1,111,406. PLUG-RECEPTACLE AND PLUG THEREFOR. HOWARD E. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 2, 1914. Serial No. 815,919. (Cl. 173—330.)

1. The combination of a plug device having suitably separated plug members proper comprising electrical contact means, a plug receptacle having therein electrical contact means for engagement with the contact means of said plug device and also having a front apertured for the insertion of the plug device, and automatically closing doors for said front which open inward to admit said plug members so mounted as to approach one another in opening and lie between the plug members when open.

2. The combination with a plug receptacle having electrical contacts therein and a front apertured for the insertion of a plug device between said receptacle contacts, of automatically closing doors for said front which open inward to admit the plug members proper of said plug device, said doors being pivoted at their adjacent sides so as to approach one another and recede from the receptacle contacts as they open.



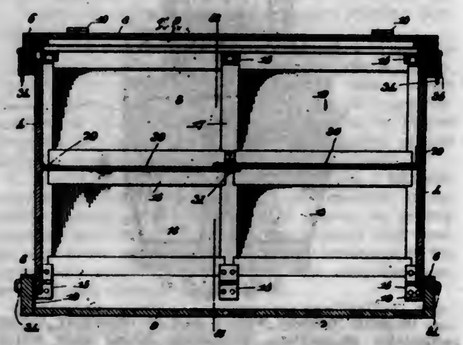
3. A front for a plug receptacle apertured for the insertion of a plug device and having automatically closing doors which open inward to admit the plug members proper of said device, said doors being so mounted and secured on said front as to approach one another in opening and to lie between the plug members when open.

4. A front for a plug receptacle apertured for the insertion of a plug device and having automatically closing doors which open inward to admit the plug members proper of said device, said doors being pivoted at their adjacent sides and thus approaching one another as they open.

5. A front for a plug receptacle apertured for the insertion of a plug device and having automatically closing inwardly opening doors for the admission of the plug members proper of said device, said doors being pivoted at their adjacent sides on a common pivot.

[Claims 6 to 8 not printed in the Gazette.]

1,111,407. FOLDING CRATE OR BOX. ADOLPH VON SCHLUMBACH, Altoona, Pa. Filed July 8, 1912. Serial No. 708,117. (Cl. 217—15.)



1. In a device of the class described, upper and lower members, foldable sides having connections with said members, end pieces having connections with one of said members, and partition members connected with said end pieces, substantially as described.

2. In a device of the class described, upper and lower members, foldable sides having connections with said members, end pieces having pivotal connections with one of said members, partition members having pivotal connections with said end pieces, and means for supporting the inner ends of said partition members.

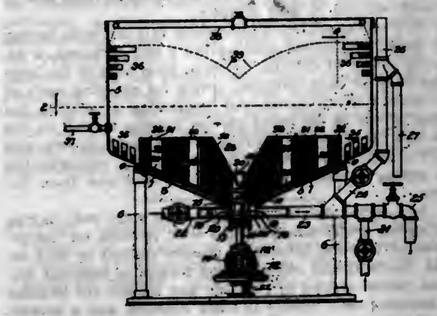
3. In a device of the class described, top and bottom members, foldable sides connected to said top and bottom respectively, end pieces hingedly connected to said bottom, partition members hingedly connected to said end pieces, and means for supporting the inner ends of said partition members, the edges of said members being recessed to pass said supporting means as said end pieces are swung inwardly.

4. In a device of the class described, upper and lower members, foldable sides having pivotal connections with said members, end pieces disposed between said foldable sides and having hinged connections with the lower member, partition members hingedly connected to said end pieces intermediate the ends thereof, the inner ends of said partition members overlapping and brackets fixed to said foldable sides for supporting said overlapping ends.

5. In a device of the class described, upper and lower members, foldable sides hingedly connected to said members and comprising vertical and transverse frame elements and panels between said elements, the vertical frame elements extending beyond the transverse elements at the lower edge and the adjacent part of said lower member being recessed to receive said ends, said ends being adapted to move into and out of said recesses as the box is expanded and folded respectively, and end pieces arranged between said sides and hingedly connected to one of said members, substantially as described.

[Claim 6 not printed in the Gazette.]

1,111,408. PULP-WASHING MACHINE. JOSEPH SCHNEIBLE, Chicago, Ill. Filed June 5, 1913. Serial No. 771,905. (Cl. 141—12.)



1. In a pulp-washing machine, a tank for holding the pulp and water, provided with an outlet for the water and having a numerously-perforated bottom, and a vertically-bladed impeller having a base-plate forming a shield to prevent the liquid from being impelled through the bottom-perforations by the action of the impeller.

2. In a pulp-washing machine, a tank for holding the pulp and water, provided with an outlet for the water, and an impeller supported in the tank to extend radially and rotate horizontally therein and provided with vertical non-radial blades forming passages between them, said blades decreasing successively in area outwardly in the radial direction.

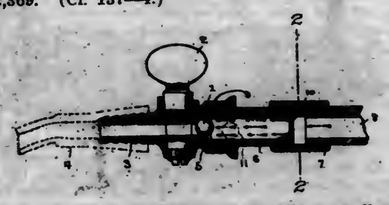
3. In a pulp-washing machine, a tank for holding the pulp and water, having an inner numerously perforated hoppered bottom and an outer imperforate bottom forming an interposed drainage-space with a central outlet for the wash-water, and an impeller comprising vertically-bladed arms extending from a center at which the impeller is rotatably supported in the tank, and having a base-plate extending parallel with and close to the surface of said bottom and forming a shield to prevent the liquid from being impelled through the bottom-perforations by the action of the impeller.

4. In a pulp-washing machine, a tank for holding the pulp and water, having an inner numerously-perforated hoppered bottom and an outer imperforate bottom forming an interposed drainage-space with a central outlet for the wash-water, and an impeller comprising a frame forming arms extending from a center at which the impeller is rotatably supported in the tank, said frame having a base-plate extending parallel with and close to the surface of said perforated bottom and an upper plate, and blades connecting said plates and forming passages between them.

5. In a pulp-washing machine, a tank for holding the pulp and water, having an inner numerously-perforated hoppered bottom and an outer imperforate bottom forming an interposed drainage-space with a central outlet for the wash-water, and an impeller comprising a frame forming arms extending from a center at which the impeller is rotatably supported centrally in the tank, said frame having a base-plate extending parallel with and close to the surface of said hoppered bottom and an upper plate depressed between its ends toward said center, and blades connecting said plates, inclining relatively to the plate-edges and forming passages between them.

[Claims 6 to 12 not printed in the Gazette.]

1,111,409. AUTOMATIC VALVE. JOHN R. SCOTT, Charleston, W. Va. Filed July 31, 1913. Serial No. 782,369. (Cl. 137—4.)



In combination with a gas valve having a small cylindrical bore, of a nozzle formed integral therewith at one end, an enlarged socket member formed integrally therewith at the opposite end, a rotary valve positioned intermediate said ends, a removable sleeve having a large cylindrical bore and adapted to threadingly engage said socket, a frusto-conical surface conecting said small fore with said large bore, a ball normally contained wholly within said removable sleeve when said rotary valve is open and a normal consumption of gas is taking place, said ball valve being adapted to seat against said frusto-conical surface and wholly within said enlarged socket member when said rotary valve is open but no gas is being consumed, and a retaining rod positioned at the inlet end of said removable sleeve to prevent displacement of the ball in that direction.

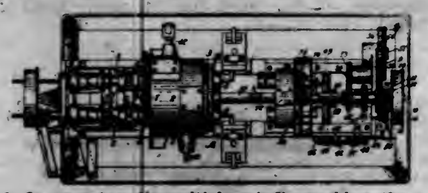
1,111,410. COMBINED DRILL AND COUNTERSINK. WILLIAM H. SEMON, Cleveland, Ohio. Filed May 11, 1911. Serial No. 626,635. (Cl. 77—66.)

1. A combined drill and countersink comprising the combination with a drill having a flute; of a countersink-member secured thereto and provided with a transverse cutting edge; the inner longitudinal portion of said member lying within and corresponding in curvature with the curvature of said flute; said countersink-member having

its cutting end constructed so as to have a material portion of the length thereof of like cross-sectional area throughout, successive cross-sections having a similar relation to the axis of the drill.

2. In combination, a drill and an outer countersink-member having two converging inner surfaces ending substantially in a line conforming in curvature with and extending into the flute of the drill; the said countersink-member furthermore being formed with a cutting edge with its extremity extending transversely with respect to said inner curved line and joining the lower extremity thereof.

1,111,411. METAL-WORKING MACHINE. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 27, 1910. Serial No. 579,240. (Cl. 29—37.)



1. In an automatic multiple spindle machine, the combination of a rotary turret, a driving shaft, means for rotating it at a constant or uninterrupted speed, and means driven from said driving shaft for intermittently indexing the turret from the center thereof at a rapid speed equal to or greater than the speed of said driving shaft, said means including a shaft secured to said turret and connecting means between said shaft and the driving shaft.

2. In an automatic multiple spindle machine, the combination of a rotary turret, a cam carrying shaft, means for rotating said cam carrying shaft at a constant or uninterrupted speed, and means driven from said cam carrying shaft for intermittently indexing the turret from the center thereof at a rapid speed equal to or greater than the speed of said cam carrying shaft, said means including a shaft secured to said turret and connecting means between said shaft and the cam carrying shaft.

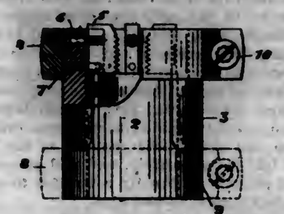
3. In an automatic multiple spindle machine, the combination of a rotary turret, a shiftable tool carrier, a driving shaft, means for rotating it at a constant or uninterrupted speed, means carried by said shaft for reciprocating the shiftable tool carrier, and means driven from said shaft for intermittently indexing the turret from the center thereof at a rapid speed equal to or greater than the speed of said driving shaft and between the time that said tool carrier backs away from its working position and returns to said position relatively to the turret, said means including a shaft secured to said turret and gearing between said shaft and the driving shaft.

4. In an automatic multiple spindle machine, the combination of a rotary turret, a sliding tool carrier, a driving shaft, means driven thereby for shifting the tool carrier toward and from the turret, a part of such movement being at a speed different from another part of such movement, means for rotating said shaft at a constant or uninterrupted speed, and means driven from said shaft for intermittently indexing the turret from the center thereof at a speed equal to or greater than the speed of said driving shaft and after the tool carrier has been shifted partly away from the turret, said means including a shaft secured to said turret and connecting means between said shaft and the driving shaft.

5. In an automatic multiple spindle machine, the combination of a rotary turret having a plurality of work carrying spindles, a sliding tool carrier having a plurality of tools, a cam carrying shaft, cams thereon for imparting a slow movement and a quick movement to the tool carrier at different times, means for rotating said cam carrying shaft at a constant or uninterrupted speed, and means driven from said cam carrying shaft for intermittently indexing the turret from the center thereof at an accelerated speed as compared with the speed of said cam carrying shaft and subsequent to a part of the slow movement of said tool carrier, said means comprising a shaft secured to said turret concentrically thereof and connecting means between said shaft and the cam carrying shaft.

[Claims 6 to 55 not printed in the Gazette.]

1,111,412. SPRING-DIE. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 22, 1912. Serial No. 727,136. (Cl. 10—119.)



1. In a spring die, the combination of a die body having split spring projections, and detachable cutters or chasers secured thereto.

2. In a spring die, the combination of a die body having split spring projections provided with recesses, and detachable chasers or cutters of a different material from that of the body secured in said recesses.

3. In a spring die, the combination of a die body having split spring projections each having a recess therein, a detachable chaser of different material from that of the body fitting each of said recesses, means for securing each of said chasers in its recess and comprising a locating pin carried by one of the parts and an opening carried by the other and threaded means projecting into said chasers, and a split clamping ring carried by the body for adjusting the split spring projections of the die toward and from the center.

4. In a spring die, the combination of a die body having split spring projections provided with recesses for the reception of chasers, detachable chasers carried by said recesses, the body and chasers being formed of different materials, means carried by the body and chasers for locating and securing said chasers in their recesses, and a detachable clamping ring adapted to fit the unsplit end of said body and to press the split projections toward the center of the die on the forcing of said clamping ring toward the split end of the die.

5. In a spring die, the combination of a die body having split spring formed projections provided with clearance spaces at each side thereof out of alinement, and detachable chasers carried by said projections in axial alinement with one another.

[Claims 6 and 7 not printed in the Gazette.]

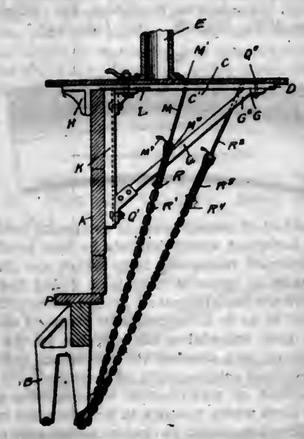
1,111,413. DOUBLE-ENDED TAP. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 24, 1913. Serial No. 743,921. (Cl. 10—141.)

A double-ended trap comprising a shank having a set of roughing cutters near each end thereof, the cutters of one set having a circumferential rake extending in a rotative direction opposite to that of the cutters of the other set, a set of finishing cutters at the middle of the length of said shank and intermediate said sets of roughing cutters, said set of finishing cutters extending over approximately twice as much of the length of said shank as each of said sets of roughing cutters and separated from said sets of roughing cutters by clearance grooves, the set of finishing cutters tapering from the middle part toward the ends whereby the cutters at the ends of such set are approximately the same height as the nearest adjacent cutters of the roughing sets at the ends thereof.

1,111,414. RECUPERATOR-FURNACE. WINFRED A. STUBBLEBINE, Allentown, Pa. Filed Oct. 31, 1913. Serial No. 798,523. (Cl. 75—121.)

A recuperator furnace having communicating fire and working chambers, a grate with a blast pipe communicating with a chamber below the grate, a compartment adjoining the fire chamber, a checker work within said compartment with a chamber above and below the checker work and communicating with each other through the latter, air supply pipes leading into the chamber below the checker work, a preheating chamber above said compartment, a passageway leading from the preheating chamber with flues leading from said passageways into the working chamber, a pipe communicating with the chamber above the checker work and extending into said preheating chamber and provided with branching pipes extending into and opening into said passageway, the front wall of the furnace intermediate the fire and preheating chambers and above said compartment having flues therein, as set forth.

1,111,415. GONDOLA DERRICK. JOHN L. TAYLOR, Chicago, Ill., assignor to Taylor Portable Steel Derrick Company, a Corporation of Illinois. Filed Aug. 27, 1913. Serial No. 786,986. (Cl. 212—65.)

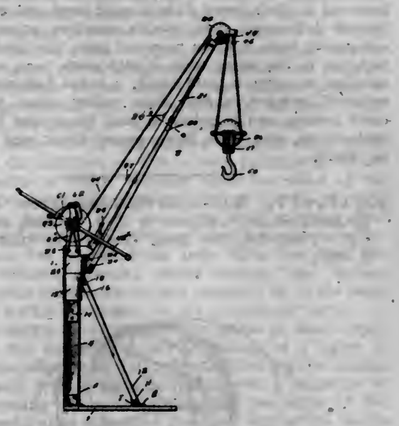


1. A derrick platform for gondola cars comprising a platform having downwardly projecting bracket portions for engagement over the upper edge of the side wall of a car and a horizontally extending rib portion serrated upon its under edge, channel beams, braces connecting the lower portions of the latter with said platform, a bracket member fastened to each channel beam and having serrations upon the upper edge thereof adapted to grip serrations upon the under edges of the ribs upon the platform, and means for holding the serrations in interlocked relation, as set forth.

2. A derrick platform for gondola cars comprising a platform having downwardly projecting bracket portions with a forwardly extending reinforcing rib having serrations upon the lower edge thereof, a channel beam adapted to coöperate with the bracket portion for engagement with the opposite walls of the side of a car, a brace connecting said channel beam and the outer portion of the platform, a bracket member having ribs projecting from the upper horizontal face thereof and designed for engaging grooves in the lower edges of the ribs underneath the platform, and clamping means for holding the serrations upon the bracket member and ribs in locked relation with one another, as set forth.

3. A derrick platform for gondola cars comprising a platform having downwardly projecting bracket portions with a forwardly extending reinforcing rib having an elongated slot and serrations upon the under surface thereof and a groove adjacent thereto, a channel beam having brace connections between the same and the platform, an adjustable bracket member with ribs upon the upper horizontal face thereof adapted to engage said grooves and having serrations adjacent to said ribs and designed to engage the serrations upon said forwardly extending part of the rib underneath the platform, clamping means for holding the adjustable bracket member and channel beam in adjusted positions, and stay chains and rods connected to the platform and adapted to be fastened to a part of the car, as set forth.

1,111,416. DERRICK. JOHN L. TAYLOR, Chicago, Ill., assignor of one-fourth to Taylor Portable Steel Derrick Company, a Corporation of Illinois. Filed Aug. 27, 1913. Serial No. 786,987. (Cl. 212—61.)



1. A derrick comprising a base and a standard fixed thereto, a socket member with a slot in its lower end arranged to receive the upper end of the standard, said base and socket member having lugs with inclined faces at angles to each other, an angle iron brace fastened to said inclined faces upon the lug and base, a head swiveled to said socket member, a drum mounted upon the head, angle irons fastened to said head and converging toward their upper ends, a pulley block fastened to said ends, a cable fastened at one end to said block and wound about said drum, a fall block pulley supported by the cable, a sheave in said block and over which the cable passes which is adapted to wind upon said drum, as set forth.

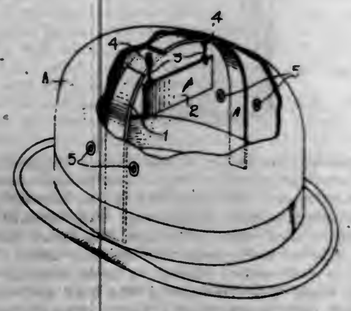
2. A derrick comprising a base and a standard fixed thereto, a sockst member with a slot in its lower end arranged to receive the upper end of the standard, said base and socket member having lugs with inclined faces

at angles to each other, an angle iron brace fastened to said inclined faces upon the lug and base, a head swiveled to said socket member, a drum mounted upon the head, said head having lugs upon its circumference with inclined faces at angles to each other, angle irons fastened to said inclined faces of the head and converging toward their upper ends, cast brackets with angled fingers engaging said converging angle irons, a pulley block to which the upper ends of the angle irons are fastened, a cable connected at one end to the block and wound about said drum, a fall block pulley supported by the cable, and a sheave in said block over which the cable passes, as set forth.

3. A derrick comprising a base made up of channel bars fastened together at an angle to each other, a flanged casting fastened to the meeting ends of said bars which form the base, lugs projecting from said casting and spaced apart, a standard fastened between said lugs, a socket member with a slot in the lower end thereof to receive the top of said standard to which it is fastened, a head swiveled within said socket member, angle bars fastened at their lower ends to said head and converging toward their upper ends, bracket members connecting said converging irons, a drum mounted upon the head, a block fastened to the upper ends of said angle bars, a cable fastened to said block, a fall block pulley supported by the cable, a pulley in said block over which the cable passes, the latter being wound about said drum, as set forth.

4. A derrick comprising a base made up of channel bars fastened together at an angle to each other, a flanged casting fastened to the meeting ends of said bars which form the base, lugs projecting from said casting and spaced apart, a standard fastened between said lugs, a socket member with a slot in the lower end thereof to receive the top of said standard to which it is fastened, a head swiveled within said socket member, angle bars fastened at their lower ends to said head and converging toward their upper ends, bracket members connecting said converging bars, a drum mounted upon the head, a block fastened to the upper ends of said angle bars, a swiveled member mounted in said block, a cable fastened to said swiveled member, a fall block pulley about which the cable passes, and a pulley in said block over which the cable turns, said cable being wound about said drum, as set forth.

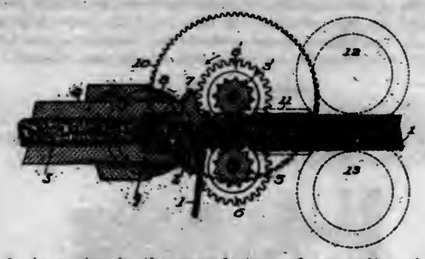
1,111,417. HAT-VENTILATOR. LYDIA A. TYLER, Spokane, Wash., assignor to R. J. Schmid, San Diego, Cal. Filed Feb. 14, 1914. Serial No. 818,749. (Cl. 2—33.)



1. A hat ventilating device comprising a bar adapted to be placed in the crown of a hat, a fan, and links suspending the fan from the center of the bar for swinging movement of the fan.

2. A hat ventilating device comprising a spring bar adapted to be arched and placed in the crown of a hat, a fan, and links suspending the fan from the center of the bar for swinging movement of the fan.

1,111,418. MANUFACTURE OF VEHICLE-TIRES. FRANK L. O. WADSWORTH, Sewickley, Pa. Filed Oct. 17, 1911. Serial No. 655,237. (Cl. 154—14.)



1. As a step in the manufacture of composite vehicle tires the formation of a solid composite cylinder comprising a core of plastic tread material, surrounded by a spiral or metallic wire.

2. As a step in the manufacture of vehicle tires of the kind described, the preliminary production of composite wire rubber cylinders by forming wire spirals, simultaneously filling said spirals with raw rubber and then subjecting the cylinder to a vulcanizing action.

3. The method of manufacturing composite wire-rubber treads or tires of the kind described which consists in first forming a series of wire spirals, filling said spirals as they are formed with raw plastic rubber, vulcanizing said cylinders, and then embedding them in the body of the tread or tire and shaping the latter to the final form required substantially as described.

4. The method of making tires which comprises the preliminary formation of composite cylinders of tire material surrounded by metal coils and the subsequent embedding of said composite cylinders in the body of the tire.

5. The method of making tires which consists in first forming composite cylinders having a core of plastic tire material surrounded by metal coils and then embedding said cylinders in the body of the tire and shaping the tire to the final form required.

[Claims 6 to 10 not printed in the Gazette.]

1,111,419. CONSTRUCTION OF VEHICLE-TIRES. FRANK L. O. WADSWORTH, Sewickley, Pa. Filed Oct. 17, 1911. Serial No. 655,238. (Cl. 154—14.)

1. The method of manufacture of composite vehicle tires of the kind described which consists in first bending wire to form a series of triangular folds which are alternately spread laterally in opposite directions, filling the grooves or spaces between the alternately spread folds with plastic tread material so as to form composite strips of solid cross-section and then embedding these strips in the body of the tire material and shaping the assembled parts to the final form required substantially as described.

2. The method of manufacture of composite anti-slipping vehicle tires which consists in first forming composite strips of solid cross-section having a central core of plastic material embraced on two sides by oppositely bent wire folds, next shaping a body of tread material with grooves to receive the said composite strips, and then bringing said strips and grooved tread body together and molding the whole to the final form required substantially as described.

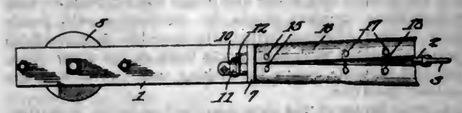
3. The method of manufacturing composite wire-rubber vehicle tires which consists in first bending wires to form a series of triangular folds which are alternately spread laterally in opposite directions, filling the grooves between the alternately spread folds with plastic rubber so as to form composite wire-rubber strips of solid cross-section, then embedding these strips in a body of plastic tire material suitably grooved to receive them and shaping the assembled parts to the final form required, and then vulcanizing the assembled parts to form one integral whole.

4. The method of manufacture of vehicle tires of the kind described which consists in first forming composite wire-rubber strips of solid cross-section, having wire folds exposed on two side surfaces thereof and then embedding said strips in a body of plastic tread material in such manner that parts of the wire are substantially flush with the surface of the assembled structure and the intermediate parts are completely embedded therein substantially as described.

5. The method of manufacture of composite wire-rubber vehicle tires which consists in first metal plating stiff wires, bending said wires to form a series of triangular folds which are spread alternately in opposite lateral directions, filling the spaces between such alternately spread folds with plastic tread material so as to form solid composite rubber-wire strips, embedding said composite strips in a body of plastic tire material, shaping the assembled parts to the final form required, and then subjecting the molded structure to a vulcanizing action, and thereby forming a layer of sulfid of the plating material between the wire and tread material.

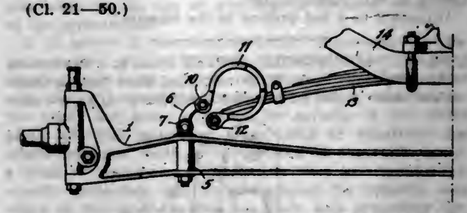
[Claims 6 and 7 not printed in the Gazette.]

1,111,420. GRADER. WILLIAM F. WAINRIGHT, Winchester, Ill. Filed Mar. 19, 1914. Serial No. 825,889. (Cl. 37—5.)



A road grading machine including a main beam, a draft device at one end thereof, soil engaging means at the other end for holding the beam against lateral displacement, a beam hingedly connected to the front end of the main beam and adjustable angularly relative thereto, superimposed scraping blades pivotally connected at their rear ends to the rear end portion of the adjustable beam and adjustable angularly upwardly and downwardly to project their outer edges into or out of active positions said beam constituting a drag when the blades are out of active position, said grading machine being invertible to bring either of the blades into engagement with soil.

1,111,421. VEHICLE-SPRING. HARRY C. WAITE, Chicago, Ill. Filed Apr. 23, 1914. Serial No. 834,019. (Cl. 21—50.)

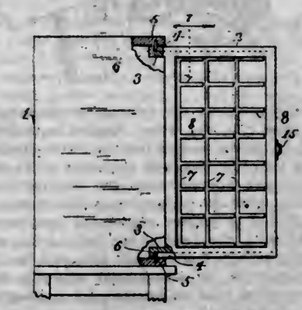


1. In combination with a vehicle-axle and a spring for carrying thereon the vehicle-body, a pair of bowed C-shaped springs pivotally supported on the axle near each end thereof, the members of each pair carrying on their free ends and embracing said spring at one end with the opening of the C extending away from the body of the spring.

2. In combination with a vehicle-axle and a spring for carrying thereon the vehicle-body, bowed C-shaped springs pivotally supported at one end in pairs on the axle near each end thereof with the opening of the C extending away from the body of the spring, the members of each pair having at their free ends a pin-connection on which said spring is carried and embraced at one end between said members.

3. In combination with a vehicle-axle and a spring for carrying thereon the vehicle-body, bowed C-shaped springs widening from their ends toward their centers and supported at one end in pairs on the axle near each end thereof, the members of each pair having at their free ends a pin-connection on which said spring is carried and embraced at one end between said members.

1,111,422. HOLDER FOR LANTERN-SLIDES, CARDS, &c. IRENE WARREN, Chicago, Ill. Filed Feb. 10, 1911, Serial No. 607,740. Renewed May 7, 1914. Serial No. 837,084. (Cl. 40—102.)



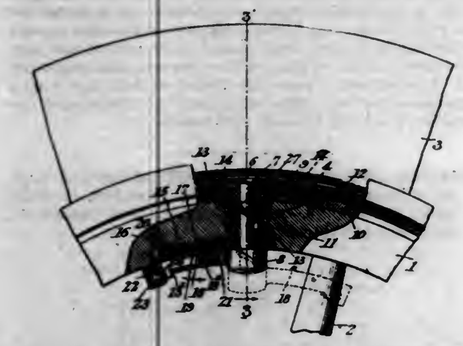
1. In a device for holding lantern slides or other transparencies, the combination with an open rectangular frame, of a plurality of shafts pivotally mounted between two sides of the frame, spaced arms extending from one side of the shafts and provided with means adapted to receive and hold lantern slides or other transparencies between them, the length of the arms being less than the distance between adjacent shafts whereby the lantern slides or other transparencies will normally lie in the same plane and within the frame, for the purpose set forth.

2. In a device for holding lantern slides or other transparencies, the combination with an open rectangular frame, of a plurality of shafts mounted upon two sides of the frame, arms extending from one side of the shafts, said arms being provided with grooves in their opposite sides to seat and hold lantern slides or other transparencies between them, the length of the arms being less than the distance between adjacent shafts whereby the lantern slides or other transparencies will normally lie in the same plane and within the frame, for the purpose set forth.

3. In a device for holding lantern slides or other transparencies, the combination with a casing, of a series of open rectangular frames slidably mounted in the casing, each of said frames being provided with a plurality of shafts pivotally mounted between the two sides of the frame, spaced arms extending from one side of the shafts and provided with means adapted to receive and hold lantern slides or other transparencies between them, the length of the arms being less than the distance between adjacent shafts whereby the lantern slides or other transparencies will normally lie in the same plane and within the frame, for the purpose set forth.

4. The combination with a case having parallel grooves therein, of a plurality of parallel rectangular frames slidably arranged in said grooves adjacent to each other, each of said frames having vertical posts pivotally mounted therein at top and bottom and a series of forwardly extended longitudinally grooved arms upon each of said posts and arranged at right angles thereto, with their free ends extending toward the front of the frame, all of said posts being in a common plane, whereby said arms if projecting laterally may be caused to impinge upon an adjacent frame when a given frame is pushed into place, thus causing them to be moved into a common plane without danger of accident or injury thereto.

1,111,423. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. JOHN LOREN WEBSTER, Chicago, Ill. Filed Feb. 13, 1914. Serial No. 818,574. (Cl. 152—21.)



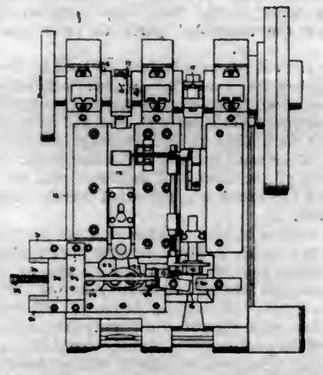
1. A demountable rim for vehicle wheels comprising a band and a fixed rim, the latter adapted to be fastened to the felly of the wheel and having its outer circumference tapering and the other designed to receive a tire and tapering upon its inner circumference, the said band and fixed rim adapted to telescope each other, a bolt mounted in the felly and adapted to engage registering apertures in the fixed rim and band, the head of the bolt having an arm, a lever pivotally mounted upon said arm and having a lug projecting therefrom for engagement with the felly, said arm being provided with an apertured lug designed to receive a key, as set forth.

2. A demountable rim for vehicle wheels comprising two rim sections, one adapted to be fastened to the wheel rim and having its outer circumference tapering and the other designed to receive a tire and tapering upon its inner circumference, the two band sections adapted to telescope each other, a socket member mounted in a recess in the wheel felly and provided with a spiral groove upon its inner wall, a bolt engaging said groove and adapted, as the bolt is rotated, to move through registering apertures in the rim sections, said socket member having a lateral projection with a notch therein, the head of the bolt being provided with an arm, a pivotal spring-pressed lever mounted upon said arm and having a lug for engagement with said notch, as set forth.

3. A demountable rim for vehicle wheels comprising two rim sections, one adapted to be fastened to the wheel rim and having its outer circumference tapering and the other designed to receive a tire and tapering upon its inner circumference, the two band sections adapted to telescope each other, a socket member mounted in a recess in the wheel rim and provided with a spiral groove upon its inner wall, a bolt engaging said groove and adapted, as the bolt is rotated, to move through registering adertures in the rim sections, said socket member having a lateral projection with a notch therein, the head of the bolt being provided with an arm, said arm having a recess in its inner face, a pivotally mounted spring-pressed lever in said recess having a lug for engagement with said notch, one end of the lever extending through an aperture in the wall of the recess and the end of the arm terminating in a lug which is apertured for the reception of a key, one end of which is adapted, as the key is turned, to bear against the end of the lever projecting through said aperture to cause the lever to be tilted, as set forth.

1,111,424. SAFETY DEVICE FOR BOLT-MACHINES. TIMOTHY A. WELCH, Sayre, Pa. Filed Oct. 4, 1913. Serial No. 793,320. (Cl. 10—23.)

1. In a device of the class described, a frame, a stationary die, a movable die, a reciprocating member slidable in said frame, a two way toggle block, connected to said reciprocating member, one link of said toggle block being connected to said movable die, yieldable means also connected to the opposite link of said toggle block, and adjustable means for locking said yieldable means against operation.



2. In a device of the class described a frame, a stationary die, a movable die, a reciprocating member, capable of sliding movement in said frame, a two way toggle block, connected to said reciprocating member, means for connecting said toggle block with said movable die in one direction, yieldable means connected with said toggle block in the other direction, and means for locking said last named means against yielding.

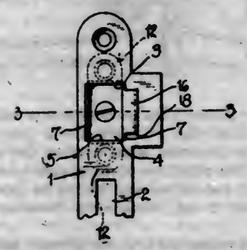
3. In a device of the class described, a frame, a stationary die, a movable die, a reciprocating member, slidably mounted in said frame and toggle block pivoted to said reciprocating member, means for connecting said toggle block in one direction with said movable die, yieldable means connected with said toggle block in the other direction and movable means for locking said yieldable means against operation.

4. In a device of the class described, a frame, a stationary die, a movable die, a reciprocating member slidably mounted upon said frame, a two way toggle block pivoted to said reciprocating member, means for connecting said toggle block with said movable die, yieldable means also connected to said toggle block but oppositely to said movable die, and means to lock said yieldable means against operation, subsequent to the initial closing movement of said movable die.

5. In a device of the class described, a frame, a stationary die, a movable die, a reciprocating member mounted on said frame, a two way toggle block pivoted to said reciprocating member, means for operatively connecting said toggle block to said movable die in one direction, yieldable means connected with said toggle block in the other direction, and positively actuated means for locking said yieldable means against operation, subsequent to the initial closing of said yieldable die.

[Claims 6 to 9 not printed in the Gazette.]

1,111,425. ADJUSTABLE STRIKE-PLATE. FERDINAND ZIGANEK and FRANK W. WILKINSON, West Toledo, Ohio. Filed June 8, 1914. Serial No. 843,826. (Cl. 70—15.)



1. A device of the class described comprising a strike plate having a latch receiving opening therein, a latch receiving cup carried by the strike plate, said cup comprising a base wall and forwardly extending side walls projecting through the opening in the strike plate, a screw carried by the strike plate and projecting loosely through the base wall of the cup, a nut mounted on the inner end of said screw for engagement against the inner face of the base wall of the cup, means for preventing rotation of said nut with relation to the screw, whereby upon rotation of the screw the cup may be moved to dispose the free edges of its side walls at any desired distance outwardly of the strike plate, and means for normally holding the cup in its innermost position with the base wall thereof engaged against said nut.

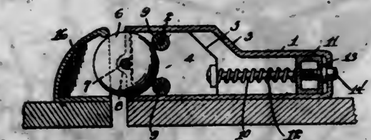
2. A device of the class described comprising a strike plate having a latch receiving opening therein, a latch receiving cup carried by the strike plate, said cup comprising a base wall and inwardly extending side walls projecting through the opening in the strike plate, means for adjusting said cup to dispose the ends of the side walls different distances outwardly of the strike plate, said strike plate having a slot formed therein to one side of the latch receiving opening, the outer extremity of one of the side walls being provided with a laterally projected flange disposed in the path of the latch, and the extremity of said flange being directed rearwardly for engagement in said slot, said flange limiting the inward movement of said cup with relation to the strike plate.

3. A device of the character described comprising a strike plate having a latch receiving opening therein, a plate disposed rearwardly of the opening and having forwardly extending end walls connected to the upper and lower edges of the opening in the strike plate, said plate being of relatively less width than the width of the opening in the strike plate, a latch receiving cup comprising a base wall and forwardly extending side walls, said side walls engaging the opposite side edges of the second mentioned plate and projecting through the opening in the strike plate, and means for adjusting said cup to dispose the ends of the side walls thereof different distances outwardly of the strike plate.

4. A device of the class described comprising a strike plate having a latch receiving opening therein, a plate disposed rearwardly of the opening in the strike plate and having forwardly extending end walls connected to the upper and lower edges of the opening in the strike plate, the last mentioned plate being of relatively less width than the width of the opening in the strike plate, a latch receiving cup comprising a base wall having forwardly projecting side walls engaging the opposite side edges of the second mentioned plate and projecting forwardly through the opening in the strike plate, an adjusting screw disposed through a central opening in said second mentioned plate, the free end of said screw being disposed through the base of said cup, and a nut mounted on the free end of said screw for engagement against the base wall of said cup, whereby upon rotation of the screw, the cup may be moved to dispose the free edges of the side walls of the cup at any desired distance outwardly of the strike plate.

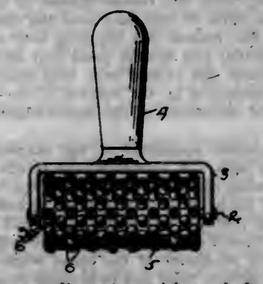
5. A device of the class described comprising a strike plate having a latch receiving opening therein, a plate disposed rearwardly of the opening in the strike plate and having forwardly extending end walls connected to the upper and lower edges of the opening in the strike plate, the last mentioned plate being of relatively less width than the width of the opening in the strike plate, a latch receiving cup comprising a base wall having forwardly projecting side walls engaging the opposite side edges of the second mentioned plate and projecting forwardly through the opening in the strike plate, an adjusting screw disposed through a central opening in said second mentioned plate, the free end of said screw being disposed through the base of said cup, a nut mounted upon the free end of said screw for engagement against the base wall of said cup, whereby upon rotation of the screw the cup may be moved to dispose the free edges of the side walls of the cup at any desired distance outwardly of the strike plate, the base of said cup having laterally directed flanges formed on its upper and lower edges, and expansion springs disposed between said flanges and said strike plate to normally hold said cup in its innermost position.

1,111,426. LATCH FOR SWINGING DOORS. FERDINAND ZIGANEK and FRANK W. WILKINSON, West Toledo, Ohio. Filed June 8, 1914. Serial No. 843,827. (Cl. 70—119.)



A device of the character described comprising a casing, a hollow guide member slidably mounted in the casing, a roller mounted in the casing forwardly of the guide member and engaged thereby, rearwardly extending pins carried by said guide member, a hollow adjusting block slidably mounted in the rear end of the casing and having the rear ends of said pins extending therein, helical springs engaged around said pins for engagement at one end against said adjusting block and at their other against said guide member whereby the guide member is normally forced forwardly within the casing, means for limiting outward movement of said roller, the rear wall of said block having a threaded opening therein, the rear wall of said casing having an opening formed therein in alinement with said threaded opening, a screw threadably disposed through said threaded opening, said screw having an enlarged portion engaged between the rear end wall of said block and the rear wall of said casing, the head of said screw projecting through the opening in the rear wall of said casing, whereby the screw may be rotated to move the block in the casing, to regulate the tension of said springs.

1,111,427. MASSAGE APPLIANCE. CORA HUME ARCHIBALD, East Las Vegas, N. Mex. Filed Nov. 11, 1912. Serial No. 730,709. (Cl. 128—16.)



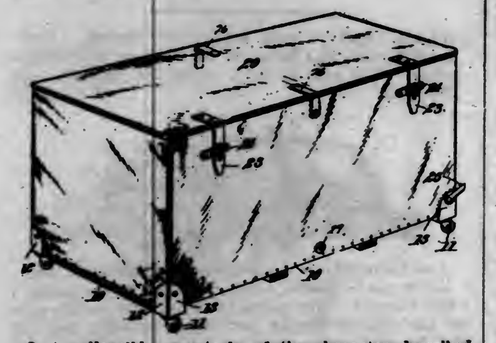
1. A massage appliance comprising a body formed of a non-yielding substance, and a plurality of non-yielding protuberances formed upon the surface of said body, said protuberances being formed with an uneven surface.

2. A massage appliance comprising a body formed of a non-yielding substance, and a plurality of non-yielding semispherically shaped protuberances formed upon the surface of said body, said protuberances being provided with a plurality of small rounded projections.

1,111,428. COLLAPSIBLE RECEPTACLE. JOSEPH J. ARONOFF, Trenton, N. J. Filed Dec. 9, 1913. Serial No. 805,581. (Cl. 150—49.)

1. A collapsible receptacle of the character described comprising a base, side frames hinged to the to the ends of said base, end frames hinged to the sides of said base near the ends thereof between said side frames to brace the latter when in open position, and flexible sides and ends secured to said side frames and to said base, said

flexible sides and ends being connected at the corners of the receptacle to limit outward movement of the upper edges of said side frames.



2. A collapsible receptacle of the character described comprising a base, side frames formed of U-shaped rods having their ends hinged to the ends of said base near the ends thereof, end frames also formed of U-shaped rods hinged to the sides of said base between said side frames to brace the latter when in open position, and flexible sides and ends secured to said side frames and to said base, said flexible sides and ends being connected at the corners of the receptacle to limit outward movement of the upped edges of said side frames.

3. A collapsible receptacle of the character described comprising a base, side frames hinged to the ends thereof and provided with notches in their inner faces, end frames hinged to the sides of said base near the ends thereof between the side frames and engaging said notches when in open position, and flexible sides and ends secured to said side frames and to said base, said flexible sides and ends being connected at the corners of the receptacle to limit outward movement of the upper edges of said side frames.

4. A collapsible receptacle of the character described comprising a base, side frames formed of U-shaped rods hinged to the ends of said base and provided with notches in their inner faces, end frames formed of U-shaped rods hinged to the sides of said base near the ends thereof between said side frames and engaging said notches when in open position, and flexible sides and ends secured to said side frames and to said base, said flexible sides and ends being connected at the corners of the receptacle to limit outward movement of the upper edges of said side frames.

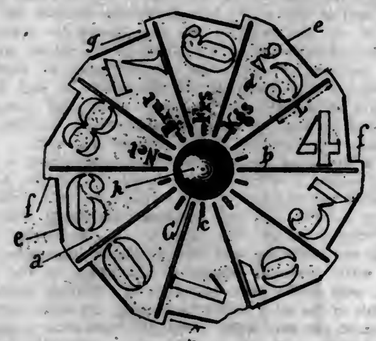
5. A collapsible receptacle of the character described comprising a base, side frames hinged to the ends of said base, end frames hinged to the sides of the base near the ends thereof between the side frames to brace the latter when in open position, and flexible sides and ends secured to said side frames and to said base, said flexible ends limiting outward movement of the upper edges of said side frames, said flexible sides and ends being connected at the corners of the receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,111,429. STENCIL-PLATE. FELIX ARRACHART, Charenton-le-Pont, France. Filed Nov. 7, 1912. Serial No. 730,040. (Cl. 101—134.)

1. A stencil plate of the character described comprising a disk provided with the characters 0 to 9 cut out of said disk adjacent the edge thereof and appropriate abbreviations between said edge and the center of said disk, a central stud, radial ribs on said disk for guiding said disk on the surface to be stenciled upon, and for alining and spacing the characters upon said surface, substantially as described.

2. A stencil plate of the character described, comprising a disk provided with the characters 0 to 9 and appropriate abbreviations grouped around the center of said disk and cut out of the material of the same, a central stud providing a handle, ribs on said disk dividing the same into ten fields each field provided with a straight portion forming a notch on the margin thereof for guiding said disk upon



the surface to be stenciled upon and for spacing said characters upon said surface, substantially as described.

1,111,430. INSULATING COMPOSITION AND THE MEHOD OF MAKING THE SAME. LAWRENCE E. BARINGER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 7, 1914. Serial No. 836,949. (Cl. 106—12.)

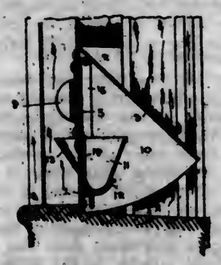
1. A composition of matter comprising a dense, hard insulating composition comprising sulfurized oil, saponified oil and a fossil gum.

2. A composition of matter comprising a dense, hard insulating composition comprising sulfurized oil, saponified oil and copal.

3. The process of forming a hard, dense insulating composition, which consists in exposing a mixture containing an oil, a fossil gum, sulfur and a saponifying material to the air for several days, molding the mixture and baking the same at a gradually rising temperature.

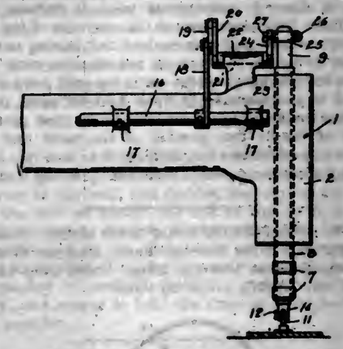
4. The process of forming a hard, dense insulating composition, which consists in exposing a mixture comprising linseed oil, copal, zinc oxid and sulfur to the air for about five to nine days, molding said mixture and finally baking for several days at a temperature rising about 50 to 60° C. to about 120° C.

1,111,431. COMBINED FRESH-AIR INLET AND AIR-MEDICATOR. OSCAR BARTH, Fort Madison, Iowa. Filed Apr. 3, 1913. Serial No. 758,539. (Cl. 98—44.)



A device of the character described including an apertured body plate adapted to be interposed between the sill of a window and the raised sash, a deflector plate formed integrally with said body plate, a tank removably secured to said body plate and having a portion projecting therethrough and a fibrous strip removably secured to said body plate and adapted to have a free end depending into said tank.

1,111,432. TRIMMING ATTACHMENT FOR SEWING-MACHINES. WILLIAM J. BELL, Brooklyn, N. Y. Filed Dec. 23, 1913. Serial No. 808,444. (Cl. 112—6.)



1. In combination with a sewing machine having a hollow presser bar, a rod slidable through said bar, means for reciprocating said rod, a knife secured to one end of the rod, and a slotted cutter plate for coöperation with the knife.

2. In combination with a sewing machine having a hollow presser bar, a rod slidable through said presser bar, means for reciprocating the rod, the lower end of the rod being bifurcated, a knife, means for adjustably securing the knife to the bifurcated end of said rod, and a slotted cutter plate for coöperation with the knife.

1,111,433. TROWEL. CHARLES KONRAD BRANDSTROM, Seattle, Wash. Filed Feb. 11, 1914. Serial No. 818,143. (Cl. 72—136.)

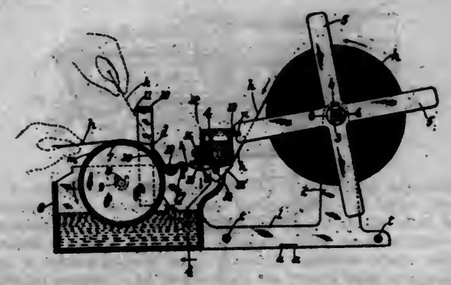
1. A trowel of the class described including a resilient blade, a ridge secured thereto, a standard extending outwardly from the ridge, a stationary rib having a tapering end, a keeper adapted to receive said tapering end and means for removably securing the other end of the rib to the blade.

2. A device of the class described including a resilient blade, a ridge plate secured thereto, a standard projecting outwardly from said plate, a keeper carried by one end of the blade, a stationary rib having one end removably engaged beneath said keeper, the other end of said rib being hollow and substantially semi-circular in form, a flange formed on the inner end of the ridge plate, a movable bolt carried by said rib having a catch adapted to engage said flange and means for actuating said bolt to engage and disengage the catch.

3. A device of the class described including a resilient blade, a ridge secured thereto, an outwardly projecting standard formed on said ridge, a reinforcing rib, a keeper secured to one end of the blade and adapted to receive one end of the rib, a pivoted lever mounted upon said standard and a pivoted catch member carried by said lever and adapted to engage the inner end of said rib and retain the same in position upon the blade.

1,111,434. GUMMED-TAPE-MOISTENING MACHINE. SAMUEL BROWN, St. Louis, Mo. Filed May 29, 1913. Serial No. 770,725. (Cl. 91—14.)

1. In a machine of the character described, a rotatable drum, means for supplying water to the peripheral surface of the drum, a source of supply of sheet material, a stationary apron contiguous to the drum and spaced therefrom, means for guiding the sheet over said apron, a cutter for severing the sheet, and a formation on the apron directed away from the drum for normally holding the section of the sheet beyond the apron out of contact with the drum to prevent premature moistening of the sheet.



2. A gummed-tape moistener comprising a suitable frame, a roll of tape mounted at one end thereof, a water tank at the opposite end, a peripherally grooved drum mounted in the tank, an apron bent trough-shaped secured in the rear of the drum and spaced therefrom and provided with a front rearwardly deflected lip, a guide rod above the trough formed in the apron, a water container mounted between the apron and roll and provided with discharge openings, a felt or equivalent strip mounted opposite the openings and having a section exposed to the upper side of the tape, a guide rod below the container over which the tape is passed before passing under the guide rod and over the apron, and a knife above the drum for severing the tape into any desired lengths.

3. In a tape moistener, a suitable frame, a spindle on said frame for supporting a tape roll, guide-heads on said spindle bearing against opposite ends of the roll, said guide-heads comprising a series of radial arms, a water trough for moistening one side of the tape, means for moistening the opposite side of the tape, a rail carried by the trough on the side facing the spindle, the arms of the guide-heads being provided with notches for engaging the rail whereby the heads are locked against rotation.

4. In a machine of the character described, a moistening member, a source of supply of sheet material, a stationary apron contiguous to the moistening member, means for guiding the sheet over the apron, a cutter for severing the sheet, and a fixed formation on the apron deflected away from the drum and spaced from the guiding means for normally holding the section of the material between the apron and cutter out of contact with the moistening member.

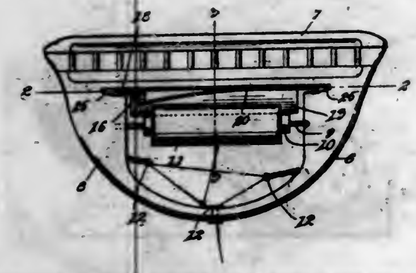
5. In a machine of the character described, a moistening member, a source of supply of sheet material, an apron contiguous to the moistening member and spaced therefrom, means for directing the sheet over the apron, a cutter for severing the sheet, and a terminal fixed formation on the apron tending away from the moistening member and spaced from the directing means for normally holding the section of the material between the apron and cutter out of contact with the moistening member.

1,111,435. TENSION DEVICE FOR SHUTTLES. ERNEST BURGESS, Norwalk, Conn. Filed Nov. 19, 1913. Serial No. 801,936. (Cl. 139—46.)

1. In a shuttle, a tensioning device including a pressure plate, a supporting rod extending parallel to the shuttle spindle in advance thereof, the pressure plate being hinged to said rod, and a spring arm integral with one end of the supporting rod and engaging the pressure plate to swing it toward the bobbin.

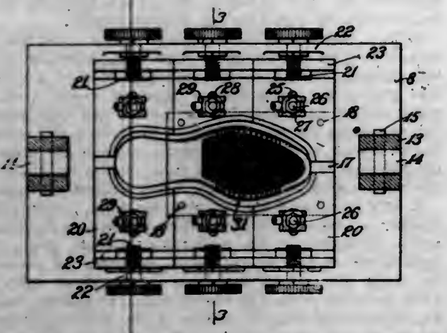
2. In a shuttle, a tensioning device including a pressure plate, a keeper formed upon one edge of said plate and lying to one side of the plane of the plate, a supporting rod to which said pressure plate is hinged, and a spring arm integral with one end of the supporting rod and engaging said keeper to exert a forward and upward pressure thereon whereby the pressure plate will be swung toward the bobbin.

3. The combination with a shuttle formed with a pair of slots opening upon the front wall and upon the central portion of said shuttle, of a tension device including a supporting rod having its extremities secured within said



slots, a rectangular pressure plate hinged along one longitudinal edge of said rod, a keeper formed upon said plate and a spring arm formed integral with the rod and engaging said keeper to swing the pressure plate toward the bobbin.

1,111,436. SHOE-SOLE VULCANIZING AND APPLYING APPARATUS. GEORGE F. BUTTERFIELD, Cambridge, Mass., assignor to Grace I. Butterfield, Cambridge, Mass. Filed Feb. 1, 1909. Serial No. 475,355. (Cl. 18—17.)



1. The shoe-holding apparatus described, comprising a base-plate formed with a sole-shaped mold to receive the vulcanizable rubber compound which, when cured, is permanently united to the shoe bottom; vertical clamp bolts rigidly secured to the base plate; a cross-bar carrying a depending foot-form for the shoe and means for holding down the foot-form and shoe, upon the rubber in the mold in combination with adjustable marginal clamps connected to the base-plate and slotted to receive the pressure bolts rising from said plate and with suitable terminal fastenings, substantially as set forth.

2. The shoe-holding apparatus described, comprising a base plate having a suitable mold to receive the vulcanizable compound and uprights or guide posts at the ends of the mold, a bridge or cross-bar having a depending foot-form for the shoe, depending end portions conforming to said uprights and pressure means engaging such parts, for tightening the foot-form and shoe upon the rubber in the mold, in combination with supporting and lifting means in such end portions, adapted to hold the foot-form and connected parts temporarily above the mold and to later assist in removing them therefrom, substantially as set forth.

3. The shoe-holding apparatus described, comprising a base plate having a suitable mold to receive the vulcanizable compound, a cross-bar having a flattened central portion with a depending foot-form, and end portions having pressure devices adapted to engage uprights rising from the base plate, in combination with slotted clamping plates adjustable to the contour of the shoe, bolts rising from the base plate through such slots and with terminal fastenings for applying the clamp pressure, substantially as set forth.

4. In a shoe-sole vulcanizing mold, a bottom portion comprising a base-plate formed the converse of the bottom of the sole or sole and heel desired and having outwardly extending marginal portions, in combination with detachable and interchangeable edge-walls for such mold, suitably anchored to and made to fit upon said marginal portions, such edge-walls being formed distinct from and independent of the bottom portion of the mold and of the clamps or mechanism for holding the boot or shoe in position during treatment, substantially as set forth.

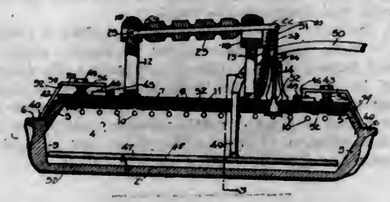
1,111,437. COMPOSITE BOOT AND SHOE. GEORGE F. BUTTERFIELD, West Newton, Mass., assignor to Grace I. Butterfield, West Newton, Mass. Filed July 10, 1913. Serial No. 778,273. (Cl. 36—30.)

1. A composite boot or shoe, comprising an upper, an inner sole, a felt middle sole saturated and thoroughly coated with rubber cement, and a rubber outsole constructed and arranged to cover the bottom surface and peripheral edge of said middle sole, and stitching permanently uniting the middle sole marginally to the inner sole and upper, the various parts of said shoe being united by vulcanisation.

2. A composite boot or shoe, comprising an upper, an inner sole, a felt middle sole and heel boss saturated and thoroughly coated with rubber cement, and a rubber outsole constructed and arranged to cover the bottom surface and peripheral edge of said middle sole, and stitching uniting the middle sole marginally to the inner sole and upper, the various parts being permanently united by vulcanization.

3. A composite boot or shoe, comprising a suitable upper and lining with an interposed binding strip of rubber along their lower edges, a rubber surfaced textile inner sole, a felt middle sole saturated and thoroughly coated with rubber cement, a vulcanized rubber sheet interposed between said textile and felted soles and stitching uniting such soles marginally to the upper and lining and a shell-like rubber outsole constructed and arranged to cover the bottom surface and inclose the peripheral edge of said felted middle sole, the various parts being permanently united by vulcanization.

1,111,438. LUSTERLESS-GARMENT-PRESSING IRON. SALVATORE PASQUALE LUCIO CALITRI, Rochester, N. Y. Filed Feb. 3, 1914. Serial No. 816,185. (Cl. 68—26.)



1. The combination with a pressing iron of a handle pivotally secured to the iron, a pressing cloth carried by the iron, means connected to the handle to take up the fullness of the cloth when the iron is lifted, and yieldable means to hold the cloth smooth transversely of the iron.

2. The combination with a pressing iron of a handle pivotally secured to the iron, a pressing cloth of greater length than the iron, a frame secured to the handle, and to one end of the pressing cloth, said frame being adapted to automatically take up the fullness of the cloth when the iron is lifted, and means to hold the cloth smooth transversely of the iron.

3. The combination with a garment pressing iron of a handle pivotally secured to the iron, a cloth of greater length than the bottom of the iron, said cloth being adapted to permit the iron to slide freely thereover, means carried by the handle and secured to one end of the cloth to take up the fullness in the cloth, and a pair of yieldable resilient arms secured to the iron near each end and adapted to hold the cloth normally extended to its full width.

4. In a device of the character described, the combination with a pressing iron of a cloth of greater length than the bottom of the iron, and carried thereby, means at one end of the iron to secure one end of the cloth, a handle pivotally secured to the iron, a frame carried by the handle, the opposite end of the cloth being secured to the frame, resilient arms secured to the iron near each end, said arms being adapted to yieldably hold the cloth fully extended laterally, and means to hold the arms in their normal operative position.

1,111,439. ENGINEER'S VALVE. HERBERT W. CHENEY, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Dec. 24, 1913. Serial No. 808,909. (Cl. 188—7.)

1. In an engineer's valve, a casing, a piston valve within said casing, said valve comprising a valve member and a seat member, one of said members being formed with an upwardly directed beaded seating portion, means for operating said valve, and means within said casing for preliminarily purifying the air admitted to said valve.

2. In an engineer's valve, a casing, a valve within said casing, said valve comprising a valve member and a seat member, one of said members being formed for the prevention of accumulation of foreign matter thereon, means for operating said valve, and a strainer within said casing and adapted to preliminarily purify air admitted to said valve.

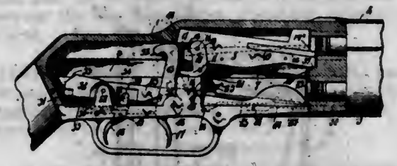
3. In an engineer's valve, a casing, a piston valve within said casing, said valve being formed with an upwardly directed beaded seating portion, means for operating said valve, and means within said casing for preliminarily purifying the air admitted to said valve.

4. In an engineer's valve, a casing, a valve within said casing, said valve being formed for the prevention of accumulation of foreign matter thereon, means for operating said valve, and a strainer within said casing and adapted to preliminarily purify air admitted to said valve.

5. In an engineer's valve, a casing, a plurality of puppet valves within said casing, means for operating said valves, and a strainer within said casing and adapted to preliminarily purify air admitted to said casing past one of said valves.

[Claim 6 not printed in the Gazette.]

1,111,440. REPEATING SHOTGUN. JAMES L. COX, Bergholz, Ohio. Filed June 19, 1914. Serial No. 846,130. (Cl. 42—17.)



1. A repeating shot gun having a pivotally mounted shell raising member, means actuated by the latter for causing the shell to aline with the barrel as the shell is raised, a sliding action bar, a breech block actuated thereby, a spring-pressed pawl pivotally mounted upon said pivotal member, and means upon the breech block designed to contact with said pawl to cause the member to tilt as the breech block moves in one direction.

2. A repeating shot gun having a pivotally mounted shell raising member, means actuated by the latter for causing the shell to aline with the barrel as the shell is raised, a sliding action bar, a breech block actuated thereby, a spring-pressed pawl pivotally mounted upon said pivotal member, a locking member pivotally mounted upon the breech block and having a projecting portion thereof adapted to contact with said pawl to cause said pivotal member to tilt as the breech block moves in one direction.

3. A repeating shot gun having a pivotally mounted shell raising member, means actuated by the latter for causing the shell to aline with the barrel as the shell is raised, a sliding action bar, a breech block actuated thereby, a spring-pressed pawl pivotally mounted upon said pivotal member, a locking member pivotally mounted upon the breech block and provided with a cam projection having a beveled portion, which projection is designed, as the breech block is moved forward, to contact with said pawl to cause the shell raising member to tilt, the pawl moving idly on the return movement of the breech block.

4. A repeating shot gun having a pivotally mounted shell raising member, means actuated by the latter for causing the shell to aline with the barrel as the shell is raised, a breech block and a firing pin carried thereby, a locking member pivotally mounted upon the breech block, a sliding action bar pivotally connected to said locking member, an abutment against which the locking member is adapted to contact to elevate the breech block to a locked position, a spring-pressed pawl upon the shell lifting member, said locking member having a projection adapted to contact with the pawl to cause the shell lifting member to tilt as the breech block moves forward, a spring-pressed hammer and a trigger for engagement with the same.

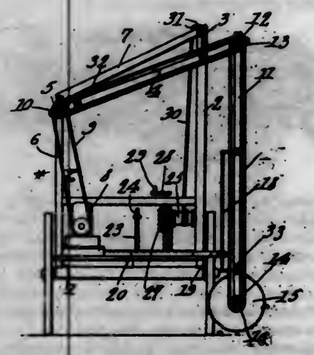
5. A repeating shot gun having a pivotally mounted shell raising member, means actuated by the latter for causing the shell to aline with the barrel as the shell is raised, a breech block and a firing pin carried thereby, a locking member having a cam edge and a hook portion, a spring actuted pawl pivotally mounted upon the shell raising member and disposed in the path of said projection, a stationary abutment against which the cam edge of said locking member is adapted to contact to throw the rear end of the breech block into a locked position, a spring-pressed hammer and a trigger for engagement with the same.

[Claims 6 to 9 not printed in the Gazette.]

1,111,441. PORTABLE SAWING-MACHINE. KARL DIEHL, Rochester, N. Y. Filed May 6, 1914. Serial No. 836,749. Cl. 143—46.)

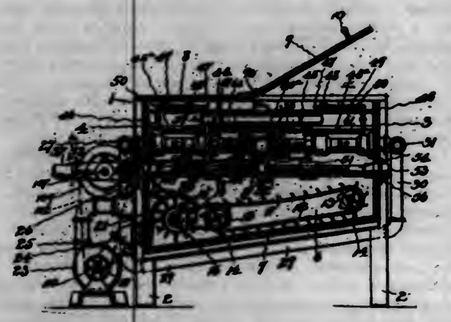
A wood sawing machine, including a supporting and guiding structure and upper frame mounted to swing upwardly and downwardly relative to said structure, a frame hung from and adapted to swing relative to the upper frame, and means for swinging the hanging frame laterally away from or toward the supporting structure, said means

including a guide rod carried by the hanging frame, a slidable arm supported by the structure and slidably engaged



by the rod, and means for shifting said arm relative to the supporting structure.

1,111,442. APPARATUS FOR APPLYING A CONDUCTIVE COATING TO THE SURFACE OF A MOLD USED IN THE ART OF ELECTROTYPING. GEORGE E. DUNTON, New York, N. Y. Filed Dec. 17, 1912. Serial No. 737,281. (Cl. 91—7.5.)



1. In a device of the character described, means adapted to hold an electrotype mold in an inverted position and means for applying a conductive coating upwardly in different and changing directions to the inverted surface of the mold, substantially as described.

2. In a device of the character described, means adapted to hold an electrotype mold in an inverted position and means for applying a conductive coating to the inverted surface of the mold and in different positions relative thereto, substantially as described.

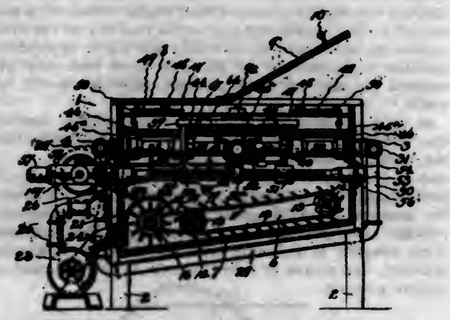
3. In a device of the character described, means adapted to hold an electrotype mold in an inverted position and means for applying a conductive coating upwardly in different and changing directions to the inverted surface of the mold and in different positions relative thereto, substantially as described.

4. In a device of the character described, horizontally rotatable means adapted to hold an electrotype mold having indentations therein in an inverted position and means for applying a conductive coating upwardly to the indentations and inverted surface of the same, substantially as described.

5. In a device of the character described, a mold carriage, a mold holder mounted horizontally thereon adapted to hold a mold in an inverted position and means for applying a conductive coating upwardly to the inverted surface of the mold, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,111,443. METHOD FOR APPLYING A CONDUCTIVE COATING TO THE SURFACE OF A MOLD USED IN THE ART OF ELECTROTYPING. GEORGE E. DUNTON, New York, N. Y. Filed Jan. 18, 1913. Serial No. 742,868. (Cl. 204—8.)



1. The method of applying a conductive coating to a mold, consisting in inverting the mold and projecting a conductive coating upwardly against the same at such angles with relation to the mold that the face of the mold and each side and bottom of all the indentations therein are coated.

2. The method of applying a conductive coating to a mold, consisting in inverting the mold and projecting a conductive coating against each of the sides and bottoms of the indentations and the face of the mold.

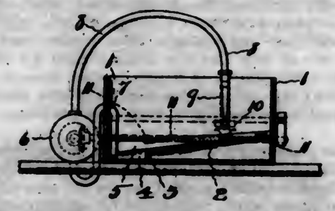
3. The method of applying a conductive coating to an inverted horizontal mold, consisting in projecting a conductive coating in an upward direction against one side of each of the indentations therein and the face of the mold simultaneously.

4. The method of applyng a conductive coating to a mold, consisting in inverting the mold, projecting a conductive coating against the mold, rotating the mold intermittently and presenting one side of each of the indentations therein and the face thereof simultaneously to the action of the conductive coating.

5. The method of applying a conductive coating to a mold, consisting in inverting the mold and projecting a conductive coating against the mold in such directions as to coat and polish or burnish the sides of the indentations therein and the face of the mold.

[Claims 6 to 20 not printed in the Gazette.]

1,111,444. METHOD FOR TREATING MOLDS USED IN THE ART OF ELECTROTYPING. GEORGE E. DUNTON, New York, N. Y. Filed Oct. 24, 1913. Serial No. 796,991. (Cl. 204—8.)



1. The method of treating molds used in the art of electrotyping to break the adhesion of the grease thereto, prior to the application of the conductive coating, consisting in applying to the mold, under pressure, a substance which will break the adhesion between the mold and the grease and facilitate the removal of the grease, removing the grease by the force of pressure of said substance, subjecting the mold to the action of a neutralising substance and then rinsing the mold and drying the same.

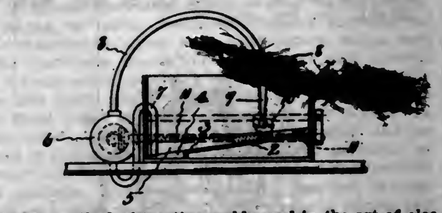
2. The method of treating molds used in the art of electrotyping to break the adhesion between the mold surface, the interstices or indentures theren and the grease, prior to the application of the conductive coating, consisting in treating the grease impregnated surface of the mold and its interstices or indentations with a substance which will break the adhesion between the mold and grease and facilitate the removal of the grease, removing the grease, treating the mold with a substance which will neutralise the substance used to break the adhesion and finally removing the neutralised substance.

3. The method of treating molds used in the art of electrotyping to break the adhesion between the mold and grease and facilitate the removal of the grease, consisting in subjecting the grease impregnated surface of the mold to the action of a substance which will break the adhesion between the mold and the grease and removing the grease, prior to the application of the conductive coating to the mold.

4. The method of treating molds used in the art of electrotyping to break the adhesion between the mold and the grease and remove the grease, consisting in taking the mold after it has been subjected to pressure and the grease expressed therefrom and breaking up the adhesion between the mold and the grease by treating the mold with an alkaline substance, then dipping the mold in a pickle to neutralise the alkaline substance and finally rinsing away the residue together with the liberated grease prior to the application of the conducting substance.

5. The method of treating molds used in the art of electrotyping to break the adhesion between the mold and the grease and remove the grease, consisting in spraying the mold with an alkaline soap solution to break the adhesion between the mold and the grease, treating with sulfuric hydrochloric acid pickle to neutralize the alkaline soap solution and remove the grease and rinsing the mold with water prior to the application of the conducting coating.

1,111,445. METHOD FOR TREATING MOLDS USED IN THE ART OF ELECTROTYPING. GEORGE E. DUNTON, New York, N. Y. Filed Nov. 14, 1913. Serial No. 800,962. (Cl. 87—5.)



1. The method of treating molds used in the art of electrotyping to remove the grease therefrom, consisting in treating the mold, prior to the application of the conductive coating, to a grease absorbing substance, treating said absorbing substance and grease with a substance, whereby the absorbing substance is transformed and the grease liberated and then removing the transformed substance and liberated grease.

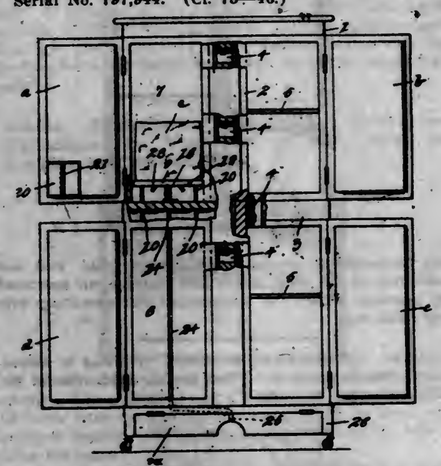
2. The method of treating molds used in the art of electrotyping to remove the grease therefrom, consisting in treating the mold prior to the application of the conductive coating, to a grease absorbing substance, treating said absorbing substance with an acid and removing the absorbing substance and acid.

3. The method of treating molds used in the art of electrotyping to remove the grease therefrom, consisting in treating the mold prior to the application of the conductive coating, with carbonate of lime to absorb the grease, converting the grease absorbed carbonate of lime into sulfate of lime, freeing the grease and washing away the free grease held by the carbonate of lime prior to its conversion into sulfate of lime.

4. The method of treating molds used in the art of electrotyping to remove the grease therefrom, consisting in treating the mold with a grease absorbing powder, treating the absorbed substance with a pickle, composed of sulfuric acid mixed with water and then removing the absorbed grease and pickle by washing or rinsing.

5. The method of treating molds used in the art of electrotyping to remove the grease therefrom, consisting in treating the grease, which has been expressed from the mold, with carbonate of lime, and after the grease has been absorbed by the carbonate of lime treating the absorbed grease and the carbonate of lime with an acid and then removing the absorbed grease, absorbing substance and the acid.

1,111,446. ICE-BOX. ED ELLIS, Guthrie, Okla., assignor of one-third to Cecil Francis Hopkins and one-third to Alpheus Amon Leer, Guthrie, Okla. Filed Oct. 29, 1913. Serial No. 797,944. (Cl. 73—46.)



1. A refrigerator having a weighing scale mounted in the ice chamber thereof, said scale comprising a pan, a series of guide members connected with the bottom of said pan, guide bushings in the floor of said chamber, said guide members, extending through said bushings, a guide rod secured centrally underneath said pan, a tubular guide in the floor of said chamber, said guide rod extending through said tubular guide, and a spring interposed between the pan and the floor of said ice chamber, in combination with a window in the door of the refrigerator having scale marks thereon, and a hand or pointer connected to said pan.

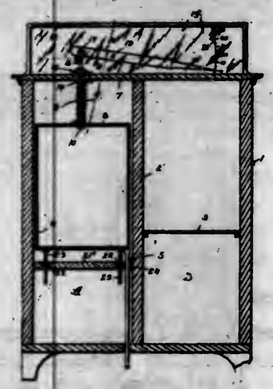
2. In a refrigerator, the combination of a weighing device for the ice, said weighing device being located in the ice chamber and comprising a pan, guide rods for said pan, a spring upon which said pan is supported, a door provided with a glass dial, and a hand or pointer connected to the pan of the weighing device and movable over the face of the dial.

1,111,447. REFRIGERATOR WEIGHING DEVICE. ED ELLIS, Guthrie, Okla., assignor of one-fourth to Cecil Francis Hopkins, one-fourth to Alpheus Amon Leer, and one-fourth to Herman Gerlach, Guthrie, Okla. Filed Dec. 13, 1913. Serial No. 806,516. (Cl. 73—46.)

1. A refrigerator weighing device comprising an ice cage adapted to be mounted within a refrigerator, a helical spring secured at its terminals to the upper end of the ice cage and to the upper wall of the refrigerator and yieldingly supporting the ice cage, a rod extending upwardly through the spring and secured at one terminal to the ice cage, the upper wall of the refrigerator having an opening therein, a compartment formed on the upper wall of the refrigerator, said rod extending into the compartment, a scale needle pivoted in the compartment, a scale plate mounted within the compartment, and a connecting rod for the first rod and scale needle, said compartment having a transparent front wall.

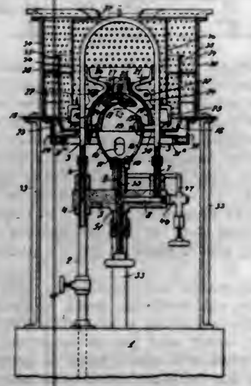
2. A refrigerator weighing device comprising an ice cage slidably mounted within a refrigerator, a spring operatively connected with the ice cage and the refrigerator and yieldingly supporting said ice cage, a rod secured to said cage, a compartment formed upon the upper portion of the refrigerator, said rod extending into said compart-

ment, a scale plate mounted within said compartment, a scale needle mounted within said compartment and operatively connected with said rod at the upper end thereof,



said compartment having a transparent front wall and guide bars at the lower end of said ice cage, an apertured bar mounted within the refrigerator and operating with said guide bars.

1,111,448. LIQUID-FUEL BURNER. THOMAS B. FERGUSON, New York, N. Y. Filed Jan. 5, 1912. Serial No. 669,620. (Cl. 158—65.)



1. A liquid fuel burner comprising in combination a burner proper, comprising flame-deflecting means adapted to convert the flame of said burner into a widely-spread flame annulus, a fuel-heating tube the major portion of which passes through the space included inside such flame annulus when the burner is in operation, and connected to the burner proper to supply gas thereto, all portions of said tube which may normally be in the path of the flame being arranged transversely to such path, and means for supplying liquid fuel to said fuel-heating tube.

2. A liquid fuel burner comprising in combination a burner proper, comprising flame-deflecting means adapted to convert the flame of said burner into a widely-spread flame annulus, a fuel-heating tube the major portion of which passes through the space included inside such flame annulus when the burner is in operation, and connected to the burner proper to supply gas thereto, all portions of said tube which may normally be in the path of the flame being arranged transversely to such path, and means for supplying liquid fuel to said fuel-heating tube, said burner further comprising means for producing a downdraft of air within the space surrounded by such annulus and in the vicinity of the portion of the fuel-heating tube passing through such space.

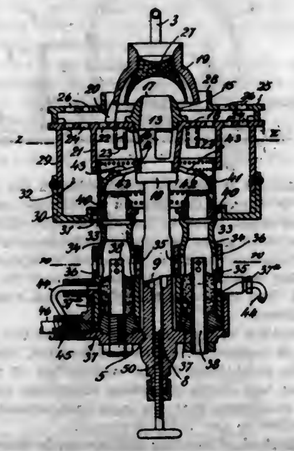
3. A liquid fuel burner comprising in combination a burner proper comprising flame-deflecting means arranged to cause the flame to spread out nearly horizontally and thence to pass upward in the form of an annulus, a return-bend fuel-heating tube the major portion of which is located within the space inclosed by such annulus when the burner is in operation, the two legs of such tube passing through the horizontal portion of the flame transversely, said fuel-heating tube connected at one end to the burner proper, and means for supplying liquid fuel to the other end of such fuel-heating tube.

4. A liquid fuel burner comprising in combination a burner proper comprising flame-deflecting means arranged to cause the flame to spread out nearly horizontally and thence to pass upward in the form of an annulus, a return-bend fuel-heating tube the major portion of which is located within the space inclosed by such annulus when the burner is in operation, the two legs of such tube passing through the horizontal portion of the flame transversely, said fuel-heating tube connected at one end to the burner proper, and means for supplying liquid fuel to the other end of such fuel-heating tube, said burner further comprising means for producing a downdraft of air within the space surrounded by such annulus and in the vicinity of the portion of the fuel-heating tube passing through such space.

5. A liquid fuel burner comprising in combination a shell inclosing an initial combustion chamber, said shell having in its lower portion air inlet ports and a burner orifice and having in its upper portion a flame orifice, a flame deflector having a top above such shell, and having sides extending downward from said top, and arranged to convert the flame into an annulus, a fuel-heating tube passing through the space above such deflector, means for conveying gas from said fuel-heating tube to said burner orifice, and means for supplying liquid fuel to said fuel-heating tube.

[Claims 6 to 38 not printed in the Gazette.]

1,111,449. LIQUID-FUEL BURNER. THOMAS B. FERGUSON, New York, N. Y. Filed Aug. 21, 1913. Serial No. 786,031. (Cl. 158—65.)



1. A burner comprising in combination fuel-jet-projecting means, a deflector arranged to deflect the said jet rearwardly and as an annulus, a platform beneath such deflector, and a mixing and air inlet chamber beneath such platform and having an air inlet, said platform having openings through which such annular flame stream will pass into the mixing and air inlet chamber and other openings through which such flame annulus will pass outwardly from the mixing chamber.

2. A burner comprising in combination fuel-jet-projecting means, a deflector arranged to deflect the said jet rearwardly and as an annulus, a platform beneath such deflector, and a mixing and air inlet chamber beneath such platform and having an air inlet, said platform having openings through which such annular flame stream will pass into the mixing chamber and other openings through which such flame annulus will pass outwardly from the mixing chamber, and a baffle separating the openings through which such annulus will pass into the mixing and air inlet chamber from the openings through which such flame annulus will pass from the mixing chamber.

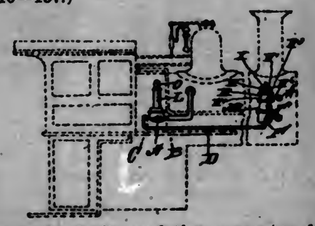
3. A burner comprising in combination fuel-jet-projecting means, an initial combustion chamber inclosing the space immediately beyond such jet-projecting means, such initial combustion chamber having an air inlet opening and a flame outlet opening, a platform extending laterally from said initial combustion chamber and located beneath said flame outlet opening, a flame deflector beyond the flame outlet of said initial combustion chamber and arranged to deflect the flame from such outlet rearwardly as a flame annulus, a mixing and air inlet chamber beneath said platform, said platform having openings through which such flame annulus will pass into said mixing and air inlet chamber, and having other openings through which the flame annulus will pass from such mixing and air inlet chamber.

4. A burner comprising in combination fuel-jet-projecting means, an initial combustion chamber inclosing the space immediately beyond such jet-projecting means, such initial combustion chamber having an air inlet opening and a flame outlet opening, a platform extending laterally from said initial combustion chamber and located beneath said flame outlet opening, a flame deflector beyond the flame outlet of said initial combustion chamber and arranged to deflect the flame from such outlet rearwardly as a flame annulus, a mixing and air inlet chamber beneath said platform, said platform having openings through which such flame annulus will pass into said mixing and air inlet chamber, and a baffle between the openings through which flame will pass into the mixing chamber, and the openings through which the flame will pass from said mixing and air inlet chamber.

5. A burner comprising in combination fuel-jet-projecting means, an initial combustion chamber inclosing the space immediately beyond such jet-projecting means, such initial combustion chamber having an air inlet opening and a flame outlet opening, a platform extending laterally from said initial combustion chamber and located beneath said flame outlet opening, a flame deflector beyond the flame outlet of said initial combustion chamber and arranged to deflect the flame from such outlet rearwardly as a flame annulus, a mixing and air inlet chamber beneath said platform, said platform having openings through which such flame annulus will pass into said mixing and air inlet chamber, and having other openings through which the flame annulus will pass from such mixing and air inlet chamber, and a second platform above and spaced away from said first platform and separated therefrom, and provided with openings through which flame gases passing between the two platforms may escape.

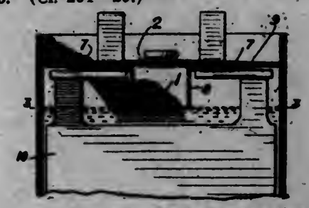
[Claims 6 to 23 not printed in the Gazette.]

1,111,450. AUTOMATIC DRAFT-CONTROLLING DEVICE FOR ENGINES. BIRD FITZPATRICK, Jr., Pensacola, Fla. Filed Apr. 27, 1914. Serial No. 834,741. (Cl. 110—157.)



An automatic draft regulating apparatus for engines comprising a valve casing with an apertured partition therein, a valve within said casing, the wall of the latter having an aperture, a portion of the stem of said valve being beveled to seat against the marginal edge of the opening in the casing, an adjusting nut upon said valve stem, a spring interposed between the nut and the shoulder upon the stem, a cap having threaded connection with said adjusting nut, a cylinder, a pipe communicating between the same and one of the compartments of said valve casing, a piston within said cylinder, a stem to said piston, a spring bearing between the piston and the end of the cylinder, an air chamber with an opening in one end thereof, a valve regulating said opening into the air chamber, a stem upon the air-regulating valve positioned in the path of the piston stem, a perforated chamber, the wall of which is fastened to the air chamber and through which the stem of the air-regulating valve passes, a spring adapted to seat the latter, and a pipe communicating with the air chamber and adapted to convey air to the stack of an engine.

1,111,451. STORAGE-BATTERY CELL. BRUCE FORD, Philadelphia, Pa. Filed Mar. 14, 1911. Serial No. 614,425. (Cl. 204—29.)



1. In a storage battery cell the combination of a cover having a filling opening and a channel member applied to the cover with its web portion spaced from the cover and arranged opposite the opening to operate as a tell-tale in filling the cells.

2. In a storage battery cell the combination of a cover having a filling opening and a channel member applied to the cover with its web portion roughened and spaced from the cover and arranged opposite the opening to operate as a tell-tale in filling the cell.

3. In a storage battery cell the combination of a cover having a filling opening and a channel member applied to the cover with its web portion perforated and spaced from the cover and arranged opposite the opening to operate as a tell-tale in filling the cell.

4. In a storage battery cell the combination of a cover having a filling opening and a channel member having its arm portions applied to the cover and its web portion spaced from and arranged opposite the opening, substantially as described.

5. In a storage battery cell the combination of a cover having a filling opening and a channel member having its arm portions applied to the cover and its web portion spaced from and arranged opposite the opening and its open ends disposed toward the longer sides of the cell, substantially as described.

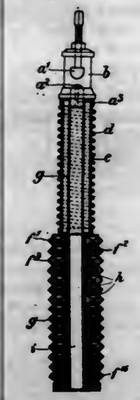
[Claim 6 not printed in the Gazette.]

1,111,452. BUTTON. JACOB FOX, New York, N. Y. Filed Sept. 19, 1911. Serial No. 650,262. (Cl. 24—104.)

A button comprising a concavo-convex collet having an opening in the bottom thereof, co-acting upper and lower cup-shaped clamping members of different sizes seated in the concave body of the collet, the lower clamping member partially closing the opening in the collet and being provided with an upwardly and outwardly extending flange and the upper clamping member being larger than the lower clamping member and provided with a downwardly and inwardly extending flange overlapping the flange of the lower clamping member, a rigid shank extending through the opening in the collet and having oppositely disposed arms bearing directly against the upper face of

the lower clamping member, a pad entirely filling the space between said clamping members, and a covering extending over the top of the upper clamping member and having its marginal edge extended downwardly between the inner wall of the collet and the outer wall of the flange of the upper clamping member and thence extended upwardly between the flanges of both clamping members and thence laterally above the upper edge of the flange of the lower clamping member and in contact with the upper surface of the pad, the extreme circumferential edge of the covering being pressed into the pad by engagement with the inner face of the upper clamping member.

1,111,453. LIGHTNING-ARRESTER. GEORGES GILES, Fribourg, Switzerland. Filed July 10, 1913. Serial No. 778,263. (Cl. 175—30.)



1. A device of the character described, comprising adjustable electrodes providing a variable spark gap, a series of fixed spaced ring electrodes providing a plurality of intermediate constant spark gaps, and a conductor movable within said fixed electrodes, the extreme end one of which is electrically connected to the said conductor while all of the others are insulated therefrom.

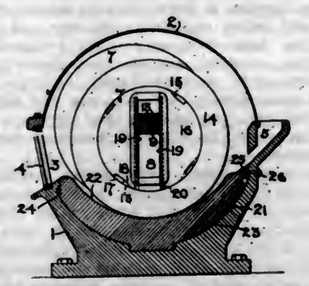
2. A device of the character described, comprising a pair of adjustable electrodes providing a variable spark gap, a series of fixed spaced ring electrodes providing a plurality of intermediate constant spark gaps, a resistance connecting one member of the said pair of electrodes and the end ring electrode next adjacent the same, and a conductor movable concentrically within the said fixed electrodes, the opposite extreme end one of which is electrically connected to the conductor while all the others are insulated therefrom.

3. A device of the character described, comprising a housing, a pair of electrodes, one of which is fixed and the other movable in the said housing, providing a variable spark gap therein, a casing connected to the said housing, a series of fixed spaced ring electrodes providing a plurality of intermediate constant spark gaps, a resistance surrounding the said casing and connecting the electrode fixed in the housing and the nearest adjacent of the said ring electrodes, a tube extending through the said series of fixed ring electrodes and through the said casing, and a conductor within the said tube and electrically connected to the fixed ring electrode at the opposite end of the series thereof, while all of the other ring electrodes are insulated from the said conductor and from each other, there being a passage through the electrode fixed in the housing so as to provide communication between the interior thereof and the said tube.

1,111,454. PULVERIZING APPARATUS. ALEXANDER GRANGER, Bulawayo, Rhodesia, South Africa. Filed Oct. 28, 1913. Serial No. 797,749. (Cl. 83—53.)

1. In a pulverizer, a mortar, a pulverizing body formed with a diametral slot, and a rotatable shaft passing through said body and having a non-circular portion which engages in the slot to rotate positively the body while leaving it free to slide transversely on the shaft, said body being positioned to coöperate with the mortar.

2. In a pulverizer, a mortar providing a crushing surface, a pulverizing body formed with a diametral slot, and a rotatable shaft passing through said body and having a non-circular portion which engages in the slot to rotate positively the body while leaving it free to slide transversely, said shaft being elevated above the crushing surface by a distance greater than the radius of the grinding body, whereby the body is caused to drop as the shaft rotates.



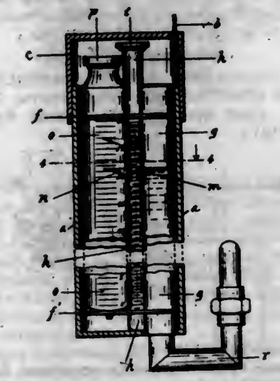
3. In a pulverizer, a mortar, a plurality of pulverizing bodies each formed with a diametral slot, and a rotatable shaft passing through said bodies and having a non-circular portion which engages in said slots to rotate positively the bodies while leaving them free to slide transversely thereon, the slots of the different bodies being disposed in different radial directions from one another.

4. In a pulverizer, a mortar, a pulverizing body formed with a diametral slot, a rotatable shaft passing through said body and having a non-circular portion which engages in the slot to rotate positively the body while leaving it free to slide transversely on the shaft, and collars fixed to the shaft and covering said slot.

5. In a pulverizer, a pulverizing body formed with a diametral slot, a rotatable shaft passing through said body and having a non-circular portion which engages in the slot to rotate positively the body while leaving it free to slide transversely on the shaft, said body being positioned to coöperate with the mortar, and a mortar having a crushing surface disposed for the body to move over while rotating after the drop.

[Claims 6 to 8 not printed in the Gazette.]

1,111,455. ADJUSTABLE LIQUID-GAGE. CHARLES F. HAMILTON, Portland, Oreg., assignor to Adjustable Liquid Gauge Company, a Corporation of Oregon. Filed Sept. 19, 1912. Serial No. 721,322. (Cl. 73—54.)



1. A liquid gage comprising a case; a threaded adjustment-rod journaled in the case; a gage-glass and a scale-rod, in the case, arranged side by side to the adjustment-rod; an indicator threaded on the adjustment-rod, said indicator provided with opposite pointers, one thereof overlying the gage-glass, the other the scale-rod; means for connecting the gage-glass with a container; key-controlled means for preventing the manipulation of the adjustment-rod; and the case being adapted to permit the inspection of the gage-glass and the scale-rod.

2. A liquid gage comprising a case; a threaded adjustment rod journaled in the case; a gage glass and a scale rod, in the case, arranged side by side to the adjustment rod; said scale rod being rotatably journaled in the case and provided with a plurality of graduated faces; an indicator threaded on the adjustment rod, said indicator provided with opposite pointers, one thereof overlying the gage glass, the other the scale rod; means for connecting the gage-glass with a container; key-controlled means for preventing the manipulation of the adjustment rod; and the case being adapted to permit the inspection of the gage glass and the scale rod.

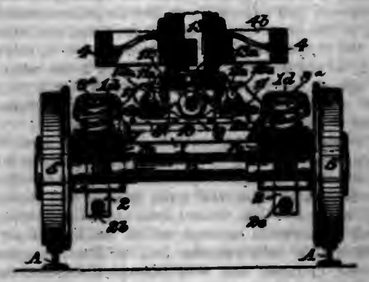
3. A liquid gage comprising a case provided with a lock-controlled opening portion; a threaded adjustment rod journaled in the case; a gage glass and a scale rod, in the case, arranged side by side to the adjustment rod; said scale rod being rotatably journaled in the case and provided with a plurality of graduated faces; an indicator threaded on the adjustment rod, said indicator provided with opposite pointers, one thereof overlying the gage glass, the other the scale rod; means for connecting the gage glass with the container; and the case being adapted to permit the inspection of the gage glass and the scale rod.

4. A liquid gage comprising a case made with an open top; a threaded adjustment rod journaled in the case; a gage glass and a scale rod, in the case, arranged side by side to the adjustment rod; an indicator threaded on the adjustment rod, said indicator provided with opposite pointers, one thereof overlying the gage glass, the other the scale rod; means for connecting the gage glass with the container; a cap movably affixed on the open top of the case; key-controlled means for locking the cap in place; and the case being adapted to permit the inspection of the gage glass and the scale rod.

5. A liquid gage comprising a case made with an open top; a threaded adjustment rod journaled in the case; a gage glass and a scale rod, in the case, arranged side by side to the adjustment rod; said scale rod being rotatably journaled in the case and provided with a plurality of graduated faces; an indicator threaded on the adjustment rod, said indicator provided with opposite pointers, one thereof overlying the gage glass, the other the scale rod; means for connecting the gage glass with the container; a cap movably affixed on the open top of the case; key-controlled means for locking the cap in place; and the case being adapted to permit the inspection of the gage glass and the scale rod.

[Claim 6 not printed in the Gazette.]

1,111,456. LOCOMOTIVE-ENGINE. CHARLES L. HEISLER, Schenectady, N. Y. Filed May 12, 1914. Serial No. 837,987. (Cl. 105—226.)



1. In a locomotive engine, the combination of a main frame, driving wheels carrying a portion of the weight thereon, a lateral motion truck supporting one end thereof, and automatically operable means interposed between the main frame and truck frame, for changing the resistance to lateral motion of said truck in forward and in backward motion, respectively, and thereby enabling it to effectively operate as a leading truck in one direction of movement of the locomotive and as a trailing truck in the opposite direction of movement.

2. In a locomotive engine, the combination of a main frame, driving wheels carrying a portion of the weight thereon, a lateral motion truck supporting one end thereof, and automatically operable means interposed between the main frame and truck frame for imparting a determined resistance to lateral motion of the truck when acting as a leading truck in the forward movement of the locomotive and a lesser resistance when acting as a trailing truck in the rearward movement of the locomotive.

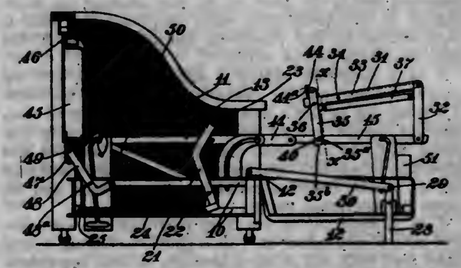
3. In a locomotive engine, the combination of a main frame, driving wheels carrying a portion of the weight thereon, two lateral motion trucks, each supporting one end thereof, and automatically operable means interposed between the main frame and each of the truck frames, for changing the resistance to lateral motion of said trucks in forward and in backward motion, respectively, and thereby enabling each of said trucks to effectively operate as a leading truck in one direction of movement of the locomotive and as a trailing truck in the opposite direction of movement.

4. In a locomotive engine, the combination of a main frame, driving wheels carrying a portion of the weight thereon, a lateral motion truck supporting one end thereof, a truck guiding member fixed to the main frame, and adapted to engage the truck with a predetermined degree of longitudinally slip or movement of the truck, relatively to the main frame, and automatically operable means, interposed between the truck guiding member and the truck frame, for changing the resistance to lateral motion of the truck in forward and in backward motion, respectively, and thereby enabling it to effectively operate as a leading truck in one direction of movement of the locomotive and as a trailing truck in the opposite direction of movement.

5. In a locomotive engine, the combination of a main frame, driving wheels carrying a portion of the weight thereon, a lateral motion truck supporting one end thereof, a guiding member fixed to the main frame and adapted to engage the truck with the capacity of relative longitudinal movement, and automatically operable means mounted on the truck and actuated by rail resistance to the truck wheels to impart a predetermined degree of longitudinal movement to the truck, relatively to the main frame, and change the resistance of the truck to lateral movement, relatively to said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,111,457. SOFA OR DAVENPORT BED. ULYSSES S. HENDERSON, Columbus, Ohio, assignor to The E. M. Hulse Company, Columbus, Ohio, a Corporation of Ohio. Filed Apr. 8, 1914. Serial No. 830,559. (Cl. 5—51.)



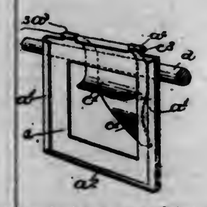
1. In a folding bed, the combination with folding bed sections, the outermost of which is provided with a pair of latching arms adapted to engage the contiguous bed section, a rock shaft having cranks to engage said latching arms, and a spring operating on the rock shaft to hold the latching arms in latching position.

2. In a folding bed, the combination with folding bed sections, the outermost of which is provided with a pair of latching arms adapted to engage the contiguous bed sections, a rock shaft having cranks to engage said latch-

ing arms, and a spring operating on the rock shaft to hold the latching arms in latching position, said rock shaft also having a thumb piece for operating the same to cause the release of said latching arms.

3. In a folding bed having an inwardly folding seat, the combination of a swinging back, a slotted extension thereon, a lever engaging at one end said slotted extension, and means on the seat acting directly on the other end of said lever for throwing the lower portion of the back forward, said means also adapted to lock said lever and the back in a position to which it is thrown forward.

1,111,458. CARD OR PICTURE SUPPORT. FRANCIS HIGHT, Winchester, Mass., assignor to Perry Mason Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 5, 1912. Serial No. 681,719. (Cl. 40—148.)



An article of manufacture comprising a card frame having means for detachably holding a card by the edges, a prop member hinged to said frame, and a clamping member carried by said prop member, said two members being adapted to coöperate to clamp an interposed support, said frame having an opening adapted to receive one of said members when no card is attached, to minimize the bulk of the article for storage, said one of said members being adapted to bear against the back of an attached card when said prop member is in propping position.

1,111,459. PROJECTILE. FRANK O. HOAGLAND, Bridgeport, Conn. Filed Jan. 3, 1914. Serial No. 810,101. (Cl. 102—28.)

1. In a projectile having a soft metal core with an elongated point portion, the combination with the core, of a point cap having a thin metal wall with one or more openings therein, projections extending outwardly from the core and filling said openings, and an anchorage device integrally connected with the metal wall contiguous to the openings and extending inwardly therefrom and immerged within the metal of the core whereby the interlocking of the projections with the point-cap wall is supplemental to and reinforces the interlocking of the same by the anchorage device.

2. In a projectile having a soft metal core with an elongated point portion, the combination with the core, of a point cap having a thin metal wall with one or more openings therein, and an anchorage device integrally connected with the metal wall contiguous to an opening and extending inwardly therefrom and embedded edgewise thereof within the core metal which surrounds and incloses the anchorage device.

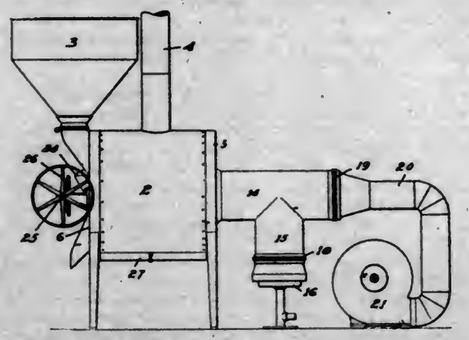
3. In a projectile of the class described, the combination with a soft metal core, of a point-cap having a thin metal wall with one or more openings therein, cap-retaining projections extending outwardly from the core and filling the said openings, and an anchorage device contiguous to one side of an opening and extending inwardly therefrom and immerged within the metal of the core, whereby the interlocking of the projections with the point-cap is supplemental to and reinforces the interlocking of the same by the anchorage device.

4. In a projectile, in combination, a soft metal core, a point-cap having a thin metal wall with one or more openings therein, projections extending outwardly from the core and filling the openings, and an anchorage device extending inwardly from the metal wall and contiguous to the forward side of an opening, and immerged edgewise thereof into the core metal, substantially as described.

5. In a projectile having a soft metal core with an elongated point portion, the combination with the core, of a point-cap having a metal wall with one or more openings therein and having one or more anchorage devices each projecting inwardly from the point cap wall and immerged in the core metal and located adjacent to the one edge of an opening.

[Claims 6 to 11 not printed in the Gazette.]

1,111,460. ROASTER. RUSSELL HOLMAN, Minneapolis, Minn. Filed Jan. 3, 1913. Serial No. 739,970. (Cl. 34—5.)



1. A coffee roaster comprising a stationary casing having an inlet opening and a hot air pipe communicating therewith, and a vent opening for the discharge of the heated air, said casing also having a filling opening and a hopper communicating therewith and discharge opening in its lower walls and a door therefor, a drum mounted to revolve within said casing and having open ends, the opening in one end being opposite and adjacent said hot air inlet opening, the opening in the other end of said drum being positioned to receive the coffee from said hopper and also to allow the discharge of the roasted coffee from said drum when said door is opened, said drum having means for agitating the coffee therein and provided with perforations in its walls through which the air may circulate, means for supplying hot air to said pipe and drum, and means for forcing cool air through said pipe into said drum when the roasting operation is completed.

2. A coffee roaster comprising a casing having an inlet opening and a hot air pipe communicating therewith and a vent for the discharge of the heated air, said casing also having a filling opening and a hopper communicating therewith and a discharge opening in its lower walls and a door therefor, a drum mounted to revolve within said casing and having open ends, the opening in one end being opposite and adjacent said hot air inlet opening, the opening in the other end of said drum being positioned to receive the coffee from said hopper and also to allow the discharge of the roasted coffee from said drum when said door is opened, said drum having perforations in its walls through which the air may circulate, and means for supplying heated air to said pipe and drum.

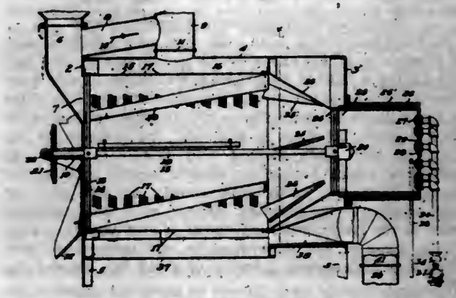
3. A roaster comprising a casing having a hot air intake and an exhaust opening and means for supplying hot air to said intake, a cylinder mounted to revolve within said casing and spaced from the walls thereof and having an opening to receive the heated air and also having perforations in its walls through which the heated air may circulate within said cylinder and within the space between said cylinder and said casing, the inner surface of said cylinder being unobstructed to allow the material therein to slide on said surface as said cylinder revolves, substantially as described.

4. A coffee roaster comprising a casing having a hot air inlet opening and a vent opening, said casing also having a filling opening, a drum mounted to revolve within said casing and spaced from the walls thereof and having perforations leading from the space within said drum to the space between said drum and casing, said drum having an opening in one end communicating with said hot air intake opening and also having an opening to receive the coffee from said filling opening, means for agitating the coffee within said drum during its revolution, and means for supplying heated air to the intake opening of said casing and to said drum.

5. A roaster comprising a casing having a hot air inlet opening in one end thereof and a vent opening in its upper walls and also provided with a filling opening, a drum mounted to revolve within said casing and spaced from the walls thereof and having perforations leading from the space within said drum to the space between said drum and casing, said drum having an opening in one end to register with the inlet opening in said casing, a hot air trunk for supplying heated air to said openings, said drum also having an opening to register with the filling opening in said casing, said casing also having a discharge opening arranged to communicate with said drum.

[Claims 6 and 7 not printed in the Gazette.]

1,111,461. ROASTER. RUSSELL HOLMAN, Minneapolis, Minn. Filed Apr. 28, 1913. Serial No. 764,095. (Cl. 34—5.)



1. A roaster comprising a casing having an exhaust or vent opening, a cylinder mounted to revolve within said casing and having perforations in its walls and spaced from the walls of said casing and also provided with a filling opening through which the material to be roasted may be delivered, said cylinder also having an air intake opening, a drum communicating with said opening and having an air intake opening, means for heating the air in said drum, and means for creating a suction through said cylinder and increasing the circulation of hot air therethrough.

2. A roaster comprising a casing having an exhaust or vent opening, a cylinder mounted to revolve within said casing and having a filling opening and an open end, a drum communicating with the open end of said cylinder and having an air intake, a series of burners mounted to heat the air in said drum, and a series of suction blades mounted to revolve with said cylinder and create a suction of hot air through the open end of said cylinder.

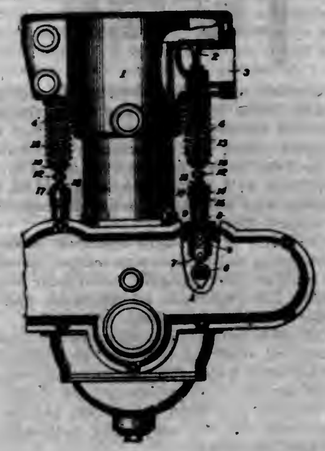
3. A roaster comprising a casing having an exhaust or vent opening, a cylinder having perforations in its walls and provided with an intake opening and mounted to revolve within said casing and having one end in the form of a truncated cone, a drum communicating with the open end of said truncated cone and having an air intake and burners for heating the air within said drum, and a series of suction blades mounted on the walls of said truncated cone and operating to increase the circulation of hot air through the open end of said cylinder and through the material within said cylinder.

4. A roaster comprising a casing having an exhaust or vent opening, a cylinder mounted to revolve within said casing and spaced from the walls thereof and having a filling opening and perforations in its walls and also having an open end, a drum communicating with said open end and having an air intake and burners for heating the air within said drums, the heated air from said drum entering said cylinder and passing through the perforations therein and circulating around said cylinder and through the material to be roasted, and a cold air trunk mounted to draw cold air into the space between sad cylinder and said casing.

5. A roaster comprising heads mounted in parallel relation and spaced apart and a jacket secured to said heads and forming a stationary casing, the wall of said casing having a vent opening therein, a cylinder mounted to revolve wthin said casing and spaced from the walls thereof and forming an annular passage, said casing having perforations in its walls, and an open end, a drum mounted in one of said casing heads and communicating with the open end of said cylinder and having an air intake opening, a series of burners mounted adjacent to said drum, the air entering said drum being heated and means for sucking the heated air into the open end of said cylinder and through and around the material therein.

[Claims 6 to 8 not prined in the Gazette.]

1,111,462. VALVE MECHANISM FOR HYDROCARBON-ENGINES. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 26, 1907. Serial No. 364,723. (Cl. 121—97.)



1. In a hydrocarbon engine, the combination of a valve having a stem connected therewith, a member adapted to engage the outer end of said stem, a cam adapted to reciprocate said member, and a spring adapted to hold said member against the end of said stem.

2. In a hydrocarbon engine, the combination of a valve having a stem connected therewith, a member of adjustable length adapted to engage the outer end of said stem, a cam adapted to reciprocate said member, and a spring adapted to hold said member in engagement with said stem.

3. In a hydrocarbon engine, the combination of a valve having a stem connected therewith, a member arranged in axial alinement with said stem and having a screw adjustably connected therewith and adapted to engage the outer end of said stem, a cam for reciprocating said member, and a spring adapted to hold said screw in engagement with said stem.

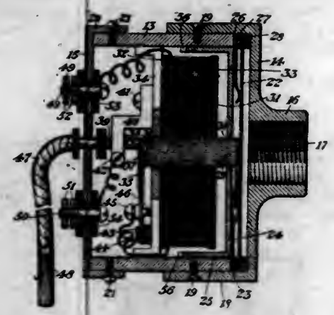
4. In a hydrocarbon engine, the combination with a valve, a cam, a roller arranged in the path of the cam, means for moving the valve in one direction as the roller is engaged by the cam, and a spring for moving the valve in the opposite direction, of means for holding the roller

out of contact with the cam at all times except when engaged by the rise thereon.

5. In a hydrocarbon engine, the combination with a valve, a cam, a roller arranged in the path of the cam and adapted to operate the valve, connections between the valve and the roller constructed and arranged so that the movement of the roller toward the cam is limited by the seating of the valve and the roller is normally held out of contact with the cam.

[Claims 6 to 12 not printed in the Gazette.]

1,111,463. HORN AND SIMILAR INSTRUMENT. MILLER REESE HUTCHISON, Bronxville, N. Y., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Sept. 15, 1905. Serial No. 278,562. (Cl. 177—7.)



1. In a device of the class described, a casing having a substantially plane front wall and a diaphragm substantially parallel therewith and spaced therefrom a distance slightly greater than that of maximum amplitude of vibration of the horn, in combination with means for vibrating said diaphragm at a definite frequency and an adjustable wall forming with said case a resonant chamber adjusted to said definite frequency.

2. In a device of the class described, a substantially dust tight casing and a diaphragm secured therein, in combination with an electromagnet, interrupter and resonant wall behind the diaphragm, all separately and independently adjustable, for the purpose described.

3. An acoustic instrument, comprising a horn diaphragm and means for vibrating the same at a definite rate in combination with walls, forming approximately equal inclosed air spaces or chambers, at the front and back thereof, the front wall being substantially parallel with said diaphragm and the rear wall being adjustable with respect to said diaphragm.

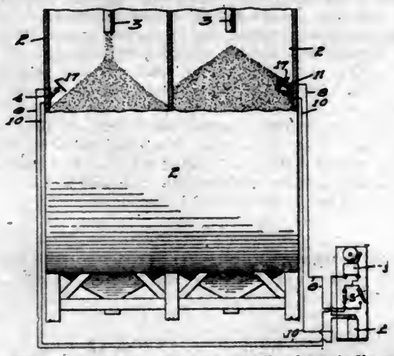
4. An acoustic instrument, comprising a horn diaphragm and means for vibrating the same at a definite rate in combination with walls forming air spaces or chambers at the front and back thereof, said spaces being balanced for maximum amplified vibration of the diaphragm when vibrating at said rate.

5. An acoustic instrument, comprising a horn diaphragm and means for vibrating the same, in combination with walls forming air chambers or spaces at the front and back thereof, and means for adjusting said spaces to produce maximum amplification for vibrations of a selected definite rate.

[Claims 6 to 22 not printed in the Gazette.]

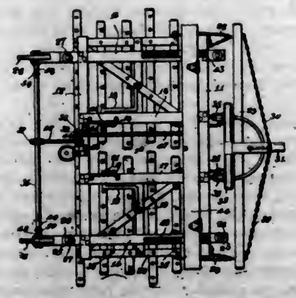
1,111,464. INDICATING DEVICE FOR BINS. THOMAS E. IBBERSON, Minneapolis, Minn. Filed Apr. 28, 1913. Serial No. 764,141. (Cl. 177—311.)

1. The combination, with a bin wall, of a bracket secured thereon, a guide mounted on said bracket and inclined upwardly and inwardly therefrom, said guide having bearings near each end thereof, contact springs mounted in said bracket and normally separated, an electric circuit connected with said springs and having a signaling device, a spindle mounted to slide in the bearings in said guide and having a limited longitudinal movement toward and from said springs, but held at each end by said guides against lateral movement, a plate mounted on said spindle and lying in a plane at right angles substantially to the direction of flow of the grain toward the wall of said bin, the pressure of the grain on said plate moving said spindle inwardly to force said contact springs together and close said circuit when a predetermined quantity of grain has entered said bin.



2. The combination, with a bin wall, of a spindle mounted to move upwardly and inwardly in bearings on said wall and having a limited longitudinal movement in said bearings, a plate mounted on said spindle and lying in a plane at right angles substantially to the direction of flow of the grain toward the wall of said bin, the pressure of the grain on said plate moving said spindle inwardly, an indicating device having an electric circuit and contact devices connected with said circuit in the path of said spindle to be actuated thereby at a predetermined point in the longitudinal movement of said spindle, whereby the operator will be warned by said indicating device when a predetermined quantity of grain has entered the bin.

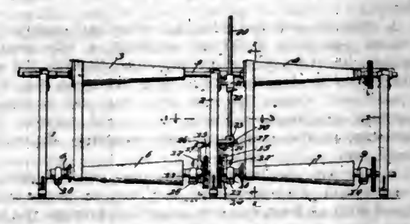
1,111,465. AGRICULTURAL MACHINE. LESLIE C. IRION, Congerville, Ill. Filed Jan. 8, 1912. Serial No. 670,031. (Cl. 111—18.)



1. A seeding machine capable of being drawn sidewise and endwise and including an elongated frame supported by casters, a seeding mechanism, a shaft detachably connected with the shafts of the casters for holding the casters against movement in the frame, driving connections between the detachable shaft and seeding mechanism, and draft attaching means on one side and one end of the frame, whereby upon removal of said shaft the casters will be permitted to swing in the frame so that the machine can be drawn sidewise or endwise.

2. A seeding machine capable of being drawn sidewise and endwise and including an elongated frame supported by casters, a seeding mechanism on the frame, the shafts of the casters having sockets in their inner ends, and a shaft detachably engaged in the said socketed ends of the caster shafts to hold the casters against movement in the frame, whereby upon removal of said shaft the casters will swing on their pintles and permit said machine to be drawn from one side or one end, and driving connections between the detachable shaft and seeding mechanism.

1,111,466. EQUALIZING DEVICE FOR SPEEDERS. JOHN JACKSON, Pawtucket, R. I., assignor to H. & B. American Machine Company, Pawtucket, R. I., a Corporation of Maine. Filed Dec. 18, 1912. Serial No. 737,483. (Cl. 64—52.)



1. In combination with the lower cones of a speeder, means to movably support each cone, equalizing means connecting the cones whereby downward movement of one cone will effect corresponding upward movement of the other cone, and means in positive connection with each cone for driving the cones in unison from their confronting ends.

2. In combination with the lower cones of a speeder and the driving belts thereof, means to support each cone so that each may be moved independent of the other, means to actuate the cones in unison, and means to raise the supporting means and thereby the cones out of engagement with the belts while the actuating means remains operative.

3. In combination with the lower cones of a speeder, a shaft for each cone, means in connection with the shafts for rotating the cones in unison, arms rigidly mounted on the shafts and supporting the lower cones, and means to actuate the shafts so as to raise or lower the cones.

4. In combination with the lower cones of a speeder, a shaft for each cone, arms rigidly mounted on the shafts and supporting the lower cones, a substantially vertical arm rigidly connected to each shaft, a link connecting said arms, and an actuating member connected to said link and to one of the arms.

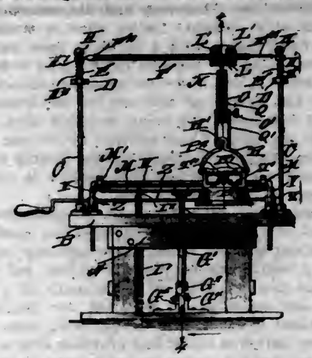
5. In combination with the lower cones of a speeder, a shaft for each cone, arms rigidly mounted on the shafts and supporting the lower cones, a substantially vertical arm rigidly connected to each shaft, a link connecting said arms, a sliding member connected to the link and to one of the arms for actuating the shafts in unison, a pin on said member, and means for actuating the pin to thereby slide the member.

[Claims 6 to 12 not printed in the Gazette.]

1,111,467. IRONING APPARATUS. MEYER M. KANE, Chicago, Ill. Filed Jan. 6, 1914. Serial No. 810,632. (Cl. 68—9.)

1. An ironing machine comprising a bench with standards thereon, a horizontally disposed, spring-pressed rod supported upon said standards, a carriage with wheels movable upon said rod, an iron hanging yieldingly from said carriage, a rocking member, a track upon which the same is mounted, connections between said iron and rocking member, and means for rocking said member, as set forth.

2. An ironing frame comprising standards, a horizontally disposed, spring-pressed rod supported thereon, a carriage movable upon said rod, a yielding hanger suspended from said carriage, an iron secured to the hanger, a vertically adjustable track, a carriage movable upon the track and said iron, and means for tilting said connection to press the iron against an article to be ironed, as set forth.



3. An ironing frame comprising standards, a horizontally disposed, spring-pressed rod supported thereon, a carriage movable upon said rod, a yielding hanger suspended from said carriage, an iron secured to the hanger, a vertically adjustable track, a rocking bail-shaped member mounted upon said track, means for rocking said member, a carriage movable upon the track, means secured to the carriage and engaging the iron and said bail-shaped member and serving to apply pressure to the iron as said bail-shaped member is rocked in one direction, as set forth.

4. An ironing frame comprising standards, a horizontally disposed, spring-pressed rod supported thereon, a carriage movable upon said rod, a yielding hanger suspended from said carriage, an iron secured to the hanger, a vertically adjustable track, a rocking bail-shaped member mounted upon said track, means for rocking said member, a carriage movable upon the track, a pivotal bar connected at one end of said iron and adjustably connected to the carriage upon said track, and means connected to the carriage and adapted to engage under said bail-shaped member, as set forth.

5. An ironing frame comprising standards, a horizontally disposed, spring-pressed rod supported thereon, a carriage movable upon said rod, a yielding hanger suspended from said carriage, an iron secured to the hanger, a horizontally disposed track having vertical portions, sockets in which the latter are mounted, rack teeth upon said vertical portions of the track, a rotatable shaft, pinion wheels fixed thereto and engaging the teeth of said shaft, means for holding the track in an adjusted position, a bail-shaped member pivotally mounted upon the track, a carriage upon the latter, a bar pivotally connected at one end to the iron and adjustably mounted upon the carriage on said track, and means actuated by the bail-shaped member and coöperating with the bar which is pivoted to the iron for applying pressure to the latter, as set forth.

[Claim 6 not printed in the Gazette.]

1,111,468. AUTOMATIC SECTION-INSULATOR. WILLARD H. KEMPTON, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed July 13, 1910. Serial No. 571,687. (Cl. 191—39.)

1. In a device for connecting and disconnecting adjacent sections of a sectional trolley wire or similar conductor, the combination with a normally open switch

adapted to be closed by a car passing in one direction, of means for locking said switch closed, said means being operable by a car passing in the opposite direction to permit the switch to resume its normally open position.

2. In a device for connecting and disconnecting adjacent sections of a sectional trolley wire or similar conductor, the combination with a normally open switch depending from one of said sections and adapted to be closed by a car passing in one direction, of means automatically released by the closing of said switch for locking said switch, said locking means being provided with a part depending in the path of and operable by the car returning in the opposite direction whereby the locking means is made inoperative and the switch permitted to return to open position.

3. In a device for connecting and disconnecting adjacent sections of a sectional trolley wire, the combination with a terminal member in electric connection with one section, of a switch pivoted thereon at one end to normally depend in open position in the path of a trolley moving in one direction, of a detent for locking said switch in closed position, said detent being made operative when the switch is closed and provided with a trigger disposed to be engaged by the trolley moving in the opposite direction to release the switch.

4. In a device for connecting and disconnecting adjacent sections of a sectional trolley, the combination with a terminal for one section, of a switch pivoted thereon to normally depend in the path of a trolley moving in one direction, a detent for said switch eccentrically pivoted to said terminal to drop into locking position under its own weight when the switch is closed, said detent being provided with a trigger in the path of said trolley on its return.

5. In a device for connecting and disconnecting adjacent sections of a sectional trolley wire, the combination with a terminal for one of said sections, of a switch pivoted thereon at one end to normally depend under its own weight in open position in the path of a trolley moving in one direction, means for locking the switch in closed position, a terminal connected to an adjacent section of the trolley line, spring contacts carried by the last mentioned terminal for coöperating with the free end of said switch, and means for forcing said switch into open position when it is released.

[Claims 6 to 10 not printed in the Gazette.]

1,111,469. CLIP FOR FOUNTAIN-PENS. GEORGE M. KRAKER, Kansas City, Mo., assignor to The Kraker Pen Co., Kansas City, Mo., a Corporation of Missouri. Filed June 13, 1914. Serial No. 844,922. (Cl. 24—11.)

1. A fountain pen and clip combination, comprising a hollow pen cap equipped near its closed end with a lateral aperture, a clip member having a main portion disposed upon the exterior of said cap and equipped with at least one arm extending through the said aperture into the interior of the cap; and a plug of an unyielding set plastic material completely embedding the said arm and substantially filling the closed end portion of the said cap.

2. A fountain pen and clip comprising in combination, a hollow pen cap equipped with a lateral aperture, a clip member having a main portion disposed upon the exterior of the cap and equipped with a pair of arms extending through said aperture into the interior of the cap, projections at the outer ends of said arms angularly disposed relatively thereto and extending in respectively opposite directions, and anchoring means filling the space between the said arms and filling the spaces between the said oppositely directed projections and the contiguous walls of the cap adjacent to said aperture.

3. A fountain pen and clip comprising in combination, a hollow pen cap equipped with a lateral aperture, a clip member having a main portion disposed upon the exterior of the cap and equipped with a pair of arms extending through said aperture into the interior of said cap, projections on the outer ends of said arms angularly disposed relatively thereto and extending in respectively opposite directions, and anchoring means filling the space between the main portions of said arms and filling the space between said oppositely directed projections and the contiguous portions of the wall of the cap adjacent to the said aperture, the latter of less width than the distance between the outer ends of said projections to permit the same to be contracted to allow the insertion of the said oppositely directed projections thereof through said aperture.

4. A fountain pen including an outer cap equipped at its closed end with a lateral aperture, a clip member equipped with at least one arm extending through the said aperture into the interior of the said outer cap, an inner cap positioned within the said outer cap, and a plug of unyielding set plastic material interposed between the closed ends of the said caps and completely embedding the said arm.

5. A fountain pen including an outer cap equipped at its closed end with a lateral aperture, a clip member equipped with at least one arm extending through the said aperture into the interior of the said outer cap, an inner cap positioned within the said outer cap, and a plug of unyielding material interposed between the closed ends of the said caps and housing the said arm, the said plug consisting of a set plastic material introduced into its said position while plastic, there being a perforation in the closed end of said outer cap into which said plug projects.

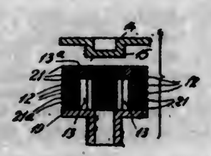
[Claims 6 to 8 not printed in the Gazette.]

1,111,470. STRAINER. ARTHUR E. KRAUSE, Jersey City, N. J. Filed Apr. 29, 1913. Serial No. 764,375. (Cl. 210—16.)

1. A strainer such as described, comprising a hollow body having a flow connection and having inwardly projecting portions and perforations, between such inwardly projecting portions, extending from the outer surface of said body inward, the said inward projections being screw threaded internally and an end piece having a correspondingly screw threaded portion engaging the threads of said projections, said end piece closing the end of said body.

2. A strainer such as described, comprising a hollow body having a flow connection and having integral inwardly projecting portions and perforations between said inwardly projecting portions extending from the outer surface of said body inward, and a detachable end piece screw threaded to the said hollow body, and closing the end of the same.

1,111,471. STRAINER. ARTHUR E. KRAUSE, Jersey City, N. J. Filed Feb. 19, 1914. Serial No. 819,788. (Cl. 210—16.)



1. A strainer such as described comprising a base provided with integral projecting ribs, a plurality of rings surounding said ribs and centered thereby but separate therefrom and forming an annular wall, straining openings being provided in such wall, and an end piece detachably secured to such base and holding said rings in place, said base, end piece, and rings inclosing a hollow space to which a flow connection is provided in the structure.

2. A strainer such as described comprising a base provided with integral projecting ribs, a plurality of rings surrounding said ribs and centered thereby but separate therefrom and forming an annular wall, straining openings being provided in such wall, and an end piece screw connected to said ribs and holding said rings in place, said base, end piece and rings inclosing a hollow space to which a flow connection is provided in the structure.

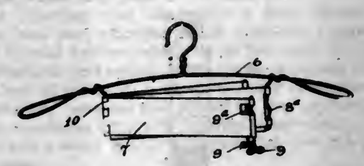
3. A strainer such as described comprising a base provided with integral projecting ribs and with a ring connecting said ribs near the ends thereof, a plurality of rings surrounding said ribs and forming an annular wall, straining openings being provided in such wall, and an end piece screw connected to the ring connecting said ribs and holding said wall-rings in place, said base, end piece and wall rings inclosing a hollow space to which a flow connection is provided in the structure.

4. A strainer such as described comprising a base provided with integral projecting ribs, a plurality of rings surrounding said ribs and centered thereby but separate therefrom and forming an annular wall and spaced apart one from the other, whereby straining openings are provided in such walls, and an end piece detachably secured to such base and holding said rings in place, said base, end piece and rings inclosing a hollow space to which a flow connection is provided in the structure.

5. A strainer such as described comprising a base provided with integral projecting ribs, a plurality of rings surrounding said ribs and forming an annular wall and provided with bosses spacing said rings apart one from the other, whereby straining openings are provided in such wall, and an end piece detachably secured to such base and holding said rings in place, said base, end piece and rings inclosing a hollow space to which a flow connection is provided in the structure.

[Claim 6 not printed in the Gazette.]

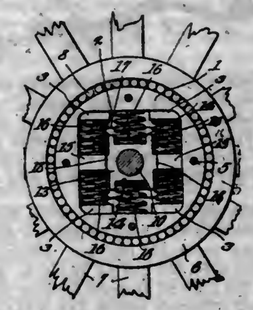
1,111,472. COMBINATION GARMENT-HANGER. ANTONI KRUSZEWSKI, Cleveland, Ohio. Filed Jan. 31, 1914. Serial No. 815,752. (Cl. 211—13.)



A garment hanger formed of a continuous wire, parts of which are bent to form two depending rods and a connecting cross rod, a plate fastened at its ends to the depending rods and attached along one edge to the cross rod, a leaf hinged at one end to one of the depending rods and arranged to swing toward and from the plate, and a pin rotatably mounted on the free end of the leaf and having a catch engageable with the other rod by turning said pin.

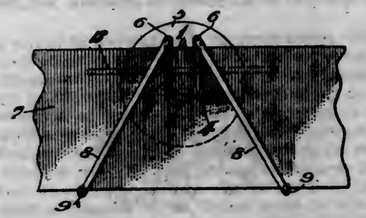
1,111,473. SPRING-HUB. EDWARD JAMES LAHAN, Quincy, Ill. Filed July 22, 1913. Serial No. 780,596. (Cl. 21—187.)

A vehicle wheel including a circular body having a rectangular opening, disks of larger diameter than the body attached to the sides thereof, a spoke annulus mounted for rotation upon the body between the disks, the disks having vertical spindle-receiving slots parallel with the sides of the said opening and midway therebetween, an elongated bearing block disposed between and parallel with the upper and lower ends of the said opening and having its ends slidably engaging the sides thereof, the block having a central spindle-receiving aperture coöperating with the slots, the sides of the central portion of the block being spaced from the disks and the end portions of the block having projections slidably engaging the disks and forming shoulders, vertical plates disposed snugly between the sides of the central portion of the block and the disks and



having their edges engaging the said shoulders, the plates having spindle-receiving apertures alining with the aforesaid aperture, and springs disposed between the block and the ends of the said opening.

1,111,474. ADJUSTABLE SHAFT-HANGER. PERCY E. LENFESTEY, Philadelphia, Pa. Filed July 11, 1913. Serial No. 778,434. (Cl. 64—14.)



1. An adjustable shaft hanger embodying a stirrup on which a shaft may have its bearing and which is adapted to be suspended movably from a rail member, and laterally-resilient means which are pendant from and connected with said stirrup and adapted to engage with said rail and lock the device automatically in adjusted position thereon.

2. An adjustable shaft hanger embodying a stirrup on which a shaft may have its bearing and which is adapted to be suspended movably from a rail member, and laterally-resilient legs continuous of said stirrup adapted to be interlocked with said rail and sustain the stirrup in adjusted position.

3. An adjustable shaft hanger embodying a stirrup which may be suspended movably from a rail member, laterally-resilient legs pendant from said stirrup, and means on said legs for connecting the same with said rail opposite to said stirrup.

4. An adjustable shaft hanger of the character stated composed of a vertically extending stirrup member, vertically extending leg members, the latter being pendant from the upper portions of the former, and resilient in their nature, means for connecting said leg member and said stirrup member, the same being adapted to form the means of suspending the device from a rail member, and means on said legs for engaging the same with said rail member.

5. A stirrup on which a shaft may be mounted adapted to be sustained on a rail member, divergent legs of resilient material pendant from the upper portions of said stirrup, and grips on said legs, said grips being adapted to be held removably on said rail member.

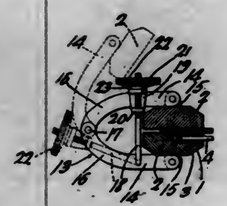
[Claims 6 to 8 not printed in the Gazette.]

1,111,475. CHECKREIN-SUPPORT. JOHN LIPPS, Montour, Iowa. Filed Feb. 28, 1914. Serial No. 821,758. (Cl. 54—14.)

1. A check rein support, composed of two members, each of which is provided with a long terminal, and a roller journaled between the terminals, one of the members having a flat apertured end while the other has a buckle formed in the corresponding end, whereby the terminal of a throat strap may engage the buckle to hold the members together.

2. A check rein support composed of two members, each of which is provided with a long terminal, a journaling pin holding the long terminals together, whereby the members may swing with the pin as the axis, and a roller mounted upon the pin and disposed between the terminals and holding such terminals spaced, one of the members being provided with a flat apertured end while the other member is provided with a buckle for disposition adjacent the apertured end of the other member, and whereby the terminal of a throat strap may engage the buckle and the under side of the apertured end of the other member to hold the members against swinging movement.

1,111,476. TROUSERS HANGER, PRESS, AND STRETCHER. LUCIEN G. LOCKE, Portsmouth, Ohio. Filed Apr. 4, 1914. Serial No. 829,627. (Cl. 100—57.)



1. A garment press comprising a pair of clamping bars, and clamps for the said bars, each clamp embodying a pair of pivoted levers connected to the remote sides of the bars, and a latch pivoted to one lever intermediate its ends and adapted to swing into and out of engagement with the other lever.

2. A garment press comprising a pair of clamping bars, and clamps for the said bars, each clamp embodying a pair of pivoted levers connected to the remote sides of the bars, a latch pivoted to one lever intermediate the ends thereof and adapted to swing into and out of engagement with the other lever, and an adjustable member carried by the latch and engageable with the last mentioned lever for swinging the levers toward one another.

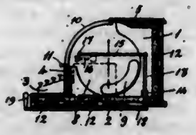
3. A garment press comprising a pair of clamping bars, and clamps for the said bars, each clamp embodying a pair of pivoted levers connected to the remote sides of the bars, a latch pivoted to one lever intermediate its ends, a saddle slidable upon the latch and engageable with the other lever, and a nut threaded upon the latch and coöperable with the saddle.

4. A garment press comprising a pair of clamping bars, and clamps for the said bars, each clamp embodying a pair of pivoted levers connected to the remote sides of the bars, a U-shaped latch pivoted to one lever, a saddle slidably engaging the arms of the latch and engageable over the other lever, and means for adjusting the saddle along the latch.

5. A garment press comprising a pair of clamping bars, and clamps for the said bars, each clamp embodying a pair of pivoted levers connected to the remote sides of the bars, a U-shaped latch having its intermediate portion pivoted through one of the levers, a saddle having angular apertured ears slidable upon the arms of the latch, the saddle being adapted to straddle the other lever, and a nut threaded upon one arm of the latch and coöperating with the saddle.

[Claim 6 not printed in the Gazette.]

1,111,477. SOUND-PROOF CASE FOR TYPE-WRITING MACHINES. VINCENZO LOMBARDI CERRI, Avezzano, Italy. Filed Jan. 27, 1914. Serial No. 814,797. (Cl. 197—186.)



1. In a sound proof case for typewriting machines, the combination of, a box wadded with sound deadening material and adapted to inclose the machine except the keyboard portion thereof; means for rendering the machine accessible and for removing it and replacing it; and means manipulated from the outside of the case for returning the carriage of the machine.

2. In a sound proof case for typewriting machines, the combination of, a box; and a shutter therefor comprising two oppositely disposed counter weighted disks rotatably mounted in the side walls of the case, and a cylindrically bent glass plate fastened to said disks.

3. In a sound proof case for typewriting machines, the combination of, a box; a vertical shaft passing to the outside of the box; a forked lever on said shaft and adapted to engage the pawl of the typewriting machine; and a handle mounted on the projecting portion of said shaft.

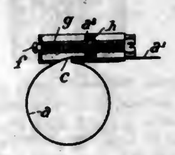
1,111,478. OIL-WELL PACKER. PATRICK H. MACK, Bradford, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 7, 1914. Serial No. 823,175. (Cl. 166—12.)

1. In a well packer, the combination of a body member, an extension member suspended from and telescopingly connected with the body member, an annular packing, an annular abutment for the packing, anchor devices for supporting the abutment from the walls of a well, and a spring interposed between the anchor devices and the telescoping extension member.

2. In a well packer, the combination of a body member, an extension member suspended from and telescopingly connected with the body member, an annular packing, an annular abutment for the packing, anchor devices for supporting the abutment from the walls of a well, semi-elliptic springs connected with the anchor devices for frictionally engaging the walls of a well, and a coiled spring interposed between the anchor devices and the telescoping extension member.

3. In a well packer, the combination of a body member, an extension member telescopingly connected with the body member, an annular packing, an annular abutment for the packing, an anchor for supporting the abutment from the walls of the well, and a coiled spring on the body member, said spring interposed between the telescoping extension member and the packing.

1,111,479. UNIVERSAL CLAMPING-RING. JEAN PAUL MARIE MALLEVILLE, Paris, France. Filed May 31, 1913. Serial No. 771,065. (Cl. 137—28.)



1. A clamping ring comprising a band having a reversely bent end, adjusting means including a frame engaging said end, and means on the frame connected with the other end of the band to move the latter along the first mentioned end in the direction in which the later extends.

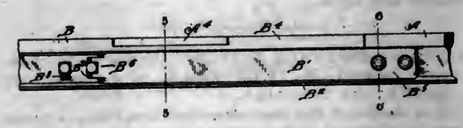
2. A clamping ring comprising a band having a reversely bent end and the other end overlapping said bent end, adjusting means including a frame having a bearing against said band at the angle of the bent end aforesaid, and means on the frame connected with the other end of the band to move the latter in the direction of reverse bending of the first-mentioned end.

3. A clamping ring comprising a band having a reversely bent end, adjusting means including a frame engaging said end, and means on the frame connected with the other end of the band to move the latter along the first mentioned end, said frame being provided with a slot through which both ends of the band pass.

4. A clamping ring comprising a band having a reversely bent end, adjusting means including a frame having a bearing against said band at the angle of the bent end aforesaid, and means on the frame connected with the other end of the band to move the latter longitudinally of the reversely bent end and toward its free extremity, said means consisting of a nut movable longitudinally of the frame and a screw operatively connected with the nut and the frame.

5. A clamping ring comprising a band having a reversely bent end portion, a frame provided with a slot through which said end portion of the band passes and having a bearing against the angle of the band formed by said bent end, a nut on the frame operatively connected with the band at its other end and movable along the bent end portion first-mentioned, and means on the frame for accomplishing relative movement of the nut and frame as described.

1,111,480. JOINT FOR LONGITUDINAL MEMBERS. BONNIE L. MALLORY, Cleveland, Ohio. Filed Dec. 29, 1911. Serial No. 668,570. (Cl. 239—8.)



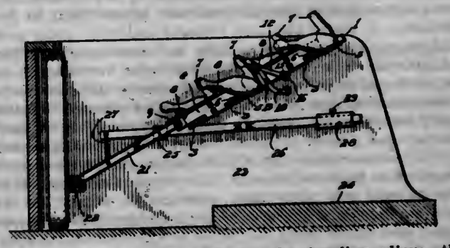
1. In a joint for longitudinal members, the combination with said members, of overlapping web members projecting from the adjacent ends of the longitudinal members, and a top flange section projecting from each of the web members over the other web members, each of the web members and its respective top flange section terminating in a common plane that is disposed at an obtuse angle to the longitudinal axis of the first mentioned members, the ends of the longitudinal members being inclined in a plane parallel to the ends of the web members.

2. In a joint for longitudinal members, the combination with said members, of overlapping web members projecting from the adjacent ends of the longitudinal members, a top flange section projecting from each of the web members over the other web member, each of the web members and its respective top flange section terminating in a common plane that is disposed at an obtuse angle to the longitudinal axis of the first mentioned members, the ends of the longitudinal members being inclined in a plane parallel to the ends of the web members, and a lug which projects from the end of each of the web members, for the purpose specified.

3. In a joint for railway rails, the combination with said rails, each of which is provided with the usual base and wheel flanges and connecting web, of a web member on each rail, said members overlapping and forming, in effect, a continuation of the web of the rails proper, and a wheel flange section on each of the web members which are separated from the rails proper by spaces in which the sections on the opposite rails rest, each of the web members and its respective wheel flange section terminating in a common plane that is disposed at an obtuse angle to the longitudinal axis of the rail, the ends of the rails being inclined transversely in a plane parallel to the ends of the web members, the adjacent ends of the wheel flange sections being inclined at an angle which is substantially the reverse of the angle of inclination of the ends of the rails.

4. In a joint for railway rails, the combination with said rails, each of which is provided with the usual base and wheel flanges and connecting web, of a web member on each rail, said members overlapping and forming, in effect, a continuation of the web of the rails proper, a wheel flange section on each of the web members which are separated from the rails proper by apaces in which the sections on the opposite rails rest, each of the web members and its respective wheel flange section terminating in a common plane that is disposed at an obtuse angle to the longitudinal axis of the rail, the ends of the rails being inclined transversely in a plane parallel to the ends of the web members, the adjacent ends of the wheel flange sections being inclined at an angle which is substantially the reverse of the angle of inclination of the ends of the rails, and a lug which projects from the end of each of the web members, for the purpose specified.

1,111,481. PIN-SETTING APPARATUS FOR BOWLING-ALLEYS. MARTIN MARTINSON, Kenosha, Wis., assignor of one-half to Bert L. Shaw, Kenosha, Wis. Filed Nov. 14, 1913. Serial No. 800,960. (Cl. 46—54.)



1. In a pin-setting apparatus for bowling alleys, the combination of a carrier upon which the pins are adapted to be arranged in substantially horizontally disposed positions, said carrier being mounted for movement toward and from the alley; a pin-rocking element movably connected with said carrier upon which the pins are adapted

to rest when arranged upon said carrier, movement of said pin-rocking element from its lower terminal of movement relative to said carrier effecting rocking of said pins to upright positions; means for releasably locking said pin-rocking element at its lower terminal of movement, said locking means being adapted to be automatically moved to release said pin-rocking element when said carrier is in its lowered position; and means for actuating said pin-rocking element to rock the pins when said element is released by said locking means, substantially as described.

2. In a pin-setting apparatus for bowling alleys, the combination of a carrier upon which the pins are adapted to be arranged in substantially horizontally disposed positions, said carrier being mounted for movement toward and from the alley; a pin-rocking element movably connected with said carrier upon which the pins are adapted to rest when arranged upon said carrier, movement of said pin-rocking element from its lower terminal of movement relative to said carrier effecting rocking of said pins to upright positions; means for releasably locking said pin-rocking element at its lower terminal of movement, said locking means being adapted to be automatically moved to release said pin-rocking element when said carrier is in its lowered position; and a spring for actuating said pin-rocking element to rock the pins when said element is released by said locking means, substantially as described.

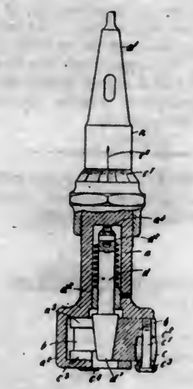
3. In a pin-setting apparatus for bowling-alleys, the combination of a carrier upon which the pins are adapted to be arranged in substantially horizontally disposed positions, said carrier being mounted for movement toward and from the alley; a frame movably connected with said carrier upon which the upper ends of said pins are adapted to rest when arranged upon said carrier, movement of said frame from its lower terminal of movement effecting rocking of said pins to vertical positions; a detent for releasably holding said frame at its lower terminal of movement, said detent being adapted to be automatically tripped to release said frame, when said carrier is in its lowered position; means for actuating said frame to rock the pins when released by said detent; and means for guiding said pins to position upon the alley, when the same are rocked to vertical positions, substantially as described.

4. In a pin-setting apparatus for bowling-alleys, the combination of a carrier upon which the pins are adapted to be arranged in substantially horizontally disposed positions, said carrier being mounted for movement toward and from the alley; a frame movably connected with said carrier upon which the upper ends of said pins are adapted to rest when arranged upon the carrier, movement of said frame from its lower terminal of movement effecting rocking of said pins to vertical position; an oscillatory detent for releasably holding said frame at its lower terminal of movement, one end of said detent being adapted to contact with the upper surface of the alley and be thereby tripped to release said frame, when said carrier is in its lowered position; means for actuating said frame to rock the pins when released by said detent, and means for guiding said pins to position upon the alley when the same are rocked to vertical positions, substantially as described.

5. In a pin-setting apparatus for bowling-alleys, the combination of a carrier upon which pins are adapted to be arranged in substantially horizontally disposed positions, said carrier being mounted for movement toward and from the alley; a frame movably connected with said carrier upon which the upper ends of said pins are adapted to rest when arranged upon said carrier, movement of said frame from its lower terminal of movement effecting rocking of said pins to vertical positions; a detent for releasably holding said frame at its lower terminal of movement, said detent being adapted to be automatically tripped to release said frame when said carrier is in its lowered position; a helical torsional spring for moving said frame, when released to rock the pins to vertical positions; and means for guiding said pins to position upon the alley, when the same are rocked to vertical positions, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,111,482. APPARATUS FOR FINISHING OR POLISHING CYLINDRICAL SURFACES. HENRY ERNEST MASSMANN and WILLIAM RICHARD TINDALL, Bristol, England. Filed June 20, 1914. Serial No. 846,314. (Cl. 90—11.)



1. Apparatus for finishing and polishing internal cylindrical surfaces comprising in combination, a casing or body having an enlarged lower portion, radially movable slides mounted in said enlarged portion, rollers carried by said slides, a longitudinally movable adjusting member having a tapered end in contact with said slides for moving the same, a cross-head carried by said member, resilient means for forcing said adjusting member in one direction, and a rotating means threaded on said casing in contact with said cross-head for moving said adjusting member in an opposite direction.

2. Apparatus for finishing and polishing internal cylindrical surfaces comprising, in combination, a casing or body having an enlarged lower portion, radial slides movably mounted in said portion, a roller and cutter rotatably carried by each slide, a longitudinally movable adjusting member having a tapered end in contact with said slides for moving the same, said adjusting member having a cross-head on its end opposite the tapered portion, resilient means bearing against said cross-head for moving the adjusting member in one direction, a rotating member threaded on said body in contact with said cross-head to move the adjusting member in an opposite direction, and a scale of graduations on said rotating member adapted to coöperate with a fixed point on said body.

3. An apparatus for finishing and polishing internal cylindrical surfaces, comprising in combination a casing or body having an enlarged lower portion, radial slides movably mounted in said portion, a cutter and roller rotatably carried by each slide, a longitudinally movable adjusting member having a tapered end in contact with said slides for moving the same, a cross-head on said adjusting member, a spring within the casing bearing at one end against the cross-head for retracting the adjusting member from the slides, a sleeve within the casing adapted to be longitudinally adjusted therein and bearing against the opposite end of the spring whereby to vary the tension of the spring, and a rotating member threaded for adjustment on said body and adapted for engagement with said cross-head whereby to project the adjusting member against said slides.

1,111,483. TELLTALE BOTTLE. ARTHUR C. MATHEWSON, Lisle, N. Y. Filed Mar. 5, 1914. Serial No. 822,674. (Cl. 215—112.)

1. A device of the class described comprising a receptacle, a quadruple rack positioned therein, means for preventing the removal of said rack, a spider mounted for ratcheting engagement with the teeth of said rack, a hollow float having universal connection with said spider, and a ball weight positioned for free movement within said float, said float being adapted for engagement with said rack upon lateral movement of said float.

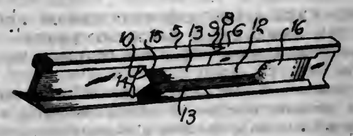
2. A device of the class described comprising a receptacle, a quadruple rack positioned therein, means for preventing the removal of said rack, a spider mounted for ratcheting engagement with the teeth of said rack, a four armed spider spanning said rack, the teeth of said rack having horizontal bottom faces, a hollow float centrally suspended for free movement from said spider, a ball weight within said float, and an annular projecting flange upon the bottom of said float and adapted for engaging the upper faces of the rack teeth.

3. A tell-tale bottle comprising a receptacle, a rack positioned therein, teeth upon said rack having horizontal top and bottom faces, a spider engaging said rack and adapted for ratcheting movement thereagainst in only one direction and having a central opening, a hollow float, a conical neck upon said float extending through said opening and a ball suspending means upon said neck above said spider.

4. A tell-tale bottle comprising a receptacle, a rack positioned therein, teeth upon said rack having horizontal top and bottom faces, a spider engaging said rack and adapted for ratcheting movement thereagainst in only one direction and having a central opening, a hollow float, a conical neck upon said float extending through said opening and a ball suspending means upon said neck above said spider, a ball weight within said float, a projecting annular flange upon the bottom of said float and adapted to engage the top faces of said teeth upon a tilting movement of the bottle.

5. A tell-tale bottle comprising a receptacle, a rack positioned therein, teeth upon said rack having horizontal top and bottom faces, a spider engaging said rack and adapted for ratcheting movement thereagainst in only one direction, a hollow float, a universal ball suspending means between said spider and float, a ball weight within said float, a projecting annular flange upon the bottom of said float and adapted to engage the top faces of said teeth upon a tilting movement of the bottle, a disk within the neck of said bottle and secured to said rack and having side corrugations therein, and a perforated hollow casing positioned above said disk.

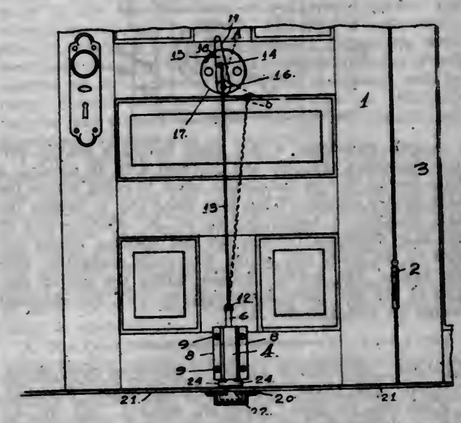
1,111,484. RAIL-JOINT. ROBERT H. MCCARTHY, Madelia, Minn. Filed June 27, 1914. Serial No. 847,727. (Cl. 239—8.)



1. In a rail joint the combination of the rail sections provided upon their abutting ends with interlocking means, each of said rail sections being provided with vertical shoulders upon opposite sides of its web, and keys adapted to be fitted between the head and base portions of the rails and each provided with a reduced obliquely disposed end portion, the opposite ends of each key having lugs formed thereon, the lug on one end of the key being adapted for engagement with a shoulder upon one rail section and the reduced end portion being adapted to be forced inwardly against the side of the other rail web to dispose the lug thereon in line with the corresponding shoulder upon said latter rail.

2. In a rail joint the combination of adjacent rail sections provided with interlocking means upon their abutting ends and each having a thickened web portion producing a vertical shoulder upon each side of the main rail web, the under side of the rail head and the base of the rail upon opposite sides of said thickened web portion being provided with longitudinally extending shoulders inclined in relatively opposite directions, and key bars each having oppositely beveled faces for engagement with the opposed shoulders on one side of the rail webs and provided with a reduced end portion obliquely inclined with respect to the body of the bar, the opposite ends of the key bar having lugs formed thereon, one of which is adapted to engage one of the vertical shoulders on one rail, the reduced end portion of said bar being adapted to be forced inwardly into parallel relation with the rail web to dispose the lug thereon in line with the vertical shoulder of the other rail.

1,111,485. DOOR-STOP. AUGUST W. MELANDER, San Francisco, Cal., assignor to Swan J. Sterner, San Francisco, Cal. Filed June 3, 1912. Serial No. 701,191. (Cl. 16—84.)



In a door stop, the combination with a casing mounted on the interior of the door, a plunger mounted to reciprocate in said casing, arms projecting laterally from the lower end of said plunger, means associated with the upper end of said plunger for operating the same, a stationary floor plate mounted adjacent the door when in a closed position for coöperation with said plunger and provided at one end at a point below the plunger when the door is in a closed position with an enlarged opening through which the lower end of said plunger and said arms are adapted to be projected when the door is in a closed position, and a contracted slot closed at one end and curved in the arc of the swing of the door and communicating at its opposite end with said enlarged opening and adapted to receive the plunger and limit the opening of the door when said plunger is inserted therein.

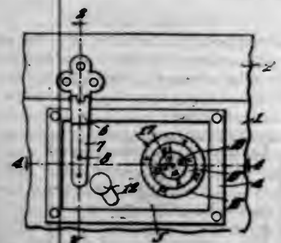
1,111,486. DIRIGIBLE LAMP. OSCAR E. MEYER, Watertown, Wis. Filed July 13, 1914. Serial No. 850,683. (Cl. 240—62.)

In a vehicle having a frame, spring-supported front wheels, and a steering gear therefor having a manually controlled primary oscillatory crank arm; the combination of a pair of oscillatory link connected lamps sup-

ported upon the frame, a rock-shaft having a lamp-actuating arm rigidly secured thereto, means connecting the lamp actuating arm and lamps, a steering gear arm loosely mounted upon the rock-shaft, a clutch member carried thereby, means for connecting said arm to the primary

crank-arm aforesaid, a clutch member in spline connection with the rock-shaft, and manually controlled means for shifting said clutch member whereby the steering gear arm is locked or released from its engagement with said rock-shaft.

1,111,487. COMBINATION-LOCK. HENRY F. NELSON, Angola, La., assignor of one-half to John R. Sanders, Angola, La., and one-half to Maurice R. Woulfe, Washington, D. C. Filed Nov. 25, 1913. Serial No. 803,015. (Cl. 70—55.)



A lock embodying a face plate having a sunken portion forming a shoulder and provided with an opening, a hasp having its free end portion offset to swing within the said sunken portion of the face plate and to engage the said shoulder, a keeper carried by the offset portion of the hasp insertible through the said opening, means carried by the inner side of the face plate engageable with the keeper, and means disposed within the sunken portion of the face plate and coöperable with the aforesaid means for actuating the same.

1,111,488. SCOURING AGENT. HEINRICH OCKELMANN, Gross-Jena, near Naumburg-on-the-Saale, Germany. Filed Dec. 15, 1913. Serial No. 806,814. (Cl. 87—5.)

1. A detergent comprising sugar, caustic alkali and alcohol, the sugar being largely in excess of the alcohol, and the product being a dry, granular substance.

2. A detergent comprising sugar, caustic alkali and alcohol, the quantity of sugar being in excess of the quantity of alcohol and of alkali, the product being a dry, granular material.

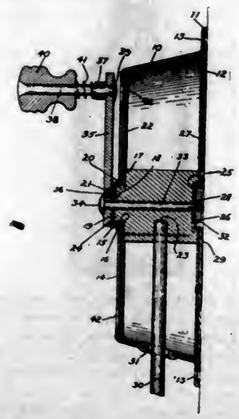
3. A detergent comprising sugar, caustic alkali and alcohol, the sugar being in excess of the combined quantities of alcohol and alkali, the product being a dry granular material.

4. A detergent comprising sugar, caustic alkali, alcohol and a soap addition, the product being a dry powder.

5. A detergent, comprising sugar, caustic alkali, soap and alcohol, the sugar content of the detergent being a multiple of the combined content of alkali and alcohol.

1,111,489. CLOTHES-LINE REEL. WILLIAM M. PALMER, New York, N. Y., assignor to William M. Palmer Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 4, 1912. Serial No. 723,856. (Cl. 242—101.)

1. A device of the class described, comprising a flanged conical casing, a spool revoluble therein, said spool having heads of varying diameters, cup members arranged internally and externally of said casing, said cup members constituting mountings for said spool, means for rotating said spool and means combined therewith for preventing the rotation thereof, the latter of said means positively engaging with the interior of said casing.



2. In a device of the class described, in combination with a casing having a plurally perforated front plate, a spool revoluble within the casing and a handle for rotating the spool, of a knob slidably mounted in said handle, a detent combined with said knob, said detent being adapted to engage with the inner side at any of the perforations in said front plate and means normally maintaining said detent out of engagement.

3. A device of the class described, comprising a conical casing, a flanged base therefor, said base having holes for attachment formed therein, a spool revolubly mounted in said casing having radial cord connections, flanges on said spool, said flanges being of different diameters to suit said casing, means for rotating said spool and a spring retracted locking means for preventing rotation of said spool combined with said rotating means, said locking means being adapted to detachably engage with openings formed in said casing whereby it is normally held in a locked position.

4. A device of the class described, comprising a casing, having a plurality of apertures on its front side, a spool mounted to revolve therein and an actuating means therefor, in combination with a plunger mounted in said actuating means, a head on said plunger adapted to pass through any of the apertures in the casing engaging on the inner side thereof, and a retractile spring combined with said plunger normally keeping said plunger out of engagement with the casing.

5. In a device of the class described, a casing having a plurality of openings on its front side, a spool mounted to revolve therein and an actuating means therefor, in combination with a locking member mounted in said actuating means, a head on said locking member adapted to pass through any of the apertures in the casing and to engage on the inner side thereof, said actuating means comprising retractile spring means normally keeping said locking member out of engagement with the casing.

1,111,490. FERTILIZER AND PROCESS OF PRODUCING THE SAME FROM ROCK MINERALS. JOSEF PERINO, Boston, Mass. Filed Mar. 20, 1914. Serial No. 826,101. (Cl. 71—7.)

1. A commercial fertilizer composed of chemically-prepared intimate mixture of potash-containing silicate rock in a zoolitic state and rock phosphate converted into the form of a finely-divided neutral reaction product.

2. The herein described process of making a commercial fertilizer which consists in adding to and mixing with finely ground rock containing plant food, a salt of a strong mineral acid, said salt capable of dissociation into its acid and base below the temperature of 800° C., and then gradually heating said mixture to an elevated temperature in the presence of steam under atmospheric pressure, thereby dissociating said salt and unlocking the chemical and physical structure of said rock without changing materially the characteristic components of said rock.

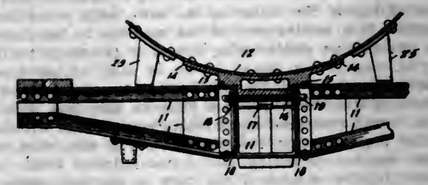
3. The herein described process of making a commercial fertilizer which consists in adding to and mixing with finely ground rock containing plant food, a salt of a strong mineral acid capable of dissociation into its acid and base below the temperature of 800° C., gradually heating such mixture to an elevated temperature in the presence of steam under atmospheric pressure, thereby disintegrating said rock by the products of dissociation of said salt aided by steam, and treating the product of disintegration with sufficient water to cool and hydrate the same and leave a dry powder.

4. The herein described process of making a commercial fertilizer which consists in gradually heating to an elevated temperature, a mixture of finely ground potash-containing silicate rock, rock phosphate and a salt of a strong mineral acid capable of dissociation into its acid and base below the temperature of 800° C., thereby disintegrating said rocks by the products of dissociation of said salt.

5. The herein described process of making a commercial fertilizer which consists in gradually heating to an elevated temperature a mixture of finely ground potash-containing silicate rock, rock phosphate and a salt of a strong mineral acid capable of dissociation into its acid and base below the temperature of 800° C., thereby disintegrating said rocks by the products of dissociation of said salt aided by steam under atmospheric pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,111,491. TANK-CAR UNDERFRAME. HERMAN C. PRIEBE, Chicago, Ill. Filed Jan. 14, 1910. Serial No. 537,981. (Cl. 105—264.)



1. In a tank-car in combination: a tank; center sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills; and a transverse freely removable key passed through mutually registering key-ways in said center sills and cradle-members; substantially as specified.

2. In a tank-car, in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed within the center-sills; and a transverse freely removable key passed through mutually registering key-ways in said center-sills and cradle-members; substantially as specified.

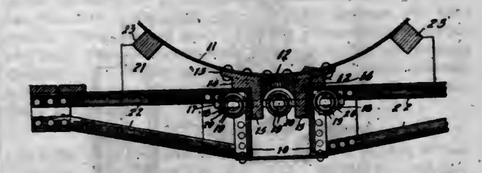
3. In a tank-car, in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills; and a horizontally transverse freely removable key passed through mutually registering key-ways in said center-sills and cradle-member; substantially as specified.

4. In a tank-car in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed within the center-sills; and a horizontally transverse freely removable key passed through mutually registering key-ways in said center-sills and cradle-member; substantially as specified.

5. In a tank-car, in combination: a tank; center-sills; body-bolsters; supporting means to secure said tank upon said center-sills; and heel-castings secured upon either side of the lower part of said tank and adapted to bear freely upon the body-bolster, to prevent lateral swaying of the tank; substantially as specified.

[Claim 6 not printed in the Gazette.]

1,111,492. TANK-CAR UNDERFRAME. HERMAN C. PRIEBE, Chicago, Ill. Filed Jan. 14, 1910. Serial No. 537,982. (Cl. 105—264.)



1. In a tank-car, in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills, said member bearing down on and being slidable longitudinally of said sills; transverse keys passed through mutually registering key-ways in said center-sills and cradle-members, the key-ways in the said mutually coöperating members being elongated to permit the aforesaid sliding of said member on said sills; and spring-devices adapted to yieldingly cushion said member at either limit of said longitudinal movement; substantially as specified.

2. In a tank-car, in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills, said member bearing down on and being slidable longitudinally of said sills; a pair of transverse keys passed through key-ways in the opposite ends of the cradle-member and through respectively registering key-ways in said center-sills, the key-ways in the said mutually coöperating members being elongated to permit the aforesaid sliding of said member on said sills; and a spring interposed and retained between said pair of opposed keys, to yieldingly cushion said member at either limit of said longitudinal movement; substantially as specified.

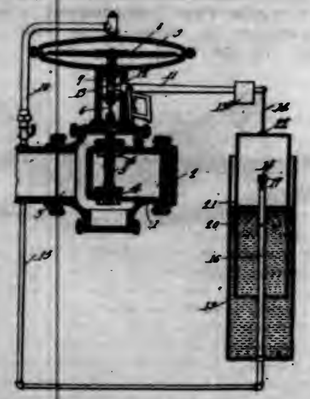
3. In a tank-car, in combination: a tank; center-sills; a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills, said member bearing down on and being slidable longitudinally of said sills; engaging devices adapted to secure together said center-sills and cradle-member and to permit and limit the aforesaid sliding of said member on said sills; and spring devices adapted to yieldingly cushion said member at either limit of said longitudinal movement; substantially as specified.

4. In a tank-car, in combination: a tank; center-sills, a cradle-member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills, said member bearing down on and being slidable longitudinally of said sills; a pair of transverse keys passed through key-ways in the opposite ends of the cradle-member and through respectively registering key-ways in said center-sills; the key-ways in the said mutually coöperating members being elongated to permit the aforesaid sliding of said member on said sills; and multiple springs interposed and retained between said pair of opposed keys, to yieldingly cushion said member at either limit of said longitudinal movement; substantially as specified.

5. In a tank-car, in combination: a tank; center-sills; a cradle member rigidly secured to the bottom of the tank and supported upon and socketed to the center-sills, said member bearing down on and being slidable longitudinally of said sills; a pair of transverse keys passed through key-ways in the opposite ends of the cradle-member and through respectively registering key-ways in said center-sills, the key-ways in the said mutually coöperating members being elongated to permit the aforesaid sliding of said member on said sills; and concentrically compound springs interposed and retained between said pair of opposed keys, to yieldingly cushion said member at either limit of said longitudinal movement; substantially as specified.

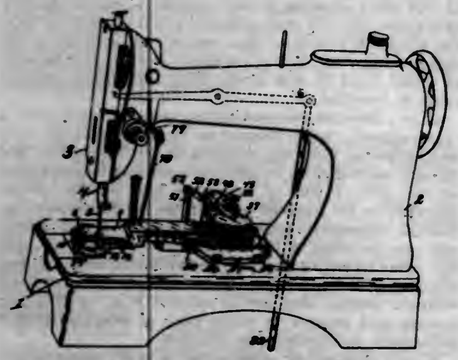
[Claims 6 to 16 not printed in the Gazette.]

1,111,493. AUXILIARY REGULATING DEVICE FOR PRESSURE-REGULATORS. PETER J. QUINLAN, Marietta, Ohio. Filed Feb. 21, 1913. Serial No. 749,977. (Cl. 50—27.)



The combination with a main pressure regulator, having a pressure and weight controlled lever, of an auxiliary regulating device for the lever, including a liquid container having an upper open end, a bell inverted within the liquid and surrounded by the container, a flexible coupling connecting the bell to the free end of the weighted lever of the regulator, a pressure fluid conduit disposed concentrically through the lower end of the container and having its outlet at its upper end disposed at a point above the liquid within the bell, and an apertured cap detachably covering the outlet end thereof, whereby the escape outlet may be varied accordin to the aperture of the cap.

1,111,494. SEWING-MACHINE FOR ATTACHING LABELS. ARTHUR ROSENTHAL, Grand Rapids, Mich., assignor to Rose Label Machine Company, Grand Rapids, Mich. Filed Mar. 11, 1912. Serial No. 683,068. (Cl. 112—32.)



1. In a label attaching machine, the combination with the bed, arm, head, needle bar and driving means of a sewing machine, of a supporting plate secured to the bed of said machine, an actuating lever frame structure carried thereby comprising a gear toothed frame part with inwardly propecting gear teeth; a swivel slide on the said supporting plate engaging in suitable ways on the said actuating lever frame; a presser foot carrying arm hinged to the said actuating lever frame; a suitable spring for putting pressure thereon, a presser foot comprising a frame with corrugated under surfaces and spring supported yielding end bars compressible inwardly whereby the said end bars are adapted to engage a label when placed beneath the same and put tension thereon so that the needle of the sewing machine can stitch within the border thereof to attach the label; a ratchet feed device; a pinion driven by said ratchet feed adapted to mesh with the gear toothed frame part of said actuating lever frame; a cam plate on said base; and a cam engaging guide member carried by said actuating lever frame for guiding and controlling the motion of the feed device, all coacting substantially as described and for the purpose specified.

2. In a label attaching machine, the combination with the bed, arm, head, needle bar and driving means of a sewing machine, of a supporting plate secured to the bed of said machine; an actuating lever frame structure carried thereby comprising a rectangular gear toothed frame part made up of rack bar members with inwardly projecting gear teeth adjustable in their relations to each other by suitable gear toothed engaging portions; a swivel slide on the said supporting plate engaging in suitable ways on the said actuating lever frame; a presser foot conformed to the label to be attached; a feed device for the actuating lever frame consisting of a ratchet wheel with suitable support; a ratchet pawl for actuating the same with connections therefor to a moving part of the machine for advancing the presser foot and carrying a label to the needle of the sewing machine; a pinion driven by said ratchet wheel adapted to mesh with the gear toothed frame part of said actuating lever frame; a cam plate on said supporting plate; and a cam engaging guide member carried by said actuating lever frame for controlling the motion of the feed device, all coacting substantially as described and for the purpose specified.

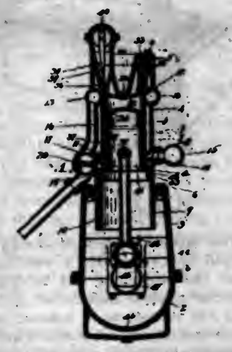
3. In a label attaching machine, the combination with the bed, arm, head, needle bar and driving means of a sewing machine, of a supporting plate secured to the bed of said machine; an actuating lever frame structure carried thereby comprising a gear toothed frame part with inwardly projecting gear teeth; a swivel slide on the said supporting plate engaging in suitable ways on the said actuating lever frame; a presser foot conformed to the label to be attached; a feed device for the actuating lever frame consisting of a ratchet wheel with suitable support; a ratchet pawl for actuating the same with connections therefor to a moving part of the machine for advancing the presser foot and carrying a label to the needle of the sewing machine; a pinion driven by said ratchet wheel adapted to mesh with the gear toothed frame part of said actuating lever frame; a cam plate on said base with a main cam surface and an auxiliary cam surface with retarder projections at the angles; and a cam engaging guide member carried by said actuating lever frame for controlling the motion of the feed device, comprising a swiveled plate with contact rolls to engage said cam actuating surfaces, all coacting substantially as described and for the purpose specified.

4. In a label attaching machine, the combination with the bed, arm, head, needle bar and driving means of a sewing machine, of a supporting plate secured to the bed of said machine; an actuating lever frame structure carried thereby; a swivel slide on the said supporting plate engaging in suitable ways on the said actuating lever frame; a presser foot carrying arm hinged to the said actuating lever frame; a suitable spring for putting pressure thereon; a presser foot comprising a frame with corrugated under surfaces and spring supported yielding end bars compressible inwardly hereby the said ends are adapted to engage a label when placed beneath the same and put tension thereon so that the needle of the sewing machine can stitch within the border thereof to attach the label; and a feed device for the actuating lever frame, for the purpose specified.

5. In a label attaching machine, the combination with the bed, arm, head, needle bar and driving means of a sewing machine, of a supporting plate secured to the bed of said machine; an actuating lever frame structure carried thereby; a swivel slide on the said supporting plate engaging in suitable ways on the said actuating lever frame; a presser foot comprising a frame with yielding face bars having corrugated under surfaces and spring supported laterally yielding end bars compressible inwardly between the ends of said frame whereby the said end bars are adapted to engage a label when placed beneath the same and put tension thereon so that the needle of the sewing machine can stitch within the border thereof to attach the label; a clamp plate having an opening corresponding to the opening of said presser foot disposed beneath said presser foot and coöperating therewith to hold the work; and a feed device for the actuating lever frame, for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,111,495. TWO-CYCLE GAS-ENGINE. GUY WORTHINGTON RHODES, Auburn, Nebr. Filed June 27, 1913. Serial No. 776,124. (Cl. 123—71.)



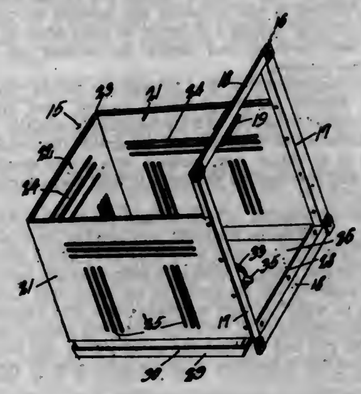
1. In a gas engine, a piston, a piston cylinder having inlet and exhaust ports, a slidable cylindrical valve therein having inlet and exhaust ports, a compression chamber, an initial gas storage chamber communicating with the inlet ports of the cylinder, a valve between said chambers, controlling the inlet of gas into the compression chamber and the passage of gas therefrom into the initial storage chamber, a power shaft with which said piston is connected and a shaft operatively connecting said slidable cylindrical valve, valve and power shaft, substantially as described.

2. In a gas engine, a piston cylinder having inlet and exhaust ports and enlarged at its lower end, a piston operatable in said piston cylinder and having an enlarged portion which fits and contacts with the enlarged portion of the piston cylinder and forms therebetween a gas compression chamber, a cylindrical valve, mounted in such manner as to be out of contact with the enlarged portions of the piston cylinder and piston, slidable between the upper portion of the piston cylinder and the piston and having inlet and exhaust ports, an initial gas storage chamber communicating with the inlet ports of the cylinder, a gas inlet valve between said compression chamber and storage chamber controlling the inlet of gas into the compression chamber, between the enlarged portions of the piston cylinder and piston, and the passage of gas into the initial storage chamber, a power shaft and a shaft operatively connecting said slidable cylindrical valve, gas inlet valve and power shaft, substantially as described.

3. In a gas engine, a piston cylinder having inlet and exhaust ports and enlarged at one end forming a gas compression chamber, a gas storage chamber communicating with the inlet ports of the cylinder, a cylindrical slidable valve in said piston cylinder having inlet and exhaust ports, a single piston which fits and operates within the slidable cylindrical valve having an enlarged portion which fits and operates within the enlarged portion of the piston cylinder, and serves to compress the gas in the gas compression chamber, a rotatable gas inlet valve adapted to supply gas to the gas compression chamber and from thence supply it to the piston cylinder and means operatively connecting the cylindrical valve, piston and rotatable gas inlet valve, substantially as described.

4. In a gas engine, a piston cylinder having inlet and exhaust ports and enlarged at its lower end, a cylindrical slidable valve, of substantially the same diameter from end to end, in said piston cylinder having inlet and exhaust ports, a piston operatively mounted within said cylindrical slidable valve and having an enlarged lower end, a gas compression chamber formed between the enlarged portion of the piston cylinder and the enlarged portion of the piston, a gas storage chamber communicating with the inlet ports of the cylinder, a passage forming a communication between the gas compression chamber and gas storage chamber, a gas inlet valve in said passage, for controlling the supply of gas to the gas compression chamber and from the gas compression chamber to the gas storage chamber, and means operatively connecting said slidable cylindrical valve, gas inlet valve and piston, substantially as described.

1,111,496. REFRIGERATOR. RUDOLPH A. RIEK, Rhinelander, Wis. Filed Jan. 31, 1913. Serial No. 745,517. (Cl. 62—69.)

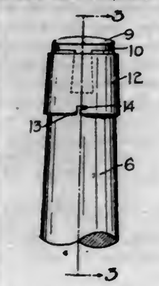


1. In a refrigerator, a case having a door frame in one upright wall provided with a continuous rabbet, an ice chest having its front open and insertible through the door frame and having an angle iron frame adapted to seat in the said rabbet to support the ice chest, a bearing member secured to the upper end of the ice chest frame and projecting inward therefrom, and a handle pivoted to the inner end of the bearing member adapted to depend from the upper end of the ice chest frame or to be swung upwardly out of the way.

2. In a refrigerator, a case having a door frame in one upright wall provided with a continuous rabbet, an ice chest frame including angle iron stiles and rails having their outer flanges arranged in substantially the same plane and having their ends overlapped and secured together, the ends of the inner flanges of the angle iron rails being bent angularly to overlap the ends of the inner flanges of the stiles and being secured thereto, the outer flanges seating in the rabbet and the inner flanges fitting in the door frame beyond the rabbet, and an ice chest including sides and a bottom secured to the inner flanges of the stiles and lower rail, respectively.

3. In a refrigerator, a case having a door frame in one upright wall provided with a continuous outer rabbet, an ice chest frame including angle iron stiles and rails having their outer flanges arranged in substantially the same plane, the said flanges of the stiles having their ends overlapping and secured to the outer sides of the ends of the said flanges of the rails, the ends of the inner flanges of the rails being bent angularly to overlap the ends of the inner flanges of the stiles behind the outer flanges of the stiles and being secured thereto, the outer flanges seating in the rabbet and the inner flanges fitting in the door frame beyond the rabbet, and an ice chest including sides and a bottom secured to those sides of the inner flanges of the stiles and lower rail, respectively, remote from the center of the ice chest frame.

1,111,497. CUE-TIP AND FASTENING MEANS THEREFOR. JAMES M. ROBINETTE, Williamson, W. Va. Filed Oct. 17, 1913. Serial No. 795,740. (Cl. 46—9.)

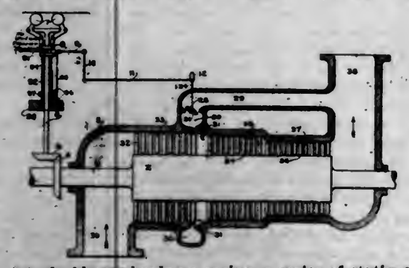


1. The combination with a billiard cue having dove-tail recesses formed in the periphery and opening on one end thereof, of a tip having a plurality of arms adapted to fit within said recesses, and means for locking the arms within the recesses.

2. The combination with a billiard cue having dove-tail recesses formed in the periphery thereof, and opening upon one end of the cue, of a tip including a circular body, and a plurality of arms formed integrally therewith and adapted to fit within said recesses, of a sleeve secured to the cue and surrounding the arms to hold them within the recesses.

3. The combination with a billiard cue having dove-tail recesses formed in the periphery and opening upon one end thereof, of a tip including a circular body and a plurality of arms formed integral with said body upon the inner side thereof adjacent the periphery of the body, said arms increasing in width as they approach their free extremities and being adapted to fit within the recesses, a sleeve mounted on the cue and holding the arms within the recesses, and means for detachably securing the sleeve to the cue.

1,111,498. TURBO-BLOWER. MAX ROTTER, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 24, 1909. Serial No. 534,827. (Cl. 230—11.)



1. A turbo-blower having a casing, a series of stationary and movable blades within said casing and a by-pass connecting points along said casing, said connection including a nozzle diverging toward the blower outlet.

2. A turbo-blower having a casing, and a by-pass connecting points along said casing, said connection including a nozzle directed toward the blower outlet.

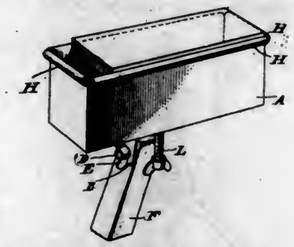
3. A rotary pump having a casing, a by-pass connecting points along said casing, and means in said connection for assisting in the driving of the rotor of the pump.

4. In a multi-stage turbo-blower, the combination of a series of stages, and a return passage between the delivery of one stage and the delivery of another stage, said passage being so directed at the delivery of the preceding stage as to transform the velocity of the fluid passing through said passage into useful work to assist in driving the blower rotor.

5. In a multi-stage turbine pump, the combination of a series of stages, a return passage around stages of said pump, a prime mover for driving said pump, adjustable means for directly controlling said prime mover, and means coöperating with said control means and with said return passage for maintaining constant the volume of fluid pumped.

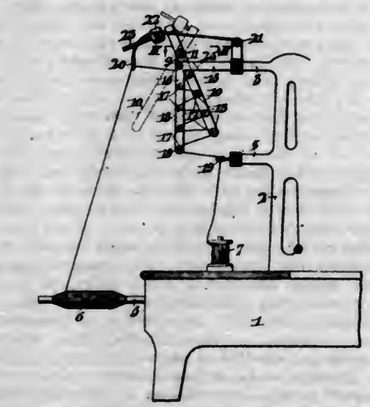
[Claims 6 and 7 not printed in the Gazette.]

1,111,499. DEVICE FOR HOLDING MATERIAL FOR CLEANING WALL-PAPER, CEILINGS, &c. ELIZA SAYRE, Fonda, Iowa. Filed Mar. 3, 1914. Serial No. 822,202. (Cl. 15—13.)



In combination with a receptacle having its outer marginal edge turned to form a roll, a wall cleaning member mounted within the receptacle and having its outer end flaring and bearing against said rolled portion, a follower movable within the receptacle, a bracket member secured to the receptacle and having arms which are provided with oppositely disposed apertures, a pivotal screw mounted in said apertures and a handle pivoted upon the screw, said receptacle having a boss projecting about an opening therein, and a screw mounted within said opening and swiveled to said follower.

1,111,500. THREAD-TENSION DEVICE. GEORGE J. SCHAUTZ and EDWIN J. STOECKEL, Scranton, Pa. Filed Dec. 1, 1910, Serial No. 595,028. Renewed June 29, 1914. Serial No. 848,063. (Cl. 242—153.)



In a thread tension device, the combination with a support, of a horizontal arm extending forwardly therefrom, a second horizontal arm extending forwardly from said support and terminating in a downwardly extending vertical arm, a plurality of spaced horizontal pins carried by said vertical arm, a swinging arm pivotally mounted intermediate its ends to the second mentioned horizontal arm, spaced horizontal pins carried by said swinging arm and arranged to pass between the first mentioned pins when said swinging arm is moved rearwardly or forwardly of the vertical arm, a thread guide disposed below and in rear of said vertical arm, a second thread guide disposed in advance of said vertical arm, and means for yieldably holding said swinging arm at an inclination whereby the pins carried by said arm will tention the thread.

1,111,501. CLIP FOR FOUNTAIN-PENS. ALBERT SCHEIBLE, Chicago, Ill., assignor, by mesne assignments, to The Kraker Pen Co., Kansas City, Mo., a Corporation of Missouri. Filed May 7, 1914. Serial No. 836,891. (Cl. 24—11.)

1. A fastener for a fountain pen cap having a perforation in its side, comprising a resilient clip disposed longitudinally of the cap upon the outer surface thereof and equipped intermediate of its ends with a pair of arms integral with said clip and extending through the said perforation into the interior of the cap and laterally engaging the walls of the said perforation; a locking member slidably inserted in the cap, the said locking member and the said arms equipped with relatively interlocking formations for preventing the retraction of the said arms through the said perforations; and means independent of the said arms for preventing the said member from sliding with respect to the cap.

2. A fountain pen having an outer and an inner cap, said inner cap having an extension interposed between the closed ends of the said caps and said outer cap having a lateral perforation therein; and a resilient clip disposed upon the exterior of the outer cap and equipped with a pair of arms extending through the said perforation into the space between the closed ends of the said outer and inner caps, the said arms equipped at their free ends with oppositely disposed extensions, the said extension upon the inner cap slidably interlocking with the said extensions of the arms to prevent retraction of the said arms through the said perforation.

3. A fountain pen having an outer cap and an inner cap, the said outer cap equipped with a lateral perforation; a retaining clip disposed upon the exterior of the outer cap and equipped with a pair of arms extending through the said perforation into the space between the closed ends of the said caps, the said arms equipped at their free ends with oppositely directed angle formations, the said inner cap equipped at its closed ends with a pair of projections adapted respectively to be slidably interposed between one of the said angle formations, and an adjacent portion of the outer cap, whereby the said projections will coact with the said angle formations to hold the clip in operative position.

4. A fountain pen having an outer cap and an inner cap, the said outer cap equipped with a lateral perforation; a retaining clip disposed upon the exterior of the outer cap and equipped with a pair of arms extending through the said perforation into the space between the closed ends of the said caps, the said arms equipped at their free ends with oppositely directed angle formations, the said inner cap equipped at its closed ends with a pair of projections adapted respectively to be slidably interposed between one of the said angle formations and an adjacent portion of the outer cap, whereby the said projections will coact with the said angle formations to hold the clip in operative position; the said projections and angle formations presenting coöperating cam formations adapted to draw the said arms inwardly of the outer cap to force the portion of the clip adjacent to the said arms tightly against the exterior of the outer cap.

5. A fastener for a fountain pen cap having a perforation in its side, comprising a resilient clip disposed longitudinally of the cap upon the outer surface thereof and equipped intermediate of its ends with a pair of arms extending through the said perforation into the interior of the cap; a locking member slidably inserted in the cap, the said locking member and the said arms equipped with relatively interlocking formations for preventing the retraction of the said arms through the said perforation, the said interlocking formations presenting cam formations coöperating upon insertion of the locking member to draw the portion of the clip adjacent to the said arms toward the cap; and means independent of the said arms for preventing the said member from sliding with respect to the cap.

[Claims 6 and 7 not printed in the Gazette.]

1,111,502. MANUFACTURE OF CATALYSTS. ALEXANDER SCHWARZMAN, Buffalo, N. Y., assignor to Spencer Kellogg & Sons, Inc., Buffalo, N. Y., a Corporation of New York. Filed Feb. 4, 1914. Serial No. 816,512. (Cl. 23—28.)

1. In the manufacture of a catalyst, the process which comprises forming a hydrated sesquioxid, treating with a solution of a compound of a platinum group metal such solution containing a relatively small amount of metal, and drying.

2. In the manufacture of a catalyst, the process which comprises forming hydrated alumina, treating with a solution of a compound of a platinum group metal such solution containing a relatively small amount of metal, and drying.

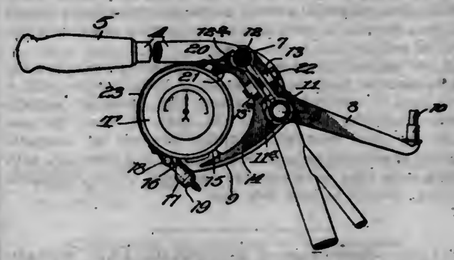
3. In the manufacture of a catalyst, the process which comprises forming a hydrated sesquioxid, treating with a solution containing the amount of a palladium compound which the sesquioxid will absorb, and drying.

4. In the manufacture of a catalyst, the process which comprises forming hydrated alumina, treating with a solution containing the amount of a palladium compound which the alumina will absorb, and drying.

5. The process of forming a catalyst which comprises precipitating a solution of a sesquioxid compound with alkali, washing the precipitate free of soluble matters, treating with a solution of a compound of a platinum group metal such solution containing a relatively small amount of metal, and drying.

[Claims 6 to 19 not printed in the Gazette.]

1,111,503. BRACKET. IGNAZ SCHWINN, Chicago, Ill. Filed Jan. 2, 1914. Serial No. 809,960. (Cl. 224—41.)

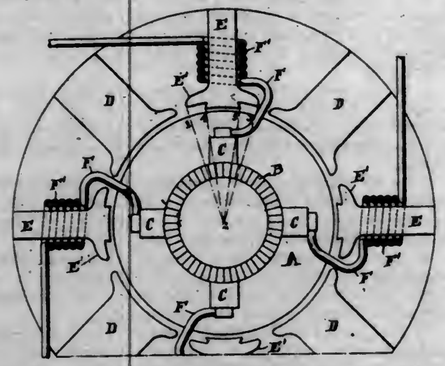


1. A device for use with motorcycle handle-bars having a reinforcing bar extending between the legs, comprising a lamp and tank supporting bracket including a pair of angular forward members provided with lamp-supports and lower and upper recesses fitting, respectively, against the transverse handle-bar member and the reinforcing bar, and a pair of rear members having lower and upper recesses fitting oppositely to said forward members respectively against said transverse member and the reinforcing bar, said forward and rear members being rigidly bolted together between their ends and the rear members forming a tank-support, and means on the rear bracket-members for securing a tank in place thereon.

2. A device for use with motorcycle handle-bars having a reinforcing bar extending between the legs, comprising a lamp and tank supporting bracket including a pair of angular forward members provided with lamp-socket posts

on their advance-ends and lower and upper recesses fitting, respectively, against the transverse handle-bar member and the reinforcing bar, and a pair of rear members having straight-faced sections provided with lower and upper recesses fitting oppositely to said forward members respectively against said transverse member and the reinforcing bar, curved rearwardly-extending lower arms provided with tank-seating lugs, upper rearwardly-projecting lugs on said rear members, said forward and rear members being rigidly bolted together between said recesses, and means on the rear bracket-members for securing a tank in place thereon.

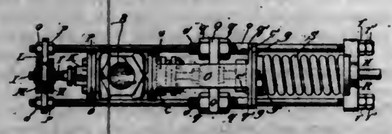
1,111,504. COMMUTATING DYNAMO-ELECTRIC MACHINE. CHARLES HEAD SMOOT, New York, N. Y., assignor to Rateau Battu Smoot Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1914. Serial No. 810,596. (Cl. 171—228.)



1. In a commutating dynamo electric machine the combination with the armature and the main field poles, of interposed commutating poles, each comprising a magnetic core formed with a pole face at its armature end through which substantially all of the commutating flux of said pole passes, and with portions adjacent its armature end which project toward the adjacent main poles at a distance from the armature somewhat greater than the distance between the armature and the face of said pole and which form magnetic shields covering substantial portions of the armature at each side of the portion covered by the face of said pole.

2. A magnetic core for the commutating pole of a dynamo electric machine comprising a body portion with a pole face at one end and formed with horns at opposite sides projecting away from the body at some distance from the pole face and adapted to serve as magnetic shields to prevent leakage flux entering the armature with which said core cooperates at the sides of the armature portion covered by said pole face.

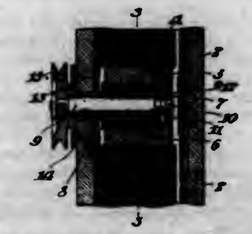
1,111,505. REGULATOR FOR HYDRAULIC STEAM-PUMPS. FRANCIS E. STEVENSON, Mount Gilead, Ohio, assignor to The Hydraulic Press Manufacturing Company, Mount Gilead, Ohio. Filed Jan. 23, 1914. Serial No. 813,904. (Cl. 103—92.)



1. A regulator for hydraulic steam pumps, comprising a valve chamber having inlet and outlet ports for steam, two independently adjustable piston valves therein controlling the inlet and outlet ports of the valve chamber and which are in line with each other, an adjustable spring connected with said valves for holding them in a predetermined position to obtain a definite pressure in the hydraulic apparatus with which the regulator is connected, a piston connected with the inlet valve and connected also with the hydraulic apparatus for moving said inlet valve to close the inlet opening to the valve chamber, and adjustable connections between said piston and the outlet valve.

2. A regulator for hydraulic steam pumps, comprising a valve chamber having inlet and outlet ports for steam, two piston valves therein controlling the inlet and outlet ports of the valve chamber and which are in line with each other, a piston connected with the steam inlet valve, a spring connected with said piston and tending to hold the valve open, a pressure chamber into which said piston extends and which is connected with the hydraulic apparatus to be regulated and which receives fluid that causes the steam inlet valve to close when a predetermined pressure is reached, means for adjusting the length of said piston rod, means for adjusting the tension of the spring, connections between said piston and the steam outlet valve, and devices for adjusting the position of said outlet valve independently of the adjustment of the inlet valve and which operate in line with said piston.

1,111,506. FILM-MAGAZINE. JULIEN TESSIER, Philadelphia, Pa., assignor to Lubin Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 30, 1913. Serial No. 764,507. (Cl. 242—76.)

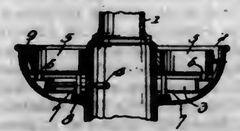


1. A magazine having a tubular bearing fixed thereto, a spindle journaled in said bearing, and a thimble fixed to said spindle and sleeved on said bearing, said thimble having a flange thereon, in combination with a spool sleeved on said thimble, said spool having means for frictionally clutching it on said thimble.

2. In a film reeling mechanism, a stationary tubular bearing, a spindle journaled therein, a thimble telescoped on said bearing and fixed to said spindle, and a spool containing a sleeve provided with spring sections frictionally engaged on said thimble.

3. A film magazine having a tubular bearing, a spindle journaled therein, a thimble fixed to said spindle and telescoped on said bearing, a spool sleeved on said thimble, and means adapted to engage an edge of film wound on said spool.

1,111,507. HORSE DRINKING-FOUNTAIN. FRED A. THOMAS, Pawtucket, R. I. Filed Sept. 23, 1913. Serial No. 791,397. (Cl. 137—11.)



1. A device for converting a single basin dringing fountain into one having individual drinking cups, including a perforated plate formed separate from the basin, means to support the plate below the upper edge of the basin of a fountain, a series of independent cups secured to the plate and having their upper edges located above the plate, and common means to supply water to the cups.

2. In a drinking fountain, a perforated plate for disposition below the upper edge of the basin, a series of individual drinking cups secured to the plate and having their ends extending above and below the plate, and means below the plate to supply water to each cup.

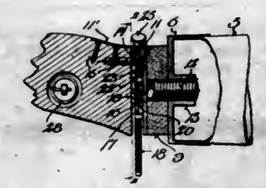
3. A device adapted to be placed in the basin of a drinking fountain including a perforated member which extends horizontally and substantially throughout the area of the basin, a series of drinking cups in connection with the member, and means to supply water to the cups.

4. In a device of the type set forth, an apertured plate shaped peripherally to engage the inner circumference of the basin of a drinking fountain, individual cups arranged in said apertures, means below the plate to supply water to each cup, and means whereby the water overflowing from the cups may pass the plate and enter the basin.

5. A device for converting a single basin drinking fountain into one having individual drinking cups including a series of individual cups, and means to both support the cups and to cover the basin bottom to allow the animals to obtain water from the cups only.

[Claims 6 to 10 not printed in the Gazette.]

1,111,508. ARTIFICIAL ARM. ADOLF VISEL, Milwaukee, Wis., assignor of one-half to Samuel W. Leeming, Milwaukee, Wis. Filed Feb. 26, 1914. Serial No. 821,119. (Cl. 3—1.)



1. An artificial-arm having a housing at the wrist thereof, a spring-controlled hook having a ratchet-end thereof pivoted in the housing into which said hook as a whole is retractive, and a spring-controlled ratchet-engaging dog guided in said housing through which its shank extends.

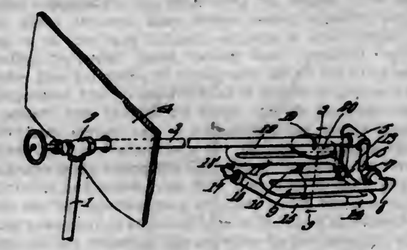
2. An artificial-arm having a housing at the wrist thereof and a gripping means forward of the housing, a spring-controlled hook having a ratchet-end thereof pivoted in the housing into which said hook as a whole is retractive, and a spring-controlled ratchet-engaging dog guided in said housing through which its shank extends.

3. An artificial arm having a housing at the wrist thereof, a pivot-stud within the housing, a spring-controlled hook having a ratchet-end loose on the stud, means by which the hook is detachably secured on said stud, said hook being retractive in said housing; and a spring-controlled ratchet-engaging dog guided in the housing through which its shank extends.

4. An artificial-arm having a housing at the wrist thereof, a pivot-stud within the housing, a hook having a ratchet-end in detachable engagement with the stud to turn thereon, a spiral-spring under tension secured at its ends to said stud and hook, the hook being retractive in said housing; and a spring-controlled ratchet-engaging dog guided in the housing through which its shank extends.

1,111,509. LIQUID-HYDROCARBON BURNER. CHARLES H. VON HOHENSTEIN, San Antonio, Tex. Filed Dec. 22, 1913. Serial No. 808,254. (Cl 158—63.)

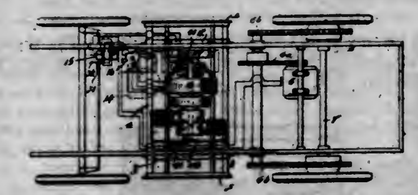
1. A fluid hydrocarbon burner, including a fluid conveying pipe, a T-coupling connected thereto, an L-coupling connected to one outlet of the T-coupling and with its other outlet disposed to project at right angles to the fluid conveying pipe, a horizontally disposed coil connected to the outlet of the L-coupling and disposed below and parallel to the fluid conveying pipe, the terminal of the coil being disposed in a plane below the coil and in vertical alinement with the fluid conducting pipe, said terminal being provided with a gas jet extending toward the fluid conveying pipe, the extreme end of the jet carrying terminal being bent upwardly and terminating at a point in substantially the same horizontal plane as the coil.



2. A fluid hydrocarbon burner, including a fluid conveying pipe, a T-coupling connected thereto, an L-coupling connected to one outlet of the T-coupling with its other outlet disposed to project at right angles to the fluid conveying pipe, a horizontally disposed coil connected to the outlet of the L-coupling and disposed below and parallel to the fluid conveying pipe, the terminal of the coil being disposed in a plane below the coil and in the same vertical plane as the fluid conveying pipe, said terminal being provided with a gas jet extending toward the fluid conveying pipe, the extreme end of the jet carrying terminal being bent upwardly and terminating at a point in substantially the same horizontal plane as the coil, and means for supporting the coil from the opposite outlet of the T-coupling.

3. A fluid hydrocarbon burner, including a fluid conveying pipe, a T-coupling connected thereto, an L-coupling connected to one outlet of the T-coupling and with its other outlet disposed to project at right angles to the fluid conveying pipe, a horizontally disposed coil connected to the outlet of the L-coupling and disposed below and parallel to the fluid conveying pipe, the terminal of the coil being disposed in a plane below the coil and in the same vertical plane as the fluid conveying pipe, said terminal being provided with a gas jet extending toward the fluid conducting pipe, the extreme end of the jet carrying terminal being bent upwardly and terminating at a point in substantially the same horizontal plane as the coil, and a flame deflector mounted upon the fluid conveying pipe directly above the gas jet.

1,111,510. MOTOR-TRUCK. CHARLES A. WARD, New York, N. Y. Filed Nov. 16, 1912. Serial No. 731,683. (Cl. 21—90.)



1. In a motor vehicle in combination, a main frame having a single power chamber formed therein for receiving an electrical power developing plant, said chamber provided with means for removably mounting power plants of two different types within said chamber (such as a gas engine and a dynamo coupled together, or a main storage battery), each power plant being of sufficient capacity to act as the sole source of power for said vehicle, said

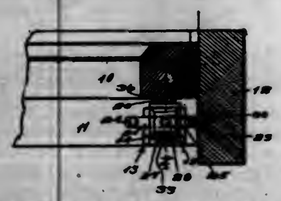
chamber arranged to hold but one of said power plants at one time, an electric motor for driving said vehicle, an electric motor controller and a gas engine controlling means mounted adjacent the operator's seat, and switch controlled means for electrically connecting the power plant contained in said chamber with either said motor or an outside source of electricity.

2. In a motor vehicle in combination, a main frame having a single power chamber formed therein for receiving an electrical power developing plant, said chamber provided with means for removably mounting power plants of two different types within said chamber (such as a gas engine and a dynamo coupled together, or a main storage battery), each power plant being of sufficient capacity to act as the sole source of power for said vehicle, said chamber arranged to hold but one of said power plants at one time, an electric motor for driving said vehicle, an electric motor controller and a gas engine controlling means mounted adjacent the operator's seat, and switch controlled means for connecting the power plant contained in said chamber in circuit with said motor and controller, comprising one set of switches and contacts for use when the dynamo is mounted in said chamber as the power plant, and a seperate set of switches and contacts for use when a main storage battery is contained in said chamber as the power plant.

3. In a motor vehicle in combination, a chassis having a power chamber formed therein adapted to receive and removably hold either one of two different electrical power developing plants (such as a gas engine and dynamo or a main storage battery), each power plant being of sufficient capacity to act as the sole source of power for said vehicle, said chamber being arranged to hold one of said power plants at a time, a power plant consisting of a gas engine and dynamo rigidly mounted in said chamber, an electric motor for driving said vehicle, removable connections between the terminals of said dynamo and motor, an electric motor controller and a gas-engine-controlling-device both mounted adjacent the operator's seat and operable by the operator, detachable connecting means between said gas-engine-controlling device and said gas engine, said power plant being removable as a whole from said chamber (that is, without disconnecting said engine and dynamo from each other).

4. In a motor vehicle in combination, a main frame having a single power chamber formed therein for receiving an electrical power developing plant, said chamber provided with means for removably mounting power plants of two different types within said chamber (such as a gas engine and a dynamo coupled together, or a main storage battery), each power plant being of sufficient capacity to act as the sole source of power for said vehicle, said chamber arranged to hold but one of said power plants at one time, an electric motor for driving said vehicle, an electric motor controller and a gas engine controlling means mounted adjacent the operator's seat, both having detachable connections leading to the interior of said chamber, and switch controlled means for connecting the power plant contained in said chamber in circuit with said motor and controller.

1,111,511. SASH-FASTENER. CHARLES L. WECHT, Logansport, Ind. Filed Apr. 4, 1914. Serial No. 829,512. (Cl. 16—52.)



1. Apparatus to lock sash-frames together and one sash frame to the window frame; comprising a reciprocatory lock-plate; a bolt to engage with the window frame, formed integral with the lock-plate, extending transversely thereof in spaced relation to the ends of the lock-plate, and having a longitudinal slot; means to secure the lock-plate to the upper end of the lower sash-frame including an element passing through the longitudinal slot; a second bolt secured to one end of the lock-plate in substantially parallel relation to the first-named bolt; and means carried by the upper sash frame, to engage the second bolt.

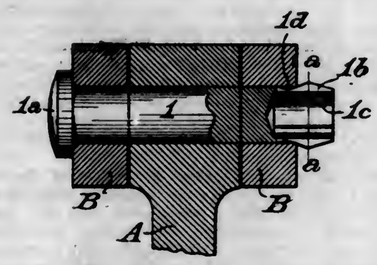
2. In apparatus of the character described, a guide plate adapted to be secured to one end of a sash frame and provided with a plurality of grooves, a lock plate provided upon its oppositet sides with corresponding ribs to enter the grooves of the guide plate whereby the lock plate may be inverted and having a longitudinally slotted bolt formed integral therewith and adapted to engage with the window-frame, a cap plate slidably engaging the upper surface of the lock plate and a bolt connecting the cap plate and guide plate and passing through the longitudinal slot in the bolt.

3. In apparatus of the character described, a guide plate adapted to be secured to one end of a sash frame and provided with a plurality of grooves, a lock plate provided with depending ribs to be slidably mounted within the grooves and having a longitudinally slotted bolt formed integral therewith and adapted to engage with the window frame, a cap plate slidably engaging the upper surface of the lock plate and a bolt connecting the cap plate and guide plate and passing through the longitudinal slot in the bolt, and means to hold the lock plate in adjustment at a desired position with relation to the guide plate.

1,111,512. FRAME. FRANK P. WILLIAMS and MICHAEL H. LANE, St. Louis, Mo. Filed Nov. 5, 1913. Serial No. 799,371. (Cl. 40—155.)

A frame comprising side, top and bottom members, each including telescoping sliding sections, rivets connecting the meeting ends of the members, each section being formed from a single piece of material bent to provide a medial flat portion forming the front thereof, a tubular outer edge, and an out-turned inner edge, and a flange on said out-turned edge and reversely bent with resepect thereto.

1,111,513. SELF-LOCKING PIN. WILLIAM E. WOODARD, Schenectady, N. Y. Filed Feb. 25, 1914. Serial No. 820,895. (Cl. 85—5.)



1. A self locking pin having an integral collapsible and expansible end, extending from its body or bearing surface and surrounding a cylindrical bore, its major diameter at its collapsible and expansible end being greater than that of its body and thereby providing an end stop which encircles its axis, and its minor diameter at said end being less than that of its body.

2. A self locking pin having a plurality of integral collapsible and self expansible locking prongs extending from one end of its body or bearing surface and surrounding a cylindrical bore, said locking prongs normally projecting beyond the diameter of the body of the pin and providing an end stop which encircles its axis, and inwardly terminating on a diameter less than that of the body.

3. A self locking pin having a plurality of integral collapsible and self expansible locking prongs extending from one end of its body or bearing surface and surrounding a cylindrical bore, and a circumferential groove adjoining said locking prongs and reducing the rigidity of the end of the pin, said locking prongs being of triangular section and outwardly inclined from said groove to a diameter greater than that of the body.

4. A self locking pin having a cylindrical bore adjoining one end of its body or bearing surface, the pin being longitudinally slotted throughout substantially the entire depth of the bore, and being finished on the exterior thereof so as to form a plurality of collapsible and self expansible locking prongs, which are of triangular longitudinal section and project normally beyond the diameter of the body, and terminate, at their inner ends, at a circumferential groove in the body.

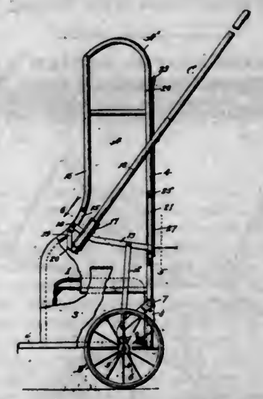
1,111,514. GO-CART OR PERAMBULATOR. ARTHUR J. ADAMS, Chicago, Ill., assignor, by mesne assignments, to William S. Ferris, Elkhart, Ind., and Alexander B. Leith, Chicago, Ill., trustees. Original application filed Mar. 2, 1910, Serial No. 546,925. Divided and this application filed Sept. 30, 1912. Serial No. 723,161. (Cl. 21—85.)

1. In a structure of the character set forth, the combination of a running-gear frame comprising side-bars, a cross-bar, bracket-members comprising web portions having their upper ends secured to said side-bars and having inturned flanges with extensions affording brace members which are secured to said cross-bar, and wheel-forks pivotally connected with said bracket-members and adapted to fold inwardly to meet the running-gear frame.

2. In a structure of the character set forth, the combination of a running-gear frame comprising side-bars, cross-bars having angular ends secured to said side-bars, bracket-members comprising web portions having their upper ends secured to said side-bars and having inturned flanges with extensions affording brace-members, said brace-members secured to said cross-bars, pivots carried by the inturned flanges of said bracket-members, and wheel-forks mounted on said pivots and adapted to swing inwardly beneath the running-gear frame.

3. In a structure of the character set forth, the combination of a running-gear frame comprising a U-shaped bar having rearwardly extending arms affording side-bars, cross-bars having angular ends secured to said side-bars, bracket-members comprising web portions having their upper ends secured to said side-bars at the outer sides thereof and having inturned flanges with extensions affording brace-members, said brace-members secured to said cross-bars, pivots carried by the inturned flanges of said bracket-members, and wheel-forks mounted on said pivots and adapted to swing inwardly beneath the running-gear frame.

1,111,515. PERAMBULATOR. ARTHUR J. ADAMS, Chicago, Ill., assignor to Fulton Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1913. Serial No. 751,027. (Cl. 21—83.)



1. A perambulator comprising a body, a pair of downwardly and rearwardly swinging wheel-forks pivotally connected with said body, a pair of arms connected with the body and linked to said wheel-forks, wheels connected to said wheel-forks, a handle slidably connected with said arms and adapted to swing the arms in the operation of swinging the handle, thereby to throw the wheels to the operative position, and means whereby the wheel-forks may be locked in the operative position.

2. A perambulator comprising a body, a pair of wheel-forks pivotally connected therewith near the lower rear corners thereof, wheels connected with said wheel-forks, a pair of arms pivotally connected with said body near the front portion thereof, links connecting said arms to said wheel-forks, a pair of handle-guides fixedly secured to said arms, a handle slidably connected with said guides and adapted to serve as a medium for swinging said arms, and releasable catch-devices adapted to serve as a means for locking the wheel-forks in the operative position.

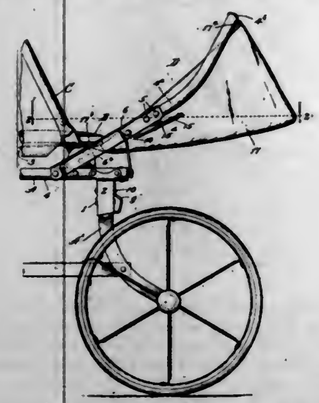
3. A perambulator comprising an upright body having its upper end equipped with a handle adapted to serve as a carrying means, a pair of downwardly and rearwardly swinging wheel-forks connected with the rear lower portion of said body, wheels connected to said wheel-forks, a pair of arms pivotally connected with said body near the front portion thereof, links connecting said arms with said wheel-forks, handle-guides carried by said arms, a handle slidably connected to said guides and adapted to serve as a means for swinging said arms, stops carried by said body and adapted to engage said second-named handle after the latter has been swung rearwardly, and means for locking said arms in the depressed position.

4. A perambulator comprising an upright body equipped at its upper end with a carrying-handle, and provided at its lower end with wheel-housings, wheel-forks connected with said body and adapted to be lowered with respect to the body, an axle equipped with a pair of wheels, spring-connections between said axle and said forks, a propelling handle adapted to be swung at an angle with relation to said body, and means connecting said propelling handle with said wheel-forks, whereby the wheel-forks will be lowered in the operation of swinging the handle rearwardly.

5. A perambulator comprising an upright body provided at its upper end with a carrying-handle, wheel-forks pivotally connected with the lower rear portion of said body and provided with slots, an axle extending through said slots and equipped with wheels, said forks extending below said axle, coil-springs connecting said axle with the lower ends of said forks, a propelling handle adapted to be swung rearwardly with respect to the body, and connections between said propelling handle and said forks, whereby the forks will be swung downwardly and rearwardly in the operation of swinging the handle rearwardly.

[Claims 6 to 10 not printed in the Gazette.]

1,111,516. PERAMBULATOR, GO-CART, &c. ARTHUR J. ADAMS, Chicago, Ill., assignor to Fulton Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1913. Serial No. 751,422. (Cl. 21—83.)



1. In a perambulator, the combination of a running-gear frame comprising side members, and a foot-rest comprising side members adapted to form virtual extensions of said first-named side members, said second-named side members equipped with connecting members pivotally joined to the first-named side members in the rear of the front ends thereof, and fitting over the top front end of said first named side members to hold said second named side members in normal lowered position, and means for securing said foot-rest in the elevated position.

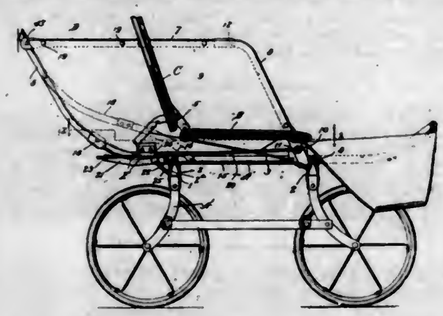
2. In a perambulator, the combination with the running-gear frame, of a front extension therefor pivotally connected therewith, locking members carried by the front portions of said running-gear frame and each equipped with a lower perforation and an upper perforation, and locking levers carried by said front extension and equipped with studs adapted to engage said perforations.

3. In a perambulator, the combination with the running-gear frame, of a front extension therefor comprising a general U-shaped member having side-arms with their rear ends lying in the plane of the side members of the running-gear frame, members embracing said side-arms and rigidly secured thereto, and embracing also the front portions of the side members of the running-gear frame and pivotally connected therewith, a pouch connected with said front extension, and means for locking said front extension in the elevated position.

4. In a perambulator, the combination with the running-gear frame of a front extension therefor pivotally connected therewith, a pouch connected with said front extension, spring-actuated locking levers mounted on said front extension, and means carried by the front portions of the side members of the running-gear frame and coacting with said locking levers when the front extension is in either the elevated or the lowered position.

5. In a perambulator, the combination of a running-gear frame, arms of U-shaped cross-section having their rear ends pivotally connected with the side members of said running-gear frame and having their front ends projecting past the front ends of the side members of the running-gear frame, a frame-member having arms received in the front portions of said first-named arms and rigidly secured thereto, spring-held locking levers having their central portions pivoted in said first-named arms, said levers having downwardly extending arms equipped with locking-studs, and locking means carried by the front portions of the side members of the running-gear frame and co-acting with said locking-studs.

1,111,517. PERAMBULATOR OR GO-CART. ARTHUR J. ADAMS, Chicago, Ill., assignor to Fulton Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1913. Serial No. 751,423. (Cl. 21—83.)



1. In a perambulator, the combination of a running gear frame, a folding superstructure mounted thereon equipped with flexible side pieces, and yielding guide connections between the lower portions of said flexible side pieces and the running gear frame, including longitudinally disposed yielding guides and means carried by the flexible side pieces and slidably engaging said guides.

2. In a perambulator, the combination of a running gear frame, a handle pivotally connected to the rear portion thereof and adapted to fold forwardly thereon, arms pivotally connected with said handle, links pivotally connected with the front portions of said arms and also pivotally connected with the running gear frame, flexible side pieces depending from said arms, longitudinally-disposed yielding guide members carried by the running gear frame, and means connected with the lower portions of said flexible side pieces and slidably engaging said guide members.

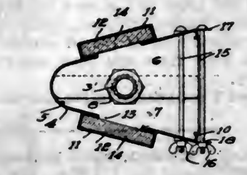
3. In a perambulator, the combination of a running gear frame, a foldable superstructure mounted thereon and equipped with flexible side pieces, rods pivotally supported at their front portions near the plane of the running gear frame, yieldingly-held guide arms engaging the rear portions of said rods, and means carried by the lower portions of the flexible side pieces and slidably engaging said rods.

4. In a perambulator, the combination of a running gear frame, a foldable superstructure thereon equipped with flexible side pieces, longitudinally extending rods mounted at their front ends on pivots carried by the running gear frame, arms connected at their front portions to the running gear frame near the rear wheel-forks and having their rear portions equipped with guides engaging said rods, and guide members attached to the lower portions of said flexible side pieces and slidably engaging said rods.

5. In a perambulator, the combination of a running gear frame, a handle pivotally connected with the rear portion thereof and adapted to fold forwardly thereon, arms pivotally connected at their rear ends with said handle, links pivotally connected with the front ends of said arms and also pivotally connected with the running gear frame, flexible side pieces depending from said arms, guide-rods pivotally connected at their front portions with the running gear frame, spring-held arms connected with the rear portion of the running gear frame and having guides for the rear portions of said rods, and means connected with said flexible side pieces and slidably engaging said rods.

[Claims 6 and 7 not printed in the Gazette.]

1,111,518. GUARD FOR WATER-GLASSES. GEORGE W. AMES, Staples, Minn. Filed May 10, 1913. Serial No. 766,720. (Cl. 73—54.)



1. The combination, with a water glass and valves therefor, of a sheet metal plate folded vertically along its middle line and inclosing said water glass on three sides and having means for engaging said valves, a clamping device for drawing the edges of said plate together to secure it on said valves, said plate having looped portions formed in the walls thereof on each side of said glass with openings in said looped portions and said plate, and glass panels fitting within said looped portions and through which the water glass is visible.

2. The combination, with a water glass and valves therefor, of a guard interposed between said valves, said guard being V-shaped, substantially, in cross section, having its apex at the front and open at the rear and adapted at the top and bottom to seat on said valves, the rear portions of the walls of said guard having openings therein, rods extending transversely at the rear of said guard and fitting within said openings for drawing the walls of said guard together and clamping them on said valves, said walls having other openings therein, and glass plates fitting within said last named openings and through which plates the water glass is visible.

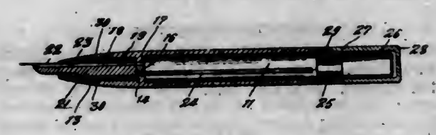
3. The combination, with a water glass and valves therefor, of a guard interposed between said valves, said guard being V-shaped, substantially, in cross section, having its apex at the front and open at the rear and provided at the top and bottom with inwardly projecting wings arranged to lap by one another and having recesses to receive said valves, the rear portions of the walls of said guard having slotted openings therein, rods extending transversely of the opening at the rear of said guard and fitting within said slots for drawing the walls of said guard together and clamping said wings on said valves, said walls having other openings therein, and glass plates fitting within said last named openings and through which plates the water glass is visible.

4. The combination, with a water glass and valves therefor, of a guard interposed between said valves and comprising sheet metal sections arranged one above the other in telescoping relation with one another, said section having wings at the top and bottom of said guard provided with recesses to receive said valves, bolts provided at the top and bottom of said guard and connecting the opposite rear walls thereof for clamping said wings on said valves, and one of said sections having a clamping bolt near the middle portion of said guard for locking said sections, one upon another, at the joint between them, said sections having vertical openings therein, and glass plates fitting within said openings, the plates of one section lapping by the plates of the other section to allow freedom of longitudinal adjustment of one section with respect to the other section.

5. The combination, with a water glass and valves whereon said glass is mounted, of a guard composed of upper and lower sections having abutting telescoping ends, said guard having means at the top and bottom for engaging said valves, the rear portion of said guard being open, and means extending transversely thereof for drawing the walls of said guard together to clamp said valves, and means for clamping the adjacent ends of said sections, one upon the other, said sections having openings therein, and a plurality of comparatively small glass plates fitting within said openings, one upon another, the plates at the adjacent ends of said sections lapping by one another, and said plates being readily inserted or removed from said guard for convenience in increasing or decreasing the length of said guard to adapt it for water glasses of different length.

[Claim 6 not printed in the Gazette.]

1,111,519. FOUNTAIN-PEN. FRANK M. ASHLEY, New York, N. Y. Filed Sept. 7, 1911. Serial No. 648,007. (Cl. 120—48.)



1. A fountain pen comprising a casing having a reservoir formed therein and provided with a bore at its forward end and having a partition between said bore and the reservoir provided with an ink-duct, a cylinder fitted to rotate in said bore, and a longitudinally movable feed plug fitted snugly in said cylinder and extending therethrough, the rear end of said plug closely abutting said partition and having an ink-duct formed in one side thereof adapted to register with the ink-duct in said partition in one position of rotary adjustment, and to be out of registry with the ink duct in the partition in another position of rotary adjustment, the joint between the cylinder and barrel being close to the end of the barrel, the latter being free from joints at intermediate points of its length.

2. A fountain pen comprising a casing having a reservoir formed therein and provided with a bore at its forward end and having a longitudinally movable partition between said bore and the reservoir provided with an ink-duct, a cylinder fitted to rotate in said bore, and a feed-plug fitted snugly in said cylinder, the rear end of which closely abuts said partition and having an ink-duct formed in one side thereof adapted to register with the ink-duct in said partition in one position of rotary adjustment, and to be out of registry with the ink duct in the partition in another position of rotary adjustment, the joint between the cylinder and barrel being close to the end of the barrel, the latter being free from joints at intermediate points of its length.

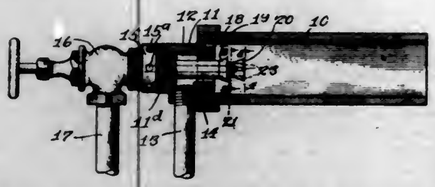
3. A fountain pen comprising a casing having a reservoir formed therein and provided with a bore at its forward end and having a partition between said bore and reservoir which is provided with an ink-duct and an opening which extends therethrough and each of which is located an equal distance radially from the axis of said bore, a cylinder fitted to rotate in said bore, a feed-plug fitted in said cylinder, the rear end of which abuts said partition and having an ink-duct formed in one side thereof adapted to register alternately with the ink-duct and opening in said partition, a tube communicating with said opening and extending into said reservoir to near the rear end thereof, and means for drawing ink into said reservoir through said tube and expelling the air therefrom.

4. A fountain pen comprising a casing having a reservoir formed therein and provided with a bore at its forward end and having a longitudinally movable partition between said bore and reservoir which is provided with an ink-duct and an opening which extends therethrough and each of which is located an equal distance radially from the axis of said bore, a cylinder fitted to rotate in said bore, a feed-plug fitted in said cylinder, the rear end of which abuts said partition and having an ink-duct formed in one side thereof adapted to register alternately with the ink-duct and opening in said partition, a tube communicating with said opening and extending into said reservoir to near the rear end thereof, and means for drawing ink into said reservoir through said tube and expelling the air therefrom.

3. A fountain pen comprising a casing having a bore at one end, a cylinder fitted in said bore, a feed-plug having an ink duct within said cylinder, a partition in the casing against which the feed-plug is adapted to abut, said partition having an ink duct therein, the cylinder being movable within the bore so as to bring the ink duct of the plug into and out of alinement with the ink duct in the partition, said cylinder being formed with peripheral grooves adapted to receive a lubricant to provide an ink tight yet free fit for the cylinder within the bore, the joint between the cylinder and barrel being close to the end of the barrel, the latter being free from joints at intermediate points of its length.

[Claims 6 to 10 not printed in the Gazette.]

1,111,520. OIL-BURNER. ARCHIE M. BAIRD and HARVEY D. PALMER, Topeka, Kans. Filed Jan. 7, 1914. Serial No. 810,707. (Cl. 158—76.)



1. An oil burner, comprising a mixing chamber open at one end, an oil supply pipe and an air supply pipe, the air being under pressure, both of said pipes being in communication with the closed end of said chamber, the oil supply pipe extending into said chamber slightly beyond the end of the air supply pipe and having its inner end provided with radially disposed ports a distance removed from the inner end thereof, said ports terminating in longitudinally disposed channels arranged beneath the normal surface of said oil supply pipe, so the oil will be drawn into the mixing chamber through the action of the air discharge therein.

2. An oil burner, comprising an elongated member open at one end, while the other end is provided with an air-receiving chamber opening into said member, conduits leading respectively from an oil supply and an air supply, the latter supply being under pressure, the air conduit being adapted to discharge the air into said chamber, and a nozzle connected with the oil conduit and extending through said chamber and into the closed end of said member, said nozzle being provided with radially extending ports terminating in longitudinally disposed channels extending to the tip of the nozzle whereby the oil is delivered in small streams or jets, the end of the nozzle being formed to deflect the air away from said nozzle and cause the oil to be entrained thereby.

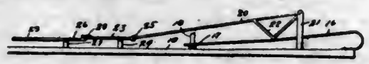
3. An oil burner, comprising a comparatively large mixing chamber open at one end, conduits leading respectively from an oil supply and an air supply, the latter being under pressure, the air conduit being adapted to deliver the air in an annular jet at one end of said chamber and about the oil conduit, while the oil conduit extends into said chamber slightly beyond the point of air delivery, with the delivery end of the oil conduit provided with radially disposed ports terminating in longitudinally disposed channels extending to the tip of said oil conduit.

4. An oil burner, comprising a comparatively large mixing chamber open at one end, conduits leading respectively from an oil supply and an air supply, the latter being under pressure, the air conduit being arranged to deliver the air in an annular jet at one end of said chamber and about the oil conduit, while the oil conduit extends into said chamber slightly beyond the delivery end of the air conduit, the delivery end of the oil conduit being provided with radially disposed ports, and means surrounding the oil conduit whereby the air is deflected at the rear of the point of discharge of said oil conduit so as to cause the oil to be entrained thereby.

5. An oil burner, comprising a mixing chamber open at one end, conduits leading respectively from an oil supply and an air supply, said conduits being concentrically arranged so that the air is delivered into the closed end of the mixing chamber in an annular stream or jet, the oil conduit extending beyond the air conduit whereby the oil is delivered at a point beyond the delivery of the air into the mixing chamber, the end of the oil conduit being provided with a number of radially arranged ports at a point removed from the inner end of said conduit and with a radially disposed flange arranged intermediate of said ports and the delivery end of the air conduit whereby the air is deflected away from said ports and the flow of oil induced thereby.

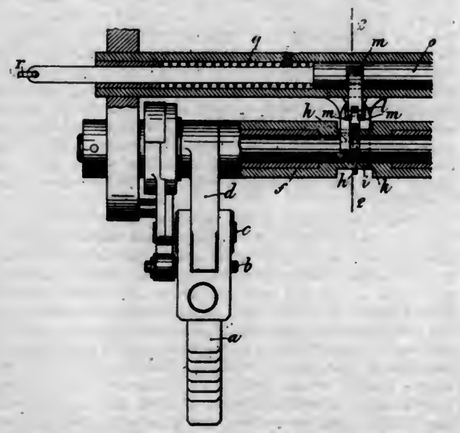
[Claims 6 and 7 not printed in the Gazette.]

1,111,521. TRAP. EDGAR A. BERG, Hatton, N. D. Filed Aug. 12, 1913. Serial No. 784,463. (Cl. 43—23.)



A trap including a base bar, a pair of opposite wire mesh jaws hinged to said bar, a leaf spring secured to said bar and having a terminal eye loosely receiving frame portions of said jaws, depression of said jaws to open position serving to tension said spring, a trigger hinged to said bar and having a projection on the bottom face designed to bear upon and hold said spring tensioned when the trigger is cocked, a trigger catch pivoted intermediate the ends on said bar and having a notch in the rear end adapted to receive the tip of said trigger when the latter is cocked, and a bait lever pivoted intermediate the ends of said bar and having a forked rear end adapted to receive the front end of said trigger catch, the upper arm of said forked end being longer than the lower end thereof.

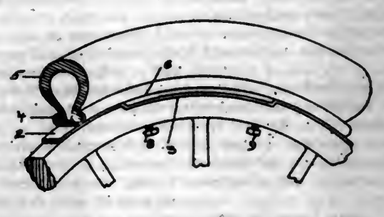
1,111,522. AUTOMATIC RAILWAY SIGNALING APPARATUS. JACQUES PIERRE DE BRAAM, Paris, France. Filed Jan. 30, 1913. Serial No. 745,115. (Cl. 246—59.)



1. In automatic railway signaling apparatus of the type specified, the combination with a pair of independently movable impact levers adapted to be actuated by track detents, a train device controlling member, two levers locking said member in its inoperative position, and means operatively connected to said impact levers for moving said locking levers into unlocking position when said impact levers are actuated.

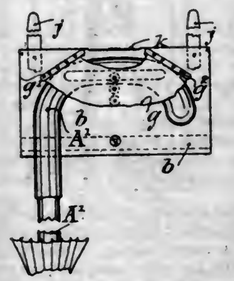
2. In automatic railway signaling apparatus of the type specified, the combination with two independently movable impact levers adapted to be operated by track detents on each side of the track, spring mechanism for operating the train brakes and warning signals, two levers pivoted scissors-fashion each independently engaging said spring mechanism, and two rotary cams each adapted to actuate one of said two scissor levers, whereby the actuation of both impact levers is necessary to fully disengage said spring mechanism in order to operate the train brakes and warning signals.

1,111,523. DEMOUNTABLE-RIM FASTENING FOR VEHICLE-WHEELS. CHARLES KULA, Bay City, Mich. Filed May 14, 1912. Serial No. 697,166. (Cl. 152—21.)



The combination of a felly and a felly band secured thereon, said band formed with circumferentially depressed portions, and a demountable rim carrying a casing; of a removable clamping member having a hole near one end, inwardly projecting flanges formed integral with said clamping member adapted to take over and cover the sides of the depressed portion of said band, a pair of adjusting screws each located near one end of said clamping member and threaded through said felly and said band, one of said screws formed with a projecting pin adapted to pass through the hole in said clamping member and engage and lock said demountable rim; a shoulder on said screw adapted to engage the inner face of said clamping member, said clamping member being normally out of engagement with said rim when the screws are loosened.

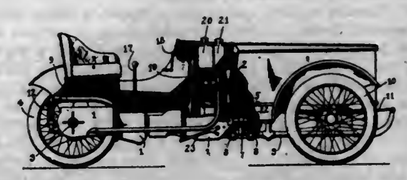
1,111,524. PORTABLE AND FOLDING DESK, REST, OR THE LIKE AND MEANS FOR SUPPORTING THE SAME. JULIUS COHEN, Manchester, England. Filed Nov. 25, 1913. Serial No. 802,895. (Cl. 45—121.)



1. In combination, a desk or rest having a back board, a supporting member secured to the back board, said member comprising a strip of flexible material having both of its ends fastened to said board and being adapted to embrace a stick or the like, and means for adjustably securing said strip to said board at a point intermediate the ends of said strip.

2. In combination, a desk or rest having a back board, a supporting member secured to the back board, said member comprising a V-shaped strip of flexible material having both of its ends fastened to said board and being adapted to embrace a stick or the like, and means for adjustably securing said strip to said board at a point intermediate the ends of said strip.

1,111,525. AUTOMOBILE CONSTRUCTION. LEMBERT W. COPPOCK, Grand Rapids, Mich. Filed Aug. 20, 1913. Serial No. 785,784. (Cl. 21—90.)

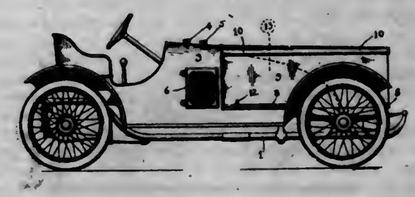


1. A motor vehicle comprising a frame supported at its forward end on wheels, propelling mechanism comprising a motor, transmission, and a rear axle, a single housing for the propelling mechanism, means for removably supporting the forward end of the housing on said frame, a spring on the rear part of said frame, a saddle attached to said spring including a hollow boss, spaced lugs on the rear of said housing to receive said boss, and a bolt passed through said ears and said boss and thereby supporting said frame on said housing.

2. A motor vehicle comprising a frame supported at its forward end on wheels, propelling mechanism comprising a motor, transmission and a rear axle, a single housing for the motor and the transmission and in which the rear axle is journaled, supporting connections between the rear of the frame and the rear of the housing, a pair of cross-members near the forward part of said frame, a bracket bridging said cross-members and supported thereby, a ball carried by said bracket, and a socket carried by the forward end of the housing to receive said ball and thereby providing a universal movement at said ball and socket joint connection.

3. A motor vehicle, comprising a frame supported at its forward end on wheels, propelling mechanism comprising a motor, transmission, and a rear axle mounted in a single housing, a spring on the rear part of said frame, a saddle attached to said spring, lugs on the rear of said housing to which the said saddle is detachably connected, a cross member near the forward part of said frame, and a ball and socket connecting the cross member and housing.

1,111,526. COOLING DEVICE FOR INTERNAL-COMBUSTION ENGINES. LEMBERT W. COPPOCK, Grand Rapids, Mich. Filed Aug. 20, 1913. Serial No. 785,785. (Cl. 21—90.)



1. A motor vehicle, comprising a frame, a detachable package box at the forward part of the frame, a lid on said package box, said lid having a longitudinal air passage therethrough, and a motor located at the rear of said package box.

2. A motor vehicle, comprising a frame, a motor mounted on said frame, a hood over said motor, a detachable package box on said frame in front of said hood and a lid on said box having a longitudinal air passage therethrough open at the front and communicating at the rear with the underside of said hood.

3. A motor vehicle, comprising a frame, a motor mounted on said frame, a hood over said motor, a wire mesh partition at the forward end of said hood, a detachable

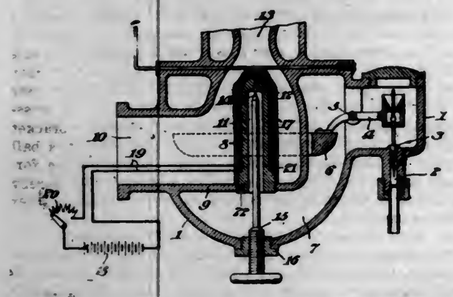
package box mounted on said frame in front of said partition, and a lid on said package box having a longitudinal passage therethrough open at the front and communicating with the said partition at the rear.

4. A motor vehicle, comprising a frame, a motor mounted on said frame, a hood over said motor, a vertical wire mesh partition at the forward end of said hood, a floor on said frame extending forward of said partition, a package box detachably mounted on said floor, said box being lower than said partition, and a lid on said box having an air passage therethrough communicating with said partition.

5. A motor vehicle, comprising a frame, a motor on said frame, a hood over said motor, a floor extending forward of said hood, a package box consisting of four vertical rectangular walls detachably mounted on said floor, and a lid for said box having a longitudinal passage therethrough communicating with the underside of said hood.

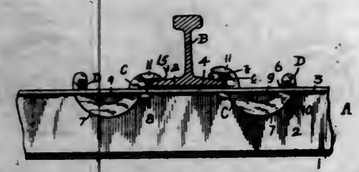
[Claims 6 and 7 not printed in the Gazette.]

1,111,527. CARBURETER. CHALON E. CORSON, Ridley Park, Pa., assignor of one-half to George C. Hetzel, Ridley Park, Pa. Filed May 27, 1913. Serial No. 770,149. (Cl. 219—38.)



In a carbureter, the combination of a fuel reservoir, with vaporizing means having a section adjacent to and a passage communicating with said reservoir, said section disposed below the liquid level of said reservoir, and a source of electric energy connected with said vaporizing means for heating fuel in said passage and reservoir.

1,111,528. RAIL-FASTENING DEVICE. GEORGE M. COTE, Pittsburgh, Pa., assignor of one-third to J. Harvey Harrison, Pittsburgh, Pa. Filed Jan. 15, 1914. Serial No. 812,195. (Cl. 238—4.)



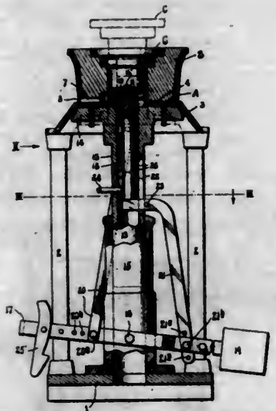
1. In railway devices for the purpose described, the combination of an I-beam cross-tie provided with a pair of alined apertures in the top flange thereof and an arc-shaped seat cut in the web thereof and connecting said apertures; a clamp member having an arc-shaped body adapted to be mounted in said seat, the head of said clamp protruding through one of said apertures to engage the rail while the tail of said clamp protrudes through the other aperture, and a second member bearing against the top of said tie and exerting an upward tension on said tail.

2. In railway devices for the purpose described, the combination of an I-beam cross-tie provided with a pair of alined apertures in the top flange thereof and an arc-shaped seat cut in the web thereof and connecting said apertures, a clamp member having an arc-shaped body adapted to be slidably mounted in said seat, the head of said clamp protruding through one of said apertures to engage the rail, a plurality of rail engaging surfaces being provided on said head, while the tail of said clamp protrudes through the other aperture, and a second member bearing against the top of said tie and exerting an upward tension on said tail.

3. In railway devices for the purpose described, the combination of an I-beam cross-tie provided with a pair of alined apertures in the top flange thereof and an arc-shaped seat cut in the web thereof and connecting said apertures, a clamp member having an arc-shaped body adapted to be mounted in said seat, the head of said clamp protruding through one of said apertures to engage the rail, while the tail of said clamp is slotted and protrudes through the second aperture, and a wedge member adapted to engage said slot and bear upon the top of said tie.

4. In railway devices for the purpose described, the combination of an I-beam cross-tie provided with a pair of alined apertures in the top flange thereof and an arc-shaped seat cut in the web thereof and connecting said apertures, a clamp member having an arc-shaped body adapted to be slidably mounted in said seat, the head of said clamp protruding through one of said apertures to engage the rail, said head being provided with a plurality of rail engaging faces, while the tail of said clamp is slotted and protrudes through the other aperture, and a wedge member engaging said slot and bearing upon the top of the tie.

1,111,529. MOLDING-MACHINE. WILLIAM A. DENNEY, Quincy, Ill., assignor to J. R. Little Metal Wheel Company, Quincy, Ill., a Corporation. Filed Mar. 9, 1914. Serial No. 823,374. (Cl. 22—47.)



1. A molding machine comprising pattern holders for supporting separable pattern sections, a flask support adjacent to said pattern holders, for supporting a flask member within which the pattern sections are supported, means for turning one of the pattern holders to release one of the pattern members, and means for moving said pattern holders in different directions to draw one of the pattern sections from the upper portion of the flask member and to draw the other pattern section from the lower portion of the flask member.

2. A molding machine comprising telescoping pattern holders adapted to support separable pattern sections, a flask support for holding a mold member around the separable pattern sections, means for turning one of the pattern holders to release a pattern section from the mold member, and means for operating said telescoping pattern holders to draw one of the pattern sections from the upper portion of the mold member and to draw the other pattern member from the lower portion of the mold member.

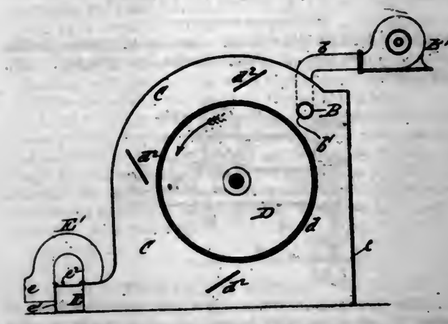
3. A molding machine comprising telescoping pattern holders adapted to support separable pattern sections, a flask support for holding a mold member around the separable pattern sections, means for turning one of the pattern holders to interlock the separable pattern sections with each other, and means for operating said telescoping pattern holders to draw one of the pattern sections from the upper portion of the mold member and to draw the other pattern member from the lower portion of the mold member.

4. A molding machine comprising telescoping pattern holders adapted to support separable pattern sections, a flask support for holding a mold member around the separable pattern sections, an operating device for shifting the pattern holders in opposite directions, and means for locking the operating device to hold the pattern sections away from each other.

5. A molding machine comprising a pattern holder adapted to support a pattern member, a flask support for holding a mold member around said pattern member, means for turning said pattern holder so as to turn the pattern member for the purpose described, and means for moving said pattern holder to separate the pattern section from said mold member.

[Claims 6 to 10 not printed in the Gazette.]

1,111,530. METHOD AND APPARATUS FOR TREATING FEATHERS. JOHN DE PAOLI, New York, N. Y. Filed Nov. 6, 1913. Serial No. 799,475. (Cl. 34—4.)



1. The method herein described of treating starched feathers for the purpose designated, consisting in subjecting them while supported on the periphery of a rotating drum to an exteriorly-applied forced air blast only substantially as set forth.

2. The method herein described of treating starched feathers for the purpose designated consisting in subjecting them while supported on the periphery of a rotating drum in an inclosure to an exteriorly-applied forced air blast only substantially as set forth.

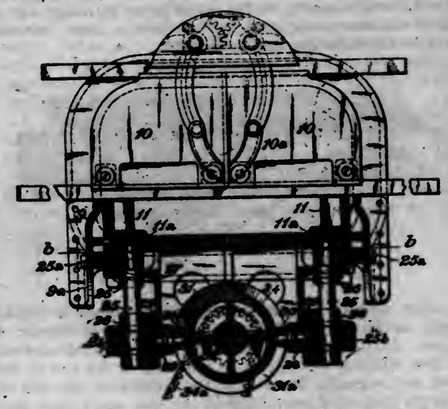
3. The method herein described of treating starched feathers for the purpose designated consisting in subjecting them to an exteriorly-applied forced air blast only while supported on the periphery of a rotating drum in an inclosure connected with an air exhaust substantially as set forth.

4. In apparatus of the character designated the combination of a rotatable perforated drum, means for supporting feathers on the periphery thereof, and means for directing an air blast only against the periphery of said drum and against the feathers and through the perforation of the drum substantially as set forth.

5. In apparatus of the character designated, the combination of a rotatable perforated drum, means for supporting feathers on the periphery thereof, an inclosure for said drum, and means for directing a blast only of air against the periphery of said drum and against the feathers and through the perforations of the drum substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,111,531. MECHANICAL STOKER. ALBERT G. ELVIN, Somerville, N. J. Filed Feb. 24, 1913. Serial No. 750,124. (Cl. 110—113.)



1. In a mechanical stoker, the combination of a shovel shaft movable about a vertical axis, a fuel shovel fixed on said shaft, a rotatable grooved operating cam, a rack fitted to reciprocate parallel with the axis of said cam and engaging the groove thereof, an intermediate shaft parallel with the shovel shaft, and gearing connecting said intermediate shaft with the rack and with the shovel shaft, respectively.

2. In a mechanical stoker, the combination of a receptacle, two shovel shafts, independently movable about vertical axes in said receptacle, two shovels, each fixed on one of said shafts, a rotatable grooved operating cam journaled intermediate of and at a right angle to the shovel shafts, under said receptacle and in rear of said shafts, members fitted to reciprocate parallel with and on opposite sides of the axis of the cam, each engaging the groove thereof, and intermediate connections independently transmitting movement from said members to the shovel shafts.

3. In a mechanical stoker, the combination of two shovel shafts, independently movable about vertical axes, two fuel shovels, each fixed on one of said shafts, a rotatable grooved operating cam journaled intermediate of and at a right angle to the shovel shafts, members fitted to reciprocate parallel with and on opposite sides of the axis of the cam, each engaging the groove thereof, and intermediate connections independently transmitting movement from said members to the shovel shafts.

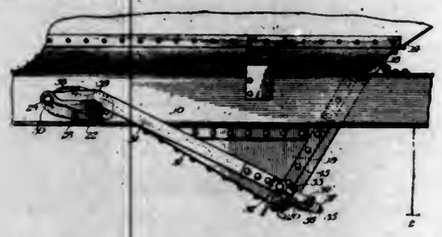
4. In a mechanical stoker, the combination of two horizontally swinging shovels mounted on vertical shafts at opposite sides of the furnace opening, a rotatable cam cylinder having a groove with inclined portions in its periphery, racks having projections engaging said groove, and intermediate gear mechanism between said racks and the shovel shafts.

5. In a mechanical stoker, the combination of two horizontally swinging shovels mounted on vertical shafts at opposite sides of the furnace opening, a rotatable cam cylinder having a peripheral groove with one portion inclined at a comparatively steep angle and another portion inclined in the opposite direction at a lesses angle, racks having projections engaging said groove, and intermediate gear mechanism between said racks and the shovel shafts.

1,111,532. DUMP-CAR. ROBERT E. FRAME and WILLIAM H. DE GRAFF, Michigan City, Ind., assignors to Haskell & Barker Car Company, Michigan City, Ind., a Corporation of Indiana. Filed June 4, 1913. Serial No. 771,679. (Cl. 105—185.)

1. In a dump car, in combination, a hopper, a hinged door for closing the discharge end of the hopper, a crank shaft, a link connecting the door and the crank of the shaft, and a fixed shoulder, engageable by the pivot uniting the link and crank, when the door is closed.

2. In a dump car, in combination, a hopper, a hinged door for closing the discharge end of the hopper, a crank shaft, a link connecting the door and the crank of the shaft, its attachment to the latter being shiftable, and a fixed shoulder, engageable by the pivot uniting the link and crank when the door is closed.



3. In a dump car, in combination, a hopper, a hinged door for closing the discharge opening of the hopper, a crank shaft having a longitudinal slot in its crank-arm, a link attached to the door, a pin fixed in the end of the link and engaging the slot in the crank-arm, the end of the pin projecting laterally from the link, and a plate having a shoulder for engagement by the pin when the door is closed, the crank-arm being so disposed that as the closing movement of the door is completed the pin passes beyond the line of attachment of the link to the door and the center of the crank shaft.

4. In a dump car, in combination, a pair of center sills spaced apart, a pair of hoppers located on opposite sides of the center sills, a door for closing the discharge opening of each hopper, such doors being rigidly united, a crank shaft disposed transversely with reference to the car and having its crank arm located between the center sills and being longitudinally slotted, a pair of plates attached one to the inner face of each of the sills, each plate having a shoulder facing backwardly with reference to the doors and being downwardly inclined, and a link connecting the crank arm with the doors, such connection being by means of a pin fixed in the link and engaging the slot in the crank arm and the shoulders of the plates.

5. In a dump car, in combination, apair of center sills spaced apart, a pair of hoppers located on opposite sides of the center sills, a door for closing the discharge opening of each hopper, such doors being rigidly united, a crank shaft disposed transversely with reference to the car and having its crank arm located between the center sills and being longitudinally slotted, a pair of plates attached one to the inner face of each of the sills, each plate having a shoulder facing backwardly with reference to the doors and being downwardly inclined, and a link connecting the crank arm with the doors, such connection being by means of a pin fixed in the link and engaging the slot in the crank arm and the shoulders of the plates, the crank arm being so disposed that in the final closing movement of the doors the pin is carried beyond a line passing through the crank arm and the point of attachment of the link to the doors.

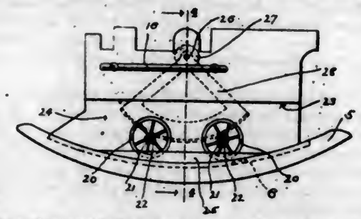
[Claim 6 not printed in the Gazette.]

1,111,533. AMUSEMENT APPARATUS. WILLIAM H. FULPER, Flemington, N. J. Filed Sept. 19, 1913. Serial No. 790,666. (Cl. 46—22.)

1. In a device of the class described, in combination, a floor, supporting means for said floor, said means including a rocker, and an upright structure carried by said floor and adapted to aid a person in mainntaining his balance when standing on or stepping onto or from said floor.

2. In a device of the class described, in combination, a floor, supporting means for said floor, said means including a rocker, and an upright structure carried by said floor, said structure including a member adapted to be grasped by the hand of a person when such person is standing on or stepping onto or from said floor.

3. In a device of the class described, in combination, a floor, supporting means for said floor, said means including a rocker, and an upright structure carried by said floor and adapted to aid a person in maintaining his balance when standing on or stepping onto or from said floor, said structure bearing the depiction of some well-known object.

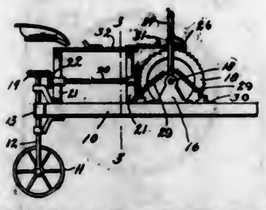


4. In a device of the class described, in combination, a floor, supporting means for said floor, said means including a rocker, and an upright structure carried by said floor and adaptetd to aid a person in maintaining his balance when standing on or stepping onto or from said floor, said structure bearing the depiction of certain of the characteristic parts of a locomotive.

5. In a device of the class described, in combination, a plurality of rockers, a platform supported thereby, a vertical wall arranged longitudinally of said platform, and a hand-rail carried by said platform at a point above said platform, said wall constituting a representation of some well-known object.

[Claims 6 to 9 not printed in the Gazette.]

1,111,534. STEERING-GEAR. GEORGE R. GATES, Beloit, Kans. Filed Oct. 4, 1913. Serial No. 793,441. (Cl. 21—191.)

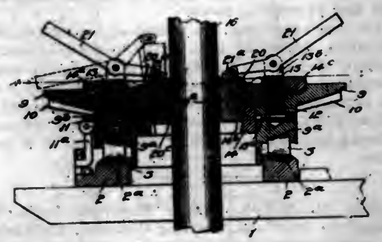


1. The combination with a dirigible ground wheel, of means for swinging the ground wheel to make a turn including a shaft, opposed bevel gears on said shaft having peripheral ratchet teeth, a bevel pinion meshing with both gears and having an operative connection with said ground wheel, a pair of foot pedals pivoted on said shaft, springs normally holding said pedals in upright position, and releasable gravity pawls on said pedals operatively engaging the ratchet teeth of said gears.

2. The combination with a dirigible ground wheel, of means for steering the ground wheel including a frame, a transverse shaft on said frame, opposed bevel gears on said shaft each having peripheral ratchet teeth, a bevel pinion meshing with both gears and having an operative connection with said ground wheel, a pair of foot pedals pivoted on said shaft, opposed springs for each pedal connected to said frame and normally holding the pedal upright, a gravity pawl on each pedal disposed in operative relation with the adjacent peripheral ratchet teeth, and stationary pins adapted to project underneath and raise both pawls when the pedals are in vertical position.

3. In combination with a dirigible ground wheel, means for steering the ground wheel comprising a frame, a transverse shaft in said frame, opposed bevel gears on said shaft each having peripheral ratchet teeth, a bevel pinion meshing with both gears and having an operative connection with said ground wheel, a pair of foot pedals revoluble upon said shaft, springs connected with each pedal for normally holding it upright, and a pawl on each pedal normally held out of engagement with said ratchet teeth and disposed to engage said ratchet teeth when said pedal is moved forwardly.

1,111,535. HYDRAULIC ROTARY DRILLING-MACHINE. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1913. Serial No. 759,958. (Cl. 255—23.)



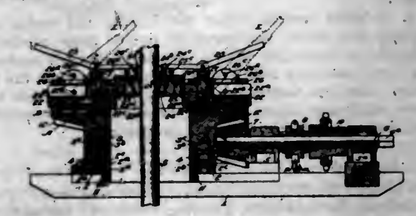
1. In a rotary drilling machine, the combination with a rotary table having an axial opening for the passage of a drill stem, and provided on its upper surface with drive pins, of a housing having openings for the passage of the drive pins, levers pivoted on the drive pins, and slips suspended from the levers, said slips provided with means for engaging the bushing.

2. In a rotary drilling machine, the combination with a rotary table having an axial opening, of a bushing having an opening in the axis of rotation of the table, and slips suspended in said bushing, said slips having beveled lower surfaces for engaging the collars on a drill stem.

3. In a rotary drilling machine, the combination of a rotary table having an axial opening, a bushing having an axial opening, slips suspended in the axial opening of said bushing and levers from which the slips are suspended, said levers having fulcrums on the rotary table.

4. In a rotary drilling machine, the combination with a rotary table having an axial opening and provided on its upper surface with drive pins, of a bushing having openings for the passage of the drive pins, slips provided with means for engaging the bushing and levers fulcrumed on the drive pins said levers having loose pin and slot connections with the slips.

1,111,536. HYDRAULIC ROTARY DRILLING-MACHINE. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 19, 1914. Serial No. 825,875. (Cl. 255—23.)



1. In a rotary drilling machine, the combination of a rotary table, slides for imparting the movement of the table to a drill-stem, slips detachably connected with the slides, and means detachably connected with the rotary table for moving the slips into and out of operative position.

2. In a rotary drilling machine, the combination of a rotary table, slides for imparting the movement of the rotary table to a drill-stem, means for restraining the movement of the rotary table, slips detachably connected with the slides, and means detachably connected with the rotary table for moving the slips into and out of operative position.

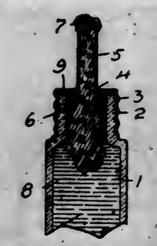
3. In a rotary drilling machine, the combination of a rotary table, slides for imparting the movement of the rotary table to a drill-stem, slip-blocks detachably connected with the slides, slips for engaging a drill-string, and means detachably connected with the rotary table for moving the slips into and out of operative position.

4. In a rotary drilling machine, the combination of a rotary table, slides for imparting the movement of the rotary table to a drill-stem, slips detachably connected with the slides, levers for moving the slips into and out of operative position, and fulcrum posts for the levers, said posts detachably stepped on the slides.

5. In a rotary drilling machine, the combination of a rotary table having slide chambers, slides for imparting the movement of the rotary table to a drill-stem, slip blocks detachably connected with the slides, slips for engaging a drill-string, levers for moving the slips into and out of operative position, and fulcrum posts for the levers.

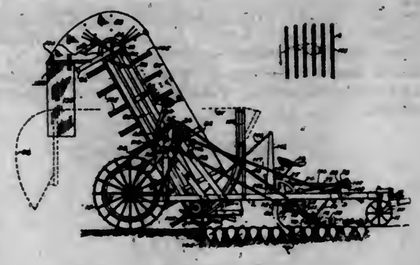
[Claims 6 to 8 not printed in the Gazette.]

1,111,537. ENVELOP-MOISTENING DEVICE. EDWARD E. HILL, Pittsburgh, Pa. Filed Apr. 17, 1913. Serial No. 761,812. (Cl. 120—75.)



An envelop moistening device comprising a receptacle constituting a reservoir and provided with a breast, a peripherally threaded neck, a gasket mounted upon said neck and projecting slightly inwardly therefrom, a cylindrical wick tube having its inner end beaded, a cap fixed to said tube intermediate the ends of the latter, said cap having a threaded rim engaging with the threads of the neck and extending to said breast, and a wick extending through said tube and into said reservoir, the connection between the cap and the tube being permanent, said gasket being clear of said tube.

1,111,538. HARVESTER FOR BEETS AND OTHER ROOT CROPS. FRANK S. INGOLDSBY, Pine Lake, Mich. Filed Aug. 12, 1912. Serial No. 714,553. (Cl. 55—51.)



1. The combination, with a wheeled vehicle, of a series of endless chains carried thereby, means for moving said chains as the vehicle moves, and individual resilient tines projecting at intervals from each chain.

2. The combination, with a wheeled vehicle, of a series of inclined endless chains carried thereby side by side and spaced apart, means for moving said chains as the vehicle moves, and projecting resilient tines carried by said chains individually.

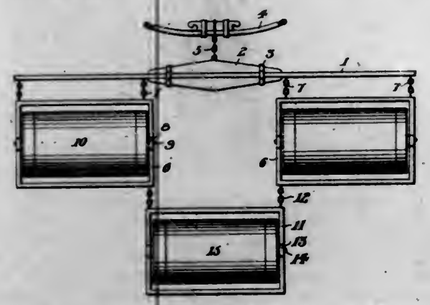
3. The combination, with a wheeled vehicle, of a series of endless chains carried thereby, means for moving said chains as the vehicle moves, and crop-lifting tines carried by said chains, said tines being arranged in arcual groups to have a position approximately that of the tines of a pitch fork.

4. The combination, with a movable vehicle, of a series of endless chains carried therein side by side and spaced apart and extending in an up and down direction, means for moving said chains as a unit consequent upon the vehicle movement, and resilient tines projecting from the chains at right angles thereto and adapted to act on root crops.

5. The combination, with a movable vehicle, of a series of endless chains carried therein side by side and spaced apart and extending in an up and down direction, means for moving said chains as a unit consequent upon the vehicle movement, tines projecting from the chains, and side walls on opposite sides of the elevating portion of the chains.

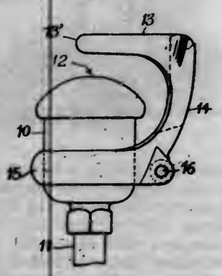
[Claims 6 to 10 not printed in the Gazette.]

1,111,539. SOIL-PULVERIZER. FLORIAN JOZSIBÁN, Maurer, N. J. Filed Feb. 24, 1913. Serial No. 750,434. (Cl. 55—47.)



A soil pulverizer comprising a beam, a pair of rectangular frames arranged rearwardly and adjacent the opposite ends thereof, a pair of flexible connections between each of the said frames and said beam, a rectangular frame arranged centrally of said beam and rearwardly of said frames, flexible connections between first named frames and the said rear frame, crushing rollers rotatably mounted in the said rectangular frames and adapted for crushing the soil when moved there-over.

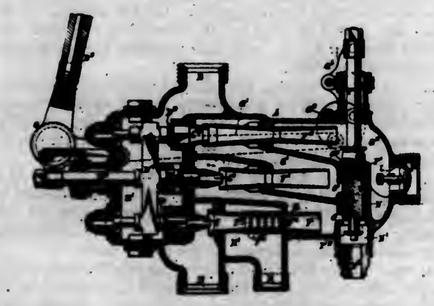
1,111,540. GUARD FOR BUBBLING DRINKING-FOUNTAINS. SIMEON C. KEITH, Jr., Newton, and ELEAZAR CATE, Belmont, Mass.; said Cate assignor to L. E. Knott Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 22, 1910. Serial No. 598,841. (Cl. 137—109.)



1. The combination with the nozzle of a bubbling drinking fountain, of a segmental guard therefor supported above the mouth of the nozzle so as to partly encircle the bubble issuing from the nozzle, the extremities of said guard being substantially diametrically opposite each other with reference to said bubble, said guard having a clamping portion arranged to clamp the peripheral surface of said nozzle to hold said guard in various angular positions and at various levels.

2. An attachment for the nozzle of a bubbling drinking fountain, consisting of a clamping device adapted to frictionally engage the periphery of said nozzle to support the device in various positions relatively to said nozzle, a post extending upwardly from said clamping device, and two arms extending from said post in position to engage the checks, near the corners of the mouth, of a person drinking.

1,111,541. INJECTOR. ERNST KOERTING, Pegli, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1914. Serial No. 812,397. (Cl. 162—1.)



1. A boiler feeding device for feeding hot water consisting of a jet pump having perforations formed in its combining tube and a steam chamber inclosing said combining tube in combination with an injector connected to receive the heated water delivered by the jet pump.

2. A boiler feeding device for feeding hot water consisting of a jet pump having perforations formed in its combining tube and a steam chamber inclosing said combining tube in combination with a two tube injector connected to receive the heated water delivered by the jet pump.

3. A boiler feeding device for feeding hot water consisting of a casing chambered to receive three combining tubes set in series and having a separate chamber inclosing the first combining tube and a valved chamber for the live steam with jets leading to each tube in combination with three combining tubes, the first of which is perforated to communicate with the chamber inclosing it.

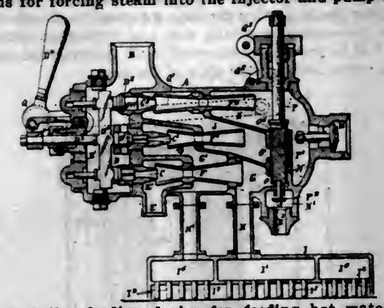
1,111,542. INJECTOR. ERNST KOERTING, Pegli, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,606. (Cl. 162—1.)

1. A boiler feeding device for feeding hot water consisting of an injector in combination with a steam jet pump and a feed water heater connected to receive water from the jet pump and supply it to the injector.

2. A boiler feeding device for feeding hot water consisting of a two tube injector in combination with a steam jet pump and a feed water heater connected to receive water from the jet pump and supply it to the injector.

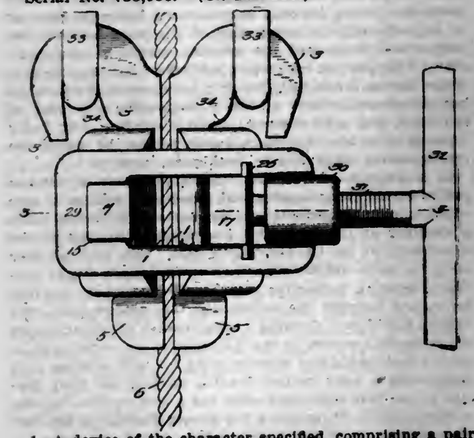
3. A boiler feeding device for feeding hot water consisting of a casing having separate chambers for a steam injector and for a steam jet pump with separate feed water and delivery ports for each in combination with an injector and a steam jet pump situated in said casing and means for forcing steam into the injector and pump.

4. A boiler feeding device for feeding hot water consisting of a casing having separate chambers for a steam injector and for a steam jet pump with separate feed water and delivery ports for each, in combination with a two tube injector and a steam jet pump situated in said casing and means for forcing steam into the injector and pump tubes.



5. A boiler feeding device for feeding hot water consisting of a casing having separate chambers for a steam injector and for a steam jet pump with separate feed water and delivery ports for each, in combination with an injector and a steam jet pump situated in said casing, a feed water heater connected to the delivery port of the jet pump and to the feed water port of the injector and means for forcing steam into the injector and pump.

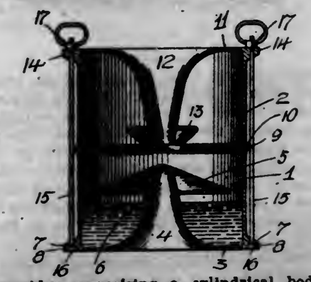
1,111,543. WIRE-LINE CLAMP. JAMES H. KUHNS, Tulsa, Okla., assignor of one-half to Oklahoma Iron Works, Tulsa, Okla., a Corporation. Filed Aug. 5, 1913. Serial No. 783,036. (Cl. 24—135.)



1. A device of the character specified, comprising a pair of levers, one of the levers having a notch or recess at one end and on its outer face, the other lever having a hook for engaging the recess, the first-named lever having a transverse rib at the end of the recess to prevent accidental disengagement of the hook, said levers being grooved transversely on their inner faces adjacent to the connection, and the grooves registering, each lever having a transverse opening extending into the recess, a gripping jaw in each recess, each jaw having an open hook at its upper end, and a threaded opening registering with the opening of the adjacent lever, a set screw passing through each opening of the lever and engaging the threaded opening of the adjacent jaw, and a bail engaging the opposite ends of the levers, and having a nut adjacent to the lever provided with the hook, a screw threaded through the nut and bearing against the end of the lever, and a detachable stop plate on the lever for preventing disengagement of the screw, the outer face of the other lever being transversely grooved at the said end.

2. A device of the character specified, comprising a pair of levers, one of the levers having a notch or recess at one end and on its outer face, the other lever having a hook for engaging the recess, the first-named lever having a transverse rib at the end of the recess to prevent accidental disengagement of the hook, said levers being grooved transversely on their inner faces adjacent to the connection, and the grooves registering, each lever having a transverse opening extending into the recess, a gripping jaw in each recess, each jaw having an open hook at its upper end, and a threaded opening registering with the opening of the adjacent lever, a set screw passing through each opening of the lever and engaging the threaded opening of the adjacent jaw, and a bail engaging the opposite ends of the levers, for clamping them together, said bail having a nut at one lever, and a screw threaded through the nut and engaging the lever.

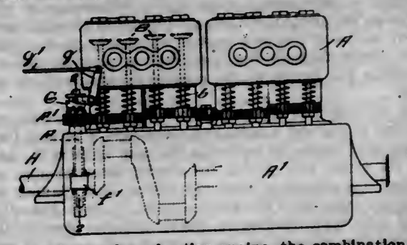
1,111,544. CUSPIDOR. VALENTINE LAICK, Tyre, Pa. Filed Aug. 5, 1913. Serial No. 783,154. (Cl. 4—38.)



1. A cuspidor comprising a cylindrical body portion formed of an upper and lower section, said lower section having its top edge provided with a socket for the reception of said upper section, each of said sections provided with a pair of apertured lugs, said lower section being closed at its bottom and said upper section open, tie bars extending through said lugs and having heads at their lower ends countersunk in the lugs of said lower section, and handles mounted upon said tie bars and engaging the lugs of the upper section.

2. A cuspidor comprising a body portion formed of a pair of abutting cylindrical sections, each of said sections provided with apertured lugs, tie bars extending through said lugs and having heads set in the lugs of the lower section and handles mounted upon the upper ends of said tie bars and engaging the lugs of the upper section.

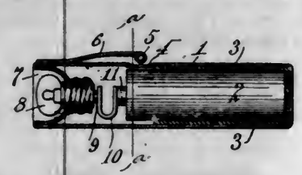
1,111,545. SELF-GRINDING VALVE. WILLIAM MAHONY, Hamilton, Ontario, Canada. Filed Dec. 16, 1913. Serial No. 807,013. (Cl. 121—97.)



1. In an internal combustion engine, the combination of valves having rotatable and longitudinally movable stems arranged parallel with one another, spur gears secured on each of said stems and in mesh with one another therebetween, and forming a gearing connecting the stems and adapted to effect their rotation and permit of their longitudinal movement at the same time, and clutch control connections for rotating one of the valve stems, for the purpose described.

2. In an internal combustion engine the combination of a plurality of valves having rotatable and longitudinally movable stems arranged parallel with one another, intermeshing spur gears secured upon the said valve stems and of sufficient width to permit of longitudinal movement of said valve stems without disengaging the said gears, and clutch controlled connections for imparting rotation to one of the said valve stems, for the purpose described.

1,111,546. POCKET ELECTRIC LIGHT. PAUL H. OELMAN, Dayton, Ohio, assignor to Traders Metal Goods Co., Inc., New York, N. Y., a Corporation of New York. Filed Aug. 11, 1913. Serial No. 784,076. (Cl. 240—8.5.)



1. A pocket electric light, comprising an outer cylindrical casing with an aperture in the side thereof, a battery incased in a shell of non-conducting material within said casing, a lamp electrically connected with said battery, and a resilient contact arm secured to the outer cylindrical casing, said arm having its free or contact end enlarged and in proximity to the aperture in said casing, and adapted to complete the circuit through the lamp and to provide means for securing the device in the pocket, substantially as described.

2. A pocket electric light, comprising a cylindrical casing, a battery incased in said casing, a lamp electrically connected to said battery and a resilient contact arm secured to said casing said arm having its free or contact end enlarged, said battery adapted to be placed in electrical contact with said enlarged end of said resilient arm, and said resilient contact arm adapted to complete the circuit through the lamp and to provide means for securing the device in the pocket, substantially as specified.

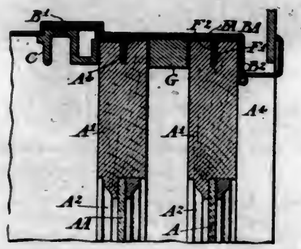
3. A pocket electric light, comprising an outer cylindrical casing with an aperture in the side thereof, a battery incased in a shell of non-conducting material within said casing, a lamp electrically connected with said battery, and a resilient contact arm secured to the outer cylindrical casing, said arm having its free or contact end in proximity to the aperture in said casing, and adapted to complete the circuit through the lamp and to provide means for securing the device in the pocket, substantially as described.

4. A pocket electric light, comprising a cylindrical casing, a battery incased in said casing, a lamp electrically connected to said battery and a resilient contact arm secured to said casing, said battery adapted to be placed in electrical contact with the contact end of said resilient arm, and said resilient contact arm adapted to complete the circuit through the lamp and to provide means for securing the device in the pocket, substantially as specified.

5. A pocket flash light comprising an elongated casing having at one end a lamp and containing a battery for the lamp, and means for retaining the flash light in the pocket of the owner and closing the circuit comprising an elongated clip connected with the casing and adapted when manually operated for that purpose to close the circuit, said clip being adapted to receive between itself and the casing the material at the front of said pocket in which the flash light may be carried.

1,111,547. WINDOW CONSTRUCTION. CHARLES W. RENNER, Altoona, Pa. Filed Feb. 11, 1911. Serial No. 607,899. (Cl. 189—65.)

1. A window construction comprising in combination a sash having longitudinal grooves formed in its side edges a window casing receiving said sash and having metallic sides each formed with a shoulder at its outer edge, and a channel separated from said shoulder by a distance not less than the thickness of said sash, and a guide and weather strip for each casing side each formed of noncorroding metal with an offset portion entering the channel and a flange portion forming a facing for the shoulder of the corresponding casing side and having an intermediate fold to provide a compressible rib entering the groove in the corresponding side edge of the sash.

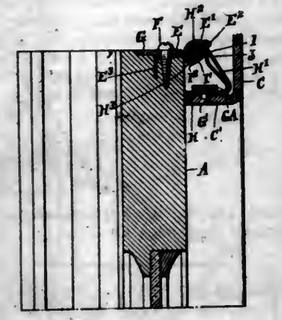


2. A window construction comprising in combination a sash having longitudinal grooves formed in its side edges, a window casing comprising metallic window posts each formed with a shoulder at its outer edge overlapping the outer face of the sash at its side edges and also having a channel formed in it at a distance from said shoulder greater than the thickness of said sash, and a combined sash guide and weather strip for each window post, each formed of noncorroding sheet metal and each comprising an offset portion entering said channel, a flange portion forming a facing for said shoulder and having a bead at its edge closing the outer edge of the joint between the body of said flange and said shoulder, said strip comprising also a body portion connecting said offset portion and said flange having a fold in it forming a compressible rib entering the groove formed in the corresponding side edge of the sash, the said channel in each window post being adapted to receive a curtain guide member by which the corresponding strip may be secured in place.

3. A window construction comprising a pair of window sashes each having longitudinal grooves formed in its side edges, a pair of metallic window posts each formed with a shoulder at its outer edge overlapping the face of the outer sash at its margin, and a sash guide and weather strip for each window post each comprising a flange portion forming a facing for said shoulder and body portion interposed between the sashes and the window post, and having a fold in it forming a compressible rib entering the corresponding groove in the side edge of the outer sash, a second sash guide and weather strip for each window post comprising a body portion bearing against the body portion of the first mentioned strip and a fold portion forming a compressible rib entering the groove formed in the corresponding edge of the inner window sash.

4. A window construction comprising a pair of window sashes each having longitudinal grooves formed in its side edges, a pair of metallic window posts each formed with a shoulder at its outer edge overlapping the face of the outer sash at its marginal and each formed with a channel separated from said shoulder by a distance exceeding the combined thickness of the sashes, and a sash guide and weather strip for each window post each comprising an offset portion entering said channel, a flange portion forming a facing for said shoulder and a connecting body portion having a fold in it forming a compressible rib entering the corresponding groove in the side edge of the outer sash, and a second sash guide and weather strip for each window post comprising an offset portion entering said channel and a body portion bearing against the body portion of the first mentioned strip and a fold portion forming a compressible rib entering the groove formed in the corresponding edge of the inner window sash, the said channel in each window post being also adapted to receive a curtain guide strip covering the portions of said sash guide and weather strips entering said channel and parallel to the bottom thereof.

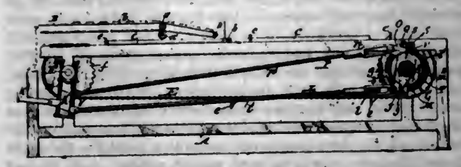
1,111,548. WEATHER-STRIP. CHARLES W. RENNER, Altoona, Pa. Filed Mar. 6, 1912. Serial No. 681,909. (Cl. 20—69.)



1. A weather strip consisting of a strip of resilient metal comprising a body portion adapted to be clamped to the object to which the strip is to be applied and an extension thereof terminating at its free edge in a hollow bead open at one side, a sheet of fabric entering said hollow bead through said open side and passing over the convex surface of said bead and alongside of said body portion and clamped between it and the object to which the strip is applied and a member axially inserted in said hollow bead and engaging the portions of the fabric portion entering the bead to secure said metal and fabric strips together.

2. A weather strip consisting of a strip of resilient metal comprising a body portion adapted to be clamped to the object to which the strip is to be applied and an extension thereof terminating at its free edge in a hollow bead open at one side, a sheet of fabric formed with a loop entering said hollow bead through said open side and passing over the convex surface of said bead and alongside of said body portion and clamped between it and the object to which the strip is applied and a rod axially inserted in said hollow bead and in the loop of said fabric to thereby secure said metal strip and fabric sheet together.

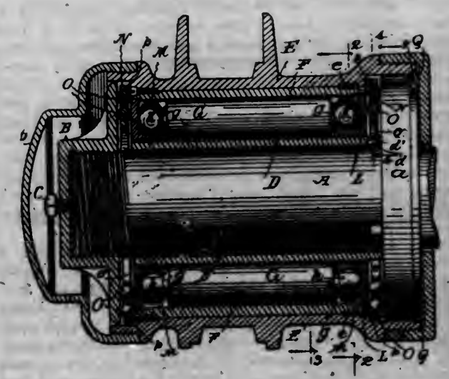
1,111,549. PAN-SKIP MECHANISM FOR DOUGH-CUTTING MACHINES. HENRY STAFFEL, Buffalo, N. Y., assignor to The J. W. Ruger Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed July 2, 1910. Serial No. 570,043. (Cl. 107—27.)



1. A pan skip mechanism comprising a ratchet wheel, regular and skip feed rock arms turning about the same axis as said ratchet wheel and projecting from opposite sides of said axis, means for operating said rock arms so that one of said arms moves forwardly while the other moves backwardly and vice versa, a regular feed pawl mounted on said regular rock arm and engaging with said ratchet wheel during each forward movement thereof, a skip feed pawl mounted on the skip feed rock arm, and means for periodically lowering the skip feed pawl into engagement with said ratchet wheel at the end of a forward stroke of the regular rock arm and at the end of a rearward stroke of the skip feed arm and retaining the same in engagement with said ratchet wheel during the subsequent active forward movement of the skip feed arm and the idle return movement of the regular feed arm.

2. A pan skip mechanism comprising a ratchet wheel, regular and skip feed rock arms turning about the same axis as said ratchet wheel and projecting from opposite sides of said axis, means for operating said rock arms so that one of said arms moves forwardly while the other moves backwardly, and vice versa, a regular feed pawl mounted on said regular rock arm and engaging with said ratchet wheel during each forward movement thereof, a skip feed pawl mounted on the skip feed rock arm, and means for periodically lowering the skip feed pawl into engagement with said ratchet wheel at the end of a forward stroke of the regular rock arm and at the end of a rearward stroke of the skip feed arm and retaining the same in engagement with said ratchet wheel during the subsequent active forward movement of the skip feed arm and the idle return movement of the regular feed arm, comprising a trip arm connected with said skip feed pawl, and a cam turning with said ratchet wheel and engaging with said trip arm.

1,111,550. ANTIFRICTION ROLLER-BEARING. ODELL WILSON, Lakewood, Ohio. Filed Mar. 20, 1912. Serial No. 684,940. (Cl. 64—61.)



1. A journal member and a bearing member with intervening rollers having axial trunnions on their ends, series of spacing balls between the trunnions, flanged rings on one member forming retainers for one side of each series of balls, floating race rings on the other side of each series of balls, and means on one member free of the balls for stopping endwise movement of the rollers.

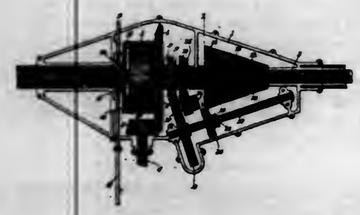
2. A journal member and a bearing member with intervening rollers having axial trunnions on their ends, series of spacing balls between the trunnions, flanged rings on one member forming stops for the trunnions independent of the balls and also forming retainers for one side of each series of balls, and floating race rings on the other side of each series of balls.

3. A journal member and a bearing member with intervening rollers having axial trunnions on their ends, series of spacing balls between the trunnions, flanged rings on one member forming retainers for one side of each series of balls, floating race rings on the other side of each series of balls, and means free of the spacing balls and race rings for stopping endwise movement of the one member with reference to the other member.

4. A journal member and a bearing member with intervening rollers having axial trunnions on their ends, series of spacing balls between the trunnions, flanged rings on one member forming retainers for one side of each series

of balls, floating race rings on the other side of each series of balls, means free of the spacing balls and race rings for stopping endwise movement of the one member with reference to the other member, and means on one member free of the balls for stopping endwise movement of the balls.

1,111,551. TRANSMISSION-GEARING. ALFRED N. ADAMS, Stockton, Cal. Filed Dec. 26, 1911. Serial No. 667,572. (Cl. 74—58.)



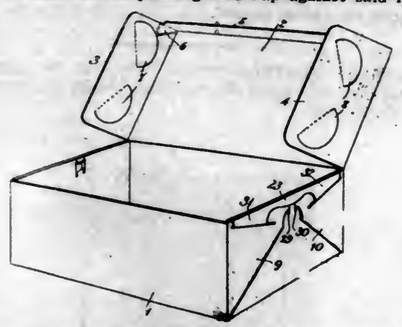
1. A device of the character described comprising a driven member, a beveled gear turnably mounted on said driven member, another beveled gear secured to said first named beveled gear, an independent shaft, a gear keyed to said independent shaft and engaging said last named beveled gear, a plurality of beveled gears mounted on said driven member, a sliding gear on said independent shaft adapted to engage said plurality of beveled gears, a beveled gear keyed to said driven member, an independent gear mounted independently of all of said gears and engaging said last named beveled member, said sliding gear being adapted to engage said independently mounted gear, as described.

2. A device of the character described comprising a driven member, a beveled gear turnably mounted on said driven member, another beveled gear secured to said first named beveled gear, an independent shaft, a gear keyed to said shaft and engaging said last named beveled gear, a plurality of beveled gears mounted on said driven member, a sliding gear on said shaft adapted to engage said plurality of beveled gears and means for driving said first named beveled gear, as described.

3. A device of the character described comprising a driven member, a beveled gear turnably mounted on said driven member, a beveled gear keyed on said driven member, an independently mounted gear engaging said last named beveled gear, an independent shaft, a gear mounted on said shaft and engaging said first named beveled gear, and a sliding gear mounted on said shaft and being adapted to engage said independently mounted gear, as described.

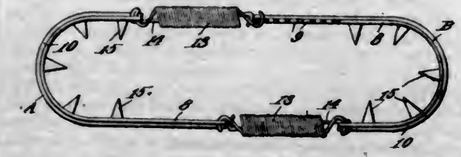
1,111,552. CONTAINER. CHARLES J. ALLERS, East Orange, N. J. Filed Dec. 17, 1913. Serial No. 807,221. (Cl. 229—36.)

A container of the class described formed from a single blank, said blank having a body portion and a lid portion, said body portion having foldable ends and sides, and foldable extensions in the angle between the ends and sides, said foldable extensions being adapted to be moved over against said ends, said lid being formed with ends having tabs thereon, a flap on one side and foldable bracing members in the angle between the ends and flap, whereby when said ends are contacting with the ends of said body and said tabs are interlocked with said extensions the flap will fit tightly against one side of said body and said bracing members will be folded beneath the ends of said lid for pressing said flap against said last



mentioned side, whereby there is presented a tightly fitting substantially telescoping lid.

1,111,553. BROOM-BRIDLE. ALBERT C. ALTHOUSE, Dublin, Pa. Filed June 30, 1913. Serial No. 776,687. (Cl. 15—23.)

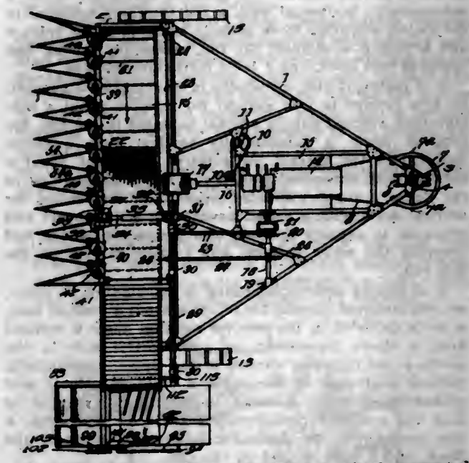


1. A broom attachment comprising two similar bands, each of said bands being provided with a plurality of inwardly projecting spurs adapted to engage broom bristles, and further provided with a plurality of longitudinally arranged apertures adjacent one end, the remote end of said band bent upon itself and provided with an aperture therein, and a holding and adjusting member extending between dissimilar ends of the bands, said holding and adjusting member including a wire extending through the last mentioned aperture of the band, one arm of the wire member coiled upon itself and forming a spring with the remote end thereof hook shaped and adapted to adjustably engage the longitudinally arranged aperture of the adjacent dissimilar end of the adjacent band, the other arm of the said holding member forming a rod with the remote end thereof bent, adapted to engage and rigidly hold the adjacent band end.

2. A broom bridle including similar bands, said bands each including a body portion with a bent end, the said body portion adapted to contact with the side walls of the broom bristles and with the bent ends thereof adapted to embrace the edge walls of the bristles, said bands provided with a plurality of inwardly struck spurs adapted to frictionally grip and wedgedly engage the said bristles, each band provided at one end with a plurality of adjusting apertures and with an aperture at its remote end, a tie rod and a coiled spring permanently secured to the last mentioned aperture and detachably and adjustably engaging one of the first mentioned apertures, said tie rod positioned in and housed by said coiled spring, said tie rod adapted to hold the bands in non-resilient engagement with the broom bristles, said tie rod detachable from the first mentioned aperture for the resilient holding of the bands by the said coiled springs.

1,111,554. THRESHING-MACHINE. ANDREW M. ANDERSON, Moscow, Idaho. Filed Nov. 16, 1912. Serial No. 731,690. (Cl. 56—29.)

1. In a threshing machine, a wheel supported main frame, a motor supported on the frame, vertical guides at the front of the frame, an auxiliary frame movable vertically in the guides, means for raising and lowering the said auxiliary frame, a plurality of cylinders and concaves supported by the auxiliary frame, said cylinders being journaled on vertical axes in spaced relation and a concave being arranged adjacent to each cylinder, a driving connection between each cylinder and the motor, dividing fingers extending forwardly from the auxiliary frame between adjacent cylinders for guiding the standing grain between the cylinders and the concaves, a feed roller cooperating with each cylinder and driven thereby, for feeding the grain between the cylinder and the adjacent concave, a cutting disk at the lower end of each feed roller, and means in rear of the cylinders for receiving and removing the grain.



2. A threshing machine comprising a wheel supported main frame, a motor supported on the frame, vertical guides at the front of the frame, an auxiliary frame movable vertically in the guides, means operated by the motor for raising and lowering the said auxiliary frame, a plurality of cylinders and concaves supported by the auxiliary frame, said cylinders being journaled on vertical axes in spaced relation and a concave being arranged adjacent to each cylinder, a driving connection between each cylinder and the motor, dividing fingers extending forwardly from the auxiliary frame between adjacent cylinders for guiding the standing grain between the cylinders and the concaves, a feed roller coöperating with each cylinder and driven thereby for feeding the grain between the cylinder and the adjacent concave, means between the guiding fingers and the cylinders and concaves for cutting the grain as it enters between the cylinder and the concave, and means in rear of the cylinders for receiving and removing the grain.

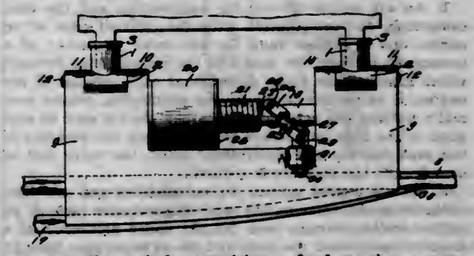
3. A threshing machine comprising a wheel supported main frame, a motor supported on the frame, vertical guides at the front of the frame, an auxiliary frame movable vertically in the guides, means operated by the motor for raising and lowering the said auxiliary frame, a plurality of cylinders and concaves supported by the auxiliary frame, said cylinders being journaled on vertical axes in spaced relation and a concave being arranged adjacent to each cylinder, a driving connection between each cylinder and the motor, means for feeding grain between the cylinders and the concaves, means at each cylinder and extending across the space between the cylinder and the adjacent feed roller for cutting the grain as it is fed between the cylinder and the concave, and means in rear of the cylinders for receiving and removing the grain.

4. A threshing machine comprising a main wheel supported frame, means for guiding the frame, a motor on the frame, said main frame having vertical guides at its front end, an auxiliary frame supported in the guides, means operated by the motor for raising or lowering the auxiliary frame, a plurality of cylinders and concaves supported by the auxiliary frame, said cylinders being journaled on vertical axes in spaced relation and a concave being arranged adjacent to each cylinder, a common driving mechanism for the cylinders and connected to the motor, means for feeding the grain between the cylinders and concaves, cutting mechanism at the lower ends of the cylinders for cutting the grain and means for receiving the grain from the cylinders and concaves.

5. A threshing machine comprising a main wheel supported frame, means for guiding the frame, an auxiliary frame movable vertically on the main frame at the front thereof, means for raising and lowering the auxiliary frame, said auxiliary frame having a series of forwardly extending dividing fingers, each of the said fingers consisting of two planes diverging from their front ends toward the auxiliary frame, a cylinder and a concave supported behind and between each adjacent pair of dividing fingers, each cylinder being journaled for rotation and a concave being arranged adjacent thereto, a feed roller adjacent to each cylinder and coöperating therewith to feed the grain between the cylinder and the concave, means for rotating the cylinders and the feed rollers, and means for receiving the grain from the cylinders.

[Claims 6 to 8 not printed in the Gazette.]

1,111,555. TROLLEY-SWITCH. JOHN C. ATTERBURY, Danville, Ill., assignor of one-half to Charles G. Taylor, Danville, Ill. Filed Sept. 4, 1913. Serial No. 788,144. (Cl. 191—38.)



1. A trolley switch comprising a fixed member, a movable member, said members being hingedly connected adjacent the upper ends thereof, a rotatable reciprocable rod carried by the fixed member, resilient means normally holding the rod extended, a link interposed between the rod and the movable member, and means for withdrawing the rod, said rod and link lying below the pivotal connection of the said members.

2. A trolley switch comprising a fixed member, a movable member hingedly connected to the upper portion of the fixed member, a rotatable reciprocable rod carried by the fixed member, a solenoid having the rod as a core, means interposed between the core and rod adapted to hold the latter extended normally and a link interposed between the rod and the movable member, the rod and link being located below the hinged connection of the members of the switch.

3. A switch comprising a fixed member, a movable hinged member connected to the upper portion of the fixed member, a reciprocable rod mounted upon the fixed member below and to one side of the pivotal connection of the members, a solenoid having the rod as a core, means interposed between the fixed member and rod adapted to hold the latter extended and a link extending from the rod and connected to the movable member at a point below and to the other side of the pivotal connection of the members.

1,111,556. AUTOMATIC AIR-SUPPLY SYSTEM FOR AUTOMOBILES. WILLIAM C. BAKELS, Midland Park, N. J. Filed Dec. 31, 1913. Serial No. 809,790. (Cl. 123—198.)

1. An automatic air supply system for automobiles, comprising the combination with a storage tank and exhaust

pipe of a motor having the usual muffler, said storage tank being connected with the exhaust pipe between the motor and the muffler, means for conveying the discharge gases from the exhaust pipe to the tank by means establishing communication between the two, and means interposed in the connection for purifying said gases during their passage to the tank, said means comprising an auxiliary tank containing a solution of water and alcohol, a porous substance saturated with said solution located therebeneath the foreign matter being retained below the porous substance and the gases escaping in the form of air.

2. An automatic air supply system for automobiles, comprising the combination with a storage tank and the exhaust pipe of a motor; of a valve connection between the exhaust pipe and the tank for conveying the discharged gases to the tank, one end of the tank having a compartment, a purifying chamber in said compartment containing a non-freezing washing solution constituting a submerged bath through which the exhaust gases are discharged downwardly to pass upwardly therethrough without displacement of the solution with the gas whereby the latter escapes in the form of air, and a valved connection between the chamber and the tank.

3. An air supply system for automobiles and the like, comprising the combination with the exhaust pipe of an engine and a storage tank for air under pressure; of a connection between the tank and the exhaust pipe through which gases escape under pressure at each exhaust of the engine, a valve interposed in the connection, means normally holding the valve open, whereby the air may be supplied to the tank, and means whereby when the pressure in the tank reaches a predetermined point, the valve will be closed until the pressure is reduced.

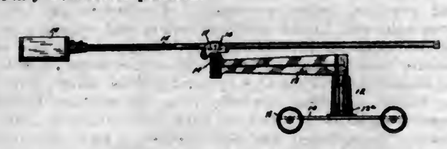
4. An air supply system for automobiles and the like, comprising the combination with the exhaust pipe of an engine and a storage tank for air under pressure; of a connection between the tank and the exhaust pipe through which gases escape under pressure at each exhaust of the engine, a valve interposed in the connection, means normally holding the valve open, whereby the air may be supplied to the tank, means whereby when the pressure in the tank reaches a predetermined point, the valve will be closed until the pressure is reduced, and means to prevent the return of the air from the tank to the exhaust pipe when said last-mentioned means is open.

5. An air supply system for automobiles and the like, comprising the combination with the exhaust pipe of an engine and a storage tank for air under pressure; of a connection between the tank and the exhaust pipe through which gases escape under pressure at each exhaust of the engine, a valve interposed in the connection, means normally holding the valve open, whereby the air may be supplied to the tank, said means embodying a valve subjected to the action of the air within the tank under pressure, whereby when the pressure within the tank exceeds that within the connection, the valve will be closed, and means in the connection to relieve the same of excess pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,111,557. POT-FILLING APPARATUS. JOHN A. BECHTEL, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1911. Serial No. 662,559. (Cl. 214—23.)

1. A ladling device comprising a support, a horizontal swinging arm carried thereby, a bar mounted intermediate its ends for universal movement on the free end of said arm and free to rotate about its own axis, a charging receptacle at one end of the bar and a handle at the other and stop means for preventing the end of the bar carrying the receptacle from swinging downwardly from a substantially horizontal position.



2. A ladling device comprising in combination a support, an arm pivoted to said support for rotation about a substantially vertical axis, a bracket mounted in the arm for rotation about a substantially vertical axis, a sleeve mounted in the bracket for rotative movement about a substantially horizontal axis, a rod rotatably mounted in the sleeve, a bearing block slidably mounted in the bracket and arranged to support the rod, means for raising and lowering said block, and a ladle carried on said rod.

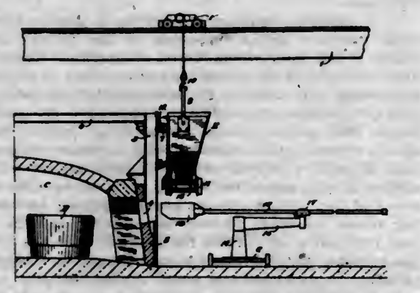
3. A ladling device comprising in combination a support, an arm pivoted to said support for rotation about a substantially vertical axis, a bracket mounted in the arm for rotation about a substantially vertical axis, a sleeve mounted in the bracket for rotative movement about a substantially horizontal axis, a rod rotatably mounted in the sleeve, a support slidably mounted in the bracket for vertical movement, a roller mounted in said support and arranged to support the rod, cam means for raising and lowering the roller support, and a ladle carried on the said rod.

4. A ladling device comprising in combination, a truck, an arm mounted thereon for rotation about a vertical axis, a clevis swiveled in the arm for rotation about a vertical axis, a sleeve trunnioned on a horizontal axis in the clevis, a rod rotatably carried in the sleeve, substantially vertical guideways on the clevis, a block slidable in said guideways, a roller mounted in said block arranged to hold the rod at a predetermined angle of inclination, a cam mounted in the clevis for raising and lowering the block, and a ladle carried on the arm.

5. A ladling device comprising a support, a horzontally swinging arm carried thereby, a bar mounted intermediate its ends for lateral swinging movement and for vertical swinging adjustment on the free end of said arm, the bar being free to rotate about its own axis, a charging receptacle at one end of the bar and a handle at the other, and adjustable means for limiting the downward swinging movement of the end of said bar carrying the receptacle.

[Claim 6 not printed in the Gazette.]

1,111,558. GLASS-MATERIAL-HANDLING APPARATUS. JOHN A. BECHTEL, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed July 8, 1913. Serial No. 777,859. (Cl. 214—23.)

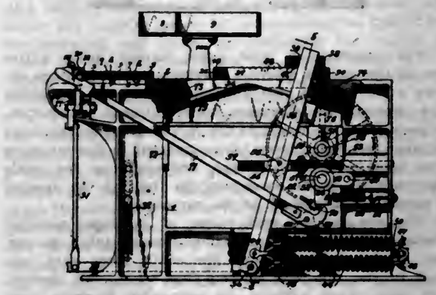


1. In combination with a glass furnace having a plurality of charging openings through its sides, portable gravity discharge hoppers removably supported upon fixed supporting means above the said openings, elevating means for moving the hoppers to and from the said supporting means, a truck movable longitudinally of the furnace past the said openings, a horizontally swinging arm carried by the truck, and a pot filling ladle carried by the said arm, the said ladle being movable upon the said arm from receiving positions beneath the hoppers to discharging positions in the furnace.

2. In combination with a glass furnace having a charging opening through its side, fixed supporting means above the charging opening, a portable gravity discharge hopper removably supported upon said fixed supporting means above the discharge opening, elevating means for moving the hopper to and from such supporting means, and a pot filling ladle mounted for movement from a receiving position beneath the gravity discharge of the hopper to a discharging position in the furnace.

3. In combination with a glass furnace having charging openings through its side and provided with melting pots, fixed supporting means above the opening, wheeled gravity discharge hoppers removably supported upon the said fixed supporting means, elevating means for moving the hoppers to and from the fixed supporting means, and a portable charging device movable longitudinally of the furnace and provided with a ladle mounted for reciprocation from receiving positions beneath the hoppers to discharging positions over the pots of the furnace.

1,111,559. HEADING-PRESS. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 24, 1913. Serial No. 763,264. (Cl. 144—31.)



1. A heading press comprising a table adapted to support the heading, an anvil arranged on the table and provided with sockets adapted to receive dowel pins, and with abutting faces arranged at right angles to said pins for engaging the rear ends of the latter, and a hammer movable toward and from said anvil.

2. A heading press comprising a table adapted to support the heading, an anvil arranged on the table and provided with sockets adapted to receive dowel pins, and with abutting faces arranged at right angles to said pins for engaging the rear ends of the latter, a hammer movable toward and from said anvil, and means for pointing the ends of said dowel pins while engaging said abutment.

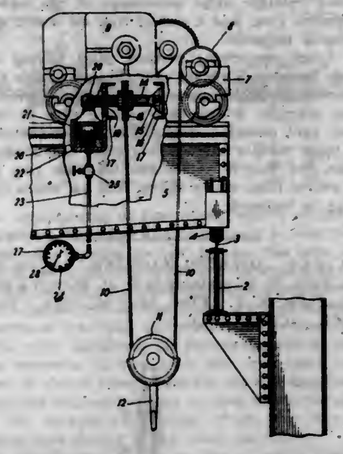
3. A heading press comprising a table adapted to support the heading, an anvil arranged on the table and provided with sockets adapted to receive dowel pins, and with abutting faces arranged at right angles to said pins for engaging the rear ends of the latter, a hammer movable toward and from said anvil, and means for pointing the ends of said dowel pins while engaging said abutment comprising a cutter blade movable at an angle across the inner ends of said sockets.

4. A heading press comprising a table adapted to support the heading, an anvil mounted on the table and provided with sockets for receiving dowel pins and having a guideway extending across said sockets and formed by the bottom of a groove in the anvil and a retaining block secured in the upper part of said groove, and a cutter blade sliding in said guideway and adapted to point the front ends of the dowel pins in said sockets.

5. A heading press comprising a table adapted to support the heading, an anvil mounted on the table and provided with sockets for receiving dowel pins and having a guideway extending across said sockets and formed by the bottom of a groove in the anvil and a retaining block secured in the upper part of said groove, a cutter blade sliding in said guideway and adapted to point the front ends of the dowel pins in said sockets, and means for reciprocating said cutter blade in said guideway.

[Claims 6 to 8 not printed in the Gazette.]

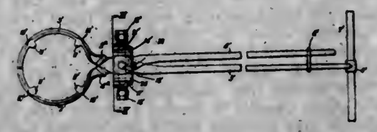
1,111,560. LOAD-INDICATOR. WILLIAM MILTON BROWN, Johnstown, Pa. Filed Apr. 3, 1913. Serial No. 758,576. (Cl. 73—3.)



1. In a traveling crane, a trolley having a crane hook, a flexible connection between the crane hook and a hoisting drum on the crane trolley, and a load indicator operatively connected to the crane hook, said load indicator comprising a dial, a slotted arm having an index finger the slot in said arm to actuate said finger
movable relatively to the dial, and means operating in the slot in said arm to actuate said finger when the load is lifted by the crane hook.

2. In a traveling crane, a trolley having a crane hook, a flexible connection between the crane hook and a hoisting drum on the crane trolley, and a load indicator operatively connected to the crane hook, said load indicator comprising a dial, a slotted arm having an index finger movable relatively to the dial, means operating in the slot in said arm to actuate said finger, said means moving the finger in one direction when a load is lifted by the crane hook, and a spring operatively engaging the crane hook and arranged to lift the hook and thereby move the finger in the opposite direction when the load is removed from the crane hook.

1,111,561. TONGS. WILLIAM MILTON BROWN, Johnstown, Pa. Filed June 29, 1914. Serial No. 847,893. (Cl. 22—82.)



1. A tongs comprising curved jaws having reins, a pivot pin connecting the jaws, said reins having bent portions connecting the jaws with lengthwise parallel portions of the reins, lugs on said jaws to limit the closing

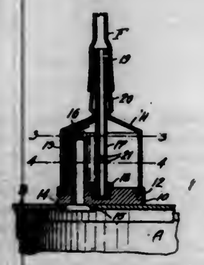
movement thereof and a plurality of oppositely extending fingers on the jaws arranged to loosely engage and maintain crucibles between said jaws when the jaws are in closed position.

2. A tongs comprising pivoted jaws having reins, a pivot pin therefor, a swivel ring through which the pivot pin extends, a trunnion ring in which said swivel ring is rotatably mounted, means for preventing relative axial movement of the swivel ring and trunnion ring, and a swivel link on which the trunnion ring is mounted.

3. A tongs comprising pivoted jaws having reins, a pivot pin therefor, said reins having bent portions between the curved jaws and the pivot pin to connect the jaws and lengthwise parallel portions of the reins, a swivel ring through which the pivot pin extends, a trunnion ring in which said swivel ring is rotatably mounted, means for preventing relative axial movement of the swivel ring and trunnion ring, and a swivel link on which the trunnion ring is mounted.

4. A tongs comprising pivoted jaws having reins, a pivot pin therefor, a swivel ring through which the pivot pin extends, heads on opposite ends of said pivot pin, a trunnion ring in which said swivel ring is rotatably mounted, said trunnion ring having a peripheral groove on the inner surface thereof to receive the heads of said pivot pin and thereby retain the trunnion ring in place on the swivel ring, and a swivel link on which the trunnion ring is fastened.

1,111,562. MILKING-MACHINE. LOOMIS BURRELL, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed June 15, 1914. Serial No. 845,064. (Cl. 31—99.)



1. In a milking machine, the combination with a milk vessel, of a trap provided with means for applying suction thereto and to said milk vessel, said trap comprising a receptacle for intercepted liquid and a check valve which closes under external pressure and prevents the inrush of air through the trap to the milk vessel when the suction is disconnected from the trap.

2. In a milking machine, the combination with a milk vessel, of a suction trap comprising a receptacle for intercepted liquid, a suction pipe communicating at one end with said vessel and at the other end with said liquid receptacle at an elevation above the bottom thereof, and a check valve which prevents the passage of air through the trap toward the milk vessel.

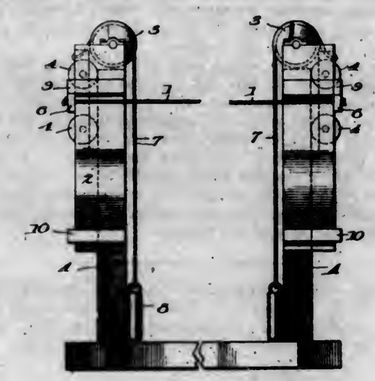
3. In a milking machine, the combination with a milk vessel, of a suction trap comprising a receptacle for intercepted liquid, a suction pipe connecting said trap with said vessel and communicating with said liquid receptacle at an elevation above the bottom thereof, and a check valve arranged at the elevated end of said suction pipe.

4. In a milking machine, the combination with a milk vessel, of a suction trap comprising a housing having at its top a nipple adapted to receive a suction tube, an upright suction pipe arranged within said housing and communicating at its lower end with said milk vessel and at its upper end with the interior of said housing, and a check valve which prevents the flow of air through said trap toward the milk vessel.

5. In a milking machine, the combination with a milk vessel, of a trap mounted thereon and comprising a housing, a suction pipe projecting upwardly from said vessel and communicating with said housing above the bottom thereof, and a check valve which prevents the flow of air through said trap and suction pipe into said vessel.

[Claims 6 to 11 not printed in the Gazette.]

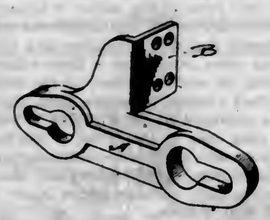
1,111,563. CLOTHES-LINE. FORTUNAT CHAREST, Cloquet, Minn. Filed Jan. 15, 1914. Serial No. 812,343. (Cl. 68—3.)



1. The combination with posts having guide plates mounted thereon, of wheeled carriages, each carriage engaging a side of the post and located between the guide plates, whereby the carriages are maintained in position, counter-weights connected to the carriages for maintaining them upon the posts, cross bars connected to the carriages having lines connected thereto, and stops on the guide plates engaged by the cross bars for limiting the upward and downward movement of the carriages.

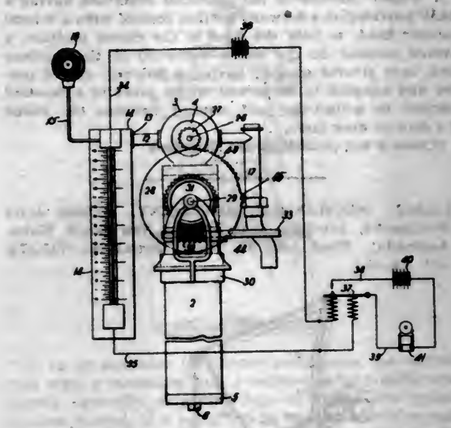
2. The combination with posts, of carriages movably mounted thereon, means for normally maintaining the carriages at the upper ends of the posts, cross bars connected to the carriages having lines connected thereto, which lines, when articles are suspended thereon, overcome the effect of the means for maintaining the lines and carriages at the upper ends of the posts by bringing the carriages into engagement with the posts, so that the lines and carriages may be held at any elevation.

1,111,564. METHOD OF MAKING CONVEYER-CHAIN LINKS. WILLIAM P. COLDREN, Lebanon, Pa. Filed July 22, 1913. Serial No. 780,496. (Cl. 59—35.)



The herein described method of making conveyer chain links which consists in first drop-forging a link with a wing extension integral therewith, secondly shearing along the line of juncture of the link and wing for a portion of the length of said wing and then bending the severed portion of the wing to a position transverse to the link proper and unsevered portion of wing.

1,111,565. CARBON-DIOXID GAGE. EDWARD A. CUNNINGHAM, Philadelphia, Pa. Filed Sept. 6, 1913. Serial No. 788,406. (Cl. 23—3.)



1. A carbon dioxid gage comprising an absorption chamber containing a reagent to absorb carbon dioxid gas, means for conducting waste gases through said chamber at a velocity substantially preventing absorption of carbon dioxid gas therein, means for interrupting the flow of gases therethrough, and means for indicating the vacuum produced in said chamber when the flow of gases is interrupted and carbon dioxid gas is absorbed to thereby indicate the carbon dioxid content of the gases.

2. A carbon dioxid gage comprising an absorption chamber containing a reagent to absorb carbon dioxid gas, means for conducting waste gases through said chamber at a velocity substantially preventing absorption of carbon dioxid gas therein, means for interrupting the flow of gases therethrough, means for indicating the vacuum produced in said chamber when the flow of gases is interrupted and carbon dioxid gas is absorbed to thereby indicate the carbon dioxid content of the gases, and means for registering the amount of vacuum produced during the interruptions in the flow of gases.

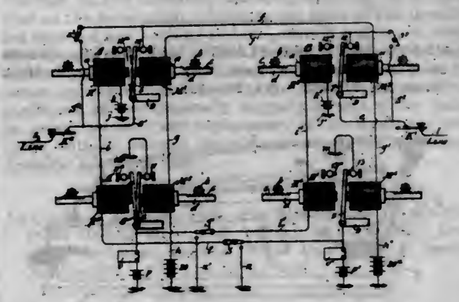
3. A carbon dioxid gage comprising an absorption chamber containing a reagent to absorb carbon dioxid gas, means for conducting waste gases through said chamber at a velocity substantially preventing absorption of carbon dioxid gas therein, means for interrupting the flow of gases therethrough, and means for registering the amount of vacuum produced during the interruptions in the flow of gases to thereby determine the carbon dioxid content of the gases.

4. A carbon dioxid gage comprising an absorption chamber containing a reagent to absorb carbon dioxid gas, means for conducting waste gases through said chamber at a velocity substantially preventing absorption of carbon dioxid gas therein, means for interrupting the flow of gases therethrough, means for indicating the vacuum produced in said chamber when the flow of gases is interrupted and carbon dioxid gas is absorbed to thereby indicate the carbon dioxid content of the gases within the chamber, and means for registering the amount of vacuum produced during the interruptions in the flow of gases, said means being arranged to indicate time intervals such vacuums are registered.

5. A carbon dioxid gage comprising an absorption chamber containing a reagent to absorb carbon dioxid gas, means for conducting waste gases through said chamber at a velocity substantially preventing absorption of carbon dioxid gas therein, means for interrupting the flow of gases therethrough, means for indicating the vacuum produced in said chamber when the flow of gases is interrupted and carbon dioxid gas is absorbed to thereby indicate the carbon dioxid content of the gases within the chamber, and means for registering the amount of vacuum produced during the interruptions in the flow of gases.

[Claim 6 not printed in the Gazette.]

1,111,566. TELEGRAPH-REPEATER. RANKIN TEMPLE DAVENPORT, Williams, Ariz. Filed Nov. 7, 1913. Serial No. 799,679. (Cl. 178—71.)



1. The combination of line wires, with a repeater connected between the wires and comprising a relay for each line, each relay having its coil in one line wire and its contacts in the other line wire, and electromagnet means for opening the contacts when the coil is deënergized.

2. The combination of line wires, with a repeater connected between the wires and comprising a relay for each line, each relay including an electro-magnet in one line wire and contacts in the other line wire, said contacts being held in closed circuit position by said magnets when energized, and magnets tending to open circuit the contacts whereby the opening and closing of one line wire causes the opening and closing of the other line wire.

3. The combination of line wires over which signals are received and repeated, with a repeating apparatus comprising two sets of co-acting circuit closing and opening electro-magnets, normally closed line wire contacts associated with and operated by each set of said magnets, the circuit closing magnets of one set being in circuit with the line wire contacts of the other set, a local circuit for each of the circuit opening magnets, and normally closed local circuit contacts associated with and operated by each set of magnets, whereby the circuit opening magnets coacting with the circuit closing magnets connected with the receiving line will be deënergized with the opening of the receiving line, and the circuit opening magnets associated with the circuit closing magnets connected with the sending line will remain energized to open the contacts of the receiving line.

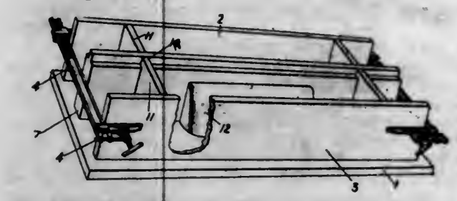
4. The combination of line wires over which signals are received and repeated, with a repeating apparatus comprising polarized relays A, A′ and B, B′, each relay comprising opposed circuit-closing and opening electro-magnets and normally closed circuit-opening and closing armatures movable to closed circuit position by said closing magnets and to open circuit position by said opening magnets, said relays A and A′ having their circuit closing magnets connected with one line through the armature of relay B, and the relays B and B′ having their circuit closing magnets connected with the other line through the armature of relay A, and local circuits including respectively the opening magnets of relays A and A′ and the armature of relay B′, and relays B and B′ and the armature of relay A′.

5. The combination of line wires over which signals are received and repeated, with a repeating apparatus comprising polarized relays A, A′ and B, B′, each relay comprising opposed circuit-closing and opening electro-magnets and normally closed circuit-opening and closing armatures movable to closed circuit position by said closing magnets and to open circuit position by said opening magnets, said relays A and A′ having their circuit closing magnets con-

nected with one line through the armature of relay B, and the relays B and B' having their circuit closing magnets connected with the other line through the armature of relay A, permanent magnets associated with said armatures for holding the latter in closed circuit position when the opening and closing magnets thereof are deënergized, and local circuits including respectively the opening magnets of relays A and A' and the armature of relay B', and relays B and B' and the armature of relay A'.

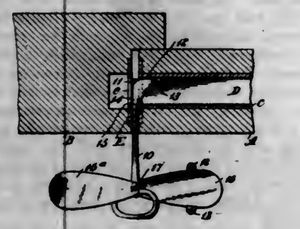
[Claims 6 and 7 not printed in the Gazette.]

1,111,567. MOLD FOR PLASTIC MATERIALS. CARTER DE MURGUIONDO, New York, N. Y. Filed Aug. 2, 1912. Serial No. 712,912. (Cl. 25—121.)



The improved box-mold for plastic material comprising a flat base, parallel side boards each having a bead on the inner side adjacent to the lower edge, a central dividing board having a pair of longitudinal rabbets at the top, a removable core secured to said board on each side thereof, and movable ends each having a side groove on one edge to receive the aforesaid bead and a lateral projection at the top on the opposite edge, the same being adapted to engage one of the rabbets, as described.

1,111,568. DOOR-FASTENER. THEODORE CHARLES DOREDANT, New Orleans, La. Filed Oct. 16, 1913. Serial No. 795,487. (Cl. 16—8.)



1. A door fastener of the character described, comprising a shank having a cross-head disposed at one side of the shank, one side face of which head is plane, and the opposite side face of which is beveled longitudinally and curved transversely.

2. A door fastener of the character described, comprising a shank having a cross-head disposed at one side of the shank, one side face of which head is plane and the opposite side face of which is beveled longitudinally at its rear side and curved transversely, the front of the head being essentially flat, and there being a lateral, rearwardly facing shoulder at the back of the head at one side.

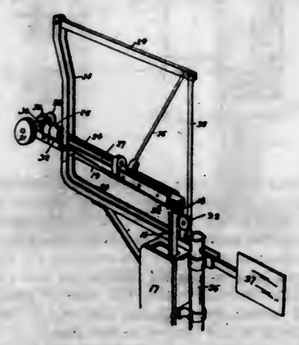
3. A door fastener of the character described, comprising a shank having a fastener head, said device being adapted to turn on its longitudinal axis, and a securing member pivoted on the shank near the rear end, said securing device having a lug at a side thereof, deflected in a direction toward the shank and transverse to the pivotal movement of the said securing member.

4. A door fastener of the character described, comprising a shank having a fastener head, said device being adapted to turn on its longitudinal axis, and a securing plate pivoted on the shank, near the end of the latter, said plate having lugs at opposite sides thereof, the lugs being curved in the direction of the shank and transverse to the direction of movement of said pivoted plate.

5. A door fastener of the character described, having a shank provided at a forward portion thereof with a lateral fastener head, to hold the door in the closed position, a pivoted member on the shank rearward of the fastener head, said pivoted member having a laterally curved portion and adapted to be turned on its pivot to a forward position to wedge the said member between the shank of a door or door jamb.

[Claim 6 not printed in the Gazette.]

1,111,569. MECHANICAL MOVEMENT. ALBERT JOHN FORTESCUE, Arncliffe, near Sydney, New South Wales, Australia. Filed Jan. 31, 1913. Serial No. 745,474. (Cl. 74—5.)

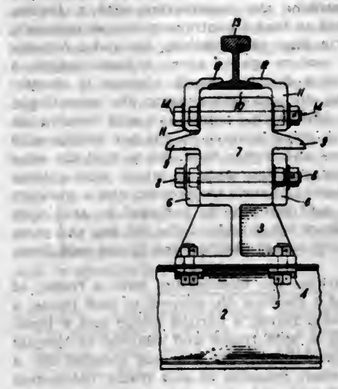


1. In a mechanism of the character specified, the combination, with a rocking member, and operating means therefor; of a rotary driving member mounted upon said rocking member; a reciprocatory driven member, a device connected with said driving member for normally exerting tension thereon; a member slidable upon said rocking member and connected with said driving member for actuation thereby; and a rod carried by said slidable member and connecting the same and said driven member, for reciprocating the latter, whereby the movement of said slidable member will vary the angular position of said rod relative to said driven member to adjust the stroke thereof.

2. In a mechanism of the character specified, the combination, with a rocking member, and operating means therefor; of a rotary driving member mounted upon said rocking member; a reciprocatory driven member; a threaded shaft and a slide mounted on said rocking member; gearing connecting said shaft and said driving member; a traveling member mounted on said shaft and connected to said slide for shifting the slide during the rotation of said shaft; and a pivotally-mounted rod carried by said slide and connecting the same and said driven member, for reciprocating the latter, whereby the movement of said slide will vary the angular position of said rod relative to said driven member to adjust the stroke thereof.

3. In a mechanism of the character specified, the combination, with a main rotary driving member, a rocking lever, and connections between said main driving member and said lever for operating the latter from the former; of a reciprocatory driven member toward which said lever extends; a subsidiary rotary driving member mounted on said lever; a member slidable on said lever toward and from said driven member and connected with the subsidiary driven member for actuation thereby; and a rod carried by said slidable member and connecting the same and said driven member for reciprocating the driven member, whereby the movement of said slidable member will vary the angular position of said rod relative to said driven member to adjust the stroke thereof.

1,111,570. INSULATOR. EUGENE FRIEDLAENDER, Braddock, Pa. Filed Mar. 22, 1913. Serial No. 756,185. (Cl. 191—32.)



1. In an insulator for electric conductors, the combination with a conductor and a relatively fixed metal chair having upwardly extending lugs on diagonally opposite corners thereof, of a metal cap having conductor engaging hook flanges on its upper face and downwardly extending lugs on diagonally opposite corners thereof, a body of insulating material between the chair and cap and embraced by the lugs on the said chair and cap, said insulating material having bolt holes therethrough registering with holes in said lugs and bolts fastened in the registering holes to secure the insulating material to the chair and cap, the lugs on the cap being located on the diagonally opposite corners diagonally opposite the lugs on the chair to permit the insertion and removal of the insulation without relative disarrangement of the conductor and chair.

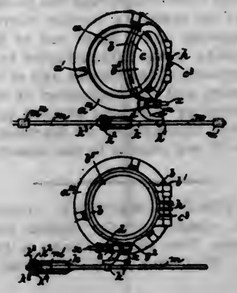
2. In an insulator for electric conductors, the combination with a conductor and a relatively fixed metal chair having upwardly extending lugs on diagonally opposite corners thereof, of a metal cap having conductor engaging hook flanges on its upper face and downwardly extending lugs on diagonally opposite corners thereof, a body of insulating material between the chair and cap and embraced by the lugs on the said chair and cap, said insulating material having bolt holes therethrough registering with holes in said lugs and bolts fastened in the registering holes to secure the insulating material to the chair and cap, the hook flanges on the cap being located on diagonally opposite corners of the insulating material from the lugs on the chair to permit the insertion and removal of the insulation and cap without relative disarrangement of the conductor and chair.

3. In an insulator for electric conductors, the combination with a conductor and a relatively fixed metal chair having upwardly extending lugs on diagonally opposite corners thereof, of a metal cap having conductor engaging hook flanges on its upper face and downwardly extending lugs on diagonally opposite corners thereof, a body of insulating material between the chair and cap and embraced by the lugs on the said chair and cap, said insulating material having bolt holes therethrough registering with holes in said lugs and bolts fastened in the registering holes to secure the insulating material to the chair and cap, the lugs and the hook flanges on the cap being located on diagonally opposite corners of the insulating material from the lugs on the chair to permit the removal and insertion of the insulation of the cap without relative disarrangement of the conductor and chair.

4. A third rail insulator comprising in combination a metal chair, a body of insulating material removably mounted on the chair and having bolt holes therein, a metal cap surmounting the insulating material having integral rail engaging hook flanges thereon whereby the body of insulating material is fastened to the third rail, and means for detachably securing the insulating material and cap on said chair to permit the removal and replacement thereof, said means including lugs on two diagonally opposite corners of the chair and the cap embracing the body of insulating material, and securing bolts in the registering holes in said lugs and insulating material.

5. In a third rail system the combination with a third rail and cross-tie, of an insulator for fastening the rail to the tie, said insulator comprising a metal chair fixed to the tie, a body of insulating material removably mounted on said chair and having transversely extending bolt holes therein, and a metal rail securing cap surmounting and fastened to the insulating material, upwardly projecting lugs on the metal chair embracing the sides of the insulating material and having bolt holes therein registering with transversely extending holes in the insulating material and fastening bolts extending through the registering holes to secure the insulating material to the chair, said lugs being positioned on two diagonally opposite corners of the chair to permit removal and replacement of the insulating material without relative disarrangement of the assembled cross-tie and third rail.

1,111,571. MEANS FOR CLOSING AND LOCKING PORT-HOLES AND THE LIKE. WALTER VILLA GILBERT, Cambridge, England. Filed June 13, 1914. Serial No. 844,968. (Cl. 114—178.)



1. Port hole and the like closing means comprising the combination with a closure having a turnable carrier, a movable locking member, and a device for operating the locking member and the carrier on the spot, of a controlling link connected at one end to one of the movable members of the closure, and a movable controlling rod connected to the other end of the controlling link and extending to a distant point, the controlling means being adapted to at times permit of free movement of the closure and at other times to act on the closure so that when the controlling rod is in neutral position the closure may be freely opened and closed by manually engaging its local operating device and without moving the controlling rod, and while the controlling rod is being moved toward another position the controlling rod will shut the closure if it is open but will not act on the closure if it is already shut, substantially as described.

2. Port hole and the like closing means comprising the combination with a closure having a turnable carrier, a movable locking member, and a device for operating the locking member and the carrier on the spot, of a controlling link articulatively connected at one end to one of the movable members of the closure, a movable controlling rod articulatively connected to the other end of the controlling link and extending to a distant point, parts of the controlling means being adapted to at times permit of relative sliding movement, and means for at other times preventing the relative sliding movement, so that when the controlling rod is in neutral position the closure may be freely opened and closed by its local operating device and without moving the controlling rod, and while the controlling rod is being moved toward another position the controlling rod will shut the closure if it is not already shut, substantially as described.

3. Port hole and the like closing means comprising the combination with a closure having a turnable carrier, a

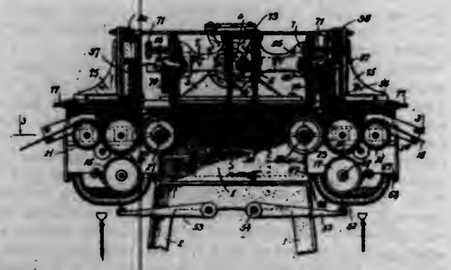
movable locking member, and a device for operating the locking member and the carrier on the spot, of a controlling link articulatively connected at one end to one of the movable members of the closure, a movable controlling rod articulatively connected to the other end of the controlling link and permitting the latter at times to have facility of relative sliding movement, and stop means on the controlling rod for at other times engaging the controlling link in different open positions of the closure for moving the latter to the shut position, substantially as described.

4. Port hole and the like closing means comprising the combination with a closure having a turnable carrier, a movable locking member, and a device for operating the locking member and the carrier on the spot, of a controlling link articulatively connected at one end to one of the movable members of the closure, a slide articulatively connected to the other end of the controlling link, a longitudinally movable controlling rod on which said slide is mounted and is at times adapted to move, and stop means on the controlling rod for engaging the slide in different open positions of the closure for moving the latter to the shut position, substantially as described.

5. Port hole and the like closing means comprising the combination with a closure having a turnable carrier, a movable locking member, and a device for operating the locking member and the carrier on the spot, of a controlling link articulatively connected at one end to one of the movable members of the closure, a movable controlling rod articulatively connected to the other end of the controlling link, the controlling means being adapted to at times permit of free movement of the closure and at other times to act on the closure, and the connection of the controlling link to the controlling rod being adapted to turn in relation to the latter, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

1,111,572. PAPER-BOX MACHINE. JULIAN A. GILES, Derby, Conn., assignor to the Duplex Paper Box Machine Company, New Haven, Conn., a Corporation of Connecticut. Filed May 1, 1912. Serial No. 694,317. (Cl. 93—47.)



1. In a paper box machine the combination with a frame, of a pair of vertical oppositely disposed punching and scoring dies secured to said frame, a pair of vertical oppositely disposed forming dies above said punching and scoring dies, a reciprocating slide slidably mounted in said frame having punching, scoring and forming members secured to each of its ends and adapted to register with said punching, scoring and forming dies respectively, a crank and crank-shaft mounted in said frame, connections between said crank and said slide, a shearing blade slide, a shearing blade secured to each end of said slide adapted to engage the upper edges respectively of said punching and scoring dies.

2. In a box machine the combination with a frame having a notching die and forming die secured thereto, of a reciprocating slide mounted on said frame having a cutting punch and a forming punch secured thereto in operative relation with said notching die and said forming die respectively, a shearing blade between said cutting punch and said forming punch, a slide on which said blade is mounted, and means for reciprocating the same independently of the reciprocation of said first named slide.

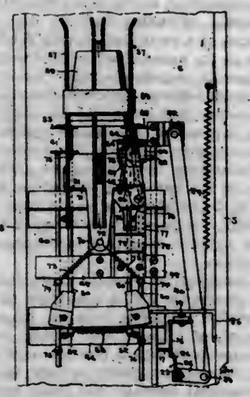
3. In a box machine the combination with a feeding mechanism adapted to feed a continuous web at intervals, a blank length at a time, of a notching die and a forming die having their centers spaced apart a blank length, a cutting punch and a forming punch adapted to operate with said notching die and said forming die respectively, said notching die and cutting punch and said forming die and forming punch being adapted to cut box blanks with end flaps, side flaps and corner flaps and to fold the same in said die, a reciprocating slide to which said cutting punch and said forming punch are secured and a pressure slide mounted in said forming die actuated by said slide and adapted to engage the outside of the end flap and press the same against the corner flap between it and said forming punch.

4. In a box machine the combination with a frame, of a notching die and a forming die secured to said frame, a slide mounted in said frame, a cutting punch and a forming punch secured to said frame and adapted to operate respectively in said notching die and said forming die, a crank and crank shaft mounted in said frame, connection between said crank and said slide, a shear blade and slide connected thereto mounted on said first named slide and a cam on said crank shaft adapted to operate said second named slide.

5. In a box machine the combination with a reciprocating slide of a forming plunger secured to said slide, a forming die adapted to be entered by said plunger, said die having a movable side piece adapted to be moved inwardly toward the side of said plunger by said reciprocating slide.

[Claims 6 to 20 not printed in the Gazette.]

1,111,573. VENDING-MACHINE. GEORGE W. GOMBER, Conyngham, Pa. Filed Nov. 1, 1913. Serial No. 798,748. (Cl. 211—8.)

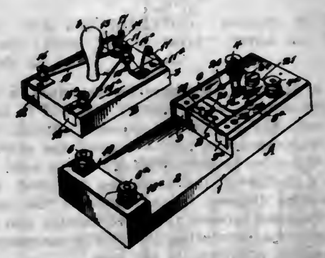


1. In a vending machine for receptacles, a pair of plates for supporting a stack of receptacles, means for moving said plates out of supporting position, means for supporting said stack subsequently to the moving of said plates out of supporting position, and jaws adapted to grasp said receptacles and separate the same individually from the stack, said plates adapted to be moved into supporting position previously to separation of said receptacles from the stack.

2. In a machine for vending receptacles, a plurality of rods for guiding a stack of the receptacles, a pair of upper plates normally supporting said stack, means for moving said upper plates out of supporting position, a pair of lower plates adapted to support the stack when said upper plates are moved out of supporting position, a pair of jaws adapted to grasp the lowermost of said stack when said upper plates are moved out of supporting position, means for moving said jaws whereby said lowermost receptacle is disengaged from the stack, said upper plates adapted to move into supporting position previous to the disengagement of the lowermost receptacle from said stack, and means for disengaging said jaws from said lowermost receptacle.

3. In a machine of the class described, means for guiding a stack of receptacles, means for normally supporting said stack, means for allowing the receptacles to become individually unsupported, movable jaws for disengaging said receptacles from the stack as they become separately unsupported, and means for engaging said receptacles as they are removed from the stack by said jaws, said engaging means adapted to hold said receptacle while said jaws are moved out of engagement therewith, and means for subsequently moving said engaging means away from said receptacles for freeing the latter.

1,111,574. LINE-PROTECTOR FOR TELEGRAPH AND TELEPHONE SYSTEMS. TOMAS GONZALEZ Y SEBASCO, Habana, Cuba. Filed May 25, 1914. Serial No. 840,778. (Cl. 175—214.)



1. A protective apparatus of the class described, comprising a base section having contacts for connection with circuit wires, a removable section having contacts engaging the first-mentioned contacts, a movable contact connected with one of the contacts of the movable section, a fuse connected with the movable contact and with the other contact of the movable section, a fixed contact on the base section arranged to engage with the movable contact when the fuse burns out, and a grounded member on the base section and spaced from the said fixed contact to form a gap across which an electric discharge takes place.

2. A protective apparatus of the class described, comprising a base section having a recess, a plurality of contacts fastened thereto and having portions extending into the recess, means for connecting the contacts at one end with the main circuit wires and contacts at the opposite end with local circuit wires, a removable section fitting in the said recess and having contacts engaging the contacts on the base section, spring-pressed movable contacts mounted on the removable section and each connected with a contact thereof, fuse wires extending from the movable contacts to the other contacts of the removable section, fixed contacts on the base section normally insulated from each other and associated with the respective movable contacts to be engaged thereby, a grounded member on the base section disposed adjacent the fixed contacts to form therewith gaps across which electric discharges take place, and cross-connections between the fixed contacts and the said contacts of the base section to which the main circuit wires are connected.

3. A protective apparatus of the class described comprising a base section having binding posts for connection with main line wires and binding posts for local line wires, fixed contacts, cross-connections between the main line wires, binding posts and the fixed contacts, a grounded member on the base section and forming with the fixed contacts gaps across which electric discharges take place, means adapted to be applied to the fixed contacts for electrically connecting them, in combination with a removable section having means electrically connecting corresponding binding posts for the main and local wires together, and each means including a fuse, and a movable contact normally restrained by the fuse and adapted to engage a corresponding fixed contact on the base section when the fuse burns.

4. A protective apparatus of the class described comprising a base section including means for connection with main and local circuit wires, grounding means for the main circuit wires and including spark gaps, a removable section normally connecting the main circuit wires with the corresponding local circuit wires and including a fuse restraining means for connecting the main line wires together when a high potential flow through either or both line wires burns the fuses, and means for connecting the main line wires together when the removable section is removed for the application of new fuses.

1,111,575. WINDOW-CLEANER. ELLA GOODWIN, Chicago, Ill. Filed Dec. 15, 1913. Serial No. 806,737. (Cl. 15—59.)

1. In a window cleaner, a pair of flexible arms of flat sheet metal, a pair of jaws secured to the upper end of said arms, and a flexible handle of flat sheet metal attached to and extending beyond the lower end of said pair of arms.

2. The combination with the head of a window cleaner, of a folding handle secured to said head, said handle being formed of thin flat metal and being flexible in both its folded and extended positions.

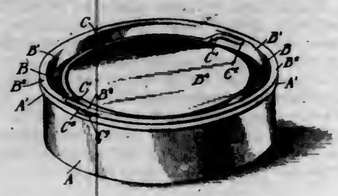
3. In a window cleaner, a handle formed of two flexible arms, cloth-holding jaws on the ends of said arms, a slidable ferrule for bringing the arms together to close the jaws, an arm pivoted to said handle and movable from a position at the side of the handle to a position adjacent to the end of the handle to extend the length thereof, and devices for securing said pivoted arm in either of its two positions.

4. In a window cleaner, a handle formed of two arms, jaws on the end of said arms, a ferrule on the arms to close the jaws, a flexible arm pivoted to the handle to extend its length, and devices for securing the arm in either of two positions.

1,111,576. METALLIC CONTAINER. PERLEY D. HAM, Garfield, N. J. Filed Aug. 6, 1913. Serial No. 783,286. (Cl. 220—6.)

1. In a metallic container, the combination of a body having an external bead at the upper edge, a cover fitting into the upper end of the said body and having an external bead opposite the said body bead, the said cover bead having flattened portions at diametrically opposite points to provide spaces between the beads at the time the cover is in closed position on the said body, the top of the said cover being provided with an annular depression adjacent the said cover bead; and a bail of approximately

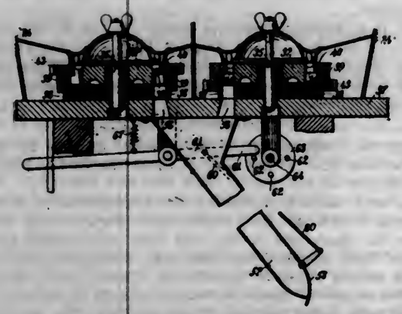
segmental shape normally extending in the said depression, the bail having trunnions journaled in the sides of the cover at the flattened bead portions, the trunnions terminating in prying arms extending in the said bead space and overlying the body bead to pry the cover open on imparting an upward swinging motion to the said bail.



2. A metallic container, comprising a body provided with an external bead at the upper edge, a cover fitting into the upper end of the said body and provided with an external bead adapted to engage the bead on the said body to limit the inward movement of the cover on the body when placing the cover in position on the body, diametrically opposite portions of the said cover bead being flattened to provide spaces above the body bead at the time the cover is in closed position, the top of the said cover being provided with an annular depression adjacent the said cover bead; and a bail of approximately segmental shape normally extending in the said depression, the bail having trunnions journaled in the sides of the cover at the said flattened bead portions, the trunnions terminating in prying arms extending in the said bead spaces and overlying the bead of the body to pry the cover open on imparting an upward swinging motion to the said bail.

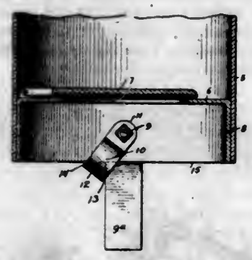
3. A metallic container, comprising a body provided with an external bead at the upper edge, a cover fitting into the upper end of the said body and provided with an external bead adapted to engage the bead on the said body to limit the inward movement of the cover on the body when placing the cover in position on the body, diametrically opposite portions of the said cover bead being flattened to provide spaces above the body bead at the time the cover is in closed position, the said cover being provided with an annular space adjacent the cover bead and below the top of the cover; and a segmental bail having trunnions journaled in the sides of the cover at the said flattened bead portions, the trunnions terminating in prying arms extending in the said bead spaces and overlying the bead of the body to pry the cover open on imparting an upward swinging motion to the said bail, the said bail being provided with offsets adjacent the trunnions, the said bail and its offsets normally extending in a horizontal plane and within the said annular space.

1,111,577. CHECK-ROW PLANTER. WILLIAM B. HAMPTON, Springfield, Mo. Filed Aug. 3, 1910. Serial No. 575,209. (Cl. 111—6.)



A seed dropping mechanism, comprising a rotary plate having a plurality of dropping perforations, said perforations having peripheral openings below the upper surface of said plate, said perforations being limited to receive a single seed; a stationary base plate recessed for holding said rotary plate and for closing laterally said peripheral openings, said base plate having a perforation disposed in the path of the perforations in said rotary plate to receive and deliver the seeds held therein; and means for rotating said rotary plate.

1,111,578. REMOVABLE VALVE FOR PUMPS. CHARLES W. HAWKINS, Bellport, N. Y. Filed Aug. 6, 1913. Serial No. 783,288. (Cl. 103—59.)



1. In a device of the character described, a core having a projection, a valve member disposed in and bolted to the core, and a member disposed between the valve member and the projection to prevent the pivotal movement of the valve member relatively to the core.

2. In a device of the character described, a core, a valve member disposed in and bolted to the core, and a member disposed between the valve member and a portion of the core, for preventing the pivotal movement of the valve member relatively to the core.

3. In a device of the character described, a core, a valve member disposed in and bolted to the core, and a member carried by the bolt and disposed between the valve member and a portion of the core, for preventing the pivotal movement of the valve member relatively to the core.

4. In a device of the character described, a core having a leg, a valve member disposed in and pivoted to the core, and a member mounted on the bolt and at one side engaging the valve member and at the other side engaging the leg, to prevent the pivotal movement of the valve member relatively to the core.

5. In a device of the character described, a core having two legs disposed opposite each other, a valve member disposed in the core, the valve member being bolted to the core in the longitudinal planes of the said legs, and members mounted on the bolts and disposed between the valve members and the legs to prevent the pivotal movement of the valve member relatively to the core.

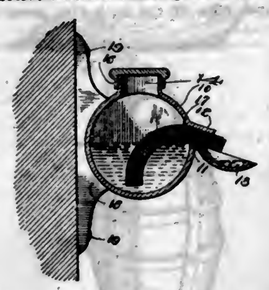
[Claim 6 not printed in the Gazette.]

1,111,579. DEVICE FOR KILLING FLIES. WILLIAM E. HEILLE, Casselton, N. D. Filed Aug. 26, 1913. Serial No. 786,643. (Cl. 43—22.)

1. An insect exterminator comprising a body, said body provided with an aperture, a flange positioned adjacent said aperture, a trough adjacent said aperture, a wick in said body positioned through said aperture and between said flange and said trough, and a poisonous liquid in said body adapted to saturate said wick.

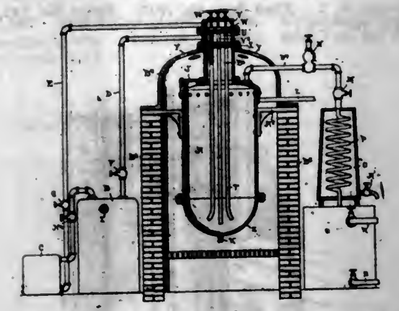
2. A fly exterminator comprising a body, said body provided with a longitudinally extending slot, a longitudinally extending flange positioned adjacent the upper edge of said opening, a longitudinally extending trough positioned adjacent the lower edge of said opening, a wick in said body passing through said opening between said flange and said trough and a poisonous liquid in said body to saturate said wick.

3. An insect exterminator comprising a body, said body provided with a longitudinally extending slot, a flange at the upper edge of said slot, a trough formed at the lower edge of said slot, said trough being segmental in cross section to receive insect attracting means, a wick in said



body and passing through said slot between said flange and said trough, and means for placing a poisonous liquid in said body to saturate said wick.

1,111,580. OIL DISTILLATION. SAMUEL M. HERBER, Inza, Mo. Filed Feb. 9, 1914. Serial No. 817,675. (Cl. 196—26.)



1. The herewith described process of oil distillation, consisting of commingling with oil a quantity of lime, (as hereinbefore referred to) (usually about 1 measured part of the lime to 7 measured parts of the oil), heating to the vaporizing temperature of the oil, and at the same time passing a desired current of air into or through the oil and vapor, and, subsequently at a desired temperature, introducing the desired quantity of steam, and condensing the resulting vapor.

2. The herewith described process of oil distillation consisting of the commingling of oil and lime (as hereinbefore referred to), then heating the product to a vaporizing temperature of the oil, while a current of air, commingled with steam or water, is passed through the commingled product, and the vapor condensed.

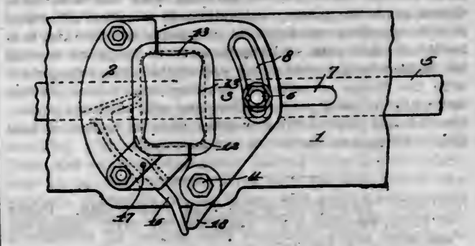
3. The herewith described process of oil distillation, comprising the commingling of oil with lime (as hereinbefore referred to), the introduction of steam or water thereto while the oil is at a vaporizing temperature, and condensing the resulting vapor.

4. In oil distillation the commingling of lime (as hereinbefore referred to) with oil heating the product to a vaporizing temperature of the oil, passing a current of air into or through the heated products, and condensing the resulting vapor, for the purpose of assisting in separating the oil into its various products and increasing the yield of lower fractions.

5. In oil distillation the commingling of lime (as hereinbefore referred to) with oil, through which a current of air commingled with steam is passing while the product is heated to a vaporizing temperature of the oil, and maintained at any desired temperature and pressure, and condensing the resulting vapor.

[Claims 6 to 10 not printed in the Gazette.]

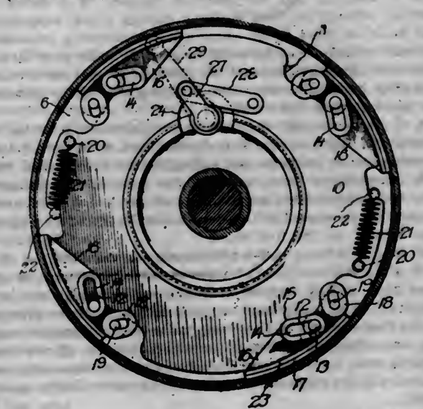
1,111,581. CAPPING DEVICE. FREDERICK J. HEYBACH, Baltimore, Md., assignor, by mesne assignments, to The Unit Weighing and Packing System, (Incorporated), Baltimore, Md., a Corporation of Delaware. Filed Mar. 31, 1910. Serial No. 552,584. (Cl. 113—31.)



1. A cap clamp having an opening of predetermined or fixed size and generally rectangular outline to receive the mouth of a receptacle of corresponding form, the walls of said opening being convexed circumferentially to operate upon and temporarily bow inwardly the flat sides of the receptacle as the mouth thereof is introduced into said opening, the walls of said opening being also recessed to receive and hold a cap in position to receive the mouth of the receptacle.

2. A device for applying caps to receptacles having mouths of generally rectangular outline comprising a flat plate, and a cap clamp composed of pivotally related sections mounted on one of the flat sides thereof and having an opening with circumferentially convexed walls to receive the mouth of a receptacle and to bow inwardly the flat sides thereof, the walls of said opening being recessed at a point between the adjacent flat side of said plate and said convexed portions to receive and hold a cap therein with its closed top against said plate and its flange in position to receive the inwardly bowed sides of the receptacle mouth, the clamp sections being capable of opening to receive a cap and having means for positively closing them whereby said opening will have a predetermined or fixed size.

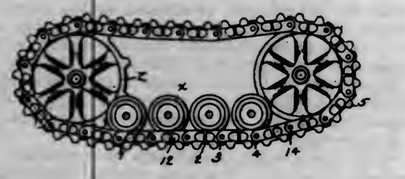
1,111,582. BRAKE-CLUTCH. JOSEPH HLASZITSKA, Detroit, Mich. Filed Dec. 13, 1913. Serial No. 806,354. (Cl. 74—13.)



In a brake clutch, a hub member having a flange, a stationary member extending into said hub member, a revoluble shoe shifting member supported between said stationary member and said hub member, spaced shoes arranged between the periphery of said shoe lifting member and the flange of said hub member, webs forming part of said shoe at the inner side of said shifting

member, said webs having long and short slots formed therein with the short slots disposed at right angles to said long slots, studs carried by said shifting member and extending into the long slots of said webs, studs carried by said stationary member and extending into the short slots of said webs and coöperating with the first mentioned studs in guiding said shoes in a radial direction, means extending through said stationary member and connected to said shoe shifting member to facilitate moving the same whereby said shoes are shifted into engagement with the flange of said hub member, and means at diametrically opposed points connecting said stationary member and said shoe shifting member adapted to restore said shoe shifting member to its normal position.

1,111,583. TRACTION-BELT FOR TRACTORS. PLINY E. HOLT, Stockton, Cal. Filed Feb. 26, 1912. Serial No. 680,078. (Cl. 21—114.)



1. A traction belt for tractors formed by a series of articulated link sections, each section embodying a transversely corrugated shoe plate and a link with joint connections for articulations at its ends, said track link having a rail head portion along one of its longer sides, the opposite side of the track link being bolted to the shoe plate and having lugs seating in the corrugations in the shoe and coacting with the bolt to hold the shoe rigidly in place, substantially as described.

2. A traction belt for tractors, formed by a series of parallel articulated links having sprocket wheel engaging portions extending transversely thereof, and lateral openings in the links for the escape of accumulations at points beyond or on the outer side of the plane of the sprocket wheel engaging portions of the links, whereby the entry of the sprocket teeth between the links will expel accumulations laterally from the links.

3. A traction belt for tractors, formed by a series of parallel articulated link sections having truck supporting rail faces on their inner edges and transversely extending sprocket wheel engaging portions at their ends with lateral apertures extending beyond the plane of the sprocket wheel engaging portions, and shoes bridging the space between the links at their outer sides.

4. A traction belt for tractors comprising a series of articulated links having a gudgeon block with an oil font therein, and a gudgeon pin engaging the interlocked link ends; transverse pins engaging the ends of the gudgeon pins and lugs formed on the link sides; a series of overlapping track shoes having depressions adapted to engage lugs formed on the link sides.

5. In a belt for a self-laying track, the combination of a shoe plate with a pair of transverse indentations on its inner side, a link section having a substantially straight rail-head on one edge and an undulating opposite edge to fit the indentations in the shoe, and a bolt passing through the shoe plate and through an offset portion of the link section, said bolt and said lugs and indentations coöperating to hold the plate and link rigidly against relative movement.

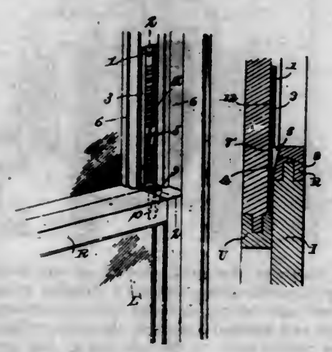
[Claims 6 to 11 not printed in the Gazette.]

1,111,584. WELL-BUCKET. PHILLIP T. HUCKABAY, Greenville, Ga. Filed Feb. 14, 1913. Serial No. 748,483. (Cl. 217—72.)

A well bucket having metal hoops encircling the same, and a combined bail and side supporting element comprising a metal tube flattened for a portion of its length and secured at the opposite sides of the bucket to said hoops and said bail being tubular and extended at some distance from the upper edge of the bucket to serve as an over-

weight to insure the tilting of the bucket in the well to fill the same.

1,111,585. SASH-FASTENER. CHARLES A. HUNT, Newburgh, N. Y. Filed Jan. 10, 1913. Serial No. 741,256. (Cl. 16—124.)

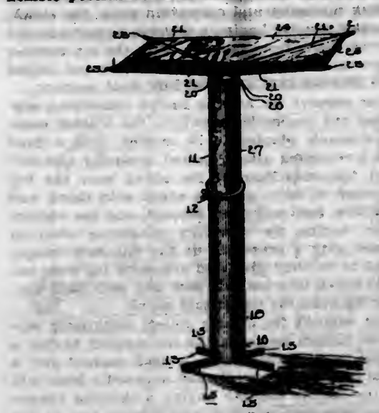


In a sash fastening, upper and lower sliding sashes, a rack bar carried by the upper sash and provided with longitudinal guideways, a wedge slidably mounted upon the rack bar and provided with flanges extending into the guideways, the said wedge being exposed beyond the side of the rack and positioned to engage the lower sash, and means on the wedge adapted to be advanced into effective locking engagement with the teeth of the rack bar on engagement of the wedge with the lower sash, said means consisting of a pair of locking teeth extended in an upward and outward direction from the flanges at the upper end of the wedge, and disposed at right angles to the said flanges.

1,111,586. STOOL. EDWARD C. HURLBERT, St. Johns, Oreg. Filed Dec. 14, 1912. Serial No. 736,796. (Cl. 155—4.)

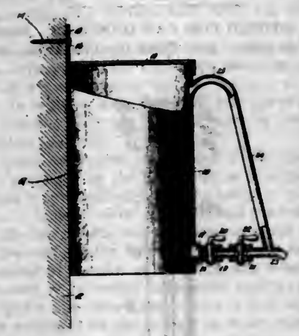
A stool comprising a support, diverging arms carried by said support, said arms slanting upwardly and terminating in tapering ends, of an inflatable rectangular seat carried by said arms, said seat composed of an upper and lower layer of cloth, said layers of cloth positioned upon the upper sides of said arms, said layers secured together at their edges and fitting together at their corners, thereby forming a non-inflatable flexible portion at each corner, said non-inflatable flexible portions fitting snugly upon the tapering ends of said arms; and a conical reinforcing sleeve

fitting over each tapering end of each arm and over the flexible portions of said seat which engages the tapering



end, whereby the seat will be held securely in engagement with said arms without danger of puncturing the same.

1,111,587. SURGICAL APPLIANCE. MICHAEL IVERSEN, Stoughton, Wis. Filed Oct. 27, 1913. Serial No. 797,505. (Cl. 128—47.)



1. A fountain can comprising a receptacle having a supporting extension and a removable cover, a valve connected to the receptacle adjacent the bottom thereof and provided with a passageway extending horizontally therefrom, and another passageway adjacent the top of the receptacle and communicating with the first-mentioned passageway outwardly of the valve, said second passageway being inclined at a spaced distance from the receptacle and being rigid.

2. A fountain can comprising a receptacle, a valve connected to the can adjacent the bottom thereof and provided with a passageway extending substantially horizontally therefrom, and another passageway communicating with the interior of the receptacle adjacent the top thereof and with the first named passageway outwardly of the valve, said second passageway being inclined at a spaced distance from the receptacle.

3. A fountain receptacle of the class described, comprising a vessel having an outlet near its bottom provided with a discharge tube, a rigid tube communicating with the first-mentioned tube at a spaced distance from the vessel and also communicating with the interior of the vessel near the top of the latter, said tube having rigid connections with the vessel and discharge tube, and providing a handle for the vessel and a return duct for the air and gases, and a pair of valves mounted in the outlet tube.

4. A fountain can comprising a receptacle having an open top, a valve connected to the can adjacent the bottom thereof and provided with a passageway extending horizontally therefrom, another passageway adjacent the top of the receptacle and communicating with the first named passageway outwardly of the valve, and a second valve mounted in the first named passageway outwardly of the first named valve whereby when the first named valve is set to permit the discharge of a predetermined quantity of fluid, said fluid may be permitted to escape or be held from escaping at required intervals, further discharge of said predetermined quantity of fluid being permitted by operation of the outer valve alone.

5. A fountain can comprising a receptacle, a valve connected to the receptacle adjacent the bottom thereof and provided with a passageway extending outwardly therefrom, and another passageway leading from the receptacle near its top and communicating with the first named passageway outwardly of the valve, said second passageway being positioned at a spaced distance from the receptacle throughout its length, said receptacle being adapted to contain and discharge fluid through the first passageway under a hydrostatic pressure head.

1,111,588. SURGICAL APPLIANCE. MICHAEL IVERSEN, Stoughton, Wis. Original application filed Aug. 2, 1912, Serial No. 712,836. Divided and this application filed Jan. 8, 1914. Serial No. 811,017. (Cl. 128—47.)

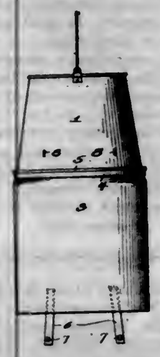
1. The combination of a receptacle, a valve adjacent the bottom thereof, a tube communicating with the valve and depending therefrom, a tube communicating with the aforesaid tube outwardly of the valve and having a curved upper end communicating with the receptacle adjacent the top of the latter, a dropper connected to the depending tube, and a discharge tube having a nozzle, said discharge tube being connected to the dropper, whereby during the flow of the fluid from the can through the nozzle, a return for gases will be effected through the dropper and second-mentioned tube.

2. A fountain can, comprising a receptacle, a rigid passageway extending horizontally therefrom near its bottom, a single valve in said passageway, another rigid passageway, said second passageway extending outward from the receptacle adjacent to the top thereof and extending downwardly to communicate at its lower end with the first passageway outwardly of the valve, a flexible discharge tube carried thereby, and a nozzle at the free end of the tube.

3. A fountain can, comprising a receptacle, a valve adjacent the bottom thereof and providing a passgaway therefrom, another passageway adjacent to the top of the receptacle and extending substantially vertical and curved at its upper end to communicate with the interior of the receptacle, said second passageway communicating with the first passageway outwardly of the valve, a flexible discharge tube carried thereby, a nozzle at the free end

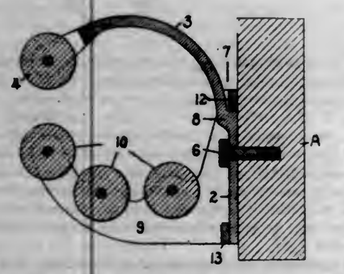
of the tube, and dropping means between the passageways and the discharge tube to render visible the flow of the fluid and to permit the return of the fluid or gas under pressure.

1,111,589. PAIL. JOHN JACKSON, Clinton, Iowa. Filed Jan. 13, 1913. Serial No. 741,872. (Cl. 56—99.)



A pail of the type set forth, comprising a rigid open ended body shaped like a conic frustum and having its greatest diameter at its lower end, a tubular open ended sack, the rigid body having a circumscribing bead at its lower end and the sack having a ring at its upper end formed to surround the body above the bead, a clamping ring frictionally engaging the upper end of the sack and surrounding the body between the first named ring and the bead, the clamping ring being removable from said body by upward displacement relatively thereto, the sack being adapted to be folded across the lower end of the body to form a bottom thereof, hooks arranged at one side of the body, and a strap having an end secured to the sack and having a free end constructed for engagement with said hooks to hold the sack in folded relation.

1,111,590. CENTER SUPPORT FOR AWNING-ROLLERS. WILLIS K. JACOBS, St. Paul, Minn. Filed Mar. 21, 1914. Serial No. 826,387. (Cl. 156—44.)



1. A center support for awning rollers comprising two separable members coöperating to hold an awning roller between them, namely a top member adapted to be secured upon a fixed support, and a bottom member adapted to be removably hung from the top member.

2. A center support for awning rollers comprising two separable members coöperating to hold an awning roller between them, namely a bracket member adapted to be secured upon a fixed support and having a retaining arm extending upwardly and outwardly from said support, and a suspension member having a skeleton hanger adapted to be hung from said arm with the top member of the hanger lodged in the space at the base of said arm between said arm and said fixed support.

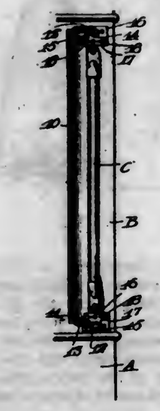
3. A center support for awning rollers comprising two separable members coöperating to hold an awning roller between them, namely a bracket member having a shank adapted to be secured upon a fixed support and a retaining arm extending upwardly and outwardly from the shank, and a suspension member having a skeleton hanger adapted to be removably hung from said arm with the top member of the hanger lying in the plane of the shank and lodged in the space between said arm and said fixed support.

4. A center support for awning rollers comprising separable bracket and suspension members, the bracket member having a shank adapted to be secured upon a fixed support and a retaining arm projected upwardly and outwardly from the outer face of the shank near the top thereof, whereby to leave a space above said shank and between said arm and said fixed support, and the suspension member having an upwardly extending skeleton hanger formed with a cross bar at the top, said hanger being adapted to be hung over said arm with its cross bar lodged in the space between said arm and said fixed support and resting upon the top of said shank.

5. A center support for awning rollers comprising separable top and bottom members, the top member having a shank adapted to be secured upon a fixed support and a retaining arm projected upwardly and outwardly from said shank, and the bottom member having a skeleton hanger comprising upright side members and a cross bar at the top, said hanger being adapted to be hung over said arm with its cross bar lodged in the space between said arm and said fixed support, the sides of the hanger being spaced apart a sufficient distance to receive said shank between them, whereby the hanger will lie in the same plane as the shank.

[Claims 6 to 8 not printed in the Gazette.]

1,111,591. SHIELD FOR CAR-HANDLES. HOWELL JORDAN, Los Angeles, Cal. Filed Dec. 19, 1913. Serial No. 807,741. (Cl. 105—81.)

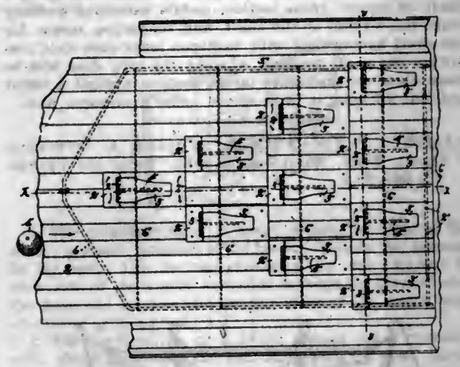


1. A shield for car handles comprising a curved shield plate, means swingingly connecting the shield to a car whereby said shield will partly encompass the handle, and is movable relative thereto, clamps stationarily mounted for receiving either edge of the shield, and means carried by the clamps for locking the shield in adjusted position.

2. A shield for car handles comprising a curved shield plate, means swingingly connecting the shield to a car whereby said shield will partly encompass the handle, and is movable relative thereto, clamps stationarily mounted for receiving either edge of the shield, and winged screws mounted in the clamps and engageable with the shield to lock it in adjusted position.

1,111,592. GAME APPARATUS. JOSEPH P. KEENAN, Waterbury, Conn. Filed Apr. 22, 1914. Serial No. 833,592. (Cl. 46—66.)

1. A game apparatus comprising a bed and a pin, the latter being so arranged on the former as to be capable of movement from a substantially vertical position to a horizontal position, and vice versa, having a flat play surface, and, when occupying its horizontal position, having its said play surface flush with the top surface of said bed.



2. A game apparatus comprising a bed, a pin-supporting frame depressed therein, the top surfaces of said bed and frame registering, each flush with the other, and a pin, the latter being so supported by said frame as to be capable of undergoing movement from a substantially vertical position to a horizontal position, and vice versa, having a flat play surface, and, when occupying its horizontal position, having its said play surface flush with the top surface of said frame.

3. A game apparatus comprising a bed and a pin, the latter so arranged on the former as to be capable of movement from a substantially vertical position to a horizontal position, in registry with said bed, and pin-resetting mechanism, whereby said pin may be reset or returned to its said vertical position.

4. A game apparatus comprising a bed and a pin, the latter so arranged on the former as to be capable of movement from a substantially vertical position to a horizontal position, in registry with said bed, and pin-resetting mechanism, the latter affording an arm arranged beneath, and whose free end-portion is movable into and out of the arc of movement of the pin aforenamed, and whereby said pin may be reset or returned to its said vertical position.

5. A game apparatus comprising a bed and a pin, the latter so arranged on the former as to be capable of movement from a substantially vertical position to a horizontal position, in registry with said bed, and pin-resetting mechanism, whereby said pin may be reset or returned to its vertical position, said mechanism comprising an arm arranged beneath, and whose free end-portion is movable duly into and out of the arc of movement of the pin aforenamed, and a rack whereby said arm may be duly actuated, said rack being freely conjoined with said arm.

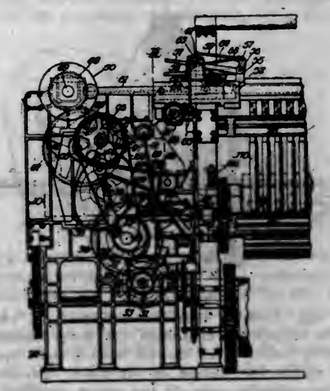
[Claims 6 to 13 not printed in the Gazette.]

1,111,593. WIRE-FABRIC MACHINE. WILLIAM A. KILMER, De Kalb, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 6, 1913. Serial No. 793,580. (Cl. 140—9.)

1. In a wire fabric machine, the combination of a plurality of twister spindles, reciprocating rack-bars for rotating said spindles, a crank element, and pawls connecting said crank element with said rack-bars, substantially as described.

2. In a wire fabric machine, the combination of a plurality of twister spindles, a reciprocating rack-bar, a crank element, means for causing a substantially constant speed of travel of said crank element, and pawls connecting said crank element to said rack-bar, substantially as described.

3. In a wire fabric machine, the combination of a plurality of twister spindles, a crank element, reciprocating rack-bars, pawls connecting said crank element to said rack-bars, and automatic means for actuating said pawls, substantially as described.



4. In wire fabric machine, the combination of a plurality of twister spindles, a rack-bar for actuating said spindles, a crank element, and a pair of opposed pawls connecting said crank element to said rack-bar, whereby motion is imparted to said rack-bars in both directions of travel of said crank element, substantially as described.

5. In a wire fabric machine, the combination of a plurality of twister spindles, rack-bars for actuating said spindles, a crank element, a pair of opposed pawls alternately connecting said rack-bars with said crank element, and automatic means for actuating said pawls, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,111,594. RAIL-JOINT. HENRY F. A. KLEINSCHMIDT, Johnstown, Pa., assignor to The Lorain Steel Company, Johnstown, Pa., a Corporation of Pennsylvania. Filed May 14, 1913. Serial No. 767,517. (Cl. 239—4.)

1. In a rail joint, a splice bar fastened to the abutting ends of adjoining rail sections and having a flange engaging the under side of the rail heads, said flange being bent into supporting engagement with the rail heads after securing the splice bar to the rails.

2. In a rail joint, a splice bar fastened to the abutting ends of adjoining rail sections and having a sectional flange engaging the under side of the rail heads, said flange section being bent into supporting engagement with the rail heads after securing the splice bar to the rails.

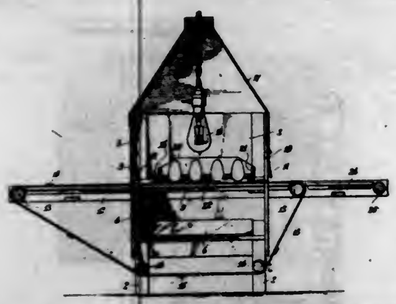
3. In a rail joint, a splice bar welded to the abutting ends of adjoining rail sections and having a flange engaging the under side of the rail heads, said flange being bent into supporting engagement with the rail heads after securing the splice bar to the rails.

4. In a rail joint, a splice bar welded to the abutting ends of adjoining rail sections and having a sectional flange engaging the under side of the rail heads, said flange section being bent into supporting engagement with the rail heads after securing the splice bar to the rails.

5. In a rail joint, a splice bar welded to the abutting ends of the webs of adjoining rail sections and having a flange engaging the under side of the rail heads, said flange being bent into supporting engagement with the rail heads after welding the splice bar to the web of the rails.

[Claims 6 to 8 not printed in the Gazette.]

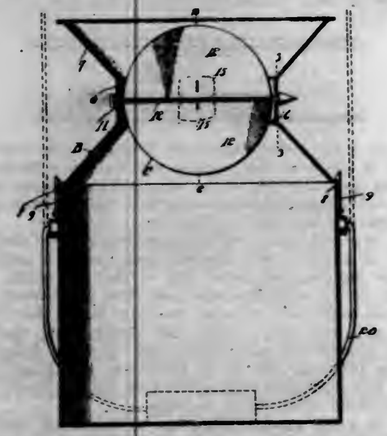
1,111,595. EGG-CANDLING MACHINE. FREDERICK ELMER LEE, Grand Forks, N. D. Filed Sept. 10, 1913. Serial No. 789,141. (Cl. 99—6.)



1. An egg candling machine comprising a casing divided into superposed chambers, the lower chamber having one side wall thereof formed with a sight opening, a reflector within the bottom of the lower chamber, doors closing the opposite ends of the upper chamber, a conveyer frame arranged longitudinally of and between said chambers and extending between the opposite sides thereof, a conveyer belt on said frame and adapted to carry the eggs into the upper chamber by way of one of said doors, across said reflector, and out of the respective chamber by way of the remaining door, and a source of light above said conveyer.

2. An egg candling machine comprising a casing, a reflector within said casing, a source of light within said casing above said reflector, means traversing a path between said reflector and source of light and adapted to carry the eggs across the reflector, and doors operable automatically in the operation of said means and disposed at the intake and delivery ends of the casing.

1,111,596. TRAP. ROBERT L. LIGHT, Wriston, W. Va., assignor of one-half to W. L. Coen, Oak Hill, W. Va. Filed Aug. 15, 1913. Serial No. 784,947. (Cl. 43—24.)

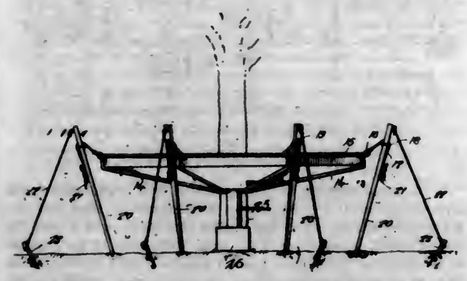


1. In a trap, a receptacle, a lid including a hollow cylindrical portion, the wall of which is provided with diametrically opposite slots having V-shaped lower ends, a trap door including a shaft of square cross section supported for rotation in the slots, and semi-circular pedals extending radially from the corners of the shaft.

2. In a trap, a receptacle, a lid member supported thereon and having upwardly and downwardly extending flaring flanges and an intermediate portion provided with diametrically opposite slots having V-shaped lower ends, a shaft of square cross section supported for free rotation in said slots with two side walls normally in engagement with the V-shaped lower portions of the slots, and pedals extending radially from the corners of the shaft.

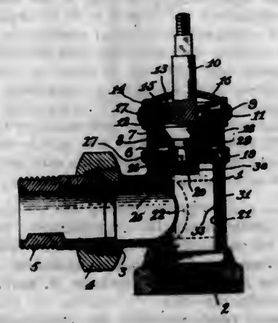
3. In an animal trap, a trap door device comprising a shaft of square cross section, pedals extending radially from the corners of the shaft, and supporting means for the shaft having slots with V-shaped lower ends that constitute the shaft bearings whereby the trap door will be maintained automatically in set position against a slight pull but allowing it to be moved under a stronger pull.

1,111,597. FRUIT-CATCHER. CHARLIE A. LITTLETON, Yacolt, Wash. Filed Jan. 8, 1913. Serial No. 740,849. (Cl. 56—99.)



A fruit catcher comprising an upstanding collar adapted to surround the trunk of a tree and having an annular flange at the base thereof, an apron secured at its inner edge to said flange and having a radially extending opening, means extending longitudinally of the said opening for connecting the adjacent edges of the opening together, a flap extending longitudinally of said opening and adapted to cover the same, complementary means carried by the flap and apron to secure the flap in an operative position to cover the opening in the apron, said securing means being wholly covered by the flap, means connected to the outer periphery of said apron for supporting the same in position, and a spout depending from said apron adjacent the collar.

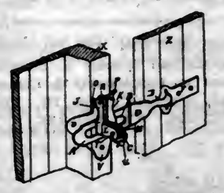
1,111,598. VALVE. WILLIAM C. MARSH, Dunkirk, N. Y. Filed Sept. 9, 1913. Serial No. 789,012. (Cl. 137—4.)



1. A valve, embodying a casing, a valve stem rotatable therein, and cone bearing surfaces on said valve stem and in said casing, said cone surfaces being of slightly different pitch to provide a sharp bearing between the two, and being in constant rotatable contact with each other.

2. A valve, embodying a casing, an apertured shelf or ledge within said casing, an annular rib on said shelf or ledge, a cone ring of composition material resting on said ledge or shelf, a retaining nut screwed into said casing to bear on said cone ring and force it into biting contact with said rib, and a valve stem having a cone surface engaging the cone surface of said ring.

1,111,599. LOCK. WILLIAM C. MARTINEAU and CLARENCE R. MARTINEAU, Albany, and A. BENJAMIN APPLEE, Watervliet, N. Y.; said Clarence R. Martineau and said A. Benjamin Appler assignors to said William C. Martineau. Filed May 15, 1914. Serial No. 838,745. (Cl. 70—83.)

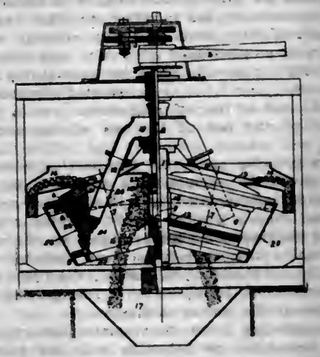


1. The combination of a hasp; means for hinging the same; a staple adapted to be placed through the opening in the hasp; two buttons pivoted above and adjacent to each side of the staple, arranged to hang by gravity over the hasp and against the opposite sides of the staple, substantially as described.

2. The combination of a hasp; a hasp plate provided with cup-shaped portion and an elongated slot therethrough; a curved portion on said hasp so arranged that the hasp may be inserted through said elongated slot with the exception of said rounded end portion which is adapted to articulate in said cup-shaped portion; a staple upon which the hasp may be placed by causing the staple to project through the opening in the hasp; means on each side of the staple for engaging the hasp after it has been placed in position on the staple, preventing the accidental withdrawal of the hasp from the staple, substantially as described.

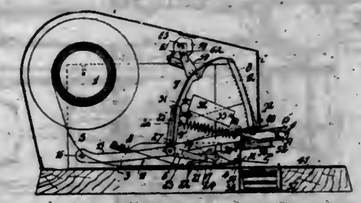
3. The combination of a hasp; means for hinging the same; a staple adapted to pass through an opening in the hasp; depending buttons adapted to pass over the hasp and lie on opposite sides of the staple; an oblique projecting finger at the upper end of each button; with a stop pin placed between the upper portions of the buttons with which said fingers will engage and stop the upward rotary movement of each button.

1,111,600. CENTRIFUGAL SEPARATOR. WILHELM MAUSS, Johannesburg, Transvaal, South Africa. Filed Dec. 17, 1912. Serial No. 737,171. (Cl. 127—3.)



Centrifugal separating apparatus comprising a drum rotatable about a main axis distant from its own axis and also rotatable about its own axis, said drum consisting of a lower conical main portion converging toward its open lower end and an inwardly projecting flange at the top, the axis of the drum being so inclined away from the main axis upwardly that the portion of the drum remote from the main axis forms a separating chamber in which material is retained centrifugally against the action of gravity, while the portion of the drum next to the main axis forms a substantially vertical wall from which material can fall through the lower end of the drum.

1,111,601. MACHINE FOR FEEDING, DETACHING, AND AFFIXING POSTAGE-STAMPS AND THE LIKE TO ENVELOPS OR OTHER ARTICLES. NORMAN SINCLAIR MCNAB, Caulfield, Victoria, Australia. Filed Apr. 24, 1912. Serial No. 692,952. (Cl. 216—28.)



1. In a machine of the kind described, the combination of a spring-controlled operating lever comprising a pair of pivoted arms, and a finger piece joining said arms and provided with a blade; a spring-controlled rocking lever; a rod connecting said levers; a series of feed pawls carried by said rocking lever; and a blade located at the mouth of the machine for coöperation with the first-named blade.

2. In a machine of the kind described, the combination, with the operating lever, of means for temporarily holding said lever out of action comprising a stud on said lever, a spring-controlled pivoted catch formed at one end with a finger plate and at the other end with a notch adapted when the operating lever is depressed to engage said stud, and means for throwing said catch out of action.

3. In a machine of the kind described, the combination, with the operating lever, of means for temporarily holding said lever out of action comprising a stud on said lever, a spring-controlled pivoted catch formed at one end with a finger plate and at the other end with a notch adapted when the operating lever is depressed to engage said stud, and means for throwing said catch out of action consisting of a pivoted cam-like depressor adapted to engage and depress the finger plate of said catch.

4. In a machine of the kind described, an operating lever, a spring-controlled bell crank lever formed at one end with a stop, and a lock on the casing the bolt of which is adapted to depress the other end of said bell crank lever and move said stop laterally over said operating lever when in its depressed position.

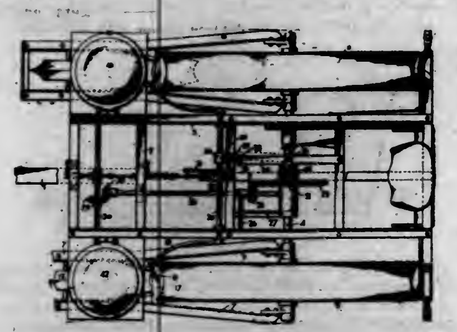
5. In a machine of the kind described, the combination of a depressible operating lever, a spring-controlled bell-crank lever, a lock having a bolt adapted to operate the bell-crank lever, and a stop associated with said bell-crank lever for holding said operating lever in depressed position.

[Claim 6 not printed in the Gazette.]

1,111,602. PLANTING-MACHINE. LINDSAY B. MCNUTT, North Kingsville, Ohio. Filed Feb. 7, 1913. Serial No. 746,779. (Cl. 111—6.)

1. In a seed dropping or planting machine, a pair of traction wheels, an axle rigidly secured to said traction wheels, a frame mounted on said axle, a dropping mechanism arranged on said frame and in front of each of said traction wheels, means for connecting said axle with said dropping mechanism for causing the actuation of the dropping mechanism when the axle is rotated, said means including a sliding gear member arranged on the axle, and a pinion meshing with the gear member, a swinging frame straddling each of said traction wheels, a furrow opener mounted on each of said swinging frames, a lifting mechanism mounted on said first mentioned frames connected with said swinging frames for lifting the swinging frames so that the furrow openers carried thereby will be out of contact with the earth, a cam member connected with said lifting mechanism and actuated thereby when the swinging frames are elevated, and means connected with the gear wheel splined to said axle actuated by said cam for disconnecting said gear wheel from said pinion when said swinging frames have been elevated whereby the

machine may be moved from one place to the other without opening a furrow and without actuating the seed dropping mechanism.



2. In a seed dropping or planting machine a pair of traction wheels, an axle rigidly secured to said traction wheels, a dropping mechanism, means for connecting said axle with said dropping mechanism for causing the actuation of the dropping mechanism when the axle is rotated, said means including a sliding gear member arranged on the axle, and a pinion meshing with the gear member, a swinging frame adjacent each of the traction wheels, a furrow opener mounted on each of said frames, a lifting mechanism connected with said frames, for lifting the same so that the furrow openers carried thereby will be out of contact with the earth, a cam member connected with said lifting mechanism and actuated thereby when the swinging frames are elevated, and means connected with the gear wheel splined to said axle actuated by said cam, for disconnecting said gear wheel from said pinion when said swinging frames have been elevated, whereby the machine may be moved from one place to the other without opening a furrow, and without actuating the said dropping mechanism.

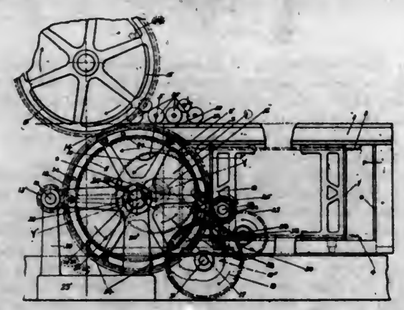
3. In a seed-dropping or planting machine, a seed-dropping mechanism, traction wheels, an axle connected with said traction wheels and rotated thereby, means for connecting said axle with the seed-dropping mechanism, whereby the seed-dropping mechanism will be operated when the traction wheels are rotated, said means including a pinion, and a gear wheel splined to said axle, said pinion and said gear wheel being normally in mesh, and means for disconnecting the seed-dropping mechanism from said axle, said means including a pivotally mounted arm, means for connecting said arm with said gear wheel, a pin extending from said arm, a cam engaging said pin, and a hand-operated mechanism for moving said cam, whereby when said hand-operated mechanism is moved said gear wheel will be moved longitudinally of said axle.

1,111,603. DENTAL TOOL. JOSEPH P. MEETES, Los Angeles, Cal. Filed Nov. 19, 1913. Serial No. 801,931. (Cl. 32—10.)

1. A dental tool comprising a pair of forceps, the jaws of said forceps being provided with apertured enlargements, a cylindrical stem, a head formed integral with the cylindrical stem, the outer surface of the head being concave, and a yieldable cushion element adapted to be secured to the concave head to form a tooth holding members.

2. In a device of the character described, a pair of pivoted handles, segmental extensions formed on the handles, enlargements formed at the free ends of the segmental extensions, said enlargements being provided with alining apertures, a stem adapted to be inserted in one of the apertured, a head formed integral with the stem, and a cushion member removably secured to the head and adapted to form a jaw to hold the article which is being operated upon when the device is in use.

1,111,604. BED-MOTION IN PRINTING-MACHINES. ROBERT MIEHLE and ROBERT F. MIEHLE, Jr., Chicago, Ill., assignors to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed May 4, 1911. Serial No. 625,050. (Cl. 101—158.)



1. In a printing press, the combination with a form bed; of means for reciprocating said bed including a shaft; devices operated by said shaft for moving the bed to and fro; a movable support carrying said shaft, means for shifting said support; a gear on the outer end of said shaft; and an internal gear meshing with the gear on the outer end of the said shaft; said gear being so positioned relative to said internal gear that the shifting movements of the gear relative to the internal gear cause an accelerated movement of the bed at one end of its strike, and a retarding movement of the bed at the other end of the stroke.

2. In a printing press, the combination with a form bed; of means for reciprocating said bed including a gear element; means operated by said element for moving the bed to and fro; a movable support carrying said gear element; means for shifting said support to cause the gear element to move the bed in either direction; and an internal gear meshing with said gear element, said gear element being so positioned relative to said internal gear that the shifting movements of the gear element relative to the internal gear cause an accelerated movement of the bed at the end of the printing stroke, and a retarding movement of the bed at the end of the non-printing stroke.

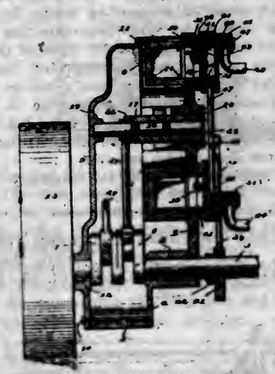
3. In a printing press, the combination with a form bed; of means for reciprocating said bed, including a shaft and devices operated by said shaft for moving the bed to and fro; a pivoted suport carrying said shaft; means for shifting said suport; a gear on the outer end of said shaft; and an internal gear meshing with the gear on the outer end of said shaft, the fulcrum of the said support being positioned on a line passing approximately through the axes of said gears.

4. In a printing press, the combination with a form bed; of means for reciprocating said bed including a shaft and devices operated by said shaft for moving the bed to and fro; a pivoted support carrying said shaft; means for shifting said support; a gear on the outer end of said shaft; and an internal gear meshing with the gear on the end of the shaft, the fulcrum of the said support being positioned substantially in line with the axis of said internal gear.

5. In a printing press, the combination with a form bed; of means for reciprocating said bed, including a shaft and devices operated by said shaft for moving the bed to and fro, a pivoted support carrying said shaft; means for shifting said support; a gear on the outer end of said shaft; and an internal gear meshing with the gear on the outer end of said shaft, the fulcrum of the said support being positioned on a line passing approximately through the axes of said gears; said gear being so positioned relative to said internal gear that the shifting movements of the gear relative to the internal gear cause an accelerated movement of the bed at the end of the printing stroke, and a retarding movement of the bed at the end of the non-printing stroke.

[Claims 6 to 11 not printed in the Gazette.]

1,111,605. INTERNAL-COMBUSTION ENGINE. CALVIN F. MOSS and MICHAEL JUNGLING, Bogalusa, La. Filed Jan. 23, 1914. Serial No. 813,877. (Cl. 123—18.)

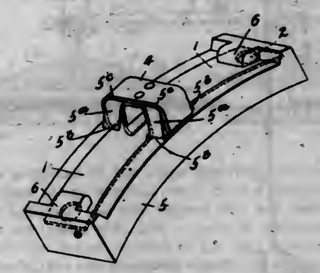


1. In an internal combustion engine, a housing inclosing an annular expansion chamber, a main frame plate forming one side wall of said expansion chamber and provided with combustion chambers at points where said pistons approach the nearest to each other, an igniter in each of said combustion chambers, arcuate pistons mounted for oscillatory movement threin about a common axis, rock shafts having coincident axes of movement and journaled one upon the other, arms connecting said pistons to their respective rock shafts, rocker arms on said shafts, a crank case, a crank shaft journaled therein, connecting rods extending from said rocker arms to said crank shaft, charge compressing means mounted on and driven by the engine and arranged to discharge the compressed charge into said combustion and expansion chambers, and means preventing the return movement of said compressed charges.

2. In an internal combustion engine, a housing inclosing an annular expansion chamber, a main frame plate forming one side wall of said expansion chamber and provided with combustion chambers at points where said pistons approach the nearest to each other, an igniter in each of said combustion chambers, arcuate pistons mounted for oscillatory movement therein about a common axis, rock shafts having coincident axes of movement and journaled one upon the other, arms connecting said pistons to their respective rock shafts, rocker arms on said shafts, a crank case, a crank shaft journaled therein, connecting rods extending from said rocker arms to said crank shaft, charge compressing means mounted on and driven by the engine and arranged to discharge the compressed charge into said combustion and expansion chambers, means preventing the return movement of said compressed charges, check valves between said compressing means and combustion chambers, and mechanically controlled means for locking and unlocking said check valves.

1,111,606. BRAKE-SHOE. HENRY B. NICHOLS and GEORGE M. RICHARDSON, Philadelphia, Pa. Filed Mar. 27, 1914. Serial No. 827,671. (Cl. 188—82.)

1. A brake shoe comprising a cast body, a back made of ductile metal having fastening devices connected therewith, said back and the fastening devices being embedded in the body of casting, and the fastening devices being separated transversely of the body so as to leave spaces between them, and projections from the cast metal associated with said fastening devices filling said spaces and furnishing bearing faces to take the thrust due to braking.



2. A brake shoe comprising a cast body, a back made of ductile metal having one or more fastening devices connected therewith, said back and the fastening devices being embedded in the body in casting and being secured together independently of the casting by means of welded joints.

3. A brake shoe comprising a back made of ductile metal of substantially the full length of the shoe, with openings at its ends and opposite recesses in its middle portion, a fastening lug composed of two members also of ductile metal, made in inverted U-shape with one member secured within the other by means of base welds, and an iron body cast upon and about said back and lug so as to embed the same in the casting with the openings in the back filled and covered by the cast iron, and the members of the lug straddling the recessed portion of the back.

4. A brake shoe comprising a cast metal body and a ductile or malleable metal lug for securing it in the brake head, said lug being made in inverted U-shape with inner and outer members welded together at their bases and with their ends separately embedded in the cast body.

5. A brake shoe comprising a cast metal body and a ductile or malleable metal lug for securing it in the brake head, said lug being formed of two members secured together to form a double arch with united crown, and with its terminal members embedded in the casting of the body.

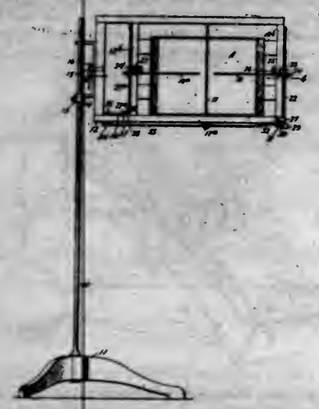
[Claims 6 to 11 not printed in the Gazette.]

1,111,607. STAND. NELSON NYBERG, Globe, Ariz. Filed Oct. 15, 1913. Serial No. 795,261. (Cl. 45—61.)

1. In a stand of the character described, a standard, a holder adapted to receive a book or other article to be held, means for swiveling the support on the standard, and means for holding a book on the support facing either upwardly or inverted, a clamp rod for clamping a book or a piece of music at the center, fingers mounted at their outer ends to be rocked and disposed toward each other, springs normally tending to hold the fingers in the lowered position to overlie the leaves of the book, levers linked to the said fingers, guide keepers for the levers, racks on the levers, toothed sectors meshing with the racks, rocker elements in rigid relation to the sectors, and a connecting rod uniting said rocker elements.

2. In a stand of the character described, a holder to receive a book or the like, means for clamping the book, said means including fingers, clips secured to spaced members of the holder, the clips having ears on which the fingers are fulcrumed, the clips at the inside each being formed with a foot, springs connected with the feet and with the respective fingers at the interior of the holder, the clips furthermore being upturned at the outer sides thereof constituting guides, levers fulcrumed to the holder and mov-

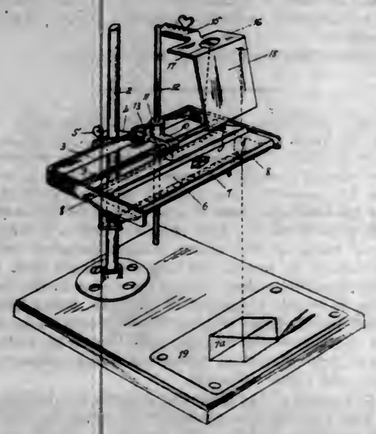
able in said guides, links connecting the levers with the fingers, and means for operating the levers in unison.



3. In a stand of the character described, a holder to receive a book or other article, fingers overlying the holder at their inner ends, the fingers being fulcrumed intermediate their ends, springs normally acting to hold the fingers in the lowered position, levers for rocking the fingers, links connecting the levers with the fingers, guide keepers on the holder near the outer ends of the levers, and additional guide keepers on the holder inward from the first guide keepers.

4. In a stand of the character described, a holder to receive a book or the like, means for mounting said holder, fingers fulcrumed at their outer ends on the holder and extending toward each other; levers operatively connected with the fingers, said levers being formed with racks and one of the levers having a finger piece, toothed sectors engaging the racks and mounted to rock, and connections between the respective sectors.

1,111,608. SKETCHING APPARATUS. WALTER THOMAS SMITH O'BRIEN, North Sydney, New South Wales, Australia. Filed Aug. 24, 1911. Serial No. 645,709. (Cl. 35—12.)



1. A reproducing apparatus, comprising a single lens, means for supporting said lens, and a screen carried by said lens-supporting means for allowing one eye of the operator to view only the object to be reproduced and the other eye to view only the surface on which the reproduction is to be made.

2. Apparatus for the purpose specified, comprising a lens, means for adjustably supporting said lens, means for holding said supporting means in adjusted position relatively to the object to be reproduced, and a screen carried by said lens-supporting means for separating the lines of vision of the eyes of the operator.

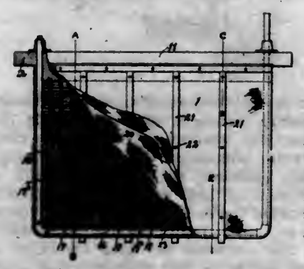
3. Apparatus for the purpose specified, comprising a lens, means for adjustably supporting said lens, means for adjustably supporting the object to be reproduced, means for holding said lens and object-supporting means in adjusted position relatively to the surface on which the reproduction of the object is to be made, and a screen carried by said lens-supporting means for separating the lines of vision of the eyes of the operator.

4. Apparatus for the purpose specified, comprising a lens, rotatably-mounted supporting means for said lens, and a screen carried by said lens-supporting means for separating the lines of vision of the eyes of the operator.

5. Apparatus for the purpose specified, comprising a lens, means for supporting said lens, a rod on which said supporting means is rotatably adjustable, a member in which said rod is adjustably secured, and a screen carried by said lens-supporting means for separating the lines of vision of the eyes of the operator.

[Claims 6 to 9 not printed in the Gazette.]

1,111,609. LEAF OF VACUUM-FILTERS FOR CYANID PROCESS. YEIKICHI OHTSUKA, Tokyo, Japan. Filed Feb. 4, 1914. Serial No. 816,639. (Cl. 75—86.)



1. A leaf of vacuum filters having a core, consisting of vertical center rods of bamboo and horizontal strips so disposed as to form clear vertical spaces for passage of filtrated liquid in the center of the leaf, substantially as and for the purpose hereinbefore described.

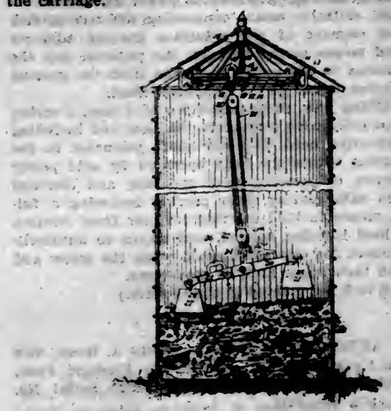
2. A leaf of vacuum filters comprising a supporting part, a U-shaped suction pipe attached to said supporting part, and a core, said core comprising spaced vertical center rods and horizontal strips on each side thereof forming perforate mats and producing vertical spaces with the rods for the passage of filtrated liquid in the center of the leaf, filter cloths outwardly of the strips on both sides of the core and suction pipe, and means carried by the supporting part outwardly of the cloths for holding the cloths against the strips and connecting said parts, said suction pipe having imperforate sides and apertures in the upper side of its bottom portion communicating with the spaces whereby the suction resistance and deposit throughout the area of the core is rendered uniform.

1,111,610. SILO-PACKER. GEORGE C. PARK, Anadarko, Okla. Filed Dec. 6, 1913. Serial No. 805,032. (Cl. 100—57.)

1. A packing means for silos, comprising a balance arm, packer weights carried by said arm, and means for supporting said arm at different heights in a silo.

2. A packing means for silos, comprising a vertically rockable arm pivoted intermediate its ends, weights pivoted to said arm, and means for suspending said arm in the silo.

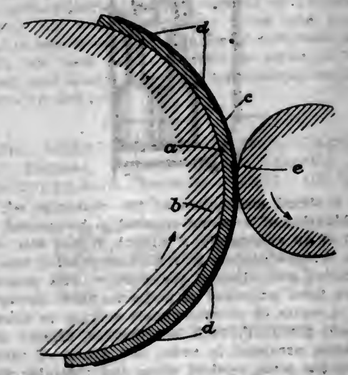
3. A packer means for silos, comprising a weighted packer device, suspension means for the said device, a carriage for the suspension means, and a transverse track for the carriage.



4. A packer for silos, comprising a packer arm, having weights at the ends, suspension means for the said arm, a carriage for the suspension means, a transverse track for the carriage, and a circular track on which the transverse track is mounted to turn.

5. A silo packing means, comprising an arm pivoted to rock in the vertical plane, a packer weight on the arm, and means for suspending the said arm and permitting a turning of the same in a lateral direction.

1,111,611. MAKING-READY PROCESS. ALBERT VICTOR PAUL, Lambhill, Glasgow, Scotland. Filed Jan. 20, 1914. Serial No. 813,293. (Cl. 101—111.)



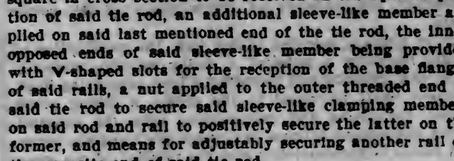
1. The herein described process which consists of grinding the making ready piece while it is in contact with the printing surface whereby is produced a sheet of varying thickness, substantially as and for the purpose set forth.

2. The herein described process which consists of grinding away portions of the making ready piece to compensate for variations in the level of the printing surface whereby there is produced a sheet of varying thickness, substantially as described.

3. The herein described process which consists in placing the making ready piece in contact with the printing surface and grinding those portions over the high parts of the type plate, the portions over the low parts yielding.

1,111,612. RAILWAY STAY-ROD. WILLIAM R. PAYNE and WILLIAM T. DRUMMOND, Scarbro, W. Va. Filed Apr. 13, 1914. Serial No. 831,524. (Cl. 238—5.)

1. In a device of the class described, the combination with a pair of rail sections; of a tie rod, sleeve-like clamping members applied thereto in pairs and the clamping members of each pair having their inner opposed ends slotted to receive the base flanges of said rails therein, means permanently formed adjacent one end of said rod to provide a stop for one pair of clamping members and to stationarily secure one rail on the rod and means in connection with the other pair of clamping members for adjustably securing the other rail on said rod.



2. In a device of the class described, the combination with a pair of rail sections; of a tie rod having a shoulder formed adjacent one end thereof the last mentioned end of said rod being threaded, a pair of clamping members of sleeve-like design applied to the last mentioned end of said tie rod, the one clamping member abutting said shoulder and both of said clamping members having their inner opposed ends slotted to receive the base flanges of the one rail therein, means in engagement with the threaded end of said tie rod to positively secure the clamping members in position on the base flanges of the rails whereby to secure the latter on the tie rod, and means in connection with the other end of said tie rod and the other rail to adjustably secure the latter on said rod.

3. In a device of the class described, the combination with a rail; of a tie rod having a shoulder formed thereon adjacent one end of the same, the last mentioned end of said rod being also threaded, a pair of sleeve-like clamping members applied to the last mentioned end of said rod to permit one of said members to abut the shoulder thereon, the inner opposed ends of said clamping members being provided with V-shaped slots to receive the base flanges of said rails therein, means to prevent the rotation of the innermost clamping member on said tie rod, a nut applied to the threaded end of said tie rod for engagement with the outer of said clamping members whereby to positively secure the latter in engagement with said rail and tie rod, and means for adjustably securing another rail to the opposite end of said tie rod.

4. In a device of the class described, the combination with a rail, of a tie rod provided with a shoulder at a point adjacent one end thereof, said tie rod being threaded at the last mentioned end, that portion of said tie rod between the shoulder and the threaded portion thereof being designed square in cross section, a sleeve-like member applied to the end of said tie rod, the bore thereof being square in cross section to be received on the squared portion of said tie rod, an additional sleeve-like member applied on said last mentioned end of the tie rod, the inner opposed ends of said sleeve-like member being provided with V-shaped slots for the reception of the base flanges of said rails, a nut applied to the outer threaded end of said tie rod to secure said sleeve-like clamping members on said rod and rail to positively secure the latter on the former, and means for adjustably securing another rail on the opposite end of said tie rod.

1,111,613. PLOW. JAMES EDWIN PEARCE, Austin, Tex. Filed July 3, 1912. Serial No. 707,489. (Cl. 97—30.)

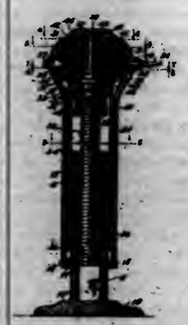
1. The combination of a frame, a plurality of plow beams depending from the frame, shares carried by said beams, wheels supporting the frame, each of said wheels being mounted in the rear of, and in line with, one of the said plows and being adapted to travel on and pack the base of the furrow made by its respective plow, and a roller mounted forwardly of the foremost plow beam and share.

2. The combination of a frame, a plurality of plow beams depending from the frame, shares carried by the said beams, wheels supporting the frame, each of said wheels being mounted in the rear of, and in line with,

one of said plow shares, and a roller mounted forwardly of the foremost plow beam and having a vertical adjustable connection therewith.

3. The combination of a frame, a plurality of plow beams vertically adjustable in the frame, shares carried by the said beams, supporting wheels for the frame mounted in the rear of, and in line with said plow shares, and a roller mounted forwardly of the foremost plow beam, said roller being connected to the said foremost plow beam for vertical movement therewith and vertical adjustment with respect thereto.

1,111,614. LIFTING-JACK. JAMES PILLING RENEKER, Logansport, Ind., assignor of one-half to Fred Vance McDonnell, Logansport, Ind. Filed Mar. 9, 1914. Serial No. 823,401. (Cl. 57—44.)



1. In a power operated lifting jack, the combination of a base including a pedestal, a casing movable vertically along said pedestal and including a load supporting head, a power shaft journaled in the casing, a lifting screw within the casing and coöperating with the pedestal, clutch connections between the power shaft and the screw, and means to automatically stop the rotation of the screw when the casing reaches its upward limit of movement independently of the stoppage of the power shaft.

2. In a power operated lifting jack, the combination of a base including a pedestal, a casing movable vertically along said pedestal and including a load supporting head, a power shaft journaled in the casing, a lifting screw within the casing and coöperating with the pedestal, clutch connections between the power shaft and the screw, and means to automatically stop the rotation of the screw when the casing reaches its lower limit of movement independently of the stoppage of the power shaft.

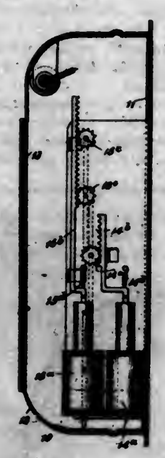
3. In a power operated lifting jack, the combination of a base including a pedestal, a casing movable vertically along said pedestal and including a load supporting head, a power shaft journaled in the casing, a lifting screw within the casing and coöperating with the pedestal, clutch connections between the power shaft and the screw, and means to automatically stop the rotation of the screw when the casing reaches either its upper or lower limit of movement.

4. In a lifting jack, the combination of a base including a vertically extending pedestal, a casing including a load supporting head movable vertically with respect to the base, a rotary screw within the casing through which the casing is hoisted upon the pedestal, a driving disk secured to the screw, a power shaft journaled in the casing, reduction gearing between the power shaft and the driving disk, shiftable means connecting the driving disk to the last element of the reduction gearing adjacent thereto, and means acting between the pedestal and the shiftable means to disconnect the same from the gearing when the screw is run to its uppermost limit.

5. In a lifting jack, the combination of a base, a casing movable upwardly with respect to the base and including a load supporting head, a power shaft journaled in the casing, gearing within the head operated by said power shaft, a screw coöperating with the base and clutched normally to said gearing, said gearing including a fulcrum gear, means to hold the fulcrum gear from rotation while the load is being hoisted, and means to automatically disconnect the clutch aforesaid when the screw and casing reach their upper limit of movement.

[Claims 6 to 9 not printed in the Gazette.]

1,111,615. AUTOMOBILE-SIGNAL. JOHN A. ROSS, New York, N. Y., assignor of one-third to Frederic Pons, New York, N. Y. Filed Jan. 10, 1914. Serial No. 811,394. (Cl. 40—52.)



1. In a signal mechanism of the character set forth, the combination of a casing adapted to be secured to the rear end of an automobile, a window in the face of said casing, a series of panels journaled on parallel axes within the casing and adjacent the window, said panels having plane faces arranged normally in view through said window, a series of electromagnets serving to selectively rotate said panels through 180 degrees, certain of said panels being arranged in pairs, the panels of each pair occupying the same vertical plane and rotatable simultaneously in the same direction, one of said panels of the pair taking the place of the other and still lying in the same plane, a display legend on said panels, a part of the legend being on one panel and the other part being on the other panel, and means to restore said panels to normal position after the magnets are deënergized.

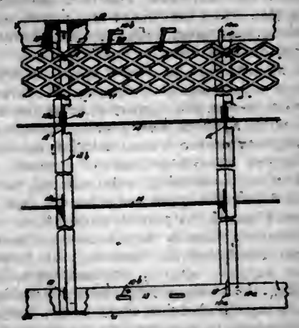
2. In a signal mechanism of the kind set forth, the combination of a casing, a panel journaled on a central axis intermediate said casing, pairs of panels journaled on axes parallel to the axes of the first-mentioned panel, the pairs of panels being journaled on axes adjacent their edges, the members of each pair being so arranged that when they swing on their axes in the same direction, one of them will take the place of the other and both will display a single legend, one half of which is carried by one panel and the other half by the other panel, a series of electromagnets associated with the several panels, means to selectively energize said magnets to actuate certain of said panels, and means to restore the panels to normal position after the magnets are deënergized.

1,111,616. SLIDING-JAW WRENCH. PAUL SABO, Racine, Wis. Filed Dec. 29, 1913. Serial No. 809,315. (Cl. 81—183.)

1. A wrench comprising a toothed shank having a fixed jaw, a sliding jaw body adjustable upon said shank, a shaft rotatably mounted in said body, a toothed wheel carried by the shaft and permanently engaging the teeth of the shank, a toothed disk fixed to the shaft, and a rotatable locking member carried by said jaw body and having a semi-cylindrical portion capable of extending into said disk for locking the same when said member is shifted thereby preventing rotation of said shaft and locking jaw body in the position to which it has been adjusted.

2. A wrench comprising a toothed shank having a fixed jaw, a sliding jaw body adjustable upon said shank, a shaft rotatably mounted in said body, a toothed wheel carried by the shaft and permanently engaging the teeth of the shank, a toothed disk fixed to the shaft, a rotatable locking member carried by said jaw body and having a semi-cylindrical portion capable of extending into said disk for locking the same when said member is shifted thereby preventing rotation of said shaft and locking the jaw body in the position to which it has been adjusted, and means to prevent longitudinal movement of said locking member.

1,111,617. SHEET-METAL PARTITION. CHARLES WILLIAM SANDERS, Victoria, British Columbia, Canada. Filed July 24, 1913. Serial No. 780,971. (Cl. 72—118.)



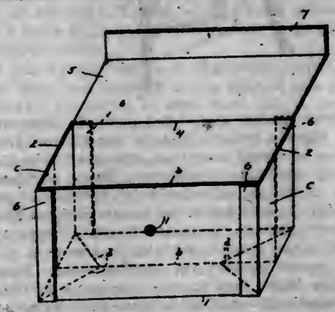
A metallic partition, comprising spaced studding elements, each having oppositely projecting flanges along its vertical edges, channel plates at the top and bottom of the partition, the top plate presenting downwardly projecting flanges, and the bottom plate presenting upwardly projecting flanges, between which flanges the upper and lower ends of the studding elements are received, the studding elements being formed with vertical series of vertically ranging, elongated slots adjacents to the side flanges, the flanges of the channel plates having transverse holes adjacent to the upper and lower slots of the studding elements, ties securing the channel plates to the studding elements, said ties extending through the holes of the channel plates and the adjacent slots of the studding elements, stiffening members between adjacent studding elements, metallic lathing on the faces of the partition, ties securing the lathing to the studding elements, said ties passing through slots of the studding elements between the channel plates, and ties securing the lathing to the flanges of the channel plates, the lathing being in the vertical plane of the flanges of the channel plates and the latter having openings for receiving the last mentioned ties.

1,111,618. LOCKABLE COCK FOR GAS-METERS. ERNST A. C. SCHOOF, New York, N. Y. Filed May 4, 1914. Serial No. 836,180. (Cl. 137—7.)

1. A cock of the class described comprising a casing, a valve element rotatably mounted therein and having a portion extending out of the casing, an arm on the said extending portion and having a threaded opening, a chamber formed on the side of the casing, a screw threaded in the chamber and adapted to extend out of the same and screw into the said arm, and means on the screw for engagement with a key, said screw being disposed on its axis parallel with the valve.

2. A cock of the class described comprising a casing, a valve therein, a laterally-extending arm on the valve and exposed outside the casing, said arm having a threaded opening, a chamber on the side of the casing and having an opening in alinement with the opening in the arm, a screw threaded in the chamber and extending out of the opening thereof and having its outer end arranged to screw into the opening of the arm, a collar on the screw and adapted to jam against the arm, and a head on the screw and arranged within the casing and having means for engagement with the key.

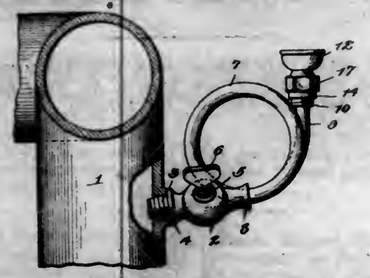
1,111,619. COLLAPSIBLE LUNCH-BOX. HENRY E. SCHRADER, New York, N. Y. Filed May 19, 1914. Serial No. 839,489. (Cl. 229—41.)



A collapsible lunch box made from a single piece of flexible material and comprising a bottom, a front and back, ends having angular flanges secured to the front and back, a folding cover having a down-turned flange and a strap handle comprising a strip of flexible material secured to the top or cover and provided with means to

extend beyond the flange of the cover and attach to a fastener, said box being foldable longitudinally at the ends, bottom and top, and said strap adapted to be taken up for holding the box in either its open or closed condition.

1,111,620. AUXILIARY AIR-INLET AND PRIMER FOR INTERNAL-COMBUSTION ENGINES. DANIEL M. SHEEDY, Poughkeepsie, N. Y. Filed Sept. 12, 1913. Serial No. 789,469. (Cl. 123—187.5.)



An auxiliary air inlet and primer for internal combustion engines comprising a hollow valved casting having means for connection with an engine manifold, a coiled metal pipe connected with said casting in advance of the valve thereof, and a valved priming cup mounted on the free end of said coiled pipe, the coils of said pipe being disposed in vertical position.

1,111,621. STORM-WINDOW. CHARLES SINGER, Winfred, S. D. Filed Feb. 16, 1914. Serial No. 819,012. (Cl. 20—55.)

1. A storm window comprising pivotally connected and relatively slidable sections foldable one against the other to assume a collapsed condition, means whereby the window may be secured to a supporting frame, and interlocking plates at the pivotally connected portions of the sections coacting to hold the latter in extended condition.

2. A storm window comprising pivotally connected sections foldable one against the other to assume a c "apsed condition, means whereby the window may be secured to a supporting frame, and interlocking plates at the pivotally connected portions of the sections coacting to hold the latter in extended condition, one of the sections comprising a sash slidable relatively to the other section and carrying one of the interlocking plates aforesaid whereby on movement of the sash said plates may be disengaged from one another.

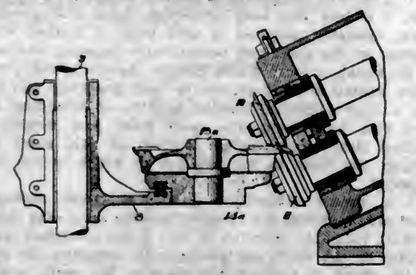
3. In a storm window, the combination of pivotally connected sections, one of said sections comprising slotted guide plates, a sash and fastening members on the sash passing through the slotted portions of the guide plates and operable to detachably and slidably connect the sash with said plates.

4. A storm window comprising an upper section, a lower section, a pair of guides pivoted at one end to the upper section and extending along the lower section, members slidably connecting the other ends of the guides to the lower section, and coöperating means between the sections normally preventing relative pivotal movement thereof.

5. A storm window comprising an upper section, a lower section, a pair of guides pivoted at one end to the upper section and extending along the lower section, and fastenings on the lower section detachably and slidably connecting said section with the other ends of the guides.

[Claims 6 to 12 not printed in the Gazette.]

1,111,622. METHOD OF FINISHING CAR-WHEELS. EDWIN E. SLICK, Pittsburgh, Pa. Filed July 8, 1910. Serial No. 571,061. (Cl. 29—168.)



1. In the manufacture of forged metal wheels the sequential steps consisting in centering the forged wheel upon a support, then bringing the centered wheel into engagement with the cutting members of a shear to thereby sever peripheral fins from the centered wheel, then shifting the support to bring the centered wheel into range of a punch, and punching the centered and sheared wheel to form the eye in the hub of the sheared wheel.

2. In the manufacture of forged metal wheels the sequential steps consisting in centering the forged wheel upon a support, then bringing the centered wheel into engagement with the cutting members of a shear to thereby sever peripheral fins therefrom, and then shifting the support to bring said wheel into range of a punch, and punching the hub of the centered wheel to form the axle eye in the hub of the sheared wheel.

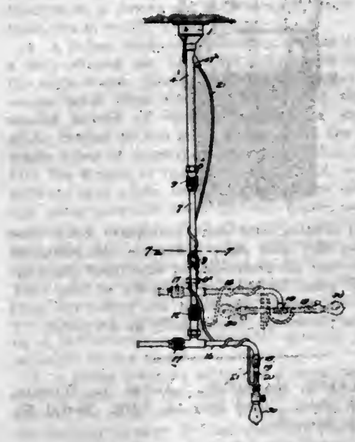
3. In the manufacture of forged metal wheels the sequential steps consisting in centering the forged wheel upon a support, moving the support to bring the wheel into engagement with a shear and thereby severing the fin from the periphery of the wheel, shifting the support to bring the centered wheel into range of a punch, and then punching the wheel to form an axial opening through the wheel hub, and simultaneously reducing the hub length to a predetermined size in the punching operation.

4. In the manufacture of forged metal wheels the sequential steps consisting in centering the forged wheel upon a wheel support, rotating the support to bring the centered wheel into engagement with opposing rotary disks and rotating the centered wheel on the support when engaged by the disks in removing the fin from the periphery thereof, then moving the support to bring the centered wheel into range of a punch, and punching the wheel to form an axially central opening extending through the wheel hub.

5. In the manufacture of forged metal wheels the sequential steps consisting in centering a forged wheel upon a wheel support, then bringing the centered wheel into engagement with the cutters of a rotary shear, rotating the wheel on the support while engaged by said cutters and thereby removing the peripheral fin from the wheel, then shifting the support to bring the wheel into range of a punch and then actuating the punch to form an opening in the wheel hub and reduce the wheel hub to a predetermined length.

[Claims 6 to 12 not printed in the Gazette.]

1,111,623. ELECTRIC-LIGHT PENDANT. WILLIAM OSCAR TEASDALE, Manila, Philippine Islands. Filed Jan. 19, 1914. Serial No. 813,005. (Cl. 240—68.)



1. An electric light pendant comprising a pair of telescopic members, means for suspending one of said telescopic members, a sleeve mounted to turn on the lower end of the other of said telescopic members, the said sleeve projecting at its lower end below the end of said telescopic member, a laterally extending sleeve having a member secured in the projecting end of the first mentioned sleeve, and a slidable arm carried by said laterally extending sleeve for supporting a lamp.

2. An electric light pendant comprising a pair of telescopic members, means for suspending one of said telescopic members, a sleeve mounted to turn on the lower end of the other telescopic member, a laterally extending sleeve having a member secured to the lower end of said first mentioned sleeve, a slidable arm carried by said laterally extending sleeve for supporting a lamp, and means for retaining said telescopic members in their adjusted positions.

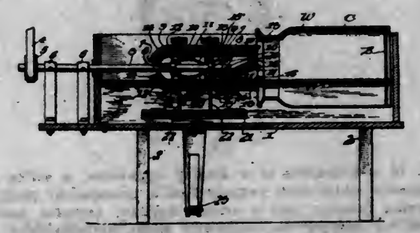
3. An electric light pendant comprising a pair of telescopic members, means for suspending one of said telescopic members, a sleeve mounted to turn on the lower end of the other telescopic member, a laterally extending sleeve having an upwardly extending member secured to the lower end of the first mentioned sleeve, a slidable arm carried by said laterally extending sleeve for supporting a lamp, means for retaining said telescopic members in their adjusted positions, and means for retaining said first mentioned sleeve in any of its adjusted positions on the said telescopic member.

4. An electric light pendant comprising a pair of telescopic members, means for suspending one of said telescopic members, the other telescopic member having an annular flange at its lower end, a sleeve mounted to turn on the lower end of the last mentioned telescopic member and engaging said annular flange, the said sleeve having its lower end internally threaded and extending below the end of said telescopic member, a laterally extending sleeve having an upwardly extending threaded lug screwing in the end of the first mentioned sleeve, a slidable arm carried by said laterally extending sleeve for supporting a lamp, means for retaining said telescopic members in their adjusted positions, means for retaining said first mentioned sleeve in any of its adjusted positions, and means for clamping said slidable arm to said laterally extending sleeve.

5. An electric light pendant comprising a pair of telescopic members, means for suspending one of said telescopic members, a sleeve mounted to turn on the lower end of one of said telescopic members, a laterally extending sleeve having a lug secured in the end of the first mentioned sleeve, a slidable arm carried by said laterally extending sleeve for supporting a lamp, said slidable arm comprising two portions connected by a hinged joint, one of said portions bearing the lamp, and means for retaining the latter portion in any of its adjusted positions.

[Claims 6 to 8 not printed in the Gazette.]

1,111,624. MACHINE FOR WASHING MILK-CANS. WILLIAM P. THORPE, Sugargrove, Pa. Filed June 1, 1914. Serial No. 842,130. (Cl. 141—7.)



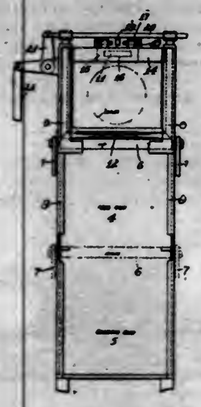
1. A device of the character described comprising a shaft, a pair of longitudinally spaced links pivoted to one side thereof, a longitudinal brush pivoted to the outer ends of said links and a second brush hingedly connected to one end of said shaft and movable independently of the other brush for the purpose set forth.

2. A device of the character described comprising a shaft, a pair of longitudinally spaced links pivoted at their inner ends to one side thereof, a longitudinal brush pivoted to the outer ends of said links, a diagonally disposed coil spring attached to said shaft and to the brush, a second brush having its back disposed adjacent one end of the shaft, and hinge links carried by said last mentioned brush and pivoted on opposite sides of the shaft, said first mentioned brush projecting beyond said last mentioned brush when the device is folded by said coil spring, the two brushes being independently movable.

3. In a device of the character described, a water tank, a pair of curved arms pivoted thereto and depending from their pivots, a brush carried by said arms, a pulley on one edge of the tank, a foot lever pivoted beneath the tank and a cable passing from the foot lever to the brush and around the pulley.

4. In a can washing device, a longitudinal driving shaft having its inner end rounded on one edge, a pair of pivot links pivotally connected to said inner end, a transverse brush having its back pivotally connected to the opposite ends of said pivot links adjacent one of its ends, a pair of collars spaced longitudinally upon said shaft, set screws for securing said collars in adjusted position thereon, a coil spring secured at its opposite ends to one of said collars and to the pivoted end of said brush, pivot ears formed on opposite sides of said collars, links pivoted at their inner ends to said ears, longitudinal strips pivotally connected on their inner faces with the outer ends of said links, said strips having one of their ends curved inwardly, bristles projecting outwardly from said strips and the curved ends thereof and coil springs connected at their outer ends to said strips, said springs projecting inwardly and being connected to the shaft adjacent one of the collars, whereby the tension of said springs may be exerted to normally move said strips inwardly, said strips projecting beyond the end of the first mentioned brush when folded.

1,111,625. AUTOMATIC DISPLAY APPARATUS. JAMES F. TILLEY, Washington, D. C., and SYDNEY B. AUSTIN, Baltimore, Md., assignors, by mesne assignments, to Mott-Lepage Animated Advertising Corporation, New York, N. Y. Filed Apr. 3, 1912, Serial No. 688,346. Renewed Aug. 17, 1914. Serial No. 857,265. (Cl. 88—16.)



1. In combination in a display apparatus, a series of composite slides each composed of a transparent picture carrying member and a screen member, transfer mechanism for moving the composite slides automatically to and from the display point, and means for automatically operating the composite slide while at said display point to produce motion picture effects, substantially as described.

2. In combination in a display apparatus, transfer mechanism for moving composite picture slides to and from a point to be displayed, operating mechanism for moving one member of the composite slide relatively to the other, with means of connection between the slide and said operating mechanism, said means of connection being engaged by the operating mechanism when the composite slide is moved to the display point, and disengaged therefrom when the slide is moved away from the display point, substantially as described.

3. In combination with composite slides, casings for holding said slides, one member of each slide being movable in relation to the other, and operating means for actuating the slide when the said slide is moved to the point of display, and automatically operating transfer mechanism to move the casings to and from said point, substantially as described.

4. In combination a series of composite slides, each composed of a transparent picture carrying member, and a transparent screen member, one movable relatively to the other, a display device, mechanism operating automatically for moving one member of the slide in relation to the other, and automatically operating transfer mechanism to move the composite slide into and out of engaging position with the operating mechanism, substantially as described.

5. In combination a series of composite slides each composed of two members one movable in relation to the other, casings to receive the slides having means to engage one slide member to retain it against movement, transfer mechanism to move the casings to and from a display point, and automatically operating mechanism for the other slide member when the casings are moved to the display point, substantially as described.

1,111,626. SHIRT. WILLIAM S. TOTHILL, Lockport, N. Y. Filed Jan. 5, 1910. Serial No. 536,533. (Cl. 2—41.)

A tailless shirt which is cut to hang loosely from the shoulders and terminates at its lower end a short distance below the waist of the wearer where it is turned in and provided with an upturned finishing band which is comparatively stiff and which has overlapping ends adapted to be secured together, said band being cut on a curve to flare upwardly and outwardly when turned up and loosely surrounding the upper portion of the trousers of

the wearer and holding said shirt outwardly away from said trousers so that said shirt can move independently of said trousers, the circumference of said band being approximately the same as that of the body of the shirt, whereby when the ends of the band are joined the shirt body will not be puckered, substantially as set forth.

1,111,627. FLYING-MACHINE. JAMES L. WALKER, Grand Island, Nebr. Filed July 22, 1913. Serial No. 780,491. (Cl. 244—29.)

1. A flying machine comprising a body, head and tail frames projecting therefrom, steering and balancing mechanism mounted solely upon the head frame, the tail frame being devoid of vertical surfaces, a supporting surface carried by the main frame and of insufficient area and lifting capacity to sustain the machine in flight, a horizontal tail plane mounted upon the tail frame of less area and lifting capacity than the main plane, but of sufficient area and lifting capacity for coöperation with the main plane to sustain the machine in flight, a motor mounted upon the main frame below the supporting surface, a propeller arranged above the tail plane for rotation on a downwardly and forwardly inclined axis, said propeller receiving motion from said motor.

2. A flying machine comprising a main frame, head and tail frames carried by the main frame, the head frame being arranged above the horizontal level of the tail frame and the latter being wholly devoid of vertical surfaces, steering and balancing mechanism mounted wholly upon the head frame, a main supporting plane, mounted upon the main frame, said supporting plane being of an area and lifting capacity insufficient to sustain the machine in flight, a horizontal tail plane mounted on the tail frame and of less area and lifting capacity than the main plane, but of sufficient area and lifting capacity for cooperation with the main plane to sustain the machine in flight, a motor mounted upon the main frame below the supporting surfaces, a propeller mounted above the tail plane, and a shaft carrying said propeller and inclining downwardly and forwardly therefrom, said shaft being driven from said motor.

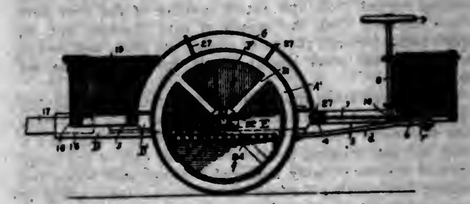
3. A flying machine comprising a main frame, including a pendant body shaped car, head and tail frames projecting from the main frame, the head frame being arranged at a higher horizontal level than the tail frame, steering and balancing mechanism mounted solely upon the head frame, the tail frame being devoid of vertical surfaces, a main supporting plane mounted upon the main frame above the car, said plane being of an area and lifting capacity insufficient to sustain the weight of the machine in flight, a horisontal tail plane mounted upon the tail frame, said tail frame being of less area and lifting capacity than the main plane but of sufficient area and lifting capacity for coöperation with the main plane to sustain the weight of the machine in flight, a motor within the car below the main supporting surface, a propeller mounted above the tail plane, and a shaft carrying said propeller and operated from the motor, said shaft extending at a downward and forward angle of inclination from the propeller to the motor.

4. A flying machine comprising a main frame including a body shaped car, head and tail frames projecting from the main frame, the head being arranged at a higher horizontal level than the tail frame, and the latter being wholly devoid of vertical surfaces, a main supporting plane carried by the main frame above the car, said main frame being of insufficient area and lifting capacity to sustain the weight of the machine in flight, vertical surfaces between said plane and the sides of the car, a horisontal tail plane mounted upon the tail frame and of less area and lifting capacity than the main plane but of sufficient area and lifting capacity for coöperation with the main plane to sustain the machine in flight, a motor mounted within the car below the main plane, a propeller upon the tail frame above the tail plane, and a shaft carrying said propeller and driven from the motor said shaft extending on a downwardly and forwardly inclined plane from the propeller to the motor.

5. A flying machine including a main plane, a flap pivoted beneath the forward portion of said plane to fold against the same under air pressure, and resilient flexible connections between the flap and rear portion of the main plane tending to move said flap downwardly and operating to adjust it downwardly to an increased angle of incidence when the air pressure on said flap is reduced to a determined extent.

[Claims 6 to 9 not printed in the Gazette.]

1,111,628. SNOW AND ICE MELTING MACHINE. AXEL WETTERVIK, Iron River, Mich., assignor of one-half to Gust Lindahl, Iron River, Mich. Filed Aug. 5, 1913. Serial No. 783,056. (Cl. 37—35.)



1. In an ice and snow melting road making machine, a supporting frame, a roller mounted thereon and having open ends, a heating means in the roller, and draft controlling doors pivotally mounted on a common axis coincident with the axis of the rollers.

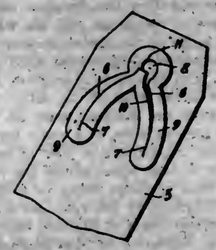
2. In a machine of the class described, the combination of a frame, axles thereon, a roller mounted on the axles, a heater disposed within the roller and suspended on the axles, and adjustable doors carried by the axles and stationary with respect to the roller to control the draft through the latter.

3. In a machine of the class described, the combination of a frame, a roller having open ends and rotatably mounted in the frame, a heater within the roller, a plurality of door sections pivotally mounted at each end of the roller, a guard disposed over the upper portion of the rollers, and means on the sections of the door for adjustable engagement with the said guard for holding the door sections in different positions.

4. In a machine of the class described, the combination of a frame, axles thereon, a roller supported by the axles, a fire-box in the roller and carried by the axle, and doors for the ends of the roller consisting of sections pivotally mounted on the axles.

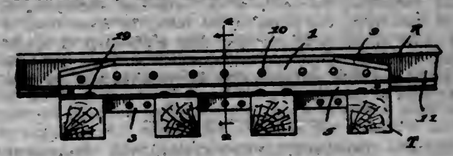
5. In a machine of the class described, the combination of a frame, axles thereon, a roller supported by the axles, a fire-box in the roller and carried by the axle, doors for the ends of the roller consisting of sections pivotally mounted on the axles, a guard mounted on the frame and disposed over the roller, and means on the sections of the doors for engagement with the guard for holding the door sections in different positions.

1,111,629. IDENTIFICATION OR MARKING TAG. LEANDER D. WHEATLEY, Waitsburg, Wash., assignor of one-half to Frank A. Jonas, Waitsburg, Wash. Filed Oct. 9, 1912. Serial No. 724,836. (Cl. 40—26.)



A tag provided with an opening comprising a reduced neck intermediate the ends with diverging lines upon one side of the neck and a line defining the major arc of a circle upon the opposite side of the neck and an integral tongue filling the neck and the space between the diverging lines and provided with an extremity substantially completing the circle.

1,111,630. RAIL-JOINT. HENRY S. WIKEL, York, Pa. Filed Jan. 28, 1914. Serial No. 815,039. (Cl. 239—10.)



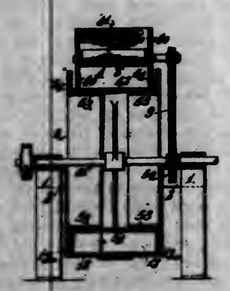
1. In combination with the meeting ends of two rails and a plurality of ties for the rails, of a joint chair for connecting the rail ends, said chair comprising two companion sections, each of which includes a base upon which the rails rest, the inner edge of each of the base portions having a plurality of downturned flanges of a length to be received between the ties and to contact with the sides of the ties, means for connecting the said flanges, each of the chair members also including an inturned angular flange which overlies the base flanges of the rails, and a vertical plate which is integrally formed with the overlying flange, said plate having its upper edge for the major portion of its length of a height to engage beneath the heads of the rails, and the said plate being inclined from the said central portion to its ends, means for securing the plates to the webs of the rails, means for securing the chair sections to the ties, each of the chair sections having its longitudinal edge, at its ends, provided with an outwardly extending ear, and means for securing the said ears to the end ties for the joint chair.

2. In combination with the meeting ends of two rails and a plurality of ties for the rails, of a chair connecting the rail ends, said chair comprising two companion members, each of which including a base upon which the rails rest, the inner longitudinal edge of the base having spaced downturned flanges which are adapted to be arranged between the ties and to contact with the sides of the tie,

means for connecting the flanges, the base members, at a distance from their longitudinal edges having inturned flanges which overlie the base flanges of the rails, the said longitudinal edges at the ends of the chair sections being formed with outwardly extending flat members, means for securing the said flat members to the end ties upon which the chair rests, means co-acting with the longitudinal edges of the chair sections for securing the same to the intermediate tie, the overlying flange of each of the sections being integrally formed with a vertical plate which is adapted to abut with the opposite faces of the webs of the rails, each of the said plates, for the major portion of its length, having its upper edge of a height to underlie the heads of the rails, and the said plate being inclined from the said central portion to its ends, the inner face of the plate at its said upper edge being formed with a continuous bead which corresponds with the shape of the said upper edge and which extends inwardly of the plate a distance approximately equaling the distance between the outer longitudinal edges of the heads and the webs of the rails, the lower inner faces of the plates at their juncture with the overlying flanges being provided with longitudinally extending beads, and means intermediate the beads for securing the plates to the webs of the rail.

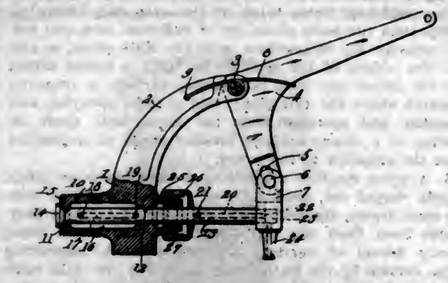
3. In combination with the meeting ends of two rails and a plurality of ties for the rails, of a chair for securing the rail ends, said chair comprising a pair of companion sections, each including a base upon which the rails rest, and each of the said base portions being of a less width than one-half of the thickness of the base portions of the rails, the inner longitudinal edges of the said base portions of the chair having a plurality of downturned flanges which are adapted to fit between the ties and to engage with the sides of the ties, overlying flanges connected adjacent the outer longitudinal edges of the bases and overlying the base flange of the rails, the said outer edges of the base members at the ends of the chair having laterally extending plates which rest upon the end ties of the chair, means for securing the said members to the said end ties, means contacting with the outer longitudinal edges of the base member for securing the chair to the intermediate ties, vertical plates formed with the overlying flanges, said vertical plates having their upper edges formed with beads and underlying the heads of the rails and conforming to and underlying the heads of the rails, the inner faces of the said plates being provided with a plurality of spaced longitudinally extending beads which contact with the webs of the rails, and means for securing the said plates to the webs of the rails.

1,111,631. DOUGH-SHAPING APPLIANCE. THOMAS H. WILLIAMS, Eugene, Oreg. Filed July 2, 1913. Serial No. 776,908. (Cl. 107—9.)



A dough shaping machine comprising a rotatable frame consisting of an annular rim and opposing flanged end sections telescopically connected with the annular rim, a supporting frame for the drum, a concave composed of two edgewise telescopic sections adjustably mounted upon the frame and cooperating with the drum to provide a dough passage, and means for feeding the dough into the said passage.

1,111,632. GAGE-COCK. MALCOLM WRIGHT, Raspeburg, Md. Filed Apr. 24, 1913. Serial No. 763,461. (Cl. 136—3.)



1. In a gage cock, the combination with a body having alined bores and a chamber axially alined with but larger than said bores and connecting their adjacent ends, the inlet end of the inner bore having a valve seat, and a gland nut and packing around the outlet end of the outer bore; of a stem slidably mounted through said bores and packing, and passing through said chamber than which it is appreciably smaller, a valve at the inner end of the stem, the stem having near its inner end a bore with lateral openings at its extremities spaced apart a less distance than the length of said chamber and both opening into it when said valve is seated, and said stem also having a second bore with a lateral inlet opening spaced from the outlet opening of the first bore a less distance than the length of said chamber and its outlet being through the outer end of the stem, and means for moving the stem longitudinally for the purpose set forth.

2. In a gage cock, the combination with a body having alined bores and a chamber axially alined with but larger than said bores and connecting their adjacent ends, and a gland nut and packing around the outlet end of the outer bore; of a stem slidably mounted through said bores and packing and passing through said chamber than which it is appreciably smaller, the stem having near its inner end a bore with lateral openings at its extremities spaced apart a less distance than the length of said chamber and said stem also having a second bore with a lateral inlet opening spaced from the outlet opening of the first bore a less distance than the length of said chamber and its outlet being through the outer end of the stem, and means for moving the stem longitudinally for the purpose set forth.

3. In a gage cock, the combination with a body having alined bores and a chamber axially alined with but larger than said bores and connecting their adjacent ends, and a gland nut and packing around the outlet end of the outer bore; of a stem slidably mounted through said bores and packing and passing through said chamber than which it is appreciably smaller, the stem having near its inner end a bore with lateral openings at its extremities spaced apart a less distance than the length of said chamber, and said stem also having a second bore with a lateral inlet opening spaced from the outlet opening of the first bore a less distance than the length of said chamber and its outlet being through the outer end of the stem, a block secured on said end and having a cavity with which said outlet communicates, a nozzle carried by the block and communicating with said cavity, and means for moving the block and sliding the stem, for the purpose set forth.

1,111,633. DUST-CATCHER FOR AIR-PIPES. JOHN W. YOUNG, Memphis, Tenn. Filed Feb. 5, 1914. Serial No. 816,759. (Cl. 83—47.)

1. A dust catcher, comprising an outer drum having necks at opposite ends to fit stove pipe sections and having a bulging body provided with a side door; and an inner, hollow holder for dust catching material, said holder being formed with inlet and outlet ends registering with the necks of the drum and having an outer bulging wall conforming generally to the body of the drum, and a cone within the said wall and united to the latter at the base of the cone adjacent to the outlet end of the holder, the apex of the cone being disposed in the direction of the opposite open end of the holder.

2. A dust catcher, comprising an outer drum formed at the opposite ends to fit stove pipe sections and having an enlarged body provided with a side door; and a removable hollow holder of reticulated material within said drum, said holder comprising an outer bulging wall, and a cone within the said wall, said wall conforming generally to the drum body and having an inlet end and an outlet end adjacent to the ends of the drum, the reticulated cone being united at its base to the reticulated wall adjacent to the outlet end, the apex of the cone being disposed in the direction of the inlet end, and a dust-catching material held by said cone and wall.

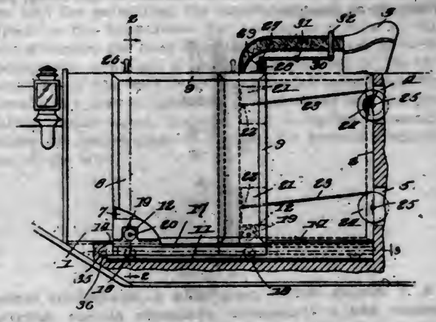
3. A dust catcher, comprising an outer drum having necks at the opposite ends to fit stove pipe sections, and a bulging body provided with a side door; a separate hollow holder receivable within the drum through the said side door, said holder comprising an outer wall conforming generally to the drum body, and a cone within said wall, said holder having inlet and outlet ends adjacent to the necks of the drum, the cone being united at its base to the wall of the holder adjacent to the outlet end, the apex of the cone being disposed in the direction of the inlet end, and dust catching material held by said wall and cone.

4. A dust collector comprising a drum having inlet and outlet necks at opposite ends to fit pipe sections and having a body of increased diameter between the necks, an inner hollow holder for dust catching material, said holder being formed with inlet and outlet ends registering with the necks of the drum, and having an outer foraminous wall of increased diameter between the said inlets and outlets, to conform generally to the body of the drum, the holder having also a foraminous cone supported within and spaced from said wall, the tapering end of the cone being disposed in the direction of the inlet of the holder; dust catching material in said cone, and dust-catching material between the foraminous wall and the drum.

5. In a dust catcher, a dust-collecting device consisting of an outer wall of foraminous material, and an axially disposed inner cone of foraminous material connecting at its base with the adjacent end of the outer wall, and dust-collecting material on said cone and the wall.

1,111,634. SLIDING DOOR. FRANCIS S. ADAMS and WILLIAM H. RICKARD, Pueblo, Colo. Filed Sept. 13, 1913. Serial No. 789,612. (Cl. 21—125.)

1. The combination with a vehicle having a door opening, and a chamber at one side of the door opening, of a door mounted to slide into and out of the chamber for closing the opening, said vehicle having a passageway below the door opening and extending into the chamber, a track rail in the passage, a plate above the passage, said plate having a longitudinal slot, pairs of wheels journaled on the door, said pairs being near the opposite side edges of the door, and the members of each pair being on opposite faces of the door, said wheels engaging a plate, said door having an extension passing through the slot and into the passage, wheels journaled on the extension and engaging the track rail, normally active means within the chamber for opening the door, a spring latch for holding the door closed, a push button adjacent to the seat, and a connection between the said button and the latch for releasing the latch when the button is depressed.



2. The combination with a vehicle having a door opening, and a chamber at one side of the door opening, of a door mounted to slide into and out of the chamber for closing the opening, said vehicle having a passageway below the door opening and extending into the chamber, a track rail in the passage, a plate above the passage, said plate having a longitudinal slot, pairs of wheels journaled on the door, said pairs being near the opposite side edges of the door, and the members of each pair being on opposite faces of the door, said wheels engaging a plate, said door having an extension passing through the slot and into the passage, wheels journaled on the extension and engaging the track rail, normally active means within the chamber for opening the door, and releasable means for holding the door closed.

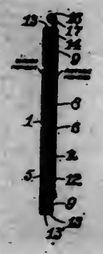
3. The combination with a vehicle having a door opening, and a chamber at one side of the door opening, of a door mounted to slide into and out of the chamber for closing the opening, said vehicle having a passageway below the door opening and extending into the chamber, a track rail in the passage, a plate above the passage, said plate having a longitudinal slot, pairs of wheels journaled on the door, the members of the pairs being on opposite sides of the slot, said door having an extension passing through the slot, wheels journaled on the extension and engaging the track rail, normally active means for opening the door, and releasable means for holding the door closed.

4. The combination with a vehicle having a door opening, and a chamber at one side of the door opening, of a door mounted to slide into and out of the chamber for closing the opening, said vehicle having a passageway below the door opening and extending into the chamber, a track rail in the passage, a plate above the passage, said plate having a longitudinal slot, pairs of wheels journaled on the door, the members of the pairs being on opposite sides of the slot, the door having an extension passing through the slot, and wheels journaled on the extension and engaging the track rail.

1,111,635. COMPOSITE LANTERN-SLIDE. SYDNEY B. AUSTIN, Baltimore, Md., assignor, by mesne assignments, to Mott-Le-Gaige Animated Advertising Corporation, New York, N. Y. Filed July 7, 1913. Serial No. 777,747. (Cl. 88—16.)

1. A display device comprising two transparent members, one a screen member and the other a composite picture carrying member, and a holder consisting of two centrally open frames, each holding one of the transparent members, said frames having relative movement in one direction and held against movement in other directions to present the different parts of the picture member to the clear spaces of the screen.

2. A display device comprising a transparent screen member and a transparent composite picture carrying member, and a holder consisting of two open frames one carrying the screen member and the other carrying the picture member, said frames being guided to have relative movement in one direction, one of said frames having means whereby it is moved in relation to the other, substantially as described.



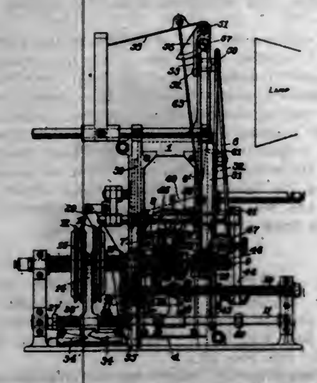
3. A display device comprising a transparent screen member and a transparent composite picture carrying member and a holder consisting of two open frames, one carrying the screen member and the other carrying the picture member, said frames being guided to have relative movement in one direction, one of said frames having means whereby it is moved in relation to the other, said means consisting of a projecting portion of one member to be engaged by automatically operating means, substantially as described.

4. A display device comprising transparent screen and picture members, an open frame for each member attached thereto, one of said frames being guided on the other to move one transparent member in one direction relative to the other substantially as described.

5. A display device comprising transparent screen and picture carrying members, an open frame attached to each, said open frames being attached together to be handled as one body, and movable one on the other in one direction but held against movement in other directions.

[Claims 6 to 15 not printed in the Gazette.]

1,111,636. AUTOMATIC DISPLAY APPARATUS FOR LANTERN-SLIDES. SYDNEY B. AUSTIN, Baltimore, Md., assignor, by mesne assignments, to Mott-Le-Gaige Animated Advertising Corporation, New York, N. Y. Filed Oct. 1, 1913. Serial No. 792,835. (Cl. 88—28.)



1. In combination in a lantern slide display apparatus, an upper and a lower trough or receptacle for the slides, an elevator moving vertically from the lower portion of the upper trough to carry a slide up to the display point, an elevator moving vertically at the rear of the lower trough to carry a lantern slide from the rear of the lower trough to a point in rear of the upper trough, plungers for moving the slides in the upper trough forwardly and for moving the slides in the lower trough rearwardly, a vertical runway at the front of the troughs, a recess connected with said runway to receive the exhibited slide and means adjacent said recess to force the slide into the runway to drop by gravity when the upper elevator rises and means for operating the elevators, substantially as described.

2. In combination in a lantern slide display apparatus, an upper and a lower trough or receptacle for the slides, an elevator moving vertically from the lower portion of the upper trough to carry a slide up to the display point, an elevator moving vertically at the rear of the lower trough to carry a lantern slide from the rear of the lower trough to a point in rear of the upper trough, plungers for moving the slides in the upper trough forwardly and for moving the slides in the lower trough rearwardly, a vertical runway at the front of the troughs, a recess connected with said runway to receive the exhibited slide and means adjacent said recess to force the slide into the runway to drop by gravity when the upper elevator rises and means for operating the elevators, said means adjacent the recess consisting of a spring member to press on the exhibited slide, substantially as described.

3. In combination in a lantern slide display apparatus, an upper and a lower trough or receptacle for the slides, an elevator moving vertically from the lower portion of the upper trough to carry a slide up to the display point, an elevator moving vertically at the rear of the lower trough to carry a lantern slide from the rear of the lower trough to a point in rear of the upper trough, plungers for moving the slides in the upper trough forwardly and for moving the slides in the lower trough rearwardly, a vertical runway at the front of the troughs, a recess connected with said runway to receive the exhibited slide and means adjacent said recess to force the slide into the runway to drop by gravity when the upper elevator rises and means for operating the elevators, and springs at the lower end of said runway to cushion the fall of the exhibited slide and to act as detent means for said slide when it is pushed rearwardly by the front plunger, substantially as described.

4. In combination in a display apparatus, an upper and a lower receptacle or trough, elevators at the front and rear of said troughs respectively, means for operating the elevators to lift a lantern slide from the upper trough to the display point and from the lower trough to the rear of the upper trough, plungers for moving the slides along the troughs, said operating means for the elevators comprising vertical racks connected therewith and gear wheels meshing with the racks with means for operating the said gears first in one direction and then in the other, each gear meshing with a rack of each elevator, substantially as described.

5. In combination in a display apparatus with the upper and lower troughs for holding lantern slides, elevators operating respectively in front of the upper trough and in rear of the lower trough, means for operating the said elevators, each elevator having depending portions to act as stops for the slides in the troughs when said elevators are raised, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,111,637. FOLDING KITE. WINFIELD SCOTT BAKER, Franklinville, N. Y. Filed May 6, 1914. Serial No. 836,737. (Cl. 244—22.)

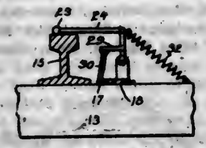
1. A kite comprising a body adapted to fold bellows fashion, longitudinal bracing strips upon the body between the lines of fold, and bracing arms hinged at the sides of the body and adapted to be extended across said strips to interlock with each other at a point between said strips to hold the body extended.

2. A kite comprising a body adapted to fold bellows fashion, reinforcing members upon the body, and fastening members carried by the body and adapted to engage said reinforcing members to interlock with each other, whereby to hold the body extended.

3. A kite comprising a body adapted to fold bellows fashion on longitudinal parellel lines, bracing strips secured to the body between the center and side portions thereof, and arms hinged at their outer ends to the side

portions of the body for a folding movement parallel therewith, said arms being adapted for extension across the body and reinforcing strips for interlocking engagement at their inner ends, whereby to hold the body rigidly extended and braced.

1,111,638. AUTOMATIC TRAIN-STOP. EUGENE LUDGER BARRIL, Iron River, Mich. Filed Dec. 23, 1913. Serial No. 808,422. (Cl. 246—59.)



1. In an automatic train stop, an obstacle comprising a rectangular frame having a top bar of wavy construction, trunnions formed on the ends of the base bar of the frame, brackets through which said trunnions are journaled, an arm formed on each trunnion and extending at right angles to the plane of the obstacle, spring means for drawing the top bar of the frame away from the track and means for swinging the frame into a vertical position.

2. In an automatic train stop, the combination with an air-line controlling valve lever, of a track obstacle including a bar having its upper lever engaging face provided with alternate arcuate depressions and upstanding portions for intermittently operating said lever, depending arms formed upon said bar for pivotally supporting the bar adjacent a track and means for moving said bar into a lever engaging position.

3. In an automatic train stop, the combination with an air-line controlling valve lever, of a track obstacle including a bar having its upper lever engaging face provided with alternate arcuate depressions and upstanding portions for intermittently operating said lever, depending arms formed upon said bar for pivotally supporting the bar adjacent a track, means for moving said bar into a lever engaging position and means for automatically moving said bar from a lever engaging position after action of said first named means.

1,111,639. WIRE-SPLICER. HARRY BENJAMIN BOTTNEN, Marshalltown, Iowa. Filed Mar. 31, 1914. Serial No. 828,490. (Cl. 140—122.)

1. A wire twister comprising a handle having at one end a substantially circular casing provided with a central opening and with a radial slot leading from the opening, a head journaled in the opening and provided with a central opening and with a radial slot leading from the opening and adapted to register with the slot of the casing, a pawl and ratchet connection between the head and the casing for constraining the head to move with the handle when the handle is moved in one direction, and for permitting the handle to move freely with respect to the head when the handle is moved in the other direction, the head having a pair of spaced jaws extending from one face, a guard plate pivoted to the opposite end of the head from the jaws for permitting the entrance of a wire to the opening of the head and for preventing displacement thereof, and a spring normally holding the guard plate in position to prevent displacement of the wire.

2. A wire twister comprising a handle provided at one end with a transverse opening, a head mounted to rotate in the opening, a pawl and ratchet connection between the head and the casing for constraining the head to move with the handle when the handle is moved in one direction, the head having a central opening and a radial slot leading from the opening, and the handle having a passage with which the slot is adapted to register, said head having jaws extending longitudinally therefrom at one end, a guard plate pivoted to the other end for permitting the entrance of a wire to the central opening and for preventing displacement thereof, and a spring normally holding the guard plate in position to prevent displacement of the wire.

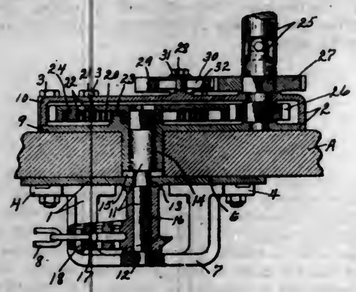
3. A wire twister comprising a handle provided at one end with a transverse opening, a head journaled for rotation in the opening and having a central opening and a radial slot leading from the opening, the handle having a slot with which the slot of the head is adapted to register, the head having a pair of spaced jaws at one end for gripping the splice wire, and a guard plate pivoted to the opposite end of the head for permitting the entrance of the line wire to the central opening and for preventing disengagement therefrom, said plate comprising a disk having a central opening adapted to registetr with the opening of the head, and having an inclined slot, and means for normally holding the plate with one wall of the slot across the slot of the head, and a pawl and ratchet connection between the head and the handle.

4. A wire twister comprising a handle provided at one end with a transverse opening, a head journaled for rotation in the opening and having a central opening and a radial slot leading fwrom the opening, the handle having a slot with which the slot of the head is adapteld to register, the head having a pair of spaced jaws at one end for gripping the splice wire, and a guard plate pivoted to the opposite end of the head for permitting the entrance of the line wire to the central opening and for preventing disengagement therefrom, said plate comprising a disk having a central opening adapted to registetr with the opening of the head, and having an inclined slot, and means for normally holding the plate with one wall of the slot across the slot of the head.

5. A wire twister comprising a handle and a head journaled at one end of the handle for rotation, said head

having a central opening and a radial slot leading from the opening for receiving the wire and having a pair of jaws at one side of the opening for engaging the wire, and a guard plate normally closing the inner end of the radial slot of the head and movable to permit the entrance or exit of the wire.

1,111,640. HAND-OPERATED BRAKE MECHANISM. WILLIAM D. BREWSTER, Syracuse, N. Y., assignor to National Brake Company, Incorporated, Buffalo, N. Y., a Corporation of New York. Filed Jan. 27, 1914. Serial No. 814,680. (Cl. 188—54.)



1. In combination with the platform of a car, brake-operating mechanism comprising a vertical shaft extending through the platform, separate bearings for the shaft secured respectively to the lower and upper sides of the platform and relatively adjustable to compensate for different thicknesses of platforms, a brake-operating cable, a winding drum therefor, and driving means for the shaft above the platform.

2. The combination with the platform of a car, a drum-supporting frame secured to the underside of the platform, a brake-operating cable, a winding drum for the cable within said frame, a vertical driving shaft for the drum extending through and above the platform, a gear case secured to the upper side of the platform, intermeshing gears within the gear case, one of said gears being secured to the vertical shaft, and a brake-staff secured to the other gear for driving the gears and brake drum.

3. In combination with the platform of a car, a drum-supporting frame secured to the underside of the platform, a gear case secured to the upper side of the platform and spaced apart therefrom to allow for variations in the thicknesses of different platforms, a brake-operating cable, a winding drum for the cable within the frame, gears within the gear case, a vertical shaft connecting the drum and one of the gears through the platform, and a brake-staff connected to the other gear for driving the gears and drum.

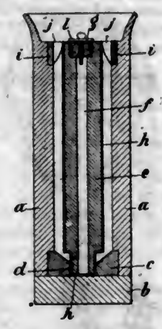
4. Brake-operating mechanism comprising a cable, a winding drum therefor, a driving shaft for the drum, a brake staff, means for transmitting motion from the brake staff to the drum shaft, and means coacting with said transmitting means for turning the shaft and drum to automatically wind the cable thereon for taking up any slack in the cable.

5. Brake-operating mechanism comprising a cable, a winding drum therefor, means for rotating the drum including a brake staff, and a spring tensioned to rotate the drum to wind the cable thereon and to take up the slack therein.

[Claims 6 to 10 not printed in the Gazette.]

1,111,641. METHOD OF MANUFACTURING TUBULAR METAL CASTINGS. HUGO BROSCH, Vienna, Austria-Hungary. Filed Mar. 28, 1914. Serial No. 827,969. (Cl. 22—192.)

1. The herein described improvement in the method of manufacturing a tubular metal body in a mold having a rigid, bodily removable, core comprising initially coating the core with a mixture comprising a suitable binder and magnesium silicates, for the purpose specified.



2. A coating for rigid, bodily removable, cores of molds for use in manufacturing tubular cast metal bodies adapted to render the core readily removable when the cast metal has solidified sufficiently to retain the desired form, comprising magnesium silicates and a suitable binder.

3. A coating for rigid, bodily removable, cores of molds for use in manufacturing tubular cast metal bodies adapted to render the core readily removable when the cast metal has solidified sufficiently to retain the desired form, comprising magnesium silicates, mineral oil soot-black, linseed oil, and plumbago.

1,111,642. TOY BALLOON. FERDINAND F. BRUCKER, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio. Filed May 27, 1914. Serial No. 841,289. (Cl. 46—37.)

1. A toy balloon formed of a single piece of elastic material and provided with a valve member loosely carried therein, substantially as described.

2. A toy balloon having a tubular neck portion integral therewith and a separate valve member confined within the balloon, substantially as described.

3. A toy balloon of thin rubber having a tubular neck or mouth piece formed integral therewith, and self-closing valve means loosely inclosed within said balloon, substantially as described.

4. A toy balloon of thin rubber having a tubular neck or mouth piece formed integral therewith and a ball valve loosely carried within said balloon adapted to close said mouth piece when the balloon is inflated, substantially as described.

5. A toy balloon of thin rubber having a tubular neck or mouth piece integral therewith, a hollow ball valve loosely contained within said balloon, a pocket formed in said neck portion adapted to receive the ball valve when the balloon is inflated, substantially as described.

[Claim 6 not printed in the Gazette.]

1,111,643. BRUSH. LOUIS WILLIAM BULLARD, Cumberland, Md. Filed Feb. 25, 1914. Serial No. 820,880. (Cl. 15—46.)

1. A brush of the character specified, comprising a handle of tubular form and having at one end a socket for tightly engaging around the neck of a bottle, the handle consisting of a back and front section of approximately equal size, the back section being semi-rigid and pliable, and the other section being flexible, the handle having an enlargement at the opposite end from the socket, said enlargement being in the plane of the junction of the sections, bristles extending from the face of the enlargement adjacent to the flexible section of the handle, said flexible section having a substantially V-shaped incision at approximately the center of the bristles for permitting the passage of liquid from the socket when the material of the said section is pressed inward, said incision leading from the interior of the handle.

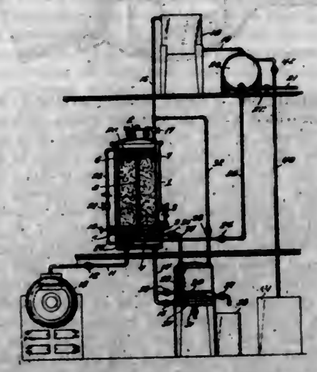
2. A brush of the character specified, comprising a handle of tubular form and having at one end a socket for tightly engaging around the neck of a bottle, the handle consisting of a back and front section of approximately equal size, the back section being semi-rigid and pliable, and the other section being flexible, the handle having an enlargement at the opposite end from the socket, said enlargement being in the plane of the junction of the sections, bristles extending from the face of the enlargement adjacent to the flexible section of the handle, the flexible section of the handle having a port at approximately the center of the bristles, the side walls of the port being normally in contact to close the port, but being movable laterally with respect to each other when pressure is exerted upon the bristles to open the port.

3. A brush of the character specified, comprising a handle of tubular form and having at one end a socket for tightly engaging around the neck of a bottle, the handle consisting of a back and a front section of approximately equal size, the back section being semi-rigid and pliable, and the other section being flexible, the handle having an enlargement at the opposite end from the socket, said enlargement being in the plane of the junction of the sections, bristles extending from the face of the enlargement adjacent to the flexible section of the handle, the flexible section of the handle having a port at approximately the center of the bristles.

4. A brush of the character specified, comprising a handle having at one end a socket provided with a flexible portion and adapted to engage the neck of a bottle, said handle having at the opposite end from the socket a plane enlargement and having bristles on one face of the enlargement, the handle having a port within the area covered by the bristles.

1,111,644. PROCESS OF EXTRACTING TURPENTINE AND ROSIN FROM WOOD. JOHN H. CASTONA, Gulfport, Miss. Filed Oct. 8, 1912. Serial No. 724,631. (Cl. 203—6.)

1. The herein described process of separating turpentine and rosin from wood, which consists in supporting a body of wood within a container in spaced relation to the sides and bottom of the container but in communication at all sides therewith, subjecting the wood to the leaching action of moderately heated turpentine allowed to percolate downwardly through the wood, subjecting the bottom of the container and the solvent turpentine passing to the container for use to the action of externally applied heat, so as to evaporate the extracted volatile elements, moderately heat the solvent turpentine and keep the extracted rosin liquefied, collecting the rosin and turpentine in the bottom of the container, raising the temperature of the same in the bottom of the receptacle to a higher degree to vaporize a portion of the turpentine and maintain the rosin in a liquefied condition, separating the unvolatilized turpentine from the rosin for recovering, injecting steam internally at a low temperature and pressure throughout the mass of the wood for the vaporization of the remaining unextracted turpentine and the retained solvent, collecting the turpentine vapor and steam from the space between the body of wood and container and condensing the same, and collecting and separating the rosin, water of condensation and turpentine from the bottom of the container and condensing the resulting turpentine vapor.



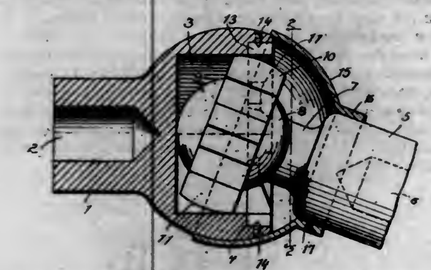
2. The herein described process of separating turpentine and rosin from wood, which consists in first subjecting a body of wood to the leaching action of moderately heated turpentine, collecting the rosin and turpentine, raising the temperature of the same to vaporize a portion of the turpentine and maintain the rosin in a liquefied condition, separating the unvolatilized turpentine from the rosin for recovery, then injecting steam throughout the mass of the wood for the vaporization of the contained turpentine and solvent, and collecting and condensing the turpentine vapor and steam and separating the turpentine from the water of condensation.

3. The herein described process of separating turpentine and rosin from wood, which consists in first subjecting the wood to the leaching action of moderately warmed turpentine, collecting the rosin and turpentine, raising the temperature of the same to vaporize a portion of the turpentine and maintain the rosin in a liquefied condition, discharging the unvolatilized turpentine and rosin and separating the same, condensing the turpentine and restoring it to the source of supply, discharging steam throughout the mass of the wood for the extraction of the remainder of the rosin, the turpentine contained therein and the residual solvent, and then collecting and condensing the turpentine and conveying it to said source of supply of the solvent and withdrawing the water of condensation therefrom.

4. The herein described process of separating turpentine and rosin from wood, which consists in subjecting the wood to the leaching action of turpentine drawn from a source of supply and moderately heated at a point between such source and its point of use, collecting the solvent turpentine and rosin, raising the temperature of the same to a point sufficiently high to vaporize a portion of the solvent and keep the rosin liquefied, separating the unvolatilized solvent from the rosin, condensing the turpentine

and returning it to the source of supply, heating the mass of wood by injecting steam at a low temperature and pressure throughout the same, collecting and condensing the turpentine vapors and steam, conveying the extracted turpentine to the said source of supply and discharging the water of condensation, and withdrawing from said source of supply the amount of turpentine gained during the extracting operation.

1,111,645. UNIVERSAL JOINT. WALLACE CHADWICK, Schenectady, N. Y. Filed Feb. 19, 1913. Serial No. 749,469. (Cl. 74—19.)



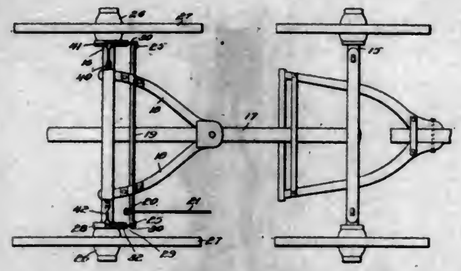
In a universal joint, a socket member having a rectangular socket provided with an annular recess adjacent the outer edge thereof, a ball member provided with rounded portions, the inner rounded portion of which is adapted to engage the flat bottom wall of the socket, the ball member being provided with bearing elements formed centrally and intermediate the ends of said rounded portions and adapted to engage the side walls of the socket, the greatest diameter of the bearing elements being equal to the internal cross section of the socket, said bearing elements having their bearing surfaces longitudinally curved and ending short of the ends of said rounded portions, and a split ring mounted within said annular recess, lying flush with the outer edge thereof and having certain portions thereof engaging the upper rounded portion above the bearing elements to hold said ball member within said socket, said split ring being provided with a plurality of V-shaped recesses upon its face adapted to receive the bearing elements.

1,111,646. CONCRETE POST AND SIMILAR STRUCTURE. ANDREW J. COMPTON, Trenton, N. J. Filed Aug. 15, 1913. Serial No. 784,979. (Cl. 72—85.)

1. A concrete structure having a reinforcing element provided with webs composed of semi-circular wings arranged obliquely to the axis of said reinforcing element and with their contiguous ends arranged out of line with each other whereby spaces are formed between adjacent offsets to form bonding recesses for the concrete.

2. A concrete structure having a reinforcing element provided with webs composed of wings arranged obliquely to the axis of said reinforcing element and with their contiguous ends out of line with each other whereby spaces are formed between adjacent offsets to form bonding recesses for the concrete, the said webs being angularly related with reference to one another.

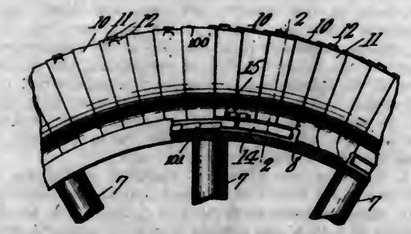
1,111,647. VEHICLE-BRAKE. HENRY T. DAHMS, Walcott, Iowa. Filed Feb. 13, 1914. Serial No. 818,549. (Cl. 21—8.)



1. In a vehicle brake, the combination with a running gear, of a rock shaft supported in parallel relation to the rear axle and having terminal arms or cranks, spring yokes connected pivotally with said cranks, and brake bands engaging the hubs of the rear wheels, the terminals of each brake band being connected with the limbs of a spring yoke.

2. In a vehicle brake, the combination with a running gear, of a rock shaft supported in parallel relation to an axle and having terminal cranks and an additional crank intermediate the ends thereof, spring yokes pivoted on the terminal cranks, brake bands engaging the hubs of the wheels on the axle and having terminal lugs, the lugs of each brake band being connected with the limbs of the spring yoke, a hand lever, and a rod connecting the hand lever with the crank intermediate the ends of the rock shaft for oscillating the latter.

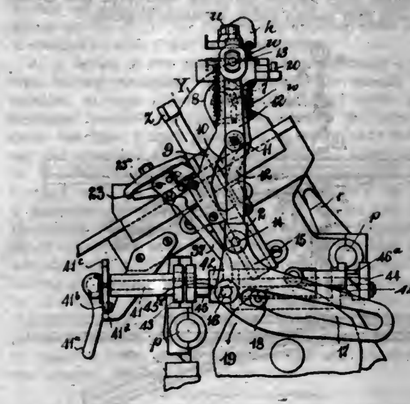
1,111,648. WHEEL-TIRE. HENRY W. DARR, Redwing, Kans., assignor of one-half to Walter W. Herold, Ellinwood, Kans. Filed Jan. 10, 1911. Serial No. 601,834. (Cl. 152—8.)



In a device of the class described, a rim; a tire comprising a plurality of arched members disposed transversely of the rim, each arched member being of truncated-cone-like form and the smaller end of each member being inserted into the larger end of an adjoining member, the larger end of each member being exposed to form a gripping edge, the arched members terminating in hooks which bear upon the rim, the hooks of the respective members being overlappel; and clamping means engaging the hooks; each hook being extended adjacent the rim and adjacent the smaller end of the corresponding arched member to form a circumferentially projecting foot located diagonally with respect to said gripping edge and coacting with the rim to form a brace adapted to limit the tilting movement of each member circumferentially of the rim when the gripping edge engages the ground.

1,111,649. INFOLDING-MACHINE. EDGAR BEVERLEY FENBY, Coventry, England. Filed July 13, 1912. Serial No. 709,261. (Cl. 223—55.)

1. In a folding machine for collars, cuffs and like blanks, side and end folders, means for operating said folders in variable sequence, comprising operating cams, a plurality of adjustable members co-acting with said cams to operate said folders, and a common member movable into set positions for moving selected adjustable members in definite sequence.



2. In a folding machine for collars, cuffs and like blanks, side and end folders, means for operating said folders in variable sequence, comprising sets of operating cams for said folders, adjustable members slidably mounted to coact variously with said cams and operate said folders, and a common rotatable shaft and coöperating mechanism for sliding selected adjustable members in definite sequence.

3. In a folding machine in combination, side folders movable toward and away from one another, end folders movable substantially transversely to said side folders and toward and away from one another, means for operating said folders in various sequence comprising an operating shaft, a plurality of operating cams mounted on said shaft, rollers slidably mounted and located to the front and rear of said operating shaft and at the ends to move said folders, a rotatable shaft transverse to said operating shaft and means coöperating with all said rollers and operable from said transverse shaft to slide selected rollers in definite sequence.

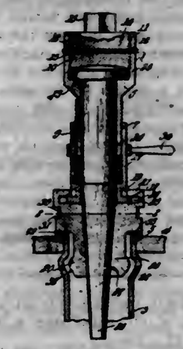
4. In a folding machine for collars, cuffs and like blanks, side folders, and means for operating same in various sequence comprising two pairs of early and late operating cams for said folders, two rollers each slidably mounted opposite a different pair of operating cams and means for sliding said rollers to coöperate with a selected cam of each pair.

5. In a folding machine for collars, cuffs and like blanks, side folders, and means for operating same in various sequence comprising a driving shaft, two pairs of early and late operating cams on said shafts, two rollers slidably mounted each opposite a different pair of operating cams and on opposite sides of the shaft, a common adjusting member for said rollers and movable into successive positions to slide said rollers alternately from one cam to the other, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,111,650. FLUE-EXPANDER. FREDRICK WILLIAM FRANK, Rocky Mount, N. C. Filed Nov. 29, 1913. Serial No. 803,745. (Cl. 153—82.)

1. A device of the class described comprising an externally threaded casing provided with an enlarged end, said casing provided with a bore extending therethrough, and communicating with a larger bore extending through the said enlarged end, a plug disposed within the said enlarged end, means for locking the same therein, a tapered pin disposed within the casing and provided with an enlarged head fitting within the enlarged portion of the casing and held against longitudinal shifting thereby, a sleeve threadedly engaging the said casing, means carried by the sleeve contacting with the tapered pin adapted to expand the flue.



2. A device of the class described comprising an externally threaded casing provided with an enlarged head, said casing provided with a bore extending therethrough and communicating with a relatively larger internally threaded bore extending through said head, an externally threaded plug positioned within said enlarged head and provided with a wrench engageable end, means extending through the said head and plug, preventing the relative rotations thereof, a sleeve threadedly engaging the said externally threaded casing, and a tapered pin provided with an enlarged head, said enlarged head and tapered pin housed within the enlarged head of the casing and interposed between the ledge defined at the meeting of the two bores and the said plug, and means carried by the sleeve adapted to be expanded into contact with a flue.

3. A device of the class described comprising a casing, a tapered pin rotatably and non-shiftably carried thereby, a sleeve provided with an annular flange extending transversely thereof engaging the casing, said annular flange secured to said casing by a reduced portion, said casing, reduced portion and annular flange defining an annular recess, expanding members provided with an annular flange spaced therefrom and defining therewith an annular recess, said recesses adapted to receive the adjacent annular flanges, means disposed upon the outer surface of said expanding members adapted to wedgedly engage and expand a flue in contact therewith, an annular spring member extending around the expanding members and resiliently contracting the same, the inner walls of the expanding member beveled to correspond with the tapered pins adapted to be expanded thereby, and a handle rigidly carried by said sleeve adapted to hold the same against rotation.

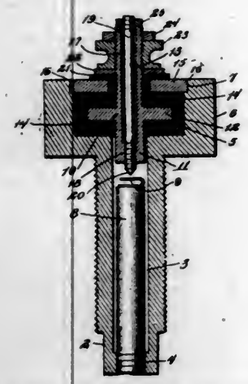
1,111,651. GAGE FOR SEWING-MACHINES. ANDRES LEONART FROSTERUS, Eureka, Cal. Filed Dec. 13, 1913. Serial No. 806,559. (Cl. 112—9.)

1. In an attachment for sewing machines, the combination with a presser-foot arm, of a gage device comprising a body adapted to be attached to the said arm, a lateral supporting arm provided upon said body, a slide block mounted upon the said supporting arm for longitudinal sliding and rotary movement thereon, means for securing said

block in adjusted position upon the said arm, a guide arm pivotally mounted upon the slide block for movement in a plane parallel to the axis of the supporting arm, a foot provided upon said guide arm, and means for securing the guide arm in adjusted position upon the slide block.

2. In an attachment for sewing machines, the combination with a presser-foot arm, of a gage device comprising a body adapted to be attached to the said arm, a laterally supporting arm providing upon said body, a slide block mounted upon said supporting arm for longitudinal sliding and rotary movement thereon, means for securing said block in adjusted position upon the said arm, a guide arm pivotally and slidably mounted upon the slide block for movement in a plane parallel to the axis of the supporting arm, a foot provided upon said guide arm, and means for securing the guide arm in adjusted position upon the slide block.

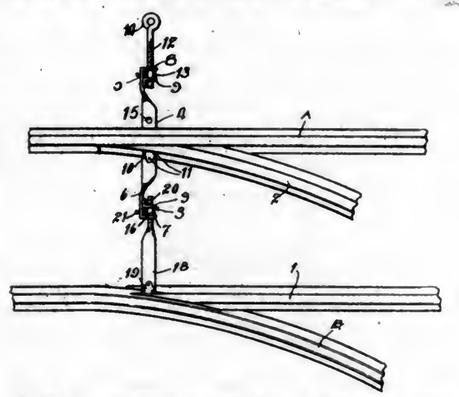
1,111,652. ELECTRIC-OPERATED ALARM. HARRY W. FRYLING, Lowell, N. C. Filed Mar. 8, 1913. Serial No. 753,040. (Cl. 177—128.)



A circuit closing element for journal box alarm circuits comprising a member having a threaded portion for mechanical and electrical engagement with the journal box, said member having a reduced extension at the lower end which is interiorly threaded, the upper end of the member being enlarged, said member being formed with an interior opening from end to end, said opening being materially increased in size within the enlarged portion, a contact element having threaded connection with the reduced extension of the member, a spring contact strip carried by the upper end of the contact element, a body removably secured within the enlarged portion of the member and wholly insulated from said member, and a second contact element longitudinally adjustable within the body for cooperation with the spring contact strip, said contact members being included in the alarm circuit.

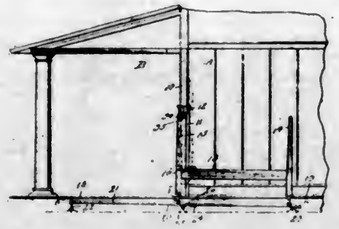
1,111,653. RAILWAY-SWITCH. JOHN HARRISON, Santa Rita, N. Mex., assignor of one-third to Charles L. McCallister and one-third to William F. Shea, Santa Rita, N. Mex. Filed June 27, 1914. Serial No. 847,603. (Cl. 104—96.)

1. The combination with the switch points of a switch of a bar secured intermediate its ends to one of the switch points and being bent at its ends to extend right angularly to its body portion, said angularly bent portion being provided at its free end with a right angularly extending lug, L-shaped members secured adjacent to the ends of said bar and having certain portions thereof disposed in spaced parallel relation to said last named right angularly bent portion, a bar secured at one end to the other switch point having its other end threaded and extended through the adjacent angularly bent portion and L-shaped plate opposed thereto, a nut mounted on the screw threaded portion of the bar and between the angularly bent portion and L-shaped plate, a bar inserted through the angularly bent portion at the opposite end of the first named bar and opposed L-shaped plate, a nut between said angularly bent portion and L-shaped plate and upon said bar, said bar to be connected with switch throwing apparatus and means to lock said first named nut in adjusted position.



2. The combination with a switch point of a railway switch of a bar secured intermediate its ends to one of the switch points, a right angularly extending lug on each end of said bar, L-shaped members secured adjacent to the ends of said bar and having certain portions thereof disposed in spaced parallel relation to said lugs, a bar secured to the other switch point and being reduced and threaded at one end and extending through alined threaded openings in the adjacent lug and L-shaped member, a nut mounted on the screw threaded portion that is extended through the adjacent L-shaped member and a bar adjustingly connected with the L-shaped member and lug at the other end of said first named bar.

1,111,654. GRAVITY-BED. THOMAS H. JERVIS, Ebensburg, Pa. Filed Jan. 3, 1914. Serial No. 810,203. (Cl. 104—14.)



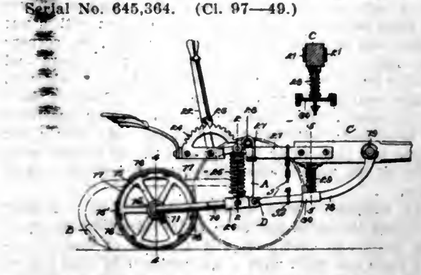
1. A device of the class described comprising a foundation having elongated slots arranged in spaced parallel relation to each other, intermediate and outer bearings arranged beneath the foundation, cranks journaled in the outer bearings, tracks connected to said cranks for changing the direction of inclination thereof, a shaft journaled in the intermediate bearings and having rack pinions, toothed racks on the track and meshing with the pinions, a movable object supported by said tracks and engaged therewith through the slots, a vertically disposed shaft, gears connecting both shafts, and means for rotating the last-named shaft.

2. A device of the class described comprising a foundation having elongated slots arranged in spaced parallel relation to each other, intermediate and outer bearings arranged beneath the foundation, cranks journaled in the outer bearings, tracks connected to said cranks for changing the direction of inclination thereof, a shaft journaled in the intermediate bearings and having rack pinions,

toothed racks on the track and meshing with the pinions, a movable object supported by said tracks and engaged therewith through the slots, a vertically disposed shaft, gears connecting both shafts, means for rotating the last-named shaft, a partition rising from the foundation and having an opening through which the object moves, and means on the object for closing the opening when the same is shifted to either side of the partition.

3. A device of the class described comprising a foundation having elongated slots arranged in spaced parallel relation to each other, intermediate and outer bearings arranged beneath the foundation, cranks journaled in the outer bearings, tracks connected to said cranks for changing the direction of inclination thereof, a shaft journaled in the intermediate bearings and having rack pinions, toothed racks on the track and meshing with the pinions, a movable object supported by said tracks and engaged therewith through the slots, a vertically disposed shaft, gears connecting both shafts, means for rotating the last-named shaft, a partition rising from the foundation and having an opening through which the object moves, means on the object for closing the opening when the same is shifted to either side of the partition, and hand operable means connected with the operating means and disposed at opposite sides of the partition and also at one side of the opening therein.

1,111,655. COTTON-CHOPPER. CHARLIE F. JONES and ERASTUS T. JONES, Wayland, Tex. Filed Aug. 22, 1911. Serial No. 645,364. (Cl. 97—49.)

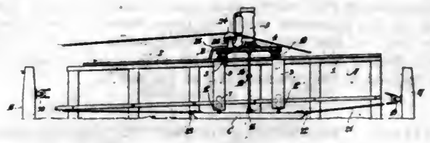


1. A machine of the class described comprising a wheel supported structure, downwardly and rearwardly extending arms pivotally connected to said structure, a cotton chopper carried by and between the arms, an apertured member supported by the arms adjacent the pivot thereof, a pin loosely connected to the structure and extending loosely through the apertured member, a compression spring upon the pin and bearing downwardly upon said member, a second spring located between the apertured member and the cotton chopper, and adjustable means mounted on the structure for bearing downwardly upon said second spring to press the chopper against the soil.

2. A cotton chopper comprising an elongated frame, a tongue attached to one end thereof, an axle detachably secured to the frame, a pair of arms pivotally secured to the tongue and curved downwardly and rearwardly from the frame, a revolving cotton chopper mounted on said arms, a bar having its ends bent around said arms and provided with an aperture therein, a bracket secured to the underside of the tongue and provided with an aperture therein, a pin adapted to be carried by said bracket and extending through the aperture in the bar, the end of the pin screw threaded and adapted to receive a nut, a coil spring mounted on the pin and adapted to form a tension device for said arms, a second tension device mounted intermediate the first tension device and the cotton chopper, and a pivoted lever attached tothe frame and adapted to control the second tension device.

1,111,656. WAVE-MOTOR. ENOS C. KERSEY, Newport Beach, Cal. Filed Nov. 12, 1913. Serial No. 800,582. (Cl. 253—8.)

1. In a wave motor, a stationary supporting structure, inclined track rails thereon, a traveling crane movable along said rails, a float flexibly connected with said crane and also movable together with said crane lengthwise of said supporting structure, a pump mounted on said crane, and a pump operating connection attached to and actuated by said float.



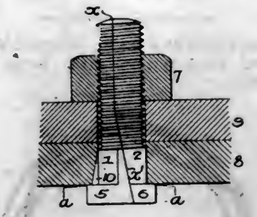
2. In a wave motor, a stationary supporting structure, inclined track rails thereon, a traveling crane movable along said rails, a float flexibly connected with said crane and also movable together with said crane lengthwise of said supporting structure, a pump mounted on said crane, a pump operating connection attached to and actuated by said float, a flexible cable for shifting the position of said crane and float, and anchoring means for said cable at opposite ends of said supporting structure.

3. In a wave motor, a stationary supporting structure, inclined track rails thereon, a traveling crane movable along said rails, a float flexibly connected with said crane and also movable together with said crane lengthwise of said supporting structure, a pump mounted on said crane, a pump operating connection attached to and actuated by said float, stay rails fastened to said supporting structure parallel to the track rails, tie bars extending downwardly from said crane, and rollers on said tie bars movable along said stay rails.

4. In a wave motor, a stationary supporting structure, inclined track rails thereon, a traveling crane movable along said rails, stay rails parallel to said track rails, tie bars extending downwardly from said crane, rollers on said tie bars movable along the stay rails, a float, flexible stays connecting the float and tie bars, and pumping means carried by said crane and actuated by said float.

5. In a wave motor, a stationary supporting structure, inclined track rails thereon, a traveling crane movable along said rails, stay rails parallel to said track rails, tie bars extending downwardly from said crane, rollers on said tie bars movable along the stay rails, a float, longitudinally extensible stays connecting the float and tie bars, and pumping means carried by said crane and actuated by said float.

1,111,657. BOLT. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 31, 1913. Serial No. 770,880. (Cl. 85—1.)

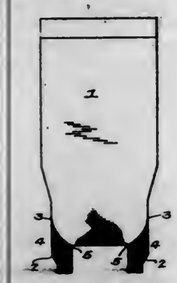


1. A bolt made in two parts, each part having a head at one end and a screw threaded body portion, the parting line of the two sections of the bolt being to one side of the center line through the bolt and at the head portion being arranged at an incline to the center line so that one section can be passed through an opening having extended parallel walls in advance of the other section, both sections, when in place, snugly fitting the said opening; with a nut applied to the threaded portions of both sections.

2. The combination in a bolt made in two parts, each part having a head at one end with an abrupt shoulder, the body portion of each section being threaded, the body portion of one section being of a greater thickness than

the other so as to bring the parting line at one side of the longitudinal center line of the bolt, the parting line at and near the head of the bolt being inclined so that the head of the thin section will be of a greater width than the head of the thick section, the parts being so proportioned that when one section is inserted in an opening having extended walls of even diameter throughout the body of the bolt will fill the opening and the heads will project beyond the opening; with a nut arranged to be applied to the threaded end of the bolt.

1,111,658. STOCKING. GUSTAV A. LANDENBERGER, Philadelphia, Pa. Filed Dec. 10, 1912. Serial No. 735,971. (Cl. 66—4.)



1. A full fashioned stocking made from a flat-knitted fabric and having a reinforced fashioned heel portion, the ends of the courses of the heel reinforcement defining a line inclined to the wales and courses.

2. A full fashioned stocking made from a flat-knitted fabric having a fashioned heel reinforcement, certain of whose courses are of varying lengths.

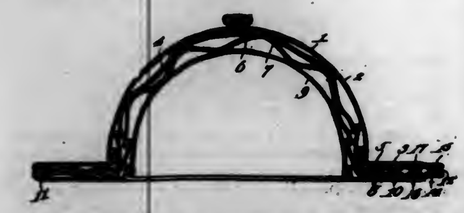
3. A full fashioned stocking made from a flat-knitted fabric having a fashioned heel reinforcement including successive courses of varying lengths.

4. A full fashioned stocking made from a flat-knitted fabric and having a portion forming a fashioned heel reinforcement, the ends of the courses of the heel reinforcement defining a curved line inclined to the wales and courses.

5. A full fashioned stocking consisting of a flat-knitted fabric having reinforced selvage edges joined together, and including portions extending inwardly from said edges to form a heel reinforcement, certain of the courses of said heel reinforcement being of varying lengths with their inner ends arranged to define a line inclined to the wales and courses of the fabric.

[Claim 6 not printed in the Gazette.]

1,111,659. REVERSIBLE HAT. AUGUSTE M. LE PIERRE, Korbel, Cal. Filed Apr. 16, 1913. Serial No. 761,540. (Cl. 2—108.)



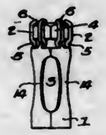
1. A hat comprising as constituent parts, an inner member, an outer member and a lining, connected at their extreme peripheral portions only, the hat having an opening communicating with the space between said constituent parts, through which opening the hat may be turned inside out.

2. A hat comprising as constituent parts, an inner member, an outer member and a lining, there being an opening in the hat communicating with the space between two of said constituent parts, through which opening the hat may be turned inside out; and means for closing the opening.

3. A hat comprising as constituent parts, an outer member, an inner member and a lining, both of said members having brims, the hat including brim-facings, one of which is connected to the lining, all of the facings and the brims being connected; there being an opening in the hat, communicating with the space between two of said constituent parts, through which opening, the hat may be turned inside out.

4. A hat comprising inner and outer, similar parts, said parts being connected at the periphery of the hat only, and there being an opening between said parts, whereby the hat may be turned inside out through said opening.

1,111,660. WALL-ANCHOR. IRA B. MALABY, Philadelphia, Pa., assignor to Norman Mellor, Philadelphia, Pa. Filed June 16, 1913. Serial No. 774,009. (Cl. 85—2.4.)



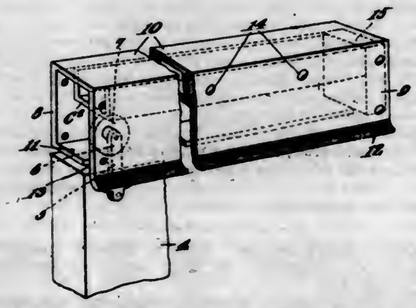
1. The combination in a wall anchor of a body of sheet metal in substantially cylindrical form, having apertures in its sides and projecting fingers at one end; with a nut embraced and immovably held by said fingers, the corners of the nut entering the spaces between the fingers and the latter being bent over at least one face of said nut.

2. The combination in a wall anchor of a body of sheet metal in substantially cylindrical form, having apertures in its sides and projecting fingers at one end; with a nut embraced and immovably held by said fingers; there being portions of the fingers extending over the nut to hold it in place.

3. An expansible wall anchor consisting of a tubular body having elongated apertures in its sides forming structurally weak side members, and a series of fingers projecting from one end; with a nut inclosed by said fingers and mounted with its corners projecting between the same; said nut being seated on the adjacent end of the body portion and having parts of the fingers extending over it.

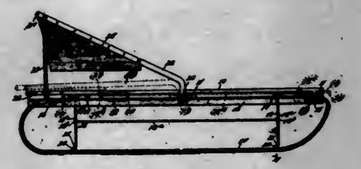
4. The combination in a wall anchor of a tubular body portion of sheet metal having elongated side openings providing structurally weak side members; a series of fingers projecting from one end of the body portion and having their outer ends connected together to provide a series of openings; with a nut embraced by said fingers and having its corners projecting in said openings.

1,111,661. DOOR-HANGER TRACK. GEORGE L. MCCALLUM, Crosby, Pa. Filed June 25, 1914. Serial No. 847,310. (Cl. 16—7.)



A track comprising a channel iron, the upper flange having a depending apron extending across the open front of the channel and defining a slot with the lower flange, a reinforcing member fitting snugly within the channel iron contacting with the upper flange, back plate, and the said apron, and means engaging the said channel iron and reinforcing member, holding the same in rigid relation.

1,111,662. FOLDING VEHICLE. ALBERT E. MCGILL, Chicago, Ill., assignor, by mesne assignments, to William S. Ferris, Elkhart, Ind., and Alexander B. Leith, Chicago, Ill. Filed Apr. 22, 1907. Serial No. 369,488. (Cl. 21—94.)



1. A folding sled comprising a body portion, runners for said body, rotatable laterally with respect to the body, braces below the body portion adjacent the forward and rear ends of the runners for holding the latter in an operative position, and a connection between the said braces also located below the body portion for simultaneously moving the braces.

2. A folding sled comprising a body portion, spaced runners for said body rotatable laterally with respect to the body, braces below the body portion adjacent the forward and rear ends of the runners for holding the latter in an operative position, and a connection also below the body portion between the braces for simultaneously moving the braces, said braces, runners, and connection being foldable toward the body portion.

3. A folding sled comprising a body portion, runners for said body rotatable laterally with respect to the body, spaced braces below the body portion for holding the runners in an operative position, and a longitudinal member also below the body portion and disposed between the braces for simultaneously moving the latter into and out of operative position, said member having a loose engagement with the braces, and foldable with the braces and runners toward the body portion.

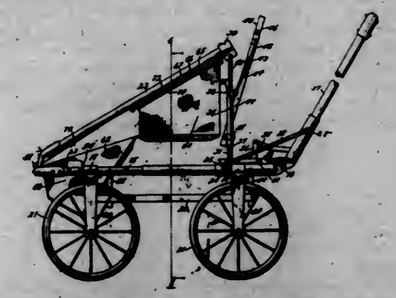
4. A folding sled comprising a body portion, spaced runners for said body rotatable laterally with respect to the body, braces below the body portion and spaced from each other longitudinally of the body for holding the runners in operative position, and a link also below the body, said link connecting the braces for simultaneously moving the latter, said braces, runners, and connections being foldable toward the body portion.

5. A folding sled comprising a body portion, spaced runners for said body rotatable laterally with respect to the body, braces below the body portion and spaced from each other longitudinally of the body for holding the runners in operative position, and a link also below the body, said link connecting the braces for simultaneously moving the latter, said braces, runners and link being foldable toward the body portion, and with the braces and link between the body and the runners.

1,111,663. FOLDING PERAMBULATOR OR GO-CART. ALBERT E. MCGILL, Chicago, Ill., assignor, by mesne assignments, to William S. Ferris, Elkhart, Ind., and Alexander B. Leith, Chicago, Ill., trustees. Filed July 31, 1907. Serial No. 386,337. (Cl. 21—83.)

1. In a folding perambulator, the combination of a running-gear frame, a body structure adapted to fold up therewith embodying a seat and a back pivotally related thereto, and an elastic support yieldingly supporting said seat and back, and means permitting said back to yield with said support independently of said seat.

2. In a folding perambulator, the combination of a running gear frame, a yielding seat support adapted to fold up therewith, and a back supported for independent yielding movement with relation to the seat support.



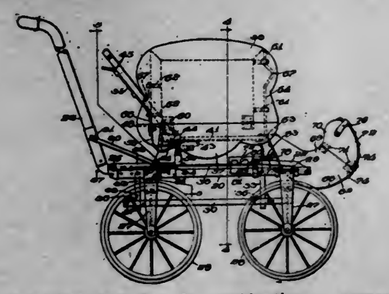
3. In a folding perambulator, the combination of a running gear frame, a yielding seat support adapted to fold up therewith, a back supported for independent yielding movement, and means whereby the back may have its angle of inclination varied with relation to the seat support.

4. In a folding perambulator, the combination of a running gear frame, a seat supporting frame adapted to fold up therewith, means for yieldingly supporting the seat frame, a back, and means for supporting the back for a bodily movement with the yielding movement of the seat frame, and for an independent yielding movement with relation thereto.

5. In a folding perambulator, the combination of a running gear frame, a seat supporting frame adapted to fold up therewith, means for yieldingly supporting the seat frame, a back, means whereby the back may have its angle of inclination varied with relation to the seat frame, and means for supporting the back for a bodily movement with the yielding movement of the seat frame and for an independent yielding movement with relation thereto.

[Claims 6 to 42 not printed in the Gazette.]

1,111,664. FOLDING GO-CART. ALBERT E. MCGILL, Chicago, Ill., and FRANK J. BEIER, Elkhart, Ind., assignors, by mesne assignments, to William S. Ferris, Elkhart, Ind., and Alexander B. Leith, Chicago, Ill., trustees. Filed June 17, 1908. Serial No. 438,890. (Cl. 21—83.)



1. A vehicle including in combination a supporting frame, a seat yieldingly supported thereby, laterally foldable sides supported by the seat, means for locking the sides in position for use including catches on the sides and a bail for engaging the catches, an adjustable back for the seat, a foldable foot rest, and means for varying the position of the rest with respect to the seat.

2. A vehicle including a supporting frame, a seat supported thereby, sides for the seat adapted to be folded inwardly upon the seat, means for holding the sides in position for use including catches on the sides and a bail for engaging the catches, a back for the seat also adapted to fold inwardly upon the seat, a foldable foot rest pivot-

ally supported with respect to the seat, and means for adjusting the rest about its pivot for varying the position thereof with respect to the seat.

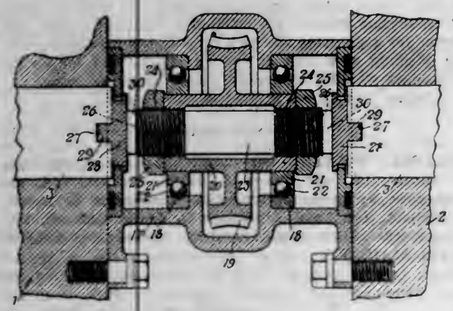
3. A vehicle including in combination a supporting frame, a seat supported thereby, laterally foldable sides for the seat, means for locking the sides in position for use including catches on the sides and a bail for engaging the catches, said bail being provided with an offset portion to form a handle, an adjustable back for the seat, a foldable foot rest, and means for varying the position of the rest with respect to the seat.

4. A vehicle including in combination a supporting frame, a seat supported thereby, laterally foldable sides for the seat, means for locking the sides in position for use, said means including catches on the sides and a bail for engaging the catches, said bail being pivoted on an axis extending transversely to the length of the supporting frame, and an adjustable back for the seat.

5. A vehicle including in combination a supporting frame, a seat yieldingly supported by the frame, sides for the seat foldable inwardly upon the seat, means for locking the sides in position for use including a pivoted bail extending transversely across the frame and adapted to removably engage the sides, a back for the seat also foldable upon the seat, and a foldable foot rest adjustably supported with respect to the seat.

[Claims 6 to 23 not printed in the Gazette.]

1,111,665. VALVE-ACTUATING DEVICE FOR EXPLOSIVE-ENGINES. CYRUS E. MEAD, Dayton, Ohio, assignor to The Mead Engine Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 22, 1912. Serial No. 672,605. (Cl. 121—24.)



1. In an explosive engine comprising two units spaced apart and having valve chambers arranged in longitudinal alinement, a rotary valve mounted in both of said chambers, and a valve-actuating device mounted in the space between said units and operatively connected with said valve.

2. In an explosive engine having a valve chamber divided into two parts, said parts being arranged in axial alinement, a rotary valve mounted in both parts of said valve chamber, and a valve actuating device mounted between the two parts of said valve chamber on an axis substantially coincident with the axis of said valve, and an operative connection between said valve and said actuating device.

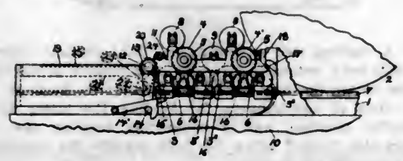
3. In an explosive engine comprising two units, a rotary valve comprising separate parts mounted in the respective units and arranged in axial alinement of said engine, and an actuating device mounted between said units, supported independently of said valve and connected with both parts thereof.

4. In an explosive engine having a valve chamber divided into two parts, said parts being arranged in axial alinement, a rotary valve comprising separate sections mounted in the respective parts of said valve chamber, an actuating device mounted between the two parts of said valve chamber, and an adjustable connection between said valve-actuating device and the two sections of said valve, whereby said sections can be simultaneously adjusted relatively to said actuating device.

5. In an explosive engine having a valve chamber divided into two parts, said parts being arranged in axial alinement, a rotary valve comprising separate sections mounted in the respective parts of said valve chamber, an actuating device mounted between the two parts of said valve chamber, supported independently of both sections of said valve and rotatable about an axis substantially coincident with the axis of said rotary valve, and a connection between the two sections of said valve and said actuating device.

[Claims 6 to 14 not printed in the Gazette.]

1,111,666. PRINTING-PRESS. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Dec. 15, 1911. Serial No. 665,917. (Cl. 101—71.)



1. A printing press having an inking roller for the printing surface of the press; a distributing roller for contacting with the inking roller; a carriage in which the distributing roller is mounted and which carriage is bodily movable toward and from the inking roller and is swingingly mounted at one end, said carriage being free to rise and fall at its opposite end as it is bodily moved; and means for holding the latter carriage end in position when the distributing roller engages the inking roller.

2. A printing press having an inking roller for the printing surface of the press; a distributing roller for contacting with the inking roller; a carriage in which the distributing roller is mounted and which carriage is bodily movable toward and from the inking roller and is swingingly mounted at one end, said carriage being free to rise and fall at its opposite end as it is bodily moved.

3. A printing press having an inking roller for the printing surface of the press; a distributing roller for contacting with the inking roller; a carriage in which the distributing roller is mounted and which carriage is bodily movable toward and from the inking roller and is swingingly mounted at one end, said carriage being free to rise and fall at its opposite end as it is bodily moved; means for holding the latter carriage end in position when the distributing roller engages the inking roller; and a guiding support for guiding the carriage in its bodily movement in the absence of the inking roller.

4. A printing press having an inking roller for the printing surface of the press; a distributing roller for contacting with the inking roller; a carriage in which the distributing roller is mounted and which carriage is bodily movable toward and from the inking roller and is swingingly mounted at one end, said carriage being free to rise and fall at its opposite end as it is bodily moved; and a guiding support for guiding the carriage in its bodily movement in the absence of the inking roller.

5. A printing press having an inking roller for the printing surface of the press; a distributing roller for contacting with the inking roller; a carriage in which the distributing roller is mounted and which carriage is bodily movable toward and from the inking roller and is swingingly mounted at one end, said carriage being free to rise and fall at its opposite end as it is bodily moved; mechanism for effecting the bodily movement of the carriage, said mechanism including means for elevating the carriage where swingingly mounted when the bodily movement of the carriage from the inking roller is initiated and depressing the carriage where swingingly mounted when the distributing roller is being brought into contact with the inking roller; and means for holding the latter carriage end in position when the distributing roller engages the inking roller.

[Claims 6 to 20 not printed in the Gazette.]

1,111,667. PRINTING-PRESS. ROBERT MIEHLE, Chicago,, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Feb. 7, 1912. Serial No. 676,096. (Cl. 101—31.)

1. A printing press including inking mechanism; mechanism for delivering the sheets from the press and overlying the inking mechanism a table for receiving the printed sheets and intervening between the delivery mechanism and the inking mechanism; and unitary mechanism, operable at will, for raising the table and the delivery mechanism together, while the delivery mechanism overlies the table, to afford access to the inking mechanism.

2. A sheet carrier including an endless belt element; two bight forming elements over which said belt elements move; means for causing each of said bight forming elements to travel bodily in a closed path and both substantially in a uniform direction; means for engaging that side of the belt element having the stretch that serves to carry the sheets and with respect to which said stretch travels, to form a third bight in the belt element; and means for holding the remaining side of the belt element to form a fourth bight therein.

3. A sheet carrier including an endless belt element; two bight forming elements over which said belt element moves; means for causing each of said bight forming elements to travel bodily in an elongated closed path and both substantially in a uniform direction; means interposed between the sides of the belt element and engaging that side of the belt element having the stretch that serves to carry the sheets and with respect to which said stretch travels, to form a third bight in the belt element; and means for holding the remaining side of the belt element to form a fourth bight therein.

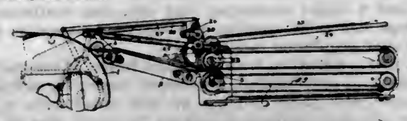
4. A sheet carrier including an elastic endless belt element; two bight forming elements over which said belt element moves; means for causing each of said bight forming elements to travel bodily in an elongated closed path and both substantially in a uniform direction; means interposed between the sides of the belt element and engaging that side of the belt element having the stretch that serves to carry the sheets and with respect to which said stretch travels, to form a third bight in the belt element; and means for holding the remaining side of the belt element to form a fourth bight therein.

5. A sheet carrier including an elastic endless belt element; two bight forming elements over which said belt element moves; means for causing each of said bight forming elements to travel bodily in an elongated closed path and both substantially in a uniform direction; means interposed between the sides of the belt element and engaging that side of the belt element having the stretch that serves to carry the sheets and with respect to which said stretch travels, to form a third bight in the belt element; and means for holding the remaining side of the belt element to form a fourth bight therein, there being present means for removing slack from the belt element.

[Claims 6 to 31 not printed in the Gazette.]

1,111,668. SHEET-DELIVERY MECHANISM. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed July 22, 1912. Serial No. 710,933. (Cl. 101—31.)

1. Sheet delivery mechanism including a sheet supporting belt element anchored at one end; a roller to which the other end of said belt element is attached; means for causing said roller to travel substantially in an orbit; and means for causing the roller to wind the belt element thereupon when the roller approaches the anchorage for the belt element.



2. Sheet delivery mechanism including a sheet supporting belt element anchored at one end; a roller to which the other end of said belt element is attached; an endless belt element upon which said roller is mounted whereby said roller is caused to travel substantially in an orbit; and means for causing the roller to wind the sheet supporting belt element thereupon when the roller approaches the anchorage for the sheet supporting belt element.

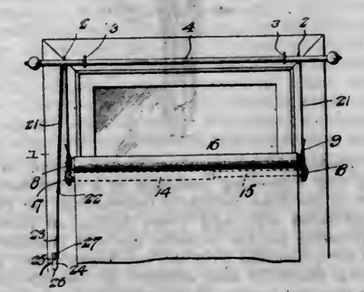
3. Sheet delivery mechanism including a sheet supporting belt element anchored at one end; a roller to which the other end of said belt element is attached; means for causing said roller to travel substantially in an orbit; and spring mechanism for turning the roller when it approaches the anchorage for the sheet supporting belt element then to wind said sheet supporting belt element upon the roller.

4. Sheet delivery mechanism including a sheet supporting belt element anchored at one end; a roller to which the other end of said belt element is attached; an endless belt element upon which said roller is mounted whereby said roller is caused to travel substantially in an orbit; and spring mechanism for turning the roller when it approaches the anchorage for the sheet supporting belt element then to wind said sheet supporting belt element upon the roller.

5. Sheet delivery mechanism including two sheet supporting belt elements; a turning anchorage for one end of each of said belt elements, these anchorages being substantially colocated; a roller to which the other end of each of said belt elements is attached; means for causing said rollers to travel substantially in opposite sides of an orbit; and means for causing the rollers to wind the belt elements thereupon when the rollers approach the anchorages for the belt elements, said anchorages being within said orbit.

[Claims 6 to 20 not printed in the Gazette.]

1,111,669. ADJUSTABLE WINDOW SHADE AND CURTAIN SUPPORT. ROBERT MUIR, O'Fallon, Ill. Filed May 21, 1913. Serial No. 769,061. (Cl. 156—27.)



1. The combination with a window frame, of suspending members on said frame, pole supporting members on the frame provided with cord guides, a shade supporting frame, a looped suspending cord extending continuously through the shade supporting frame and over said suspending members and through said guides, and means upon the frame and engageable with the terminals of the cord to hold the shade supporting frame at a desired elevation.

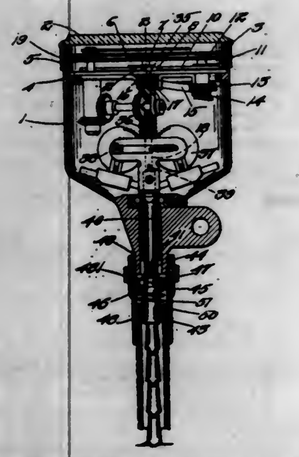
2. The combination with a window frame, of suspending members on said frame, shade supporting brackets provided wtih guide openings at their upper ends, a tubular telescopic connection between the lower ends of the brackets, and a looped suspending cord extending continuously through said guide openings and telescopic connection and over said suspending members.

3. The combination with a window frame, of suspending members on said frame, elbow-shaped supporting brackets provided with guide openings at their upper ends, a tubular telescopic connection between the lower ends of the brackets, and a suspending cord extending through said guide openings and telescopic connection and over said suspending members.

4. A fixture of the character described comprising suspending members, elbow-shaped supporting brackets provided with guide openings at their upper ends, telescopic tubes fitted in openings in the lower ends of the brackets, slotted caps engaging the brackets and covering the ends of the tubes, and a suspending cord extending through said guide openings, telescopic tubes and caps and over said suspending members.

5. A fixture of the character described comprising suspending members, a shade supporting frame, a looped cord rove through said frame and over said suspending members, and a clamp for holding the free end of the cord, said clamp comprising a spring plate centrally secured and having a deflected lower end and provided with a window frame engaging spur at its upper end to hold it from pivotal movement.

1,111,670. SHAFT-COUPLING FOR SPEEDOMETERS. GEORGE D. PEEBLES, Medford, Mass., assignor to Standard Thermometer Company, Boston, Mass., a Corporation of Maine. Filed Oct. 22, 1913. Serial No. 796,717. (Cl. 73—123.)



1. A speedometer driving shaft having a head, in combination with a coupling consisting of a sleeve having a shoulder on the inner periphery intermediate the ends, a union connected with said sleeve having an internally screw threaded portion between the said shoulder and one end for connection with the speedometer case, and a coil spring seated on said shoulder on the side toward the said threaded portion of the union to form a seat for the said head of the driving shaft while the said shaft extends back through the opposite end of said coupling.

2. A speedometer driving shaft having a head, in combination with a coupling consisting of a sleeve having an annular shoulder on the inner periphery intermediate the ends, a union connected with said sleeve and having an internally screw threaded portion between the said shoulder and one end for connection with a speedometer case, and a coil spring seated on said shoulder on the side toward the said threaded portion of the union to form a seat for the said head of the driving shaft, the said annular shoulder forming a restricted aperture for passage of said driving shaft, the interior diameter of said sleeve at the union end being sufficient to receive the head of the shaft.

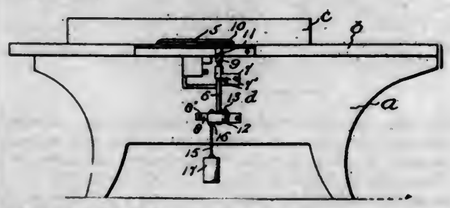
3. A speedometer having a shaft or spindle connected with the actuating mechanism of the speedometer and having a case with a threaded tubular stem surrounding the said shaft or spindle, a detachable driving shaft, one of said two shafts being constructed with a tongue on one end and the adjacent end of the other of said shafts being formed with a slot whereby said tongue and slot are adapted to engage with each other, said driving shaft being formed with a collar rotatable thereon slightly back of the coupling end of the said shaft, in combination with a coupling sleeve having a shoulder on the inner periphery thereof intermediate the ends, a union connected with said sleeve and having an internally screw threaded portion for connection with the screw threaded stem of the speedometer case, and a coil spring seated on said shoulder on the side toward the said threaded portion of the union to form a seat for the said collar of the driving shaft, said driving shaft extending back through the rear end of said sleeve.

4. A speedometer having an actuating shaft or spindle, a driving shaft, one of said two shafts being formed with a tongue on the end thereof and the other of said two shafts being formed with a slot whereby said two shafts are adapted to engage with each other, in combination with a screw threaded union a coupling comprising a sleeve having at one end a swivel connection with said screw threaded union, a speedometer case having an apertured portion surrounding the speedometer shaft and threaded to receive the threaded end of said union, said driving shaft passing through said sleeve and being provided with a collar adjacent the portion which engages the speedometer shaft, and a spring seat within said coupling sleeve on which the said collar is seated whereby the said driving shaft is permitted to yield backward under longitudinal pressure.

5. A speedometer having a shaft or spindle connected with the driving mechanism of the speedometer and a case having a threaded tubular stem surrounding the said shaft, a driving shaft connected with the driving mechanism of the vehicle or machine with which the speedometer is to be connected, one of said two shafts having at one end thereof a slot and the adjacent end of the other of said shafts having a tongue which is adapted to engage with said slot whereby the rotation of the driving shaft will rotate the speedometer shaft, a coupling sleeve having at one end a tapped out union adapted to engage with the threaded stem of the speedometer case, said sleeve also being formed with a spring seat and said driving shaft being formed with a shoulder which is adapted to be seated on said spring while the end of the shaft is inclosed within said sleeve, said spring seat yielding to the pressure of the tongue on the end of one shaft against the end of the other shaft if the said tongue is crosswise of the slot when the coupling is screwed up.

[Claims 6 to 12 not printed in the Gazette.]

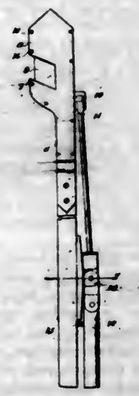
1,111,671. JOINTER-GUARD. GEORGE PETER, Rochester, N. Y. Filed May 22, 1914. Serial No. 840,319. (Cl. 144—251.)



1. A guard of the class described comprising a pair of brackets adapted to be secured to a machine or the like, one of said brackets having a housing formed therein, a drum located within the housing, and adapted to rotate horizontally therein, a vertical sheave disposed tangentially to the drum and pivoted in the housing, a flexible element wound around the drum and trained over the sheave so as to have its end depend therefrom, a weight carried by the end of the flexible element, a vertical shaft carried by the drum and journaled in the brackets and a guard plate detachably secured to the upper end of the shaft substantially as described.

2. A guard of the class described comprising a pair of brackets adapted to be secured to a machine or the like, one of said brackets having formed therein an enlarged housing, a detachable cover for the housing provided with a central opening, a drum located within the housing and adapted to rotate horizontally therein, a vertical sheave pivoted in the housing and disposed tangentially to the periphery of the drum, a vertical shaft securely mounted on the drum and journaled in the brackets, a guard plate detachably mounted on the upper end of the shaft and adapted to have vertical adjustment thereon, a flexible element wound around the drum and trained over the sheave so as to depend from the housing, and a weight carried by the depending end portion of the element for the purposes set forth.

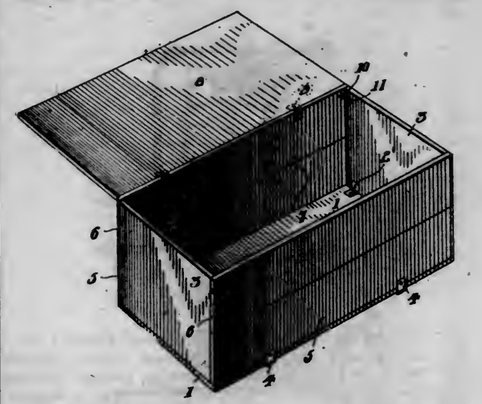
1,111,672. COMBINATION-PRUNER. MAJOR PHILBERT, Windsor, Cal., assignor of one-half to J. Madison Campbell, Sonoma county, Cal. Filed Sept. 24, 1913. Serial No. 791,625. (Cl. 30—11.)



A pruner comprising a pole, a head formed from two alined plates having cut-away portions diagonally disposed and opening through one side of the head, spacer strips interposed between the pieces and united thereto to form a guideway, a movable blade arranged in the guideway and having a diagonal knife edge working through the cut-away portion in the pieces of the head, one of said spacer strips being cut away to form a guide slot between the pieces of the head, an ear on the blade and projected through the guide slot exteriorly of the head, an operating lever pivotally connected to the pole, and a connecting rod engaged in the ear and attached to the lever for actuating the blade on movement of the latter.

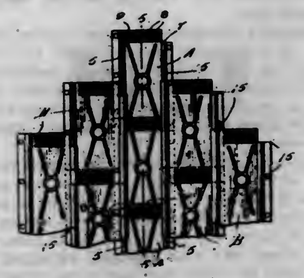
1,111,673. FOLDING BOX. ANTON POKORNY, Milwaukee, Wis. Filed July 31, 1913. Serial No. 782,216. (Cl. 217—15.)

A folding box comprising a bottom plate, end walls hinged to said bottom plate and adapted to fold inwardly upon the top of said bottom plate, sectional side walls hinged to said bottom plate and having the sections thereof hinged together whereby said side walls can be folded upon the bottom side of said bottom plate, a lid hinged to the upper edge of one of said side walls and capable of being folded upon said collapsed side walls, and hooks and



staples in connection with the upper edges of said side and end walls for maintaining a rigid set up box.

1,111,674. METALLIC SHINGLE. CLIFTON A. PRUITT and CHARLIE B. PRUITT, Anderson, S. C. Filed July 18, 1913. Serial No. 779,814. (Cl. 108—17.)

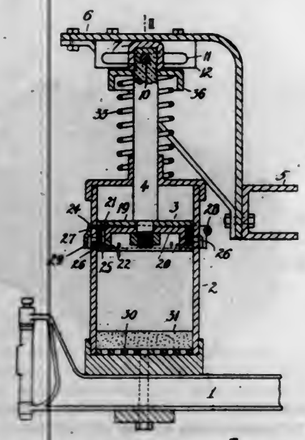


In combination two abutting shingles, each of said shingles consisting of metallic plate, a series of transversely extending corrugations at each end of said plate and extending down to the transverse edges thereof, the corrugations at one end of the plate being in a higher plane with respect to those located at the other end thereof, a downwardly and forwardly extending lip formed integral with the corrugations formed of the smallest depth upon each of said plates, each of said plates being cut away at diagonally opposite corners to provide right angular notches, a pair of longitudinally extending beads formed at the opposite edges of one of said plates, a corresponding pair of beads formed short of their outer edges adapted to telescope with said first mentioned beads, corrugations of one of said plates adapted to ride over said lip upon the corrugations at one end of the opposite plate, each of said beads adapted to extend alongside of the corrugations of each plate, one of said plates adapted to bear with its transverse edge against one of the edges of one of said right angular notches whereby to be limited in movement to hold the corrugations in mesh.

1,111,675. AUXILIARY PNEUMATIC SUPPORT FOR VEHICLES. PHILIP RAYSON, Elsternwick, Victoria, Australia. Filed Aug. 13, 1913. Serial No. 784,639. (Cl. 21—105.)

1. An improved auxiliary pneumatic support for vehicles consisting of a cylinder mounted on the axle of the vehicle, a piston in said cylinder provided with a projecting stem, a

hardened cap on the end of the latter, and a rubber pad covered by a metal plate on the chassis against which said cap bears.



2. An improved auxiliary pneumatic support for vehicles consisting of a cylinder mounted on the axle of the vehicle, a piston in said cylinder provided with a projecting stem adapted to bear against the chassis, a pair of lugs on the latter formed with slots and a laterally projecting pin on the stem provided with friction reducing bearings and engaging said slots.

3. An improved auxiliary pneumatic support for vehicles consisting of a cylinder provided with air ports and mounted on the axle of the vehicle, a perforated metal plate in the bottom of said cylinder, a rubber disk upon said plate, a piston in said cylinder provided with a projecting stem adapted to bear against the chassis or a bracket thereon.

4. An improved auxiliary pneumatic support for vehicles consisting of a cylinder provided with air ports and mounted on the axle of the vehicle, a piston in said cylinder comprising a pair of plates and a cup leather clamped between said plates, the lower plate being formed with a peripheral recess and with passages extending between said recess and its under face and a projecting stem on said piston adapted to bear against the chassis or a bracket thereon.

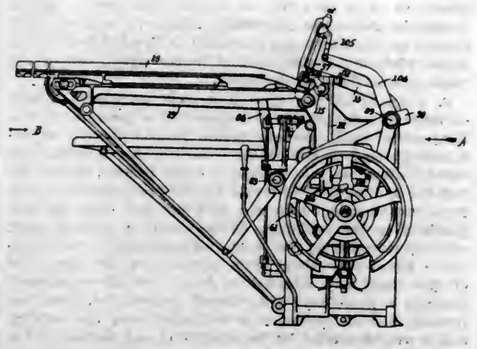
5. An improved auxiliary pneumatic support for vehicles consisting of a cylinder provided with air ports and an adjustable band formed with a lip to overlie said air port, and a piston in said cylinder provided with a projecting stem adapted to bear against the chassis or a bracket thereon.

[Claim 6 not printed in the Gazette.]

1,111,676. APPARATUS FOR APPLYING BANDS, WRAPPERS, OR LABELS TO BOXES, BLOCKS, OR PACKAGES. WILLIAM ROSE, Gainsborough, England. Filed June 29, 1910. Serial No. 569,562. (Cl. 216—38.)

1. In apparatus for applying bands to packages, a stationary magazine of bands, a rocking pick-up device comprising a pick-up arm having an adhesive-carrying contact face, and a coöperating plunger moving therewith, a folding device for applying the band to the package and means for actuating said pick-up arm to lift a band from the magazine by contact with its adhesive-carrying face, to convey said band to the folding device, and there to actuate the plunger to free the band from the pick-up arm, substantially as described.

2. In apparatus for applying bands to packages, a band-applying device having a folding table with delivery aperture, means for placing a pasted band on said table across the delivery aperture, a rocking carrier for receiving a package and delivering the same upon the band on the folding table and a plunger moving with said carrier and serving to press said package and band into the delivery aperture in the folding table.



3. In apparatus for applying bands to packages, a band-applying device having a folding table with delivery aperture, means for placing a pasted band on said table across the delivery aperture, a rocking carrier for receiving a package and delivering the same upon the band on the folding table and a plunger moving with said carrier and serving to press said package and band into the delivery aperture in the folding table, together with band folding arms adapted to fold the ends of the band upon the package.

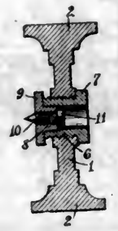
4. In apparatus for applying bands to packages, a band-applying device having a folding table with delivery aperture, means for placing a paster band on said table across the delivery aperture, a rocking carrier for receiving a package and delivering the same upon the band on the folding table and a plunger moving with said carrier and serving to press said package and band into the delivery aperture in the folding table, together with band folding arms adapted to fold the ends of the band upon the package, and means for maintaining the band taut during the folding operation.

5. In apparatus for applying bands to packages, a band-applying device having a folding table with delivery aperture, means for placing a pasted band on said table across the delivery aperture, a rocking carrier for receiving a package and delivering the same upon the band on the folding table and a plunger moving with said carrier and serving to press said package and band into the delivery aperture in the folding table, together with band folding arms lying substantially in the plane of the table before the application of the band and means for moving said arms to fold the band over the package.

[Claims 6 to 23 not printed in the Gazette.]

1,111,677. HAND-LEVEL CONSTRUCTION. EDMUND A. SCHADE, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 12, 1914. Serial No. 824,109. (Cl. 33—207.)

1. Supporting means for hand levels comprising in combination with the level body, a plurality of members carried by and extending transversely through the level body, the greatest overall length of said members not exceeding the greatest overall thickness of the level body, said members having bores extending therethrough, pointed pins extending through said bores and adjustable longitudinally thereof, said pins being projectable from the same side of the level body with means for limiting the amount of projection of the pointed ends of said pins, said members being arranged to be projected and held with their pointed pins projecting beyond one of their extremities and beyond the plane of the adjacent side bearing surface of the level body for supporting engagement, and being arranged to be retired from such position and held with both ends within the planes of the opposite side bearing surfaces of said level body and with the pointed ends of said pins wholly within their respective bores.

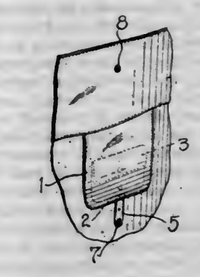


2. Supporting means for hand levels comprising in combination with the level body, a plurality of members carried by and extending transversely through the level body, the greatest overall length of said members not exceeding the greatest overall thickness of the level body, said members having bores extending partially therethrough from one end, the opposite ends of said members being provided with bores of reduced diameter therethrough, pointed pins extending through said last named bores and adjustable longitudinally thereof, said pins being projectable from the same side of the level body with means for limiting the amount of projection of the pointed ends of said pins, said members being arranged to be projected and held with their pointed pins projecting beyond one of their extremities and beyond the plane of the adjacent side bearing surface of the level body for supporting engagement, and being arranged to be retired from such position and held with both ends within the planes of the opposite side bearing surfaces of said level body and with the pointed ends of said pins wholly within their respective bores.

3. Supporting means for hand levels comprising in combination with the level body, a plurality of members carried by and extending transversely through the level body, the greatest overall length of said members not exceeding the greatest overall thickness of the level body, said members having bores extending partially therethrough from one end, the opposite ends of said members being provided with threaded bores of reduced diameter extending therethrough, threaded pins coöperating with and movable longitudinally of said bores and having pointed ends arranged to be projected a limited distance beyond the ends of said members, said pins having their opposite ends formed for manual control, said members being arranged to be projected and held with the pointed ends of said pins in projected position and extending slightly beyond the plane of the adjacent side bearing surface of the level body for supporting engagement, said members being also arranged to be retired from such position and held with both ends within the planes of the opposite side bearing surfaces of said level body, the pointed ends of said pins being manually retractable wholly within the bores of said members.

4. Supporting means for hand levels comprising in combination with the level body, a plurality of threaded members extending through transverse threaded bores in the level body, said members having bores extending partially therethrough from their same relative ends, the opposite ends of said members being provided with bores of reduced diameter, threaded pins for operating in the said threaded bores and having pointed ends arranged to project a limited distance from said members and from the same side of the level body, the opposite ends of said pins being formed for manual control, and the greatest overall length of said members not exceeding the greatest overall thickness of the level body, said members having stop abutments adjacent their ends to retain them on said body and in said level bores and being of such length that they may be projected to bring the pointed ends of said pins beyond the plane of the adjacent side bearing surface of the level body for supporting engagement, the pointed ends of said pins being manually retractable wholly within their respective bores.

1,111,678. SAFETY-POCKET. LIBORIUS SENGE, Crescent Springs, Ky. Filed May 29, 1914. Serial No. 841,858. (Cl. 2—15.)



In a safety pocket construction, the combination of a garment pocket provided with an entrance opening and another opening separate therefrom, with an article tab adapted to be permanently attached to an article of value, said tab being insertible through the last mentioned opening, after the article has been passed through said entrance opening, and means for securing said tab to a garment with the pocket in an upwardly folded position.

1,111,679. LIP-BANDAGE. JOHN J. SILBAUGH, Lancaster, Ohio. Filed Jan. 5, 1914. Serial No. 810,304. (Cl. 128—3.)

1. A lip bandage comprising a covering for the injured portion, a clip adapted to hold said covering in position, and an adhesive tape secured at its ends to the sides of the face and intermediate its ends to said clip.

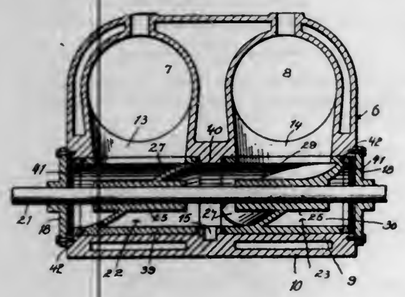
2. A lip bandage comprising an aseptic gauze covering for the injured portion, a water-proof covering for said gauze, a clip adapted to hold said gauze and water-proof covering in place, and an adhesive tape secured at its ends to the sides of the face and intermediate its ends to said clip.

3. A bandage for the inside portion of a lip comprising an aseptic gauze covering for the injured portion, a water-proof member covering said gauze and extending over the outside portion of the lip, a clip adapted to hold said gauze and said water-proof member in position, said clip being formed with two legs and a cross piece adapted to lie adjacent the edges of the bandage on the inside of the mouth to hold them in position, and an adhesive tape secured at its ends to the sides of the face and intermediate its ends to said clip.

1,111,680. ROTARY ENGINE-VALVE. CHARLES R. SPENCER, Atlanta, Ga., assignor of one-third to Walter W. Strong and one-third to Rolin S. Sasnett, Atlanta, Ga. Filed Feb. 7, 1913. Serial No. 746,976. (Cl. 123—190.)

1. In combination with a two cylinder internal combustion engine having an elongated port formed in each cylin-

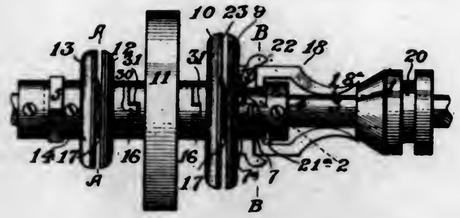
der, a cylindrical valve casing formed around said ports and communicating with the interior of the cylinders by virtue thereof, the axis of the casing being parallel to the cylinder port, said casing being formed with an intake opening centrally of its ends and exhaust openings adjacent its ends, and a pair of rotary valves housed within the casing for individually controlling flow of gas into and from the cylinders, each valve comprising a cylindrical shell open at each end and divided longitudinally into an intake compartment and an exhaust compartment, said compartments being closed at one end and opening upon opposite ends of the shell, the intake compartments being opposed to one another and in communication with the intake opening of the valve casing, and the exhaust compartments being in communication with the exhaust openings of the valve casing, each shell being formed with a longitudinal port communicating with the intake compartment thereof and adapted to register with a cylinder port when the valve is rotated, said port having a front wall paralleling the axis of the valve casing and a rear wall inclined to the front wall whereby a quick opening of the cylinder port results, said port being gradually closed toward the intake end of the valve, each shell being also formed with an opening communicating with the exhaust compartment thereof and adapted to register with a cylinder port.



2. In combination with an internal combustion engine cylinder formed with an elongated port, a valve casing formed around said port and paralleling the same, and a rotary valve housed within said casing having a cylindrical shell open at each end and divided longitudinally into an intake compartment and an exhaust compartment, said compartments being closed at one end and opening upon opposite ends of the valve, the casing being formed with an intake port in continuous communication with the intake compartment of the valve and with an exhaust port in continuous communication with the exhaust compartment of the valve, the shell having a longitudinal port communicating with the intake opening of the valve and tapering toward the inner end of said opening, the shell also having a longitudinal port communicating with the exhaust compartment of the valve and tapering toward the inner end thereof, the forward walls of said openings paralleling the cylinder port, a rotation of the valve causing the openings to alternately register with said cylinder port.

3. In combination with a two cylinder internal combustion engine having a port formed in each cylinder, a cylindrical valve casing formed around said port parallel with the same, the casing being formed centrally of its ends with an intake opening and adjacent its ends with exhaust openings, cover plates closing the ends of said valve casing, exhaust pipes carried by said plates, a valve shaft journaled through the plate and running longitudinally of the valve casing, a pair of rotary valves rigid with said shaft and designed to properly control the flow of gases into and from the engine cylinders, an annular flange formed on the interior of the valve casing centrally of its ends for engagement by the inner ends of the valve, and locking rings threaded into the ends of the valve casing for engagement with the outer ends of the valve.

1,111,681. DUPLEX CLUTCH. JACOB H. STULL, Fremont, Ohio. Filed Jan. 29, 1913. Serial No. 744,863. (Cl. 192—7.)



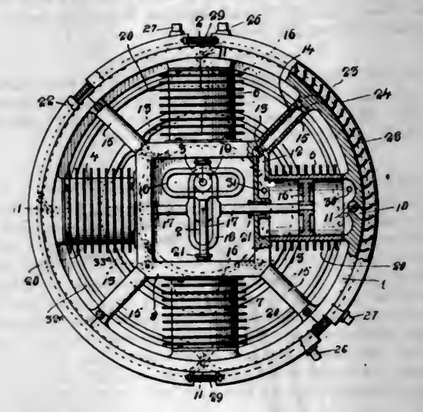
1. A duplex clutch comprising: an operating shaft; a sleeve mounted thereon and made to turn therewith; an annular shoulder for said sleeve at one end, and a screw threaded adjusting nut for the other end; a friction clutch disk slidable upon said sleeve, with slotted hub therefor, and jaw clutch connections between the same and said shoulder which cause said disk to turn as said sleeve is made to operate; a second friction clutch disk contiguous to said nut with securing means therefor whereby the same may be fixed upon said sleeve when in suitable position; substantially identical springs, one for each such disk mounted upon said sleeve; additional clutch disks, one companion for each of the previously mentioned disks, and a driving pulley, all loose upon said sleve, together wth jaw clutch connections upon each side of said pulley and between the same and its adjacent disk, whereby all said parts are locked together and made to turn as a single piece; suitable lugs, which are oppositely mounted upon the outer perimeter of said hub; a shiftable cone mounted upon said shaft, and a cam provided bent lever, one for each such lug, the shorter arm of which operates in said slot and is made to fulcrum against said shoulder, while the cam of the other arm coöperates with said cone to lift against the outer face of said lug, whereby as said cone is operated, said springs are compressed and both said clutches are closed, together with suitable keepers for each such lever which guard against the action of centrifugal force; all in combination, and substantially as set forth.

2. In a device of the character described, the combination of a shaft; a sleeve fixed thereupon, one end of which is provided with a shoulder at two diametrically opposite points, and a screw threaded adjusting nut for the opposite end thereof, together with means for holding said nut in place; a hubbed friction disk, slidably connected with said sleeve, the hub of which, at two diametrically opposite points, is provided with a slot, and a coöperating retaining lug; a shiftable cone, loose upon said shaft; a pair of cam provided bent levers, one for each such slot and lug, for the operation of said disk; said slots being made to receive one end of said lever, and said levers being so formed, that while said end is fulcrumed against said shoulder, the opposite end thereof is made to operate by engagement of said cam with the face of said cone, the point of the bend being made to lift against the face of its retaining lug; a second disk for coöperation with said first named disk, and a pulley adjacent to said nut, both loose upon said sleeve, together with engaging means between said second disk and said pulley, for the operation thereof.

3. In a construction of the sort described the combination of a shaft, a sleeve fixed thereon, one end of which is provided with a shoulder at two diametrically opposite points; a shiftable cone loose upon said shaft; a hubbed friction disk slidably connected to said sleeve, and a pair of bent levers for the operation thereof; said hub being oppositely provided with retaining lugs, and slots, one such lug and slot for each such lever; said slots being made to receive one end of said lever, and said lever being so formed, that while said end is fulcrumed against said shoulder, the opposite end thereof is made to operate by engagement with the face of said cone, and said lever, at the point of the bend, is made to engage and lift against the face of said retaining lug, whereby said disk is operated.

4. In a construction of the sort described, the combination of a shaft; a sleeve fixed thereon; one end of which is provided with a shoulder at two diametrically opposite points; a shiftable cone, loose upon said shaft; a hubbed friction disk, slidably connected to said sleeve, and a cooperating friction member loose thereon, together with a pair of cam provided bent levers for the operation of said hubbed disk; said hub being oppositely provided with retaining lugs and slots, one such lug and slot for each such lever; said slots being made to receive one end of said lever, and said lever being so formed, that while said end is fulcrumed against said shoulder, the opposite end thereof is made to operate by engagement of said cam with the face of said cone, said lever at the point of the bend, being made to engage and lift against the face of said retaining lug; all substantially as set forth.

1,111,682. INTERNAL-COMBUSTION ENGINE. SIMON S. SUTTON, Eldorado, Ill. Filed Dec. 13, 1913. Serial No. 806,628. (Cl. 123—44.)



1. An internal combustion engine embodying a stationary crank shaft, a circular series of rotating cylinders, a rotary crank case supporting the inner ends of said cylinders and provided with inclosed intake and exhaust passages, a circular rim connecting the outer ends of said cylinders and provided with intake and exhaust ports, pistons in said cylinders connected with said crank shaft, and arcuate stationary intake and exhaust chambers held against the outer face of said rim and adapted to communicate with all of said intake and exhaust passages and ports.

2. An internal combustion engine embodying a stationary crank shaft, a circular series of rotating cylinders, a rotary crank case supporting the inner ends of said cylinders and provided with inclosed intake and exhaust passages, a circular rim connecting the outer ends of said cylinders and provided with intake and exhaust ports, some of which communicate with the outer ends of the cylinders and others with the intake and exhaust passages of the crank case, pistons in said cylinders connected with said crank shaft, and arcuate stationary intake and exhaust chambers held against the outer face of said rim and adapted to communicate with all of said intake and exhaust passages and ports.

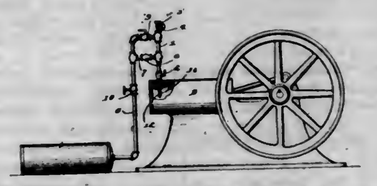
3. An internal combustion engine embodying a stationary crank shaft, a circular series of rotating cylinders, a rotary crank case supporting the inner ends of said cylinders and provided with inclosed intake and exhaust passages, a circular rim connecting the outer ends of said cylinders and provided with intake and exhaust ports, spokes connecting said crank case and rim and provided with gas passages which communicate with the passages in the crank case and ports through the rim, pistons in said cylinders connected with said crank shaft, and arcuate stationary intake and exhaust chambers held against the outer face of said rim and adapted to communicate with all of said intake and exhaust passages and ports.

4. An internal combustion engine embodying a stationary crank shaft, a circular series of rotating cylinders, a rotary crank case supporting the inner ends of said cylinders and provided with inclosed intake and exhaust passages, a circular rim connecting the outer ends of said cylinders and provided with intake and exhaust ports, pistons in said cylinders connected with said crank shaft, and arcuate stationary intake and exhaust chambers yieldingly sustained in contact with the outer face of said rim and adapted to communicate with all of said intake and exhaust passages and ports.

5. An internal combustion engine embodying a stationary crank shaft, a circular series of rotating cylinders, a rotary crank case supporting the inner ends of said cylinders and provided with inclosed intake and exhaust passages, a circular rim connecting the outer ends of said cylinders and provided with intake and exhaust ports, pistons in said cylinders connected with said crank shaft, arcuate stationary intake and exhaust chambers held against the outer face of said rim and adapted to communicate with all of said intake and exhaust passages and ports, and mechanically operated valves controlling the intake and exhaust passage of the crank case and the intake and exhaust ports of the rim.

[Claim 6 not printed in the Gazette.]

1,111,683. STARTER FOR INTERNAL-COMBUSTION ENGINES. SIMON S. SUTTON, Eldorado, Ill. Filed Jan. 7, 1914. Serial No. 810,818. (Cl. 123—180.)



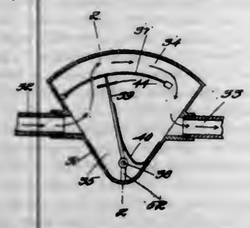
1. A starter for internal combustion engines, comprising a priming tube arranged to discharge into the combustion chamber of the engine, a priming cup on the filling end of said tube provided with a stop-cock, a stop-cock controlling the discharge end of said tube, a compressed air tank, an air pipe leading from said tank into said priming tube betwen the priming cup cock and the discharge end cock, a check valve in said by-pass, and a into said priming tube between the priming cup cock and discharge end cock, a check valve in said by-pass, and a stop-cock controlling said air pipe and located between the priming tube and the junction of the air pipe and by-pass.

2. A starter for internal combustion engines, comprising a priming tube arranged to discharge into the combustion chamber of the engine, a priming cup on the filling end of said tube provided with a stop-cock, a stop-cock controlling the discharge end of said tube, a compressed air tank, an air pipe leading from said tank into said priming tube between the priming cup cock and the discharge end cock, a by-pass leading from said air pipe into said priming tube between the priming cup cock and discharge end cock, a check valve in said by-pass, a stop-cock controlling said air pipe and located between the priming tube and the junction of the air pipe and by-pass, and another stop-cock between the tank and junction of the air pipe and by-pass.

1,111,684. FLOW-INDICATOR. JOHN F. VAUGHAN, Cambridge, Mass. Filed Mar. 26, 1912. Serial No. 686,427. (Cl. 73—167.)

1. A flow indicator comprising a casing divided into two chambers by a perforated partition, a movable pivoted

member located in one of said chambers and dividing it into two spaces of variable size, and yielding means acting on said movable member, said movable member coöperating with said perforated partition so that it is moved by a fluid flowing through said indicator to a point of equilibrium determined by the balance of pressure on both sides of said pivoted member, a pointer, and means whereby movement of the pivoted member will produce a corresponding movement of the pointer.



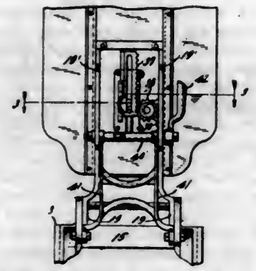
2. A flow indicator comprising a casing divided into two chambers by a perforated partition, a movable pivoted member located in one of said chambers and dividing it into two spaces of variable size, yielding means acting on said movable member, a pointer mechanically independent of said movable member, and magnetic means carried by one of said members to operate the said pointer, said movable member coöperating with said perforated partition so that it is moved by a fluid flowing through said indicator to a point of equilibrium determined by the balance of pressure on both sides of said pivoted member.

3. A flow indicator comprising a casing divided into two chambers by a perforated partition, a movable pivoted member located in one of said chambers and dividing it into two spaces of variable size, a spring acting on said movable member, said movable member coöperating with said perforated partition so that it is moved by a fluid flowing through said indicator to a point of equilibrium determined by the force of said spring and the balance of pressure on both sides of said movable member, a pointer located outside of said chamber and mechanically independent of said movable member, and magnetic means carried by one of said members to operate the pointer.

4. A flow indicator comprising a casing divided into two chambers by a perforated partition, a movable pivoted member located in one of said chambers and dividing it into two spaces of variable size, a spring acting on said movable member, said movable member coöperating with said perforated partition so that it is moved by a fluid flowing through said indicator to a point of equilibrium determined by the force of said spring and the balance of pressure on both sides of said movable member, a pointer located outside of said chamber and mechanically independent of said movable member, and magnetic coöperating members on said movable member and said pointer respectively whereby movement of the movable member will produce a corresponding movement of the pointer.

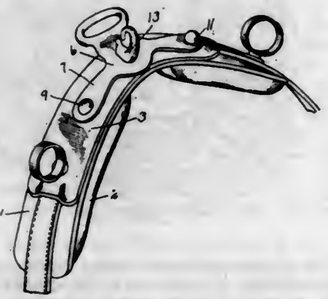
5. The flow indicator comprising a chamber of segmental form having two radial sides and a curved side, an inlet pipe entering one radial side, an outlet pipe connected with the other radial side, an arcuate partition concentric with the curved side and having a longitudinal slot therein, said partition being relatively shorter than the said curved side so that there is an open space around the end of the partition at the outlet side, a movable member pivoted at one end at the center about which said partition and curved side are formed and having its free end in contact with said partition, and a spring acting on the said movable member against the force of the fluid from the inlet side, the path of the fluid through the device being along one side of the movable member through the slot in the partition between the curved side of the chamber and the partition and to the outlet pipe, a pointer, and means whereby movement of the pivoted member will produce a corresponding movement of the pointer.

1,111,685. ADJUSTABLE CHAIR. HARRY S. ALLISON, Indianapolis, Ind., assignor to W. D. Allison, Indianapolis, Ind. Filed Aug. 14, 1912. Serial No. 715,011. (Cl. 155—7.)



An adjustable chair, comprising a seat, a back frame angularly adjustable relatively to said seat, a back slidably mounted on said back frame, a bracing frame engaging said back frame at an angle, a pinion carried by said back frame, and two racks carried by said back and said bracing frame respectively and meshing with said pinion on opposite sides of the latter.

1,111,686. GIG-SADDLE. FREDERICK P. AMES, Kansas City, Mo., assignor to Askew Saddlery Company, Kansas City, Mo., a Corporation of Missouri. Filed June 18, 1912. Serial No. 704,333. (Cl. 54—61.)



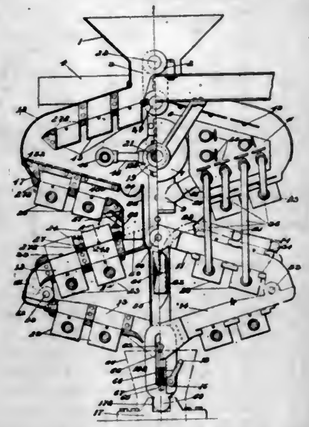
1. The combination with a reinforced, arched saddle, of a seat comprising a body, a crupper loop integral with the body, laterally extending reinforcing ears integral with the body and secured near the outer ends to the reinforced saddle, and a rein hook having a square shank projected through and adapted to secure the central portion of said body and saddle.

2. The combination with an arched saddle having a metal reinforcing member, of a stamped metal seat comprising a body portion having a square aperture therein, a crupper loop integral with the body, laterally extending reinforcing ears integral with the body and secured to the saddle and reinforcing member, a rein hook having a square shank projected through the square aperture in the body and through the saddle, a threaded extension on said square shank, and a nut on said extension for drawing the central portion of said seat, saddle and reinforcing member firmly together.

1,111,687. CONCENTRATOR. HARVEY W. BAILEY, Portland, Oreg., assignor to Harvey Bailey, Portland, Oreg. Filed Nov. 15, 1913. Serial No. 801,188. (Cl. 83—54.)

1. A concentrator comprising a frame, a base, a pair of risers pivotally supported upon said base, a shaft mounted in said risers, hangers journaled by one end upon said shaft and by the other upon said frame, a two-part raceway built upon said risers, a casing inclosing said raceway, and means for rocking the casing upon its pivotal supports.

2. A concentrator comprising a frame, a base, a pair of risers pivotally supported upon said base, a shaft mounted in said risers, hangers journaled by one end upon said shaft and by the other upon said frame, a two-part raceway disposed in zig zag sections built upon said risers, a casing inclosing said race-way, a power shaft mounted in the casing intermediate the sections of said race-way, an eccentric fixed upon the power shaft and means for operatively connecting it with the first mentioned shaft for vibrating the casing upon its pivotal supports.



3. A concentrator comprising a frame, a base, a pair of risers pivotally supported upon said base, a shaft mounted in said risers, hangers journaled by one end upon said shaft and by the other upon said frame, a two-part raceway disposed in zig zag sections built upon said risers, air-receptacles disposed along said sections, a casing inclosing said race-way, a power shaft mounted in the casing intermediate the sections of said race-way, an eccentric fixed upon the first mentioned shaft, an air compressor, communicating with said receptacles and means for operatively connecting the compressor with the power shaft, whereby said casing and race-way may be vibrated under an air pressure.

4. A concentrator comprising a frame, a base, a pair of risers pivotally supported upon said base, a shaft mounted transversely in said risers, hangers journaled by one end upon said shaft and by the other upon said frame, a two-part race-way disposed in zig-zag sections built upon said risers, some of which being hingedly connected, a casing inclosing the race-way and conforming thereto, a power shaft mounted in the casing intermediate the sections of said race-way, an eccentric fixed upon the power shaft and operatively connected with the first mentioned shaft, air-receptacles disposed along said sections, an air-compressor communicating therewith and operatively connected with the power shaft, and means adjusting the hinged sections to vary their relative positions in the race-way.

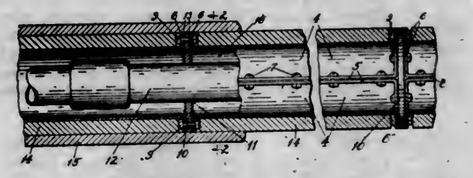
5. A concentrator comprising a casing, a riffle box therein adapted to receive air under pressure, means for vibrating the casing, a receptacle having an exhaust opening at one end placed in inverted position above said riffle box, and baffle plates disposed in staggered relation throughout said inverted receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,111,688. MEANS FOR WATERPROOFING PIPE-COVERINGS. DUDLEY A. BONITZ, Chicago, Ill. Filed Sept. 23, 1912. Serial No. 721,835. (Cl. 137—75.)

1. A steam pipe covering comprising an enameled metallic sleeve surrounding the pipe and forming a water-tight compartment, and a layer of heat-insulating material disposed on the outside of said sleeve.

2. In combination, a steam pipe, a metal sleeve mounted on said pipe and spaced therefrom to form a water-tight compartment, a glazed coating on said sleeve, and a layer of asbestos on the outside of said sleeve.

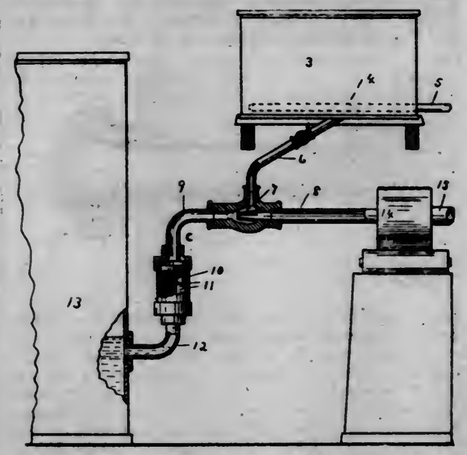


3. In combination, a steam-pipe, a covering therefor comprising a plurality of metallic sleeve sections forming a water-tight compartment, each section having a coating of enamel and being provided with end flanges, spacers mounted on the steam-pipe and disposed between said sections, and means for securing adjacent flanges and the interposed spacer together, and a layer of asbestos on the outside of said sleeve sections.

4. In a pipe covering, a plurality of tubular flanged sections having the interior surface thereof covered with a water proof coating of enamel, spacing members surrounding the pipe to be covered, said spacing members being clamped between the flanges of said tubular members to form a tight joint, and an asbestos cover surrounding and inclosing said tubular members.

5. In a pipe covering, a plurality of segmental sections having side flanges and end flanges, means to clamp said flanges together to form tubular cylinders, means to clamp said end flanges of adjacent cylinders together, spacing members surrounding the pipe to be covered, said spacing members interposed between said end flanges, a coating of water proof enamel on the interior surface of said sections, said sections and said spacing members forming a water tight wall, and a cover of heat insulating material surrounding said wall to prevent heat losses.

1,111,689. PROCESS FOR EMULSIFYING RESIN SOAP IN WATER. WILLIAM J. DOLAN, Rhinelander, Wis. Filed Apr. 9, 1913. Serial No. 759,825. (Cl. 134—21.)



1. The process of emulsifying resin soap in water, consisting in heating resin soap, introducing it into hot water under pressure by means of such water pressure, and emulsifying and atomizing it under said pressure by agitation of said mixture.

2. The process of emulsifying resin soap in water, consisting in heating resin soap, introducing it into hot water under pressure by means of such water pressure, and emulsifying and atomizing it under said pressure by agitation of said mixture in proportion to such pressure.

3. The process of emulsifying resin soap in water, consisting in heating resin soap, introducing it into hot water

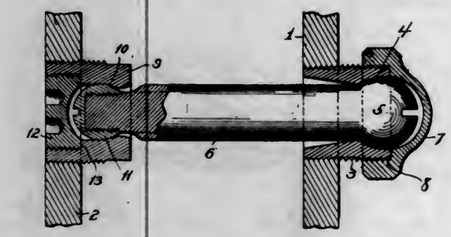
under pressure by means of such water pressure, and emulsifying and atomizing it under said pressure by agitation of said mixture caused by said pressure.

4. The process of emulsifying resin soap in water, consisting in heating resin soap, introducing it into hot water under pressure by means of such water pressure, and emulsifying and atomizing it under said pressure by agitation of said mixture by means operated by said pressure.

1,111,690. ENVELOP. BAILEY M. FENNELL, Cristobal, Canal Zone, assignor of one-half to James A. Smith, Bristol, Tenn. Filed Dec. 27, 1912. Serial No. 738,897. (Cl. 229—73.)

The combination with an envelop provided with a pair of longitudinally spaced parallel slits in its face, of an addressed slip substantially rectangular in shape and slidably trained through the slits and adapted to contain a pair of addresses to selectively expose one, a pair of lateral extensions on the bottom of the slip forming stops to limit the sliding movement of the slip in the slits and a shield provided adjacent the inner sides of the face of the envelop and secured thereto, said shield being substantially of the same width as the envelop and the upper end of the address slip being bent down upon the shield to hold said slip against sliding movement when the flap of the envelop is closed.

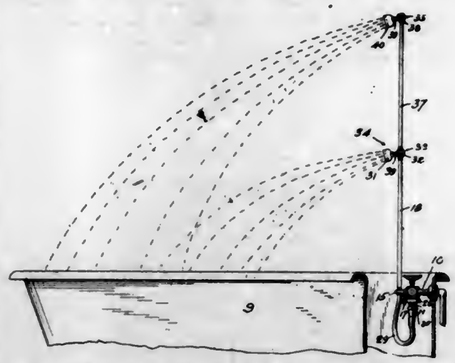
1,111,691. FLEXIBLE STAY-BOLT FOR BOILERS. JOHN ROGERS FLANNERY, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed May 5, 1913. Serial No. 765,589. (Cl. 85—1.5.)



In a stay bolt for boilers, the combination of a pair of oppositely disposed sleeves each open at its ends, and each provided with an integral internal curved seat, a stay bolts having two approximately spherical heads one of which is detachably secured to the bolt, the said heads resting against the curved seats in the sleeves, and caps for the sleeves, the inner faces of the caps being curved to conform to the contour of the heads and approximately concentric therewith.

1,111,692. SHOWER-BATH. ALEXANDER S. HARVEY and JOSEPH W. BRILL, Los Angeles, Cal., assignors to William R. Wallace, Los Angeles, Cal. Filed Apr. 30, 1914. Serial No. 835,383. (Cl. 4—26.)

1. An attachable shower bath comprising an upper and a lower tubular member, means to adjustably secure said lower member to a bath cock, a connection interposed between said upper and lower tubular members and adapted to support and convey fluid to a spraying member, a valve casing secured to the upper end of said upper tubular member and adapted to support and convey fluid to a spraying member, spraying members having concaved apertured faces adjustably supported in said connection and said valve casing, and tubular means to connect the lower end of said lower tubular member to said bath cock.



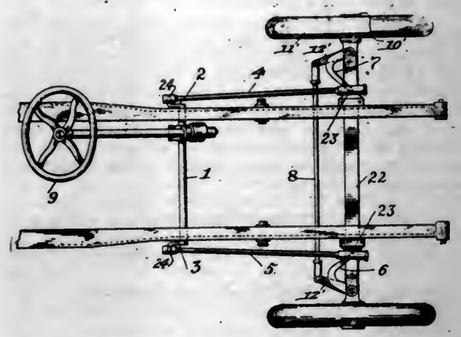
2. A detachable shower bath comprising an upper and a lower tube, means to vertically adjust and secure the lower end of said lower tube to a bath cock, a flexible connection from said cock to said lower tube adapted to convey fluid thereto, a hollow connection secured to the upper end of said tube and the lower end of said upper tube having a channel adapted to convey fluid through said connection and to a spraying member supported in relation thereto, an elongated spraying member vertically adjustable in said connection, a valve casing secured to said upper end of said upper tube and adapted to convey fluid to a spraying member, and an elongated spraying member vertically movable in relation to said valve casing, whereby the supply of fluid thereto may be cut off as desired.

3. An adjustable shower bath comprising an upper and a lower tube, means to adjust and secure the lower end of said lower tube to a bath cock, a tubular connection from the bath cock to said lower tube, a hollow connection arranged to connect the said upper and lower tubes, provided with a channel to convey fluid, an elongated spraying member extending on either side of said connection and vertically movable in relation thereto, a valve casing secured to the upper end of said upper tube, a tapered valve mounted in said casing adapted to convey fluid to a spraying member, and a spraying member attached to and extending on either side of said valve, and adapted to operate the said valve.

1,111,693. MECHANISM FOR STEERING AUTOMOBILES. HENRY T. HAZARD, Los Angeles, Cal. Filed Jan. 14, 1914. Serial No. 812,005. (Cl. 21—199.)

1. In a steering mechanism of the character herein described, a pair of spindles, wheels on said spindles, a steering arm and a drag-link supporting arm on each spindle, a drag-link carried by said drag-link supporting arms, steering cranks, rigid unbendable steering links operatively connecting the swinging end of the steering arms with the swinging end of the steering cranks, said steering cranks arranged to swing on a vertical plane and maintain a constant distance between the swinging ends of the steering arms and the swinging ends of the steering cranks.

2. In a steering mechanism of the character herein described, a pair of spindles, a steering arm on each spindle, a drag-link supporting arm on each spindle, a drag-link connecting said last mentioned arms adapted to give the spindles the proper position in turning, a hand steering wheel, steering cranks operatively mounted on the frame to move in a vertical plane, one in a forward and one in a rearward direction on the rotation of the hand steering wheel, means connecting the steering cranks with the hand steering wheel, and rigid unbendable steering links extending from the swinging ends of the steering arms to the swinging ends of the steering cranks, the cranks and arms arranged to give a free movement to the steering links while turning in either direction.



3. A duplex steering device, comprising a steering column carrying on its lower end a worm gear, a shaft transversely mounted and carrying segmental gearing meshing with the worm gear, said shaft carrying a pair of steering cranks, one crank extending upwardly and one downwardly, both of said cranks being inclined rearwardly from a vertical plane through the axis of the steering shaft, and links connecting the steering arm on each side with the corresponding cranks.

4. In an auto car provided with the usual steering device, comprising a steering arm mounted on the stub axle of one of the fore-wheels, the usual drag-link supporting arms inclined toward or away from each other, usual drag-link supported thereby, the usual steering link extending from said steering arm to the usual steering crank keyed on the steering shaft, the herein described supplementary steering mechanism adapted to act in concert with the hereinbefore mentioned device or independently thereof comprising an extension on the steering shaft, a supplemental steering crank on the extension, both steering cranks having an inclination rearwardly equal to the inclination toward or away from each other of the drag link supporting arms, a supplementary steering arm on the stub axle of the other fore wheel and a supplementary steering link operatively connecting the swinging end of the supplementary steering crank with the supplemental steering arm.

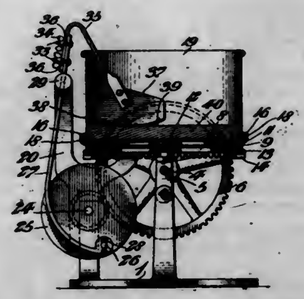
5. A duplex steering device comprising a pair of steering arms one on the spindle of each front wheel, a steering shaft, steering cranks keyed thereon, steering links operatively connected at their forward end to the steering arms, and at their rear ends to the swinging ends of said steering cranks, one of said steering cranks extending upwardly and one downwardly, operatively connected with the steering column, and placed at an angle to the rear of a vertical line through the axis of the steering shaft, whereby on the rotation of the steering column one link will move forwardly over a longer stroke causing the fore wheels to describe different concentric circles in steering, the outer wheel the larger and the inner wheel the smaller circle.

[Claims 6 to 9 not printed in the Gazette.]

1,111,694. CHOPPING AND MIXING MACHINE. CHARLES W. HOTTMANN, Philadelphia, Pa., assignor of one-half to August H. E. Juergens, Philadelphia, Pa. Filed July 6, 1914. Serial No. 849,208. (Cl. 17—17.)

1. A device of the character stated, comprising a container, means to continuously rotate said container, a crank arm, a tool operatively connected with said crank arm and extending within said container, a pivotally mounted guide for said crank arm, and actuating means for said crank arm.

2. A device of the character stated, comprising a spider having bearing members thereon, a support mounted on said spider and provided with a gear, a container carried by said support, a crank disk, a crank arm connected with said disk, a pivotally mounted guide through which the upper end of said arm passes, a tool located within the container and removably connected to the crank arm, and means to revolve said support and said crank disk.



3. A device of the character stated, comprising a spider having bearing members thereon and provided with a bracket, a support mounted on said spider and provided with a gear, a container carried by said support, a crank disk, a crank arm connected with said disk, a guide pivotally mounted in said bracket through which the upper end of said crank arm passes, a tool located within the container and removably connected to the crank arm, and means to revolve said support and said crank disk.

4. A device of the character stated, comprising a framework, a spider carried thereby, a support rotatably mounted on said spider, means to maintain said support and spider in assembled position, a container mounted on said support, a gear carried by said support, a driving shaft operatively connected with said gear, a cam disk operatively connected with said driving shaft, a bracket, an apertured guide movably carried by said bracket, a crank arm passing through the aperture of said guide, a cutter arm having one end secured to said crank arm and its other end extending into said container, and a working tool carried by said cutter arm.

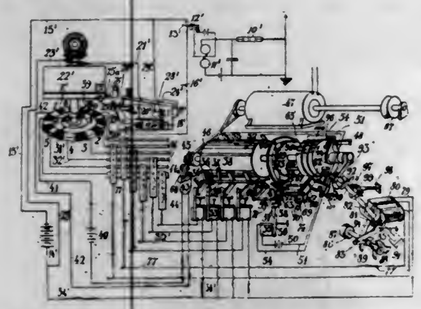
5. A device of the character stated, comprising a container, means to revolve the same, a working tool within the container, a connection from said working tool, means to vertically reciprocate said connection, and a guide with which said connection is in sliding engagement, said guide being pivotally supported in a horizontal plane lying above the bottom of said container.

1,111,695. TYPE-PRINTING TELEGRAPH APPARATUS FOR LINE AND RADIO TELEGRAPHY. ABRAHAM NILSEN HOVLAND, Christiania, Norway, assignor to A/S Hovlands Radiotelegraf, Christiania, Norway. Filed Nov. 17, 1911. Serial No. 660,790. (Cl. 178—3.)

1. In a telegraph system, means for initiating signals whose impulses are of given intervals, receiving mechanism set in operation by the reception of said impulses, means at the sending station for changing the intervals of said impulses, means at the receiving station to correspondingly change the intervals of reception, said intervals and impulses for each signal being completed in a single rotation of the receiving means, and mechanism controlled from the interval changing mechanism to reëstablish the normal interval relation between the impulses of a signal.

2. In a telegraph system, means at a sending station for initiating signals whose impulses are of given intervals, adjustable means for changing both the order of sequence and the time intervals between the impulses, receiving means at a receiving station set in operation by said impulses, means connected thereto for changing the time interval of received impulses arranged to be set in correspondence with the like means at the sending station, and

printing mechanism set in operation by said signal impulses and printing the signal after the impulses have been received.



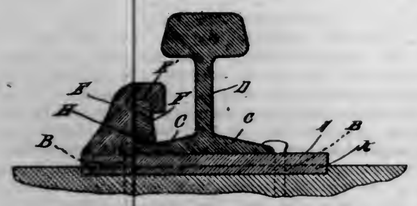
3. In a telegraph system, a sending station having key-actuated signaling means including a sunflower switch, and a cryptograph mechanism between the keys of said means and said switch; a receiving station having a like sunflower switch set in operation by the impulses received and like cryptograph mechanism, a contact drum driven independently of said switch and controlled from said switch, and contact devices coöperating with the drum and actuated by current impulses through said switch and cryptograph mechanism.

4. In a telegraph system, a sending station having key-actuated signaling means including a sunflower switch which in one rotation sends all the current impulses for a given signal, a cryptograph mechanism between the keys of said device and said switch; a receiving station having a like sunflower switch for receiving all the current impulses for a signal during a single rotation, a like cryptograph mechanism connected to said switch, a contact drum, contact levers coöperating with the drum and controlled by current impulses through said switch and mechanism, and printing mechanism controlled from said drum.

5. In combination, a manual key-board, a synchronized transmitter receiving impulses therefrom and associated cryptograph mechanism, a synchronized receiver and associated cryptograph mechanism, a driven type-wheel, and electro-magnetic mechanism controlled by the latter cryptograph mechanism for arresting the type-wheel, and mechanism for moving a record strip against the arrested type-wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,111,696. ANTI-CREEPING RAILWAY DEVICE. HUGH T. HUGHES, Youngstown, Ohio. Filed Aug. 30, 1912, Serial No. 717,985. Renewed Dec. 5, 1913. Serial No. 804,943. (Cl. 238—2.)

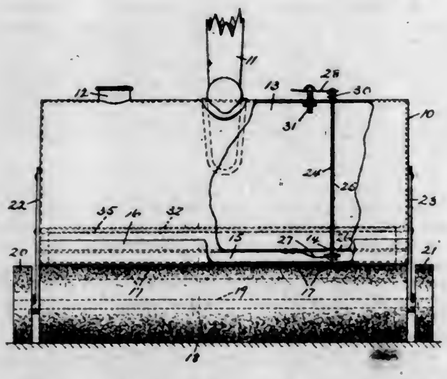


1. A device for preventing railway rails from creeping comprising a plate upon which the flange of a railway rail is adapted to rest, said plate having an upright portion with an undercut slot formed in the lateral projection thereof, and a cam member adapted to engage said slot and the upper surface of the flange of a railway rail, as set forth.

2. A device for preventing railway rails from creeping comprising a plate upon which the flange of a railway rail is adapted to rest, said plate having an upright portion with an undercut slot formed in the lateral projection thereof, a cam having its upper edge convexed and engaging a similarly shaped wall of the slot and its lower edge serrated and adapted to engage the upper surface of the flange of a rail, as set forth.

3. A device for preventing railway rails from creeping comprising a plate upon which the flange of a railway rail is adapted to rest, said plate having an upright portion with an undercut slot formed in the lateral projection thereof, a cam having its upper edge convexed and engaging a similarly shaped wall of the slot and having its lower edge provided with two convexed portions, each having a series of serrations upon the edge thereof and adapted to engage the upper surface of the flange of a railway rail, as set forth.

1,111,697. FLOOR-POLISHING DEVICE. RUBEN LICHTER, New York, N. Y., assignor to Superior Floor Oiler Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 16, 1914. Serial No. 824,994. (Cl. 15—51.)



1. A device of the character described, comprising a tank having a supply chamber and a sub-chamber therein, means within the tank to provide an outlet whereby liquid in the supply chamber may be delivered to the sub-chamber, means in the sub-chamber to permit the liquid to be fed therefrom, a buffer pivoted to the tank, and adapted to receive the liquid when fed from the sub-chamber, said buffer being rotatable when guided over a surface by moving the tank so that the liquid delivered thereto will be applied on the surface, a controller within the tank for permitting the flow of the liquid through the outlet to be regulated, and a brake hinged to the tank, and adapted to be swung to engage the buffer to prevent its rotation for the purpose specified.

2. In a device of the character described, a tank adapted to contain liquid, and having an inlet and an outlet, a substantially V-shaped plate having its edges secured to the underside of the tank so that the apex of the plate will be spaced from the tank to provide a sub-chamber, and said plate having a number of spaced openings in its apex for the passage of the liquid from a sub-chamber, a spring actuated valve within the tank, and controlling the passage through the outlet thereof whereby the flow of the liquid may be regulated, means on the tank, and adapted to be detachably engaged by the valve to retain the valve in adjusted open position relatively to the outlet, a buffer pivoted to the tank, and adapted to receive the liquid when fed through the opening of the V-shaped plate, said buffer being rotatable when guided over a surface by moving the tank so that the liquid delivered thereto will be applied on the surface, and a brake hinged to the tank, and adapted to be swung to engage the buffer to prevent its rotation for the purpose specified.

1,111,698. PROCESS FOR THE MANUFACTURE OF DUCTILE BODIES OF HIGH-FUSING METALS AND ALLOYS OF THE SAME. ALFRED J. LIEBMANN, New York, N. Y., assignor to Nathan Hofheimer, New York, N. Y. Filed June 3, 1914. Serial No. 842,588. (Cl. 75—17.)

1. The process for the manufacture of ductile bodies of high-fusing metals, which consists in mixing metallic powder with a powdered oxid of the same metal subjecting the mixture to a high pressure to form a compact mass and then submitting the formed mass to a combined reducing and sintering operation.

2. The process for the manufacture of ductile bodies of high-fusing metals, such as tungsten which consists in mixing into the metallic tungsten powder, about 1% of powdered tungsten oxid, subjecting the mixture to high compression thereby forming a mass of suitable dimensions and then submitting the formed mass to a combined reducing and sintering operation as and for the purpose described.

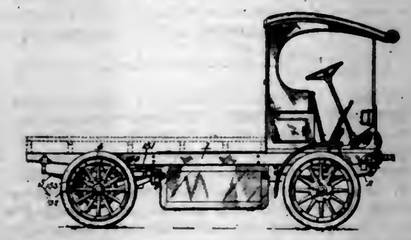
3. The process for the manufacture of bodies of ductile tungsten which consists in intimately mixing metallic tungsten powder with powdered tungsten tri-oxid forming the mixture into a body of suitable dimensions by compression and then simultaneously subjecting the same to a combined reducing and sintering operation.

4. The process for the manufacture of bodies of ductile tungsten which consists in intimately mixing into metallic tungsten powder approximately 1% of powdered tungsten oxid so that the particles of tungsten oxid are strewn in between the particles of powdered metallic tungsten, forming the mixture into a compressed mass of suitable dimensions and then submitting it to a combined reducing and sintering operation which results in the sintering of the particles of metallic tungsten and the complete reduction of the particles of powdered tungsten oxid to metallic tungsten and subsequently sintering the particles of metallic tungsten so reduced to the surrounding tungsten particles, thereby forming a uniform body of ductile tungsten.

5. The process for the manufacture of ductile bodies of tungsten which consists in intimately mixing tungsten metal powder of substantially uniform grain, with tungsten oxid powder of substantially the same size of grain so that the particles of tungsten oxid are strewn in between the particles of powdered metallic tungsten then forming the mixture into a compressed mass of suitable dimensions and then submitting the said mass to a combined reducing and sintering operation, thereby forming a uniform body of ductile tungsten.

[Claims 6 to 10 not printed in the Gazette.]

1,111,699. MOTOR AND TRANSMISSION SUPPORT. WILLIAM MACGLASHAN, South Bend, Ind., assignor to The Studebaker Corporation, South Bend, Ind., a Corporation of New Jersey. Filed Feb. 5, 1913. Serial No. 746,329. (Cl. 21—90.)



1. In a self-propelled vehicle, a rare housing, a motor rigidly secured thereto, means in the form of radius rods pivotally connected to the housing and connected to the frame, and means detachably connecting the motor to the radius rods forward of the housing so the radius rods serve not only to transmit the propelling force from the rear axle to the frame but also support the motor so that it may be released and rotated downward to render it accessible at will.

2. In a self-propelled vehicle, a rear housing rotatably connected to the springs, a motor rigidly secured to the front of the housing having its axis extending longitudinally of the vehicle, a thrust rod pivotally connected to the housing, having a universal joint connection with the vehicle frame forward of the housing, and means detachably suspending the forward end of the motor from the thrust rod so that the motor may be released and swung downward to render it accessible.

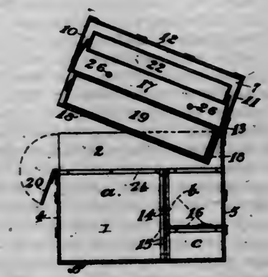
3. In a self-propelled vehicle, a rear housing rotatably connected to the springs, a motor rigidly secured to the front of the housing having its axis extending longitudinally of the vehicle, radius rods pivotally connected to the housing, having a universal joint connection with the vehicle frame forward of the housing, means detachably suspending the forward end of the motor from the radius rods so that it may be released and swung downward to render it accessible, and a motor casing having a removable cover at its forward end through which the armature may be removed.

4. In a self-propelled vehicle, a rear housing, rotatably connected to the springs, a motor rigidly secured to the front of the housing having its axis extending longitudinally of the vehicle, radius rods pivotally connected to the housing, having a universal joint connection with the vehicle frame forward of the housing, means detachably suspending the forward end of the motor from the radius rods so that it may be released and swung downward to render it accessible, a motor casing having a removable cover at its forward end, and the armature having a bearing and a removable frame supporting the bearing, the armature being removable in a forward direction.

5. In a self-propelled vehicle, a rear housing rotatably connected to the springs, a motor rigidly secured to the front of the housing having its axis extending longitudinally of the vehicle, radius rods pivotally connected to the housing, having a universal joint connection with the vehicle frame forward of the housing, means detachably suspending the forward end of the motor from the radius rods so that it may be released and swung downward to render it accessible, a motor casing having a removable cover at its forward end, the armature having a bearing and a removable frame supporting the bearing, the armature being removable with the frame and having at its rear end one member of a draw-clutch, gearing in the housing connected to the rear shaft and a member of a draw-clutch in operative relation with the gearing and adapted to coöperate with the draw-clutch member on the armature.

[Claims 6 to 14 not printed in the Gazette.]

1,111,700. TRUNK. RICHARD SULLIVAN MACGRATH, Winnipeg, Manitoba, Canada. Filed Oct. 2, 1911. Serial No. 652,420. (Cl. 190—4.)

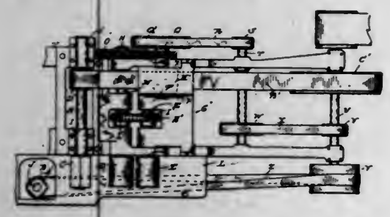


1. A trunk having a lid connected to one side thereof for angular movement in a vertical plane, the trunk being further provided with an opening at one side below the level of the lid when the latter is closed, and with a closure for said opening, a tray adapted to be carried in the lid and having a support depending therefrom, a drawer

in said support wholly carried by the tray and arranged opposite the said opening in the side of the trunk when the tray is in place, in the trunk, and means carried by the lid to detachably secure the tray in the lid to cause the tray to remain in and be lifted bodily by the lid and completely out of the trunk when the lid is opened, said securing means when detached permitting the lid to be opened without raising the tray.

2 A trunk having a lid connected to one side thereof for angular movement in a vertical plane, the trunk being further provided with an opening at one side below the level of the lid when the latter is closed, and with a closure for said opening, a tray adapted to be carried in the lid and having a support depending therefrom, a drawer in said support wholly carried by the tray and arranged opposite the said opening in the side of the trunk when the tray is in place, in the trunk and means carried by the lid to detachably secure the tray in the lid to cause the tray to remain in and be lifted bodily by the lid and completely out of the trunk when the lid is open, said securing means when detached permitting the lid to be opened without raising the tray, the trunk being further provided with supporting means for the tray and on which the tray rests when released from the lid.

1,111,701. WOOD-PLANING MACHINE. ARTHUR W. NELSON, Williamsport, Pa., assignor to Hermance Machine Company, Williamsport, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1913. Serial No. 764,111. (Cl. 144—117.)

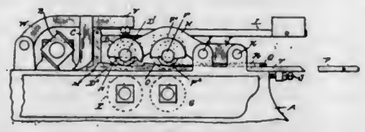


1. In a planing machine, the combination of a frame, a bed arranged at one side of the frame, a cutter head and a feed roll extending across the bed, a shaft for the cutter head journaled in bearings in the sides of the frame, a drive shaft, driving members respectively on the cutter head and the drive shafts, each positioned intermediate the sides of the frame, a flexible connection between said driving members, a shaft for the feed roll arranged intermediate the shaft for the cutter head and the drive shaft and extending transversely of the bed, a journal for said shaft to one side of said flexible connection and between the sides of the frame, and a member carrying said journal, mounted upon the frame sides and having a portion arranged above the plane of the flexible connection.

2. In a planing machine, the combination of a frame, of a horizontally-arranged bed positioned at one side of the frame, a cutter head and feed rolls extending across said bed, horizontal shafts for the cutter head and one of the feed rolls journaled in bearings in the sides of the frame and arranged in substantially the same plane, a horizontal drive shaft extending transversely of and mounted upon the frame, pulleys upon said driving shaft and the cutter head shaft, arranged between the sides of the frame, a belt connecting said pulleys, a shaft extending transversely of the bed for another of said feed rolls, a bearing in which said last-mentioned shaft is journaled, arranged in close proximity to the belt and in substantially the same plane, a member carrying said bearing having the portion near said belt arranged in a plane above said belt, means for driving the first-mentioned feed roll shaft from the drive shaft, an actuating connection between said feed roll shafts, a vertically-arranged cutter head positioned in operative relation to the bed, and a driving connection at one side of the frame between said drive shaft and said vertical cutter head.

3. In a planing machine, the combination of a frame, a bed arranged at one side of the frame, a cutter head and a feed roll extending across the bed, a shaft for the cutter head journaled in bearings in the sides of the frame, a drive shaft, driving members respectively on the cutter head and the drive shafts, each positioned intermediate the sides of the frame, a flexible connection between said driving members, a shaft for the feed roll arranged intermediate the shaft for the cutter head and the drive shaft and extending transversely of the bed, a second shaft for a second feed roll between the shafts for the drive shaft and the other of said feed rolls extending parallel to the other shaft of said feed rolls, sprockets arranged upon said feed roll shafts intermediate the sides of the frame, an actuating connection between said sprockets, a bearing for said second shaft between its sprocket wheel and the flexible connection between the driving members, a member extending between the sides of the frame carrying said bearing, said member having the portion extending across said flexible connection between the driving members arranged above the plane of said connection.

1,111,702. PLANING-MACHINE. ARTHUR W. NELSON, Williamsport, Pa., assignor to Hermance Machine Company, Williamsport, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1913. Serial No. 764,112. (Cl. 144—130.)



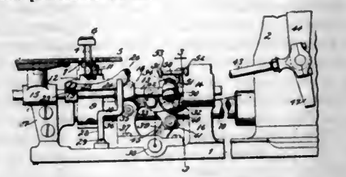
1. In a planing machine, the combination with a plurality of pairs of feed rolls, the members of each pair being respectively positioned upon opposite sides of the line of feed, rockable means carrying one member of each pair upon the same side of the line of feed, a shiftable slide adapted to rock said means to move the rolls carried thereby away from their coöperating members, said slide serving to maintain the rolls in normal spaced relation, an extension on said slide, means for limiting the inward movement of said extension, a lever pivoted for movement in a horizontal plane and connected to said slide to effect the shifting thereof, and means for varying the relation of the slide to said rockable means to adjust the normal spaced relation of the feed rolls.

2. In a planing machine, the combination with a pair of feed rolls positioned upon opposite sides of the line of feed, of a rockable support for one of said rolls permitting the same to be moved away from the other, a second rockable support partially extending over said first-mentioned support, an adjustable screw arranged in said portion over said support adapted to rest upon said first-mentioned support, a chip-breaker upon the second rockable support, and means for simultaneously adjusting said movable roll and said chip-breaker away from the line of feed.

1,111,703. LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1906. Serial No. 337,990. (Cl. 112—5.)

1. In a sewing machine, the combination with a work support, of stitch-forming mechanism comprising a needle, a looper, means for oscillating said looper and causing the same to dwell at the forward end of its stroke while the needle is reciprocating above the work support, and means for adjusting the period of dwell.

2. In a sewing machine, the combination with a work support, of stitch-forming mechanism comprising a needle, a looper, means for oscillating said looper for moving said looper bodily laterally and giving to said looper a dwell at the forward end of its stroke while the needle is reciprocating above the work support, and means for adjusting the period of dwell.



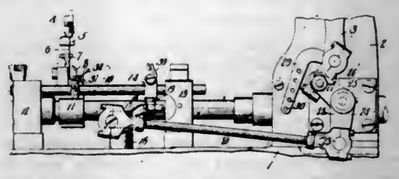
3. In a sewing machine, the combination of a needle, a looper, means for oscillating the looper about an axis at right angles to the path of the needle, and means for moving the looper bodily longitudinally of its axis and during the forward movement of the looper, whereby said looper after entering the needle loop is moved laterally across the path of the needle for positioning the looper thread on the opposite side of the needle path, said means for oscillating the looper being constructed whereby said looper returns in substantially the same path as its forward movement.

4. In a sewing machine, stitch-forming mechanism comprising a needle, a threaded looper, means to oscillate said looper, and means for moving said looper laterally in a direction substantially at right angles to its plane of oscillation to carry its thread across the path of the needle and for retracting said looper in the same path, said looper being caused to dwell to hold the looper thread loop in proper position for the entrance of the needle between the looper thread and looper body.

5. In a sewing machine, the combination of a needle, a threaded looper, means for oscillating the looper about an axis at right angles to the path of the needle, and means for moving the looper bodily longitudinally of its axis and during the forward movement of the looper, whereby said looper after entering the needle loop is moved laterally across the path of the needle for positioning the looper thread on the opposite side of the needle path, said means for oscillating the looper being constructed whereby said looper returns in substantially the same path as its forward movement, said looper having the face thereof adjacent the needle curved.

[Claims 6 to 26 not printed in the Gazette.]

1,111,704. LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1906. Serial No. 337,992. (Cl. 112—5.)



1. A looper mechanism for sewing machines including in combination, a looper, a looper support, a link, means for reciprocating said link in the direction of its length, and means for connecting said link to said looper support, said connecting means being so constructed as to oscillate said looper support about its axis and to move said looper support longitudinally of its axis.

2. A looper mechanism for sewing machines including in combination, a looper, a support therefor, a link, means for reciprocating said link back and forth in the direction of its length, means for connecting said link to said looper support, said means being constructed so as to oscillate said looper support and move the same longitudinally of its axis for moving said looper into and out of the needle loop, said means for reciprocating the looper being constructed so as to give said looper an extended dwell at the forward end of the stroke.

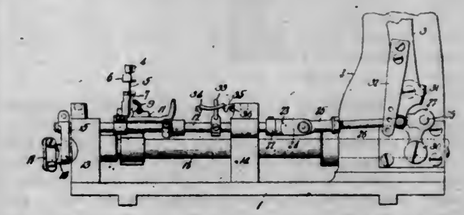
3. A looper mechanism for sewing machines including in combination, a looper, a support therefor, a link, means for reciprocating the link in the direction of its length, a rock shaft connected to said link and to said looper support, said rock shaft being constructed and disposed relative to the looper support, whereby said looper support is oscillated about its axis and moved longitudinally of its axis.

4. A looper mechanism for sewing machines including in combination, an oscillating looper, a support therefor, a rock shaft having its axis located at one side of the axis of the looper support and in a plane cutting the axis of the looper support at right angles, means for connecting said rock shaft directly to said looper support including a single pivotal connection, whereby the movement of said connection imparts both an endwise and oscillating movements to said looper support, and means for oscillating said rock shaft.

5. A looper mechanism for sewing machines including in combination, an oscillating looper, a support therefor, a link, a rock shaft connected to said link and to said looper support, the axis of said rock shaft being arranged at right angles to the axis of the looper support, whereby said looper support is oscillated and moved longitudinally, and means for reciprocating said link and giving thereto an extended dwell in its forward position, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,111,705. LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1906. Serial No. 337,993. (Cl. 112—5.)



1. A looper mechanism for sewing machines, including in combination, a main shaft, a looper, a looper support therefor, a needle lever extension, means operated from the main shaft for oscillating said looper and means operated from the needle lever extension for moving said looper laterally, said means for oscillating the looper and moving the same laterally, including devices to move it backward and forward in substantially the same path.

2. A looper mechanism for sewing machines including in combination, a thread-carrying looper, a support for said thread-carrying looper, means for positively oscillating said looper support, and means for positively moving said looper support laterally in a direction parallel with the axis of the looper support, said means for moving the looper support laterally and for oscillating the looper support being so timed relative to each other as to move said looper forward and back in substantially the same path on one side of the needle, the lateral movement of said looper carrying the looper thread to the opposite side of the needle from the path of travel of the looper.

3. A looper mechanism for sewing machines including in combination, a thread-carrying looper, a support for said thread-carrying looper, means for positively oscillating said looper support, and means for positively moving said looper support laterally in a direction parallel with the axis of the looper support, said means for moving the looper support laterally and for oscillating the looper support being so timed relative to each other as to move said

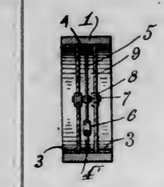
looper forward and back in substantially the same path on one side of the needle, the lateral movement of said looper carrying the looper thread to the opposite side of the needle from the path of travel of the looper, said looper being curved on the face thereof adjacent the needle to form a clearance space for the needle.

4. A sewing machine including in combination a stitch forming mechanism, comprising a needle, a looper, said looper having a curved face adjacent to the path of the needle, means for oscillating said looper, and means for moving said looper laterally comprising a rock arm device for operating the same, and giving to said looper, an extended dwell at the forward end of its lateral stroke, said means for oscillating the looper and said means for moving the looper laterally being timed, so as to move said looper forward and back in substantially the same path.

5. A sewing machine including in combination a stitch forming mechanism, comprising a needle and a needle lever extension, a looper, a looper support, means for oscillating said looper support whereby said looper is moved into and out of the needle loop, and independent means for moving said looper support longitudinally, whereby said looper is moved laterally during its oscillation, comprising a rock arm, a link connected thereto, and having a universal connection with said looper support, and means connected with said needle lever extension for oscillating said rock arm.

[Claims 6 and 7 not printed in the Gazette.]

1,111,706. LEVEL. EDWARD J. RITTY, Dayton, Ohio, assignor of one-half to Leo J. Ritty, Dayton, Ohio. Filed Apr. 15, 1914. Serial No. 832,098. (Cl. 33—215.)



A level comprising a frame having a centrally disposed opening therein, a ring centrally disposed in said opening with an annular portion extending at a right angle to said ring and upon opposite sides of which portion scales are arranged denoting degrees of a circle and lineal measurements respectively, transparent disks provided with axial openings and set in said opening on each side of said ring and abutting with the circumferential edges thereof, a pointer having its shaft extending through said axial openings, and individual retaining rings arranged in said opening on the outside of said disks and abutting thereagainst, said retaining rings being each of a thickness corresponding to the thickness of the ring of the indicator, substantially as described.

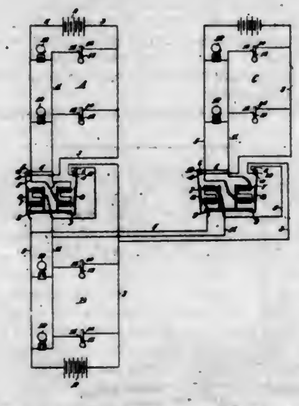
1,111,707. ROOF BRACKET OR JACK. OSCAR SCHORN, Cleveland, Ohio. Filed Feb. 19, 1912. Serial No. 678,594. (Cl. 20—86.)

1. A roof bracket or jack comprising a suitable base of heavy band iron or steel having its lower end doubled back over a pivotal bolt the double part being bent upwardly to an acute angle to said base, a steel blade inserted between said double part and clamped securely to said base by means of a bolt with winged nut passing through holes provided in said double part and center of steel blade, suitable teeth cut into lower edge of said steel blade for the purpose of gripping roof and for cutting a small groove in slate or shingles, into which said steel blade will fit and prevent said base from sliding downward, said steel blade to be of sufficient size to extend several inches on each side of base and thereby prevent all lateral movement and side play of said base substantially as described.

2. A roof bracket or jack comprising a base of heavy band iron or steel having its lower end doubled back and bent upwardly to an acute angle to said base, a transverse slot cut through the eye formed by said double part, a steel arm hinged into the said slot by means of a pivotal bolt passing through eye of double part and a hole in lower end of steel arm, a series of upwardly opening notches cut into outside edge of said steel arm, another arm hinged at the upper end of said base and consisting of two metal strips riveted together for about two-thirds of their length, and then spread apart to form a U shaped slot the open end of which is closed by a bolt or rivet, said slot being of sufficient width to admit free end of lower arm and thereby forming a bracket of great strength which can be quickly adjusted to pitch of roof by means of the notches cut into lower arm and engaging the bolt or rivet closing free end of upper arm, substantially as described.

3. In a roof bracket or jack the combination of a suitable base of heavy band iron or steel having its lower end doubled back over a pivotal bolt the said double part being bent upwardly to an acute angle to the base, thereby providing a convenient socket into which a toothed saw blade can be clamped as described, and also forming a suitable support to which the lower arm of adjustable bracket can be hinged substantially as described.

1,111,708. AUTOMATIC FIRE-ALARM SYSTEM. IRVIN B. SIMMS, Sacramento, Cal., assignor of one-third to Frank Hunt, Wheatland, Cal. Filed Sept. 24, 1913. Serial No. 791,507. (Cl. 177—355.)



1. In an electric alarm system, the combination with a source of electrical supply and a normally open circuit connected thereto, of a series of electric alarms, a series of thermo-circuit-closers arranged in parallel in said circuit, a second normally open circuit, means operated by the closing of the first named circuit by the circuit-closers for closing said second circuit, and means by which the closing of the second circuit will effect an auxiliary closing of the first named circuit independent of the thermo circuit-closers.

2. In an electric alarm system, the combination with a source of electrical supply and a normally open circuit, of a series of electric alarms, a relay magnet and a series of thermo-circuit-closers arranged in parallel in said circuit, a second normally open circuit, means whereby the energizing of the relay magnet in the first circuit will operate to close the second circuit, and means controlled by the closing of the second circuit for closing the first circuit independent of the thermo-circuit-closers.

3. In an electric alarm system, a pair of separate and independent circuits, a series of electric alarms and a series of thermo-circuit-closers arranged in parallel in each of said circuits, and means whereby the closing of one of said circuits will close the other circuit independent of the thermo-circuit-closers.

4. In an electric alarm system, a pair of separate and independent circuits, a series of electric alarms and a series of thermo-circuit-closers arranged in parallel in each of said circuits, a relay magnet in each of said circuits, and a switch in each circuit adapted to be closed by the energizing of the magnet in the other circuit whereby the closing of one circuit will effect the closing of the other circuit independent of the thermo-circuit-closers.

5. An electric-alarm system comprising a series of separate normally open circuits, a source of electrical supply for each circuit, a plurality of electric-alarms and a series of thermo-circuit-closers in each of said circuits, means whereby the closing of one of the circuits will cause the closing of the remainder of the circuits, and means whereby the closing of some one of the latter circuits will operate to close the first closed circuit independent of the thermo-circuit-closers therein.

[Claim 6 not printed in the Gazette.]

1,111,709. ARMOR-PLATE. SAMUEL S. WALES, Munhall, Pa., assignor to Carnegie Steel Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 1, 1906. Serial No. 328,659. (Cl. 75—1.)

1. A steel armor plate containing silicon, manganese, nickel, chromium and tungsten, the nickel being in excess of 5 per cent, the chromium less than .25 per cent. and the tungsten less than .70 per cent.

2. A steel armor plate containing silicon, manganese, nickel, chromium and tungsten, the nickel being present in the proportion of from 3 to 12 per cent., the chromium in the proportion of from .15 to .25 per cent. and the tungsten in the proportion of from .50 to .70 per cent.

3. A steel armor plate containing silicon up to .15 per cent, not more than .35 per cent. manganese, at least 5 per cent. nickel, less than .25 per cent. chromium and less than .70 per cent. tungsten.

1,111,710. STEEL ALLOY. SAMUEL S. WALES, Munhall, Pa., assignor to Carnegie Steel Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 27, 1909. Serial No. 534,985. (Cl. 75—1.)

1. An alloy steel containing manganese, 4 per cent. nickel, 2 per cent. chromium, and titanium.

2. An alloy steel containing manganese, 4 per cent. nickel, 2 per cent. chromium, and 2 per cent. titanium.

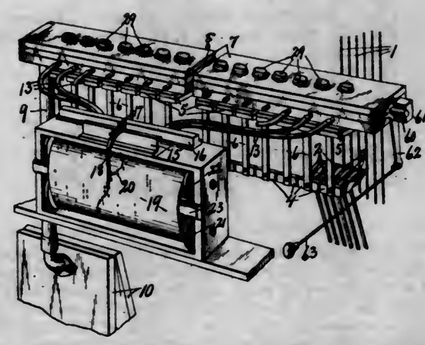
1,111,711. ALLOYED STEEL. SAMUEL S. WALES, Munhall, Pa., assignor to Carnegie Steel Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 27, 1909. Serial No. 534,986. (Cl. 75—1.)

An alloy steel containing carbon, manganese, chromium, .99 per cent. nickel, .15 per cent. vanadium.

1,111,712. SELF-PLAYING MUSICAL INSTRUMENT. LEWIS B. DOMAN, Elbridge, N. Y. Filed Sept. 3, 1907. Serial No. 391,190. (Cl. 84—160.)

1. In a self-playing musical instrument a system of note-sounding devices, and mechanisms for varying the force applied to operate said devices comprising a series of bellows, a support therefor, a sectional rail carried as to its several sections by the several bellows, each section acting upon a relatively small number of note-sounding devices, means to control the action of the bellows severally, and separate means to shift the position of the bellows-support relatively to said note-sounding devices.

2. In a self playing musical instrument, a system of hammers, a hammer rail composed of sections, each coacting with a small group of hammers, a plurality of pneumatics each connected to one of the hammer rail sections to shift the corresponding group of hammers, a rocking support for the pneumatics, and manually operated means for controlling the action separately of said pneumatics.



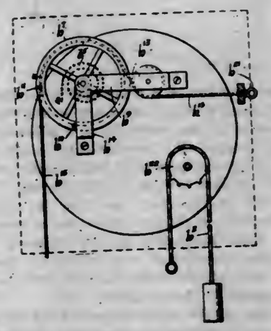
3. In a self playing musical instrument, a rocking support, means for rocking said support, separately acting pneumatics mounted upon the support, separately movable hammer rail sections each rigidly connected to the movable side of one of the pneumatics, and means for causing the action of the pneumatics, one at a time, independent of each other.

4. In a self playing musical instrument, a system of strings and hammers therefor, a plurality of pneumatics each controlling the action of a small group of hammers, a rocking support for the pneumatics, primary pneumatics one for each of the first named pneumatics, and means for controlling the action of the primary pneumatics.

5. In combination with a system of hammers and strings of a self-playing musical instrument, a perforated music-sheet having one set of perforations representing the melody of a musical composition, means movable transversely of the music sheet to follow the different positions of the melody-perforations when presented to a predetermined transverse line, and additional means brought into action by the movement of the first named means for causing the hammers corresponding to the melody perforations in the music-sheet to shift their position.

[Claims 6 to 12 not printed in the Gazette.]

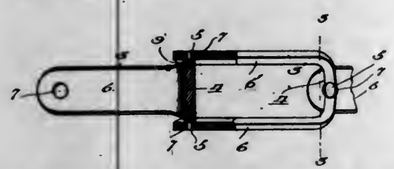
1,111,713. TIME-REGULATOR FOR DAMPERS OF FURNACES, RANGES, OR STOVES. ROBERT T. GARRETT, Philadelphia, Pa. Filed Aug. 9, 1913. Serial No. 783,870. (Cl. 161—8.)



In a time regulator damper for furnaces, etc., a clock having an alarm-mechanism provided with a spring controlled shaft and a tripping-device, a pulley carried on and operated by said shaft, flexible weighted means connected with said pulley to control the dampers and to permit of

winding of said mechanism, a bracket secured to the framework of said clock and said pulley provided with stop-pins to respectively engage different parts of said bracket, substantially as and for the purposes described.

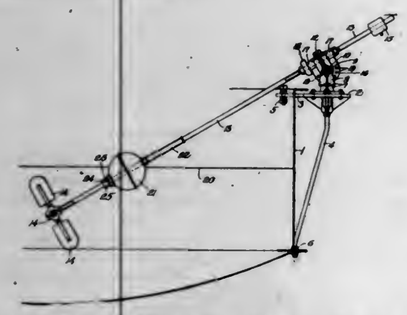
1,111,714. FLEXIBLE SHAFT. ROBERT L. HIGHT, Decatur, Ill. Filed Mar. 16, 1912. Serial No. 684,359. (Cl. 64—30.)



1. A flexible shaft formed of a plurality of U-shaped links pivotally connected together, each link being formed of a single piece of metal and bent into substantially U-shape, the arms of which are curved transversely and apertured adjacent their ends, the head of each link being provided with beveled edges terminating in laterally projecting lugs at right angles to the arms of the links.

2. As a new article of manufacture, a flexible shaft composed of a plurality of links of the same construction, each link comprising a strip of metal bent into substantially U-shape form, the head of each link being enlarged laterally and terminating in reduced lugs, the arms of said link being curved transversely and apertured adjacent their ends and adapted to receive the lugs of the adjacent link, the enlarged portions of said head fitting in the concavity of the arms and conforming in shape thereto.

1,111,715. AGITATOR FOR MILK-TANKS AND THE LIKE. CHARLES H. HOOD, Somerville, Mass., assignor to H. P. Hood & Sons, Charlestown, Mass., a Corporation of Massachusetts. Filed Dec. 30, 1913. Serial No. 809,491. (Cl. 31—38.)



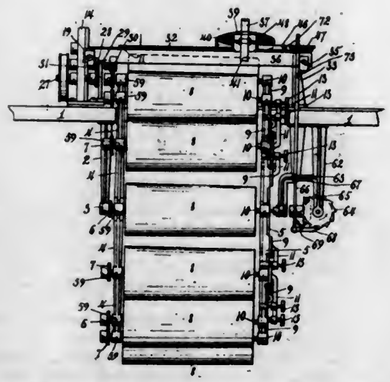
1. Apparatus of the kind described for agitating milk or the like contained within reservoirs, comprising means to stir the contents of the reservoir at a substantially predetermined depth below the level of said contents, said stirring means being automatically raised and lowered as the level of said contents is raised and lowered.

2. Apparatus of the kind described for agitating milk or the like contained within reservoirs, comprising means including a float supported in the contents to stir the contents of the reservoir at a substantially predetermined depth below the level of said contents, irrespective of the variation in level of the contents.

3. Apparatus of the kind described for agitating milk or the like contained within reservoirs, comprising means to agitate the contents of a reservoir at a substantially predetermined depth below the surface, said means including a rotating shaft extending into said tank at an angle, and mechanism to permit said shaft to oscillate with the varying level of said contents.

4. Apparatus of the kind described for agitating milk or the like contained within reservoirs, comprising a driving shaft outside the tank, a driven shaft arranged substantially at right angles to said driving shaft, and extending at an angle into said tank, agitating means on the inner end of the driven shaft, a float to support the driven shaft, and means permitting said shaft to oscillate on the driving shaft during rotation of both shafts to cause said stirring means to remain a predetermined depth below the level of the contents during the variation of said level.

1,111,716. SOUND-REPRODUCING MACHINE. HYMAN E. MARKLE, Nashville, Tenn. Filed Aug. 27, 1906. Serial No. 332,224. (Cl. 181—4.)



1. In a sound reproducing machine, the combination with a multiplex record holder, of a sound box carriage, bosses on said holder, a locking lever engaging said bosses to lock the holder against movement, and means rigidly fixed to and carried by said carriage for releasing said locking bar from said bosses when the carriage is raised.

2. In a sound reproducing machine the combination with a multiplex record holder comprising a series of arms, shafts connected to said arms to hold a record, a locking bar constructed to engage each of said arms as the record holder is revolved, to lock the holder against movement while a record is being reproduced and means fixed to and carried by the carriage for releasing said locking bar from said arms when the carriage is raised to permit the holder to revolve.

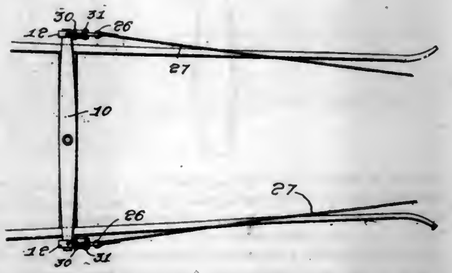
3. In a sound reproducing machine, the combination with a multiplex record holder comprising a series of arms, shafts connected to said arms each to hold a record, bosses on each of said arms, of a locking bar constructed to engage said bosses to lock the holder against movement while a record is being reproduced and means fixed to and carried by the carriage for releasing said locking bar from said bosses when the carriage is raised to permit the holder to revolve.

4. In a sound producing machine, the combination with the sound box carriage, of a multiplex record holder revolubly mounted upon a shaft, gear wheels connected to said shaft, a ratchet wheel formed on the periphery of one of said gear wheels, a lever, a pawl pivotally secured to said lever and adapted to engage said ratchet wheel, said lever extending into the path of the carriage, and means on said carriage adapted to operate said lever whereby the holder is revolved after the carriage has traversed a record.

5. In a sound reproducing machine, the combination with the sound box carriage and a multiplex record holder, of a trip secured to the carriage, a lever constructed to permit the trip to pass it in the forward movement of the carriage, means elevating the carriage after the trip has passed the lever, said trip, in its elevated position being adapted to operate the lever on the return movement of the carriage and means connecting said lever and the holder whereby the holder is given a partial revolution each time said lever is operated.

[Claims 6 to 8 not printed in the Gazette.]

1,111,717. SWINGLETREE DEVICE. JOHN E. MCGRANER, Harrisburg, Ill., assignor of one-third to John A. Tuttle and one-third to Charles Van Meter, Harrisburg, Ill. Filed Dec. 13, 1913. Serial No. 806,465. (Cl. 21—79.)



1. A device of the kind described comprising a socket, member provided with an eye at one end adapted to fit over the end of a swingle-tree, said socket member provided with a socket at the opposite end from that of said eye, an eye yoke having a lug at one end thereof, said lug adapted to fit in said socket in said socket member, and rotatable means on said socket member for holding said lug in said socket.

2. A device of the kind described comprising a socket member with an eye at one end adapted to fit over the end of a swingle-tree, said socket member provided with a socket at the opposite end from that of said eye, an eye yoke having a lug at one end thereof, said lug adapted to fit in said socket in said socket member, and means passing around said socket member and over said lug for holding said lug in said socket of said socket member.

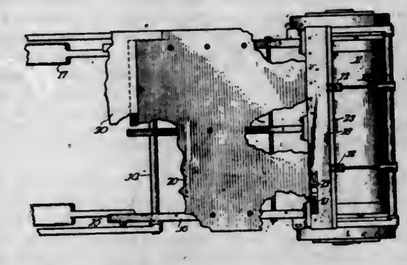
3. A device of the kind described comprising a socket member provided with an eye at one end adapted to fit over the end of a swingle-tree, said socket member provided with a socket at the opposite end from that of said eye, an eye yoke having a lug at one end thereof, said lug adapted to fit in said socket in said socket member, said socket member provided with shoulders at both ends, a rotatable locking collar on said socket member between said shoulders, said collar provided with a cut-away portion adapted to be positioned in alinement with the opening formed in said socket member by said socket when in an open position, and means for holding said collar against movement when said cut-away portion is out of alinement with said opening formed in said socket member.

4. A device of the kind described comprising a socket member and a member adapted to fit in the socket of said socket member, and a ring means carried by one of said members for holding said second mentioned member in said first mentioned member.

5. A device of the kind described comprising a socket member adapted to be carried by a swingle-tree, an eye yoke having a lug at one end thereof adapted to fit in the socket of said socket member, a collar rotatably carried by said socket member for holding said lug in said socket member and means for preventing the longitudinal movement of said collar on said socket member.

1,111,718. FEED-TABLE FOR PRINTING-PRESSES. ROBERT MIEHLE, Chicago, Ill. Filed Feb. 24, 1914. Serial No. 820,474. (Cl. 101—38.)

1. In a printing press, the combination with a cylinder, of a hinged metal frame, and a feed board carried thereby, such frame having a metal terminal lip forming an independent continuation of the board, substantially as described.



2. In a printing press, the combination with a cylinder, of a hinged metal frame, and a feed board carried thereby, such frame having a metal terminal lip forming an independent continuation of the board, and gages carried by the frame and independent of the board, substantially as described.

3. In a printing press, the combination with a cylinder, of a movable frame, a feed board carried thereby, said frame having a metal terminal lip forming an independent continuation of the board, said frame mounted to swing the lip from an inoperative position to an operative position adjacent to the cylinder, and a registering device arranged to accurately position the lip with reference to the cylinder in its operative position, substantially as described.

4. In a printing press, the combination with the cylinder, of a tiltable frame, a feed board carried thereby, said frame having a metal terminal lip forming an independent continuation of the board, said frame mounted to swing the lip from the elevated position above the cylinder to a position closely adjacent and substantially tangent thereto, and a registering device arranged to accurately position the lip with reference to the cylinder in its lowered position, substantially as described.

5. In a printing press, the combination with a cylinder, of a tiltable frame, a feed board carried thereby, a registering device arranged to accurately position the board with reference to the cylinder in its operative position, said registering device comprising a stud and coöperating socket, one carried by the frame and the other by a suitable support, and means to vary the extent to which the stud may enter the socket, substantially as described.

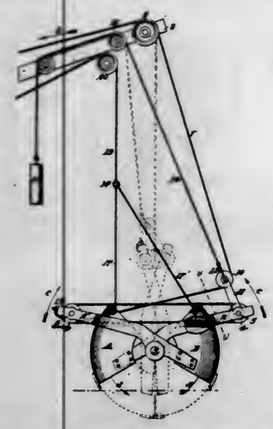
[Claims 6 to 9 not printed in the Gazette.]

1,111,719. CLAM-SHELL BUCKET. JOSEPH F. MILLER, Sacramento, Cal. Filed June 11, 1913. Serial No. 773,040. (Cl. 37—30.)

1. In a clam shell bucket, a pair of jaws, operating means comprising pivotally connected arms, each jaw having a pair of arms rigidly connected thereto on opposite sides thereof, sheave carrying means for each jaw connected to each of the arms of the respective jaws, and a single combined hoisting and jaw closing cable secured at one end to a stationary point and being rove back and forth and around the sheaves and adapted to have its opposite end operated to draw the arms together to close the jaws of the bucket.

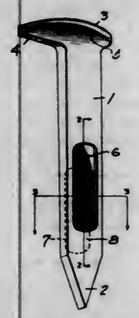
2. In a clam shell bucket, a pair of jaws, an arm rigidly connected to each jaw, the arm of one jaw being pivoted to the arm of the other jaw, the arms crossing each other above said pivotal point, sheaves carried on the outer ends of the arms, a single hauling cable rigidly secured at one end to a stationary point and being rove around the sheaves and having its opposite ends adapted to be operated to draw the arms together to close the jaws, a direction roller engaged with the last named end of the cable, means to movably support the direction roller from one of said arms, and a counter-balanced table having one end connected to said supporting means to hold same in an up-

right position out of engagement with said last named arm during the opening and closing movements of said arms.



3. In a clam shell bucket, a pair of jaws, an arm rigidly connected to each jaw, the arm of one jaw being pivoted to the arm of the other jaw, sheaves carried on the outer ends of the arms, a single hauling cable rigidly secured at one end to a stationary point and being rove around the sheaves and having its opposite end adapted to be operated to draw the arms together to close the jaws, means movably connected to the outer end of one arm for engagement with the last named end of the cable, and means to hold said means in an upright position during the opening and closing movements of the arms.

1,111,720. SPIKE. HALLIE NORRIS, Pittsburgh, Pa., assignor of one-half to William M. Rees, Pittsburgh, Pa. Filed June 26, 1913. Serial No. 775,993. (Cl. 85—19.)



A spike opposite walls of which have longitudinal recesses therein arranged in staggered relation, whereby the unrecessed portion of the side wall opposite the end of each recess forms an abutment to steady the spike within the wood and to oppose the pressure of the wood fibers projecting into the recess at the opposite side wall.

1,111,721. SAFETY-RAZOR. KING C. GILLETTE, Brookline, Mass. Filed Mar. 6, 1905. Serial No. 248,505. (Cl. 30—12.)

1. In a safety razor the combination of a rectangular blade having two cutting edges and suitable end portions, a rectangular holder having a pair of upwardly projecting lugs for each end of the blade, the members of each pair of lugs being separated or spaced apart to receive and embrace an end portion of the blade between them, to prevent displacement of the blade in all directions in the plane thereof, said upstanding lugs being disposed substantially at the four corners of the holder and blade, a guard for the cutting edge in use, a handle on the bottom of the holder, and means bearing upon the upper surface of the blade to hold it fixed from displacement upon the holder.

2. In a safety razor the combination of a rectangular blade having two cutting edges and suitable end portions providing additional transverse and longitudinal edges, a holder for the blade comprising a handle, a blade seat upon said handle, a pair of upstanding lugs at each end of the blade seat engaging the said transverse and longitudinal edges of the blade, a guard for the cutting edge or edges, and means bearing upon the upper surface of the blade to hold it fixed from displacement upon the holder.

3. In a safety razor, a holder for a double edged blade comprising a handle having two sides, the two sides being resilient and joined together at one end, and a frame having two sides, the inner edges of said sides being joined each to a free end of the handle, the outer edges opposite and parallel to the said inner edges having each a row of teeth for seating the edges of the blade thereon, lips formed on the corners for gripping the blade, the distance between adjacent lips on opposite sides of the frame when the blade is removed therefrom being of different dimension than the width of the blade, and means operating the handle for adjusting the frame to bring the lips in spring pressed engagement with the blade.

4. In a safety razor, a holder for a double-edged blade comprising a handle having two sides, the two sides being resilient, and joined together at one end, a frame having two sides, the inner edges of said sides being joined each to a free end of the handle, the outer edges opposite and parallel to the said inner edges having each a row of teeth for seating the edges of the blade thereon, lips formed on the corners for gripping the blade, and a slide ring mounted on the handle adapted to be pushed up the handle to close the parts to bring the lips in spring pressed engagement with the blade.

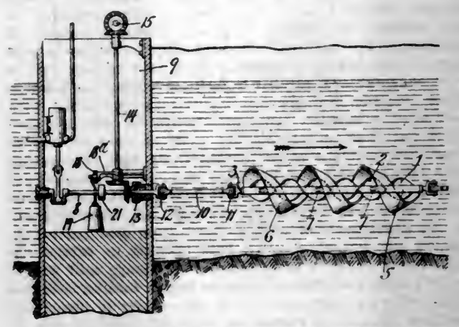
5. In a safety razor, a holder for a double-edged blade comprising a handle having two sides, the two sides being resilient, and joined together at one end, a frame having two sides, the inner edges of said sides being joined each to a free end of the handle, the outer edges opposite and parallel to the said inner edges having each a row of teeth for seating the edges of the blade thereon, and lips formed on the corners for gripping the blade.

[Claims 6 to 23 not printed in the Gazette.]

1,111,722. WATER-MOTOR. JAMES H. SHEAHAN, Freeport, Ill. Filed Nov. 16, 1910. Serial No. 592,633. (Cl. 170—97.)

1. A water power apparatus comprising a shaft, propeller blades thereon adapted to be acted upon by the current of water, so as to rotate said shaft, and an inclined spiral disconnected from said shaft and extending around said propeller blades.

2. A water power device comprising a receptacle extending above the surface of the water and fixed in position, a shaft therein extending through the wall of the receptacle, a rotating device actuated by the current operatively connected with said shaft, so as to drive the same, a water-removing device located at the bottom of said receptacle, and means in said receptacle for automatically connecting it with said shaft when the water reaches a predetermined height in the receptacle.



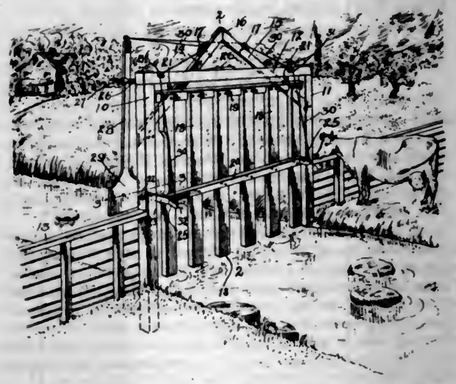
3. A water power device comprising a rotatably mounted shaft, propeller blades connected therewith, an inclined spiral surrounding said shaft and propeller blades and fixed in position with relation to said shaft.

4. A water power device comprising a rotatably mounted shaft, propeller blades connected therewith, an open spiral surrounding said shaft and propeller blades, and an outer frame to which said spiral is connected so as to be held against rotation.

5. A water power device comprising a receptacle extending above the surface of the water and fixed in position, a shaft therein extending through the wall of the receptacle, a current actuated rotating device outside of the receptacle and operatively connected with said shaft, so as to drive the same, a pump in said receptacle, a pivoted lever in said receptacle, a weight at one end of said lever, a bucket at the other end of said lever, a suction pipe for said pump in said bucket, and means for automatically connecting the pump with said current actuated device when the water reaches a predetermined height.

[Claim 6 not printed in the Gazette.]

1,111,723. FLOOD-GATE. THOMAS L. TATE, Stewardson, Ill., assignor of one-half to John H. Friesner, Strasburg, Ill. Filed Feb. 3, 1914. Serial No. 816,307. (Cl. 39—4.)

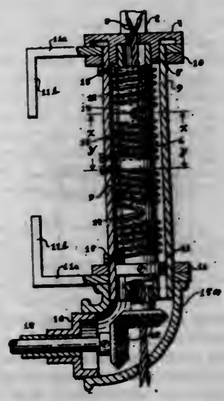


1. In an apparatus of the class described, a supporting frame including a transverse upper member, a gate device mounted to swing from said upper frame member in one direction, means for holding said gate from movement away from said frame, a bracket extending from said upper frame member, a member movably engaging said bracket and depending therefrom and into position to be actuated by flowing water, and connecting means between said movable member and said gate holding means.

2. In a device of the class described, a supporting frame including vertical side members and a transverse head member, diagonal braces connecting the frame side members and the head member, a gate suspended from the head member and limited in its movement by the braces in one direction, a latch device holding the gate from movement in the opposite direction, and a controlling device arranged to be actuated by an abnormal rise of water and connected to said latch device and releasing the same and permitting the gate to swing in one direction.

3. In a device of the class described, a supporting frame, a gate mounted to swing upon said frame, a latch device of resilient material pivoted upon said frame, said latch device having an intermediate gate engaging offset and inclined laterally in advance of the offset, whereby the gate is held from movement in one direction and caused to automatically displace the latch device against the resistance of its resilient portion when returning to closed position, a controlling device arranged to be actuated by an abnormal rise of water, and connecting means between the controlling means and the latch device and operating to release the latch device without resistance from the resilient portion of the same.

1,111,724. ADJUSTABLE VEHICLE-HEADLIGHT. DAVID C. KITCHING, Valley Mills, Tex. Filed Apr. 23, 1914. Serial No. 833,827. (Cl. 240—61.)



1. In a device of the character described, the combination with two vertical cylinders, spaced one within the other, the outer one being rigidly supported, of a headlight surmounting the inner cylinder, a pair of springs coiled upon the inner cylinder, each having a connection with the outer cylinder, opposite rotative impulses being exerted by said springs upon the inner cylinder, and means for subjecting the inner cylinder to rotation.

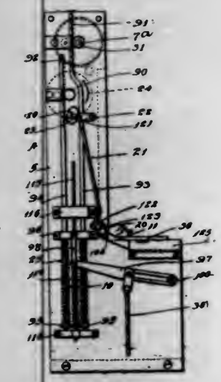
2. In a device of the character described, the combination with two vertical cylinders, spaced one within the other, the outer one being rigidly supported, of a headlight surmounting the inner cylinder, a pair of springs coiled upon the inner cylinder having their ends made fast to the outer cylinder, a loop being formed at the center of each spring from which it passes around said cylinder in the same direction in extending toward the ends, a pin projecting rigidly from the inner cylinder into each loop, one of said pins producing distortion of the springs for rotation of the inner cylinder in a certain direction, and the other pin producing distortion of its correlated spring for rotation of the cylinder in the other direction, and means for subjecting the inner cylinder to rotation.

3. In a device of the character described, the combination with a vertical cylinder, of a headlight superim-

posed thereupon, a pair of springs coiled upon said cylinder, having their extremities made fast in a vertical alinement adjacent to the cylinder, a loop being formed at the center of each spring, from which its coils are passed around the cylinder, a pin projecting rigidly from the cylinder into each loop, one of said pins subjecting the correlated spring to distortion during rotation of the cylinder in a certain direction, and subjecting the correlated spring to distortion in the other direction, and means for subjecting the cylinder to rotation.

4. In a device of the character described, the combination with two vertical cylinders spaced one within the other, the outer one being rigidly supported, of a cap mounted upon the lower end of the outer cylinder, supporting the weight of the inner cylinder, means maintaining the proper spaced relation of the two cylinders at their upper ends, a head light surmounting the inner cylinder, a pair of springs coiled upon the inner cylinder, each having a connection with the outer cylinder, opposite rotative impulses being exerted by said springs upon the inner cylinder, and means for communicating rotation to the inner cylinder.

1,111,725. DISPLAY-MACHINE. WILLIAM CLIFTON CUTLER, Sawtelle, Cal. Filed July 10, 1913. Serial No. 778,332. (Cl. 40—36.)



1. In a displaying machine, an exhibit, an exhibit coupling element, cords connected to said element, sheaves around which said cords are wound to move said exhibit into displaying position, a shaft upon which the sheaves are mounted, a pinion on said shaft, a rack engaging said pinion, a spring for actuating said rack, platform mechanism adapted to compress said spring when the operator stands on the platform, means for locking said shaft against rotation, and means for releasing said shaft to enable said spring to expand to move the exhibit into displaying position through the medium of said rack, pinion, sheaves, shaft, cords and coupling element.

2. A displaying machine comprising a cabinet provided with a sight opening, a curtain for closing said opening, a roll upon which the curtain is wound, an exhibit adapted to be displayed through said opening, a pinion in connection with said curtain roll, a rack meshing with said pinion, means for reciprocating said rack to rotate said pinion and roll to wind up the curtain to display the exhibit through said sight opening.

3. A displaying machine comprising a cabinet provided with a sight opening, a curtain for closing said opening, a roll upon which the curtain is wound, an exhibit adapted to be displayed through said opening, a pinion in connection with said curtain roll, a rack meshing with said pinion, a spring for actuating said rack, platform mechanism for compressing said spring, means for locking said curtain roll against rotation with the curtain covering said opening, means for releasing said roll to enable said spring to expand to actuate the rack to cause the pinion and roll to rotate and wind up the curtain to display said exhibit through said sight opening.

4. A displaying machine comprising a cabinet provided with a sight opening, a curtain for said opening, a roll upon which said curtain is wound, an exhibit, a shaft, sheaves mounted upon said shaft, cords connected to said sheaves, an exhibit coupling element connected to said cords for coupling the respective exhibits to said cords, a ratchet in connection with said curtain roll, a pawl engaging said ratchet to lock the curtain in position when covering said opening, an arm in connection with said pawl, a cam on said shaft means for rotating said shaft and sheaves to wind the cords on said sheaves to draw the exhibit coupled to said cords into registration with said opening and to cause said cam to engage said pawl arm, to disengage said pawl from said ratchet, means for winding up the curtain on said roll when released by the disengagement of said pawl from said ratchet to display the exhibit through said opening, a ratchet on said sheave shaft, a pawl adapted to engage said sheave ratchet when the exhibit has been drawn into registration with said sight opening, to lock the exhibit in displaying position, an arm in connection with said pawl, a cam in connection with said curtain roll, said curtain adapted to unwind from the roll and cover said opening, when the exhibit has been sufficiently displayed, said curtain roll cam adapted to engage said arm, when the curtain has closed said opening, to disengage the pawl from the sheave ratchet to enable the exhibit to move out of registration with said sight opening.

5. A displaying machine comprising a cabinet provided with a sight opening, a curtain for said opening, a roll upon which said curtain is wound, an exhibit, a shaft, sheaves mounted upon said shaft, cords connected to said sheaves, an exhibit coupling element for coupling the respective exhibits to said cords, means for rotating said shaft to wind the cords on the sheaves, to draw the exhibit coupled by said coupling element to said cords into registration with said opening, a ratchet on said sleeve shaft, a pawl for engaging said ratchet when the exhibit has been drawn into registration with said sight opening to lock the exhibit in displaying position, an arm in connection with said pawl, a cam in connection with said curtain roll, and means for winding up the curtain on said roll to uncover the opening and display the exhibit through said opening, said curtain adapted to unwind the roll and cover said opening when the exhibit has been displayed, said cam adapted to engage said arm when the curtain has closed said opening, to disengage the pawl from said ratchet to enable the exhibit to move out of registration with said sight opening.

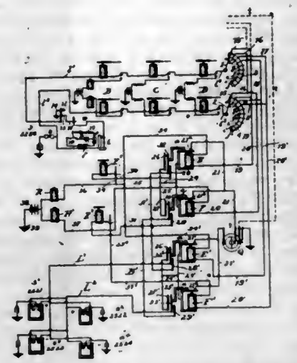
[Claim 6 not printed in the Gazette.]

REISSUES.

13,802. AUTOMATIC ELECTRIC EXCHANGE SYSTEM. WILLIAM RAGAN BINKLEY, New Bedford, Mass., assignor, by mesne assignments, to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 16, 1904. Serial No. 237,188. Original No. 717,327, dated Dec. 30, 1902, Serial No. 115,498. (Cl. 179—17.)

1. In an automatic telephone exchange system, a pair of telephone lines, a calling station on one line, a plurality of stations on another line to be called, a central station with automatic switching means thereat under the control of the calling station for establishing conversational connections between said stations, said automatic switching means serving also to establish connections for selectively signaling any one of the stations on the desired line.

2. In an automatic telephone exchange system, the combination with a calling and a called telephone line each extending from a subscriber's station to a central station, of connector mechanism associated with each line, a plurality of pairs of conductors leading from each connector mechanism to the associated line, and means at the calling substation for controlling the actuation of the associated connector mechanism to establish connection between said lines over a predetermined pair of said conductors.



3. In an automatic selective signaling system, the combination with a plurality of lines leading from substations to a central station, of connector mechanism adapted upon actuation automatically to connect a calling line with a called line, means located at the calling substation for controlling the associated connecting mechanism, a plurality of interconnecting signaling branches associated with each line, and means for establishing connection from a substation on a calling line to a called line through a desired one of the branches connected therewith.

4. In a party line signaling system, the combination with automatic exchange mechanism, of a plurality of line circuits leading to and from the exchange, a plurality of interconnecting signaling paths over which a circuit may be completed between two of said line circuits, and means actuated from a substation on one of such line circuits for completing such connection over a desired one of such paths.

5. In an automatic exchange system, the combination with a plurality of party lines each leading from a plurality of substations to a central station, of connector mechanism associated with each line at the central station, means at each of the substations for controlling the actuation of the connector mechanism of the line leading thereto and serving upon actuation to connect a calling line with a called line, a plurality of interconnecting paths available to each connector mechanism for establishing connection between a calling line and a called line, a source of signaling current, selective mechanism controlling the current flow from said source, and means for automatically connecting the source of signaling current through the selected path with the called line.

6. In an automatic telephone exchange system, the combination with a plurality of party lines extending from a central exchange and each terminating in a plurality of party line substations, of a connector at the central exchange, means for automatically controlling the connector to connect electrically the calling line with the called line, mechanism located at the substations for controlling the operation of said means, a ringing circuit, ringing mechanism at the exchange, a key at the calling substation for controlling the ringing circuit, and means serving to connect the calling line with the called line and simultaneously to cause the proper arrangement of the ringing mechanism whereby the actuation of the controlling key causes the selective signaling of the desired station on the called line.

7. In an automatic telephone exchange system, the combination with a central exchange, of a calling line and a called line leading therefrom, a connector mechanism at the central exchange, said connector mechanism having contacts connected through a plurality of paths with the calling line, switch arms for said connector mechanism adapted upon actuation of suitable calling substation apparatus to engage said contacts to select one of said paths through which the calling line is electrically connected with the called line, a plurality of selective signaling devices connected with the called line, a source of selective calling currents, and means controlled from the calling substation for operatively closing the circuit between the called line and the source of signaling currents over the selected path.

8. In an automatic telephone exchange system, the combination with a plurality of telephone lines, of a plurality of stations on each of said lines, each station being equipped with a selectively responsive signal receiving device, connector mechanism for each line, means located at each substation for controlling the operation of the associated connector mechanism at the central station, a plurality of paths associated with said connector mechanism through any one of which connection may be established through a calling line and a called line, and means for automatically establishing connection between a calling line and a called line upon the actuation of the connector mechanism of the calling line.

9. In an automatic exchange system for party-line telephones, exchange mechanism for connecting the stations, a motor generator, ringing relays connected in pairs, circuit connections between the exchange mechanism, generator and relays, means for energizing the magnet of one of the relays of a pair, a switch operated by the armature of the energized magnet to throw the generator into and out of circuit of the line through the armature and circuit connections of the other magnet to transmit a current impulse to operate a signal at a called station, and means for restoring the parts to their normal positions, substantially as set forth.

10. In an automatic exchange system for party line telephone systems, exchange mechanism embodying banks of contacts having dissimilar points connected, a motor generator, ringing relays connected in pairs, circuit connections between the contacts and different sets of relays, circuit connections between the line, generator and relays, and switch mechanism controllable from a substation and through the armatures and circuit connections of the relays to throw the generator into and out of circuit of the line to transmit a current to operate the signal at a called station, substantially as and for the purpose set forth.

11. In an automatic exchange system for party line telephone systems, exchange mechanism embodying banks of contacts having dissimilar points connected, a motor generator, ringing relays connected in pairs, circuit connections between the contacts and different sets of relays, circuit connections between the line, generator and relays, means for energizing the magnet of one of the relays of a pair, a switch operated by the armature of the energized magnet to throw the generator into and out of circuit of the line through the armature and circuit connections of the other magnet to transmit a current impulse to operate a signal at a called station, and means for restoring the parts to their normal positions, substantially as and for the purpose specified.

12. In a system of the character described, banks of contacts having dissimilar points connected, a motor generator, a pair of connected ringing relays whose armatures are normally in circuit with the generator but out of circuit with the line, said relays being electrically connected with said contacts, switch mechanism for connecting the relays with the line, and means for operating one of the relays to close said switch mechanism and connect said relay with the line and disconnect it from the generator, whereby a circuit from the generator to the line is established through the armatures and circuit connections of the connected relays, substantially as set forth.

13. In a telephone exchange system, the combination with a central station, a plurality of party lines, each leading from said central station to a series of substations, selective signaling apparatus at each substation, selective signaling apparatus at the central station adapted to cooperate therewith, electromagnetic connector mechanism at the central station, switching apparatus at each of the substations adapted to control the operation of said con-

nector mechanism for connecting a calling line with the called line, and a plurality of paths at the central station through any one of which the connector mechanism may connect a calling line with the called line.

14. In an automatic telephone exchange system, the combination with a central station, of a called telephone line leading therefrom to a plurality of substations, signaling apparatus at each of said substations, selective signaling apparatus at the central station for actuating said substation signaling apparatus selectively, automatic connector mechanism at the central station adapted upon actuation to connect a calling line with the called line, a calling line leading from the central station to a substation, switching mechanism located at the substation on the calling line for actuating said automatic connector mechanism at the central station, and a plurality of paths at the central station through any one of which the connector mechanism may connect a calling line with the called line.

15. In an automatic telephone system, a plurality of telephone lines terminating by their limbs at a central office, connecting mechanism at such central office adapted to be operated from substations on such telephone lines to connect two of such lines for conversation, a plurality of signaling paths connected with one of such telephone lines, and means operated from a substation on a second line for including a predetermined one of such paths in circuit with such second line.

16. In an automatic telephone system, a plurality of telephone lines terminating by their limbs at a central office, connecting mechanism at such central office adapted to be operated from substations on such telephone lines to connect two of such lines for conversation, a plurality of signaling paths connected with each of such telephone lines, and means operated from a substation on one of such telephone lines for including a predetermined one of such paths in circuit with such telephone line.

17. In a telephone exchange system, in combination, a calling line, a line to be called, a plurality of telephone stations connected with the line to be called, a central station, automatic connecting mechanism at the central station, a plurality of conducting paths leading from the calling line to the line to be called, means associated with the different conducting paths for individually signaling the different stations on the line to be called, and means at the calling station for operating such connecting mechanism to establish connection between the calling and the called lines over an elected one of such conducting paths, whereby an elected station on the called telephone line will be signaled.

18. In an automatic telephone exchange system, a party line, another line, a calling station thereon, a central station for connecting said lines for conversation, and automatic means thereat for completing connections between the calling and the called lines and means under the control of the calling station for selectively signaling any party on the party line.

19. In an automatic telephone exchange system, a party line, a second line, a calling station thereon, interrupter means at the calling station, a central station and connector means thereat controlled by said interrupter, and automatic means for connecting the calling station with the desired line and selecting the desired party on said line.

20. In a telephone exchange system, a calling and a called subscriber's line, a plurality of telephones on the called subscriber's line, a signal at each station thereon, means at the central office for interconnecting said lines for conversation, automatic switching mechanism at the central office and means at the calling subscriber's station to control said automatic switching mechanism over the telephone line for completing circuits for selectively sounding any signal on said called line.

21. In an automatic telephone exchange system, a calling station, a plurality of stations on a party line, automatic apparatus at the central office, control apparatus at the calling station, said control apparatus being adapted to be actuated in a plurality of different ways to cause the automatic apparatus to connect said calling station and said party line, and selective signaling apparatus corresponding with the different ways of operating said control apparatus adapted to selectively signal a different one of the parties on said party line.

22. In an automatic telephone exchange system, a calling line, a calling station thereon, a calling device at the calling station, a party line, bells at the various stations thereon and means controlled over the line conductors from the calling station by the selective operation of said calling device for completing a connection for the selective operation of the bells on said party line.

23. In a telephone system the combination with a central station, of a distant calling subscriber's station connected by line wires with the central station, a plurality of other distant stations connected by a pair of line wires with the central station, a link circuit at the central office for connecting the line wires of the calling station with the line wires of the other stations, and means under the control of a subscriber at the calling station for selectively signaling any one of the other stations.

24. In an automatic telephone exchange system, the combination with automatic switching mechanism, of a calling device, a party line to be called, a plurality of annunciators thereon, a plurality of paths between said device and the line to be called for completing the connection, any one of which paths may be elected and selected from the calling device, and apparatus associated with said paths adapted to connect signaling current with said line for selectively sounding said annunciators.

25. In an automatic telephone exchange system, the combination with automatic switching mechanism, of a calling device, a party line to be called, a plurality of annunciators thereon, a plurality of paths between said device and the line to be called for completing the connection, any one of which paths may be elected and selected from the calling device, and apparatus associated with said paths adapted to connect signaling current with said line for sounding the annunciator at the desired station and excluding the other annunciators on said line.

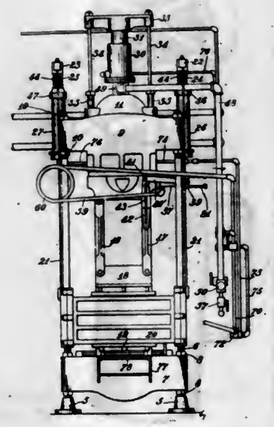
26. In an automatic telephone exchange system, the combination with automatic switching mechanism, of a calling device, a party line to be called, a plurality of signals for said line, a plurality of paths between said device and the line to be called for completing the connection, any one of which paths may be elected and selected from the calling device, and relays associated with said paths adapted to connect signaling current with said line for selectively sounding the desired signal.

27. A telephone system comprising substation party lines, automatic apparatus controlled at a calling substation for extending the circuit thereof to a called party line, and means controlled from the calling substation for selectively signaling the desired substation of the called line.

13,803. HYDRAULIC CEMENT-BLOCK-MAKING MACHINE. WILLIAM L. KENY, Marion, Ohio, assignor, by direct and mesne assignments, to The Jaeger Machine Company, Columbus, Ohio, a Corporation. Filed July 15, 1911. Serial No. 638,763. Original No. 960,053, dated June 7, 1910, Serial No. 499,902. (Cl. 25—55.)

1. A machine of the character described, comprising a base and a fixed head, supporting members extending from said base to said fixed head, a ram in said fixed head, a vertically movable mold box, a swinging platen member adapted to enter said mold box, a presser head swingingly mounted upon the plunger of said ram, a second ram adapted to swing said swinging head out of alinement with said plunger, a third ram mounted upon said first named ram in vertical alinement therewith, connections between said third ram and said plunger, said third ram being adapted to elevate said plunger, and a pair of rams mounted upon opposite sides of said first named ram and adapted to elevate the mold box.

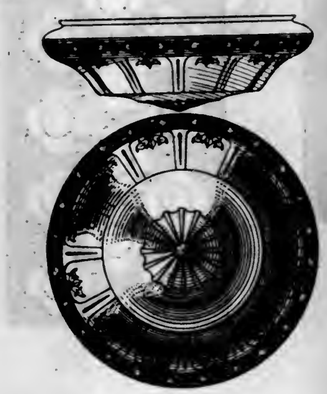
2. A machine of the character described, comprising a base and a fixed head, supporting members extending from said base to said fixed head, a ram in said fixed head, a vertically movable mold box, a swinging platen member adapted to enter said mold box, a presser head swingingly mounted upon the plunger of said ram, a second ram adapted to swing said swinging head out of alinement with said plunger, a third ram mounted upon said first named ram in vertical alinement therewith, connections between said third ram and said plunger, said third ram adapted to elevate said plunger, a pair of rams mounted upon opposite sides of said first named ram and adapted to elevate the mold box, and springs which yieldingly support said mold box a short distance above said base.



3. In a machine for molding concrete block, the combination with a base, a mold box movable with reference thereto, springs for supporting said mold box, a presser head means for moving the same laterally from the mold box, and means for moving the presser head into the mold box, and means independent of the springs for lifting the mold box to clear the same from the block.

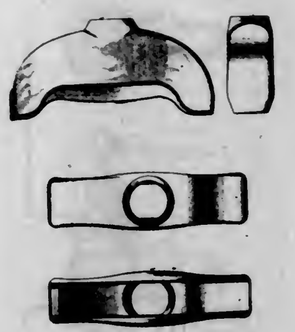
DESIGNS.

46,422. SHADE OR BOWL FOR LIGHTING-FIXTURES. GEORGE M. BEARDSLEE and IRA L. FRENCH, Chicago, Ill., assignors to Beardslee Chandelier Manufacturing Company, Chicago, Ill., a Corporation of Delaware. Filed Aug. 12, 1914. Serial No. 856,501. Term of patent 7 years.



The ornamental design for a shade or bowl for a lighting fixture as shown.

46,423. BROOM-SHOULDER COVER. NORMAN H. BEEBE, Davenport, Iowa, assignor to Lee Broom & Duster Company, Davenport, Iowa, a Corporation of Iowa. Filed July 2, 1914. Serial No. 848,685. Term of patent 14 years.

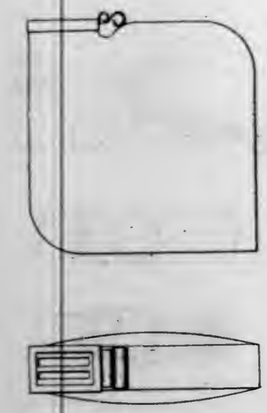


The ornamental design for a broom-shoulder cover, as shown.

46,424. WRENCH AND HOSE-SPANNER. CHARLES E. BERRY, Watertown, Mass. Filed July 27, 1914. Serial No. 853,496. Term of patent 14 years.

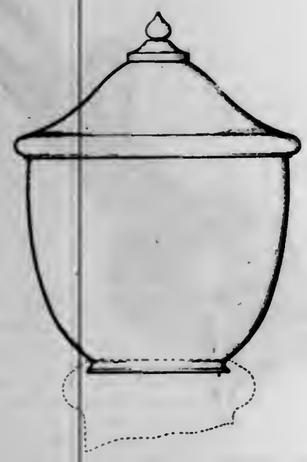
The ornamental design for a wrench and hose spanner, as shown.

46,425. BOTTLE FOR DUSTLIKE MATERIALS. GUSTAVO PAOLO BRETTER, Milan, Italy. Filed Mar. 9, 1914. Serial No. 823,586. Term of patent 3½ years.



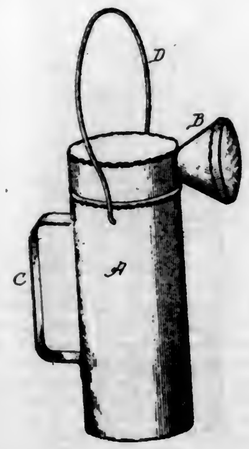
The ornamental design for a bottle for dust-like materials as shown.

46,426. LIGHTING-FIXTURE. CARL A. BROWN and FLORENCE L. GRANT, Fostoria, Ohio, assignors to General Electric Company, a Corporation of New York. Filed July 29, 1914. Serial No. 853,959. Term of patent 14 years.



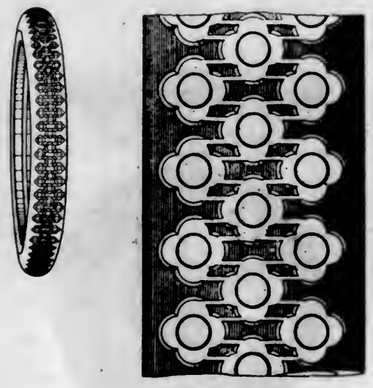
The ornamental design for a lighting fixture as shown.

46,427. PORTABLE ELECTRIC LAMP. JOHN J. BROWNRIGG, HARRY HENDERSON, and ARTHUR S. CASE, Marion, Ind., assignors to Delta Electric Company, Marion, Ind., a Corporation of Indiana. Filed Aug. 1, 1914. Serial No. 854,578. Term of patent 14 years.



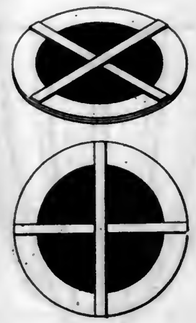
The ornamental design for a portable electric lamp, as described and shown.

46,428. VEHICLE-TIRE. JAMES CHRISTY, Akron, Ohio. Filed July 21, 1913. Serial No. 780,406. Term of patent 14 years.



The ornamental design for a vehicle tire, as shown.

46,429. COVER FOR FRUIT-BASKETS. RAYMOND P. CLARK, Rochester, N. Y. Filed Mar. 9, 1914. Serial No. 823,587. Term of patent 14 years.

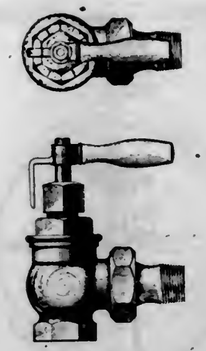


The ornamental design for a cover for a fruit basket substantially as shown.

46,430. ATOMIZER-HEAD. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed July 2, 1914. Serial No. 848,684. Term of patent 14 years.

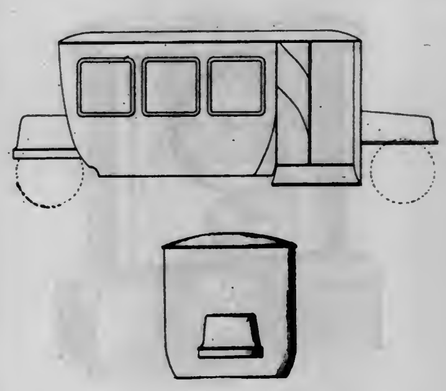
The ornamental design for an atomizer head, substantially as shown and described.

46,431. FRACTIONAL INLET-VALVE. JAMES A. DONNELLY, Brooklyn, N. Y. Filed June 20, 1913. Serial No. 774,874. Term of patent 14 years.



The ornamental design for a fractional inlet valve, as shown.

46,432. BODY FOR ELECTRICAL OMNIBUSES OR OTHER VEHICLES. CORNELIUS J. FIELD and RAYMOND CILLEY, Brooklyn, N. Y., assignors to Field Omnibus Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 18, 1913. Serial No. 796,088. Term of patent 7 years.



The ornamental design for a body for electrical omnibuses or other vehicles, as shown.

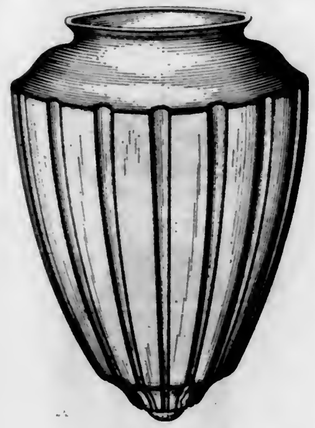
46,433. CLIP. CHARLES C. GEBHARDT, Richmond, Va. Filed July 28, 1914. Serial No. 853,712. Term of patent 14 years.

The ornamental design for a clip, as shown.

46,434. CASE FOR COIN-CONTROLLED CLOCKS AND SAVINGS-BANKS. JOSEPH GRANZ, Chicago, Ill. Filed Feb. 14, 1914. Serial No. 818,801. Term of patent 7 years.

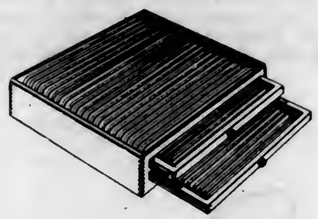
The ornamental design for a case for coin controlled clock and savings bank, as shown.

46,435. GLOBE. WILLIAM F. M. HAWE, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 14, 1914. Serial No. 856,873. Term of patent 14 years.



The ornamental design for a globe, as shown.

46,436. DISPLAY-CABINET. MAURICE J. KARPELES, Providence, R. I. Filed July 28, 1914. Serial No. 853,711. Term of patent 7 years.

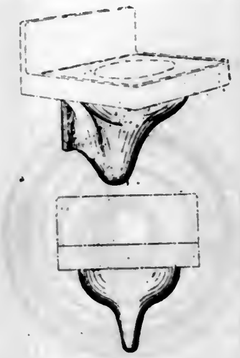


The ornamental design for a display cabinet, as shown.

46,437. GAME-BOARD. WALTER R. LOCKHART, Hotchkiss, Colo. Filed June 18, 1914. Serial No. 845,780. Term of patent 3½ years.

The ornamental design for a game board as shown.

46,438. BOWL-BASE FOR LAVATORIES. IRA A. MANN, Pittsburgh, Pa. Filed May 18, 1914. Serial No. 839,451. Term of patent 14 years.



The ornamental design for a bowl base for a lavatory.

46,439. VEHICLE-TIRE. ROBERT JAMES MARSHALL, East Liverpool, Ohio, assignor to The Morgan and Marshall Rubber and Tire Co., East Liverpool, Ohio, a Corporation of Delaware. Filed June 20, 1914. Serial No. 846,396. Term of patent 7 years.

The ornamental design for a vehicle tire, substantially as shown.

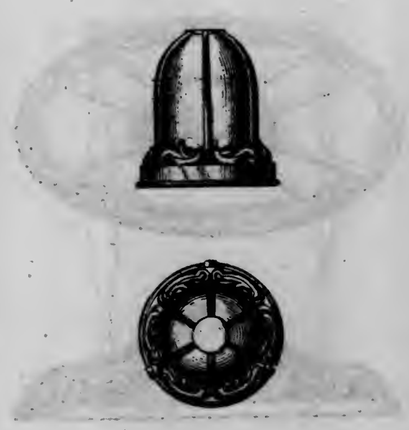
46,440. BADGE OR SIMILAR ARTICLE. GEORGE EMERY MEGRAW, Oakland, Cal. Filed Mar. 11, 1914. Serial No. 824,067. Term of patent 3½ years.

The ornamental design for a badge or similar article, as shown.

46,441. STEERING-WHEEL. ROBERT M. MCLAIN, Huntsville, Ala. Filed June 19, 1914. Serial No. 846,210. Term of patent 14 years.

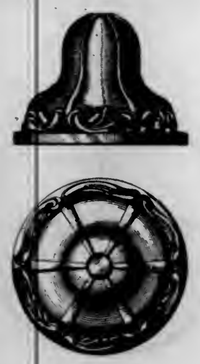
The ornamental design for a steering wheel, as shown.

46,442. SHADE-HOLDER. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 27, 1914. Serial No. 853,477. Term of patent 3½ years.



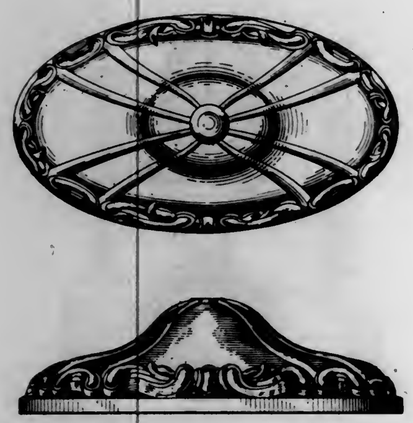
The ornamental design for a shade holder, substantially as shown.

46,443. BRACKET-CANOPY. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 27, 1914. Serial No. 853,478. Term of patent 3½ years.



The ornamental design for a bracket canopy, substantially as shown.

46,444. BACK-PLATE. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 27, 1914. Serial No. 853,479. Term of patent 3½ years.

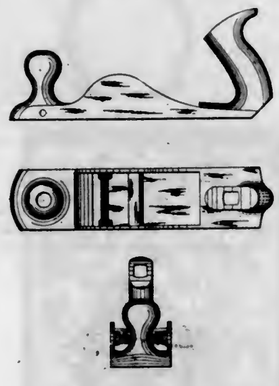


The ornamental design for back plate, substantially as shown.

46,445. SHOWER-PLATE. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 27, 1914. Serial No. 853,480. Term of patent 3½ years.

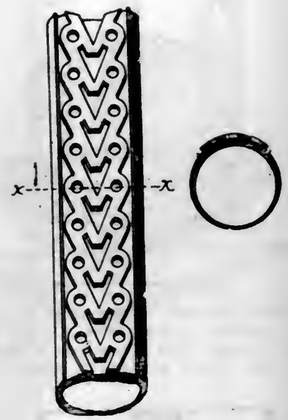
The ornamental design for shower plate, substantially as shown.

46,446. PLANE-BODY. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 11, 1913. Serial No. 778,595. Term of patent 14 years.



The ornamental design for a plane body substantially as shown and described.

46,447. PNEUMATIC TIRE. THERON R. PALMER, Erie, Pa. Filed Feb. 21, 1914. Serial No. 820,365. Term of patent 7 years



The ornamental design for a pneumatic tire, as shown.

46,448. AUTOMOBILE RADIATOR-CAP OR LIKE ARTICLE. HENRY A. PRUSSER, Willow, Cal. Filed June 30, 1914. Serial No. 848,313. Term of patent 7 years.

The ornamental design for an automobile radiator cap or like article, substantially as shown.

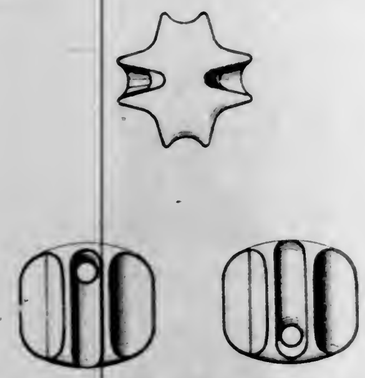
46,449. TUMBLER. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Apr. 10, 1914. Serial No. 831,056. Term of patent 7 years.

The ornamental design for a tumbler, substantially as shown.

46,450. TOOTH-BRUSH. JULES J. SABRAZIN, New Orleans, La. Filed July 3, 1914. Serial No. 848,959. Term of patent 14 years.

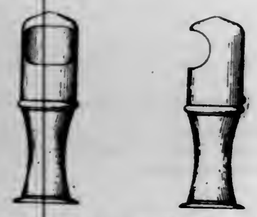
The ornamental design for a tooth brush, as shown.

46,451. INSULATOR. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 29, 1913. Serial No. 781,885. Term of patent 14 years.



The ornamental design for an insulator, as shown.

46,452. CASING FOR ELECTRIC GAGE-LAMPS. FREDRICK F. SCHOTTKY, New York, N. Y., assignor to J. H. Faw, Inc., New York, N. Y., a Corporation of New York. Filed July 27, 1914. Serial No. 853,481. Term of patent 14 years.

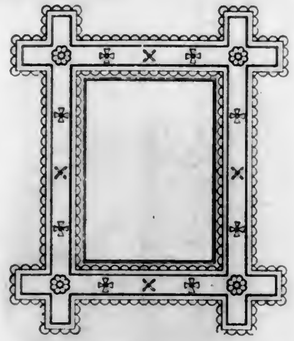


The ornamental design for casing for electric gage lamps as shown.

46,453. DISH. WINFIELD DEXTER SMITH and RUDOLPH J. BOURGEOIS, Chicago, Ill., assignors to W. D. Smith Silver Co., a Corporation of Delaware. Filed Mar. 9, 1914. Serial No. 823,590. Term of patent 14 years.

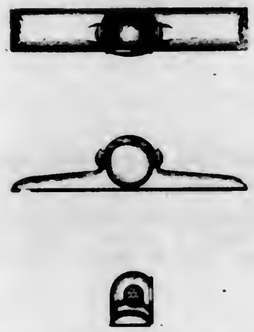
The ornamental design of a dish substantially as shown in the drawings.

46,454. PICTURE-FRAME. ALBERT SÖDERBLOM, Lakefield, Minn. Filed July 29, 1914. Serial No. 853,963. Term of patent 7 years.



The ornamental design for a picture frame, as shown.

46,455. VEHICLE-LAMP. FREDRICK S. STAFFORD, Chicago, Ill., assignor to Stafford Auto Lamp & Number Company, Chicago, Ill., a Corporation of Texas. Filed July 25, 1914. Serial No. 853,171. Term of patent 7 years.

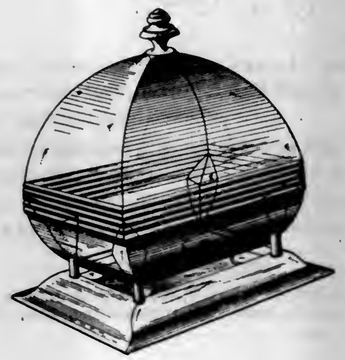


The ornamental design for a vehicle lamp substantially as shown.

46,456. SHEET METAL. WILLIAM H. STOUGH, Canton, Ohio. Filed June 23, 1913. Serial No. 775,412. Term of patent 14 years.

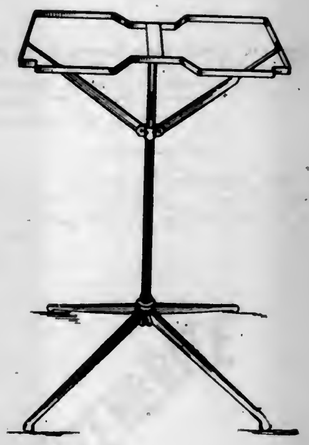
The ornamental design for sheet metal substantially as shown.

46,457. FLY-TRAP. JOHN SZOTÁK and CHÁRLES BALÁZS, Elizabeth, N. J. Filed July 22, 1914. Serial No. 852,485. Term of patent 3½ years.



The ornamental design for a fly trap, as shown.

46,458. STAND FOR BOOKS. WILLIAM TEMPLIN, Glenellyn, Ill. Filed Feb. 24, 1913. Serial No. 750,424. Term of patent 7 years.

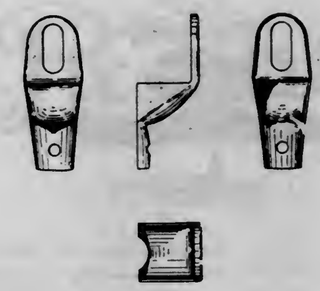


The ornamental design for a stand for books, as shown and described.

46,459. CASTING-DIE FOR GRINDING-TOOLS. CHARLES H. TRUE, Hammond, Ind., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed June 10, 1914. Serial No. 844,380. Term of patent 14 years.

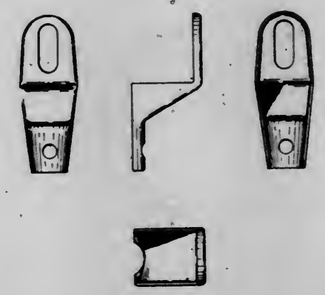
The ornamental design for a casting die for grinding tools, as shown.

46,460. FURNITURE-BRACE. ALBERT WANNER, Jr., New York, N. Y. Filed June 24, 1914. Serial No. 847,121. Term of patent 14 years.



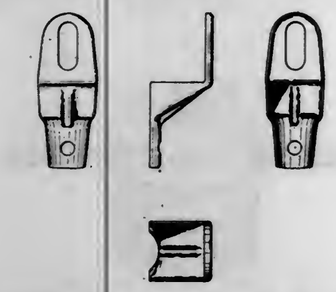
The ornamental design for a furniture brace, as shown.

46,461. FURNITURE-BRACE. ALBERT WANNER, Jr., New York, N. Y. Filed June 24, 1914. Serial No. 847,122. Term of patent 14 years.



The ornamental design for a furniture brace, as shown.

46,462. FURNITURE-BRACE. ALBERT WANNER, Jr., New York, N. Y. Filed June 24, 1914. Serial No. 847,123. Term of patent 14 years.



The ornamental design for a furniture brace, as shown.

46,463. BOX. WILLIAM J. WHITE, Niagara Falls, N. Y. Filed May 24, 1913. Serial No. 769,721. Term of patent 3½ years.

The ornamental design for a box, as shown and described.

46,464. BUTTON. JOHN N. WHITEHOUSE, Newark, N. J. Filed July 11, 1914. Serial No. 850,508. Term of patent 3½ years.

The ornamental design for a button, as shown and described.

46,465. BUTTON. JOHN N. WHITEHOUSE, Newark, N. J. Filed July 11, 1914. Serial No. 850,509. Term of patent 3½ years.

The ornamental design for a button, as shown and described.

TRADE-MARKS

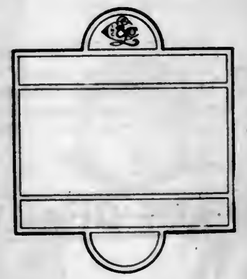
PUBLISHED SEPTEMBER 22, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 57,702. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LYON, CONKLIN & CO. INC., Baltimore, Md. Filed July 19, 1911.



Particular description of goods.—Tinsmiths' Shears, Seaming-Machines, Rollers for Shaping Sheet Metal, and Soldering-Irons.
Claims use since July 1, 1910.

Ser. No. 64,797. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) UNITED STATES FOIL COMPANY, London, England, and Yonkers, N. Y. Filed July 17, 1912.

LITENBRITE

Particular description of goods.—Metal Foil.
Claims use since Apr. 8, 1912.

Ser. No. 70,252. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) RESISTAL PROCESS COMPANY, Chicago, Ill. Filed May 5, 1913.

Resistal

Particular description of goods.—Waterproof Fabrics, Waterproof Bed-Sheets, Waterproof Sheeting, and Waterproof Blankets.
Claims use since July 1, 1912.

Ser. No. 70,933. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.

Particular description of goods.—Medicated Stock Food.
Claims use since Apr. 26, 1901.

Ser. No. 71,781. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVE STUDEBAKER, West New York, N. J. Filed July 16, 1913.

Particular description of goods.—A Medicinal Salve.
Claims use since Apr. 1, 1913.

Ser. No. 72,403. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) OREGON BRASS WORKS, Portland, Oreg. Filed Aug. 18, 1913.

DENSEMORE

Particular description of goods.—Bearing-Bronze.
Claims use since June 1, 1913.

Ser. No. 72,879. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) M. EWING FOX & CO., New York, N. Y. Filed Sept. 16, 1913.

CALCOTA

Particular description of goods.—Calcimine or Water-Paint.
Claims use since on or about Mar. 15, 1913.

Ser. No. 73,841. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHARLES C. STIEFF AND COMPANY, Baltimore, Md. Filed Nov. 6, 1913.

Maryland's Best.

Applicant disclaims exclusive use of the words "Maryland's Best."
Particular description of goods.—Pocket-Knives, Scissors, Shears, Base-Metal Table and Kitchen Knives.
Claims use since Oct. 1, 1910.

Ser. No. 74,106. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SOCIETÀ ANONIMA ITALIANA GIO. ANSALDO & C., Rome and Genoa, Italy. Filed Nov. 20, 1913.

ACCACIO CEMENTATO
CO
BREVETTI ANSALDO
GENOVA

No claim being made to the words "Accacio Cementato Brevetti Ansaldo Genova."
Particular description of goods.—Pivots and Bolts, Cam-Shafts, Valve-Pins, Milling-Cutters, Spiral Drills, Cross-Heads and Guides Therefor; Pistons, Segments, and Forks, Bearings, Connection-Rod Heads, and Crank-Pins, All Being Cemented Steel Articles.
Claims use since Apr. 29, 1911.

Ser. No. 74,109. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JAMES MELVIN JONES, Hamilton, Canada; Buffalo and New York, N. Y., and Chicago, Ill. Filed Nov. 21, 1913.

JONES GUARD

Comprising my facsimile signature, no claim being made to the exclusive use of the words "Jones Guard."
Particular description of goods.—Safety-Guards for Woodworking Machinery and Power-Presses.
Claims use since July 1, 1907.

Ser. No. 75,266. (Class 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MULTI REFILLABLE FUSE COMPANY, Chicago, Ill. Filed Jan. 17, 1914.

MULTI

Particular description of goods.—Electrical Fuses, Electrical Switches, Insulating-Bushings, Cut-Outs, Cartridge-Fuse Material, Fuse-Links, Fuse-Cut-Out Fittings, Fuse-Wire, Fuse-Strip, Fuse-Terminals, Fusible Protectors for Electrical Purposes, Fuse-Cut-Out Boxes, Fuse Panel-Board, Electrical-Wire Connectors, Electrical-Wire Bushings, Circuit-Breakers, Ground-Clamps, Cord-Adjusters, and Carbon-Brushes.
Claims use since July 1, 1913.

Ser. No. 75,913. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HIPON

Particular description of goods.—Heavy Iron Hauling-Chains, Enamel Ware, Pipe, Nails, Screws, and Door-Hinges.
Claims use since Jan. 1, 1911.

Ser. No. 75,917. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HOMBRE GORDO

Particular description of goods.—Heavy Iron Hauling-Chains, Enamel Ware, Pipe, Nails, Screws, and Door-Hinges.
Claims use since Jan. 1, 1911.

Ser. No. 76,008. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL CUTLERY CO., Philadelphia, Pa. Filed Feb. 18, 1914.

NATIONAL

Particular description of goods.—Shears and Snips.
Claims use since 1905.

Ser. No. 77,289. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATHAN MANUFACTURING COMPANY, New York, N. Y. Filed Apr. 7, 1914.

NATHAN

Particular description of goods.—Injectors, Lubricators, Boiler-Checks, Steam-Whistles, Ejectors, and Oil-Pumps.
Claims use since about June 15, 1913.

Ser. No. 77,918. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FRANCKE CO., New Brunswick, N. J. Filed May 1, 1914.

DONT BE RIGID

The words "Dont Be Rigid."
Particular description of goods.—Flexible Couplings for Machinery.
Claims use since Mar. 24, 1914.

Ser. No. 78,022. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HALL MANUFACTURING COMPANY, Monticello, Iowa. Filed May 6, 1914.

TRADE HALL MARK

No claim, however, being made to the words "Trade-Mark."
Particular description of goods.—Hoists, Combination Hoist and Wire-Stretchers, Woven-Wire Stretchers, Garden-Plows, Post-Hole Augers and Diggers, Litter-Carriers, Spades and Trowels, Lawn-Weeders.
Claims use since about the 1st of January, 1909.

Ser. No. 78,429. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) UNITED STATES SAND PAPER COMPANY, Williamsport, Pa. Filed May 20, 1914.

CARBALOX

Particular description of goods.—Cloth and Paper Overlaid or Faced with an Abrasive Material or Substance, Flint, Garnet, and Emery Papers, Emery and Crocus Cloth.
Claims use since about the 14th of May, 1914.

Ser. No. 78,548. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ATSCO, INCORPORATED, New York, N. Y. Filed May 26, 1914.

RADIUM GOLD FIBRE SCREEN

No claim being made to the descriptive words "Fibre Screen."

Particular description of goods.—Screens Upon Which Magic-Lantern or Moving Pictures are or May be Projected.

Claims use since about May 30, 1912.

Ser. No. 78,627. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH E. TOMASCH, Cleveland, Ohio. Filed May 28, 1914.

JE

Particular description of goods.—A Hand-Soap.

Claims use since May 4, 1914.

Ser. No. 78,649. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DUPLEXO VACUUM CLEANER CO., New York, N. Y. Filed May 29, 1914.

"REX"

Particular description of goods.—Hand Vacuum-Cleaners.

Claims use since Nov. 30, 1912.

Ser. No. 78,650. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DUPLEXO VACUUM CLEANER CO., New York, N. Y. Filed May 29, 1914.

DUPLEXO

Particular description of goods.—Hand Vacuum-Cleaners.

Claims use since Nov. 30, 1912.

Ser. No. 78,827. (CLASS 38. PRINTS AND PUBLICATIONS.) OTHO E. CLOUD, Philadelphia, Pa. Filed June 5, 1914.

Particular description of goods.—A Weekly Publication of Horse-Racing.

Claims use since May 4, 1914.

Ser. No. 78,914. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BUCKEYE ENGINE CO., Salem, Ohio. Filed June 9, 1914.

Buckeyemobile

Particular description of goods.—Superheated-Steam-Power Units.

Claims use since Apr. 9, 1914.

Ser. No. 78,928. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed June 9, 1914.

J-M

Particular description of goods.—Rubber Belting, Rubber Fabric, and Metallic Hose, Rubber, Asbestos, and Metallic Packing.

Claims use since the 1st day of January, 1909.

Ser. No. 79,041. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE J. A. SCHWOB CO., Moundsville, W. Va. Filed June 12, 1914. Under ten-year proviso.

SCHWOB'S CRADLE

Comprising the words "Schwob's Cradle."

Particular description of goods.—Grain, Rice, and Corn Cradles.

Claims use for about fifty-five years.

Ser. No. 79,084. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PHILO HAY SPECIALTIES CO., Newark, N. J. Filed June 13, 1914.

No claim is made to the exclusive use of the word "Soap."

Particular description of goods.—Medicated Soap.

Claims use since Mar. 1, 1914.

Ser. No. 79,085. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PHILO HAY SPECIALTIES CO., Newark, N. J. Filed June 13, 1914.

No claim is made to the exclusive use of the words "Soap" and "Medicated."

Particular description of goods.—Medicated Soap.

Claims use since Mar. 1, 1914.

Ser. No. 79,099. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) E. W. CONKLIN & SON, INC., Binghamton, N. Y. Filed June 15, 1914.

IMPERIAL

Particular description of goods.—Grass, Field, and Agricultural Seeds.

Claims use since Dec. 27, 1899.

Ser. No. 79,156. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) LOUIS E. RODGERS, Chicago, Ill. Filed June 16, 1914.

"UNI-ROL"

Particular description of goods.—Driers for All Kinds of Clay Products, Lumber, and other Articles or Products Containing Moisture.

Claims use since on or about Oct. 25, 1913.

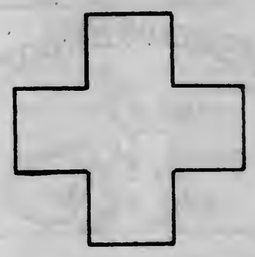
Ser. No. 79,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NAAMLOOZE VENNOOTSCHAP KONINKLIJKE PHARMACEUTISCHE FABRIEK VOORHEEN BROCADES & STHEEMAN, Meppel, Netherlands. Filed June 22, 1914.

ANALUTOS.

Particular description of goods.—A Medicine for the Treatment of Rheumatism, Neuralgia, Headache, Colds, La Grippe, and as a Heart-Stimulant.

Claims use since the 18th day of November, 1912.

Ser. No. 79,339. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SHARPLES SEPARATOR CO., West Chester, Pa. Filed June 24, 1914.



Particular description of goods.—Cream-Separators, Clarifiers, and Milking-Machines.

Claims use since about May 28, 1914.

Ser. No. 79,513. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DUPLEXO VACUUM CLEANER COMPANY, New York, N. Y. Filed July 2, 1914.

Particular description of goods.—Hand Vacuum-Cleaners.

Claims use since June 1, 1914.

Ser. No. 79,515. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & Co., Chicago, Ill. Filed July 2, 1914.

I.C.

Particular description of goods.—Mountings for Spectacles and Eyeglasses.
Claims use since Apr. 15, 1888.

Ser. No. 79,521. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUST-PARKER-MARTIN COMPANY, Augusta, Me., and Duluth, Minn. Filed July 2, 1914.

OMAR

Particular description of goods.—Coffee.
Claims use since June 1, 1914.

Ser. No. 79,546. (CLASS 39. CLOTHING.) S. L. SILVER & Co., New York, N. Y. Filed July 3, 1914.

Particular description of goods.—Ladies' Coats and Suits.
Claims use since June 1, 1914.

Ser. No. 79,557. (CLASS 38. PRINTS AND PUBLICATIONS.) CULTIVATOR PUBLISHING COMPANY, Los Angeles, Cal. Filed July 6, 1914.

CALIFORNIA CULTIVATOR

Particular description of goods.—Weekly Periodicals.
Claims use since January, 1878.

Ser. No. 79,558. (CLASS 38. PRINTS AND PUBLICATIONS.) CULTIVATOR PUBLISHING COMPANY, Los Angeles, Cal. Filed July 6, 1914.

THE RURAL CALIFORNIAN

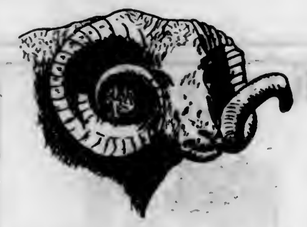
Particular description of goods.—Monthly and Weekly Periodicals.
Claims use since January, 1878.

Ser. No. 79,658. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID BRUENN, New Orleans, La. Filed July 9, 1914.

Rodonole

The word "Rodonole," printed in red.
Particular description of goods.—Antiseptic Powder, Which is to be Used in Solution as a Douche for Venereal Diseases.
Claims use since Apr. 1, 1914.

Ser. No. 79,719. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RAMCO MANUFACTURING COMPANY, Schenectady, N. Y. Filed July 10, 1914.



Particular description of goods.—Vending-Machines, Knife-Sharpeners, and Egg-Beaters.
Claims use since on or about July 1, 1914.

Ser. No. 79,720. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RAMCO MANUFACTURING COMPANY, Schenectady, N. Y. Filed July 10, 1914.

RAMCO

Particular description of goods.—Vending-Machines, Knife-Sharpeners, and Egg-Beaters.
Claims use since on or about July 1, 1914.

Ser. No. 79,721. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RAMCO MANUFACTURING COMPANY, Schenectady, N. Y. Filed July 10, 1914.

RAMCO

Particular description of goods.—Vending-Machines, Knife-Sharpeners, and Egg-Beaters.
Claims use since on or about July 1, 1914.

Ser. No. 79,779. (CLASS 15. OILS AND GREASES.) LUMEN BEARING COMPANY, Buffalo, N. Y. Filed July 14, 1914.

LESOYL

Particular description of goods.—Lubricants.
Claims use since May 26, 1914.

Ser. No. 79,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUDSON CONDENSED MILK CO., INC., New York, N. Y. Filed July 15, 1914.

BANTAM

Particular description of goods.—Sweetened Condensed Milk.
Claims use since June 25, 1914.

Ser. No. 79,823. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE TOBEY FURNITURE COMPANY, Chicago, Ill. Filed July 15, 1914. Under ten-year proviso.

TOBEY

Particular description of goods.—Polishing Substances and Materials for Furniture, Automobiles, or Woodwork Generally.
Claims use since the year 1893.

Ser. No. 79,844. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR E. VINTON, Muncie, Ind. Filed July 16, 1914.

VIOLAX TABLETS

No claim being made for the use of the word "Tablets."
Particular description of goods.—A Laxative Tablet.
Claims use since July 1, 1914.

Ser. No. 79,850. (CLASS 37. PAPER AND STATIONERY.) CHARLES BECK COMPANY, Philadelphia, Pa. Filed July 16, 1914.

Glassfinish

Particular description of goods.—Printer's and Box-Covering Paper.
Claims use since August, 1906.

Ser. No. 79,854. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PAXTON & GALLAGHER CO., Omaha, Nebr. Filed July 16, 1914.

MONITOR

Particular description of goods.—Automobile-Tires, Inner Tubes, Inside Patches for Pneumatic Tires, Outside Patches and Boots for Pneumatic Tires.
Claims use since January, 1913.

Ser. No. 79,905. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE GENERAL FIREPROOFING CO., Youngstown, Ohio. Filed July 18, 1914.

GF

Particular description of goods.—Chemical Dry, Paste, and Ready-Mixed Paints.
Claims use since June 1, 1914.

Ser. No. 79,953. (CLASS 37. PAPER AND STATIONERY.) MAX A. REPELOW, Elmhurst, N. Y. Filed July 20, 1914.

The Sentinel

Particular description of goods.—Card Telephone-Indexes in Blank Form.
Claims use since the 10th of July, 1914.

Ser. No. 79,993. (CLASS 39. CLOTHING.) FRED SCHNEIDER, Omaha, Nebr. Filed July 22, 1914.

True-Worth

Particular description of goods. — Clothing - Aprons, Dresses, Rompers, Kimonos, Children's Bloomers, and Children's Bibs.
Claims use since May 1, 1911.

Ser. No. 80,018. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SANITARY MANUFACTURING COMPANY, New York, N. Y. Filed July 23, 1914.

Vapoforce

Particular description of goods.—Electric Vaporizers.
Claims use since about June 15, 1914.

Ser. No. 80,024. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) INDUSTRIAL MOVING PICTURE COMPANY, Chicago, Ill. Filed July 20, 1914.

The words "Quality" and "Service," as shown on drawing, are disclaimed as part of the trade-mark.
Particular description of goods.—Moving Pictures.
Claims use since July 1, 1914.

Ser. No. 80,030. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HALLAM-RICE COMPANY, Providence, R. I. Filed July 24, 1914.

Maxixe

Particular description of goods.—Jewelry for Personal Wear.
Claims use since July 1, 1914.

Ser. No. 80,036. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PHENIX MARBLE COMPANY, Kansas City, Mo. Filed July 24, 1914.

NAPOLEON

Particular description of goods.—Quarried Marble.
Claims use since July 10, 1914.

Ser. No. 80,144. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANUEL ARISPE, San Antonio, Tex. Filed July 29, 1914.

Being a portrait of Manuel Arispe.
Particular description of goods.—A Preparation for the Treatment of Tuberculosis and other Diseases of the Lungs.
Claims use since June 10, 1914.

Ser. No. 80,163. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) REMIEN & KUHNERT CO., Chicago, Ill. Filed July 29, 1914.

Particular description of goods.—Varnish.
Claims use since Mar. 1, 1914.

Ser. No. 80,201. (CLASS 48. MALT EXTRACTS AND LIQUORS.) DUNCAN GILMOUR & CO. LIMITED, Sheffield, England. Filed July 31, 1914.

No claim is made to the use of the words "Gilmour's Milk Stout, Double Nourishment, Duncan Gilmour & Co. Limited."
Particular description of goods.—An Alcoholic Beverage Known as Milk-Stout.
Claims use since the year 1910.

Ser. No. 80,279. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYMAN H. SWAN, Los Angeles, Cal. Filed Aug. 3, 1914.

Particular description of goods.—A Preparation for the Treatment of Hog-Cholera and Disinfectant.
Claims use since Mar. 3, 1914.

Ser. No. 80,303. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOLON PALMER, New York, N. Y. Filed Aug. 4, 1914.

FASHION

Comprising the word "Fashion."
Particular description of goods.—Perfume, Complexion and Sachet Powders.
Claims use since 1898.

Ser. No. 80,334. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. B. PICKELSIMER, Asheville, N. C. Filed Aug. 5, 1914.

Easeall

Particular description of goods.—A Remedy for Headache.
Claims use since June 22, 1914.

Ser. No. 80,361. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH M. EATON, Los Angeles, Cal. Filed Aug. 6, 1914.

Cali-Fleur

Particular description of goods.—Perfumes.
Claims use since July 24, 1914.

Ser. No. 80,362. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. L. GARGARO, Memphis, Tenn. Filed Aug. 6, 1914.

Particular description of goods.—Compound for Restoring Gray Hair to Color.
Claims use since Feb. 27, 1914.

Ser. No. 80,376. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHWARZENBACH BROS., Baltimore, Md. Filed Aug. 6, 1914.

ROLEUM

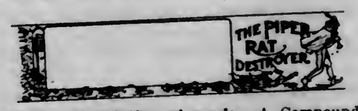
Particular description of goods.—Rheumatism, Neuralgia, Sprains, Wrenches.
Claims use since July, 1913.

Ser. No. 80,543. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS L. LEEMING, New York, N. Y. Filed Aug. 13, 1914.

NEOLIN

Particular description of goods.—Non-Poisonous Germicides for Medical and Surgical Use Specially Prepared for Internal Administration.
Claims use since Aug. 1, 1914.

Ser. No. 80,564. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. FAXLANGER, Buffalo, N. Y. Filed Aug. 14, 1914. Under ten-year proviso.



Particular description of goods.—A Compound for the Destruction of Vermin.
Claims use since Sept. 15, 1876.

Ser. No. 80,595. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VELDOP COMPANY, Providence, R. I. Filed Aug. 15, 1914.

Veldop

Particular description of goods.—Insecticide.
Claims use since on or about July 22, 1913.

Ser. No. 80,642. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GERVAISE GRAHAM, Chicago, Ill. Filed Aug. 18, 1914.

Bonalaxa

Particular description of goods.—A Laxative Preparation in the Form of a Bonbon.
Claims use since July, 1909.

Ser. No. 80,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

GYPSY

Particular description of goods.—Creams for Brown-Tail-Moth Itch, Ivy-Poisoning, Heat-Rash, Mosquito-Bites, Pimples, Hives, and All Skin Eruptions and Inflammations.
Claims use since about August, 1905.

Ser. No. 80,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

RIKURA

Particular description of goods.—Wafers and Preparations for Nervous and Sick Headaches and Neuralgic and Rheumatic Pains.
Claims use since about April, 1910.

Ser. No. 80,659. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

CAPITINA

Particular description of goods.—Liquid Extracts and Washes for External Use for Destroying Head-Lice, Crabs, and other Body-Vermin.
Claims use since about September, 1905.

Ser. No. 80,745. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLIVE C. PRIOR, Middletown, N. Y. Filed Aug. 22, 1914.

FADE-AWAY CREAM

The exclusive independent use of the word "Cream" not being claimed.
Particular description of goods.—A Face-Cream.
Claims use since 1909.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 22, 1914.

99,833. OLIVE-OIL. APREA BROS., New York, N. Y.
Filed May 29, 1914. Serial No. 78,635. PUBLISHED JULY 14, 1914.

99,834. SOAPS. ARMOUR & COMPANY, Chicago, Ill.
Filed May 2, 1914. Serial No. 77,945. PUBLISHED JULY 21, 1914.

99,835. CATSUP, PICKLES, OLIVE-OIL, JAMS, JELLIES, OLIVES, COFFEE, TEA, DRIED BEANS FOR FOOD. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed January 8, 1912. Serial No. 60,673. PUBLISHED MARCH 3, 1914.

99,836. WHEAT-FLOUR. AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo.
Filed April 11, 1914. Serial No. 77,423. PUBLISHED JULY 14, 1914.

99,837. MEDICINAL REMEDY FOR THE TREATMENT OF DYSPEPSIA. BELL & CO., INC., Orangeburg, N. Y.
Filed February 14, 1914. Serial No. 75,894. PUBLISHED JULY 21, 1914.

99,838. CRAYONS. BINNEY & SMITH COMPANY, East Orange, N. J., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,672. PUBLISHED JULY 7, 1914.

99,839. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. AUGUSTUS BLAUVELT, Paterson, N. J.
Filed March 28, 1914. Serial No. 77,016. PUBLISHED JULY 21, 1914.

99,840. TOOTH-POWDER, BATHING-POWDER, POWDER FOR MOUTH-WATER, POWDERS FOR FACE AND BODY. GUSTAVO PAOLO BREITER, Milan, Italy.
Filed January 7, 1914. Serial No. 74,995. PUBLISHED JULY 21, 1914.

99,841. REMEDY FOR THE BLOOD. JOHN D. BURKE, Montgomery, Ala.
Filed May 19, 1914. Serial No. 78,380. PUBLISHED JULY 21, 1914.

99,842. CITRUS FRUIT JELLIES AND PRESERVES. JOHN M. CAMERON, Fort Myers, Fla.
Filed March 5, 1914. Serial No. 76,349. PUBLISHED JULY 14, 1914.

99,843. WASHING COMPOUND FOR LAUNDRY PURPOSES. THE CELLULOID STARCH COMPANY, New York, N. Y.
Filed April 8, 1913. Serial No. 69,653. PUBLISHED JUNE 23, 1914.

99,844. WASHING-COMPOUND TABLETS FOR LAUNDRY PURPOSES. THE CELLULOID STARCH COMPANY, New York, N. Y.
Filed February 12, 1914. Serial No. 75,862. PUBLISHED JUNE 23, 1914.

99,845. BEER. THE CENTRAL BREWING COMPANY OF NEW YORK, New York, N. Y.
Filed June 29, 1914. Serial No. 79,421. PUBLISHED JULY 21, 1914.

99,846. BEER. THE CENTRAL BREWING COMPANY OF NEW YORK, New York, N. Y.
Filed June 29, 1914. Serial No. 79,422. PUBLISHED JULY 21, 1914.

99,847. LIQUID PREPARATION FOR EXTERNAL USE FOR THE SKIN. A. S. CLEMENT AND COMPANY, Van Buren, Me.
Filed June 1, 1914. Serial No. 78,683. PUBLISHED JULY 21, 1914.

99,848. SALT. THE CLEVELAND SALT COMPANY, Cleveland, Ohio.
Filed May 7, 1914. Serial No. 78,057. PUBLISHED JULY 21, 1914.

99,849. WEEKLY PUBLICATIONS. CLOUD PUBLISHING COMPANY, Chicago, Ill.
Filed May 4, 1914. Serial No. 77,969. PUBLISHED JULY 14, 1914.

99,850. REMEDY FOR DYSPEPSIA. JOSEPH CLOUTIER, Worcester, Mass.
Filed January 24, 1912. Serial No. 61,005. PUBLISHED JULY 14, 1914.

99,851. WHEAT-FLOUR. CLYDE MILLING AND ELEVATOR COMPANY, Clyde, Kans.
Filed March 18, 1914. Serial No. 76,727. PUBLISHED JULY 14, 1914.

99,852. RUBBER TIRES, CASINGS, AND INNER TUBES. CONVERSE RUBBER SHOE CO., Malden, Mass.
Filed May 2, 1914. Serial No. 77,949. PUBLISHED JULY 14, 1914.

99,853. BLACKBERRY CORDIAL. CO-OPERATIVE DRUG MANUFACTURING COMPANY now by change of name American Drug Co., Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,940. PUBLISHED JULY 14, 1914.

99,854. GLOVE-CLEANERS, AND CLOTHES-CLEANERS IN LIQUID FORM. CO-OPERATIVE DRUG MANUFACTURING COMPANY now by change of name American Drug Mfg. Co., Jackson, Tenn.
Filed July 7, 1913. Serial No. 71,559. PUBLISHED JULY 14, 1914.

99,855. SOAP. CRUSELLAS HNO Y CA., Habana, Cuba.
Filed May 5, 1913. Serial No. 70,232. PUBLISHED JUNE 23, 1914.

99,856. PREPARATION FOR THE TREATMENT OF SORE, TIRED, AND ACHING FEET. JAMES CURTIS, Chicago, Ill.
Filed April 6, 1914. Serial No. 77,260. PUBLISHED JULY 21, 1914.

99,857. FOOT REMEDY FOR CERTAIN FOOT AILMENTS OR BODY ODORS. DENNISON PHARMACAL COMPANY, Chicago, Ill.
Filed May 25, 1914. Serial No. 78,518. PUBLISHED JULY 21, 1914.

99,858. NON-INTOXICATING CARBONATED TONIC BEVERAGES. EDWARD DIEHL, Nashville, Tenn.
Filed May 28, 1913. Serial No. 70,714. PUBLISHED JULY 21, 1914.

99,859. WHEAT-FLOUR. THE JOHN P. DOUSMAN MILLING COMPANY, De Pere, Wis.
Filed April 2, 1914. Serial No. 77,149. PUBLISHED JULY 14, 1914.

99,860. CHEMICAL COMPOUND FOR THE DESTRUCTION OF RODENTS AND OTHER BURROWING ANIMALS. HERBERT F. DUGAN, San Francisco, Cal.
Filed March 20, 1914. Serial No. 76,792. PUBLISHED JULY 21, 1914.

99,861. PHOTOGRAPHIC DEVELOPER. EASTMAN KODAK COMPANY, Rochester, N. Y.
Filed August 2, 1913. Serial No. 72,130. PUBLISHED JULY 21, 1914.

99,862. POLISH FOR EYEGLASSES. GEORGE E. ECKERT, Chicago, Ill.
Filed May 1, 1914. Serial No. 77,915. PUBLISHED JULY 21, 1914.

99,863. CERTAIN NAMED MUSICAL INSTRUMENTS AND SUPPLIES THEREFOR. CARL ESSBACH, Brunndöbra, Germany.
Filed November 3, 1913. Serial No. 73,748. PUBLISHED JULY 14, 1914.

99,864. WHEAT-FLOUR. FEDERAL MILLING COMPANY, Lockport, N. Y.
Filed June 8, 1912. Serial No. 64,064. PUBLISHED JULY 7, 1914.

99,865. TOILET CERATE. THE S. R. FEIL COMPANY, Cleveland, Ohio.
Filed May 5, 1914. Serial No. 77,996. PUBLISHED JULY 21, 1914.

99,866. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. T. B. FENTON, Worden, Ill.
Filed May 23, 1914. Serial No. 78,494. PUBLISHED JULY 21, 1914.

99,867. SHAVING-SOAP. FESLER SALES COMPANY, New York, N. Y.
Filed April 25, 1913. Serial No. 70,054. PUBLISHED JULY 14, 1914.

99,868. OLIVE-OIL. JOSEPH FINELLI, Hoboken, N. J.
Filed September 28, 1912. Serial No. 66,028. PUBLISHED JULY 14, 1914.

99,869. SHEEP SKIN AND WOOL MITTEN AS A WASHING DEVICE. ANDREW FISCHER, Baltimore, Md.
Filed May 8, 1914. Serial No. 78,122. PUBLISHED JULY 21, 1914.

99,870. BUTTER. HENRY FORD, Detroit and Dearborn township, Wayne county, Mich.
Filed May 29, 1914. Serial No. 78,652. PUBLISHED JULY 7, 1914.

99,871. CHEWING-GUM. FRANKLIN CARO CO., Richmond, Va.
Filed December 17, 1912. Serial No. 67,457. PUBLISHED JULY 14, 1914.

99,872. TOILET SOAP. RAMON P. FRANQUI, New York, N. Y.
Filed April 17, 1913. Serial No. 69,849. PUBLISHED JULY 14, 1914.

99,873. CERTAIN NAMED MATERIALS FOR STEAM, AIR, AMMONIA, HYDRAULIC AND METALLIC PACKINGS. JOHN P. GALLAGHER, Philadelphia, Pa.
Filed March 21, 1914. Serial No. 76,815. PUBLISHED JULY 14, 1914.

99,874. CIGARS. GANS BROTHERS, New York, N. Y.
Filed October 8, 1913. Serial No. 73,274. PUBLISHED JULY 14, 1914.

99,875. FOUNTAIN-PENS AND THE PARTS THEREOF. GEM FOUNTAIN PEN CORPORATION, New York, N. Y.
Filed May 26, 1913. Serial No. 70,659. PUBLISHED JULY 7, 1914.

99,876. CERTAIN NAMED PAPER AND STATIONERY SUPPLIES. THE GEM SUPPLIES CO. LTD., London, England.
Filed September 20, 1913. Serial No. 72,968. PUBLISHED JULY 21, 1914.

99,877. UNFERMENTED HOP EXTRACT OF CEREALS. GRAIN JUICE COMPANY, LTD., Chicago, Ill.
Filed June 6, 1914. Serial No. 78,862. PUBLISHED JULY 14, 1914.

99,878. POLISHES FOR CERTAIN NAMED MATERIALS. GREEN SEAL SPECIALTY COMPANY, Pittsburgh, Pa.
Filed March 4, 1914. Serial No. 76,318. PUBLISHED JUNE 23, 1914.

99,879. CANNED AND FRESH PINEAPPLES. GRIFFITH-DURNEY CO., San Francisco, Cal.
Filed April 27, 1914. Serial No. 77,775. PUBLISHED JULY 14, 1914.

99,880. PNEUMATIC PIANO-PLAYERS. THE OTTO HIGEL CO., LIMITED, Toronto, Ontario, Canada.
Filed September 29, 1913. Serial No. 73,106. PUBLISHED FEBRUARY 17, 1914.

99,881. WHEAT-FLOUR, COFFEE, AND TEA. THE HOLBROOK GROCERY CO., NOT INC., Keene, Woodsville, and Nashua, N. H.
Filed June 14, 1911. Serial No. 57,012. PUBLISHED MARCH 3, 1914.

99,882. POLISHES, DRESSERS, AND CLEANSERS FOR SHOES OF LEATHER, CANVAS, AND OTHER MATERIALS. THE R. M. HOLLINGSHEAD CO. Camden, N. J.
Filed April 23, 1914. Serial No. 77,675. PUBLISHED JULY 7, 1914.

99,883. LINIMENT. HOME REMEDY COMPANY, Fredonia, N. Y.
Filed May 8, 1914. Serial No. 78,127. PUBLISHED JULY 14, 1914.

99,884. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. RICHARD HUDNUT, New York, N. Y.
Filed June 4, 1914. Serial No. 78,812. PUBLISHED JULY 21, 1914.

99,885. SOAP. IOWA SOAP CO., Burlington, Iowa.
Filed February 4, 1914. Serial No. 75,676. PUBLISHED JUNE 30, 1914.

99,886. MEDICAL COMPOUND FOR CATHARTIC PURPOSES. JOHN W. JAMES, Jr., Brooklyn, N. Y.
Filed December 18, 1911. Serial No. 60,306. PUBLISHED JULY 21, 1914.

99,887. FLY-CATCHERS. FR. KAISER, Waiblingen, Germany.
Filed May 1, 1914. Serial No. 77,927. PUBLISHED JULY 14, 1914.

99,888. LEATHER SHOES. KEIFFER BROS., Co., New Orleans, La.
Filed May 6, 1914. Serial No. 78,025. PUBLISHED JULY 7, 1914.

99,889. NON-INTOXICATING CARBONATED TONIC BEVERAGES AND SODA-WATER SYRUPS. CHANDLER KING, Chattanooga, Tenn.
Filed June 18, 1914. Serial No. 79,200. PUBLISHED JULY 21, 1914.

99,890. COFFEES, TEAS, AND SPICES. KNELL & PRENGEL CO., Milwaukee, Wis.
Filed June 23, 1911. Serial No. 57,263. PUBLISHED JULY 14, 1914.

99,891. PREPARATIONS FOR CERTAIN NAMED TOILET PURPOSES. FANNY LISSBERGER, London, England.
Filed December 1, 1913. Serial No. 74,288. PUBLISHED JULY 21, 1914.

99,892. MONTHLY PUBLICATION. THE MCCASKEY REGISTER COMPANY, Alliance, Ohio.
Filed March 27, 1914. Serial No. 76,999. PUBLISHED JULY 14, 1914.

99,893. COFFEE. MCFADDEN COFFEE & SPICE CO., Dubuque, Iowa.
Filed April 13, 1914. Serial No. 77,445. PUBLISHED JULY 14, 1914.

99,894. STOGIES. JOHN F. MILLER, Wheeling, W. Va.
Filed February 16, 1914. Serial No. 75,941. PUBLISHED JULY 14, 1914.

99,895. STOGIES. THE MILLER CIGAR CO., Wheeling, W. Va.
Filed May 8, 1914. Serial No. 78,132. PUBLISHED JULY 14, 1914.

99,896. CERTAIN NAMED FOODS. MONOPOL IMPORT EXPORT UNION, INC., New York, N. Y.
Filed March 31, 1914. Serial No. 77,154. PUBLISHED JUNE 30, 1914.

99,897. DRY-CLEANING SOAP. MONTGOMERIE, STOBO & Co., LTD., Glasgow, Scotland.
Filed May 24, 1913. Serial No. 70,626. PUBLISHED SEPTEMBER 23, 1913.

99,898. RAZOR-STROPS AND DRESSINGS. NEV-A-HONE RAZOR STROP COMPANY, New York, N. Y.
Filed July 13, 1912. Serial No. 64,699. PUBLISHED JULY 7, 1914.

99,899. COMPOUND FOR CLEANSING AND SCOURING CERTAIN NAMED MATERIALS. NICKEL PLATE STOVE POLISH CO., Chicago, Ill.
Filed March 14, 1914. Serial No. 76,652. PUBLISHED JULY 21, 1914.

99,900. HEAT-PRODUCER AND SMOKE-REDUCER USED ON COAL, COKE, AND OTHER FUELS. NITRO-IGNITUM MFG. CO., St. Louis, Mo.
Filed April 24, 1913. Serial No. 70,043. PUBLISHED JULY 21, 1914.

99,901. ELECTRIC PLAYER-PIANOS. OPERATORS' PIANO CO., Chicago, Ill.
Filed December 13, 1913. Serial No. 74,588. PUBLISHED FEBRUARY 17, 1914.

99,902. EMULSION CLEANER FOR USE ON WOOD-WORK AND METAL. THE PERFECTOL COMPANY, Philadelphia, Pa.
Filed March 2, 1909. Serial No. 40,896. PUBLISHED JUNE 30, 1914.

99,903. IRON AND STEEL ABRASIVES. PITTSBURGH CRUSHED STEEL CO., Pittsburgh, Pa.
Filed March 10, 1914. Serial No. 76,522. PUBLISHED JUNE 23, 1914.

99,904. CIGARS. C. C. PORTER, Holdrege, Nebr.
Filed May 7, 1914. Serial No. 78,095. PUBLISHED JULY 14, 1914.

99,905. BEER, BEER POOR IN ALCOHOL, AND MALT EXTRACTS. J. PSCHORR, Munich, Germany.
Filed December 12, 1913. Serial No. 74,527. PUBLISHED JULY 21, 1914.

99,906. CLEANSER. THE REYNOLDS CORPORATION, Bristol, Tenn.
Filed June 3, 1914. Serial No. 78,779. PUBLISHED JULY 7, 1914.

99,907. NON-INTOXICATING CARBONATED TONIC BEVERAGES. ANDREW C. ROSETTER, Appleton, Minn.
Filed June 16, 1914. Serial No. 79,149. PUBLISHED JULY 21, 1914.

99,908. TOILET SOAP. THE SALCURA COMPANY, Milwaukee, Wis.
Filed April 17, 1914. Serial No. 77,545. PUBLISHED JULY 21, 1914.

99,909. BRANDY. ALEX. D. SHAW & Co., New York, N. Y.
Filed May 11, 1912. Serial No. 63,491. PUBLISHED JULY 14, 1914.

99,910. PAPER FOR WRITING AND PRINTING AND ENVELOPS. BRADNER SMITH & Co., Chicago, Ill.
Filed November 29, 1913. Serial No. 74,249. PUBLISHED JULY 21, 1914.

99,911. CANNED CORN. SNOW FLAKE CANNING CO., Brunswick, Me.
Filed March 23, 1914. Serial No. 76,880. PUBLISHED JULY 7, 1914.

99,912. BOOT AND SHOE BLACKING. SOCIÉTÉ DES CIRAGES FRANÇAIS, Paris, France.
Filed October 15, 1913. Serial No. 73,404. PUBLISHED JULY 21, 1914.

99,913. CERTAIN NAMED CHEMICAL AND PHARMACEUTICAL PREPARATIONS. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed February 6, 1912. Serial No. 61,301. PUBLISHED JULY 21, 1914.

99,914. CERTAIN NAMED CHEMICAL AND PHARMACEUTICAL PREPARATIONS. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed February 6, 1912. Serial No. 61,302. PUBLISHED JULY 21, 1914.

99,915. POWDER FOR MAKING A LAXATIVE TONIC BEVERAGE. STEWART FOOD COMPANY, Chicago, Ill.
Filed May 5, 1914. Serial No. 78,003. PUBLISHED JULY 21, 1914.

99,916. REMEDY FOR HEART TROUBLE. ARANKA SZECSENYI, Detroit, Mich.
Filed June 19, 1914. Serial No. 79,232. PUBLISHED JULY 21, 1914.

99,917. CIGARS. ISIDOR TEITELBAUM, Cleveland, Ohio.
Filed April 27, 1914. Serial No. 77,815. PUBLISHED JULY 14, 1914.

99,918. PREPARED FOOD FOR INFANTS. DR. THEINHARDT'S NÄHRMITTEL-GESELLSCHAFT M. B. H., Stuttgart-Cannstatt, Germany.
Filed November 28, 1913. Serial No. 74,243. PUBLISHED JULY 14, 1914.

99,919. WHEAT-FLOUR. CHARLES TIEDEMANN MILLING Co., O'Fallon, Ill.
Filed May 15, 1914. Serial No. 78,321. PUBLISHED JULY 7, 1914.

99,920. STRAIGHT WHISKY. THE TURNER-LOOKER Co., Cincinnati, Ohio.
Filed June 15, 1914. Serial No. 79,128. PUBLISHED JULY 14, 1914.

99,921. CIGARETTES. NICHOLAS VARDA, New York, N. Y.
Filed March 31, 1914. Serial No. 77,137. PUBLISHED JULY 14, 1914.

99,922. CANDY. ROY WANGENHEIM, Buffalo, N. Y.
Filed May 22, 1914. Serial No. 78,485. PUBLISHED JULY 7, 1914.

99,923. REMEDIES FOR CERTAIN NAMED DISEASES OF ANIMALS. ALBERT A. WELLS, La Fayette, Ind.
Filed February 21, 1914. Serial No. 76,095. PUBLISHED JULY 21, 1914.

99,924. RAT-TRAPS. GEO. S. WHITE, Nashville, Tenn.
Filed April 24, 1914. Serial No. 77,738. PUBLISHED JULY 14, 1914.

99,925. SWEET BEER. JOHN J. WOLF, Philadelphia, Pa.
Filed June 18, 1914. Serial No. 79,189. PUBLISHED JULY 21, 1914.

99,926. COFFEES. THE WOOLSON SPICE Co., Toledo, Ohio.
Filed February 13, 1914. Serial No. 75,893. PUBLISHED APRIL 21, 1914.

99,927. TABLE AND ORNAMENTAL DISHES, PLATES, AND BOWLS. THE WORCESTER ROYAL PORCELAIN COMPANY LIMITED, Worcester, England.
Filed May 3, 1913. Serial No. 56,141. PUBLISHED OCTOBER 7, 1913.

99,928. REMEDY FOR CERTAIN NAMED DISEASES AND AILMENTS. CHAUNCEY F. YORK, Detroit, Mich.
Filed April 15, 1914. Serial No. 77,500. PUBLISHED JULY 21, 1914.

99,929. REMEDY FOR HEMORRHOIDS. YOUNG & PARSONS, Abernant, Ala.
Filed April 29, 1914. Serial No. 77,875. PUBLISHED JULY 14, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,188. MATCHES. ACTIENGESELLSCHAFT UNION VEREINIGTE ZÜNDHOLZ- UND WICHSE-FABRIKEN, Augsburg, Germany.
Registered May 20, 1884. Renewed May 20, 1914.

LABELS

REGISTERED SEPTEMBER 22, 1914.

17,992.—*Title:* "DE JOIGNY SHAVING MIST." (For a Shaving Mixture.) DE JOIGNY SHAVING MIST CO., San Francisco, Cal. Filed August 31, 1914.

17,993.—*Title:* "E. GREENFIELD'S SONS., ESTABLISHED 1848, CONFECTIONERS." (For Candies.) E. GREENFIELD'S SONS, New York, N. Y. Filed September 3, 1914.

17,994.—*Title:* "SOMETHING FINE." (For Cigars.) SAMUEL HERBERG, Chicago, Ill. Filed August 6, 1914.

17,995.—*Title:* "SAMIDARE." (For Toilet-Paper.) THE JOHN HOBERG CO., Green Bay, Wis. Filed August 11, 1914.

17,996.—*Title:* "MASTER YET." (For Cigars.) LA POSENDA CIGAR COMPANY, Chicago, Ill. Filed September 2, 1914.

17,997.—*Title:* "SIXTH SENATOR." (For Cigars.) LA POSENDA CIGAR COMPANY, Chicago, Ill. Filed September 2, 1914.

17,998.—*Title:* "CAMPNIC." (For Wrappers for Food Products.) NASHUA CARD GUMMED & COATED PAPER COMPANY, Nashua, N. H. Filed July 17, 1914.

17,999.—*Title:* "BETTER THAN THE IMPORTED." (For Spirits.) HYMAN B. ROSENSON, New York, N. Y. Filed September 2, 1914.

18,000.—*Title:* "VÉRITABLE BÉNÉDICTINE." (For a Cordial.) SOCIETE ANONYME DE LA DISTILLERIE DE LA LIQUEUR BENEDICTINE DE L'ABBAYE DE FECAMP, Fecamp, France. Filed July 14, 1914.

18,001.—*Title:* "OLD GOBBLER WHISKEY." (For Whiskies.) STARK DISTILLERY CO., St. Louis, Mo. Filed August 31, 1914.

18,002.—*Title:* "HAHATONKA WHISKEY." (For Whiskies.) STARK DISTILLERY CO., St. Louis, Mo. Filed August 31, 1914.

PRINTS

REGISTERED SEPTEMBER 22, 1914.

3,740.—*Title:* "MISS WHEATSWORTH." (For Whole-Wheat Biscuit.) F. H. BENNETT BISCUIT CO., New York, N. Y. Filed August 28, 1914.

3,741.—*Title:* "THE FORTUNE TELLER." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed August 28, 1914.

3,742.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL CO., New York, N. Y. Filed September 2, 1914.

3,743.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL CO., New York, N. Y. Filed September 2, 1914.

3,744.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL CO., New York, N. Y. Filed September 2, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Second Circuit.

GENERAL ELECTRIC CO. *et al. v.* STEINBERGER.

Decided April 7, 1914.

214 FED. REP., 781.

PATENTS—PERSON ENTITLED TO PATENT—DISK STRAIN-INSULATOR.

The disk strain-insulator having rain-shedding annular corrugations covered by the claims put in interference in the Patent Office between Hewlett and Steinberger, as a result of which Patent No. 904,370 was issued to Steinberger, *Held* to have been independently invented by Hewlett, who, as the inventor first reducing the invention to practice by filing his application, is entitled to the patent therefor.

APPEAL from the District Court of the United States for the Eastern District of New York.

STATEMENT OF THE CASE.

This cause comes here upon appeal from a decree of the District Court, Eastern District of New York. The suit was brought under section 4915, Revised Statutes of the United States, (U. S. Comp. St., 1901, p. 3992,) praying that a patent be issued to complainant for the device covered by claims 9, 10 and 11 of United States Letters Patent No. 904,370 for a disk strain-insulator, granted November 17, 1908, to defendant, Steinberger. The district court decreed that Hewlett was the first inventor and entitled to a patent. The General Electric Company is the assignee of Hewlett. The opinions of the district judge will be found in 208 Fed., 699. Affirmed.

Mr. C. H. Wilson for the appellant.

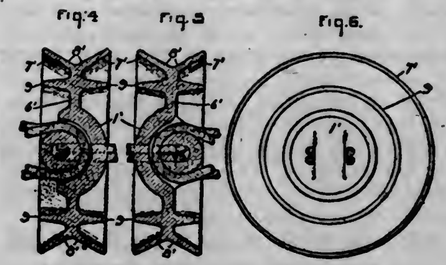
Mr. Charles Neave for the appellees.

Before LACOMBE, COXE, and ROGERS, Circuit Judges.

LACOMBE, *Cir. J.:*

The facts are very fully set forth in Judge Chatfield's opinion, which may be referred to for any not here recited. A disk strain-insulator, as its name implies, is a disk of insulating material, mounted so that the line of its axis is substantially horizontal. To it from one side comes a current-carrying wire; a similar one leads from it on the other side. These two wires are insulated from each other by a mass of insulating material in the body of the disk; in service the current is carried around the insulator by a shunt-wire. The current is powerful, the wires heavy, and the device must be strong; it is thickened about the axis. Generally a plurality of these insulators are coupled together in a series. The general appearance of the disk suggests a pulley with bosses at the axis and various projections from it, which will be referred to later on.

A good idea of the structures may be formed from inspection of Figures 4, 5, and 6 of Hewlett's application, here reproduced. Figures from the drawings of Steinberger's patent will appear later on.



The three claims of Steinberger read as follows:

9. A disk strain-insulator, comprising suspension members, a mass of insulating material partially enveloping the same, said mass being provided centrally with a disk integral therewith and lying substantially in the general equatorial plane of said mass, and further provided with flanges extending in opposite directions from said equatorial plane.

10. A disk strain-insulator, comprising suspension members, a mass of insulating material partially enveloping the same and having a disk portion, said disk portion being provided with annular collars extending in opposite directions and in the general direction of said suspension members.

11. A disk strain-insulator, comprising strain members, a body of insulating material partially enveloping the same and having a comparatively large disk, said disk being provided with collars integral therewith and extending in opposite directions.

There is a constant tendency of the current to leave the main wire where it runs into insulation and to creep around the outside and over the edge of the disk till it reaches the wire on the other side. It is the object of the invention to control this tendency. One way to do this is to lengthen the path along which the current undertakes to creep. This may be done by enlarging the diameter of the disk. It may also be accomplished by corrugating the surface of the disk, for the creeping current always moves on the surface of the disk, and if it has a succession of protuberances to march over its journey may be materially lengthened. When the disk is wet—these insulators, of course, are exposed on the line to atmospheric conditions—it is much easier for the current to creep along it. To meet that difficulty the device is arranged so that the protuberances from the disk will not only increase the length of the pathway, but will serve as hoods or covers to parts of the surface, so that whether rain falls per-

pendicularly, or is blown in against the disk from one side or the other, there will always be some part of the surface kept free from moisture; the protuberances act as baffle-boards, and, with the disk form channels through which the water runs to the edge of the disk and falls off.

It seems not to be controverted that the application of Hewlett and the patent of Steinberger cover the same invention. Hewlett was first in the Patent Office, filing application on April 20, 1907. Steinberger's application was filed January 20, 1908. Since it illustrated and described the invention disclosed in Hewlett's application, an interference should have been declared. But the Office overlooked Hewlett, and by inadvertence issued the Steinberger patent on November 17, 1908. Having subsequently discovered its error, the Office declared interference between Hewlett and the three above-quoted claims of Steinberger's patent. Upon the hearing of the interference Steinberger took testimony to show that he conceived the invention and made sketches about March or April, 1904. He did not, however, reduce his invention to practice until he filed his application. We think this did not disclose such reasonable diligence as would entitle him to priority over Hewlett, whose application was filed nine months earlier. As we understand the record all the tribunals which have considered the question reached the same conclusion.

Steinberger further showed that in October, 1905, he wrote to an engineer named Buck disclosing an insulator and inclosing a sketch of the same. This he alleged embodied the invention in interference, and he contended that Buck had communicated it to Hewlett. Hewlett's attorney, being of the opinion that Steinberger's letter and sketch did not embody the invention, took no testimony on behalf of Hewlett. The Examiner of Interferences held that the letter and sketch were not a disclosure of the invention and awarded priority to Hewlett. On appeal the Board of Examiners-in-Chief affirmed this decision. The next appeal was to the Commissioner of Patents, who held that there had been a disclosure to Buck, and that upon the record as it stood it was to be inferred that Buck had communicated such disclosure to Hewlett. The latter then appealed to the Court of Appeals for the District of Columbia, which affirmed the Commissioner of Patents. Thereupon this suit was begun, with the result above set forth.

This suit is in no sense an appeal from the Court of Appeals of the District of Columbia; there is testimony in this record which was not before that tribunal. Nevertheless its decision on a question of fact is entitled to great consideration. As the Supreme Court said in *Morgan* v. *Daniels*, (153 U. S., 120; 14 Sup. Ct., 772; 38 L. Ed., 657,) it will be accepted—

unless the contrary is established by testimony which in character and amount carries thorough conviction.

Before discussing the question whether or not there is such testimony in this case, a preliminary matter may be first disposed of.

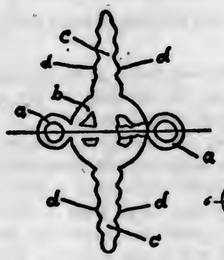
In 1905 and 1906 Buck and Hewlett were working together to devise a *system* of suspension for high-tension wires for which they filed a joint application on February 15, 1906. It covered not only the system, but also this insulator. Since each of the two had contributed something to the invention of this system, there seems to us nothing mysterious or suspicious about the filing of this joint application. Shortly thereafter, when the attorney's attention was called to the fact that the insulator might have a broader application than in that particular system, and that Hewlett believed himself to be the sole inventor of the disk insulator, and that Buck did not dispute this, the claims for insulator were canceled out of the joint application, and a sole application for them was filed by Hewlett. In this we find no reason sufficient for denying the relief prayed for. It is unnecessary to discuss Hewlett's narrative of the various steps in his invention, or the testimony as to his alleged knowledge of Steinberger's 1905 disclosure. Both Buck and Hewlett testify that the contents of the letter and sketch were never communicated to the latter. In our opinion it would make no difference if Steinberger had sent them to Hewlett, instead of to Buck. The only real question in the case is whether the sketch disclosed the subject-matter of the invention in interference.

The letter of Steinberger of October 7, 1905, is in answer to one of Buck in reference to the manufacture of a disk of the particular insulating material (electrose) which Steinberger was handling. It tells of making a disk of fourteen inches diameter and incloses a sketch marked No. 2 of which it says:

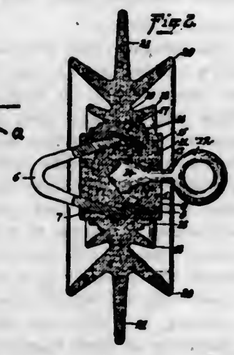
Please note that we have indicated the surface of the disk as being corrugated. Our object for corrugating the planes of the disk is to provide additional surface, without increasing the diameter of the disk, thereby providing for surface leakage (of electricity) and enabling you to impress a greater voltage than you could do on a disk with plane surfaces.

We here reproduce, side by side, the drawing of the disk in Steinberger's patent—hereinafter referred to as Type B—and the sketch of October, 1905, enlarged as in defendant's brief and hereinafter referred to as Type A.

Type A.
Steinberger Sketch.



Type B.
Steinberger Patent.



As was pointed out above, there are two methods for preventing the disastrous effects of creeping.

The first is merely to lengthen the path to be crept over, the second is to make that lengthened path more difficult to travel by keeping parts of it substantially dry in all weather conditions. Inspection of the drawing of Type B shows that the projections which lengthen the path are so arranged as to secure this latter advantage. It is equally apparent that the projections—or "corrugations" as the latter calls them—of Type A will not do so; there are no channels formed by corrugation and disk surface to drain off the falling water, which will flow over the whole disk, whether it is two inches or two feet wide.

We do not understand that the Court of Appeals of the District of Columbia held as matter of fact that a disk fourteen inches in diameter of Type A would have the hoods or covers which would prevent the surface from getting wet. If they did, we should not hesitate to reach a different conclusion; the structure being so simple and its functions under rainfall so manifest that no expert's testimony could clarify or obscure the situation. In its opinion the court says:

We think that Steinberger at the time of this disclosure *had in mind* the idea of *so constructing* his device that it would divert moisture.

Also:

The corrugations of Steinberger, *being properly positioned*, perform and were intended to perform substantially the same function as the so-called "flanges" and "collars" of the issue.

If the words last above italicized are intended to mean that as positioned in the sketch Type A they will perform that function, inspection of the sketch shows that the statement is incorrect. If, however, as is more probable, they were intended to mean that the corrugations shown in Type A, *when properly positioned*, might be made to perform that function, the statement is correct, but in our opinion unimportant. The question is, What did the sketch disclose? not what Steinberger had in mind he might do with it, nor what might be accomplished by effecting a radical change in the contour and position of the corrugations.

We think the error of the court of appeals consisted in giving too broad an interpretation to the claims in interference and then concluding that the exhibition of any type of device which would infringe them was a disclosure of any other type of device which would also infringe them. Turning back to the three claims, it is evident that their language is very broad, broad enough to cover, not only the "flanges" and "collars" shown in Type B, which undoubtedly afford protection against moisture, but also other collars and flanges, which like the corrugations of Type A will not afford any such protection. But, without any reference at all to the prior art, which undoubtedly is such as to require a narrower construction, the patent itself precludes so broad an interpretation. If anything is well settled in patent law, it is that claims must be read in the light of the specifications. Referring to the specifications of the Steinberger patent we find the following:

The patentee states that his invention relates to strain-insulators, particularly those of the disk type; the special object being to improve their structure and to render them as near as practicable "proof against the evil effects of moisture." Referring to the drawings he says that Fig. 1 shows—

the various annular hoods used for enabling the insulator to shed moisture.

Referring to Fig. 2 he calls attention to—

steps 16 of annular conformity, * * * an annular flange 18 separated from the steps by an annular groove 17. A larger flange 20, also of annular form, disposed adjacent to the flange 18 and separated therefrom by an annular groove 19—and a disk 21 extending directly outward.

He then says:

With an insulator made as above described and mounted so that its general axis of suspension is horizontal, the pairs of flanges and of grooves separating the same serve to prevent the effective entrance of moisture in such manner as to destroy the dielectric qualities of the insulator. As may be seen from Fig. 2, it is impossible for rain to so thoroughly wet all parts of the insulator as to invite undue leakage of the electric current. If the rain flows into the insulator from the right-hand side, some part of the annular flanges will remain dry. Similarly, if the rain beats in from the left-hand side, according to Fig. 2, some parts of the flanges will likewise remain dry. Unless the rain assumes unusual violence, it is difficult, if not impossible, for the moisture due either to the spattering of raindrops, the lateral effect of the wind upon the rain, or the creeping of rainwater from any cause, to totally destroy, or even seriously impair, the insulating qualities of the device.

Other parts of the specifications refer to another feature of the structure, viz., the method of connecting the current-wires with the insulating-disk, strengthening it against strains. But these do not figure in claims 9, 10, and 11, the only ones in issue in the interference, which deal with the flanges or collars. Certainly in the light of the specifications these three claims cannot be construed to cover flanges, collars, corrugations, or protuberances of any kind, which are *not* adapted to perform the function, the performance of which Steinberger announced as *his* particular contribution to the art.

We are not concerned in this case with any exhaustive examination into the state of the art, in order to determine whether or not there was patentable invention in so modifying non-rain-shedding corrugations that they will perform a new function. For the purpose of this suit it must be assumed that rain-shedding flanges were patentable at the date of the application; both sides, of course, contend that the claims to that extent are valid. But if it were an inventive step to advance from Type A to Type B, surely there can be no force in the contention that a disclosure of Type A was a disclosure of Type B.

The decree is affirmed, with costs.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Borsch patent, No. 637,444, for a bifocal lens for eyeglasses, and the Borsch, Jr., patent, No. 876,933, for an improvement on the same, both *Held* valid and infringed on motion for preliminary injunction. *Kryptok Co.* v. *United Bifocal Co.*, 214 Fed. Rep., 983.

(U. S. D. C.) The Robinson patent, No. 809,582, for a machine for peeling vegetables, *Held* valid and infringed on a motion for preliminary injunction. *Imperial Mach. Co.* v. *N. R. Streeter & Co.*, 214 Fed. Rep., 985.

Foreign Patents, Trade-Marks, Etc.—Germany—Taxes, Fees, Etc.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 19, 1914.

This Office has been unofficially informed that the following proclamation was published in the *Patent Muster und Zeichenwesen* of August 26, 1914.

This is published as a correction of the notice with reference to the payment of taxes, fees, etc., in Germany, appearing in the OFFICIAL GAZETTE of September 15, 1914.

THOMAS EWING,
Commissioner.

MEASURES FOR PREVENTING HARDSHIP TO APPLICANTS FOR OR PROPRIETORS OF INDUSTRIAL PROTECTION DURING THE CONTINUATION OF THE STATE OF WAR.

a. Proclamation.

All terms stipulated by the Imperial Patent Office in the matter of patents, utility models and trade-marks have been extended three months.

Berlin, August 4th, 1914.

THE IMPERIAL PATENT OFFICE.
(Signed) ROBOLSKI.

b. Proclamation.

By the foregoing proclamation the term stipulated by the Patent Office in the matter of patents, utility models and trade-marks has been prolonged three months.

The Patent Office hopes, by that measure to prevent that applicants for protection, who on account of the state of war should not be in position to reply, within the stipulated time, to actions of the office, should suffer by not filing such reply. The right to still further prolongation is reserved.

By this decision of the Patent Office, however, the terms established by the laws themselves (term for appealing of a rejection or term for the payment of taxes, etc.) which the Patent Office has no power to change, are not affected.

The Patent Office is especially empowered to decide about application for extension of time for the payment of taxes only when such applications relate to first and second year's taxes because the patent law provides only for an extension of time for paying those taxes. Hence as matters stand, the obligation of observing the terms legally stipulated and to pay the taxes due within the limit of such term still exists. If, however, in some particular cases it would be impossible, on account of the state of war, to observe the legal terms of payment, it is the intention to remedy as much as possible the damage that might be caused by applying to such cases the provisions of the code of civil procedure relating to restoration to the former condition. Sections 233 and following of the code of civil procedure provide that a party who, by acts of God or other inevitable occurrence, has been prevented from observing a peremptory term, may after the hindrance has been removed and upon due application be restored in its former condition.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 18, 1914.

Kosmic Oil Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of E. F. Houghton & Company, 240–250 West Somerset street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered May 22, 1888, No. 15,500, to the Kosmic Oil Co., 20 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Kosmic Oil Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kosmic Oil Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 2, 1914.

Alfred Hodge, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Milton Bradley Co., 43 Cross street, Springfield, Mass., for registration of a trade-mark and trade-mark registered December 12, 1899, No. 33,871, to Alfred Hodge, 108 Broad street, New York, N. Y., and a notice of such declaration sent by registered mail to said Alfred Hodge at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Alfred Hodge, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 206—No. 5. TUESDAY, SEPTEMBER 29, 1914. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Trade-Marks	141—No.	99,930 to No. 100,070,	inclusive.
Labels	None.		
Prints	None.		
Reissues	1—No.	13,804.	
Total	867		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	....	North Carolina	7	3
Arizona	2	....	North Dakota	3	....
Arkansas	4	....	Ohio	57	13
California	31	7	Oklahoma	7	1
Colorado	6	....	Oregon	6	....
Connecticut	22	1	Pennsylvania	74	8
Delaware	2	....	Rhode Island	5	2
Florida	3	1	South Carolina	1	....
Georgia	5	1	South Dakota	1	1
Idaho	2	....	Tennessee	8	4
Illinois	68	23	Texas	9	4
Indiana	22	4	Utah	2	....
Iowa	11	....	Vermont	1	....
Kansas	6	....	Virginia	5	....
Kentucky	2	....	Washington	7	2
Louisiana	4	2	West Virginia	5	....
Maine	3	....	Wisconsin	18	1
Maryland	8	5	Wyoming	2	....
Massachusetts	50	7			
Michigan	22	2	Alaska, District of	....	....
Minnesota	7	3	Canal Zone	....	....
Mississippi	....	1	District of Columbia	9	....
Missouri	25	3	Hawaii Territory	....	2
Montana	4	....	Philippine Islands	....	....
Nebraska	7	....	Porto Rico	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	....	U. S. Navy	....	....
New Jersey	31	5			
New Mexico	1	....	Total to residents of the United States	663	132
New York	80	26			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Natal	....	....
Austria-Hungary	1	1	Netherlands	....	1
Belgium	1	....	New South Wales	1	....
British India	....	....	New Zealand	2	....
Brazil	1	....	Norway	....	....
British West Indies	....	....	Portugal	....	....
Canada	19	1	Queensland	....	....
Cape Colony	....	....	Roumania	....	....
Chile	1	....	Russia	....	....
Costa Rica	....	....	Scotland	1	....
Cuba	1	....	South Australia	....	....
Denmark	....	....	Spain	....	....
England	12	3	Sweden	1	....
Finland	....	....	Switzerland	....	1
France	3	....	Transvaal, South Africa	1	....
Germany	10	1	Victoria	1	....
India	....	....	Western Australia	....	....
Ireland	1	1			
Italy	2	....			
Luxemburg	....	....	Total to residents of foreign countries	61	9
Mexico	1	....			

Adverse Decisions in Interference.

PATENT NO. 990,468.

On August 28, 1914, a decision was rendered that Frans G. Agrell was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 7, 10, and 11 of his Patent No. 990,468, subject, "Telephone system," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,092,898.

On August 28, 1914, a decision was rendered that Harry De Witt Cox was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,092,898, subject, "Folding-vehicle-top holder," and no appeal having been taken within the time allowed such decision has become final.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 26, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 18	July 8	593
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	May 4	Aug. 7	695
175	3. Annealing and Tempering; Electric Heating and Rheostat; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 8	Sept. 14	116
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 2	Aug. 5	789
167	5. Bookbinding; Harvesters; Jewelry; Music.	May 27	July 27	468
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	Aug. 1	675
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 10	Aug. 7	595
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 3	Aug. 20	1220
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 26	July 17	694
235	10. Carriages and Wagons	May 2	Aug. 3	1086
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 13	Sept. 8	242
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 28	July 6	1154
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 7	July 15	513
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 16	Sept. 1	419
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 17	Aug. 12	948
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	July 27	775
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 26	Aug. 29	225
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 21	Aug. 18	223
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 15	Aug. 17	299

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 3	Aug. 8	426
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 28	July 20	507
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 29	Aug. 7	237
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 18	Aug. 6	479
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Apr. 25	Aug. 21	588
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 10	Aug. 10	216
106	26. Electricity, Generation; Motive Power.	Dec. 11	June 12	927
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 15	Aug. 8	547
65	28. Internal-Combustion Engines	June 9	July 28	667
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 22	Aug. 14	478
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 25	Aug. 20	416
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 1	Aug. 10	339
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 5	Aug. 20	772
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Apr. 3	Aug. 17	393
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 20	July 29	397
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 30	Aug. 26	633
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	July 27	July 27	785
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 4	Aug 3	900
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	Aug. 3	845
321	39. Water Distribution	Apr. 20	July 20	544
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 26	Aug. 14	1155
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 23	Aug. 20	456
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 9	July 29	389
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 13	Aug. 22	247

Oldest new case, Dec. 11; oldest amended, June 12.
Total number of applications awaiting action..... 25,074

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 27	Aug 7	1129
	Designs	Aug. 20	Sept. 14	178
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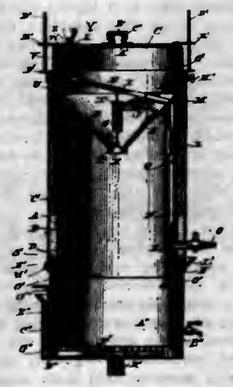
PATENTS

GRANTED SEPTEMBER 29, 1914.

1,111,726. ACETYLENE-GENERATOR. EDMUND R. ANGELL, Derry, N. H. Filed Aug. 5, 1907. Serial No. 387,215. (Cl. 48—53.1.)



1. In an acetylene generator, a floating gasholder and generating chamber, in combination with mechanism for feeding carbid into water, consisting of a carbid hopper with a frusto-conical bottom, the small end being downward and open for the mouth; a conical stopper adapted to be drawn into said mouth to close the feed; a transverse lever within the upper portion of the hopper, extending diametrically across it with its fulcrum upon a support projecting inwardly from its attachment to the side of said hopper; a rod attached at its lower end to the vertex of the conical stopper, pivotally suspended at its upper end from the middle part of said lever, and working vertically in the axial line of the hopper; a guard sleeve and disk-like cover therefor, through which said rod works, protected thereby from interfering contact with carbid, the guard sleeve being firmly fastened to the fulcrum-support of the lever, and the disk-like cover free to move laterally on the top of said sleeve with the swaying of the rod; a weight pivotally suspended from the short arm of the lever and working vertically in an upright pipe, which is tightly fixed in the outer edge of the bottom of the hopper and forms part of the gas channel; and a friction wheel on the end of the long arm of the lever adjusted to receive motion from the gasholder when nearly down to actuate the feed.

2. In an acetylene generator, a floating gasholder and generating chamber in combination with mechanism for feeding carbid into water consisting of a carbid chamber, or hopper, with a frusto-conical bottom, the small end being downward and open for the mouth; a conical stopper adapted to be drawn into said mouth to close the feed; a transverse lever within the upper portion of the hopper, extending diametrically across it with its fulcrum upon a support projecting inwardly from its attachment to the side of said chamber; a rod attached at its lower end to the vertex of the conical stopper, pivotally suspended at its upper end from the middle part of said lever, and working vertically in the axial line of the hopper; a guard sleeve with a disk-like cover therefor, to prevent the carbid interfering with the motion of said rod which works through them, the guard sleeve being fastened to the fulcrum-support of the lever and the disk-like cover being free to move on the top of said sleeve with the swaying of the rod; a weight pivotally suspended from the short arm of the lever and working vertically in an upright pipe, which is fixed in the outer edge of the bottom of the hopper and forms part of the gas channel; a friction wheel on the end of the long arm of the lever adapted to receive motion from the gas-holder when nearly down to actuate the feed; a screw working vertically through a nut secured in the top of the gasholder, a convenient knob being provided for turning the screw with packing between it and said nut; a disk fixed transversely on the end of said screw and adapted to engage said friction wheel to depress the long arm of said lever when said screw is turned down, and to be raised from contact therewith when the screw is turned up, said mechanism constituting means for putting the gasholder in and out of control of said feeding device.

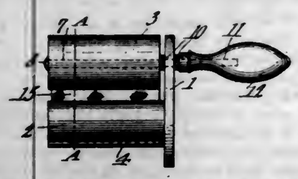
3. In an acetylene generator, a floating gasholder and generating chamber in combination with mechanism for feeding carbid into water, consisting of a carbid chamber, or hopper, with a frusto-conical bottom, the small end being downward and open for the mouth; a conical stopper adapted to be drawn into said mouth to close the feed; a transverse lever within the upper portion of the chamber, extending diametrically across it with its fulcrum upon a support projecting inwardly from its attachment to the side of said chamber; a rod pivotally suspended at its upper end from the middle part of said lever, and working vertically in the axial line of the hopper; a ball and socket joint at the lower end of said rod connecting it to the vertex of the conical stopper whereby said stopper seeks the place of least resistance to close the feed; a weight pivotally suspended from the short arm of the lever and working vertically in an upright pipe which is fixed in the outer edge of the bottom of the hopper and forms part of the gas channel; and a friction wheel on the end of the long arm of the lever adapted to receive motion from the gasholder when nearly down to actuate the feed.

4. In an acetylene generator, a gasholder; a generating chamber; an annular gasholder seal; mechanism for feeding carbid into water consisting of a carbid chamber formed by the upper part of the inner wall of said annular seal and a frusto-conical bottom, the small end thereof being the mouth of the chamber; a lever within the top of the chamber and extending diametrically across it and fulcrumed to a rigid support projecting from the side of the chamber; a rod pivotally suspended from the middle part of said lever; a conical stopper adapted to close the mouth of said chamber; a ball and socket joint which attaches said stopper to said rod; a guard sleeve fastened to said rigid support and through which said rod works vertically; a perforated disk lying upon the top of said sleeve through which said rod also works, and which moves laterally on the top of said sleeve with the swaying motion of the rod; a weight suspended from the short arm of said lever; and a friction wheel on the end of its long arm; in combination with means for putting said feeding mechanism in and out of control of the gasholder, consisting of a nut rigidly fixed in the top thereof, a screw working vertically through said nut and top of gasholder; a disk transversely fixed on the end of the screw within the gasholder and adapted to engage said friction wheel, whereby the lever may be depressed to open the feed, or allowed to rise by the influence of said weight to close it at will.

1,111,727. RIBBON-REVIVER. JOSEPH HERMAN AXLINE, Columbus, Ohio. Filed Jan. 27, 1913. Serial No. 744,572. (Cl. 91—48.)

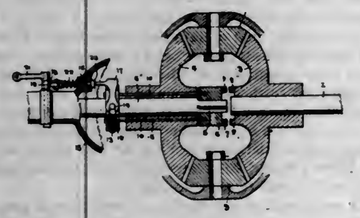
A mechanism for treating typewriter ribbons comprising a side plate, a shaft rigidly secured to the upper extremity thereof and extending at both sides thereof, a drum rota-

tably secured upon the shaft at one side of said plate, a handle rigidly secured to the remote end of said shaft, a cylindrical reservoir disposed beneath said drum and rigidly secured to the said side plate, said reservoir provided with a longitudinal slot along the upper portion thereof, a wick disposed within said slot extending within said reservoir and contacting with and adapted to apply a liquid upon the peripheral surface of said drum, guide bars rig-



idly and non-rotatably secured to the said side plate adjacent the lower extremity thereof and positioned apart a distance relatively less than the diameter of said rotatable drum, said guide bars of relatively small diameter adapted to guide and direct a ribbon thereunder to sharply bend the same and direct the same over the upper surface of the said drum and adapted to insure that the said ribbon will contact with the said drum throughout a semi-circumferential portion thereof.

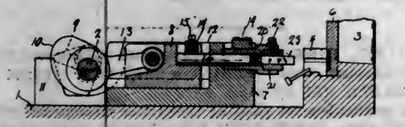
1,111,728. LOCKING DEVICE FOR DIFFERENTIAL GEARS. WILLIAM A. BESSERDICH and BERNHARD A. MOSLING, Clintonville, Wis. Filed Mar. 19, 1913. Serial No. 755,408. (Cl. 74—34.)



1. The combination with a two part driven shaft having one of the ends of the parts squared, and differential gears mounted over said parts; of a clutch member mounted over said squared end and adapted for engagement with parts of said differential gears, a ring slidable on one side of the shaft parts, rods connecting said ring with said clutch member, and means for shifting said ring on said shaft part.

2. In a locking device, a two part shaft, a squared end on one of the adjacent ends of the parts of said shaft, a differential gear on the end of the other part of said shaft, teeth on the hub of said gear, a clutch member slidable over said squared end and adapted for engagement with the teeth of the hub of said gear, a ring slidable on one side of the shaft parts, connecting means between said ring and the clutch member, and means for shifting said ring on said shaft part.

1,111,729. BOLT-HEADING MACHINE. JOHN R. BLAKESLEE, Cleveland, Ohio, assignor to The Ajax Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 18, 1911. Serial No. 655,372. (Cl. 10—15.)



1. In mechanism of the class described, the combination with means for gripping the stock; of a forming die; an upsetting tool reciprocable within said forming die; and means adapted to positively reciprocate said die and tool both relatively to the stock and independently of each other, said means being arranged to retract said forming die farther than said upsetting tool.

2. In mechanism of the class described, the combination with means for gripping the stock; of two independently reciprocable slides; a forming die carried by one of said slides; an upsetting tool carried by the other of said slides, said upsetting tool being reciprocable within said forming die; and means adapted to reciprocate said slides both relatively to the stock and independently of each other, said means being arranged to retract said first-named slide farther than said last-named slide.

3. In mechanism of the class described, the combination with means for gripping the stock; of two independently reciprocable slides; a forming die carried by one of said slides; an upsetting tool carried by the other of said slides, said upsetting tool being reciprocable within said forming die; cams adapted to reciprocate said first-named slide; and a crank connected to reciprocate said last-named slide, said cams being arranged to advance and retract the slide operated thereby more rapidly than said crank operated slide, and also to retract its slide farther than said crank-operated slide.

4. In mechanism of the class described, the combination with means for gripping the stock; of a main slide; a second slide carried by said main slide and reciprocable thereon in the direction of reciprocation of said main slide; a forming die carried by said main slide at its forward end; an upsetting tool carried by said second slide and extending within said forming die; a crank-shaft having its crank connected to regularly reciprocate said second slide; and cams on said shaft adapted to intermittently reciprocate said main slide, said cams being arranged to advance said forming die more rapidly than said upsetting tool, retain the same in advanced position, and then retract said forming die more rapidly, and also farther, than said upsetting tool.

5. In mechanism of the class described, the combination with means for gripping the stock; of a forming die; an upsetting tool reciprocable within said forming die; and means for positively reciprocating said die and tool independently of each other, said means being arranged to advance the forming die faster than and beyond the upsetting tool, to retain the forming die in advanced position and simultaneously to advance the upsetting tool to the stock, and then simultaneously to retract the tool and to retract the forming die faster than and beyond the upsetting tool.

[Claim 6 not printed in the Gazette.]

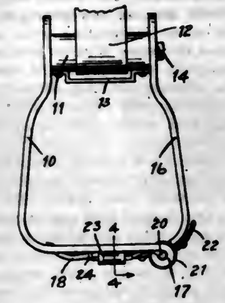
1,111,730. DENTAL BRIDGE. HENRY P. BOOS, Minneapolis, Minn. Filed Apr. 30, 1914. Serial No. 835,431. (Cl. 32—12.)

An appliance for dentistry bridge-work comprising a double tooth crown, a pair of posts formed along the inside of said crown and adjacent the back edges of the teeth, one of said teeth being provided with an inwardly-extending projecting portion on the side thereof, a plate having a member provided with a pair of sockets for sliding over said posts, and a spring finger secured at its end to said member adjacent the rear socket and engageable with said projecting portion to hold the plate in operative position.

1,111,731. SAFETY-STIRRUP. ERNST J. BOYD, ALONZO BOYD, and THEODORE M. SLIFE, Arapahoe, Nebr. Filed Apr. 14, 1914. Serial No. 831,780. (Cl. 54—49.)

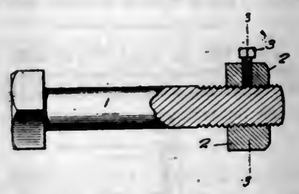
A safety stirrup comprising an L-shaped member having a horizontal portion bifurcated, a second L-shaped

member having a horizontal portion reduced and movable within the bifurcation, said second L-shaped member being pivotally connected to the outer end of the bifurcated portion of the first member, a spring mounted on the pivot of the members, one end of the spring bearing on



the second member, the spring at the opposite side of the pivot having the ends engaging under the portions of the bifurcations, and a transverse member secured to the said spring ends for holding said spring ends from engaging in the bifurcation.

1,111,732. NUT-LOCK. GÉDÉON BREAULT, Pawtucket, R. I. Filed Mar. 12, 1914. Serial No. 824,118. (Cl. 151—24.)

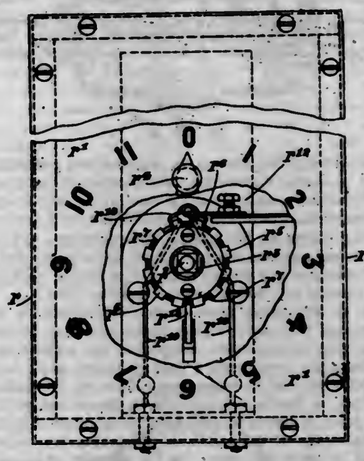


The combination with a threaded bolt, a polygonal nut applied thereto and provided at one of its sides with a radially threaded bore, of a locking screw inserted in such bore and having its inner end provided with cross-wise grooves arranged at an angle to each other and forming four points that take into the adjacent grooves of the bolt and straddle the thread between said grooves, as described.

1,111,733. TRANSMITTING APPARATUS FOR USE IN ELECTRIC SIGNALING ON RAILWAYS. GEORGE HERBERT BROWN, deceased, by Herbert Brown, executor, Belfast, Ireland. Original application filed Aug. 31, 1909, Serial No. 515,551. Divided and this application filed Dec. 6, 1910. Serial No. 595,937. (Cl. 177—378.)

1. Transmitting apparatus for use in conjunction with an indicator in electrical signaling on railways, comprising a dial having indications thereon, a pointing device which can be worked over said dial, a conducting ring operatively connected with said pointing device and having a series of openings therethrough, an insulating ring arranged within said conducting ring and having a series of projections projecting through said series of openings, means for retaining the rings in position after they have been moved by the pointing device, electrical means for releasing said rings, means for automatically returning the rings after release, a brush bearing on the outer ring and which is in circuit with the said electrical means, and a second brush which is in circuit with the indicator and bears on the outer ring and which is also adapted to be moved out of contact with said outer ring by the projections of the inner ring.

2. Transmitting apparatus for use in conjunction with an indicator in electrical signaling on railways, comprising a dial having indications thereon, a pointing device which can be worked over said dial, means for carrying the pointing device, a conducting ring operatively connected with said pointing device and having a series of openings therethrough, an insulating ring arranged within said conducting ring and having a series of projections projecting into said series of openings, means for temporarily retaining the rings in position after they have been moved by the pointing device, electrical means for releasing said rings, means for automatically returning the rings after they have been released, escapement mechanism for controlling the action of said ring returning means, a brush bearing on the outer ring and which is in circuit with the said electric means, a second brush which is in circuit with the indicator and which also bears on the outer ring and is adapted to be moved out of contact with the outer ring by the projections on the inner ring.



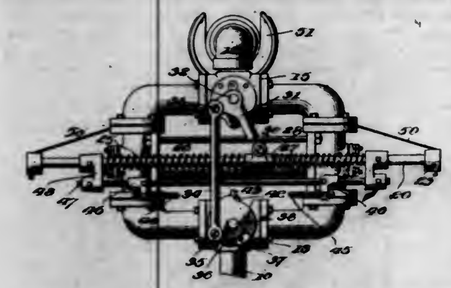
3. A transmitting apparatus for use in conjunction with an indicator in electrical signaling on railways, comprising a dial having indications thereon, a pointing device which can be worked over said dial, means for carrying the pointing device, a conducting ring operatively connected with said pointing device and having a series of openings therethrough and a number of recesses therein, an insulating ring arranged within said conducting ring and having a series of projections projecting into said series of openings, a catch adapted to engage a recess in said conducting ring, a solenoid adapted to remove said catch from said recess, means for automatically returning the rings after said catch has been moved out of engagement therewith, a brush bearing on the conducting ring and which is in circuit with said solenoid, a second brush which is in circuit with the indicator and which also bears on the collecting ring and is adapted to be moved intermittently out of contact with the conducting ring by the projections on the insulating ring.

1,111,734. IRRIGATING SYSTEM. JOHN P. CAMPBELL, Jacksonville, Fla. Filed May 25, 1914. Serial No. 840,845. (Cl. 137—66.)

1. In an irrigating system, in combination, an inlet pipe adapted to convey water under pressure, an irrigating pipe, and an intermediate motor having a rectilinear movement operating to rotate the irrigating pipe solely by the water in the supply pipe which subsequently passes out through said irrigating pipe.

2. In an irrigating system, in combination, a supply pipe adapted to convey water under pressure, an irrigating pipe, and intermediate mechanism for oscillating said irrigating pipe, comprising a cylinder, a piston therein adapted to be actuated solely by the water in the supply pipe which subsequently passes out through said irrigating pipe, and means connecting said cylinder with the irrigating pipe.

3. In an irrigating system, in combination, a supply pipe adapted to convey water under pressure, an irrigating pipe and intermediate mechanism for oscillating said irrigating pipe, comprising branch pipes between the inlet and outlet, three-way valves at the points of connection, and means for operating said valves in unison by the water in the supply pipe before passing to said irrigating pipe.

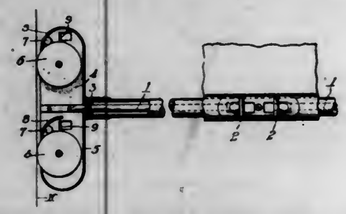


4. In an irrigating system, in combination, a supply pipe adapted to convey water under pressure, an irrigating pipe and intermediate mechanism for oscillating said irrigating pipe, comprising branch pipes between the inlet and outlet, three-way valves at the points of connection, and a cylinder having a piston adapted to be actuated by the pressure of water in the supply pipe for actuating said valves before passing out through said irrigating pipe.

5. In an irrigating system, in combination, a supply pipe adapted to convey water under pressure, an irrigating pipe and intermediate mechanism for oscillating said irrigating pipe, comprising a pair of branch pipes between the inlet and outlet, three-way valves at the points of connection, a double acting cylinder connected with said branch pipes, a piston in said cylinder adapted to be moved by the pressure of the water in the supply pipe acting at one side to force the water on its opposite side out into said irrigating pipe.

[Claims 6 to 13 not printed in the Gazette.]

1,111,735. FRICTION DEVICE FOR HOLDING WINDOW-CURTAINS. WALTER L. CONWELL, Montclair, N. J., assignor to Transportation Utilities Company, New York, N. Y., a Corporation of West Virginia. Filed Jan. 9, 1912. Serial No. 670,234. (Cl. 156—26.)



1. In a curtain fixture, the combination of a curtain stick, a friction shoe carried by each end of said stick, each friction shoe comprising a casing provided with curved ends, wheels pivoted to the walls of said casing eccentric with said curved ends, and rollers confined between the peripheries of said wheels and said curved casing ends, whereby rotation of said wheels in one direction will be opposed by the wedging of said rollers between the peripheries of said wheels and the eccentric ends of said casing.

2. In a friction shoe, a guide wheel, an inclosing casing, said casing being provided with a wall approaching the periphery of said wheel at an acute angle, and a roller confined in the space between said wall and the periphery of said wheel, whereby as said wheel is rotated in one direction, said roller will crowd into said acute angle and exert a braking action on said wheel, and whereby as said wheel is rotated in the opposite direction, said roller will be moved toward the open end of said angle to release said wheel.

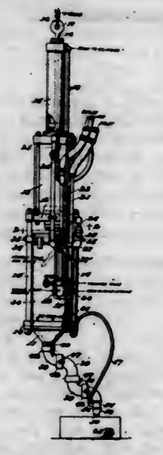
3. In a friction device for curtains, a supporting member, a wheel carried thereby and freely rotatable, a guide also carried by said member and arranged adjacent the periphery of said wheel coöperating with said periphery to form a V-shaped inclosure, a roller located within said inclosure and normally tending toward the narrow end of said inclosure, whereby rotation of said wheel in one direction tends to wedge said roller farther into said narrow end, whereby said roller exerts a braking effect on said wheel.

4. A friction device for a curtain comprising, in combination, two plates suitably spaced apart, a plurality of wheels arranged between said plates and having their peripheries projecting beyond said plates, guide walls also arranged between said plates and adjacent each wheel, one guide wall and the periphery of each wheel coöperating to form a V-shaped recess, and a roller located in each V-shaped recess and adapted to cause friction against the periphery of the corresponding wheel when said wheel is turning in the proper direction.

5. A friction shoe for curtain sticks, comprising an integral inclosing casing, rotatable disks provided with uninterrupted peripheries and smooth, flat sides, pivoted between the side walls of said casing, said casing having end walls approaching the peripheries of said disks at acute angles, and friction rollers confined between the peripheries of said disks and said end walls to exert a braking action in one direction of rotation of said disks.

[Claims 6 to 8 not printed in the Gazette.]

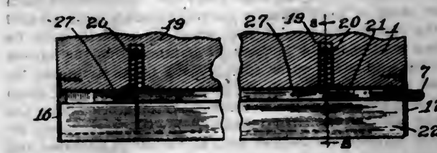
1,111,736. PROCESS OF FILLING MOLDS AND THE LIKE. IRA L. CONKLING, Philadelphia, Pa. Filed Sept. 22, 1910. Serial No. 583,257. (Cl. 25—156.)



The method of filling molds with clay or similar stiff plastic material, which consists in confining a mass of clay or similar stiff plastic material, subjecting the mass to heavy pressure to force the same in a small stream, subjecting said extruded material at the point of extrusion to a strong blast flowing in substantially the line of extrusion, whereby the clay or similar stiff plastic material will be impelled under the force of the blast into the mold with great velocity and in a finely comminuted condition.

1,111,737. AUTOMATICALLY-OPERATING WEATHER-STRIP. LESTER I. COONRADT, Chicago, Ill. Filed Sept. 30, 1912. Serial No. 723,040. (Cl. 20—68.)

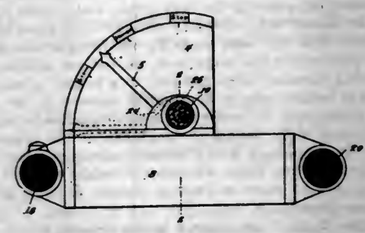
1. In a device of the class described, a door, a casing disposed longitudinally of the base thereof, a sealing member slidable vertically in said casing, vertical rods secured on said sealing member, springs engaging said rods for retaining said sealing member normally retracted, a longitudinally movable rigid thrust bar guided to move in a straight line, and flexible connections between said thrust rod and said vertical rods for projecting said vertical rods and said sealing member when said thrust rod is moved longitudinally.



2. In a device of the class described, a door, a casing disposed longitudinally of the base thereof, a sealing member slidable vertically in said casing, tubular extensions extending upwardly from the top of said casing, rods secured on said sealing member and extending vertically into said tubular casings, springs interposed in said tubular members for engaging said rods and normally retaining said sealing member retracted, a longitudinally movable rigid thrust rod guided to move in a straight line, and flexible connections between said thrust rod and said vertical rods for projecting said vertical rods and said sealing member when said thrust rod is moved longitudinally.

3. In a device of the class described, a door, a casing disposed longitudinally of the base thereof, a sealing member slidable vertically in said casing, vertical rods secured on said sealing member, springs engaging said rods for normally retaining said sealing member retracted, a longitudinally movable rigid thrust rod, and spring and cable connections between said thrust rod and said vertical rods, said cable springs being stronger than said vertical rod springs whereby said sealing member will be yieldingly projected by the longitudinal movement of said thrust rod.

1,111,738. VISUAL-SIGNAL DEVICE FOR VEHICLES. ANTHONY F. COPERSITO, Brooklyn, N. Y., assignor of one-half to John McMahon, New York, N. Y. Filed Oct. 15, 1912. Serial No. 725,909. (Cl. 73—123.)

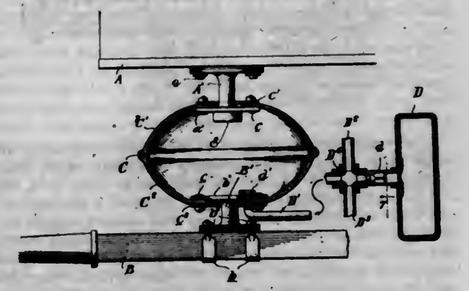


1. In visual signal devices for vehicles, the combination of a dial adapted to be disposed at the rear end of a vehicle and having markings to indicate low speed and stalling of the vehicle, an indicator for said dial, a plurality of electric lights in close proximity to said dial and disposed relative to the markings thereon to indicate low speed and stalling of the vehicle, a contact for each of said lights, a contact carried by said indicator for co-action with said first mentioned contacts, and means adapted for operation by transmission of the vehicle moving at a positive velocity ratio with respect to the tread of the wheels thereof to actuate said indicator, substantially as and for the purpose set forth.

2. In a visual signal device for vehicles, the combination of a dial adapted to be disposed at the rear end of the vehicle and having markings to indicate low speed and stalling of the vehicle, an indicator yieldably held by gravity pointing at the marking of said dial indicating stalled, mechanism adapted for connection with transmission of the vehicle, moving at a positive velocity ratio with the tread of a wheel thereof, for moving said indicator from a normal position, two electric lights, one to indicate low speed and the other stalling of the vehicle, a contact for the light indicating stalling disposed in conducting relation to said indicator when the latter is in a normal position, and a contact for the other of said lights disposed to be in conducting relation to said indicator when the latter moves to indicate low speed, substantially as and for the purpose set forth.

3. In a visual signal device for vehicles, the combination of a dial adapted to be disposed at the rear end of a vehicle and having markings to indicate low speed and stalling of the vehicle, an indicator weighted to normally point at the markings of the said dial indicating stalling, mechanism adapted for connection with transmission of the vehicle moving at a positive velocity ratio with the tread of the wheel thereof, for moving said indicator from a normal position, two electric lights, one to indicate low speed and the other stalling, said means being disposed in close proximity to said dial and relative to the markings thereof, a contact for the light indicating stalling disposed in conducting relation to said indicator when the latter is in a normal position, and the contact for the other of said lights disposed to be in conducting relation to said indicator when the latter moves to indicate low speed, substantially as and for the purpose set forth.

1,111,739. SHOCK-ABSORBER. BENJAMIN W. DAVIS, Phillips, Wis. Filed July 22, 1907, Serial No. 384,982. Renewed May 23, 1910. Serial No. 563,001. (Cl. 21—50.)



1. In a shock absorbing device, the combination with an expansible and compressible chamber containing fluid, of means for securing said chamber to two relatively movable members, means for permitting the expulsion of fluid from said chamber when compressed by the movement of said members toward each other, means for restricting the return of fluid to said chamber when expanded by the relative movement of said members apart, and means for utilizing the atmospheric pressure to retard the expansion of said chamber.

2. In a shock absorbing device, the combination with an expansible and compressible chamber having a flexible wall and containing fluid, means for securing said chamber to two relatively movable members, means for permitting the expulsion of fluid from said chamber when compressed, means for restricting the return of fluid to said chamber during expansion, and means for supporting said flexible wall so as to be forced against atmospheric pressure during the expansion of said chamber.

3. In a shock absorbing device, the combination of an expansible and compressible chamber airtight containing fluid under pressure and comprising a substantially hemispherical flexible wall, of means for securing said chamber directly to two relatively movable members, means for permitting the expulsion of fluid from said chamber during its compression, means for restricting the return of fluid to said chamber during its expansion, and means for holding said wall permanently distended transversely.

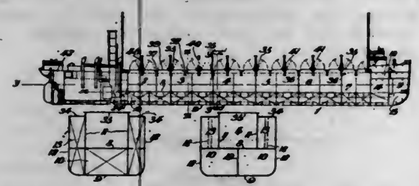
4. In a shock absorbing device, the combination with an expansible and compressible chamber containing fluid, of

means for securing said chamber to two relatively movable members, means for permitting the expulsion of fluid from said chamber when compressed by the movement of said members toward each other and for permitting the return of fluid to said chamber when expanded by the relative movement of said members apart, and means for utilizing the atmospheric pressure to retard the expansion of said chamber.

5. In a shock absorbing device, the combination with an extensible and compressible air-tight chamber containing fluid, of means for securing said chamber directly to two relatively movable members between which the chamber is interposed, means for permitting the expulsion of fluid from said chamber when compressed by the movement of said members toward each other and for permitting the return of fluid to said chamber when expanded by the relative movement of said members apart, and a projection extending within said chamber to support one of the movable members upon the other should said chamber collapse.

[Claim 6 not printed in the Gazette.]

1,111,740. ORE, BULK OR DENSE CARGO CARRIER. HUGO P. FREAR, San Francisco, Cal., assignor to Bethlehem Steel Corporation, South Bethlehem, Pa., a corporation of New Jersey. Filed Sept. 3, 1913. Serial No. 787,831. (Cl. 114—73.)



1. A vessel of the character described, comprising an outer main shell, a longitudinally extending cargo hold arranged centrally within the main outer shell with its bottom wall elevated a substantial distance from the bottom wall of the main shell, closed side tanks arranged between the cargo hold and the side walls of the main shells and adapted for the reception of a liquid ballast or liquid cargo, and closed lower tanks arranged between the bottom of the cargo hold and the bottom of the main outer shell and extending completely across the bottom of the cargo hold, said lower tanks being divided by a central closed bulkhead and having open communication to said side shells, and the combined capacity of said side tanks and lower tanks being greater than the capacity of said cargo hold, and means for introducing and withdrawing liquid ballast into each of the lower closed tanks.

2. A vessel of the character described, comprising a main outer shell, a longitudinally extending cargo hold located in the central portion of the main outer shell with its bottom wall spaced a substantial distance from the bottom wall of the main outer shell, closed tanks arranged between the side walls of the main outer shell and cargo hold and extending for a substantial distance above the bottom wall of the cargo hold, lower closed tanks arranged between the bottom wall of the cargo hold and the bottom wall of the main outer shell extending entirely across the bottom of the cargo hold and the bottom of the closed side tanks, means for supplying a ballast liquid into each of the lower tanks, said lower tanks being divided by a central closed bulkhead and having open communication to the side shells, and trunks extending substantially vertically through the side tanks into the lower tanks for affording access to the latter.

3. In a vessel of the character described, an elevated longitudinally extending cargo hold, centrally located with respect to the sides of said vessel, a plurality of closed, water-tight side tanks adapted for water ballast or liquid or other cargo, located on each side of said cargo hold, a plurality of lower, closed, water-tight tanks adapted for water ballast or liquid cargo, extending longitudinally of said vessel under said side water tanks and cargo hold, said side and lower tanks being separated from each other, and peak tanks 14, 15 and 16 located in the forward part of the vessel, said tank 14 being located in juxtaposition to the forward end of said cargo hold, said tank 16 being located above said tank 14, and said tank 15 being forward of the tank 14.

4. A vessel of the character described, comprising a main outer shell, a longitudinally extending cargo hold located in the central portion of said main outer shell, with its bottom wall spaced a substantial distance from the bottom wall of said main outer shell, closed tanks arranged between the side walls of the main outer shell and cargo hold and extending for a substantial distance above the bottom wall of the cargo chamber, lower closed tanks arranged between the bottom wall of the cargo chamber and the bottom wall of the main outer shell extending entirely across the bottom of said cargo hold and the bottom of the closed side tanks, and means for independently or simultaneously introducing a ballast liquid or liquid cargo into each of said lower tanks, said lower tanks being divided by a central closed bulkhead and having open communication to the side tanks, the bottom of said cargo hold being elevated above the keel to a height in excess of the usual proportions or depth with respect to the depth of the vessel, and the width of said side tanks being so proportioned with respect to the width of said cargo hold, that cargoes of any density will have approximately the same matacentric height as cargoes of lesser or average density in ships of ordinary construction, the combined capacity of said side tanks and lower tanks being greater than the capacity of said cargo hold.

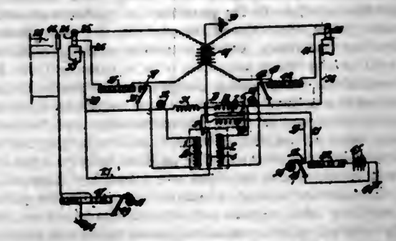
5. A vessel of the character described, comprising a main outer shell, a longitudinally extending cargo hold located in the central portion of said main outer shell, with its bottom wall spaced a substantial distance from the bottom wall of the main outer shell, closed tanks arranged between the side walls of said main outer shell and cargo hold and extending for a substantial distance above the bottom wall of said cargo hold, lower closed tanks arranged between the bottom wall of said cargo hold and the bottom wall of the main outer shell, extending entirely across the bottom of said cargo hold, said lower tanks being adapted to receive a liquid ballast or a liquid cargo, and being divided by a central closed bulkhead and having open communication to the side shells, and trunks extending downwardly from the deck of the vessel through said side tanks into the lower tanks for affording access to said lower tanks under the cargo hold, the bottom of said cargo hold being elevated above the keel to a height in excess of the usual proportions or depth with respect to the depth of the vessel, and the width of the said side tanks being so proportioned with respect to the width of the cargo hold that with cargoes of heavy density, the vessel will have approximately the same metacentric height as with ordinary cargoes of lesser or average density in ships of ordinary construction.

[Claims 6 and 7 not printed in the Gazette.]

1,111,741. SAFETY HAT-PIN. CHARLES GATES, Louisville, Ky., assignor of one-half to Henry G. Trompeter, Louisville, Ky. Filed Mar. 19, 1913. Serial No. 755,329. (Cl. 24—55.)

An article of manufacture, comprising a hollow shell having an opening, a loosely coiled tube secured by one end to the inner periphery of the shell and in alinement with said opening, a flaring entrance secured to the outer end of the tube and lying within the shell, the interior of the tube being coated with damar varnish to increase the resistance offered to the withdrawal of a pin.

1,111,742. AUTOMATIC TOLL-RECORDER FOR TELEPHONE SYSTEMS. ERNEST GRAHAM GODFREE, Sandringham, near Melbourne, Victoria, Australia. Filed Mar. 18, 1912. Serial No. 684,604. (Cl. 179—9.)



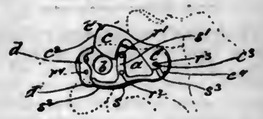
1. In a telephone toll recording system, a circuit, a consequent pole electro-magnet one coil of which is energized by the calling telephone, and the other coil energized by the answering telephone, an armature operated by said electro-magnet, a circuit closed by said armature, a toll recording device adapted to be operated by the closing of said armature circuit, and a second electro-magnet arranged in the circuit to operate and open the circuit after the meter has registered.

2. In a telephone recording system, a circuit, registering means located in said circuit, consequent pole electro-magnets adapted first to close and then open said circuit, and manually operated means for controlling the registration, substantially as specified.

3. In a telephone recording system a circuit, a registering device located in said circuit, a consequent pole electro-magnet adapted automatically to close said circuit when the desired parties are in communication, and a second consequent pole electro-magnet adapted after a toll has been recorded to open the meter circuit.

4. In a telephone recording system a circuit, a registering device in said circuit, and a consequent pole electro-magnet having its coils so wound that when energized the magnetic flux produced in the one opposes the magnetic flux produced in the other, and an armature adapted to become attracted by the electro-magnet and to close said circuit.

1,111,743. CIGAR-CUTTER. SAUL GRABOFF, New York, N. Y. Filed Mar. 16, 1914. Serial No. 825,063. (Cl. 131—38.)



1. In a device of the character designated, parallel plates having tip-receiving openings, a pivoted blade, a spring pressing said blade to open position, and a latch to hold the blade closed, said spring having an extension operating said latch and the latch disposed at an angle to the blade and coöperating directly with the spring and blade.

2. In a device of the character designated, parallel plates, a cigar tip cutter blade movably mounted between said plates, a spring pressing said blade to open position, and a pivoted latch to hold said blade closed said spring having an extension operating said spring, and a blade having a cam surface engaging the latch to force it back against the pressure of the spring.

3. In a device of the character designated, plates, a cigar tip cutter blade pivoted therebetween, a spring pressing the blade to open position, a latch to hold the blade closed, said spring having an extension operating said latch, and the blade having a cam surface for engagement with the latch, and means between the plates in the path of the latch to limit the thrust of the latter under the influence of the spring.

4. In a device of the character designated, the combination of parallel plates formed with cigar tip openings, a duplex spring interposed between them, the shank of which acts as a spacing block, a cigar tip cutter blade fulcrumed on a rivet between said plates and engaging with one end of said duplex spring and a latch pivoted on a rivet between said plates and resting normally against another rivet there-between and controlled by the other arm of said duplex spring, and adapted to engage with a shoulder on the said cutter blade, for the purpose described.

1,111,744. TANK-FLUSHING DEVICE. PHILIP HAAS, Dayton, Ohio. Filed June 12, 1912. Serial No. 703,345. (Cl. 137—69.)

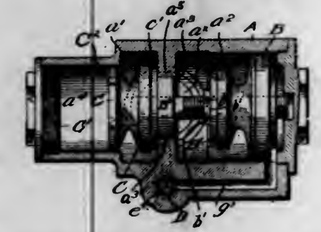
1. In a flushing device for water closets, the combination with the bowl, a flushing pipe connected thereto, and an inlet valve for said flushing pipe located below the bowl, said flushing pipe being provided with a drain outlet adjacent to the inlet valve, adapted to be connected to the soil pipe, of a check valve interposed between the inlet valve and the water supply for the flushing pipe, and below the connection of the said drain outlet with the flushing pipe, said check valve being constructed to close under back pressure to positively prevent any contamination of the water supply from the drain outlet and from the connection between the flushing pipe and bowl.

2. In a flushing device for water closets, the combination with the bowl, a flushing pipe connected thereto, and an inlet valve for said flushing pipe located below the bowl, said flushing pipe being provided with a drain outlet adjacent to the inlet valve, adapted to be connected to the soil pipe, of a check valve located between the inlet valve and the water supply therefor and below the connection of the drain outlet with the flushing pipe, and a valve seat below said valve, said valve being adapted to close under back pressure to positively prevent contamination of the water in the inlet pipe from the drain outlet, and from the connection of the flushing pipe with the bowl, said inlet valve being provided with a projection to engage the check valve to limit its upward movement and to positively force it downward toward its seat when the inlet valve is in closed position.

3. In a flushing device for water closets, the combination with the bowl, a flushing pipe connected thereto, and an inlet valve for said flushing pipe located below the bowl, said flushing pipe being provided with a drain outlet adjacent to the inlet valve, adapted to be connected to the soil pipe, of a check valve interposed between the inlet valve and the water inlet pipe and located below the connection of the drain outlet with the flushing pipe, a valve seat for said check valve located between said valve and the inlet valve, and a valve seat for the check valve located between it and the water supply, said inlet valve being provided with a projection for engaging the check valve and normally holding it away from the valve seat adjacent to the inlet valve and for forcing it positively toward the other of said valve seats when the inlet valve is in closed position, whereby the said check valve will positively prevent contamination of the water supply from the drain outlet and from the connection between the flushing pipe and the bowl.

4. In a flushing device for water closets, the combination with a flushing pipe, a tank and a bowl operatively connected therewith, and valve mechanism including an inlet valve below the bowl, said flushing pipe being provided with a drain outlet adjacent to the inlet valve, of a check valve interposed between the inlet valve and the water supply and located below the connection of the drain outlet with the flushing pipe, and constructed to close under back pressure to positively prevent the contamination of the water supply for the flushing device under the back pressure of the tank, from the drain outlet and from the connection between the bowl and the flushing pipe.

1,111,745. FLUSHING DEVICE FOR WATER-CLOSETS. PHILIP HAAS, Dayton, Ohio. Filed June 12, 1912. Serial No. 703,346. (Cl. 137—93.)

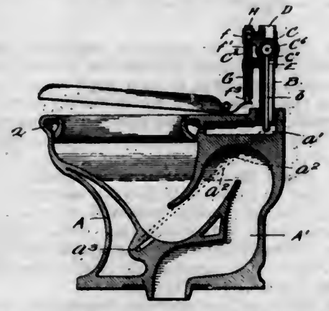


1. In an automatic flushing valve for water closets, the combination with a hollow main casing provided with a compression chamber at one end and a guiding chamber at the other end, in axial alinement therewith, said chambers being separated by a partition having an aperture therein, said casing being provided with a water inlet communicating with the inner end of the guiding chamber on one side of the partition, and with a water outlet communicating with the inner end of the compression chamber on the other side of the partition, of a movable guiding body fitting said guiding chamber, a valve carried thereby normally closing the aperture in the partition, a piston in the compression chamber, a valve normally in open position carried by said piston for closing the aperture in the partition, a part extending through the aperture in the partition and connecting said guiding body and piston, means for maintaining a constant communication between the outer end of the guiding chamber and the water inlet, a by pass connecting the water inlet with the outer end of the compression chamber, an auxiliary valve controlling said by-pass, and said casing being provided with a reduced passage from said by-pass, between said auxiliary valve and the outlet chamber, to said outlet chamber for discharging water from said compression chamber on the outer side of the piston, whereby on the opening of said auxiliary valve, water is admitted behind the piston to move said guiding body and piston and open the aperture in the partition to produce a preliminary discharge of water through the valve casing, which is cut off by the piston valve, and whereby on the closing of said auxiliary valve, the accumulation of water in the guiding chamber behind the guiding body moves said guiding body and piston in the reverse direction and produces a flushing discharge through the valve casing, which is cut off by the closing of the valve carried by said guiding body.

2. In an automatic flushing valve for water closets, the combination with a hollow main casing provided with a compression chamber at one end and a guiding chamber at the other end, in axial alinement therewith, said chambers being separated by a partition having an aperture therein, said casing being provided with a water inlet communicating with the inner end of the guiding chamber on one side of the partition, and with a water outlet communicating with the inner end of the compression chamber on the other side of the partition, of a movable guiding body fitting said guiding chamber, a valve carried thereby normally closing the aperture in the partition, a piston in the compression chamber, a valve carried thereby for closing the aperture in the partition, said piston and guiding body being provided, the one with an adjustable stem loosely engaging the other and extending through the aperture in the partition, a bypass connecting the water inlet with the outer end of the compression chamber, an auxiliary valve normally closing said bypass, said casing being provided with a passage from the outer end of the compression chamber to the water outlet, and means for maintaining a constant communication between the outer end of the guiding chamber and the inlet chamber, whereby on the opening of said auxiliary valve, the piston operates said movable guiding body to open the partition aperture and produce a preliminary passage of water through the casing, which is cut off by the piston valve and on the closing of the auxiliary valve, the guiding body operates to open the piston valve and produce a flushing passage of water through the casing which is cut off by the closing of the valve carried by said guiding body.

3. In an automatic flushing valve for water closets, the combination with a hollow main casing provided with a compression chamber, said main casing being provided with a guiding chamber in axial alinement with the pressure chamber and separated therefrom by a partition having an aperture therein, said casing having an inlet chamber communicating with the guiding chamber on one side of said partition, and an outlet chamber communicating with the compression chamber on the opposite side of said partition, and a by-pass from the inlet chamber to the outer end of the pressure chamber, of a guiding body fitting said guiding chamber, a valve carried thereby normally closing said aperture in the partition, a piston in the pressure chamber, a valve carried thereby for closing the aperture in the partition, a stem secured to said piston and loosely engaging said guiding body, an auxiliary valve normally closing said bypass, means having a part outside the casing for opening said auxiliary valve, and means for maintaining a constant communication between the outer end of the guiding chamber and the inlet chamber, said stem being adjustable to vary the relative positions of the piston and guiding body, and regulate the duration of the flushing, said casing having a removable closure at the outer end of the pressure chamber, whereby said closure can be removed and the piston and its stem withdrawn to adjust the stem to vary the duration of flush and replaced, without cutting off the water supply to the inlet chamber.

1,111,746. VENTILATING WATER-CLOSET. PHILIP HAAS, Dayton, Ohio. Filed July 19, 1912. Serial No. 710,507. (Cl. 4—18.)



1. The combination with a closet bowl provided with a discharge for fecal matter having a trap portion to contain a liquid seal, of means for discharging water through said trap to break the liquid seal and empty the trap and for thereafter continuously discharging an injector stream through the empty trap and shutting off the admission of water to the bowl from any other source thus preventing the refilling of the trap, to withdraw large quantities of air from and through the bowl and discharge it through said trap and discharge passage, and for thereafter discharging water into the bowl above the point of communication of the injector discharge passage with the bowl, while continuing the discharge of the injector stream, to flush the bowl, and finally shutting off the supply of water to the bowl, to permit it to refill, and restore the liquid seal.

2. The combination with a closet bowl provided with a discharge passage for fecal matter, having a trap portion to contain a liquid seal, said bowl being provided with a jet discharge aperture for discharging water longitudinally through said trap, and a flushing discharge aperture communicating with the bowl above the jet aperture, of means for supplying water through one of said discharge apertures to break the liquid seal and empty the said trap and for thereafter continuously discharging an injector stream from said jet aperture through the empty trap, and preventing the discharge of water through the flushing aperture to prevent the refilling of the trap, to withdraw large quantities of air from and through the bowl and discharge it through said discharge passage and said trap, and for thereafter supplying water to the flushing aperture to flush the bowl and restore the liquid seal.

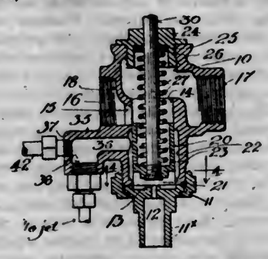
3. The combination with a closet bowl provided with a discharge passage for fecal matter, having a trap portion to contain a liquid seal, said bowl being provided with a jet discharge aperture discharging longitudinally through said trap, and a flushing discharge aperture communicating with the bowl above the liquid level of the liquid seal, of means for discharging water through both of said apertures to wet the walls of the bowl above the liquid seal and empty the trap, and for shutting off the supply of water to the flushing discharge aperture while continuing the supply to the jet, to continuously discharge an injector stream through the empty trap while preventing the refilling of said trap to withdraw large quantities of air from and through the bowl and discharge it through said trap and discharge passage, and for thereafter again supplying water to said flushing discharge aperture to flush the bowl and restore the liquid seal, and for finally cutting off the supply of water to the bowl.

4. The combination with a closet bowl provided with a discharge passage for fecal matter, having a trap portion to contain a liquid seal, said bowl being provided with a jet discharge aperture discharging longitudinally through said trap, and a flushing discharge aperture communicating with the bowl above the liquid level of the liquid seal, of means for discharging water through both of said apertures to wet the walls of the bowl above the liquid seal and empty the trap, and for shutting off the supply of water to the flushing discharge aperture while continuing the supply to the jet to continuously discharge an injector stream through the empty trap while preventing the refilling of said trap to withdraw large quantities of air from and through the bowl and discharge it through said trap and discharge passage, and for thereafter again supplying water to said flushing discharge aperture to flush the bowl and restore the liquid seal, while continuing the supply of water to the jet and for finally cutting off the supply of water to both discharge apertures.

5. The combination with a closet bowl provided with a discharge passage for fecal matter having a trap portion to contain a liquid seal, said bowl being provided with a jet discharge aperture for discharging water longitudinally through said trap, and a flushing discharge aperture located above the level of the jet aperture, of automatic means for supplying water to one of said apertures to break the liquid seal and empty the said trap, and for thereafter continuously discharging an injector stream from said jet aperture through the said empty trap, and preventing the discharge of water through the flushing aperture to prevent the refilling of the said trap, to withdraw large quantities of air from and through the bowl and discharge it through said trap and discharge passage, and for thereafter supplying water to the flushing aperture, while continuing the discharge from the jet aperture, to flush the bowl, and for thereafter cutting off the supply of water to the bowl to permit it to refill, and restore the liquid seal, whereby said operations will automatically take place in sequential order.

[Claims 6 to 11 not printed in the Gazette.]

1,111,747. WATER-CLOSET VALVE. PHILIP HAAS, Dayton, Ohio. Filed Oct. 30, 1913. Serial No. 798,299. (Cl. 4—28.)



1. In a water closet valve, the combination with a valve casing provided with a flushing aperture, and interior cylindrical guiding portions provided with an outlet aperture in the cylindrical wall thereof between the upper and lower ends of said guiding portions, said outlet aperture communicating with said flushing aperture, said casing having a tank supplying and relieving aperture communicating with the interior of the casing above said cylindrical guiding portions and being also provided with an inlet aperture at one end of the casing substantially in line with the axis of said guiding portions, portions of the casing adjacent to said inlet aperture being of greater internal diameter than the cylindrical guiding portions, of a hollow cylindrical valve body fitting said cylindrical guiding portions and adapted to close said outlet aperture when the valve is in open position, said valve body being open at the end remote from the inlet aperture and closed at the other end, the closed end of said valve body being provided with a valve for normally closing the inlet aperture in the casing, said valve body having lateral apertures in its walls communicating with the interior of the valve body, a spring for holding said valve body normally in position with its inlet valve closed, and means for moving the valve body against its spring to open the inlet aperture and simultaneously close the outlet aperture, whereby the water will pass around and through the valve body to the tank, and on the return movement of the valve body to close the inlet aperture, the outlet aperture will be open to permit the tank to discharge through the flushing aperture.

2. In a water closet valve, the combination with a valve casing provided with a flushing aperture, interior cylindrical guiding portions, an outlet aperture between the upper and lower parts of said guiding portions connected with said flushing aperture, a tank supplying and relieving aperture connecting with the casing above said guiding portions, and an inlet aperture below said guiding apertures, portions of the casing below said guiding portions being of greater internal diameter, of a hollow cylindrical valve body engaging said guiding portions, and adapted to close said outlet aperture when in open position, said valve body being open at one end and closed at the other and provided at its closed end with a valve normally closing the inlet aperture, said valve body having apertures in its walls, a spring engaging said valve body and normally holding the inlet valve closed, said valve casing being provided with an auxiliary discharge aperture below said guiding portions, a connection therefrom to the jet of the bowl, and means for moving said valve body to open the inlet aperture and close said outlet aperture, whereby on the opening movement of the valve, water will be discharged up through the valve to the tank and portions of the water will be discharged to the jet to break the seal and create a continuous suction through the open trap for ventilating, and on closing the

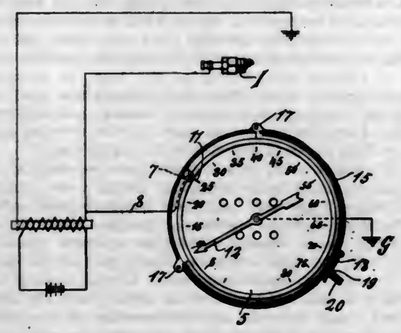
valve, the water in the tank will be discharged from the flushing aperture.

3. In a water closet valve, the combination with a valve casing provided with a flushing aperture, interior cylindrical guiding portions, an outlet aperture between the upper and lower parts of said guiding portions connected with said flushing aperture, a tank supplying and relieving aperture connecting with the casing above said guiding apertures, and an inlet aperture below said guiding apertures, portions of the casing below said guiding portions being of greater internal diameter, of a hollow cylindrical valve body engaging said guiding portions, and adapted to close said outlet aperture when in open position, said valve body being open at one end and closed at the other and provided at its closed end with a valve normally closing the inlet aperture, said valve body having apertures in its walls, a spring engaging said valve body and normally holding the inlet valve closed, said casing being provided with an auxiliary discharge aperture below the said guiding portion, one of said apertures being connected to the jet of the bowl and the other of said apertures being connected to the rim flush passage thereof, whereby upon opening the valve a portion of the water will be delivered to the tank and portions will be discharged through the jet to break the seal of the trap and create a continuous suction through the open trap for ventilating, and a portion of the water will be discharged through the rim flush to wet the side walls of the bowl above the liquid level of the trap and on closing the valve the water will be discharged through the tank to the flush aperture.

4. In a water closet valve, the combination with a valve casing provided with a flushing aperture, interior cylindrical guiding portions, an outlet aperture between the upper and lower parts of said guiding portions connected with said flushing aperture, a tank supplying and relieving aperture connecting with the casing above said guiding apertures, and an inlet aperture below said guiding apertures, portions of the casing below said guiding portions being of greater internal diameter, of a hollow cylindrical valve body engaging said guiding portions, and adapted to close said outlet aperture when in open position, said valve body being open at one end and closed at the other and provided at its closed end with a valve normally closing the inlet aperture, said valve body having apertures in its walls, a spring engaging said valve body and normally holding the inlet valve closed, said valve casing being provided with an auxiliary discharge aperture below said guiding portions and a connection therefrom to the jet of the bowl, a pivoted closet seat and operative mechanism for connecting said valve with the sent for normally holding the seat in raised position, whereby on the depression of the seat the valve will be automatically discharged, delivered to the tank and to the jet to break the seal and continuously create suction through the open trap while the seat is depressed, and on releasing the seat the valve and seat are returned to normal position and the water accumulated in the tank is discharged through said flushing aperture.

5. In a water closet valve, the combination with a valve casing provided with a flushing aperture, interior cylindrical guiding portions, an outlet aperture between the upper and lower parts of said guiding portions connected with said flushing aperture, a tank supplying and relieving aperture connecting with the casing above said guiding apertures, and an inlet aperture below said guiding apertures, portions of the casing below said guiding portions being of greater internal diameter, of a hollow cylindrical valve body engaging said guiding portions, and adapted to close said outlet aperture when in open position, said valve body being open at one end and closed at the other and provided at its closed end with a valve normally closing the inlet aperture, said valve body having apertures in its walls, a spring engaging said valve body and normally holding the inlet valve closed, said valve casing being provided with auxiliary discharge aperture, one of which is connected with the jet of the bowl and the other with the rim flush passage independent of said flushing aperture, a pivoted closet seat, connections between said seat and said valve normally holding the seat in lifted position, whereby on the depression of the seat the valve will be open to admit water to the tank and simultaneously and automatically discharge portions to the rim flush passage continuously and to the jet passage breaking the liquid seal and continuously producing suction through the open trap while the seat is depressed for ventilating, and on releasing the seat the valve and seat are returned to normal position by the spring and water accumulated in the tank is discharged from said flushing aperture.

1,111,748. SPEED-CONTROLLING DEVICE. KARL L. HARTER and HERBERT THOMAS REYNOLDS, Tampa, Fla. Filed July 24, 1913. Serial No. 780,912. (Cl. 177—311.)

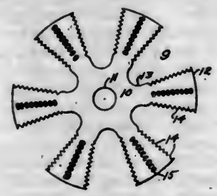


1. The combination with a speed indicator having apertures in its casing; of a plug adapted to be inserted into a selected one of said apertures, said plug having a contact which is in the path of the pointer of the speed indicator, a band encircling the casing of the speed indicator, said band covering the aforesaid plug, and means for locking the band on the casing of the speed indicator.

2. The combination with a speed indicator having apertures in its casing; of a plug adapted to be inserted into a selected one of said apertures, said plug having a contact which is in the path of the pointer of the speed indicator, a band encircling the casing of the speed indicator and covering the plug, said band comprising hinged sections, and means for locking said sections on the casing of the speed indicator.

3. The combination with a speed indicator having apertures in its casing; of a plug adapted to be inserted into a selected one of said apertures, said plug having a contact which is in the path of the pointer of the speed indicator, a band encircling the casing of the speed indicator, said band being channeled in cross-section and forming a housing which incloses the aforesaid plug, and means for locking the band on the casing of the speed indicator.

1,111,749. MANUFACTURE OF BOLT-ANCHORS. CARL JOSEPH, Bayonne, N. J. Filed Nov. 18, 1913. Serial No. 801,620. (Cl. 85—2.4.)



1. A blank out of which to form a bolt anchor, comprising a central body and a series of symmetrically disposed radiating segments in angular relation to one another.

2. A blank out of which to form a bolt anchor, comprising a central body and a series of symmetrically disposed radiating segments disposed in angular relation to each other, each tapering from the outer end toward the center.

3. A blank out of which to form a bolt anchor, comprising a central body and a series of symmetrically disposed radiating segments, each tapering from its outer end toward the center along radial lines.

4. A blank out of which to form a bolt anchor, comprising a central body and a series of angularly and symmetrically disposed radiating segments, each tapering from its end toward the center, each segment being serrated along its radial edges.

5. A blank out of which to form a bolt anchor comprising a central body and a series of angularly and symmetrically disposed radiating segments, each tapering from its end toward the center, each segment being scored or indented along its middle radial axis.

[Claims 6 to 10 not printed in the Gazette.]

1,111,750. CHAPLET-MACHINE. BERTRAND B. KAHN, Cincinnati, Ohio, assignor to The Estate Stove Company, Hamilton, Ohio. Filed Dec. 24, 1913. Serial No. 808,518. (Cl. 153—12.)

1. A chaplet machine comprising, a bed-die having in its upper surface a recess adapted to the bottom and end walls of the chaplet to be produced, a longitudinally slotted core-die extending transversely across the bed-die and adapted to move downwardly into the recess thereof and bend a strip of metal overlying the recess to form the bottom and upstanding walls of the chaplet, wipers disposed above the bed-die and at the sides of said recess and adapted to move inward and bend down said upstanding walls to form the top of the chaplet, a vertically movable strip disposed above the recess and adapted to bend the inner end of one of the walls downward through the slot in the core-die, and mechanism for moving the core-die and strip and wipers, combined substantially as set forth.

2. A chaplet machine comprising, a bed-die having in its upper surface a recess having a depth equal to the vertical height of the chaplet to be produced and adapted to the bottom and end walls of the chaplet to be produced, a core-die extending transversely across the bed-die and having a vertical dimension equal to the depth of said recess and adapted to move downwardly into the recess thereof and bend a strip of metal overlying the recess to form the bottom and upstanding walls of the chaplet, wipers disposed above the bed-die and at the sides of said recess and adapted to move inwardly and downwardly and bend down said upstanding walls to form the top of the chaplet, a shear disposed across the top of the bed-die at its stock-entering end, a stop projecting up from the face of the bed-die on the opposite side of the recess, and serving to arrest the advance of a strip fed forwardly over the bed-die, and mechanism for moving, the core-die and shear and wipers, combined substantially as set forth.

3. A chaplet machine comprising, a bed-die having in its upper surface a recess adapted to the bottom and end walls of the chaplet to be produced, a core-die extending transversely across the bed-die and adapted to move downwardly into the recess thereof and bend a strip of metal overlying the recess to form the bottom and upstanding walls of the chaplet, wipers disposed above the bed-die and at the sides of said recess and adapted to move inward and bend down said upstanding walls to form the top of the chaplet, a perforated stripper surrounding and sliding on said core-die and movable outwardly thereon, and mechanism for moving the core-die and stripper and wipers, combined substantially as set forth.

4. A chaplet machine comprising, a bed-die having a width equal at least to twice the width of the strip of metal from which the chaplet is to be made and having in its upper surface a reces adapted to the bottom and end walls of the chaplet to be produced, a core-die extending transversely across the width of the bed-die and adapted to move downwardly into the recess thereof and bend a strip of metal overlying the recess to form the bottom and upstanding walls of the chaplet, a wiper disposed above the bed-die and at one side of said recess and adapted to move inward over the rear of the bed-die and bend down one of said upstanding walls so as to form a portion of the top of the chaplet, a wiper disposed above the bed-die at the side of the recess opposite the first-mentioned wiper and adapted to move inward and bend down the remaining upstanding wall of the chaplet whose first upstanding wall was bent down by the first-mentioned wiper, and mechanism for moving the core-die and wipers, combined substantially as set forth.

5. A chaplet machine comprising, a bed-die having a width equal at least to twice the width of the strip of metal from which the chaplet is to be made and having in its upper surface a recess adapted to the bottom and end walls of the chaplet to be produced, a core-die extending transversely across the width of the bed-die and adapted to move downwardly into the recess thereof and bend a strip of metal overlying the recess to form the bottom and upstanding walls of the chaplet, a wiper disposed above the bed-die and at one side of said recess and adapted to move inward over the rear of the bed-die and bend down one of said upstanding walls so as to form a portion of the top of the chaplet, a wiper disposed above the bed-die at the side of the recess opposite the first-mentioned wiper and adapted to move inward and bend down the remaining upstanding wall of the chaplet whose first upstanding wall was bent down by the first-mentioned wiper, and mechanism for moving the core-die and wipers for shifting a partially formed chaplet forwardly on the core-die to bring it from the field of action of the first wiper to the field of action of the second wiper, combined substantially as set forth.

[Claims 6 to 20 not printed in the Gazette.]

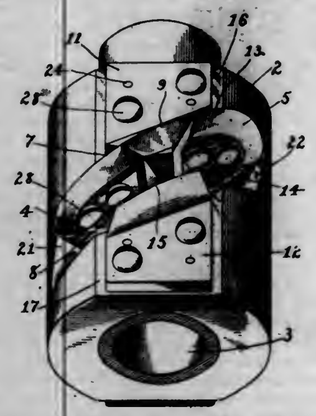
1,111,751. ROTARY CUTTER. EDMOND KENNY, New Brighton, N. Y., assignor to Mercantile Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 22, 1913. Serial No. 743,472. (Cl. 164—28.)

1. A rotary cutter including in combination a body, having a flat cutting member seat whose longitudinal direction is oblique to the cutter axis, and a cutting member, having flat parallel side walls, fixed to said seat, said side walls being normal to a plane through the cutter axis.

2. A rotary cutter including in combination a body, having a cutting member seat out of parallelism with the cutter axis and normal to a plane oblique to said axis, said plane being normal to a plane through said axis, and a cutting member fixed to said seat.

3. A rotary cutter including in combination a body, having two cutting member seats which are inclined to one another and out of parallelism with the cutter axis and

normal to a common plane and which common plane is oblique to the cutter axis and normal to a plane through said axis, and a cutting member fixed to each seat.



4. A rotary cutter including in combination a body, having a plurality of cutting member seats, one or more of which are parallel with the cuter axis and two of which are oblique to said axis, said oblique seats each having a side wall normal thereto respectively and normal to a plane through the cutter axis, and a cutting member fixed to each seat.

5. A rotary cutter including in combination a body, having four flat cutting-member seats, two of which are in one plane, parallel with the cutter axis and two of which are oblique to said axis, said oblique seats being normal to a common plane and which common plane is oblique to the cutter axis and normal to a plane through said axis, and a cutting member fixed to each seat.

[Claims 6 to 9 not printed in the Gazette.]

1,111,752. LAUNDRY APPARATUS. EDWIN LICHTENSTEIN and CHARLES VITA, New York, N. Y. Filed Feb. 7, 1914. Serial No. 817,162. (Cl. 193—2.)

1. The combination with a conveyer chain of a laundry drying apparatus, of rotary brushes engaging opposite sides thereof, gearing whereby said brushes are driven by the chain, and stationary brushes positioned to act upon the chain beyond the rotary brushes.

2. The combination with a conveyer chain of a laundry drying apparatus, of rotary wire brushes, gearing whereby said brushes are positively driven by said chain, stationary relatively soft brushes between which the chain passes after leaving said rotary brushes, and means whereby said rotary brushes may be brought into and out of engagement with the chain.

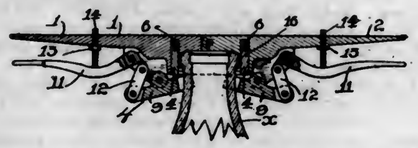
3. The combination with a collar conveyer comprising a chain and hooks carried thereby, of brush mechanism located to act upon the chain, and other brushes arranged to act upon said hooks.

4. The combination with a collar conveyer comprising a chain and hooks carried thereby, of brush mechanism located to act upon the chain, and yieldingly mounted brushes arranged to act upon said hooks.

5. The combination with a laundry chain carrying hooks, of brush mechanism located to engage the chain, and other brushes mounted yieldingly on arms so as to be capable of rising and falling as said hooks pass beneath them.

[Claims 6 to 12 not printed in the Gazette.]

1,111,753. SEALING TOOL OR CHUCK FOR BOTTLES. GUSTAVE LIDSEEN, Chicago, Ill. Filed Aug. 30, 1911. Serial No. 646,945. (Cl. 113—4.)



1. In a device of the class described a pair of pivoted handles affording frame members, spring pressed slidably supported semi-circular jaws therein, means thereon adapted to engage the apron of a sealing cap, semi-circular yoke members freely engaging under and supporting said jaws, and toggle levers connected to said yokes acting to force the same upwardly thereby rolling the apron of the cap inwardly and upwardly into engagement with the bottle.

2. A sealing tool of the class described embracing oppositely directed levers hingedly connected together, sealing jaws slidably and yieldingly supported thereon and adapted to encircle a bottle neck, one or more projections on each sealing jaw adapted to engage beneath the margin or apron of a sealing cap applied on the bottle, toggle levers extending beneath the first named lever and adapted to be simultaneously engaged therewith, and acting to move said jaws to roll the margins of the sealing cap upwardly and inwardly against the bottle neck.

3. A device of the class described embracing semi-circular sealing jaws, springs bearing thereagainst, a head adapted to hold a sealing cap upon a bottle mouth, pivoted yoke members supporting said jaws against the springs, toggle levers for actuating said yoke levers to move the sealing jaws upwardly, and means carried on each sealing jaw for rolling the margin of the cap upwardly and inwardly into engagement beneath the head of the bottle neck.

4. A device of the class described embracing spring pressed, upwardly movable semi-circular jaws adapted to engage and fold a sealing cap and roll the margin thereof upwardly against the bottle to which it is purposed attaching the same, and levers hingedly connected and containing said sealing jaws, and toggle levers adapted to actuate said jaws.

5. In a device of the class described levers hingedly connected, semi-circular sealing jaws carried thereon, grooved pins projecting inwardly of said jaws to engage beneath the margins of a sealing cap, toggle levers extending beneath the first named lever and adapted to be gripped together therewith, a yoke on each engaging beneath each sealing jaw and acting to force the same upwardly, and a gage for limiting the upward movement of the sealing jaw.

[Claims 6 to 11 not printed in the Gazette.]

1,111,754. VEHICLE AND ELASTIC SUSPENSION DEVICE THEREFOR. RICHARD LIEBAU, Watervliet, N. Y., assignor to The Westinghouse Air Spring Company, a Corporation of Pennsylvania. Filed Dec. 22, 1908. Serial No. 468,762. (Cl. 21—50.)

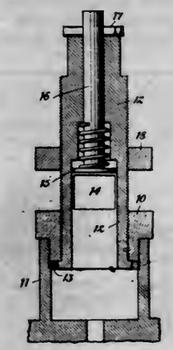
1. A hydro-pneumatic supporting or cushioning device comprising telescopic members slidable one within the other and confining a body of gaseous fluid, and having a sliding joint provided between said members and comprising a cupped packing ring formed from a single piece of leather clamped to one of said members and arranged in extended sliding engagement with the cylindrical wall of the other member, with the free edge of the said cupped ring extending in the direction of the high gaseous pressure, and a cone expander coöperating with said gaseous pressure, being yieldingly forced at practically constant pressure against said free edge of said cupped ring uniformly and continuously throughout its entire circumference whereby the action of the cone is self-adjusting and substantially uniform both during the compression movement when the sliding friction between the packing and wall tends to compress and shorten the cup leather, and during the expansion movement when such friction tends to stretch and lengthen said cup leather and to curl the free edge thereof away from the cylindrical wall.

2. A hydro-pneumatic supporting or cushioning device comprising telescopic members slidable one within the other and confining a body of gaseous fluid, and having a sliding joint provided between said members and comprising a cupped packing ring formed from a single piece of leather clamped to one of the members and arranged in extended sliding engagement with the cylindrical wall of the other member, with the free edge of the said cupped ring extending in the direction of the high gaseous pressure, a solid rigid cone expander and yielding means forcing said cone into engagement with the free edge of said cup leather in a direction parallel with the axis of the device, said cone being yieldingly forced at practically constant pressure against said free edge of said packing uniformly and continuously throughout its entire circumference whereby the action of the cone is self-adjusting and substantially uniform both during the compression movement when the sliding friction between the packing and wall tends to compress and shorten the cup leather and during the expansion movement when such friction tends to stretch and lengthen said cup leather and to curl the free edge thereof away from the cylindrical wall.

3. A hydro-pneumatic supporting or cushioning device comprising telescopic members slidable one within the other and confining a body of gaseous fluid, and having a sliding joint provided between said members and comprising a packing-ring formed from a single piece of leather clamped to one of the members and arranged in extended sliding engagement with the cylindrical wall of the other member, with the free edge of the said cupped ring extending in the direction of the high gaseous pressure, and a cone expander yieldingly forced at practically constant pressure against said free edge of said cupped ring uniformly and continuously throughout its entire circumference whereby the action of the cone is self-adjusting and substantially uniform both during the compression movement when the sliding friction between the packing and wall tends to compress and shorten the cup leather, and during the expansion movement when such friction tends to stretch and lengthen said cup leather and to curl the free edge thereof away from the cylindrical wall, said cone expander having a wedging angle greater than the angle of friction of its surfaces of engagement with the leather packing.

4. A cushioning device comprising telescopic members slidable one within the other and confining a body of gaseous fluid, a packing for the sliding joint between said members, comprising a flexible cupped packing ring clamped to one of said members and arranged in extended sliding engagement with the cylindrical wall of the other member, and a cone expander yieldingly held against the free edge of the cupped ring, said cone expander having a wedging angle greater than the angle of friction of its surfaces of engagement with the leather packing.

1,111,755. GREASE-COMPRESSOR FOR ENGINE-RODS. JAMES E. MCDANIEL, Columbia, S. C. Filed Oct. 25, 1913. Serial No. 797,286. (Cl. 184—38.)



1. A grease compressor for engine rods comprising a bushing adapted to be threaded into the rod, a compressing member threaded into said bushing from the lower end thereof and having an annular shoulder on its lower end preventing its removal from the bushing by way of the top thereof, said compressing member having also a laterally disposed aperture for the introduction of grease exposed when the compressing member projects its greatest extent from the top of said bushing, and closed by screwing said compressing member into said bushing.

2. A grease compressor for engine rods comprising an exteriorly and interiorly threaded bushing, together with an exteriorly threaded compressing member screwed into said bushing from the bottom thereof and having means on its lower end preventing disengagement of said screw threads and the removal of said compressing member by way of the top of the bushing, said compressing member being recessed from the bottom up and having a laterally disposed aperture communicating with said recess and exposed when said compressing member is withdrawn from the top of said bushing to its limit, but closed when said compressor member is screwed down into said bushing.

3. A grease compressor for engine rods comprising an annular bushing of substantially uniform diameter adapted to be threaded onto the rod, and a grease compressing member threaded into said bushing and provided with means engaging the underside of the bushing and preventing disengagement of said threads and removal thereof by way of the top of bushing, one of said elements having a laterally disposed aperture for the introduction of grease, opened when said compressor member is screwed out of the top of said bushing to its limit, and closed by screwing said compressor member into the bushing.

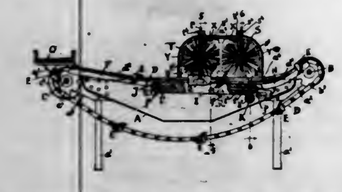
4. A grease compressor for engine rods comprising a bushing adapted to be threaded onto the rod, and a grease compressing member threaded into said bushing and provided with means preventing disengagement of said threads and removal thereof by way of the top of bushing, one of said elements having a laterally disposed aperture for the introduction of grease, opened when said compressor member is screwed out of the top of said bushing to its limit, said compressor member being recessed from its bottom upwardly, and a spring pressed piston located

in said recess, and adapted to engage and press upon the grease when said member is screwed down into the bushing.

5. A grease compressor for engine rods comprising a bushing adapted to be threaded onto the rod, and a grease compressing member threaded into said bushing and provided with means preventing disengagement of said threads and removal thereof by way of the top of the bushing, one of said elements having a laterally disposed aperture for the introduction of grease, opened when said compressor member is screwed out of the top of said bushing to its limit, said compressor member being recessed from the bottom, and a spring pressed piston in said recess the bottom of which piston lies approximately at the top of said aperture when said compressor member is in its uppermost position, but which is adapted to bear upon and compress the introduced grease when said member is screwed down into the bushing.

[Claims 6 to 10 not printed in the Gazette.]

1,111,756. BOTTLE RINSING AND OUTSIDE-BRUSHING CONVEYER. GEORGE J. MEYER, Milwaukee, Wis. Filed Apr. 8, 1910. Serial No. 554,290. (Cl. 51—7.)



1. The combination of a runway for bottles, means for rotating bottles on said runway by frictional contact, and a movable center-support for the mouth-end of said bottles consisting of a scoop-shaped block adapted to receive and center the mouth of a bottle and act as a pivot about which it turns.

2. The combination of a runway for bottles, means for rotating bottles on said runway by frictional contact, and a movable center-support for the mouth-end of said bottles consisting of a scoop-shaped block adapted to receive and center the mouth of a bottle and act as a pivot about which it turns, said scoop-shaped block being open at the top, in conjunction with means for advancing said block parallel to said runway and frictional cleaning-means located above said runway and adapted to contact with the surface of the bottle as it passes along said runway.

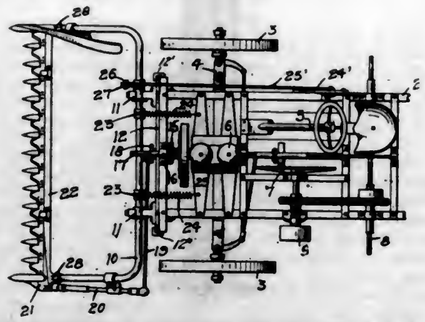
3. The combination of a plurality of parallel cylindrical rollers in the spandrels between which bottles are adapted to rest, having their axes parallel thereto, means for rotating said rollers in the same direction so as frictionally to give a rotative movement to said bottles, a member carrying a plurality of scoop-shaped blocks projecting into said spandrels, and each adapted to pick up the mouth of a bottle presented to it and support it above the level which it would otherwise occupy whereby its upper surface is approximately on a level with that of the body of the bottle, means for advancing said member so as to move said bottles longitudinally along said rollers in advance of said member, and means immediately over said bottles adapted to brush them as they move along said rollers.

4. The combination of a plurality of parallel cylindrical rollers in the spandrels between which bottles are adapted to rest having their axes parallel thereto, means for rotating said rollers in the same direction so as frictionally to give a rotative movement to said bottles, a member carrying a plurality of scoop-shaped blocks projecting into said spandrels and each adapted to pick up the mouth of a bottle presented to it and support it above the level which it would otherwise occupy whereby its upper surface is approximately on a level with that of the body of the bottle, means for advancing said member so as to move said bottles longitudinally along said rollers in advance of said member, and means for supporting a liquid around said bottles when in said runway, in such position that the surface of said liquid passes through said bottles.

5. The combination of a runway for bottles, means for rotating bottles on said runway by frictional contact, and a movable center-support for the mouth-end of said bottles consisting of a scoop-shaped block adapted to receive and center the mouth of a bottle, said block having a circular recess into which the mouth of the bottle fits and a projection in the center of said recess adapted to enter the mouth of the bottle and form a pivotal center therefor.

[Claim 6 not printed in the Gazette.]

1,111,757. MOWING-MACHINE. NILS NILSON and LEONARD NILSON, Wayzata, Minn. Filed May 29, 1911. Serial No. 630,221. (Cl. 56—78.)



1. The combination, with a frame having carrying wheels and a source of motive power mounted thereon, of a rocker plate pivoted at the longitudinal center thereof to oscillate in a vertical plane, a mower frame pivotally supported by said plate and frame to tilt laterally on the pivot of said rocker plate and also having an independent tilting movement on its pivots, a finger bar, and a cutter bar operatively connected with said source of power.

2. A mower comprising a wheeled frame, and a source of motive power mounted thereon, a mower frame, a rocker plate having a horizontal pivot on said wheeled frame and supporting said mower frame, said plate extending transversely of said wheeled frame from side to side, guides for the end portions of said plate, said mower frame having a finger bar and a cutter bar operatively connected with said source of power and being free to tilt with the movement of said rocker plate in a vertical plane to allow the forward portion of said mower frame to rise and fall with the inequalities of the ground.

3. A mower comprising a wheeled frame, a source of power mounted thereon, a rocker plate having a centrally arranged horizontal pivot on the forward portion of said frame and free to oscillate in a vertical plane, brackets mounted on said plate and projecting forwardly thereon, a mower frame journaled in said brackets and having a swinging movement in its bearings toward or from the ground line and also being free to oscillate with said rocker plate on its pivot, a finger bar, and a cutter bar operatively connected with said source of power.

4. The combination, with a wheeled frame and a source of motive power mounted thereon, of a shaft mounted in the forward portion of said frame and having a driving connection with said source of motive power, a sleeve mounted on said shaft, a rocker plate mounted centrally, intermediate to its ends, on said sleeve and free to oscillate thereon in a vertical plane, a mower frame carried by said rocker plate, a crank disk mounted on said shaft, a finger bar, and a cutter bar having a driving connection with said crank disk.

5. The combination, with a wheeled frame and a source of motive power mounted thereon, of a rocker plate pivoted at the center of its longitudinal axis on the forward portion of said frame and free to oscillate in a vertical plane, a crank disk concentric with the pivot of said rocker plate, a mower frame supported by said rocker plate and free to oscillate therewith and also having a tilting movement toward and from the ground line independently of said rocker plate, a finger bar, and a cutter bar carried by said mower frame and having a pitman-rod connection with said crank disk.

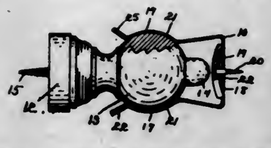
1,111,758. TREE-PAINT AND METHOD OF PREPARING SAME. WILLIAM B. OTWELL, Carlinville, Ill., assignor to Minnesota Linseed Oil Paint Company, Minneapolis, Minn., a Corporation. Filed Nov. 4, 1912. Serial No. 729,313. (Cl. 134—42.)

1. A tree paint consisting of glue, sulfur, tobacco dust, Venetian red, air slaked lime, water, coal tar and creosote intermingled and combined in the manner and approximately as specified.

2. The method of preparing a tree paint including tobacco dust as an insecticide, which comprises mixing together powdered glue, flour of sulfur, Venetian red and powdered tobacco dust, separately mixing air slaked lime and Venetian red, separately packaging approximately fourteen ounces of mixture number one and approximately five pounds two ounces of mixture numer two, and mixing said sets of ingredients with water immediately before using in the proportion of one gallon of water for each fourteen ounces of mixture number one and five pounds two ounces of mixture number two.

3. The method of preparing a tree paint including tobacco dust as an insecticide which consists in mixing together powdered glue, flour of sulfur, Venetian red and powdered tobacco dust, separately mixing air slaked lime and Venetian red, separately mixing coal tar and creosote, separately packaging approximately fourteen ounces of mixture number one, approximately five pounds two ounces of mixture number two, and approximately six ounces of mixture number three, and mixing said sets of ingredients with water immediately before using in the proportion of one gallon of water for each fourteen ounces of mixture number one, five pounds two ounces of mixture number two and six ounces of mixture number three.

1,111,759. DOOR-CATCH. GENIO S. PARKER, Hartford, Conn. Filed June 25, 1914. Serial No. 847,226. (Cl. 16—78.)



A door catch comprising a spring catch made of a strip of sheet metal bent into U-shape so as to provide a base portion and a pair of spring arms suitable for engaging with a bumper, the said base portion having a slot, a securing plate of arched form engaging with the outer face of the said base portion, and side ribs on the said securing plate engaging with the edges of the said base portion, and a screw passing through the said plate at the middle portion and through the said slot.

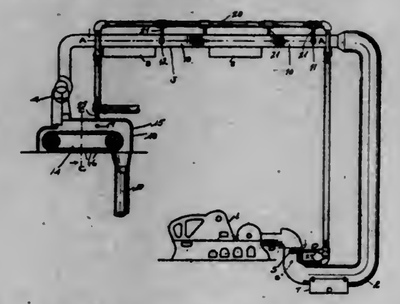
1,111,760. CORD-EYE SUPPORT. GEORGE E. PRENTICE, New Britain, Conn. Filed Oct. 2, 1913. Serial No. 792,948. (Cl. 241—10.)

1. A cord eye and a connection bar, the said cord eye having an upwardly extending shank provided with a head at the upper end, the said connection-bar consisting of a piece of sheet material bent upon itself to provide a double thickness of the said sheet material, the said shank being positioned at the middle portion of the said bar, extending at right angles thereto, the opposed faces of the said shank and bar being in abutment, and the said head being in bearing engagement with the opposed edge portions of the said bar.

2. In combination, a cord eye having a shank, a head at the free end of the said shank, and a connection bar, the said connection bar comprising a strip of sheet metal having a slot and a pair of wings, one on each side of the said slot, the said wings being closed against the shank with the said head engaged with the opposed edges of the said wings.

3. A cord eye and supporting bar therefor the said cord eye having a shank of sheet metal, and having the upper end bent over to form a head, the said supporting bar being formed of sheet metal and having two wings connected by apex portions and a slot separating the said two wings at the middle, between the said apex portions, the said shank extending across the supporting bar and being positioned in the said slot, and the said wings being closed against the said shank.

1,111,761. ART OF CLEANSING COTTON AND PREPARING IT FOR MARKET OR FOR CARDING. JOHN F. REARDON, Millville, N. J. Filed May 29, 1911. Serial No. 630,140. (Cl. 19—18.)



1. The herein described method of treating cotton and the like, which consists in conducting along a given course cotton which is free to disperse, and simultaneously dispersing said cotton by discharging against it a jet of compressed air in a direction other than that in which the cotton is being conducted.

2. The herein described method of treating cotton and the like, which consists in conducting the cotton through a chamber or casing whose sides confine it against escape, and dispersing said cotton in said chamber or casing by discharging a jet of compressed air against it in a direction other than that in which the cotton is being conducted.

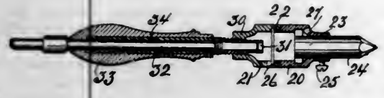
3. The herein described method of treating cotton and the like, which consists in conducting along a given course cotton which is free to disperse, and dispersing said cotton by discharging against it jets of compressed air directed transversely of the said course of the cotton.

4. The herein described methd of treating cotton and the like, which consists in conducting the cotton through a chamber or casing whose sides confine it against escape, and dispersing said cotton by discharging jets of compressed air against it in said chamber or casing and transversely thereof.

5. The herein described method of treating cotton and the like, which consists in conducting along a given course cotton which is free to disperse, and dispersing said cotton by discharging against it jets of compressed air from opposite sides of said course in directions other than that in which the cotton is being conducted.

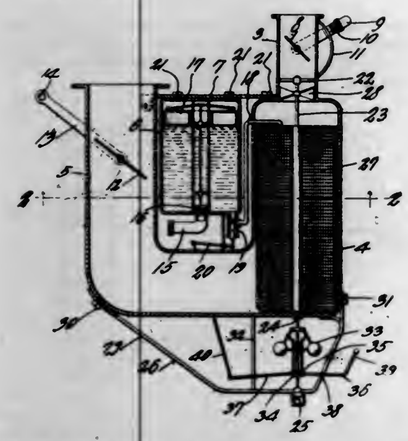
[Claims 6 to 11 not printed in the Gazette.]

1,111,762. SOLDERING-IRON. PAUL F. REICHHELM, Jersey City, N. J. Filed Sept. 10, 1908. Serial No. 452,362. (Cl. 158—26.)



The combination in a soldering iron of a combustion chamber compressing a front portion having a vent and a neck formed therewith, a rear portion for the chamber having a lighting aperture and detachably connected to the front portion, a soldering tip detachably connected to said neck extending from the outside of the neck into said front portion, a burner extending into the rear portion, a conduit detachably connected to said burner and a handle for said conduit.

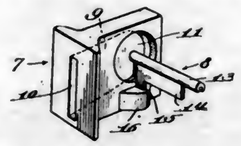
1,111,763. CARBURETER. JAMES CLARENCE ROGERS, Grayson, Ga. Filed Oct. 1, 1913. Serial No. 792,845. (Cl. 48—155.1.)



1. In a carbureter, the combination of a liquid fuel containing chamber with means disposed therein for maintaining the fuel at a constant level, a mixing chamber in communication with and adapted to receive liquid fuel from the said fuel containing chamber, air inlet and gaseous fuel outlet pipes communicating with the said mixing chamber at the upper and lower extremities thereof respectively, a shaft extending longitudinally of said mixing chamber, a foraminous blade carried thereby and arranged adjacent the fuel inlet of the mixing chamber, said foraminous blade intercepting the path of flow of liquid fuel through said mixing chamber to reduce the same to a spray, and a propeller carried by the said shaft disposed within the said air inlet pipe and rotated by the ingression of air taken with respect to said mixing chamber.

2. In a carbureter, the combination of a mixing chamber, an air inlet and a gaseous fuel outlet pipe communicating therewith, a liquid fuel containing chamber, a liquid fuel outlet pipe communicating with said fuel containing chamber and the upper portion of said mixing chamber, a valve disposed within said pipe controlling the flow of liquid therethrough, a propeller disposed within said air inlet pipe actuated by the passage of air therethrough, a shaft supporting and actuated by said propeller, a foraminous blade carried by said shaft and rotated thereby, said foraminous blade rotating to intercept the path of flow of liquid from said mixing chamber, fuel supply pipe, and means secured to said shaft and connected to the said valve controlling the position of said valve and positioning the same functional of the speed of rotation of said shaft.

1,111,764. FEEDER FOR CHECK-CONTROLLED APPARATUS. FREDERICK W. ROLLAND, Chicago, Ill., assignor to Henry Goetz, Chicago, Ill. Filed Sept. 27, 1910. Serial No. 584,115. (Cl. 194—4.)



1. The combination with a slug receiving chute structure having an opening in one of its walls through which a slug is adapted to be inserted flatwise, of a check-guide mounted exteriorly of the chute structure, and obstructing the said opening, and a check having a slot for receiving said guide and adapted to ride upon the latter while being digitally moved into said opening.

2. The combination with a slug receiving chute structure having an opening in one of its walls through which a slug is adapted to be inserted flatwise, of a check-guide mounted exteriorly of the chute structure, and extending into the said opening, and a check having a slot for receiving said guide and adapted to ride upon the latter while being digitally inserted through said opening.

3. The combination with a slug receiving chute structure having an opening in one of its walls through which a slug is adapted to be inserted flatwise, of a check-guide mounted exteriorly of the chute structure, and extending into the said opening, and terminating at the inner end of the latter, and a check having a slot for receiving said guide and adapted to ride upon the latter while being digitally inserted through said opening and off said guide.

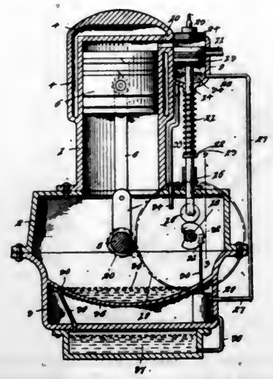
4. The combination with a chute having substantially parallel front and rear walls and having an opening in the front wall thereof for admitting a slug in a direction transverse to the face of the slug, of a guide extending within the said opening transversely of the front wall of the chute; a slug having a perforation adapted to coact with the said guide, enabling the slug to ride upon the said guide while being inserted through the opening; and a supporting member connecting the guide with the chute structure, the slug being slotted to straddle the said supporting member while being digitally inserted through the opening; the said guide terminating rearwardly substantially flush with the forward surface of the bore of the chute, whereby the slug may drop into the bore of the chute through the space back of the rear end of the said guide when digitally brought into registration with the said bore.

5. The combination with a chute having substantially parallel front and rear walls and having an opening in its front wall for admitting a slug with its face parallel to the front wall of the chute, of a slug adapted to slide edgewise within said chute, the said slug having a slot transversely of its faces; and a slug-selecting guide extending within the said opening and extending forwardly of the said front wall from a plane substantially flush with the forward edge of the bore of the chute; the said guide coacting with the said slot in the slug to hold the slug substantially in transverse alinement with the said opening until the slug registers with the bore of the chute.

[Claim 6 not printed in the Gazette.]

1,111,765. INTERNAL-COMBUSTION ENGINE. JOHN N. ROSE, Jr., Kinsley, Kans. Filed Nov. 19, 1913. Serial No. 801,923. (Cl. 121—115.)

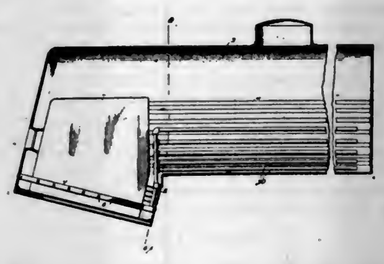
1. In an engine the combination of a cylinder, a piston therein, a valve casing communicating with said cylinder, piston valves mounted in said casing, one of said valves controlling the intake and the other controlling the exhaust, an oil pump, a pipe leading from said pump to said valve casing, an overflow oil pipe communicating with said casing, and having its discharge end disposed within the crank casing, and means for operating said valve.



2. In an engine and in combination with the cylinder, pistons, and means to operate the same, of a valve casing, said valve casing communicating with said cylinder, a piston valve mounted in said casing and adapted to control the intake of fuel, said valve comprising a piston head, a rigid stem, a roller mounted on the end of said stem, cams for operating said valve, an oil pocket in the casing, an oil pump for feeding oil to the pocket, an overflow pipe communicating with said pocket, said overflow pipe having its discharge end located in the crank casing.

3. In an engine the combination of a cylinder, a piston mounted therein, a valve casing communicating with said cylinder, an inlet valve and an exhaust valve mounted in said casing, an oil pocket for each valve in said casing, an oil pump, a pipe leading from the oil pump to each of said oil pockets, an oil reservoir, an overflow pipe communicating with each of said pockets and discharging into the crank casing of the engine, a return pipe leading from the crank casing to said oil reservoir, and means for operating said valve.

1,111,766. CIRCULATING SYSTEM FOR BOILERS. JAMES BLAKE SCOTT, Clearfield, Pa. Filed Mar. 29, 1913. Serial No. 757,630. (Cl. 122—59.)



1. In a boiler, the combination with a casing having a fire box therein, a water leg surrounding said fire box, and fire tubes extending from said fire box to the forward end of said casing; of a ring disposed in said water leg, said ring being provided with ports communicating with the water leg, and means to conduct water from the forward end of said boiler to said ring.

2. In a boiler, the combination with a casing having a fire box in the rear end thereof, a water leg formed in the casing surrounding said fire box, and fire tubes extending from said fire box to the forward end of said casing; of a hollow ring disposed in said water leg and having communication with the latter, and a plurality of conduits extending from a point adjacent the forward end of said boiler and having communication with the forward end of said ring.

3. In a boiler, the combination with a casing having a fire box formed in the rear end thereof, a water leg formed in the casing surrounding said fire box, and fire tubes extending from the fire box to the forward end of the casing; of a hollow ring member secured in said water leg adjacent the lower end thereof, said ring fitting snugly between the inner and outer walls of said water leg, the inner periphery of said ring being notched to provide substantial ports in the water leg and also forming a communication between the ring and said leg, and means to conduct water from the forward end of said boiler to said ring member.

4. In a boiler, the combination with a casing having a fire box formed in the rear end thereof, a water leg formed in the casing surrounding said fire box, and fire tubes extending from the fire box to the forward end of the casing; of a hollow ring member secured in said water leg adjacent the lower end thereof to provide a substantial wall in the length of the same, the inner periphery of the ring member being notched to provide ports between the portions of the leg above and below said ring member, said notches also providing means for communication between the interior of said ring member and said water leg, and conduits extending from points adjacent the forward end of the boiler and communication with the forward end of the ring member.

5. In a boiler, the combination with a casing having a fire box formed in the rear end thereof, a water leg formed in the casing surrounding said fire box, and fire tubes extending from said fire box to the forward end of the casing; of a hollow ring member secured in the water leg adjacent the lower end of the same to provide a substantial wall in the length thereof, the inner periphery of said ring member being notched to provide substantial ports between the portions of the leg above and below said ring member, said notched portions of the ring member also providing a means of communication between the interior of the ring member and said water leg, stand pipes mounted in the forward portion of the ring member, and intake pipes extending longitudinally of the boiler from a point adjacent the forward end thereof and connected to said stand pipes.

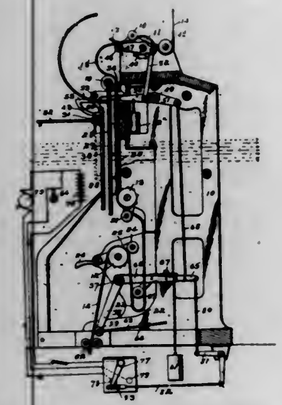
[Claim 6 not printed in the Gazette.]

1,111,767. FILM-FIRE-PROTECTION DEVICE FOR MOVING-PICTURE FILMS. DELBERT O. SEAMAN, Des Moines, Iowa, assignor of one-half to C. T. Smith, Des Moines, Iowa. Filed Oct. 14, 1912. Serial No. 726,147. (Cl. 88—17.)

1. In a moving picture machine of the type having a top feed sprocket and an intermittent feed sprocket, a shutter hinged at its upper edge, means for holding said shutter in its open position, a lever pivoted between its ends, one end of said lever being designed to stand normally in the path of a slack loop in a film between said sprockets, a link pivoted to the other end of said lever, a second lever pivotally mounted with one end adjacent to and in operative relation with said shutter holding means for moving the same to inoperative position when said second lever is moved to one position of its movement, said link being pivoted to said second lever so that should said slack loop become taut the end of said first lever within the loop will be engaged and lowered and the second lever will thereby be moved and will engage said first means for moving it to said inoperative position.

2. In a moving picture machine of the type having a top feed sprocket and an intermittent feed sprocket, a shutter hinged at its upper edge, means for holding said shutter in its open position, a lever pivoted between its ends, having one end arranged to be within the slack portion of a film between said sprockets, a second lever having one end adjacent to and in operative relation with said

shutter holding means for moving the same to inoperative position when said second lever is moved to one position of its movement, a link pivoted to the other end of said first lever and to said second lever so that when the slack portion of the film becomes taut the end of the first lever within said slack portion is moved and said second lever is thereby moved to position for moving the shutter holding means to inoperative position, an electric circuit for furnishing power to operate the machine, a switch therein, mechanism for connecting said second lever with said switch so that when said second lever is moved to its last described position the switch is moved to position for breaking the circuit.



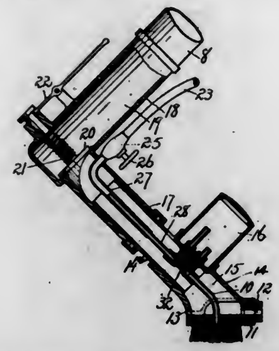
3. In a moving picture machine of the type having intermittent and take-up feed sprockets, a hinged shutter, means for holding said shutter in open position, a lever pivoted between its ends, an arm on said lever arranged to be within a slack loop portion of a film between said sprockets, a second lever pivoted between its ends with one end adjacent to and in operative relation with said shutter holding mechanism, a link connecting said levers so that when said slack portion becomes taut, said first lever will move said link, thereby moving the second lever to position for engaging said shutter holding means and moving it to inoperative position.

4. In a moving picture machine, a hinged shutter, means for holding said hinged shutter open, a lever pivoted between its ends with one end adjacent to and in operative relation with a shutter holding means, a link pivoted to the other end of said lever, means for holding a portion of a film taut in the machine, a bell crank lever having one arm arranged to be engaged by said taut portion of the film for holding the lever in one position of its movement, means operatively connected with said lever for normally throwing said arm across the path of travel of the film should the tension of the film be released, means for operatively connecting said link with the other arm of said bell crank lever, so that should the tension on the film be removed, one arm of said bell crank lever is thrown into the path of the film, the other arm moves said last named means and said link for moving said first named lever to position for engaging said shutter holding means and moving it to inoperative position.

5. In a moving picture machine, a hinged shutter, means for holding the same in open position, means for holding a portion of a film taut in the machine, a lever designed to be engaged by said taut portion, means for normally moving said lever to a position extending across the path of travel of said taut portion, means for operatively connecting said lever with said shutter holding means so that if the taut portion should become slack or the film break, said shutter holding means will be released and said lever moved to its position extending cross the path of film travel.

[Claims 6 to 10 not printed in the Gazette.]

1,111,768. CLEANING APPARATUS. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 20, 1907. Serial No. 358,486. (Cl. 15—51.)



1. A cleaner including a head containing a chamber and having a brush and a mouth piece located appurtenant one to the other thereon, said mouth piece having a mouth opening into said chamber, a neck extending from the head into a tubular support, a connection on said support for attachment of an air pipe and means for supplying water to said brush.

2. A cleaner including a head, a brush located on the head, a neck extending from said head, a water supply pipe extending through said neck, a mouth piece having a mouth opening into an air chamber in said head, a tubular support to receive said neck, an extension within said support connected with the water supply, and means on said support for attachment of an air pipe.

3. A cleaner including a head with a brush secured thereto, a neck extending from said head, and having an air chamber, a water supply pipe extending within said neck and opening within the brush, a mouth piece having a mouth opening into the air chamber in the neck, a tubular support having an extension therein, said support and extension being rotatably connected with the neck and water supply pipe therein, a connection for a water supply to said support, and a connection for an air pipe to said support.

4. A cleaner including a head having a brush, means for supplying water within the brush, a suction device supported appurtenant to the brush, an extension to which the brush and suction device are secured, a valve for controlling the movement of air within said extension, a connection for a water supply pipe, and a connection for an air pipe, both connections communicating with the passage in said extension.

5. A cleaner including a head having a brush, means for delivering water within the brush, a suction device located appurtenant to the brush, an extension to which said brush and suction device are secured, a soap box mounted on the extension, said water supply extending through the soap box, means for connection of a water supply to said supply pipe, and means for connection of an air pipe to said extension.

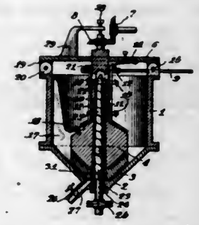
1,111,769. SWING. EMIL M. SPRICH, St. Louis, Mo., assignor to John Sprich & Sons, Belleville, Ill., a Firm. Filed Oct. 8, 1913. Serial No. 794,066. (Cl. 155—35.)

1. In a swing, a bracket, arranged to be non-rotatively secured to an overhead support, an open link pivotally secured to said bracket, a rod suspended from said link, a rocker of lesser dimensions than the open link pivotally secured to the bracket, a pitman pivotally secured to said rocker, a sleeve connected with said pitman and arranged to slide on said rod, and means for rocking said rocker, said open link capable of overriding the rocker when in operation.

2. In a swing, a swing rod, a rocking element a pitman pivotally connected with the rocking element, a sleeve arranged to slide on the swing rod and connected with the

pitman, means for rocking said rocking element and cushioning means for engagement with said sleeve, for the purposes stated.

1,111,770. GRINDING-MILL. HENRY C. STRACK, Owego, N. Y., assignor of twenty-four one-hundredths to Wallace D. Strack and twenty-four one-hundredths to Henry D. Strack, Brooklyn, N. Y. Filed July 28, 1913. Serial No. 781,689. (Cl. 83—13.)



1. A grinding mill having a casing with a fixed grinding surface; rotating superimposed grinders within the casing, means for rotating the grinders, said means rotating the grinders at different relative speeds.

2. A grinding mill having a casing with a fixed grinding surface; rotary superimposed grinders within the casing, and means for rotating the grinders in opposite directions to one another.

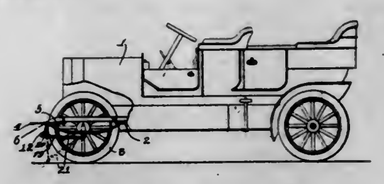
3. A grinding mill having a casing with a fixed grinding surface; rotary superimposed grinders within the casing, and means for rotating the grinders in opposite directions to one another at different relative speeds.

4. A grinding mill having a casing; a rotary grinder within the casing, a plow carried by the said grinder and rotating with it, a scraper engaging with the grinder and means for rotating the scraper independently of the grinder.

5. A grinding mill having a casing; rotary superimposed grinders within the casing, a hollow shaft for supporting the upper grinder, a conveyer within a hollow shaft for causing the material to pass through the hollow shaft from below the grinders to above the same, a shank on the conveyer, means on the shank for engaging with the lower grinder, means for rotating the shank and the hollow shaft, and a plow carried by one of the grinders and rotating with it.

[Claims 6 to 12 not printed in the Gazette.]

1,111,771. COMBINED BUFFER AND FENDER. WILLIAM WALL TALBOT, Chicago, Ill., and CHARLES A. SAWTELLE, Salt Lake City, Utah, assignors, by direct and mesne assignments, of one-half to Sidney H. Boynton, Chicago, Ill., and one-half to James H. Dow, Atlanta, Ga. Filed Nov. 6, 1911. Serial No. 658,628. (Cl. 105—130.)



1. An automobile fender of the class described comprising a plurality of articulated members adapted to be extended, releasable means affording support for one of said members, and levers pivoted to the automobile and to said releasably supported member, said levers acting to support said articulated members other than the releasably supported member when the fender is in retracted position.

2. A foldable automobile fender, comprising a plurality of bars, means for releasably locking said bars in retracted position, a yieldingly supported bumper, means for releasing said locking means when pressure is applied to said bumper, and a common means for throwing said bars to extended position and for limiting said movement.

3. A foldable automobile fender, comprising hingedly supported articulated members, levers engaging said members when in retracted position, means for releasably locking said members in retracted position, and means for automatically releasing said locking means, said levers acting to throw said members to extended position and to limit their extending movement.

4. A collapsible automobile fender of the class described, embracing hingedly supported articulated members, levers engaging said members when in retracted position, means for releasably locking said members in retracted position, and means for automatically releasing said locking means, said levers acting to throw said members to extended position to limit said extending movement and to brace the same in such position.

5. A device of the class described embracing an extensible automobile fender composed of normally collapsed articulated bars, a lock on one of said bars for locking the same, a yieldingly supported member in advance of the fender and acting with impact to actuate the lock to release the fender, springs acting to actuate a plurality of levers, said levers being pivotally engaged at a fixed point of support and engaged at the bottom of the fender and acting to swing said fender downwardly and rearwardly when extended, and to support and limit the extending movement of the same at the lowest edge thereof, and operative connections adapted for manual actuation to release and extend the fender at the will of the operator.

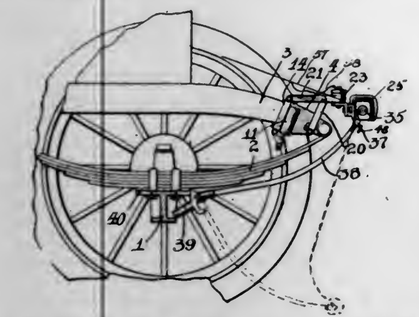
[Claims 6 to 10 not printed in the Gazette.]

1,111,772. LIFE GUARD OR FENDER. WILLIAM WALL TALBOT, Atlanta, Ga., assignor, by direct and mesne assignments, of one-half to Sidney H. Boynton, Chicago, Ill., and one-half to James H. Dow, Atlanta, Ga. Filed Mar. 25, 1912. Serial No. 686,173. (Cl. 105—130.)

1. A fender embracing a transverse buffing bar yieldingly supported in advance of a vehicle, an apron normally concealed and engaged at one of its ends therein, a manually actuatable pawl and ratchet for normally supporting said apron in closed relation, means on the buffing bar for retaining said pawl out of engagement, and means for projecting and extending said apron downwardly.

2. A vehicle, a buffing bar yieldingly supported transversely thereon in advance thereof, a spring roller supported on the buffing bar, an apron rigidly engaged at its upper edge thereto, an apron rod in the lower edge of the apron, a spring detent upon which said apron rod is sup-

ported and adapted to release said rod when said bar is actuated, arms hingedly engaged on the vehicle and rigidly connected with the apron rod and acting to hold the apron rod from rearward movement when the buffing bar is actuated to release said apron rod from said spring detent and thereafter to project said apron downwardly, and manually operated means for actuating the buffing bar independently of shock to release said apron rod for downward projection of the apron.



3. The combination with an automobile of substantially horizontal spring impelled bars yieldingly supported on and above chassis frame at the front thereof, a buffing bar extending transversely of the vehicle, pivoted connections between the buffing bar and said spring impelled bars permitting movement in either end of said buffing bar, a flexible fender normally concealed from view and engaged at its upper edge on the buffing bar, means normally supporting the same in closed relation thereon, but releasable by shock on said buffing bar, and arms acting in part by gravity to project the curtain downwardly to open the same when the supporting means are released.

4. In a device of the class described a yieldingly supported buffing bar, a flexible apron secured and concealed within said buffing bar, means for projecting said apron downwardly into extended position, mechanism on the buffing bar adapted to be released by shock on the buffing bar for releasing said apron to extended position, and manually operated means also acting to release said apron to extended position.

5. In a device of the class described a transversely extending buffing bar comprising a downwardly facing channel bar curved rearwardly at its ends and tapered, a spring roller journaled in said buffing bar, a curtain apron engaged along its upper edge on said roller, an apron rod engaged in the lower edge of the curtain, a forwardly facing detent on the rear side of the buffing bar acting to support said curtain rod when the curtain is closed, and arms hingedly engaged on the vehicle frame and rigidly secured on the apron rod, and acting to hold the same against the retraction of said detent to release said rod when the buffing bar is actuated, and acting partly by gravity to project the apron downwardly to extended position when the detent is retracted.

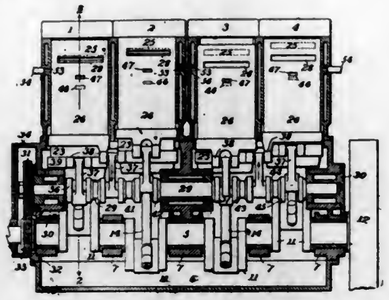
[Claims 6 to 15 not printed in the Gazette.]

1,111,773. HYDROCARBON-MOTOR. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 16, 1910. Serial No. 567,236. (Cl. 123—188.)

1. In a hydrocarbon motor, the combination with a cylinder and a piston therefor, of valve mechanism including a sliding valve for the cylinder, a starting port controlled by said valve, and a starting fluid supply connected to said port.

2. In a hydrocarbon motor, the combination with a cylinder and a piston therefor, of valve mechanism including a valve sleeve for the cylinder, a starting fluid supply, and means controlled by said valve sleeve for admitting starting fluid to said cylinder to start the motor.

3. In a hydrocarbon motor, the combination with a cylinder and a piston therefor, of valve mechanism including a valve sleeve surrounding the piston, a starting fluid supply, and means to admit the fluid to said cylinder through said valve sleeve.

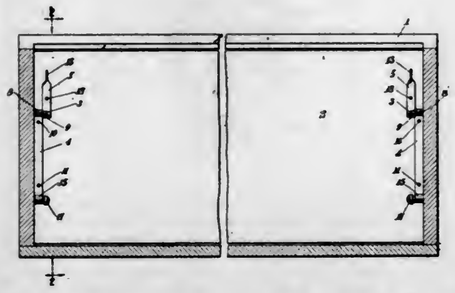


4. In a hydrocarbon motor, the combination with a cylinder and a piston therefor, of a plurality of valve sleeves surrounding the piston, a starting fluid supply, and means to admit the fluid to said cylinder through said valve sleeves.

5. In a hydrocarbon motor, the combination with a cylinder having inlet and exhaust ports, and a piston for the cylinder, of valve means including a sleeve for controlling said ports, and means controlled by said sleeve for admitting a starting fluid to the cylinder.

[Claims 6 to 36 not printed in the Gazette.]

1,111,774. HINGE CONNECTION. FREDERICK MERRILL TIBBOTT and ERIC LEMANDER, Boston, Mass., assignors to Emerson Piano Company, Boston, Mass., a Corporation of Illinois. Filed Dec. 18, 1913. Serial No. 807,524. (Cl. 16—11.)



1. A hinge connection comprising a pintle to be secured to one of the parts to be connected, and a hinge member and a separate locking member, to be independently secured to the other part, said members having plate portions disposed in a plane substantially parallel to the axis of the pintle, and extending on opposite sides thereof, said plate portions being each provided at one end with a bearing portion for engaging the pintle on one side only thereof, said locking member being movable longitudinally of the pintle into and out of engagement therewith.

2. A hinge connection comprising a pintle to be secured to one of the parts to be connected, and a hinge member and a separate locking member to be independently secured to the other part, said members having plate portions disposed in a plane substantially parallel to the axis of the pintle, and extending on opposite sides thereof, said plate portions being each provided at one end with a bearing portion for engaging the pintle on one side only thereof, said locking member being provided with means for pivotally mounting it in an axis perpendicular to its plate portion, whereby said locking member can be swung laterally, longitudinally of the pintle, into and out of engagement therewith.

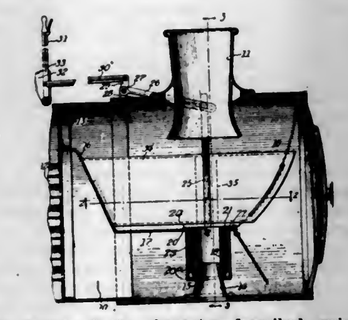
3. A hinge connection comprising a pintle to be secured to one of the parts to be connected, and a hinge member and a separate locking member to be independently secured to the other part, said members having plate portions disposed in a plane substantially parallel to the axis of the pintle and extending on opposite sides thereof, each of said plate portions being provided at one end with a bearing portion engaging the pintle on the opposite side thereof from that on which the plate portion extends, said hinge member being provided with means for securing it to its appropriate part, and the locking member being independently secured to said part by a pivot extending transversely of the plate portion thereof, whereby the locking member can be swung laterally, longitudinally of the pintle, into and out of engagement therewith.

4. A hinge connection comprising a pintle to be secured to one of the parts to be connected, and a hinge member and a separate locking member to be independently secured to the other part, said members having plate portions disposed in a plane substantially parallel to the axis of the pintle and extending on opposite sides thereof, each of said plate portions being provided at one end with a bearing portion engaging the pintle on the opposite side thereof from that on which the plate portion extends, said bearing portions of said members engaging the pintle at different points longitudinally thereof, and the bearing portion of the locking member engaging the pintle near the end, and a pivotal support for the locking member having its axis disposed perpendicularly to the plane of the plate portion thereof, whereby said locking member can be swung into engagement with and away from the end of the pintle.

5. In a hinge connection, the combination with a pintle to be secured to one of the parts to be connected, and a hinge member and locking member to be secured to the other part, said members being provided each with a bearing portion for engaging the pintle on one side only, said hinge member being provided with a yielding retaining arm provided with locking recesses for engaging a locking stud on the side thereof corresponding to the side of the pintle engaged by the bearing portion of the hinge member, and means for movably supporting said locking member whereby it may be moved out of operative position, to permit the hinge member to disengage the pintle and the retaining arm to simultaneously disengage its locking stud by a movement of the part connected therewith in the same direction.

[Claim 6 not printed in the Gazette.]

1,111,775. DRAFT-PRODUCING DEVICE. JAMES TROTTER, Chicago, Ill. Filed Feb. 2, 1914. Serial No. 815,883. (Cl. 110—152.)



1. A device of the character described embodying a smoke box having flues discharging thereinto, a stack leading from the box, a nozzle arranged at a low elevation in the lower portion of the box and in line with the stack to discharge thereinto through the smoke box, an imperforate partition extending downwardly and forwardly from a point above the flues and adjacent the ends of the flues, said partition having a portion extending forwardly between the nozzle and the stack and terminating short of the front of the box, a screen connected with the partition and extending upwardly to form an apertured barrier for the cinders to the stack, and an adjustable extension connected with and forming part of the nozzle.

2. A device of the character described embodying a smoke box having flues discharging thereinto, a stack leading from the box, a nozzle arranged at a low elevation in the lower portion of the box and in line with the stack to discharge thereinto through the smoke box, an imperforate partition extending downwardly and forwardly from a point above the flues and adjacent the ends of the flues, said partition having a portion extending forwardly between the nozzle and the stack and terminating short of the front of the box, a screen connected with the partition and extending upwardly to form an apertured barrier for the cinders to the stack, an adjustable extension connected with and forming part of the nozzle, and means for controlling said extension at will.

3. A device of the character described embodying a smoke box having flues discharging thereinto, a stack leading from the box, a nozzle arranged at a low elevation in the lower portion of the box and in line with the stack to discharge thereinto through the smoke box, an imperforate partition extending downwardly and forwardly from a point above the flues and adjacent the ends of the flues, said partition having a portion extending forwardly between the nozzle and stack and terminating short of the front of the box, a screen connected with the partition and extending upwardly to form an apertured barrier for the cinders to the stack, an adjustable extension connected with and forming part of the nozzle, and means whereby said extension may be adjusted at will from the engine cab, and maintained in its adjusted position.

4. A device of the character described embodying a smoke box having flues discharging thereinto, a stack leading from the box, a nozzle arranged at a low elevation in the lower portion of the box and in line with the stack to discharge thereinto through the smoke box, an imperforate partition extending downwardly and forwardly from a point above the flues and adjacent the ends of the flues, said partition having a portion extending forwardly between the nozzle and the stack and terminating short of the front of the box, a screen connected with the partition and extending upwardly to form an apertured barrier for the cinders to the stack, and an adjustable extension connected with and forming part of the nozzle, said extension embodying one or more tubular elements telescoping with the nozzle.

5. A device of the character described, embodying a smoke box having flues discharging thereinto, an imperforate partition extending from a point above the flues downwardly and forwardly to the front of the box to divide the box into two chambers, said partition having a perforated portion adjacent the front of the box, a stack leading from one of the chambers, a steam nozzle arranged at a low elevation in the other chamber said nozzle discharging through the other chamber and into the stack to entrain the gases from the box into the stack, and means constituting a portion of the nozzle whereby the extent of such entrainment may be controlled from the outside of the smoke box.

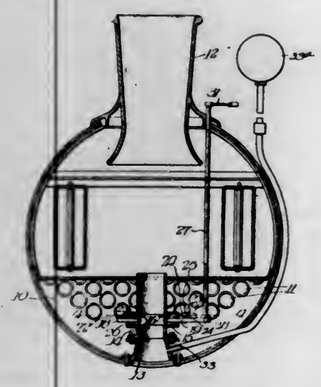
[Claims 6 to 23 not printed in the Gazette.]

1,111,776. DRAFT-REGULATING DEVICE FOR LOCOMOTIVE-ENGINES. JAMES TROTTER, Chicago, Ill. Filed May 1, 1914. Serial No. 835,603. (Cl. 110—152.)

1. In a variable exhaust for engines, an exhaust nozzle, opposed cut offs movable transversely of the nozzle toward and away from the center of the nozzle, chambers formed in the nozzle for receiving the respective cut offs, and spaced bearings disposed between the upper face of the cut offs and the upper wall of the respective chambers to reduce friction therebetween and to form a passageway for the steam across the upper face of the cut offs.

2. In a variable exhaust for engines, an exhaust nozzle, opposed laterally opening chambers having communication

with the nozzle, a cutoff embodying separated members, one of which members is arranged to move loosely in each of the chambers whereby the steam will pass through the chambers and around the cutoffs, and both members movable in directions toward and from the center of the nozzle, a journal connected with each of the members, each of the journals having a bearing in one of the walls of each of the chambers and extending through that wall to the outside of the chamber, and means exterior of the chambers and nozzle connecting the said members for movement in unison.



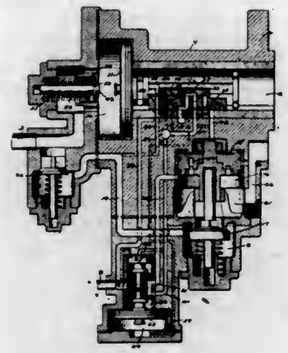
3. In a variable exhaust for engines, an exhaust nozzle, opposed laterally opening chambers having communication with the nozzle, a cutoff embodying separated members, one of which members is arranged to move in each of the chambers, and both members movable in directions toward and from the center of the nozzle, a journal connected with each of the members, each of the journals having a bearing in one of the walls of each of the chambers and extending through that wall to the outside of the chamber, spaced ribs connected with the cutoffs and extending lengthwise of the direction of the movement of the cutoffs, said ribs forming a passage for the steam from the chamber and across the face of the cutoff, means exterior of the chambers and nozzle connecting the said members for movement in unison, and means for actuating the members from the cab of the engine.

4. In a variable exhaust for engines, an exhaust nozzle, opposed laterally opening chambers having communication with the nozzle, a cutoff embodying separated members, one of which members is arranged to move in each of the chambers, and both members movable in directions toward and from the center of the nozzle, a journal connected with each of the members, each of the journals having a bearing in one of the walls of each of the chambers and extending through that wall to the outside of the chamber, spaced ribs on the upper face of each of the said members, said ribs extending lengthwise of the direction of the movement of the members and contacting with and movable over the top wall of the respective chambers to form a passage for the steam through the chambers and across the face of the cutoff, and means exterior of the chambers and nozzle connecting the members for movement in unison.

5. A variable exhaust for engines embodying an exhaust nozzle, opposed laterally extending chambers opening into the nozzle, a cutoff member in each chamber said members being separated from each other and movable toward and away from each other, means supporting the members from the end walls of the respective chambers and for sliding movement in the chambers, means holding the members spaced from the wall of the chamber to form a passage for the steam through the chamber and across the face of the member and means exterior of the nozzle and chambers for simultaneously and correspondingly actuating the members.

[Claims 6 and 7 not printed in the Gazette.]

1,111,777. TRIPLE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 17, 1908. Serial No. 458,270. (Cl. 188—15.)



1. In a triple valve device, a piston subject to the opposing pressures of the auxiliary reservoir and brake pipe, valve means operated thereby for controlling a passage leading to the brake cylinder, a valve device normally subject on opposite sides to fluid pressure only for controlling communication through said passage, and means operating upon a reduction in brake pipe pressure for venting fluid from one side of said valve device to operate the same and thereby close said communication.

2. In a triple valve device, a piston subject to the opposing pressure of the auxiliary reservoir and brake pipe, valve means operated thereby for controlling a passage leading to the brake cylinder, a valve device normally subject to opposing fluid pressures for controlling communication through said passage, and means operating upon a sudden reduction in brake pipe pressure to vent fluid from one side of said valve device to the local brake pipe vent passage and thereby actuate said valve device to close communication through said brake cylinder passage.

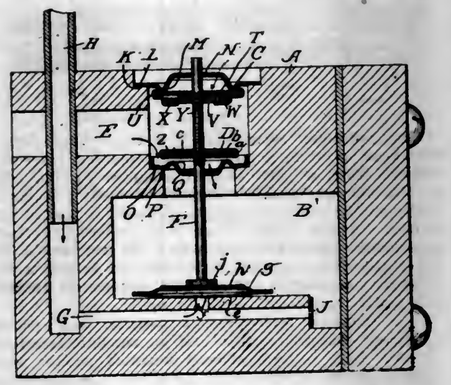
3. In a fluid pressure brake, the combination with a triple valve and brake cylinder, of valve means adapted to control communication from said triple valve and from an additional source of fluid pressure to the brake cylinder, a movable abutment normally subject to opposing fluid pressure for operating said valve means and having differential heads, one of which is normally subject on one side to atmospheric pressure, and means operating upon a reduction in brake pipe pressure for varying the fluid pressure on one side of the other head to actuate said valve means and thereby cut off communication from the triple valve to the brake cylinder and supply air from said additional source to the brake cylinder.

4. A triple valve device provided with a passage through which air is supplied to and released from the brake cylinder, valve means for controlling communication through said passage, a movable abutment normally subject in one direction to atmospheric pressure and the pressure in the system and in the opposite direction to the pressure in the system, and means operating in an emergency application of the brakes for venting air from one side of said abutment to actuate the same and thereby close communication through said brake cylinder passage.

5. In a fluid pressure brake, the combination with an auxiliary reservoir, brake cylinder, and a supplemental reservoir, of a triple valve device provided with a passage through which air is supplied from the auxiliary reservoir to and released from the brake cylinder, valve means adapted to control communication through said passage and the supply of air from the supplemental reservoir to the brake cylinder, a movable abutment having differential heads, one normally subject in one direction to atmospheric pressure and the other on opposite sides to fluid at supplemental reservoir pressure, and means operating upon a sudden reduction in brake pipe pressure for venting air from one side of said movable abutment to cut off communication from the triple valve device through said passage and supply air from the supplemental reservoir to the brake cylinder.

[Claims 6 to 16 not printed in the Gazette.]

1,111,778. VALVE MECHANISM FOR PNEUMATIC PLAYERS. EUGENE T. TURNEY, New York, N. Y., assignor to American Player Action Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 26, 1913. Serial No. 750,823. (Cl. 84—156.)



1. A valve mechanism of the class described including in combination a spindle and a pair of valves, said spindle passing through both valves and said valves being flexibly mounted on said spindle, each valve having both faces stiff and unyielding at the edge and having a yielding bearing portion.

2. A valve mechanism of the class described including in combination a valve composed of a sheet of yielding material forming the valve face, a sheet of metal having its edge turned over the edge of said yielding material to stiffen both faces of the latter, at the edge a yielding backing sheet fastened to said metal sheet and a spindle fastened to said backing sheet and passing freely through said metal sheet.

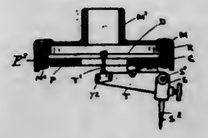
3. A valve mechanism of the class described including in combination a valve composed of a facing sheet of yielding material and a backing sheet of metal having its edge turned over the edge of said facing sheet and having tongues passing through the facing sheet and fastening the same to the backing sheet.

4. A valve mechanism of the class described including in combination a pair of valve seats facing each other and formed with raised ribs to make a line contact, a pair of valves between said seats, each valve having a bearing portion with a face of yielding material and an edge which is stiffened on both faces, and a spindle carrying said valves and having a separate flexible connection with each of said valves.

5. A valve mechanism of the class described including in combination a valve composed of a sheet of yielding material forming the valve face, a sheet of metal having its edge turned over the edge of said yielding material to stiffen both faces of the latter at the edge and a spindle passing freely through said metal sheet, said valve being flexibly mounted on said spindle.

1,111,779. PHONOGRAPHIC SOUND-BOX. JOHN H. VAN MATER, Atlantic Highlands, N. J. Filed July 5, 1913. Serial No. 777,537. (Cl. 181—11.)

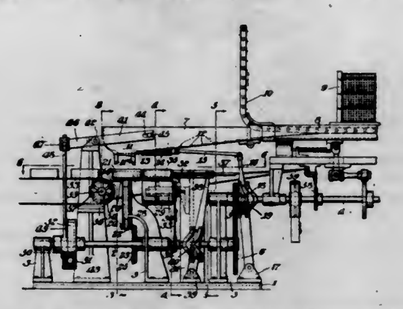
1. In a sound recording and reproducing machine, a stylus arm and a vibratory diaphragm united by a sound transmitting member made of thin material tapering in width and formed at its smaller end into a spiral with its wide dimensions perpendicular to the plane of the diaphragm to which it is attached.



2. In a sound recording and reproducing machine, a complete mechanism for receiving and transmitting sound vibrations and comprising an insulated stylus arm and fulcrum, an insulated vibratory diaphragm and a sound transmitting member uniting the stylus arm with the diaphragm and consisting of thin material, tapering in width and formed at its smaller end into a spiral with its wide dimensions perpendicular to the plane of the diaphragm to which it is attached.

3. In a sound recording and reproducing machine, a sound box, a vibratory diaphragm therein, a stylus arm, a transmitting member composed of tapering material and made partly into a spiral for connecting the diaphragm to the arm, and a body supported within but out of contact with said sound box for flexibly holding the stylus arm in place.

1,111,780. MACHINE FOR PACKING MATCHES. JACOB P. WRIGHT, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 22, 1912. Serial No. 727,117. (Cl. 144—61.)



1. In a machine for packing matches, a hopper having a single discharge opening through which the matches are delivered with their heads in one direction, a rotary tray-support beneath said opening, means for supplying a box-tray to said support, means for intermittently rotating said support, the periods of rest being at the end of each semi-rotation of the support, a cut-off gate for the discharge opening, and means to actuate the said gate to open and close the said opening when the tray-support is at rest, whereby successive quantities of matches can be delivered from the single discharge opening to the tray with the heads of one quantity oppositely disposed to those of another quantity.

2. In a machine for packing matches, a hopper having a discharge opening at one end thereof, said opening having depending side walls, a rotary tray-support beneath said opening, means for supplying a box-tray to said support, means for intermittently rotating said support, the periods of rest being at the end of each semi-rotation of the support, a cut-off gate for the discharge opening, means to actuate the said gate to open and close the said opening when the tray-support is at rest, and means for effecting a relative vertical movement between the discharge portion of the hopper and the tray-support.

3. In a machine for packing matches, an elongated trough-like hopper pivoted at one end and having a depending discharge portion at the other end thereof, means for supporting a box-tray beneath said discharge portion,

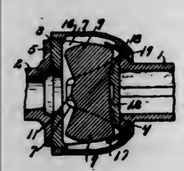
means for vertically moving the hopper to cause said discharge portion to pass into and from the box-tray thus supported, a cut-off gate for said discharge portion, and means for actuating said gate at predetermined intervals.

4. In a machine for packing matches, a hopper having a single discharge opening through which the matches are delivered with their heads in one direction, a rotary tray-support beneath said opening, a shaft for said support, a continuously driven shaft, gearing between said shafts adapted to intermittently rotate and lock the shaft for the tray-support, the periods of rest being at the end of each semi-rotation of the support, a cut-off gate for the discharge opening, and means to actuate the said gate to open and close the said opening when the tray-support is at rest.

5. In a machine for packing matches, a trough having a discharge portion at one end thereof, a gate for said portion, means whereby box-trays are consecutively moved into position beneath said discharge portion, and means for bodily lowering and raising the discharge end of the trough when each box-tray is positioned thereunder.

[Claim 6 not printed in the Gazette.]

1,111,781. UNIVERSAL JOINT. PRESTON M. YOUNG, Jackson, Mich. Filed Mar. 28, 1912. Serial No. 686,854. (Cl. 74—19.)



1. In a universal joint, the combination of the driving and driven members each having a pair of arms provided with longitudinal slot-like bearings and curved bearing surfaces between the arms, and a coupling member having transversely disposed curved bearings coacting with the bearing surfaces between the arms of said driving and driven members and pairs of flat radially disposed cross arms disposed in said slot-like bearings of said driving and driven member arms.

2. In a universal joint, the combination of the driving and driven members each having a pair of longitudinally slotted arms and curved bearing surfaces between the arms, and a coupling member having transversely disposed curved bearings at its ends coacting with said bearing surfaces between the arms of said driving and driven members and pairs of radially disposed cross arms engaging the said slots thereof.

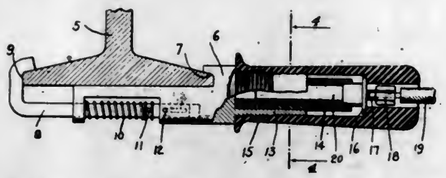
3. In a universal joint, the combination of the driving and driven members, each provided with a pair of arms and curved bearing surfaces between the arms, the arms being longitudinally slotted, and a coupling member having curved bearings at its ends coacting with the bearing surfaces between said driving and driven member arms and pairs of flat radially disposed cross arms engaging said slots of said driving and driven members, the sides of the cross arms being in bearing engagement with the sides of the slots.

4. In a universal joint, the combination of the driving and driven members, and a coupling member having pairs of radially disposed cross arms engaging said driving and driven members and transversely disposed cylindrically curved segmental end bearings, said driving and driven members being provided with cylindrically curved bearing seats for the said end bearings of said coupling member and with longitudinal slot-like bearings for the said radial arms thereof.

5. In a universal joint, the combination of the driving and driven members each having a pair of arms provided with longitudinal slot-like bearings and curved bearing surfaces between the arms, and a coupling member having pairs of radially disposed cross arms disposed in said slot-like bearings of said driving and driven member arms and curved end bearings coacting with the bearing surfaces between the arms of said driving and driven members.

[Claims 6 to 9 not printed in the Gazette.]

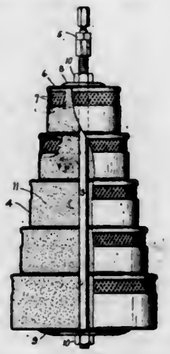
1,111,782. CONNECTOR. WILLIAM C. BANKS, New York, N. Y., assignor, by mesne assignments, to N-W Equipment Co., Inc., New York, N. Y., a Corporation of New York. Filed July 29, 1913. Serial No. 781,776. (Cl. 173—273.)



1. A connector comprising a metallic body-portion having an engaging surface and an annular, exteriorly-threaded boss, a hook slidably mounted on the body-portion and in electrical contact therewith, a spring acting on the hook and tending to move it toward said surface, a hollow handle of insulating material interiorly-threaded for detachably mounting it on said boss, a contact stationarily mounted within the handle and a fuse inclosed by the handle and engaging said contact and said body-portion, substantially as set forth.

2. A connector comprising a metallic body-portion having an engaging surface and an annular, exteriorly-threaded boss, a hook slidably mounted on the body-portion and in electrical contact therewith, a spring acting on the hook and tending to move it toward said surface, a tube of insulating material extending within the boss, a fuse in said tube, a hollow handle of insulating material inclosing said fuse and tube and interiorly-threaded to coact with said thread on the boss and a contact mounted within the handle in position to engage one end of the fuse and force the other end thereof into engagement with the body-portion, substantially as set forth.

1,111,783. GROUND CONNECTION. WILLIAM C. BANKS, New York, N. Y., assignor, by mesne assignments, to N-W Equipment Co., Inc., New York, N. Y., a Corporation of New York. Filed Sept. 5, 1913. Serial No. 788,202. (Cl. 173—31.)



1. A ground connection comprising a central rod adapted to have a wire connected to its upper end and a plurality of receptacles secured upon the rod in electrical contact therewith and in engagement with each other, said receptacles increasing in diameter from the top downward and each of them being perforated so that water may overflow from each into the next lower one, substantially as set forth.

2. A ground connection comprising a central rod adapted to have a wire connected to its upper end and a plurality of receptacles secured upon the rod in electrical contact therewith and in engagement with each other, said receptacles increasing in diameter from the top downward and each of them having the side walls thereof perforated adjacent to the upper edge thereof, substantially as set forth.

3. A ground connection comprising a central rod adapted to have a wire connected to its upper end and a plurality of receptacles secured upon the rod in electrical contact therewith, each of said receptacles having a removable cover which is in engagement with the bottom of the next higher receptacle, which extends beyond the bottom of the next higher receptacle and which has a multiplicity of perforations in the portion thereof extending beyond the next adjacent receptacle, substantially as set forth.

4. A ground connection comprising a central rod adapted to have a wire connected to its upper end and a plurality of receptacles secured upon the rod in electrical contact therewith, said receptacles increasing in diameter from the top downward and each of them having a perforated top and a multiplicity of perforations in the side wall adjacent to the top, substantially as set forth.

1,111,784. PILE-PULLER. ROY J. BLACKBURN, St. Louis, Mo., assignor of one-half to George G. Prendergast, St. Louis, Mo. Filed May 31, 1911. Serial No. 630,480. (Cl. 57—19.)

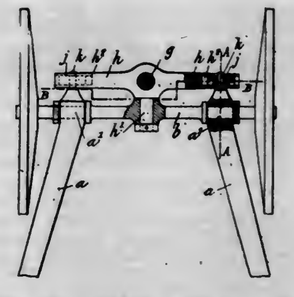
In a pile puller, a tripod, a tackle supported by and overhead the tripod and arranged to be connected with a hoisting machine, and a tackle suspended from the tripod and arranged to be connected with a pile and said hoisting machine, whereby a pile may be first acted upon by said suspended tackle and then acted upon by said overhead tackle.

1,111,785. WHEELED GUN-CARRIAGE. EMILE BOURDELLES, Paris, France, assignor to Schneider & Cie., Paris, France. Filed May 21, 1913. Serial No. 768,953. (Cl. 89—40.)

1. In a wheeled gun carriage, a supporting frame comprising anchoring members revolubly mounted on the carriage axle and another member revolubly mounted on the forward side of said axle and directly engaging each of the first-named members to adapt the frame to conform with ground conformations differing from those on which the wheels may rest.

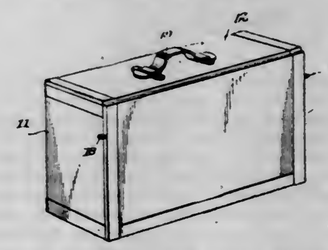
2. In a wheeled gun carriage, a supporting frame comprising anchoring members hinged to the carriage axle and another member having a pivot connected with the carriage axle on its forward side and having yielding connections with the ends of said members adapting the frame to take positions in conformity with ground conformations independent of the position of wheels and axle of the gun carriage.

3. In a wheeled gun carriage, a supporting frame comprising anchoring members hinged to the carriage axle and a base member having a pivot connection with the carriage axle, connections between the front ends of said members



and said base, each connection comprising a pivot in one of said elements and a slidable bearing housed in the other element adapting the frame to take positions in conformity with the ground conformations independent of the position of the wheels and axle of the gun carriage.

1,111,786. COLLAPSIBLE PERAMBULATOR. MICHAEL BRAHAM, New York, N. Y. Filed Nov. 6, 1913. Serial No. 799,578. (Cl. 21—83.)



1. A perambulator of the character described comprising a folding body portion, the sections of said body portion being connected for free pivotal movement whereby the outer faces of the sections of said body portion when in a folded position will form the inner faces of said body portion when in a set-up position, supporting means for said body portion, and carrying means connected with the inner face of one of said sections.

2. A perambulator of the character described comprising a body portion formed of a plurality of sections, means for pivotally connecting said sections to permit free pivotal movement of said sections whereby the outer faces of the sections when said perambulator is in a folded position will form the inner faces of said sections when said perambulator is in a set-up position, foldable supporting means for said body portion, and carrying means connected with the inner face of one of said sections.

3. A perambulator comprising a foldable body portion, said body portion comprising a bottom, side walls pivotally connected with said bottom, a back wall pivotally connected with said bottom, a back pivotally connected with said back wall, means for regulating the angle of said back, a foot rest pivotally connected with said bottom, and foldable supporting and operating means for said body portion.

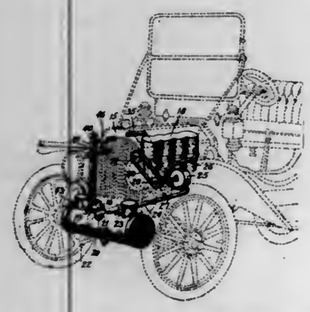
4. A perambulator comprising a body portion, said body portion comprising a plurality of pivotally connected sections, means for holding the back of said body portion in an angularly adjusted position, a pair of supporting legs pivotally connected with the bottom of said body portion, supporting means carried by said legs, braces pivotally connected with the said legs and provided with longitudinally extending slots, the free end of one of said braces being reduced to form a finger passing through the slot of

the remaining brace, a latch carried by the bottom of said body portion and passing through the slot of said first mentioned brace to releasably engage the same and hold said braces in a set position and means for operating said perambulator.

5. A perambulator comprising a body portion, supporting legs pivotally connected with said body portion, support means carried by said legs, bracing bars pivotally connected with said legs and having their free ends constructed for interlocking engagement, means carried by said body portion for releasably engaging said braces to releasably hold the braces in a set position, and operating means for said perambulator carried by said body portion.

[Claims 6 to 12 not printed in the Gazette.]

1,111,787. WATER-COOLING SYSTEM FOR AUTOMOBILE-ENGINES. JOHN W. DALMAN, Chicago, Ill. Filed Feb. 19, 1912. Serial No. 678,449. (Cl. 123—170.)



1. In a device of the class described, an engine, a cooling system comprising a water jacket, a radiator, a reservoir at a lower level than said radiator, and a duct leading from the lower part of said radiator upward to a point adjacent the top thereof, a second duct communicating with the upper part of said first mentioned duct and with said reservoir, and means for stopping the flow of water from said radiator through said ducts when the water in said radiator has drained to a predetermined level.

2. In a device of the class described, an engine, a cooling system comprising a water jacket, a radiator, a reservoir at a lower level than said radiator, a duct leading from the lower part of said radiator upward to a point adjacent the top thereof, a duct communicating with the upper part of said first mentioned duct and with said reservoir, and a duct leading directly from the lower part of said radiator to said reservoir.

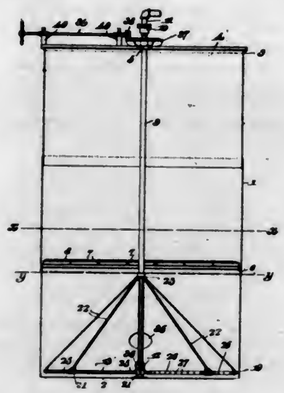
3. In a device of the class described, an engine, a cooling system comprising a water jacket, a radiator, a reservoir at a lower level than said radiator, means for permitting a flow of water from the lower part of said radiator to said reservoir, and means for permitting an additional flow of water from said radiator to said reservoir when the water level in said radiator reaches a predetermined level.

4. In a device of the class described, a cooling system comprising a water jacket, a radiator, a reservoir at a lower level than said radiator, a pump, a duct leading directly from the lower part of said radiator to said reservoir, said duct being of insufficient size to conduct the normal flow caused by said pump, and a second larger duct leading from said radiator to said reservoir, said second duct being operative only when said radiator is substantially full of water.

5. In a device of the class described, an engine, a cooling system comprising a radiator, a water jacket, a duct leading from said water to said radiator, a reservoir at a lower level than said radiator, means for permitting a flow of water from the lower part of said radiator to said reservoir, additional means for permitting a flow of water from said radiator to said reservoir when the water level in said radiator reaches a predetermined level, and a pump for forcing water from said reservoir through said jacket and into said radiator.

[Claims 6 and 7 not printed in the Gazette.]

1,111,788. CHEMICAL-MIXER. CLAUDE WILSON EWING, Toledo, Ohio. Filed Apr. 30, 1913. Serial No. 764,553. (Cl. 23—3.)



1. A mixing apparatus, comprising a casing, a grating dividing said casing into upper and lower chambers, the upper chamber constituting a magazine and the lower an agitating chamber, an agitator in the lower chamber and means for supplying steam to said agitator, substantially as described.

2. In a mixing apparatus, a casing, a grating dividing said casing into upper and lower chambers, the upper chamber constituting a magazine and the lower an agitating chamber, an agitator in said lower chamber and means for supplying steam to said lower chamber, substantially as described.

3. In a mixing apparatus, a casing, a grating dividing said casing into upper and lower chambers, an agitator in the lower chamber, means for supplying steam to said lower chamber, a drain pipe, and a decanting pipe swiveled to the end of said drain pipe, substantially as described.

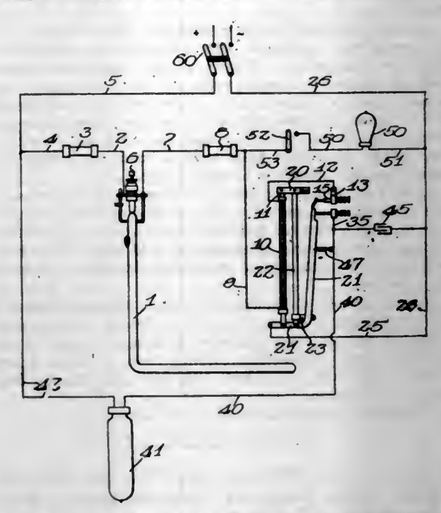
4. In a mixing apparatus, a casing, and an agitator therein, said agitator comprising a vertically disposed rotary steam pipe, a hub on the lower end of said pipe, a plurality of radially disposed branch pipes, each provided with a plurality of perforations and an angularly disposed blade fixed to each of said branch pipes, the lower forward edges of said blades extending below the horizontal plane of the lower sides of said pipe and the upper edges extending above said pipes, substantially as described.

5. In a mixing apparatus, a casing, and an agitator therein, said agitator comprising a vertically disposed rotary steam pipe, a hub on the lower end of said pipe, a plurality of radially disposed branch pipes each provided with a plurality of perforations and an angularly disposed perforated blade fixed to each of said branch pipes, the lower forward edges of said blades extending below the plane of the lower faces of said pipes and the upper edges extending above said pipes, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,111,789. THERMAL RELAY. THOMAS B. FREAS, East Orange, N. J., assignor to V. Weber & Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1911. Serial No. 663,951. (Cl. 177—128.)

1. A thermal relay comprising a main circuit, a relay circuit, a thermal switch controlling said relay circuit, and means operated by said relay circuit for interrupting first the main circuit and then the relay circuit with an appreciable lapse of time intervening, whereby the relay circuit remains energized long enough to insure the interruption of the main circuit and the relay circuit is finally interrupted for its own protection.



2. In combination, a main circuit, a relay circuit, a switch arm in series in the main circuit, a contact in the main circuit adapted to be engaged by said switch arm, an expansion rod adapted to operate said switch arm, a heating coil adapted to heat said rod for opening said switch arm, said heating coil being in series with the relay circuit, and a circuit breaker in said relay circuit operated by said switch arm, the parts being so timed that the switch arm in moving to open position opens first the main circuit and then the relay circuit, whereby the opening of the main circuit is insured and the heating coil in the relay circuit is protected against overheating.

3. In combination, two parallel electrical circuits, one forming a controlling circuit and the other a controlled circuit, a translating device in the controlled circuit, a main switch adapted to open and close both of said circuits, a coil in series in the controlling circuit adapted to operate said switch, a thermo responsive switch also located in said controlling circuit, said main switch, in moving toward closed position, closing first the controlling circuit and then the controlled circuit and in moving to open position opening first the controlled circuit and then the controlling circuit.

4. The combination with the supply mains of an electric circuit, of two contacts, a normally closed switch arm electrically connected to one of said mains and when in completely closed position engaging both of said contacts, said arm being adapted to leave first one and then the other of said contacts in moving to open position, a translating device electrically connected to the first-to-be-left-contact and electrically connected to the remaining supply main, a thermo responsive switch connected to the last-to-be-left-contact and to said remaining supply main, and an electrically operated device in circuit relation with said thermo responsive switch and controlled thereby for moving said switch arm to open position.

5. In an electric heater, a controlling circuit, a controlled circuit, a contact in series in each of said circuits, a main switch common to said circuits and adapted to be in engagement with both of said contacts at the same time, said switch being resilient and adapted to remain in engagement with one of said contacts after it has left the other, a heating element in the controlled circuit, a coil located in the controlling circuit and arranged to operate the main switch and a thermo responsive switch also located in the controlling circuit for opening and closing the same.

[Claims 6 to 15 not printed in the Gazette.]

1,111,790. ELECTRIC HEATER. WILLIAM H. FULTON, New York, N. Y. Filed Aug. 26, 1908, Serial No. 450,337. Renewed Feb. 20, 1914. Serial No. 820,049. (Cl. 219—63.)

1. An electric heater having an outer radiating pipe, a plurality of sections of lining of electrically insulating and heat transmitting material arranged end to end within the pipe, and an inner current-carrying conductor within the lining; substantially as described.

2. An electric heater having an outer radiating pipe, a plurality of sections of lining of electrically insulating and heat transmitting material arranged end to end within the pipe, and an inner current-carrying conductor within the lining, said current-carrying conductor consisting of naked coiled wire; substantially as described.

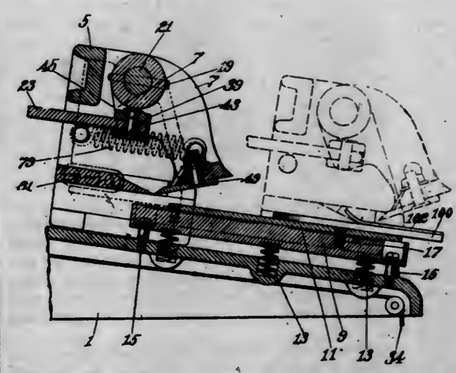
3. An electric heater having an outer radiating pipe, a lining of electrically insulating and heat-transmitting material, an inner current-carrying conductor within the lining, a terminal plug carrying a binding post and a protecting end-piece for said terminal; substantially as described.

4. An electric heater having an outer radiating pipe, a lining therefor made up in sections, spacing pieces for the several sections, and a current-carrying conductor made up of coils or convolutions engaged by the spacing pieces, whereby the length of conductor in any individual section of the lining may be varied by appropriately distending the convolutions therein; substantially as described.

5. An electric heater having an outer radiating pipe, a lining therefor made up in sections of electrically insulating and heat-transmitting material, said sections being recessed at one end and having a hollow interior bore of less diameter than the recess, slotted disks bearing against the ledges constituting the bottoms of the recesses, and a current-carrying conductor made up of coils or convolutions, said conductor being straightened out at intervals so as to pass through the slots of the disks; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,111,791. MACHINE FOR OPERATING UPON SOLES. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 11, 1911. Serial No. 664,965. (Cl. 12—67.)



1. A machine of the class described having, in combination, a bed for supporting a piece of stock, a knife, yielding means for permitting relative movement in a given direction between said bed and knife, and means for caus-

ing relative movement in another direction between said knife and bed first to bring the knife above the stock and then to cause the knife to shave off a portion of the stock.

2. A machine of the class described having, in combination, a bed for supporting a piece of stock, a knife, yielding means for permitting relative movement between said bed and knife, and means for moving said knife backforemost over said stock and then edge-foremost to save off a portion of said stock.

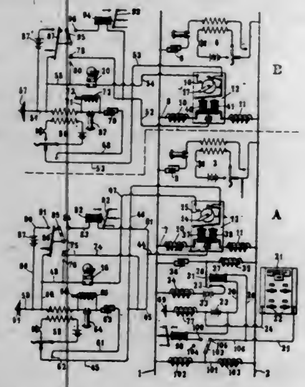
3. A machine of the class described having, in combination, a bed for supporting a piece of stock, a knife located in front of said stock with its back presented toward said stock, and means for causing the knife to traverse the stock back foremost and then for reversing the direction of movement to cause the knife to enter the stock.

4. A machine of the class described having, in combination, a bed for supporting a piece of stock, springs arranged to permit the bed to yield, a knife arranged at an angle to the surface of the bed and having its back toward said stock, the edge of the knife being located nearer to the surface of the bed than is the upper surface of the stock, and means for causing the stock to be traversed by the knife first in a direction to cause the bed to yield and then in a direction to cause the knife to enter the stock.

5. A machine of the class described having, in combination, a bed for supporting a piece of stock, a knife arranged at an angle to the surface of the bed and having its back toward said stock, the edge of the knife being located near to the surface of the bed than is the upper surface of the stock, springs arranged to permit relative yielding movement between said knife and bed, and means for causing the stock to be traversed by the knife first in a direction to cause the bed to yield and then in a direction to cause the knife to enter the stock.

[Claims 6 to 24 not printed in the Gazette.]

1,111,792. SELECTIVE SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Original application filed Mar. 28, 1910, Serial No. 552,054. Divided and this application filed Mar. 8, 1911. Serial No. 613,011. (Cl. 177—342.)



1. In a system of the class described, in combination, a line comprising a metallic pair, selective signaling means in bridge of said line, means for impressing signaling impulses over said metallic pair to operate said selective means, a ground connection for the opposite sides of said line, and means in said ground connection for controlling said means.

2. In a system of the class described, in combination, a line comprising a metallic pair, a plurality of selectors connected in bridge of said line, a ground connection for the opposite sides of said line near each selector, a source of current supply for said line, means for impressing signaling impulses from said source of supply to said line to operate said selectors, and a plurality of means, one at the central station and another in a ground connection adapted independently to control the operation of said selectors.

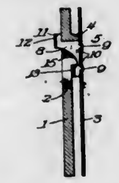
3. In a system of the class described, in combination, a line comprising a metallic pair, a plurality of selectors in bridge of said pair, a plurality of local signaling devices each of which is provided with a circuit adapted to be closed by one of said selectors, means associated with said line for operating said selectors, a ground connection common to the opposite sides of said line near each selector, and means associated with said ground connection for controlling the operation of said means.

4. In a system of the class described, in combination, a line comprising a metallic pair, a selector comprising a pair of coils connected in bridge of said line, a connection leading from a point intermediate said coils to ground, and means in said ground connection adapted to control the selectors.

5. In a system of the class described, in combination, a line comprising a pair of metallic sides, a selector comprising a pair of coils connected in bridge of said line, a normally open connection leading from a point intermediate said coils to ground, and means for closing said ground connection.

[Claims 6 to 12 not printed in the Gazette.]

1,111,793. SLOT AND SLUG FOR VENDING DEVICES. HENRY GOETZ, Chicago, Ill. Filed July 1, 1912. Serial No. 707,100. (Cl. 194—4.)



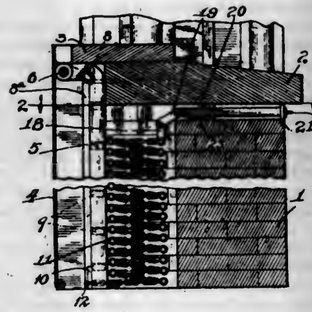
1. The combination with a chute having substantially parallel front and rear walls and having an opening in its front wall for the admission of a slug, of a slug adapted to slide within said chute, the said slug being slotted transversely of its faces; and a slug selector comprising guides mounted within the said opening and adapted to coact with the slots in said slug, one of the said guides extending forwardly from the rear wall of the chute and adapted to guide the slug into registration with the bore of the chute, the other of said guides being adapted to hold the slug substantially in transverse alinement with the said opening until the slug registers with the bore of the chute.

2. The combination with a chute having substantially parallel front and rear walls and having an opening in its front wall for the admission of a slug, of a slug adapted to slide within said chute, the said slug being slotted transversely of its faces; and having the slug selector comprising guides mounted within the said opening and adapted to coact with the slots in the said slug, one of the said guides extending forwardly from the rear wall of the chute and adapted to guide the slug into registration with the bore of the chute, the other of said guides being adapted to hold the slug substantially in transverse alinement with the said opening until the slug registers with the bore of the chute; the former of said guides being cut away to permit the entrance of a finger for digitally pressing the inserted slug into proper position for alining with the said bore of the chute.

3. The combination with a chute having substantially parallel front and rear walls and having an opening in the front wall thereof for admitting a slug in a direction transverse to the face of the slug, of a pair of slug-selecting guides mounted within the said opening transversely of the front wall of the chute, one of the said guides extending substantially to the rear wall of the chute, the other of said guides terminating substantially flush with the forward edge of the bore of the chute; and a slug having a pair of slots transversely of its face adapted to coact respectively with the said guides, whereby both of said guides will hold the slug substantially in transverse alinement with the said opening when the slug is digitally inserted until the slug registers with the bore of the chute, and whereby the latter of said guides will release the slug for admission by gravity into the bore of the chute when the slug has reached the said registering position.

4. The combination with a chute having an opening in one wall thereof for the admission of a disk, and a projection extending into the said opening, and into said chute, said projection comprising a vertically disposed rib having its upper edge disposed in contact with the wall of said opening and provided at its lower end with a ward of less length than said rib, of a disk corresponding in shape and size with said opening and adapted to be inserted therein, there being a slot through said disk extending inwardly from an edge thereof and laterally enlarged at its inner end for permitting said rib and its ward to pass therethrough in the direction of the longitudinal axis of said slug as the latter is inserted through said opening, said ward terminating in the plane of the inner face of the wall of the chute provided with said opening, whereby when said disk has passed through the latter it will drop by gravity edgewise into said chute.

1,111,794. FIRE-ESCAPE. WILLIAM F. HAJEK, Chicago, Ill. Filed Aug. 19, 1912. Serial No. 715,768. (Cl. 228—6.)



1. In a device of the class described a collapsible ladder concealed in a recess in a wall, and detachable retaining means for each end thereof, said means permitting extension of either end of said ladder for use and for holding the same in such position at the other end thereof.

2. In a device of the class described a collapsible ladder concealed in a recess beneath the window sill of a building, a bracket pivotally mounted on the inner wall of said building and releasably connected to one end of said ladder, a passage communicating with said recess in the wall of the building, and a detachable closure therefor connected to the other end of said ladder.

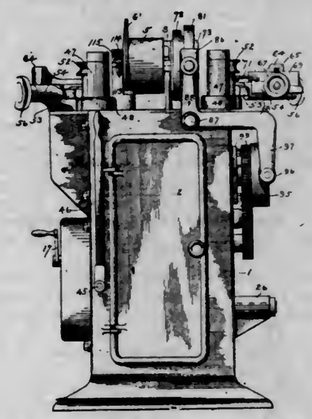
3. A device of the class described embracing a non-combustible ladder adapted to be folded in a recess beneath a window, a bracket releasably engaged to said ladder and permanently attached to the window and adapted to swing outwardly from the window to support the ladder free from the wall, a recess opening beneath the sill from the ladder containing recess, a closing member thereon provided with a hand pull and attached to the end of the ladder opposite to that end attached to the bracket whereby the ladder may be pulled outwardly beneath the sill, and swinging guide arms affording brackets to support said ladder free from the wall when drawn outwardly beneath the sill.

4. A fire escape embracing a non-combustible ladder concealed within a recess in a room and adapted to be extended for use from either one of its ends, the one end from inside the room, and the other end from outside the room, the unextended end serving to support the ladder in extended position.

5. A building equipped with fire escapes, one for each window, each comprising a fireproof ladder foldable in a recess beneath the window, a bracket on said recess adapted to be swung upwardly and outwardly through the window and to which one end of the ladder is engaged, means permitting extension of said ladder from outside the building, embracing a pull extending through a recess beneath the sill and detachably engaged to the other end of the ladder, guide arms adapted to engage the ladder and project the same free from the wall when so extended.

[Claims 6 to 9 not printed in the Gazette.]

1,111,795. WOOD-TURNING MACHINE. WILSON S. HAWKER, Dayton, Ohio. Filed May 5, 1910. Serial No. 559,631. (Cl. 142—29.)



1. In a turning machine, intermeshing gear sectors, feed rolls eccentrically carried by the sectors whereby an oscillation of the sectors will cause the rolls to move to and from each other, means for manually adjusting the sectors to adjust the feed rolls to predetermined normal relation one with the other, and yielding means tending to maintain the sectors in their predetermined adjusted positions against the tension of which the sectors may move from such predetermined adjusted positions and adapted to return the sectors to such predetermined adjusted positions after each movement therefrom, substantially as specified.

2. In a turning machine, a turning head, a plurality of feed rolls, adapted to rotate at uniform rates of speed, variable driving connections between the turning head and the rolls comprising two friction disks rotating in parallel planes with their adjacent faces in contact one with the other, a sliding head upon which one of the friction disks is carried, driving connections carried by said sliding head adapted to maintain operative connection with the feed rolls throughout all positions of adjustment, the sliding movement of said head being adapted to cause the disks to engage one with the other at different distances from the center of rotation thereby varying the relative rate of rotation of the turning head and feed rolls.

3. In a turning machine, a main frame, a turning head and a drive pulley mounted thereon, a friction disk revoluble with the pulley, guides within said frame, a movable head slidingly mounted on said guides, a driven friction disk carried by said head, a counter shaft carried in said head, a bevel pinion carried by said shaft and a second pinion carried by said head with which the first pinion meshes, a revoluble shaft journaled in the main frame driven by the second mentioned and on which the pinion is longitudinally movable upon adjustment of the sliding head, a plurality of feed rolls, driving connections between

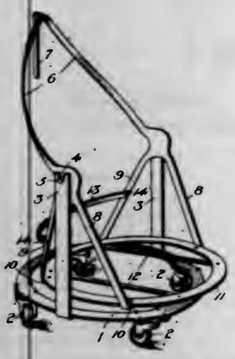
the revoluble shaft and feed rolls, the speed of such rolls being varied by the adjustment of the sliding head.

4. In a turning machine, a main frame, a turning head and a drive pulley mounted thereon, a friction disk revoluble with the pulley, guides within said frame, a movable head slidingly mounted on said guides, a driven friction disk carried by said head, means for shifting said head and thereby varying the engaging point of the friction disks, a transverse drive shaft, two oppositely disposed gears loosely journaled on said shaft, an intermediate driving pinion meshing with both said gears, driving connections between the driven friction disk and said driving pinion, a shiftable clutch adapted to engage either of the gears with the drive shaft, whereby the direction of rotation of the shaft may be reversed by alternately engaging the said gears therewith, a plurality of revoluble feed rolls and driving connections between the feed rolls and drive shaft.

5. In a turning machine, a main frame, a turning head and a drive pulley mounted thereon, a friction disk revoluble with the pulley, guides within said frame, a movable head slidingly mounted on said guides, a driven friction disk carried by said head, the point of engagement of the friction disks and thereby the relative speed of the disks being varied by the adjustment of the sliding head, a drive shaft, reversible driving connections between the driven friction disk and drive shaft and a plurality of feed rolls driven by said drive shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,111,796. BARREL-STAND. JOHN HOFFMAN, Port Huron, Mich. Filed Mar. 11, 1912. Serial No. 682,873. (Cl. 248—16.)

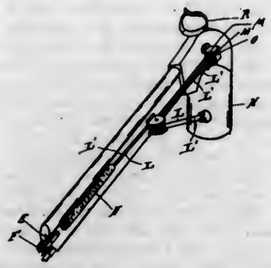


1. In a tilting barrel stand the combination with a base, of a barrel frame pivotally surmounting said base having an open bottom, tracks crossing said bottom from front to rear, a yoke having bifurcated lower ends secured to said bottom and adapted at its upper end to embrace the upper rear portion of a barrel, and a hand-lever pivotally suspended from the upper portion of said yoke.

2. In a tilting barrel stand the combination with a base, of a barrel frame pivotally surmounting said base having an open bottom, tracks crossing said bottom from front to rear, a yoke consisting of spaced members adapted to permit protrusion of the convex portion of barrels consigned thereto and having bifurcated lower ends secured to said bottom, and a hand lever pivotally suspended from the upper portion of said yoke.

3. In a tilting barrel stand the combination with a base of a barrel frame pivotally surmounting said base having an open bottom, tracks crossing said bottom from front to rear, a yoke consisting of oppositely disposed converging side members spaced and adapted to permit protrusion of the convex portion of barrels consigned thereto, said yoke having bifurcated lower ends secured to said bottom member, and a hand lever projecting from the back of said yoke.

1,111,797. COTTON-PICKER. HENRY S. HOPPER, Detroit, Mich. Filed Oct. 13, 1913. Serial No. 794,962. (Cl. 56—6.)



1. A picker, comprising an extended arm attachable to and directable by one arm of the operator, said extended arm providing a conduit, an endless conveyer chain movable inwardly through said conduit, picker points carried by said chain, a revoluble actuating member for said chain, and a flexible connection engaging said actuating member to operate the same and adapted for actuation by the free hand of the operator.

2. A picker, comprising an extended arm, said extended arm providing a conduit, an endless conveyer chain passing through said conduit, picker points on said conveyer chain, a revoluble shaft for actuating said conveyer chain, a pulley, a flexible connection passing over said pulley, and a clutch between said pulley and revoluble shaft for actuating the same in one direction.

3. A picker, comprising an extended arm, said extended arm providing a conduit, a conveyer chain extending through said conduit, picker points on said chain, a discharge tube at the inner end of said conduit, a revoluble tined wheel for disengaging the cotton locks from said picker, mechanism for simultaneously operating said chain and tined member, and a flexible connection for operating said mechanism adapted for manipulation by the free hand of the operator.

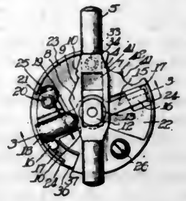
4. A picker, comprising an extended arm, said extended arm providing a conduit, a conveyer chain in said conduit, picker points on said conveyer chain, a discharge tube at the inner end of said conduit, a tined rotary member for disengaging the bolls from said chain and delivering the same into said discharge tube, mechanism for operating said chain and tined member, a flexible actuating connection, a pair of pulleys over which said flexible connection passes, a spring for returning the flexible connection, and clutches for imparting driving movement from said pulleys to said mechanism respectively in the outward and return movement of said flexible connection.

5. A picker, comprising an extended arm, said extended arm providing a conduit, a conveyer chain passing through said conduit, picker points upon said chain, a discharge tube at the upper end of said conduit, a revoluble tined doffer wheel for disengaging the cotton locks from the picker points, and strippers between said tines for disengaging the cotton therefrom, the ends of said strippers being free.

1,111,798. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 5, 1911. Serial No. 653,035. (Cl. 175—287.)

1. In an electric switch, in combination, a circular base, an operating member diametrically reciprocable across the same, a contact member pivoted centrally on said base and an operative connection between said members comprising a single peaked cam movable by one and a single spring-pressed device carried by the other resiliently engaging the cam.

2. In an electric switch, in combination, a base, a double-ended push-button operating member reciprocable across the same, an oscillating contact member pivoted on said base and movable in a plane parallel thereto, and an operative connection between said members comprising means to hold said contact member stationary during a predetermined movement of said operating member and to thereafter move the same with a quick snap action.



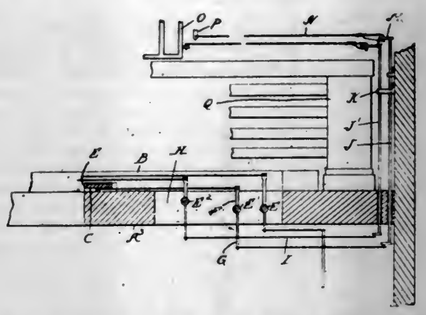
3. In an electric switch, in combination, a circular base, a double-ended push-button operating member diametrically reciprocable across the same, an oscillating contact member pivoted centrally on said base and movable in a plane parallel thereto and an operative connection between said members comprising means, including a single unyielding reciprocable cam and a single spring-pressed member in direct engagement, to hold said contact member stationary during a predetermined initial movement of said operating member and to thereafter move the same with a snap action.

4. In an electric switch, in combination, an oscillating contact member, a socket thereon, a ball within said socket and movable longitudinally thereof, a spring biasing said ball in one direction, a peaked cam member directly engaging said ball on said contact member, and means for moving said cam member to actuate said contact member.

5. In an electric switch, in combination, an oscillating contact member, a socket thereon, a ball within said socket and movable longitudinally thereof, a spring biasing said ball in one direction, a peaked cam member directly engaging said ball on said contact member, and push buttons for moving said cam member in opposite directions to impart a movement to said contact member in opposite directions.

[Claims 6 to 12 not printed in the Gazette.]

1,111,799. CONTROL MECHANISM FOR SELF-PLAYING MUSICAL INSTRUMENTS. RICHARD A. LEADBETER, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed July 16, 1912. Serial No. 709,688. (Cl. 84—160.)



1. A controlling mechanism for self-playing musical instruments which includes a key bed, a key frame positioned above the bed and keys comprising levers pivotally mounted upon the key bed below the key frame and movable in the plane of the bed, said bed including longitudinal bars, a plurality of bell crank levers supported by said bars, rods connecting the first mentioned levers with the bell crank levers, a plurality of vertically extending bell crank levers having an operative connection with the mechanism to be controlled and connections between the first mentioned bell crank levers and the second mentioned bell crank levers whereby actuation of the first mentioned levers will operate the bell crank levers to actuate the mechanism to be controlled.

2. A controlling mechanism for self-playing musical instruments which includes a key bed and a key frame mounted thereon, a series of levers extending transversely of the bed and pivotally connected thereto, said levers being movable between the frame and bed, said bed including longitudinal bars, rods connected to said levers and extending parallel with said bars, a plurality of shafts supported between the bars and extending transversely of the bed, bell cranks mounted on said shafts, rods connecting said levers with said bell cranks, said levers having portions which extend below the bed, means having an operative connection with the mechanism to be controlled, and an operative connection between the portions of said bell cranks which extend below the bed and said means whereby actuation of the levers will operate the mechanism to be controlled.

3. A controlling mechanism for self-playing musical instruments which includes a key bed, a key frame arranged above the bed, a plurality of levers pivotally supported on the bed and operating between the bed and frame, rock shafts supported by the frame and having an operative connection with said levers, a plurality of vertically extending rock shafts having an operative connection with the first mentioned rock shafts, said rock shafts at their upper terminals having crank arms and rods engaging said crank arms and having an operative engagement with the mechanism to be controlled.

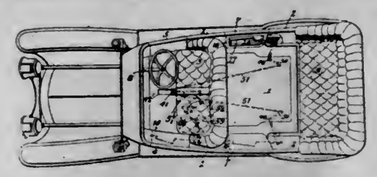
1,111,800. FUEL-BRIQUET COMPOSITION. WILLIAM LOESCH, Chicago, Ill., assignor of forty one-hundredths to George B. Storer, Chicago, Ill. Filed Apr. 14, 1913. Serial No. 761,125. (Cl. 44—1.)

1. A fuel briquet composition consisting of finely comminuted fuel, a binding agent consisting of cement and finely comminuted clay, a rapid non-explosive ignition agent consisting of potassium nitrate, in substantially the proportions set forth.

2. A fuel briquet composition consisting substantially of one hundred (100) parts by bulk of finely comminuted fuel, substantially twenty-five (25) parts by bulk of cement, substantially five (5) parts by bulk of finely comminuted clay, substantially one-half (½) of one part by bulk of potassium nitrate and twenty-five (25) parts by bulk of water.

3. A fuel for briquet compositions containing substantially one hundred (100) parts by bulk of finely comminuted fuel, substantially two (2) parts by bulk of coal oil, substantially twenty-five (25) parts by bulk of cement, substantially five (5) parts by bulk of finely comminuted clay, substantially one-half (½) of one part by bulk of potassium nitrate, and substantially twenty-five (25) parts by bulk of water.

1,111,801. DOOR-OPERATING DEVICE. CHARLES S. MACKEARNIN, Buffalo, N. Y. Filed Jan. 17, 1913. Serial No. 742,541. (Cl. 39—91.)



1. A door operating device comprising a hinge which pivotally connects one edge of the door with its wall, a locking device adapted to connect the other edge of the door with said wall, and means for operating said locking device comprising a sectional shifting rod which is normally arranged in line and adapted to abut, and the

front section of which is mounted to slide on the door and is connected with said locking device and the other rear section of which is mounted to slide on said wall, and means for reciprocating said shifting rod comprising a spring device which operates to yieldingly hold said rear rod section in its central normal position, a bearing head arranged on the rear end of the rear rod section, a rock shaft, and a shifting arm arranged on said rock shaft and adapted to engage with said head during its forward and backward strokes.

2. A door operating device comprising a hinge which pivotally connects one edge of the door with its wall, a locking device adapted to connect the other edge of the door with said wall, and means for operating said locking device comprising a sectional shifting rod which is normally arranged in line and adapted to abut, and the front section of which is mounted to slide on the door and is connected with said locking device and the other rear section of which is mounted to slide on said wall, a rock shaft, a rock arm arranged on said shaft and engaging said rear rod section, a link connected with said door and provided with a slot, and a rock arm arranged on said shaft and provided with a pin engaging with said slot.

3. A door operating device comprising a hinge which pivotally connects one edge of the door with its wall, a locking device adapted to connect the other edge of the door with said wall, and means for operating said locking device comprising a sectional shifting rod which is normally arranged in line and adapted to abut, and the front section of which is mounted to slide on the door and is connected wtih said locking device and the other rear section of which is mounted to slide on said wall, a rock shaft, a rock arm arranged on said shaft and engaging said rear rod section, a link connected with said door and provided with a slot, and a rock arm arranged on said shaft and provided with a pin engaging with said slot, said hinge having a frame which is mounted on said wall and comprising a fixed rear section upon which said shaft is mounted, and a detachable front part which carries the pintle of the hinge.

4. A door operating device comprising a plurality of coupling levers each of which is operatively connected with a door and provided with a socket, and an operating lever arranged between said coupling lever and capable of engaging the socket of either of said coupling levers by swinging the operating lever laterally and also capable of swinging forwardly and backwardly with the coupling levers while in engagement with one or the other.

5. A door operating device comprising a plurality of coupling levers each of which is operatively connected with a door, one of said coupling levers having a laterally opening socket and the other with a shoulder or hook, an operating lever capable of swinging forward and backward with said coupling levers and also laterally into engagement with said socket, and a latch mounted on the operating lever and adapted to engage said shoulder or hook for coupling the operating lever with said hook coupling lever.

[Claim 6 not printed in the Gazette.]

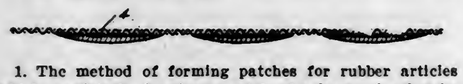
1,111,802. METHOD OF FORMING PATCHES FOR RUBBER ARTICLES. JOSEPH G. MOOMY, Erie, Pa. Filed Feb. 21, 1913. Serial No. 749,844. (Cl. 18—48.)

1. The method of forming patches for rubber articles which consists in forming a layer of raw rubber and a layer of stock compounded to vulcanize under heat; placing said layers together face to face; and vulcanizing and uniting the associated layers by heat to form a patch, having one surface vulcanized rubber and the other surface raw rubber.

2. The method of forming patches for rubber articles which consists in forming a layer of raw rubber a layer of stock compounded to vulcanize under heat and approximating the size of the layer of raw rubber, and a second layer of stock compounded to vulcanize under heat arranged on the first layer of vulcanizing stock, said second layer being of smaller dimensions than the first layer; placing the three layers together face to face with the two layers of vulcanizing stock in contact and the layer of raw rubber on the larger layer of vulcanizing stock; and vulcanizing and uniting the asosciated layers by heat while subjecting the layers to pressure and causing the edge to flow to form a patch with beveled edge and having one surface vulcanized rubber and the other surface raw rubber.

3. The method of forming patches for rubber articles which consists in forming a layer of raw rubber and a layer of stock compounded to vulcanize under heat; placing said layers together face to face; placing the exposed surface of the layer of raw rubber on a glazed fabric; placing the glazed fabric on an imperforate surface; and vulcanizing and uniting the associated layers by heat to form a patch having one surface vulcanized rubber and the other surface raw rubber, the surface of the raw rubber remaining detachably secured to the glazed fabric.

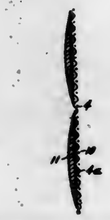
1,111,803. METHOD OF FORMING PATCHES FOR RUBBER ARTICLES. JOSEPH G. MOOMY, Erie, Pa. Filed Sept. 4, 1913. Serial No. 788,115. (Cl. 18—48.)



1. The method of forming patches for rubber articles which consists in forming a patch of a layer of vulcanizing stock and a layer of non vulcanizing stock, vulcanizing the vulcanizing layer in contact with the layer of non vulcanizing stock with the face of the non vulcanizing layer in contact with the fabric forming a mount for the patch and then air proofing the fabric.

2. The method of forming patches for rubber articles which consists in forming a patch of a layer of vulcanizing stock and a layer of non vulcanizing stock, vulcanizing the vulcanizing layer in contact with the layer of non vulcanizing stock with the face of the non vulcanizing layer in contact with the fabric forming a mount for the patch and then air proofing the fabric by the application of an air proofing substance in fluid state.

1,111,804. PATCH FOR RUBBER ARTICLES AND PROCESS OF MANUFACTURE. JOSEPH G. MOOMY, Erie, Pa. Filed Sept. 4, 1913. Serial No. 788,116. (Cl. 18—48.)



1. A patch for rubber articles having one face raw rubber and the opposite face vulcanized rubber formed by vulcanizing a layer of vulcanizing stock in contact with a layer of non vulcanizing stock, the raw rubber and vulcanizing rubber portions of the patch being thinner at the edge than in the body of the patch.

2. The method or process of forming patches for rubber articles which consists in forming a layer of raw rubber and a layer of stock compounded to vulcanize under heat and approximating the size of the layer of raw rubber; a second layer of stock compounded to vulcanize under heat arranged on the first layer of vulcanizing stock, said second layer being of smaller dimensions than the first layer; placing the three layers together face to face with the two layers of vulcanizing stock in contact and the layer of raw rubber on the larger layer of vulcanizing stock; and vulcanizing and uniting the asosciated layers by heat while subjecting the layers to pressure to form a patch having one surface vulcanized rubber and the other surface raw rubber with the edges of said patch beveled, the non vulcanized surface extending to the extreme edge of the patch.

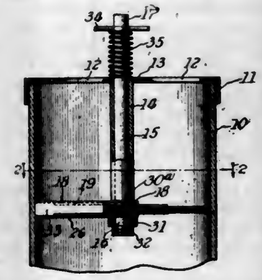
3. A patch for rubber articles having one face raw rubber and the opposite face vulcanized rubber formed by vulcanizing a layer of vulcanizing stock in contact with a layer of non vulcanizing stock, the raw rubber and vulcanizing portions of the patch forming a feather edge.

4. A patch for rubber articles having one face raw rubber and the opposite face vulcanized rubber and formed by vulcanizing a layer of vulcanizing stock in contact with a layer of non vulcanizing stock and an air proofing for the raw surface of the patch.

5. A patch for rubber articles having one face raw rubber and the opposite face vulcanized rubber and formed by vulcanizing a layer of vulcanizing stock in contact with a layer of non vulcanizing stock and air proofing for the raw surface of the patch, said air proofing comprising a fabric to which the raw surface is secured as the patch is vulcanized.

[Claim 6 not printed in the Gazette.]

1,111,805. ADJUSTABLE SHUT-OFF. SMITH PYKETT, Chicago, Ill. Filed Dec. 29, 1913. Serial No. 809,363. (Cl. 126—285.)



1. The combination of a plurality of concentric sectoral pieces, a collar formed at the apex of each piece, a shaft common to the pieces and to which the lowermost piece is fixed, a bearing for the shaft and to the lower end of which the uppermost sectoral piece is fixed, and means upon the collar of each piece coöperating with the adjacent piece for spreading the pieces about the shaft.

2. The combination of a plurality of concentric sectoral pieces, a collar formed at the apex of each piece, a shaft common to the pieces and to which the lowermost piece is fixed, a bearing for the shaft and to the lower end of which the uppermost sectoral piece is fixed, and means upon the collar of each piece coöperating with the adjacent piece for spreading the pieces about the shaft and for placing the pieces in a superposed position.

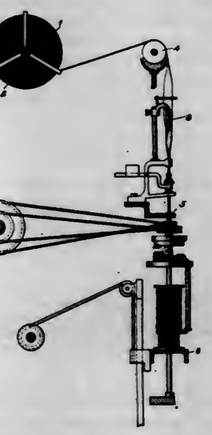
3. The combination of a plurality of concentric sectoral pieces apertured at their apices, a shaft engaging the apertures of the pieces, each of said pieces being provided with a curved aperture concentric with the shaft, projections upon the pieces each engaging the curved aperture of the adjacent piece, and a bearing for the shaft and to which the uppermost sectoral piece is fixed, the lowermost sectoral piece being fixed to the shaft.

4. The combination of a plurality of concentric superposed sectoral pieces, a collar formed at the apex of each piece, the collars being provided with alternately opposite segmental apertures, a projection upon each collar engaging the segmental aperture of the adjacent collar, a shaft common to all of the collars and to which the lowermost sectoral piece is fixed, and a fixed bearing for the shaft to which the uppermost sectoral piece is fixed.

5. The combination of a plurality of concentric sectoral pieces, a collar formed at the apex of each piece, a shaft engaging the collars and to which the lower sectoral piece is fixed, a sleeve forming a bearing for the shaft, each of said pieces being provided with a curved slot concentric with the shaft, the uppermost sectoral piece being fixed to the sleeve, and a projection upon each piece engaging the slot of the adjacent piece, of a thickness not greater than that of said adjacent piece and of a width less than the length of the curved slot in the adjacent piece.

[Claims 6 to 9 not printed in the Gazette.]

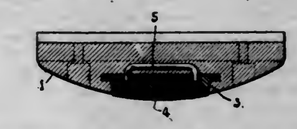
1,111,806. METHOD OF MANUFACTURING TUBULAR CONDUITS. WILLIAM C. ROBINSON, Pittsburgh, Pa. Filed Mar. 30, 1914. Serial No. 828,336. (Cl. 139—72.)



1. The herein described method of manufacturing flexible tubular conduits, which consists in twisting into cylindrical form a relatively wide strip of thin paper previously moistened by an adhesive solution, passing the twisted paper strip through a heating and drying oven, flattening the strip while in a heated condition, and weaving a conduit wherein the flattened strip forms a helical woof.

2. The herein described method of manufacturing flexible tubular conduits, which consists in twisting into cylindrical form a relatively wide strip of thin paper previously moistened by an adhesive solution, flattening and compressing the strip, and weaving a conduit wherein the flattened strip forms a helical woof.

1,111,807. PROCESS OF MAKING CHAFING-BLOCKS FOR RAILWAY ROLLING-STOCK. WILLIAM H. SELF, Webb City, Mo. Filed Sept. 20, 1913. Serial No. 790,861. (Cl. 22—204.)



1. The method of making chafing blocks which consists in casting a hard metal chafing plate onto the ends of a bond member so that the bond member is in the form of a loop extending from the inner face of said hard metal chafing plate, and casting a soft metal body block around

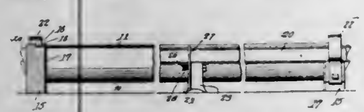
the side edges and inner face of said hard metal chafing plate so as to embed the loop of said bond in the soft metal body block.

2. The method of making chafing blocks which consists in forming a hard metal chafing plate, heating said hard metal chafing plate so as to expand it, then placing the hot and expanded chafing plate into a mold, and thereafter pouring molten metal around the side edges of said hot and expanded chafing plate, substantially as described.

3. The process of manufacturing locomotive chafing plates consisting in providing a mold with a chill member therein, casting a semi-steel metal against the chill member and around the ends of substantially U-shaped members to form a chafing plate member; cooling the body thus cast; reheating same to a dull redness; and while in this state casting a softer metal on the chafing plate member and about the U-shaped members, to firmly unite the whole; and allowing same to cool, substantially as described.

4. The process of manufacturing locomotive chafing plates consisting in providing a mold with a chill member therein, casting a metal consisting substantially of 47 per cent. open hearth steel, 3 per cent. ferro-manganese, 40 per cent. scrap cast iron and 10 per cent. charcoal pig iron against the chill member and around and embedding the ends of substantially U-shaped members to form a chafing plate member; cooling the body thus cast; reheating same to a dull redness; and while in this state casting a softer metal on the chafing plate member and about the U-shaped members, to firmly unite the whole; and allowing same to cool, substantially as described.

1,111,808. POST-MOLD. QUINCY G. SHELDON, Elburn, Ill. Filed Oct. 4, 1913. Serial No. 793,393. (Cl. 25—118.)



1. In a post mold, a series of trough-shaped mold units placed side by side, end bars having a rabbeted top edge and a plate extending above the rabbet, said plate having a notched top edge, and the mold units having end projections passing through the notches of the plates and seating in the rabbets of the end bars, and means for holding the end bars against spreading.

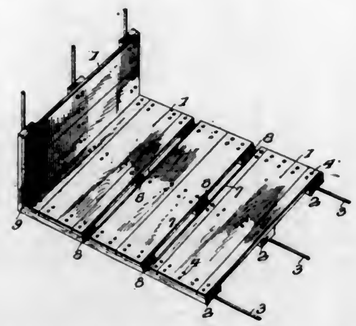
2. In a post mold, a series of trough-shaped mold units placed side by side, end supports for said units, longitudinal bars fitting against the end units of the series and removably connected to the end supports, and an intermediate support having seats to receive the mold units, and end recesses in which the longitudinal bars removably seat.

3. In a post mold, a series of trough-shaped mold units placed side by side, end supports for said units, longitudinal bars fitting against the end units of the series and removably connected to the end supports, and an intermediate support having seats to receive the mold units, and latches carried by the intermediate support and engageable with the longitudinal bars.

4. In a post mold, a series of trough-shaped mold units placed side by side, end supports for said units, longitudinal bars fitting against the end units of the series and removably connected to the end supports, and an intermediate support having seats to receive the mold units, and end recesses in which the longitudinal bars removably seat, and latches carried by the intermediate support and engageable with the longitudinal bars.

1,111,809. MANUFACTURE OF WIRE-BOUND RECEPTACLES. JOHN SHELLENBERGER, Rome, Ga. Filed Nov. 22, 1912. Serial No. 732,997. (Cl. 217—12.)

1. A wire bound receptacle comprising closely assembled longitudinal wall-forming sheets, battens and wire bindings traversing the outer surfaces of said sheets and securing them together and continuous across the longitudinal corners of the receptacle, the longitudinal edges of sheets at the corners of the receptacle being parallel and beveled throughout their lengths and tightly compressed together to form closed miter joints extending throughout the length of the receptacle.



2. A wire bound flat web adapted to be folded to form walls of a wire bound receptacle, said web embodying wall-forming sections and intervening V-cuts constituting the fold lines between said sections, the longitudinal edges of said sections forming the walls of said cuts and being parallel and beveled completely across the web, the walls of each cut converging at an angle slightly less than the angle formed by the meeting wall sections of said web when folded to form a receptacle, whereby said beveled longitudinal edges are compressed together when the web is folded to form a wire bound receptacle.

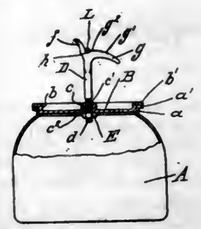
3. A wire bound box web comprising closely assembled wall forming sheets, battens and wire bindings traversing the outer surfaces of said sheets and securing them together, said web having V-cuts extending transversely across the same at the fold lines and through the sheets and forming V-grooves across the battens, said cuts dividing said sheets into wall forming sections having spaced longitudinal adjacent beveled edges at the inner side of the web with said grooves in the battens centrally arranged between adjacent edges, said edges adapted to meet and squarely abut under compression throughout their lengths when the web is folded into box form and thereby form the box with tight corner bevel-miter-joints throughout its length.

4. A wire-bound flat box-web consisting of a plurality of parallel boards fitted snugly together with their longitudinal edges engaging and wire bindings stapled to and traversing all of said boards and securing the same together and continuous across the joints between the boards, said web formed with V-cuts extending transversely across the same at the fold lines and forming wall sections having spaced longitudinal adjacent beveled edges at the inner side of the web and adapted to meet and squarely abut under compression throughout their lengths when the web is folded into box form and thereby form compressed corner bevel-miter-joints throughout the length of the box, said cuts extending longitudinally of and approximately through said boards without regard to the meeting edges of said boards.

5. A wire-bound flat box-web adapted to be folded to form walls of a wire bound receptacle, said web consisting of wall forming sections and exterior wire bound battens traversing said sections, securing them together and bridging the joints therebetween, said web formed with V-cuts constituting the fold lines between the sections and separating the sections and forming V-grooves across the inner faces of the battens, the longitudinal edges of said sections forming the spaced walls of said cuts and being parallel and beveled completely across the web, the walls of each cut converging at an angle slightly less than the angle formed by the meeting wall sections of said web when folded to form a receptacle, whereby said beveled longitudinal edges are compressed together when the web is folded to form a wire bound receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,111,810. STEAM COOKING VESSEL. JOHN T. SLOCOMB, Providence, R. I. Filed Mar. 2, 1914. Serial No. 821,941. (Cl. 53—1.)



1. In a cooking vessel, the combination with the body, of a cover resting upon the body, a bail pivotally mounted at opposite points upon the body, a post fixed to the cover, and inclined diverging fingers upon the free end of the post adapted to engage the bail.

2. In a cooking vessel, the combination with the body, of a cover resting upon the body, a resilient bail pivotally mounted upon the body, a post upon the cover, an inclined finger upon the end of the post, a second finger upon the post adjacent the first finger disposed at an angle to the first finger and provided with a cam surface.

3. In a cooking vessel, the combination with the body, of a cover resting upon the body, a resilient bail upon the body, a post upon the cover provided with a bail seat in its upper extremity, and diverging fingers upon the post at each side of the seat.

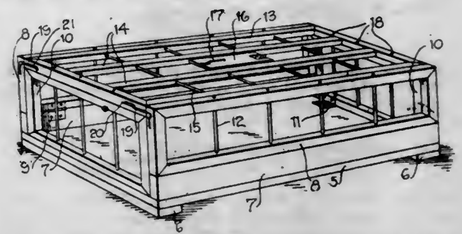
4. In a cooking vessel, the combination with the body, of a cover upon the body provided with a central opening surrounded by threads, a bail upon the body, a vertically adjustable post located in the opening and provided with threads adapted to engage the first mentioned threads, a nut engaging the threads upon the post and adapted to abut against the cover, and a bail seat upon the end of the post.

5. In a cooking vessel, the combination with the body of a vertically disposed annular wall adapted to form an opening into the body, a horizontal external flange upon the upper end of the wall, a cover provided with a vertical peripheral wall adapted to abut against the first mentioned wall, a horizontal flange upon the upper end of the second mentioned wall adapted to overlap the first mentioned flange, said cover being provided with a central opening, a post extending through the opening in the cover, a cam finger upon the upper extremity of the post, and a resilient bail pivotally mounted upon the body and adapted to engage the cam finger.

[Claim 6 not printed in the Gazette.]

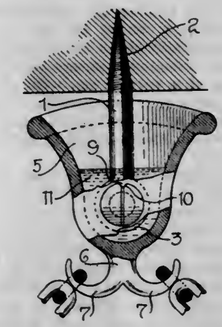
1,111,811. FOLDING CRATE. SALATHIEL WISE STALNAKER, Flat Woods, W. Va. Filed July 23, 1913. Serial No. 780,836. (Cl. 217—47.)

A folding crate or coop comprising a bottom, side and end sections hingedly mounted upon said bottom, said side and end sections each consisting of a rectangular frame, rods connecting the longitudinal bars of said frame, the rods of the end sections projecting above the top bars thereof, a top section provided with openings in its opposite ends to receive the projecting rods of the end sections whereby said ends are supported in their erect positions and the top held against longitudinal movement, said top section being further provided in its opposite ends and adjacent its longitudinal edges with recesses, and catch members carried by the side sections to engage in said recesses and retain the parts in their erect positions, said end sections being foldable upon the bottom of the crate, and the top section adapted for arrangement upon the end sections to frictionally engage the hinges of the side sections, said side sections being foldable inwardly upon said top section



and the catches of said side sections engaging the ends of the top section to retain the parts in their collapsed positions.

1,111,812. SUSPENDING DEVICE. HARLIN EDGAR STEWART, Ceredo, W. Va. Filed Nov. 17, 1913. Serial No. 801,484. (Cl. 248—22.)



1. A device of the class described comprising a suspending member having a perforated lower end, a transversely extending bearing member rotatably mounted intermediate of its ends in the perforated end of the suspending member, a cup carried by said bearing member upon its opposite ends, and a hook formed on the cup.

2. A device of the class described comprising a vertically disposed suspending member, a transversely extending bearing member rotatably supported in the lower end of said suspending member, an oil cup supported upon the opposite ends of said bearing member, means formed on said cup for engagement with said bearing member to prevent relative rotation of said bearing member and the cup, and a hook formed on said cup.

3. A device of the class described comprising a lubricating cup having alined openings in its opposite sides, a bearing member positioned in said alined openings, said bearing member having a notch formed in one end, a lug carried by said lubricating cup and engaged in said notch to prevent rotation of said bearing member, hooks carried by said lubricating cup, and a suspending member mounted upon said bearing member.

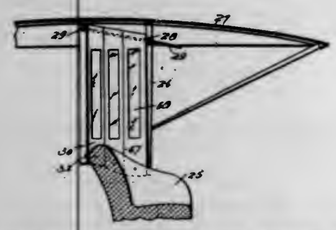
4. A device of the class described comprising a suspending member having a perforated lower end, a bearing member extending transversely through the perforated lower end of the threaded member, an oil cup supported upon the opposite ends of said bearing member, means for preventing turning of said bearing member relatively to said cup, and hooks formed on the lower end of said cup.

5. A device of the class described comprising a lubricating cup, having alined openings in its opposite sides, a bearing member extending transversely through said cup and having its opposite ends disposed in the alined openings in said cup, one end of said bearing member having a notch formed therein, a lug formed on one side of said

cup and projecting into one of said openings therein to engage the notch in said bearing member, a hook carried by said cup, and a suspending member loosely mounted upon said bearing member within the walls of said cup.

[Claim 6 not printed in the Gazette.]

1,111,813. DIVIDING CURTAIN FOR VEHICLE-TOPS. WEBB C. SWEET, Washington, D. C. Filed June 7, 1913. Serial No. 772,394. (Cl. 21—62.)



1. In an attachment for vehicle tops, clamping members, each comprising a base, a plate rotatable with relation to the base, means for holding the plate at different positions of adjustment, a socket carried by the plate, a bracket having arms slidable in the sockets of the clamping members, said clamping members being adapted to be secured to a bow of a vehicle top, with the arms of the bracket in the sockets of the said clamps whereby the said bracket may be held at an angle with relation to the bow or parallel therewith, and a dividing curtain suspended by the said bracket.

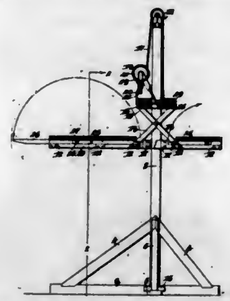
2. In an attachment for vehicle tops, clamping members, each comprising a base, a plate rotatable with relation to the base, means for holding the plate at different positions of adjustment, a socket carried by the plate, a bracket having arms slidable in the sockets of the clamping members, said clamping members being adapted to be secured to a bow of a vehicle top, with the arms of the bracket in the sockets of the said clamps whereby the said bracket may be held at an angle with relation to the bow or parallel therewith, and a dividing curtain and means for suspending the same from the said bracket, said dividing curtain being foldable on the arms of the bracket and adapted to lie parallel with the main portion of the bracket when in folded position.

3. In an attachment for vehicle tops, a bracket comprising telescopic sections, each of which is provided with an arm, clamps secured to a bow of a vehicle top, said clamps having sockets for the reception of the said arms of the clamps, means associated with the clamps for permitting adjustment of the brackets at angles with relation to the bow or to assume a position parallel to the said bow, a curtain, means for suspending the curtain from the bracket, said curtain being foldable and adapted to be moved from the bracket to the arms thereof for storage.

4. In an attachment for vehicle tops, a bracket having arms, sockets in which the arms of the bracket are slidable, members adapted to be secured to a bow of a vehicle, means whereby the sockets are supported by the members, means for securing the said sockets to the members in different positions of adjustment, means for retaining the arms in the sockets, a curtain, and means for suspending the curtain from the bracket, whereby the said curtain is foldable and adapted to be moved from the bracket to the arms thereof for storage.

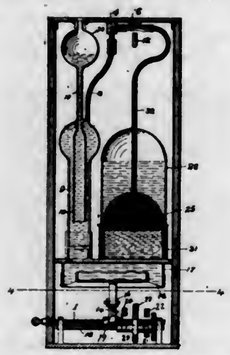
1,111,814. BUILDER'S SCAFFOLD. ELI WATERSON, Victoria, British Columbia, Canada. Filed Oct. 16, 1913. Serial No. 795,507. (Cl. 20—81.)

1. In a builder's scaffold, a supporting standard relatively fixedly located, a platform supporting member longitudinally slidably mounted on said standard, said supporting member including an upper and lower section, and cross braces secured at their ends to the upper and lower sections, there being one set of cross braces at each side of the vertical support, and means for sustaining the platform supporting body on the vertical support.



2. In a builder's scaffold support, an upright, a platform support vertically movable on said upright and composed of two side plates, one on each side of the upright, distance pieces connecting said side plates and arranged in close proximity to said upright to form a channel way through which said upright projects, supplemental distance pieces connecting said side plates together at intervals throughout their lengths, said supplemental distance pieces being located toward the lower edge of said side plates and spaced from the upper edge of the same, whereby to leave recesses above said supplemental distance pieces, and an extension bar pivoted at one end between said side plates and adapted to be swung over and rest on said supplemental distance pieces and project beyond the ends of said side plates and means for sustaining said platform on said upright.

1,111,815. APPARATUS FOR AUTOMATIC GAS ANALYSIS. HENRY J. WESTOVER, New York, N. Y. Filed July 16, 1909. Serial No. 508,081. (Cl. 23—3.)



1. In an automatic gas analyzer, a measuring chamber, an absorption chamber, a storing vessel, suitable tubes connecting said measuring chamber with said absorption chamber and with said storing vessel and valves for controlling movement of liquid through said tubes; in combination with a container for liquid, a flexible diaphragm under the same, a rotatable shaft, mechanism driven by said shaft for raising and lowering said diaphragm, and mechanism driven by the same shaft for controlling said valves automatically in proper relation to the movements of said diaphragm, substantially as described.

2. In an automatic gas analyzer, a measuring chamber, an absorption chamber, a driving shaft, a pump driven thereby, a cam shaft also driven thereby, flexible tubes for passage of gas to and from said chamber, and means for pinching or releasing said tubes operated by said cam shaft, substantially as described.

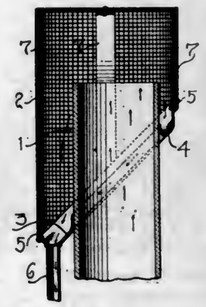
3. In an automatic gas analyzer, a measuring chamber, an absorption chamber, flexible gas tubes, pipes connected therewith leading to and from said chambers, a cam shaft, and means for pinching and releasing said tubes in proper order operated by said cam shaft, substantially as described.

4. In an automatic gas analyzer, a measuring chamber, an absorption chamber, three flexible tubes for respectively leading gas to said measuring chamber, leading gas from one of said chambers to the other, and discharging gas to the atmosphere; in combination with levers normally arranged to pinch said tubes individually, a shaft having three cams, and levers on said cams mechanically connected to said first named levers, substantially as described.

5. In an automatic gas analyzer, and in combination with a closed gas storage vessel, a measuring chamber, an absorption chamber, a pipe having a flexible section leading from said measuring chamber to said storage vessel, a similar pipe leading from said measuring chamber to said absorption chamber, levers for pressing upon or releasing said flexible pipe sections, a revoluble shaft and cams thereon for operating said levers, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,111,816. SPARK-ARRESTER. JAMES W. WILLING, Nanticoke, Md. Filed Jan. 21, 1914. Serial No. 813,543. (Cl. 110—130.)



1. A device of the class described including a hood provided with an opening adapted to receive a smoke-stack, and a resilient flange around said opening adapted for engagement with the stack, as and for the purpose set forth.

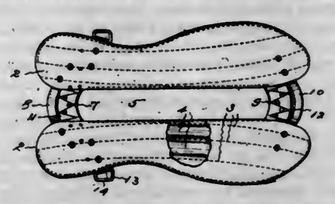
2. A device of the class described including a hood having an opening adapted to receive a smoke-stack, and a resilient flange arranged around said opening, whereby when the stack is placed within said opening, the inner edge of the flange will resiliently engage the stack to retain the hood in position thereon.

3. A device of the class described including a hood having an opening therein adapted to receive a smoke-stack, and a resilient flange around said opening and adapted to engage the smoke-stack, whereby various sizes of stacks may be disposed within said opening.

1,111,817. RIDING-SADDLETREE. SAMUEL S. ADAMS, Hartford, Conn., assignor to The Smith-Worthington Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 1, 1913. Serial No. 758,156. (Cl. 54—44.)

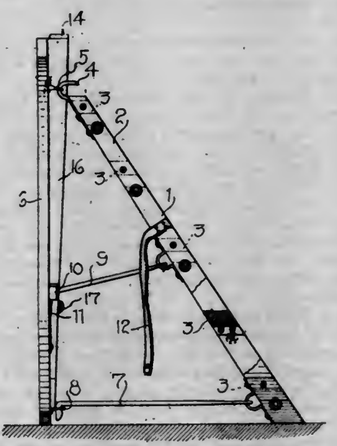
1. A McClellan saddle-tree having side bars constructed of stitched layers of leather with pockets containing interposed spring steel strips, a high arched wooden pommel-core joining said bars a short distance back from the front end, and a wide arched wooden cantle-core joining said bars a short distance in front of the rear end, the upper leather layers of the side bars extending upwardly over the pommel-core and upwardly over the cantle-core.

2. A McClellan saddle-tree having side bars on each side of a central opening, said bars being formed of upper and lower plies of stiff leather with interposed spring steel strips, an arched pommel extending upwardly from and joining the side bars near the front ends, an arched



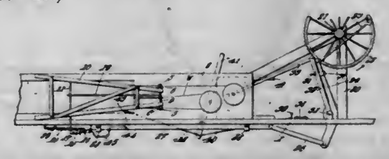
cantle extending upward from and joining the side bars near the rear ends, a sheet metal pommel arch piece joining the side bars in front of the pommel and a sheet metal cantle arch joining the side bars in back of the cantle.

1,111,818. COMBINED STEP-LADDER AND IRONING-BOARD. WILLIAM H. ANGELL, Cashion, Ariz. Filed Dec. 13, 1913. Serial No. 806,526. (Cl. 228—32.)



In a device of the class described, a ladder, a support therefor loosely hinged to the upper end thereof, bracing arms loosely hinged to the lower portions of said ladder and adapted for engagement with the lower portions of said support, a keeper carried on the support intermediate of its ends, said keeper being open at its front and bottom, an arm hingedly connected to the ladder intermediate of its ends, said keeper being adapted to receive the free end of said arm, and a spring locking bar secured at its lower end to said support, the upper end of said bar extending within said keeper to support the free end of said arm therein, whereby to secure the ladder and support in operative positions with respect to one another.

1,111,819. BALING-PRESS. EROS V. BARKER, Celina, Ohio. Filed May 19, 1914. Serial No. 839,551. (Cl. 100—20.)



1. In a baling press, the combination with a press box, a follower, and needles mounted for movement transversely of the press box, of a revoluble actuating element,

a lever, a pitman connection between one end of the lever and said element, needle operating mechanism adapted to be actuated by said lever, an element mounted for oscillation, a pitman connection between said element and the follower, means for coupling said lever to said element, and means for simultaneously uncoupling said lever and element and coupling the needle operating mechanism to the lever.

2. In a baling press, the combination with a press box, a follower, and a needle mounted for movement transversely of the press box, of a revoluble actuating element, a lever adapted to be oscillated thereby, mechanism operated by the lever and normally uncoupled from the needle, an element mounted for oscillation, a pitman connection between said element and the follower, means normally coupling together said lever and element, and means under the control of an operator for simultaneously uncoupling said lever and element and coupling the lever to the needle.

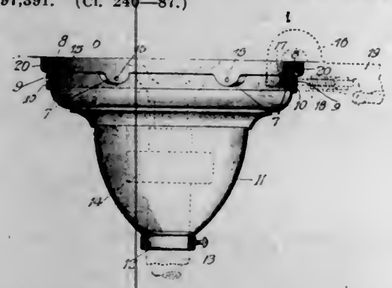
3. In a baling press, the combination with a press box, a follower, and a needle movable transversely of the press box, of a continuously rotating drive element, a lever continuously actuated by said drive element, means normally coupled to the lever for transmitting motion to the follower, means normally uncoupled from the lever for actuating the needle, and means under the control of the operator for simultaneously uncoupling the follower actuating means from the lever and coupling the needle actuating means to the lever.

4. In a baling press, the combination with a press box, a follower, and a needle mounted for movement transversely of the press box, of a revoluble actuating element, a lever adapted to be continuously operated by said element, means normally coupled to and movable with the lever for actuating the follower, a coupling bar connected to and continuously reciprocated by the lever, a latch member connected to and movable with the lever, and means under the control of the operator for simultaneously uncoupling the lever from the follower actuating means and for shifting the latch member into engagement with the reciprocating bar.

5. In a baling press, the combination with a press box, a follower, and a needle mounted for movement transversely of the press box, of a revoluble actuating element, a lever adapted to be oscillated by said element, a member mounted to swing about the pivot of the lever, a connection between said member and the follower, means carried by the lever for automatically engaging said member to couple the lever and member together, needle operating mechanism normally uncoupled from the needle, and means under the control of an operator for simultaneously coupling the needle operating mechanism to the lever and uncoupling the lever from said follower actuating member.

[Claims 6 and 7 not printed in the Gazette.]

1,111,820. CANOPY-INSULATOR. EDMUND E. BECHTOLD, Chicago, Ill. Filed Oct. 27, 1913. Serial No. 797,391. (Cl. 240—87.)



1. In a canopy insulator, the combination with a support, of a canopy and a continuous flexible insulating member located between the canopy and support and fitted within the former and having an indentation on its outer portion into which a portion of the canopy may be forced.

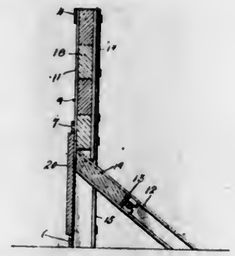
2. In a canopy insulator, the combination with a support, of a canopy, and a continuous flexible insulating member located between the canopy and support and fitted within the former and having a plurality of indentations on its outer surface into which portions of the canopy may be forced.

1,111,821. ARSENIC-ANTIMONY COMPOUND AND PROCESS OF MAKING SAME. ALFRED BERTHEIM and PAUL KARRER, Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Sept. 24, 1913. Serial No. 791,550. (Cl. 23—24.)

1. The process of preparing organic arsenic antimony compounds, which consists in treating with a strong reducing agent the mixture of an aromatic arsinic acid and an antimony compound in solution.

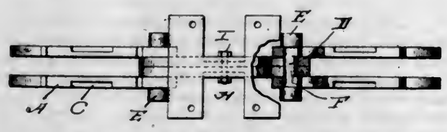
2. As new products, organic arsenic-antimony compounds containing most probably the atom group —As=Sb—, the arsenic atom being linked to an aromatic radical; said compounds being colored powders, insoluble in water, but soluble in diluted hydrochloric acid and diluted caustic soda-lye.

1,111,822. CORN-CRIB DOOR. CHARLIE H. BOWEN and DANIEL A. BRAKEN, Jasper, Minn. Filed May 11, 1911. Serial No. 626,537. (Cl. 130—3.)



A door structure for wire corn cribs comprising spaced uprights, grooved members secured to adjacent sides of said uprights respectively and terminating short of the lower end of said uprights, inclined members having their upper ends secured to the adjacent faces respectively of said uprights at the lower end of the grooved members, a plurality of boards having their ends slidably engaged in the groove of said members and the lowermost board engaging the upper end of the inclined members, said inclined members being provided with grooves in their adjacent faces respectively, a panel slidable in the groove of the inclined members, a bar engaging said panel to hold same in its uppermost position, said bar having laterally turned ends disposed in the grooves of the inclined member and provided with recesses, and clamping bolts engaged through said recesses and the inclined members for detachably securing the bar thereto.

1,111,823. CHAIN AND BUCKET CONNECTION. WILLIAM P. COLDREN, Lebanon, Pa. Filed June 27, 1913. Serial No. 776,153. (Cl. 193—8.)



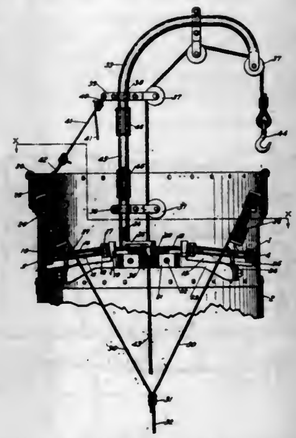
1. The combination with a chain composed of series of similar links, each link having an apertured recessed portion intermediate its ends, of a connector comprising a

plate portion adapted to extend transversely across a pair of opposed links, a connecting portion and parallel apertured ears extending from said connecting portion, said ears being adapted to contact with the apertured portions of pair of opposed links, and a bolt passing through said apertured links and ears as set forth.

2. The combintion, with a chain composed of a plurality of similar links, each link being apertured and recessed intermediate its ends, of connector plates adapted to rest transversely across a pair of opposed links, said plates being united by an integral web, and apertured ears arranged at right angles to the said web and plates, said ears being parallel, spaced apart, and adapted to contact with the apertured portions of a pair of opposed links, and a bolt passing through said links and ears.

3. The combination, with a pair of opposed links each link being apertured and recessed intermediate its ends, of a connector comprising a plate portion adapted to extend transversely across a pair of links, and a pair of parallel apertured and spaced ears, said ears being of a size and shape and so spaced as to engage the recesses of the opposed links, and a bolt passing through said apertured ears and links as set forth.

1,111,824. ADJUSTABLE SCAFFOLD. ARTHUR C. DAVIS, Birmingham, Ala. Filed Dec. 26, 1913. Serial No. 808,792. (Cl. 20—81.)



1. In an adjustable scaffold, the combination of an expansible rim portion, a central platform, radial connections from the platform to the rim which are disposed at a slight upward inclination from the rim to the platform, means to adjustably connect said radial connections to the platform, and a hoisting mechanism supported on said platform, substantially as described.

2. In an adjustable scaffold, an expansible sectional rim, radial connections adjustably connecting said rim to a central platform, a central platform normally supported by said connections above the rim, a hoisting apparatus mounted on said central platform, and means to lock said rim and platform in spaced relationship, said radial connections being arranged to cause the weight of the central platform to force the rim against the surrounding stack as the platform is pressed down, substantially as described.

3. In an adjustable scaffold, a rim section adapted to engage the inner wall of a stack, a central platform, hoisting mechanism supported on said platform, radially disposed members adjustably connecting the platform and rim sections, a supporting frame which is connected to the platform and projects outwardly beyond same to a point adjacent to said rim, block and tackle adjustable connections for the outer ends of said frame from the stack, and a cable for operating said block and tackle connections from machinery on the ground, substantially as described.

4. An adjustable scaffold comprising a sectional rim, means to expand said rim against the stack, a central platform spaced from the rim, radially disposed inclined connections between the rim and platform which are inclined so that the weight on the platform wedges the rim against the stack, said platform being of an inverted dish-shape and having elongated radial slots about its edge, which slots receive adjustable fastenings for said radial connections, and hoisting mechanism supported centrally on said platform, substantially as described.

5. In an adjustable scaffold, in combination, a central platform having a vertical opening therein, a horizontally swinging member having a tubular bearing seated in said central opening in the platform, a hoisting pole carried at the free end of said swinging member, sheave wheels, the wheel or wheels connected to the vertical base portion of said pole being disposed with peripheral edge or edges in vertical alinement with the center of the opening in the pivotal bearing of said member, a hoisting cable which passes up through the openings in said platform and a member and passes over said sheave wheels, a rim, skeleton frame work connecting said platform and rim, and means to force the rim to clamp the inner wall of the stack, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,111,825. VELOCIPEDE. JAMES S. DEAN, Toledo, Iowa. Filed Dec. 2, 1912. Serial No. 734,652. (Cl. 208—42.)

1. A machine of the class described, consisting of a wheel supported housing in the form of an animal, means within the housing for supporting an operator concealed in the housing, and means for actuation by the operator for rotating the wheels.

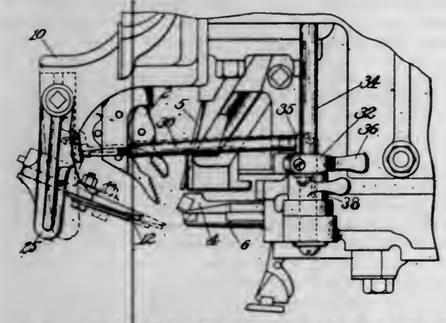
2. A machine of the class described, consisting of a wheel supported housing in the form of an animal, means within the housing for supporting an operator concealed in the housing, means for actuation by the operator for rotating the wheels, and means upon the wheels for actuating the legs of the housing.

3. A machine of the class described, consisting of a wheel supported housing in the form of an animal, means within the housing for supporting an operator concealed in the housing, and means for actuating by the operator for rotating the wheels, the legs of the housing being movably mounted, means for yieldingly holding the legs, and means upon the wheels for engaging, shifting and releasing the legs.

1,111,826. LASTING-MACHINE. CHARLES DE MINICO, Portsmouth, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 18, 1909. Serial No. 513,453. (Cl. 12—2.)

1. A machine of the class described, having, in combination, means for inserting tacks into work sustained in the hands of the operator, work guiding means for determining the angular relation of the tack receiving face of the work to the direction of the ingoing tack, and means arranged for actuation to effect simultaneously, while the machine

is running and the operator is so sustaining a shoe, both vertical and horizontal components of an adjustment of an element of the guiding means for changing said angular relation.



2. A machine of the class described having, in combination, means for inserting tacks into work sustained in the hands of the operator, guiding means including a member extending obliquely with relation to and into engagement with the tack receiving face of the work for determining the angular relation of said face to the ingoing tack, and means under the control of the operator for adjusting said engaging member longitudinally toward and from the tack inserting means in said oblique direction whereby the angular relation of the face of the work to the direction of the ingoing tack is changed.

3. A machine of the class described having, in combination, means for working an upper over a last, means for fastening the upper, a shoe bottom rest having two predetermined operative positions in which it resists upward and outward movement of the shoe, supporting means in which the rest is slidable between such positions, and means for automatically locking the rest against displacement by pressure of the work against it while in either of said two operative positions.

4. A lasting machine having a reciprocatory wiper constructed and arranged for movement inwardly over the shoe bottom to force the upper into lasted position, a bottom rest for determining the angular relation of the shoe bottom to the direction of movement of said reciprocating wiper, and a single means under control of the operator for effecting a simultaneous downward and inward adjustment of the rest toward the plane of the acting face of the wiper or reversely to change said angular relation of the plane of the sole to the direction of movement of the wiper.

5. A lasting machine having, in combination, a shoe bottom rest, means for effecting adjustment of the rest into one or another of a plurality of operative positions while the machine is in operation, and automatic means for positively locking the rest in adjusted position.

[Claims 6 to 16 not printed in the Gazette.]

1,111,827. ENGINE-VALVE. GEORGE A. GILLETTE, Detroit, Mich. Filed Apr. 6, 1914. Serial No. 829,930. (Cl. 136—8.)

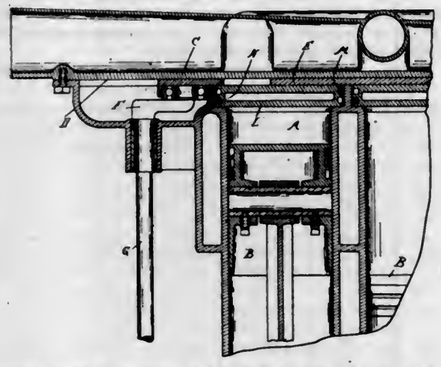
1. The combination with an engine cylinder having a flat ported valve face, of a valve having a gyratory movement over said face, and a floating head bearing against said valve for maintaining the seal between the same and said valve face.

2. The combination with an engine cylinder, of a floating head in said cylinder, a valve seat, and a valve intermediate said seat and said floating head.

3. The combination with an engine cylinder, of a floating head engaging the end of said cylinder, a stationary head having a flat valve face or seat, and a valve intermediate said stationary head and floating head.

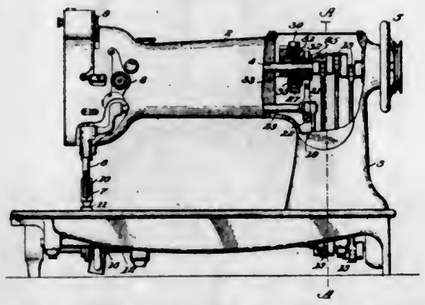
4. The combination with an engine cylinder, of a floating head at the end of said cylinder, a stationary ported head having inlet and exhaust passages formed therein, and a valve arranged intermediate said floating head and stationary head.

5. The combination with an engine cylinder having a counter-bored end, of a floating head arranged in the counter-bore of said cylinder, a stationary head having a flat valve face, and a valve intermediate said stationary head and floating head.



[Claims 6 to 13 not printed in the Gazette.]

1,111,828. SEWING-MACHINE. CHARLES F. GRAY, Sierra Madre, Cal., and FRANK S. WOODHEAD, Wortendyke, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 13, 1911. Serial No. 665,417. (Cl. 112—8.)



1. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a feed-drive shaft and a feed-drive connection, of a feed-adjusting bracket secured upon said main shaft and upon which is pivotally mounted a feed-adjusting disk provided with a feed-eccentric, and means including a key removable from the machine adapted to be placed into operative relationship with said feed-adjusting disk to release it from and secure it in effective relationship with said feed-adjusting bracket and means for securing said key from removal except when in a predetermined position.

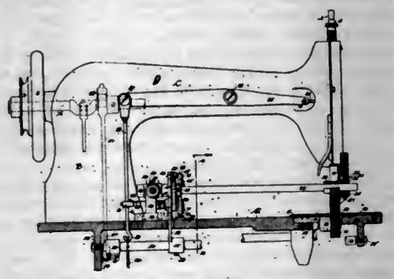
2. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a feed-drive shaft and feed-drive connection, of a feed-adjusting bracket secured upon said main shaft and upon which is pivotally mounted a feed-adjusting disk provided with a feed-eccentric, a key removable from the machine adapted to be placed into operative relationship with said feed-adjusting disk to release it from and secure it in effective relationship with said feed-adjusting bracket, and means including a rocking indicator for designating the number of stitches to the inch and means for securing said key from removal except when in a predetermined position.

3. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a feed-drive shaft and feed-drive connection, of a feed-adjusting bracket secured upon said main shaft and upon which is pivotally mounted a feed-adjusting disk provided with a feed-eccentric, a rocking indicator for designating the number of stitches to the inch adapted to be placed into and out of operative relationship with said feed-adjusting bracket, and means including a key-plate and portable key, the latter being provided with a step-projection and adapted to be placed into operative relationship with said feed-adjusting disk to release it from and secure it in effective relationship with said feed-adjusting bracket and means for securing said key from removal except when in a predetermined position.

4. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a feed-drive shaft and feed-drive connection, of a feed-adjusting bracket secured on said main shaft and upon which is pivotally mounted a feed-adjusting disk provided with a holding screw and a feed-eccentric, a key adapted to temporarily engage said holding screw to release said feed-adjusting disk from and secure it in effective relationship with said feed-adjusting bracket, and means including a rocking indicator normally held out of but adapted to be placed into operative relationship with said last-mentioned bracket for designating the number of stitches to the inch.

5. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a feed-drive shaft and feed-drive connection, of a feed-adjusting bracket secured upon said main shaft and upon which is pivotally mounted a feed-adjusting disk provided with a feed-eccentric, and means for securing and releasing said feed-adjusting disk with respect to said feed-adjusting bracket, said means including a key-plate, a key provided with a step-projection, and a resiliently held hollow plunger, the latter being mounted in the bracket arm and normally acting to hold said key out of effective relationship with the feed-adjusting mechanism.

1,111,829. FEEDING MECHANISM FOR SEWING-MACHINES. ALFRED GAIER, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 18, 1913. Serial No. 801,572. (Cl. 112—8.)



1. In a sewing machine, the combination with a driving shaft and stitch-forming mechanism, of a spring-pressed bar and lifting means therefor, a carrier supported by said bar, a presser-foot connected to said carrier, a feed-wheel provided with a shaft mounted at one end within said carrier to move with the same, a movable support for the opposite end of said shaft, and actuating means operatively connecting the driving shaft and said feed-wheel whereby intermittent movements are imparted to the latter.

2. In a sewing machine, the combination with a driving shaft and stitch-forming mechanism, of a spring-pressed bar and lifting means therefor, a carrier supported by bar, a presser-foot connected to said carrier, a feed-wheel provided with a shaft mounted at one end within said carrier and yielding relatively to the same, a movable bearing member for the opposite end of said shaft, a ratchet-wheel carried by the latter, an actuating pawl, and operative connections between the driving shaft and said pawl, whereby intermittent movements are imparted to the feed-wheel.

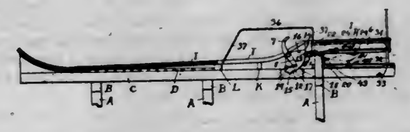
3. In a sewing machine, the combination with stitch-forming mechanism, of a spring-pressed bar, a stop to limit the movement of the latter under the action of its spring, a carrier supported by said bar, a presser-foot pivotally connected to said carrier, a spring for said presser-foot, a feed-wheel provided with a shaft mounted at one end within and yielding relatively to said carrier, a spring within the latter and engaging said shaft, a movable support for the opposite end of said shaft, actuating means for the feed-wheel, and a lifting device for the presser-bar.

4. In a sewing machine, the combination with stitch-forming mechanism, of feeding mechanism comprising a feed-wheel and a yielding support for the same, actuating means for said wheel including a ratchet device and an actuating pawl therefor, a member adapted to be moved into effective position to vary the action of said pawl, and automatically acting means for returning said member to a neutral position.

5. In a sewing machine, the combination with a stitch-forming mechanism, of feeding mechanism comprising a feed-wheel and actuating mechanism therefor, a presser-foot, means including a treadle-rod for lifting said presser-foot, controlling means for said actuating mechanism, and connections between said controlling means and the treadle-rod whereby movement of the latter will modify the feeding movements of said wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,111,830. MINE-CAR-DUMPING APPARATUS. CHARLES A. GRIFFITH, Pruden, Tenn. Original application filed May 17, 1909, Serial No. 496,560. Divided and this application filed Dec. 27, 1910, Serial No. 599,241. Renewed May 14, 1914. Serial No. 838,616. (Cl. 214—1.)



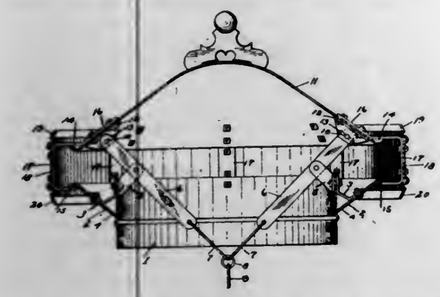
1. In a car dumping apparatus, the combination of a track support, a continuous unbroken track mounted on the said support to be held thereby with all of its parts fixed against movement and with one part intermediate its ends at a longitudinal inclination such that a car upon it will discharge its contents by gravity through one end, a mechanism for engaging a car to resist and temporarily stop its movement along the said inclined part of the track in order to effect dumping and for then permitting it to move onward, and means for automatically opening the end of the car as the car is stopped.

2. In a car dumping apparatus, the combination of a track support, a continuous unbroken track mounted on the said support to be held thereby with all of its parts fixed against movement, the said track comprising two substantially horizontal parts at different elevations and a short connecting part between them having a longitudinal inclination such that a car upon it will discharge its contents by gravity through one end, and a mechanism for engaging a car to stop it on the said inclined part of the track in order to effect dumping and for then permitting it to move onward.

3. In a car dumping apparatus, the combination of a track support, a continuous unbroken track mounted on the said support to be held thereby with all of its parts fixed against movement, the said track comprising two substantially horizontal parts at different elevations and a short connecting part between them having a longitudinal inclination such that a car upon it will discharge its contents by gravity through one end, a mechanism for engaging a car to stop it on the said inclined part of the track in order to effect dumping and for then permitting it to move onward, and means adjacent the inclined part of the track for engaging the vertically movable end door of a car and guiding it along a fixed path at an angle to and

above that which it would take if not so engaged, whereby the door is opened as the car is moved into inclined dumping position.

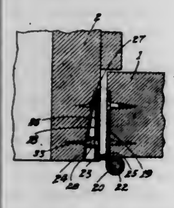
1,111,831. VENTILATOR. HARRY C. HAMES, London, Ohio, assignor to The Thomas & Armstrong Company, London, Ohio, a Corporation of Ohio. Filed Sept. 11, 1911. Serial No. 648,738. (Cl. 98—4.)



1. A ventilator comprising a shaft element, an upwardly movable crown element, operating levers for elevating said crown element, and a set of brackets on each of said crown and shaft elements, said levers having a pin and slot connection with the brackets on one of said elements and having a positive pivotal connection with the other brackets.

2. A ventilator comprising a shaft element, an upwardly movable crown element, operating levers for elevating said crown element, a set of brackets on said shaft element to which said levers are pivoted, a set of brackets on said crown element, pin and slot connections between one end of each of said levers and said last named brackets, a center ring, and connecting links connecting the free ends of said levers with said center ring.

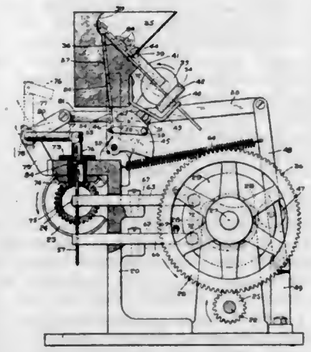
1,111,832. HINGE. ROSS HAZELRIGG and WILLIAM J. MEEKER, Santa Rosa, Cal. Filed July 22, 1913. Serial No. 780,562. (Cl. 16—112.)



1. An adjustable hinge for doors comprising two pivotally connected leaves one of said leaves being bent at right angles along its vertical length adjacent the pivotal connection, a triangular shaped envelop secured to the door frame, said hinge leaf extending into said envelop, and pivotally seated in the apex thereof, a tubular screw extending through the outer wall of said triangular envelop and seated on the inner wall thereof, a screw threaded opening in said leaf adapted to be engaged by said tubular screw, a countersunk opening in said screw, and a holding screw seated in said countersunk opening for the purpose of locking said tubular screw.

2. An adjustable butt hinge for doors, comprising two leaves pivotally connected one with the other, one of said leaves being turned at right angles along its vertical length a short distance from said pivotal connection, said leaf being enveloped to the said angle in a triangular-section shaped casing secured to the frame of the door, said leaf projecting at the angle thereof through a slot in said casing, the end of said leaf farthest from said pivotal connection being seated in the apex of the triangular casing, and screw means seated in said casing, and adapted to cooperate with and move said leaf within the triangular space in said casing, as and for the purpose set forth.

1,111,833. NUT-TAPPING MACHINE. FREDERICK C. HOFFMAN, Thomaston, Conn., assignor to The Blake and Johnson Company, Waterbury, Conn., a Corporation of Connecticut. Filed Aug. 15, 1912. Serial No. 715,274. (Cl. 10—133.)



1. A nut tapping machine comprising a tap, upper and lower pairs of jaws for holding the tap and provided with operating shanks, means acting on the shanks of each pair of jaws tending to bring them together to open the jaws, means for holding the shanks of both pairs of jaws normally separated to close the jaws, said holding means including means for successively releasing the shanks of both pairs of jaws, said release being timed so that the tap is always supported by at least one pair of jaws, and means for rotating the blanks.

2. A nut tapping machine comprising a tap, upper and lower pairs of jaws for holding the tap and provided with operating shanks, means acting on the shanks of each pair of jaws tending to bring said shanks together to open the jaws, and a single cam located between the shanks of both pairs of jaws to hold the latter normally closed, said cam being provided with means for releasing the shanks of both jaws, said release being timed so that the tap is always supported by at least one pair of jaws, means for rotating the blanks.

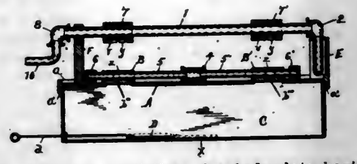
3. A nut tapping machine comprising a tap, a magazine, a swinging carrier provided with a slide for retaining the successive blanks as they are discharged from the magazine, means for withdrawing said slide to release each blank when the latter is placed on said tap, means for rotating the released blank, and a pusher for directly engaging said blank to force the latter over said tap.

4. An improvement in nut tapping machines comprising a non-rotary tap, a rotatable carrier having a longitudinal opening through which said tap extends and which just receives the blanks, a magazine, a swinging carrier provided with a slide for retaining the successive blanks as they are discharged from the magazine, means for withdrawing said slide to successively release each blank when the latter is placed on said tap, and means for forcing the blank through the opening into said rotatable carrier when released by said swinging carrier.

5. An improvement in nut tapping machines comprising a non-rotary tap, a rotatable carrier having a longitudinal opening through which said tap extends and which just receives the blanks, a magazine, a swinging blank carrier provided with a slide for retaining the successive blanks as they are discharged from the magazine, a slide-operating arm supported by said blank carrier, and means for actuating said arm as the carrier approaches either limit of its movement.

[Claims 6 to 15 not printed in the Gazette.]

1,111,834. OIL-BURNER. DAVID A. HOOVER, Portland, Ind. Filed Jan. 10, 1914. Serial No. 811,287. (Cl. 158—64.)



1. An oil-burner consisting of a body-plate having air apertures therethrough, an air chamber located below the said plate, means for controlling the admission of air into the said air chamber, a generator-pipe extending across longitudinally of and above the said plate, means for removably securing the generator pipe above the plate, a plurality of burner-pipes located below the generator-pipe and parallel therewith and in alinement with each other, means interiorly connecting the inner ends of the burner-pipes with one end of the generator-pipe, means for connecting the other end of the generator pipe to the fuel supply, and a valve for controlling the admission of fuel to the generator-pipe.

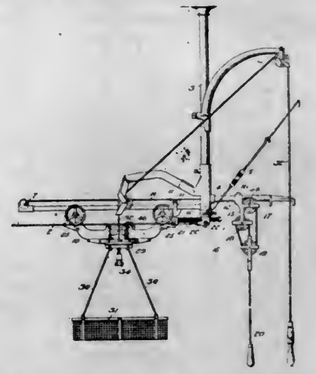
2. An oil burner consisting of a body-plate having air supply cones extending upward therefrom for the admission of air from below, a generator pipe extending longitudinally of and located above said plate, means for retaining the generator pipe in position, burner-pipes each having an exit therein and located below the generator pipe and parallel therewith, and resting in notches formed in the upper edges of the said air supply cones and with each of said exisits concentric with one of the said air supply cones, an air chamber located below the said plate and common to all of the said air supply cones, means for interiorly connecting the inner ends of the burner-pipes with one end of the generator-pipe, means for connecting the other end of the generator-pipe to a fuel supply, a valve for controlling the admission of fuel, and a damper for controlling the admission of air into the said air chamber.

3. An oil burner consisting of a body-plate having air apertures therethrough for the admission of air from below, a generator-pipe extending longitudinally of and located above said plate, standards for retaining the generator pipe in operative position, burner-pipes located on said plate and located directly below and parallel with the generator pipe, there being an exit aperture in each of said burner pipes, the same being located concentric with their respective air apertures in the plate, means connecting the inner ends of said burner pipes to one end of the generator pipe, an air chamber located below the body-plate, there being a central aperture in the bottom of said chamber, and a damper for opening and closing said aperture in the air chamber.

4. An oil burner consisting of a body-plate having air apertures therein for the admission of air from below the plate, a generator pipe located above and disposed centrally and longitudinally of the plate, burner pipes located between the generator pipe and the plate and parallel therewith, there being an exit from each of the burner pipes, each exit being concentric with one of said air apertures in the body plate, means for connecting the inner ends of the burner pipes to one end of the generator pipe, an air chamber located below said body plate, deflectors slidably suspended on the generator pipe and each being adapted to be located above one of said exits, a lip formed around the edge of the lower face of each of said deflectors, there being a plurality of notches formed in each of said lips, and means for retaining the generator pipe and the burner pipes in operative position.

1,111,835. STORE-SERVICE APPARATUS. GEORGE JACOBS, Cleveland, Ohio, assignor, by mesne assignments, to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Nov. 27, 1912. Serial No. 733,872. (Cl. 186—29.)

1. In a store service apparatus, the combination of a traveling carriage, a vertically movable article holder, a clutch movable about a vertical axis, for uniting the said holder to the carriage, means for moving the clutch to release the holder and for maintaining it in open position while the holder is separated from the carriage, and means arranged to release the clutch from the said holding means and operated as the holder is brought into engagement with the carriage.



2. In a store service apparatus, the combination of a traveling carriage, a vertically movable article holder, a clutch upon the carriage for uniting it and the holder, a cam device also upon the carriage for determining the open and the closed positions of the clutch, and means for actuating the said cam device arranged to be operated as the holder is brought into engagement with the carriage.

3. In a store service apparatus, the combination of a traveling carriage, an article holder, means for vertically moving the article holder to lift it into engagement with the carriage and to lower it therefrom, a clutch for uniting the holder and the carriage, a cam device for determining the open and the closed positions of the clutch, and means for actuating the cam device operated by the said means for vertically moving the holder, arranged to move it to cause the clutch to unite the holder and carriage when the said means move the holder into engagement with carriage, and to open the clutch to release the holder when the said means are moved upward to receive the carriage preparatory to lowering it.

4. In a store service apparatus, the combination of a traveling carriage, an article holder, a slotted cylinder carrying hooks, mounted in the carriage, and constituting a clutch for uniting the said holder to the carriage, a cam device for determining the open and the closed positions of the said clutch, and means for actuating said cam device.

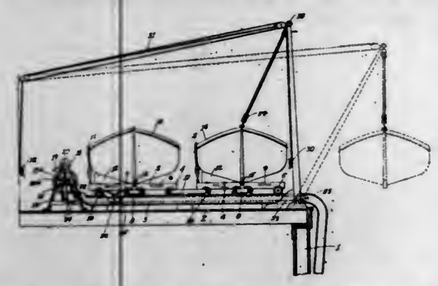
5. In a store service apparatus, the combination of a traveling carriage, an article holder, a slotted cylinder carrying hooks mounted in the carriage so as to be free to oscillate and constituting a clutch for uniting the said holder to the carriage, an arm extending from the cylinder, a cam device arranged to act upon the said arm to determine the open and the closed positions of the said clutch, and means for actuating the said cam device.

[Claims 6 to 23 not printed in the Gazette.]

1,111,836. LAUNCHING DEVICE. JOHN ALBERT JOHNSON and JOSEPH W. LUDLAM, Oakland, Cal. Filed Mar. 21, 1913. Serial No. 755,895. (Cl. 9—22.)

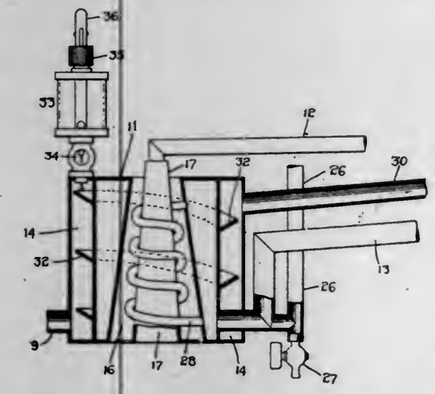
1. A boat handling mechanism comprising in combination, a track mounted on the deck of a ship and extending from a point in-board to the edge of said deck and then down the side of the vessel for a substantial distance, said track being extended outward from the edge of the vessel at the level of the track and then bending inwardly in its downwardly extending portion, and a train mounted on said tracks, said train comprising a plurality of trucks pivotally linked together, and means for retaining said trucks on said tracks when they are lowered over the side of the vessel.

2. A boat handling mechanism comprising in combination, a track extending from a point in-board of the vessel to the edge thereof and thence down the side thereof a substantial distance, and a train adapted to travel on said tracks, said train comprising a plurality of trucks



for supporting boats, said trucks being pivotally linked, the one to the other, and driving means attached to the in-board end of said train whereby said train except the in-board end thereof, may be run down the side of the vessel.

1,111,837. HUMIDIFYING APPARATUS. ARTHUR R. JOYCE, New Fairfield, Conn. Filed July 5, 1913. Serial No. 777,573. (Cl. 98—47.)



The combination with a humidifying chamber comprising spaced inner and outer walls, providing a closed space therebetween, of a spiral vaporizing plate arranged within the closed space and vertically inclined in cross-section and extending downwardly toward the inner wall to conduct water fed thereon upon the inner wall, means to supply water into the closed space to the upper end of the spiral vaporizing plate, heating means arranged within the inner wall, air inlet means for the closed space, and air outlet means communicating with the closed space and adapted to supply humidified air to a chamber, substantially as described.

1,111,838. REINFORCED EXPANDED METAL. JULIUS KAHN, Detroit, Mich., and THOMAS HENRY KANE, Youngstown, Ohio, assignors to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed July 19, 1911. Serial No. 639,272. (Cl. 72—117.)

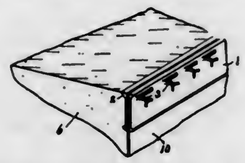
1. A reinforced expanded metal comprising parallel ribs and strands of entire metal and open-work metal between them, and metal rods rigidly attached at intervals to said ribs and extending at substantially right angles to the same to prevent further expansion of the open-work metal.

2. A new article of manufacture, consisting of a sheet of reinforced expanded metal, comprising parallel ribs and open-work metal between the ribs, and metal rods rigidly attached at intervals to the walls of said ribs and extending at substantially right angles to the ribs to prevent extension of the sheet at right angles to said ribs.

3. A new article of manufacture consisting of reinforced expanded metal comprising alternate bands of expanded metal and parallel ribs, U-shaped in cross-section, and rods extending at substantially right angles to the ribs and attached to both walls thereof to prevent the ribs from spreading.

4. An expanded metal structure including reticulated web portions and ribs integral with said portions and alternating therewith, said ribs being U-shaped in cross section and closed at one side only and the opposite walls of each rib having a rigid uniting connection at intervals.

1,111,839. PROTECTING-PLATE FOR THE EDGES OF CONCRETE CONSTRUCTIONS. THOMAS HENRY KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 19, 1914. Serial No. 812,879. (Cl. 94—2.)



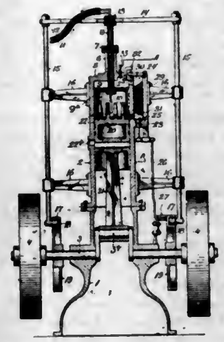
1. A reinforcing plate for the edge of a body of concrete comprising a flat plate, means to secure this plate against the side of the body of concrete with its outer face vertical, and an over-hanging ledge formed along the upper edge of the plate on the side next to the concrete to protect the edge of the concrete, the lower edge of said ledge being beveled so as to ensure an obtuse angle on the concrete, and the entire top of the plate being flush with the concrete and forming a right angle with the outer face of the plate.

2. A reinforcing plate for the edges of expansion joints between sections of concrete roadways, comprising a plate having a stiffening rib along its lower edge and a short over-hanging ledge along its upper edge on the side next to the concrete, said ledge having a flat upper surface in the plane of the roadway and a beveled lower surface that joins the flat upper surface along a sharp edge, and means for securing the reinforcing plate against the side of the body of concrete, the exterior of the plate being flat and vertical and forming a right angle with the upper surface of the ledge.

3. A reinforcing plate for the edges of expansion joints between sections of concrete roadways, comprising a vertical plate having a flat body portion with a flat outer side and a short over-hanging ledge formed along its upper edge on the side next to the concrete, said ledge having a flat upper surface in the plane of the roadway forming a right angle with the outside of the plate, and an inclined lower surface merging with the flat upper surface at an acute angle, and means for securing the reinforcing plate against the side of the body of the concrete.

1,111,840. INTERNAL-COMBUSTION ENGINE. JOSEPH KOENIG, Two Rivers, Wis. Filed Dec. 20, 1910. Serial No. 598,447. (Cl. 123—66.)

1. An internal combustion engine comprising a reciprocative piston, a cylinder therefor having an inlet port alternately opened and closed in coöperation with the movement of the piston, an auxiliary piston interposed between the head end of the cylinder and main piston, a valve-controlled exhaust chamber having separate ports communicating with the cylinder under control of the auxiliary piston, and ignition means in communication with the head end of said cylinder.



2. An internal combustion engine comprising a reciprocative piston, a cylinder therefor having an inlet port alternately opened and closed in coöperation with the movement of the piston, a second piston interposed between the head end of the cylinder and the first named piston, a valve-controlled exhaust chamber having separate ports communicating with said cylinder under control of the second piston, thermal bodies in connection with the exhaust chamber, and ignition means communicating with the head end of said cylinder.

3. An internal combustion engine comprising a reciprocative piston, a cylinder therefor having an inlet port alternately opened and closed in coöperation with movement of the piston, a second piston interposed between the head end of the cylinder and the first named piston, a valve-controlled exhaust chamber having separate ports communicating with said cylinder under control of the second piston, thermal bodies in connection with the exhaust chamber, ignition means in communication with the head end of said cylinder, and an oil or gas feed pipe communicating with the cylinder.

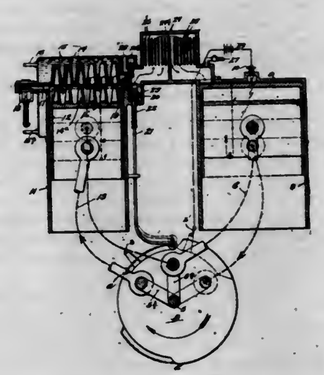
4. An internal combustion engine comprising a reciprocative piston, a cylinder therefor having an inlet port alternately opened and closed in coöperation with movement of the piston, a fluid-cooled hollow piston interposed between the head end of the cylinder and main piston, a valve-controlled exhaust chamber having separate ports communicating with the cylinder under control of the hollow piston, and ignition means in communication with the head end of said cylinder.

5. An internal combustion engine comprising a reciprocative piston, a cylinder therefor having an inlet port alternately opened and closed in coöperation with movement of the piston, a hollow piston interposed between the head end of the cylinder and main piston, a hollow piston-rod connected to the hollow piston, fluid pipes communicating with the hollow piston-rod, a valve-controlled exhaust chamber having separate ports communicating with the cylinder under control of the hollow piston, thermal plates in connection with the exhaust chamber, ignition means in communication with the head end of the cylinder, an oil or gas feed pipe in communication with the head end of said cylinder, a crank-shaft, and independent operating means connecting the crank-shaft and pair of pistons.

[Claims 6 to 20 not printed in the Gazette.]

1,111,841. INTERNAL-COMBUSTION ENGINE. JOSEPH KOENIG, Two Rivers, Wis. Filed Mar. 7, 1911. Serial No. 612,878. (Cl. 123—68.)

1. In an internal combustion engine having a piston, and a cylinder therefor; the combination of a fluid compression cylinder having a discharge port, and a valve-controlled intake port, a piston mounted in the compression cylinder, a thermal chamber in communication with the compression cylinder discharge port and head end of said engine cylinder, the chamber being provided with an exhaust port in juxtaposition to the compression cylinder, valves for said compression cylinder discharge port and chamber exhaust port, and positive means for actuating the valves successively, whereby the compression cylinder discharge port is held closed during the major part of the working stroke of its piston and the chamber exhaust port is open during the exhaust stroke of the working piston.



2. In an internal combustion engine having a piston, and a cylinder therefor; the combination of a fluid compression cylinder having a discharge port, and a valve-controlled intake port, a piston mounted in the compression cylinder, a thermal chamber in communication with the compression-cylinder discharge port and head end of said engine cylinder, the chamber being provided with an exhaust port in juxtaposition to the compression cylinder, a plurality of thermal plates located in the chamber in spaced relation to each other, valves for said compression cylinder discharge port and chamber exhaust port, and positive means for actuating the valves successively, whereby the compression cylinder discharge port is held closed during the major part of the working stroke of its piston and the chamber exhaust port is open during the exhaust stroke of the working piston.

3. In an internal combustion engine having a piston, and a cylinder therefor; the combination of a fluid compression cylinder having a discharge port, and a valve-controlled intake port, a piston mounted in the compression cylinder, a thermal chamber in communication with the compression cylinder discharge port and head end of said engine cylinder, the chamber being provided with an exhaust port in juxtaposition to the compression cylinder, valves for said compression cylinder discharge port and chamber exhaust port, and a single positive means for successively actuating both valves, whereby the compression cylinder discharge port is held closed during the major part of the working stroke of its piston and the chamber exhaust port is open during the exhaust stroke of the working piston.

4. In an internal combustion engine having a piston, and a cylinder therefor; the combination of a fluid compression cylinder having a discharge port, and a valve-controlled intake port, a piston mounted in the compression cylinder, a thermal chamber in communication with the compression cylinder discharge port and head end of said engine cylinder, the chamber being provided with an exhaust port that is disposed adjacent to the air intake end of said chamber, valves for said compression cylinder discharge port and chamber exhaust port, and positive means for actuating the valves successively, whereby the compression cylinder discharge port is held closed during the major part of the working stroke of its piston and the chamber exhaust port is open during the exhaust stroke of the working piston.

5. An internal combustion engine comprising a working cylinder, a piston therefor, a fluid cooled fluid compression cylinder having a discharge port, and a valve-controlled intake port, the compression cylinder being of lesser area than the engine cylinder, a piston for the compression cylinder, a thermal chamber in communication with the compression cylinder discharge port and head end of said engine cylinder, the chamber being provided with an exhaust port disposed adjacent to its air intake end, valves for said compression cylinder discharge port and chamber exhaust port, and positive means for actuating the valves whereby the compression cylinder discharge port is held closed during the major portion of the working stroke of its piston, and the chamber exhaust port is opened during the exhaust stroke of the working piston.

1,111,842. PROCESS OF MANUFACTURING METHYL CHLORID. BURRITT S. LACY, Perth Amboy, N. J., assignor, by mesne assignments, to The Roessler & Hasslacher Chemical Company, a Corporation of New York. Filed July 7, 1913. Serial No. 777,767. (Cl. 23—24.)

1. The process of manufacturing methyl-chlorid from methane and chlorin gas, consisting in mixing chlorin gas with a proportion of methane greater than the theoretical one and bringing said mixture to reaction.

2. The process of manufacturing methyl-chlorid from methane and chlorin gas, consisting in mixing chlorin gas with a proportion of methane greater than the theoretical one, close to the reaction vessel before entering same and causing the mixture to react within a suitable reaction vessel.

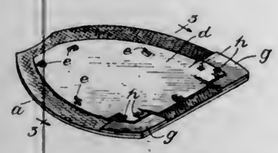
3. The process of manufacturing methyl-chlorid from methane and chlorin gas, consisting in mixing chlorin gas with a proportion of methane greater than the theoretical one, close to the reaction vessel before entering same and causing the mixture to react within a non-metallic reaction vessel.

4. The process of manufacturing methyl-chlorid from methane and chlorin gas, consisting in mixing chlorin gas with a proportion of methane, greater than the theoretical one, close to the reaction vessel before entering same and causing the mixture to react within a reaction vessel made of quartz.

5. The process of manufacturing methyl-chlorid from methane and chlorin gas, consisting in mixing methane with chlorin gas with a proportion of methane, greater than the theoretical one, passing said mixture through a reaction vessel of quartz and maintaining said vessel at a suitable temperature.

[Claims 6 to 9 not printed in the Gazette.]

1,111,843. HORSESHOE-PAD. ANDRU LARSEN, Chicago, Ill. Filed Oct. 18, 1912. Serial No. 726,428. (Cl. 168—26.)



1. A horse-shoe pad, comprising a flexible body member having front and side marginal portions of the general contour of the corresponding outer edge portions of the horse-shoe, and adapted to extend between the hoof and the shoe, a metallic shield plate secured to the flexible body member, a heel cushion member formed of compressible material and having all portions thereof that serve to cushion the heel of the hoof located between the hoof and the shoe, said heel cushion member being in contact with the adjacent marginal parts of the flexible body member, and means for securing said heel cushion member to the flexible member.

2. A horse-shoe pad comprising a flexible main body member having all of its side and end marginal portions formed in one integral piece, the outer edge of said member being of the general contour of the outer edge of a horse-shoe, a metallic shield plate secured to the under side of said flexible main body member, a heel cushion member formed of leather and extending between the shield plate and said flexible main body member and projecting laterally beyond the rear portion of the shield plate, and means for securing the leather heel cushion member to the shield plate.

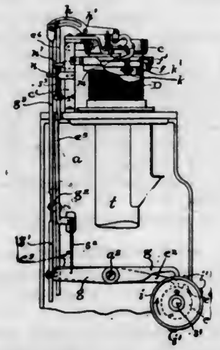
3. A horse-shoe pad comprising a flexible body member having all of its side and end marginal portions formed in one integral piece, the outer edge of said main body member being of the general contour of the outer edge of a horse-shoe, a shield plate secured to the under side of said flexible main body member, and compressible heel cushion members secured to the shield plate at the rear portion thereof and extending between the shield plate and said flexible body member and projecting laterally beyond the opposite side margins of said plate.

4. A horse-shoe pad comprising a flexible main body member having side and end marginal portions formed in one integral piece, the outer edge of said member being of the general contour of the outer edge of a horse-shoe, a metallic shield plate secured to the under side of said flexible main body member, said flexible main body member having marginal portions extending beyond the edges of said plate at the end margin and both side margins of the latter and adapted to extend between a hoof and shoe, heel cushion members formed of leather and extending laterally and endwise beyond the margins of the shield plate at the rear corners of the latter and adapted to extend between a hoof and shoe, and means for securing said heel cushion members to the opposite rear corners of the shield plate, respectively.

5. A horse-shoe pad comprising a flexible main body member having all of its side and end marginal portions formed in one integral piece, the outer edge of said member being of the general contour of the outer edge of a horse-shoe, a shield plate secured to said flexible main body member, said flexible main body member having marginal portions extending beyond the edges of said plate at the end margin and both side margins of the latter and adapted to extend between a hoof and shoe, compressible heel cushion members extending over the marginal parts of said flexible main body member exterior to the rear and side margins of the shield plate, and means connecting said cushion members with the shield plate and body member.

[Claims 6 and 7 not printed in the Gazette.]

1,111,844. AUTOMATIC CIRCULAR-KNITTING MACHINE. JOHN LAWSON, Central Falls, R. I. Filed Jan. 27, 1912. Serial No. 673,712. (Cl. 66—21.)



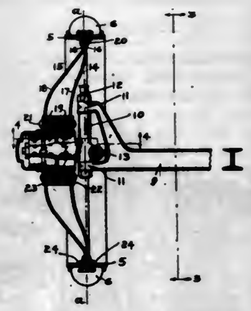
1. In a full automatic circular knitting-machine provided with a revoluble annular needle cylinder, a latch-ring mounted to swing above the cylinder, and a base plate member fixed to the latch-ring, the combination therewith of a fabric-cutter located within the cylinder, said cutter carried by an arm pivoted to the base-plate, a revoluble cam, and instrumentalities connecting said cam and arm arranged and timed for causing the cutter to swing into and out of cutting action.

2. In an automatic circular knitting-machine having a needle-cylinder, the combination of a web-cutter, a movably positioned plate or base disposed within the needle-row having said web-cutter pivotally supported therein, and means for swinging the web-cutter to engage an inner circular surface of the needle-cylinder.

3. In an automatic circular knitting-machine provided with a needle-cylinder and the usual stitch-forming means, the combination of a plate element movably mounted above the top of the cylinder, a swinging web-cutter capable of independent movement, supported on said plate, and means for moving the web-cutter outward against an inner surface of the needle-cylinder to engage and transversely sever the tubular web extending downward between said inner surface of the cylinder and the periphery of the web-cutter.

4. In an automatic circular knitting-machine having a needle-cylinder and a pivoted latch-ring normally positioned thereabove, the combination therewith of a pivoted web-cutter supported on the latch-ring and bodily movable with it, and means for moving the web-cutter in and out of cutting action to sever the web.

1,111,845. CASTER-WHEEL. ALFRED M. LOFLAND, Lebanon, Ind. Filed Sept. 5, 1912. Serial No. 718,706. (Cl. 21—69.)

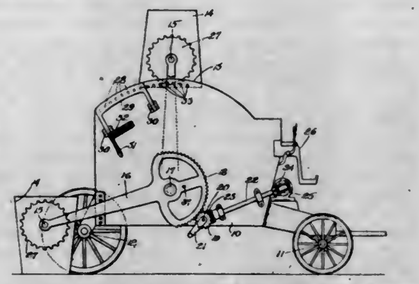


1. In a wheel, the combination with a hub and a rim, of a pair of sheet metal disks both extending from the rim to the hub and secured to and connecting said members, the connection with the rim being approximately within the middle plane of the wheel, both of said disks being curved from rim to hub outwardly to form an outwardly dished wheel, the outer disk having more dish than the inner one.

2. In a wheel dished outwardly to receive the pivot of a steering-knuckle and caster-acting support in a plane through the middle of the wheel, the combination of a hub, a rim, a pair of sheet metal disks each having annular outer portions which are in contact with each other and are in planes at right angles to the axis of the hub, said disks having inner portions separated by an annular hub extension and said disks also having intermediate outwardly and continuously curved portions connecting said rim and hub to form an outwardly dished wheel, the outer disk having more dish than the inner disk, the outer edges of said disks being flanged in opposite outer directions to receive the rim of the wheel, and means connecting the flanges with said rim.

3. In a wheel dished outwardly to receive the pivot of a steering-knuckle and caster-acting support in a plane through the middle of the wheel, the combination, of a hub, a rim, a pair of sheet metal disks each having annular outer portions which are in contact with each other and are in planes at right angles to the axis of the hub, said disks having inner portions parallel with each other but separated by an annular hub extension, said disks having intermediate outwardly curved portions connecting said rim and hub portions to form an outwardly dished wheel, the outer disk having more dish than the inner disk, the outer edges of said disks being flanged in opposite outer directions to receive the rim of the wheel, and rivets securing the contacting portions of the disks together.

1,111,846. POWER-LOADING WAGON. CHARLES W. MAYER, Rochester, N. Y. Filed Oct. 4, 1913. Serial No. 793,345. (Cl. 214—1.)



1. Apparatus of the kind described, comprising a vehicle-body, vertically-swinging arms carried by the body, a receiving-bucket having trunnions journaled directly on said arms, and coöperating means on the bucket and the vehicle-body whereby the bucket is automatically inverted for dumping as it comes to position over the body.

2. Apparatus of the kind described, comprising a vehicle-body, vertically-swinging arms carried by the body, means other than the vehicle wheels and axles for lifting said arms, a receiving-bucket having trunnions journaled directly on said arms, and coöperating means on the bucket and the vehicle-body whereby the bucket is automatically inverted for dumping as it comes to position over the body.

3. An apparatus of the kind described, comprising a vehicle-body, vertically-swinging arms pivoted to the body, a receiving bucket journaled on said arms and carrying a gear wheel, the vehicle-body carrying a gear-rack arranged to be engaged by said wheel for automatically inverting the bucket, and means for lifting said arms.

4. An apparatus of the kind described, comprising a vehicle-body, vertically-swinging arms pivoted to the body, a receiving bucket journaled on said arms and carrying a gear wheel, the vehicle-body carrying a gear-rack curved concentrically with said arm-pivots and arranged to be engaged by said gear wheel when said arms are elevated, and means for lifting said arms.

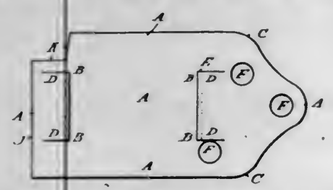
5. Apparatus of the kind described, comprising a vehicle body, swinging arms mounted on the body, a receiving bucket journaled at the ends of said arms, and means for effecting a turning over of the bucket to dump the same as it comes to a predetermined position over the body, said means consisting of a toothed member rigid with the bucket and a series of pins disposed in an arc at the top of the body, certain of said pins being movable to inoperative position to permit the bucket to pass the same before being dumped.

[Claims 6 and 7 not printed in the Gazette.]

1,111,847. ANTI-RAIL-CREEPER TIE-PLATE. OLIVER A. MCCOMBS, Dallas, Tex. Filed May 18, 1914. Serial No. 839,361. (Cl. 238—2.)

1. A one piece anti rail creeper tie plate adapted to be placed between a railway rail and tie having on the upper side two opposing, oppose, parallel rail gripping lug hooks, that project upwardly and inwardly over the rail

flanges, said hooks being shorter than the width of said plate, and located across the center thereof on each side of said rail, one end of said plate extending farther from said rail on one side than on the other, all fastener openings being in the long end of said plate, and said plate to be fastened to said tie by the long end only, substantially as described and for the purpose set forth.

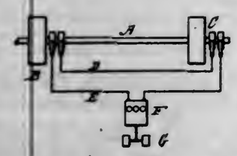


2. A one piece anti rail creeper tie plate adapted to be placed between a railway rail and tie, having on the upper side two opposing, opposite, parallel, rail gripping lug hooks that project upwardly and inwardly over the rail flanges, said hooks being shorter than the width of said plate and located across the center of said plate on each side of said rail, one end of said plate extending farther from said rail on one side than on the other, all fastener openings being in the long end of said plate, and said plate being fastened to said tie by the long end only, the under side of the long end of said plate having a plurality of short disconnected ribs, substantially as described and for the purpose set forth.

3. A one piece anti rail creeper tie plate adapted to be placed between a railway rail and tie, having on the upper side two opposing, opposite, parallel, rail gripping lug hooks that project upwardly and inwardly over the rail flanges, said hooks being shorter than the width of said plate and located across the center thereof on each side of said rail, one end of said plate extending farther from said rail on one side than on the other, all fastener openings being in the long end of said plate and said plate to be fastened to said tie by the long end only, the under side of the long end of said plate having a plurality of short disconnected ribs, and the under side of the said plate beneath the rail seat and the short end being smooth, substantially as described and for the purpose set forth.

4. A one piece anti rail creeper tie plate adapted to be placed between a railway rail and tie having on the upper side two opposing, opposite, parallel, rail gripping lug hooks that project upwardly and inwardly over the rail flanges, said hooks being shorter than the width of said plate and located across the center thereof on each side of said rail, one end of said plate extending farther from said rail on one side than on the other, all fastener openings being in the long end of said plate and said plate to be fastened to said tie by the long end only, the under side of said long end of said plate having a plurality of short disconnected ribs, the under side of said plate beneath the rail seat and the said short end being smooth, and said plate having a notch in the corner of the short end thereof, substantially as described and for the purpose set forth.

1,111,848. MEANS FOR ELECTRICALLY DETERMINING TRANSMITTED POWER. WALTER E. MCCOY and SEVERN D. STRONG, New York, N. Y., assignors of one-third to Frank W. Smith, New York, N. Y. Filed Apr. 1, 1912. Serial No. 687,888. (Cl. 73—15.)



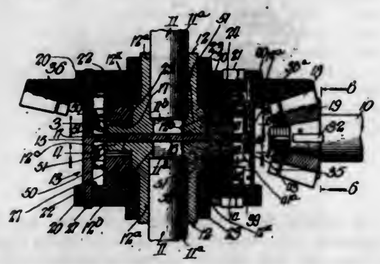
1. Means for electrically determining power transmitted during a given time, comprising two generators, a rotating power transmitting member capable of deflection under torsional stress conected to the armature shafts of said generators, the said generators being interposed between the driving motor and the load and constructed and connected by a circuit so that their voltage waves will be parallel under zero deflection of said transmitting member, and means in said circuit for determining the voltage resulting from divergence of said waves due to the torsional deflection of said member.

2. Means for electrically measuring and integrating, under given speed and stress of load, power transmitted during a given time, comprising two generators, a rotating power transmitting member capable of deflection under torsional stress connected to the armature shafts of said generators, the said generators being interposed between the driving motor and the load and constructed and connected by a circuit so that their voltage waves will be parallel under zero deflection of said transmitting member, and means in said circuit for measuring and integrating the voltage resulting from divergence of said waves due to the torsional deflection of said member under given speed and stress of load.

3. Means for electrically measuring and integrating power transmitted during a given time, comprising a rotating power transmitting shaft, two generators mounted thereon between the driving motor and the load and having terminals of like polarity connected in circuit, and an integrating electric meter interposed in said circuit.

4. Means for electrically measuring and integrating power transmitted during a given time, comprising a rotating power transmitting shaft, two generators mounted thereon between the driving motor and the load and having terminals of like polarity connected in circuit, an integrating electric meter interposed in said circuit, and means for retarding the rotation of the moving member in said meter proportionately to the square of its speed.

1,111,849. DIFFERENTIAL GEARING. WILLIAM L. MCDONALD, Chicago, Ill. Filed Feb. 17, 1913. Serial No. 748,796. (Cl. 74—59.)



1. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a rotatable casing in which the two parts of said driven shaft have bearing, a clutch device for each shaft part comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said ring having cam lugs adapted to interlock with said casing but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, means connecting said two rings for rotating them in unison independently of said casing, said means providing for yielding relative rotative movement between said two rings, mechanism for driving said casing in either direction, and means intermediate said drive mechanism and said rings acting to impart limited rotative movement to them relative to the casing in advance of the rotative movement of the casing, and in the opposite direction.

2. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a casing in which the two parts of said driven shaft have bearing, a clutch device for each part of said driven shaft, comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said ring having cam lugs adapted to interlock with said casing but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, a beveled gear fixed to said casing, a driving pinion meshing therewith and capable of limited rotative movement on said drive shaft, means connecting said two rings for rotating them in unison independently of said casing, said means providing for yielding relative rotative movement between said two rings, a member rotative on said casing, means fixed to said drive shaft operatively engaging said rotative member, and means operatively connecting said rotative member and said ring rotating means.

3. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a casing in which the two parts of said driven shaft have bearing, a clutch device for each part of said driven shaft, comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said ring having cam lugs adapted to interlock with said casing but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, a beveled gear fixed to said casing, a driving pinion meshing therewith and capable of limited rotative movement on said drive shaft, means connecting said two rings for rotating them in unison independently of said casing, said means providing for yielding relative rotation between said two rings, and means intermediate said drive shaft and said rings acting to impart limited rotative movement to them relative to the casing in advance of the rotative movement of the casing and in the opposite direction.

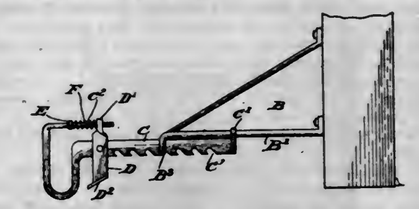
3. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a casing in which the two parts of said driven shaft have bearing, said casing having end walls provided with cam grooves, a clutch device for each part of said driven shaft, comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said ring having cam lugs coacting with the cam grooves in said casing end walls and adapted to interlock therewith but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, a beveled gear fixed to said casing, a driving pinion meshing therewith and capable of limited rotative movement on said drive shaft, means connecting said two rings for rotating them in unison independently of said casing, said means providing for yielding relative rotation between said two rings, a member rotative on said casing, means fixed to said drive shaft operatively engaging said rotative member, and means operatively connecting said rotative member and said ring rotating means.

4. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a casing in which the two parts of said driven shaft have bearing, a clutch device for each part of said driven shaft, comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said ring having cam lugs adapted to interlock with said casing but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, a beveled gear fixed to said casing, a driving pinion meshing therewith and capable of limited rotative movement on said drive shaft, a rock shaft carried by said casing, means interposed between said rock shaft and said rings for imparting limited rotative movement to said rings, said means including a resilient member acting to permit yielding relative rotative movement between said rings, and means intermediate said drive shaft and said rock shaft acting to impart limited rotative movement to the rock shaft in advance of the rotative movement of the casing.

5. A differential gearing comprising the combination of a drive-shaft, a two-part driven shaft, a casing in which the two parts of said driven shaft have bearing, a clutch device for each part of said driven shaft, comprising a clutch member fixed to the associated shaft part and a rotative ring movable endwise thereof, said rings having cam lugs adapted to interlock with said casing but permitting a limited rotative movement of said ring in either direction with reference to said casing by means of which said ring is forced into engagement with its associated clutch member, a beveled gear fixed to said casing, a driving pinion meshing therewith and capable of limited rotative movement on said drive shaft, a rock shaft carried by said casing, gears on said rock shaft rotatively engaged with said rings, means connecting said last-named gears with said rock shaft for imparting rotative movement from said rock shaft to said rings but providing for yielding relative rotative movement between said rings, and means intermediate said drive shaft and said rock shaft acting to impart relative rotative movement to the rock shaft in advance of the rotative movement of the casing.

[Claim 6 not printed in the Gazette.]

1,111,850. SACK-HOLDING DEVICE. CLARENCE N. MERRITT, Glyndon, Minn. Filed Feb. 2, 1914. Serial No. 816,127. (Cl. 83—26.)

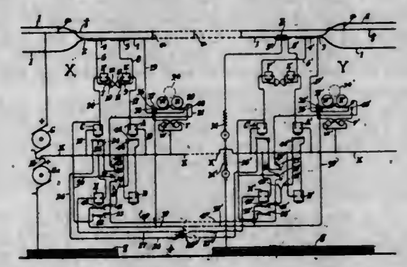


1. A bag holding device consisting of a bracket having side members, arms adjustable on said side members and having bag engaging hooks pivoted thereon, and other bag engaging means; said bracket and said other bag engaging means being adapted to be secured on opposite sides of a spout and said arms having means for adjusting the movement of said pivoted hooks.

2. A bag holding device consisting of a bracket having depressed portions and side members, arms slidable on said side members and having notches in which said depressed portions are engaged, bag engaging hooks pivoted on said arms, adjustable means connected with said arms for regulating the movement of said pivoted hooks, and other bag engaging means for holding the opposite side of a bag from that held by said pivoted hooks.

3. In a bag holding device, the combination of a bracket, arms adjustable thereon, pivoted bag engaging hooks on said arms, and adjustable means carried by an upper portion of said arms and engaging said hooks for controlling the movement thereof.

1,111,851. SIGNALING SYSTEM FOR HIGH-VOLTAGE RAILWAYS. CARL P. NACHOD, Philadelphia, Pa. Filed July 23, 1912. Serial No. 711,023. (Cl. 246—36.)



1. The combination with an electric railway system, of supply and return conductors therefor, a signaling system, a return conductor for said signaling system independent of the return conductor of said electric railway system, and a source of electro-motive-force connected between said return conductors opposing flow of current through said signaling system to said return conductor of said electric railway system.

2. In combination, an electric railway system, supply and return conductors therefor, means supplying energy to said railway system through said conductors, a signaling system, supply and return conductors therefor, the supply conductors of said railway system and of said signaling system being in electrical communication with each other, and a source of electro-motive-force connected between said return conductors opposing flow of current through said signaling system to the return conductor of said railway system.

3. The combination with an electric railway system, of supply and return conductors therefor, a source of energy delivering current over said supply and return conductors for said railway system, a signaling system, and a return conductor therefor in electrical communication with said source of energy and maintained at a potential higher

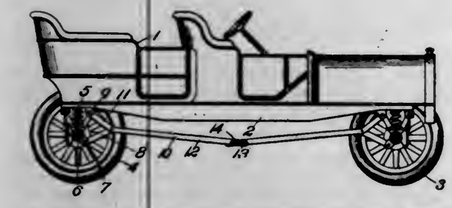
than the potential of said return conductor of said railway system.

4. The combination with an electric railway system, of supply and return conductors therefor, a source of energy delivering current to said system over said conductors, a signaling system having supply and return conductors, and means for impressing upon said conductors of said signaling system energy derived from said source at a potential fractional of the potential of said electric railway system and maintaining said signaling system conductors at a potential higher than the return conductor of said railway system.

5. The combination with an electric railway system, of a contact conductor and a return conductor, a source of energy delivering current to said system over said conductors, a signaling system comprising a signal, signal controlling means and a contact, a second contact movable with a vehicle delivering energy from said contact conductor to said signaling system contact and simultaneously to said vehicle, and a return conductor for said signaling system maintained at a potential higher than the return conductor of said electric railway system.

[Claims 6 and 7 not printed in the Gazette.]

1,111,852. SHOCK-EQUALIZER. OTTO NEUVIANS, Agenda, Kans. Filed Aug. 25, 1913. Serial No. 786,448. (Cl. 21—105.)



1. In a shock equalizer, the combination with a vehicle body and axles, of an individual lever mechanism pivotally mounted at each corner of the vehicle with one arm of each lever connected with a like arm of another lever, and means for connecting each of said levers with the vehicle axle adjacent its body mounting.

2. In a shock equalizer, the combination with a vehicle body and axles, of a lever pivotally connected with the body at each corner thereof and extending longitudinally relative thereto, and having slidable connection with a like lever having pivotal mounting on the body, and means connecting each of said levers with an adjacent axle.

3. In a shock equalizer, the combination with a vehicle body and axles, of a lever having one end pivotally connected with the body and its opposite end connected with a like arm of a lever having like mounting on the vehicle, and a link connecting said lever with the axle adjacent its body mounting.

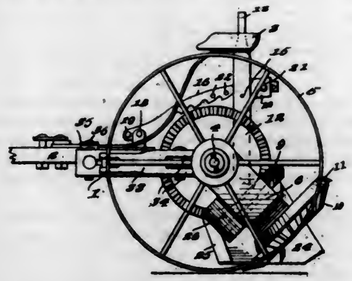
4. In a shock equalizer, the combination with a vehicle body and axles, of longitudinally and transversely extending bell crank levers pivotally mounted on the body at each corner thereof and adjacent the axles, means connecting the free ends of the longitudinal and of the transverse levers, and links pivotally supported on the axles and connected with the bell crank levers.

5. In a shock equalizer, the combination with a vehicle body and axles, of collars on the ends of the axles, bell crank levers pivotally mounted on the body and connected in pairs, and links having their ends pivotally mounted on said collars and connected with the bell crank levers, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,111,853. BEAN-HARVESTER. JOHN FRANCIS OAKES, Copas, Minn. Filed June 10, 1913. Serial No. 772,864. (Cl. 56—1.)

1. A bean harvester, consisting of a frame, an axle carrying ground wheels mounted in said frame, a yoke pivotally mounted upon the axle, and bean extracting means embodying an eccentrically mounted disk carried by said yoke and operated from the axle.



2. A bean harvester consisting of a frame, an axle mounted in said frame and carrying ground wheels, a yoke swinging from said axle, bean extracting means embodying an eccentrically mounted disk mounted in said yoke, a driving gear mounted on the axle, and a gear carried by said yoke and meshing with said driving gear for operating the bean extracting mechanism.

3. A bean harvester, consisting of a frame, having draft means and carrying a driver's seat, an axle mounted in said frame, ground wheels on said axle, a driving gear wheel mounted on said axle, a yoke swung from said axle, a shaft mounted in said yoke, a gear wheel on said shaft meshing with the driving gear wheel on the axle, a toothed wheel mounted on the other end of said shaft, and an intermediate disk or wheel mounted eccentrically on said shaft and operating substantially parallel with and in conjunction with the toothed wheel.

4. A bean harvester, consisting of the frame, the axle mounted in said frame, the ground wheels on said axle, the toothed hub on one of said wheels, the sliding collar on the axle having teeth adapted to engage the tooth of the hub, the shifting lever for sliding said collar, the foot lever connected with said shifting lever for operating said lever, the driving gear wheel on said axle adapted to be thrown into and out of use by said clutch mechanism, and bean extracting means embodying coacting disks upon the same shaft, one of said disks being disposed eccentrically with relation to the other operated by said driving gear wheel.

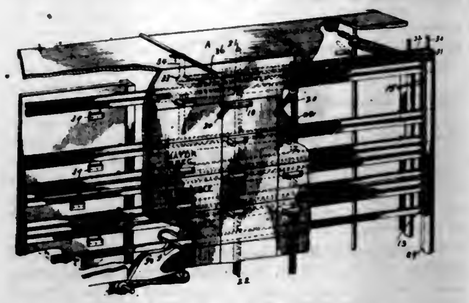
5. A bean harvester, consisting of a frame, an axle, ground wheels on said axle, a clutch mechanism carried by the axle and one of said wheels, foot operated mechanism for actuating said clutch, a driving gear wheel on said axle, a swinging frame mounted on the axle, a shaft in said frame, a bevel gear wheel on one end of the shaft meshing with said driving gear wheel, a toothed wheel mounted on the other end of said shaft, and an interposed wheel mounted eccentrically on said shaft between said toothed wheel and frame parallel with and coacting with said toothed wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,111,854. IRREGULAR-VOTING DEVICE. CHARLES HERBERT OCUMPAUGH, Rochester, N. Y. Filed Nov. 21, 1912. Serial No. 732,695. (Cl. 235—54.)

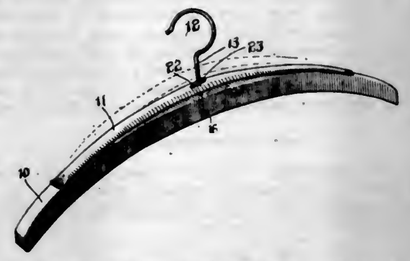
1. In a voting machine, in combination, a face plate having a vote-receiving opening, a chute communicating with said opening, voting devices, means for resetting said voting devices, a shaft and connections for operating said resetting means, and an arm on said shaft extending, when the parts are in voting position, into said chute adjacent said opening.

2. In a voting machine, in combination, a face plate having a vote receiving opening, a chute communicating with said opening, a slide bar movable adjacent said opening, means for moving said slide bar to engage a vote deposited in said opening and positively move the same therefrom, said means including a shaft, and an arm on



said shaft extending, when the parts are in voting position, into said chute adjacent said opening.

1,111,855. GARMENT-HANGER. ALBERT OPPENHEIM, New York, N. Y., and EDWARD CLEARY, Bridgeport, Conn., assignors to The Connecticut Web and Buckle Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 21, 1914. Serial No. 826,221. (Cl. 211—13.)



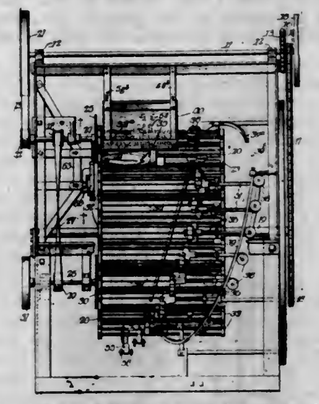
1. A garment hanger comprising a carrying bar, a hook having a shank rotatable in the bar and upon one side a locking projection, and a spring clip adapted to engage the upper side of the bar and having a hole at its midlength through which the shank passes and a slot through which the locking projection may pass, the clip being locked in operative position by rotation of the shank to place the locking projection out of alinement with the slot and in engagement with the outer face of the clip.

2. A garment hanger comprising a carrying bar, a hook having a shank rotatable in the bar and upon one side a locking projection formed by displacing metal of the shank outward and a spring clip through which the shank passes and which is provided with a slot through which the locking projection may pass, substantially as described, for the purpose specified.

3. A garment hanger comprising a carrying bag, a hook having a shank rotatable in the bar and upon one side a locking projection, a locking washer seated in the carrying bar and provided with recesses, the shank passing through said washer and headed on the outer side thereof, a disk outside the washer and having lugs passing through the recesses and engaging the bar, whereby the washer is held against rotation and the shank against longitudinal movement, and a spring clip on the upper side of the bar through which the shank passes and which is provided with a slot through which the locking projection may be passed.

4. A garment hanger comprising a carrying bar, suspending means comprising a shank rotatable in the bar and having upon one side a locking projection and a spring clip through which the shank passes and which is provided with a slot through which the locking projection may be passed and which upon rotation of the shank will engage the outer face of the clip.

1,111,856. CORN-HUSKER. JOSEPH H. PIERCE, Chicago, Ill. Original application filed Sept. 18, 1905, Serial No. 278,969. Divided and this application filed Mar. 31, 1913. Serial No. 757,814. (Cl. 130—5.)



1. In a machine of the character described, the combination of a conveyer for an ear of corn, a saw adjacent to said conveyer to sever the stock end of said ear, and means traveling with said conveyer to project the stock end of said ear into the plane of operation of said saw, substantially as described.

2. In a machine of the character described, the combination of a rotatable conveyer for an ear of corn, a saw adjacent to said conveyer, and a spring actuated means traveling with said conveyer to project the stock end of said ear into the plane of operation of said saw, substantially as described.

3. In a machine of the character described, the combination of a conveyer having a plurality of receptacles, each adapted to receive an ear of corn, a saw adjacent to said conveyer to sever the stock ends of said ears, and means in each receptacle to project the stock ends of said ears into the plane of operation of said saw, substantially as described.

4. In a machine of the character described, the combination of a conveyer having a plurality of receptacles each adapted to receive an ear of corn, a saw adjacent to said conveyer to sever the stock ends of said ears, and a spring actuated means in each receptacle to project the stock ends of said ears into the plane of operation of said saw, substantially as described.

5. In a machine of the character described, the combination of a conveyer having a plurality of receptacles each adapted to receive an ear of corn, means adjacent to said conveyer to sever the stock ends of said ears of corn, and a sliding spring-actuated pusher in each receptacle to project its ear of corn into the plane of operation of said severing means whereby its stock end may be cut off as said conveyer moves, substantially as described.

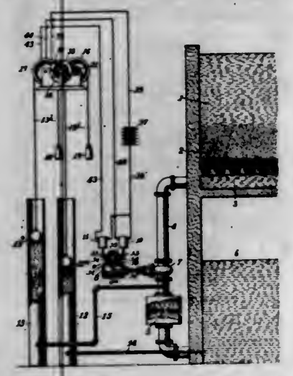
[Claims 6 to 16 not printed in the Gazette.]

1,111,857. CONTROLLING DEVICE FOR FILTRATION PLANTS. WALTER J. PIKE, Grand Rapids, Mich. Filed Sept. 29, 1913. Serial No. 792,519. (Cl. 50—13.)

1. A controlling device, comprising a passage having a restricted orifice, a valve at the pressure side of said orifice, means for opening and closing said valve, separate electric circuits to control the opening and closing means, an arm and a circuit closer simultaneously rotative, a float to rotate the same and operating the closer when the float rises to the limit, rotary segments in circuit with the respective controlling circuits and alternately engaged by the arm, and a separate float to rotate the segments.

2. A controlling device, comprising a passage having a restricted orifice, a valve at the pressure side of said orifice, means for opening and closing said valve, separate

electric circuits to control the opening and closing means, a float carried by fluid the level of which is determined by the pressure between the valve and orifice and adapted to close the closing circuit when the said level reaches the maximum, and a float carried by fluid the level of which is determined by the pressure below said orifice and adapted to shift circuits as the pressure changes.



3. A controlling device, comprising a passage having a restricted orifice, a valve in the passage above said orifice, means for opening and closing said valve, electric circuits for controlling said means, a rotary shaft carrying a rotary circuit closer adapted to shift the current from the arm to the closing circuit, a float to rotate said shaft carried on fluid raised and lowered by the pressure between the orifice and the valve, rotary segments in the respective opening and closing circuits and alternately engaged by the rotary arm, and a float to rotate said segments carried on fluid raised and lowered by the pressure below said orifice.

4. A controlling device, comprising a passage having a restricted orifice, a valve in the passage above said orifice, means for opening and closing said valve, separate electric circuits for controlling said means, a rotary shaft, an arm and a rotary circuit closer on said shaft and electrically connected, said closer adapted to shift the circuit from the arm to the closing circuit, a float to rotate said shaft and shift the circuit when said float rises to a maximum, an insulated disk rotative on the shaft and carrying segments arranged in the respective circuits and alternately engaged by the arm to close said circuits, and a second float to rotate said disk, the difference in the levels of said floats being determined by the difference in pressures at the respective sides of said orifice.

5. In combination with a filtration plant having a restricted orifice between the filter and the clear well, a valve at the pressure side of said orifice, electromagnets to control the opening and closing of said valve, a rotatable contact arm, a rotatable disk having segments adapted to be separately engaged by said arm, a source of electricity in communication with the coils of said magnets and with the said contact arm, electric conductors from the said segments to the respective magnets, and separate means actuated by the respective pressures above and below the said orifice for independently rotating the contact arm and the disk.

[Claims 6 to 9 not printed in the Gazette.]

1,111,858. RESPIRATOR. WALTER S. POLLARD, Philadelphia, Pa. Filed Aug. 20, 1913. Serial No. 785,601. (Cl. 128—13.)

1. In a respirator, a hollow casing having its rear face shaped to contact with the lips and cheeks of the user and to fit under his nose and provided with openings to register with his nostrils, the front face of said casing having the material thereof near opposite ends outwardly and laterally deflected, the laterally deflected portion being provided with apertures, filtering material covering said apertures, and caps in frictional engagement with said outwardly deflected portions for holding said filtering material in position.

2. In a respirator, a hollow casing having its rear face shaped to contact with the upper lip and cheeks of the user and to leave the mouth uncovered and to fit under his nose and provided with openings to register with his nostrils, chambers on the front face of said casing near its opposite ends, communicating with the interior of the casing, filtering material within said chambers, and caps for holding said filtering material in position.

3. In a respirator, a hollow casing consisting of a rear and a front plate secured together at their outer edges, said rear plate being shaped to contact with the upper lip and the cheeks of the user and to fit under the nose of the user and having openings to register with the nostrils of the user, said front plate, on opposite sides of its central portion, being outwardly deflected to form side walls and apertured front walls, and caps each having an apertured front wall and having side walls adapted to engage the side walls of said outwardly deflected portions, whereby a chamber is formed between the apertured portions of said front plate and the apertured portions of said caps.

1,111,859. CARRIER. FRANK D. POWELL, Lowell, Mass., assignor to The Lamson Company, Newark, N. J., a Corporation of New Jersey. Filed June 4, 1910. Serial No. 564,938. (Cl. 243—39.)

1. In a carrier, a buffer head provided with a metallic member embedded therein and having spaced teeth, a shell provided with prongs adapted to pass between the teeth of said metallic member, and means for securing said shell to said buffer head.

2. In a carrier, a buffer head provided with a flaring metallic member embedded therein and having spaced teeth, a shell provided with prongs adapted to pass between the teeth of metallic member, and means for securing said shell to said buffer head.

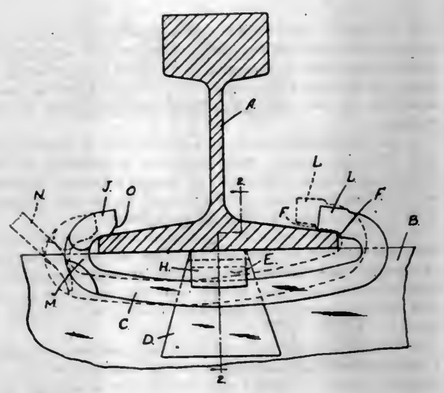
3. In a carrier, a buffer head provided with a metallic member embedded therein, a shell to which said buffer head is adapted to be secured, a washer adapted to be brought into contact with said metallic member, and means for securing the washer in direct contact with said metallic member and for holding the shell and buffer head together.

4. A carrier comprising a shell and a buffer head provided with a pronged member, the prongs of which are curved and are spaced apart so that the angles subtended between lines drawn through the center of said member and the points of prongs adjacent to each other, are in all cases less than 180°, said prongs being wedged into the material of said head from the side thereof adjacent said shell, said material substantially completely covering and concealing said member, and means for firmly securing said member to said shell.

5. A carrier comprising a shell, a buffer head of cushioning material, for said shell, and means for rigidly uniting said cushioning material to said shell, said means including a plurality of spaced apart, deformed prongs wedged into said material from the side thereof adjacent said shell, said deformed prongs being subjected, at least initially, to greater pressure from said material upon one side of each of said prongs than upon an opposite side of the same and being deformed by being thus wedged into said material so as to grasp said material in the interior thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,111,860. RAIL-STAY. FREDERICK A. PRESTON, Highland Park, and PHILIP W. MOORE, Evanston, Ill., assignors to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed May 2, 1914. Serial No. 835,906. (Cl. 238—4.)



1. A rail anchor comprising two elements one of which is resilient and is interposed between the rail and the other element so as to be put under strain by the other element against the rail and one of which is formed with means for giving said device a stationary position in the roadbed against its tendency to creep with the creep of the rail, one of said elements consisting of a yoke adapted to extend around the base of the rail and the other element being interposed between the yoke and the rail; said elements being capable of adjustment to said operative position by a movement of one of them transversely of the rail.

2. A rail anchor comprising two elements one of which is resilient and is interposed between the rail and the other element so as to be put under strain by the other element against the rail and one of which is formed with means for giving said device a stationary position in the roadbed against its tendency to creep with the creep of the rail, one of said elements consisting of a yoke adapted to extend around the base of the rail and the other element being interposed between the yoke and the rail; said elements being capable of adjustment to said operative position by the movement of the yoke transversely of the rail.

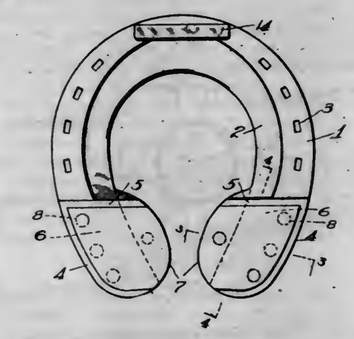
3. A rail anchor comprising two elements one of which is resilient so as to be put under strain by the other element and one of which is formed with means for giving said device a stationary position in the roadbed against its tendency to creep with the creep of the rail, one of said elements consisting of a yoke adapted to extend around the base of the rail and the other element being interposed between the yoke and the rail; said elements being capable of adjustment to said operative position by the movement of the yoke transversely of the rail, said yoke being provided with lugs adapted to be engaged by a tool.

4. A rail anchor comprising two elements one of which is resilient so as to be put under strain by the other element and one of which is formed with means for giving said device a stationary position in the road-bed against its tendency to creep with the creep of the rail, one of said elements consisting of a yoke adapted to extend around the base of the rail and the other element being interposed between the yoke and the rail; said elements being capable of adjustment to said operative position by the movement of the yoke transversely of the rail, the latter being formed with a recess adapted to be engaged with a tool for this purpose.

5. A rail anchor comprising two elements one of which is resilient so as to be put under strain by the other element and one of which is formed with means for giving said device a stationary position in the road-bed against its tendency to creep with the creep of the rail, one of said elements consisting of a yoke adapted to extend around the base of the rail and the other element being interposed between the yoke and the rail; said elements being capable of adjustment to said operative position by the movement of the yoke transversely of the rail, the latter being provided on opposite sides with recesses adapted to be engaged by a claw bar for this purpose.

[Claims 6 to 20 not printed in the Gazette.]

1,111,861. HORSESHOE. JOHN D. ROBNETT, Chicago, Ill. Filed Feb. 28, 1912. Serial No. 680,439. (Cl. 168—13.)



1. A horseshoe comprising a body portion, cushion receptacles at the heels thereof integral with the body portion, said cushion receptacles provided with bottom pieces, said bottom pieces provided on the side thereof opposite to that on which the cushion receptacles are located, with recesses having upstanding walls extending completely therearound said bottom pieces substantially in the same plane as the body portion of the shoe, projecting walls for the front and outer sides of said cushion receptacle, the inner opposed sides of said cushion receptacle being open, and independent separated cushions in said cushion receptacles.

2. A horseshoe comprising a body portion, cushion receptacles at the heels thereof integral with the body portion, said cushion receptacles provided with bottom pieces substantially in the same plane as the body portion of the shoe, said bottom pieces projecting laterally toward each other beyond the outline of the shoe and out of contact with each other, a recess associated with said bottom pieces on the side thereof opposite to the side where the cushions are located, an upstanding wall extending en-

tirely around each of said recesses, a portion of said bottom pieces projecting beyond said recesses.

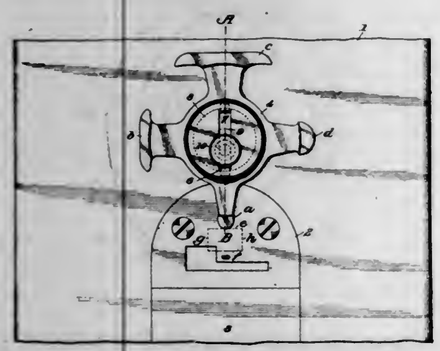
3. A horseshoe comprising a body portion, cushion receptacles at the heels thereof integral with the body portion, said cushion receptacles provided with bottom pieces substantially in the same plane as the body portion of the shoe, recesses at the heels of the shoe above said bottom pieces and on the side of the shoe opposite the cushions each recess provided with outstanding walls and entirely surrounding it, a portion of the bottom piece extending beyond the recess and cushioning material in said cushion receptacles and said recesses, the cushioning material in the recesses adapted to come in contact with the horse's hoof.

4. A horseshoe comprising a body portion, cushion receiving receptacles integral with the heels thereof, bottom parts for said cushion receiving receptacles, said bottom parts provided with portions which project upwardly beyond the outline of the shoe, the upper face of said portions being below the upper face of the shoe.

5. A horseshoe comprising a body portion, cushion receiving receptacles integral with the heels thereof, bottom parts for said cushion receiving receptacles, said bottom parts provided with portions which project inwardly beyond the outline of the shoe, the upper face of said portions being below the upper face of the shoe, an opening extending through each of said projecting portions having an inclined face, cushions in said cushion receiving receptacles and provided with portions which project through said openings.

[Claim 6 not printed in the Gazette.]

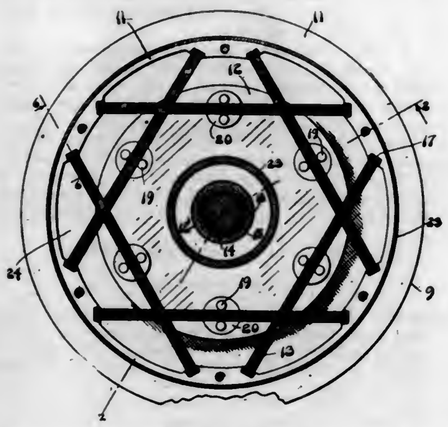
1,111,862. FABRIC-GUIDING ATTACHMENT FOR SEWING-MACHINES. ALBERT RONTKE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 12, 1912. Serial No. 683,203. (Cl. 112—9.)



1. An edge-guiding device for sewing machines comprising a guide-frame provided with an edge-guide and a circularly arranged inclined wall, a cap provided with integrally formed flanges mounted on said frame, said cap being held in effective relationship with said frame by said flanges which are in sliding relationship with said inclined wall and provided with a slot extending across its axis, and means for securing said frame and cap in their desired relationship.

2. An edge-guiding device for sewing machines comprising a guide-frame provided with multiple edge-guides whose guiding surfaces are of different lengths and a circularly arranged inclined wall, a cap provided with integrally formed flanges mounted on said frame, said cap being held in effective relationship with said frame by suitable flanges having sliding relationship with said inclined wall and provided with a slot extending across its axis, and means for securing said frame and cap in their desired relationship.

1,111,863. SPRING-WHEEL. FREDERICK M. ROSS and HORACE G. HORSTMAN, Cincinnati, Ohio, assignors of one-fourth to Willard W. Baxter and one-fourth to Theodore Horstman, Cincinnati, Ohio. Filed Jan. 27, 1913. Serial No. 744,299. (Cl. 152—45.)



1. In combination with a rim, a disk surrounded by, but spaced from the rim, a plurality of sets of straight flat springs, mounted on said rim, each set of springs being engaged by the rim at its ends only, and pin-carrying spools mounted on the disk, for supporting the disk on the springs.

2. In combination with an annular rim, a disk concentric with, but spaced from said rim, a plurality of sets of springs mounted on said rim, spools rotatably mounted on the disk and pins carried by the spools for engaging each set of springs at intermediate points.

3. In combination with a substantially annular rim, a disk, surrounded by, but spaced from the rim, a plurality of springs, each spring having both its ends supported on said rim, and separate means, movably mounted on said disk, for engaging each spring at a point intermediate its ends.

4. In combination in a wheel, a hub portion comprising a substantially annular rim, a disk surrounded by, but radially spaced from said rim, a plurality of springs, each spring having both its ends supported on the rim, spools rotatably mounted on said disk, and pins, carried by each spool, for engaging one of said springs.

5. In combination with a substantially annular rim, a disk surrounded by, but spaced from said rim, a plurality of springs, each spring having its ends only, supported by the rim, spools rotatably mounted on said disk, and a pair of pins loosely mounted on each spool, for slidably engaging each spring at a point between its ends.

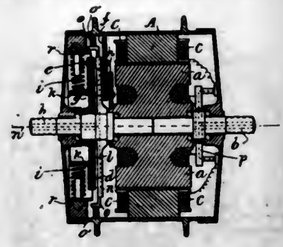
[Claims 6 to 10 not printed in the Gazette.]

1,111,864. ELECTRIC-LIGHTING APPARATUS FOR VELOCIPEDES. ALOIS SANLADERER, Ortenburg, near Vilshofen, Germany. Filed June 12, 1913. Serial No. 773,148. (Cl. 171—231.)

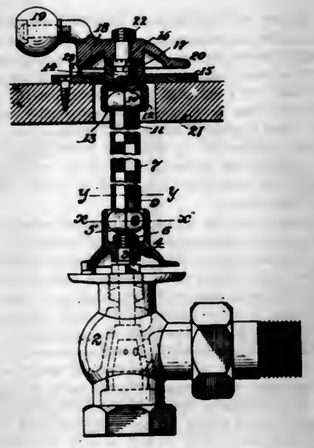
1. The combination with a rotary casing, of an armature mounted for rotation in said casing, a set of field magnets disposed within said casing, and an elastic driving clutch between said casing and armature for driving the latter oppositely to the casing.

2. The combination, with a rotary casing, of an axle within said casing, a dynamo within said casing having an armature rotatable on said axle, and an elastic clutch within said casing and in frictional engagement therewith, adapted to transmit rotation from said casing to said dynamo, for the purpose set forth.

3. The combination, with a rotary casing, of an axle within said casing, a dynamo within said casing having an armature rotatable on said axle, a ratchet pinion for transmitting rotation to said armature, an elastic circularly curved clutch-band within said casing, a lever pivoted to said clutch-band and adapted to engage the teeth of said ratchet pinion, and a spring attached to said lever and to said clutch-band, expanding the latter against the inner surface of the casing, for the purpose set forth.



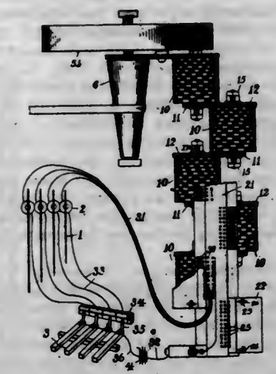
1,111,865. POWER-TRANSMITTING DEVICE. JOHN A. SERRELL, North Plainfield, N. J. Filed Jan. 4, 1912. Serial No. 669,454. (Cl. 137—7.)



The combination of a valve having a valve stem, a head removably secured to said valve stem and provided with a polygonal shaped socket, a polygonal shaped head adapted to fit within said socket, a retaining device for normally preventing removal of said head, a polygonal shaped stem secured to said polygonal head, a support removed from and independent of said valve, a socket member rotatably mounted in said support, said member being provided with a polygonal socket, a manually operable device secured to said socket member for rotating said head, a head of polygonal shape suitably secured within said socket for universal movement, a polygonal stem carried by said last named head and a tube conforming in shape to both said polygonal stems and adapted to receive said stems in telescopic relation, said tube being substantially longer than the combined lengths of said stems whereby the length of the connection between the socket heads may be varied to suit conditions.

1,111,866. PULSATION-PRODUCING DEVICE FOR ELECTRICAL MUSICAL INSTRUMENTS. MELVIN L. SEVERY, Arlington Heights, and GEORGE B. SINCLAIR, Boston, Mass. Filed July 25, 1907. Serial No. 385,456. (Cl. 84—131.)

1. The combination of tuned sonorous bodies, and electromagnetic means for their vibration embracing a plurality of substantially duplicate groups of rotative pulsation-producing members, and gears rotatively uniting said members, each of said groups having a rotative speed which is either a multiple or submultiple of some one of the other associated groups.



2. The combination of tuned sonorous bodies, and electromagnetic means for their vibration embracing a plurality of substantially duplicate groups of rotative pulsation producing members, and gears rotatively uniting said members, the speed of each of said groups, save the slowest, being a multiple of the speed of said slowest rotating group.

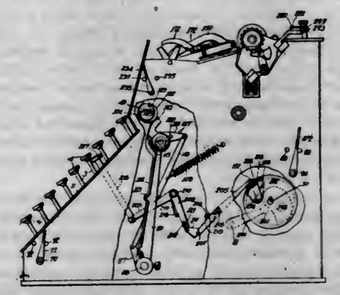
3. The combination of tuned sonorous bodies, and electromagnetic means for their actuation having a plurality of substantially duplicate groups of rotative pulsation producing members geared together to run at relative speeds which are powers of two.

4. The combination of tuned sonorous bodies, and electromagnetic means for their actuation having a plurality of substantially duplicate groups of rotative pulsation-producing members each geared to the one next above it to rotate at one-half the latter's speed.

5. The combination with an electric circuit, of pulsation producing means comprising brushes, and a plurality of substantially duplicate groups of rotative current-affecting members, each group geared to the one next above it to rotate at one-half the latter's speed, and each member of a group being formed with a number of current-affecting elements.

[Claims 6 and 7 not printed in the Gazette.]

1,111,867. COMBINED COMPUTING AND LISTING MACHINE. DANIEL W. SHIEK, Chicago, Ill., assignor to Walter L. Milliken, Barnstable, Mass. Filed Feb. 16, 1912. Serial No. 678,068. (Cl. 235—82.)



1. In a computing machine, a plurality of indicators, a series of operating keys for each indicator, and intermediate transmitting mechanism between the operating keys and the indicators, whereby the latter may be actuated by the operation of the former, in combination with

supplemental operating mechanism arranged to coöperate with the transmitting mechanism to actuate the indicators.

2. In a computing machine, a plurality of registering members, a series of operating keys for each registering member, and intermediate transmitting mechanism between the operating keys and the registering members whereby the latter may be actuated by the operation of the former, in combination with supplemental operating mechanism arranged to coöperate with the transmitting mechanism to actuate the registering members.

3. In a computing machine, a plurality of registering members, suitable carrying mechanism, a series of operating keys for each registering member, and intermediate transmitting mechanism between the operating keys and the registering members whereby the latter may be actuated by the operation of the former, in combination with supplemental operating mechanism arranged to coöperate with the transmitting mechanism to actuate the registering members.

4. In a computing machine, a plurality of registering wheels, a series of operating keys for each registering wheel, and intermediate transmitting mechanism between the operating keys and the registering wheels, whereby the latter may be actuated by the operation of the former, in combination with supplemental operating mechanism arranged to coöperate with the transmitting mechanism to actuate the registering wheels a distance dependent upon the particular key operated.

5. In a computing machine or the like, a plurality of indicators, a series of operating keys for each indicator, and intermediate transmitting mechanism between the operating keys and the indicators, whereby the latter may be actuated by the operation of the former, in combination with means for limiting the function of the keys to that of controlling elements only.

[Claims 6 to 39 not printed in the Gazette.]

1,111,868. TYPE-WRITER. ZALMON G. SHOLES and JOSEPH M. FRAAZ, New York, N. Y., assignors, by mesne assignments, to The Lawrence Manufacturing Company Limited, London, England. Filed May 9, 1911. Serial No. 625,981. (Cl. 197—114.)

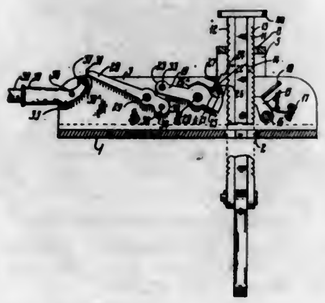
1. In a typewriter, a platen, a ratchet wheel thereon, a roller, a spring mounting for said roller for normally pressing the same between the teeth of said ratchet, and a revoluble shaft having a flattened portion bearing against said spring for controlling said roller, substantially as described.

2. In a typewriter, a platen provided with a ratchet 16 having teeth projecting horizontally from one end thereof, a releasing sector rotatably mounted concentrically with said platen just in front of said teeth and having a releasing projection, a pawl-carrying sector having a pivoted spring-pressed pawl adapted to engage with said teeth and placed in the path of movement of said releasing projection, said sector being mounted concentrically with said platen just outside of said releasing sector, substantially as described.

3. In a typewriter, a platen having a spacing ratchet with horizontally projecting teeth, a releasing sector placed flat against said spacing ratchet and a pawl carrying sector rotatably mounted outside of said releasing sector and parallel to it and said ratchet, said pawl bearing sector having an external circumferential flange extending over and protecting said releasing sector and the teeth of said ratchet, substantially as described.

4. In a typewriter a platen having a spacing ratchet with horizontal projecting teeth, a releasing sector placed flat against the said spacing ratchet, and a pawl-carrying sector rotatably mounted concentrically with said releasing sector, and one of said sectors having an external circumferential flange, extending over and protecting the other sector and the teeth of said ratchet, substantially as described.

1,111,869. HOISTING DEVICE. ALBERT E. SPOONER, Renfrew, Ontario, Canada. Filed Mar. 13, 1913. Serial No. 753,969. (Cl. 57—100.)



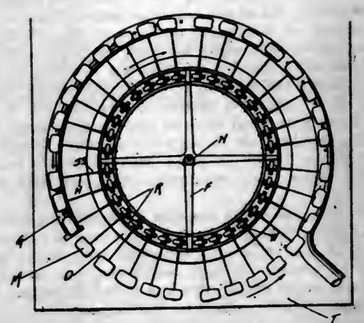
1. A device for the purpose specified comprising a pair of angle plates, a rack member vertically movable between said angle plates, a retaining dog pivoted between said angle plates and engaging with said rack member, a dog lever pivoted between said angle plates, a lifting dog carried by said dog lever and engaging with said rack, a fulcrum lever pivotally supported between said plates and operatively connected to said dog lever and a hand lever pivotally supported between said plates and having a cam formed on one end thereof and operatively engaging with said fulcrum lever.

2. A device for the purpose specified comprising a base plate, a pair of angle plates secured along said base plate parallel one with the other, a guide plate supported across and above said angle plate toward one end thereof and having lug extensions from two sides of a central opening therethrough, a rack member vertically movable between said angle plates and through the opening in said guide plate and having vertically extending grooves on two sides thereof into which said lugs extend and ratchet teeth formed on the remaining two sides, a spring held retaining dog pivotally mounted between said angle plates and engaging the teeth on one side of said rack, a plurality of fulcrum levers linked one to the other to compound the same and pivotally mounted between said angle plates on the opposite side of said rack to that engaged by said retaining dog, a springheld dog carried at one end of said fulcrum levers and engaging with said rack and a cam lever pivoted between said angle plates and operatively engaging with the opposite end of said fulcrum lever.

3. A device of the class described comprising a toothed member, a plurality of fulcrum levers compounded one with the other, one of said levers having a notched end forming a socket bearing, a springheld retaining dog engaging with said toothed member, a springheld dog mounted in the socket bearing of one of said fulcrum levers and a cam lever operatively actuating one of said fulcrum levers.

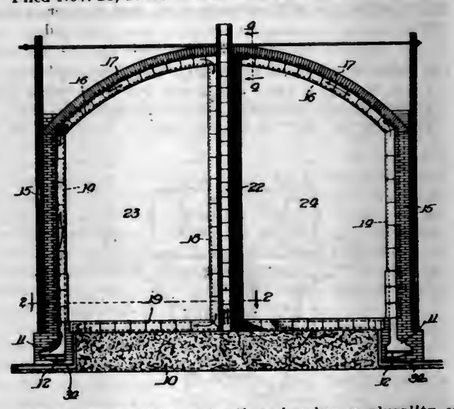
4. A device of the class described comprising a pair of angle plates, a toothed member mounted adjacent said angle plates, a retaining dog pivoted between said angle plates and engaging with said toother member, a dog lever pivoted between said angle plates and having one end thereof forked, a dog carried by said dog lever at the opposite end of the fork and engaging said toothed member, a fulcrum lever pivoted between said angle plates and having one end thereof forked, a link pivotally connecting the forked ends of said dog lever and said fulcrum lever and a cam lever operatively engaging said fulcrum lever at the end opposite the fork thereof.

1,111,870. MARSHMALLOW-TOASTING MACHINE. MATTHIAS O. SPURGEON, Vancouver, Wash. Filed Jan. 8, 1914. Serial No. 810,996. (Cl. 126—41.)



A candy toasting machine, the combination of a circular burner, an adjustable candy holder, double rotating mechanism for carrying the candy holder adjacent to and in a circle corresponding to that described by the burner and for rotating said candy holder on its own axis.

1,111,871. KILN. ENOCH P. STEVENS, Chicago, Ill. Filed Nov. 21, 1912. Serial No. 732,627. (Cl. 25—144.)



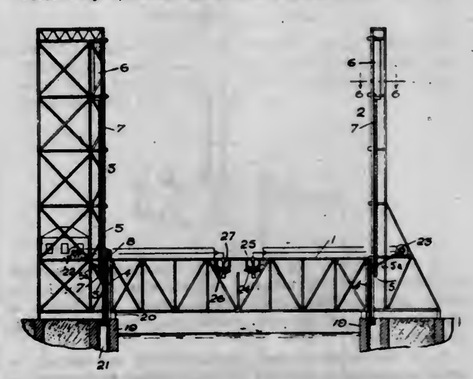
1. A kiln comprising a heating chamber, a plurality of heating flues forming an inner side of the chamber, the walls of adjacent flues being separated from each other throughout substantially the widths of the flues, and the spaces between the flues being open to the heating chamber.

2. A kiln comprising a heating chamber, a plurality of heating flues extending across the chamber and forming the floor thereof, the walls of adjacent flues being separated from each other throughout substantially the vertical widths of the flues, and the spaces between the flues being open to the heating chamber.

3. A kiln comprising a heating chamber, a firebox in one wall of the chamber, flues leading upwardly from the firebox, each flue extending through the adjacent wall, across the top of the chamber to the opposite side wall thereof, thence downwardly through said opposite wall to the floor, thence across the floor and back to said opposite wall, and finally upwardly through said opposite wall.

4. A kiln comprising a heating chamber, a firebox in one wall of the chamber, flues leading upwardly from the firebox, each flue extending through the adjacent wall, across the top of the chamber to the opposite side wall thereof, thence downwardly through said opposite wall to the floor, thence across the floor and back to said opposite wall, and finally upwardly through said opposite wall, the walls of adjacent flues being separated from each other throughout substantially the widths of the flues, and the spaces between the flues being open to the heating chamber.

1,111,872. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed July 6, 1909. Serial No. 505,989. (Cl. 14—42.)



1. A lift bridge comprising two separated piers a span extending across the space between said piers and carrying a roadway and adapted to be lifted and lowered, a counterweight located above said span, and rigid connecting pieces by means of which the counterweight and span are movably connected together.

2. In a lift bridge, a span adapted to be lifted, counterweight for said span, rigid connecting pieces by means of which the counterweights and span are connected together, a common support for the span and counterweight, and an adjustable connection between the span and the support permitting expansion.

3. In a lift bridge, a span adapted to be lifted, counterweight towers at the ends, rigid connecting pieces by means of which the counterweights and span are connected together, and a free connection between the span and the towers to permit change in alinement without interfering with the movement of the span.

4. In a lift bridge, a span adapted to be lifted, counterweight devices at the ends of said span, a link at one end of the span said link connected to one of the counterweight devices.

5. In a lift bridge, two frames traveling in a tower and operatively connected together, a counterweight connected to one frame and a bridge span freely connected to the other frame so as to be capable of moving independently of the frame.

[Claims 6 to 14 not printed in the Gazette.]

1,111,873. RAZOR-STROP. FRANK J. TOMEK, St. Louis, Mo. Filed Sept. 15, 1913. Serial No. 789,821. (Cl. 51—16.)

1. A razor-strop comprising a member having a normally flat portion and an adjacent portion forming an extension continued in the direction of the flat portion and arched transversely to the longitudinal axis of the strop, the arch of the extension merging with the flat portion.

2. A razor-strop comprising a strop having a substantially flat portion, a handle at one end of the strop, a rigid member secured to the handle and to one end of the strop and bowed transversely to the longitudinal axis of the strop, suitable marginal flanges formed on the strop between the bowed member and the flat portion of the strop, a soft pliable filler spanning the space between the flanges and secured to said flanges, the portion of the strop opposite the filler being bowed or arched transversely and merging with the flat portion of the strop.

3. A razor-strop comprising a strop having a substantially flat stropping surface, and a contiguous stropping

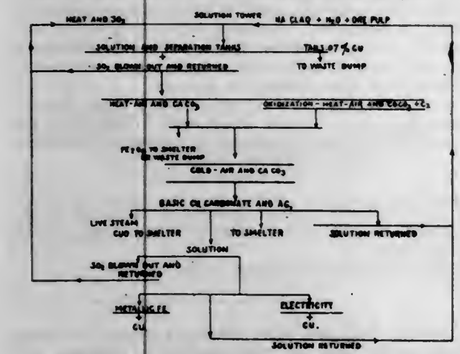
surface bowed transversely to and merging with the flat surface, both surfaces facing in the same direction.

4. A razor-strop comprising a substantially flat section, an adjacent section forming an extension thereof in the same direction and arched transversely the length of the strop, and a filler for maintaining the arch in said arched section.

5. A razor-strop having a substantially flat section, an adjacent transversely bowed section alining therewith, the stropping surface of the bowed section facing in the same direction with the stropping surface or the flat section, marginal flanges on the bowed section, and a taut member or filler connecting the flanges and maintaining the arch in the bowed section.

[Claim 6 not printed in the Gazette.]

1,111,874. PROCESS FOR THE TREATMENT OF COPPER ORES AND THE RECOVERY OF THEIR VALUES. CHARLES S. VADNER, Salt Lake City, Utah. Filed Dec. 9, 1913. Serial No. 805,540. (Cl. 75—18.)



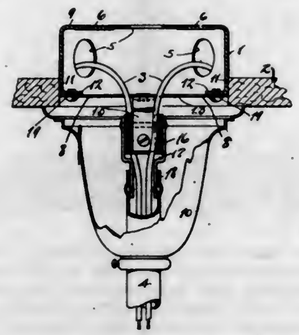
1. The process which consists in dissolving naturally oxidized and sufficiently roasting sulfid ores of copper in a solution of sodium chlorid saturated with sulfur dioxid gas in the presence of heat, blowing out the excess of sulfur dioxid gas and precipitating the copper as a basic copper carbonate, by adding finely pulverized calcium carbonate, to the cold solution and passing air through the same.

2. The process which consists in dissolving naturally oxidized and sufficiently roasted sulfid ores of copper in a solution of sodium chlorid saturated with sulfur dioxid in the presence of heat, and separating the undissolved portions and getting rid of any excess of sulfur dioxid by passing a current of compressed air through the solution, and treating said solution while hot with finely pulverized calcium carbonate whereby the ferric hydrate formed reacts with the arsenic and eliminates same from the solution as ferric arsenite.

3. The process which consists in dissolving oxidized and sufficiently roasted sulfid ores of copper in a solution of sodium chlorid saturated with sulfur dioxid gas in the presence of heat, separating the undissolved portions of ore and getting rid of any excess of sulfur dioxid by passing a current of compressed air through the solution and treating the solution while hot with finely pulverized calcium carbonate, thereby precipitating the iron as ferric oxid; allowing the solution to cool, precipitating the copperand silver contained therein by the addition of additional finely pulverized calcium carbonate, passing a current of compressed air through the solution, thereby precipitating the copper as green basic carbonate together with the silver, then separating the precipitate by filtration.

4. The process which consists in dissolving naturally oxidized and sufficiently roasted sulfid ores of copper in a solution of sodium chlorid saturated with sulfur dioxid gas in the presence of heat, separating the undissolved portions of ore by dacantation and filtration, getting rid of any excess of sulfur dioxid by passing a current of compressed air through the solution, treatitng the solution while hot with finely pulverized calcium carbonate and thereby precipitating the iron as ferric oxid; then allowing the solution to cool and precipitating the copper and silver contained therein by addition of additional finely pulverized calcium carbonate and passing a current of compressed air through the solution, thereby precipitating the copper as a green basic carbonate together with the silver, then separating the precipitate and dissolving same in sulfur dioxid and water and then blowing out the excess of sulfur dioxid gas with compressed air and recovering the copper.

1,111,875. LIGHTING-FIXTURE. FREDERICK W. WAKEFIELD, Vermilion, Ohio, assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio, a Corporation of Ohio. Filed Apr. 25, 1913. Serial No. 763,573. (Cl. 240—85.)

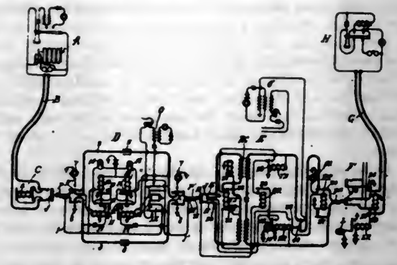


1. The combination of an outlet box provided with an aperture in its top and a plurality of inwardly directed lugs at its open end; and a plate provided with a plurality of apertures adapted to permit the convenient attachment of various fixture supports, said plate being removably attached to said lugs, whereby upon removal of said plate, other fixture supports may be attached to the material behind the top of said box through such aperture.

2. The combination of an outlet box provided with inturned lugs; and a plate provided with open slots adapted to be engaged by screws secured to such inturned lugs on the outlet box, said plate being also provided with apertures permitting the attachment of a fixture to said plate and the passage through the same of the electrical conductors.

3. As a new article of manufacture, an outlet box stamped from sheet metal and having two oppositely disposed inturned lugs, and a fixture-receiving plate also stamped out of sheet metal and provided with oppositely disposed slots adapted to be engaged by screws secured to such inturned lugs on said box, said plate also having apertures adapted to be engaged by a fixture support and to permit the passage of the electrical conductors.

1,111,876. TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 1, 1912. Serial No. 729,076. (Cl. 179—44.)



1. A telephone system comprising magneto and common battery lines, a cord circuit connected to a magneto line, a trunk circuit interconnecting said cord circuit and a common battery line, a pair of talking conductors included in the connection extending between said lines, a supervisory relay for the cord circuit, a supervisory relay for the trunk circuit included in circuit with and controlled over the called line, and a circuit connection including the winding of said cord supervisory relay, normally closed contacts on said trunk relay and a third conductor between said cord and link circuits.

2. A telephone system comprising magneto and common battery lines, a cord circuit for directly interconnecting the magneto lines and connected to a calling one of them, a trunk circuit interconnecting said cord circuit and a common battery called line, a pair of talking conductors included in the connection extending between said line, an answering supervisory relay for the cord circuit, an answering supervisory relay for the trunk circuit, and a control circuit for the cord supervisory relay independent of said talking conductors and including normally closed contacts of the trunk supervisory relay and a third conductor between said cord and trunk circuits.

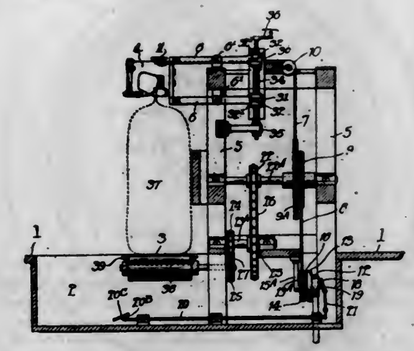
3. A cord circuit comprising a pair of three conductor connecting terminals, a pair of talking conductors extending between two of the conductors of said connecting terminals, a relay at each end of said cord circuit having a winding connected in bridge of said conductors, a second relay at each end of the cord circuit connected to the third conductor of the corresponding terminal, a signal common to the pair of relays at each end of the cord circuit, and circuit connections extending from said signal to contacts on each of said relays, each circuit being adapted for independently displaying the associated signal.

4. A telephone system comprising magneto and common battery lines, a cord circuit connected at its answering end to a magneto line, a trunk circuit connected to the calling end of the cord circuit and adapted for extending the connection to a common battery line, a pair of talking conductors included in the connection between said cord and trunk circuits, a supervisory relay for the cord circuit, a guard signal relay for the link circuit, and a series operating circuit for said relays closed when said cord is connected to the trunk and including a third conductor between said cord and trunk circuits.

5. A telephone system comprising magneto and common battery lines, a cord circuit connected at its answering end to a magneto line, a trunk circuit connected to the calling end of the cord circuit and adapted for extending the connection to a common battery line, a pair of talking conductors included in the connection between said cord and trunk circuits, a supervisory relay for the cord circuit, a guard signal relay for the link circuit, a series energizing circuit for said relays closed when said cord is connected to the trunk and including a third conductor between said cord and trunk circuit, and a guard signal for said trunk having an operating circuit including contacts of the guard relay said circuit being adapted to be closed if the cord is connected to the trunk before the trunk is connected to a called common battery line.

[Claims 6 to 8 not printed in the Gazette.]

1,111,877. BAG-SEWING MACHINE. LOUIS A. BAUDOIN, Chicago, Ill., assignor to Edwards & Loomis Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1912. Serial No. 713,471. (Cl. 112—24.)



1. A bag sewing device, comprising a supporting frame; a conveyer adapted for carrying filled bags; sewing mechanism adapted to sew the mouths of the bags while carried by said conveyer; means for operating said sewing mechanism and said conveyer; a pair of arms fulcrumed on said frame one above the other on horizontally disposed axes, and carrying said sewing mechanism hinged to each of said arms; and means for shifting said arms vertically for adjusting said sewing mechanism relatively to said conveyer.

2. A bag sewing device, comprising a supporting frame, a conveyer mounted in fixed vertical relation to the frame and adapted to carry filled bags, sewing mechanism adapted to sew the mouths of the bags while carried by said conveyer, means for operating said mechanism and said conveyer, a pair of arms fulcrumed on said frame intermediate of their ends and each hinged to said sewing mechanism at its outer end, and a screw rotatably mounted on said frame and having threaded connection with said arms at their inner ends whereby said sewing mechanism is adapted to be adjusted vertically relatively of said conveyer.

3. A bag sewing device, comprising a supporting frame; a conveyer mounted in fixed vertical relation to the frame and adapted to carry filled bags; sewing mechanism adapted to sew the mouths of the bags while carried by said conveyer; means for operating said mechanism and said conveyer; a plurality of rocker arms fulcrumed on said frame in pairs vertically and horizontally and having said sewing mechanism carried at the outer ends thereof; horizontally disposed blocks mounted between said pairs of arms; vertical guideways on said frame; shoulders on said blocks adapted to engage said guideways; said arms being slotted at their inner ends to receive said shoulders; and a screw rotatably mounted on said frame having threaded engagement with said blocks and adapted when turned to move said blocks in a vertical direction whereby said sewing mechanism is adjusted relatively of said conveyer.

4. A bag sewing device, comprising a supporting frame; a conveyer adapted for carrying filled bags along said frame; sewing mechanism carried by said frame and having movement relatively to said frame toward and from said conveyer, and adapted to sew the mouths of the bags while carried by said conveyer; and a pair of arms pivoted to said frame and arranged parallelly one over the

other and projecting over the said conveyer to support the said sewing machine in an upright position during its movement toward and from said conveyer, said arms being of substantially equal length between points of pivoting to the frame and to the sewing mechanism respectively.

1,111,878. WIRE-GRIPPING MECHANISM. ELBERT H. CARROLL, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 28, 1910. Serial No. 594,441. (Cl. 205—24.)

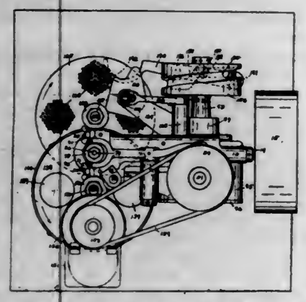
1. A wire gripping mechanism, comprising a pair of opposing gripping jaws, links pivotally connected to said jaws, and upwardly extending arms on each of said jaws adapted to be compressed by hand for opening the jaws.

2. In a wire gripping mechanism, the combination of a pair of opposing gripping jaws, links pivotally connected to said jaws, upturned arms projecting from each of said jaws, and a spring interposed between said arms to separate them and hold the jaws in a normally closed position.

3. In a wire gripping mechanism, a pair of wire gripping jaws, a pair of links each pivotally connected to said jaws, and means extending from each one of said jaws in cooperating relation to the means extending from the other of said jaws to provide for the opening of said jaws.

4. In a wire gripping mechanism, a pair of wire gripping jaws, links pivotally connected to each of said jaws, and means adapted to be operated to open said jaws, comprising an arm extending from each of said jaws.

1,111,879. MOLDING-MACHINE. ARTHUR COLTON and BURTON W. SCOTT, Detroit, Mich., assignors to Arthur Colton Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 30, 1914. Serial No. 815,376. (Cl. 107—17.)



1. In a molding machine, a movable feed plate having a chamber therein, a movable mold plate having an apertured portion that passes beneath said chamber, a table beneath the mold plate and in close engagement with the lower surface thereof, a rotary member, and means for projecting the rotary member into the chamber to force material contained therein into the aperture in the mold plate.

2. In a molding machine, a movable feed plate having a chamber therein, a movable mold plate having an apertured portion that passes beneath said chamber, a table beneath the mold plate and in close engagement with the lower surface thereof, a rotary member, means for projecting the rotary member into the chamber to force material contained therein into the aperture in the mold plate, and means for moving the mold plate while the rotary member is projected into the chamber.

3. In a molding machine, a movable feed plate having a chamber therein, a movable mold plate having an apertured portion that passes beneath said chamber, a table beneath the mold plate and in close engagement with the lower surface thereof, a movable member adapted to agitate the material, means for moving the movable member in one direction to project it into the chamber, means for moving a portion of the member in another direction while in the chamber, to force the material contained therein into the aperture in the mold plate, and means for moving the mold plate while the member is in the chamber.

4. In a molding machine, a movable feed plate having a chamber therein, a movable mold plate having an apertured portion that passes beneath said chamber, a table beneath the mold plate and in close engagement with the lower surface thereof, a rotary member, means for projecting the rotary member into the chamber to force material contained therein into the aperture in the mold plate, and means for feeding material in the chamber to the rotary member.

5. In a molding machine, a rotary feed plate having a chamber therein, a rotary mold plate having a portion provided with apertures that pass beneath the chamber, a table beneath the mold plate and in close engagement with the lower surface thereof, a rotary wiper, means for projecting the wiper into the chamber, and means for rotating the wiper when in the chamber to force material into the apertures in the mold plate.

[Claims 6 to 26 not printed in the Gazette.]

1,111,880. HARNESS LOOP OR BILLET. CHARLES J. COOPER, Moline, Ill., assignor of one-half to H. W. Cooper Saddlery Hardware Mfg. Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 19, 1911. Serial No. 603,438. (Cl. 54—87.)

1. A harness loop, comprising, in combination, a buckle having a rigid tongue, a line-strap having an integral free end portion passed through said buckle and engaged with the tongue thereof, and a loop-strap having one longitudinal limb thereof attached at its inner end to the underside of said line-strap in rear of said buckle and its other longitudinal limb passed through said buckle and above the free end portion of said line-strap and also engaged with the tongue of said buckle, substantially as described.

2. A harness loop, comprising, in combination, a buckle consisting of a rectangular frame having front and rear end cross-bars and two intermediate cross-bars, the rearmost of said intermediate cross-bars having a rigid upstanding stud and the foremost of said intermediate cross-bars being downwardly off-set relative to said rearmost intermediate cross-bar, a line-strap having an integral free end portion passed through said buckle above both of said intermediate cross-bars and apertured to engage said stud, and a loop-strap having one longitudinal limb thereof attached at its inner end to the underside of said line-strap in rear of said buckle and passed between said intermediate cross-bars, and its other limb passed through said buckle beneath said end cross-bars and above both said intermediate cross-bars and the free end portion of said line-strap and apertured to engage said stud, substantially as described.

1,111,881. METHOD FOR MAKING ALKALI-SILICO-ALUMINATE RICHER IN ALKALI THAN FELDSPAR. ALFRED H. COWLES, Sewaren, N. J., assignor to The Electric Smelting and Aluminum Company, Sewaren, N. J. Filed Sept. 11, 1913. Serial No. 789,394. (Cl. 23—13.)

1. The method of forming alkali-silico-aluminate and hydrochloric acid which consists in subjecting a material containing silica and aumina and carbon to the action of vapor of water and vapor of salt in a rotary furnace, the material acted upon presenting large areas of surface to unit of mass exposed.

2. The method of forming alkali-silico-aluminate, which consists in forming a mixture of clay carbon and salt into small masses, and subjecting the masses thus formed in a rotary furnace to the action of water vapor and furnace combustion gases.

3. The method of forming alkali-silico-aluminate and hydrochloric acid, which consists in subjecting a mixture of clay carbon and salt in small masses in a rotary furnace to high temperature and vapor of water, precipitating the dust particles formed, and separately collecting the resulting solid product.

4. The method of forming alkali-silico-aluminate and hydrochloric acid, which consists in adding to a mixture of clay and salt carbon in a finely divided condition, forming the resulting mixture into small masses, and subjecting the same in a rotary furnace to the action of combustion gases and vapor of water, the vapor of water being sufficiently in excess to aid in the condensation of the hydrochloric acid product.

5. The method of forming alkali-silico-aluminate and hydrochloric acid, which consists in feeding salt carbon and aluminous material agglutinated together into small masses into the converting zone of a rotary furnace, blowing steam, air and water into the lower end of said furnace, maintaining the portions of the furnace attackable by the acid at a temperature above the boiling point of strong hydrochloric acid, and removing and utilizing the vapor of water and hydrochloric acid fumes coming from the furnace.

[Claims 6 to 9 not printed in the Gazette.]

1,111,882. CARD GAME. JOHN W. CULP, South Bend, Ind. Filed Apr. 2, 1914. Serial No. 829,012. (Cl. 46—25.)

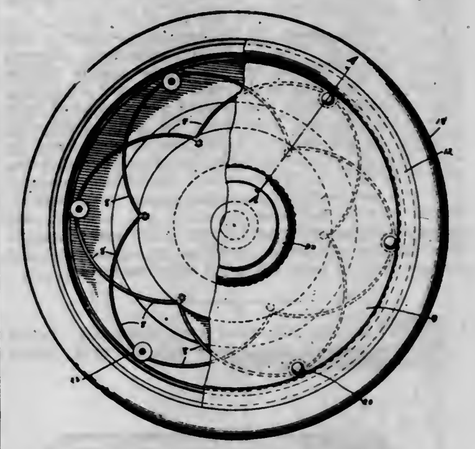
1. A series of game playing elementa having back markings of similar and proportional variation throughout the set of such elements.

2. A series of game playing elements having similar back markings, said markings being distinguishable by size variation only.

3. A series of game playing cards having similar back markings, said markings increasing in size and in direct proportion throughout the series of cards.

4. A series of game playing cards having similar back markings, and grouped distinctive face markings, the back markings varying in size successively throughout the series and throughout each group of distinctive face markings.

1,111,883. SPRING-WHEEL. J STANFORD CULP, Elkhart, Ind. Filed Mar. 9, 1914. Serial No. 823,292. (Cl. 152—37.)



1. In a spring wheel, the combination comprising a hub member formed with radiated flanges, housing plates inclosing said hub member and in slidable engagement therewith, a plurality of spring supporting bolts arranged between said housing plates adjacent to the outer perimeters thereof, a plurality of curved springs arranged within said housing plates the outer ends of said springs being supported by said spring supporting bolts, the inner ends of said springs being secured to said hub flanges, each one of said spring supporting bolts being a support for the outer end of two of said springs which converge thereon from relatively opposite directions and from separate inner spring supports located in said hub flanges, and an annular spring tread band arranged between said housing plates adjacent the outer perimeters thereof, said spring tread band having an inner surface which serves as a support for said curved springs when said springs are under compression.

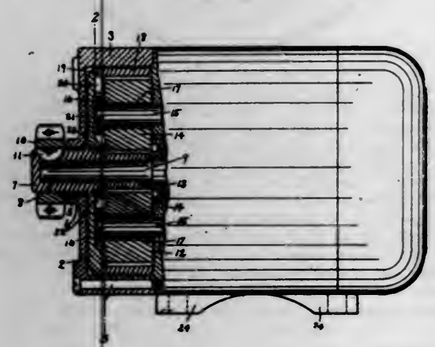
2. In a spring wheel, the combination comprising a hub member formed with radiated flanges, housing plates inclosing said hub member and in slidable engagement therewith, a plurality of spring supporting bolts arranged between said housing plates adjacent their outer perimeters and penetrating the same, a plurality of curved springs arranged within said housing plates the outer ends of said springs being supported by said spring supporting bolts, the inner ends of said springs being secured to said hub member, each one of said spring supporting bolts being a support for the outer end of a plurality of said springs which converge thereon from relatively opposite directions and from separate inner spring supports located in said hub member, an annular spring tread band arranged between said housing plates adjacent their outer perimeters, said spring tread band having an inner surface which serves as a support for said curved springs when the same are under compression, and means carried by one of the housing plates for excluding deleterious material from the interior of the wheel.

3. In a spring wheel, the combination comprising a hub member carrying radiated flanges, oppositely disposed housing plates inclosing said hub member and in slidable engagement therewith, a plurality of spring supporting bolts arranged between said housing plates adjacent their outer perimeters, a plurality of curved springs arranged

within said housing plates the outer ends of said springs being supported by said spring supporting bolts, the inner ends of said springs being secured to said hub member, each one of said spring supporting bolts being a support for the outer end of a plurality of said springs which converge thereon from different directions and from separate inner spring supports located in said hub member, an annular spring tread band arranged between said housing plates adjacent said spring supporting bolts, and means carried by one of said housing plates for excluding deleterious material from the interior of the wheel.

4. In a spring wheel, the combination comprising a hub member carrying radiated flanges, oppositely disposed housing plates inclosing said hub member and in slidable engagement therewith, a plurality of spring supporting bolts arranged between said housing plates adjacent their outer perimeters and penetrating the same, a plurality of curved springs arranged within said housing plates the outer ends of the springs being supported by said spring supporting bolts and the inner ends thereof being mounted upon said hub member, an annular spring tread band arranged between said housing plates and adjacent said spring supporting bolts, said spring tread band having its inner surface adapted to serve as a support for said springs when the same are under compression.

1,111,884. MOTOR GEARING AND HOUSING. SIMON DEUTSCH, Detroit, Mich. Filed June 16, 1913. Serial No. 773,923. (Cl. 74—7.)



1. In an electric motor, the combination of a main housing, an auxiliary housing secured thereto and consisting of a disk and a cylinder connected thereto, a bearing in said disk, a thimble revolubly mounted in said bearing, a disk connected thereto and provided with radial teeth, an internal gear revolubly mounted within the auxiliary housing and having teeth along its edges in mesh with the teeth on said disk, a plurality of stationary shafts mounted on said main housing, pinions on said shafts in mesh with said internal gear, an armature shaft revoluble in said thimble, and a pinion mounted on said armature shaft in mesh with the pinions on said stationary shafts.

2. In an electric motor, the combination with an armature shaft, a pinion thereon, an internal gear concentric therewith, a plurality of idler pinions meshing with the internal gear and the pinion on the armature shaft, a stationary shaft for each of said idler pinions, a housing for said gear, a bearing carried by the housing, a sleeve revoluble in the bearing concentric with the armature shaft, and a driving connection between the sleeve and the internal gear whereby they may move transversely in respect to each other without causing binding between them.

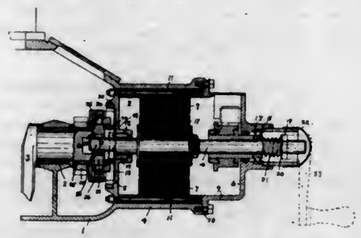
3. In an electric motor, the combination of a housing for the motor, a cup-shaped gear case secured thereto, an internally toothed annulus revolubly mounted in the casing, a disk revolubly mounted in the casing and having operative toothed connection with the annulus permitting movement transversely thereto, a driving pinion mounted on the disk, a pinion mounted on the armature shaft of the motor, and idler pinions between the pinion on the armature shaft and the annulus.

4. In an electric motor, the combination of a main housing, an auxiliary housing secured thereto and consisting of a disk and a cylinder connected thereto, a bearing in said disk, a thimble revolubly mounted in said bearing, a disk connected thereto, an internal gear revolubly mounted within the auxiliary housing and connecting to said disk, a plurality of stationary shafts mounted on said main housing, pinions on said shafts in mesh with said internal gear, an armature shaft revoluble in said thimble, and a pinion mounted on said armature shaft in mesh with the pinions on said stationary shafts.

5. In an electric motor, the combination with an armature shaft, a pinion thereon, an internal gear concentric therewith, a plurality of idler pinions meshing with the internal gear and the pinion on the armature shaft, a stationary shaft for each of said idler pinions, a housing for said gear, a bearing carried by the housing, a sleeve revoluble in the bearing concentric with the armature shaft, and a disk within the gear housing rigidly connected to said sleeve and having projections slidably engaging the internal gear.

[Claims 6 to 8 not printed in the Gazette.]

1,111,885. ENGINE-STARTER. SIMON DEUTSCH, Detroit, Mich. Filed Sept. 26, 1913. Serial No. 791,895. (Cl. 74—59.)



1. In a motor-generator for use with internal combustion engines, the combination with the engine shaft and an internally toothed gear mounted thereon, an armature shaft mounted concentric with and having a crank-pin extending toward the engine shaft, an externally toothed gear on the crank-pin meshing with the internal gear, an abutment ring having pockets, and pawls mounted on the external gear and adapted to engage in said pockets to prevent said external gear from revolving backward.

2. In a motor generator for use with internal combustion engines, the combination with the engine shaft, and a motor driven auxiliary shaft shiftable longitudinally upon its axis, means connecting said shafts whereby the first may drive the second at equal speed and the second drive the first at reduced speed, and means whereby the second, when longitudinally shifted, may drive the first at equal speed.

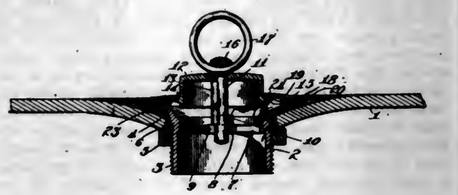
3. The combination of a pair of shafts, means connecting the shafts whereby each can drive the other at equal speed when the shafts have a predetermined position relative to each other, and whereby one will drive the other at greatly reduced speed when their relative positions are changed.

4. The combination of a pair of shafts in line with each other, means connecting the shafts whereby each may drive the other at equal speed when their adjacent ends are a predetermined distance apart, and whereby one will drive the other at greatly reduced speed when such ends are moved farther apart.

5. In a motor-generator for use with internal combustion engines, the combination of the engine shaft, an armature shaft of an electric generator motor having one end adapted to receive a crank-handle, differential gearing connecting said shafts whereby the engine shaft may drive the armature shaft at equal speed and the armature shaft may drive the engine shaft at equal speed or greatly reduced speed, depending on the relative positions of the shafts.

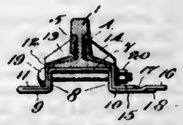
[Claims 6 to 9 not printed in the Gazette.]

1,111,886. WASTE-OUTLET. EDWARD S. DUFFY, Chicago, Ill. Filed Aug. 6, 1910. Serial No. 575,875. (Cl. 4—35.)



The combination with a sink having a waste outlet, of an annular member seated in said outlet and having flanged sections at its upper end for engaging the inside of the sink about its outlet, means for securely clamping the annular member to the sink, a bracket extending radially into said annular member and having a guide-way formed therein, a pin slidable in said guide-way and having a shoulder for engaging the upper end of the bracket when in raised position, a plug carried by the upper end of said pin and adapted, when in its lower position, to close said annular member, and a strainer over the annular member secured to the flanged sections thereof and serving as a guide for said plug and as an abutment to limit the upward movement thereof.

1,111,887. RAIL-JOINT. ERNEST DVORACEK, Maynard, Ohio. Filed June 27, 1914. Serial No. 847,634. (Cl. 239—6.)



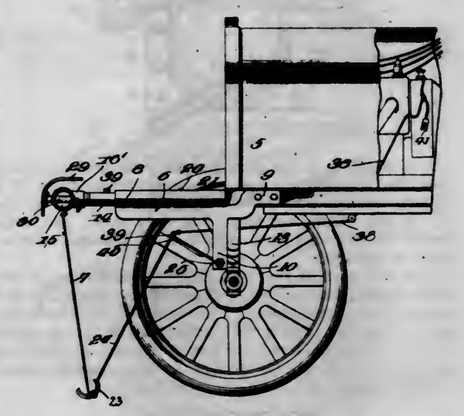
1. A rail joint consisting of angular fish plates, clamping means to clamp the fish plates to the rails consisting of a rectangular rail base supporting and engaging portion, depending flanges formed on the ends of said portion, laterally extending flanges formed on the ends of said depending flanges to rest flat upon the road bed or ground, a fixed rail clamping jaw carried adjacent one end of said rail base engaging and supporting portion, a removable jaw carried at the other end of said rail base supporting and engaging portion, a locking tongue carried by said removable jaw, arms carried by the laterally extending flanges, one of the laterally extending flanges to coöperate with the locking tongue to hold the removable jaws against upward movement, and a bolt inserted through the depending flanges and fixed and removable jaws.

2. A rail joint consisting of fish plates to overlie the ends of rails and sides thereof and means to clamp the fish plates to the rails and supports for the rails consisting of a rail base engaging and supporting portion approximately the same width as the base of the rails, depending flanges on the ends of said rail base engaging and supporting portion to support the rail in spaced relation to the ground or road bed, laterally extending flanges acting as feet formed on the free ends of said depending flanges and to rest flat upon the road bed or ground, and means to clamp the fish plates to the rails carried adjacent to the ends of said rail base engaging and supporting portion.

3. A rail joint consisting of fish plates to overlie the ends of rails and sides thereof and means to clamp the fish plates to the rails and supports for the rails consisting of a rail base engaging and supporting portion approximately the same width as the base of the rails, depending flanges on the ends of said rail base engaging and supporting portion to support the rail in spaced relation to the ground or road bed, laterally extending flanges acting as feet formed on the free ends of said depending flanges and to rest flat upon the road bed or ground, and means to clamp the fish plates to the rails carried adjacent to the ends of said rail base engaging and supporting portion, consisting of a movable clamping jaw, a stationary clamping jaw, a bolt inserted through the depending flanges and jaws, and a nut turned on one end of said bolt.

4. A rail joint consisting of angular fish plates, clamping means to clamp the fish plates to the rails consisting of a rail base supporting and engaging portion, depending flanges formed on the ends of said portions, laterally extending flanges formed on the ends of said depending flanges, a rail clamping jaw carried adjacent to one end of said rail base engaging and supporting portion, an adjustable jaw carried at the other end of said rail base supporting portion, and a locking tongue carried by said removable jaw and arranged to interlock with the adjacent lateral flange.

1,111,888. SAFETY DEVICE FOR VEHICLES. HERBERT L. EISENHAUER, Euclid, Ohio. Filed Apr. 20, 1914. Serial No. 833,239. (Cl. 105—130.)



1. In a device of the character described, the combination of a movable contact member, a plurality of spring-pressed rods connected thereto, reciprocating members in which said rods project and in relation to which they move, buffer springs bearing against said reciprocating members, a shield, and means operated on the movement of said contact member to release said shield and permit it to drop in front of the vehicle wheels.

2. In a device of the character described, the combination of a movable contact member, a plurality of spring-pressed rods connected thereto, reciprocating members in which said rods project and in relation to which they move, buffer springs bearing against said reciprocating members, a shield, and means connected to said contact member and operating when the same is moved to release said shield.

3. In a device of the character described, the combination of a movable contact member, a plurality of spring-pressed rods connected thereto, reciprocating members in which said rods project and in relation to which they move, buffer springs bearing against said reciprocating members, a shield, means operated on the movement of said contact member to release said shield and permit it to drop in front of the vehicle wheels, motor mechanism, and connections between said shield and the motor mechanism for stopping the motor when the shield is dropped.

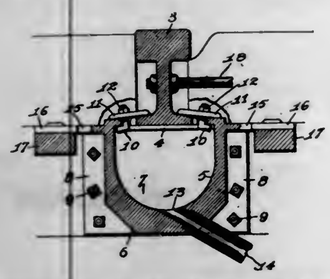
4. In a device of the character described, the combination of a collapsible shield, a movable contact member, connections between said shield and member whereby the former is maintained in collapsed position, a plurality of

springs adapted to maintain the shield in collapsed condition, a plurality of plungers independent of said contact member but adapted to be moved rearward upon the movement of said contact member, and buffer springs associated with said plungers.

5. In a device of the character described, the combination of a collapsible shield, means maintaining said shield in collapsed condition, a spring-pressed movable contact member the initial movement of which displaces said means and permits said shield to drop, a plunger independent of said contact member but adapted to be moved rearward upon the further movement of said contact member, and a buffer spring associated with said plunger.

[Claims 6 to 17 not printed in the Gazette.]

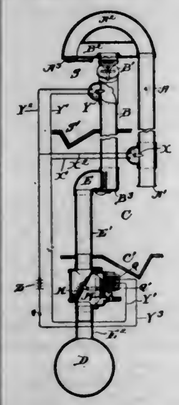
1,111,889. RAIL-DRAIN FOR RAILWAY-TRACKS. WILLIAM FIKEN, St. Louis, Mo. Filed Jan. 21, 1914. Serial No. 813,393. (Cl. 104—14.)



1. A structure of the class described comprising a sluice extending the entire length of the road bed; rails of a railway track located on the same; webs formed on the top of the sluice for supporting said rails; and arms formed on the sluice and supported on timbers, substantially as specified.

2. A structure of the class described comprising a sectional sluice; flanges provided thereon by which the sections are connected together; webs forming the upper portion of the sluice and located at suitable distances apart, rails located on said webs, and arms formed on the sluice and connected to suitable timbers for supporting the sluice in rigid position, substantially as specified.

1,111,890. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Nov. 30, 1906. Serial No. 345,683. (Cl. 243—15.)

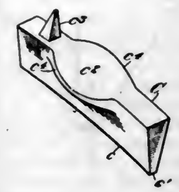


1. In pneumatic despatch tube apparatus, a transit tube for the transmission of carriers, an air-exhaust pipe communicating with the transit tube, a casing interposed in the communication between the transit tube and the air-exhaust pipe, an apertured partition extending across the interior of the casing forming chambers therein with one chamber on the pressure side of the partition and the other chamber on the exhaust side of the partition with the two chambers communicating through the aperture in the partition, a valve in the chamber on the pressure side of the partition to control the aperture through the partition, a spring normally pressing the valve against the partition to close the aperture therein, a diaphragm extending across the chamber on the exhaust side of the partition, said chamber having a timing conduit leading around the diaphragm and said chamber having a port to the outside air opposite to the outer side of the diaphragm, means connecting the inner side of the diaphragm with the valve so that an inward movement of the diaphragm will open said valve against the air-pressure back of the partition and against the action of the spring, a valve normally closing the port to the outside air, carrier-actuated means for momentarily opening the port-valve to admit atmospheric pressure to the outer side of the diaphragm to move the latter inward to operate the valve controlling the aperture in the partition, the atmospheric pressure so admitted exhausting through the timing conduit to the inner side of the diaphragm after the closing of the port-valve to permit the spring to close the partition-valve within a determined interval.

2. In pneumatic despatch tube apparatus, a transit tube for the transmission of carriers, an air-exhaust pipe communicating with the transit tube, a casing interposed in the communication between the transit tube and the air-exhaust pipe, an apertured partition extending across the interior of the casing forming chambers therein with one chamber on the pressure side of the partition and the other chamber on the exhaust side of the partition with the two chambers communicating through the aperture in the partition, a valve in the chamber on the pressure side of the partition to control the aperture through the partition, a spring normally pressing the valve against the partition to close the aperture therein, a diaphragm extending across the chamber on the exhaust side of the partition, said chamber having a timing conduit leading around the diaphragm and said chamber having a port to the outside air opposite to the outer side of the diaphragm, means connecting the inner side of the diaphragm with the valve so that an inward movement of the diaphragm will open said valve against the air-pressure back of the partition and against the action of the spring, a valve normally closing the port to the outside air, carrier-actuated mechanism for momentarily opening the port-valve to admit atmospheric pressure to the outer side of the diaphragm to move the latter inward to operate the valve controlling the aperture in the partition, the atmospheric pressure so admitted exhausting through the timing conduit to the inner side of the diaphragm after the closing of the port-valve to permit the spring to close the partition-valve, means for regulating the passage of air through the timing conduit to time the closing movement of the partition-valve, and means for regulating the opening of the port-valve.

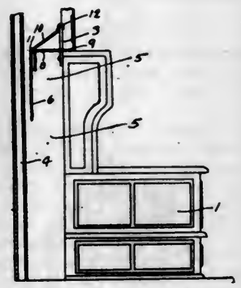
3. In pneumatic despatch tube apparatus, a transit tube for the transmission of carriers, an air-exhaust pipe communicating with the transit tube, a casing interposed in the communication between the transit tube and the air-exhaust pipe, an apertured partition extending across the interior of the casing forming chambers therein with one chamber on the pressure side of the partition and the other chamber on the exhaust side of the partition and with the two chambers communicating through the aperture in the partition, a valve in the chamber on the pressure side of the partition to control the aperture through the partition, means normally pressing the valve against the partition to close the aperture therein, a diaphragm extending across the chamber on the exhaust side of the partition, said chamber having a timing conduit leading around the diaphragm and a port to the outside air adjacent to one side of the diaphragm, means connecting the diaphragm with the valve so that a movement of the diaphragm will open said valve against the air-pressure back of the partition and against the action of the valve closing means, a valve normally closing the port to the outside air, mechanism for momentarily opening the port-valve to admit atmospheric pressure to said side of the diaphragm to move the latter to operate the valve controlling the aperture in the partition, the atmospheric pressure so admitted exhausting through the timing conduit after the closing of the port-valve, to permit the aforesaid valve closing means to close the partition-valve within a substantially determined interval of time.

1,111,891. HORSESHOE-CALK. LLOYD L. FOX, Lowell, Me., assignor of one-third to Harry A. Wheeler, Newton, Mass., and one-third to Nathan C. Fogg, Lowell, Me. Filed Jan. 17, 1914. Serial No. 812,667. (Cl. 59—69.)



As a new article of manufacture, a horseshoe calk having a main body portion adapted to be welded to the under side of the shoe with a "butt" weld and a plurality of integral lugs extending laterally from said body of the calk to adapt them to be bent around both sides of the shoe to be welded thereto to form a "scarf" weld.

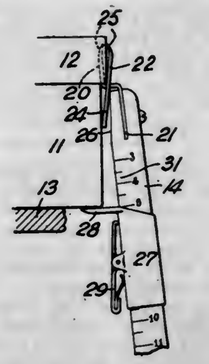
1,111,892. DRYING-RACK. CHARLES E. GABBY, Cheney, Wash. Filed Oct. 2, 1913. Serial No. 792,997. (Cl. 126—333.)



In a clothes or like article supporting means, as an article of the class described, a supporting structure having top horizontal and end vertical marginal portions, a length of wire having its ends extending rearwardly thereof and provided with terminal hooks adapted to be sprung into grip with said end vertical margins to form a horizontal support, and one or more hanger wire supports rotatively connected with said wire support and having hooked end for engaging said horizontal margin to pendently sustain said support in a horizontal position, substantially as described and for the purposes set forth.

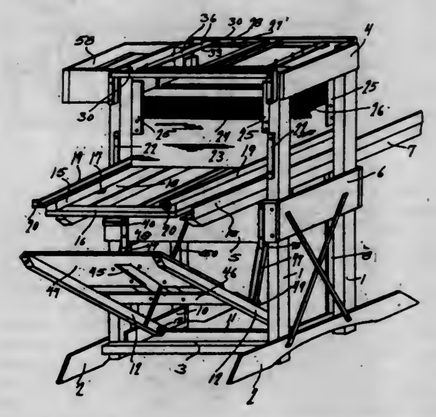
1,111,893. BOX-LIFTING DEVICE. ALFRED E. GADLEY, Montreal, Quebec, Canada. Filed Mar. 21, 1913. Serial No. 755,954. (Cl. 57—113.)

A device of the character described comprising a handle, a pair of tongs at one end thereof having one jaw rigidly connected to the handle and offset therefrom, and the other jaw being apertured to receive said fixed jaw and pivotally and slidably mounted on said fixed jaw at



the offset thereof, and a support slidably mounted on said handle.

1,111,894. BOX-LIDDING MACHINE. OSCAR D. GIBBS, Spokane, Wash. Filed Feb. 2, 1914. Serial No. 816,040. (Cl. 100—57.)



1. In a box lidding machine, a frame, lid holding means thereon, a box supporting truck movable into lid supplying and lid applying positions with respect to said holding means, a magazine for the lids carried by said truck, means whereby said truck may be shifted to transfer a lid from said magazine to said holding means when said truck is in a supplying position and thereafter to shift said truck when in a lid applying position to abut the box against the lid held by said means, substantially as described.

2. In a box lidding machine, a frame, lid holding means thereon, a box supporting truck movable beneath said holding means into lid supplying and lid applying positions, a magazine for the lids carried by said truck, and means for raising said truck to transfer a lid from said magazine to said holding means when said truck is in a supplying position and thereafter raise said truck when in a lid applying position to abut the box against the lid held by said means, substantially as described.

3. In a box lidding machine, a frame, a lid holding means thereon, a box supporting truck slidable beneath said holding means into lid supplying and lid applying positions, mechanism for locking said truck in either position, and means for raising said truck to transfer a lid from said magazine to said means when said truck is in a supplying position and thereafter raise said truck

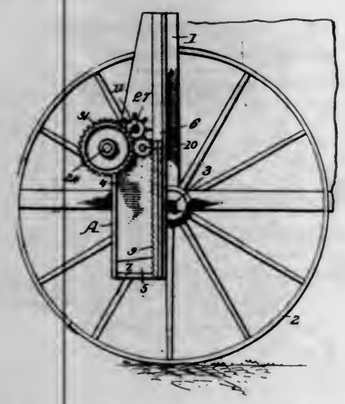
when shifted to a lid applying position to abut the box against the lid held by said means, substantially as described.

4. In a box lidding machine, a frame, lid holding means thereon, a box supporting truck movable into lid supplying and lid applying positions with respect to said holding means, a magazine for the lids carried by said truck, means whereby said truck may be shifted to transfer a lid from said magazine to said holding means when said truck is in a supplying position and thereafter shift said truck when in a lid applying position to abut the box against the lid held by said means, and mechanism for locking said last-named means to hold the box in abutting relation against the lid while the latter is nailed, substantially as described.

5. In a box lidding machine, a frame, lid holding means thereon, a carriage slidable vertically on said frame toward said holding means, a box supporting truck including a lid magazine movable horizontally on said carriage into lid supplying and lid applying positions, and means for raising said carriage and truck toward said holding means when the truck is in a supplying position and thereafter when the truck is in an applying position, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,111,895. FERTILIZER-DISTRIBUTER. GEORGE P. GREENWOOD, Billerica, Mass. Filed Sept. 1, 1910. Serial No. 580,048. (Cl. 111—34.)



1. A fertilizer distributer comprising, in combination, a distributing roller mounted over a distributing box, said box having its bottom and one side connected together, and means for gradually moving the bottom and said connected side of the box toward the roller in a substantially vertical rectilinear path.

2. A fertilizer distributer comprising, in combination, a distributing roller mounted over a distributing box, said box comprising a rigid unitary structure having its bottom and one side connected together; guide means for guiding the movement of said bottom and said side in a substantially vertical rectilinear path; and means for so moving said bottom and said side.

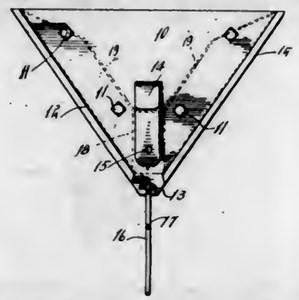
3. A fertilizer distributer comprising, in combination, a distributing box having a fixed portion and a relatively movable bottom and side wall secured together, a distributing roller mounted over said box, a pair of racks secured to said side wall, a pair of pinions meshing with said racks, and means for rotating said pinions to move said bottom and side wall toward said roller in a substantially vertical rectilinear path.

4. A fertilizer distributer comprising, in combination, distributing means mounted over a distributing box, said box comprising a rigid unitary structure having its bottom and one side connected together; guide means for guiding the movement of said bottom and side in a substantially vertical rectilinear path; and means for so moving said bottom and one side.

5. A fertilizer distributer comprising, in combination, a distributing roller; a distributing box over which said roller is mounted, said box having its bottom and one side connected together to form a rigid unitary structure; and means for imparting a gradual relative movement to said roller and said structure in a generally vertical direction one to the other.

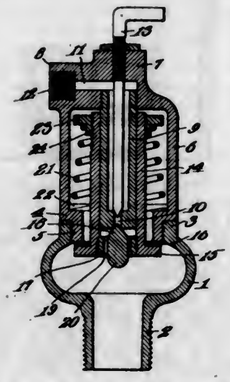
[Claims 6 and 7 not printed in the Gazette.]

1,111,896. PLOW-SCRAPER-SETTING TOOL. EARLY T. GRIMES, Enterprise, Ala. Filed Apr. 29, 1914. Serial No. 835,305. (Cl. 76—90.)



A plow setting device comprising a base having vertically extending and converging rails formed on two of its sides, the said sides being cut away at their convergent ends, a block mounted on the base in rear of the cut away portion, said block being formed with an inclined upper face, and a clamping lever pivotally connected to the base between the cut away portions of the side rails said lever having a vertically extending pin for engagement through the eye of a plow scraper and being arranged to hold the eye portion of the scraper on the block while the scraper is being set.

1,111,897. MIXING-VALVE FOR EXPLOSIVE-ENGINES. FREDRICK HARROLD, Marion, Ohio. Filed May 15, 1913. Serial No. 767,943. (Cl. 137—26.)



1. In a device of the character described, a mixing chamber having an inlet, a fluid supplying tube having a constricted opening, and a sleeve slidably mounted upon the tube carrying valves to normally close the passage and the said opening, and a needle valve projecting into the tube to coöperate with the said opening.

2. In a device of the character described, a mixing chamber having an inlet, a fluid supplying tube having a constricted opening, and a yieldable sleeve slidable on the tube entering the said inlet, the sleeve having a valve within its lower end seatable within the said opening, and having an exterior flange adapted to close the air passage, and a needle valve projecting into the tube to coöperate with the said opening.

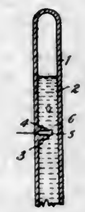
3. In a device of the character described, a mixing chamber, an inlet nipple engaged thereto, a fluid supplying tube having a constricted opening, a spring pressed sleeve slidable on the tube and passing through the said nipple, the sleeve having a valve within its respective end seatable against the end of the tube, and having an exterior flange seatable against the nipple, and a needle valve projecting into the tube to coöperate with the said opening.

4. In a device of the character described, a mixing chamber having an inlet, a fluid supplying tube, a spring pressed sleeve slidable on the tube and passing through the said inlet, the sleeve having an exterior flange to normally close the inlet, and a plug engaged within one end of the sleeve and having a valve seatable against the end of the tube and a plurality of ducts therethrough.

5. In a device of the character described, a mixing chamber, a frame having a nipple attached to the mixing chamber, a fluid supplying tube supported by the frame, a sleeve slidable on the tube and passing through the said nipple, the sleeve having a valve within one end seatable against the end of the tube, and having an exterior flange seatable against the nipple, and a spring disposed between the other end of the sleeve and the frame.

[Claims 6 to 8 not printed in the Gazette.]

1,111,898. ELECTRODE FOR ELECTROLYTIC MEASURING INSTRUMENTS. HENRY STAFFORD HATFIELD, Brunswick, Germany. Filed June 28, 1913. Serial No. 776,235. (Cl. 171—266.)



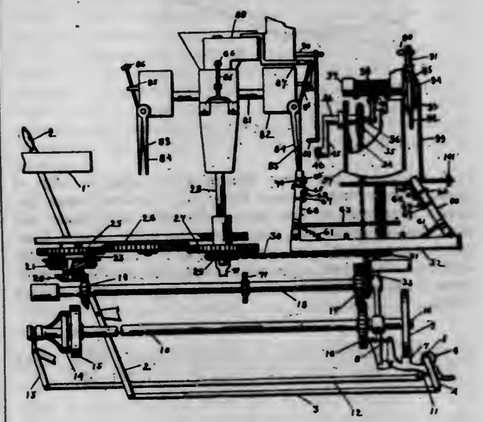
1. An electrolytic measuring instrument comprising a chamber formed with a gas space and containing a liquid electrolyte of a character to evolve a gas under electrolization, and an electrode whose active part is line-shape and is situated on the boundary between the liquid and the gas space, whereby the gas, instead of first appearing as bubbles on the electrode, diffuses at once into the gas space.

2. An electrolytic measuring instrument comprising a chamber formed with a gas space and containing a liquid electrolyte of a character to evolve a gas under electrolization, and an electrode whose active part is in the shape of a line which projects into the liquid for a fraction of a millimeter only and which is situated on the boundary between the liquid and the gas space, whereby the gas, instead of first appearing as bubbles on the electrode, diffuses at once into the gas space, substantially as described.

3. An electrolytic measuring instrument comprising a chamber formed with a gas space and containing a liquid electrolyte of a character to evolve a gas under electrolization and an electrode whose active part is in the form of a narrow line situated on the boundary between the liquid and the gas space and which line partially or wholly surrounds an opening through which the liberated gas may exude, the size of the opening being too small to admit the penetration of the liquid, whereby the gas instead of first appearing as bubbles on the electrode, diffuses at once into the gas space substantially as described.

4. An electrolytic measuring instrument comprising a chamber formed with a gas space and containing a liquid electrolyte of a character to evolve a gas under electrolization, and an electrode whose active part is in the form of a reticulation of lines situated on the boundary between the liquid and the gas space and which reticulation of lines surrounds openings through which the liberated gas may exude, the size of the openings being too small to permit the penetration of the liquid, whereby the gas, instead of first appearing as bubbles on the electrodes, diffuses at once into the gas space.

1,111,899. BAG-OPENING MACHINE. JOHN HENDERSON and ERNEST R. TIETZ, Toledo, Ohio. Filed Feb. 13, 1914. Serial No. 818,497. (Cl. 93—2.)



1. A bag opening machine embodying a bag receiving pocket member, a relatively reciprocable member movable into a bag in the pocket member to open the bag, one of said members being pivoted, and driving means for bringing the pocket member into position with respect to the bag opening member.

2. A bag opening machine embodying a pocket for receiving a flat bag having lateral edges, tilting means including a guide for directing the tilting of the pocket into position to receive an unopened bag, said pocket being provided with gripping means for pressing edges of the bag inward to hold the bag open, and means for actuating the gripping means after the bag is received in the pocket.

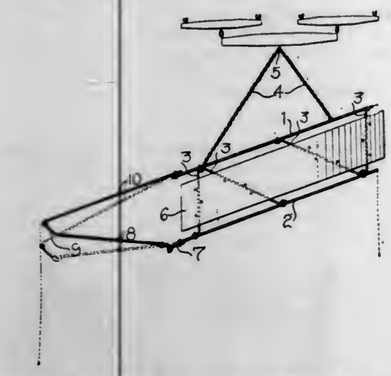
3. A bag opening machine embodying a pocket for receiving a flat bag having lateral edges, tilting means including a guide for directing the tilting of the pocket into position to receive an unopened bag, said pocket being provided with a movable gripping means for pressing an edge of the bag inward to hold the bag open, and means for actuating the gripping means after the bag is received in the pocket.

4. A bag opening machine embodying a pocket for receiving a flat bag having lateral edges, tilting means including a guide for directing the tilting of the pocket into position to receive an unopened bag, said pocket being provided with a movable gripping means for pressing an edge of the bag inward, and a trip for actuating the gripping means, and means for actuating the gripping means after the bag is received in the pocket.

5. A bag opening machine embodying a pocket for receiving a flat bag having lateral edges, tilting means including a guide for directing the tilting of the pocket into position to receive an unopened bag, said pocket being provided with a movable gripping means for pressing an edge of the bag inward, a trip for releasing the gripping means, and a reset for the gripping means, and means for actuating the gripping means after the bag is received in the pocket.

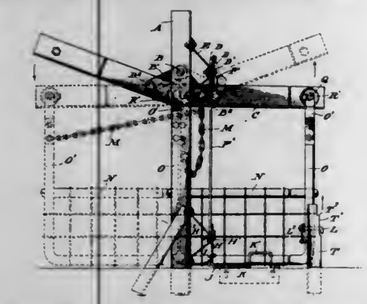
[Claims 6 to 12 not printed in the Gazette.]

1,111,900. ROAD-DRAG. SAMUEL E. HUGHES, Alexandria, Ind., assignor of one-half to Samuel G. Phillips, Alexandria, Ind. Filed Jan. 5, 1914. Serial No. 810,456. (Cl. 37—5.)



A device of the class described including a pair of parallel drag blades braced together, a leveling blade pivotally connected to one end of the rear drag blade and arranged at angle with respect to the latter, and a bracing rod connected to the forward end of the leveling blade and the other end adjustably connected to the forward drag blade whereby to regulate the angle of the leveling blade.

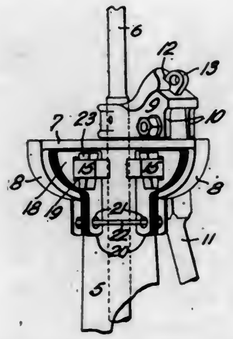
1,111,901. GATE. ELZA R. HURST, Orient, Ohio. Filed Apr. 7, 1914. Serial No. 830,137. (Cl. 39—31.)



1. A gravity gate and automatic lock comprising posts, angled tracks pivotally mounted thereon, means for tilting the tracks, a gate having rollers mounted upon said tracks, a vertically disposed V-shaped post having a slot in the ridge thereof, which slot is widened near its upper end, a latch journaled in the gate post and having one end hooked and a counterbalance arm upon the other end, said hook adapted, as the gate closes, to contact with the inclined face of the gate post to cause the gate to lock under the momentum of the gate closing, and a gravity arm throwing the hook over the edge of the slot after the hook passes through the latter, said gate being adapted to be raised at its latch end so as to permit the latch to pass freely through said widened portion of the slot when the tracks are rocked to open the gate, as set forth.

2. An automatically operated gate comprising a post, angled tracks pivotally mounted between the same, levers pivotally mounted upon the posts and having their inner ends apertured, a rod fastened to the tracks and having loose pivotal connection with said apertures, horizontally disposed rock shafts with pivotal connections between the same and said levers, a gate having rollers at the upper ends thereof mounted upon said tracks, a chain fastened to one end of the gate and the other end to the track to limit the movement of the gate in one direction, a slotted V-shaped post, a hook having a shank portion journaled in the end of the gate, one end bent to form a hook for engagement with a slot in said post, and a weighted arm upon the other end of the hook, the upper portion of the slot being widened to allow the hook to withdraw when in its normal position, said gate being adapted to be raised at its latch end so as to permit the latch to pass freely through said widened portion of the slot when the tracks are rocked to open the gate, as set forth.

1,111,902. RAILWAY-SWITCH. ERNEST G. JACKSON, Montreal, Quebec, Canada. Filed July 16, 1913. Serial No. 779,369. (Cl. 104—25.)



1. In a switch stand, the combination with a switch throw limiting bracket and adjusting blocks at the ends thereof, of means insertible between the bracket and blocks for adjusting the position of said blocks.

2. In a switch stand, the combination with a switch throw limiting bracket and adjusting blocks on the ends thereof, of a plurality of members movably mounted between the ends of the bracket insertible between either end of said bracket and either adjusting block, whereby the position of said block will be adjusted.

3. In a switch stand, the combination with a switch throw limiting bracket, and switch lever engaging blocks on the ends thereof, of a plurality of shims insertible singly or collectively between either end of the bracket and either block.

4. In a switch stand, the combination with a switch throw limiting bracket and switch lever engaging blocks on the ends thereof, of a plurality of shims insertible singly or collectively between either end of the bracket and either block, and a rod passing through all of said shims and secured at its ends to the switch stand.

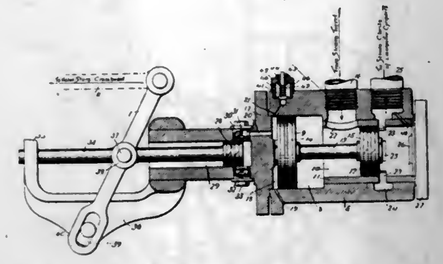
5. In a switch stand, the combination with a switch throw limiting bracket and switch lever engaging blocks, of apertured end plates on said bracket, slotted shanks on said blocks insertible through the end plate apertures, and wedges insertible through the slots of said shanks.

[Claims 6 to 9 not printed in the Gazette.]

1,111,903. DRIFTING-VALVE. CHARLES JAMES, Rutherford, N. J. Filed Nov. 25, 1913. Serial No. 802,903. (Cl. 121—14.)

1. In combination with a locomotive having power cylinders, a power source, and running gear; a valve comprising a casing having inlet and outlet ports; a valve piston movable in said casing to cover said outlet port; a floating piston operatively connected with said valve piston; means operatively connecting said power source and floating piston to move said valve piston to close said outlet port; an air-pressure mechanism operatively connected with said floating piston to move the same in opposition to said power source; and a relief valve for said air-pressure mechanism, to regulate the maximum pressure thereof.

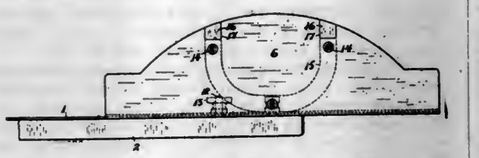
2. In combination with a locomotive having power cylinders, a power source, and running gear; a valve comprising a casing having inlet and outlet ports; a valve piston movable in said casing to cover said outlet port; a floating piston operatively connected with said valve piston; means operatively connecting said power source and floating piston to move said valve piston to close said outlet port; and an air-pump operatively connected with said running gear, arranged to deliver into said casing, at the far side of said floating piston, to move the same in opposition to the pressure of said power source.



3. In combination with a locomotive having power cylinders, a power source, and running gear; a valve comprising a cylindrical casing interposed between said power source and power cylinders, said casing having longitudinally separated inlet and outlet ports; a valve piston to expose and close said outlet port; a floating piston of relatively larger diameter operatively mounted in said casing; a piston rod connecting said pistons, said rod being arranged to maintain said pistons continuously at opposite sides of said inlet port; an air-compression pump operatively connecting said casing, to deliver air under pressure between said floating piston and the adjacent head of said casing, to move said valve piston to expose said outlet port and establish communication between the inlet and outlet ports; and means operatively connected with said running gear for operating said pump.

4. In combination with a locomotive having power cylinders, a power source, and running gear; a valve comprising a cylindrical casing having inlet and outlet ports longitudinally separated therein; a valve piston to normally rest between said ports; a floating piston having a relatively larger diameter, disposed at the side of said inlet port opposite that where said valve piston rests, to secure an unbalanced pressure between said pistons; a piston rod rigidly connecting said pistons; an air pump operatively connected with said running gear to deliver air under pressure at the far side of said floating piston; and a relief valve opening from said casing to operate at a pressure greater than the said unbalanced pressure exerted on said pistons.

1,111,904. SAW-GUIDE. LEANDER A. KAHRS, Healdsburg, Cal., assignor of one-third to Charles W. Tucker, Healdsburg, Cal. Filed Dec. 10, 1913. Serial No. 805,743. (Cl. 143—86.)



In a saw guide, the combination of a plate for resting upon the material to be cut and having a straight portion for positioning the plate upon the material, a base pivotally secured to the plate, a vertical guide plate of non-magnetic material secured to the base, and a magnet of which the terminal portions extend through recesses in the guide plate and the poles are flush with its outer surface.

1,111,905. WEAPON. CHARLES R. KEERAN, Bloomington, Ill. Filed Aug. 5, 1913. Serial No. 783,066. (Cl. 42—72.)

1. A weapon, consisting of a pistol and a stcok for the pistol, in the form of a hand wielded conventional implement of defense, capable of conventional and independent use from its use in connection with the pistol, and a separable, flexible connection between the butt of the pistol and the implement, substantially as described.

2. A weapon, consisting of a pistol and a stock for the pistol, in the form of a policeman's club, and a flexible separable connection between the butt of the pistol and outer end of the club, said connection permitting rapid assembling for conjoint use and rapid disassembling for independent use of the pistol and club, substantially as described.

3. A weapon consisting of a pistol and a stock for the pistol in the form of an implement capable of independent use from its use in connection with the pistol, a socket and protuberance connection between the implement and pistol to permit their rapid assemblance for conjoint use and rapid disassemblance for independent use, and means associated with said connection for absorbing the vertical jerk of the revolver incident to the firing thereof, substantially as described.

4. A weapon consisting of two elements, namely a fire arm and a stock for the fire arm in the form of an implement capable of independent use from its use with the fire arm, a pin extending from one of said elements, a bore in the other of said elements to receive the pin, a ball and socket connection between the pin and the element to which the pin is attached and tension means for maintaining the pin in normal projected position from said element, substantially as described.

5. A weapon consisting of two elements, namely a fire arm and a stock for the fire arm in the form of an implement capable of independent use from its use with the fire arm, a pin projecting from one of said elements, said pin being provided with a head on one end, said head terminating in a flat face and merging into the body of the pin to provide rounded shoulders at the point of mergence, a sleeve within which said head is placed, said sleeve having the interior face of the outer end thereof rounded to conform to the configuration of the rounded shoulders, and a spring in said sleeve and resting against said head for maintaining the pin normally projected under tension, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

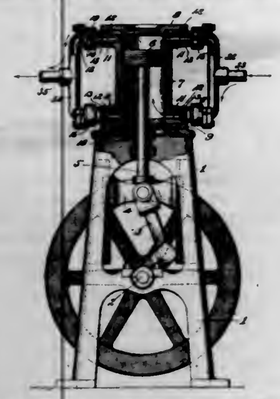
1,111,906. AIR-PUMP AND VALVE THEREFOR. JESSE KEPPEL, St. Louis, Mo. Filed July 21, 1913. Serial No. 780,186. (Cl. 230—34.)

1. A valve for air pumps comprising a casing affording a valve chamber, a disk-valve mounted in said chamber, one side of said chamber providing a flat seat for the valve to prevent the escape of air, and the other side being provided on its face with grooves, said valve being provided with peripheral recesses corresponding in position with said grooves.

2. A valve for air pumps comprising a casing affording a valve chamber, a series of pins projecting into said chamber, a disk-valve located in said chamber and mounted to move on said pins and provided with peripheral recesses, one wall of said chamber providing a flat seat for the valve, and the other wall being provided with grooves corresponding in position with the recesses of the valve to permit the passage of air around the valve.

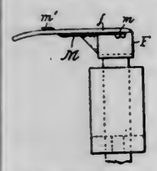
3. A valve for air pumps comprising a casing affording a valve chamber, a disk-valve mounted in said chamber, one side of said chamber providing a flat seat for the

valve to prevent the escape of air, and the other side being provided on its face with grooves, said valve being pro-



vided with passages corresponding in position with said grooves.

1,111,907. THREAD-HOLDING DEVICE. JOHN KIEWICZ, Hyde Park, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Original application filed Apr. 18, 1912, Serial No. 691,652. Divided and this application filed May 13, 1913. Serial No. 767,298. (Cl. 112—29.)



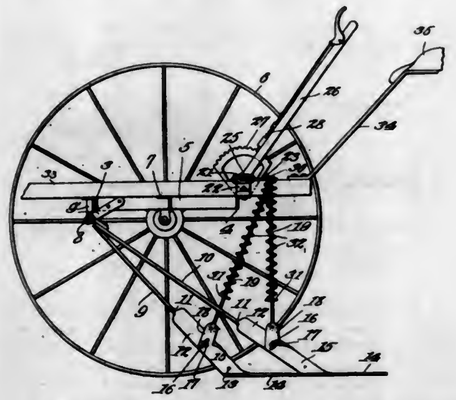
1. A device for holding thread ends on sewing machines comprising in combination with a fixed plate-like portion of a sewing machine, an elongated spring strip member, shaped and arranged to have its thread holding end pressing flatwise directly against said fixed member with the thread between them and its other end stationarily secured to said fixed member, said strip member having its secured end at one side of the fixed member, and its holding end at the opposite side.

2. A device for holding thread ends on sewing machines comprising in combination with a fixed plate-like portion of a sewing machine, an elongated spring strip member, shaped and arranged to have its thread holding end pressing flatwise directly against said fixed member with the thread between them and its other end stationarily secured to said fixed member, and said strip member having its secured end at one side of the fixed member, and its holding end at the opposite side, and reversely bent at the point of passing the fixed member's plane.

3. A device for holding thread ends on sewing machines comprising in combination with a fixed plate-like portion of a sewing machine, an elongated spring strip member, shaped and arranged to have its thread holding end pressing flatwise directly against said fixed member with the thread between them and its other end stationarily secured to said fixed member, the fixed member having an aperture, and the strip member passing through said aperture and there reversely bent so that its two ends lie against opposite faces of the fixed member.

1,111,908. WEED-CUTTER. CHARLES E. KLINE, Burke, Wash. Filed Sept. 22, 1913. Serial No. 791,146. (Cl. 55—60.)

1. A machine of the class described, comprising a frame, a shaft rotatably secured thereto and extending along the front edge thereof, a second shaft extending along and rotatably secured to the rear edge thereof, a suspension arm carried by the first mentioned shaft, outstanding oppositely extending sharpened wings carried by said suspension arm, a lifting arm rigidly secured to the said second mentioned shaft, a raising rod pivotally secured to said outstanding wings and resiliently secured to the said lifting arm.



2. A machine of the class described, comprising a frame, a shaft rotatably secured thereto and extending along the front edge thereof, a second shaft extending along and rotatably secured to the rear edge thereof, a suspension arm carried by the first mentioned shaft, outstanding oppositely extending sharpened wings carried by said suspension arm, a lifting arm rigidly secured to the said second mentioned shaft, a raising rod pivotally secured to said outstanding wings pivotally and slidably engaging the said lifting arm of the rear shaft, and resilient means secured to said arm and engaging the said raising rod holding the same against sliding motion with respect to said sliding arm.

3. A device of the class described, comprising suspension arms formed of wire plates, said plates twisted intermediate their ends through substantially 90 degrees and forming lower sharpened cutting blades, means carried at the upper ends of said arms for pivotally securing the same to a supporting structure, each of said arms provided with a pair of cutting wings arranged upon and pivotally secured to opposite sides of said cutting blade portion of the suspension arms, said cutting wings terminating in upstanding portions, means engaging the upstanding portions of the cutting wings for locking the same in adjusted position to the said cutting blade portion of the suspension arms, said cutting wings defining a V-shaped horizontally extending cutter with the lower cutting blade portion of a suspension arm upstanding therefrom at the apex thereof.

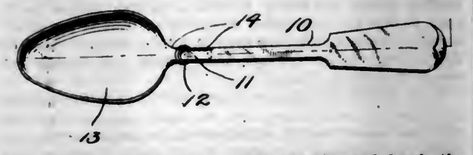
1,111,909. METHOD OF MANUFACTURING FENCE-POSTS. ANDREW A. KRAMER, Kansas City, Kans. Filed May 10, 1912. Serial No. 696,475. (Cl. 25—155.)

1. The method of manufacturing fence posts consisting in providing a form, having openings therein, arranging reinforcing members longitudinally within the form, projecting spikes through openings in the form and alternately on opposite sides of the reinforcing members, filling the form with concrete to embed the reinforcing members, withdrawing the spikes before the concrete has set, and allowing the concrete to set, whereby the form is made an integral part of the post.

2. The method of manufacturing fence posts consisting in providing a form having openings therein, arranging reinforcing within the form, projecting spikes through the form openings, projecting tubular members over the spikes and against the reinforcing to center the latter, filling the form with concrete, removing the tubular members and spikes before the concrete has set, and allowing the con-

crete to set whereby the form is made an integral part of the post.

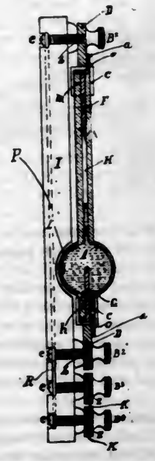
1,111,910. SANITARY SPOON. ROLAND D. KUNZ, Sandusky, Ohio. Filed Nov. 19, 1912. Serial No. 732,388. (Cl. 30—22.)



A spoon comprising a separable handle and bowl, the handle being formed on a hard substance having resilient serrated gripping jaws on one end thereof, the bowl being formed of compressed fibrous material and having a stem engaging between the jaws of the handle, each of the jaws having a stop flange on the free end, and a sliding ring on the handle for forcing the serrations of the jaws successively to bite into the stem of the bowl.

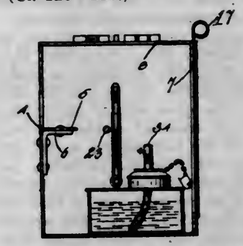
1,111,911. [WITHDRAWN.]

1,111,912. THERMOMETRIC FIRE-DETECTOR. KINJIRO MATSUDAIRA, Washington, D. C. Filed May 1, 1912. Serial No. 694,417. (Cl. 177—302.)



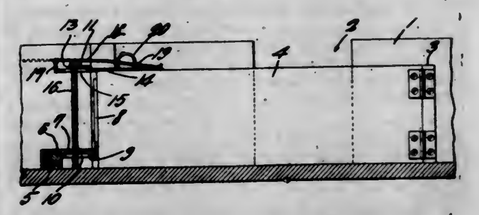
A thermometric instrument comprising a thermometer provided with stems, caps receiving the ends of the stems, wires inserted in the stems of the thermometer and having offset ends, said wires passing through the ends of the caps and having their outer portions disposed eccentrically with relation to the caps, and lugs connected to the outer portions of the wires and bearing against the central portions of the caps and lying approximately in alinement with the inner portions of the wires.

1,111,913. HEATING-OVEN. JOHN H. MAURER, Baltimore, Md., assignor of one-half to Charles M. Winternitz, Baltimore, Md. Filed May 14, 1914. Serial No. 838,549. (Cl. 126—226.)



A heating oven including a rectangular casing, said rectangular casing being provided with a longitudinal slot in its front wall, the metal from the slot being bent inwardly and forming a shelf, the top wall of the casing being provided with a central circular aperture, a grid supported by the walls of the aperture, a longitudinal reinforcing bar extending through the casing from end to end, said bar coöperating with the shelf in holding tools which are to be heated, a gas burner centrally of the casing and extending into close proximity with the grid, and a pair of spaced alcohol lamps within the casing to form tool heaters, whereby when tools are laid on the shelf and the supporting bar they will be in direct alinement with the flame from the alcohol lamps and become heated.

1,111,914. LATCH DEVICE FOR IRRIGATING DIVIDING-BOXES. CHARLES H. MCCARTY, Wellington, Colo. Filed Dec. 23, 1913. Serial No. 808,516. (Cl. 61—47.)



1. The combination with a dividing box, and a hinged dividing board therein, of a transverse strip disposed between the sides of the dividing box adjoining the free end of the dividing board, a member carried by the free end of the dividing board and coöperable with the said strip, and locking means engageable with the said strip at various points along its length and with the said member.

2. The combination with a dividing box, and a hinged dividing board therein, of a transverse apertured strip disposed within the dividing box adjoining the free end of the dividing board, a member secured to the free end of the dividing board and having a protruding slotted portion coöperating with the said strip, and a locking member insertible through the apertures of the said strip and the slot of the said member.

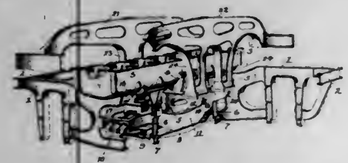
3. The combination with a dividing box, and a hinged dividing board therein, of an apertured strip attached to one side of the dividing box and extending transversely adjoining the free end of the dividing board, a member carried by the free end of the dividing board and coöperable with the said strip, a latch bolt insertible through the

said strip and member, and means carried by the dividing board and arranged to be locked over the latch bolt to prevent its withdrawal.

4. The combination with a dividing box, and a dividing board therein, of a transverse apertured strip supported within the dividing box at the free end of the dividing board, a strip attached to the free end of the dividing board and projecting therefrom, the projecting portion of the second mentioned strip having a slot coöperating with the apertures of the first mentioned strip, a latch bolt insertible through the said strips, a hasp hinged to the free end of the second mentioned strip and adapted to swing over the latch bolt, and a keeper carried by the dividing board for coöperation with the hasp.

5. The combination with a dividing box, and a hinged dividing board therein, of an apertured strip connected loosely to one side of the dividing box and arranged to be disposed adjoining the free end of the dividing board, a leaf secured to the upper edge of the dividing board and projecting from the free end of the said board, the projecting portion of the leaf having a slot, the said strip being adapted to rest upon the projecting portion of the leaf to coöperate with the said slot, a keeper carried by the basal portion of the said leaf, a latch bolt insertible through the said apertured strip and slotted portion of the said leaf, and a hasp hinged to the free end of the said leaf to swing over the latch bolt, and having a slot to engage over the keeper.

1,111,915. MOTOR-TRUCK. WILLIAM R. MCKEEN and WARREN DEAN BURTON, Omaha, Nebr., assignors to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed June 23, 1913. Serial No. 775,358. (Cl. 105—243.)



1. The combination with a truck having a transom and a truck bolster mounted directly beneath said transom, of a body bolster having a portion adapted to extend beneath said transom and rest on said truck bolster; and suitable pivotal connections between said bolsters.

2. The combination with a truck structure including a truck frame, truck bolsters and center bearing, of a motor base mounted upon said frame above said center bearing, and a body bolster structure having a portion extending beneath the motor base and resting upon said center bearing.

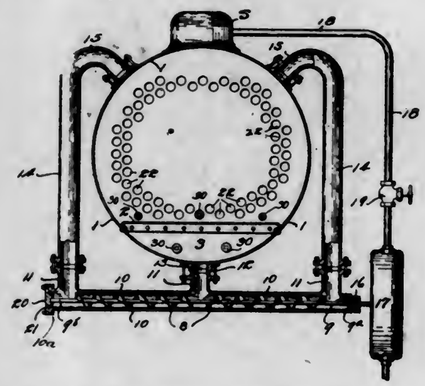
3. The combination with a truck structure including a truck frame, truck bolster, center bearing and side bearings, of a motor base mounted upon said frame above said center bearing, and a body bolster structure having a portion extending beneath the motor base and entering into coactive relation with said center and side bearings.

4. The combination with a truck structure including a truck frame, spring plank, bolster springs, and truck bolster provided with the usual bearings, of a motor base mounted on said frame over said truck bolster; and a body bolster structure having a portion extending beneath said motor base and entering into coactive relation with the bearings on said truck bolster.

5. The combination with a truck structure including a truck frame, spring plank, bolster springs, and truck bolster provided with the usual bearings, of a motor base mounted on said frame over said truck bolster; a pair of body bolsters at opposite sides of the motor base; and a center plate connected to said body bolsters, extending beneath the motor base and entering into coactive relation with the bearings on said truck bolster.

[Claims 6 and 7 not printed in the Gazette.]

1,111,916. CIRCULATING MEANS FOR LOCOMOTIVE-BOILERS. JOHN P. NEFF, East Orange, N. J. Filed Sept. 8, 1913. Serial No. 788,708. (Cl. 122—411.)



1. A water circulating system for locomotive boilers including in combination with the boiler and fire tubes, a separating diaphragm arranged below the fire tubes and extending across the boiler forming a mixing compartment open at one end and closed at the other, means for establishing communication between said compartment and the top of the boiler, and operative means for forcing the water through the latter.

2. A water circulating system for locomotive boilers, including in combination with the boiler having front and rear flue sheets, and longitudinal fire tubes connecting the same, a diaphragm arranged beneath said fire tubes and extending transversely between the lower sides of the boiler, and having its front end meeting with the front flue sheet and its rear end terminating short of the rear flue sheet to form a mixing compartment open at one end, water conveying means in communication with the said compartment formed on one side of the diaphragm and with the boiler on the other side of the diaphragm, and power actuated means for forcing the water from the mixing compartment to the major portion of the boiler.

3. A water circulating system for locomotive boilers including in combination with the boiler having a mixing compartment formed therein, a tubular casing member having offset necks one of which is in communication with said compartment, a conveyer screw having oppositely pitched flights and a shaft rotatably mounted in said casing, water carrying pipes communicating at one end with the other necks on the casing member and at the other end with the top of the boiler, and means for operating said conveyer screw.

1,111,917. COMPOSITION OF MATTER TO BE USED AS A FOOD. CORNELIUS ODEGARD, Helena, Mont., assignor to Cereal Mince Company, Minneapolis, Minn., a Corporation. Filed Mar. 9, 1914. Serial No. 823,560. (Cl. 99—10.)

1. A composition of matter for use as a breakfast food comprising a plurality of different granular cereal meals and chocolate or cocoa incorporated and combined substantially as described, so that the chocolate permeates and is incorporated with the uncooked grains of the meals.

2. A composition of matter for use as a breakfast food comprising twenty-five parts by weight of granular cereal meals and one part by weight of chocolate or cocoa, all in the dry form, comingled and combined substantially as described.

3. The process of making a composition of matter to be used as a breakfast food, which consists in thoroughly comingling granular cereal meals in the natural dry uncooked condition in fixed proportions with powdered chocolate or cocoa and thereafter subjecting the mixture for a short period to a heat approximately two hundred degrees Fahrenheit to melt the chocolate and cause the same to permeate and be incorporated with the grains of the meals.

1,111,918. HYDROUS ALKALI-METAL SILICATE AND METHOD OF PRODUCING IT. EDWARD ALFRED PATERSON, Port Arthur, Ontario, Canada. Filed Dec. 17, 1913. Serial No. 807,358. (Cl. 23—13.)

1. A substantially homogeneous, dry, comminuted alkali metal silicate, dried under low pressure, having a large percentage of silica and having alkali and contained water, sufficient, in view of its having been dried under low pressure, to make it soluble in cold water.

2. A substantially homogeneous, dry, alkali metal silicate, dried under low pressure, easily soluble in cold water, in which silicate the molecularly combined water is approximately from twelve per cent. to nineteen per cent.

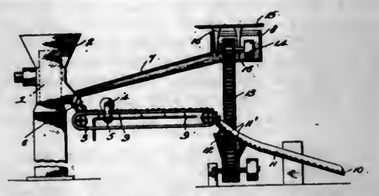
3. A substantially homogeneous, dry, comminuted, alkali metal silicate dried at low temperature and under low pressure, having a large percentage of silica, and having alkali and contained water, sufficient, in view of its having been dried at low temperature and under low pressure, to make it soluble in cold water.

4. The method of producing a dry powdered hydrous alkali metal silicate, which consists in incompletely drying an alkali metal silicate at a comparatively low temperature and under a partial vacuum to reduce the water content and to produce a solid mass, next coarse grinding the material thus obtained, further drying the coarse ground mixture, then regrinding the material to reduce it to a fine powder and finally drying until the water content is reduced to an amount which in the hydrous alkali metal silicate produced is sufficient only in connection with the alkali present to render the silicate readily soluble in cold water.

5. The method of producing a dry powdered hydrous alkali metal silicate, which consists in incompletely drying an alkali metal silicate to reduce the water content and to produce a solid mass, next coarse grinding the material thus obtained, further drying the coarse ground mixture, then regrinding the material to reduce it to a fine powder and finally drying until the water content is reduced to an amount which in the hydrous alkali metal silicate produced is sufficient only in connection with the alkali present to render the silicate readily soluble in cold water.

[Claims 6 to 9 not printed in the Gazette.]

1,111,919. BRIQUET COMPOSITION AND PROCESS OF MAKING BRIQUETS. EDWARD ALFRED PATERSON, Port Arthur, Ontario, Canada. Filed Dec. 26, 1913. Serial No. 808,866. (Cl. 75—73.)



1. The process of briqueting a siliceous ore, which consists in mixing with a hydrous alkali silicate an alkali earth carbonate, and agglomerating said ore with said mixture.

2. The process of briqueting a siliceous ore, which consists in mixing with an alkali silicate, a hydrous alkali earth carbonate, and agglomerating said ore with said mixture, the quantity of alkali earth carbonate being proportioned to the total quantity of silicic acid in the agglomerated briquet.

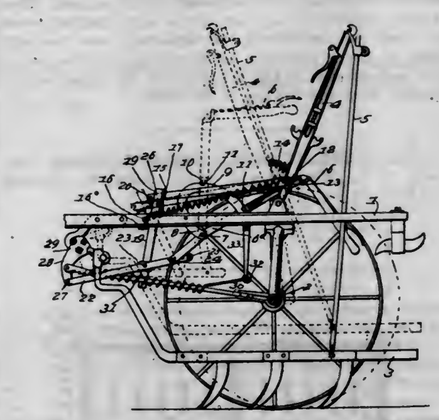
3. The process of briqueting siliceous iron ore, which consists in mixing with hydrous sodium silicate pulverized limestone and briqueting said ore with said mixture.

4. The process of briqueting siliceous ore, which consists in mixing with hydrous sodium silicate an alkali earth carbonate, agglomerating said ore with said mixture, the quantity of said carbonate being proportioned to the total quantity of the silicic acid in the finished briquets, and exposing them to the hardening effect of carbon dioxid.

5. A process for briqueting or lumping ore dust, which consists in mixing said ore dust with a hydrous alkali silicate, in solution, and water, discharging upon a suitable surface a layer of powdered ore, discharging upon said layer the mixed ore and silicate, molding or lumping said mixture upon said surface, drying the lumps so formed upon the same surface, discharging the said lumps from said surface, and at the same time separating from said lumps any unattached powdered ore.

[Claims 6 to 9 not printed in the Gazette.]

1,111,920. LOCKING AND RELEASING DEVICE FOR CULTIVATORS. HENRY PETERSEN, Mount Auburn, Iowa. Filed Dec. 17, 1913. Serial No. 807,161. (Cl. 97—35.)



1. In a cultivator, a mast-moving bar, means for moving the same embodying a lifting lever, and an automatic lock and releasing device therefor operable when the lifting lever is raised or depressed, said device embodying slidably engaged members automatically releasable when the mast is moved to its rear position.

2. A cultivator mast, a mast-moving bar pivotally connected thereto, a lifting lever, a member connected therewith, and interengaging slidable members for automatically locking said mast in its forward position and automatically releasable in the opposite direction.

3. A cultivator mast, a mast-moving bar pivotally connected thereto, a lifting lever, a member connected therewith, interengaging slidable members for automatically locking said mast in its forward position, and automatic releasing means operative as the mast is moved to its rearward position.

4. In a cultivator, a device for the purpose described, comprising members movable with relation to each other, interengaging slidable means for locking said members, and a member for automatically moving one of the interengaging members out of operative relation with the other and a lifting lever.

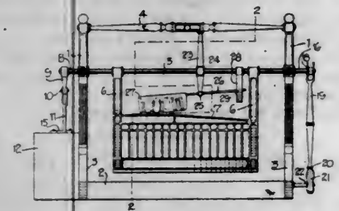
5. In a cultivator, a device of the class described, comprising a movably mounted mast, a member pivotally connected therewith, a member coöperating with said member, said members having interengaging members, a lifting lever and an automatic releasing device for said interengaging members embodying slidably engaged elements.

[Claims 6 to 13 not printed in the Gazette.]

1,111,921. CRADLE. JAMES B. RUSSELL, Seminole, Okla. Filed Aug. 27, 1913. Serial No. 786,982. (Cl. 230—10.)

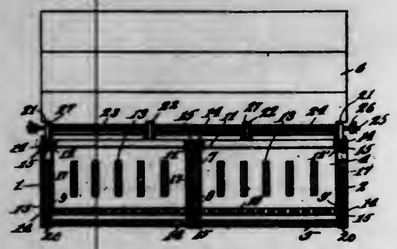
A device of the character described comprising a supporting frame including uprights, a bar connecting the uprights, a shaft rotatably supported by the uprights be-

low the connecting bar, means for imparting rocking movement to the shaft, an arm depending from the connecting bar of the frame and extending below the shaft, such depending arm being provided with an opening through which the shaft is projected, an arm pivoted intermediate its length to the free end of the depending



arm for oscillation in substantially a horizontal plane and being provided at one end portion with fanning means, and a rock arm secured to and depending from the shaft having its lower extremity bifurcated to straddle the opposite end portion of the rod whereby the same may be oscillated upon the rocking of the shaft.

1,111,922. BOTTLE-CRATE. CHARLES A. SEIFERT, Newbern, N. C. Filed May 3, 1913. Serial No. 765,369. (Cl. 217—5.)



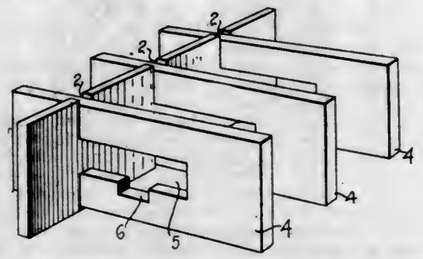
1. A crate, having two end walls, a bottom, rear wall and front wall, a plurality of vertical reinforcing rods carried by and incased in the rear wall, the upper ends thereof being projected above the upper edge of the rear wall, a cover, a hinging rod mounted longitudinally within the cover, and coöperating means carried by the upper terminals of the reinforcing rods of the rear wall and said rod for hingedly connecting the cover to the rear wall.

2. A crate, having two end walls, a front and rear wall, and a bottom, a plurality of reinforcing rods disposed in the rear wall and having their upper ends projecting above the upper edge of the rear wall, a cover, a hinging rod mounted longitudinally within the cover, and detachable coöperating means carried by the upper terminals of the reinforcing rods of the rear wall and said hinging rod for hingedly connecting the cover to the rear wall.

3. A crate, having two end walls, a front and a rear wall, and a bottom, a plurality of reinforcing rods disposed in the rear wall and having their upper ends projecting above the upper edge of the rear wall, a plurality of hooked eyes detachably connected to the upper ends of said rods, one to each rod, a cover, and a hinging rod connected to the cover and threaded through the eyes of the hooks and forming therewith a hinge support for the cover.

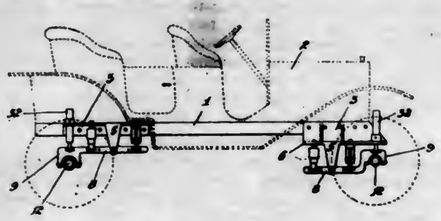
1,111,923. PUZZLE. FELICISSIMO C. SILVA, Lowell, Mass. Filed May 8, 1914. Serial No. 837,215. (Cl. 46—41.)

1. A device of the class described including a plurality of interlocking bars formed in sets, each of the bars of one set including an elongated body having spaced recesses formed inwardly from each of the longitudinal edges of the body, the bars of the other set including an elongated body having a centrally arranged elongated opening to receive the bars of the other set and further provided with a recess formed in one of the walls of said opening, whereby to receive the material between the recesses of the other bars and one of the first sets of bars being substantially wider than the remaining bars of that set, as and for the purpose set forth.



2. A device of the class described including a plurality of interlocking bars formed in sets, the bars of one set including an elongated body having spaced recesses extending inwardly from each of the longitudinal edges of the body, the bars of the other set including an elongated body having a centrally arranged elongated opening of a length sufficient to receive one of the bars of the first set in a vertical position and the remaining bars in a horizontal position, said bars being further provided with a recess communicating with one of the side walls of the opening adapted to receive the material between the recesses in the first bars, as and for the purpose set forth.

1,111,924. VEHICLE-SPRING. JAMES SAMUEL SMITH, Montreal, Quebec, Canada. Filed Aug. 29, 1913. Serial No. 787,364. (Cl. 21—101.)



1. In a vehicle spring, the combination with the vehicle frame and wheel axle of a bracket rigidly secured to said frame, a lever pivoted to said bracket to swing vertically and having a forked outer end, a sleeve loosely encircling said axle and having stub shafts engaging and forming pivotal connection with said forked end and a compression spring disposed between said lever and bracket.

2. In a vehicle spring, the combination with the vehicle frame and wheel axle of an angular bracket secured to said frame and having a horizontally extending flange and a depending pivot boss, a lever secured to the lower end of said pivot boss and connected at its outer end to said axle, a telescoping spring casing formed of a pair of cup shaped parts, the upper one of said parts being pivotally connected to said flange and the lower one of said parts being pivotally connected to said lever, a compression spring within said casing and means for adjusting said casing toward or away from said pivot boss.

3. In a vehicle spring, the combination with the vehicle frame and wheel axle of a bracket secured to said frame, a lever intermediately pivoted in said bracket, means for connecting said lever at one end to said axle, a compression spring disposed between said bracket and lever between the pivot point and axle, a compression spring on the other side of said pivot between said bracket and lever, and frames connected to said bracket and lever

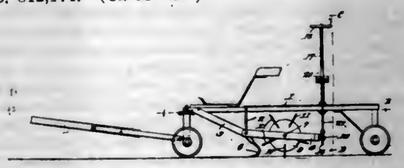
insuring the corresponding compression of said latter spring with the former spring.

4. In a vehicle spring, the combination with the vehicle frame and wheel axle of a bracket secured to said frame and having a depending pivot boss, a lever horizontally pivoted to one side of said pivot boss and connected to said axle at its outer end and having a diagonally extending brace member extending from its outer end and pivotally connected to the other side of said pivot boss, and a compression spring disposed between said lever and said bracket.

5. In a vehicle spring, the combination with the vehicle frame and wheel axle of a bracket secured to said frame, a lever pivoted in said bracket and connected at its outer end to said axle, a compression spring disposed between said bracket and said lever, a pair of distanced bumper springs suitably supported and a connection from said lever adapted to contact one of said bumper springs for compression just before said lever reaches its limit of movement in an up or down direction.

[Claim 6 not printed in the Gazette.]

1,111,925. STALK-CUTTER. JOHN WESLEY SMITH, Hutchinson, Kans., assignor of one-half to Enoch M. Ramsey, Hutchinson, Kans. Filed June 1, 1914. Serial No. 842,174. (Cl. 55—61.)



1. A stalk cutter including a wheel supported platform, a transversely extending series of separately pivoted frames, a cross head, means upon the platform for adjusting the cross head upwardly and downwardly, a cross beam, hangers connecting said cross head to the cross beam, slidable connections between the cross beam and the respective pivoted frames, and a revoluble cutter mounted within each of the said frames.

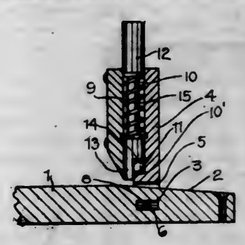
2. A stalk cutter including a wheel supported platform, a transversely extending series of separately pivoted frames, a cross head, means upon the platform for adjusting the cross head upwardly and downwardly, a cross beam, hangers connecting said cross head to the cross beam, slidable connections between the cross beam and the respective pivoted frames, a shaft within each of the pivoted frames, a cutter mounted for rotation on the shaft, and means in front of each of the cutters for straightening stalks into the path of the cutter.

3. A stalk cutter including a wheel supported platform, a transversely extending series of frames mounted under the platform, said frames being pivotally connected at their front ends to the platform, an upwardly extending adjusting screw mounted for rotation on the platform, a cross head engaged and supported thereby, a cross beam under the platform, hangers connecting the cross head to the cross beam, said cross beam having vertical slots, studs extending from the respective pivoted frames and slidably mounted in the slots, and a revoluble cutter mounted for rotation in each of the pivoted frames.

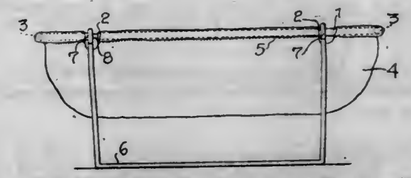
1,111,926. SAW-SET. WILEY STAFFORD, Jeffris, La. Filed Sept. 27, 1913. Serial No. 792,184. (Cl. 76—70.)

1. A device of the class described comprising a base member, an angularly adjustable socket mounted upon said base member, said socket member having a vertical circular opening therein, a punch mounted for reciprocation in said opening, means for resiliently retaining said punch in its uppermost position, and means for preventing rotation of said punch within said circular opening.

2. A device of the class described comprising a base member, an angularly adjustable socket mounted upon said base member, said socket being provided with a vertical opening therein having a lug formed in the lower end thereof, whereby the lower end of said opening is of semi-circular form, a plunger mounted in said opening and having a portion of its lower end cut away thereby forming a semi-circular lower extremity for reciprocation through the semi-circular lower end of the opening, and means for resiliently retaining the plunger in its uppermost position.



1,111,927. CARRIER. D. CURTIS STANION, Santa Cruz, Cal. Filed Oct. 27, 1913. Serial No. 797,619. (Cl. 150—49.)



1. A device of the class described including a substantially rectangular frame, a flexible body having its upper edge secured to the frame, U-shaped members having certain of their ends formed oval in shape and rotatably mounted upon the side portions of the frame, whereby they may be disposed above or beneath the frame, and means coacting with said oval-shaped ends for retaining said U-shaped members against movement, when disposed beneath the frame.

2. A device of the class described including a substantially rectangular frame, a flexible body suspended from the frame, the side members of said frame being provided with reduced portions, said reduced portions being circular in form at one end and oval in form at the other end, U-shaped members having oval shaped eyes formed on certain of their ends and mounted within said reduced portions, said eyes being arranged upon the circular portions when moving said U-shaped members and said eyes being arranged upon the oval portions to retain the U-shaped members against movement.

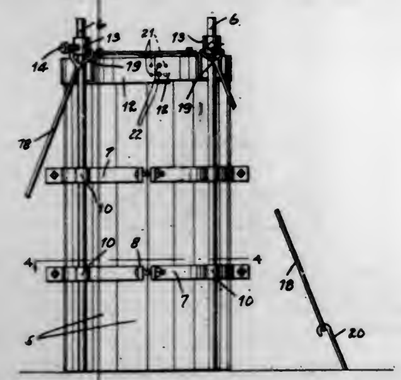
3. A device of the class described including a substantially rectangular frame, a flexible body suspended therefrom, the side members of said frame having reduced portions, said reduced portions being provided with a circular and an oval portion, U-shaped members having oval shaped eyes formed at the ends thereof, which are mounted upon the reduced portions, said eyes being arranged upon the circular portion when actuating the handle and adapted to be arranged upon the oval portion to retain the U-shaped members in their operative position.

1,111,928. SILO-SUPPORT. CHARLES F. STEWART, Nashville, Kans. Filed Oct. 10, 1913. Serial No. 794,524. (Cl. 217—4.)

1. A silo support comprising the combination with a cylindrical silo comprising vertical staves, of a plurality of uprights disposed in intimate relation to the outer periphery of the silo and extending thereabove, channel members slidable on the uprights and engaging over the top edge of the silo to anchor the same and guy rods extending from said channel members and anchored adjacent the ground.

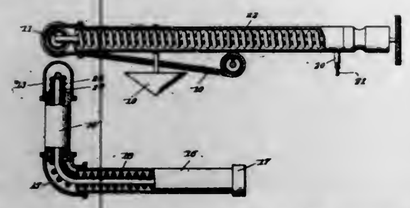
2. A silo support comprising the combination with a cylindrical silo disposed vertically, of a plurality of up-

rights disposed in intimate relation to and extending above its outer periphery, channel members on the uprights and



engaging over the top edge of the silo to anchor the same, tie rods connecting diametrically opposed channel members and guy rods extending from the channel members and anchored adjacent the ground.

1,111,929. HYDROCARBON-BURNER. MELVIN T. STONE, San Antonio, Tex. Filed Nov. 12, 1913. Serial No. 800,547. (Cl. 158—63.)



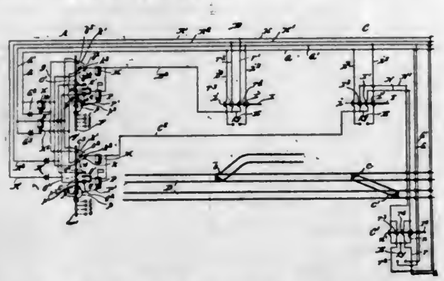
1. A hydrocarbon burner comprising an induction pipe, a branch having communication therewith, a further pipe having a combustion opening connected with the branch and arranged below the induction pipe, a coiled wire trained through the induction pipe, branch, and last-named pipe for spreading the fuel throughout the maximum area thereof, and a single wire passed through the coiled wire throughout the extent of the induction pipe, branch, and last-named pipe.

2. A hydrocarbon burner comprising an induction pipe, a branch having communication therewith, a further pipe having a combustion opening connected with the branch and arranged below the induction pipe, a coiled wire trained through the induction pipe, branch, and last-named pipe for spreading the fuel throughout the maximum area thereof, a single wire passed through the coiled wire throughout the extent of the induction pipe, branch, and last-named pipe, and a spreader arranged in the path of the flame when issuing from the combustion opening.

1,111,930. RAILWAY SIGNAL AND SWITCH OPERATING MEANS. PETER G. TEN EYCK, Albany, N. Y. Filed Aug. 24, 1909. Serial No. 514,413. (Cl. 246—53.)

1. A switch and signal operating system embodying an operator's station, a plurality of switch or signal stations, each having electrically controlled motor mechanism, an individual line extending from the operator's station to the motor mechanism of each switch or signal station, two returns both common to the motor mechanisms of all the stations, means at each switch or signal station controlled by the motor mechanism at that station for connecting the individual line for that station with the common returns alternately, means at the operator's station for connecting any individual line with either return, and means for supplying current to the lines.

2. A switch and signal operating system embodying an operator's station, a plurality of switch or signal stations, an individual line extending from the operator's station to each of the switch or signal stations, two returns both common to all stations, electrically controlled means at each switch or signal station for connecting the individual line with the returns alternately, independent means at the operator's station for connecting any individual line with either return, and means for supplying current through the lines to the electrically controlled means at each station.



3. A switch and signal operating system embodying an operator's station, a plurality of switch or signal stations, an operating motor at each station, an individual line extending from the operator's station to each swich or signal station, two returns both common to all stations, means operated by the motor at each station for connecting the individual line with the returns alternately, means at the operator's station for connecting any individual line with either return, and means for suppiying current to the lines.

4. A switch and signal operating system embodying an operator's station, a plurality of switch or signal stations, an operating motor at each station, individual station lines one from the operator's station to each of the switch and signal stations, a plurality of returns common to all stations, means at each station operated by the motor for connecting the individual station line with the common returns in succession, manually controlled means at the operator's station for connecting any individual switch or signal station line with either return, and means for supplying energy to the lines.

5. A switch and signal operating system embodying an operator's station, a plurality of switch or signal stations, remote from the operator's station, two independent sources of electrical energy, two operating circuits between the sources of energy and stations, an automatic electrically actuated switch at each signal or switch station controlled through both operating circuits and operating to automatically establish the circuits alternately, and manually controlled switches at the operator's station whereby the circuit including either source of energy may be established.

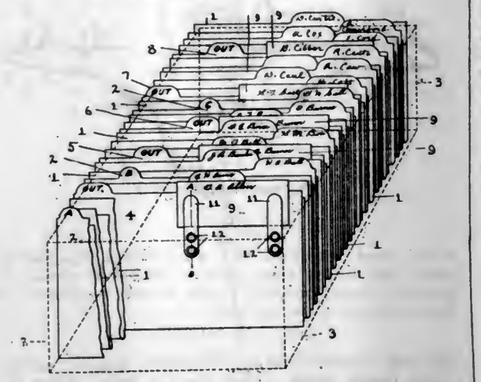
[Claims 6 to 23 not printed in the Gazette.]

1,111,931. INDEX. CHESTER I. WAGNER, Dayton, Ohio, assignor to The Shaw-Walker Company, Muskegon, Mich., a Corporation of Michigan. Filed Feb. 20, 1913. Serial No. 749,714. (Cl. 129—16.)

1. In an index, a plurality of indicators adapted to be severally inserted into the respective places of withdrawn indexed matters having different attention dates, the indicators having distinguishments in such inter-relative position thereon as to severally suggest the corresponding attention dates of their respective withdrawn indexed matters.

2. In an index, a plurality of out-cards adapted to be severally inserted into the respective places of withdrawn indexed matters having different attention dates, the out-cards having tabs in such inter-relative laterally arranged position thereon as to severally suggest the corresponding attention dates of their respective withdrawn indexed matters.

3. In an index, a plurality of out-cards adapted to be severally inserted into the respective places of withdrawn indexed matters having different attention dates, the out-cards having tabs in such inter-relative position thereon as to severally suggest the corresponding attention dates of their respective withdrawn indexed matters.

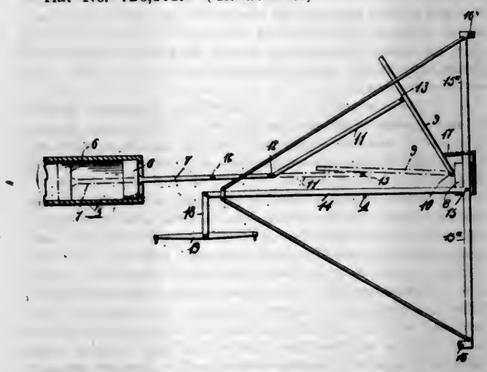


4. In an index, an out-card adapted to be inserted into the index in place of withdrawn indexed matter, a card adapted to display memoranda relative to such withdrawn matter, and means carried by the out-cards for yieldingly enclasping the said card on the out-card.

5. In an index, an out-card adapted to be inserted into the index in place of withdrawn indexed matter and having a spring clip, and a card adapted to display memoranda relative to such withdrawn matter and to be removably held in the clip.

[Claim 6 not printed in the Gazette.]

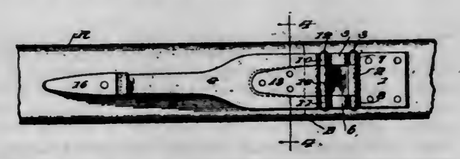
1,111,932. SWEEP FOR PRESSES. FRED E. WINCHESTER, Thermopolis, Wyo. Filed Oct. 16, 1912. Serial No. 726,103. (Cl. 100—7.)



1. The combination with a baling press, of a plunger head sliding therein, a plunger rod for said head, a support disposed in spaced relation to the press, a plunger actuating lever pivoted on said support eccentrically thereof, a link bar pivotally connected at one end to the outer end of the plunger rod and pivoted at its opposite end to the actuating lever at a point between the center of the actuating lever and the outer free end thereof, a rotatable sweep connected with the support and including draft mechanism, and means carried by the sweep and adapted at predetermined times in the travel of the sweep to engage with that portion of the lever between the link bar connection therewith and the free end thereof for swinging said lever to force the plunger forward in the press and means for returning the actuating lever to its initial position upon the release thereof by the sweep.

2. The combination with a baling press, of a plunger head slidably mounted therein, a plunger rod extending from the head, a bearing block disposed in spaced relation to the press, a plunger actuating lever mounted eccentrically relative to the block, a link bar connected at one end to the plunger rod and at its other end to the actuating lever at a point between the free end of the lever and the center thereof, a rotatable sweep including a draft arm, and actuating arms extending in opposite directions, oppositely disposed hooks extending downwardly from the ends of the actuating arms and adapted to successivley engage the plunger actuating lever at a point between the free end of the lever and the point of connection of the link bar, to actuate said lever and force the plunger head forward in the press, and a retractile spring connected at one end with the bearing block, and connected directly to the actuating lever at its other end for returning the actuating lever to its initial position upon the release thereof of the sweep.

1,111,933. OPERATING DEVICE FOR SPLIT WHEEL-RIMS. GEORGE WESLEY WOLF, Rockford, Ohio. Filed Oct. 9, 1913. Serial No. 794,293. (Cl. 152—21.)



1. A split rim operating device comprising hinge members connected to the opposite ends of the rim and having knuckles on their opposed edges, an operating lever bifurcated at one end with each arm thereof provided with longitudinally spaced knuckles, the knuckles on one arm registering with those on the other and adapted to register with the knuckles on the hinge members, a pintle connecting the outer knuckle of said lever with the knuckle on one hinge member, a pintle connecting the inner knuckle of said lever with the knuckle of the other hinge member, the last mentioned hinge member being shaped to fit between the arms and in the crotch of said lever, said lever and hinge member having beveled overlapping meeting faces beyond the pivotal connection thereof, and means for locking said lever in closed position.

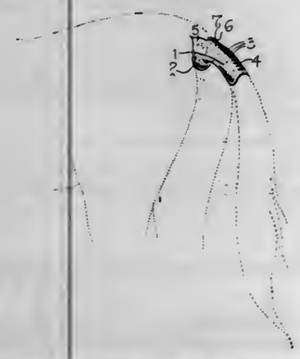
2. An operating device for split wheel rims comprising hinge members secured to the opposite ends of the rim, an operating lever, means connecting said lever with both of said hinge members at points spaced from each other, one of said hinge members and said lever having beveled meeting faces adapted to overlap and form reinforcing means and a limiting stop for the lever.

1,111,934. PUZZLE. FREDERICK A. WONNBERGER, Union Course, N. Y. Filed Apr. 13, 1914. Serial No. 831,539. (Cl. 46—41.)

A puzzle comprising a U-shaped frame having its arm connecting portion and the free ends of its arms provided

with eyes respectively, a double cord including a loop end and a connected end, the loop end of the cord being engaged successively through the eye of one arm, the eye of the arm connecting portion and then through the eye of the other arm, and the connected end of the cord being then engaged through the loop end and through the eye of the arm connecting portion.

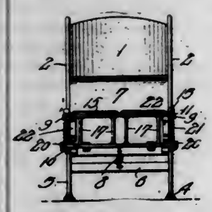
1,111,935. BREEDER'S APPLIANCE. CHARLES FRANKLIN WRIGHT, Kennett, Mo. Filed Mar. 28, 1914. Serial No. 828,019. (Cl. 119—143.)



1. A device of the class described including a bandage, means for detachably connecting the longitudinal edges thereof, said bandage having a pocket at one end thereof, and means arranged within said pocket forming a spherical projection as and for the purpose set forth.

2. A device of the class described including a bandage formed of double thick material having a pocket formed in one end thereof, means detachably connecting the longitudinal edges thereof, a substantially circular enlarged portion formed contiguous with the pocket, means for connecting the open sides of the enlarged portions, and means arranged within said pocket forming a spherical projection, as and for the purpose set forth.

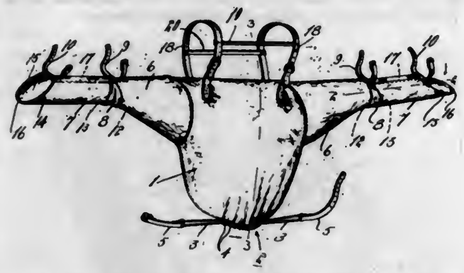
1,111,936. CHAIR. ARLOW E. YOUNG, Albion, Ind. Filed Nov. 5, 1912. Serial No. 729,646. (Cl. 155—13.)



A chair of the class described comprising, side bars having a seat pivoted therebetween, the lower ends of which side bars terminate in legs, a cross bar connecting said legs, a spring connected to said cross bar and to the rear end of said seat, ears on said side bars, arms pivoted on said ears, springs mounted on said pivot and tending to move said arms inwardly, means to limit the outward movement of the arms the inward movement being controlled by the seat.

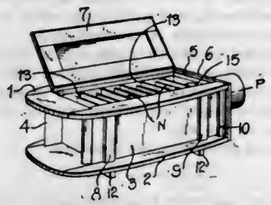
1,111,937. SACK FOR FRUIT. MATTHEW A. ZOULEK, Old Mission, Mich. Filed Nov. 17, 1913. Serial No. 801,522. (Cl. 56—99.)

A device for picking fruit, comprising a sack, loops connected to the upper edge of the sack for engaging the shoulders of the person, inner and outer sleeve sections having communication with the interior of the sack, strap sections carried by the sleeve sections for engaging the arms of the wearer so that the sleeve sections will be suspended thereunder, a mouth formed



at the lower end of the sack, draw strings engaging the mouth and having strap sections connected thereto for engaging around the body of the wearer to operate the draw strings to close said mouth.

1,111,938. PHOTO-NEGATIVE DRIER. JOHN C. AMUNDSON, Crosby, Minn. Filed Apr. 29, 1914. Serial No. 835,225. (Cl. 34—26.)



1. A photo negative drier comprising a chamber having sides provided with vertical grooves or channels, a hinged top and a solid bottom, one end of the chamber being open, heads secured to the other end and provided with an opening, a flue arranged in one of the heads, and a fabric shield detachably secured around the open end and sides of the chamber.

2. A photo-negative drier comprising a chamber having sides provided with vertical grooves or channels, a hinged top and a solid bottom, one end of the chamber being open, and a flue in communication with the chamber through the opposite end.

3. A photo-negative drier comprising a chamber having sides provided with vertical grooves or channels, a hinged top and a solid bottom, one end of the chamber being open, heads secured to the opposite end and provided with an opening, and a flue arranged in one of the heads.

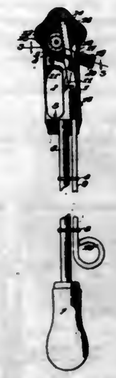
4. A photo-negative drier comprising a chamber having sides provided with vertical grooves or channels, a top provided with an opening, means for closing said opening in the top, a solid bottom, one end of the chamber being open, a flue in communication with the chamber through the opposite end, and a fabric shield detachably disposed across the open end of the chamber.

5. A photo-negative drier comprising a chamber having sides provided with vertical grooves or channels, said sides being spaced apart a distance in excess of the width of a negative, a hinged top and a solid bottom, one end of the chamber being open, and a flue in communication with the chamber through the opposite end.

[Claim 6 not printed in the Gazette.]

1,111,939. SELF-LIGHTING GAS-LIGHTER. OTIS R. ANGELL, Boston, Mass. Filed Jan. 22, 1914. Serial No. 813,756. (Cl. 67—6.1.)

1. A gas lighting torch comprising a casing open at one side, a lamp pivotally mounted in said casing to swing out through said open side, an igniting device arranged in said casing adjacent the wick of said lamp and means for simultaneously actuating said igniting device and ejecting said lamp from said casing.



2. A gas lighting torch comprising a casing, a lamp pivoted in said casing to swing outwardly therefrom, a reciprocable member mounted in said casing, a link connecting said member with said lamp, a sparking pencil also arranged in said casing, an abrading member arranged in contact with said pencil and means connected with said reciprocable member for simultaneously actuating said abrading member and projecting said lamp.

3. A gas lighting torch comprising a casing, a lamp pivotally mounted in said casing to swing outwardly therefrom, a rod extending into said casing, a ratchet bar pivotally connected at one end to said rod, a coil spring arranged on said rod between one end of said casing and said bar for normally projecting said bar, a sparking pencil arranged in said casing, an abrading disk positioned to engage said pencil and having a ratchet wheel fixed to one face thereof in position to be engaged by the teeth of said ratchet bar, means for yieldably holding said bar in engagement with said wheel, and means connecting said lamp with said rod whereby the lamp is simultaneously projected on the actuation of the igniting device when a pull is exerted on said rod.

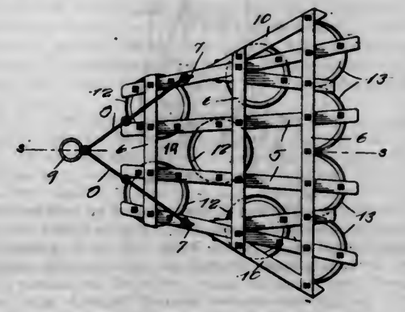
4. A gas lighting torch comprising a casing open at one side, a lamp pivotally mounted in said casing to swing outward through said open side, an igniting device arranged in said casing adjacent the wick of said lamp and comprising a revolubly mounted abrading disk having a ratchet wheel fixed to one face thereof, a tube extending obliquely into said casing and having its inner end open and arranged adjacent the periphery of said abrading disk, a sparking pencil mounted in said tube, a spring for normally projecting said pencil into engagement with said abrading disk, and a cap screwed on the outer end of said tube for controlling the tension of the spring which projects said sparking pencil, and means engaged with said ratchet wheel for simultaneously turning said disk and projecting said lamp.

1,111,940. GROUND-LEVELER AND MOISTURE-RETAINER. PETER S. BAKER, Logansport, Ind. Filed July 31, 1913. Serial No. 782,273. (Cl. 55—22.)

1. An agricultural machine comprising a frame and a plurality of annular members depending therefrom with their axis disposed vertically and the lower ends of said members being flared outwardly.

2. An agricultural machine comprising a frame, a plurality of annular members depending therefrom with their axis disposed vertically and a plurality of arcuate members disposed in a line at the rear of the machine and having their side edges abutting and the lower ends of all of said members being outwardly flared.

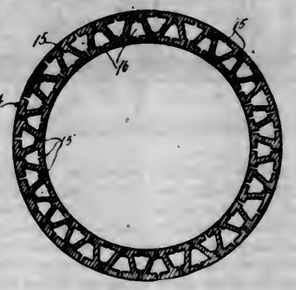
3. An agricultural machine comprising a plurality of longitudinal bars, a plurality of transverse bars, a plurality of annular members disposed thereunder with their axis disposed vertically and provided with spaced openings and bolts passed through the bars and terminating in hooked portions engaging the openings to hold the said members to the frame.



4. A ground working implement comprising an annular band having its edges outwardly flared.

5. A ground working implement comprising an annular band having its side edges outwardly flared, the axis of said implement adapted to be disposed vertically, the forward portion of the lowermost flared edge being adapted to cut the earth and direct it to the interior of the band and the rear portion of said edge being adapted to pulverize the earth and pack it.

1,111,941. OIL-RING. DAVID B. BARDIN and EMMETT L. NORRIS, Brewster, Fla. Filed Nov. 18, 1913. Serial No. 801,655. (Cl. 64—31.)



1. An oil ring comprising an annular body having a plurality of radial passages therethrough, said passages having their intermediate portions enlarged to form pockets.

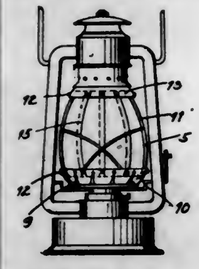
2. An oil ring comprising an annular body having a plurality of radial passages therethrough, said passages having their intermediate portions enlarged to form frusto pyramidal shaped pockets.

3. An oil ring comprising an annular body having a plurality of radial passages therethrough, said passages having their intermediate portions enlarged to form frusto pyramidal shaped pockets, the pockets of adjacent passages being oppositely disposed.

1,111,942. LANTERN-GLOBE GUARD. ALBERT BATCHELOR, Melbourne Ridge, Quebec, Canada. Filed Oct. 9, 1913. Serial No. 794,311. (Cl. 240—102.)

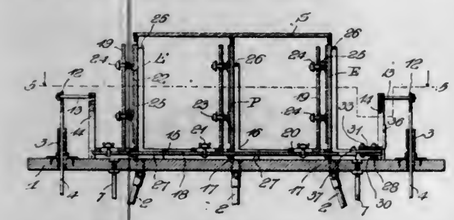
1. A lantern globe-guard consisting of an annular lower member of resilient material adapted to be forced over the bulged portion of a lantern globe and to fit around the lower reduced portion thereof, an upper annular member

adapted to surround the upper portion of the lantern globe, and a transparent member secured between said lower annular member and said upper annular member.



2. A lantern globe-guard consisting of an annular lower member of resilient material adapted to be forced over the bulged portion of a lantern globe and to fit around the lower reduced portion thereof, an upper annular member adapted to surround the upper portion of the lantern globe, and a transparent member secured between said lower annular member and said upper annular member, the lower edge of said transparent member being secured to the inner periphery of the upper edge of said lower annular member and having its upper edge surrounded by the lower edge of the upper annular member.

1,111,943. CRATE-MAKING MACHINE. MARTIN S. BENNETT, Minneapolis, Kans. Filed June 8, 1914. Serial No. 843,830. (Cl. 144—296.)

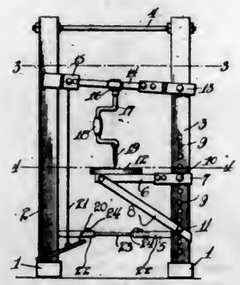


1. In a crate making machine, the combination with a number of upright clamping frames, an operating bar slidably mounted beneath the same, and upright clamping members on said bar, of a lever pivoted intermediate its ends to a relatively fixed support, a link pivoted to one end thereof, and a pivotal connection between said link and said operating bar, said link having a notch adapted to receive the pivot of the lever when the latter is operated.

2. In a crate making machine, the combination with a number of upright clamping frames, an operating bar slidable beneath the same and upright clamping members carried by said bar, of an upright pivot pin rising from a relatively fixed support spaced from one end of said bar, a bell crank having an opening near its angle receiving said pin, an operating handle formed on one end of said bell crank, a lever spaced from the other arm of said bell crank and having an opening intermediate its ends receiving said pivot pin, an upright spacing member between the adjacent ends of said last mentioned arm and said lever, and a link pivoted to the opposite end of said lever and to the adjacent end of said operating bar, said link having a pair of notches in one edge adapted to receive siad pivot pin and said spacing members when the bell crank is turned around its pivot to shift said movable clamping members toward the fixed members.

3. In a crate making machine, the combination with a rectangular frame having a number of upright clamping members secured thereto, an operating bar slidable beneath the same, a number of movable clamping members carried by said bar and a transverse end bar secured to said frame adjacent one end of the operating bar, of an upright pivot pin rising from said transverse bar, a lever pivoted between its ends on said pin, a spacing member rising from one end of said lever, a bell crank pivoted on said pin and attached to said spacing member at one end, a handle rising from the other end of said bell crank, and a link pivoted at its ends to the remaining end of said lever and said operating bar, said link having a pair of notches in one edge, for the reception of said pivot pin and spacing member.

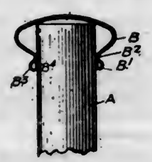
1,111,944. PORTABLE DRILLING-STAND. WILLIAM R. BOOTH, Gravette, Ark. Filed Mar. 28, 1914. Serial No. 828,026. (Cl. 77—30.)



1. A device of the character described comprising a frame including a pair of spaced standards, a drill supporting bar pivotally connected at one end to one of said standards adjacent its upper end, a pair of guide plates connected to the opposite sides of said bar at its opposite end and projecting longitudinally therefrom, the projecting portions of said plates being engaged against the opposite side faces of the other of said standards, a work supporting member connected to one of said standards below said bar, a depending drill carried by said bar, and means for moving said bar downwardly to force the drill into engagement with the work upon the supporting member.

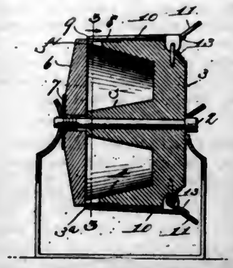
2. A device of the character described including a pair of spaced standards, a drill supporting bar pivotally connected at one end to one of said standards adjacent its upper end, a work supporting member carried by said standards at their lower ends, said member comprising a pair of inwardly extending tubular rods mounted at their outer ends in said standards, the inner ends of said rods terminating in spaced relation with each other, a central rod having its opposite ends mounted in the opposed ends of said tubular rods, means for detachably holding the opposite ends of said central rod within the opposing ends of said tubular rods, a depending drill carried by said supporting bar intermediate of its ends, and means for lowering said supporting bar to engage the drill with the work carried upon said supporting member.

1,111,945. FINISHING CAP, KNOB, OR VASE FOR BEDPOSTS AND THE LIKE. RICHARD BRADSHAW, Toronto, Ontario, Canada. Filed Apr. 6, 1912. Serial No. 688,967. (Cl. 5—4.)



The combination with a post, of a sheet metal knob or the like therefor having a neck portion terminating in an inwardly curved up-turned portion having an inner annular smooth surface forming a collar designed to slip onto the post, and an inwardly constricted annular portion formed in the neck immediately above the upper end of the up-turned portion and of slightly less diameter than the internal diameter of the up-turned portion and adapted to grip the surface of the post, as and for the purpose specified.

1,111,946. RECEPTACLE FOR TRAVELERS. BRITTON E. BYRD, Durham, N. C. Filed Oct. 23, 1913. Serial No. 796,969. (Cl. 211—8.)



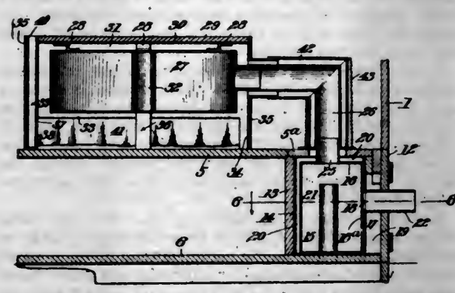
1. A device of the kind described comprising a rotatable receptacle, having peripheral openings and a plurality of magnets mounted upon the periphery of said receptacle and registering with said openings, said magnets being capable of movement relative to the receptacle.

2. A traveler receptacle comprising a rotatable cylinder having openings in its periphery, and pivoted magnets the poles of which normally overlap said openings.

3. An article delivering device comprising a rotatable receptacle having delivery orifices in its periphery, and permanent magnets pivotally mounted upon the periphery of the receptacle, the poles of each magnet normally overlapping one of said delivery orifices, and thumb pieces carried by the pivoted end portions of said magnets.

4. A device of the kind described comprising a rotatable receptacle having discharge openings in its periphery, a band rotatably mounted upon said receptacle having openings of graduated sizes adapted to be brought into registry with the openings in the receptacle and spring pressed pivoted magnets, the poles of which extend transversely across said band and overlie said openings.

1,111,947. BROODER. LEE L. CARSON, Chelsea, Okla. Filed Apr. 29, 1913. Serial No. 764,399. (Cl. 237—14.)

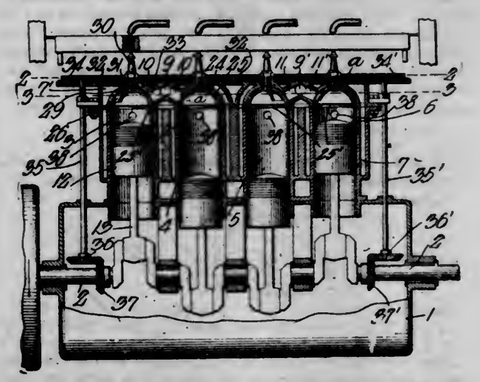


1. In a brooder, a heater comprising a metallic lamp box, a housing therefor spaced therefrom on sides and top, a vertical conduit communicating with the interior of said lamp box and serving to convey the products of combustion, a second conduit surrounding the first, and a pair of branch conduits connected at one end with said second conduit and communicating at their other end at separated points with the space between the top of the lamp box and housing, whereby said second and branch conduits serve to convey air heated by passage over said lamp box.

2. In a brooder, a hover, a heating drum therein, a metallic lamp box, an outer housing entirely surrounding said lamp box and spaced therefrom on all four sides and top to provide air passages, a conduit extending upwardly from the interior of said box to said heating drum for conveying the products of combustion, a second conduit inclosing the first, and extending upwardly from the top of said housing and thence laterally to said hover, said second conduit communicating with the space between said housing and lampbox, means for supplying air through the bottom of said lamp box to support combustion, and means for supplying air to the space between said lamp box and housing, at one side of the latter, whereby incoming air is caused to circulate around and over the said lamp box, before passing through said second conduit to said hover.

3. In a brooder, a heater comprising a lamp box, and a housing therefor, spaced therefrom, a door in said housing, the wall of said lamp box adjacent said door having a window, a conduit carried by said door and registering with the window in said lamp box, whereby the interior of said box may be seen by looking through said conduit and window, said conduit also having a lateral opening communicating with the space between said lamp box and housing, whereby air is supplied to said space.

1,111,948. INTERNAL-COMBUSTION ENGINE. GEORGE GOLDEN CLOUGH, Galveston, Tex. Filed Dec. 14, 1911. Serial No. 665,713. (Cl. 123—80.)

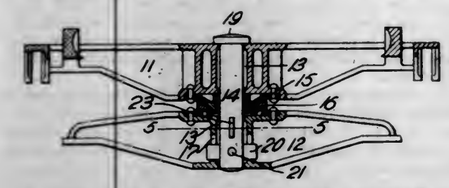


1. An internal combustion engine, including a cylinder the head of which is formed semi-spherical and as a continuation of the wall of the cylinder and is further provided with a concentric bore, said cylinder being provided with intake and exhaust ports in the semi-spherical head portion thereof, a semi-spherical hollow valve disposed for rotation within the semi-spherical head of the cylinder and provided with a single port for registration one at a time with the intake and exhaust ports of the cylinder, the lower edge of the rim of the valve being beveled to reduce the area of its edge and to guide the compressed and exhaust gases toward the center of the valve, said valve being further provided with a tubular shank for rotation within the concentric bore of the cylinder, said shank and valve being capable of a slight sliding movement within the head of the cylinder due to the expansion and contraction of the parts, and said tubular shank constituting a spark plug carrying element.

2. In combination with an internal combustion engine, the head of which is provided with a semi-spherical concavity terminating in a concentric cylindrical bore, said head being provided with an intake and an exhaust port, of a rotary valve, including a semi-spherical hollow member, having a concentrically disposed hollow stem, said stem being disposed for rotation within the concentric bore of the cylinder while the outer surface of the valve member is in contact with the semi-spherical walls of the head, the lower rim of the valve member being reduced and beveled from its peripheral edge inwardly to form a directing means to prevent the introduction of any for-

eign substances between the outer surface of the valve and the adjacent portion of the cylinder head, said valve member being provided with a single port for controlling both the intake and exhaust ports respectively of the cylinder.

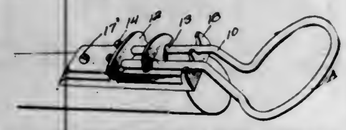
1,111,949. CAR CONSTRUCTION. JAMES M. COLEMAN, Montreal, Quebec, Canada. Filed Aug. 22, 1912. Serial No. 716,521. (Cl. 105—108.)



1. A device of the character described comprising the combination with a body bolster and a truck bolster of a king pin pivotally connecting the bolsters, means carried by the pin automatically engaging the truck bolster to hold the pin against removal and means for alining the pin arranged to bring said automatically engaging mechanism into operative relation with the truck bolster.

2. A device of the character described comprising the combination with a body bolster and a truck bolster having vertically disposed slots and grooves formed therein of a king pin pivotally connecting said bolsters, pawls pivotally mounted on said pin arranged to automatically engage through the slots of the truck bolster and ribs on said pin coöperating with the bolster grooves to hold the pin in such position that the pawls aline with the bolster slots.

1,111,950. MOP. JOHN R. COOLEY and JAKE H. COOLEY, Clarksville, Tenn. Filed Apr. 2, 1913. Serial No. 758,443. (Cl. 15—56.)



The combination of a handle, a plate secured to the handle, a transverse flange on one end of the plate provided with spaced recesses, a second transverse flange on said plate provided with spaced openings alining respectively with the recesses of the first named flange, a holder for a cleaner having projecting arms, said arms seating in the respective recesses in the first named flange and having their free ends turned laterally and engaged through the respective openings in the second named flange, and means for clamping said arms to the plate.

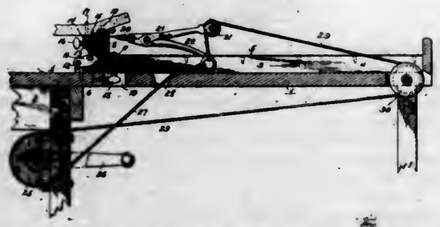
1,111,951. COMBINED CORN CUTTER AND SHOCK MOVER. THEODORE CULLI, Mascoutah, Ill. Filed Apr. 15, 1912, Serial No. 690,822. Renewed Apr. 6, 1914. Serial No. 830,083. (Cl. 56—105.)

1. In a corn harvester, an axle; a platform partially supported by the axle, a beam at the rear end of the platform, said axle being removably clipped to the beam for disposal upon the bottom or top face thereof to regulate the height of the platform from the ground, a wheeled truck at the forward end of the platform and adjustable vertically with respect to the platform, knives carried by the platform, and draft means connected to the platform.

2. A corn harvester and carrier comprising a platform having means thereon for cutting corn stalks, said platform being adapted to receive the corn stalks after they are cut, an axle at the rear end of the platform, wheels on the axle, means whereby the axle may be clamped to the top and bottom surfaces of the platform alternately for adjusting the elevation of said rear end, means whereby the elevation of the front end of the platform may be adjusted, and draft means connected to the platform.

3. A combined corn cutter and shock mover comprising a platform having cutting blades thereon and having a central beam projecting in advance of the forward end thereof, a transverse brace medially of the platform, an axle at the rear end of the platform, wheels on the axle, a truck detachably connected to the forward end of the beam, means on the transverse brace for detachably connecting a suitable tongue when the truck is detached, and means carried by the forward end of the beam for detachably connecting the latter to said tongue.

1,111,952. MEAT-SKINNING MACHINE. CLINTON W. CUNNINGHAM, Baltimore, Md., assignor to Kingan & Company, Limited, Indianapolis, Ind., a Corporation of Great Britain. Filed May 26, 1914. Serial No. 841,115. (Cl. 17—13.)



1. In a machine of the character described, the combination with a table, of a fixed frame thereon, a blade on said fixed frame, a swinging roller frame, a roller mounted in said roller frame, means for adjusting roller frame, and a clamp for pulling material past the blade.

2. In a machine of the character described, the combination with a table, a blade secured to said fixed frame, a swinging roller frame, a roller mounted in said roller frame, means for adjusting the roller frame, a clamp to engage material to be pulled past the blade, and operating means for moving said clamp over the table.

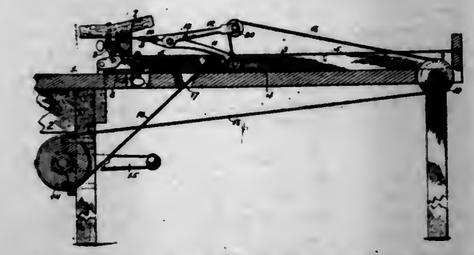
3. In a machine of the character described, the combination with a table, of a fixed frame thereon, a blade secured upon said fixed frame, a horizontal hinged frame, a roller frame hinged to the horizontal hinged frame, a roller mounted in the roller frame below the blade, and means for adjusting the horizontal hinged frame to adjust the roller relatively to the table.

4. In a machine of the character described, the combination with a table, of a fixed frame thereon, a blade on said fixed frame, a horizontal hinged frame projecting through the fixed frame, a roller frame hinged to the horizontal hinged frame, a roller mounted in said roller frame below the blade, and a thumb screw passing through the base of the fixed frame and swiveled to the horizontal hinged frame.

5. In a machine of the character described, the combination with a table, of a fixed frame thereon, a blade on said fixed frame, a swinging roller frame, a roller mounted in said roller frame, means for adjusting said roller frame horizontally and means for adjusting said roller frame vertically.

1,111,953. CLAMP-OPERATING DEVICE FOR MEAT-SKINNING MACHINES. CLINTON W. CUNNINGHAM, Baltimore, Md., assignor to Kingan & Company, Limited, Indianapolis, Ind., a Corporation of Great Britain. Original application filed May 26, 1914, Serial No. 841,115. Divided and this application filed Aug. 6, 1914. Serial No. 855,467. (Cl. 17—13.)

1. The combination with a frame, of a clamp movable thereon, said clamp comprising two pivoted levers carrying jaws, a drum mounted in the frame, a rope wound on said drum and connected with one of the clamp ends, and another rope wound on the drum and movably connected with the other clamp lever and secured to the first-mentioned clamp lever.

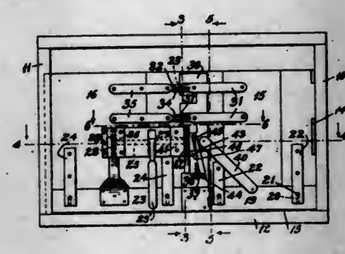


2. The combination with a frame, of a clamp movable thereon and comprising pivoted levers provided with jaws, a drum mounted in the frame, a rope wound on said drum and secured to one of the clamp levers, a pulley mounted in the frame, another rope wound in the reverse direction upon said drum, said last-mentioned rope passing over the pulley in the frame and then movably connected with the other clamp levers and fixed to the first-mentioned clamp lever.

3. The combination with a frame, of a clamp comprising hinged levers and jaws on said levers, a drum, a rope wound on the drum and connected with one of the clamp levers, another rope wound in the opposite direction on said drum and secured to the same clamp lever, a pulley on the other clamp lever over which said last-mentioned rope passes, and a pulley supported by the frame intermediate of the drum and the clamp, over which the last-mentioned rope passes.

4. The combination with a table provided with a guideway and wear plates at respective sides of said guideway, of a clamp comprising pivoted levers provided with elongated jaws movable on said wear plates, a drum, a rope wound on said drum and secured to one of the clamp levers, a pulley at the far end of the guideway, another rope wound in the opposite direction on said drum and passing over said pulley, said last mentioned rope secured to the first-mentioned clamp lever and movably connected with the other clamp lever.

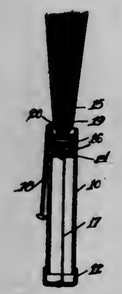
1,111,954. GRAIN-CAR DOOR. ANDREW DAVIDSON, MARTIN JENSEN, and JOHN P. BLOCKER, Devils Lake, N. D. Filed Apr. 28, 1913. Serial No. 764,276. (Cl. 20—28.)



1. The combination with the frame of a grain car doorway having a sill plate and a vertical longitudinal recess in one of the stiles of said frame, of a door hinged to the stile opposite the slotted stile and having its free end engaged in said recess, said door being divided vertically in the center and hinged together, longitudinal plates mounted on the sections of the door at the lower sides thereof and vertically slidable thereon, rack bars carried by the plates, a shaft carried by one of the door sections, pinions on the shaft engaging the said racks, interlocking perforated members carried by the sections of the door, means carried by one of the plates for passage through the said interlocking members, and means carried by the said last named plate for engagement with means carried by one section of the door for holding the plate in elevated position when the door is open.

2. A sectional hinged grain car door, having vertical plates slidable thereon, transverse sill plates carried by the plates and movable vertically on the lower portions of the door sections, one of said plates being slotted, a lug carried by one of the door sections and projecting through the slot, bifurcated apertured members carried by one of the door sections, apertured members carried by the other section for engagement in the bifurcations in the first members, means carried by said slotted plate for engagement through the registered openings of the apertured members, a transverse shaft having pinions thereon for engagement with the racks, an operating lever carried by the shaft, a pivoted spring pressed member carried by the slotted plate and formed with a notch, a projection on the pivoted member, and a projection carried by the other section of the door for engagement with the projection of the pivoted member to disengage the pivoted member from the lug when the door is closed.

1,111,955. BRUSH. WILLIAM B. DENNIS, Hagerstown, Md. Filed Oct. 18, 1913. Serial No. 795,975. (Cl. 15—30.)



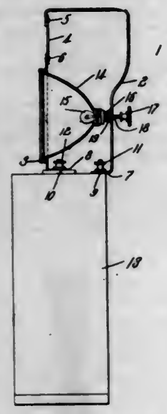
1. A device of the character described comprising a case open at both ends, a closure for one end of said case removably mounted thereon, a brush slidably mounted in said case, means connecting said brush with said cover to limit the outward movement of said brush, a rod pivotally connected with the head of said brush for moving said brush into and out of said case, said rod being bent at a point adjacent its inner end whereby the rod may be folded back against said case to hold the brush in an extended position, and a closure for the opposite end of said case from said first-mentioned closure.

2. A device of the character described comprising a casing, a cleaning element slidably mounted in said casing, means carried by said casing and connected with said cleaning element for limiting the outward movement of the cleaning element, and means for moving said cleaning element into and out of said casing and for holding the same in an extended position.

1,111,956. ELECTRIC LAMP. THEODORE P. DRIVER, Melrose, Mass. Filed May 15, 1914. Serial No. 838,708. (Cl. 240—8.5.)

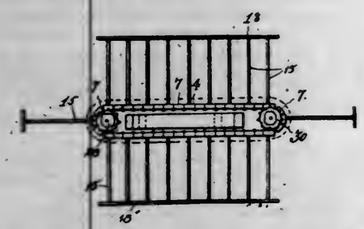
1. An electric lantern adapted to be attached to a battery comprising in combination a supporting member formed of three connecting sections, each of the end sections being composed of current conducting material and the middle section of insulating material, and each of said end sections being adapted to engage at its free extremity a battery terminal, a reflector carried on said supporting member, an electric lamp contained in said reflector, one filament terminal of which lamp is connected with one of said end sections and a contact device on the other of said end sections adapted to make and break contact with the other filament terminal of the lamp.

2. An electric lantern adapted to be attached to a dry cell battery comprising in combination a supporting member formed of three connecting sections, each of the end sections being composed of current conducting material and the middle section of insulating material, and each of said end sections being adapted to engage at its free extremity a battery terminal, a reflector of conducting material containing an electric lamp supported on one of said end sections and in electric contact therewith and with one filament terminal of the lamp, and a thumb screw in engagement with a screw threaded aperture in the other of said end sections and adapted to make and break contact with the other filament terminal of the lamp.



3. An electric lantern adapted to be attached to a dry battery comprising in combination a supporting member formed of three connecting sections, each of the end sections being composed of current conducting material and the middle section of insulating material, and each of said end sections being adapted to engage at its free extremity a battery terminal, a reflector of conducting material carried on one of said end sections and electrically connected therewith, an incandescent lamp supported in said reflector and positioned to effect contact between said reflector and one filament terminal of the lamp, and a contact device supported on the other of said end sections and electrically connected therewith adapted to make and break contact with the other filament terminal of the lamp.

1,111,957. DEVICE FOR ADVERTISING. ALBERT GIEGERICH, Dubuque, Iowa. Filed May 26, 1913. Serial No. 769,857. (Cl. 40—98.)



1. In a device of the character described, panels, an endless carrier consisting of strips of greater length than the panels hinged together, means connected with alternate strips and each panel for removably attaching the panels to the strips, means for intermittently advancing the panels, and means engaging one of the panels for holding part of the panels in a predetermined position for a predetermined length of time.

2. In a device of the character described, an endless carrier consisting of strips hinged to each other, panels removably attached to alternate strips of the carrier, facings of the width of two strips of the carrier on the outer longitudinal edge of each panel, means for intermittently advancing the carrier and means for stopping the carrier and bringing the facings on the edges of the panels on one side of the carrier in contact with each other.

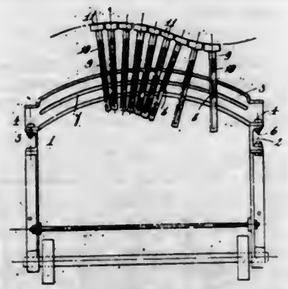
3. In a device of the character described, an endless carrier composed of strips provided with recesses hinged together, panels provided with facings on their outer longitudinal edges, means for removably attaching the panels to alternate strips of the carrier, means for imparting motion to the carrier consisting of a plurality of shafts set vertically within the carrier, wheels on the shafts and provided with means adapted to engage the recesses in the strips of the carrier, means connected with the power and one of the shafts to cause the carrier to travel intermittently around the shafts, and means for stopping and holding the panels in a given position at predetermined times.

4. In a device of the character described, an endless carrier, panels secured to the carrier, facings on the outer edges of said panels, means for imparting an intermittent motion to the carrier, and means for holding said facings on the panels on one side of the carrier in contact with each other at and for a predetermined time.

5. In a device of the character described, an endless traveling carrier composed of strips set vertically and hinged together, and said strips provided with recesses, two shafts set vertically, a wheel on each shaft and the wheels provided with dowels adapted to engage the recesses in the strips and rotate the carrier around said shafts, panels removably attached to alternate strips of the carrier, and said panels having abutting extremities certain of which are brought into contact with each other for display purposes when two panels are diametrically opposite of each other, and means for holding said certain of the panels in contact with each other for a predetermined length of time.

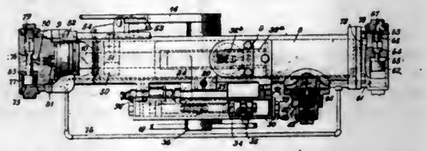
[Claims 6 to 13 not printed in the Gazette.]

1,111,958. MOLD FOR SHAPING GLASS PLATES. JULES GOFFIN and VALMY DE LONGUEVILLE, Molenbeek, St. Jean, Belgium. Filed Feb. 18, 1911. Serial No. 609,364. (Cl. 49—67.)



A mold for the purpose specified, embodying therein a carriage having longitudinal side bars spaced apart, a plurality of curved transverse bars spaced from each other and carried by the upper edges of said side bars, said transverse bars having longitudinal curved slots therein, means whereby said transverse bars may be removably secured to the side bars with either the concavity or the convexity of the curve uppermost, a plurality of adjacently arranged molding members carried by each of said transverse bars each of said molding members being individually movable and adjustable in relation to its companion members and in relation to the side bars and transverse bars, said molding members having enlarged heads and a bolt carried by each molding member and entering the slot in one of the transverse bars whereby said molding member may be secured in adjusted position.

1,111,959. DOOR-OPERATING APPARATUS. ALBERT GOTTSCHALK, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Feb. 15, 1912. Serial No. 677,766. (Cl. 39—94.)



1. In a door operating apparatus, the combination with a fluid pressure motor, and connecting means for actuating the door, of fluid pressure actuated means operating automatically upon the arrest of the door during its closing movement, for admitting fluid to the opposite end of the motor to cause a reverse movement of the door.

2. In a door operating appartus, the combination with a fluid pressure motor and connecting means for actuating the door, of a valve for controlling the supply of fluid to the motor, and additional valve means operating automatically upon the arrest of the door during its closing movement, for supplying fluid to the opposite end of the motor to cause a reverse movement of the door.

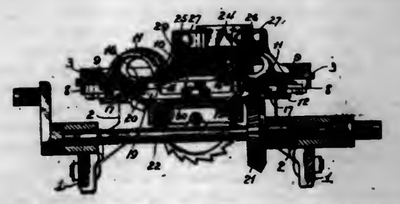
3. In a door operating apparatus, the combination with a fluid pressure motor and connecting means for actuating the door, of a manually operated valve device for controlling the supply of fluid to the motor for opening and closing the door, and additional valve means operating automatically upon the arrest of the door during its closing movement, for cutting off the supply of fluid to the closing side of said motor and supplying fluid to the opposite side thereof to cause a reverse movement of the door.

4. In a door operating apparatus, the combination with a fluid pressure motor and connecting means for actuating the door, of a valve device operated by the pressure in said motor, when the door is arrested during its closing movement, to supply fluid to the opposite end of the motor to reverse the movement thereof.

5. In a door operating apparatus, the combination with a fluid pressure motor and connecting means for actuating the door, of a valve device operated by the pressure in said motor, when the door is arrested during its closing movement, to cut off the supply of fluid to the closing end of the motor and open a supply of fluid to the opposite end to cause a reverse movement of the motor.

[Claims 6 to 11 not printed in the Gazette.]

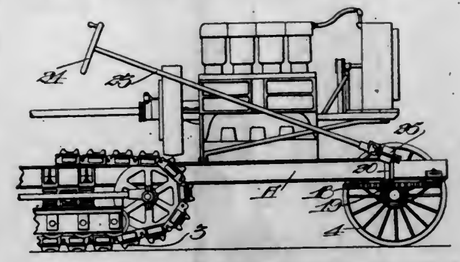
1,111,960. SEED-FEEDING MECHANISM FOR PLANTERS. EDWARD M. HEYLMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Apr. 28, 1914. Serial No. 834,963. (Cl. 111—6.)



1. In feed mechanism, the combination with an annular frame, a feed ring having an outlet opening and a feed disk having peripheral teeth, of a brush cut-off supported by the annular frame over the outlet of the feed ring and over the path of the feed disk teeth, of a guard at one side of the brush, said guard having an inner face tangential to the feed disk and having its lower edge inclined upwardly from the wall of the annular frame.

2. In a feed mechanism, the combination of an annular frame having an upward extension, a feed ring connected with said frame and having an outlet opening below said upward extension, a toothed feed disk over said feed ring, a brush cut-off alongside the inner face of said extension, and lugs secured to the said extension and engaging the head of said brush cut-off.

1,111,961. STEERING MECHANISM FOR TRACTION-ENGINES, &c. BENJAMIN HOLT, Stockton, Cal. Filed June 26, 1911. Serial No. 635,309. (Cl. 21—202.)



1. In a steering mechanism for vehicles, the combination with the vehicle frame embodying a horizontal guide having a circular vertical wall with an inwardly projecting circular track flange at the top having its track face directed downwardly, a turn-table ring located within the circular guide below the track flange, anti-friction rollers interposed between the said ring and flange and between the said ring and lower portion of the guide, a vertical steering wheel, located within the ring, bearings in which the steering wheel is journaled located below and supporting the ring and guide, a segmental rack rigid with the ring and located below the guide, a pinion journaled in the frame and meshing with the rack and a wheel for rotating the pinion.

2. In a vehicle steering mechanism, the combination with the vehicle frame embodying a horizontal guide having a circular vertical wall with an inwardly projecting circular track flange at the top having its track face directed downwardly, a turn-table ring located within the circular guide below the track flange, anti-friction rollers interposed between the ring and track face of the flange and between the guide and outer face of the ring near the bottom thereof, two parallel chords rigid with and extending below the turntable ring, bearing boxes movable vertically in said chords, a vertical steering wheel journaled in said boxes, a segmental rack rigid with the turntable ring and located below the same and above the axis of the steering wheel, a pinion journaled on a fixed axis and meshing with the rack, and means for turning the pinion to steer the vehicle.

3. In a vehicle steering mechanism, the combination with the vehicle frame embodying a horizontal guide having a circular vertical wall with an inwardly projecting annular track flange at the top having its track face directed downwardly, a turntable ring located within the circular guide below the track flange, antifriction rollers interposed between the ring and track face of the flange and between the guide and outer face of the ring near the bottom thereof, oppositely disposed clips rigid with the turntable ring and having their upper ends extended over the track flange, a steering wheel journaled on a horizontal axis and located within the turntable ring, and means for turning said turntable ring and wheel horizontally with relation to the guide and vehicle frame, substantially as described.

1,111,962. SANITARY DRINKING-CUP AND DISPENSER. REBECCA E. HOOPER, Half Moon Bay, Cal. Filed Aug. 6, 1913. Serial No. 783,322. (Cl. 211—8.)

A container for drinking cups which latter are folded so as to have a relatively contracted portion which provides a finger grip, consisting of a casing having a slot in its front side which slot alines with the casing bottom and is of a length greater than the greatest length of the

folded cup, said casing having a forwardly curved lower end so that the bottom thereof is arranged at an incline, the bottom of the casing having a cutaway part located at substantially the center of the slot and communicating therewith, said cutaway part being of a size slightly larger than that of the contracted part of the cup where-

by said contracted part of the cup is permitted to pass through the cutaway part and to project below the casing bottom and in substantially a vertical plane, the cutaway part being of considerably less length than the greatest length of the folded cup whereby to necessitate removal of the body of the folded cup through the slot and by a single movement in a straight line.

1,111,963. SPARK-GAP. GOTTLIEB F. KNORR, Des Moines, Iowa. Filed Oct. 6, 1913. Serial No. 793,956. (Cl. 175—183.)

1. A spark gap, comprising a cylinder made of insulating material and having a transverse opening extending through it and a longitudinal opening extending through it, said cylinder being formed with an annular flange at one end, a hollow cylindrical transparent body mounted on said cylinder resting against said flange, a cap on said transparent cylinder and said first cylinder on the ends thereof opposite said flange, a screw threaded rod extending into said longitudinal opening to said transverse opening through said cap, said rod having a flange formed outside of said cap, and means formed on its outer end for securing it to a spark plug, and a screw threaded rod received in the other end of said longitudinal opening.

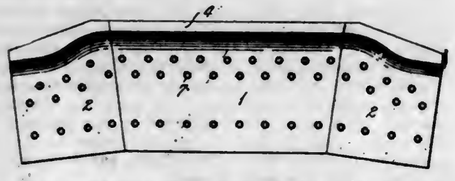
2. In a device of the class described, a body of insulating material having a transverse opening extended through it, screw threaded rods mounted longitudinally in the ends of said body and extending into said body to said opening, said body being formed with an annular flange at one end, a transparent cylinder received on said body and resting against said flange, and a cap on said body and on said cylinder on the end of the body opposite the flange, one of said screw threaded rods being provided with a flange for holding said cap in position for securing said transparent cylinder on said body.

1,111,964. GUY-ANCHOR. FRANK P. KOBERT, Fairhaven, Conn., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 30, 1912. Serial No. 723,029. (Cl. 189—92.)

In an anchor, an anchor bar provided with a head, consisting of a plurality of fluke members, said fluke members being stamped from sheet metal and being substantially triangular in form and being provided at one corner with semi-circular heads having central apertures through which the anchor bar is passed, and the body portions

of said fluke members being provided adjacent to their opposite side edges with radial ribs on the top surface thereof and corresponding radial grooves on the bottom surface thereof.

1,111,965. UPHOLSTERY-FORMER. JACOB KRONHEIM, Detroit, Mich. Filed Mar. 15, 1913. Serial No. 754,536. (Cl. 155—43.)



1. An upholstery former for the back and arm portions of a seat, comprising a mold adapted to have upholstery shaped thereon, said mold being provided with end portions adapted to be turned out of the plane of the body portion thereof and means confronting the turnable end portions of the mold and movable relatively thereto and adapted to press the material forming the upholstery against the mold and hold the same against distortion after the end portions of the mold are turned.

2. An upholstery former for the back and arm portions of a seat comprising a mold having end portions adapted to be turned laterally out of the plane of the body portion of the mold, means for holding the material forming the upholstery upon the mold, and means confronting the turnable end portions of the mold and movable relatively thereto and adapted to clamp the end portions of the upholstery against the end portions of the mold after the same are turned out of the plane of the body portion.

3. An upholstery former for the back and arm portions of a seat, comprising a mold formed of a plurality of hinge connected parts and means forming part of said former and movable relatively to the hinge connected parts for holding the material forming an upholstery strip upon the mold when the parts thereof are turned relatively.

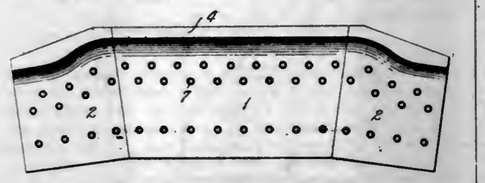
4. An upholstery former for the back and arm portions of a seat, comprising a mold having end portions adapted to be turned out of the plane of the body portion thereof, a supporting table for the mold provided with stops against which the end portions of the mold are turned, and means confronting the turned end portions of the mold and movable relatively thereto for holding upholstery in contact with the mold and its end portions.

5. An upholstery former for the back and arm portions of a seat, comprising a mold formed of a plurality of hinge connected sections each formed with an edge portion adapted to form a roll along one edge of an upholstery strip, a plurality of edge strips formed to conform

to the shape of the rolled edge of the upholstery strip to hold said strip against distortion when the end portions of the mold are turned out of the plane of the intermediate portion thereof, and means for engaging and holding said edge strips.

[Claim 6 not printed in the Gazette.]

1,111,966. METHOD OF UPHOLSTERY. JACOB KRONHEIM, Flint, Mich. Original application filed Mar. 15, 1913, Serial No. 754,536. Divided and this application filed Sept. 17, 1913. Serial No. 790,219. (Cl. 155—43.)

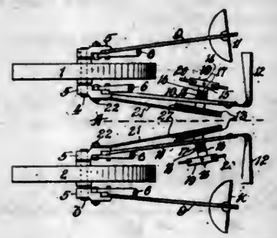


1. The method of forming upholstery which consists in placing material in a mold and pressing the same therein to form tufts, then holding the central portion of the material against distortion and bending the ends, and then securing a strip to the formed material.

2. The method of forming upholstery which consists in first placing material to form a strip of upholstery within a mold in an extended flat position and pressing it therein to form tufts and a rounded edge portion, folding and securing the edges of the molded strip, and then holding the formed edge portion against distortion and bending and shaping the molded upholstery strip to conform to the curve of the back and arms of a seat.

3. The method of forming upholstery which consists in first placing material to form an upholstery strip within a mold in an extended flat position and pressing it therein to form a rolled-up edge portion and tufts, then holding the rolled edge portion against distortion and bending the ends of the molded strip to conform to the curving of the back and arm portions of a seat, then removing the molded upholstery strip from the mold and placing it within an open supporting frame to hold it in formed position and re-arranging the material while the upholstery strip is so held.

1,111,967. CULTIVATOR. FREDERICK F. MEEKER, Westport, Conn. Filed Dec. 4, 1913. Serial No. 804,586. (Cl. 97—37.)

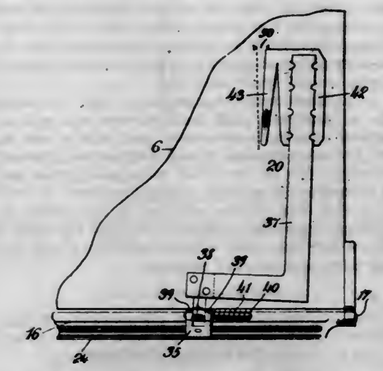


1. An improvement in cultivators comprising a disk cultivator wheel, a rotatable support therefor, said wheel arranged at an angle with respect to the line of travel of the cultivator, means for rotating the wheel and a guard adjacent to the wheel for the purpose described.

2. An improvement in cultivators comprising a disk cultivator wheel, a shaft on which the wheel is mounted, a support in which the shaft is journaled, means for effecting both a horizontal and vertical adjustment of said support, means for rotating the wheel, a soil leveling guard adjacent to the wheel, and means for effecting a lateral and vertical adjustment of the guard.

3. An improvement in cultivators comprising a disk cultivator wheel, a shaft on which the wheel is mounted, an adjustable support in which the shaft is journaled, a driver on said shaft adapted to contact with the ground when the cultivator is in motion to rotate the disk wheel, and an adjustable guard adjacent to the wheel for the purpose set forth.

1,111,968. SHEET-REGISTERING MECHANISM. LEWIS E. MORRISON, Newark, N. J., assignor to himself and Matthias Plum, Newark, N. J. Filed Dec. 23, 1910. Serial No. 598,911. (Cl. 101—22.)

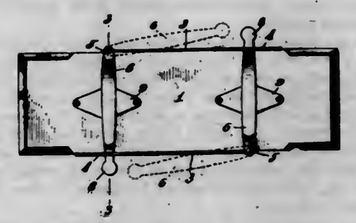


1. The combination of a movable platen, a gage support pivoted parallel to the same, a gage pivoted at an angle to the said support pivot and means for oscillating said support to cause the said gage stop to move in an arc in a plane parallel to the surface of the platen.

2. The combination of a movable platen, a gripper bar pivoted parallel to the same, a gage block supported on said gripper bar, a gage pivoted on said gage block, the axis of the gage pivot being inclined with respect to the axis of the gripper bar pivot, whereby when said platen is operated the said gage moves transversely of the said platen in a plane parallel to the surface thereof.

3. The combination of a movable platen, a gripper bar pivoted parallel to the same, a gage block adjustably secured to said gripper bar, a gage pivoted on said gage block with the axis of its pivot inclined to the axis of the gripper bar, means for operating said platen to cause the said gage to move transversely of the platen and means for keeping the gage in contact with the surface of the platen.

1,111,969. GARMENT-PRESS. BERT R. PEOPLES, Vallejo, Cal. Filed Mar. 4, 1912. Serial No. 681,456. (Cl. 100—57.)



1. A garment press comprising a relatively stationary and a movable board, and a pair of clamping members secured to opposite sides of the stationary board, each member comprising a strip provided at one end with an arm and at its other end with a pivot member, and a pressure member pivotally mounted on the pivot member of one strip and having its free end adapted to engage with the arm of the other strip.

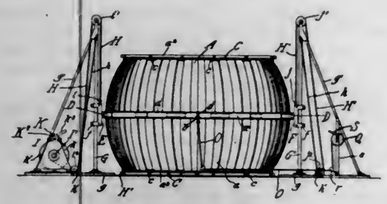
2. A garment press comprising a pair of boards, and a pair of similarly formed clamping members arranged on

opposite sides of said boards, each of said members comprising a strip secured to one of said boards and formed at one end with an upstanding arm having a cam hook and at its other end with a pivot member, a spring pivotally mounted upon each pivot member and adapted to bear against the other of said boards, the free end of the spring carried by each strip being engageable with the hook on the other strip.

3. A garment press comprising a pair of separable boards, a dampened cloth held between the said boards, longitudinal members secured to each side of one of said boards, pivots on one end of said longitudinal members and overhanging lugs on the other ends, said pivots and lugs being diametrically opposed, clamps attached to said pivots arranged to engage the other board and having their free ends secured under said lugs.

4. A garment press comprising a pair of separable boards, a dampened cloth held between the said boards, longitudinal members secured to each side of one of said boards, pivots on one end of said longitudinal members and overhanging lugs on the other ends, said pivots and lugs being diametrically opposed, inclined surfaces on the under sides of said lugs, clamps attached to the pivots on said longitudinal members arranged to engage the other board and have their free ends secured under said lugs and contacting with said inclined surfaces.

1,111,970. APPARATUS FOR GYMNASTIC PERFORMANCES. ARTHUR ROEHR, New York, N. Y. Filed Sept. 12, 1911. Serial No. 648,835. (Cl. 104—14.)



1. In an apparatus of the class described, the combination of a plurality of fixed posts, carriages slidably fitted on said posts, a cage pivoted to said carriages and adapted to be supported in a raised position thereby, said cage being free to turn on a horizontal axis afforded by said pivotal connections, hoisting cables connected to said carriages, and cage turning mechanism separate from the hoisting cables.

2. In an apparatus of the class described, the combination of a plurality of fixed posts, carriages slidably fitted on said posts, a cage pivoted to said carriages, separate hoisting cables connected to said carriages, a winding drum for said hoisting cables, and turning cables connected to the pivoted cage, said turning cables being separate from the hoisting cables.

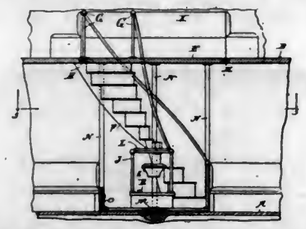
3. In an apparatus of the class described, the combination of a plurality of fixed posts, carriages slidably fitted on said posts, a cage pivoted to said carriages, hoisting cables connected to the carriages for raising and lowering the carriages and the cage, a winding drum whereon the cables are wound, and other cables connected to said cage intermediate the pivotal connections between the hoisting cables and the carriages, said cables being separate from the hoisting cables and operating to steady the cage during the hoisting thereof.

4. In an apparatus of the class described, the combination of a pivoted cage, hoisting mechanism therefor, a windlass separate from the hoisting mechanism, and cables connected with the cage and operated by the windlass for steadying the cage during the hoisting operation, said cables and windlass being adapted to impart rotary movement to said cage.

5. In an apparatus of the class described, the combination of a pivoted cage, the inner surface of which constitutes a track for a bicycle, means for imparting rotary movement to the cage, and means for balancing said cage in opposition to the centrifugal force of a bicycle rider performing within the cage, said balancing means being independent of the bicycle adapted to traverse the cage.

[Claims 6 to 11 not printed in the Gazette.]

1,111,971. DOUBLE-DECK CAR. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Apr. 4, 1912. Serial No. 688,385. (Cl. 105—199.)



1. In a double deck car, a doorway for the ingress or egress of passengers to and from the lower deck of the car, a door therefor, a stairway leading from the lower to the upper deck of the car, and means located adjacent said stairway for controlling the door movements.

2. In a double deck car, a center doorway in the side of the lower portion of the car, a stairway located inside the car opposite said doorway and leading to the upper deck, a door for the center side doorway, and means located adjacent the stairway for controlling said door.

3. In a double deck car, a doorway at each side of the lower portion of the car, a stairway leading from the lower to the upper deck of the car and when in position for use located inside the car opposite one of said doorways, and means for shifting said stairway into position opposite the other doorway, whereby either of said doorways may be used.

4. In a double deck car, a doorway for the ingress or egress of passengers to and from the lower deck of the car, a door for the doorway, a stairway leading from the lower to the upper deck of the car, the lower deck landing of the stairway being positioned opposite the doorway, and means located adjacent the lower deck landing of the stairway for controlling the movements of said door.

5. In a double deck car having a doorway, a stairway located within the car, opposite the doorway, a conductor's stand carried by the stairway framework adjacent the lower deck landing thereof, a door for said doorway, and means located adjacent the conductor's stand for controlling the operation of the door.

[Claims 6 to 19 not printed in the Gazette.]

1,111,972. REINFORCED CONCRETE CONSTRUCTION. HENRI RUSCH, St. Louis, Mo. Filed Aug. 8, 1913. Serial No. 783,844. (Cl. 72—66.)

1. The combination with a concrete beam, of a metal plate bonded to the exterior lower side of said beam by the hardening action of the concrete, means on said plate for engaging the forms which shape the side surfaces of said beam during the formation of the beam, a plurality of obliquely disposed arms embedded in the concrete and having their lower ends rigidly united with said plate, and a rod separate from said plate embedded in the concrete above said plate and separated from said plate by a layer of concrete, substantially as described.

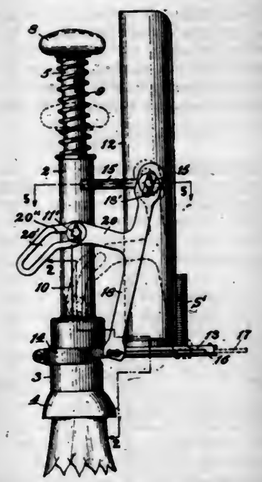
2. The combination with a concrete beam, of a metal plate bonded to the exterior lower side of said beam by the hardening action of the concrete, means on said plate for engaging the forms which shape the side surfaces of said beam during the formation of said beam, a plurality of arms between the side edges of said plate embedded in the concrete and rigidly united with said plate, and a rod separate from said plate embedded in the concrete between said arms above said plate and separated from said plate by a layer of concrete, substantially as described.

3. The combination with a series of concrete beams monolithically united with each other, metal plates of equal width with the lower sides of said beams bonded against the exterior lower sides of said beams by the hardening action of the concrete, a row of arms rigid with said plates near each side edge thereof and embedded in the concrete, projections rigid with said plates, and metallic lathing supported by said projections between said plates, substantially as described.

4. The combination with a series of monolothically united concrete beams, a metallic plate of equal width with the under side of each beam bonded against the exterior under side of said beam by the hardening action of the concrete, parallel rows of arms rigid with said plate and embedded in said concrete, rods embedded in said concrete between said rows of arms and separated from said plate by a part of the concrete, and projections rigid with said plates for the purpose set forth, substantially as described.

5. The combination with a series of monolithically united concrete beams, a metal plate of equal width with the lower side of each beam bonded against the exterior lower side of each beam by the hardening action of the concrete, rows of arms rigid with each plate and embedded in the concrete, rods embedded in the concrete parallel with each plate and separated from each plate by a layer of concrete, projections integral with said plates, metallic lathing between said plates engaged and supported by said projections, and plaster supported by said lathing, substantially as described.

1,111,973. DEVICE FOR APPLYING BOTTLE-STOPPERS. MILO T. SCHOLL and ROBERT A. GILLESPIE, Pittsburgh, Pa. Filed Apr. 12, 1912. Serial No. 690,422. (Cl. 226—5.)

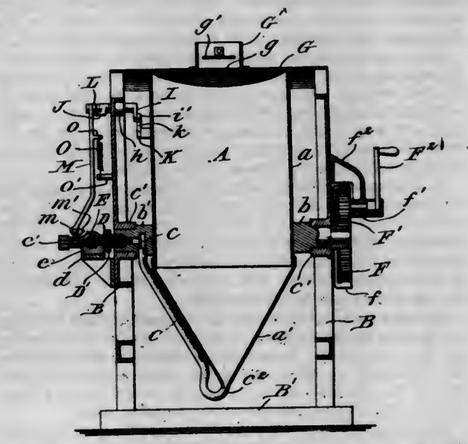


1. The combination of a support, a reciprocating slide for projecting stoppers into position to be seated, levers of the third order movably fulcrumed at their upper ends to the support and at their lower ends pivotally connected directly to the slide, vertically movable stopper-seating means, and operative connections between the seating means and the levers for applying pressure to said levers in directions corresponding to the axis of said means for oscillating the levers and thereby reciprocating the slide.

2. The combination of a support, a reciprocating slide for projecting stoppers into position to be seated, levers of the third order movably fulcrumed at their upper ends to the support and at their lower ends pivotally connected directly to the slide, vertically movable stopper-seating means, slotted arms projecting from the levers, and a cross-head carried by the stopper-seating means and entered in the arm slots for applying pressure to said arms in a direction corresponding to the axis of said means for oscillating the levers and thereby reciprocating the slide when the seating means is actuated.

3. The combination of an open-bottom chamber, stopper-seating means movable vertically therein, a stopper-inserting slide movable at right angles to the direction of movement of the stopper-seating means, a lever support, levers of the third order fulcrumed at their upper ends to the support and slotted to move vertically thereon with the lower ends of the levers pivotally connected to the slide, and means operatively connecting the stopper-seating means and said levers, said means applying pressure to the levers in a direction corresponding to the axis of said stopper seating means.

1,111,974. CONCRETE-MIXER. KARL R. SCHUSTER, New York, N. Y. Filed Apr. 25, 1914. Serial No. 834,335. (Cl. 83—73.)



1. A mixer embodying a pivoted container movable to a charging position and to a discharging position, and valve-controlled means for supplying an aeriform mixing agent to the lower part of said container.

2. A mixer embodying a tiltable container and valve-controlled means unitary therewith for supplying air, steam or gas to the interior of said container and at the bottom portion thereof, said container being movable to a charging position and to a discharging position without disconnecting said supply means.

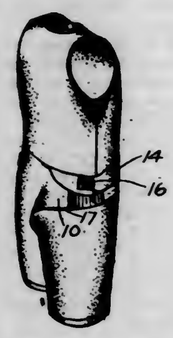
3. A mixer embodying a tiltable container, means for supplying an agitating agent under pressure to said container, and a cut off controllable by the tilting movement of the container for opening and closing said supply means.

4. A mixer embodying a pivoted container open at the upper end, means for supplying an agitating agent under pressure to said container, and a closure for said open end of the container, said container being movable relative to said closure.

5. A mixer embodying a pivoted container open at the upper end, means for supplying an agitating agent to said container, and a closure for said open end of the container, said closure being provided with a normally open vent, whereby the closure prevents the materials from being blown out of the container by the action of said agitating agent and the latter is free to escape through said vent, said container being movable relative to the closure for assuming charging or discharging positions.

[Claims 6 to 19 not printed in the Gazette.]

1,111,975. GARMENT. FRANK L. SMITH, Dayton, Ohio. Filed Oct. 15, 1913. Serial No. 795,179. (Cl. 2—144.)



1. A garment having a pair of overlapping flaps covering an opening in the garment, detachable means for securing the free ends of the flaps to the garment to hold them in overlapping position, and retrieving straps attached to said free ends and to the garment, the latter attachments being so located that the retrieving straps are covered by the flaps when they are secured in their overlapping position.

2. A garment having a pair of overlapping flaps covering an opening in the garment, detachable means for securing the free ends of the flaps to the garment to hold them in overlapping position, retrieving straps attached to said free ends and to the garment, and means whereby the detachable means for securing the underneath flap to the garment is located on the outside of the garment.

3. A garment having a pair of overlapping flaps covering an opening in the garment, extensions attached to the free ends of the flaps, a slit in the garment through which the extension of the underneath flap passes, detachable means for securing the extensions to the garment to hold the flaps in overlapping position, and retrieving straps attached to the extensions and to the garment.

4. A garment having a pair of overlapping flaps covering an opening in the garment, detachable means for securing the free ends of the flaps to the garment to hold the flaps in overlapping position, and means operable from the outside of the garment for retrieving the inner flap and placing it in its proper position under the outer flap.

5. A garment having a pair of overlapping flaps covering an opening in the garment, detachable means for securing the free ends of the flaps to the garment to hold them in overlapping position, and retrieving straps secured to said free ends and to the garment.

[Claims 6 to 8 not printed in the Gazette.]

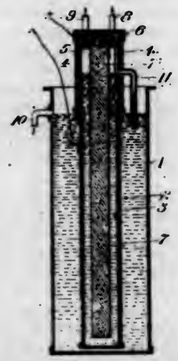
1,111,976. PROCESS OF TREATING COMPLEX REFRACTORY ORES OF SILVER AND GOLD. COURT C. TITUS, Helena, Mont., assignor to Montana Metallurgical Company, Helena, Mont., a Corporation of Montana. Filed Dec. 14, 1910. Serial No. 597,222. (Cl. 75—07.)

1. The process of treating ores containing iron, another metal, and a metalloid, which consists in agitating and heating the ore and reacting on it at increasing temperatures not to exceed 250° C. with a gaseous mixture containing chlorin and oxygen, thereby oxidizing the iron and chlorinating the other metal and the metalloid, and vaporizing and separating the metalloid chlorid from the oxidized iron and chlorinated metal.

2. The process of treating ores containing iron, another metal, and a metalloid, which consists in agitating the ore and finally heating it to a temperature not exceeding 250° C. insufficient to cause fusion and agglomeration, while subjecting it to an atmosphere containing chlorin and oxygen, thereby oxidizing the iron and chlorinating the other metal and the metalloid, and vaporizing and separating the metalloid chlorid from the oxidized iron and chlorinated metal.

3. The process of treating ores containing iron, another metal, and a metalloid, which consists in agitating the ore and finally heating it to a temperature of about 250° C., while subjecting it to an atmosphere containing chlorin and oxygen, thereby oxidizing the iron and chlorinating the other metal and the metalloid, and vaporizing and separating the metalloid chlorid from the oxidized iron and chlorinated metal.

1,111,977. ELECTROLYTIC CELL. COURT C. TITUS, Helena, Mont., assignor to Montana Metallurgical Company, Helena, Mont., a Corporation of Montana. Filed Dec. 14, 1910. Serial No. 597,223. (Cl. 204—58.)

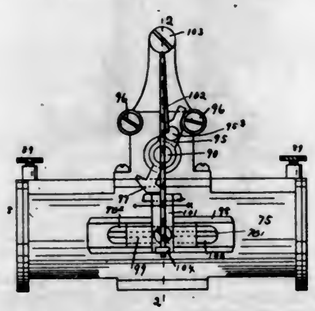


1. In an electrolytic cell having two compartments separated by a diaphragm and foraminous cathode, an overflow passage extending from the upper end of the anode compartment into the other compartment.

2. In an electrolytic cell having two compartments separated by a diaphragm and foraminous cathode, an overflow pipe extending from the upper end of the anode compartment downward into the other compartment.

3. In an electrolytic cell having two compartments separated by a diaphragm and foraminous cathode, a gastight chamber at the upper end of the anode compartment, means for maintaining a partial vacuum therein, and an overflow pipe extending from said chamber downward into the outer compartment and sealed by the liquid therein.

1,111,978. MILKING-MACHINE. WILLIAM J. UEBLER, West Schuyler, N. Y. Filed Jan. 22, 1909. Serial No. 473,697. (Cl. 31—100.)



1. A teat cup having a rigid shell and a collapsible lining having encircling spaced ribs adapted to engage with the shell to provide a series of inflatable chambers, substantially as set forth.

2. A teat cup having a tubular rigid shell, an inflatable lining within the shell having spaced external ribs detachably engaging with the shell and providing a series

to some extent of independent inflatable chambers between the shell and lining, substantially as set forth.

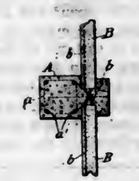
3. The combination in a teat cup of a tubular shell of rigid material, a flexible lining within the shell having a set of external ribs fitting the shell and means for inflating and deflating the spaces between the lining and shell, substantially as set forth.

4. The combination in a teat cup of a tubular rigid shell, an elastic lining having encircling elastic ribs normally fitting against the walls of the shell and dividing the space between the lining and the shell normally into a series of chambers, and means for inflating the chambers successively and deflating them simultaneously, substantially as set forth.

5. The combination in a teat cup of a rigid tubular casing open at each end, an elastic lining having external elastic ribs normally fitting the casing and subdividing the space between the casing and lining normally into a series of inflatable chambers, the teat cup lining substantially fitting and closing the lower end of the casing and means for inflating and deflating the spaces between the casing and lining, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

1,111,979. REINFORCED BULKHEAD OR RETAINING-WALL. MAXWELL M. UPSON, Englewood, N. J., and HORACE P. HAMLIN, New York, N. Y., assignors to Raymond Concrete Pile Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 20, 1910. Serial No. 598,426. (Cl. 61—30.)



1. A bulk-head consisting of a series of reinforced concrete piles, each driven into the solid earth and provided with an abutment situated at substantially the earth's level, and a series of reinforced concrete slabs extending from pile to pile, the slabs and piles being provided with one or more series of projecting reinforcements, and means for integrally uniting said piles and said slabs through said projecting reinforcements.

2. A bulk-head or retaining wall comprising a series of reinforced concrete piles placed at intervals, a series of reinforced concrete slabs each extending from pile to pile and partially overlapping said piles, reinforcements extending from said slabs rearwardly and a concrete structure integrally uniting said slabs, said piles and said projecting reinforcements.

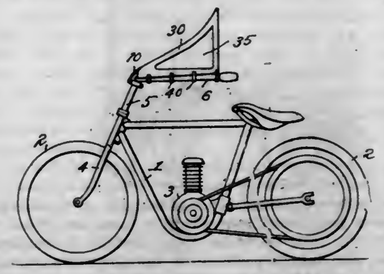
3. A bulk-head or retaining wall comprising a series of piles set at intervals, a slab formation extending from pile to pile, each slab being in arched form, metal reinforcements embedded in said piles and projecting rearwardly of said slabs and means for integrally uniting said reinforcements to said slabs.

4. A bulk-head or retaining wall comprising a series of piles set at intervals, a slab formation extending from pile to pile, each slab being in arched form, and comprising a series of interlocking units, metal reinforcements embedded in said piles and projecting rearwardly of said slabs and means for integrally uniting said reinforcements to said slabs.

5. A bulk-head or retaining wall, comprising a series of piles of cantaliver construction and arrangement set at intervals, a slab formation extending from pile to pile, each slab being in arched form, metal reinforcements embedded in said piles and projecting rearwardly of said slabs and means for integrally uniting said reinforcements to said slabs.

[Claims 6 to 11 not printed in the Gazette.]

1,111,980. WIND-SHIELD. EDMUND VAN BUREN, New York, N. Y. Filed Jan. 23, 1913. Serial No. 743,772. (Cl. 208—150.)



1. A wind shield for motorcycles, comprising a supporting frame carried by the steering member and projecting above the same, and flexible deflecting members carried by said supporting frame, said deflecting members being fastened to the steering member.

2. A wind shield for motorcycles, comprising a flexible supporting frame, means for attaching one end of said frame to the steering member, transparent deflecting members supported on said frame and means for adjustably attaching said deflecting members to the steering member.

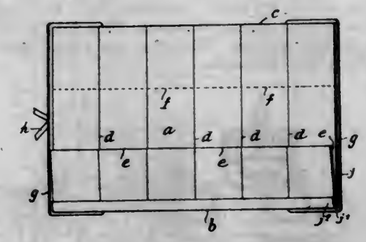
3. A wind shield for motorcycles, comprising a supporting frame attached to the steering head, flexible deflecting members carried by said frame and means on said deflecting members for attaching them to the steering member.

4. In a motorcycle, in combination with the steering member, a shield supporting frame attached to said steering member above the same, deflecting curtains carried by said supporting frame and means for fastening said curtains to the rearwardly projecting portions of the steering member.

5. A wind shield for motorcycles, comprising a supporting frame having its forward end attached to the steering member and extending upwardly and rearwardly in a curved manner over said steering member, and a transparent deflecting member carried by said frame in a manner to permit the lower edge of said deflecting member to be fastened to said steering member.

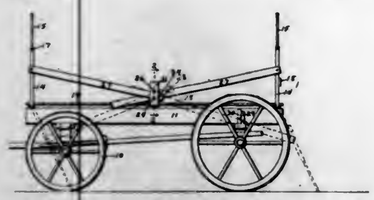
[Claim 6 not printed in the Gazette.]

1,111,981. FILE FOR PAPERS AND DOCUMENTS. JOHN WALKER, Jr., London, England. Filed Dec. 3, 1910. Serial No. 595,375. (Cl. 129—16.)



A file comprising a sheet of material folded longitudinally and having the material on each side of the fold of unequal width, and a sheet of material of substantially the width of the shorter folded part of said first sheet, said second sheet being folded longitudinally along one edge to form a narrow attaching tab, said fold in said second piece of material having the fold in said first piece fitting therein and being attached to said first piece by its attaching tab, said sheets of material being folded transversely, alternately in opposite directions, to form a plurality of pockets, said file being adapted to be spread and laid flat upon a table.

1,111,982. HAY-RACK. GEORGE S. WASHBURN, Belle Plaine, Iowa. Filed Mar. 24, 1913. Serial No. 756,604. (Cl. 21—74.)

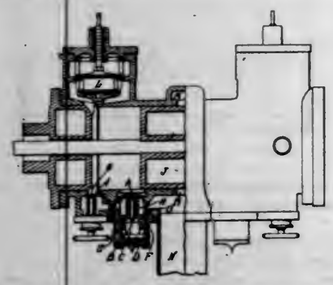


1. A rack comprising a frame adapted to be placed on a running gear, standards pivotally mounted at the corners of the rack to swing from upright to suspended position, side members pivoted to the respective standards at points spaced from their pivotal points, brackets at the sides of said rack near the middle thereof, slidingly receiving said side members, means for locking said side members to said brackets.

2. A rack comprising a frame adapted to be placed on a running gear, standards pivotally mounted at the corners of the rack to swing from upright to position extending downwardly for supporting the rack, a side member pivoted to each of said standards at points spaced from the pivotal points thereof and extending to points at the sides of the rack near the transverse center thereof, said side members being slidably mounted on the frame, and means for securing said side members to the rack in various positions of the standards.

3. In a device of the class described, a hay rack, comprising a frame, horizontal transverse members rotatably mounted on said frame near each end thereof, parallel right angled extensions on each end of said horizontal members, members adjustably and telescopically mounted on said extensions, longitudinal members mounted on said horizontal members to permit the free rotation thereof, side frame members each pivoted to one of said extensions above the level of the main body of the rack extending downwardly and toward the transverse middle of the rack, brackets secured to the outer longitudinal members and slidingly receiving the inner ends of said side frame members on each side of the rack, each of said side members being provided on its lower surface with a notch, bolts in said brackets received in said notches, and removable pins in said brackets above said side members designed to secure said side members in engagement with said bolts.

1,111,983. AUTOMATIC EXHAUST-VALVE. EDWIN F. WILLIAMS and LE GRAND SKINNER, Erie, Pa., assignors to The Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Mar. 25, 1913. Serial No. 756,680. (Cl. 121—45.)



1. The combination with a steam engine cylinder, of an exhaust valve, means to automatically open and close said valve when the engine is running non-condensing, and means governed by the vacuum in the exhaust pipe for holding said valve closed when the engine is running condensing.

2. The combination with a steam engine cylinder having main and auxiliary exhaust ports, of a valve controlling the auxiliary exhaust port, means to automatically open and close said valve when the engine is running non-condensing, and means governed by the vacuum in the exhaust pipe for closing said valve when the engine is running condensing.

3. The combination with a steam engine cylinder having a middle exhaust port and an auxiliary exhaust port between the middle port and each end of the cylinder, of a valve controlling each auxiliary exhaust port, means controlled by the pressure in the cylinder to open and close said valve when the engine is running non-condensing, and means controlled by the vacuum in the exhaust pipe for holding said valve closed when the engine is running condensing.

4. The combination with a steam engine cylinder having a middle exhaust port and an auxiliary exhaust port between the middle port and each end of the cylinder, of a valve controlling each auxiliary exhaust port, a spring tending to hold said valve open, and a pressure operated device connected to said valve and exposed to compression in the end of the cylinder and acting to close said valve when the pressure in the cylinder exceeds the strength of the spring, and another pressure-operated device connected to said valve and exposed to the vacuum in the exhaust pipe and acting to hold said valve closed when such vacuum exists.

5. The combination with a steam engine cylinder having a middle exhaust port and an auxiliary exhaust port between the middle port and each end of the cylinder, of a valve controlling each auxiliary exhaust port, a spring tending to hold said valve open, and a differential piston connected to said valve, one part of said piston being exposed to compression in the end of the cylinder and acting to close said valve when the pressure exceeds the strength of the spring, and the other part of the piston being exposed to vacuum in the exhaust pipe acting to hold said valve closed while such vacuum exists.

[Claims 6 to 9 not printed in the Gazette.]

1,111,984. LOOSE-LEAF BINDER. ADOLPH WISSLER, St. Louis, Mo. Filed Mar. 27, 1911. Serial No. 617,148. (Cl. 129—24.)

1. In a loose leaf binder, the combination with a back plate, of a base plate adapted to be selectively located at different points on said back plate, a pair of arms fulcrumed on the base plate, which arms unite to form a binding loop, the lower ends of which arms occupy a plane below the plane occupied by the fulcrum points of said arms when the same are closed.

2. In a loose leaf binder, the combination with a back plate, of a base plate adapted to be selectively located at different points on said back plate, a pair of arms fulcrumed on the base plate, which arms unite to form a binding loop, the lower ends of which arms occupy a plane above the plane occupied by the fulcrums of the arms when the same are in open positions.

3. In a loose leaf binder, a back plate, a base plate adapted to be positioned on the back plate, which base plate is provided with an upwardly bent portion that is slotted transversely at its center, and a pair of arms fulcrumed on the upwardly bent portion of the base plate on opposite sides of the slot therein, which arms are adapted to unite to form a binding loop.

4. In a loose leaf binder, the combination with a back plate, of a base plate adapted to be selectively located at different points on said back plate, a pair of inverted U-shaped bearings on the base plate, and a pair of arms fulcrumed in said bearings, which arms unite to form a binding loop.

5. In a loose leaf binder, the combination with a back plate of a base adapted to be adjustably positioned on said back plate, a pair of arms fulcrumed on said base, which arms unite to form a binding loop, and a bearing member interposed between the lower ends of said arms.

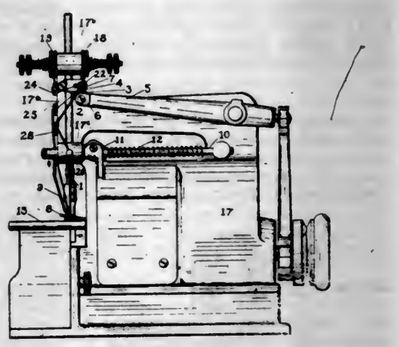
[Claims 6 to 26 not printed in the Gazette.]

1,111,985. TIRE-PUNCTURE DETECTOR. JAMES W. ANDERSON, San Francisco, Cal. Filed Aug. 20, 1913. Serial No. 785,815. (Cl. 73—46.)

1. A puncture detector for pneumatic tires consisting of a frame fitting the periphery of the tire and said frame having a bottom pervious to air, and a transparent top, said top and pervious bottom inclosing a chamber, and a series of flexible strips hingedly mounted in said chamber, and operable by a current of air passing through the pervious bottom.

2. In a puncture detector the combination of a frame having a reticulated bottom and a flexible strip hingedly supported at one end and resting on said bottom.

1,111,986. TAKE-UP FOR CROCHET-MACHINES. SAMUEL W. AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 9, 1913. Serial No. 741,052. (Cl. 112—26.)



1. A take up for plural thread machines embodying a reciprocating implement, two pairs of stationary thread supporting elements coöperating with the said implement, one pair being arranged at one side of and in a line substantially parallel with the path of the implement and the other pair being arranged one on either side of and in a line inclined to the path of the implement.

2. In a two thread crochet machine including a needle, a needle bar and mechanism for actuating the same, the combination of a plurality of thread supporting elements mounted one above the other on a stationary portion of the machine and at one side of a line parallel with the needle bar, a thread supporting element for one of the threads on the opposite side of said line, a take up implement carried by a member of the needle bar actuating mechanism in a path parallel with the needle bar, and operating upon both of the threads each between two independent points of support, to pull off and control each of the threads independently of the other.

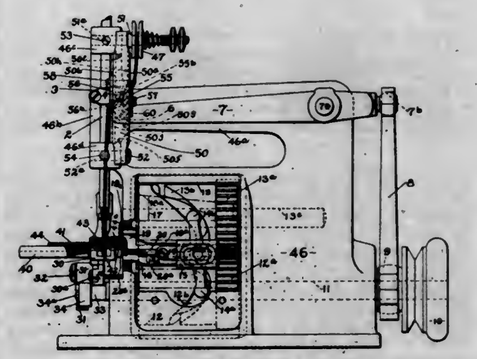
3. A thread controlling system comprising a reciprocating thread carrying implement and two pairs of stationary thread supporting elements with which the said thread carrying implement coöperates, one pair being arranged on one side of the path of reciprocation of the implement and the other pair being arranged one on each side of the path of the implement and in a line diagonal thereto, means whereby the distance between the respective elements of each pair of thread supporting elements may be adjusted, a support for the said thread supporting elements and means for carrying and actuating the thread carrying implement.

4. In a two thread crochet machine including a needle bar and mechanism for actuating the same, a thread pull off and take up embodying three thread guides mounted on a stationary portion of the machine at one side of a line parallel with the needle bar and in the direction of its reciprocation with relation to each other, a tension mounted at the side of said line opposite to that on which the thread guides are located, a thread eye carried by the needle bar mechanism and reciprocating between the tension and the thread guides, and means for adjusting the thread guides relatively to each other and with relation to the tension, in the direction of the reciprocation of the thread eye.

5. In a two thread crochet machine, a take up for the two threads embodying two pairs of thread supporting elements, a reciprocating thread engaging implement, the thread supporting elements being arranged one pair at one side of the path of the reciprocating implement and the other pair one on each side of the path of the implement and in a line diagonal to said path, the threads being passed through the reciprocating thread engaging implement intermediate the elements of the respective pairs of thread supporting elements, whereby one thread is constrained at two points on the same side of the path of the implement and the other thread is constrained at two points on opposite sides respectively of the said path and in a line diagonal thereto, while the thread intermediate the points of constrainment is reciprocated in the path of the implement.

[Claim 6 not printed in the Gazette.]

1,111,987. CROCHET-MACHINE TAKE-UP. SAMUEL WALTER AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 15, 1913. Serial No. 801,200. (Cl. 112—26.)



1. In a machine of the class described, a take up consisting in the combination of a take up frame, means including a pair of ears on the said frame for securing the same to the machine, and a pair of eye pieces mounted on the take up frame, the said eye pieces being each provided with a laterally extending eye portion, with a reciprocating thread eye member coöperating with the eye portions of the eye pieces whereby the thread is pulled off and taken up twice during the formation of a double loop stitch.

2. In a double loop stitch crochet machine, a take up consisting in the combination of a take up frame secured to the machine by means including a pair of laterally extending ears, a pair of eye pieces mounted on the said frame and disposed one on either side of the path of a cooperating reciprocating thread eye member, whereby the thread is pulled off and taken up twice during the formation of each double loop crochet stitch.

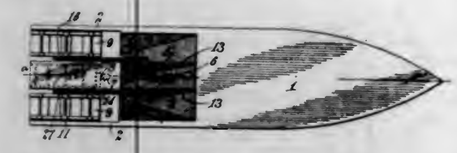
3. In combination in a double loop stitch crochet machine a take up comprising a frame provided with a pair of longitudinally extending webs disposed one on either side of the said frame, means for securing the frame to the machine, a pair of eye pieces adjustable in the direction of the length of the said webs, each of the said eye pieces having a portion for engaging one of the said webs, means for adjustably securing the eye pieces to the frame and, a reciprocating thread eye member coöperating with the eye pieces whereby the thread is pulled off and taken up twice during the formation of a double loop crochet stitch.

4. In combination in a crochet machine including a stitch forming mechanism and a reciprocating thread eye member actuated thereby, a take up comprising a take up frame having a pair of oppositely disposed webs extending in the direction of the path of the reciprocating thread eye member, means for securing the frame to the machine, a pair of stationary eye pieces adjustable in the direction of the length of the frame webs, each of the said eye pieces having a portion for engaging one of the said webs, means for adjustably securing the eye pieces to the frame and in contact with the webs thereof, whereby the eye pieces may coöperate with the reciprocating thread eye member to effect the pulling off and taking up of the thread.

5. In a machine of the class described, a take up consisting in the combination of a take up frame, a web projecting from each of the two sides thereof, a plurality of screw holes arranged in the frame with their axes in a plane parallel to the plane of the webs, means for securing the frame to the machine, a pair of adjustable eye pieces each having a screw slot for registering with the screw holes in the frame and a surface, parallel with the side of the slot adjacent thereto, for engaging one of the frame webs, and a reciprocating thread engaging implement coöperating with the eye pieces to pull off, take up and control the thread.

[Claims 6 to 9 not printed in the Gazette.]

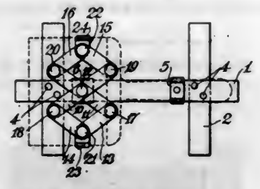
1,111,988. PROPELLER FOR BOATS. WILLIAM N. BELL, National Military Home, Ohio. Filed Nov. 17, 1913. Serial No. 801,342. (Cl. 115—0.5.)



In a propelling means for boats, the combination with the hull of a boat the stern of which is provided with an inclosed centrally disposed space open to the water at its forward and rearward ends, of a screw propeller mounted in the forward portion of said inclosed space, an impact wheel mounted within said inclosed space rearwardly of said propeller, and paddle wheels mounted on opposite sides of said inclosed space, said paddle wheels and impact wheels being fixed to a common shaft, and gearing by means of which the shaft of the propeller is connected to the common shaft of the impact and paddle wheels.

1,111,989. DISPLAY-RACK FOR BRUSHES. MYRON H. BISHOP, Springfield, Mass. Filed Oct. 4, 1913. Serial No. 793,464. (Cl. 248—49.)

1. In a display rack of the kind described, the combination, a longitudinal bar-member, transversely arranged members secured to said bar member, clips slidably connected to the longitudinally arranged bar member, each of said clips having upright post-members attached thereto and one of said pair of post-members being laterally adjusted relative to each other whereby the articles of different widths and lengths may be secured, as described.

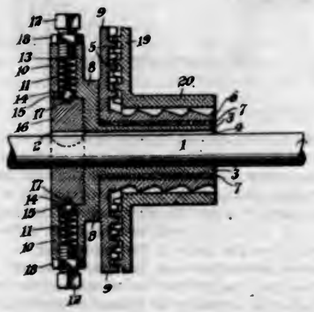


2. In a brush holder, the combination, a supporting base-member, an adjustable clip secured to the base-member, a pair of vertically arranged elastic post-members to grip the sides of the handles of the brushes and normally inclined toward each other, a second pair of upright post members attached to said second clip, and means to laterally adjust the distance between the second pair of upright post-members to accommodate brushes of different widths, whereby the adjustability of the handle and bristle griping members being adjustable lengthwise of each other will accommodate brushes of different lengths, as described.

3. A display rack for paint brushes, comprising in combination, a supporting base having a longitudinal member and transverse members secured thereto, means secured to the base to grip the handle and bristle portion of the brush, said gripping means being constructed and arranged to hold brushes of different widths and lengths, the handle gripping means comprising a pair of elastic upright members normally inclined toward each other.

4. A display rack for holding brushes one above the other, comprising, in combination, means to grip the handles of the brushes, means to grip the head or bristle portions of the brushes, the latter means being adjustable laterally to hold brushes of different widths, and the handle gripping means being adjustable longitudinally to hold brushes of different lengths, and means to permit the bristle holding means to be adjustable in the same direction as the handle gripping means.

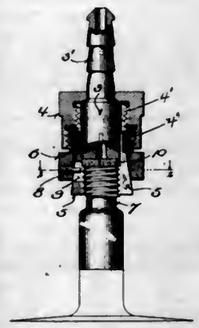
1,111,990. AUTOMATIC RELEASING AND REENGAGING DRIVE. WILLIAM F. H. BRAUN, Philadelphia, Pa., assignor to Coles Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 5, 1912. Serial No. 735,058. (Cl. 64—13.)



1. The combination with a driving member having a cylindrical periphery and having a circumferentially short depression in said periphery, of a driven member having a bore, said bore having a aperture of less diameter next to the periphery of said driving member, and a resiliently pressed ball too large to pass through said aperture projecting through said aperture normally engaging in said depression.

2. The combination of a shaft, a rotary member keyed thereon, a second member rotatable upon said shaft and upon the first-mentioned member, said first-mentioned member having sockets formed therein, said second-mentioned member having elongated openings formed therein and restricted at their lower ends, balls movable in said openings, said balls being of a less diameter than the diameter of the openings, and being of a larger diameter than the diameters of the restricted ends of said openings, whereby they will be limited in their movement toward the sockets in the first-mentioned rotatable member, adjustable plugs for the openings in the second-mentioned rotatable member, and springs disposed within said openings and contacting with the adjustable plugs and balls.

1,111,991. AIR-PUMP NIPPLE. CHARLES D. BREMER, Milwaukee, Wis. Filed Feb. 20, 1914. Serial No. 819,870. (Cl. 137—28.)

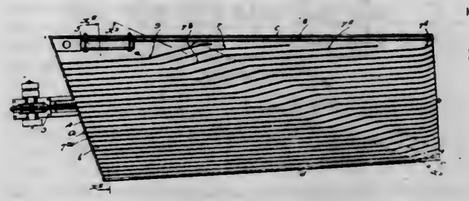


1. An air-pump nipple comprising a nozzle, a counterbored nut having a screw-thread of one direction in a smaller diameter of its bore and similar thread of the opposite direction in the greatest diameter of said bore, spring expander-sections fashioned inwardly at one end to match the screw-thread of a valve-nipple and having external screw-thread engaging that of said smaller diameter of the nut-bore, a sleeve slidable on outwardly inclined ends of the expander-sections and having a shank provided with a screw-thread engaging that of the greatest diameter of said nut-bore, a stop with the sleeve engaging a longitudinal slot in one of the expander-sections, and a centrally apertured nozzle-facing packing-disk seated on inner shoulders with which the expander-sections are provided.

2. An air-pump nipple comprising a nozzle, a counterbored nut having a right-hand screw thread in a smaller diameter of its bore and a left-hand screw-thread in the greatest diameter of said bore, spring expander sections fashioned inwardly at one end to match the screw-thread of a valve-nipple and having external screw-thread engaging the right-hand thread of the nut, a sleeve slidable on outwardly inclined ends of the expander-sections and having a shank provided with a screw-thread engaging the left-hand thread of said nut, a stop with the sleeve engaging a longitudinal slot in one of the expander-sections, and a centrally apertured nozzle-facing packing-disk seated on inner shoulders with which the expander sections are provided.

3. An air-pump nipple comprising a nozzle, a counterbored nut having screw-thread of one direction in a smaller diameter of its bore and similar thread of the opposite direction in the greatest diameter of said bore, spring expander-sections fashioned inwardly at one end to match the screw-thread of a valve-nipple and having external screw-thread engaging that of said smaller diameter of the nut-bore, a sleeve slidable on outwardly inclined ends of the expander-sections and having a shank provided with a screw-thread engaging that of the greatest diameter of said nut-bore, a sleeve-engaging screw having a reduced pin end extending into a longitudinal slot of one of the expander-sections, and a centrally apertured nozzle-facing packing-disk seated on inner shoulders which the expander sections are provided.

1,111,992. CONCENTRATOR. WILLIAM A. BUTCHART, Denver, Colo. Filed Nov. 29, 1913. Serial No. 803,641. (Cl. 83—88.)



1. A reciprocating concentrator table having a transversely inclined plane surface, feed and wash water supply means at the upper side of said surface, and riffles extending longitudinally on said surface and having portions thereof deflected toward the upper side of the table to provide a cleaning zone, the riffle portions in said cleaning zone being of greater height at the upper part than at the lower part of said zone.

2. A reciprocating concentrator table having a transversely inclined plane surface, feed and wash water supply means at the higher side of said surface, tapering riffles extending longitudinally thereon, the height of said riffles decreasing toward the concentrates discharge end of said surface, said riffles having portions deflected toward the higher side of said table to form a cleaning zone, said cleaning zone extending diagonally of the table, the deflected riffle portions in said cleaning zone being of progressively decreasing heights toward the lower part of said cleaning zone.

3. A reciprocating concentrator table having a transversely inclined plane surface, parallel riffles on said surface forming parallel spaces or interriffle channels decreasing in width from the higher or feed and wash water side of said surface toward the tailings discharge side thereof.

4. A reciprocating concentrator table having a transversely inclined plane surface, parallel riffles on said surface consisting of strips decreasing in height from the higher or dressing water side thereof toward the lower or tailings discharge side of said surface, said riffles separated by parallel channels progressively decreasing in width from the higher or feed and wash water side of said surface toward the lower or tailings discharge side thereof.

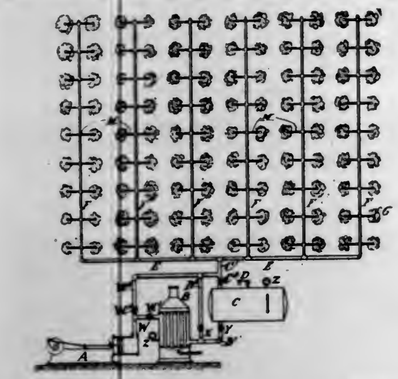
5. A reciprocating concentrator table having a transversely inclined plane surface, riffles thereon decreasing in height above said surface from the higher toward the lower side thereof, said riffles being deflected first toward the higher or wash water side of said table and then toward the concentrates discharge end thereof, said deflections occurring in the respective riffles at points which will produce a continuous zone of deflected riffle portions extending from the higher toward the lower side of said table and the height of the riffles in said zone progressively decreasing toward the lower part of the zone.

[Claims 6 to 9 not printed in the Gazette.]

1,111,993. DEVICE FOR PREVENTING FROSTS IN ORCHARDS. JAMES L. CARDER, Los Angeles, Cal. Filed May 2, 1913. Serial No. 765,156. (Cl. 126—59.5.)

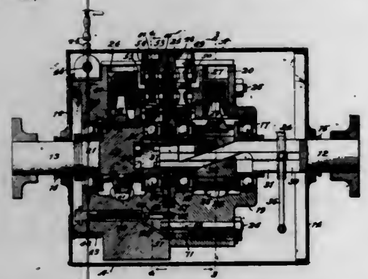
An orchard heater, comprising a series of distributing pipes, a plurality of ejecting nozzles at convenient points,

a tank connected with the distributing pipes, a heater and an air compressor operatively connected up with said tank,



and means for regulating the temperature of the air and the out-flow of the heated air.

1,111,994. HYDRAULIC VARIABLE-SPEED-TRANSMISSION DEVICE. ESTEBAN CIARLO, South Bethlehem, Pa. Filed July 3, 1913. Serial No. 777,292. (Cl. 138—3.)



1. In a hydraulic mechanism of the class described, the combination of a driving member, a pump having pistons, operatively connected with said driving member, and rotatably mounted cylinders, means for adjusting the connection between the pistons and the driving member while the parts are in motion, the parts being so constructed and arranged that the pistons may be operated by the driving member or the cylinders revolved with the driving member or independently thereof, a motor operated by the fluid delivered by said pump, and a driven member operated by said motor.

2. In a hydraulic mechanism of the class described, the combination of a driving member, a pump having pistons, operatively connected with said driving member, and rotatably mounted cylinders, means for adjusting the connection between the pistons and the driving member while the parts are in motion, the parts being so constructed and arranged that the pistons may be operated by the driving member or the cylinders revolved with the driving member or independently thereof, a motor operated by the fluid delivered by said pump and rotatable as a whole with the driving member, and a driven member operated by said motor.

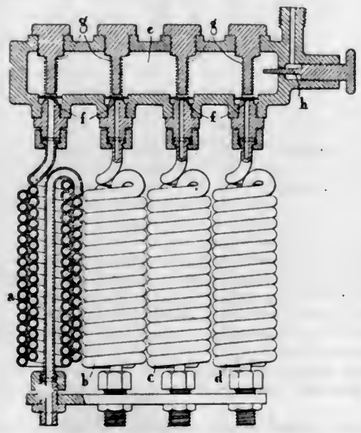
3. In a hydraulic mechanism of the class described, the combination of a driving member, a pump having pistons, operatively connected with said driving member, and rotatably mounted cylinders, means for adjusting the connection between the pistons and the driving member while the parts are in motion, the parts being so constructed and arranged that the pistons may be operated by the driving member or the cylinders revolved with the driving member or independently thereof, a motor operated by the fluid delivered by said pump, and having cylinders rotatable with the pump cylinders, and a driven member operated by said motor.

4. In a hydraulic mechanism of the class described, the combination of a driving member, a pump having pistons operatively connected with said driving member, and rotatably mounted cylinders, means for adjusting the connection between the pistons and the driving member while the parts are in motion, the parts being so constructed and arranged that the pistons may be operated by the driving member or the cylinders revolved with the driving member or independently thereof, a motor having cylinders rigidly secured to said pump cylinders, and pistons adapted to be operated by the fluid delivered by said pump, and a driven member operatively connected with said motor pistons.

5. In a hydraulic mechanism of the class described, the combination of a driving member, a driven member in axial alinement therewith, a casing rotatably mounted with respect to the driving and driven members and having pump and motor cylinders therein, pistons in said cylinders, means operatively connecting the pump pistons with the driving member, means operatively connecting the motor pistons with the driven member, means for holding said casing against rotation, and a clutch for directly connecting the driving and driven members.

[Claims 6 to 17 not printed in the Gazette.]

1,111,995. APPARATUS FOR OBTAINING COMBUSTIBLE GAS. GOGU CONSTANTINESCU, Bloomsbury, London, England. Filed Feb. 26, 1913. Serial No. 750,716. (Cl. 123—198.)

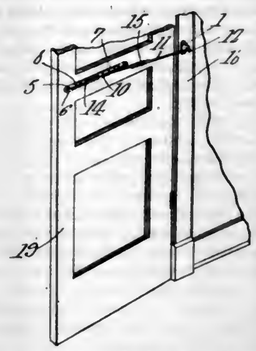


1. Apparatus for drawing off combustible mixture from a cylinder of an internal combustion engine, comprising in combination a long pipe of small diameter in constantly open communication with the combustion chamber, a small reservoir communicating with said pipe, and a non-return valve controlling the outlet from said pipe into said reservoir, as set forth.

2. Apparatus for drawing off combustible mixture from a cylinder of an internal combustion engine, comprising in combination a long pipe of small diameter in constantly open communication with the combustion chamber, a small reservoir communicating with said pipe, a non-return valve controlling the outlet from said pipe into said reservoir, and means for controlling the outlet from said reservoir, as set forth.

3. Apparatus for drawing off combustible mixture from a cylinder of an internal combustion engine, comprising in combination a long spiral pipe of small diameter in constantly open communication with the combustion chamber, a small reservoir communicating with said pipe, and a non-return valve controlling the outlet from said pipe into said reservoir, as set forth.

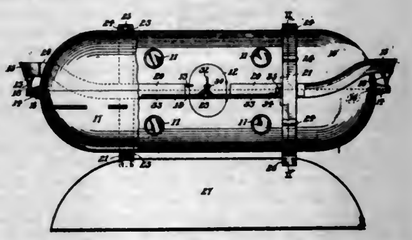
1,111,996. DOOR-HOLDER AND WINDOW-LOCK. JAMES W. COX, Ashland, Ky. Filed Dec. 15, 1910. Serial No. 597,503. (Cl. 16—6.)



1. A device for locking a barrier in a partially opened position and for restraining the barrier against further opening, but permitting the barrier to be moved to a completely closed position, the device comprising a rod in a single length coiled upon itself intermediate its ends to form a spring the convolutions of which are in contact to render the spring responsive to traction only and to render the rod effective as a rigid prop constituting the sole means for limiting the opening of the barrier; means for supporting one end of the rod pivotally but against longitudinal movement; and a support-engaging member having an elongated slot and provided with an opening, the rod having a finger adapted to slide in the slot and to register against sliding in the opening.

2. In a device of the class described, the combination with a fixed support and a movable barrier, of a longitudinally resilient one-piece prop connecting the support and the barrier, the prop having a fixed minimum length under compression and having a variable length under elongation.

1,111,997. LIFE-BOAT. KAZIMIER DOMBKOWSKI, Amsterdam, N. Y. Filed June 15, 1914. Serial No. 845,123. (Cl. 9—4.)



1. In a device of the class described, a casing comprising windows and entrance doors, a carriage suspended within said casing, straps surrounding said casing, a weighted keel secured to the lower ends of said straps, friction rollers carried by the straps and engaging the casing, and means adapted to be brought into engagement with the casing to arrest movement thereof.

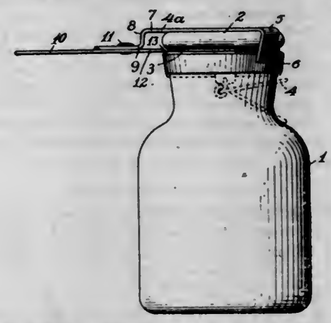
2. In a device of the class described, a casing, a carriage suspended within the casing, a peripheral deck surrounding the casing, transverse straps surrounding the casing and connected to the deck, a keel secured to the lower ends of the straps, roller bearings interposed between the casing and straps, and means carried by the deck adapted to engage the casing to arrest rotary movement thereof.

3. In a device of the class described, a casing, a carriage suspended within the same, means in which the casing is adapted to revolve, an endless peripheral deck carried by the said means, peripheral teeth at spaced points on the casing, and means carried by said deck adapted to be brought into engagement with said teeth to arrest movement of said casing.

4. In a device of the class described, a casing, peripheral teeth formed on portions of said casing, straps surrouding the casing and inclosing said teeth, a peripheral deck secured to said straps, levers pivotally mounted on the deck, and arms carried by said levers adapted to be brought into engagement with said teeth to arrest rotary movement of said casing.

5. In a device of the class described, a casing, a peripheral deck for said casing journaled thereto at each end, transverse straps surrounding the casing and connected to the deck, and means carried by the deck adapted to be brought into engagement with said casing for arresting movement thereof.

1,111,998. JAR-OPENER. GEORGE M. DUVALL, Auburn, Mass., assignor of one-half to William A. Duvall, Auburn, Mass. Filed Feb. 27, 1909. Serial No. 480,432. (Cl. 65—26.)



1. A jar opener, comprising a supporting member adapted to rest on the top of the jar cover, said supporting member provided with downwardly extending arms to engage the cover, and also provided with a downwardly extending portion bent to form a bearing surface in the plane of the top of the jar, and a lever pivoted on said bearing surface, one arm of said lever provided with a beveled edge adapted to enter between the jar and cover to crowd the cover against the supporting member, whereby said cover is gripped and carried by said jar opener upon removal from the jar.

2. A jar opener, comprising a supporting member adapted to rest on the top of the jar cover, said supporting member provided with arms extending downwardly to engage the cover, and also provided with a downwardly extending portion bent to form a bearing surface in the plane of the top of the jar, a lever pivoted on said bearing surface, said lever having a beveled edge at one end adapted to be crowded between the top of the jar and the cover, whereby to retain said cover between the said lever and said supporting member, the said arms of the supporting member extending below and beyond the plane of the top of the jar to support said cover in a raised position upon its removal, in conjunction with the opener, from the jar.

1,111,999. PHONOGRAPH-RECORD. THOMAS A. EDISON, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 20, 1912. Serial No. 672,397. (Cl. 181—17.)

1. As a new article of manufacture, a record tablet having a yielding surface veneer of hard material, and a

backing therefor comprising a hard substantially unyielding base and a layer of resilient material located intermediate said surface vencer and base, said resilient material being yieldable but not liable to permanent deformation under the pressure of the reproducer stylus, substantially as described.

2. As a new article of manufacture, a record tablet having a yielding celluloid surface veneer, and a backing therefor comprising a hard substantially unyielding base and a layer of resilient material located intermediate said surface veneer and base, said resilient material being yieldable but not liable to permanent deformation under the pressure of the reproducer stylus, substantially as described.

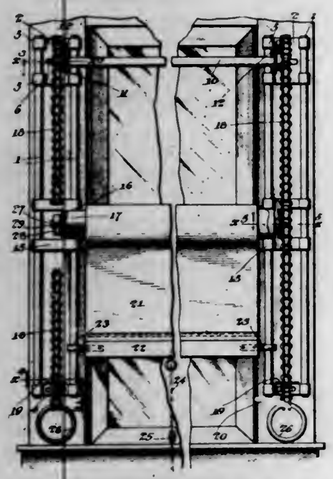
3. As a new article of manufacture, a record tablet having a yielding surface veneer of hard material, and a backing therefor comprising a hard unyielding base and a layer of rubber located intermediate said surface veneer and base, substantially as described.

4. As a new article of manufacture, a record tablet having a yielding celluloid surface veneer, and a backing therefor comprising a hard unyielding base and a layer of rubber located intermediate said surface veneer and base, substantially as described.

5. As a new article of manufacture, a record tablet having a yielding surface veneer of hard material, and a backing therefor comprising a plaster base and a layer of resilient material located intermediate said surface veneer and base, said resilient material being yieldable but not liable to permanent deformation under the pressure of the reproducer stylus, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,112,000. SHADE-ADJUSTER. LOUIS B. GIRARD and JOHN P. WHITMORE, Los Angeles, Cal., assignors to Girard Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed May 24, 1913. Serial No. 769,697. (Cl. 156—27.)

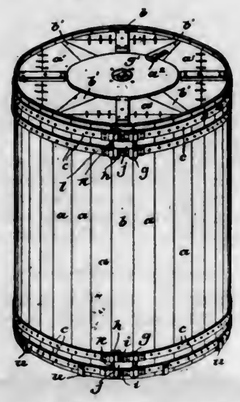


1. In a shade adjuster, a vertical guide on each side of the window, a bracket on each vertical guide, a shade roller mounted in said brackets, a shaft at the upper end of said guides, a sprocket on each end of said shaft, and chains extending from the respective sliding brackets and over said sprockets for adjusting the elevation of the shade roller when either of said chains is moved, a bracket with a projecting arm at the lower end of said guides, each of said arms having an opening through which the associated chain extends, said arm having a finger adapted to be engaged by a link of the associated chain.

2. A shade adjuster comprising a pair of vertical guides on each side of the window, a vertically sliding bracket on each pair of guides, a bracket on the upper end of each pair of guides, each pair of upper brackets having a forwardly projecting arm, a shaft journaled in said arms, a sprocket on each end of said shaft, chains secured to the respective sliding brackets and extending over said sprocketss, and means for detachably retaining the lower portions of said chains, each of the upper brackets having a lug, a weighted dog pivoted to each sprocket and having a shoulder adapted to engage the associated lug when the sprocket revolves slowly.

3. A shade adjuster comprising a pair of vertical guides on each side of the window, a vertically sliding bracket on each pair of guides, a bracket on the upper end of each pair of guides, each pair of upper brackets having a forwardly projecting arm, a shaft journaled in said arms, a sprocket on each end of said shaft, chains secured to the respective sliding brackets and extending over said sprockets, and means for detachably retaining the lower portions of said chains, each of said upper brackets comprising a plate with four wings, two of each of said wings being curled around a guide rod, each of said sliding brackets having four wings, two of each being curled around the guide rods and slidable thereon.

1,112,001. COLLAPSIBLE HOGSHEAD. JOHN H. GORMAN, Salisbury, N. C. Filed May 16, 1913. Serial No. 768,046. (Cl. 217—44.)



1. A stave structure consisting of two main sections each of which consists of staves flexibly connected together, means for hinging these two main sections together at their adjacent edges, these means embodying devices whereby the adjacent edges of the main sections may be separated a limited distance to thus increase the diameter of the stave structure without disconnecting said adjacent edges of the main sections, a removable top or head, and a bottom, and lost-motion means connecting said bottom to the main sections, these connecting means being so constructed as to permit the main sections to have an outward movement independently of the bottom when the main sections are expanded in the manner set forth.

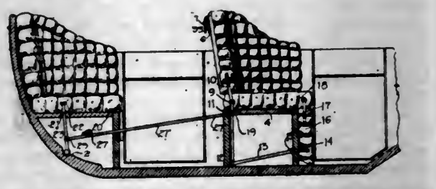
2. A receptacle consisting of a collapsible stave structure, a removable head, a bottom consisting of sections hinged to the stave structure and to each other and adapted to swing inwardly into the stave structure, and cleat bars each rigidly fastened at one end to the inner face of one of said sections and having its unattached end extending across the joint between the sections, whereby the free end portions of said cleats may be used as levers in spreading the sections of the bottom and whereby also the weight of the contents of the receptacle will aid in holding the sections spread.

3. In combination, a removable head, an expansible and contractible stave structure, a bottom constructed of hinged sections adapted to fold inwardly, and link hinges connecting said sections to the stave structure, the link hinges permitting the stave structure to be expanded without disconnecting the same from the bottom.

4. In combination, a stave structure and means whereby its diameter may be expanded and contracted a limited distance, said means forming a permanent connection between the parts of the stave structure, whereby the stave structure may be expanded without disconnecting its adjacent edges, the bottom consisting of sections hinged together and adapted to fold inwardly, and link hinges connecting said sections to the stave structure.

5. A collapsible receptacle, consisting of a stave structure comprising two main sections and two spacing staves forming end walls when the structure is collapsed, the other two walls being formed by said main sections, the inner corners of the main sections as well as the spacing staves being correspondingly beveled, a removable head, a sectional bottom hinged to the said main sections and adapted to fold into the box-like receptacle formed by said main sections and said spacing staves, flexible hoops connecting the staves of said main sections and additional short hoop sections attached to the spacing staves, and links connecting the adjacent ends of said hoops, each of said links extending across one of the joints between the spacing stave and the adjacent stave of the main section and being pivotally connected to the hoop sections, for the purposes set forth.

1,112,002. VEHICLE-BODY. CHARLES A. GREEN, Portland, Oreg. Filed Sept. 17, 1913. Serial No. 790,217. (Cl. 21—43.)



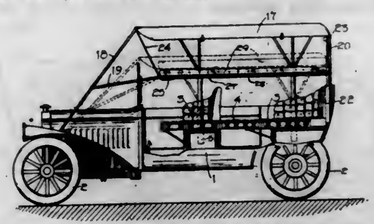
1. In combination with a vehicle body, having supports formed therein, cushions slidably mounted on said supports, said cushions being adapted to form seats, a back hingedly connected to the sides of the vehicle body and adapted to form the back for the front seat, a panel hingedly secured to the sides at the forward end of the front seat, a lever connected to the front panel, a lever connected to the front cushion forming the back of the front seat, a link connecting the front panel with the second mentioned lever, a lever operatively connected to the rear cushion of the rear seat, and adjustable links connecting the rear lever and the front lever, said levers and links being adapted to cause the cushions to assume a bed-like position.

2. In combination with a vehicle body having supports formed therein, cushions slidably mounted on said supports, said cushions being adapted to form seats, a back pivotally secured to the sides of the vehicle body adjacent the forward support, a panel pivotally secured to the sides adjacent the front edge of the front support, a lever secured to the back, said lever extending downwardly and terminating in a pivotal connection, a link secured to the pivotal connection and the front panel, a lever pivotally connected with the rear seat, and links adapted to connect the first mentioned and second mentioned levers, thereby causing the whole to assume a bed like position.

1,112,003. AUTOMOBILE ATTACHMENT. CHARLES A. GREEN, Portland, Oreg. Filed Sept. 18, 1913. Serial No. 790,466. (Cl. 21—62.)

1. In combination with an automobile body having convertible seats, a top carried by said body, and a bed spring suspended from said top and arranged to be hidden thereby when not in use.

2. In combination with a vehicle body, a top carried by said body, said top being adapted to be adjusted vertically, and a bed spring supported by said top and arranged to be hidden thereby when not in use.



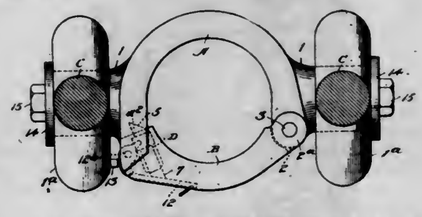
3. In combination with a vehicle body having convertible seats, cylindrical tubes carried by said body intermediate the upholstery and the side walls thereof, supports slidably mounted in said tubes, said supports having a top carried by their upper extremities, and a bed spring so located as to be covered by the top when it is not in use.

4. In a device of the character described the combination of an automobile body having convertible seats, means carried by said body to support a top, a top secured to the upper extremity of the supporting means, and a bed supported by said top and so located as to be hidden thereby when the device is not in use.

5. The combination with an automobile body, a top supported thereby, means formed on the support for the top and adapted to support a bed, said bed being so located as to be hidden from view when not in use.

[Claims 6 and 7 not printed in the Gazette.]

1,112,004. CASING-ELEVATOR. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 23, 1913. Serial No. 743,787. (Cl. 57—9.)



1. In a casing elevator, the combination of a bail, a bail member on which the bail is journaled, a movable member pivoted on the bail member, a lock for the movable member, said lock having locking engagement with the bail member, and means on the bail for preventing the accidental movement of the lock when the elevator is loaded.

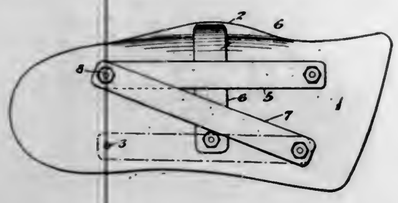
2. In a casing elevator, the combination of a bail, a bail member on which the bail is journaled, a movable member pivoted on the bail member, an automatic lock for the movable member, said lock being actuated independently of the bail, and means on the bail for preventing the accidental movement of the lock when the elevator is loaded.

3. In a casing elevator, the combination of a bail, a bail member on which the bail is journaled, a movable member pivoted on the bail member, a lock for the movable member, a latch for actuating the lock, and means on the bail for preventing the accidental movement of the latch when the elevator is loaded.

4. In a casing elevator, the combination of a bail, a bail member on which the bail is journaled, a movable member pivoted on the bail member, a spring closed lock for the movable member, and means on the bail for preventing the accidental movement of the lock when the elevator is loaded.

5. In a casing elevator, the combination of a bail, a bail member on which the bail is journaled, a movable member pivoted on the bail member, a spring-actuated lock for the movable member, a latch for retracting the spring-actuated lock, and means on the bail for preventing the accidental movement of the latch when the elevator is loaded.

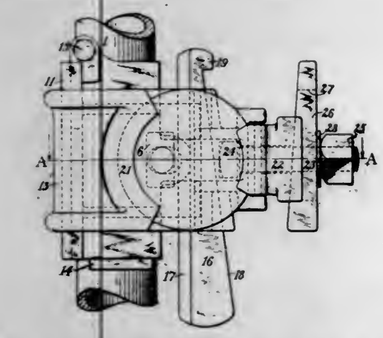
1,112,005. ARCH-SUPPORT. GEORGE C. HAMMANN, Cincinnati, Ohio. Filed Aug. 7, 1913. Serial No. 783,507. (Cl. 36—71.)



1. An arch supporter comprising a plate adapted to fit under the arch of a foot, a series of reinforcing springs detachably secured to the underside of said plate, and means whereby the points of bearing of said springs on said plate may be altered for adjustment.

2. An arch supporter comprising a plate adapted to fit under the arch of a foot, a lip on said plate adapted to fit against the inner side of said arch, a series of reinforcing springs detachably secured to the under side of said plate and said lip, and means whereby the points of bearing of said springs on said plate and lip may be altered for adjustment.

1,112,006. DRILL-MOUNTING. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 12, 1910. Serial No. 537,734. (Cl. 255—51.)



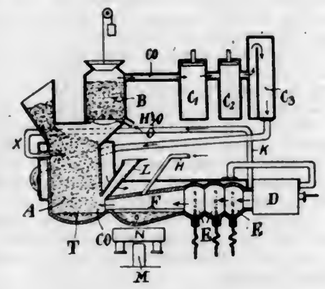
1. In a drill mounting, a clamp, a saddle slidable thereon and a longitudinally slidable wedge key interposed between portions of the clamp and saddle for instantaneously locking the saddle to and releasing it from the clamp.

2. In a drill mounting, a clamp having parallel guides thereon, a saddle fitted to slide along the guides and a wedge key interposed between the saddle and one of the guides and slidable in the direction of the guides for instantaneously locking the saddle to and releasing it from the clamp.

1,112,007. PROCESS OF PRODUCING IRON AND STEEL DIRECTLY FROM THE ORE. KARL ALBERT FREDRIK HIORTH, Christiania, Norway. Filed June 13, 1912. Serial No. 703,576. (Cl. 75—75.)

1. The process of producing iron and steel directly from an ore charge, which consists in producing a gas rich in carbon oxid, purifying said gas, introducing air and a part of said purified gas into the upper part of the ore charge, electrically heating another part of the purified gas, and passing the electrically heated part of the gas over the metal melted down from the ore charge and into the lower part of the ore charge; substantially as described.

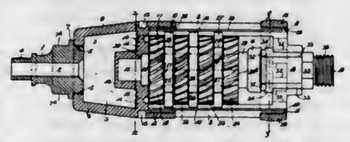
2. The process of producing iron and steel directly from an ore charge made up of ore and a small proportion of carbon material, which consists in producing gas rich in carbon oxid, purifying said gas, introducing air and a part of said purified gas into the upper part of the charge of ore and carbon material, electrically heating another part of the purified gas, and passing the electrically heated part of the gas over the metal melted down from the ore charge and into the lower part of the ore and carbon material; substantially as described.



3. The process of producing iron and steel directly from an ore charge, which consists in producing a gas rich in carbon oxid, purifying said gas, introducing air and a part of said purified gas into the upper part of the ore charge, electrically heating another part of the purified gas, passing the electrically heated part of the gas over the metal melted down from the ore charge and into the lower part of the ore charge, and utilizing the radiated heat to preheat the purified gas; substantially as described.

4. The process of producing iron and steel directly from an ore charge, which consists in producing a gas rich in carbon oxid, purifying said gas, introducing air and a part of said purified gas into the upper part of the ore charge, electrically heating another part of the purified gas, passing the electrically heated part of the gas over the metal melted down from the ore charge and into the lower part of the ore charge, and simultaneously introducing a carbon-bearing material into the lower part of the ore charge; substantially as described.

1,112,008. TUBE-CLEANER. ALBERT HOLDSWORTH, Johannesburg, Transvaal, South Africa. Filed June 16, 1913. Serial No. 774,010. (Cl. 121—58.)

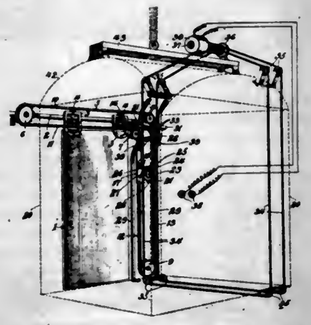


1. A tube cleaner comprising a plurality of revoluble elements which are separated by stationary elements and a casing comprising a plurality of parts for inclosing the revoluble and stationary elements, the parts of the casing being grooved to receive packing strips between them.

2. A tube cleaner comprising a plurality of revoluble elements which are separated by stationary elements and a casing comprising a plurality of parts for inclosing the revoluble and stationary elements the parts of the casing being grooved to receive packing strips between them and in which the front portion of the casing is constructed to provide a receiving chamber for the actuating fluid and with a diaphragm partition in which angularly disposed ports or passages are formed for the actuating fluid to pass to the first revoluble element.

3. A tube cleaner comprising a plurality of revoluble elements which are separated by stationary elements and a casing comprising a plurality of parts for inclosing the revoluble and stationary elements, the parts of the casing being grooved to receive packing strips between them and the parts of said casing serving to clamp the several stationary elements in position between them.

1,112,009. APPARATUS FOR OPERATING ELEVATOR-DOORS. THOMAS A. HOLLORAN, Washington, D. C. Filed July 16, 1913. Serial No. 779,378. (Cl. 187—52.)



1. In an elevator, a plurality of doors to be moved, a car, a motor carried by the car and adapted to move all of said doors one at a time, means for controlling the motor and means operated by the motor for making a break in the operating circuit of the car prior to the actuation of a door and for closing such break after the door is closed.

2. In an elevator, a car, a plurality of doors to be moved, a normally inactive motor carried by the car, separate door moving devices for said doors including endless flexible connections having vertical and horizontal stretches at each door, the horizontal stretches being connected with the door, and means carried by the car and actuated by the motor and adapted to engage with the vertical stretch of each door moving device to impart motion to the same.

3. In an elevator, a car, a plurality of doors to be moved, a motor carried by the car, separate door moving devices including endless flexible connections having horizontal and vertical stretches located at each door, the latter being connected with the horizontal stretch, a traveler moving upwardly and downwardly on the car and actuated by the motor and adapted to impart motion to the vertical stretches one at a time, and means for guiding the traveler into and out of open engagement with the vertical stretches.

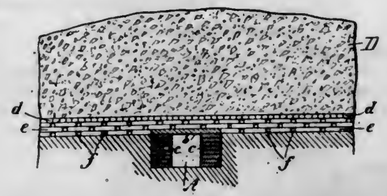
4. In an elevator, a car, a plurality of doors to be moved, a motor carried by the car, separate door moving devices including endless flexible connections having horizontal and vertical stretches located at each door, the latter being connected with the horizontal stretch, a traveler moving upwardly and downwardly on the car and actuated by the motor and adapted to impart motion to the vertical stretches one at a time, and guide rails mounted on the car and arranged to guide the traveler into and out of engagement with the vertical stretches.

5. In an elevator, a car, a plurality of doors, a motor mounted on the car, separate door moving devices including flexible connections operatively connected with the doors and having a substantially vertical stretch at each door, and a traveler actuated by the motor and movable upwardly and downwardly on the car for actuating the vertical stretches.

[Claims 6 to 28 not printed in the Gazette.]

1,112,010. TREATMENT OF ZINC RESIDUES. ARCHIBALD JONES, Bartlesville, Okla., assignor to Bartlesville Zinc Company, New York, N. Y., a Corporation of New York. Filed July 5, 1911. Serial No. 636,972. (Cl. 75—28.)

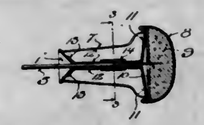
1. The method of treating zinc retort residues which consists in concentrating them by combustion of their carbon content and simultaneously volatilizing the contained zinc, and catching the products of volatilization of the zinc in the outer layers of the pile; substantially as described.



2. The method of treating zinc retort residues which consists in concentrating them by the combustion of their carbon content and simultaneously volatilizing the contained zinc, and catching the products of volatilization of the zinc in the outer layer of the pile, the operation being conducted under conditions to cause the concentrated mass to sinter; substantially as described.

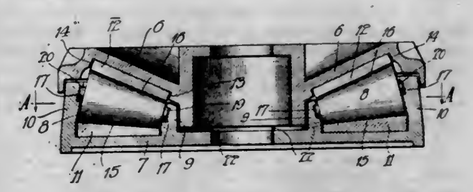
3. The method of treating zinc retort residues, which consists in arranging them in a pile in the open air, concentrating them by combustion of their carbon content and simultaneously volatilizing the contained zinc, the operation being conducted under conditions to cause the concentrated mass to sinter; substantially as described.

1,112,011. HAT-PIN GUARD. JOHN KIRCHNER, Milwaukee, Wis., assignor of one-half to Joseph R. Tipil, Milwaukee, Wis. Filed Apr. 26, 1913. Serial No. 763,727. (Cl. 24—155.)



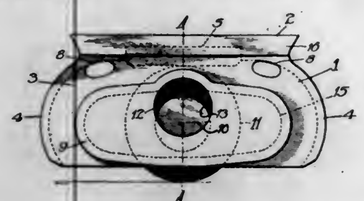
In a hat-pin guard, the combination of a shell provided at one end with a flange, a cap inturned on the shell-flange, a pair of jaws having laterally bent ends abutting said flange inside the cap, and a disk in said cap against said ends of said jaws.

1,112,012. CENTER-BEARING. ELMYR A. LAUGHLIN, Chicago, Ill. Filed May 20, 1912. Serial No. 698,593. (Cl. 64—64.)



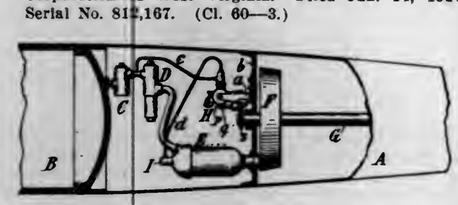
A center bearing, comprising upper and lower housing members, upwardly disposed annular flanges concentrically arranged on said lower housing member, annular grooves in said flanges, said lower housing member being provided with a wear plate having a fluted upper bearing surface, said surface being radially straight from and downwardly convergent toward the center thereof, said upper housing member being provided with a wear plate having a lower bearing surface, said surface being radially straight from and downwardly convergent toward the center thereof, and bearing rollers having studs thereon for coacting with said annular grooves, said rollers being arranged to coact with said surfaces and being free to independently adjust themselves to support said upper housing member.

1,112,013. SIDE BEARING. ELMER A. LAUGHLIN, Chicago, Ill. Filed May 22, 1913. Serial No. 769,269. (Cl. 64—64.)



In a side bearing for railway cars, the combination of a roller, a housing having an opening through which said roller protrudes, and having ways at opposite sides thereof, a wear plate in said housing coöperating with said roller, said roller having a removable shaft extending into said ways, a retaining wall at the outer side of each way, and said ways being greater in height at their centers than the diameter of said shaft and being suitably reduced in height at their ends whereby the load normally transmitted through said wear plate may be transmitted through said shaft when the roller is at the ends of said ways, one of said retaining walls having therein an opening for the passage of said shaft and said wear plate being adapted to be inserted through said roller opening and adapted when in place to prevent said shaft from registering with said shaft opening.

1,112,014. RETARDING DEVICE FOR AUTOMOBILE TORPEDOES. FRANK M. LEAVITT, Smithtown, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Jan. 14, 1914. Serial No. 812,167. (Cl. 60—3.)



1. A retarding device comprising a traction bar, two rollers on opposite sides of said bar, gearing for driving one roller for displacing the bar, the bar having a recess in which the other roller may fall, and a part the movement of which is to be retarded connected to said latter roller.

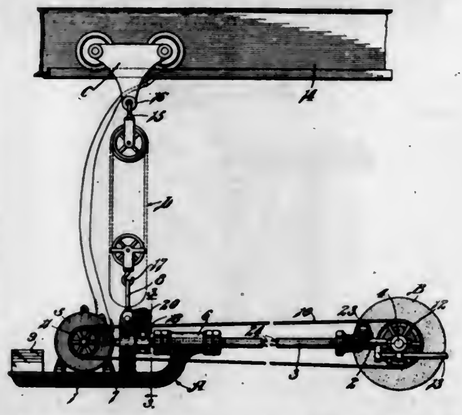
2. A retarding device comprising a traction bar, two rollers on opposite sides of said bar, gearing for driving one roller for displacing the bar, the bar having a recess in which the other roller may fall, a part the movement of which is to be retarded connected to said latter roller, and an adjustable stop for varying the starting point of said traction bar to adjust the duration of retardation.

3. The combination with a valve shell having inlet and outlet openings, a valve moving in said shell to close said outlet, a plunger exposed to fluid pressure within said shell and connected to the valve so that when moved by such pressure it will open the valve, and a retarding device for temporarily sustaining said plunger against such pressure to retard the opening of said valve.

1,112,015. GRINDING-MACHINE. JOHN J. LICHTER and JOHN N. MAHER, St. Louis, Mo., assignors to St. Louis Frog & Switch Company, St. Louis, Mo., a Corporation of Missouri. Filed May 7, 1914. Serial No. 837,039. (Cl. 51—12.)

1. A grinding machine, comprising a horizontally disposed frame equipped with a grinding wheel, and a carriage from which said frame is suspended by means that permits a universal movement of the frame.

2. A grinding machine, comprising a horizontally disposed support equipped with a grinding wheel, a movable carriage that travels on a track or runway, and a connection between said support and carriage which permits the support to be bodily shifted laterally and held in a position parallel to the path of travel of said carriage and also raised and lowered with relation to the work.



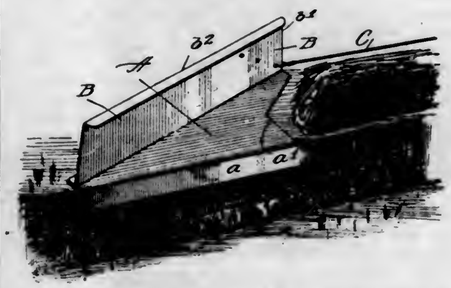
3. A grinding machine, comprising a horizontally disposed support provided with a grinding wheel, a carriage that travels on an over-head track, and a vertically swinging hanger on said carriage in which said support is oscillatingly mounted.

4. A grinding machine, comprising a carriage that travels on an over-head track, a grinding wheel, a vertically swinging supporting structure for said grinding wheel which permits said grinding wheel to be raised and lowered, a connection between said carriage and supporting structure which permits said wheel to be swung laterally and moved bodily in a path parallel to said track.

5. A grinding machine, comprising a horizontally disposed support, a grinding wheel mounted on said support in such a manner that it can be arranged in an inclined plane, a movable carriage, and means suspended from said carriage on which said support is pivotally mounted.

[Claims 6 to 16 not printed in the Gazette.]

1,112,016. DEVICE FOR FILLING IN TRENCHES OR DITCHES. LACHLAN MACLACHLAN, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Dec. 2, 1912. Serial No. 734,484. (Cl. 37—5.)

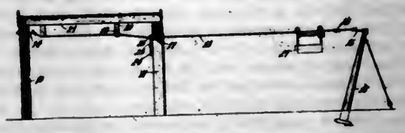


1. A back filling shovel comprising a horizontal wall which rests flatwise upon the ground having a cutting edge at its forward end, a depending runner extending along the edge of said wall, adapted to slide along the vertically disposed side of the trench, forming an apron for delivering the dirt from said wall to the trench, and an upstanding deflector mounted on said wall, disposed at an angle with its rear end at the side of the trench, extending continuously along the upper surface of said wall to the front end thereof, the said runner and deflector converging to the rear end of the shovel and said shovel being held by said runner against displacement away from the ditch.

2. A back filling shovel comprising a horizontal wall which rests flatwise upon the ground having a cutting edge at its forward end, a depending runner extending along the edge of said wall, adapted to slide along the vertically disposed side of the trench, forming an apron for delivering the dirt from said wall to the trench, and an upstanding deflector mounted on said wall, disposed at an angle with its rear end at the side of the trench, extending continuously along the uper surface of said wall to the front end thereof, the said runner and deflector converging to the rear end of the shovel and said shovel being held by said runner against displacement away from the ditch, together with a flange along the upper edge of said deflector, overhanging the front surface thereof.

3. A back filling shovel comprising a horizontal wall which rests flatwise upon the ground having a cutting edge at its forward end, a depending runner extending along the edge of said wall, adapted to slide along the vertically disposed side of the trench, forming an apron for delivering the dirt from said wall to the trench, and an upstanding deflector mounted on said wall, disposed at an angle with its rear end at the side of the trench, extending continuously along the upper surface of said wall to the front end thereof, the said runner and deflector converging to the rear end of the shovel and said shovel being held by said runner against displacement away from the ditch, together with a draft connection for the forward end of said shovel, and means for adjusting said connection.

1,112,017. CARRIER-TRACK. EDWARD MARTIN, Oconomowoc, Wis. Filed July 27, 1914. Serial No. 853,558. (Cl. 104—180.)



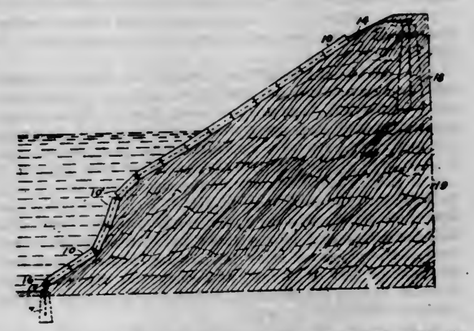
1. In a carrier track for barns and the like, a track wire having one end secured within the barn and passing through the doorway with its other end secured at a point outside of the barn, means for depressing the track wire from a position above the level of the top of the barn door to a position below such level, a track hanger within the barn near the doorway engaging the track wire, and a carrier mounted to travel on the track wire from a loading position between the track hanger and the interior secured portion of the track wire through the doorway to a discharging position outside of the barn.

2. A carrier track for barns and the like, comprising a track wire having one end secured within the barn and passing through the doorway with its other end secured at a point outside of the barn, a suitably mounted lever connected with the track wire near the doorway, means for swinging the lever to lower the track wire from a position at the upper edge of the doorway to a position therebeneath, a track hanger engaging the track wire within the barn near the doorway, and a carrier mounted on the track wire and adapted to travel from a loading position between the track hanger and the interior secured end of the track wire through the doorway to a discharging position outside of the barn.

3. A carrier track for barns and the like, comprising a track wire secured within the barn and passing through the doorway thereof to a point outside of the barn, there being a groove in the upper portion of the doorway through which the track wire passes, a lever pivotally mounted at the doorway having a hooked end engaging the track wire, a handle lever pivotally mounted at the doorway, means connecting the handle lever with the hooked lever for swinging the latter to depress the track wire to a position below the groove, and a carrier mounted on the track wire.

4. In a carrier track, a track hanger comprising a bracket, a hook-shaped hanger member adjustably secured thereto, and an inverted U-shaped cleat embracing the upturned hook-shaped end of the hanger member and, adapted to surround a track wire.

1,112,018. PROTECTION OF LEVEES, EMBANKMENTS, DAMS, AND OTHER NATURAL OR ARTIFICIAL STRUCTURES. JAMES MCGILLIVRAY, Sacramento, Cal. Filed May 17, 1913. Serial No. 768,293. (Cl. 61—30.)



1. A revetment unit of composition provided with tie holes for the purpose set forth and with grooves along its ends for the reception of assembling cables.

2. A slab of reinforced concrete adapted to serve as a portion of a revetment and provided with reinforced tie holes at its ends, and with grooves along its ends for the reception of assembling cables.

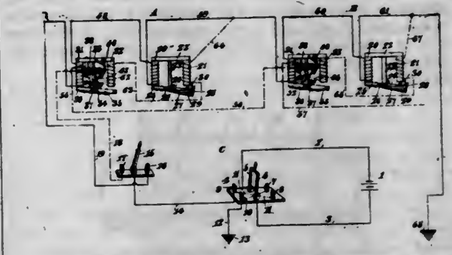
3. A revetment unit consisting of a slab of reinforced concrete provided with a cable groove along each end wall thereof and with transverse reinforced tie holes at the corners of said unit.

4. A revetment consisting of a series of slabs provided with grooves in their adjacent ends, cables extending through the channels formed by said adjacent grooves, and means for holding adjacent slabs together, thereby inclosing the cables in said grooves and making close union between the slabs.

5. A revetment consisting of a series of concrete slabs provided with transverse tie holes, cables extending along the ends of said slabs, and means for tying the slabs together whereby to hold them to said cables and close to each other.

[Claims 6 to 9 not printed in the Gazette.]

1,112,019. SYSTEM OF SELECTIVE CONTROL OF REMOTE-CONTROL SWITCHES. PHILIP THOMAS MCNALLY, Dunlap, Iowa. Filed June 10, 1913. Serial No. 772,906. (Cl. 177—340.)



1. A system for the control of remote control switches, comprising an electro-magnetic control means at each distant station, a polarized relay associated with each of said remote control means, means under the control of each polarized relay for directing current to the next con-

trol station in order, and means for causing current to flow in the desired direction through the polarized relay to cause the latter to operate or to remain quiescent, at will.

2. A system for the selective control of remote control switches, comprising polarized control magnets each at a distant station, a polarized relay associated with each control magnet, the polarized relay and the polarized control magnet having active magnets in series and restoring magnets in series, different circuit connections for each group of magnets, means for directing current to either set of magnets, at will, means for controlling the direction of flow of current through the active magnets at will, and means associated with each polarized relay for cutting out the active magnets at the station where the relay is located and coupling up the control line of the next station in order.

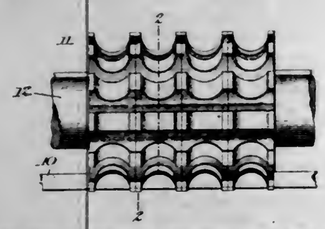
3. A system of selective control of remote control switches, comprising a control magnet and a polarized relay associated therewith at each distant station, each control magnet and polarized relay associated therewith comprising two separate electromagnets, an armature common to both electromagnets and polarized with respect to one of those electromagnets on the relay and control magnet active to the respective polarized armatures being connected in series, and the other electromagnets being also connected in series, means under the control of the armature of the polarized relay for cutting the associated control magnet out of circuit, and means for energizing the magnets having the polarized armatures to produce therein different polarities, at will.

4. A system of selective control of remote control switches, comprising a control magnet and a polarized relay associated therewith at each distant station, each control magnet and polarized relay associated therewith comprising two separate electromagnets, an armature common to both electromagnets and polarized with respect to one of them, those electromagnets on the relay and control magnet active to the respective polarized armatures being connected in series and the other electromagnets being also connected in series, means under the control of the armature of the polarized relay for cutting the associated control magnet out of circuit, and means for energizing the magnets having the polarized armatures to produce therein different polarities, at will, the system also including means for directing current through all the electromagnets controlling the nonpolarized portions of the armatures simultaneously throughout the system.

5. A system for the selective control of remote control switches, comprising a series of sets each including a control magnet having separate electromagnets and an armature common to both and polarized with respect to one of the magnets, and a polarized relay associated with the control magnet and also including separate electromagnets with an armature common to both and polarized with respect to one of the electromagnets, and means associated with each polarized relay for cutting the control magnet out of circuit.

[Claims 6 to 12 not printed in the Gazette.]

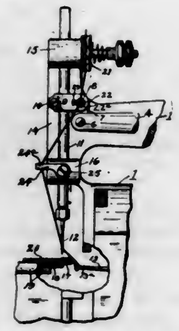
1,112,020. METHOD OF MAKING KEYS. SILAS C. MERRICK, New Brighton, Pa., assignor to The Standard Horse Nail Company, New Brighton, Pa., a Corporation of Pennsylvania. Filed June 24, 1914. Serial No. 847,119. (Cl. 90—11.)



1. The herein described method of making semi-cylindrical prismatic keys which consists in milling transversely through a bar of rectangular cross section, the width of the bar in the direction of feed of the cutter being the thickness of the key and the cutter forming the curved side of the key and severing the key from the bar in one operation.

2. The herein described method of making semi-cylindrical prismatic keys which consists in milling transversely through a series of bars of rectangular cross section arranged side by side in the direction of feed of the cutter, the cutter forming the curved sides of the keys and severing the keys in one operation.

1,112,021. TAKE-UP FOR CROCHET-MACHINES. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 9, 1913. Serial No. 741,060. (Cl. 112—26.)



1. In a crochet machine, the stitch forming mechanism of which includes a vibratory reciprocating crochet hook operating to form overedge stitches including an upper loop and a lower loop formed from a single thread and the two loops of which are tied by a loop of the following stitch; and in combination therewith, a pair of thread supporting elements mounted one above and to one side of the other on a stationary portion of the machine, and a vertically reciprocating thread engaging implement operating upon the thread in a path the limits of which are beneath the upper and above the lower of the thread supporting elements and within the lateral distance therebetween whereby the said thread engaging implement pulls off the thread as the crochet hook forms the upper loop and lets out the same as the said hook forms the lower loop, and means for actuating and carrying the thread engaging implement.

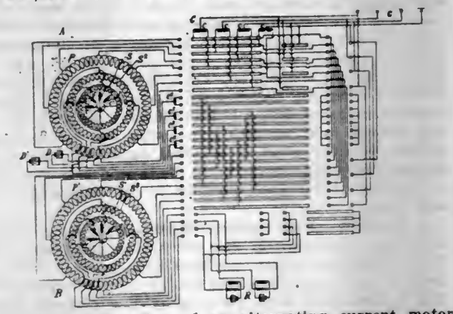
2. In a crochet machine, including an eye pointed needle, a needle bar and a vibratory reciprocating crochet hook and in combination, a device of the class described embodying a tension and an adjustable thread guide, both mounted on a stationary portion of the machine, the tension being mounted above the thread guide and on the side of a line parallel with the needle bar opposite to that on which the thread guide is adjustably mounted, and a thread engaging implement carried by the needle bar and operating upon the thread immediately between the tension and the thread guide in the path parallel with the needle bar and between the tension and the said thread guide; whereby the thread is pulled off and let out once for each two reciprocations of the crochet hook.

3. In combination in a crochet machine including a reciprocating eye pointed needle, a device of the class described embodying a thread engaging implement reciprocating in a vertical rectilinear path, a tension mounted on one side of and above the upper end of the path of the implement and a thread guide adjustably mounted on the other side of and between the said path and the path of the needle eye, the straight line between the tension and the thread guide being inclined to the path of the implement and the straight line between the said thread guide and the point of penetration of the needle being inclined to the path of the needle eye, whereby the thread engaging implement, operating upon the needle thread held between the tension and the thread guide, may pull off thread on its descent and let out the pulled off thread on its ascent and whereby the needle, operating upon the needle thread held between the said thread guide and the point of needle penetration, may take up and let out the thread; substantially as herein set forth and described.

4. In combination in a crochet machine, the stitch forming mechanism of which includes an eye pointed needle and an oscillatory crochet hook, a mechanism for operating on the thread including a tension mounted on the upper portion of the frame head of the machine, a thread guide mounted on the lower portion thereof, an eye in the said thread guide and an eye reciprocating in a path inclined to the straight line between the tension and the thread guide, the course of the thread through the elements of the device being from the tension through the reciprocating eye, through the eye of the thread guide and then through the needle eye, whereby the reciprocating eye coöperating with the tension and the thread guide may operate to pull off the thread on its descent and to let out the thread to the needle and the crochet hook on its ascent substantially in the manner and for the purposes herein set forth.

5. In a crochet machine including an eye pointed needle, a needle bar mounted in the frame head of the machine and mechanism for actuating the needle bar, the combination of a tension mounted on the upper portion of the frame head, an arm one end of which is adjustably secured to the lower portion of the frame head, the said arm having a thread eye through the free end thereof, situated at one side of a straight line between the point of penetration of the needle and the tension, a reciprocating eye operating on the thread between the tension and the thread eye to pull off thread on its descent and let out the same on its ascent, said needle eye operating between the thread eye and the point of penetration of the needle to take up thread on its ascent and let out the same on its descent; whereby adjustment of the position of the thread eye with respect to the tension and the point of penetration of the needle will simultaneously vary the action of the reciprocating eye and the needle eye.

1,112,022. CONCATENATED CONTROL OF ALTERNATING-CURRENT MOTORS. RALPH D. MERSHON, New York, N. Y. Filed June 11, 1906. Serial No. 321,094. (Cl. 172—274.)



1. The combination of an alternating current motor having primary and secondary elements each adapted to operate with different numbers of poles, an alternating current motor having a primary element connected with the secondary element of the first named motor to receive current therefrom, and capacity across the connections between the motors.

2. The combination of a plurality of alternating current motors having primary and secondary elements each of which elements is adapted to operate with different numbers of poles, means for connecting the motors in concatenation or in multiple with the same or different numbers of poles, as desired, and means for connecting capacity across the secondary terminals of one or more of the motors when in concatenation.

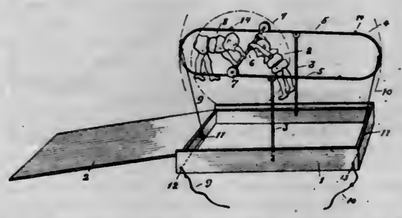
3. The combination of an alternating current motor having a primary element and a plurality of independent secondary windings, an alternating current motor having a primary element, means for connecting the primary of the last named motor with any of the secondary windings of the first named motor, and means for varying the number of poles in the primary of the first named motor.

4. The combination of a plurality of alternating current motors each having a primary winding and a plurality of secondary windings, means for connecting the motors in multiple or in concatenation and for varying the number of poles in the primary winding of one or more of the motors, and means for connecting capacity across the secondary terminals of one or more of the motors.

5. The combination with a plurality of motors, of means for connecting the same in concatenation or in multiple with the same or different numbers of poles, as desired, and means connected across the terminals of an intermediate circuit of the system when in concatenation, to neutralize to a desired extent the stray field resulting from the concatenated connection.

[Claims 6 to 10 not printed in the Gazette.]

1,112,023. ACROBATIC TOY. CHARLES A. MEURER, Terrace Park, Ohio. Filed Jan. 20, 1913. Serial No. 743,005. (Cl. 46—40.)



1. In a toy device, a base and side supports, with a track of parallel rails secured together and pivotally mounted at its middle portion on the side supports, a bar with grooved rollers adapted to ride on said track, and counterbalanced acrobatic figures secured to said bar, to rotate therewith.

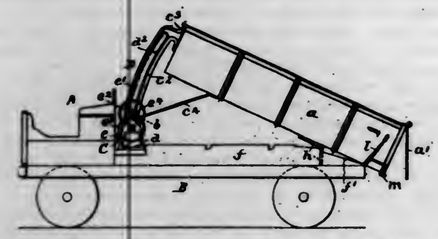
2. In a toy device, a base and side supports, with a track of parallel rails secured together and pivotally mounted at its middle portion on the side supports in horizontal position, a bar with grooved rollers adapted to ride on said track, and counterbalanced acrobatic figures secured to said bar, to rotate therewith, with the arms and legs of the figure jointed to the body portion, to allow free movement.

3. In a toy device, a base and side supports, with a track of parallel rails secured together and pivotally mounted at its middle portion on the side supports in horizontal position, a bar with grooved rollers adapted to ride on said track, and counterbalanced acrobatic figures secured to said bar, to rotate therewith, with the arms and legs of the figure jointed to the body portion, to allow free movement, and cords attached to both ends of the track structure, to shift the track in either direction as desired.

1,112,024. MOTOR-TRUCK HAVING A DUMPING-BODY. JOSEPH W. MONAHAN, Providence, R. I. Filed Oct. 7, 1911. Serial No. 653,356. (Cl. 21—20.)

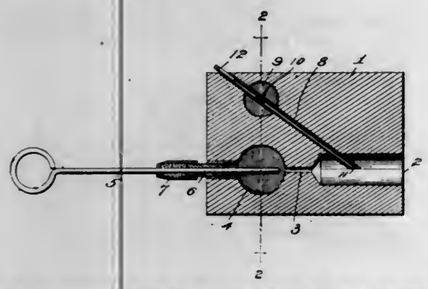
The combination with the chassis, frame and body of a motor truck, of elevating mechanism comprising a pair of curved longitudinally-slotted bars, each having rack teeth on the concave wall of its slot, and a plain bearing surface on the convex wall of its slot, and provided at its upper end with an integral rearwardly-projecting foot having an enlarged flat rear face to afford an extended bearing surface upon the front of said body to which it is secured, and at its lower end with an upwardly-inclined rigid strut, the rear end of which is secured to the underside of said body near its front end, a main shaft having its ends projecting through the slots in said bars, spaced collars on the ends of said main shaft, one on each side of said bars,

pinions on said shaft between the collars, engaging the teeth on one side of the slots, and having a guiding bear-



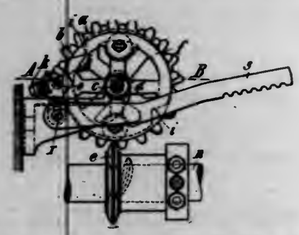
ing on the opposite sides of the slots, and gearing for revolving said shaft.

1,112,025. OIL-BURNING APPARATUS. FRANK E. NELSON, Los Angeles, Cal. Filed Jan. 27, 1914. Serial No. 814,668. (Cl. 158—75.)



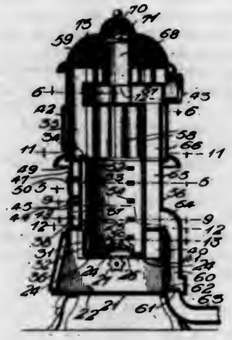
An oil burning apparatus comprising a body having a mixing chamber that is open at its forward end, and a steam-receiving chamber located back of the first-named chamber, and a comparatively small steam duct intermediate said chambers, and also having an oil-receiving chamber located above and in the same vertical plane as the steam-receiving chamber; an oil conduit extending obliquely through the oil-receiving chamber and having a port in communication therewith and also having a beveled discharge end in the mixing chamber and arranged in the same horizontal plane as the uppermost portion of the steam duct; removable means for normally closing the outer end of the oil conduit; packing means connected with the body; and a cleaning rod removably arranged in said packing means and in alinement with the steam duct.

1,112,026. DEVICE FOR DETERMINING THE FREQUENCY OF THE SHOTS IN WOVEN FABRICS. HEINRICH OBERHOLZER, Mährisch Schönberg, Austria-Hungary. Filed June 1, 1914. Serial No. 842,123. (Cl. 139—18.)



A device for determining the frequency of the shots in woven fabrics, consisting of two independently revoluble worm wheels, the number of teeth on said worm wheels differing by one, a notch disk attached to each worm wheel, and means coöperating with said notched disks so as to rock the lever controlling the counter warp threads when the notches in said disks register.

1,112,027. HEATING-STOVE. ELGIN F. PAQUIN, Charlestown, N. H., and CHARLES C. PAQUIN, Springfield, Vt. Filed July 3, 1911. Serial No. 636,777. (Cl. 126—67.)



1. In a stove of the character described, the combination of a base, a cylindrical fire pot having the lower end thereof disposed within the base and provided with a grate, a main body above said fire pot having communication therewith and with the chimney, a reticulated dome disposed on said main body and having therein an air chamber, an annular casing depending from the said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom thereby forming a circumferential air inlet, air passages interposed between said fire pot and casing and communicating with said air inlet whereby the air may circulate through said passages and protect the casing from the deteriorating effect of the heat radiating from said fire pot, and means whereby the air in said passages may be conveyed in a heated condition to the air chamber in said dome.

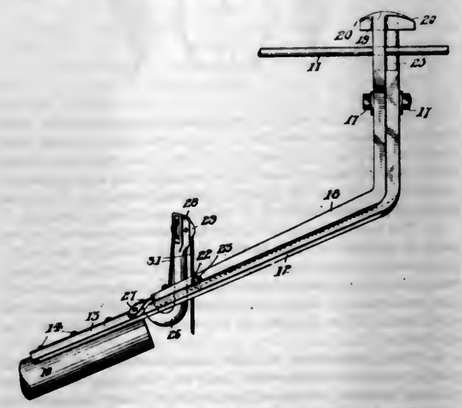
2. In a stove of the character described, the combination of a base, a cylindrical fire pot having the lower end thereof disposed within the base and provided with a grate, a main body above said fire pot having communication therewith and with the chimney, a reticulated dome disposed on said main body and having therein an air chamber, an annular casing depending from the said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom thereby forming a circumferential air inlet, radially extending wings formed on the side of said fire pot and adapted to coact with said casing to form vertically extending air passages, the lower ends of which communicate with said air inlet whereby air may circulate through said passages and protect the casing from the deteriorating effect of the heat radiating from said fire pot, and means whereby the air in said passages may be conveyed in a heated condition to the air chamber in said dome.

3. In a stove of the character described, the combination of a base, a cylindrical fire pot having the lower end thereof disposed within the base and provided with a grate, a main body above said fire pot having communication therewith and with the chimney, a reticulated dome disposed on said main body and having therein an air chamber, an annular casing depending from the said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom thereby forming a circumferential air inlet, air passages interposed between said fire pot and casing and communicating with said air inlet whereby the air circulating through said passages will protect the casing from the deteriorating effect of the heat radiating from said fire pot, and upright tubes arranged within said main body connecting said vertical air passages with the air chamber in said dome whereby the air in said passages may be conveyed to said chamber and heated in transit by the products of combustion in said main body.

4. In a stove of the character described, the combination of a base, a cylindrical fire pot having the lower end thereof disposed within the base and provided with a grate, a main body above said fire pot having communication therewith and with the chimney, a reticulated dome disposed on said main body and having therein an air chamber, an annular casing depending from said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom, thereby forming a circumferential air inlet, air passages interposed between said fire pot and casing and communicating with said air inlet whereby the air circulating through said passages will protect the casing from the deteriorating effect of the heat radiating from said fire pot and casing depending from said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom, thereby forming a circumferential air inlet, air passages interposed between said fire pot and casing and communicating with said air inlet whereby the air may be conveyed in a heated condition to the air chamber in said dome, an auxiliary air heating means arranged within said stove and comprising a drum located within said main body immediately above the fire pot and adapted to be heated by the products of combustion arising therefrom, means whereby outside air is conveyed to and heated by said drum, and an upright pipe connecting said drum with said air chamber whereby the heated air in the former may be carried to the latter and conveyed to the exterior of the stove.

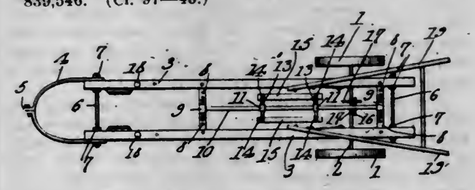
5. In a stove of the character described, the combination of a base, a cylindrical fire pot having the lower end thereof disposed within the base and provided with a grate, a main body above said fire pot having communication therewith and with the chimney, a dome disposed on said main body having therein an air chamber, an annular casing depending from the said main body, said casing having the front portion of its lower end secured to said base, the remaining rear and sides thereof being spaced therefrom, thereby forming a circumferential air inlet, air passages interposed between said fire pot and casing and communicating with said air inlet whereby the air circulating through said passages will protect the casing from the heat radiating from said fire pot, a drum located within said main body immediately above the fire pot and adapted to be heated by the products of combustion arising therefrom, means whereby outside air is conveyed to and heated by said drum, a baffle plate within said drum for deflecting the air passing therethrough whereby the latter may be brought into contact with the heated walls of said drum, and a vertically disposed pipe having its lower end communicating with said drum and its upper end entering said air chamber whereby the heated air in the former may be conducted to the latter and conveyed to the exterior of the stove.

1,112,028. TROLLEY-POLE HEAD. JOZEPH PARADOWISH, Brockton, Mass. Filed June 5, 1914. Serial No. 843,131. (Cl. 191—80.)



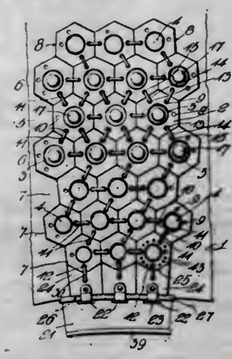
The combination with a trolley pole, of an angular arm secured to the outer end thereof, said arm carrying a head at its outer end, a second angular arm pivoted to the first-named arm and provided with a head in engagement with the first-named head, the front and rear ends of the opposing faces being beveled for a portion of their lengths, jaws on said arms inwardly of the heads, a spring connecting the inner ends of the arms and adapted to bring the heads into contact, a third arm secured at one end to the first-named arm, a pulley revolubly mounted in the other end of said arm, and a rope passing over said pulley and connected at one end to the second-named arm for controlling the movement of said head.

1,112,029. COTTON-CHOPPER. MARTIN M. PERKINS, Alabama City, Ala. Filed May 19, 1914. Serial No. 839,546. (Cl. 97—45.)



A cotton chopper including a wheel supported revoluble axle, longitudinal beams adjustably connected to and supported by the axle, adjustably connected cross strips carried by the beams, a longitudinal shaft journaled upon said strips, hangers adjustably connected to and movable with the shaft, said hangers having downwardly diverging arms, chopping blades connected to the arms, said blades being parallel with the shaft, oppositely extending fingers connected to and movable with the shaft, and radially disposed tappets revoluble with the axle and disposed in pairs, the tappets of each pair being adapted to engage and actuate one finger and the tappets of the other pair being adapted to engage and actuate the other finger, said tappets engaging the fingers successively.

1,112,030. ARMOR FOR PNEUMATIC TIRES. ROBERT C. PURVIS, Seaford, Del. Continuation of application Serial No. 410,325, filed Jan. 11, 1908. This application filed July 12, 1910. Serial No. 571,597. (Cl. 152—16.)



1. An armor for pneumatic tires comprising an inclosing sheath, a plurality of substantially hexagonal disks secured to the sheath arranged in longitudinal rows, the disks of each row gradually decreasing in size from the central longitudinal row outwardly, said disks having apertures in separate pairs of adjoining sides and leaving two diametrically opposite perfectly free sides, links passing through said apertures and arranged in rows extending longitudinally with and diagonally to the circumference of the wheel, the succeeding rows having the disks thereof mating with the disks of other rows with their edges substantially abutting to prevent entrance of for-

eign articles, means for securing the armor upon the tire, and means to adjust ssid securing means.

2. An armor for pneumatic tires comprising an inclosing sheath, a flexible metallic sheath composed of a plurality of substantially hexagonal disks arranged in longitudinal rows, the disks of said rows gradually decreasing in size from the central longitudinal row outwardly, two of the opposite sides of certain of the disks being arranged in converging relation and converging in an inward radial direction, said disks also having apertures in separate pairs of adjoining sides and leaving two diametrically opposite perfectly free sides, links passing through said apertures and arranged in rows extending longitudinal with and diagonally to the circumference of the wheel, the succeeding rows having the disks thereof mating with the disks of other rows with their edges substantially abutting to prevent entrance of foreign articles, extra links uniting the disks of the central longitudinal rows and the two next adjacent side rows whereby the tread portion of the tire will be strengthened and means to secure the armor upon the tire.

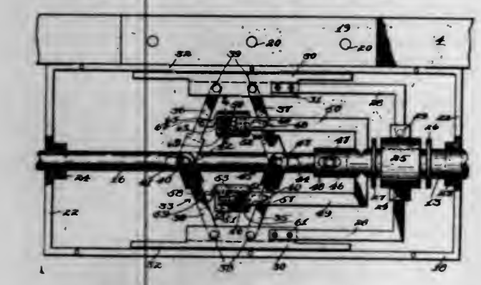
3. A flexible metallic armor completely inclosing the pneumatic tire and protecting it from internal stress and external injury, said armor being composed of a plurality of flexibly connected substantially hexagonal closely abutting metallic disks, said disks gradually decreasing in size from the central or tread portion of the armor outwardly toward both margins.

4. A flexible metallic armor adapted to completely inclose a pneumatic tire and protect it from internal stress and external injury comprising a plurality of substantially hexagonal metallic disks with the edges of adjacent disks abutting and fitted to conform to the shape of the tire to which it is to be applied, and means for flexibly connecting some but not all of the edges of the disks to hold them in close relation to prevent the entrance of foreign substances between them.

5. In an armor for pneumatic tires, and in combination with a plurality of disks, links flexibly connecting said disks so as to form a number of rows running diagonally to the circumference of the tire to which the device is applied, and links flexibly connecting said disks in circumferential rows, one pair of diametrically opposite edges of each disk being free or unlinked to abutting disk edges.

[Claims 6 to 23 not printed in the Gazette.]

1,112,031. STEERING MECHANISM FOR AUTOMOBILES. GORDON A. REAM, Buffalo, N. Y. Filed July 31, 1913. Serial No. 782,245. (Cl. 21—194.)



1. In apparatus of the character described, a plurality of longitudinally movable rods arranged in coöperative relation, locking means connected with one rod and operated upon the longitudinal movement of the same, and means connected with the locking means and with the other rod to release the locking means upon the longitudinal movement of the last named rod.

2. In apparatus of the character described, a plurality of longitudinally movable rods arranged in end to end relation, locking means connected with one longitudinal rod and operated upon the longitudinal movement of the same, means connected with the locking means and with the other longitudinal rod to release the locking means upon the longitudinal movement of the last named rod, and connecting means between the longitudinal rods whereby one may move the other upon the release of the locking means.

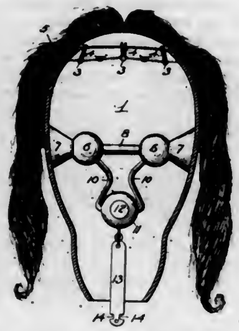
3. In apparatus of the character described, a plurality of longitudinally movable rods, connecting means between the same, means positively preventing one rod from moving the other rod, and means operated upon the slight longitudinal movement of the last named rod to operate the last named means, whereby the last named rod upon further longitudinal movement thereof in the same direction will move the first named rod longitudinally.

4. In apparatus of the character described, a plurality of longitudinally movable operating and operated rods disposed in end to end relation, a fixed structure disposed near the rods, brake shoes pivotally connected with the operated rod and engaging the fixed structure, control means for the shoes, connecting means between the control means and the operated rod whereby the shoes are forced into clamping engagement with the fixed structure upon the longitudinal movement of the operated rod in either direction, connecting means between the control means and the operating rod whereby the shoes are moved out of engagement with the fixed support upon the longitudinal movement of the operating rod in either direction, and means whereby the operating rod will move the operated rod after the release of the shoes.

5. In apparatus of the character described, reciprocatory operating and operated elements disposed in end to end relation, brake means connected with the reciprocatory operated element and adapted when set to positively prevent the operated element from partaking of reciprocatory movements in either direction, and means connected with and operated by the movement of the reciprocatory operating element in either direction to release the brake means.

[Claims 6 to 11 not printed in the Gazette.]

1,112,032. DOLL-HEAD. ERNST REINHARDT, Philadelphia, Pa. Filed Dec. 9, 1913. Serial No. 805,586. (Cl. 46—40.)



1. The combination of a doll head having inwardly projecting sockets secured to the opposite sides thereof, eyes seated in said sockets, and a resilient yoke connecting said eyes and retaining them in the sockets but susceptible of contraction so as to permit disengagement of the eyes from the sockets when it is desired to change the eyes.

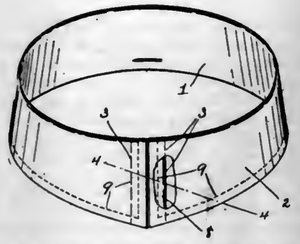
2. The combination of a doll head having inwardly projecting sockets secured to the opposite sides of the same, eyes seated in said sockets, and a strut interposed between the eyes and serving to maintain them in engagement with the sockets, said strut being removable from between the eyes when it is desired to move the latter toward one another.

3. The combination of a doll head having inwardly projecting sockets on opposite sides of the same, eyes fitted to said sockets, a depending resilient yoke connected to said eyes and serving to maintain them in engagement with the sockets, and a weight mounted upon said yoke.

4. The combination of a doll head having a shell with slotted rear portion, swinging eyes, and a depending weight connected thereto, with a locking bar connected to said weight and notched for engagement with the slotted rear portion of the shell.

5. The combination of a doll head having on the inside of the same sockets at the opposite sides thereof, eyes seated in said sockets, and resilient means disposed between the eyes and serving to retain the same in said sockets but contractible so as to permit of their removal therefrom.

1,112,033. SOFT FOLD-COLLAR. JULIA ROBINSON, Troy, N. Y., assignor, by mesne assignments, to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed Nov. 13, 1912. Serial No. 731,084. (Cl. 2—67.)



1. A soft-fold-collar having a folded-over top formed of a plurality of plies inturned and secured together along their edges, and a reinforcing strip having an edge portion stitched to, and inturned between, the respective edge portions of the top along its ends and extending to a greater distance from the end of the top than do the inturned edges of the top plies.

2. A soft fold-collar having a folded-over top formed of a plurality of plies inturned and secured together along their edges, and a reinforcing strip folded along its longitudinal middle and having its edge portions stitched to, and inturned between, the respective edge portions of the top along its ends, said strip having its folded edge portion extending further inward from the end of the top than do the inturned edges of the top plies, said folded edge and top plies being connected together by a line of stitching extending along the inner side of said inturned top ply edges.

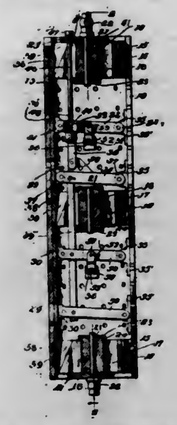
3. A soft fold-collar having a folded-over top formed of a plurality of plies inturned and secured together along their edges, and having a reinforcing strip stitched to, and inturned between, the respective edge-portions of the top along its ends, said top having means whereby its ends are adapted to be secured together.

1,112,034. CORE-BAR. WALTER D. ROSS, Anniston, Ala. Filed Sept. 11, 1912. Serial No. 719,879. (Cl. 22—173.)

1. A collapsible core-bar comprising a main body portion, said body portion being slotted throughout its length, a member movable within the slot formed in the body portion, supporting heads arranged within the body portion, said heads being formed of hingedly connected sections which are secured to said body portion, means carried by the movable member for moving the sections of the heads to expand said body portion, and means carried by one of the sections and contacting with the other for limiting the movement of said head sections.

2. A collapsible core-bar comprising a main body portion, said body portion being slotted throughout its length, a member movable within the slot formed in the body portion, supporting heads arranged within the body portion, said heads being formed of hingedly connected sections which are secured to said body portion, means carried by the movable member for moving the sections of the heads to expand said body portion, and means for limiting the expansion of the head sections, said means comprising a flange plate supported by one of said sections.

3. A collapsible core-bar comprising a main body portion, said body portion being slotted throughout its length, a member movable within the slot formed in the body portion, supporting heads arranged within the body portion, said heads being formed of hingedly connected sections which are secured to said body portion, means carried by the movable member for moving the sections of the heads to expand said body portion, and means for limiting the expansion of the head sections, said means including a member supported by one of the head sections and disposed to contact with the other head section.



4. A collapsible core-bar comprising a main body portion, said body portion being slotted throughout its length, a member movable within the slot formed in the body portion, supporting heads arranged within the body portion, said heads being formed of hingedly connected sections which are secured to said body portion, means carried by the movable member for moving the sections of the heads to expand said body portion, and means for limiting the expansion of the head sections, said means including a plate supported by one of the sections of the head, said plate being formed with a curved flange disposed to contact with the other head.

5. A collapsible core-bar comprising a main body portion, said body portion being slotted throughout its length, a member movable within the slot of said body portion, the outer face of said member and the outer face of the body portion forming a continuous surface when the movable member assumes its position within said slot, supporting heads disposed in spaced relation within the body portion, arms having a pivotal connection with the body portion and the movable member, a bar connecting said arms, means for moving said bar longitudinally of the body portion to impart movement to the movable member, and a flexible connection between said arms and the inner wall of the body portion.

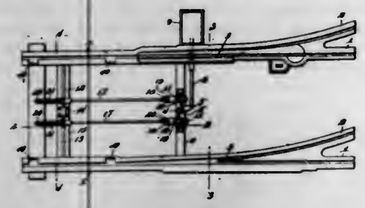
[Claims 6 to 8 not printed in the Gazette.]

1,112,035. AUTOMATIC RAILWAY-SWITCH. GARRETT D. SNYDER, Calgary, Alberta, Canada. Filed Oct. 3, 1913. Serial No. 793,240. (Cl. 104—24.)

1. In a railway switch, the combination with the switch points, of a hub, a connecting arm extending outwardly from said hub, a rod connecting said arm with the switch points, operating arms extending outwardly from said hub at diametrically opposite points and at right angles to said first arm, push rods, a pin and slot connection between each push rod and one of said operating arms, a shaft comprising coaxial sections, an arm secured to each section and connected to one of said push rods, and means for rotating said sections independently of one another whereby the switch points may be thrown to the desired position.

2. In a railway switch, the combination with the switch points, of a hub, a connecting arm extending outwardly from said hub, a rod connecting said arm with the switch points, operating arms extending outwardly from said hub at diametrically opposite points and at right angles to

said first arm, push rods, a slotted link carried by one end of each push rod, a pin carried by each of said operating arms and in engagement with the slot in one of said links, a shaft comprising coaxial sections, an arm secured to each



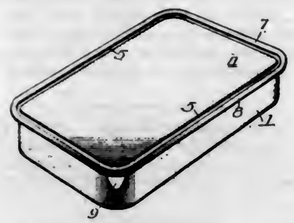
section and connected to one of said push rods, and means for rotating said sections independently of one another whereby the switch points may be thrown to the desired position.

1,112,036. CLAMP FOR TEAR-OFF BLOCKS. WILHELM STIEWE, Treptow, near Berlin, Germany. Filed Feb. 14, 1914. Serial No. 818,638. (Cl. 40—121.)

1. A block or pad, comprising in combination, a plurality of leaves having a row of slits at one end for the reception of the holding portions of a binding cap extending the width of the pad, the end slits at the sides of the leaves having open ends, and an angular cap formed of sheet metal, having a body portion provided with apertures, and a holding portion provided with holding tongues extending through the slits in the leaves, the outer tongues lying in the open slits substantially filling the length of said slits and extending substantially to the edges of the leaves, thus preventing the formation of fringes attached to the stub at the sides of the leaves as the leaves are torn off, the free ends of the tongues being bent upwardly, and the body portion of the cap being bent over the top of the pad and then downwardly over the tongues, forming a rim extending across the pad beyond the slits, said tongues extending through the apertures in the body portion of the cap and being bent to lock the parts together.

2. A block or pad, comprising in combination a plurality of leaves having a row of slits at one end for the reception of the holding portions of a binding cap extending the width of the pad, the slits at the sides of the leaves having open ends, and an angular cap formed of sheet metal, having a body portion provided with apertures, and a holding portion provided with holding tongues extending through the slits in the leaves and then bent upwardly, the body portion of the cap being bent over the top of the pad and then downwardly over the tongues, forming a rim extending across the pad beyond the slits, said tongues extending through the apertures in the body portion of the cap and being bent to lock the parts together, the body and holding portions of the cap being bent one upon the other at their juncture to form a rib extending beyond the row of slits in the leaves, on the face of the pad opposite to the bent ends of the holding tongues.

1,112,037. SHEET-METAL CAN FOR SARDINES. WILLIAM E. TAYLOR, Eastport, Me., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 1, 1910. Serial No. 584,788. (Cl. 220—65.)

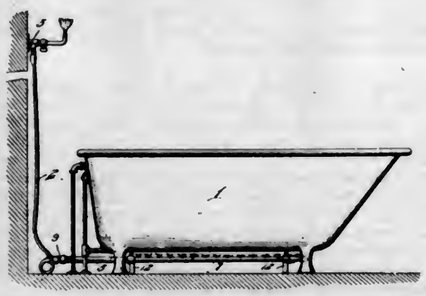


1. In a sardine can, the combination with a can body having an outstanding seam flange, of a cover having a longer outstanding seam flange soldered at its inner part to said seam flange of the body and provided with an unsoldered inturned and free flange at its outer portion folded around and inclosing the soldered edge of said outstanding flange of the body, substantially as specified.

2. In a sardine can, the combination with a can body having an outstanding seam flange, of a cover having an outstanding seam flange soldered to said seam flange of the body and provided with an unsoldered inturned and free flange at its outer portion folded around said outstanding flange of the body, said cover having a projecting tongue carried on the said free and unsoldered folded portion independent of the seam, and scores or weakened lines extending from the edges thereof across the seam flange and along the sides and end of the cover.

3. In a sardine can, the combination of a can body having an outstanding seam flange, and a cover having an outstanding seam flange soldered to the seam flange of the body, one of the said flanges being longer than the other and extending beyond the soldering and the edge of the shorter flange, and being bent around the soldered edge of the latter so as to be substantially parallel with the shorter flange, and to inclose the same, the said longer flange beyond the outer edge of the shorter flange being unconnected with and free from the shorter flange; substantially as set forth.

1,112,038. BATH-TUB HEATER. JOHN N. THORNTON, Bridgeport, Conn. Filed Sept. 26, 1913. Serial No. 792,055. (Cl. 126—350.)

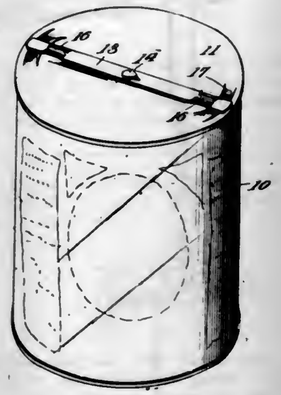


1. The herein described bath tub heater comprising a tube having a suitable gas inlet and a series of upwardly directed burner outlets, legs embracing the tube and each independently adjustable about the tube to extend therefrom at any desired angle, and means for securing the legs rigidly to the tube in any adjusted position.

2. The herein described bath tub heater comprising a tube having air and gas inlets adjacent one end and bent upon itself to provide a plurality of substantially parallel members each provided with a series of upwardly directed burner openings, a plurality of legs each having a portion surrounding one of said members and adapted to turn thereon to extend at any desired angle from the tube, and means for securing each leg in any adjusted position.

3. The combination with a bath tub, of a heater arranged beneath the tub and comprising a tube having at one end means for attaching a gas supply pipe, said tube being bent upon itself to provide a plurality of laterally spaced connected members, each of which has a series of upwardly directed burner openings, and legs connected with the tube and bodily adjustable relative thereto for the purposes described.

1,112,039. CAN-OPENER. HENRY TILL, Pittsburg, Cal. Filed Feb. 17, 1914. Serial No. 819,245. (Cl. 220—67.)



1. The combination with a container top, of an opener having a piercing element pivoted on the top, the top being instruck to provide a seat having an inclined bottom wall to receive the piercing element.

2. The combination with a container top, of an opener having a piercing element pivoted on the top, the top being instruck to provide a seat concentrically curved with respect to the pivot point of the opener and having an inclined bottom wall.

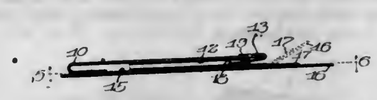
3. The combination with a container top, of an opener having a piercing member pivoted on the top, the top being instruck to provide a seat including spaced side walls and a bottom wall having a horizontal central portion and upwardly inclined end portions.

4. The combination with a container top, of an opener having a piercing member pivoted on the top, the top being instruck to provide a seat including spaced side walls and a bottom wall having a horizontal central portion and upwardly inclined end portions, said bottom wall being curved concentrically of the pivot point of the opener.

5. The combination with a container top, of an opener pivoted centrally of its length and provided at its ends with piercing prongs, the top being instruck at diametrically opposite points to provide seats to receive the prongs, said seats each including an inclined bottom wall over which the prongs ride.

1,112,040. COIN-HOLDER. JOHN T. TODD, Springfield, Ill., assignor to The Registered Tracer System, Springfield, Ill., a Corporation of Illinois. Filed Oct. 16, 1911. Serial No. 654,843. (Cl. 229—69.)

1. The combination of a substantially flat and closed casing for receiving coins, and having a narrow opening through one edge, a flexible tubular member inserted into the opening, said tubular member having a portion extending from one end thereof and projecting through the opening to the outside of the casing, means operating to prevent the removal of the coins from the casing, but permitting the insertion of a coin into the casing through the tubular member, and a fly leaf separate from but connected with the casing in such a manner as to fold over the face of the casing to rest flat thereagainst.



2. The combination of a closed casing for receiving coins, and having a narrow opening through one edge, a flexible tubular member in the casing and having a portion projecting through the opening to the outside of the casing, a portion of the tubular member operating to prevent the removal of the coins from the casing but permitting the insertion of the coins through the tubular member into the casing, and a flap separate from the casing and adapted to be folded over that edge of the casing which contains the opening, and onto the face of the casing, the said projecting portion of the tubular member serving as a guide for directing the coins into the opening, said flap also extending over the said projecting portion.

3. The combination of a closed casing for receiving coins, and having a narrow opening through one edge, an open ended tubular member within the casing having one end adjacent the opening in the casing and with another end terminating short of the opposite edge of the casing, tongues projecting across the tubular member to form a yielding closure for the tubular member, a wrapper adapted to encompass the casing, and means projecting beyond the edge of the casing and connected with the wrapper and serving as a guide for directing the coin into the tubular member.

4. The combination of a closed casing for receiving the coins, and having a narrow opening through one edge, an open ended tubular member within the casing with one end terminating short of the bottom of the casing, another end being disposed adjacent the said opening in the edge of the casing and adapted to receive the coin, means within the tubular member for retaining the coin against removal therethrough, a wrapper encompassing said casing, and means projecting from the end of the tubular member beyond the casing and secured to the wrapper and serving as a guide for directing the coin into the tubular member.

5. The combination of a closed casing for receiving coins, and having a narrow opening through one edge, an open ended tubular member within the casing with one end terminating short of the bottom of the casing, another end being disposed adjacent the said opening in the edge of the casing and adapted to receive the coin, means within the tubular member for retaining the coin against removal therethrough, and a wrapper encompassing the casing, a portion of the tubular member projecting beyond the end thereof, through the opening in the casing and secured to the wrapper for directing the coin into the tubular member.

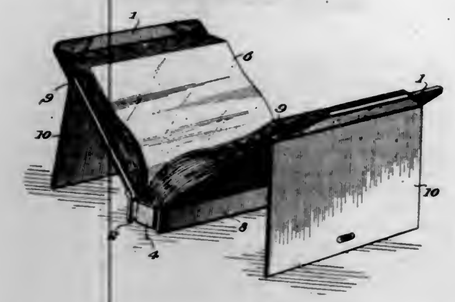
1,112,041. SHEET-CONTAINER. WILLIAM T. TREADWAY, St. Louis, Mo. Filed Mar. 9, 1914. Serial No. 823,342. (Cl. 129—1.)

1. A container for sheets comprising attached back portions hinged for convergent and divergent swinging movement and adapted to afford a support and covering for sheets, and extensible support members mounted on said back portions and adapted in their extended positions to support said back portions in a partially opened position, and in their retracted positions to conform to the surface contour of said back portions, releasable means for securing said support members in their retracted positions, and means for causing said support members to assume their extended positions.

2. A container for sheets comprising hinged back portions adapted to support sheets therebetween, supports for said back portions hinged thereto, means for limiting

the swinging movement of said supports in either direction, and means for holding said supports in either of their extreme positions.

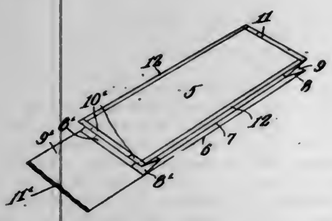
3. A container for sheets comprising hinged back portions adapted to support sheets therebetween, supports for said back portions mounted thereon, and means for securing said supports in positions within the surface limits of said back portions.



4. A container for sheets comprising a cover adapted to support sheets, said cover being made up of back portions hinged together for swinging movement, supports adapted to limit the divergent movement of said back portions, and means impelling said supports for divergent movement.

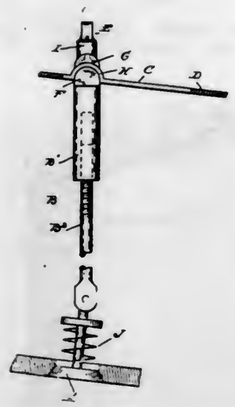
5. A container for sheets having a hinged back portion, a support for said back portion foldable to the same into inoperative position, and from the same to operative position, and means for holding the support in its infolded and outfolded positions.

1,112,042. CARTON. SAMUEL R. ULLMAN, Wilkes-Barre, Pa. Filed July 20, 1912. Serial No. 710,715. (Cl. 229—87.)



A carton embodying a rigid rectangular blank forming a back, and a second blank comprising a rectangular front, sides attached to the edges of the front and each having a single inwardly folding plait, overlapping bottom flaps attached to the lower ends of the sides and each having a single inwardly folding plait, a bottom flap attached to the lower end of the front and having a single inwardly folding plait, the last mentioned bottom flap overlapping, folding with and being secured to the first mentioned bottom flaps, the sides having supplemental flaps overlapping and secured to the edges of the back, the first mentioned bottom flaps having supplemental flaps overlapping and secured to the lower end of the back, and the last mentioned bottom flap having a supplemental flap overlapping and secured to the last mentioned supplemental flaps, closure flaps attached to the upper ends of the sides and each having a single inwardly folding plait, the closure flaps being designed to overlap each other, and having supplemental flaps to overlap each other and the upper end of the back, in order to limit the inward movement of the said closure flaps, and a closure flap attached to the upper end of the front, the last mentioned closure flap being longer than the last mentioned bottom flap and having a strip of adhesive along its free end to permit the free end of the last mentioned closure flap to be attached at various points over the back.

1,112,043. MUFFLER-CONTROL LEVER FOR MOTOR-VEHICLES. NILS ERIK WAHLBERG, Pontiac, Mich., assignor to Oakland Motor Car Company, Pontiac, Mich., a Corporation of Michigan. Filed Feb. 24, 1914. Serial No. 820,781. (Cl. 137—4.)



1. The combination with an automatically closing valve, of an opening device therefor, comprising a rod connected with the valve, a slotted plate through which said rod passes, cross heads on said rod above and below said plate, a portion intermediate said cross heads for engaging the sides of said slot and preventing turning of the rod therein, and a portion between said guide portion and the upper cross head rotatable in said slot when in engagement therewith.

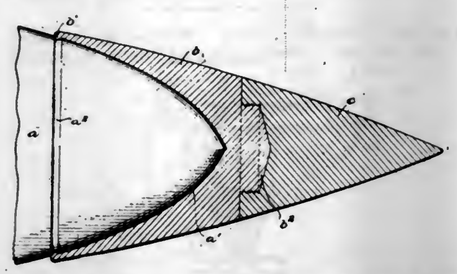
2. The combination with an automatically closing valve, of a rod for opening said valve, a slotted plate through which said rod passes, cross heads on said rod above and below said plate, an intermediate portion for engaging the sides of said slot to hold said rod from turning, and a portion adjacent said intermediate portion rotatable in said slot when in engagement therewith.

3. The combination with an automatically closing valve, of a rod for opening said valve formed in two sections having a threaded engagement with each other permitting of relative longitudinal adjustment, a slotted guide through which one of said sections passes, cross heads on said section above and below said plate, an intermediate portion for engaging the sides of said slot to prevent rotation of said section therein, and a portion adjacent said intermediate portion rotatable in said slot, permitting of adjustment of said sections.

4. The combination with an automatically closing valve, of an opening device therefor comprising a rod connected with the valve, a slotted plate through which said rod passes, a cross-head adjacent said plate, a portion adjacent said cross-head for engaging the sides of said slot and preventing turning of the rod therein, and a portion adjacent said guide portion rotatable in said slot when in engagement therewith.

1,112,044. PROJECTILE. JAMES A. WATSON, Washington, D. C., assignor to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Dec. 16, 1910. Serial No. 597,712. (Cl. 102—28.)

The combination with a pointed armor-piercing projectile and a soft metal cap secured to the projectile and surrounding and supporting the point thereof, of a wind shield secured to the soft metal cap and tapered to reduce the resistance of the atmosphere to the flight of the projectile, the said wind shield being solid and composed



of aluminum or other metal of lower specific gravity than the projectile and cap and sufficiently soft or fragile so that it will not interfere with the functioning of the projectile at the moment of impact.

1,112,045. FORM AND ATTACHMENT FOR CULTIVATOR-TEETH. DANIEL H. YOUNG, Manchester, Iowa. Filed May 6, 1913. Serial No. 765,814. (Cl. 55—127.)

1. A spring tooth for a cultivating implement comprising a straight depending elastic body and a hook-shaped head having a forward offset at the junction with the body and a hook at its rear end formed with a bend at its extremity, whereby the tooth is adapted to detachably engage and lock with a frame bar.

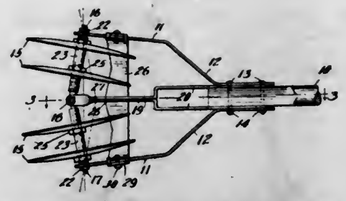
2. The combination with an angle bar having alined V-shaped notches at its front and rear edges and in the intermediate angle, of a spring tooth having a recurved head adapted to embrace the bar, and a front shoulder and rear terminal bend which are adapted to respectively enter and engage the alined notches, and thus lock with said bar.

3. The combination with a bar having V-shaped notches in its edges in the same transverse plane, of a spring-tooth having a depending body and a head bent detachably about said bar to be seated in said notches, and a resilient connection between said body and bar.

4. The combination with a supporting angle-bar, of a spring-tooth having its upper end recurved about the bar to detachably engage both edges and the intermediate exterior angle thereof, said tooth depending from the bar, and a yieldable spring-connection between the depending part of the angle-bar and that part of the depending tooth which lies opposite thereto, one end of the spring-connection being detachably passed through an orifice in the bar and engaged with the opposite side thereof.

1,112,046. COMBINED CULTIVATOR AND WEED-CUTTER. JOHN M. ZENTZ, David City, Nebr., assignor of one-half to Simon F. Leonard. Filed July 7, 1913. Serial No. 777,619. (Cl. 97—41.)

1. A combined hand cultivator and weed cutter including, in combination: a frame; a handle extending rearwardly and upwardly from the frame and by which the tool is adapted to be pushed; concavo-convex disks rotatably supported in said frame; and a depending, flat cutter blade at the rear of said disks and sufficiently far back to permit relatively large stones and the like to freely pass between it and the disks, said blade being arranged so that it is inclined from the vertical when the tool is being used, whereby it pulls and maintains the disks in the ground due to the downward pressure exerted on said handle, substantially as specified.

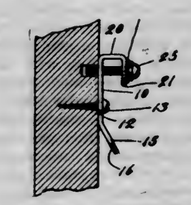


2. A device of the character described including, in combination: a forked frame having an operating handle secured thereto; a flexible shaft mounted on said frame and adjustable angularly; and a plurality of cultivator disks reversibly supported by said shaft, whereby the operation of the disks to throw the dirt inwardly or outwardly may be changed by adjusting the angularity of the shaft and reversing the position of said disks, substantially as specified.

3. A device of the character described including, in combination: a forked frame having an operating handle secured thereto; a flexible shaft having its ends mounted in the forks of said frame and adjustable angularly; and removable and interchangeable sleeves loosely mounted on the parts of said shaft, each of said sleeves carrying a plurality of cultivator disks whereby the operation of the disks to throw the dirt inwardly or outwardly may be changed by adjusting the angularity of the shaft and by interchanging said sleeves with the disks carried thereby, substantially as specified.

4. A device of the character described including, in combination: a forked frame having an operating handle secured thereto; a flexible shaft mounted on said frame and adjustable angularly; a plurality of cultivator disks reversibly supported by said shaft, whereby the operation of the disks to throw the dirt inwardly or outwardly may be changed by adjusting the angularity of the shaft and reversing the position of said disks; and a sub-soil cutter operating at the rear of said disks, substantially as specified.

1,112,047. CIRCUIT-WIRE TERMINAL. ALFRED A. ZIEGLER, Boston, Mass. Filed Aug. 11, 1913. Serial No. 784,068. (Cl. 173—259.)

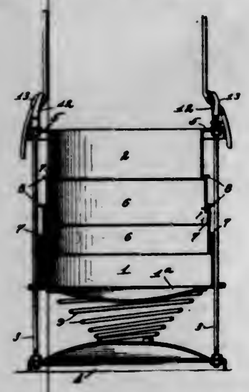


1. The circuit-wire terminal herein described consisting of an elongated plate, one end-portion of which is bent upward and inward to form a flat attaching-portion and an overturned-portion, arranged in parallel relation, both said overturned-portion and attaching-portion having screw-threaded holes through them, arranged in alinement, and a binding-screw for a circuit-wire extended through and engaging said threaded holes, the attaching-portion also having a hole through it for an attaching-screw.

2. The circuit-wire terminal herein described consisting of an elongated plate of sheet metal, one end-portion of

which is bent upward and inward to form a flat attaching-portion and an overturned-portion, arranged in parallel relation, the latter being made slightly resilient, and both having screw-threaded holes through them arranged in alinement, and a binding-screw for a circuit-wire extended through and engaging said threaded holes, the attaching-portion also having a hole through it for an attaching-screw.

1,112,048. ANIMAL FEED BOX OR TROUGH. GIUSEPPE ALFANO, Pittston, Pa., assignor of one-half to Samuel Lucchino, trustee, Pittston, Pa. Filed Mar. 6, 1914. Serial No. 822,874. (Cl. 119—65.)



1. A feed trough or bag comprising a series of rigid annular sections telescopically arranged with relation to each other and interengaging with each other so that the several sections follow each other either in the extension or collapsing of the feed bag or trough, and a spring connected to the outer or bottom section serving to gradually collapse the bag or trough as the food is removed therefrom by the animal.

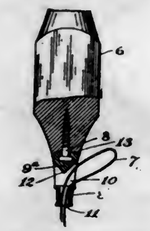
2. A feed trough or bag comprising a series of rigid annular sections telescopically arranged with relation to each other and interengaging with each other so that the several sections follow each other either in the extension or collapsing of the feed bag or trough, a spring connected to the outer or bottom section serving to gradually collapse the bag or trough as the food is removed therefrom by the animal, a lid for the upper section, and turn buckles for maintaining said lid closed, said buckles having tongues for connection to a supporting band or the like.

3. In a feed bag, an outer section having an inturned flange at its upper edge, an inner section telescoping into said outer section and having an outturned flange on its lower end adapted to interlock with said flange on the outer section, and projections extending outwardly from the inner section for engagement with the upper edge of the outer section whereby to prevent the passage of the inner section down through the outer section.

4. A feed bag comprising a base section having a bottom and having an inturned flange at its upper edge, a plurality of telescoping sections mounted in said base section and having interlocking engagement with the base section whereby to prevent the separation of the sections, and means on the sections for preventing the passage of the plurality of sections below the inturned flange of the base section.

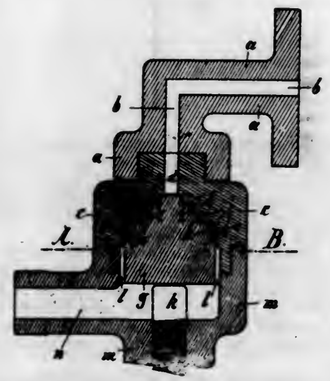
5. A feed bag comprising a plurality of telescoping annular sections, the outermost of which constitutes the lower section provided with a closed bottom, a base, guide rods mounted on the base and extending upwardly about said sections and being secured to the top or innermost section, said sections having out-turned rims at their lower edges and having interior rims at their upper edges adapted to interlock and prevent the separation of the sections, and fingers outstanding from the sections at the top thereof for engagement with the adjacent outer section whereby to prevent the falling of the sections below the interior rims of the outer adjacent sections.

1,112,049. FISHING-FLOAT. WILLIAM F. ANTHONY, Cleveland, Ohio. Filed Apr. 1, 1914. Serial No. 828,880. (Cl. 43—4.)



An attachment for a fishing float comprising a body 9 having a cross passage 10 and longitudinal passage 11 communicating therewith, and a projecting guide 12 in said passage 10, opposite the inner end of the passage 11.

1,112,050. DEVICE FOR MIXING AND RENDERING LIQUIDS HOMOGENEOUS. FRANZ MAX BERBERICH, Kiel, Germany. Filed Oct. 11, 1912. Serial No. 725,114. (Cl. 99—2.)

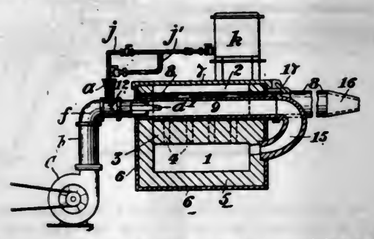


1. A device for rendering liquids homogeneous comprising a casing having a liquid inlet, a cavity and a liquid outlet, a body arranged within said cavity to form a passage therebetween, the casing being provided with a laterally extending groove that is closed at its outer end and opens at its inner end into said passage, all parts of the structure being stationary when in operation.

2. A device for rendering liquids homogeneous comprising a casing having a liquid inlet, a cavity and a liquid outlet, a body arranged within said cavity to form a liquid passage therebetween, means for adjusting said body and thereby adjusting the liquid passage, the casing being provided with a laterally extending groove that is closed at its outer end, and opens at its inner end into said passage, all parts of the structure being stationary when in operation.

3. A device for rendering liquids homogeneous comprising a casing provided with a stepped cavity, the step portions of the casing terminating in annular grooves, and a stepped adjustable body arranged within the casing with which it forms annular spaces adjacent to the grooves, all parts of the structure being stationary when in operation.

1,112,051. OIL-GAS PRODUCER. JOHN BURDON, WILLIAM MURRAY BURDON, and MATTHEW MURRAY BURDON, Bellshill, Scotland. Filed Feb. 24, 1911. Serial No. 610,549. (Cl. 158—5.)



1. A self contained oil gas producer comprising a flame chamber, a superposed retort chamber, a tubular retort extending through the retort chamber and projecting outward beyond the end thereof, a second retort in the retort chamber having at its end a nozzle deflected into the flame chamber, means for supplying oil to the retorts, and means for atomizing the oil within the retorts by a blast of a large volume of low pressure air, the oil gas flame from the nozzle heating the flame chamber and also both retorts.

2. A self contained oil gas producer comprising a retort chamber, a plurality of retorts in the retort chamber, means for supplying oil to each of the retorts separately, means for atomizing the oil within each retort by blowing into the retort a large volume of low pressure air, and a flame chamber in which oil gas from one of the retorts is burned, hot gases being conducted from the flame to the retort chamber to heat all of the retorts.

3. A self contained oil gas producer comprising a chamber in which oil gas is burned, a second chamber, means for directing the hot gases from the first chamber to the second, two retorts arranged side by side in the said second chamber, means for supplying oil to each retort, means for blowing a large volume of air into each retort to atomize the oil therein, and means whereby oil gas from one retort is conducted to the first chamber to be consumed therein.

4. A self contained oil gas producer comprising a chamber divided by a perforated partition into two compartments, one above the other, the lower one constituting a firing chamber and the upper one a retort chamber, means for heating the firing chamber, a plurality of retorts in the retort chamber, means for supplying oil separately to each of the retorts, means for separately atomizing the oil by directing a blast of a large volume of low pressure air into each retort, and means whereby the oil gas produced in one of the retorts will be discharged directly into the furnace or interior to be heated.

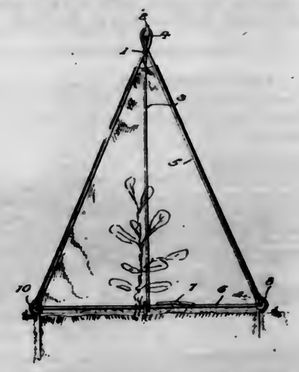
5. A self contained oil gas producer comprising a firing chamber made of fire brick, means for heating the chamber, a retort chamber made of fire brick, an outer metallic casing inclosing the structure, a series of parallel retorts in the retort chamber, means for supplying oil to each of the retorts, means for directing a blast of low pressure air in a large volume into each of the retorts for atomizing the oil therein, and means whereby the oil gas thus produced in one of the retorts may be discharged directly into the furnace or other interior to be heated.

[Claims 6 to 15 not printed in the Gazette.]

1,112,052. PLANT-PROTECTOR. SINGLETON CAMPBELL, Abilene, Tex. Filed May 24, 1913. Serial No. 769,752. (Cl. 47—22.)

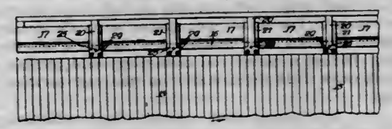
1. In a device of the class described, a frame including downwardly diverging legs, an annulus supported by the legs above their lower ends, a flexible covering arranged upon the frame, and means at the lower edge of the covering for drawing the same circumferentially about the frame below the annulus.

2. In a device of the class described, a frame having downwardly diverging legs, an annulus supported by the legs above their lower ends, a substantially conical flexible covering disposed upon the frame and provided at its lower edge with a hem, and a drawstring inserted through



the hem and adapted to hold the lower edge of the covering securely about the annulus.

1,112,053. CAR-ROOF. HENRY A. CHRISTY, Chicago, Ill., assignor to American Car Roof Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1913. Serial No. 793,578. (Cl. 108—5.)



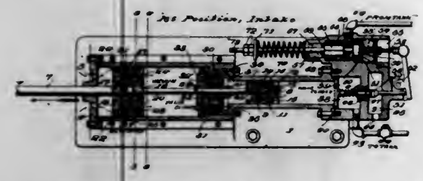
1. In a car-roof construction, the combination of car-body side-walls, carlines extending from side-wall to side-wall, sheet-metal roof-plates resting on said carlines and having upstanding marginal flanges along their adjacent edges, the ends of said plates and flanges being bent down over said side-walls to provide efficient drainage over the walls, means fastening said flanges together, and cap-strips fitted over said roof-plate flanges, the side-walls of said cap-strips being spaced away from the upstanding flanges and flange fastening means covered thereby to provide drainage channels within the cap-strips and to permit limited relative movement of the roof-plates and cap-strips, substantially as described.

2. In a car-roof construction, the combination of car-body side-walls, carlines extending from side-wall to side-wall, sheet-metal roof-plates resting on said carlines and having upstanding marginal flanges along their adjacent edges, the ends of said plates and flanges being bent down over said side-walls to provide efficient drainage over the walls, means fastening said flanges together, and cap-strips of inverted channel shape in cross section fitted over said roof-plate flanges, the side-walls of said cap-strips being spaced away from the upstanding flanges and flange fastening means covered thereby to provide drainage channels within the cap-strips and to permit limited relative movement of the roof-plates and cap-strips, said cap-strips having apertured ends down-turned over said side-walls, substantially as described.

3. In a car-roof construction the combination of car-body side-walls, metal eave bars disposed longitudinally of the car-body at the tops of said side-walls, carlines extending from side-wall to side-wall, sheet-metal roof-plates on said carlines and having upstanding marginal flanges along their adjacent edges, the ends of said plates and flanges being bent down over said eave bars to provide efficient drainage over the side-walls, U-shaped clips fitted over the abutting roof-plate flanges to fasten them together, and cap-strips of inverted channel shape in cross-section fitted over said roof-plate flanges, the side-walls of said cap-strips being spaced away from the upstanding

roof-plate flanges and their fastening clips covered thereby to provide drainage channels within the cap-strips, said cap-strips having apertured ends down-turned over the car-body side-walls, substantially as described.

1,112,054. AIR-COMPRESSOR. LEROY CLAWSON, Hall, Mont., assignor of one-half to Charles Lavern Clawson, Hall, Mont. Filed June 23, 1913. Serial No. 775,450. (Cl. 230—34.)



1. A fluid compressing apparatus comprising axially alined cylinders, pistons working in said cylinders, valves carried by the pistons, a piston rod common to said pistons, a check valve slidably mounted upon a rod between the pistons and in frictional engagement with the rod, and means on the cylinders to limit the movement of the check-valve.

2. A fluid compressing apparatus comprising axially alined cylinders, pistons working therein and comprising bodies having spaced annular flanges radiating therefrom and provided with fluid passages out of axial alinement, valve rings in frictional engagement with the respective cylinders between said flanges and spaced from the respective bodies, a piston rod connecting said pistons, and a check-valve held frictionally on the rod between the pistons.

3. In a fluid compressor, axially alined cylinders, pistons working therein, a piston rod connecting said pistons, a valve ring frictionally held upon the piston rod between the pistons and adapted to impinge against the end of the smaller cylinder, and a stop ring secured within the larger cylinder and projecting into the path of movement of said valve.

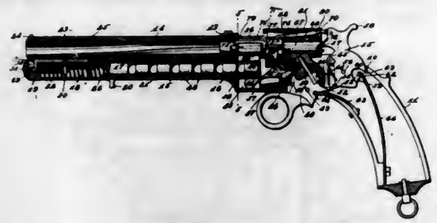
4. In a fluid compressor, the combination of a cylinder having an inlet at one end and an outlet at the opposite end, a piston working therein, a valve body secured to and fitting over the outer end of the cylinder, a valve within said body controlling the flow from the cylinder and adapted to close the outlet end thereof, an outlet from said valve body beyond said valve, and a pressure-controlled vent in said body beyond said outlet.

5. In a fluid compressor, the combination of a cylinder, a piston working therein, a valve body secured to and fitting over the end of the cylinder, said valve body having a relief chamber and a valve chamber, a vent leading from the said relief chamber, an outlet from the valve chamber, a valve within the valve chamber normally closing the end of the cylinder, and pressure-controlled means for establishing communication between the valve chamber and the relief chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,112,055. AUTOMATIC MAGAZINE-FIREARM. EMILIO D'AMORE, Pittston, Pa., assignor of one-half to Samuel Lucchino, trustee, Pittston, Pa. Filed Mar. 6, 1914. Serial No. 822,831. (Cl. 42—21.)

1. In magazine firearms having a magazine below the barrel, a vertically movable cartridge carrier, a reciprocating breech bolt adapted to feed cartridges from the carrier to the barrel and having extractors for withdrawing the discharge shells therefrom, a tooth on one side of said breech bolt, a spring tending normally to maintain the bolt against the breech of the barrel, a hammer, a pawl pivotally connected at one end to said hammer and adapted to engage by its other end the tooth on the breech bolt to withdraw said bolt when the hammer is retracted, and a tripping means for disengaging the pawl from the tooth to release said bolt.



2. In magazine firearms having a magazine below the barrel, a vertically movable carrier provided with a recess for receiving cartridges from the magazine and conveying them to the breech of the barrel, and flanges above the recess to form a temporary support for extracted shells, a reciprocating breech bolt having extractors adapted to feed cartridges from the carrier to the barrel and withdraw the discharged shells therefrom, a spring tending normally to maintain the bolt against the breech of the barrel, a hammer, a trigger for actuating said hammer, means connected to the hammer for withdrawing the bolt when the hammer is retracted, and means positively operated by the trigger for raising and lowering the cartridge carrier.

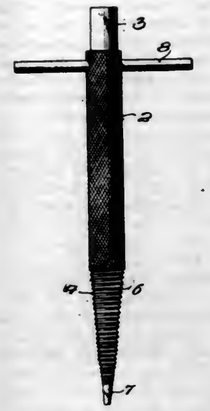
3. In magazine firearms having a magazine below the barrel, a vertically movable carrier provided with a recess for receiving cartridges from the magazine and conveying them to the breech of the barrel, and flanges above the recess to form a temporary support for extracted shells, a reciprocating breech bolt having extractors adapted to feed cartridges from the carrier to the barrel and withdraw the discharged shells therefrom, a spring tending normally to maintain the bolt against the breech of the barrel, a hammer, a trigger for actuating said hammer, means pivoted to the hammer and adapted to engage and withdraw said bolt when the hammer is retracted, a lever engaging at one end with said carrier for raising and lowering the same, a finger projecting from the trigger to bear upon the other end of said lever and raise the carrier when the trigger is pulled, and a lip also projecting from the trigger to press upward against the lever and lower the carrier when the trigger is released.

4. In magazine firearms having the magazine below the barrel, a vertically movable carrier provided with a recess for receiving the cartridges from the magazine and conveying them to the breech of the barrel, and flanges above the recess to form a temporary support for extracted shells, a reciprocating breech bolt having extractors adapted to feed cartridges from the carrier to the barrel and withdraw discharged shells therefrom, a spring tending normally to maintain the bolt against the breech of the barrel, a hammer, a hinged leaf or catch on said hammer, means pivoted to said hammer for withdrawing the bolt when the hammer is retracted, a lever engaging at one end with said carrier for raising and lowering the same, and a trigger having a lug for engaging said leaf to retract the hammer, and a finger to operate said lever and raise the carrier when the trigger is pulled, and a lip also to engage said lever and lower the carrier when the trigger is released.

5. In magazine firearms having a magazine below the barrel, a vertically movable carrier provided with a recess for receiving the cartridges from the magazine and conveying them to the breech of the barrel and flanges above the recess to form a temporary support for extracted shells, a reciprocating breech bolt having extractors adapted to feed cartridges from the carrier to the barrel and withdraw discharged shells therefrom depositing them upon the flanges of said carrier, a lever fulcrumed between its ends engaging by one arm with the carrier to positively raise and lower the same and having a rib on the other arm close to said fulcrum, and a trigger provided with a finger to bear first on the free end of said lever and afterward on the rib thereon to raise said carrier at first slowly and then more quickly.

[Claims 6 to 8 not printed in the Gazette.]

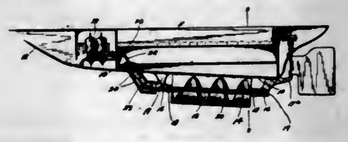
1,112,056. NAIL-SET. RICHARD E. A. DE BOW, Bradley Beach, N. J. Filed July 8, 1913. Serial No. 777,938. (Cl. 145—46.)



1. As an article of manufacture, a nail set having a shank tapered adjacent one end, the butt end of the tapered portion being of the same diameter as the body of the nail set, said shank being screw threaded along the tapered portion thereof, said screw threads being relatively shallow.

2. As an article of manufacture, a nail set having a shank tapered adjacent one end, the tapered portion of the shank having shallow screw threads formed therein, the smallest portion of the shank being blunt and adapted to engage the head of a nail.

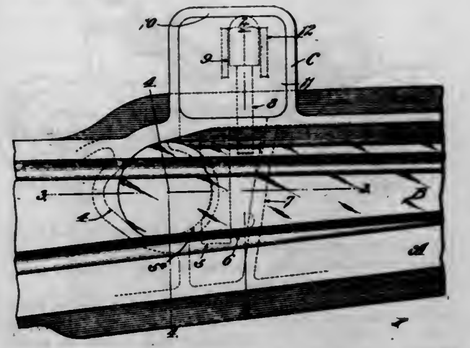
1,112,057. SPEED-BOAT. JOSEPH DUDASH, Philadelphia, Pa. Filed Oct. 8, 1913. Serial No. 794,138. (Cl. 115—42.)



In a speed-boat, a motor, hangers secured to the boat-bottom, a screw-propeller operatively mounted between said hangers, a generally cylindrical casing open fore and aft for partially inclosing said screw-propeller secured to the boat-bottom, a driving rod connecting said motor and screw-propeller, said driving rod penetrating the boat-bottom and a casing of generally elliptical cross section for inclosing that part of the driving rod exposed to the water.

1,112,058. TONGUE-SWITCH. ROBERT E. EINSTEIN, St. Louis, Mo., assignor to St. Louis Frog & Switch Company, St. Louis, Mo., a Corporation of Missouri. Filed May 12, 1914. Serial No. 837,993. (Cl. 104—115.)

1. A tongue switch, comprising a body part, a tongue provided at its heel end with an integral pivot pin projecting downwardly into a chamber in said body part and provided with a flat bottom face that rests upon a horizontally disposed bearing surface on the bottom of said chamber, the diameter of said pin being approximately equal to the diameter of the heel portion of the tongue, a retaining member in said chamber that bears upon the front face of said pivot pin and locks the tongue in inoperative position in the body part of the switch, and means on the rear side of said pivot pin that coöperates with the body part of the switch to prevent the heel end portion of the tongue from moving vertically.



2. A tongue switch, comprising a body part, a tongue provided at its heel end with an integral pivot pin projecting downwardly into a chamber in said body part and provided with a flat bottom face that rests upon a horizontally disposed bearing surface on the bottom of said chamber, the transverse diameter of said pivot pin being approximately equal to the diameter of the heel portion of the tongue, a retaining member in said chamber that bears upon the front face of said pivot pin and locks the tongue in operative position in the body part of the switch, and a lip at the lower end of said pivot pin that projects rearwardly from same and enters a notch in the rear wall of said chamber.

3. A tongue switch provided at its heel end with an integral pivot pin whose rear half is convexed and substantially the same cross-sectional area throughout its entire height, the lower end of said pivot pin being flat and resting upon the bottom of a chamber, a lip on said pivot pin that projects from the rear side of same and enters a notch in the rear wall of said chamber, a bearing member extending transversely of said chamber and provided with an undercut concaved surface that embraces a tapered surface on the front half of said pivot pin, and an adjustable device pivotally connected to said member in such a manner that it can be swung upwardly for locking the tongue in operative position in the body part of the switch.

4. A tongue switch, comprising a body part, a tongue, and a locking mechanism for said tongue comprising a wedge and an adjusting device for same pivotally connected together in such a manner that said adjusting device can be swung upwardly relatively to the wedge.

5. A tongue switch, comprising a body part, a tongue, and a locking mechanism for said tongue comprising a wedge, an adjustable device pivotally connected at one end to said wedge in such a manner that said adjusting device can be swung upwardly relatively to the wedge, and a stationary wall that acts as an abutment for the opposite end of said device.

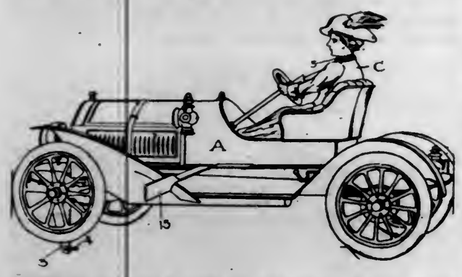
[Claims 6 to 9 not printed in the Gazette.]

1,112,059. COMPOSITION FOR COATING CEMENT. CARLETON ELLIS, Larchmont, N. Y., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed May 24, 1909. Serial No. 497,934. (Cl. 134—39.)

1. In a finish coat for cement, a composition comprising at least 10% of the free fatty acid of a drying oil and acid resin and thinning and extending materials.

2. In a finish coating for cement a composition comprising a substantial amount of the free fatty acids of a drying oil, an acid resin and thinning and extending materials.

1,112,060. AMUSEMENT ADVERTISING DEVICE. EMIL M. ERDMANN, Long Prairie, Minn. Filed Aug. 11, 1913. Serial No. 784,281. (Cl. 46—45.)



1. In combination, a plurality of animated figures, means for carrying said animated figures past each other, and means controlled in the passing of said figures to give a turning motion to the figures.

2. In combination, a plurality of animated figures, means for carrying said animated figures past each other, and means controlled in the passing of said figures to successively give a turning motion to the head and body of each figure.

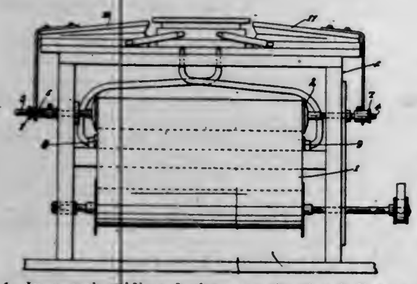
3. In combination, a plurality of animated figures, means for carrying said animated figures past each other, and means controlled in the passing of said figures to successively give a turning motion to the head and body of each figure and a nodding motion to the head.

4. In combination, a plurality of conveyances, means for carrying said conveyances past each other, animated figures, means for movably supporting said animated figures in connection with said conveyances, and means actuatable as said conveyances pass to successively turn said figures and nod the heads thereof.

5. In combination, a plurality of conveyances, means for carrying said conveyances past each other, animated figures, means for movably supporting said animated figures in connection with said conveyances, and lever mechanism actuated as said conveyances pass to move said figures.

[Claim 6 not printed in the Gazette.]

1,112,061. WEB-GUIDING DEVICE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Oct. 15, 1913. Serial No. 795,184. (Cl. 84—161.)



1. In a web-guiding device: a pair of spindles in one axial line with a space between, the opposed ends of said spindles adapted to engage and support a sheet-spool therebetween, and a movable connecting member having its spindle controlling parts engaging and supported by both said spindles and adapted to be moved in unison with both spindles in direction of said axial line, a fixed part of the apparatus and bearings fixed thereon, both independent of and separate from said member, said bearings supporting said spindles.

2. In a web-guiding device: a pair of spindles in one axial line with a space between, the opposed ends of said spindles adapted to engage and support a sheet-spool therebetween, and a bodily movable connecting member having its spindle controlling parts engaging and supported by both said spindles and adapted to be moved in unison with both spindles in direction of said axial line, a fixed part of the apparatus and bearings fixed thereon, both independent of and separate from said member, said bearings supporting said spindles.

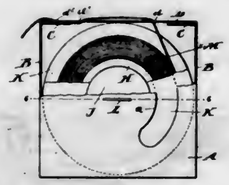
3. In a web-guiding device: a pair of spindles in one axial line with a space between, the opposed ends of said spindles adapted to engage and support a sheet-spool therebetween, and a bodily movable connecting member having its spindle controlling parts engaging and supported by both said spindles and adapted to be moved in unison with both spindles in direction of said axial line, a fixed part of the apparatus and bearings fixed thereon, both independent of and separate from said member, said bearings supporting said spindles.

4. In a web-guiding device: a pair of spindles in one axial line with a space between, the opposed ends of said spindles adapted to engage and support a sheet-spool therebetween, and a bodily movable solid unitary connecting member having its spindle controlling parts engaging and supported by both said spindles and adapted to be moved in unison with both spindles in direction of said axial line, a fixed part of the apparatus and bearings fixed thereon, both independent of and separate from said member, said bearings supporting said spindles.

5. In a web-guiding device: a pair of spindles in one axial line with a space between, the opposed ends of said spindles adapted to engage and support a sheet-spool therebetween, and a solid connecting yoke engaging and supported by both said spindles and adapted to be moved in unison with both spindles in direction of said axial line, a fixed part of the apparatus and bearings fixed hereon, both independent of and separate from said yoke, said bearings supporting said spindles.

[Claims 6 to 9 not printed in the Gazette.]

1,112,062. RIBBON-PACKAGE. PERCY GARDNER, New York, N. Y., assignor to Gardner & Highet Co., New York, N. Y., a Corporation of New York. Filed May 15, 1914. Serial No. 838,897. (Cl. 206—52.)



1. In a ribbon package, a container, a cylindrical block secured therein, disks rotatably mounted on said block, a roll rotatably mounted on said block between said disks and having a free end of ribbon presented on the exterior of such container.

2. In a ribbon package, a container having sides and top, disks rotatably mounted in said container, and a roll rotatably mounted between said disks, said top having transverse slots through which the free end of ribbon from said roll is traversed to present an area for inspection and to hold such end.

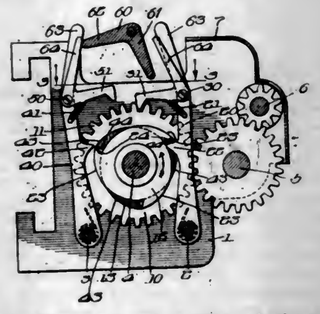
3. In a ribbon package, a container having sides and top the latter provided with a slot, a cylindrical block in said container extending from side to side thereof and secured to said sides, a roll of ribbon rotatably mounted on said block and of less width than the latter, disks rotatably mounted on said block on each side of said roll and filling the spaces between said roll and the adjacent sides, said roll having a free end of ribbon extending through such slot in the top to the exterior of such container.

4. In a ribbon package, a container having sides and top, disks rotatably mounted in said container, and a roll rotatably mounted between said disks, said top having transverse slots through which the free end of ribbon from such roll is traversed to present an area for inspection and to hold such end, said sides having apertures closed by said disks and permitting the latter to be grasped for rewinding said roll.

5. In a ribbon package, a container having sides and top the latter provided with a slot, a cylindrical block in said container extending from side to side thereof and secured to said sides, a roll of ribbon rotatably mounted on said block and of less width than the latter, disks rotatably mounted on said block, one on each side of said roll and filling the spaces between said roll and the adjacent sides, said roll having a free end extending through said slot in the top to the exterior of said container, and said sides having apertures closed by said disks and permitting said disks with said roll to be grasped for rewinding.

[Claims 6 to 8 not printed in the Gazette.]

1,112,063. CALCULATING-MACHINE. HYMAN ELI GOLDBERG, Chicago, Ill., assignor to Goldberg Calculating Machine Company, Chicago, Ill. Filed Sept. 20, 1911. Serial No. 650,361. (Cl. 235—134.)

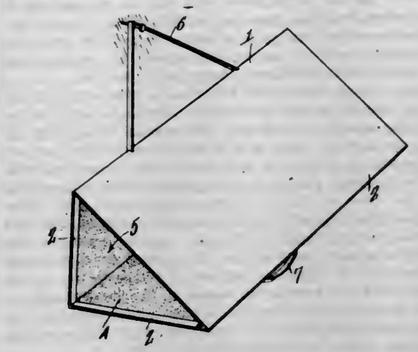


1. In a totalizer: a lower carrying wheel; a higher carrying wheel, two oppositely-disposed cams upon the lower carrying wheel; two power levers, one for each of said cams; an incline and drop upon each cam, each incline and drop coöperating with its power lever to thereby store up energy during the non-carrying period of the lower carrying wheel and to release the energy during the carrying period; transmitting mechanism supported on each power lever to carry the higher carrying wheel; a manually-operable reversing bar having two alternative positions and coöperating with said power levers and said transmitting mechanism to render only a predetermined one of said cams operative at one time; and means to render the transmitting mechanism associated with the inoperative cam inoperative on said higher carrying wheel during the passage of said reversing bar to its alternative position.

2. In a totalizer: a lower carrying wheel; a higher carrying wheel; two oppositely-disposed cams upon the lower carrying wheel; two power levers, one for each of said cams; an incline and drop upon each cam, each incline and drop coöperating with its power lever to thereby store up energy during the non-carrying period of the lower carrying wheel and to release the energy during the carrying period; a pawl supported on each power lever to carry the higher carrying wheel; a manually-operable reversing bar having two alternative positions and coöperating with said power levers and said pawls to render only a predetermined one of said cams operative at one time; and means to render the pawl associated with the inoperative cam inoperative on said higher carrying wheel during the passage of said reversing bar to its alternative position.

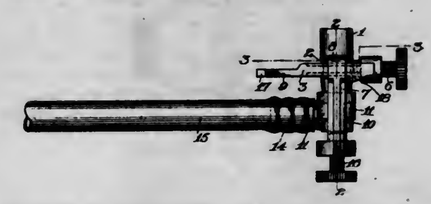
1,112,064. FLY-TRAP. FRANCIS H. GORDON, Harrisburg, Pa. Filed Apr. 3, 1912. Serial No. 688,243. (Cl. 43—22.)

An open ended fly trap of trianguler cross section and comprising a base and side walls, the inner faces of which are coated with a viscous substance, the trap having suspension means at its apex, the base of the trap constituting a brace and coöperating with the side walls to give the trap a truss-like cross section which serves to prevent a distortion of the trap when the same is upheld by the suspension means, the base being foldable along a



longitudinal line to bring portions of the base and portions of the side walls into contact, and to space portions of the side walls adjacent the apex, thereby avoiding a distortion of the side walls and a consequent loss of the truss-like construction when the base is drawn down, and a pendent element secured to the base at the longitudinal line therein.

1,112,065. FAUCET ATTACHMENT. FREDERICK O. HILFIKER, Rochester, N. Y., assignor to F. O. Hilfiker Co., Syracuse, N. Y., a Corporation of New York. Filed June 17, 1911. Serial No. 633,887. (Cl. 137—28.)



1. In a hose connection for faucets, the combination with a bracket embodying a rigid guide and means for securing it to the faucet in a fixed position thereon, of a conducting member supported by the bracket and having a rectilinear movement on the guide relatively to the faucet into and out of alinement with the mouth of the latter, and means for preventing disengagement of the conducting member from its guide when out of alinement with the faucet.

2. In a hose connection for faucets, the combination with a bracket and means for securing it to the faucet in a fixed position thereon, of a conducting member supported by the bracket and having a seat, said member being laterally adjustable on the bracket to bring its seat into and out of alinement with the mouth of the faucet and movable on the bracket with the contacting member, means independent of the supporting connection of the conducting member for clamping said seat against the mouth of the faucet.

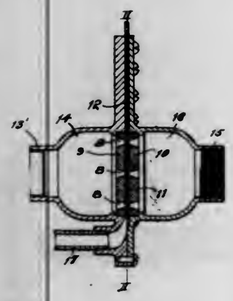
3. In a hose connection for faucets, the combination with a bracket and means for securing it in fixed position to the faucet, of a carrier guided on the bracket, a conducting member guided on the carrier and having a seat, said member being movable laterally with the carrier to bring its seat into and out of register with the mouth of the faucet, and means for moving the conducting member on the carrier to engage the seat thereof with the mouth of the faucet.

4. In a hose connection for faucets, the combination with a bracket having an opening therein adapted to receive the mouth of the faucet and means for rigidly securing it on the latter, of a yoke-shaped carrier guided on the bracket, an elbow within the yoke provided with a seat and movable laterally with the carrier to bring the seat into and out of register with the faucet opening of the bracket, and also movable on the carrier in a direction transverse to the path of movement of the latter on the bracket, and means on the carrier for moving the elbow seat laterally thereof toward said opening.

5. In a hose connection for faucets, the combination with a bracket having an opening therein adapted to receive the mouth of a faucet and means for rigidly securing it on the latter, of a yoke-shaped carrier depending from and guided on the bracket, an elbow movable within the yoke provided with guiding lugs coöperating with the arms of the latter and with a seat, said elbow being movable laterally with the carrier to bring the seat into and out of register with the faucet opening of the bracket and also movable on the carrier in a direction transverse to the path of movement of the latter on the bracket, and a set screw threaded in the carrier and engaging beneath the elbow for moving the latter relatively to the carrier and forcing its seat toward the said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,112,066. GAS AND AIR MIXER. THOMAS H. HOLLIS, Pittsburgh, Pa. Filed June 2, 1913. Serial No. 771,171. (Cl. 48—180.)



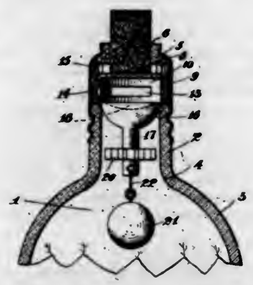
1. In combination in a gas and air mixer, an air supply conduit, a pair of tapering nozzles in the conduit with their contracted ends opposing each other in alinement but spaced apart, a gas supply chamber surrounding the said opposing ends and communicating with the space between the ends of the nozzles, a gas supply conduit connected to said chamber, and a valve fitting the space between the ends of the nozzles and movable transversely of the axes of the nozzles.

2. In combination in a gas and air mixer, an air supply conduit, a plurality of pairs of tapering nozzles in the conduit side by side with the contracted ends of each pair in opposition but spaced apart, a gas supply chamber surrounding the said opposing ends, a valve fitting in the space between the said opposing ends and movable transversely of the axes of the nozzles, and a gas conduit connected to the said chamber.

3. In combination in a gas and air mixer, an air supply conduit, a pair of nozzles in the conduit with their ends opposing each other in alinement but spaced apart, a gas supply chamber surrounding the said opposing ends and communicating with the space between the ends of the nozzles, a gas supply conduit connected to said chamber, and a valve fitting the space between the ends of the nozzles and movable transversely of the axes of the nozzles.

4. In combination in a gas and air mixer, an air supply conduit, a plurality of pairs of nozzles in the conduit side by side with the ends of each pair in opposition but spaced apart, a gas supply chamber surrounding the said opposing ends, a valve fitting in the space between the said opposing ends and movable transversely of the axes of the nozzles, and a gas conduit connected to the said chamber.

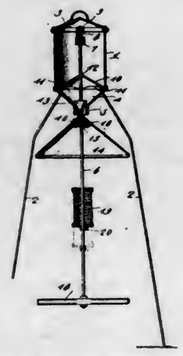
1,112,067. NON-REFILLABLE BOTTLE. GAETANO IMPELLITTERI and ANTONINO IMPELLITTERI, New York, N. Y. Filed Mar. 12, 1914. Serial No. 824,095. (Cl. 215—63.)



1. A combination in a non-refillable bottle of a bottle and means to prevent the flow of liquid in one direction comprising a cap, a valve chamber adapted to rest on the top of said bottle, means to space said chamber from said cap at its top and sides, a valve adapted to rest on the top of said bottle and movable within said chamber, a valve stem, means to space said stem from the sides of said bottle, and a weight secured to the stem by flexible connection adapted when the bottle is inverted to rest on the end of said stem and on the side of the bottle approximately at the point of curvature between the neck and body of the bottle, substantially as described.

2. The combination in a non-refillable bottle, of a bottle, and means to prevent the flow of liquid in one direction comprising a cap, a valve chamber adapted to rest on the top of said bottle, a valve adapted to rest on the top of said bottle and movable within said chamber and provided with a stem, and a weight secured to the stem by a flexible connection adapted to rest on the end of said stem and the sides of said bottle when said bottle is inverted and so arranged that if a line be drawn through the point of contact of said weight with said bottle at right angles to the side of the neck of said bottle the center of gravity of said weight will be on the opposite side of said line from said stem.

1,112,068. CHICKEN-FEEDER. WILLIAM L. KELLER, Kearney, Nebr. Filed Dec. 30, 1912. Serial No. 739,388. (Cl. 119—70.)

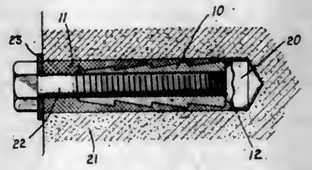


1. A device for the purpose stated comprising a hopper, a yieldably supported operating rod extending into the hopper, a cut-off valve carried by said rod within the hopper, a bait box fitted around the rod below the hopper, and a perch carried by the rod below the bait box.

2. A device for the purpose stated comprising a hopper, a yieldably supported operating rod extending into the hopper, a cut-off valve carried by said rod within the hopper, a support secured upon the rod below the hopper, a bait box fitting around the rod and resting upon said support, and a perch carried by the rod below the bait box.

3. A device for the purpose stated comprising a hopper, a yieldably supported operating rod extending into the hopper, a cut-off valve carried by said rod within the hopper, a clip fitted around the rod below the hopper, a bolt inserted through the ends of the clip and clamping the same around said rod, a bait box fitted around the rod and resting on said clip, and a perch carried by the rod below the bait box.

1,112,069. EXPANSION BOLT-ANCHOR. JOSEPH KENNEDY, New York, N. Y., assignor to The Clements Company, a Corporation of New York. Filed Aug. 14, 1913. Serial No. 784,675. (Cl. 85—24.)



1. An expansion bolt anchor comprising an inner member of hard metal having a longitudinal bore, the outside of said member being in the form of a series of truncated cones, and a relatively movable outer member of soft metal fitting over the inner member and extending beyond the smaller end thereof, the extending part of said outer member being provided with a bore in alinement with the bore in the inner member.

2. An expansion bolt anchor comprising an inner member of hard metal having a threaded longitudinal bore, the outside of said member being in the form of a series of truncated cones progressively decreasing in transverse dimensions, and a relatively movable outer member of soft metal fitting over the inner member and extending beyond the smaller end thereof, the extending part of said outer member being provided with a clearance hole in alinement with the threaded hole in the inner member.

3. An expansion bolt anchor comprising an inner member of hard metal, the exterior surface of which is constructed to form alternate transverse ridges and depressions, and a relatively movable inner member of soft metal fitting over the outer member and extending beyond the end thereof.

1,112,070. PORTABLE DRILL. HENRY J. KIMMAN and THEODORE P. KIMMAN, Cleveland, Ohio, assignors to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 28, 1913. Serial No. 757,364. (Cl. 121—24.)

1. In a drilling machine, the combination, with a prime mover and drill spindle, of intermediate driving connections therebetween comprising a rotatable shaft actuated by the prime mover, reduction gearing operated by the shaft including an eccentric actuated by the shaft, a gear operated by such eccentric, means for mounting said gear for oscillating and lateral movement, a second gear mounted concentric of the shaft and driven by the first mentioned gear, and means for transmitting motion from the second gear to the spindle.

2. In a drilling machine, the combination, with a prime mover and drill spindle, of intermediate driving connections therebetween comprising a rotatable shaft actuated by the prime mover, reduction gearing operated by the shaft including an eccentric actuated by the shaft, an external toothed gear operated by the eccentric, means for mounting said gear for oscillating and lateral movement, an internal toothed gear mounted concentric of the shaft and arranged to mesh with and to be driven by the other gear, and means for transmitting motion from the second mentioned gear to the spindle.

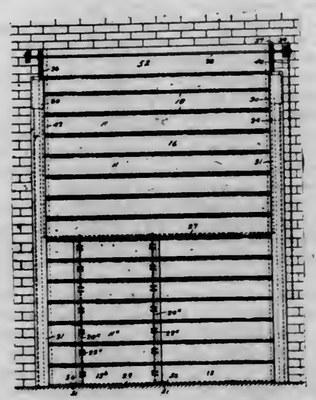
3. In a drilling machine, the combination, with a prime mover and drill spindle, of intermediate driving connections therebetween comprising a rotatable shaft actuated by the prime mover, reduction gearing operated by the shaft including an eccentric actuated by the shaft, a gear operated by such eccentric, a lever in which the gear is mounted and which is itself mounted for oscillating and lateral movement, a second gear operated by the first gear, and means for transmitting motion from the second gear to the spindle.

4. In a drilling machine, the combination with a prime mover and drill spindle, of intermediate driving connections therebetween comprising a rotatable shaft actuated by the prime mover and having an eccentric, a gear operated by such eccentric, a second gear surrounding the first gear and driven thereby, a lever in which the first gear is mounted and which has a combined reciprocating and oscillating movement, and driving mechanism between the second gear and the spindle.

5. In a drilling machine, the combination with a prime mover and drill spindle, of intermediate driving connections therebetween comprising a rotatable shaft actuated by the prime mover and having an eccentric, a gear operated by such eccentric, a second gear surrounding the first gear and driven thereby, a lever or carrier having an opening provided with gear teeth to receive and hold the first gear, and driving mechanism between the second gear and the spindle.

[Claims 6 to 9 not printed in the Gazette.]

1,112,071. FIRE DOOR OR WINDOW. GEORGE W. KNOPP, Pottstown, Pa. Filed July 25, 1913. Serial No. 781,085. (Cl. 189—60.)



1. A collapsible door or the like having a plurality of slats mounted to turn, each slat provided with a plurality of chambered portions, said slats forming spaced walls when closing the doorway and means for turning and collapsing said slats.

2. In a collapsible door or the like, the combination of a plurality of slats mounted to turn each provided with a chambered portion and connections with said slats which turn and collapse them, the chambered portions of adjacent slats facing each other and forming a double walled door when the doorway is closed.

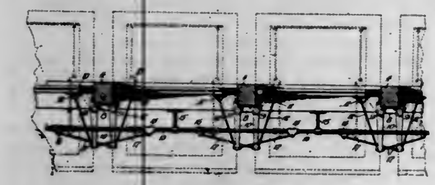
3. An extensible and collapsible double walled door or the like comprising a plurality of slats mounted to turn each slat provided with a bent portion to form an air chamber, the bent portion of adjacent slats overlapping to form interspaces when the door is extended and means for extending and collapsing said door.

4. A collapsible double walled door or the like comprising a plurality of slats mounted to turn each curved to form chambered portions at opposite ends of the slats, said slats, when the door is extended, coöperating with each other to form spaced inner and outer walls, and connections to said slats to turn and collapse them.

5. In a double walled door or the like comprising a plurality of slats mounted to turn and bent or curved to form chambers, adjacent slats being arranged so as to meet edge to face and form double walls with interspaces, and connections to said slats to turn and collapse them.

[Claims 6 to 34 not printed in the Gazette.]

1,112,072. WINDOW-OPERATING MECHANISM. ROBERT A. LACKEY, Oak Park, Ill. Filed May 16, 1910. Serial No. 561,778. (Cl. 16—28.)



1. In a window operating mechanism, the combination of a straight member pivoted adjacent a window to be operated, so that its free end will swing outwardly beyond the window frame, a link connecting said member with said window and normally disposed at an angle to the plane of the closed window, an operating rod mounted to reciprocate longitudinally, and an oscillating connection between the outer end of said member and the rod to cause said member to swing on its pivot through an arc greater than 90°.

2. In a window operating mechanism, the combination of a series of members pivoted adjacent a series of windows to be operated so that the free ends of said members will swing outwardly beyond the window frames, a link connecting each of said members with a window, said links being normally disposed at an angle to the plane of the closed windows, an operating rod mounted to reciprocate longitudinally in a direction parallel with the windows, and a link connecting the ends of each of said members with said rod whereby longitudinal movement of the rod will swing the members upon their pivots through an arc greater than 90° to operate said windows.

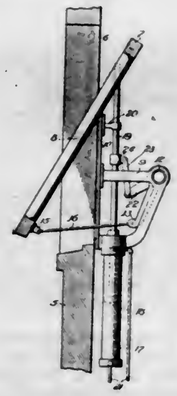
3. In a window operating mechanism, the combination of a series of straight members pivoted adjacent a series of windows to be operated, said members being normally disposed at right angles to the plane of the closed windows, a series of links connecting said windows with the adjacent members, an operating rod mounted to reciprocate longitudinally only, and a series of links connecting said members with said rod whereby the outer ends of said links will travel from one side of said rod to the other and the pivotal members may be swung on their pivots in an arc of approximately 180° so that their free ends are swung outside the window frames to operate said windows upon longitudinal movement of said operating rod.

4. In a window operating mechanism, the combination of a series of windows, a member pivoted adjacent each side of a window to be operated and extending inwardly therefrom, a link connecting each of said members with a side of a window, a pair of operating rods mounted to move simultaneously in opposite directions, and an oscillatory connection between each rod and a number of said members to cause said members to oscillate simultaneously transversely of said rods to operate the window upon actuation of the rods.

5. In a window operating mechanism, the combination of a member pivoted adjacent each side of a window to be operated, a link connecting each of said members with a side of the window, a pair of operating rods mounted to move simultaneously in opposite directions, and an oscillatory connection between each member and a rod, each of said connections comprising a link pivotally connected at one end to a rod and at the other end to one of said members whereby to cause said members to oscillate simultaneously to operate the window upon actuation of the rods.

[Claims 6 to 15 not rpinted in the Gazette.]

1,112,073. WINDOW-OPERATING MECHANISM. ROBERT A. LACKEY, Oak Park, Ill. Filed May 5, 1911. Serial No. 625,218. (Cl. 16—28.)



1. In a window operating mechanism, the combination of a rotatably mounted shaft, a pneumatic device for rotating said shaft, means locking the same in a predetermined position, an arm fixed on the shaft, and means connected to said arm and a window sash for operating said sash upon rotation of the shaft.

2. In a window operating mechanism, the combination of a rotatably mounted shaft, means for rotating the shaft, and connections between the shaft and a sash automatically locking the shaft against rotation under forces tending to open the sash when the sash is closed.

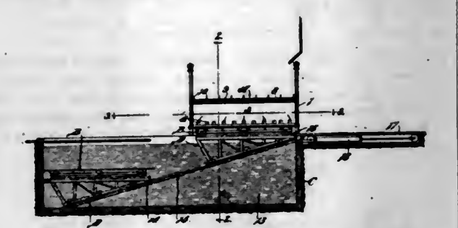
3. In a window operating mechanism, the combination of a pneumatic device, and connections between a window sash and said pneumatic device, said connections locking the sash against movement other than that produced by the pneumatic device when the sash is in predetermined position.

4. In a window operating mechanism, the combination of a rotatably mounted shaft, an arm fixed on said shaft, a pneumatic device, a link connecting said arm and the pneumatic device for rotating said shaft, and operative connections between said shaft and a window sash whereby the sash will be operated upon rotation of the shaft said link being disposed substantially at right angles to both the arm and the pneumatic device when the sash is in closed position, whereby the sash will be locked against opening movement.

5. In a window operating mechanism, the combination of a rotatably mounted shaft, a pneumatic device for rotating said shaft, an arm fixed on said shaft and normally disposed when the sash is in closed position in parallel relation to the path of travel of the pneumatic device, a link connecting said pneumatic device and said arm whereby operation of said pneumatic device will rotate said shaft, a second arm fixed on said shaft, and a link connecting said second arm with a window sash whereby said sash will be operated upon rotation of the shaft.

[Claims 6 to 9 not printed in the Gazette.]

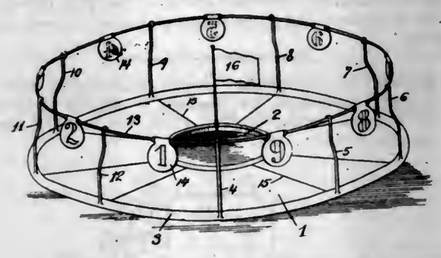
1,112,074. HEAT-TREATING APPARATUS. JOHN J. LICHTER, St. Louis, Mo. Filed May 7, 1914. Serial No. 837,040. (Cl. 148—34.)



1. An apparatus for treating metals and other substances, comprising a heating furnace, a dipping tank located underneath the chamber of the furnace, a truck or carrier whose edge portions project under sealing ledges on the side walls of the furnace chamber, and means for moving said truck downward and in an inclined plane into said dipping tank.

2. An apparatus for treating metals and other substances, comprising a heating furnace, a dipping tank arranged under the chamber of the furnace and provided with inclined tracks, a cradle traveling on said tracks, and a truck or carrier that is adapted to be run onto said cradle so as to form the bottom of the chamber of said furnace during the operation of heating the substance being treated.

1,112,075. DEVICE FOR PRACTISING GOLF-PUTTING. JOSEPH LUSH, Newark, N. J. Filed Feb. 17, 1914. Serial No. 819,159. (Cl. 46—59.)

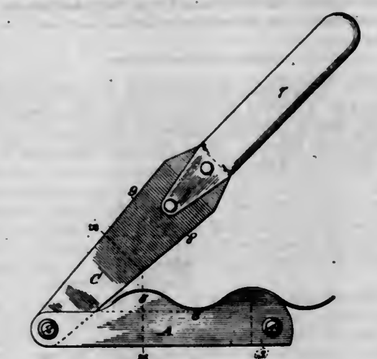


1. In a device for practising golf putting, the combination of a substantially flat annular base having a flange extending about an interior hole, posts spaced apart from one another and disposed adjacent the outer periphery of said base, and a member extending along and above the outer periphery of said base, said member coöperating with said posts to form arches.

2. In a device for practising golf putting, the combination of a substantially flat annular base having a flange extending about a central hole, posts spaced equal distances from one another and disposed adjacent the outer periphery of said base, a member held by said posts extending a complete circumference above the outer periphery of said base and markers carried by said member.

3. In a device for practising golf putting, the combination of a substantially annular base having a central opening, said base being of reduced effective thickness at its outer periphery and extending at a slight upward grade toward said hole, posts spaced apart from one another and disposed adjacent the outer periphery of said base, a member held by said posts above the outer periphery of said base and markers carried by said member.

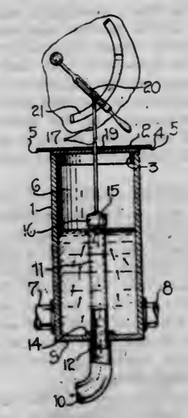
1,112,076. CORRUGATED-IRON SHEARS. FRANK McGORVIN, Redding, Cal. Filed Nov. 24, 1913. Serial No. 802,612. (Cl. 164—41.)



1. A shearing tool including a pair of spaced plates arranged in side by side relation one of which has a straight uninterrupted shearing edge and the other of which has a corrugated-shaped shearing edge, and a knife pivotally mounted in the space between said plate and serving to hold the latter spaced at one end, said knife being received in the space between the plates and having a shearing edge on each side thereof whereby one shearing edge of the knife coöperates with the shearing edge of one plate and the opposite shearing edge of the knife coöperates with the shearing edge of the other plate.

2. A shearing tool including a pair of spaced plates arranged in side by side relation, said plates having upper and lower longitudinal shearing edges, and a blade also having upper and lower longitudinal shearing edges pivoted between the plates, said plates and blade being invertible so as to allow the shearing edges of the blade to coöperate with either the upper or lower respective shearing edges of the plates.

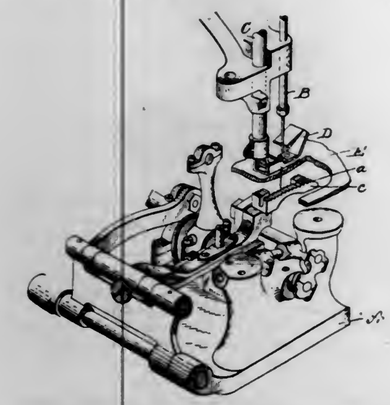
1,112,077. TRAP. WILLIAM J. MCLEAN, Everett, Mass. Filed Oct. 25, 1913. Serial No. 797,287. (Cl. 182—12.)



A water trap comprising a vertically disposed hollow cylindrical member having its ends closed and provided in its lower end with an outlet having a discharge pipe in communication therewith at a point adjacent its lower end and also provided with an inlet opening in the side wall having an inlet pipe in communication therewith; a vertically disposed tubular body within the cylinder, the upper end thereof being closed and having its lower extremity normally inserted within the outlet, said body being

provided with an opening on a side wall adjacent the closed end thereof, an annular flange projecting outwardly from the tubular body in close proximity to its lower end and serving to limit the insertion of said body within the outlet, and means for imparting endwise movement to the body.

1,112,078. FEEDING MECHANISM FOR SEWING-MACHINES. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1904. Serial No. 211,004. (Cl. 112—8.)



1. A sewing machine including in combination, a cloth plate, a needle and a feeding mechanism comprising a feed dog, adapted to engage the material in front of the needle, means for projecting said feed dog through the cloth plate to engage and feed the work, said feed dog having the forward end of its feeding surface inclined downwardly and forwardly relatively to the rearward portion of said surface and beneath the surface of the cloth plate, said inclined forward portion having feed teeth thereon, and means for adjusting the relative position of the feed dog and cloth plate.

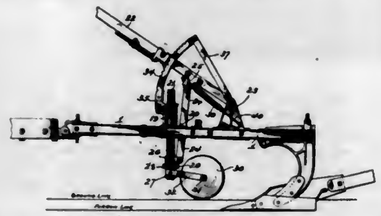
2. A sewing machine including a combination, a cloth plate, a needle, and a feeding mechanism comprising a feed dog, adapted to engage the material in front of the needle, means for projecting said feed dog through the cloth plate to engage and feed the work, said feed dog having the main portion of its feeding surface inclined downwardly and rearwardly, and its front portion inclined downwardly and forwardly beneath the surface of the cloth plate, said inclined forward portion having feed teeth thereon.

3. A sewing machine including in combination, a cloth plate, a needle, and a feeding mechanism comprising a pivoted feed dog adapted to engage the material in front of the needle, means for tilting said dog, means for projecting the same through the throat plate to engage and feed the work, said feed dog having the forward end of its feeding surface inclined downwardly and forwardly relatively to the rearward portion of said surface and beneath the surface of the cloth plate, whereby the feeding of the fabric is not impeded by the end of the feed dog in its various tilted positions.

4. A sewing machine including in combination, a cloth plate, a needle, a feeding mechanism comprising a pivoted feed dog adapted to engage the material in front of the needle, means for tilting said dog, means for projecting the same through the throat plate to engage and feed the work, said feed dog having the main portion of its feeding surface inclined downwardly and rearwardly, and its front portion inclined downwardly and forwardly beneath the surface of the cloth plate, whereby the feeding of the fabric is not impeded by the end of the feed dog in its various tilted positions.

5. A sewing machine including in combination, a cloth plate, a needle, a feeding mechanism comprising a feed dog adapted to engage the material in front of the needle, means for projecting the feed dog through the cloth plate to engage and feed the work, said feed dog having the main portion of its feeding surface inclined downwardly and rearwardly and its front portion inclined downwardly and forwardly beneath the surface of the cloth plate, said main portion and said front portion having teeth projecting outwardly at substantially the same angle to the surface of the feed dog.

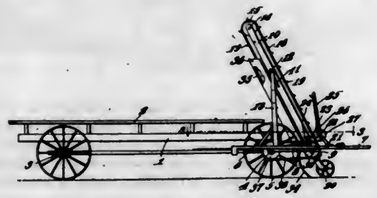
1,112,079. GANG-PLOW. NORMAN I. MILLIKEN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Original application filed June 19, 1913, Serial No. 774,669. Divided and this application filed Sept. 11, 1913. Serial No. 789,364. (Cl. 97—14.)



1. In a gang plow, the combination with a plow beam, and a sliding post having a caster gage wheel connected with its lower end, of a hand lever and a connecting rod, the latter pivotally connected at its upper end to the hand lever and at its lower end to the rear side of the lower end of the sliding post.

2. In a gang plow, the combination of a plow beam, a sleeve fixed thereto, a vertically sliding post passing through said fixed sleeve, a sleeve swiveled to the lower end of the sliding post, arms secured to said swiveled sleeve, a caster gage wheel mounted between said arms, a hand lever fulcrumed on the plow beam, and a connecting rod connected with the hand lever and with the rear side of the lower end of the sliding post above the swiveled sleeve.

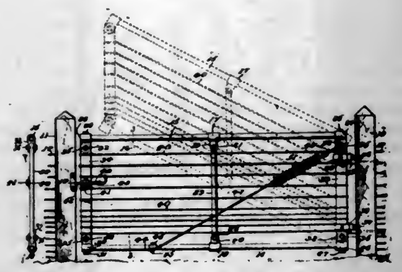
1,112,080. HAY-LOADER. GEORGE WASHINGTON MONTGOMERY, Springboro, Pa., assignor of one-half to Mark D. Bowman, Springboro, Pa. Filed July 19, 1912. Serial No. 710,510. (Cl. 56—61.)



1. The combination with a wheel supported structure of an upwardly extending elevator, means for connecting the same to said structure, means for supporting the elevator normally at a predetermined distance from the ground, a rake for directing material into engagement with the elevator, means for driving the elevator from a supporting wheel, a lever, and separate means operated by said lever for simultaneously shifting the elevator upwardly away from the ground and uncoupling said driving mechanism from the axle.

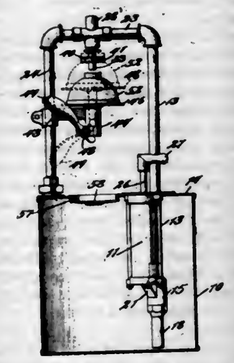
2. The combination with a wheel supported structure including an axle adapted to be rotated by said wheels, of a rack connected to and movable with the structure, an elevator overhanging the rack and mounted on said structure, a connection between the elevator and structure, means for sliding the elevator upwardly and downwardly relative to the structure, rake teeth for gathering material and directing it into engagement with the elevator, a board extending under the elevator and overhanging the rack for supporting material engaged by the lower flight of the elevator, and means for transmitting motion from the said axle to the elevator irrespective of the sliding movement of the elevator.

1,112,081. GATE. JOHN H. MOSS, Angola, Ind., assignor of one-half to Charles S. Whitworth and one-half to Charles C. Bogle, Cedar Falls, Iowa. Filed May 29, 1913. Serial No. 770,708. (Cl. 39—18.)



A gate including a frame formed of upper and lower longitudinal members and end members, clips engaging said longitudinal members and including spaced side portions bearing upon opposite sides of said end members, pivot devices extending through the sides of said clips and likewise through the portions of the end members and braced thereby, connecting members swinging upon the upper pivot at the hinge end of the gate and at opposite sides of the same, a spring coupled to each of said connecting members, a stop carried by the lower longitudinal member of said gate, and a rod bent into U-shape and engaging at its bend with a stop and coupled at its terminals respectively to said springs.

1,112,082. APPARATUS FOR FILLING OIL-CANS. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Jan. 15, 1909. Serial No. 472,403. (Cl. 221—86.)



1. In a device of the class described, the combination of a dispensing tank provided with a discharge outlet, a valve connected to the outlet, said valve having a discharge outlet and an independent passage, both adapted to be moved into and out of communication with the tank discharge outlet, means tending normally to adjust the valve to move its outlet out of communication with the tank outlet and the independent passage into communication with the tank outlet, a receptacle support for positioning and holding a receptacle out of engagement with the nozzle, and means for adjusting the support to bodily adjust the receptacle into engagement with the nozzle whereby the latter will be shifted by the adjustment of the receptacle to move the outlet thereof to establish communication of the said outlet with the tank outlet and against the tension of the first recited means.

2. In a device of the character described, the combination of a dispensing tank provided with a discharge outlet, a combined discharge nozzle and non-rotatable valve connected to the outlet for discharging the liquid into a receptacle, means tending normally to adjust the valve to close the nozzle, means whereby the valve may be adjusted by a receptacle which is being filled to open the nozzle, and means whereby the liquid will flow through the valve and nozzle and be discharged back into the tank when the said receptacle is filled.

3. In a portable device of the character described, the combination of a tank provided with an outlet for discharging the liquid into a receptacle and an inlet, said outlet and inlet being connected by a pipe, a combined non-rotatable valve and discharge nozzle arranged in the pipe, said valve being provided with a passage, resilient means tending normally to cause the valve to close the outlet of the nozzle and to cause the passage in the valve to communicate with the first said pipe, means whereby the excess liquid will be discharged from the receptacle which is being filled through the nozzle and back into the tank when the receptacle is full.

4. In a portable device of the character described, the combination of a tank provided with an outlet for discharging the liquid into a receptacle and an inlet, said outlet and inlet being connected by a pipe, a combined non-rotatable valve and discharge nozzle arranged in the pipe, said valve being provided with a passage, means tending normally to cause the valve to close the outlet of the nozzle and to cause the passage in the valve to communicate with the first said pipe, means whereby the receptacle which is being filled will adjust the valve to open the nozzle, and means whereby the excess liquid will be discharged through the nozzle and back into the tank.

5. In a portable device of the character described, the combination of a tank provided with an outlet and an inlet, said outlet and inlet being connected by a pipe, a combined non-rotatable discharge nozzle and valve arranged within the pipe, said valve having a passage, means tending normally to cause the passage in the valve to communicate with the first said pipe, and to close the nozzle, an adjustable receptacle support, means for adjusting the support and a receptacle thereon to open the nozzle to permit the liquid to be discharged into the receptacle, and means for discharging the excess liquid back into the tank when the receptacle is full.

[Claims 6 to 24 not printed in the Gazette.]

1,112,083. BOX-NAILING MECHANISM. ELMER C. NORTHRUP, San Francisco, Cal., assignor to Automatic Machine Company, San Francisco, Cal., a Corporation of California. Filed Feb. 15, 1911. Serial No. 608,816. (Cl. 1—16.)

1. In a box nailing machine, an inclined nail chute, the lower end of the nail chute having a short steep inclination to receive part of the head of the nail, and a bracket slidable transversely of the lower end of the nail chute, said bracket being formed with a shoulder sufficiently

abrupt to receive one side of the head of the nail, said shoulder and steep inclination acting mutually temporarily in the operation of the machine to support the nail, whereby when the bracket moves out of line with the nail chute the shoulder of said bracket will be removed from the head of the nail and the steep inclination of the end of the nail chute will allow the nail to slide off and the latter will fall.

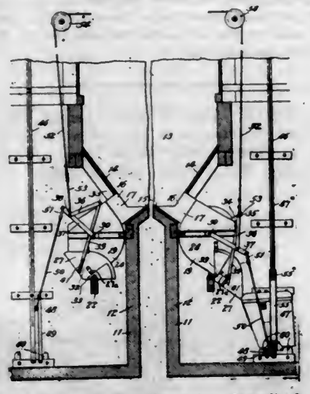
2. In a box nailing machine, an inclined nail chute, the lower end of the nail chute having a short steep inclination to receive part of the head of the nail, a bracket slidable transversely of the lower end of the nail chute, said bracket being formed with a shoulder sufficiently abrupt to receive one side of the head of the nail, said shoulder and steep inclination acting mutually temporarily in the operation of the machine to support the nail, whereby when the bracket moves out of line with the nail chute the shoulder of said bracket will be removed from the head of the nail and the steep inclination of the end of the nail chute will allow the nail to slide off and the latter will fall, and a picker comprising a conical member movable with said bracket transversely of the nail chute and having a path of movement at one side of said bracket and movable between the two lower nails as the bracket moves away from the nail chute to spread apart the lowermost nail and to retain the next higher nail in the nail chute when the lower end of the nail chute is uncovered by the bracket.

3. In a box nailing machine, an inclined nail chute, the lower end of the nail chute having a short steep inclination to receive part of the head of the nail, a bracket slidable transversely of the lower end of the nail chute, said bracket being formed with a shoulder sufficiently abrupt to receive one side of the head of the nail, said shoulder and steep inclination acting mutually temporarily in the operation of the machine to support the nail, whereby when the bracket moves out of line with the nail chute the shoulder of said bracket will be removed from the head of the nail and the steep inclination of the end of the nail chute will allow the nail to slide off and the latter will fall, and a picker comprising a conical member movable with said bracket transversely of the nail chute and having a path of movement at one side of said bracket and movable between the two lower nails as the bracket moves away from the nail chute to spread apart the lowermost nail and to retain the next higher nail in the nail chute when the lower end of the nail chute is uncovered by the bracket, said picker being spring supported and arranged to yield rearwardly in a longitudinal direction if its normal bodily movement is positively obstructed.

4. In a box nailing machine, a nail chute, a plurality of slidably supported rods extending transversely at the lower end of the nail chute, a plurality of brackets slidable on said rods, means coacting with the rods and slidable brackets for causing various brackets to be moved when the rods are operated, a picker carried by each bracket and movable between the two lower rails of the nail chute, each bracket having a shoulder constructed and arranged to receive and support the head of a nail when the shoulder is in line with the nail chute, and means for operating one of said rods a definite number of times in a given period, and for operating the other rod a less number of times in the same period.

5. In a box nailing machine, a nail chute, a plurality of slidably supported rods extending transversely at the lower end of the nail chute, a plurality of brackets slidable on said rods, removable abutments on the rods for moving the brackets, a picker carried by each bracket, and movable between the two lower nails of the nail chute, each bracket having a shoulder constructed and arranged to receive and support the head of a nail when the shoulder is in line with the nail chute, and a cam at the end of said rods, said cam having three cam faces, two of said cam faces having a less radius than the other, all three cam faces having a path of movement against the end of one of said rods, the longer cam face having a path of movement against the end of the other rod also, whereby one of said rods is operated three times for each revolution of the cam and the other rod is actuated once.

1,112,084. MATERIAL-HANDLING APPARATUS. ROBERT A. OGLE, Chicago, Ill. Filed Dec. 4, 1911. Serial No. 663,896. (Cl. 214—12.)



1. In apparatus of the character described, the combination with a hopper provided with a discharge-opening, of means for controlling the discharge of material from the apparatus comprising a measuring device consisting of a chute communicating with said hopper-outlet, a door at the discharge-end of said chute, an under-cut gate in said chute extending at all times above the bottom of said chute and leaving a passagegway from the hopper to the door when the gate is open and operating to control the flow of material from the hopper to the chute, and elevating means for controlling the operation of said gate and door.

2. In apparatus of the character described, the combination with a hopper provided with a discharge-opening, of means for controlling the discharge of material from the apparatus comprising a measuring device consisting of a chute communicating with said hopper-outlet, a door at the discharge-end of said chute, an under-cut gate in said chute separate from said door and extending at all times above the bottom of said chute and operating to control the flow of material from the hopper to the chute, and means operatively connecting said gate and door together to cause said gate to be open when said door is closed, and said door to be open when said gate is closed, elevating mechanism located adjacent to said first-named means for receiving material from said hopper, and means actuated by said elevating mechanism for actuating said first-named means.

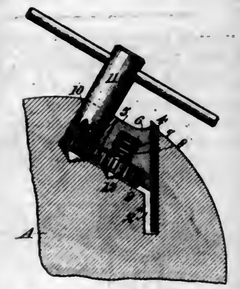
3. In apparatus of the character described, the combination with a hopper provided with a discharge-opening, of means for controlling the discharge of material from the apparatus comprising a measuring device consisting of a chute communicating with said hopper-outlet, a door at the discharge end of said chute, a pivotally mounted under-cut gate in said chute separate from said door and extending at all times above the bottom of said chute and operating to control the flow of material from said hopper to said chute, and means operatively connecting together said gate and door to cause said gate to be open when said door is closed, and said door to be opened when said gate is closed, elevating mechanism located adjacent to said first-named means for receiving material from said hopper, and means actuated by said elevating mechanism for actuating said first-named means.

4. In apparatus of the character set forth, the combination with a hopper provided with a discharge-outlet, of means for controlling the flow of material from said hopper comprising a measuring device consisting of a chute communicating with said hopper-outlet, a door at the discharge end of said chute, a pivotally supported under-cut gate in said chute, said gate being at all times spaced from the bottom of said chute, and means operatively connecting said gate and door together to cause said gate to be open when said door is closed, and said door to be open when said gate is closed, elevating mechanism located adjacent to said first-named means for receiving material from said hopper, and means actuated by said elevating mechanism for actuating said first-named means.

5. In apparatus of the character set forth, the combination with a hopper provided with a discharge-outlet, of means for controlling the discharge of material from said hopper comprising a chute communicating with said hopper-outlet, a pivoted gate for said hopper-outlet constructed and arranged to permit material to flow from said hopper into the chute when the gate is open, a pivoted door for said chute beyond said gate, and means operatively connecting together said gate and door and operating when actuated in one direction to simultaneously open said door and close said gate, and close said door and open said gate when moved in the opposite direction, said last-named means being constructed and arranged to cause the initial rotary opening movement of said door and the initial rotary closing movement thereof to be slower and faster, respectively, than the rotary movement of said gate, and said door to be open when said gate is closed, elevating mechanism located adjacent to said first-named means for receiving material from said hopper, and means actuated by said elevating mechanism for actuating said first-named means.

[Claims 6 to 23 not printed in the Gazette.]

1,112,085. CUTTER-HEAD. COLLINS K. ORTON, San Francisco, Cal. Filed Feb. 11, 1914. Serial No. 818,052. (Cl. 144—230.)

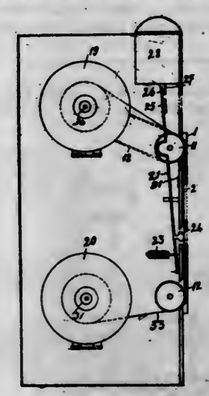


1. In combination with a cutter head having a channel, a block in the channel, one of said parts having an annular recess with a central threaded hole leading therein, the other part having a socket, and the head having a hole which intersects the recess, a screw threaded into said threaded hole, a gear between the block base and the channel bottom affixed to said screw and being rotatably received in said annular recess, said gear having a journal which projects into the socket and having a part thereof projecting into said hole which intersects the recess, and a key having pinion teeth insertible in said last named hole and having its teeth engageable with the teeth of said gear.

2. In combination with a cutter head having a channel in its periphery, and a block in the channel, a gear disposed between the block base and the bottom of the channel and having a journal which bears on one of said elements, a screw connected to the gear and rotatably and positively engaged with the other element, said head having a hole in its periphery which intersects a portion of the gear teeth, and a key insertible in said hole and having teeth for engagement with the gear teeth.

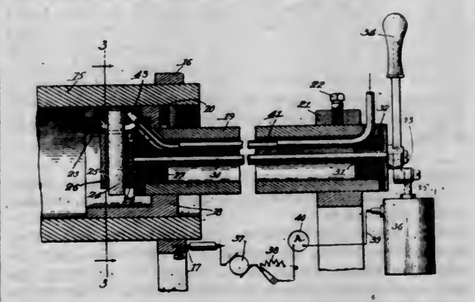
1,112,086. INDICATOR FOR ILLUSTRATING AND SIGNALING THE ROUTE OF A VEHICLE. PIO PAPINI, Florence, Italy. Filed Mar. 13, 1911. Serial No. 614,228. (Cl. 40—42.)

1. In a route indicator for vehicles, two spools adapted to travel in synchronism with the motion of the vehicle, a route signaling band traveling between the two spools and provided with holes, mechanism for conveying motion to the band from the wheels of the vehicle, a plurality of pivotally arranged levers, knobs on said levers adapted to enter the said holes without obstructing the movement of the band, springs to keep the knobs in contact with the said band and signals actuated by the said levers, means for disconnecting the band moving mechanism from the parts from which it derives its motion, and means for simultaneously displacing all said levers from operative relation to the band, said means consisting of a pivoted bow piece arranged transversely to said levers.



2. In a route indicator for vehicles, two spools adapted to travel in synchronism with the motion of the vehicle, means for imparting motion to said spools in unison with the motion of the vehicle, a route signaling band traveling between the two spools and provided with holes, a case having a front wall provided with holes, a frame before the front wall, provided with holes and forming with the said wall a slit for guiding and flattening the band, a window in the said frame to make the band visible, pivotally arranged levers to slide along the said band, knobs on the said levers adapted to enter the holes in the band, the front wall and the frame, and signals actuated by the said levers.

1,112,087. METHOD OF HARDENING AND TEMPERING. JOHN PATTEN, Baltimore, Md. Filed Aug. 15, 1912. Serial No. 715,283. (Cl. 148—10.)



1. The method of hardening a cylindrical surface of a piece of metal which consists in applying an electric arc to the surface and relatively rotating the arc and surface and also imparting a relative axial movement until the entire surface to be treated has been traversed by the arc.

2. The method of surface hardening a cylindrical surface of a piece of metal which consists in subjecting the surface to an electric arc, and imparting a rotary movement to the surface and an axial movement to the arc whereby the entire cylindrical surface may be treated.

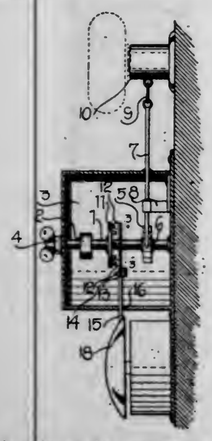
3. The method of surface hardening a piece of metal which consists in applying an electric arc thereto, causing

the metal and arc to travel relatively, and rapidly absorbing the heat from the path of the arc in the rear thereof.

4. The method of surface hardening a piece of metal which consists in applying an electric arc thereto, causing the metal and arc to travel relatively, and rapidly cooling the surface in the path of the arc immediately after the passage of the arc.

5. The method of surface hardening a piece of metal which consists in applying an electric arc thereto, causing the metal and arc to travel relatively, and rapidly cooling the surface in the path of the arc and immediately in the rear of the arc by directing thereon a stream of cold fluid.

1,112,088. BURGLAR-ALARM. JOHN P. PEARCE, Albertville, Ala. Filed Feb. 11, 1914. Serial No. 818,099. (Cl. 116—44.)

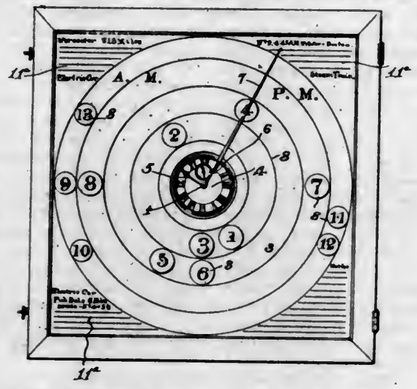


In a burglar alarm, the combination with a gong and a hammer mechanism coacting therewith and including an anchor, of means for actuating the hammer embodying a spring actuated shaft, a ratchet wheel and a crown wheel carried by the shaft, the latter being engaged by the anchor, a slidable dog normally engaging the ratchet wheel, a rotatable dog releasing member, and a link loosely connecting the dog and the rotatable member whereby turning of the latter in one direction will cause the link to exert a pull on the dog and thus release it from engagement with the ratchet wheel, the movement of the rotatable member in the opposite direction causing the dog and link to have a sliding movement relative to each other, thus to prevent the dog from being moved into engagement with the ratchet wheel during its rotation and thereby prevent injury to its teeth.

1,112,089. TIME-TABLE. SIDNEY W. PHELPS, Southbridge, Mass. Filed Sept. 3, 1910. Serial No. 580,347. (Cl. 161—18.)

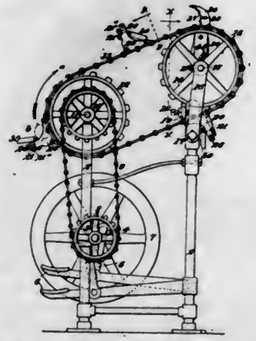
1. A time-table including a clock having one of its hands formed with an extension, a dial over which the extension passes, minor dials arranged on said main dial and corresponding in position with certain of the minute designations of the clock, means carried by the said minor dial and serving in conjunction with the extension of the clock hand to designate the exact time when a certain event indicated by the dial is scheduled to occur.

2. A time-table including a dial, a clock having an ordinary hour hand traveling over the central portion of the dial and a minute hand having an extension traveling over the major portion of the dial, supplemental dials arranged on the main dial and corresponding in position to certain of the minute designations of the clock, hands carried by the supplemental dials for indicating a certain hour, and configurations disposed on the face of the minor dial and referring to a second set of configurations, said second set being disposed at one corner of the main dial, whereby the two sets of configurations serve to denote a certain scheduled occurrence and the hour designating hand on the supplemental dial serves to indicate the hour



near which the event is to occur and the position of the supplemental dial indicates the minutes before or after the hour for the occurrence of the event, the approach of the minute hand of the clock to the supplemental dial denoting the approach of said time.

1,112,090. FRUIT PITTING AND CUTTING MACHINE. FRANK CUTTER PHILIPS, Healdsburg, Cal. Filed May 18, 1914. Serial No. 839,269. (Cl. 146—6.)



1. In a fruit pitting machine, a pair of parallel, spaced chains, a driving mechanism therefor and carriers fixed upon and between said chains and moving therewith, each having a pocket for the reception of fruit, a relatively stationary cutter and abutment member mounted in the path of movement of said pockets so as to divide the fruit carried in the pockets as they pass the abutment member, and presser fingers connected to said carriers for embracing the fruit placed in the pocket of the carriers to steady the same in its position therein.

2. In a fruit pitting machine, a pair of parallel, spaced sprocket chains, a driving mechanism therefor and carriers fixed upon and between said chains and moving therewith, each having a pocket for the reception of fruit, a relatively stationary cutter and abutment member mounted in the path of movement of said pockets so as to divide the fruit carried in the pockets as they pass the abutment member, and presser fingers connected to said carriers for embracing the fruit placed in the pocket of the carriers to steady the same in its position therein, said presser fingers automatically falling into engaging position with a fruit inserted in a pocket in a carrier during movement of the carrier and automatically operating

to release the several fruit sections in the carrier after the same has passed the cutting member.

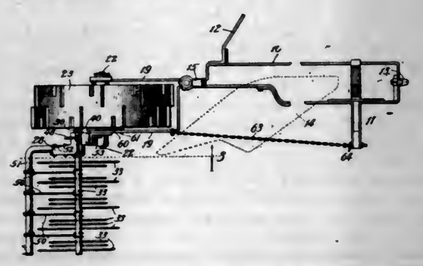
3. In a fruit pitting machine, a pair of parallel, spaced sprocket chains, a driving mechanism therefor and carriers fixed upon and between said chains and moving therewith, each having a pocket for the reception of fruit, a relatively stationary cutter and abutment member mounted in the path of movement of said pockets so as to divide the fruit carried in the pockets as they pass the abutment member, and presser fingers connected to said carriers for embracing the fruit placed in the pocket of the carriers to steady the same in its position therein, said cutter member being adjustably mounted so as to cooperate with the carriers for the severance of fruit of different sizes.

4. In a fruit pitting machine, a pair of parallel, spaced sprocket chains, a driving mechanism therefor and carriers fixed upon and between said chains and moving therewith, each having a pocket for the reception of fruit, a relatively stationary cutter and abutment member mounted in the path of movement of said pockets so as to divide the fruit carried in the pockets as they pass the abutment member, presser fingers connected to said carriers for embracing the fruit placed in the pocket of the carriers to steady the same in its position therein, and means for providing for a limited yielding movement of said cutter member.

5. In a fruit pitting machine, a pair of parallel, spaced sprocket chains, a driving mechanism therefor and carriers fixed upon and between said chains and moving therewith, each having a pocket for the reception of fruit, a relatively stationary cutter and abutment member mounted in the path of movement of said pockets so as to divide the fruit carried in the pockets as they pass the abutment member, presser fingers connected to said carriers for embracing the fruit placed in the pocket of the carriers to steady the same in its position therein, means for providing for a limited yielding movement of said cutter member, said means comprising a pivotal support for the cutter, and a spring reacting against the swinging portion of the cutter member.

[Claims 6 to 15 not printed in the Gazette.]

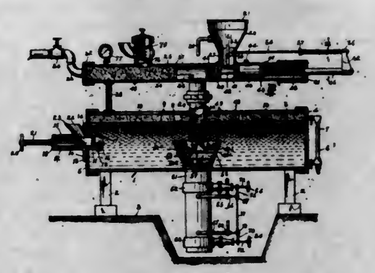
1,112,001. AGRICULTURAL MACHINE. DARIUS T. PHILLIPS, Chicago, Ill. Filed Nov. 28, 1910. Serial No. 594,464. (Cl. 97—44.)



1. Pulverizing mechanism for the purpose set forth comprising, in combination, a wheeled support, a shaft journaled on said support and provided with laterally-projecting rods spaced apart, a bar carried by said support and extending substantially parallel with said shaft in the rear of the axis of the latter, rods of spring metal coiled loosely about said bar to present spring-sections with the outer ends of said yielding rods projecting into the spaces between the rods on said shaft, and means for rotating said shaft in the direction opposite to that in which the wheel of the support rotates when the latter is moved over the ground, whereby the lumps of dirt engaged by said first-named rods are raised thereby and fall upon said stationary rods and are broken up by the coöperating stationary and movable rods.

2. A combined sub-soil packer and pulverizing device for attachment to a plow, comprising a frame interchangeable with the usual wheeled frame of the plow, a wheel on said supplemental frame positioned to travel in the furrow made by the plow and pack the soil at the bottom of the furrow, a shaft journaled on said frame and extending laterally thereof and provided with laterally-extending rods spaced apart, a bar carried by said supplemental frame extending in the rear of the axis upon which said shaft rotates and substantially parallel therewith, yielding rods carried by said bar and extending into the spaces between the rods on said shaft, and means for rotating said shaft in the direction opposite to that in which whel rotates when the wheel is moved over the ground, whereby the lumps of dirt engaged by sid first-named rods are raised and fall upon said yielding rods and are broken up by the coöperating rods rods on said shaft.

1,112,092. ACETYLENE-GAS GENERATOR. VICTOR PINGRET, Cleveland, Ohio. Filed Dec. 13, 1909. Serial No. 532,846. (Cl. 48—51.)



1. In an acetylene gas machine, a generating tank having gas and water compartments, a feed cylinder communicating with said tank, a hopper communicating with said cylinder, a reciprocating piston mounted in said cylinder, means for conducting gas from the generating tank to said cylinder, said means supplied with an absorbent material, a residue chamber communicating with the generating tank, and means in said chamber controlling the admission thereto and discharge therefrom of residue received from the generating tank.

2. In an apparatus for generating acetylene gas, a generating tank, a baffle plate dividing the interior of the tank into gas and water compartments, an absorbent material in the gas compartment, a feed cylinder communicating with said tank, a hopper for the cylinder, a piston in said cylinder, a loading chamber in said piston, a slaking hopper in said tank, and a residue chamber communicating with said hopper.

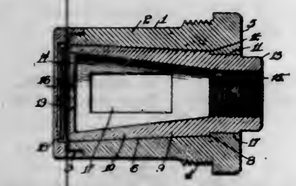
3. In an apparatus for generating acetylene gas, the combination of a generating tank having a water compartment and a gas compartment therein separated by a screen, an absorbent arranged in said gas compartment, cylinder communicating with the gas and water compartments of said generating tank, said cylinder having a gas compartment with an absorbent therein, an outlet communicating with said gas compartment, and a piston chamber, a reciprocating chambered piston arranged in said chamber, said piston adapted to be operated by the gas-pressure in said cylinder, means for admitting a supply of gas generating material to said piston chamber, means within said tank for screening the generating material, and means for discharging waste material from said tank.

4. In an apparatus for generating acetylene gas, the combination with a generating tank, a perforated partition in said tank, a cylinder connected with the tank, a piston in said cylinder, a loading chamber in the piston, a spring adapted to project the piston, a hopper arranged to register with the said chamber when the piston is retracted, absorbent material arranged above the said partition, a discharge chamber for the tank, and valves for the discharge chamber.

5. In an apparatus for generating acetylene gas, the combination of a generating tank, a baffle plate in the tank, a discharge pipe for said tank, means for introducing an initial charge of gas producing material into the tank, a piston cylinder communicating with the tank, a chambered piston in said cylinder, and a feed hopper adapted to register with the said piston chamber when the piston is at one end of its stroke.

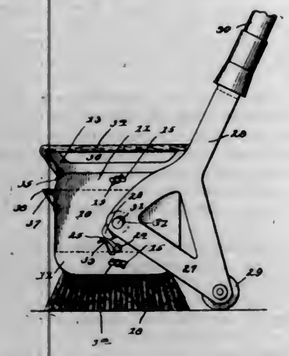
[Claims 6 to 9 not printed in the Gazette.]

1,112,093. TAPPING-VALVE. EDWARD P. POOLE, Connellsville, Pa. Filed Jan. 15, 1913. Serial No. 742,269. (Cl. 137—27.)



A receptacle tapping valve comprising a casing adapted to be secured to the receptacle and having a portion thereof projecting beyond the outer surface of the wall of the receptacle to permit of the manipulation of the casing, said casing being formed with an internal bore tapering from the inner end of the casing to a point approximately in line with the outer surface of the receptacle when the casing is in place, the bore of the casing being of true cylindrical form from the forward end of the taper to the forward end of the casing, the cylinder section of the bore being of less diameter than the minimum similar dimension of the tapered section of the bore to provide a shoulder at the juncture of such bore sections, a plug having an external surface corresponding exactly to the internal surface of and fitting both sections of the bore of the casing, the inner end of the plug approximately alining with the inner end of the casing, the outer end of the plug extending in advance of the outer end of the casing and being formed to permit manipulation of the plug independently of the casing, the plug and casing being each formed with diametrically opposed ports adapted to be placed in registry or non-registry to control the flow of the liquid from the receptacle, and a cap having threaded connection with the inner end of the casing and limited in its application by such inner end of the casing, said cap being spaced from the inner end of the plug, and a spring interposed between said cap and plug.

1,112,094. FOUNTAIN-BRUSH. ADOLPH A. RACKOFF, New York, N. Y. Filed Nov. 4, 1913. Serial No. 799,191. (Cl. 15—51.)



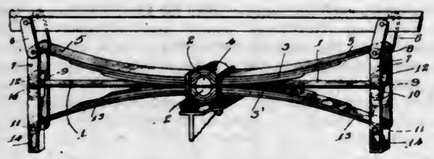
1. An article of the class described comprising a body forming a reservoir having end flanges, a brush, means for adjustably and detachably mounting the brush between the flanges, and means for delivering liquid from the reservoir to the brush.

2. An article of the class described comprising a body forming a reservoir having end flanges, a brush, means for adjustably and detachably mounting the brush between the flanges, means for delivering liquid from the reservoir to the brush, and means for controlling said second-named means.

3. An article of the class described comprising a body forming a reservoir having end flanges, a brush, means for adjustably and detachably mounting the brush between the flanges, means for delivering liquid from the reservoir to the brush, means for controlling said second-named means, and means for sustaining the second-named means closed.

4. An article of the class described comprising a body forming a reservoir having end flanges, a brush, means for adjustably and detachably mounting the brush between the flanges, means for delivering liquid from the reservoir to the brush, means for controlling said second-named means, means for sustaining the second-named means closed, and a handle detachably connected with said third-named means.

1,112,095. SPRING. CLABEORN P. RANDOLPH, El Centro, Cal. Filed Apr. 28, 1913. Serial No. 764,266. (Cl. 21—105.)

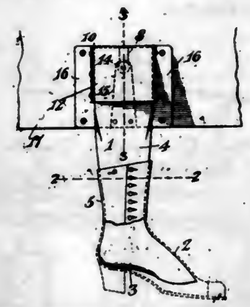


1. A spring comprising a straight center leaf with a transverse loop at each end thereof, leaves above and below the center leaf, a leaf below the center leaf having a transverse loop in the ends thereof, a leaf above the center leaf connected with the body of the vehicle, plates connected with the body and extending down adjacent said loops, said plates having rollers which pass through the respective loops and which are so spaced as to serially make contact with the respective loops.

2. A spring comprising two oppositely bowed leaves, a center leaf between the bowed leaves, an axle connection at the center of the leaves, body supports connected to the ends of the leaves, the connections between the bowed leaves and supports being of different degrees of fit allowing one bowed member and the supports to move a definite amount without bending the other bowed member, the center leaf having loose connections with the supports allowing a less movement in both directions of either bowed spring and supports, whereby in the down movement the three leaves are brought into bending action in one consecutive order and in the upward movement are brought into bending action in the opposite consecutive order.

1,112,096. MEANS FOR FACILITATING THE MARKING OF BUTTON POSITIONS ON SHOES. OTTO R. ROENIUS and WILLIAM F. GLEUE, Grand Rapids, Mich. Filed Jan. 31, 1913. Serial No. 745,522. (Cl. 12—123.)

1. A device for the purpose described, comprising a form having a leg portion of greater width and less thickness than the like parts of the human leg of a size corresponding to the form, said leg portion being of flattened elliptical cross-section, and a foot entering portion of smaller size than the foot-receiving portion of a shoe otherwise adapted to the form, with said foot-entering portion provided with an instep part corresponding in curvature to the natural curve of the instep, the leg portion of the form being shaped to provide a solid or unbroken support for the short quarter and buttonhole fly of a shoe applied to the form with the buttonhole fly overlapping the short quarter.



2. A device for the purpose described, comprising a form alike on both faces and having at one end a shoe entering portion and at the other end a flat portion with the intermediate part of flat elliptical cross-section, and a holder provided with a latch member and shaped to receive the flattened end of the form, said flattened end of the form being shaped on each face to receive the latch member.

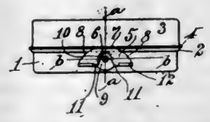
3. A device for the purpose described, comprising a form having a shoe entering part and a shank part, the shank part terminating at the end remote from the shoe entering part in a flat portion having recesses on opposite sides and grooves extending from the end of the flat portion to the recesses, and a holder for receiving the flattened end of the form with either face of the form uppermost and provided with a yieldable latch member in position to engage in a respective recess.

4. A device for the purpose described, comprising a form having a shoe entering part and a leg portion, the latter being relatively flat and of elliptical cross-section with the shorter axis less, and the longer axis greater than like parts of a human leg of a size corresponding to the form, and where overlaid by the buttonhole fly and short quarter of a shoe applied to the form being solid or unbroken to constitute a support for the named parts of the shoe during the marking operation.

5. A device for the purpose described, comprising a form with one end shaped to enter the foot receiving part of a button shoe and with a leg portion longer than the leg receiving part of the shoe to project beyond the top of the upper of the shoe, the leg portion where corresponding to the upper of the shoe when applied being in cross-section in the shape of a flattened ellipse of greater length and less thickness than like parts of a human leg of a size corresponding to the form, and that portion of the form remote from the foot entering portion being flat and of substantially rectangular cross-section.

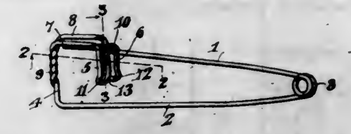
[Claim 6 not printed in the Gazette.]

1,112,097. LID-OPENER. SAMUEL SCHMIDT, Farmersville, Ohio. Filed Jan. 14, 1914. Serial No. 811,939. (Cl. 220—6.)



The combination with a box having a circumferential bead and the lid thereof having a circumferential marginal flange, of a lifter pivoted to said box, and having a central boss through which the pivot extends, said boss terminating in opposite shoulders on the lower edge of said lifter adapted to engage the bead on said box to limit the movement of said lifter in either direction.

1,112,098. SAFETY-PIN. FREDERICK CHARLES SCOTT, Hornby Island, British Columbia, Canada, assignor of one-third to C. C. Williams and one-third to Frank M. Dyer, Detroit, Mich. Filed Apr. 3, 1913. Serial No. 758,619. (Cl. 24—159.)



1. A safety pin including a movable bar or pin proper provided with spaced bends and a substantially straight intermediate angularly disposed connecting portion offsetting the outer portion of the pin from the plane of the inner portion, and a catch or keeper extending from a relatively fixed portion of the safety pin and having spaced coacting gripping portions arranged in pairs which are spaced apart longitudinally of the safety pin to engage the movable pin or bar at the said bends thereof.

2. A safety pin including a movable bar or pin proper provided with spaced bends and having a substantially straight intermediate angularly disposed connecting portion offsetting the outer portion of the movable pin or bar from the inner portion thereof, and a catch or keeper extending from a relatively fixed portion of the safety pin and comprising spaced coacting gripping portions arranged in pairs, the said pairs of gripping portions being disposed in transverse planes arranged at different angles to the movable pin or bar and engaging the same at the bends thereof.

3. A safety pin including a movable bar or pin proper provided with spaced bends and having a substantially straight intermediate connecting portion offsetting the outer portion of the movable pin or bar from the plane of the inner portion, and a catch extending from the side of the safety pin at which the movable pin or bar is arranged and terminating short of the opposite side of the safety pin, said catch consisting of a pair of substantially U-shaped loops having spaced sides or gripping portions, the sides or gripping portions of one loop coacting with the sides or gripping portions of the other loop and the coacting gripping portions or sides being arranged in different transverse planes and engaging the pin or bar at the bends thereof.

4. A safety pin constructed of a single piece of wire and including a movable bar or pin proper having its end adjacent to the point deflected laterally and offsetting the point of the pin or bar from the remaining portion of the same, and a catch or keeper composed of two lengths of wire spaced laterally to allow for the introduction of the pin or bar and formed at its free end with gripping portions arranged in pairs, which are spaced longitudinally of the pin or bar so as to engage the same at two points along the deflected portion thereof.

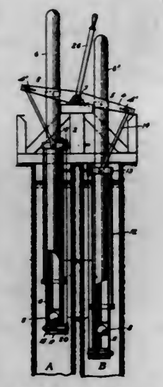
1,112,099. BALANCED AUTOMATIC AIR-LIFT. NORMAN R. SMITH, Red Bluff, Cal. Filed Sept. 17, 1913. Serial No. 790,339. (Cl. 103—54.)

1. A pump-cylinder comprising a pair of reciprocating pump-cylinders, means for moving said pump-cylinders simultaneously in opposite directions, and means for delivering alternate charges of liquid and air to the pump-cylinders on the reciprocation thereof.

2. In a pump, a pair of reciprocating pump-cylinders, means for moving said pump-cylinders in unison in opposite directions, pistons on the lower ends of said pump-cylinders, means for reciprocating the pistons in advance of the pump-cylinders, and means controlled by the reciprocation of the pump-cylinders and pistons by which alternate charges of liquid and air will be delivered to the pump-cylinders.

3. In a pump, a pair of reciprocating pump-cylinders, means for moving said pump cylinders in unison in opposite directions, pistons on the lower ends of said pump-

cylinders, means for reciprocating the pistons in advance of the pump-cylinders, means controlled by the reciprocation of the pump-cylinders and pistons by which alternate charges of liquid and air will be delivered to the pump-cylinders, and means by which the weight of the liquid in the well will operate to force the liquid in the pump-casings to discharge.

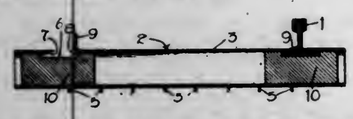


4. In a pump, a walking-beam, a pair of balanced pump-cylinders on said walking-beam, a piston on the end of each of the pump-cylinders, connections between the walking-beam and the pistons for reciprocating the latter, means controlled by the piston for trapping air in the pump-cylinders, and a valve in the piston for admitting liquid to the pump-cylinders.

5. In a pump, a reciprocating pump-cylinder, a foot-valve thereon, an external piston, means by which said piston will trap air below the foot-valve to form an air piston, and valved means for admitting liquid to the pump-cylinder by which the external presure of the liquid in which the pump-cylinder is submerged will operate to raise liquid in the pump-cylinder.

[Claims 6 to 8 not printed in the Gazette.]

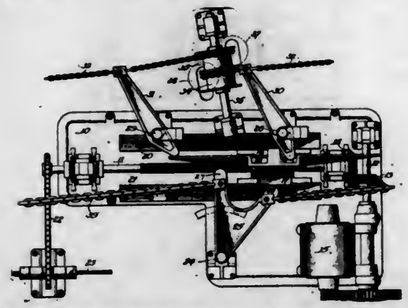
1,112,100. RAILROAD-TIE. FRANKLIN W. THEAL and CHARLES A. BLAIR, Akron, Ohio. Filed Nov. 19, 1913. Serial No. 801,934. (Cl. 238—5.)



In a device of the character described a body portion bent to form a substantially rectangular casing, the edges of said casing being riveted together, a plurality of slits formed near the ends of the casing, lugs formed between the slits and adapted to be bent upwardly at right angles to the surface of the casing, said casing having a recess near each end, the outer wall of each recess being beveled to form a rail flange engaging portion, tongues formed of the metal between the outer and inner walls of the recess, said tongues being adapted to be bent downwardly and coöperate with the rail flange engaging portions to hold the railroad rails in place, and a block adapted to be inserted beneath each recess, and form a rail seat, thereby forming a cushioning member to take up the vibration of traffic.

1,112,101. REVERSING MECHANISM. FRED TSCHUDY, Birmingham, Ala. Original application filed June 17, 1911, Serial No. 633,848. Divided and this application filed Oct. 30, 1911. Serial No. 657,454. (Cl. 74—5.)

1. A reversing mechanism for furnaces, comprising, in combination, a base member, a shaft, an element mounted for reciprocation with relation to said shaft, an air-valve-operating lever and a gas-valve-operating lever, said levers being adapted for actuation by said reciprocatory member, and at different periods in the reciprocation thereof, substantially as described.

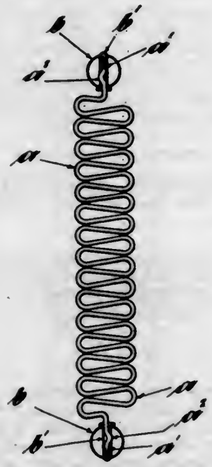


2. A reversing mechanism for furnaces, comprising, in combination, a base, a worm shaft mounted in bearings on said base, means for rotating said worm shaft, a member mounted on and adapted to be reciprocated by said worm shaft, gas valve and air-valve-operating levers associated with said base, said levers being adapted for actuation by the said reciprocatory member, substantially as described.

3. A reversing mechanism for furnaces, comprising, in combination, a base, a worm shaft mounted in bearings on said base, means for rotating said worm shaft, a member mounted on and adapted to be reciprocated by said worm shaft, gas valve and air-valve-operating levers associated with said base, said levers being adapted for actuation by said reciprocatory member and at different stages in the reciprocation thereof, substantially as described.

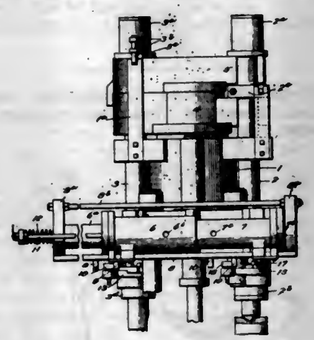
4. In a reversing mechanism for furnaces, the combination of a suporting member, a reciprocatory member mounted for movement on said supporting member, means for reciprocating said reciprocatory member, a plurality of levers associated with said mechanism and having portions adapted to be acted upon by said reciprocatory member at different points in its reciprocation, said levers being maintained by said reciprocatory member against movement except by said reciprocatory member, substantially as described.

1,112,102. COLLAR-SUPPORTER. JAMES GRAHAM TURNBULL, Manchester, England. Filed Apr. 10, 1913. Serial No. 760,132. (Cl. 2—90.)



In a collar or like support or stiffener, the combination of a length of spring wire bent to a sinuous form, the sinuosities being of regular and even formation and lying in a plane common to all and width-wise of the support, said wire having its ends pointed and near each of such pointed ends having a kink, and a sheath comprising an outer shell part and an inner tubular part, the latter being closed at one end and open at the other end, and having a hole at one side to receive the kink in the pointed end of the wire, when the latter is inserted in the sheath, as set forth.

1,112,103. RETORT-PRESS. CHARLES ALBERT WETTENGEL, St. Louis, Mo. Filed Oct. 24, 1912. Serial No. 727,566. (Cl. 25—27.)



1. In a retort press, the combination with a clay cylinder, of a matrix and cover pivotally mounted at one end on said clay cylinder, bolts and nuts for bringing said parts closely together during the operation of the press, power actuated mechanism and connecting means to loosen said nuts, and means for raising the bolt to which the free ends of said matrix and cover are secured.

2. In a retort press, the combination with a clay cylinder, of a matrix and cover, bolts provided with nuts for holding said parts together during the operation of the press, levers engaging said nuts, a bar provided with projections engaging said levers, and power actuated mechanism for actuating said bar and projections to move said levers to permit said matrix and cover to be moved from their operative positions.

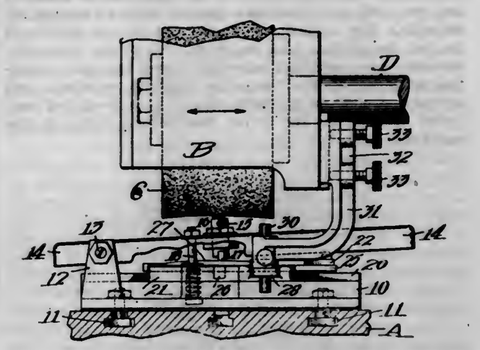
3. In a retort press, the combination with a clay cylinder, of a matrix and cover, bolts provided with nuts for holding said parts tightly together during the operation of the press, levers engaging said nuts, a bar provided with a series of projections for engaging said levers, one of the series of said projections being a greater distance apart than the other to permit the levers to be struck one at a time, and power actuated mechanism for moving said bar and projections.

4. In a retort press, the combination with a clay cylinder, of a matrix and cover, bolts provided at their upper ends with adjustable collars and at their lower ends with nuts for holding said parts tightly together during the operation of the retort press, power actuated mechanism and connecting means adapted to loosen said nuts to permit the said matrix and cover to be moved from their operative positions.

5. In a retort press, the combination with a clay cylinder, of a matrix and cover, bolts provided with nuts for holding said parts tightly together during the operation of the retort press, lugs provided on said nuts, levers provided with sockets and apertures, screws provided in said levers adjacent to said apertures, said nuts resting in said sockets and said lugs resting in said apertures, the screws being adapted to adjust the lugs in said apertures, and power actuated mechanism for moving said levers.

[Claim 6 not printed in the Gazette.]

1,112,104. DEVICE FOR SHAPING GRINDING-WHEELS. ALPHONZO WHITE, Worcester, Mass., assignor to Norton Grinding Company, a Corporation of Massachusetts. Filed May 12, 1913. Serial No. 766,993. (Cl. 125—6.)



1. The combination with a grinding machine having an axially reciprocable rotatable wheel, and a work table, of means for shaping said wheel comprising a plate between the wheel and table; means carried by said plate for shaping the wheel as it rotates, and means movable axially with the wheel for moving said plate and shaping means positively toward the wheel.

2. In an attachment for grinding machines, the combination with a base adapted to be applied to the work table of a grinding machine, of a support for a diamond point located over said base, and movable toward and from the base, and means movable axially with the grinding wheel to be operated upon, and located between said base and support, for controlling the position of the diamond point with respect to the axis of the wheel.

3. In an attachment for grinding machines the combination of a base adapted to be attached to the work table of a grinding machine, of a plate movably connected with said base, a support on said plate for a diamond point or other cutting tool, a slide movable along said base, means for moving said slide with the wheel to be cut, and means movable with said slide for controlling the distance of the diamond point from the axis of the grinding wheel.

4. In an attachment for a grinding machine, the combination with a base adapted to be secured to the work table of the grinding machine transversely thereof, and parallel with the grinding wheel shaft, of a plate between said base and the grinding wheel shaft pivoted to one end of said base on an axis parallel with the surface of the work table, a cutting tool support on said plate, and a member slidable along said base parallel with the grinding wheel shaft and under said support for engaging said support during its sliding motion and controlling the pivotal motion of said plate.

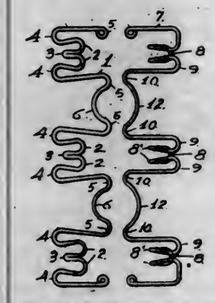
5. In an attachment for grinding machines, the combination of a base adapted to be secured to the work table of a grinding machine, a plate pivoted to said base at one end thereof and extending over the base, a support on the top of said plate for a cutting tool, and a member slidable along said base under the plate and support and having a master surface engaging the bottom of said cutting tool support.

[Claims 6 to 8 not printed in the Gazette.]

1,112,105. COMBINED STAY AND HOOK AND EYELET. MARGARET WOLFF, San Francisco, Cal. Filed Oct. 7, 1913. Serial No. 793,937. (Cl. 2—91.)

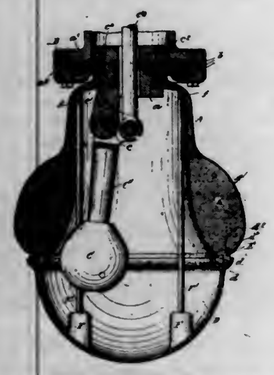
1. A stay consisting of a pair of continuous wire members each of which is formed to have inturned right angular ends formed with stitching eyelets, each member also having spaced intermediate longitudinal portions which aline

with the free extremities of the right angular ends and are laterally arched, one of the members having two ends and an intermediate pair of spaced seats and a hook which spaces the seats, the seats and hooks being connected by said longitudinal portions and the other member having two end and an intermediate pair of seats to engage the respective first named seats and also having eyelets to receive the hooks, said longitudinal portions when the members are connected extending along the outer longitudinal sides of the respective opposite members, and stitching eyelets on opposite sides of each hook and each eyelet located at the outer longitudinal sides of the members.



2. A stay consisting of a pair of continuous wire members the ends of each of which are turned inwardly and formed with sewing eyes, a series of spaced hooks formed on one member and located adjacent to the outer longitudinal side thereof and a series of corresponding spaced eyes formed on the other member and located adjacent to the outer longitudinal side of same, and a series of longitudinal connecting portions for the eyes and for the hooks which connecting portions are located adjacent to the inner longitudinal sides of the members whereby when the members are secured together the connecting portions of one member will extend across the space between the hooks or eyes of the other member.

1,112,106. SOUNDER. EDWARD C. WOOD, Somerville, Mass., assignor to Submarine Signal Company, Waterville, Me., a Corporation of Maine. Filed Dec. 11, 1912. Serial No. 736,216. (Cl. 116—18.)



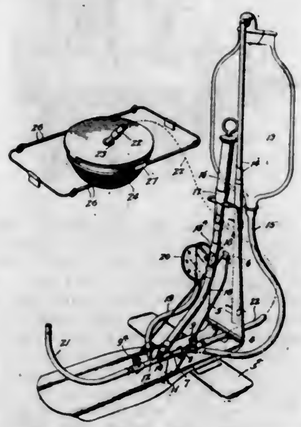
1. The sounder above described comprising a bell, a cap having substantially the same diameter as the bell, and a gasket, said cap being clamped to said bell to form an inclosure and said gasket being located between the edges of said cap and said bell whereby it will allow the vibration of the bell and will prevent the leakage of water into the said inclosure.

2. The sounder above described comprising a bell and a cap, said bell and said cap each having a groove in its edge, in combination with a resilient gasket located in said grooves, and means for clamping said bell, said cap and said gasket together to form a watertight joint, as set forth.

3. The sounder above described comprising a bell, a ring of resilient material and a cap, said cap and said bell each being provided with means to receive said ring, and means whereby said ring may be clamped between said cap and said bell, a portion of said ring being exposed, whereby in the vibration of said bell a portion only of said ring will be moved thereby.

4. The sounder above described comprising a bell, a ring of resilient material and a cap, said cap and said bell each being provided with means to receive said ring, and means comprising binding rods, whereby said ring is clamped between said bell and said cap, one end of each binding rod being attached to said bell, the other end of said rod being attached to said cap.

1,112,107. CLYSTERIZING APPARATUS. ANTON G. ANDERSON, Chicago, Ill. Filed Mar. 23, 1914. Serial No. 826,763. (Cl. 128—25.)



1. In a clysterizing apparatus, the combination of a main pipe having branches extending from it between its ends, a clyster-pipe on one end of the main-pipe and a discharge-tube on the opposite end thereof, a liquid-supply tube connected with one of said branches, and a pump having a tube-connection with another of said branches.

2. In a clysterizing apparatus, the combination of a main pipe having branches extending from it between its ends, a clyster-pipe on one end of the main-pipe and a discharge-tube on the opposite end thereof, a liquid-supply tube connected with one of said branches, and a pump connected with another of said branches by a tube containing an inspection-opening.

3. In a clysterizing apparatus, the combination of a main pipe having a cluster of branches extending from it between its ends, a clyster-pipe on one end of the main-pipe and a discharge-tube on the opposite end thereof, a liquid-supply tube connected with one of said branches, a vacuum-gage connected with another of said branches, and a pump having a tube-connection with another of said branches.

4. In a clysterizing apparatus, the combination of a main pipe having valves near its opposite ends and branches extending from it between the valves, a clyster-pipe on one end of the main pipe and a discharge-tube on the opposite end thereof, a liquid-supply tube connected with one of said branches, and a pump connected with another of said branches.

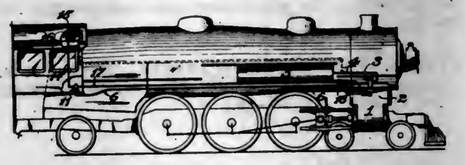
5. In a clysterizing apparatus, the combination of a main pipe having branches extending from it between its ends, a clyster-pipe on one end of the main pipe and a discharge-tube on the opposite end thereof, a liquid-supply tube connected with one of said branches, a tube connected at one end with another of said branches and terminating at its opposite end in a socket, and a pump fitting said socket.

[Claims 6 and 7 not printed in the Gazette.]

1,112,108. CHAIR-TIP. JOSEPH E. BATTEY, Pittsburgh, Pa. Filed Mar. 29, 1913. Serial No. 757,546. (Cl. 155—33.)

A tip for furniture legs, comprising a cylindrical cushioning member formed of resilient material and having an axial bore and adapted to be seated against the end of the furniture leg, the lower portion of said member being countersunk, a metallic cup-shaped cap therefor having an annular bearing portion adapted to contact with and slide on the floor, a cylindrical portion surrounding and confining the lower portion of said cushioning member and a countersunk central portion to receive the countersunk portion of said cushioning member and forming an exterior socket, the edge of said cap being spaced from the end of the furniture leg and thereby leaving the upper portion of the side surface of the cushioning member exposed, said cap being also provided with a central aperture, and a securing member adapted to be passed through said aperture and the bore of said cushioning member into the furniture leg, the head of said securing member being seated in the exterior socket of said cap and lying above the annular bearing portion thereof.

1,112,109. DRIFTING-VALVE FOR LOCOMOTIVES. JOSEPH BILLINGHAM and CHARLES F. KAHLER, Schenectady, N. Y. Filed Apr. 24, 1914. Serial No. 834,054. (Cl. 14—14.)



1. In a drifting valve mechanism for locomotives, the combination of means for controlling the supply of steam from a boiler to a distribution valve chest, independently of the main steam supply pipe, a source of fluid pressure supply independent of said pipe, and mechanism, actuated by variation of valve chest pressure, for automatically governing the application of pressure from said independent source to said steam supply controlling means.

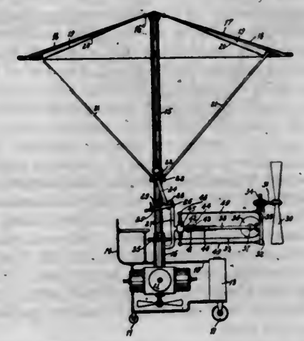
2. In a drifting valve mechanism for locomotives, the combination of a valve controlling the supply of steam from a boiler to a distribution valve chest, independently of the main steam supply pipe, means for actuating said valve by the application, in the opposite direction, of boiler supply steam and of fluid pressure from a source independent of the main steam supply pipe, and mechanism, actuated by differences of valve chest pressure, for controlling the supply of fluid pressure from the independent source to the valve actuating means.

3. In a drifting valve mechanism for locomotives, the combination of a valve controlling the supply of steam from a boiler to a distribution valve chest, independently of the main steam supply pipe, means for unseating said valve by fluid pressure from a source independent of said pipe, and mechanism, actuated by a reduction of valve chest pressure, for supplying fluid pressure to said unseating means.

4. In a drifting valve mechanism for locomotives, the combination of an admission valve controlling the supply of steam from a boiler to a distribution valve chest, independently of the main steam supply pipe, an actuating piston, of larger diameter than said valve and connected thereto, a source of fluid pressure supply independent of the main steam supply pipe, and mechanism, actuated by differences of valve chest pressure, for controlling the supply of fluid pressure from the independent source to the actuating piston.

5. In a drifting valve mechanism for locomotives, the combination of an admission valve mechanism comprising an inclosing casing, a valve fitted therein and controlling communication between a boiler supply steam pipe and a delivery steam pipe leading to a distribution valve chest, and a piston of larger diameter connected to the valve; a source of fluid pressure independent of the main steam supply pipe; and a vacuum piston mechanism comprising an inclosing casing, a piston therein subject on its opposite sides to atmospheric and distribution valve chest pressure, respectively, and pistons of smaller diameter connected to said last specified piston and controlling communication between the independent source of fluid pressure and the piston of the admission valve mechanism.

1,112,110. AEROPLANE. JOSEPH E. BISSELL, Pittsburgh, Pa. Filed Oct. 7, 1909. Serial No. 521,462. (Cl. 244—19.)

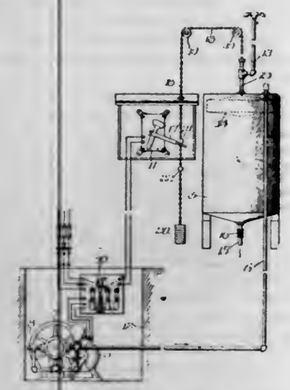


1. In an aeroplane the combination of a frame, a gyroscopic poiser-wing including an extended and substantially undistortable membrane rotating in a general plane of its extent, the continuity of such membrane being interrupted by a radially extending opening, a levitator-blade extending adjacent such opening and movable to close such opening, means for moving said levitator-blade, and means for rotating said poiser-wing, substantially as described.

2. In an aeroplane the combination of a main frame, an outwardly extensible arm carried by said frame, a supplemental frame pivoted on said arm, a propeller shaft rotatable in and carried solely by said supplemental frame, a motor carried in the said main frame, and flexible operative connections between said motor and the propeller shaft carried in said supplemental frame, substantially as described.

3. In an aeroplane, the combination of a frame, a motor carried in said frame having its power shaft extending in a vertical direction, a gyroscopic poiser-wing secured directly to said power shaft and including an extended and substantially undistortable membrane rotating in a general plane of its extent, the continuity of such membrane being interrupted by a radially extending opening, a levitator blade extending adjacent such opening and movable to close such opening, means for moving said levitator blade, and a relatively heavy rim forming the periphery of said membrane and serving as a fly-wheel for said motor and a gyroscopic balance for said aeroplane.

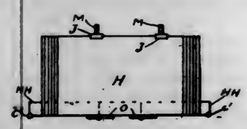
1,112,111. APPARATUS FOR MAINTAINING A CONSTANT SUPPLY AND PRESSURE IN SERVICE-PIPES. HARRY M. BOWSER and THOMAS F. MULLIGAN, Fort Wayne, Ind., assignors to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Dec. 12, 1910. Serial No. 596,941. (Cl. 103—86.)



1. An apparatus for maintaining a constant supply and pressure in service pipes consisting of a closed supply tank, a pump therefor, a supply pipe leading from the pump through the top of the tank and an electric motor for actuating the pump, a service pipe leading from the tank, a switch for controlling the motor, a float in the tank, a tubular member leading from the top of the tank, a vent pipe with downwardly opening vents connected to the tubular member at the side thereof and extending horizontally and upwardly therefrom, pulleys mounted above the tank and the switch, a flexible member connected with the float extending through the tubular member over the pulleys and depending adjacent the switch, a weight connected with the depending end of the flexible member for counterbalancing the float, the switch being provided with an operating handle extending adjacent the flexible member, and spaced members disposed on the flexible member adapted to engage the handle of the switch to actuate it and open and close a circuit for controlling the motor when the float in the closed tank reaches predetermined positions in the tank.

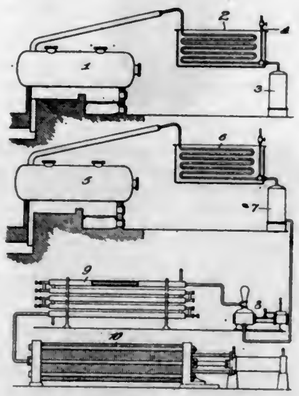
2. The combination with a closed supply tank, of a discharge pipe therefor, a fill pipe connected through the top of the tank, a float in the tank, a tubular member extending upwardly from the top of the tank and open at the top, a flexible member connected with the float extending through the tubular member, and an upwardly extending vent pipe with downwardly opening vents connected to the said tubular member at the side thereof.

1,112,112. CONSTRUCTION OF FORMS FOR CONCRETE CONSTRUCTION. GEORGE W. BRANDT, Brooklyn, N. Y., assignor to Mary E. Brandt, Leonia, N. J. Filed Dec. 30, 1910. Serial No. 600,205. (Cl. 25—131.)



In a mold to form a ventilated concrete structure the combination comprising side framings, a core to suspend between the framings a produce the vertical ventilating shafts, straps across the framing and flanges on the ends of the straps, ring hooks suspending the said core from the said straps, and hinged horizontal extensions on the bottom of said core, the extensions projecting beyond the bottom ends of the core to connect with adjacent horizontal core extensions to make continuous horizontal passages opening into the vertical shafts.

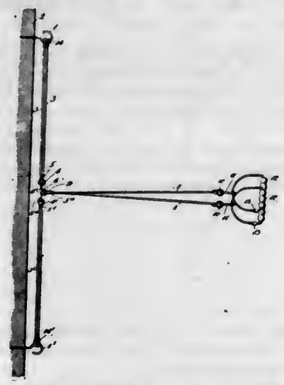
1,112,113. PROCESS FOR PRODUCING WAX FROM OTHER HYDROCARBONS. WILLIAM M. BURTON, Chicago, Ill., assignor to Standard Oil Company, Whiting, Ind., a Corporation of Indiana. Filed Jan. 21, 1914. Serial No. 813,567. (Cl. 196—25.)



1. The process of producing wax, which consists in successively practicing the following steps, (1) distilling a wax free hydrocarbon of high boiling point under pressure and at a temperature necessitated by the pressure, (2) distilling the residuum of the first distillation at a low pressure, (3) chilling the distillate of the second distillation, and (4) pressing out the wax.

2. The process of producing wax, which consists in distilling a wax free hydrocarbon of relatively high boiling point under a pressure of above 4 atmospheres and a temperature of above 650° F., then distilling the residuum of the first distillation at a low pressure, then chilling the distillate of the second distillation and pressing out the wax.

1,112,114. EXERCISING APPARATUS. RICHARD J. R. CAINES, Boston, Mass. Filed June 26, 1913. Serial No. 775,841. (Cl. 46—69.)



1. In an exercising apparatus, separated supporting-members adapted to be attached to a wall or the like, two sets of elastic cords, each having a plurality of members, means uniting the inner ends of said sets of cords, and means whereby the outer end of each cord of both sets

may be attached to and removed from its supporting member independently of the other cord or cords of the same set.

2. In an exercising apparatus, separated supporting members arranged to be attached to a wall or the like, two elastic cords of substantially equal length, each having its outer end attached to one of said supporting members, a pair of hand-cords and a coupling swiveled to the inner ends of all of said cords, said coupling comprising a center ring to which said hand-cords are attached and two outer rings integral with said center ring to which the first mentioned elastic cords are respectively attached, said center ring lying in a plane at right angles to that of said outer rings.

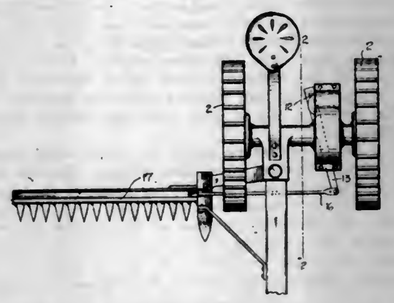
3. In an exercising apparatus, an elastic cord, a grooved ring or eyelet, said cord being doubled around the groove in said ring or eyelet, and a slip for holding the doubled portion of said cord to said ring or eyelet, said clip being bent around each portion of said cord and having its inner ends provided with interlocking teeth for engaging said cord.

4. In an exercising apparatus, three rings, three sets of elastic cords, each set formed of a single length of elastic cord, the middle portion of which is doubled around one of said rings, means securing the doubled portion of each cord at its ring, and a coupling permanently swiveled to each of said rings.

5. In an exercising apparatus, a coupling comprising a ring, two rings integral with the first-mentioned ring and lying in a plane at right angles thereto, three eyelets each permanently embraced by one of said rings, and three elastic members each permanently secured around one of said eyelets.

[Claim 6 not printed in the Gazette.]

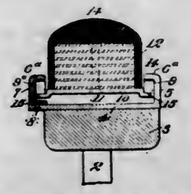
1,112,115. MOWING-MACHINE. OSMOND CALL, Chesterfield, Idaho. Filed Oct. 4, 1913. Serial No. 793,428. (Cl. 56—75.)



A device of the character described comprising a supporting axle, traction wheels fixed thereto, a frame carried by the axle, a lever pivoted intermediate its length to the frame, a disk rotatable upon a vertical axis and provided with a pin loosely engageable with an extremity of the lever whereby said lever will be rocked upon rotation of the disk, an operative connection between the axle and the disk whereby said disk is rotated, a cutting mechanism including a reciprocating cutting bar, and a pitman connection between the opposite extremity of the lever and the reciprocating bar.

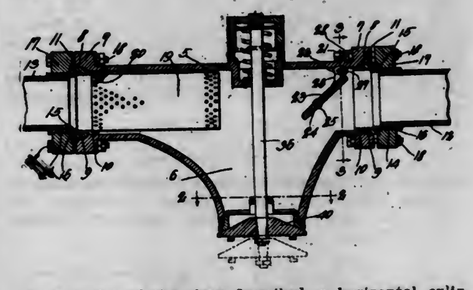
1,112,116. RESILIENT WHEEL. ALFRED CANE, Oakland, Cal. Filed Aug. 6, 1913. Serial No. 783,263. (Cl. 152—8.)

In a resilient wheel, peripheral flanges secured to the wheel felly and extending outwardly therefrom and having the outer edges thereof turned inwardly, a series of lugs disposed radially of the wheel and being secured to the inner circumference of each of said inturned portions of the flanges and extending inwardly toward the felly, the free ends of said lugs being spaced from the felly, an elastic metallic ring surrounding said felly in spaced relation thereto, said ring having a series of depressed parts located on each side thereof which form sockets



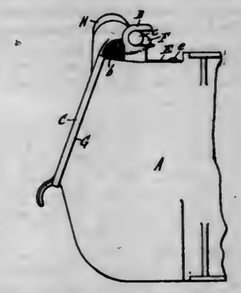
into which the free ends of the respective lugs project so as to prevent relative circumferential movement between the ring and felly, and an annular tire secured to the ring.

1,112,117. CHECK-VALVE. HARRY JOSEPH CARBIS, Freeport, Pa. Filed July 2, 1912, Serial No. 707,397. Renewed Jan. 26, 1914. Serial No. 814,583. (Cl. 137—32.)



In a device of the class described, a horizontal cylindrical casing, a gasket fitting in one end thereof, a bolt passing through the top of the casing adjacent the gasket and having an inner longitudinally elongated loop bearing against the top of the casing, a flap valve seatable against the gasket and having ears fitting over the said loop, and a pin carried by the ears and working through the loop to permit the valve to swing and shift longitudinally.

1,112,118. JOURNAL-BOX. DAVID J. CARSON, Buffalo, and JAMES A. LANIGAN, Lancaster, N. Y. Filed June 18, 1912. Serial No. 704,346. (Cl. 64—23.)



1. A journal box provided on its top between its sides with a lug, side bearing lugs arranged on said box at opposite sides of said other lug and in rear thereof, a lid having a hood portion which projects over said first mentioned lug and has laterally projecting trunnions at its sides which are journaled in said bearing lugs, and a spring member which exerts pressure of said lid for yieldingly resisting the movement of said lid.

2. A journal box provided on its top between its sides with a central lug; bearing lugs which are arranged on said box at opposite sides of said central lug and have rearwardly opening trunnion slots, a lid having a hood portion which projects over said central lug and has trunnions which are journaled in said trunnion slots, and a spring member which acts to retain said trunnions in said slots and yieldingly resists the movements of said lid.

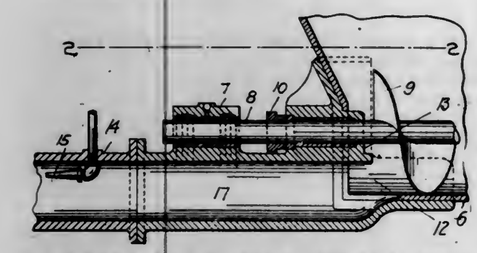
3. A journal box provided on its top at opposite sides thereof with bearings, a lid having trunnions which are journaled in said bearings, leaf springs which are arranged on said top between said bearings and beneath overlying parts of the lid and yieldingly resist the movement of said lid, and means located between said springs which hold the springs from lateral displacement.

4. A journal box provided on its top between its sides with a lug, bearings arranged on said box at opposite sides of said lug, a lid having projections which extend rearwardly between said lug and said bearings and are provided with side trunnions which are journaled in said bearings, and springs which are located on the top of said box beneath and act against said lid projections.

5. A journal box provided on its top between its sides with a lug, bearings arranged on said box at opposite sides of said lug, a lid having trunnions at its side portions which are journaled in said bearings, cam projections on said lid which are located at the inner sides of said bearings, and leaf springs which are secured to the top of said box and are located beneath said cam projections and have portions that substantially conform to the path described by said cams when the lid is swung on its trunnions.

[Claim 6 not printed in the Gazette.]

1,112,119. APPARATUS FOR SEPARATING LIQUID FROM SOLID MATTER. HERBERT C. COLBURN, Victor, Colo. Filed July 23, 1913. Serial No. 780,677. (Cl. 100—48.)



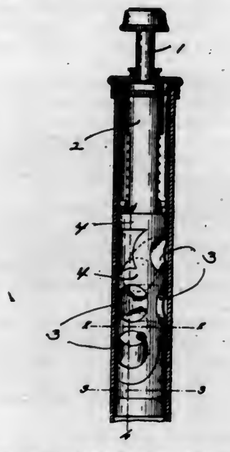
1. In apparatus of the character described, a transport screw, a passage in which said screw has a rotary movement to convey material to an end thereof, said passage having at the said end an outlet conduit and an abutment against which material conveyed by the screw, impinges before entering said conduit, and a nozzle for the injection of a fluid under pressure into said conduit to accelerate the flow of said material.

2. In apparatus of the character described, a receptacle which at its bottom has an open trough to receive the lower portion of its contents, a transport screw rotatably mounted in the said trough, the said trough having at one of its ends a discharge opening placed out of alinement with the axis of rotation of the screw, and an abutment against which material conveyed by the screw impinges before it enters the said opening.

3. In apparatus of the character described, a receptacle the bottom of which consists of an open trough toward which its sides converge, a transport screw rotatably mounted in the said trough, the said trough having at one of its ends a discharge opening placed out of alinement with the axis of rotation of the screw, and an abutment against which material conveyed by the screw impinges before it enters the said opening.

4. In apparatus of the class described, a receptacle having at its bottom an open trough to receive the lower portion of its contents, and means for conveying material toward an end of the trough, the said trough having adjacent the said end, a discharge-opening and an abutment against which the conveyed material impinges before it passes through the said opening.

1,112,120. CORNET-VALVE. CHARLES G. CONN, Elkhart, Ind. Filed Nov. 11, 1913. Serial No. 800,361. (Cl. 84—8.)



1. A valve for brass wind musical instruments, comprising a valve casing having inlet and outlet openings for the tubing of the instrument, a piston valve having air ports to register with the said openings in the casing, bearing areas formed at the ends of the piston and bearing areas formed around said ports of the piston, whereby the piston is of the same cross sectional area at its ends and at the said bearing areas around the ports, said areas forming a part of a cylindrical surface, the remaining portions of the exterior surface being depressed below said cylindrical surface whereby the cross sectional area of the piston is less at said remaining portion than at the ends.

2. A finger key valve piston for brass wind musical instruments, having ports therethrough, bearing areas surrounding said ports and bearing areas at the ends of said piston, said areas forming a part of a cylindrical surface, the remaining portions of the exterior surface of the piston being depressed below said cylindrical surface, whereby the cross sectional area of the piston at said remaining portion is less than at the said bearing areas.

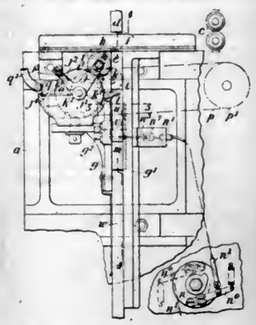
1,112,121. MACHINE FOR MAKING RECEPTACLES. JOSEPH WESTON COYLE, Harringay, England. Filed June 30, 1913. Serial No. 776,546. (Cl. 93—51.)

1. A machine for making receptacles comprising a forming channel, a plunger adapted to slide in said channel, folding and gumming devices normally outside of said channel, and means connected to said folding and gumming devices and extending into said channel adapted to be engaged by said plunger to bring the folding and gumming devices into operative relation with said plunger.

2. In a machine for making receptacles, wherein a reciprocating plunger coöperates with a forming channel, the combination with the said plunger, of rollers mounted upon an oscillating lever, each of said rollers having folding and gumming surfaces.

3. A receptacle making machine comprising a forming channel, a plunger adapted to slide in said channel, an oscillating lever, rollers mounted upon said oscillating lever, each of said rollers having folding and gumming surfaces, and means connected to said lever and extending into said channel adapted to be engaged by said plunger to operate said rollers.

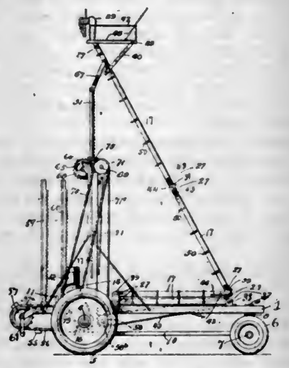
4. A machine for making receptacles, comprising a forming channel, a plunger adapted to slide in said forming channel, an oscillating lever, combined folding and gumming rollers mounted on said lever, and means connected with said lever adapted to be engaged by said plunger to operate said rollers.



5. A machine for making receptacles comprising a forming channel, a plunger adapted to slide in said channel, an oscillating lever, combined folding and gumming rollers mounted on said lever, means connected to said lever extending into said channel and adapted to be engaged by said plunger for moving the lever and rollers toward the plunger, and a spring for drawing the lever away from said plunger.

[Claims 6 to 11 not printed in the Gazette.]

1,112,122. EXTENSION-LADDER. JOSEPH DETRIK, Pricedale, Pa., assignor of one-third to John Komlósi, Pricedale, Pa. Filed Dec. 2, 1913. Serial No. 804,151. (Cl. 228—28.)



1. A structure of the class described, comprising a plurality of pivotally-connected ladders, a rack bar connected with the uppermost ladder of the series, means coacting with the rack bar to lift the series of ladders, an endless traveling carrier associated with the series of ladders, and means for imparting motion to the carrier.

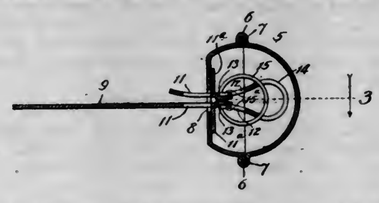
2. A structure of the class described, comprising a wheeled platform, a series of pivotally-connected ladders supported thereby, one of which is permanently assembled with the platform, an extensible rack bar connected with one end of the uppermost series of the ladders, means for imparting vertical movement to the rack bar whereby to elevate the series of ladders, an endless carrier disposed between the side rails of the ladders, and means for imparting movement to the carrier longitudinally of the ladders.

3. A structure of the class described, comprising a wheeled platform, a series of pivotally-connected ladders disposed upon the platform, one of which is permanently combined therewith, a platform carried by the upper end of the uppermost ladder of the series, means for maintaining the latter platform in horizontal position irrespective of the inclination assumed by the ladder, a rack bar operatively connected with the latter ladder, means for imparting an upward movement to the rack bar to raise the series of ladders, an endless carrier disposed between the side rails of the ladders, means for imparting longitudinal traveling movement to the conveyer, and means carried by the conveyer to accommodate a person using the appliance.

4. A structure of the class described, comprising a wheeled platform, a series of ladders disposed thereon, one of which is permanently connected with the platform, a platform supported by the upper end of the uppermost of the series of ladders, means for adjusting the latter platform relative to the ladder whereby to cause it to maintain a horizontal position irrespective of the inclination of the ladder, means carried by the platform for holding the ladder connected with a window frame, a rack bar connected with the upper end of the uppermost ladder, means for imparting vertical movement to the rack bar, and a traveling conveyer carried by the sections of the ladder and disposed between the side rails thereof.

5. A structure of the class described comprising a series of pivotally connected spaced foldable ladders, an endless traveling belt interposed between the series and foldable therewith, means for imparting movement to the belt, and means for elevating the ladders independently of the belt driving means.

1,112,123. CAR-SEAL. FLOYD DOW, Wyanet, Ill., assignor of one-half to John C. Rasmussen, Wyanet, Ill. Filed May 20, 1914. Serial No. 839,722. (Cl. 70—99.)

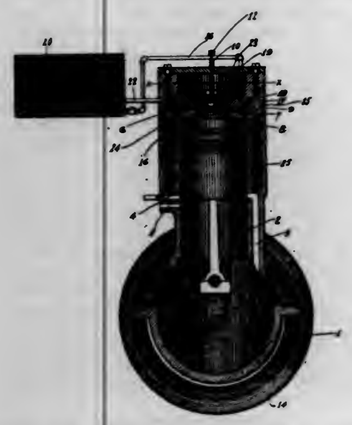


A car seal comprising a hollow head provided with an insertion-slot, a shackle having an eye in one end and formed at its opposite end into a shouldered loop confined in the head and provided with a longitudinal slot extending into both of its separated legs, relatively opposite slots near the ends of the longitudinal slot and sockets in said legs diverging to said relatively opposite slots, and a split resilient locking ring extending through both legs of said longitudinal slot and having in-turned ends yieldingly confined in said sockets, the shackle extending from the head through said insertion-slot and having its eye-containing end insertible into the head through said insertion-slot to release and actuate the locking ring.

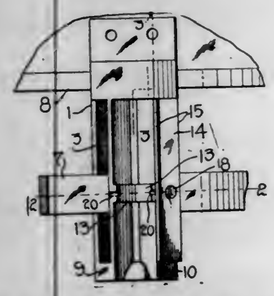
1,112,124. FLUID-PRESSURE MEANS FOR FORCING FUEL INTO INTERNAL-COMBUSTION ENGINES. CHARLES H. DUNTON, Lodi, Cal. Filed Feb. 6, 1913. Serial No. 746,549. (Cl. 123—32.)

1. A device of the character described comprising the combination with a cylinder, and a piston operating in said cylinder, of an independent chambered member disposed above said cylinder, a valve adapted to communicate from said cylinder to said chambered member when an explosion takes place in said cylinder, a chambered member disposed within said first named chambered member and having ports communicating with said cylinder, a valve forming a normal closure for said ports and adapted to be operated with the operation of said piston, a fuel supply means communicating with said last named chambered member, said last named chambered member having ports communicating from said first named chambered member to said valve, as described.

2. A device of the character described comprising the combination with a cylinder and a piston operating in said cylinder, of a chambered member disposed above said cylinder, a valve adapted to communicate from said cylinder to said chambered member when an explosion occurs in said cylinder, a chambered member disposed within said first named chambered member and having ports adapted to communicate with said cylinder, a valve forming a normal closure for said ports and adapted to be opened with the operation of said piston, a fuel supply means communicating with said last named chambered member, said last named chambered member having ports communicating from said first named chambered member to said last named valve, and means communicating from said first named chambered member to said fuel supply means, as described.



1,112,125. REVERSIBLE FULCRUM FOR BRAKE-BEAMS. HORACE Z. EBBS, Knoxville, Tenn. Filed Apr. 1, 1914. Serial No. 828,886. (Cl. 188—22.)



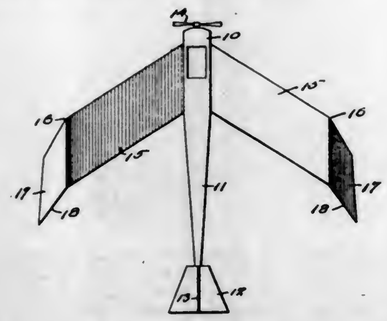
1. A brake beam fulcrum having brake lever receiving guides disposed at right angles to each other and a one-piece filler for one guide when the other is engaged.

2. A brake beam fulcrum having brake lever receiving guides disposed at right angles to each other, a one-piece filler for one guide when the other is engaged by a brake lever, and a brake lever operating pin carried by the filler.

3. A brake beam fulcrum comprising an attaching clamp and a head, the latter being cruciform in cross section and provided with longitudinally disposed brake lever receiving guides disposed at right angles to each other and obliquely to the vertical axis of the head, and a one-piece filler for one guide when the other is engaged by a brake lever.

4. A brake beam fulcrum comprising an attaching clamp and a head, the latter being cruciform in cross section and provided with longitudinally disposed brake lever receiving guides disposed at right angles to each other and obliquely to the vertical axis of the head, a one-piece filler for one guide when the other is engaged by a brake lever, and a brake lever pivoting pin carried by the filler.

1,112,126. AEROPLANE CONSTRUCTION. RUPERT A. EMMONS, Washington, D. C. Filed June 12, 1914. Serial No. 844,708. (Cl. 244—12.)



1. An aeroplane comprising a body frame work, propelling and steering devices, lifting planes extending from opposite sides of the body, said wings having a rearward rake being also inclined upwardly from their bases for their major part and having a positive forward angle of incidence; their tips being inclined laterally downwardly and having a negative angle of incidence over at least a part of their area with respect to the forward movement of the machine.

2. An aeroplane comprising a body frame work, propelling and steering devices, lifting planes extending from opposite sides of the body having a rearward rake, said wings being also inclined upwardly and outwardly for their major part and having a positive angle of incidence, their tips having a second rake to the rear and being inclined downwardly and outwardly, and having also a negative angle of incidence with respect to the forward movement of the craft.

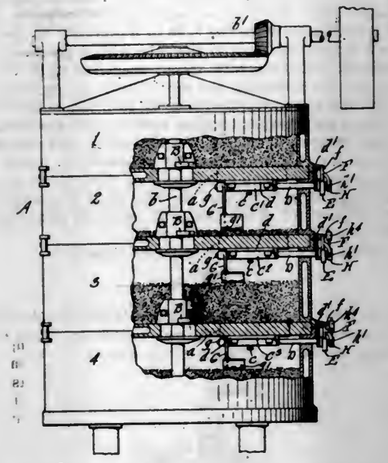
3. An aeroplane comprising a body frame work, propelling and steering devices, lifting planes extending from opposite sides of the body having a rearward rake, said wings being also inclined laterally upward for their major part and having a positive angle of incidence, their tips having a second rake to the rear and being inclined laterally downward.

4. An aeroplane comprising a body frame, propelling and steering devices, lifting planes extending from opposite sides of the body, having a rearward rake, said wings being also inclined laterally upwardly for their major part and having a positive angle of incidence, their tips having a second rake to the rear and having a negative angle of incidence for at least a part of their area with respect to forward movement of the craft.

1,112,127. STEAM-COOKER AND THE LIKE. MICHAEL W. FAHERTY, Memphis, Tenn., assignor to Alfred W. French, Piqua, Ohio. Filed Apr. 2, 1913. Serial No. 758,340. (Cl. 87—6.)

1. The combination with a plurality of kettles or chambers arranged to permit material to discharge from one chamber into another, of a gate which controls the discharge of the material from the first chamber into the second chamber, a device controlled by the depth of the material in the second chamber for closing said gate, and means for holding said gate closed which are actuated by said device to release said gate when the depth of the material in said second chamber is reduced a predetermined amount, substantially as set forth.

2. The combination with a plurality of kettles or chambers arranged to permit material to discharge from one chamber into another, of a gate which controls the discharge of the material from the first chamber into the second chamber, a device which is caused to move independently of said gate by changes in the depth of the material in said second chamber, means actuated by said device for closing said gate, and means for holding said gate closed which are actuated by said device to release said gate when the depth of the material in said second chamber is reduced a predetermined amount, substantially as set forth.



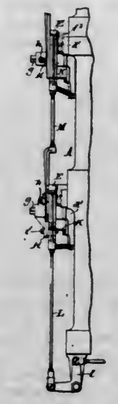
3. The combination with a plurality of kettles or chambers arranged to permit material to discharge from one chamber into another, of a gate which controls the discharge of the material from the first chamber into the second chamber, a device which is caused to move independently of said gate by changes in the depth of the material in said second chamber, means actuated by said device for closing said gate when the material has accumulated to a predetermined depth in said second chamber, and a latch for holding said gate closed which is actuated by said device to release said gate when the depth of the material in said second chamber is reduced a predetermined amount, substantially as set forth.

4. The combination with a plurality of kettles or chambers arranged to permit material to discharge from one chamber into another, of a gate which controls the discharge of the material from the first chamber into the second chamber, a device which is caused to move independently of said gate by changes in the depth of the material in said second chamber, means which are actuated by said device for closing said gate and which are adjustable for causing said gate to be closed when the material has accumulated to different desired depths in said second chamber, and means for holding said gate closed which are actuated by said device to release said gate when the depth of the material in said second chamber is reduced a predetermined amount, substantially as set forth.

5. The combination with a plurality of kettles or chambers arranged to permit material to discharge from one chamber into another, of a gate which controls the discharge of the material from the first chamber into the second chamber, and mechanism controlled by the depth of the material in said second chamber for closing and locking said gate when the material accumulates to a desired depth in said second chamber and for releasing said gate when the depth of the material in said second chamber is reduced a desired amount, said mechanism including a part which is adjustable to regulate the closing of said gate, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,112,128. GATE-OPERATING MECHANISM FOR MEAL-COOKERS AND ANALOGOUS APPARATUS. MICHAEL W. FAHERTY, Memphis, Tenn., assignor to The French Oil Mill Machinery Company, Piqua, Ohio. Filed June 8, 1914. Serial No. 843,633. (Cl. 87—6.)



1. The combination with a plurality of chambers arranged to permit material to discharge from one chamber into another, and a gate which controls the discharge of the material from one chamber to the other, of a device for closing said gate, the action of which is governed by the quantity of material in the receiving chamber, and ratchet mechanism through which said closing device actuates the gate.

2. The combination with a plurality of chambers arranged to permit material to discharge from one chamber into another, and a gate which controls the discharge of the material from one chamber to the other, of a device for closing said gate, the action of which is governed by the quantity of material in the receiving chamber, and mechanism operated by said closing device for closing said gate by successive intermittent movements.

3. The combination with a plurality of chambers arranged to permit material to discharge from one chamber into another, and a gate which controls the discharge of the material from one chamber to the other, of a device for closing said gate, automatic means which set said closing device in action, and mechanism operated by successive movements of said closing device for closing said gate.

4. The combination with a plurality of chambers arranged to permit material to discharge from one chamber into another, and a gate which controls the discharge of the material from one chamber to the other, of a device actuated by the material accumulating in the receiving chamber for closing said gate, and mechanism operated by successive movements of said closing device for closing said gate.

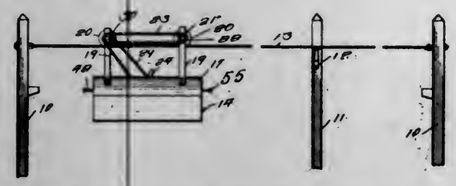
5. The combination with a plurality of chambers arranged to permit material to discharge from one chamber into another, and a gate which controls the discharge of the material from one chamber to the other, of a device actuated by the material accumulating in the receiving chamber for closing said gate, and ratchet mechanism operatively connecting said closing device to said gate.

[Claims 6 to 16 not printed in the Gazette.]

1,112,129. RURAL MAIL-BOX. CHARLES N. GALLOWAY, Neersville, Va. Filed Aug. 13, 1912. Serial No. 714,930. (Cl. 186—28.)

1. A mail box delivery apparatus embodying a track wire, a receptacle, hangers carried by the receptacle adjacent each end thereof, shafts rotatably carried by the hangers, grooved rollers mounted on the shafts and engageable along the wire, drive sprockets carried by the shafts,

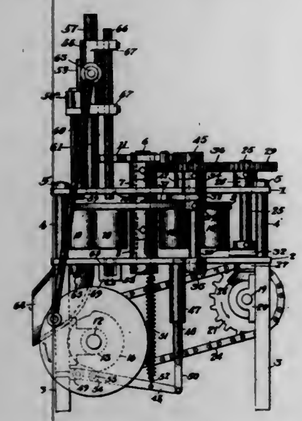
chains connecting said sprockets, means for rotating the said shafts simultaneously and including a pivoted standard, a pinion rotatably carried by the standard, spring motors alternately intergearable with the pinion, means operated by the movement of the standard to cause one motor to be brought stationary and the other for operation at each end of the wire and means for controlling and arresting the speed of rotation of the pinion and its intergeared connection with the first named shafts.



2. A delivery apparatus comprising a track wire, a receptacle, wheels carried by the receptacle and engaging said wire, drive means carried by the receptacle, intergeared connections between the drive means and the wheels for driving the receptacle, a governor for regulating the speed of the intergeared connections and means connected to said governor and extending exteriorly of the receptacle whereby pressure against said means will actuate the governor to stop the driving means.

3. The combination in a delivery apparatus including a traveling member, a driving mechanism therefor and a governor for regulating the drive mechanism and including a friction plate, of a lever pivoted intermediate of its end, a brake shoe at one end of said lever engageable with the friction plate, and slidably mounted rods connected to the lever on opposite sides of its pivot and extending outwardly of the ends of the traveling member.

1,112,130. MACHINE FOR TREATING FRUIT. HENRY GABRIEL GINACA, Honolulu, Hawaii, assignor to Hawaiian Pineapple Company, Ltd., Honolulu, Hawaii, a Corporation of Hawaii. Filed May 15, 1912. Serial No. 697,385. (Cl. 146—6.)



1. A machine for treating fruit, comprising a plurality of fruit receiving tubes, means for moving said tubes to successive positions, power actuated means adapted to act directly on the fruit to move the same longitudinally in said tubes, means for trimming the ends of the fruit in certain of said positions, and means for discharging the fruit from the tubes.

2. A machine for treating fruit, comprising a plurality of fruit receiving tubes through which the fruit is passed, means for moving said tubes to successive positions, power actuated means adapted to act directly on the fruit to move the same longitudinally in said tubes, means for trimming and for removing the ends of the fruit when in two of said positions, and means for discharging the fruit from the tubes after the ends have been trimmed.

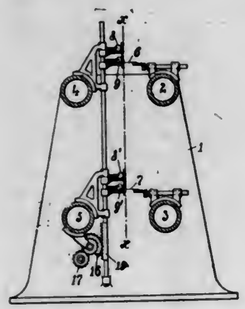
3. A machine for treating fruit, comprising a plurality of tubes adapted to receive fruit, means for moving said tubes together to successive positions, means for trimming off both of the ends and for coring the fruit, and means for discharging the fruit thus treated, these operations being effected in successive positions of said tubes.

4. In a machine for treating fruit, a fruit receiving tube through which the fruit is longitudinally movable, means to intermittently move the tube to a plurality of positions, means to hold the fruit in the tube with a portion thereof projecting out of the tube, means operative while the tube is at rest for trimming the end of fruit so projecting out of the tube, and means to discharge the fruit so treated.

5. In a machine for treating fruit, a fruit receiving tube through which the fruit is longitudinally movable, means to move the tube to a plurality of positions, power actuated means adapted to act directly on the fruit to move the same longitudinally within the tube until a portion of the fruit projects out of the tube, and means to treat the fruit while so projecting out of said tube.

[Claims 6 to 17 not printed in the Gazette.]

1,112,131. SHUTTLE EMBROIDERING-MACHINE. JULIUS GROETSCHEL, Vogtland, Germany. Filed Feb. 4, 1913. Serial No. 746,183. (Cl. 112—7.)



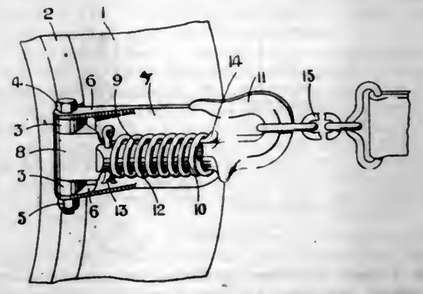
1. In a shuttle embroidering machine a supporting frame, a rod mounted for vertical reciprocation in said frame, a plurality of rows of shuttle raceways fixed on said rod, shuttles mounted in each raceway, a row of needles and means for shifting said raceways whereby, when one raceway is shifted into coöperative relation with said row of needles another raceway is shifted into inoperative relation with said row of needles.

2. In a shuttle embroidering machine a supporting frame, rows of shuttles adapted to reciprocate vertically arranged in said frame, a rod to reciprocate said rows of shuttles, and a fixed row of needles opposite to which the rows of shuttles alternately appear for coöperation therewith.

3. In a shuttle embroidering machine, a supporting frame, a shuttle race thereon means to move the shuttles horizontally in said race, a toothed rod secured to the shuttle races, a rotating toothed wheel engaging with said toothed rod and a row of needles opposite to which said rows of shuttles are alternately moved by said rod, as specified.

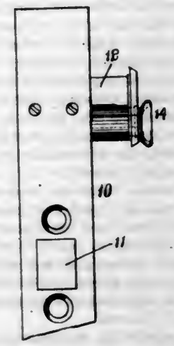
1,112,132. HAME-HOOK. WILLIAM HAMLYN and HENRY MILLER, Brydone, New Zealand. Filed Mar. 26, 1913. Serial No. 756,899. (Cl. 54—30.)

An improved hame hook comprising in combination two longitudinally sliding portions the inner end of one being hinged to the hame plate and the outer end of the other having a hooked end for attachment of the trace, and a



spring connection between said portions substantially as described.

1,112,133. KEYHOLE-GUIDE. WILBER F. HAMMOND, Jr., Bridgeport, Conn. Filed Jan. 31, 1914. Serial No. 815,727. (Cl. 70—16.)



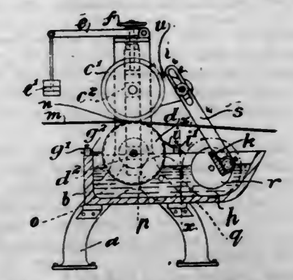
1. In a lock of the character described, the combination with a barrel having a key hole, of an oblong mouth piece surrounding the key hole and rotatable with the barrel, said mouth piece having tapering sides extending from the rim of the mouth piece to the key hole.

2. In a lock of the character described, the combination with a rotatable barrel having a key hole and holes in its outer face, of a key guide having a key hole corresponding with the key hole in the barrel and tapering pins upon its back adapted to be driven into the holes in the barrel.

3. In a lock of the character described, a rotatable barrel having a key hole and having a projecting mouth piece whose sides taper from the rim to the key hole and serve as a guide in inserting the key.

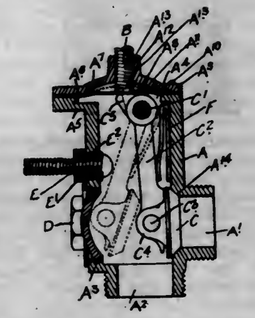
1,112,134. MEANS FOR APPLYING ADHESIVE PREPARATIONS TO THE SURFACE OF WOVEN FABRICS. FREDERICK HANSING, London, England, assignor to Fiddes, Todd & Corry, Limited, Belfast, Ireland. Filed Jan. 28, 1913. Serial No. 744,616. (Cl. 91—51.)

In apparatus for applying a semi-solid adhesive preparation to the surface of a fabric the combination of an indented roller provided with heating means and adjustably and revolubly supported in a receptacle for containing the adhesive preparation so that as its periphery passes therethrough the indentations will take up a supply of the adhesive material, a second roller having a yielding surface superposed on the first mentioned roller and provided with means whereby its pressure on the under roller can be regulated, a knife adjustably disposed relatively to the first mentioned roller to remove adhesive material from its surface as it rises toward the upper roller, a comb adjustably disposed and having projections which fit into and remove adhesive material from the in-



dentations in the first mentioned roller as its surface passes downward into the receptacle, and an automatically acting shovel for forcing the adhesive material toward the portion of the roller in the receptacle.

1,112,135. VALVE. JOHN WILLIAM HARKOM, Melbourne, Quebec, Canada. Filed May 9, 1913. Serial No. 766,545. (Cl. 137—4.)



1. In a valve, the combination with the valve casing having an outlet port and an inlet port provided with a valve seat, of a valve co-acting with the valve seat, an operating valve mechanism extending through the casing out of alinement with the inlet port, and a lever co-acting with the operating mechanism to hold the valve on its seat and a spring to move the valve out of the path of the fluid between the inlet and outlet ports when the pressure of the operating mechanism is removed from said lever.

2. In a valve, the combination with the valve casing having an outlet port and an inlet port provided with a valve seat, of a valve co-acting with the valve seat, a lever pivoted at one end to the valve and at the opposite end to the casing at one side of the inlet port and resilient means for throwing the end of the lever upwardly in an arc-shaped direction to carry the valve off its seat and out of the path of the fluid flowing between the inlet and outlet ports, and means for forcing the valve closed against such resilient means, as and for the purpose specified.

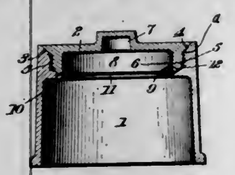
3. In a valve, the combination with the valve casing having an outlet port and an inlet port provided with a valve seat, of a valve co-acting with the valve seat, a lever pivoted to the casing at one end at one side of the valve seat and to the valve at the opposite end and an operating mechanism extending through the casing and co-acting with the lever to lower the valve in an arc-shaped direction on to its seat, and a resilient means for raising the valve out of the path of the fluid flowing between the inlet and outlet ports when the valve operating mechanism is withdrawn, as and for the purpose specified.

4. In a valve, the combination with the valve casing having an outlet port and an inlet port having a valve seat, of a valve co-acting with the valve seat, an orifice in the valve casing out of the path of the fluid travel, a resilient imperforate diaphragm extending over the orifice, a covering cap extending over the diaphragm and secured to the casing, a valve operating mechanism bearing against the diaphragm, and a lever having a tail piece bearing against the diaphragm and pivotally supporting the valve at its opposite end, and resilient means for raising the valve off its seat, as and for the purpose specified.

5. In a valve, the combination with the valve casing having an inlet and an outlet port, of a valve co-acting with the inlet port, resilient means for raising the valve off its seat in an arc-shaped direction, mechanism for operating the valve, and means independent of the valve operating mechanism for locking the valve tight on its seat, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,112,136. CLEAN-OUT PLUG. JOSEPH G. HAYES, Indianapolis, Ind., assignor to Hayes Brothers, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 12, 1912. Serial No. 676,946. (Cl. 137—76.)



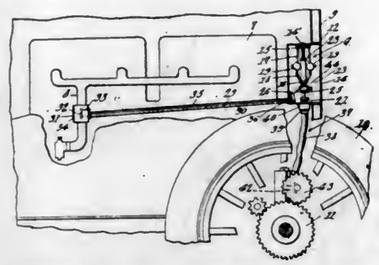
1. A clean out device for pipes comprising a body member with a closing plug, said body member being formed at its outer end with a beveled seat and at a distance from said outer end with an inwardly projecting annular flange having a second tapered seat, the portion intermediate of said tapered seats being formed with screw-threads, a recess or pocket being formed on each side of the screw-threaded portion, and said plug being formed with a tapered flange at its outer end adapted to fit upon the outer seat of the body and with a tapered inner edge adapted to seat upon the tapered seat of the flange, with exterior screw-threads adapted to engage and coöperate with the screw-threads of the body, and means for engagement of a tool with said plug for turning the same, substantially as set forth.

2. A clean out device for pipes comprising a body member having interior screw-threads near its outer end, an internal circumferential flange below the screw-threaded portion with a tapered upper face, a recess or pocket between said flange and the threaded portion, an integral plug member provided with exterior screw-threads adapted to engage the screw-threads of the body member and formed at its inner end with a tapered face adapted to seat upon the tapered face of the flange of the body member, and means for attachment of an operating device for turning said plug member, substantially as set forth.

1,112,137. SPEED-CONTROLLING MECHANISM FOR AUTOMOBILES. THOMAS W. HENDERSON, Fort Madison, Iowa. Filed May 22, 1914. Serial No. 840,283. (Cl. 121—112.)

1. The combination with a vehicle with a radiator and fuel supply, of a casing built in the radiator thereof and provided with an outwardly opening door, and speed controlled means disposed within said casing, adapted to close the fuel supply at excessive vehicle speeds.

2. The combination with a vehicle with a radiator and fuel controlling valve, of a casing built in the radiator thereof and provided with an outwardly opening door, and speed controlled means disposed within said casing for closing the fuel controlling valve at excessive speeds, said adjustable means for regulating the speed necessary for the closure of the fuel controlling valve.



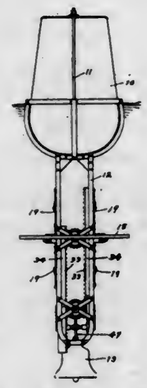
3. A speed controlling mechanism for automobiles with radiators, comprising a governor casing built in the vehicle radiator, a door opening outwardly therefrom, a governor disposed within said casing, means operably connecting said governor with a vehicle wheel, a fuel controlling valve disposed within the inlet manifold of the vehicle engine, a housing tube extending between said governor casing and fuel controlling valve, and a connecting rod disposed within said housing tube operably connecting said governor with said fuel controlling valve for the actuation of the latter by and with the former.

4. The combination with a vehicle having a radiator, of a casing built in said radiator, the interior of said casing accessible from the front of said radiator, a speed controlling mechanism disposed within said casing, means mechanically connecting the same to a wheel of the vehicle, and means mechanically connecting the speed controlling means with the automobile driving mechanism for controlling the speed thereof.

5. The combination with an automobile with a hood and driving means interposed therein, of a casing disposed within said hood and externally accessible with respect thereto, adjustable speed controlling means disposed within said casing and mechanically connected to said automobile, said speed controlling means mechanically connected to said automobile driving means for controlling the speed thereof.

[Claim 6 not printed in the Gazette.]

1,112,138. SIGNAL-BUOY. HORACE H. HILL, Somerville, and ROLLIN ABELL, Boston, Mass., assignors to Submarine Signal Company, Boston, Mass., a Corporation of Maine. Filed Dec. 22, 1902. Serial No. 136,181. (Cl. 116—18.)



1. In a signal buoy, in combination, a signaling means, a pair of power-storing devices, means operable by wave motion, means for operatively connecting one of said power storing devices to said wave operated means to cause power to be stored and for simultaneously causing the disconnection of the other of said devices from said wave operated means, and means for operatively connecting each of said devices with said signaling means when disconnected from said wave operated means.

2. In a signal buoy, in combination, a signaling means, a pair of power-storing devices, means operable by wave motion, automatic means for operatively connecting one of said power storing devices to said wave operated means to cause power to be stored and for simultaneously and positively causing the disconnection of the other of said devices from said wave operated means, and means for operatively connecting each of said devices with said signaling means when disconnected from said wave operated means.

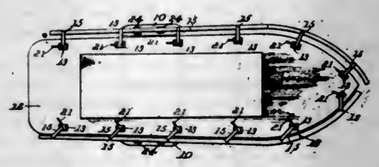
3. In a signal buoy, in combination, a signaling means, a pair of power-storing devices, means operable by wave motion, means for operatively connecting one of said power storing devices to said wave operated means to cause power to be stored and for simultaneously causing the disconnection of the other of said devices from said wave operated means, and means for operatively connecting each of said devices with said signaling means to cause said device to exert the power stored thereby upon said signaling means during its entire period of disconnection from said wave operated means, said last named connecting means being inoperative when the corresponding power storing device is moved by said wave operated means.

4. In a signal buoy, in combination, a signaling means, a pair of vertically reciprocating weights, means operable by wave motion, means for operatively connecting one of said weights to said wave operated means to cause the same to be raised and for simultaneously causing the disconnection of the other of said weights from said wave operated means, and means for operatively connecting each of said weights with said signaling means when disconnected from said wave operated means.

5. In a signal buoy, signaling means, a plurality of weights, means actuated by said weights for operating said signaling means, a float, a pair of submerged pivotally oscillating fins acted upon by the water, means operated by said fins for raising said weights, and means for alternately connecting said weights with said raising means.

[Claims 6 to 8 not printed in the Gazette.]

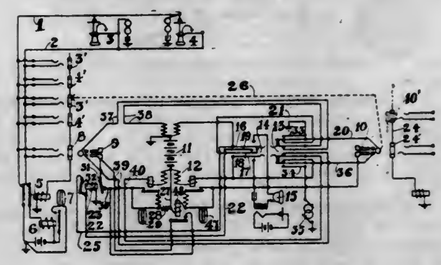
1,112,139. SHIP'S DAVIT. PÉTER P. HORVÁTH, Racine, Wis. Filed Apr. 20, 1914. Serial No. 833,276. (Cl. 9—22.)



1. The combination with a ship, of a plurality of tubular posts mounted on the ship's deck adjacent to the gunwales, a rod journaled in the upper portion of each of said posts and having its upper end curved to adapt it to overhang the gunwale, a track-rail at each side of the ship pivotally-suspended from the curved ends of said rods, means for turning said rods to project the rails outward and forward to abut their forward ends, pulley blocks provided with rollers movable on said rails, and life-boats suspended from said pulley-blocks.

2. In combination with the deck of a ship, tubular posts mounted thereon adjacent the opposite gunwales thereof, vertical rods journaled in the tops of said posts, operating turn levers carried by said arms, opposite track rails pivotally suspended from the arms at opposite sides of the ship, pulley blocks provided with rollers slidably mounted upon said rails, limiting stops secured to said rails, life boats adjustably suspended from said pulley blocks, and interlocking ends forwardly positioned upon said rails adapted for abutting each other when the life boats are in their operative positions.

1,112,140. TELEPHONE SYSTEM. DAVID S. HULFISH, Toronto, Ontario, Canada, assignor to Canadian Independent Telephone Company, Limited, Toronto, Canada, a Corporation of Canada. Filed Nov. 26, 1910, Serial No. 594,257. Renewed Dec. 22, 1913. Serial No. 808,274. (Cl. 179—35.)



1. In a telephone system, a telephone line; a plurality of central office jacks for said telephone line; a connecting plug-pair comprising in part a calling plug and answering plug and a test relay; a main battery; a circuit from said battery through an armature contact of said relay to the body of said answering plug; a circuit from the tip of said calling plug to and through the helix of said test relay; and an auxiliary test circuit from a contact of said relay, said relay being adapted to act when energized, first, to open the connection between said battery and said answering plug, and second and subsequently to close circuit between said auxiliary test circuit and said calling plug, substantially as described.

2. In a telephone system, answering and calling plugs; answering and calling jacks; a busy test relay; a test circuit extending from the calling plug to the test relay and controlling the relay; an auxiliary test circuit extending from the relay to the operator's telephone and controlled by the relay; and contacts on said relay adapted to remove the busy test conditions from the answering plug and jack when a busy test condition is encountered upon a tested line by the calling plug, substantially as described.

3. In a telephone system, a connective plug pair having two switching plugs and adapted to connect with the same line at the same time with both its switching plugs; a battery; and a ringing key forming a part of said connective plug pair and adapted to disconnect the battery from the calling line at one of its plugs and to connect a ringing generator to the line at the other of its switching plugs substantially as described.

4. In a telephone system, a call-answering plug, a ringing plug and a ringing key having contacts opening the talking conductors between the call-answering plug and its associated plug-pair apparatus while ringing upon the ringing plug.

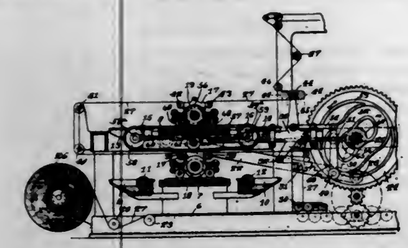
5. In a telephone system, a test relay; a main test circuit through said relay and an auxiliary test circuit from said relay to the operator's telephone equipment, said relay being adapted to connect together said main and auxiliary test circuits; a test circuit extending to the answering plug and a contact in said relay interrupting said circuit and removing the test potential from the answering plug when said test relay is operated.

[Claims 6 to 11 not printed in the Gazette.]

1,112,141. PRINTING-PRESS. ROBERT T. JOHNSTON, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,467. (Cl. 101—12.)

1. A printing press of the type described, comprising means for advancing the web, an impression cylinder, a

stationary form, and reciprocating means for rotating said cylinder with the web while the web is advancing.



2. A printing press of the type described, comprising means for advancing the web, an impression cylinder, a stationary form, reciprocating means for rotating said cylinder with the web while the web is advancing, and means for rolling the cylinder over the web during printing.

3. A printing press of the type described, comprising means for advancing the web, an impression cylinder, a stationary form, traveling means for rotating said cylinder with the web while the web is advancing, and means for reciprocating said traveling means.

4. A printing press of the type described, comprising means for advancing the web, an impression cylinder, a stationary form, means for reciprocating the cylinder, a traveling member operatively connected with said cylinder to rotate the same, means for driving said traveling member at a normal speed, and means coöperating with said cylinder reciprocating means for varying the rotative effect of said traveling member upon the cylinder to cause the cylinder to roll over the web while the same is being printed.

5. A printing press of the type described, comprising means for advancing the web, a cylinder, a stationary form, means for reciprocating the cylinder, means adapted to be operated to rotate the cylinder with the web while the web is advancing, and means coöperating with said cylinder reciprocating means for varying the operation of said cylinder-rotating means to cause the cylinder to roll over the web during printing.

[Claims 6 to 25 not printed in the Gazette.]

1,112,142. PROCESS OF PRESERVING EGG. SIMEON C. KEITH, Jr., Brookline, Mass., assignor to H. J. Keith Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 2, 1914. Serial No. 809,867. (Cl. 99—5.)

1. As a new product or article of manufacture, a churned homogeneous solid frozen egg mixture containing substantially no air.

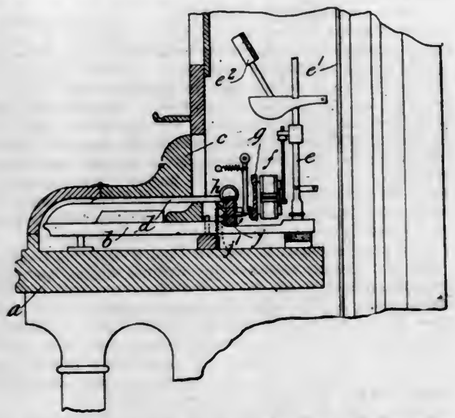
2. The herein described process which consists in agitating or churning an egg mixture *in vacuo* and simultaneously freezing such mixture.

3. The herein described process which consists in agitating or churning an egg mixture *in vacuo* and simultaneously freezing such mixture, and then freezing and holding such mixture at a temperature of approximately zero degrees F.

1,112,143. LOCKING DEVICE FOR ELECTRICALLY-OPERATED PIANOS. JOHN F. KELLY, Pittsfield, Mass. Filed May 31, 1912. Serial No. 700,761. (Cl. 84—228.)

1. A key locking device for electrically operated pianos comprising a movable member, an electro-magnet to move said member into engagement with the keys to lock the same, means to lock the member when in its key-locking position, a second electro-magnet, and connections operable therefrom to unlock the member and permit the member to move into an unlocking position to release the keys, and means to move said member after it is unlocked.

2. In a piano-key locking device, the combination, a rotatably mounted bar located to engage the rear portion of the keys to lock the same, an electro-magnet to move the bar to a locking position, an electro-magnet to release said bar, an armature for each of said magnets, the bar being secured to the armature of one of the electro-magnets, an arm on the bar, the armature of the other electro-magnet arranged to engage the arm and retain the bar in a position to lock the keys, and means to rotate the bar to a position to unlock the keys when the arm is released whereby when one of the electro-magnets is energized the bar will be moved to an unlocking position and when the other electro-magnet is energized the bar will be moved to a locking position, as described.



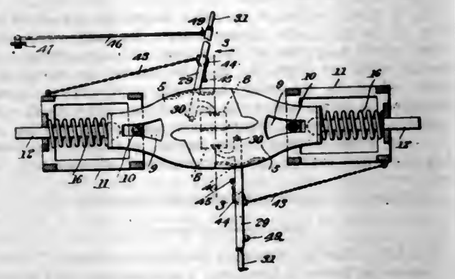
3. An electro-mechanical device to lock the manually-operable keys of a piano, electro-magnetic means to operate the tone sounding devices of the instrument, said device comprising, in combination, a rotatably mounted bar located over and adjacent the inner ends of said keys, electro-magnets, armatures therefor, said bar-member being secured to the armature of one of the electro-magnets, means to lock the bar in its locking position, the armature of the other electro-magnet serving to unlock said bar, means to energize said magnets, whereby when one of the magnets is energized the bar is moved to engage the upper surface of the keys to prevent their manual operation, and said keys will be prevented from falling at their forward ends when the instrument is being electrically operated and whereby when the other magnet is energized the bar will be unlocked, as described.

4. In a musical instrument, the combination with the manually-operable keys thereof, electrically operated devices to operate the instrument independently of the manually operable keys, a rotatably mounted member to lock said keys against manual operation, an electro-magnet to operate said member, a second electro-magnet and means operated by the second electro-magnet to release said member, and means to rotate said member after its release by the second electro-magnet to move the same to a position to permit the manual operation of the keys.

1,112,144. TRAIN-PIPE COUPLING. OTIS B. KENT and CHARLES W. WATERS, Washington, D. C., assignors of one-third to Charles F. Forsyth, Washington, D. C. Filed June 5, 1913. Serial No. 771,950. (Cl. 188—13.)

1. In a connector of the character described, a coupling member having means for coöperative connection with a coacting coupling member, said coupling member being provided with a slot, a support carrying a fulcrum and retaining element loosely engaging said slot, a sliding element carried by said support, a universal joint connection between said coupling member and sliding element, and a cushioning spring associated with said sliding element and yieldingly backing said coupling member.

2. In a connector of the character described, a coupling member having a lateral abutment face, a union normally disposed within the plane of said abutment face and projectable and retractable in a plane transversely of the coupler, and a manually operable lever for adjustiug said union.



3. In a connector of the character described, a coupler member having a lateral abutment face, a union having a fluid duct and normally arranged within the plane of said face and projectable inwardly and outwardly relative to said plane, and manually operable lever for adjusting said union, and means for locking said lever in adjustable position.

4. In a connector of the character described, a coupler member having a lateral abutment face, a union having a fluid duct and normally arranged within the plane of said face and adjustable transversely inwardly and outwardly relative to such plane, means for adjusting said union, and means for locking the adjusting means in adjusted position.

5. In a connector of the character described, a coupler member having a lateral abutment face, a union having a fluid duct and adjustable inwardly and outwardly transversely of the coupling member with relation to the plane of said face, a controlling device for adjusting said union, means for locking said controlling device in adjusted position, and means for releasing the locking means automatically in a determined phase of operation.

[Claims 6 to 17 not printed in the Gazette.]

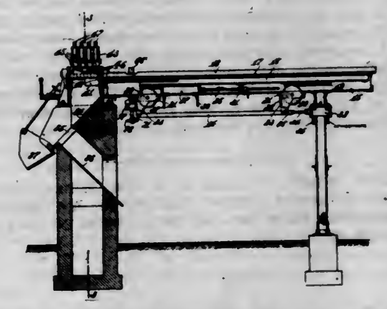
1,112,145. PINEAPPLE-CRATE. HENRY B. KOPF, New Haven, Conn. Filed July 24, 1913. Serial No. 780,908. (Cl. 229—42.)

1. In a pineapple crate, the combination with a box, of partitions therefor each consisting of a length of cardboard folded to form a loop, and one or more lateral arms, the said partitions being assembled in the box at a right angle to the bottom of the box with the loops in abutment, and clamps applied to the abutting bends of the loops into which the legs of the clamps are inserted at a right angle to the plane of the bottom of the box.

2. In a pineapple crate, the combination with a box, of four partitions each consisting of a length of cardboard folded to form a loop, and two lateral arms the said partitions being assembled in the box at a right angle to the bottom thereof with the bends of the loops in abutment, and two clamps crossed with respect to each other and having their legs inserted into the bends of the loops and extending at a right angle to the bottom of the box.

3. In a pineapple crate, the combination with a box, of a plurality of cardboard partitions each having a central loop flanked by laterally extending arms, the said partitions being symmetrically assembled in the box at a right angle to the bottom thereof with the bends of the loops in abutment, means for securing the abutting bends of the loops together, and cup-shaped cushions respectively introduced into the bottoms of the compartments formed by the partitions.

1,112,146. PIG-BREAKING MACHINE. JAMES B. LADD, Ardmore, and DAVID BAKER, Haverford, Pa. Filed Dec. 9, 1909. Serial No. 532,171. (Cl. 29—66.)



1. In a pig breaking machine, the combination with breaking means of a stationary pig frame support and a vertically and horizontally movable pig frame support, and a fluid actuated piston operating independently of the breaking means for moving said movable support.

2. In a pig breaking machine, the combination with breaking means of a stationary pig frame support, a vertically and horizontally movable pig frame support, means operating independently of the breaking means for causing said vertical and horizontal movements comprising cylinders and pistons working therein and suitable connecting means, and automatic means for preventing the actuation of the movable pig frame support except only in desired relationship with the breaking operation.

3. In a pig breaking machine, the combination with breaking means of a stationary pig frame support, a vertically and horizontally movable pig frame support and means for causing said vertical and horizontal movements comprising a source of pressure, a pressure controlling valve, cylinders and pistons working therein, and suitable connections and means for operating the pressure controlling valve for automatically securing said vertical and horizontal movements in desired relationship with the breaking operation.

4. In a pig breaking machine, the combination of breaking means of a stationary pig frame support and a vertically and horizontally movable pig frame support, means for causing said vertical and horizontal movements comprising a source of elastic pressure, a plurality of cylinders and pistons working therein, a controlling valve means connecting the cylinder with the source of pressure and with the valve and with each other whereby upon a definite movement of one piston pressure is communicated from one cylinder to another.

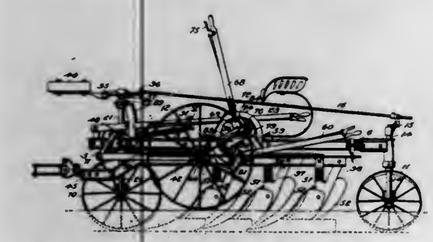
5. In a pig breaking machine, the combination of supporting anvils, coöperating pig and sow breaking dies and a single supporting and operating member therefor, the anvils having separated sow-supporting surfaces and separated pig supporting surfaces, one pig supporting surface in a different horizontal plane from that of the sow-supporting surface.

[Claims 6 to 16 not printed in the Gazette.]

1,112,147. BOX. JOSEPH M. LEVIE, New York, N. Y. Filed June 1, 1914. Serial No. 842,044. (Cl. 46—37.)

A box of the character designated comprising a container section and a cover sheath slidable longitudinally thereon and in prescribed alinement with relation thereto, said container section and cover sheath being formed with a composite pictorial design, the component part of the design on the container section being formed with an extended portion parallel to the prescribed line of movement of the container section and the cover sheath the one upon the other, for the purpose described.

1,112,148. PLOW. STALEY D. POOLE, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Oct. 30, 1906. Serial No. 341,267. (Cl. 97—55.)



1. In a mechanism of the class described, the combination of a frame, a plow, a wheel on the land side of the plow, a support for said wheel movably carried by the frame, a wheel on the furrow side of the plow, plow lifting devices mounted on the frame, means for adjustably connecting the land wheel support to the said lifting devices whereby the latter are actuated by movement of the support, and means operable at will by the force of the draft for moving the said support, substantially as set forth.

2. In a mechanism of the class described, the combination of a wheel frame, wheels supporting said frame comprising a furrow wheel and a land wheel, a plow, a crank shaft journaled on the wheel frame and operatively connected to the plow, a radius arm mounted to swing about the axis of the crank shaft and having at its outer end an axle on which the land wheel is mounted, adjustable means for connecting the radius arm to the crank shaft in different angular positions in relation thereto, and means for locking the land wheel against rotation relative to the radius arm, substantially as set forth.

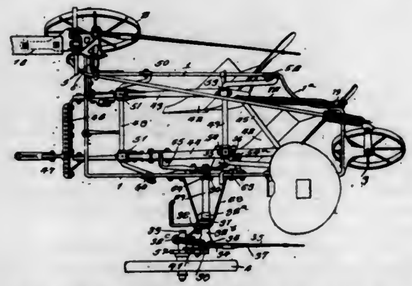
3. In a mechanism of the class described, the combination of a wheel frame, ground wheels supporting said frame, a plow, a swinging radius arm on which one of said wheels is mounted, means for lifting the plow relative to the wheel frame, adjustable connections between the radius arm and lifting means, and means operable at will by the draft for swinging the radius arm to actuate the lifting means, substantially as set forth.

4. In a mechanism of the class described, the combination of a frame, a plow, a wheel on the land side of the plow, a carrier for said wheel movably mounted on the frame, a wheel on the furrow side of the plow, plow lifting devices mounted on the frame, and means for adjustably connecting the land wheel carrier to the said lifting devices whereby the latter are actuated by movement of the carrier, said carrier being movable at will by the turning force of the land wheel to elevate the plow, substantially as set forth.

5. In a mechanism of the class described, the combination of the plow, the furrow wheel, the land wheel, the crank shaft supported on the wheels and operatively connected with the plow, the movable carrier on which the land wheel is rotatably mounted, said carrier being mounted to swing about the axis of the crank shaft and relative to said shaft, means for stopping the rotation of the land wheel relative to the carrier, and means for locking the wheel carrier to the crank shaft, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,112,149. PLOW. CHARLES H. MELVIN, Moline, Ill., assignor to Deere & Company, a Corporation of Illinois. Filed July 29, 1908. Serial No. 445,978. (Cl. 97—55.)



1. In a plowing mechanism adapted to have draft or propelling power applied thereto, the combination of the front furrow wheel, a rear furrow wheel, the land wheel, a frame supported on said three wheels and normally held bodily fixed relatively to the ground but adapted to be vertically moved relatively to one or more of said wheels, plows vertically movable relatively to the frame, a front bail and a rear bail for connecting the frame and the plows, a rock shaft supplemental to and independent of the bails, a power transmitter interposed between and movable relatively to the rock shaft and the plows, means operable at will for locking the rock shaft to one of the ground wheels whereby the said wheel can transmit draft force through said rock shaft to lift the frame relatively to the ground and simultaneously lift the plows relatively to the frame.

2. The combination of the ground wheels, the frame carried thereupon and supported at three points bodily in rigid relation to the ground, but adapted to be automatically moved vertically relatively to the ground, the plow, a front bail and a rear bail connecting the plow to the frame, a rock shaft supplemental to, and mounted independently of, the bails, a crank arm on said rock shaft connected to the plow, a radius arm connected to said shaft and having one of the ground wheels mounted eccentrically thereon as to the arm's axis, and optionally operable means for locking the radius arm to the wheel whereby said wheel can transmit the draft force to rock the shaft and to lift the frame with respect to one or more of its points of ground support and simultaneously lift the plows in the frame.

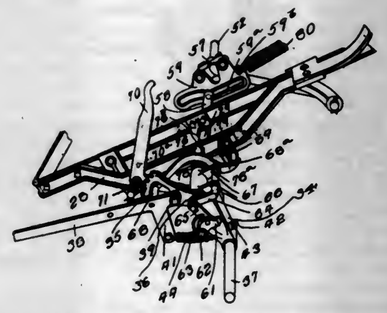
3. The combination of the front furrow wheel, the rear furrow wheel, the land wheel, the frame normally supported by said wheels in fixed relation to the ground and optionally adjustable upon each of them and automatically liftable upon one, means for supporting the plow upon the frame comprising one or more bails extending forward and upward from the frame to the plows, the draft devices connected directly to the plows, and power transmitting devices actuated by the draft devices to lift the frame relatively to the ground and lift the plows relatively to the frame.

4. The combination of the front furrow wheel, the rear furrow wheel, the land wheel, the frame normally supported thereon in fixed relation to the ground but adapted to be optionally adjusted on each of said wheels and to be automatically lifted relatively to the ground, a plow movably connected to the frame, a swinging radius arm on the frame on which arm the land wheel is mounted, lifting devices between the said arm and the plow, means for yieldingly holding the arm in normal position, means for causing the wheel to swing the radius arm backward to lift the frame away from the ground and to simultaneously lift the plow in the frame as set forth.

5. The combination of the front furrow wheel, the rear furrow wheel, the land wheel, the frame which is supported on said wheels and is normally held bodily in fixed relation to the ground but is adapted to be automatically lifted on the land side, a plow movably connected to the frame, a rock shaft on the frame, lifting connections between the rock shaft and the plow, a radius arm loosely sleeved on the rock shaft and carrying the land wheel at its free end, yielding connections between the rock shaft and the radius arm, and means for causing the wheel to swing the radius arm backward to lift the land side of the frame and to simultaneously lift the plows in the frame.

[Claims 6 to 13 not printed in the Gazette.]

1,112,150. PLOW. CHARLES H. MELVIN, Moline, Ill., assignor to Deere & Company, a Corporation of Illinois. Filed July 9, 1909. Serial No. 506,716. (Cl. 97—55.)



1. In a mechanism of the class described, the combination of a wheel frame, ground wheels comprising front and rear furrow wheels and a land wheel upon which said frame is supported, a plow movably connected to the frame, a swinging radius arm carried by the wheel frame, the aforesaid land wheel being mounted on the free end of said arm, means for lifting the plow relative to the wheel frame comprising a crank and a slotted cam plate carried by the plow and engaged by said crank, means for adjustably connecting the radius arm to the lifting means and means for swinging the radius arm to a certain limiting position to effect the lifting of the plow, the slot in said plate being shaped so that the plow is lifted by such swinging of the radius arm to the same height relative to the wheel frame irrespective of the adjustment of the connections between the radius arm and the lifting means.

2. In mechanism of the class described, the combination of a wheel frame, ground wheels comprising front and rear furrow wheels and a land wheel upon which said frame is supported, a plow movably connected to the frame, a swinging radius arm supported by the frame, the aforesaid land wheel being mounted on the free end of said arm, a rock shaft mounted on said frame, adjustable means adapted to connect the radius arm to the rock shaft in different angular positions, means for swinging the radius arm to a limiting upright position, and lifting devices interposed between the rock shaft and the plow, said devices acting when the radius arm is swung as stated to raise the plow to the same height relative to the frame irrespective of the adjustment of the connections between the radius arm and the rock shaft.

3. In a mechanism of the class described, the combination of a wheel frame, ground wheels comprising front and rear furrow wheels and a land wheel upon which said frame is supported, a plow movably connected to the frame, a rock shaft mounted on said frame, a radius arm mounted to swing about the axis of the rock shaft and carrying at its free end the aforesaid land wheel, adjustable means for securing the radius arm to the rock shaft in different angular positions in relation to said shaft, lifting connections between the rock shaft and plow comprising a crank carried by the rock shaft and a slotted plate carried by the plow and engaged by said crank, and means for swinging the radius arm to a certain limiting position to effect the lifting of the plow, the slot in said plate being shaped so that the plow is lifted by such swinging of the radius arm to the same height relative to the wheel frame irrespective of the adjustment of the securing means between the radius arm and the rock shaft.

4. The combination of a wheel frame, ground wheels upon which said frame is supported comprising a furrow wheel and a land wheel, a plow movably connected to the frame, means for lifting the plow mounted on the frame, a swinging radius arm supported by the frame, the aforesaid land wheel being mounted on the free end of said arm, means for adjustably connecting said arm to the plow lifting devices, means carried by the lifting devices and the frame for locking the plow down in operative position, and means carried by the swinging arm and the frame for automatically locking the plow in its raised or inoperative position when the arm is swung to a limiting upright position.

5. In a mechanism of the class described, the combination of a wheel frame, ground wheels comprising front and rear furrow wheels and a land wheel upon which said frame is supported, a plow movably connected to the frame, a swinging radius arm carried by the wheel frame, the aforesaid land wheel being mounted on the free end of said arm, means for lifting the plow relative to the wheel frame comprising a crank and a slotted cam plate carried by the plow and engaged by said crank, means for adjustably connecting the radius arm to the lifting means, and means for locking the land wheel to the radius arm to cause the swinging of the latter and the lifting of the plow, the slot in the said plate being shaped so that the plow is lifted to the same height relative to the wheel frame irrespective of the adjustment of the connection between the radius arm and the lifting means.

[Claims 6 to 8 not printed in the Gazette.]

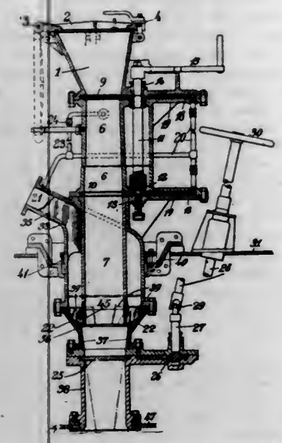
1,112,151. UNDER-WATER ASH-EJECTOR. JOHN F. METTEN, Philadelphia, Pa. Filed Dec. 11, 1911. Serial No. 665,018. (Cl. 114—186.)

1. In an ash ejector adapted to discharge below water level, the combination of a tube opening through the ship below the water level, a casing connected with said tube and containing movable gates adapted to open and close said tube, seats for said gates comprised between sections of said tube, said gates being spaced from said seats, and means for discharging water over said seats into said tube.

2. In an ash ejector adapted to discharge below water level, the combination of a tube opening through the ship below the water level, movable gates for opening and closing said tube, said tube having seats for said gates, a water nozzle surrounding said tube below the lower gate, and means for discharging water over said seats into said tube.

3. An under water ash ejector comprising a hopper, a closure therefor, a flaring ejector tube having its smallest diameter at the bottom of the hopper, a plurality of inclosed disk gates operable simultaneously to open and close alternate portions of said tube, means for adjusting said gates longitudinally of said tube, an annular

converging water nozzle adjacent the lower end of said tube, and a disk gate below said tube and nozzle for fully opening said tube.

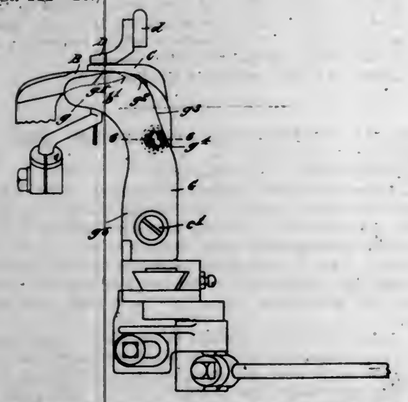


4. An under water ash ejector comprising a hopper, an ejector tube having its smallest diameter at the bottom of the hopper, gates operable simultaneously to open and close alternate portions of said tube, an annular nozzle at the end of said tube, an outer tube beyond said nozzle having an unobstructed discharge for the stream from said nozzle, and a horizontally rotatable inclosed gate below said nozzle journaled externally of said outer tube.

5. In an under water ash ejector, the combination with an ejector tube, having a cone shaped outer end, of a nozzle tube surrounding said cone shaped end to form an annular nozzle, and baffle plates positioned between said ejector tube and said nozzle tube.

[Claims 6 to 14 not printed in the Gazette.]

1,112,152. STITCHING GUARD FOR OUTSOLE AND WELT MACHINES. GEORGE ELI MONGEAU, Lowell, Mass. Filed Feb. 16, 1911. Serial No. 608,999. (Cl. 112—20.)

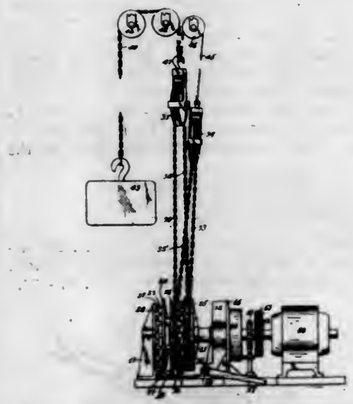


1. A guard adapted to be secured to a shoe-sewing machine in contact with the work supporting table thereof and to extend below said table and having an incline to extend over the work receiving end of said table.

2. The combination in a shoe-sewing machine with a work-supporting table having a work-receiving end, of an elastic guard adapted to press against said work-supporting table and reaching below said table in front of the awl and needle of said machine and having an incline extending over said end of said table, to direct work in front of and upon said table, and means for supporting said guard.

3. A guard of elastic sheet metal adapted to be secured to the adjustable edge-gage of a shoe-sewing machine and to press against the work-supporting table of said machine and reaching below said table and arranged in front of the awl and needle of said machine and having an incline extending over the work-receiving end of said table to direct work in front of and upon said table, and having the edge of said guard on the side from which the work approaches bent backward to fit said adjustable edge-gage.

1,112,153. HOISTING MECHANISM. EDWARD YOUNG MOORE, Cleveland, Ohio. Filed Dec. 29, 1913. Serial No. 809,309. (Cl. 57—129.)



1. The combination of two sprocket wheels having respectively different numbers of teeth, a chain formed in a loop and wrapping around both sprocket wheels, means for locking one of the wheels to the other or to an independent device, a brake adapted to retard the rotation of the other wheel, and means for automatically rendering the brake inactive when the sprocket wheels are locked to each other and active when one of them is locked to the independent device.

2. In a hoisting mechanism, the combination of two adjacent sprocket wheels having respectively different numbers of teeth, a chain formed in a loop and wrapping around both sprocket wheels, means for clutching one of the sprocket wheels to its neighbor or to a stationary device, as desired, a brake adapted to retard the rotation of the other wheel, and means for concurrently applying the brake and causing said clutching to the stationary device.

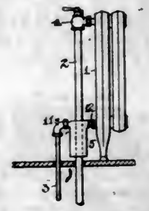
3. The combination of a shaft, a pair of adjacent sprocket wheels thereon, one tight on the shaft and one loose on the shaft, a stationary device on that side of the loose sprocket which is opposite to the tight sprocket, means for shifting the loose sprocket alternatively into engagement with the tight sprocket or the stationary device, a brake adapted to retard the rotation of the shaft and means for automatically relieving the brake when the loose sprocket is locked to the tight sprocket.

4. In a hoisting mechanism, the combination of a shaft, a pair of sprocket wheels thereon having respectively different numbers of teeth, one of said sprocket wheels being fast on the shaft and the other loose, a chain formed in a loop and wrapping around both sprocket wheels, means for shifting one of said sprocket wheels to clutch it with its neighbor or with a stationary device, a brake on said shaft adapted to act in one direction of rotation thereof, and mechanism for throwing said brake out of action concurrently with the shifting of the movable pulley.

5. The combination of a shaft, a pair of sprocket wheels having respectively different numbers of teeth, one rigid on the shaft and the other loose on the shaft and shiftable, means for clutching the shiftable wheel with its neighbor in one position and with a stationary device in the other position, an eccentric shaft, means engaging said shaft for shifting said pulley, a brake on said first mentioned shaft adapted to act when rotated in one direction, and mechanism for throwing said brake out of action by the means for shifting the movable pulley.

[Claims 6 and 7 not printed in the Gazette.]

1,112,154. RETURN-FITTING FOR VAPOR-HEATING SYSTEMS. THOMAS G. MOUAT, Cleveland, Ohio. Filed June 15, 1914. Serial No. 845,057. (Cl. 237—80.)



1. A return fitting for vapor heating systems, comprising a cylindrical casting having spaced concentric walls defining an annular chamber, the ends of said chamber being closed and said inner wall defining the location for the steam supply, inlet and outlet connections carried by the outer wall and communicating with separated portions of said chamber, and an integral septum traversing said chamber at each side of said inner wall and extending from the closure at one end to a point adjacent to the closure at the other end, said septa being located between said inlet and outlet connections and one of the same having a vent aperture therethrough at a point adjacent the closure to which it is united.

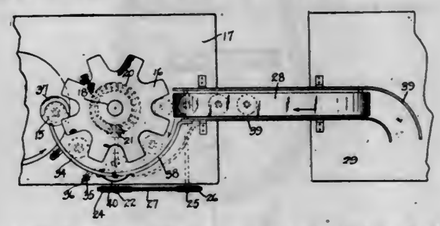
2. In a vapor heating system, the combination, with a radiator having vertical coils and headers at the top and bottom of said coils, of a hollow upright cylindrical shell having an inlet and an outlet connection at its upper end, means connecting said inlet to said lower header, a return conduit connected to the said outlet, an upright cylindrical tube within said shell and spaced therefrom to form an annular chamber, integral webs connecting the upper and lower ends of said tube and shell and closing said chamber, an integral septum traversing said chamber at each side of said inner tube and extending from said upper web to a point adjacent to said lower web, said septa being located between said inlet and outlet and the lower end of the same being spaced from said lower web to form a passageway, the upper end of one of said septa being formed with a small aperture whereby substantial equality of pressure upon opposite sides thereof is secured, and a steam supply conduit connected to said upper header and passing through said inner tube.

3. In a vapor heating system, the combination, with a radiator having vertical coils and headers at the top and bottom of said coils, of a hollow upright cylindrical shell having an inlet and an outlet connection at its upper end, means connecting said inlet to said lower header, a return conduit connected to the said outlet, an upright cylindrical tube within said shell and spaced therefrom to form an annular chamber, integral webs connecting the upper and lower ends of said tube and shell and closing said chamber, an integral septum traversing said chamber at each side of said inner tube and extending from said upper web to a point adjacent to said lower web, said septa being located between said inlet and outlet and the lower end of the same being spaced from said lower web to form a passageway, the upper end of one of said septa being formed with a small aperture whereby substantial equality of pressure upon opposite sides thereof is secured, a steam conduit passing through said inner tube and connected to said upper header, and a shut off valve in said steam conduit between said tube and header.

4. A return fitting for vapor heating systems, comprising a cylindrical casting having spaced concentric walls defining an annular chamber, the ends of said chamber being closed and said inner wall defining the location for the steam supply, inlet and outlet connections carried by the outer wall and communicating with separated portions of said chamber, and an integral septum traversing said chamber at each side of said inner wall and extending from the closure at one end to a point adjacent to the closure at the other end, said septa being located at an angle to the radii which they intersect and being located between said inlet and outlet connections, one of said septa being formed with a radial vent aperture at a point adjacent its top and the outer wall being formed with a plugged aperture in alinement with said vent aperture.

5. A return fitting for vapor heating systems, comprising a cylindrical shell having an inlet and an outlet connection at its upper end, a cylindrical tube within said shell and spaced therefrom to form an annular chamber, integral webs connecting the upper and lower ends of said tube and shell and closing said chamber, a rigid septum traversing said chamber at each side of said inner tube and extending from the web nearest said inlet and outlet to a point adjacent the other web and spaced therefrom to form a passageway, there being a second smaller passageway connecting the inlet and outlet sides of said chamber adjacent to said first web.

1,112,155. BOTTLE-FEEDING MECHANISM. WILLIAM C. MUENCH, Indianapolis, Ind., assignor to Progress Machine Co., Indianapolis, Ind., a Corporation. Filed May 6, 1912. Serial No. 695,498. (Cl. 113—114.)



A bottle crowning machine including a fixed table, a star wheel thereon for conveying bottles along the surface of the table, a guide substantially concentric with said star wheel and beyond the periphery thereof and consisting of a fixed portion adjustably mounted on said table at the point where the bottles leave the star wheel, and a movable portion hinged to the forward end of said fixed portion and extending to the point where the bottles enter said star wheel, a spring on said fixed portion of the guide and bearing against the outer surface of said movable portion, and means for limiting the inward movement of the free end of said movable portion of said guide.

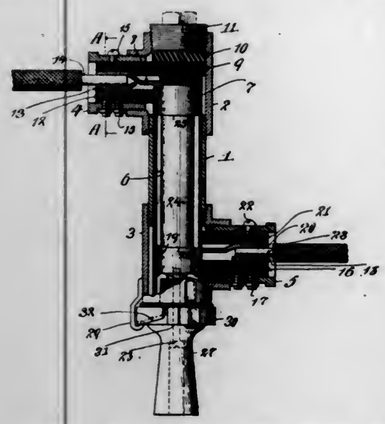
1,112,156. FUSE-SWITCH. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 28, 1913. Serial No. 803,370. (Cl. 175—277.)

1. A tubular casing, a cup-shaped contact and an annular contact disposed within said casing, a cylindrical fuse plug received in and having external contacts coöperating with said casing contacts, hooks on said casing, and a flange on said plug having in its edge circumferential recesses coöperating with said hooks upon the rotation of said plug to force the end of said plug into said cup-shaped contact.

2. A casing having a tubular body portion and tubular projections extending laterally therefrom, fixed contacts in said body portion, arms on said contacts extending into said projections, means in said projections for connecting said arms to circuit terminals, and a removable cylindrical fuse plug received in said body portion and having external contacts coöperating with said fixed contacts.

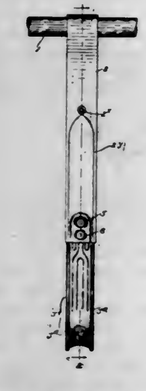
3. A tubular casing, contacts therein, a removable cylindrical fuse plug received in said casing and having external

contacts coöperating with said casing contacts, a flange on said plug abutting against the circumferential edge of



said casing, and hooks on said casing engaging said flange and holding said casing and plug contacts in coöperative relation.

1,112,157. HANGER-STRAP OR HANDHOLD FOR CARS. JOHN F. NEWTON, Jr., Boston, Mass. Filed Feb. 7, 1914. Serial No. 817,324. (Cl. 105—35.)

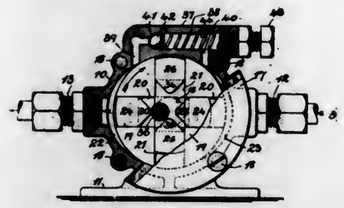


1. A hanger-strap or hand-hold comprising a supporting strap, a handle composed of sheet-metal formed into a loop with a connecting lug or tongue having eyelet-holes therethrough, said lug or tongue formed with depressions around said eyelet-holes and with a raised bead, and fastenings occupying said eyelet-holes and securing the strap to the lug or tongue, the said strap molded with prominent portions which fit and occupy said depressions around the eyelet-holes, and also with a depression which fits and is occupied by said raised bead of the lug or tongue, thereby relieving the fastenings of more or less strain, and holding the strap and handle in longitudinal alinement.

2. A hanger-strap or hand-hold comprising a supporting strap and a handle, the latter composed of a strip of sheet-metal bent into the form of a loop with the free ends of the strip brought close together, the said loop having its side-arms stiffened to prevent them from being crushed together by tubular ribs formed by bending or rolling the marginal portions of the strips inward, the upper portions of the said side-arms forming a lug or tongue engaged by the fastening means which connects the handle to the strap, with the said side-arms respectively molded to form intermediate longitudinal panels which continue upon said lug or tongue, whereby bending of the lug or tongue at the base or root thereof is obviated.

3. A hanger-strap or hand-hold having a handle composed of a strip of sheet-metal bent into the form of a loop with the free ends of the strip brought close together, having in its bend an open or uncovered inward transverse concavity, and having the said bend and the side-arms of the loop stiffened and trussed by tubular ribs formed by bending or rolling the marginal portions of the strip inward upon themselves, with the free side-edges of the strip closed against and touching the surface of the sheet-metal.

1,112,158. LUBRICATING APPARATUS. JOHANNES TH. PEDERSEN, New York, N. Y. Filed Nov. 17, 1911. Serial No. 660,756. (Cl. 103—44.)



1. A lubricating apparatus comprising a casing having inlet and outlet ports, a revoluble head having piston chambers intersecting centrally therein, reciprocating pistons movable one within the other in the said chamber, contact devices connected to the said pistons, and a stationary device engaged by the said contact devices when the revoluble head is turned for successively driving the said pistons only when the piston chambers are open to the said inlet and outlet ports.

2. A lubricating apparatus comprising a casing having inlet and outlet ports, a revoluble head in which there are piston chambers at right angles to each other, a pair of reciprocating pistons operating the one within the other in the said chambers in the revoluble head, and a stationary device engaged by members connected to the said pistons when the revoluble head is turned for successively driving the said pistons only when the piston chambers are open to the said inlet and outlet ports.

3. A lubricating apparatus comprising a casing having inlet and outlet ports, a revoluble head, in the face of which intersecting slide-ways are cut at right angles to each other, a pair of reciprocating pistons adapted to operate, the one within the other, in the said slide-ways, and a fixed pin engaged by members connected to the said pistons when the revoluble head is turned for successively and intermittently driving the said pistons only when the said slide-ways are open to the said inlet and outlet ports.

4. A lubricating apparatus comprising a casing having inlet and outlet connections, a revoluble head in the face of which slide-ways are cut at right angles to each other, a piston having a base, end uprights and lugs extending inwardly therefrom and adapted to operate any one of the said slide-ways, a piston including end uprights, lugs connected thereto, and a connecting member adapted to operate in the other slide-way with the connecting member sliding against the outer surface of the base of the aforesaid piston, and means for engaging the said lugs on the piston for driving the same successively when the said revoluble head is turned.

5. A lubricating apparatus comprising a casing having inlet and outlet connections, a revoluble head in the face of which slide-ways are cut at right angles to each other, a piston having a base, end uprights and lugs extending inwardly therefrom and adapted to operate in one of the said slide-ways, a piston including end uprights, lugs connected thereto and a connecting member adapted to operate in the other slide-way with the connecting member sliding against the outer surface of the base of the aforesaid piston, a cover and a pin projecting inwardly therefrom and adapted to engage successively the said lugs on the said piston to drive the same when the said revoluble head is turned.

[Claim 6 not printed in the Gazette.]

1,112,159. CURTAIN-POLE. WILLIAM M. ROSSITER, Sunbury, Pa. Filed Dec. 2, 1913. Serial No. 804,265. (Cl. 156—22.)

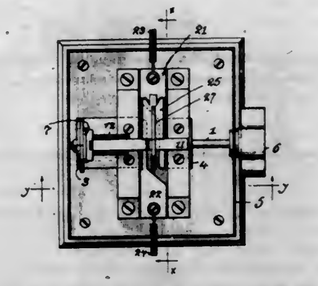
A device of the class described comprising a hollow curtain pole having a longitudinal slot in its lower portion, means for supporting said pole, said pole adapted to carry a stick and allow a curtain carried by said stick to pass outwardly through said slot, a ball adapted to be carried upon each end of said pole, a retaining plug carried by each of said balls, each plug comprising an elongated body terminating in an enlarged head having a rounded inner portion, said enlarged head adapted to be positioned within the interior of said pole and slightly expand the same for holding said ball in engagement therewith whereby the stick carried within said pole will be prevented from becoming accidentally removed from the interior of the same.

1,112,160. CURTAIN-POLE BRACKET. WILLIAM MORRIS ROSSITER, Sunbury, Pa. Filed Mar. 2, 1914. Serial No. 821,948. (Cl. 156—22.)

A curtain pole bracket comprising a bowed body, said body being provided with a spur at its upper portion adapted to dig into a window casing, the lower portion of said bracket being curved to bear against a window casing for supporting the bracket in a spaced relation thereto, said bracket also provided with a plurality of adjustment apertures, a block positioned upon said bracket, said bracket provided with a central pocket adapted to carry a curtain pole, a set screw passing through one of said apertures, and engaging said block for holding the block in an adjusted position upon said bracket.

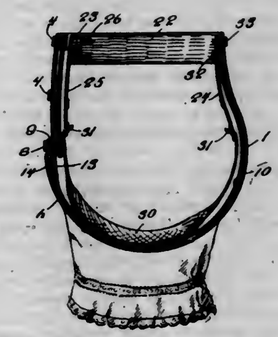
1,112,161. SNAP-SWITCH. CHARLES ROTH, Brooklyn, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,724. (Cl. 175—290.)

A snap switch, comprising a rotatable shaft, a guide-plate loose on said shaft and having side flanges, a helical spring on said shaft having its ends secured respectively to said shaft and said guide-plate, a fixed cam-plate facing said guide-plate, a dog-plate having a longitudinal slot receiving said shaft disposed between the side flanges of said guide-plate and between said guide-plate and said cam-plate and having rack teeth on an edge of said slot, a pinion on said shaft within said slot and engaging said rack teeth, a dog on said dog-plate coöperating with the edge of said cam-plate, a cross bar loose on said shaft,



bars extending from said cross bar parallel to said shaft and secured at their ends to said guide-plate, a switch lever secured to said bars, and contacts coöperating with said lever.

1,112,162. COMBINATION CATAMENIAL DRAWERS. JOSEPHINE G. ROVIRA, New York, N. Y. Filed Apr. 18, 1912. Serial No. 691,587. (Cl. 128—5.)



1. In a sanitary catamenial garment, the combination with a pair of drawers of a catamenial-pad-supporting-belt connected to said drawers; and a water-proof lining for said drawers connected to said belt.

2. In a sanitary catamenial garment, the combination with a pair of drawers, of a catamenial-pad-supporting belt detachably connected to said drawers at the back thereof; and a waterproof lining for said drawers detachably connected at its rear end to said belt and being detachably connected at its front end to the front portion of said drawers.

3. In a sanitary catamenial garment, the combination with a pair of drawers, of a catamenial-pad-supporting belt connected to said drawers; and a waterproof lining for said drawers detachably connected to said belt and being detachably connected to parts of said drawers.

4. In a sanitary catamenial garment, the combination with a pair of drawers, of a catamenial-pad-supporting belt; belt attaching means for detachably connecting said belt to said drawers; a waterproof lining for said drawers; and means for interchangeably connecting said waterproof lining either to said belt or to said belt-attaching means.

5. A catamenial-pad supporting belt formed with a pendent catamenial-pad attaching tab at its rear; and an independently formed belt front section having a pendent catamenial-pad attaching tab formed thereon, one of said catamenial-pad attaching tabs being formed with a longitudinally extending slit; and means bridging said slit at intervals comprising means for adjustably securing a catamenial pad to said tab.

1,112,163. MACHINE FOR BRUSHING SOLE-LEATHER. CARLETON RUHE, Olean, N. Y. Filed Apr. 13, 1914. Serial No. 831,522. (Cl. 149—15.)

1. In a machine of the character described, a supporting structure, a bed connected therewith and adapted to receive leather upon the same to move longitudinally thereof, an intermediate rotatable brush arranged above and near the bed to engage with the leather supported thereby, outer rotatable brushes arranged above and near the bed to engage with the leather supported thereby and spaced from the intermediate brush, and means to rotate all of the brushes in the same direction and the intermediate brush at a greater rate of speed than the outer brushes.

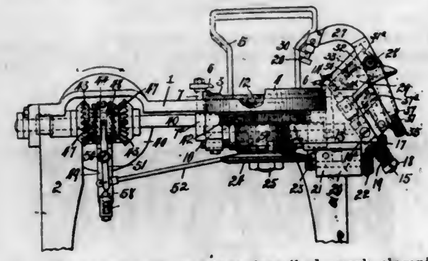
2. In a machine of the character described, a supporting structure, a vertically yielding bed connected therewith and adapted to receive leather thereon to move longitudinally thereof, an intermediate rotatable brush arranged above and near the bed to engage with the leather supported thereby, outer rotatable brushes arranged above and near the bed to engage with the leather supported thereby, means to rotate the intermediate brush, and speed reducing gearing between the intermediate brush and the outer brushes to drive the outer brushes in the same direction with the intermediate brush and at a less rate of speed.

3. In a machine of the character described, a supporting structure, a resilient bed arranged near the supporting structure, means connecting one end portion of the resilient bed with the supporting structure, so that the opposite end portion thereof is free to be swung in a vertical plane, a roll connected with the supporting structure and arranged near and below the vertically movable end portion of the resilient bed, a flexible element connected with the vertically movable end portion of the resilient bed and with the roll to be wound thereon, means to turn the roll and hold the same in a desired position against movement, a rotatable brush arranged near and above the resilient bed to engage with material traveling thereon, and means to rotate the brush.

4. In a machine of the character described, a supporting structure, a resilient bed arranged near the same, vertically adjustable means connecting one end of the bed with the corresponding end of the supporting structure, a second vertically adjustable means arranged near and spaced a substantial distance from the first named vertically adjustable means, and connecting the bed and the supporting structure, a drum connected with the supporting structure, and arranged near and below the opposite end of the resilient bed, a flexible element connected with this end of the resilient bed, and with the drum to be wound upon the drum, means to turn the drum and hold the same in a desired position, a rotatable drum arranged near and above the resilient bed to engage material traveling thereon, and means to rotate the brush.

5. In a machine of the character described, a resilient bed adapted to be approximately horizontally arranged vertically, adjustable means connected with the opposite ends of the resilient bed to hold the same against upward movement, adjustable means engaging the resilient bed between its ends to move the same upwardly and positively hold that portion of the bed with which the same engages against vertical movement, a rotatable brush arranged above and near the resilient bed, and means to drive the brush.

1,112,164. FENDER-VIZOR-WIRING-IN MACHINE. FRITZ RUNDQUIST, Toledo, Ohio, assignor, by mesne assignments, to The Willys-Overland Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 11, 1913. Serial No. 784,162. (Cl. 113—1.)



1. In a machine of the class described, work clamping means having a rotatable control part, swingingly mounted work beading means, and mechanism having connection with and operable by movements of the control part of said clamping means to swing the beading means into and out of operative position.

2. In a machine of the class described, a work support, clamping fingers operable to clamp work to the support, work beading means, and mechanism operable to move said fingers into and out of clamping position and to simultaneously and automatically move said beading means into and out of operative position respectively.

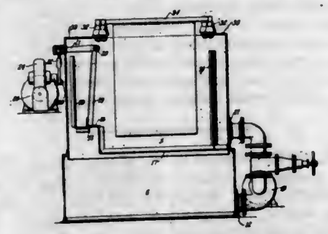
3. In combination, a work support, clamping members movable to clamp work to the support, rotatable means for moving said fingers into and out of clamping position, work beading means, and mechanism operable by movements of said rotary means to move the beading means into and out of operative position.

4. In combination, a work support, means operable to clamp work to said support and having a rotatable control part, a work beading mechanism having inner and outer work coacting parts mounted for jaw-like movements to place such parts into and out of operative position, and means operable to control the relative movement of said beading parts when the clamping means is operated to engage or release the work.

5. In combination, a work-supporting part, a beading mechanism mounted for orbital swinging movements relative to said part, means operable to swing such mechanism a predetermined distance in one direction and then to reverse the swinging movements thereof, and means operable to clamp work to said part and to render said first means operable.

[Claims 6 to 70 not printed in the Gazette.]

1,112,165. FLUID-RHEOSTAT. ARTHUR SIMON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 10, 1913. Serial No. 753,303. (Cl. 219—57.)



1. In a fluid rheostat, a tank, electrodes therein, said tank having a fluid inlet, and means insuring a uniform distribution of the fluid throughout the entire width of the tank as it passes to said electrodes.

2. In a fluid rheostat, a tank, electrodes therein, said tank having a fluid inlet, and means insuring a uniform distribution of the fluid throughout the entire width of the tank as it passes to said electrodes, said electrodes being disposed parallel to the current of the fluid.

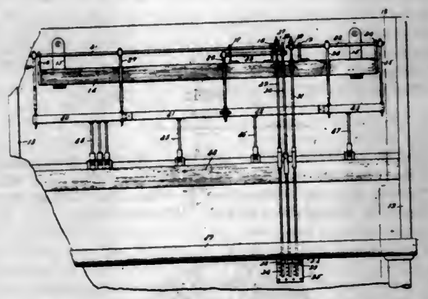
3. In a fluid rheostat, a tank having an inlet at one end thereof, electrodes mounted in said tank, and a weir between said inlet and said electrodes extending the entire width of said tank.

4. In a fluid rheostat, a tank having an inlet at one end thereof, electrodes mounted in said tank, and a weir between said inlet and said electrodes extending the entire width of said tank, said electrodes being substantially at right angles to said weir.

5. In a fluid rheostat, a tank provided at one end with an inlet, and means insuring a uniform distribution of the fluid throughout the entire width of the tank, said tank being provided at its opposite end with an outlet extending the entire width of the same.

[Claims 6 to 15 not printed in the Gazette.]

1,112,166. PHRASING-BAR FOR MUSICAL INSTRUMENTS. IRVING B. SMITH, Philadelphia, Pa., assignor to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1912. Serial No. 707,527. (Cl. 84—61.)



1. In expression mechanism for musical instruments, the combination with the hammers and the strings on which they act, of a plurality of hammer supporting bars for moving said hammers into different positions of rest, and means including but one operating device for simultaneously moving two of said bars to cause the hammer heads supported by one bar to assume different positions of rest in planes parallel to the plane of the strings and the hammer heads supported by an adjacent bar to assume different positions of rest in planes oblique to the plane of the strings.

2. In expression mechanism for musical instruments, a phrasing bar comprising a plurality of movable sections, means including but one operating device for imparting a movement of translation to one section, and means whereby said movement will cause another section to assume a position oblique to the first named section.

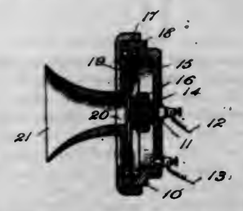
3. In expression mechanism for musical instruments, a phrasing bar comprising a plurality of movable sections arranged and connected end to end, means including but one operating device for imparting a movement of translation to one section, and means whereby said movement will cause an adjacent section to assume a position oblique to the first named section.

4. In expression mechanism for musical instruments, a flexible phrasing bar comprising intermediate and end sections arranged and joined end to end, means including but one manually operable controller having operative connections with each of the said end sections for moving the latter independently into different parallel planes, and means whereby movements of either end section into different parallel planes will cause an adjacent intermediate section to assume different positions in planes oblique to the parallel planes.

5. In expression mechanism for musical instruments, a phrasing bar comprising a plurality of normally alined intermediate and end sections flexibly connected together at their adjacent ends, separate operating means including but one finger key connected to each of the end sections for moving the latter into different parallel planes, and means whereby movement of one end section will cause the adjacent intermediate section to assume a position oblique to the plane of the end section so moved.

[Claims 6 to 11 not printed in the Gazette.]

1,112,167. TELEPHONE-TRANSMITTER. JESSE L. SPENCE, New York, N. Y., assignor to Electrical Experiment Company, Inc., a Corporation of New York. Filed June 6, 1913. Serial No. 772,087. (Cl. 177—122.)



1. In a telephonic transmitter, a microphone, a diaphragm sufficiently stiff to be substantially inflexible under the conditions of use and mounted in operative relation with said microphone, and a resilient mounting for said diaphragm of an aperiodic character, adapted to permit movements of the diaphragm responsive to the form of acoustic waves with a minimum of distortion, substantially as described.

2. In a telephone transmitter, a microphone and a diaphragm in contact therewith sufficiently stiff to be substantially inflexible under conditions of use; in combination with a resilient aperiodic mounting for said diaphragm adapted to permit movements of translation of the same responsive to the impressed acoustic waves with a minimum of distortion.

3. In a telephonic transmitter, a conducting casing, a microphone within the same insulated therefrom, a conducting diaphragm resting on its edge upon and within said casing, said diaphragm being sufficiently stiff to be substantially inflexible under conditions of use, and a yielding aperiodic mounting for said diaphragm, substantially as described.

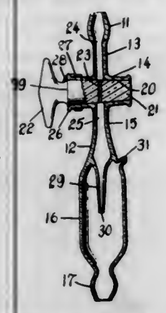
4. In a telephonic transmitter, a microphone, a diaphragm sufficiently stiff to be inflexible under conditions of use and mounted in operative relation with said microphone, and a pair of delicate air cushions making light contact with the opposite sides of the edge of said diaphragm and adapted to yield readily to the movements of the diaphragm incident to operation, substantially as described.

5. In a telephonic transmitter, a microphonic mass of carbon, a thin carbon diaphragm sufficiently stiff to be inflexible under conditions of use in contact with said mass, and a yielding aperiodic mounting for said diaphragm, substantially as described.

1,112,168. SURGICAL IRRIGATING APPARATUS. LOUIS J. STILLING, Newark, N. J. Filed Aug. 1, 1913. Serial No. 782,403. (Cl. 137—30.)

1. The hereindescribed surgical irrigating feed device, comprising a tubular body portion adapted at its upper and lower ends to connect with inlet and outlet pipes and having an upper neck portion and a lower enlarged chamber, a nozzle forming a continuation of said neck and depending into said chamber, the tip of said nozzle being at a distance from the bottom of the chamber so that the level of liquid is below it and the wall of the body portion having a vent opening at the top of the chamber outside the nozzle, and a controlling valve in said neck, whereby the flow of liquid through the feed device may

be observed and any back-flow of gas into the chamber will be trapped and discharged into the atmosphere.



2. The hereindescribed surgical irrigating feed device, comprising a tubular body portion adapted at its upper and lower extremities to receive rubber tubing and having an upper neck portion and a lower enlarged chamber inwardly tapered at its top and bottom, a nozzle forming a continuation of said neck and depending into said chamber from its tapered upward part, the tip of said nozzle being at a distance from the bottom of the chamber so that the level of liquid is below it and the wall of the body portion having a vent opening at the top of the contracting space between the nozzle and the wall of the chamber, and a controlling valve in said neck, whereby the flow of liquid through the feed device may be observed and any back-flow of gas into the chamber will be trapped and discharged into the atmosphere.

3. The hereindescribed surgical irrigating feed device, comprising a tubular body portion adapted at its upper and lower ends to connect with inlet and outlet pipes and having an upper neck portion and a lower enlarged chamber with a nozzle forming a continuation of said neck and depending into said chamber, the tip of said nozzle being at a distance from the bottom of the chamber so that the level of liquid is below it and the wall of the body portion having a vent opening at the top of the chamber outside the nozzle, whereby any back-flow of gas into the chamber will be trapped and discharged into the atmosphere.

4. The hereindescribed surgical irrigating feed device, comprising a tubular body portion adapted at its upper and lower extremities to receive rubber tubing and having an upper neck portion and a lower enlarged chamber inwardly tapered at its top and bottom with a nozzle forming a continuation of said neck and depending into said chamber from its tapered upward part, the tip of said nozzle being at a distance from the bottom of the chamber so that the level of liquid is below it and the wall of the body portion having a vent opening at the top of the contracting space between the nozzle and the wall of the chamber, whereby any back-flow of gas into the chamber will be trapped and discharged into the atmosphere.

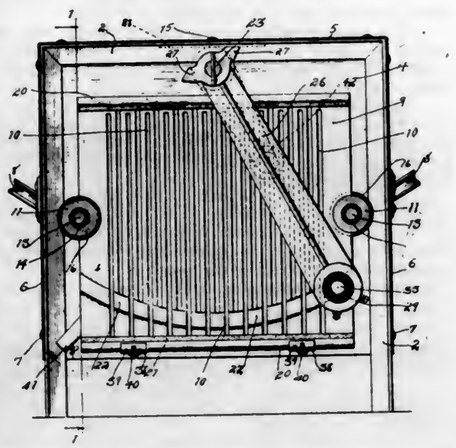
1,112,169. RHEOSTAT. LEWIS L. TATUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 7, 1908. Serial No. 466,351. (Cl. 219—69.)

1. The combination with a grid resistance, comprising a series of convolutions, of a movable contact element adapted to engage said convolutions, said convolutions having raised contact surfaces.

2. In a variable resistance device, in combination, a pair of electrically connected resistance grids arranged with adjoining surfaces, and a contact element adapted to simultaneously engage and be moved over the adjoining surfaces of said grids.

3. In a variable resistance device, in combination, a pair of resistance grids formed of a series of convolutions, and a contact member movable between said grids and adapted to simultaneously engage a convolution of each grid.

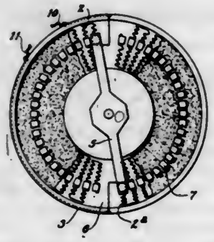
4. In a variable resistance device, in combination, a pair of resistance grids, and a movable element adapted to simultaneously engage and vary said grids.



5. In a variable resistance device, in combination, a pair of resistance grids, and a movable element adapted to simultaneously engage said grids to short-circuit portions of the same.

[Claims 6 to 25 not printed in the Gazette.]

1,112,170. RHEOSTAT. LEWIS L. TATUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 10, 1913. Serial No. 747,420. (Cl. 219—48.)



1. A rheostat comprising a heat absorbing base, and adjustable resistances mounted on opposite sides thereof with their successive steps in relatively different positions with respect to said base.

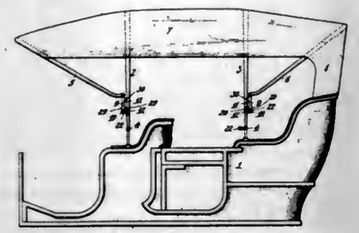
2. A rheostat comprising a heat absorbing base, adjustable resistances mounted on opposite sides thereof to transmit heat thereto, the steps of resistances at corresponding points on opposite sides of the base being separated from their respective terminals by resistances of different values.

3. A rheostat comprising two resistances, and a common supporting base therefor arranged between the same, said resistances being arranged in different relations with respect to said base whereby when both resistances transmit heat to the same portion or portions of the base the rate of heat dissipation of one resistance will be reduced.

4. A rheostat comprising two adjustable resistances, a common supporting base therefor arranged between the same to absorb heat therefrom, said resistances being of different values between their respective terminals and corresponding points on opposite sides of said base throughout their respective lengths.

5. A rheostat comprising a heat absorbing base, resistances mounted on opposite sides thereof, and controlling elements mounted on opposite sides of said base for adjusting said resistances, said elements throughout their entire range of movement having different relative positions for corresponding control of their respective resistances.

1,112,171. BOW-SHORTENING DEVICE FOR VEHICLE-TOPS. JOSEPH TEPPERT, Buffalo, N. Y. Filed June 7, 1911. Serial No. 631,722. (Cl. 21—62.)



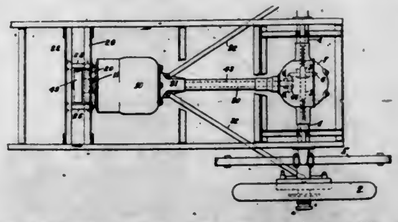
1. In a vehicle top having a vertically-disposed bow and a diagonal or brace bow, a shortening device connecting said bows comprising a head secured to said vertically-disposed bow, and a lever secured to said diagonal or brace bow, said head having an axial externally-threaded stud and a rim surrounding said stud and having a series of teeth at its edge, said lever having a circular depression into which said head is fitted and having a series of teeth co-acting with the teeth on the rim of said head, and a thumb nut passing through said lever and provided with internal threads engaging said axial stud.

2. In a vehicle top having a vertically-disposed bow and a diagonal or brace bow, a shortening device comprising a head fixedly secured to said vertically-disposed bow and provided with an externally-threaded stud extending axially therefrom and an annular rim surrounding said stud and having a series of teeth at its edge, a lever pivotally connected at its outer end to said diagonal or brace bow and having at its inner end a circular depression to receive the rim of said head and a series of teeth engaging the teeth of said rim, a thumb nut rotatably held in said lever and having an internally-threaded bore into which said stud is threaded, and means to prevent accidental disengagement of said lever from said head.

3. In a vehicle top having a vertically-disposed bow and a diagonal or brace bow, a shortening device interposed between the two comprising a head fixedly secured to said vertically-disposed bow and having an externally-threaded axial stud and a circular rim surrounding said stud and provided with a series of teeth at its edge, and a lever having a circular depression to receive said circular rim and a circular series of teeth engaging the teeth of said rim, said lever having an axial bore provided with an enlargement at its inner end, a washer fitting into said enlargement, and a thumb nut passing through the bore of said lever, and expanded at its inner end onto said washer, said thumb nut being threaded onto said axial stud.

4. In a vehicle top comprising a vertically-disposed bow and a diagonal or brace bow, a shortening device connecting said bows and comprising a head fixedly secured to said vertically-disposed bow and having an axial externally-threaded stud provided with a central bore internally-threaded in an opposite direction, a lever pivotally connected at its outer end with said diagonal or brace bow and having a central depression to receive said head, an axial bore, a thumb nut rotatably retained in the bore of said lever and having internal screw-threads engaging the external threads of said stud and an internal flange between said screw threads and the outer end of said nut, a stop screw threaded into the threaded bore of said stud and having a head adapted to engage said flange and prevent removal of said lever from said head, and means whereby said lever may be retained by said thumb nut in either of a plurality of positions.

1,112,172. MOTOR-VEHICLE. MORRIS S. TOWSON, Cleveland, Ohio, assignor, by mesne assignments, to The Elwell-Parker Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 26, 1911. Serial No. 651,423. (Cl. 21—90.)



1. In a motor vehicle, the combination, with the frame having a pair of cross bars, of a motor casing having a tubular extension at its forward end, a transverse member in which said tubular extension is journaled, brackets mounted on the cross bars for pivotally carrying the transverse member by the frame, a fly wheel on the forward end of the armature shaft extending into the space between the cross bars, and mechanism including the drive shaft connecting the rear end of the armature shaft with the live axle.

2. In a motor vehicle, the combination, with a main frame, of a transverse bar pivotally carried thereby, a motor casing having a tubular extension about its axis, said extension being journaled in an opening in the transverse bar, a collar secured to the extension on the opposite side of the transverse bar, the armature shaft of the motor extending through the tubular extension of the frame, a fly wheel on said shaft beyond the transverse bar, and mechanism including a drive shaft connecting the other end of the armature with the live axle.

3. In a motor vehicle, the combination, with a chassis frame, of a transverse bar having trunnions at its ends journaled in the frame and having an eye at its center, a motor having a tubular extension on one end of its frame journaled in said eye, an armature within the motor having its shaft journaled in a bearing within the tubular extension, and propelling means for the vehicle connected with the other end of the armature shaft.

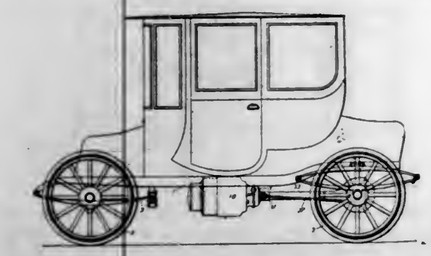
4. In a motor vehicle, the combination, with a chassis frame, of a transverse bar having trunnions at its ends journaled in the frame and having an eye at its center, a motor having a tubular extension on one end of its frame journaled in said eye, an armature within the motor having its shaft extending through the tubular extension, a wheel on said shaft beyond the extension, and propelling means for the vehicle connected with the other end of said shaft.

1,112,173. MOTOR-VEHICLE. MORRIS S. TOWSON, Cleveland, Ohio, assignor, by mesne assignments, to The Elwell-Parker Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 29, 1911. Serial No. 651,919. (Cl. 21—90.)

1. In a motor vehicle, the combination, with a frame, of an electric motor having its axis longitudinal and suspended from the frame in the median line of the vehicle, said motor having on its end a partly spherical extension, a driving axle, a housing surrounding the same, a tube connected with said housing and having at its ends a partly spherical extension engaging and making a ball joint with the spherical extension first mentioned, a propeller shaft in said tube geared with the driving axle, and a universal means within the spherical members connecting the propeller shaft with the armature.

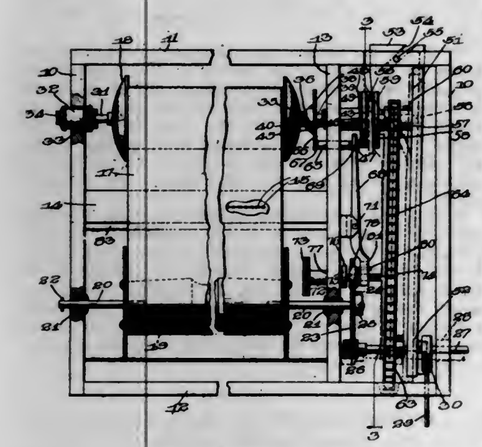
2. In a motor vehicle, the combination, with a chassis frame comprising longitudinal bars, cross bars and intermediate longitudinal bars supported by the cross bars, of an electric motor located centrally of the frame and ex-

tending in a fore-and-aft direction and suspended by ears connected to the intermediate longitudinal bars, said motor having a partly spherical housing at its rear end, a driving axle, a housing surrounding the same, a tubular extension from said housing having a partly spherical forward end mounted in the spherical housing of the motor



frame, brace bars leading from the axle housing near its ends forwardly and inwardly and secured at their forward ends to the tubular extension near its forward end, a propelling shaft within the tubular extension, and a universal joint within the spherical members connecting the propelling shaft with the armature shaft.

1,112,174. WINDING AND REWINDING MECHANISM FOR MUSIC SHEETS OR RECORDS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Apr. 23, 1908. Serial No. 428,781. (Cl. 84—166.)



1. In a device of the class described, the combination of a tracker board, a record supporting spool on one side of the board, a record receiving spool on the opposite side of the board, means for feeding the record on to the receiving spool, means for longitudinally adjusting one of the spools at will to bodily shift the record with respect to the tracker board, and means whereby the record when thus shifted will automatically shift the other spool to position the latter with respect to the first said spool.

2. In a device of the class described, the combination of a tracker board, a record supporting spool on one side of the board, a record receiving spool on the opposite side of the board, one of said spools being crowned, means for feeding the record on to the receiving spool, means for longitudinally adjusting one of the spools at will to shift the record with respect to the tracker board, and independent means whereby the shifting of said spool will automatically shift the other spool to position the latter with respect to the first said spool.

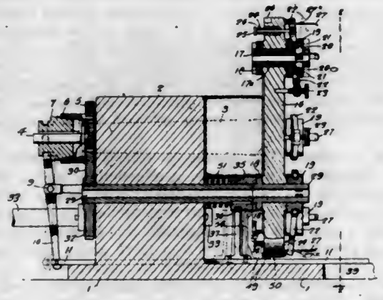
3. In a device of the class described, the combination of a tracker board, a longitudinally adjustable record supporting spool on one side of the board, means for feeding the record to the receiving spool, elastic means for holding one of the spools in position with respect to the tracker board, positive means for adjusting said roller longitudinally and at will to position the record with respect to the tracker board, and means whereby the record when thus shifted will automatically adjust the receiving roller to position the latter with respect to the first said roller.

4. In a device of the class described, the combination of a tracker board, a record supporting spool on one side of the board, means for operating said spool, a record receiving spool on the opposite side of the board, means for operating said spool, means for longitudinally adjusting one of the spools to position the record with respect to the tracker board, means whereby the record when thus shifted will automatically adjust the receiving spool, and means for throwing one of the spool operating means into and the other out of operation.

5. In a device of the class described, the combination of a tracker board, a record supporting spool on one side of the board, means for operating said spool, a record receiving spool on the opposite side of the board, means for operating said spool, means for longitudinally adjusting one of the spools to position the record with respect to the tracker board, means whereby the record when thus shifted will automatically adjust the receiving spool, and a single means for simultaneously throwing one of the spool operating means into and the other out of operation.

[Claims 6 to 30 not printed in the Gazette.]

1,112,175. BOLT-THREADING MACHINE. CLARENCE VALE and THOMAS CLARENCE MUNDY, Roanoke, Va. Filed Sept. 11, 1913. Serial No. 789,400. (Cl. 10—93.)



1. In a bolt threading machine, a face plate, a plurality of pairs of revoluble cutter holders carried by said face plate, means for causing the revolution of a predetermined pair of cutter holders, said means comprising a drive shaft, a pair of auxiliary shafts each provided with a clutch member arranged to engage a driving head, and means for transmitting the movement from said drive shaft to said auxiliary shafts.

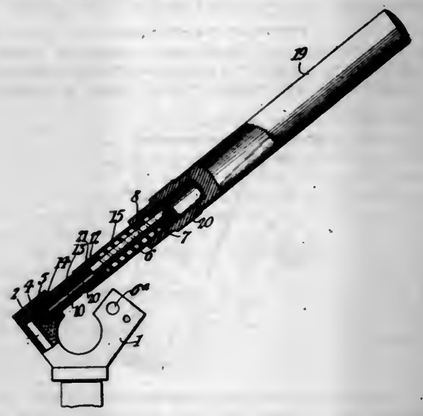
2. In a bolt threading machine, a face plate, a plurality of pairs of revoluble cutter holders carried by said face plate, means for causing the revolution of a predetermined pair of cutter holders, said means comprising a drive shaft, a pair of auxiliary shafts each provided with a clutch member arranged to engage a driving head, and a clutch for transmitting the movement from said drive shaft to said auxiliary shafts.

3. In a bolt threading machine, a face plate, a plurality of pairs of revoluble cutter holders carried by said face plate, means for causing the revolution of a predetermined pair of cutter holders, said last named means comprising a drive shaft, a pair of auxiliary shafts each provided with a clutch member arranged to engage a driving head, a clutch for transmitting the movement from said drive shaft to said auxiliary shafts, and means for connecting and disconnecting the clutches carried by said auxiliary shafts with the cutter holders.

4. In a bolt threading machine, a drive shaft, a face plate, revoluble cutters carried by said face plate, said cutters being disposed in pairs, means disposed between the drive shaft and the face plate for revolving the latter at will to bring each of said pairs of cutters into operative position successively.

5. In a bolt threading machine, a drive shaft, a face plate, revoluble cutters carried by said face plate, said cutters being disposed in pairs, means disposed between the drive shaft and the face plate for revolving the latter at will to bring each of said pairs of cutters into operative position successively, and means connected with said drive shaft for causing the revolution of the cutters when in their operative position.

1,112,176. GAS-BURNER CLEANER. HENRY VAN HOEVENBERG, North Elba, N. Y. Filed Apr. 7, 1913. Serial No. 759,383. (Cl. 240—119.)



1. In a burner cleaner, the combination with a cleaning needle, of a holder for said needle, and a combined guard and guide for said needle acting to guide the needle to a position to be used and normally inclosing and covering said needle, said guard and said needle having a relative movement in the act of using said needle to permit the protruding of said needle during a cleaning operation.

2. In a burner cleaner, the combination with a cleaning needle, of a holder for said needle, and a guarding means for inclosing and protecting said needle at all times except when said needle protrudes while actually cleaning, said guard stopping by engagement with the burner being cleaned while said needle moves in through the outlet of the burner.

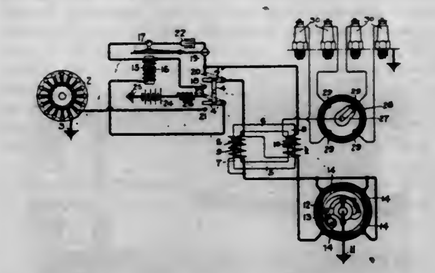
3. In a burner cleaner, the combination with a cleaning needle, of a holder for said needle, a guard for said needle, said guard and said holder having a relative movement, and a spring interposed between said guard and said holder normally holding said guard and said holder in such a position that said needle will be covered and protected by said guard.

4. In a burner cleaner, the combination with a cleaning needle, of a holder for said needle, a guard for said needle, said guard and said holder having a relative movement, a spring interposed between said guard and said holder normally holding said guard and said holder in such a position that said needle will be covered and protected by said guard, and a detent for preventing a relative movement between said guard and said holder.

5. In a burner cleaner, the combination with a cleaning needle, of a holder for said needle, a guard for said needle normally protecting said needle, and a detent for preventing a relative movement between said guard and said needle.

[Claims 6 to 15 not printed in the Gazette.]

1,112,177. ELECTRICAL SYSTEM. RICHARD VARLEY, Englewood, N. J. Continuation of application Serial No. 826,236, filed Mar. 21, 1914. This application filed July 1, 1914. Serial No. 848,360. (Cl. 123—148.)



1. A source of energy, and a circuit therefor, a coil inductively related thereto, current actuated interrupter mechanism in circuit with said coil, and a second coil inductively related to the first coil and having in circuit therewith a current using instrumentality.

2. A source of energy and a circuit therefor, a coil inductively related thereto, a circuit closing device in circuit with said coil, current responsive means for interrupting the circuit of said coil, and a second coil inductively related to the first coil.

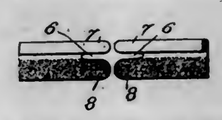
3. A source of energy and a circuit therefor, a coil inductively related thereto, means for periodically closing and opening the circuit of said coil, a vibrator in circuit with said coil, and a second coil inductively related to the first coil and having in circuit a current using instrumentality.

4. A source of energy and a circuit therefor, a coil inductively related thereto, means for periodically closing and opening the circuit of said coil, a vibrator in circuit with said coil and said means, and a second coil inductively related to the first coil and having in circuit a current using instrumentality.

5. A source of current and a coil in circuit therewith, a second coil inductively related to the first coil and having in circuit a current using instrumentality, and means, including an independent circuit and current responsive interrupter mechanism, for building up from said source, energy in said first coil and for transferring said energy to the second coil to energize the current using instrumentality.

[Claims 6 to 43 not printed in the Gazette.]

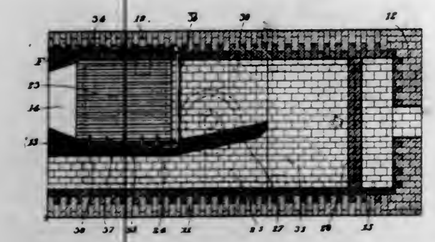
1,112,178. CLOSURE-FLAP FOR ENVELOPS. MATTHEW VIERENGEL, Brooklyn, N. Y. Filed June 20, 1913. Serial No. 774,867. (Cl. 229—65.)



A flap-forming attachment for flapless envelops comprising a sheet of material of greater width than the envelop to which it is to be attached, and having oppositely disposed recesses, the innermost edges of which are spaced apart a distance substantially equal to the width of said envelop, said recesses dividing the sheet into portions constituting respectively an attaching portion and a flap-forming portion, said recesses providing the attaching portion with lobes adapted to be folded around the lateral edges of the flapless envelop to be sealed to

the outside wall of said envelop opposite to the face on which the attaching portion is to be imposed, and said flap-forming portion having a flexible metal strip rolled therein to be folded about the lateral edges of said envelop when the flap portion is in envelop closing position, the edge of said strip being spaced from said attaching portion by substantially the width of said recesses.

1,112,179. FUEL-SAVER AND SMOKE-CONSUMER. JOHN LINDSAY WEBSTER, Ottawa, Ontario, Canada. Filed May 8, 1914. Serial No. 837,211. (Cl. 122—75.)



1. In a steam boiler furnace and in combination, a boiler having a plurality of tubes, a masonry structure supporting the boiler formed with side and end walls and formed with chambers at opposite ends into which the tubes open, a baffle wall preventing the products of combustion passing directly to the rear end of the tubes, a grate and a baffle wall at the side of the grate terminating a distance short of the first said baffle wall equal to the breadth of the said grate, the front of the second said baffle wall being offset to one side of the center forming a passageway between the baffle wall and the side wall of the masonry structure, and a partition dividing the tubes at the front end into two sections, the number of tubes in the first section through which the products of combustion pass being greater than in the second section.

2. In a steam boiler furnace and in combination, a boiler having a plurality of tubes, a masonry structure supporting the boiler formed with side and end walls and formed with chambers at opposite ends into which the tubes open, a baffle wall preventing the products of combustion passing directly to the rear end of the tubes, a grate and a baffle wall at the side of the grate terminating a distance short of the first said baffle wall equal to the breadth of the said grate, the front of the second said baffle wall being offset to one side of the center forming a passageway between the baffle wall and the side wall of the masonry structure, and a partition dividing the tubes at the front end into two sections, the number of tubes in the first section through which the products of combustion pass being greater than in the second section, in the proportion at least of one to one and one-quarter.

1,112,180. DENTIFRICE. CHARLES W. WESTENFELTER, Springfield, Ohio. Filed Mar. 8, 1913. Serial No. 752,854. (Cl. 167—9.)

1. In a dentifrice, a mixture consisting of a body, and an agent for indicating an acid or alkaline condition of the mouth.

2. In a dentifrice, a mixture consisting of a body, and an agent for coloring the dentifrice and indicating an acid or alkaline condition of the mouth.

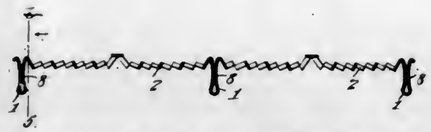
3. In a dentifrice, a mixture consisting of a body, and a coloring agent adapted to have its coloring properties neutralized by acid in the mouth.

4. In a dentifrice, a mixture consisting of a body, and an agent consisting of phenolphthalein for indicating an acid or alkaline condition of the mouth.

5. In a dentifrice, a mixture consisting of tincture of myrrh, precipitated chalk, glycerin, alcohol, bicarbonate of soda, hydroxid of soda, oil of peppermint, saccharin, water and an agent for indicating an acid or alkaline condition of the mouth.

[Claims 6 and 7 not printed in the Gazette.]

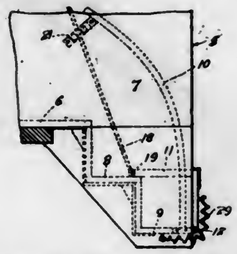
1,112,181. EXPANDED METAL STRUCTURE. HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Mar. 27, 1912. Serial No. 686,603. (Cl. 72—117.)



1. An expanded metal structure having ribs which are grooved from one side, the opposite walls of each rib contacting at intervals and rigidly united thereat.

2. An expanded metal structure having ribs which are grooved from one side, the opposite walls of each rib contacting at intervals and welded together at such points.

1,112,182. FOLDING CAR-STEP. JAMES F. WHITE, Center, Okla., assignor of one-half to Elmer C. Burress, Center, Okla. Filed June 3, 1914. Serial No. 842,639. (Cl. 105—86.)



In an extensible car step structure, an auxiliary step provided upon its ends with ears, ears secured upon the free edge of a stationary step, said ears being pivoted to each other, a curved plate connecting said first named ears, a curved plate connecting said second named ears, the upper edge of said first named plate abutting against the inner face of said second named plate when said auxiliary step is extended, a chain secured to said auxiliary step and engageable upon a stationary hook whereby said step may be elevated, a stop rod for limiting the downward movement of said auxiliary step and a bracket engaged by said stop rod, said first named curved plate lying flat upon said second named curved plate when said step is folded upwardly.

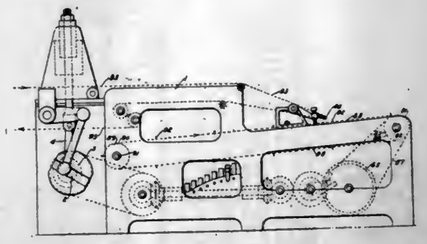
1,112,183. FERTILIZER. THOMAS LEOPOLD WILLSON and MAXIMILIAN MATTHEUS HAFF, Ottawa, Ontario, Canada, assignors, by direct and mesne assignments, to Southern Investment Co. of Canada Ltd., Montreal, Canada, a Corporation of Canada. Original application filed July 10, 1912, Serial No. 708,548. Divided and this application filed Aug. 17, 1912. Serial No. 715,570. (Cl. 71—7.)

1. As a new article of manufacture, a substantially dry fertilizer composition containing monocalcium ammonium phosphate and a little ammonium phosphate and containing no free acid.

2. As a new article of manufacture, a dry fertilizer containing an ammonium calcium phosphate, such phosphate containing at least sufficient ammonia to correspond to the formula $Ca(NH_4)H_2(PO_4)_2$.

3. As a new fertilizer, a double superphosphate containing a substantial amount of combined ammonia.

1,112,184. CRACKER-CUTTING MACHINE. DANIEL K. ALLISON, Cincinnati, Ohio, and BRYAN D. PINKNEY, Newport, Ky., assignors to The J. H. Day Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 3, 1912. Serial No. 713,029. (Cl. 107—7.)



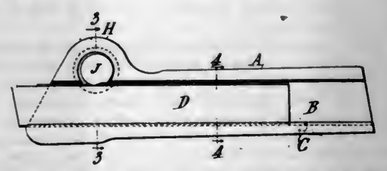
1. A pan carrier consisting of an endless conveyer, a pan skipping mechanism coöperating with said conveyer and means for setting said conveyer relatively forward or backward while in motion for the purpose of registering the pans with the pan skip.

2. A pan carrier consisting of an endless conveyer, a pan skipping mechanism arranged to actuate said conveyer at certain intervals, means for driving said conveyer and manually operated means for accelerating or retarding the movement of said conveyer for the purpose of registering the pans with the pan skip.

3. In a cracker cutting machine having a reciprocating cutter, an endless conveyer for carrying pans through the machine, a pan-skipping mechanism for imparting accelerated motion to said endless conveyer and a gear mechanism for changing the time of the said accelerated motion with relation to the movement of the said reciprocating cutter, while the machine is in motion.

4. In a cracker cutting machine having a reciprocating cutter an endless conveyer for carrying pans through the machine, a pan skipping device arranged to actuate said conveyer at certain intervals, means for driving said conveyer, and manually operated means for accelerating or retarding the movement of said conveyer to change the time of the pan skip with relation to the operation of the said cutter.

1,112,185. LATHE-TOOL. GEORGE AMBORN, Chapinville, Conn. Filed Jan. 25, 1913. Serial No. 744,131. (Cl. 29—96.)



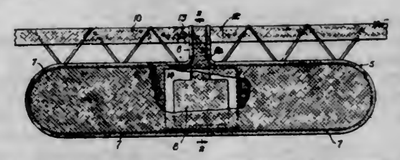
1. A side tool holder or the like having a shallow groove in its side, and a rotatable cam at one side of said groove, said cam having a circular bearing portion, and a cam face projecting over said groove, said cam face having an undercut or bevel surface of substantially the width of said groove adapted to force the tool against the opposite side of the groove and hold the tool against sidewise displacement therein.

2. A side tool holder or the like having a shallow groove in its side, and a rotatable cam at one side of said groove said cam having a circular bearing portion, and a cam face projecting over said groove, said cam face having an undercut or bevel surface of substantially the width of said groove adapted to force the tool against the opposite side of the groove and hold the tool against sidewise displacement therein, and said cam having a wrench face at the side opposite said cam face.

3. A side tool holder or the like having a shallow groove in its side, and a rotatable cam at one side of said groove said cam having a circular bearing portion, and a cam face projecting over said groove, said cam face having an undercut or bevel surface of substantially the width of said groove adapted to force the tool against the opposite side of the groove and hold the tool against sidewise displacement therein, and said cam having a shoulder bearing against said holder to prevent outward movement across the tool.

4. A side tool holder or the like having a shallow groove in its side, a circular bore leading to the top of said groove, and an enlargement of said bore on the opposite side to said groove, and a rotatable cam having a circular bearing portion fitting said bore, a flange on one side thereof, in said enlargement, and a cam face on the opposite side of said bearing portion, projecting over, said groove, said cam face having an undercut or bevel surface of substantially the width of said groove adapted to force the tool against the opposite side of the groove and hold the tool against sidewise displacement therein.

1,112,186. LIFE-BELT. GULLOW M. ANDERSEN, Chicago, Ill. Filed Nov. 15, 1913. Serial No. 801,294. (Cl. 9—19.)



1. A life saving appliance comprising a bag-like body portion of water-pervious material, a water-pervious receptacle for a gas-producing substance within said body and having its interior in direct communication with the interior of the body solely by reason of the porosity of the receptacle, means for permitting the charging of said receptacle with gas-producing substance, and means for attaching the appliance to the body of the wearer, substantially as described.

2. A life saving appliance comprising a bag-like body portion of woven fabric, a woven-fabric receptacle for gas-producing substance within said body and having its interior in direct communication with the interior of the body solely by reason of the porosity of the receptacle, means for permitting the charging of said receptacle with gas-producing substance, and means for attaching the appliance to the body of the wearer, substantially as described.

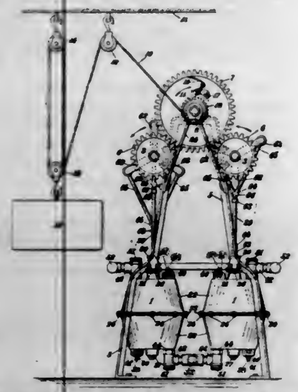
3. A life saving appliance comprising a bag-like body portion of close-weave fabric, a woven-fabric receptacle for a gas-producing substance within said body and of a more open weave than the weave of the fabric comprising the body of the appliance and having its interior in direct communication with the interior of the body solely by reason of the porosity of the receptacle, means for permitting the charging of said receptacle with gas-producing substance, and means for attaching the appliance to the body of the wearer, substantially as described.

4. A life saving appliance comprising a bag-like body portion of water-pervious material, a water-pervious receptacle for gas-producing substance within said body, a section of moisture-resisting material arranged to prevent passage of moisture from the body of the wearer to the gas-producing substance within the receptacle with gas-producing substance, and means for attaching the appliance to the body of the wearer, substantially as described.

5. A life saving appliance comprising a bag-like body portion of woven fabric, a woven-fabric receptacle for gas-producing substance within said body, a section of moisture-resisting material arranged to prevent the passage of moisture from the body of the wearer to the gas-producing substance within the receptacle, means for permitting the charging of said receptacle with gas-producing substance, and means for attaching the appliance to the body of the wearer, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,112,187. PISTON-PUMP. MATTIE ANDRES, St. Louis, Mo. Filed Aug. 29, 1912. Serial No. 717,654. (Cl. 230—5.)



1. In a pump, the combination of a barrel having an opening in an end thereof, a flexible partition in said barrel, a reciprocatory piston working in said barrel and connected to said partition for actuating same, and a support having a pair of lugs located on opposite sides thereof, one of said lugs fitting in the opening in said barrel for supporting the latter, there being an opening extending through said lugs and said member for guiding the piston-rod.

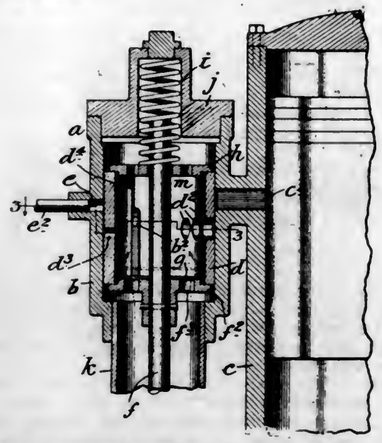
2. In a pump, the combination of a barrel having an opening in an end thereof, a flexible partition in said barrel, a reciprocatory piston working in said barrel and connected to said partition for actuating same, a support having a pair of lugs located on opposite sides thereof, one of said lugs fitting in the opening in said barrel for supporting the latter, there being an opening extending through said lugs and said member for guiding the piston-rod, and a packing-retaining cap borne by the other of said lugs and having an opening for the piston-rod.

3. In combination with end standards, a pair of spaced horizontal members secured at their ends to said standards, said members having apertures therethrough, barrels disposed on the under sides of said members and having bosses on their upper ends, means projecting down from the under sides of said members to engage said bosses to support the barrels from said members, piston-rods extending through said apertures in said members and into the barrels, pistons in the barrels connected to the piston-rods, means above said members for operating the piston-rods, and means to connect the lower ends of the barrels together.

1,112,188. COMPOUND INDUCTION-VALVE FOR INTERNAL-COMBUSTION ENGINES. LEONARD ATWOOD, Farmington, Me. Filed May 23, 1913. Serial No. 769,401. (Cl. 123—121.)

1. A compound induction valve for mixing high and low grade combustible fuel, comprising a casing with inlet port to the cylinder of an engine, a tubular slidable valve member longitudinally slotted in expansive contact with the interior surface of the casing and operated by the crank shaft, means in the bottom portion of said valve member for admitting intermittently the low grade fuel charge, and means in said valve member for the admission of high grade fuel and for the discharge of the mixed fuel into the cylinder.

2. A compound induction valve for mixing high and low grade fuel, comprising a casing with inlet port to the cylinder of an engine, a crank shaft operated tubular valve member within the casing in expansive contact with said casing and having a longitudinal slot with enlarged portion, a pin reaching into said slot horizontally alined ports in the valve member adapted to register periodically with the inlet port to the cylinder, an inlet port opposite said horizontal ports for the admission of high grade fuel, and means for keeping said ports normally closed.



3. A compound induction valve for mixing high and low grade fuel, comprising a casing with inlet port to the cylinder of an engine, a crank shaft operated tubular valve member having a longitudinal slot with enlarged portion and in expansive contact with the inner surface of the casing, a pin reaching into the enlarged portion of the slot, means in the bottom portion of said valve member to introduce intermittently low grade fuel, horizontally alined ports in the valve member adapted to register periodically with the inlet port to the cylinder, an inlet port for high grade fuel opposite said horizontal ports, and means for keeping said ports normally closed.

4. A compound induction valve for mixing high and low grade fuel, comprising a casing with inlet port to the cylinder of an engine, a crank shaft operated valve rod, a longitudinally movable valve member within the casing around said rod, a spider on the rod having apertures and contacting with the lower end of the valve member, a gravity plate normally closing said apertures, a perforated top plate on the valve member, a coiled spring pressing the top plate normally down, means in the valve member adapted to communicate with the cylinder and means for introducing auxiliary fuel when the cylinder takes its fuel charge.

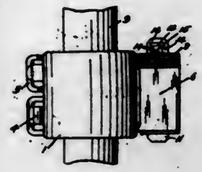
5. In a compound induction valve for mixing high and low grade fuel, a tubular slidable valve member having a longitudinal slot with enlarged bottom portion and adapted to make expansive outer surface contact, a pin reaching into the enlarged slot portion, a bottom disk or spider with apertures contacting with the lower end of the valve member, a gravity plate normally closing said apertures, a perforated top plate, means to press said top plate normally downward, horizontally alined ports centrally within the valve member adapted to communicate periodically with the cylinder, and a high grade fuel inlet at approximately the same height as the horizontally alined ports.

[Claim 6 not printed in the Gazette.]

1,112,189. PIPE-COUPLING SEAL. THOMAS BARTHOLOMEW, Columbus, Ohio, assignor to Michael A. Corbett, Columbus, Ohio. Filed Aug. 9, 1913. Serial No. 783,904. (Cl. 137—28.)

1. A seal for locking two separable members comprising complemental body members, depending slotted legs on opposite ends of both of said members, and a frangible locking key for insertion through the slots of both members.

2. A seal for locking two separable members comprising complemental interchangeable body members, depending slotted legs on opposite ends of both of said members, and a frangible locking key for insertion through the slots of both members.



3. A seal for locking two separable members comprising complemental interchangeable body members, depending slotted legs on opposite ends of both of said members, a depending leg on the side of both of said members of approximately half the length of each of said body members, and a frangible locking key for insertion through the slots of both members.

4. A seal for locking two separable members comprising complemental body members, depending slotted legs on opposite ends of both of said members, a U-shaped pocket formed in one end of each of said members adapted to receive the opposing depending leg, a depending leg on the side of both of said members approximately half the length of each of said body members, a key body portion adapted for insertion through all of said slots, resilient inner formations carried by said key to prevent its movement in one direction when in operative position through said slots, and a raised portion to prevent its movement in the other direction.

1,112,190. DUSTLESS POLISHING-MOP. JOSEPH O. BEAZLEY, Baltimore, Md. Filed Oct. 6, 1913. Serial No. 793,701. (Cl. 15—54.)

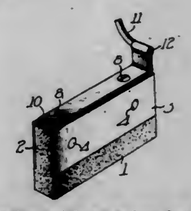
1. A mop of the class described comprising a mop head, a spring plate connected with the mop head and provided with spring bends having opposite openings, and a handle having arms provided with pivot portions mounted in the openings of the said bends and arranged to flex the said bends and create a binding action on the said pivot portions whereby the mop head is adjustably secured in its pivotal movement.

2. A mop of the class described, comprising a mop head, a spring plate provided with spaced approximately U-shaped bends having free outer portions, and a handle provided with pivot portions extending through the bends of the spring plate and arranged to flex the free portions thereof to produce a binding action on the pivots for holding the mop head in various positions with relation to the handle.

3. A mop of the class described, including a mop head, a spring plate carrying the mop head and provided with approximately U-shaped bends composed of inner and outer sides, the inner sides being provided with substantially circular openings and the outer sides having elongated openings, and a handle provided with pivot portions arranged at an angle to each other and operating in the said openings and adapted to flex the spring bends when the handle is swung outwardly from the mop head whereby the latter is held in different positions with relation to the handle.

4. A mop of the class described, including a mop head, a transverse plate secured to the mop head and provided with terminal approximately U-shaped bends having openings in its inner and outer sides, a mop handle, and arms extending from the handle and having terminal pivots arranged at an angle to each other and operating in the openings of the spring bends and adapted to flex the latter to produce a binding action on the pivots to retain the mop head in various positions with relation to the handle.

1,112,191. CARBON BRUSH AND PIGTAIL. WILLIAM L. BLISS, Milwaukee, Wis., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee. Filed May 2, 1910. Serial No. 559,013. (Cl. 171—210.)



1. The combination with a carbon brush, of a reinforcing conducting member having depending portions engaging certain faces of said carbon brush, a rivet passing through said brush and depending portions for holding said members in engagement, and a removable terminal member held in close contact with said reinforcing member by a screw which engages said rivet.

2. In combination, a carbon block, a U-shaped conducting member fitting over said block, rivets for holding said elements together, a terminal member held in engagement with said conducting member by screws, said screws passing loosely through holes in said block and engaging said rivets, and a conductor in permanent electrical contact with said terminal member.

3. In combination, a carbon block having a reduced portion, a conducting cap having bent down portions engaging said reduced portion, and flush with the surface of the block, rivets passing through said reduced portion and having heads engaging said bent down portions, holes extending from said cap into said block beyond the rivets, and screws of smaller diameter than said holes passing through said cap, engaging said rivets and clamping a terminal member against said cap.

4. A carbon block having a hole extending through it, another hole perpendicular to said first hole and intersecting it, a cap on said block, a rivet in said first hole having a transverse threaded hole and having headed ends for securing said cap, a screw passing through said cap, occupying said second hole, and engaging said threaded hole in the rivet.

5. A brush for a dynamo electric machine comprising a contact member, a reinforcing cap inclosing one end of said member, means passing through the sides of said cap and the end of said member for securing said parts together, and securing means for an electric terminal passing through said cap and detachably engaging said cap securing means.

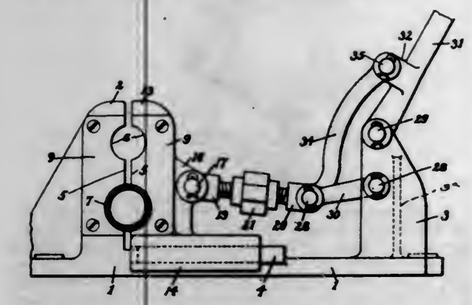
[Claims 6 to 8 not printed in the Gazette.]

1,112,192. QUICK-ACTING PIPE-VISE. FRANK J. CALLAN, Boston, Mass. Filed May 18, 1914. Serial No. 839,345. (Cl. 81—33.)

1. A vise comprising a base having a fixed jaw, and a fixed standard spaced from said jaw, a movable jaw slidingly engaged with the base between the fixed jaw and the standard, a toggle connected by an outer pivot with the movable jaw and by an inner pivot with the standard, and manually operated means for forcing the toggle to a position of rest with the jaws opened, and to an active position with the jaws closed, said means having provisions for automatically confining the toggle in its active position.

2. A vise comprising a base having at one end portion a fixed jaw and at the opposite end portion a fixed standard, a movable jaw slidingly engaged with the base between said fixed jaw and standard, a toggle connected

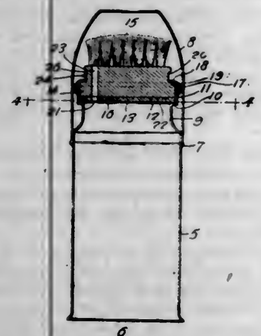
by an outer pivot with the movable jaw and by an inner pivot with the standard, said outer and inner pivots being on a plane substantially parallel with the base, a hand lever fulcrumed on the standard at a distance from the said inner pivot, the lever fulcrum and inner pivot being on a plane at an angle to the base, and a link pivoted at one end to said lever and at the opposite end to the toggle knuckle and adapted to coöperate with the lever in forcing the toggle to a position of rest with the jaws opened and to an active position with the jaws closed, the arrangement being such that the weight of the lever is adapted to confine the toggle in its active position.



3. A vise comprising a base having a fixed jaw and a fixed standard spaced from the fixed jaw, a movable jaw slidingly engaged with the base between the fixed jaw and the standard, a toggle connected by an outer pivot with the movable jaw and by an inner pivot with the standard, and means for forcing the toggle to a position of rest, with the jaws opened, and to an active position with the jaws closed, the toggle being adjustable in length to vary the closing movement of the movable jaw.

4. A vise comprising a base having a fixed jaw and a fixed standard spaced from the fixed jaw, a movable jaw slidingly engaged with the base between the fixed jaw and the standard, a toggle connected by an outer pivot with the movable jaw and by an inner pivot with the standard, and means for forcing the toggle to a position of rest, with the jaws opened, and to an active position with the jaws closed, one of the toggle links being a turnbuckle adapted to vary the length of the toggle.

1,112,193. CLEANING DEVICE. JERRY CARLETON and ALVIN L. DE LONG, Sioux Falls, S. D. Filed Jan. 31, 1914. Serial No. 815,657. (Cl. 15—46.)



1. A device of the class described, comprising a cylindrical receptacle reduced at one end, an annular shoulder disposed outwardly at approximately right angles to said reduced end, a flange extending substantially at right angles to said outwardly disposed shoulder, a disk disposed within said flange and resting against said shoulder, said disk provided with a large central opening whereby the receptacle may be filled, a brush adapted to be seated within said flange and against said disk, said brush comprising a block having bristles on its upper surface and having a closure disk on its lower surface, a collar adapted to engage said block and to be threaded onto said flange for securing said block in place, said block provided with a plurality of bores, first said disk provided with a plurality of sets of openings of various sizes, said block adapted to be turned whereby said bores will come into registration with one or another of said sets of openings, a staple carried by said block and a lug carried by said collar and embraced by said staple, said lug adapted to limit the movement of said block, whereby the bores are brought into registration with one or another of the sets of openings in first said disk, said sealing disk adapted to close all of the sets of openings except the ones in registration with said bores and adapted to close all of the sets of openings when said block is disposed so that the lug is midway between the ends of the staple.

2. A device of the class described, comprising a receptacle closed at one end and open at the other, a disk secured in the open end of said receptacle, a flange surrounding said disk, a block disposed within said flange, said block carrying bristles on one surface, and a closure disk on the other surface, said block and closure disk provided with a plurality of bores, first said disk provided with sets of openings of various sizes, a collar engaging said block and adapted to be threaded onto said flange for securing said block in place, said block adapted to be turned whereby the bores may be brought into registration with one or another set of openings, and means for limiting the movement of the said block, whereby the movement of said block may be stopped when the bores are in registration with one or another set of openings.

3. A device of the class described, comprising a receptacle closed at one end and open at the other, a disk disposed at the open end of said receptacle, a block removably positioned on said disk, means for removably positioning said block on said disk, said block provided with a plurality of bores extending therethrough, said disk provided with a central opening whereby said receptacle may be filled, and with sets of openings of various diameters, said block adapted to be turned whereby said bores may be brought into registration with one or another of said sets of openings, means carried by said block for closing one set of openings when the other is in registration with said bores, and means for limiting the movement of the block whereby the bores will be in registration with one or the other set of openings.

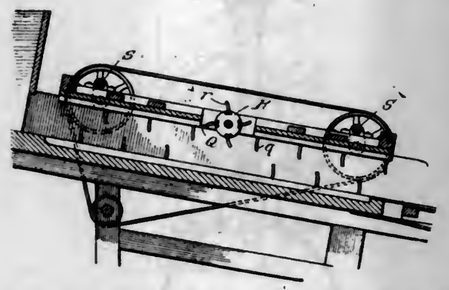
4. A device of the class described comprising a receptacle having an annular shoulder, a marginal flange on said shoulder, a block rotatably positioned on the shoulder within the flange, a collar connected to the flange and rotatably engaging the block, bristles carried by the block, means for regulating the flow of the receptacle contents to the bristles as the block is adjusted, and coöperating means between the collar and block for determining the adjustment positions of the block.

5. A device of the class described including a receptacle having a shoulder, and a collar connected therewith, and provided with a portion overhanging the shoulder, an adjustable block having a portion disposed between the shoulder and the overhanging collar portion, a lug carried by the collar, and a staple carried by the block adapted to co-act with said lug in determining the adjustment positions of the block.

[Claim 6 not printed in the Gazette.]

1,112,194. THRESHER. GEORGE WILLIAM CARPENTER, Deming, N. Mex., assignor of one-fourth to John Carpenter, one-fourth to H. Granville Bush, and one-fourth to Willard E. Holt, Deming, N. Mex. Filed Apr. 8, 1914. Serial No. 830,365. (Cl. 130—30.)

1. A threshing machine including an inclined thresher plate provided with upwardly projecting spurs or spikes, a hopper mounted adjacent the upper end of said thresher plate, a beater consisting of a plate disposed above the thresher plate and provided with depending spurs or spikes, means for imparting a circular movement to the beater and toward and away from the thresher plate and maintaining them in parallel relation at all times during the movement and a threshing cylinder mounted in and movable with the beater.



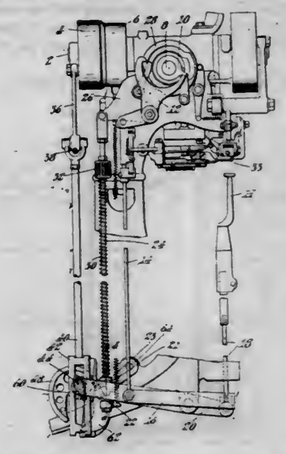
2. A threshing machine including an inclined stationary thresher plate having upwardly projecting teeth arranged in longitudinal rows and provided with longitudinal grooves between the rows, a hopper at the upper end of the said plate, a beater disposed above the thresher plate and provided with depending spurs or spikes arranged in longitudinal rows between the longitudinal rows of the thresher plate spikes and also having longitudinal grooves between its longitudinal rows of spikes or spurs, and means for imparting a circular movement to the said beater and toward and away from the thresher plate to such an extent as to cause movement of the spikes or spurs within and out of the grooves of the beater and thresher plates substantially as described.

3. A threshing machine including a frame, an inclined thresher plate mounted in the upper portion of the frame, a hopper at the upper end of the thresher plate, a beater consisting of a plate disposed above and parallel with the thresher plate, transverse shafts mounted in bearings on the frame sides and having crank portions therebetween, bearings carried by the beater plate adjacent its ends and through which the crank portions of the said shafts are journaled, the said beater plate having an intermediate transverse opening, a threshing cylinder extending within the opening of the beater plate and journaled upon the same and having a sprocket and chain connection with the crank portion of one of the said shafts, and means for rotating the shafts whereby to impart a circular movement to the beater plate and the cylinder and independently rotate the latter during such movement, all for the purpose described.

4. A threshing machine including an inclined thresher plate provided with upwardly projecting spurs or spikes, a hopper mounted adjacent the upper end of said thresher plate, a beater consisting of a plate disposed above the thresher plate and provided with depending spurs or spikes, a threshing cylinder mounted transversely across and within the beater plate and provided with peripherally projecting spurs or spikes, and means for imparting a circular movement to the beater and its cylinder toward and away from the thresher plate and maintaining them in parallel relation at all times, and means whereby to impart independent rotative movement to the cylinder during its movement with the beater.

1,112,195. MECHANISM FOR OPERATING WORK-SUPPORTS. LOUIS A. CASGRAIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 25, 1911. Serial No. 616,809. (Cl. 1—41.)

1. In a machine for successively inserting fastenings, the combination with a work abutment and a work support which is spring pressed normally into work clamping relation to said abutment when the machine is operating, of means for intermittently effecting through the work support a uniform depression of the work to permit the work to be fed between the successive fastening inserting operations, comprising a power driven member having a uniform stroke, a member connected to said work support, said members being disconnected during the fastening inserting operation, and means for intermittently locking said members together always at the same point in the stroke of said power driven member, said locking means comprising a part of variable dimensions moved by the relative movement of said members as different work thicknesses are clamped, to bring the appropriate dimension into operative relation to said members.



2. In a machine for successively inserting fastenings, the combination with a work abutment and a work support which is spring pressed normally into work clamping relation to said abutment when the machine is operating, of means for intermittently effecting through the work support a uniform depression of the work to permit the work to be fed between the successive fastening inserting operations, comprising a power driven member having a uniform stroke, a member connected to said work support, said members being disconnected during the fastening inserting operation, and means for intermittently locking said members together always at the same point in the stroke of said power driven member, said locking means comprising a part of variable dimensions and connections between said part and one of said members whereby the relative movement of said members, as different work thicknesses are clamped, serves to bring the appropriate dimension into operative relation to said members.

3. In a machine of the class described, the combination with a work abutment, a work support, a spring and means for bringing said spring into operative relation to said work support to cause said work support to be pressed normally into work clamping relation to said abutment when the machine is operating, of means for intermittently effecting through the work support a uniform depression of the work to permit the work to be fed between the successive fastening inserting operations, comprising a power driven member having a uniform stroke, a member connected to said work support, said members being disconnected during the fastening inserting operation, and means for intermittently locking said members together always at the same point in the stroke of said power driven member, said locking means comprising a part of variable dimensions moved by the relative movement of said members, as different work thicknesses are clamped, to bring the appropriate dimension into operative relation to said members, and means, connected to said spring applying means and moved into operative position when said spring is caused

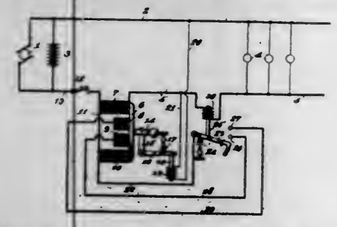
to act upon said work support, for effecting the relative movement of said part and said members.

4. In a machine of the class described the combination with a work support and a power driven member, of a rotary device having an eccentric surface automatically brought into intermittent driving engagement with said member at a point in the path of movement of said member, said device being supported at a point in the line of movement of said member, and means for transmitting motion from said device to said support.

5. In a machine of the class described the combination with a support and a reciprocating power driven member, of means for effecting an intermittent driving connection between said support and said member comprising a locking device automatically movable about an axis intersecting the line of movement of said driven member into position to be engaged and moved by said member, and means for transmitting motion from said device to said support.

[Claims 6 to 11 not printed in the Gazette.]

1,112,196. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Nov. 5, 1910. Serial No. 590,837. (Cl. 171—229.)



1. Means for regulating an electric circuit comprehending a plurality of regulating elements, a common means for operating the said elements and means for varying the effect of said elements depending upon the current to be regulated.

2. Means for regulating an electric circuit comprehending a plurality of regulating elements, a common means for varying the effect thereof, and means in series in the circuit for rendering a portion of said elements inoperative, depending upon the current in the circuit to be governed.

3. Means for regulating an electric circuit comprehending a plurality of variable resistances, a common means for controlling said resistances, and means in series in the circuit for determining the operativeness and inoperativeness of a portion of said resistances depending on the current in the circuit to be governed.

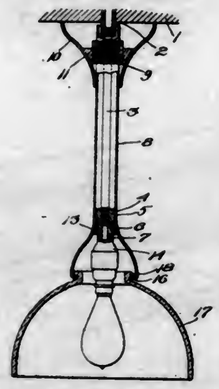
4. Means for regulating an electric circuit comprehending a plurality of variable resistances, a common means for controlling said resistances responsive to fluctuations in voltage across the circuit to be governed and means in series in the circuit for cutting in and out a portion of said resistances depending for its operation upon the current in said circuit.

5. Means for regulating an electric circuit comprehending a variable resistance therein, a variable resistance in shunt thereto, means for varying the said resistances responsive to voltage fluctuations across said circuit and means for rendering one of said resistances operative depending upon the current in said circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,112,197. WALL OR CEILING FIXTURE FOR LIGHTS. DAVID CROWNFIELD, Cambridge, Mass. Filed Mar. 6, 1914. Serial No. 822,817. (Cl. 240—76.)

1. In a light fixture, the combination of a tubular hanger, means to secure the hanger to part of a building, a canopy surrounding the hanger, adjustable means wholly interior to the canopy, securing the same to the hanger, a shade holder secured to the free end of the hanger, means wholly interior to the shade holder to secure a shade thereto, and means to attach a light to the hanger on the inside of the shade holder.



2. In a light fixture, the combination of a tubular hanger, means to secure the hanger to part of a building, a hollow outwardly flaring canopy surrounding the hanger, the hanger and canopy in screw thread connection inside the canopy, a shade holder secured to the free end of the hanger, means wholly interior to the shade holder to secure a shade thereto, said shade holder overhanging said shade fastening means, and means to attach a light on the inside of the shade holder.

3. In a light fixture, the combination of a tubular hanger, means to secure the hanger to part of a building, an enlargement near one end of the hanger, a hollow outwardly flaring canopy embracing the hanger at its smaller end and provided with internal means to engage the enlargement on the hanger adjustably, a sleeve secured to the free end of the hanger internally of the same, said sleeve provided with a section of smaller diameter than that secured to the hanger, a shade holder secured internally to said smaller sleeve section, means wholly interior to the shade holder to secure a shade thereto, said shade holder overhanging said shade fastening means, and means to attach a light to the sleeve on the inside of said shade holder.

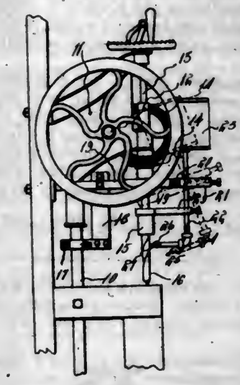
4. In a light fixture, the combination of a tubular hanger having an enlargement, means to secure said hanger to part of a building, a canopy having an opening for said hanger and a screw threaded portion adapted to coöperate with said enlargement adjustably to secure said hanger and said canopy, a threaded sleeve on said hanger, a shade holder secured to said sleeve and abutting against said hanger whereby the outer surface of said holder and hanger are substantially continuous, means wholly interior to the shade holder to secure a shade thereto, and means to attach a light on the inside of said shade holder.

5. In a light fixture, the combination of a tubular hanger, means to secure the hanger to part of a building, a hollow canopy surrounding the hanger, adjustable means wholly interior to the canopy securing the same to the hanger, a sleeve secured on the free end of said hanger internally of the same, said sleeve provided with a section of smaller diameter than that secured to the hanger, a shade holder having an interior screw threaded portion secured to said smaller sleeve section and provided with internal spurs spaced apart for securing a shade, and means to attach a light on the inside of said shade holder.

[Claims 6 to 8 not printed in the Gazette.]

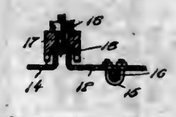
1,112,198. DRILL-OILER. HENRY DAVIS, Nashville, Tenn. Filed Sept. 24, 1913. Serial No. 791,572. (Cl. 77—5.)

1. An oiling device for a drill comprising a support arranged to be clamped to the frame of the drill, a bar adjustably connected to the support, a guide clip hinged to the bar, an oil tank disposed above the clip, an oil pipe connected to the tank and extending loosely through the clip, a supporting member rigidly and detachably connected to the pipe and arranged to engage with a drill chuck, a valve in the pipe, and a nozzle carried by the pipe and arranged to be disposed against the drill bit.



2. An oiling device for a drilling machine comprising a support mounted on the machine, an oil reservoir, an oil conduit connected to the reservoir and leading to the drill bit, means carried by the conduit and resting on the drill chuck whereby the reservoir and conduit move with the drill bit, and movable means forming a part of the support and slidably receiving the conduit, whereby said conduit is capable of being moved toward and away from the drill bit.

1,112,199. HARROW ATTACHMENT FOR CULTIVATORS. CHARLES C. DEAN, Remmel, Ark. Filed Jan. 5, 1914. Serial No. 810,460. (Cl. 97—44.)



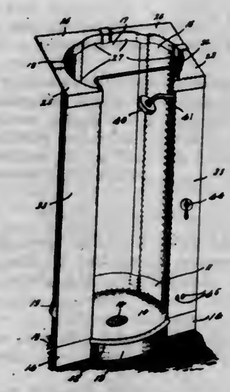
A harrow attachment for cultivators comprising an elongated plate having an intermediate offset portion provided with a bolt opening and adapted to seat in a slot in the standard of a cultivator, a plurality of U-shaped clips engaged through the plate and disposed in horizontal alinement and a plurality of teeth clamped to the plate by said clips for vertical adjustment.

1,112,200. SHOWER-STALL. HENRY H. DUPONT, Indianapolis, Ind. Filed July 5, 1913. Serial No. 777,409. (Cl. 4—26.)

1. A stationary shower-stall, comprising an enameled receptor having an upstanding circular flange, an enameled iron wall having a socket at its lower end fitting said upstanding flange, said wall being composed of a plurality of parts, adjacent parts of the wall meeting on a vertical joint formed by a vertical socket along the edge of one part and a coöperating tongue along the edge of the other, said wall parts being provided with exterior lugs near the edges forming such joints, and bolts coöperating with said lugs to hold the wall parts together, said receptor and said wall having the enamel on the inner surface.

2. A sanitary shower-stall, comprising an enameled receptor having an upstanding circular flange, and an enameled iron wall having at its lower end a socket comprising two depending spaced flanges between which fits said upstanding flange, said receptor and said wall having the enamel on the inner surface and having their inner surfaces substantially flush with each other.

3. A sanitary shower-stall, comprising an enameled receptor having an upstanding circular flange, an enameled iron wall having a socket at its lower end fitting over said upstanding flange, said receptor and said wall having the enamel on the inner surface and said wall extending less than all the way around the edge of the receptor so as to leave a doorway, a pair of finishing plates of iron enameled on the forward face, which finishing plates are provided with inturned flanges at their inner edges to overlap the edges of the doorway, and a third finishing plate enameled on the forward face and fitting against the front of the receptor below the doorway and beneath the first named finishing plates, said third finishing plate being provided at its upper edge and beneath said first finishing plates with a tongue and said first finishing plates being provided at their lower edges with sockets which fit over said tongue on the third finishing plate.



4. A sanitary shower-stall, comprising an enameled receptor having an upstanding circular flange, an enameled iron wall having a socket at its lower end fitting over said upstanding flange, said receptor and said wall having the enamel on the inner surface and said wall extending less than all the way around the edge of the receptor so as to leave a doorway, a pair of finishing plates of iron enameled on the forward face, which finishing plates are provided with inturned flanges at their inner edges to overlap the edges of the doorway, and a third finishing plate enameled on the forward face and fitting against the front of the receptor below the doorway and beneath the first named finishing plates.

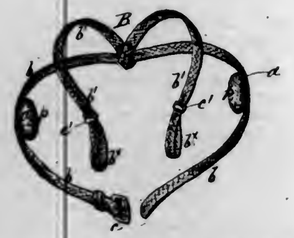
5. A sanitary shower-stall, comprising an enameled receptor having an upstanding circular flange, an enameled iron wall having a socket at its lower end fitting over said upstanding flange, said receptor and said wall having the enamel on the inner surface and said wall extending less than all the way around the edge of the receptor so as to leave a doorway, a pair of finishing plates of iron enameled on the forward face, which finishing plates are provided with inturned flanges at their inner edges to overlap the edges of the doorway, and a third finishing plate enameled on the forward face and fitting against the front of the receptor below the doorway and beneath the first named finishing plates, the upstanding flange of the receptor having its upper edge turned forward below the doorway to form a reverse flange which fits over the upper edge of said third finishing plate below said doorway.

[Claims 6 to 13 not printed in the Gazette.]

1,112,201. SHOULDER-SUPPORT FOR PERSONAL WEAR. FREDERICK W. ERSFELD, New York, N. Y. Filed Mar. 23, 1914. Serial No. 826,485. (Cl. 2—93.)

1. As an improved article of manufacture for personal wear, a shoulder-sustaining device comprising inflatable bulbous elastic cushions, a belt to which said cushions are

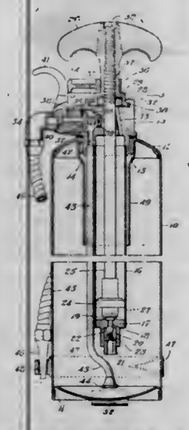
secured and shoulder straps connected with said belt at the back and having loops slidably engaging said belt at the front.



2. As an improved article of manufacture for personal wear, a shoulder-sustaining device comprising inflatable bulbous elastic cushions, a belt having pockets in which said cushions are retained, closures for said pockets, and shoulder straps connected with said belt at the back and front.

3. As an improved article of manufacture for personal wear, a shoulder-sustaining device comprising inflatable bulbous elastic cushions, a belt having pockets in which said cushions are retained, closures for said pockets, shoulder straps connected with said belt at the back and front, and said closures for said pockets being detachably held in closed position.

1,112,202. FIRE-EXTINGUISHER. DANA ESTES, Brookline, Mass., assignor of one-half to Jesse B. Thomas, Boston, Mass. Filed Oct. 16, 1913. Serial No. 795,474. (Cl. 169—12.)



1. A fire extinguisher comprising a reservoir, a pump barrel in the reservoir, said pump barrel having its lower end closed and provided with a vertical aperture, a rib or shoulder being formed around the upper end of the aperture, a piston in the pump barrel, said piston having stopper plug or disk adapted to be seated upon the said rib, a piston rod movable through the upper end of the reservoir, and means for locking the piston rod with the stopper plug or disk firmly seated upon said rib to prevent access of liquid from the reservoir into the pump barrel.

2. The combination with a fire extinguisher provided with a handle, and having an outlet valve provided with a movable operating handle, of a supporting bracket having an arm interposed between said handles when the extinguisher is supported by the bracket to prevent operation of said valve.

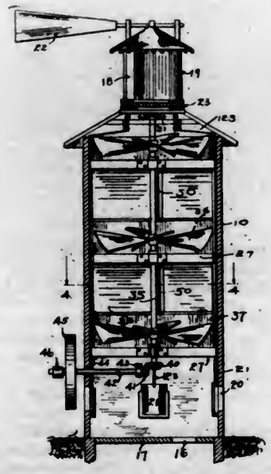
3. The combination with a fire extinguisher provided with a handle, and having an outlet valve provided with a movable operating handle, of a supporting bracket having an arm interposed between said handles when the extinguisher is supported by the bracket to prevent operation of said valve, said arm having a socket to receive the first mentioned handle.

4. The combination with a fire extinguisher provided with a handle, and having an outlet valve provided with a movable operating handle, of a supporting bracket having an arm interposed between said handles when the extinguisher is supported by the bracket to prevent operation of said valve, said arm having a socket to receive the first mentioned handle, and a spring plate normally closing said socket.

5. The combination with a fire extinguisher provided with a handle and having an outlet valve provided with a movable operating handle, of a supporting bracket having means at its lower end for supporting the extinguisher and having an arm at its upper end provided with an enlargement interposed between said handles when the extinguisher is supported by the bracket to prevent operation of said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,112,203. ATMOSPHERIC POWER-GENERATOR. ALBERT J. FANDREY, Indianapolis, Ind. Filed Apr. 1, 1913. Serial No. 758,118. (Cl. 253—2.)



1. An atmospheric power generator including a tower with openings at the lower end thereof for the inlet of air, a revolving top, means within the tower adapted to be revolved by the current of air from the outlet on one side thereof, a weather vane secured to said top for turning the air outlet away from the wind, and means actuated by said revolving top for opening the air inlets at the lower part of the tower, as described.

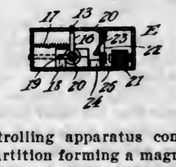
2. An atmospheric power generator including a tower with openings at the lower end thereof for the inlet of air, a revolving top, means within the tower adapted to be revolved by the current of air from the outlet on one side thereof, a weather vane secured to said top for turning the air outlet away from the wind, and means actuated by the revolving top for opening the air inlet in the lower part of the tower which is located on the side opposite a particular position of the weather vane.

3. An atmospheric power generator including a tower with openings at the lower end thereof for the inlet of air, a revolving top, means within the tower adapted to be revolved by the current of air from the outlet on one side thereof, a weather vane secured to said top for turning the air outlet away from the wind, a door for closing each of said air inlet openings at the lower part of the tower, means located near the revolving top for opening each door, and means connected with the revolving top for engaging and actuating one of said door opening means at a time.

4. An atmospheric power generator including a tower with openings at the lower end thereof for the inlet of air, a revolving top, means within the tower adapted to be revolved by the current of air from the outlet on one side thereof, a weather vane secured to said top for turning the air outlet away from the wind, a vertically slidable door for each of said air inlet openings, a plunger located near said revolving top, means for connecting each plunger with the door of the same side as the plunger, and a track bar secured to the revolving top opposite the weather vane and in position to engage said plungers one at a time.

5. An atmospheric power generator including a tower with openings at the lower end thereof for the inlet of air, a revolving top, means within the tower adapted to be revolved by the current of air from the outlet on one side thereof, a weather vane secured to said top for turning the air outlet away from the wind, a vertically slidable door for each of said air inlet openings, a plunger located near said revolving top, a lever fulcrumed between its ends, a cable extending from the end of said lever to one of said doors, a roller extending from each plunger, and a track bar secured to the revolving top at a point opposite the weather vane and in position to engage the rollers on said plungers, one at a time.

1,112,204. SAFETY BLOCK SYSTEM FOR RAILROADS. BERNARD FAY, Danbury, Conn. Filed Feb. 27, 1913. Serial No. 751,107. (Cl. 246—59.)

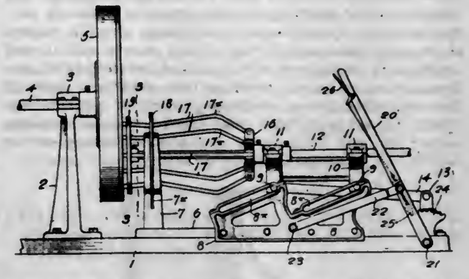


1. A train controlling apparatus comprising a casing provided with a partition forming a magnet chamber therein, said partition being provided with an opening, an armature in the magnet chamber and having a latching lip projecting through the opening, a shaft journaled in the casing and having a projecting end portion, means carried by the projecting portion and actuated by a train for rotating the shaft, an arm carried by the shaft within the casing and adapted to be engaged by the latching lip of the armature, a magnet in the chamber for releasing the armature from the arm, means carried by the shaft for engaging a speed controller of a train, and means actuated by a train for energizing the magnet.

2. A train controlling apparatus comprising a casing provided with a partition forming two compartments, said partition having an opening therein, a magnet in one compartment, a spring armature mounted on the partition in the magnet compartment and provided with a lip that normally projects through the opening in the partition, a shaft journaled in the other compartment and having a portion projecting beyond the casing, an arm carried by the shaft within the casing, train actuated means carried by the projecting portion of the shaft for rotating the shaft to engage the arm with the lip of the armature, train speed controlling means carried by the shaft and placed in the path of the train when the shaft is rotated to engage the arm and lip, means actuated by a train for energizing the magnet to disengage the armature and the latching arm, and means for reversely rotating the shaft when the armature is disengaged from the latching arm.

1,112,205. SPEED-CHANGING DEVICE. AARON FREITZ, Edmond, Okla. Filed Apr. 18, 1913. Serial No. 761,975. (Cl. 74—7.)

1. A speed changing device comprising a driving shaft, a driven shaft, a gear on said driven shaft, a series of pivoted arms, the ends of the pivoted arms being movable toward and away from a common center, and being arranged to continuously engage the teeth of the gear for driving the latter, means for simultaneously moving the ends of the arms toward and away from the common center, and means for moving said driving shaft to maintain the ends of the pivoted arms in operative relation with the teeth of the gear.



2. A speed changing device comprising a driving shaft, a driven shaft, a gear on said driven shaft, a series of pivoted arms, the ends of the pivoted arms being movable toward and away from a common center, and being arranged to engage the teeth of the gear for driving the latter, and means for simultaneously moving the ends of the arms toward and away from the common center, the teeth of said driven gear being at all times in engagement with one of the arms.

3. A speed changing device comprising a base, slidable cam members carried by said base, a frame carried by said slidable cam, a driving shaft rotatably carried by the frame, means for moving the cam longitudinally of the shaft, means for preventing the movement of the frame, a series of spring arms pivotally carried by said shaft and rotatable therewith, a driven gear arranged to be engaged by the ends of said arms, and a spreading device movable with said cam for causing a simultaneous spreading of said arms toward or away from said driving shaft.

4. In a speed changing device, a driven gear, a driving shaft, a series of arms pivotally connected to said driving shaft, the ends of said arms being arranged to extend into engagement with the teeth of the gear, a guide plate having radially extending slots arranged to receive the end of the arms, means for simultaneously moving the arms away from or toward said driving shaft, and means for moving said driving shaft to maintain the ends of the pivoted arms in operative relation with the teeth of the gear.

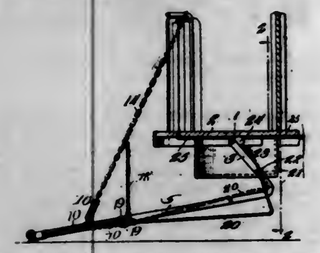
5. In a speed changing device, a driven internal gear, a driving shaft, a series of arms pivotally connected with said driving shaft and disposed at equal intervals around said shaft, said arms having portions inclining at an angle to the central longitudinal axis of said shaft, the ends of the arms being arranged to engage the teeth of the internal gear, a slotted guide plate carried by said shaft, the slots in said guide plate being arranged to receive the ends of said arms, and a spreader plate arranged to engage the inclined portion of the arms for simultaneously moving the ends of the arms toward or away from said shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,112,206. CAR-FENDER. JOHN T. FULMELE, Wilmington, Del. Filed Oct. 14, 1912. Serial No. 725,635. (Cl. 105—250.)

1. The combination with a car having an air brake and a pressure pipe, of a valve communicating with said pressure pipe, a fender comprising a downwardly movable portion for receiving and carrying a body encountered by the fender, and means actuated by the movement of the movable fender portion for opening the valve to let out the air from the pressure pipe, said means comprising a lever pivotally mounted on a portion of the frame, one end of said lever being arranged to engage the valve and the other end being disposed beneath the movable fender portion and arranged to be engaged by the latter in its movement.

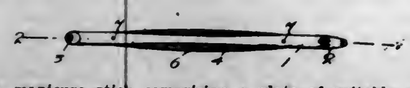
2. The combination with a car having an air brake and a pressure pipe, of a valve communicating with said pressure pipe and having a projecting valve stem, a fender frame pivotally mounted upon the bottom of the car and having a body receiving portion pivotally mounted near the front end of said frame, a rock shaft pivotally mounted on said frame and having a hook on one side thereof arranged to be engaged by the pivoted body receiving portion, an integral arm extending from said rock shaft on the other side thereof and being provided with an upwardly turned end, and a head carried by said upwardly turned end and arranged to engage said valve stem for forcing the valve open.



3. The combination with a car, of a fender therefor comprising a pivot rod, a pair of arms loosely mounted on said pivot rod, said arms extending rearwardly and being bent forwardly, a frame secured to said arms, a movable body receiving portion pivotally mounted near the forward end of said frame, a roller disposed in front of said body receiving portion, and flexible members for suspending the front end of the frame, said members being attached to the car.

4. The combination with a car, of a fender therefor comprising a pivot rod, a pair of arms loosely mounted on said pivot rod, said arms extending rearwardly and being bent forwardly, a frame secured to said arms, a movable body receiving portion pivotally mounted near the forward end of said frame, a roller disposed in front of said body receiving portion, flexible members for suspending the front end of the frame, each of said members comprising a chain attached at one end to the car, a spring attached to the frame near the front end thereof, said spring and said chain being connected together, and an upwardly extending fender member pivotally connected to the frame at its bottom corners and to said chains at its upper corners.

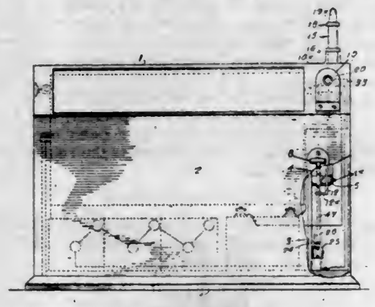
1,112,207. MANICURE-STICK. HENRY CLAY GIBSON, Little Rock, Ark. Filed Mar. 21, 1914. Serial No. 826,331. (Cl. 30—23.)



A manicure stick comprising a plate of suitable material longitudinally slotted intermediate its ends, the plan of the slot being approximately parallel with the side faces of the plate, a strip held in the slot, the opposite faces of the strip being abrasive, said bar being of less width intermediate its ends and gradually increasing in width toward its ends to expose a portion of the strip at each side of the bar from near one end of the bar to near the other, the side edges of the strip at the ends thereof being flush with the side edges of the bar.

1,112,208. COMBINED CIGAR LIGHTER AND CUTTER. LAWRENCE B. GRASBERGER, Richmond, Va. Original application filed June 22, 1912, Serial No. 705,336. Divided and this application filed Aug. 22, 1913. Serial No. 786,095. (Cl. 175—296.)

1. In a combined cigar cutter and lighter, a casing, a movable cutter blade, and a lamp carried by said casing, said lamp being provided with a burner, a cap for said burner, a source of current having one terminal connected to said cap, means for connecting the other terminal of the source of current to the burner, means for simultaneously operating said cutter and for removing the cap from the burner thereby causing a spark to pass between the cap and the burner, said last-named means comprising a lever pivotally carried within said casing and having a portion extending outside of the casing, said lever being arranged to engage a portion of said slidable cutter in its downward movement, and a stem for said cap arranged to be engaged by one end of said lever in its upward movement.



2. In a combined cigar cutter and lighter, a casing, a movable cutter blade, and a lamp carried by said casing, said lamp being provided with a burner, a cap for said burner, a source of current having one terminal connected to said cap, means for connecting the other terminal of the source of current to the burner, means for simultaneously operating said cutter and for removing the cap from the burner thereby causing a spark to pass between the cap and the burner, said last-named means comprising a lever pivotally carried within said casing and having a portion extending outside of the casing, said lever being arranged to engage a portion of said slidable cutter in its downward movement, and a stem for said cap arranged to be engaged by one end of said lever in its upward movement, and means for rotating said stem during its upward movement.

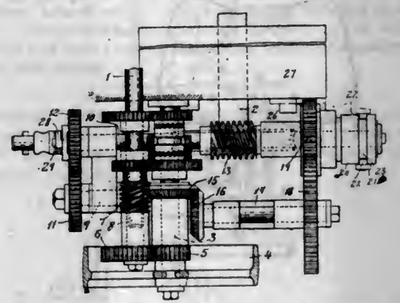
3. In a combined cigar cutter and lighter, a casing, a movable cutter blade, and a lamp carried by said casing, said lamp being provided with a burner, a cap for said burner, a source of current having one terminal connected to said cap, means for connecting the other terminal of the source of current to the burner, means for simultaneously operating said cutter and for removing the cap from the burner thereby causing a spark to pass between the cap and the burner, said last-named means comprising a lever pivotally carried within said casing and having a portion extending outside of the casing, said lever being arranged to engage a portion of said slidable cutter in its downward movement, a stem for said cap arranged to be engaged by one end of said lever in its upward movement, means for rotating said stem during its upward movement, and means for returning the parts to their normal positions.

4. In a cigar lighter, a casing, a lamp carried thereby and having a burner, a wick for said burner, a lever pivotally mounted within said casing and having an end extending without the casing, a cap for said wick, a slidable rod arranged at and engaged by the rear end of said lever, said slidable rod having a bend at its upper end and being secured to said cap, a bearing sleeve surrounding a portion of said rod, a spring secured at one end to said rod and arranged to bear on said bearing sleeve at the other end for normally holding the cap upon the tube, and a source of current, one terminal of said source of current being connected with said cap, and means for connecting the other terminal to said burner.

5. In a cigar lighter, a casing, a lamp carried thereby and having a burner, a wick for said burner, a lever pivotally mounted within said casing and having an end extending without the casing, a cap for said wick, a slidable rod arranged at and engaged by the rear end of said lever, said slidable rod having a bend at its upper end and being secured to said cap, a bearing sleeve surrounding a portion of said rod, a spring secured at one end to said rod and arranged to bear on said bearing sleeve at the other end for normally holding the cap upon the tube, a source of current, one terminal of said source of current being connected with said cap, means for connecting the other terminal to said burner, said last-named means comprising a contact spring connected with said source of current, an arm carried by said lever and arranged to engage the contact spring and the downward movement of the lever, said arm having electrical connection with said burner.

[Claims 6 to 11 not printed in the Gazette.]

1,112,209. DRIVING MECHANISM FOR MULTISPINDLE MACHINES. GEORGE O. GRIDLEY, Windsor, Vt. Filed Apr. 2, 1909. Serial No. 487,505. (Cl. 29—37.)



1. A driving mechanism for multispindle machines, comprising a spindle-driving shaft, a prime mover geared to said spindle-driving shaft and adapted to drive the latter and thereby the spindles, a tool feed shaft, gearing between said spindle-driving shaft and tool feed shaft by which the former drives the latter at all times while work is being performed, and an independent train of gearing the driving member of which is connected to said prime mover for driving the tool feed shaft at a constant and relatively high speed.

2. A driving mechanism of the character described comprising a spindle driving shaft, an operating shaft geared to said spindle driving shaft, a tool feed shaft, slow speed gearing between said spindle driving shaft and tool feed shaft, a high speed gearing independent of said slow speed gearing between the operating shaft and the tool shaft, the driving element of said high speed gearing being secured upon said operating shaft.

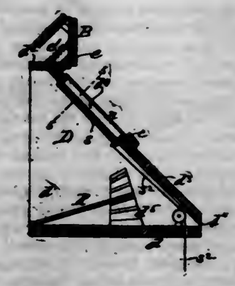
3. A driving mechanism for machines of the character described comprising a spindle driving shaft, an operating shaft, intermeshing gears secured to said spindle driving and operating shafts respectively whereby the spindle driving shaft is rotated, a tool feed shaft, slow speed and high speed gears loose with respect to said tool feeding shaft, clutching means for connecting said gears respectively to said tool feed shaft, a worm and wheel gearing driven by the spindle driving shaft and in gear with said slow speed gear of the tool shaft, and a high speed gearing driven by the operating shaft and in gear with said high speed gear of the tool feed shaft.

4. A driving mechanism for multispindle machines comprising a prime mover, a spindle driving shaft, complemental intermeshing gears on said prime mover and spindle driving shaft, a tool feed actuating shaft, a slow speed driving gear loose on said tool feed actuating shaft, an intermediate shaft, a gear on said intermediate shaft meshing with said slow speed driving gear, a worm wheel on said intermediate shaft, a worm on said spindle driving shaft; a high speed gear loosely mounted on said tool feed operating shaft, an intermediate gearing driven directly by the prime mover meshing with and actuating said high speed gear, and clutches for independently connecting the slow speed and high speed gears with the tool feed operating shaft.

5. A driving mechanism for multispindle machines, comprising a prime mover, a spindle driver, a tool feeder, mechanism through which the prime mover drives said spindle driver, mechanism through which the spindle driver actuates the tool feeder, and independent mechanism through which the prime mover actuates the tool feeder at a speed different from that given the tool feeder by the spindle driver.

[Claim 6 not printed in the Gazette.]

1,112,210 PHOTOGRAPHIC-PRINTING DESK. CARL HALPERN, Newark, N. J. Filed Nov. 17, 1913. Serial No. 801,346. (Cl. 95—73.)



1. In a photo-printing device of the character designated the combination of the inclined front formed with the exposure aperture and gage shoulders, of the side members each formed with a groove for the support of the edge of a shutter, said shutter mounted in and between said grooves retractile springs situated in said grooves and attached to said shutter and to stationary parts, and a flexible connection for actuating said shutter against the resitsance of said retractile springs, as and for the purpose set forth.

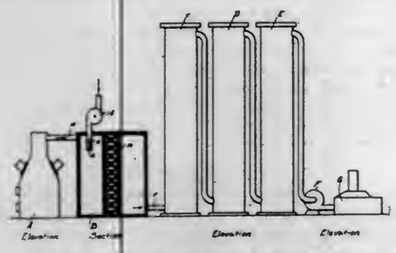
2. In a photo-printing device of the character designated the combination of the inclined front formed with the exposure aperture and gage shoulders, of the grooved side members each formed with a groove for the support of the edge of a shutter, said shutter mounted in and between said grooves, retractile springs situated in said grooves and attached to said shutter and to stationary parts, a flexible connection for actuating said shutter against the action of said retractile springs, and one or more film guide rollers mounted on the side members parallel to the exposure aperture as and for the purpose described.

3. In a photo-printing device of the character designated the combination of the inclined front formed with the exposure aperture and gage shoulders, of the grooved side members each formed with a groove for the support of the edge of a shutter, said shutter mounted in and between said grooves, retractile springs situated in said grooves and attached to said shutter and to stationary parts, a flexible connection for actuating said shutter against the action of the said retractile springs, a reflector within the desk below the exposure aperture, and means for adjusting said reflector in inclination, as and for the purpose set forth.

1,112,211. METHOD OF MANUFACTURING PHOSPHORIC ACID. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 7, 1914. Serial No. 817,368. (Cl. 23—1.)

1. The herein described process for manufacturing phosphoric acid which comprises first heating natural phosphate rock, silicious material and carbon to produce va-

pors of phosphorus, then withdrawing the furnace gases and vapors in a stream, then breaking up the stream and mixing the gases with oxygen and then absorbing the acid by an aqueous liquid in towers operated on the countercurrent system.



2. The herein described process of manufacturing phosphoric acid which comprises first heating natural phosphate rock, silicious material and carbon to produce vapors of phosphorus, withdrawing the furnace gases and vapors in a stream, breaking up the stream with a countercurrent of oxygen and then absorbing the phosphoric acid.

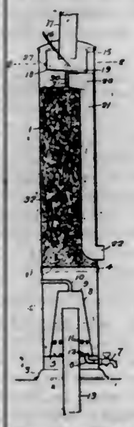
3. The herein described process for manufacturing phosphoric acid which comprises first heating natural phosphate rock, silicious material and carbon to produce vapors of phosphorous, then withdrawing the furnace gases and vapors in a stream, then breaking up the stream and mixing the gases with oxygen and then absorbing the acid in towers operated on the countercurrent system, and then passing the spent gases through a scrubber.

4. The herein described process for manufacturing phosphoric acid which comprises first heating natural phosphate rock, silicious material and carbon to produce vapors of phosphorous, then withdrawing the furnace gases and vapors in a stream, then breaking up the stream and mixing the gases with oxygen and then absorbing the acid in towers operated on the countercurrent system, and then passing the spent gases through a scrubber having the liquid therein cooled.

5. The herein described method of manufacturing phosphoric acid which comprises heating natural phosphate rock, silicious material and carbon to produce vapors of phosphorus, withdrawing the gases and vapors in a stream and mixing the gases with oxygen, then breaking up the combined stream of gases and oxygen and then absorbing the phosphoric acid.

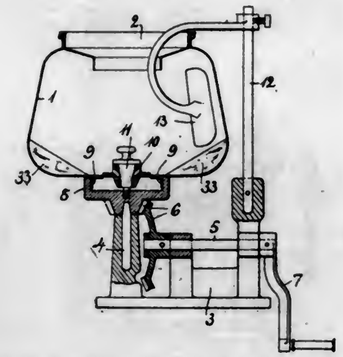
[Claims 6 to 11 not printed in the Gazette.]

1,112,212. FILTER. URIAH HOKE, Cornwall, Pa. Filed May 20, 1913. Serial No. 768,140. (Cl. 210—4.)



A filter comprising upper and lower sections detachably connected together, the lower section having a base and a bottom above the base and provided with a delivery pipe extending through the bottom, the upper section having a transverse perforated partition near its lower end for supporting filtering medium, a waste pipe held in the upper section at one side thereof and delivering laterally from the section near the partition, a removable top for the upper section having an inlet pipe extending through the same, means between the said inlet pipe and the waste pipe for receiving the water from the inlet pipe and delivering it to the waste pipe or to the interior of the filter, and means in the lower section in connection with the delivery pipe for preventing the direct flow of the water from the filter through the delivery pipe.

1,112,213. MILK-RECEPTACLE FOR CENTRIFUGAL SEPARATORS. CARL ALRIK HULT, Stockholm, and KNUT ARON EMANUEL TINNBERG, Partille, Sweden. Filed Aug. 21, 1913. Serial No. 785,923. (Cl. 31—18.)



1. In combination, a disk shaped cup rotatable about a vertical axis; means for rotating and means for supporting said cup; a milk receptacle adapted for churns and centrifugal separators; and a downwardly projecting flange secured to the bottom of said receptacle and snugly received on said cup.

2. In combination, a disk shaped cup rotatable about a vertical axis; means for rotating and means for supporting said cup; a milk receptacle adapted for churns and centrifugal separators; a downwardly projecting flange secured to the bottom of said receptacle and snugly received on said cup; and means for holding said flange in the cup.

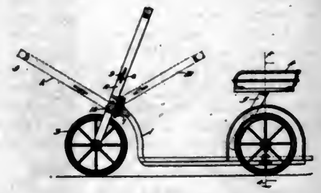
3. In combination, a disk shaped cup rotatable about a vertical axis; means for supporting and means for rotating said cup; a milk receptacle adapted for churns and centrifugal separators; a downwardly projecting flange secured to the bottom of said receptacle and snugly received on said cup; and means for holding said flange in the cup; and a bayonet connection for holding the flange in the cup.

4. In combination, a disk shaped cup rotatable about a vertical axis; means for rotating and means for supporting said cup; a milk receptacle adapted for churns and centrifugal separators; a downwardly projecting flange secured to the bottom of said receptacle and snugly received on said cup; an inwardly extending notched rib secured in said flange; and hooks secured in said cup and adapted to pass through the notches of the rib and to engage over the rib.

5. In combination, a disk shaped cup rotatable about a vertical axis; means for rotating and means for supporting said cup; a milk receptacle adapted for churns and centrifugal separators; a downwardly projecting flange secured to the bottom of said receptacle and snugly received on said cup; an inwardly extending rib in said cup and having inwardly opening notches; a disk rotatably secured in said cup and provided with hooks adapted to pass through said notches and engage over said rib.

[Claims 6 to 8 not printed in the Gazette.]

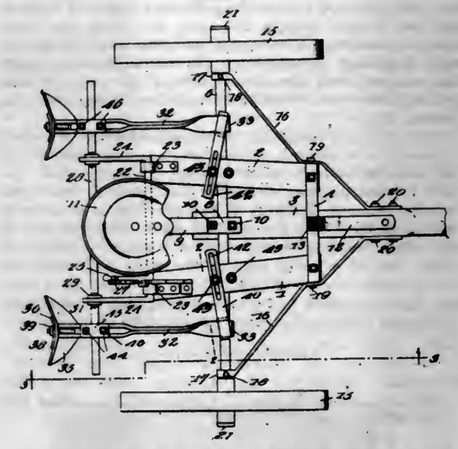
1,112,214. PUSH-MOTOR. ERIK JOHNSON, Chicago, Ill. Filed May 22, 1913. Serial No. 769,240. (Cl. 21—191.)



1. In a push motor the combination with the frame, of a front fork comprising a round diminished portion slotted at its free extremity, a slotted handle pivoted to said fork and locking means carried by said handle for releasable engagement with the slotted portion of said fork.

2. In a push motor the combination with the frame, of a front fork comprising a rounded diminished portion slotted at its free extremity, a slotted handle pivoted to said fork, a body portion, formed in said handle, above its slotted portion, formed with a cavity, a spring disposed in said body portion and a bar normally disposed in the slotted portions of said handle and fork in frictional engagement with said spring.

1,112,215. DITCHING-PLOW. BENJAMIN A. JORDAN and EDWARD J. TE GROTENHUIS, Crawford, Colo. Filed Apr. 17, 1912, Serial No. 691,366. Renewed Aug. 25, 1914. Serial No. 858,521. (Cl. 97—12.)

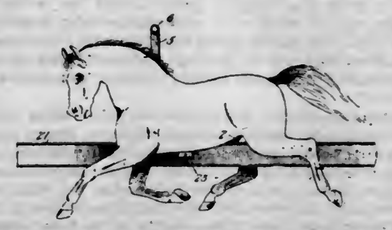


1. A plow of the character specified, comprising a frame, an axle journaled transversely of the frame, wheels on the axle, a plow beam slidably connected at its front end with the axle at each side of the frame, means for securing the beams in adjusted position, a plow connected to the rear end of each beam, and means for simultaneously raising and lowering the beams, said means comprising a shaft arranged beneath the rear ends of the beams and detachably secured thereto, a shaft journaled on the rear end of the frame and provided at each end with a rearwardly extending arm, a hanger connecting each arm to the first named shaft, and means for oscillating the last-named shaft.

2. A plow of the character specified, comprising a frame, an axle journaled transversely of the frame, wheels on the axle, a plow beam slidably connected at its front end with the axle at each side of the frame, means for securing the beams in adjusted position, a plow connected to the rear end of each beam, and means for simultaneously raising and lowering the beams, said means comprising a shaft arranged beneath the rear ends of the beams and detachably secured thereto, and means for raising and lowering the shaft.

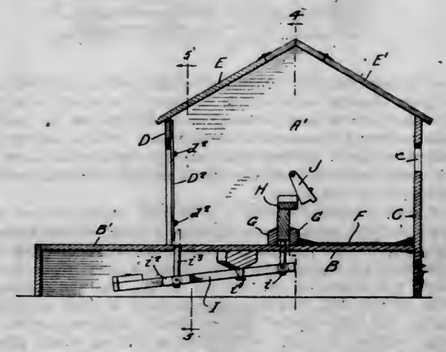
3. A ditching plow comprising a frame, an axle journaled transversely of the frame, a wheel at each end of the axle, a plow beam slidably connected to the axle at each side of the frame, a plow secured to each beam, means for simultaneously raising and lowering the beams, and means for securing the beams to the axle in adjusted position, said means comprising a bar for each beam provided with a pair of spaced laterally extending lugs engaging the beam, and a slidable connection between the inner end of each bar and the frame.

1,112,216. AMUSEMENT DEVICE. CHARLES KELKER, Philadelphia, Pa. Filed Apr. 3, 1914. Serial No. 829,224. (Cl. 104—111.)



In a device of the character described, a rail, a suitable frame, wheels journaled in said frame and engaging said rail, a lever pivotally secured to said frame, a shaft journaled in said frame, oscillating members loosely mounted on said shaft, pawls carried by said oscillating members, ratchet wheels secured to the aforesaid shaft and adapted to be engaged by said pawls, links, pivotally connecting said lever and said oscillating members to revolve said shaft, and driving mechanism interposed between said shaft and said wheels.

1,112,217. TRAP-NEST. ADAM G. REINHOLD KELLER, Alameda, Cal. Filed Mar. 4, 1914. Serial No. 822,318. (Cl. 119—49.)



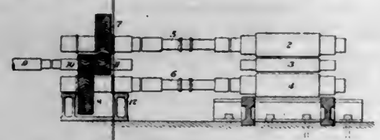
1. In a trap nest of the character described, the combination of a casing consisting of front, rear and side walls, the former of which is cut away to provide a door opening, a base having a portion extended forwardly of the front wall, the said side and rear walls being extended below the base in order to support the latter in elevated position, hinged covers closing the upper portion of the casing, doors hinged upon the inner sides of the door opening having their contiguous inner faces spaced apart and cut away at their upper and lower portions, transverse parallel guides extended across the base within the casing and dividing the latter into forward and rear compartments in the latter of which the nest is located, a vertically movable partition strip mounted between the guides and pivoted adjacent one end, a gravity latch piece mounted upon the inner surface of one of the side walls

within the casing and movable to engage the free end of the partition strip in lowered position, a pin connected to the partition strip adjacent its free end and depending through the base, a lever pivoted intermediate its ends beneath the base and to the rear end of which the said depending pin is pivotally connected, the said lever being provided adjacent its forward end with lateral projections, and door locking pins pivotally secured to the said lateral projections and extending vertically through the base at points immediately in the rear of the swinging doors, all for the purpose described.

2. In a trap nest, the combination of a casing having a door opening at one side, doors hinged to swing inwardly at the door opening, a vertically movable member disposed within and across the casing at the front of the nest, means for locking the said member in lowered position, a lever intermediately pivoted below the casing and to the rear of which said vertically movable member is connected, and locking pins extending vertically from the said lever forwardly of its pivot and up-standing through the base of the casing at the inner sides of the said swinging doors.

3. In a trap nest, the combination of a casing having a door opening, inwardly swinging doors hinged at the sides of the door opening and having their adjacent inner edges spaced apart and cut away at the upper and lower portions thereof, and means for locking the said doors against inward movement including pins vertically movable through the base of the casing at the inner sides of the doors, a vertically movable member within the casing, and connections between the said vertically movable member and the said locking pins whereby to move the latter upwardly against the doors when the former is lowered.

1,112,218. GEAR-DRIVE FOR THREE-HIGH ROLLING-MILLS. JULIAN KENNEDY, Pittsburgh, Pa. Filed Dec. 31, 1912. Serial No. 739,559. (Cl. 80—54.)

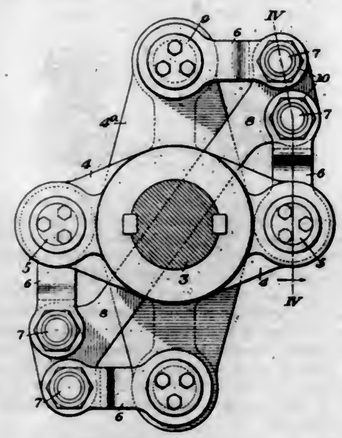


1. A gear drive for three-high rolling mills, comprising a gear housing, overlapping staggered toothed wheels mounted within said housing in close relation to each other, driving connections between said wheels and the mill rolls, and a driving shaft having pinion gears meshing with the toothed wheels within the gear housing, substantially as described.

2. The combination with a three-high rolling mill, of a drive therefor, said drive comprising a supplemental housing separated from the mill housing, two horizontal shafts journaled in the supplemental housing one above the other and connected respectively to the top and bottom rolls of the mill, a gear wheel secured to each of said shafts, the two wheels being in closely adjacent overlapping relation to each other, and a driving shaft also journaled in said supplemental housing and having a pinion which meshes with each of said gear wheels; substantially as described.

3. The combination with a three-high rolling mill, of a drive therefor, said drive comprising a supplemental housing separated from the mill housing, two horizontal shafts journaled in the supplemental housing one above the other and connected respectively to the top and bottom rolls of the mill, a gear wheel secured to each of said shafts within the supplemental housing, the two wheels being in closely adjacent overlapping relation to each other, and a driving shaft or spindle also journaled in said supplemental housing and having a pinion which meshes with each of said gear wheels, said gear wheels being separated laterally from each other a distance less than the width of the housing for the mill rolls; substantially as described.

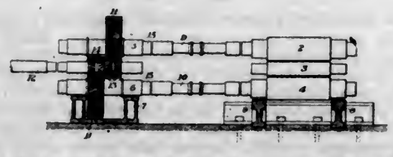
1,112,219. SHAFT-COUPLING. JULIAN KENNEDY, Pittsburgh, Pa. Filed Aug. 2, 1913. Serial No. 782,682. (Cl. 64—13.)



1. In a shaft coupling, the combination of two shaft members to be coupled, a transverse coupling member rigidly secured to each shaft member, projecting pins carried by the coupling members and lying in the same transverse plane, the pins of one coupling member being located farther from the coupling center than the pins of the other coupling member by a distance sufficient to allow one set of pins passing the other set, when one shaft member is rotated relatively to the other shaft member, a link detachably engaging each pin and arranged in pairs, and an equalizing member connecting the pairs of links between the ends of the shaft members, substantially as described.

2. In a shaft coupling, the combination of two shaft members to be coupled, a transverse coupling member rigidly secured to each shaft member, projecting pins carried by the coupling members and lying in the same transverse plane, the pins of one coupling member being located farther from the coupling center than the pins of the other coupling member by a distance sufficient to allow one set of pins passing the other set, when one shaft member is rotated relatively to the other shaft member, links connected to the sets of pins, and an equalizing connection between the links, substantially as described.

1,112,220. DRIVING MECHANISM FOR ROLLING-MILLS. JULIAN KENNEDY, Pittsburgh, Pa. Filed Oct. 22, 1913. Serial No. 796,607. (Cl. 74—7.)

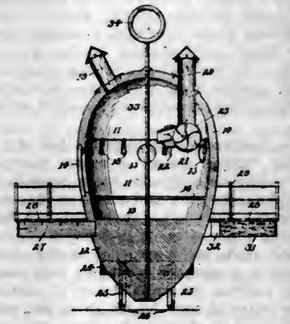


1. A gear-driving mechanism for rolling mills, comprising a gear housing, overlapping toothed wheels secured upon shafts within said housing and adapted for driving connection to the rolls, and a driving shaft having a pinion gear meshing with the toothed wheels within the gear housing, said toothed wheels having inclined teeth reversed in direction, substantially as described.

2. A gear-driving mechanism for rolling mills, comprising a gear housing, overlapping toothed wheels rigidly secured to two shafts mounted in said housing, said wheels being of the herring bone type and with the teeth reversed directly to each other, the shafts being interchangeable and adapted for connection to the rolls at either end, and a pinion drive for said toothed wheels, substantially as described.

3. A gear-driving mechanism for three-high rolling mills, comprising a gear housing having overlapping toothed wheels secured to shafts mounted therein, said toothed wheels being of the herring bone type with the teeth reversed thereon and said shafts being reversible and adapted for connection to the rolling mill at either end, and a driving shaft within the housing having a pinion with two portions reversed in direction and engaging said toothed wheels, substantially as described.

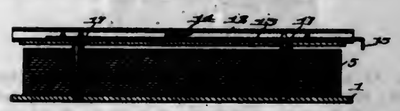
1,112,221. LIFE-SAVING APPARATUS. ADAM KOWALSKY, Carteret, N. J. Filed June 27, 1914. Serial No. 847,608. (Cl. 9—4.)



1. A device of the class described comprising a hollow egg-shaped float having the lower portion thereof of solid formation, an annular seat within said float, a supporting rod axially positioned through said float, a suspension ring at the top of said rod, an annular collar around the reduced lower end of said float, and supporting legs secured to said collar.

2. A device of the class described comprising a hollow egg-shaped float having a solid lower end, an annular deck secured upon said float, cork members secured beneath said deck and having V-shaped cut away portions adjacent the float and a railing surrounding the upper edge of said deck.

1,112,222. LOOSE-LEAF BINDER. JOHN G. MAGIN, Rochester, N. Y., assignor to Henry Conolly Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 30, 1912. Serial No. 728,655. (Cl. 129—8.)



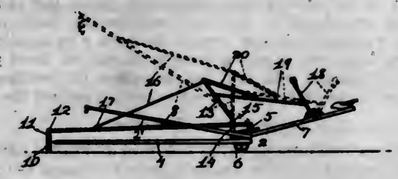
1. A loose leaf binder comprising a supporting member having a plurality of impaling projections, and a transfer member having a plurality of transfer projections, the impaling projections and the transfer projections having such shapes in cross section that, when one impaling projection is in abutting relation with one transfer projection, a complete cylinder is formed, the ends of the impaling projections interlocking with the transfer member and the ends of the transfer projections interlocking with the supporting member to prevent relative lateral movement between the projections.

2. A loose leaf binder comprising a supporting member having a plurality of impaling projections and also having pockets near the bases of said projections, a transfer member having a plurality of transfer projections and also having openings at the bases of the transfer projections for the passage of the impaling projections, the impaling projections and the transfer projections having such shapes in cross section that, when the impaling projection is in abutting relation with one transfer projection, a complete cylinder is formed and the ends of the transfer projections resting in the pockets of the supporting member, and a retaining member coöperating with those portions of the impaling projections passed through the openings of the transfer member.

3. A loose leaf binder comprising a supporting member having a pair of parallel impaling projections, each having a flattened face and a curved face, the opposed faces of the projections being of the same form, said supporting member also having pockets near the bases of the impaling projections, and a transfer member provided with a pair of parallel transfer projections, each having a flattened face and a curved face, the opposed faces of the two transfer projections being alike but different from the opposed faces of the impaling projections, those projections having the flat faces opposed being farther from each other than those having the curved faces opposed, so each pair of projections will hold leaves against sidewise movement thereon, the ends of the transfer projections extending into the pockets of the supporting member.

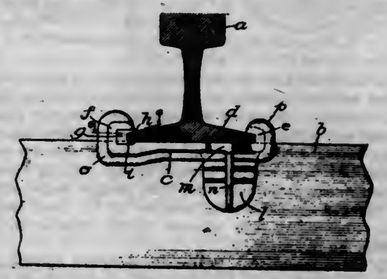
4. A loose leaf binder comprising a supporting member having a pair of parallel impaling projections formed with flat longitudinal faces, and a transfer member having a pair of parallel transfer projections formed with flat longitudinal faces coöperating with the longitudinal faces of the impaling projections, the ends of the transfer projections interlocking with the supporting member and the ends of the impaling projections interlocking with the transfer member to prevent relative sidewise movement of the supporting and the transfer member.

1,112,223. HAY-SWEEP. OTTO B. MATTSON, Craig, Nebr. Filed Mar. 3, 1914. Serial No. 822,216. (Cl. 56—137.)



In a hay sweep, uprights, lateral arms pivoted at their rear ends to said uprights, a transverse scraper bar pivoted to the forward ends of said arms and adapted to be lowered in front of and to have bracing engagement with the points of the sweep teeth, and lever operated devices for raising and lowering said arms and the push bar.

1,112,224. ANTICREEPER FOR RAILWAY-RAILS. PATRICK H. MCCOOK, Indiana Harbor, Ind. Filed Nov. 6, 1913. Serial No. 799,469. (Cl. 238—4.)

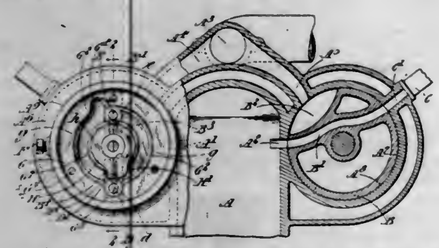


1. An anti creeper for railway rails including two single piece clamp members, one underlying the base flange of a rail and terminating in hooks *e f* which themselves terminate above and overlie the base flange and which hooks

are spaced apart for receiving the base flange therebetween, hook *e* being adapted to receive one side of the flange, the space of the second hook *f* affording clearance between the upper end of this latter hook and the top of the base flange for purpose of assembly, also clearance between the adjacent side of the base flange and this latter hook to receive the second clamp member, the second clamp member *g* being provided with an insetting lip *h* which overlies said adjacent side of the base flange, said second clamp member being tapered in the direction in which creepage of the rail is to be guarded against; a downwardly extending ear *l* carried by the clamp and which extends forwardly of the clamp in position to engage a tie and to space the tie from the clamp, said ear being located at one side of the clamp and with spacing between said ear and the base flange of the rail to enable turning effort to be exerted upon the clamp when the rail is moved toward the tie, the first clamp member being rearwardly extended beyond its hook *e* to afford an extended foot *m*, and a brace *n* joining a central vertical portion of the ear *l* with the foot *m* to prevent the ear *l* from bending to the rear when the ear is pressed against the tie.

2. An anti creeper for railway rails including two single piece clamp members, one underlying the base flange of a rail and terminating in hooks *e f* which themselves terminate above the base flange and which hooks are spaced apart for receiving the base flange therebetween, hook *e* being adapted to receive one side of the flange, the space of hook *f* receiving the second clamp member between the adjacent side of the rail base and hook *f*, this second clamp member being tapered in the direction in which the creepage of the rail is to be guarded against; a downwardly extending ear carried by the clamp at and below hook *e* and which extends forwardly of the clamp, said ear being located at one side of the clamp with spacing between it and the base flange of the rail to enable turning effort to be exerted upon the clamp when the rail is moved toward the tie, the first clamp member being rearwardly extended at and beyond the hook *e* to constitute an extended foot *m*, and a brace *n* joining the lower portion of said ear with said foot to oppose the bending of the ear to the rear when the ear is pressed against the tie.

1,112,225. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HERMAN PHILIP ERIKSEN MILLER, Hollinwood, Oldham, England. Filed Sept. 26, 1913. Serial No. 791,983. (Cl. 123—80.)



1. In valve mechanism the combination of a continuously rotating driving member, a rotary valve-operating body, studs rotatable therewith and movable radially thereto into and out of engagement with said driving member, guiding means cooperating with said studs whereby when one stud has been carried around by the driving member and then released the other has been brought into position to be engaged by the driving member by the movement of the valve-operating body effected by the first stud, substantially as described.

2. In valve mechanism, the combination of a continuously rotating driving finger, a rotary valve-operating body, studs movable radially thereto but rotating therewith, and guiding means providing a channel surrounding said finger and wherein said studs move when engaged by said finger, the channel having a plurality of pockets in its outer wall to receive said studs when not engaged by said finger, said pockets being disposed other than diametrically opposite one another, substantially as described.

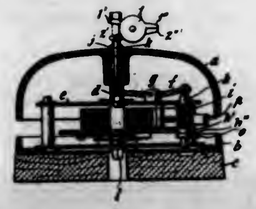
3. In valve mechanism, the combination of a rotary valve-operating body, studs movable radially thereto but rotating therewith, guiding means providing a channel wherein said studs move, a driving finger having a central hub constituting one side of said channel, a driving face on said finger whereby said studs are moved in said channel, said channel having a plurality of pockets in its outer wall whereinto said studs are moved out of engagement with said driving face, said pockets being disposed other than diametrically opposite one another, and a cambered portion on the central hub of said driving finger adjacent said driving face and engaging said studs, substantially as described.

4. In valve mechanism, the combination of a continuously rotating driving finger, a rotary valve-operating body, a plurality of studs movable radially thereto but rotating therewith, guiding means providing a channel surrounding said driving finger, said channel having a plurality of pockets in its outer wall whereinto said studs are moved when brought opposite them, and means preventing one of said studs from entering one of said pockets, substantially as described.

5. In valve mechanism, the combination of a continuously rotating driving finger, a rotary valve-operating body having radial slots therein, shoes movable longitudinally in said slots, studs on said shoes, guiding means providing a channel surrounding said driving finger, said channel having a plurality of pockets in its outer wall whereinto said studs are moved out of engagement with said driving face, a casing surrounding said valve-operating body, and limiting the radial travel of said shoes, one of said shoes being of such length as to prevent its stud from entering said pockets, and a recess in said outer casing permitting said shoe to move outward opposite one pocket whereby said stud enters said pocket, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,112,226. THERMOSTATIC FIRE-ALARM. LOUIS C. MILLER, Verona, N. J. Filed Oct. 17, 1908. Serial No. 458,175. (Cl. 116—11.)



1. An alarm provided with suitable operating mechanism; means for normally holding the operating mechanism out of action, said means including a key composed of a plurality of elements of high heat resistance held set in a normal position by a fusible means, whereby said fusible means, when subjected to heat of predetermined degree, will release the elements of said key thus releasing the alarm-operating mechanism, and said key also including means by which the fusible means will also reset said elements in a relatively fixed position when the heat influence ceases.

2. An alarm provided with suitable operating mechanism; means for normally holding the operating mechanism out of action, including a key composed of relatively rotatable members of high heat resistance held set in a normal position by a fusible means, whereby said fusible means, when subjected to heat of predetermined degree, will release the members of said key thus releasing the alarm-operating mechanism, and said key also including means by which the fusible means will also reset the said members in a relatively fixed position when the heat influence ceases.

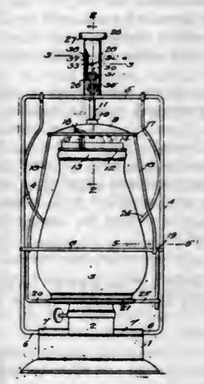
3. An alarm provided with suitable operating mechanism; means for normally holding the operating mechanism out of action, including a key composed of members each provided with a plurality of arms extending in different directions; and fusible means for holding said members set in a normal position, whereby said fusible means, when subjected to heat of predetermined degree, will release the members of said key thus releasing the alarm-operating mchanism, and said key also including means by which the fusible means will also reset the said members of said key in a relatively fixed position when the heat influence ceases.

4. An alarm provided with suitable operating mechanism; means for normally holding the operating mechanism out of action, including a key composed of a plurality of connected members having a high heat resistance; a key-socket comprising a stop for limiting the movements of said members; and fusible means in engagement with the members of said key to normally hold the same in a set condition, whereby said fusible means, when subjected to heat of predetermined degree, will release the members of said key thus releasing the alarm-operating mechanism.

5. An alarm provided with suitable operating mechanism; means for normally holding the operating mechanism out of action, including a key consisting of elements movable on and relatively to each other, and held set in a normal position by a fusible means, whereby said fusible means, when subjected to heat of predetermined degree, will release the elements of said mechanism thus releasing the alarm-operating mechanism, and said key also including means by which the fusible means will also reset the said elements in a relatively fixed position when the heat influence ceases.

[Claims 6 to 8 not printed in the Gazette.]

1,112,227. LANTERN. JOHN NIELSON, Bandon, Oreg. Filed May 28, 1914. Serial No. 841,526. (Cl. 240—32.)

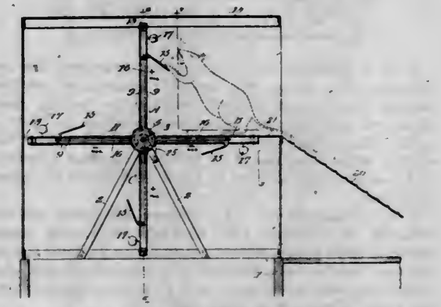


1. A lantern comprising a body, a substantially rectangular frame connected with the body and extending upwardly therefrom, a chimney supporting frame slidable on the first-named frame, a chimney releasably connected with the chimney supporting frame, a shield in connection with the chimney supporting frame, a rod extending upwardly from the shield, a sectional casing arranged above the first-named frame and comprising a section connected with the said first-named frame, and a section connected with the outer end of the rod, the sections being slidably connected, a spring within the casing and normally acting to move the sections away from each other and to lift the chimney supporting frame away from the body, a latch for holding the sections with the chimney supporting frame in lowered position, said latch being releasable, and a spring normally holding the latch in engaging position.

2. A lantern comprising a body, a substantially rectangular frame connected with the body and extending upwardly therefrom, a chimney supporting frame slidable on the first-named frame, a chimney releasably connected with the chimney supporting frame, a shield in connection with the chimney supporting frame, a rod extending upwardly from the shield, a sectional casing arranged above the first-named frame and comprising a section connected with the said first-named frame, and a section connected with the outer end of the rod, the sections being slidably connected, a spring within the casing and normally acting to move the sections away from each other and to lift the chimney supporting frame away from the body.

3. A lantern comprising a body, a substantially rectangular frame connected with the body and extending upwardly therefrom, a chimney supporting frame slidable on the first-named frame, a chimney releasably connected with the chimney supporting frame, a shield in connection with the chimney supporting frame, a rod extending upwardly from the shield, a sectional casing arranged above the first-named frame and comprising a section connected with the said first-named frame, and a section connected with the outer end of the rod, the sections being slidably connected, a spring within the casing and normally acting to move the sections away from each other and to lift the chimney supporting frame away from the body, and releasable means for normally holding the chimney supporting frame in lowered position.

1,112,228. ELECTRIC RAT-TRAP. CLARENCE W. N. PALMER, Greencastle, Pa. Filed Nov. 21, 1912. Serial No. 732,714. (Cl. 43—34.)



1. In an electric trap, a central fixed shaft, a sleeve rotatably mounted on said shaft, a series of radially extending platforms carried by said sleeve, means carried by each platform for preventing the rotation of the sleeve, and means for charging alternate platforms with electricity of the same sign and adjacent platforms with electricity of opposite sign.

2. In an electric trap, a central fixed shaft, a locking collar secured to said shaft and being provided with a recess, a sleeve loosely mounted on said shaft and constituting a hub, a plurality of radiating platforms carried by said hub, and locking means carried by each of said platforms and adapted to enter the recess in the collar for preventing the rotation of the hub.

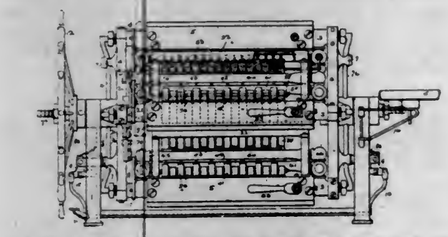
3. In an electric trap, a central fixed shaft, a locking collar secured to said shaft and being provided with a recess, a sleeve loosely mounted on said shaft and constituting a hub, a plurality of radiating platforms carried by said hub, locking means carried by each of said platforms and adapted to enter the recess in the collar for preventing the rotation of the hub, each of said locking means comprising a pivoted plate, and a gravity operated locking rod pivotally connected to said plate, the lower end of each of said rods being arranged to enter successively the recess in said collar.

4. In an electric trap, a stationary shaft, a hub or sleeve loosely mounted on said shaft, radially extending platforms carried by said hub and being insulated therefrom, a locking collar secured to said shaft, locking means carried by each of said platforms for engaging said locking collar in succession, each of said locking means comprising a pivot plate, and a gravity operated locking rod pivotally connected with said plate and arranged to engage the collar.

5. In an electric trap, a stationary shaft, a hub or sleeve loosely mounted on said shaft, radially extending platforms carried by said hub and being insulated therefrom, a locking collar secured to said shaft, locking means carried by each of said platforms for engaging said locking collar in succession, each of said locking means comprising a pivot plate, a gravity operated locking rod pivotally connected with said plate and arranged to engage the collar, each of said plates having electrical connection with the platform upon which it is mounted, and means for charging adjacent radially extending platforms with electricity of opposite polarity.

[Claims 6 and 7 not printed in the Gazette.]

1,112,229. CRAYON-MACHINE. CHRISTIAN A. RITTMAN, Sandusky, Ohio, assignor to The American Crayon Company, Sandusky, Ohio, a Corporation of Ohio. Filed May 4, 1912. Serial No. 695,096. (Cl. 18—28.)



1. In a machine of the character described, the combination of a frame, two laterally contacting relatively slidable plates held therein, said plates having spaced shoulders and complementary mold recesses in their adjacent faces; and fluid-pressure operated means coöperative with such shoulders but disconnected therefrom, said means being adapted to press said plates in opposite directions.

2. In a machine of the character described, the combination of a frame, two laterally contacting complementary mold plates disposed therein, and a fluid pressure operated flexible tube adapted to move one of said plates relative to said other plate, and in a direction parallel to the plane of contact of said plates.

3. In a machine of the character described, the combination of a frame, two laterally contacting complementary mold plates disposed therein, each of said plates being provided with a projecting shoulder spaced from such shoulder on said other plate, and fluid-pressure means disposed between such shoulders and adapted to force said mold plates in opposite directions.

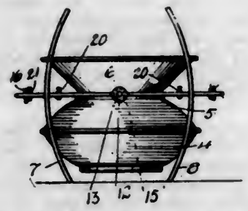
4. In a machine of the character described, the combination of a frame, two laterally contacting complementary mold plates disposed therein, each of said plates being provided with an engaging face, such two faces being spaced from each other, and fluid pressure means disposed between such faces and adapted to force said mold plates in opposite directions.

5. In a machine of the character described, the combination of a frame, two complementary mold plates, each of said plates being provided with a projecting shoulder spaced from such shoulder on said other plate, and a fluid-pressure operated flexible tube disposed between such spaced shoulders and adapted to press said mold plates in opposite directions.

[Claims 6 to 13 not printed in the Gazette.]

1,112,230. CUSPIDOR-STAND. MORTON GRANT SMITH, Washington, Pa. Filed May 6, 1914. Serial No. 836,767. (Cl. 248—41.)

1. A cuspidor stand comprising a plurality of clamping members adapted to be secured to the neck of a cuspidor and including arms, a gambrel ring provided with a pair of diametrically opposed bearings in which extend the said arms whereby the clamping member is pivotally supported from said ring, a series of vertically disposed legs, an annular member integral with the inner faces of said legs intermediate the ends thereof and provided with a pair of diametrically opposed bearings, and pintles carried by said ring and mounted in the bearings in said annular member.

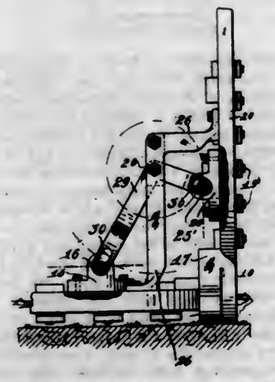


2. A cuspidor stand comprising a plurality of clamping members adapted to be secured to the neck of a cuspidor and including arms, a gambrel ring provided with a pair of diametrically opposed bearings in which extend the said arms whereby the clamping member is pivotally supported from said ring, a series of vertically disposed legs, an annular member integral with the inner faces of said legs intermediate the ends thereof and provided with a pair of diametrically opposed bearings, pintles carried by said ring and mounted in the bearings in said annular member, and said legs being of greater height than the cuspidor and supported by the clamping member.

3. A cuspidor stand comprising a plurality of clamping members adapted to be secured to the neck of a cuspidor and including arms, a gambrel ring provided with a pair of diametrically opposed bearings in which extend the said arms whereby the clamping member is pivotally supported from said ring, a series of vertically disposed legs, an annular member integral with the inner faces of said legs intermediate the ends thereof and provided with a pair of diametrically opposed bearings, pintles carried by said ring and mounted in the bearings in said annular member, washer mounted upon said pintle and interposed between said annular member and ring, and stop collars mounted upon said arms inwardly with respect to said ring.

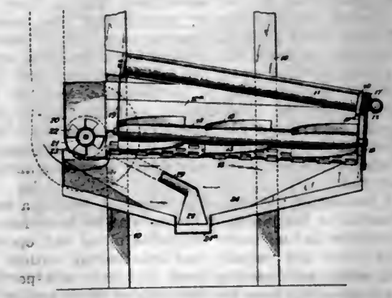
4. A cuspidor stand comprising a series of vertically disposed segment-shaped legs, an annular member integral with the inner faces of said legs centrally of the ends thereof, a ring pivotally connected to and arranged within said annular member, a pair of semi-circular oppositely disposed clamping members adapted to suspend a cuspidor within said ring and provided with arms pivotally mounted in said ring, and means for connecting said clamping members together.

1,112,231. SICKLE APPARATUS. ALBERT STEARNS, Alto Pass, Ill. Filed June 4, 1912. Serial No. 701,602. (Cl. 56—30.)



A sickle comprising a horizontal finger bar, a divider at one end of said horizontal finger bar, a vertical finger bar having its lower end portion in said pocket in said divider, knives traveling longitudinally upon said finger bars, a bracket secured to said finger bars, said bracket having substantially an inverted L-shape and having its vertical arm extending in spaced relation to the vertical finger bar with its lower end bent to form a foot secured to the horizontal finger bar and having its horizontal arm carried toward the vertical finger bar and terminating in a foot secured to the vertical finger bar whereby said bracket forms a substantially diagonal brace connected with said finger bars at a point in spaced relation to the connected ends of said finger bars to prevent pivotal movement of said finger bars with respect to each other, and a bell crank lever pivotally mounted upon said brace and having its arms connected with said knives whereby longitudinal movement of one knife will transmit longitudinal movement to the other of said knives.

1,112,232. CORN SAVING AND CLEANING DEVICE. GEORGE ARTHUR STEVENS, Elgin, Ill. Filed Mar. 6, 1914. Serial No. 822,870. (Cl. 130—15.)



1. In a machine of the character described, an upwardly inclined screen trough approximately semi-circular in cross-section and having wings along the sides, said wings inclining upwardly and outwardly from the trough, a revolving shaft in said trough, formed with spiral series of tossing blades, the blades of a series being disposed in advance of one another and separated by intervening spaces, a transverse screen trough at the upper end of the first trough and receiving material from the latter, means for tossing and advancing the material in the second trough and delivering to the second trough, means for delivering material to be screened to both of said screening troughs and a conveyer to which the material is delivered by the advancing means of the second trough.

2. In a machine of the character described, the combination with feed rollers to feed husks and corn, of a trough beneath the rollers and fed thereby, a second trough transverse to the first trough, beyond one end of the said rollers to receive material falling beyond the rollers, said troughs having openings for escape of shelled corn, means associated with the first trough to agitate the husks and deliver the same to the transverse trough, and means associated with the transverse trough to agitate the husks therein and advance the same toward an end of said transverse trough.

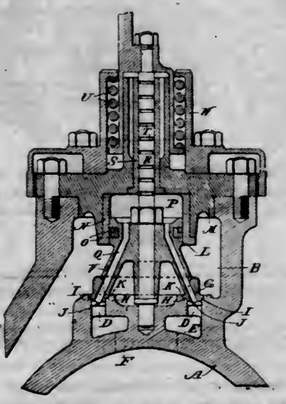
3. In a machine of the character described, the combination with feed rollers, of a screen beneath the rollers to receive shelled corn and husks from the rollers, means for agitating the husks and advancing the same along the trough, a chute beneath the screen for the discharge of the corn escaping through said screen, a suction conveyer, feed means to deliver the husks from the said advancing means to the suction conveyer, a suction nozzle associated with the discharge spout and a connection establishing communication between the said nozzle and the suction conveyer.

4. In a machine of the character described, the combination with feed rollers for feeding husks and corn, of a screen beneath the rollers to receive the material fed thereby, means associated with the screen for agitating the material received thereon and advancing and discharging said material, a chute beneath the screen to catch and discharge the corn escaping through the screen, a suction nozzle adjacent to the discharge spout, a suction conveyer, and connecting means serving to conduct to said suction conveyer husk particles taken in by the nozzle and the husks discharged from the screen by the said advancing means.

5. In a machine of the character described, the combination with feed rollers to deliver husks and corn to be separated, of means for separating the shelled corn and husks delivered by said rollers and for cleaning said corn, said means comprising a screen beneath the rollers, means associated with the screen to agitate the material thereon and advance and discharge the husks, a chute beneath the screen to discharge the shelled corn, means associated with the chute to separate from the corn the husk particles escaping through the screen, a conveying means for the husks and means to conduct to said conveyer the husks from the said separator associated with the chute and the husks discharged by the said advancing means.

[Claims 6 to 8 not printed in the Gazette.]

1,112,233. PUPPET-VALVE. ROBERT C. STEVENS, Erie, Pa., assignor to The Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 26, 1914. Serial No. 814,394. (Cl. 136—6.)



1. The combination of a valve casing having an annular port and two seats in the same plane, and a cylinder, an annular valve coöperating with said seats, and a balancing piston connected to said valve and working in the cylinder, and provided with a passage extending through the valve and piston and connecting the port and the chamber within the cylinder.

2. The combination of an annular puppet valve provided with two seating faces in the same plane, a valve seat having a single port controlled by said valve, a balancing piston connected to said valve, and a cylinder in which said piston works.

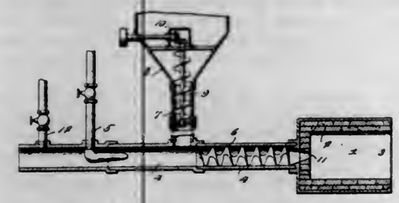
3. A combined puppet valve and balancing piston, the valve having two seats in the same plane, and provided with a steam passage extending through said valve and piston.

4. A combined annular puppet valve and balancing piston, the valve and piston being connected by spaced arms, and provided with a passage extending through the valve, piston and one of the arms, from the face of the valve to the opposite side of the piston.

5. The combination of a valve casing having an annular port and two seats around the same in the same plane, a cylinder opposite said port and open at one end into the valve casing, an annular puppet valve having two faces in the same plane, coöperating with said seats, a balancing piston in the cylinder, and connected to said valve, and means to equalize the pressure in said port and cylinder.

[Claim 6 not printed in the Gazette.]

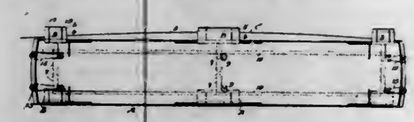
1,112,234. BURNER. CHARLES VIVION STUART, Memphis, Tenn. Filed Mar. 24, 1914. Serial No. 826,991. (Cl. 110—22.)



1. A burner including a combustion chamber, a conduit having communication with the chamber, a fluid pressure device opening into the conduit and directing the pressure longitudinally thereof toward the chamber, a liquid fuel feed pipe opening into the conduit beyond the pressure device relative to the chamber, and a solid fuel feed pipe opening into the conduit between the pressure device and the chamber, said conduit being open to the atmosphere beyond the liquid fuel feed pipe.

2. A burner including a combustion chamber, a conduit having communication with the chamber, a fluid pressure device opening into the conduit and directing the pressure longitudinally thereof toward the chamber, a liquid fuel feed pipe opening into the conduit beyond the pressure device relative to the chamber, a solid fuel feed pipe opening into the conduit between the pressure device and chamber, and an interrupter arranged in the conduit between the solid fuel feed pipe and the chamber, said conduit being open to the atmosphere beyond the liquid fuel feed pipe.

1,112,235. DOOR-SILL EXTENSION FOR SUBWAY-CARS. CHARLES M. SWEDBERG, Yonkers, N. Y. Filed Mar. 4, 1914. Serial No. 822,305. (Cl. 105—87.)



1. A car having a sill extension normally retracted within the car body and movable successively outwardly from the body and then to an inclined position, means for moving the sill extension inwardly and outwardly, and guiding means for the sill for permitting the latter to move to and from an inclined position when projected.

2. In a railway car, a sill extension mounted at a level above a station platform, means for projecting the sill laterally from the car, and means for permitting the outer end of the sill extension to drop and rest on the station platform.

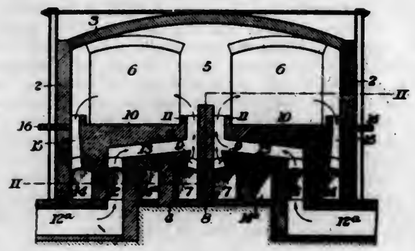
3. In a railway car, a sill extension movable laterally into and out of the body of the car, and an operating means hingedly connected with the sill extension for permitting the latter to tilt downwardly when in projected position, to rest on a station platform.

4. In a railway car, a sill extension for bridging the gap between the car and the station platform, means for projecting the sill extension a distance greater than the gap, whereby the sill extension will be supported by the car and station platform, and means guiding the extension while moving outwardly, and thereafter permitting the extension to swing to an inclined position.

5. In a railway car, a sill extension for bridging the gap between the car and the station platform, and means for projecting the sill extension a distance greater than the gap, whereby the sill extension will be supported by the car and station platform, said sill extension having a yielding outer member.

[Claims 6 to 8 not printed in the Gazette.]

1,112,236. ANNEALING-FURNACE. JOHN ALBERT SWINDELL, Pittsburgh, Pa. Filed Dec. 12, 1913. Serial No. 806,224. (Cl. 148—17.)



1. A furnace of the character described, comprising a heating chamber or compartment for the articles to be heated, having an inlet port for the heating medium opening into the inner side of said chamber or compartment, and an outlet port for the waste gases leading from the outer side of said chamber or compartment, the base of the furnace below said chamber or compartment having longitudinally arranged air, gas and waste flues, the waste flues having portions which are below the outer side portion of the said chamber or compartment, and the gas flue being below the inner side of said chamber or compartment, the air and gas flues having ports which connect the flues with said inlet port, and the said outlet port being connected to the said waste flue; substantially as described.

2. A furnace of the character described, having a heating chamber or compartment for the articles to be heated, said chamber having inlets extending along and opening into its inner side portion, and also having outlets extending along and opening from its outer side portion, with a supporting floor for the articles to be heated between the said inlets and outlets, the base of the furnace having longitudinally arranged air, gas and waste flues therein, with ports leading from the air and gas flues and communicating with said inlets, and other ports communicating with said outlets and leading to the waste flue; substantially as described.

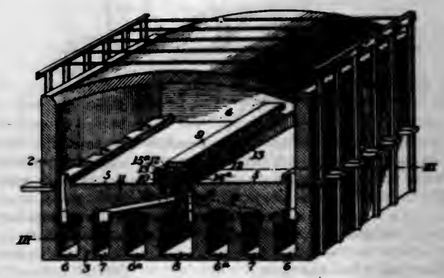
3. A furnace of the character described, comprising a heating chamber or compartment for the articles to be heated, having an inlet port for the heating medium opening into the inner side of said chamber or compartment, and an outlet port for the waste gases leading from the outer side of said chamber or compartment, the base of the furnace below said chamber or compartment having longitudinally arranged air, gas and waste flues, the waste flues having portions which are below the outer side portion of the said chamber or compartment, and the gas flue being below the inner side of said chamber or compartment, the air and gas flues having ports which connect the flues with said inlet port, and the said outlet port being connected to the said waste flue, some of said flues having double passes; substantially as described.

4. A furnace of the character described, comprising a heating chamber or compartment for the articles to be heated, having an inlet port for the heating medium opening into the inner side of said chamber or compartment, and an outlet port for the waste gases leading from the outer side of said chamber or compartment, the base of the furnace below said chamber or compartment having longitudinally arranged air, gas and waste flues, the waste flues having portions which are below the outer side portion of the said chamber or compartment, and the gas flue being below the inner side of said chamber or compartment, the air and gas flues having ports which connect the flues with said inlet port, and the said outlet port being connected to the said waste flue, some of said flues having double passes in substantially the same horizontal plane; substantially as described.

5. A furnace of the character described, comprising a heating chamber or compartment for the articles to be heated, having an inlet port for the heating medium opening into the inner side of said chamber or compartment, and an outlet port for the waste gases leading from the outer side of said chamber or compartment, the base of the furnace below said chamber or compartment having longitudinally arranged air, gas and waste flues, the waste flues having portions which are below the outer side portion of the said chamber or compartment, and the gas flue being below the inner side of said chamber or compartment, the air and gas flues having ports which connect the flues with said inlet port, and the said outlet port being connected to the said waste flue, together with damper means for the ports which connect the outlet with the waste flues; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,112,237. ANNEALING-FURNACE. JOHN ALBERT SWINDELL and JOHN C. SWINDELL, Pittsburgh, Pa. Filed Dec. 12, 1913. Serial No. 806,225. (Cl. 148—17.)



1. A furnace of the character described having longitudinally extending gas and air supply flues in its base and having a centrally arranged longitudinal preheating chamber extending downwardly within the base of the furnace, and with which said air flue communicates, said chamber having discharge openings at its upper portion, and means for delivering gas from the gas supply flue to be mixed and burned with said air; substantially as described.

2. A furnace of the character described having a hollow central wall extending upwardly within the lower portion of the furnace chamber and containing therein a preheating chamber, said wall having discharge openings leading outwardly therefrom into said chamber, means for delivering air into the said preheating chamber, and means for supplying gas to be burned with said air, said means comprising a flue extending longitudinally within the base of the furnace below the said wall, and having upwardly extending ports, and said furnace chamber having offtake means for the products of combustion extending along its opposite side throughout substantially the entire length thereof.

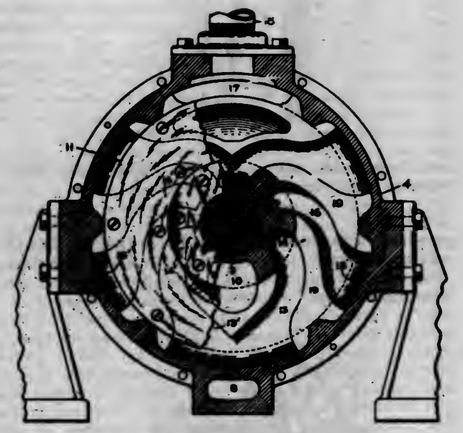
3. A furnace of the character described having a hollow central longitudinal wall projecting upwardly into the lower portion of its furnace chamber, said wall inclosing a preheating chamber having openings leading outwardly therefrom into the furnace chamber, a longitudinally extending baffle wall adjacent to said hollow central wall, means for delivering air into the said preheating chamber, and means for supplying gas to be burned with the air preheated in said preheating chamber; substantially as described.

4. A furnace of the character described having in its base longitudinally arranged waste ports communicating with the opposite sides of the furnace chamber and also having in its base longitudinally arranged air and gas supply ports whose walls are arranged to be heated by conduction from the waste ports, said furnace also having a centrally arranged preheating chamber communicating with the air flues and having discharge openings at opposite sides of its upper portion within the furnace chamber, and connections leading from the gas port to supply gas to be burned with the air preheated in said chamber; substantially as described.

5. A furnace of the character described having its base provided with waste, air and gas ports, the walls of the air and gas ports being arranged to be heated by conduction from the furnace chamber and also by conduction from the waste ports, and also having at its central portion air and gas heating passages connected respectively with the said air and gas ports; substantially as described.

[Claim 6 not printed in the Gazette.]

1,112,238. CENTRIFUGAL PUMP. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 2, 1913. Serial No. 765,063. (Cl. 103—43.)



1. A centrifugal pump having a single impeller, means for supplying fluid to the group of vanes occupying a certain angular position in the casing of said pump, and means for conveying the fluid discharged by said vanes to a succession of pairs of groups of vanes annularly displaced from the first group and symmetrically arranged on either side thereof.

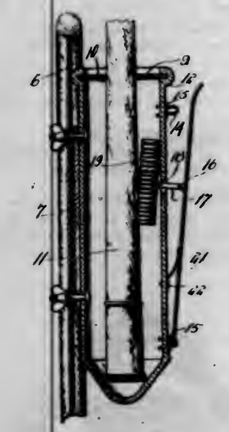
2. A centrifugal pump having a single impeller provided with vanes, a casing having inner chambers for supplying fluid to the roots of said vanes, outer chambers in said casing receiving the fluid from the tips of said vanes, and ducts connecting each outer chamber with the inner chamber next in advance, said chambers being arranged in pairs, so that the fluid will pass around the casing in two parallel streams from the inlet to the outlet.

3. A centrifugal pump having a single impeller provided with vanes adapted to receive fluid from both sides, a casing, an inlet conduit communicating with the lower end of the casing, an outlet conduit at the top of the casing, outer chambers and inner chambers in the casing, ducts connecting the lowermost inner chamber with the inlet conduit, and ducts connecting each inner chamber with the outer chamber next in advance, the uppermost outer chamber communicating with the outlet conduit whereby the fluid will pass around the casing in two parallel streams.

1,112,239. WHIP-SOCKET. PETER TRONRUD, Prairie Farm, Wis. Filed July 2, 1913. Serial No. 777,036. (Cl. 21—130.)

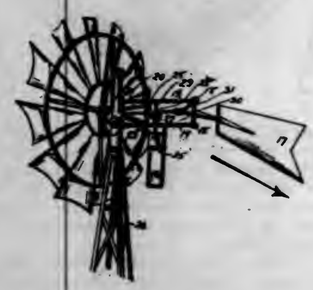
A whip lock comprising the combination with a socket, of a latch bar pivoted at its lower end to the lower end of the socket and being provided at its upper end with a staple slot, an arm extending inwardly from the intermediate portion of the bar and slidably passed through the

outer wall of the socket, an arcuate clamping plate carried by the free end of the arm within the socket, a spring dis-



posed between the latch bar and the socket and a staple carried by the upper end of the socket.

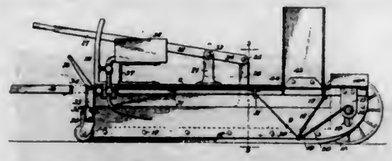
1,112,240. MEANS FOR GOVERNING THE SPEED OF WIND-MOTORS. ALFRED PERCY TURNBULL, Sydney, New South Wales, Australia. Filed Apr. 12, 1912. Serial No. 690,390. (Cl. 170—46.)



1. In means for governing the speed of wind motors, a tower, a head mounted to turn on the tower and carrying a pulley, a wind wheel mounted on the head, laterally projecting and spaced rods on the head and carrying two pulleys intermediate their ends, a tail piece pivoted between the outer ends of the said rods, an arm projecting from the upper rod at an angle thereto, and carrying a pulley, guides depending from the lower rod opposite the pulleys of said rods, a weight sliding in said guides, and a rope or cable secured to the weight and having diverging members, one member passing over one of the pulleys of the rods and the pulley of the arm and secured to the tail piece, and the other member passing over the other pulley of the rods and the pulley of the head and extending down to the base of the tower.

2. In a device of the character described, a power structure, a framework mounted to rotate on the vertical axis of said power structure, said framework having a radially positioned tail piece receiving member and a wind wheel receiving member offset from the radial line drawn through said vertical axis and said tail piece receiving member, a wind wheel mounted on said wind wheel receiving member, a pivotally mounted tail piece arranged on said tail piece receiving member, a bracket extending from the end of said tail piece receiving member at an angle thereto, a pulley on the end of said bracket, a cable connected to said tail piece extending over said pulley, a second pulley for said cable for guiding the same into a vertical direction to the base of the power structure, and a weight mounted on said cable below said second mentioned pulley whereby said tail piece is held normally as a continuation of said tail piece receiving member of said framework, but is permitted to move from that position when said wind wheel has attained a predetermined speed by reason of pressure thereon as the tendency of said wheel to rotate around said vertical axis will be greater than the resistance of said weight thus causing the tail piece to turn the wind wheel out of the wind.

1,112,241. STUBBLE-BURNER. ALFRED WARD, Bowbells, N. D. Filed May 15, 1914. Serial No. 838,729. (Cl. 126—271.2.)



1. In a device of the class described, a frame having a horizontal plate, an axle secured at one end of the frame, depending shoes at each side of the plate and movable vertically relatively to the frame, the shoes each having a vertical slot through which the axle is disposed, wheels mounted on the axle, means for raising the shoes relatively to the plate, an apron at one end of the frame depending from the plate.

2. In a device of the class described, a frame having a horizontal plate, an axle secured at one end of the frame, a shoe at each side of the plate, each of the shoes having a vertical slot through which the axle is disposed and a longitudinal slot extending through the top of the shoes and a flange depending at each side of the plate, the flanges extending into the slots in the shoes.

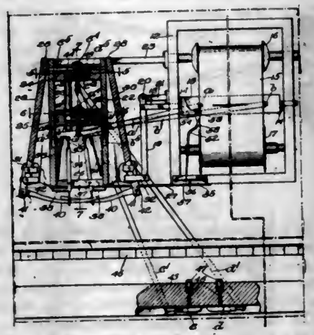
3. In a device of the class described, a frame having a horizontal plate, an axle secured at one end of the frame, a shoe at each side of the plate, each of the shoes having a vertical slot through which the axle is disposed and a longitudinal slot extending through the top of the shoes, a flange depending at each side of the plate, the flanges extending into the slots in the shoes, levers fulcrumed at the top of the frame and means connecting the arms of the levers with the shoes.

4. In a device of the class described, a frame having a horizontal plate disposed above the ground, shoes depending at the sides of the plate, an apron pivoted at one end of the plate and extending therefrom downward and in the direction of the other end of the plate, a second apron pivoted between the first apron and the first mentioned end of the plate, the bottom of the second apron normally engaging the bottom of the first apron, and means for moving the second mentioned apron upward and in the direction of the second mentioned end of the plate, there being an outlet in the plate adjacent the first apron.

5. In a device of the class described, a frame having a horizontal plate disposed above the ground, shoes depending at the sides of the plate, an apron pivoted at one end of the plate and extending therefrom downward and in the direction of the other end of the plate, a second apron pivoted between the first apron and the first mentioned end of the plate, the bottom of the second apron normally engaging the bottom of the first apron, means for moving the second mentioned apron upward and in the direction of the second mentioned end of the plate, there being an outlet in the plate adjacent the first apron, an axle secured at one end of the frame, a depending shoe at each side of the plate, the shoes each having a vertical slot through which the axle is disposed, and means for raising the shoes relatively to the plate.

[Claims 6 and 7 not printed in the Gazette.]

1,112,242. AUTOMATIC LOCKING DEVICE FOR TRACKER MECHANISM. WILLIAM A. WATSON, Malden, Mass., assignor to National Piano Company, Boston, Mass., a Corporation of Maine. Filed May 31, 1913. Serial No. 771,034. (Cl. 84—161.)



1. Mechanism of the character described, comprising a tracker bar and a note-sheet support, one of which is shiftable relatively to the other, a motor for effecting such shifting, controlling mechanism governed by the note sheet for placing the motor in condition to act, and means under the control of the performer for causing the motor to act when placed in condition to act by said controlling mechanism.

2. Mechanism of the character described, comprising a tracker bar and a note-sheet support, one of which is shiftable relatively to the other, a motor for effecting such shifting, controlling mechanism governed by the note sheet for placing the motor in condition to act, an indicator to show the proper direction of shifting to secure registration of the tracker bar and note sheet, and means under the selective control of the performer for causing the motor to act in the selected direction when placed in condition to act by said controlling mechanism.

3. Mechanism of the character described, comprising a tracker bar and a note-sheet support, one of which is shiftable relatively to the other, a normally locked motor for effecting such shifting, lock-releasing devices governed by the note sheet, and manually controlled devices to cause the motor to act when unlocked.

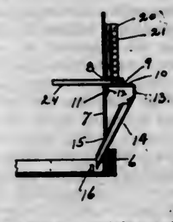
4. Mechanism of the character described, comprising a tracker bar and note-sheet support, one of which is shiftable relatively to the other, a tracker bar having ports spaced relatively to each other a distance greater than the width of the note sheet employed in connection with the tracker bar, a motor for restoring registration of the note sheet and tracker bar, controlling mechanism for placing the motor in condition to act, said mechanism being governed by which one of the ports in the tracker bar may be covered by the note sheet, and means under the control of the performer for causing the motor to act in a proper direction.

5. Mechanism of the character described, comprising a tracker bar and a note-sheet support, one of which is shiftable relatively to the other, a motor comprising a pair of connected pneumatics, connections between said pneumatics to restore registration between the note sheet and tracker bar, controlling mechanism governed by the note sheet for placing the motor in condition to act, and means under the control of the performer for causing the motor to act when placed in condition to act by said controlling mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,112,243. GAME APPARATUS. GEORGE M. WEITZEL, Duquesne, Pa. Filed June 10, 1914. Serial No. 844,312. (Cl. 46—57.)

1. A game apparatus comprising a base provided with pockets, a support, means arranged at the rear of said support for holding a series of gravity movable spherical bodies, a chute extending over said base, means shiftable through said support and capable of successively carrying said bodies to deposit them in the chute whereby they will be conducted to said base.

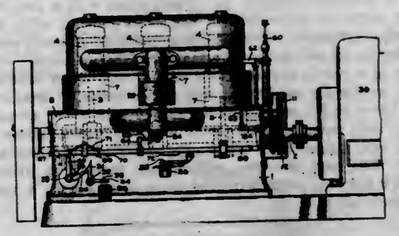


2. A game apparatus comprising a base provided with pockets, a support, means arranged at the rear of said support for holding a series of gravity movable spherical bodies, a chute extending over said base, means shiftable through said support and capable of successively carrying said bodies to deposit them in the chute whereby they will be conducted to said base, and a deflector carried by said base in proximity to the lower end of said chute.

3. A game apparatus comprising a base provided with pockets, a support, means arranged at the rear of said support for holding a series of gravity movable spherical bodies, a chute extending over said base, means shiftable through said support and capable of successively carrying said bodies to deposit them in the chute whereby they will be conducted to said base, and means for connecting said chute to said support, said means constituting a platform for said carrier.

4. A game apparatus comprising a base provided with pockets, a support, means arranged at the rear of said support for holding a series of gravity movable spherical bodies, a chute extending over said base, means shiftable through said support and capable of successively carrying said bodies to deposit them in the chute whereby they will be conducted to said base, a deflector carried by said base in proximity to the lower end of said chute, and means for connecting said chute to said support, said means constituting a platform for said carrier.

1,112,244. AUTOMATIC STARTING MECHANISM FOR INTERNAL-COMBUSTION-ENGINE GENERATOR SETS. HENRY O. WESTENDARP, Saugus, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 1, 1912. Serial No. 687,636. (Cl. 123—181.)



1. The combination with an internal combustion engine, of means for starting said engine by compressed air, a generator driven by said engine, a compressor and a storage tank for the air therefrom which furnishes the compressed air for starting the engine, a motor for driving said compressor which receives current from said generator, a pressure regulator connected to said storage tank for starting and stopping the compressor, an ignition circuit for the engine, and means for rendering the ignition circuit inoperative when current ceases to flow in the circuit of the generator.

2. The combination with an internal combustion engine, of means for starting said engine by compressed air,

a valve for controlling the admission of compressed air for such starting purposes, an electromagnet for tripping said valve, switches at distant stations for operating said electromagnet, and an ignition magneto for said engine which is rendered operative by the closing of one of said distant switches.

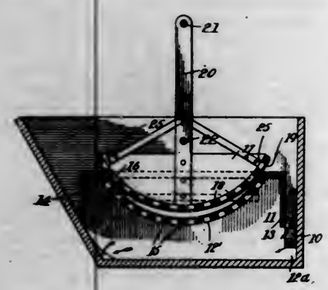
3. The combination with an internal combustion engine, of means for starting said engine by compressed air, a valve for controlling the admission of compressed air for such starting purposes, an electromagnet for tripping said valve, switches at distant points for operating said electromagnet, an ignition magneto for said engine, and a short circuit for said magneto which is opened when one of said switches is closed to trip said valve.

4. The combination with an internal combustion engine, of means for starting said engine by compressed air, a storage tank for such air, a pressure responsive device connected with said tank, a switch lever operated by said device, an ignition magneto for said engine, and a short circuit for said magneto which is opened by said lever when the air pressure drops below a predetermined minimum.

5. The combination with an internal combustion engine, of means for starting said engine by compressed air, a storage tank for such air, a pressure responsive device connected with said tank, a switch lever operated by said device, a valve for admitting the compressed air for starting purposes, and an electrical tripping device for said valve whose circuit is closed by said lever when the air pressure drops below a predetermined minimum.

[Claims 6 to 13 not printed in the Gazette.]

1,112,245. WASHING-MACHINE. LEE YOUNG, New York, N. Y. Filed Sept. 26, 1912. Serial No. 722,436. (Cl. 68—20.)

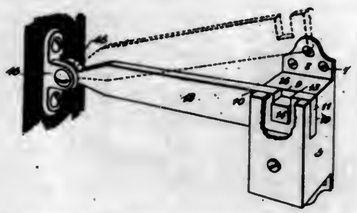


In a washing machine, the combination with a tub, of a lower series of slats held in fixed relationship with said tub, and arranged on an arc of a circle of predetermined radius, an upper series of slats arranged on an arc of a circle of a radius greater than that of said lower series of slats, means for oscillating said upper series of slats over said lower series of slats, side rails on said lower series of slats, and complemental rails on said upper series of slats, said upper rails being of greater length than said lower rails and movable on one end thereof to prevent contact between said series of slats and provide a space therebetween.

1,112,246. LOCK. HERMAN ADLER, New York, N. Y. Filed Dec. 23, 1913. Serial No. 808,361. (Cl. 70—31.)

1. In a lock, a bolt having a top and a front end with a recess extending through the top and the front end, a lug extending from the top of the bolt into the recess in the direction of the front end of the bolt, the lug being spaced from the bottom of the recess and the front end of the bolt.

2. In a lock, a threaded bolt having a top and a front end with a recess extending through the top and the front end, a lug extending from the top of the bolt into the recess in the direction of the front end of the bolt, the lug being spaced from the bottom of the recess and the front end of the bolt, a latch bar adapted to be disposed between the front end of the lug and the front end of the bolt, and having an opening for receiving the lug, and a threaded member meshing with the thread on the bolt for the purpose specified.



3. In a lock, a casing having an opening in its top, a bolt for moving horizontally in the casing and having a top and a front end with a recess extending through the top and the front end, a lug extending from the top of the bolt in the recess in the direction of the front end of the bolt, the lug being spaced from the bottom of the recess and the front end of the bolt, and a latch bar for insertion in the opening in the casing and in the recess in the bolt beyond the front of the lug to be retained by the lug when the bolt is moved into operative position.

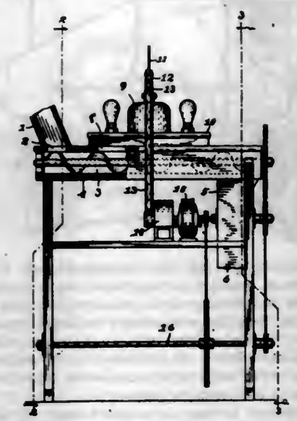
4. In a lock, a casing, the casing being provided with an opening in its top, a bolt for moving horizontally in the casing and with a horizontally disposed threaded opening, the bolt having a top and a front end with a recess extending through the top and the front end, a lug extending from the top of the bolt into the recess in the direction of the front end of the bolt, the lug being spaced from the bottom of the recess and the front end of the bolt, a latch bar for insertion in the opening in the casing and in the recess in the bolt beyond the front of the lug to be retained by the lug when the bolt is moved into operative position, and a threaded member for meshing in the threaded opening in the bolt and journaled in bearings in the casing.

5. In a lock, a cylindrical locking means having a threaded orifice, and adapted to be inserted in an opening at one side of a door, a plate adapted to be disposed at the other side of the door and having two openings, a screw member normally disposed in one of the openings and meshing in the threaded orifice, a casing normally secured against the plate, the casing having an opening in its top, a bolt for moving horizontally in the casing, and with a horizontally disposed threaded opening, the bolt having a top and a front end, there being a recess in the bolt extending through the top and the front end adjacent the opening in the casing, a lug extending from the bolt into the recess in the direction of the front end of the bolt, the lug being spaced from the bottom of the recess and the front end of the bolt, a latch bar for insertion in the opening in the casing and in the recess in the bolt to be retained by the lug when the bolt is moved into operative position, a threaded member meshing in the threaded opening in the bolt and journaled in bearings in the casing, and means connecting the cylindrical locking means with the threaded member.

1,112,247. MOISTURE-INDICATOR FOR CEREAL PRODUCTS. FREDERICK C. ATKINSON, Indianapolis, Ind., assignor to American Hominy Company, Indianapolis, Ind., a Corporation of New Jersey. Filed Dec. 2, 1913. Serial No. 804,282. (Cl. 73—24.)

1. In a moisture indicator for comminuted products in combination with means for feeding the material from one point to another through an inclosing casing, means in communication with the body of material at a point intermediate the said points of receiving and delivering the material for receiving air carried along with said material, means in said receiving means for indicating the humidity of the air and means for drawing the air through such receiving means, substantially as described.

2. In a moisture indicator for cereal products, in combination with products-conveying means open to the atmosphere only at its receiving end, discharging means in communication with said conveying means and a hygrometer in communication with the conveying means between the receiving and discharging ends of said conveying means, means for inclosing said hygrometer a passageway leading from said hygrometer and a draft inducing means in communication with said passageway, substantially as described.



3. In a moisture indicator for cereal products in combination with a feed spout through which the products and air are admitted, a conveyer in communication with said spout, discharge means in communication with the conveyer, a closed casing in communication with said conveyer and a humidity indicating device and a temperature indicating device in said closed casing, substantially as described.

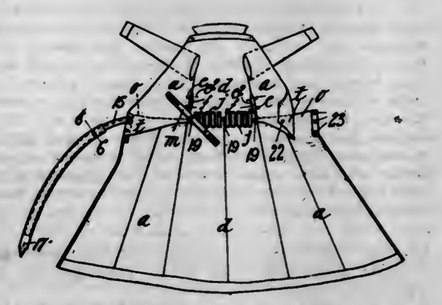
4. In a moisture indicator for cereal products, in combination with a feed spout to which material is delivered and through which air is admitted, a conveyer, a casing closed against the atmosphere and having means to receive air from said conveyer, a humidity indicating device in said closed casing, a pipe leading from said casing and exhaust means in communication with said pipe, substantially as described.

5. In a moisture indicator for cereal products, in combination with a conveyer, means to feed material to said conveyer at one end thereof, means to receive the discharged material from the other end of the conveyer, a humidity indicating device in communication with said conveyer intermediate the ends of the latter and a rotary valve in the discharge means, substantially as described.

1,112,248. WOMAN'S REVERSIBLE AND ADJUSTABLE HOUSE-DRESS. WILLIAM C. P. BALDWIN, Holyoke, Mass. Filed Feb. 13, 1913. Serial No. 748,090. (Cl. 2—145.)

1. A dress comprising continuous waist and skirt portions and formed at its waist line with slits, either end of each of which portions is adapted to be lapped over the other end thereof and to extend across the front and around the adjacent side of the wearer for reversibility; in combination with correlated duplicated means located adjacent the waist line for fastening the relatively outermost of such portions in overlapped position; a belt comprising telescoped elastic and inelastic portions adapted to be detachably secured at one end to the edge of the relatively innermost portion, inserted through the adjacent slit and passed entirely around the dress at the waist line, the other end of said belt being adapted to be overlapped and secured upon itself; and means for retaining the said belt portions in adjusted position relatively to each other.

2. A garment of the character specified having reversibly overlapping front portions and a belt adapted to be detachably connected at one end to one of such portions and to be passed completely around the waist line of the garment and overlapped and secured upon itself at its other end, said belt comprising telescopically arranged elastic and inelastic portions having correlated means for retention thereof in adjusted position relatively to each other.



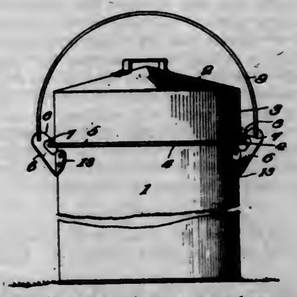
3. A garment of the character specified having overlapping front portions and a belt adapted to be detachably connected at one end to one of such portions and to be passed completely around the waist line of the garment and over-lapped and secured upon itself at its other end, said belt comprising an elastic portion and a tubular inelastic portion adapted to receive said elastic portion and of sufficient length to completely encircle the garment at the waist line, said belt portions being provided with correlated means for retaining them in adjusted position relatively to each other.

4. A dress comprising waist and skirt front portions adapted either to adjustably overlap the other and to extend across the front and around the sides of the dress, said overlapping front portions being separated at the waist line and of such vertical dimensions that the lower extremities of the waist portions may be lapped across the upper extremities of the skirt portions, and means for securing said portions in such adjusted overlapping position.

5. A woman's dress having reversible fronts and means for confining them in either of their overlapping relations, and said garment having at its back portion at the waist line a detachable elastic strip or band, and means for securing such strip at different portions of its length in either its normal or in its stretched condition.

[Claims 6 and 7 not printed in the Gazette.]

1,112,249. GARBAGE-RECEPTACLE. HARRY B. BALL, Norfolk, Va. Filed June 14, 1913. Serial No. 773,708. (Cl. 220—28.)

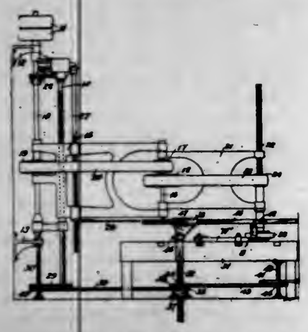


1. As an article of manufacture, a garbage receptacle, a cover therefor having a circumferential flange designed to telescope the receptacle on its outside and extend downwardly thereover a considerable distance, the lower edge of said flange being beaded and having opposite reduced

portions, and ears secured to the receptacle beneath the edge of the cover, the upper ends of said ears forming hooks which intersect the vertical plane of the bead of said flange to lock the cover to the receptacle, said ears extending upwardly from the receptacle to a point above the horizontal plane of the lower edge of said flange, forming spaces between said hooks and the receptacle to allow of the passage of the reduced portions of the cover flange.

2. As an article of manufacture, a garbage receptacle, a cover therefor having a circumferential flange designed to telescope the receptacle and extend downwardly thereover a considerable distance, the lower edge of said flange being beaded and having opposite reduced portions, and hooks secured to the receptacle and extending outwardly therefrom forming spaces between their ends and the receptacle to allow of the passage of the reduced portions of the cover flange, said hooks being composed of metal plates bent back upon themselves and presenting their edges toward the receptacle and also bent to form flanges which are secured to the receptacle.

1,112,250. UNIVERSAL STONEWORKING-MACHINE. OSCAR BAUER, New York, N. Y. Filed Mar. 9, 1914. Serial No. 823,539. (Cl. 51—11.)



1. The combination with a driving shaft, a grinding wheel, supporting means extending from the shaft to said wheel, and a power screw adapted to vertically adjust said supporting means, of a hand controlled guide member associated with said grinding wheel, and means extending from said main power screw to cause the adjustment of said guide member simultaneously with the adjustment of the grinding wheel.

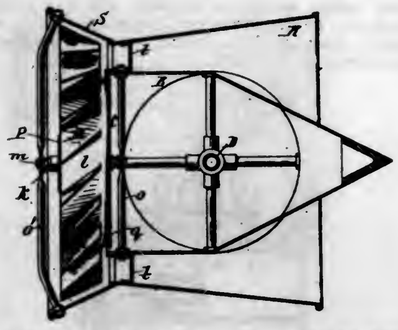
2. The combination with a driving shaft, a frame connected to the driving shaft and adapted to be swung laterally around the axis thereof, a grinding wheel associated with the outer end of said frame, a power screw coöperating with said frame for lifting or lowering it, and a work supporting bed beneath the wheel, of an auxiliary screw associated with the bed, a guide bar connected to said auxiliary screw and to the axis of the grinding wheel, and means to operate the main and auxiliary screws simultaneously for lifting and lowering the guide bar simultaneously with the aforesaid movements of the frame.

3. In a device of the character set forth, the combination of a guide bar, main and auxiliary screws arranged parallel to each other, said guide bar being associated with the auxiliary screw, and means for rotating the two screws simultaneously in the same direction either by power or by hand, substantially as set forth.

1,112,251. VENTILATOR. CHARLES H. BICALKY, Buffalo, N. Y. Filed Mar. 24, 1910. Serial No. 551,258. (Cl. 98—7.)

1. A ventilator comprising a hood provided with an air passage on one side, and a rotatable fan wheel having a ring projecting into said air passage and provided within the hood with an annular gutter.

2. A ventilator having, in combination, an air supply pipe, an exhaust pipe projecting thereinto, said pipes being fast together and having their respective outlets adjacent to each other, a fan within said supply pipe adjacent to the outlet thereof and a fan adjacent to the outlet of said exhaust pipe, said fans being connected together, whereby both of said fans may be rotated.



3. A ventilator having, in combination, an air supply pipe, an exhaust pipe projecting thereinto, said pipes being fast together and having their respective outlets adjacent to each other, said pipes rotatably mounted upon a suitable support, a fan within said supply pipe adjacent to the outlet thereof and a fan adjacent to the outlet of said exhaust pipe, said fans being connected together, whereby both of said fans may be rotated.

4. A ventilator having in combination, an air supply pipe, a vane fast thereto, an exhaust pipe projecting into said air supply pipe, said pipes being fast together and having their respective outlets adjacent to each other, a fan located in said supply pipe adjacent to the outlet thereof, and a fan adjacent to the outlet of said exhaust pipe, said fans being connected together, whereby both of said fans may be rotated.

5. A ventilator having, in combination, an air supply pipe, an exhaust pipe extending at an angle to said air supply pipe and fast thereto, the outlet end of said exhaust pipe extending into said air supply pipe, with its outward end extending parallel to said supply pipe, the outlet end of said exhaust pipe being adjacent to the outlet end of said supply pipe, a rotary fan in said supply pipe and a rotary fan adjacent to the end of said exhaust pipe, said fans being connected together, whereby both of said fans may be rotated.

[Claim 6 not printed in the Gazette.]

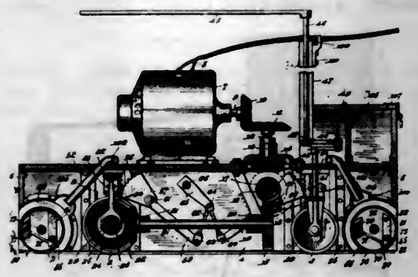
1,112,252. ARTIFICIAL TOOTH. GEORGE L. BIENVENU, New Orleans, La. Filed Dec. 20, 1913. Serial No. 807,966. (Cl. 32—9.)

In an artificial tooth, a porcelain body, a metallic backing therefor, and a wire for securing the backing baked together, said wire being embedded in the porcelain and having ends projecting through the rear wall thereof and through the backing for securing the said backing.

1,112,253. FLOOR-SURFACING MACHINE. JOHN FRANCIS BILLS, Casper, Wyo. Filed Oct. 29, 1913. Serial No. 798,066. (Cl. 51—13.)

1. In a floor surfacing machine, the combination of a truck frame, a platform thereon, a motor mounted on said truck, traction wheels supporting said truck, and driven by said motor, steering wheels also supporting said truck

manually controlled steering mechanism, and means operable from above said platform for raising and lowering the truck relatively to the truck supporting wheels, said means comprising pairs of oppositely arranged vertically movable slides having rack faces, sector gears meshing with said rack faces, a hand lever, and connections between said sector gears and hand lever.



2. In a floor surfacing machine, the combination of a truck frame, a platform thereon, a motor mounted on said truck, traction wheels supporting said truck and driven by said motor, steering wheels also supporting said truck, manually controlled steering mechanism, and means operable from above said platform for raising and lowering the truck relatively to the truck supporting wheels, said means comprising pairs of oppositely arranged vertically movable slides having rack faces, sector gears meshing with said rack faces, a hand lever, and longitudinally extensible connections between said sector gears and hand lever.

1,112,254. COAT. JACOB BLOCH, Cincinnati, Ohio. Filed Feb. 16, 1914. Serial No. 818,949. (Cl. 2—88.)

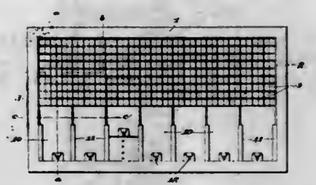
1. A coat having invisible pockets in its shoulders adapted to receive a removable pad, and disconnectible fastening means for closing said pockets.

2. A coat having invisible pockets in its lining above the shoulders adapted to receive removable pads, and disconnectible fastening means for closing the mouths of the pockets.

3. A coat having a lining, invisible pockets secured within the lining adjacent the shoulder seams and lying above the shoulders of the wearer when the coat is worn, said pockets adapted to receive removable pads, and disconnectible fastening devices for closing the mouths of the pockets.

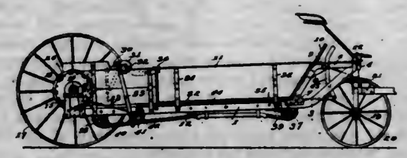
1,112,255. OVEN-DOOR. PAUL C. BRENNER, Chicago, Ill. Filed July 2, 1913, Serial No. 777,106. Renewed July 28, 1914. Serial No. 853,690. (Cl. 126—190.)

1. An oven having a door to close the same and also extending below the bottom of the oven and provided with an opening above the oven bottom, a curtain carried by the door and normally closing the opening thereof, the said curtain comprising a plurality of flexible strips arranged side by side, the said door also having a vertically movable slide normally arranged below the said opening and adapted to be moved upwardly to partly cover said opening when one or more of the flexible strips are displaced by a projecting handle or the like.



2. An oven having a door to close the same, the said door also extending below the bottom of the oven and having an opening above the oven bottom, a curtain carried by the door and normally forming a closure for said opening, the said curtain comprising a plurality of flexible vertical strips arranged side by side, the said strips being composed of members pivotally connected together for vertical movement, and a vertically movable slide carried by the door and normally arranged below the opening thereof, said slide being adapted to be raised to close against the under side of an object projecting outwardly through the door opening, when one or more of the said strips are displaced entirely or in part by said object.

1,112,256. MANURE-SPREADER. THEOPHILUS BROWN, Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Nov. 20, 1912. Serial No. 732,552. (Cl. 111—40.)

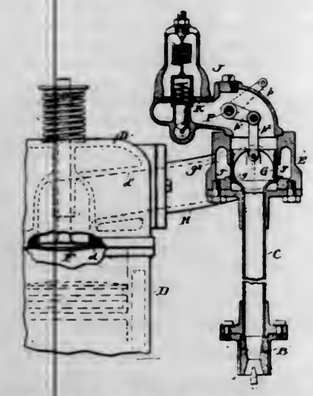


1. The combination of the rear axle, the front axle, the high rear ground wheels on the rear axle, the two relatively low front wheels spaced apart on the front axle, the main sills below and suspended from the rear axle and extending forward on lines substantially parallel with each other from end to end to points above the front axle, each having a lower elongated section and an upward and forward inclined section, a load-supporting-and-delivering apron, a load-carrying body supported on said sills and having a forward and upward inclined front end wall arranged to support a portion of the load in front of the front end of the apron, a rotary distributer at the rear end of the apron, the elongated cross bolster secured to the front ends of the said parallel sills, and the horizontally swinging carrier for the front axle supported by the said bolster, the aforesaid parts being arranged substantially as set forth to permit the axle to turn from a position perpendicular, to a position parallel, to the longitudinal lines of the vehicle without the front wheels impinging upon the said sills.

2. The combination of the relatively long rear axle, the relatively short front axle, the relatively high rear ground wheels carried by the rear axle, the relatively low front wheels on the front axle, the main sills below and suspended from the rear axle and extending forward to points above the front wheels and lying continuously in the same longitudinal vertical planes and inclined upward at their front ends, a load-carrying body supported on said sills and having a forward and upward inclined front end wall, a load-supporting-and-delivering apron at the bottom of the body, a rotary distributer on the rear axle, the angled braces rigid with and bearing against the inclined front end wall and extending from the front lower corners of the body upward and forward to the ends of the main sills, the long cross bolster secured to said sills and braces, the

rotary carrier for the front axle positioned to permit it to turn from a position parallel, to a position at right angles, to the transverse lines of the body without impinging on the said sills or braces, substantially as set forth.

1,112,257. MIXTURE-SUPPLYING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. ALANSON P. BRUSH, Flint, Mich. Filed May 8, 1911. Serial No. 625,867. (Cl. 123—119.)



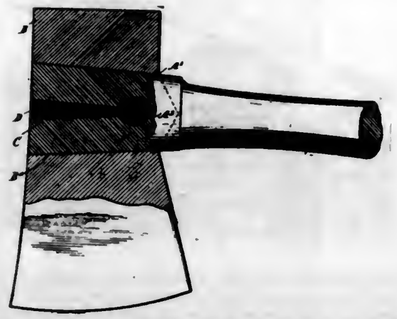
1. The combination with an internal combustion engine having plural cylinders each having in its head a mixture inlet port, and downwardly opening inlet valves to said several ports, individual mixture distributing conduits which extend at an inclination upward from said several ports to a common distributing chamber, a single mixture supplying tube which extends from said common distributing chamber downward below said inlet ports and to the source of mixture supply, and a throttle valve in said distributing chamber, said single mixture supplying tube being of less cross sectional area than each of the individual mixture distributing conduits.

2. The combination with an internal combustion engine, and a fuel spraying nozzle which is located below the plane of the inlet port of said engine cylinder, of a relatively small upwardly extended tube into the lower end of which the spray nozzle discharges, a throttle valve casing with which the upper end of said tube is connected and which is located above the inlet port of the engine cylinder, a throttle valve in said casing, and a conduit leading in a downwardly inclined direction from said throttle valve casing to the inlet port of the engine cylinder,—said upwardly extended tube being of smaller diameter than said conduit.

3. The combination with an internal combustion engine, and a fuel spraying nozzle which is located below the plane of the inlet port of said engine cylinder, of a relatively small upwardly extended tube into the lower end of which the spray nozzle discharges, a throttle valve casing with which the upper end of said tube is connected, and which is located above the inlet port of the engine cylinder, a throttle valve in said casing, an auxiliary air valve casing connected with and supported by the throttle valve casing and containing a spring controlled auxiliary valve, a conduit leading in a downwardly inclined direction from said throttle valve casing to the inlet port of the engine cylinder, said upwardly extended tube being of smaller diameter than said conduit.

4. The combination with a plural cylinder internal combustion engine, and a single fuel spraying nozzle, which is located below the plane of the inlet port of said engine cylinder, of a relatively small upwardly extended tube into the lower end of which the spray nozzle discharges, a throttle valve casing with which the upper end of said tube is connected, and which is located above the inlet ports of the engine cylinders, a throttle valve in said casing, and several independent conduits which lead in downwardly inclined directions from said throttle valve casing to the several inlet ports of the engine cylinders, said upwardly extended tube being of smaller diameter than said conduits.

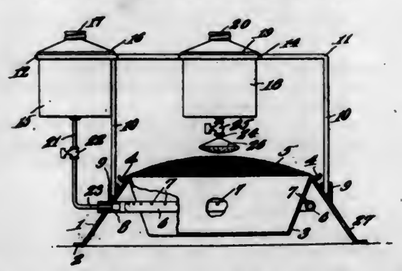
1,112,258. HANDLE-FASTENING. IRWIN G. BURTON, Asbury Park, N. J. Filed Jan. 27, 1914. Serial No. 814,681. (Cl. 145—79.)



1. In combination with a handle having a split and an opening into which leads the inner end of the said split, a wedge in the form of a hollow shell open at both ends, the said wedge engaging the said split, the inner open end of said wedge being of less size than the said opening in the handle and reaching to the same and a material capable to set and harden and filling the said opening and the said wedge.

2. In combination a tool having a socket, a handle having a socket end fitting into the said socket, the said socket end being provided with a transverse opening and a split leading from the terminal of the handle end to the said opening, a wedge in the form of an approximately rectangular shell, hollow throughout its extent and open at both ends, the said wedge being driven into the said split to spread the socket end of the handle in the said socket, the said transverse opening in the socket end of the handle being larger than the opening at the inner or small end of the said wedge and a metal filling the said transverse opening and the said hollow wedge.

1,112,259. APPARATUS FOR DESTROYING INSECTS. WILLIAM W. CALHOUN, New Orleans, La. Filed Oct. 27, 1913. Serial No. 797,610. (Cl. 43—22.)



1. An insect destroyer comprising a pan; and a burner surrounding the pan, the burner being adapted to heat a zone of the pan to prevent insects from passing out of the pan.

2. An insect destroyer comprising a pan; a burner surrounding the pan, the burner being adapted to heat a zone of the pan to prevent insects from passing out of the pan; and a source of poison supply discharging into the pan.

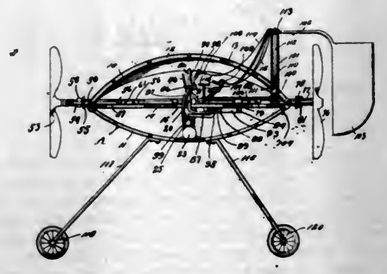
3. An insect destroyer comprising a pan; means for heating the pan; and a source of poison supply discharging into the pan.

4. An insect destroyer comprising a support; a pan upheld by the support; a burner discharging against the pan and including an air inlet mounted in the support; and a fuel nozzle discharging within the air inlet.

5. In a device of the class described, a support; a pan upheld by the support; a frame mounted on the support; and a poison receptacle upheld by the frame and discharging within the pan.

[Claims 6 to 9 not printed in the Gazette.]

1,112,260. AEROPLANE. WILLIAM G. CANION, El Paso, Tex. Filed June 21, 1913. Serial No. 775,022. (Cl. 244—14.)



1. In an aeroplane, a frame, a transverse shaft rotatably mounted on said frame, a plane supported by said transverse shaft, a second frame including interlocked sections one of which is fixed on said shaft and the other loosely mounted thereon, propellers mounted on said sections respectively, and means for disengaging the interlocking sections of the second named frame whereby the rotation of said shaft will swing one of said sections to dispose the propeller carried thereby at different angles of incidence.

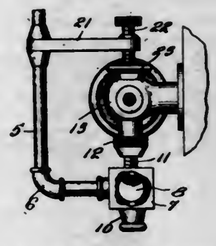
2. In an aeroplane, a frame, a transverse shaft rotatably mounted on said frame, a plane supported by said transverse shaft, a second frame including interlocked sections one of which is fixed on said shaft and the other loosely mounted thereon, propellers mounted on said sections respectively, and lever operated means for disengaging the interlocking sections of the second named frame whereby the rotation of said shaft will swing one of said sections to dispose the propeller carried thereby at different angles of incidence.

3. In an aeroplane, a frame, a transverse shaft rotatably mounted on said frame, a plane supported by said transverse shaft, a second frame including interlocked sections one of which is fixed on said shaft and the other loosely mounted thereon, propellers mounted on said sections respectively, and means for locking the other section of the second named frame against pivotal movement about said shaft.

4. In an aeroplane, a frame, a transverse shaft rotatably mounted on said frame, a plane supported by said shaft, a second frame including interlocked sections one of which is fixed on said shaft and the other loosely mounted thereon, propellers mounted on said sections respectively, means for locking the other section of the second named frame against pivotal movement about said shaft, and lever operated means for releasing said last named sections for pivotal movement about said shaft.

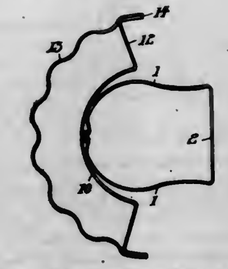
1,112,261. SHOWER-BATH ATTACHMENT. JOHN H. CARTER, New Orleans, La. Filed Feb. 17, 1914. Serial No. 819,232. (Cl. 137—28.)

A spigot attachment comprising a valve casing having a discharge spout at its lower side, and an externally threaded nipple at the opposite upper side thereof, a union collar adjustably engaging the threaded nipple for receiving the spigot when the nipple is inserted in the latter, a delivery pipe leading from the casing, an arm on the pipe, and a set screw threaded in the said arm and



adapted to engage the spigot at the head thereof for locking the nipple therein.

1,112,262. HAIR-DRYING DEVICE. FRANK P. CAWLEY, Pittsburgh, Pa. Filed Sept. 30, 1912. Serial No. 723,106. (Cl. 34—26.)



1. A hair drying device comprising a segment-shaped corrugated member adapted to be supported from the shoulders, the corrugations of said member being segment-shaped in plan and extending inwardly and outwardly with respect to each other, said member having each of its ends extending upwardly, said ends being disposed at right angles with respect to said corrugations.

2. A hair drying device comprising a segment-shaped corrugated member adapted to be supported from the shoulders, the corruations of said member being segment-shaped in plan and extending inwardly and outwardly with respect to each other, said member having each of its ends extending upwardly, said ends being disposed at right angles with respect to said corrugations; shoulder pieces to said upturned ends of said member.

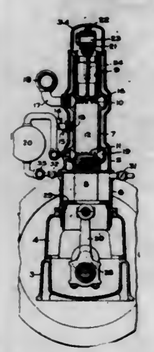
3. A hair drying device comprising a segment shaped corrugated member adapted to be supported from the shoulders, the corrugations of said member being segment-shaped in plan and extending inwardly and outwardly with respect to each other, said member having each of its ends extending upwardly, said ends being disposed at right angles with respect to said corrugations, shoulder pieces, means for connecting the shoulder pieces to said upturned ends of said member, and a breast piece connecting said shoulder pieces.

4. A hair drying device comprising a segment-shaped corrugated member, means adapted to be mounted upon the shoulders of a person for supporting said member above the shoulders and spaced from the neck of a person, the ends of said member being extended upwardly and disposed at right angles with respect to the corrugations of said member.

1,112,263. INTERNAL-COMBUSTION ENGINE. HENRI G. CHATAIN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Apr. 23, 1912. Serial No. 692,582. (Cl. 123—51.)

1. In a two-cycle engine, the combination of a differential cylinder, oppositely moving working pistons mounted therein which compress the charge of air between them to

a point where its temperature is above the fuel igniting temperature, exhaust and scavenging ports in the cylinder which are controlled by the pistons, an air pump piston that is located in the portion of the cylinder having the larger area, a crank shaft, power transmitting means between the pistons and the crank shaft, the weight of the outer piston and its power transmitting means being substantially balanced by that of the inner working piston, its power transmitting means and the air pump piston, a device for discharging fuel into the body of compressed air between the working pistons, and means for conveying air to the device under a pressure greater than the compression pressure.



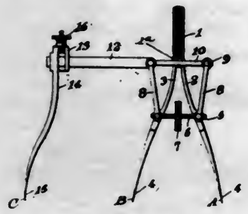
2. In a two-cycle engine, the combination of differential cylinders, a pair of oppositely moving working pistons in each cylinder, each cylinder having exhaust and scavenging ports that are controlled by its pistons, an air pump piston located in the enlarged portion of each cylinder and connected to and moving with the adjacent working piston, a crank shaft, power transmitting means between the working pistons of each cylinder and said crank shaft, the power transmitting means for each cylinder being so related to that of the other that when the first cylinder has been exhausted the air in the second cylinder has been compressed, means for transmitting air delivered by the pump in one cylinder to the scavenging ports of another cylinder, and means for introducing fuel into the cylinders.

3. In a two-cycle engine, the combination of open ended differential cylinders, a pair of oppositely moving pistons in each cylinder, admission and scavenging ports, an air pump piston located in the enlarged portion of each cylinder and which is connected to its inner working piston, a crank shaft, power transmitting means between the inner and outer working pistons and the crank shaft, the weight of each outer piston and its power transmitting means being substantially balanced by that of the inner piston, its power transmitting means and connected air pump piston, means for transmitting air delivered by one pump to the scavenging ports of an adjacent working cylinder, and means for introducing fuel into the cylinders.

1,112,264. DRAFTING INSTRUMENT. JAMES H. CLARK, Flint, Mich. Filed Nov. 2, 1911. Serial No. 658,124. (Cl. 33—158.)

1. A drawing instrument of the class described comprising a body having a handle, a pair of yieldable legs provided on said body and having pointed free ends, means by which said legs may be flexed laterally to effect relative adjustment of the points thereof, a third leg having its free end pointed, means for mounting the last-named leg movably upon the body, and means associating the said mounting means for the third leg with the first-named legs for maintaining the points of all the legs in substantial collinearity irrespective of the relative adjustment of the first-named legs.

2. A drawing instrument of the class described comprising a body having a handle, a pair of yieldable legs provided on said body and having pointed free ends, means by which said legs may be flexed laterally to effect relative adjustment of the points thereof, a third leg having its free end pointed, a member mounted for longitudinal movement upon the said body for connecting the third leg therewith the said third leg being adapted to be adjusted laterally with respect to the first-named legs, means for securing the third leg in laterally adjusted position upon the said member, and means for maintaining the points of all the legs in substantial collinearity irrespective of the relative adjustment of the first-named legs.



3. A drawing instrument of the class described comprising a body having a handle, a pair of yieldable legs provided upon said body and having pointed free ends, means by which said legs may be flexed laterally to effect relative adjustment of the points thereof, a laterally projecting bar mounted upon the body for longitudinal movement thereon, a third leg attached to the said bar and having a pointed free end disposed in substantial collinearity with the points of the first-named blades, and means operatively connecting the first-named legs with the said bar for maintaining the collinearity of the points of all the legs.

4. A drawing instrument of the class described comprising a body having a handle, a pair of yieldable legs provided upon said body and having pointed free ends, means by which said legs may be flexed laterally to effect relative adjustment of the points thereof, a laterally projecting bar mounted upon the body for longitudinal movement thereon, a third leg attached to the said bar and having a pointed free end disposed in substantial collinearity with the points of the first-named blades, and a pair of rigid link members having corresponding ends thereof pivotally connected to the respective first-named legs and their opposite ends pivoted to the said bar at points spaced from each side of the body.

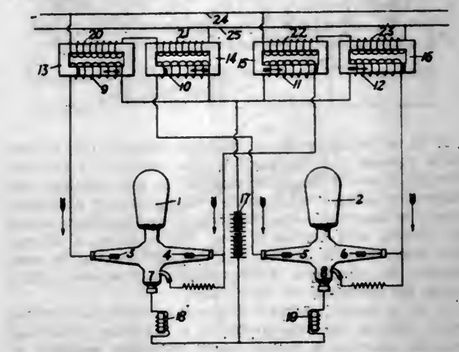
5. A drawing instrument of the class described comprising a body having a handle, a pair of yieldable legs provided upon said body and having pointed free ends, means by which said legs may be flexed laterally to effect relative adjustment of the points thereof, a laterally projecting bar mounted upon the body for longitudinal movement thereon, a third leg attached to the said bar and having a pointed free end disposed in substantial collinearity with the points of the first-named blades, and a pair of rigid link members having corresponding ends thereof pivotally connected to the respective first-named legs and their opposite ends pivoted to the said bar at points spaced from each side of the body, the said link members being movable in a common plane with the said legs and bar.

[Claim 6 not printed in the Gazette.]

1,112,265. CURRENT-RECTIFYING APPARATUS. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 10, 1912. Serial No. 670,523. (Cl. 171—253.)

1. The combination with two rectifying devices, of four transformers the primary windings of which are connected in series in pairs, and the secondary windings of which have a common connection to the cathodes of the rectifiers and other connections respectively to the anodes of the rectifiers, the anodes of each rectifier being respectively connected to secondary windings of transformers belonging to different pairs.

2. The combination with two rectifying devices, of four transformers, the primary windings of which are connected in series in pairs, and the secondary windings of which have a common connection to the cathodes of the rectifiers and other connections respectively to the anodes of the rectifiers.



3. The combination with two rectifying devices, each having two anodes and a cathode, of four transformers having primary windings connected in series in pairs and secondary windings, a terminal of each of which is connected to the cathodes of the rectifiers and the remaining terminals of which are respectively connected to the anodes of the rectifiers, the anodes of each rectifier being respectively connected to the secondary windings of transformers belonging to different pairs.

4. The combination with a supply circuit and current-rectifying apparatus, of transforming apparatus interposed between the circuit and the current-rectifying apparatus, and connections between the current-rectifying apparatus and the transforming apparatus whereby the latter normally offers comparatively little opposition to the flow of current to the rectifying apparatus, and whereby, upon the occurrence of a short circuit, it offers a large amount of opposition to the flow of current.

5. The combination with a supply circuit and two multi-anode rectifiers, the transformers having primary and secondary windings, and connections whereby the anodes of the rectifiers are supplied from the transformer secondary windings, and the secondary winding of each transformer is rendered inactive during alternate half wave cycles of the current, and also whereby short circuit current between two anodes of a rectifier is limited in value by the high reactance of inactive secondary windings.

[Claims 6 to 10 not printed in the Gazette.]

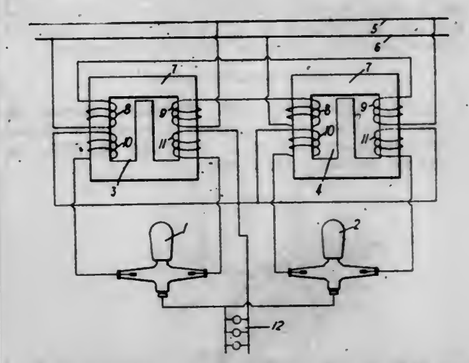
1,112,266. RECTIFIER SYSTEM. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 21, 1912. Serial No. 705,038. (Cl. 171—253.)

1. The combination with two transformers each having two primary coils that are series connected in pairs, with one coil of each transformer in each pair, of two rectifying devices each of which is supplied from a secondary winding of each transformer.

2. The combination with two transformers each having two primary coils that are series connected in pairs, with one coil of each transformer in each pair, of two rectifying devices supplied from the secondary windings of the said transformers, the anodes of the several rectifiers being connected to the secondary terminals of the respective transformers.

3. The combination with two transformers each having two primary coils that are series connected in pairs, with one coil of each transformer in each pair, of two rectifying devices supplied from the secondary windings of the transformers.

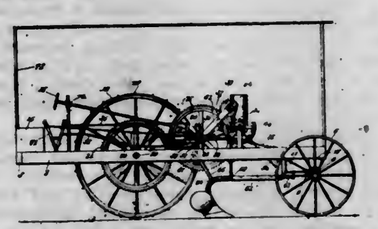
4. The combination with two transformers each comprising a core having a plurality of legs, and a primary and a secondary coil upon each of several legs the primary coils being series connected in pairs, of two rectifying devices supplied from the secondary windings of the transformers.



5. The combination with two transformers each comprising a core having a plurality of legs, and a primary and a secondary coil upon each of several legs the primary coils being series connected in pairs, of two rectifying devices each of which is supplied from a secondary winding of each transformer.

[Claims 6 to 9 not printed in the Gazette.]

1,112,267. MOTOR-PLOW. MOYLAND E. COURTNEY, Fairplay, Mo. Filed Dec. 28, 1912. Serial No. 739,099. (Cl. 21—114.)



1. In a traction engine, an open center frame, an element pulled by the tractor, a centrally arranged traction drive wheel, a front axle, steering wheels connected therewith, a driving pinion on the motor shaft, a gear wheel fast on the axle of the drive wheel, a transmission gear wheel meshing with the drive wheel gear, a reversing pinion meshing with the transmission gear, and means thrown into action by relative movement of the frame and the element pulled by the tractor on meeting an obstruction operating to disengage the driving pinion from its shaft and throw the driving mechanism out of gear.

2. In a traction engine, an open center frame, an element pulled by the tractor, a centrally arranged traction drive wheel, a front axle, steering wheels connected therewith, a driving pinion on the motor shaft, a gear wheel fast on the axle of the drive wheel, a transmission gear wheel meshing with the drive wheel gear, a reversing pinion meshing with the transmission gear, and means thrown into action by relative movement of the frame and the element pulled by the tractor on meeting an obstruction operating to disengage the driving pinion from its shaft and throw the driving mechanism out of gear, a pivoted frame by which the transmission gear and reversing pinion are carried, and manually operated means for swinging said frame.

3. In a traction engine, an open center frame, an element pulled by the tractor, a centrally arranged traction drive wheel, a front axle, steering wheels connected therewith, a driving pinion on the motor shaft, a gear wheel fast on the axle of the drive wheel, a transmission gear

wheel meshing with the drive wheel gear, a reversing pinion meshing with the transmission gear, a trip arm connected with the element pulled by the tractor, a clutch for throwing the driving pinion and reversing pinion alternately into and out of engagement with the motor shaft, and a clutch operating lever arranged in the path of said trip arm and adapted to be actuated thereby when the element pulled by the tractor meets an obstruction.

1,112,268. MOUNTING FOR WHEELS. ROBERT M. CRAIG, Paterson, N. J., assignor of one-half to Samuel Mulholland, Paterson, N. J. Filed July 25, 1913. Serial No. 781,108. (Cl. 64—69.)

1. A trolley pole having in combination a trolley-wheel-supporting member and a trolley-wheel, said member penetrating the wheel centrally and forming therewith and interiorly thereof a ball and socket joint, said pole having means to hold the wheel at one point thereof, eccentrically, against lateral displacement, substantially as described.

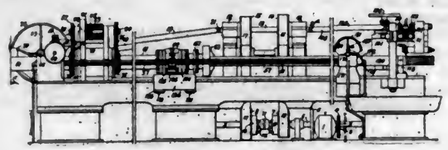
2. In combination, the pole proper, a trolley-wheel-supporting member arranged therein and having transverse grooves formed therein and extending concentrically, balls in said grooves, a trolley wheel receiving said member centrally thereof and having an interior circumferential groove occupied by the balls, and means on the pole proper to hold the wheel at one point thereof, concentrically, against lateral displacement, substantially as described.

3. A trolley pole having in combination a laterally yielding trolley-wheel-supporting member and a trolley-wheel, said member penetrating the wheel centrally and forming therewith and interiorly thereof a ball and socket joint, said pole having means to hold the wheel at one point thereof, eccentrically, against lateral displacement, substantially as described.

4. A trolley pole having in combination, a trolley-wheel-supporting member and a trolley-wheel, said member penetrating the wheel centrally and forming therewith and interiorly thereof a ball and socket joint, said pole having means to hold the wheel at one point thereof approximately opposite the wire-contacting point of the wheel against lateral displacement, substantially as described.

1,112,269. METAL-WORKING MACHINE. JAMES R. CRELLIN and THOMAS R. CRELLIN, Philadelphia, Pa. Filed Nov. 23, 1911. Serial No. 661,887. (Cl. 10—154.)

1. In a metal working machine adapted for cutting screw threads, the combination of a bed-plate, a carriage movable thereon, a sleeve rotatably mounted in said carriage and adapted to carry a blank to be cut, a plurality of master screws in operative engagement with said carriage, means for turning said screws to move the carriage, means connecting the screws to the carriage and serving to compensate for the pitch differences of said screws, means for turning said sleeve simultaneously with its longitudinal movement, and a cutter for operating on said blank.



2. In a metal working machine adapted for cutting screw threads, the combination of a bed-plate, a carriage thereon, a sleeve rotatably mounted in said carriage and adapted to carry a blank to be cut, a plurality of master screws in operative engagement with said carriage, means for turning said screws to move the carriage, a connection between said screws and carriage serving to compensate for the pitch differences of said screws, and a cutter for operating on said blank.

3. In a metal working machine adapted for cutting screw threads, the combination of a bed-plate, a carriage movable thereon, a hollow sleeve rotatably mounted in said carriage and adapted to carry a blank to be cut, a plurality of master screws, means for coupling said screws to the carriage and serving to compensate for the pitch differences of said screws, a cutter for operating on said blank, an adjustable carrier therefor, and means for operating said cutter.

4. In a metal working machine adapted for cutting screw threads, the combination of a bed-plate, a carriage movable thereon, a hollow sleeve rotatably mounted in said carriage and adapted to carry a blank to be cut, a plurality of master screws, means for coupling said screws to the carriage and serving to compensate for the pitch differences of said screws, means for independently connecting said screws with said carriage, a cutter for operating on said blank, and means for operating said cutter.

5. In a metal working machine adapted for cutting screw threads, the combination of a bed plate, a carriage movable thereon, a rotatable sleeve mounted in said carriage, a chuck carried by said carriage for receiving the blank to be cut, a plurality of master screws, and means operatively connecting said master screws to the carriage, said means serving also for compensating any difference in pitch in said lead screws in the transmission of their rotative movement to impart longitudinal movement to the carriage.

[Claims 6 to 20 not printed in the Gazette.]

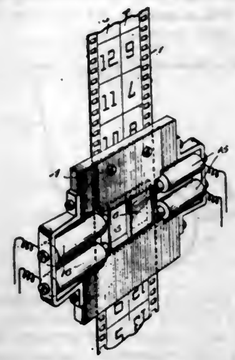
1,112,270. APERTURE-GATE. CLARENCE A. CURRIE, Sound Beach, Conn. Filed Dec. 5, 1913. Serial No. 804,846. (Cl. 88—17.)

1. In an aperture gate of the class described, a non-magnetic frame with an opening, a sliding member arranged in said opening and filling half thereof, and means for shifting the position of said sliding member from one side of said opening to the other.

2. An aperture gate comprising a non-magnetic frame formed with an opening, a movable member arranged in said opening, said movable member being made of magnetizable material, said movable member being of half the width of said opening, and magnetic means arranged to act on said movable member for causing the same to alternately fill different parts of said opening.

3. In an aperture gate of the class described, a sliding member for the aperture in the gate, and magnetic means for causing the sliding member to be shifted from one side to the other.

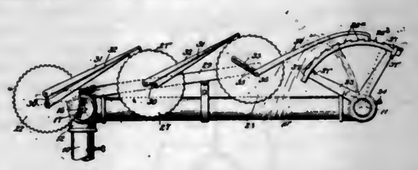
4. An aperture gate of the class described, comprising a non-magnetic frame formed with an opening for exposing the full width of a film having a plurality of series of pictures thereon, a sliding member arranged in said opening adapted to cover all of the series of pictures except one, said sliding member being of magnetic material, and electromagnets arranged on opposite sides of said frame adapted to alternately attract said sliding member.



5. In an aperture gate of the class described, a frame formed with an opening, a sliding member arranged in said opening, means for moving said sliding member from one side of the opening to the other, and resilient means pressing against said sliding member for frictionally resisting the movement thereof.

[Claim 6 not printed in the Gazette.]

1,112,271. IRRIGATION DEVICE. LUTHER B. DEMUTH, Beidler, Ohio. Filed Apr. 9, 1914. Serial No. 830,606. (Cl. 137—65.)

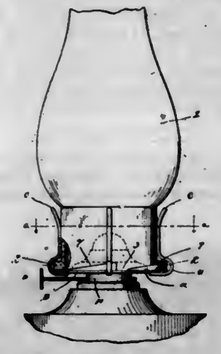


1. In a device of the character set forth, the combination with a water main and a plurality of horizontal spraying pipes arranged in alinement with each other and adapted to receive water from said main, of means to control the delivery of water through said spraying pipes, power means set in operation by the flow of water through the main, and connections between the power means and said pipes whereby either of said pipes may rotate while the other may remain inactive.

2. In an irrigating device, the combination of a water main, a distributing nozzle communicating therewith and adapted to deliver water therefrom, an actuating member secured to said spraying nozzle for oscillation thereof around a horizontal axis, said actuating member having two series of ratchet teeth arranged thereon parallel to each other but extending in opposite directions, a rotary power wheel, a pawl pivoted to said power wheel and adapted to coöperate with either of said series of ratchet teeth, and means to cause the pawl to be deflected from one series to the other for reversing the rotation of the distributing nozzle automatically.

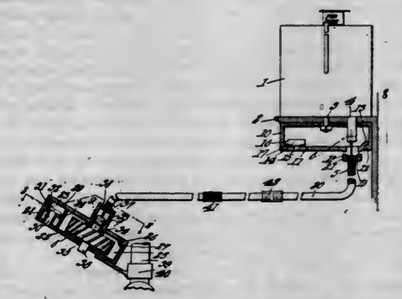
3. In an irrigating device, the combination of a water main, a horizontal distributing pipe communicating with said main and adapted to deliver water therefrom, an actuator comprising an arc-shaped member secured to the distributing pipe and comprising a plurality of series of ratchet teeth, the teeth of one series being reverse to those of the series adjacent thereto, a rotary power wheel, and reciprocating means actuated from said power wheel and coöperating with said actuator for oscillation of the distributing pipe.

1,112,272. LAMP-CHIMNEY. THADDEUS B. DILLARD, Sylva, N. C. Filed Dec. 2, 1913. Serial No. 804,303. (Cl. 240—99.)



A lamp chimney having locking lugs on its outside at its base to engage in the bends of the spring clamping fingers of a lamp burner, the said lugs being spaced apart, curved from end to end and arranged so that each lug widens from end to end, said lugs also having upper inclined cam surfaces rising from their narrow front ends to their broadened rear ends for the purpose set forth.

1,112,273. PROTECTOR FOR TAXICAB-METERS. WALTER LE ROY DIXON and FRANCIS E. SHANLEY, Pittsburgh, Pa. Filed Feb. 7, 1914. Serial No. 817,377. (Cl. 235—30.)



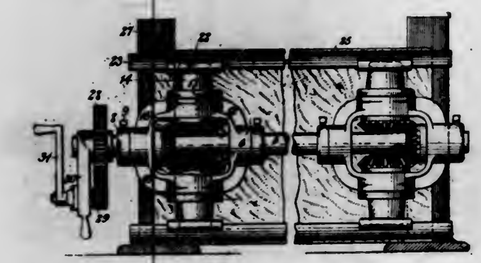
1. In a device of the character described, a pair of cases adapted to house the couplings between a flexible shaft and a meter shaft and actuating member, respectively, each case including a removable cover through which the flexible shaft is adapted to pass, means for locking the covers in place, and a tubing through which the flexible shaft is adapted to pass, and having its ends anchored to the said covers.

2. In a device of the character described, a case adapted to house a coupling between a flexible shaft and another member disposed within the case, a removable cover for the case having means for the passage of the flexible shaft, means for locking the cover to the case, and a tubing through which the flexible shaft is adapted to pass, and having one end anchored to the said means.

3. In a device of the character described, a case adapted to house a coupling between a flexible shaft and another member disposed within the case, a cover for the case having means for the passage of the flexible shaft, one end of the cover and one end of the case having interengageable means for permitting the cover to be swung open and closed, and key-controlled means for locking the other end of the cover and case together, and a tubing through which the flexible shaft is adapted to pass, and having one end anchored within the said means through which the flexible shaft is adapted to pass.

4. In a device of the character described, a case adapted to house the coupling between a flexible shaft and another member disposed within the case, a removable cover for the case, means for locking the cover to the case, the cover having an outstanding tubular portion through which the flexible shaft is adapted to pass, the free end of the tubular portion having an inturned flange, and a tubing through which the flexible shaft is adapted to pass and having an outturned flange at one end disposed within the said tubular portion and engageable with the aforesaid flange.

1,112,274. STRETCHER. SAMUEL WORCESTER DODGE, Fitchburg, Mass. Filed Jan. 21, 1914. Serial No. 813,542. (Cl. 26—8.)



1. In a stretcher, a shaft, a frame mounted on the shaft and having an opening, a gear for rotating with the shaft, a gear meshing with the first gear, the second gear abutting against the frame and having a sleeve disposed in the opening in the frame, a nut disposed in the sleeve and keyed for rotating therewith, an outer flange on the nut bearing against the outer side of the frame, a threaded member meshing with the thread in the nut and a transverse supporting head mounted on the threaded member.

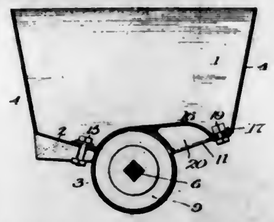
2. In a stretcher, a shaft, a frame disposed around the shaft and having openings at opposite sides of the shaft, a gear for rotating with the shaft, two detachable gears meshing with the first gear and abutting against the inner sides of the frame around the openings in the frame, sleeves on the second mentioned gears disposed in the openings in the frame, nuts disposed in the sleeves and keyed for rotating therewith, outer flanges on the nuts against the outer sides of the frame, and threaded members within the nuts and meshing therewith.

3. In a stretcher, a shaft, a frame having two openings spaced apart in which the shaft is rotatably disposed, collars on the shaft and engaging the frame for holding the frame against movement longitudinally of the shaft, there being another opening in the frame at an angle to the axle of the shaft, a sleeve journaled in the last mentioned opening and having a gear with a shoulder engaging the inner side of the frame at the third opening therein, a nut disposed in and keyed to the sleeve and having a flange normally engaging the outer side of the frame at the third mentioned opening therein, a threaded member meshing with the nut, and a gear keyed to the shaft with which the first mentioned gear meshes.

1,112,275. FEEDER FOR GRAIN-DRILLS. MARTIN DUEBER, Tipton, Mo., assignor of one-half to W. F. Quigley, Tipton, Mo. Filed Dec. 6, 1913. Serial No. 805,095. (Cl. 111—31.)

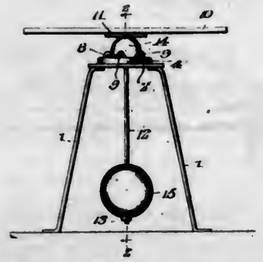
1. In a grain feeder, a hopper having an outlet intermediate of its ends, a shaft journaled upon the hopper, right and left hand augers carried by the shaft and operating to feed the grain inwardly to said outlet, and a guard secured to the hopper and having a partially circular portion covering the inner ends of the augers, said guard being provided with a hood covering the outlet with an entrance leading thereto in line with the inner ends of the augers.

2. In a grain feeder, a hopper provided with an outlet, a shaft journaled in the hopper, right and left hand augers carried by the shaft and operating to feed the grain inwardly to said outlet, and a guard provided with a portion covering the inner ends of the augers, a hood covering the outlet, and a passage between the hood and the space bound by said covering portion.



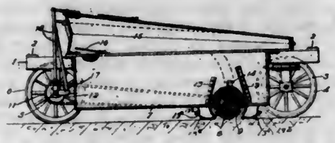
3. In a grain feeder, a hopper having a bottom provided with a depressed portion, sloping sides leading thereto, an outlet in one of said sloping sides centrally of the hopper and intersecting said depression, a shaft journaled upon the hopper in line with said depression, right and left hand augers carried by the shaft and operating to feed the grain inwardly to said central outlet, and a guard secured to the bottom of the hopper and having a partially circular portion covering the inner ends of the augers, said guard being provided with a hood covering the outlet and with an entrance leading thereto in line with the inner ends of the augers.

1,112,276. TABLE. BENJAMIN T. EATON, Mobile, Ala. Filed Feb. 4, 1914. Serial No. 816,584. (Cl. 114—195.)



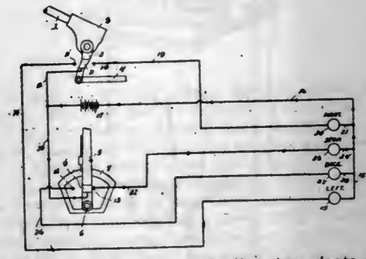
A self leveling table comprising supporting legs, an apertured platform mounted upon the legs, a notched flange surrounding the aperture and having pairs of recesses arranged upon opposite sides of said notches, substantially U-shaped axles carrying rollers intermediate their ends, the ends of said axles being fitted within the recesses and rollers lying within the notches, a table top, a rod connected to said top and depending therefrom, a ball removably mounted upon the rod and engaged with the table top and resting upon said rollers, said rod passing through the aperture in the platform and a weight removably connected to the lower end of the rod.

1,112,277. VACUUM-CLEANER. EDWARD LOUIS FAHRBACH, Buffalo, N. Y. Filed June 4, 1913. Serial No. 771,695. (Cl. 15—17.)



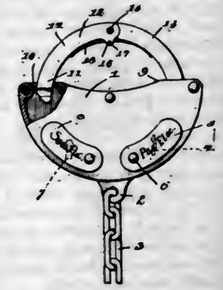
In a vacuum cleaning machine, a refuse box, a brush operable to loosen the dirt on the surface being cleaned, flexible shields partially inclosing said brush and projecting into said refuse box and contacting with the surface to be cleaned, and a plurality of bellows communicating with said box and operable successively whereby the refuse will be drawn into said box continuously.

1,112,278. AUTOMOBILE-SIGNAL. ROBERT G. FALCONER, Washington, D. C. Filed Sept. 14, 1912. Serial No. 720,353. (Cl. 177—337.)



In a signal apparatus, in combination, two pivots oppositely disposed in alinement, a lever fulcrumed at one end to each of said pivots, an electric contact plate mounted upon each of said levers flush with the opposite edges thereof, two fixed contacts arranged adjacent the opposite edges of the contact plates carried by said levers whereby the edges of each lever may engage with either of said pairs of contacts, a wire connecting the contact plates of said levers, a battery, a plurality of signals, a wire connecting one contact to one of said signal, arranged at the end of a series of signals, a wire leading from said last named signal to one side of the battery, shunt wires connecting the remaining signals with said wire leading to said battery, a wire leading from another signal to the contact opposite to said first named contact, a wire connecting said first named wire to the opposite side of said battery, a wire connecting one of the fixed contacts of the remaining lever with another of said signals, and a wire connecting the remaining fixed contact with the remaining signal.

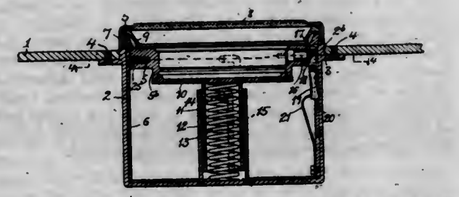
1,112,279. SWITCH-PADLOCK. HARRY H. FERRIS, Huntington Beach, Cal. Filed Jan. 27, 1914. Serial No. 814,817. (Cl. 70—105.)



1. A lock of the class described comprising a body, a shackle having its ends adapted for engagement with the body and being free from connection therewith throughout its intervening length, releasable means for securing one end of the shackle to the body, and independently operable means for securing the opposite end of the shackle detachably to the body, each end of the shackle being adapted to be disengaged from the body without disturbing the other end of the shackle in its engagement with the body.

2. A lock of the class described comprising a body having a pair of relatively spaced openings therein, a shackle including a pair of pivotally connected sections, each section being adapted to have its free extremity engaged within one of the body openings, lock mechanism provided within said body for operative engagement with the free end of one shackle section, a second lock mechanism provided within the body for operative association with the free end of the other shackle section, the said mechanisms being independently operable, and a spring connected with both shackle sections and being adapted to be placed under tension when both sections are locked to the body.

1,112,280. AUTOMOBILE CLOCK-CASE. CONOVER FITCH, Newton, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed May 19, 1913. Serial No. 768,445. (Cl. 58—56.)



1. The combination of a stem winding and stem set timepiece, and a mounting for the same, said mounting comprising telescopic members, the outer one of which is adapted to be secured to a wall, and to the inner one of which the timepiece is secured, the inner member being movable endwise out of the outer member to permit manipulation of said stem.

2. The combination of a wall, a timepiece, and a mounting for the timepiece, said mounting comprising an outer shell secured to the wall and having an open end substantially flush with the wall, and an inner member contained in said shell and movable endwise into and out of the open end of the latter, said timepiece being secured to said inner member adjacent to the open end of the shell and having a winding and setting stem, said stem being at the side of the timepiece, and the latter with the said inner member being movable outwardly with respect to the shell to give access to the stem.

3. An automobile clock case comprising a shell adapted to be mounted upon a wall or plate of the automobile structure, and having an open end passing through said plate, a watch mounting comprising in part a sleeve having a bearing within said shell, and being movable into and out of the same, and a winding and setting member connected with said mounting and brought into accessible position when the mounting is withdrawn from the shell.

4. The combination with a supporting wall, of a timepiece, having its face only visible at one side of said wall, a case for said timepiece comprising a shell projecting through the wall from that side at which the clock face is visible, and a mounting for the timepiece contained in said shell, said mounting being arranged for withdrawal to a certain extent from the shell to permit winding and setting of the timepiece.

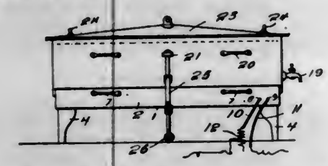
5. A case for a timepiece comprising a shell open at one end, a sleeve fitting slidingly within said shell, a mounting frame for a timepiece secured to said sleeve, a setting stem for the timepiece normally contained within the shell and rendered accessible by withdrawal of the mounting frame from the shell, yielding means tending to eject the mounting frame from the shell, and a positive lock adapted to be released at need for restraining the action of said yielding means.

[Claims 6 to 8 not printed in the Gazette.]

1,112,281. COOKING UTENSIL. MARTIN J. FLYNN, Portsmouth, Va. Filed Mar. 7, 1914. Serial No. 823,200. (Cl. 219—43.)

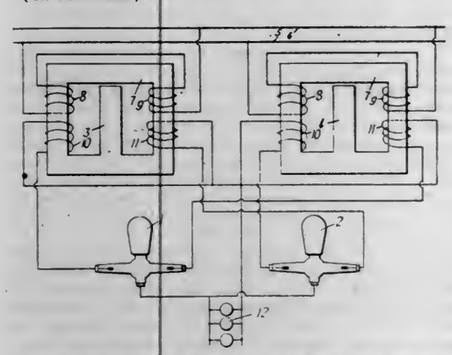
1. In a device of the character described, the combination with an electrical heating element, a receptacle, said

receptacle being provided with a central longitudinal trough, a drain tap at one end of the receptacle and located at the lower extremity of the trough to drain the receptacle, means to anchor the receptacle in place on the heating element and means to control the flow of current through the heating element and thereby control the heat generated thereby.



2. In a device of the character described the combination with a heating element comprising a plurality of insulated bars, heating coils wound on said bars, and means to control the flow of electrical current through the heating coils, and thereby control the heat generated therein, of a receptacle having a centrally located, longitudinally extending drain trough, a drain tap at one end of the drain trough, and a turnbuckle to removably secure the receptacle in position on the heating element.

1,112,282. RECTIFIER SYSTEM. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 21, 1912. Serial No. 705,013. (Cl. 171—253.)



1. The combination with two transformers each comprising two sets of primary and secondary coils, the mutual inductance between coils of the same set being greater than that between coils belonging to different sets, of two rectifying devices each of which is supplied from a secondary coil of each transformer.

2. The combination with two transformers each comprising two sets of primary and secondary coils, the mutual inductance between coils of the same set being greater than that between coils belonging to different sets, of two rectifying devices that are supplied from the secondary coils of the transformers.

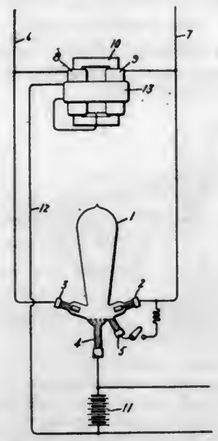
3. The combination with two transformers each comprising two secondary coils, of two rectifying devices each of which is supplied from a secondary coil of each transformer.

4. The combination with two transformers each comprising a core having a plurality of legs, and a primary and secondary coil upon each leg, of two rectifying devices each of which is supplied from a secondary coil of each transformer.

5. The combination with two transformers each comprising a core having a plurality of legs, and a leakage path, and a primary and a secondary coil upon each leg, of two rectifying devices each of which is supplied from a secondary coil of each transformer.

[Claims 6 and 7 not printed in the Gazette.]

1,112,283. SYSTEM OF ELECTRICAL DISTRIBUTION. JOHN J. FRANK, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 5, 1912. Serial No. 718,666. (Cl. 171—253.)



1. The combination of a winding, a vapor electric device having its anodes connected to terminals of said winding and its cathode to an intermediate point, an inductive coil in the cathode circuit, and a core forming a closed magnetic circuit with respect to said winding and an open magnetic circuit with respect to said coil.

2. The combination of a closed magnetic core, coils wound upon legs of said core and having a common connection, a vapor electric device having its anodes connected to the free terminals of said coils, and its cathode to the common connection and an inductive coil in the cathode circuit surrounding said core.

3. In a system of distribution, the combination of current supply leads, a rectifying device having anodes connected thereto, inductance coils connected across said leads and providing a point of intermediate potential, another inductance coil in series with the cathode and connected to said intermediate point, and a core common to all said coils providing a closed magnetic circuit for the coils in the anode circuit and an open magnetic circuit for the cathode coil.

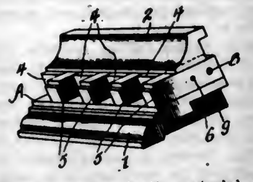
4. An electrical system, comprising the combination of a core, coils wound on separate legs of said core, a series connection for said coils, a device having unidirectional conductivity, connections between respective anodes of said device and terminals of said coils, a coil wound over the outside of said core as a whole and connections for said coil to a cathode of said device and to an intermediate point on said series connected coils.

5. An electrical system, comprising the combination of current supply leads, a magnetic core, inductance coils wound on separate legs of said core and connected across said leads and in series with each other, a device having a plurality of anodes connected respectively to terminals of said coils and a cathode connected to an intermediate point, and a coil in series with said cathode carrying unidirectional current and wound outside both the series connected coils and said core as a whole.

1,112,284. MOLD FOR PLASTIC MATERIAL. ERNESTO FUCHS, Guadalajara, Mexico. Filed May 5, 1911, Serial No. 625,137. Renewed June 7, 1913. Serial No. 772,423. (Cl. 25—123.)

1. In a mold for forming plastic material, a face plate contoured to form the general features of the object and composed of two sections spaced apart in parallel relation, blocks interposed between said sections and forming a series of openings spaced apart and extending from the rear to the front of the plate, spacing blocks slidingly

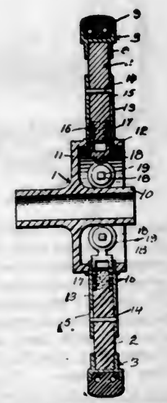
fitted in and adapted to be protruded through and withdrawn within said openings, said blocks being adapted to produce a succession of regular depressions, leaving thereby a series of regularly recurring projections of an ornamental character in the molded object.



2. In a mold for forming plastic material, a face plate contoured to form the general features of the object and composed of two sections spaced apart in parallel relation, blocks interposed between said sections and forming a series of openings spaced apart and extending from the rear to the front of the plate, spacing blocks slidingly fitted in and adapted to be protruded through and withdrawn within said openings, said blocks being adapted to produce a succession of regular depressions, leaving thereby a series of regularly recurring projections of an ornamental character in the molded object, and means for guiding said blocks when withdrawn from said openings.

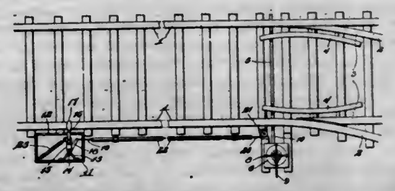
3. In a mold for forming plastic material, a face plate contoured to form the general features of the object and composed of two sections spaced apart in parallel relation, blocks interposed between said sections and forming a series of openings spaced apart and extending from the rear to the front of the plate, spacing blocks slidingly fitted in and adapted to be protruded through and withdrawn within said openings, said blocks being adapted to produce a succession of regular depressions, leaving thereby a series of regularly recurring projections of an ornamental character in the molded object, means for guiding said blocks when withdrawn from said openings, and means for limiting the movement of said blocks when protruded through said openings.

1,112,285. SPRING-WHEEL. HARRY S. GOVER, Bel Air, Md. Filed Feb. 25, 1914. Serial No. 820,869. (Cl. 152—31.)



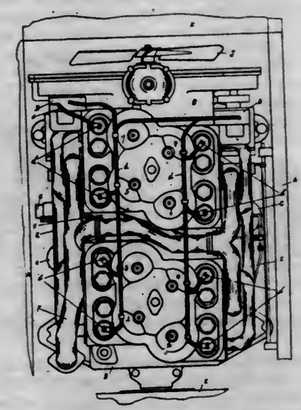
A spring wheel comprising a hub having a plurality of spaced screw threaded openings in the periphery thereof, tubular casings having their inner ends externally and internally threaded and turned in said screw threaded openings in the hub, a rim, a plurality of cylindrical spokes secured at their outer ends to said rim and positioned for sliding movement within the casings, means to slidably secure the spokes to the casings, the inner ends of the spokes being reduced to provide annular shoulders, helical expansion springs mounted on the reduced portions of the spokes and engaging the shoulders at their outer ends, externally threaded cup-shaped adjusting members turned within the externally threaded ends of the tubular casings, engaging the inner ends of the springs, and receiving the reduced ends of the spokes, and angular spaced projections on the inner faces of said adjusting members.

1,112,286. SIGNALING DEVICE. CHARLES W. GUILL, Phoenix, Ariz. Filed Mar. 26, 1913. Serial No. 756,955. (Cl. 104—12.)



In a switch structure, the combination with the switch points, of arcuate shaped metallic bars secured to the confronting faces of said points, a switch throwing rod disposed transversely of the track rails below the latter and connected with the under faces of said bars, and means for actuating said rod to throw the switch points to the desired position.

1,112,287. ENGINE. JOHN K. GUNN, Utica, N. Y. Filed Sept. 1, 1909. Serial No. 515,693. (Cl. 123—54.)



1. In an internal combustion engine, the combination with a crank shaft provided with a plurality of cranks angularly disposed with relation to each other, of a plurality of cylinder units each consisting of a casting comprising a plurality of vertical cylinder bores forming working cylinder chambers, said bores being staggered with relation to each other so that lines joining points on the axes thereof will form a rhomboid, and the axes of said bores or chambers being alternately disposed on opposite sides of the vertical plane of the crank shaft.

2. In an internal combustion engine, the combination with a crank shaft provided with a plurality of cranks so disposed with relation to each other as to provide an arrangement thereof in which the cranks will be 90° apart, of a plurality of cylinder units each consisting of a casting comprising a plurality of vertical cylinder bores forming working cylinder chambers, said bores being staggered with relation to each other so that lines joining points on the axes thereof will form a rhomboid, and the axes of said bores or chambers being alternately disposed on opposite sides of the vertical plane of the crank shaft.

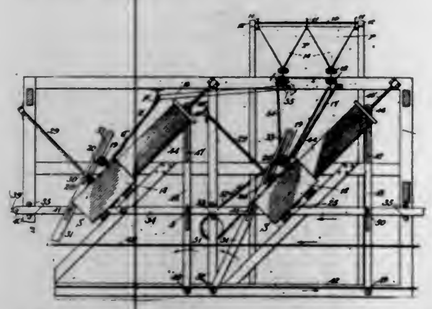
3. In an internal combustion engine, the combination with a crank shaft provided with a plurality of cranks

angularly disposed with relation to each other, of a plurality of cylinder units each consisting of a casting comprising a plurality of vertical cylinder bores forming working cylinder chambers, said bores being staggered with relation to each other so that lines joining points on the axes thereof will form a rhomboid, and the axes of said bores or chambers being alternately disposed on opposite sides of the vertical plane of the crank shaft, pistons working in said cylinder chambers, and piston rods connecting said cranks and pistons.

4. In an internal combustion engine, the combination with a crank shaft provided with a plurality of cranks angularly disposed with relation to each other, of a plurality of vertical cylinder bores forming working cylinder chambers, said bores being staggered with relation to and overlapping each other so that lines joining points on the axes thereof will form a rhomboid, and the said cylinder chambers being so disposed that their axes will be on opposite sides of the vertical plane of the said crank shaft.

5. In an internal combustion engine, the combination with a crank shaft provided with a plurality of cranks angularly disposed with relation to each other, of a plurality of vertical cylinder bores forming working cylinder chambers, said bores being staggered with relation to and overlapping each other so that lines joining points on the axes thereof will form a rhomboid, and the said cylinder chambers being so disposed that their axes will be on opposite sides of the vertical plane of the said crank shaft, pistons working on said cylinder chambers, and piston rods connecting said cranks and pistons.

1,112,288. PAPER CUTTING AND FOLDING MACHINE. FRANK P. HILDEBRANDT, Saugerites, N. Y. Filed Feb. 19, 1914. Serial No. 819,716. (Cl. 101—47.)



1. The herein described paper cutting and folding machine comprising, in combination, a plurality of independent folding devices, means to deliver paper in strips to said folding devices, each strip being folded along its longitudinal center, each folding device comprising a folding block and a pair of folding members operated at right angles to each other in succession and coöperating with the folding block so as to fold the paper in succession on different lines, and means to operate all of the folding devices simultaneously.

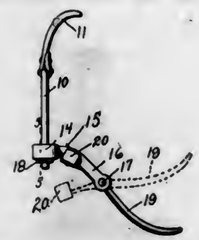
2. The herein described folding device comprising a block having a transverse slot substantially intermediate its length and perpendicular to its axis and another slot extending longitudinally therethrough and intersecting the first mentioned slot on a diagonal line, a removable stop block 25 normally closing one end of the transverse slot, a pair of folding members acting in succession in said slots to form successive folds in a napkin, said folding members operating at right angles to each other, a pair of pivoted arms connected to the folding members to operate them positively toward and from the block, and a reciprocating member serving to actuate the arms simultaneously.

3. The herein described folding device for paper napkins comprising a block having a tranaverse slot and a longitudinal slot intersecting the other substantially at the middle of the block, a stop block closing the lower edge of the first mentioned slot, a pair of folding members coöperating in succession with the slots aforesaid to successively fold a napkin, means to deliver paper in a strip to the folding device, means to sever paper in napkin lengths from the strip, and means to operate the folding members and cutting device simultaneously and at uniform rate whereby the napkins are folded and delivered from the folding device at regular intervals.

4. In a paper napkin folding machine, the combination of a series of folding devices, means to deliver strips of paper to the several devices, each strip being folded along its longitudinal center, said delivering means including guides leading to the several folding devices, said guides having sharp shearing shoulders, a roller common to all of said folding devices, cutting members carried by said roller and adapted to coöperate with said shoulders to sever napkin lengths from the several strips, one napkin for each rotation of the roller, a reciprocating member for each folding device adapted to engage a napkin thereon simultaneously with the severing thereof from tne strip, a bar carrying all of said folding members, and means for operating the paper delivering and paper cutting devices simultaneously with the reciprocation of the folding member bar.

5. The herein described paper napkin folding machine comprising, in combination, a plurality of independent folding devices, means to deliver paper in strips folded longitudinally to said folding devices, each folding device comprising a rectangular folding block having a transverse slot formed therethrough parallel to its ends, a flat rectangular tongue movable into and out of said slot, said block also having a longitudinal slot extending from one end to the other and intersecting the transverse slot in a plane at right angles thereto, a flat rectangular blade movable into and out of the longitudinal slot, means to reciprocate said tongue and blade in alternation in directions at right angles to each other, means to sever a napkin length from each strip adjacent the folding block at each reciprocation of said tongue, and means to operate all of the folding devices simultaneously and continuously.

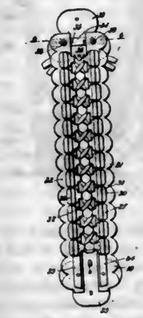
1,112,289. ANIMAL-POKE. WILLIAM HOGAN, Corinth, Ga. Filed Apr. 3, 1914. Serial No. 829,271. (Cl. 119—140.)



An animal poke comprising a U-shaped yoke member, a bridge piece detachably connected with the legs of said yoke, a laterally extending bifurcated arm carried by said bridge piece, a hook pivotally mounted in the bifurcated portion of said arm for relative movement with respect thereto, and a substantially U-shaped supporting member carried at the upper end of said hook and adapted to embrace said laterally extending arm to limit the movement of said hook in one direction.

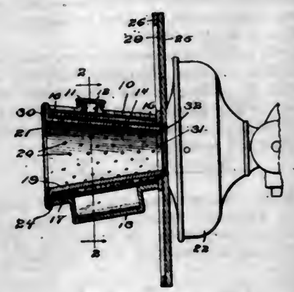
1,112,290. BOOT AND SHOE. JEPPE JEPPERSON, Salt Lake City, Utah. Filed Oct. 8, 1913. Serial No. 794,086. (Cl. 24—207.)

1. The combination of a boot or shoe having an opening in the upper and provided with a plurality of spaced guides along the edges of the said opening, a bar in the vamp at the lower end of the opening, and guide arms at opposite sides of the lower end of the said opening, and a tongue comprising two flexible strips, a member connecting the lower ends of the strips and provided with a plate having a hook adapted to engage the bar of the vamp, a member at the upper ends of the strips and provided with a slotted bar adjustably secured to the said strips, a plurality of clips secured to the strips and each having an eye and oppositely extending members engaging the said guides, and a lacing in the eyes of the clips.



2. The combination of a boot or shoe having an opening in the upper and provided with guides along the edges of the openings, and a bar in the vamp at the lower end of the opening, and a tongue comprising two flexible strips having metallic extensions at their lower ends, a member connecting the lower ends of the strips and provided with a plate having a hook extending through the member and adapted to engage the bar of the vamp, a member provided with a cross bar adjustably secured to the upper ends of the strips, a plurality of clips secured to the strips and having eyes and members engaging the said guides, and a lacing in said eyes.

1,112,291. SANITARY MOUTHPIECE. ED MONROE JENKINS, Italy, Tex. Filed Mar. 7, 1913. Serial No. 752,693. (Cl. 179—185.)



1. In a telephone transmitter mouth-piece, spaced inner, outer and intermediate shells, means permitting the introduction of disinfectant fluid between the outer and intermediate shells, a receptacle communicating with the space between the outer and intermediate shells positioned to receive such introduced disinfectant, a disseminating member covering the receptacle, and means permitting the discharge of fumes through the inner shell.

2. In a telephone transmitter mouth-piece, an outer shell, a shell within the outer shell formed in part of foraminous material, a receptacle disposed beneath the foraminous material means facilitating the introduction of disinfectant material into the receptacle, and a perforate inner shell spaced from the intermediate shell and provided with means for securing all of said shells to a transmitter.

3. In a telephone transmitter mouthpiece, the combination with an outer shell having means for introducing a liquid disinfectant, said shell being provided with a receptacle for receiving said disinfectant, and a perforated inner shell disposed within and in spaced relation to the outer shell for guiding the disinfectant into said receptacle.

4. In a telephone transmitter mouthpiece, the combination with an outer shell having means for introducing a liquid disinfectant, said shell being provided with a receptacle for receiving said disinfectant, a perforated inner shell disposed within and in spaced relation to the outer shell for guiding the disinfectant into said receptacle, and means interposed between said inner and outer shells to disseminate the disinfecting fumes passing into the inner shell through the perforations thereof.

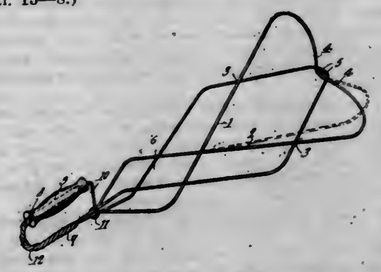
1,112,292. RAILWAY-TIE. ADAM KANGAS, Ishpeming, Mich. Filed June 1, 1914. Serial No. 842,043. (Cl. 238—4.)

1. A railway tie, comprising a strip of channel material having holes therein at each edge of each rail and the flanges of which are downwardly directed, a clamping member for each rail passed through the holes on the inner edges of said rails, and a clamping member for each rail passed through the holes at the outer edges of said rails, said first named clamping member holding said last named member in position, at each rail.

2. A railway tie, comprising a strip of channel material having holes therein at each edge of each rail and the flanges of which are downwardly directed, a clamping member for each rail passed upwardly through the holes on the inner edges of said rails, means for securing said clamping members to said tie, and a clamping member passed through the outer holes at the edge of each rail, said first named member locking said last named member in position.

3. A railway tie, comprising a strip of channel material having holes therein at each edge of each rail and the flanges of which are downwardly directed, a clamping member for each rail consisting of a yoke-shaped body member of metal and the ends of which are upwardly and thence inwardly directed and passed through corresponding holes to rest on the outer edge of the rail, and a clamping member consisting of a rod having a hook at one end adapted to be passed through a corresponding hole at the inner rail edge and rest thereon, and having an upwardly directed outer end passed through said tie, and a nut threaded on said end above said tie.

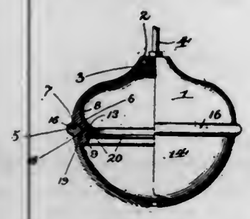
1,112,293. CARPET-BEATER. WOOD A. KELLER, Bloomsburg, Pa. Filed Jan. 26, 1914. Serial No. 814,524. (Cl. 15—8.)



A carpet beater comprising a beater head including several strands of wire, the strands converging to a common point at the inner end of the head and then being extended to provide a shank, the strands of the shank being twisted

and doubled to provide a rigid twisted guard lying in the axis of the beater head and a twisted outwardly-projecting support parallel with the guard, one strand of the said support being extended angularly from the outer end thereof and having a portion embracing the strands at the outer end of the guard, and a handle mounted upon the said support.

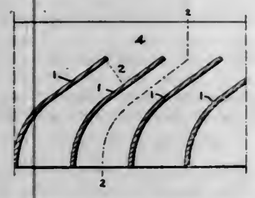
1,112,294. TANK BULB OR VALVE. IRWIN F. KEPLER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Oct. 23, 1912. Serial No. 727,398. (Cl. 4—5.)



1. A tank valve or bulb, comprising an upper substantially rigid section; a lower relatively flexible and elastic section formed of rubber; integrally-formed interlocking members carried by said sections, the members of said lower section tending, by reason of the elasticity thereof, to hug the members of the upper section; and a rigid internal support carried by said upper section adjacent to the joint between the two sections to prevent collapse of the bulb at the joint.

2. A tank valve or bulb, comprising an upper substantially rigid section; a lower relatively flexible and elastic section formed of rubber; integrally-formed interlocking members carried by said sections; and a flat ring located interiorly of the upper section adjacent to the lower marginal portion thereof and serving to prevent the parts from collapse.

1,112,295. STEAM-TURBINE NOZZLE. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 1, 1912. Serial No. 723,310. (Cl. 121—57.)

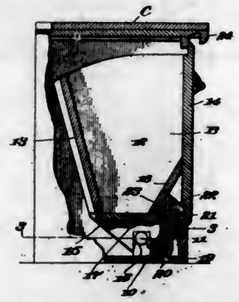


1. A steam turbine nozzle having its boundary walls extending to its outer end, and its partitions terminating at a distance from the exit end of said nozzle sufficiently far to permit the steam to expand to substantially the true counterpressure before emerging from between said boundary walls.

2. A steam turbine nozzle for varying counterpressure, having its boundary walls extending to its outer end, and its partitions terminating adjacent to the narrowest point in said nozzle, said point lying sufficiently far from the outer end to permit the steam to expand within the nozzle to substantially the true counterpressure.

3. A steam turbine nozzle for varying counterpressure having boundary walls extending to its exit end and partition walls terminating sufficiently far back from its exit end to permit free expansion of the steam in the nozzle to substantially the true counterpressure under all conditions of operation, the distance apart of the adjacent surfaces of adjacent partitions being uniform for a substantial distance back from their ends.

1,112,296. TILTING BIN. FREDERICK KYLE, Milton, Oreg. Filed Aug. 5, 1913. Serial No. 783,144. (Cl. 211—6.)



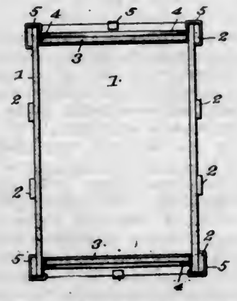
In a device of the class described, a casing open in front and having at the lower end of the front opening a transversely disposed cross piece, a cross bar secured within the casing on the bottom member thereof in rear of and parallel to the cross piece, said cross bar being provided at the ends thereof with pintles spaced from the bottom of the casing, and a bin having front and rear members, angularly disposed bottom members and side members extending below the front, rear and bottom members, said side members being provided with notches engaging the terminal pintles of the cross bar and of a depth exceeding the diameter of said pintles, and said side members being also provided adjacent to the front member with recesses having arcuate edges concentric with the pivotal axis of the bin and straight edges radial thereto.

1,112,297. MANUFACTURE OF CELLULOID OR LIKE SUBSTITUTES. LEON LOUIS THEODORE LABBÉ, Asnieres, France. Filed June 16, 1911. Serial No. 633,588. (Cl. 106—46.)

1. The herein described celluloid substitute, which is non-inflammable and insoluble in water, and which consists of a hardened mixture of a glycero-silicic jelly with an albuminous collo-silicate obtained by adding to an albuminoid solution a silicic solution.

2. The herein described process for the manufacture of a non-inflammable celluloid substitute insoluble in water, which consists in adding to an albuminoid solution a silicic solution having an excess of hydrochloric acid, subsequently adding a glycero-silicic jelly, hardening, drying and compressing the resulting product.

1,112,298. KEG. MAURICE LACHMAN, New York, N. Y., assignor to Lachman Manufacturing Company, New York, N. Y., a Corporation of Delaware. Filed June 28, 1912. Serial No. 706,324. (Cl. 229—67.)



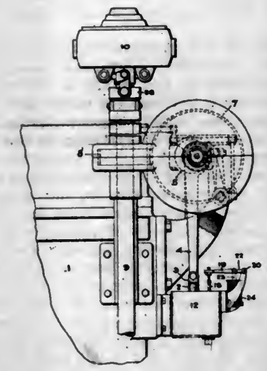
1. A container comprising a body of paper-like material, a paper hoop cemented to the periphery of the body, a head, a continuous metal band engaging said head and extending over the rim of this container to the outside of said paper hoop, said band being provided with a skirt adapted to engage the periphery of the body beyond the hoop and means for tying said skirt to said body.

2. A container comprising a body of paper-like material, a paper hoop cemented to the periphery of the body, a head, a continuous metal band engaging said head and extending over the rim of this container to the outside of said paper hoop, said band being provided with a skirt adapted to engage the periphery of the body beyond the hoop and a wire wrapped around said skirt to bind said band to said body.

3. A container comprising a body of paper-like material, a paper hoop secured to the periphery of said body, a head provided with a flange resting on the edge of said body and a metal band fastener on the exterior of said hoop and adapted to engage the under side of the same whereby the band is prevented from removal in one direction, the edge of said band being spun with the outer edge of the head flange to lock the two together.

4. A container comprising a body of paper-like material, a paper hoop secured to the periphery of said body near the end thereof, a head, a continuous metal band engaging said head and extending over a portion of said paper hoop and an annular metallic member covering said hoop, and means for maintaining said parts in the relation specified to retain said head within said body.

1,112,299. FUEL-PUMP. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 23, 1912. Serial No. 716,669. (Cl. 123—140.)

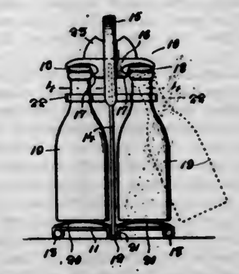


1. The combination with an internal combustion engine, of a fuel pump having a constant stroke, a suction valve therefor, a solenoid for holding said valve open, a rotary switch having a conducting segment of varying width, a relatively movable brush coöperating therewith, and a speed governor adapted to vary the point of contact between said switch and said brush.

2. The combination with an internal combustion engine, of a fuel pump having a constant stroke, a suction valve therefor, a solenoid for holding said valve open, a rotary switch operating in synchronism with said pump and consisting of a cylinder having a conducting segment of varying width, a brush movable along said cylinder, and a speed governor adapted to move said brush.

3. The combination with an internal combustion engine, of a fuel pump having a constant stroke, a suction valve therefor having an upwardly-extending stem, a rock-arm to push said stem downwardly and open said valve, a solenoid to actuate said arm, a rotary switch operating in synchronism with said pump, and a speed governor adapted to vary the length of time said switch closes the circuit of said solenoid during the forcing stroke of said pump.

1,112,300. BOTTLE-CARRIER. JOSEPH C. LIGEOUR, Fitzgerald, Ga. Filed Sept. 3, 1913. Serial No. 787,959. (Cl. 224—48.)



1. In a bottle carrier, the combination with a base, of a vertical partition carried thereby, springs on the base for supporting bottles adjacent the said partition, a handle carried by the partition, gripping members engaging the bottles, and means on the partition engaging the caps of the bottles for removing the same therefrom when the bottles are removed from the said base.

2. In a bottle carrier, the combination with a base for supporting bottles, of a partition carried by the base and having the bottles arranged on both sides thereof, members carried by the partition and engaging the caps of the bottles for removing the caps therefrom when the bottles are removed from the base, and gripping members carried by the partition and engaging the bottles to hold the same in engagement with the cap removing members.

3. In a bottle carrier, the combination with a base for supporting bottles having caps rigid thereon, of cap removing members engaging the caps of the bottles for removing the caps therefrom when the bottles are removed from the base, and gripping members for holding the bottles in cap removing position on the base.

4. In a bottle carrier, the combination with a base for supporting bottles having caps rigid thereon, of supporting ribs struck from the base and extending longitudinally thereto, a partition carried by the base and arranged to extend centrally thereto, with the bottles on both sides of the partition, and cap removing members carried by the partition and engaging the caps of the bottles for removing the caps therefrom when the bottles are removed from the base.

5. In a bottle carrier, the combination with a base for supporting bottles having caps rigid thereon, of supporting ribs struck from the base and extending longitudinally thereto, a partition carried by the base and arranged to extend centrally thereto, with the bottles on both sides of the partition, cap removing members carried by the partition and engaging the caps of the bottles for removing the caps therefrom when the bottles are removed from the base, and a handle having its ends connected to the ends of the partition.

[Claims 6 to 8 not printed in the Gazette.]

1,112,301. SANDING DEVICE FOR AUTOMOBILES. CHARLES L. LINCOLN, New York, N. Y. Filed Nov. 14, 1913. Serial No. 800,986. (Cl. 105—60.)

1. A sanding device for automobiles, comprising a rigid container adapted to contain a dry, non-packing material, a pipe secured to and leading from the said sand box, a

sleeve mounted to slide on the end of the said pipe and terminating in a nozzle, and manually controlled means connected with the said sleeve to impart a sliding motion to the same to project the nozzle farther beyond the end of the pipe and into close proximity to the roadway immediately in front of the rear drive wheel of the automobile.

2. A sanding device for automobiles, comprising a container adapted to contain fine gravel, dry, coarse sand or like dry non-packing material, a pipe leading from the said container and inclined downwardly and rearwardly to terminate a distance from the rear or drive wheels of the automobile, a sleeve slidable on the rear portion of the said pipe and terminating in a nozzle, and manually-controlled means for imparting a sliding motion to the sleeve, the latter when in retracted position having its nozzle a safe distance above the roadway and the sleeve when in extended position having its nozzle in close proximity to the roadway immediately in front of the rear drive wheel of the automobile.

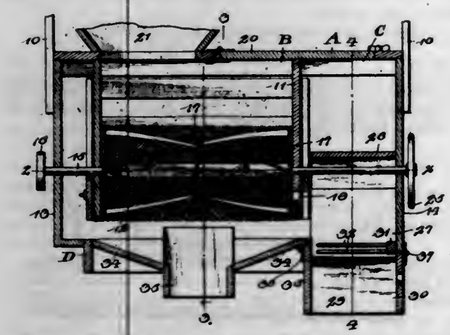
3. A sanding device for automobiles, comprising a container adapted to contain fine gravel, dry, coarse sand or like dry non-packing material, a pipe leading from the said container and inclined downwardly and rearwardly to terminate a distance from the rear or drive wheels of the automobile, a sleeve slidable on the rear portion of the said pipe and terminating in a nozzle, a valve normally closing the said nozzle, means for opening the valve on sliding the sleeve rearward, and manually-controlled means for imparting a rearward and return sliding motion to the said sleeve.

4. A sanding device for automobiles, comprising a container adapted to contain fine gravel, dry, coarse sand or like dry, non-packing material, a pipe leading from the said container and inclined downwardly and rearwardly to terminate a distance from the rear or drive wheels of the automobile, a sleeve slidable on the rear portion of the said pipe and terminating in a nozzle, a valve pivoted on the said nozzle and normally closing the same, a rod connected with the said valve and provided with spaced shoulders, a fixed stop for engagement by the said shoulders to automatically open and close the valve, and manually-controlled means for imparting a sliding movement to the said sleeve.

5. In combination, an automobile having running boards, a container detachably mounted on the under side of each of the said running boards, delivery means adjustable rearwardly with respect to the container for delivering the contents of the said container to the roadway in front of the rear wheels of the automobile, and a controlling device for moving the said delivery means and under the control of the operator.

[Claims 6 to 12 not printed in the Gazette.]

1,112,302. SEPARATOR AND GRADER. JOHN W. LINKHART, North Vernon, Ind. Filed Apr. 19, 1913. Serial No. 762,259. (Cl. 130—17.)



1. In a separator and grader, a casing having end members and a transverse partition, a driven shaft supported for rotation in the end members and extending through the partition, a screen supported in one compartment of the casing and having a semi-circular bottom portion, arms extending radially from the shaft within said compartment above the screen, spirally disposed wings carried by the arms in spaced relation to the surface of the screen, a housing adjacent to and communicating with the other compartment of the casing, a driven fan supported for rotation in said housing, an inclined deflector supported to receive the impact of the air current generated by the fan, and a bran chute to receive and guide material thus deflected, the partition member being provided with an opening for the discharge of material over the tail end of the screen.

2. In a separator and grader, a casing having end members and a transverse partition, a screen supported in one compartment of the casing between the partition and one end member, said partition being provided with an opening for the passage of material discharged over the screen, means for feeding material over the screen in the direction of the discharge opening, resilient fingers mounted on the end member of the casing and having free ends extending in the direction of the discharge opening and terminating beneath the latter, an inclined deflector supported above the fingers, and means for generating an air current and for projecting the same in the direction of the deflector.

3. In a separator and grader, a casing having compartments, a screen supported in one compartment, means for feeding material over the screen and discharging it into the other compartment, resilient fingers supported in said other compartment in spaced relation to the screen compartment and having free ends extending in the direction of said compartment to receive material discharged over the screen, a deflector supported above the fingers, and means for deflecting an air current and for projecting it against the deflector to separate light from heavy material.

4. In a separator and grader, a substantially rectangular casing having a transverse partition, a screen supported in one compartment of the casing, a driven shaft extending longitudinally through the casing and having radially extending arms, spirally disposed blades carried by said arms in materially spaced relation to the upper surface of the screen, a bottom member supported detachably beneath the screen and having cant boards and a discharge chute, resilient fingers supported in the other compartment of the casing at a distance from the screen compartment and having free ends extending in the direction of said compartment to receive material discharged over the screen, an inclined deflector supported above the fingers, and means for generating an air current and for projecting it against the deflector, and means for guiding the separated material discharged over the screen.

5. In a separating and grading machine, a casing, supporting members whereby said casing may be suspended, a bottom member detachably connected with the casing and having cant boards and a detachable chute, an outlet spout hinged upon one end of the casing and having its free end detachably connected with the detachable bottom member, and a bran chute hingedly supported on one side of the casing.

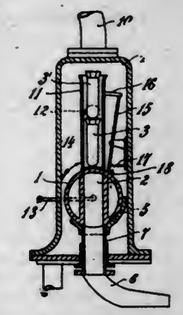
1,112,303. ROLLER-BEARING WITH DUPLEX ROLLS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed May 23, 1912. Serial No. 699,100. (Cl. 64—62.)

1. In a roller bearing, the combination, with a hub and casing having guide-ribs thereon at the middle of their length, of duplex rolls having each two sections formed of spirally wound strands, spindles fitted rotatably to the sections and having each an integral collar upon one end and a non-integral collar upon the opposite end, whereby the roll-sections can be applied to the spindles separately at opposite sides of the ribs, washers fitted between the ribs and the adjacent chisel-shaped ends of the roll-strands to prevent abrasion by such chisel-shaped ends, and the collars being arranged and operated to tie the rolls together upon the spindles and thus resist end thrust.

2. In a roller bearing, the combination, with a hub and casing having in one end cylindrical roll-seats d' and a' and in the other end sleeves s and t forming similar roll-seats and provided at their inner ends with annular guide-ribs c' and b', of duplex-rolls having each two sections, spindles fitted rotatably to the sections and having each

an integral collar upon one end and a non-integral collar upon the opposite end, whereby the roll-sections can be applied to the spindles separately at opposite sides of the ribs, washers fitted between the ribs and the ends of the rolls, and the collars being arranged and operated to the the rolls together upon the spindles and thus resist end-thrust.

1,112,304. APPARATUS FOR TUBULAR TRANSFERRING SYSTEMS. LEOPOLD LOEBENBERG, Rio de Janeiro, Brazil. Filed July 22, 1914. Serial No. 852,526. (Cl. 243—19.)



1. In a cylinder transferring device, the combination of a casing having pipes leading from its upper and lower ends and forming cylinder passages, a receiving pipe disposed in the casing with its upper open end below the upper casing pipe to receive cylinders therefrom, a rotary transfer drum mounted at the lower end of the receiving pipe and having a diametrical chamber closed at one end and adapted to register with the receiving pipe, and a tubular member below said drum, with which the said drum chamber is also adapted to communicate, communicating at its lower end with the lower casing pipe.

2. In a cylinder transferring device, the combination of a casing having pipes leading from its upper and lower ends and forming cylinder passages, a receiving pipe disposed in the casing and with its upper open end below the upper casing pipe to receive several cylinders therefrom in superposed relation, a rotary transfer drum mounted at the lower end of the receiving pipe and having a diametrical chamber closed at one end and adapted to register with the receiving pipe, means to engage a cylinder in the receiving pipe and prevent the same from dropping into the transfer drum, and a tubular member below said drum, with which said drum chamber is also adapted to communicate, communicating at its lower end with the lower casing pipe.

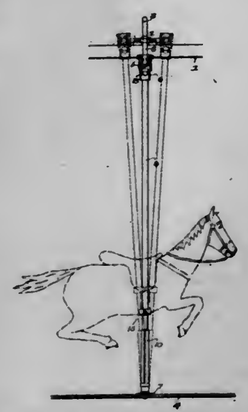
3. In a cylinder transferring device, the combination of a casing having pipes leading from its upper and lower ends and forming cylinder passages, a receiving pipe disposed in the casing with its upper open end below the upper casing pipe to receive cylinders therefrom, a rotary transfer drum mounted at the lower end of the receiving pipe and having a diametrical chamber closed at one end and adapted to register with the receiving pipe, and a tubular member below said drum, with which the said drum chamber is also adapted to communicate, communicating at its lower end with the lower casing pipe, a shoe carried by the upper end of said tubular member and snugly engaging the lower portion of the periphery of said drum.

4. In a cylinder transferring device, the combination of a casing having pipes leading from its upper and lower ends and forming cylinder passages, a receiving pipe disposed in the casing with its upper open end below the upper casing pipe to receive cylinders therefrom, a rotary transfer drum mounted at the lower end of the receiving pipe and having a diametrical chamber closed at one end and adapted to register with the receiving pipe, and a tubular member below said drum, with which the said drum chamber is also adapted to communicate, communicating at its lower end with the lower casing pipe, a shoe carried by the upper end of said tubular member and snugly engaging the lower portion of the periphery of said drum, and means whereby to adjust said tubular member longitudinally to increase and decrease the tension of the said shoe against the drum.

5. In a cylinder transferring device, the combination of a casing having pipes leading from its upper and lower ends and forming cylinder passages, a receiving pipe disposed in the casing with its upper open end below the upper casing pipe to receive cylinders therefrom, a tubular member below and spaced from the receiving pipe and communicating at its lower end with the lower casing pipe, and a transfer member mounted to move in the space between the said receiving pipe and the said tubular member and adapted to close one while in communication with the other.

[Claim 6 not printed in the Gazette.]

1,112,305. ANIMAL MOUNT OR SUPPORT FOR CAROUSELS. ROBERT LUSSE and JOSEPH LUSSE, Philadelphia, Pa. Filed Jan. 3, 1914. Serial No. 810,153. (Cl. 46—27.)



1. The combination of a longitudinally extensible rod carrying a spring at the bottom, a socket for the lower end of the rod, means locking the rod thereto and held in place by said spring, and a movable connection for the upper end of said rod.

2. The combination of a longitudinally extensible rod, lugs at each end of said rod, a socket for the lower end of the rod having means for engaging the lugs to lock the rod thereto, and a movable connection for the upper end of said rod engaging the lugs of the same.

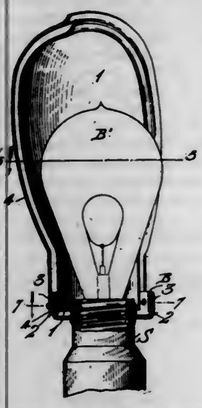
3. The combination of a pair of telescoping rods one of which is longitudinally movable with respect to the other, a movable connection for the upper rod, a spring carried at the bottom of the lower rod, a socket receiving the lower rod, and means held in place by said spring for locking the rod to said socket.

4. The combination of a pair of telescoping rods one of which is longitudinally movable with respect to the other, lugs carried by said rods at the outer terminals of the same, a movable connection engaging the lugs at the upper end of the upper rod, a socket receiving the lower end of the lower rod and having provision for engaging the lugs of the same, and means for locking the rod thereto.

5. The combination of a supporting rod carrying a spring at the bottom, retaining means for said bottom end, a depending socket, and lugs carried by said rod, said socket having grooves for the passage of the lugs through the socket and seats for the reception of said lugs upon giving the rod a quarter turn, said spring serving to hold said lugs in their seats.

[Claims 6 to 20 not printed in the Gazette.]

1,112,306. ELECTRIC INCANDESCENT LAMP. ROBERT ADONIS MAHAN, Jonesboro, Ark. Filed Mar. 19, 1914. Serial No. 825,848. (Cl. 240—53.)



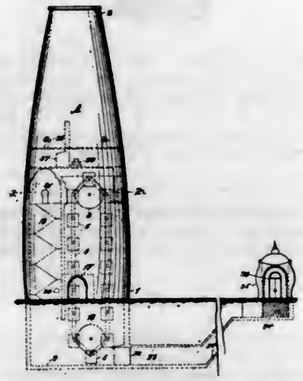
1. An incandescent lamp having a shade bracket mounted thereon, a hollow semi-pear-shaped shield section fixed to said bracket, a band revolubly mounted on said bracket, and a similarly shaped shield section secured to said band, revoluble therewith and adapted to telescopically and laterally engage the other section.

2. An incandescent lamp socket having an annular shade bracket mounted to revolve on said socket, a shade section fixed to the inner face of said bracket, said bracket having an annular seat in its outer face, a band revolubly mounted in said seat, and a shade section fixed to said band said sections conforming to the shape of an electric light bulb and adapted to telescope laterally.

3. The combination with a supporting member, and an incandescent electric lamp socket having a shank, of a universal joint connection between said socket and support comprising a tubular casing having a reduced central portion with enlarged chambers at its opposite ends, means for securing one end of said casing to said support, a lamp connecting element having a thimble at one end fitting in the reduced portion of said casing with a head revolubly mounted in the outer end of said casing, a coil spring arranged around said thimble in said chamber at the outer end of said casing, a binding element mounted in said casing and engaging said thimble, and means at the outer end of said connecting element for frictionally engaging the shank of said socket.

4. The combination with a supporting member and an incandescent lamp socket having a shank, of a universal joint connection between said socket and support comprising a tubular casing having a reduced central portion with enlarged chambers at its opposite ends, means for securing said casing to said supporting member, a lamp connecting member having a thimble extending into the reduced portion of said casing, and a head fitting in the outer chamber thereof, a coil spring arranged in said chamber between said head and the inner end wall of said chamber, a headed bolt extending through said thimble with the head thereof engaging the inner end wall of the chamber at the inner end of said casing, and laterally spaced longitudinally extending apertured clamping ears at the outer end of said lamp connecting element, and means for connecting said ears to the shank of said socket.

1,112,307. AMUSEMENT DEVICE. EUGENIO CHOUTEAU MANTEROLA, Rancagua, Chile. Filed Mar. 11, 1914. Serial No. 823,924. (Cl. 46—70.)



1. An amusement device for creating the impression of being projected to a distant planet or through space, comprising a cannon-like structure having an entrance, passenger-conveying means therein, means for producing sounds of explosion in the structure, and means of exit.

2. An amusement device for creating the impression of being projected to a distant planet or through space, comprising a cannon-like structure having an entrance, passenger-conveying means therein, means for producing sounds of explosion in the structure, a chamber or hall to which the passengers are conveyed by the said conveying means, said hall being adapted to contain persons representing inhabitants of the distant planet and representations of buildings, vegetation and the like, and means of exit from the said chamber.

3. An amusement device for creating the impression of being projected to a distant planet or through space, comprising a cannon-like structure having an entrance, passenger-conveying means therein, means for producing sounds of explosion in the structure, means of exit, means for producing and discharging smoke from the top of the structure, and means for illuminating the discharged smoke.

4. An amusement device for creating the impression of being projected to a distant planet or through space, comprising a cannon-like structure having an entrance, passenger-conveying means therein, means for producing sounds of explosion in the structure, means of exit, means for producing and discharging smoke from the top of the structure, means for illuminating the discharged smoke, and a detonating device in the upper portion of said structure.

5. An amusement device for creating the impression of being projected to a distant planet, comprising a cannon-like structure, a landing or station in the upper portion thereof, a landing or station in the base of the structure, means whereby passengers can reach the upper landing, a series of movable cars for conducting the passengers to the lower landing, mechanism for controlling the movement of the cars, a chamber under ground and communicating with the base of the structure, stairs leading upwardly from the chamber, and an exit building at the head of the stairs.

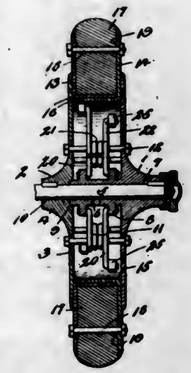
[Claims 6 and 7 not printed in the Gazette.]

1,112,308. RAKE-CLEANER. CHARLES E. MCCORMICK, Independence, Mo., assignor of one-half to B. W. McCormick, Independence, Mo. Filed Mar. 12, 1914. Serial No. 824,220. (Cl. 55—146.)

1. The combination with a rake consisting of a handle, a head on said handle and teeth carried by the head of a shank connected to the handle of the rake, a U-shaped bracket connected to said shank, a raker cleaner connected to said bracket and having plates extending between the teeth of the rake, and a spring bearing upon the shank of the cleaner to cause same to automatically discharge the rakings at the end of each backward stroke of the rake.

2. The combination with a rake consisting of a handle, a head on one end of said handle and teeth carried by said head of a shank, a U-shaped bracket connected to the shank, a bar having outwardly extending cleaner plates connected thereto, said bar being attached to said bracket and a leaf spring connected to the handle of the rake and having its free end bearing upon the shank of the cleaner to move the cleaner plates toward the ends of the teeth when the rake is lifted from the ground.

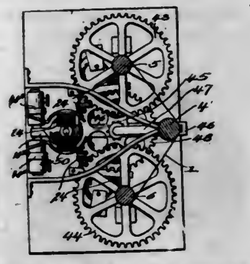
1,112,309. SPRING-WHEEL. OSCAR F. MILLER, New Milford, Pa. Filed Nov. 29, 1913. Serial No. 803,764. (Cl. 152—44.)



1. A wheel comprising a hub section including members each formed to provide a plate portion and a hub portion, one of the members having an inwardly projecting sleeve extension formed with spaced annular ribs, bolts securing the members together, a bearing member mounted for radial movement between the plate portions, coil springs mounted on the securing bolts and terminally connected to the ribs on the sleeves and to the bearing members.

2. A wheel comprising a hub section including members each formed to provide a plate portion and a hub portion, one of the members having an inwardly projecting sleeve extension formed with spaced annular ribs, bolts securing the members together, a bearing member mounted for radial movement between the plate portions, coil springs mounted on the securing bolts and terminally connected to the ribs on the sleeves and to the bearing members, the alternate springs being secured to opposing ribs.

1,112,310. AUTOMATIC ELECTRICAL ANNOUNCER. ARTHUR JOHN WILLIAM MUNDEN and JOHN MITCHELL MUIR, Dunedin, New Zealand. Filed June 19, 1912. Serial No. 704,662. (Cl. 40—53.)



1. In an indicating apparatus, the combination, with a traveling band, and winding rollers to which the band ends are connected, each of said rollers being provided with a gear; of a main circuit; a circuit closer therefor; an electro-magnet included in said circuit; an armature associated with said magnet; a shunt circuit; a motor, a contact and a pair of reversing magnets included in the shunt circuit; a gear shiftable alternately in opposite directions by the reversing magnets, to bring it into mesh alternately with the gears on said rollers; gear connections between the motor shaft and the shiftable gear for driving the latter; a contact finger carried by said armature for engagement with said contact when the first-named magnet is energized, to close said shunt circuit; and a reversing switch for controlling said reversing magnets.

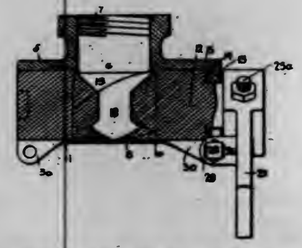
2. In an indicating apparatus, the combination, with a traveling band, and winding rollers to which the band ends are connected, each of said rollers being provided with a gear; of a main circuit; a circuit closer therefor; an electro-magnet included in said circuit; an armature associated with said magnet; a shunt circuit; a motor, a contact and a pair of reversing magnets included in the shunt circuit; a gear on the motor shaft; a rocking armature associated with the reversing magnets; a spindle carried by the second-named armature and provided with a pair of gears, one of which is constantly in mesh with the gear on the motor shaft, while the other gear is adapted to mesh alternately with the gears on said rollers; a contact finger carried by the first-named armature for engagement with said contact when the first-named magnet is energized, to close said shunt circuit; and a reversing switch for controlling said reversing magnets.

3. In an indicating apparatus, the combination, with a traveling indicating band, and winding rollers to which the band ends are connected, each of said rollers being provided with a gear; of a rocking lever provided with a gear adapted to mesh alternately with the first-named gears; electro-magnetic means for operating said lever; a motor; gear connections between said motor and the second-named gear; a shunt circuit wherein said motor and said lever-operating means are included; an electro-magnetically controlled device for stopping said band; a main circuit wherein said stopping device is included; a circuit closer for said main circuit; and means associated with said stopping device for closing said shunt circuit when said main circuit is closed.

4. In an indicating apparatus, the combination, with a traveling indicating band, and winding rollers to which the band ends are connected, each of said rollers being provided with a gear; of a rocking lever provided with a gear adapted to mesh alternately with the first-named gears; electro-magnetic means for operating said lever; a motor; gear connections between said motor and the

second-named gear; a shunt circuit wherein said motor and said lever-operating means are included; an electromagnetically controlled device for stopping said band; a main circuit wherein said stopping device is included; a circuit closer for said main circuit; means associated with said stopping device for closing said shunt circuit when said main circuit is closed; a signal; a signal circuit; and means associated with said stopping device for closing said signal circuit when said main circuit is closed.

1,112,311. NOZZLE. CHESTER JOHN MYERS, Cortland, N. Y. Filed Jan. 25, 1913. Serial No. 744,145. (Cl. 137—85.)



1. In a nozzle, a casing having ports, two valve members in the casing, each of the valve members having a projection at its side extending toward the other valve member for seating against the other projection when one of the valve members is rotated relatively to the other.

2. In a nozzle, a casing having ports, two valve members in the casing, each of the valve members having a spiral projection at its side, extending toward the other valve member, the spiral projections being normally spaced apart, so that one of the valve members may be rotated relatively to the other to close the nozzle.

3. In a nozzle, a casing having ports, two valve members in the casing, each of the valve members having a bearing surface, and a projection at its side, extending toward the other valve member, the end of each of the projections being disposed between the bearing surface on the companion valve member and the casing.

4. In a nozzle, a casing having ports, two valve members in the casing, each of the valve members having a bearing surface, and a spiral projection at its side, extending toward the other valve member, the ends of the spiral projections being disposed between the bearing surfaces on the companion valve members and the casing.

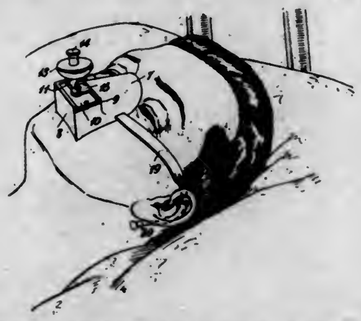
5. In a nozzle, a casing having ports, two valve members in the casing, each of the valve members having a cone-shaped surface, and a projection at its side extending toward the other valve member, the ends of the projections being disposed between the cone-shaped surfaces and the casing.

[Claims 6 to 10 not printed in the Gazette.]

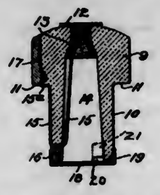
1,112,312. CHLOROFORMER. JOSÉ SIMEON OLIVA, Regla-Habana, Cuba. Filed Dec. 16, 1913. Serial No. 807,009. (Cl. 128—13.)

1. In a chloroformer, a nose piece having an extension forming a continuation of said nose piece, said extension being open at the top and bottom thereof; slides adapted to close the top opening of the extension; a receptacle for anesthetic engaged by said slides and whereby the same is secured to said extension; a container for absorbent material fitting into said extension through the lower opening, said receptacle having a valve-controlled discharge into said container, said container having a fine mesh wall forming an outlet from said container into said nose piece, said nose piece having means whereby the same can be properly secured and maintained on the patient.

2. In a chloroformer, a nose piece having an extension, said extension having an opening at the top thereof and under-cut grooves adjacent the opening; two superposing slides fitting into said groove, each of said slides having a longitudinal slot extending substantially to the middle of the same, said slides normally closing the upper opening of said extension; a receptacle for an anesthetic, having a stem engaged by the slots of said slides and whereby said receptacle is secured to said extension; a container for absorbent material within said extension and removably associated therewith, said receptacle having a valve in said stem for controlling the discharge from said receptacle into said container, said container having a fine mesh wall forming an outlet therefrom into the nose piece; and resilient means adapted to engage the ears of the patient for maintaining said nose piece in proper position on the patient.



1,112,313. FUSE-CAPSULE. HENRY T. PAISTE, Philadelphia, Pa., assignor to H. T. Paiste Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 5, 1913. Serial No. 771,953. (Cl. 175—277.)



1. The combination in a fuse capsule of a tubular body of insulating material closed at one end and having two portions of different external diameters; a terminal plate on one end of said body; a conductor including a relatively fusible portion connected to the terminal within the body and extending therefrom over the external surface of said body; with a transparent cap normally closing the open end of said body; and means for holding the cap in place.

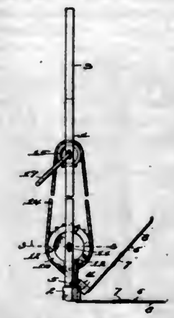
2. The combination in a fuse capsule of a tubular body of insulating material closed at one end and having two portions of different external diameters; a terminal plate on one end of said body; a conductor including a relatively fusible portion connected to the terminal within the body and extending therefrom over the external surface of said body; with a transparent cap normally closing the open end of said body; and a flanged ring cemented to the body for holding the cap in place.

3. The combination in a fuse capsule of a tubular body of insulating material closed at one end and including two portions of different external diameters, the portion of smaller diameter being open at its extremity and having a plurality of notches in its edge; a terminal plate on the end of the body adjacent its large diameter portion; a conductor having a relatively fusible portion and connected to said terminal, extending through the body, through one of the notches in the edge of the smaller diameter portion thereof and over the external surface of said body; with a cap closing the small diameter end of the body and coöperating with certain of the notches therein to form air passages.

4. The combination in a fuse capsule of a hollow body having two portions of different diameters and closed at its portion of large diameter; a terminal plate on the end of the body adjacent said latter portion, the end of the small diameter part of the body being provided with notches extended from its edge in its external surface; a conductor having a relatively fusible portion and extending from the terminal plate through the body, through one of said notches and over the external surface of the body; with a cap closing the open end of the body.

5. A fuse capsule consisting of a body of insulating material having an open end provided with notches in its edge extended longitudinally of said body in the external surface thereof; with a cap closing said open end and having a portion extending over the outside surface of the body and coöperating with the notches therein to form air passages opening laterally out of the end of the body, extending longitudinally of said body and discharging laterally at points distant from the end thereof; with a fuse in the body.

1,112,314. CARPET-BEATER. MARTIN J. PALMER and WILLIAM H. BURTON, Beardstown, Ill. Filed Oct. 16, 1913. Serial No. 795,525. (Cl. 15—8.)



1. In a portable carpet beater, a base bar adapted to rest directly upon the carpet *in situ*, a rocker bar parallel to the base bar, spring hinge connections between the base bar and the rocker bar, a beater carried by the rocker bar, an upright frame of which the base bar forms a part and which has a handle at its upper end, and manually operated means carried by said upright frame for periodically moving said rocker bar about its hinge connections as an axis.

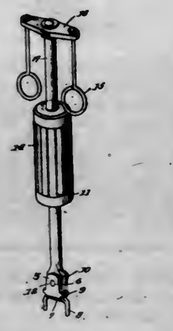
2. In a portable carpet beater, a base bar adapted to rest directly upon the carpet *in situ*, a rocker bar parallel to the base bar, hinge connections between the base bar and the rocker bar, a beater carried by the rocker bar, an upright frame of which the base bar forms a part and which has a handle at its upper end, and manually operated means carried by said upright frame for periodically moving said rocker bar about its hinge connections as an axis.

3. In a portable carpet beater, a base bar adapted to rest directly upon the carpet *in situ*, a rocker bar parallel to the base bar, spring hinge connections between the base bar and the rocker bar, a beater carried by the rocker bar, an upright frame of which the base bar forms a part and which has a handle at its upper end, and manually operated means carried by said upright frame for periodically moving said rocker bar about its hinge connections as an axis, the means including a wheel provided with laterally projecting studs and an angularly disposed arm carried by the rocker bar for engagement by said studs.

4. In a portable carpet beater, a base bar adapted to rest directly upon the carpet *in situ*, a pair of juxtaposed rocker bars parallel to the base bar, hinge connections between the rocker bars and the base bar, beaters carried by the rocker bars, an upright frame of which the base bar forms a part and which has a handle at its upper end, and manually operated means carried by the frame and common to said rocker bars for periodically and alternately moving them about their hinge connections as axes.

5. In a portable carpet beater, a base bar adapted to rest directly upon the carpet *in situ*, a pair of juxtaposed rocker bars parallel to the base bar, spring hinge connections between the rocker bars and the base bar, beaters carried by the rocker bars, an upright frame of which the base bar forms a part and which has a handle at its upper end, and manually operated means carried by the frame and common to said rocker bars for periodically and alternately moving them about their hinge connections as axes, the means including a wheel having laterally projecting studs at each side thereof and angularly disposed arms carried by the rocker bar for engagement by said studs.

1,112,315. VALVE-GRINDING TOOL. HENRY RASCOE PARSONS, Sharpsville, Pa. Filed Jan. 26, 1914. Serial No. 814,350. (Cl. 51—4.)



1. A valve grinding tool attachment, comprising side walls in spaced relation and converging downwardly, lugs extending from the lower ends of the walls in spaced and parallel relation, bridges connecting said walls intermediate their ends, said walls provided with alining openings for receiving a pin.

2. A valve grinding tool attachment, comprising side walls, lugs depending therefrom and bridges connecting said walls intermediate their ends, said bridges adapted to limit the movement of a tool relative to the attachment.

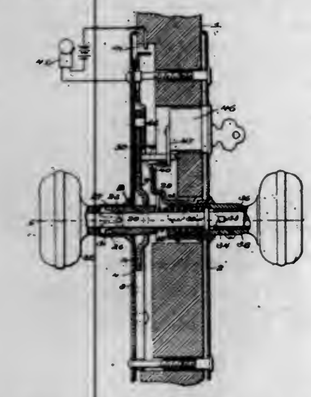
3. The combination with a screwdriver shaped tool-head, of an attachment comprising side walls occurring in spaced relation to each other, and converging downwardly, lugs depending from the lower ends of said walls and occurring in spaced and parallel relation, bridges connecting said walls intermediate their ends, said walls provided with openings for receiving a pin, said tool-head provided with an opening for receiving said pin, said opening being of a greater diameter than the diameter of the pin, whereby to effect a loose connection between said head and pin, the distance apart of said walls being greater than the thickness of said tool-head, said bridges adapted to be engaged by said tool-head for limiting the rotary motion thereof relative to the attachment.

4. The combination with a substantially flat tool-head, of an attachment comprising side walls embracing said tool-head in spaced relation thereto, a pin extending through said side walls and said tool-head, bridges connecting said side walls adapted to limit the movement of said tool-head relatively to said attachment, and lugs on said attachment for engaging a valve.

5. The combination with a tool-head of an attachment comprising side walls adapted to embrace the tool-head, means for loosely connecting said walls to said tool-head, means for limiting the movement of said tool-head relative to said attachment and means carried by said attachment for engaging a valve.

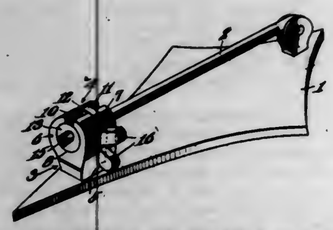
[Claim 6 not printed in the Gazette.]

1,112,316. ALARM-LOCK. LEONARD PERCIVAL, Tacoma, Wash., assignor to Alarm Lock Company, a Corporation of Washington. Filed May 8, 1909. Serial No. 494,791. (Cl. 177—203.)



In an alarm latch mechanism, a latch, a shaft, and connections for manipulating said latch from the shaft, outer and inner knobs having shanks for rotating the shaft, an alarm, means including a member having a yoke portion bearing against the shank of one of the knobs and actuated by the rotation of the outer knob for sounding the alarm, the other knob and the shaft being capable of disengagement from the first mentioned knob, and means for locking the shaft and one of the knobs against rotation.

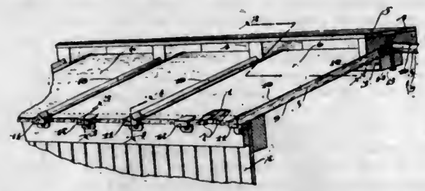
1,112,317. SAFETY-CATCH FOR PINS. HENRY W. PETERS, Boston, Mass. Filed July 21, 1913. Serial No. 780,299. (Cl. 24—157.)



1. The combination with a body and a pin pivoted thereto, of a catch embodying a bearing and a tumbler, the bearing comprising a base secured to the body and having a relatively thick outer ear and an inner ear, the ears having openings and slots leading thereto, the tumbler embodying a disk having oppositely projecting relatively long and short trunnions and having a radial finger piece, the disk and its trunnions having a radial slot, and the relatively long and short trunnions being journaled through the openings of the relatively thick outer ear and the inner ear respectively.

2. A safety catch for jewelry pins comprising a bearing and a tumbler, the bearing embodying a base having diverging outer and inner ears, the outer ear being relatively thick, the ears having openings and slots leading to the openings, the tumbler embodying a disk adapted to be held between the ears and having oppositely projecting relatively long and short trunnions, the disk having a radial finger piece, the disk and its trunnions having a radial slot, the relatively long trunnion being adapted to be inserted through the opening of the relatively thick outer ear, and the ears then being adapted to be bent together to engage the inner ear over the relatively short trunnion, and to permit the base to be secured to a member, whereby the relatively thick ear is held against flexing outwardly.

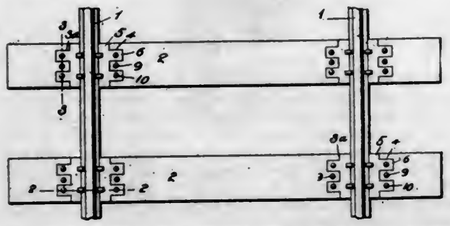
1,112,318. OUTSIDE METAL ROOF FOR CARS. EDWARD POSSON, Chicago, Ill. Filed Sept. 20, 1913. Serial No. 790,885. (Cl. 108—5.)



1. The combination with a car body, of an outside metal roof structure comprising transverse gutters, roof plates having downturned edges seated on said gutters, caps overlying said gutters and covering the gaps between the adjacent ends of said roof plates, the said gutters being open at their outer ends and projecting beyond the sides of the car, and clips secured to the sides of the car and embracing the ends of said gutters and of said caps and supporting the edges of said roof sheets with freedom for movements in the roof plane.

2. The combination with a car body, of an outside metal roof structure comprising transverse gutters, roof plates having downturned edges seated on said gutters, caps overlying said gutters and covering the gaps between the adjacent ends of said roof plates, saddle blocks resting on the intermediate portions of said caps, a running board secured on said saddle blocks, threaded plates secured to the intermediate portions of said gutters, and nut-equipped bolts passed through the roof structure, the said gutters, the said caps, and the said saddle blocks, and having threaded engagement with the said threaded plates.

1,112,319. RAILWAY. WILLIAM PRATT, Grand Valley, Colo. Filed Mar. 18, 1914. Serial No. 825,526. (Cl. 238—5.)



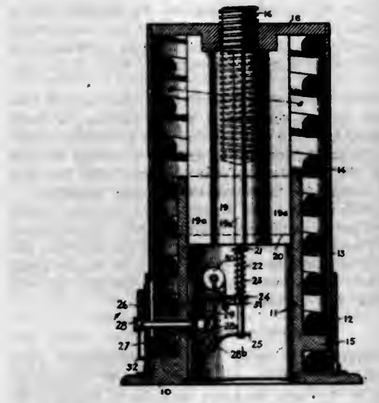
1. In a railway, the combination of a metallic sleeper or tie having a top wall and side walls and also having an opening in its top wall extending throughout its width, an anchor plate arranged between the side walls and under the top wall of the tie and the opening in said top wall, bolts extending through and connecting the top wall of the tie and the anchor plate, a chair snugly occupying the opening in the top wall of the tie and resting flush with the upper side of the tie and having a seat that receives a rail, bolts extending through and connecting the chair and the anchor plate, and rail-holding bolts engaging the rail base and extending through and connecting the chair and the anchor plate.

2. In a railway, the combination of a rail, a metallic sleeper or tie having a top wall and side wall and also having an opening in said top wall extending throughout the width of the tie and sub-openings extending in opposite directions from said openings and longitudinally of the tie, an anchor plate arranged below the top wall and between the side walls of the tie and also below the opening and sub-openings in said top wall, means connecting the anchor plate to said top wall, a chair snugly occupying the said opening and sub-openings in the top wall of the tie, means connecting the reduced portions or tongues of the chair with the anchor plate, and rail-holding means engaging the base of the rail and connecting the rail chair and the anchor plate.

3. The combination in a railway, of a rail, a sleeper or tie having an opening in its upper side extending throughout its width and also having sub-openings extending in opposite directions from said opening and longitudinally of the tie, and a rail chair receiving the rail and snugly occupying the opening and sub-openings of the tie and arranged flush with the upper side of the tie and connected with the rail and the tie.

4. In a railway, the combination of a metallic sleeper or tie having a top wall and side walls and also having an opening in its top wall extending throughout its width, an anchor plate arranged between the side walls and under the top wall of the tie and the opening in said top wall, bolts extending through and connecting the top wall of the tie and the anchor plate, a chair snugly occupying the opening in the top wall of the tie and resting flush with the upper side of the tie and having a seat that receives a rail; said seat being provided with transverse corrugations, a cushion interposed between the chair and the tie, bolts extending through and connecting the chair and the anchor plate, and rail-holding bolts engaging the rail base and extending through and connecting the chair and the anchor plate.

1,112,320. WAGON-SCALE. WILLIAM CARLISLE PRICE, Middleton, Idaho. Filed Aug. 1, 1913. Serial No. 782,446. (Cl. 73—46.)

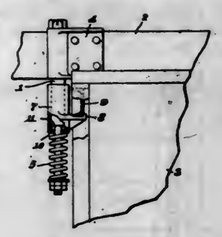


1. In a weighing scales of the character indicated, a base having a cylinder rising therefrom, a yieldingly supported outer cylinder spaced from the first cylinder and provided with a head, a vertical jack screw operating in the said head, a depending member on the head, a guide head in the first cylinder, in which guide head the depending member has movement, a spring-pressed spindle supported in the inner cylinder, a movable indicator device, and operative connections between the indicator device and the spindle.

2. In a weighing scales of the character described, a base, an inner cylinder on said base formed with a spiral flange at the interior, an outer cylinder, a spiral spring disposed between the cylinders, convolutions of the spring engaging said flange, a head on the outer cylinder resting on the spring, a vertical jack screw extending through said head and having threaded engagement therewith, and indicating means arranged to indicate the movements of the head by the jack screw.

3. In a weighing scales of the character described, a base having a cylinder thereon and an outer cylinder having a head, a compression spring supporting said head and cylinder, said head having a depending member, a spindle in the inner cylinder beneath the said depending member, a spring normally tending to raise the spindle, a dial on the outer cylinder, a pointer movable over said dial and having a spindle extending to the interior of the scales, and actuating means connecting the two spindles.

1,112,321. BATTERY-CRADLE-SUPPORTING MECHANISM FOR VEHICLES. FRANK E. QUEENEY, New York, N. Y., assignor to General Vehicle Company, Incorporated, a Corporation of New York. Filed Oct. 3, 1913. Serial No. 793,133. (Cl. 100—267.)



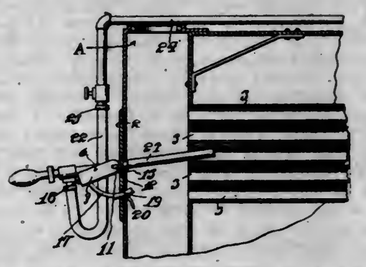
1. A battery cradle supporting mechanism for vehicles comprising vertical members attached to the frame of the vehicle adjacent the ends of the cradle, a spring surrounding and attached at its lower end to the lower end of each of said vertical members, and a rotatable hook member for engaging the battery cradle carried on the upper end of each spring, said hook member being adapted to be rotated into and out of engagement with the battery cradle.

2. A battery cradle supporting mechanism for vehicles comprising vertical members attached to the frame of the vehicle adjacent the ends of the cradle, a rotatable and vertically movable hook member for engaging the battery cradle guided in its movements by each of said vertical members, and a spring carrying each of said hook members, said hook members being adapted to be rotated into and out of engagement with the battery cradle.

3. A battery cradle supporting mechanism for vehicles comprising vertical rods depending from the frame of the vehicle adjacent the ends of the cradle, a spring surrounding and attached at its lower end to the lower end of each of said rods, and a sleeve carrying a hook portion slidable on and rotatable about each vertical rod and supported by the spring thereon whereby said hook portion may be rotated into and out of engaging position.

4. The combination with a vehicle and a battery cradle of means for attaching the cradle to the vehicle comprising depending members carried by the frame of the vehicle, springs carried by the depending members, and hooks carried by said springs and guided in their movements by said depending members, said hooks being adapted to be turned into and out of engagement with the cradle.

1,112,322. FLUE-CLEANER. ELZA H. REITER, Elgin, Ill. Filed June 3, 1912. Serial No. 701,343. (Cl. 110—173.)



The combination with a flue door formed with an opening therein for the passage of a tube cleaning device and a second opening for the passage of a segmental rack bar, of a tube cleaning device, a support for said device comprising a U-shaped frame, angular bolts pivotally connecting the leg portions of the frame to the door and at opposite sides of the first mentioned opening, so that the frame may swing freely on the angular bolts, a segmental rack bar adapted to adjustably engage with the wall of the second opening in the flue door, said bar having a shank projecting through a relatively large aperture in the cross bar of the

U-shaped frame so that said shank may have a limited amount of play in the aperture, and means for adjustably securing the shank portion of the rack bar to the cross bar of the frame.

1,112,323. EXIT-DOOR CONTROL. WALTER I. RESNIKOFF, New York, N. Y. Filed Mar. 18, 1914. Serial No. 825,648. (Cl. 70—120.)

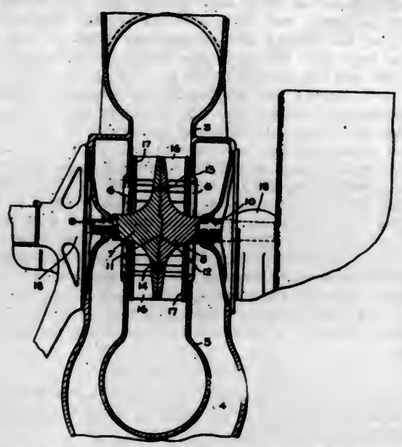
1. In an exit-door control, a door adapted to open exteriorly; a pedal mounted to swing to and from the floor on the inner side of the door; a door bolt carried by the free end of the pedal; means for guiding the bolt on the door frame; resilient means normally raising the free end of the pedal from the floor whereby the bolt engages the door, said free end of the pedal being adapted to move toward the floor when a predetermined weight is placed thereon, thus disengaging the bolt from the door; means adapted to project through and engage the pedal when the free end thereof is depressed toward the floor and the door is open, and retain said pedal in said depressed position; and means positioned intermediate said first mentioned means and the door whereby when said door is closed said first mentioned means release the pedal, thus raising the free end of the pedal from the floor and locking the door by means of the bolt.

2. In an exit-door control, a door adapted to be opened exteriorly; a pedal pivotally connected with one side to the floor, the side free to move being adjacent the door; a bolt pivotally connected to the pedal adjacent the side free to move; means for guiding the bolt on the door frame; means carried by the door adapted to be engaged by said bolt, resilient means normally raising the free side of the pedal whereby the bolt locks the door, the movable side of the pedal adapted to be depressed to the floor by a predetermined weight placed on the pedal whereby the bolt unlocks the door, said pedal having apertures therein; catches carried by the floor adapted to project through said apertures when the pedal is depressed; a resilient member associated with the catches and normally tending to force said catches into engagement with said pedal when the same is depressed; and a slide positioned intermediate the door and said catches, said slide being movable by the spring engaging the catches when the door is open and, by the door when the same is moved to the closing position, substantially as and for the purpose set forth.

1,112,324. IMPELLER FOR CENTRIFUGAL COMPRESSORS AND PUMPS. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 28, 1914. Serial No. 815,062. (Cl. 230—11.)

1. In a device of the class described, a rotor comprising a shaft and a web portion, said shaft and web portion being cast in two parts, the line of division being in a plane at substantially right angles to the axial line of the shaft.

2. In a device of the character described, a rotor cast in two sections, each section comprising a web portion and a shaft portion extending at right angles to the plane of the web portion, and means for fastening the two sections together.



3. In a device of the class described, an impeller and a shaft cast integral therewith, said impeller and shaft being cast in two parts, the line of division being substantially on the central vertical plane through the web of the impeller.

4. In a device of the class described, a rotor cast in two sections, each section comprising a web portion, a shaft portion merging into the web portion and gradually thickened at the point of juncture to present a curved surface for directing the fluid, vanes cast integral with the web section, and means for fastening the sections together.

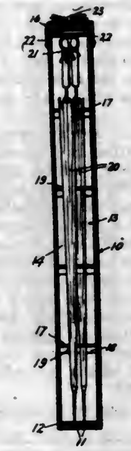
5. In a device of the class described, an impeller which is cast in two parts, each part having a shaft cast integral with it, there being a socket in one of the parts of the impeller and a projection on the other which is snugly fitted into the socket, and means that extend through the web of the impeller for uniting the parts.

1,112,325. SHIPPING-BOX FOR UMBRELLAS AND CANES. SAMUEL H. ROBERTS and GEORGE W. SCHAEFER, New York, N. Y.; said Schaefer assignor to Richard W. Roberts, Brooklyn, N. Y. Filed July 9, 1913. Serial No. 778,072. (Cl. 206—46.)

1. A shipping box of the class described, comprising an elongated receptacle, closing means for the ends of the receptacle, an open frame fitted therein, partitions held between the sides of said frame and having depending portions secured thereto, said partitions having vertically alined openings for receiving articles to be held, a top for said frame, cords carried by the top for connecting articles held within the partitions, and means for securing the frame in the receptacle.

2. A shipping box of the class described, comprising an elongated rectangular receptacle, closing means for the ends of the receptacle, a rectangular frame fitted therein, a plurality of spaced parallel partitions held between the sides of said frame and having depending portions secured thereto, said partitions having vertically alined openings for receiving the articles to be held, means to secure the articles to the frame with the ends of the articles engaged with the ends of the frame, and means for detachably holding said frame in the receptacle.

3. A shipping box for umbrellas and the like, comprising an outer receptacle having end flaps forming reinforcing members to prevent piercing of the ends of the umbrellas therethrough, a frame removably mounted in said receptacle, a plurality of spaced partitions held in said frame, said partitions each having diagonally opposite openings therethrough, the openings being disposed in alined series with respect to the length of the box and each series of openings gradually decreasing in size toward one end of the box, whereby the edge walls of the openings will frictionally engage and hold the umbrellas in the box, means for closing the ends of the frame, and means carried by the frame for anchoring the umbrellas.



4. In a shipping box for umbrellas, an outer receptacle of elongated form, closures for the ends of said receptacle having a plurality of thicknesses of material, a plurality of spaced parallel partitions held in said receptacle and having depending portions for securing the same in position at their ends, said partitions having pairs of alined series of openings therethrough gradually decreasing in diameter toward one end of the receptacle and adapted to receive umbrellas therein in spaced relation, the tapered formation of the umbrellas in connection with the coverings thereof frictionally engaging the edge portions of the openings to hold the umbrellas against lateral and longitudinal displacement while the end closures prevent penetration of the umbrellas therethrough, and means carried by the receptacle for positively holding one closure over the handle portions of the umbrellas.

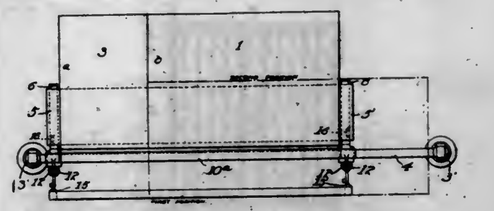
5. A shipping device for umbrellas, comprising an elongated rectangular support, a plurality of spaced parallel partitions held between the sides of said support and having depending portions secured thereto, said partitions having each a pair of circular apertures diagonally disposed with respect to each other, the apertures in the partitions gradually and successively decreasing in size toward the bottom of the support for receiving the umbrellas and holding the same in position by binding contact of the covers thereof with the edge walls of the apertures, and means carried by the support for additionally holding the umbrellas from displacement.

1,112,326. CLICKING-MACHINE. CHARLES H. ROPER, Belmont, Mass., assignor to Hood Rubber Co., Watertown, Mass., a Corporation of Massachusetts. Filed July 25, 1914. Serial No. 853,212. (Cl. 164—25.)

1. In combination with the cutting block and presser head of a clicking machine, an extension table or shelf at the side of said cutting block and stock holding means shiftable with relation to said table and shelf.

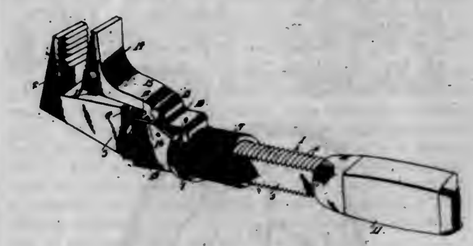
2. In combination with the cutting block and presser head of a clicking machine, stock holding means in proximity to said cutting block and having a length in excess of the length of the cutting block, and shiftable in relation thereto.

3. In combination with the cutting block and presser head of a clicking machine, a horizontal track, a support for uncut stock slidably supported from said track, stock gripping means in proximity to the edge of the cutting



block and also slidably supported from said track, and means for operating said grippers.

1,112,327. WRENCH. ORSON MONROE ROSE, Medford, Oreg. Filed Mar. 13, 1914. Serial No. 824,489. (Cl. 81—92.)

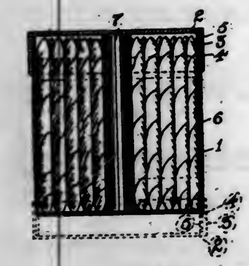


A wrench including a body having a stationary jaw, said body having one of its ends formed with a straight wall providing a shoulder, the body below the shoulder being provided with a longitudinally extending shank having two of the opposite walls thereof threaded, an operating sleeve having a threaded bore arranged upon the shank and coöperating with the threads thereof, said sleeve having an annular flange for one of its ends, a carriage arranged over the shank opposite the shouldered wall of the body, said carriage having a throat receiving the flange of the operating sleeve, the carriage having a transverse annular opening and being provided at the rear wall of the opening with an upstanding member forming a shoulder, a movable jaw including a body which is arranged over the body of the stationary jaw, the body of the movable jaw having its end terminating in a downturned tail, the lower portion of which being rounded and adapted to be received within the rounded openings in the carriage and the said tail, above its rounded portion, adapted to contact with the upstanding wall of the carriage, the body of the movable jaw having a longitudinal channel, a flat spring having one of its ends secured within the channel, the opposite end of the spring bearing upon the body of the stationary jaw, a yoke surrounding one of the threaded faces and two of the sides of the shank and adapted to have its side walls contact with the tail of the movable jaw, and means for removably securing the yoke to the carriage.

1,112,328. CONTAINER FOR STOGIES. GEORGE HENRY SCHMUNK, Cranberry township, Butler county, Pa., assignor to Pittsburgh Stogie & Cigar Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 29, 1912. Serial No. 693,925. (Cl. 131—11.)

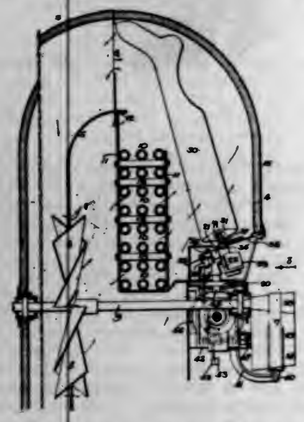
A container for the vertical packing of stogies consisting of a body having a constant diameter and a cover provided with a depending flange of sufficient capacity to receive either the top or the bottom of the said body, said flange being provided with an internal shoulder to limit the insertion of the top or bottom of said body therein, and

a loose support adapted to be held in place by the stogies and to extend from the bottom of said container to the



cover thereof to prevent longitudinal crushing of said stogies, substantially as and for the purpose described.

1,112,329. STOCKING-DRIER. WALTER M. SCHWARTZ and HARRY COULSTON, Philadelphia, Pa., assignors to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 17, 1913, Serial No. 768,272. Renewed Feb. 24, 1914. Serial No. 820,690. (Cl. 34—12.)



1. The combination in a stocking drier, of a bed; a carrier arranged to travel thereon; a stocking form mounted on the carrier; a drying chamber arranged to receive the stocking forms and having a portion overhanging the bed and above the carrier, said drying chamber having inlet and outlet openings for the forms, and a slot in the underside of the overhanging portion connected with said openings so that, as the carrier is traversed over the bed, the form, with a stocking thereon, will travel through the drying chamber.

2. The combination of a bed; a carrier; means for traversing the carrier over the bed; a stocking form mounted on the carrier and connected therewith by a spindle; a drying chamber having a portion overhanging the rear of the bed and above the carrier, said overhanging portion having a longitudinal slot in its underside and having inlet and outlet slots for the passage of the form, said longitudinal slot being narrow and so located that the spindle which connects the form with the carrier will travel in the slot.

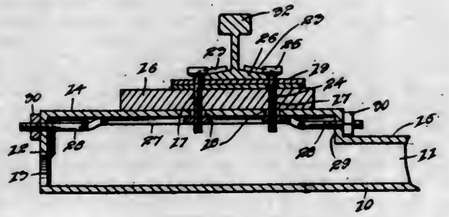
3. The combination in a stocking drier, of a casing inclosing the drying chamber and having a slotted overhanging portion at one side to allow for the movement of the stocking form within the drier; a vertical partition in the casing; a transverse shaft having a fan thereon located in an opening in the upper end of the partition to allow for the circulation of air around the partition; and a heating coil located in the chamber at one side of the partition for heating the air as it circulates in the drying chamber.

4. The combination of a bed; an endless guideway therein; carriers mounted in the guideway; stocking forms mounted on the carriers; shafts having cams thereon for traversing the carriers in the guideway; a drying chamber located at the rear of the bed and overhanging the rear portion of the guideway, the overhanging portion having a longitudinal slot therein for the passage of the connection between the carrier and its form; a driving shaft; a fan thereon for circulating the air in the chamber; means for heating the air as it circulates; and mechanism whereby the cam shafts are driven from the fan shaft.

5. The combination in a drier, of a casing; means for heating the air circulating in the casing; a bed; an endless guideway in the bed; carriers arranged to travel in the guideway; a bearing bracket on the head; a clamp having a spindle mounted in the bearing; a stocking form secured to the clamp; a drying chamber having an overhanging portion extending over the rear of the bed; a longitudinal slot on the underside of the overhanging portion through which the clamp spindle extends; a horizontal shaft passing through the drying chamber; a fan on said shaft by which the air in said chamber is circulated; a cam shaft; a cam thereon; a worm wheel on the cam shaft; a secondary shaft; a worm thereon meshing with the worm wheel; and means for driving the secondary shaft from the fan shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,112,330. HOLLOW METAL TIE. WILLIAM J. SEELEY, Kansas City, Mo. Filed Mar. 18, 1914. Serial No. 825,493. (Cl. 238—5.)



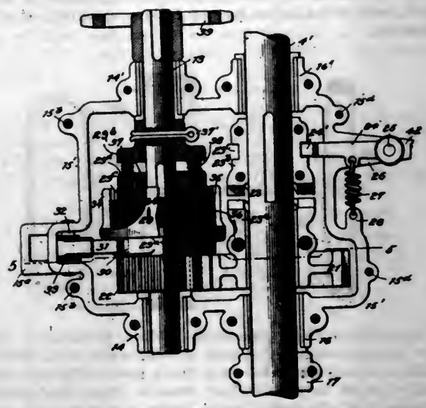
A railway tie comprising a body, cushions disposed over the ends of said body, pairs of rail base clamping members disposed over said cushions, securing bolts extending through said rail base clamping members and cushions, means for anchoring said securing means, and means for adjusting said anchoring means longitudinally of said tie.

1,112,331. CABLE-REELING MECHANISM FOR ELECTRIC TRACTION SYSTEMS. FRANK L. SESSIONS, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Feb. 20, 1904, Serial No. 194,590. Renewed Feb. 23, 1909. Serial No. 479,515. (Cl. 242—91.)

1. In a cable reeling mechanism for an electric locomotive, the combination with a cable reel, track wheels and a rotating axle secured to the track wheels, of a train of power transmitting devices interposed between the reel and the axle and comprising a friction clutch, the elements of which are held in yielding engagement with each other, a ratchet wheel carried by the clutch element operatively farther from the reel, and a pawl adapted to engage the teeth of the ratchet and prevent the rotation of the last said clutch element in one direction.

2. In an electric traction system, the combination of a separate and independent wheeled truck adapted to be detachably connected with an electric locomotive, an electric cable reel suitable mounted upon the truck, power transmitting mechanism for controlling the operation of

said reel in the direction to wind up the cable thereon including a uni-directional drive positive clutch connected to the track wheels, a friction clutch the elements of which are normally held in forced contact with each other, and means for holding the element of the friction clutch which is operatively farther from the reel against rotation in one direction.



3. In a cable reeling mechanism for an electric locomotive, the combination with a cable reel adapted to wind up and pay out a cable, of mechanism for controlling the rotation of the reel comprising a rotating shaft and a train of power transmitting devices interposed between the shaft and the reel and comprising a uni-directional drive positive clutch and a friction clutch, one element of which can rotate in the direction to turn the reel to wind up the cable and is held from turning in the opposite direction, whereby the friction between the clutch elements operated to oppose the rotation of the reel in cable paying out direction.

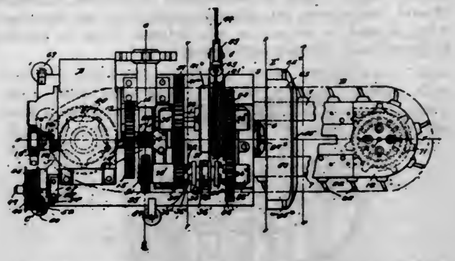
4. In a cable reeling mechanism for an electric locomotive, the combination with a cable reel adapted to wind up and pay out a cable, of mechanism for controlling the rotation of the reel including a pair of friction elements normally held in forced contact with each other and arranged to rotate together in one direction to turn the reel to wind up the cable, and a clutch in the train of power transmitting devices connecting one of said friction elements with the source of power, means for holding the last mentioned friction element against rotation in the direction to turn the reel to pay off the cable, and means for throwing the said clutch into or out of operation.

5. In an electric locomotive cable reeling mechanism, the combination of a cable reel adapted to wind up and pay out a cable, of mechanism for controlling the rotation of the reel comprising a pair of power transmitting friction elements normally held in forced engagement with each other, a uni-directional clutch for transmitting power to the element operatively farther from the reel, and a means for locking the last said element against rotation in the direction opposite to that in which it is rotated by the clutch.

[Claims 6 to 24 not printed in the Gazette.]

1,112,332. MINING-MACHINE. FRANK L. SESSIONS, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Original application filed Mar. 23, 1910, Serial No. 551,068. Divided and this application filed June 16, 1910, Serial No. 567,201. Renewed Sept. 18, 1913. Serial No. 790,563. (Cl. 125—14.)

1. In a mining machine, the combination of a bed frame, a cutter frame projecting from the inner end of the bed frame, a series of cutters mounted upon said cutter frame, means for bodily propelling the machine transversely to the coal face to initially advance the cutters under the coal, a rigid guide slidably mounted on the cutter frame, said guide being constructed to engage the floor of the mine, and means for fixing said guide in position on the mine floor.



2. In a mining machine, the combination of a bed frame, a cutter frame projecting from the inner end of the bed frame, a series of cutters mounted upon said cutter frame, means for bodily propelling the machine transversely to the coal face to initially advance the cutters under the coal, a guide mounted permanently on the cutter frame to slide longitudinally thereof, and means for anchoring said guide.

3. In a mining machine, the combination of a bed frame, a cutter frame projecting from the inner end of the bed frame, a series of cutters mounted upon said cutter frame, means for bodily propelling the machine longitudinally to make the initial cut under the coal and laterally to undercut the coal along its face, and a guide mounted slidably upon the cutter frame and adapted to be fixed in position to guide the cutter frame during the initial cut and to abut against the inner end of the bed frame and the face of the coal as the machine is propelled laterally.

4. In a mining machine, the combination of a bed frame, a cutter frame projecting from the inner end of said bed frame, a series of cutters mounted upon the cutter frame, means for guiding the cutter frame as it is advanced longitudinally, a draft cable extending from the rear side of the bed frame inward to an anchor, and means for winding up said cable to advance the machine longitudinally.

5. In a mining machine, the combination of a bed frame, a cutter frame projecting from the inner end of said bed frame, a series of cutters mounted upon the cutter frame, a draft cable, a winding drum therefor mounted on the bed frame, a plurality of guide pulleys for the cable on the bed frame whereby the cable may be extended from the front side of the machine along the coal face to propel the machine laterally or may be extended from the rear side of the machine toward the coal face to advance the machine longitudinally, and means for guiding the cutter frame as it is advanced longitudinally.

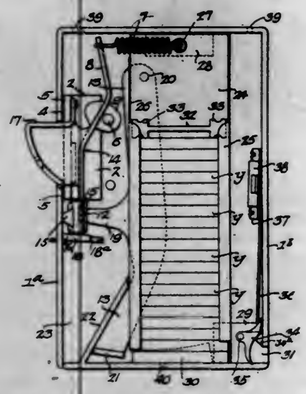
[Claims 6 to 12 not printed in the Gazette.]

1,112,333. VENDING-MACHINE. WILLIAM C. SHARKEY, Philadelphia, Pa., assignor to Clarence A. Goslin, Philadelphia, Pa. Filed Dec. 27, 1913. Serial No. 808,972. (Cl. 194—88.)

1. The combination in a vending machine, of a casing having a coin slot; an operating lever, extending edgewise substantially parallel with the wall of said casing adjacent the slot and having its edge portion below the slot recessed to form an abutment shaped to engage the edge and one face of a coin and coöperate with a part of the casing to temporarily support said coin; with an ejecting lever pivoted adjacent the first lever and having a portion intermediate its ends extended across the operating lever, said portion including a projecting part formed to be engaged and moved by the latter lever when it moves in one direction and operatively connected to the operating lever by the coin when said lever moves in the opposite direction.

2. The combination in a vending machine, of a casing having a coin slot; with a pair of pivoted levers within the casing, one of which extends edgewise substantially parellel with and is spaced from an adjacent wall of the

casing with a portion of its edge below said slot provided with a recess, the other lever having an arm extending from an intermediate portion across the first lever and projecting into the recess thereof so as to be moved thereby under predetermined conditions, a portion of said casing and the adjacent portion of the first lever being formed to support a coin between them in position to operatively connect said levers.



3. The combination in a vending machine of a casing having a coin slot; an operating lever extending edgewise substantially parallel with and supported adjacent one wall of the casing, said lever having a portion of its edge below said slot provided with a recess and having a slotted portion formed to coöperate with a part of the casing to support a coin in a position adjacent said recess; with an ejecting lever pivotally mounted at its upper end and having its lower end formed to eject an article, said ejecting lever having a right angled extension intermediate its ends projecting across the operating lever and turned into the recess thereof in position to be moved directly by said lever under certain conditions, and through the medium of the coin under other conditions.

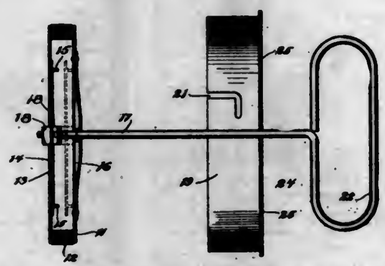
4. The combination in a vending machine of a casing having a coin slot; an operating lever extending edgewise substantially parallel with and supported adjacent one wall of the casing, said lever having a portion of its edge below said slot provided with a recess and including a slotted portion coöperating with a portion of the casing to support a coin adjacent said recess; an ejecting lever pivotally mounted at its upper end and having its lower end formed to eject an article, said ejecting lever having a right angled extension intermediate its ends projecting across the operating lever and turned into the recess thereof in position to be operatively connected to said lever through the coin, said operating lever being pivotally mounted between its ends; and a spring connected to the upper end of the operating lever and to the casing.

5. The combination in a vending machine of a casing having a coin-supporting abutment; a lever mounted in the casing having a lower portion extending substantially parallel with a wall of the casing and recessed on a side presented toward said abutment, said recessed portion adapted to coöperate with said abutment to temporarily support a coin by its edges, a wall of the recess being in position to engage the face of the coin; and an ejecting lever pivotally mounted at its upper end back of the first-named lever and having an arm normally extending between a portion of the operating lever and one face of the coin delivered thereto.

[Claims 6 to 11 not printed in the Gazette.]

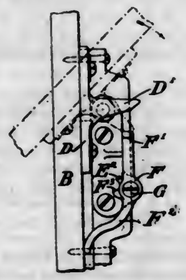
1,112,334. PISTON FOR PNEUMATIC SMOKERS. BRUCE A. SHAW, Oak Park, Ill. Filed Feb. 2, 1912. Serial No. 674,970. (Cl. 230—34.)

1. A plunger for pneumatic smokers including a hollow casing comprising spaced parallel walls, each formed with an opening, a valve strip freely movable between the walls and of materially less diameter than the similar dimension of the casing, and a plunger operating rod connected directly to the valve strip, said valve strip being formed with projections arranged at an angle to one surface adapted in movement of the strip in one direction to engage the inner surface of one of the walls of the casing to maintain the valve strip in spaced relation to such wall, said casing being formed for the reception of edge packing.



2. A plunger for pneumatic smokers including a hollow casing comprising spaced parallel walls, each formed with an opening, a valve strip freely movable between the walls and of materially less diameter than the similar dimension of the casing, and a plunger operating rod connected directly to the valve strip, said valve strip being formed with projections arranged at an angle to one surface adapted in movement of the strip in one direction to engage the inner surface of one of the walls of the casing to maintain the valve strip in spaced relation to such wall, said valve strip serving as a means for connecting the casing and plunger rod to permit said rod to move the casing subsequent to the limit movement of the valve strip in either direction.

1,112,335. FIREPROOF-WINDOW STOP. FRANK F. SMITH, Newark, N. J. Filed July 29, 1914. Serial No. 853,877. (Cl. 16—142.)

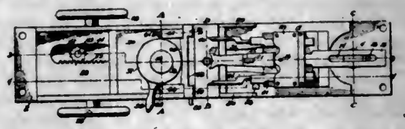


1. A device of the character described, comprising a stop and a movable latch, one carried by the frame and the other by the sash, said parts adapted to come in contact when the sash is opened and to check the said opening movement at a predetermined point, said latch having a portion normally in the path of the stop and mounted to move out of the path of said stop when it is desired to open the said sash farther, and means whereby the movement of the sash toward its closed position automatically forces the latch back into the path of the stop.

2. The combination with a window, comprising a frame and a sash pivotally mounted therein, of a checking device comprising a stop and a latch, one mounted on the sash and the other on the frame and said latch being normally in the path of the stop, and constructed and arranged so that it will come in contact therewith when the window is partly opened and check the further opening thereof, said latch being movable out of alinement with the stop and the relative construction and arrangement of the same with respect to the sash being such that when the sash is closed it automatically returns the latch to the path of the stop.

3. The combination of a stop and a latch one adapted to be mounted on the frame and the other on a sash of a pivoted window, the latch having a portion constructed and arranged to come in contact with the stop when the sash is swung on its pivot and movable out of the path of the said stop to permit further pivotal movement of the window, and means whereby the reverse movement of the sash positively restores the latch to its original position.

1,112,336. MORTISING-MACHINE. STILLMAN C. SNYDER, Tamarack, N. C., and WILBURN J. SNYDER, deceased, by Stillman C. Snyder, administrator, Tamarack, N. C. Filed Aug. 23, 1912. Serial No. 716,778. (Cl. 144—80.)



1. In a machine of the class set forth, in combination, a support, cutting elements, means for operating the cutting elements, a bed plate upon the support, a feed plate mounted upon the bed and having its ends upset to provide stop members which are disposed to the opposite sides of the cutting elements, a vertically adjustable work rest arranged upon the feed plate, and a longitudinally adjustable work holder carried by the feed plate and arranged to the rear of its stop shoulders and the vertically adjustable work support.

2. In a machine of the class described, in combination, cutting elements, means for operating the cutting elements, a bed plate, a feed plate upon the bed plate, means for longitudinally moving the feed plate upon the bed plate, means for limiting the movement of the feed plate upon the bed plate, the bed plate having one if its ends provided with upset members forming stops which are disposed to the opposite sides of the cutting elements, a vertically adjustable work support arranged adjacent the stop members, a work holder disposed to the rear of the support, and means for adjusting the work holder toward or away from the cutting elements.

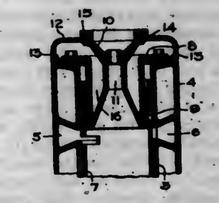
3. In a mortising machine, a support, a bed plate upon the support, cutting elements, means for simultaneously operating the cutting elements, a slidable feed plate upon the bed plate, stop members integrally formed with the feed plate and disposed to the opposite sides of the cutting elements, a work holder upon the feed plate, springs for retaining the work holder in one position, and a cam member adapted to centrally engage with the work holder to force the same against the tension of the springs toward the cutting elements.

4. In a mortising machine, cutting elements, means for operating the cutting elements, a bed plate, a feed plate upon the bed plate, a guide for the feed plate, stops upon the feed plate, a vertically adjustable work support carried by the feed plate, a slidable plate arranged upon the feed plate, a lock for the said slidable plate, said lock including a cam, housings upon the plate, spring pressed pins within the housings, a holder connected with the pins and said holder having its inner faces rounded and adapted to engage the cam member of the lock substantially as and for the purpose set forth.

5. In a mortising machine, a bed plate, cutting elements, means for operating the cutting elements, the bed plate being provided with an elongated opening, a feed plate upon the bed plate, a flanged guide plate passing through the opening of the bed plate, and connected with the feed plate, stops upon the feed plate, a work rest arranged upon the feed plate and positioned adjacent the stops, a screw for raising or lowering the rest plate, the feed plate being provided with an elongated opening, one of the walls of which being provided with teeth, a toothed wheel meshing with the said teeth, a shaft for the toothed wheel, a smaller toothed wheel upon the shaft and arranged below the bed plate, a transverse shaft provided with a worm intermeshing with the said smaller toothed wheel, a hand wheel for this shaft, and an adjustable work holder arranged above the feed plate.

[Claim 6 not printed in the Gazette.]

1,112,337. WATER-JACKET FOR INTERNAL-COMBUSTION ENGINES. JULIUS SPIEGEL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 31, 1911. Serial No. 630,360. (Cl. 123—173.)



1. In combination, a cylinder, a head that closes the end of the cylinder and projects into the bore of the cylinder, said head having a centrally arranged hollow member with a cooling-water space between it and the outer wall of the head, a cover for the head that fits against the end of the cylinder and incloses a cooling-water space between it and the end of the cylinder that is in communication with the first mentioned space, said member having a cylindrical portion projecting outwardly through the cover, and a nut on said portion that holds the cover in place.

2. In combination, a cylinder, a head that closes the end of the cylinder and has a hollow cylindrical portion that projects into the bore of the cylinder, a tubular valve mounted in the bore of the cylinder between said portion and the wall of the bore, a centrally arranged hollow member within the head whose wall merges with the wall of said portion adjacent the inner end thereof, a cover for the head that fits against the end of the cylinder and incloses a cooling-water space between it and the end of the cylinder that is in communication with the space between the inner and outer walls of the head, said hollow member having a cylindrical portion that projects outwardly through the cover, and a nut in threaded engagement with said cylindrical portion that secures the cover in place.

1,112,338. INTERNAL-COMBUSTION ENGINE. PEACY GEORGE TACCHI, Acton, London, England. Filed Mar. 3, 1913. Serial No. 751,884. (Cl. 123—44.)

1. In an internal combustion rotary engine, the combination of a rotatably mounted shaft; a plurality of

radiating cylinders affixed thereto, each cylinder having a pair of piston chambers of different diameters; a correspondingly shaped reciprocating piston operating in each of said cylinders and having a pair of working faces; inlet and exhaust ports for said piston chambers; ignition means; and an annularly shaped track having an uninterrupted tread surface movably engaged by said pistons, a portion of said track having a curvature gradually increasing in radius, a contiguous portion remaining unaltered at the maximum length of said increased radius, and the curvature of the remaining portion being gradually reduced in radius to meet the minimum radius.

2. In an internal combustion rotary engine, the combination of a rotatably mounted shaft; a plurality of radiating cylinders affixed thereto, each cylinder having a pair of piston chambers of different diameters; a correspondingly shaped piston operating in each of said cylinders and having a pair of working faces; ignition means; inlet and exhaust ports for said piston chambers; valves controlling said inlet and exhaust ports having spindles extending into proximity with said shaft; a pair of stationary annular cams mounted on said shaft adjacent said valve spindles, each provided on its annular peripheral surface with a pair of eccentric cam grooves, said cam grooves being annularly disposed and arranged parallel for a portion of their circumference, thence crossing each other to meet its complementary cam groove; spring controlled tappets having a universal joint connection with said cylinders and adapted to successively engage said cam grooves for alternately operating said inlet and exhaust valves during the cycle of rotation of said cylinders; and an annularly cam-shaped track having an uninterrupted tread surface movably engaged by said pistons.

3. In an internal combustion rotary engine, the combination of an annular casing; a shaft rotatably mounted in said casing; a plurality of radiating cylinder affixed to said shaft, each having a pair of piston chambers of different diameters; a correspondingly shaped reciprocating piston operating in each of said cylinders and having a pair of working faces; a cam-shaped track, having an uninterrupted tread surface encircling and movably engaged by said pistons; an arc-shaped channel formed on each side of said casing; an inlet conduit for each cylinder, communicating with said piston chambers, and having an opening registering with one of said arc-shaped channels; an exhaust conduit for each of said cylinders communicating with said piston chambers and having an opening registering with said other arc-shaped channel; ignition means; and automatically operated valves controlling said inlet and exhaust ports.

1,112,339. PUMP. FRANZ CARL TEUFL, Oil City, Pa., assignor to General Electric Company, a Corporation of New York. Filed Apr. 16, 1913. Serial No. 761,478. (Cl. 123—139.)

1. In a pump, the combination of a cylinder, a hollow plunger therefor, an actuator for the plunger, conduits conveying fluid to the cylinder and the discharge therefrom, and a valve located in the cylinder that coöperates with the plunger to cut off the discharge of fluid from the cylinder.

2. In a pump, the combination of a cylinder, a hollow plunger therefor, an actuator for the plunger, conduits conveying fluid to the cylinder and the discharge therefrom, a valve located in the cylinder that coöperates with the plunger to cut off the discharge of fluid from the cylinder, and an overflow valve which opens after the cut-off valve is seated.

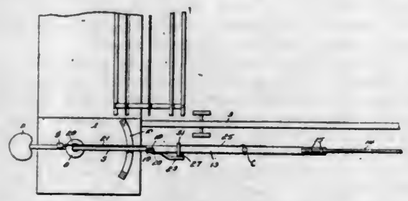
3. In a pump, the combination of a cylinder, a hollow plunger having an inlet port and a valve seat, an actuator for the plunger, conduits conveying fluid to the cylinder and the discharge therefrom, a valve located in the cylinder which engages said seat at some portion of the plunger stroke to cut off the discharge from the cylinder, and means for determining the time of closing of the cutoff valve with respect to the stroke of the plunger.

4. In a pump, the combination of a cylinder, a hollow plunger therefor through which fluid passes from the cylinder on its discharge stroke, an actuator for the plunger, conduits conveying fluid to the cylinder and the discharge therefrom, a valve located in the cylinder which coöperates with the plunger to cut off the discharge of fluid from the cylinder, and means for adjusting the valve to determine the time of closure thereof and regulate the amount of fluid discharged on each plunger stroke.

5. In a pump, the combination of a cylinder, auction and discharge valves therefor, a hollow plunger, an actuator for the plunger, a cutoff valve that coöperates with the plunger to determine the amount of fluid delivered on each plunger stroke, means for determining the time of closing of the cutoff valve, and a pressure actuated relief valve that opens to relieve the cylinder of fluid as the plunger continues its stroke after the cutoff valve is seated.

[Claims 6 to 14 not printed in the Gazette.]

1,112,340. WHIP-OPERATING DEVICE. JOHN W. THIE, Mediapolis, Iowa. Filed Feb. 25, 1914. Serial No. 820,983. (Cl. 21—129.)



1. A whip operating device comprising a journaled standard, a bearing carried by the standard, a supporting track, a bar, a roller mounted upon the bar and traveling on the track, a whip mounted upon the bar, and means for actuating the bar to operate the whip.

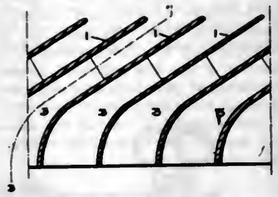
2. A whip operating device including a whip carrying lever mounted for horizontal and vertical movement, means for moving the lever horizontally and means for holding the lever against vertical movement, and means for releasing the lever and operating it vertically.

1,112,341. TURBINE-NOZZLE. ERICH ÜBERLÉE, Grunewald, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 23, 1912. Serial No. 721,979. (Cl. 121—57.)

1. A steam turbine nozzle for varying counter-pressure, having only its side walls extending to the outer end thereof.

2. A steam turbine nozzle for varying counter-pressure, having its side walls extending to its outer end, and another wall terminating substantially at the narrowest point in said nozzle and so absent at its outer end.

3. A steam turbine nozzle having its side walls extending to its outer end and its upper and lower walls terminating at some distance back from the outer end of said nozzle and so absent from such point to its outer end.

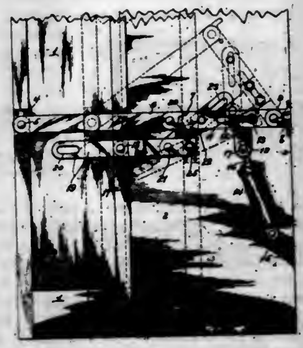


4. A steam turbine nozzle having its side walls extending to its outer end and slightly diverging and its upper and lower walls terminating at some distance back from the outer end of said nozzle and so absent from such point to the outer end thereof.

5. A steam turbine nozzle having its side walls extending to its outer end, and its upper and lower walls offering no obstruction to the free expansion of the steam beyond the narrowest point of said nozzle and so in effect absent for some distance back from its outer end.

[Claim 6 not printed in the Gazette.]

1,112,342. DOOR OPERATING AND LOCKING DEVICE. HENRY G. VOIGHT, New Britain, Conn. Filed Mar. 31, 1914. Serial No. 828,615. (Cl. 70—102.)



1. Means for opening and closing a sliding door consisting of toggle levers connected at one end to the door and at the other end to a fixed support, an actuating lever mounted to turn on a support carried by the door a link having pivotal connection with the actuating lever and loosely connected with the toggle lever adjacent the joint in the latter, and automatic means for moving the levers in a direction to close the door.

2. Means for opening and closing a sliding door consisting of toggle levers connected at one end to the door and at the other end to a fixed support, an actuating lever mounted to turn on a support carried by the door and connected with the toggle lever at the rear of the joint, and automatic means for moving the levers in a direction to close the door.

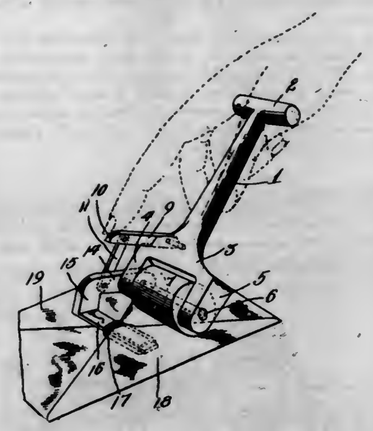
3. Means for opening and closing a sliding door consisting of two connected levers, one longer than the other, the longer lever being connected to the door and the shorter lever to a fixed support, an actuating lever carried by the door and connected with the shorter lever and automatic means for moving the levers in a direction to close the door.

4. Means for opening and closing a sliding door consisting of two connected levers one longer than the other, the longer lever being connected to the front stile of the door and the shorter lever to a fixed support, an actuating lever carried on a support secured to the rear stile of the door and connected with said shorter lever at the rear of the joint and means for moving said levers in a direction to close the door.

5. In a sliding door opening and closing mechanism, the combination of a lever pivoted to a fixed support, mechanism connected with said lever for automatically closing the door, an actuating lever fulcrumed intermediate its ends on a support carried by the door, a link pivoted to said actuating lever adjacent the rear end of the latter first mentioned lever and passing through the slot in the link.

[Claims 6 to 8 not printed in the Gazette.]

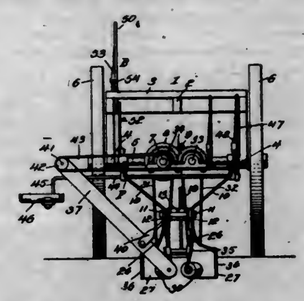
1,112,343. ENVELOP-SEALER. COLUMBUS C. WALLACE, Dover, Tenn., assignor of one-half to Charlie A. Moery, Indian Mound, Tenn. Filed Apr. 7, 1914. Serial No. 830,200. (Cl. 120—6.)



1. In an envelop sealer, a handle, a lever pivotally connected to said handle, a second lever pivotally connected to said handle and having link connection with said first named lever, a shoe formed upon said first named lever, and a liquid retaining pad carried by said shoe.

2. In an envelop sealer, a handle, a lever pivotally connected to said handle, a second lever pivotally connected to said handle and having link connection with said first named lever, a shoe formed upon said first named lever, a liquid retaining pad carried by said shoe, and a roller rotatably carried by said handle and positioned rearwardly of said liquid retaining pad.

1,112,344. BEET-HARVESTER. JEDAH G. WEBBER and CHARLES F. CARR, Antwerp, Ohio. Filed Feb. 14, 1913. Serial No. 748,408. (Cl. 55—9.)



1. In a beet harvester, a wheel supported frame structure including a movably and adjustably supported sub-

frame, coiters and plows carried by the sub-frame, said plows being spaced apart laterally, rearwardly converging driven rollers supported in rear of the plows, and guard members constituting a cage between said rollers.

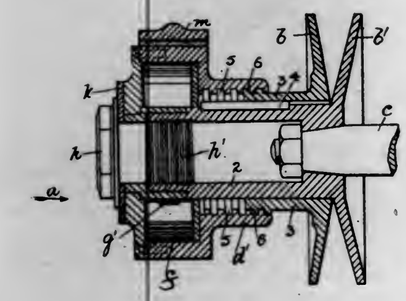
2. In a beet harvester, a frame structure, right and left hand plows carried thereby, rearwardly converging driven rollers in rear of the plows, guard members extending rearwardly from the plows outside the rollers, and guard members constituting a cage between and above the rollers.

3. In a beet harvester, the combination with means for displacing the dirt from adjacent to the sides of the beets, of rearwardly converging lifting rollers, means for driving the same, and guard members constituting a cage between and above the lifting rollers.

4. In a beet harvester, means for displacing the dirt adjacent to the sides of the beets, rearwardly converging lifting rollers in rear of the dirt displacing means, means for driving the rollers, and elevating means including a conveyer casing supported pivotally with respect to one of the rollers.

5. In a beet harvester, means for displacing the dirt from adjacent to the sides of the beets, rearwardly converging driven lifting rollers in rear of the dirt displacing means, guard members constituting a cage between and above the lifting rollers, and beet elevating means including a casing which is supported pivotally with respect to the axis of one of the rollers.

1,112,345. EXPANSIBLE PULLEY. WILLIAM PHILIPSON, THOMAS WHITTLE HOPWOOD PHILIPSON, and PERCY CLARKSON PHILIPSON; Bolton, England. Filed Aug. 23, 1912. Serial No. 716,716. (Cl. 64—8.)



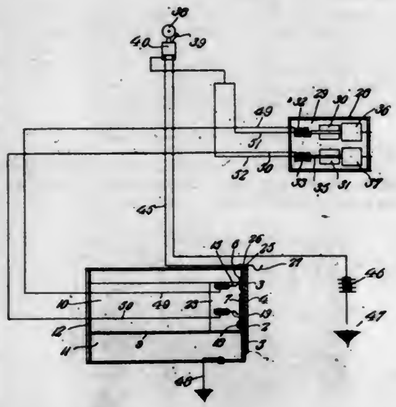
1. An expansible pulley embodying opposed inclined disks, one of which is axially movable relative to the other; means to rotate said disks in unison; an independently rotatable part; means to retard the movement of the independently rotatable part; means to accelerate the movement of the independently movable part when the retarding means is released; and means whereby the retarded and accelerated movements of the movable part move the movable disk longitudinally.

2. An expansible pulley embodying opposed inclined disks mounted to rotate, one of said disks being movable in parallelism with the axis of rotation; a part rotatable independently of the disks; threaded connection between the independently rotatable part and the movable disk whereby a difference in rotation of the independently rotatable part causes a movement of the disk; manual means for retarding the movement of the independently rotatable part; and mechanical means for accelerating the movement of the independently rotatable part when the manual retarding means is released.

3. In an expansible pulley opposed inclined disks, one of which is movable in parallelism with the axis of rotation; a collar capable of normal rotation with the disks and of independent rotation relative thereto; means whereby independent rotation of the collar causes movement of the movable disk; a spring connected with the collar; manual means for retarding the collar and placing the spring under greater tension; and means to withdraw the retarding means to permit the spring to accelerate the movement of the collar.

4. In an expansible pulley opposed inclined disks, one of which is movable in parallelism with the axis of rotation; an independently movable part; connection between the independently movable part and the movable disk whereby movement of the independently movable part causes movement of the disk; manual means for retarding the movement of the independently movable part; means for locking the independently movable part when so retarded; and means to accelerate the movement of the independently movable part when the locking and retarding means are released.

1,112,346. MAIL-BOX. JOHN F. WILCOX, Earlsboro, Okla. Filed Apr. 13, 1912. Serial No. 690,528. (Cl. 177—333.)



A mail box having a compartment, a pair of doors closing openings leading to the compartment, a main door operating to overlie and conceal said pair of doors, an indicator, solenoids within the indicator, shutters connected with the cores of the solenoids, means connected to the shutters for operating the same in opposition to the pull of the solenoids, an audible alarm for the indicator, a circuit including the alarm and the main door, a circuit including one of the solenoids and one of the pair of doors, a circuit including the remaining solenoid and the remaining door of the pair of doors, each of said circuits being broken when the particular circuit included door is closed, the opening of said door closing the circuit, each of said solenoids including circuits also including the alarm.

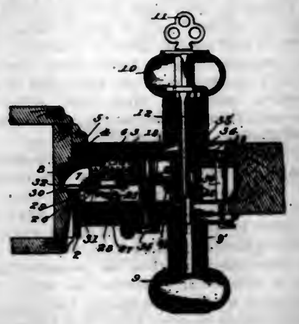
1,112,347. LOCK AND LATCH. WILLIAM H. F. YOUNG, Muncie, Ind. Filed Feb. 12, 1913. Serial No. 747,970. (Cl. 70—91.)

1. In a lock of the character described, the combination with a bolt, a disk for operating said bolt and a spring pressed ball engaging the disk for frictionally holding it in its adjusted position.

2. In a lock of the character described, the combination with a sliding bolt, a disk having recesses in one face thereof, a spring pressed ball engaging the disk and adapted to enter the recesses, whereby the bolt is frictionally held in its outward or retracted position.

3. In a lock of the character described, the combination with a sliding bolt, of the disk for operating the said bolt, the outer face of the disk having two recesses arranged in a circular line, a housing adjacent the disk and a spring pressed ball within the housing and adapted to engage the face of the disk and enter the recesses therein, whereby the bolt is held in its outer or retracted position.

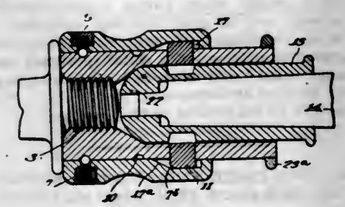
4. In a lock of the character described, the combination with a sliding bolt, a disk for operating the said bolt, the outer face of the disk having recesses arranged in a circular line, a housing adjacent the disk, a spring pressed ball within the housing, adapted to engage the face of the disk and enter the recesses carried thereby, whereby the bolt is frictionally held in its outer or retracted position.



5. In a lock of the character described, the combination with a sliding bolt, of a disk for operating the said bolt and having recesses in its outer face, a housing adjacent the disk, a spring pressed ball within the housing and adapted to enter the recesses in the face of the disk, and a spring pressed pawl for locking the bolt in its outward position against inward movement by pressure at the outer end of the bolt.

[Claims 6 and 7 not printed in the Gazette.]

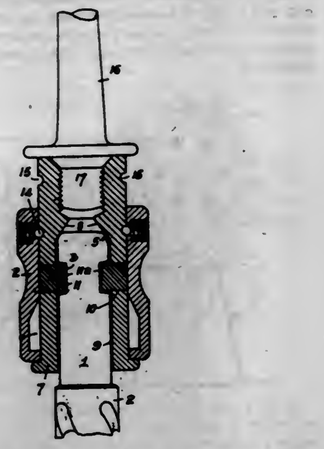
1,112,348. CHUCK FOR BORING-MACHINES, LATHES, OR THE LIKE. JOHN WILLIAM BARNES, Rock Ferry, England. Filed June 26, 1911. Serial No. 635,288. (Cl. 29—145.)



In a tool chuck, in combination a socket member having a conical inner end portion, a cylindrical collet engaging the socket, the said collet being of less diameter than the diameter of the socket to provide an annular clearance between the collet and the socket, said collet having an end with a rounded edge adapted to engage the conical end of the socket, said collet having recesses, and said socket having perforations, radially movable keys in the perforations, said keys being adapted to loosely engage the recesses in the collet, a sliding sleeve for controlling the movement of the keys, and a tool shank adapted to be carried in said collet, substantially as described.

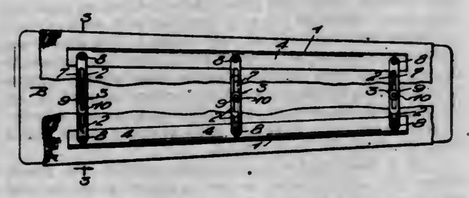
1,112,349. DRILL OR THE LIKE AND SOCKET THEREFOR. JOHN WILLIAM BARNES, Rock Ferry, England. Filed Dec. 15, 1911. Serial No. 665,984. (Cl. 29—145.)

In a tool chuck in combination, a socket member having a conical inner end portion, a cylindrical tool shank engaging the socket, the said tool shank being of less diameter than the diameter of the socket to provide an annular clearance between the shank and the socket, said shank having a rounded end portion adapted to engage the conical end of the socket, said shank having recesses, and the said socket having perforations, radially movable keys in the perforations, said keys being adapted to loosely



engage the recesses in the shank and a sliding sleeve for controlling the movement of the keys.

1,112,350. HOLDER FOR IRONING-BOARD COVERS. EFFA T. BARSTOW, Tacoma, Wash. Filed Apr. 23, 1914. Serial No. 833,945. (Cl. 68—10.)



1. A device of the character described, comprising a pair of longitudinal jaws having upper and lower inwardly extending flanges connected along their outer edges, the upper flanges being of less width than the lower, teeth along the inner edges of the upper flanges, slotted links pivoted to said lower flanges and extending inwardly into overlapping engagement, bolts depending through the slots of said links and thumb nuts on said bolts.

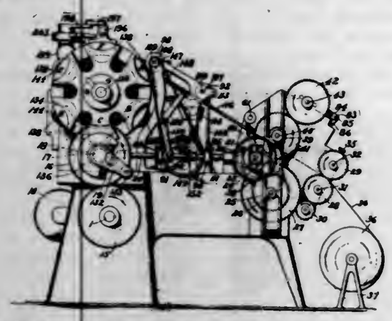
2. A device of the character described comprising a pair of spaced longitudinal toothed jaws, inwardly extending links pivoted to said jaws and lying in overlapping engagement with one another, and clamping means for locking said links against movement.

1,112,351. PAPER-CARTON-MAKING MACHINE. GEORGE W. BEADLE, Bayonne, N. J., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Aug. 2, 1911. Serial No. 641,916. (Cl. 93—81.)

1. In a machine for making paper cartons, the combination of a paper feeding means; means to cut the paper into suitable lengths; a slotted guide for said paper; supports for said paper in said guide; means extending longitudinally of said guide to lift said paper from said supports at predetermined intervals; means to apply an adhesive to said paper; and means to wind said cut paper into a tube, substantially as described.

2. In a machine for making paper cartons, the combination of a paper feeding means comprising a plurality of rolls between which said paper passes; a slotted guide for

said paper; supports for said paper in said guide; means extending longitudinally of said guide to lift said paper from said supports at predetermined intervals; means to cut the paper into suitable lengths; means to apply an adhesive to said paper through said slotted guide; and means to wind said cut paper into a tube, substantially as described.



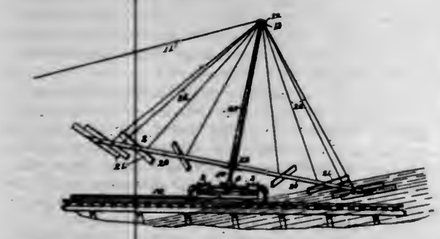
3. In a machine for making paper cartons, the combination of a paper feeding means; a slotted guide for said paper; supports for said paper in said guide; means extending longitudinally of said guide to lift said paper from said supports at predetermined intervals; means to cut the paper into suitable lengths comprising a reciprocating knife; means to apply an adhesive through said slotted guide to said paper; and means to wind said cut paper into a tube, substantially as described.

4. In a machine for making paper cartons, the combination of a paper feeding means comprising a plurality of rolls between which said paper passes; a slotted guide for said paper; supports for said paper in said guide; means extending longitudinally of said guide to lift said paper from said supports at predetermined intervals; means to cut the paper into suitable lengths comprising a reciprocating knife; means comprising a roller adapted to extend through the slot in said guide to apply an adhesive to said paper; and means to wind said cut paper into a tube, substantially as described.

5. In a machine for making paper cartons, the combination of a paper feeding means; a slotted guide for said paper; supports for said paper in said guide; means extending longitudinally of said guide to lift said paper from said supports at predetermined intervals; means to cut the paper into suitable lengths; means to apply an adhesive to said paper comprising a roll carrying said adhesive, and a movable roll adapted to move through said slotted guide toward and from said adhesive carrying roll; and means to wind said cut paper into a tube, substantially as described.

[Claims 6 to 44 not printed in the Gazette.]

1,112,352. CURRENT-MOTOR. OSCAR D. BOOTH, Everett, Wash., assignor to Everett Current Motor Company, Everett, Wash., a Corporation. Filed May 28, 1913. Serial No. 770,343. (Cl. 103—117.)



1. In a current motor, in combination, a series of paddle-carrying arms, a central or hub member to which said arms are secured, an axial shaft secured to rotate with said central member, a bearing frame having journal bearings for said shaft adapted to support the shaft in an upright position, a horizontal pivot axis for said bearing frame, a bevel gear secured to the rotative shaft, a shaft lying in the axis of said bearing frame and a bevel gear on said latter shaft meshing with the other bevel gear.

2. In a current motor, in combination, a paddle-carrying wheel having an axial shaft secured to turn therewith and having an upright axially placed mast, a bearing frame in which said central shaft is journaled, pivot and supporting bearings for said frame lying horizontally, a collar rotatably mounted upon the upper end of said mast, guys extending outwardly from said collar to fixed anchorages, and transmission mechanism connected with said central shaft.

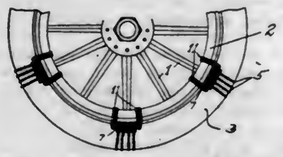
3. In a current motor, in combination, a paddle-carrying wheel having an axial shaft secured to turn therewith and having an upward extension forming a mast, a collar secured to the upper end of the mast, guys extending from said collar to the outer parts of the wheel frame, a second collar rotatively mounted on the mast above the first collar, guys extending from the second collar to fixed anchorages, a step bearing member in which the lower end of the axial shaft is journaled, and pivot supports for said step bearing member lying in a horizontal plane.

4. In a current motor, in combination, a paddle-carrying wheel having an axial shaft secured to turn therewith and having an upward extension forming a mast, a collar secured to the upper end of the mast, guys extending from said collar to the outer parts of the wheel frame, a second collar rotatively mounted on the mast above the first collar, guys extending from the second collar to fixed anchorages, a step bearing member in which the lower end of the axial shaft is journaled, pivot supports for said step bearing member lying in a horizontal plane, and a power transmission device containing two intermeshing bevel gears, one secured to the axial shaft of the wheel and the other journaled co-axial with the pivot axis of the step bearing member.

5. In a current motor, in combination, an inclined track extending into the water, a car mounted to traverse said track, a paddle wheel having a step bearing supported on said car by pivot bearings extending transversely of the car and track, said wheel having an upwardly extending axial mast, a collar rotatively mounted on the upper end of said mast, and guys extending from said collar to fixed anchorages.

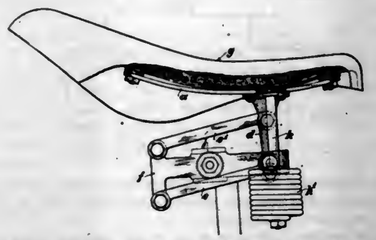
[Claims 6 to 13 not printed in the Gazette.]

1,112,353. TIRE-PROTECTOR. VIRGIL L. BOWMAN, Oakland, Cal. Filed Jan. 6, 1913. Serial No. 740,526. (Cl. 152—14.)



A tire protector comprising a plurality of plates, each plate formed from a blank comprising a narrow body, a narrow ear extending from each end of said body, each ear being coiled outwardly to form an aperture therein and present an even surface upon the rear portion of said body thereby preventing the plate from injuring or marring the rim of the wheel, each plate provided with a plurality of apertures formed along the edge thereof, chains secured to said plate, said chains passing through said apertures, said chains adapted to pass around a tire for constituting an anti-skidding means, offstanding bands adapted to fit over the felly of the wheel comprising thin yieldable bodies terminating in enlarged bolt portions bent at radical angles to the body and nuts threaded upon said bolt portions, and said bolt portions passing through said apertures in said ears, said nuts adapted to firmly clamp said nuts in said plates, said ears extending beyond the body portion of each plate for allowing said bolts to pass therethrough without interfering with said body.

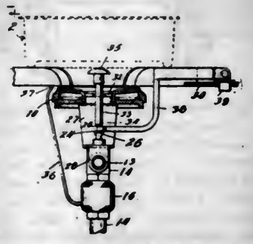
1,112,354. MOTOR-CYCLE, CYCLE, AND ANALOGOUS SADDLES AND SEATS. BOULTBEE BROOKS, Birmingham, England. Original application filed July 20, 1912, Serial No. 710,690. Divided and this application filed Apr. 6, 1914. Serial No. 829,960. (Cl. 208—15.)



1. In motor-cycle, cycle and analogous saddles and seats, a base frame, a seat frame, hanger brackets depending from the seat frame, parallel-motion links connected with the hanger brackets and the base frame, coiled springs for supporting the seat connected with the base frame and having their axes located directly under the load, and depending thrust rods carried by the seat frame and connected to the springs.

2. In a motor-cycle, cycle and analogous saddles and seats, a base frame, a seat frame, hanger brackets depending from the seat frame, parallel-motion links connected with the hanger brackets and the base frame, compound springs comprising compression and extension spring elements, connected together at their lower ends and of which the said exterior spring elements are suspended from the base frame, and thrust rods depending from the seat frame and connected with the compression spring elements.

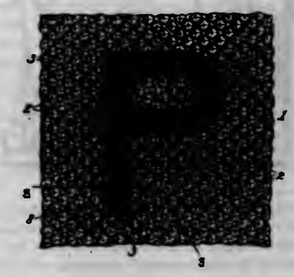
1,112,355. AUTOMATIC BURNER FOR GAS-STOVES. GEORGE BRUTON, Joliet, Ill., assignor to Franklin L. Rockey, Joliet, Ill. Filed Nov. 4, 1907. Serial No. 400,514. (Cl. 126—52.)



1. In a gas-stove burner, in combination; a burner having a valve centrally located thereunder and automatically controlled by the placing and removing of the cooking vessel, said valve being provided with an upwardly projecting valve-stem and plunger extending centrally through the burner and adapted to make contact with the bottom of said cooking vessel, and also being provided with a lateral controlling lever adapted to make contact with the outer rim of the bottom of the cooking vessel; and a gas-conduit leading from said valve laterally outward from under and looped back to said burner and provided near its outer looped end with an air intake and mixing chamber laterally removed from under said burner, substantially as specified.

2. In a gas-stove burner, in combination; a burner having a valve located centrally thereunder and automatically controlled by the placing and removing of the cooking vessel, said valve being provided with an upwardly projecting valve-stem; and means for imparting motion to said valve-stem, said means being formed and arranged to be depressed by contact of either the central bottom or the rim of the cooking vessel supported in its operative position over the burner; and a gas-conduit leading from said valve laterally outward from under and looped back to said burner and provided near its outer looped end with an air intake and mixing chamber laterally removed from under said burner; substantially as specified.

1,112,356. MATRIX-SHEET AND METHOD OF PRODUCING SAME. EDGAR R. BULLARD, Wheeling, W. Va., assignor of one-half to Leslie E. Morningstar, Wheeling, W. Va. Filed Dec. 4, 1911. Serial No. 663,899. (Cl. 198—7.)



1. A matrix sheet comprising a thin sheet of readily impressionable material which is embossed by indentations extending therethrough to present a working surface having alternate minute stipples in depression and relief lines, said sheet having its reverse face cemented to a base of relatively firmer material having a yieldable surface in such manner that minute air pockets are constituted between said base and the relief elevations, whereby a pliant working surface is provided whereon lines may be impressed without disturbing adjacent lines or stipples.

2. The herein described method of forming a matrix sheet, which consists, first, in embossing a sheet of fibrous tissue to produce on its working face a field of minute stipples in depression and interposed relief lines in elevation, second, in mounting the reverse face of said sheet upon a base of a relatively firmer yieldable material so that air-containing pockets are formed between said base and the walls defining said relief lines, and then depressing some of the elevated lines to or below the level of the stipples to form in said sheet a desired design.

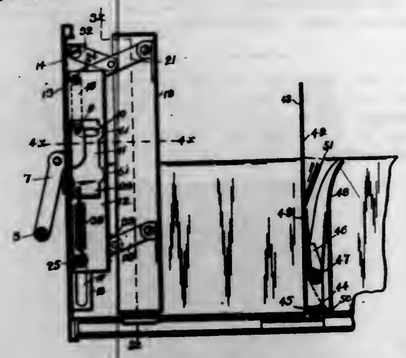
3. The herein described method of forming a matrix sheet, which consists, first, in embossing through a sheet of thin paper to produce on its working face a field of minute substantially conical stipples in depression and interposed relief lines, second, in mounting said embossed sheet upon a relatively heavier and firmer base so that only the apices of the stipples engage said base and so that air-containing pockets are formed between said base and the walls defining the relief lines, and then breaking down portions of said relief lines to produce a desired design in depression on said working face of the embossed sheet.

1,112,357. COMPRESSOR FOR FILING-DRAWERS. RAYMOND G. BULLOCK, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Sept. 17, 1913. Serial No. 790,316. (Cl. 129—26.)

1. In a filing case the combination of a drawer having a stationary front, a movable compressor mounted inside of said drawer adjacent to said front and means extending from said compressor to the outside of the drawer for moving said compressor.

2. In a filing case, the combination of a drawer having a stationary front, the compressor mounted to move inside of said drawer toward and away from said front, means extending through the front of the drawer for moving said compressor to compressing position.

3. In a filing case, the combination of a drawer, a pair of compressors therein, one of said compressors being movable longitudinally of the drawer, means for clamping said compressor in any desired position, the other compressor having a limited movement in the drawer and means for forcing the second compressor toward the first compressor.

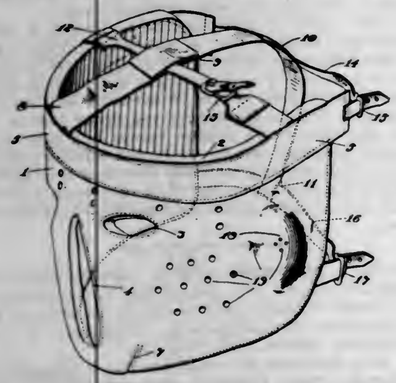


4. In a filing case, the combination of a drawer, a pair of compressors therein, one of said compressors being movable longitudinally of the drawer, means for clamping said compressor in any desired position, the other compressor having a limited movement in the drawer and means for forcing the second compressor toward the first compressor, said means including a lever extending through the front of the drawer.

5. In a filing case, the combination of a drawer, having a front and a bottom rigid with each other, a compressor mounted to move along the bottom and standing parallel to the front of the drawer, a lever pivotally mounted outside of the drawer and extending inside, vertically sliding devices inside of the drawer operated by said lever, toggles connected to the compressor and operated by said vertically sliding devices for moving said compressor forward and back upon the operation of the lever.

[Claims 6 to 11 not printed in the Gazette.]

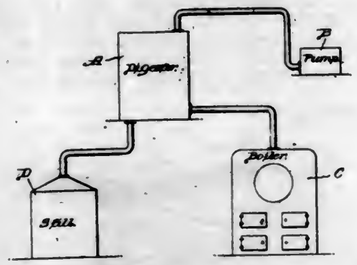
1,112,358. HEAD-PROTECTOR. SAMUEL CLINE, Philadelphia, Pa., assignor to George A. Reach, Bala, Pa. Filed Apr. 18, 1914. Serial No. 832,915. (Cl. 2—119.)



1. A mask for training purposes comprising a soft yielding protector to the face and ears, with nose and eye openings, and a metallic protector inserted in the pad for the ears, substantially as described.

2. A mask for training purposes comprising a protector for the face, a lining therefor, a metallic ear guard between the lining and the protector, and an opening in the lining registering with the ear guard.

1,112,359. PROCESS FOR EXTRACTING FROM WOODS THEIR SOLUBLE CONTENTS. IRVING SPENCER CLOPE, Wilkinsburg, Pa., assignor to Empire Chemical Company, Atlanta, Ga., a Corporation of Georgia. Filed Oct. 22, 1913. Serial No. 796,678. (Cl. 203—6.)

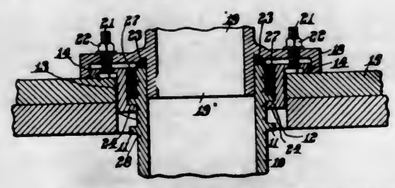


1. The process of extracting from coniferous woods, their soluble constituents, which consists in treating such woods with trichlorethylene.

2. The process of extracting from coniferous woods, acetone, wood alcohol, turpentine, pine oil and resin, which consists in treating such woods in a vacuum with vapors of trichlorethylene, allowing such vapors to condense, together with the dissolved constituents of the wood in such condensate, and subjecting the resulting solution thus formed to fractional distillation.

3. The process of extracting from coniferous woods, acetone, wood alcohol, turpentire, resin, and other soluble constituents, which consists in treating such woods with vapors of trichlorethylene, allowing such vapors to condense, together with the dissolved constituents of the wood and subjecting the resulting solution thus formed to fractional distillation.

1,112,360. FLOOR CONNECTION. THOMAS E. CROSBY, Allston, Mass. Filed Nov. 29, 1912. Serial No. 734,192. (Cl. 137—94.)



1. In a floor connection for water closets, the combination of a closet bend immovably positioned and provided with oppositely disposed outwardly extending lugs integral therewith; a plumbing fixture having a recessed bottom flange adapted to rest on a floor and provided with concentric slots; a floor plate within the recess of said flange movable relatively to said bend and fixture and provided with downwardly inclined extensions surrounding said bend, said extensions having lug receiving depressions in their upper faces; and means extending from said plate through said slots for locking said plate in adjusted position.

2. In a floor connection for water closets, the combination of a closet bend immovably positioned and provided with a plurality of outwardly extending lugs integral therewith and in different horizontal planes; a plumbing fixture having a recessed bottom flange adapted to rest on a floor and provided with concentric slots; a floor plate within the recess of said flange movable relatively to said bend and fixture and provided with downwardly inclined extensions surrounding said bend, said extensions being adapted to pass between the lugs and having lug receiving depressions in their upper faces; and means extending from said plate through said slots for locking said plate in adjusted position.

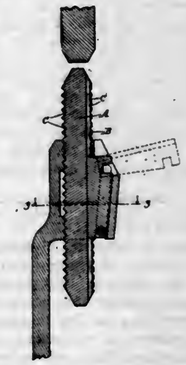
3. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs in the same horizontal plane; a floor plate within said recess provided with an annular flange extending downwardly in an opening in the floor and surrounding said closet bend, said flange being provided with a plurality of continuously inclined tracks extending inwardly toward the periphery of said closet bend each having a series of lug-receiving depressions therein having horizontal bottoms; and means for securing said plumbing fixture to said floor plate.

4. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs; a floor plate within said recess provided with an annular flange extending downwardly in an opening in the floor and surrounding said closet bend, said flange being provided with a plurality of continuously inclined lug engaging tracks the upper and lower walls of which are parallel, while the lower wall is provided with a plurality of lug engaging depressions having flat horizontal bottoms; and means for securing said plumbing fixture to said floor plate.

5. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs; a floor plate within said recess provided with an annular flange extending downwardly in an opening in the floor and surrounding said closet bed, said flange being provided with a plurality of continuously inclined lug engaging tracks, the upper and lower walls of which are parallel, the upper end of each track being positioned above the lower end of another track and provided with an inwardly extending vertical rib the lower end of which is separated from the upper face of the lower track a distance slightly greater than the thickness of a lug; and means for securing said plumbing fixture to said floor plate.

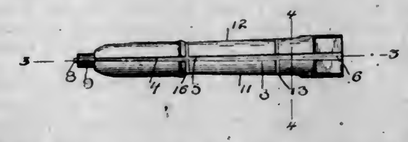
[Claims 6 to 8 not printed in the Gazette.]

1,112,361. ARC-LIGHT ELECTRODE. CHARLES W. DAKE, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 5, 1912. Serial No. 735,034. (Cl. 176—121.)



An electrode comprising a thin central metallic core symmetrically disposed cooling ribs longitudinally arranged said ribs extending throughout the entire length thereof uniform equidistant notches transversely arranged across the outer surface of said ribs.

1,112,362. FOUNTAIN-PEN. DEWITT C. DEMAREST, Passaic, N. J. Filed June 17, 1911, Serial No. 633,739. Renewed May 15, 1914. Serial No. 838,800½. (Cl. 120—50.)



1. A fountain pen feed bar formed with notched-out portions, with a longitudinal feeding bore, with a transverse recess communicating with said bore and notched-out portions, and with another longitudinal bore leading to said recess from the inner end of the feed bar.

2. A fountain pen feed bar formed with tapering notched out portions on each side thereof for the purpose specified, also formed with a longitudinal feeding bore, with a transverse recess communicating with said bore and notched out portions, and with another longitudinal bore leading to said recess from the inner end of the feed bar.

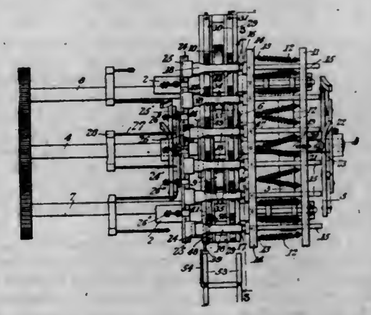
3. A fountain pen feed bar formed with a longitudinal feeding bore, and with a transversely extending recess having at its inner end a transverse bore intersecting the longitudinal bore, the feed bar being further formed with a side recess intersected by the transverse recess, and with another longitudinal bore leading to said transverse recess from the inner end of the feed bar.

4. A fountain pen feed bar formed with a longitudinal bore, with side recesses, with front and rear transverse recesses intersecting said recesses and said bore, and with a longitudinal channel intersecting said transverse recesses and said bore.

5. A fountain pen feed bar formed with a longitudinal feed bore, and with tapering longitudinal recesses with front and rear transverse recesses intersecting the longitudinal bore, and with another longitudinal bore leading from the inner end of the feed bar to the rear transverse recess.

[Claims 6 and 7 not printed in the Gazette.]

1,112,363. APPARATUS FOR BORING BOBBINS. NAPOLÉON DEMERS, Sherbrooke, Quebec, Canada. Filed Aug. 11, 1913. Serial No. 784,203. (Cl. 144—14.)



1. An apparatus for boring bobbins comprising a frame, a movable rack, plates upon the latter and means upon the plates for holding bobbins, oppositely disposed movable socket members, pivotally mounted angle levers, antifriction rollers journaled upon said levers, a roller upon each lever engaging underneath said rack, rotatable cams adapted to contact with corresponding antifriction rollers upon said levers to cause the same to tilt to raise the rack to bring spindles, designed to rest upon the plates, into alinement with said socket members, cam-actuated mechanism for moving the oppositely disposed socket

members toward each other to engage and hold the spindles while being bored, springs for releasing the socket members after the holes are bored, means for imparting a longitudinal movement to the rack after the spindles are released and while the rack is in an elevated position, means for depositing a single spindle as the rack lowers, while the other spindles are held suspended by the socket members, and means for returning the rack to its normal position.

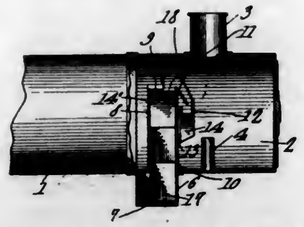
2. An apparatus for boring bobbins comprising a frame, a movable rack, plates upon the latter and means upon the plates for holding bobbins, spring-pressed crosspieces, socket members mounted thereon and arranged opposite each other, antifriction wheels journaled upon projections upon said crosspieces, cam wheels adapted to contact with the antifriction wheels upon said projections and to move the sockets into contact with the opposite ends of spindles previously placed upon the plates and raised to positions in alinement with the socket members, means for imparting a longitudinal movement to the rack after the sockets are released from the spindles, tracks upon which a single spindle is adapted to be deposited as the rack lowers while the other spindles are held in suspension, and means for returning the rack to its normal position.

3. An apparatus for boring bobbins comprising a frame, a movable rack, plates upon the latter and means upon the plates for holding bobbins, crosspieces, springs connected thereto, socket members fastened to said crosspieces, a stationary beam to which the springs secured to one of said crosspieces are attached, projections upon said crosspieces, an antifriction wheel journaled upon each of said projections, cam wheels adapted to contact with said antifriction wheels upon the projections, provided with offsets and designed to move the socket members toward each other to engage the opposite ends of the spindles previously raised by the plates into alinement with said socket members, means for imparting a longitudinal movement to the rack when in an elevated position, inclined tracks over which a single spindle upon the rack is positioned when the rack is given a longitudinal movement to its limit in one direction, and means for returning the rack to its normal position after it has lowered.

4. An apparatus for boring bobbins comprising a frame, a movable rack, plates upon the latter, thumb screws for adjusting the plates, fingers upon the latter between which spindles are adapted to be held, oppositely disposed movable socket members, pivotally mounted angle levers, antifriction rollers journaled upon said levers, a roller upon each lever engaging underneath said rack, rotatable cams adapted to contact with corresponding antifriction rollers upon said levers to cause the same to tilt to bring the spindles into alinement with said socket members, cam-actuated mechanism for moving the oppositely disposed socket members toward each other to engage and hold the spindles while being bored, springs for releasing the socket members after the holes are bored, a downwardly extending projection upon the rack, a rotatable disk, means for operating the same, an arm secured to the disk, a set screw upon said projection against which the arm is adapted to contact, and means for returning the rack to its normal position.

5. An apparatus for boring bobbins comprising a frame, a movable rack, plates upon the latter, thumb screws for adjusting the plates, fingers upon the latter between which spindles are adapted to be held, oppositely disposed movable socket members, pivotally mounted angle levers, antifriction rollers journaled upon said levers, a roller upon each lever engaging underneath said rack, rotatable cams adapted to contact with corresponding antifriction rollers upon said levers to cause the same to tilt to raise the rack to bring the spindles into alinement with said socket members, cam-actuated mechanism for moving the oppositely disposed socket members toward each other to engage and hold the spindles while being bored, springs for releasing the socket members after the holes are bored, a downwardly extending projection upon the rack, a rotatable disk, means for operating the same, an arm secured to the disk, a set screw upon said projection against which the arm is adapted to contact, a bar projecting from the rack, and a cam for engagement with said bar to return the rack to its normal position.

1,112,364. SPARK-ARRESTER. FRANK DOMOWITCH, Wilkes-Barre, Pa. Filed Apr. 14, 1914. Serial No. 831,885. (Cl. 110—124.)



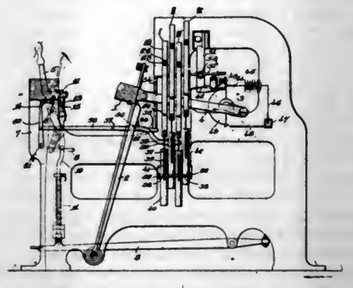
1. The combination with the smoke box of a boiler, of a spark arrester therein and extending into the path of the combustion products, said spark arrester including a cinder box, spaced partitions above the cinder box, and spaced at their upper edges from the top of the smoke box, a baffle depending from the top of the smoke box and between the partitions, a hopper, a screen extending from the hopper to the top of the smoke box and intersecting the path of the products of combustion from between the partitions, the said hopper discharging into the space between the partitions.

2. The combination with the smoke box of a boiler, of a spark arrester including a cinder box, transverse partitions within the smoke box and above the cinder box, said partitions being spaced from the top of the smoke box, a baffle plate depending from the top of the smoke box and between the partitions, a hopper supported by one of the partitions, a screen extending from the hopper to the top of the cinder box and across the path of the products of combustion flowing from between the transverse partitions, said hopper discharging into the space between the partitions, and a partition connecting the transverse partitions and dividing the space therebetween into separate compartments opening downwardly into the cinder box.

3. The combination with the smoke box of a boiler, of a spark arrester including a cinder box depending from the smoke box and having a bottom adapted to be opened, spaced transverse partitions above the cinder box, a partition connecting the said transverse partitions and dividing the space therebetween into upper and lower compartments discharging downwardly into the cinder box, a baffle plate depending from the top of the smoke box and between the transverse partitions, an apron extending downwardly from one of the transverse partitions, a hopper for receiving material from the apron, said hopper discharging into the lower compartment between the partitions, and a screen extending from the hopper to the top of the smoke box and intersecting the path of the products of combustion issuing from the compartment.

1,112,365. ELECTROMECHANICAL WARP STOP-MOTION. GORDON J. DUSTIN, Plymouth, Mass., assignor to John F. Dustin, Lawrence, Mass. Filed Dec. 23, 1911. Serial No. 667,442. , (Cl. 139—91.)

1. In a warp stop-motion for looms, the combination of a controlling-circuit for setting in operation the stopping mechanism, a harness-frame having a heddle-supporting bar fixed therein above the warp and comprising an insulating sheath and a terminal set therein and projecting above the sheath, a second terminal fixed in the harness-frame below the warp, means to include the terminals in the controlling-circuit only when the harness-frame is down, said means including transverse contact feet depending below the frame and connected yieldingly with the two terminals, and a series of metallic heddles slotted to receive loosely the supporting bar and the lower terminal and always in contact with the latter, breakage of a warp-thread causing the heddle thereof to complete the controlling-circuit by contact of such heddle simultaneously with the upper and lower terminals when the harness-frame is down.



2. In a worp stop-motion for looms, the combination of a controlling-circuit for setting in operation the stopping mechanism, shedding mechanism, including a plurality of vertically reciprocating harness-frames each having fixedly mounted in it upper and lower terminals insulated from each other, an insulating sheath for the upper terminal, the latter projecting above the sheath, a series of metallic heddles in each frame and adapted to electrically connect the terminals thereof when a warp-thread fails, means to include the terminals of a harness-frame in the controlling-circuit when the frame is at or near its lowest position, such means comprising a pair of fixed, duplex contact members in the controlling-circuit to coöperate with contact members on all of the harness-frames, contact members carried by and connected yieldingly with each harness-frame, to coöperate intermittingly with the said fixed contact members and include the terminals of a frame in the controlling-circuit, and a pair of members of insulating material depending from each frame adjacent the movable contact members thereof, each of said insulating members sliding between the parts of a duplex contact member and acting to prevent engagement of the contact members of adjacent harness-frames.

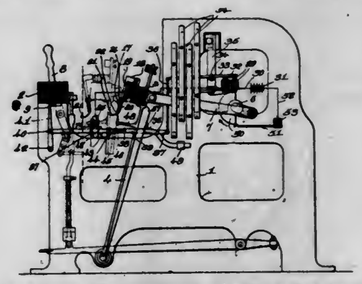
3. In a warp stop-motion for looms, the combination of a controlling-circuit for setting in operation the stopping mechanism, duplex fixed contact members in such circuit, at opposite sides of the loom, a harness frame having metallic side-bars insulated from each other, upper and lower terminals fixedly mounted in the frame and each electrically connected with a side-bar, metallic heddles adapted to engage simultaneously with said terminals when a warp-thread breaks and the side-bars are in the controlling-circuit, a tubular, longitudinally slotted sheath of insulating material connected with each side-bar and sliding between the parts of each duplex contact member, and a metallic spring within each sheath and connected with the corresponding side-bar, the foot of the spring being elongated and extended through the slot of the sheath to form a movable contact adapted to engage the fixed contact member when the harness-frame is down, the sheaths preventing short-circuiting through adjacent harness-frames.

4. In a warp stop-motion for looms, the combination of a controlling-circuit for setting in operation the stopping mechanism, said circuit having fixed contact members at opposite sides of the loom, a harness-frame having two terminals fixed therein and insulated from each other, means to electrically connect the terminals when the frame is down and a warp-thread fails or slackens unduly, movable contact members on the frame, each consisting of a spring coil connected with one of the terminals and havinlg a foot to engage a fixed contact member when the harness-frame is down, to thereby include the terminals in the controlling circuit, and a tubular sheath of insulating material inclosing each spring coil and having a lateral aperture through which the foot of the coil extends.

5. In a warp stop-motion for looms, the combination of a controlling-circuit for setting in operation the stopping mechanism, said circuit having fixed contact members at opposite sides of the loom, a harness-frame having two terminals fixed therein and insulated from each other, means to electrically connect the terminals when the frame is down and a warp-thread fails or slackens unduly, yielding contact members on the frame, each electrically connected with one of the terminals, each contact member having a laterally elongated foot to engage a fixed contact member when the frame is down and thereby include the terminals in the controlling circuit, and a tubular insulator for each contact member, inclosing the main portion thereof and laterally apertured for the projection therethrough of the elongated foot.

[Claims 6 to 8 not printed in the Gazette.]

1,112,366. LOOM. JOHN F. DUSTIN, Fulton, N. Y. Filed Sept. 5, 1911. Serial No. 647,790. (Cl. 139—51.)



1. In a loom, the combination with a lay having two shuttle boxes, of a shuttle detector associated with each shuttle box and arranged to occupy one position when a shuttle is in the box and another position when the box is empty, each shuttle detector having a wiper contact associated therewith, which contact moves in one path when a shuttle occupies the corresponding box and in another path when there is no shuttle in the box, an electric circuit having two pairs of separated stationary contacts, each pair of stationary contacts being situated to be engaged by the corresponding wiper contact when it moves in the first-named path, and means to stop the loom when the circuit is closed simultaneously by both wiper contacts.

2. In a loom, the combination with a lay having at each end a shuttle box provided with a binder, of a shuttle detector adjacent each shuttle box and operated by the binder thereof, a wiper contact associated with each shuttle detector and situated beneath the lay, each wiper contact moving in one path when a shuttle occupies the corresponding box and in another path when there is no shuttle in the box, an electric circuit having two pairs of stationary contacts situated to be engaged by the wipers when they move in the first-named paths, and means to stop the loom when the circuit is closed simultaneously at both pairs of contacts.

3. In a loom, the combination with a lay having at each end a shuttle box provided with a binder, of a shuttle detector pivoted to the lay adjacent each shuttle box, each shuttle detector engaging the binder of its shuttle box and extending below the lay, a contact wiper sustained by the lower end of each shuttle detector, an electric circuit having two pairs of separated stationary contacts sustained by the loom frame beneath the lay, the presence of a shuttle in each shuttle box operating through the binder and shuttle detector to place the corresponding wiper contact in position to engage the stationary contacts as the lay vibrates, and means to stop the loom when the circuit is closed simultaneously at both pairs of stationary contacts.

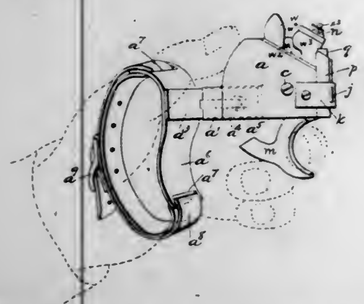
4. In a loom, the combination with a lay having two shuttle boxes, of a shuttle detector associated with each

shuttle box, a normally-open circuit having two pairs of separated stationary contacts, a wiper contact carried by each detector, each detector when actuated by a shuttle in the corresponding shuttle box moving its wiper contact into position to engage the corresponding pair of stationary contacts as the lay vibrates, and means to stop the loom when the circuit is closed at both pairs of stationary contacts simultaneously.

5. In a loom, the combination with a lay having a shuttle box at one end, of shifting shuttle boxes at the other end, a knock-off lever, a member connected thereto and extending beneath the lay, a dog pivoted to the member, a hook rigidly carried by the lay, and means to move said dog thereby to bring it into the path of the hook whenever the shifting shuttle boxes bring a shuttle into operative position while another shuttle is also in operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,112,367. KNOT-TYING DEVICE. ARTEMAS B. EDMANDS, Milford, Mass. Filed May 5, 1913. Serial No. 765,468. (Cl. 28—33.)



1. In a knot-tying device, a containing frame work; a trigger shaft revolubly mounted therein; a second shaft also revolubly mounted therein at right angles to said trigger shaft; two needle-carrying arms, the one integral with said trigger shaft, the other integral with said second shaft and operating in planes at right angles to each other; two hook needles fixed one upon each of said arms; a reciprocating trigger fixed upon said trigger shaft; bevel gears fixed one upon the inner end of each of said needle-carrying arms and in mesh with each other; a spring operating to return said trigger and said needle arms and needles to their normal position when said trigger is released; and means for arranging the threads in such a position with reference to each other and to said needles that said threads will be drawn by engagement with said needles into a weaver's knot.

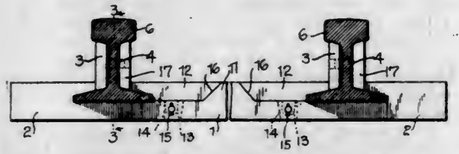
2. In a knot-tying device, a containing frame work; a trigger shaft revolubly mounted therein; a second shaft also revolubly mounted therein at right angles to said trigger shaft; two needle-carrying arms, the one integral with said trigger shaft, the other integral with said second shaft and operating in planes at right angles to each other; two hook needles fixed one upon each of said arms; a reciprocating trigger fixed upon said trigger shaft; bevel gears, one upon the inner end of each of said needle-carrying arms and in mesh with each other; a spring operating to return said trigger and said needle arms and needles to their normal position when said trigger is released; guides for placing the threads in proper relation to each other for the formation of a weaver's knot by the engagement therewith of said needles, and separate shears mounted upon said containing frame work and operated by said trigger, and serving to cut said threads to a proper length.

3. In a knot-tying device, a containing frame work; a trigger shaft revolubly mounted therein; a second shaft also revolubly mounted therein at right angles to said trigger shaft; two needle-carrying arms, the one integral with said trigger shaft, the other integral with said second shaft and operating in planes at right angles to each other; two hook needles fixed one upon each of said arms; a reciprocating trigger fixed upon said trigger shaft; bevel gears, one upon the inner end of each of said needle-carrying arms and in mesh with each other; a spring operating to return said trigger and said needle arms and needles to their normal position when said trigger is released; two posts adapted to form a loop in one thread and having a space between them for the reception of the second thread; a thread guide operating to place said second thread in proper relation to said first thread for the formation of a weaver's knot and an eyelet serving to hold said first thread in position.

4. A knot-tying device comprising a frame, two hook needles revolubly mounted therein and moving in planes at right angles to each other, one of said needles moving in the arc of a circle and being of full size at its free end and having a portion of its concaved surface cut away to form a clearance for the thread to be engaged by said needle and its free end being adapted to hold said thread for maintaining proper relations to a second thread for the formation of a weaver's knot, journaling means for said needles positioned transversely of and perpendicular to each other and means for operating said needles.

5. In a knot-tying device, two revolubly mounted hook needles adapted for movement in planes at right angles to each other, one of said needles being of full size at its free end and having a portion of its concaved surface cut away to form a clearance for the thread to be engaged by said needle and the free end of said needle adapted to hold said thread for maintaining the proper relations to a second thread for the formation of a weaver's knot, journaling means for said needles, one of said journaling means being positioned transversely through the other journaling means.

1,112,368. RAILWAY-TIE AND RAIL-FASTENER. WILLARD R. FERRIS, Perrington, Mich. Filed May 3, 1913. Serial No. 765,375. (Cl. 238—5.)

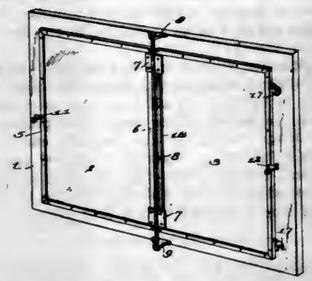


The combination with a tie having a recess formed in its upper face and an integral fish plate extending over one side of the recess with a pair of spaced locking lugs therebeneath for engagement in recesses in one edge of the base of adjacent rail sections, said tie having a vertical aperture in its recessed portion; of a removable block positioned in the recessed portion of the tie and having a lug projecting from its lower face and engaged in the vertical aperture in the recessed portion of the tie, and a fastening member engaged transversely through the tie and through said lug, said block having a fish plate formed therewith and adapted for coöperation with the first mentioned fish plate, said block also having a pair of lugs formed therewith beneath the second mentioned fish plate and opposite the first mentioned lugs, said lugs formed with the block being adapted for engagement in the recesses in the opposite edge of the base of the rail sections.

1,112,369. PHOTOGRAPHIC COPY-HOLDER. EZRA B. FISH, Kansas City, Mo., assignor to The Cameragraph Company, Kansas City, Mo., a Corporation of Arizona. Filed July 1, 1913. Serial No. 776,891. (Cl. 88—24.)

1. Photographic apparatus of the class described comprising a support, and copyholding members connected thereto and movable into positions to hold separate objects beneath them or into positions to hold an object between them.

2. Photographic apparatus of the class described comprising a support, and copyholding members pivotally connected thereto and movable into opposite positions relatively to said support, and also movable into superposed relation relatively to one another.



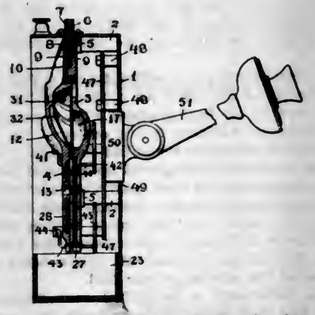
3. Photographic apparatus of the class described comprising a support, and a pair of members movable into opposite positions on said support to hold objects thereon, and also movable into superposed relation with one another to hold an object between them.

4. Photographic apparatus of the class described comprising a support, and a pair of members pivotally connected thereto and movable into opposite positions relatively to said support and also movable bodily into superposed relation relatively to one another.

5. A photographic copyholder comprising a support, and a pair of members pivotally connected thereto and movable into positions at opposite sides of their pivotal axis to hold sheets against said support and also movable into superposed relation to hold a sheet between them.

[Claims 6 and 7 not printed in the Gazette.]

1,112,370. COIN-CONTROLLED PAY-STATION FOR TELEPHONES. ARTHUR B. FLAGG and WALTER H. LIVERMORE, Worcester, Mass., assignors, by mesne assignments, to Livermore Pay Station Company, Portland, Me., a Corporation of Maine. Filed Dec. 26, 1905. Serial No. 293,175. (Cl. 194—96.)



1. The combination with a pair of coin channel plates recessed in opposite directions and placed face to face to form a coin channel, of a separator plate parallel with the recessed sides of said channel plates and held between said plates in the center of the channel, whereby said channel is divided into two parts.

2. The combination with a pair of coin channel plates, recessed in opposite directions and placed face to face to form a coin channel, of a separator plate parallel with the recessed sides of said channel plates and inserted in the center of the lower part of the channel, whereby said channel is divided into two parts, with said separator plate forming the inner sides of said channels, and with said channels communicating with the single channel at the upper part of the channel plates.

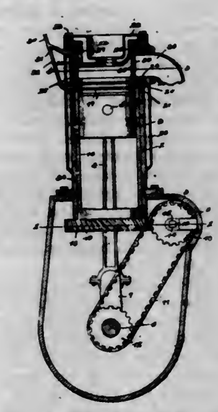
3. The combination of a pair of recessed channel plates placed face to face to form a single coin channel, a trough for the passage of coins therethrough having a series of side openings and placed in said coin channel, and a separator plate placed in the center of the coin channel and below said trough, and coin separating devices whereby the coins are diverted from the trough and through said side openings and upon opposite sides of said separator plate.

4. The combination of a pair of channel plates having recessed sides and placed face to face to form a coin channel, one of said channel plates curved laterally outward and the other of said plates curved inward to correspond with said outward bend, and provided with a bevel to receive the advancing coin, whereby the motion of the coin is checked as it passes through said coin channel.

5. The combination with a coin channel having its sides in a vertical plane and having a section with its edges inclined, whereby a coin will roll on its edge through said inclined section, said channel having a reverse curved section, said inclined section with a second oppositely inclined section, an opening in said curved section in the line of movement of the coin, and a sound signal placed opposite said opening and outside the coin channel, whereby the coin by its rolling action through the first inclined section will be forcibly carried against the sound signal and caused to rebound into the second and oppositely inclined section.

[Claims 6 to 15 not printed in the Gazette.]

1,112,371. GAS-ENGINE. CHARLES E. HATHAWAY, Murphysboro, Ill. Filed July 8, 1913. Serial No. 777,881. (Cl. 123—190.)

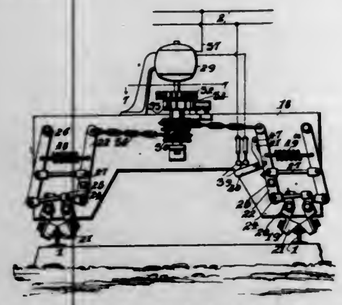


In an internal combustion engine, the combination of a crank shaft, a cylinder provided with an internal valve abutment shoulder, a reciprocatory piston, a cylindrical valve operating between the piston and cylinder wall and ported to register with the intake and exhaust ports of the cylinder, an annular external shoulder on said valve engaging said internal shoulder of the cylinder, a cylindrical compression shell arranged interiorly of said valve shell, and means for operating said valve.

1,112,372. TRAIN-STOPPING APPARATUS. ASAHEL H. HUSSEY, Whittier, Cal. Filed Sept. 16, 1913. Serial No. 790,081. (Cl. 188—48.)

1. In train stopping apparatus, a normally open electric circuit, a source of energy therefor, car brakes, each comprising pairs of levers, the levers of each pair being fulcrumed between the ends thereof upon the car body and disposed above and at the opposite sides of the lines of rails, brake shoes carried by the lower ends of said levers, operating levers for swinging said first levers to braking and non-braking positions, motors connected in said circuit, connections between each motor and the respective operating levers, and means for closing said circuit whereby the motors will be energized and the brake shoes actuated to braking position.

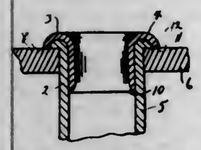
2. In train stopping apparatus, a normally open electric circuit, a source of energy therefor, car brakes, each comprising pairs of levers, the levers of each pair being fulcrumed between the ends thereof upon the car body and disposed above and at the opposite sides of the lines of rails, brake shoes carried by the lower ends of said levers, operating levers for swinging said first levers to braking and non-braking positions, motors connected in said circuit, connections between each motor and the respective operating levers, means for closing said circuit whereby the motors will be energized and the brake shoes actuated to braking position, and means holding said brake shoes normally inactive.



3. In train stopping apparatus, a normally open electric circuit, a source of energy therefor, car brakes, each comprising pairs of levers, the levers of each pair being fulcrumed between the ends thereof upon the car body and disposed above and at the opposite sides of the lines of rails, brake shoes carried by the lower ends of said levers, operating levers for swinging said first levers to braking and non-braking positions, motors connected in said circuit, connections between each motor and the respective operating levers, means for closing said circuit whereby the motors will be energized and the brake shoes actuated to braking position, means holding said brake shoes normally inactive, and means for interrupting the flow of current through each motor succeeding the operation of said operating levers.

4. In train stopping apparatus, a normally open electric circuit, a source of energy therefor, car brakes, each comprising pairs of levers, the levers of each pair being fulcrumed between the ends thereof upon the car body and disposed above and at the opposite sides of the lines of rails, brake shoes carried by the lower ends of said levers, operating levers for swinging said first levers to braking and non-braking positions, motors connected in said circuit, connections between each motor and the respective operating levers, means for closing said circuit whereby the motors will be energized and the brake shoes actuated to braking position, means holding said brake shoes normally inactive, means for interrupting the flow of current through each motor succeeding the operation of said operating levers, and means for holding the brake shoes in braking position succeding the deënergization of the motor.

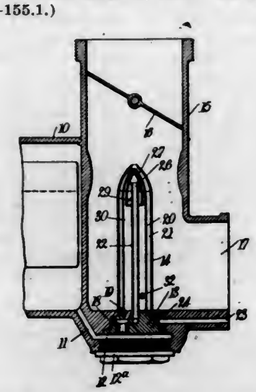
1,112,373. PROTECTOR FOR THE BEADS OF BOILER-FLUES. JAMES E. LANGDON, Philadelphia, Pa., assignor of one-half to George D. Rollins, Philadelphia, Pa. Filed May 28, 1913. Serial No. 770,385. (Cl. 110—97.)



1. The combination with a flue and the flue sheet of a boiler of a protector comprising a body, the inner lower edge of which is beveled inward from the outer surface and adapted to be rolled out to secure the protector in place, and a flange carried by the opposite end of said body, said flange having an inverted U shaped groove in the edge thereof, thereby producing two annular concentric knife edges adapted to be embedded in the flue sheet for the purpose specified.

2. The combination with a flue and the flue sheet of a boiler of a protector comprising a body, the inner lower edge of which is beveled inward from the outer surface and adapted to be rolled out to secure the protector in place, and a flange carried by the opposite end of said body, said flange having an inverted U shaped groove in the edge thereof, thereby producing two annular concentric knife edges adapted to be embedded in the flue sheet, and a packing ring contained within said groove.

1,112,374. CARBURETER. D MCRA LIVINGSTON, New York, N. Y. Filed Aug. 10, 1911. Serial No. 643,312. (Cl. 48—155.1.)



1. A carbureter nozzle comprising a suction controlled jet and an air duct extending into the nozzle and having a suction controlled fuel seal at its outlet end within the nozzle, the sealed area of the said outlet of the air duct decreasing with the extent of the suction exerted on the nozzle.

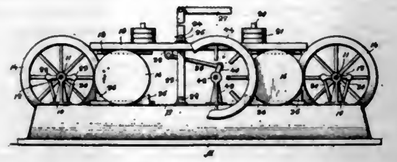
2. In a carbureter, the combination of a fuel reservoir, a nozzle having a fuel feed jet communicating with said reservoir, and an air feed provided with a variable outlet within the nozzle adjacent to the outlet of the fuel feed jet, and having a suction controlled fuel seal, lowering in proportion to the suction exerted on the fuel feed jet.

3. In a carbureter, a fuel feed device having a fuel connection, an outlet, a fuel passage from the fuel connection to the outlet, and air inlets leading to the said fuel passage at different levels between the fuel connection and the outlet, the said air inlets being normally sealed, under low speeds, by the fuel.

4. In a carbureter, a main fuel feed device and an auxiliary fuel feed device, each having a fuel connection, an outlet, and a fuel passage from the fuel connection to the outlet, and the auxiliary feed device having air inlets leading to the fuel passage thereof at different levels between the fuel connection and the outlet, the said air inlets being normally sealed by the fuel at low speeds and admitting air in succession under high speeds.

1,112,375. TRANSMISSION MECHANISM. NORBERTO MARTINEZ, Cotulla, Tex., assignor of one-half to Theophilus Wahrenberger, Cotulla, Tex. Filed Mar. 31, 1914. Serial No. 828,514. (Cl. 74—14.)

1. A device of the class described comprising a support, a plurality of swinging levers, a pivot on the support and common to the levers, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the levers, beveled tread members on the levers, and roller means movable on the support for working against the tread members to displace the levers.



2. A device of the class described comprising a support, a plurality of swinging levers, a pivot on the support and common to the levers, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the levers, beveled tread members on the levers, roller means movable on the support for working against the tread members to displace the levers, and means for setting the roller members in motion.

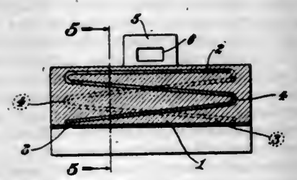
3. A device of the class described comprising a support, a plurality of swinging levers, a pivot on the support and common to the levers, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the levers, beveled tread members on the levers, roller means movable on the support for working against the tread members to displace the levers, means for setting the roller members in motion, and means for limiting the movement of the last-named means.

4. A device of the class described comprising a support, a plurality of swinging levers, a pivot on the support and common to the levers, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the levers, beveled tread members on the levers, roller means movable on the support for working against the tread members to displace the levers, means for setting the roller members in motion, means for limiting the movement of the last-named means, and counter-balancing means coöperative therewith.

5. A device of the class described comprising a support, a plurality of swinging levers, a pivot on the support and common to the levers, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the levers, beveled tread members on the levers, roller means movable on the support for working against the tread members to displace the levers, a shiftable table supported by the roller means, and means for reciprocating the said table.

[Claims 6 to 8 not printed in the Gazette.]

1,112,376. REINFORCED BRAKE-SHOE. JOHN J. MORSE, St. Louis, Mo. Original application filed Aug. 19, 1912, Serial No. 715,707. Divided and this application filed July 21, 1913. Serial No. 780,130. (Cl. 188—82.)



1. A brake-shoe having a body portion including a wearing member which extends toward the wearing face of the shoe in an obliquely transverse direction, said wearing member being of different material from other material forming a part of the said body.

2. A brake-shoe having a body portion including a plurality of wearing members which are angularly disposed with respect to each other and which extend toward the wearing face of the shoe in obliquely transverse directions, said wearing members being of different material from other material forming a part of the said body.

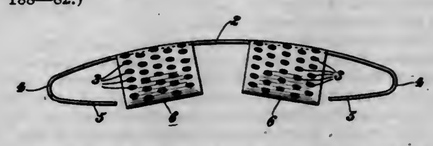
3. A brake-shoe having a body portion composed of a plurality of materials one of which is a tough metal and the other of which is a granular material, said body portion including members of the tough metal which are embedded in the granular material and which extend toward the wearing face of the shoe in transversely oblique directions.

4. In a brake-shoe, a plate of ductile metal located adjacent to the back thereof, said plate having extensions which are connected to the longitudinal sides of the plate and project therefrom into the wearing part of the brake-shoe, the free end portions of the extensions terminating at points located adjacent to the longitudinal side of the plate opposite to the longitudinal side to which the extensions are connected.

5. A reinforced brake-shoe composed of cast-metal and having a plate of ductile metal located adjacent to the back thereof and arms borne by said plate and projecting transversely from the longitudinal sides of same into the wearing part of the brake-shoe, the arms borne by one side of said plate being arranged in staggered relation with respect to the arms borne by the other side of the said plate and terminating at opposite sides of the plate.

[Claims 6 to 18 not printed in the Gazette.]

1,112,377. REINFORCED BRAKE-SHOE. JOHN J. MORSE, St. Louis, Mo. Original application filed Aug. 19, 1912, Serial No. 715,707. Divided and this application filed July 21, 1913. Serial No. 780,131. (Cl. 188—82.)



1. A reinforced brake-shoe composed of cast-metal and having a plate of ductile metal located adjacent to the back thereof, said plate having an extension which projects transversely from one of the longitudinal sides thereof into the wearing part of the brake-shoe.

2. A reinforced brake-shoe composed of cast-metal and having a plate of ductile metal located adjacent to the back thereof, said plate having a plurality of extensions which project transversely from a longitudinal side of same into the wearing part of the brake-shoe.

3. A reinforced brake-shoe composed of cast-metal and having a perforated plate of ductile metal located adjacent to the back thereof, the end portions of said plate being bent inwardly adjacent to the ends of the brake-shoe so as to extend into the wearing part of the brake-shoe, and a perforated extension projecting from a side of said plate into the wearing part of the brake-shoe.

4. A reinforced brake-shoe composed of cast-metal and having a perforated plate of ductile metal located adjacent to the back thereof, the end portions of said plate being bent inwardly adjacent to the ends of the brake-shoe so as to extend into the wearing part of the brake-shoe, and a plurality of perforated extensions projecting from a side of said plate into the wearing part of the brake-shoe.

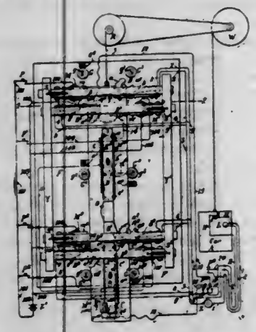
5. A reinforced brake-shoe having a perforated plate located adjacent to the back thereof and having parts of same adjacent to the marginal edges of the longitudinal sides thereof bent inwardly so that each of the parts extends from side to side of the shoe and into the wearing face of the shoe.

[Claims 6 to 9 not printed in the Gazette.]

1,112,378. SWITCHING APPARATUS. HENRY F. NEWBURY, New York, N. Y., assignor to Elevator Supply & Repair Company, a Corporation of Illinois. Filed Jan. 28, 1905. Serial No. 243,120. (Cl. 177—336.)

1. In an elevator signal apparatus, in combination, a plurality of switch devices, actuating means adapted to move said devices to close a circuit through each device, and means comprising a movable part and means for shift-

ing the same to change the coacting relations between said switch devices and said actuating means, one relatively to the other, and means for maintaining said changed relation during the relative movement of such means and devices in one direction.



2. In an elevator signal apparatus, in combination, a plurality of switch devices, means adapted to move past such device and actuate the same, changing means adapted to be displaced to change the coacting relations of the switch device and actuating means, and holding means adapted to engage with and continuously hold the changing means in its displaced position, before and after passing the individual switch devices.

3. In an elevator signal apparatus, in combination, a plurality of switch devices, means adapted to move past such devices in succession and actuate the same, means adapted to change the coacting relations of the switch device and actuating means, and comprising a movable part, holding means comprising a holding member which is adapted to be moved into and out of holding position relatively to said movable part of the changing means, and means adapted to control said holding member.

4. In an elevator signal apparatus, in combination, a switch device, means adapted to move relatively to the switch device and actuate the same, means adapted to change the coacting relation of the switch device and actuating means, comprising an electrically controlled device, a circuit and operating means, and a holding device adapted to be moved into the path of movement of the said electrically controlled device and hold the parts of said switch device in a fixed relation for a desired length of time.

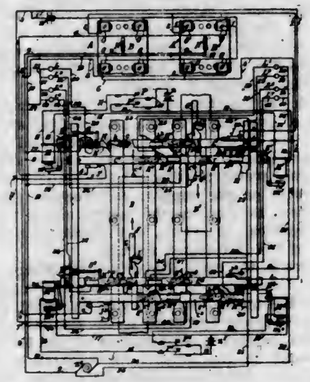
5. In an elevator signal apparatus, in combination, a plurality of switch devices, means adapted to move relatively to the switch device to pass the same in succession and actuate the same, means adapted to change the coacting relations of the switch device and actuating means, and holding means adapted to hold the parts in their changed relation independently of the movement of the actuating means.

[Claims 6 to 26 not printed in the Gazette.]

1,112,379. ELEVATOR SIGNAL SYSTEM OR APPARATUS. HENRY F. NEWBURY, New York, N. Y., assignor to Elevator Supply & Repair Company, a Corporation of Illinois. Filed Oct. 14, 1914. Serial No. 654,637. (Cl. 177—336.)

1. In an elevator signal apparatus, in combination, a plurality of cars, a passenger's button, a movable member, and means whereby said member is adapted to be displaced by the operation of said button, said movable member corresponding to the said button and corresponding to all the said cars in common, floor-signal circuits including floor signals for indicating the direction of movement of said cars, means moving correspondingly to said cars and coöperating with said movable member to close said floor signal circuits, and a car signal circuit including signals in the cars, and means for closing said car signal circuit through the medium of said movable member.

2. In an elevator signal apparatus, in combination, a plurality of cars, a passenger's button, a movable member, and means whereby said member is adapted to be displaced by the operation of said button, said movable member corresponding to the said button and corresponding to all the said cars in common, floor signal circuits including floor signals for indicating the direction of movement of said cars, means moving correspondingly to said cars and coöperating with said movable member to close said floor signal circuits, a car signal circuit including signals in the cars, means for closing said car signal circuit through the medium of said movable member, and means for returning said movable member to open said car signal circuit when any car arrives at a predetermined point.



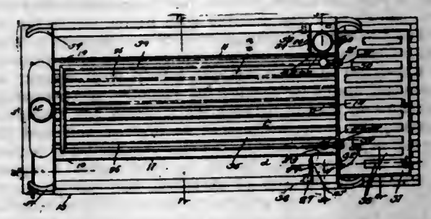
3. In an elevator signal apparatus, in combination, a plurality of cars, a passenger's button, a movable member, and means whereby said member is adapted to be displaced by the operation of said button, said movable member corresponding to the said button and corresponding to all the said cars in common, floor-signal circuits including floor signals for indicating the direction of movement of said cars, means moving correspondingly to said cars and coöperating with said movable member to close said floor-signal circuits, and arranged to return said movable member, and a car signal circuit including signals in the cars, and means for closing said car signal circuit through the medium of said movable member.

4. In an elevator signal apparatus, in combination, a plurality of cars, a passengers' button, a movable member, and means whereby said member is adapted to be displaced by the operation of said button, said movable member corresponding to the said button and corresponding to all the said cars in common, floor signal circuits including floor signals for indicating the direction of movement of said cars, means moving correspondingly to said cars and coöperating with said movable member to close said floor signal circuits, a car signal circuit including signals in the cars, means for closing said car signal circuit through the medium of said movable member, means for returning said movable member to open said car signal circuit when any car arrives at a predetermined point, and means for yieldingly holding said movable member in its normal position and yieldingly in its displaced position.

5. In an elevator signal apparatus, in combination, a plurality of cars, a passengers' button, a movable carrier, and means whereby said carrier is adapted to be displaced by the operation of said button, said carrier corresponding to the said button and corresponding to all the said cars in common, floor signal circuits including floor signals, circuit-closers therefor carried by said movable carrier and travelers moving correspondingly to said cars and adapted to actuate said circuit-closers to close said floor signal circuits, car signal circuits including signals in the cars and means for closing the same through the agency of said carrier.

[Claims 6 and 7 not printed in the Gazette.]

1,112,380. MAPLE-SUGAR EVAPORATOR. RILEY H. OBER and HOWARD K. OBER, Fort Jackson, N. Y. Filed June 28, 1912. Serial No. 706,464. (Cl. 127—9.)



1. In a device for evaporating maple syrup, a pan having longitudinal and parallel compartments, heat conducting flues extending longitudinally through the middle compartments, smaller compartments at one end of each of the side compartments, a regulating device disposed in one of the smaller compartments, a syrup conducting pipe disposed over the middle compartment and connected to the regulator, a heating pan at one end of the first-named pan and communicating therewith, the said compartments of the first-named pan communicating with each other, and gates in said communications for regulating the flow of the syrup back and forth longitudinally of the pan through the compartments and out of the opposite side of the pan.

2. In a device for evaporating maple sugar, a syrup pan, a heater pan connected therewith, a plurality of longitudinal parallel compartments in the first-named pan, the outer compartments communicating with the intermediate compartments at one end, the said intermediate compartments communicating with each other at the opposite end, means for regulating the flow of syrup, longitudinal heating flues in the said intermediate compartments, means for conducting syrup to the heater pan, a valve in the syrup conveying means, a float for operating the valve when the syrup has reached a predetermined depth.

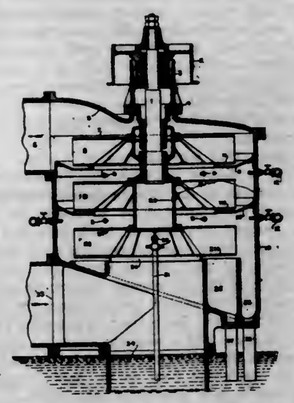
3. The combination with an evaporating pan having a U-shaped syrup conducting pipe mounted thereon and provided with a funnel, of a regulator comprising an open-ended vertical tank, a syrup supply pipe leading to and mounted on the tank, a discharge nozzle in the second-named pipe, detachably connected to the funnel, a float in the tank, a valve in the nozzle, and adjustable connections between the float and valve for regulating the flow of syrup to the first-named pipe.

1,112,381. GAS-WASHER. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 10, 1912. Serial No. 676,874. (Cl. 48—141.)

1. In a gas washer, a casing, means for admitting liquid spray to said casing, means having a circularly continuous surface adjacent its periphery for collecting said spray and for directing said liquid outwardly toward the wall of said casing in the form of a film, means for directing said film of liquid inwardly away from the wall of said casing, and inclosed fan blades located between said outwardly and said inwardly directing means for forcing the gas through the casing whereby the gas flows against and through said film and said spray in succession.

2. In a gas washer, a casing, means for admitting liquid to said casing, means having a circularly continuous surface adjacent its periphery for directing said liquid outwardly toward the wall of said casing in the form of a film, means for directing said film of liquid inwardly away from the wall of said casing, and inclosed fan blades located between said outwardly and said inwardly directing means for forcing the gas through the casing whereby the gas flows against and through said film in succession.

3. In a gas washer, a casing, means for directing liquid toward the mid portion of said casing, means having a circularly continuous surface adjacent its periphery for collecting and directing said liquid to flow toward the wall of said casing in the form of a film, means for reversing the direction of flow of said liquid film, and means located between said film directing and reversing means for gradually forcing gas first along and then through said liquid.

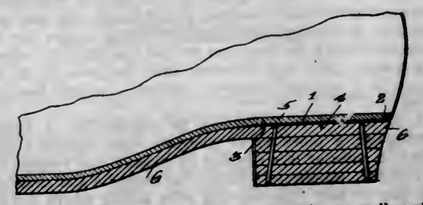


4. In a gas washer, a casing, rotary means within said casing, means for admitting liquid to said casing and for directing said liquid toward said rotating means, means carried by said rotary means and having a circularly continuous surface adjacent its periphery for collecting and directing said liquid to flow outwardly toward said casing in the form of a continuous film, means for reversing the direction of flow of said liquid film, and means carried by said rotating means for gradually forcing gas successively along and through said film.

5. In a gas washer, a rotatable fan, blades in said fan, said fan blades having their entire inlet and discharge edges radially directing, means for admitting gas to the inlet end of said fan blades, and means having a circularly continuous surface adjacent its periphery for forming a continuous inclosing film of liquid at the discharge of said fan.

[Claims 6 and 7 not printed in the Gazette.]

1,112,382. HEEL-PROTECTOR. JAMES S. RAMLOSE, Newport, R. I. Filed June 17, 1913. Serial No. 774,126. (Cl. 36—1.)



1. A heel protector for shoes, comprising a nail resisting metallic plate conforming substantially in size and shape to the interior of a shoe at the heel, a covering for the plate and terminating adjacent to the forward edge thereof, and oppositely projecting securing means carried by the plate for securing the covering thereto on one side and adapted to enter the bottom of the shoe on the other side to secure the covering and plate in position.

2. The combination with a shoe, of a metal plate conforming to the shape of the heel and disposed above the heel in the bottom of the shoe, integral teeth carried by the plate, some of said teeth being bent downwardly and arranged to enter the bottom of the shoe for securing the plate to the shoe and other of said teeth being bent upwardly, and a covering carried by said plate and receiving the upwardly bent teeth and secured to the plate thereby.

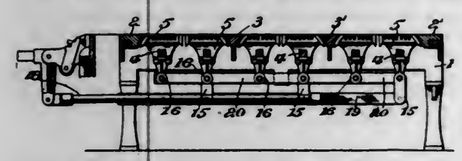
3. The combination with a shoe, of a metal plate conforming to the shape of the heel and disposed above the heel in the bottom of the shoe, a series of upwardly projecting teeth bent from the plate on the outer edge thereof, a series of teeth bent from the plate on the front edge thereof, certain of said last-mentioned teeth projecting downwardly and certain thereof projecting upwardly, a tooth bent downwardly from the plate near the middle part thereof, the downwardly bent teeth being arranged to enter the bottom of the shoe for holding the plate to the shoe, and a covering for the plate disposed upon the upper surface of the latter and arranged to receive the upwardly bent teeth, said cover being held in position by said upwardly bent teeth.

4. The combination with a shoe, of a metal plate conforming to the shape of the heel and disposed above the heel and the bottom of the shoe, a series of upwardly projecting integral teeth carried by the plate on the outer curved edge thereof, a series of teeth stamped from the plate on the front edge thereof, certain of said teeth projecting downwardly and others projecting upwardly, a tooth stamped from the plate near the middle part thereof and being bent downwardly, the downwardly bent teeth being arranged to enter the bottom of the shoe for holding the plate to the shoe, and a resilient covering for the plate disposed upon the upper surface of the latter and arranged to receive the upwardly bent teeth, said covering being held in position by said upwardly bent teeth.

5. A heel protector for shoes, comprising a nail-resisting metallic plate conforming in size and shape to the interior of the shoe at the heel, a leather covering for the plate, and oppositely projecting securing means integral with the plate for securing the covering thereto on one side and adapted to enter the bottom of the shoe on the other side.

[Claim 6 not printed in the Gazette.]

1,112,383. GRATE. JAMES REAGAN, Philadelphia, Pa. Filed July 16, 1913. Serial No. 779,365. (Cl. 126—180.)



1. A furnace grate, having in combination a square rocking-bar, a plurality of choppers, each having a plurality of pairs of legs adapted to straddle the rocking-bar and provide air-spaces between the choppers and said bar, one pair of said legs coacting with keying means for detachably-holding the choppers on the bar against vertical and lateral play, but allowing said choppers to be removed in a vertical direction without a lateral displacement.

2. A furnace grate, having in combination a square rocking-bar, a plurality of choppers, each having a plurality of pairs of legs adapted to straddle the rocking-bar and provide air-spaces between the choppers and said bar, one pair of said legs coacting with keying means for detachably-holding the choppers on the bar against vertical and lateral play, but allowing said choppers to be removed in a vertical direction without a vertical displacement, spanners arranged on the rocking-bar, between the pairs of legs, and means for rocking the spanners and thereby the choppers.

3. A furnace grate, having in combination a square rocking-bar, a plurality of choppers, each having a plurality of pairs of legs adapted to straddle the rocking-bar and provide air-spaces between the choppers and said bar, one pair of said legs coacting with keying means for detachably-holding the choppers on the bar against vertical and lateral play, but allowing said choppers to be removed in a vertical direction without a lateral displacement, bridge-bars having horizontal air-spaces therethrough, and independent means for rocking the choppers.

4. A furnace grate, having in combination a square rocking-bar, a plurality of choppers, each having a plurality of pairs of legs adapted to straddle the rocking-bar and provide air-spaces between the choppers and said bar, one pair of said legs coacting with keying means for detachably-holding the choppers on the bar against vertical and lateral play, but allowing said choppers to be removed in a vertical direction without lateral displacement, independent means for rocking the choppers, stoker-castings journaled on the bar, between the choppers, and means for cleaving the stoker-castings so as to raise and hold the fire-bed in suspension while the choppers are being rocked.

5. A furnace grate, having in combination a square rocking-bar, a plurality of choppers, each having a plurality of pairs of legs adapted to straddle the rocking-bar and provide air-spaces between the choppers and said bar, one pair of said legs coacting with keying means for detachably-holding the choppers on the bar against vertical and lateral play, but allowing said choppers to be removed in a vertical direction without a lateral displacement, independent means for rocking the choppers, head and tail-blocks comprising a number of sections, each adapted to be attached to the respective head and tail-bars of the grate frame by securing pins, and bridge-bars provided with oppositely-disposed cutting edges and with air-spaces therethrough.

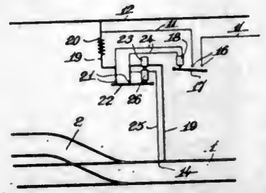
[Claim 6 not printed in the Gazette.]

1,112,384. SPRAYING APPARATUS. HERBERT CHARLES RICH, Hoxton, London, England. Filed July 2, 1914. Serial No. 848,635. (Cl. 137—14.)

A spraying apparatus comprising in combination, two telescopic cylindrical sections adapted to form a liquid reservoir, a bayonet slot connection between said telescopic sections, a closure for one end of said reservoir having a threaded aperture therethrough, and a nozzle closure for the other end of said reservoir, an air tube entering the threaded aperture in said first mentioned closure, a nozzle disposed on the end of said air tube and having its opening concentric and lying within the opening of said nozzle closure, said threaded aperture providing means whereby the relative distance between said nozzle closure and said air nozzle may be varied to vary the quantity of liquid sprayed, and a guide to said air tube disposed within said reservoir.

1,112,385. SIGNAL SYSTEM. JOHN J. RUDDICK, West Newton, Mass., assignor to United States Electric Signal Co., a Corporation of Massachusetts. Filed Oct. 9, 1911. Serial No. 653,479. (Cl. 246—36.)

1. In a signal system, the combination with a main conductor carrying a comparatively high voltage and a return, of a normally-closed circuit connecting said conductor and return, a shunt circuit connected to said closed circuit, a signal-setting magnet in the shunt circuit which is normally inoperative, an insulated rail section, a branch circuit connecting the normally-closed circuit to the insulated rail section, and means controlled by the branch circuit to open the normally-closed circuit between the terminals of the shunt circuit when a car passes over the insulated rail section, whereby the signal-setting magnet is rendered operative.



2. In a signal system, the combination with a main conductor carrying a comparatively high voltage and a return, of a normally-closed circuit connecting said conductor and return potential-reducing means in said circuit, a shunt circuit connected to said closed circuit, a signal-setting magnet in the shunt circuit which is normally inoperative, an insulated rail section, a branch circuit connecting the insulated rail section to the normally-closed circuit on the return side of the potential-reducing means whereby the voltage between the terminals of the branch circuit is comparatively low, and means controlled by the branch circuit to open the normally-closed circuit between the terminals of the shunt circuit when a car passes over the insulated rail section, whereby the signal-setting magnet is rendered operative.

3. In a signal system, the combination with a main conductor and a return, of a circuit connecting said conductor and return, a signal-setting magnet connected thereto, means acting normally to short circuit said signal-setting magnet whereby the latter is normally inactive, an insulated rail section, a branch circuit connected thereto but taking current from the main conductor, means to maintain a low voltage in said branch circuit, and means rendered operative when the branch circuit is closed by connecting the insulated rail section to the return to break the short circuit and render the signal-setting magnet operative.

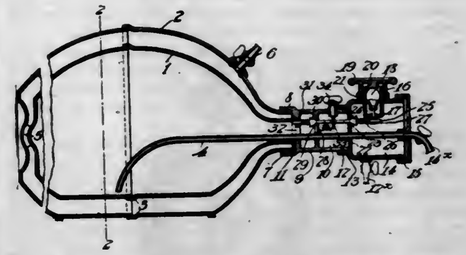
4. In a signal system, the combination with a main conductor and return, of a circuit connecting said conductor and return potential-reducing means in said circuit, a signal-setting magnet connected to said circuit, a locking magnet in said circuit, means operated thereby for short-circuiting the signal-setting magnet, an insulated rail section, a branch circuit connecting said rail section to the first-named circuit on the return side of the potential-reducing means, and a neutralizing magnet in the branch circuit which when operative is adapted to neutralize the action of the locking magnet.

5. In a signal system, the combination with a main conductor and a return, of a circuit connecting said conductor and return and having a continuously-closed shunt connection, a resistance in said circuit, a signal-setting magnet in said shunt connection, a signaling circuit controlled by said magnet, means acting normally to short-circuit said shunt connection whereby the signal-setting magnet is normally inactive, an insulated rail section, a branch circuit connecting said insulated rail section and the first-named circuit on the return side of the resistance therein, and means rendered operative when the branch circuit is connected to the return to break the short-circuit and render the signal-setting magnet operative.

[Claims 6 and 7 not printed in the Gazette.]

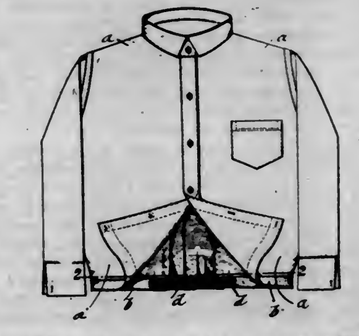
1,112,386. APPARATUS FOR DISPENSING LIQUIDS. ADAM EMIL SCHATZ, Mount Vernon, N. Y. Filed June 21, 1912. Serial No. 705,142. (Cl. 225—18.)

1. A liquid dispensing apparatus comprising a vessel, a gas head connected to said vessel having an upper main gas chamber provided with an auxiliary chamber formed in one side thereof for the reception of a gas charged capsule, a reducing chamber intermediate said main chamber and vessel, a valve connected with said main chamber, a valve connected with the reducing chamber, and means carried by the reducing chamber and extending within the same for successively operating each valve to regulate the pressure supplied to the vessel containing the liquid.



2. A liquid dispensing apparatus comprising a vessel, in combination with a gas containing head, said head having an upper main gas chamber provided with an auxiliary chamber formed in one side thereof for the reception of a gas charged capsule, a reducing chamber intermediate said main chamber and vessel, a valve connected with said main chamber, a valve connected with the reducing chamber, means carried by the reducing chamber and projecting into the same for successively operating such valves to regulate the pressure applied to the vessel, and a discharge tube passing from the vessel entirely through the reducing chamber and main chamber and projecting through the top of the latter chamber.

1,112,387. BOY'S BLOUSE. FREDERICK H. SCHNEER, New Rochelle, N. Y. Filed Oct. 29, 1912. Serial No. 728,367. (Cl. 2—98.)

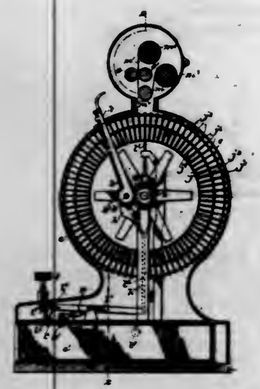


In a boy's blouse, the combination of a waistband having button-holes in its rear-portion, a strap composed of elastic material only, and alongside the waistband, and provided with a button at the center thereof, and an outer button at each end of the strap, said buttons being adapted to be passed through said button-holes correspondingly arranged, the elastic strap being shorter than the distance between the outer holes of the waistband for forming folds or plaits in the waistband over the buttons for concealing the buttons when said waistband is folded.

1,112,388. COMPUTING COUNTER-SCALE AND CASH-REGISTER. FOSTER J. SIBLEY, Findlay, Ohio, assignor of one-half to Thos. C. Dunn, Findlay, Ohio. Filed Sept. 7, 1905. Serial No. 277,318. (Cl. 73—104.)

1. The combination of computing scales, a rotating circular frame, a series of normally concealed indicators in said frame, each of said indicators containing a single value indication, a price key, means independent of said key for rotating said frame, a weighing scale, devices operated by said scale for controlling the movement of said

frame, and a device connected with said key which will permit a complete revolution of said frame but adapted by the movement of said key to expose any one of said indicators as determined by the movement of said frame, substantially as specified.



2. The combination, with a weighing device, of a series of keys representing prices-per-pound, a series of indicator frames, each frame having a plurality of normally concealed indicators representing different values, means for moving said frames, means operated by the weighing device for controlling the movement of said frames proportionate to the weighing movement of said weighing device, and separate means for exposing any one of said indicators by a movement of its corresponding key, substantially as specified.

3. In combination with a scale, a measuring wheel moved by said scale, an indicator frame having a series of normally-unexposed value indicators, means for moving said frame, means on said measuring wheel for determining the movement of said frame, a price key having means for exposing any one of said indicators on said frame, and printers to record the values indicated by said indicators, substantially as specified.

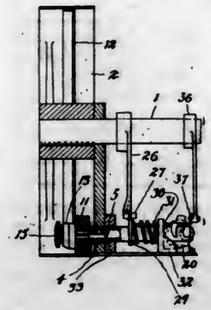
4. The combination with a scale, a measuring wheel moved by said scale, a series of keys representing prices-per-pound, a series of indicating wheels each having a series of normally concealed indicators representing values, means for moving said wheels, means on said measuring wheel for determining the movement of said wheels, and means connected with each of said keys adapted when a key is operated to expose an indicator representing a value determined by the depressed key and the position of the indicating wheel corresponding thereto, substantially as specified.

5. The combination with a scale movable to different positions in proportion to the weight of the article weighed, accounting mechanism having a series of movable members for recording different values in proportion to the movement of said scale, means for moving said members, an intermediate measuring device moving with said scale to control the movement of said members, and means representing prices for operating said members after they have been moved to a given position.

[Claims 6 to 15 not printed in the Gazette.]

1,112,389. KNOTTER FOR HARVESTER-BINDERS. JOHN M. SIMPSON and JOSEPH E. WILKINSON, Winnipeg, Manitoba, Canada. Filed Sept. 11, 1911. Serial No. 648,766. (Cl. 56—33.)

1. In a knotter the combination of a knotting spindle arranged transversely to the lead of the twine; a hook on the end of the spindle; a rotatable longitudinally movable sleeve in which the spindle is longitudinally movable and in regard to which it is relatively non-rotatable, said hook coöperating with the end of the spindle to grip the twine; a bill carried by the sleeve; and means suitably coördinated for rotating the sleeve and spindle and for sliding them endwise either separately or simultaneously.



2. In a knotter the combination of a knotting spindle arranged transversely to the lead of the twine; a hook on the end of the spindle; a rotatable longitudinally movable sleeve in which the spindle is longitudinally movable and in regard to which it is relatively non-rotatable, said hook coöperating with the end of the spindle to grip the twine; a bill carried by the sleeve; means suitably coördinated for rotating the sleeve and spindle and for sliding them endwise either separately or simultaneously; a cord cutter slidable longitudinally of said sleeve; and means for actuating said cutter to cut the twine.

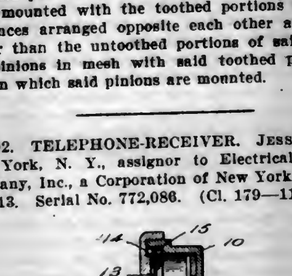
3. In a knotter the combination of a knotting spindle arranged transversely to the lead of the twine; a hook on the end of the spindle; a rotatable longitudinally movable sleeve in which the spindle is longitudinally movable and in regard to which it is relatively non-rotatable said hook coöperating with the end of the spindle to grip the twine; a bill carried by the sleeve; means suitably coördinated for rotating the sleeve and spindle, and for sliding them endwise either separately or simultaneously; a notched cord-holding disk journaled behind the knotter bill on an axis parallel to the lead of the cord; a coöperating plate bent over the edge of the disk; and means for imparting a step-wise movement of rotation to said disk.

4. In a knotter the combination of a notched cord-holding disk; a plate coöperating therewith bent over the edge of the disk; a knotter shaft; and an arm carried thereby adapted to engage the notches of the disk to impart a step by step movement of rotation to the latter.

5. In a knotter the combination of a knotting spindle arranged transversely of the lead of the twine; a hook on the end of the spindle; a rotatable longitudinally movable sleeve in which the spindle is longitudinally movable and in regard to which it is relatively non-rotatable, said hook coöperating with the end of the spindle to grip the twine; a bill carried by the sleeve adjacent the hook; a pinion secured to the opposite end of the sleeve; a disk secured to the end of the spindle adjacent the pinion so that when the hook is in engagement with the sleeve end the disk is spaced from the pinion; a pulley carrying a segmental gear adapted to drive the pinion; means for holding the pinion from rotation when it is not in mesh with the gear; and cams carried by the pulley adapted to engage the disk and pinion to slide the spindle and sleeve endwise either separately or simultaneously.

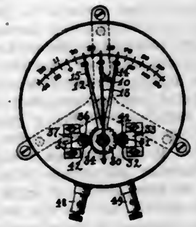
1,112,390. ICE-CREAM CABINET. JAMES J. SNIGO. Pittsburgh, Pa. Filed Apr. 25, 1913. Serial No. 763,534. (Cl. 62—75.)

1. The combination with a protecting cylinder for an ice cream can, of a pan for supporting an ice cream can and a protecting cylinder therefor, said cylinder having a perforated body portion, said pan being of a materially greater diameter than the protecting cylinder, a pair of uprights secured to the top edge of said pan, a handle at the outer end of each upright and oppositely extending transverse cleats adapted for supporting said cylinder in said pan and having upturned ends secured to the inner face of said pan.



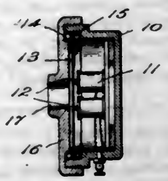
2. The combination with a protecting cylinder for an ice cream can, of a pan for supporting an ice cream can and a protecting cylinder therefor, said cylinder having a perforated body portion, said pan being of materially greater diameter than the said protecting cylinder, a pair of uprights secured to the top edge of said pan, a handle at the outer end of each of the uprights, said handle projecting toward the said protecting cylinder for the ice cream can, and oppositely extending transverse cleats adapted for supporting the cylinder within said pan and having upturned ends secured to the face of said pan.

1,112,391. THERMOSTATIC CIRCUIT-CONTROLLER. GEORGE E. SPEAR, Amesbury, Mass., assignor to Standard Thermometer Company, Boston, Mass., a Corporation of Maine. Filed Apr. 11, 1913. Serial No. 760,564. (Cl. 177—128.)



In an instrument of the class described, in combination, a plurality of pointers, independently rotatable disks to which said pointers are secured, said disks being concentrically mounted with the toothed portions of their circumferences arranged opposite each other and of larger diameter than the untoothed portions of said circumferences, pinions in mesh with said toothed portions, and shafts on which said pinions are mounted.

1,112,392. TELEPHONE-RECEIVER. JESSE L. SPENCE, New York, N. Y., assignor to Electrical Experiment Company, Inc., a Corporation of New York. Filed June 6, 1913. Serial No. 772,086. (Cl. 179—115.)



1. In a telephone receiver, a magnet and a diaphragm sufficiently stiff to be substantially inflexible under the operating stresses for which it is designed; in combination with a yielding aperiodic mounting therefor, substantially as described.

2. In a telephone receiver, a magnet and a diaphragm sufficiently stiff to be substantially inflexible under the operating stresses for which it is designed; in combination with a delicate pneumatic cushion placed against the edge of said diaphragm on the side toward said magnet, and exerting a pressure at all times light enough to permit said cushion to yield readily to the movements of the diaphragm incident to operation, substantially as described.

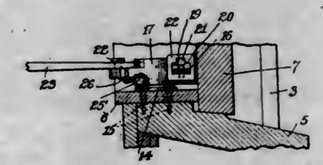
3. In a telephone receiver, a magnet and a diaphragm sufficiently stiff to be substantially inflexible under the operating stresses for which it is designed; in combination with a pair of delicate air cushions confining the edge of said diaphragm and pressing against the same so lightly as to permit said cushions to yield readily to the movements of the diaphragm incident to operation, substantially as described.

4. In a telephone receiver, a magnet, a delicate air cushion, and a substantially inflexible diaphragm confined in light contact at its edge with said cushion and free of all attachment save at its edge, substantially as described.

5. In a telephone receiver, a magnet, a pair of delicate air cushions, and a substantially inflexible diaphragm confined by light pressure between said cushions at its edge and otherwise unattached, substantially as described.

[Claim 6 not printed in the Gazette.]

1,112,393. CASEMENT-WINDOW ADJUSTER. ROBERT C. SPENCER, Jr., River Forest, Ill. Filed July 9, 1913. Serial No. 777,991. (Cl. 16—135.)



1. In a casement window adjuster, the combination of a strut lever adapted to be pivoted at one end to the frame of a casement window extending away from the hinged side of a sash mounted in the frame, an operating handle for the strut lever extending from the pivotal point of said strut lever and at an angle with said strut lever, a fixed member adapted to be attached to the sash of a casement window and having sliding connection with the strut lever, and means for locking said fixed member to the strut lever, said locking means being operated by said handle.

2. In a casement window adjuster, a main operating lever adapted to be pivoted at one end to the frame of a casement window at a point between the inside and the outside planes of the window frame, an operating handle for said main operating lever adapted to extend inwardly from the point at which the main operating lever is pivoted, a bracket member adapted to be attached to the sash of a casement window and having sliding connection with said main operating lever, and locking means associated with said sliding connection, said locking means being operated from said handle.

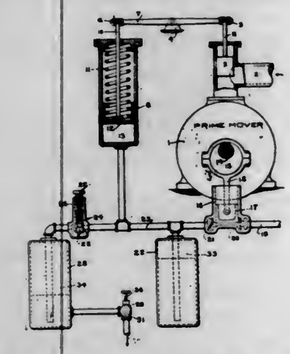
3. In combination, a casement window adjuster comprising a pivot member, a lever mounted upon said pivot member, an operating handle extending from said lever, and a bracket through which said lever may slide and with which it may make locking engagement.

4. In combination, a casement window adjuster comprising a pivot member, a lever mounted upon said pivot member, an operating handle extending from said lever, and a bracket through which said lever may slide and with which it may make locking engagement by manipulation of said handle.

5. In combination, a casement window adjuster comprising a pivot member, a lever mounted upon said pivot member, an operating handle for said lever, and a bracket having an opening through which said lever may pass lengthwise, said lever having notches therein in which a portion of the bracket may engage.

[Claims 6 to 23 not printed in the Gazette.]

1,112,394. SPEED-REGULATING DEVICE. CARL G. SPRADO, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Nov. 23, 1910. Serial No. 593,795. (Cl. 103—92.)



1. In a speed regulating device, a prime mover, a throttle valve for said prime mover, a pump driven by said prime mover, a high pressure system connected with the discharge of said pump, means actuated by the pressure in said system for controlling said throttle valve, a low pressure system, a reducing valve interposed between said high and low pressure systems, and means for drainage from said low pressure system at a predetermined constant rate.

2. In a speed regulating device, a prime mover, means for controlling the admission of working fluid to said prime mover, a pump driven by said prime mover and discharging to a high pressure system, means actuated by the pressure in said high pressure system for operating said controlling means, a low pressure system, a reducing valve interposed between said high and low pressure systems, and means for drainage from said low pressure system at a predetermined constant rate.

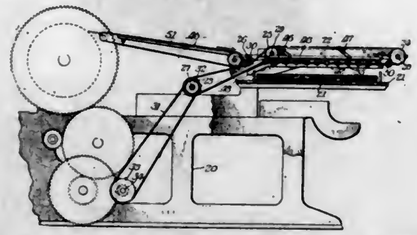
3. In a speed regulating device, a prime mover, means for controlling the admission of working fluid to said prime mover, a pump driven by said prime mover, a high pressure system receiving the discharge from said pump, means actuated by the pressure in said high pressure system to operate said controlling means, a low pressure system, a reducing valve interposed between said high and low pressure systems, and manually adjustable means for drainage from said low pressure system at a predetermined constant rate.

4. In a speed regulating device, a rotary element the speed whereof it is desired to maintain constant, means for restoring the speed of the element from any value deviating from said desired constant speed, fluid pressure actuated means controlling said speed restoring means, a pump driven by said rotary element for pumping said fluid, and means independent of said fluid pressure actuated means, for discharging said pumped fluid at a predetermined constant rate whereby the fluid pressure at the discharge differs from that acting on said fluid pressure actuated means.

5. In a speed regulating device, a prime mover the speed whereof it is desired to maintain constant when subjected to different loads, means for restoring the speed of said prime mover from any value deviating from said desired constant speed, fluid pressure actuated means controlling said restoring means, a pump driven by said prime mover for generating said fluid pressure, discharge means providing an orifice for discharging pumped fluid, said fluid pressure actuated means being interposed between said pump and said discharge means, and means preventing said fluid pressure from having direct access to the fluid being discharged past said orifice.

[Claims 6 to 8 not printed in the Gazette.]

1,112,395. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. BURT D. STEVENS, Riverside, and MICHAEL A. DROITCOUR, Chicago, Ill., assignors to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 18, 1911. Serial No. 655,442. (Cl. 101—31.)



1. In a device of the character described, the combination of a pair of sprocket chains, sprocket wheels coacting with said chains, a plurality of rollers between and carried by portions of the lengths of said chains and adapted to transport the sheets of paper over the delivery pile, means to cause said chains to travel, means to feed sheets of paper on top of said rollers while said rollers are on the bottom stretch of their travel, means to cause said rollers to rotate on their own axes after the paper has reached a position above the delivery pile to permit the rollers to travel from beneath the paper and permit the latter to fall on the pile, and means carried by the paper conveyer for controlling the action of said roller-rotating means, substantially as described.

2. In a device of the character described, the combination of a pair of endless sprocket chains, sprocket wheels co-acting with said chains, a plurality of rollers between and carried by portions of the length of said chains and adapted to support and transport the sheets of paper to the delivery pile, means to cause said chains to travel, means to feed sheets of paper on top of said rollers while the rollers are on the bottom stretch of their travel, a bar mounted to move toward and from the rollers and to contact therewith while the paper is above the delivery-pile to cause said rollers to rotate and pass from beneath the paper to permit the latter to fall on the delivery pile, and an enlargement on one of said rollers governing the contact of said bar with the companion rollers, substantially as described.

3. In a sheet delivery mechanism for printing presses, the combination of a fly delivery device, an endless conveyer delivery device, and an immovable support for the latter, the endless conveyer mechanism being adapted to assume a position on said immovable support in which it will not interfere with the operation of the fly device, substantially as described.

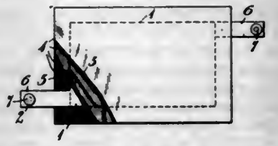
4. In a sheet delivery mechanism for printing presses, the combination of a fly delivery device, a mutilated endless conveyer delivery device, and fixedly mounted supporting wheels for the latter positioned and arranged to permit the sheet-conveying part of the conveyer to be housed beneath the fly device during the operation of the latter, substantially as described.

1,112,396. TAB END. HENRY J. STUART, Derby, Conn., assignor to The Robert N. Bassett Company, Derby, Conn., a Corporation of Connecticut. Filed June 10, 1914. Serial No. 844,163. (Cl. 24—245.)

In a tab end, a base plate, a button mounted thereon, two transverse slots in said plate below said button, one transverse slot in said plate above said button and a tape threaded through said slots as follows: through the uppermost slot from the front to the rear, thence down to and through the intermediate slot from the rear to the front, thence down to and through the lowermost slot from the

front to the rear, thence down to and around the lower edge of the plate, thence up to and again through the intermediate slot from the front to the rear, the tip end of the tape terminating at the rear of the frame between the uppermost slot and the intermediate slot.

1,112,397. CONDENSER. PHILLIPS THOMAS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 4, 1913. Serial No. 804,757. (Cl. 250—41.)



1. An electrical condenser having a dielectric comprising a halogenized fatty acid.

2. An electrical condenser having a dielectric comprising a halogenized stearic acid.

3. An electrical condenser having a dielectric comprising chlorinated stearic acid.

4. An electrical condenser having a dielectric comprising a substitution product of a fatty acid, said substitution in the fatty acid being effected by means of an electrically generated chemical element.

5. An electrical condenser having a dielectric comprising a substitution product of a fatty acid, said substitution in the fatty acid being effected by means of an electrically generated element of the halogen group.

[Claims 6 to 18 not printed in the Gazette.]

1,112,398. ROCK-DRILL. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Original application filed Feb. 14, 1914, Serial No. 818,644. Divided and this application filed Apr. 13, 1914. Serial No. 831,530. (Cl. 121—20.)

1. In apparatus of the character set forth, the combination with a motor, of feeding means for the motor comprising a cylinder member and a piston operating therein, one being connected to the motor, and means for supplying motive fluid to the feeding means, said motor comprising a cylinder member having a rear pressure surface, a piston operating in the cylinder member and having two rear pressure surfaces, one of which is opposed to the surface of the cylinder member, and means for supplying motive fluid to the motor and periodically introducing motive fluid between said opposed pressure surfaces of the piston and cylinder member, and thereby producing an intermittent pressure resistance to the feeding means, said motive fluid supplying means maintaining a constant pressure against the other rear pressure surface of the piston.

2. In apparatus of the character set forth, the combination with a motor, of feeding means for the motor comprising a cylinder member and a piston operating therein, one being connected to the motor, and means for supplying motive fluid to the feeding means, said motor comprising a cylinder member having a rear pressure surface, a piston operating in the cylinder member and having two rear pressure surfaces, one of which is opposed to the surface of the cylinder member, and means for supplying motive fluid to the motor and periodically introducing motive fluid between said opposed pressure surfaces of the piston and cylinder member, and thereby producing an intermittent pressure resistance to the feeding means, said motive fluid supplying means maintaining a constant pressure against the other rear pressure surface of the piston, the combined areas of the rear pressure surfaces of the motor piston being greater than that of the feeding piston.

3. In apparatus of the character set forth, the combination with a motor comprising a cylinder member and a piston operating therein and having rear pressure surfaces of different diameters, of feeding means connected to the motor and comprising a cylinder and a piston operating in the cylinder, said feeding piston being of less area than the larger rear pressure surface of the motor piston, means for supplying motive fluid to the feeding means and to the motor, and means for distributing motive fluid to the motor piston to maintain a constant pressure against one of the rear surfaces thereof and an intermittent pressure against the other.

4. In apparatus of the character set forth, the combination with a motor comprising a cylinder member having a rear pressure surface and a piston operating therein and having rear pressure surfaces of different diameters, one of which is opposed to the said cylinder pressure surface, of feeding means connected to the motor and comprising a cylinder and a piston operating in the cylinder, means for supplying motive fluid to the feeding means and to the motor, and means for distributing motive fluid to the motor piston to maintain a constant pressure against one of the rear surfaces thereof and an intermittent pressure against the other and against the said cylinder pressure surface, said pressure surfaces of the motor and the feed piston being so proportioned that the pressure against the said combined motor surfaces intermittently produces sufficient counter-pressure to the pressure against the feed piston to relieve the pressure of the apparatus against the work whereby said apparatus can be easily rotated.

5. In apparatus of the character set forth, the combination with a valveless motor, comprising a cylinder member and a piston operating therein and having rear pressure surfaces of different diameters, of feeding means connected to the motor and comprising a cylinder member and a piston member operating therein, the area of the feed piston being less than the combined rear pressure areas of the motor piston.

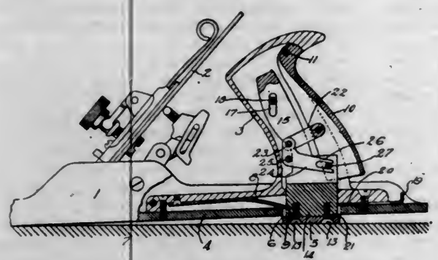
[Claims 6 and 7 not printed in the Gazette.]

1,112,399. BENCH-PLANE. HARVEY M. WOOD, Los Angeles, Cal. Original application filed Nov. 8, 1907, Serial No. 401,341. Divided and this application filed Oct. 14, 1912. Serial No. 725,577. (Cl. 145—5.)

1. In a plane the combination of a shoe, a blade, a handle behind said blade, said handle being rigidly mounted on said shoe, and said handle having a rear member movably mounted, a heel-piece arranged to normally project beyond the shoe, and means connecting the said rear member of the handle with the heel-piece and adapted to retract the said heel-piece when the rear section of the handle is moved.

2. In a plane the combination of a shoe, a blade, a spring operated heel-piece arranged to normally project beyond the shoe, a handle behind said blade, said handle being rigidly mounted on said shoe, and said handle having a movably mounted rear section, means connecting

the said rear section of the handle with the heel-piece and adapted to retract the said heel-piece when the rear section of the handle is moved, and means for holding said heel-piece in its retracted position.



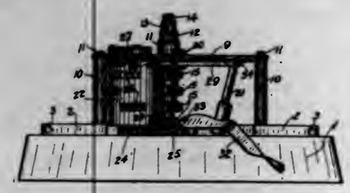
3. In a plane, the combination of a shoe, a blade, a hollow handle having a rear section pivotally mounted, a spring-operated heel-piece adapted to normally project beyond the shoe and mechanism in the hollow of the handle connecting the rear section of the handle with the heel-piece and adapted to retract the heel-piece when the rear section of the handle is moved.

4. In a plane the combination of a shoe, a blade, a hollow handle having a rear section pivotally mounted, a spring operated heel-piece adapted to normally project beyond the shoe, and link mechanism supported in the hollow of the handle and connecting the rear section of the handle with the heel-piece and adapted to retract the heel-piece when the rear section of the handle is moved.

5. In a plane the combination of a shoe, a blade, a hollow handle having a rear section pivotally mounted, a carrier riding in the hollow of the handle, a heel-piece mounted on the carrier and adapted to normally project through and beyond the shoe, and means in the hollow of the handle connecting the rear section of the handle with the carrier and adapted to retract the carrier and heel-piece by motion of the rear section of the handle.

[Claims 6 to 9 not printed in the Gazette.]

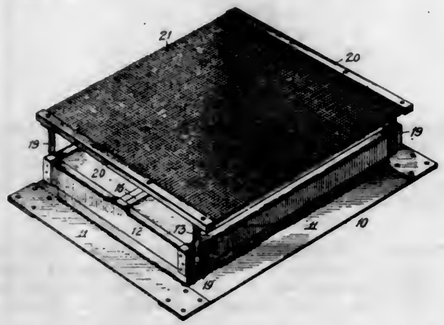
1,112,400. MUSIC-LEAF TURNER. FREDERICK ACKERMAN and JAMES H. SULLIVAN, Vancouver, British Columbia, Canada. Filed Apr. 2, 1914. Serial No. 829,100. (Cl. 84—135.)



1. In a music leaf turner, a plurality of turnable members having partial rotary movement about a common axis, driving mechanism for the turnable members, a spring normally in tension for operating said driving mechanism, means for locking the spring in tension, a lever for re-winding the spring and means operated by said re-winding lever for releasing said locking means whereby the spring turns the turnable members individually a predetermined distance.

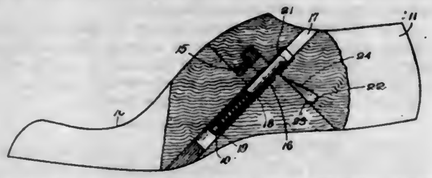
2. In a music leaf turner, the combination with vertically supported revoluble tubular members, of pinions carried by the said tubular members, a normally wound-up spring, a revoluble toothed cylinder operated by the unwinding of said spring and adapted to successively rotate the said pinions, stops on the said cylinder, a suitably mounted pawl adapted to normally engage the said stops so as to limit each successive movement of the cylinder, a pinion carried by the cylinder, a gear engaging said pinion, a lever hingedly connected to the said gear, said lever being adapted to throw the pawl out of engagement with said stops to free the cylinder and means for returning the pawl to its normal position, as and for the purpose specified.

1,112,401. ROOF-WINDOW. CLAUDE J. ALLEN, Early, Iowa. Filed May 8, 1912. Serial No. 695,864. (Cl. 108—16.)



In a roof window, the combination of a window frame, a sheet metal sash frame, the sides and ends of said sash frame being formed of sheet metal and bent to form upper and lower edges, a muntin for said sash frame, said muntin being constructed of two sheet metal members bent to form upper and lower edges and a pair of downwardly extending U-shaped reinforcing ribs spaced apart to receive a lifting element therebetween and a pane seated between said muntin and the respective sides and ends of said sash frame.

1,112,402. LAST. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, South Boston, Mass., a Corporation of New Jersey. Filed Mar. 9, 1909. Serial No. 482,390. (Cl. 12—135.)



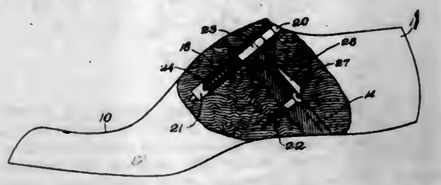
1. A last comprising a forepart and a heel-part having abutting faces, the abutting portion of one part having an undercut groove of uniform width, a portion of the other part being in the form of a flanged tongue adapted to slide in said groove; and a retractible stop member projecting from said tongue, the last part having said groove being provided with faces adapted to be engaged by said stop member to limit relative movement in both directions of the last parts and with an additional face for confining said stop member so as to prevent all relative movement, the last parts being separable when said stop member is retracted.

2. A last comprising a forepart and a heel-part having abutting faces, the abutting portion of one part having an undercut groove of uniform width, and a portion of the other part being formed with a tongue flanged on its sides to fit and slide in said groove; and a stop member projecting from the abutting portion of one of said parts, the other of said parts having an elongated recess arranged to receive said stop member and permit lateral movement of the same therein so that said last parts may slide relatively to each other, said recessed part having a stop face at one end of said recess adapted to coact with said stop member to limit such relative movement of the last parts.

3. A last comprising a forepart and a heel-part having abutting faces, the abutting portion of one part having an undercut groove of uniform width, and a portion of the other part being formed to fit and slide in said groove; and a stop member projecting from the abutting portion of one of said parts, the other of said parts having an elongated recess arranged to receive said stop member and permit lateral movement of the same therein so that said last parts may slide relatively to each other, said recessed part having a stop face at one end of said recess adapted to coact with the side of said stop member, and a second recess at the opposite end of said elongated recess, said second recess having confronting faces arranged to coact with opposite sides of said stop member to confine said stop member against all lateral movement.

4. A last comprising a forepart and a heel-part having abutting faces, the abutting portion of one part having an undercut groove of uniform width, and a portion of the other part being formed to fit and slide in said groove; and a stop member projecting from the abutting portion of one of said parts, the other of said parts having two confronting stop faces arranged to coact with opposite sides of said stop member to limit relative sliding movement of said last parts, said stop member being movable laterally between said stop faces, a third stop face between said two stop faces and confronting one of said two stop faces to confine said stop member against lateral movement, and an inclined face arranged to coact with the end of said stop member to move said stop member endwise beyond said third stop face.

1,112,403. LAST. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, South Boston, Mass., a Corporation of New Jersey. Filed Mar. 9, 1909. Serial No. 482,391. (Cl. 12—135.)



1. A last comprising a forepart and heel-part one of which has an undercut groove in its confronting face, a flanged coupling member affixed to the other part and adapted to slide in said groove, and a member carried by said coupling member and movable relatively thereto for locking said last parts against relative movement, said grooved member having means adapted to coact with said locking member for locking the last parts.

2. A last comprising a forepart and heel-part one of which has an undercut groove in its confronting face, a flanged coupling member affixed to the other part and adapted to slide in said groove, a member carried by said coupling member and movable relatively thereto for locking said last parts against relative movement, said grooved part having means for coacting with said locking member to lock the last parts, and a spring for acting upon said locking member, said coupling member having a socket for said spring.

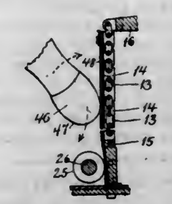
3. A last comprising a forepart and heel-part one of which has an undercut groove in its confronting face, a flanged coupling member affixed to the other part and adapted to slide in said groove, said coupling member having a shank extending into the last part to which it is affixed, said shank having a socket, a locking member carried by said coupling member and movable relatively thereto, said grooved member having means for coacting with said locking member to lock the last parts against relative movement, and a spring arranged in said socket to move said locking member to locking position.

4. A last comprising a forepart and heel-part one of which has an undercut groove in its abutting portion, a coupling member affixed to the other one of said parts to slide in said groove and hold said parts connected, said grooved part having a stop face, a stop member carried by said coupling member and arranged to coact with said stop face to limit relative sliding movement of said parts in one direction, and a spring arranged to hold said stop member in operative position, said stop member being movable relatively to said coupling member, against the force of said spring, from operative position to clear said stop face.

5. A last comprising a forepart and heel-part one of which has an undercut groove in its confronting face, a flanged coupling member affixed to the other part and adapted to slide in said groove, and a locking member carried by said coupling member and movable relatively thereto, said grooved last part having means for coacting with said locking member to lock the last parts against relative movement, said coupling member and locking member having coactive means adapted to keep them connected.

[Claims 6 to 8 not printed in the Gazette.]

1,112,404. WAXING-MACHINE. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, South Boston, Mass., a Corporation of New Jersey. Filed Apr. 1, 1910. Serial No. 552,908. (Cl. 51—17.)



1. In a device for applying dressing to boots and shoes, a work bed comprising a series of movable working members pivotally connected to each other so as to be capable of assuming various angular relations, and means connected to the end members of said series of members for anchoring and supporting said series of members.

2. In a device for applying dressing to boots and shoes, a work bed comprising a series of movable working members pivotally connected to each other so as to be capable of assuming various angular relations, and anchoring members for said series of working members, the end members of said series of working members being connected respectively to said anchoring members, said anchoring members being spaced to hold said series of working members taut.

3. In a device for applying dressing to boots and shoes, a support, a work bed comprising a series of working members pivotally connected to each other and suspended from said support by one end of the series, and means for anchoring the other end of said series of working members.

4. In a device for applying dressing to boots and shoes, a work bed comprising a series of working members and links connecting said working members one with another, said links and working members being pivotally connected, the working surfaces of said working members being in contiguous edge to edge relation in advance of said connecting links, and anchoring means for the ends of said series of working members.

5. In a device for applying dressing to boots and shoes, a work bed comprising a series of working members and links pivotally connecting them, said working members having working surfaces in contiguous edge to edge relation and overlapping said connecting links, and anchoring means for the ends of said series of working members.

[Claims 6 to 13 not printed in the Gazette.]

1,112,405. HYDROFLYING-MACHINE. ENRICO FORLANINI, Milan, Italy. Filed Apr. 6, 1905. Serial No. 254,174. (Cl. 114—66.5.)

1. In a water conveyance, a rod normally substantially vertical in combination with a plurality of normally ap-

proximately horizontal superposed supporting water-blades rigidly connected to said rod.

2. In a water conveyance, the combination with the hull of the same, of a normally substantially vertical rod connected to the hull, and a plurality of superimposed approximately horizontal supporting water-blades, all rigidly connected with the said rod, so as to be stationary with respect to each other.

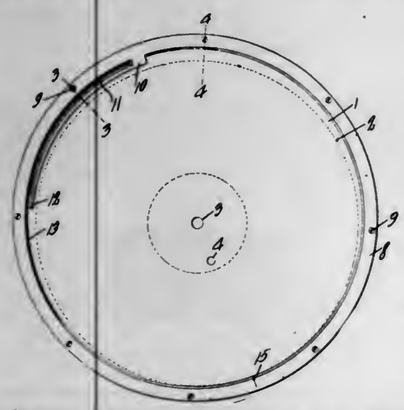
3. In a water conveyance, the combination with the hull of the same and a normally substantially vertical rod, of a plurality of supporting water-blades substantially perpendicular to and rigidly connected to said rod, and arranged below the hull.

4. In a water conveyance, a plurality of superposed blades, in combination with a connecting rod adapted to occupy an approximately vertical position said rod being transverse to and rigidly connected to said blades within their periphery, whereby the periphery of said blades is free and unobstructed at all points.

5. In a water conveyance, a plurality of superposed normally approximately horizontal blades, in combination with a normally substantially vertical connecting rod transverse and rigidly connected to said blades substantially on the geometrical locus of the centers of pressure of the longitudinal elements of the blades.

[Claims 6 to 21 not printed in the Gazette.]

1,112,406. STYLUS-GUIDING ATTACHMENT FOR SOUND-RECORDS. CHARLES W. EBELING, Wheeling, W. Va., assignor of one-half to Harrison W. Rogers, Wheeling, W. Va. Filed May 20, 1913. Serial No. 768,845. (Cl. 181—17.)



1. The combination with a sound record disk, of a stylus guiding device attached to the periphery of the disk and provided with a stylus guiding inner surface formed upon a line that is a continuation of a selected convolution of the phonic groove of the record disk, and a tongue carried by the device and spaced from the guiding inner surface thereof to form a stylus receiving channel.

2. The combination with a sound record disk, of a curved stylus guiding device, including a ring attached to the periphery of the disk, said ring being provided with a stylus receiving groove therein formed upon a curve that is a continuation of a selected convolution of the phonic groove of the record disk, the portion of the ring adjacent the outlet of the groove being beveled and forming a connecting medium between the groove of the ring and the selected convolution of the phonic groove.

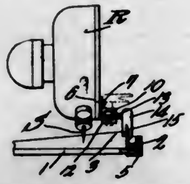
3. The combination with a sound record disk, of a stylus guiding device, including a ring clamped to and adjacent the periphery of the sound record disk and having a stylus receiving channel, the inner edge of the ring adjacent the outlet of the channel being beveled to receive and guide the stylus, said inner edge leading into a selected point of the phonic groove of the record disk.

4. The combination with a sound record disk, of a stylus guiding device, including a ring clamped to and adjacent the periphery of the sound record disk, and a projecting tongue at one point of its inner edge providing a stylus receiving channel, the inner edge of the ring adjacent the outlet of the channel leading into a selected point of the phonic groove of the record disk.

5. The combination with a sound record disk, of a stylus guiding device, including a ring clamped to and adjacent the periphery of the sound record disk, and a tongue carried by the ring and providing therewith a stylus receiving channel, the inner edge of the ring adjacent the outlet of the channel being beveled to receive and guide the stylus into a selected point of the phonic groove of the record disk.

[Claims 6 and 7 not printed in the Gazette.]

1,112,407. STYLUS-GUIDING ATTACHMENT FOR SOUND-RECORDS. CHARLES W. EBELING, Wheeling, W. Va., assignor of one-half to Harrison W. Rogers, Wheeling, W. Va. Original application filed May 20, 1913, Serial No. 768,845. Divided and this application filed Oct. 9, 1913. Serial No. 794,307. (Cl. 181—3.)



1. The combination with a sound record and a reproducer and stylus, of means for placing the stylus in a selected point of the phonic groove of the record, including a raised track carried by the disk adjacent the periphery thereof, said track having its upper edge formed with a gradual incline and upon a curve parallel to the phonic groove, and means carried by the reproducer for sliding engagement with the track to hold the stylus above the record until gradually lowered by the inclined portion of the track into the phonic groove.

2. The combination with a sound record and a reproducer and stylus, of means for placing the stylus in a selected point of the phonic groove of the record, including a raised track carried by the disk adjacent the periphery thereof, said track having its upper edge formed with a gradual incline and upon a curve parallel to the phonic groove, laterally swinging means carried by the reproducer for sliding engagement with the track to hold the stylus above the record until gradually lowered by the inclined portion of the track into the phonic groove, and a spring for swinging the track engaging means out of the path of the track after the stylus has been placed in the phonic groove.

3. The combination with a sound record disk and a reproducer and stylus, of means for placing the stylus in a selected point of the phonic groove of the record disk, including a raised track, means carried thereby for attaching the track to the record disk adjacent the periphery thereof, said track having its upper edge formed with a gradual incline and upon a curve parallel to the phonic groove, and means carried by the reproducer for sliding engagement with the track to hold the stylus above the record disk until gradually lowered by the inclined portion of the track into the phonic groove.

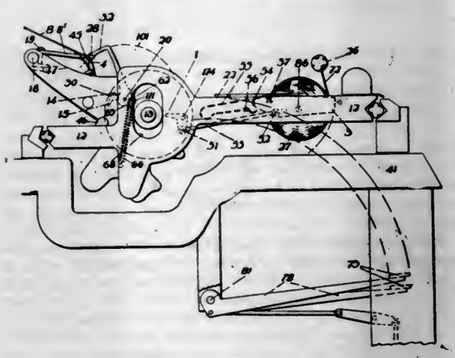
4. The combination with a sound record disk and a reproducer and stylus, of means for placing the stylus in a selected point of the phonic groove of the record disk, including a raised track, means carried thereby for attaching

the track to the record disk adjacent the periphery thereof, said track having its upper edge formed with a gradual incline and upon a curve parallel to the phonic groove, laterally swinging means carried by the reproducer for sliding engagement with the track to hold the stylus above the record disk until gradually lowered by the inclined portion of the track into the phonic groove, and a spring for swinging the track engaging means out of the path of the track after the stylus has been placed in the phonic groove.

5. The combination with a sound record disk and a reproducer and stylus, of means for placing the stylus in a selected point of the phonic groove of the record disk, including a curved support, means for attaching the support to the record disk, a raised track carried by the support, said track having its upper edge formed with a gradual incline and upon a curve parallel to the phonic groove, and means carried by the reproducer for sliding engagement with the track to hold the stylus above the record disk until gradually lowered by the inclined portion of the track into the phonic groove.

[Claim 6 not printed in the Gazette.]

1,112,408. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1912. Serial No. 734,869. (Cl. 197—189.)



1. In a typewriting machine, in combination, a platen, a detainable member actuated from the platen, indicating means called into operation through said member, a paper-feeler, and a cam-stop connected to detain said member in starting position under the control of said paper-feeler.

2. In a typewriting machine, in combination, a platen, a detainable member actuated from the platen, indicating means called into operation through said member, a paper-feeler, and a cam and coöperating cam-follower, one thereof connected to move in unison with said member and one thereof serving as a detent upon the other and one thereof controlled by said paper-feeler.

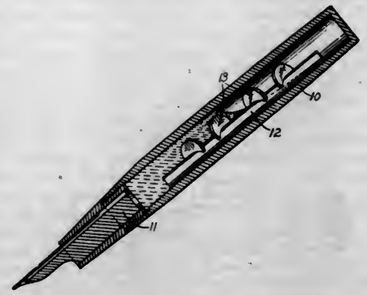
3. In a typewriting machine, in combination, a platen, an operative member having a projection in connection therewith, indicating means called into operation through said member, means for giving said member movement coördinated with that of the platen but permitting detention thereof independently of the platen, a cam-stop in the path of said projection, and a paper-feeler in control of said cam-stop.

4. In a typewriting machine, in combination, a platen, a detainable member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, a cam-lever in the path of said projection, and a paper-feeler connected to control the action of said cam-lever and itself actuated into the paper-path by said cam-lever.

5. In a typewriting machine, in combination, a platen, a paper-feeler, a spring for retracting said paper-feeler away from sheet-controlled position to facilitate entering the sheet, an operative member actuated from the platen under the control of said paper-feeler, and indicating means called into operation through said member.

[Claims 6 to 21 not printed in the Gazette.]

1,112,409. FOUNTAIN-PEN ATTACHMENT. THORVALD E. NIELSEN, Washington, D. C., assignor of one-half to Emory A. Bryant, Washington, D. C. Filed Mar. 21, 1913. Serial No. 755,925. (Cl. 120—50.)

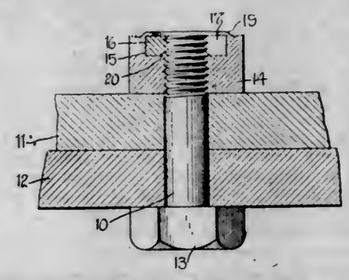


1. The combination with the barrel of a fountain pen, of a feed-controlling device comprising a rod-like member wholly within the barrel, and attracting the ink in the barrel by capillarity, said member normally seating against one side of the barrel and having a relatively small diameter, and being of such length as to extend throughout the major portion of the length of the barrel, one end of the member being normally in proximity to the nib end of the barrel.

2. The combination with the barrel of a fountain pen, of a feed-controlling device comprising a buoyant, rod-like member of relatively small diameter, wholly within the barrel, and attracting the ink in the barrel by capillarity, said member being of such length as to extend throughout the major portion of the length of the barrel, one end of the member being normally in proximity to the nib end of the barrel.

3. As a new article of manufacture, a feed-controlling device for fountain pens comprising a rod-like member attracting the ink by capillarity, said member being independent of the pen and adapted to be placed in the barrel thereof, and having laterally projecting deflecting wings.

1,112,410. NUT-LOCK. WILLIAM M. SMITH, Pittsburgh, Pa., assignor of one-third to William A. Fouks, Turtle Creek, Pa. Filed May 29, 1914. Serial No. 841,811. (Cl. 151—14.)

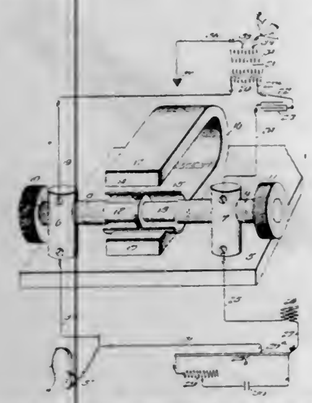


1. A lock nut comprising a nut formed on its outer face with a recess, a normally-contracted supplemental resilient split nut fitting said recess, the outer edges of the walls of said recess being upset to project them inward over the outer edges of said resilient nut, to permanently connect the supplemental nut to the recessed nut.

2. A two-part self-locking nut comprising a nut formed on its outer face with a recessed seat, and a split resilient

supplemental nut fitting within said recess, and permanently-secured to the first-named nut, said supplemental nut being normally contracted, and adapted to be expanded automatically by being turned upon a bolt, said supplemental nut having an annular beveled surface on its inner face adjacent to its innermost thread.

1,112,411. WAVE-DETECTOR. ROBERT T. ACKLEY, Cortland, Ohio. Filed Dec. 17, 1912. Serial No. 737,217. (Cl. 250—30.)



1. A wave detector comprising a plurality of disks disposed parallel to and in loose engagement with each other and means for inducing contrary magnetic polarities in oppositely disposed portions in each of said disks.

2. A wave detector comprising a plurality of disks made of magnetically permeable material disposed parallel with each other, means for conferring magnetic polarity of one sign upon contiguous edges of said disks and for conferring magnetic polarity of a different sign upon the opposite continuous edges of adjacent disks.

3. A wave detector comprising a tube of insulating material, cohering bodies mounted therein, terminals located upon opposite sides of said cohering bodies and engaging the same, a spring for pressing one of said terminals toward the other in order to compress said cohering bodies, a sliding bolt connected with said spring, a lever engaging said sliding bolt and means controllable at the will of the operator for adjusting the pressure of said lever upon said sliding bolt.

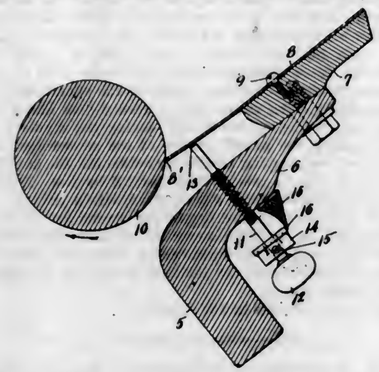
4. A wave detector comprising a plurality of thin magnetically permeable, movable disks disposed parallel with each other, means for subjecting said disks to the passage of an electric current at right angles to the plane of the disks, and means for maintaining the parallelism of the disks during their movement.

5. A wave detector comprising a plurality of thin magnetically permeable, movable disks disposed parallel with each other, means for subjecting said disks to the passage of an electric current at right angles to the plane of the disks, and means for maintaining the parallelism of the disks during their movement, said last named means comprising a hollow guide member having an interior cross section conforming to the contour of the disks and being disposed in close proximity to the latter.

[Claim 6 not printed in the Gazette.]

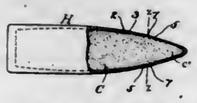
1,112,412. INK-SUPPLY FOR PRINTING-PRESSES. WILLIAM J. ADAM, Norwood, Mass., assignor to The Plimpton Press, Norwood, Mass., a Corporation of Massachusetts. Filed July 16, 1914. Serial No. 851,276. (Cl. 101—74.)

An ink supply for printing presses comprising a beam having an inclined member furnished with a series of screw threaded perforations arranged in line, a spacer carried by said member, a knife carried by said spacer and adapted to be flexed, a scale depending from said beam member and having graduations extending parallel with the axes of said perforations, a series of adjusting screws received by said perforations and having ends bearing against said



knife, and a series of collars rotatable on said adjusting screws and having peripheral graduations and set screws whereby said collars can be secured in adjusted position on said adjusting screws.

1,112,413. PROJECTILE. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 24, 1913. Serial No. 808,538. (Cl. 102—28.)



1. In a projectile for small arms, a soft-metal core comprising an elongated core-point, in combination with an unflanged point-cap without indentations for taking into the core-point, and having one or more openings therein, and cap-retaining projections extending outwardly from the core into said openings, whereby to lock together the core and point-cap, substantially as described.

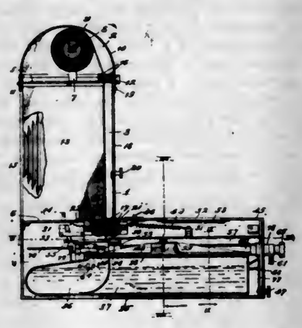
2. In a mushroom projectile for small arms, a soft metal core comprising an elongated core-point, in combination with a point-cap having one or more openings therein, and cap-retaining projections integral with the core and extending outwardly into and filling said openings, whereby to interlock the core and point-cap, and provide a smooth exterior for the capped point-portion of the projectile.

3. In a mushroom projectile or bullet of the class described, comprising an elongated core-point, in combination with a covering member applied to the core and having a plurality of openings therein, and cap-retaining projections extending outwardly from the core and filling said openings in the covering member, substantially as described.

4. A mushroom bullet comprising a soft metal core, a jacket-body and a jacket-tip, the said tip being superficially applied to the pointed end of the soft metal core and formed with one or more openings into which the metal of the core exudes to form a lock or locks for maintaining the tip in engagement with the core without being set inward and embedded therein.

1,112,414. DEVELOPING AND FIXING CAMERA. FLOYD D. JONES and SAMUEL M. COFFMAN, Kansas City, Mo., assignors, by direct and mesne assignments, of one-third to Logan H. Bagby, San Antonio, Tex., and two-thirds to said Jones. Filed Oct. 28, 1909. Serial No. 525,188. (Cl. 95—13.)

1. The combination with a camera, of a case containing the same, means for supporting sensitized material immediately in the rear of the camera for exposure, a vessel adapted to contain a developing bath and a fixing bath adjacent one end of said sensitized material, feed-rollers for feeding the exposed portion of the sensitized material to said developing bath, intermeshing gear wheels on the ends of the rollers for driving the same in opposite directions, a large gear wheel normally intermeshing with one of the first-mentioned gear wheels and provided with an aperture, a stud projecting from the adjacent side of the case through said aperture, a shaft slidably and rotatably mounted in the case and carrying said large gear wheel, a knob on the outer end of said shaft whereby the same may be pushed inward to disengage the large gear wheel from the stud, and means for conducting the sensitized material from the developing bath to the fixing bath.



2. The combination with a camera, of a case containing the same, means for supporting sensitized material immediately in the rear of the camera for exposure, a vessel adapted to contain a developing bath and a fixing bath adjacent one end of said sensitized material, feed-rollers for feeding the exposed portion of the sensitized material to said developing bath, intermeshing gear wheels on the ends of the rollers for driving the same in opposite directions, a large gear wheel normally intermeshing with one of the first-mentioned gear wheels and provided with an aperture, a stud projecting from the adjacent side of the case through said aperture, a shaft slidably and rotatably mounted in the case and carrying said large gear wheel, a knob on the outer end of said shaft whereby the same may be pushed inward to disengage the large gear wheel from the stud, resilient means pressing outward upon said knob to normally hold the large gear wheel in engagement with the stud, means normally overlapping said large gear wheel to prevent the same from being pushed out of engagement with the stud, and means for conducting the sensitized material from the developing bath to the fixing bath.

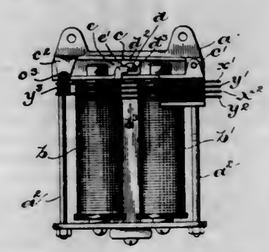
3. The combination with a camera, of a case containing the same, means for supporting a sensitized roll of material in said case, means for supporting a portion of said sensitized material immediately in the rear of the camera for exposure, a vessel adapted to contain a developing bath and a fixing bath adjacent one end of said sensitized material, means for feeding the exposed portion of the sensitized material to said developing bath, shears between the feeding means and said developing bath for severing the exposed portion of the sensitized material below said feeding means, and gripping means coacting with the shears for conducting the severed portion of the sensitized material from the developing bath to the fixing bath.

4. The combination with a camera, of a case containing the same, means for supporting a roll of sensitized material in said case, means for supporting a portion of said sensitized material in the rear of the camera for exposure, a vessel adapted to contain a developing bath and a fixing bath adjacent one end of said sensitized material, means for feeding the exposed sensitized material to said developing bath, a blade between the feeding means and the developing bath, another blade pivoted to the first-mentioned one to coact therewith in severing the exposed portion of the sensitized material below the feeding means, means for actuating said pivoted blade, and means coöperating with the blades and actuating means for engaging the severed portion of the sensitized material and conducting it from the developing bath to the fixing bath.

5. The combination with a camera, of a case containing the same, means for supporting a roll of sensitized material in said case, means for supporting a portion of said sensitized material immediately in the rear of said camera for exposure, a vessel adapted to contain a developing bath and a fixing bath adjacent one end of said sensitized material, means for feeding the exposed end of said sensitized material to said developing bath, a slidingly-mounted blade between said feeding means and the developing bath, a stop in the rear of said blade for normally holding the same stationary, a tube fixed to said blade and extending rearwardly through the case whereby said blade may be disengaged from the stop and drawn toward the rear end of the case, a blade pivoted to the first-mentioned blade for coöperating therewith in severing the sensitized material below the feeding means, an arm loosely-connected to said pivoted blade for actuating the same, an inner tube secured to said arm for actuating the same and slidably-extending through the first-mentioned tube, a gripper secured to said arm for coöperating with the sliding blade in holding the sensitized material preparatory to severing the same and conducting it from the developing bath to the fixing bath, an arm for submerging the severed portion of the sensitized material in the fixing bath, and a rod carrying the arm, said rod being rotatably-mounted in the inner tube through which it extends.

[Claims 6 to 36 not printed in the Gazette.]

1,112,415. LINE-CONNECTOR. DANIEL W. KNEISLY, Dayton, Ohio. Filed Jan. 5, 1912. Serial No. 669,635. (Cl. 179—16.)



1. In a line connector, an electric circuit, an electromagnet bridged across the line, a second circuit, a switch adapted to connect said circuits, an armature attracted by said electromagnet and by its movement adapted to close the switch to connect the circuits, a polarized armature carried by the first mentioned armature, a fixed stop adapted to be engaged by the polarized armature when the latter is oscillated in one direction during the time that the first mentioned armature is attracted, to lock said first mentioned armature in its operated position, said polarized armature being withdrawn from engagement with the stop to release the first mentioned armature by a reversal of the current.

2. In a line connector, an electric circuit, an electromagnet in said circuit, an armature controlled by said magnet, a switch controlled by the movement of the armature, a latch comprising a polarized armature for locking the switch in its operated position and for releasing same from a distant point through the operation of said magnet, substantially as specified.

3. In a line connector, an electric circuit, an electromagnet, a switch, an armature governed by the electromagnet and by its movement adapted to operate said switch, a polarized armature carried by the switch operating armature, but capable of movement independent thereof for locking said switch operating armature by an impulse through said magnet in one direction and for re-

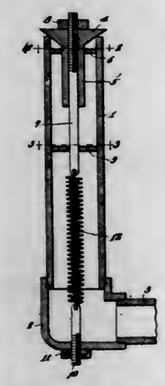
leasing it by an impulse through the magnet in the opposite direction, substantially as specified.

4. In a line connector, an electric circuit, an electromagnet, a switch controlled by said magnet, a polarized armature and a detent engaged by the polarized armature to lock said switch, the construction and arrangement being such that when an impulse is transmitted through the magnet in one direction the armature is shifted into engagement with the detent and when an impulse is transmitted in the opposite direction, the armature is disengaged therefrom to release the switch.

5. In a line connector, an electric circuit, an electromagnet, a switch, a movable armature attracted by the magnet and by its movement adapted to control the switch, a polarized armature movably mounted on said control armature and means engaged by the polarized armature when it is moved in one direction whereby the control armature will be locked to maintain the switch in closed position, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,112,416. SPRAYING OR SPRINKLING NOZZLE. JOHN L. SARGENT, Indianola, Nebr., assignor of one-half to John C. Puckett, Indianola, Nebr. Filed Oct. 13, 1913. Serial No. 794,975. (Cl. 137—81.)



1. In a nozzle, a nozzle tube, a valve seatable against the end thereof and having a tubular stem projecting into the nozzle tube, a rod passing loosely through the valve and its stem, a stop carried by the outer end of the rod and seating against the valve, a contractile spring disposed within the tube and connected to the inner end of the said rod, and guides secured within the nozzle tube and slidably receiving the valve stem and the said rod.

2. In a nozzle, a nozzle tube, an elbow secured to one end thereof, a valve seatable against the other end of the nozzle tube and having a tubular stem projecting axially thereinto, a rod passing loosely through the valve and its stem, a second rod passing slidably through the elbow, nuts threaded upon the remote ends of the rods and seating against the valve and elbow, respectively, a contractile spring connecting the adjacent ends of said rods, and guides secured within the nozzle tube and slidably receiving the valve stem and first mentioned rod respectively.

1,112,417. EXPANSION-BOLT. JOSEPH KENNEDY, New York, N. Y., assignor to The Clements Company, a Corporation of New York. Filed May 11, 1912. Serial No. 696,674. (Cl. 85—2.4.)

1. A bolt anchor comprising a tubular shell of soft material having a bore tapered in opposite directions and an internally threaded expander within said shell, the smallest diameter of the bore of said shell being less than the diameter of the threaded portion of the expander.

2. A bolt anchor comprising a tubular shell of soft material having a bore tapered in opposite directions and an internally threaded expander within said shell shaped to prevent relative rotation of the shell therewith, the smallest diameter of the bore of said shell being less than the diameter of the threaded portion of the expander.

3. The combination of a bolt and a bolt anchor comprising a tubular shell of material softer than that of the bolt, and an internally threaded expander within the shell shaped to prevent relative rotation of the shell therewith, the bore of said shell having a portion of less diameter than that of the bolt and being arranged to be successively expanded by the bolt and by the expander.

4. The combination of a bolt and a bolt anchor comprising a tubular shell of material softer than that of the bolt and provided with a bore tapering from each end toward the middle of the shell, the smallest diameter of said bore being less than that of the bolt whereby when the bolt is screwed into the shell an initial expansion is effected, and an internally threaded expander within the shell adapted to coöperate with the bolt to produce the final expansion.

5. The combination of a bolt and a bolt anchor comprising a tubular shell of material softer than the bolt slit for a portion of its length, said shell having a bore tapered in opposite directions toward substantially the central portion thereof, the smallest diameter of said bore being less than that of the bolt, said slit being provided with a pair of oppositely disposed enlargements and an internally threaded conical expander within said shell having ears in said enlargements.

1,112,418. PROCESS FOR THE MANUFACTURE OF OPTICAL SQUARES. OTTO EPPENSTEIN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed June 4, 1914. Serial No. 842,988. (Cl. 88—1.)

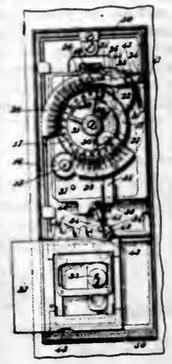
1. A process for the manufacture of optical squares composed of two silvered metal plates and an intermediate metal member connecting the same, consisting in applying to a mold, the material of which allows of its being given a polish at the surfaces corresponding to the reflecting surfaces of the square, metal in a finely divided form and thereupon separating the square from the mold.

2. A process for the manufacture of optical squares composed of two silvered metal plates and an intermediate metal member connecting the same, consisting in applying to a glass mold, the surfaces of which corresponding to the reflecting surfaces of the square are silvered, metal in a finely divided form and thereupon separating the square from the mold.

1,112,419. TIME-RECORDING LOCK. EDWIN SANFORD PHELPS, Elizabeth, N. J. Filed Feb. 24, 1914. Serial No. 820,646. (Cl. 234—1.)

1. A time-recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, a lock-bolt mechanism including a bolt and means for positively throwing and retracting the bolt, and a member coöperatively associated with the bolt and recording-making mechanism and actuated in throwing the bolt in one direction and also in its retraction to cause the stylus to make a visible record of the movement of the bolt from one position to another and of the period it remains in each position.

2. A time-recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, a lock-bolt mechanism including a bolt and means for positively throwing and retracting the bolt, and a member coöperatively associated with the bolt and record-making mechanism and actuated in throwing the bolt in its two positions to shift an element of the record-making mechanism to make a radial record of the movement of the bolt from one position to another and a circular record of the period the bolt remains in each position.



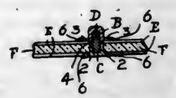
3. A time-recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, a lock-bolt mechanism including a bolt and means for positively throwing and retracting the bolt, and a member located relatively to the bolt to be actuated by the bolt in its back and forth movements and connected with the record-making mechanism to cause the stylus to record in one arc one position of the bolt and in a different arc another position of the bolt.

4. A time-recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, a lock-bolt mechanism including a bolt and means for positively throwing and retracting the bolt, said bolt having a cam-formation, and a member connected with the record-making mechanism and positioned in relation to the bolt to be actuated by the cam-formation thereof to cause the stylus to make a record in one arc for indicating one position of the bolt and in a different arc for another position of the bolt.

5. A time-recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, one of which is shiftable in position relatively to the other, a lock-bolt mechanism including a bolt and means for positively throwing and retracting the bolt, and a member connected with the shiftable member of the record-making mechanism and located relatively to the bolt to be actuated by the bolt in its back and forward movements to change the position of the shiftable member of the record-making mechanism to cause the stylus to record in different arcs the different positions of the bolt.

[Claim 6 not printed in the Gazette.]

1,112,420. LEADED GLASS CONSTRUCTION. ALBERT W. WEITERSHAUSEN, Millvale borough, Pa., assignor to Pittsburgh Art Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 5, 1914. Serial No. 822,598. (Cl. 189—77.)

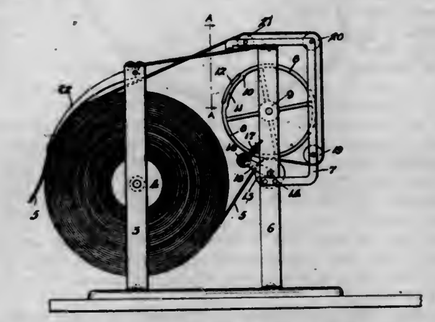


1. A reinforced element for leaded glass structures consisting of two coacting substantially U-shape lead members provided with lateral flanges, and a metal reinforcing bar incased within the same, for the purpose described.

2. A reinforced element for leaded glass structures consisting of two coacting substantially U-shape lead members provided with lateral flanges, the flanges of one of said members being adjacent to its base and the flanges of the other member being adjacent to its top, and a metal reinforcing bar incased within said members, for the purpose described.

3. A panel structure for leaded glass comprising a channel border, reinforcing bars spanning the interior of said border and having their ends inserted in the channel thereof, and coacting substantially U-shape lead members provided with lateral flanges incasing said bars and having their ends secured to said border.

1,112,421. DEVICE FOR PRINTING ON WRAPPING-PAPER ROLLS. WILLIAM EMERY DAVIS, Portland, Oreg. Filed Mar. 19, 1913. Serial No. 755,309. (Cl. 211—30.)



In a device of the character described, the combination with a base-plate with a pair of vertical standards at the front portion of said base-plate, a pair of vertical standards to the rear of the aforesaid vertical standards, revoluble spiders supported by said rear standards, means to connect said spiders, a portion of said spiders being adapted to receive type, a roll revolubly mounted to the rear standards immediately below said spiders, hangers pivoted to the rear standards, an inking roll of tenacious material revolubly mounted to said hangers, springs attached to said rear standards and said hangers for the purpose of yieldingly supporting said inking roll, brackets forming approximately two right-angles fixed to said rear standards, and revoluble means carried by said brackets to guide paper, said paper being attached intermediate the forward standards, substantially as set forth.

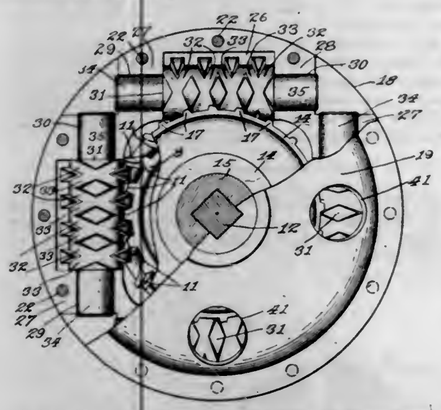
1,112,422. POWER-TRANSMISSION GEARING. LESLIE B. GRAHAM, East Chicago, Ind., assignor of one-half to Clarence W. Taylor, Chicago, Ill. Filed July 23, 1913. Serial No. 780,675. (Cl. 74—34.)

1. In power transmission mechanism of the differential type, in combination, one or more double worms, worm wheels fixed to independent shafts, said worms each being in mesh with both of said worm wheels, and a rotatable housing carrying said double worms in a manner for bodily rotation thereof, each worm being loosely journaled on its own axis.

2. In power transmission mechanism, in combination, independent shafts, a worm wheel fixed to one end of each shaft, one or more double worms being in mesh with both of said worm wheels, a rotatable housing carrying the double worm or worms suitably for bodily rotation thereof, each worm being loosely journaled on its own axis, and means to rotate said housing.

3. In power transmission mechanism, in combination, one or more worms each having right and left threads formed circumferentially thereon and two worm wheels fixed to separate shafts, said worm wheels being suitably formed for intermeshing engagement with each of said worms, and to permit relative rotative movement of said worm wheels, a rotatable housing suitably formed to carry each of said worms for bodily rotation therewith, each

worm being loosely journaled on its own axis, and means to rotate said housing.

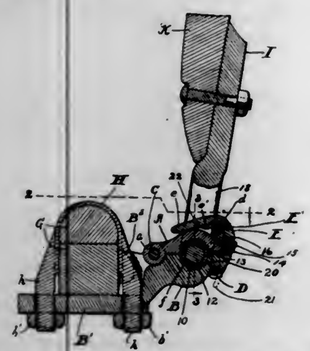


4. In power transmission mechanism, in combination, a rotatable housing formed with worm-recesses and anti-friction worm-end bearings, one or more worms each having right and left threads formed thereon and carried by said rotatable housing, each said worm being loosely journaled on its own axis, a divided shaft, a worm wheel fixed to one end of each shaft, each said worm being in mesh with both of said worm wheels, and means to rotate said housing.

5. In power transmission mechanism, in combination, independent shafts, a worm wheel fixed to one end of each shaft, a rotatable housing formed with worm-recesses, one or more worms each having right and left threads formed thereon and rotatably carried by said rotatable housing, each said worm being in mesh with both of said worm wheels and rotatable bodily, and means to rotate said housing.

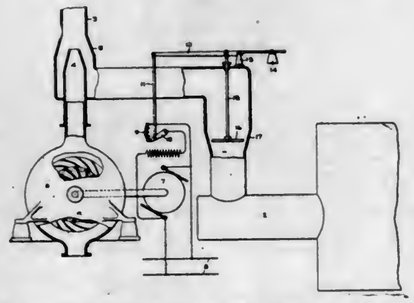
[Claim 6 not printed in the Gazette.]

1,112,423. THILL-COUPLING. GOLLADAY LAKE, Cleveland, Ohio. Filed Nov. 2, 1910. Serial No. 590,258. (Cl. 21—57.)



In a thill-coupling, a bracket divided into an upper section and a lower section, the upper bracket-section being pivotally connected at its rear end to the lower bracket-section and arranged to be swung in a vertical plane and the lower bracket-section being adapted to be attached to an axle; a thill-iron having a shackle which has bearing in the bracket forward of the axis of the upper bracket-section; a link having bearing in the lower bracket-section forward of the axis of the shackle and having its axis parallel with the axis of the shackle, said link having a pivotal member which is arranged externally of the bracket and substantially parallel with and spaced from the axis of the link, and a locking member rotatably mounted on said pivotal member and in its locking position overlapping the top of the upper bracket-section forward of the axis of the shackle, said locking member having a lever which in said position of said locking member projects rearwardly through said shackle when the thill-iron is in position projecting upwardly and forwardly of the bracket, the length of said lever relative to the dimensions of the shackle being such as to prevent the lever in its locking position from being actuated upwardly and forwardly through the shackle in the aforesaid position of the thill-iron.

1,112,424. APPARATUS FOR PRODUCING SULFURIC ACID. EDWARD H. MCFARLAND, Cincinnati, Ohio, assignor to General Electric Company, a Corporation of New York. Filed May 10, 1913. Serial No. 766,746. (Cl. 23—1.)



1. The combination with the lead chamber of a sulfuric acid apparatus, of a blower for producing a draft through said chamber, and a device responsive to variations in the volume of gas passing out of said chamber and controlling the speed of said blower.

2. The combination with the lead chamber of a sulfuric acid apparatus, of an ejector nozzle for producing a draft through said chamber, a blower delivering air to said nozzle, a motor for driving said blower, and a device responsive to variations in the volume of gas passing out of said chamber and controlling the speed of said motor.

3. The combination with the lead chamber of a sulfuric acid apparatus, of an ejector nozzle for producing a draft through said chamber, a centrifugal blower delivering air to said nozzle, an electric motor for driving said blower, and a device responsive to variations in the volume of gas passing out of said chamber and controlling the supply of current for said motor.

4. The combination with the lead chamber of a sulfuric acid apparatus, of an exit pipe from said chamber having a conical enlargement, a disk float located in said enlargement, a blower, a nozzle delivering air from said blower to induce a draft through said exit pipe, a motor for driving said blower, and means connected to said float for controlling the supply of energy to said motor.

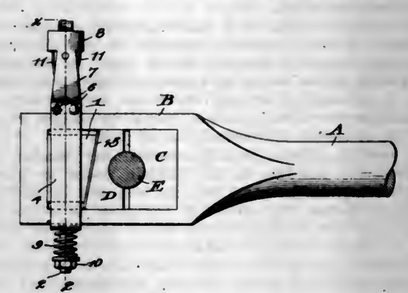
5. The combination with the lead chamber of a sulfuric acid apparatus, of an exit pipe therefrom, a stack connected with said exit pipe, a nozzle entering said stack, a blower delivering air to said nozzle to such gases from said chamber through said exit pipe and expel them through said stack, a motor for driving said blower, and a float riding upon the column of gases in said exit pipe and serving to regulate the speed of said motor.

[Claims 6 and 7 not printed in the Gazette.]

1,112,425. WEAR-COMPENSATING JOURNAL-BOX. CHRIST SEIVERT, Calio, N. D. Filed Aug. 21, 1913. Serial No. 786,002. (Cl. 64—55.)

1. A journal box, a block working therein, a strap surrounding the said box, means for drawing said strap tightly around said box and a collar carried by said strap,

in combination with a bolt screwthreaded in said block and passing freely through said box, strap and collar, said bolt being provided on one end with screw-threads and on the other with screw notches formed of a continuous thread, a plurality of resilient keepers of slightly different lengths carried by said strap and collar and engaging said notches one at a time, a nut and washer turned on the screw-threaded end of said bolt and an actuating spring surrounding said bolt and bearing against said strap and the washer to move said bolt and block transversely of said box to compensate for wear.



2. A journal box, a compensating block working therein and a bolt passing freely through said box, but fixedly connected to said block, said bolt having one end squared and provided with screw-notches formed of a continuous thread, in combination with a spring acting to pull said bolt and block transversely of said box, resilient keepers of different lengths adapted to engage the notches on said bolt, only one resilient keeper engaging the notches at one time, and supports for said resilient keepers connected to the box.

3. In combination with a journal box a compensating key working therein a bolt having screw-threaded engagement with said key, a spring acting to pull said bolt and key transversely of said box means for adjusting the tension of said spring and resilient means engaging said bolt to prevent the reverse movement of said bolt and key.

4. A journal box, a compensating block working therein and a bolt passing freely through said box, but fixedly connected to said block, said bolt having one end squared and provided with screw-notches formed of a continuous thread, in combination with a spring acting to pull said bolt and block transversely of said box, means engaging said notches to prevent reverse movement of said bolt and supports for said means connected to said box.

5. A journal box, a compensating key working therein and a bolt passing freely through said box, but adjustably connected to said key, said bolt having one end squared and provided with notches, in combination with a spring acting to pull said bolt and block transversely of the box, means engaging said notches to prevent reverse movement of said bolt and supports for the said means connected to said box.

[Claims 6 and 7 not printed in the Gazette.]

1,112,426. WALL-BOX. HART A. STODDARD, Philadelphia, Pa., assignor to Chelten Electric Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1912. Serial No. 734,879. (Cl. 247—5.)

1. A wall box comprising the combination of box section, an end wall for the section having a hole through it and having an indentation extending to its margin, a pin arranged to slide endwise through said hole and to project from the wall, a yielding bar connection connecting one end of the pin and the wall, and a second box section provided at its edge with a rigid finger adapted to said indentation and with a lug or ear provided with a hole for the reception of the free end of the pin.

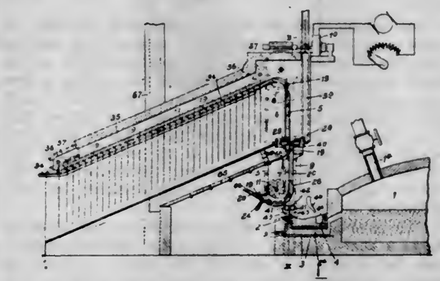
2. A wall box comprising the combination of a box section, an end wall for the section having a hole through it and having an indentation extending to its margin, a bevel-ended pin arranged to slide endwise through said hole and to project from the wall, a yielding bar connection connecting one end of the pin and the wall, and a second box section provided at its edge with a rigid finger adapted to said indentation and with a lug or ear provided with a hole for the reception of the free end of the pin.

3. A wall box comprising the combination of a box section, an end wall for the section having a hole through it and having an indentation extending to its margin, a pin arranged to slide endwise through said hole and to project from the hole, a spring yielding bar connection connecting one end of the pin and the wall, and a second box section provided at its edge with a rigid finger adapted to said indentation and with a lug or ear provided with a hole for the reception of the free end of the pin.

4. In a wall box the combination of perforated walls and perforated lugs or ears, an endwise movable pin co-operating with both said perforations and means for connecting one end of the pin to one of said walls and for positioning the other end of the pin in one of the perforations and permitting of its being thrust into the other perforation.

REISSUES.

13,804. MANUFACTURE OF SHEET-GLASS. HALBERT K. HITCHCOCK, Tarentum, Pa., assignor of one-half to Hitchcock Experiment Company, a Corporation of New Jersey. Filed June 18, 1906. Serial No. 322,121. Original No. 805,064, dated Nov. 21, 1906, Serial No. 71,980. (Cl. 49—17.)



1. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, means for applying a regulated tension to the glass whereby the glass is pulley away from the slot at or approximately at the rate of feed through the slot and means for severing the glass beyond the line or point at which tension is applied, substantially as set forth.

2. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, means for regulating the temperature of the glass as it flows through the slot or opening, means for applying a regulated tension to the glass, whereby the glass is pulled away from the slot at or approximately at the rate of feed and means for severing the glass beyond the line or point at which tension is applied through the slot, substantially as set forth.

3. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, a mechanism arranged in a

plane parallel or approximately parallel with the direction of feed of the glass through the slot adapted to pull the glass away from the slot at or approximately at the rate of feed of glass through the slot and means for severing the glass beyond the line or point at which tension is applied, substantially as set forth.

4. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, a pulling mechanism arranged in the plane of feed of the glass through said slot or opening, and a series of grippers for connecting the glass sheet or plate to the pulling mechanism, substantially as set forth.

5. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, means for applying a regulated tension to the glass whereby it is pulled away from the slot at or approximately at the rate of feed through the slot and means operated by the tension mechanism for cracking the glass at predetermined points or intervals, substantially as set forth.

6. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, a pulling mechanism arranged in a plane parallel to the direction of feed of glass through the slot, rotatable blades operated by the pulling mechanism for cracking the glass arranged to operate at predetermined intervals, substantially as set forth.

7. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass having a discharge slot or opening, means for forcing the glass through said slot or opening, a pulling mechanism arranged in the plane of feed of glass through the slot, a series of grippers detachably connected to the pulling mechanism and mechanism for feeding the grippers to the pulling mechanism one at a time, substantially as set forth.

8. The combination of a glass-containing chamber or receptacle, an orifice having a shape substantially similar to that of the article to be formed, located outside of the chamber but connected thereto, means for causing a flow of glass from the chamber to a formative point in said orifice, means for applying continuously a stretching tension to the glass in such manner as to remove the glass from the orifice at a rate equal to the movement of the glass thereto and means for cooling the glass from the formative point outwardly or in the direction of pull, substantially as set forth.

9. The combination of means for bringing a mass of glass to a shape similar to that of the desired product, means for cooling the glass at the point at which it assumes the desired shape and means for applying tension to such initial shape for reducing the shape to the desired dimensions without material alteration of the shape in transverse section, at a rate equal or approximately equal to the rate of initial formation.

10. The combination of a glass containing chamber or receptacle, an orifice having a shape similar to that of the article desired connected to the chamber, means for causing a flow of glass to the orifice, a heated chamber and means adapted to pull the glass from the orifice at a rate equal or approximately equal to the flow of glass to the orifice and deliver the sheet while hot into the heated chamber, substantially as set forth.

11. The combination of a glass-containing chamber or receptacle, an orifice having a shape similar to that of the article desired connected to the chamber, means for causing a flow of glass to the orifice, a heated chamber above the orifice and means adapted to pull the glass from the orifice and deliver it into the heated chamber, substantially as set forth.

12. The combination of a glass-containing chamber or receptacle, an orifice or opening having a shape similar to that of the article desired, means for causing a flow of glass to the orifice or opening, a heated chamber, means for pulling the glass from the orifice or opening and delivering it into the heated chamber and means for severing the glass into lengths or sections, substantially as set forth.

13. The combination of a glass-containing chamber or receptacle, an orifice or opening having a shape similar to that of the article desired, means for causing a flow of glass to the orifice or opening, a heated chamber above the orifice, means for pulling the glass from the orifice or opening and delivering it into the heated chamber and means for severing the glass into lengths or sections, substantially as set forth.

14. The combination of a glass-containing chamber or receptacle, a slot or orifice connected to the chamber, means for positively forcing molten glass up through such slot or orifice, means for cooling the surface of such glass to the line of contact with such slot or orifice, means operative to stretch such glass as it emerges from such slot or orifice, substantially as set forth.

15. The combination of a glass-containing chamber, a slot or orifice connected to the chamber, means for positively forcing molten glass through such slot or orifice, means for cooling the surface of the glass as it passes out of such slot or orifice to the line of contact on such slot or orifice, a heated chamber, means operative to stretch such glass as it emerges from such slot or orifice and deposit it in a heated chamber, substantially as set forth.

16. The combination of a receptacle for molten glass having a discharge-orifice connected therewith, means for forcing the glass to such orifice, means for regulating the temperature of the glass as it passes to such orifice, means for cooling said glass as it leaves said orifice and a pulling apparatus for taking the glass away as fast as it is fed to such apparatus, substantially as set forth.

17. In an apparatus for the formation of sheets of glass the combination of a receptacle for holding molten glass, a discharge slot or opening connected therewith of a shape similar to the finished article, means for forcing the molten glass to a formative point at or near the end of said slot or opening, a heated chamber, means for applying a regulated tension upon the glass and moving it into the chamber whereby the glass is pulled away at or approximately at the same speed as the movement of the glass to such formative point, substantially as set forth.

18. The combination of a receptacle for molten glass having a discharge slot or opening connected therewith, means for forcing the glass to a formative point at or near the end of said opening, means for regulating the temperature of the glass in its passage to such formative point, means for applying a regulated tension to the glass whereby it is pulled away at a rate equal or approximately equal to the rate of feed to such formative point and a means for cooling the surface of said glass under tension to the line of contact with the retining-walls at such formative point, substantially as set forth.

19. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass, an upwardly-discharging slot or opening outside of the receptacle but connected therewith, means for forcing the glass through said slot or opening, means for applying a regulated tension to the glass whereby the glass is pulled away from the slot at or approximately at the rate of feed through the slot and means for severing the glass beyond the line or point at which tension is applied, substantially as set forth.

20. In an apparatus for forming sheets of glass, the combination of a receptacle for the glass, an upwardly-discharging slot or opening outside of the receptacle but connected therewith, means for forcing the glass through said slot or opening, means for regulating the tension on the glass as it flows through the slot or opening, means for applying a regulated tension to the glass whereby the glass is pulled away from the slot at or approximately at the rate of feed thereto, and means for severing the glass beyond the line or point at which tension is applied thereto, substantially as set forth.

21. In an apparatus for forming sheets of glass the combination of a receptacle for the glass, an upwardly-discharging slot or opening outside of the receptacle but connected therewith, a mechanism arranged in a plane parallel or approximately parallel with the direction of feed of glass through the slot, adapted to pull the glass away from the slot at or approximately at the rate of feed through the slot and means for severing the glass beyond the line or point at which tension is applied, substantially as set forth.

22. In an apparatus for the manufacture of sheets of glass, the combination of a basin or receptacle provided with a discharge slot or opening, a heated chamber, a drawing mechanism having the portions in engagement with the glass movable along in said chamber to pull the glass in the plane of the discharge slot or opening and means for regulating the temperature of the glass in its movement from the slot to the heated chamber.

23. In an apparatus for the manufacture of sheets of glass, the combination of a basin or receptacle provided with a discharge slot or opening, a heated chamber separated from the discharge slot or opening to permit the cooling of the glass, a drawing mechanism having the portions in engagement with the glass movable along in said chamber in the plane of the discharge slot or opening and means for regulating the temperature of the glass in its movement from the slot to the heated chamber.

24. In an apparatus for the manufacture of sheets of glass, a heated chamber, gripping mechanism having the portions engaging the glass movable along in said chamber, and means for closing the gripping mechanism arranged outside of said chamber.

25. In an apparatus for making sheet glass by a continuous operation, a receptacle containing molten glass, a chamber through which the glass as drawn is passed continuously, grip bars engaging the sheet at intervals and an endless carrier for moving the grip bars continuously through the chamber.

26. In an apparatus for making sheet glass by a continuous operation, a receptacle for molten glass, means for continuously drawing a sheet of glass of uniform width from said receptacle, said means including endless belts or chains, a series of transverse bars, movable by said chains and means for clamping the sheet against said bars whereby the pull or draw on the sheet is continuous or uninterrupted.

27. In an apparatus for the manufacture of sheets of glass the combination of a basin or receptacle, a heated chamber, a drawing mechanism having the portions in engagement with the glass movable along in said chamber to pull the glass in the plane of the discharge slot or opening and means for regulating the temperature of the glass in its movement from the slot to the heated chamber.

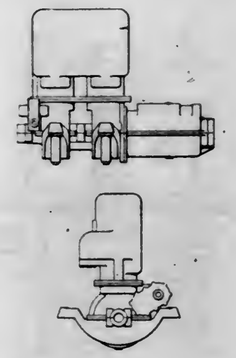
28. In an apparatus for the manufacture of sheets of glass, the combination of a basin or receptacle, a heated chamber separated from the discharge slot or opening to permit the cooling of the glass, a drawing mechanism having the portions in engagement with the glass movable along in said chamber in the plane of the discharge slot or opening and means for regulating the temperature of the glass in its movement from the slot to the heated chamber.

DESIGNS.

46,466. VELVET. SIDNEY BLUMENTHAL, New York, N. Y., assignor to Sidney Blumenthal & Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Apr. 10, 1913. Serial No. 760,321. Term of patent 7 years.

The ornamental design for velvet, as shown.

46,467. CASING FOR HYDROCARBON-ENGINES. HENRY A. BUDDE, Manchester, Conn. Filed May 15, 1914. Serial No. 838,882. Term of patent 14 years.

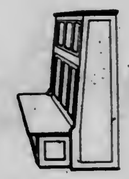


The ornamental design for a casing for hydrocarbon engines as shown.

46,468. COMBINED KEY-RING AND BOTTLE-OPENER. EUGENE G. FALCONER, San Francisco, Cal. Filed July 30, 1914. Serial No. 854,890. Term of patent 7 years.

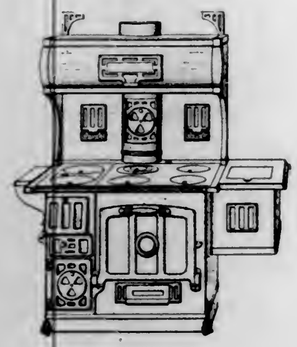
The ornamental design for a combined key ring and bottle opener, as shown.

46,469. SECTION OF A FOLDING BED. WALDO R. FILLMORE and ELMER BOILLOT, Kansas City, Mo. Filed Dec. 6, 1913. Serial No. 805,169. Term of patent 7 years.



The ornamental design for a section of a folding bed, as shown.

46,470. COOKING-STOVE. GEORGE W. HOWES, Dowagiac, Mich. Filed Aug. 6, 1914. Serial No. 855,520. Term of patent 7 years.



The ornamental design for a cooking stove as shown.

46,471. ARM FOR CHANDELIERS AND BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,824. Term of patent 3½ years.

The ornamental design for an arm for chandeliers and bowls as shown.

46,472. CHANDELIER AND BRACKET ARM. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,825. Term of patent 3½ years.

The ornamental design for a chandelier and bracket arm as shown.

46,473. SCROLL CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,826. Term of patent 3½ years.

The ornamental design for a scroll clamp for light reflecting bowls as shown.

46,474. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,827. Term of patent 3½ years.

The ornamental design for a clamp for light reflecting bowls, as shown.

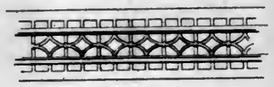
46,475. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,828. Term of patent 3½ years.

The ornamental design for a clamp for light reflecting bowls, as shown.

46,476. ARM FOR CHANDELIERS OR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,829. Term of patent 3½ years.

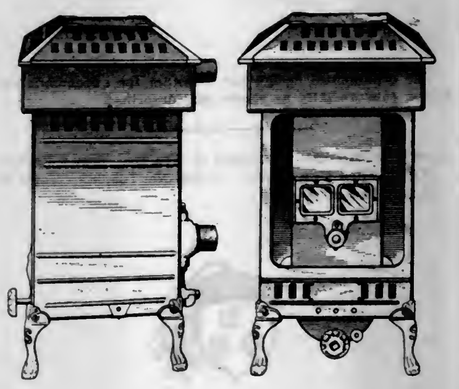
The ornamental design for an arm for chandeliers or light reflecting bowls as shown.

46,477. METAL-WORKER'S STOCK. SIDNEY ALEXANDER KELLER, Woodmere, N. Y. Filed Aug. 5, 1914. Serial No. 855,330. Term of patent 3½ years.



The ornamental design for metal-workers stock, substantially as shown.

46,478. GAS-HEATER. ADOLPH H. KOCH, Los Angeles, Cal. Filed Aug. 1, 1914. Serial No. 854,580. Term of patent 7 years.

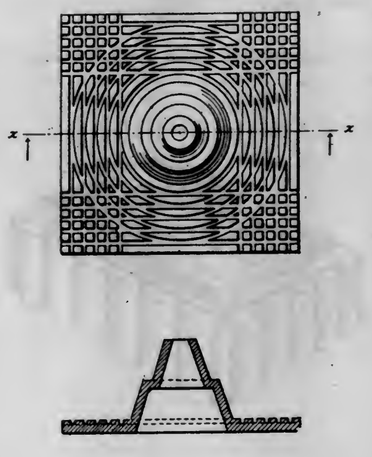


The ornamental design for a gas heater, as shown.

46,479. PUMP. FISHER H. LIPPINCOTT, Cynwyd, Pa., assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1914. Serial No. 855,909. Term of patent 7 years.

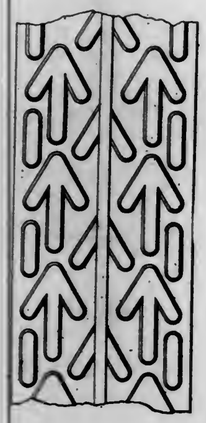
The ornamental design for a pump, as shown.

46,480. BURNER. LOUIS P. LIVELY, Dallas, Tex. Filed June 30, 1914. Serial No. 848,311. Term of patent 7 years.



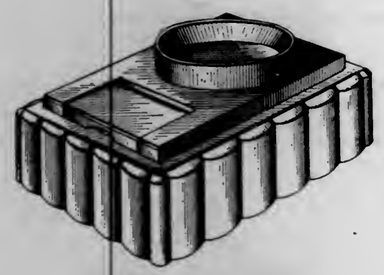
The ornamental design for a burner, substantially as shown.

46,481. TIRE-CASING. THOMAS R. MCKENNAN, East Palestine, Ohio. Filed Aug. 5, 1914. Serial No. 855,328. Term of patent 3½ years.



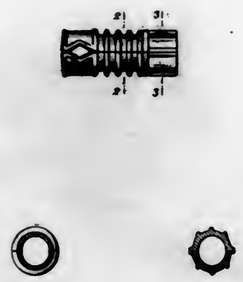
The ornamental design for a tire casing, as shown.

46,482. INKSTAND. CHARLES H. NUMAN, New York, N. Y. Filed July 27, 1914. Serial No. 853,483. Term of patent 7 years.



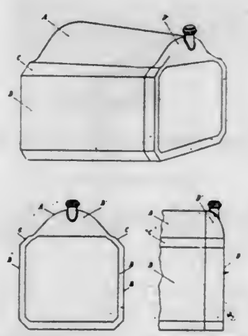
The ornamental design for an inkstand, as shown.

46,483. SHIELD OR SIMILAR ARTICLE. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed Aug. 4, 1914. Serial No. 855,071. Term of patent 14 years.



The ornamental design for a shield or similar article as shown.

46,484. BONNET FOR AUTOMOBILE VEHICLES. EDOUARD HENRI FRÉDÉRIC DE TURCKHEIM, Paris, France. Filed May 26, 1913. Serial No. 770,083. Term of patent 7 years.

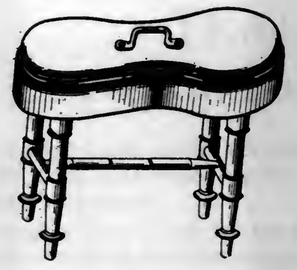


The ornamental design for a bonnet for automobile vehicles, substantially as shown and described.

46,485. EMBLEM. CHARLES G. TURNER, Grand Rapids, Mich. Filed May 5, 1913. Serial No. 765,689. Term of patent 14 years.

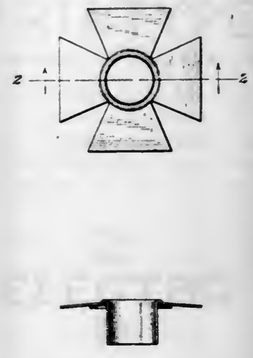
The ornamental design for an emblem, as shown.

46,486. DOUCHE-PAN. JOSEPH WEINHARDT, Jr., St. Louis, Mo. Filed Aug. 4, 1914. Serial No. 855,069. Term of patent 14 years.



The ornamental design for douche pan, as shown.

46,487. EYELET. GEORGE M. WILLIAMS, Elizabeth, N. J. Filed July 7, 1914. Serial No. 849,601. Term of patent 14 years.

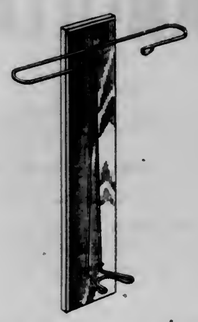


The ornamental design for an eyelet, as shown.

46,488. BOTTLE-STOPPER. CHARLES D. WOLFSON, Brooklyn, N. Y., assignor to A. A. Vantine & Co. Inc., New York, N. Y., a Corporation of New York. Filed July 20, 1914. Serial No. 852,071. Term of patent 3½ years.

The ornamental design for a bottle-stopper, as shown.

46,489. BROOM-HOLDER. JOHN ZIEGMAN, Fostoria, Ohio. Filed July 1, 1914. Serial No. 848,491. Term of patent 14 years.



The ornamental design for a broom holder, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 29, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 65,666. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE OLIVER TYPEWRITER COMPANY, Chicago, Ill. Filed Sept. 10, 1912.

PRINTYPE

Particular description of goods.—Type-Writing Machines.

Claims use since the 15th day of July, 1912.

Ser. No. 67,168. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) REFRACTORY ZINC ORE TREATMENT COMPANY, New York, N. Y. Filed Nov. 29, 1912.

Z
ELECTRO
N

The trade-mark consists of the simulation of a cross produced by broken lines consisting of letters disposed to form the outline of the cross.

Particular description of goods.—Spelters.

Claims use since Nov. 5, 1912.

Ser. No. 67,501. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE OLIVER TYPEWRITER COMPANY, Chicago, Ill. Filed Dec. 19, 1912.

Particular description of goods.—Type-Writing Machines.

Claims use since the 15th day of November, 1912.

Ser. No. 71,747. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed July 16, 1913.

NATIONAL

Consisting of the word "National."

Particular description of goods.—Electric Incandescent Lamps.

Claims use since about June, 1901.

Ser. No. 73,183. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PEROLIN COMPANY OF AMERICA, Chicago, Ill. Filed Oct. 3, 1913.

BROOKS
ELECTRIC
BOILER
CLEANER

The words "Brooks Boiler Cleaner" being disclaimed.

Particular description of goods.—Chemical Compounds for Preserving Boiler Metals and Removing Oil, Scale from Boilers.

Claims use since July 15, 1911.

Ser. No. 75,627. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) O-Do-Cure Toilet Company, Chicago, Ill. Filed Feb. 2, 1914.

Consisting of the words "O Do Cure" and the portrait of Hazel Bollinger.

Particular description of goods.—A Toilet Water.

Claims use since Jan. 2, 1914.

Ser. No. 76,540. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) Columbia Star Milling Co., Columbia, Ill. Filed Mar. 11, 1914.

MONROE STAR

Particular description of goods.—Wheat-Flour.

Claims use since 1896.

Ser. No. 77,680. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) I. B. Kleinert Rubber Company, New York, N. Y. Filed Apr. 23, 1914.

TANGO

Particular description of goods.—Dress-Shields.

Claims use since the 1st of December, 1913.

Ser. No. 78,387. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) Kalon Manufacturing Company, Williamsport, Pa. Filed May 19, 1914.

Consists of a circle inclosing the word "Kalon" extending through the vertical and horizontal centers of the circle in crisscross relation, such words being embraced by sectors of a circle.

Particular description of goods.—A Varnish Food for Preserving the Luster Continually Against the Humidity of the Air and the Action of Gases and a Varnish-Solvent for Dissolving All Resinous and Gum Substances.

Claims use since the year of 1889.

Ser. No. 78,466. (CLASS 6. CHEMICALS, MEDICINES. AND PHARMACEUTICAL PREPARATIONS.) Thomas E. Dockrell, New York, N. Y. Filed May 22, 1914.

SIMLATE

Particular description of goods.—A Pharmaceutical Preparation Used as a Tonic in Improving the Appetite and for Aiding Dyspepsia, Indigestion, Flatulence, Heartburn, or Digestive Disturbances Not Due to Organic Diseases.

Claims use since Jan. 1, 1908.

Ser. No. 78,894. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) Turton Bros. & Matthews, Ltd., Sheffield, England. Filed June 6, 1914.

TB&M

Particular description of goods.—Machine-Knives, Scissors, Shears, Files, Saws, Rasps, Augers, Hatchets and Adzes, Vises, Picks, Spades, Shovels, Hammers, Rakes, Hay and Digging Forks.

Claims use since the year 1872.

Ser. No. 78,945. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) Joseph R. Hite, Pittsburgh, Pa. Filed June 10, 1914.

S. G. Mollinger

Father Mollinger's

The portrait shown being that of Father S. G. Mollinger and the signature being a facsimile of his signature.

Particular description of goods.—Emulsion of Cod-Liver and Hypophosphites; Tonic Hypophosphites with Pepsin; Nerve and System Tonics; Liniments; Blood Remedies; Salves; Remedies for Diseases of the Eye, Catarrh, Coughs, Colds, Bronchitis, Asthma, Hay-Fever, Rheumatism, Lumbago, Indigestion, Dyspepsia, Diarrhea, Gall-Stones, Eczema, Epilepsy, St. Vitus's Dance, and for Diseases of the Kidneys, Liver, and Stomach and of Females.

Claims use since July 25, 1892.

Ser. No. 79,158. (CLASS 39. CLOTHING.) John M. Given, Inc., Pittsburgh, Pa.; New York, N. Y., and Chicago, Ill. Filed June 16, 1914.

MESSENGER

Particular description of goods.—Hosiery.

Claims use since May 23, 1914.

Ser. No. 79,160. (CLASS 39. CLOTHING.) John M. Given, Inc., Pittsburgh, Pa.; New York, N. Y., and Chicago, Ill. Filed June 16, 1914.

SUNSHINE GIRL

Particular description of goods.—Hosiery.

Claims use since May 23, 1914.

Ser. No. 79,297. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) George H. Kress, Hartford, Conn. Filed June 23, 1914.

KRESS'S HONEY-B"

No claim being made to the surname "Kress."

Particular description of goods.—A Remedy for Croup, Frog in Throat, Sore Throat, Whooping-Cough, Constipation, Pulmonary Inflammation, Asthma, and Inflammation of the Breast.

Claims use since May 10, 1914.

Ser. No. 79,524. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) Michael B. Toy, Boston, Mass. Filed July 2, 1914.

The trade-mark is shown in the accompanying drawing, no claim being made to the printed language appearing thereon.

Particular description of goods.—Spices and Coffee.

Claims use since October, 1913.

Ser. No. 79,722. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) George W. Ramey & Sons, Speers Ferry, Va. Filed July 10, 1914.

RAMEY'S

The portrait shown is that of George W. Ramey.

Particular description of goods.—A Remedy for Membranous Croup, Hives, Colic, Teething, Coughs, Colds, Hoarseness, Asthma, Bronchitis, Consumption, Whooping-Cough, Catarrh, Sore Throat, Chapped Hands and Lips, Sores, Burns, Headache, Earache, Toothache, Swollen Cake in Breast, Diphtheria, Tonsilitis, Joint-Felons, Frost and Snake Bites, Sprains, Nail-Wounds, Swellings, Stiff Joints, Flux, Diarrhea, Measles, Mumps, La Grippe, Gastritis, Colic, Typhoid, Pneumonia, Scarlet Fever, Jaundice, Bright's Disease, Dropsy, Spinal Affection, Spasms, Epilepsy Fits, Insanity, Indigestion, Smothering, Bladder, Pleurisy, Dyspepsia, Menstruation, Green Sickness, Leucorrhea, Womb Troubles, Turn of Life, Hiccough, Smallpox, Cholera Morbus, Sore Inflamed Granulated Eyelids, and Rheumatism.

Claims use since June, 1914.

Ser. No. 79,800. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) Theodore P. Driver, Melrose and Boston, Mass. Filed July 15, 1914.

WAH-WAH-TAY SEE

Particular description of goods.—Electric Lights.

Claims use since May 15, 1914.

Ser. No. 79,820. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) The Sentanel Remedies Company, Wilmington, Del., and Covington, Ky. Filed July 15, 1914.

Sentinel

Particular description of goods.—Laxative Tablets.

Claims use since May 5, 1914.

Ser. No. 79,902. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CHICAGO DIRECTORY COMPANY, Chicago, Ill. Filed July 18, 1914. Under ten-year proviso.

THE

CHICAGO BLUE BOOK

Particular description of goods.—An Annual Publication.
Claims use since about the year 1890.

Ser. No. 79,970. (CLASS 38. PRINTS AND PUBLICATIONS.) PASSAIC METAL WARE CO., Passaic, N. J. Filed July 21, 1914.

STELAD SIGNS

No claim is made to the exclusive use of the letters "igns."
Particular description of goods.—Advertising-Signs for Public Distribution.
Claims use since June 29, 1914.

Ser. No. 79,979. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ATHA TOOL COMPANY, Newark, N. J. Filed July 22, 1914.

A

Particular description of goods.—Hammers; Sledges; Mauls; Coopers' Drivers; Bull Sets; Boiler and Mill Picks; Wedges; Stone and Quarry Picks; Railroad Track-Tongs; Blacksmiths' Tongs; Rail-Forks; Claw and Timber Bars; Tamping-Bars; Lining-Bars; Swages, Fullers, Flatters, and Hardies for Blacksmiths' Use; Punches; Adzes; Cleavers; Choppers; Bush-Hooks; Trowels; Drift-Pins; Rivet Sets; Dollies; Saws; Spreaders; Pavers' Reels; Chisels; Wrenches; Anvil-Tools; Casing-Rippers; Flue-Beaders; Ladles, and Bridge-Builders' Gouges.
Claims use since the year 1888.

Ser. No. 79,991. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REGENTS MERCANTILE CORPORATION, St. Louis, Mo. Filed July 22, 1914.

"HYGEIA"

Particular description of goods.—Pastes and Powders for Beautifying and Preserving the Teeth and Skin, Shampoo Preparations, Hair-Tonic, Toilet Waters, Sea-Salt, and Baking-Powder.
Claims use since Oct. 1, 1911.

Ser. No. 80,012. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLYDE T. LANGDON, Piqua, Ohio. Filed July 23, 1914.

CARPET

Particular description of goods.—Corn-Plasters.
Claims use since the 1st day of July, 1912.

Ser. No. 80,127. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE JEFFREY MANUFACTURING COMPANY, Columbus, Ohio. Filed July 28, 1914.

"ARCWALL"

Particular description of goods.—Machinery for Making Incisions or Cuts in Rock, Coal, or the Like.
Claims use since May 1, 1914.

Ser. No. 80,183. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MUELLER & HAINES PLAYER PIANO COMPANY, Chicago, Ill. Filed July 30, 1914.

PUREATONE

Particular description of goods.—Pianos.
Claims use since May 27, 1914.

Ser. No. 80,228. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) O. V. HOOKER & SON, St. Johnsbury, Vt. Filed Aug. 1, 1914.

Particular description of goods.—Saw and Sharpening Machines.
Claims use since Dec. 1, 1913.

Ser. No. 80,259. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) VOLOTONE COMPANY, Elizabeth, N. J. Filed Aug. 1, 1914.

VOLOTONE

Particular description of goods.—Piano-Players and Parts Thereof and Appurtenances Therefor.
Claims use since about June 1, 1914.

Ser. No. 80,322. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Aug. 5, 1914.

123

Particular description of goods.—Photographic Film.
Claims use since May, 1905.

Ser. No. 80,380. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEMUEL A. CARTER, Bunnell, Fla. Filed Aug. 7, 1914.

Particular description of goods.—A Remedy for Colic, Cramps, Headache, Croup, Insect Stings and Bites, Corns, Bunions, and Tender Feet, Diarrhea, Rheumatism, Neuralgia, Sciatica, Sore Gums, Toothache, Sore Throat, Tonsilitis, Sprains, Bruises, Soreness and Stiffness of Muscles and Joints; a Remedy for Disordered Liver, Biliousness, Constipation, and Malaria; and a Laxative Remedy for Colds and La Grippe.
Claims use since May 1, 1914.

Ser. No. 80,391. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM C. CUMBEE, Sterling, Ga. Filed Aug. 8, 1914.

Particular description of goods.—An Insect-Destroyer.
Claims use since May, 1914.

Ser. No. 80,411. (CLASS 37. PAPER AND STATIONERY.) UNITED DRUG COMPANY, Boston, Mass. Filed Aug. 8, 1914.

The Rexall Store

The words "The" and "Store" are hereby disclaimed.
Particular description of goods.—Wrapping-Paper and Toilet-Paper.
Claims use since prior to April, 1911.

Ser. No. 80,420. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed Aug. 10, 1914.

Golden Beauty

Particular description of goods.—Scissors and Shears.
Claims use since July 25, 1914.

Ser. No. 80,421. (CLASS 37. PAPER AND STATIONERY.) BLAKE, MOFFITT & TOWNE, San Francisco, Cal. Filed Aug. 10, 1914. Under ten-year proviso.

Particular description of goods.—Bond and Writing Paper.
Claims use since Feb. 28, 1887.

Ser. No. 80,458. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed Aug. 11, 1914.

SNOW DRIFT

Particular description of goods.—Toilet-Paper.
Claims use since Dec. 6, 1905.

Ser. No. 80,474. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE AMERICAN HARDWARE CORPORATION, New Britain, Conn. Filed Aug. 12, 1914.

CORBIN

Particular description of goods.—Odometers and Speedometers.
Claims use since 1912.

Ser. No. 80,511. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) LYON, CONKLIN & CO. INC., Baltimore, Md. Filed Aug. 12, 1914.

LYONORE

Particular description of goods.—Metals in Ingot and Plate Form.
Claims use since July 24, 1914.

Ser. No. 80,512. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NICHOLSON FILE COMPANY, Providence, R. I. Filed Aug. 12, 1914.

SPARK

Particular description of goods.—Files and Rasps.
Claims use since July 22, 1914.

Ser. No. 80,540. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WYTTENBACH BROS. COMPANY, Evansville, Ind. Filed Aug. 13, 1914.

SOLVO

Particular description of goods.—A Remedy for the Treatment of Rheumatism and Diseases of the Bladder and Kidneys.
Claims use since December, 1911.

Ser. No. 80,545. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL TWIST DRILL & TOOL CO., Detroit, Mich. Filed Aug. 13, 1914.

NATIONAL

The word "National."
Particular description of goods.—Twist-Drills, Twist-Drill Bits, Reamers, Cutters, Counterbores, and Chucks.
Claims use since Nov. 3, 1903.

Ser. No. 80,566. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARENCE E. KENYON, Great Falls, Mont. Filed Aug. 14, 1914.

KILLIBUG

Comprising the word "Killibug."
Particular description of goods.—An Insecticide.
Claims use since about May 1, 1914.

Ser. No. 80,645. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

ROACHICIDE

Particular description of goods.—Insecticides for Exterminating Roaches and Water-Bugs.
Claims use since during the latter part of the year 1912.

Ser. No. 80,647. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

MALTOLEUM

Particular description of goods.—Preparations for Bronchitis, Pulmonary Diseases, Nervous Exhaustion and Debility Following Recovery from Wasting Fevers; Tonics Promoting Appetite and Increase of Flesh.
Claims use since the latter part of the year 1905.

Ser. No. 80,651. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

FOOTPEPA

Particular description of goods.—Foot-Powders for Tired, Aching, Swollen, and Perspiring Feet, Corns, Callouses, and for Chafed Skin and for Deodorizing the Skin.
Claims use since the latter part of the year 1904.

Ser. No. 80,653. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

RIKERMIDGETS

Particular description of goods.—Laxatives.
Claims use since about March, 1913.

Ser. No. 80,655. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

RIKERDYMONS

Particular description of goods.—Preparations for Throat and Bronchial Troubles, Tickling in the Throat, Hoarseness, Coughs, Colds, Asthma, and Bronchitis.
Claims use since the latter part of the year 1912.

Ser. No. 80,667. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MORRIS OFFENBERG, Pittsburgh, Pa. Filed Aug. 18, 1914.

MULTIPLEXINE

Particular description of goods.—A Preparation or Base Used for the Reduction and Emulsification of Essential Oils for the Manufacture of Flavoring Extracts, Flavoring Extracts, Flavoring Syrups, Perfumes, and Beer Extract.
Claims use since the year 1912.

Ser. No. 80,669. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SHERWIN-WILLIAMS CO., Cleveland, Ohio. Filed Aug. 18, 1914.

Tuber-Tonic

Particular description of goods.—A Combination Insecticide and Fungicide.
Claims use since Oct. 29, 1913.

Ser. No. 80,675. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GEORGE C. ANDREWS, Minneapolis, Minn. Filed Aug. 19, 1914.

Particular description of goods.—Traction-Engines.
Claims use since about July 1, 1914.

Ser. No. 80,684. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SARATOGA VICHY SPRING CO., Saratoga Springs, N. Y. Filed Aug. 19, 1914.

GOLF CLUB

Particular description of goods.—Non-Alcoholic Carbonated Beverages.
Claims use since June 1, 1914.

Ser. No. 80,701. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES H. HOLTZMAN, Baltimore, Md. Filed Aug. 20, 1914.

TRADE PVD MARK

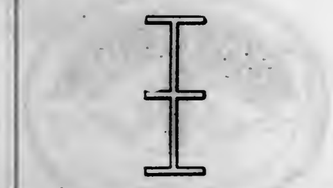
The words "Trade Mark," however, being disclaimed as with but not a part of the mark.
Particular description of goods.—Externally-Applied Remedies for Venereal Diseases.
Claims use since July 1, 1914.

Ser. No. 80,709. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE REESE CHEMICAL COMPANY, Cleveland, Ohio. Filed Aug. 20, 1914.

Blood Tabs

The heart being printed in red.
Particular description of goods.—Tablets for Purifying and Nourishing the Blood and Invigorating the Nervous System.
Claims use since about July 1, 1913.

Ser. No. 80,719. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) EDGAR ALLEN AMERICAN MANGANESE STEEL COMPANY, Augusta, Me., and Chicago, Ill. Filed Aug. 21, 1914.



Particular description of goods.—Castings and Forgings Made of Carbon Steel, Manganese Steel, and Iron.
Claims use since about Sept. 20, 1913.

Ser. No. 80,725. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERSON CHEMICAL COMPANY, Gary, Ind. Filed Aug. 21, 1914.

SPEARMINTO

Particular description of goods.—Tooth-Paste.
Claims use since the 1st day of August, 1914.

Ser. No. 80,742. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY DISSTON & SONS INCORPORATED, Philadelphia, Pa. Filed Aug. 22, 1914.

Particular description of goods.—Saws.
Claims use since June 5, 1914.

Ser. No. 80,768. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE BALDWIN COMPANY, Cincinnati, Ohio. Filed Aug. 24, 1914.

Modello

Particular description of goods.—Pianos, Player-Pianos, and Piano-Players.
Claims use since June 8, 1914.

Ser. No. 80,804. (CLASS 48. MALT EXTRACTS AND LIQUORS.) SEATTLE BREWING AND MALTING CO., Seattle, Wash. Filed Aug. 25, 1914.

Particular description of goods.—Beer.
Claims use since Nov. 5, 1913.

Ser. No. 80,862. (CLASS 48. MALT EXTRACTS AND LIQUORS.) OBERMEYER & LIEBMANN, New York and Brooklyn, N. Y. Filed Aug. 28, 1914.

FIGARO

Particular description of goods.—Beer.
Claims use since Aug. 22, 1914.

Ser. No. 80,889. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GOENNER & CO., Johnstown, Pa. Filed Aug. 31, 1914.

HAPPY LIFE

Particular description of goods.—Beer.
Claims use since Aug. 15, 1914.

Ser. No. 80,890. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GOENNER & CO., Johnstown, Pa. Filed Aug. 31, 1914.

LONG LIFE

Particular description of goods.—Beer.
Claims use since Aug. 15, 1914.

Ser. No. 80,891. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GOENNER & CO., Johnstown, Pa. Filed Aug. 31, 1914.

YOUNG LIFE

Particular description of goods.—Beer.
Claims use since Aug. 15, 1914.

Ser. No. 80,914. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STARK DISTILLERY CO., St. Louis, Mo. Filed Aug. 31, 1914.

OLD GOBBLER

Particular description of goods.—Straight, Blended, Compounded, and Imitation Whiskies.
Claims use since on or about the 1st of July, 1914.

Ser. No. 80,987. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EASTON & BURNHAM MACH. CO., Pawtucket, R. I. Filed Sept. 4, 1914.

Particular description of goods.—Spindles, Skein-Winders, Bobbin-Spoolers, and Reels.
Claims use since Aug. 28, 1914.

Ser. No. 80,989. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARL F. LAUBER, Philadelphia, Pa. Filed Sept. 4, 1914.

No. 9

Particular description of goods.—Blended Whisky.
Claims use since May 2, 1904.

Ser. No. 81,046. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDBERG, BOWEN & CO., San Francisco, Cal. Filed Sept. 8, 1914.

EARLY & OFTEN

Particular description of goods.—Whisky, Gin, Brandy, and Cocktails.
Claims use since about the 1st day of January, 1897.

Ser. No. 81,086. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROTH & CO., San Francisco, Cal. Filed Sept. 8, 1914.

SUM

Particular description of goods.—Whisky.
Claims use since Feb. 1, 1914.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 29, 1914.

99,930. BOTTLE-MAKING MACHINERY AND APPLIANCES THEREFOR. ARROW BOTTLERS COMPANY, Chicago, Ill.
Filed May 11, 1914. Serial No. 78,183. PUBLISHED JULY 14, 1914.

99,931. SAFETY-RAZORS AND SAFETY-RAZOR BLADES. AUTO STROP SAFETY RAZOR CO., LD., London, England.
Filed May 15, 1914. Serial No. 78,296. PUBLISHED JULY 28, 1914.

99,932. AUTOGRAPHIC REGISTERS. AUTOGRAPHIC REGISTER COMPANY, Hoboken, N. J.
Filed May 26, 1914. Serial No. 78,545. PUBLISHED JULY 28, 1914.

99,933. PAPER FOR AUTOGRAPHIC REGISTERS. AUTOGRAPHIC REGISTER COMPANY, Hoboken, N. J.
Filed May 26, 1914. Serial No. 78,546. PUBLISHED JULY 28, 1914.

99,934. SEMAPHORE SIGNALING DEVICES FOR USE UPON AUTOMOBILES AND OTHER VEHICLES. BAER MANUFACTURING CO., Philadelphia, Pa.
Filed May 15, 1914. Serial No. 78,300. PUBLISHED JULY 21, 1914.

99,935. HAIR-TONIC. BALDPATE CO., New York, N. Y.
Filed June 1, 1914. Serial No. 78,671. PUBLISHED JULY 28, 1914.

99,936. CANDIES AND CHOCOLATES. BALLWEG & GREENWALD, Brooklyn, N. Y.
Filed June 16, 1914. Serial No. 79,151. PUBLISHED JULY 21, 1914.

99,937. DREDGING APPARATUS. BAY CITY DREDGE WORKS, Bay City, Mich.
Filed February 26, 1914. Serial No. 76,160. PUBLISHED JUNE 2, 1914.

99,938. AUTOMOBILE-PUMPS. THE BOLTÉ & WEYER CO., Chicago, Ill.
Filed April 18, 1913. Serial No. 69,883. PUBLISHED JULY 21, 1914.

99,939. AUTOMOBILE-PUMPS. THE BOLTÉ & WEYER CO., Chicago, Ill.
Filed April 18, 1913. Serial No. 69,884. PUBLISHED JULY 21, 1914.

99,940. TOILET POWDERS. A. BOURJOIS & CO. INC., New York, N. Y.
Filed June 12, 1914. Serial No. 79,026. PUBLISHED JULY 28, 1914.

99,941. CERTAIN NAMED MUSICAL INSTRUMENTS, PARTS THEREOF, AND ACCESSORIES THEREFOR. C. BRUNO & SON, INC., New York, N. Y.
Filed June 13, 1914. Serial No. 79,050. PUBLISHED JULY 28, 1914.

99,942. COMPOSITION OF MATTER ADAPTED TO REMOVE CARBONACEOUS DEPOSITS FROM INTERNAL-COMBUSTION ENGINES. EDWARD ROBERT BULE, New York, N. Y.
Filed July 8, 1913. Serial No. 71,593. PUBLISHED JULY 28, 1914.

99,943. TOOL-STEEL. THE CARPENTER STEEL COMPANY, Reading, Pa.
Filed May 11, 1914. Serial No. 78,193. PUBLISHED JULY 21, 1914.

99,944. CERTAIN NAMED CUTLERY. CHALLENGE CUTLERY CORPORATION, Bridgeport, Conn.
Filed May 27, 1914. Serial No. 78,578. PUBLISHED JULY 21, 1914.

99,945. FRICTION-TAPE. FRANK CHAPMAN, Providence, R. I.
Filed May 28, 1914. Serial No. 78,604. PUBLISHED JULY 14, 1914.

99,946. COFFEE. CHASE & SANBORN, Boston, Mass.
Filed June 11, 1914. Serial No. 78,996. PUBLISHED JULY 21, 1914.

99,947. WEIGHING MACHINES AND SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed May 29, 1914. Serial No. 78,645. PUBLISHED JULY 14, 1914.

99,948. MEDICINES FOR TREATMENT OF VENEREAL DISEASES. SHIROSABURO CHIBA, Seattle, Wash.
Filed May 2, 1914. Serial No. 77,951. PUBLISHED JULY 28, 1914.

99,949. ICE-CREAMS AND ICES. T. D. COOK & CO., Boston, Mass.
Filed May 9, 1914. Serial No. 78,151. PUBLISHED JULY 21, 1914.

99,950. INSECTICIDES. WM. COOPER & NEPHEWS, Berkhamsted, England, and Chicago, Ill.
Filed May 21, 1913. Serial No. 70,539. PUBLISHED JULY 28, 1914.

99,951. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,926. PUBLISHED JULY 28, 1914.

99,952. CERTAIN NAMED MEDICINES, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,927. PUBLISHED JULY 28, 1914.

99,953. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,929. PUBLISHED JULY 28, 1914.

99,954. MACHINE-OIL. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,951. PUBLISHED JULY 21, 1914.

99,955. CITRUS FRUITS. CO-OPERATIVE ORANGE ASS'N, Lindsay, Cal.
Filed May 29, 1914. Serial No. 78,647. PUBLISHED JULY 21, 1914.

99,956. CITRUS FRUITS. CO-OPERATIVE ORANGE ASS'N, Lindsay, Cal.
Filed May 29, 1914. Serial No. 78,648. PUBLISHED JULY 21, 1914.

99,957. CERTAIN NAMED MEDICINES, REMEDIES, AND PHARMACEUTICAL PREPARATIONS. W. H. CRAWFORD CO., Baltimore, Md.
Filed March 27, 1911. Serial No. 55,321. PUBLISHED AUGUST 22, 1911.

99,958. POLISH FOR VARNISH. WILLIAM H. DAMON, Los Angeles, Cal.
Filed May 11, 1914. Serial No. 78,195. PUBLISHED JULY 14, 1914.

99,959. METAL FENCING-GATES AND FENCE-POSTS. DWIGGINS WIRE FENCE COMPANY, Anderson, Ind.
Filed December 4, 1913. Serial No. 74,355. PUBLISHED JULY 14, 1914.

99,960. TEA. DWINELL-WRIGHT CO., Boston, Mass.
Filed June 17, 1914. Serial No. 79,170. PUBLISHED JULY 21, 1914.

99,961. LAWN-MOWER. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,792. PUBLISHED JULY 21, 1914.

99,962. READY-MIXED PAINT. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,793. PUBLISHED JULY 14, 1914.

99,963. PHARMACEUTICAL PREPARATIONS FOR MEDICINAL BATHS. FRIEDRICH FELLENBERG, Erlenbach, Switzerland.
Filed May 12, 1914. Serial No. 78,219. PUBLISHED JULY 28, 1914.

99,964. ALIMENTARY PASTE PRODUCTS. FORT WORTH MACARONI CO., Fort Worth, Tex.
Filed June 2, 1914. Serial No. 78,742. PUBLISHED JULY 21, 1914.

99,965. ALIMENTARY PASTE PRODUCTS. FORT WORTH MACARONI CO., Fort Worth, Tex.
Filed June 2, 1914. Serial No. 78,743. PUBLISHED JULY 21, 1914.

99,966. ALIMENTARY PASTE PRODUCTS. FORT WORTH MACARONI CO., Fort Worth, Tex.
Filed June 2, 1914. Serial No. 78,744. PUBLISHED JULY 21, 1914.

99,967. CANNED FRUITS AND VEGETABLES. FRICK BROS., New Iberia, La.
Filed June 17, 1914. Serial No. 79,172. PUBLISHED JULY 21, 1914.

99,968. ARTISTS' OILS AND VARNISHES. E. H. & A. C. FRIEDRICHS CO., New York, N. Y.
Filed May 18, 1914. Serial No. 78,353. PUBLISHED JULY 14, 1914.

99,969. GASOLENE PUMPING ENGINES. FULLER AND JOHNSON MANUFACTURING COMPANY, Madison, Wis.
Filed March 2, 1911. Serial No. 54,818. PUBLISHED JULY 14, 1914.

99,970. FOOT-POWDER. LOUIS A. GEHRUM, Detroit, Mich.
Filed May 29, 1914. Serial No. 78,656. PUBLISHED JULY 28, 1914.

99,971. REMEDY FOR LIVER AND STOMACH TROUBLES. GEORGIA MEDICINE CO., Wrightsville, Ga.
Filed May 26, 1914. Serial No. 78,555. PUBLISHED JULY 28, 1914.

99,972. CANDIES. FREDERICK GLASS, Madison, Ind.
Filed May 2, 1914. Serial No. 77,955. PUBLISHED JULY 21, 1914.

99,973. MILK AND CREAM, AND CREAM ALONE. WILLIAM L. GLATFELTER, Spring Grove, Pa.
Filed May 7, 1914. Serial No. 78,076. PUBLISHED JULY 21, 1914.

99,974. COFFEE. GRAND UNION TEA COMPANY, Brooklyn, N. Y.
Filed June 9, 1914. Serial No. 78,921. PUBLISHED JULY 21, 1914.

99,975. ANTISEPTICS. WILLIAM S. GODWIN, Baltimore, Md.
Filed June 29, 1914. Serial No. 79,452. PUBLISHED JULY 28, 1914.

99,976. KEROSENE. W. R. GRACE & CO., New York, N. Y.
Filed May 14, 1914. Serial No. 78,275. PUBLISHED JULY 28, 1914.

99,977. TURPENTINE. W. R. GRACE & CO., New York, N. Y.
Filed June 23, 1914. Serial No. 79,293. PUBLISHED JULY 28, 1914.

99,978. SILICATE OF SODA OR WATER-GLASS. THE GRASSELLI CHEMICAL COMPANY, Cleveland, Ohio.
Filed February 12, 1914. Serial No. 75,869. PUBLISHED MARCH 31, 1914.

99,979. JEWELRY FOR PERSONAL ADORNMENT. THE H. W. K. COMPANY, Providence, R. I., and Attleboro, Mass.
Filed June 5, 1914. Serial No. 78,835. PUBLISHED JULY 28, 1914.

99,980. EYE-PROTECTORS. F. A. HARDY & COMPANY, Chicago, Ill.
Filed July 23, 1910. Serial No. 51,030. PUBLISHED JULY 21, 1914.

99,981. CANNED PINEAPPLE. HAWAIIAN PINEAPPLE CO. LTD., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,206. PUBLISHED JULY 21, 1914.

99,982. CANNED PINEAPPLE. HAWAIIAN PINEAPPLE CO. LTD., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,210. PUBLISHED JULY 21, 1914.

99,983. ELECTRIC-LIGHTING FIXTURES. THE HORN & BRANNEN MFG. CO., Philadelphia, Pa.
Filed February 20, 1914. Serial No. 76,053. PUBLISHED JULY 14, 1914.

99,984. PREPARATIONS FOR THE TREATMENT OF COLDS, HEADACHES, LA GRIPPE, NEURALGIA, AND RHEUMATISM. JOHN R. HUGHES, Spokane, Wash.
Filed April 27, 1914. Serial No. 77,781. PUBLISHED JULY 28, 1914.

99,985. CERTAIN NAMED ELECTRICAL SUPPLIES. IMPERIAL RUBBER CO., New York, N. Y.
Filed June 16, 1914. Serial No. 79,153. PUBLISHED JULY 14, 1914.

99,986. MIXED PAINTS AND VARNISHES. IMPERIAL RUBBER CO., New York, N. Y.
Filed June 25, 1914. Serial No. 79,358. PUBLISHED JULY 28, 1914.

99,987. FLUID-OPERATED ROTARY DRILLS AND FLUID-OPERATED RIVETING AND CHIPPING HAMMERS. INGERSOLL-RAND COMPANY, Jersey City, N. J., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,700. PUBLISHED JULY 21, 1914.

99,988. LUBRICANTS. THE INTEROCEAN OIL COMPANY, Pierre, S. D., and New York, N. Y.
Filed June 26, 1914. Serial No. 79,388. PUBLISHED JULY 28, 1914.

99,989. REMEDY FOR SKIN DISEASES. WILLIAM C. KEIM, Vicksburg, Miss.
Filed April 9, 1913. Serial No. 69,679. PUBLISHED JULY 28, 1914.

99,990. CERTAIN PRECIOUS AND SEMIPRECIOUS STONES AND JEWELRY FOR PERSONAL WEAR. HARRY E. KERSTINE, Philadelphia, Pa.
Filed April 24, 1914. Serial No. 77,727. PUBLISHED JULY 28, 1914.

99,991. PROTECTION-GLASSES. JULIUS KING OPTICAL COMPANY, New York, N. Y.
Filed June 19, 1914. Serial No. 79,219. PUBLISHED JULY 21, 1914.

99,992. EYEGLASSES AND SPECTACLES. THE F. W. KING OPTICAL COMPANY, Cleveland, Ohio.
Filed June 1, 1914. Serial No. 78,704. PUBLISHED JULY 21, 1914.

99,993. LINIMENT. CHARLES H. KRUG, Dayton, Ohio.
Filed April 1, 1914. Serial No. 77,129. PUBLISHED JULY 28, 1914.

99,994. WHEAT-FLOUR. LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind., and Boston, Mass.
Filed April 14, 1914. Serial No. 77,476. PUBLISHED JULY 21, 1914.

99,995. APPLICATION FOR PNEUMONIA, CONGESTION OR INFLAMMATION OF THE LUNGS, CROUPS, AND COLDS. RUBEN M. LEONARD, Salisbury, N. C.
Filed May 6, 1914. Serial No. 78,029. PUBLISHED JULY 28, 1914.

99,996. RELATIVELY SMALL CHOCOLATE-COVERED CAKES. LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo.
Filed June 15, 1914. Serial No. 79,106. PUBLISHED JULY 21, 1914.

99,997. CANDIES, (COMMONLY CALLED CARAMELS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo.
Filed June 15, 1914. Serial No. 79,107. PUBLISHED JULY 21, 1914.

99,998. CHOCOLATE CANDIES, (COMMONLY CALLED CHOCOLATE CREAMS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo.
Filed June 15, 1914. Serial No. 79,108. PUBLISHED JULY 21, 1914.

99,999. PAINTS, VARNISHES, AND LACQUERS, (DRY, PASTE, AND READY-MIXED.) MAATSCHAPPIJ VEREENIGDE VAN DER BURG'S JAPANLAK FABRIEKEN, (UNITED VANDEBURG'S JAPANLAC- AND VARNISH WORKS,) Rotterdam, Netherlands.
Filed June 20, 1914. Serial No. 79,242. PUBLISHED JULY 28, 1914.

100,000. SYRUP FOR SODA-FOUNTAIN BEVERAGES. MAGNUS & LAUER, San Francisco, Cal.
Filed March 27, 1914. Serial No. 76,997. PUBLISHED JULY 28, 1914.

100,001. CLOTH-CUTTING MACHINES. H. MAIMIN CO., INC., New York, N. Y.
Filed June 16, 1914. Serial No. 79,155. PUBLISHED JULY 21, 1914.

100,002. AXES. MANN EDGE TOOL CO., Lewistown, Pa.
Filed June 20, 1914. Serial No. 79,244. PUBLISHED JULY 21, 1914.

100,003. CERTAIN PHARMACEUTICAL PREPARATIONS AND OILS FOR MEDICAL PURPOSES. MCCLINTONS, LTD., Donaghmore, Ireland.
Filed March 5, 1914. Serial No. 76,370. PUBLISHED JULY 28, 1914.

100,004. TEA AND BLENDED COFFEE. W. F. MCLAUGHLIN & COMPANY, Chicago, Ill.
Filed May 25, 1914. Serial No. 78,544. PUBLISHED JULY 21, 1914.

100,005. WATCH-BRACELETS. THE MEALY MANUFACTURING COMPANY, Baltimore, Md.
Filed June 18, 1914. Serial No. 79,229. PUBLISHED JULY 28, 1914.

100,006. GINGER-BEER. HUBERT J. MIDDLETON, New York, N. Y.
Filed June 2, 1914. Serial No. 78,749. PUBLISHED JULY 28, 1914.

100,007. CANDY. MILLER-ELMER MFG. CO., LTD., New Orleans, La.
Filed June 6, 1914. Serial No. 78,875. PUBLISHED JULY 21, 1914.

100,008. WRAPPING-PAPER. MINNEAPOLIS PAPER COMPANY, Minneapolis, Minn.
Filed June 4, 1914. Serial No. 78,815. PUBLISHED JULY 28, 1914.

100,009. ELECTRICALLY-OPERATED ELEVATORS AND DUMB-WAITERS, ELECTRIC MOTORS, DYNAMOS, ELECTRIC SWITCHES. GUY K. MITCHELL, Baltimore, Md.
Filed March 25, 1914. Serial No. 76,938. PUBLISHED JULY 14, 1914.

100,010. LAUNDRY BLUE. MARK A. MITCHELSON, New York, N. Y.
Filed April 22, 1914. Serial No. 77,654. PUBLISHED JULY 28, 1914.

100,011. ANTISEPTIC PREPARATIONS. MONSON PHARMACAL COMPANY, Chicago, Ill.
Filed June 22, 1914. Serial No. 79,266. PUBLISHED JULY 28, 1914.

100,012. CERTAIN NAMED CUTLERY, TOOLS, AND MACHINES. CHAS. MORRILL, New York, N. Y.
Filed September 20, 1912. Serial No. 65,896. PUBLISHED JULY 14, 1914.

100,013. PERFUMES AND SACHET-POWDER. EUGÈNE MOULIÉ, Jacksonville, Fla.
Filed April 24, 1914. Serial No. 77,729. PUBLISHED JULY 28, 1914.

100,014. TOILET-PAPER. MT. HOLYOKE TISSUE MILLS, Holyoke, Mass.
Filed September 20, 1911. Serial No. 58,736. PUBLISHED SEPTEMBER 9, 1913.

100,015. SEWING-MACHINES AND PARTS THEREOF. H. MUNDLOS & CO., Magdeburg, Germany.
Filed September 3, 1913. Serial No. 72,664. PUBLISHED JULY 14, 1914.

100,016. ELECTRICAL BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed May 27, 1914. Serial No. 78,586. PUBLISHED JULY 14, 1914.

100,017. ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed June 1, 1914. Serial No. 78,708. PUBLISHED JULY 14, 1914.

100,018. ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed June 1, 1914. Serial No. 78,709. PUBLISHED JULY 14, 1914.

100,019. CERTAIN NAMED MACHINERY AND TOOLS. NEW IDEA SPREADER CO., Coldwater, Ohio.
Filed April 30, 1914. Serial No. 77,893. PUBLISHED JULY 21, 1914.

100,020. LIME-SULFUR SOLUTION, BORDEAUX-ARSENATE, ARSENATE OF LEAD, BORDEAUX PASTE, AND SOLUBLE SULFUR. NIAGARA SPRAYER COMPANY, Middleport, N. Y.
Filed June 11, 1914. Serial No. 79,009. PUBLISHED JULY 28, 1914.

100,021. CARDS OF A BLANK NATURE USED FOR BOOKKEEPING SYSTEMS. NICOLS, DEAN & GREGG, St. Paul, Minn.
Filed May 7, 1914. Serial No. 78,089. PUBLISHED JULY 28, 1914.

100,022. POLISHES FOR ALL WOODWORK, FURNITURE, FLOORS, PIANOS, AUTOMOBILES, &c. NU LIFE PRODUCTS COMPANY, Titusville, Pa.
Filed June 4, 1914. Serial No. 78,818. PUBLISHED JULY 21, 1914.

100,023. TOILET-PAPER. PAPER SALES COMPANY, Chicago, Ill.
Filed October 20, 1913. Serial No. 73,520. PUBLISHED JULY 28, 1914.

100,024. DRY AND READY-MIXED PAINTS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISH. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed June 22, 1914. Serial No. 79,270. PUBLISHED JULY 28, 1914.

100,025. BEER, ALE, AND PORTER. PITTSBURGH BREWING COMPANY, Pittsburgh, Pa.
Filed September 23, 1913. Serial No. 73,016. PUBLISHED JULY 28, 1914.

100,026. VACUUM CLEANERS AND SWEEPERS. THE RAMEY CO., Chillicothe, Ohio.
Filed May 13, 1914. Serial No. 78,257. PUBLISHED JULY 21, 1914.

100,027. TOILET PREPARATION TO PREVENT PERSPIRATION UNDER ARMS, ALSO FOR ODOROUS AND SWEATY FEET. PEARL E. REIFSCHNEIDER, Lawton, Okla.
Filed March 24, 1914. Serial No. 76,907. PUBLISHED JULY 28, 1914.

100,028. MEDICINAL OIL FOR THE TREATMENT OF CONSTIPATION WITH A PURELY MECHANICAL ACTION. RIKER & HEGEMAN CO., New York, N. Y.
Filed June 18, 1914. Serial No. 79,198. PUBLISHED JULY 28, 1914.

100,029. ENSILAGE-CUTTERS OR SILO-FILLERS AND BALING-PRESSES. ROBINSON & Co., Richmond, Ind.
Filed June 10, 1914. Serial No. 78,960. PUBLISHED JULY 21, 1914.

100,030. ENGINE-OIL. WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa.
Filed December 1, 1911. Serial No. 60,014. PUBLISHED JULY 21, 1914.

100,031. THE TREATMENT OF TUBERCULOSIS. EMIL ROLLER, New York, N. Y.
Filed June 22, 1914. Serial No. 79,278. PUBLISHED JULY 28, 1914.

100,032. HAY-FEVER, CATARRHAL CONDITIONS, AND EYE-WASH. EMIL ROLLER, New York, N. Y.
Filed June 22, 1914. Serial No. 79,279. PUBLISHED JULY 28, 1914.

100,033. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. VICTOR ROYKÓ, Tiszaujlak, Austria-Hungary.
Filed May 9, 1913. Serial No. 70,326. PUBLISHED JULY 28, 1914.

100,034. MEDICINAL PREPARATION USED AS A CATHARTIC, LAXATIVE, AND TO REGULATE THE ACTION OF THE BOWELS. THE SALINOS COMPANY, Minneapolis, Minn.
Filed May 15, 1914. Serial No. 78,316. PUBLISHED JULY 28, 1914.

100,035. SHEET-METAL TRANSFORMER AND DYNAMO PLATES. JOSEPH SANKEY & SONS LIMITED, Bilston, England.
Filed March 26, 1914. Serial No. 76,974. PUBLISHED JULY 21, 1914.

100,036. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. ADOLPHE SCHWOB, New York, N. Y.
Filed May 29, 1914. Serial No. 78,664. PUBLISHED JULY 28, 1914.

100,037. MEDICINAL TONIC. SALVATORE F. SELLARO, New York, N. Y.
Filed February 9, 1914. Serial No. 75,792. PUBLISHED JULY 28, 1914.

100,038. TEA, COFFEE, AND COCOA. E. T. SMITH COMPANY, Worcester, Mass.
Filed June 9, 1914. Serial No. 78,934. PUBLISHED JULY 21, 1914.

100,039. SOLDERING MATERIAL COMPOSED OF PULVERIZED SOLDER, A FLUX, AND A CARRIER. THE SOLDERALL COMPANY, New York, N. Y.
Filed April 7, 1911. Serial No. 55,588. PUBLISHED JULY 14, 1914.

100,040. BUTTER. FRANKLIN H. STANLEY, Cleveland, Ohio.
Filed March 16, 1914. Serial No. 76,709. PUBLISHED JULY 21, 1914.

100,041. WHEAT-FLOUR. STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C.
Filed February 10, 1914. Serial No. 75,829. PUBLISHED JULY 21, 1914.

100,042. WHEAT-FLOUR. STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C.
Filed February 10, 1914. Serial No. 75,830. PUBLISHED JULY 21, 1914.

100,043. PREPARATION FOR THE PREVENTION AND TREATMENT OF HAY-FEVER. RICHARD MONTGOMERY STOLWORTHY, Cincinnati, Ohio.
Filed June 22, 1914. Serial No. 79,281. PUBLISHED JULY 28, 1914.

100,044. VARNISH. M. G. STONEMAN & SON, Albany, N. Y.
Filed May 25, 1914. Serial No. 78,540. PUBLISHED JULY 14, 1914.

100,045. CITRUS FRUIT. R. R. SUTHERLAND, Riverside, Cal.
Filed June 18, 1914. Serial No. 79,196. PUBLISHED JULY 21, 1914.

100,046. CITRUS FRUIT. R. R. SUTHERLAND, Riverside, Cal.
Filed June 18, 1914. Serial No. 79,197. PUBLISHED JULY 21, 1914.

100,047. CERTAIN NAMED GOLD AND SILVER JEWELRY FOR PERSONAL WEAR. SWIFT AND FISHER, North Attleboro, Mass.
Filed April 29, 1914. Serial No. 77,870. PUBLISHED JULY 28, 1914.

100,048. OINTMENT AND SALVES. THE SWISS DRUG COMPANY, Findlay, Ohio.
Filed June 9, 1914. Serial No. 78,935. PUBLISHED JULY 28, 1914.

100,049. NAPHTHA, BENZIN, AND GASOLENE. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed June 22, 1914. Serial No. 79,285. PUBLISHED JULY 28, 1914.

100,050. PETROLEUM OR KEROSENE OIL. TILLMANN & BENDEL, San Francisco, Cal.
Filed September 2, 1913. Serial No. 72,646. PUBLISHED JULY 14, 1914.

100,051. MACHINE-NEEDLES. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed June 26, 1914. Serial No. 79,394. PUBLISHED JULY 21, 1914.

100,052. COLD-CREAM, TOOTH-PASTE, AND TOOTH-WASH. UNITED DRUG COMPANY, Boston, Mass.
Filed June 1, 1914. Serial No. 78,719. PUBLISHED JULY 28, 1914.

100,053. SELF-INKING STAMP-PADS. B. G. VOLGER MANUFACTURING COMPANY, Passaic, N. J.
Filed June 10, 1914. Serial No. 79,021. PUBLISHED JULY 28, 1914.

100,054. SELF-INKING STAMP-PADS. B. G. VOLGER MANUFACTURING COMPANY, Passaic, N. J.
Filed June 10, 1914. Serial No. 79,022. PUBLISHED JULY 28, 1914.

100,055. EFFERVESCENT REMEDY FOR HEADACHE, NEURALGIA, AND NERVOUSNESS. WALKER DRUG COMPANY, Schenectady, N. Y.
Filed June 26, 1914. Serial No. 79,395. PUBLISHED JULY 28, 1914.

100,056. BAKING-POWDER. THE WOOLSON SPICE COMPANY, Toledo, Ohio.
Filed June 15, 1914. Serial No. 79,130. PUBLISHED JULY 28, 1914.

100,057. INTERNAL REMEDY FOR MARES TO PROCURE IMMUNITY FOR THE FOALS FROM A CERTAIN DISEASE. H. O. WRIGHT, Winnipeg, Manitoba, Canada.
Filed June 18, 1914. Serial No. 79,207. PUBLISHED JULY 28, 1914.

100,058. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,974. PUBLISHED JULY 21, 1914.

100,059. CHEWING-GUM. WM. WRIGLEY JR., COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,975. PUBLISHED JULY 21, 1914.

100,060. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,976. PUBLISHED JULY 21, 1914.

100,061. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,977. PUBLISHED JULY 21, 1914.

100,062. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,978. PUBLISHED JULY 21, 1914.

100,063. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,979. PUBLISHED JULY 21, 1914.

100,064. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,981. PUBLISHED JULY 21, 1914.

100,065. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,982. PUBLISHED JULY 21, 1914.

100,066. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,983. PUBLISHED JULY 21, 1914.

100,067. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,985. PUBLISHED JULY 21, 1914.

100,068. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,986. PUBLISHED JULY 21, 1914.

100,069. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,987. PUBLISHED JULY 21, 1914.

100,070. CHEWING-GUM. WM. WRIGLEY JR. COMPANY, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,989. PUBLISHED JULY 21, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HILL AND HILL.

Decided July 14, 1914.

APPLICATION — RIGHT TO PROSECUTE — EQUITABLE ASSIGNEE.

Where the entire right, title, and interest in an application for patent is assigned, *Held* that the assignee should be allowed to prosecute the application to the exclusion of the inventor, even though the assignment does not contain a request that the patent be issued to the assignee.

ON PETITION.

MACHINE FOR PROJECTING CONTINUOUS MOVING PICTURES.

Messrs. Hill & Simms for the applicants.

Mr. Horace Pettit for the Sempergraphic Corporation, General.

NEWTON, *First Assistant Commissioner:*

This is a petition by the Sempergraphic Corporation, General, to permit it to prosecute this application as assignee of the entire interest, under the provisions of Rules 5 and 20.

The chain of title from the applicants, Hill and Hill, to the Sempergraphic Corporation, General, is as follows:

On January 4, 1913, Hill and Hill jointly assigned to Edmond H. Lysle two-thirds of their entire right, title, and interest to certain mechanisms and certain applications and all improvements on the inventions, without specifying the applications. Indeed, the particular applications involved were not filed until ten days after the date of this instrument.

On January 17, 1913, Hill and Hill and Lysle assigned to the Sempergraphic Patents Corporation the full and exclusive right "in all countries" to make, use, and sell the inventions, (still without specifying what applications disclosed said inventions)—

provided that the following terms and agreements shall be included and observed and in case of any failure on the part of the Sempergraphic Patents Corporation to properly execute the said terms until a licensor has sent written notification thereof to the Sempergraphic Corporation; it being provided and agreed, however, that if within thirty days after such notification shall have been given the said failure shall be remedied, then the said full and exclusive right shall continue as before.

In the same instrument the Sempergraphic Patents Corporation was given the right to license other concerns to make machines and for producing and exhibiting films, etc., and each of the licensees agreed upon demand of the Sempergraphic Patents Corporation to execute any other papers that may be necessary to further vest in the Sempergraphic Patents Corporation the inventions, including the execution of suitable applications for Letters Patent. There were other terms in this instrument that have no bearing on the question to be decided.

On December 2, 1913, Hill and Hill and Lysle filed an instrument specifying that the applications referred to in the agreement of January 17, 1913, were those serially numbered * * * * .

On December 8, 1913, Hill and Hill further specifically assigned the above-mentioned applications, with the inventions disclosed therein, to Lysle—two-thirds of their entire right, title, and interest to said inventions and to all improvements thereon—and requested that the patents be issued to Lysle—

as assignee of the entire two-thirds interest in and to the same.

On December 23, 1913, the Sempergraphic Patents Corporation assigned to the Sempergraphic Corporation, General—

the full and exclusive right, license and privilege in any and all countries to make, use, sell and deal in all inventions now owned or which may hereafter be acquired—

by the Sempergraphic Patents Corporation.

On December 23, 1913, Hill and Hill and Lysle executed an instrument and attached it to the instrument last above mentioned in which it was set forth that—

they have ratified and confirmed and do hereby ratify and confirm the foregoing agreement as far as they or any of them have any rights or interests in the matters whatsoever, and to that extent hereby join with the Sempergraphic Patents Corporation in the foregoing grant and in and to the said agreement with the Sempergraphic Corporation, General.

There are other provisions in these various instruments; but the provisions above enumerated seem to be all that have any material bearing on the question to be decided in this case, which is: Do these various instruments, taken together, constitute such an assignment of this application from Hill and Hill, through mesne assignments, to the Sempergraphic Corporation, General, as should give this corporation the right to control the prosecution of this application before the Office?

The instruments, fairly construed, amount to an assignment of the entire interest in the invention

to the Sempergraphic Corporation, General; but the assignment is not coupled with a request to issue the patent to the assignee.

It is now the practice of the Office to refuse to allow the assignee of the entire interest in an invention to control the prosecution of the application unless the assignment is accompanied by a request from the inventor to issue the patent to the assignee, (*ex parte Stanford*, 138 O. G., 527,) on the ground that without such request the assignee has an equitable but not a legal title to the invention.

Such decisions seem to draw an altogether artificial distinction in allowing control by an assignee when the assignment is coupled with a request to issue the patent and refusing control when not accompanied with such request. Indeed, Judge Noyes has decided in *Hildreth* v. *Auerbach*, (200 Fed. Rep., 972,) rendered since the Commissioner's decision in *ex parte Stanford*, *supra*, that to convey a legal title to an unpatented invention it was not necessary to request that the patent issue to the assignee. This decision swept away the foundation on which *ex parte Stanford* was based, and that decision therefore should not be longer followed. Furthermore, the fundamental reasons why the assignee of an entire interest should have the right to prosecute an application to the exclusion of the inventor is based on the equitable ground that where an inventor has parted with his entire interest in the invention to an assignee presumably the assignee, being then the one to be benefited by the invention, should have the control of it, and this fundamental reason for giving the assignee the control of the prosecution of the application exists whether the assignee has a legal or only an equitable title to the invention.

It is held, therefore, that the Sempergraphic Corporation, General, has the right to prosecute this application before the Office, to the exclusion of the inventors, but with the understanding that the inventors, Hill and Hill, may at any time inspect this application, with a view of seeing that it is properly prosecuted, and to the extent indicated this petition is granted.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Wilfley patent, No. 590,675, for an ore-concentrating table, *Held* valid and infringed. *Detroit Copper Mining Co. of Arizona* v. *Mine & Smelter Supply Co.*, 215 Fed. Rep., 100.

(U. S. C. C. A.) The Hall patent, No. 692,277, for an incubator, *Held* not infringed. *Hall-Mammoth Incubator Co.* v. *Tcabout*, 215 Fed. Rep., 109.

(U. S. D. C.) The Gimson patent, No. 709,008, for a die for cutting out leather, *Held* void for lack of patentable invention in view of the prior art. *Independent Die Co.* v. *Savels*, 215 Fed. Rep., 122.

(U. S. C. C. A.) The Chamberlain patent, No. 822,185, for a drier, *Held* void for prior use of the essential features by others. *Grupe Drier & Boiler Co.* v. *Geiger, Fiske & Koop*, 215 Fed. Rep., 110.

(U. S. D. C.) The Hassam patents, Nos. 819,652, 851,625, and 861,650, for a pavement and process of making same, *Held* valid and infringed. *Hassam Paving Co.* v. *Consolidated Contract Co.*, 215 Fed. Rep., 114.

(U. S. D. C.) The Crawford patent, No. 1,065,297, for a waist-grip, *Held* not anticipated, but not infringed. *Neva-Slip Shirt Waist Grip Co.* v. *Marcon Mfg. Co.*, 215 Fed. Rep., 117.

Disclaimer.

1,009,355.—*Werd W. Turnbull*, Columbus, Ohio. BAKING-MACHINES. Patent dated November 21, 1911. Disclaimer filed September 19, 1914, by *The Turnbull Manufacturing Company*, assignee.

Enters this disclaimer—

"To that part of page 1, lines 18, 19, and 20 of the body of said specification, which is in the following words, to wit:

"to provide improved means for automatically raising and lowering the movable baking plates.

"and to claims 1 to 8, inclusive, which are in the following words, to wit:

"1. A baking machine comprising a rotatable element, hinged plates carried thereby, means for maintaining said plates in elevated position during a determinate period of the rotation, and independent means for initially elevating said plates.

"2. A baking machine comprising a rotatable element, hinged plates carried thereby, means for maintaining said plates in elevated position during a determinate period of the rotation, and independent means for initially elevating said plates in successive steps.

"3. A baking machine comprising a rotatable element, hinged plates carried thereby, means for maintaining said plates in elevated position during a determinate period of the rotation, and independent means for initially elevating said plates in successive steps, said means comprising relatively independent units.

"4. A baking machine comprising a rotatable element, hinged plates carried thereby, means for maintaining said plates in elevated relation during a determinate period of the rotation and a lever for automatically moving said plates into subjection to said means.

"5. A baking machine comprising a rotatable element, hinged plates carried thereby, means for maintaining said plates in elevated position during a determinate period of the rotation, a lever for automatically moving said plates into subjection to said means, and a means for slightly raising said plates just preceding movement by said levers.

"6. A baking machine comprising sectional traveling baking units, means for maintaining the sections of said traveling units separated for a determinate interval in the period of travel, and independent mechanism for initially separating said sections.

"7. A baking machine comprising sectional traveling baking units, means for maintaining the sections of said units separated for a determinate interval in the period of travel and independent mechanism for separating said sections in successive steps prior to the operation of said means.

"8. In a machine of the character described, the combination with a supporting frame, and a baking ring rotatably mounted on said frame and having a rack on its lower side, of a plurality of baking plates hinged in connection with said baking ring, a fixed channel member within the circle of said baking ring and having an upwardly inclined termination, a shaft journaled beneath said baking ring, a disk on said shaft, a pivoted lever eccentrically fulcrumed on said disk adapted to successively engage and elevate said hinged baking plates, a pinion wheel carried by said shaft and engaging said rack, and means for operating said shaft."

Foreign Patents, Trade-Marks, Etc.—Taxes, Fees, Etc.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 22, 1914.

This Office has received the following notices relating to the payment of taxes, fees, etc., on patents.

trade-marks, etc., in certain foreign countries as follows:

CANADA.

Orders and Regulations Respecting Patents of Invention, Made Under the "The War Measures Act, 1914."

1. "Commissioner" means the Commissioner of Patents and includes the Deputy Commissioner of Patents.

2. The Commissioner may, on the application of any person, and subject to such terms and conditions, if any, as he may think fit, order the avoidance or suspension, in whole or in part, of any patent or license, the person entitled to the benefit of which is the subject of any State at war with His Majesty, and the Commissioner, before granting any such application, may require to be satisfied on the following heads:—

(*a*) That the person entitled to the benefit of such patent or license is the subject of a State at war with His Majesty;

(*b*) That the person applying intends to manufacture or cause to be manufactured, the patented article, or to carry on, or cause to be carried on, the patented process within the Dominion of Canada;

(*c*) That it is in the general interests of the country or of a section of the community, or of a trade, that such article should be manufactured or such process carried on as aforesaid.

The fee payable on such application shall be ten dollars.

The Commissioner may at any time, in his absolute discretion, revoke any avoidance or suspension of any patent or license ordered by him, but if any person during the period of such avoidance or suspension begins to manufacture, use or sell in Canada the invention covered by said patent, such person may continue to manufacture, use or sell such invention in as full and ample a manner as if such revocation had not been made.

Provided always that the Commissioner may at any time, if in his absolute discretion he deem it expedient in the public interest, order the avoidance or suspension in whole or in part of any such patent or license upon such terms and conditions, if any, as he may think fit.

3. The Commissioner may, at any time during the continuance of these Orders and Regulations, avoid or suspend any proceedings on any application made under the Patent Act by a subject of any State at war with His Majesty.

4. The Commissioner may also, at any time, during the continuance of these Orders and Regulations, extend the time prescribed by the Patent Act or any rules made thereunder, for doing any act or filing any document, upon such terms and subject to such conditions as he may think fit in the following cases, namely:—

(*a*) Where it is shown to his satisfaction that the applicant, patentee, or proprietor, as the case may be, was prevented from doing the said act, or filing the said document, by reason of active service or enforced absence from this country, or any other circumstances arising from the present state of war, which, in the opinion of the Commissioner, would justify such extension;

(*b*) Where the doing of any act would, by reason of the circumstances arising from the present state of war, be prejudicial or injurious to the rights or interests of any applicant, patentee or proprietor as aforesaid.

Such extension of any prescribed time, if granted after its expiration, shall have the same effect as if granted prior thereto, provided such expiration occurred on or after the fourth day of August, 1914.

5. The Commissioner may refuse to register the assignment of any patent made by a subject of any State at war with His Majesty, and filed in the Patent Office on or after the fourth day of August, 1914, unless satisfied that such assignment was made in good faith and not for the purpose of evading any of the provisions of the foregoing Orders and Regulations.

6. The term "person" used in these Orders and Regulations shall, in addition to the meaning given thereto by par. (20) of section 34 of "The Interpretation Act," include any Government department.

7. These Orders and Regulations shall come into operation as and from the fourth day of August, 1914.

BELGIUM.

The following notice is a translation from *Moniteur Belge* of September 2 and 3, 1914:

Ministry of Industry and Work and Ministry of Finance.—Payment of Taxes on Patents.

Albert, King of the Belgians, to all present and to come, greeting.

In view of art. 1 of the royal decree of May 7, 1900, providing that "the first annual payment of the tax fixed by art. 3 of the law of May 24, 1854, shall be made at the office of registration charged with the receipt of various revenues established at the principal town of a provincial government or 'commissariate of arrondissement.' The following annual payments must be made at the office where the first payment has been received," we have decreed and hereby do decree:

ART. 1. Departing from the foregoing article, the annual payments, until a date not yet fixed, may be made at any office entitled to receive the payment of taxes (or fees) on patents.

ART. 2. Applications shall be received subject to later examination.

ART. 3. Our Minister of Industry and Work and our Minister of Finance, each as far as he is concerned, is charged with the execution of this decree.

Done at Antwerp, September 2, 1914.

ALBERT.

For the King:
ARM. HUBERT,
Minister of Ind. & Work.
A. VAN VYVERE,
Minister of Finance.

THOMAS EWING,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

William Kurzenknabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McNeely & Price, 170–172 North Fourth street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 21, 1896, No. 28,154, to William Kurzenknabe, 124 Franklin street, Chicago, Ill., and a notice of such declaration sent by registered mail to said William Kurzenknabe at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Kurzenknabe, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

Joseph D. Little, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Agricultural Chemical Co., 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered March 15, 1892, No. 20,845, to Joseph D. Little, Springfield, Ohio, and a notice of such declaration sent by registered mail to said Joseph D. Little at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph D. Little, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three successive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 18, 1914.

Kosmic Oil Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of E. F. Houghton & Company, 240–250 West Somerset street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered May 22, 1888, No. 15,500, to the Kosmic Oil Co., 20 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Kosmic Oil Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kosmic Oil Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

SEPTEMBER, 1914.

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DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

SEPTEMBER, 1914.

[The decisions of the United States Circuit Court of Appeals are indicated by the letter d.]

2. IN RE MCNEIL CONSTRUED.

The decision in *in re McNeil* (100 O. G., 2178; 20 App. D. C., 294) is based on the ground that the coaction between the improved element of the combination and the other elements thereof was not different from that between the corresponding elements of the old combination. If the new element coacts with the other elements of the combination in a different manner from the corresponding elements of the old combination and a new result is obtained thereby, the decision does not apply.

[*Ex parte* Mumford, 878.

PRIORITY OF ADOPTION AND USE.

TRADE-MARKS—REPRESENTATION OF A COW FOR CHEESE—VALID.

"I am inclined to hold that if Lawrence & Son can clearly establish priority of adoption of the representation of a cow as a trade-mark for cheese and show continuous use from 1876 to the present time such mark should be held valid. Such long-continued use by a user of a trade-mark should resolve all doubts as to its validity in favor of the user."

[W. A. Lawrence & Son *v.* The Licking Creamery Company, 389.

PROSECUTION OF APPLICATION BY ASSIGNEE.

See Assignees' Right to Prosecute Application.

REDUCTION TO PRACTICE.

See Right to Patent.

REFERENCES.

See Division of Applications.

REGISTRATION OF TRADE-MARKS.

See Geographical Terms.

TRADE-MARKS—"YALE" FOR BOLT-OPERATING MACHINES.

The word "Yale" *Held* registrable as a trade-mark under the ten-year proviso of the Trade-Mark Act.

[*Ex parte* The Yale & Towne Manufacturing Co., 877.

RIGHT TO PATENT.

PERSON ENTITLED TO PATENT—DISK STRAIN-INSULATOR.

The disk strain-insulator having rain-shedding annular corrugations covered by the claims put in interference in the Patent Office between Hewlett and Steinberger *Held* to have been independently invented by Hewlett, who, as the inventor first reducing the invention to practice by filing his application, is entitled to the patent therefor.

[4 General Electric Co. *et al. v.* Steinberger, 1161.

TEN-YEARS CLAUSE.

See Registration of Trade-Marks.

TERMINOLOGY.

"AGGREGATION" DEFINED.

In one sense (which, in the interest of accurate terminology, might well be taken as the exclusive sense) "aggregation" in the law of patents means that the claims in and of themselves, independently of the prior art, show that the elements are incapable of coacting to produce a unitary result.

[4 Krell Auto Grand Piano Co. of America *v.* Story & Clark Co. *et al.* 313.

TRADE-MARKS.

See Geographical Terms; Priority of Adoption and Use; Registration of Trade-Marks.

VALID TRADE-MARKS.

See Priority of Adoption and Use.

VALIDITY OF PATENT.

See Patentability.

DETERMINATION ON DEMURRER.

A patent cannot be held invalid on demurrer to a bill for its infringement unless inevitably void either on its face or by reason of matters of such universal or common knowledge that the court may take judicial notice of them.

[4 Krell Auto Grand Piano Co. of America *v.* Story & Clark Co. *et al.* 313.

VOID PATENTS.

See Particular Patents; Validity of Patents.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

A-B Stove Company. (See Berry, Frank K., assignor.)
A/S Hovlands Radiotelegraf. (See Hovland, Abraham N., assignor.)
Abbe, George C., Lansdowne, assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Reel for mine-locomotives. No. 1,110,995; Sept. 15; Gaz. vol. 206; p. 836.
Abbott, William G., Jr., Wilton, N. H. Recovery of ingredients from wool-scouring and analogous liquors. No. 1,110,277; Sept. 8; Gaz. vol. 206; p. 546.
Abel, August, assignor to Maschinenfabrik Moenus A.-G., Frankfort-on-the-Main, Germany. Machine for measuring the surface of leather or the like. No. 1,110,278; Sept. 8; Gaz. vol. 206; p. 546.
Abell, Rollin. (See Hill and Abell.)
Ackerman, Frederick, and J. H. Sullivan, Vancouver, British Columbia, Canada. Music-leaf turner. No. 1,110,521; Sept. 15; Gaz. vol. 206; p. 671.
Ackerman, Frederick, and J. H. Sullivan, Vancouver, British Columbia, Canada. Music-leaf turner. No. 1,112,400; Sept. 29; Gaz. vol. 206; p. 1404.
Ackerman, Maurice, assignor of two-fifths to S. Krucoff, Washington, D. C. Nut-lock. No. 1,110,996; Sept. 15; Gaz. vol. 206; p. 837.
Ackerman, Ralph B., El Moro, Colo. Pump. No. 1,110,522; Sept. 15; Gaz. vol. 206; p. 672.
Ackley, Robert T., Cortland, Ohio. Wave-detector. No. 1,112,411; Sept. 29; Gaz. vol. 206; p. 1408.
Acme Wire Co., The. (See Underhill and Kelsey, assignors.)
Adam, William J., assignor to The Plimpton Press, Norwood, Mass. Ink-supply for printing-presses. No. 1,112,412; Sept. 29; Gaz. vol. 206; p. 1408.
Adams, Alfred N., Stockton, Cal. Transmission-gearing. No. 1,111,551; Sept. 22; Gaz. vol. 206; p. 1072.
Adams, Arthur J., assignor to Fulton Manufacturing Company, Chicago, Ill. Perambulator. No. 1,111,515; Sept. 22; Gaz. vol. 206; 1059.
Adams, Arthur J., assignor to Fulton Manufacturing Company, Chicago, Ill. Perambulator, go-cart, &c. No. 1,111,516; Sept. 22; Gaz. vol. 206; p. 1060.
Adams, Arthur J., assignor to Fulton Manufacturing Company, Chicago, Ill. Perambulator or go-cart. No. 1,111,517; Sept. 22; Gaz. vol. 206; p. 1060.
Adams, Arthur J., Chicago, Ill., assignor, by mesne assignments, to W. S. Ferris, Elkhart, Ind., and A. B. Leith, Chicago, Ill., trustees. Go-cart or perambulator. No. 1,111,514; Sept. 22; Gaz. vol. 206; p. 1059.
Adams, Claude. (See Fenno, George B., assignor.)
Adams, Francis S., and W. H. Rickard, Pueblo, Colo. Sliding door. No. 1,111,634; Sept. 22; Gaz. vol. 206; p. 1101.
Adams, Samuel S., assignor to The Smith-Worthington Company, Hartford, Conn. Riding-saddletree. No. 1,111,817; Sept. 29; Gaz. vol. 206; p. 1203.
Adams, Walter S., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,108,874; Sept. 1; Gaz. vol. 206; p. 3.
Addressograph Company. (See Duncan, Joseph S., assignor.)
Adjustable Liquid Gauge Company. (See Hamilton, Charles F., assignor.)
Adler, Herman, New York, N. Y. Lock. No. 1,112,246; Sept. 29; Gaz. vol. 206; p. 1350.
Aero-Gas Machine Company. (See Laux, Mathias, assignor.)
Agan, John P., assignor of one-third to W. A. Shumate and one-third to F. J. Lerch, Louisville, Ky. Screw-propeller. No. 1,110,979; Sept. 15; Gaz. vol. 206; p. 832.
Agasote Millboard Co., The. (See Sutherland, Daniel M., Jr., assignor.)
Aicher, Gustav A., and S. Lazar, San Francisco, Cal. Paper-towel container. No. 1,110,523; Sept. 15; Gaz. vol. 206; p. 672.
Aiken, Charles W. (See Butterworth, Samuel, assignor.)
Aitken, William, Liverpool, England. Telephone switching system. No. 1,110,027; Sept. 8; Gaz. vol. 206; p. 455.
Ajax Manufacturing Company, The. (See Blakeslee, John R., assignor.)
Aktiebolaget Ljungström Angturbin. (See Ljungström, Fredrik, assignor.)
Alaksin, Michael, Beaver Falls, Pa. Non-skid link. No. 1,110,524; Sept. 15; Gaz. vol. 206; p. 673.
Alarm Lock Company. (See Percival, Leonard, assignor.)
Albali Manufacturing Company. (See Millard, William, assignor.)
Alber, Frank H., Driscoll, N. D. Draft-equalizer. No. 1,110,279; Sept. 8; Gaz. vol. 206; p. 546.
Alemany, Joaquin, assignor to Havana Commercial Company, Habana, Cuba. Delivery mechanism for labeling-machines. No. 1,108,786; Sept. 1; Gaz. vol. 206; p. 3.
Alexander, John, Hartford, Conn. Radiator. No. 1,109,384; Sept. 1; Gaz. vol. 206; p. 189.
Alexander, John H. C., Oakland, Cal. Propeller. No. 1,108,875; Sept. 1; Gaz. vol. 206; p. 3.
Alexander, John R., Altoona, Pa. Flexible metallic coupling. No. 1,111,283; Sept. 22; Gaz. vol. 206; p. 981.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. High-frequency alternator. No. 1,110,028; Sept. 8; Gaz. vol. 206; p. 455.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. High-frequency alternator. No. 1,110,029; Sept. 8; Gaz. vol. 206; p. 456.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Bearing. No. 1,110,030; Sept. 8; Gaz. vol. 206; p. 456.
Alfano, Giuseppe, assignor of one-half to S. Lucchino, trustee, Pittston, Pa. Animal feed box or trough. No. 1,112,048; Sept. 29; Gaz. vol. 206; p. 1280.
Allan, Charles D., Chicago, Ill. Slide-rule. No. 1,110,855; Sept. 15; Gaz. vol. 206; p. 789.
Allard, Charles E., Haverhill, Mass. Heel-making machine. No. 1,110,175; Sept. 8; Gaz. vol. 206; p. 510.
Allen, Claude J., Early, Iowa. Roof-window. No. 1,112,401; Sept. 29; Gaz. vol. 206; p. 1404.
Allen, Edward A., Rumford Falls, Me. Method and means for electrolyzing saline solutions. No. 1,109,311; Sept. 1; Gaz. vol. 206; p. 161.
Allen, Everett P., deceased; M. A. Allen, executrix, assignor to Dole Valve Company, Chicago, Ill. Air-valve. No. 1,110,095; Sept. 8; Gaz. vol. 206; p. 480.
Allen, Everett P., deceased; M. A. Allen, executrix, assignor to Dole Valve Company, Chicago, Ill. Air-valve for heating systems. No. 1,110,096; Sept. 8; Gaz. vol. 206; p. 480.
Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company. Stamp-applying and envelop-sealing machine. No. 1,110,097; Sept. 8; Gaz. vol. 206; p. 481.
Allen, Fred R., assignor to Allen Wrench & Tool Company, Providence, R. I. Wrench. No. 1,110,980; Sept. 15; Gaz. vol. 206; p. 832.
Allen, George L., Wilmington, N. C. Car-ladder. No. 1,109,100; Sept. 1; Gaz. vol. 206; p. 86.
Allen, John H., Verona, N. J. Insulated rail-joint. No. 1,110,098; Sept. 8; Gaz. vol. 206; p. 481.
Allen Manufacturing Company, The. (See McIntyre, William J., assignor.)
Allen, Mary A., executrix. (See Allen, Everett P.)
Allen, Oliver C., Center township, Hancock county, Ind. Suspension-fencing. No. 1,109,312; Sept. 1; Gaz. vol. 206; p. 161.
Allen, Philip, Providence, R. I. Union. No. 1,110,280; Sept. 8; Gaz. vol. 206; p. 547.
Allen Wrench & Tool Company. (See Allen, Fred R., assignor.)
Allers, Charles J., East Orange, N. J. Container. No. 1,111,552; Sept. 22; Gaz. vol. 206; p. 1072.
Allis-Chalmers Manufacturing Company. (See Capen, Thomas W., assignor.)
Allis-Chalmers Manufacturing Company (See Cheney, Herbert W., assignor.)
Allis-Chalmers Manufacturing Company. (See Hirt, Jules H., assignor.)
Allis-Chalmers Manufacturing Company. (See Holthoff, Henry C., assignor.)
Allis-Chalmers Manufacturing Company. (See Patitz, Johann F. M., assignor.)

Allis-Chalmers Manufacturing Company. (See Rotter, Max, assignor.)
Allis-Chalmers Manufacturing Company. (See Sprado, Carl G., assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Halfdan A., assignor.)
Allison, Andrew J., Hartshorne, Okla. Device for preventing ash and drift from going down waterways. No. 1,109,385; Sept. 1; Gaz. vol. 206; p. 189.
Allison, Daniel K., Cincinnati, Ohio, and B. D. Pinkney, Newport, Ky., assignors to The J. H. Day Company, Cincinnati, Ohio. Cracker-cutting machine. No. 1,112,184; Sept. 29; Gaz. vol. 206; p. 1327.
Allison, Harry S., assignor to W. D. Allison, Indianapolis, Ind. Adjustable chair. No. 1,111,685; Sept. 22; Gaz. vol. 206; p. 1120.
Allison, W. D. (See Allison, Harry S., assignor.)
Almquist, Leopold, Ridgewood, N. J., assignor, by mesne assignments, to American Car and Foundry Company, New York, N. Y. Flush car-door. No. 1,109,607; Sept. 1; Gaz. vol. 206; p. 262.
Althouse, Albert C., Dublin, Pa. Broom-bridle. No. 1,111,553; Sept. 22; Gaz. vol. 206; p. 1072.
Altic, Benjamin L., Roanoke, Va. Glass-cutter. No. 1,109,274; Sept. 1; Gaz. vol. 206; p. 148.
Ambash, Clement, and N. Morgenstern, Brooklyn, N. Y. Toy figure. No. 1,110,100; Sept. 8; Gaz. vol. 206; p. 482.
Amborn, George, Chapinville, Conn. Lathe-tool. No. 1,112,185; Sept. 29; Gaz. vol. 206; p. 1327.
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Tool-holder. No. 1,110,281; Sept. 8; Gaz. vol. 206; p. 547.
American Arch Company. (See Moore, Charles B., assignor.)
American Brake Shoe & Foundry Company. (See Cook, George, assignor.)
American Brake Shoe & Foundry Company. (See Evans, George S., assignor.)
American Brake Shoe & Foundry Company. (See Gallagher, Joseph D., assignor.)
American Can Company. (See Taylor, William E., assignor.)
American Car and Foundry Company. (See Almquist, Leopold, assignor.)
American Car and Foundry Company. (See Beard, Paul M., assignor.)
American Car and Foundry Company. (See Cherbonnier, George C., assignor.)
American Car and Foundry Company. (See Cooper, James J., assignor.)
American Car and Foundry Company. (See Hamilton, Karl M., assignor.)
American Car and Foundry Company. (See Morgan, Samuel S., assignor.)
American Car and Foundry Company. (See Osborn, Joseph A., assignor.)
American Car and Foundry Company. (See Rohlfing, John M., assignor.)
American Car and Foundry Company. (See Steinmeyer, John W., assignor.)
American Car and Foundry Company. (See Summa, Victor M., assignor.)
American Car and Foundry Company. (See Welsbrod, Jacob H., assignor.)
American Car Roof Company. (See Christy, Henry A., assignor.)
American Chemical Paint Company. (See Feldt, George D., assignor.)
American Crayon Company, The. (See Rittman, Christian A., assignor.)
American Electric Company, The. (See Burns, Peter C., assignor.)
American Electric Telephone Company. (See Burns, Peter C., assignor.)
American Fork and Hoe Company, The. (See Cowdery, Warren H., assignor.)
American Hardware Corporation, The. (See Hurd, Norman B., assignor.)
American Hardware Corporation, The. (See Johnson, Charles E., assignor.)
American Hardware Corporation, The. (See Stone, Elmer B., assignor.)
American Hominy Company. (See Atkinson, Frederick C., assignor.)
American Lacing Hook Co. (See Jennings, Richard P., assignor.)
American Multigraph Company, The. (See Trundle, George T., Jr., assignor.)
American Player Action Company. (See Turney, Eugene T., assignor.)
American Pneumatic Service Company. (See Emerson, Merton L., assignor.)
American Pneumatic Service Company. (See Fordyce, Edmond A., assignor.)
American Radiator Company. (See Sutton, William S., assignor.)
American Safety Steel Rail Co. (See Hellstrom, Frank O., assignor.)
American Seeding Machine Company, The. (See Packham and Braley, assignors.)
American Steel Foundries. (See Kinne, Edmund P., assignor.)
American Steel & Wire Company, The. (See Banta and Weaver, assignors.)
American Steel & Wire Company of New Jersey, The. (See Kilmer, William A., assignor.)
American Steel & Wire Company of New Jersey, The. (See Weaver, Albert T., assignor.)
American Vertebrate Propeller Company. (See Turner, Joseph, assignor.)
American Water Supply Company of New England. (See Provandie, Herbert F., assignor.)
Ames, Frederick P., assignor to Askew Saddlery Company, Kansas City, Mo. Gig-saddle. No. 1,111,686; Sept. 22; Gaz. vol. 206; p. 1120.
Ames, George W., Staples, Minn. Guard for water-glasses. No. 1,111,518; Sept. 22; Gaz. vol. 206; p. 1061.
Amundson, John C., Crosby, Minn. Photo-negative drier. No. 1,111,938; Sept. 29; Gaz. vol. 206; p. 1244.
Andersen, Gullow M., Chicago, Ill. Life-belt. No. 1,112,186; Sept. 29; Gaz. vol. 206; p. 1327.
Andersen, Hans, Nymore, Minn. Saw-set. No. 1,111,348; Sept. 22; Gaz. vol. 206; p. 1003.
Anderson, Albert D., Duluth, Minn. Seed-dropping mechanism for planters. No. 1,109,500; Sept. 1; Gaz. vol. 206; p. 226.
Anderson, Andrew M., Moscow, Idaho. Threshing-machine. No. 1,111,554; Sept. 22; Gaz. vol. 206; p. 1072.
Anderson, Anton G., Chicago, Ill. Clysterizing apparatus. No. 1,112,107; Sept. 29; Gaz. vol. 206; p. 1300.
Anderson, Auguest W., Vancouver, British Columbia, Canada. Flexible film. No. 1,108,962; Sept. 1; Gaz. vol. 206; p. 37.
Anderson, Charles E., Crystal Falls, Mich. Chimney-sweeper. No. 1,110,856; Sept. 15; Gaz. vol. 206; p. 789.
Anderson, Charles O., Waterville, Kans. Planter. No. 1,108,878; Sept. 1; Gaz. vol. 206; p. 5.
Anderson, Frank C., Cincinnati, Ohio. Lock for interlocking switch-stand mechanism. No. 1,108,879; Sept. 1; Gaz. vol. 206; p. 5.
Anderson, James W., San Francisco, Cal. Tire-puncture detector. No. 1,111,985; Sept. 29; Gaz. vol. 206; p. 1259.
Anderson, Robert H., assignor to R. B. Anderson, San Diego, Cal. Combined wardrobe and bed receptacle. No. 1,110,031; Sept. 8; Gaz. vol. 206; p. 456.
Anderson, Ruth B. (See Anderson, Robert H., assignor.)
Andree, Henry, Rossville, assignor of one-half to G. F. Moersberger, Baltimore, Md. Book-holder. No. 1,108,963; Sept. 1; Gaz. vol. 206; p. 37.
Andrén, August, Brooklyn, N. Y., assignor, by mesne assignments, to Elevator Supply & Repair Company, Chicago, Ill. Signaling apparatus. No. 1,109,950; Sept. 8; Gaz. vol. 206; p. 428.
Andres, Mattie, St. Louis, Mo. Piston-pump. No. 1,112,187; Sept. 29; Gaz. vol. 206; p. 1328.
Andresen, Julius C. (See Marten, Grahn, and Andresen.)
Andrews, George R. (See Andrews, Robert E. and G. R.)
Andrews, Martin L., Trowbridge, Pa. Clothes-rack. No. 1,109,275; Sept. 1; Gaz. vol. 206; p. 149.
Andrews, Robert E., Mount Gilead, N. C., and G. R. Andrews, New York, N. Y. Mop-holder. No. 1,110,981; Sept. 15; Gaz. vol. 206; p. 832.
Andruszkiewicz, Frank, Easthampton, Mass. Sled. No. 1,110,525; Sept. 15; Gaz. vol. 206; p. 673.
Angell, Edmund R., Derry, N. H. Acetylene-generator. No. 1,111,726; Sept. 29; Gaz. vol. 206; p. 1167.
Angell, Otis R., Boston, Mass. Self-lighting gas-lighter. No. 1,111,939; Sept. 29; Gaz. vol. 206; p. 1244.
Angell, William H., Cashion, Ariz. Combined step-ladder and ironing-board. No. 1,111,818; Sept. 29; Gaz. vol. 206; p. 1203.
Angle-American Patent Bottle Company Limited, The. (See Ulman, Jacob A., assignor.)
Ansley, Thomas, Lowry City, Mo. Rail-joint. No. 1,109,951; Sept. 8; Gaz. vol. 206; p. 429.
Anthony, John A., Charleston, S. C. Brake-operating device. No. 1,109,501; Sept. 1; Gaz. vol. 206; p. 226.
Anthony, William F., Cleveland, Ohio. Fishing-float. No. 1,112,049; Sept. 29; Gaz. vol. 206; p. 1280.
Antoine, Aloise, and J. Roos, Passaic, N. J. Truck. No. 1,109,654; Sept. 8; Gaz. vol. 206; p. 321.
Applas, Clarence S., Moline, Ill. Vehicle-curtain. No. 1,110,857; Sept. 15; Gaz. vol. 206; p. 790.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Lamp-socket. No. 1,110,099; Sept. 8; Gaz. vol. 206; p. 482.
Appler, A. Benjamin. (See Martineau and Appler.)
Arbogast, Charles V., Stowe township, Allegheny county, Pa. Combined neck-ring and former for making hollow glassware. No. 1,108,964; Sept. 1; Gaz. vol. 206; p. 37.
Arcade Manufacturing Company. (See Perkins, Floyd N., assignor.)
Archibald, Cora H., East Las Vegas, N. Mex. Massage appliance. No. 1,111,427; Sept. 22; Gaz. vol. 206; p. 1029.
Arlitz, Oscar C., New York, N. Y., assignor to Lovell-McConnell Manufacturing Company. Mechanical horn. No. 1,110,032; Sept. 8; Gaz. vol. 206; p. 457.
Armistead, William E. (See Woodbury, Roy J., assignor.)
Armstrong, Charles G. (See Southworth and Armstrong.)
Armstrong, Charles H., Bridgeport, Conn. Saw-guide for gas-pipes. No. 1,109,952; Sept. 8; Gaz. vol. 206; p. 429.

Armstrong, Haskell R., Peoria, Ill. Pneumatic tire. No. 1,109,101; Sept. 1; Gaz. vol. 206; p. 86.
Armstrong, John A., London, England. Dirigible airship and the like. No. 1,109,502; Sept. 1; Gaz. vol. 206; p. 227.
Armstrong, Paul, New York, N. Y. Calendar. No. 1,110,858; Sept. 15; Gaz. vol. 206; p. 790.
Armstrong, William T., Canton, Minn. Shaft attachment. No. 1,110,176; Sept. 8; Gaz. vol. 206; p. 510.
Arnold, Lydia F. B., Oshkosh, Wis. Collapsible rack. No. 1,109,953; Sept. 8; Gaz. vol. 206; p. 429.
Arnold, Matthew H., Butte, Mont. Lubricating device. No. 1,111,124; Sept. 22; Gaz. vol. 206; p. 925.
Arnold, Samuel C., assignor to The Denver Quartz Mill and Crusher Company, Denver, Colo. Rock-crusher. No. 1,109,158; Sept. 1; Gaz. vol. 206; p. 106.
Aronoff, Joseph J., Trenton, N. J. Collapsible receptacle. No. 1,111,428; Sept. 22; Gaz. vol. 206; p. 1029.
Arrachart, Felix, Charenton-le-Pont, France. Stencil-plate. No. 1,111,429; Sept. 22; Gaz. vol. 206; p. 1030.
Art Metal Construction Company. (See Bullock, Raymond G., assignor.)
Art Metal Construction Company. (See Stuck, Everett, assignor.)
Arthur Colton Company. (See Colton and Scott, assignors.)
Artista Piano Player Company. (See Turney, Eugene T., assignor.)
Ashley, Frank M., New York, N. Y. Fountain-pen. No. 1,111,519; Sept. 22; Gaz. vol. 206; p. 1061.
Ashmore, Edith B., Philadelphia, Pa. Curtain-pole-concealing suspension means for double-fabric draperies. No. 1,109,608; Sept. 1; Gaz. vol. 206; p. 263.
Ashtabula Bow Socket Company, The. (See Lewis, Fred K., assignor.)
Ashton, Harry M., Coburg, Victoria, Australia. Instrument for removing the hides or skins from carcasses of cattle, sheep, or other animals. No. 1,110,859; Sept. 15; Gaz. vol. 206; p. 791.
Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for assembling parts of boots and shoes. No. 1,109,655; Sept. 8; Gaz. vol. 206; p. 321.
Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Assembling-machine. No. 1,110,308; Sept. 15; Gaz. vol. 206; p. 595.
Askew, Levi J., and W. A. Masters, assignors of fifty-six and two-thirds one-hundredths to said Askew, thirty-three and one-third one-hundredths to said Masters, and ten one-hundredths to J. Barton, Birmingham, Ala. Pattern for circular sand molds. No. 1,110,282; Sept. 8; Gaz. vol. 206; p. 547.
Askew Saddlery Company. (See Ames, Frederick P., assignor.)
Aspfors, Evert, Floodwood, Minn. Harrow. No. 1,109,813; Sept. 8; Gaz. vol. 206; p. 378.
Atkins, Charles H., assignor to Kleen-Sweep Manufacturing Company, Springfield, Mass. Vacuum-producer. No. 1,110,860; Sept. 15; Gaz. vol. 206; p. 791.
Atkinson, Asher, New Bruswick, N. J., assignor, by mesne assignments, to H. B. Newhall, Littleton, N. H. Stirrup for reinforced concrete. No. 1,110,416; Sept. 15; Gaz. vol. 206; p. 635.
Atkinson, Frederick C., assignor to American Hominy Company, Indianapolis, Ind. Moisture-indicator for cereal products. No. 1,112,247; Sept. 29; Gaz. vol. 206; p. 1350.
Atkinson, Richard. (See Broccolin, Julius, assignor.)
Atlas Tack Company. (See Leonard, Herbert C., assignor.)
Atterbury, John C., assignor of one-half to C. G. Taylor, Danville, Ill. Trolley-switch. No. 1,111,555; Sept. 22; Gaz. vol. 206; p. 1073.
Atwood, Leonard, Farmington, Me. Driving mechanism for elevators and the like. No. 1,110,248; Sept. 8; Gaz. vol. 206; p. 534.
Atwood, Leonard, Farmington, Me. Compound induction-valve for internal-combustion engines. No. 1,112,188; Sept. 29; Gaz. vol. 206; p. 1328.
Austin, Frederick C. (See MacLachlan, Lachlan, assignor.)
Austin, Stephen H., San Francisco, Cal. Sawing-machine. No. 1,110,736; Sept. 15; Gaz. vol. 206; p. 748.
Austin, Sydney B. (See Tilley and Austin.)
Austin, Sydney B., Baltimore, Md., assignor, by mesne assignments, to Mott-Le-Gaige Animated Advertising Corporation, New York, N. Y. Composite lantern-slide. No. 1,111,635; Sept. 22; Gaz. vol. 206; p. 1101.
Austin, Sydney B., Baltimore, Md., assignor, by mesne assignments, to Mott-Le-Gaige Animated Advertising Corporation, New York, N. Y. Automatic display apparatus for lantern-slides. No. 1,111,636; Sept. 22; Gaz. vol. 206; p. 1102.
Auto-Manual Piano Action Company, The. (See Wuest, Philip, Jr., assignor.)
Automatic Electric Company. (See Mellinger, Edward A., assignor.)
Automatic Machine Company. (See Northrup, Elmer C., assignor.)
Automatic Railroad Appliances Company. (See Lawn, William E., assignor.)
Automatic Stemmer Company. (See Eckart, George F., assignor.)
Automatic Stove Co., The. (See Phillips, Ross M. G., assignor.)
Automatic Train Stop Company. (See Latey, Harry N., assignor.)
Automatic Train Stop Company. (See Woltmann, Ernst, assignor.)
Autoplate Company of America, The. (See Goulding, Benjamin J. J., assignor.)
Auxiliary Re-saw Corporation. (See Newcomb, Alcanzo D., assignor.)
Avis, Samuel W., assignor to The Merrow Machine Company, Hartford, Conn. Take-up for crochet-machines. No. 1,111,986; Sept. 29; Gaz. vol. 206; p. 1259.
Avis, Samuel W., assignor to The Merrow Machine Company, Hartford, Conn. Crochet-machine take-up. No. 1,111,987; Sept. 29; Gaz. vol. 206; p. 1259.
Axford, Edward, Germantown, Pa. Wearing-apparel. No. 1,110,982; Sept. 15; Gaz. vol. 206; p. 832.
Axline, Joseph H., Columbus, Ohio. Ribbon-reviver. No. 1,111,727; Sept. 29; Gaz. vol. 206; p. 1167.
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Canning machinery. No. 1,110,983; Sept. 15; p. 206; p. 833.
Ayars Machine Company. (See Ayars, Charles H., assignor.)
Aylsworth, Jonas W., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Making phonograph-records. No. 1,110,417; Sept. 15; Gaz. vol. 206; p. 635.
Aylsworth, Jonas W., assignor to Condensite Company of America, East Orange, N. J. Plastic composition. No. 1,111,284; Sept. 22; Gaz. vol. 206; p. 981.
Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Glen Ridge, N. J. Phenolic condensation product and forming same. No. 1,111,285; Sept. 22; Gaz. vol. 206; p. 981.
Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Glen Ridge, N. J. Producing indurated articles. No. 1,111,286; Sept. 22; Gaz. vol. 206; p. 981.
Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Glen Ridge, N. J. Cresolic varnish composition. No. 1,111,287; Sept. 22; Gaz. vol. 206; p. 982.
Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Glen Ridge, N. J. Production of plastic substance. No. 1,111,288; Sept. 22; Gaz. vol. 206; p. 982.
Aylsworth, Jonas W., East Orange, assignor to Halogen Products Company, Glen Ridge, N. J. Electrical condenser. No. 1,111,289; Sept. 22; Gaz. vol. 206; p. 982.
B. F. Goodrich Company, The. (See Kepler, Irwin F., assignor.)
B. F. Meeks Sons. (See Carter, William, assignor.)
B. F. Perkins & Son. (See Murphy, James A., assignor.)
B. V. D. Company, The. (See Erlanger, Milton S., assignor.)
Bachrach, David, Baltimore, Md. Making compounds of nitrocellulose and similar substances. (Reissue.) No. 13,793; Sept. 1; Gaz. vol. 206; p. 281.
Bagby, Logan H. (See Jones and Coffman, assignors.)
Bagley, John N., Superior, Nebr. Oil-gage. No. 1,110,474; Sept. 15; Gaz. vol. 206; p. 655.
Bagnall, Arthur G., and J. A. Taylor, Cleveland, Ohio. Combined plaster and cement base-screed. No. 1,110,369; Sept. 15; Gaz. vol. 206; p. 617.
Baier, Fredrick, Chicago, Ill., assignor, by mesne assignments, to The Swiss Magneto Company, Buffalo, N. Y. Electric-conductor coupling. No. 1,110,475; Sept. 15; Gaz. vol. 206; p. 656.
Bailey, George W., Arlington, Va. Perpetual calendar. No. 1,109,814; Sept. 8; Gaz. vol. 206; p. 378.
Bailey, Harvey. (See Bailey, Harvey W., assignor.)
Bailey, Harvey W., assignor to H. Bailey, Portland, Oreg. Concentrator. No. 1,111,687; Sept. 22; Gaz. vol. 206; p. 1120.
Bailey, James M., Buenos Aires, Argentina. Internal-combustion engine. No. 1,110,861; Sept. 15; Gaz. vol. 206; p. 792.
Bailey, Robert L., assignor to A. L. MacLeod, Portland, Oreg. Variable-speed transmission mechanism for motor-cycles. No. 1,110,249; Sept. 8; Gaz. vol. 206; p. 534.
Bailey, William, Birmingham, England, assignor to The Crown Cork and Seal Co., Baltimore, Md. Stoppering crown or cap for bottles and the like. No. 1,110,862; Sept. 15; Gaz. vol. 206; p. 792.
Baillot, Jules, Montmagny, Quebec, Canada. Core for lining converters. No. 1,108,880; Sept. 1; Gaz. vol. 206; p. 5.
Baird, Archie M., and H. D. Palmer, Topeka, Kans. Oil-burner. No. 1,111,520; Sept. 22; Gaz. vol. 206; p. 1062.
Baird, Mortimer M., Rochester, N. Y. Furnace. No. 1,109,503; Sept. 1; Gaz. vol. 206; p. 227.
Bakels, William C., Midland Park, N. J. Automatic air-supply system for automobiles. No. 1,111,556; Sept. 22; Gaz. vol. 206; p. 1073.
Baker, Charles P., Painesville, Ohio. Vegetable-topping machine. No. 1,110,370; Sept. 15; Gaz. vol. 206; p. 617.
Baker, David. (See Ladd and Baker.)
Baker, George R. (See Baker, George S. and G. R.)
Baker, George R., Vernon, Tex. Dirigible lamp for vehicles. No. 1,110,177; Sept. 8; Gaz. vol. 206; p. 511.
Baker, George S., London, England. Apparatus for treating dough preparatory to baking. No. 1,109,894; Sept. 8; Gaz. vol. 206; p. 407.

Birch, Albert, and W. Hamer, assignors to Dobson and Barlow Limited, Bolton, England. Mechanism for evening fibrous slivers. No. 1,111,200; Sept. 22; Gaz. vol. 206; p. 982.
Bird, Charles S., Walpole, Mass. Composite waterproof shingle. No. 1,108,884; Sept. 1; Gaz. vol. 206; p. 7.
Birdsong, John L. (See Studebaker, Enoch H., assignor.)
Bisbing, Harry L., Clermont, Iowa. End-gate. No. 1,110,740; Sept. 15; Gaz. vol. 206; p. 749.
Bisesi, Joseph, Martinsville, Ind. Trolley-wheel mounting. No. 1,109,104; Sept. 1; Gaz. vol. 206; p. 87.
Bishop, Columbus H., El Reno, Okla. Car-gear equipment. No. 1,110,871; Sept. 15; Gaz. vol. 206; p. 796.
Bishop, Myron H., Springfield, Mass. Display-rack for brushes. No. 1,111,989; Sept. 29; Gaz. vol. 206; p. 1260.
Bissell, Joseph E., Pittsburgh, Pa. Aeroplane. No. 1,112,110; Sept. 29; Gaz. vol. 206; p. 1301.
Bistline, John A., and J. P. Jones, Logan, Utah. Hay-rake. No. 1,109,897; Sept. 8; Gaz. vol. 206; p. 409.
Bitler, Cornelia, Frederick, Kans. Hat-box. No. 1,109,392; Sept. 1; Gaz. vol. 206; p. 191.
Bitz, Jacob L., assignor of one-half to H. L. Milnes, Coldwater, Mich. Scissors. No. 1,110,181; Sept. 8; Gaz. vol. 206; p. 512.
Bixby, Edward K., Chicago, Ill. Fountain-pen. No. 1,109,033; Sept. 1; Gaz. vol. 206; p. 64.
Bjorkland, Gustave. (See Schwarz and Bjorkland.)
Blackburn, Roy J., assignor of one-half to G. G. Prendergast, St. Louis, Mo. Pile-puller. No. 1,111,784; Sept. 29; Gaz. vol. 206; p. 1191.
Blackstead, Anders P., assignor to Camden Iron Works, Camden, N. J. Centrifugal pump. No. 1,109,393; Sept. 1; Gaz. vol. 206; p. 192.
Blair, Charles A. (See Theal and Blair.)
Blake and Johnson Company, The. (See Hoffman, Frederick C., assignor.)
Blakeslee, John R., assignor to The Ajax Manufacturing Company, Cleveland, Ohio. Bolt-heading machine. No. 1,111,729; Sept. 29; Gaz. vol. 206; p. 1168.
Blandin, Clayton O., W. T. Davis, and W. A. Reynolds, Denver, Colo. Weed-destroyer. No. 1,110,182; Sept. 8; Gaz. vol. 206; p. 512.
Blecher, Carl, Berlin, Germany. Grinding-machine. No. 1,109,277; Sept. 1; Gaz. vol. 206; p. 149.
Blessing, John B., Randlett, Okla. Conveyer for unloading cotton or the like. No. 1,110,104; Sept. 8; Gaz. vol. 206; p. 484.
Blessing, Margaret E., Philadelphia, Pa. Stocking. No. 1,111,353; Sept. 22; Gaz. vol. 206; p. 1004.
Bliss, William L., Milwaukee, Wis., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Carbon brush and pigtail. No. 1,112,191; Sept. 29; Gaz. vol. 206; p. 1329.
Blist, Albert, Los Angeles, Cal. Door-check. No. 1,111,291; Sept. 22; Gaz. vol. 206; p. 983.
Bloch, Eugene, New York, N. Y. Coating process. No. 1,110,741; Sept. 15; Gaz. vol. 206; p. 749.
Bloch, Jacob, Cincinnati, Ohio. Coat. No. 1,112,254; Sept. 29; Gaz. vol. 206; p. 1353.
Block, Alexander E., St. Louis, Mo. Arch-support. No. 1,110,476; Sept. 15; Gaz. vol. 206; p. 656.
Blocker, John P. (See Davidson, Jensen, and Blocker.)
Blocker, William, Jackson, Miss. Trolley-pole. No. 1,111,127; Sept. 22; Gaz. vol. 206; p. 926.
Blofield, Arthur E., and J. J. Link, New York, N. Y. Clasp. No. 1,111,354; Sept. 22; Gaz. vol. 206; p. 1004.
Blomfeldt, Allen A., Chicago, Ill. Spraying mechanism. No. 1,108,885; Sept. 1; Gaz. vol. 206; p. 7.
Blount Plow Works. (See Phelps, Spencer H., assignor.)
Blumenthal, Maurice, Brooklyn, N. Y. Tool for detaching obstructions from electric-wire conduits. No. 1,111,208; Sept. 22; Gaz. vol. 206; p. 955.
Boekel, Julius, Philadelphia, Pa. Thermostat. No. 1,110,477; Sept. 15; Gaz. vol. 206; p. 656.
Bogle, Charles C., *et al.* (See Moss, John H., assignor.)
Bohn, Gebhard C., St. Paul, Minn. Ventilating-hood. No. 1,111,292; Sept. 22; Gaz. vol. 206; p. 983.
Boker, Vitus A., Minneapolis, Minn. Transmission mechanism. No. 1,111,355; Sept. 22; Gaz. vol. 206; p. 1005.
Bond, Thomas P. (See Ratcliff, Alva A., assignor.)
Bonenberger, George, assignor to Steel Scaffolding Company, Evansville, Ind. Adjustable scaffold. No. 1,109,505; Sept. 1; Gaz. vol. 206; p. 228.
Bonenberger, George, assignor to Steel Scaffolding Company, Evansville, Ind. Shingling-bracket. No. 1,109,506; Sept. 1; Gaz. vol. 206; p. 228.
Bonham, Harry J., Los Angeles, Cal. Rail-fitting. No. 1,110,183; Sept. 8; Gaz. vol. 206; p. 512.
Bonitz, Dudley A., Chicago, Ill. Means for waterproofing pipe-coverings. No. 1,111,688; Sept. 22; Gaz. vol. 206; p. 1121.
Bonneville, William H., Philadelphia, Pa. Metal collapsible case. No. 1,111,054; Sept. 22; Gaz. vol. 206; p. 902.
Bonney, Charles A., St. Louis, Mo., assignor to United Shoe Machinery Company. Fly-closer for boots and shoes. No. 1,108,965; Sept. 1; Gaz. vol. 206; p. 37.
Bonney, Charles A., St. Louis, Mo., assignor to United Shoe Machinery Company, Paterson, N. J. Fly-closer for boots and shoes. No. 1,108,966; Sept. 1; Gaz. vol. 206; p. 38.
Boos, Henry P., Minneapolis, Minn. Dental bridge. No. 1,111,730; Sept. 29; Gaz. vol. 206; p. 1168.
Booth, Oscar D., assignor to Everett Current Motor Company, Everett, Wash. Current-motor. No. 1,112,352; Sept. 29; Gaz. vol. 206; p. 1386.
Booth, William R., Gravette, Ark. Portable drilling-stand. No. 1,111,944; Sept. 29; Gaz. vol. 206; p. 1246.
Born, Gabriel F., Gnadenhutten, Ohio. Window-screen. No. 1,110,036; Sept. 8; Gaz. vol. 206; p. 459.
Borresen, Helge A., Marquette, Mich. Cabinet for sound-reproducing machines. No. 1,109,386; Sept. 1; Gaz. vol. 206; p. 189.
Borresen, Helge A., Marquette, Mich. Turret-pliers. No. 1,110,528; Sept. 15; Gaz. vol. 206; p. 674.
Borschneck, Charles F., Knoxville, Pa. Electric display system. No. 1,110,872; Sept. 15; Gaz. vol. 206; p. 796.
Bostock, Frederick L., Pittston, Pa. Tool. No. 1,109,507; Sept. 1; Gaz. vol. 206; p. 228.
Bostwick, Arthur B., Brooklyn, N. Y. Stencil. No. 1,111,002; Sept. 22; Gaz. vol. 206; p. 883.
Bottnen, Harry B., Marshalltown, Iowa. Wire-splicer. No. 1,111,639; Sept. 22; Gaz. vol. 206; p. 1103.
Boughton, John W., Philadelphia, Pa. Airship. No. 1,109,658; Sept. 8; Gaz. vol. 206; p. 322.
Boulter, Royal L., Los Angeles, Cal. Telegraph-key. No. 1,109,818; Sept. 8; Gaz. vol. 206; p. 379.
Boulter, Royal L., Los Angeles, Cal. Telegraph-key. No. 1,110,373; Sept. 15; Gaz. vol. 206; p. 619.
Bourdelles, Emile, assignor to Schneider & Cie., Paris, France. Breech-loading gun. No. 1,110,105; Sept. 8; Gaz. vol. 206; p. 484.
Bourdelles, Emile, assignor to Schneider & Cie., Paris, France. Wheeled gun-carriage. No. 1,111,785; Sept. 29; Gaz. vol. 206; p. 1191.
Bourne, Charles O., Melrose, Mass. Leg-band. No. 1,109,394; Sept. 1; Gaz. vol. 206; p. 192.
Bowen, Charlie H., and D. A. Braken, Jasper, Minn. Corn-crib door. No. 1,111,822; Sept. 29; Gaz. vol. 206; p. 1204.
Bowen, George W. (See Zerk, Oscar, assignor.)
Bowen, Harry, assignor to The Holton Company, Jackson, Mich. Centering attachment for cutting-off machines. No. 1,109,957; Sept. 8; Gaz. vol. 206; p. 430.
Bowen, Roger, and W. F. Sweeney, Southwest, Pa. Tire-protector. No. 1,109,278; Sept. 1; Gaz. vol. 206; p. 149.
Bowers, Ernest C., Kalamazoo, assignor, by mesne assignments, to National Standard Company, Niles, Mich. Pawl-and-ratchet mechanism. No. 1,111,128; Sept. 22; Gaz. vol. 206; p. 926.
Bowers, Lionel F., assignor to Columbia Mfg. Co., Columbia, Pa. Cuff-press. No. 1,109,508; Sept. 1; Gaz. vol. 206; p. 228.
Bowie, Augustus J., Jr., San Francisco, Cal. Electrical switch. No. 1,110,374; Sept. 15; Gaz. vol. 206; p. 619.
Bowman, Frank A., and J. E. Briggs, Gilbert, Minn. Steering-gear. No. 1,109,316; Sept. 1; Gaz. vol. 206; p. 163.
Bowman, George W., York, Pa. Cigar-tuck cutter. No. 1,110,106; Sept. 8; Gaz. vol. 206; p. 485.
Bowman, Mark D. (See Montgomery, George W., assignor.)
Bowman, Virgil L., Oakland, Cal. Tire-protector. No. 1,112,353; Sept. 29; Gaz. vol. 206; p. 1386.
Bowser, Harry M., and T. F. Mulligan, assignors to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Apparatus for maintaining a constant supply and pressure in service-pipes. No. 1,112,111; Sept. 29; Gaz. vol. 206; p. 1302.
"Box Car Flush Door Company," The. (See Huff, Robert, assignor.)
Boxall, William L., Perry, Cal. Wood-gas generator and burner. No. 1,111,129; Sept. 22; Gaz. vol. 206; p. 927.
Boyajian, Kamaghiel G., Swarthmore, Pa. Sad-iron-balancing mechanism. No. 1,109,317; Sept. 1; Gaz. vol. 206; p. 163.
Boyd, Alonzo. (See Boyd and Slife.)
Boyd, Ernst J., and A. and T. M. Slife, Arapahoe, Nebr. Safety-stirrup. No. 1,111,731; Sept. 29; Gaz. vol. 206; p. 1168.
Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Key-ring. No. 1,110,873; Sept. 15; Gaz. vol. 206; p. 797.
Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Grater. No. 1,111,356; Sept. 22; Gaz. vol. 206; p. 1005.
Boye Needle Company, The. (See Boye, James H., assignor.)
Boyer, Allen P., Goshen, Ind. Cooker. No. 1,111,130; Sept. 22; Gaz. vol. 206; p. 927.
Boyle, Francis J. (See Heath and Boyle.)
Boyle, Henry K. (See Redrup and Boyle.)
Boyle, William W., and F. Miller, St. James, Mich. Furniture-fastening. No. 1,111,209; Sept. 22; Gaz. vol. 206; p. 955.
Boyler, Emanuel J., New Haven, Conn., assignor to The Greist Manufacturing Company. Sewing-machine hemmer and the like. No. 1,109,898; Sept. 8; Gaz. vol. 206; p. 409.
Boylston Manufacturing Company, The. (See Ballard, Harrie A., assignor.)
Boyn, James, Chicago, Ill. Screw. No. 1,110,250; Sept. 8; Gaz. vol. 206; p. 535.
Boynton, Sidney H., *et al.* (See Talbot, William W., assignor.)
Boynton, Sidney H., *et al.* (See Talbot and Sawtelle, assignors.)

Braae, Maurice A. (See Morton and Braae.)
Braam, Jacques P. de, Paris, France. Automatic railway signaling apparatus. No. 1,111,522; Sept. 22; Gaz. vol. 206; p. 1062.
Braden, Albert R., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Soldering. No. 1,109,659; Sept. 8; Gaz. vol. 206; p. 323.
Bradley, William J. (See Braine and Bradley.)
Bradshaw, Richard, Toronto, Ontario, Canada. Finishing cap, knob, or vase for bedposts and the like. No. 1,111,945; Sept. 29; Gaz. vol. 206; p. 1246.
Bradshaw, Richard C., and T. A. Garvey, St. Louis, Mo. Non-refillable bottle. No. 1,110,037; Sept. 8; Gaz. vol. 206; p. 459.
Bragger, John W., assignor to J. B. Wise, Inc., Watertown, N. Y. Flush-valve-operating mechanism. No. 1,110,251; Sept. 8; Gaz. vol. 206; p. 535.
Braham, Michael, New York, N. Y. Collapsible perambulator. No. 1,111,786; Sept. 29; Gaz. vol. 206; p. 1191.
Braine, Bancroft G., New York, and W. J. Bradley, Troy, assignors to The Rail Joint Company, New York, N. Y. Rolled shoe-angle. No. 1,110,529; Sept. 15; Gaz. vol. 206; p. 674.
Brake, Friend C., Edgerton, Minn. Egg-candling device. No. 1,110,874; Sept. 15; Gaz. vol. 206; p. 797.
Braken, Daniel A. (See Bowen and Braken.)
Braley, William L. (See Packham and Braley.)
Brandis, Walter, San Diego, Cal. Beet pulling and topping machine. No. 1,111,210; Sept. 22; Gaz. vol. 206; p. 955.
Brandon, Lawrence E., assignor of one-half to H. W. Silsby, Derby, Vt. Igniting device. No. 1,110,611; Sept. 15; Gaz. vol. 206; p. 703.
Brandstrom, Charles K., Seattle, Wash. Trowel. No. 1,111,433; Sept. 22; Gaz. vol. 206; p. 1031.
Brandt, George W., Brooklyn, N. Y., assignor to M. E. Brandt, Leonia, N. J. Construction of forms for concrete construction. No. 1,112,112; Sept. 29; Gaz. vol. 206; p. 1302.
Brandt, Mary E. (See Brandt, George W., assignor.)
Brant, Antonia F., Alameda, Cal. Bucket. No. 1,111,357; Sept. 22; Gaz. vol. 206; p. 1006.
Brasington, Ross M., Marietta, Ohio. Shock-absorber for motor-vehicles. No. 1,110,875; Sept. 15; Gaz. vol. 206; p. 797.
Braun, Julius, Lüttringhausen, Germany. Umbrella-envelop. No. 1,109,509; Sept. 1; Gaz. vol. 206; p. 229.
Braun, William F. H., assignor to Coles Manufacturing Company, Philadelphia, Pa. Automatic releasing and reëngaging drive. No. 1,111,990; Sept. 29; Gaz. vol. 206; p. 1260.
Breault, Gédéon, Pawtucket, R. I. Nut-lock. No. 1,111,732; Sept. 29; Gaz. vol. 206; p. 1169.
Bremer, Charles D., Milwaukee, Wis. Air-pump nipple. No. 1,111,991; Sept. 29; Gaz. vol. 206; p. 1261.
Brenner, Paul C., Chicago, Ill. Ash-sifter. No. 1,109,395; Sept. 1; Gaz. vol. 206; p. 192.
Brenner, Paul C., Chicago, Ill. Oven-door. No. 1,112,255; Sept. 29; Gaz. vol. 206; p. 1353.
Bretch, Edward, St. Louis, Mo. Short-circuiting device. No. 1,111,358; Sept. 22; Gaz. vol. 206; p. 1006.
Bretney, Eugene, Indianapolis, Ind. Refrigerating apparatus. No. 1,109,396; Sept. 1; Gaz. vol. 206; p. 192.
Breuer, Martin W. (See Cook and Breuer.)
Brewer, Albert G., Natick, assignor to Welted Sole Company, Boston, Mass. Machine for molding soles. No. 1,109,196; Sept. 1; Gaz. vol. 206; p. 121.
Brewster, William D., Syracuse, assignor to National Brake Company, Incorporated, Buffalo, N. Y. Hand-operated brake mechanism. No. 1,111,640; Sept. 22; Gaz. vol. 206; p. 1104.
Bricker, Sacks, Washington, D. C. Anesthetic-dispenser. No. 1,110,742; Sept. 15; Gaz. vol. 206; p. 749.
Bridgeport Brass Company. (See Clark, Walter R., assignor.)
Bridgeport Brass Company. (See Webster, William R., assignor.)
Briggs, John E. (See Bowman and Briggs.)
Brill, Joseph W. (See Harvey and Brill.)
Brink, George B., Plymouth, Mich. Spring structure and upholstering-cover therefor. No. 1,110,987; Sept. 15; Gaz. vol. 206; p. 834.
Bristol, Edgar H., Naugatuck, Conn., assignor, by mesne assignments, to The Foxboro Company, Foxboro, Mass. Engine stop mechanism. No. 1,109,611; Sept. 1; Gaz. vol. 206; p. 264.
Bristow, Joseph, Jr., Oak Park, Ill. Stucco construction. No. 1,110,309; Sept. 15; Gaz. vol. 206; p. 595.
Britt, William J., Jr., assignor to Killark Electric Manufacturing Company, St. Louis, Mo. Fuse. No. 1,110,478; Sept. 15; Gaz. vol. 206; p. 657.
Brixius, Frank E., Manitowoc, assignor of one-half to G. P. Brunner, Manitowoc Rapids, Wis. Electrically-operated hammer. No. 1,110,285; Sept. 8; Gaz. vol. 206; p. 548.
Broccolin, Julius, assignor of one-half to R. Atkinson, Cleveland, Ohio. Shock-absorber. No. 1,110,876; Sept. 15; Gaz. vol. 206; p. 798.
Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Toe-binding apparatus. No. 1,109,660; Sept. 8; Gaz. vol. 206; p. 323.
Brock, Samuel T., Mount Vernon, Ohio. Puttyless window sash and pane holder. No. 1,110,530; Sept. 15; Gaz. vol. 206; p. 674.
Brooks, Boultbee, Birmingham, England. Motor-cycle, cycle, and analogous saddles and seats. No. 1,112,354; Sept. 29; Gaz. vol. 206; p. 1387.
Brooks, Halbert G. (See Garratt, James H., assignor.)
Brookshire, Samuel N., Fort Worth, Tex. Silo. No. 1,109,566; Sept. 1; Gaz. vol. 206; p. 247.
Bropson, James, Cleveland, Ohio. Non-skidding device. No. 1,110,107; Sept. 8; Gaz. vol. 206; p. 485.
Brosch, Hugo, Vienna, Austria-Hungary. Manufacturing tubular metal castings. No. 1,111,641; Sept. 22; Gaz. vol. 206; p. 1104.
Broughton, Walter C., Kansas City, Mo. Knockdown concrete building. No. 1,111,131; Sept. 22; Gaz. vol. 206; p. 928.
Brower, Edward S., Ridgewood, N. J. Wind-shield. No. 1,109,197; Sept. 1; Gaz. vol. 206; p. 121.
Brown, Alexander C. E. (See Brown and Merry.)
Brown Bag Filling Machine Company, The. (See Brown, Benjamin F., assignor.)
Brown, Benjamin F., assignor to The Brown Bag Filling Machine Company, Fitchburg, Mass. Paper drinking-cup. No. 1,110,286; Sept. 8; Gaz. vol. 206; p. 549.
Brown, Charlie, Glencoe, Ill. Headlight. No. 1,110,877; Sept. 15; Gaz. vol. 206; p. 798.
Brown, Edmund L., and M. Murphy, assignors to The Caloric Company, Janesville, Wis. Fireless cook-stove or cooker. No. 1,110,184; Sept. 8; Gaz. vol. 206; p. 513.
Brown, Frank D., and J. H. Werling, Huntington, Ind. Apparatus for opening and closing doors, gates, &c. No. 1,110,878; Sept. 15; Gaz. vol. 206; p. 798.
Brown, George H., deceased; H. Brown, executor, Belfast, Ireland. Transmitting apparatus for use in electric signaling on railways. No. 1,111,733; Sept. 29; Gaz. vol. 206; p. 1169.
Brown, George R. (See Clayton, Brown, and Clayton.) (Reissue.)
Brown, Herbert, executor. (See Brown, George H.)
Brown-Lipe Gear Company, The. (See Sponable, George W., assignor.)
Brown, Otis E., Brockton, Mass., assignor to The Singer Manufacturing Company. Stitch-forming mechanism. No. 1,111,132; Sept. 22; Gaz. vol. 206; p. 928.
Brown, Robert, Greenville, Mo. Electric-despatch system. No. 1,109,397; Sept. 1; Gaz. vol. 206; p. 193.
Brown, Samuel, St. Louis, Mo. Gummed-tape-moistening machine. No. 1,110,667; Sept. 15; Gaz. vol. 206; p. 724.
Brown, Samuel, St. Louis, Mo. Gummed-tape-moistening machine. No. 1,111,434; Sept. 22; Gaz. vol. 206; p. 1031.
Brown, Theodore P., Worcester, Mass., assignor to Simplex Player Action Company. Musical instrument. No. 1 109,319; Sept. 1; Gaz. vol. 206; p. 164.
Brown, Theophilus, assignor to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,112,256; Sept. 29; Gaz. vol. 206; p. 1353.
Brown, William H., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Zero-eliminating mechanism for calculating-machines. No. 1,108,877; Sept. 1; Gaz. vol. 206; p. 4.
Brown, William M., Johnstown, Pa. Load-indicator. No. 1,111,560; Sept. 22; Gaz. vol. 206; p. 1075.
Brown, William M., Johnstown, Pa. Tongs. No. 1,111,561; Sept. 22; Gaz. vol. 206; p. 1075.
Brown, William R., Chicago, Ill., assignor to Municipal Supply Co. Calipers. No. 1,110,879; Sept. 15; Gaz. vol. 206; p. 799.
Brown, William S., Knoxville, Tenn. Steam-engine valve-gear. No. 1,110,287; Sept. 8; Gaz. vol. 206; p. 549.
Brown, William S., Knoxville, Tenn. Locomotive valve-gear. No. 1,110,288; Sept. 8; Gaz. vol. 206; p. 549.
Brown, Willis and A. C. E., and T. B. Merry, Adelaide, South Australia, Australia. Release safety-hook. No. 1,110,185; Sept. 8; Gaz. vol. 206; p. 513.
Browne, Arthur W., Prince Bay, N. Y., and F. L. Wallace, Lansdowne, assignors to The S. S. White Dental Manufacturing Company, Philadelphia, Pa. Surgical inhaler. No. 1,109,318; Sept. 1; Gaz. vol. 206; p. 163.
Browning, Tillie J., Philadelphia, Pa. Collar-supporter. No. 1,111,359; Sept. 22; Gaz. vol. 206; p. 1006.
Brucker, Ferdinand F., assignor to The Miller Rubber Company, Akron, Ohio. Toy balloon. No. 1,111,642; Sept. 22; Gaz. vol. 206; p. 1104.
Brumbaugh, Earl F., Colwich, Kans. Switch-signal. No. 1,110,880; Sept. 15; Gaz. vol. 206; p. 799.
Brunelle, Hormisdas E., St. Paul, Minn. Workman's scaffold. No. 1,110,881; Sept. 15; Gaz. vol. 206; p. 799.
Brunner, George P. (See Brixius, Frank E., assignor.)
Brunt, Colin M., *et al.* (See Ridgway, Samuel R., assignor.)
Brush, Alanson P., Flint, Mich. Mixture-supplying apparatus for internal-combustion engines. No. 1,112,257; Sept. 29; Gaz. vol. 206; p. 1354.
Bruton, George, assignor to F. L. Rockey, Joliet, Ill. Automatic burner for gas-stoves. No. 1,112,355; Sept. 29; Gaz. vol. 206; p. 1387.
Bryan, Barnabas, Washington, D. C. Sealing-wax-applying device. No. 1,109,034; Sept. 1; Gaz. vol. 206; p. 64.
Bryan, Hugh B., assignor of one-half to L. D. Hobbs, Johnston City, Ill. Spring-tire. No. 1,109,198; Sept. 1; Gaz. vol. 206; p. 122.
Bryan, William D. (See Dunlap and Bryan.)
Bryant, Clyde J., assignor of one-half to J. P. Wallis, Chicago, Ill. Mail-opening machine. No. 1,109,958; Sept. 8; Gaz. vol. 206; p. 431.

Forgrove Machinery Company Limited, The. (See Grover, Frederick, assignor.)
Forlanini, Enrico, Milan, Italy. Hydroflying-machine. No. 1,112,405; Sept. 29; Gaz. vol. 206; p. 1405.
Fornander, Alfred, New York, N. Y. Device for sharpening cutting instruments. No. 1,110,619; Sept. 15; Gaz. vol. 206; p. 706.
Forrest, William H., Boston, Mass., assignor to Excel Jack Mfg. Co. Lifting-jack. No. 1,109,980; Sept. 8; Gaz. vol. 206; p. 439.
Forrester, Eli T., Hot Springs, S. D. Jacket. No. 1,111,222; Sept. 22; Gaz. vol. 206; p. 960.
Forsyth, Charles F. (See Kent and Waters, assignors.)
Fortescue, Albert J., Arncliffe, near Sydney, New South Wales, Australia. Mechanical movement. No. 1,111,569; Sept. 22; Gaz. vol. 206; p. 1078.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rectifier system. No. 1,112,282; Sept. 29; Gaz. vol. 206; p. 1362.
Fortier, Charles L., assignor to Johnson Service Company, Milwaukee, Wis. Thermostat. No. 1,109,913; Sept. 8; Gaz. vol. 206; p. 415.
Fortier, Charles L., assignor to Johnson Service Company, Milwaukee, Wis. Thermostat and like device. No. 1,109,981; Sept. 8; Gaz. vol. 206; p. 440.
Foster, Homer. (See Graham, Turner, Foster, and Grant.)
Fouks, William A. (See Smith, William M., assignor.)
Fowler, Gordon F., Oak Park, assignor to Sears, Roebuck & Company, Chicago, Ill. Elastic bearing for centrifugal machines. No. 1,111,372; Sept. 22; Gaz. vol. 206; p. 1010.
Fox, Jacob, New York, N. Y. Button. No. 1,111,452; Sept. 22; Gaz. vol. 206; p. 1037.
Fox, Lloyd L., Lowell, Me., assignor of one-third to H. A. Wheeler, Newton, Mass., and one-third to N. C. Fogg, Lowell, Me. Horseshoe-calk. No. 1,111,891; Sept. 29; Gaz. vol. 206; p. 1231.
Fraaz, Joseph M. (See Sholes and Fraaz.)
Frame, Robert E., and W. H. De Graff, assignors to Haskell & Barker Car Company, Michigan City, Ind. Dump-car. No. 1,111,532; Sept. 22; Gaz. vol. 206; p. 1065.
Frangopolu, Constantine C., assignor to W. H. Kent, San Francisco, Cal. Decarbonizing-liquid injector and auxiliary air control. No. 1,109,914; Sept. 8; Gaz. vol. 206; p. 415.
Frank B. Cook Company. (See Corwin, Elmer R., assignor.)
Frank B. Cook Company. (See Johnson, Morton L., assignor.)
Frank, Fredrick W., Rocky Mount, N. C. Flue-expander. No. 1,111,650; Sept. 22; Gaz. vol. 206; p. 1107.
Frank, Jerome W., New York, N. Y. Coating process. No. 1,110,765; Sept. 15; Gaz. vol. 206; p. 757.
Frank, John J., Pittsfield, Mass., assignor to General Electric Company. System of electrical distribution. No. 1,112,289; Sept. 29; Gaz. vol. 206; p. 1362.
Franke, Paul E. (See Streich and Franke.)
Franklin, Benjamin, Chicago, Ill. Window-guard. No. 1,110,678; Sept. 15; Gaz. vol. 206; p. 728.
Fraser, Donald, assignor to Chain Belt Company, Milwaukee, Wis. Loader for concrete-mixers and similar machines. No. 1,109,915; Sept. 8; Gaz. vol. 206; p. 416.
Fraser, John, Hackensack, N. J. Machine for edging metal plates. No. 1,109,521; Sept. 1; Gaz. vol. 206; p. 232.
Fraser, John, Hackensack, N. J. Machine for forming sheet-metal pipes. No. 1,109,522; Sept. 1; Gaz. vol. 206; p. 233.
Fraser, William A., Georgetown, Ontario, Canada. Flushing-tank. No. 1,110,432; Sept. 15; Gaz. vol. 206; p. 640.
Fraser, William A., Georgetown, Ontario, Canada. Flushing system. No. 1,110,620; Sept. 15; Gaz. vol. 206; p. 707.
Frates, Thomas L., Livermore, Cal. Internal-combustion engine. No. 1,109,982; Sept. 8; Gaz. vol. 206; p. 440.
Fray, Peter, Tampa, Fla. Molding-flask. No. 1,110,679; Sept. 15; Gaz. vol. 206; p. 728.
Frear, Hugo P., San Francisco, Cal., assignor to Bethlehem Steel Corporation, South Bethlehem, Pa. Ore, bulk or dense cargo carrier. No. 1,111,740; Sept. 29; Gaz. vol. 206; p. 1172.
Frenz, Thomas B., East Orange, N. J., assignor to V. Weber & Company, Chicago, Ill. Thermal relay. No. 1,111,789; Sept. 29; Gaz. vol. 206; p. 1192.
Fred Medart Manufacturing Company. (See Medart, Philip S., assignor.)
Freedman, Hyman and N. M., Chicago, Ill. Davenport-bed. No. 1,108,983; Sept. 1; Gaz. vol. 206; p. 44.
Freedman, Nathan M. (See Freedman, Hyman and N. M.)
Freeman, Louis G., Cincinnati, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J. Heel-seat-jointing machine. (Reissue.) No. 13,799; Sept. 15; Gaz. vol. 206; p. 838.
French, Alfred W. (See Faherty, Michael W., assignor.)
French, Edmund L., and G. W. Stephenson, Syracuse, N. Y., assignors to Crucible Steel Company of America, Pittsburgh, Pa. Grinding and polishing machine. No. 1,111,254; Sept. 22; Gaz. vol. 206; p. 970.
French, Frank H., Preston, Iowa. Mop and brush. No. 1,110,766; Sept. 15; Gaz. vol. 206; p. 757.
French Oil Mill Machinery Company. (See Faherty, Michael W., assignor.)
Fresh, Henry, Cumberland, Md. Brake. No. 1,110,767; Sept. 15; Gaz. vol. 206; p. 757.
Fretz, Aaron, Edmond, Okla. Speed-changing device. No. 1,112,205; Sept. 29; Gaz. vol. 206; p. 1335.
Fretz, Samuel S., Jr. (See Hartzell, Morris H., assignor.)
Freund, Hans R. (See Freund, Leonhart H. and H. R.)
Freund, Leonhart H. and H. R., New York, N. Y. Kaleidoscopic container. No. 1,109,123; Sept. 1; Gaz. vol. 206; p. 93.
Frey, Erwin S., Brooklyn, and F. Marriott, Wood Haven, N. Y. Cake-turner. No. 1,109,523; Sept. 1; Gaz. vol. 206; p. 233.
Frey, Herbert H., Chicago, Ill. Apparatus for compressing air. No. 1,108,984; Sept. 1; Gaz. vol. 206; p. 44.
Friday, Wilbur L., Beaver Dam, Wis. Harvester. No. 1,109,916; Sept. 8; Gaz. vol. 206; p. 416.
Friedlaender, Eugene, Braddock, Pa. Insulator. No. 1,111,570; Sept. 22; Gaz. vol. 206; p. 1079.
Friedman, Leslie H., St. Kilda, Melbourne, Victoria, Australia. Spring-motor-overwinding preventer. No. 1,109,569; Sept. 1; Gaz. vol. 206; p. 248.
Friedrich, Edward, San Antonio, Tex. Display-counter. No. 1,108,985; Sept. 1; Gaz. vol. 206; p. 45.
Friel, John J., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa. Conveyer. No. 1,109,284; Sept. 1; Gaz. vol. 206; p. 152.
Friesner, John H. (See Tate, Thomas L., assignor.)
Frigid Fluid Company. (See Davis, Frederick W., assignor.)
Frigid Fuel Co. (See Miller, Frederick W., assignor.)
Fritz, Osville J., Weisenburg, Pa. Insulator. No. 1,109,058; Sept. 1; Gaz. vol. 206; p. 72.
Frosterus, Andres L., Eureka, Cal. Gage for sewing-machines. No. 1,111,651; Sept. 22; Gaz. vol. 206; p. 1107.
Froussard, Albert F., St. Louis, Mo. Tube-cleaner. No. 1,110,319; Sept. 15; Gaz. vol. 206; p. 599.
Fryling, Harry W., Lowell, N. C. Electric-operated alarm. No. 1,111,652; Sept. 22; Gaz. vol. 206; p. 1108.
Fuchs, Ernesto, Guadalajara, Mexico. Mold for plastic material. No. 1,112,284; Sept. 29; Gaz. vol. 206; p. 1362.
Fulford, Harry. (See Reiter and Fulford.)
Fulmele, John T., Wilmington, Del. Car-fender. No. 1,112,206; Sept. 29; Gaz. vol. 206; p. 1335.
Fulmer, Albert P., and F. M. Nebinger, Wilmington, Del. Bottle-closure. No. 1,109,570; Sept. 1; Gaz. vol. 206; p. 248.
Fulper, William H., Flemington, N. J. Amusement apparatus. No. 1,111,533; Sept. 22; Gaz. vol. 206; p. 1066.
Fulton, Louis B., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburgh, Pa. Gas relief-valve. No. 1,110,320; Sept. 15; Gaz. vol. 206; p. 599.
Fulton Manufacturing Company. (See Adams, Arthur J., assignor.)
Fulton, William H., New York, N. Y. Electric heater. No. 1,111,790; Sept. 29; Gaz. vol. 206; p. 1193.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting-machine. No. 1,111,255; Sept. 22; Gaz. vol. 206; p. 971.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon soles. No. 1,111,791; Sept. 29; Gaz. vol. 206; p. 1193.
Furth, George W., Cleveland, Ohio. Baling-tack. No. 1,109,746; Sept. 8; Gaz. vol. 206; p. 356.
G. & W. Electric Specialty Co. (See Williams, Paul F., assignor.)
Gabby, Charles E., Cheney, Wash. Drying-rack. No. 1,111,892; Sept. 29; Gaz. vol. 206; p. 1231.
Gabel, Joseph A., Chehalis, Wash. Joint. No. 1,110,621; Sept. 15; Gaz. vol. 206; p. 707.
Gadley, Alfred E., Montreal, Quebec, Canada. Box-lifting device. No. 1,111,893; Sept. 29; Gaz. vol. 206; p. 1231.
Gaertner, Gottfried, Newark, N. J. Fly-paper holder. No. 1,109,571; Sept. 1; Gaz. vol. 206; p. 249.
Gaggins, William H., Philadelphia, Pa. Shoe-polishing apparatus. No. 1,110,384; Sept. 15; Gaz. vol. 206; p. 623.
Gaggins, William H., Philadelphia, Pa. Shoe-polishing apparatus. No. 1,110,385; Sept. 15; Gaz. vol. 206; p. 623.
Gaggins, William H., Philadelphia, Pa. Shoe-rest. No. 1,110,386; Sept. 15; Gaz. vol. 206; p. 623.
Gale, Roy F., Fort Wayne, Ind. Telegrapn-transmitter. No. 1,109,411; Sept. 1; Gaz. vol. 206; p. 198.
Galey, John I. (See Hale and Galey.)
Gall, Adolph F., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Apparatus for producing motion-picture films. No. 1,109,017; Sept. 8; Gaz. vol. 206; p. 416.
Gallagher, Bernard, Lynn, Mass. Casting apparatus. No. 1,109,572; Sept. 1; Gaz. vol. 206; p. 249.
Gallagher, Joseph D., Glen Ridge, assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Back for brake-shoes. No. 1,111,017; Sept. 22; Gaz. vol. 206; p. 889.
Gallaher, Wallace G., Salida, Colo. Hay gathering and stacking machine. No. 1,109,674; Sept. 8; Gaz. vol. 206; p. 329.
Galley, Elmer T. (See Somers, Clinton E., assignor.)
Galloway, Charles N., Neersville, Va. Rural mail-box. No. 1,112,129; Sept. 29; Gaz. vol. 206; p. 1307.
Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Centering means for feed-guides. No. 1,109,573; Sept. 1; Gaz. vol. 206; p. 250.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Web-guiding device. No. 1,112,061; Sept. 29; Gaz. vol. 206; p. 1284.
Gamble, Frederick O., Chicago, Ill. Tool for using dental floss. No. 1,110,680; Sept. 15; Gaz. vol. 206; p. 728.
Gamble, Hugh A., Greenville, Miss. Electric heater. No. 1,110,919; Sept. 15; Gaz. vol. 206; p. 812.
Gardner & Highet Co. (See Gardner, Percy, assignor.)
Gardner, Percy, assignor to Gardner & Highet Co., New York, N. Y. Ribbon-package. No. 1,112,062; Sept. 29; Gaz. vol. 206; p. 1284.
Garford, Arthur L., assignor to The Garford Company, Elyria, Ohio. Fender. No. 1,110,433; Sept. 15; Gaz. vol. 206; p. 640.
Garford Company, The. (See Garford, Arthur L., assignor.)
Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)
Garlington, Jesse M., Ottawa, Ill. Match-box. No. 1,110,321; Sept. 15; Gaz. vol. 206; p. 600.
Garman, Raymond H., Chicago, Ill. Book for children. No. 1,110,434; Sept. 15; Gaz. vol. 206; p. 641.
Garratt, James H., assignor of one-half to H. G. Brooks, Rochester, N. Y. Ejecting mechanism for presses. No. 1,108,898; Sept. 1; Gaz. vol. 206; p. 12.
Garraway, Lee O., Memphis, Tenn. Folding step-ladder. No. 1,108,896; Sept. 1; Gaz. vol. 206; p. 12.
Garrett Go-Cart & Carriage Company. (See Layton and Lowe, assignors.)
Garrett, Robert T., Philadelphia, Pa. Time-regulator for dampers of furnaces, ranges, or stoves. No. 1,111,713; Sept. 22; Gaz. vol. 206; p. 1129.
Garrett, Walter B. (See Hoffman and Garrett.)
Garst, Julius. (See Johnson, Lawrence E., assignor.)
Garvey, Thomas A. (See Bradshaw and Garvey.)
Gately, Michael F., Winslow, Nebr. Anchoring device. No. 1,110,435; Sept. 15; Gaz. vol. 206; p. 641.
Gates, Charles, assignor of one-half to H. G. Trompeter, Louisville, Ky. Safety hat-pin. No. 1,111,741; Sept. 29; Gaz. vol. 206; p. 1172.
Gates, George R., Beloit, Kans. Steering-gear. No. 1,111,534; Sept. 22; Gaz. vol. 206; p. 1066.
Gates, Laurie, and T. F. Graham, Tampa, Fla. Trousers-holder. No. 1,110,387; Sept. 15; Gaz. vol. 206; p. 624.
Gates, Louis W., West Haven, assignor to C. Cowles & Co., New Haven, Conn. Window-operator. No. 1,109,574; Sept. 1; Gaz. vol. 206; p. 250.
Gee, Albert, Oak Lane, assignor of one-half to W. P. Moore, Elkins Park, Pa. Pattern-controlled stop mechanism for knitting-machines. No. 1,110,322; Sept. 15; Gaz. vol. 206; p. 600.
Geeb, Frank, Long Island City, N. Y. Musical instrument. No. 1,111,256; Sept. 22; Gaz. vol. 206; p. 971.
Geer, Langdon. (See Nielsen and Geer.)
Gefter, Israel, Meriden, Conn. Percolating coffee-pot. No. 1,109,918; Sept. 8; Gaz. vol. 206; p. 417.
Gehman, John, Brutus, Mich. Safety device for elevators. No. 1,109,412; Sept. 1; Gaz. vol. 206; p. 198.
Gehrandt, Gustave R., Chicago, Ill. Smelting and purifying iron. No. 1,110,540; Sept. 15; Gaz. vol. 206; p. 677.
Gehrke, Edward A., Lincoln, Nebr. Ball-cock for flush-tanks. No. 1,110,436; Sept. 15; Gaz. vol. 206; p. 641.
Geisler, Henry G., Syracuse, N. Y. Reclining-chair. No. 1,108,897; Sept. 1; Gaz. vol. 206; p. 12.
Gelow, Albert, assignor to The Warren Featherbone Company, Three Oaks, Mich. Collar-supporter. No. 1,110,622; Sept. 15; Gaz. vol. 206; p. 707.
Gendron Wheel Company. (See Vogel, Joshua F., assignor.)
General Electric Company. (See Alexanderson, Ernst F. W., assignor.)
General Electric Company. (See Barringer, Lawrence E., assignor.)
General Electric Company. (See Carichoff, Eugene R., assignor.)
General Electric Company. (See Chatain, Henri G., assignor.)
General Electric Company. (See Creighton, Elmer E. F., assignor.)
General Electric Company. (See Dechamps, Heinrich, assignor.)
General Electric Company. (See Ford, Stanley E., assignor.)
General Electric Company. (See Frank, John J., assignor.)
General Electric Company. (See Hanke, Frank C., assignor.)
General Electric Company. (See Harraden, Walter L., assignor.)
General Electric Company. (See Hewlett, Edward M., assignor.)
General Electric Company. (See Holden, Frank, assignor.)
General Electric Company. (See Johnson, Charles J., assignor.)
General Electric Company. (See Junggren, Oscar, assignor.)
General Electric Company. (See Kieser, Walter, assignor.)
General Electric Company. (See Krämer, Bernhard, assignor.)
General Electric Company. (See Kreusler, Hans, assignor.)
General Electric Company. (See Laycock, Harry A., assignor.)
General Electric Company. (See Lemp, Hermann, assignor.)
General Electric Company. (See Loewenstein, Louis C., assignor.)
General Electric Company. (See McFarland, Edward H., assignor.)
General Electric Company. (See Murphy, Edwin J., assignor.)
General Electric Company. (See Naylor, Charles H., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Ruder, William E., assignor.)
General Electric Company. (See Sargent, Howard R., assignor.)
General Electric Company. (See Spiegel, Julius, assignor.)
General Electric Company. (See Teufl, Franz C., assignor.)
General Electric Company. (See Thomson, Elihu, assignor.)
General Electric Company. (See Uberlée, Erich, assignor.)
General Electric Company. (See Weintraub, Ezechiel, assignor.)
General Electric Company. (See Westendarp, Henry O., assignor.)
General Electric Company. (See White, Harold E., assignor.)
General Electric Company. (See Wilkinson, James, assignor.)
General Electric Company. (See Wright, Gilbert, assignor.)
General Fireproofing Company, The. (See White, Herbert E., assignor.)
General Vehicle Company. (See Queeney, Frank E., assignor.)
George A. Ohl & Co. (See Ohl, George A., Jr., assignor.)
George S. Kelley Company. (See Lange, Albert, assignor.)
George, Samuel G., Conrad, Mont. Threshing-machine. No. 1,110,768; Sept. 15; Gaz. vol. 206; p. 758.
Gerlach, Herman, *et al.* (See Ellis, Ed, assignor.)
German, Solomon, Reisterstown, Md. Garment-fastener. No. 1,109,215; Sept. 1; Gaz. vol. 206; p. 127.
Gerstenslager, George, Wooster, Ohio. Road-cart. No. 1,110,681; Sept. 15; Gaz. vol. 206; p. 729.
Gessner, William, West Hoboken, N. J. Holder for playing-cards. No. 1,109,524; Sept. 1; Gaz. vol. 206; p. 233.
Gibbs, Oscar D., Spokane, Wash. Box-lidding machine. No. 1,111,894; Sept. 29; Gaz. vol. 206; p. 1231.
Gibson, Adelbert R., and G. H. Ferguson, Los Angeles, Cal. Vibratory bed. No. 1,110,920; Sept. 15; Gaz. vol. 206; p. 812.
Gibson, Cecil E., Indianapolis, Ind. Automobile. No. 1,111,018; Sept. 22; Gaz. vol. 206; p. 889.
Gibson, Henry C., Little Rock, Ark. Manicure-stick. No. 1,112,207; Sept. 29; Gaz. vol. 206; p. 1336.
Gibson, William J., *et al.* (See McCoy, Charles W., assignor.)
Gidanski, Charles M., New York, N. Y. Rail-supporting structure. No. 1,110,124; Sept. 8; Gaz. vol. 206; p. 491.
Giegerich, Albert, Dubuque, Iowa. Device for advertising. No. 1,111,957; Sept. 29; Gaz. vol. 206; p. 1250.
Giertsen, Waldemar. (See Nelson, Arthur W., assignor.)
Giertsen, Waldemar, Chicago, Ill. Chain-feed saw. No. 1,109,747; Sept. 8; Gaz. vol. 206; p. 356.
Giese, Charles H., Newark, N. J. Water-heating appliance for gas-stoves. No. 1,111,148; Sept. 22; Gaz. vol. 206; p. 934.
Giesebrecht, Frederick E. M. (See Woods and Giesebrecht.)
Gieseler, William H., Passaic, N. J. Boiler for steam-radiators. No. 1,109,983; Sept. 8; Gaz. vol. 206; p. 440.
Giglio, Alfonso de, Copenhagen, Denmark. Kinematographic apparatus utilizing the usual photographic films. No. 1,109,575; Sept. 1; Gaz. vol. 206; p. 251.
Gilbert, Walter V., Cambridge, England. Means for closing and locking port-holes and the like. No. 1,111,571; Sept. 22; Gaz. vol. 206; p. 1079.
Gilchrist Company, The. (See Gilchrist, Raymond B., assignor.)
Gilchrist, Raymond B., assignor to The Gilchrist Company, Newark, N. J. Ice-cream disher. No. 1,109,576; Sept. 1; Gaz. vol. 206; p. 251.
Gilchrist, Raymond B., assignor to The Gilchrist Company, Newark, N. J. Ice-cream ladle. No. 1,109,577; Sept. 1; Gaz. vol. 206; p. 252.
Gilchrist, Raymond B., assignor to The Gilchrist Company, Newark, N. J. Ice-cream ladle. No. 1,109,578; Sept. 1; Gaz. vol. 206; p. 252.
Gilchrist, Raymond B., assignor to The Gilchrist Company, Newark, N. J. Ice-cream disher. No. 1,109,579; Sept. 1; Gaz. vol. 206; p. 253.
Gilles, Georges, Fribourg, Switzerland. Lightning-arrester. No. 1,111,453; Sept. 22; Gaz. vol. 206; p. 1038.
Giles, Julian A., Derby, assignor to The Duplex Paper Box Machine Company, New Haven, Conn. Paper-box machine. No. 1,111,572; Sept. 22; Gaz. vol. 206; p. 1080.
Gill, Edwin R., Yonkers, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company. Signaling system. (Reissue.) No. 13,795; Sept. 1; Gaz. vol. 206; p. 281.

Gill, Edwin R., Yonkers, N. Y., assignor, by mesne assignments, to The Hall Switch & Signal Company. Automatic signal-operator. (Reissue.) No. 13,800; Sept. 15; Gaz. vol. 206; p. 844.
Gill, Edwin R., Yonkers, N. Y., assignor, by mesne assignments, to The Hall Switch & Signal Company. Selective signaling system. No. 1,111,792; Sept. 29; Gaz. vol. 206; p. 1194.
Gill, William A., assignor of one-half to F. A. Cook, Portland, Oreg. Valve mechanism for gas-engines. No. 1,110,921; Sept. 15; Gaz. vol. 206; p. 812.
Gillespie, George W. (See Rookledge and Gillespie.)
Gillespie, Robert A. (See Scholl and Gillespie.)
Gillette, George F., Detroit, Mich. Engine-valve. No. 1,111,827; Sept. 29; Gaz. vol. 206; p. 1206.
Gillette, King C., Brookline, Mass. Safety-razor. No. 1,111,721; Sept. 22; Gaz. vol. 206; p. 1132.
Gilson, Albert F. F., Closter, N. J., assignor to Western Electric Company, New York, N. Y. Switch-key. No. 1,109,919; Sept. 8; Gaz. vol. 206; p. 417.
Ginaca, Henry G., assignor to Hawaiian Pineapple Company, Ltd., Honolulu, Hawaii. Machine for treating fruit. No. 1,112,130; Sept. 29; Gaz. vol. 206; p. 1308.
Girard, Louis B., and J. P. Whitmore, assignors to Girard Manufacturing Company, Los Angeles, Cal. Shade-adjuster. No. 1,112,000; Sept. 29; Gaz. vol. 206; p. 1264.
Girard Manufacturing Company. (See Girard and Whitmore, assignors.)
Giroud, Felipe, deceased; E. E. Chapman, executrix, New York, N. Y., assignor to Package Machinery Company. Packaging-machine. No. 1,110,125; Sept. 8; Gaz. vol. 206; p. 491.
Girtanner, Alexander, St. Louis, Mo. Packing-ring for pistons. No. 1,111,063; Sept. 22; Gaz. vol. 206; p. 904.
Girtanner, Alexander, assignor of one-half to J. H. Reeder, St. Louis, Mo. Piston-packing for gas-engines. No. 1,111,062; Sept. 22; Gaz. vol. 206; p. 904.
Girtanner, Frederick, St. Louis, Mo. Water-heater. No. 1,110,444; Sept. 15; Gaz. vol. 206; p. 659.
Givulinovich, Lawrence, Seattle, Wash. Butter-cutting machine. No. 1,111,373; Sept. 22; Gaz. vol. 206; p. 1011.
Glassford, George W., Jr., Cleveland, Ohio. Dust-collector. No. 1,109,959; Sept. 1; Gaz. vol. 206; p. 72.
Glauber, Joseph H., Cleveland, Ohio. Basin, bath-cock, and other plumbing connection. No. 1,109,920; Sept. 8; Gaz. vol. 206; p. 418.
Gleue, William F. (See Roenius and Gleue.)
Glines, Frederick S., Swampscott, assignor to L. Muther, Newton, Mass. Eyelet-setting device. No. 1,110,258; Sept. 8; Gaz. vol. 206; p. 538.
Glinski, Barney J. (See Wajda, Floryan, assignor.)
Globensky, Ernest C., Coldwater, Mich. Nursery-chair. No. 1,111,305; Sept. 22; Gaz. vol. 206; p. 988.
Glowacki, John B., Chicago, Ill. Weather and dust proofing device. No. 1,108,986; Sept. 1; Gaz. vol. 206; p. 45.
Goddard, Fred L., assignor to Currier & Roby, New York, N. Y. Salad-dressing mixer. No. 1,111,374; Sept. 22; Gaz. vol. 206; p. 1011.
Godfree, Ernest G., Sandringham, near Melbourne, Victoria, Australia. Automatic toll-recorder for telephone systems. No. 1,111,742; Sept. 29; Gaz. vol. 206; p. 1173.
Goetz, Henry. (See Rolland, Frederick W., assignor.)
Goetz, Henry, Chicago, Ill. Slot and slug for vending devices. No. 1,111,793; Sept. 29; Gaz. vol. 206; p. 1194.
Goetz, Henry F., assignor to Waterbury Mfg. Co., Waterbury, Conn. Bath and basin waste. No. 1,111,375; Sept. 22; Gaz. vol. 206; p. 1011.
Goff, Samuel B., Camden, N. J. Cooking apparatus. No. 1,109,828; Sept. 8; Gaz. vol. 206; p. 383.
Goffin, Jules, and V. de Longueville, Molenbeek, St. Jean, Belgium. Mold for shaping glass plates. No. 1,111,958; Sept. 29; Gaz. vol. 206; p. 1250.
Gohlke, Max, Berlin, Germany. Ball-bearing. No. 1,108,859; Sept. 1; Gaz. vol. 206; p. 13.
Gold, Egbert H., Chicago, Ill. Low-pressure steam-heating system. No. 1,109,675; Sept. 8; Gaz. vol. 206; p. 330.
Gold, Maurice. (See Plomgren and Gold.)
Goldberg Calculating Machine Company. (See Goldberg, Hyman E., assignor.)
Goldberg, Hyman E., assignor to Goldberg Calculating Machine Company, Chicago, Ill. Calculating-machine. No. 1,112,063; Sept. 29; Gaz. vol. 206; p. 1285.
Goldberg, Max W., Brillion, Wis. Ladle-holder. No. 1,110,049; Sept. 8; Gaz. vol. 206; p. 463.
Golden, Robert, Meehan Junction, Miss. Transmission-gearing. No. 1,110,437; Sept. 15; Gaz. vol. 206; p. 642.
Gomber, George W., Conyngham, Pa. Vending-machine. No. 1,111,573; Sept. 22; Gaz. vol. 206; p. 1080.
Gonzalez y Sebasco, Tomas, Habana, Cuba. Line-protector for telegraph and telephone systems. No. 1,111,574; Sept. 22; Gaz. vol. 206; p. 1081.
Gooch, Benjamin, Scio, Oreg. Dispensing-can. No. 1,110,682; Sept. 15; Gaz. vol. 206; p. 729.
Good, John, New York, N. Y. Tension-regulator. No. 1,109,580; Sept. 1; Gaz. vol. 206; p. 253.
Goodloe, Higgins L., Marshall, Mo. Cravat-shield. No. 1,109,748; Sept. 8; Gaz. vol. 206; p. 356.
Goodwin, Ella, Chicago, Ill. Window-cleaner. No. 1,111,575; Sept. 22; Gaz. vol. 206; p. 1081.
Goodwin, Frank J., Lexington, Ky. Vise. No. 1,110,683; Sept. 15; Gaz. vol. 206; p. 729.
Goodwin, Hal, Chicago, Ill. Fire-preventive device for motion-picture apparatus. No. 1,111,376; Sept. 22; Gaz. vol. 206; p. 1011.
Goodyear, Edward J., Wilkinsburg, Pa. Air-inlet device for explosive-engines. No. 1,110,922; Sept. 15; Gaz. vol. 206; p. 813.
Goodyear Tire and Rubber Company, The. (See Kuentzel, Curt, assignor.)
Goodyear Tire and Rubber Company, The. (See Nall and Tyler, assignors.)
Gordon, Arthur M., Plymouth, assignor to Seth Thomas Clock Co., Thomaston, Conn. Tower-clock escapement. No. 1,109,581; Sept. 1; Gaz. vol. 206; p. 253.
Gordon, Francis H., Harrisburg, Pa. Fly-trap. No. 1,112,064; Sept. 29; Gaz. vol. 206; p. 1285.
Gordon Hollow Blast Grate Company, The. (See Tower, Ray J., assignor.)
Gordon, Raymond D., and L. O. Hudson, Tulsa, Okla. Igniter for explosive-engines. No. 1,109,829; Sept. 8; Gaz. vol. 206; p. 383.
Gore, Warren W., Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill. Internal-combustion engine. No. 1,110,438; Sept. 15; Gaz. vol. 206; p. 642.
Gorham, Edgar W., Lyndonville, Vt. Broom-holder. No. 1,109,413; Sept. 1; Gaz. vol. 206; p. 109.
Gorman, John H., Salisbury, N. C. Collapsible hogshead. No. 1,112,001; Sept. 29; Gaz. vol. 206; p. 1264.
Gorton, Charles E., Montclair, N. J., assignor to E. Muller, New York, N. Y. Feed-water cleanser. No. 1,109,582; Sept. 1; Gaz. vol. 206; p. 254.
Gorton, Robert, Newton, Mass. Clasp for hose-supporters. No. 1,109,583; Sept. 1; Gaz. vol. 206; p. 254.
Goslin, Clarence A. (See Sharkey, William C., assignor.)
Goss, George W., St. Louis, Mo., assignor to L. M. Morden, Waterbury, Conn. Loose-leaf binder. No. 1,111,377; Sept. 22; Gaz. vol. 206; p. 1012.
Goss Printing Press Company, The. (See Johnston, Robert T., assignor.)
Goss Printing Press Company, The. (See Raabe and Terrey, assignors.)
Gossett, Edgar C. and E. E., Jackson, Ga. Safety attachment for trolley-poles. No. 1,110,485; Sept. 15; Gaz. vol. 206; p. 659.
Gossett, Ernest E. (See Gossett, Edgar C. and E. E.)
Gott, John, Hove, Brighton, England, assignor to Commercial Cable Company, New York, N. Y. Quadruplex telegraph system. No. 1,109,830; Sept. 8; Gaz. vol. 206; p. 384.
Gottschalk, Albert, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill. Door-operating apparatus. No. 1,111,959; Sept. 29; Gaz. vol. 206; p. 1251.
Goughnour, Charles L., assignor to The United Electric Company, Canton, Ohio. Suction cleaning-nozzle. No. 1,110,439; Sept. 15; Gaz. vol. 206; p. 642.
Gould Coupler Company. (See Davis, Donald C., assignor.)
Goulding, Benjamin J. J., London, England, assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J. Apparatus for shaving curved stereotype-plates. No. 1,109,831; Sept. 8; Gaz. vol. 206; p. 384.
Gover, Harry S., Bel Air, Md. Spring-wheel. No. 1,112,285; Sept. 29; Gaz. vol. 206; p. 1363.
Gowlland, Charles S. (See Gowlland, William and C. S.)
Gowlland, William and C. S., Croydon, England. Ophthalmometer. No. 1,110,197; Sept. 8; Gaz. vol. 206; p. 517.
Grabe, Georg, Nikolassee, near Berlin, assignor to Siemens & Halske A. G., Berlin, Germany. Automatic telephone-exchange system. No. 1,109,216; Sept. 1; Gaz. vol. 206; p. 128.
Graboff, Saul, New York, N. Y. Cigar-cutter. No. 1,111,743; Sept. 29; Gaz. vol. 206; p. 1173.
Graham, Ellas, Hazel Dell, W. C. Turner, H. Foster, and H. M. Grant, Casey; said Grant assignor to W. B. Linn, Martinsville, Ill. Apparatus for dispensing gasolene, &c. No. 1,109,832; Sept. 8; Gaz. vol. 206; p. 384.
Graham, James A. (See Harris and Graham.)
Graham, Leslie B., East Chicago, Ind., assignor of one-half to C. W. Taylor, Chicago, Ill. Power-transmission gearing. No. 1,112,422; Sept. 29; Gaz. vol. 206; p. 1411.
Graham, Perry, Blaine, Wash. Tree-felling footboard. No. 1,109,749; Sept. 8; Gaz. vol. 206; p. 356.
Graham, Perry, assignor of one-third to R. F. Doan and one-third to O. Stevenson, Blaine, Wash. Cant-hook. No. 1,109,217; Sept. 1; Gaz. vol. 206; p. 128.
Graham, Samuel, Detroit, Mich. Pipe-cleanser. No. 1,110,126; Sept. 8; Gaz. vol. 206; p. 493.
Graham, Thomas F. (See Gates and Graham.)
Grahn, Henry. (See Marten, Grahn, and Andersen.)
Gramm, Benjamin A., Lima, Ohio. Power-transmission mechanism. No. 1,109,584; Sept. 1; Gaz. vol. 206; p. 254.
Granger, Alexander, Bulawayo, Rhodesia, South Africa. Pulverizing apparatus. No. 1,111,454; Sept. 22; Gaz. vol. 206; p. 1038.
Grant, Albert E., Troy, N. Y., assignor to J. M. Grant, Pittsburgh, Pa. Device for separating metal sheets. No. 1,109,676; Sept. 8; Gaz. vol. 206; p. 330.
Grant, Harvey M. (See Graham, Turner and Grant.)
Grant, John M. (See Grant, Albert E., assignor.)
Grant, Patrick. (See Cummings, Thomas G., assignor.)
Granulator Soap Company. (See Evans, Henry R., assignor.)

Grasberger, Lawrence B., Richmond, Va. Combined cigar lighter and cutter. No. 1,112,208; Sept. 29; Gaz. vol. 206; p. 1336.
Gravelle, John B., Asbury Park, N. J. Railway-brake. No. 1,108,900; Sept. 1; Gaz. vol. 206; p. 13.
Graves, Peter S., and J. I. Ollivetti, Plattsburg, N. Y. Hot-water dispenser and drinking-glass sterilizer. No. 1,109,414; Sept. 1; Gaz. vol. 206; p. 109.
Gray, Charles F., Sierra Madre, Cal., and F. S. Woodhead, Wortendyke, N. J., assignors to The Singer Manufacturing Company. Sewing-machine. No. 1,111,828; Sept. 29; Gaz. vol. 206; p. 1206.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Separable earthen insulating-pipe conduit. No. 1,110,127; Sept. 8; Gaz. vol. 206; p. 493.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Pipe-support. No. 1,110,128; Sept. 8; Gaz. vol. 206; p. 493.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Separable insulating earthen conduit. No. 1,110,129; Sept. 8; Gaz. vol. 206; p. 494.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Pipe-support. No. 1,110,130; Sept. 8; Gaz. vol. 206; p. 494.
Grean, Alexander M., assignor to Grean Shoulder Form & Pad Company, New York, N. Y. Collar-supporter. No. 1,110,769; Sept. 15; Gaz. vol. 206; p. 758.
Grean Shoulder Form & Pad Company. (See Grean, Alexander M., assignor.)
Greaves, John H., and C. G. Lucas, Newport News, Va. Chuck. No. 1,110,770; Sept. 15; Gaz. vol. 206; p. 758.
Green, Charles A., Portland, Oreg. Vehicle-body. No. 1,112,002; Sept. 29; Gaz. vol. 206; p. 1285.
Green, Charles A., Portland, Oreg. Automobile attachment. No. 1,112,003; Sept. 29; Gaz. vol. 206; p. 1285.
Green, Furney F., Coalgate, Okla. Metallic railway-tie. No. 1,110,198; Sept. 8; Gaz. vol. 206; p. 517.
Green, James D., and W. D. Konantz, Arcadia, Kans. Marking and checking attachment for corn-planters. No. 1,111,223; Sept. 22; Gaz. vol. 206; p. 960.
Green, William C., Comanche, and H. Hestand, Chickasha, Okla. Carrier and dump for peanut-diggers. No. 1,110,998; Sept. 15; Gaz. vol. 206; p. 837.
Green, William W., Niles, Mich. Automatic regulator for carbureters. No. 1,110,131; Sept. 8; Gaz. vol. 206; p. 495.
Greenawalt, John E., Denver, Colo. Sintering apparatus. No. 1,110,623; Sept. 15; Gaz. vol. 206; p. 708.
Greenburg, Albert, Oakville, Pa. Power-transmission mechanism. No. 1,109,218; Sept. 1; Gaz. vol. 206; p. 128.
Greenstreet, Charles J., Denver, Colo. Treating heavy hydrocarbon oils. No. 1,110,923; Sept. 15; Gaz. vol. 206; p. 813.
Greenstreet, Charles J., Webster Groves, Mo. Treating heavy hydrocarbon oils. No. 1,110,924; Sept. 15; Gaz. vol. 206; p. 814.
Greenstreet, Charles J., Webster Groves, Mo. Manufacturing olefins and their oxidation products. No. 1,110,925; Sept. 15; Gaz. vol. 206; p. 814.
Greenstreet, Charles J., Webster Groves, Mo. Furnace and fuel-feeding device therefor. No. 1,110,926; Sept. 15; Gaz. vol. 206; p. 814.
Greenwood, George P., Billerica, Mass. Fertilizer-distributer. No. 1,111,895; Sept. 29; Gaz. vol. 206; p. 1232.
Gregg, Byron E., Carlyle, Kans. Cultivator. No. 1,111,378; Sept. 22; Gaz. vol. 206; p. 1012.
Greist Manufacturing Company, The. (See Boyler, Emanuel J., assignor.)
Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Hydraulic rotary drilling-machine. No. 1,111,535; Sept. 22; Gaz. vol. 206; p. 1067.
Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Hydraulic rotary drilling-machine. No. 1,111,536; Sept. 22; Gaz. vol. 206; p. 1067.
Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Casing-elevator. No. 1,112,004; Sept. 29; Gaz. vol. 206; p. 1265.
Gridley, George O., Windsor, Vt. Driving mechanism for multispindle-machines. No. 1,112,209; Sept. 29; Gaz. vol. 206; p. 1337.
Grieb, Alfred, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,111,829; Sept. 29; Gaz. vol. 206; p. 1207.
Griffin, Arthur L., Middlebury, Ind. Voting-machine. No. 1,109,124; Sept. 1; Gaz. vol. 206; p. 94.
Griffin, Willis F., Cottonwood, Tex. Boll-weevil exterminator. No. 1,109,060; Sept. 1; Gaz. vol. 206; p. 73.
Griffith, Charles A., Pruden, Tenn. Mine-car-dumping apparatus. No. 1,111,830; Sept. 29; Gaz. vol. 206; p. 1207.
Griffiths, George J., and C. H. Roderick, Woodstock, assignors to The Oliver Typewriter Company, Chicago, Ill. Ribbon-actuating mechanism for type-writers. No. 1,110,132; Sept. 8; Gaz. vol. 206; p. 495.
Grimes, Early T., Enterprise, Ala. Plow-scraper-setting tool. No. 1,111,896; Sept. 29; Gaz. vol. 206; p. 1232.
Grimes, James B., assignor to The Ingle System Company, Dayton, Ohio. Coin-receptacle. No. 1,110,771; Sept. 15; Gaz. vol. 206; p. 759.
Grip Nut Company. (See Flint, Louis J., assignor.)
Grip Nut Company. (See Hibbard, Edward R., assignor.)
Groetschel, Julius, Vogtland, Germany. Shuttle embroidering-machine. No. 1,112,131; Sept. 29; Gaz. vol. 206; p. 1308.
Grosvenor, Herbert J. (See Corey and Grosvenor.)
Grotenhuis, Edward J. te. (See Jordan and Grotenhuis.)
Grover, Frederick, assignor to The Forgrove Machinery Company Limited, Leeds, England. Tablet-wrapping machine. No. 1,110,133; Sept. 8; Gaz. vol. 206; p. 496.
Gruber, Louis, assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,108,901; Sept. 1; Gaz. vol. 206; p. 13.
Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Motor-vehicle construction. No. 1,110,134; Sept. 8; Gaz. vol. 206; p. 496.
Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Motor-vehicle construction. No. 1,110,199; Sept. 8; Gaz. vol. 206; p. 517.
Gruetter, John R., assignor to The Loew Manufacturing Company, Cleveland, Ohio. Bottle-cleaning apparatus. No. 1,110,927; Sept. 15; Gaz. vol. 206; p. 815.
Grumme, Frederick, Indianapolis, Ind. Sanitary drinking-fountain. No. 1,109,219; Sept. 1; Gaz. vol. 206; p. 129.
Gudmand-Hoyer, Julius V., assignor of one-half to H. H. La Vercombe, Detroit, Mich. Truing gears. No. 1,111,064; Sept. 22; Gaz. vol. 206; p. 905.
Guenette, Leoda, Fitchburg, Mass. Clothes-pin. No. 1,109,984; Sept. 8; Gaz. vol. 206; p. 440.
Guiffre, Gaetano, Capitol View, Md. Non-slipping low shoe. No. 1,110,624; Sept. 15; Gaz. vol. 206; p. 708.
Guill, Charles W., Phoenix, Ariz. Signaling device. No. 1,112,286; Sept. 29; Gaz. vol. 206; p. 1363.
Guingrich, Emanuel E., and C. L. Miller, Carlock, Ill. Machine element. No. 1,110,050; Sept. 8; Gaz. vol. 206; p. 463.
Gulleford, Richard H., St. Albans, Christchurch, New Zealand. Pedal for bicycles and the like. No. 1,109,585; Sept. 1; Gaz. vol. 206; p. 255.
Gunderman, Martha J., Boulder, Colo. Appliance for removing facial defects. No. 1,110,772; Sept. 15; Gaz. vol. 206; p. 759.
Gunn, John K., Utica, N. Y. Engine. No. 1,112,287; Sept. 29; Gaz. vol. 206; p. 1363.
Guye, Charles E., Geneva, Switzerland, assignor to Southern Power Company, Charlotte, N. C. Stabilizing means for electric-arc furnaces. No. 1,109,330; Sept. 1; Gaz. vol. 206; p. 168.
H. Mueller Mfg. Co. (See Mueller, Philip, assignor.)
H. Mueller Mfg. Co. (See Mueller and Schuermann, assignors.)
H. & B. American Machine Company. (See Jackson, John, assignor.)
H. H. Franklin Manufacturing Company. (See Brown, William H., assignor.)
H. J. Keith Company. (See Keith, Simeon C., Jr., assignor.)
H. P. Hood & Sons. (See Hood, Charles H., assignor.)
H. T. Paiste Company. (See Paiste, Henry T., assignor.)
H. W. Cooper Saddlery Hardware Mfg. Company. (See Cooper, Charles J., assignor.)
Haas, Philip, Dayton, Ohio. Tank-flushing device. No. 1,111,744; Sept. 29; Gaz. vol. 206; p. 1173.
Haas, Philip, Dayton, Ohio. Flushing device for water-closets. No. 1,111,745; Sept. 29; Gaz. vol. 206; p. 1174.
Haas, Philip, Dayton, Ohio. Ventilating water-closet. No. 1,111,746; Sept. 29; Gaz. vol. 206; p. 1174.
Haas, Philip, Dayton, Ohio. Water-closet valve. No. 1,111,747; Sept. 29; Gaz. vol. 206; p. 1175.
Haase, Heinrich, Rathenow, Germany. Frame for spectacles, eyeglasses, and the like. No. 1,109,285; Sept. 1; Gaz. vol. 206; p. 152.
Habrle, Jules, San Francisco, Cal. Bread-cutter. No. 1,110,773; Sept. 15; Gaz. vol. 206; p. 759.
Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack pulling and resetting machine. No. 1,109,220; Sept. 1; Gaz. vol. 206; p. 129.
Hadley, Artemus N., Indianapolis, Ind. Traction-wheel. No. 1,109,985; Sept. 8; Gaz. vol. 206; p. 441.
Haff, Maximilian M. (See Willson and Haff.)
Hagadone, Clinton A., Western Springs, Ill., assignor to International Harvester Company. Tongue-truck. No. 1,110,298; Sept. 8; Gaz. vol. 206; p. 553.
Hagen, Louis R., Minneapolis, Minn. Box-seal cutter. No. 1,109,286; Sept. 1; Gaz. vol. 206; p. 152.
Hager, Henry F., assignor of one-half to J. H. Kosnick, Chicago, Ill. Bed-spring fabric. No. 1,110,774; Sept. 15; Gaz. vol. 206; p. 760.
Hagner, Frederick H., Corpus Christi, Tex., assignor of one-half to F. W. Davis, Pine Plains, N. Y. Chair for sewing-machines and the like. No. 1,110,486; Sept. 15; Gaz. vol. 206; p. 660.
Hahn, Jacob, Buffalo, N. Y. Producing coloring-matter for paper-making and similar manufactures. No. 1,110,775; Sept. 15; Gaz. vol. 206; p. 760.
Hahn, John N., Cleveland, Ohio. Machine for pasting pasteboard packages. No. 1,111,379; Sept. 22; Gaz. vol. 206; p. 1012.
Hähnle, Max. (See Edwin, Hähnle, and Strasser.)
Haines, Jones & Cadbury Inc. (See Sharp, Joseph W., Jr., assignor.)
Hajek, William F., Chicago, Ill. Fire-escape. No. 1,111,794; Sept. 29; Gaz. vol. 206; p. 1195.

Hale, John W., and J. I. Galey, Grand Prairie, Tex. Boll breaker and cleaner. No. 1,110,776; Sept. 15; Gaz. vol. 206; p. 760.
H[illegible]ward S., Rochester, N. Y. Register. No. 1,108,902; Sept. 1; Gaz. vol. 206; p. 14.
Hall, Elwin H., Pawhuska, Okla. Rail-joint. No. 1,110,200; Sept. 8; Gaz. vol. 206; p. 518.
Hall, Hiram T., Oakland, Cal. Fire-fighting system. No. 1,109,833; Sept. 8; Gaz. vol. 206; p. 385.
Hall, John B., Philadelphia, Pa. Maturing immature and frost-bitten cotton-bolls. No. 1,110,928; Sept. 15; Gaz. vol. 206; p. 815.
Hall Switch & Signal Company. (See Gill, Edwin R., assignor.) (Reissue.)
Hallett, William R., Castor, Alberta, Canada. Rotary valve for explosive-engines. No. 1,109,628; Sept. 1; Gaz. vol. 206; p. 271.
Halogen Products Company. (See Aylsworth, Jonas W., assignor.)
Halpern, Carl, Newark, N. J. Photographic-printing desk. No. 1,112,210; Sept. 29; Gaz. vol. 206; p. 1337.
Halsall, William J., Greenfield, Ind. Rolling-mill. No. 1,110,625; Sept. 15; Gaz. vol. 206; p. 708.
Halsey, C. H. (See Long, William T., assignor.)
Halverson, Lars B., Flandreau, S. D. Penholder for multi-color-writing. No. 1,111,140; Sept. 22; Gaz. vol. 206; p. 934.
Ham, Perley D., Garfield, N. J. Metallic container. No. 1,111,576; Sept. 22; Gaz. vol. 206; p. 1081.
Hamachek, Frank, Kewaunee, Wis. Device for expanding and contracting chains. No. 1,109,834; Sept. 8; Gaz. vol. 206; p. 385.
Hamberg, John O. (See Sutton, Crowl, and Hamberg.)
Hamer, Walter. (See Birch and Hamer.)
Hames, Harry C., assignor to The Thomas & Armstrong Company, London, Ohio. Ventilator. No. 1,111,831; Sept. 29; Gaz. vol. 206; p. 1208.
Hamilton, Belton T., Finchley, England. Carbureter. No. 1,111,224; Sept. 22; Gaz. vol. 206; p. 961.
Hamilton, Benjamin J., Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Manufacturing boots and shoes. No. 1,110,323; Sept. 15; Gaz. vol. 206; p. 601.
Hamilton, Benjamin J., Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Upper-stretching machine. No. 1,110,324; Sept. 15; Gaz. vol. 206; p. 601.
Hamilton, Charles F., Portland, Oreg., assignor to Adjustable Liquid Gauge Company. Adjustable liquid-gage. No. 1,111,455; Sept. 22; Gaz. vol. 206; p. 1038.
Hamilton, John E., Smithton, Pa. Tooth-brush. No. 1,111,019; Sept. 22; Gaz. vol. 206; p. 889.
Hamilton, Karl M., Davenport, Iowa, assignor to American Car and Foundry Company, St. Louis, Mo. Bolster. No. 1,109,629; Sept. 1; Gaz. vol. 206; p. 271.
Hamilton Scale & Tank Company, The. (See Emanuel, Benjamin D., assignor.)
Hamlin, Horace P. (See Upson and Hamlin.)
Hamlyn, William, and H. Miller, Brydone, New Zealand. Hame-hook. No. 1,112,132; Sept. 29; Gaz. vol. 206; p. 1308.
Hammann, George C., Cincinnati, Ohio. Arch-support. No. 1,112,005; Sept. 29; Gaz. vol. 206; p. 1266.
Hammarberg, Albert, *et al.* (See Hultgreen, Charles E., assignor.)
Hammell, John, Chicago, Ill. Gas-engine. No. 1,109,987; Sept. 1; Gaz. vol. 206; p. 46.
Hammond, Jennie, Farmingdale, N. Y. Carpet-sweeper attachment. No. 1,110,929; Sept. 15; Gaz. vol. 206; p. 815.
Hammond, Wilber F., Jr., Bridgeport, Conn. Keyhole-guide. No. 1,112,133; Sept. 29; Gaz. vol. 206; p. 1309.
Hampton, Samuel B. (See Filstead, Charles D., assignor.)
Hampton, William B., Springfield, Mo. Check-row planter. No. 1,111,577; Sept. 22; Gaz. vol. 206; p. 1082.
Hancock, Albert B., Dubuque, Iowa. Sad-iron. No. 1,109,988; Sept. 1; Gaz. vol. 206; p. 46.
Hancock, Harry W., Charlotte, Mich. Pump. No. 1,108,903; Sept. 1; Gaz. vol. 206; p. 14.
Hanitz, Hana T. R. (See Swebilius and Hanitz.)
Hanke, Frank C., Modesto, Cal., assignor to General Electric Company. Plug-puller. No. 1,111,380; Sept. 22; Gaz. vol. 206; p. 1013.
Hanrahan, Francis J., Rupert, Pa. Nut and pipe wrench. No. 1,109,061; Sept. 1; Gaz. vol. 206; p. 73.
Hansen, Augie L., assignor to Justrite Manufacturing Company, Chicago, Ill. Lamp. No. 1,109,221; Sept. 1; Gaz. vol. 206; p. 130.
Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Oiler. No. 1,109,222; Sept. 1; Gaz. vol. 206; p. 130.
Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Drill-mounting. No. 1,112,006; Sept. 29; Gaz. vol. 206; p. 1266.
Hansen, Niels, Stanwood, Wash. Crosscut-sawing apparatus. No. 1,110,777; Sept. 15; Gaz. vol. 206; p. 761.
Hansen, Peter H. (See Wilburn, Minnie C., assignor.)
Hansing, Frederick, London, England, assignor to Fiddes, Todd & Corry, Limited, Belfast, Ireland. Means for applying adhesive preparations to the surface of woven fabrics. No. 1,112,134; Sept. 29; Gaz. vol. 206; p. 1309.
Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Metal-working machine. No. 1,110,325; Sept. 15; Gaz. vol. 206; p. 602.
Hanson, Bernard, Martin, Ohio. Corn-planting machine. No. 1,109,835; Sept. 8; Gaz. vol. 206; p. 386.
Hanson, Rufus R., Boston, Mass. Shaft-coupling. No. 1,109,836; Sept. 8; Gaz. vol. 206; p. 386.
Happel, Samuel F., Bethlehem, Pa. Seal-lock. No. 1,111,065; Sept. 22; Gaz. vol. 206; p. 905.
Hardick, William, Cadillac, assignor of one-half to L. A. Ogden, Grand Rapids, Mich. Turnbuckle. No. 1,110,201; Sept. 8; Gaz. vol. 206; p. 518.
Hardick, William, Cadillac, and L. A. Ogden, Grand Rapids, assignors of one-third to G. Johnston, Cadillac, Mich. Switch-throw. No. 1,110,626; Sept. 15; Gaz. vol. 206; p. 709.
Harding, Jesse S., Stoughton, assignor of one-half to C. D. Dyer, Whitman, Mass. Brake slack-adjuster. No. 1,109,837; Sept. 8; Gaz. vol. 206; p. 386.
Hardman, George H., Fall River, Mass. Railway-tie. No. 1,110,684; Sept. 15; Gaz. vol. 206; p. 730.
Hardman, Peck & Co. (See Schwarz and Bjorkland, assignors.)
Hardman, Peck & Company. (See Hattemer, Justus, assignor.)
Hardy, Frank E. (See Lutes and Hardy.)
Harjes, Frederic W., Ticonic, Iowa. Elevator. No. 1,109,062; Sept. 1; Gaz. vol. 206; p. 73.
Harkom, John W., Melbourne, Quebec, Canada. Valve. No. 1,112,135; Sept. 29; Gaz. vol. 206; p. 1300.
Harley, William S., Milwaukee, Wis. Oil-distributing mechanism. No. 1,108,904; Sept. 1; Gaz. vol. 206; p. 15.
Harpster, William S., assignor, by mesne assignments, to C. A. Hill, Columbus, Ohio. Communion-service tray. No. 1,110,051; Sept. 8; Gaz. vol. 206; p. 463.
Harpstrite, Frederick. (See Spore and Harpstrite.)
Harraden, Walter L., Lynn, Mass., assignor to General Electric Company. Arc-light electrode. No. 1,111,381; Sept. 22; Gaz. vol. 206; p. 1013.
Harris Automatic Press Company, The. (See Minnick, William F., assignor.)
Harris, Evans N., Frazer, Mo. Railway-rail tie and rail-fastener. No. 1,110,778; Sept. 15; Gaz. vol. 206; p. 761.
Harris, James S., and J. A. Graham, assignors of one-third to T. G. Puckett, one-third to D. D. Puckett, and one-third to said Graham, Thompsonville, Ill. Subsoiler. No. 1,109,063; Sept. 1; Gaz. vol. 206; p. 73.
Harris, Richard G., assignor of one-third to J. W. Hill and one-third to I. W. Hill, Bearden, Tenn. Miner's lamp. No. 1,109,415; Sept. 1; Gaz. vol. 206; p. 199.
Harrison, George E., assignor of one-half to B. S. Pittenger, Philadelphia, Pa. Locking device for cigar-cutters. No. 1,110,930; Sept. 15; Gaz. vol. 206; p. 816.
Harrison, J. Harvey. (See Côté, George M., assignor.)
Harrison, James R., assignor to M. Rumely Company, Laporte, Ind. Conveyer. No. 1,109,986; Sept. 8; Gaz. vol. 206; p. 441.
Harrison, John, assignor of one-third to C. L. McCallister and one-third to W. F. Shea, Santa Rita, N. Mex. Railway-switch. No. 1,111,653; Sept. 22; Gaz. vol. 206; p. 1108.
Harrison, John O., assignor of one-half to J. C. Flannery, Boone, Iowa. Automatic retainer for air-brakes. No. 1,109,287; Sept. 1; Gaz. vol. 206; p. 152.
Harrold, Fredrick, Marion, Ohio. Mixing-valve for explosive-engines. No. 1,111,897; Sept. 29; Gaz. vol. 206; p. 1232.
Harry Vissering & Company. (See Vissering, Harry, assignor.)
Hart, Charles L., *et al.* (See Putnam, Israel, assignor.)
Harter, Karl L., and H. T. Reynolds, Tampa, Fla. Speed-controlling device. No. 1,111,748; Sept. 29; Gaz. vol. 206; p. 1176.
Harting, Clayton C. (See Knapp and Harting.)
Hartman, Jacob, Rochester, N. Y. Deposit and collection receptacle. No. 1,110,779; Sept. 15; Gaz. vol. 206; p. 761.
Hartwell, George H., Jr., San Antonio, Tex. Nozzle for cotton-pickers. No. 1,109,525; Sept. 1; Gaz. vol. 206; p. 233.
Hartzell, Morris H., assignor to S. S. Fretz, Jr., Philadelphia, Pa. Folding umbrella. No. 1,109,677; Sept. 8; Gaz. vol. 206; p. 331.
Harvey, Alexander S., and J. W. Brill, assignors to W. R. Wallace, Los Angeles, Cal. Shower-bath. No. 1,111,692; Sept. 22; Gaz. vol. 206; p. 1122.
Haskell & Barker Car Company. (See Frame and De Graff, assignors.)
Hassler, Robert H., assignor to Nordyke & Marmon Company, Indianapolis, Ind. Controller for self-starters for engines. No. 1,111,150; Sept. 22; Gaz. vol. 206; p. 934.
Hastings, William H., Malden, assignor to Merrimac Hat Company, Amesbury, Mass. Making hats. No. 1,111,066; Sept. 22; Gaz. vol. 206; p. 905.
Hatch, Nathan, Albany, N. Y. Union suit. No. 1,110,052; Sept. 8; Gaz. vol. 206; p. 464.
Hatch, Nathan, Albany, N. Y. Union suit. No. 1,110,053; Sept. 8; Gaz. vol. 206; p. 464.
Hatch, Nathan, Albany, N. Y. Union suit. No. 1,110,054; Sept. 8; Gaz. vol. 206; p. 464.
Hatch, Nathan, Albany, N. Y. Union suit. No. 1,110,055; Sept. 8; Gaz. vol. 206; p. 465.
Hatcher, Charles M., Seattle, Wash. Pad. No. 1,110,056; Sept. 8; Gaz. vol. 206; p. 465.

Hatfield, Henry S., Brunswick, Germany. Electrode for electrolytic measuring instruments. No. 1,111,898; Sept. 29; Gaz. vol. 206; p. 1233.
Hathaway, Charles E., Murphysboro, Ill. Gas-engine. No. 1,112,371; Sept. 29; Gaz. vol. 206; p. 1303.
Hattemer, Justus, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y. Pedal. No. 1,110,202; Sept. 8; Gaz. vol. 206; p. 518.
Havana Commercial Company. (See Alemany, Joaquin, assignor.)
Havens, Ernest A., assignor to M. D. Batchelder, Peoria, Ill. Sign-support. No. 1,109,921; Sept. 8; Gaz. vol. 206; p. 418.
Havenstrite, David J., Newark, N. J., assignor to J. H. Stone, Noroton Heights, Conn. Rotary refrigerating apparatus. No. 1,109,223; Sept. 1; Gaz. vol. 206; p. 130.
Hawaiian Pineapple Company. (See Ginaca, Henry G., assignor.)
Hawker, Paul H., and I. J. Reuter, assignors to Remy Electric Company, Anderson, Ind. Ignition apparatus. No. 1,109,064; Sept. 1; Gaz. vol. 206; p. 74.
Hawker, Wilson S., Dayton, Ohio. Wood-turning machine. No. 1,111,795; Sept. 29; Gaz. vol. 206; p. 1195.
Hawkins, Charles W., Bellport, N. Y. Removable valve for pumps. No. 1,111,578; Sept. 22; Gaz. vol. 206; p. 1082.
Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Sheet-coating machine. No. 1,109,331; Sept. 1; Gaz. vol. 206; p. 169.
Hay, John T., Union City, Ind. Journal-box. No. 1,110,388; Sept. 15; Gaz. vol. 206; p. 624.
Hayden, Charles A., Gorham, N. H. Nut and bolt construction. No. 1,110,203; Sept. 8; Gaz. vol. 206; p. 519.
Hayes Brothers. (See Hayes, Joseph G., assignor.)
Hayes, Charles J. W., Rochester, Mich. Mechanical figure toy. No. 1,110,685; Sept. 15; Gaz. vol. 206; p. 730.
Hayes, Joseph G., assignor to Hayes Brothers, Indianapolis, Ind. Clean-out plug. No. 1,112,136; Sept. 29; Gaz. vol. 206; p. 1310.
Hazard, Henry T., Los Angeles, Cal. Mechanism for steering automobiles. No. 1,111,693; Sept. 22; Gaz. vol. 206; p. 1122.
Hazelrigg, Ross, and W. J. Meeker, Santa Rosa, Cal. Hinge. No. 1,111,832; Sept. 29; Gaz. vol. 206; p. 1208.
Headley, Barton M., Pataskala, Ohio. Roof for silos. No. 1,110,059; Sept. 8; Gaz. vol. 206; p. 466.
Healy, John E. (See Cunniff, Williams, and Healy.)
Healy, Patrick J., assignor of one-third to W. R. Houghtling, Seattle, Wash. Water tubular boiler for locomotives. No. 1,109,526; Sept. 1; Gaz. vol. 206; p. 234.
Healy, William P. (See Miller, Julius J., assignor.)
Heartman, Axel W., St. Paul, Minn. Ironing-board. No. 1,111,151; Sept. 22; Gaz. vol. 206; p. 935.
Heath, Joshua, Sydney, and F. J. Boyle, North Sydney, New South Wales, Australia. Infant sling-support. No. 1,109,065; Sept. 1; Gaz. vol. 206; p. 74.
Heath Method Company, The. (See Morse, Thomas W., assignor.)
Heath, Ora J., Springfield, Ohio. Window-fixture. No. 1,111,067; Sept. 22; Gaz. vol. 206; p. 906.
Heaton Peninsular Button Fastener Company. (See Perkins, George W., assignor.)
Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Manufacturing phosphoric acid. No. 1,112,211; Sept. 29; Gaz. vol. 206; p. 1337.
Heck, Anderson C., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Excavator. No. 1,110,931; Sept. 15; Gaz. vol. 206; p. 816.
Hedman, Erik G., Stockholm, Sweden. Knife-edge bearing for weighing apparatus. No. 1,109,838; Sept. 8; Gaz. vol. 206; p. 387.
Hedstrom, Carl O., Portland, Conn. Motor-cycle frame. No. 1,111,152; Sept. 22; Gaz. vol. 206; p. 935.
Heffner, John, Saxton, Pa. Plow. No. 1,109,527; Sept. 1; Gaz. vol. 206; p. 234.
Heflin, Ellsworth, and W. J. Roberts, Red Oak, Iowa. Veterinary appliance. No. 1,110,686; Sept. 15; Gaz. vol. 206; p. 730.
Heille, William E., Casselton, N. D. Device for killing flies. No. 1,111,579; Sept. 22; Gaz. vol. 206; p. 1082.
Heinz, William V., La Salle, Ill. Chute for glazed windows. No. 1,110,627; Sept. 15; Gaz. vol. 206; p. 709.
Heinz, William V., La Salle, Ill. Metal bead for plasterings. No. 1,111,153; Sept. 22; Gaz. vol. 206; p. 935.
Heisler, Charles L., Schenectady, N. Y. Locomotive-engine. No. 1,111,456; Sept. 22; Gaz. vol. 206; p. 1039.
Heisler, Martin M., and A. G. Witte, Chicago, Ill. Lubricator. No. 1,109,125; Sept. 1; Gaz. vol. 206; p. 94.
Helberg, August W. H., Gardnersville, Nev. Reserve-supply tank. No. 1,110,057; Sept. 8; Gaz. vol. 206; p. 465.
Heller, Ernst B., New York, N. Y., assignor to Beatrice Creamery Company, Lincoln, Nebr. Producing renovated and artificial butter. No. 1,109,750; Sept. 8; Gaz. vol. 206; p. 357.
Hellstrom, Frank O., assignor to American Safety Steel Rail Co., Bismarck, N. D. Railway-rail. No. 1,109,922; Sept. 8; Gaz. vol. 206; p. 419.
Hemington, Edward J., Akron, Ohio. Tire. No. 1,109,066; Sept. 1; Gaz. vol. 206; p. 74.
Henckel, Gustave A., New York, N. Y. Combination vase and candlestick. No. 1,109,751; Sept. 8; Gaz. vol. 206; p. 357.
Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,108,905; Sept. 1; Gaz. vol. 206; p. 15.
Henderson, James F., assignor to National Soap Holder Co., Detroit, Mich. Liquid-soap holder. No. 1,110,135; Sept. 8; Gaz. vol. 206; p. 497.
Henderson, John, and E. R. Tietz, Toledo, Ohio. Bag-opening machine. No. 1,111,899; Sept. 29; Gaz. vol. 206; p. 1233.
Henderson, Thomas W., Fort Madison, Iowa. Speed-controlling mechanism for automobiles. No. 1,112,137; Sept. 29; Gaz. vol. 206; p. 1310.
Henderson, Ulysses S., assignor to The E. M. Hulse Company, Columbus, Ohio. Sofa or davenport bed. No. 1,111,457; Sept. 22; Gaz. vol. 206; p. 1039.
Hendrickson, Peter H., Ione, Wash. Wagon steering-gear. No. 1,109,752; Sept. 8; Gaz. vol. 206; p. 357.
Hendrix, Harry E., Willow Lake, S. D. Nut-lock. No. 1,110,932; Sept. 15; Gaz. vol. 206; p. 816.
Hendrix, Loyd R., Savannah, Ga. Door-check. No. 1,110,628; Sept. 15; Gaz. vol. 206; p. 710.
Henkelman, Charles E., Atlantic City, N. J. Automatic oil indicator and feeder. No. 1,109,417; Sept. 1; Gaz. vol. 206; p. 199.
Henkle, Guy C., assignor to The Hurst Silo Company, Chicago, Ill. Mold for making reinforced-concrete blocks. No. 1,109,753; Sept. 8; Gaz. vol. 206; p. 358.
Henrici, William A. E., assignor to Liberty Trust Company, trustee, Boston, Mass. Combined washing and clothes-drying machine. No. 1,109,630; Sept. 1; Gaz. vol. 206; p. 272.
Henry, Augustus M., New York, N. Y., assignor, by mesne assignments, to M. C. Baker, Stamford, Conn. Bulletin-board. No. 1,108,989; Sept. 1; Gaz. vol. 206; p. 46.
Henry Conolly Company. (See Magin, John G., assignor.)
Henry, James E. and W. J., Reedsville, Pa. Railway-tie. No. 1,111,306; Sept. 22; Gaz. vol. 206; p. 988.
Henry Matier & Company Limited. (See McCauley, William R., assignor.)
Henry, William, North Kansas City, Mo. Current-motor. No. 1,109,839; Sept. 8; Gaz. vol. 206; p. 387.
Henry, William J. (See Henry, James E. and W. J.)
Henry Zimmern & Company. (See Robbins, Albert F., assignor.)
Henshaw, F. R., trustee. (See Jameson, Alexander, assignor.)
Hepner, Roy L. (See Santmyers and Hepner.)
Herber, Samuel M., Inza, Mo. Oil distillation. No. 1,111,580; Sept. 22; Gaz. vol. 206; p. 1083.
Hercules Tire Company. (See Dunn, Leslie, assignor.)
Hering, Louis F., assignor of one-half to A. Konjetzky, Pomona, Cal. Projectile. No. 1,110,933; Sept. 15; Gaz. vol. 206; p. 816.
Hermance Machine Company. (See Nelson, Arthur W., assignor.)
Herold, Walter W. (See Darr, Henry W., assignor.)
Herrin, Bervin E., Ahloso, Okla. Extension car-step. No. 1,109,224; Sept. 1; Gaz. vol. 206; p. 131.
Hershey, Jacob R., assignor to Electric Service Supplies Company, Philadelphia, Pa. Forming characters. No. 1,109,332; Sept. 1; Gaz. vol. 206; p. 169.
Herzig, Adolph F., East St. Louis, Ill. Ore-roasting furnace. No. 1,108,906; Sept. 1; Gaz. vol. 206; p. 16.
Hesla, Syvert A., Butler, Minn. Support. No. 1,109,987; Sept. 8; Gaz. vol. 206; p. 441.
Hespe, Frederick F. (See Larsen, Magnus, assignor.)
Hess Dustless Mining Machine Company. (See Hess, Louis F., assignor.)
Hess, Joseph J., New Hampton, Iowa. Pump. No. 1,111,069; Sept. 22; Gaz. vol. 206; p. 906.
Hess, Louis F., assignor to Hess Dustless Mining Machine Company, Ansted, W. Va. Cutter-head. No. 1,109,988; Sept. 8; Gaz. vol. 206; p. 442.
Hestand, Hardy. (See Green and Hestand.)
Hetzel, George C. (See Corson, Chalon E., assignor.)
Hewitt, Edward R., Ringwood, N. J., assignor to Hewitt Motor Company, New York, N. Y. Tire. No. 1,110,541; Sept. 15; Gaz. vol. 206; p. 678.
Hewitt, Edward R., Ringwood, N. J., assignor to Hewitt Motor Company, New York, N. Y. Controlling mechanism. No. 1,110,542; Sept. 15; Gaz. vol. 206; p. 678.
Hewitt Motor Company. (See Hewitt, Edward R., assignor.)
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Starting and controlling device for electric vapor apparatus. No. 1,110,543; Sept. 15; Gaz. vol. 206; p. 678.
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Electrode for vapor apparatus. No. 1,110,544; Sept. 15; Gaz. vol. 206; p. 679.
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J. Electric vapor apparatus and method of operating the same. No. 1,110,545; Sept. 15; Gaz. vol. 206; p. 679.
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Directional-current arrester. No. 1,110,546; Sept. 15; Gaz. vol. 206; p. 679.

Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Governing mechanism for mixed-pressure turbines. No. 1,110,491; Sept. 15; Gaz. vol. 206; p. 661.
Jungling, Michael. (See Moss and Jungling.)
Junkin, John R., Fairbanks, Alaska. Steering device for automobiles. No. 1,109,422; Sept. 1; Gaz. vol. 206; p. 201.
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
Kahler, Charles F. (See Billingham and Kahler.)
Kahn, Albert. (See Hundhausen, Joseph, assignor.)
Kahn, Bertrand B., Cincinnati, assignor to The Estate Stove Company, Hamilton, Ohio. Chaplet-machine. No. 1,111,750; Sept. 29; Gaz. vol. 206; p. 1177.
Kahn, Julius, Detroit, Mich., and T. H. Kane, Youngstown, Ohio, assignors to Trussed Concrete Steel Company, Detroit, Mich. Reinforced expanded metal. No. 1,111,838; Sept. 29; Gaz. vol. 206; p. 1210.
Kahrs, Leander A., assignor of one-third to C. W. Tucker, Healdsburg, Cal. Saw-guide. No. 1,111,904; Sept. 29; Gaz. vol. 206; p. 1235.
Kaisling, William, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Selector-switch for automatic exchanges. No. 1,110,492; Sept. 15; Gaz. vol. 206; p. 662.
Kammerer, Friedrich, Pforzheim, Germany. Manufacture of solder-cored wire. No. 1,109,423; Sept. 1; Gaz. vol. 206; p. 202.
Kane, Meyer M., Chicago, Ill. Ironing apparatus. No. 1,111,467; Sept. 22; Gaz. vol. 206; p. 1043.
Kane, Thomas H. (See Kahn and Kane.)
Kane, Thomas H., Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Protecting-plate for the edges of concrete constructions. No. 1,111,839; Sept. 29; Gaz. vol. 206; p. 1210.
Kane, William, Philadelphia, Pa. Valve. No. 1,110,565; Sept. 15; Gaz. vol. 206; p. 686.
Kangas, Adam, Ishpeming, Mich. Railway-tie. No. 1,112,292; Sept. 29; Gaz. vol. 206; p. 1305.
Kaplan, Morduch L., Brooklyn, N. Y. Galvanic cell. No. 1,109,128; Sept. 1; Gaz. vol. 206; p. 95.
Kaplan, Morduch L., Brooklyn, N. Y. Galvanic cell. No. 1,109,129; Sept. 1; Gaz. vol. 206; p. 96.
Karrer, Paul. (See Bertheim and Karrer.)
Kasch, Charles H., Davenport, Iowa. Journal-box lid. No. 1,110,207; Sept. 8; Gaz. vol. 206; p. 520.
Kassander, Leopold, assignor to The Nathan Manufacturing Company, New York, N. Y. Jet-pump apparatus. No. 1,109,682; Sept. 8; Gaz. vol. 206; p. 333.
Kastner, Edward G., and J. E. Benton, Detroit, Mich. Coin-handling device. No. 1,111,389; Sept. 22; Gaz. vol. 206; p. 1016.
Kauertz, Wilhelm, Dusseldorf, Germany. Hall for airships. No. 1,109,648; Sept. 1; Gaz. vol. 206; p. 279.
Kaufmann, Paul H. F., North Tonawanda, N. Y. Micrometer-adjusting mechanism for microscopes and other devices. No. 1,110,266; Sept. 8; Gaz. vol. 206; p. 541.
Kautzky, Joseph, Fort Dodge, Iowa. Automatic single-trigger mechanism for double-barrel guns. No. 1,109,632; Sept. 1; Gaz. vol. 206; p. 272.
Kaye, Edgar C., Chicago, Ill. Pneumatic sole for shoes. No. 1,109,130; Sept. 1; Gaz. vol. 206; p. 96.
Kayser, Charles H., *et al.* (See Concato, Girolamo, assignor.)
Kearney, George F., Highland Park, Mich. Paper-roll holder. No. 1,109,929; Sept. 8; Gaz. vol. 206; p. 421.
Keenan, Joseph P., Waterbury, Conn. Game apparatus. No. 1,111,992; Sept. 22; Gaz. vol. 206; p. 1086.
Keene, William J., assignor to Chicago Spring Butt Company, Chicago, Ill. Spring-hinge. No. 1,111,157; Sept. 22; Gaz. vol. 206; p. 936.
Keene, William J., assignor to Chicago Spring Butt Company, Chicago, Ill. Spring-hinge. No. 1,111,158; Sept. 22; Gaz. vol. 206; p. 937.
Keenan, Charles R., Bloomington, Ill. Weapon. No. 1,111,905; Sept. 29; Gaz. vol. 206; p. 1235.
Keith, Edward W., Denver, Colo. Machine for removing slag, ash, or other residue from the retorts of zinc-furnaces. No. 1,109,533; Sept. 1; Gaz. vol. 206; p. 236.
Keith, Simeon C., Jr., Brookline, assignor to H. J. Keith Company, Boston, Mass. Preserving eggs. No. 1,112,142; Sept. 29; Gaz. vol. 206; p. 1312.
Keith, Simeon C., Jr., Newton, and E. Cate, Belmont; said Cate assignor to L. E. Knott Apparatus Company, Boston, Mass. Guard for bubbling drinking-fountains. No. 1,111,540; Sept. 22; Gaz. vol. 206; p. 1068.
Kelker, Charles, Philadelphia, Pa. Amusement device. No. 1,112,216; Sept. 29; Gaz. vol. 206; p. 1339.
Keller, Adam G. R., Alameda, Cal. Trap-nest. No. 1,112,217; Sept. 29; Gaz. vol. 206; p. 1339.
Keller, Charles A., Paris, France. Electrically treating, melting, and refining metals. No. 1,110,208; Sept. 8; Gaz. vol. 206; p. 520.
Keller, Edward, Perth Amboy, N. J. Treating anode residues. No. 1,110,493; Sept. 15; Gaz. vol. 206; p. 662.
Keller, Frederick H. von, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. High-tension vapor-converter. No. 1,110,630; Sept. 15; Gaz. vol. 206; p. 710.
Keller, Frederick H. von, Berlin, Germany, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Apparatus for operating mercury-vapor lamps. No. 1,110,631; Sept. 15; Gaz. vol. 206; p. 710.
Keller, John R., Crafton, Pa., assignor to The Rail Joint Company, New York, N. Y. Insulated rail-joint. No. 1,110,291; Sept. 8; Gaz. vol. 206; p. 550.
Keller & Jost, Graf, *et al.* (See Scholle, Edward, assignor.)
Keller, William F., Minneapolis, Minn. Harrow-tooth fastener. No. 1,108,909; Sept. 1; Gaz. vol. 206; p. 17.
Keller, William L., Kearney, Nebr. Chicken-feeder. No. 1,112,068; Sept. 29; Gaz. vol. 206; p. 1286.
Keller, Wood A., Bloomsburg, Pa. Carpet-beater. No. 1,112,293; Sept. 29; Gaz. vol. 206; p. 1305.
Kellogg, John H., Battle Creek, Mich. Therapeutic apparatus. No. 1,110,494; Sept. 15; Gaz. vol. 206; p. 662.
Kellogg, John L., Battle Creek, Mich. Making confections. No. 1,110,267; Sept. 8; Gaz. vol. 206; p. 541.
Kellogg Switchboard & Supply Company. (See Dyson, Alfred H., assignor.)
Kellogg Switchboard & Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Schoenwolf, Fred, assignor.)
Kellogg Switchboard and Supply Company. (See Winton, Charles S., assignor.)
Kelly, Eugene J., Washington, D. C. Repair-coupling. No. 1,110,632; Sept. 15; Gaz. vol. 206; p. 711.
Kelly, John, Chicago, Ill. Valve. No. 1,111,390; Sept. 22; Gaz. vol. 206; p. 1017.
Kelly, John F., Pittsfield, Mass. Locking device for electrically-operated pianos. No. 1,112,143; Sept. 29; Gaz. vol. 206; p. 1312.
Kelsey, Duane J. (See Underhill and Kelsey.)
Kelso, Nyla Q., assignor of one-half to J. D. Wynn, Tulsa, Okla. Brooder. No. 1,110,941; Sept. 15; Gaz. vol. 206; p. 819.
Keltner, Halbert E., *et al.* (See Stillman, John C., assignor.)
Kempner, Adolph W., New York, N. Y. Register. No. 1,110,942; Sept. 15; Gaz. vol. 206; p. 819.
Kempton, Willard H., assignor to The Ohio Brass Company, Mansfield, Ohio. Automatic section-insulator. No. 1,111,468; Sept. 22; Gaz. vol. 206; p. 1043.
Kendall, William G., and C. Schonert, Newark, N. J. Automatic fountain. No. 1,110,943; Sept. 15; Gaz. vol. 206; p. 820.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,109,683; Sept. 8; Gaz. vol. 206; p. 333.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,109,845; Sept. 8; Gaz. vol. 206; p. 390.
Kennedy, Joseph, New York, N. Y., assignor to The Clements Company. Expansion bolt-anchor. No. 1,112,069; Sept. 29; Gaz. vol. 206; p. 1287.
Kennedy, Joseph, New York, N. Y., assignor to The Clements Company. Expansion-bolt. No. 1,112,417; Sept. 29; Gaz. vol. 206; p. 1410.
Kennedy, Julian, Pittsburgh, Pa. Gear-drive for three-high rolling-mills. No. 1,112,218; Sept. 29; Gaz. vol. 206; p. 1340.
Kennedy, Julian, Pittsburgh, Pa. Shaft-coupling. No. 1,112,219; Sept. 29; Gaz. vol. 206; p. 1340.
Kennedy, Julian, Pittsburgh, Pa. Driving mechanism for rolling-mills. No. 1,112,220; Sept. 29; Gaz. vol. 206; p. 1340.
Kenny, Edmond, New Brighton, assignor to Mercantile Corporation, New York, N. Y. Rotary cutter. No. 1,111,751; Sept. 29; Gaz. vol. 206; p. 1177.
Kent, Arthur A. (See McQuown, Thomas H., assignor.)
Kent, Otis B., and C. W. Waters, assignors of one-third to C. F. Forsyth, Washington, D. C. Train-pipe coupling. No. 1,112,144; Sept. 29; Gaz. vol. 206; p. 1312.
Kent, W. H. (See Frangopolu, Constantine C., assignor.)
Keny, William L., Marion, assignor to The Jaeger Machine Company, Columbus, Ohio. Hydraulic cement-block-making machine. (Reissue.) No. 13,803; Sept. 22; Gaz. vol. 206; p. 1136.
Kepler, Irwin F., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Tank bulb or valve. No. 1,112,294; Sept. 29; Gaz. vol. 206; p. 1366.
Keppel, Jesse, St. Louis, Mo. Air-pump and valve therefor. No. 1,111,906; Sept. 29; Gaz. vol. 206; p. 1235.
Kerby, Marshall A., Florence, Ala. Folding crate. No. 1,110,060; Sept. 8; Gaz. vol. 206; p. 466.
Kersey, Enos C., Newport Beach, Cal. Wave-motor. No. 1,111,656; Sept. 22; Gaz. vol. 206; p. 1109.
Kett, Richard, assignor of one-half to A. H. Flucken, Denver, Colo. Track-sander for locomotives. No. 1,110,391; Sept. 15; Gaz. vol. 206; p. 625.
Kettering, Charles F., assignor to The National Cash Register Company, Dayton, Ohio. Registering mechanism. No. 1,109,763; Sept. 8; Gaz. vol. 206; p. 361.
Kettering, Charles F., and W. A. Chryst, assignors to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,110,392; Sept. 15; Gaz. vol. 206; p. 626.
Keys, William A. (See Mills, George W., Jr., assignor.)
Kiefer, Claude R., Mishawaka, Ind. Bicycle. No. 1,109,424; Sept. 1; Gaz. vol. 206; p. 202.
Kienzle, Herbert, Schwenningen-on-the-Neckar, Germany. Removable spring-housing for clocks. No. 1,110,061; Sept. 8; Gaz. vol. 206; p. 467.
Kieren, Joseph, Gilbert, Minn. Switch-clutch. No. 1,109,425; Sept. 1; Gaz. vol. 206; p. 202.

Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Power system. No. 1,109,168; Sept. 1; Gaz. vol. 206; p. 111.
Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Steam-turbine nozzle. No. 1,112,295; Sept. 29; Gaz. vol. 206; p. 1366.
Kiewicz, John, Hyde Park, assignor to The Reece Button Hole Machine Company, Boston, Mass. Thread-holding device. No. 1,111,907; Sept. 29; Gaz. vol. 206; p. 1236.
Kilbourn, Edward E., W. E. Smith, and I. W. Kilbourn, assignors to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Seamless stocking and knitting the same. No. 1,110,443; Sept. 15; Gaz. vol. 206; p. 644.
Kilbourn, Isaac W. (See Kilbourn, Smith, and Kilbourn.)
Kilbourn Manufacturing Corporation. (See Kilbourn, Smith, and Kilbourn, assignors.)
Killark Electric Manufacturing Company. (See Britt, William J., Jr., assignor.)
Killean, Margaret E., San Francisco, Cal. Bloomers. No. 1,109,231; Sept. 1; Gaz. vol. 206; p. 133.
Kilmer, William A., De Kalb, assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Wire-fabric machine. No. 1,111,593; Sept. 22; Gaz. vol. 206; p. 1087.
Kilpatrick, Robert W. (See Earley and Kilpatrick.)
Kimman, Henry J. and T. P., Cleveland, Ohio, assignors to Chicago Pneumatic Tool Company, Chicago, Ill. Portable drill. No. 1,112,070; Sept. 29; Gaz. vol. 206; p. 1287.
Kimman, Theodore P. (See Kimman, Henry J. and T. P.)
Kincaid, Ira, M. A. Foote, and W. H. Neureither, Chicago, Ill. Flange-lubricator for railway-cars. No. 1,111,308; Sept. 22; Gaz. vol. 206; p. 988.
Kindler, Albert, San Diego, Cal. Radiator-subheater. No. 1,111,309; Sept. 22; Gaz. vol. 206; p. 989.
Kingan & Company. (See Cunningham, Clinton W., assignor.)
Kingsbury, Albert, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Friction-clutch. No. 1,109,232; Sept. 1; Gaz. vol. 206; p. 133.
Kinnard, Chester E., assignor to The Cooper Automatic Car Door Co., Cooper, Tex. Door-hanger. No. 1,110,944; Sept. 15; Gaz. vol. 206; p. 821.
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill. Radial-motion operating-lever. No. 1,108,910; Sept. 1; Gaz. vol. 206; p. 17.
Kinsman, Walter R., Red Bank, N. J., assignor of one-half to C. E. Chapin, Milford, Conn. Lid-lifter. No. 1,110,945; Sept. 15; Gaz. vol. 206; p. 821.
Kintner, Theodore J., Denver, Colo. Gage attachment for planes. No. 1,110,999; Sept. 15; Gaz. vol. 206; p. 837.
Kirchner, George P., assignor of one-half to P. J. Englebrecht, Rifle, Colo. Gun-clip. No. 1,110,209; Sept. 8; Gaz. vol. 206; p. 521.
Kirchner, John, assignor of one-half to J. R. Tipil, Milwaukee, Wis. Hat-pin guard. No. 1,112,011; Sept. 29; Gaz. vol. 206; p. 1267.
Kissinger, John H., Spokane, Wash. Corkscrew. No. 1,110,210; Sept. 8; Gaz. vol. 206; p. 521.
Kitching, David C., Valley Mills, Tex. Adjustable vehicle-headlight. No. 1,111,724; Sept. 22; Gaz. vol. 206; p. 1133.
Kittredge, John W., Boulder, Colo. Centrifugal compressor. No. 1,110,696; Sept. 15; Gaz. vol. 206; p. 734.
Klappenbach, Albert, San Antonio, Tex. Pedal attachment for pianos. No. 1,111,226; Sept. 22; Gaz. vol. 206; p. 961.
Kleen-Sweep Manufacturing Company. (See Atkins, Charles H., assignor.)
Klein, Adolph S. Cleveland, Ohio. Display-case. No. 1,109,339; Sept. 1; Gaz. vol. 206; p. 172.
Klein, Albert, Cody, Wyo. Milking-machine. No. 1,109,994; Sept. 8; Gaz. vol. 206; p. 444.
Klein, Augustus J., Orange, N. J. Nose-guard for eyeglasses. No. 1,109,930; Sept. 8; Gaz. vol. 206; p. 421.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,111,798; Sept. 29; Gaz. vol. 206; p. 1106.
Klein, Jacob J., Kearney, Nebr. Disinfectant-distributer for closets. No. 1,108,911; Sept. 1; Gaz. vol. 206; p. 17.
Kleinschmidt, Henry F. A., assignor to The Lorain Steel Company, Johnstown, Pa. Rail-joint. No. 1,111,504; Sept. 22; Gaz. vol. 206; p. 1087.
Klesa, Albert H., *et al.* (See Ostendorf, Wilhelm L., assignor.)
Kline, Charles E., Burke, Wash. Weed-cutter. No. 1,110,908; Sept. 29; Gaz. vol. 206; p. 1236.
Kline, William, Woodstock, Va., assignor of one-half to W. J. Moore, Washington, D. C. Type-writer erasing device. No. 1,108,994; Sept. 1; Gaz. vol. 206; p. 48.
Kling, Louis A., Elizabeth, N. J., assignor to The J. G. Brill Company, Philadelphia, Pa. Slack-adjuster for car-brakes. No. 1,110,141; Sept. 8; Gaz. vol. 206; p. 499.
Klohs, Sam F., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Carline structure. No. 1,109,340; Sept. 1; Gaz. vol. 206; p. 172.
Kluge, Eduard, Leipzig, Germany. Apparatus for unoiling steam and the like. No. 1,109,588; Sept. 1; Gaz. vol. 206; p. 256.
Knap, William F., Des Moines, Iowa. Book-cover. No. 1,109,846; Sept. 8; Gaz. vol. 206; p. 390.
Knapp, George O. (See Beach and Doughty, assignors.)
Knapp, Theron L., and C. C. Harting, Woodstock, assignors to The Oliver Typewriter Company, Chicago, Ill. Type-writing-machine frame. No. 1,110,062; Sept. 8; Gaz. vol. 206; p. 467.
Knauff, George C., Chicago, Ill. Electric-lamp socket. No. 1,109,633; Sept. 1; Gaz. vol. 206; p. 273.
Knauff, George C., Chicago, Ill. Focusing lamp-socket. No. 1,110,795; Sept. 15; Gaz. vol. 206; p. 768.
Kneass, Strickland L., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Valve. No. 1,111,391; Sept. 22; Gaz. vol. 206; p. 1017.
Kneeland, Ernest S., Malden, Mass. Automatic weighing device. No. 1,109,293; Sept. 1; Gaz. vol. 206; p. 154.
Knelsly, Daniel W., Dayton, Ohio. Line-connector. No. 1,112,415; Sept. 29; Gaz. vol. 206; p. 1409.
Knicl, Lewis J., Detroit, Mich. Locking device for internal-combustion engines. No. 1,108,995; Sept. 1; Gaz. vol. 206; p. 49.
Knight, Albert B., Fairmont, W. Va. Glass-heating burner. No. 1,109,131; Sept. 1; Gaz. vol. 206; p. 96.
Knopf, George W., Pottstown, Pa. Fire door or window. No. 1,112,071; Sept. 29; Gaz. vol. 206; p. 1287.
Knorpp Candy Company. (See Knorpp, Max, assignor.)
Knorpp, Max, New York, assignor to Knorpp Candy Company, Brooklyn, N. Y. Candle-holder. No. 1,110,796; Sept. 15; Gaz. vol. 206; p. 768.
Knorr, Gottlieb F., Des Moines, Iowa. Spark-gap. No. 1,111,963; Sept. 29; Gaz. vol. 206; p. 1252.
Knox, Kirk H., Exira, Iowa. Combined strainer and brush-holder. No. 1,111,159; Sept. 22; Gaz. vol. 206; p. 937.
Knox, Robert R., San Francisco, Cal. Expansion-bolt. No. 1,110,797; Sept. 15; Gaz. vol. 206; p. 768.
Koban Manufacturing Company. (See Pratt, Clarence H., assignor.)
Kobert, Frank P., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn. Insulator-support. No. 1,110,495; Sept. 15; Gaz. vol. 206; p. 663.
Kobert, Frank P., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn. Insulator-support for electric wires. No. 1,110,496; Sept. 15; Gaz. vol. 206; p. 663.
Kobert, Frank P., Fairhaven, assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn. Guy-anchor. No. 1,111,964; Sept. 29; Gaz. vol. 206; p. 1252.
Koch, Max M., Cleveland, Ohio. Oven-brace. No. 1,110,697; Sept. 15; Gaz. vol. 206; p. 734.
Kocher, Samuel J. (See Peck and Kocher.)
Kocsis, Geza. (See Szuth, John, assignor.)
Koehler, Louis F., Chicago, Ill. Dental anvil or swage-block. No. 1,111,392; Sept. 22; Gaz. vol. 206; p. 1017.
Koehler, Theodore. (See Menten, Herman, assignor.)
Koenig, Joseph, Two Rivers, Wis. Internal-combustion engine. No. 1,111,840; Sept. 29; Gaz. vol. 206; p. 1210.
Koenig, Joseph, Two Rivers, Wis. Internal-combustion engine. No. 1,111,841; Sept. 29; Gaz. vol. 206; p. 1211.
Koenig, Wilhelm. (See Mauch and Koenig.)
Koerting, Ernst, Pegli, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa. Injector. No. 1,111,541; Sept. 22; Gaz. vol. 206; p. 1068.
Koerting, Ernst, Pegli, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa. Injector. No. 1,111,542; Sept. 22; Gaz. vol. 206; p. 1068.
Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Bolt. No. 1,111,657; Sept. 22; Gaz. vol. 206; p. 1109.
Kolle, Dalitor W., Portland, Oreg. Fastening. No. 1,110,211; Sept. 8; Gaz. vol. 206; p. 521.
Kollenberg, Frederick G., assignor of one-half to W. E. Danhauer, Owensboro, Ky. Bottle-cap. No. 1,108,906; Sept. 1; Gaz. vol. 206; p. 49.
Komlósi, John. (See Detrik, Joseph, assignor.)
Konantz, Walter D. (See Green and Konantz.)
König, Carl, Vohwinkel, Germany. Controlling device for railway-vehicles. No. 1,109,534; Sept. 1; Gaz. vol. 206; p. 237.
Konitzko, Joseph, San Francisco, Cal. Propeller mechanism. No. 1,110,497; Sept. 15; Gaz. vol. 206; p. 663.
Konjetzky, Alfred. (See Hering, Louis F., assignor.)
Koons, Catherine D., St. James, Mo. Window. No. 1,110,498; Sept. 15; Gaz. vol. 206; p. 663.
Koons, Frank, Grooville, N. Y. Sawing-machine. No. 1,108,912; Sept. 1; Gaz. vol. 206; p. 18.
Koontz, Victor R., Waynesboro, Pa. Clutch. No. 1,110,212; Sept. 8; Gaz. vol. 206; p. 521.
Kopeczky, Joseph, Racine, Wis. Non-skid device. No. 1,111,072; Sept. 22; Gaz. vol. 206; p. 908.
Kopf, Henry B., New Haven, Conn. Pineapple-crate. No. 1,112,145; Sept. 29; Gaz. vol. 206; p. 1313.
Koroknay, Paul, Lyndora, Pa. Pneumatic tool. No. 1,110,663; Sept. 8; Gaz. vol. 206; p. 467.
Kosnick, Joseph H. (See Hager, Henry F., assignor.)
Kowalsky, Adam, Carteret, N. J. Life-saving apparatus. No. 1,112,221; Sept. 29; Gaz. vol. 206; p. 1341.
Kozmousky, John, Boston, Mass. Pill-injector. No. 1,109,072; Sept. 1; Gaz. vol. 206; p. 76.
Kraker, George M., assignor to The Kraker Pen Co., Kansas City, Mo. Clip for fountain-pens. No. 1,111,469; Sept. 22; Gaz. vol. 206; p. 1044.
Kraker Pen Co., The. (See Kraker, George M., assignor.)
Kraker Pen Co., The. (See Scheible, Albert, assignor.)

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Binder. No. 1,110,705; Sept. 15; Gaz. vol. 206; p. 737.
Moffitt, Ulysses S., Los Angeles, Cal. Switch-throwing device. No. 1,111,313; Sept. 22; Gaz. vol. 206; p. 990.
Moine, Selest E., Tulia, Tex. Shifting camera-back. No. 1,110,333; Sept. 15; Gaz. vol. 206; p. 605.
Moldenhauer, Frederick W., and B. G. Edgerton, assignors to Wisconsin Stable Equipment Company, Oconomowoc, Wis. Stanchion. No. 1,109,933; Sept. 8; Gaz. vol. 206; p. 422.
Moloney, Matthew, Christchurch, New Zealand. Fire-alarm. No. 1,109,859; Sept. 8; Gaz. vol. 206; p. 395.
Molstad, Peter, Macoun, Saskatchewan, Canada. Furnace-cleaner. No. 1,109,451; Sept. 1; Gaz. vol. 206; p. 210.
Molyneux, George E., Bayonne, N. J. Curtain-fixture. No. 1,109,860; Sept. 8; Gaz. vol. 206; p. 395.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,111,167; Sept. 22; Gaz. vol. 206; p. 941.
Molyneux, George E., Bayonne, and F. Pech, Elizabeth, N. J., assignors to The Singer Manufacturing Company. Hand-wheel clutch for sewing-machines. No. 1,111,168; Sept. 22; Gaz. vol. 206; p. 941.
Momyer, Harry H., Dallas, Tex. Moving-picture machine. No. 1,111,229; Sept. 22; Gaz. vol. 206; p. 962.
Monahan, Joseph W., Providence, R. I. Motor-truck having a dumping-body. No. 1,112,024; Sept. 29; Gaz. vol. 206; p. 1271.
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)
Mongeau, George E., Lowell, Mass. Guard for outsole and welt stitching machines. No. 1,112,152; Sept. 29; Gaz. vol. 206; p. 1316.
Monnot, John F., Paris, France, assignor to Duplex Metals Company, New York, N. Y. Making clad metals. No. 1,110,638; Sept. 15; Gaz. vol. 206; p. 713.
Monosmith, Olney B., Lorain, Ohio. Carbureter. No. 1,110,453; Sept. 15; Gaz. vol. 206; p. 648.
Montague, Dwight P., Chattanooga, Tenn., and U. G. Lee, Chicago, Ill., assignors to Montague Mailing Machinery Co. Address-plate and index-tab therefor. No. 1,110,221; Sept. 8; Gaz. vol. 206; p. 525.
Montague Mailing Machinery Co. (See Montague and Lee, assignors.)
Montana Metallurgical Company. (See Titus, Court C., assignor.)
Montgomery, George W., assignor of one-half to M. D. Bowman, Springboro, Pa. Hay-loader. No. 1,112,080; Sept. 29; Gaz. vol. 206; p. 1290.
Moomy, Joseph G., Erie, Pa. Forming patches for rubber articles. No. 1,111,802; Sept. 29; Gaz. vol. 206; p. 1198.
Moomy, Joseph G., Erie, Pa. Forming patches for rubber articles. No. 1,111,803; Sept. 29; Gaz. vol. 206; p. 1198.
Moomy, Joseph G., Erie, Pa. Patch for rubber articles and manufacture of same. No. 1,111,804; Sept. 29; Gaz. vol. 206; p. 1198.
Moore, Charles B., Evanston, Ill., assignor, by mesne assignments, to American Arch Company, New York, N. Y. Refractory arch for locomotive-boiler furnaces. No. 1,109,692; Sept. 8; Gaz. vol. 206; p. 336.
Moore, Claude, Taft, Cal. Rotary tool for deep wells. No. 1,110,639; Sept. 15; Gaz. vol. 206; p. 713.
Moore, Edward Y., Cleveland, Ohio. Hoisting mechanism. No. 1,112,153; Sept. 29; Gaz. vol. 206; p. 1316.
Moore, Hugh K., and R. B. Wolf, Berlin, N. H. Reclaiming waste products in the manufacture of sulfite fiber. No. 1,110,454; Sept. 15; Gaz. vol. 206; p. 648.
Moore, Philip W. (See Preston and Moore.)
Moore, William J. (See Kline, William, assignor.)
Moore, William P. (See Gee, Albert, assignor.)
Moran, John M., Miami, Fla. Salt-shaker. No. 1,110,398; Sept. 15; Gaz. vol. 206; p. 628.
Moran, Joseph F., Parkridge, N. J. Can-opening machine. No. 1,110,334; Sept. 15; Gaz. vol. 206; p. 605.
Morat, Jacques, Yonkers, N. Y. Grinding machinery. No. 1,110,222; Sept. 8; Gaz. vol. 206; p. 525.
Morden, Lucena M. (See Goss, George W., assignor.)
Morewood, Thomas M., Elizabeth, N. J. Nut-lock. No. 1,110,335; Sept. 15; Gaz. vol. 206; p. 605.
Morgan Construction Company. (See Carroll, Elbert H., assignor.)
Morgan, David, Ashland, Wis. Pencil-box. No. 1,109,590; Sept. 1; Gaz. vol. 206; p. 256.
Morgan, Matthew J., Chicago, Ill. Car-coupling uncoupling device. No. 1,111,080; Sept. 22; Gaz. vol. 206; p. 911.
Morgan, Samuel S., St. Charles, assignor to American Car and Foundry Company, St. Louis, Mo. Welding-tool. No. 1,109,591; Sept. 1; Gaz. vol. 206; p. 257.
Morgan, Samuel S., St. Charles, assignor to American Car and Foundry Company, St. Louis, Mo. Electric welding apparatus. No. 1,109,592; Sept. 1; Gaz. vol. 206; p. 257.
Morgenstern, Nathan. (See Ambash and Morgenstern.)
Morley, Albert, assignor to The Warren Featherbone Company, Three Oaks, Mich. Garment-weight. No. 1,110,075; Sept. 8; Gaz. vol. 206; p. 472.
Morley, Ralph C. (See Wales, Nathaniel B., assignor.)
Morningstar, Leslie E. (See Bullard, Edgar R., assignor.)
Morris, Adis, Indianola, Iowa. Mowing-machine. No. 1,111,081; Sept. 22; Gaz. vol. 206; p. 911.
Morris, Stephen, Newcomer, Pa. Incline safety-catch. No. 1,109,693; Sept. 8; Gaz. vol. 206; p. 337.
Morrison, George W., Lowell, Mass. Safety-foot for ladders. No. 1,109,452; Sept. 1; Gaz. vol. 206; p. 210.
Morrison, Lewis E., assignor to himself and M. Plum, Newark, N. J. Sheet-registering mechanism. No. 1,111,968; Sept. 29; Gaz. vol. 206; p. 1253.
Morrow, John, Denver, Colo. Lubricator. No. 1,110,706; Sept. 15; Gaz. vol. 206; p. 737.
Morse, Albert W., assignor to Nathan Manufacturing Company, New York, N. Y. Valve. No. 1,111,390; Sept. 22; Gaz. vol. 206; p. 1019.
Morse Code Signal Company. (See Burnett, William S., assignor.)
Morse, John J., St. Louis, Mo. Reinforced brake-shoe. No. 1,112,376; Sept. 29; Gaz. vol. 206; p. 1395.
Morse, John J., St. Louis, Mo. Reinforced brake-shoe. No. 1,112,377; Sept. 29; Gaz. vol. 206; p. 1395.
Morse, Theodore F., assignor to Huntley Manufacturing Company, Silver Creek, N. Y. Grain-separator. No. 1,109,299; Sept. 1; Gaz. vol. 206; p. 156.
Morse, Thomas W., Paterson, assignor, by mesne assignments, to The Heath Method Company, Newark, N. J. Mixing device for fluids. No. 1,110,223; Sept. 8; Gaz. vol. 206; p. 526.
Morse Twist Drill & Machine Company. (See Davenport, William S., assignor.)
Morton, Alexander, and M. A. Brase, Labonte, Wyo. Wheeled grader. No. 1,108,925; Sept. 1; Gaz. vol. 206; p. 23.
Morton, Woolridge B. (See Manly and Morton.)
Mosier, Joseph H., Provemont, Mich. Two-cycle engine. No. 1,109,694; Sept. 8; Gaz. vol. 206; p. 337.
Mosier, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosier Safe Company, New York, N. Y. Safe or vault wall construction. No. 1,109,695; Sept. 8; Gaz. vol. 206; p. 338.
Mosier Safe Company, The. (See Mosier and Bartels, assignors.)
Mosling, Bernhard A. (See Besserdich and Mosling.)
Moss, Calvin F., and M. Jungling, Bogalusa, La. Internal-combustion engine. No. 1,111,605; Sept. 22; Gaz. vol. 206; p. 1091.
Moss, John H., Angola, Ind., assignor of one-half to C. S. Whitworth and one-half to C. C. Bogle, Cedar Falls, Iowa. Gate. No. 1,112,081; Sept. 29; Gaz. vol. 206; p. 1291.
Moss, William T., San Jose, Cal. Popcorn-cake machine. No. 1,109,861; Sept. 8; Gaz. vol. 206; p. 396.
Motograph Company of America. (See Bickley, Everett H., assignor.)
Mott-Le-Gaige Animated Advertising Corporation. (See Austin, Sydney B., assignor.)
Mott-Le-Gaige Animated Advertising Corporation. (See Tilley and Austin, assignors.)
Motter, George J., Washington, D. C. Nose-bag. No. 1,109,135; Sept. 1; Gaz. vol. 206; p. 97.
Mouat, Thomas G., Cleveland, Ohio. Return-fitting for vapor-heating systems. No. 1,112,154; Sept. 29; Gaz. vol. 206; p. 1317.
Moye, Edward A. (See Clark, Edward O., assignor.)
Moynihan, James F., West Newton, Mass. Valve. No. 1,110,269; Sept. 8; Gaz. vol. 206; p. 542.
Mudge, Loyal H., Denver, Colo. Bank-check. No. 1,109,453; Sept. 1; Gaz. vol. 206; p. 211.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Matrix composing-machine. No. 1,109,696; Sept. 8; Gaz. vol. 206; p. 338.
Mueller, Philip, assignor to H. Mueller Mfg. Co., Decatur, Ill. Lever-handle for self-closing work. No. 1,111,169; Sept. 22; Gaz. vol. 206; p. 942.
Mueller, Philip, and A. C. Schuermann, assignors to H. Mueller Mfg. Co., Decatur, Ill. Receptacle-actuated cock. No. 1,110,958; Sept. 15; Gaz. vol. 206; p. 825.
Muench, William C., assignor to Progress Machine Co., Indianapolis, Ind. Bottle-feeding mechanism. No. 1,112,155; Sept. 29; Gaz. vol. 206; p. 1317.
Muir, John M. (See Munden and Muir.)
Muir, Robert, O'Fallon, Ill. Adjustable window shade and curtain support. No. 1,111,669; Sept. 22; Gaz. vol. 206; p. 1113.
Mularkey, James, assignor of one-half to J. P. Sprague, Kansas City, Mo. Building-partition. No. 1,110,707; Sept. 15; Gaz. vol. 206; p. 738.
Mularkey, James, assignor to J. P. Sprague, Kansas City, Mo. Building-partition. No. 1,110,708; Sept. 15; Gaz. vol. 206; p. 738.
Muldoon, John W., New York, N. Y. Form for monolithic walls. No. 1,109,934; Sept. 8; Gaz. vol. 206; p. 422.
Mulholland, Samuel. (See Craig, Robert M., assignor.)
Muller, Edward. (See Gorton, Charles E., assignor.)
Müller, Hans, Milwaukee, Wis., assignor to Universal Oxygen Company. Apparatus for treating welding-gases. No. 1,109,777; Sept. 8; Gaz. vol. 206; p. 365.
Müller, William H., Union Course, N. Y. Convertible swing. No. 1,109,454; Sept. 1; Gaz. vol. 206; p. 211.
Mulligan, Thomas F. (See Bowker and Mulligan.)
Mulligan, Thomas F., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Apparatus for filling oil-cans. No. 1,112,082; Sept. 29; Gaz. vol. 206; p. 1291.
Mulvehill, John D., Spokane, Wash. Non-refillable bottle. No. 1,111,082; Sept. 22; Gaz. vol. 206; p. 911.
Munden, Arthur J. W., and J. M. Muir, Dunedin, New Zealand. Automatic electrical announcer. No. 1,112,310; Sept. 29; Gaz. vol. 206; p. 1371.

Mundy, Thomas C. (See Vale and Mundy.)
Municipal Supply Co. (See Brown, William R., assignor.)
Munslow, William E., Steubenville, Ohio. Railway-tie. No. 1,109,539; Sept. 1; Gaz. vol. 206; p. 239.
Muntz, William E., London, England. Pneumatic tire. No. 1,110,640; Sept. 15; Gaz. vol. 206; p. 714.
Murphy, Edwin J., Schenectady, N. Y., assignor to General Electric Company. Current-reversing relay. No. 1,109,244; Sept. 1; Gaz. vol. 206; p. 138.
Murphy, Edwin J., Schenectady, N. Y., assignor to General Electric Company. Electromagnetic switch. No. 1,109,245; Sept. 1; Gaz. vol. 206; p. 138.
Murphy, George C., Louisville, Ky. Relay contact device. No. 1,109,778; Sept. 8; Gaz. vol. 206; p. 366.
Murphy, James A., assignor of one-half to B. F. Perkins & Son, Inc., Holyoke, Mass. Base-ball bat. No. 1,111,314; Sept. 22; Gaz. vol. 206; p. 990.
Murphy, Morton. (See Brown and Murphy.)
Murphy, Otto S., Peoria, Ill. Hasp-lock. No. 1,111,028; Sept. 22; Gaz. vol. 206; p. 892.
Murray, James W., St. George, New Brunswick, Canada. Figure toy. No. 1,110,224; Sept. 8; Gaz. vol. 206; p. 526.
Murray, Thomas E. (See Roth, Charles, assignor.)
Murray, Thomas E., New York, N. Y. Fuse-switch. No. 1,112,156; Sept. 29; Gaz. vol. 206; p. 1317.
Muth, John, assignor to The E. H. Hotchkiss Company, Norwalk, Conn. Envelop-sealing attachment for stapling-machines. No. 1,109,355; Sept. 1; Gaz. vol. 206; p. 178.
Muther, Lorenz. (See Glines, Frederick S., assignor.)
Muzzy, William H., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,109,697; Sept. 8; Gaz. vol. 206; p. 338.
Mycue, William O., Niagara Falls, N. Y. Carbureter. No. 1,109,356; Sept. 1; Gaz. vol. 206; p. 178.
Myers, Carmon A., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Demountable vehicle-rim. No. 1,109,173; Sept. 1; Gaz. vol. 206; p. 112.
Myers, Chester J., Cortland, N. Y. Nozzle. No. 1,112,311; Sept. 29; Gaz. vol. 206; p. 1372.
Myers, Lewis C., Brooklyn, assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y. Type-writing machine. No. 1,108,926; Sept. 1; Gaz. vol. 206; p. 23.
Myers, Loring W., Lubec, Me. Surf-anchor. No. 1,110,507; Sept. 15; Gaz. vol. 206; p. 667.
Myers, Stephen D., Carrollton, Tex. Rail-joint shock-absorber. No. 1,109,862; Sept. 8; Gaz. vol. 206; p. 396.
Mygatt, Otis A., New York, N. Y. Glass globe and reflector. No. 1,111,400; Sept. 22; Gaz. vol. 206; p. 1020.
N-W Equipment Co. (See Banks, William C., assignor.)
Nachod, Carl P., Philadelphia, Pa. Electric signaling system. No. 1,108,927; Sept. 1; Gaz. vol. 206; p. 23.
Nachod, Carl P., Philadelphia, Pa. Signaling system for high-voltage railways. No. 1,111,851; Sept. 29; Gaz. vol. 206; p. 1215.
Nagle Re Blade Knife Company. (See Weckbaugh, Joseph V., assignor.)
Nall, Edward, and W. C. Tyler, assignors to The Goodyear Tire and Rubber Company, Akron, Ohio. Skiving-machine. No. 1,111,170; Sept. 22; Gaz. vol. 206; p. 942.
Narrow Fabric Corporation. (See Buchanan, John J., assignor.)
Nash, Charles J., assignor to Universal Draft Gear Attachment Co., Chicago, Ill. Draft-rigging. No. 1,109,005; Sept. 1; Gaz. vol. 206; p. 53.
Nashua Card Gummed and Coated Paper Company. (See Watson, George W., assignor.)
Nathan Manufacturing Company, The. (See Kassander, Leopold, assignor.)
Nathan Manufacturing Company. (See Morse, Albert W., assignor.)
Nathan Manufacturing Company, The. (See Wollheim, Walter E., assignor.)
National Acme Manufacturing Company, The. (See Hunter, Hugh M., assignor.)
National Acme Manufacturing Company, The. (See Smith, Oscar A., assignor.)
National Brake Company. (See Brewster, William D., assignor.)
National Cash Register Company, The. (See Carroll, Thomas, assignor.)
National Cash Register Company, The. (See Ellinwood, Clarence S., assignor.)
National Cash Register Company, The. (See Gruber, Louis, assignor.)
National Cash Register Company, The. (See Kettering, Charles F., assignor.)
National Cash Register Company, The. (See Kettering and Chryst, assignors.)
National Cash Register Company, The. (See Martin, Hnakon A., assignor.)
National Cash Register Company, The. (See Muzzy, William H., assignor.)
National Envelope Sealing and Stamping Manufacturing Company. (See Allen, Fred R., assignor.)
National Graphite Lubrication Company. (See Watres, Reyburn, assignor.)
National Malleable Castings Company, The. (See Bucklus, Albert O., Jr., assignor.)
National Malleable Castings Company, The. (See Pope, Henry F., assignor.)
National Piano Company. (See Watson, William A., assignor.)
National Pneumatic Company. (See Gottschalk, Albert, assignor.)
National Pneumatic Company. (See Rowntree, Harold, assignor.)
National Sewing Machine Company. (See Hohmann, Richard K., assignor.)
National Soap Holder Co. (See Henderson, James F., assignor.)
National Standard Company. (See Bowers, Ernest C., assignor.)
National-Standard Company. (See Larsen and Parkin, assignors.)
Naylor, Charles H., Rugby, England, assignor to General Electric Company. Elastic-fluid turbine. No. 1,110,508; Sept. 15; Gaz. vol. 206; p. 667.
Neal, Elmer E., assignor to The New Departure Manufacturing Company, Bristol, Conn. Universal joint. No. 1,109,006; Sept. 1; Gaz. vol. 206; p. 53.
Neale, Harold J., assignor to Wright Wire Company, Worcester, Mass. Tree-guard. No. 1,109,779; Sept. 8; Gaz. vol. 206; p. 366.
Nebinger, Frank M. (See Fulmer and Nebinger.)
Needl, Charles M., Pittsburgh, Pa. Form or mold. No. 1,109,863; Sept. 8; Gaz. vol. 206; p. 396.
Neff, John P., East Orange, N. J. Circulating means for locomotive-boilers. No. 1,111,916; Sept. 29; Gaz. vol. 206; p. 1238.
Neidig Typewriter Co. (See Neidig, William J., assignor.)
Neidig, William J., Madison, Wis., assignor, by mesne assignments, to Chicago Title and Trust Company, trustee. Type-writing machine. No. 1,110,641; Sept. 15; Gaz. vol. 206; p. 714.
Neidig, William J., Madison, Wis., assignor, by mesne assignments, to Chicago Title and Trust Company, trustee. Type-writing machine. No. 1,111,401; Sept. 22; Gaz. vol. 206; p. 1020.
Neidig, William J., Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill. Type-writing machine. No. 1,112,408; Sept. 29; Gaz. vol. 206; p. 1407.
Neil, Moses H. (See Schlared, Charles, assignor.)
Nell, William, Jr., *et al.* (See Caufield, Frank E., Jr., assignor.)
Neisler, Oscar L., Chicago, Ill. Internal-combustion engine. No. 1,110,336; Sept. 15; Gaz. vol. 206; p. 606.
Nelson, Arne T., Detroit, Mich. Speed-reducing chuck for drill-presses. No. 1,110,455; Sept. 15; Gaz. vol. 206; p. 649.
Nelson, Arthur F. (See Reynders and Nelson.)
Nelson, Arthur W., Williamsport, Pa., assignor, by mesne assignments, to W. Giertsen, Chicago, Ill. Chain-feed saw. No. 1,110,709; Sept. 15; Gaz. vol. 206; p. 738.
Nelson, Arthur W., assignor to Hermance Machine Company, Williamsport, Pa. Wood-planing machine. No. 1,111,701; Sept. 22; Gaz. vol. 206; p. 1126.
Nelson, Arthur W., assignor to Hermance Machine Company, Williamsport, Pa. Planing-machine. No. 1,111,702; Sept. 22; Gaz. vol. 206; p. 1126.
Nelson, Charles. (See Rehm, Frederick C., assignor.)
Nelson, Charles, Brooklyn, assignor to S. Sternau & Co., New York, N. Y. Coffee-machine. No. 1,111,029; Sept. 22; Gaz. vol. 206; p. 892.
Nelson, Charles, Brooklyn, assignor to S. Sternau & Co., New York, N. Y. Coffee-machine. No. 1,111,083; Sept. 22; Gaz. vol. 206; p. 912.
Nelson, Charles, Brooklyn, assignor to S. Sternau & Co., New York, N. Y. Coffee-machine. No. 1,111,270; Sept. 22; Gaz. vol. 206; p. 976.
Nelson, Edgar A., Jr., Washington, D. C. Puzzle. No. 1,109,698; Sept. 8; Gaz. vol. 206; p. 339.
Nelson, Elza A., Dexter, assignor to The Pomeroy Novelty Company, Pomeroy, Ohio. Safety-loop. No. 1,110,337; Sept. 15; Gaz. vol. 206; p. 606.
Nelson, Elza A., Dexter, assignor to The Pomeroy Novelty Company, Pomeroy, Ohio. Breast-bow for harness. No. 1,110,338; Sept. 15; Gaz. vol. 206; p. 606.
Nelson, Frank E., Los Angeles, Cal. Oil-burning apparatus. No. 1,112,025; Sept. 29; Gaz. vol. 206; p. 1272.
Nelson, Henry F., assignor of one-half to W. W. Pecue, Angola, and one-half to W. T. Hodge, Bayou Sara, La. Rail-joint. No. 1,109,780; Sept. 8; Gaz. vol. 206; p. 366.
Nelson, Henry F., assignor of one-half to J. R. Sanders, Angola, La., and one-half to M. R. Woulfe, Washington, D. C. Combination-lock. No. 1,111,487; Sept. 22; Gaz. vol. 206; p. 1050.
Nelson, James E., Lancaster, N. Y. Drafting apparatus. No. 1,109,864; Sept. 8; Gaz. vol. 206; p. 397.
Nelson, Oscar. (See Wirgen, Peter, assignor.)
Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,109,136; Sept. 1; Gaz. vol. 206; p. 98.
Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,109,137; Sept. 1; Gaz. vol. 206; p. 98.
Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,109,138; Sept. 1; Gaz. vol. 206; p. 99.
Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,109,139; Sept. 1; Gaz. vol. 206; p. 99.
Ness, Carl O., Waterville, Iowa. Harness-pad. No. 1,111,402; Sept. 22; Gaz. vol. 206; p. 1021.
Neumeister, John G. (See Falkenwalde, Oscar, assignor.)
Neureither, Warren H. (See Kincaid, Foote, and Neureither.)
Neuvians, Otto, Agenda, Kans. Shock-equalizer. No. 1,111,852; Sept. 29; Gaz. vol. 206; p. 1216.

Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,111,097; Sept. 22; Gaz. vol. 206; p. 916.

Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Type or matrix. No. 1,111,098; Sept. 22; Gaz. vol. 206; p. 916.

Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Hopper-car-door-operating mechanism. No. 1,109,598; Sept. 1; Gaz. vol. 206; p. 259.

Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Railway-car end construction. No. 1,109,599; Sept. 1; Gaz. vol. 206; p. 260.

Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Hopper-car with articulated truck. No. 1,109,600; Sept. 1; Gaz. vol. 206; p. 260.

Rolland, Frederick W., assignor to H. Goetz, Chicago, Ill. Feeder for check-controlled apparatus. No. 1,111,764; Sept. 29; Gaz. vol. 206; p. 1182.

Rollins, George D. (See Langdon, James E., assignor.)

Rontke, Albert, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Fabric-guiding attachment for sewing-machines. No. 1,111,862; Sept. 29; Gaz. vol. 206; p. 1220.

Rookledge, Percival L., and G. W. Gillespie, Cambria, Cal.; said Gillespie assignor to said Rookledge. Vehicle-spring. No. 1,110,826; Sept. 15; Gaz. vol. 206; p. 778.

Roos, Julius. (See Antoine and Roos.)

Roper, Charles H., Belmont, assignor to Hood Rubber Co., Watertown, Mass. Clicking-machine. No. 1,112,326; Sept. 29; Gaz. vol. 206; p. 1377.

Roper & Company, C. F. (See Draper, Clare H., assignor.)

Rose, James M., Philadelphia, Pa., assignor to Merchant & Evans Company, Camden, N. J. Umbrella-stand. No. 1,109,788; Sept. 8; Gaz. vol. 206; p. 368.

Rose, John N., Jr., Kinsley, Kans. Internal-combustion engine. No. 1,111,765; Sept. 29; Gaz. vol. 206; p. 1182.

Rose, John W., Dodge City, Kans. Berry-box. No. 1,109,468; Sept. 1; Gaz. vol. 206; p. 216.

Rose Label Machine Company. (See Rosenthal, Arthur, assignor.)

Rose, Orson M., Medford, Oreg. Wrench. No. 1,112,327; Sept. 29; Gaz. vol. 206; p. 1377.

Rose, Wesley M., Sacramento, Cal. Sanitary drinking-fountain. No. 1,111,325; Sept. 22; Gaz. vol. 206; p. 994.

Rose, William, Gainsborough, England. Apparatus for applying bands, wrappers, or labels to boxes, blocks, or packages. No. 1,111,676; Sept. 22; Gaz. vol. 206; p. 1116.

Rosen, Sixten A., assignor of one-half to H. L. Dow, Worcester, Mass. Meat and fruit press. No. 1,109,363; Sept. 1; Gaz. vol. 206; p. 181.

Rosenbaum, Bedrich, Dumbarton, Scotland. Periscope for submarine and submersible craft. No. 1,110,827; Sept. 15; Gaz. vol. 206; p. 779.

Rosenberg, Benjamin, New York, N. Y. Pneumatic plug for heels. No. 1,109,180; Sept. 1; Gaz. vol. 206; p. 115.

Rosenthal, Arthur, assignor to Rose Label Machine Company, Grand Rapids, Mich. Sewing-machine for attaching labels. No. 1,111,494; Sept. 22; Gaz. vol. 206; p. 1052.

Rosenthal, Raphael. (See Schreiber, Norbert, assignor.)

Ross, Frederick M., and H. G. Horstman, assignors of one-fourth to W. W. Baxter and one-fourth to T. Horstman, Cincinnati, Ohio. Spring-wheel. No. 1,111,863; Sept. 29; Gaz. vol. 206; p. 1220.

Ross, John A., assignor of one-third to F. Pons, New York, N. Y. Automobile-signal. No. 1,111,615; Sept. 22; Gaz. vol. 206; p. 1094.

Ross, Matilda, Tacoma, Wash. Embroidery-frame and support therefor. No. 1,110,349; Sept. 15; Gaz. vol. 206; p. 611.

Ross, Walter D., Anniston, Ala. Core-bar. No. 1,112,034; Sept. 29; Gaz. vol. 206; p. 1275.

Ross, William O. (See Idris and Ross.)

Rossiter, Frederick O., *et al.* (See Stillman, John C., assignor.)

Rossiter, William M., Sunbury, Pa. Curtain-pole. No. 1,112,159; Sept. 29; Gaz. vol. 206; p. 1319.

Rossiter, William M., Sunbury, Pa. Curtain-pole bracket. No. 1,112,160; Sept. 29; Gaz. vol. 206; p. 1319.

Roth, Charles, Brooklyn, assignor to T. E. Murray, New York, N. Y. Snap-switch. No. 1,112,161; Sept. 29; Gaz. vol. 206; p. 1319.

Rothe, Wilhelm, Reichenbach, Germany. Waste and like breaking or carding machine. No. 1,111,035; Sept. 22; Gaz. vol. 206; p. 894.

Rothschild, Alexander Z., San Francisco, Cal. Obtaining fiber from cocoanut-husks. No. 1,111,405; Sept. 22; Gaz. vol. 206; p. 1022.

Rotter, Max, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Turbo-blower. No. 1,111,408; Sept. 22; Gaz. vol. 206; p. 1054.

Rouse, Martin L., Columbia, Mo. Temperature-indicator for incubators. No. 1,111,182; Sept. 22; Gaz. vol. 206; p. 946.

Rouse, Thomas, Stamford Hill, London, assignor of one-half to Bessler Waechter & Company, Limited, London, England. Producing a ferrated and borated alkaline silicate. No. 1,109,704; Sept. 8; Gaz. vol. 206; p. 341.

Roussel, Thomas J., Hamilton, Ontario, Canada. Window. No. 1,110,717; Sept. 15; Gaz. vol. 206; p. 741.

Rovell, Lloyd, Harriette, Mich. Envelop. No. 1,110,964; Sept. 15; Gaz. vol. 206; p. 827.

Rovira, Josephine G., New York, N. Y. Combination catamenial drawers. No. 1,112,162; Sept. 29; Gaz. vol. 206; p. 1319.

Rowntree, Harold, assignor to National Pneumatic Company, Chicago, Ill. Double-deck car. No. 1,111,971; Sept. 29; Gaz. vol. 206; p. 1254.

Royal Typewriter Company. (See Myers, Lewis C., assignor.)

Royce, Elizabeth R., Cambridge, Mass. Infant's undergarment. No. 1,110,459; Sept. 15; Gaz. vol. 206; p. 650.

Royle, Vernon, Paterson, N. J. Shuttle. No. 1,109,250; Sept. 1; Gaz. vol. 206; p. 140.

Ruble, William P., Esmond, N. D. Internal-combustion engine. No. 1,111,183; Sept. 22; Gaz. vol. 206; p. 947.

Rudd, Henry A., and F. B. Collins, Barberton, Ohio, assignors to The Diamond Match Company, Chicago, Ill. Jack for portable hoists. No. 1,109,148; Sept. 1; Gaz. vol. 206; p. 103.

Ruddick, John J., West Newton, Mass., assignor to United States Electric Signal Co. Signal system. No. 1,112,385; Sept. 29; Gaz. vol. 206; p. 1398.

Ruder, William E., Schenectady, N. Y., assignor to General Electric Company. Silicon steel. No. 1,110,010; Sept. 8; Gaz. vol. 206; p. 449.

Rudolph Wurlitzer Manufacturing Company, The. (See McCormick, Frank L., assignor.)

Rudolph Wurlitzer Mfg. Company. (See Hope-Jones, Robert, assignor.)

Ruhe, Carleton, Olean, N. Y. Machine for brushing sole-leather. No. 1,112,163; Sept. 29; Gaz. vol. 206; p. 1320.

Ruhmann, Benjamin, Newark, N. J. Clasp or holding device. No. 1,111,184; Sept. 22; Gaz. vol. 206; p. 947.

Rulu Gas Lighter Company. (See Rutz, Luethe, and Rutz, assignors.)

Rundle, William R., *et al.* (See McCoy, Charles W., assignor.)

Rundquist, Fritz, assignor, by mesne assignments, to The Willys-Overland Company, Toledo, Ohio. Fender-vizor-wiring-in machine. No. 1,112,164; Sept. 29; Gaz. vol. 206; p. 1320.

Ruppert, Friedrich. (See Collischonn and Ruppert.)

Rusby, John M., and J. H. Taussig, assignors to The United Gas Improvement Company, Philadelphia, Pa. Regulating the temperature of combustion. No. 1,110,991; Sept. 15; Gaz. vol. 206; p. 835.

Rusch, Henri, St. Louis, Mo. Reinforced concrete construction. No. 1,111,972; Sept. 29; Gaz. vol. 206; p. 1254.

Russell, James B., Seminole, Okla. Cradle. No. 1,111,921; Sept. 29; Gaz. vol. 206; p. 1239.

Rutz, Arnold O. (See Rutz, Luethe, and Rutz.)

Rutz, Julius F., J. K. Luethe, and A. O. Rutz, assignors to Rulu Gas Lighter Company, Milwaukee, Wis. Drill-press. No. 1,108,933; Sept. 1; Gaz. vol. 206; p. 26.

Rybárský, Paul, Hoboken, N. J. Knife-sharpener. No. 1,111,273; Sept. 22; Gaz. vol. 206; p. 977.

Rypinski, Maurice C., Braddock, Pa., assignor to Westinghouse Electric & Manufacturing Company. Temperature-indicator. No. 1,108,934; Sept. 1; Gaz. vol. 206; p. 27.

S. F. Bowser & Co. (See Corey and Grosvenor, assignors.)

S. F. Bowser & Company. (See Bowser and Mulligan, assignors.)

S. F. Bowser & Company. (See Mulligan, Thomas F., assignor.)

S. S. White Dental Manufacturing Company, The. (See Browne and Wallace, assignors.)

Sabo, Paul, Racine, Wis. Sliding-jaw wrench. No. 1,111,616; Sept. 22; Gaz. vol. 206; p. 1095.

Sacerdote, Guido, assignor to The Metal Treating & Equipment Co., Inc., New York, N. Y. Electrogalvanizing solution. No. 1,109,181; Sept. 1; Gaz. vol. 206; p. 116.

Sadler, Charles W., Windsor Locks, Conn. Ironing-machine. No. 1,110,828; Sept. 15; Gaz. vol. 206; p. 779.

Sadus, Joseph and W., Filbert, W. Va. Automobile sled. No. 1,109,182; Sept. 1; Gaz. vol. 206; p. 116.

Sadus, Walenty. (See Sadus, Joseph and W.)

Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)

Sage, Ralph V., Columbus, Ohio. Metallic box-car. No. 1,110,403; Sept. 15; Gaz. vol. 206; p. 630.

Sage, Ralph V., Westmont borough, Pa., assignor to Cambria Steel Company. Dumping-car construction. No. 1,110,235; Sept. 8; Gaz. vol. 206; p. 530.

Sage, Ralph V., Westmont borough, Pa., assignor to Cambria Steel Company. Car construction. No. 1,110,236; Sept. 8; Gaz. vol. 206; p. 531.

Saltis, Michael, Fort William McKinley, Philippine Islands. Portable stretcher. No. 1,109,083; Sept. 1; Gaz. vol. 206; p. 80.

Saltzman, Frank L., and E. J. Crockett, Oakland, Cal. Oil-burner. No. 1,110,147; Sept. 8; Gaz. vol. 206; p. 501.

Samp, Charles L., Detroit, Mich. Wagon-loader. No. 1,109,789; Sept. 8; Gaz. vol. 206; p. 369.

Sandberg, Ole, Ogema, Saskatchewan, Canada. Combination shovel and hoe. No. 1,109,469; Sept. 1; Gaz. vol. 206; p. 216.

Sanders, Charles W., Victoria, British Columbia, Canada. Sheet-metal partition. No. 1,111,617; Sept. 22; Gaz. vol. 206; p. 1095.

Sanders, John R., *et al.* (See Nelson, Henry F., assignor.)

Sandford, Joseph A., Jr., assignor to The R. Thomas and Sons Company, East Liverpool, Ohio. Post-insulator. No. 1,109,470; Sept. 1; Gaz. vol. 206; p. 216.

Sandvig, Alvin C., Grafton, N. D. Pitchfork. No. 1,109,251; Sept. 1; Gaz. vol. 206; p. 140.

Sanladerer, Alois, Ortenburg, near Vilshofen, Germany. Electric-lighting apparatus for velocipedes. No. 1,111,864; Sept. 29; Gaz. vol. 206; p. 1220.

Santmyers, Washington L., and R. L. Hepner, Strasburg, Va. Reamer. No. 1,110,273; Sept. 8; Gaz. vol. 206; p. 544.

Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Plug-receptacle and plug therefor. No. 1,111,406; Sept. 22; Gaz. vol. 206; p. 1022.

Sargent, John L., assignor of one-half to J. C. Puckett, Indianola, Nebr. Spraying or sprinkling nozzle. No. 1,112,418; Sept. 29; Gaz. vol. 206; p. 1410.

Sasnett, Rolin S., *et al.* (See Spencer, Charles R., assignor.)

Saunders, David H., Gloucester, Mass., assignor, by mesne assignments, to H. E. Hounsell, Limited, Bridgeport, England. Net-machine. No. 1,110,718; Sept. 15; Gaz. vol. 206; p. 742.

Saunders Sealer Company, The. (See Osborn, Henry C., assignor.)

Savage, Harry, and W. L. Baker, San Antonio, Tex. Automatic passenger-fare-registering mechanism. No. 1,109,790; Sept. 8; Gaz. vol. 206; p. 369.

Savy, Emile L. A., Paris, France. Apparatus for molding chocolate or the like containing preserved fruits, almonds, or other hard bodies. No. 1,110,404; Sept. 15; Gaz. vol. 206; p. 630.

Sawtelle, Charles A. (See Talbot and Sawtelle.)

Sawyer, Harry, Muskegon, Mich. Freight-handling crane structure. No. 1,111,099; Sept. 22; Gaz. vol. 206; p. 917.

Sawyer, Harry, Muskegon, Mich. Freight-handling apparatus. No. 1,111,100; Sept. 22; Gaz. vol. 206; p. 917.

Sawyer, Harry, Muskegon, Mich. Crane. No. 1,111,101; Sept. 22; Gaz. vol. 206; p. 917.

Sawyer, Harry, Muskegon, Mich. Rocking-boom crane. No. 1,111,102; Sept. 22; Gaz. vol. 206; p. 918.

Sayer, George J., Chicago, Ill. Sausage-stuffer. No. 1,109,548; Sept. 1; Gaz. vol. 206; p. 241.

Sayles, Frank A. (See Lewis, Willard I., assignor.)

Sayre, Eliza, Fonda, Iowa. Device for holding material for cleaning wall-paper, ceilings, &c. No. 1,111,499; Sept. 22; Gaz. vol. 206; p. 1054.

Scace, William, Pittsfield, Mass. Resilient tire. No. 1,110,649; Sept. 15; Gaz. vol. 206; p. 717.

Scarfe, George, Nevada City, Cal. Constant-flow meter. No. 1,109,149; Sept. 1; Gaz. vol. 206; p. 103.

Schade, Edmund A., assignor to The Stanley Rule & Level Company, New Britain, Conn. Hand-level construction. No. 1,111,677; Sept. 22; Gaz. vol. 206; p. 1116.

Schade, William F., Griffin, N. D. Plow-lifting mechanism. No. 1,109,084; Sept. 1; Gaz. vol. 206; p. 80.

Schaefer, George W. (See Roberts and Schaefer.)

Schaidhauf, Alois, Frankfort-on-the-Main, Germany, assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y. Stable hydrogen peroxid and making the same. No. 1,109,791; Sept. 8; Gaz. vol. 206; p. 370.

Schaller, Carl, Brunswick, Germany. Calculating-machine. No. 1,109,471; Sept. 1; Gaz. vol. 206; p. 216.

Schamann, Matthew, Alma, Wis. Sawing-machine. No. 1,109,252; Sept. 1; Gaz. vol. 206; p. 141.

Scharwenka, Adolf V., New York, N. Y. Railway-switch. No. 1,109,943; Sept. 8; Gaz. vol. 206; p. 426.

Schatz, Adam E., Mount Vernon, N. Y. Apparatus for dispensing liquids. No. 1,112,386; Sept. 29; Gaz. vol. 206; p. 1399.

Schauts, George J., and E. J. Stoeckel, Scranton, Pa. Thread-tension device. No. 1,111,500; Sept. 22; Gaz. vol. 206; p. 1054.

Schebora, John, Chicago, Ill. Window and frame therefor. No. 1,109,253; Sept. 1; Gaz. vol. 206; p. 141.

Scheible, Albert, Chicago, Ill., assignor, by mesne assignments, to The Kraker Pen Co., Kansas City, Mo. Clip for fountain-pens. No. 1,111,501; Sept. 22; Gaz. vol. 206; p. 1055.

Schellenbach, William L., Hartwell, assignor to The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio. Gearing. No. 1,111,326; Sept. 22; Gaz. vol. 206; p. 995.

Schelter, John C., Rochester, N. Y., assignor to Fits-Empire Double Pivot Last Company, Auburn, Me. Last. No. 1,110,719; Sept. 15; Gaz. vol. 206; p. 742.

Scherser, Albert H., Chicago, Ill. Bascule-bridge. No. 1,109,792; Sept. 8; Gaz. vol. 206; p. 370.

Schevitz, Carl, Jacksonville, Fla. Spring-wheel. No. 1,109,549; Sept. 1; Gaz. vol. 206; p. 242.

Schlessler, Josef, Baden, near Vienna, Austria-Hungary. Telephonic and telegraphic apparatus. No. 1,109,472; Sept. 1; Gaz. vol. 206; p. 217.

Schlared, Charles, assignor of one-half to M. H. Neil, Columbus, Ohio. Car-coupling. No. 1,110,829; Sept. 15; Gaz. vol. 206; p. 779.

Schmid, R. J. (See Tyler, Lydia A., assignor.)

Schmidt, Gustave F., Chicago, Ill. Carbureting apparatus. No. 1,109,085; Sept. 1; Gaz. vol. 206; p. 81.

Schmidt, Henry H., Bessie, Okla. Bench-vise. No. 1,111,185; Sept. 22; Gaz. vol. 206; p. 948.

Schmidt, Samuel, Farmersville, Ohio. Lid-opener. No. 1,112,097; Sept. 29; Gaz. vol. 206; p. 1297.

Schmunk, George H., Cranberry township, Butler county, assignor to Pittsburgh Stogie & Cigar Company, Pittsburgh, Pa. Container for stogies. No. 1,112,328; Sept. 29; Gaz. vol. 206; p. 1377.

Schneer, Frederick H., New Rochelle, N. Y. Boy's blouse. No. 1,112,387; Sept. 29; Gaz. vol. 206; p. 1399.

Schneible, Joseph, Chicago, Ill. Pulp-washing machine. No. 1,111,408; Sept. 22; Gaz. vol. 206; p. 1023.

Schneider, Aaron, Philadelphia, Pa. Braid-guide for sewing-machines. No. 1,109,254; Sept. 1; Gaz. vol. 206; p. 141.

Schneider, Alfred, Birmingham, Ala. Metal pipe and hose connection. No. 1,110,011; Sept. 8; Gaz. vol. 206; p. 449.

Schneider & Cie. (See Bourdelies, Emile, assignor.)

Schneider, Jaquet & Cie., G. m. b. H. (See Jaquet, Charles, assignor.)

Schneider, John P., Chicago, Ill. Eye-shade. No. 1,110,350; Sept. 15; Gaz. vol. 206; p. 611.

Schneider, Philip H., Akron, Ohio. Ball. No. 1,109,183; Sept. 1; Gaz. vol. 206; p. 116.

Schoen, Frederick W., Scranton, Pa. Egg-crate. No. 1,109,873; Sept. 8; Gaz. vol. 206; p. 400.

Schoenfeld, Charles, Canton, Ohio. Device for operating and locking prison-doors. No. 1,109,364; Sept. 1; Gaz. vol. 206; p. 181.

Schoenfeld, Morris, Rorschach, Switzerland. Device for holding threads in embroidering-machines. No. 1,110,405; Sept. 15; Gaz. vol. 206; p. 630.

Schoenmehl, Charles B., Waterbury, Conn. Galvanic battery. No. 1,111,186; Sept. 22; Gaz. vol. 206; p. 948.

Schoenwolf, Fred, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Automatic telephone-exchange system. No. 1,110,460; Sept. 15; Gaz. vol. 206; p. 651.

Scholl, Milo T., and R. A. Gillespie, Pittsburgh, Pa. Device for applying bottle-stoppers. No. 1,111,973; Sept. 29; Gaz. vol. 206; p. 1255.

Scholle, Eduard, Neuss-on-the-Rhine, assignor to Wecka & Co., proprietors Messers. Graf Keller & Jost, Oberhausen, Rhineland, Germany. Pinch-bar. No. 1,109,365; Sept. 1; Gaz. vol. 206; p. 182.

Schonert, Carl. (See Kendall and Schonert.)

Schoof, Ernst A. C., New York, N. Y. Lockable cock for gas-meters. No. 1,111,618; Sept. 22; Gaz. vol. 206; p. 1095.

Schorn, Oscar, Cleveland, Ohio. Roof bracket or jack. No. 1,111,707; Sept. 22; Gaz. vol. 206; p. 1128.

Schorn, Oscar, assignor of one-half to J. P. Weigel, Cleveland, Ohio. Painter's tool. No. 1,110,351; Sept. 15; Gaz. vol. 206; p. 611.

Schrader, Henry E., New York, N. Y. Collapsible lunch-box. No. 1,111,619; Sept. 22; Gaz. vol. 206; p. 1095.

Schrafft, Albert. (See Tabor, Clinton D., assignor.)

Schreck, Edward, Columbus, Ohio. Tooth-brush. No. 1,110,406; Sept. 15; Gaz. vol. 206; p. 630.

Schreiber, Norbert, assignor of forty-nine one-hundredths to R. Rosenthal, Lincoln, Ill. Boiler-cleaner. No. 1,109,550; Sept. 1; Gaz. vol. 206; p. 242.

Schroeder, Anthony J., Donaldsonville, La. Bellows attachment for chairs. No. 1,109,473; Sept. 1; Gaz. vol. 206; p. 217.

Schubert Piano Company. (See Dickinson, Joseph W., assignor.)

Schuchert, Albert E. (See Jeffery and Schuchert.)

Schuermann, Anton C. (See Mueller and Schuermann.)

Schulenburg, Fred, River Forest, Ill. Trap for catchbasins. No. 1,109,944; Sept. 8; Gaz. vol. 206; p. 426.

Schultz, August, Los Angeles, Cal. Washing-machine. No. 1,111,238; Sept. 22; Gaz. vol. 206; p. 965.

Schultz, Joseph R., St. Louis, Mo. Bottle-cap remover. No. 1,110,720; Sept. 15; Gaz. vol. 206; p. 742.

Schulz, Otto C., assignor to Bauer & Black, Chicago, Ill. Machine for making surgical bandages. No. 1,109,184; Sept. 1; Gaz. vol. 206; p. 116.

Schulz, Otto C., assignor to Bauer & Black, Chicago, Ill. Making surgical bandages. No. 1,109,185; Sept. 1; Gaz. vol. 206; p. 117.

Schurig, Emil A., Grossröhrsdorf, Germany, Heddle. No. 1,109,306; Sept. 1; Gaz. vol. 206; p. 159.

Schuster, Karl R., New York, N. Y. Concrete-mixer. No. 1,111,974; Sept. 29; Gaz. vol. 206; p. 1255.

Schütte, Hermann, Pittsburgh, Pa. Hanger for trolley-wires. No. 1,110,578; Sept. 15; Gaz. vol. 206; p. 691.

Schutte & Koerting Company. (See Koerting, Ernst, assignor.)

Schwager, Georg, Berlin, Germany. Shock-absorber for vehicles. No. 1,109,255; Sept. 1; Gaz. vol. 206; p. 141.

Schwanhausser, Frederick, Jersey City, N. J. Stereomotograph. No. 1,108,935; Sept. 1; Gaz. vol. 206; p. 27.

Schwarcman, Alexander, assignor to Spencer Kellogg & Sons, Inc., Buffalo, N. Y. Manufacture of catalysts. No. 1,111,502; Sept. 22; Gaz. vol. 206; p. 1055.

Schwartz, Walter M., and H. Coulston, assignors to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Stocking-drier. No. 1,112,329; Sept. 29; Gaz. vol. 206; p. 1378.

Schwarz, Justin O., New York, and G. Bjorkland, Steinway, assignors to Hardman, Peck & Co., New York, N. Y. Player-grand pedal. No. 1,110,965; Sept. 15; Gaz. vol. 206; p. 827.

Schwarz, Karl, assignor to Maschinenfabrik Augsburg Nurnberg A. G., Nuremberg, Germany. Cylinder. No. 1,110,148; Sept. 8; Gaz. vol. 206; p. 501.

Schwinn, Ignaz, Chicago, Ill. Bracket. No. 1,111,503; Sept. 22; Gaz. vol. 206; p. 1055.
Schwitzer, Louis, Indianapolis, Ind. Pumping system for gas-engines. No. 1,109,256; Sept. 1; Gaz. vol. 206; p. 142.
Scott, Burton W. (See Colton and Scott.)
Scott, Edward, Wooler, England. Supplementary cover or band for pneumatic tires. No. 1,109,874; Sept. 8; Gaz. vol. 206; p. 400.
Scott, Frank P., *et al.* (See Ostendorf, Wilhelm L., assignor.)
Scott, Frederick C., Hornby Island, British Columbia, Canada, assignor of one-third to C. C. Williams and one-third to F. M. Dyer, Detroit, Mich. Safety-pin. No. 1,112,098; Sept. 29; Gaz. vol. 206; p. 1297.
Scott, James B., Clearfield, Pa. Circulating system for boilers. No. 1,111,766; Sept. 29; Gaz. vol. 206; p. 1183.
Scott, John C., Covington, Ky. Ventilator. No. 1,109,793; Sept. 8; Gaz. vol. 206; p. 370.
Scott, John R., Charleston, W. Va. Automatic valve. No. 1,111,409; Sept. 22; Gaz. vol. 206; p. 1023.
Scott, Robert D. (See Viers and Scott.)
Scott, Thomas J., Winchester, Tenn. Combined bookcase and vault therefor. No. 1,110,721; Sept. 15; Gaz. vol. 206; p. 743.
Scott, William F., *et al.* (See Wigle, Wilson B., assignor.)
Seaman, Delbert O., assignor of one-half to C. T. Smith, Des Moines, Iowa. Film-fire-protection device for moving-picture films. No. 1,111,767; Sept. 29; Gaz. vol. 206; p. 1183.
Searle, Joseph M., Pittsburgh, Pa. Exhaust-condenser for steam-exhaust pipes. No. 1,110,461; Sept. 15; Gaz. vol. 206; p. 651.
Sears, Roebuck & Company. (See Fowler, Gordon F., assignor.)
Seeber, Frederick, New York, N. Y. Clasp. No. 1,110,579; Sept. 15; Gaz. vol. 206; p. 691.
Seeds, George, assignor to Newton Disc Plow Company, Newton, Iowa. Gearing device for washing-machines and wringers. No. 1,110,830; Sept. 15; Gaz. vol. 206; p. 780.
Seeley, William J., Kansas City, Mo. Hollow metal tie. No. 1,112,330; Sept. 29; Gaz. vol. 206; p. 1378.
Seelig, John G. (See Wyman, William H., assignor.)
Seelye, William F., assignor of one-half to J. P. Wilson, New Haven, Conn. Lock-canal marine toy. No. 1,109,366; Sept. 1; Gaz. vol. 206; p. 182.
Seewald, Christian, Williamsport, Pa. Tire attachment. No. 1,109,307; Sept. 1; Gaz. vol. 206; p. 159.
Seifert, Charles A., Newbern, N. C. Bottle-crate. No. 1,111,922; Sept. 29; Gaz. vol. 206; p. 1240.
Seiss, George J., Toledo, Ohio. Gearing for knife-sharpeners. No. 1,109,945; Sept. 8; Gaz. vol. 206; p. 426.
Seivert, Christ, Calio, N. D. Wear-compensating journal-box. No. 1,112,425; Sept. 29; Gaz. vol. 206; p. 1412.
Self, William H., Webb City, Mo. Making chafing-blocks for railway rolling-stock. No. 1,111,807; Sept. 29; Gaz. vol. 206; p. 1199.
Sell Horse Goods Company, The. (See Sell, William E., assignor.)
Sell, William E., assignor to The Sell Horse Goods Company, Canton, Ohio. Horse-checking device. No. 1,110,650; Sept. 15; Gaz. vol. 206; p. 717.
Sellers, Preston H., East St. Louis, Ill. Combined condenser and reboiler. No. 1,109,794; Sept. 8; Gaz. vol. 206; p. 370.
Sells, James B., London, Ky. Churn. No. 1,111,187; Sept. 22; Gaz. vol. 206; p. 948.
Semmelbeck, Fred A., Watersmeet, Mich. Ticket-holder. No. 1,109,795; Sept. 8; Gaz. vol. 206; p. 371.
Semon, William H., Cleveland, Ohio. Combined drill and countersink. No. 1,111,410; Sept. 22; Gaz. vol. 206; p. 1023.
Sengbusch, Gustav J., Milwaukee, Wis. Ink-well. No. 1,109,019; Sept. 1; Gaz. vol. 206; p. 58.
Senge, Liborius, Crescent Springs, Ky. Safety-pocket. No. 1,111,678; Sept. 22; Gaz. vol. 206; p. 1117.
Sentinel Automatic Gas Appliance Co., The. (See Phillips, Ross M. G., assignor.)
Serrell, John A., North Plainfield, N. J. Power-transmitting device. No. 1,111,865; Sept. 29; Gaz. vol. 206; p. 1221.
Serrell, John A., North Plainfield, and J. L. Fitts, Pensauken township, Camden county, N. J.; said Fitts assignor to Warren Webster & Company. Thermostatic valve. No. 1,109,705; Sept. 8; Gaz. vol. 206; p. 341.
Sessions, Frank L., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Cable-reeling mechanism for electric traction systems. No. 1,112,331; Sept. 29; Gaz. vol. 206; p. 1378.
Sessions, Frank L., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Mining-machine. No. 1,112,332; Sept. 29; Gaz. vol. 206; p. 1379.
Seth Thomas Clock Co. (See Gordon, Arthur M., assignor.)
Severs, Demeter M., Mishawaka, Ind. Shoe-heel. No. 1,110,966; Sept. 15; Gaz. vol. 206; p. 828.
Severin, Ludwig, Hagen-Delstern, Germany. Device for lighting gas-lamps from a distance. No. 1,109,150; Sept. 1; Gaz. vol. 206; p. 104.
Severy, Melvin L., Arlington Heights, Mass. Power system. No. 1,110,722; Sept. 15; Gaz. vol. 206; p. 743.
Severy, Melvin L., Arlington Heights, and G. B. Sinclair, Boston, Mass. Pulsation-producing device for electrical musical instruments. No. 1,111,866; Sept. 29; Gaz. vol. 206; p. 1221.
Severy, Melvin L., Arlington Heights, and G. B. Sinclair, Winthrop, Mass., assignors to Choralcelo Manufacturing Company. Timbre-controller for electrical musical instruments. No. 1,110,012; Sept. 8; Gaz. vol. 206; p. 449.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Means of attaching work-supports of sewing-machines. No. 1,110,237; Sept. 8; Gaz. vol. 206; p. 531.
Seymour, James A., Auburn, N. Y. Valve-gear. No. 1,111,327; Sept. 22; Gaz. vol. 206; p. 995.
Seys, Abraham J. (See Whittemore, James A., assignor.)
Shaller, Harry J. (See Hoss, Charles, assignor.)
Shane, Isaac E. (See Hirsch and Shane.)
Shanley, Francis E. (See Dixon and Shanley.)
Shantz, Edgar, Rochester, N. Y. Button. No. 1,110,462; Sept. 15; Gaz. vol. 206; p. 652.
Sharkey, William C., assignor to C. A. Goslin, Philadelphia, Pa. Vending-machine. No. 1,112,333; Sept. 29; Gaz. vol. 206; p. 1379.
Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Draft connection. No. 1,109,875; Sept. 8; Gaz. vol. 206; p. 400.
Sharp, Joseph W., Jr., assignor to Haines, Jones & Cadbury Inc., Philadelphia, Pa. Water-closet. No. 1,110,831; Sept. 15; Gaz. vol. 206; p. 780.
Sharp, Joseph W., Jr., assignor to Haines, Jones & Cadbury Inc., Philadelphia, Pa. Water-closet. No. 1,110,992; Sept. 15; Gaz. vol. 206; p. 835.
Shaw, Bert L. (See Martinson, Martin, assignor.)
Shaw, Bruce A., Oak Park, Ill. Piston for pneumatic smokers. No. 1,112,334; Sept. 29; Gaz. vol. 206; p. 1380.
Shaw-Walker Company, The. (See Wagner, Chester I., assignor.)
Shea, William F., *et al.* (See Harrison, John, assignor.)
Sheahan, James H., Freeport, Ill. Water-motor. No. 1,111,722; Sept. 22; Gaz. vol. 206; p. 1132.
Sheahan, William, Oregon City, Oreg. Clutch for paper-spools. No. 1,110,651; Sept. 15; Gaz. vol. 206; p. 717.
Sheedy, Daniel M., Poughkeepsie, N. Y. Auxiliary air-inlet and primer for internal-combustion engines. No. 1,111,620; Sept. 22; Gaz. vol. 206; p. 1006.
Sheldon, Quincy G., Elburn, Ill. Post-mold. No. 1,111,808; Sept. 29; Gaz. vol. 206; p. 1200.
Shellabarger, Claude D., Spokane, Wash. Pump-equalizer. No. 1,109,706; Sept. 8; Gaz. vol. 206; p. 342.
Shellenberger, John, Rome, Ga. Manufacture of wire-bound receptacles. No. 1,111,809; Sept. 29; Gaz. vol. 206; p. 1200.
Sheperd, William R., Urbana, Ohio. Drying-frame. No. 1,110,080; Sept. 8; Gaz. vol. 206; p. 474.
Sheperdson, John W., Harrisburg, Pa. Rolling-mill guide. No. 1,110,463; Sept. 15; Gaz. vol. 206; p. 652.
Sherman, Norman W., Lake City, Iowa. Oil-burner. No. 1,109,474; Sept. 1; Gaz. vol. 206; p. 217.
Sherwood, Fred C. (See Phillips and Sherwood.)
Shiek, Daniel W., Chicago, Ill., assignor to W. L. Milliken, Barnstable, Mass. Combined computing and listing machine. No. 1,111,867; Sept. 29; Gaz. vol. 206; p. 1221.
Shields, Carl E., Rock Island, Ill. Adjustment for bench-vises. No. 1,111,103; Sept. 22; Gaz. vol. 206; p. 918.
Shirk, Andrew W., Dayton, Ohio. Sewer-agitator. No. 1,110,832; Sept. 15; Gaz. vol. 206; p. 782.
Shirley, Henry R., St. Paul, Minn., assignor of one-half to J. A. Ferris, Rossland, Canada. Temperature-alarm apparatus. No. 1,110,580; Sept. 15; Gaz. vol. 206; p. 691.
Shirley, William W., Buffalo, N. Y. Fan attachment for rocking-chairs. No. 1,110,652; Sept. 15; Gaz. vol. 206; p. 718.
Shoenberg, Milton H., assignor, by mesne assignments, to Majestic Electric Development Co., San Francisco, Cal. Electric radiator. No. 1,109,551; Sept. 1; Gaz. vol. 206; p. 242.
Sholes, Zalmon G., and J. M. Fraaz, New York, N. Y., assignors, by mesne assignments, to The Lawrence Manufacturing Company Limited, London, England. Typewriter. No. 1,111,868; Sept. 29; Gaz. vol. 206; p. 1222.
Shull, Anderson H. (See Richards and Shull.)
Shults, Frederick W. (See Shults, Joseph M. and F. W.)
Shults, Joseph M. and F. W., Baltimore, Md. Fluid-blast stoker. No. 1,109,367; Sept. 1; Gaz. vol. 206; p. 182.
Shumate, William A., *et al.* (See Agan, John P., assignor.)
Sibley, Foster J., assignor of one-half to T. C. Dunn, Findlay, Ohio. Computing counter-scale and cash-register. No. 1,112,388; Sept. 29; Gaz. vol. 206; p. 1399.
Sidebottom, John W., assignor to T. C. Entwistle Company, Lowell, Mass. Lease-former. No. 1,109,257; Sept. 1; Gaz. vol. 206; p. 142.
Sieber, Lawrence G., Cincinnati, Ohio. Scale. No. 1,109,368; Sept. 1; Gaz. vol. 206; p. 182.
Siemens & Halske A. G. (See Grabe, Georg, assignor.)
Siggers, Edward G. (See Von Moos, George F., assignor.)
Silbaugh, John J., Lancaster, Ohio. Lip-bandage. No. 1,111,679; Sept. 22; Gaz. vol. 206; p. 1117.
Silliman, William F., Cleveland, Ohio. Combined book-mark and leaf-turner. No. 1,110,013; Sept. 8; Gaz. vol. 206; p. 450.
Sills, John F., Albertville, Ala. Finger-protector. No. 1,109,796; Sept. 8; Gaz. vol. 206; p. 371.

Silsby, Harvey W. (See Brandon, Lawrence E., assignor.)
Silva, Felicissimo C., Lowell, Mass. Puzzle. No. 1,111,923; Sept. 29; Gaz. vol. 206; p. 1240.
Silveira, Henry M., Cambridge, Mass. Cuspidor. No. 1,110,967; Sept. 15; Gaz. vol. 206; p. 828.
Silver, Jesse W., South Tacoma, Wash. Button. No. 1,109,797; Sept. 8; Gaz. vol. 206; p. 371.
Simmonds Engineering Company, The. (See Simmonds, John J., assignor.)
Simmonds, John J., assignor to The Simmonds Engineering Company, Iola, Kans. Retort-discharging machine. No. 1,110,081; Sept. 8; Gaz. vol. 206; p. 474.
Simms, Irvin B., Sacramento, assignor of one-third to F. Hunt, Wheatland, Cal. Automatic fire-alarm system. No. 1,111,708; Sept. 22; Gaz. vol. 206; p. 1128.
Simon, Arthur, assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Alternating-current-motor controller for elevators. No. 1,110,352; Sept. 15; Gaz. vol. 206; p. 612.
Simon, Arthur, assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Fluid-rheostat. No. 1,112,165; Sept. 29; Gaz. vol. 206; p. 1320.
Simon, Bühler & Baumann. (See Bauer, Georg J., assignor.)
Simoni, Jens, Keyport, N. J., assignor to H. Clarkson, Flushing, N. Y. Puncture-healing liquid for tires. No. 1,109,151; Sept. 1; Gaz. vol. 206; p. 104.
Simplex Player Action Company. (See Brown, Theodore P., assignor.)
Simpson, John M., and J. E. Wilkinson, Winnipeg, Manitoba, Canada. Knotter for harvester-binders. No. 1,112,389; Sept. 29; Gaz. vol. 206; p. 1400.
Simpson, Joseph T., Chicago, Ill. Overshoe. No. 1,111,188; Sept. 22; Gaz. vol. 206; p. 949.
Sims, Thomas W., Eheart, Va. Clinical-thermometer case. No. 1,109,308; Sept. 1; Gaz. vol. 206; p. 160.
Sinclair, George B. (See Severy, Melvin L., assignor.)
Sinclair, George B. (See Severy and Sinclair.)
Singer, Charles, Winfred, S. D. Storm-window. No. 1,111,621; Sept. 22; Gaz. vol. 206; p. 1096.
Singer Manufacturing Company, The. (See Brown, Otis E., assignor.)
Singer Manufacturing Company, The. (See Gray and Woodhead, assignors.)
Singer Manufacturing Company, The. (See Grieb, Alfred, assignor.)
Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)
Singer Manufacturing Company, The. (See Molyneux and Pech, assignors.)
Singer Manufacturing Company, The. (See Rontke, Albert, assignor.)
Single Service Package Corporation of America. (See Beadle, George W., assignor.)
Sintz, Claude, Detroit, Mich. Clutch. No. 1,108,936; Sept. 1; Gaz. vol. 206; p. 27.
Sipperley, Elbert N., Westport, Conn. Curtain-light. No. 1,109,475; Sept. 1; Gaz. vol. 206; p. 218.
Sisson, Eugene A., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Holster for automatic pistols. No. 1,110,993; Sept. 15; Gaz. vol. 206; p. 836.
Skelton, Frederick and W. E., Hamilton, Ontario, Canada, assignors of one-third to E. W. McCarty, New York, N. Y. Tool-handle. No. 1,110,149; Sept. 8; Gaz. vol. 206; p. 502.
Skelton, Walter E. (See Skelton, Frederick and W. E.)
Skiff, Joseph B., Clinton, Iowa, and C. J. Westphall, Portland, Oreg. Fence-post. No. 1,109,020; Sept. 1; Gaz. vol. 206; p. 58.
Skinner, Calvin, Columbus, Ohio. Cattle-guard. No. 1,109,552; Sept. 1; Gaz. vol. 206; p. 243.
Skinner Engine Company, The. (See Stevens, Robert C., assignor.)
Skinner Engine Company, The. (See Williams and Skinner, assignors.)
Skinner, Le Grand. (See Williams and Skinner.)
Slappey, William H., Hopewell, Ala. Fireplace attachment. No. 1,111,036; Sept. 22; Gaz. vol. 206; p. 805.
Slater, Charles B., Boston, Mass., assignor of one-half to Flexible Rubber Goods Co., Salisbury, Conn. Rubber-soled shoe. No. 1,110,353; Sept. 15; Gaz. vol. 206; p. 612.
Slatton, John L., Baypoint, Cal. Fruit-harvester. No. 1,109,645; Sept. 1; Gaz. vol. 206; p. 278.
Slavin, Joseph F., and J. Mendel, New York, N. Y. Traveler's umbrella-carrier. No. 1,110,150; Sept. 8; Gaz. vol. 206; p. 502.
Slick, Edwin E., Westmont borough, Pa. Spliced reinforcing-bar. No. 1,109,258; Sept. 1; Gaz. vol. 206; p. 142.
Slick, Edwin E., Johnstown, Pa. Furnace-roof. No. 1,109,553; Sept. 1; Gaz. vol. 206; p. 243.
Slick, Edwin E., Pittsburgh, Pa. Finishing car-wheels. No. 1,111,622; Sept. 22; Gaz. vol. 206; p. 1096.
Slife, Theodore M. (See Boyd and Slife.)
Slocomb, John T., Providence, R. I. Steam cooking vessel. No. 1,111,810; Sept. 29; Gaz. vol. 206; p. 1201.
Sly, Wilfred C., Cleveland, Ohio. Tire-bracket. No. 1,111,189; Sept. 22; Gaz. vol. 206; p. 949.
Smart, Walter J., New York, N. Y. Atomizer. No. 1,110,653; Sept. 15; Gaz. vol. 206; p. 718.
Smelser, Henry D., West Plains, Mo. Device for concentrating the rays of the sun. No. 1,111,239; Sept. 22; Gaz. vol. 206; p. 966.
Smith, Arthur G., *et al.* (See Tufford, John G., assignor.)
Smith, Arthur W., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,110,407; Sept. 15; Gaz. vol. 206; p. 631.
Smith, Arthur W., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,110,464; Sept. 15; Gaz. vol. 206; p. 652.
Smith, Bertram C., and W. J. Stevenson, Groveton, Tex. Privy-seat. No. 1,111,037; Sept. 22; Gaz. vol. 206; p. 895.
Smith, C. T. (See Seaman, Delbert O., assignor.)
Smith, Charles E., Saginaw, Mich. Bean-separating machine. No. 1,110,014; Sept. 8; Gaz. vol. 206; p. 450.
Smith, Frank F., Newark, N. J. Fireproof window-stop. No. 1,112,335; Sept. 29; Gaz. vol. 206; p. 1380.
Smith, Frank L., Dayton, Ohio. Garment. No. 1,111,975; Sept. 29; Gaz. vol. 206; p. 1256.
Smith, Frank V., Floriston, Cal. Magnetic vibrator. No. 1,111,038; Sept. 22; Gaz. vol. 206; p. 895.
Smith, Frank W. (See McCoy and Sprong, assignors.)
Smith, Frederick W., assignor to Smith Organ Company, Inc., North Tonawanda, N. Y. Tracker-board for self-playing musical instruments. No. 1,111,328; Sept. 22; Gaz. vol. 206; p. 995.
Smith, Irving B., assignor to Electrelle Company, Philadelphia, Pa. Automatic musical-instrument player. No. 1,109,554; Sept. 1; Gaz. vol. 206; p. 243.
Smith, Irving B., assignor to Electrelle Company, Philadelphia, Pa. Phrasing-bar for musical instruments. No. 1,112,166; Sept. 29; Gaz. vol. 206; p. 1321.
Smith, Jabez M., Malvern, Ark. Type-writer. No. 1,110,513; Sept. 15; Gaz. vol. 206; p. 669.
Smith, James A. (See Fennell, Bailey M., assignor.)
Smith, James H., Port Murry, N. J. Automatic safety device for locomotives. No. 1,109,798; Sept. 8; Gaz. vol. 206; p. 371.
Smith, James R., Howell, Ind. Float-valve for pumps. No. 1,110,354; Sept. 15; Gaz. vol. 206; p. 612.
Smith, James S., Montreal, Quebec, Canada. Vehicle-spring. No. 1,111,924; Sept. 29; Gaz. vol. 206; p. 1240.
Smith, John C., Louisville, Ky. System of elevator control. No. 1,109,707; Sept. 8; Gaz. vol. 206; p. 342.
Smith, John Q., and A. B. Hoover, Paola, Kans. Sectional flooring. No. 1,110,833; Sept. 15; Gaz. vol. 206; p. 781.
Smith, John W., assignor of one-half to E. M. Ramsey, Hutchinson, Kans. Stalk-cutter. No. 1,111,925; Sept. 29; Gaz. vol. 206; p. 1241.
Smith, Louis, Chicago, Ill. Paper-pad holder. No. 1,109,708; Sept. 8; Gaz. vol. 206; p. 342.
Smith, Morton G., Washington, Pa. Cuspidor-stand. No. 1,112,320; Sept. 29; Gaz. vol. 206; p. 1344.
Smith, Norman R., Red Bluff, Cal. Balanced automatic air-lift. No. 1,112,099; Sept. 29; Gaz. vol. 206; p. 1297.
Smith Organ Company. (See Smith, Frederick W., assignor.)
Smith, Oscar A., assignor to The National Acme Manufacturing Company, Cleveland, Ohio. Metal-working machine. No. 1,111,411; Sept. 22; Gaz. vol. 206; p. 1024.
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Spring-die. No. 1,111,412; Sept. 22; Gaz. vol. 206; p. 1024.
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Double-ended tap. No. 1,111,413; Sept. 22; Gaz. vol. 206; p. 1024.
Smith, Philip H., Pawling, N. Y. Aeroplane. No. 1,110,355; Sept. 15; Gaz. vol. 206; p. 613.
Smith, William C., *et al.* (See Tufford, John G., assignor.)
Smith, William D., Washington, D. C. Ordnance. No. 1,111,039; Sept. 22; Gaz. vol. 206; p. 895.
Smith, William E. (See Kilbourn, Smith, and Kilbourn.)
Smith, William M., Pittsburgh, assignor of one-third to W. A. Fouks, Turtle Creek, Pa. Nut-lock. No. 1,112,410; Sept. 29; Gaz. vol. 206; p. 1407.
Smith, William R., assignor to Buffalo Leather Co., Buffalo, N. Y. Apparatus for dyeing textile materials. No. 1,111,104; Sept. 22; Gaz. vol. 206; p. 918.
Smith-Worthington Company, The. (See Adams, Samuel S., assignor.)
Smith, Zebulon B., Elizabeth City county, Va. Car-replacer. No. 1,109,360; Sept. 1; Gaz. vol. 206; p. 183.
Smithson, George W. (See Woodard, Joseph W., assignor.)
Smoot, Charles H., assignor to Rateau Battu Smoot Company, New York, N. Y. Commutating dynamo-electric machine. No. 1,111,504; Sept. 22; Gaz. vol. 206; p. 1056.
Snigo, James J., Pittsburgh, Pa. Ice-cream cabinet. No. 1,112,300; Sept. 29; Gaz. vol. 206; p. 1400.
Snow, Henry A., assignor of one-half to G. E. Tralles, Denver, Colo. Railway-tie. No. 1,110,465; Sept. 15; Gaz. vol. 206; p. 652.
Snow, Sidney C., Blakesburg, Iowa. Selective system. No. 1,110,834; Sept. 15; Gaz. vol. 206; p. 781.
Snyder, Garrett D., Calgary, Alberta, Canada. Automatic railway-switch. No. 1,112,035; Sept. 29; Gaz. vol. 206; p. 1275.
Snyder, George W., assignor to California Drug and Chemical Company, Los Angeles, Cal. Waterproofing material. No. 1,109,799; Sept. 8; Gaz. vol. 206; p. 372.
Snyder, Parke T., Chicago, Ill. Shipping-package. No. 1,108,937; Sept. 1; Gaz. vol. 206; p. 28.

Stuebner, Ruben, Millvale, Pa. Rail-joint. No. 1,109,482; Sept. 1; Gaz. vol. 206; p. 220.
Stull, Jacob H., Fremont, Ohio. Duplex clutch. No. 1,111,681; Sept. 22; Gaz. vol. 206; p. 1118.
Sturgis, Albert, Griffin, Ind. Seasoning attachment for meat-chopping machines. No. 1,110,515; Sept. 15; Gaz. vol. 206; p. 670.
Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)
Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)
Sturtevant, Thomas J. (See Sturtevant, Thomas L. and T. J.)
Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screen or separator. No. 1,111,044; Sept. 22; Gaz. vol. 206; p. 897.
Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Millstone. No. 1,111,043; Sept. 22; Gaz. vol. 206; p. 897.
Submarine Signal Company. (See Fessenden, Reginald A., assignor.)
Submarine Signal Company. (See Hill and Abell, assignors.)
Submarine Signal Company. (See Wood, Edward C., assignor.)
Submarine Wireless Company. (See Berger, Christian, assignor.)
Sullivan, James H. (See Ackerman and Sullivan.)
Sulzbacher, Jerome, New York, N. Y. Alarm-cable. No. 1,109,878; Sept. 8; Gaz. vol. 206; p. 401.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Dumping-car door. No. 1,109,603; Sept. 1; Gaz. vol. 206; p. 261.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Car end construction. No. 1,109,604; Sept. 1; Gaz. vol. 206; p. 262.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis Mo. Railway-car. No. 1,109,605; Sept. 1; Gaz. vol. 206; p. 262.
Summey, David L., assignor to Chase Rolling Mill Co., Waterbury, Conn. Extrusion-machine. No. 1,109,535; Sept. 1; Gaz. vol. 206; p. 244.
Sumner, Orlando, London, England. Steam-generator. No. 1,109,483; Sept. 1; Gaz. vol. 206; p. 220.
Sundby, Gudmund, Glöshaugen, near Trondhjem, Norway. Relief mechanism for water-motors. No. 1,109,153; Sept. 1; Gaz. vol. 206; p. 105.
Sundeen, Bernhard. (See Edgecomb, Luther B., assignor.)
Sundell, Gustaf B., Stockholm, Sweden. Oil-cup. No. 1,110,836; Sept. 15; Gaz. vol. 206; p. 782.
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Overload motor-controlling apparatus. No. 1,111,240; Sept. 22; Gaz. vol. 206; p. 966.
Superior Floor Oiler Co. (See Lichter, Ruben, assignor.)
Suspension Bed Spring Manufacturing Company. (See Neadoff, Abraham S., assignor.)
Sutcliffe, Frank, Conshohocken, Pa. Boiler-stand. No. 1,109,556; Sept. 1; Gaz. vol. 206; p. 244.
Sutherland, Daniel M., Jr., Trenton, assignor to The Agasote Millboard Co., Ewing, N. J. Suction lifting apparatus. No. 1,110,409; Sept. 15; Gaz. vol. 206; p. 631.
Sutton, Charles G., Cherrydale, Kans. Level attachment. No. 1,109,024; Sept. 1; Gaz. vol. 206; p. 60.
Sutton, George C., I. W. Crowl, and J. O. Hamberg, Priest River, Idaho. Apparatus for burning stumps. No. 1,111,241; Sept. 22; Gaz. vol. 206; p. 966.
Sutton, George C., I. W. Crowl, and J. O. Hamberg, Priest River, Idaho. Condenser. No. 1,111,242; Sept. 22; Gaz. vol. 206; p. 967.
Sutton, Simon S., Eldorado, Ill. Internal-combustion engine. No. 1,111,682; Sept. 22; Gaz. vol. 206; p. 1119.
Sutton, Simon S., Eldorado, Ill. Starter for internal-combustion engines. No. 1,111,683; Sept. 22; Gaz. vol. 206; p. 1119.
Sutton, William S., Rockford, assignor to American Radiator Company, Chicago, Ill. Vacuum-cleaner. No. 1,109,639; Sept. 1; Gaz. vol. 206; p. 275.
Swanson, Carl A. (See Hubbard and Swanson.)
Swebillus, Carl G., and H. T. R. Hanitz, assignors to The Marlin Firearms Company, New Haven, Conn. Take-down repeating firearm. No. 1,110,837; Sept. 15; Gaz. vol. 206; p. 782.
Swedberg, Charles M., Yonkers, N. Y. Door-sill extension for subway-cars. No. 1,112,235; Sept. 29; Gaz. vol. 206; p. 1346.
Sweeney, William F. (See Bowen and Sweeney.)
Sweet, Webb C., Washington, D. C. Dividing curtain for vehicle-tops. No. 1,111,813; Sept. 29; Gaz. vol. 206; p. 1202.
Sweezy, Wiley G. (See Leighton, James A., assignor.)
Swezey, Benjamin F., Bellingham, Minn. Device for preventing snow-drifts. No. 1,108,943; Sept. 1; Gaz. vol. 206; p. 30.
Swindell, John A., Pittsburgh, Pa. Annealing-furnace. No. 1,112,236; Sept. 29; Gaz. vol. 206; p. 1346.
Swindell, John A. and J. C., Pittsburgh, Pa. Annealing-furnace. No. 1,112,237; Sept. 29; Gaz. vol. 206; p. 1347.
Swindell, John C. (See Swindell, John A. and J. C.)
Swiss Magneto Company, The. (See Baier, Fredrick, assignor.)
Syracuse Chilled Plow Company, The. (See Lee, William H., assignor.)
Szalkay, Steven, Flint, Mich. Shield. No. 1,110,084; Sept. 8; Gaz. vol. 206; p. 476.
Szénási, József. (See Budai and Szénási.)
Szuth, John, New York, N. Y. Flying-machine. No. 1,110,727; Sept. 15; Gaz. vol. 206; p. 745.
Szuth, John, assignor of one-fourth to G. Kocsis, New York, N. Y. Folding crate. No. 1,110,726; Sept. 15; Gaz. vol. 206; p. 744.
T. C. Entwistle Company. (See Sidebottom, John W., assignor.)
Tabor, Clinton D., New Dorp, N. Y., assignor of one-half to A. Schrafft, Newark, N. J. Weather-guard for doors. No. 1,110,242; Sept. 8; Gaz. vol. 206; p. 532.
Tacchi, Percy G., Acton, London, England. Internal-combustion engine. No. 1,112,338; Sept. 29; Gaz. vol. 206; p. 1381.
Tackney, Edward J., assignor of one-half to H. C. Wiedeman, Detroit, Mich. Expansible bung-plug. No. 1,109,262; Sept. 1; Gaz. vol. 206; p. 144.
Taft, Harrison S., Seattle, Wash. Reinforced-concrete-column construction. No. 1,111,194; Sept. 22; Gaz. vol. 206; p. 950.
Talbert, Daniel H., Indianapolis, Ind. Machine for applying fluid to objects. No. 1,109,087; Sept. 1; Gaz. vol. 206; p. 82.
Talbot, James A., Walla Walla, Wash. Weed-cutter. No. 1,111,108; Sept. 22; Gaz. vol. 206; p. 919.
Talbot, William W., Atlanta, Ga., assignor of one-half to S. H. Boynton, Chicago, Ill., and one-half to J. H. Dow, Atlanta, Ga. Life guard or fender. No. 1,111,772; Sept. 29; Gaz. vol. 206; p. 1185.
Talbot, William W., Chicago, Ill., and C. A. Sawtelle, Salt Lake City, Utah, assignors of one-half to S. H. Boynton, Chicago, Ill., and one-half to J. H. Dow, Atlanta, Ga. Combined buffer and fender. No. 1,111,771; Sept. 29; Gaz. vol. 206; p. 1185.
Taliaferro, Thomas L., Wheeling, W. Va., assignor, by mesne assignments, to Phoenix-Hermetic Company, New York, N. Y. Sheet-metal cover for receptacles. No. 1,109,484; Sept. 1; Gaz. vol. 206; p. 221.
Tamagno, Daniel B., assignor to L. Tamagno, New York, N. Y. Can-closure. No. 1,109,557; Sept. 1; Gaz. vol. 206; p. 245.
Tamagno, Lydie. (See Tamagno, Daniel B., assignor.)
Tannenbaum, Robert, Cincinnati, Ohio. Ash-remover. No. 1,108,944; Sept. 1; Gaz. vol. 206; p. 30.
Tanner, Delbert N., Great Falls, Mont. Automobile sled. No. 1,110,160; Sept. 8; Gaz. vol. 206; p. 505.
Tate, Thomas L., Stewardson, assignor of one-half to J. H. Friesner, Strasburg, Ill. Flood-gate. No. 1,111,723; Sept. 22; Gaz. vol. 206; p. 1133.
Tatum, Lewis L., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Rheostat. No. 1,112,169; Sept. 29; Gaz. vol. 206; p. 1322.
Tatum, Lewis L., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Rheostat. No. 1,112,170; Sept. 29; Gaz. vol. 206; p. 1322.
Taubert, Albert, New York, N. Y. Green-corn spoon. No. 1,110,161; Sept. 8; Gaz. vol. 206; p. 505.
Taussig, John H. (See Rusby and Taussig.)
Taylor, Charles G. (See Atterbury, John C., assignor.)
Taylor, Clarence W. (See Graham, Leslie R., assignor.)
Taylor, David H., and B. E. Connelly, Wheeling, W. Va. Driving mechanism. No. 1,109,088; Sept. 1; Gaz. vol. 206; p. 82.
Taylor, Edward, Owensboro, Ky. Portable hydraulic stretcher. No. 1,110,838; Sept. 15; Gaz. vol. 206; p. 783.
Taylor, Eugene H., Hyde Park, Mass. Safety device for corner-staying machines. No. 1,111,329; Sept. 22; Gaz. vol. 206; p. 996.
Taylor, Henry, Chicago, Ill. Go-cart. No. 1,110,162; Sept. 8; Gaz. vol. 206; p. 506.
Taylor, Herbert C., Greensburg, Ind. Adjustable oven. No. 1,109,263; Sept. 1; Gaz. vol. 206; p. 144.
Taylor, James A. (See Bagnall and Taylor.)
Taylor, John L., Chicago, Ill., assignor to Taylor Portable Steel Derrick Company. Gondola derrick. No. 1,111,415; Sept. 22; Gaz. vol. 206; p. 1025.
Taylor, John L., Chicago, Ill., assignor of one-fourth to Taylor Portable Steel Derrick Company. Derrick. No. 1,111,416; Sept. 22; Gaz. vol. 206; p. 1025.
Taylor Portable Steel Derrick Company. (See Taylor, John L., assignor.)
Taylor, Thomas A., Kenton, Ohio. Fuel-heater. No. 1,109,025; Sept. 1; Gaz. vol. 206; p. 61.
Taylor, William E., Eastport, Me., assignor to American Can Company, New York, N. Y. Sheet-metal can for sardines. No. 1,112,037; Sept. 29; Gaz. vol. 206; p. 1276.
Teasdale, William O., Manila, Philippine Islands. Electric-light pendant. No. 1,111,623; Sept. 22; Gaz. vol. 206; p. 1097.
Teepie, Natalie A., (now by marriage N. A. Stolp,) Philadelphia, Pa. Means of protection for feminine wear. No. 1,109,264; Sept. 1; Gaz. vol. 206; p. 144.
Templeton Kenly & Co. (See Malicki, Joseph, assignor.)
Ten Eyck, Peter G., Albany, N. Y. Railway signal and switch operating means. No. 1,111,930; Sept. 29; Gaz. vol. 206; p. 1242.
Tench, Samuel V., *et al.* (See Johnson, John S., assignor.)

Teppert, Joseph, Buffalo, N. Y. Bow-shortening device for vehicle-tops. No. 1,112,171; Sept. 29; Gaz. vol. 206; p. 1323.
Terrey, Arthur. (See Raabe and Terrey.)
Terry, Charles M., Gary, Ind. Scale-remover. No. 1,111,330; Sept. 22; Gaz. vol. 206; p. 906.
Terry, Joseph T., Jr., San Francisco, Cal. Ore-pulp classifier. No. 1,109,485; Sept. 1; Gaz. vol. 206; p. 221.
Terry, Richard A., Roanoke, Va. Oil-burner. No. 1,110,516; Sept. 15; Gaz. vol. 206; p. 670.
Tessier, Julien, assignor to Lubin Manufacturing Company, Philadelphia, Pa. Film-magazine. No. 1,111,506; Sept. 22; Gaz. vol. 206; p. 1056.
Teuf, Franz C., Oil City, Pa., assignor to General Electric Company. Pump. No. 1,112,339; Sept. 29; Gaz. vol. 206; p. 1382.
Thacher, George H., Jr., assignor to G. H. Thacher, Sr., Albany, N. Y. Dumping-grate. No. 1,109,265; Sept. 1; Gaz. vol. 206; p. 145.
Thacher, George H., Jr., assignor to G. H. Thacher, Sr., Albany, N. Y. Inclined grate for furnaces. No. 1,109,266; Sept. 1; Gaz. vol. 206; p. 145.
Thayer, Harry, Sidney, Me. Crow-jack. No. 1,111,195; Sept. 22; Gaz. vol. 206; p. 951.
Thayer, Horace H., Jr., Wilmington, Del. Bulkhead-door. No. 1,110,410; Sept. 15; Gaz. vol. 206; p. 632.
Thayer, Paul M., Plymouth, Ind. Automatic stoker for locomotives. No. 1,109,802; Sept. 8; Gaz. vol. 206; p. 373.
Theal, Franklin W., and C. A. Blair, Akron, Ohio. Railway-tie. No. 1,112,100; Sept. 29; Gaz. vol. 206; p. 1298.
Thie, John W., Mediapolis, Iowa. Whip-operating device. No. 1,112,340; Sept. 29; Gaz. vol. 206; p. 1382.
Thierry, Charles V., Paris, France. Electric zinc-furnace with integral condenser. No. 1,110,359; Sept. 15; Gaz. vol. 206; p. 614.
Thomas & Armstrong Company, The. (See Hames, Harry C., assignor.)
Thomas, Fred A., Pawtucket, R. I. Horse drinking-fountain. No. 1,111,507; Sept. 22; Gaz. vol. 206; p. 1056.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp receptacle for signs. No. 1,110,163; Sept. 8; Gaz. vol. 206; p. 506.
Thomas, Hopkins, assignor of one-half to W. R. Thomas, Sr., Catasauqua, Pa. Friction-clutch. No. 1,110,972; Sept. 15; Gaz. vol. 206; p. 829.
Thomas, Jesse B. (See Estes, Dana, assignor.)
Thomas, John B., Lakewood, N. J. Railway-bed and rail-support. No. 1,109,267; Sept. 1; Gaz. vol. 206; p. 146.
Thomas, John H., Bloomfield, N. J., assignor to Thomas Motive Power Company. Air-compressor. No. 1,109,154; Sept. 1; Gaz. vol. 206; p. 105.
Thomas, Marvin G., Basin, Wyo. Pipe. No. 1,111,196; Sept. 22; Gaz. vol. 206; p. 951.
Thomas Motive Power Company. (See Thomas, John H., assignor.)
Thomas, Percy H., Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Single-phase gas or vapor electric apparatus. No. 1,110,582; Sept. 15; Gaz. vol. 206; p. 692.
Thomas, Percy H., Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Electrical distribution system. No. 1,110,583; Sept. 15; Gaz. vol. 206; p. 693.
Thomas, Percy H., East Orange, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Means for keeping vapor-converters alive. No. 1,110,584; Sept. 15; Gaz. vol. 206; p. 693.
Thomas, Percy H., East Orange, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Controlling device for vapor apparatus. No. 1,110,585; Sept. 15; Gaz. vol. 206; p. 694.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Mercury-vapor outfit and circuit therefor. No. 1,110,586; Sept. 15; Gaz. vol. 206; p. 694.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Alternating-current vapor-lamp. No. 1,110,587; Sept. 15; Gaz. vol. 206; p. 694.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Operation of vapor-converters. No. 1,110,588; Sept. 15; Gaz. vol. 206; p. 695.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Alternating-current vapor device. No. 1,110,589; Sept. 15; Gaz. vol. 206; p. 695.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Regulation of systems of electrical distribution. No. 1,110,590; Sept. 15; Gaz. vol. 206; p. 696.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Method of and apparatus for starting vapor devices. No. 1,110,591; Sept. 15; Gaz. vol. 206; p. 696.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. System of distribution by vapor electric converters. No. 1,110,592; Sept. 15; Gaz. vol. 206; p. 696.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. System of distribution by vapor electric converters. No. 1,110,593; Sept. 15; Gaz. vol. 206; p. 697.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Operation of vapor-converters. No. 1,110,594; Sept. 15; Gaz. vol. 206; p. 697.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Operation of vapor-converters. No. 1,110,595; Sept. 15; Gaz. vol. 206; p. 698.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. System of electrical distribution. No. 1,110,596; Sept. 15; Gaz. vol. 206; p. 698.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Starting device for vapor-converters. No. 1,110,597; Sept. 15; Gaz. vol. 206; p. 698.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Alternating and direct current electric distribution. No. 1,110,598; Sept. 15; Gaz. vol. 206; p. 699.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Means for starting vapor-converters in series. No. 1,110,599; Sept. 15; Gaz. vol. 206; p. 699.
Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Three-wire system of electrical distribution. No. 1,110,658; Sept. 15; Gaz. vol. 206; p. 721.
Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. Vapor electric apparatus. No. 1,110,600; Sept. 15; Gaz. vol. 206; p. 700.
Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Cooling device for vapor electric apparatus. No. 1,110,601; Sept. 15; Gaz. vol. 206; p. 700.
Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Vapor electric apparatus adapted for operation in series. No. 1,110,602; Sept. 15; Gaz. vol. 206; p. 701.
Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. Mercury-vapor apparatus. No. 1,110,063; Sept. 15; Gaz. vol. 206; p. 701.
Thomas, Phillips, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Condenser. No. 1,112,397; Sept. 29; Gaz. vol. 206; p. 1403.
Thomas, William R., Sr. (See Thomas, Hopkins, assignor.)
Thompson, Enos, Radnor, W. Va. Spark-extinguisher. No. 1,109,486; Sept. 1; Gaz. vol. 206; p. 221.
Thompson, Milton E., Ridgway, Pa. Turbine-wheel. No. 1,108,945; Sept. 1; Gaz. vol. 206; p. 31.
Thompson, Owen A. (See Overly and Thompson.)
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Centrifugal pump. No. 1,112,238; Sept. 29; Gaz. vol. 206; p. 1347.
Thornton, John N., Bridgeport, Conn. Bath-tub heater. No. 1,112,038; Sept. 29; Gaz. vol. 206; p. 1276.
Thorpe, George W., Geneva, N. Y. Fur-stretcher. No. 1,110,016; Sept. 8; Gaz. vol. 206; p. 451.
Thorpe, William P., Sugargrove, Pa. Machine for washing milk-cans. No. 1,111,624; Sept. 22; Gaz. vol. 206; p. 1097.
Thorschmidt, Ernest C., New York, N. Y. Stave bending and forming machine. No. 1,108,946; Sept. 1; Gaz. vol. 206; p. 31.
Thullen, Louis H., Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling system. No. 1,109,879; Sept. 8; Gaz. vol. 206; p. 401.
Thullen, Louis H., Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signaling system for railways. No. 1,109,880; Sept. 8; Gaz. vol. 206; p. 402.
Thullen, Louis H., Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signaling system for railways. No. 1,109,881; Sept. 8; Gaz. vol. 206; p. 402.
Thunhart, Titus, Leoben, Styria, Austria-Hungary. Rope railway. No. 1,109,371; Sept. 1; Gaz. vol. 206; p. 184.
Thurman, Charles R., assignor to Electric Renovator Manufacturing Co., Pittsburgh, Pa. Dust-collector. No. 1,109,372; Sept. 1; Gaz. vol. 206; p. 184.
Thurston, William T., Quincy, assignor of one-fourth to J. J. Lawlor, Concord, and one-fourth to F. L. Jones, Melrose, Mass. Nut-lock. No. 1,110,839; Sept. 15; Gaz. vol. 206; p. 783.
Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Hydrocarbon-motor. No. 1,111,773; Sept. 29; Gaz. vol. 206; p. 1186.
Tibbits, George W., Los Angeles, Cal. Vehicle-spring. No. 1,111,045; Sept. 22; Gaz. vol. 206; p. 898.
Tibbott, Frederick M., and E. Lemander, assignors to Emerson Piano Company, Boston, Mass. Hinge connection. No. 1,111,774; Sept. 29; Gaz. vol. 206; p. 1186.
Tietz, Ernest R. (See Henderson and Tietz.)
Till, Henry, Los Angeles, Cal. Can-opener. No. 1,110,728; Sept. 15; Gaz. vol. 206; p. 745.
Till, Henry, Pittsburg, Cal. Can-opener. No. 1,112,039; Sept. 29; Gaz. vol. 206; p. 1277.
Tilley, James F., Washington, D. C., and S. B. Austin, Baltimore, Md., assignors, by mesne assignments, to Mott-Le-Gaige Animated Advertising Corporation, New York, N. Y. Automatic display apparatus. No. 1,111,625; Sept. 22; Gaz. vol. 206; p. 1098.

Vita, Charles. (See Lichtenstein and Vita.)
Vogel, Joshua F., assignor to Gendron Wheel Company, Toledo, Ohio. Steering-gear. No. 1,109,718; Sept. 8; Gaz. vol. 206; p. 346.
Voight, Henry G., New Britain, Conn. Door operating and locking device. No. 1,112,342; Sept. 29; Gaz. vol. 206; p. 1383.
Voigt, Gustav A., Los Angeles, Cal. Gun-sight. No. 1,111,332; Sept. 22; Gaz. vol. 206; p. 997.
Voigt, Philip H., and O. C. Kuehne, Houston, Tex. Winding-drum. No. 1,111,333; Sept. 22; Gaz. vol. 206; p. 997.
Von Hohenstein, Charles H., San Antonio, Tex. Liquid-hydrocarbon burner. No. 1,111,509; Sept. 22; Gaz. vol. 206; p. 1057.
Von Moos, George F., Chicago, Ill., assignor of one-third to E. G. Siggers, Washington, D. C. Automobile cover-adjuster. No. 1,108,951; Sept. 1; Gaz. vol. 206; p. 33.
Von Pagenhardt, Maximilian, Kansas City, Mo. Steam-generator. No. 1,111,176; Sept. 22; Gaz. vol. 206; p. 944.
Von Schluembach, Adolph, Altoona, Pa. Folding crate or box. No. 1,111,407; Sept. 22; Gaz. vol. 206; p. 1022.
Wacker, Charles H. (See Wacker, Frederick G., assignor.)
Wacker, Frederick G., assignor to C. H. Wacker, Chicago, Ill. Apparatus for shaping metal articles. No. 1,111,198; Sept. 22; Gaz. vol. 206; p. 952.
Wadsworth, Frank L. O., Sewickley, Pa. Manufacture of vehicle-tires. No. 1,111,418; Sept. 22; Gaz. vol. 206; p. 1026.
Wadsworth, Frank L. O., Sewickley, Pa. Construction of vehicle-tires. No. 1,111,419; Sept. 22; Gaz. vol. 206; p. 1026.
Wagley, Oswal O., Milwaukee, Wis. Water-meter. No. 1,109,804; Sept. 8; Gaz. vol. 206; p. 374.
Wagner, Chester I., Dayton, Ohio, assignor to The Shaw-Walker Company, Muskegon, Mich. Index. No. 1,111,931; Sept. 29; Gaz. vol. 206; p. 1242.
Wagner, Gus J., and M. H. Hopkins, assignors to The O. & W. Thum Company, Grand Rapids, Mich. Oil-press. No. 1,110,087; Sept. 8; Gaz. vol. 206; p. 477.
Wahlberg, Nils E., assignor to Oakland Motor Car Company, Pontiac, Mich. Muffler-control lever for motor-vehicles. No. 1,112,043; Sept. 29; Gaz. vol. 206; p. 1278.
Wahrenberger, Theophilus. (See Martinez, Norberto, assignor.)
Wainright, William F., Winchester, Ill. Grader. No. 1,111,420; Sept. 22; Gaz. vol. 206; p. 1027.
Wait, William B., New York, N. Y. Embossing-machine. No. 1,111,334; Sept. 22; Gaz. vol. 206; p. 997.
Waite Grass Carpet Company. (See Waite, Ossian T., assignor.)
Waite, Harry C., Chicago, Ill. Vehicle-spring. No. 1,111,421; Sept. 22; Gaz. vol. 206; p. 1027.
Waite, Ossian T., assignor to Waite Grass Carpet Company, Oshkosh, Wis. Grass-twine machine. No. 1,110,842; Sept. 15; Gaz. vol. 206; p. 784.
Wajda, Florvan, East Hammond, Ind., assignor of one-half to B. J. Glinski, Chicago, Ill. Switch-throwing device. No. 1,110,088; Sept. 8; Gaz. vol. 206; p. 478.
Wakefield, Frederick W., assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio. Lighting-fixture. No. 1,111,875; Sept. 29; Gaz. vol. 206; p. 1224.
Wakfer, William H., South Norwood, assignor of one-half to S. Peck, Calbourne, England. Manufacture of files or rasps. No. 1,109,156; Sept. 1; Gaz. vol. 206; p. 106.
Walchensteiner, Josef. (See Prettner, Franz, assignor.)
Walden, Alfred E., assignor to Chalmers Motor Company, Detroit, Mich. Fuel-oil-delivery system for motor-vehicles. No. 1,111,335; Sept. 22; Gaz. vol. 206; p. 998.
Waldes, Heinrich, Wrschowitz, near Prague, Austria-Hungary. Feeding mechanism for button-sewing machines. No. 1,110,843; Sept. 15; Gaz. vol. 206; p. 784.
Wales, Nathaniel B., assignor to R. C. Morley, Saginaw, Mich. Pneumatic jack. No. 1,108,952; Sept. 1; Gaz. vol. 206; p. 33.
Wales, Samuel S., Munhall, assignor to Carnegie Steel Company, Pittsburgh, Pa. Armor-plate. No. 1,111,709; Sept. 22; Gaz. vol. 206; p. 1129.
Wales, Samuel S., Munhall, assignor to Carnegie Steel Company, Pittsburgh, Pa. Steel alloy. No. 1,111,710; Sept. 22; Gaz. vol. 206; p. 1129.
Wales, Samuel S., Munhall, assignor to Carnegie Steel Company, Pittsburgh, Pa. Alloyed steel. No. 1,111,711; Sept. 22; Gaz. vol. 206; p. 1129.
Walker, James L., Grand Island, Nebr. Flying-machine. No. 1,111,627; Sept. 22; Gaz. vol. 206; p. 1098.
Walker, John, Jr., London, England. File for papers and documents. No. 1,111,981; Sept. 29; Gaz. vol. 206; p. 1257.
Walker, John C., Yonkers, N. Y. Making an alloy of ferromanganese and silicon. No. 1,109,640; Sept. 1; Gaz. vol. 206; p. 276.
Wallace, Columbus C., Dover, assignor of one-half to C. A. Moery, Indian Mound, Tenn. Envelop-sealer. No. 1,112,343; Sept. 29; Gaz. vol. 206; p. 1383.
Wallace, Frank W., Chattanooga, Tenn. Clothes-rack for sleeping-cars. No. 1,111,199; Sept. 22; Gaz. vol. 206; p. 952.
Wallace, Frederick L. (See Browne and Wallace.)
Wallace, George, Niagara Falls, N. Y. Pipe-cutting machine. No. 1,111,336; Sept. 22; Gaz. vol. 206; p. 998.
Wallace, William J., Detroit, Mich. Shock-absorber. No. 1,109,560; Sept. 1; Gaz. vol. 206; p. 245.
Wallace, William R. (See Harvey and Brill, assignors.)
Waller, Grant A., and F. E. Wright, assignors to Q. A. and F. E. Wright, Fortville, Ind. Acetylene-gas generator. No. 1,109,377; Sept. 1; Gaz. vol. 206; p. 186.
Wallis, John P. (See Bryant, Clyde J., assignor.)
Wallis, Joseph A., 2d, Beverly, Mass. Rotary internal-combustion engine. No. 1,109,270; Sept. 1; Gaz. vol. 206; p. 147.
Walp, James, Allentown, Pa. Valve. No. 1,110,731; Sept. 15; Gaz. vol. 206; p. 746.
Walsh-Baker Corporation. (See Walsh, Thomas P., assignor.)
Walsh, Martin J., Jr., St. Louis, Mo. Money-sorting machine. No. 1,109,026; Sept. 1; Gaz. vol. 206; p. 61.
Walsh, Thomas P., Boston, Mass., assignor to Walsh-Baker Corporation, Portland, Me. Machine for cutting and stripping yarn from bobbins. No. 1,109,949; Sept. 8; Gaz. vol. 206; p. 428.
Waltham Watch Company. (See Conover, Fitch, assignor.)
Waltham Watch Company. (See Ohlson, Olof, assignor.)
Walther, Heinrich, assignor to Nollesche Werke Ernst Nolle, Weissenfels, Germany. Pulling-over machine. No. 1,110,170; Sept. 8; Gaz. vol. 206; p. 508.
Walther, Heinrich, assignor to Nollesche Werke Ernst Nolle, Weissenfels, Saxony, Germany. Lasting and nailing machine. No. 1,110,171; Sept. 8; Gaz. vol. 206; p. 509.
Wanderer Werke vorm. Winklhofer & Jaenicke Akt.-Ges. (See Buschmann, Theodor E., assignor.)
Wandrey, Fred G. (See Madsen and Wandrey.)
Wang, Theodore, Jacksonville, Fla. Sprayer. No. 1,109,883; Sept. 8; Gaz. vol. 206; p. 404.
Ward, Alfred, Bowbells, N. D. Stubble-burner. No. 1,112,241; Sept. 29; Gaz. vol. 206; p. 1348.
Ward, Charles A., New York, N. Y. Motor-truck. No. 1,111,510; Sept. 22; Gaz. vol. 206; p. 1057.
Ward, Henry J., assignor to B. C. Dickey, Indiana Harbor, Ind. Car-seal. No. 1,108,953; Sept. 1; Gaz. vol. 206; p. 33.
Ward, John D., deceased; L. H. Ward, administratrix, Buffalo, N. Y. Adding-machine. No. 1,109,378; Sept. 1; Gaz. vol. 206; p. 187.
Ward, Lillian H., administratrix. (See Ward, John D.)
Ward Pump Company. (See Johnson, Oscar W., assignor.)
Ward, Robert L., Robinson, Ill. Truss. No. 1,109,379; Sept. 1; Gaz. vol. 206; p. 187.
Ware, Walter, Chicago, Ill. Roller. No. 1,110,360; Sept. 15; Gaz. vol. 206; p. 614.
Warman, William A., New York, N. Y. Valve mechanism for pumps, engines, &c. No. 1,109,271; Sept. 1; Gaz. vol. 206; p. 147.
Warman, William A., New York, N. Y. Air compressor or motor. No. 1,109,805; Sept. 8; Gaz. vol. 206; p. 374.
Warne, Frederick C., assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio. Cultivator. No. 1,110,471; Sept. 15; Gaz. vol. 206; p. 654.
Warner, Arthur L., Moline, Ill., assignor to Williams, White & Company. Crank-shaft-forging apparatus. No. 1,108,954; Sept. 1; Gaz. vol. 206; p. 34.
Warner, George R., Snover, Mich. Holdback. No. 1,111,111; Sept. 22; Gaz. vol. 206; p. 920.
Waroczky, John, Duquesne, Pa. Compound hoe. No. 1,110,089; Sept. 8; Gaz. vol. 206; p. 478.
Warren, Alva S., Batavia, N. Y. Cabbage-harvester. No. 1,110,844; Sept. 15; Gaz. vol. 206; p. 785.
Warren Featherbone Company, The. (See Gelow, Albert, assignor.)
Warren Featherbone Company, The. (See Morley, Albert, assignor.)
Warren, Irene, Chicago, Ill. Holder for lantern-slides, cards, &c. No. 1,111,422; Sept. 22; Gaz. vol. 206; p. 1027.
Warren, Murray H., Mexico, Mexico. Apparatus for refining petroleum. No. 1,110,361; Sept. 15; Gaz. vol. 206; p. 615.
Warren Webster & Company. (See Serrell and Fitts, assignors.)
Warriner, Walter, Fort Wayne, Ind. Pliers. No. 1,111,200; Sept. 22; Gaz. vol. 206; p. 953.
Wartman, John J., New York, N. Y. Plumb-stock. No. 1,110,976; Sept. 15; Gaz. vol. 206; p. 831.
Washburn, George S., Belle Plaine, Iowa. Hay-rack. No. 1,111,982; Sept. 29; Gaz. vol. 206; p. 1258.
Washington, Madison T. B., assignor of one-fifth to J. W. Witherspoon, New York, N. Y. Mechanical motor. No. 1,109,380; Sept. 1; Gaz. vol. 206; p. 187.
Waterbury Clock Co. (See Putnam, James R., assignor.)
Waterbury Clock Co. (See Webinger, Frederick, assignor.)
Waterbury Farrel Foundry and Machine Company, The. (See Wilcox, Richard L., assignor.)
Waterbury Mfg. Co. (See Goetz, Henry F., assignor.)
Waterfield, James, assignor to Quaker Lace Company, Philadelphia, Pa. Lace fabric and making same. No. 1,110,845; Sept. 15; Gaz. vol. 206; p. 785.
Waters, Charles W. (See Kent and Waters.)
Waterson, Ell, Victoria, British Columbia, Canada. Builder's scaffold. No. 1,111,814; Sept. 29; Gaz. vol. 206; p. 1202.
Watkins, Benjamin G., W. P., and T., Elizabethtown, Ky. Post-hole auger. No. 1,110,517; Sept. 15; Gaz. vol. 206; p. 670.
Watkins, Taylor. (See Watkins, Benjamin G., W. P., and T.)

Watkins, Walter P. (See Watkins, Benjamin G., W. P., and T.)
Watkins, William E., Boston, Mass. Puzzle. No. 1,111,337; Sept. 22; Gaz. vol. 206; p. 998.
Watres, Reyburn, Scranton, Pa., assignor, by mesne assignments, to National Graphite Lubrication Company, Wilmington, Del. Lubricating device for internal-combustion engines. No. 1,108,955; Sept. 1; Gaz. vol. 206; p. 34.
Watrous, Earl G., Chicago, Ill. Lavatory-fixture. No. 1,108,956; Sept. 1; Gaz. vol. 206; p. 35.
Watson, George W., assignor to Nashua Card Gummed and Coated Paper Company, Nashua, N. H. Wrapping-machine. No. 1,110,090; Sept. 8; Gaz. vol. 206; p. 478.
Watson, James A., Washington, D. C., assignor to Bethlehem Steel Company, South Bethlehem, Pa. Projectile. No. 1,112,044; Sept. 29; Gaz. vol. 206; p. 1278.
Watson, John W., Gary, Ind. Tongs. No. 1,111,338; Sept. 22; Gaz. vol. 206; p. 999.
Watson, William A., Malden, assignor to National Piano Company, Boston, Mass. Automatic locking device for tracker mechanism. No. 1,112,242; Sept. 29; Gaz. vol. 206; p. 1349.
Wattie, William, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Pile-wire for pile-fabric looms. No. 1,109,719; Sept. 8; Gaz. vol. 206; p. 346.
Watts, Ernest E., Kingston, Ontario, Canada. Extracting zinc from its ores or compounds. No. 1,111,201; Sept. 22; Gaz. vol. 206; p. 953.
Waugh, Daniel S., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drill. No. 1,112,398; Sept. 29; Gaz. vol. 206; p. 1403.
Waynert, Erik W., Mason, Wis. Folding harrow. No. 1,110,846; Sept. 15; Gaz. vol. 206; p. 786.
Weaver, Albert T. (See Banta and Weaver.)
Weaver, Albert T., Joliet, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Bale-tie. No. 1,109,720; Sept. 8; Gaz. vol. 206; p. 347.
Weaver, Albert T., Joliet, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Bale-tie. No. 1,109,721; Sept. 8; Gaz. vol. 206; p. 347.
Webb, Edwin W. (See Barber and Webb.)
Webb, Joseph C., Twin Falls, Idaho. Envelop-closure. No. 1,110,019; Sept. 8; Gaz. vol. 206; p. 452.
Webber, Jedah G., and C. F. Carr, Antwerp, Ohio. Beet-harvester. No. 1,112,344; Sept. 29; Gaz. vol. 206; p. 1383.
Weber Dental Manufacturing Company, The. (See Weber, Henry E., assignor.)
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Stapling-machine for boxes, cases, and the like. No. 1,111,113; Sept. 22; Gaz. vol. 206; p. 921.
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Stapling-machine for boxes, cases, and the like. No. 1,111,114; Sept. 22; Gaz. vol. 206; p. 921.
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Staple forming and driving mechanism. No. 1,111,115; Sept. 22; Gaz. vol. 206; p. 922.
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Wire stitching or stapling machine. No. 1,111,116; Sept. 22; Gaz. vol. 206; p. 922.
Weber, Henry E., assignor to The Weber Dental Manufacturing Company, Canton, Ohio. Work-guide. No. 1,111,047; Sept. 22; Gaz. vol. 206; p. 898.
Weber, Herman A., Hartford, Conn. Reservoir-cuspidor. No. 1,109,884; Sept. 8; Gaz. vol. 206; p. 404.
Webster, Fay H., Marvell, Ark. Spark-arrester and smoke-treating device. No. 1,109,381; Sept. 1; Gaz. vol. 206; p. 187.
Webster, John L., Chicago, Ill. Signal system. No. 1,111,423; Sept. 22; Gaz. vol. 206; p. 1028.
Webster, John L., Ottawa, Ontario, Canada. Demountable rim for vehicle-wheels. No. 1,112,179; Sept. 29; Gaz. vol. 206; p. 1326.
Webster, William R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Rolling-mill or similar installation. No. 1,109,885; Sept. 8; Gaz. vol. 206; p. 405.
Wecht, Charles L., Logansport, Ind. Sash-fastener. No. 1,111,511; Sept. 22; Gaz. vol. 206; p. 1058.
Weckbaugh, Joseph V., St. Louis, Mo., assignor to Nagle Re Blade Knife Company, Newark, N. J. Inserting rivets in reblade-knives. No. 1,109,094; Sept. 1; Gaz. vol. 206; p. 84.
Wecks & Co., *et al.* (See Scholle, Eduard, assignor.)
Wedolt Company, The. (See Fenn, William B., assignor.)
Weeks, John A., Ganer, Ala. Combined plow and cultivator. No. 1,109,095; Sept. 1; Gaz. vol. 206; p. 84.
Weeks, William C., Vancouver, British Columbia, Canada. Excavating device. No. 1,110,604; Sept. 15; Gaz. vol. 206; p. 701.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Strike and chime clock. No. 1,110,732; Sept. 15; Gaz. vol. 206; p. 746.
Wehrle Company, The. (See Pickup, George E., assignor.)
Weigel, Arnold A. (See Woods and Weigel.)
Weigel, John P. (See Schorn, Oscar, assignor.)
Weimer, Frank M. and R. F., Somerset, Pa. Mail-receptacle. No. 1,109,491; Sept. 1; Gaz. vol. 206; p. 223.
Weimer, Robert F. (See Weimer, Frank M. and R. F.)
Weintraub, Ezechiel, Schenectady, N. Y., assignor to General Electric Company. Operating vapor electric apparatus from an alternating-current source. No. 1,110,847; Sept. 15; Gaz. vol. 206; p. 786.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Variable-resistance device. No. 1,110,848; Sept. 15; Gaz. vol. 206; p. 786.
Weis, John P., and R. R. Hughes, Jr., Nyack, assignors to L. N. Littauer, Gloversville, N. Y. Combined ruffling, trimming, and overstitch sewing mechanism. No. 1,111,339; Sept. 22; Gaz. vol. 206; p. 999.
Weisbrod, Jacob H., assignor to American Car and Foundry Company, St. Louis, Mo. Cast-steel body-bolster. No. 1,109,606; Sept. 1; Gaz. vol. 206; p. 262.
Weiser, Frank J., Norwood, Minn. Rope-machine. No. 1,110,472; Sept. 15; Gaz. vol. 206; p. 655.
Weiss, Joseph W., Baltimore, Md. Collapsible hat-package. No. 1,109,722; Sept. 8; Gaz. vol. 206; p. 347.
Weitershausen, Albert W., Millvale borough, assignor to Pittsburgh Art Glass Company, Pittsburgh, Pa. Leaded glass construction. No. 1,112,420; Sept. 29; Gaz. vol. 206; p. 1411.
Weitzel, George M., Duquesne, Pa. Game apparatus. No. 1,112,243; Sept. 29; Gaz. vol. 206; p. 1349.
Welch, Albert G., executor. (See Woods and Weigel.)
Welch, Timothy A., Sayre, Pa. Safety device for bolt-machines. No. 1,111,424; Sept. 22; Gaz. vol. 206; p. 1028.
Welch, William H., assignor to The Cleveland Machine & Manufacturing Company, Cleveland, Ohio. Mechanical movement. No. 1,110,977; Sept. 15; Gaz. vol. 206; p. 831.
Welch, William H., assignor to The Cleveland Machine & Manufacturing Company, Cleveland, Ohio. Drawing-press. No. 1,111,000; Sept. 15; Gaz. vol. 206; p. 838.
Wells, Henry F. (See Fenton, William C., assignor.)
Wells, Joel C., Southbridge, Mass. Spectacles. No. 1,108,957; Sept. 1; Gaz. vol. 206; p. 35.
Welsbach, Carl A. von, Vienna, Austria-Hungary. Manufacture of electric filaments. No. 1,109,887; Sept. 8; Gaz. vol. 206; p. 405.
Welsbach, Carl A. von, Vienna, Austria-Hungary. Manufacture of electric filaments. No. 1,109,888; Sept. 8; Gaz. vol. 206; p. 406.
Welsbach, Carl A. von, Vienna, Austria-Hungary, assignor to Welsbach Light Company, Gloucester City, N. J. Manufacture of electric filaments. No. 1,109,886; Sept. 8; Gaz. vol. 206; p. 405.
Welsbach Light Company. (See Welsbach, Carl A. von, assignor.)
Welsh, James W. (See Jones and Welsh.)
Welted Sole Company. (See Brewer, Albert G., assignor.)
Wenborne-Karpen Dryer Co. (See Hultgren, Charles, assignor.)
Wendt, Gustave A., Spokane, Wash. Revolving-cylinder gas-engine. No. 1,111,048; Sept. 22; Gaz. vol. 206; p. 899.
Wentland, Daniel, Pettibone, N. D. Gang-plow. No. 1,109,806; Sept. 8; Gaz. vol. 206; p. 375.
Werling, Julius H. (See Brown and Werling.)
Wern, Gustav P., New York, N. Y. Automatic control for a band-brake. No. 1,109,382; Sept. 1; Gaz. vol. 206; p. 188.
Werner, Oscar, Los Angeles, Cal. Pencil-holder. No. 1,110,518; Sept. 15; Gaz. vol. 206; p. 670.
Werner, William, Milwaukee, Wis. Gripping device. No. 1,109,190; Sept. 1; Gaz. vol. 206; p. 119.
West, John A., Los Angeles, Cal. Dental crown-remover. No. 1,109,096; Sept. 1; Gaz. vol. 206; p. 84.
Westendarp, Henry O., Saugus, Mass., assignor to General Electric Company. Automatic starting mechanism for internal-combustion-engine generator sets. No. 1,112,244; Sept. 29; Gaz. vol. 206; p. 1349.
Westenfelter, Charles W., Springfield, Ohio. Dentifrice. No. 1,112,180; Sept. 29; Gaz. vol. 206; p. 1326.
Westerbeck, Frederick, St. Louis, Mo. Sheet-metal box. No. 1,110,661; Sept. 15; Gaz. vol. 206; p. 722.
Western Electric Company. (See Binkley, William R., assignor.) (Reissue.)
Western Electric Company. (See Egerton, Henry C., assignor.)
Western Electric Company. (See Gilson, Albert F. F., assignor.)
Western Electric Company. (See Lundquist, Frank A., assignor.)
Western Electric Company. (See McBerty, Frank R., assignor.)
Western Electric Company. (See Reeves, Frank N., assignor.)
Western Electric Company. (See Tromp, Gerard P., assignor.)
Westfall, Walter E., Maryville, Mo. Silencer construction for firearms. No. 1,111,202; Sept. 22; Gaz. vol. 206; p. 953.
Westinghouse Air Brake Company, The. (See Corrington, Murray, assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Air Brake Company, The. (See Westinghouse, Henry H., assignor.)
Westinghouse Air Spring Company, The. (See Liebau, Richard, assignor.)

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Howes, George W., Dowagiac, Mich. Cooking-stove. No. 46,470; Sept. 29; Gaz. vol. 206; p. 1416.
Huber, Charles, New York, N. Y., assignor, by mesne assignments, to Triplex Manufacturing Co., Incorporated. Gas-saving attachment for gas-stoves. No. 46,401; Sept. 15; Gaz. vol. 206; p. 848.
J. H. Faw, Inc. (See Schottky, Fredrick F., assignor.)
Jeavons, William R., Cleveland, Ohio. Heater. No. 46,343; Sept. 1; Gaz. vol. 206; p. 286.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers and bowls. No. 46,471; Sept. 29; Gaz. vol. 206; p. 1416.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Chandelier and bracket arm. No. 46,472; Sept. 29; Gaz. vol. 206; p. 1416.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Scroll clamp for light-reflecting bowls. No. 46,473; Sept. 29; Gaz. vol. 206; p. 1416.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Clamp for light-reflecting bowls. Nos. 46,474–5; Sept. 29; Gaz. vol. 206; p. 1416.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers or light-reflecting bowls. No. 46,476; Sept. 29; Gaz. vol. 206; p. 1417.
Karpeles, Maurice J., Providence, R. I. Display-cabinet. No. 46,436; Sept. 22; Gaz. vol. 206; p. 1140.
Kaufmann, Ary, Newark, N. J. Vanity-case. Nos. 46,344–5; Sept. 1; Gaz. vol. 206; p. 286.
Keller, Sidney A., Woodmere, N. Y. Metal-worker's stock. No. 46,477; Sept. 29; Gaz. vol. 206; p. 1417.
Kennebunk Manufacturing Company. (See Lougee, William S., assignor.)
Kiefer, Raymond A., Ramsey, N. J. Receptacle for gas-vaporizers. No. 46,402; Sept. 15; Gaz. vol. 206; p. 848.
Koch, Adolph H., Los Angeles, Cal. Gas-heater. No. 46,478; Sept. 29; Gaz. vol. 206; p. 1417.
Koehler, Ernest F., Marlboro, Mass. Bonnet for miners' safety-lamps. No. 46,403; Sept. 15; Gaz. vol. 206; p. 848.
Kordick, Frank, assignor to Regal Musical Instrument Co., Chicago, Ill. Musical instrument. No. 46,366; Sept. 8; Gaz. vol. 206; p. 561.
Layton, William P., assignor to Garrett Go-Cart & Carriage Company, Chicago, Ill. Body and hood of children's carriages. No. 46,389; Sept. 8; Gaz. vol. 206; p. 566.
Lee Broom & Duster Company. (See Beebe, Norman H., assignor.)
Lippincott, Fisher H., Cynwyd, assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa. Pump. No. 46,479; Sept. 29; Gaz. vol. 206; p. 1417.
Lively, Louis P., Dallas, Tex. Burner. No. 46,480; Sept. 29; Gaz. vol. 206; p. 1417.
Lockhart, Walter R., Hotchkiss, Colo. Game-board. No. 46,437; Sept. 22; Gaz. vol. 206; p. 1140.
Locomotive Superheater Company. (See True, Charles H., assignor.)
Lougee, William S., Rochester, N. H., assignor to Kennebunk Manufacturing Company, Kennebunk, Me. Megaphone. No. 46,404; Sept. 15; Gaz. vol. 206; p. 848.
MacLennan, Frank P., Topeka, Kans. Newspaper-dispensing device. No. 46,405; Sept. 15; Gaz. vol. 206; p. 848.
Macbeth-Evans Glass Company. (See Hawe, William F. M., assignor.)
Mann, Ira A., Pittsburgh, Pa. Bowl-base for lavatories. No. 46,438; Sept. 22; Gaz. vol. 206; p. 1141.
Marcus, Jacob, Boston, Mass. Alarm or drum-shaped clock housing stand. No. 46,346; Sept. 1; Gaz. vol. 206; p. 287.
Marshall, Robert J., assignor to The Morgan and Marshall Rubber and Tire Co., East Liverpool, Ohio. Vehicle-tire. No. 46,439; Sept. 22; Gaz. vol. 206; p. 1141.
McClurg, John S., assignor to The Pharis Tire & Rubber Company, Newark, Ohio. Rubber tire. No. 46,367; Sept. 8; Gaz. vol. 206; p. 362.
McCray Refrigerator Company. (See Ullin, Charles O., assignor.)
McKenna, Thomas R., East Palestine, Ohio. Tire-casing. No. 46,481; Sept. 29; Gaz. vol. 206; p. 1418.
McLain, Robert M., Huntsville, Ala. Steering-wheel. No. 46,441; Sept. 22; Gaz. vol. 206; p. 1141.
Megraw, George E., Oakland, Cal. Badge or similar article. No. 46,440; Sept. 22; Gaz. vol. 206; p. 1141.
Mersereau Metal Bed Company. (See Bolte, Charles, assignor.)
Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)
Miller, James W., Johnson City, Tenn. Joint-raker. No. 46,406; Sept. 15; Gaz. vol. 206; p. 849.
Morgan and Marshall Rubber and Tire Co., The. (See Marshall, Robert J., assignor.)
Moss, Anna J. and C. L., Collingswood, N. J. Poison-bottle. No. 46,407; Sept. 15; Gaz. vol. 206; p. 849.
Moss, Clara L. (See Moss, Anna J. and C. L.)
Murray, James A., assignor to The Seamless Rubber Co., New Haven, Conn. Bathing-cap. Nos. 46,408–10; Sept. 15; Gaz. vol. 206; p. 849.
Myers, Burton D., assignor to The Simeon L. and George H. Rogers Co., Wallingford, Conn. Spoon, fork, or similar article. No. 46,368; Sept. 8; Gaz. vol. 206; p. 362.
Mygatt, Otis A., New York, N. Y. Glass shade or reflector. No. 46,347; Sept. 1; Gaz. vol. 206; p. 287.
Nagoski, Frank, Memphis, Tenn. Match-case. No. 46,411; Sept. 15; Gaz. vol. 206; p. 850.
Nash, John J., assignor to American Pin Company, Waterbury, Conn. Shade-holder. No. 46,442; Sept. 22; Gaz. vol. 206; p. 1141.
Nash, John J., assignor to American Pin Company, Waterbury, Conn. Bracket-canopy. No. 46,443; Sept. 22; Gaz. vol. 206; p. 1142.
Nash, John J., assignor to American Pin Company, Waterbury, Conn. Back-plate. No. 46,444; Sept. 22; Gaz. vol. 206; p. 1142.
Nash, John J., assignor to American Pin Company, Waterbury, Conn. Shower-plate. No. 46,445; Sept. 22; Gaz. vol. 206; p. 1142.
Newhall, Henry B. (See Pleister, Henry W., assignor.)
Newman, Henry W., New York, N. Y. Advertising-kiosk. No. 46,412; Sept. 15; Gaz. vol. 206; p. 850.
Numan, Charles H., New York, N. Y. Inkstand. No. 46,482; Sept. 29; Gaz. vol. 206; p. 1418.
Orr, John F., assignor to The Cincinnati Coffin Company, Cincinnati, Ohio. Lining for burial-casket lids. No. 46,413; Sept. 15; Gaz. vol. 206; p. 850.
Page, Albert A., East Haven, Conn., assignor to Sargent & Company, New Haven, Conn. Plane-body. No. 46,446; Sept. 22; Gaz. vol. 206; p. 1142.
Palmer, Theron R., Erie, Pa. Pneumatic tire. No. 46,447; Sept. 22; Gaz. vol. 206; p. 1143.
Peres, Max, Solingen, Germany. Pocket-knife. No. 46,414; Sept. 15; Gaz. vol. 206; p. 850.
Pharis Tire & Rubber Company, The. (See McClurg, John S., assignor.)
Philip Strobel & Sons. (See Brown, Harlow R., assignor.)
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Shield or similar article. No. 46,483; Sept. 29; Gaz. vol. 206; p. 1418.
Portland Sales Company. (See Seamon, Percy R., assignor.)
Powell, Milton C., Ralston, Nebr. Built-in kitchen-cabinet. No. 46,348; Sept. 1; Gaz. vol. 206; p. 287.
Prusser, Henry A., Willow, Cal. Automobile radiator-cap or like article. No. 46,448; Sept. 22; Gaz. vol. 206; p. 1143.
R. Wallace & Sons Mfg. Co. (See Hillbom, Henrik, assignor.)
Ramey, James E., Oakland, Cal. Watch-chain. No. 46,369; Sept. 8; Gaz. vol. 206; p. 362.
Redd, Mary L., Columbus, Ga. Flag-holder for soldiers' graves and other decorative purposes. No. 46,349; Sept. 1; Gaz. vol. 206; p. 287.
Regal Musical Instrument Co. (See Kordick, Frank, assignor.)
S. Herbert Cut Glass Company, The. (See Waldman, William, assignor.)
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Tumbler. No. 46,449; Sept. 22; Gaz. vol. 206; p. 1143.
Sargent & Company. (See Page, Albert A., assignor.)
Sarrazin, Jules J., New Orleans, La. Tooth-brush. No. 46,450; Sept. 22; Gaz. vol. 206; p. 1143.
Schaake, William, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Insulator. No. 46,451; Sept. 22; Gaz. vol. 206; p. 1144.
Schottky, Fredrick F., assignor to J. H. Faw, Inc., New York, N. Y. Casing for electric gage-lamps. No. 46,452; Sept. 22; Gaz. vol. 206; p. 1144.
Schwarz, Harry, St. Louis, Mo. Middy waist or blouse. No. 46,415; Sept. 15; Gaz. vol. 206; p. 850.
Seamless Rubber Co., The. (See Murray, James A., assignor.)
Seamon, Percy R., assignor to Portland Sales Company, Boston, Mass. Mirror-stand. No. 46,370; Sept. 8; Gaz. vol. 206; p. 362.
Selleck, Allen C., Chicago, Ill. Pancake-turner. No. 46,416; Sept. 15; Gaz. vol. 206; p. 850.
Shiveley, George W. (See Daum and Shivcley.)
Sidney Blumenthal & Company. (See Blumenthal, Sidney, assignor.)
Sikorski, Clarence, Dayton, Ohio. Escutcheon-plate. No. 46,350; Sept. 1; Gaz. vol. 206; p. 288.
Simeon L. and George H. Rogers Co., The. (See Myers, Burton D., assignor.)
Smith, Bryan H., assignor to Clarence Whitman & Co. Inc., New York, N. Y. Cotton pongee shirting. Nos. 46,371–5; Sept. 8; Gaz. vol. 206; pp. 562–3.
Smith, Winfield D., and R. J. Bourgeois, Chicago, Ill., assignors to W. D. Smith Silver Co. Dish. No. 46,453; Sept. 22; Gaz. vol. 206; p. 1144.
Söderblom, Albert, Lakefield, Minn. Picture-frame. No. 46,454; Sept. 22; Gaz. vol. 206; p. 1144.
Stafford, Fredrick S., assignor to Stafford Auto Lamp & Number Company, Chicago, Ill. Vehicle-lamp. No. 46,455; Sept. 22; Gaz. vol. 206; p. 1144.
Stafford Auto Lamp & Number Company. (See Stafford, Fredrick S., assignor.)
Staub, Marie C., Worcester, Mass. Metal or similar article. No. 46,376; Sept. 8; Gaz. vol. 206; p. 563.
Stearns, Harry B., Oakland, Cal. Built-in combined china-closet and writing-desk. No. 46,351; Sept. 1; Gaz. vol. 206; p. 288.
Steffens-Amberg Co., The. (See Fox, Thomas A., assignor.)
Stough, William H., Canton, Ohio. Sheet metal. No. 46,456; Sept. 22; Gaz. vol. 206; p. 1144.
Strobel, George P., New York, N. Y. Table. Nos. 46,377–8; Sept. 8; Gaz. vol. 206; p. 563.

Strong, James H., assignor to Gill Brothers Company, Steubenville, Ohio. Shade. No. 46,379; Sept. 8; Gaz. vol. 206; p. 564.
Stroock, Bertram A., New York, assignor to Stroock Plush Company, Newburgh, N. Y. Plush fabric. No. 46,352; Sept. 1; Gaz. vol. 206; p. 288.
Stroock Plush Company. (See Stroock, Bertram A., assignor.)
Szotak, John, and C. Balazs, Elizabeth, N. J. Fly-trap. No. 46,457; Sept. 22; Gaz. vol. 206; p. 1145.
Templin, William, Glenellyn, Ill. Stand for books. No. 46,458; Sept. 22; Gaz. vol. 206; p. 1145.
Tice, Herbert C., Newburgh, N. Y. Flagstaff-holder. No. 46,417; Sept. 15; Gaz. vol. 206; p. 851.
Tiedemann & Sons, Theo. (See Casaretto, Robert, assignor.)
Treiber, Theodore R., Kansas City, Mo. Display-cabinet. No. 46,380; Sept. 8; Gaz. vol. 206; p. 564.
Triplex Manufacturing Co. (See Huber, Charles, assignor.)
True, Charles H., Hammond, Ind., assignor to Locomotive Superheater Company, New York, N. Y. Casting-die for grinding-tools. No. 46,459; Sept. 22; Gaz. vol. 206; p. 1145.
Turckheim, Edouard H. F. de, Paris, France. Bonnet for automobile vehicles. No. 46,484; Sept. 29; Gaz. vol. 206; p. 1418.
Turner, Charles G., Grand Rapids, Mich. Emblem. No. 46,485; Sept. 29; Gaz. vol. 206; p. 1418.
Ullin, Charles O., assignor to McCray Refrigerator Company, Kendallville, Ind. Refrigerator. No. 46,381; Sept. 8; Gaz. vol. 206; p. 564.
Ungemach, Leo, Schiltigheim, near Strassburg, Germany. Box. No. 46,353; Sept. 1; Gaz. vol. 206; p. 288.
Valenzuela, Bernard, Oakland, Cal. Combined button-hook and bottle-opener. No. 46,382; Sept. 8; Gaz. vol. 206; p. 564.
Voshardt, Herman F., assignor to Friedley-Voshardt Company, Chicago, Ill. Lamp shade and reflector. No. 46,418; Sept. 15; Gaz. vol. 206; p. 851.
W. D. Smith Silver Co. (See Smith and Bourgeois, assignors.)
Waldman, William, assignor to The S. Herbert Cut Glass Company, New York, N. Y. Artificial flower. No. 46,397; Sept. 15; Gaz. vol. 206; p. 847.
Wanner, Albert, Jr., New York, N. Y. Furniture-brace. Nos. 46,460–2; Sept. 22; Gaz. vol. 206; pp. 1145–6.
Weinhardt, Joseph, Jr., St. Louis, Mo. Douche-pan. No. 46,486; Sept. 29; Gaz. vol. 206; p. 1419.
Westinghouse Electric and Manufacturing Company. (See Schaake, William, assignor.)
White, William J., Niagara Falls, N. Y. Box. No. 46,463; Sept. 22; Gaz. vol. 206; p. 1146.
Whitehouse, John N., Newark, N. J. Button. Nos. 46,464–5; Sept. 22; Gaz. vol. 206; p. 1146.
Whitmore, Anna E. and P. A., Nokomis, Ill. Dish and fruit simulation. No. 46,383; Sept. 8; Gaz. vol. 206; p. 564.
Whitmore, Percis A. (See Whitmore, Anna E. and P. A.)
Wilkinson, Iona, assignor to Wilkinson Quilt Company, Ligonier, Ind. Quilt. Nos. 46,419–21; Sept. 15; Gaz. vol. 206; p. 851.
Wilkinson Quilt Company. (See Wilkinson, Iona, assignor.)
Williams, George M., Elizabeth, N. J. Eyelet. No. 46,487; Sept. 29; Gaz. vol. 206; p. 1419.
Winton, Alexander, Cleveland, Ohio. Frame for a stationary explosion-engine and connected dynamo. No. 46,384; Sept. 8; Gaz. vol. 206; p. 565.
Winton, Alexander, Cleveland, Ohio. Frame for a marine explosion engine and transmission-casing. Nos. 46,385–6; Sept. 8; Gaz. vol. 206; p. 565.
Winton, Alexander, Cleveland, Ohio. Combined frame for explosion-engine and connected dynamo. No. 46,387; Sept. 8; Gaz. vol. 206; p. 565.
Winton, Alexander, Cleveland, Ohio. Frame for marine explosion-engine and connected transmission-casing. No. 46,388; Sept. 8; Gaz. vol. 206; p. 566.
Wolfson, Charles D., Brooklyn, assignor to A. A. Vantine & Co. Inc., New York, N. Y. Bottle-stopper. No. 46,488; Sept. 29; Gaz. vol. 206; p. 1419.
Ziegman, John, Fostoria, Ohio. Broom-holder. No. 46,489; Sept. 29; Gaz. vol. 206; p. 1419.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co. Inc., New York, N. Y. Toilet powders. No. 99,940; Sept. 29; Gaz. vol. 206; p. 1431.
A. Stein & Company, Chicago, Ill. Hose-supporters. No. 99,510; Sept. 1; Gaz. vol. 206; p. 310.
A. B. C. Importation Co., New York, N. Y. Cigarettes. Nos. 99,467–8; Sept. 1; Gaz. vol. 206; p. 308.
A. W. Morris Co., New York, N. Y. Dates. No. 99,771; Sept. 15; Gaz. vol. 206; p. 871.
Abolisher Chemical Company, Buffalo, N. Y. Cleaning-powder for floors, marble, brass, &c. No. 99,675; Sept. 15; Gaz. vol. 206; p. 869.
Acker Merrall & Condit Company, New York, N. Y. Blended coffee. No. 99,531; Sept. 8; Gaz. vol. 206; p. 583.
Agasote Millboard Co., The, Trenton, N. J. Wood substitutes made from pulp. No. 99,413; Sept. 1; Gaz. vol. 206; p. 307.
Agasote Millboard Co., Trenton, N. J. Millboards. No. 99,676; Sept. 15; Gaz. vol. 206; p. 869.
Aktiebolaget Radius, Stockholm, Sweden. Petroleum and kitchen stoves and soldering-lamps. No. 99,414; Sept. 1; Gaz. vol. 206; p. 307.
Albert Dickinson Company, Chicago, Ill. Popping-corn. Nos. 99,708–9; Sept. 15; Gaz. vol. 206; p. 870.
American Agricultural Chemical Co., New York, N. Y. Fertilizer. No. 99,678; Sept. 15; Gaz. vol. 206; p. 869.
American Cleanser Company, Haoke Ranch, near Boerne, Tex. Cleaning and polishing substance. No. 99,679; Sept. 15; Gaz. vol. 206; p. 869.
American Coal Products Company, New York, N. Y. Fertilizing-sulfates. No. 99,415; Sept. 1; Gaz. vol. 206; p. 307.
Aprea Bros., New York, N. Y. Olive-oil. No. 99,833; Sept. 22; Gaz. vol. 206; p. 1157.
Apsley Rubber Co., Hudson, Mass. Rubber boots and shoes. No. 99,416; Sept. 1; Gaz. vol. 206; p. 307.
Armour & Company, Chicago, Ill. Soaps. No. 99,834; Sept. 22; Gaz. vol. 206; p. 1157.
Armstrong Cork & Insulation Company, Pittsburgh, Pa. Composition floor-tiles of linoleum, &c. No. 99,532; Sept. 8; Gaz. vol. 206; p. 583.
Arrow Bottlers Company, Chicago, Ill. Bottle-making machinery and appliances therefor. No. 99,930; Sept. 29; Gaz. vol. 206; p. 1431.
Atlantic Chemical Corporation, The, Norfolk, Va. Fertilizers. Nos. 99,417–18; Sept. 1; Gaz. vol. 206; p. 307.
Atlantic Chemical Corporation, Norfolk, Va. Fertilizers. No. 99,533; Sept. 8; Gaz. vol. 206; p. 583.
August Buermann Manufacturing Co., Newark, N. J. Bits, spurs, stirrups, and saddlery hardware. No. 99,421; Sept. 1; Gaz. vol. 206; p. 307.
Aunt Jemima Mills Company, St. Joseph, Mo. Wheat-flour. No. 99,836; Sept. 22; Gaz. vol. 206; p. 1157.
Auto Strop Safety Razor Co., Ld., London, England. Safety-razors and safety-razor blades. No. 99,931; Sept. 29; Gaz. vol. 206; p. 1431.
Autographic Register Company, Hoboken, N. J. Autographic registers. Nos. 99,932–3; Sept. 29; Gaz. vol. 206; p. 1431.
Automatic Cradle Mfg. Co., The, Stevens Point, Wis. Self-swinging cradles. No. 99,534; Sept. 8; Gaz. vol. 206; p. 583.
B. G. Volger Manufacturing Company, Passaic, N. J. Self-inking stamp-pads. Nos. 100,053–4; Sept. 29; Gaz. vol. 206; p. 1434.
Baer Manufacturing Co., Philadelphia, Pa. Semaphore signaling devices for automobiles, &c. No. 99,934; Sept. 29; Gaz. vol. 206; p. 1431.
Baldpate Co., New York, N. Y. Hair-tonic. No. 99,935; Sept. 29; Gaz. vol. 206; p. 1431.
Ballweg & Greenwald, Brooklyn, N. Y. Candies and chocolates. No. 99,936; Sept. 29; Gaz. vol. 206; p. 1431.
Barlow, George W., Jr., New York, N. Y. Ladies' neckwear and neckscarfs. No. 99,535; Sept. 8; Gaz. vol. 206; p. 583.
Bay City Dredge Works, Bay City, Mich. Dredging apparatus. No. 99,937; Sept. 29; Gaz. vol. 206; p. 1431.
Bay State Milling Co., Winona, Minn. Wheat-flour. No. 99,682; Sept. 15; Gaz. vol. 206; p. 869.
Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Napped cotton goods. No. 99,536; Sept. 8; Gaz. vol. 206; p. 583.
Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Quilts. No. 99,537; Sept. 8; Gaz. vol. 206; p. 583.
Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Cotton rugs and textile bath-mats. No. 99,538; Sept. 8; Gaz. vol. 206; p. 583.
Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Robe-flannel in the piece. No. 99,539; Sept. 8; Gaz. vol. 206; p. 583.
Bee Bee Confection Company, The, Dayton, Ohio. Chewing-gum. No. 99,683; Sept. 15; Gaz. vol. 206; p. 869.
Bell & Co., Inc., Orangeburg, N. Y. Remedy for treatment of dyspepsia. No. 99,837; Sept. 22; Gaz. vol. 206; p. 1157.
Bigelow & Dowse Company, Boston, Mass. Base-balls, mitts, base-ball, batting, and sporting gloves. No. 99,419; Sept. 1; Gaz. vol. 206; p. 307.
Binney & Smith Company, East Orange, N. J., and New York, N. Y. Crayons. No. 99,838; Sept. 22; Gaz. vol. 206; p. 1157.
Blackley, Anna J., Philadelphia, Pa. Cheese. No. 99,540; Sept. 8; Gaz. vol. 206; p. 583.
Blase, Louis, Philadelphia, Pa. Cigars, cigarettes, and smoking and chewing tobacco. No. 99,684; Sept. 15; Gaz. vol. 206; p. 869.
Blauvelt, Augustus, Paterson, N. J. Preparation for treatment of certain named diseases. No. 99,839; Sept. 22; Gaz. vol. 206; p. 1157.
Blow, Harry L., Tuckerton, N. J. Ointment. No. 99,685; Sept. 15; Gaz. vol. 206; p. 869.
Boggs, Charles O., San Francisco, Cal. Bread. No. 99,541; Sept. 8; Gaz. vol. 206; p. 583.
Boltè & Weyer Co., The, Chicago, Ill. Automobile-pumps, Nos. 99,938–9; Sept. 29; Gaz. vol. 206; p. 1431.
Bowers Brothers Inc., Richmond, Va. Coffee. No. 99,542; Sept. 8; Gaz. vol. 206; p. 583.
Bradner Smith & Co., Chicago, Ill. Paper for writing and printing and envelops. No. 99,910; Sept. 22; Gaz. vol. 206; p. 1159.
Brandt, Max I., New York, N. Y. Medicine for disorders of the digestive tract. No. 99,543; Sept. 8; Gaz. vol. 206; p. 583.
Braun, Ernest R., Pittsburgh, Pa. Bread. No. 99,544; Sept. 8; Gaz. vol. 206; p. 583.
Breiter, Gustavo P., Milan, Italy. Tooth, bathing, face, &c., powders. No. 99,840; Sept. 22; Gaz. vol. 206; p. 1157.
Bronx Window Shade & Awning Co., New York, N. Y. Awnings. No. 99,420; Sept. 1; Gaz. vol. 206; p. 307.
Bugbee & Niles Co., Providence, R. I. Certain named articles made of precious metals. No. 99,422; Sept. 1; Gaz. vol. 206; p. 307.
Bule, Edward R., New York, N. Y. Composition to remove carbonaceous deposits from internal-combustion engines. No. 99,942; Sept. 29; Gaz. vol. 206; p. 1431.
Burke, John D., Montgomery, Ala. Remedy for the blood. No. 99,841; Sept. 22; Gaz. vol. 206; p. 1157.
Büssing, Firm of H., Brunswick, Germany. Carriages and motor carriages, chassis, &c. No. 99,423; Sept. 1; Gaz. vol. 206; p. 307.
Byck Bros. & Co., Louisville, Ky. Leather shoes. No. 99,545; Sept. 8; Gaz. vol. 206; p. 583.
Byers, Ninian E., New York, N. Y. Bread. No. 99,687; Sept. 15; Gaz. vol. 206; p. 869.
C. Bruno & Son, Inc., New York, N. Y. Certain named musical instruments, parts, and accessories. No. 99,941; Sept. 29; Gaz. vol. 206; p. 1431.
C. D. Kenny Co., The, Baltimore, Md. Tea. No. 99,753; Sept. 15; Gaz. vol. 206; p. 871.
C. H. Wheeler Manufacturing Company, Philadelphia, Pa. Valves. No. 99,670; Sept. 8; Gaz. vol. 206; p. 587.
Cadick Milling Company, Grandview, Ind. Wheat-flour. No. 99,546; Sept. 8; Gaz. vol. 206; p. 583.
California Associated Raisin Co., Fresno, Cal. Raisins. No. 99,688; Sept. 15; Gaz. vol. 206; p. 869.
Cameron, John M., Fort Myers, Fla. Citrus fruit jellies and preserves. No. 99,842; Sept. 22; Gaz. vol. 206; p. 1157.
Cameron Stove Co., Inc., Richmond, Va. Cooking and heating stoves and cooking-ranges. No. 99,689; Sept. 15; Gaz. vol. 206; p. 869.
Canadian Mill and Elevator Company, El Reno, Okla. Wheat-flour. No. 99,690; Sept. 15; Gaz. vol. 206; p. 869.
Carbondale Calcium Co., Carbondale, Pa. Preservative for preventing rust and corrosion of iron and steel. No. 99,424; Sept. 1; Gaz. vol. 206; p. 307.
Carpenter Steel Company, The, Reading, Pa. Tool-steel. No. 99,943; Sept. 29; Gaz. vol. 206; p. 1431.
Carrom-Archarena Co., Ludington, Mich. Tables. No. 99,547; Sept. 8; Gaz. vol. 206; p. 583.
Carson, Robert P., Manitou, Colo. Medicine for asthma, bronchitis, and hay-fever. No. 99,691; Sept. 15; Gaz. vol. 206; p. 869.
Caserta Wine Co., The, New York, N. Y. Olive-oil. No. 99,692; Sept. 15; Gaz. vol. 206; p. 869.
Celluloid Starch Company, The, New York, N. Y. Laundry-washing compound. No. 99,843; Sept. 22; Gaz. vol. 206; p. 1157.

Celluloid Starch Company, The, New York, N. Y. Laundry-washing tablets. No. 99,844; Sept. 22; Gaz. vol. 206; p. 1157.

Central Brewing Company of New York, The, New York, N. Y. Beer. Nos. 99,845–6; Sept. 22; Gaz. vol. 206; p. 1157.

Central Ohio Paper Company, The, Columbus, Ohio. Cover, bond, writing, and printing paper. No. 99,425; Sept. 1; Gaz. vol. 206; p. 307.

Century Co., The, New York, N. Y. Periodical magazines, printed books, and prints. No. 99,426; Sept. 1; Gaz. vol. 206; p. 307.

Challenge Cutlery Corporation, Bridgeport, Conn. Certain named cutlery. No. 99,944; Sept. 29; Gaz. vol. 206; p. 1431.

Chapman, Frank, Providence, R. I. Friction-tape. No. 99,945; Sept. 29; Gaz. vol. 206; p. 1431.

Charles Tiedemann Milling Co., O'Fallon, Ill. Wheat-flour. No. 99,919; Sept. 22; Gaz. vol. 206; p. 1159.

Chas. Morrill, New York, N. Y. Certain named cutlery, tools, and machines. No. 100,012; Sept. 29; Gaz. vol 206; p. 1433.

Chase & Sanborn, Boston, Mass. Coffee. No. 99,548; Sept. 8; Gaz. vol. 206; p. 583.

Chase & Sanborn, Boston, Mass. Coffee. No. 99,946; Sept. 29; Gaz. vol. 206; p. 1431.

Chatfield & Woods Company, Cincinnati, Ohio. Bond writing paper. No. 99,693; Sept. 15; Gaz. vol. 206; p. 869.

Chautauqua Institution, Chautauqua and New York, N. Y. Monthly and weekly periodicals. No. 99,694; Sept. 15; Gaz. vol. 206; p. 869.

Chiba, Shirosaburo, Seattle, Wash. Medicines for venereal diseases. No. 99,948; Sept. 29; Gaz. vol. 206; p. 1431.

Chicago Fire Brick Co., Chicago, Ill. Bricks, tile, flue-lining, &c. No. 99,427; Sept. 1; Gaz. vol. 206; p. 307.

Chila, Mathias, Whiting, Ind. Remedy for disorders of the stomach and bowels. No. 99,549; Sept. 8; Gaz. vol. 206; p. 583.

Choralcelo Company, Portland, Me., and Boston, Mass. Musical instruments with certain electrical attachments. No. 99,428; Sept. 1; Gaz. vol. 206; p. 307.

Cie Gle de Phonographes, Cinematographes et Appareils de Precision, Paris, France. Kinematographic apparatus. No. 99,695; Sept. 15; Gaz. vol. 206; p. 869.

Clawson, Lewis T., Wiersdale and Plymouth, Fla., and Brooklyn, N. Y. Oranges and grape-fruit. No. 99,550; Sept. 8; Gaz. vol. 206; p. 583.

Clement and Company, A. S., Van Buren, Me. Liquid preparation for the skin. No. 99,847; Sept. 22; Gaz. vol. 206; p. 1157.

Cleveland Salt Company, The, Cleveland, Ohio. Salt. No. 99,848; Sept. 22; Gaz. vol. 206; p. 1157.

Cleveland Wire Spring Co., Cleveland, Ohio. Bed-springs. No. 99,431; Sept. 1; Gaz. vol. 206; p. 307.

Cloud Publishing Company, Chicago, Ill. Monthly magazines. No. 99,429; Sept. 1; Gaz. vol. 206; p. 307.

Cloud Publishing Company, Chicago, Ill. Weekly publications. No. 99,849; Sept. 22; Gaz. vol. 206; p. 1157.

Cloutier, Joseph, Worcester, Mass. Remedy for dyspepsia. No. 99,850; Sept. 22; Gaz. vol. 206; p. 1157.

Clyde Milling and Elevator Company, Clyde, Kans. Wheat-flour. No. 99,851; Sept. 22; Gaz. vol. 206; p. 1157.

Co-operative Drug Manufacturing Company, Jackson, Tenn. Blackberry cordial. Nos. 99,558–60; Sept. 8; Gaz. vol 206; p. 583.

Co-operative Drug Manufacturing Company, Jackson, Tenn. Furniture-polish. No. 99,561; Sept. 8; Gaz. vol. 206; p. 584.

Co-operative Drug Manufacturing Company, Jackson, Tenn. Machine-oil. Nos. 99,562–3; Sept. 8; Gaz. vol. 206; p. 584.

Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co., Jackson, Tenn. Furniture-polish. Nos. 99,700–1; Sept. 15; Gaz. vol. 206; p. 869.

Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co., Jackson, Tenn. Machine-oil. No. 99,702; Sept. 15; Gaz. vol. 206; p. 869.

Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co., Jackson, Tenn. Metal-polish, glove and clothes cleaners, and soap. No. 99,703; Sept. 15; Gaz. vol. 206; p. 869.

Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Blackberry cordial. No. 99,853; Sept. 22; Gaz. vol. 206; p. 1157.

Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Glove and clothes cleaners. No. 99,854; Sept. 22; Gaz. vol. 206; p. 1157.

Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Certain named medicines and pharmaceutical preparations. Nos. 99,951–3; Sept. 29; Gaz. vol. 206; p. 1431.

Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Machine-oil. No. 99,954; Sept. 29; Gaz. vol. 206; p. 1431.

Co-operative Orange Ass'n, Lindsay, Cal. Citrus fruits. Nos. 99,955–6; Sept. 29; Gaz. vol. 206; p. 1431.

Cobb County Chemical Mining Co., Atlanta, Ga. Chemical drier for fertilizers. No. 99,697; Sept. 15; Gaz. vol. 206; p. 869.

Coburn, Clarence W., San Francisco, Cal. Floor-oils. No. 99,430; Sept. 1; Gaz. vol. 206; p. 307.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Liquid and powdered perfumes. No. 99,551; Sept. 8; Gaz. vol. 206; p. 583.

Columbia Guano Co., Norfolk, Va. Fertilizers. Nos. 99,552–6; Sept. 8; Gaz. vol. 206; p. 583.

Cone, Frederick H., New York, N. Y. Bristles, horsehair, fibers, animal and artificial hairs. No. 99,432; Sept. 1; Gaz. vol. 206; p. 307.

Consolidated Drug Co. Inc., The, Washington, D. C. Arnica and carbolic salve, corn paint and plaster. No. 99,557; Sept. 8; Gaz. vol. 206; p. 583.

Consolidated Grocery Company, Pensacola, Jacksonville, and Tampa, Fla. Self-rising flour. No. 99,698; Sept. 15; Gaz. vol. 206; p. 869.

Continental Supply Company, Youngstown, Ohio. Power transmission and conveyer belts. No. 99,699; Sept. 15; Gaz. vol. 206; p. 869.

Converse Rubber Shoe Co., Malden, Mass. Rubber tires, casings, and inner tubes. No. 99,852; Sept. 22; Gaz. vol. 206; p. 1157.

Cook, Ernest L., Bridgewater, Mass. Brick. No. 99,433; Sept. 1; Gaz. vol. 206; p. 307.

Cooper & Nephews, Wm., Berkhamsted, England, and Chicago, Ill. Insecticides. No. 99,950; Sept. 29; Gaz. vol. 206; p. 1431.

Courteen Seed Company, Milwaukee, Wis. Certain named seeds. No. 99,434; Sept. 1; Gaz. vol. 206; p. 307.

Courteen Seed Company, Milwaukee, Wis. Certain named seeds and seed-corn. No. 99,435; Sept. 1; Gaz. vol. 206; p. 307.

Courteen Seed Company, Milwaukee, Wis. Yellow-dent seed-corn. No. 99,436; Sept. 1; Gaz. vol. 206; p. 307.

Credit Clearing House, Jersey City, N. J., and New York, N. Y. Semi-annual publication of a record of enforced collections, &c. No. 99,704; Sept. 15; Gaz. vol. 206; p. 870.

Crescent Mill & Elevator Co., The, Denver, Colo. Wheat-flour. Nos. 99,564–5; Sept. 8; Gaz. vol. 206; p. 584.

Crusellas Hno. y Ca., Habana, Cuba. Soap. No. 99,855; Sept. 22; Gaz. vol. 206; p. 1157.

Curnes and Hood Confectionery Co., Chicago, Ill. Salted peanuts and almonds, pistachio-nuts, &c. No. 99,706; Sept. 15; Gaz. vol. 206; p. 870.

Curtis, James, Chicago, Ill. Preparation for treatment of sore, tired, and aching feet. No. 99,856; Sept. 22; Gaz. vol. 206; p. 1157.

Cutler, William F., San Francisco, Cal. Antitoxin chewing-gum. No. 99,566; Sept. 8; Gaz. vol. 206; p. 584.

D. De Bernardi & Co., San Francisco, Cal. Certain named foods. No. 99,568; Sept. 8; Gaz. vol. 206; p. 584.

D'amour, Sophie, Rumford, Me. Medical preparations for treating certain named diseases. No. 99,438; Sept. 1; Gaz. vol. 206; p. 307.

Damon, William H., Los Angeles, Cal. Polish for varnish. No. 99,958; Sept. 29; Gaz. vol. 206; p. 1431.

Daniels, Wm. S., Detroit, Mich. Automobile springs and wire wheels. No. 99,440; Sept. 1; Gaz. vol. 206; p. 307.

Dart Manufacturing Company, The, Waterloo, Iowa. Motor-trucks. No. 99,707; Sept. 15; Gaz. vol. 206; p. 870.

Davis, Freeman G., Lewiston, Me. Canned baked beans and tomatoes. No. 99,567; Sept. 8; Gaz. vol. 206; p. 584.

De Vilbiss Manufacturing Company, The, Toledo, Ohio. Rubber bulbs. No. 99,439; Sept. 1; Gaz. vol. 206; p. 307.

Dennison Pharmacal Company, Chicago, Ill. Foot remedy for certain foot ailments. No. 99,857; Sept. 22; Gaz. vol. 206; p. 1157.

Detroit Sanitary Supply Company, Detroit, Mich. Sewer-gas traps. No. 99,441; Sept. 1; Gaz. vol. 206; p. 307.

Deutsch, Rudolph, New York, N. Y. Cocoa matting. No. 99,442; Sept. 1; Gaz. vol. 206; p. 308.

Diamond Anti Friction Metal Company, Chicago, Ill. Antifriction metals and journal-boxes. No. 99,443; Sept. 1; Gaz. vol. 206; p. 308.

Diehl, Edward, Nashville, Tenn. Non-intoxicating carbonated tonic beverages. No. 99,858; Sept. 22; Gaz. vol. 206; p. 1157.

Doble & Sons, Frederick, London and Dewsbury, England. Flannel piece goods. No. 99,444; Sept. 1; Gaz. vol. 206; p. 308.

Dorr Cigar Factory, Augusta, Ga. Cigars, cheroots, cigarettes, and tobaccos. No. 99,710; Sept. 15; Gaz. vol. 206; p. 870.

Dover Fire Brick Company, Cleveland, Ohio. Bricks. No. 99,445; Sept. 1; Gaz. vol. 206; p. 308.

Dr. Theinhardt's Nährmittel-Gesellschaft m. b. H., Stuttgart-Cannstatt, Germany. Prepared food for infants. No. 99,918; Sept. 22; Gaz. vol. 206; p. 1159.

Dugan, Herbert F., San Francisco, Cal. Chemical compound for the destruction of rodents, &c. No. 99,860; Sept. 22; Gaz. vol. 206; p. 1157.

Dullene Mfg. Company, Philadelphia, Pa. Dressing for all dull leather. No. 99,711; Sept. 15; Gaz. vol. 206; p. 870.

Dunlop Milling Co., Clarksville, Tenn. Self-rising flour. No. 99,712; Sept. 15; Gaz. vol. 206; p. 870.

Dwiggins Wire Fence Company, Anderson, Ind. Metal fencing-gates and fence-posts. No. 99,959; Sept. 29; Gaz. vol. 206; p. 1432.

Dwinell-Wright Co., Boston, Mass. Tea. No. 99,960; Sept. 29; Gaz. vol. 206; p. 1432.

B. C. Atkins & Company, Indianapolis, Ind. Saws. No. 99,680; Sept. 15; Gaz. vol. 206; p. 869.

E. H. & A. C. Friedrichs Co., New York, N. Y. Artists' oils and varnishes. No. 99,968; Sept. 29; Gaz. vol. 206; p. 1432.

E. T. Smith Company, Worcester, Mass. Tea, coffee, and cocoa. No. 100,038; Sept. 29; Gaz. vol. 206; p. 1434.

E. & Z. Van Raalte, New York, N. Y. Veilings and nettings. No. 99,519; Sept. 1; Gaz. vol. 206; p. 310.

Eagle Pencil Company, New York, N. Y. Lead-pencils. No. 99,446; Sept. 1; Gaz. vol. 206; p. 308.

Earle & Lyon, Salt Lake City, Utah. Certain named surgical appliances and treatment-cabinets. No. 99,447; Sept. 1; Gaz. vol. 206; p. 308.

Eastman Kodak Company, Rochester, N. Y. Photographic developer. No. 99,861; Sept. 22; Gaz. vol. 206; p. 1157.

Eckert, George E., Chicago, Ill. Polish for eyeglasses. No. 99,862; Sept. 22; Gaz. vol. 206; p. 1157.

Edible Seed Oils Company, Inc., New York, N. Y. Corn-oil. Nos. 99,569–70; Sept. 8; Gaz. vol. 206; p. 584.

Eisemann & Co., E., New York, N. Y. Artificial feathers; plumes, feathers, &c. Nos. 99,448–9; Sept. 1; Gaz. vol. 206; p. 308.

Elektrizitätswerk Lonza, Gampel, Switzerland. Certain named metallic alloys. No. 99,450; Sept. 1; Gaz. vol. 206; p. 308.

Easbach, Firm of Carl, Brunndöbra, Germany. Certain musical instruments and supplies therefor. No. 99,863; Sept. 22; Gaz. vol. 206; p. 1158.

Essex Rubber Company, Trenton, N. J. Rubber sheet-packing and round gasket-tubing. No. 99,713; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Fibrous sheet-packing. No. 99,714; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Rubber and duck packing. No. 99,715; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Asbestos packing. No. 99,716; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Rubber sheet-packing. No. 99,717; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Asbestos sheet-packing. Nos. 99,718–9; Sept. 15; Gaz. vol. 206; p. 870.

Essex Rubber Company, Trenton, N. J. Rubber sheet-packing and round gasket-tubing. No. 99,720; Sept. 15; Gaz. vol. 206; p. 870.

Estes Title Indexes Company, Little Rock, Ark. Blank forms for abstracts of title to real estate. No. 99,722; Sept. 15; Gaz. vol. 206; p. 870.

F. Koref & Company, New York, N. Y. Emulsion of port-wine and olive-oil. No. 99,756; Sept. 15; Gaz. vol. 206; p. 871.

F. A. Hardy & Co., Chicago, Ill. Spectacle and eye-glass lenses. No. 99,461; Sept. 1; Gaz. vol. 206; p. 308.

F. A. Hardy & Company, Chicago, Ill. Eye-protectors. No. 99,980; Sept. 29; Gaz. vol. 206; p. 1432.

F. S. Royster Guano Co., Norfolk, Va. Fertilizers. No. 99,500; Sept. 1; Gaz. vol. 206; p. 309.

F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 99,637–45; Sept. 8; Gaz. vol. 206; p. 586.

F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 99,791–3; Sept. 15; Gaz. vol. 206; p. 872.

F. W. King Optical Company, The, Cleveland, Ohio. Eye-glasses and spectacles. No. 99,992; Sept. 29; Gaz. vol. 206; p. 1432.

Fair, The, Chicago, Ill. Trousers. No. 99,571; Sept. 8; Gaz. vol. 206; p. 584.

Fair, The, Chicago, Ill. Candy. Nos. 99,723–5; Sept. 15; Gaz. vol. 206; p. 870.

Fair, The, Chicago, Ill. Lawn-mowers. No. 99,961; Sept. 29; Gaz. vol. 206; p. 1432.

Fair, The, Chicago, Ill. Ready-mixed paint. No. 99,962; Sept. 29; Gaz. vol. 206; p. 1432.

Fairbanks, Morse & Company, Chicago, Ill. Laundry-washing machines. No. 99,572; Sept. 8; Gaz. vol. 206; p. 584.

Federal Milling Company, Lockport, N. Y. Wheat-flour. No. 99,864; Sept. 22; Gaz. vol. 206; p. 1158.

Fellenberg, Friedrich, Erlenbach, Switzerland. Pharmaceutical preparations for medicinal baths. No. 99,963; Sept. 29; Gaz. vol. 206; p. 1432.

Fenton, T. B., Worden, Ill. Preparation for treatment of hog-cholera. No. 99,866; Sept. 22; Gaz. vol. 206; p. 1158.

Fesler Sales Company, New York, N. Y. Shaving-soap. No. 99,867; Sept. 22; Gaz. vol. 206; p. 1158.

Finelli, Joseph, Hoboken, N. J. Olive-oil. No. 99,868; Sept. 22; Gaz. vol. 206; p. 1158.

Fischer, Andrew, Baltimore, Md. Sheepskin and wool mitten as a washing device. No. 99,869; Sept. 22; Gaz. vol. 206; p. 1158.

Ford, Henry, Detroit and Dearborn township, Wayne county, Mich. Butter. No. 99,870; Sept. 22; Gaz. vol. 206; p. 1158.

Forest Products Co., New Orleans, La. Pine creosote, oil, and tar. No. 99,451; Sept. 1; Gaz. vol. 206; p. 308.

Fort Worth Macaroni Co., Fort Worth, Tex. Alimentary paste products. Nos. 99,964–6; Sept. 29; Gaz. vol. 206; p. 1432.

Foss, Packard & Co., Auburn, Me. Boots, shoes, and slippers. No. 99,452; Sept. 1; Gaz. vol. 206; p. 308.

Fox & Co., M. Ewing, New York, N. Y. Calcimines and water-paints. No. 99,453; Sept. 1; Gaz. vol. 206; p. 308.

Francesco Izzo & Figlio, Torre Annunziata, near Napies, Italy. Macaroni. No. 99,750; Sept. 15; Gaz. vol. 206; p. 871.

Frankel, Albert H., New York, N. Y. Covered glass pitchers, bottles, jugs, jars, and tankards. No. 99,726; Sept. 15; Gaz. vol. 206; p. 870.

Franklin Caro Co., Richmond, Va. Chewing-gum. No. 99,871; Sept. 22; Gaz. vol. 206; p. 1158.

Franqui, Ramon P., New York, N. Y. Toilet soap. No. 99,872; Sept. 22; Gaz. vol. 206; p. 1158.

Frederick W. Lipps Company, of Baltimore City, The, Baltimore, Md. Candy. No. 99,760; Sept. 15; Gaz. vol. 206; p. 871.

Frick Bros., New Iberia, La. Canned fruits and vegetables. No. 99,967; Sept. 29; Gaz. vol. 206; p. 1432.

Friedman, Israel, New York, N. Y. Men's neckwear. No. 99,454; Sept. 1; Gaz. vol. 206; p. 308.

Friable, Chauncey O., Chicago, Ill. Wood-fiber wall-board. No. 99,455; Sept. 1; Gaz. vol. 206; p. 308.

Fruit Puddine Co., The, Baltimore, Md. Farinaceous compound with fruit flavorings. No. 99,574; Sept. 8; Gaz. vol. 206; p. 584.

Fuller & Johnson Manufacturing Company, Madison, Wis. Gasolene pumping engines. No. 99,969; Sept. 29; Gaz. vol. 206; p. 1432.

G. F. Heublein & Bro., Hartford, Conn. Olive-oil. No. 99,740; Sept. 15; Gaz. vol. 206; p. 871.

Gallagher, John P., Philadelphia, Pa. Certain named materials for steam, air, ammonia, hydraulic, and metallic packings. No. 99,873; Sept. 22; Gaz. vol. 206; p. 1158.

Galusha Stove Company, Rochester, N. Y. Cooking stoves and ranges, parlor-heaters, and furnaces. No. 99,456; Sept. 1; Gaz. vol. 206; p. 308.

Gans Brothers, New York, N. Y. Cigars. No. 99,874; Sept. 22; Gaz. vol. 206; p. 1158.

Garbini e Figli, F., assignor to L. Garbini, Lucca, Italy. Olive-oil. No. 99,573; Sept. 8; Gaz. vol. 206; p. 584.

Garbini, Luigi. (See Garbini e Figli, F., assignor.)

Gebrum, Louis A., Detroit, Mich. Foot-powder. No. 99,970; Sept. 29; Gaz. vol. 206; p. 1432.

Gem Fountain Pen Corporation, New York, N. Y. Fountain-pens and parts. No. 99,727; Sept. 15; Gaz. vol. 206; p. 870.

Gem Fountain Pen Corporation, New York, N. Y. Fountain-pens and the parts thereof. No. 99,875; Sept. 22; Gaz. vol. 206; p. 1158.

Gem Supplies Co. Ltd., London, England. Certain named paper and stationery supplies. No. 99,876; Sept. 22; Gaz. vol. 206; p. 1158.

General Electric Company, Schenectady, N. Y. Glass lamps, columns, bases, globes, &c. No. 99,728; Sept. 15; Gaz. vol. 206; p. 870.

George Borgfeldt & Co., New York, N. Y. Alarm-clocks. No. 99,686; Sept. 15; Gaz. vol. 206; p. 869.

George Close Company, Cambridge, Mass. Chocolate candy. No. 99,696; Sept. 15; Gaz. vol. 206; p. 869.

George, James M., Amarillo, Tex. Catarrh medicine. No. 99,729; Sept. 15; Gaz. vol. 206; p. 870.

Georgia Medicine Co., Wrightsville, Ga. Remedy for liver and stomach troubles. No. 99,971; Sept. 29; Gaz. vol. 206; p. 1432.

Germania Importing Co., New York, N. Y. Linoleums. No. 99,575; Sept. 8; Gaz. vol. 206; p. 584.

Germania Importing Company, New York, N. Y. Fuses. No. 99,457; Sept. 1; Gaz. vol. 206; p. 308.

Glass, Frederick, Madison, Ind. Candles. No. 99,972; Sept. 29; Gaz. vol. 206; p. 1432.

Glatfelter, William L., Spring Grove, Pa. Milk and cream and cream alone. No. 99,973; Sept. 29; Gaz. vol. 206; p. 1432.

Gleason, Chas. K., Philadelphia, Pa. Mercerized cotton piece goods. No. 99,576; Sept. 8; Gaz. vol. 206; p. 584.

Godfrey S. Mahn, New York, N. Y. Cigarettes. No. 99,766; Sept. 15; Gaz. vol. 206; p. 871.

Godwin, William S., Baltimore, Md. Antiseptics. No. 99,975; Sept. 29; Gaz. vol. 206; p. 1432.

Goepel, Estate of Charles F.; F. J. Goepel, executrix, New York, N. Y. Certain named supplies for pianos and other musical instruments. No. 99,721; Sept. 15; Gaz. vol. 206; p. 870.

Goodman, Thos. A., St. Louis, Mo. Cold and massage creams, face-powder, and peroxid of hydrogen. No. 99,577; Sept. 8; Gaz. vol. 206; p. 584.

Goos-Olene Co., Superior, Wis. Remedy for sore throats, stiff necks, and chest pains. No. 99,730; Sept. 15; Gaz. vol. 206; p. 870.

Grain Juice Company, Ltd., Chicago, Ill. Unfermented hop extract of cereals. No. 99,877; Sept. 22; Gaz. vol. 206; p. 1158.

Grand Rapids Upholstering Co., Grand Rapids, Mich. Apparatus for cooking by retained heat. No. 99,458; Sept. 1; Gaz. vol. 206; p. 308.

Grand Union Tea Company, Brooklyn, N. Y. Coffee. No. 99,974; Sept. 29; Gaz. vol. 206; p. 1432.

Grasselli Chemical Company, Cleveland, Ohio. Silicate of soda or water-glass. No. 99,978; Sept. 29; Gaz. vol. 206; p. 1432.

Green Seal Specialty Company, Pittsburgh, Pa. Polishes for certain named materials. No. 99,878; Sept. 22; Gaz. vol. 206; p. 1158.
Greenberg & Co., Max, New York, N. Y. Monthly publication. No. 99,731; Sept. 15; Gaz. vol. 206; p. 870.
Griffith-Durney Co., San Francisco, Cal. Fresh and canned pineapples. No. 99,733; Sept. 15; Gaz. vol. 206; p. 870.
Griffith-Durney Co., San Francisco, Cal. Canned and fresh pineapples. No. 99,879; Sept. 22; Gaz. vol. 206; p. 1158.
Grocers Coffee Co., Indianapolis, Ind. Teas and coffees. No. 99,734; Sept. 15; Gaz. vol. 206; p. 870.
H. Maimin Co., Inc., New York, N. Y. Cloth-cutting machines. No. 100,001; Sept. 29; Gaz. vol. 206; p. 1433.
H. D. Lee Mercantile Company, The, Salina, Kans. Overall union suits. No. 99,475; Sept. 1; Gaz. vol. 206; p. 309.
H. W. Johns-Manville Co., New York, N. Y. Certain named plumbing and steam-fitting supplies. No. 99,594; Sept. 8; Gaz. vol. 206; p. 584.
H. W. K. Company, The, Providence, R. I. Jewelry. No. 99,979; Sept. 29; Gaz. vol. 206; p. 1432.
Hagen, George A., New Orleans, La. Syrups for table use. No. 99,735; Sept. 15; Gaz. vol. 206; p. 870.
Handl, Ernest, Chicago, Ill. Fluid to be used before confinements. No. 99,460; Sept. 1; Gaz. vol. 206; p. 308.
Harriet Hubbard Ayer, New York, N. Y. Certain named pharmaceutical preparations. No. 99,681; Sept. 15; Gaz. vol. 206; p. 869.
Hawaiian Pineapple Co., Ltd., Honolulu, Hawaii. Canned pineapple. No. 99,736; Sept. 15; Gaz. vol. 206; p. 870.
Hawaiian Pineapple Co. Ltd., Honolulu, Hawaii. Canned pineapple. Nos. 99,981–2; Sept. 29; Gaz. vol. 206; p. 1432.
Hawley & Hoops, New York, N. Y. Candy. No. 99,737; Sept. 15; Gaz. vol. 206; p. 870.
Heavenridge, Josiah, Canon City, Colo. Publication for the treatment of hog-cholera. No. 99,738; Sept. 15; Gaz. vol. 206; p. 871.
Heide, Henry, New York, N. Y. Chocolate, chocolate liquors, and cocoa. No. 99,579; Sept. 8; Gaz. vol. 206; p. 584.
Helt-Miller-Lau Co., Fort Wayne, Ind. Chocolate candy. No. 99,739; Sept. 15; Gaz. vol. 206; p. 871.
Henry F. Scatcnard Mfg. Co., Norristown, Pa. Cotton and wool piece goods. No. 99,506; Sept. 1; Gaz. vol. 206; p. 309.
Hercules Powder Company, Wilmington, Del. High explosives. No. 99,462; Sept. 1; Gaz. vol. 206; p. 308.
Herold Company, Phil, San Jose, Cal. Leather shoes. No. 99,463; Sept. 1; Gaz. vol. 206; p. 308.
Herrmann, Aukam & Co., New York, N. Y. Handkerchiefs. Nos. 99,581–5; Sept. 8; Gaz. vol. 206; p. 584.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Mouse, rat, and animal and game traps, incubators, &c. No. 99,741; Sept. 15; Gaz. vol. 206; p. 871.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Certain lighting apparatus and parts thereof, heating stoves and ranges, not electrical. No. 99,742; Sept. 15; Gaz. vol. 206; p. 871.
Higley, Christina J., New York, N. Y. Hose-supporters. No. 99,586; Sept. 8; Gaz. vol. 206; p. 584.
Hill-Canton Dryer Company, Canton, Ohio. Drying-cabinets. No. 99,587; Sept. 8; Gaz. vol. 206; p. 584.
Hiscox Bros. Co., Patchogue, N. Y. Liquid soap for shampooing the hair and bathing. No. 99,743; Sept. 15; Gaz. vol. 206; p. 871.
Holbrook Grocery Co., The, Keene, Woodsville, and Nashua, N. H. Wheat-flour, coffee, and tea. No. 99,881; Sept. 22; Gaz. vol. 206; p. 1158.
Holliston Mills, The, Norwood, Mass. Colored, stiffened, and finished fabric. No. 99,464; Sept. 1; Gaz. vol. 206; p. 308.
Home Remedy Company, Fredonia, N. Y. Liniment. No. 99,883; Sept. 22; Gaz. vol. 206; p. 1158.
Honaker, Martin, Sen., Honaker, Va. Remedy for venereal diseases. No. 99,588; Sept. 8; Gaz. vol. 206; p. 584.
Hood Rubber Company, Watertown, Mass. Rubber boots and shoes and rubber-soled shoes. No. 99,589; Sept. 8; Gaz. vol. 206; p. 584.
Hoquiam Lumber & Shingle Company, Hoquiam, Wash. Certain named building material. No. 99,465; Sept. 1; Gaz. vol. 206; p. 308.
Horn & Brannen Mfg. Co., The, Philadelphia, Pa. Electric-lighting fixtures. No. 99,983; Sept. 29; Gaz. vol. 206; p. 1432.
Hot Springs Chemical Company, assignor to Chemical Specialty Company, Chicago, Ill. Perspiration and talcum powders, toilet creams, &c. No. 99,590; Sept. 8; Gaz. vol. 206; p. 584.
Hudson Mechanical Rubber Company, Trenton, N. J., and New York, N. Y. Composition for making washers, gaskets, packing, &c. No. 99,744; Sept. 15; Gaz. vol. 206; p. 871.
Hughes, John R., Spokane, Wash. Preparations for treatment of colds, headaches, &c. No. 99,984; Sept. 29; Gaz. vol. 206; p. 1432.
Hutchins, Jesse M., Lake Charles, La. Preparation for the treatment of consumption, &c. No. 99,591; Sept. 8; Gaz. vol. 206; p. 584.
Hutchinson Oil Company, The, Hutchinson, Kans. Harness-oil dressing. No. 99,745; Sept. 15; Gaz. vol. 206; p. 871.
Ikeda, Kenzo, New York, N. Y. Tea. No. 99,746; Sept. 15; Gaz. vol. 206; p. 871.
Imperial Candy Co., Seattle, Wash. Candy. No. 99,592; Sept. 8; Gaz. vol. 206; p. 584.
Imperial Glass Company, Bellaire, Ohio. Pressed and blown table-glassware. No. 99,747; Sept. 15; Gaz. vol. 206; p. 871.
Imperial Glass Company, Bellaire, Ohio. Table-glassware. No. 99,748; Sept. 15; Gaz. vol. 206; p. 871.
Imperial Player Roll Company, Chicago, Ill. Music-sheets for musical-instrument players. No. 99,466; Sept. 1; Gaz. vol. 206; p. 308.
Imperial Rubber Co., New York, N. Y. Certain named electrical supplies. No. 99,985; Sept. 29; Gaz. vol. 206; p. 1432.
Imperial Rubber Co., New York, N. Y. Mixed paints and varnishes. No. 99,986; Sept. 29; Gaz. vol. 206; p. 1432.
Indiana Chemical Company, Jonesboro, Ind. Certain pharmaceutical preparations. No. 99,593; Sept. 8; Gaz. vol. 206; p. 584.
Ingersoll-Rand Company, Jersey City, N. J., and New York, N. Y. Fluid-operated rotary drills and riveting and chipping hammers. No. 99,987; Sept. 29; Gaz. vol. 206; p. 1432.
International Harvester Corporation, Chicago, Ill. Internal-combustion engines and parts thereof. No. 99,749; Sept. 15; Gaz. vol. 206; p. 871.
Interocean Oil Company, The, Pierre, S. D., and New York, N. Y. Lubricants. No. 99,988; Sept. 29; Gaz. vol. 206; p. 1432.
Iowa Soap Co., Burlington, Iowa. Soap. No. 99,885; Sept. 22; Gaz. vol. 206; p. 1158.
J. Allen Smith & Company, Knoxville, Tenn. Wheat-flour. No. 99,800; Sept. 15; Gaz. vol. 206; p. 872.
J. B. Greenhut Co., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Coffee. No. 99,732; Sept. 15; Gaz. vol. 206; p. 870.
J. D. Riedel Aktiengesellschaft, Berlin, Germany. Internal disinfectants. No. 99,780; Sept. 15; Gaz. vol. 206; p. 872.
J. K. Armsby Company, The, Chicago, Ill., and San Francisco, Cal. Catsup, pickles, olive-oil, &c. No. 99,835; Sept. 22; Gaz. vol. 206; p. 1157.
J. W. Quinn Drug Company, Greenwood, Miss. Certain medicines and remedies for certain named diseases. No. 99,498; Sept. 1; Gaz. vol. 206; p. 309.
James, John W., Jr., Brooklyn, N. Y. Medical compound for cathartic purposes. No. 99,886; Sept. 22; Gaz. vol. 206; p. 1158.
Jellico Grocery Company, Jellico, Tenn. Coffee. No. 99,751; Sept. 15; Gaz. vol. 206; p. 871.
John Chatillon & Sons, New York, N. Y. Weighing machines and scales. No. 99,947; Sept. 29; Gaz. vol. 206; p. 1431.
John G. Woodward & Co. (Inc.), Council Bluffs, Iowa. Candy. No. 99,830; Sept. 15; Gaz. vol. 206; p. 873.
John Graf Company, Milwaukee, Wis. Weiss beer, soda, seltzer, and mineral waters, and ginger-ales. No. 99,578; Sept. 8; Gaz. vol. 206; p. 584.
John Lane & Sons, Limited, London, England. Paints, enamels, and varnishes. Nos. 99,477–8; Sept. 1; Gaz. vol. 206; p. 309.
John P. Dousman Milling Company, De Pere, Wis. Wheat-flour. No. 99,859; Sept. 22; Gaz. vol. 206; p. 1157.
Johnson, Irven E., Mineral Wells, Tex. Natural mineral water. No. 99,469; Sept. 1; Gaz. vol. 206; p. 308.
Joseph Heusler Brewing Company, The, Newark, N. J. Malt beverages. No. 99,580; Sept. 8; Gaz. vol. 206; p. 584.
Joseph Sankey & Sons Limited, Bilston, England. Sheet-metal transformer and dynamo plates. No. 100,035; Sept. 29; Gaz. vol. 206; p. 1434.
Jowers, Solomon P., Rockford, Ala. Remedies for neuralgia. No. 99,595; Sept. 8; Gaz. vol. 206; p. 585.
Julius King Optical Company, New York, N. Y. Protection-glasses. No. 99,991; Sept. 29; Gaz. vol. 206; p. 1432.
Kadiak Fisheries Co., Seattle, Wash. Canned salmon. Nos. 99,596–8; Sept. 8; Gaz. vol. 206; p. 585.
Kadiak Fisheries Co., Seattle, Wash. Canned salmon. No. 99,752; Sept. 15; Gaz. vol. 206; p. 871.
Kaiser, Fr., Wutbilngen, Germany. Fly-catchers. No. 99,887; Sept. 22; Gaz. vol. 206; p. 1158.
Kalle & Co., Aktiengesellschaft, Biebrich, Germany. Bacilli preparations for the treatment of tuberculosis, &c. No. 99,470; Sept. 1; Gaz. vol. 206; p. 308.
Kanter & Son, N., Cleveland, Ohio. Hair-tonic and toilet water. No. 99,471; Sept. 1; Gaz. vol. 206; p. 308.
Katz Brothers Leather Goods Co., New York, N. Y. Dress-suit cases and traveling-bags. No. 99,599; Sept. 8; Gaz. vol. 206; p. 585.
Keiffer Bros. Co., New Orleans, La. Leather shoes. No. 99,888; Sept. 22; Gaz. vol. 206; p. 1158.
Keim, William C., Vicksburg, Miss. Remedy for skin diseases. No. 99,889; Sept. 29; Gaz. vol. 206; p. 1432.
Kerstine, Harry E., Philadelphia, Pa. Certain precious and semiprecious stones and jewelry. No. 99,990; Sept. 29; Gaz. vol. 206; p. 1432.
Keyless Lock Co., The, Indianapolis, Ind. Steel furniture. No. 99,600; Sept. 8; Gaz. vol. 206; p. 585.
Keystone Watch Case Company, Philadelphia, Pa. Watches watchcases, and watch-movements. No. 99,754; Sept. 15; Gaz. vol. 206; p. 871.

Kiley Hardware Company, Boston, Mass. Varnishes. No. 99,472; Sept. 1; Gaz. vol. 206; p. 308.
King, Chandler, Chattanooga, Tenn. Non-intoxicating carbonated tonic beverages and soda-water syrups. No. 99,889; Sept. 22; Gaz. vol. 206; p. 1158.
Kleine, Harry B., Covington, Ky. Squabs. No. 99,755; Sept. 15; Gaz. vol. 206; p. 871.
Knell & Prengel Co., Milwaukee, Wis. Coffees, teas, and spices. No. 99,890; Sept. 22; Gaz. vol. 206; p. 1158.
Knox Hat Manufacturing Company, The, New York, N. Y. Hats and caps. No. 99,473; Sept. 1; Gaz. vol. 206; p. 308.
Krug, Charles H., Dayton, Ohio. Liniment. No. 99,993; Sept. 29; Gaz. vol. 206; p. 1432.
La Bontee, Wilfred A., St. Louis, Mo. Cake. No. 99,601; Sept. 8; Gaz. vol. 206; p. 585.
La Salle Varnish Co., The, Chicago, Ill. Calcimine. No. 99,474; Sept. 1; Gaz. vol. 206; p. 308.
Landenberger & Co., J. W., Philadelphia, Pa. Hosiery. Nos. 99,602–5; Sept. 8; Gaz. vol. 206; p. 585.
Lawrence, John H., Washington, D. C. Metal-polish. No. 99,758; Sept. 15; Gaz. vol. 206; p. 871.
Lawrenceburg Roller Mills Co., Lawrenceburg, Ind., and Boston, Mass. Wheat-flour. No. 99,994; Sept. 29; Gaz. vol. 206; p. 1432.
Leonard, Ruben M., Salisbury, N. C. Application for pneumonia, congestion or inflammation of the lungs, croups, and colds. No. 99,995; Sept. 29; Gaz. vol. 206; p. 1433.
Levy, Abraham, New York, N. Y. Brass, copper, gold, and silver. No. 99,606; Sept. 8; Gaz. vol. 206; p. 585.
Lewis & Son, George W., Westboro, Mass. Lice and fly destroyer. No. 99,759; Sept. 15; Gaz. vol. 206; p. 871.
Lincrusta Works "Pallas," Inc., New York, N. Y. Decorative fabric for walls and ceilings. No. 99,476; Sept. 1; Gaz. vol. 206; p. 309.
Lissberger, Fanny, London, England. Preparations for certain named toilet purposes. No. 99,891; Sept. 22; Gaz. vol. 206; p. 1158.
Lonergan's, Dr., Pittsburgh, Pa. Medical compounds for the digestive organs. No. 99,761; Sept. 15; Gaz. vol. 206; p. 871.
Loose-Wiles Biscuit Company, Boston, Mass. Biscuit. No. 99,607; Sept. 8; Gaz. vol. 206; p. 585.
Loose-Wiles Biscuit Company, Boston, Mass. Biscuit. Nos. 99,762–5; Sept. 15; Gaz. vol. 206; p. 871.
Loose-Wiles Biscuit Company, Kansas City, Mo. Chocolate-covered cakes. No. 99,996; Sept. 29; Gaz. vol. 206; p. 1433.
Loose-Wiles Biscuit Company, Kansas City, Mo. Caramels. No. 99,997; Sept. 29; Gaz. vol. 206; p. 1433.
Loose-Wiles Biscuit Company, Kansas City, Mo. Chocolate creams. No. 99,998; Sept. 29; Gaz. vol. 206; p. 1433.
M. Welte & Sons, Inc., New York, N. Y. Self-playing pianos, organs, and orchestrions. No. 99,826; Sept. 15; Gaz. vol. 206; p. 873.
Maatschappij Vereenigde Van der Burg's Japaniak Fabrieken, (United Vanderburg's Japaniac- and Varnish Works,) Rotterdam, Netherlands. Paints, varnishes, and lacquers. No. 99,999; Sept. 29; Gaz. vol. 206; p. 1433.
Magnus & Lauer, San Francisco, Cal. Syrup for soda-fountain beverages. No. 100,000; Sept. 29; Gaz. vol. 206; p. 1433.
Mann Edge Tool Co., Lewistown, Pa. Axes. No. 100,002; Sept. 29; Gaz. vol. 206; p. 1433.
Mansfield Tire & Rubber Co., The, Mansfield, Ohio. Rubber automobile and vehicle tires. No. 99,479; Sept. 1; Gaz. vol. 206; p. 309.
Marquette Cement Manufacturing Co., Chicago, Ill. Portland cement. No. 99,609; Sept. 8; Gaz. vol. 206; p. 585.
Mason & Hanson, New York, N. Y. Woolen piece goods and tailors' trimmings. Nos. 99,610–11; Sept. 8; Gaz. vol. 206; p. 585.
Maurer, Edward P., Cleveland, Ohio. Electric transformers. No. 99,480; Sept. 1; Gaz. vol. 206; p. 309.
McCaskey Register Company, The, Alliance, Ohio. Monthly publication. No. 99,892; Sept. 22; Gaz. vol. 206; p. 1158.
McClinton's, Ltd., Donaghmore, Ireland. Certain pharmaceutical preparations and oils. No. 100,003; Sept. 29; Gaz. vol. 206; p. 1433.
McFadden Coffee & Spice Co., Dubuque, Iowa. Coffee. No. 99,893; Sept. 22; Gaz. vol. 206; p. 1158.
McFaddin & Co., H. G., New York, N. Y. Glass lamp globes, shades, and reflectors. No. 99,481; Sept. 1; Gaz. vol. 206; p. 309.
Mealy Manufacturing Company, Baltimore, Md. Watch-bracelets. No. 100,005; Sept. 29; Gaz. vol. 206; p. 1433.
Meilier Company—Perfumer, St. Louis, Mo. Perfumery. No. 99,767; Sept. 15; Gaz. vol. 206; p. 871.
Melville A. Gunst Costume Co., New York, N. Y. Ladies' and misses' dresses and costumes. No. 99,459; Sept. 1; Gaz. vol. 206; p. 308.
Messters Projection G. m. b. H., Berlin, Germany. Films for the so-called living photographs. No. 99,768; Sept. 15; Gaz. vol. 206; p. 871.
Meyer, Foote & Dayton Co., Rochester, N. Y. Coffee and tea. No. 99,769; Sept. 15; Gaz. vol. 206; p. 871.
Middleton, Hubert J., New York, N. Y. Ginger-beer. No. 100,006; Sept. 29; Gaz. vol. 206; p. 1433.
Miller Cigar Co., The, Wheeling, W. Va. Stogies. No. 99,895; Sept. 22; Gaz. vol. 206; p. 1158.
Miller-Elmer Mfg. Co., Ltd., New Orleans, La. Candy. No. 100,007; Sept. 29; Gaz. vol. 206; p. 1433.
Miller, John F., Wheeling, W. Va. Stogies. No. 99,894; Sept. 22; Gaz. vol. 206; p. 1158.
Miller, Laura B., Aidan, Pa. Preparation for the treatment of skin diseases and eruptions. No. 99,482; Sept. 1; Gaz. vol. 206; p. 309.
Milwaukee Grains & Feed Company, Milwaukee, Wis. Brewers' dried grains. No. 99,612; Sept. 8; Gaz. vol. 206; p. 585.
Milwaukee Sales Co., Milwaukee, Wis. Certain named floor cleaning and polishing devices. No. 99,770; Sept. 15; Gaz. vol. 206; p. 871.
Minneapolis Paper Company, Minneapolis, Minn. Wrapping-paper. No. 100,008; Sept. 29; Gaz. vol. 206; p. 1433.
Mitchell, Guy K., Baltimore, Md. Electrically-operated elevators and dumb-waiters, electric motors, &c. No. 100,009; Sept. 29; Gaz. vol. 206; p. 1433.
Mitchelson, Mark A., New York, N. Y. Laundry blue. No. 100,010; Sept. 29; Gaz. vol. 206; p. 1433.
Model Mill Company, Johnson City, Tenn. Self-rising wheat-flour. No. 99,613; Sept. 8; Gaz. vol. 206; p. 585.
Monopol Import Export Union, Inc., New York, N. Y. Certain named foods. No. 99,896; Sept. 22; Gaz. vol. 206; p. 1158.
Monroe Pharmacal Company, Chicago, Ill. Antiseptic preparations. No. 100,011; Sept. 29; Gaz. vol. 206; p. 1433.
Montag Brothers, Atlanta, Ga. Writing tablets and paper, envelops, &c. No. 99,483; Sept. 1; Gaz. vol. 206; p. 309.
Montgomerie, Stobo & Co., Glasgow, Scotland. Dry-cleaning soap. No. 99,897; Sept. 22; Gaz. vol. 206; p. 1158.
Morny Freres Limited, London, England. Perfumery, toilet waters and powders, &c. No. 99,484; Sept. 1; Gaz. vol. 206; p. 309.
Morny Freres Ltd., London, England. Aromatic salts, toilet waters, bath, sachet, and dusting powders, lotions, dentrifices, &c. No. 99,485; Sept. 1; Gaz. vol. 206; p. 309.
Mose H. Land Milling Company, Marshall, Mo. Self-rising flour. No. 99,757; Sept. 15; Gaz. vol. 206; p. 871.
Mouillé, Eugene, Jacksonville, Fla. Perfumes and sachet-powder. No. 100,013; Sept. 29; Gaz. vol. 206; p. 1433.
Mt. Holyoke Tissue Mills, Holyoke, Mass. Toilet-paper. No. 100,014; Sept. 29; Gaz. vol. 206; p. 1433.
Mundlos & Co., H., Magdeburg, Germany. Sewing-machines and parts thereof. No. 100,015; Sept. 29; Gaz. vol. 206; p. 1433.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 99,614–17; Sept. 8; Gaz. vol. 206; p. 585.
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Candies. No. 99,772; Sept. 15; Gaz. vol. 206; p. 871.
National Carbon Company, Cleveland, Ohio. Electrical batteries. No. 100,016; Sept. 29; Gaz. vol. 206; p. 1433.
National Carbon Company, Cleveland, Ohio. Electric batteries. Nos. 100,017–18; Sept. 29; Gaz. vol. 206; p. 1433.
New-A-Hone Razor Strop Company, New York, N. Y. Razor-strops and dressings. No. 99,898; Sept. 22; Gaz. vol. 206; p. 1159.
New England Drug Company, Boston, Mass. Laxative tablets or powder. No. 99,486; Sept. 1; Gaz. vol. 206; p. 309.
New Idea Spreader Co., Coldwater, Ohio. Certain named machinery and tools. No. 100,019; Sept. 29; Gaz. vol. 206; p. 1433.
Niagara Paper Mills, Lockport, N. Y. Monthly periodical. No. 99,773; Sept. 15; Gaz. vol. 206; p. 871.
Niagara Sprayer Company, Middleport, N. Y. Lime-sulfur solution, Bordeaux arsenate and paste, &c. No. 100,020; Sept. 29; Gaz. vol. 206; p. 1433.
Nickel Plate Stove Polish Co., Chicago, Ill. Compound for cleansing and scouring certain named materials. No. 99,899; Sept. 22; Gaz. vol. 206; p. 1159.
Nicols, Dean & Gregg, St. Paul, Minn. Cards for bookkeeping systems. No. 100,021; Sept. 29; Gaz. vol. 206; p. 1433.
Nifong, Jefferson D., Colorado Springs, Colo. Preparations for prevention of venereal diseases. No. 99,618; Sept. 8; Gaz. vol. 206; p. 585.
Nitro-Ignitum Mfg. Co., St. Louis, Mo. Heat-producer and smoke-reducer used on coal, coke, &c. No. 99,900; Sept. 22; Gaz. vol. 206; p. 1159.
Nora Gon, Evelyn B., Memphis, Tenn. Cigars. No. 99,487; Sept. 1; Gaz. vol. 206; p. 309.
Nordman, Joshua J., Pittsburgh, Pa. Games. No. 99,488; Sept. 1; Gaz. vol. 206; p. 309.
Norman Company, The, Philadelphia, Pa. Cleanser. No. 99,774; Sept. 15; Gaz. vol. 206; p. 872.
Noyes Comb Company, Binghamton, N. Y. Toilet-combs. No. 99,489; Sept. 1; Gaz. vol. 206; p. 309.
Nu Life Products Company, Titusville, Pa. Polishes for all woodwork, furniture, automobiles, &c. No. 100,022; Sept. 29; Gaz. vol. 206; p. 1433.
Nuway Manufacturing Co., Sonderton, Pa. Soap. No. 99,775; Sept. 15; Gaz. vol. 206; p. 872.
O'Halloran & Bishop, Inc., Columbus, Ga. Non-intoxicating carbonated beverage and syrup. No. 99,490; Sept. 1; Gaz. vol. 206; p. 309.
Oakville Company, Waterbury, Conn. Safety-pins. No. 99,619; Sept. 8; Gaz. vol. 206; p. 585.

Old Drury Cigarette Co., Inc., New York, N. Y. Cigarettes. No. 99,491; Sept. 1; Gaz. vol. 206; p. 309.

Operators' Piano Co., Chicago, Ill. Electric player-pianos. No. 99,901; Sept. 22; Gaz. vol. 206; p. 1159.

Orange Growers Cash Association, Redlands, Cal. Fresh oranges, lemons, limes, and grape-fruit. No. 99,620; Sept. 8; Gaz. vol. 206; p. 585.

Otto, Albert T., New York, N. Y. Preparation offensive to rapacious birds and animals. No. 99,492; Sept. 1; Gaz. vol. 206; p. 309.

Otto Higel Co., The, Toronto, Ontario, Canada. Pneumatic piano-players. No. 99,880; Sept. 22; Gaz. vol. 206; p. 1158.

Outing Shoe Co., Boston, Mass. Shoes and slippers. No. 99,621; Sept. 8; Gaz. vol. 206; p. 585.

Pacific Commercial Company, Manila, Philippine Islands, and New York, N. Y. Straw hats. No. 99,622; Sept. 8; Gaz. vol. 206; p. 585.

Palmer & Singer Manufacturing Company, New York, N. Y. Motor-vehicles. No. 99,623; Sept. 8; Gaz. vol. 206; p. 585.

Panama Macaroni Company, Los Angeles and Culver City, Cal. Macaroni, noodles, spaghetti, soup-marks. No. 99,777; Sept. 15; Gaz. vol. 206; p. 872.

Paper Makers Co., The, Louisville, Ky. Writing and bond papers. No. 99,493; Sept. 1; Gaz. vol. 206; p. 309.

Paper Sales Company, Chicago, Ill. Toilet-paper. No. 100,023; Sept. 29; Gaz. vol. 206; p. 1433.

Paris, Charles T., Chattanooga, Tenn. Roasted coffee. No. 99,624; Sept. 8; Gaz. vol. 206; p. 585.

Parsons Paper Co., Holyoke, Mass. Printing and writing papers. No. 99,778; Sept. 15; Gaz. vol. 206; p. 872.

Patterson-Sargent Company, Cleveland, Ohio. Paints, enamels, stains, lacs, &c. No. 100,024; Sept. 29; Gaz. vol. 206; p. 1433.

Perfectol Company, Philadelphia, Pa. Emulsion cleaner for woodwork and metal. No. 99,902; Sept. 22; Gaz. vol. 206; p. 1159.

Perseverence Worsted Company, Woonsocket, R. I. Worsted piece goods. No. 99,494; Sept. 1; Gaz. vol. 206; p. 309.

Phoenix Toilet and Paper Manufacturing Company, Phoenix, N. Y. Toilet-papers. No. 99,779; Sept. 15; Gaz. vol. 206; p. 872.

Piper Cooling and Preserving Company, The, Jackson, Mo. Refrigerators. No. 99,625; Sept. 8; Gaz. vol. 206; p. 585.

Pittsburgh Brewing Company, Pittsburgh, Pa. Beer. No. 99,495; Sept. 1; Gaz. vol. 206; p. 309.

Pittsburgh Brewing Company, Pittsburgh, Pa. Beer, ale, and porter. No. 100,025; Sept. 29; Gaz. vol. 206; p. 1433.

Pittsburgh Crushed Steel Co., Pittsburgh, Pa. Iron and steel abrasives. No. 99,903; Sept. 22; Gaz. vol. 206; p. 1159.

Plaschy, Leon, New York, N. Y. Medicinal compound for the scalp. No. 99,496; Sept. 1; Gaz. vol. 206; p. 309.

Pope & Sons, Chas. S., Manchester, Me. Cream, milk, and butter. No. 99,626; Sept. 8; Gaz. vol. 206; p. 585.

Porter, C. C., Holdrege, Nebr. Cigars. No. 99,904; Sept. 22; Gaz. vol. 206; p. 1159.

Potts & Co., Horace T., Philadelphia, Pa. Tool-steel. No. 99,627; Sept. 8; Gaz. vol. 206; p. 585.

Powell, Charles A., Whitesboro, N. Y. Knitted vests, pants, union suits, and corset-covers. No. 99,628; Sept. 8; Gaz. vol. 206; p. 585.

Powell-Sanders Co., Spokane, Wash. Coffee. No. 99,780; Sept. 15; Gaz. vol. 206; p. 872.

Pressed Metal Radiator Company, Pittsburgh, Pa. Steam and hot-water boilers and radiators. Nos. 99,781–2; Sept. 15; Gaz. vol. 206; p. 872.

Price Flavoring Extract Company, Chicago, Ill. Flavoring extracts for foods. No. 99,783; Sept. 15; Gaz. vol. 206; p. 872.

Procter & Gamble Company, The, Ivorydale and Cincinnati, Ohio. Soap. No. 99,784; Sept. 15; Gaz. vol. 206; p. 872.

Pschorr, Firm of G., Munich, Germany. Beer, beer poor in alcohol, and malt extracts. No. 99,905; Sept. 22; Gaz. vol. 206; p. 1159.

Purity Yeast Company, Beresford, S. D. Yeast. No. 99,785; Sept. 15; Gaz. vol. 206; p. 872.

Queen City Specialty Company, Buffalo, N. Y. Furniture and automobile polishes. No. 99,629; Sept. 8; Gaz. vol. 206; p. 585.

Quimby, George A., Laconia, N. H. Certain named pharmaceutical preparations. No. 99,497; Sept. 1; Gaz. vol. 206; p. 309.

R. M. Hollingshead Co., Camden, N. J. Polishes, dressers, and shoe-cleansers, &c. No. 99,882; Sept. 22; Gaz. vol. 206; p. 1158.

Ramey Co., Chillicothe, Ohio. Vacuum cleaners and sweepers. No. 100,026; Sept. 29; Gaz. vol. 206; p. 1433.

Reifschneider, Pearl E., Lawton, Okla. Toilet preparation to prevent perspiration under arms, &c. No. 100,027; Sept. 29; Gaz. vol. 206; p. 1433.

Reinhardt, Max P., London, England. Compound to free boilers and their supply-water from sediments. No. 99,630; Sept. 8; Gaz. vol. 206; p. 586.

Remy, Schmidt & Pleissner, New York, N. Y. Certain named household linen. No. 99,631; Sept. 8; Gaz. vol. 206; p. 586.

Revere Rubber Company, Providence, R. I., and Chelsea, Mass. Rubber soles for boots and shoes. No. 99,632; Sept. 8; Gaz. vol. 206; p. 586.

Reymer & Brothers, Incorporated, Pittsburgh, Pa. Chocolates. No. 99,633; Sept. 8; Gaz. vol. 206; p. 586.

Reynolds Corporation, Bristol, Tenn. Cleanser. No. 99,906; Sept. 22; Gaz. vol. 206; p. 1159.

Rice-Stix Dry Goods Company, St. Louis, Mo. Men's and boys' hosiery. No. 99,634; Sept. 8; Gaz. vol. 206; p. 586.

Richard Hudnut, New York, N. Y. Certain named pharmaceutical preparations. No. 99,884; Sept. 22; Gaz. vol. 206; p. 1158.

Riker & Hegeman Co., New York, N. Y. Medicinal oil for constipation. No. 100,028; Sept. 29; Gaz. vol. 206; p. 1434.

Rinaldi, Romeo, Jersey City, N. J. Ointments and salves. No. 99,787; Sept. 15; Gaz. vol. 206; p. 872.

Robb, John W., Philadelphia, Pa. Tooth powder, paste, and wash and face-cream. No. 99,788; Sept. 15; Gaz. vol. 206; p. 872.

Robert A. Wooldridge Company, The, Baltimore, Md. Fertilizers. No. 99,673; Sept. 8; Gaz. vol. 206; p. 587.

Robinson & Co., Richmond, Ind. Ensilage-cutters or silo-fillers and baling-presses. No. 100,029; Sept. 29; Gaz. vol. 206; p. 1434.

Robt. F. Mackenzie Co., The, Cleveland, Ohio. Candy. No. 99,608; Sept. 8; Gaz. vol. 206; p. 585.

Rochester Carrier Co., Rochester, N. Y. Paper or fiber cartons, boxes, or containers. No. 99,499; Sept. 1; Gaz. vol. 206; p. 309.

Rodman Chemical Company, East Pittsburgh, Pa. Case-hardening materials. No. 99,789; Sept. 15; Gaz. vol. 206; p. 872.

Roller, Emil, New York, N. Y. Treatment of tuberculosis. No. 100,031; Sept. 29; Gaz. vol. 206; p. 1434.

Roller, Emil, New York, N. Y. Hay-fever, catarrhal conditions, and eye-wash. No. 100,032; Sept. 29; Gaz. vol. 206; p. 1434.

Rose, Randolph, Chattanooga, Tenn. Cigars. No. 99,790; Sept. 15; Gaz. vol. 206; p. 872.

Rosenfield, William, Philadelphia, Pa. Hat and bonnet frames. No. 99,635; Sept. 8; Gaz. vol. 206; p. 586.

Rosetter, Andrew C., Appleton, Minn. Non-intoxicating carbonated tonic beverages. No. 99,907; Sept. 22; Gaz. vol. 206; p. 1159.

Rouss, Firm of Charles B., New York, N. Y. Sweaters. No. 99,636; Sept. 8; Gaz. vol. 206; p. 586.

Roykó, Victor, Tiszaujlak, Austria-Hungary. Certain named pharmaceutical preparations. No. 100,033; Sept. 29; Gaz. vol. 206; p. 1434.

Rubber Sundries Company, Cleveland, Ohio. Rubber water-bottles, fountain-syringes, and ice-caps. No. 99,646; Sept. 8; Gaz. vol. 206; p. 586.

Ruud Manufacturing Company, Pittsburgh, Pa. Instantaneous automatic water heaters and storage systems. No. 99,501; Sept. 1; Gaz. vol. 206; p. 309.

S. R. Feil Company, Cleveland, Ohio. Toilet cerate. No. 99,865; Sept. 22; Gaz. vol. 206; p. 1158.

Salcura Company, The, Milwaukee, Wis. Toilet soap. No. 99,908; Sept. 22; Gaz. vol. 206; p. 1159.

Salinos Company, Minneapolis, Minn. Medicinal preparation used as a cathartic and laxative, &c. No. 100,034; Sept. 29; Gaz. vol. 206; p. 1434.

Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and plushes in the piece. Nos. 99,502–3; Sept. 1; Gaz. vol. 206; p. 309.

Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Coats, cloaks, wraps, and capes. Nos. 99,504–5; Sept. 1; Gaz. vol. 206; p. 309.

Salt's Textile Manufacturing Company, Bridgeport, Conn., and New York, N. Y. Coats, cloaks, wraps, and capes. No. 99,647; Sept. 8; Gaz. vol. 206; p. 586.

Samuel Cupples Wooden Ware Company, St. Louis, Mo. Fruit-jar rings. No. 99,705; Sept. 15; Gaz. vol. 206; p. 870.

Santa Rosa Cured Fruit Association, Santa Rosa, Cal. Prunes. No. 99,794; Sept. 15; Gaz. vol. 206; p. 872.

Saxony Mills, St. Louis, Mo. Wheat-flour. No. 99,648; Sept. 8; Gaz. vol. 206; p. 586.

Scarpelli Bros., Spokane, Wash. Macaroni products. No. 99,649; Sept. 8; Gaz. vol. 206; p. 586.

Schieffelin, William J., New York, N. Y. Appliance for the production of radio-active medicinal water. No. 99,507; Sept. 1; Gaz. vol. 206; p. 310.

Schonegg, Arnold, Ambridge, Pa. Beer. No. 99,650; Sept. 8; Gaz. vol. 206; p. 586.

Schorn & Brower, New York, N. Y. Tea. No. 99,795; Sept. 15; Gaz. vol. 206; p. 872.

Schroeder, Joseph C., St. Louis, Mo. Certain named medicines and pharmaceutical preparations. No. 99,796; Sept. 15; Gaz. vol. 206; p. 872.

Schulten & Co., Jno. J., Louisville, Ky. Leather shoes. No. 99,508; Sept. 1; Gaz. vol. 206; p. 310.

Schultz, Baujan & Co., Beardstown, Ill. Self-rising wheat-flour. No. 99,797; Sept. 15; Gaz. vol. 206; p. 872.

Schulze Baking Company, Chicago, Ill. Bread. Nos. 99,651–2; Sept. 8; Gaz. vol. 206; p. 586.

Schulze Baking Company, Chicago, Ill. Bread. No. 99,798; Sept. 15; Gaz. vol. 206; p. 872.

Schwab Bros. & Baer, Inc., New York, N. Y. Cigars. No. 99,799; Sept. 15; Gaz. vol. 206; p. 872.

Schwob, Adolphe, New York, N. Y. Watches, watchcases, and watch-movements. No. 100,036; Sept. 29; Gaz. vol. 206; p. 1434.

Scott County Milling Company, Sikeston, Mo. Cornmeal. No. 99,800; Sept. 15; Gaz. vol. 206; p. 872.

Sears, Roebuck and Co., Chicago, Ill. Gloves. No. 99,653; Sept. 8; Gaz. vol. 206; p. 586.

Sellaro, Salvatore F., New York, N. Y. Medicinal tonic. No. 100,037; Sept. 29; Gaz. vol. 206; p. 1434.

Shaw & Co., Alex D., New York, N. Y. Brandy. No. 99,909; Sept. 22; Gaz. vol. 206; p. 1159.

Shaw, Theodore L., Chicago, Ill. Certain named publications. No. 99,801; Sept. 15; Gaz. vol. 206; p. 872.

Shelby Candy & Mfg. Co., Shelby, Ohio. Candies. No. 99,802; Sept. 15; Gaz. vol. 206; p. 872.

Shoemaker & Busch, Philadelphia, Pa. Disinfectants, deodorants, perfumes, and holders therefor. No. 99,803; Sept. 15; Gaz. vol. 206; p. 872.

Sinclair Manufacturing Company, The, Toledo, Ohio. Chlorid of lime, concentrated lye, and powdered borax. No. 99,654; Sept. 8; Gaz. vol. 206; p. 586.

Slater Mill & Elevator Company, Slater, Mo. Self-rising wheat-flour. Nos. 99,804–5; Sept. 15; Gaz. vol. 206; p. 872.

Smith Manufacturing Co., Atlanta, Ga., and Jacksonville, Fla. Remedy for certain named diseases. No. 99,655; Sept. 8; Gaz. vol. 206; p. 586.

Snow Flake Canning Co., Brunswick, Me. Canned corn. No. 99,911; Sept. 22; Gaz. vol. 206; p. 1159.

Société Anonyme des Savons De Marseille, Marseille, France. Soap. No. 99,807; Sept. 15; Gaz. vol. 206; p. 872.

Société des Cirages Français, Paris, France. Boot and shoe blacking. No. 99,912; Sept. 22; Gaz. vol. 206; p. 1159.

Society of Chemical Industry in Basle, Basel, Switzerland. Certain articles made of acetyl cellulose. No. 99,656; Sept. 8; Gaz. vol. 206; p. 586.

Society of Chemical Industry in Basle, Basel, Switzerland. Pharmaceutical product applicable in stanching. Nos. 99,808–9; Sept. 15; Gaz. vol. 206; p. 872.

Society of Chemical Industry in Basle, Basel, Switzerland. Certain named chemical and pharmaceutical preparations. Nos. 99,913–14; Sept. 22; Gaz. vol. 206; p. 1159.

Solderall Company, New York, N. Y. Soldering material. No. 100,039; Sept. 29; Gaz. vol. 206; p. 1434.

Solon Palmer, New York, N. Y. Toilet soap. No. 99,776; Sept. 15; Gaz. vol. 206; p. 872.

South Holland Milk Corporation. New York, N. Y. Condensed milk. No. 99,810; Sept. 15; Gaz. vol. 206; p. 873.

Spahr, Harry M., Baltimore, Md. Laundry bluing. No. 99,657; Sept. 8; Gaz. vol. 206; p. 586.

Speicher, Paul J., Gaston, Ind. Brood-coop. No. 99,811; Sept. 15; Gaz. vol. 206; p. 873.

Spencer & Washington, Atlantic City, N. J. Remedy for the hair and scalp. No. 99,812; Sept. 15; Gaz. vol. 206; p. 873.

Splitdorf Electrical Company, Newark, N. J. Electrical dynamos, motors, switches, &c. No. 99,509; Sept. 1; Gaz. vol. 206; p. 310.

St. Lucie Fruit Co., The, Southport, Conn., and Stuart, Fla. Fresh grape-fruit, oranges, kumquats, &c. No. 99,658; Sept. 8; Gaz. vol. 206; p. 586.

Standard Brewing Co., New Orleans, La. Beer. No. 99,659; Sept. 8; Gaz. vol. 206; p. 586.

Standard Oil Company of Louisiana, Baton Rouge, La. Gasolene, naphtha, oils, and engine-distillate. No. 99,660; Sept. 8; Gaz. vol. 206; p. 586.

Stanley, Franklin H., Cleveland, Ohio. Butter. No. 100,040; Sept. 29; Gaz. vol. 206; p. 1434.

Starkey & Palen, Philadelphia, Pa. Compound oxygen. No. 99,813; Sept. 15; Gaz. vol. 206; p. 873.

Statesville Flour Mill Company, Corp., Statesville, N. C. Wheat-flour. Nos. 100,041–2; Sept. 29; Gaz. vol. 206; p. 1434.

Steinwender-Stoffregen Coffee Co., St. Louis, Mo. Roasted coffee. Nos. 99,661–2; Sept. 8; Gaz. vol. 206; p. 586.

Stewart Food Company, Chicago, Ill. Powder for making a laxative tonic beverage. No. 99,915; Sept. 22; Gaz. vol. 206; p. 1159.

Stickley, Gustav, New York, N. Y. Plans and specifications for houses and bungalows. No. 99,511; Sept. 1; Gaz. vol. 206; p. 310.

Stohr, Franz, Vienna, Austria-Hungary. Laxatives. No. 99,512; Sept. 1; Gaz. vol. 206; p. 310.

Stolworthy, Richard M., Cincinnati, Ohio. Preparation for prevention and treatment of hay-fever. No. 100,043; Sept. 29; Gaz. vol. 206; p. 1434.

Stoneman & Son, M. G., Albany, N. Y. Varnish. No. 100,044; Sept. 29; Gaz. vol. 206; p. 1434.

Success Novelty Ads Co., Inc., New York, N. Y. Needles for hand-sewing. No. 99,663; Sept. 8; Gaz. vol. 206; p. 587.

Sullivan, McMahan, Buck & Wisner, Memphis, Tenn. Soda-water, limeade, orangeade, &c. No. 99,513; Sept. 1; Gaz. vol. 206; p. 310.

Sussman, Paul, New York, N. Y. Cheeses. No. 99,664; Sept. 8; Gaz. vol. 206; p. 587.

Sutherland, R. R., Riverside, Cal. Citrus fruit. Nos. 100,045–6; Sept. 29; Gaz. vol. 206; p. 1434.

Swaab, San & Marqusee, Philadephia, Pa. Cigars, cigarettes, cheroots, and tobacco. No. 99,814; Sept. 15; Gaz. vol. 206; p. 873.

Swift and Fisher, North Attleboro, Mass. Certain named gold and silver jewelry. No. 100,047; Sept. 29; Gaz. vol. 207; p. 1434.

Swiss Drug Company, Findlay, Ohio. Ointment and salves. No. 100,048; Sept. 29; Gaz. vol. 206; p. 1434.

Szecsenyi, Aranka, Detroit, Mich. Remedy for heart trouble. No. 99,916; Sept. 22; Gaz. vol. 206; p. 1159.

T. A. Willson & Co., Inc., Reading, Pa. Automobile-goggles. No. 99,526; Sept. 1; Gaz. vol. 206; p. 310.

T. D. Cook & Co., Boston, Mass. Ice-creams and ices. No. 99,949; Sept. 29; Gaz. vol. 206; p. 1431.

Tatro, Henry, Burlington, Vt. Soap. No. 99,815; Sept. 15; Gaz. vol. 206; p. 873.

Taube, Emil, Philadelphia, Pa. Oleomargarin. No. 99,665; Sept. 8; Gaz. vol. 206; p. 587.

Teitelbaum, Isidor, Cleveland, Ohio. Cigars. No. 99,917; Sept. 22; Gaz. vol. 206; p. 1159.

Tetlow, Clara, Philadelphia, Pa. Face-powder. No. 99,514; Sept. 1; Gaz. vol. 206; p. 310.

Tetlow, Clara, Philadelphia, Pa. Face and talcum powders. No. 99,515; Sept. 1; Gaz. vol. 206; p. 310.

Texas Company, Houston and Port Arthur, Tex., and New York, N. Y. Naphtha, benzin, and gasolene. No. 100,049; Sept. 29; Gaz. vol. 206; p. 1434.

Thos. Cusack Company, Chicago, Ill. Paint-paste. No. 99,437; Sept. 1; Gaz. vol. 206; p. 307.

Tillmann & Bendel, San Francisco, Cal. Petroleum or kerosene oil. No. 100,050; Sept. 29; Gaz. vol. 206; p. 1434.

Timber Fireproofing Company, Limited, The, London, England. Fireproof timber. No. 99,816; Sept. 15; Gaz. vol. 206; p. 873.

Tioga Mill & Elevator Company, Waverly, N. Y. Scratch and chick-feed, middlings, and cracked corn. No. 99,666; Sept. 8; Gaz. vol. 206; p. 587.

Tremont & Suffolk Mills, Lowell, Mass. Cotton piece goods. No. 99,516; Sept. 1; Gaz. vol. 206; p. 310.

Trenchard, Henry, Jr., New York, N. Y. Envelops. No. 99,817; Sept. 15; Gaz. vol. 206; p. 873.

True-Fit Waterproof Co., Inc., New York, N. Y. Cravenette coats and rain-coats. No. 99,517; Sept. 1; Gaz. vol. 206; p. 310.

Turner-Looker Co., The, Cincinnati, Ohio. Straight whisky. No. 99,920; Sept. 22; Gaz. vol. 206; p. 1159.

Union Fishermen's Co-operative Pkg. Co., Astoria, Oreg. Canned salmon. No. 99,818; Sept. 15; Gaz. vol. 206; p. 873.

Union Petroleum Company, Philadelphia, Pa. Oils and greases for lubrication, &c. No. 99,518; Sept. 1; Gaz. vol. 206; p. 310.

Union Special Machine Company, Chicago, Ill. Machine-needles. No. 100,051; Sept. 29; Gaz. vol. 206; p. 1434.

United Drug Company, Boston, Mass. Cold-cream, tooth paste and wash. No. 100,052; Sept. 29; Gaz. vol. 206; p. 1434.

Universal Winding Company, Providence, R. I., and Boston, Mass. Winding-machines and parts thereof. No. 99,667; Sept. 8; Gaz. vol. 206; p. 587.

Utley's, Inc., Holyoke, Mass. Certain named ornamental designs for colleges and fraternities. No. 99,819; Sept. 15; Gaz. vol. 206; p. 873.

Valier & Spies Milling Co., St. Louis, Mo. Wheat-flour. No. 99,820; Sept. 15; Gaz. vol. 206; p. 873.

Vanity Fair Publishing Company, Inc., New York, N. Y. Trade periodical. No. 99,821; Sept. 15; Gaz. vol. 206; p. 873.

Varda, Nicholas, New York, N. Y. Cigarettes. No. 99,921; Sept. 22; Gaz. vol. 206; p. 1159.

Vereinigte Chininfabriken Zimmer & Co. Ges. mit beschränkter Haftung. Frankfort-on-the-Main, Germany. Preparation for treating malaria, &c. No. 99,822; Sept. 15; Gaz. vol. 206; p. 873.

Vienna Delicatessen Co., Atlantic City, N. J. Cheeses. No. 99,668; Sept. 8; Gaz. vol. 206; p. 587.

Vittucci Importing Co., Seattle, Wash. Baking-powder. No. 99,520; Sept. 1; Gaz. vol. 206; p. 310.

W. F. McLaughlin & Company, Chicago, Ill. Tea and blended coffee. No. 100,004; Sept. 29; Gaz. vol. 206; p. 1433.

W. H. Crawford Co., Baltimore, Md. Certain named medicines, remedies, and pharmaceutical preparations. No. 99,957; Sept. 29; Gaz. vol. 206; p. 1431.

W. R. Grace & Co., New York, N. Y. Kerosene. No. 99,976; Sept. 29; Gaz. vol. 206; p. 1432.

W. R. Grace & Co., New York, N. Y. Turpentine. No. 99,977; Sept. 29; Gaz. vol. 206; p. 1432.

Walker, Daniel T., Chicago, Ill. Constipation and kidney tablets and liniments. No. 99,521; Sept. 1; Gaz. vol. 206; p. 310.

Walker Drug Company, Schenectady, N. Y. Effervescent remedy for headache, neuralgia, and nervousness. No. 100,055; Sept. 29; Gaz. vol. 206; p. 1434.

Wangenheim, Roy, Buffalo, N. Y. Candy. No. 99,922; Sept. 22; Gaz. vol. 206; p. 1159.

Ward-Owsley Co., Aberdeen, S. D. Candy. No. 99,823; Sept. 15; Gaz. vol. 206; p. 873.

Warner-Quinlan Asphalt Company, Syracuse, N. Y. Asphaltum. No. 99,522; Sept. 1; Gaz. vol. 206; p. 310.

Weeber & Don, New York, N. Y. Seeds. No. 99,824; Sept. 15; Gaz. vol. 206; p. 873.

Weideman Co., Cleveland, Ohio. Certain named foods. No. 99,825; Sept. 15; Gaz. vol. 206; p. 873.

Wells, Albert A., La Fayette, Ind. Remedies for certain named diseases of animals. No. 99,923; Sept. 22; Gaz. vol. 206; p. 1159.

West Coast Grocery Company, Tacoma, Wash. Package roasted coffee. No. 99,669; Sept. 8; Gaz. vol. 206; p. 587.

West Virginia Pulp Products Co., New York, N. Y. Wood and paper pulps. No. 99,827; Sept. 15; Gaz. vol. 206; p. 873.

White, Geo. S., Nashville, Tenn. Rat-traps. No. 99,924; Sept. 22; Gaz. vol. 206; p. 1159.

Wichert & Gardiner, Brooklyn and New York, N. Y. Leather and canvas shoes and slippers. No. 99,523; Sept. 1; Gaz. vol. 206; p. 310.

Wiebusch & Hilger, Limited, New York, N. Y. Pliers, nippers, pincers, wrenches, and trowels. No. 99,671; Sept. 8; Gaz. vol. 206; p. 587.

Wilder-Manning Tanning Company, The, Chicago, Ill. Leather. Nos. 99,524–5; Sept. 1; Gaz. vol. 206; p. 310.

Williams Baking Company, Newark, N. J. Bread. No. 99,828; Sept. 15; Gaz. vol. 206; p. 873.

Wm. Alton Co., Inc., New York, N. Y. Wheat-flour. No. 99,677; Sept. 15; Gaz. vol. 206; p. 869.

Wm. C. Robinson & Son Co., Baltimore, Md., and Coraopolis, Pa. Engine-oil. No. 100,030; Sept. 29; Gaz. vol. 206; p. 1434.

Wm. Wrigley Jr. Company, Chicago, Ill. Chewing-gum. Nos. 100,068–70; Sept. 29; Gaz. vol. 206; pp. 1434–5.

Wolf, David, New York, N. Y. Books. No. 99,527; Sept. 1; Gaz. vol. 206; p. 310.

Wolf, John J., Philadelphia, Pa. Sweet beer. No. 99,925; Sept. 22; Gaz. vol. 206; p. 1159.

Wood, Henry A. W., New York, N. Y. Shaving-cream. No. 99,829; Sept. 15; Gaz. vol. 206; p. 873.

Woods, Francis A., assignor to Woods Mobilette Company, Chicago, Ill. Automobiles. No. 99,528; Sept. 1; Gaz. vol. 206; p. 310.

Woods, Francis A., assignor to Woods Mobilette Company, Chicago, Ill. Automobiles. No. 99,672; Sept. 8; Gaz. vol. 206; p. 587.

Woods Mobilette Company. (See Woods, Francis A., assignor.)

Woolson Spice Co., Toledo, Ohio. Coffee. No. 99,926; Sept. 22; Gaz. vol. 206; p. 1159.

Woolson Spice Company, The, Toledo, Ohio. Coffee, teas, and spices. No. 99,831; Sept. 15; Gaz. vol. 206; p. 873.

Woolson Spice Company, Toledo, Ohio. Baking-powder. No. 100,056; Sept. 29; Gaz. vol. 206; p. 1434.

Woonsocket Rubber Company, Woonsocket, R. I. Rubber boots and shoes. No. 99,674; Sept. 8; Gaz. vol. 206; p. 587.

Worcester Royal Porcelain Company Limited, Worcester, England. Table and ornamental dishes, plates, and bowls. No. 99,927; Sept. 22; Gaz. vol. 206; p. 1159.

Wright, H. O., Winnipeg, Manitoba, Canada. Remedy for mares to procure immunity for the foals from a certain disease. No. 100,057; Sept. 29; Gaz. vol. 206; p. 1434.

Yeoell, William J., Philadelphia, Pa. Printing-plates. No. 99,832; Sept. 15; Gaz. vol. 206; p. 873.

York, Chauncey F., Detroit, Mich. Remedy for certain named diseases and ailments. No. 99,928; Sept. 22; Gaz. vol. 206; p. 1159.

Young & Parsons, Abernant, Ala. Remedy for hemorrhoids. No. 99,929; Sept. 22; Gaz. vol. 206; p. 1159.

Zinn, Edward, New York, N. Y. Certain named cutlery and tools and parts thereof. No. 99,529; Sept. 1; Gaz. vol. 206; p. 310.

Zonoz Chemical Co. Inc., Brooklyn, N. Y. Ointment. No. 99,530; Sept. 1; Gaz. vol. 206; p. 310.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. Wilhelm Company, The, Reading, Pa.; New York, N. Y., and Boston, Mass. "Rookwood." (For Enamel.) Nos. 17,990–1; Sept. 15; Gaz. vol. 206; p. 875.

Aladdin Specialty Co., Chicago, Ill. "Aladdin Polish." (For Liquid Polish.) No. 17,960; Sept. 15; Gaz. vol. 206; p. 875.

Angermeier, John A., Jr., Elberfeld, Ind. "Angermeier's Peerless Liniment." (For Liniment.) No. 17,961; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Roup Remedy for Poultry." (For a Remedy for Roup in Poultry.) No. 17,962; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Gape Remedy." (For a Remedy for Gapes in Chickens.) No. 17,963; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Healing Ointment." (For Ointment.) No. 17,964; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Special Poultry Remedy." (For a Remedy for Diseases of Poultry.) No. 17,965; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Vegetable Horse, Cattle and Poultry Medicinal Powder." (For Medicines for Horses, Cattle, and Poultry.) No. 17,966; Sept. 15; Gaz. vol. 206; p. 875.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Lice Powder." (For a Lice-Powder for Poultry.) No. 17,967; Sept. 15; Gaz. vol. 206; p. 875.

Bergonzi & Co., L., New York, N. Y. "Anise Alcoholate." (For Anise Alcoholate.) No. 17,934; Sept. 1; Gaz. vol. 206; p. 311.

Bradford & Mendows, Columbus, Ga. "Bradford's R. C. C. For Chills and Fever." (For Medicine.) No. 17,935; Sept. 1; Gaz. vol. 206; p. 311.

California Central Creameries, San Francisco, Cal. "Powdered Skim Milk." (For Powdered Skim-Milk.) No. 17,936; Sept. 1; Gaz. vol. 206; p. 311.

Canton Biscuit Co., The, Canton, Ohio. "I've Gota Biscuit." (For Crackers and Biscuit.) No. 17,937; Sept. 1; Gaz. vol. 206; p. 311.

Capitol Refining Company Inc., The, South Washington, Va. "White Dome." (For Shortening.) No. 17,938; Sept. 1; Gaz. vol. 206; p. 311.

Capitol Refining Company Inc., The, South Washington, Va. "Crisp White." (For Shortening.) No. 17,939; Sept. 1; Gaz. vol. 206; p. 311.

Cronan, John J., Denver, Colo. "Sweet Pepsin Salts." (For Sweet Pepsin Salts.) No. 17,968; Sept. 15; Gaz. vol. 206; p. 875.

Cryder, Floyd E., Minneapolis, Minn. "Homogenized Laurentia Milk." (For Homogenized Milk.) No. 17,969; Sept. 15; Gaz. vol. 206; p. 875.

Cudahy Packing Co., The, Chicago, Ill. "Rex." (For Pork and Beans.) No. 17,940; Sept. 1; Gaz. vol. 206; p. 311.

Davis Hosiery Mills, Chattanooga, Tenn. "5-20-7." (For Hosiery.) No. 17,941; Sept. 1; Gaz. vol. 206; p. 311.

De Joigny Shaving Mist Co., San Francisco, Cal. "De Joigny Shaving Mist." (For a Shaving Mixture.) No. 17,902; Sept. 22; Gaz. vol. 206; p. 1160.

Doerr, Chas., Jr., St. Louis, Mo. "I-Need-A." (For Cigars.) No. 17,970; Sept. 15; Gaz. vol. 206; p. 875.

E. Greenfield's Sons, New York, N. Y. "E. Greenfield's Sons., Established 1848, Confectioners." (For Candies.) No. 17,903; Sept. 22; Gaz. vol. 206; p. 1160.

Ec-Zene Company, St. Paul, Minn. "Ec-Zene Skin Soap, Best for the Nursery, Toilet and Bath." (For Soap.) No. 17,971; Sept. 15; Gaz. vol. 206; p. 875.

Eldridge Co., Geo. R., Detroit, Mich. "Golden Rod." (For Butter.) No. 17,972; Sept. 15; Gaz. vol. 206; p. 875.

Estes, Llewellyn W., Washington, D. C. "One Minute Silver Cleaner." (For a Cleaning and Polishing Compound.) No. 17,974; Sept. 15; Gaz. vol. 206; p. 875.

Fialla & Eppler, Inc., New York, N. Y. "3 in 1." (For Blackberry Ginger and Brandy.) No. 17,073; Sept. 15; Gaz. vol 206; p. 875.

Gelpi & Sons, Paul, New Orleans, La. "J. Reyes y Cia." (For Sherry-Wine.) No. 17,976; Sept. 15; Gaz. vol. 206; p. 875.

Gelpi & Sons, Paul, New Orleans, La. "Berwick Brand Dry Gin." (For Gin.) No. 17,977; Sept. 15; Gaz. vol. 206; p. 875.

Gelpi & Sons, Paul, New Orleans, La. "J. Reyes y Ca." (For Jerez Wine.) No. 17,978; Sept. 15; Gaz. vol. 206; p. 875.

Giglio, Angelo, New York, N. Y. "Hygienic Tango Powder Puff." (For Toilet-Boxes.) No. 17,942; Sept. 1; Gaz. vol. 206; p. 311.

Globe Canning Company, The, Eastport, Me. "Otto Brand." (For Sardines.) No. 17,943; Sept. 1; Gaz. vol. 206; p. 311.

Globe Canning Company, The, Eastport, Me. "Nomad Brand." (For Sardines.) No. 17,944; Sept. 1; Gaz. vol. 206; p. 311.

Globe Canning Company, The, Eastport, Me. "Glanco Brand." (For Sardines.) No. 17,945; Sept. 1; Gaz vol. 206; p. 311.

Globe Canning Company, The, Eastport, Me. "Jensen Brand." (For Sardines.) No. 17,946; Sept. 1; Gaz. vol. 206; p. 311.

Globe Canning Company, The, Eastport, Me. "Manchinic Brand." (For Sardines.) No. 17,947; Sept. 1; Gaz. vol. 206; p. 311.

Henschel & Co., A. C., Chicago, Ill. "Lord Duke." (For Cigars.) No. 17,948; Sept. 1; Gaz. vol. 206; p. 311.

Henschel & Co., A. C., Chicago, Ill. "Benefit." (For Cigars.) No. 17,949; Sept. 1; Gaz. vol. 206; p. 311.

Herzberg, Samuel, Chicago, Ill. "Something Fine." (For Cigars.) No. 17,994; Sept. 22; Gaz. vol. 206; p. 1160.

Houchin, Alfred W., Kirkwood, N. J. "De Light of the World." (For Dynamos.) No. 17,979; Sept. 15; Gaz. vol. 206; p. 875.

Independent Milwaukee Brewery, Milwaukee, Wis. "Braumeister Bier." (For Beer.) No. 17,981; Sept. 15; Gaz. vol. 206; p. 875.

John Hoberg Co., The, Green Bay, Wis. "Samidare." (For Toilet-Paper.) No. 17,995; Sept. 22; Gaz. vol. 206; p. 1160.

Kahn, Joseph, New York, N. Y. "Sore-Off The Horse's Best Friend." (For a Veterinary Remedy.) No. 17,950; Sept. 1; Gaz. vol. 206; p. 311.

La Posenda Cigar Company, Chicago, Ill. "Master Yet." (For Cigars.) No. 17,996; Sept. 22; Gaz. vol. 206; p. 1160.

La Posenda Cigar Company, Chicago, Ill. "Sixth Senator." (For Cigars.) No. 17,997; Sept. 22; Gaz. vol. 206; p. 1160.

Landers, Frary & Clark, New Britain, Conn. "Universal." (For Putty-Knives.) No. 17,951; Sept. 1; Gaz. vol. 206; p. 311.

Lastlong Underwear Co., Oswego, N. Y. "Lastlong." (For Underwear.) No. 17,952; Sept. 1; Gaz. vol. 206; p. 311.

McClaskey, Lacey, Bloomfield, Ky. "Sugar-Valley Mineral Water." (For Mineral Water.) No. 17,980; Sept. 15; Gaz. vol. 206; p. 875.

Nashua Card Gummed & Coated Paper Company, Nashua, N. H. "Campuic." (For Wrappers for Food Products.) No. 17,998; Sept. 22; Gaz. vol. 206; p. 1160.

Pacella, Michelangelo, Chicago, Ill. "Cimex For Bed Bugs Tere-Metaiol-Chlorimine." (For an Insecticide.) No. 17,953; Sept. 1; Gaz. vol. 206; p. 311.

Penryn Fruit Company, Penryn, Cal. "California Cherries." (For Cherries.) No. 17,954; Sept. 1; Gaz. vol. 206; p. 311.

Phoenix Bros., Fairoaks, Cal. "Phoenix's California Ripe Olives." (For Ripe Olives.) No. 17,955; Sept. 1; Gaz. vol. 206; p. 311.

Quick Relief Remedy Company, Long Island City, N. Y. "Quick Relief Lung Balsam." (For Medicine.) No. 17,982; Sept. 15; Gaz. vol. 206; p. 875.

R. W. Gees Commission Co., Kansas City, Mo. "Portales Gems." (For Cantaloupa.) No. 17,975; Sept. 15; Gaz. vol. 206; p. 875.

Robert Smith Ale Brewing Co., The, Philadelphia, Pa. "Robert Smith's Philada. Brown Stout." (For Stout.) No. 17,983; Sept. 15; Gaz. vol. 206; p. 875.

Rosenson, Hyman B., New York, N. Y. "Better than The Imported." (For Spirits.) No. 17,999; Sept. 22; Gaz. vol. 206; p. 1160.

Scorsone Brothers, St. Antonio-Angio, Italy. "Fili Scorsone." (For Tomato Paste.) No. 17,956; Sept. 1; Gaz. vol. 206; p. 311.

Societe Anonyme de la Distillerie de la Liqueur Benedictine de L'Abbaye de Fecamp, Fecamp, France. "Véritable Bénédictine." (For a Cordial.) No. 18,000; Sept. 22; Gaz. vol. 206; p. 1160.

Southern California Music Company, Los Angeles, Cal. "Green Dragon." (For Violin-Strings.) No. 17,957; Sept. 1; Gaz. vol. 206; p. 311.

Stark Distillery Co., St. Louis, Mo. "Old Gobbler Whiskey." (For Whiskies.) No. 18,001; Sept. 22; Gaz. vol. 206; p. 1160.

Stark Distillery Co., St. Louis, Mo. "Hahatonka Whiskey." (For Whiskies.) No. 18,002; Sept. 22; Gaz. vol. 206; p. 1160.

Triplex Biscuit Co. Inc., Buffalo, N. Y. "Triplex Biscuit." (For Biscuit.) No. 17,958; Sept. 1; Gaz. vol. 206; p. 311.

U. S. Hame Company, Buffalo, N. Y. "The Lone Star Adjustable Draft Hame." (For Hames.) No. 17,984; Sept. 15; Gaz. vol. 206; p. 875.

U. S. Hame Company, Buffalo, N. Y. "No. 568 All Steel Hame Concord Dandy." (For Hames.) No. 17,985; Sept. 15; Gaz. vol. 206; p. 875.

U. S. Hame Company, Buffalo, N. Y. "No. 568 All Steel Hame Concord High Top." (For Hames.) No. 17,986; Sept. 15; Gaz. vol. 206; p. 875.

U. S. Hame Company, Buffalo, N. Y. "No. 568 All Steel Hame Concord Favorite." (For Hames.) No. 17,987; Sept. 15; Gaz. vol. 206; p. 875.

Velvet Cleanser Co., Inc., Washington, D. C. "Velvet Hand Cleanser." (For a Hand-Cleaner.) No. 17,959; Sept. 1; Gaz. vol. 206; p. 311.

Wetterer Brewing Co., The, Cincinnati, Ohio. "Queen City." (For Beer.) No. 17,988; Sept. 15; Gaz. vol. 206; p. 875.

Wetterer Brewing Co., The, Cincinnati, Ohio. "Royal Seal." (For Beer.) No. 17,989; Sept. 15; Gaz. vol. 206; p. 875.

PRINTS.

Anheuser Busch Brewing Assn., St. Louis, Mo. "Budweiser Honored By All Nations." (For Beer.) No. 3,720; Sept. 15; Gaz. vol. 206; p. 876.

B. V. D. Company, The, New York, N. Y. "B. V. D. 1914 Youth's Union Suit." (For Athletic Underwear.) No. 3,721; Sept. 15; Gaz. vol. 206; p. 876.

Bauman, Abraham, New York, N. Y. "Admiration Outfit." (For Clothing.) No. 3,715; Sept. 1; Gaz. vol. 206; p. 311.

Conrad Seipp Brewing Co., The, Chicago, Ill. "Drink Hollander Beer." (For Beer.) No. 3,739; Sept. 15; Gaz. vol. 206; p. 876.

Cream of Wheat Co., Minneapolis, Minn. "The Fortune Teller." (For Wheat Breakfast Food.) No. 3,741; Sept. 22; Gaz. vol. 206; p. 1160.

Duane Pharmacal Company, New York, N. Y. "Algola Pills." (For Pills.) No. 3,716; Sept. 1; Gaz. vol. 206; p. 311.

Easton, Spencer G., Philadelphia, Pa. "Criterion Underwear. Cool Comfortable Correct." (For Ladies' Underwear.) No. 3,722; Sept. 15; Gaz. vol. 206; p. 876.

F. F. Hansell & Bro. Ltd., New Orleans, La. "Kelly Domestic Science Table." (For Tables.) No. 3,725; Sept. 15; Gaz. vol. 206; p. 876.

F. H. Bennett Biscuit Co., New York, N. Y. "Miss Wheatsworth." (For Whole-Wheat Biscuit.) No. 3,740; Sept. 22; Gaz. vol. 206; p. 1160.

Fendrich, John, Evansville, Ind. "The Denby Girl." (For Cigars.) No. 3,723; Sept. 15; Gaz. vol. 206; p. 876.

Henry E. Frankenberg Company, New York, N. Y. "Utopia Lustrous Embroidery Flosses." (For Embroidery-Floss.) No. 3,724; Sept. 15; Gaz. vol. 206; p. 876.

Hobbs, Thomas G., Norfolk, Va. "Sun Rize." (For Bread.) No. 3,726; Sept. 15; Gaz. vol. 206; p. 876.

Manhattan Petticoat Co., Inc., New York, N. Y. "Manhattan." (For Petticoats.) No. 3,728; Sept. 15; Gaz. vol. 206; p. 876.

Peter Schoenhofen Brewing Co., The, Chicago, Ill. "A Case of Good Judgment." (For Beer.) Nos. 3,732–8; Sept. 15; Gaz. vol. 206; p. 876.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Makes Your Mouth Water." (For Chewing-Tobacco.) No. 3,718; Sept. 1; Gaz. vol. 206; p. 311.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Getting Away with a Good Thing." (For Chewing-Tobacco.) No. 3,719; Sept. 1; Gaz. vol. 206; p. 311.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "When P. A. speaks be a good list'ner!" (For Smoking-Tobacco.) No. 3,729; Sept. 15; Gaz. vol. 206; p. 876.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "There's peace in every puff!" (For Smoking-Tobacco.) No. 3,730; Sept. 15; Gaz. vol. 206; p. 876.

Reckitts (U. S. A.) Ltd., New York, N. Y. "Cubie." (For Blue.) No. 3,717; Sept. 1; Gaz. vol. 206; p. 311.

Schneider, Charles E., New Haven, Conn. "Photoplast." (For an Apparatus for the Production of Scenic Effects.) No. 3,731; Sept. 15; Gaz. vol. 206; p. 876.

Vacuum Oil Co., New York, N. Y. "Oils that Lubricate Most." (For Oils.) Nos. 3,742–4; Sept. 22; Gaz. vol. 206; p. 1160.

Walter M. Lowney Co., Boston, Mass. "Lowney's Breakfast Cocoa." (For Cocoa.) No. 3,727; Sept. 15; Gaz. vol. 206; p. 876.

DISCLAIMERS.

Howard, Clarence H., and H. M. Pflager, St. Louis, Mo.; disclaimer filed by assignee, Double Body Bolster Company. Truck construction. No. 1,080,555; disclaimer filed Aug. 24, 1914; Gaz. vol. 206; p. 319.

Turubull, Werd W., Columbus, Ohio; disclaimer filed by assignee, The Turnbull Manufacturing Company. Baking-machine. No. 1,009,355; disclaimer filed Sept. 19, 1914; Gaz. vol. 206; p. 1438.

Westlake, Charles T., St. Louis, Mo.; disclaimer filed by assignee, Double Body Bolster Company. Center-bolster for six-wheel car-trucks. No. 1,102,620; disclaimer filed Sept. 5, 1914; Gaz. vol. 206; p. 880.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

Abdominal supporter. L. M. Payne. No. 1,110,226; Sept. 8; Gaz. vol. 206; p. 527.
Acetylene-generator. E. R. Angell. No. 1,111,726; Sept. 29; Gaz. vol. 206; p. 1157.
Acid, Manufacturing phosphoric. I. Hechenbleikner. No. 1,112,211; Sept. 29; Gaz. vol. 206; p. 1337.
Acid-producing apparatus, Sulfuric-. E. H. McFarland. No. 1,112,424; Sept. 29; Gaz. vol. 206; p. 1412.
Adding-machine. J. D. Ward. No. 1,109,378; Sept. 1; Gaz. vol. 206; p. 187.
Adding-machine. F. Madsen and F. G. Wandrey. No. 1,110,327; Sept. 15; Gaz. vol. 206; p. 602.
Address-plate and index-tab therefor. D. P. Montague and U. G. Lee. No. 1,110,221; Sept. 8; Gaz. vol. 206; p. 525.
Addressing-machine. J. S. Duncan. No. 1,110,118; Sept. 8; Gaz. vol. 206; p 490.
Adhesive preparations to the surface of woven fabrics, Means for applying. F. Hansing. No. 1,112,134; Sept. 29; Gaz. vol. 206; p. 1309.
Adjustable chair. H. S. Allison. No. 1,111,685; Sept. 22; Gaz. vol. 206; p. 1120.
Adjustable gage and marker. E. Fitz. No. 1,110,763; Sept. 15; Gaz. vol. 206; p. 756.
Advertising device. A. Giegerich. No. 1,111,957; Sept. 29; Gaz. vol. 206; p. 1250.
Advertising device, Amusement. E. M. Erdmann. No. 1,112,060; Sept. 29; Gaz. vol. 206; p. 1284.
Advertising device especially adapted for the exhibition of paints, calcimines, and similar manufactures. H. W. Pearson. No. 1,111,320; Sept. 22; Gaz. vol. 206; p. 992.
Aerating apparatus. O. Zistel. No. 1,109,193; Sept. 1; Gaz. vol. 206; p. 120.
Aerial life-saving device. D. W. Ogilvie. No. 1,110,710; Sept. 15; Gaz. vol. 206; p. 756.
Aeronautical power plant. H. W. Jacobs. No. 1,110,489; Sept. 15; Gaz. vol. 206; p. 660.
Aeroplane. J. Stasiak. No. 1,108,941; Sept. 1; Gaz. vol. 206; p. 29.
Aeroplane. P. H. Smith. No. 1,110,355; Sept. 15; Gaz. vol. 206; p. 613.
Aeroplane. A. Jacoby. No. 1,110,792; Sept. 15; Gaz. vol. 206; p. 766.
Aeroplane. H. L. Coakley. No. 1,110,895; Sept. 15; Gaz. vol. 206; p. 804.
Aeroplane. J. E. Bissell. No. 1,112,110; Sept. 29; Gaz. vol. 206; p. 1301.
Aeroplane. W. G. Canion. No. 1,112,260; Sept. 29; Gaz. vol. 206; p. 1355.
Aeroplane construction. R. A. Emmons. No. 1,112,126; Sept. 29; Gaz. vol. 206; p. 1306.
Aeroplanes, Hull for hydro-. C. H. Flint. No. 1,110,918; Sept. 15; Gaz. vol. 206; p. 812.
Agitator. J. V. N. Dorr. No. 1,109,210; Sept. 1; Gaz. vol. 206; p. 125.
Agricultural implement. W. H. Cowdery. No. 1,110,673; Sept. 15; Gaz. vol. 206; p. 726.
Agricultural machine. L. C. Irion. No. 1,111,465; Sept. 22; Gaz. vol. 206; p. 1042.
Agricultural machine. D. T. Phillips. No. 1,112,091; Sept. 29; Gaz. vol. 206; p. 1295.
Agriculture, Implement of. B. Vale. No. 1,110,244; Sept. 8; Gaz. vol. 206; p. 533.
Air-brakes, Automatic retainer for. J. O. Harrison. No. 1,109,287; Sept. 1; Gaz. vol. 206; p. 152.
Air-compressing apparatus. H. H. Frey. No. 1,108,984; Sept. 1; Gaz. vol. 206; p. 44.
Air-compressing machine. A. L. Ellis. No. 1,109,519; Sept. 1; Gaz. vol. 206; p. 232.
Air-compressor. J. H. Thomas. No. 1,109,154; Sept. 1; Gaz. vol. 206; p. 105.
Air-compressor. A. F. Feller. No. 1,110,123; Sept. 8; Gaz. vol. 206; p. 491.
Air-compressor. L. Clawson. No. 1,112,054; Sept. 29; Gaz. vol. 206; p. 1282.
Air compressor or motor. W. A. Warman. No. 1,109,805; Sept. 8; Gaz. vol. 206; p. 374.
Air inlet and air-medicator, Combined fresh-. O. Barth. No. 1,111,431; Sept. 22; Gaz. vol. 206; p. 1030.
Air purifying and cooling device. C. F. Lundeberg. No. 1,109,171; Sept. 1; Gaz. vol. 206; p. 112.
Air-purifying apparatus. G. E. Lob. No. 1,109,997; Sept. 8; Gaz. vol. 206; p. 445.
Air, Regenerating. H. R. Carveth. No. 1,111,055; Sept. 22; Gaz. vol. 206; p. 902.
Air-spring. W. L. Ostendorf. No. 1,108,930; Sept. 1; Gaz. vol. 206; p. 25.
Airship. J. W. Boughton. No. 1,109,658; Sept. 8; Gaz. vol. 206; p. 322.
Airship and the like, Dirigible. J. A. Armstrong. No. 1,109,502; Sept. 1; Gaz. vol. 206; p. 227.
Airships, Hull for. W. Kauertz. No. 1,109,648; Sept. 1; Gaz. vol. 206; p. 279.
Alarm: See Burglar-alarm; Door-alarm; Electric-operated alarm; Fire-alarm.
Alarm-cable. J. Sulzbacher. No. 1,109,878; Sept. 8; Gaz. vol. 206; p. 401.
Alarm device. J. E. Priester. No. 1,110,713; Sept. 15; Gaz. vol. 206; p. 740.
Alarm-lock. L. Percival. No. 1,112,316; Sept. 29; Gaz. vol. 206; p. 1374.
Alkali-silico-aluminate richer in alkali than feldspar, Making. A. H. Cowles. No. 1,111,881; Sept. 29; Gaz. vol. 206; p. 1227.
Alkaline silicate, Producing a ferrated and borated. T. Rouse. No. 1,109,704; Sept. 8; Gaz. vol. 206; p. 341.
Alloy of ferromanganese and silicon, Making an. J. C. Walker. No. 1,109,640; Sept. 1; Gaz. vol. 206; p. 276.
Alloys of tungsten and other highly refractory metals related to it, Manufacturing. H. Kreusler. No. 1,110,303; Sept. 8; Gaz. vol. 206; p. 555.
Alternator, High-frequency. E. F. W. Alexanderson. No. 1,110,028; Sept. 8; Gaz. vol. 206; p. 455.
Alternator, High-frequency. E. F. W. Alexanderson. No. 1,110,029; Sept. 8; Gaz. vol. 206; p. 456.
Aluminium fluorid, Obtaining. C. A. Doremus. No. 1,110,675; Sept. 15; Gaz. vol. 206; p. 727.
Amalgamator. C. R. Dennison. No. 1,111,251; Sept. 22; Gaz. vol. 206; p. 969.
Amusement apparatus. J. A. Jobson. No. 1,109,421; Sept. 1; Gaz. vol. 206; p. 201.
Amusement apparatus. W. H. Fulper. No. 1,111,533; Sept. 22; Gaz. vol. 206; p. 1066.
Amusement device. C. Kelker. No. 1,112,216; Sept. 29; Gaz. vol. 206; p. 1339.
Amusement device. E. C. Manterola. No. 1,112,307; Sept. 29; Gaz. vol. 206; p. 1370.
Anchor, Guy-. F. P. Kobert. No. 1,111,964; Sept. 29; Gaz. vol. 206; p. 1252.
Anchor, Surf-. L. W. Myers. No. 1,110,507; Sept. 15; Gaz. vol. 206; p. 667.
Anchoring device. M. F. Gately. No. 1,110,435; Sept. 15; Gaz. vol. 206; p. 641.
Anesthetic-dispenser. S. Bricker. No. 1,110,742; Sept. 15; Gaz. vol. 206; p. 749.
Animal-trap. D. S. Travis. No. 1,109,558; Sept. 1; Gaz. vol. 206; p. 245.
Animal-trap. W. J. McPherson. No. 1,110,636; Sept. 15; Gaz. vol. 206; p. 712.
Animal-trussing apparatus. D. H. Burcham. No. 1,109,820; Sept. 8; Gaz. vol. 206; p. 380.
Annealing-furnace. J. A. Swindell. No. 1,112,236; Sept. 29; Gaz. vol. 206; p. 1346.
Annealing-furnace. J. A. and J. C. Swindell. No. 1,112,237; Sept. 29; Gaz. vol. 206; p. 1347.
Annealing metals, Method of and apparatus for. F. H. Fechtig. No. 1,110,122; Sept. 8; Gaz. vol. 206; p. 491.
Annealing or cementing various articles, Method and apparatus for. G. Richter. No. 1,109,362; Sept. 1; Gaz. vol. 206; p. 180.
Annunciator, Rain-. J. H. Stroud. No. 1,109,481; Sept. 1; Gaz. vol. 206; p. 220.
Anode residues, Treating. E. Keller. No. 1,110,403; Sept. 15; Gaz. vol. 206; p. 662.
Antislipping device for wheels. J. C. McLean. No. 1,110,331; Sept. 15; Gaz. vol. 206; p. 604.
Aperture-gate. C. A. Currie. No. 1,112,270; Sept. 29; Gaz. vol. 206; p. 1358.
Apparel, Wearing-. E. Axford. No. 1,110,982; Sept. 15; Gaz. vol. 206; p. 832.
Arch-support. A. E. Block. No. 1,110,476; Sept. 15; Gaz. vol. 206; p. 656.

Bottle-stopper. A. A. Miller. No. 1,111,228; Sept. 22; Gaz. vol. 206; p. 962.
Bottle-stopper. W. M. Camp. No. 1,111,294; Sept. 22; Gaz. vol. 206; p. 983.
Bottle-stoppers. Device for applying. M. T. Scholl and R. A. Gillespie. No. 1,111,973; Sept. 29; Gaz. vol. 206; p. 1255.
Bottle support, Nursing-. J. B. Phelps. No. 1,110,712; Sept. 15; Gaz. vol. 206; p. 740.
Bottle, Telltale. A. C. Mathewson. No. 1,111,483; Sept. 22; Gaz. vol. 206; p. 1048.
Bottles and the like, Stoppering crown or cap for. W. Bailey. No. 1,110,862; Sept. 15; Gaz. vol. 206; p. 702.
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Bowling-alley pin-setting apparatus. M. Martinson. No. 1,111,481; Sept. 22; Gaz. vol. 206; p. 1047.
Bowling-ball with composition coating and gripping-sockets. J. W. Hyatt. No. 1,111,022; Sept. 22; Gaz. vol. 206; p. 890.
Bowling-ball with self-contained handle. J. W. Hyatt. No. 1,111,023; Sept. 22; Gaz. vol. 206; p. 890.
Box: *See* Berry-box; Boiler fire-box; Car journal-box; Fare-box; Feed-box; Fire-box; Folded-blank box; Folding box; Hat-box; Ice-box; Index-box; Journal-box; Lunch-box; Mail-box; Match-box; Outlet-box; Pencil-box; Phonographic sound-box; Seal-cutter box; Sheet-metal box; Shipping-box; Wall-box.
Box. J. Wooster. No. 1,111,120; Sept. 22; Gaz. vol. 206; p. 924.
Box. J. M. Levie. No. 1,112,147; Sept. 29; Gaz. vol. 206; p. 1314.
Box-lidding machine. O. D. Gibbs. No. 1,111,804; Sept. 29; Gaz. vol. 206; p. 1231.
Box-lifting device. A. E. Gadley. No. 1,111,803; Sept. 29; Gaz. vol. 206; p. 1231.
Box-nailing mechanism. E. C. Northrup. No. 1,112,083; Sept. 29; Gaz. vol. 206; p. 1201.
Box-opening implement. E. E. Stacy. No. 1,110,969; Sept. 15; Gaz. vol. 206; p. 828.
Brace: *See* Oven-brace.
Bracing-iron. J. B. Bankson. No. 1,110,178; Sept. 8; Gaz. vol. 206; p. 511.
Bracket: *See* Curtain and shade bracket; Curtain-pole bracket; Dental engine-bracket; Roof-bracket; Shingling-bracket; Tire-bracket.
Bracket. I. Schwinn. No. 1,111,503; Sept. 22; Gaz. vol. 206; p. 1053.
Bracket for pivotally supporting signs, mirrors, and similar devices. M. Tischler. No. 1,110,973; Sept. 15; Gaz. vol. 206; p. 830.
Brake: *See* Fluid-pressure brake; Friction-brake; Railway-brake; Vehicle-brake; Vehicle rebound-brake.
Brake. H. Fresh. No. 1,110,767; Sept. 15; Gaz. vol. 206; p. 757.
Brake apparatus, Fluid-pressure-. M. Corrington. No. 1,110,300; Sept. 8; Gaz. vol. 206; p. 554.
Brake apparatus, Fluid-pressure-. M. Corrington. No. 1,110,301; Sept. 8; Gaz. vol. 206; p. 554.
Brake, Automatic control for a band-. G. P. Wern. No. 1,109,382; Sept. 1; Gaz. vol. 206; p. 188.
Brake-beam fulcrum, Reversible. H. Z. Ebbs. No. 1,112,125; Sept. 29; Gaz. vol. 206; p. 1306.
Brake mechanism, Hand-operated. W. D. Brewster. No. 1,111,640; Sept. 22; Gaz. vol. 206; p. 1104.
Brake mechanism, Self-acting and self-regulating. C. F. Parker. No. 1,111,089; Sept. 22; Gaz. vol. 206; p. 913.
Brake-operating device. J. A. Anthony. No. 1,109,501; Sept. 1; Gaz. vol. 206; p. 226.
Brake-shoe. H. J. Camp. No. 1,110,744; Sept. 15; Gaz. vol. 206; p. 750.
Brake-shoe. H. Jones. No. 1,111,025; Sept. 22; Gaz. vol. 206; p. 891.
Brake-shoe. H. B. Nichols and G. M. Richardson. No. 1,111,606; Sept. 22; Gaz. vol. 206; p. 1091.
Brake-shoe back. J. D. Gallagher. No. 1,111,017; Sept. 22; Gaz. vol. 206; p. 889.
Brake-shoe, Reinforced. J. J. Morse. No. 1,112,376; Sept. 29; Gaz. vol. 206; p. 1305.
Brake-shoe, Reinforced. J. J. Morse. No. 1,112,377; Sept. 29; Gaz. vol. 206; p. 1305.
Brake-shoes, Metallic back for. G. S. Evans. No. 1,109,122; Sept. 1; Gaz. vol. 206; p. 93.
Brake-shoes, Reinforced lug for. G. Cook. No. 1,109,112; Sept. 1; Gaz. vol. 206; p. 90.
Brake slack-adjuster. J. S. Harding. No. 1,109,837; Sept. 8; Gaz. vol. 206; p. 386.
Brake-valve-controlling device for vehicles. F. T. Jones. No. 1,109,337; Sept. 1; Gaz. vol. 206; p. 171.
Bread-cutter. J. Habrie. No. 1,110,773; Sept. 15; Gaz. vol. 206; p. 759.
Bread wrapping and sealing machine. F. Streich and P. E. Franke. No. 1,110,083; Sept. 8; Gaz. vol. 206; p. 475.
Breeder's appliance. C. F. Wright. No. 1,111,935; Sept. 29; Gaz. vol. 206; p. 1244.
Brick-cut-off table. J. G. Barbour. No. 1,110,371; Sept. 15; Gaz. vol. 206; p. 618.
Brick-mold. H. E. Hunt. No. 1,109,070; Sept. 1; Gaz. vol. 206; p. 76.
Bridge. J. B. Strauss. No. 1,111,872; Sept. 29; Gaz. vol. 206; p. 1223.
Bridge, Bascule-. A. H. Scherzer. No. 1,109,792; Sept. 8; Gaz. vol. 206; p. 370.
Briquet composition and making briquets. E. A. Paterson. No. 1,111,910; Sept. 29; Gaz. vol. 206; p. 1239.
Brooder. N. Q. Kelso. No. 1,110,941; Sept. 15; Gaz. vol. 206; p. 819.
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Brooder, Fireless. R. C. B. Lethbridge. No. 1,108,917; Sept. 1; Gaz. vol. 206; p. 19.
Broom-bridle. A. C. Althouse. No. 1,111,553; Sept. 22; Gaz. vol. 206; p. 1072.
Broom-holder. E. W. Gorham. No. 1,109,413; Sept. 1; Gaz. vol. 206; p. 109.
Brush. M. C. Wilburn. No. 1,110,605; Sept. 15; Gaz. vol. 206; p. 702.
Brush. L. W. Bullard. No. 1,111,643; Sept. 22; Gaz. vol. 206; p. 1105.
Brush. W. B. Dennis. No. 1,111,955; Sept. 29; Gaz. vol. 206; p. 1249.
Brush, Fountain-. A. A. Rackoff. No. 1,112,094; Sept. 29; Gaz. vol. 206; p. 1296.
Brush-receptacle. J. G. Carmichael. No. 1,110,533; Sept. 15; Gaz. vol. 206; p. 675.
Brush, Tooth-. E. Schreck. No. 1,110,406; Sept. 15; Gaz. vol. 206; p. 630.
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Bucket. A. F. Brant. No. 1,111,357; Sept. 22; Gaz. vol. 206; p. 1006.
Bucket, Clam-shell. J. F. Miller. No. 1,111,719; Sept. 22; Gaz. vol. 206; p. 1131.
Bucket, Well-. P. T. Huckabay. No. 1,111,584; Sept. 22; Gaz. vol. 206; p. 1084.
Buffer and fender, Combined. W. W. Talbot and C. A. Sawtelle. No. 1,111,771; Sept. 29; Gaz. vol. 206; p. 1185.
Bug and worm collector. R. C. Bartlett. No. 1,108,882; Sept. 1; Gaz. vol. 206; p. 6.
Building-block, F-shaped. M. Lutgen. No. 1,110,504; Sept. 15; Gaz. vol. 206; p. 666.
Building-block for circular walls, Reinforced. J. J. Rayner. No. 1,109,248; Sept. 1; Gaz. vol. 206; p. 139.
Building construction. W. B. Fentherstone. No. 1,109,214; Sept. 1; Gaz. vol. 206; p. 127.
Building materials, Distributing. E. V. Johnson. No. 1,111,071; Sept. 22; Gaz. vol. 206; p. 907.
Building-partition. J. Mularkey. No. 1,110,707; Sept. 15; Gaz. vol. 206; p. 738.
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Building structure, Knockdown. R. M. Stalker. No. 1,111,040; Sept. 22; Gaz. vol. 206; p. 896.
Buildings, Delivery-facilitating device for. C. Fohman. No. 1,111,016; Sept. 22; Gaz. vol. 206; p. 888.
Bulkhead or retaining-wall, Reinforced. M. M. Upson and H. P. Hamlin. No. 1,111,979; Sept. 29; Gaz. vol. 206; p. 1257.
Bulletin-board. A. M. Henry. No. 1,108,989; Sept. 1; Gaz. vol. 206; p. 46.
Bung-plug, Expansible. E. J. Tackney. No. 1,109,262; Sept. 1; Gaz. vol. 206; p. 144.
Buoy, Signal-. H. H. Hill and R. Abell. No. 1,112,138; Sept. 29; Gaz. vol. 206; p. 1310.
Burglar-alarm. T. H. Farrell. No. 1,109,329; Sept. 1; Gaz. vol. 206; p. 168.
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Burner: *See* Gas-burner; Glass-heating burner; Hydrocarbon-burner; Lamp-burner; Liquid-fuel burner; Oil-burner; Stubble-burner.
Burner. C. V. Stuart. No. 1,112,234; Sept. 29; Gaz. vol. 206; p. 1346.
Burner for gas-stoves, Automatic. G. Bruton. No. 1,112,355; Sept. 29; Gaz. vol. 206; p. 1387.
Burning liquid fuel, System of. A. Laing. No. 1,109,342; Sept. 1; Gaz. vol. 206; p. 173.
Butter-cutting machine. L. Givulinovich. No. 1,111,373; Sept. 22; Gaz. vol. 206; p. 1011.
Butter, Producing renovated and artificial. E. B. Heller. No. 1,109,750; Sept. 8; Gaz. vol. 206; p. 357.
Button. J. W. Silver. No. 1,109,797; Sept. 8; Gaz. vol. 206; p. 371.
Button. E. Shantz. No. 1,110,462; Sept. 15; Gaz. vol. 206; p. 652.
Button. J. Fox. No. 1,111,452; Sept. 22; Gaz. vol. 206; p. 1037.
Button-attaching machine. A. Johnston. No. 1,110,794; Sept. 15; Gaz. vol. 206; p. 767.
Button-attaching machines, Fastener-feeding mechanism for. F. R. White. No. 1,109,098; Sept. 1; Gaz. vol. 206; p. 85.
Button-cutting machine. C. R. Stadden. No. 1,109,638; Sept. 1; Gaz. vol. 206; p. 275.
Cabinet, Annunciator-. M. Levison. No. 1,108,990; Sept. 1; Gaz. vol. 206; p. 51.
Cabinet for sound-reproducing machines. H. A. Borresen. No. 1,109,386; Sept. 1; Gaz. vol. 206; p. 180.
Cabinet, Fruit-display. A. R. Overfield. No. 1,111,088; Sept. 22; Gaz. vol. 206; p. 913.
Cabinet, Ice-cream. J. J. Suigo. No. 1,112,390; Sept. 29; Gaz. vol. 206; p. 1400.

Cabinet, Ironing-board. C. B. Cox. No. 1,110,903; Sept. 15; Gaz. vol. 206; p. 807.
Cable-hanger. J. E. Ogden. No. 1,110,568; Sept. 15; Gaz. vol. 206; p. 687.
Cable-reeling mechanism for electric traction systems. F. L. Sessions. No. 1,112,331; Sept. 29; Gaz. vol. 206; p. 1378.
Cake-turner. E. S. Frey and F. Marriott. No. 1,109,523; Sept. 1; Gaz. vol. 206; p. 233.
Calculating-machine. C. Schaller. No. 1,109,471; Sept. 1; Gaz. vol. 206; p. 216.
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Calendar. P. Armstrong. No. 1,110,858; Sept. 15; Gaz. vol. 206; p. 790.
Calendar, Perpetual. G. W. Bailey. No. 1,109,814; Sept. 8; Gaz. vol. 206; p. 378.
Calipers. P. J. Robinson. No. 1,109,467; Sept. 1; Gaz. vol. 206; p. 215.
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Calipers, Reversible. G. B. Fenno. No. 1,109,056; Sept. 1; Gaz. vol. 206; p. 71.
Call-distributer system, Automatic. F. R. McBerty. No. 1,110,809; Sept. 15; Gaz. vol. 206; p. 772.
Camera. L. Holland-Letz. No. 1,109,226; Sept. 1; Gaz. vol. 206; p. 131.
Camera attachment. R. Lockyer. No. 1,109,077; Sept. 1; Gaz. vol. 206; p. 78.
Camera-back, Shifting. S. E. Moine. No. 1,110,333; Sept. 15; Gaz. vol. 206; p. 605.
Camera, Developing and fixing. F. D. Jones and S. M. Coffman. No. 1,112,414; Sept. 29; Gaz. vol. 206; p. 1408.
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Can carrier, Paint-. G. Chindgren. No. 1,109,161; Sept. 1; Gaz. vol. 206; p. 107.
Can-closure. D. B. Tamagno. No. 1,109,557; Sept. 1; Gaz. vol. 206; p. 245.
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Can-filling apparatus, Oil-. T. F. Mulligan. No. 1,112,082; Sept. 29; Gaz. vol. 206; p. 1201.
Can-opener. H. Till. No. 1,110,728; Sept. 15; Gaz. vol. 206; p. 745.
Can-opener. C. I. Millar. No. 1,111,163; Sept. 22; Gaz. vol. 206; p. 939.
Can-opener. H. Till. No. 1,112,039; Sept. 29; Gaz. vol. 206; p. 1277.
Can-opening machine. J. F. Moran. No. 1,110,334; Sept. 15; Gaz. vol. 206; p. 605.
Can-washing machine, Milk-. W. P. Thorpe. No. 1,111,624; Sept. 22; Gaz. vol. 206; p. 1097.
Canning apparatus. E. L. Flowers. No. 1,109,673; Sept. 8; Gaz. vol. 206; p. 329.
Canning machinery. C. H. Ayars. No. 1,110,983; Sept. 15; Gaz. vol. 206; p. 833.
Canceling device, Hand-. D. E. Stevens. No. 1,109,480; Sept. 1; Gaz. vol. 206; p. 219.
Candle-holder. M. Knorpp. No. 1,110,796; Sept. 15; Gaz. vol. 206; p. 768.
Canoe-barrow. F. B. Flower. No. 1,109,520; Sept. 1; Gaz. vol. 206; p. 232.
Cant-hook. P. Graham. No. 1,109,217; Sept. 1; Gaz. vol. 206; p. 128.
Capping device. F. J. Heybach. No. 1,111,581; Sept. 22; Gaz. vol. 206; p. 1083.
Car-brake slack-adjuster. L. A. Kling. No. 1,110,141; Sept. 8; Gaz. vol. 206; p. 499.
Car construction. R. V. Sage. No. 1,110,236; Sept. 8; Gaz. vol. 206; p. 531.
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Car construction, Dumping-. R. V. Sage. No. 1,110,235; Sept. 8; Gaz. vol. 206; p. 530.
Car-coupling. H. F. Pope. No. 1,109,246; Sept. 1; Gaz. vol. 206; p. 139.
Car-coupling. C. Schlared. No. 1,110,829; Sept. 15; Gaz. vol. 206; p. 770.
Car-coupling uncoupling device. M. J. Morgan. No. 1,111,080; Sept. 22; Gaz. vol. 206; p. 911.
Car-door. E. Posson. No. 1,110,458; Sept. 15; Gaz. vol. 206; p. 650.
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Car-door, Flush. L. Almquist. No. 1,109,607; Sept. 1; Gaz. vol. 206; p. 262.
Car door, Grain-. A. Davidson, M. Jensen, and J. P. Blocker. No. 1,111,954; Sept. 29; Gaz. vol. 206; p. 1249.
Car-door-operating mechanism, Hopper-. J. M. Rohling. No. 1,109,598; Sept. 1; Gaz. vol. 206; p. 259.
Car, Double-deck. H. Rowntree. No. 1,111,971; Sept. 29; Gaz. vol. 206; p. 1254.
Car, Dump-. R. E. Frame and W. H. De Graff. No. 1,111,532; Sept. 22; Gaz. vol. 206; p. 1065.
Car-dumping apparatus, Mine-. C. A. Grimth. No. 1,111,830; Sept. 29; Gaz. vol. 206; p. 1207.
Car end construction. V. M. Summa. No. 1,109,604; Sept. 1; Gaz. vol. 206; p. 262.
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Car-fender. W. D. Wright. No. 1,111,346; Sept. 22; Gaz. vol. 206; p. 1002.
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Car-handle shield. H. Jordan. No. 1,111,591; Sept. 22; Gaz. vol. 206; p. 1086.
Car, Hopper-. P. M. Beard. No. 1,109,609; Sept. 1; Gaz. vol. 206; p. 263.
Car journal-box. D. C. Davis. No. 1,109,281; Sept. 1; Gaz. vol. 206; p. 151.
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Car-replacer. Z. B. Smith. No. 1,109,369; Sept. 1; Gaz. vol. 206; p. 183.
Car-roof. R. C. Dudley. No. 1,109,324; Sept. 1; Gaz. vol. 206; p. 166.
Car-roof. H. A. Christy. No. 1,112,053; Sept. 29; Gaz. vol. 206; p. 1281.
Car-step, Extension. B. E. Herrin. No. 1,109,224; Sept. 1; Gaz. vol. 206; p. 131.
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Car track-gage attachment, Hand-. P. E. Cauthorn. No. 1,110,894; Sept. 15; Gaz. vol. 206; p. 804.
Car underframe, Tank-. H. C. Priebe. No. 1,111,491; Sept. 22; Gaz. vol. 206; p. 1051.
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Car ventilator, Stock-. T. E. Lindsey. No. 1,110,447; Sept. 15; Gaz. vol. 206; p. 646.
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Car wheel, Mining-. A. B. Day. No. 1,109,906; Sept. 8; Gaz. vol. 206; p. 412.
Car-wheels, Finishing. E. E. Slick. No. 1,111,622; Sept. 22; Gaz. vol. 206; p. 1096.
Car with articulated truck, Hopper-. J. M. Rohling. No. 1,109,600; Sept. 1; Gaz. vol. 206; p. 260.
Cars and other motors or vehicles, Driving means for hand-. R. Zertuche. No. 1,111,205; Sept. 22; Gaz. vol. 206; p. 954.
Cars, Clothes-rack for sleeping-. F. W. Wallace. No. 1,111,199; Sept. 22; Gaz. vol. 206; p. 952.
Cars, Door-sill extension for subway-. C. M. Swedberg. No. 1,112,235; Sept. 29; Gaz. vol. 206; p. 1346.
Cars, Hanger-strap or handhold for. J. F. Newton, Jr. No. 1,112,157; Sept. 29; Gaz. vol. 206; p. 1318.
Cars or trains, Apparatus for the control of railway. P. Utne. No. 1,110,412; Sept. 15; Gaz. vol. 206; p. 633.
Cars, Outside metal roof for. E. Posson. No. 1,112,318; Sept. 29; Gaz. vol. 206; p. 1374.
Carbon brush and pigtail. W. L. Bliss. No. 1,112,191; Sept. 29; Gaz. vol. 206; p. 1329.
Carbon-dioxid gage. E. A. Cunningham. No. 1,111,565; Sept. 22; Gaz. vol. 206; p. 1077.
Carbureter. W. O. Mycue. No. 1,109,356; Sept. 1; Gaz. vol. 206; p. 178.
Carbureter. G. Christian. No. 1,110,041; Sept. 8; Gaz. vol. 206; p. 460.
Carbureter. B. Monosmith. No. 1,110,453; Sept. 15; Gaz. vol. 206; p. 648.
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Carbureter. J. C. Rogers. No. 1,111,763; Sept. 29; Gaz. vol. 206; p. 1182.
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Carbureters, Automatic regulator for. W. W. Green. No. 1,110,131; Sept. 8; Gaz. vol. 206; p. 495.
Carbureters, Electric attachment for. A. S. Bignell. No. 1,109,735; Sept. 8; Gaz. vol. 206; p. 352.
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Carbureting means for use with heavy fuels. A. C. Stewart. No. 1,110,724; Sept. 15; Gaz. vol. 206; p. 744.
Card holder, Playing-. W. Gessner. No. 1,109,524; Sept. 1; Gaz. vol. 206; p. 233.

Razor, Safety-. K. C. Gillette. No. 1,111,721; Sept. 22; Gaz. vol. 206; p. 1132.
Razor-strop. F. J. Tomek. No. 1,111,873; Sept. 29; Gaz. vol. 206; p. 1223.
Reamer. W. T. Charles. No. 1,109,321; Sept. 1; Gaz. vol. 206; p. 165.
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Receptacle-cap. J. H. Follen. No. 1,110,618; Sept. 15; Gaz. vol. 206; p. 706.
Receptacle, Collapsible. J. J. Aronoff. No. 1,111,428; Sept. 22; Gaz. vol. 206; p. 1029.
Receptacle, Deposit and collection. J. Hartman. No. 1,110,779; Sept. 15; Gaz. vol. 206; p. 761.
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Recording apparatus. J. R. Peirce. No. 1,110,643; Sept. 15; Gaz. vol. 206; p. 715.
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Recuperator-furnace. W. A. Stubblebine. No. 1,111,414; Sept. 22; Gaz. vol. 206; p. 1025.
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Reel for strip material. J. J. Buchanan. No. 1,110,743; Sept. 15; Gaz. vol. 206; p. 750.
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Refrigeration and apparatus therefor, Process of. N. H. Hillier. No. 1,109,923; Sept. 8; Gaz. vol. 206; p. 419.
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Refuse-depository. F. Ehrhardt. No. 1,109,911; Sept. 8; Gaz. vol. 206; p. 414.
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Register. E. S. Hall. No. 1,108,902; Sept. 1; Gaz. vol. 206; p. 14.
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Relay, Thermal. T. B. Freas. No. 1,111,789; Sept. 29; Gaz. vol. 206; p. 1192.
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Respirator. W. S. Pollard. No. 1,111,858; Sept. 29; Gaz. vol. 206; p. 1218.
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Retort-press. C. A. Wettengel. No. 1,112,103; Sept. 29; Gaz. vol. 206; p. 1299.
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Rock-drill. D. S. Waugh. No. 1,112,398; Sept. 29; Gaz. vol. 206; p. 1403.
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Roller. W. Ware. No. 1,110,360; Sept. 15; Gaz. vol. 206; p. 614.
Roller-mill. W. A. Dunn. No. 1,109,051; Sept. 1; Gaz. vol. 206; p. 60.
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Rolling-mill or similar installation. W. R. Webster. No. 1,109,885; Sept. 8; Gaz. vol. 206; p. 405.
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Rope-machine. F. J. Weiser. No. 1,110,472; Sept. 15; Gaz. vol. 206; p. 655.
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Rotary engine. L. S. Flatau. No. 1,110,302; Sept. 8; Gaz. vol. 206; p. 555.
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Rotary internal-combustion engine. J. A. Wallis, 2d. No. 1,109,270; Sept. 1; Gaz. vol. 206; p. 147.
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Rule. F. M. Erwin. No. 1,110,195; Sept. 8; Gaz. vol. 206; p. 516.
Rule attachment. T. W. Southard. No. 1,110,968; Sept. 15; Gaz. vol. 206; p. 828.
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Safety-lock. G. A. Null. No. 1,109,081; Sept. 1; Gaz. vol. 206; p. 80.
Safety-pin. F. C. Scott. No. 1,112,098; Sept. 29; Gaz. vol. 206; p. 1297.
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Sash-balance. J. T. Jones. No. 1,110,139; Sept. 8; Gaz. vol. 206; p. 498.
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Sash-fastener. C. L. Wecht. No. 1,111,511; Sept. 22; Gaz. vol. 206; p. 1058.
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Scaffold, Adjustable. G. Bonenberger. No. 1,109,505; Sept. 1; Gaz. vol. 206; p. 228.
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Scouring agent. H. Ockelmann. No. 1,111,488; Sept. 22; Gaz. vol. 206; p. 1050.
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Screen. E. Lynch. No. 1,109,437; Sept. 1; Gaz. vol. 206; p. 206.
Screen. D. Cole. No. 1,111,217; Sept. 22; Gaz. vol. 206; p. 958.
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Screen or separator. T. J. Sturtevant. No. 1,111,044; Sept. 22; Gaz. vol. 206; p. 897.
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Screw-driver. W. Carter. No. 1,109,040; Sept. 1; Gaz. vol. 206; p. 66.
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Seal cutter, Box-. L. R. Hagen. No. 1,109,286; Sept. 1; Gaz. vol. 206; p. 152.
Seal-lock. S. F. Happel. No. 1,111,065; Sept. 22; Gaz. vol. 206; p. 905.
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Sealing tool or chuck for bottles. G. Lidseen. No. 1,111,753; Sept. 29; Gaz. vol. 206; p. 1178.
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Seat shield, Toilet-. A. G. Dahlgren. No. 1,109,904; Sept. 8; Gaz. vol. 206; p. 411.
Sectional trough. F. W. Carpenter. No. 1,110,419; Sept. 15; Gaz. vol. 206; p. 636.
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Seed-germinator and plant-forcer. R. McCloy. No. 1,109,687; Sept. 8; Gaz. vol. 206; p. 335.
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Selector. W. S. Burnett. No. 1,110,418; Sept. 15; Gaz. vol. 206; p. 635.
Selector-switch for automatic exchanges. W. Kaisling. No. 1,110,492; Sept. 15; Gaz. vol. 206; p. 662.
Self-locking pen. W. E. Woodard. No. 1,111,513; Sept. 22; Gaz. vol. 206; p. 1058.
Separation of materials, Effecting the. R. Jaffé. No. 1,109,529; Sept. 1; Gaz. vol. 206; p. 235.
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Separator. H. Martinson. No. 1,111,227; Sept. 22; Gaz. vol. 206; p. 961.
Separator. C. Jaquet. No. 1,111,261; Sept. 22; Gaz. vol. 206; p. 973.
Separator and grader. J. W. Linkhart. No. 1,112,302; Sept. 29; Gaz. vol. 206; p. 1368.
Separator mechanism. G. D. Beaston. No. 1,110,283; Sept. 8; Gaz. vol. 206; p. 548.
Settee, Folding. P. A. Johnson. No. 1,110,695; Sept. 15; Gaz. vol. 206; p. 733.
Sewed articles, Seam for. H. J. Dahl. No. 1,109,515; Sept. 1; Gaz. vol. 206; p. 230.
Sewer-agitator. A. W. Shirk. No. 1,110,832; Sept. 15; Gaz. vol. 206; p. 781.
Sewer construction. J. M. Conkle. No. 1,110,898; Sept. 15; Gaz. vol. 206; p. 805.
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Sewing-machine. R. K. Hohmann. No. 1,109,989; Sept. 8; Gaz. vol. 206; p. 442.
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Twine machine, Grass-. O. T. Waite. No. 1,110,842; Sept. 15; Gaz. vol. 206; p. 784.
Two-cycle engine. J. H. Mosier. No. 1,109,694; Sept. 8; Gaz. vol. 206; p. 337.
Type or matrix. J. R. Rogers. No. 1,111,098; Sept. 22; Gaz. vol. 206; p. 916.
Type-writer. J. M. Smith. No. 1,110,513; Sept. 15; Gaz. vol. 206; p. 669.
Type-writer. Z. G. Sholes and J. M. Fraaz. No. 1,111,868; Sept. 29; Gaz. vol. 206; p. 1222.
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Type-writer tabulator. T. E. Buschmann. No. 1,111,293; Sept. 22; Gaz. vol. 206; p. 983.
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Umbrella-carrier, Traveler's. J. F. Slavin and J. Mendel. No. 1,110,150; Sept. 8; Gaz. vol. 206; p. 502.
Umbrella drip-receptacle. C. J. Madonna. No. 1,110,215; Sept. 8; Gaz. vol. 206; p. 523.
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Umbrella, Folding. M. H. Hartzell. No. 1,109,677; Sept. 8; Gaz. vol. 206; p. 331.
Umbrella-rib construction. A. J. Mills. No. 1,109,691; Sept. 8; Gaz. vol. 206; p. 336.
Umbrella-stand. J. M. Rose. No. 1,109,788; Sept. 8; Gaz. vol. 206; p. 368.
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Universal joint. E. E. Neal. No. 1,109,006; Sept. 1; Gaz. vol. 206; p. 53.
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Vacuum-cleaner. E. L. Fahrbach. No. 1,112,277; Sept. 29; Gaz. vol. 206; p. 1360.
Vacuum-cleaner and carpet-sweeper, Combined. M. S. Wright. No. 1,109,492; Sept. 1; Gaz. vol. 206; p. 224.
Vacuum, Means for improving a. M. von Recklinghausen. No. 1,110,576; Sept. 15; Gaz. vol. 206; p. 690.
Vacuum-producer. C. H. Atkins. No. 1,110,860; Sept. 15; Gaz. vol. 206; p. 791.
Valve. G. J. Le May. No. 1,109,169; Sept. 1; Gaz. vol. 206; p. 112.
Valve. J. F. Moynihan. No. 1,110,269; Sept. 8; Gaz. vol. 206; p. 542.
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Valve. W. C. Marsh. No. 1,111,598; Sept. 22; Gaz. vol. 206; p. 1088.
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Valve, Air-. C. H. Peterson. No. 1,109,174; Sept. 1; Gaz. vol. 206; p. 113.
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Valve, Check-. H. J. Carbis. No. 1,112,117; Sept. 29; Gaz. vol. 206; p. 1303.
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Valve device, Triple-. W. V. Turner. No. 1,108,948; Sept. 1; Gaz. vol. 206; p. 32.
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Valve, Engineer's. H. W. Cheney. No. 1,111,439; Sept. 22; Gaz. vol. 206; p. 1033.
Valve for engines, Twin throttle-. O. Junggren. No. 1,110,206; Sept. 8; Gaz. vol. 206; p. 520.
Valve for explosive-engines, Mixing-. F. Harrold. No. 1,111,897; Sept. 29; Gaz. vol. 206; p. 1232.
Valve for explosive-engines, Piston-. L. C. Malthy. No. 1,110,635; Sept. 15; Gaz. vol. 206; p. 712.
Valve for explosive-engines, Rotary. W. R. Hallett. No. 1,109,628; Sept. 1; Gaz. vol. 206; p. 271.
Valve for heating systems, Air-. E. P. Allen. No. 1,110,096; Sept. 8; Gaz. vol. 206; p. 480.
Valve for internal-combustion engines, Compound induction-. L. Atwood. No. 1,112,188; Sept. 29; Gaz. vol. 206; p. 1328.
Valve for locomotives, Drifting-. J. Billingham and C. F. Kahler. No. 1,112,109; Sept. 29; Gaz. vol. 206; p. 1301.
Valve for steam-cylinders, Relief-. J. H. Coyne and J. J. Worden. No. 1,110,378; Sept. 15; Gaz. vol. 206; p. 620.
Valve, Gas relief-. L. B. Fulton. No. 1,110,320; Sept. 15; Gaz. vol. 206; p. 599.
Valve-gear. J. A. Seymour. No. 1,111,327; Sept. 22; Gaz. vol. 206; p. 995.
Valve-gear for steam-engines. E. F. Williams and L. Skinner. No. 1,109,807; Sept. 8; Gaz. vol. 206; p. 375.
Valve-gear, Locomotive. W. S. Brown. No. 1,110,288; Sept. 8; Gaz. vol. 206; p. 549.
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Valve-grinding machine, Triple-. P. E. McSweeney. No. 1,110,506; Sept. 15; Gaz. vol. 206; p. 666.
Valve-grinding tool. H. R. Parsons. No. 1,112,315; Sept. 29; Gaz. vol. 206; p. 1373.
Valve mechanism for gas-engines. W. A. Gill. No. 1,110,921; Sept. 15; Gaz. vol. 206; p. 812.

Valve mechanism for hydrocarbon-engines. R. Huff. No. 1,111,462; Sept. 22; Gaz. vol. 206; p. 1041.
Valve mechanism for internal-combustion engines. H. P. E. Miller. No. 1,112,225; Sept. 29; Gaz. vol. 206; p. 1342.
Valve mechanism for pneumatic players. E. T. Turney. No. 1,111,778; Sept. 29; Gaz. vol. 206; p. 1180.
Valve mechanism for pumps, engines, &c. W. A. Warman No. 1,109,271; Sept. 1; Gaz. vol. 206; p. 147.
Valve-operating mechanism, Flush-. J. W. Bragger. No. 1,110,251; Sept. 8; Gaz. vol. 206; p. 535.
Valve, Puppet-. R. C. Stevens. No. 1,112,233; Sept. 29; Gaz. vol. 206; p. 1345.
Valve, Reducing-. G. H. Viger. No. 1,108,950; Sept. 1; Gaz. vol. 206; p. 32.
Valve, Rotary engine-. C. R. Spencer. No. 1,111,680; Sept. 22; Gaz. vol. 206; p. 1117.
Valve, Self-grinding. W. Mahony. No. 1,111,545; Sept. 22; Gaz. vol. 206; p. 1069.
Valve, Tapping-. E. P. Poole. No. 1,112,093; Sept. 29; Gaz. vol. 206; p. 1296.
Valve, Tender-tank. S. S. Riegel. No. 1,111,324; Sept. 22; Gaz. vol. 206; p. 994.
Valve, Thermostatic. J. A. Serrell and J. L. Fitts. No. 1,109,705; Sept. 8; Gaz. vol. 206; p. 341.
Valve, Unloader-. C. B. McAulay. No. 1,110,567; Sept. 15; Gaz. vol. 206; p. 687.
Vanity-case and mesh-bag, Combined. F. C. Miller. No. 1,111,397; Sept. 22; Gaz. vol. 206; p. 1019.
Vapor-apparatus-controlling device. P. H. Thomas. No. 1,110,585; Sept. 15; Gaz. vol. 206; p. 694.
Vapor-converter. P. C. Hewitt. No. 1,110,549; Sept. 15; Gaz. vol. 206; p. 681.
Vapor converter, High-tension-. F. H. von Keller. No. 1,110,630; Sept. 15; Gaz. vol. 206; p. 710.
Vapor-converter-starting device. P. H. Thomas. No. 1,110,597; Sept. 15; Gaz. vol. 206; p. 698.
Vapor-converters alive, Means for keeping. P. H. Thomas. No. 1,110,584; Sept. 15; Gaz. vol. 206; p. 693.
Vapor-converters in series, Means for starting. P. H. Thomas. No. 1,110,599; Sept. 15; Gaz. vol. 206; p. 699.
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Vapor-converters, Operation of. P. H. Thomas. No. 1,110,594; Sept. 15; Gaz. vol. 206; p. 697.
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Varnish, Manufacture of. S. E. Ford. No. 1,109,979; Sept. 8; Gaz. vol. 206; p. 439.
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Vault, Burial-. I. E. Woodard. No. 1,110,520; Sept. 15; Gaz. vol. 206; p. 671.
Vault-light construction. A. Chambley. No. 1,109,510; Sept. 1; Gaz. vol. 206; p. 229.
Vegetable fiber, Securing. J. Lacroix. No. 1,111,027; Sept. 22; Gaz. vol. 206; p. 892.
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Vehicle. C. W. Jackson. No. 1,108,992; Sept. 1; Gaz. vol. 206; p. 48.
Vehicle. F. A. Wieland. No. 1,109,191; Sept. 1; Gaz. vol. 206; p. 119.
Vehicle and elastic suspension device therefor. R. Lieban. No. 1,111,754; Sept. 29; Gaz. vol. 206; p. 1178.
Vehicle-body. C. A. Green. No. 1,112,002; Sept. 29; Gaz. vol. 206; p. 1265.
Vehicle-brake. C. J. Dale. No. 1,110,255; Sept. 8; Gaz. vol. 206; p. 537.
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Vehicle dump-body. D. A. Lowney. No. 1,109,132; Sept. 1; Gaz. vol. 206; p. 96.
Vehicle fender-light. F. R. Pike. No. 1,110,227; Sept. 8; Gaz. vol. 206; p. 527.
Vehicle, Folding. A. E. McGill. No. 1,111,662; Sept. 22; Gaz. vol. 206; p. 1111.
Vehicle, Indicator for illustrating and signaling the route of a. P. Papini. No. 1,112,086; Sept. 29; Gaz. vol. 206; p. 1293.
Vehicle, Motor-. E. R. Robinson. No. 1,109,018; Sept. 1; Gaz. vol. 206; p. 57.
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Vehicle rebound-brake, Spring. W. G. Cox. No. 1,110,311; Sept. 15; Gaz. vol. 206; p. 595.
Vehicle, Refuse-. J. Bart. No. 1,111,052; Sept. 22; Gaz. vol. 206; p. 901.
Vehicle-rim, Demountable. C. A. Myers. No. 1,109,173; Sept. 1; Gaz. vol. 206; p. 113.
Vehicle safety device. H. L. Eisenhauer. No. 1,111,888; Sept. 29; Gaz. vol. 206; p. 1229.
Vehicle-spring. P. L. Rookledge and G. W. Gillespie. No. 1,110,826; Sept. 15; Gaz. vol. 206; p. 778.
Vehicle-spring. G. W. Tibbits. No. 1,111,045; Sept. 22; Gaz. vol. 206; p. 898.
Vehicle-spring. C. S. Van Syckel. No. 1,111,278; Sept. 22; Gaz. vol. 206; p. 979.
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Vehicle-spring. H. C. Waite. No. 1,111,421; Sept. 22; Gaz. vol. 206; p. 1027.
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Vehicle-spring, Pneumatic. R. M. G. Phillips. No. 1,109,146; Sept. 1; Gaz. vol. 206; p. 102.
Vehicle top-bow-shortening device. J. Teppert. No. 1,112,171; Sept. 29; Gaz. vol. 206; p. 1323.
Vehicle-top support. F. K. Lewis. No. 1,109,431; Sept. 1; Gaz. vol. 206; p. 204.
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Vehicles and the like, Spring suspension mechanism for. W. C. Fenton. No. 1,109,912; Sept. 8; Gaz. vol. 206; p. 415.
Vehicles, Auxiliary pneumatic support for. P. Rayson. No. 1,111,675; Sept. 22; Gaz. vol. 206; p. 1115.
Vehicles, Battery-cradle-supporting mechanism for. F. E. Queeney. No. 1,112,321; Sept. 29; Gaz. vol. 206; p. 1375.
Vehicles, Compound recoil-spring for. D. L. Potter. No. 1,110,230; Sept. 8; Gaz. vol. 206; p. 528.
Vehicles, Fuel-oil-delivery system for motor-. A. E. Walden. No. 1,111,335; Sept. 22; Gaz. vol. 206; p. 998.
Vehicles, Muffler-control lever for motor-. N. E. Wahlberg. No. 1,112,043; Sept. 29; Gaz. vol. 206; p. 1278.
Vehicles, Visual-signal device for. A. F. Copersito. No. 1,111,738; Sept. 29; Gaz. vol. 206; p. 1171.
Velocipede. J. S. Dean. No. 1,111,825; Sept. 29; Gaz. vol. 206; p. 1205.
Velocipedes, Electric-lighting apparatus for. A. Sanladerer. No. 1,111,864; Sept. 29; Gaz. vol. 206; p. 1220.
Vending devices, Slot and slug for. H. Goetz. No. 1,111,793; Sept. 29; Gaz. vol. 206; p. 1194.
Vending-machine. W. Millard. No. 1,109,134; Sept. 1; Gaz. vol. 206; p. 97.
Vending-machine. G. W. Gomber. No. 1,111,573; Sept. 22; Gaz. vol. 206; p. 1080.
Vending-machine. W. C. Sharkey. No. 1,112,333; Sept. 29; Gaz. vol. 206; p. 1379.
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Ventilator. J. C. Scott. No. 1,109,793; Sept. 8; Gaz. vol. 206; p. 370.
Ventilator. A. Joch. No. 1,109,927; Sept. 8; Gaz. vol. 206; p. 420.
Ventilator. H. C. Hames. No. 1,111,831; Sept. 29; Gaz. vol. 206; p. 1208.
Ventilator. C. H. Bicalky. No. 1,112,251; Sept. 29; Gaz. vol. 206; p. 1352.
Vessels, Engine-log for. H. H. Cummings. No. 1,109,665; Sept. 8; Gaz. vol. 206; p. 325.
Vessels, Yieldable reinforcement for. J. Kralik. No. 1,110,798; Sept. 15; Gaz. vol. 206; p. 760.
Veterinary appliance. E. Heflin and W. J. Roberts. No. 1,110,686; Sept. 15; Gaz. vol. 206; p. 730.
Vibrator, Magnetic. F. V. Smith. No. 1,111,038; Sept. 22; Gaz. vol. 206; p. 895.
Violin. J. R. Spear. No. 1,110,654; Sept. 15; Gaz. vol. 206; p. 719.
Vise. F. J. Goodwin. No. 1,110,683; Sept. 15; Gaz. vol. 206; p. 729.
Vise, Bench-. H. H. Schmidt. No. 1,111,185; Sept. 22; Gaz. vol. 206; p. 948.
Vise for hacksaws, Adjustable. A. Hutton. No. 1,111,386; Sept. 22; Gaz. vol. 206; p. 1015.
Vise, Quick-acting pipe-. F. J. Callan. No. 1,112,192; Sept. 29; Gaz. vol. 206; p. 1329.
Vise support, Pipe-. W. A. Pike. No. 1,111,032; Sept. 22; Gaz. vol. 206; p. 893.
Vises, Adjustment for bench-. C. E. Shields. No. 1,111,103; Sept. 22; Gaz. vol. 206; p. 918.
Voting device, Irregular-. C. H. Ocumpaugh. No. 1,111,854; Sept. 29; Gaz. vol. 206; p. 1216.
Voting-machine. A. L. Griffin. No. 1,109,124; Sept. 1; Gaz. vol. 206; p. 94.
Voting-machine. E. F. Chapman. No. 1,109,200; Sept. 1; Gaz. vol. 206; p. 122.
Voting-machine. J. H. McElroy. No. 1,110,811; Sept. 15; Gaz. vol. 206; p. 773.
Wagon, Dumping-. C. M. Manly. No. 1,110,450; Sept. 15; Gaz. vol. 206; p. 647.
Wagon-loader. C. L. Samp. No. 1,109,789; Sept. 8; Gaz. vol. 206; p. 369.
Wagon, Power-loading. C. W. Mayer. No. 1,111,846; Sept. 29; Gaz. vol. 206; p. 1213.
Wagon-rack. E. H. Studebaker. No. 1,108,942; Sept. 1; Gaz. vol. 206; p. 30.
Wagon steering-gear. P. H. Hendrickson. No. 1,109,752; Sept. 8; Gaz. vol. 206; p. 357.
Wall-anchor. I. B. Malaby. No. 1,111,660; Sept. 22; Gaz. vol. 206; p. 1110.
Wall-box. H. A. Stoddard. No. 1,112,426; Sept. 29; Gaz. vol. 206; p. 1413.
Wall-heater. G. F. Resnor. No. 1,109,466; Sept. 1; Gaz. vol. 206; p. 215.

ALPHABETICAL LIST OF DESIGNS.

Match-case. F. Nagoski. No. 46,411; Sept. 15; Gaz. vol. 206; p. 850.
Medal, medallion, or watch-charm. L. Gardin. No. 46,399; Sept. 15; Gaz. vol. 206; p. 847.
Megaphone. W. S. Lougee. No. 46,404; Sept. 15; Gaz. vol. 206; p. 848.
Metal or similar article. M. C. Staub. No. 46,376; Sept. 8; Gaz. vol. 206; p. 563.
Metal-worker's stock. S. A. Keller. No. 46,477; Sept. 29; Gaz. vol. 206; p. 1417.
Middy waist or blouse. H. Schwerz. No. 46,415; Sept. 15; Gaz. vol. 206; p. 850.
Mirror-stand. P. R. Seamon. No. 46,370; Sept. 8; Gaz. vol. 206; p. 562.
Musical instrument. F. Kordick. No. 46,366; Sept. 8; Gaz. vol. 206; p. 561.
Newspaper-dispensing device. F. P. MacLennan. No. 46,405; Sept. 15; Gaz. vol. 206; p. 848.
Omnibuses or other vehicles, Body for electrical. C. J. Field and R. Cilley. No. 46,432; Sept. 22; Gaz. vol. 206; p. 1139.
Pancake-turner. A. C. Selleck. No. 46,416; Sept. 15; Gaz. vol. 206; p. 850.
Picture-frame. A. Söderblom. No. 46,454; Sept. 22; Gaz. vol. 206; p. 1144.
Plane-body. A. A. Page. No. 46,446; Sept. 22; Gaz. vol. 206; p. 1142.
Powder box or can. E. Fuchs. No. 46,334; Sept. 1; Gaz. vol. 206; p. 284.
Pump. F. H. Limpicott. No. 46,479; Sept. 29; Gaz. vol. 206; p. 1417.
Pump-casing. W. E. Gorton. No. 46,336; Sept. 1; Gaz. vol. 206; p. 284.
Quilt. I. Wilkinson. Nos. 46,419–21; Sept. 15; Gaz. vol. 206; p. 851.
Raker, Joint-. J. W. Miller. No. 46,406; Sept. 15; Gaz. vol. 206; p. 849.
Refrigerator. C. O. Ullin. No. 46,381; Sept. 8; Gaz. vol. 206; p. 564.
Saw attachment. W. D. Foss. No. 46,361; Sept. 8; Gaz. vol. 206; p. 560.
Saw-handle. J. C. Dietrich. No. 46,396; Sept. 15; Gaz. vol. 206; p. 847.
Shade. J. H. Strong. No. 46,379; Sept. 8; Gaz. vol. 206; p. 564.
Shade-holder. J. J. Nash. No. 46,442; Sept. 22; Gaz. vol. 206; p. 1141.
Sheet metal. W. H. Stough. No. 46,456; Sept. 22; Gaz. vol. 206; p. 1144.
Shield or similar article. H. W. Pleister. No. 46,483; Sept. 29; Gaz. vol. 206; p. 1418.
Shirting, Cotton pongee. B. H. Smith. Nos. 46,371–5; Sept. 8; Gaz. vol. 206; pp. 562–3.
Shower-plate. J. J. Nash. No. 46,445; Sept. 22; Gaz. vol. 206; p. 1142.
Sounding-board support. G. J. Gaul. No. 46,362; Sept. 8; Gaz. vol. 206; p. 561.
Spool-holder. J. M. Cordell. No. 46,395; Sept. 15; Gaz. vol. 206; p. 847.
Spoon, fork, or similar article. H. Hillbom. No. 46,364; Sept. 8; Gaz. vol. 206; p. 561.
Spoon, fork, or similar article. B. D. Myers. No. 46,368; Sept. 8; Gaz. vol. 206; p. 562.
Spoons, forks, or similar articles, Handle for. C. A. Bennett. No. 46,354; Sept. 8; Gaz. vol. 206; p. 559.
Steering-wheel. R. M. McLain. No. 46,441; Sept. 22; Gaz. vol. 206; p. 1141.
Stove, Cooking-. G. W. Howes. No. 46,470; Sept. 29; Gaz. vol. 206; p. 1416.
Stove or range warming-oven. F. R. Henry. No. 46,380; Sept. 1; Gaz. vol. 206; p. 285.
Stoves, Gas-saving attachment for gas-. C. Huber. No. 46,401; Sept. 15; Gaz. vol. 206; p. 848.
Sun-dial. J. S. Alexander. No. 46,390; Sept. 15; Gaz. vol. 206; p. 846.
Table. H. R. Brown. No. 46,357; Sept. 8; Gaz. vol. 206; p. 560.
Table. G. P. Strobel. Nos. 46,377–8; Sept. 8; Gaz. vol. 206; p. 563.
Tire-casing. T. R. McKenna. No. 46,481; Sept. 29; Gaz. vol. 206; p. 1418.
Tire, Pneumatic. T. R. Palmer. No. 46,447; Sept. 22; Gaz. vol. 206; p. 1143.
Tire, Rubber. J. S. McClurg. No. 46,367; Sept. 8; Gaz. vol. 206; p. 562.
Tire-supporting bracket for automobiles. G. F. Discher. No. 46,360; Sept. 8; Gaz. vol. 206; p. 560.
Tire, Vehicle-. G. W. Daum and G. W. Shiveley. No. 46,359; Sept. 8; Gaz. vol. 206; p. 560.
Tire, Vehicle-. J. Christy. No. 46,428; Sept. 22; Gaz. vol. 206; p. 1138.
Tire, Vehicle-. R. J. Marshall. No. 46,439; Sept. 22; Gaz. vol. 206; p. 1141.
Tumbler. A. J. Sanford. No. 46,449; Sept. 22; Gaz. vol. 206; p. 1143.
Type, Font of. M. F. Benton. No. 46,330; Sept. 1; Gaz. vol. 206; p. 283.
Valve casing, Radiator-air-. G. D. Hoffman. Nos. 46,341–2; Sept. 1; Gaz. vol. 206; pp. 285–6.
Valve, Fractional inlet-. J. A. Donnelly. No. 46,431; Sept. 22; Gaz. vol. 206; p. 1139.
Vanity-case. A. Kaufmann. Nos. 46,344–5; Sept. 1; Gaz. vol. 206; p. 286.
Velvet. S. Blumenthal. No. 46,466; Sept. 29; Gaz. vol. 206; p. 1415.
Watch-fob. C. R. Blomberg. No. 46,392; Sept. 15; Gaz. vol. 206; p. 846.
Wrench and hose-spanner. C. E. Berry. No. 46,424; Sept. 22; Gaz. vol. 206; p. 1137.

ALPHABETICAL LIST OF TRADE-MARKS.

Abrasives, Iron and steel. Pittsburgh Crushed Steel Co. No. 99,903; Sept. 22; Gaz. vol. 206; p. 1159.
Acetyl-cellulose, Articles made of. Society of Chemical Industry in Basle. No. 99,656; Sept. 8; Gaz. vol. 206; p. 586.
Alimentary paste products. Fort Worth Macaroni Co. Nos. 99,964–6; Sept. 29; Gaz. vol. 206; p. 1432.
Alloys, Certain named metallic. Elektrizitätswerk Lonza. No. 99,450; Sept. 1; Gaz. vol. 206; p. 308.
Antiseptic preparations. Monroe Pharmacal Company. No. 100,011; Sept. 29; Gaz. vol. 206; p. 1433.
Antiseptics. W. S. Godwin. No. 99,975; Sept. 29; Gaz. vol. 206; p. 1432.
Asphaltum. Warner-Quinlan Asphalt Company. No. 99,522; Sept. 1; Gaz. vol. 206; p. 310.
Autographic registers. Autographic Register Company. No. 99,932; Sept. 29; Gaz. vol. 206; p. 1431.
Automobile-pumps. Boité & Weyer Co. Nos. 99,938–9; Sept. 29; Gaz. vol. 206; p. 1431.
Automobile-springs and wire wheels. W. S. Daniels. No. 99,440; Sept. 1; Gaz. vol. 206; p. 307.
Automobiles. F. A. Woods. No. 99,528; Sept. 1; Gaz. vol. 206; p. 310.
Automobiles. F. A. Woods. No. 99,672; Sept. 8; Gaz. vol. 206; p. 587.
Awnings. Bronx Window Shade & Awning Co. No. 99,420; Sept. 1; Gaz. vol. 206; p. 307.
Axes. Mann Edge Tool Co. No. 100,002; Sept. 29; Gaz. vol. 206; p. 1433.
Bacilli preparations for treatment of tuberculosis, &c. Kalle & Co., Aktiengesellschaft. No. 99,470; Sept. 1; Gaz. vol. 206; p. 308.
Baking-powder. Vittucci Importing Co. No. 99,520; Sept. 1; Gaz. vol. 206; p. 310.
Baking-powder. The Woolson Spice Company. No 100,056; Sept. 29; Gaz. vol. 206; p. 1434.
Balls, mitts, base-ball, batting, and sporting gloves, Base-. Bigelow & Dowse Company. No. 99,419; Sept. 1; Gaz. vol. 206; p. 307.
Bandages, belts, surgical pads and stockings, &c. Earle & Lyon. No. 99,447; Sept. 1; Gaz. vol. 206; p. 308.
Bath preparations, Medicinal. F. Fellenberg. No. 99,963; Sept. 29; Gaz. vol. 206; p. 1432.
Bed-springs. Cleveland Wire Spring Co. No. 99,431; Sept. 1; Gaz. vol. 206; p. 307.
Beer. Pittsburgh Brewing Company. No. 99,495; Sept. 1; Gaz. vol. 206; p. 309.
Beer. A. Schonegg. No. 99,650; Sept. 8; Gaz. vol. 206; p. 586.
Beer. Standard Brewing Co. No. 99,659; Sept. 8; Gaz. vol. 206; p. 586.
Beer. The Central Brewing Company of New York. Nos. 99,845-6; Sept. 22; Gaz. vol. 206; p. 1157.
Beer, ale, and porter. Pittsburgh Brewing Company. No. 100,025; Sept. 29; Gaz. vol. 206; p. 1433.
Beer, beer poor in alcohol, malt extracts. Firm of G. Pschorr. No. 99,905; Sept. 22; Gaz. vol. 206; p. 1159.
Beer, soda, &c., waters, and ginger-ale, Weiss. John Graf Company. No. 99,578; Sept. 8; Gaz. vol. 206; p. 584.
Beer, Sweet. J. J. Wolf. No. 99,925; Sept. 22; Gaz. vol. 206; p. 1159.
Belts, Power transmission and conveyer. The Continental Supply Company. No. 99,690; Sept. 15; Gaz. vol. 206; p. 869.
Beverage and syrup, Non-intoxicating carbonated. O'Halloran & Bishop. No. 99,490; Sept. 1; Gaz. vol. 206; p. 309.
Beverage, Powder for making a laxative tonic. Stewart Food Company. No. 99,915; Sept. 22; Gaz. vol. 206; p. 1159.
Beverage syrup, Soda-fountain-. Magnus & Lauer. No. 100,000; Sept. 29; Gaz. vol. 206; p. 1433.
Beverages and soda-water syrups. C. King. No. 99,889; Sept. 22; Gaz. vol. 206; p. 1158.
Beverages, Malt. The Joseph Hensler Brewing Company. No. 99,580; Sept. 8; Gaz. vol. 206; p. 584.
Beverages, Non-intoxicating carbonated. A. C. Rosetter. No. 99,907; Sept. 22; Gaz. vol. 206; p. 1159.
Beverages, Non-intoxicating carbonated tonic. E. Diehl. No. 99,858; Sept. 22; Gaz. vol. 206; p. 1157.
Biscuit. Loose-Wiles Biscuit Company. No. 99,607; Sept. 8; Gaz. vol. 206; p. 585.
Biscuit. National Biscuit Company. Nos. 99,614–15; Sept. 8; Gaz. vol. 206; p. 585.
Biscuit. National Biscuit Company. No. 99,617; Sept. 8; Gaz. vol. 206; p. 585.
Biscuit. Loose-Wiles Biscuit Company. No. 99,762; Sept. 15; Gaz. vol. 206; p. 871.
Biscuit and candy. National Biscuit Company. No. 99,616; Sept. 8; Gaz. vol. 206; p. 585.
Bits, spurs, stirrups, and saddlery hardware. August Buermann Manufacturing Co. No. 99,421; Sept. 1; Gaz. vol. 206; p. 307.
Blacking, Boot and shoe. Société des Cirages Français. No. 99,912; Sept. 22; Gaz. vol. 206; p. 1159.
Blank forms for abstracts of real-estate title. The Estes Title Indexes Company. No. 99,722; Sept. 15; Gaz. vol. 206; p. 870.
Blue, Laundry. M. A. Mitchelson. No. 100,010; Sept. 29; Gaz. vol. 206; p. 1433.
Bluing, Laundry. H. M. Spahr. No. 99,657; Sept. 8; Gaz. vol. 206; p. 586.
Boiler and supply-water sediment freeing compound. M. P. Reinhardt. No. 99,630; Sept. 8; Gaz. vol. 206; p. 586.
Boilers and radiators, Steam and hot-water. Pressed Metal Radiator Company. Nos. 99,781–2; Sept. 15; Gaz. vol. 206; p. 872.
Books, Children's. D. Wolf. No. 99,527; Sept. 1; Gaz. vol. 206; p. 310.
Boots, shoes, and slippers. Foss, Packard & Co. No. 99,452; Sept. 1; Gaz. vol. 206; p. 308.
Bottle-making machinery and appliances therefor. Arrow Bottlers Company. No. 99,930; Sept. 29; Gaz. vol. 206; p. 1431.
Bracelets, Watch-. The Mealy Manufacturing Company. No. 100,005; Sept. 29; Gaz. vol. 206; p. 1433.
Brandy. A. D. Shaw & Co. No. 99,909; Sept. 22; Gaz. vol. 206; p. 1159.
Brass, copper, gold, and silver. A. Levy. No. 99,606; Sept. 8; Gaz. vol. 206; p. 585.
Bread. C. O. Boggs. No. 99,541; Sept. 8; Gaz. vol. 206; p. 583.
Bread. E. R. Braun. No. 99,544; Sept. 8; Gaz. vol. 206; p. 583.
Bread. Schulze Baking Company. Nos. 99,651–2; Sept. 8; Gaz. vol. 206; p. 586.
Bread. N. E. Byers. No. 99,687; Sept. 15; Gaz. vol. 206; p. 869.
Bread. Schulze Baking Company. No. 99,798; Sept. 15; Gaz. vol. 206; p. 872.
Bread. Williams Baking Company. No. 99,828; Sept. 15; Gaz. vol. 206; p. 873.
Brick. E. L. Cook. No. 99,433; Sept. 1; Gaz. vol. 206; p. 307.
Bricks, Dover Fire Brick Company. No. 99,445; Sept. 1; Gaz. vol. 206; p. 308.
Bricks, tile, flue-lining, &c. Chicago Fire Brick Co. No. 99,427; Sept. 1; Gaz. vol. 206; p. 307.
Bristles, horsehair, fibers, animal and artificial hairs. F. H. Cone. No. 99,432; Sept. 1; Gaz. vol. 206; p. 307.
Building material. Hoquiam Lumber & Shingle Company. No. 99,465; Sept. 1; Gaz. vol. 206; p. 308.
Butter. H. Ford. No. 99,870; Sept. 22; Gaz. vol. 206; p. 1158.
Butter. F. H. Stanley. No. 100,040; Sept. 29; Gaz. vol. 206; p. 1434.
Cake. W. A. La Bontee. No. 99,601; Sept. 8; Gaz. vol. 206; p. 585.
Cakes, Chocolate-covered. Loose-Wiles Biscuit Company. No. 99,996; Sept. 29; Gaz. vol. 206; p. 1433.
Calcimine. The La Salle Varnish Co. No. 99,474; Sept. 1; Gaz. vol. 206; p. 308.
Calcimines and water-paints. M. E. Fox & Co. No. 99,453; Sept. 1; Gaz. vol. 206; p. 308.
Candies. Lovell & Covel Company. Nos. 99,763–5; Sept. 15; Gaz. vol. 206; p. 871.
Candies. The National Candy Company. No. 99,772; Sept. 15; Gaz. vol. 206; p. 871.
Candies. Shelby Candy & Mfg. Co. No. 99,802; Sept. 15; Gaz. vol. 206; p. 872.
Candies. F. Glass. No. 99,972; Sept. 29; Gaz. vol. 206; p. 1432.
Candies and chocolates. Ballweg & Greenwald. No. 99,936; Sept. 29; Gaz. vol. 206; p. 1431.
Candy. Imperial Candy Co. No. 99,592; Sept. 8; Gaz. vol. 206; p. 584.
Candy. Robt. F. Mackenzie Co. No. 99,608; Sept. 8; Gaz. vol. 206; p. 585.
Candy. The Fair. Nos. 99,723–5; Sept. 15; Gaz. vol. 206; p. 870.
Candy. Hawley & Hoops. No. 99,737; Sept. 15; Gaz. vol. 206; p. 870.
Candy. The Frederick W. Lipps Company of Baltimore City. No. 99,760; Sept. 15; Gaz. vol. 206; p. 871.
Candy. Ward-Owsley Co. No. 99,823; Sept. 15; Gaz. vol. 206; p. 873.
Candy. John G. Woodward & Co. No. 99,830; Sept. 15; Gaz. vol. 206; p. 873.
Candy. R. Wangenheim. No. 99,922; Sept. 22; Gaz. vol. 206; p. 1159.

Candy. Miller-Elmer Mfg. Co. No. 100,007; Sept. 29; Gaz. vol. 206; p. 1433.
Candy, Chocolate. The George Close Company. No. 99,696; Sept. 15; Gaz. vol. 206; p. 869.
Candy, Chocolate. Helt-Miller-Lau Co. No. 99,739; Sept. 15; Gaz. vol. 206; p. 871.
Canned baked beans and tomatoes. F. G. Davis. No. 99,567; Sept. 8; Gaz. vol. 206; p. 584.
Canned corn. Snow Flake Canning Co. No. 99,911; Sept. 22; Gaz. vol. 206; p. 1159.
Canned fruits and vegetables. Frick Bros. No. 99,967; Sept. 29; Gaz. vol. 206; p. 1432.
Canned pineapple. Hawaiian Pineapple Co. Nos. 99,981–2; Sept. 29; Gaz. vol. 206; p. 1432.
Canned salmon. Kadiak Fisheries Co. Nos. 99,596–8; Sept. 8; Gaz. vol. 206; p. 585.
Canned salmon. Kadiak Fisheries Co. No. 99,752; Sept. 15; Gaz. vol. 206; p. 871.
Canned salmon. Union Fishermen's Co-operative Pkg. Co. No. 99,818; Sept. 15; Gaz. vol. 206; p. 873.
Caramels. Loose-Wiles Biscuit Company. No. 99,997; Sept. 29; Gaz. vol. 206; p. 1433.
Cards for bookkeeeping systems, Blank. Nicols, Dean & Gregg. No. 100,021; Sept. 29; Gaz. vol. 206; p. 1433.
Carriages, motor carriages and chassis, &c. Firm of H. Büssing. No. 99,423; Sept. 1; Gaz. vol. 206; p. 307.
Case hardening materials. Rodman Chemical Company. No. 99,789; Sept. 15; Gaz. vol. 206; p. 872.
Catsup, pickles, olive-oil, jams, &c. The J. K. Armsby Company. No. 99,835; Sept. 22; Gaz. vol. 206; p. 1157.
Cement, Portland. Marquette Cement Manufacturing Co. No. 99,609; Sept. 8; Gaz. vol. 206; p. 585.
Cheese. A. J. Blackley. No. 99,540; Sept. 8; Gaz. vol. 206; p. 583.
Cheeses. P. Sussman. No. 99,664; Sept. 8; Gaz. vol. 206; p. 587.
Cheeses. Vienna Delicatessen Co. No. 99,668; Sept. 8; Gaz. vol. 206; p. 587.
Chemical and pharmaceutical preparations, Certain named. Society of Chemical Industry in Basle. Nos. 99,913–14; Sept. 22; Gaz. vol. 206; p. 1159.
Chlorid of lime, concentrated lye, and powdered borax. The Sinclair Manufacturing Company. No. 99,654; Sept. 8; Gaz. vol. 206; p. 586.
Chocolate, chocolate liquors, and cocoa. H. Heide. No. 99,579; Sept. 8; Gaz. vol. 206; p. 584.
Chocolate creams. Loose-Wiles Biscuit Company. No. 99,998; Sept. 29; Gaz. vol. 206; p. 1433.
Chocolates. Reymer & Brothers. No. 99,633; Sept. 8; Gaz. vol. 206; p. 586.
Cigarettes. A. B. C. Importation Co. Nos. 99,467–8; Sept. 1; Gaz. vol. 206; p. 308.
Cigarettes. Old Drury Cigarette Co. No. 99,491; Sept. 1; Gaz. vol. 206; p. 309.
Cigarettes. Godfrey S. Mahn. No. 99,766; Sept. 15; Gaz. vol. 206; p. 871.
Cigarettes. N. Varda. No. 99,921; Sept. 22; Gaz. vol. 206; p. 1159.
Cigars. E. B. Nora Gon. No. 99,487; Sept. 1; Gaz. vol. 206; p. 309.
Cigars. R. Rose. No. 99,790; Sept. 15; Gaz. vol. 206; p. 872.
Cigars. Schwab Bros. & Baer. No. 99,799; Sept. 15; Gaz. vol. 206; p. 872.
Cigars. Gans Brothers. No. 99,874; Sept. 22; Gaz. vol. 206; p. 1158.
Cigars. C. C. Porter. No. 99,904; Sept. 22; Gaz. vol. 206; p. 1159.
Cigars. I. Teitelbaum. No. 99,917; Sept. 22; Gaz. vol. 206; p. 1159.
Cigars, cheroots, cigarettes, and tobaccos. Dorr Cigar Factory. No. 99,710; Sept. 15; Gaz. vol. 206; p. 870.
Cigars, cigarettes, and tobacco. L. Blase. No. 99,684; Sept. 15; Gaz. vol. 206; p. 869.
Cigars, cigarettes, cheroots, and tobacco. Swaab, San & Marqusee. No. 99,814; Sept. 15; Gaz. vol. 206; p. 873.
Cleaner for woodwork and metal, Emulsion. The Perfectol Company. No. 99,902; Sept. 22; Gaz. vol. 206; p. 1159.
Cleaners and sweepers, Vacuum. The Ramey Co. No. 100,026; Sept. 29; Gaz. vol. 206; p. 1433.
Cleaners, Glove and clothes. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. No. 99,854; Sept. 22; Gaz. vol. 206; p. 1157.
Cleaning and polishing devices, Certain named floor. Milwaukee Sales Co. No. 99,770; Sept. 15; Gaz. vol. 206; p. 871.
Cleaning and polishing substance. American Cleanser Company. No. 99,679; Sept. 15; Gaz. vol. 206; p. 869.
Cleaning powder. Abolisher Chemical Company. No. 99,675; Sept. 15; Gaz. vol. 206; p. 869.
Cleanser. The Norman Company. No. 99,774; Sept. 15; Gaz. vol. 206; p. 872.
Cleanser. The Reynolds Corporation. No. 99,906; Sept. 22; Gaz. vol. 206; p. 1159.
Cleansing and scouring compound. Nickel Plate Stove Polish Co. No. 99,899; Sept. 22; Gaz. vol. 206; p. 1159.
Clocks, Alarm-. George Borgfeldt & Co. No. 99,686; Sept. 15; Gaz. vol. 206; p. 869.
Cloth-cutting machines. H. Maimin Co. No. 100,001; Sept. 29; Gaz. vol. 206; p. 1433.
Coats and rain-coats, Cravenette. True-Fit Waterproof Co. No. 99,517; Sept. 1; Gaz. vol. 206; p. 310.
Coats, cloaks, wraps, and capes. The Salt's Textile Manufacturing Company. Nos. 99,504–5; Sept. 1; Gaz. vol. 206; p. 309.
Coats, cloaks, wraps, and capes. The Salt's Textile Manufacturing Company. No. 99,647; Sept. 8; Gaz. vol. 206; p. 586.
Coffee. Bowers Brothers. No. 99,542; Sept. 8; Gaz. vol. 206; p. 583.
Coffee. Chase & Sanborn. No. 99,548; Sept. 8; Gaz. vol. 206; p. 583.
Coffee. J. B. Greenhut Co., formerly Greenhut, Siegel Cooper Co. No. 99,732; Sept. 15; Gaz. vol. 206; p. 870.
Coffee. Jellico Grocery Company. No. 99,751; Sept. 15; Gaz. vol. 206; p. 871.
Coffee. Powell-Sanders Co. No. 99,780; Sept. 15; Gaz. vol. 206; p. 872.
Coffee. McFadden Coffee & Spice Co. No. 99,893; Sept. 22; Gaz. vol. 206; p. 1158.
Coffee. The Woolson Spice Co. No. 99,926; Sept. 22; Gaz. vol. 206; p. 1159.
Coffee. Chase & Sanborn. No. 99,946; Sept. 29; Gaz. vol. 206; p. 1431.
Coffee. Grand Union Tea Company. No. 99,974; Sept. 29; Gaz. vol. 206; p. 1432.
Coffee and tea. Meyer, Foote & Dayton Co. No. 99,769; Sept. 15; Gaz. vol. 206; p. 871.
Coffee, Blended. Acker, Merrall & Condit Company. No. 99,531; Sept. 8; Gaz. vol. 206; p. 583.
Coffee, Package roasted. West Coast Grocery Company. No. 99,669; Sept. 8; Gaz. vol. 206; p. 587.
Coffee, Roasted. C. T. Paris. No. 99,624; Sept. 8; Gaz. vol. 206; p. 585.
Coffee, Roasted. Steinwender-Stoffregen Coffee Co. Nos. 99,661–2; Sept. 8; Gaz. vol. 206; p. 586.
Coffee, teas, and spices. The Woolson Spice Company. No. 99,831; Sept. 15; Gaz. vol. 206; p. 873.
Coffees, teas, and spices. Knell & Prengel. No. 99,890; Sept. 22; Gaz. vol. 206; p. 1158.
Combs, Toilet-. Noyes Comb Company. No. 99,489; Sept. 1; Gaz. vol. 206; p. 309.
Cooking apparatus, Retained-heat. Grand Rapids Upholstering Co. No. 99,458; Sept. 1; Gaz. vol. 206; p. 308.
Coop, Brood-. P. J. Speicher. No. 99,811; Sept. 15; Gaz. vol. 206; p. 873.
Cordial, Blackberry. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. No. 99,853; Sept. 22; Gaz. vol. 206; p. 1157.
Corn, Popping-. The Albert Dickinson Company. Nos. 99,708–9; Sept. 15; Gaz. vol. 206; p. 870.
Corn, Yellow-dent seed-. Courteen Seed Company. No. 99,436; Sept. 1; Gaz. vol. 206; p. 307.
Cornmeal. Scott County Milling Company. No. 99,800; Sept. 15; Gaz. vol. 206; p. 872.
Cotton and wool piece goods. Henry F. Scatchard Mfg. Co. No. 99,506; Sept. 1; Gaz. vol. 206; p. 309.
Cotton goods, Napped. Beacon Manufacturing Co. No. 99,536; Sept. 8; Gaz. vol. 206; p. 583.
Cotton piece goods. Tremont & Suffolk Mills. No. 99,516; Sept. 1; Gaz. vol. 206; p. 310.
Cotton piece goods, Mercerized. C. K. Glason. No. 99,576; Sept. 8; Gaz. vol. 206; p. 584.
Cradles, Self-swinging. The Automatic Cradle Mfg. Co. No. 99,534; Sept. 8; Gaz. vol. 206; p. 583.
Crayons. Binney & Smith Company. No. 99,838; Sept. 22; Gaz. vol. 206; p. 1157.
Cream, milk, and butter. C. S. Pope & Sons. No. 99,626; Sept. 8; Gaz. vol. 206; p. 585.
Cream, Shaving-. H. A. W. Wood. No. 99,829; Sept. 15; Gaz. vol. 206; p. 873.
Cream, tooth paste and wash, Cold-. United Drug Company. No. 100,052; Sept. 29; Gaz. vol. 206; p. 1434.
Creams, face-powder, and peroxid of hydrogen, Cold and massage. T. A. Goodman. No. 99,577; Sept. 8; Gaz. vol. 206; p. 584.
Creosote, oil, and tar, Pine. Forest Products Co. No. 99,451; Sept. 1; Gaz. vol. 206; p. 308.
Cutlery and tools and parts thereof, Certain named. E. Zinn. No. 99,529; Sept. 1; Gaz. vol. 206; p. 310.
Cutlery, Certain named. Challenge Cutlery Corporation. No. 99,944; Sept. 29; Gaz. vol. 206; p. 1431.
Cutlery, tools, and machines, Certain named. C. Morrill. No. 100,012; Sept. 29; Gaz. vol. 206; p. 1433.
Cutters or silo-fillers and baling-presses, Ensilage-. Robinson & Co. No. 100,029; Sept. 29; Gaz. vol. 206; p. 1434.
Dates. A. W. Morris Co. No. 99,771; Sept. 15; Gaz. vol. 206; p. 871.
Designs for colleges and fraternities, Ornamental. Utley's Inc. No. 99,819; Sept. 15; Gaz. vol. 206; p. 873.
Diamonds, rubies, emeralds, pearls, &c. H. E. Kerstine. No. 99,990; Sept. 29; Gaz. vol. 206; p. 1432.
Dishes, plates, and bowls, Table and ornamental. The Worcester Royal Porcelain Company. No. 99,927; Sept. 22; Gaz. vol. 206; p. 1159.
Disinfectants, deodorants, perfumes, and porous holders therefor. Shoemaker & Busch. No. 99,803; Sept. 15; Gaz. vol. 206; p. 872.
Disinfectants, Internal. J. D. Riedel Aktiengesellschaft. No. 99,786; Sept. 15; Gaz. vol. 206; p. 872.
Dredging apparatus. Bay City Dredge Works. No. 99,937; Sept. 29; Gaz. vol. 206; p. 1431.

Dresses and costumes, Ladies' and misses'. Melville A. Gunst Costume Co. No. 99,459; Sept. 1; Gaz. vol. 206; p. 308.
Drills and riveting and chipping hammers, Rotary. Ingersoll-Rand Company. No. 99,987; Sept. 29; Gaz. vol. 206; p. 1432.
Drying-cabinets. The Hill-Canton Dryer Company. No. 99,587; Sept. 8; Gaz. vol. 206; p. 584.
Electric batteries. National Carbon Company. Nos. 100,017–18; Sept. 29; Gaz. vol. 206; p. 1433.
Electric-lighting fixtures. The Horn & Brannen Mfg. Co. No. 99,983; Sept. 29; Gaz. vol. 206; p. 1432.
Electric transformers. E. P. Maurer. No. 99,480; Sept. 1; Gaz. vol. 206; p. 309.
Electrical batteries. National Carbon Company. No. 100,016; Sept. 29; Gaz. vol. 206; p. 1433.
Electrical dynamos, motors, &c. Splitdorf Electrical Company. No. 99,509; Sept. 1; Gaz. vol. 206; p. 310.
Electrical supplies, Certain named. Imperial Rubber Co. No. 99,985; Sept. 29; Gaz. vol. 206; p. 1432.
Elevators and dumb-waiters, electric motors, &c., Electrically-operated. G. K. Mitchell. No. 100,009; Sept. 29; Gaz. vol. 206; p. 1433.
Emulsion of port-wine and olive-oil. F. Koref & Company. No. 99,756; Sept. 15; Gaz. vol. 206; p. 871.
Engines and parts thereof, Internal-combustion. International Harvester Corporation. No. 99,749; Sept. 15; Gaz. vol. 206; p. 871.
Engines, Composition to remove carbonaceous deposits from internal-combustion. E. R. Bule. No. 99,942; Sept. 29; Gaz. vol. 206; p. 1431.
Engines, Gasolene pumping. Fuller and Johnson Manufacturing Company. No. 99,969; Sept. 29; Gaz. vol. 206; p. 1432.
Envelops. H. Trenchard, Jr. No. 99,817; Sept. 15; Gaz. vol. 206; p. 873.
Explosives, High. Hercules Powder Company. No. 99,462; Sept. 1; Gaz. vol. 206; p. 308.
Eye-protectors. F. A. Hardy & Company. No. 99,980; Sept. 29; Gaz. vol. 206; p. 1432.
Eyeglass-polish. G. E. Eckert. No. 99,862; Sept. 22; Gaz. vol. 206; p. 1157.
Eyeglasses and spectacles. The F. W. King Optical Company. No. 99,992; Sept. 29; Gaz. vol. 206; p. 1432.
Fabric, Colored, stiffened, and finished. The Holliston Mills. No. 99,464; Sept. 1; Gaz. vol. 206; p. 308.
Farinaceous compound with fruit flavorings. Fruit Puddine Co. No. 99,574; Sept. 8; Gaz. vol. 206; p. 584.
Feathers, plumes, &c., Artificial and fancy. E. Eisemann & Co. Nos. 99,448–9; Sept. 1; Gaz. vol. 206; p. 308.
Feed, middlings, and cracked corn. Tioga Mill & Elevator Company. No. 99,666; Sept. 8; Gaz. vol. 206; p. 587.
Fertilizer. American Agricultural Chemical Co. No. 99,415; Sept. 1; Gaz. vol. 206; p. 307.
Fertilizer. American Agricultural Chemical Co. No. 99,678; Sept. 15; Gaz. vol. 206; p. 869.
Fertilizer, chemical drier. Cobb County Chemical Mining Co. No. 99,697; Sept. 15; Gaz. vol. 206; p. 869.
Fertilizers. The Atlantic Chemical Corporation. Nos. 99,417–18; Sept. 1; Gaz. vol. 206; p. 307.
Fertilizers. F. S. Royster Guano Co. No. 99,500; Sept. 1; Gaz. vol. 206; p. 309.
Fertilizers. The Atlantic Chemical Corporation. No. 99,533; Sept. 8; Gaz. vol. 206; p. 583.
Fertilizers. Columbia Guano Co. Nos. 99,552–6; Sept. 8; Gaz. vol. 206; p. 583.
Fertilizers. F. S. Royster Guano Co. Nos. 99,637–45; Sept. 8; Gaz. vol. 206; p. 586.
Fertilizers. The Robert A Woolridge. No. 99,673; Sept. 8; Gaz. vol. 206; p. 587.
Fertilizers. F. S. Royster Guano Co. Nos. 99,791–3; Sept. 15; Gaz. vol. 206; p. 872.
Flannel in the piece, Robe-. Beacon Manufacturing Co. No. 99,539; Sept. 8; Gaz. vol. 206; p. 583.
Flannel piece goods. F. Doble & Sons. No. 99,444; Sept. 1; Gaz. vol. 206; p. 308.
Flavoring extracts for foods. Price Flavoring Extract Company. No. 99,783; Sept. 15; Gaz. vol. 206; p. 872.
Flour, coffee, and tea, Wheat-. The Holbrook Grocery Co. No. 99,881; Sept. 22; Gaz. vol. 206; p. 1158.
Flour, Self-rising wheat-. Model Mill Company. No. 99,613; Sept. 8; Gaz. vol. 206; p. 585.
Flour, Self-rising. Consolidated Grocery Company. No. 99,698; Sept. 15; Gaz. vol. 206; p. 869.
Flour, Self-rising. The Dunlop Milling Co. No. 99,712; Sept. 15; Gaz. vol. 206; p. 870.
Flour, Self-rising. Mose H. Land Milling Company. No. 99,757; Sept. 15; Gaz. vol. 206; p. 871.
Flour, Self-rising wheat-. Schultz, Baujan & Co. No. 99,797; Sept. 15; Gaz. vol. 206; p. 872.
Flour, Self-rsing wheat-. Slater Mill & Elevator Company. No. 99,804; Sept. 15; Gaz. vol. 206; p. 872.
Flour, Wheat-. Cadick Milling Company. No. 99,546; Sept. 8; Gaz. vol. 206; p. 583.
Flour, Wheat-. The Crescent Mill & Elevator Co. Nos. 99,564–5; Sept. 8; Gaz. vol. 206; p. 584.
Flour, Wheat-. Saxony Mills. No. 99,648; Sept. 8; Gaz. vol. 206; p. 586.
Flour, Wheat-. [illegible]alten Co. No. 99,677; Sept. 15; Gaz. vol. 206; p. 869.
Flour, Wheat-. Bay State Milling Co. No. 99,682; Sept. 15; Gaz. vol. 206; p. 869.
Flour, Wheat-. The Canadian Mill and Elevator Company. No. 99,690; Sept. 15; Gaz. vol. 206; p. 869.
Flour, Wheat-. Slater Mill and Elevator Company. No. 99,805; Sept. 15; Gaz. vol. 206; p. 872.
Flour, Wheat-. J. Allen Smith & Company. No. 99,806; Sept. 15; Gaz. vol. 206; p. 872.
Flour, Wheat-. Valier & Spies Milling Co. No. 99,820; Sept. 15; Gaz. vol. 206; p. 873.
Flour, Wheat-. Aunt Jemima Mills Company. No. 99,836; Sept. 22; Gaz. vol. 206; p. 1157.
Flour, Wheat-. Clyde Milling and Elevator Company. No. 99,851; Sept. 22; Gaz. vol. 206; p. 1157.
Flour, Wheat-. The John P. Dousman Milling Company. No. 99,859; Sept. 22; Gaz. vol. 206; p. 1157.
Flour, Wheat-. Federal Milling Company. No. 99,864; Sept. 22; Gaz. vol. 206; p. 1158.
Flour, Wheat-. Charles Tiedemann Milling Co. No. 99,919; Sept. 22; Gaz. vol. 206; p. 1159.
Flour, Wheat-. Lawrenceburg Roller Mills Co. No. 99,994; Sept. 29; Gaz. vol. 206; p. 1432.
Flour, Wheat-. Statesville Flour Mill Company, Corp. Nos. 100,041–2; Sept. 29; Gaz. vol. 206; p. 1434.
Fluid intended to be used before confinements. E. Handl. No. 99,460; Sept. 1; Gaz. vol. 206; p. 308.
Fly-catchers. F. Kaiser. No. 99,887; Sept. 22; Gaz. vol. 206; p. 1158.
Food for infants, Prepared. Dr. Theinhardt's Nährmittel-Gesellschaft m. b. H. No. 99,918; Sept. 22; Gaz. vol. 206; p. 1159.
Foods, Certain named. D. De Bernardi & Co. No. 99,568; Sept. 8; Gaz. vol. 206; p. 584.
Foods, Certain named. The Weideman Co. No. 99,825; Sept. 15; Gaz. vol. 206; p. 873.
Foods, Certain named. Monopol Import Export Union. No. 99,896; Sept. 22; Gaz. vol. 206; p. 1158.
Footwear, Certain named. Outing Shoe Co. No. 99,621; Sept. 8; Gaz. vol. 206; p. 585.
Friction-tape. F. Chapman. No. 99,945; Sept. 29; Gaz. vol. 206; p. 1431.
Fruit, Citrus. R. R. Sutherland. Nos. 100,045–6; Sept. 29; Gaz. vol. 206; p. 1434.
Fruit jellies and preserves, Citrus. J. M. Cameron. No. 99,842; Sept. 22; Gaz. vol. 206; p. 1157.
Fruits, Citrus. Co-operative Orange Ass'n. Nos. 99,955–6; Sept. 29; Gaz. vol. 206; p. 1431.
Furniture and automobile polishes. Queen City Specialty Company. No. 99,629; Sept. 8; Gaz. vol. 206; p. 585.
Furniture-polish. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. No. 99,561; Sept. 8; Gaz. vol. 206; p. 584.
Furniture-polish. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. Nos. 99,700–1; Sept. 15; Gaz. vol. 206; p. 869.
Furniture, Steel. The Keyless Lock Co. No. 99,600; Sept. 8; Gaz. vol. 206; p. 585.
Fuses. Germania Importing Company. No. 99,457; Sept. 1; Gaz. vol. 206; p. 308.
Games. J. J. Nordman. No. 99,488; Sept. 1; Gaz. vol. 206; p. 309.
Gasolene, naphtha, oils, &c. Standard Oil Company of Louisiana. No. 99,660; Sept. 8; Gaz. vol. 206; p. 586.
Gates and posts, Metal fencing-. Dwiggins Wire Fence Company. No. 99,959; Sept. 29; Gaz. vol. 206; p. 1432.
Ginger-beer. H. J. Middleton. No. 100,006; Sept. 29; Gaz. vol. 206; p. 1433.
Glasses, Protection-. Julius King Optical Company. No. 99,991; Sept. 29; Gaz. vol. 206; p. 1432.
Glassware, Table-. Imperial Glass Company. Nos. 99,747–8; Sept. 15; Gaz. vol. 206; p. 871.
Gloves. Sears, Roebuck and Co. No. 99,653; Sept. 8; Gaz. vol. 206; p. 586.
Goggles, Automobile. T. A. Willson & Co. No. 99,526; Sept. 1; Gaz. vol. 206; p. 310.
Grains, Brewers' dried. Milwaukee Grains & Feed Company. No. 99,612; Sept. 8; Gaz. vol. 206; p. 585.
Grape-fruit, oranges, kumquats, &c., Fresh. The St. Lucie Fruit Co. No. 99,658; Sept. 8; Gaz. vol. 206; p. 586.
Gum, Antitoxin chewing-. W. F. Cutler. No. 99,566; Sept. 8; Gaz. vol. 206; p. 584.
Gum, Chewing-. The Bee Bee Confection Company. No. 99,683; Sept. 15; Gaz. vol. 206; p. 869.
Gum, Chewing-. Franklin Caro Co. No. 99,871; Sept. 22; Gaz. vol. 206; p. 1158.
Gum, Chewing-. Wm. Wrigley Jr. Company. Nos. 100,058–70; Sept. 29; Gaz. vol. 206; pp. 1434–5.
Hair-tonic. Baldpate Co. No. 99,935; Sept. 29; Gaz. vol. 206; p. 1431.
Hair-tonic and toilet water. N. Kanter & Son. No. 99,471; Sept. 1; Gaz. vol. 206; p. 308.
Handkerchiefs. Herrmann, Aukam & Co. Nos. 99,581–5; Sept. 8; Gaz. vol. 206; p. 584.
Hat and bonnet frames, Materials for making. W. Rosenfield. No. 99,635; Sept. 8; Gaz. vol. 206; p. 586.
Hats and caps. The Knox Hat Manufacturing Company. No. 99,473; Sept. 1; Gaz. vol. 206; p. 308.
Hats, Straw. Pacific Commercial Company. No. 99,622; Sept. 8; Gaz. vol. 206; p. 585.
Hay-fever, catarrhal conditions, and eye-wash. E. Roller. No. 100,032; Sept. 29; Gaz. vol. 206; p. 1434.
Heat-producer and smoke-reducer used on coal, coke, and other fuels. Nitro-Ignitum Mfg. Co. No. 99,900; Sept. 22; Gaz. vol. 206; p. 1159.
Hop extract of cereals, Unfermented. Grain Juice Company. No. 99,877; Sept. 22; Gaz. vol. 206; p. 1158.
Hose-supporters. A. Stein & Company. No. 99,510; Sept. 1; Gaz. vol. 206; p. 310.

Hose-supporters. C. J. Higley. No. 99,586; Sept. 8; Gaz. vol. 206; p. 584.
Hosiery. J. W. Landenberger & Co. Nos. 99,602–5; Sept. 8; Gaz. vol. 206; p. 585.
Hosiery, Men's and boys'. Rice-Stix Dry Goods Company. No. 99,634; Sept. 8; Gaz. vol. 206; p. 586.
Ice-creams and ices. T. D. Cook & Co. No. 99,949; Sept. 29; Gaz. vol. 206; p. 1431.
Insecticides. Wm. Cooper & Nephews. No. 99,950; Sept. 29; Gaz. vol. 206; p. 1431.
Jar rings, Fruit-. Samuel Cupples Wooden Ware Company. No. 99,705; Sept. 15; Gaz. vol. 206; p. 870.
Jewelry. The H. W. K. Company. No. 99,979; Sept. 29; Gaz. vol. 206; p. 1432.
Jewelry, Gold and silver. Swift and Fisher. No. 100,047; Sept. 29; Gaz. vol. 206; p. 1434.
Kerosene. W. R. Grace & Co. No. 99,976; Sept. 29; Gaz. vol. 206; p. 1432.
Kinematographic apparatus. Cie Gle de Phonographes, Cinematographes et Appareils de Precision. No. 99,695; Sept. 15; Gaz. vol. 206; p. 869.
Knitted vests, pants, union suits, and corset-covers. C. A. Powell. No. 99,628; Sept. 8; Gaz. vol. 206; p. 585.
Lamp globes, shades, and reflectors, Glass. H. G. McFaddin & Co. No. 99,481; Sept. 1; Gaz. vol. 206; p. 309.
Lamps, columns, bases, globes, &c., Glass. General Electric Company. No. 99,728; Sept. 15; Gaz. vol. 206; p. 870.
Laxative tablets or powder. New England Drug Company. No. 99,486; Sept. 1; Gaz. vol. 206; p. 309.
Laxatives. F. Stohr. No. 99,512; Sept. 1; Gaz. vol. 206; p. 310.
Leather. The Wilder-Manning Tanning Co. Nos. 99,524–5; Sept. 1; Gaz. vol. 206; p. 310.
Leather dressing, Dull-. Dullene Mfg. Company. No. 99,711; Sept. 15; Gaz. vol. 206; p. 870.
Lice and fly destroyer. G. W. Lewis & Son. No. 99,759; Sept. 15; Gaz. vol. 206; p. 871.
Lighting appliances, &c., Certain. Hibbard, Spencer, Bartlett & Co. No. 99,742; Sept. 15; Gaz. vol. 206; p. 871.
Lime-sulfur solution, Bordeaux arsenate and paste, &c. Niagara Sprayer Company. No. 100,020; Sept. 29; Gaz. vol. 206; p. 1433.
Linen, Certain named household. Remy, Schmidt & Pleissner. No. 99,631; Sept. 8; Gaz. vol. 206; p. 586.
Liniment. Home Remedy Company. No. 99,883; Sept. 22; Gaz. vol. 206; p. 1158.
Liniment. C. H. Krug. No. 99,993; Sept. 29; Gaz. vol. 206; p. 1432.
Linoleums. Germania Importing Co. No. 99,575; Sept. 8; Gaz. vol. 206; p. 584.
Lubricants. The Interocean Oil Company. No. 99,988; Sept. 29; Gaz. vol. 206; p. 1432.
Macaroni. Francesco Izzo & Figlio. No. 99,750; Sept. 15; Gaz. vol. 206; p. 871.
Macaroni, noodles, spaghetti, soup-marks. Panama Macaroni Company. No. 99,777; Sept. 15; Gaz. vol. 206; p. 872.
Macaroni products. Scarpelli Bros. No. 99,649; Sept. 8; Gaz. vol. 206; p. 586.
Machinery and tools, Certain named. New Idea Spreader Co. No. 100,019; Sept. 29; Gaz. vol. 206; p. 1433.
Magazines, Monthly. Cloud Publishing Co. No. 99,429; Sept. 1; Gaz. vol. 206; p. 307.
Magazines, printed books, and prints, Periodical. The Century Co. No. 99,426; Sept. 1; Gaz. vol. 206; p. 307.
Matting, Cocoa. R. Deutsch. No. 99,442; Sept. 1; Gaz. vol. 206; p. 308.
Medical appliance for the production of radio-active medicinal water. W. J. Schieffelin. No. 99,507; Sept. 1; Gaz. vol. 206; p. 310.
Medical compound, Cathartic. J. W. James, Jr. No. 99,886; Sept. 22; Gaz. vol. 206; p. 1158.
Medical compounds for the digestive organs. Dr. Lonergan's. No. 99,761; Sept. 15; Gaz. vol. 206; p. 871.
Medical preparations for certain named diseases. S. D'amour. No. 99,438; Sept. 1; Gaz. vol. 206; p. 307.
Medicinal compound for the scalp. L. Plaschy. No. 99,496; Sept. 1; Gaz. vol. 206; p. 309.
Medicinal preparation used as a cathartic, &c. The Salnos Company. No. 100,034; Sept. 29; Gaz. vol. 206; p. 1434.
Medicine, Catarrh. J. M. George. No. 99,729; Sept. 15; Gaz. vol. 206; p. 870.
Medicine for asthma, bronchitis, and hay-fever. R. P. Carson. No. 99,691; Sept. 15; Gaz. vol. 206; p. 869.
Medicine for disorders of the digestive tract. M. I. Brandt. No. 99,543; Sept. 8; Gaz. vol. 206; p. 583.
Medicines and pharmaceutical preparations, Certain named. Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.) Nos. 99,951–3; Sept. 29; Gaz. vol. 206; p. 1431.
Medicines and pharmaceutical preparations, Certain named. J. C. Schroeder. No. 99,796; Sept. 15; Gaz. vol. 206; p. 872.
Medicines and remedies, Certain named. J. W. Quinn Drug Company. No. 99,498; Sept. 1; Gaz. vol. 206; p. 309.
Medicines for venereal diseases. S. Chiba. No. 99,948; Sept. 29; Gaz. vol. 206; p. 1431.
Medicines, remedies, and pharmaceutical preparations, Certain named. W. H. Crawford Co. No. 99,957; Sept. 29; Gaz. vol. 206; p. 1431.
Metal-polish. J. H. Lawrence. No. 99,758; Sept. 15; Gaz. vol. 206; p. 871.
Metal-polish, glove and clothes cleaners, and soaps. Co-operative Drug Manufacturing Company, now, by change of name, American Drug Mfg. Co. No. 99,703; Sept. 15; Gaz. vol. 206; p. 869.
Metals and journal-boxes, Antifriction. Diamond Anti Friction Metal Company. No. 99,443; Sept. 1; Gaz. vol. 206; p. 308.
Milk and cream and cream alone. W. L. Glatfelter. No. 99,973; Sept. 29; Gaz. vol. 206; p. 1432.
Milk, Condensed. South Holland Milk Corporation. No. 99,810; Sept. 15; Gaz. vol. 206; p. 873.
Millboards. The Agasote Millboard Co. No. 99,676; Sept. 15; Gaz. vol. 206; p. 869.
Mowers, Lawn-. The Fair. No. 99,961; Sept. 29; Gaz. vol. 206; p. 1432.
Music-sheets. Imperial Player Roll Company. No. 99,466; Sept. 1; Gaz. vol. 206; p. 308.
Musical instruments and supplies, Certain named. C. Essbach. No. 99,863; Sept. 22; Gaz. vol. 206; p. 1158.
Musical instruments, parts, and accessories, Certain named. C. Bruno & Son. No. 99,941; Sept. 29; Gaz. vol. 206; p. 1431.
Musical instruments, parts thereof, &c. Choralcelo Company. No. 99,428; Sept. 1; Gaz. vol. 206; p. 307.
Naphtha, benzin, and gasolene. The Texas Company. No. 100,049; Sept. 29; Gaz. vol. 206; p. 1434.
Neckwear and neckscarfs, Ladies'. G. W. Barlow, Jr. No. 99,535; Sept. 8; Gaz. vol. 206; p. 583.
Neckwear, Men's. I. Friedman. No. 99,454; Sept. 1; Gaz. vol. 206; p. 308.
Needles, Hand-sewing. Success Novelty Ads Co. No. 99,663; Sept. 8; Gaz. vol. 206; p. 587.
Needles, Machine-. Union Special Machine Company. No. 100,051; Sept. 29; Gaz. vol. 206; p. 1434.
Oil, Corn-. Edible Seed Oils Company. Nos. 99,569–70; Sept. 8; Gaz. vol. 206; p. 584.
Oil dressing, Harness-. The Hutchinson Oil Company. No. 99,745; Sept. 15; Gaz. vol. 206; p. 871.
Oil, Engine-. Wm. C. Robinson & Son Co. No. 100,030; Sept. 29; Gaz. vol. 206; p. 1434.
Oil for constipation, Medicinal. Riker & Hegeman Co. No. 100,028; Sept. 29; Gaz. vol. 206; p. 1434.
Oil, Machine-. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. Nos. 99,562–3; Sept. 8; Gaz. vol. 206; p. 584.
Oil, Machine-. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. No. 99,702; Sept. 15; Gaz. vol. 206; p. 869.
Oil, Machine-. Co-operative Drug Manufacturing Company, now by change of name American Drug Mfg. Co. No. 99,954; Sept. 29; Gaz. vol. 206; p. 1431.
Oil, Olive-. F. Garbini e Figli. No. 99,573; Sept. 8; Gaz. vol. 206; p. 584.
Oil, Olive-. The Caserta Wine Co. No. 99,692; Sept. 15; Gaz. vol. 206; p. 869.
Oil, Olive-. G. F. Heublein & Bro. No. 99,740; Sept. 15; Gaz. vol. 206; p. 871.
Oil, Olive-. Aprea Bros. No. 99,833; Sept. 22; Gaz. vol. 206; p. 1157.
Oil, Olive-. J. Finelli. No. 99,868; Sept. 22; Gaz. vol. 206; p. 1158.
Oils and greases. Union Petroleum Company. No. 99,518; Sept. 1; Gaz. vol. 206; p. 310.
Oils and varnishes, Artists'. E. H. & A. C. Friedrichs Co. No. 99,968; Sept. 29; Gaz. vol. 206; p. 1432.
Oils, Floor-. C. W. Coburn. No. 99,430; Sept. 1; Gaz. vol. 206; p. 307.
Ointment. Zonoz Chemical Co. No. 99,530; Sept. 1; Gaz. vol. 206; p. 310.
Ointment. H. L. Blow. No. 99,685; Sept. 15; Gaz. vol. 206; p. 869.
Ointment and salves. The Swiss Drug Company. No. 100,048; Sept. 29; Gaz. vol. 206; p. 1434.
Ointments and salves. R. Rinaldi. No. 99,787; Sept. 15; Gaz. vol. 206; p. 872.
Oleomargarin. E. Taube. No. 99,665; Sept. 8; Gaz. vol. 206; p. 587.
Oranges and grape-fruit. L. T. Clawson. No. 99,550; Sept. 8; Gaz. vol. 206; p. 583.
Oranges, lemons, limes, and grape-fruit, Fresh. Orange Growers Cash Association. No. 99,620; Sept. 8; Gaz. vol. 206; p. 585.
Overall union suits. The H. D. Lee Mercantile Company. No. 99,475; Sept. 1; Gaz. vol. 206; p. 309.
Oxygen for treatment of chronic diseases, Compound. Starkey & Palen. No. 99,813; Sept. 15; Gaz. vol. 206; p. 873.
Packing, Asbestos. Essex Rubber Company. No. 99,716; Sept. 15; Gaz. vol. 206; p. 870.
Packing, Asbestos sheet-. Essex Rubber Company. Nos. 99,718–19; Sept. 15; Gaz. vol. 206; p. 870.
Packing, Fibrous sheet-. Essex Rubber Company. No. 99,714; Sept. 15; Gaz. vol. 206; p. 870.
Packings, Certain named materials for. J. P. Gallagher. No. 99,873; Sept. 22; Gaz. vol. 206; p. 1158.
Paint-paste. Thos. Cusack Company. No. 99,437; Sept. 1; Gaz. vol. 206; p. 307.
Paint, Ready-mixed. The Fair. No. 99,962; Sept. 29; Gaz. vol. 206; p. 1432.
Paints and varnishes, Mixed. Imperial Rubber Co. No. 99,986; Sept. 29; Gaz. vol. 206; p. 1432.
Paints, enamels, and varnishes, Ready-mixed. John Line & Sons. Nos. 99,477–8; Sept. 1; Gaz. vol. 206; p. 309.
Paints, enamels, stains, &c. The Patterson-Sargent Company. No. 100,024; Sept. 29; Gaz. vol. 206; p. 1433.

Paints, varnishes, and lacquers. Maatschappij Vereenigde Van der Burg's Japanlak Fabrieken, (United Vanderburg's Japanlac- and Varnish Works.) No. 99,999; Sept. 29; Gaz. vol. 206; p. 1433.
Paper and envelops, Writing and printing. Bradner Smith & Co. No. 99,910; Sept. 22; Gaz. vol. 206; p. 1159.
Paper and stationery supplies, Certain named. The Gem Supplies Co. No. 99,876; Sept. 22; Gaz. vol. 206; p. 1158.
Paper, Autographic-register. Autographic Register Company. No. 99,933; Sept. 29; Gaz. vol. 206; p. 1431.
Paper, Bond writing-. The Chatfield & Woods Company. No. 99,693; Sept. 15; Gaz. vol. 206; p. 869.
Paper, Cover, bond, writing, and printing. The Central Ohio Paper Company. No. 99,425; Sept. 1; Gaz. vol. 206; p. 307.
Paper or fiber cartons, boxes, or containers. Rochester Carrier Co. No. 99,499; Sept. 1; Gaz. vol. 206; p. 309.
Paper, Toilet-. Mt. Holyoke Tissue Mills. No. 100,014; Sept. 29; Gaz. vol. 206; p. 1433.
Paper, Toilet-. Paper Sales Company. No. 100,023; Sept. 29; Gaz. vol. 206; p. 1433.
Paper, Wrapping-. Minneapolis Paper Company. No. 100,008; Sept. 29; Gaz. vol. 206; p. 1433.
Papers, Printing and writing. Parsons Paper Co. No. 99,778; Sept. 15; Gaz. vol. 206; p. 872.
Papers, Toilet-. Phoenix Toilet and Paper Manufacturing Company. No. 99,779; Sept. 15; Gaz. vol. 206; p. 872.
Papers, Writing and bond. The Paper Makers Co. No. 99,493; Sept. 1; Gaz. vol. 206; p. 309.
Peanuts and almonds, pistachio-nuts, &c., Salted. Curnes and Hood Confectionery Co. No. 99,706; Sept. 15; Gaz. vol. 206; p. 870.
Pencils, Lead-. Eagle Pencil Company. No. 99,446; Sept. 1; Gaz. vol. 206; p. 308.
Pens and parts, Fountain-. Gem Fountain Pen Corporation. No. 99,727; Sept. 15; Gaz. vol. 206; p. 878.
Pens and the parts thereof, Fountain-. Gem Fountain Pen Corporation. No. 99,875; Sept. 22; Gaz. vol. 206; p. 1158.
Perfume, toilet water, skin-creams, &c. Richard Hudnut. No. 99,884; Sept. 22; Gaz. vol. 206; p. 1158.
Perfumes and sachet-powder. E. Moulié. No. 100,013; Sept. 29; Gaz. vol. 206; p. 1433.
Perfumes, Liquid and powdered. Colgate & Co. No. 99,551; Sept. 8; Gaz. vol. 206; p. 583.
Perfumery. Mellier Company—Perfumer. No. 99,767; Sept. 15; Gaz. vol. 206; p. 871.
Perfumery, toilet waters and powders, &c. Morny Freres Limited. Nos. 99,484–5; Sept. 1; Gaz. vol. 206; p. 309.
Periodical, Monthly. Niagara Paper Mills. No. 99,773; Sept. 15; Gaz. vol. 206; p. 871.
Periodical, Trade. The Vanity Fair Publishing Company. No. 99,821; Sept. 15; Gaz. vol. 206; p. 873.
Periodicals. Chautauqua Institution. No. 99,694; Sept. 15; Gaz. vol. 206; p. 869.
Petroleum or kerosene oil. Tillmann & Bendel. No. 100,050; Sept. 29; Gaz. vol. 206; p. 1434.
Pharmaceutical preparations and oils. McClinton's. No. 100,003; Sept. 29; Gaz. vol. 206; p. 1433.
Pharmaceutical preparations and remedies for certain named diseases. Indiana Chemical Company. No. 99,593; Sept. 8; Gaz. vol. 206; p. 584.
Pharmaceutical preparations, Certain named. G. A. Quimby. No. 99,497; Sept. 1; Gaz. vol. 206; p. 309.
Pharmaceutical preparations, Certain named. H. H. Ayer. No. 99,681; Sept. 15; Gaz. vol. 206; p. 869.
Pharmaceutical preparations, Certain named. V. Roykó. No. 100,033; Sept. 29; Gaz. vol. 206; p. 1434.
Pharmaceutical product from digitalis-leaves. Society of Chemical Industry in Basle. No. 99,808; Sept. 15; Gaz. vol. 206 p. 872.
Pharmaceutical product prepared from the blood of animals or animal substance. Society of Chemical Industry in Basle. No. 99,809; Sept. 15; Gaz. vol. 206; p. 872.
Photograph films, Living-. Messters-Projection G. m. b. H. No. 99,768; Sept. 15; Gaz. vol. 206; p. 871.
Photographic developer. Eastman Kodak Company. No. 99,861; Sept. 22; Gaz. vol. 206; p. 1157.
Piano-players, Pneumatic. The Otto Higel Co. No. 99,880; Sept. 22; Gaz. vol. 206; p. 1158.
Pianos and other musical instruments, Certain named supplies used in making. Estate of C. F. Goepel. No. 99,721; Sept. 15; Gaz. vol. 206; p. 870.
Pianos, Electric player-. Operators' Piano Co. No. 99,901; Sept. 22; Gaz. vol. 206; p. 1159.
Pianos, organs, and orchestrions, Self-playing. M. Welte & Sons. No. 99,826; Sept. 15; Gaz. vol. 206; p. 873.
Pineapple, Canned. Hawaiian Pineapple Co. No. 99,736; Sept. 15; Gaz. vol. 206; p. 870.
Pineapples, Canned and fresh. Griffith-Durney Co. No. 99,879; Sept. 22; Gaz. vol. 206; p. 1158.
Pineapples, Fresh and canned. Griffith-Durney Co. No. 99,733; Sept. 15; Gaz. vol. 206; p. 870.
Pins, Safety-. Oakville Company. No. 99,619; Sept. 8; Gaz. vol. 206; p. 585.
Pitchers, bottles, jugs, jars, and tankards, Covered glass. A. H. Frankel. No. 99,726; Sept. 15; Gaz. vol. 206; p. 870.
Plans and specifications for houses and bungalows. G. Stickley. No. 99,511; Sept. 1; Gaz. vol. 206; p. 310.
Pliers, nippers, pincers, wrenches, and trowels. Wiebusch & Hilger. No. 99,671; Sept. 8; Gaz. vol. 206; p. 587.
Plumbing and steam-fitting supplies, Certain named. H. W. Johns-Manville Co. No. 99,594; Sept. 8; Gaz. vol. 206; p. 584.
Pneumonia, croup, &c., application. R. M. Leonard. No. 99,995; Sept. 29; Gaz. vol. 206; p. 1433.
Polishes for certain named materials. Green Seal Specialty Company. No. 99,878; Sept. 22; Gaz. vol. 206; p. 1158.
Powder, Face-. C. Tetlow. No. 99,514; Sept. 1; Gaz. vol. 206; p. 310.
Powder, Face and talcum. C. Tetlow. No. 99,515; Sept. 1; Gaz. vol. 206; p. 310.
Powder, Foot-. L. A. Gebrum. No. 99,970; Sept. 29; Gaz. vol. 206; p. 1432.
Powder, paste, and wash, and face cream, Tooth. J. W. Robb. No. 99,788; Sept. 15; Gaz. vol. 206; p. 872.
Powders, Toilet. A. Bourjois & Co. No. 99,940; Sept. 29; Gaz. vol. 206; p. 1431.
Powders, toilet creams, &c., Perspiration and talcum. Hot Springs Chemical Company. No. 99,590; Sept. 8; Gaz. vol. 206; p. 584.
Powders, Tooth, bathing, face, &c. G. P. Breiter. No. 99,840; Sept. 22; Gaz. vol. 206; p. 1157.
Precious metal, Certain named articles made of. Bugbee & Niles Co. No. 99,422; Sept. 1; Gaz. vol. 206; p. 307.
Preparation for prevention and treatment of hay-fever. R. M. Stolworthy. No. 100,043; Sept. 29; Gaz. vol. 206; p. 1434.
Preparation for the treatment of consumption, &c. J. M. Hutchins. No. 99,591; Sept. 8; Gaz. vol. 206; p. 584.
Preparation for the treatment of skin diseases and eruptions. L. B. Miller. No. 99,482; Sept. 1; Gaz. vol. 206; p. 309.
Preparation for treating malaria, &c. Vereinigte Chininfabriken Zimmer & Co. Ges. mit beschränker Haftung. No. 99,822; Sept. 15; Gaz. vol. 206; p. 873.
Preparation for treatment of certain named diseases. A. Blauvelt. No. 99,839; Sept. 22; Gaz. vol. 206; p. 1157.
Preparation for treatment of hog-cholera. J. Heavenridge. No. 99,738; Sept. 15; Gaz. vol. 206; p. 871.
Preparation for treatment of hog-cholera. T. B. Fenton. No. 99,866; Sept. 22; Gaz. vol. 206; p. 1158.
Preparation for treatment of sore, tired, and aching feet. J. Curtis. No. 99,856; Sept. 22; Gaz. vol. 206; p. 1157.
Preparation, Liquid and powdered. Colgate & Co. No. 99,551; Sept. 8; Gaz. vol. 206; p. 583.
Preparation, Liquid skin. A. S. Clement and Company. No. 99,847; Sept. 22; Gaz. vol. 206; p. 1157.
Preparation offensive to rapacious birds and animals. A. T. Otto. No. 99,492; Sept. 1; Gaz. vol. 206; p. 309.
Preparations, Certain named toilet. F. Limberger. No. 99,891; Sept. 22; Gaz. vol. 206; p. 1158.
Preparations for prevention of venereal diseases. J. D. Nifong. No. 99,618; Sept. 8; Gaz. vol. 206; p. 585.
Preparations for treatment of colds, headaches, &c. J. R. Hughes. No. 99,984; Sept. 29; Gaz. vol. 206; p. 1432.
Preservative for iron and steel. Carbondale Calcium Co. No. 99,424; Sept. 1; Gaz. vol. 206; p. 307.
Printing-plates. W. J. Yeoell. No. 99,832; Sept. 15; Gaz. vol. 206; p. 873.
Prunes. Santa Rosa Cured Fruit Association. No. 99,794; Sept. 15; Gaz. vol. 206; p. 872.
Publication, Monthly. Max Greenberg & Co. No. 99,731; Sept. 15; Gaz. vol. 206; p. 870.
Publication, Monthly. The McCaskey Register Company. No. 99,892; Sept. 22; Gaz. vol. 206; p. 1158.
Publication of a record of enforced collections, &c. The Credit Clearing House. No. 99,704; Sept. 15; Gaz. vol. 206; p. 870.
Publications, Certain named. T. L. Shaw. No. 99,801; Sept. 15; Gaz. vol. 206; p. 872.
Publications, Weekly. Cloud Publishing Company. No. 99,849; Sept. 22; Gaz. vol. 206; p. 1157.
Pulp, Wood and paper. West Virginia Pulp Products Co. No. 99,827; Sept. 15; Gaz. vol. 206; p. 873.
Quilts. Beacon Manufacturing Co. No. 99,537; Sept. 8; Gaz. vol. 206; p. 583.
Raisins. California Associated Raisin Co. No. 99,688; Sept. 15; Gaz. vol. 206; p. 869.
Rat-traps. G. S. White. No. 99,924; Sept. 22; Gaz. vol. 206; p. 1159.
Razor-strops and dressings. Nev-A-Hone Razor Strop Company. No. 99,898; Sept. 22; Gaz. vol. 206; p. 1159.
Razors and blades, Safety-. Auto Strop Safety Razor Co. No. 99,931; Sept. 29; Gaz. vol. 206; p. 1431.
Refrigerators. The Piper Cooling and Preserving Company. No. 99,625; Sept. 8; Gaz. vol. 206; p. 585.
Remedies for certain named diseases, and cold-cream. Smith Manufacturing Co. No. 99,655; Sept. 8; Gaz. vol. 206; p. 586.
Remedies for certain named diseases of animals. A. A. Wells. No. 99,923; Sept. 22; Gaz. vol. 206; p. 1159.
Remedies for neuralgia. S. F. Jowers. No. 99,595; Sept. 8; Gaz. vol. 206; p. 585.
Remedy, Blood. J. D. Burke. No. 99,841; Sept. 22; Gaz. vol. 206; p. 1157.
Remedy for certain foot ailments. Dennison Pharmacal Company. No. 99,857; Sept. 22; Gaz. vol. 206; p. 1157.
Remedy for certain named diseases. C. F. York. No. 99,928; Sept. 22; Gaz. vol. 206; p. 1159.
Remedy for disorders of the stomach and bowels. M. Chila. No. 99,549; Sept. 8; Gaz. vol. 206; p. 583.
Remedy for dyspepsia. Bell & Co. No. 99,837; Sept. 22; Gaz. vol. 206; p. 1157.
Remedy for dyspepsia. J. Cloutier. No. 99,850; Sept. 22; Gaz. vol. 206; p. 1157.

Remedy for headache, neuralgia, &c., Effervescent. Walker Drug Company. No. 100,055; Sept. 29; Gaz. vol. 206; p. 1434.
Remedy for heart trouble. A. Szecsenyi. No. 99,916; Sept. 22; Gaz. vol. 206; p. 1159.
Remedy, Hemorrhoid. Young & Parsons. No. 99,929; Sept. 22; Gaz. vol. 206; p. 1159.
Remedy for liver and stomach troubles. Georgia Medicine Co. No. 99,971; Sept. 29; Gaz. vol. 206; p. 1432.
Remedy for mares to procure immunity for the foals from a certain disease. H. O. Wright. No. 100,057; Sept. 29; Gaz. vol. 206; p. 1434.
Remedy for skin diseases. W. C. Keim. No. 99,989; Sept. 29; Gaz. vol. 206; p. 1432.
Remedy for sore throats, stiff necks, and chest pains. Goos-Oleine Co. No. 99,730; Sept. 15; Gaz. vol. 206; p. 870.
Remedy for the hair and scalp. Spencer & Washington. No. 99,812; Sept. 15; Gaz. vol. 206; p. 873.
Remedy for venereal diseases. M. Honaker, Sen. No. 99,588; Sept. 8; Gaz. vol. 206; p. 584.
Rodent, &c., destruction compound, Chemical. H. F. Dugan. No. 99,860; Sept. 22; Gaz. vol. 206; p. 1157.
Rubber and duck packing. Essex Rubber Company. No. 99,715; Sept. 15; Gaz. vol. 206; p. 870.
Rubber boots and shoes. Apsley Rubber Co. No. 99,416; Sept. 1; Gaz. vol. 206; p. 307.
Rubber boots and shoes. Woonsocket Rubber Company. No. 99,674; Sept. 8; Gaz. vol. 206; p. 587.
Rubber boots and shoes and rubber-soled shoes. Hood Rubber Company. No. 99,589; Sept. 8; Gaz. vol. 206; p. 584.
Rubber bulbs. The De Vilbiss Manufacturing Company. No. 99,439; Sept. 1; Gaz. vol. 206; p. 307.
Rubber sheet-packing. Essex Rubber Company. No. 99,713; Sept. 15; Gaz. vol. 206; p. 870.
Rubber sheet-packing. Essex Rubber Company. No. 99,917; Sept. 15; Gaz. vol. 206; p. 870.
Rubber sheet-packing and round gasket-tubing. Essex Rubber Company. No. 99,720; Sept. 15; Gaz. vol. 206; p. 870.
Rubber soles for boots and shoes. Revere Rubber Company. No. 99,632; Sept. 8; Gaz. vol. 206; p. 586.
Rubber water-bottles, syringes, and ice-caps. Rubber Sundries Company. No. 99,646; Sept. 8; Gaz. vol. 206; p. 586.
Rugs and textile bath-mats, Cotton. Beacon Manufacturing Co. No. 99,538; Sept. 8; Gaz. vol. 206; p. 583.
Salt. The Cleveland Salt Company. No. 99,848; Sept. 22; Gaz. vol. 206; p. 1157.
Salts, toilet powders, &c., Aromatic. Morny Freres. No. 99,485; Sept. 1; Gaz. vol. 206; p. 309.
Salves, corn paint and plaster, Arnica and carbolic. Consolidated Drug Co. No. 99,557; Sept. 8; Gaz. vol. 206; p. 583.
Saws. E. C. Atkins & Company. No. 99,680; Sept. 15; Gaz. vol. 206; p. 869.
Seeds. Weeber & Don. No. 99,824; Sept. 15; Gaz. vol. 206; p. 873.
Seeds, Certain named. Courteen Seed Company. Nos. 99,434–5; Sept. 1; Gaz. vol. 206; p. 307.
Sewer-gas traps. Detroit Sanitary Supply Company. No. 99,441; Sept. 1; Gaz. vol. 206; p. 307.
Sewing-machines and parts. H. Mundlos & Co. No. 100,015; Sept. 29; Gaz. vol. 206; p. 1433.
Shoe, &c., polishes, dressers, and cleansers. The R. M. Hollingshead Co. No. 99,882; Sept. 22; Gaz. vol. 206; p. 1158.
Shoes and slippers. Wichert & Gardiner. No. 99,523; Sept. 1; Gaz. vol. 206; p. 310.
Shoes, Leather. P. Herold Company. No. 99,463; Sept. 1; Gaz. vol. 206; p. 308.
Shoes, Leather. J. J. Schulten & Co. No. 99,508; Sept. 1; Gaz. vol. 206; p. 310.
Shoes, Leather. Byck Bros. & Co. No. 99,545; Sept. 8; Gaz. vol. 206; p. 583.
Shoes, Leather. Keiffer Bros. Co. No. 99,888; Sept. 22; Gaz. vol. 206; p. 1158.
Signaling devices for automobiles, &c., Semaphore. Baer Manufacturing Co. No. 99,934; Sept. 29; Gaz. vol. 206; p. 1431.
Silicate of soda or water-glass. Grasselli Chemical Company. No. 99,978; Sept. 29; Gaz. vol. 206; p. 1432.
Soap. Nuway Manufacturing Co. No. 99,775; Sept. 15; Gaz. vol. 206; p. 872.
Soap. The Procter & Gamble Company. No. 99,784; Sept. 15; Gaz. vol. 206; p. 872.
Soap. Société Anonyme des Savons De Marseille. No. 99,807; Sept. 15; Gaz. vol. 206; p. 872.
Soap. H. Tatro. No. 99,815; Sept. 15; Gaz. vol. 206; p. 873.
Soap. Crusellas Hno y Ca. No. 99,855; Sept. 22; Gaz. vol. 206; p. 1157.
Soap. Iowa Soap Co. No. 99,885; Sept. 22; Gaz. vol. 206; p. 1158.
Soap, Dry-cleaning. Montgomerie, Stobo & Co. No. 99,897; Sept. 22; Gaz. vol. 206; p. 1158.
Soap for shampooing and bathing, Liquid. Hiscox Bros. Co. No. 99,743; Sept. 15; Gaz. vol. 206; p. 871.
Soap, Shaving-. Fesler Sales Company. No. 99,867; Sept. 22; Gaz. vol. 206; p. 1158.
Soap, Toilet. Solon Palmer. No. 99,776; Sept. 15; Gaz. vol. 206; p. 872.
Soap, Toilet. R. P. Franqui. No. 99,872; Sept. 22; Gaz. vol. 206; p. 1158.
Soap, Toilet. The Salcura Company. No. 99,908; Sept. 22; Gaz. vol. 206; p. 1159.
Soaps. Armour & Company. No. 99,834; Sept. 22; Gaz. vol. 206; p. 1157.
Soda-water, limeade, lemonade, &c. Sullivan, McMahan Buck & Wisner. No. 99,513; Sept. 1; Gaz. vol. 206; p. 310.
Soldering material. The Solderall Company. No. 100,039; Sept. 29; Gaz. vol. 206; p. 1434.
Spectacle and eyeglass lenses. F. A. Hardy & Co. No. 99,461; Sept. 1; Gaz. vol. 206; p. 308.
Squabs. H. B. Kleine. No. 99,755; Sept. 15; Gaz. vol. 206; p. 871.
Stamp-pads, Self-inking. B. G. Volger Manufacturing Company. Nos. 100,053–4; Sept. 29; Gaz. vol. 206; p. 1434.
Steel, Tool-. H. T. Potts & Co. No. 99,627; Sept. 8; Gaz. vol. 206; p. 585.
Steel, Tool-. The Carpenter Steel Company. No. 99,948; Sept. 29; Gaz. vol. 206; p. 1431.
Stogies. J. F. Miller. No. 99,894; Sept. 22; Gaz. vol. 206; p. 1158.
Stogies. The Miller Cigar Co. No. 99,895; Sept. 22; Gaz. vol. 206; p. 1158.
Stoves and ranges. Cameron Stove Co. No. 99,689; Sept. 15; Gaz. vol. 206; p. 869.
Stoves and ranges, parlor-heaters, and furnaces, Cooking. Galusha Stove Company. No. 99,456; Sept. 1; Gaz. vol. 206; p. 308.
Stoves and soldering-lamps, Petroleum and kitchen. Aktiebolaget Radius. No. 99,414; Sept. 1; Gaz. vol. 206; p. 307.
Suit cases and traveling-bags, Dress-. Katz Brothers Leather Goods Co. No. 99,599; Sept. 8; Gaz. vol. 206; p. 585.
Sweaters. Firm of C. B. Rouss. No. 99,636; Sept. 8; Gaz. vol. 206; p. 586.
Syrups, Table-. G. A. Hageni. No. 99,735; Sept. 15; Gaz. vol. 206; p. 870.
Tables. Carrom-Archarena Co. No. 99,547; Sept. 8; Gaz. vol. 206; p. 583.
Tablets and paper, envelops, &c., Writing. Montag Brothers. No. 99,485; Sept. 1; Gaz. vol. 206; p. 309.
Tablets and liniments, Constipation and kidney. D. T. Walker. No. 99,521; Sept. 1; Gaz. vol. 206; p. 310.
Tea. K. Ikeda. No. 99,746; Sept. 15; Gaz. vol. 206; p. 871.
Tea. C. D. Kenny Co. No. 99,753; Sept. 15; Gaz. vol. 206; p. 871.
Tea. Schorn & Brower. No. 99,795; Sept. 15; Gaz. vol. 206; p. 872.
Tea. Dwinell-Wright Co. No. 99,960; Sept. 29; Gaz. vol. 206; p. 1432.
Tea and blended coffee. W. F. McLaughlin & Company. No. 100,004; Sept. 29; Gaz. vol. 206; p. 1433.
Tea, coffee, and cocoa. E. T. Smith & Company. No. 100,038; Sept. 29; Gaz. vol. 206; p. 1434.
Teas and coffees. The Grocers Coffee Co. No. 99,734; Sept. 15; Gaz. vol. 206; p. 870.
Tiles of linoleum, &c., Floor-. Armstrong Cork & Insulation Company. No. 99,532; Sept. 8; Gaz. vol. 206; p. 583.
Timber, Fireproof. Timber Fireproofing Company. No. 99,816; Sept. 15; Gaz. vol. 206; p. 873.
Tires, casings, and inner tubes, Rubber. Converse Rubber Shoe Co. No. 99,852; Sept. 22; Gaz. vol. 206; p. 1157.
Tires, Rubber automobile and vehicle. The Mansfield Tire & Rubber Co. No. 99,479; Sept. 1; Gaz. vol. 206; p. 309.
Toilet cerate. The S. R. Fell Company. No. 99,865; Sept. 22; Gaz. vol. 206; p. 1158.
Toilet preparations. P. E. Reifschneider. No. 100,027; Sept. 29; Gaz. vol. 206; p. 1433.
Tonic, Medicinal. S. F. Sellaro. No. 100,037; Sept. 29; Gaz. vol. 206; p. 1434.
Transformer and dynamo plates, Sheet-metal. Joseph Sankey & Sons. No. 100,035; Sept. 29; Gaz. vol. 206; p. 1434.
Traps, and certain poultry appliances, Mouse, rat, &c. Hibbard, Spencer, Bartlett & Co. No. 99,741; Sept. 15; Gaz. vol. 206; p. 871.
Trousers. The Fair. No. 99,571; Sept. 8; Gaz. vol. 206; p. 584.
Trucks, Motor-. The Dart Manufacturing Company. No. 99,707; Sept. 15; Gaz. vol. 206; p. 870.
Tuberculosis treatment. E. Roller. No. 100,031; Sept. 29; Gaz. vol. 206; p. 1434.
Turpentine. W. R. Grace & Co. No. 99,977; Sept. 29; Gaz. vol. 206; p. 1432.
Valves. C. H. Wheeler Manufacturing Company. No. 99,670; Sept. 8; Gaz. vol. 206; p. 587.
Varnish. M. G. Stoneman & Son. No. 100,044; Sept. 29; Gaz. vol. 206; p. 1434.
Varnish-polish. W. H. Damon. No. 99,958; Sept. 29; Gaz. vol. 206; p. 1431.
Varnishes. Kiley Hardware Company. No. 99,472; Sept. 1; Gaz. vol. 206; p. 308.
Vehicles, Motor-. Palmer & Singer Manufacturing Company. No. 99,623; Sept. 8; Gaz. vol. 206; p. 585.
Veilings and nettings. E. & Z. Van Raalte. No. 99,519; Sept. 1; Gaz. vol. 206; p. 310.

Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. Nos. 99,502–3; Sept. 1; Gaz. vol. 206; p. 309.
Wall and ceiling decorative fabric. Lincrusta Works "Pallas." No. 99,476; Sept. 1; Gaz. vol. 206; p. 309.
Wall-board, Wood-fiber. C. O. Frisbie. No. 99,455; Sept. 1; Gaz. vol. 206; p. 308.
Washers, gaskets, packing, &c., Composition for making. Hudson Mechanical Rubber Company. No. 99,744; Sept. 15; Gaz. vol. 206; p. 871.
Washing compound, Laundry-. The Celluloid Starch Company. No. 99,843; Sept. 22; Gaz. vol. 206; p. 1157.
Washing-compound tablets. The Celluloid Starch Company. No. 99,844; Sept. 22; Gaz. vol. 206; p. 1157.
Washing device, Sheepskin and wool mitten as a. A. Fischer. No. 99,869; Sept. 22; Gaz. vol. 206; p. 1158.
Washing machines, Laundry-. Fairbanks, Morse & Company. No. 99,572; Sept. 8; Gaz. vol. 206; p. 584.
Watches, watchcases, and watch-movements. The Keystone Watch Case Company. No. 99,754; Sept. 15; Gaz. vol. 206; p. 871.
Watches, watchcases, and watch-movements. Adolph Schwab. No. 100,036; Sept. 29; Gaz. vol. 206; p. 1434.
Water heaters and storage systems, Instantaneous. Rund Manufacturing Company. No. 99,501; Sept. 1; Gaz. vol. 206; p. 309.
Water, Natural mineral. I. E. Johnson. No. 99,469; Sept. 1; Gaz. vol. 206; p. 308.
Weighing machines and scales. John Chatillon & Sons. No. 99,947; Sept. 29; Gaz. vol. 206; p. 1431.
Whisky, Straight. The Turner-Looker Co. No. 99,920; Sept. 22; Gaz. vol. 206; p. 1159.
Winding-machines and parts thereof. Universal Winding Company. No. 99,667; Sept. 8; Gaz. vol. 206; p. 587.
Wood substitutes of pulp. The Agasote Millboard Co. No. 99,413; Sept. 1; Gaz. vol. 206; p. 307.
Woodwork, furniture, automobile, &c., polishes. Nu Life Products Company. No. 100,022; Sept. 29; Gaz. vol. 206; p. 1433.
Woolen piece goods and tailors' trimmings. Mason & Hanson. Nos. 99,610–11; Sept. 8; Gaz. vol. 206; p. 585.
Worsted piece goods. Perseverance Worsted Company. No. 99,494; Sept. 1; Gaz. vol. 206; p. 309.
Yeast. Purity Yeast Company. No. 99,785; Sept. 15; Gaz. vol. 206; p. 872.

ALPHABETICAL LIST OF LABELS.

"Aladdin Polish." (For Liquid Polish.) Aladdin Specialty Co. No. 17,960; Sept. 15; Gaz. vol. 206; p. 875.

"Angermeier's Peerless Liniment." (For Liniment.) J. A. Angermeier, Jr. No. 17,961; Sept. 15; Gaz. vol. 206; p. 875.

"Anise Alcoholate." (For Anise Alcoholate.) L. Bregonzi & Co. No. 17,934; Sept. 1; Gaz. vol. 206; p. 311.

"Barker's Roup Remedy For Poultry." (For a Remedy for Roup in Poultry.) The Barker, Moore & Mein Medicine Company. No. 17,962; Sept. 15; Gaz. vol. 206; p. 875.

"Barker's Gape Remedy." (For a Remedy for Gapes in Chickens.) The Barker, Moore & Mein Medicine Company. No. 17,963; Sept. 15; Gaz. vol. 206; p. 875.

"Barker's Healing Ointment." (For Ointment.) The Barker, Moore & Mein Medicine Company. No. 17,964; Sept. 15; Gaz. vol. 206; p. 875.

"Barker's Special Poultry Remedy." (For a Remedy for Diseases of Poultry.) The Barker, Moore & Mein Medicine Company. No. 17,965; Sept. 15; Gaz. vol. 206; p. 875.

"Barker's Vegetable Horse, Cattle and Poultry Medicinal Powder." (For Medicine for Horses, Cattle, and Poultry.) The Barker, Moore & Mein Medicine Company. No. 17,966; Sept. 15; Gaz. vol. 206; p. 875.

"Barker's Lice Powder." (For a Lice-Powder for Poultry.) The Baker, Moore & Mein Medicine Company. No. 17,967; Sept. 15; Gaz. vol. 206; p. 875.

"Benefit." (For Cigars.) A. C. Henschel & Co. No. 17,949; Sept. 1; Gaz. vol. 206; p. 311.

"Berwick Brand Dry Gin." (For Gin.) P. Gelpi & Sons. No. 17,977; Sept. 15; Gaz. vol. 206; p. 875.

"Better Than The Imported." (For Spirits.) H. B. Rosenson. No. 17,999; Sept. 22; Gaz. vol. 206; p. 1160.

"Bradford's R. C. C. For Chills and Fever." (For Medicine.) Bradford & Meadows. No. 17,935; Sept. 1; Gaz. vol. 206; p. 311.

"Braumeister Bier." (For Beer.) Independent Milwaukee Brewery. No. 17,981; Sept. 15; Gaz. vol. 206; p. 875.

"California Cherries." (For Cherries.) Penryn Fruit Company. No. 17,954; Sept. 1; Gaz. vol. 206; p. 311.

"Campnic." (For Wrappers for Food Products.) Nashua Card Gummed & Coated Paper Company. No. 17,998; Sept. 22; Gaz. vol. 206; p. 1160.

"Cimex For Bed Bugs Tere-Metaiol Chlormine." (For an Insecticide.) M. Pacella. No. 17,953; Sept. 1; Gaz. vol. 206; p. 311.

"Crisp White." (For Shortening.) The Capitol Refining Company. No. 17,939; Sept. 1; Gaz. vol. 206; p. 311.

"De Joigny Shaving Mist." (For a Shaving Mixture.) De Joigny Shaving Mist Co. No. 17,992; Sept. 22; Gaz. vol. 206; p. 1160.

"De Light of the World." (For Dynamos.) A. W. Houchin. No. 17,979; Sept. 15; Gaz. vol. 206; p. 875.

"E. Greenfield's Sons., Established 1848, Confectioners." (For Candies.) E. Greenfield's Sons. No. 17,993; Sept. 22; Gaz. vol. 206; p. 1160.

"Ec-Zene Skin Soap, Best for the Nursery, Toilet and Bath." (For Soap.) Ec-Zene Company. No. 17,971; Sept. 15; Gaz. vol. 206; p. 875.

"Fill Scorscone." (For Tomato Paste.) Scorsone Brothers. No. 17,956; Sept. 1; Gaz. vol. 206; p. 311.

"5-20-7." (For Hosiery.) Davis Hosiery Mills. No 17,941; Sept. 1; Gaz. vol. 206; p. 311.

"Glanco Brand." (For Sardines.) The Globe Canning Company. No. 17,945; Sept. 1; Gaz. vol. 206; p. 311.

"Golden Rod." (For Butter.) G. R. Eldridge Co. No. 17,972; Sept. 15; Gaz. vol. 206; p. 875.

"Green Dragon." (For Violin-Strings.) Southern California Music Company. No. 17,957; Sept. 1; Gaz. vol. 206; p. 311.

"Hahatonka Whiskey." (For Whiskies.) Stark Distillery Co. No. 17,002; Sept. 22; Gaz. vol. 206; p. 1160.

"Homogenized Laurentia Milk." (For Homogenized Milk.) F. E. Cryder. No. 17,969; Sept. 15; Gaz. vol. 206; p. 875.

"Hygienic Tango Powder Puff." (For Toilet-Boxes.) A. Giglio. No. 17,942; Sept. 1; Gaz. vol. 206; p. 311.

"I-Need-A." (For Cigars.) C. Doerr, Jr. No. 17,970; Sept. 15; Gaz. vol. 206; p. 875.

"I've Gota Biscuit." (For Crackers and Biscuit.) The Canton Biscuit Co. No. 17,937; Sept. 1; Gaz. vol. 206; p. 311.

"J. Reyes y Ca." (For Jerez Wine.) P. Gelpi & Sons. No. 17,978; Sept. 15; Gaz. vol. 206; p. 875.

"J Reyes y Cia." (For Sherry-Wine.) P. Gelpi & Sons. No. 17,976; Sept. 15; Gaz. vol. 206; p. 875.

"Jensen Brand." (For Sardines.) The Globe Canning Company. No. 17,946; Sept. 1; Gaz. vol. 206; p. 311.

"Lastiong." (For Underwear.) Lastiong Underwear Co. No. 17,952; Sept. 1; Gaz. vol. 206; p. 311.

"Lord Duke." (For Cigars.) A. C. Henschel & Co. No. 17,948; Sept. 1; Gaz. vol. 206; p. 311.

"Manchinric Brand." (For Sardines.) The Globe Canning Company. No. 17,947; Sept. 1; Gaz. vol. 206; p. 311.

"Master Yet." (For Cigars.) La Posenda Cigar Company. No. 17,996; Sept. 22; Gaz. vol. 206; p. 1160.

"No. 568 All Steel Hame Concord Dandy." (For Hames.) U. S. Hame Company. No. 17,985; Sept. 15; Gaz. vol. 206; p. 875.

"No. 568 All Steel Hame Concord Favorite." (For Hames.) U. S. Hame Company. No. 17,987; Sept. 15; Gaz. vol. 206; p. 875.

"No 568 All Steel Hame Concord High Top." (For Hames.) U. S. Hame Company. No. 17,986; Sept. 15; Gaz. vol. 206; p. 875.

"Nomad Brand." (For Sardines.) The Globe Canning Company. No. 17,944; Sept. 1; Gaz. vol. 206; p. 311.

"Old Gobbler Whiskey." (For Whiskies.) Stark Distillery Co. No. 18,001; Sept. 22; Gaz. vol. 206; p. 1160.

"One Minute Silver Cleaner." (For a Cleaning and Polishing Compound.) L. W. Estes. No. 17,974; Sept. 15; Gaz. vol. 206; p. 875.

"Otto Brand." (For Sardines.) The Globe Canning Company. No. 17,943; Sept. 1; Gaz. vol. 206; p. 311.

"Phoenix's California Ripe Olives." (For Ripe Olives.) Phoenix Bros. No. 17,955; Sept. 1; Gaz. vol. 206; p. 311.

"Portales Gems." (For Cantaloups.) R. W. Gees Commission Co. No. 17,975; Sept. 15; Gaz. vol. 206; p. 875.

"Powdered Skim Milk." (For Powdered Skim-Milk.) California Central Creameries. No. 17,936; Sept. 1; Gaz. vol. 206; p. 311.

"Queen City." (For Beer.) The Wetterer Brewing Co. No 17,988; Sept. 15; Gaz. vol. 206; p. 875.

"Quick Relief Lung Balsam." (For Medicine.) Quick Relief Remedy Company. No. 17,982; Sept. 15; Gaz. vol. 206; p. 875.

"Rex." (For Pork and Beans.) The Cudahy Packing Co. No. 17,940; Sept. 1; Gaz. vol. 206; p. 311.

"Robert Smith's Philada. Brown Stout." (For Stout.) The Robert Smith Ale Brewing Co. No. 17,983; Sept. 15; Gaz. vol. 206; p. 875.

"Rookwood." (For Enamel.) The A. Wilhelm Company. Nos. 17,990–1; Sept. 15; Gaz. vol. 206; p. 875.

"Royal Seal." (For Beer.) The Wetterer Brewing Co. No. 17,989; Sept. 15; Gaz. vol. 206; p. 875.

"Samidare." (For Toilet-Paper.) The John Hoberg Co. No. 17,995; Sept. 22; Gaz. vol. 206; p. 1160.

"Sixth Senator." (For Cigars.) La Posenda Cigar Company. No. 17,997; Sept. 22; Gaz. vol. 206; p. 1160.

"Something Fine." (For Cigars.) S. Herzberg. No. 17,994; Sept. 22; Gaz. vol. 206; p. 1160.

"Sore-Off The Horse's Best Friend." (For a Veterinary Remedy.) J. Kahn. No. 17,950; Sept. 1; Gaz. vol. 206; p. 311.

"Sugar-Valley Mineral Water." (For Mineral Water.) L. McClaskey. No. 17,980; Sept. 15; Gaz. vol. 206; p. 875.

"Sweet Pepsin Salts." (For Sweet Pepsin Salts.) J. J. Cronan. No. 17,968; Sept. 15; Gaz. vol. 206; p. 875.

"The Lone Star Adjustable Draft Hame." (For Hames.) U. S. Hame Company. No. 17,984; Sept. 15; Gaz. vol. 206; p. 875.

"3 in 1." (For Blackberry Ginger and Brandy.) Fialla & Eppler. No. 17,973; Sept. 15; Gaz. vol. 206; p. 875.

"Triplex Biscuit." (For Biscuit.) Triplex Biscuit Co. No. 17,958; Sept. 1; Gaz. vol. 206; p. 311.

"Universal." (For Putty-Knives.) Landers, Frary & Clark. No. 17,951; Sept. 1; Gaz. vol. 206; p. 311.

"Velvet Hand Cleanser." (For a Hand-Cleaner.) Velvet Cleaner Co. No. 17,959; Sept. 1; Gaz. vol. 206; p. 311.

"Véritable Bénédictine." (For a Cordial.) Societe Anonyme de la Distillerie de la Liqueur Benedictine de L'Abbaye de Fecamp. No. 18,000; Sept. 22; Gaz. vol. 206; p. 1160.

"White Dome." (For Shortening.) The Capitol Refining Company. No. 17,938; Sept. 1; Gaz. vol. 206; p. 311.

PRINTS.

"A Case of Good Judgment." (For Beer.) The Peter Schoenhofen Brewing Co. Nos. 3,732–8; Sept. 15; Gaz. vol. 206; p. 876.

"Admiration Outfit." (For Clothing). A. Bauman. No. 3,715; Sept. 1; Gaz. vol. 206; p. 311.

"Algoia Pills." (For Pills.) Duane Pharmacal Company. No. 3,716; Sept. 1; Gaz. vol. 206; p. 311.

"B. V. D. 1914 Youth's Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 3,721; Sept. 15; Gaz. vol. 206; p. 876.

"Budweiser Honored By All Nations." (For Beer.) Anheuser Busch Brewing Assn. No. 3,720; Sept. 15; Gaz. vol. 206; p. 876.

"Criterion Underwear. Cool Comfortable Correct." (For Ladies' Underwear.) S. G. Easton. No. 3,722; Sept. 15; Gaz. vol. 206; p. 876.

"Cuble." (For Blue.) Reckitts (U. S. A.). No. 3,717; Sept. 1; Gaz. vol. 206; p. 311.

"Drink Hollander Beer." (For Beer.) The Conrad Seipp Brewing Co. No. 3,739; Sept. 15; Gaz. vol. 206; p. 876.

"Getting Away with a Good Thing." (For Chewing-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,719; Sept. 1; Gaz. vol. 206; p. 311.

"Kelly Domestic Science Table." (For Tables.) F. H. Hansell & Bro. No. 3,725; Sept. 15; Gaz. vol. 206; p. 876.

"Lowney's Breakfast Cocoa." (For Cocoa.) Walter M. Lowney Co. No. 3,727; Sept. 15; Gaz. vol. 206; p. 876.

"Makes Your Mouth Water." (For Chewing-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,718; Sept. 1; Gaz. vol. 206; p. 311.

"Manhattan." (For Petticoats.) Manhattan Petticoat Co. No. 3,728; Sept. 15; Gaz. vol. 206; p. 876.

"Miss Wheatsworth." (For Whole-Wheat Biscuit.) F. H. Bennett Biscuit Co. No. 3,740; Sept. 22; Gaz. vol. 206; p. 1160.

"Oils that Lubricate Most." (For Oils.) Vacuum Oil Co. Nos. 3,742–4; Sept. 22; Gaz. vol. 206; p. 1160.

"Photoplast." (For an Apparatus for the Production of Scenic Effects.) C. E. Schneider. No. 3,731; Sept. 15; Gaz. vol. 206; p. 876.

"Sun Rize." (For Bread.) T. G. Hobbs. No. 3,726; Sept. 15; Gaz. vol. 206; p. 876.

"The Denby Girl." (For Cigars.) J. H. Fendrich. No. 3,723; Sept. 15; Gaz. vol. 206; p. 876.

"The Fortune Teller." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 3,741; Sept. 22; Gaz. vol. 206; p. 1160.

"There's peace in every puff." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,730; Sept. 15; Gaz. vol. 206; p. 876.

"Utopia Lustrous Embroidery Flosses." (For Embroidery-Floss.) Henry E. Frankenberg Company. No. 3,724; Sept. 15; Gaz. vol. 206; p. 876.

"When P. A. Speaks be a good list'ner!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,729; Sept. 15; Gaz. vol. 206; p. 876.

DISCLAIMERS.

Baking-machine. W. W. Turnbull. No. 1,009,355; date of patent Nov. 21, 1911; disclaimer filed Sept. 19, 1914; Gaz. vol. 206; p. 1438.

Trucks, Center-bolster for six-wheel car-. C. T. Westlake. No. 1,102,620; date of patent July 7, 1914; disclaimer filed Sept. 5, 1914; Gaz. vol. 206; p. 880.

Truck construction. C. H. Howard and H. M. Pflager. No. 1,080,555; date of patent Dec. 9, 1913; disclaimer filed Aug. 24, 1914; Gaz. vol. 206; p. 319.

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CCVII.

OCTOBER,

1914.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1914.

ERRATA.

1,112,508, pages 33–34, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,113,262, page 339, second claim, line 7, for the word "and" read *one;* third claim, line 9, strike out the word "oil."

1,114,190, page 705, fourth claim, line 3, for the word "circumstance" read *circumference.*

1,114,622, page 855, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,115,127, page 1088, first claim, line 6, for the word "shaft" read *shafts.*

1,115,391, pages 1177–1178, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,115,418, page 1188, in heading, assignment, for "assignor to Thomas Gustave Plant, Boston, Mass." read *assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey.*

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ANNOUNCEMENTS.

Patents Nos. 1,112,427 to 1,113,177.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 207—No. 1. TUESDAY, OCTOBER 6, 1914. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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TO RESIDENTS OF FOREIGN COUNTRIES.

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Belgium	1		New South Wales	1	
British India			New Zealand		
Brazil	1		Norway	1	1
Canada	9	2	Portugal		
Cape Colony			Queensland		
Chile			Roumania		
Costa Rica			Russia	1	
Cuba			Scotland	2	
Denmark	2		South Australia		
Dutch East Indies	1		Spain		1
England	19	3	Sweden	4	
Finland			Switzerland	1	
France	4	1	Transvaal, South Africa		
Germany	23	4	Victoria		
India			Western Australia		
Ireland					
Italy					
Luxemburg			Total to residents of foreign countries	72	12
Japan	1				

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Renewal of Forfeited Cases.

A petition for the renewal of a forfeited application need not be signed by the inventor or assignee, but may be signed by the attorney.

A power of attorney in the original application authorizing an attorney to transact all business in the Patent Office in connection with the application construed to be of sufficient scope to include the signing of a petition for renewal and the subsequent prosecution of the application. (*Ex parte Agee*, 101 O. G., 1609.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 3, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 15	July 17	611
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	May 11	Aug. 12	687
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 8	Sept. 22	109
232	4. Bridges; Conveyors; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Apr. 3	Aug. 20	778
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 2	Aug. 4	464
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	Sept. 10	1207
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 20	Aug. 8	638
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 4	Sept. 10	1207
148	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 30	July 20	704
225	10. Carriages and Wagons	May 11	Aug. 13	1052
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 27	Sept. 15	239
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	May 2	July 10	1114
229	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 7	July 20	482
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 24	Sept. 5	444
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Apr. 24	Aug. 19	938
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	Aug. 5	766
203	17. Metrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 29	Sept. 3	219
227	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 27	Aug. 29	237
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Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 3	Aug. 8	389
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 4	July 30	500
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 30	Aug. 14	234
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 20	Aug. 12	468
144	24. Apparel; Apparel Apparatus; Sewing Machines.	May 5	Aug. 26	580
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 10	Aug. 18	213
106	26. Electricity, Generation; Motive Power.	Dec. 26	June 18	919
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 24	Aug. 15	539
65	28. Internal-Combustion Engines	June 17	July 30	662
147	29. Coopering; Fire-Escapes; Ladders; Rools; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 29	Aug. 25	499
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 10	Sept. 3	404
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 2	Aug. 18	372
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 14	Aug. 21	774
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	May 11	Sept. 1	397
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 25	Aug. 11	328
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 6	Sept. 3	627
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	July 28	Aug. 12	746
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 11	Aug. 10	934
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	Aug. 18	832
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280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 1	Aug. 28	1168
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279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 16	Aug. 12	377
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 28	Aug. 31	244

Oldest new case, Dec. 26; oldest amended, June 18.
Total number of applications awaiting action 24,747

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
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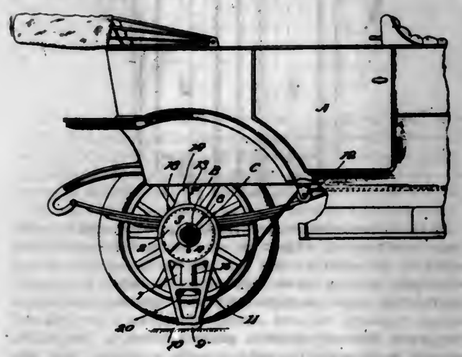
	Designs	Aug. 26	Sept. 14	200
	Labels and Prints	Sept. 5	Sept. 1	136

PATENTS

GRANTED OCTOBER 6, 1914.

1,112,427. COMBINED BRAKE, LOCK, AND JACK FOR AUTOMOBILES. GOTTFRIED BAUMANN, Heaton Mersey, England. Filed Nov. 13, 1912. Serial No. 731,091. (Cl. 21—8.)



1. The combination with a wheeled vehicle, of disks rotatably mounted upon the vehicle, supporting members, one for each disk, each supporting member having an annular portion rotatably engaging the disk and being rotatable upon the disk in a plane parallel to the length of the vehicle, each disk having a recess upon its edge face, the supporting member having a transversely extending web disposed approximately parallel to the annular portion of the supporting member, and a locking means carried by said web and the annular portion of the supporting member and including a bolt adapted to project through the annular portion and into a recess in said disk.

2. The combination with a wheeled vehicle, of a supporting member rotatably attached to the body of the vehicle for movement in a plane parallel to the length of the vehicle, said member when disposed in a vertical position extending below the periphery of the adjacent vehicle wheel, a barrel carried by the supporting member, a bolt in the barrel adapted to latch the supporting member in a vertical or horizontal position, a spring for each bolt acting to force it into its locked position, a removable head bearing against the outer end of the spring, and a locking device removably disposed at the lower end of the supporting member and acting to lock said removable head in place whereby to prevent a removal of the head and a consequent removal of the spring.

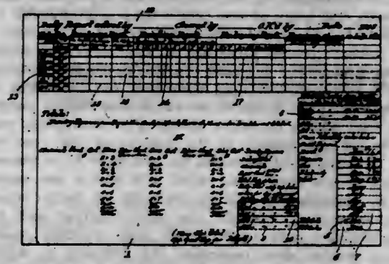
3. The combination with a wheeled vehicle, of a supporting member rotatably attached to the body of the vehicle for movement in a plane parallel to the length of the vehicle, said member when disposed in a vertical position extending below the peripheries of the wheels, a spring pressed bolt carried by the supporting member and acting to latch the supporting member in a horizontal or a vertical position, and a lock engageable with the said bolt to hold it in its latching position.

4. The combination with a wheeled vehicle, of supporting members rotatably attached to the body of the vehicle for movement in planes parallel to the length of the vehicle, said members when disposed in a vertical position extending below the peripheries of the vehicle wheels, and a spring pressed bolt carried by each of the supporting members and acting to latch the supporting members in a horizontal or a vertical position.

5. The combination with a wheeled vehicle, of supporting members rotatably attached to the body of the vehicle for movement in planes parallel to the length thereof, said members when disposed in a vertical position extending below the peripheries of the vehicle wheels, a barrel carried by each of the supporting members and a bolt in each barrel acting to latch the supporting members in a horizontal or a vertical position, a spring for each bolt acting to force it into its locking position, and a removable head in each barrel bearing against the outer end of the spring.

[Claims 6 to 8 not printed in the Gazette.]

1,112,428. REPORT-RECORD. JOHN W. BERWICK, Brooklyn, N. Y. Filed May 2, 1913. Serial No. 765,116. (Cl. 11—19.)



1. A report record consisting of a plurality of sheets corresponding to different time periods and having spaces thereupon for the entry of data regarding the business to which said report record relates, said sheets having a plurality of detachable coupons bearing the names of said time periods arranged in regular chronological succession and arranged on said sheets so that the names of said time periods will be superposed upon each other when said sheets are superposed, whereby certain of the coupons of the upper sheets may be torn off to expose the corresponding coupons of the under sheets, said time period coupons having entries of figures thereupon representing the results in the different time periods.

2. A report record consisting of a plurality of sheets corresponding to the different months of the year, said sheets having spaces for the entry of data regarding the business to which said report record relates, said sheets having detachable coupons bearing the names of the months of the year arranged in regular chronological succession and arranged on same sheets so that coupons corresponding to the said months may be superposed upon each other, whereby certain of the coupons of the upper sheets may be torn off to expose the corresponding coupons of the under sheets, said sheets further having a plurality of detachable coupons numbered to correspond with the successive weeks of a month and arranged so as to be superposed upon each other.

3. A report record consisting of a plurality of sheets corresponding to the different months of the year having headings for the entry of data regarding the business to which said report record relates, said sheets having a plurality of detachable coupons bearing the names of the months of the year arranged in chronological succession and arranged so that the different monthly coupons are

superposed upon the corresponding monthly coupons when the sheets are superposed upon each other, said monthly coupons being arranged for the entry of results of the business for the different months, in combination with a second plurality of report sheets having a plurality of detachable coupons numbered in order and corresponding to successive divisions of time less than a month, said last named report sheets having headings for the entry of data to aline with and correspond with the headings for the data which is entered on said monthly report sheets, said last named report sheets being disposed between said monthly report sheets, said second plurality of sheets being of less extent than the monthly sheets so as to leave said monthly coupons exposed.

4. A report record consisting of a plurality of monthly report sheets corresponding to the different months of the year, having similarly arranged headings thereupon for the entry of data regarding the business to which said report record relates, said sheets having a plurality of detachable coupons bearing the names of the months of the year arranged in succession and adapted to become superposed upon each other when said sheets are superposed, in combination with a plurality of daily report sheets arranged like the said monthly report sheets to receive data regarding the business to which said record relates, said daily report sheets having a plurality of detachable coupons corresponding to the days of the week arranged in regular succession, said daily report sheets being substantially identical so that when superposed the corresponding day coupons are superposed upon each other, and being of less extent than said monthly report sheets so as to leave said monthly coupons exposed.

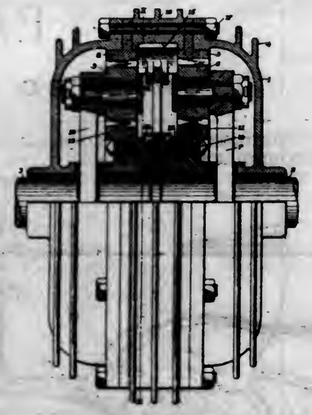
5. A report record consisting of a plurality of sheets corresponding to the different months of the year, having similarly arranged headings thereupon for the entry of data regarding the business to which said report record relates, said sheets having a plurality of detachable coupons bearing the names of the months of the year arranged in the same order on all the sheets so as to become superposed upon each other when said sheets are superposed, in combination with a plurality of daily report sheets having headings like the said headings and arranged like the said headings on said monthly report sheets to receive data regarding the business to which said report record relates, said daily report sheets having a plurality of detachable coupons bearing the names of the days of the week arranged in regular succession and in the same order on the different sheets, said daily report sheets being similar so that when superposed the corresponding day coupons are superposed upon each other, said monthly report sheets having a plurality of detachable coupons numbered in succession to correspond with the successive weeks of the month and arranged to become superposed upon each other when said monthly report sheets are superposed, and bearing characters indicating the weekly results, said monthly coupons having characters indicating the monthly results.

[Claims 6 to 8 not printed in the Gazette.]

1,112,429. TRANSMISSION MECHANISM. OSCAR C. BORNHOLT, Detroit, Mich. Filed Aug. 20, 1913. Serial No. 785,611. (Cl. 74—34.)

1. In a transmission mechanism, a main shaft, a follower shaft alined therewith, an intermediate gear rotatably secured on the shafts, a casing rotatable on the shafts as a housing for the gears, a pair of internal gears secured to the casing concentrically with the shafts, a set of planetary pinions mounted on the end of each shaft, each set intermeshing both with the intermediate gear and with the companion internal gear, and means operated by centrifugal force for locking the casing to turn in unison with the intermediate gear.

2. In a transmission mechanism, a main shaft, a follower shaft alined therewith, an intermediate gear mounted concentrically on the adjacent ends of the shafts, sets of planetary pinions each secured on the end of a shaft in mesh with the intermediate gear, a casing rotatably secured on the shafts as a housing for the gears, annular gears in the casing each in mesh with the planetary pinions, and means for frictionally engaging the casing to turn with the intermediate gear when the casing approaches a predetermined speed.



3. In a transmission mechanism, a main shaft, a follower shaft alined therewith, an intermediate gear journaled on the adjacent end portions of the shafts, sets of planetary pinions each secured to a shaft to revolve around the latter in mesh with the intermediate gear, a casing rotatably secured on the shafts as a housing for the gears, internal annular gears secured to the casing each in mesh with the said planetary pinions, and centrifugal weight levers mounted to revolve with the intermediate gear and arranged to frictionally engage the casing to turn the latter with the intermediate gear.

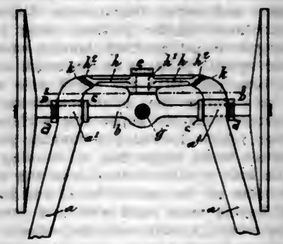
4. In a transmission mechanism, a main shaft, a follower shaft alined therewith, a sleeve journaled on the adjacent end portions of the shafts, a pair of annular gears secured in spaced relation on the sleeve, the sleeve and annular gears forming a unitary intermediate gear, centrifugal weight levers mounted on the sleeve to revolve therewith, sets of planetary pinions each secured to a shaft in mesh with intermediate gears, a casing rotatable on the shafts as a housing for the gears, and annular internal gears secured in the casing each in mesh with a set of planetary pinions, the casing being frictionally engaged by the centrifugal weight levers to turn in unison with the intermediate gear when the casing approaches a predetermined rate of speed.

5. In a transmission mechanism, a main shaft, a follower shaft alined therewith, a sleeve journaled on the adjacent end portions of the shafts, a pair of annular gears secured in spaced relation on the sleeve, the sleeve and gears forming a unitary intermediate gear, centrifugal weight levers pivoted on extensions of the sleeve, a plate secured on each shaft, a set of planetary pinions journaled on each plate to revolve in mesh with the intermediate gear, a casing journaled on the shafts as a housing for the gears, and internal annular gears secured to the casing each in mesh with a set of planetary pinions, the casing having an internal friction face with which the centrifugal weight levers engage when the casing approaches a predetermined rate of speed.

1,112,430. WHEELED GUN-CARRIAGE. EMILE BOURDELLES, Paris, France. Original application filed May 21, 1913, Serial No. 768,953. Divided and this application filed Apr. 20, 1914. Serial No. 833,246. (Cl. 89—40.)

1. In a gun carriage, the combination with the axle of the carriage, of a pair of anchor members provided with gear teeth and revolubly supported on said axle, and a rotary member mounted on said axle having gear teeth engaging said teeth on the anchor members.

2. In a gun carriage, the combination with the axle of the carriage, of a pair of anchor members revolubly mounted on said axle and having forwardly extending ends provided with gear teeth, and a member pivoted to said axle between said members and having teeth engaging the teeth on said anchor members for causing said members to rotate together.

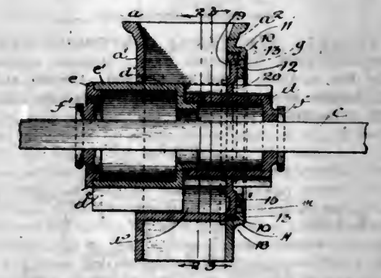


3. In a gun carriage, the combination of the axle, a pair of anchor members mounted on opposite sides of the center of the axle and turning on the axle as a pivot, and gearing directly connecting said anchor members whereby they may be simultaneously turned independently of the axle.

4. In a gun carriage, the combination with the axle of the carriage, of a pair of diverging anchor members mounted to turn on the axle as an axis, said anchor members having their portions to the rear of the axle resting on the ground and with portions extending forwardly of the axle, and gearing connections between the forward portions of said anchor members.

5. In a gun carriage, the combination with the axle of the carriage, of a pivot extending forwardly of the axle in the horizontal plane thereof, a member mounted to turn on said pivot and having gear teeth on opposite sides of said pivot, and anchor members mounted to turn on the axle of the carriage as an axis and having forwardly projecting arms provided with gear teeth engaging the gear teeth on said pivoted member.

1,112,431. SEED-FEEDING DEVICE. HARRISON B. BOZARD, La Crosse, Wis., assignor to La Crosse Plow Co., La Crosse, Wis., a Corporation of Wisconsin. Filed Feb. 17, 1913. Serial No. 748,820. (Cl. 111—17.)



1. The combination of a case formed of sections, one section having a recess therein and a wall projecting from the outer side thereof, a feed-wheel in the case, a shaft for driving the feed-wheel and a feed-ring mounted in said recess and bearing against the inner face of the projecting wall, a groove being formed at the outer edge of said recess, and in said inner face of said wall.

2. The combination of a case formed of sections, one section having a recess therein and a wall projecting from the other side thereof, a feed-wheel in the case, a shaft for driving the feed-wheel and a feed-ring mounted in said recess and bearing against the inner face of the projecting wall, and having its periphery bearing in the periphery of the recess, a groove being formed at the outer edge of said recess and in said inner face of said wall.

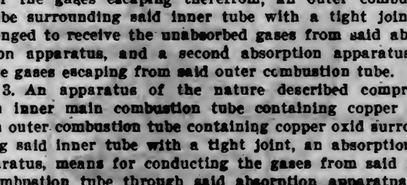
3. The combination of a case formed of sections, one section having a recess and a wall projecting from one side thereof, a feed-wheel in the case, a shaft for driving the feed-wheel, and a feed-ring mounted in said recess and bearing against the inner face of the projecting wall, said wall having openings therein adjacent the outer edge of the ring for the escape of any material between said bearing-face and the ring.

4. The combination of a case formed of sections, one section having a recess and a wall projecting outwardly from one side thereof, a feed-wheel in the case, a shaft for driving the feed-wheel and a feed-ring mounted in said recess and bearing against the inner face of said wall, said ring having a channel inwardly of its rim.

5. The combination of a case formed of sections one section having a recess and a wall raised from one side thereof, a feed-wheel in the case, a shaft for driving the feed-wheel and a feed-ring mounted in said recess and bearing against the inner face of the raised wall, a groove being formed at the outer edge of said bearing face, said ring having grooves on its opposite faces, relatively offset, and a rim of the width of the recess.

[Claim 6 not printed in the Gazette.]

1,112,432. APPARATUS FOR USE IN ELEMENTARY ORGANIC ANALYSIS. HUGO BRACH, Vienna, Austria-Hungary. Filed Mar. 5, 1914. Serial No. 822,784. (Cl. 23—3.)



1. An apparatus of the nature described comprising two concentric combustion tubes, one surrounding the other with a tight joint, two sets of absorption apparatus, and means for passing the gases from one of said tubes through one absorption apparatus and then through the other tube and the other absorption apparatus.

2. An apparatus of the nature described comprising an inner main combustion tube, an absorption apparatus for the gases escaping therefrom, an outer combustion tube surrounding said inner tube with a tight joint arranged to receive the unabsorbed gases from said absorption apparatus, and a second absorption apparatus for the gases escaping from said outer combustion tube.

3. An apparatus of the nature described comprising an inner main combustion tube containing copper oxid, an outer combustion tube containing copper oxid surrounding said inner tube with a tight joint, an absorption apparatus, means for conducting the gases from said main combustion tube through said absorption apparatus and said outer combustion tube, and an absorption apparatus arranged to receive the gases from said last mentioned combustion tube.

1,112,433. ELECTRICAL GROUND-DETECTOR. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 17, 1912. Serial No. 726,260. (Cl. 175—183.)

1. A ground detector comprising relatively universally movable members, one of which is provided with a plurality of coils having a common terminal, and the other of which is provided with a coil that is connected to the common terminal of the aforesaid coils.

2. A ground detector comprising relatively universally movable members, one of which is provided with a plurality of coils having a common terminal, and the other of which is provided with a coil that is connected between the said common terminal and the ground.

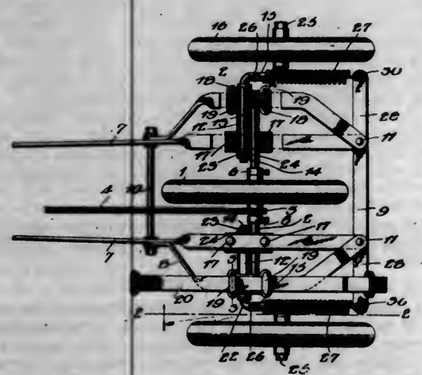
3. The combination with a distributing circuit, of a ground detector comprising relatively universally movable members, one of which is provided with a plurality of coils having a common terminal and the remaining terminals connected respectively to the distributing circuit conductors, and the other member of which is provided with a coil that is connected between the common terminal of the aforesaid coils and the ground.

4. The combination with a distributing circuit of a ground detector, comprising relatively universally movable members, one of which is provided with a plurality of coils respectively corresponding to and associated with the distributing circuit conductors, the said coils having a common terminal, and the other member of which is provided with a coil that is connected to the common terminal of the aforesaid coils.

5. The combination with a distributing circuit of a ground detector, comprising relatively universally movable members, one of which is provided with a plurality of coils respectively corresponding to and associated with the distributing circuit conductors, the said coils having a common terminal, and the other member of which is provided with a coil that is connected between the common terminal of the aforesaid coils and the ground.

[Claims 6 to 13 not printed in the Gazette.]

1,112,434. MOTOR-VEHICLE. LORY W. BURRELL, Brainerd, Minn., assignor to Albert Angel, Brainerd, Minn. Filed Mar. 31, 1913. Serial No. 758,033. (Cl. 21—90.)



1. A motor vehicle including a running gear frame, bearings secured to the running gear frame at opposite sides thereof, a transverse axle mounted in the said bearings, spaced side crank axle sections journaled in the said bearings, a central traction wheel mounted on the axle and supporting the running gear frame, counterbalancing wheels of the same diameter as the central traction wheel and mounted on the crank axle sections, and springs connected with the latter and with the running gear frame for maintaining the counterbalancing wheels in constant contact with the supporting surface and adapted to permit the side wheels to yield to irregularities thereof.

2. A motor vehicle including a running gear frame, a central traction wheel mounted on the running gear frame and subjected to the weight of the vehicle, a pair of spaced independently movable crank axle sections located at opposite sides of the central traction wheel and having inner and outer transversely disposed spindle portions, the inner spindle portions being journaled on the running gear frame, counterbalancing wheels mounted on the outer spindle portions of the crank axle sections, and spring connected with the crank axle sections and yieldably maintaining the counterbalancing wheels in constant contact with the supporting surface.

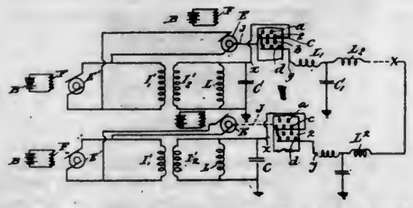
3. A motor vehicle including a running gear frame, a central traction wheel supporting the running gear frame, spaced crank axle sections mounted on the running gear at opposite sides of the central wheel and provided with cranks and having arms rigid with and arranged at an angle to the cranks, counterbalancing wheels mounted on the said cranks, and springs connected with the said arms for yieldably maintaining the counterbalancing wheels in constant contact with the supporting surface.

4. A motor vehicle including a running gear frame, a transverse axle secured to the frame, a central traction wheel mounted on the axle and subjected to the weight of the motor vehicle, spaced crank axle sections journaled on the running gear at opposite sides of the central traction wheel in substantially the horizontal plane of the axis thereof and having independent movement, counterbalancing wheels mounted on the crank axle sections, and means connected with the crank axle sections for yieldably maintaining the counterbalancing wheels in constant contact with the supporting surface, whereby the motor vehicle is balanced on the central traction wheel and is maintained in an upright position.

5. A motor vehicle including a running gear frame, a central traction wheel supporting the running gear frame, spaced crank axles mounted on the running gear frame in substantially the same horizontal plane as the axis of the central traction wheel, said crank axle sections being movable independently of each other and having rearwardly extending cranks, counterbalancing wheels arranged on the said cranks, and means connected with the crank axle sections for yieldably maintaining the counterbalancing wheels in constant contact with the supporting surface.

[Claims 6 to 8 not printed in the Gazette.]

1,112,435. ELECTRICAL CONVERSION SYSTEM. SEWALL CABOT, Brookline, Mass. Original application filed Dec. 4, 1909, Serial No. 531,306. Divided and this application filed Aug. 10, 1911. Serial No. 643,322. (Cl. 171—253.)



1. In an electrical conversion system, a source of alternating current, an alternating current transformer having one winding connected therewith, a condenser connected across the other winding of said transformer, the circuit including said condenser being resonant to the frequency of said alternating current, a working circuit, and means in synchronism with said alternating current for conveying energy unidirectionally from the resonant circuit to said working circuit.

2. In an electrical conversion system, a source of alternating current, an alternating current transformer having one winding connected therewith, a condenser connected across the other winding of said transformer, the circuit including said condenser being resonant to the frequency of said alternating current, a working circuit, means in synchronism with said alternating current for conveying energy unidirectionally from the resonant circuit to said working circuit, and an inductance in series with said working circuit for preventing current fluctuations therein.

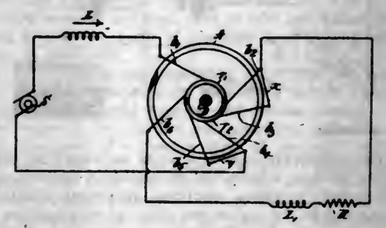
3. In an electrical conversion system, a source of alternating current, an alternating current transformer having one winding connected therewith, a condenser connected across the other winding of said transformer, the circuit including said condenser being resonant to the frequency of said alternating current, a working circuit, means in synchronism with said alternating current for conveying energy unidirectionally from the resonant circuit to said working circuit, and a capacity in shunt to said working circuit for preventing fluctuations of potential therein.

4. In an electrical conversion system, a source of alternating current, an alternating current transformer having one winding connected therewith, a condenser connected across the other winding of said transformer, a working circuit, and means in synchronism with said alternating current for conveying energy unidirectionally from said condenser to said working circuit.

5. In an electrical conversion system, a source of alternating current, an alternating current transformer having one winding connected therewith, a condenser connected across the other winding of said transformer, a working circuit, means in synchronism with said alternating current for conveying energy unidirectionally from said condenser to said working circuit, and an inductance in series with said working circuit for preventing current fluctuations therein.

[Claims 6 to 13 not printed in the Gazette.]

1,112,436. ELECTRIC CONVERSION. SEWALL CABOT, Brookline, Mass. Filed Aug. 22, 1912. Serial No. 716,360. (Cl. 171—253.)



1. A system for converting constant-potential A. C. to substantially constant-current D. C. comprising, in combination, a source of constant-potential A. C., a working circuit, an inductance in series with the source of A. C. for controlling the value of current in said working circuit, a synchronously driven commutator for controlling the connection of said source to said working circuit, and an inductance in series with said working circuit of value large compared to that of the first-mentioned inductance.

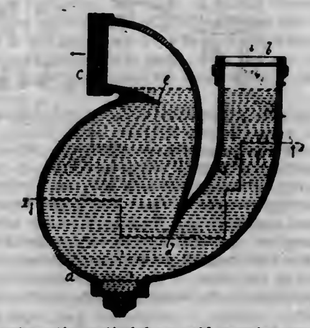
2. A system for converting constant-potential A. C. to substantially constant-current D. C. comprising, in combination, a source of constant-potential A. C., a working circuit, an inductance in series with said source of A. C. for controlling the value of current in said working circuit, a synchronously driven commutator, brushes connecting said commutator with said source and with said working circuit, said brushes being spaced around said commutator to connect said source to said working circuit twice during every cycle, means for short-circuiting the connections of said source to said working circuit twice during every cycle, and an inductance in series to said working circuit of value large compared with the first-mentioned inductance.

3. A system for converting constant-potential A. C. to substantially constant-current D. C. comprising, in combination, a source of constant-potential A. C., a working circuit, an inductance in series with the source of A. C., a synchronously-driven commutator for controlling the connection of said source to said working circuit, and an inductance in series with said working circuit, the value of the first mentioned inductance in henries being approximately equal to the maximum E. M. F. of said source divided by twelve times the product of the amperes in the working circuit by the frequency of the current of the source in cycles per second.

4. A system for converting constant-potential A. C. to substantially constant-current D. C. comprising, in combination, a source of constant-potential A. C., a working circuit, an inductance in series with the source of A. C., a synchronously driven commutator for controlling the connection of said source to said working circuit, and an inductance in series with said working circuit, the value of the first mentioned inductance in henries being approximately equal to the maximum E. M. F. of said source divided by twelve times the product of the amperes in the working circuit by the frequency of the current of the source in cycles per second and the value of the last mentioned inductance being large compared to that of the first mentioned inductance.

5. A system for converting constant-potential A. C. to substantially constant-current D. C. comprising, in combination, a source of constant-potential A. C., a working circuit, an inductance in series with said source of A. C. for controlling the value of current in said working circuit, a synchronously driven commutator, brushes connecting said commutator with said source and with said working circuit, said brushes being spaced around said commutator to connect said source to said working circuit twice during every cycle, means for short-circuiting the connections of said source to said working circuit twice during every cycle, the duration of such short-circuit being approximately equal to the duration of a quarter of a cycle of the alternating current developed by the source, and an inductance in series with said working circuit of value large compared to the first mentioned inductance.

1,112,437. ANTISIPHON SELF-SCOURING TRAP. GEORGE CODY, Brooklyn, N. Y. Filed Mar. 24, 1910. Serial No. 551,381. (Cl. 182—12.)



1. An automatic anti-siphon self-scouring trap having an inlet at the bottom, and a horizontally extending outflow connection from the top, the outer wall of the trap being extended inwardly at its junction with the outflow connection, and inclined continuously downward from said junction, so as to form a combined cut-off lip and return water shed when the trap is siphoning.

2. An automatic anti-siphon self scouring trap consisting of a bulging curvilinear body, to which are joined an inlet leg and an outlet leg, a sharp sealing cut off edge in said trap formed at the juncture of the wall of the trap body and inlet leg, the body of the trap being bulged and of greater capacity at the point farthest from the inlet leg, and a sharp sealing cut off edge in the body of the trap at the outlet and below the level of the outflow from the outlet leg.

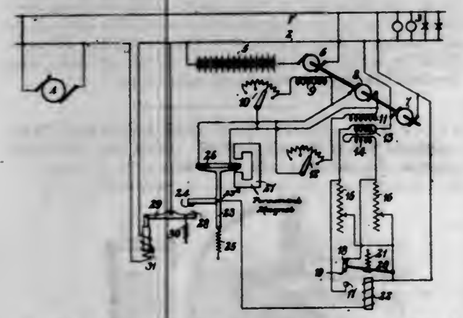
3. An automatic anti-siphon self-scouring trap having an inlet at the bottom, and a horizontally extending outflow connection from the top, the outer wall of the trap being extended inwardly at its junction with the outflow connection, and inclined continuously downward from said junction, so as to form a combined cut-off lip and return water shed when the trap is siphoning, the body of the trap having its largest horizontal cross section near its bottom.

4. An automatic anti-siphon self-scouring trap having an inlet at the bottom, and a horizontally extending outflow connection from the top, the outer wall of the trap being extended inwardly at its junction with the outflow connection, and inclined continuously downward from said junction, so as to form a combined cut-off lip and return water shed when the trap is siphoning, the body of the trap having its largest horizontal cross section near its bottom and being curvilinear in outline of intersection with planes of every angle of direction.

5. An automatic, anti-siphon, self-scouring trap having its interior free from partitions or other obstructions to the flow of water, an outlet at the top and an inlet on one side at the bottom of the trap body, in combination with an exterior vertically disposed inlet leg connected to the trap body inlet, the highest exterior point of connection between the body and inlet leg being below the lowest normal level of water in said trap.

[Claims 6 to 13 not printed in the Gazette.]

1,112,438. SYSTEM OF ELECTRICAL DISTRIBUTION AND REGULATION. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 9, 1906. Serial No. 325,291. (Cl. 171—310.)



1. The combination with an electrical circuit, and a dynamo-electric machine connected thereto, of an exciter generator for supplying the field magnet winding of the dynamo-electric machine having a main field magnet winding and two auxiliary field magnet windings arranged to act in opposition, resistances in circuit, respectively, with the auxiliary field magnet windings, and means for shunting the one or the other of the resistances that is responsive in operation to variations in the current traversing said circuit.

2. The combination with an electrical circuit, and a dynamo-electric machine connected thereto, of an exciter generator for supplying the field magnet winding of the dynamo-electric machine having a main field magnet winding and two auxiliary field magnet windings arranged to act in opposition, resistances in circuit, respectively, with the auxiliary field magnet windings, and means for shunting the one or the other of the resistances that is responsive in operation to variations in the current traversing said circuit and to the voltage of the exciter circuit.

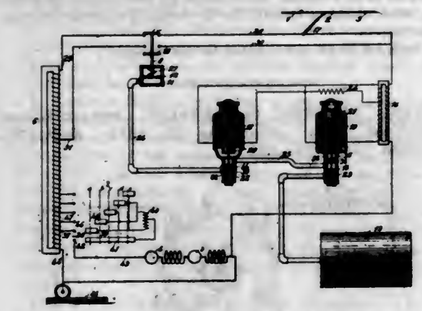
3. The combination with an electrical circuit, and a dynamo-electric machine connected thereto, of an exciter for the field magnet winding of the dynamo-electric machine having a main field magnet winding and two auxiliary field magnet windings arranged to act in opposition, resistances in circuit, respectively, with the auxiliary field magnet windings, and means for shunting the one or the other of the resistances comprising co-acting contact terminals one of which is responsive in operation to variations of current in said circuit.

4. The combination with an electrical circuit, and a dynamo-electric machine connected thereto, of an exciter for the field magnet winding of the dynamo-electric machine having a main field magnet winding and two auxiliary field magnet windings arranged to act in opposition, resistances in circuit, respectively, with the auxiliary field magnet windings, and means for shunting the one or the other of the resistances comprising co-acting contact terminals that are responsive in operation, respectively, to variations of current in said circuit and to the voltage of the exciter circuit.

5. The combination with an electrical circuit, a storage battery and a booster generator connected thereto, of an exciter generator for supplying the field magnet winding of the booster generator having two field magnet windings arranged to act in opposition, resistances respectively in circuit therewith, and means for shunting the one or the other of the resistances that is responsive in operation to variations in the current that traverses said circuit.

[Claims 6 to 34 not printed in the Gazette.]

1,112,439. ELECTRIC-CIRCUIT-CONTROL SYSTEM. RICHARD J. DEARBORN, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 20, 1906. Serial No. 302,137. (Cl. 191—7.)



1. The combination with sources of electrical energy of unlike voltage, a plurality of conductor sections severally supplied therefrom, electrical apparatus adapted to be connected to the one or the other of said sections and a pair of switches for effecting such connection, of means for automatically and selectively actuating the switches to complete the one or the other of said connections according as the voltage of the conductor section from which energy is received is high or low.

2. An electrically propelled vehicle having a current collector adapted to engage either a high or a low voltage supply circuit conductor, high and low voltage receiving conductors and automatic means for selectively connecting the current collector to the one or the other of the receiving conductors, in accordance with the voltage of the supply circuit conductor that is engaged by the current collector.

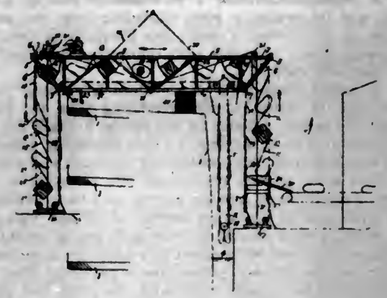
3. The combination with an alternating current supply conductor, a transformer having two points adapted to be connected to said conductor, and a switching device for effecting such connections, of means for automatically and selectively actuating said device to complete a connection from said supply conductor to the one or the other point in said transformer according as the supply conductor is at a relatively high or low potential.

4. The combination with a supply conductor, a plurality of electric motors, a voltage-regulating transformer provided with a plurality of leads adapted to be connected to said supply conductor, and a switching device for effecting such connections, of means for automatically and selectively actuating said device to complete a connection from the supply conductor to the one or the other of said transformer leads according as the energy supplied is at a relatively high or low voltage.

5. The combination with a pair of supply conductors of unlike voltage, electrical apparatus adapted to be connected to the one or the other of said conductors, and a pair of mechanically interlocked switches for effecting such connections one of which is normally closed and the other normally open, of means for simultaneously actuating said switches to successively open the one and close the other only when energizing current for said actuating means is supplied at a relatively low voltage.

[Claims 6 to 15 not printed in the Gazette.]

1,112,440. CONVEYER. PERCY GEIKIE DONALD and BRUCE ISAAC DONALD, London, England. Filed Jan. 23, 1911. Serial No. 604,137. (Cl. 193—3.)



1. In a loading and unloading apparatus, the combination with a frame, of upper and lower carrier wheels on said frame, an endless carrier trained over said wheels and having depending working end loops and a depending idler loop, a weight carried by the idler loop, and a weight for each working end loop, each of said last named weights being greatly in excess of the idler loop weight, substantially as described.

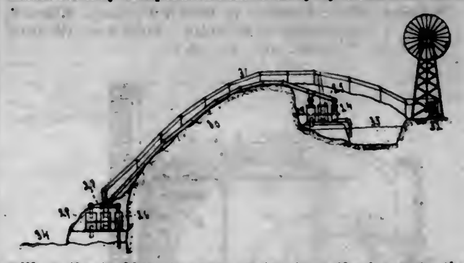
2. In a loading and unloading apparatus, the combination with a carrier support, an endless carrier adapted to be advanced on said support and having pendent looped ends adjacent the loading and unloading points, pockets each composed of a flexible strip of material having its ends connected with the carrier at points spaced apart a distance less than the length of the strip, whereby the resulting slack of the strip causes the pockets to always open upwardly, and means for collapsing said pockets to discharge the contents thereof.

3. In a loading and unloading apparatus, the combination with a carrier support, an endless carrier adapted to be advanced on said support and having pendent looped ends adjacent the loading and unloading points, pockets each composed of a flexible strip of material having its ends connected with the carrier at points spaced apart a distance less than the length of the strip whereby the resulting slack of the strip causes the pockets to always open upwardly when traveling vertically up or down or in a horizontal position, and rolling mechanism for collapsing said pockets to discharge the contents thereof at the unloading point, substantially as described.

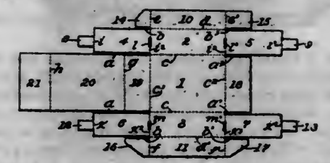
1,112,441. SYSTEM OF STORING POWER. REGINALD A. FESSENDEN, Brant Rock, Mass. Filed Apr. 2, 1906. Serial No. 309,471. (Cl. 171—315.)

1. The combination with two reservoirs at different elevations, of a siphon pipe connecting them, and means for utilizing the energy of the falling water in both legs of the siphon to produce electrical energy.

2. The combination with a windmill and two reservoirs at different elevations, of an electric machine operated by the windmill, a pump in the lower reservoir, an electric machine near the lower reservoir provided with a driving turbine, and electric connections by which the two electric machines may be operated indifferently by either the windmill or the turbine, to pump water from the lower to the upper reservoir.



1,112,442. FOLDING BOX. HERBERT A. FLACK, Cherokee, Iowa. Filed July 21, 1913. Serial No. 780,199. (Cl. 229—36.)



1. A folding box, comprising a bottom having side folds on two opposite sides, the said folds having end-flaps provided with end-tabs, and each of said end-flaps having a transverse slot extending along its line of junction with the carrying side-fold, the end-flaps folded over each other to form box-sides, entire throughout and of double thickness, when the end-tabs on the outer flaps are inserted in the slots in the inner flaps so as to lie along the inner walls of the adjacent side folds.

2. A folding box, comprising a bottom having side folds on two opposite sides, the said folds having end-flaps provided with end-tabs, each of said end-flaps having a transverse slot extending along its line of junction with the carrying side-fold, the end flaps adapted, when folded over each other, to form box-sides of double strength, when the end-tabs on the outer of said end flaps are inserted in the slots in the inner end flaps so as to lie along the inner walls of the adjacent side folds, with the end tabs on the said inner flaps lying along the inner walls of the adjacent side folds.

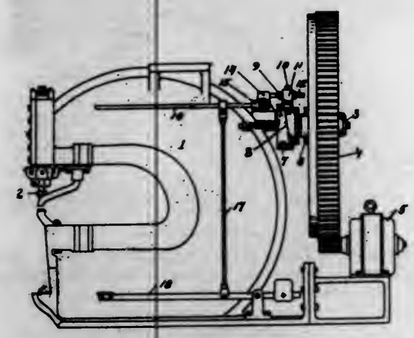
3. A folding box, comprising a bottom having side folds on two opposite sides provided with top flaps having end-tabs, the first-mentioned folds having end-flaps provided with end-tabs, each of said end-flaps having a transverse slot extending along its line of junction with the carrying side-fold, the end-flaps folded over each other to form box-sides when the end-tabs on the outer flaps are inserted in the slots in the inner flaps to lie along the inner walls of the adjacent side-folds, and the side-fold top-flaps folded over the box opposite its bottom, with their end-tabs folded inwardly to engage the first-mentioned infolded end-tabs.

4. A folding box comprising a bottom, two side folds, end flaps on each side fold, a top flap on each side fold, end tabs on each end flap and on each top flap, end folds on said bottom, a top fold on one of the last mentioned end folds, and an end flap on the said top fold, certain of the side fold end flap tabs having locking engagement with the side fold opposite thereto, and the top flap end tabs bearing against said end flap tabs to hold them against the abutting side folds with which they are engaged.

5. A folding box comprising a bottom, side and end folds, top folds on the end folds, a pair of end flaps on each end of each side fold, each side fold end flap having locking engagement with the opposite side fold, one end with its top fold dividing the interior of the box into two compartments, and the other end fold with its top fold serving to cover the uppermost compartment.

[Claims 6 to 8 not printed in the Gazette.]

1,112,443. CLUTCH ATTACHMENT FOR PUNCHING AND RIVETING MACHINES. FREDERICK S. FLOETER, Saginaw, Mich., assignor to Wickes Brothers, Saginaw, Mich., a Corporation of Michigan. Filed Aug. 19, 1912. Serial No. 715,809. (Cl. 192—9.)



1. In a clutch attachment for punching and other machines, the combination with a main shaft and a clutch member loosely mounted thereon, of a clutching member slidably mounted on said shaft, a spring to normally cause the engagement of the clutch, said clutching member being provided with a helical circumferential cam having a side working face; removable means adapted to engage said cam face at a predetermined point along its face, said cam face in its travel adapted to disengage said clutching member from the aforesaid loosely mounted clutch member.

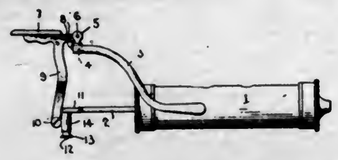
2. In a clutch-disengaging device for punching machines, the combination with a main shaft and a two-part clutch thereof, one member of said clutch slidably mounted upon said shaft and provided with a helical circumferential cam, of a spring to normally cause the engagement of the clutch, a rocking element adapted to be manually actuated, a shoe carried by said rocking element adapted to engage the face of said cam, and means for longitudinally adjusting said shoe to regulate the timing of the action of said cam.

3. In a clutch-disengaging device for punching machines, the combination with a main shaft and a two-part clutch thereof, one member of said clutch member slidably mounted upon said shaft and provided with a helical circumferential cam, of a spring to normally cause the engagement of the clutch, a rocking element pivoted adjacent said sliding clutch member, means carried by said rocking element adapted to support a roller shoe, and means adapted to be actuated for either engaging or disengaging said roller shoe with the face of said cam, and means for longitudinally adjusting said shoe supporting means to regulate the timing of the action of said cam.

4. In a clutch attachment for punching and other machines, the combination with the main shaft and a clutch-member loosely mounted thereon, of a clutching member slidably mounted on said shaft, a spring to normally cause the engagement of the clutch, said clutching member being provided with a helical circumferential cam having a side working face, rocking means arranged adjacent the sliding clutch member, means for actuating said rocking means, adjustable supporting means carried by said rocking means, a shoe supported by said adjustable supporting means, said shoe adapted to engage the face of said cam to regulate the timing of the action of said cam.

5. In a clutch attachment for punching and other machines, the combination with a main shaft and a clutch member loosely mounted thereon, of a clutching member slidably mounted on said shaft, a spring to normally cause the engagement of the clutch, said clutching member being provided with a helical circumferential cam having a side working face, a shoe adapted to engage the face of said cam, a yoke for supporting said shoe, means for supporting said yoke to permit adjustment of said shoe in a direction lengthwise of the main shaft, to regulate the timing of the action of said cam and means for actuating said yoke-supporting means.

1,112,444. VALVE FOR BRASS WIND MUSICAL INSTRUMENTS. JAMES H. GARDNER, Elkhart, Ind., assignor to C. G. Conn, Elkhart, Ind. Filed Nov. 6, 1913. Serial No. 799,631. (Cl. 84—8.)



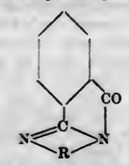
1. A cornet comprising a rectilinearly moving piston valve, and its casing, a stem extending from the piston outside of the casing, a finger key pivotally mounted on the casing, and a universal joint connecting the finger key with the said stem.

2. A cornet comprising a rectilinearly moving piston valve, and its casing, a stem extending from the piston outside the casing, a frame on the casing, a finger key pivotally mounted on said frame, an arm depending from said key and a universal joint connecting said arm and stem.

3. In a wind musical instrument, the combination of a series of rectilinearly moving pistons and their casings, a frame, the ends of which are secured to the end casings of said series, a stem extending from each piston outside its casing, a bell crank lever finger key pivotally mounted on said frame, one for each piston, and a universal joint connecting each bell crank lever with its respective piston stem.

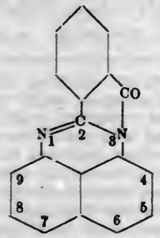
1,112,445. SULFUR DYES. KARL PAUL GRÄLERT, MAX BUFF, and JOSEPH FLASHLAENDER, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 6, 1913. Serial No. 805,057. (Cl. 8—1.)

1. The new sulfur dyes obtained from phthaloperinone compounds having most probably the formula:



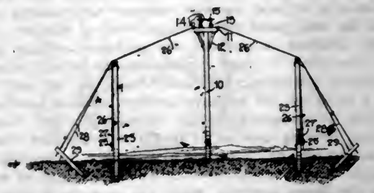
in which R stands for a naphthalene ring which dyes are after being dried and pulverized dark powders being soluble in a solution of sodium sulfid generally with a yellowish-brown to red-brown coloration; being soluble in concentrated sulfuric acid with a brown coloration; and dyeing unmordanted cotton bloomy brown shades fast to light, substantially as described.

2. The new sulfur dye obtained from phthaloperinone having most probably the formula:



which is after being dried and pulverized a dark powder soluble in a sodium sulfid solution with a reddish-brown coloration and soluble in concentrated sulfuric acid with a brown coloration; dyeing unmordanted cotton in pure reddish-brown shades fast to light, substantially as described.

1,112,446. OVERHEAD-RAILROAD CONSTRUCTION. FRANK OSCAR GUSTAFSON, Bessemer, township, Gogebic county, Mich. Filed July 27, 1914. Serial No. 853,549. (Cl. 104—4.)



1. An overhead railroad having longitudinal ties resting on a plurality of gauntree posts; each longitudinal tie comprising a beam extending between two gauntree posts, a tension member suspended along the beam and connected thereto by a plate riveted to each end of the tension member and secured by bolts to the beam, and a compression member between the beam and the tension member situated at its middle; joining members connecting the ends of two beams, said joining members resting directly on the T-pieces.

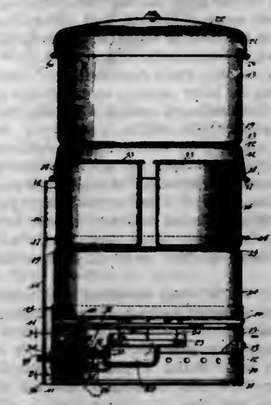
2. An overhead railroad having longitudinal ties resting on a plurality of gauntree posts; each gauntree post comprising a single upright post and a T-piece secured at the top of said single post, diagonal struts connecting the ends of the T-pieces with the single post, said longitudinal ties resting on top of said T-pieces; each longitudinal tie comprising a beam extending between two gauntree posts, a tension member suspended along the beam and connected thereto by a plate riveted to each end of the tension member and secured by bolts to the beam, and compression members between the beam and the tension member situated at its middle; joining members connecting the ends of two beams, said joining members resting directly on the T-pieces.

3. An overhead railroad having longitudinal ties resting on a plurality of gauntree posts; a trestle on each side of said gauntree posts and at suitable distance therefrom, and anchorage members for each trestle, and tensioning members between said trestle and said anchorage members, and other tension members secured to said gauntree posts at one end and to the lower part of the trestle at the other end, said other tensioning members passing over the top of the trestle.

4. An overhead railroad having longitudinal ties resting on a plurality of gauntree posts; each gauntree post comprising a single upright post and a T-piece secured at the top of said single post, diagonal struts connecting the ends of the T-pieces with the single post, said longitudinal ties resting on top of said T-pieces; each longitudinal tie comprising a beam extending between two gauntree posts, a tension bar suspended along the beam and connected thereto by a plate; a trestle on each side of said gauntree posts and at suitable distance therefrom, and anchorage members for each trestle, and tensioning members between said trestle and said anchorage member, and other tensioning members secured to said gauntree posts at one end and to the lower part of the trestle at the other end, said other tensioning members passing over the top of the trestle.

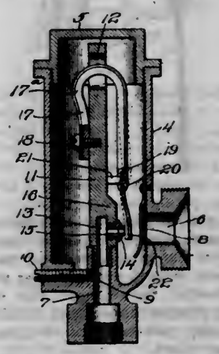
1,112,447. CULINARY UTENSIL. NOAH S. HARTER, Waukegan, Ill., assignor to The Harter Company, Waukegan, Ill., a Corporation of Illinois. Filed Feb. 9, 1914. Serial No. 817,635. (Cl. 236—6.)

1. A device of the character described comprising a separable burner section and a removable, superposed food container section; controllable means for fuel supplied to the burner, in said burner section; a responsive means for controlling said fuel-controlling means; a food section; a flue opening into said food section and open to the atmosphere at its lower end, each vessel carrying a section of said flue, said heat responsive means located in the flue section carried by the burner section whereby heated vapor or gases escaping from said food section must pass through both flue sections to the atmosphere and a cooling blast of air will pass through said flue when said food section is open.



2. A device of the character described comprising a separable burner section and a plurality of removable, interchangeable food container sections superposed upon said burner section, one above the other; controllable means for fuel supplied to the burner, in said burner section; a heat responsive means for controlling said fuel-controlling means; a flue opening into each said food section, near their respective upper edges, and open to the atmosphere at its lower end, each vessel carrying a section of said flue, said heat responsive means located in the flue section of the burner section whereby heated gases or vapor escaping from either or both said food sections must pass downward through said flues to the atmosphere and a cooling blast of air will be drawn through said flue when either said food section is opened whereby to increase the fuel supply through said burner.

1,112,448. THERMOSTATIC MEMBER AND SUPPORTING-POST THEREFOR. ORVILLE CROMWELL HATCH, Seattle, Wash. Filed June 14, 1912. Serial No. 703,706. (Cl. 236—9.)



1. In a valve of the class described, the combination of a casing having an inlet passage and a discharge passage therein, a post within said casing, a passage in said post communicating with the outlet passage, a non-thermostatic pivoted member for controlling the passage through

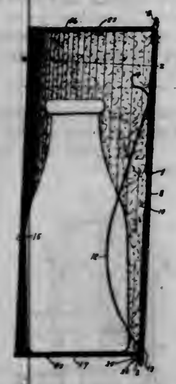
said post, and a thermostatic member attached directly to said post and having an operative connection with said pivoted member, substantially as described.

2. In a valve of the class described, the combination of a casing having an inlet passage and a discharge passage therein, a post within said casing, a passage in said post communicating with the outlet passage, a non-thermostatic pivoted member for controlling the passage through said post, and a thermostatic member bent to lie upon opposite sides of the post, having the end lying upon one side of the post secured thereto, and the free end on the opposite side of the post in operative connection with said pivoted member, substantially as described.

3. In a valve of the class described, the combination of a casing having an inlet passage and a discharge passage therein, a post within said casing, a passage in said post communicating with the outlet passage, a non-thermostatic pivoted member for controlling the passage through said post, said post having an aperture therein, and a thermostatic member extending through said aperture and bent to lie upon opposite sides of the post, the end upon one side of the post being secured thereto, and the free end on the opposite side of the post having an operative connection to said pivoted member, substantially as described.

4. In a valve of the class described, the combination of a casing having an inlet passage and a discharge passage, a member composed of thermostatic material within said casing, a supporting post for said member removably secured within said casing, a passage through said post communicating with and forming a portion of the discharge passage, and also in communication with the interior of the casing, a lever of non-thermostatic material pivotally secured to said post, means for securing one end of said thermostatic member to said post, the free end of said member being secured to one arm of said lever, the other arm of said lever being arranged to have its end controlling the passage through said post, substantially as described.

1,112,449. PACKAGE-RECEPTACLE. CHARLES A. HERMANN, Milwaukee, Wis. Filed Oct. 1, 1913. Serial No. 792,737. (Cl. 232—41.)



1. A receptacle comprising the combination with a wall plate, of a package holding member, hinges connecting said member with the wall plate and having sufficient play to allow both vertical and swinging movements, and mutually interlocking flanges upon the wall plate and package holding member respectively, adapted to prevent the package holding member from swinging to open position except when raised.

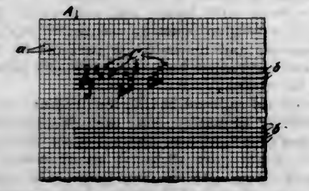
2. A receptacle comprising the combination with a wall plate, of a swinging package holding member, hinges connecting said member with the wall plate; the butts of said hinges being spaced to permit vertical movements of said member, and mutually interlocking flanges upon the wall plate and package holding member respectively, adapted to prevent the package holding member from swinging to open position except when raised, said hinge having a pintle provided at its lower end with a supporting arm adapted to hold the swinging member in a raised position when not in closed position.

3. A receptacle comprising the combination with a wall plate, of a package holding member, connections between one side margin of the package holding member and the wall plate, adapted to permit both lifting and swinging movements of said member, mutual interlocking flanges upon the wall plate and package holding member, respectively, adapted to prevent the package holding member from swinging to open position except when raised, an outwardly projecting apertured flange on the wall plate, and a latch on the package holding member located in a position to interlock in the flange aperture, when the package holding member is raised to a position disengaging said interlocking flanges preparatory to swinging said member to open position, said latch being out of registry with the flange aperture when the package holding member is closed and depressed with said flanges in interlocking position.

4. A receptacle comprising the combination with a wall plate, a package holding member, connections between one side margin of the package holding member and the wall plate, adapted to permit both lifting and swinging movements of said member, mutually interlocking flanges upon the wall plate and package holding member, respectively, adapted to prevent the package holding member from swinging to open position except when raised, said wall plate being provided with an interior order card holder.

5. A receptacle comprising the combination with a wall plate, of a package holding member, connections between one side margin of the package holding member and the wall plate adapted to permit both lifting and swinging movements of said member, and mutually interlocking flanges upon the wall plate and package holding member respectively, adapted to prevent the package holding member from swinging to open position except when raised, said wall plate and swinging member being provided with a lining of non-heat conducting material.

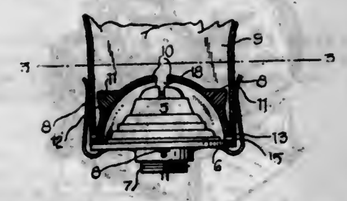
1,112,450. PROCESS FOR PRODUCING PRINTED MUSIC-SHEETS. LUDWIG HESS, New York, N. Y. Filed May 10, 1912. Serial No. 696,352. (Cl. 101—205.)



1. The process of producing music sheets which consists in taking a sheet of transparent paper dividing the surface of said sheet into minute sections by providing the same with transparent vertical and horizontal hatching lines, printing upon one side of such transparent sheet with non-transparent ink the music staff lines and other music symbols, placing the transparent sheet face downwardly upon a suitably prepared printing surface, subjecting said sheet and surface to the action of strong light to form a negative, developing said negative plate and printing therefrom.

2. The process of producing music sheets which consists in taking a sheet of transparent paper dividing the surface of said sheet into minute sections by providing transparent vertical and horizontal hatching lines thereon, printing with non-transparent ink upon one side of such transparent sheet the music staff lines, sketching the music symbols thereon in pencil, stamping by means of stamping devices inked with non-transparent ink the music symbols so sketched, placing the said sheet face downwardly upon a suitably prepared printing surface, subjecting said sheet and surface to the action of strong light to form a negative, developing the negative and printing therefrom.

1,112,451. LAMP-BURNER ATTACHMENT. FRED T. HIGGINS, Klamath Falls, Oreg. Filed Feb. 21, 1914. Serial No. 820,267. (Cl. 67—71.)



1. The combination with a burner provided with a body flange, of a cap therefor consisting of a plurality of sections each provided with a flange adapted to be seated upon said burner flange, and having a plurality of grooves in its bottom face through which air is admitted into the space between the burner and the cap, each of said cap sections being also provided with means to support a lamp chimney in spaced relation to the flanges thereon.

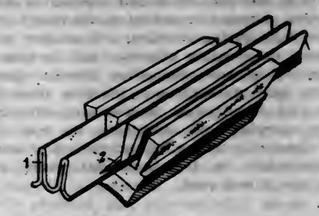
2. The combination with a burner provided with a body flange, of a cap therefor, comprising a plurality of similar sections adapted for arrangement upon said burner flange, the adjacent sections having overlapping edge portions and spaced edge portions to accommodate the burner wick, each of said cap sections being further provided in its lower edge with a radial groove whereby air is admitted to the space between the cap and the burner, and additional means formed on said cap sections to support a lamp chimney upon the same and to provide air inlet openings between the lower edge of the chimney and the cap sections whereby air is admitted to the lower end of the chimney exteriorly of the cap.

3. The combination with a burner provided with a body flange, of a cap therefor comprising a plurality of similar sections adapted for arrangement upon said burner flange, the adjacent sections having overlapping edge portions and spaced edge portions to accommodate the burner wick, each of said cap sections being further provided in its lower edge with a radial groove whereby air is admitted to the space between the cap and the burner, and additional means formed on said cap sections to support a lamp chimney upon the same and to provide air inlet openings between the lower edge of the chimney and the cap sections whereby air in admitted to the lower end of the chimney exteriorly of the cap, each of said cap sections being further provided with means for directing the air outwardly against the chimney wall.

4. The combination with a burner provided with a body flange, of a cap therefor consisting of a plurality of sections each having a flange formed on its lower edge for engagement upon said burner flange, a plurality of radial ribs formed upon each of said cap flanges and producing grooves in the bottom face thereof through which air may enter to the space between the cap and the burner, said ribs being adapted to support a lamp chimney in spaced relation to the flanges on the cap sections through which air may enter to the space between the cap and the chimney, and an enlargement formed upon each of said cap sections having an outwardly inclined face to direct the incoming air outwardly against the wall of the lamp chimney.

1,112,452. WINDING FOR INDUCTION-MOTORS. THEODORE HOOCK, East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 6, 1910. Serial No. 580,766. (Cl. 172—120.)

1. A closed-circuit winding for electrical devices consisting of a sheet of conducting material having transverse slits extending partially across it and folds extending from edge to edge between the slits.



2. A closed-circuit winding for electrical devices consisting of a transversely slitted sheet having transverse folds between the slits.

3. A closed-circuit winding for electrical devices consisting of a transversely slitted sheet having folds between the slits, the inner faces of which are in close contact.

4. A closed-circuit winding for electrical devices consisting of a sheet provided with transverse slits extending only partially across the same and intermediate its edges and having folds between the slits.

5. A closed-circuit winding for electrical devices consisting of a sheet provided with transverse slits extending only partially across the same and intermediate its edges and having folds between the slits, the inner faces of which are in close contact.

[Claims 6 to 10 not printed in the Gazette.]

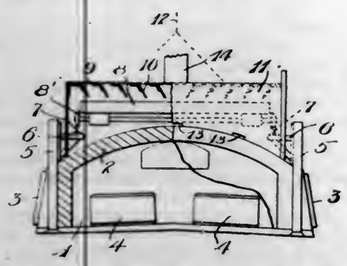
1,112,453. TRIP DEVICE. ALBERT EDMUND HUDSON, Calgary, Alberta, Canada. Filed Dec. 1, 1913. Serial No. 804,056. (Cl. 246—59.)

In an apparatus of the character described, a trip device comprising a casing, a vertically movable sleeve member therein, an abutment member, a plunger pin on the abutment member extending in the sleeve member, a spring extending between the sleeve member and the plunger pin, means for limiting the outward movement of the plunger pin, means for raising and lowering the sleeve member, said means comprising a cross shaft, a weighted lever arm, a lever arm on the cross shaft, a link connecting the last mentioned lever arm with the sleeve.

1,112,454. DEHYDRATING APPARATUS. IRWIN S. JOSEPH, Rahway, N. J. Filed Jan. 14, 1914. Serial No. 812,015. (Cl. 34—46.)

1. In a reclaiming apparatus, the combination of a glass furnace having a straight longitudinally extending combustion chamber, a longitudinally extending sheet metal dehydrating chamber above the combustion chamber and in close proximity thereto, the two chambers having their

longitudinal axes substantially in the same vertical plane and being disconnected so that the dehydrating chamber is heated only by radiation from said combustion chamber, said combustion chamber extending substantially the full length of the dehydrating chamber, and shallow containers within said dehydrating chamber, and in close proximity to the roof of said combustion chamber, posts extending above said glass furnace, brackets thereon, and rails within said dehydrating chamber supported by said brackets and carrying said containers, the roof of said combustion chamber being arched and the top of said rails being approximately in the horizontal plane passing through the top of said roof.



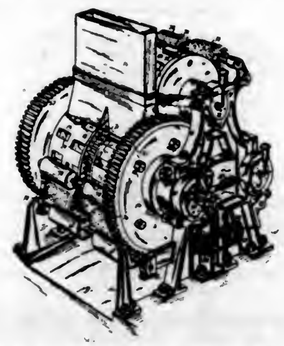
2. In a reclaiming apparatus, the combination of a glass furnace having a straight longitudinally extending combustion chamber, a longitudinally extending dehydrating chamber above the combustion chamber and in close proximity thereto, the two chambers having their longitudinal axes substantially in the same vertical plane and being disconnected so that the dehydrating chamber is heated only by radiation from said combustion chamber, said combustion chamber extending substantially the full length of the dehydrating chamber, and shallow containers within said dehydrating chamber and in close proximity to the roof of said combustion chamber, posts extending above said glass furnace, brackets thereon, and rails within said dehydrating chamber supported by said brackets and carrying said containers.

3. In a reclaiming apparatus, the combination of a glass furnace having a straight longitudinally extending combustion chamber, a longitudinally extending dehydrating chamber above the combustion chamber and in close proximity thereto, the two chambers having their longitudinal axes substantially in the same vertical plane and being disconnected so that the dehydrating chamber is heated only by radiation from said combustion chamber, said combustion chamber extending substantially the full length of the dehydrating chamber.

1,112,455. ROTARY MOLDING AND COMPRESSION MACHINE. VICTOR KARBOWSKY, Tempe, New South Wales, Australia. Filed Aug. 21, 1913. Serial No. 785,908. (Cl. 25—75.)

1. In rotary molding and compression machines for plastic material, in combination, a rotary barrel having a plurality of peripheral molds, each containing a spring held piston, a fixed hollow cam barrel contained within said barrel, concentric surfaces 31 and cam surfaces 34, 44, 42 and 43 on said cam barrel, cams contained within said cam barrel and supported by an internally projecting rib on the latter, said cams slotted and adjustable radially by a through rod passing through the ends of the said barrel, and piston backing plates 45 supported by said cams, T-shaped piston backing plates housed within and passing through the wall of said cam barrel, and a through rod having fingers taking in a slot in each of said T-plates, as herein set forth.

2. In rotary molding and compression machines for plastic material, in combination, a rotary barrel having a plurality of peripheral molds each containing a hollow piston 20 having a reduced end and rounded inner edges, a cap closing the outer end of each of said pistons, a central slot in said pistons and a through rod in said slot, said rods held in the wall of the rotary barrel and connected to said caps by springs as herein set forth.



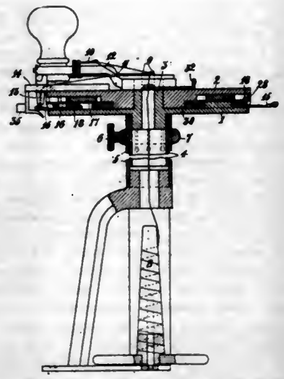
3. In rotary molding and compression machines for plastic material, in combination, a rotary barrel having a plurality of peripheral molds each containing a spring held piston, a pair of supplementary barrels rotating synchronously and gearing with said rotary mold barrel, spring held radial plungers in said supplementary barrels, said plungers having clearance recesses in their outer ends, cam barrels 74 and 75 contained one in each of said supplementary barrels, cam surfaces 77 on said cam barrel 74 and cam surfaces 77^a on said barrel 75, as herein specified.

4. In rotary molding and compression machines for plastic material, in combination, a rotary barrel having a plurality of circumferential series of mold cavities arranged in echelon longitudinally of the barrel, spring held pistons contained within each of said cavities, a fixed hollow cam barrel contained within said barrel, concentric surfaces 31 and cam surfaces 34, 44, 42 and 43 on said cam barrel, cams contained within said cam barrel and supported by an internally projecting rib on the latter, said cams slotted and adjustable radially by a through rod passing through the ends of said barrel, piston backing plates 45 supported by said cams, T-shaped piston backing plates housed within and passing through the wall of said cam barrel, a through rod having fingers taking in a slot in each of said T-plates and passing through the rotary mold barrel, a hopper or chute superposing said rotary barrel, a pair of supplementary barrels gearing with said rotary mold barrel, spring held radial plungers in said supplementary barrels, clearance recesses in the outer ends of said plungers, cam barrels 74 and 75 contained one in each of said supplementary barrels, cam surfaces 77 on said cam barrel 74 and cam surfaces 77^a on said cam barrel 75, vertical framings 41 containing and supporting said mold and supplementary barrels, as herein set forth.

5. In rotary molding and compression machines for plastic material, in combination, a rotary barrel having a plurality of circumferential series of mold cavities arranged in echelon longitudinally of the barrel, spring held pistons contained within each of said cavities, a fixed hollow cam barrel contained within said barrel, concentric surfaces 31 and cam surfaces 34, 44, 42 and 43 on said cam barrel, cams contained within said cam barrel and supported by an internally projecting rib on the latter, said cams slotted and adjustable radially by a through rod passing through the ends of said barrel, piston backing plates 45 supported by said cams, T-shaped piston backing plates housed within and passing through the wall of said cam barrel, a through rod having fingers taking in a slot in each of said T-plates and passing through the rotary mold barrel, a hopper or chute superposing said rotary barrel, a pair of supplementary barrels gearing with said rotary mold barrel, spring held radial plungers in said supplementary barrels, clearance recesses in the outer ends of said plungers, cam barrels 74 and 75 contained one in each of said supplementary barrels, cam surfaces 77 on said cam barrel 74 and cam surfaces 77^a on said cam barrel 75, vertical framings 41 containing and supporting said mold and supplementary barrels, an offtake belt conveyer positioned below said mold barrel and driven by a sprocket on a transverse shaft geared to the power shaft a toothed belt connecting said sprocket to a further sprocket on the shaft of the driving roller of said conveyer, as herein set forth.

[Claim 6 not printed in the Gazette.]

1,112,456. KNITTING-MACHINE. JOHAN LUDVIG KIHLQVIST, Adelsö, Ekerö, near Stockholm, and GUSTAF LINDÉN, Nässjö, Sweden. Filed Sept. 30, 1911. Serial No. 652,161. (Cl. 66—22.)



1. In a knitting-machine, the combination of an annular needle bed having an opening for the yarn inside the needle bed, hooked needles placed in the said bed, with their hooks directed outward, yarn-supplying means placed below the needle bed, yarn-guiding means placed above the needle bed, and operating cams for the needles arranged so as to allow the needles to be moved by hand to an outer inoperative and an inner inoperative position independent of said needle operating cams, part of said cams, including an adjustable element, being adapted to move the needles to an intermediate operative position when said element is properly adjusted.

2. In a knitting-machine, the combination of an annular needle bed having an opening for the yarn inside the needle bed, hooked needles movably radially in the said bed with their hooks directed outward, a revoluble circular disk placed on the former one, a crank-arm adapted to turn within certain limits relatively to the disk, a yarn-guide carried by the said crank-arm, and needle-operating cams carried by the said revoluble disk and arranged so as to allow the needles to be moved by hand to an outer inoperative and an inner inoperative position independent of said needle-operating cams, part of said cams, including an adjustable element, being adapted to move the needles to an intermediate operative position when said element is properly adjusted.

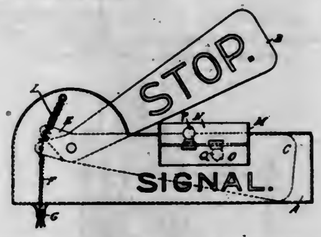
3. In a knitting-machine, the combination of an annular needle bed having an opening for the yarn inside the needle bed, hooked needles movably radially in the said bed, with their hooks directed outward, a revoluble circular disk placed on the former one, a crank-arm adapted to turn within certain limits relatively to the disk, a yarn-guide carried by the said crank-arm, a spring hook for conducting the yarn and a spring arm for stretching it, both carried by the crank-arm, and needle-operating cams carried by the said revoluble disk and arranged so as to allow the needles to be moved by hand to an outer inoperative and an inner inoperative position independent of said needle-operating cams, part of said cams, including an adjustable element, being adapted to move the needles to an intermediate operative position when said element is properly adjusted.

4. In a knitting-machine, the combination of a central standard adjustable in length and having a central opening, a circular disk carried by the said standard, said disk forming an annular needle bed, hooked needles movable radially in the said bed, with their hooks directed outward, a revoluble circular disk placed on the former one, a yarn-guide carried by the said revoluble disk, needle-operating cams carried by the same disk and arranged so as to allow the needles to be moved by hand to an outer inoperative and an inner inoperative position independent of said needle-operating cams, part of said cams, including an adjustable element, being adapted to move the needles to an intermediate operative position when said element is properly adjusted, and yarn-suplying means placed at the foot of the standard.

5. In a knitting-machine, the combination of an annular needle bed having an opening for the yarn inside the needle bed, hooked needles movable radially in the said bed, with their hooks directed outward, a revoluble circular disk on the former one, a yarn-guide carried by the said revoluble disk, needle-operating cams projecting from the said disk and arranged so as to allow the needles to be moved by hand to an inner inoperative and an outer inoperative position independent of said needle-operating cams, part of said cams, including an adjustable element, being adapted to move the needles to an intermediate operative position, and one of the needle-operating cams being adjustable in radial direction toward and away from the other cams.

[Claims 6 to 11 not printed in the Gazette.]

1,112,457. AUTOMOBILE-SIGNAL. WILLIAM KREBS, Albany, N. Y., assignor of one-half to Albert L. Dutcher, Menands, N. Y. Filed Nov. 11, 1913. Serial No. 800,305. (Cl. 40—67.)



The combination of a signal for automobiles, comprising a signal box, with the word Signal thereon, adapted to be secured to the rear of an automobile; two or more signals in said box adapted to be displayed; a series of pedal levers; means at the end of each signal for attaching a stiff wire thereto; a stiff wire extending from the end of each signal to said pedal levers, respectively, in position to be operated by the driver; two lamps mounted adjacent to the box containing the signals; means for illuminating said lamps, one of said lamps being normally lighted and throwing its rays upon the word Signal on the box; and means connected with said levers for extinguishing the light shining on the word Signal and simultaneously illuminating the other lamp which throws a colored light upon the displayed signal when a lever is moved to display a signal.

1,112,458. ARC-LIGHT ELECTRODE. ISADOR LADOFF, Cleveland, Ohio, assignor, by mesne assignments, of thirty one-hundredths to Walter D. Edmonds, Boonville, N. Y. Filed June 1, 1911. Serial No. 630,545. (Cl. 176—136.)

1. An arc light electrode characterized as yielding a flaming arc, as containing a preponderance of carbon and as containing also calcium titanate.

2. An arc light electrode characterized as yielding a flaming arc, as containing a preponderance of carbon and as containing also calcium titanate and an organic salt of titanium.

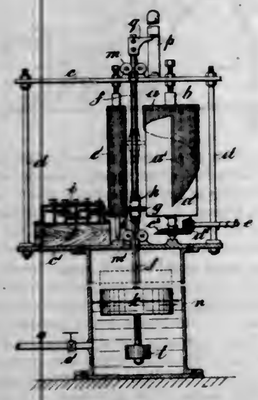
3. An arc light electrode characterized as yielding a flaming arc, as containing a preponderance of carbon and as containing also calcium titanate mixed with carbon and with an organic salt of titanium.

4. An arc light electrode characterized as yielding a flaming arc, as containing a preponderance of carbon and as containing also calcium titanate mixed with carbon and a halogen compound of titanium.

5. An arc light electrode characterized as yielding a flaming arc, as containing a preponderance of carbon and as containing also calcium titanate and titanofluorid of an alkaline metal.

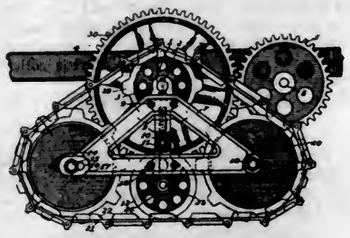
[Claims 6 and 7 not printed in the Gazette.]

1,112,459. METER OR MEASURING INSTRUMENT. JAMES EDWARD LEA, Manchester, England. Filed Mar. 28, 1908. Serial No. 423,804. (Cl. 73—167.)



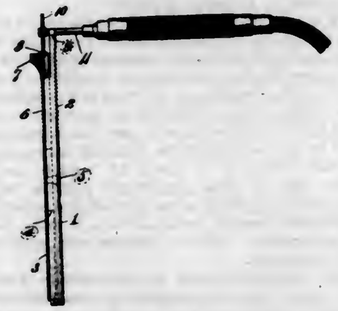
In a meter or instrument for measuring the flow of a liquid, a rotary drum having upon its periphery a number of teeth said teeth being of varying length, in combination with a long rotary pinion, a spindle slidably mounted between the said pinion and the drum, a float to which the spindle is connected and which is acted upon by the liquid to be measured, a small rotary pinion wheel on the said spindle, a revolution counter comprising a train of gear wheels, the said small pinion being in constant driving connection with the long pinion and the said long pinion being in constant driving connection with the counter, and the said teeth on the drum being adapted to engage the pinion wheel and to rotate such pinion wheel to an extent varying with the varying positions of the float, substantially as herein set forth.

1,112,460. TRACTOR. HARRY W. LEAVITT, Paris, Mo. Filed Apr. 21, 1913. Serial No. 762,614. (Cl. 21—114.)



In a tractor, a main frame, a shaft fixedly mounted in said frame, a gear wheel and a pinion fixedly connected together and rotatably mounted upon said shaft, a rotatable shaft mounted in said frame, a pinion fixed on said rotatable shaft and in mesh with said gear wheel, hangers pivotally suspended on said fixed shaft on opposite sides of said sprocket wheel and gear wheel, and fixedly connected together in spaced relation, like idler sprocket wheels rotatably mounted between said spaced hangers at their opposite ends, one of the said idler sprocket wheels being mounted in said hangers for longitudinal adjustment therealong, a chain passed about and in mesh with said idler sprocket wheels and with the said sprocket wheel on the fixed shaft, the links of said chain having laterally flattened edges, a pair of upright hollow sockets mounted between said hangers fixedly and medially, and opening downwardly, coiled compression springs seated in the upper parts of said sockets, plungers slidably mounted in said sockets and having their upper ends bearing against said springs with their lower ends provided with bearings, idler wheels mounted in the bearings on said plungers, and adapted to ride yieldingly upon the opposite flattened edges of the inner faces of the links of said chain, the links of said chain being provided with integral projections on the tread surfaces thereof.

1,112,461. TOOL-SHARPENER. OTTO M. LONG and ELMER H. MATKIN, Bonne Terre, Mo. Filed May 28, 1913. Serial No. 770,312. (Cl. 125—6.)



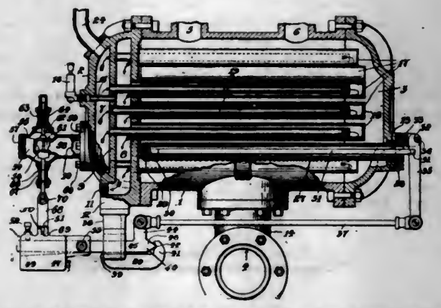
1. In a device of the character described, a support provided at one end with an implement rest, an element arranged to slide longitudinally against one side of said support and having a slot therein, a stud on said support extending through said slot and limiting movement of said element toward and away from said implement rest, manually engageable serrations on said element whereby said element may be firmly held in any desired position against the side of said support, and a cutter carried at the end of said element toward said implement rest, substantially as described.

2. In a device of the character described, a support provided at one end with an implement rest, a cutter carrier having a longitudinal slot and having tongue and groove connection with said support, manually engageable serrations on said cutter carrier whereby said carrier may be firmly held in any adjustment against the side of said support, a stud removably carried by said support and extending through said slot to limit movement of said cutter carrier toward and away from said implement rest, and a cutter mounted in the end of said cutter carrier which is toward said implement rest, substantially as described.

3. In a device of the character described, a support provided with an implement rest in one end thereof, a sliding element arranged to operate against one side of said support toward and away from said rest, a tongue and groove connection at each side of said support holding said element in position, said element having a longitudinal slot between said tongue and groove connections, a projection on said support extending into said slot and limiting movement of said element, manually engageable serrations on said element whereby said element may be firmly held in any adjustment, and a cutter on one end of said element adjacent said implement rest, substantially as specified.

4. In a device of the character described, a support having an implement rest in one end thereof, a cutter carrier, tongue and groove connection between said cutter carrier and said support, a cutter in one end of said carrier adjacent said implement rest, and a knurled thumb rest on said carrier permitting engagement thereof for positioning and holding said carrier in relative adjustment with said support, for the purpose set forth.

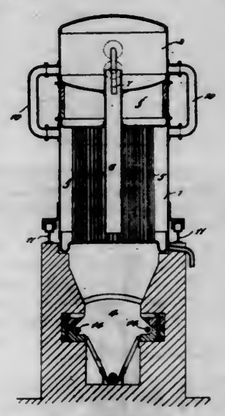
1,112,462. HOT-WATER HEATER. EUGÈNE SOLOMON MANNY, Montreal, Quebec, Canada. Filed Jan. 30, 1913. Serial No. 745,147. (Cl. 236—5.)



1. In a device of the class described, a hot water casing having a plurality of steam heating pipes therein contained and a steam inlet leading to said pipes, a steam feed pipe leading to said steam inlet, a spring closed valve introduced in said steam feed pipe, a weighted member, a rod connected with said weighted member and projecting upwardly therefrom and engaging said valve, a lever connected with said weighted member and offset at one end and suitably fulcrumed, an arm pivotally secured to said hot water casing at the opposite end from said valve, a connecting rod pivotally joining said arm and said offset, an expansion tube open at its outer end and extending beyond the wall of said hot water casing from the interior thereof and an inner longitudinal member screwthreaded into the closed end of said expansion tube and extending outwardly beyond the open end and engaging said arm intermediate of the length thereof.

2. In a device of the class described, in combination, a water casing having an inlet and an outlet and a steam inlet, steam heating means within said casing connected with said steam inlet, an expansion member formed of a tube closed at the inner end and supported at its open outer end by a ring secured to the casing on the outer side and a bar screwed to the inner closed end of the tube and projecting outwardly beyond the outer end of said tube in the form of a tongue, a link pivotally secured at its upper end from the casing above said tongue and engaged thereby, a bracket supported from the other end of said casing having a vertical slot therethrough and a bar at the lower end thereof upwardly offset at the end and forming a V-shaped bearing in the inner wall of the offset, a crank lever having short vertical section, a long horizontal section extending through said vertical slot and a spear shaped end at the angle corner engaging in said V-shaped bearing, a connecting rod pivotally joining the vertical section of said crank lever to said link, a weight having a longitudinal slot therethrough and an inclined bed to said slot and at the upper end of said weight lugs having vertical slots therein from the top, said weight being pivotally secured on the horizontal section of said crank lever, a valve casing communicating with the steam inlet to said casing having a double seat therein, a valve correspondingly formed and spring-held to said seats, a rod extending upwardly into said valve chamber and engaging the lower end of said valve, a link having lateral pins from the lower portion of the sides thereof engaging in said vertical slots in the weight lugs and at its upper end secured to said rod extending into the valve chamber and a set screw inserted in the correspondingly threaded orifice in the weight from the top and engaging the upper side of the horizontal section of the crank lever.

1,112,463. STEAM-GENERATOR. JAMES MEIKLE, Glasgow, Scotland. Filed Apr. 20, 1914. Serial No. 833,215. (Cl. 122—123.)

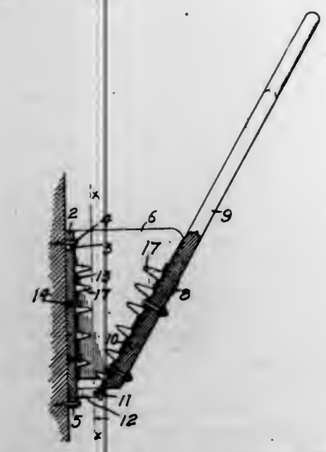


A steam generator comprising two superposed boiler sections the lower of which is fitted with fire tubes, a smoke-box separating said sections, return tubes outside said smoke-box, said return tubes connecting the upper end of the lower section with the lower end of the upper section, a depending tubular element traversing said smoke-box and serving to lead feed water to the lower section, and a feed water inlet pipe leading into said tubular element.

1,112,464. ICE-CRUSHER. CHARLES J. MILLER, Minneapolis, Minn., assignor to Gebhard C. Bohn, St. Paul, Minn. Filed Mar. 30, 1908. Serial No. 424,267. (Cl. 83—63.)

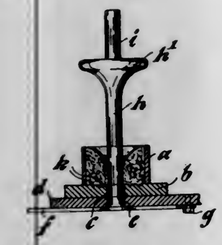
1. An ice crusher comprising a plate having means for attachment to a wall, a series of teeth mounted on said plate and projecting outwardly therefrom, side plates hinged to said wall plate and adapted to swing back against the wall into the plane of said wall plate or move outwardly to a position parallel with one another and at right angles substantialy to said wall plate, means for temporarily securing said hinged plates in a position parallel with one another, and a lever hinged at its lower end near said wall plate, a plate carried by said lever and fitting between said hinged plates, a series of teeth mounted on said

lever plate, and the lower end of said lever being spaced a sufficient distance from said wall plate to permit the discharge of the crushed ice therethrough, substantially as described.



2. An ice crusher comprising a rear plate, side plates attached at their rear edges to said rear plate, a plate hinged at its lower end intermediate of said side plates, a strap normally connecting the outer portions of said side plates and holding them in parallel position, said strap serving as a stop to limit the movement of said hinged plate, a hand lever carried by said hinged plate and a plurality of teeth extending toward each other from said back and hinged plates.

1,112,465. APPARATUS FOR FORMING POURING-GATES FOR MOLDS. WILLIAM MILLS, Birmingham, England. Filed Dec. 10, 1912. Serial No. 735,976. (Cl. 22—162.)



1. In an apparatus for forming pouring gates for molds in combination, a plate having a central aperture, a rammer adapted to pass through said aperture, and a movable member mounted beneath said plate for retaining the rammer in a raised position when so desired.

2. In an apparatus for forming pouring gates for molds in combination, a plate having a central aperture, a box resting on said plate and surrounding said aperture for receiving the sand to form the molds, a rammer adapted to pass through said aperture, and a movable member mounted beneath said plate for retaining the rammer in a raised position when so desired.

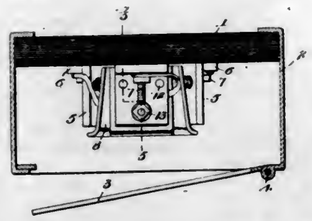
3. In an apparatus for forming pouring gates in combination, a plate having a central aperture and having grooves therein concentric with said aperture, a box resting upon said plate for receiving sand to form the gates, a rammer adapted to pass through said aperture, and a movable member mounted beneath said plate for retaining said rammer in raised position when so desired.

4. In an apparatus for forming pouring gates for molds, a rammer in the form of a spindle having an enlarged head of suitable shape, a grooved disk having a guiding aperture therein, the lower portion of said rammer adapted to pass through the guiding aperture in said disk.

5. In an apparatus for forming pouring gates for molds in combination, a rammer, a plate or disk having an aperture therein, and pivotally mounted lever for retaining the rammer in a raised position.

[Claim 6 not printed in the Gazette.]

1,112,466. PLUG-SWITCH. GUY K. MITCHELL, Baltimore, Md. Filed Dec. 23, 1911. Serial No. 667,485. (Cl. 173—338.)



1. In a plug switch, a socket member comprising a base, a plurality of rigid plates mounted in spaced relation on said base and projecting at right angles therefrom, a contact blade supported by each plate, one end of said blade being pivotally connected with the plate at a point remote from said base, and a compression spring interposed between said blade and plate at a point between such pivotal connection and base.

2. A plug switch comprising a socket member having contact blades, a rigid support to which each of said blades is resiliently secured, such securing means comprising a pair of pins carried by each of said blades and located one adjacent each end thereof, said support having openings through which such pins loosely extend, one of said pins having a head incapable of passing through the associated opening, and a coil spring surrounding each of said pins and interposed between the blade and support.

1,112,467. SANITARY PENHOLDER. ROY NAY, Lebanon, Ind. Filed July 12, 1912. Serial No. 708,976. (Cl. 120—97.)

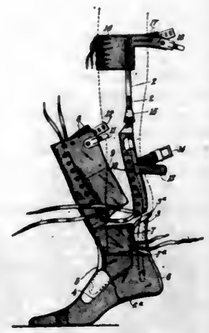
The combination with a pen holder staff provided with a magazine at its tip; of a cap for said magazine arranged to cover the magazine and form a closure therefor, said cap being provided with an extension of conical shape and having a sharpened apex adapted to enter the opening of a pen point to serve as an extractor.

1,112,468. EXTENSION-FOOT. EDWARD L. O'CONNOR, New York, N. Y. Filed Jan. 7, 1910. Serial No. 536,905. (Cl. 3—5.)

1. In a device of the kind described, a foot-piece, side braces extending upwardly from the foot-piece, and a front-band adapted to clasp the ankle of the wearer, said front-band comprising flap-portions adjustably connected to the side-braces and means for detachably connecting the flap-portions together at the rear.

2. In a device of the kind described, a foot-piece, side braces extending upwardly from the foot-piece, flies carried by the side braces, a front-band adapted to clasp the ankle of the wearer, said front-band comprising rearwardly extending flap-portions adjustably laced to the said flies and means for detachably connecting the flap-portions at the rear.

3. In a device of the kind described, a foot-piece, side braces extending upwardly therefrom, a front-band adapted to clasp the ankle of the wearer, and means for adjustably connecting the top edge of the band to the side braces.

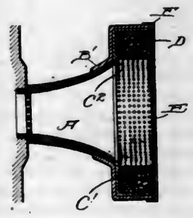


4. In a device of the kind described, a foot-piece, side braces extending upwardly therefrom, and provided with downwardly extending flies, and a front-band adapted to clasp the ankle of the wearer and laced by its top edge to the flies on the side braces.

5. In a device of the kind described, having a foot-piece provided with a rest for the heel of the wearer's foot, a band below the heel-rest comprising flaps connected with the foot-piece at the front and extending rearwardly, said flaps being adjustably connected together at the back, and rearwardly extending lining flaps inside of the first-named flaps.

[Claims 6 and 7 not printed in the Gazette.]

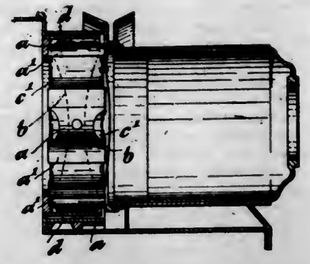
1,112,469. ANTISEPTIC HOLDER FOR TELEPHONE-MOUTHPIECES. JOHN G. O'DONNELL, Washington, D. C., assignor of one-third to Charles J. Helmsen and one-third to Edward A. Helmsen, Washington, D. C. Filed Aug. 26, 1913. Serial No. 786,711. (Cl. 179—185.)



1. In a device of the kind described an outer shell or case adapted to be attached to the mouth piece of the telephone, a perforated carrier arranged within the outer shell or case and adapted to receive and hold a powdered antiseptic, means for closing the front of said carrier together with means for securing said carrier in the outer shell or case.

2. A device of the kind described comprising an outwardly flaring shell or case having a central opening surrounded by a tapered flange adapted to receive the outer end of the telephone mouthpiece, an annular carrier perforated upon the interior and adapted to receive a powdered antiseptic, said carrier being adapted to fit within the outer shell or case and bear against the forward end of the mouth piece, the interior diameter of the carrier being co-extensive with the mouth piece, and means for securing said carrier within the outer shell or case and simultaneously connecting said parts to the mouth piece as set forth.

1,112,470. LENS OR REFLECTOR SUPPORT. ROBERT ALEXANDER OLDFIELD, Birmingham, England. Filed June 26, 1913. Serial No. 775,931. (Cl. 240—111.)

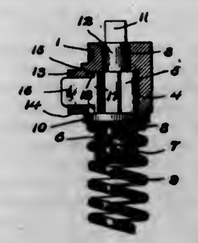


1. In a device for retaining circular reflectors and the like in position within a lamp or other illuminating device, an annular split ring disposed on the periphery of said circular reflector, a series of bow shaped members disposed around the periphery of said annular split ring and fixed in position with respect to said lamp, each of said bow shaped members comprising a resilient portion, and extended parts integral with said resilient portion and having flanges adapted to engage said annular split ring, substantially as described.

2. In a device for retaining annular reflectors and the like in position within a lamp or other illuminating device, an annular split ring disposed on the periphery of said circular reflector, channels provided on said annular split ring, a series of bow shaped members disposed around the periphery of said annular split ring and fixed in position wth respect to said lamp, each of said bow shaped members comprising a resilient portion and extended parts integral with said resilient portion and adapted to engage said split ring and the channels thereon substantially as described.

3. In a device for retaining circular reflectors and the like in position within a lamp or other illuminating device, a series of bow shaped members disposed around the peripheries of said circular reflectors and secured to the said lamp or other illuminating device, each of said bow shaped members comprising a resilient portion, an extended part integral with said resilient portion, grooved flanges on said extended part adapted to engage said circular reflector and retain the same in place, substantially as described.

1,112,471. DOOR-SPRING WINDER AND SET. SAMUEL PAULSON, Brooklyn, N. Y. Filed Jan. 5, 1914. Serial No. 810,287. (Cl. 16—9.)



1. In combination, a bearing bracket having a longitudinal bore of two diameters, and having a slot in the wall of its larger diameter, a spindle having a journal fitting the smaller diameter and having a series of teeth adapted to turn in the larger diameter of the bearing, said spindle constructed at one end to facilitate its rotary movement, and at its other end constructed for connection with a coiled spring, and a locking key movable through the said slot in the larger diameter of the bear-

ing bracket and adapted to lock with the teeth, substantially as described.

2. In combination, a bearing bracket having a longitudinal bore of two diameters, a spindle having a journal fitting the smaller diameter and having a series of teeth adapted to turn in the larger diameter of the bearing, said spindle constructed at one end to facilitate its rotary movement, and at its other end constructed for connection with a coiled spring, said bracket having a slotted extension, and a recess at the inner end of the slotted extension, a locking key projecting through the slotted extension and having an enlarged inner end movable in the recess, said key having a beveled inner end adapted to lock with said teeth, substantially as described.

3. In combination, a bearing bracket having a longitudinal bore of two diameters, a spindle having a journal fitting the smaller diameter and having a series of teeth adapted to turn in the larger diameter of the bearing, said spindle constructed at one end to facilitate its rotary movement, and at its other end constructed for connection with a coiled spring, said bracket having a slotted extension, and a locking key in said slotted extension adapted to engage the said teeth, said larger diameter of bore extending to one end of the bracket, and said spindle having an annular flange bearing against the lower end of the bracket and closing said larger diameter of bore, substantially as described.

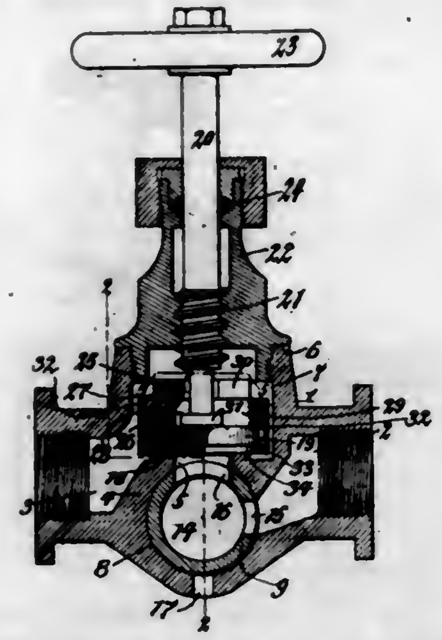
4. In combination, a bearing bracket having a longitudinal bore of two diameters, a spindle having a journal fitting the smaller diameter and having a series of teeth adapted to turn in the larger diameter of the bearing, said spindle constructed at one end to facilitate its rotary movement, and at its other end constructed for connection with a coiled spring, said bracket having a slotted extension, and a recess at the inner end of the slotted extension, a locking key projecting through the slotted extension and having an enlarged inner end movable in the recess, said key having a beveled inner end adapted to lock with the said teeth, said larger diameter of bore extending to one end of the bracket, and said spindle having an annular flange bearing against the lower end of the bracket and closing said larger diameter of bore, substantially as described.

5. In combination, a bearing bracket, a spindle mounted to turn in the bearing bracket, an annular flange on the spindle, said spindle at its end having a longitudinal groove adapted to receive the inwardly bent end of a coiled spring, a circular series of ratchet teeth on the spindle located within the bearing bracket, a movable key adapted to lock with said teeth, said key having an enlarged inner beveled end adapted to engage with the teeth when the latter are turned in one direction and to be moved by the teeth when the teeth are turned in the opposite direction, and said spindle at one end projecting beyond the bearing bracket and made angular, substantially as described.

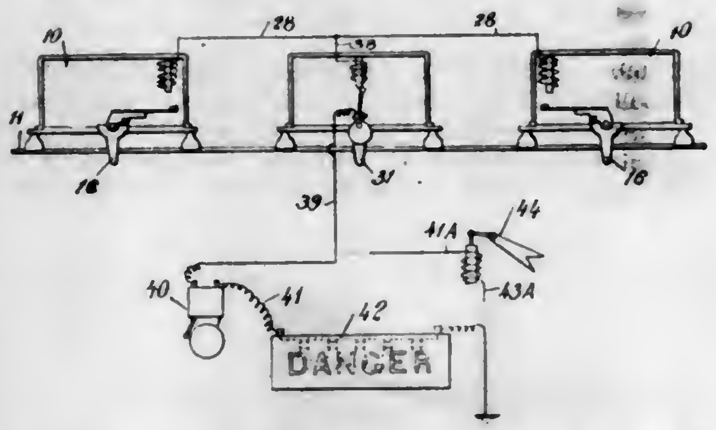
1,112,472. VALVE. Frederick C. Pfeil, Buffalo, N. Y. Filed Aug. 9, 1912. Serial No. 714,199. (Cl. 137—4.)

1. A valve comprising a casing having an inlet, an outlet, a diaphragm arranged between said inlet and outlet and having a main port, and a blow off port communicating with said casing on the inlet side of the diaphragm vertically in line with said main port, a main valve device for controlling said main port arranged on the outlet side of the diaphragm, and a supplemental valve device arranged on the inlet side of the diaphragm vertically in line with said main valve device and adapted to close the main port and connect said inlet with said blow-off port or to close said blow-off port and connect said inlet with said main port.

2. A valve comprising a casing having an inlet, an outlet, a diaphragm arranged between said inlet and outlet and having a main port, and a blow off port communicating with said casing on the inlet side of the diaphragm vertically in line with said main port, a main valve device for controlling said main port arranged on the outlet side of the diaphragm, and a supplemental valve device arranged on the inlet side of the diaphragm vertically in line with said main valve device and adapted to close the main port and connect said inlet with said blow-off port or to close said blow-off port and connect said inlet with said main port or to simultaneously close said main port and blow-off port.



1,112,473. ELECTRIC SIGNAL SYSTEM FOR RAILWAYS. Frank J. Pilgrim, Paterson, N. J.; Claudia V. Pilgrim, Bergen county, N. J., administratrix of said Frank J. Pilgrim, deceased, assignor to E. G. Long Company, New York, N. Y., a Corporation of New York. Filed Apr. 28, 1911. Serial No. 623,875. (Cl. 246—36.)



1. In a railway signal system, a switch, means for temporarily opening said switch by the movement of a car, and an electromagnet device having a hardened core for maintaining said switch in its closed position.

2. In a railway signal system, a switch, said switch comprising an actuating lever arranged to be moved by the movement of a car, a circuit closed arranged to be temporarily opened by the lever, and an electromagnet having a hardened core for maintaining said switch in its closed position.

3. In a railway signal system, a switch, said switch comprising an actuating lever arranged to be moved by the movement of a car, a yielding contact bearing member secured to the actuating lever, a soft iron contact tip attached to the contact bearing member and an electromagnet having a hardened core for normally coöperating with the soft iron contact tip and holding the switch closed, said switch being temporarily opened when said lever is actuated.

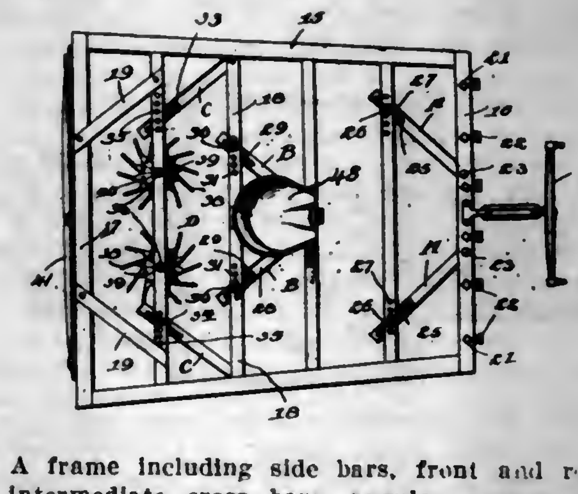
4. In a railway system, a trolley-wire, a switch mechanism affixed to said wire, said mechanism comprising a transverse pin, a pair of actuating levers pivotally depending from said pin at either side of the trolley-wire, a shoulder on each of the levers, a circuit closer having a movable member pivotally supported by said pin, an anti-friction roller carried by said member above the actuating lever shoulders, said member being arranged

to be moved to its closed position by said shoulders, and an electromagnet for maintaining said movable member in its closed position away from the shoulders.

5. In a railway, a trolley-wire, an electrically actuated signal device, a circuit therefor, a switch affixed to the trolley-wire, said switch comprising a transverse pin, a pair of actuating levers pivotally depending from said pin at either side of the trolley-wire, a shoulder on each of the levers, a circuit closer in said signal circuit having a movable member electrically connected with the trolley-wire and pivotally supported by said pin, said member being arranged to be moved into its closed position by said shoulder, and an electromagnet for maintaining said movable member in its closed position away from said shoulders having an unhardened core in said circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,112,474. HARROW AND LAND-LEVELER. Joseph H. Porter, Worton, Md. Filed Apr. 3, 1914. Serial No. 829,339. (Cl. 55—23.)



1. A frame including side bars, front and rear bars and intermediate cross bars, angular scraper elements mounted on the underside of said frame in pairs, some of said scraper bars diverging rearwardly and others converging rearwardly, and means for adjustably supporting the said scraper bars to enable the angles therebetween to be varied.

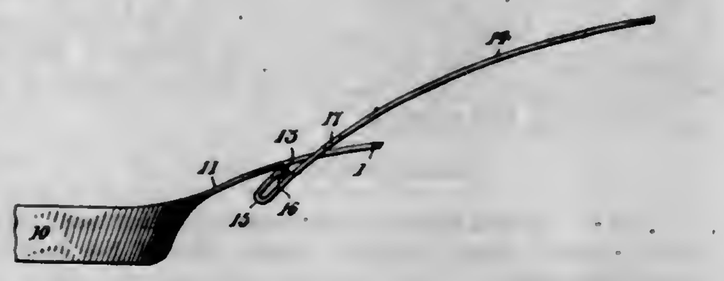
2. In an implement of the class described, a carrying frame, pairs of rearwardly divergent angular scraper bars mounted on the underside of the frame, a pair of rearwardly convergent scraper bars mounted on the underside of the frame in rear of the first mentioned scraper bars, and agitating elements supported for rotation intermediate the rearwardly convergent scraper bars.

3. In an implement of the class described, a carrying frame having a front cross bar, scarifiers connected with said front cross bar for vertical adjustment, rearwardly divergent scraper elements supported on the underside of the frame in rear of the scarifiers, rearwardly convergent scraper elements supported on the underside of the frame in rear of the first mentioned scraper elements, and agitator elements supported for rotation intermediate the rearwardly convergent scraper elements.

4. In an implement of the class described, the combination with a carrying frame having scraper elements for moving the soil laterally, said scraper elements converging in a rearward direction, of agitator elements supported for rotation intermediate said scraper bars, each of said agitator elements comprising a disk and a plurality of tangentially disposed cutting members detachably connected therewith.

5. In an implement of the class described, a carrying frame having a front bar, scarifiers adjustably connected with said front bar, scraper elements supported on the underside of the frame, said scraper elements consisting of angle bars arranged in pairs, some diverging rearwardly and others converging rearwardly to move the soil engaged thereby in opposite directions, rotary agitator elements supported intermediate the rearwardly convergent scraper elements, and a leveling bar adjustably connected with the carrying frame at the rear end thereof.

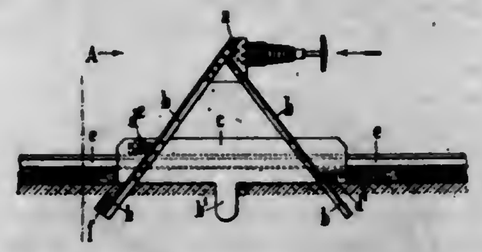
1,112,475. UTENSIL-LIFTER. Anthony A. Pospychala, Whiting, Ind. Filed Apr. 8, 1914. Serial No. 830,409. (Cl. 53—7.)



1. A device of the class described, comprising in combination with a utensil having a projection provided with a longitudinal slot and a downwardly projecting flange at the inner end of said slot, a removable handle comprising a single strip of metal rolled over upon itself at one end and having oppositely projecting lugs slightly removed from said end, the said rolled over end being adapted for insertion through said slot, whereby said rolled end and said flange may be brought into seating engagement.

2. A device of the class described, comprising a utensil, a projecting handle upon said utensil having a longitudinal slot therethrough, a portion of said handle being downwardly bent forming an angular flange at the inner end of said slot, a one-piece lifter, a rolled-over end upon said lifter forming a face angularly positioned with respect to said lifter, outwardly-projecting lugs upon said lifter slightly removed from said rolled-over end thereof, the width of said lifter being less than the width of said slot and whereby the rolled over end of the lifter is adapted for insertion through said slot with seating engagement of said face with the under surface of said flange and with said lugs engageably positioned above said utensil handle at opposite sides of said slot.

1,112,476. RAILROAD-BUFFER. Franz Rawie, Osnabrück-Schinkel, Germany. Filed Oct. 29, 1912. Serial No. 728,415. (Cl. 104—49.)



1. A slidable railroad-buffer comprising bracing members provided with spur like extensions adapted to penetrate into the bedding, and guiding members connecting with said bracing members for securing proper guiding of the buffer during displacement, the guiding members being arranged one behind the other, in such manner that a guiding member at the front end of the buffer is adapted to contact with the lower side of a rail of the track, and a guiding member at the back end of the buffer is adapted to contact with the upper side of a rail of the track.

2. A railroad-buffer comprising bracing members provided with spur like extensions adapted to penetrate into the bedding of the track, cross-bars provided at the front end and at the back end of the buffer arranged for crossing the track above and below the rails respectively.

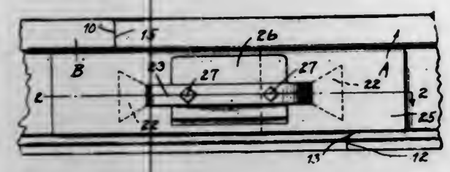
3. A railroad-buffer comprising bracing members provided with spur like extensions adapted to penetrate into the bedding, side plates arranged for lateral contact with the rails of a track and connected by cross-bars arranged in different levels at the front and the back end of said plates, a cross-bar at the front end of the buffer arranged for contact with the upper side of the rails and a cross-bar at the back end of the buffer arranged for contact with the under side of the rails.

4. A slidable railroad-buffer comprising angular braces having bracing members provided with spur-like extensions at front and back adapted to penetrate into the bed-

ding, whereby slidable displacement of the buffer relatively to the rails may take place under impact.

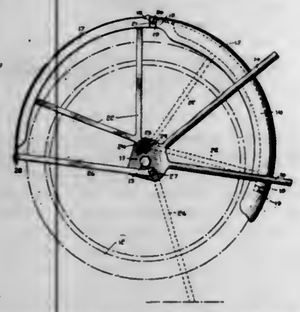
5. A railroad-buffer comprising bracing members provided with spur-like extensions adapted to penetrate the bedding, said buffer being capable of slidable displacement longitudinally of the rails under impact from a car, the energy of impact being absorbed in the movement of the parts through the bedding.

1,112,477. RAIL-JOINT. THEOPHILUS ROBERTS, Bristow, Okla. Filed June 12, 1914. Serial No. 844,726. (Cl. 239—8.)



In a rail joint, a pair of rail ends one of which has its web removed a predetermined distance inwardly of the end of its ball and its base a predetermined distance inwardly of the end of its web, and the other having its web removed a predetermined distance inwardly of the end of its base, the webs of said rail ends being provided with mating longitudinal recesses having dove-tail enlargements at their inner ends, a locking plate disposed against the outer sides of the webs of the rail ends, a rib on said plate disposed in said recesses and having dove-tail terminals seated in the dove-tail enlargements of said recesses respectively, an extension on said rib provided with a slot parallel to the webs of the rail sections, a washer plate engaged on said extension and bearing against the inner sides of the webs, and a wedge engaged through said slot.

1,112,478. SECTIONAL MUD-GUARD FOR MOTOR-CYCLES. HARRY LESLIE RODERICK, Oroville, Cal. Filed Apr. 30, 1913. Serial No. 764,554. (Cl. 208—144.)



1. A sectional mud guard for motorcycles embodying a stationary section carried by the frame of the motorcycle, and a movable section pivoted to the frame and adapted to aline with the stationary section.

2. A sectional mud guard for motorcycles embodying a stationary section carried by the frame of the motorcycle, a movable section pivoted to the frame and adapted to aline with the stationary section and to be shifted beneath the stationary section, and means for joining the sections in the first-named position.

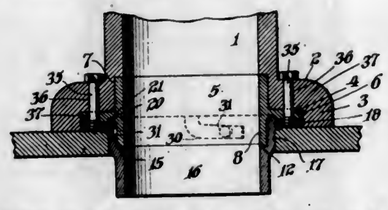
3. The combination with the frame of a motorcycle or the like; of a stationary mud guard section carried by the frame, a movable section pivotally secured to the bearing portions of said frame, means for joining the extremities of the sections when the parts are in operative position, and means for clamping the movable section in such position in conjunction with the frame.

4. The combination with the frame of a motorcycle or the like; of a stationary mud guard section carried by the frame, a movable section pivotally secured to the bearing portions of said frame, means for joining the extremities of the sections when the parts are in operative positions, and means for clamping the movable section in such position in conjunction with the frame, said movable section having an engaging portion for a supporting stand.

5. The combination with a frame as described having bearing plates; of a mud guard section carried by said frame parts and extending above and below the same to inclose a portion of the wheel journaled in the frame, said section having a reduced upper end provided with a bead, a movable section having a frame pivotally and slidably connected to said plates and having near one extremity a raised portion in which the bead is adapted to seat, and clamping means for removably securing the co-acting portions of the sections.

[Claims 6 and 7 not printed in the Gazette.]

1,112,479. GROUND-JOINT COUPLING. ALFRED J. RUDOLPH, Philadelphia, Pa. Filed Oct. 18, 1911. Serial No. 655,345. (Cl. 137—94.)



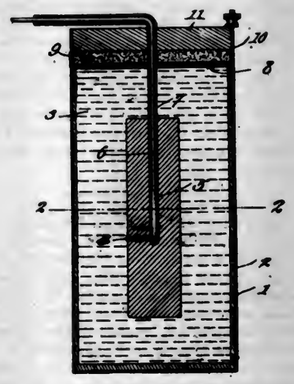
1. Means for connecting a water closet bowl to a discharge pipe which means consists of a member seated in the lower end of said bowl the said member being provided with an annular recess therein and a second member also provided with an annular recess in which the edge of the lower end of the first-named member is seated and the upper edge of the second-named member being seated in the annular recess of the first-named member, one of the said members being provided with slots opening at the edge of the end thereof and portions of said slots being inclined at an acute angle to the plane of said edge and the other of said members being provided with lugs which are adapted to enter the said slots whereby when the said members are turned with respect to each other the edges thereof are respectively drawn firmly and closely into the said annular recesses.

2. In combination, a water closet bowl having a recess formed in its lower end and also having a laterally extending flange at its lower end also provided with a recess, a member having its upper end seated in the first-mentioned recess and having a flange seated in the second-named recess, the said member having an annular recess formed exteriorly thereof in the portion of said flange adjacent to said member, and the said member being provided with lugs exteriorly thereof, a second member having an enlarged upper end into which the lower end of the first-named member projects, and the said second-named member having an annular recess formed interiorly thereof at the lower edge of said enlarged portion, said second-named member also having open ended groves therein, portions of which are inclined at an acute angle to the plane of the upper edge of said second-named member, the lugs of the first-named member being adapted to enter the said grooves whereby when the said members are rotated with respect to each other, the annular edge of each of said members is drawn into the annular recess of the other member whereby a closed joint is formed.

3. In combination, a water closet bowl having an annular recess formed interiorly of its lower end and also having a laterally extending flange at its lower end said flange being provided with an annular recess extending at right angles to the first-named recess, one member of a coupling seated in the first-named annular recess, the said member having a flange seated in the second-named recess and the said member having an annular recess formed in the said flange adjacent to the said member, a second member having an enlarged upper end into which the lower end of the first-named member projects, the said second-named member being provided with an annular recess interiorly thereof and one of the said members being provided with lugs and the other one with angular open ended grooves, portions of which grooves extend at an acute angle to the plane of the edge of the end of the member in which they are provided, the said grooves being adapted to receive the said lugs whereby when the said members are rotated with respect to each other they are drawn toward each other so that the edge of each of the said members engages the recess in the other member, and the said second-named member being provided with a flange which is in contact with the flange upon the first-named member outside of the annular recess therein, and means for detachably engaging the second-mentioned flange for securing the said members to the flange upon the said bowl.

4. A coupling adapted for use in connection with water closet apparatus comprising an annular member having a laterally extending flange intermediate its ends, the said flange being provided with an annular recess adjacent to the body of said member and a second member having an enlarged end to receive one end of the first-named member, the said second-named member having an interiorly situated annular recess at the lower edge of said enlarged portion, one of the said members being provided with lugs and the other one of said members being provided with angular grooves cpening upon the edge of said member, portions of said grooves being inclined at an acute angle to the plane of the edge of said member, the said grooves being adapted to receive the said lugs whereby when the said members are relatively rotated the edge of each member is drawn firmly into the annular recess upon the other member.

1,112,480. DRY CELL. JOSEPH E. RUNNER and WILLIAM A. PRISTERER, Dunkirk, Ind. Filed Aug. 4, 1913. Serial No. 782,933. (Cl. 204—34.)



1. A dry cell, having a positive member, the greater portion of which is the container, an electrolyte mounted therein, a negative electrode submerged within the electrolyte with its upper end below the upper surface of the electrolyte, an insulated conductor leading from the negative electrode through the electrolyte and exteriorly of the container, a metal disk disposed upon the upper surface of the electrolyte and contacting at its periphery with the container, the container and the disk forming the positive electrode, and a hermetical seal filling the upper end of the container above said disk.

2. A dry cell, including a metal receptacle comprising the positive electrode, a porous lining therefor extending to a point near the top thereof, an electrolyte filling the receptacle to the upper edge of the porous lining, a negative electrode disposed to be surrounded by the electrolyte and having its upper end terminate at a point below the upper surface of the active material, an insulated combined conductor and terminal connection for the negative electrode connected to the negative electrode and extending through the electrolyte, a coating of porous material mounted upon the upper surface of the electrolyte, a metal disk fitted upon the last mentioned lining and in contact with the positive electrode to form a portion thereof, and a hermetical seal above the last mentioned disk and within the upper end of the receptacle.

3. A dry cell, including a metal receptacle comprising the positive electrode, a porous lining therefor extending to a point near the top thereof, an electrolyte filling the receptacle to the upper edge of the porous lining, a negative electrode disposed to be surrounded by the electrolyte and having its upper end terminate at a point below the upper surface of the electrolyte, an insulated combined conductor and terminal connection for the negative electrode connected to the negative electrode and extending through the active material, a coating of porous material mounted upon the upper surface of the electrolyte, a metal disk fitted upon the last mentioned lining and in contact with the positive electrode to form a portion thereof, a hermetical seal above the last mentioned disk and within the upper end of the receptacle, and a granular packing between the metal disk and the hermetical seal.

4. A dry cell, having a positive electrode forming the receptacle, an electrolyte therein, a negative electrode submerged within the electrolyte and having its upper end terminating at a point below the upper surface thereof, a piece of bare metal disposed wthin the negative electrode at a point equidistant from the ends and axially thereof, a lead contacting and extending from the metal piece and projecting exteriorly of the positive electrode, an insulating coating for said lead extending from a point within the negative electrode to a point exteriorly of the upper end of the positive electrode, the terminal of the lead being exposed and constituting a connecting terminal for an adjacent cell, and a metal disk fitting within and contacting the wall of the receptacle and forming with the receptacle a surrounding positive electrode to contain the electrolyte and the negative electrode, the lead being extended through the disk.

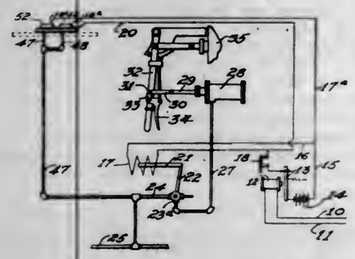
5. A dry cell, having a positive electrode container, an electrolyte therein, a negative electrode suspended within the electrolyte with the material beyond both ends thereof, a bare conductor leading centrally from the negative electrode and exteriorly of the container and constituting the negative terminal, insulating material surrounding the conductor from a point within the negative electrode and through the electrolyte, a metal plate covering the electrolyte and contacting to form with the container an inclosing positive electrode, and a hermetical seal above the metal plate and in the container.

1,112,481. AUTOMATIC BRAKE MECHANISM FOR TRAINS. JOHN SAMUELS, Rock Slope, Ala., assignor, by mesne assignments, to John Samuels, Eugene Thomason, W. C. Long, and J. E. Lacey, a Copartnership. Filed Oct. 25, 1913. Serial No. 797,260. (Cl. 246—59.)

1. Means for automatically arresting a train, said means comprising, in combination with the air brake system, an air motor, a pipe connecting said motor with the air brake system, a valve in said pipe for controlling the flow of air to said motor, means to automatically operate said valve, means controlled by said valve both to admit and slowly exhaust the air pressure from said motor, and means controlled by said motor to stop the train, substantially as described.

2. In an apparatus of the character described, in combination with a locomotive and air brake system, a pipe leading from the air brake system, a two-way valve to control the exhaust of air through said pipe, means to automatically operate said valve under predetermined conditions, a main exhaust pipe and a bleeder pipe controlled by said valve and simultaneously opened or closed

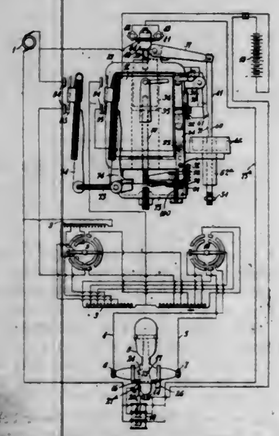
thereby, and mechanism actuated by the exhaust air passing through the main exhaust pipe for shutting off the motor fluid to the locomotive.



3. In combination, a train, its air brake system, a normally closed pipe line connected with the air brake system and having a plurality of bleeder ports therein, a valve means in said pipe line for controlling one or more of said ports, and one or more gage glasses included in said pipe line and normally closing the other of said bleeder ports, an explosive device adjacent to each gage glass, electrically controlled means operable automatically under predetermined conditions for exploding said device or devices and for operating said valve means to open said ports, and track means for energizing said electrical means on a passing train, substantially as described.

4. Means for automatically arresting a train, said means comprising in combination with the air brake system, an air motor, a pipe connecting said motor with the air brake system, an indicating valve in said pipe for controlling the flow of air to said motor, means to automatically operate said valve, means controlled by said valve both to admit and slowly exhaust the air pressure from said motor, and means controlled by said motor to stop the train, substantially as described.

1,112,482. SYSTEM OF MULTICURRENT DISTRIBUTION. HAROLD M. SCHEIBE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Oct. 8, 1910, Serial No. 586,079. Divided and this application filed May 27, 1912. Serial No. 700,003. (Cl. 171—314.)

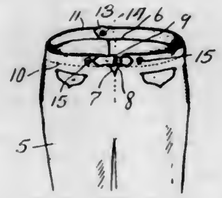


1. The combination with an alternating current supply circuit, a vapor rectifier, a direct current receiving circuit, starting means for the rectifier, automatic re-starting means for the rectifier, and means dependent upon an abnormal current in the direct current receiving circuit for interrupting both the alternating current supply circuit and the direct current receiving circuit.

2. In a battery-charging system, the combination with an alternating current supply circuit, a vapor rectifier, a storage battery, starting means for the rectifier, and means dependent upon an interruption of the charging current for re-starting the rectifying process, of a circuit interrupter, and means dependent upon an abnormal current in the battery circuit for actuating the interrupter to open the alternating current supply circuit and the storage battery circuit.

3. In a battery-charging system, the combination with an alternating current supply circuit, a vapor rectifier, a storage battery, starting means for the rectifier, means dependent upon an interruption of the charging current for re-starting the rectifying process and means dependent upon the weakening of the charging current for preventing the restarting of the rectifying process, of a circuit interrupter, and means dependent upon an abnormal current in the battery circuit for actuating the interrupter to open the alternating current supply circuit and the storage battery circuit.

1,112,483. TROUSERS. LOUIS A. SCHLESINGER, San Diego, Cal. Filed Oct. 13, 1913. Serial No. 794,952. (Cl. 2—142.)



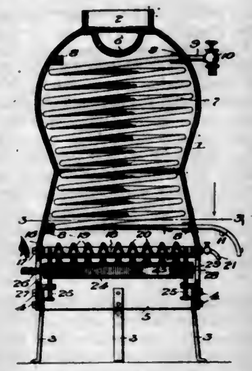
The combination with the trousers provided with a fly opening, of a band secured to the inner side of the trousers body at its upper edge and having a tongue formed on one end projecting beyond the edge of the fly opening, means for detachably fastening said tongue to the trousers body beyond the opposite edge of the fly opening, binding braid stitched to the upper edge of the trousers body and the band, said body being provided with a seam at the lower edge of the band, suspender fastening means secured to the exterior of the trousers body adjacent its upper edge, said upper edge of the trousers body and the band being adapted to be turned outwardly and downwardly to expose the band to view whereby the same has the appearance of a belt.

1,112,484. GAS-HEATED WATER-HEATER. JOSEPH SHIMMELFENNIG, Philadelphia, Pa., assignor of two-thirds to William E. Groll, West Philadelphia, Pa. Filed Mar. 3, 1914. Serial No. 822,200. (Cl. 158—106.)

1. The combination with a plurality of air nipples or burners, of gas supplying nipples or burners corresponding in number and position to the nipples aforesaid and individually adapted to coöperate therewith to regulate the air supply therethrough, said plurality of gas supplying nipples or burners being movable at will in opposite directions simultaneously and bodily as an entirety in relation to the air nipples or burners to position them closer to or farther from the air nipples or burners.

2. The combination with a plurality of air burners or nipples, of a plurality of projecting gas supplying nipples or burners corresponding in number and position to the nipples aforesaid and individually adapted to enter and coöperate with the air nipples to regulate the air supply therethrough, said air nipples and gas supplying nipples being relatively bodily movable at will in opposite directions as an entirety to position them closer to or farther from each other.

3. The combination with a plurality of air nipples or burners, of a gas expansion box having a plurality of projecting gas burners communicating with its interior and adapted to enter and coöperate with the air nipples or burners to regulate the supply of air therethrough, and means for adjusting at will in opposite directions the gas expansion box in relation to the plate whereby the gas burners are simultaneously and bodily moved closer to or farther from the air nipples.



4. The combination with an inclosing shell, of a plate located inside said shell and provided with burners, raised above its surface, and means for draining condensation from the upper face of said plate.

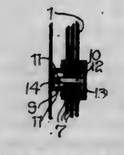
1,112,485. ESCUTCHEON-PLATE. CHARLES R. SNYDER, Spokane, Wash. Filed July 8, 1913. Serial No. 777,888. (Cl. 70—16.)

1. An escutcheon plate having a longitudinally extending groove of uniform diameter throughout, a keyhole formed in the walls of the groove intermediate the ends thereof, said groove being of a width slightly greater than the end of the key and adapted to guide the key to the key-hole.

2. An escutcheon plate having a longitudinally extending V-shaped groove and a key hole formed in the walls of the groove, said groove being of slightly greater width than the key hole adapted to effectively guide a key to the key hole.

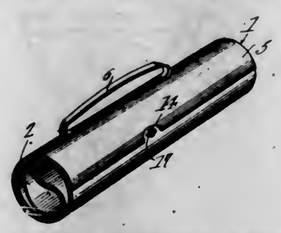
1,112,486. ENVELOP AND FASTENER. LESLIE E. SPRING, White Cottage, Ohio. Filed Nov. 29, 1913. Serial No. 803,777. (Cl. 229—78.)

A device of the class described comprising the combination with an envelop having inturned flap members, a locking plate having a central off-set portion connected to the inner face of the front wall of the envelop, a U-shaped spring wire clamping member extending transversely through the off-set portion of said locking plate, a second locking plate having a shank extending through the rear wall of the envelop and the inturned flap members



thereof, said shank having an enlarged head at its free end for engagement between the legs of said U-shaped clamp.

1,112,487. COVER FOR SHEET-MUSIC, MAGAZINES, AND THE LIKE. HENRY W. STAMPS, Rome, Ga. Filed May 9, 1913. Serial No. 766,643. (Cl. 224—47.)



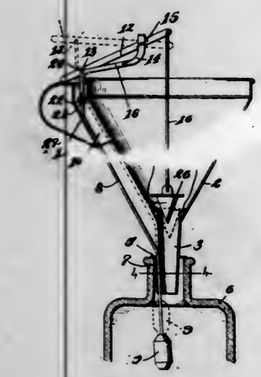
1. A cover of the character described, including a sheet of flexible material folded to provide two main leaves, one leaf being provided with a folded end adapted to receive and envelop the edge of the other sheet when the sheet is constituting a satchel, a handle connected exteriorly of the inclosing sheet at the junction of the folded end thereof, a hook connected centrally of the free edge of the folded end, and three eyes connected to project exteriorly of the sheet, one of said eyes being disposed to receive the hook when the sheet is folded to form a satchel, the intermediate eye being disposed to receive the hook when the sheet is folded to form a portfolio, while the third eye is disposed to engage the hook when the sheet is forming a music roll.

2. A cover of the character described, including a sheet of flexible material folded to provide two main leaves, means attached to the inner faces of the sheet across the fold to prevent the fold from lying in the same plane as the sheet when the sheet is extended, one leaf being provided with a folded end adapted to receive and envelop the edge of the other sheet when the sheet is constituting a satchel, a handle connected exteriorly of the inclosing sheet at the junction of the folded end thereof, a hook connected centrally of the free edge of the folded end, and three eyes connected to project exteriorly of the sheet, one of said eyes being disposed to receive the hook when the sheet is folded to form a satchel, the intermediate eye being disposed to receive the hook when the sheet is folded to form a portfolio, while the third eye is disposed to engage the hook when the sheet is forming a music roll.

1,112,488. FUNNEL. UNO A. STENMAN, Norfolk, Conn. Filed May 6, 1913. Serial No. 765,917. (Cl. 226—33.)

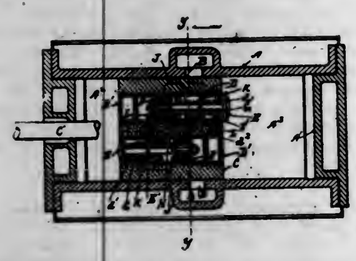
1. In a funnel, the combination of a funnel body, a nozzle connected to the lower end of said funnel body, a guide-way formed upon said nozzle, a casing secured to said body portion near the upper end of the same, said casing provided with a pair of openings disposed directly opposite each other in the sides thereof, a bracket constructed of resilient material mounted upon said body portion having its lower ends inserted through said openings, means for closing the outlet of said funnel and means extending through said guide-way and said casing and connected to said bracket for controlling the closing means of the outlet of said funnel body.

2. In a funnel, the combination of a funnel body, a nozzle connected to the lower end of said funnel body, a guide-way formed upon said nozzle, a casing secured to said body portion near the upper end of the same, said casing provided with a pair of openings disposed directly opposite each other in the sides thereof, a bracket constructed of resilient material mounted upon said body portion having its lower ends detachably inserted through said openings, means mounted on said bracket for controlling the outlet of said funnel having one part thereof disposed within said funnel and another part disposed without said funnel and extending through said guide-way, said first named part of said controlling means being removable from the interior of said funnel when said bracket is detached so that the funnel may be used in the ordinary manner.



3. In a funnel, the combination of a funnel body, a nozzle secured to said funnel body, a guide-way formed upon said nozzle, a bracket mounted upon said funnel body, a bar fulcrumed to said bracket, a valve for closing the outlet of said funnel, a rod having its respective ends pivotally connected to said valve and to one end of said bar, a float, a wire, the one end of which is secured to said float, and the opposite end pivotally connected to the other end of said bar, said wire extending through said guide way and conforming to the contour of said body and said nozzle.

1,112,489. STEAM-ENGINE. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Mar. 29, 1913. Serial No. 757,528. (Cl. 121—45.)



1. The combination with a steam engine cylinder having central exhaust ports, of a piston in said cylinder having exhaust passages therein adapted to communicate with said central exhaust ports, a valve in said piston controlling the exhaust to said ports, and means within said piston actuated by pressure within the cylinder for controlling said valve during the compression and admission periods, substantially as set forth.

2. The combination with a steam engine cylinder having central exhaust ports, of a piston in said cylinder having passages adapted to communicate with said central exhaust ports, a valve in said piston adapted to control the exhaust through said passages to said ports, means within said piston to open said valve during the exhaust period of each stroke, and means within the piston actuated by pressure within the cylinder for closing said valve during the compression and admission period, substantially as set forth.

3. In a steam engine, a cylinder having central exhaust ports, an engine-piston in said cylinder having steam passage-ways and valve and piston chambers therein adapted to communicate with said central exhaust during the reciprocation of said engine-piston and with the interior of said cylinder, a valve adapted to close said valve-chamber, a valve-stem thereon, a piston in said piston-chamber secured on said valve-stem, adapted to be actuated by fluid in that end of said cylinder toward which said engine-piston is moving to cause said valve to close the passage through said valve-chamber and retain it in a closed position until the central exhaust ports in said cylinder are uncovered by the engine-piston on its return stroke and means contained within said engine piston to operate said valve in the opposite direction, substantially as set forth.

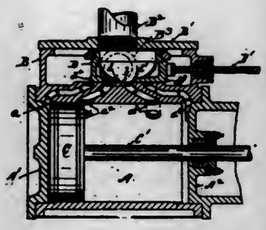
4. In a steam engine, a cylinder having central exhaust ports, an engine-piston therein adapted to cover and uncover said ports during its reciprocation having a valve-chamber and steam passage-ways therein adapted to communicate with said central exhaust during the reciprocation of said engine-piston, and a piston-chamber and other steam passage-ways therein in constant communication with the interior of said cylinder and said piston-chamber and said central exhaust, a valve adapted to close communication between the interior of said cylinder and said valve-chamber, a valve-stem thereon, a piston in said piston-chamber secured on said valve-stem and adapted to be actuated by fluid in that end of the cylinder toward which the piston is moving, communicated thereto through some of the steam passages to operate said valve to close communication between said end of the cylinder and the valve-chamber in said engine-piston, and mechanism contained within said engine piston adapted to operate said valve in the opposite direction when said central exhaust ports are uncovered on the return stroke of said piston, substantially as set forth.

5. In a steam engine, a cylinder having central exhaust ports, an engine-piston therein adapted to cover and uncover said central exhaust ports during its reciprocations, having therein a valve-chamber in said engine-piston, a depressed recess in the periphery of said piston, an exhaust port extending between said valve-chamber and said depressed recess, a piston chamber, a steam passage-way leading from one end of said engine-piston to one end of said piston-chamber, and another passage-way leading from the opposite end of said piston-chamber to said central exhaust; a valve mounted in said engine-piston, a valve-stem thereon, a piston in said piston-chamber and secured on said valve-stem adapted to be actuated by fluid in said cylinder to cause said valve to close communication between the interior of said cylinder and the valve-chamber in said engine-piston and retain said valve in a closed position until said central exhaust ports are uncovered by the return stroke of said engine-piston, and means to move said valve in the opposite direction, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,112,490. STEAM-ENGINE. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Sept. 26, 1913. Serial No. 791,995. (Cl. 121—45.)

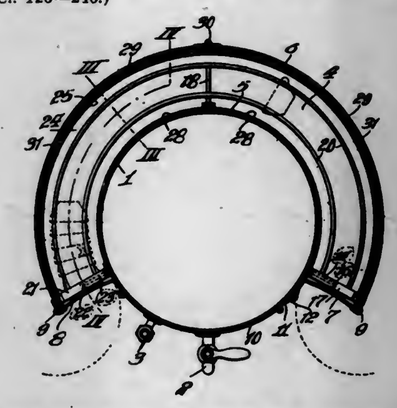
1. The combination in a steam engine, of a cylinder having a steam intake port in the wall of said cylinder at the end thereof, an independent exhaust port in the wall of said cylinder spaced from said intake port, a piston in said cylinder, a valve chest with which said port communicates, a valve therein adapted to alternately open said steam port to steam, and said exhaust port to exhaust in proper time with relation to the movement of the piston.



2. The combination in a steam engine, of a cylinder having steam inlet ports and independent exhaust ports in the wall thereof spaced from said inlet ports, a piston in said cylinder, heads on said cylinder, a valve-chest with which said ports communicate, a hollow valve therein adapted to alternately open said exhaust ports and receive the exhaust steam thereinto and conduct it to the engine pipe, and to alternately open said steam inlet ports to admit steam thereinto from said valve-chest, in proper time with relation to the movement of said piston, substantially as set forth.

3. In a steam engine, the combination of a cylinder having steam inlet ports at its ends, and independent exhaust ports in the walls thereof spaced from said inlet ports located between each of said steam inlet ports and the middle of said cylinder, a piston in said cylinder adapted to pass each of said exhaust ports during its movement toward each end of the cylinder, heads on said cylinder, a valve chest with which all of said ports communicate, and a valve therein adapted to alternately open said steam ports to steam and said exhaust ports to exhaust, in proper time with relation to the movement of said piston, substantially as set forth.

1,112,491. WARMING-CLOSET. SAMUEL F. SWANTEES, St. Louis, Mo. Filed Jan. 24, 1913. Serial No. 743,891. (Cl. 126—246.)



1. The combination of a dish-warming closet and a heated vessel, and means whereby dishes are conveyed from a high point on one end of said closet to a lower point at the other end of said closet.

2. The combination of a warming closet and a heated vessel, conveyers located in said closet, said conveyers forming means for conveying dishes from a high point on one end to a lower point at the other end of said closet.

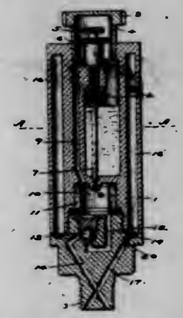
3. The combination of a warming closet and a heated vessel, said vessel being adapted to contain foodstuff, said closet being located against the outside of said vessel, and means located in said closet for passing dishes therethrough, said vessel adapted to heat said closet.

4. The combination of a warming closet and a heated vessel, said closet being adapted to be heated by said vessel, gravity conveyers located in said closet, said conveyers forming means for conveying dishes through said closet.

5. A heated dispensing vessel, a closet located adjacent said vessel, said closet having a receiving and a delivery end for dishes, means located in said closet for moving dishes from a high point on one end to a lower point at the other end of said closet, said closet adapted to be heated by said vessel.

[Claims 6 and 7 not printed in the Gazette.]

1,112,492. LUBRICATOR FOR AIR-PUMPS. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 7, 1904. Serial No. 223,611. (Cl. 184—59.)



1. A lubricator for air pumps, comprising an oil chamber, an outlet-passage leading therefrom to the pump, a needle valve for controlling the flow of oil from the chamber into the outlet passage, a check valve in said passage adapted to seat away from the pump, and an air-inlet port leading from a point in said passage above the check valve and opening into the upper portion of the oil chamber.

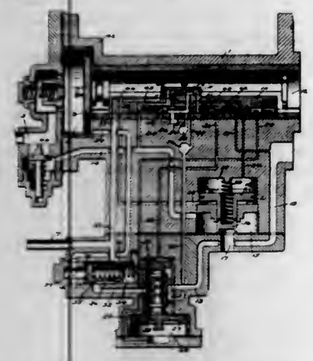
2. A lubricator for air pump cylinders, comprising a casing containing an oil chamber opening at the top to the atmosphere, a drip chamber and a feed port leading from the oil chamber to said drip chamber, a closed reversely curved outlet passage leading from the drip chamber to the pump cylinder, a check valve actuated by gravity and the pump pressure for normally closing said outlet passage, and a separate air inlet passage leading to the drip chamber for supplying air thereto upon the suction stroke of the pump.

3. In lubricating means adapted for connection to the piston-containing cylinder of an explosive engine, the combination of an oil-container having an outlet opening, a sight feed-chamber in communication therewith, an attaching nipple provided with an internal valve-chamber, a valve seated therein, there being also two passages in the nipple of which one connects with the valve-chamber below the valve therein and is open toward the sight-feed chamber, while the other connects the valve-chamber above the valve therein with the outside and a screw-plug seated in the bottom of the sight-feed-chamber to permit access to the valve-chamber below.

1,112,493. QUICK-ACTION TRIPLE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 8, 1909. Serial No. 481,942. (Cl. 188—15.)

1. In a fluid pressure brake, the combination with a train pipe and a triple valve device subject to the opposing pressures of a train pipe and a chamber, of means for venting fluid from said chamber to a space other than the train pipe to prevent movement of the triple valve device from service to emergency application position.

2. In a fluid pressure brake, the combination with a train pipe and a triple valve device subject to the opposing pressures of the train pipe and a chamber and having a service and an emergency application position, of means for venting fluid from said chamber to the atmosphere upon movement of the triple valve device from service position to prevent movement thereof to emergency application position.



3. In a fluid pressure brake, the combination with a train pipe and triple valve device subject to the opposing pressures of the train pipe and a chamber and having a service and an emergency application position, of means for venting fluid from said chamber to a space other than the train pipe in a position intermediate service and emergency application positions to thereby prevent movement of the triple valve device of emergency application position upon a gradual reduction in train pipe pressure after equalization of the train pipe and chamber pressure.

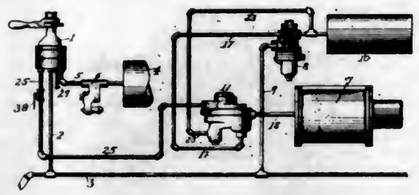
4. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, and a triple valve device subject to the opposing pressures of the train pipe and auxiliary reservoir and having a service and an emergency application position, of an emergency valve mechanism controlled by said triple valve device for effecting an emergency application of the brakes and means for venting fluid from the auxiliary reservoir to a space other than the train pipe in a position intermediate service and emergency application positions, to thereby prevent movement of the triple valve device to emergency position upon a gradual reduction in train pipe pressure after equalization of the train pipe and the auxiliary reservoir pressures.

5. In a fluid pressure brake, the combination with a train pipe and an automatic valve device subject to the opposing pressures of the train pipe and a chamber and having a service and an emergency application position, of a safety valve device and means for venting fluid from said chamber through the safety valve device upon movement of the automatic valve device from service application position toward emergency application position.

[Claims 6 to 28 not printed in the Gazette.]

1,112,494. COMBINED AUTOMATIC AND STRAIGHT-AIR BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 2, 1910. Serial No. 552,978. (Cl. 188—1.)

1. In a combined automatic and straight air brake, the combination with a train pipe, auxiliary reservoir, triple valve, and brake cylinder, of an independent pipe for supplying air to the brake cylinder and a valve mechanism adapted in one position to establish communication from the triple valve supply pipe to the brake cylinder and in another position from said independent pipe to the brake cylinder and operating when the triple valve is in emergency application position with the triple valve supply pipe open to the auxiliary reservoir, only upon a predetermined substantial reduction in brake cylinder pressure by release through the independent pipe, to open communication from said supply pipe to the brake cylinder.



2. In a combined automatic and straight air brake, the combination with a train pipe, auxiliary reservoir, triple valve, and brake cylinder, of a straight air pipe for supplying fluid to the brake cylinder and a piston having differential heads for controlling the release from the brake cylinder, the larger head being subject to the pressure of the straight air pipe, the smaller head to the flow of fluid from the triple valve.

3. In a combined automatic and straight air brake, the combination with a train pipe, auxiliary reservoir, triple valve, and brake cylinder, of a straight air pipe for supplying fluid to the brake cylinder and a piston having differential heads for controlling the release from the brake cylinder, the larger head being subject to the pressure of the straight air pipe, the smaller head to the flow of fluid from the triple valve, and having the brake cylinder connected to the space intermediate the piston heads.

4. In a combined automatic and straight air brake, the combination with a train pipe, auxiliary reservoir, triple valve, and brake cylinder, of an independent pipe for supplying air to the brake cylinder, a brake valve for controlling the pressures in the train pipe and said independent pipe, and a valve mechanism having a position for connecting the brake cylinder with the triple valve supply pipe and another position for connecting the brake cylinder with the independent pipe and adapted upon a predetermined reduction in brake cylinder pressure by releasing through the independent pipe to close the independent pipe communication to the brake cylinder and open communication from the triple valve supply pipe to the brake cylinder.

5. In a combined automatic and straight air brake, the combination with a train pipe, auxiliary reservoir, triple valve, and brake cylinder, of an independent pipe for supplying air to the brake cylinder and a valve mechanism comprising a piston having a reduced area thereof exposed to the pressure in the triple valve supply pipe in one position and operating upon a predetermined reduction in the pressure of fluid released from the brake cylinder through the independent pipe to close communication from the brake cylinder to the independent pipe and open communication from the triple valve supply pipe to the brake cylinder.

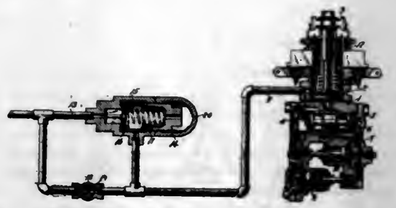
[Claims 6 to 14 not printed in the Gazette.]

1,112,495. DUPLEX-PRESSURE ELECTRIC PUMP-GOVERNOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 11, 1911. Serial No. 620,471. (Cl. 230—24.)

1. The combination with a pump governor operating at a predetermined maximum degree of pump pressure for cutting out the pump and at a predetermined minimum degree of pump pressure for cutting in the pump, of means for causing the pump governor to cut the pump into and out of action when the maximum and minimum pump pressures are higher than those for which the governor is adjusted.

2. The combination with a pump governor normally operated according to the degree of pump pressure for cutting the pump into and out of action, of a valve device for supplying fluid to the pump governor at a pressure less than the pump pressure, to thereby cause the governor

to cut the pump into and out of action at pump pressures in excess of the pressures for which the governor is adjusted.



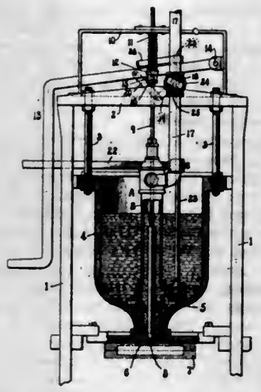
3. The combination with a pump governor comprising a movable abutment and a regulating valve mechanism normally operated according to the degree of pump pressure for controlling the admission and release of fluid to and from said abutment to cause the pump to be cut into and out of action, of an excess pressure valve for supplying fluid to operate the pump governor to cut the pump into and out of action at pressures a predetermined degree less than the pump pressure.

4. The combination with a pump governor governed by fluid pressure and adapted at a predetermined maximum degree of pressure to cut the pump out of action and at a predetermined minimum degree of pressure to cut the pump into action, of a valve device for supplying operating fluid to the pump governor at a predetermined degree of pressure less than the pump pressure and a cock having one position in which communication is opened for supplying fluid at pump presure to the pump governor and another position for closing said communication, so that operating fluid is supplied to the pump governor through said valve device.

5. The combination with a pump governor comprising a movable abutment and a valve mechanism operated by variations in fluid pressure for supplying and releasing fluid to and from said abutment to control the pump, of an excess pressure valve subject to the opposing pressures of an adjustable spring and the pump pressure for also supplying operating fluid to the pump governor at a pressure a predetermined degree less than the pump pressure to thereby cause the pump to be cut in and out at pressures higher than normal.

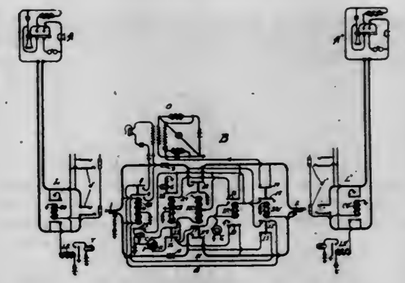
[Claims 6 and 7 not printed in the Gazette.]

1,112,496. ART OF MAKING CASTINGS. WILLIAM C. URBAN, Granite City, Ill., assignor of one-half to Hoyt Metal Company, St. Louis, Mo., a Corporation. Filed Feb. 13, 1913. Serial No. 748,096. (Cl. 22—200.)



In the art of making castings, the process which consists in confining molten material in a primary and a secondary compartment, the latter being provided with an admission port through which molten material may flow from the primary compartment and with a discharge port through which the molten material is discharged; closing said discharge port to prevent the escape of molten material from the secondary compartment, opening and closing the admission port while the discharge port is closed, introducing fluid under pressure into the secondary compartment, and opening and closing the discharge port while the admission port is closed.

1,112,497. TELEPHONE SYSTEM WITH AUTOMATIC RINGING. RICHARD I. UTTER, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 25, 1913. Serial No. 797,154. (Cl. 179—58.)



1. A telephone system comprising telephone lines, a link circuit for connection therewith, a calling supervisory relay and source of ringing current, an interrupter relay and means for operation thereof to alternately bridge said relay and current across a connected called line, a ringing control relay and energizing circuit therefor responsive to said supervisory relay, an interrupter included in said energizing circuit, said interrupter being adapted to prevent a premature operation of said control relay by an incidental momentary operation of the supervisory relay.

2. A telephone system comprising telephone lines, a link circuit for connection therewith, a calling supervisory relay and source of ringing current, means for alternately connecting said relay and current in bridge of a connected called line, a ringing control relay and energizing circuit therefor responsive to said supervisory relay, an interrupter included in the circuit of the control relay, said interrupter being adapted to prevent a premature operation of the control relay by an incidental momentary operation of the supervisory relay.

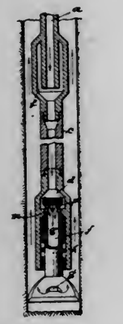
3. A telephone system comprising telephone lines, an operator controlled link circuit for connection therewith, a calling supervisory relay and source of ringing current, means responsive to the connection of said link circuit to a called one of said lines for alternately connecting said relay and current in bridge of a connected called line, a ringing control relay and energizing circuit therefor responsive to said supervisory relay, an interrupter included in the circuit of the control relay, and means whereby said interrupter will prevent a premature operation of the control relay by an incidental momentary operation of the supervisory relay.

4. A telephone system comprising telephone lines, an operator's link circuit for connection therewith, a ringing or interrupter relay a ringing control relay and a calling supervisory relay for said link circuit, an energizing circuit for each of said interrupter and control relays, an interrupter having alternate contacts included in said circuits, means responsive to the connection of said link circuit to a called one of said lines whereby said circuit of the interrupter relay is effective to periodically apply ringing current to said line, and means for energizing said supervisory relay upon response of the called line to establish said energizing circuit for the control relay to prevent further application of ringing current.

5. A telephone system comprising an operator's link circuit, telephone lines adapted for connection therewith, an interrupter relay a ringing control relay and a calling supervisory relay for said link circuit, an interrupter having alternate contacts adapted to be alternately connected in energizing circuits for the ringing and interrupter relays, means responsive to the connection of said link circuit to one of said lines whereby one of the alternate contacts of said interrupter causes the operation of said interrupter relay to periodically apply ringing current to the connected line, means whereby said supervisory relay is energized upon response from the connected line to close an energizing circuit for the ringing control relay through the other alternate contact of the interrupter to prevent further application of ringing current to the conneced line.

[Claims 6 and 7 not printed in the Gazette.]

1,112,498. DRILL. LOUIS JEAN CHRÊTIEN VAN ES, Batavia, Netherlands East Indies. Filed May 1, 1913. Serial No. 764,944. (Cl. 255—4.)



1. In a percussion drill, the combination of a cylinder having a constricted part; a piston reciprocating in said constricted part and provided with a closed head adapted to close the constricted part, and with intermediate recesses adapted to unclose said restricted part; and a spring for raising the piston.

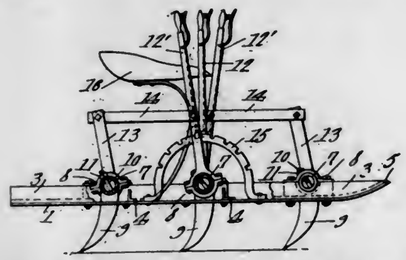
2. In a percussion drill, the combination of a cylinder having a constricted part; a piston reciprocating in said constricted part and provided with a closed head adapted to close the constricted part, and with intermediate recesses adapted to unclose said restricted part; a spring for raising the piston; and a drill on the lower end of the piston, said drill having a fluid discharge passage therein.

3. In a percussion drill, the combination of a cylinder; means for conducting fluid to the upper part of the cylinder, a partition in the cylinder provided with a bore; a piston within said cylinder and bore and having a closed upper end adapted to close said bore and provided with intermediate recesses adapted to permit the passage of fluid through the bore; yieldable means pressing on said piston to move the upper end of the piston from the bore; and a drill attached to the piston.

4. In a percussion drill, the combination of a cylinder having a single outlet opening, a single inlet opening and a constricting bore between said openings and closed at its sides; and a piston in said cylinder and bore having a part adapted to close said bore when the piston is in one position and provided with passages permitting the passage of fluid through said bore when the piston is in another position.

5. In a percussion drill, the combination of a cylinder having outlet and inlet openings, and a constricting bore between said openings, the cylinder being free from openings adjacent to said bore; and a piston in said cylinder and bore and having a part adapted to close said bore when the piston is in one position and provided with passages permitting the passage of fluid through said bore when the piston is in another position.

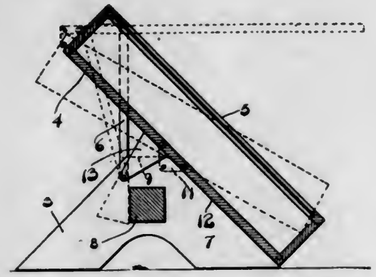
1,112,490. SOIL-PULVERIZER. JOSEPH VIEIRA, Arcata, Cal. Filed Aug. 4, 1913. Serial No. 782,982. (Cl. 55—23.)



1. In a device of the character described, a plate having a plurality of transverse series of longitudinal slots, the slots of the respective series being offset with respect to each other, shafts journaled on the plate at the forward ends of the respective slots, blades secured to the respective shafts and adapted to be swung completely through the slots, a plurality of hand levers carried by one shaft, means connecting the levers and several shafts, and independent means for locking each of the levers at various angular positions.

2. In a device of the class described, a plate having a plurality of transverse series of longitudinal slots, shafts journaled on the plate over the respective slots, semi-crescent shaped blades secured to the respective shafts and adapted to be swung completely through the slots, and means for independently actuating the shafts.

1,112,500. SHOW-CASE. JOHN M. WADDELL, Greenfield, Ohio. Filed Feb. 17, 1913. Serial No. 748,768. (Cl. 211—26.)



1. In an apparatus of the character described, the combination of a base, a case pivotally mounted on the base and normally occupying a tilted position thereon, a lid hinged on the case and adapted to close the case in its normal position, and a link between the base and the lid adapted to raise the lid when the case is moved toward a horizontal position.

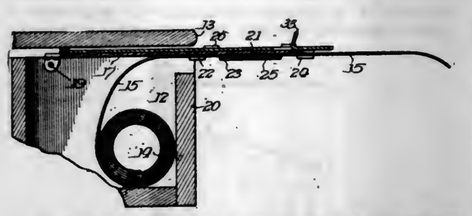
2. In an apparatus of the character described, the combination of a base having an inclined and a horizontal face, a case pivotally secured to the base and capable of being swung to a horizontal position, into engagement with the horizontal face, and to an inclined position into engagement with the inclined face, a lid for the case and means for moving the lid from a closed to an open position when the case is swung from the inclined to the horizontal position, and to a closed position when the case is swung from the horizontal to the inclined position.

3. An apparatus of the character described, comprising a base having inclined and horizontal case-supporting surfaces, a case pivotally mounted on the base and capable of being turned to different positions, so as to be supported in an inclined position on the inclined surface or in a horizontal position on the horizontal surface, a lid for the case and a link pivotally secured to the base and to the lid, for moving the lid when the case is moved relatively to the base.

4. The combination of a base having an inclined and a horizontal case-supporting surface, a case pivotally secured to the base, a lid movably mounted upon the case, means actuated by variations in the relative positions of the base and the case, for actuating the lid, and means for locking the case in an inclined position on the base and for thereby locking the lid in a closed position.

5. In combination with a base, a show case pivotally mounted thereon and movable to different positions relatively to the base, a lid hinged to the case, a link pivotally secured to the base and to the lid, for moving the lid in response to variations in the relative positions between the base and the case, and means for locking the case in one position on the base and for thereby locking the lid against motion.

1,112,501. LABEL-HOLDER. HENRY EMMET WALSH, Chicago, Ill. Filed Sept. 26, 1913. Serial No. 791,950. (Cl. 211—37.)



1. In a device of the character described and including a paper feed and a cutting edge, a gage movable in one direction with the paper and in the other direction independently thereof, the range of movement of the gage corresponding to the length of the paper to be severed and the paths of movement of the paper and gage being substantially parallel and closely adjacent whereby to permit them both to be jointly grasped by the fingers and drawn forward, substantially as described.

2. In a device of the character described and including a paper feed and a cutting edge, a reciprocating gage movable in a forward direction with the paper and rearwardly independent thereof, the range of movement of the gage corresponding to the length of paper to be severed, and means to support the paper closely adjacent the forward end of the gage whereby to permit them to be jointly grasped by the fingers and drawn forward, substantially as described.

3. In a device of the character described and including a paper feed and a cutting edge, a reciprocating gage movable in a forward direction with the paper and rearwardly independent thereof, the range of movement of the gage corresponding to the length of paper to be severed, a cutting edge being carried by the gage, substantially as described.

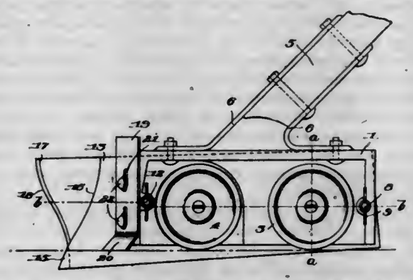
4. In a device of the character described, a compartment for the roll of paper, a feed shelf extending therefrom and provided with guiding means, a gage mounted for longitudinal reciprocation relative to the shelf and having a cutting edge associated therewith, the range of movement of the gage corresponding to the length of paper to be severed, substantially as described.

5. In a device of the character described, a compartment for the roll of paper, a feed shelf extending therefrom and provided with guiding fingers, a gage mounted for longitudinal reciprocation relative to the shelf, a cutting edge associated with the shelf and gage the range of movement of the gage corresponding to the length of paper to be severed, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,112,502. LAWN-TRIMMER. GEORGE E. WALTER, Rochester, N. Y. Filed Aug. 28, 1913. Serial No. 787,165. (Cl. 97—28.)

1. A device of the class described comprising a wheeled carriage, and a trench cutter arranged to one side of the carriage depending below the wheels of the carriage and having a mold board arranged to discharge the material in advance of the wheeled carriage and in advance of the forward end of the trench cutter.



2. A device of the class described comprising a frame, a deflector at the forward portion of the frame, and a trench cutter arranged on one side of the frame and having a mold board arranged to discharge material in advance of the deflector to be carried by the latter to the opposite side of the frame out of the path of the frame.

3. A device of the class described comprising a frame, a deflector vertically adjustable on the front part of the frame, a trench cutter arranged on one side of the frame depending below the frame, and having a mold board arranged to discharge material in front of the deflector to be carried by the latter to the opposite side of the frame out of the path of the frame.

4. A device of the class described comprising a box-like frame open at its bottom and one of its side walls, wheels arranged in the frame, a deflector vertically adjustable on the front wall of the frame and having its lower edge acting as a scraper, a trough-shaped cutter pivoted near the rear portion of the frame, and means for adjustably securing the forward end of the trough-shaped cutter, said cutter having a mold board which turns the material in advance of the deflector to be carried by the latter to one side of the frame.

5. A device of the class described comprising a frame, a trench cutter depending below the frame at one side thereof, and a wheel arranged on the frame to operate in a plane at an acute angle to the line movement of the frame so that the depending cutter is held against the side walk and friction on the outer wall of the trench cutter is reduced.

[Claims 6 to 11 not printed in the Gazette.]

1,112,503. JOINT FOR ARTIFICIAL LEGS. JACOB WAMBSGANS and WILLIAM H. WAMBSGANS, Peoria, Ill. Filed Feb. 27, 1913. Serial No. 750,977. (Cl. 3—2.)

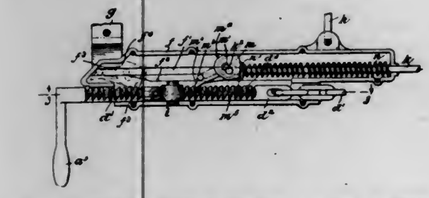
1. A hinge joint for artificial limbs, including a member having a bearing member or plate with a stud provided centrally thereon and having an annular groove or recess, a second member having an annular bearing member provided with a groove or recess on each side thereof and having an enlarged aperture therethrough, an additional member having a cap portion provided with an annular groove or recess and a stud or extension, said stud or extension fitting in said enlarged aperture in said annular bearing member and having an aperture to receive said first mentioned stud, antifriction balls positioned in the races formed by said grooves or recesses and securing means connected to said first mentioned stud and bearing on the outside of the cap portion of said additional member.

2. A hinge joint for artificial limbs, including a member having a circular bearing member or plate with a stud provided centrally thereon and having an annular groove

or recess, said stud having a flat face and a screw threaded aperture, a second member having an annular bearing member provided with a groove or recess on each side thereof, an additional member having a cap portion provided with an annular groove or recess and a stud or extension, said stud or extension fitting in said annular bearing member and having a flat sided aperture to receive said first mentioned stud, antifriction balls positioned in the races formed by said grooves or recesses and a screw member passing through said members and engaging said screw threaded aperture, said screw member having an enlarged head and adapted to bear on said additional member, the end of said first mentioned stud being flush with the outside face of said additional member when the joint is assembled.

3. A hinge joint for artificial limbs, including a member having a circular bearing member or plate provided with a circular stud having a centrally located screw threaded aperture and a flat face, said bearing member or plate having an annular groove or recess, a second member having an annular bearing member provided with an annular groove or recess on each side thereof, an additional member having a cap portion provided with an annular groove or recess on its inner face and also having a depending stud or extension, said stud or extension fitting in said annular bearing member and having a flat sided aperture to receive said first mentioned stud, ball bearings positioned in the races formed by said groove or recess, and an assembling member comprising a screw threaded bolt adapted to enter said screw threaded aperture, and an enlarged head adapted to bear on said additional member.

1,112,504. SLACK-ADJUSTER FOR RAILWAY-BRAKES. FRANK D. WARD, New York, N. Y. Filed Jan. 9, 1914. Serial No. 811,157. (Cl. 188—50.)

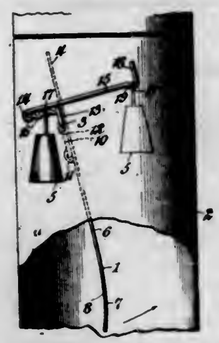


1. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever and an automatic take-up device including supporting means mounted on the car body and comprising a rack bar and a take-up rod both slidably mounted in said supporting means, a holding dog in engagement with the rack bar to hold the same against movement in one direction, a series of teeth on the rack bar, a pawl carried by the take-up rod, a shoulder being formed on the supporting means and cooperating with the pawl to hold the same out of engagement with the teeth of the rack bar during normal travel of the pull rod and permitting engagement of the pawl with the teeth of the rack bar upon excess travel of the pull rod and means to force the pawl into positive locking engagement with the teeth to prevent movement of the rack bar in the opposite direction after the brakes have been released.

2. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever and an automatic take-up device including supporting means mounted on the car body and comprising a rack bar and a take-up rod, a pawl pivotally mounted on the take-up rod and connecting the same operatively with the rack bar, the supporting means and the pawl being provided with cooperating cam surfaces to force the pawl into locking engagement with the rack bar to hold the same against movement in one direction when the brakes are released and a spring-pressed holding dog mounted on said supporting means and engaging the rack bar to prevent positively movement thereof in the opposite direction.

3. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, a casing supported on the car body, an automatic take-up device supported in said casing and including two rods operatively connected to the dead lever and to the pull rod respectively, a pawl supported pivotally within said casing on the inner end of the pull rod and operative upon excess travel of the pull rod to connect said two first named rods, guide shoulders formed on the inner side walls of the casing and coöperating with the toe of said pawl to determine its position, the body of said pawl being provided with a slot to receive the pivot pin of the pawl, a spring in operative engagement with the body of the pawl to hold the same normally out of engagement with the rack bar and coöperating cams formed on the inner wall of the casing and on the body of the pawl to force the latter into locking engagement with the rack bar after the brakes have been released.

1,112,505. AUTOMATIC DAMPER FOR STOVEPIPES. CHARLES S. WAYBRIGHT, Staunton, Va. Filed Nov. 26, 1913. Serial No. 803,300. (Cl. 236—2.)



1. A device of the class described, including a shaft composed of straight side portions and an intermediate bend, said shaft being adapted to be passed through perforations of a stove pipe from the exterior thereof, and a substantially oblong damper of greater length than the diameter of a stove pipe, so as to occupy an inclined position therein when closed, and provided at its center with spaced side tongues for engaging the side portions of the shaft, and having an intermediate tongue for engaging the bend of the shaft, whereby the damper is locked to the shaft and is held against relative lateral and rotary movement, said intermediate and side tongues forming downwardly extending hooks to enable them to be readily engaged with the shaft after the latter has been passed through the opposite sides of a stove pipe.

2. A device of the class described, including a damper consisting of a substantially oblong plate having upper and lower portions arranged in substantially the same plane, said damper being eccentrically pivoted at its upper portion and being of a length considerably greater than the diameter of a stove pipe, so as to occupy an inclined position therein when closed, said damper being tapered at its lower portion to form a contacting lower end and having a substantially arcuate upper edge arranged in spaced relation with the stove pipe when the damper is in its closed position.

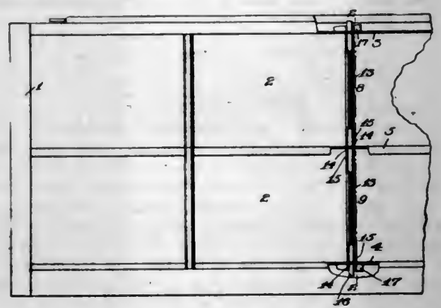
3. A device of the class described including a substantially oblong damper eccentrically pivoted at its upper portion and being of a length considerably greater than the diameter of a stove pipe so as to occupy an inclined position therein when closed, said damper being tapered at the lower portion to form a contacting lower end and provided thereat with a notch adapted to form a draft opening for blowing away the soot and for preventing an accumulation of the same on the stove pipe at the place of contact with the damper.

4. A device of the class described including an oblong damper of considerably greater length than the diameter of a pipe so as to occupy an inclined position therein when closed, said damper being eccentrically pivoted at its upper portion and having its lower portion bowed or curved longitudinally and presenting a concave face to the draft to enable it to catch the same.

5. A device of the class described including a damper, a shaft eccentrically pivoting the damper and bent outwardly at one end into a substantially U-shaped arm, the latter having one of its sides extended inwardly beyond the vertical plane of the shaft to form an inner arm, the other side of the outwardly extending arm being provided with a plurality of notches or recesses, and a weight having means for engaging the said notches or recesses and adapted also to be arranged on the inner arm.

[Claim 6 not printed in the Gazette.]

1,112,506. PARTITIONS OR WALLS FOR METAL FURNITURE. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 30, 1913. Serial No. 798,231. (Cl. 211—27.)



1. In metallic furniture, the combination with two walls, of a partition extending between them composed of two parallel spaced plates having inwardly projecting embossed areas thereon arranged at intervals and acting as spacing means between the plates, and a tie rod for compressing the walls against the partition, said rod being inclosed by the plates and arranged between two of the spacing means.

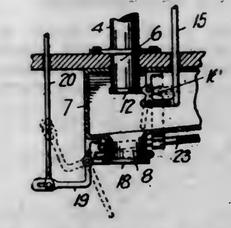
2. In metallic furniture, the combination with two walls having slots therein arranged at intervals and openings between the slots, of a partition wall comprising two spaced plates having projecting tongues at their ends cooperating with the slots in the walls and tie rods for compressing the walls against the partition passing through the openings in the former and inclosed between the plates of the latter.

3. In metallic furniture, the combination with upper and lower walls or floors and a similar intermediate wall, having a plurality of slots therein, of two partition walls arranged in the same plane and having tongues at their ends and cutaway portions adjacent to the tongues, each tongue at the proximate ends of the partitions being adapted to occupy a portion of a corresponding slot in the intermediate wall jointly with an oppositely projecting corresponding tongue on the other partition, the projecting portion of each of said tongues being accommodated within the cutaway portion adjacent to the other tongue.

4. In metallic furniture, the combination with a partition member comprising two spaced parallel plates, each having a projecting tongue at its end in the plane of the plate, of a wall to which the partition is connected having a slot in alinement with each wall and through which slots the tongues respectively project and means for compressing the wall against the partition.

5. In metallic furniture, the combination with two upper and lower walls or floors and a separate intermediate wall having a plurality of pairs of parallel slots therein, of two partition walls arranged in the same plane and each comprising two spaced parallel plates having a plurality of pairs of parallel tongues at their ends, and a cutaway portion adjacent to each tongue, the pairs of tongues being adapted to occupy portions of the respective pairs of slots in the intermediate wall jointly with oppositely projecting pairs of corresponding tongues on the other partition, the projecting portion of each tongue being accommodated within the cutaway portion adjacent to the other tongue which is located in the same slot therewith.

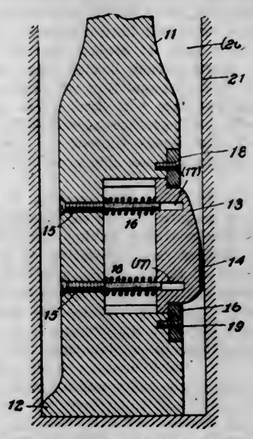
1,112,507. WATER-CLOSET FOR RAILWAY-CARRIAGES. WILLIAM WEST, Denver, Colo. Filed Apr. 10, 1912. Serial No. 689,856. (Cl. 4—20.)



In a water closet for railway carriages, a tank having a sloping bottom, a single vertically, downwardly extending outlet conduit which is disposed at the lower end of said bottom, and an inlet opening disposed above and in axial alinement with said conduit for the connection of the tank with the outlet of a closet bowl in a railway carriage beneath which it is applied, an outwardly opening valve at the lower end of said conduit, means for moving said valve from a point within the said carriage, and means at the end of the tank remote from said conduit for its connection with a source of water supply.

1,112,508. WELL-DRILLING BIT. WILLIAM E. WETZEL, Parkersburg, W. Va. Filed Oct. 24, 1913. Serial No. 796,894. (Cl. 255—63.)

WITHDRAWN



1. A well drilling bit having a spring operated block inserted in the bit whereby to make the cutting edge bore eccentrically, substantially as described.

2. A well drilling bit having inserted therein a depressible block, springs behind said block adapted to force it outwardly, whereby to cause the bit to bore a shaft of diameter longer than the edge of the bit, substantially as described.

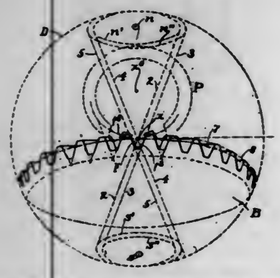
3. The combination of a well drilling bit having one side of the cutting edge flared, a block inserted in the body

of the bit on the side opposite the flared edge, springs behind said block adapted to force it outwardly, whereby as the bit is raised and revolved the flared edge is kept pressed against the outside of the hole, substantially as and for the purposes described.

4. A well drilling bit having one corner of its cutting edge flared, combined with a spring block insert on the side opposite the flared corner, whereby the bit is centered symmetrically with respect to the flared corner and the extended block, substantially as and for the purposes described.

5. In a well drilling bit, a block insert combined with a spring, whereby to cause the bit to bore eccentrically a shaft of diameter larger than the cutting edge, and by compression of the spring to allow the bit to be withdrawn through a casing of smaller diameter than the hole bored.

1,112,509. BEVEL-GEARING. HARVEY D. WILLIAMS, New York, N. Y., assignor to Gear Improvement Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 14, 1913. Serial No. 760,861. (Cl. 74—41.)



1. The herein described improvement in bevel-gearing, it consisting of a pair of conical meshing gear-wheels comprising a master-wheel having the pinion-engaging tooth-surfaces thereof consisting of plane-surfaces each of which comprises face and flank areas located in one plane, and said tooth-surface planes being arranged in pairs in which the planes thereof are transversely converging and are also arranged in longitudinal parallelism.

2. The herein described improvement in bevel-gearing, it consisting of a pair of conical meshing gear-wheels comprising a master-wheel having the pinion-engaging tooth-surfaces thereof consisting of plane-surfaces each of which comprises face and flank areas located in one plane, and said tooth-surface planes being arranged in pairs in which the planes thereof are transversely and inwardly converging and are also arranged in longitudinal parallelism.

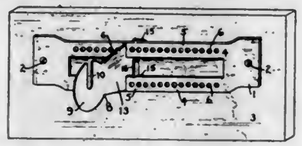
3. The herein described improvement in bevel-gearing, it consisting of a pair of conical meshing gear-wheels comprising a master-wheel having the pinion-engaging tooth-surfaces thereof each consisting of a working surface area located all in one plane, and said tooth-surface planes being arranged in pairs in which the planes thereof are transversely converging and are also arranged in longitudinal parallelism and conforming to the single-reproduction configuration, in combination with a comeshing pinion having the wheel-engaging tooth-surfaces thereof curved to conform to the compound-reproduction configuration, and said curved tooth-surfaces of the pinion being also geometrical envelops of the lines of contact of the pinion tooth-surface with said plane tooth-surfaces of the conical master-wheel.

4. The herein described improvement in bevel-gearing, it consisting of a pair of conical meshing gear-wheels comprising a master-wheel having the pinion engaging tooth-surfaces thereof each consisting of a working surface area located all in one plane, and said tooth-surface planes being arranged in pairs in which the planes thereof are transversely and inwardly converging and are also arranged in longitudinal parallelism and conforming to the single-reproduction configuration, in combination with a co-meshing pinion having the wheel-engaging tooth-surfaces thereof curved to conform to the compound-reproduction configuration, and said curved tooth-surfaces of the pinion being also geometrical envelops of the lines of contact of the pinion tooth-surface with said plane tooth-surfaces of the conical master-wheel.

5. The herein described improvement in toothed-gearing, it consisting of a pair of bevel-gears, comprising a conical pinion in combination with a master-wheel having the pinion-engaging toothed-surfaces thereof consisting of plane-surfaces arranged in successive pairs in which each pair has the planes thereof transversely converging and also arranged in longitudinal-parallelism and conforming to the single-reproduction configuration, the said wheel-teeth being each located between two adjacent said tooth-surface planes, and said pinion having the wheel-engaging tooth-surfaces thereof curved to conform to the compound-reproduction configuration.

[Claims 6 to 30 not printed in the Gazette.]

1,112,510. ADJUSTABLE WINDOW-SHADE BRACKET. GRAFTON M. WILSON and SYLVESTER W. EVERETT, Dayton, Ohio. Filed Mar. 3, 1914. Serial No. 822,226. (Cl. 156—24.)



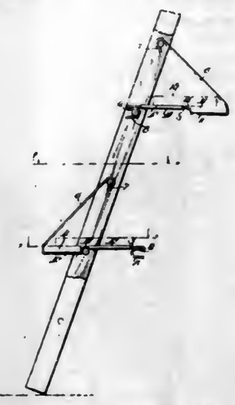
1. A window shade bracket comprising a base plate having an elevated longitudinal flat portion provided with a slot, said plate also provided with a series of apertures on each side of said slot, a bracket arm longitudinally movable in said slot, and pins carried by said bracket arm, adapted to be received by said apertures, to firmly hold the bracket arm in any of its adjusted positions, substantially as described.

2. In a window shade bracket, the combination with a base plate bent upwardly and inwardly from its ends to form a longitudinal flat portion, said flat portion provided with a slot, a bracket arm having a narrow portion movable in said slot, said base plate provided with a series of apertures on each side of said slot, pins carried by said bracket arm adapted to engage said apertures, and a flange secured to the narrow portion of said bracket arm, said flange being movable beneath the longitudinal portions of the base plate containing the apertures, and adapted to be moved into tight engagement with said portions to coöperate with said pins in firmly holding the bracket member in any of its adjusted positions, substantially as described.

3. A window shade bracket comprising between its end portions, two parallel elevated guides, each guide provided with a series of apertures, a bracket arm having a wing portion movable over each guide and a narrow portion movable between them, each wing portion having a pin adapted to be received by each aperture, and a flange carried by the lower end of the narrow portion of said bracket arm, said flange adapted to firmly engage the guides beneath which it is movable, to coöperate with the pins in firmly holding the bracket arm in any of its adjusted positions, substantially as described.

1,112,511. LADDER STEP AND BRACKET. CHARLES S. WINN, Rockford, Ill. Filed Nov. 14, 1913. Serial No. 801,033. (Cl. 20—85.)

1. A ladder bracket comprising, two V-shaped side members spaced apart, each arm of said side members terminating with a hooked end, and each member having one of its arms formed with a shoulder intermediate its ends, and a step having its end portions resting on the latter arms intermediate the said shoulders and the junction of said arms.



2. A ladder bracket comprising, two V-shaped side members spaced apart, each arm of said side members terminating with a hooked end, and each member having one of its arms formed with a shoulder intermediate its ends, a step having its end portions resting on the latter arms intermediate the said shoulders and the junction of said arms, and a shelf having its ends resting on said latter arms intermediate said shoulders and the arm ends, the shelf ends being engageable with said arms by the placing of said member in operative position, and means for fastening the side members fixed with the step when they have been placed in said position.

3. In a ladder bracket, the combination of a horizontally disposed platform having round receiving means intermediate its ends and having round receiving means at one end of the platform, and supporting means attached to the end of the platform opposite that of said round receiving means, said supporting means extending above the platform and having round receiving means at its upper end.

4. In a ladder bracket, the combination of a horizontally disposed platform having separate round receiving means at one end portion and at a central portion, the several round receiving means adapted to receive a round from a common side, and supporting means attached to the platform at its end opposite that of its round receiving end, said supporting means extending above the platform and having round receiving means at its upper end.

5. In a ladder bracket, the combination with a horizontally disposed platform and means for connecting the platform suspended-like from a round thereabove, of round receiving means carried by the platform for receiving a round at one end portion thereof with the platform in one position and for reeciving a round at a point intermediate its ends with the platform in a reversed position.

[Claim 6 not printed in the Gazette.]

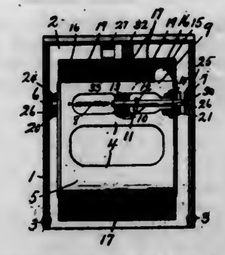
1,112,512. TOILET-PAPER HOLDER. HERBERT D. WOOD, Phoenix, N. Y. Filed Mar. 17, 1914. Serial No. 825,211. (Cl. 211—31.)

1. A toilet paper holder comprising a casing having a movable closure, a paper reel having journals upon opposite sides thereof and means operating in connection with said journals for locking said closure.

2. A toilet paper holder comprising a case having a movable closure, a paper reel having journals upon opposite sides thereof and means in connection with the closure and adapted to engage said journals for locking said closure.

3. A toilet paper holder comprising a case having a movable closure, a paper reel mounted therein, and means in connection with the reel for locking said closure until the paper is removed from the reel.

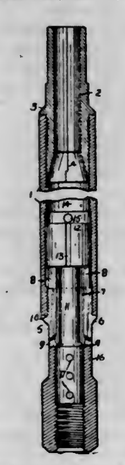
4. A toilet paper holder comprising a case having a movable closure, a paper reel having journals thereon, bearings in connection with said movable closure for receiving said journals, and jaws in said case adapted to engage said journals.



5. A toilet paper holder comprising a case having a movable closure, a paper reel having journals thereon, bearings in connection with said movable closure for receiving said journals, and movable jaws in said case adapted to engage said journals upon the outside of said bearings.

[Claims 6 to 23 not printed in the Gazette.]

1,112,513. SWIVEL ROPE-SOCKET. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed July 30, 1913. Serial No. 782,125. (Cl. 255—26.)



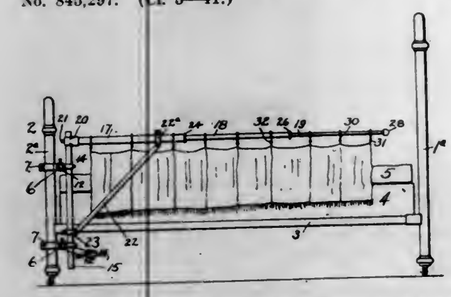
1. In a rope-socket, a barrel, a tubular rope-seat secured to one end of the barrel, a swivel-support secured to the other end of the barrel, and a swivel-stem rotatable in the said support and having a swivel-head bearing on the upper end of the said support, the said swivel-support and swivel-head having longitudinal slots, the barrel and the slots in the swivel-support having ports, whereby a fluid circulation may be maintained through the said ports and slots.

2. In a rope-socket, a barrel, a rope-seat on the upper end thereof, a swivel-support on the other end, a swivel-stem on the swivel-support and having a head bearing on the upper end of the said support, there being one of more longitudinal slots in the head, and one or more longitudinal slots in the said support, the barrel having a port through its wall above the said swivel-head, and the said swivel-support having a lateral port for each slot.

3. In a rope-socket, a barrel, a rope-seat on one end thereof, a swivel-stem supported by the other end, a socket-box into which the lower end of the swivel-stem projects, and rivets extending through the socket-box and swivel-stem to connect them together, the rivets being

sufficiently large to perform the work ordinarily required in use, but sufficiently small to be sheared off when the swivel-stem is drawn up with a force exceeding predetermined value above that ordinarily applied in use.

1,112,514. BED-COVERING-SUSTAINING MEANS. EUGEN ZIMMERMANN, Peoria, Ill. Filed Sept. 20, 1909. Serial No. 518,500. Renewed June 15, 1914. Serial No. 845,297. (Cl. 5—41.)



1. A bed covering sustaining means, comprising spaced members and means for attaching the same to a bed frame, a plurality of vertical supports and means for adjustably attaching said supports to said spaced members in spaced relation to each other, other members carried by said supports, and a bed covering sustaining means on said second mentioned members.

2. A bed covering sustaining means, comprising spaced members and means for attaching the same to a bed frame, a plurality of vertical supports and means for attaching said supports to said spaced members, said vertical supports being adjustable in both a vertical and a horizontal direction relative to said spaced members, and extensible members carried by said supports.

3. A bed covering sustaining means, comprising spaced members and means for attaching the same to a bed frame, a plurality of vertical supports and means for attaching said supports to said spaced members, said vertical supports being adjustable in both a vertical and a horizontal direction relative to said spaced members, and extensible members carried by said supports, and bed covering sustaining means adjustable on said extensible members.

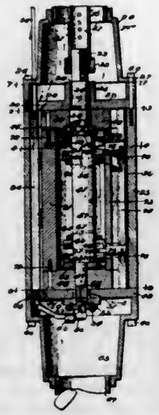
4. A bed covering sustaining means comprising rods adapted to be secured transversely to a bed frame, a plurality of vertically disposed rods and means for attaching the same to said transversely disposed rods, telescopic rods extending transversely from and supported by said vertical rods, brace bars for said telescopic rods, and means carried by said telescopic rods adapted to sustain the bed covering.

5. A bed covering sustaining means, comprising pairs of brackets, which are adapted to be secured in adjustable relation to each other to a part of a bed, transverse rods connected with said pairs of brackets, additional brackets having an adjustable relation on said rods, uprights adjustably carried in said last mentioned brackets, and means for supporting a bed covering connected with and extending from the upper ends of said uprights.

[Claims 6 and 7 not printed in the Gazette.]

1,112,515. ROTARY PUMP. ANDREW N. BAADE, Spokane, Wash. Filed Jan. 25, 1913. Serial No. 744,187. (Cl. 103—44.)

1. A rotary pump comprising a cylinder, heads forming closures for the upper and lower ends of said cylinder and provided with outlet and inlet openings respectively, an abutment within the cylinder extending between said heads and disposed between said inlet and outlet openings, a stationary eccentric shaft supported by one of said heads, a piston working between the said heads and around said eccentric shaft, blades mounted radially in the said piston, and means connected with said blades and engaging the eccentric shaft for projecting the blades as they move from the abutment and retracting the same as they move toward the abutment.



2. A rotary pump comprising a cylinder, a hollow piston mounted therein, means for rotating the piston, an abutment extending longitudinally of the cylinder at one side thereof, a projection at the opposite side of the cylinder, blades carried by the piston, and means comprising a stationary member supporting the piston and housed by and within the same for moving the blades outward as they approach the projection and moving them inwardly as they approach the abutment.

3. A rotary pump comprising a cylinder having upper and lower heads, an internal longitudinal abutment extending between the heads, a hollow piston mounted between said heads, means for rotating the piston, blades carried by the said piston, means housed within the piston to project and retract the said blades, and lubricant conveyer extending through the cylinder adjacent the abutment and communicating through the lower end of the cylinder with the interior of the piston.

4. In a rotary pump, the combination of a cylinder having upper and lower heads, a driving shaft journaled in the upper head of the cylinder and extending below the same, a hollow piston rigid with the lower end of said driving shaft and extending between the heads of the cylinder, means for rotating the said driving shaft, blades carried by the piston, a support for the piston seated in the lower head of the cylinder and extending to the upper end of the piston, and means within the piston carried by said support to project and retract the blades.

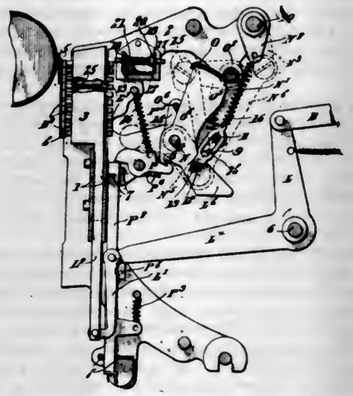
5. In a rotary pump, the combination of a cylinder having upper and lower heads, a hollow piston fitted between said heads, a driving shaft extending through the upper head and rigid with the piston, a stationary eccentric shaft supported in the lower head of the cylinder and extending within the piston to support the same, blades mounted in the piston, and supports for the said blades slidable radially in the piston and movable around the eccentric shaft whereby the blades will be projected and retracted.

[Claims 6 to 11 not printed in the Gazette.]

1,112,516. PRINTING MECHANISM. FRANK H. BICKFORD, Muncie, Ind., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1911. Serial No. 656,066. (Cl. 235—60.)

1. In a printing mechanism, the combination with a frame; a series of type-carrying members; and a series of printing hammers therefor; of a self-contained plunger mechanism interposed as an entirety between the type-carrying members and the printing hammers, and fixed to the frame.

2. In a printing mechanism, the combination with a frame; a series of type-carrying members; and a series of printing hammers therefor; of a self-contained plunger mechanism interposed as an entirety between the type-carrying members and the printing hammers; and comprising a series of plungers; and a combined guiding and supporting means in which said plungers are shiftably mounted, said guiding and supporting means being fixed to the frame.



3. In a printing mechanism, the combination with a frame; a series of type-carrying members; and a series of printing hammers therefor; of a self-contained plunger mechanism interposed as an entirety between the type-carrying members and the printing hammers; and comprising a pair of apertured guiding and supporting plates; and a series of plungers seated in the apertures, the ends of said plungers extending beyond the outer faces of the plates.

4. In a printing mechanism, the combination with a frame; a series of type-carrying members; and a series of printing hammers therefor; of a self-contained plunger mechanism interposed as an entirety between the type-carrying members and the printing hammers; and comprising a series of plungers; a combined guiding and supporting means in which said plungers are shiftably seated; and springs coiled about the plungers and bearing against the guiding means and plungers, respectively.

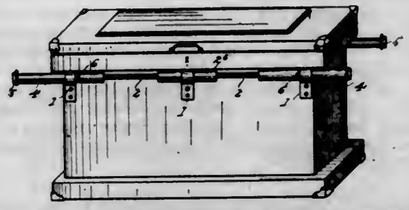
5. In a printing mechanism, the combination with a series of type carriers adjustable relatively to the printing line; several type bars mounted for back and forth movement in the respective carriers and having types thereon; a hammer for each type carrier, and means to trip the hammers, of a self-contained plunger mount interposed, as an entirety between the type bars and hammers, said mount comprising end plates secured to the frame of the mechanism, and a pair of apertured, oppositely disposed guides extending between the end plates; and spring pressed plungers, the opposite ends of which project through the apertures in the guides and lie in the paths of said hammers and opposite said types, respectively.

[Claim 6 not printed in the Gazette.]

1,112,517. TOOL-CHEST HANDLE. PHILIPPE BOISVERT, East Angus, Quebec, Canada. Filed Apr. 4, 1914. Serial No. 829,538. (Cl. 16—10.)

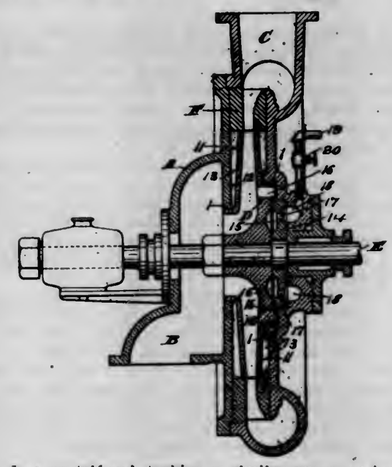
1. In combination, a plurality of brackets, a rod fixed to one of said brackets and having its opposite ends extending concentrically through the remaining brackets, sleeves slidably mounted on the free ends of said rod and movable through said brackets, stop lugs extending from said sleeves and adapted to engage said brackets, and leaf springs adapted to engage said sleeves and yieldingly retain them in inoperative position.

2. In combination; a plurality of brackets; a sleeve carried by the center bracket of each set and secured therein; a block centrally secured in the said sleeve; a rod consisting of two parts threaded into the opposite faces of the said block, and having its ends extending freely and concentrically through the bores of the remaining brackets of the set; sleeves slidable on the said rods and



movable through the said brackets; a stop lug projecting from each sleeve midway of its length and adapted to engage a bracket, as the sleeve is slid outwardly; and leaf springs integral with the first mentioned sleeve and adapted to yieldingly engage the last mentioned sleeves, so as to hold them in inoperative position.

1,112,518. CENTRIFUGAL, TURBINE, AND SIMILAR PUMP. JOHN J. BROWN, New York, N. Y., assignor to Henry R. Worthington, New York, N. Y., a Corporation of New Jersey. Filed Aug. 19, 1905. Serial No. 274,906. (Cl. 103—43.)



1. In a centrifugal, turbine or similar pump, an inclosed impeller having its outside surface exposed to delivery pressure larger on the suction side of the impeller than on the other side to secure a constant excess of pressure on the suction side of the impeller, in combination with a balancing chamber on the opposite side of the impeller, passages connecting said balancing chamber with the impeller, and means for supplying liquid to said balancing chamber under pressure greater than the pressure at the point where said passages connect with the impeller.

2. In a centrifugal, turbine or similar pump, an inclosed impeller having its outside surface exposed to delivery pressure larger on the suction side of the impeller than on the other side to secure a constant excess of pressure on the suction side of the impeller, in combination with a bearing disk on the opposite side of the impeller having a chamber between it and the impeller and an annular bearing inclosing the chamber, passages outside the bearing surface connecting with the impeller, and means for supplying liquid to said chamber under pressure to balance the excess of delivery pressure and form a liquid bearing for the impeller.

3. The combination with the inclosed impeller D having the chamber 13 on the suction side of the impeller of

greater radius than on the opposite side, bearing ring 14 on the back of the impeller inclosing balancing chamber 15, openings 16 through the impeller connecting the impeller with the space outside the bearing ring, and means for supplying liquid under pressure to said balancing chamber.

4. The combination with the inclosed impeller D having the chamber 13 on the suction side of the impeller of greater radius than on the opposite side, bearing ring 14 on the back of the impeller inclosing balancing chamber 15, openings 16 through the impeller connecting the impeller with the space outside the bearing ring, chamber 18 and means for supplying liquid under pressure to said chamber, and passages 17 through the ring 14 connecting chambers 15, 18.

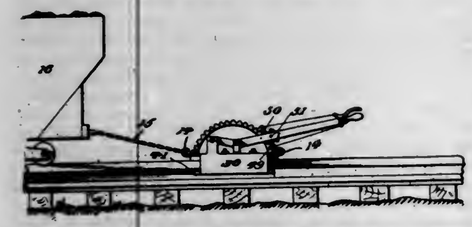
1,112,519. CAR-REPLACER. FRANK K. BRUCE, Drifton, Ala. Filed Jan. 29, 1912. Serial No. 674,074. (Cl. 104—162.)

1. A car replacer comprising pivotally connected point, intermediate and terminal sections, the point section being provided with means for engaging a track rail and the terminal section being provided with an inclined tread surface, means for preventing vertical movement of the point section, and means for preventing lateral movement of the terminal section.

2. A car replacer comprising pivotally connected point, terminal and intermediate sections, one end of the intermediate section being provided with a tongue adapted to engage a lip on the end of the terminal section, connecting plates spanning the junction of the tongue and lip connection and uniting the sections, and means carried by the point section for engagement with a track rail.

3. A car replacer consisting of a point member adapted to bear against the side of a track rail and having a lower portion adapted to extend under the tread of the rail and bear against the base thereof, an intermediate section pivoted to said point member to have relative horizontal movement, a terminal member, and connecting links secured rigidly to the sides of the intermediate member and pivoted to the sides of the terminal member whereby said terminal member may have vertical movement.

1,112,520. RETAINING MECHANISM FOR RAILROAD-CARS. ALFRED BURTOSKY, Wyano, Pa. Filed Sept. 3, 1913. Serial No. 787,902. (Cl. 105—71.)



1. In a device of the character described, a body member, a pair of coacting gripping jaws carried thereby, and means for moving the jaws into and out of engagement with the web of the rail, and separate means for locking the jaws in open or closed position, said first and second-mentioned means being both mounted on the body member.

2. In a device of the character described, a body member, a pair of coacting gripping jaws swingingly attached thereto, means mounted on the body member for moving the gripping jaws into and out of engagement with the web of the rail and for locking the jaws in open or closed position, and means for detachably connecting the body member to a railway car.

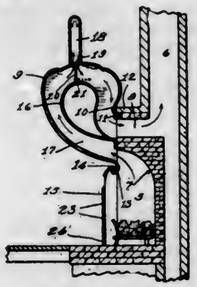
3. In a device of the character described, a body member adapted to be mounted upon the tread of a rail, a pair of coacting gripping jaws swingingly attached to the body member, said jaws being adapted for engagement with the opposite sides of the rail web for holding the body member against longitudinal movement, means for manipulating the jaws, and means for locking them in adjusted position.

4. In a device of the character described, a body member mountable on the tread of a rail, a face plate secured to the body member, a pair of coacting gripping jaws swingingly attached to the longitudinal edges of the face plate, and means mounted on the face plate and connected to the gripping jaws for moving the jaws into and out of operative position and for holding them in adjusted position.

5. In a device of the character described, a body member, a face plate secured thereto, a pair of gripping jaws swingingly attached to the longitudinal edges of the face plate, upwardly extending arms carried by the jaws, an operating lever pivotally mounted on the face plate, means for holding the lever in adjusted position, and links connecting the lever with the upwardly extending arms.

[Claims 6 to 10 not printed in the Gazette.]

1,112,521. FIREPLACE-RADIATOR. JASON R. CARMAN, Seattle, Wash. Filed Jan. 21, 1914. Serial No. 813,399. (Cl. 126—120.)



1. In a fireplace radiator of the class described, the combination with a fireplace disposed within the wall of a room of a building and associated with a smoke-flue extending to the exterior of such building, of a heat radiator comprising a curved conduit formed and disposed to project its convex front wall outwardly and upwardly from the top portion of said fireplace to adapt it to conduct products of combustion from said fireplace into the smoke-flue associated with said fireplace a screen disposed in front of said fireplace to extend downwardly from the lower front edge of said conduit to the bottom portion of said fireplace and hinged to said edge.

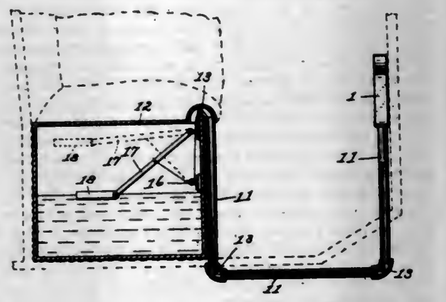
2. The combination with a fireplace and its smoke-flue, of a radiator comprising a conduit projecting outward from the top portion of the fireplace, and adapted to conduct products of combustion into said flue, and a screen in front of the fireplace, extending down from the lower front edge of said conduit to the bottom of the fireplace, the upper edge of said screen and the lower front edge of said conduit being curved to interlock and thereby secure the screen detachably.

3. In a fireplace radiator of the class described, the combination with a fireplace disposed within the wall of a room of a building, of a smoke-flue disposed to extend upwardly from a point adjacent to the upper portion of said fireplace, a heat radiator disposed to project outwardly from the said wall of a room in front of the lower portion of said smoke-flue and the upper portion of said fireplace, said heat radiator being provided with a passageway communicating with the upper portion of said fireplace and with the said smoke-flue through which passageway products of combustion may pass from said fireplace into said smoke-flue to heat said radiator, an upwardly extended and inclosed chamber disposed upon the top of said heat radiator and opening into the passageway thereof, and a damper disposed to be turned to a position at right angles with the direction of said passageway with its upper edge by-secting the opening into said chamber whereby products of combustion are diverted to pass over the top edge of said damper through the bottom portion of said chamber thence to return into the passageway to reach said smoke-flue.

4. In a fireplace of the class described, a smoke flue associated therewith, a radiator member arranged to project outwardly from the fireplace and forming communication between the smoke flue and fireplace, the lower front wall of said radiator member being curved, and a screen having a hooked upper edge supported on the curved lower edge of the radiator.

5. In a fireplace, a smoke flue associated therewith, a radiator member forming communication between the fireplace and smoke flue, and a screen having a hinge connection with the lower end of the radiator member and suspended therefrom.

1,112,522. INDICATOR FOR GASOLENE-TANKS. CARL J. L. F. CETTI, Chicago, Ill. Filed July 31, 1913. Serial No. 782,198. (Cl. 73—82.)

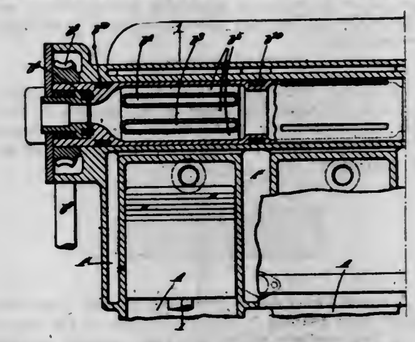


The combination of a tank; a float in said tank; an indicator comprising a scale; a pivoted finger in operative relation with said scale, said finger being extended beyond its pivotal point and provided with a T-head; a spring connected with one side of said T-head and arranged to hold said finger normally at the zero of said scale; and an operative connection between the other side of said T-head and said float, substantially as described.

1,112,523. VALVE FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER GRAHAM CLARK, Wimbledon Park, England. Filed Nov. 7, 1912. Serial No. 730,101. (Cl. 123—190.)

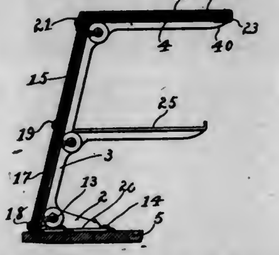
1. In an internal combustion engine, the combination with a cylindrical valve body having a plurality of intercommunicating passages extending transversely through it with their ports arranged equi-distantly and all lying in the same or approximately the same transverse plane, of a cylindrical valve casing or seat having a pair of peripheral inlet and exhaust ports adapted to coöperate with the ports in the valve body and also having a pair of peripheral ports communicating directly with one and the same end of the working cylinder, and being of such area that when one of the valve ports registers with the external inlet or exhaust port a plurality of the other valve ports will register with the ports leading to the working cylinder.

2. In an internal combustion engine the combination with a cylindrical valve body having two intercommunicating passages extending transversely through it with their four ports arranged equidistantly and all lying in the same transverse plane, of a cylindrical valve casing or seat having two pairs of peripheral ports one pair being arranged side by side and communicating respectively with the inlet and exhaust pipes or conduits and the other pair



arranged diametrically or approximately diametrically opposite each other and communicating with passages extending from one and the same end of the working cylinder and means for imparting continuous rotary motion to said valve body from the engine shaft at one eighth of the speed of the latter.

1,112,524. COUNTER-GUARD BRACKET. MARTIN S. CRANE, Hoboken, N. J. Filed Sept. 25, 1913. Serial No. 791,746. (Cl. 211—25.)



1. A counter guard bracket including in combination a fixed foot, an upright member adjustably interlocking therewith, a horizontal member adjustably interlocking with said upright member, and plate retaining means on one or more of said members.

2. A counter guard bracket including in combination a plurality of articulated adjustably interlocking members, said interlocking means comprising a disk-like portion on each member, radial grooves in one disk-like member and one or more complementary ribs on the other disk-like member and means for binding said disk-like members face to face, and plate retaining means on one or more of said interlocking members.

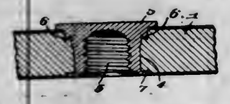
3. A counter guard bracket including in combination a foot adapted for attachment to a counter, an upright member adjustably interlocking therewith, a plurality of horizontal members adjustably interlocking with said upright member, and plate retaining means on one or more of said members.

4. A counter guard bracket including in combination a foot adapted for attachment to a counter, an upright member adjustably interlocking therewith, a horizontal member adjustably interlocking with said upright member, and a horizontal member fixed to said upright member between said foot and said adjustably interlocking horizontal member.

5. A counter guard bracket including in combination a fixed foot, an upright member adjustably interlocking

therewith and a horizontal member adjustably interlocking with said upright member, said interlocking means comprising a pair of coacting faces, one thereof on each of the interlocking members, one of said faces being provided with interlocking means and the other of said faces being provided with a plurality of interlocking means for engagement with said first mentioned interlocking means, and means for binding said members together in interlocking engagement.

1,112,525. TRIPOD-SOCKET FOR CAMERA-BEDS. HARRY R. DARLING, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed May 5, 1913. Serial No. 765,481. (Cl. 248—43.)



1. A tripod socket for cameras and the like comprising a flanged head adapted to bear on one side of the camera bed, an intermediate cylindrical body portion provided with a threaded recess to receive the tripod bolt, a plurality of spurs arranged laterally of the body portion in the region of its junction with the head and an annular collar at the other and open end of the body portion flush with the peripheral surface thereof and adapted to be spun or riveted over on the opposite side of the bed.

2. A tripod socket for cameras and the like comprising a flanged head adapted to bear on one side of the camera bed, an intermediate cylindrical body portion provided with a threaded recess to receive the tripod bolt, a conical portion at the junction of the body portion and head, a plurality of spurs struck up from the conical portion arranged laterally of the body portion and extending longitudinally thereof and means at the other end of the body portion adapted to be turned over against the other side of the bed.

3. The combination with a member to be supported, having a circular aperture therein provided with a countersunk portion, of a tripod socket comprising a flanged head bearing against one side of the member, an intermediate cylindrical body portion occupying the aperture in the member and provided with a threaded recess to receive the tripod bolt, a conical portion at the junction of the body portion and head lying within the countersunk portion of the aperture, a plurality of spurs struck up from the conical portion and embedded in the surface of the countersunk portion of the aperture and an annular collar at the other end of the body portion turned down against the other side of the member.

1,112,526. SIGHTING APPARATUS FOR ORDNANCE. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed May 6, 1912. Serial No. 695,503. (Cl. 33—49.)

1. In sighting apparatus for ordnance, the combination with the sight, the sight carrier, the sight bracket, and the deflection pivot connecting the carrier to the bracket, of a sight trunnion for the bracket arranged parallel to and independent of the gun trunnion, a member moving with the gun during pointing only, means for connecting said member to the sight bracket, a member moving with the gun in elevation, an extension of the sight carrier formed with a cam groove, means moving with the last mentioned member for engaging in said grove, and means for altering the inclination of said cam groove.

2. In sighting apparatus for ordnance, the combination with the sight, the sight carrier, the sight bracket, and the deflection pivot connecting the carrier to the bracket, of a sight trunnion for the bracket arranged parallel to and above the gun trunnion, a member moving with the gun during pointing only, means for connecting said member to the sight bracket, a member moving with the gun in elevation, an extension of the sight carrier formed with a cam groove, means moving with the last mentioned member for engaging in said groove, and means for altering the inclination of said cam groove.

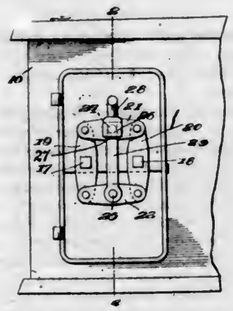
3. In sighting apparatus for ordnance, the combination with the sight, the sight carrier, the sight bracket, and the deflection pivot connecting the carrier to the sight bracket, of a pointing gear casing, a sight trunnion for the bracket arranged parallel to and independent of the gun trunnion, means for connecting the said casing to the sight trunnion, a member moving with the gun in elevation, an extension of the sight carrier formed with a cam groove, means connected to the said member for engaging in said groove, and means for altering the inclination of said cam groove.

4. In sighting apparatus for ordnance, the combination with the sight, the sight carrier, the sight bracket, and the deflection pivot connecting the carrier to the sight bracket, of a pointing gear casing, a sight trunnion for the bracket arranged parallel to and independent of the gun trunnion, means for connecting the said casing to the sight trunnion, an arm on said pointing gear casing, a link connected to said arm and to the sight trunnion, a member moving with the gun in elevation, an extension of the sight carrier formed with a cam groove, means connected to the said member for engaging in said groove, and means for altering the inclination of said cam groove.

5. In sighting apparatus for ordnance, the combination with the sight, the sight carrier, the sight bracket, and the deflection pivot connecting the carrier to the bracket, of a sight trunnion for said bracket arranged parallel to and above the gun trunnion, a pointing gear casing, an arm on said casing, a lever on the said sight trunnion, a link connecting said arm and lever, an arm on the gun trunnion, a lever loosely mounted on said sight trunnion, a link for connecting the last mentioned arm and lever, an extension of the said carrier formed with a cam groove and means for altering the inclination of the said cam groove.

[Claims 6 to 8 not printed in the Gazette.]

1,112,527. GRATE-OPERATING APPARATUS. HARVEY DIKEMAN, Danbury, Conn. Filed Apr. 13, 1914. Serial No. 831,661. (Cl. 126—169.)



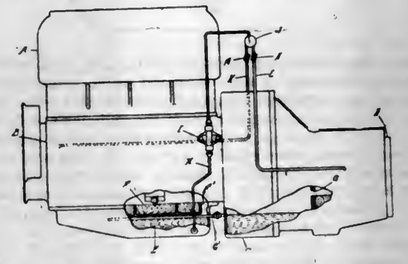
1. The combination with a grate device including a plurality of rocking units, of arms connected intermediate their ends respectively to said units, links pivotally connected to said arms at equal distances from the grate unit connections thereof, a member pivotally connected to said links, and means for imparting movement to said link connecting member.

2. The combination with a grate device including a plurality of rocking units, of arms connected intermediate their ends respectively to said units, links pivotally connected to said arms at equal distances from the grate unit connections thereof, and means for imparting reciprocating movement to said links.

3. The combination with a grate device including a plurality of rocking units, of arms connected intermediate their ends respectively to said units, links pivotally connected to said arms at equal distances from the grate unit connections, a member pivotally connected to said links and having a socket, and an operating member engaging said socket.

4. The combination with a grate device including a plurality of rocking units, of arms connected intermediate their ends respectively to said units, links pivotally connected to said arms above and below said grate connections, and means for imparting reciprocating movement to said arms and their link connections.

1,112,528. LUBRICATING SYSTEM FOR COMBINED MOTOR AND TRANSMISSION UNITS. GEORGE W. DUNHAM, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 3, 1910. Serial No. 575,252. (Cl. 184—6.)



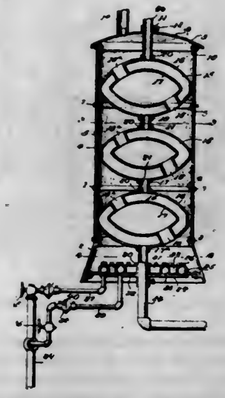
1. The combination with a crank case, a transmission gearing housing and a fly-wheel housing intermediate said crank case and transmission gearing housing, of an oil well beneath said crank case, overflow connections from said transmission gearing housing into said fly-wheel housing, and from the latter into the oil well, an overflow from the crank case to the oil well; a pump for elevating the oil from said oil-well, a conduit through which the oil is propelled having a sight-feed therein, and valve controlled branches beyond said sight-feed for distributing the lubricant to the crank case and transmission gearing housing respectively.

2. The combination with the crank case having a splash pocket, a fly-wheel housing and a transmission gearing housing, of an oil well beneath said splash pocket, means for supplying oil from said well to the splash pocket and one of said housings, an overflow from the latter housing to the other housing, and overflow connections from the last mentioned housing and the splash pocket to the oil well.

3. The combination with a crank case having a splash pocket, of a transmission gearing housing, a fly-wheel housing intermediate said crank case and transmission gearing housing, an oil well beneath the splash pocket, overflow connections from the transmission gearing housing into the fly-wheel housing and from the latter into the oil well, an overflow from the splash pocket to the oil well, and means for supplying oil from said well to the splash pocket and a transmission gearing housing.

4. The combination with a crank case and transmission gearing housing, and a fly-wheel housing intermediate the crank case and the transmission housing, of an oil well beneath the crank case, overflow connections from the transmission gearing housing in the fly-wheel housing and from the latter into the oil well, an overflow from the crank case to the oil well, a pump for elevating the oil from said well, and conduits leading from the pump to the transmission housing and the crank case.

1,112,529. WATER-HEATER. ERNEST W. EVANS, Robinson, Ill. Filed June 14, 1913. Serial No. 773,630 (Cl. 122—216.)



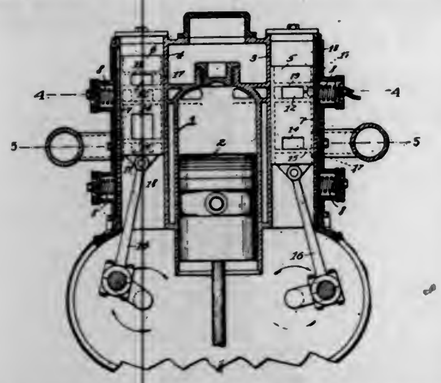
1. A water heater including in its organization an exterior casing or drum, a plurality of superposed water containing chambers, connected to each other and to a source of supply, said chambers being convexo-convex in form and having outer and inner walls spaced apart, the inner wall inclosing a heating space and the chamber being provided upon its upper side with a passage extending into the heating space from the exterior of the chamber and on its lower side with a like passage, the passages being diagonally disposed with relation to each other but being otherwise imperforate, the openings being spaced from the center of the chamber and being disposed immediately adjacent the margin of the chamber.

2. A water heater including in its organization an exterior casing or drum, a plurality of superposed water containing chambers connected to each other and to a source of supply, said chambers being convexo-convex in form and having outer and inner walls spaced apart, the inner wall inclosing a heating space, the chamber being provided upon its upper side with a passage extending into the heating space from the exterior of the chamber and on its lower side with a like passage, the passages being diagonally disposed with relation to each other, but the chamber being otherwise imperforate, each of the said chambers being flattened at one point of its periphery, the remainder of the periphery of each heating chamber fitting snugly the said drum, the flattened portion of one chamber being disposed diametrically opposite to the flattened portion of the next adjacent chamber, to thereby retard the passage of heat between the chambers and provide for a circulation of heat from one side of the drum to the other side of the drum and the space between each two chambers, the first-named passage extending through the wall of each heating chamber and being disposed adjacent the flattened portion of the chamber.

1,112,530. INTERNAL-COMBUSTION ENGINE. THOMAS J. FAY, Brooklyn, N. Y., assignor to The Goby Engine Company, a Corporation of Ohio. Filed Feb. 25, 1914. Serial No. 820,802. (Cl. 123—86.)

1. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge shaped guideway having surfaces converging toward the cylinder and being open at the side remote from the cylinder, a hollow tapered or wedge shaped valve slidably mounted in said guideway and provided with a chamber having a port

arranged to communicate with the cylinder port, a cover for the outer or enlarged end of the guideway, said cover being spaced from the adjacent surface of the valve, and yieldable means interposed between the cover and the valve and operating to press the valve within its seat in the guideway.



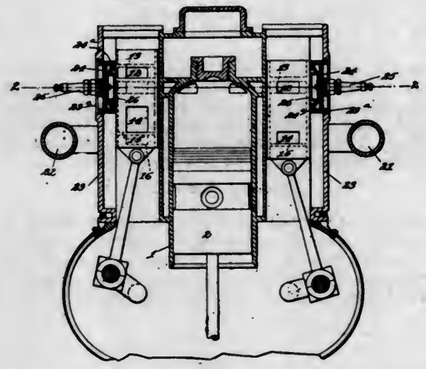
2. In an internal combustion engine, the combination of a cylinder having a pair of laterally spaced ports, a tapered or wedge shaped guideway extending longitudinally of the cylinder and interposed between said ports, said guideway being open at the side remote from the cylinder and having a port in each of its convergent walls adapted to communicate with the correspondingly located cylinder port, a hollow tapered or wedge shaped valve slidably mounted in the guideway and provided with ports arranged to register with the guideway ports, a cover for the open end of the guideway, said cover being spaced from the valve, and springs interposed between said cover and said valve.

3. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge shaped guideway having surfaces converging toward the cylinder and being open at the side remote from the cylinder and having a port in each side wall thereof, a hollow tapered or wedge shaped valve slidably mounted in said guideway and having ports arranged to communicate with the guideway ports, and a cover for the outer or enlarged end of the guideway and spaced from the outer wall of the valve, there being means between the cover and the valve whereby the pressure exerted upon the converging side walls of the valve through the guideway ports may be coöperatively opposed.

4. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge shaped guideway having surfaces converging toward the cylinder and forming with each other an acute angle, a hollow tapered or wedge shaped valve slidably mounted in said guideway and adapted to communicate with the cylinder port, a cover for the outer or enlarged end of the guideway, said cover being spaced from the adjacent surface of the valve, the space between the convergent faces of the guideway being arranged to communicate with the cylinder, and there being means interposed between the cover and the valve whereby the pressure thus exerted to unseat the valve may be coöperatively opopsed.

1,112,531. INTERNAL-COMBUSTION ENGINE. THOMAS J. FAY, Brooklyn, N. Y., assignor to The Goby Engine Company, a Corporation of Ohio. Original application filed Feb. 25, 1914, Serial No. 820,802. Divided and this application filed June 3, 1914. Serial No. 842,765. (Cl. 123—86.)

1. In an internal combustion engine, the combination of a cylinder having opposed pairs of laterally spaced ports, a tapered or wedge-shaped guideway interposed between the ports of each pair and having surfaces converging toward the cylinder and being open at the side remote from the cylinder and having a port in each side wall thereof, there being passageways connecting the guideway and cylinder ports, and a hollow tapered or wedge-shaped valve slidably mounted in each guideway and having ports arranged to communicate with the guideway ports, there being a chamber provided outside of the outer or enlarged end of the guideway, said chamber being in communication with said passageways whereby the pressure exerted upon the converging side walls of each valve through the guideway ports may be coöperatively opposed.



2. In an internal combustion engine, the combination of a cylinder having a pair of spaced ports, a tapered or wedge-shaped guideway interposed between said ports and having surfaces converging toward the cylinder and forming with each other an acute angle, and a hollow tapered or wedge-shaped valve slidably mounted in said guideway and adapted to communicate with the cylinder ports, there being a chamber provided for the outer or enlarged end of the guideway, said chamber being in communication with the cylinder ports and the space between the convergent faces of the guideways being arranged to communicate with the cylinder ports, whereby the pressure exerted in the guideways tending to unseat the valve may be coöperatively opposed.

3. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge-shaped guideway having surfaces converging toward the cylinder and forming with each other an acute angle, and a hollow tapered or wedge-shaped valve slidably mounted in said guideway and adapted to communicate with the cylinder port, the space between the convergent faces of the guideway being arranged to communicate with such port and there being a chamber provided outside of the guideway which is also in communication with said port, whereby the pressure which may be exerted within the guideway to unseat the valve may be coöperatively opposed.

4. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge-shaped guideway having surfaces converging toward the cylinder and forming with each other an acute angle, said guideway having a port adapted to communicate with the cylinder, and a hollow tapered or wedge-shaped valve slidably mounted in said guideway and having a fluid-containing chamber provided with a port whereby said valve is adapted to communicate with the cylinder through said guideway port, and means whereby pressure fluid may be applied to the outer surface of the valve to oppose the fluid pressure which may be exerted between the valve and its guideway tending to unseat the valve.

5. In an internal combustion engine, the combination of a cylinder having a port, a tapered or wedge-shaped guideway having surfaces converging toward the cylinder and forming with each other an acute angle, a hollow tapered or wedge-shaped valve slidably mounted in said guideway and adapted to control the flow of fluid between the guideway and the cylinder, and a by-pass connection

subjecting the surface of the valve remote from the cylinder to the pressure therein and coöperatively opposing the unseating pressure exerted upon the valve by such cylinder pressure.

[Claims 6 to 19 not printed in the Gazette.]

1,112,532. COMBINED MOP AND WRINGER. PAUL FUHRER, Denver, Colo. Filed Mar. 11, 1913. Serial No. 753,562. (Cl. 15—43.)

1. In a mop, a handle, a mop cloth clamping head carried by the handle, a supporting member slidably mounted upon the handle, a crank mounted for rotation and rocking movement upon the supporting member, means for holding the crank against rotation, and means carried by the crank for the attachment of a mop cloth.

2. In a mop, a handle, a mop cloth clamping head carried by the handle, a support slidably mounted upon the handle, a bearing carried by the support and having a bearing opening flared in the direction of its ends, a pivot member mounted in the said opening for rotation and for rocking movement, means upon the support for holding the pivot member against rotation, and means carried by the said pivot member for the attachment of a mop cloth.

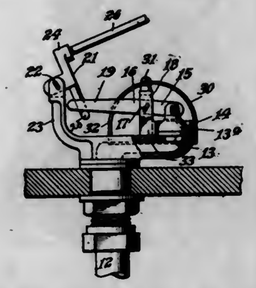
3. In a mop, a handle, a mop cloth clamping head, carried by the handle, a supporting member slidably mounted upon the handle and including spaced portions, a bearing carried by the said spaced portions, a crank having a pivot mounted for rotation and for rocking movement in the bearing, the crank when rocked being adapted to engage between the spaced portions of the supporting member and thereby be held against rotative movement, and means carried by the pivot for the attachment of a mop cloth.

4. In a mop, a handle, a mop cloth clamping head carried by the handle, a rod carried by the handle and co extensive therewith, a supporting member formed from a single length of wire bent to form an eye slidably fitting the said rod and to form spaced portions having bends substantially in contact, a bearing supported by the spaced portions adjacent to the said bends, a crank having a pivot mounted for rotation and rocking movement in the bearing, the crank when rocked being engageable between the said bends in the spaced portions, whereby to be held against rotative movement, and means carried by the pivot for the attachment of a mop cloth.

5. In a mop, a handle, a mop cloth clamping head carried by the handle, a rod carried by the handle and coextensive therewith, a supporting member having an eye slidably fitting the rod and having spaced portions extending beside the handle, a member carried by the handle and having portions projecting in opposite directions therebeyond and arranged to engage against the spaced portion of the said member when the member is in one position of its sliding movement, thereby to hold the supporting member against turning upon the rod and upon the handle, a bearing carried by the supporting member, a crank handle having a pivot rotatably mounted in the said bearing, and mop cloth attaching means carried by the pivot.

[Claim 6 not printed in the Gazette.]

1,112,533. COMPOUND-LEVER BALL-COCK FOR WATER-CLOSETS. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed Jan. 26, 1911. Serial No. 604,796. (Cl. 137—104.)



1. In a device of the character described, the combination of a tank having a water supply port opening thereinto, a flange surrounding the said port, said flange having an opening therein, a valve for closing and opening said port, a pivoted lever for supporting said valve, means upon which the said lever is pivoted, an inverted cup-like device located over the said port and supported upon the said lever supporting means, the said cup having an opening therein in alinement with the opening in the said flange and through which the valve supporting lever extends, and means for causing movement of the said lever to operate said valve.

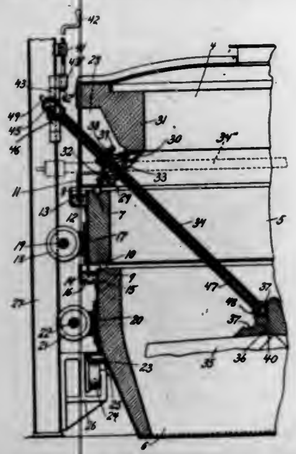
2. In a device of the character described, the combination of a tank having a water supply port opening thereinto, a horizontal lever pivoted intermediate its ends and having a valve secured to one end for opening and closing the said port, a lever pivoted intermediate its ends and disposed in a generally vertical position, one end of the said lever being in contact with the end of the said horizontal lever upon the opposite side of the pivot from the said valve, a float secured to an arm having connection with the opposite end of the said vertically disposed lever, said float rising and falling in the said tank to cause pivotal movement of the said vertically disposed lever and thereby causing pivotal movement of the said horizontal lever to control the said valve.

1,112,534. GAS-PRODUCER APPARATUS. JAMES A. HERRICK, Newark, N. J. Filed Dec. 30, 1912. Serial No. 739,290. (Cl. 48—85.2.)

1. In a gas producer, in combination, a movable mounting carried by said producer, a poker coöperating with said mounting, and adjusting means removed from the interior of said producer whereby said poker may be adjusted to and maintained in a predetermined set at an oblique angle to the horizontal; a second mounting located within the producer and adapted to coöperate with an end-portion of said poker in a predetermined set, and adjusting means removed from the interior of said producer whereby said poker may be adjusted to and maintained in such a predetermined set.

2. In a gas producer, in combination, a movable mounting carried by said producer, a poker coöperating with said mounting, and adjusting means removed from the interior of said producer whereby said poker may be adjusted to and maintained in a predetermined set at an oblique angle to the horizontal; a second mounting located within the producer and adapted to coöperate with an end-portion of said poker in a predetermined set, and adjusting means removed from the interior of said producer

whereby said poker may be adjusted to and maintained in such a predetermined set, said adjusting means including a controller device connected to said poker at a point outside of said first-mentioned mounting.

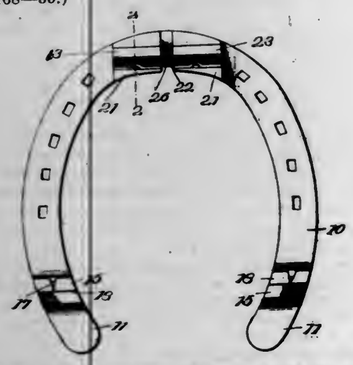


3. In a gas producer, in combination, a movable mounting carried by said producer, a poker coöperating with said mounting, and adjusting means removed from the interior of said producer whereby said poker may be adjusted to and maintained in any of a plurality of predetermined sets each at an oblique angle to the horizontal; a second mounting located within the producer and adapted to coöperate with an end-portion of said poker in a predetermined set, and adjusting means removed from the interior of said producer whereby said poker may be adjusted to and maintained in any of such plurality of such predetermined sets.

4. In a gas producer, in combination, a poker mounted so as to be universally movable with respect to the wall of the producer in which it is mounted, and adjustable as to the extent of its projection into the producer, and a support within the producer for the poker in any one of a plurality of such adjustments.

5. In a gas producer, a poker mounted in a wall of the producer, and a support for the end of the poker within the producer.

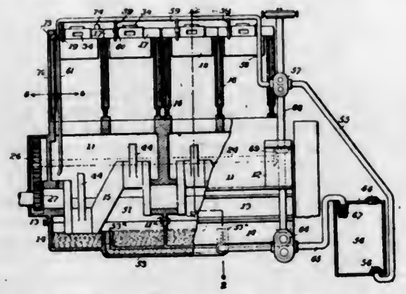
1,112,535. HORSESHOE. GEORGE E. HOWE, East Smethport, Pa., assignor of one-half to James N. Hackett, East Smethport, Pa. Filed May 6, 1913. Serial No. 765,855. (Cl. 168—35.)



1. A horse shoe of uniform thickness at its toe portion and provided with pairs of spaced transversely extending lips formed on the side edges of the shoe, one pair of lips being spaced from the other and arranged on each side of the longitudinal medial line of the toe portion of the shoe, the lips formed upon the inner edge of the shoe conforming throughout their entire length to the contour of the shoe and each pair of said lips terminating short of the outer edge of the shoe, the shoe being slotted upon its inner face intermediate said pairs of lips, and calks supported upon the shoe one between each pair of lips, the ends of each calk terminating flush with the ends of the lips engaging said calk.

2. A horse shoe of uniform thickness at its toe portion and provided with pairs of spaced upstanding lips formed on the side edges of the shoe, one pair of lips being spaced from the other and arranged on each side of the longitudinal medial line of the toe portion of the shoe, the shoe being slotted upon its inner face intermediate said pairs of lips, and calks supported upon the shoe one between each pair of lips, each of said calks being provided with a V-shaped slot, a portion of the metal constituting one of the lips of each pair being pressed into the slot of the adjacent calk.

1,112,536. HYDROCARBON-MOTOR. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 2, 1909. Serial No. 505,735. (Cl. 121—115.)



1. In a multi-cylinder engine, the combination with the crank case and with the cylinders having valves operated in the heads thereof, of means for supplying lubrication to said crank case and to the heads for lubricating the valves comprising a supply tank, a conduit leading from said supply tank to said crank case and having branches leading to said heads, a conduit for returning the oil from the crank case to the tank, and means for circulating the oil through the conduits.

2. In a hydrocarbon motor, the combination with the crank case and the cylinder having an annular valve chamber, of a sleeve valve in said chamber, and means for supplying lubricant from the crank case to said valve chamber.

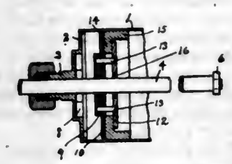
3. In a hydrocarbon motor, the combination with the crank case and the cylinder having an annular valve chamber concentric with the bore of the cylinder, of a sleeve valve in said chamber, and a conduit for supplying lubricant from the crank case to said chamber.

4. In a hydrocarbon motor, the combination with the crank case and cylinder mounted thereon, the cylinder being provided with an annular valve chamber in the head thereof, of an annular sleeve valve adapted to operate in said chamber, an oil conduit leading from the crank case to said annular chamber and means whereby the surplus oil is returned from said chamber to the crank case.

5. In a multicylinder hydrocarbon engine, the combination, with the crank shaft and the cylinders having sleeve valves operating in the heads thereof, of an oil supply, circulating means for feeding oil to the crank shaft bearings and the sleeve valves, from said supply, and means for returning oil from the sleeve valves to the supply.

[Claims 6 to 18 not printed in the Gazette.]

1,112,537. FIRE-EXTINGUISHER. CHARLES M. JACOBSEN, Detroit, Mich. Filed Feb. 17, 1913. Serial No. 748,778. (Cl. 169—17.)



1. The combination of a container having a head at one end and a nozzle at the other end, and a piston and piston rod for forcing material in the container out through the nozzle, said piston having a central opening through which the piston rod is slidable, which opening consists of a round rear portion, an oblong front portion, and an enlarged intermediate portion between the other two, and an oblong cross bar on the piston rod adapted to pass through the oblong front portion into the enlarged intermediate portion and to be turned therein across the oblong portion to lock the piston to the piston rod.

2. The combination of a container having a head at one end, said head having an opening therein, the container having a second opening, means for forcing material in the container out through the second opening, said means comprising two members, one a piston and the other a piston rod that passes through the opening in the head, an oblong protuberance on one of the members, the other member having an oblong opening therein, the oblong protuberance being adapted to pass through the oblong opening to lock the members together when they are turned relative to each other about the axis of the piston rod, and means to hold one of the members from turning about the axis of the piston rod when the other member is being turned about this axis.

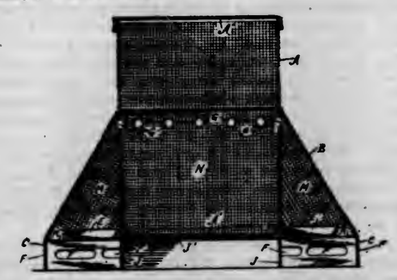
3. The combination of a cylindrical container having a head at one end and a nozzle and valve at the other end, a piston slidable in said container and comprising two plates, means to separate the plates, one of the plates having an oblong opening and the other having a circular opening, a piston rod slidable through said head and piston and having an oblong cross-bar at its inner end adapted to pass through the oblong opening in the piston plate and be turned by the rod between the piston plates across said opening to lock the piston and piston rod together, and means to prevent the piston from turning in the container.

4. The combination of a cylindrical container having a head at one end and a nozzle and valve at the other end; a piston slidable in said container and comprising two plates and a cup-shaped resilient washer between them, one of said plates having an oblong opening and the other having a circular opening, and a piston rod slidable through said head and piston and having an oblong protuberance at its inner end adapted to pass through the oblong opening in the piston plate and be turned by the rod between the piston plates across said opening to lock the piston and piston rod together, said head having an interior polygonal depression and said piston a polygonal boss to fit said depression to prevent the piston from turning in the container.

1,112,538. FLY-TRAP. ALBERT G. KLETT, Milwaukee, Wis. Filed Feb. 1, 1913. Serial No. 745,530. (Cl. 43—22.)

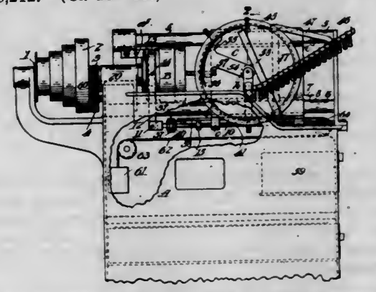
1. The combination of a base provided with supporting flanges, a table supported from the base, a chamber mounted upon said table and composed of reticulate walls, a truncated tapered member supported from the base with its upper margin embracing said chamber, said chamber being provided with apertures communicating with its interior from the space between the chamber and said truncated tapered member, and means for admitting flies to the last mentioned space from the exterior, substantially as described.

2. The combination with a truncated tapered member, composed of wire netting, a chamber also composed of wire netting and adapted to enter the upper end of said truncated member, said chamber being provided with apertures communicating with its interior from the exterior space inclosed by said truncated member, a base provided with apertures for the admission of flies to said last mentioned space, and means for supporting bait pans in a position to attract flies from the exterior through said openings, substantially as described.



3. The combination with a truncated tapered member, composed of wire netting, a chamber also composed of wire netting and adapted to enter the upper end of said truncated member, said chamber being provided with apertures communicating with its interior from the exterior space inclosed by said truncated member, a base provided with apertures for the admission of flies to said last mentioned space, and means for supporting bait pans in a position to attract flies from the exterior through said openings, said chamber being closed at the bottom and being provided with a removable cap, substantially as described.

1,112,539. BOLT-THREADING MACHINE. ABRAHAM B. LANDIS, Enfield, Pa. Filed Mar. 31, 1911. Serial No. 618,212. (Cl. 10—89.)



1. An automatic bolt threading machine comprising a bed, a cutter-head, a reciprocating work carriage, means for feeding the work, a screw-shaft for operating said reciprocating carriage, a pivoted part carrying a nut-portion adapted to be normally held into engagement with said screw-shaft, a trip bar for throwing said nut section out of engagement with said screw-shaft, a sliding rod connected with the mechanism for opening and closing the die, a connection between said sliding rod and said trip bar, whereby said trip bar is operated as the die is opened to release said nut part from said screw-shaft, and means for sliding said work carriage away from the cutter-head as soon as said die is opened and the nut part released, substantially as set forth.

2. An automatic bolt threading machine comprising a bed, a cutter-head embodying a die, means for operating the same, a work carriage, means for feeding the work, a gear for feeding said work carriage to the cutter-head, means for opening the die and releasing said gear when the cutting operation is completed, a transverse shaft, a tur-ret mounted thereon, a clutch connection between the car-

riage feeding gear and the shaft of the turret wheel, means for engaging said clutch to move said turret wheel forward one step at the limit of the rearward motion of the carriage, means for unlocking said turret just prior to the engagement of said clutch, and means for operating the die closing mechanism at the limit of the rearward movement of said work carriage, substantially as set forth.

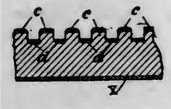
3. An automatic bolt cutting machine comprising a bed, a cutter-head, means for operating the same, a reciprocating work-carriage, a carriage operating screw-shaft, a pivoted nut part carried by said work-carriage for engaging with said screw-shaft for operating it in a forward direction, means for disengaging said nut part at the completion of the work, means for sliding said work carriage rearwardly on its track while said nut part is disengaged, a connection with the die opening and closing mechanism arranged to be operated by said work-carriage, a contact between said work-carriage and said connection at the limit of the rearward motion of said carriage for operating the same and also reëngaging the nut part with the screw-shaft, and means for feeding the work, substantially as set forth.

4. An automatic bolt cutting machine comprising a bed, a cutter-head, mechanism for opening and closing said cutter-head, a rod connected with said mechanism for operating the same, a reciprocating work carriage mounted on tracks on said bed, connections between said carriage and said rod for sliding the same to operate the opening and closing mechanism, a gear for operating said carriage in a forward direction, means operated by said rod for disengaging said gear at the opening of the die, means for returning said carriage to contact with an adjustable yoke mounted on its track, said yoke, means for adjusting said yoke to regulate the length of movement of said carriage, means carried by said yoke for engaging the carriage with said rod, a turret on said carriage for receiving and presenting the work to the die, a gear connection between said carriage operating gear and the shaft of said turret, and means for throwing said gear into engagement at the limit of the rearward movement of said carriage, substantially as set forth.

5. An automatic bolt threading machine comprising a bed, a cutter-head, a reciprocating work-carriage, an adjustable yoke mounted on the tracks of said carriage, a connection for opening and closing the head, and adjustable strikes between said connection and said work-carriage whereby said connection is operated, one of which is carried by said adjustable yoke, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,112,540. PHOTOGRAPHIC SCREEN AND PROCESS OF MAKING THE SAME. ALFRED LEHNER, Kelsterbach, Germany, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 15, 1909. Serial No. 478,036. (Cl. 95—81.5.)



1. In the art of preparing multicolor screens for color photography, the process which consists in coating the relief portions of a relief hatched screen-sheet with a color resist, then applying color to the intaglio-portions of the sheet and then removing the resist.

2. The process of preparing screen sheets having relief portions thereon for color photography, which consists in coating the relief portions of said sheet with a color resist, then applying color to the surface thereof and then removing the resist.

3. The process of preparing multicolor screens for color photography, which consists in coating the relief portions of a relief hatched screen sheet with a color resist, then applying color to the surface of the screen sheet, removing the resist and coloring the relief portions.

4. The process of preparing multicolor screens for color photography, which consists in hatching a screen sheet in relief, coating the relief portions with a color resist, then applying color to the surface of the screen sheet, then removing the resist and coloring the relief portions.

5. The process of preparing multicolor screens for color photography which consists in coating the relief portions and the back of a screen sheet with a color resist, then immersing the screen sheet in a color bath, then removing the resist and coating the relief portions with a color different from that in the color bath.

[Claims 6 to 11 not printed in the Gazette.]

1,112,541. MANUFACTURE OF POLYCHROMIC SURFACES. ALFRED LEHNER, Kelsterbach, Germany, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 15, 1909. Serial No. 478,037. (Cl. 95—2.)

1. A process for making multicolored surfaces consisting in dyeing portions of the surface and drying, then allowing a dye in substantially the same menstruum as that of the first to act so briefly on the uncolored surfaces as to color them only and not to affect those areas previously dyed.

2. A process of forming multicolored objects which consists in coloring a portion of an object with one color, then immersing the object into a bath of another color comprising substantially the same menstruum as employed for applying the first color for a period of time only sufficient to color the remainder of the surface without affecting the color first applied.

3. The process of forming multicolored objects, which consists in coloring a portion of the surface of an object with one color and after drying immersing the entire object into a bath of another color comprising substantially the same menstruum as employed for applying the first color for a time just sufficient to color the remainder of the surface without affecting the color previously applied.

4. The process which consists in applying a color bath to the entire surface of a dry body, already colored with a color mixture of another color employing substantially the same menstruum as the said color bath on a portion of its surface for a time only sufficient to color the remainder of the surface and without affecting the color first applied.

5. The process of coloring sheets, which consists in marking a design on the surface of such sheets with a resist, immersing the sheet in a color bath, then removing and drying the sheet, then removing the resist and again immersing the sheet into a bath of another color for a time only sufficient to color the newly exposed portions of the surface.

[Claims 6 to 9 not printed in the Gazette.]

1,112,542. ADJUSTABLE AND VARIABLE CENTERING FOR CONCRETE ARCHES, &c. HARRY A. LOSER, Baltimore, Md. Filed Feb. 18, 1913. Serial No. 749,126. (Cl. 25—131.5.)

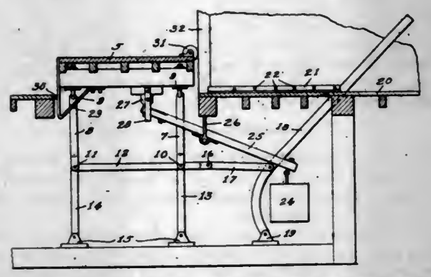
1. An intermediate section for an adjustable or variable centering to form concrete arches comprising a triangular truss having a base member, and side members having one of their ends connected to opposite ends of the base and their other ends connected to each other to form the apex of the truss, means at the ends of the base member for pivotally connecting the same to an adjoining intermediate section, a pin rigidly supported in said section at the apex of the truss, and two separate and independent rods pivotally connected at one of their ends to said pin and free at the other end, and means adjustably connecting the free ends of each two adjacent rods.

2. An intermediate section for an adjustable or variable centering to form concrete arches comprising a triangular truss having a base member having pin openings at its ends, and side members having one of their ends connected to the opposite ends of the base and their other ends connected to each other to form the apex of the truss, removable pins inserted in the openings at the ends of the base member for pivotally connecting one section to an adjoining section, a pin rigidly supported in said section at the apex of the truss, two separate and independent rods pivotally connected at one end to said pin in said apex of the truss and threaded at the other end, and means adjustably connecting the threaded ends of each two adjacent rods.

3. An adjustable center section for an adjustable or variable centering to form concrete arches comprising a central strut member, an adjustable side piece adapted to be connected to each of the ends of the strut member, and means for rigidly locking said strut member and side pieces together after having been properly adjusted with respect to each other, and means at the bottom of each of said side pieces for adjustably connecting a truss of the centering to each of said side pieces.

4. An adjustable center section for an adjustable and variable centering to form concrete arches comprising a central strut member, an adjustable side piece adapted to slide over each of the ends of the strut member, and fastening bolts passing through the strut member and side pieces for rigidly locking said strut member and side pieces together after having been properly adjusted with respect to each other, means at the top of each of said side pieces for pivotally connecting a truss of the centering to each of said side pieces, and means at the bottom of each of said pieces for adjustably connecting a truss of the centering to each of said side pieces.

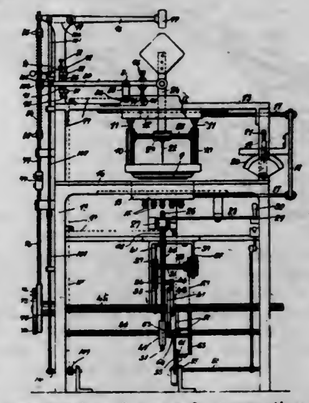
1,112,543. VEHICLE-LOADING ACCOMMODATOR FOR WAREHOUSES. JAMES LOVE, Seattle, Wash., assignor of one-half to John A. Deacon, Seattle, Wash. Filed Dec. 24, 1913. Serial No. 808,548. (Cl. 214—1.)



1. In a structure of the class described, the combination with a platform, of a lever arm, toggle links articulated with said platform and with said lever arm whereby said toggle links may be deflected to move said platform vertically, a counter-weight whereby an upward pressure may be exerted on said platform, and a guide bracket adapted to extend downwardly from a side of said platform to prevent sidewise movement thereof.

2. A loading and unloading device comprising a platform hinged at its inner end, means for raising the outer end of said platform consisting of a plurality of pairs of toggle-links the lower member of each pair of links being pivotally secured at its lower end, a horizontal bar connected with the pivotal connection of each pair of links, a link connected to said horizontal bar, a lever arm connected to the link of said bar, a second lever fulcrumed below the platform and a counterweight carried by said second lever, said platform being provided with means for preventing sidewise movements of said platform as it is raised or lowered.

1,112,544. MACHINE FOR RECTIFYING ELECTROTYPES. WALKER W. MCCARROLL, Arlington, N. J. Filed July 25, 1911. Serial No. 640,500. (Cl. 29—21.)



1. The combination of means for supporting an electrotype, a movable member having a glass block adapted to be operated to straighten the electrotype, a hammer and mechanism for operating the latter and the said member to cause the latter to press against the electrotype and to cause the hammer to strike a blow on the said member after the said glass block has been pressed against the electrotype.

2. The combination of means for supporting an electrotype, a glass block suspended above the same, means for operating the said glass block to exert a pressure on the electrotype, a hammer and means for operating the hammer to deliver a blow on the said glass block after the latter has been pressed against the electrotype.

3. The combination of means for supporting an electrotype, means adapted to be operated to straighten the electrotype and comprising a glass block for exerting a pressure on the electrotype and a hammer for delivering a blow on the said glass block and mechanism for operating the aforesaid means whereby the glass block is caused to move toward the electrotype in advance of the operation of the said hammer.

4. The combination of means for supporting an electrotype, a glass block suspended above the said supporting means, mechanism for reciprocating the said glass block, a pivoted adjusting block and means for setting the same into two different positions to regulate the operations of the said glass block.

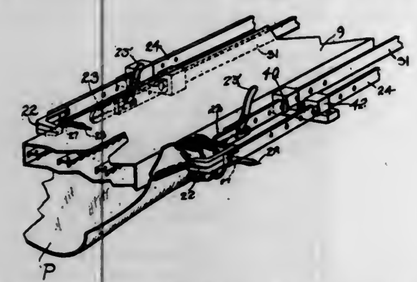
5. The combination of a glass block, supporting means therefor, a hammer adapted to strike the said supporting means, mechanism for operating the said glass block and the said hammer, vertically reciprocating rods, springs carried by the said rods and adapted to engage on the top and on the bottom of the said operating means for the hammer and the glass block and means for adjusting the tension of the said springs.

[Claims 6 to 29 not printed in the Gazette.]

1,112,545. PAD-STUFFING MACHINE. ARTHUR E. MCCLAIN, Cincinnati, Ohio, assignor to The American Pad & Textile Company, Greenfield, Ohio, a Corporation of Ohio. Filed Feb. 24, 1912. Serial No. 679,670. (Cl. 69—4.)

1. In an apparatus of the character described, a conveyer, means for moving padding material through said

conveyer, means arranged to engage a cover to be stuffed when said cover is in position on said conveyer and arranged to yieldingly restrain its motion along said conveyer during the stuffing operation, means arranged to disengage said engaging means from said cover after said cover has been partially stuffed, and additional means arranged to engage said cover and arranged to yieldingly restrain its motion relatively to said conveyer after the first mentioned means has been disengaged from said cover.



2. In an apparatus of the character described a conveyer for delivering pad stuffing material, clamps for engaging a pad cover to be stuffed, for holding it in position over the conveyer, means connected to the clamps for yieldingly restraining the motion of the cover along the conveyer, means engaged by the clamps during their forward motion along the conveyer, for disengaging the clamps from the cover, and additional clamps for engaging the cover, for holding it in place relatively to the conveyer, and means connected to the additional clamps for yieldingly restraining motion of the cover relatively to the conveyer, after the disengagement of the first mentioned clamps.

3. In an apparatus of the character described, a conveyer, for delivering stuffing material, means for engaging a pad cover to be stuffed and for holding it in position relatively to the conveyer and for yieldingly restraining its motion along the conveyer, additional means for engaging the cover and restraining its motion along the conveyer and automatic means for disengaging the first mentioned means and leaving said additional means operative in restraining the motion of the cover.

4. In an apparatus of the character described, a conveyer for delivering stuffing material, clamps for engaging and holding a cover to be stuffed in position relatively to the conveyer, means for yieldingly restraining relative motion between the clamps and the conveyer during the stuffing operation, a second set of clamps for engaging the cover, means for yieldingly restraining relative motion between the second set of clamps and the conveyer during the stuffing operation, and means for disengaging the first mentioned clamps from the cover after a pre-determined portion of the cover has been stuffed.

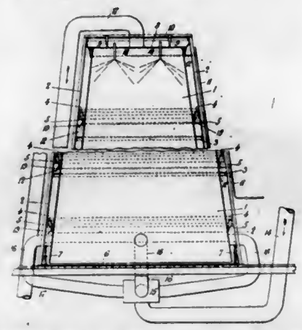
5. A machine for stuffing pads, comprising a conveyer for stuffing material, means for forcing the material through the conveyer and into a pad cover to be stuffed, means for holding the cover to be stuffed in position relatively to the conveyer during the stuffing operation, means adapted to render said holding means inoperative after a pre-determined portion of the cover has been stuffed, and additional means for holding the cover in place, after the first mentioned means has been rendered inoperative.

[Claims 6 to 16 not printed in the Gazette.]

1,112,546. CHAMBER USED IN THE MANUFACTURE OF SULFURIC ACID. WILLIE GEORGE MILLS and CHARLES TURNER PACKARD, Ipswich, England, assignors to Edward Packard and Company, Limited, Ipswich, England. Filed Mar. 21, 1914. Serial No. 826,148. (Cl. 23—1.)

1. In apparatus for the manufacture of sulfuric acid the combination of a chamber of the shape of a frustum of a pyramid and means for causing water to flow down the outer surface of the wall of the chamber.

2. In apparatus for the manufacture of sulfuric acid the combination of a chamber of the shape of a frustum of a pyramid, a framework, a trough connecting the chamber to the framework and means for causing water to flow down the outer surface of the wall of the chamber both above and beneath the trough.



3. In apparatus for the manufacture of sulfuric acid the combination of a chamber of the shape of a frustum of a pyramid, a framework, a water supply pipe surrounding the top of the outer surface of the wall of the chamber, a trough surrounding the wall of the chamber and connected to both the wall and the framework and a water supply pipe surrounding the outer surface of the wall of the chamber just beneath the trough.

1,112,547. COMPOSITION OF MATTER TO BE USED AS AN OXYGENIZER IN CONNECTION WITH COMBUSTIBLES. ADOLPHE MORIN, LOUIS HAMON, and ERNEST HESS, Montreal, Quebec, Canada. Filed Nov. 22, 1913. Serial No. 802,528. (Cl. 44—4.)

1. As a means of aiding the complete combustion of fuel and residues, an enriching composition consisting of chlorate of sodium, permanganate of sodium and water the latter in quantity by weight approximately equaling the combined quantities by weight of said salts.

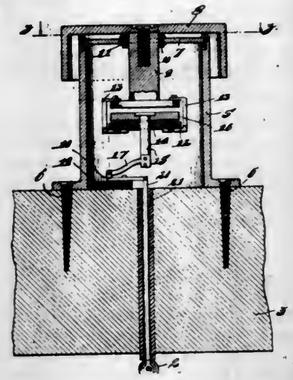
2. As a means for aiding the complete combustion of fuel and residues, an enriching composition formed of approximately, by weight, 52.6 per cent. of water, 21.0 per cent. of chlorate of sodium and 26.4 per cent. of permanganate of sodium.

3. A composition to be used for aiding the combustion of fuel and residues composed of chlorate of sodium, permanganate of sodium and water, the quantity by weight of one of such salts being in excess of the quantity by weight of the other of such salts and the quantity by weight of water being approximately equal to the combined quantity by weight of the two salts.

1,112,548. ELECTRIC-RAILWAY SYSTEM. EDWARD J. MURPHY, Gary, Ind., assignor of one-half to Leonard B. Gump, Gary, Ind. Filed Nov. 3, 1913. Serial No. 798,895. (Cl. 191—18.)

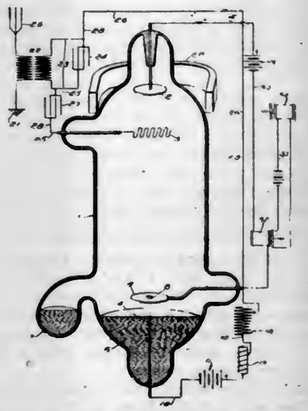
1. A device of the kind described comprising a hollow body; an upper contact member slidably mounted in said hollow body; a guide carried by said contact member; a lower contact member mounted in said guide, both of said contact members having portions capable of becoming magnetized; and a magnet above said upper contact member adapted to draw the latter into engagement therewith and said lower contact member into engagement with said upper contact member, substantially as described.

2. A device of the kind described comprising a hollow body; an upper contact member slidably mounted in said body and insulated therefrom; a guide carried at the lower end of said contact member; a lower contact member insulated from and mounted in said guide, a portion of said lower contact member being of soft iron; a flexible electrical conductor connected with said lower contact member; and a movable magnet adapted to move over said upper contact member at varying distances therefrom, said magnet when over said upper contact member drawing the latter into engagement therewith and said lower contact member into engagement with said upper contact member electrically connecting said contact members, substantially as described.



3. A device of the kind described comprising a hollow body having a top with a perforation therein; a contact member of soft iron having a stem slidably mounted in and electrically insulated from said perforation; a cap secured to said stem limiting the downward movement of said contact member; a guide carried by and depended from said contact member; a second contact member mounted in said guide and electrically insulated therefrom; a soft iron disk secured to the upper end of said last mentioned contact member; an electrical conductor having one end connected with the lower end of said last mentioned contact member; and a magnet adapted to be positioned at different distances from said first mentioned contact member, draw the latter into contact therewith and draw said second mentioned contact member into engagement with said first mentioned contact member establishing electrical connection through said electrical conductor, contact members and magnet, substantially as described.

1,112,549. APPARATUS FOR AMPLIFYING OR DETECTING ELECTRICAL VARIATIONS. GEORGE W. PIERCE, Cambridge, Mass. Filed Nov. 26, 1913. Serial No. 803,357. (Cl. 179—171.)



1. An apparatus for amplifying or detecting electrical variations having, in combination, an evacuated vessel containing at least three electrodes, a conducting body of mercury vapor therein, a controlling electric circuit connected with two of the electrodes, and a controlled electric circuit including a source of electrical energy connected with two of the electrodes, one at least of the controlled circuit electrodes being other than the controlling circuit electrodes.

2. An apparatus for amplifying or detecting electrical variations having, in combination, an evacuated vessel containing at least four electrodes, means for maintaining a mercury arc between two of the electrodes, a controlling electric circuit connected with two of the electrodes, and a controlled electric circuit including a source of electrical energy connected with two of the electrodes, one at least of the controlled circuit electrodes being other than the controlling circuit electrodes.

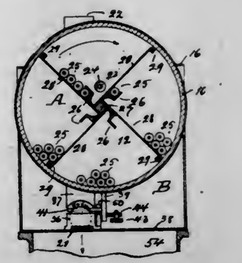
3. An apparatus for amplifying or detecting electrical variations having, in combination, an evacuated vessel containing a plurality of electrodes, a conducting body of mercury vapor therein, a controlling circuit connected with one or more of the electrodes, and a controlled circuit including a source of electrical energy connected with a plurality of the electrodes, one at least of the controlled circuit electrodes being other than the controlling circuit electrode or electrodes.

4. An apparatus for amplifying or detecting electrical variations having, in combination, an evacuated vessel containing at least four electrodes and provided with means for maintaining an arc between two of the electrodes, a controlling circuit connected with one or more of the electrodes, and a controlled circuit including a source of electrical energy connected with a plurality of the electrodes, one at least of the controlled circuit electrodes being other than the controlling circuit electrode or electrodes.

5. An apparatus for amplifying or detecting electrical variations having, in combination, an evacuated vessel, an electrode therein, means including a mercury arc spaced from the electrode and a circuit containing a source of electrical energy connected between the mercury arc and the electrode for maintaining a luminous region in the neighborhood of the electrode, a second electrode between the arc and the electrode, and means for impressing electrical variations upon the second electrode so as to vary the characteristics of said luminous region.

[Claims 6 to 12 not printed in the Gazette.]

1,112,550. VENDING DEVICE. FLOR S. POLLITT, Cincinnati, Ohio. Filed Sept. 15, 1913. Serial No. 789,761. (Cl. 211—8.)



1. In a vending device, the combination of a cylindrical magazine provided with alined openings in its opposite ends, one of which openings constitutes a discharge-opening for the articles contained in the magazine, a shutter whereby this latter opening is normally held closed, a device adapted to support one of the articles mentioned, means to manipulate this device so as to cause one of these articles to lodge thereupon, means to adjust this device so as to aline the article thereon with the openings mentioned, an ejector in alinement with these openings, and mechanism for actuating the ejector and the shutter mentioned, to expel the supported article through the uncovered discharge-opening.

2. In a vending device, the combination of a cylindrical magazine, a case whereby it is supported in a substantially horizontal position, alined openings in the ends thereof, an ejector supported opposite one of these openings, a shutter supported opposite the other opening which latter opening serves for a discharge-opening, a device to gather the articles within the magazine and to move them into the upper part of same, a ledge on this device adapted to retain one of these articles, said ledge being so positioned as to cause the article thereon to aline with the openings mentioned, and mechanism causing the shutter to uncover the discharge-opening and the ejector to move into the other opening for the purpose of discharging the article.

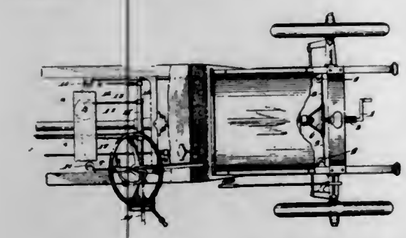
3. In a vending device, the combination of a magazine, a case whereby it is supported, alined openings in opposite ends of the magazine, one of which openings constitutes a discharge-opening, a shutter to normally close this latter opening, a device to move the articles contained in the magazine, one at a time, in alinement with the openings mentioned, means to mainpulate this device for such purpose, indicating means to show when the article has arrived in said alined position, and means which effect discharge of the article from this position and which move the shutter to uncover the discharge-opening.

4. In a vending device, the combination of a magazine, a case whereby it is supported, alined openings in opposite ends of the magazine, one of which openings constitutes a discharge-opening, a shutter to normally close this latter opening, an adjustable support to move the articles contained in the magazine, one at the time, in alinement with the openings mentioned, means which operate to discharge the article from this support and to move the shutter to uncover the discharge-opening for this purpose, and means to temporarily hold said support in position with a yielding engagement until the article thereon is discharged therefrom.

5. In a vending device, the combination of a magazine, a case whereby it is supported, alined openings in opposite ends of the magazine, one of which openings constitutes a discharge-opening, a shutter to normally close this latter opening, a device to move the articles contained in the magazine, one at a time, in alinement with the openings mentioned, an ejector to discharge the article from this position, mechanism adapted to operate the ejector and to move the shutter so as to uncover the discharge-opening, a push-rod adapted to be operatively connected to the mechanism to actuate the same and a spring to return the push-rod and all involved operating parts to normal positions.

[Claims 6 and 7 not printed in the Gazette.]

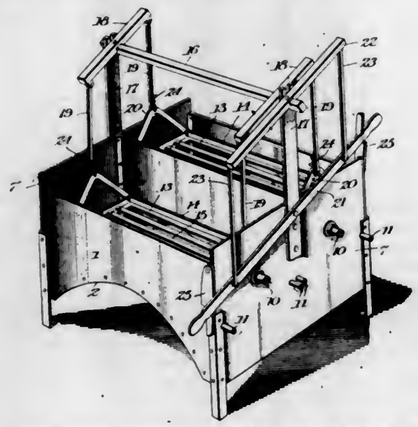
1,112,551. SAFETY ATTACHMENT FOR AUTOMOBILES. NELS E. POLSON and HELMER R. PAULSON, La Grange, Ill. Filed Sept. 20, 1913. Serial No. 790,946. (Cl. 123—179.)



1. The combination of a motor propelled vehicle having a motor and a crank for starting the same; means for preventing operative connection between said crank and motor; a gear shifting lever; a drum; cables wound upon said drum and operatively connected with the means for preventing operative connection between said crank and motor; a crank pin on said drum; a crank arm operated by said lever; and a link connecting said crank pin and said crank arm, substantially as described.

2. The combination of a motor propelled vehicle having a motor and a crank spring held from operative connection with said motor; a swinging plate interposed between said crank and motor, said plate having an opening registering with said crank and adapted to permit engagement of said crank with said motor; a gear shifting lever; a drum; cables attached to opposite sides of said plate and wound upon said drum; a crank pin on said drum; a crank arm operated by said lever; and a link connecting said crank pin and said crank arm, substantially as described.

1,112,552. TOMATO-SCALDER. THOMAS H. POWERS, Templeman Cross Roads, Va., assignor of one-half to Robert L. Parker, Templeman Cross Roads, Va. Filed Jan. 7, 1914. Serial No. 810,889. (Cl. 146—14.)



1. A tomato scalder comprising a tank having a bottom oppositely inclined from a central elevated point and provided with sludge outlets at its lowest points adjoining the ends of the tank, steam pipes arranged within the tank close to said bottom and having steam discharge openings, and a tomato carrier movable in the tank above said steam pipes.

2. A tomato scalder comprising a tank having a bottom oppositely inclined from a central elevated point and provided with sludge outlets at its lowest points adjoining the ends of the tank, baffles arranged at the sides of the tank and defining flow-ways for the solid matter which is precipitated upon said bottom, said flow-ways tapering toward said outlets, steam pipes arranged within the tank close to said bottom and having steam discharge openings, and a tomato carrier movable in the tank above said steam pipes.

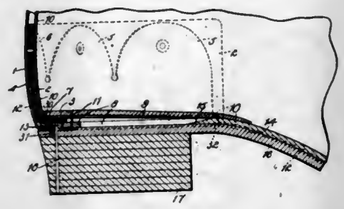
3. A tomato scalder comprising a tank having a bottom oppositely inclined from a central elevated point provided with sludge outlets at its lowest ends adjoining the ends of the tank, steam pipes arranged within the tank close to said bottom, the steam pipes having downwardly directed steam discharge openings, and a tomato carrier movable in said tank above said steam pipes.

1,112,553. SHOE CONSTRUCTION. ASHTON H. PRATT, Chicago, Ill. Filed Nov. 4, 1912. Serial No. 729,255. (Cl. 36—68.)

1. In a shoe construction, the combination of an insole, and a counter comprising a plurality of thicknesses and having an inturned metal flange, one of said thicknesses being above said insole.

2. In a shoe construction, the combination of an insole, an extra heel piece, and a metal counter having an inturned metal flange secured between the insole and extra heel piece.

3. In a shoe construction, the combination of two flat pieces of material inside the shoe and above the heel, and a metal counter having an inturned metal flange secured between said two pieces.

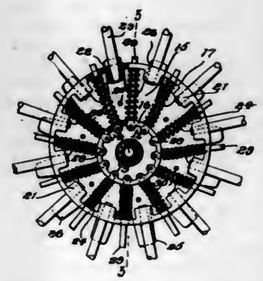


4. In a shoe construction, the combination of two members comprising the insole and an extra heel piece, and a metal counter having an inturned metal flange secured between said members to form an integral counter-structure.

5. In a shoe construction, the combination of an insole, an extra heel-piece, a metal counter secured between the insole and heel-piece, an upper, an outer sole and heel, and nails extending through the outer sole, the heel and the upper to secure them in place, said counter serving to clench said nails at their inner ends.

[Claims 6 to 22 not printed in the Gazette.]

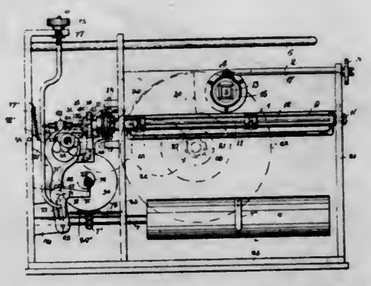
1,112,554. WHEEL. MANNA M. PRATT, Green City, Mo. Filed Feb. 15, 1913. Serial No. 748,760. (Cl. 152—39.)



A wheel including a hub, an inner web integral with said hub, an annular bearing flange integral with said web, a sleeve slidable on the hub, an outer web integral with said sleeve, said outer web bearing against the extremity of the flange and being spaced thereby from the inner web, a cap carried by the hub and bearing against the sleeve to hold the web formed integral with said sleeve in engagement with the flange, means for connecting said webs together, an annular member slidably mounted between said webs externally of the supporting flange, a plurality of radially disposed rods extending through the supporting flange and pivotally connected thereto, said rods being slidable through the annular member, yieldable members interposed between the supporting flange and the annular member, a wheel rim, and a plurality of spokes connecting said rim and annular member.

1,112,555. KINEMATOGRAPH CAMERA AND PROJECTING APPARATUS. CASIMIR DE PROSZYNSKI, London, England. Filed July 19, 1912. Serial No. 710,453. (Cl. 88—18.)

1. In combination in a kinematograph apparatus having a lens and means for carrying a film, said film carrying means comprising rotary film feeding members, rack and pawl mechanism for moving said film carrying means step-by-step across the lens first in one direction, and then step-by-step across the lens in an opposite direction, and means for rotating said rotary film feeding members during the change from the step-by-step movement in one direction to the step-by-step movement in the other direction, substantially as and for the purpose hereinbefore set forth.



2. A kinematograph apparatus for use with a perforated film comprising a lens and means for intermittently feeding the film relatively to said lens both laterally and longitudinally consisting of sprocket pinions engaging in the perforations of the film, rack and pawl mechanism for intermittently moving said pinions parallel to their axes of rotation, and means for intermittently rotating said pinions, substantially as and for the purpose hereinbefore set forth.

3. A kinematograph apparatus for use with a film, comprising a lens and means for intermittently feeding a film both laterally and longitudinally relatively to said lens, consisting of a plurality of sprocket pinions, a shaft on which said pinions are slidably mounted, a rack connecting said pinions together, a rod having pawls for engaging said rack, means for reciprocating said rod, and means for intermittently rotating the aforesaid shaft and pinions substantially as and for the purpose hereinbefore set forth.

4. A kinematograph apparatus for use with a film, comprising a lens and means for intermittently feeding a film both laterally and longitudinally relatively to said bars, consisting of a plurality of sprocket pinions, a shaft on which said pinions are slidably mounted, a rack connecting said pinions together, a rod having pawls for engaging said rack, said pawls being angularly displaced and being of opposite hand, means for reciprocating said rod, means for intermittently rotating said rod for the purpose of bringing one of said pawls into engagement with the rack and disengaging the other, and means for intermittently rotating the aforesaid shaft and pinions thereon, substantially as and for the purpose hereinbefore set forth.

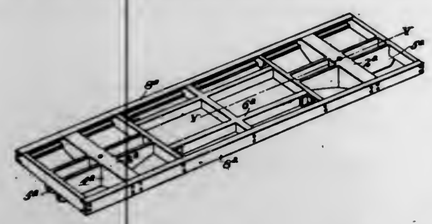
5. A kinematograph apparatus for use with a film, comprising a lens and means for intermittently feeding a film both laterally and longitudinally relatively to said lens, consisting of a plurality of sprocket pinions, a shaft on which said pinions are slidably mounted, a rack connecting said pinions together, a rod having pawls for engaging said rack, said pawls being angularly displaced and being of opposite hand, means for reciprocating said rod comprising cams and a pivoted lever, means for intermittently rotating said rod and means for intermittently rotating the aforesaid shaft and pinions thereon, substantially as and for the purpose hereinbefore set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,112,556. CAR-UNDERFRAME. OSWALD S. PULLIAM, Pittsburgh, Pa. Filed Oct. 26, 1910. Serial No. 589,133. (Cl. 105—76.)

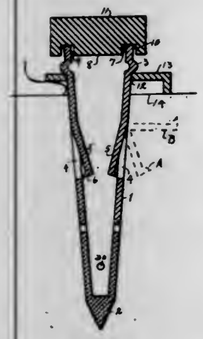
An underframe for cars comprising in a cantaliver construction two integral metallic end-portions each constituting a substantially balanced structure and including a body-bolster formed with a center bearing, an end-sill, said bolster and end-sill formed with reduced ends, a connecting middle-portion comprising a transverse member

formed with reduced ends, and a pair of continuous separable side-members of channel form constituting the side-sills of the underframe with the reduced ends of the



transverse members entered in and secured to the side-members, said side-members extending from end-sill to end-sill.

1,112,557. SPIKE. CHARLES READ, New York, N. Y. Filed Oct. 11, 1912. Serial No. 725,290. (Cl. 85—23.)



1. A spike formed of four pyramidal side members each member being provided with an integral projection, and certain of said members provided with tongues for securing the whole as specified.

2. A spike formed with four pyramidal sides, tongues formed in certain of said sides normally arranged within the plane of said sides in combination with means operable within the body of said spike for forcibly projecting said tongues beyond the plane of said sides as herein specified and for the purpose set forth.

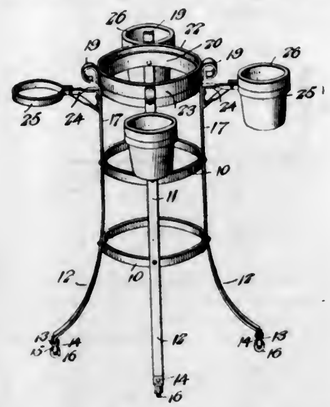
3. A spike having in combination a hollow body composed of four sides and tongues formed in two of said sides, projections formed in all of said sides and a plate in frictional engagement with the body as herein specified.

4. A spike of the character described having a body and means in operable relation to said body and adapted to be forced outward therefrom for securing said body against displacement, a spreader for placing in operative position the first said means, and a driving plate reinforcing the sides of said body and for receiving the pressure applied while the spike is being inserted all combined as herein specified and for the purpose set forth.

1,112,558. FLOWER-STAND. JOHN M. RED, Saucier, Miss. Filed July 22, 1913. Serial No. 780,558. (Cl. 248—41.)

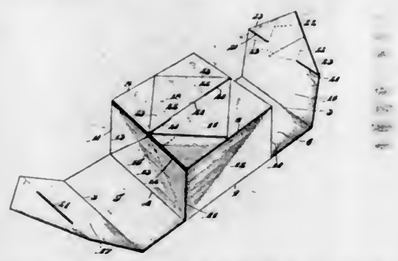
1. In a flower stand, the combination with a stand body formed of connected standards, of hooks formed at the upper ends of the standards by offsetting the standards to provide a seat, a band secured to the standards and spaced from the hooks, and a receptacle-supporting member adapted to repose upon the seat and lie between the said hooks and the said band.

2. In a flower stand, the combination with a stand formed of connected standards, of a seat formed by off-



setting the upper ends of the standards, a band connecting the standards, and a receptacle-supporting member adapted to repose upon the said seat and encircle the said band.

1,112,559. FOLDING BOX. MICHAEL J. REILLY, Chicago, Ill., assignor of one-fifth to George A. Cregier, one-fifth to John W. Raleigh, one-fifth to Lawrence F. Baunach, and one-fifth to Oscar O. Eckstein, Chicago, Ill. Filed Nov. 12, 1913. Serial No. 800,464. (Cl. 229—40.)

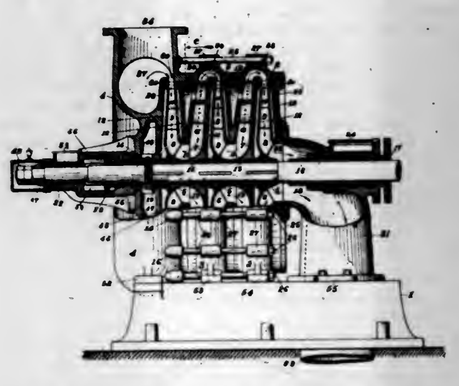


1. A folding box comprising a substantially rectangular blank, the interior of said blank being slit and creased to form the walls of the box, opposite corners of said blank overlapping each other at the top of the box and being slit and creased to interlock with each other to hold the walls of the box in operative positions, the corner portions of the blank forming the top wall of the box, there being parallel slits extending inwardly from the periphery of said blank at each of the corners thereof, and there being creases extending perpendicular to said slits to define the walls of the box, the slits at two opposite corners of said blank being shorter than those at the other corners thereof, and there being creases extended inwardly from said shorter slits a distance corresponding with the longer of said slits, substantially as described.

2. A folding box comprising a blank having its central portion creased defining a substantially rectangular bottom, there being parallel slits extending from the ends of two of the parallel sides of said bottom and parallel creases extending from the other parallel sides of said bottom defining triangular portions between said last mentioned creases and slits, parts of the portions between said last mentioned creases being disposed upright forming the sides of the box and the remaining parts thereof disposed parallel to said bottom and partially forming the top of the box, parts of the portions of said blank between said parallel slits being disposed upright and forming the ends of the box and the remaining parts

of such last mentioned portions being disposed parallel with said bottom and finishing the top of the box, and parts of said triangular portions disposed on the inner sides of said ends and the remaining parts of said triangular portions being disposed under the top of the box, substantially as described.

1,112,560. TURBINE-PUMP. JOHN RICHARDS, San Francisco, Cal., assignor to Turbine Pump Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 17, 1901. Serial No. 78,925. (Cl. 103—43.)



1. In a rotary pump, an inlet way, an annular discharge chamber whose discharge annulus is approximately circular in cross section, one or more connected impeller chambers between said inlet way and said discharge chamber, and an annular throat way between the adjacent impeller chamber and said discharge annulus, within the boundary of the circular section of the latter, tangential to the inner wall thereof, approximately opposite to the central line of said annulus, forming a continuous communication between said impeller chamber and said discharge annulus, and the adjacent impeller chamber, tangential to the ring section of the said discharge chamber, substantially as specified.

2. In a rotary pump, an annular discharge chamber, the annulus being approximately circular in cross section, an annular throat way within the boundary of the circular section, tangential to the inner wall of said discharge annulus, approximately opposite to the central line of the annulus, an impeller chamber communicating with said throat way, an impeller therein, and a partition within the area of the circular section separating said impeller chamber from said discharge annulus up to the junction of the latter with the annular throatway, substantially as specified.

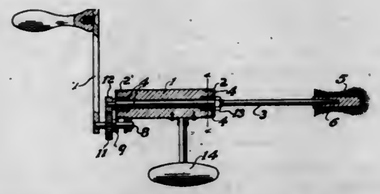
3. In a rotary pump, the discharge chamber 4 provided with the walls or webs 43 and 44, the former adapted to receive a support for the pump spindle and the latter forming in part one wall of the adjoining impeller chamber, and ribs 45 between these walls to brace them.

4. In a rotary pump, a series of similar impeller chambers detachably connected together, rotary impellers in said chambers, water passages alternating with the impellers, curved annular passages external to and leading from the impellers to said water passages, and nipples 11 that form with the impeller inlets curved annular passages from the said water passages to each next impeller in the series, substantially as specified.

5. In a rotary pump, a series of impeller chambers detachably connected together, a central impeller spindle, a series of impellers in said chambers secured on said spindle, a chambered sleeve 46, supporting the lateral one end, and having gland 20 for excluding water, oil-bearing 22, thrust bearing 47, beyond chambered sleeve 46 and removable oil case 48, substantially as specified.

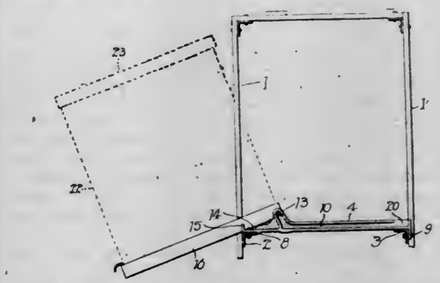
[Claims 6 to 12 not printed in the Gazette.]

1,112,561. TOOTH-BRUSH. EDWIN H. RODELL, Cumings, N. D. Filed Feb. 17, 1912. Serial No. 678,300. (Cl. 15—37.)



The combination with a tubular supporting member; of a driven shaft rotatably mounted therein; a gear mounted upon said shaft; a ferrule mounted upon the terminal of the tubular supporting member adjacent to the gear carried by the driven shaft aforesaid; bearings formed on said ferrule; a driving shaft mounted for rotation in said bearings; a gear mounted upon said driving shaft for meshing with the gear mounted on the terminal of the driven shaft; means for rotating said driving shaft; and a right angularly arranged handle secured to the side of said tubular supporting member.

1,112,562. DRAWER AND SUPPORT. ALVIN W. ROGMAN, Chicago, Ill. Filed Dec. 14, 1912. Serial No. 736,785. (Cl. 211—6.)



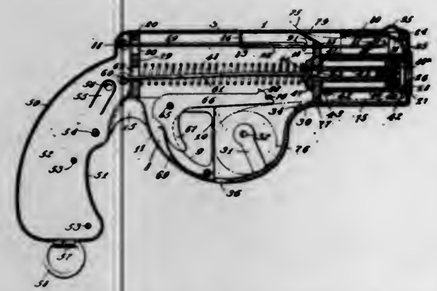
1. A device of the class described comprising a frame including horizontal side members having guideways extending to points near the forward ends thereof and terminating in upwardly and forwardly disposed extensions located at said points on said side members and in which said guideways terminate, a drawer member mounted on said frame, shoulders formed adjacent to the rear corners of said drawer member engaging said guideways, ledges on said side members in advance of said extensions and coacting with said shoulders for shiftably supporting said drawer member, said guideways being provided with rearwardly extending openings to permit the release of said shoulders from said guideways.

2. A device of the class described comprising a frame including horizontal side members having guideways extending to points near the forward ends thereof and terminating in upwardly and forwardly disposed extensions located at said points on said side members and in which said guideways terminate, a drawer member slidably mounted on said frame, studs located adjacent to the rear corners of said drawer member and engaging said guideways and ledges on said side members in advance of said extensions and coacting with said studs to support said drawer member, in a tilted position, the front walls of said extension forming closures for the forward ends of said horizontal guideways and acting as stops for the studs to limit the outward movement of the drawer.

3. A device of the class described comprising a frame including horizontal side members having guideways extending to points at a distance back of the forward ends thereof, and terminating in upwardly disposed extensions located at said points on said side members and in which

said guideways terminate, a drawer member slidably mounted on said frame, studs projecting from the sides of said drawer adjacent to the rear corners thereof, and engaging said guideways, the front walls of said extensions forming stops for said studs to limit the outward movement of the drawer, ledges on said side members in advance of said extensions and coacting with said lugs to support the drawer in a tilted position, and a spacing lug adjacent each of said ledges for preventing lateral movement of said drawer.

1,112,563. PNEUMATIC PISTOL. DANIEL R. SACKMAN, Cleveland, Ohio. Filed Aug. 3, 1912. Serial No. 713,031. (Cl. 46—46.)



1. In a device of the character described, the combination, with a support and a fixed clamping member carried thereby, of a cylinder slidably mounted in said support, the forward end of said cylinder forming a movable clamping member, a piston in said cylinder and fitting frictionally against the walls thereof, a spring for advancing said piston, a trigger for holding said piston against the tension of said spring, and means for retracting said piston so as to compress said spring and simultaneously to withdraw said movable clamping member from said fixed clamping member to permit the introduction of a frangible diaphragm therebetween.

2. In a pneumatic pistol, the combination, with a barrel member and a handle member pivotally connected thereto, of an air compressing cylinder slidably mounted in said barrel and having its axis substantially parallel therewith, a piston slidable in said cylinder and making close frictional contact therewith, a spring tending to advance said piston, tension means connecting said piston with said handle member whereby said piston may be retracted when the pistol is broken, a trigger for retaining said piston in rectracted position, means for limiting the rearward movement of said cylinder during the retractive movement of said piston, and a plate carried by said barrel member adjacent to the forward end of said cylinder and having an aperture registering with said cylinder, whereby the friction of said piston against the wall of said cylinder will advance said cylinder toward said plate prior to any material forward movement of said piston relative to said cylinder so as to clamp a frangible diaphragm against said plate.

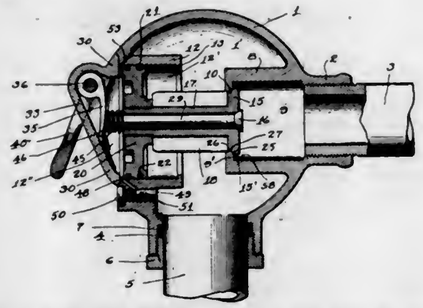
3. In a pneumatic pistol, the combination, with a barrel member of an air compressing cylinder slidably mounted in said barrel, an air compressing piston frictionally mounted in said cylinder, a spring tending to advance said piston, means for retracting said piston against the tension of said spring, a trigger for retaining said piston in retracted position, and an apertured plate carried by said barrel member adjacent to the end of said cylinder.

4. In a pneumatic pistol, in combination, a sheet-metal barrel member having substantially flat, depending, parallel sides, each of said sides being swelled outwardly to form a longitudinal corrugation simulating the barrel of a firearm, an air compressing cylinder within said barrel member and having its sides projecting into said swelled portions, a piston for said cylinder, a spring for said piston, means for retracting said piston against the tension of said spring, a trigger for retaining said piston in retracted position, and an apertured plate carried by said barrel member and closing the end of said cylinder and adapted to receive a frangible diaphragm, the spaces between said sides above and below said cylinder forming receptacles for the ends of such diaphragm.

5. In a pneumatic pistol, in combination, a barrel member having spaced sides defining a chamber, longitudinally spaced plates bridging said chamber, and formed with alined apertures, an air compressing cylinder within said barrel member between the two forward plates, the length of said cylinder being slightly less than the distance between said plates, a piston in said cylinder and making close frictional contact with the walls thereof, a spring for said piston, means for retracting said piston against the tension of said spring, and a trigger for retaining said piston in retracted position, said cylinder being longitudinally slidable within the limits defined by said plates, whereby it will be withdrawn from the forward plate upon the retraction of the piston to permit the insertion of a frangible diaphragm and will be advanced toward said plate upon the forward movement of the piston so as to clamp said diaphragm about the aperture in said plate.

[Claims 6 to 24 not printed in the Gazette.]

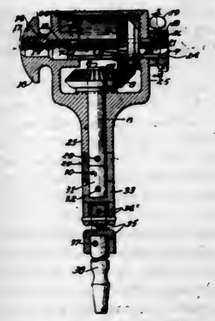
1,112,564. VALVE. HERMAN D. SCHROEDER, Los Angeles, Cal. Filed June 16, 1913. Serial No. 773,903. (Cl. 137—93.)



1. A valve comprising a casing provided with an inlet chamber and with a discharge chamber and with a port between said inlet chamber and discharge chamber, said port having a valve seat, a valve member slidably mounted in said port and adapted to engage said seat, and having a valve head portion exposed to the pressure in said inlet chamber, the periphery of said valve head portion approaching the wall of said inlet chamber to form a restricted passage between said periphery and wall throughout the movement of said valve member and the port opening between said valve member and its seat being between said restricted passage and the discharge chamber and being of larger area substantially throughout the stroke of the valve than said restricted passage so that pressure due to obstruction at said restricted passage is maintained on the front of the valve member and there is substantially no pressure on the back of said valve member, said casing being further provided with a piston chamber opposite said inlet chamber, said piston chamber being open at its inner end to communicate with said discharge chamber, a piston in said piston chamber connected to said valve member, said piston being of larger area than said port opening, said valve member being operated in either direction solely by the difference in pressure on the aforesaid head portion thereof, and on said piston, said valve member having a longitudinal bore communicating at one end with the inlet chamber and at the other end with the space back of said piston, a pilot valve for closing the opening of said bore into said inlet chamber, and provided with a stem extending through said bore and manually operated means directly engaging said stem to open the pilot valve, said manually operated means being freely movable in either direction to permit the main valve to be closed solely by the pressure of the water, said casing being further provided with a drainage passage leading from the space back of the piston to the said discharge chamber.

2. A valve comprising a casing provided with an inlet chamber and with a discharge chamber and with a port between said inlet chamber and discharge chamber, said port having a valve seat, a valve member slidably mounted in said port and adapted to engage said seat, and having a valve head portion exposed to the pressure in said inlet chamber, the periphery of said valve head portion approaching the wall of said inlet chamber to form a restricted passage between said periphery and wall throughout the movement of said valve member and the port opening between said valve member and its seat being between said restricted passage and the discharge chamber and being of larger area substantially throughout the stroke of the valve than said restricted passage so that pressure due to obstruction at said restricted passage is maintained on the front of the valve member and there is substantially no pressure on the back of said valve member, said casing being further provided with a piston chamber opposite said inlet chamber, said piston chamber being open at its inner end to communicate with said discharge chamber, a piston in said piston chamber connected to said valve member, said piston being of larger area than said inlet chamber, the space between said inlet chamber and piston being unobstructed, so that water from the port may strike the piston, and the walls of the inlet chamber and piston chamber being spaced apart so that the water rebounding from the piston may freely escape into the discharge chamber, said valve member being operated in either direction solely by the difference in pressure on the aforesaid head thereof, and on said piston, said valve member having a longitudinal bore communicating at one end with the inlet chamber and at the other end with the space back of said piston, a pilot valve for closing the opening of said bore into said inlet chamber, and provided with a stem extending through said bore and manually operated means directly engaging said stem to open the pilot valve, said manually operated means being freely movable to permit the main valve to be closed solely by the pressure of the water, said casing being further provided with a drainage passage leading from the space back to the piston to the said discharge chamber.

1,112,565. DRILLING DEVICE. WILLIAM SCHULTZ, Chicago, Ill. Filed Feb. 2, 1912. Serial No. 674,916. (Cl. 77—7.)



In drilling devices a frame consisting of two parallel members connected to a base elongated into a stem, a hollow shaft mounted in said parallel members in the plane of said stem and at right angles to said stem; a shaft mounted in said stem in axial alinement therewith; intermeshing gears mounted on said shafts; a cap extending from said base over the edges of said parallel members, and covering said gears; a hand knob on one of said members with an opening therein opposite to one end of the hollow shaft; means to fix a drill in the other end of said hollow shaft so as to be adjustable lengthwise; and means to connect the outer end of the other shaft to an operating means; substantially as and for the purpose described.

1,112,566. SIGNAL DEVICE. GEORGE J. SEISS, Toledo, Ohio. Filed Jan. 26, 1914. Serial No. 814,398. (Cl. 116—1.)

1. In a device of the character described, the combination of a diaphragm, a rotatable member having a peripheral socket inclined in the plane of rotation of said member, the smaller angle between said socket and the wheel periphery being in advance of the larger angle in the direction of rotation of the member, and a striker part mounted within the socket for limited outward and inward movements therein and intended to have tapping contact with the diaphragm as the member is rotated.

2. In a device of the character described, a diaphragm, a rotatable member having a plurality of peripheral sockets, striker parts loosely mounted in said sockets for limited inward and outward movements therein and remaining at the limit of their outward movements during a rotation of the member, due to centrifugal action, with their outer sides projecting from the member in position to have striking contact with said diaphragm, said sockets being inclined in the plane of rotation of the striking parts and in a direction opposed to the intended direction of rotation of the member whereby the smaller angle between each socket and the member periphery is disposed in advance of the socket relative to the direction of intended rotation of the member.

3. In a device of the character described, a diaphragm having a protuberant striking part, a rotatable member having a plurality of sockets arranged in circumferentially alined relation around the peripheral portion of said member, said sockets being restricted at their outer ends and inclined in the plane of rotation of the member with the small angle between each socket and the member periphery disposed in advance of the socket relative to the direction of rotation of the member, a ball located in each socket for free longitudinal movements therein and when at the limit of its outward movement in the socket having its outer side projecting from the periphery of the member in position to strike the protuberant part of the diaphragm, the striking thrust of each ball being opposed by the socket side wall which stands at an obtuse angle to the member periphery.

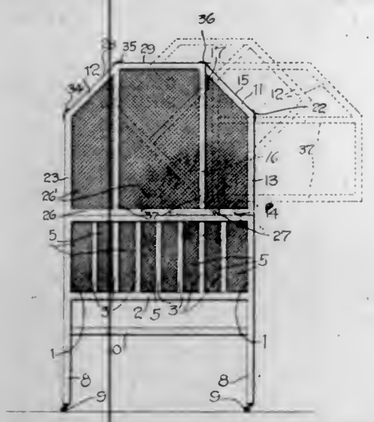
4. In a device of the character described, a rotatable diaphragm coacting member having a peripheral socket inclined in a direction opposed to the direction of intended rotation of the member, a striking part mounted within the socket for limited inward and outward movements therein, and means for rotating the member.

5. In a device of the character described, a diaphragm, a roller holding cage carried by said diaphragm and comprising a looped member having an opening in its looped portion and having prongs projected through the diaphragm and clenched at the opposite side thereof, and also having ears closing the end portions of the loop, a roller rotatably carried within said cage with a portion exposed through said opening, and rotatable means having peripherally disposed roller striking parts.

1,112,567. CRIB. WILLIAM H. SEKRIT, St. Louis, Mo. Filed Apr. 28, 1913. Serial No. 764,229. (Cl. 5—14.)

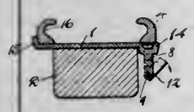
A canopy comprising a stationary screened cover section, a screened movable cover section positioned upon

the stationary cover section and slightly overlapping the same, said movable cover section being hinged to the lower portion of the stationary cover section and adapted to swing over the same to substantially horizontal position,



and means secured to the upper overlapped edge of the movable cover section and resting upon the adjacent portion of the stationary cover section to close the space between said cover sections.

1,112,568. VEHICLE WHEEL-RIM. FRANK L. SESSIONS, Lakewood, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 5, 1913. Serial No. 765,639. (Cl. 152—21.)



1. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; and a locking member attached to said rim so as to be oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, said member being adapted in one position to engage the lug on said flange.

2. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim, said lug being provided with a shoulder; and a locking member pivotally attached to said rim about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, said member being adapted to engage the shoulder on said lug.

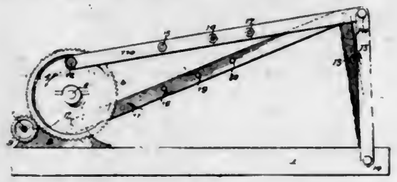
3. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; a locking member attached to said rim so as to be oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, said member being adapted in one position to engage the lug on said flange; and means adapted to retain said member in such engaging position.

4. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; a locking member attached to said rim so as to be oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, said member being adapted in one position to engage the lug on said flange; and resilient means adapted to retain said member in such engaging position.

5. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; a locking member attached to said rim so as to be oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, said member being adapted in one position to engage the lug; and means adapted optionally to retain said member either in or out of such engaging position.

[Claims 6 to 15 not printed in the Gazette.]

1,112,569. CANDY-PULLING MACHINE. GEORGE C. C. SHEAN and LOUIS SCHMELZ, Buffalo, N. Y. Filed Aug. 13, 1913. Serial No. 784,620. (Cl. 107—30.)



1. A candy pulling machine comprising two movable supports, a set of pulling pins arranged on each of said supports, and means operating said supports so that the pins of one support pass through the spaces between the pins on the other support and a pin of one support passes around all the pins of the other support.

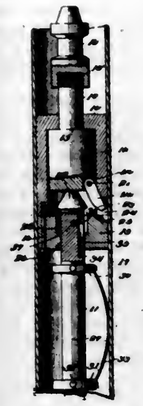
2. A candy pulling machine comprising two movable supports, a set of pulling pins arranged on each of said supports, and means for operating said supports, so that a pin of each support passes downwardly through the space between two pins of the other support, and another pin of each support passes upwardly through the space between two pins of the other support, and a pin of each support passes around all the pins of the other support.

3. A candy pulling machine comprising two movable supports arranged adjacent to each other, a set of pulling pins arranged in a row on each support and projecting toward the other support, each of said sets comprising three pins, and means for moving said supports relatively to each other so that each pin at the extremity of the set on one support passes through the space between the two pins adjacent to the diagonally opposite extremity of the set of pins on the other support.

4. A candy pulling machine comprising two movable supports arranged adjacent to each other, a set of pulling pins arranged in a row on each support and projecting toward the other support, each of said sets comprising three pins, and means for moving said supports relatively to each other so that the pin at one extremity of each set passes in one direction through the space between two pins adjacent to the diagonally opposite extremity of the other set and the pin at the opposite extremity of each set passes in another direction through the space between two pins adjacent to the diagonally opposite extremity of the other set.

5. A candy pulling machine comprising two movable supports arranged adjacent to each other, a set of pulling pins arranged in a row on each support and projecting toward the other support, each of said sets comprising three pins, and means for moving said supports relatively to each other so that the pin at one extremity of each set passes in one direction through the space between two pins adjacent to the diagonally opposite extremity of the other set, the pin at the opposite extremity of each set passes in another direction through the space between two pins adjacent to the diagonally opposite extremity of the other set and an intermediate pin of each set passes completely around the other set of pins.

1,112,570. WELL-CASING PERFORATOR. CHARLES P. SKINNER, Orcutt, Cal. Filed June 7, 1913. Serial No. 772,346. (Cl. 81—188.)



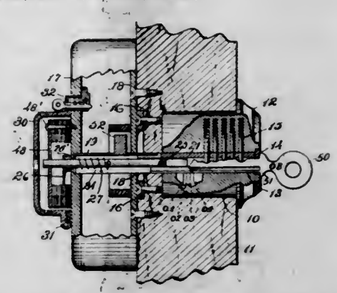
1. A perforator for well casings including a cage closed at its ends, a punch carrying mandrel reciprocally mounted in the cage with a reduced extension projecting through the top thereof, punches carried by the mandrel and movable radially through openings formed in the cage wall upon downward movement of the mandrel in the cage, and means carried by the cage for supporting the same when lowered in position in the casing.

2. A perforator for well casings including a cage closed at its ends, a punch carrying mandrel reciprocally mounted in the cage, punches carried by the mandrel, means for reciprocating the mandrel in the cage, a mandrel shaft movable through the bottom of the cage and provided at its upper end with a head adapted to seat in a socket in the bottom of the cage and adjacent to the head with a catch adapted to engage beneath the cage to lock the shaft against movement independent of the cage, and casing-engaging elements carried by the shaft.

3. A perforator for well casings including a cage closed at its ends, a punch carrying mandrel reciprocally mounted in the cage, punches carried by the mandrel, means for reciprocating the mandrel in the cage, a mandrel shaft movable through the bottom of the cage and provided at its upper end with a head adapted to seat in a socket in the bottom of the cage and adjacent to the head with a catch adapted to engage beneath the cage to lock the shaft against movement independent of the cage, and casing-engaging elements carried by the shaft; said elements being adapted to engage the casing sufficiently to support the cage but not sufficiently to support the cage and its mandrel.

4. A perforator for well casings including a cage provided in its outer face with longitudinally extending leakage grooves, said cage being closed at its upper end, a mandrel mounted in the cage for reciprocatory movement therein and having a reduced extension projecting from an opening in the closed upper end of the cage, a cap block secured to and closing the lower end of the cage and provided centrally with a socket and with a bore forming a reduced continuation of the socket, the wall of said cage being provided with slots and the upper face of the block with channels registering with the slots, punches carried by the mandrel and adapted upon downward movement of the mandrel with respect to the cage to engage the cap block and be forced radially through the slits in the cage to perforate a casing, a mandrel shaft movable through the bore of the cap block and provided with a head adapted in one position to engage against the lower face of the first mandrel and in another position to seat in the socket of the cap block, a spring-pressed trigger carried by the shaft and adapted to automatically engage beneath the cap block when the head of the shaft is seated in the socket thereof, collars carried by the free end of the mandrel shaft, and bowed springs connecting the collars and adapted for frictional engagement with a casing to support the mandrel shaft and cage.

1,112,571. MECHANISM FOR ELECTRICALLY INDICATING AND RECORDING LOCK-KEYS. ALFRED LOUIS SOHM, Los Angeles, Cal., assignor to The Sohm Electric Signal & Recording Company, Spokane, Wash., a Corporation of Arizona. Filed Sept. 13, 1910. Serial No. 581,794. (Cl. 177—203.)



1. In combination, a lock having a rotatable key holder, a sliding member extending into and rotatable with said key holder, a plurality of contacts in different planes at right angles to the line of sliding movement, and a contact maker carried by said sliding member in the zone of said contacts, said sliding member being arranged to be engaged by a key inserted in said holder to move said contact maker into one of said planes.

2. In combination, a lock having a rotatable key holder, a sliding rod extending into said key holder, a plurality of contacts arranged circularly around said rod, and a contact maker carried by said rod and arranged in its movement with the key holder to engage said contacts.

3. In combination, a lock having a rotatable key holder, a sliding member extending into and rotatable with said key holder, a plurality of contacts in different planes at right angles to the line of sliding movement, a contact maker carried by said member, and resilient means tending to hold said contact maker in one of said planes, said sliding member being arranged to be engaged by keys inserted in said holder to move said contact maker into the other planes.

4. In combination, a lock, a set of contacts arranged side by side, an opposing contact, said set of contacts and said opposing contact being longitudinally movable relatively to each other by the insertion of a key in said lock so as to bring said opposing contact in the plane of any contact of said set, said set of contacts and said opposing contact being movable relatively to each other in the plane of each contact of said set.

5. In combination, a lock having a rotatable key holder, a rotatable sliding rod extending into said key holder, a plurality of keys for engaging with said rod, a plurality of contacts insulated from each other, and a contact maker carried by said rod and brought into operative relation with certain of said contacts to the exclusion of the others depending upon the length of the key employed.

[Claims 6 to 12 not printed in the Gazette.]

1,112,572. PLATFORM-OPERATED MACHINE. FRED B. STAMM, Los Angeles, Cal. Filed Oct. 28, 1913. Serial No. 797,818. (Cl. 40—31.)

1. The combination of curtain supporting rollers, a curtain wound on said rollers, curtain operating mechanism connected to one of said rollers for driving the same to wind the curtain, the curtain acting to rotate the other roller, and selective mechanism for stopping the curtain actuated roller at the desired point.

2. The combination of curtain supporting rollers, a curtain wound on said rollers, curtain operating mecha-

nism connected to one of said rollers, a weight operated platform for operating said curtain operating mechanism, gearing connected with the other of said rollers and operated by the same, and a bank of keys for selectively controlling the operation of said gearing.

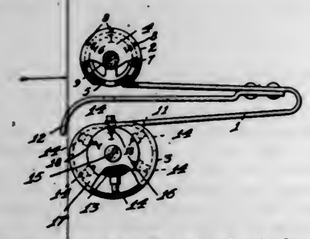
3. In a platform operated machine, a base, a pedestal, exhibiting means on said pedestal, a platform on the base, mechanism for operating said exhibiting means, a plurality of racks on said platform, a pair of shafts, pinions on the shafts meshing with the respective racks, sprockets on the respective shafts, a chain connecting said sprockets for producing synchronous operation of said shafts, and means connected with one of said shafts for actuating said mechanism.

4. In a platform operated machine, a base, a pedestal, exhibiting means on said pedestal, a platform on the base, mechanism for operating said exhibiting means, a plurality of racks on said platform, a pair of shafts, pinions on the shafts meshing with the respective racks, sprockets on the respective shafts, a chain connecting said sprockets for producing synchronous operation of said shafts, said mechanism including a vertical shaft in said pedestal, said mechanism being connected to the upper end of said shaft, a wheel on the lower end of said shaft, a wheel on one of said first named shafts, and a connection from the latter wheel to the first wheel.

5. In a platform operated machine, a pair of rollers, a curtain on said rollers, gearing for operating said curtain including a driving gear, a stop on said driving gear for normally holding the same from turning, a weight operated platform for actuating said gearing, a release catch having a detent engaging said stop, and a release lever for lifting said release catch to disengage said stop and permit the driving gear to rotate.

[Claims 6 and 7 not printed in the Gazette.]

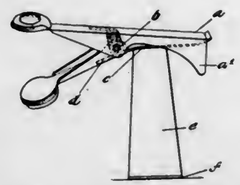
1,112,573. TICKET-PUNCH. RALPH P. STEVENS, Stanford University, Cal. Filed June 11, 1913. Serial No. 773,043. (Cl. 101—160.)



1. A punch comprising a pair of cylinder-like receptacles, a spring securing said receptacles together, a revoluble male die block carried within one of said receptacles, a revoluble female die box within and having substantially its entire periphery in contact with the interior of the other receptacle, the outer surface of said female die box lying in substantially the same plane as the inner face of the spring to wnich said receptacle is secured, and a circular cover secured to the female die having lugs on the side thereof to engage notches in the box to hold the die in a given position.

2. A punch comprising a pair of cylinder-like receptacles, a spring securing said receptacles together, a revoluble male die block carried within one of said receptacles, a revoluble female die box within and having substantially its entire periphery in contact with the interior of the other receptacle, the outer surface of said female die box lying in substantially the same plane as the inner face of the spring to which said receptacle is secured, a stripper plate secured to the spring and extending between the two receptacles, a circular cover secured to the female die having lugs on the sides thereof to engage notches in the side of the die box to hold the die in a given position and a plate connected to the male die and having lugs on the side thereof to engage the die box and hold the male die in a given position.

1,112,574. APPLIANCE FOR SUPPORTING COOKING UTENSILS. AMY M. STOCKING, East Orange, N. J. Filed Apr. 26, 1912. Serial No. 693,333. (Cl. 65—65.)



1. A support for sauce pans and similar utensils comprising a clip adapted to engage any part of the handle of the utensil laterally thereof and a standard extending downwardly from the handle grasping portion of the clip whereby by adjusting the clip along the handle of the utensil its body portion may be held either level or in an angular position as may be desired.

2. A supporting device for sauce pans and similar utensils comprising two jaws pivoted together, a spring the reaction of which tends to close the jaws whereby the device may be applied laterally to any part of the handle of the utensil, a standard extending downwardly from the handle grasping portion of the device and a laterally extending base piece at the bottom of the standard.

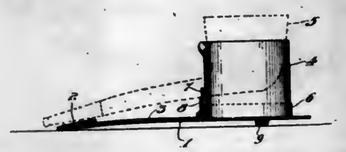
3. A supporting device for sauce pans and similar utensils comprising two jaws pivoted together adapted to laterally engage any part of the handle of the utensil, the upper one of which is movable upon the lower one and is substantially straight and the lower one of which inclines downwardly in front of the pivot and extends substantially horizontally in rear of the pivot, flanges on the upper horizontal jaw that embrace the edges of the rear part of the lower angular jaw and a standard extending downwardly from the lower angular jaw in rear of the pivot and formed with a laterally extending base.

4. A support for sauce pans and similar utensils comprising a clip adapted to engage any part of the handle of a utensil laterally thereof and a standard extending downwardly from the handle grasping portion of the clip said standard and the grasping portion being transversely arranged at an acute angle, whereby by applying the clip at the right or left hand side of the handles of utensils of different sizes and heights said utensils may be securely held in desired positions.

5. A supporting device for sauce pans and similar utensils comprising two jaws pivoted together, a spring the reaction of which tends to close the jaws whereby the device may be applied laterally to any part of the handle

of the utensil, an extensible standard extending downwardly from the handle grasping portion of the device and a laterally extending base piece at the bottom of the standard.

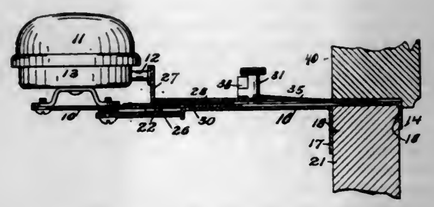
1,112,575. SMOKER'S ACCESSORY. BURKHARD STRICKER, Chicago, Ill. Filed Oct. 4, 1913. Serial No. 793,331. (Cl. 131—51.)



1. A smoking pipe holder comprising a flat body; a vertically disposed slitted circular band of resilient material having its lower end secured to said flat body and providing a pipe holder; a narrow annular band encircling the lower end of said slitted band and secured to the latter; and a loop around said annular band between the ends of said slitted band and providing a pipe supporting means, substantially as described.

2. A smoking pipe holder comprising a flat body; a vertically disposed slitted circular band of resilient material having its lower end secured to said flat body and providing a pipe holder, the upper corners of said band at the slit thereof being outwardly flaring; a narrow annular band encircling the lower end of said slitted band and secured to the latter; and a loop around said annular band between the ends of said slitted band and providing a pipe supporting means, substantially as described.

1,112,576. ALARM DEVICE. WESLEY TRAFFORD, New York, N. Y. Filed Dec. 6, 1905. Serial No. 290,517. (Cl. 116—44.)



1. In an alarm device, the combination of a self-ringing bell, supporting means, means for attaching the supporting means to a door, a member tending to set the bell in operation, a holding device for preventing the operation of said member, and a movable device controlled in its movements by engagement with the door frame during the opening and closing of the door to cause said holding device to move out of operative position when the door is closed and to permit said member to operate to set the bell in operation when the door is opened.

2. In a door alarm, the combination of a self-ringing bell, means tending to set the bell in operation, a holding device for preventing the operation of said means, and a second holding device adapted to be moved into position to prevent the operation of said means, the first said holding device being arranged to move out of operative position as the second said holding device is moved into operative position, and the second said holding device being arranged to move out of operative position to permit said means to operate, substantially as described.

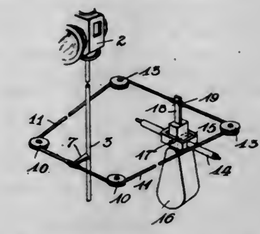
3. In a door alarm, the combination of a self-ringing bell, a spring actuated member tending to set the bell in operation, a holding device for preventing operative movement of said member, and a second holding device adapted to be moved into operative position to prevent operative movement of said member and to cause said member to be released from the first said holding device, the second said holding device being arranged to move out of operative position to permit operative movement of said member, substantially as described.

4. In a door alarm, the combination of a self-ringing bell, a spring actuated member tending to set the bell in operation, a holding device for preventing operative movement of said member, and a second holding device adapted to be moved into operative position to prevent operative movement of said member, and by its movement into operative position to move the first said holding device out of operative position, the second said holding device being arranged to move out of operative position to permit operative movement of said member, substantially as described.

5. In a door alarm, the combination of a bell and means for ringing the bell, a holding device for preventing the ringing of the bell, and a second holding device for preventing the ringing of the bell adapted to be moved into operative position and by its movement into operative position to move the first said holding device out of operative position, the second said holding device being arranged to move out of operative position to permit the ringing of the bell, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,112,577. HEADLIGHT-ACTUATING MECHANISM FOR LOCOMOTIVES. PETER N. TROUT, Roanoke, Va. Filed Dec. 8, 1913. Serial No. 805,388. (Cl. 240—62.)



1. The combination with a locomotive, of a headlight rotatably mounted thereon for rotation in an approximately horizontal plane, a pendulum swingingly supported below the boiler of the locomotive and between its side frames, an arm projecting in line with the longitudinal axis of the locomotive and operatively connected to the headlight, flexible connections passing from said arm to the pendulum, and pulleys over which said flexible connections pass.

2. The combination with a locomotive, of a headlight, a vertical spindle for the headlight rotatably supported upon the locomotive and having a forwardly projecting arm, oppositely disposed pulleys disposed one on each side of said spindle, a pendulum pivotally supported beneath the boiler of the locomotive and having an upwardly extending arm, and flexible connections passing from said upwardly extending arm to the arm of the headlight spindle.

3. The combination with a locomotive including a boiler and side frames, of a headlight, a vertical spindle upon which the headlight is mounted and supported for rotation upon the locomotive and having a forwardly extending arm, a pendulum swingingly mounted between the side frames of the locomotive and beneath the boiler thereof and having an upwardly extending arm, pulleys supported on each side of the locomotive opposite said pendulum, pulleys supported on each side of the spindle opposite the arm thereof, and flexible connections passing from the upper end of the pendulum above its pivotal point over said pulleys to said arm.

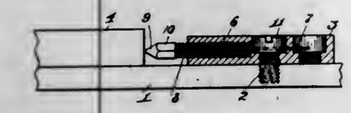
4. The combination with a locomotive, of a headlight rotatably mounted thereon for rotation in an approximately horizontal plane, a pendulum pivotally supported on the locomotive for movement in a plane transverse

thereto and for movement in a plane approximately coincident with the longitudinal axis of the locomotive, and operative connections between the pendulum above its pivotal axis and said headlight whereby the latter will be rotated upon a lateral swinging of the pendulum relative to the locomotive.

5. The combination with a locomotive, of a headlight rotatably mounted thereon for rotation in an approximately horizontal plane, a transverse shaft including a yoke and supported upon the locomotive frame for movement in a plane parallel to the longitudinal plane of the locomotive, a pendulum pivoted in said yoke for movement transverse to the locomotive, and operative connections between the upper end of said pendulum above its pivotal point and said headlight whereby the latter may be rotated in one or the other direction upon a lateral swinging motion of the pendulum relative to the locomotive.

[Claim 6 not printed in the Gazette.]

1,112,578. MOUNTING-BLOCK FOR EMBOSSING-DIES. HORATIO E. VAN DOREN, South Bend, Ind. Filed June 17, 1914. Serial No. 845,708. (Cl. 101—169.)



1. Means for securing dies on mounting blocks including a clamp block, means for securing the same to the mounting block, and an adjustable die engaging element carried by the clamp block adapted to automatically lock itself against independent movement with relation to said block.

2. A clamp block for securing dies on mounting blocks including a body formed with a threaded bore, a holding screw coöperating with said bore and designed to engage the die, and means for automatically locking said screw against movement.

3. A means for securing embossing dies on mounting blocks including a clamp block, means for securing the same to the mounting block, a holding screw carried by the clamp block and adapted to engage the die, and means operable in the adjustment of said holding screw to automatically lock the same against independent movement.

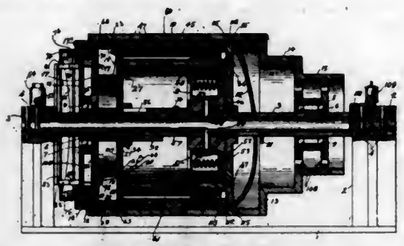
4. A mounting block, and die holding means thereon, including a die engaging holding screw, and means for automatically locking said screw in the movement thereof subsequent to the engagement of the screw and die.

5. A clamp block for securing embossing dies on mounting blocks including a body, a holding screw having threaded connection with the body and adapted to engage the embossing die, said block being formed with a longitudinally extending channel dividing the bore for the holding screw.

[Claims 6 to 9 not printed in the Gazette.]

1,112,579. INTERNAL-COMBUSTION ENGINE. CHARLES W. WATSON, Oak Park, Ill., assignor to Rota Engine Company, a Corporation of Delaware. Filed Aug. 7, 1912. Serial No. 713,822. (Cl. 123—8.)

1. In an engine of the class described, the combination with a hollow cylinder and shaft of opposing counterpart motor members, one rotary and the other reciprocatory but non-rotary, said non-rotary member forming a resisting element to resist the expansive action of an explosion between the two, counterpart recesses, formed in said members adapted when in registration to form a combustion-chamber, a chamber for receiving an explosive charge preparatory to its admission to said combustion-chamber, means for drawing said charge into said chamber by the movement in one direction of said non-rotary member and means for introducing and compressing the same in said combustion-chamber by the reverse movement of said member.



2. In an internal combustion engine, the combination of a hollow cylinder mounted upon a shaft, a primary cam-member within said cylinder rigidly secured thereto, a secondary cam-member mounted to move longitudinally upon said shaft, said cam-members having counterpart recesses opposed to each other to form a combustion chamber and counterpart co-acting cam-faces, one member being rotative and the other non-rotative, a hollow reciprocatory piston member connected with said secondary cam-member, an abutment upon said shaft formed to fit the interior of said piston member, said abutment being held against longitudinal movement, a carbureter in operative communication with the space between said stationary abutment and the interior of said hollow piston and means for injecting an explosive charge into said combustion-chamber.

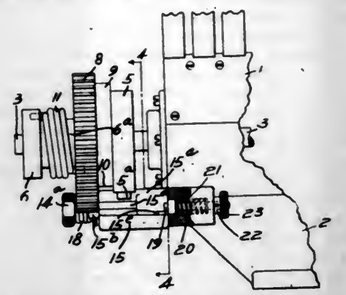
3. In an internal combustion engine, the combination of a main cylinder and shaft, one of which is rotary and the other non-rotary, primary and secondary cam-members within said cylinder, one secured to the cylinder and the other to the shaft, means for permitting longitudinal movement upon said shaft of said secondary cam-member, a hollow piston connected with said secondary cam-member, an abutment upon said shaft formed to fit the interior of said hollow piston, said abutment being held against longitudinal movement, an explosion-chamber formed between the co-acting faces of said cam-members, a carbureter in operative communication with the space between said stationary abutment and the interior of said hollow piston, means for injecting an explosive charge into said explosion chamber and means for igniting the same.

4. In an internal combustion engine, the combination of a main cylinder and shaft, of opposing counterpart spiral-faced motor cam-members, one rotary and the other non-rotary, said non-rotary member being arranged to be reciprocated laterally from and toward its fellow to the extent of the pitch of the cam thereon, counterpart recesses formed in the opposing faces of said cam-members, said recesses being adapted when in registration with each other to form a combustion-chamber, a secondary cylinder in operative connection with said reciprocatory member to be reciprocated therewith, an abutment mounted stationarily upon the shaft within said secondary cylinder, a source of fuel and air supply, a conduit leading therefrom to the space between said abutment and one end of said secondary cylinder, means for conveying said fuel and air supply to said combustion-chamber when said reciprocatory member is returned to a normal position and means for returning said reciprocatory member to a normal position after each expansion stroke of the engine.

5. In an engine of the class described, the combination with a cylinder and shaft of opposing counterpart motor-members inclosed within said cylinder, one rotary and non-reciprocatory, the other reciprocatory and non-rotary, a combustion-chamber formed by normally registering counterpart recesses in the meeting faces of said motor-members, a charge-receiving chamber in predetermined communication with said combustion-chamber, a hollow piston secured to said reciprocatory member to be actuated therewith, said piston having ports at its outer end in communication with said combustion-chamber, a stationary abutment upon said shaft having a chamber therein, a normally closed valve therein opening into said hollow piston and a carbureter in communication with the chamber in said abutment.

[Claims 6 to 15 not printed in the Gazette.]

1,112,580. DEVICE FOR OPERATING MAGNETOS. ELMER A. WATTS, Springfield, Ohio, assignor to The Miller Improved Gas Engine Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 16, 1912. Serial No. 691,139. (Cl. 123—149.)



1. In a device of the character described, an armature shaft, a driving member, a spring forming a driving connection between said shaft and driving member, a lock for said shaft, means operated by the driving member for throwing said lock out of operative position, and means for automatically engaging and positively holding said lock out of operative position.

2. In a device of the character described, an armature shaft, a driving member, a spring forming a driving connection between said shaft and driving member, a lock for said shaft, means operated by said driving member for throwing said lock out of operative position, and a spring catch for said lock to positively hold the same out of operative position.

3. In a device of the character described, an armature shaft, a driving member, a spring forming a driving connection between said shaft and member, a swinging lock for said shaft, a spring catch to hold said lock in inoperative position, a spring for throwing said lock to operative position, and means operated by said driving member for throwing said lock out of operative position.

4. In a device of the character described, an armature shaft, a driving member, a spring forming a driving connection between said shaft and member, a swinging lock for said shaft, a catch for holding said lock in inoperative position, a spring for throwing said lock to operative position when released by said catch, and means for adjusting the tension of said last-mentioned spring.

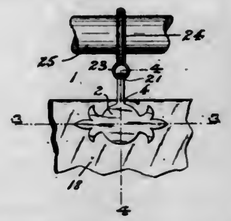
5. In a device of the character described, an armature shaft, a driving member, a spring forming a driving connection between said shaft and member, a swinging spring-pressed lock for said shaft, a cam connected to said driving member for throwing said lock out of locking position, and a spring catch for holding said lock in inoperative position.

[Claims 6 to 10 not printed in the Gazette.]

1,112,581. SUSPENDING DEVICE. RUSSELL WHITCOMB, Elizabeth, N. J. Filed Sept. 9, 1913. Serial No. 788,834. (Cl. 156—21.)

1. In a device of the kind described, a pair of plates adapted to be registered together with the fabric to be supported inserted therebetween, a detachable fastening pin, said rear-plate being provided with perforations providing pin-passages through which said fastening-pin may be woven, and a rearwardly projecting portion provided with an opening connected with said front-plate for pressing the fabric to be supported into the path of said fastening-pin so that the latter passes through said fabric and through the opening of said rearwardly projecting portion.

2. In a device of the kind described, a pair of plates adapted to be registered together with the fabric to be supported inserted therebetween, a detachable fastening pin, said rear-plate being provided with perforations providing pin-passages through which said fastening-pin may be woven, a rearwardly projecting portion provided with an opening connected with said front-plate for pressing the fabric to be supported into the path of said fastening-pin so that the latter passes through said fabric and through the opening of said rearwardly projecting portion, and means for suspending said plates.



3. In a device of the kind described, a pair of plates adapted to be registered together with the fabric to be supported inserted therebetween, a detachable fastening pin, fastening pin engaging means connected with each plate so that said fastening pin may be woven through the same and through the fabric to be supported, protecting-tongues connected with one of said plates and adapted to be bent over the respective ends of said fastening pin to prevent accidental displacement or removal thereof, and a suspending device mutually connected with each plate.

4. In a device of the kind described, a front-plate, a rear-plate, a connecting-strip interconnecting said front-plate and said rear-plate, said connecting-strip being doubled upon itself to register said front-plate and said rear-plate together so that the fabric to be supported may be inserted between said front-plate and said rear-plate, a detachable fastening-pin, means connected with said front-plate and means connected with said rear-plate adapted to be engaged by said fastening pin in such a manner as to permit the pin to pass through the fabric to be supported, protecting-tongues struck up from the body of said rear-plate and adapted to be bent over the respective ends of said fastening pin to prevent accidental displacement or removal thereof, and the doubled over portion of said connecting-strip being bent to form a suspending-device.

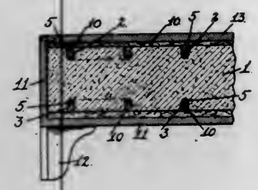
5. In a device of the kind described, a front-plate of any ornamental configuration or character, a rear-plate, a connecting-strip interconnecting said front-plate and said rear-plate, said connecting-strip being doubled upon itself to register said front-plate and said rear-plate together so that the fabric to be supported may be inserted therebetween, a detachable fastening-pin, said rear-plate being provided with perforations providing pin-passages through which said fastening-pin may be woven, a rearwardly projecting portion provided with an opening connected with said front-plate for pressing the fabric to be supported into the path of said fastening-pin so that the latter passes through said fabric and through the opening of said rearwardly projecting portion, and the doubled over portion of said connecting-strip being bent to form a suspending device.

[Claims 6 to 10 not printed in the Gazette.]

1,112,582. ELECTRIC HEATER. FRANK R. WHITTLESEY, Oakland, Cal. Filed Oct. 7, 1913. Serial No. 793,948. (Cl. 219—37.)

1. An electric-heater comprising a heating member of low electric and heat conductivity, said member having formed in its upper and lower faces a continuous tortuous groove the ends of which emerge from the member at one end near one side thereof, one above the other, and the middle portion passing from the upper to the lower face in said end near the other side thereof, said end being

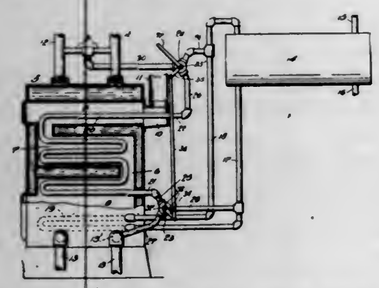
formed with plug-receiving sockets at the ends of the groove and at points intermediate said ends; an electric wire seated in said groove and exposed for electrical contact in the sockets of said member; a double electric cord one cord of which is electrically connected with the beginning of the electric-heating-wire; and a plug carried by the other cord adapted to be fitted at will to any of the sockets of the heating member, to make electrical contact with the heating wire at various points in the length of said wire.



2. An electric-heater comprising a heating member of low electric and heat conductivity, said member having formed in its upper and lower faces a continuous tortuous groove the ends of which emerge from the member at one end near one side thereof, one above the other, and the middle portion passing from the upper to the lower face in said end near the other side thereof, said end being formed with plug-receiving sockets at the ends of the groove and at points intermediate said ends; an electric wire seated in said groove and exposed for electrical contact in the sockets of said member; a metallic box inclosing said heating member said box having openings registering with the sockets of said member; means for insulating the heating wire from the metallic box; a double electric cord one cord of which is electrically connected with the beginning of the electric-heating-wire; and a plug carried by the other cord adapted to be fitted at will to any of the sockets of the heating member, to make electrical contact with the heating wire at various points in the length of said wire.

3. An electric heater comprising a substantially rectangular block formed on each of its faces with a tortuous groove, the groove of one face communicating with the groove of the other face, a heating wire lying in said groove, a casing receiving the block, a closure for the casing, a filling of asbestos interposed between the faces of the block and the casing, said asbestos entering the grooves formed in said faces, there being openings formed in the casing which aline with openings formed in the edges of the block whereby to permit of the insertion of an electric connection to effect a connection with the heating wire at different points throughout its length to increase or diminish the resistance.

1,112,583. AUXILIARY HEATING SYSTEM. JOHN R. WILLIAMS, Seattle, Wash. Filed May 15, 1913. Serial No. 767,841. (Cl. 237—19.)



1. An auxiliary heating system for heating boilers, comprising an auxiliary heating coil positioned in the flues of said boiler having up-flow and return-flow pipes communicating, respectively, with the up-flow and return-flow pipes of the boiler, a heating circuit under pressure having a portion extending within the furnace of the boiler and having an up-flow pipe and a return-flow pipe communicatively connected to the up-flow and return-flow pipes of the coil, respectively, and valve members controlling said connections whereby communication from the coil is selectively established with said up-flow and return-flow pipes of the boiler or with the heating circuit.

2. In an auxiliary heating system for heating boilers, an auxiliary heating coil positioned in the flues of said boiler having an up-flow pipe and a return-flow pipe connected with the up-flow and return-flow pipes of the boiler, respectively, a heating circuit under pressure having an up-flow pipe and a return-flow pipe and having a portion extending within the furnace of the boiler, a pipe connecting the up-flow pipes and a pipe connecting the return-flow pipes of both said coil and said circuit, and a valve in the junction of said coil with each of said connective pipes whereby communication therewith is selectively established with either the up-flow and return-flow pipes of the boiler or said heating circuit.

3. In an auxiliary heating system for heating boilers, an auxiliary heating coil positioned in the flues of said boiler having an up-flow pipe and a return-flow pipe connected with the up-flow and return-flow pipes of the boiler, respectively, a heating circuit under pressure having an up-flow pipe and a return-flow pipe and having a portion extending within the furnace of the boiler, a pipe connecting the up-flow pipes and a pipe connecting the return-flow pipes of both said coil and said circuit, a three-way valve in the junction of said coil with each of said connective pipes making selective communication with either the up-flow and return-flow pipes of the boiler or the heating circuit, and connections between said valves whereby they may be regulated in unison.

4. In an auxiliary heating system for heating boilers, an auxiliary heating coil traversing the flues of the boiler, and communicatively connected at its opposite ends with the circulating pipes of the boiler, a water-heating service circuit including a tank connected with a pressure main and including a return-flow pipe and an up-flow pipe; a pipe connecting said return-flow pipe with the lower end of said coil, a valve in the connection between said connecting pipe and coil adapted to convey water to the latter selectively from the circulating pipes of said boiler or from the tank, a pipe connecting said up-flow pipe with the upper end of said coil, a valve in the connection between said up-flow pipe and coil adapted to convey the circulating fluid from the coil selectively to the circulating pipes of the boiler or to said circuit.

5. In an auxiliary heating system for heating boilers, an auxiliary heating coil traversing the flues of the boiler, and communicatively connected at its opposite ends with the circulating pipes of the boiler, a water-heating service circuit including a tank connected with a pressure main and including a return-flow pipe and an up-flow pipe; a pipe connecting said return-flow pipe with the lower end of said coil, a valve in the connection between said connecting pipe and coil adapted to convey water to the latter selectively from the circulating pipes of said boiler or from the tank, a pipe connecting said up-flow pipe with the upper end of said coil, a valve in the connection between said up-flow pipe and coil adapted to convey the circulating fluid from the coil selectively to the circulating pipes of the boiler or to said circuit, and connections between said valves whereby both valves may be adjusted in unison to predeterminately circulate said fluid through said circuit or through the boiler.

[Claim 6 not printed in the Gazette.]

1,112,584. FRONT SUSPENSION FOR AUTOMOBILES. FRANK O. WOODLAND, Worcester, Mass. Filed June 19, 1913. Serial No. 774,578. (Cl. 21—141.)

1. A front suspension means for automobiles, comprising an axle-beam provided at its ends with vertically disposed tubular swivel-bearing sockets having closed tops and open at their bottom ends, and wheel-bearing swivel members having integral upright spindles thereon, movably fitting within said sockets, and a half elliptic spring underlying and supporting said axle-beam and having its ends supported by said swiveling members, substantially as set forth.

2. An axle beam provided at its respective ends with vertically disposed tubular bearing sockets having upper and lower interior bearing faces with an intermediate chamber having a lateral opening, a wheel-axle having a vertical swivel spindle formed with upper and lower cylindrical portions of different diameter, and having an intermediate annular shoulder, a spring centrally secured beneath the axle-beam, and its ends bifurcated and arranged in the openings in said bearing sockets and supported by a seat or washer upon the shoulders of said swivel spindles.

3. A front suspension axle for automobiles, consisting of an axle-beam provided with rearwardly projecting ears for attaching the chassis frame, and having at its ends vertically disposed cylindrical bearing-sockets, in combination with swiveling wheel-supporting members having thereon integral vertical pintle journals that movably fit within said sockets, and a half-elliptic leaf spring centrally secured to the axle-beam and having its ends supported by shoulders or seats upon said swivel-pintles that move endwise within the bearing-sockets.

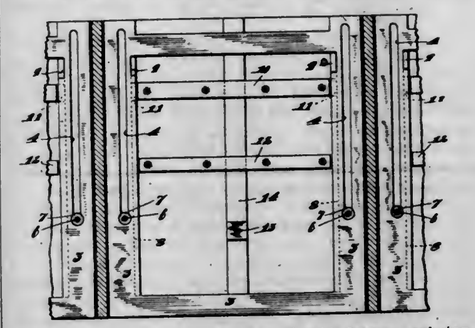
4. In combination substantially as described, of the dual-flanged axle-beam having frame-attaching ears projecting from its rear side, and provided with depending tubular sockets, swiveling wheel-axles having vertical spindles telescoping within said tubular sockets, a semi-elliptic leaf spring extending beneath said axle-beam with its ends resting upon washers carried by shoulders formed on said spindles, said axle-beam carried upon said spring and provided with integral downwardly projecting lugs located at intermediate positions above the respective wings of the spring.

5. In a front suspension mechanism for the purpose set forth, an axle-beam provided at its ends with vertically disposed tubular bearing-sockets, each having an upper bearing portion, a lower bearing portion, and an intermediate spring-receiving space; in combination, with the swiveling wheel-axles, each provided with a hollow upright swivel-spindle fixed thereto, said spindles having upper and lower journal portions of different diameter fitting within said bearing-sockets, and a spring-supporting ledge and spring seats upon said spindles, a spring carried by the swivel-members and supporting the axle-beam.

[Claims 6 to 9 not printed in the Gazette.]

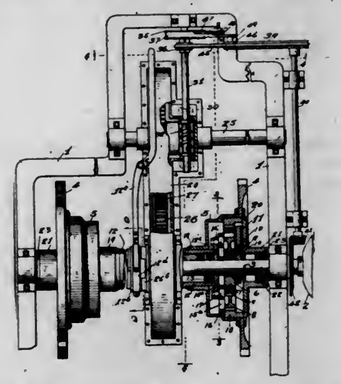
1,112,585. CABINET. CHARLES A. ABBATH, Quincy, Ill. Filed Sept. 17, 1913. Serial No. 790,155. (Cl. 45—77.)

A cabinet comprising a casing provided with a drawer compartment; a frame slidable in said compartment and having longitudinal grooves in the inner faces of the frame sides, there being entry notches at the extreme inner ends of said grooves; means for limiting the movement of said slidable frame; a drawer snugly fitting said compartment and slidable on said frame, said notches being located at a greater distance from the front of said frame than the length of said drawer; a cross bar on the bottom of said drawer at the rear and provided with tongues sliding in said grooves and adapted to enter said notches; and stops on said drawer and frame arranged to



engage after partial withdrawal of said drawer, substantially as described.

1,112,586. POWER-TRANSMISSION AND SPEED-CONTROLLING DEVICE. WILLIAM P. ALLEN, Chicago, Ill. Filed Dec. 18, 1912. Serial No. 737,380. (Cl. 74—35.)



1. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis, and means controllable at will for rotating the trammel device about the axis of the shaft.

2. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis; means for rotating the trammel device about the axis of the shaft, and means for varying at will the rate of such rotation.

3. In a power-transmitting device, in combination with a rotating shaft; an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a plate surrounding the shaft and means for holding it against rotation therewith; a trammel plate mounted on the shaft between the last-mentioned plate and the spur gear, said trammel plate having slots in diametral lines, transverse to each other; abutments on the gear engaging said slots in one of said lines, and abutments on the plate engaging the slots in the other of said lines; a sleeve co-axial with the shaft engaged endwise with the plate for rotating or

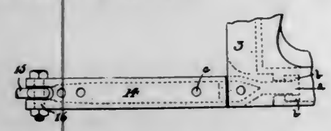
holding the same against rotation about the shaft; a casing journaled on the sleeve and rigid with said internal gear, and means for holding the sleeve against rotation about the shaft.

4. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing therewith and journaled concentrically with the shaft; a sleeve encompassing the shaft, and roller bearings by which it is spaced therefrom and journaled thereon, the means by which the internal gear is journaled concentrically with the shaft comprising a casing rigid with said gear and journaled on the sleeve; a trammel device for controlling the rotation of the spur gear about its own axis, comprising a plate within the last-mentioned casing engaged by the sleeve for holding thereby or rotation therewith; a trammel plate interposed between the last-mentioned plate and the spur gear having sliding connection with both, said connections being for sliding in lines transverse to each other, and means for controlling the rotation of the sleeve about the shaft.

5. In a power-transmitting device, in combination with a rotating shaft, a casing sleeve encompassing the shaft for a part of its length; two power-transmitting wheels, one at each end of the sleeve, each having a hollow hub constituting a gear casing, said casing being journaled at one end directly on the sleeve, and at the other end indirectly on the shaft beyond the end of the sleeve; ball bearings interposed on the shaft between the same and the sleeve for journaling the latter on the former, and ball bearings by which the outer end of the wheel hub is journaled on the shaft; collars which close the outer ends of the casing hubs and are journaled directly on the shaft, and gear trains within the casing hubs of the power wheels, respectively, for transmitting rotation from the shaft to said wheels.

[Claims 6 to 21 not printed in the Gazette.]

1,112,587. CAR-UNDERFRAME. JOHN ALLISON, Dravosburg, Pa., assignor, by mesne assignments, to Pittsburgh Equipment Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 25, 1910. Serial No. 545,799. (Cl. 105—76.)



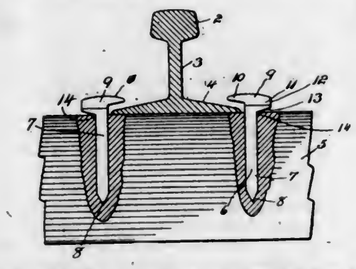
1. In an underframe for cars, a double body-bolster portion having an inner end member, a platform portion, and an intermediate portion comprising the end member of the underframe and a transverse member, all formed as an integral metallic structure, integral side members connecting said end members, integral centrally disposed beams extending longitudinally of the car and connecting the said end members, said beams each having a portion projecting beyond the end member of the underframe, said projecting portion being of greater depth than the remaining portion of the beam.

2. In an underframe for cars, a double body-bolster portion having an inner end member, a platform portion, and an intermediate portion comprising the underframe end member and a transverse member all formed as an integral metallic structure, integral side members connecting the said end members, integral beams extending longitudinally of the car and connecting the said end members, said beams each having a portion projecting beyond the end member of the underframe, said projecting portion being of greater depth than the remaining portion of the beam, an integral recessed transversely extending member on the body-bolster portion connecting the longitudinally extending beams, and a separable center plate casting disposed in the recess of the said connecting member.

3. The combination of a railway car underframe comprising a body bolster portion integral with the car underframe, of a head-seat formed integral with the body bolster portion, and a truss-rod anchor provided with a head engaging the seat on the body bolster, said truss-rod anchor projecting beyond the body bolster portion.

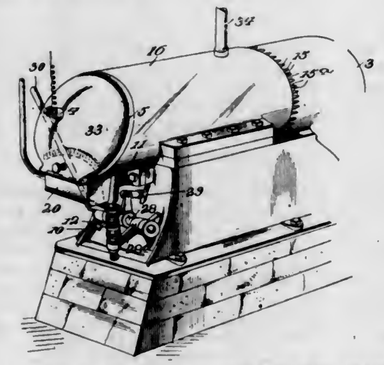
4. A railway car underframe provided with an integral body bolster portion, a head-seat integral with the body bolster portion, a truss-rod anchor formed with a head engaging the head-seat, and means for securing the truss-rod anchor rigidly to the underframe.

1,112,588. RAILROAD-SPIKE. JOHN H. ANNIS, Hillsboro, N. H., assignor of one-half to Clifford F. Tresca, Jacksonville, Fla. Filed Sept. 24, 1913. Serial No. 791,588. (Cl. 85—28.)



A railroad spike comprising a pointed shank and a T head, said T head comprising a projecting portion having an inclined bottom for engagement with the foot of a railroad rail and also comprising a projecting portion having an inclined bottom for engagement with the upper surface of a wooden cross tie, said last mentioned projecting portion having also a vertical wall adapted to enter the railroad tie to prevent transverse movement of the spike, the said last mentioned projecting portion being thicker than the first mentioned projecting portion whereby the said inclined bottom thereof will engage the wooden tie before the said inclined surface of the first mentioned projecting portion will engage the surface of the rail, the whole arranged in such manner that when the said spike is driven into its extreme lowermost position the said inclined surface on the second mentioned projecting portion will engage the surface of the tie to cause the spike to move transversely toward the rail, substantially as described and for the purposes set forth.

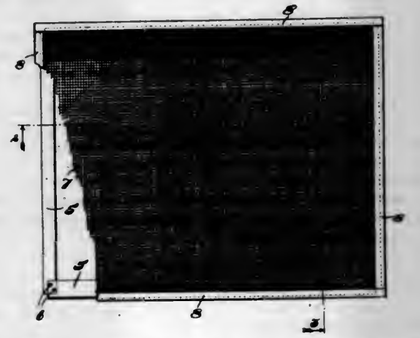
1,112,589. INTERNAL-COMBUSTION ENGINE. HENRY W. ASHMUSEN, Kings Park, N. Y. Filed Apr. 1, 1910. Serial No. 552,819. (Cl. 123—171.)



In an internal combustion engine, a cylinder having an air chamber formed at its head end, said cylinder being

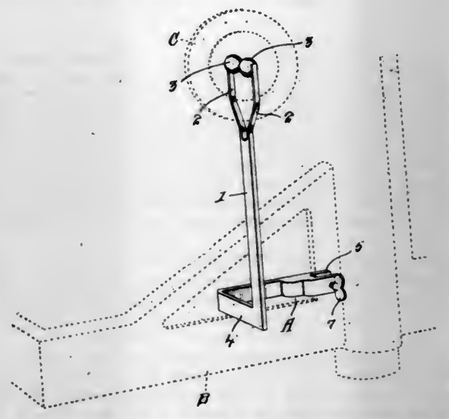
provided between its inner and its outer surface with a plurality of longitudinally extending channels spaced from each other by webs connecting the inner and outer portions of the wall of the cylinder, said channels being disposed at suitable intervals around the cylinder, one end of each channel being open for the admission of air, the other end opening into said chamber formed in the head of the cylinder, and said head chamber connecting with a passage to the intake port of the cylinder, and means for vaporizing a charge disposed in said last named passage.

1,112,590. WINDOW-SCREEN. HENNING BACKSTROM, Chicago, Ill. Filed July 25, 1912. Serial No. 711,556. (Cl. 156—14.)



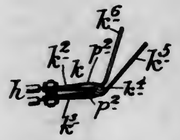
A window screen comprising a frame provided with recesses at its four outer corners; screen fabric stretched over said frame and folded upon the same at the edges, the corners of said fabric being folded into said recesses; and removable U-shaped channel members placed over the sides and ends of said frame to secure said fabric thereto, substantially as described.

1,112,591. ERASER ATTACHMENT FOR TYPEWRITERS. CARLTON E. BEEM, Atlanta, Ga., assignor of one-third to Fred A. Bishop, Atlanta, Ga., and two-thirds to George Hancock, Atlanta, Ga. Filed Sept. 17, 1910. Serial No. 582,471. (Cl. 248—20.)



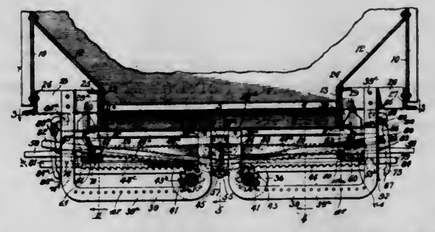
An attachment for a typewriting machine consisting of an eraser holder embodying an L-shaped supporting and clamping base, one arm of which is terminally slotted so that when in its applied position it embraces an upright member of the frame of the typewriting machine, a binding screw for fastening the slotted end of said arm in place, the other arm of said L-shaped base being adapted to extend outwardly across and supported upon a horizontal member of the frame of the typewriting machine, a standard rising from the extremity of the last mentioned arm and having its upper part bifurcated forming spring eraser holding jaws, and spherical members secured to and between said jaws in normal contacting engagement and between which an eraser is adapted to be yieldingly held.

1,112,592. BURGLAR-ALARM DEVICE. LEWIS H. BERG, New York, N. Y., assignor of one-half to Louis Jerkowski, New York, N. Y. Filed Aug. 16, 1913. Serial No. 785,082. (Cl. 177—202.)



In an apparatus of the class described, an electric circuit making and breaking device comprising spring-operated jaws hinged together and normally held in contact and provided with diverging thin flat shanks, and electric circuit wires connected with said jaws, and the spring by which the jaws are operated being wound on the pintle pin of the hinge by which said jaws are connected and being provided with projecting portions which bear on the backs of said jaws.

1,112,593. DUMP-DOOR-OPERATING MECHANISM. HERBERT A. BOWEN, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Oct. 18, 1910. Serial No. 587,691. (Cl. 105—185.)



1. In a car having a dump door, a shaft for holding said door in a closed position, a ratchet wheel fixed to said shaft, and a ratchet bar adapted to engage said wheel and to give said shaft a movement with relation to its supporting position, the teeth on said wheel being under-cut to prevent disengagement of the teeth of the ratchet bar therefrom.

2. In a car having a dump door, a shaft for holding said door in a closed position, a ratchet wheel fixed to said shaft, and a ratchet bar adapted to engage said wheel and to give said shaft a movement with relation to its supporting position, the teeth on said wheel being under-cut and the engaging surfaces of the teeth on the ratchet bar having a backward slope to prevent disengagement of said teeth.

3. In a car having a dump door, a shaft for holding said door in a closed position, a ratchet wheel fixed to said shaft, and a ratchet bar adapted to engage said wheel and to give said shaft a movement with relation to its supporting position, the teeth on said wheel having curved faces, and the engaging surfaces of the teeth on the ratchet bar having a backward slope to prevent disengagement of said teeth.

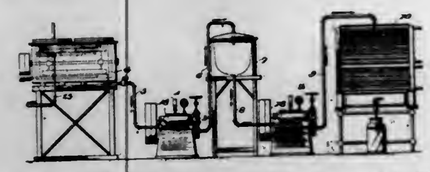
4. In a car having a dump door, a supporting shaft for said door, a reciprocating ratchet bar adapted to give said shaft a movement with relation to its supporting position,

and means for retaining during the return stroke of said bar, said shaft in position at the end of each advancing stroke of the reciprocating movement of the bar.

5. In a car having a dump door, a supporting shaft for said door, a ratchet wheel fixed on said shaft, a reciprocating ratchet bar adapted to engage said wheel and to give it a rotary motion when reciprocated, means by which the rotation of said shaft causes its movement with relation to its supporting position, and means for retaining during the return stroke of said bar, said shaft in position at the end of each advancing stroke of the reciprocating movement of the bar.

[Claims 6 to 38 not printed in the Gazette.]

1,112,594. METHOD OR PROCESS OF HOMOGENIZING CREAM. HENRY N. BRAWNER, Jr., Washington, D. C. Filed Aug. 28, 1912. Serial No. 717,497. (Cl. 99—2.)

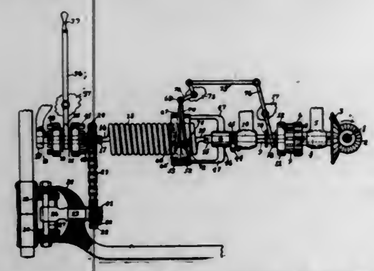


1. The improvement in the art of homogenizing cream which consists in subjecting the cream to repeated homogenizing action to avoid the occurrence of curd in the final homogenized product.

2. The herein described process which consists in subjecting cream to a homogenizing action, and then subjecting the cream homogenized in the first action to a second homogenizing action to break up the curd formed during the first homogenizing action.

3. The hereindescribed process which consists in heating cream to a suitable temperature, subjecting the heated cream to a homogenizing action, repeating such homogenizing action upon the cream, and then cooling the cream.

1,112,595. EMERGENCY DRIVING APPARATUS FOR MOTOR-VEHICLES. WILLIAM BROWN, West Cummington, Mass. Filed Jan. 11, 1913. Serial No. 741,575. (Cl. 21—90.)



1. The combination, in a motor vehicle having a main driving shaft for rotating the rear carriage wheels, of auxiliary apparatus including a driving spring for rotating at least one of the front carriage wheels and means for detachably connecting the spring with said shaft for winding up the spring.

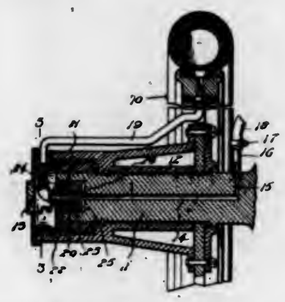
2. The combination, in a motor vehicle having a main driving shaft for rotating the rear carriage wheels, of emergency spring means for rotating at least one of the front carriage wheels and including a medium for receiving and storing mechanical energy, means for transmitting energy from said shaft to said medium, means for releasing at will the energy stored in said medium, and means for transmitting the energy so released to said front vehicle wheel.

3. In a motor vehicle having a driving shaft for rotating the rear carriage wheels, auxiliary apparatus for rotating at least one of the front carriage wheels and including a helically formed spring, means for detachably connecting the shaft with one end of the spring for winding up the same, means for securing the opposite end of the spring in normally stationary position, means for connecting said stationary end of the spring with said front wheel, and means for releasing the spring when under tension.

4. In motor vehicles having a driving shaft for rotating the rear carriage wheels, auxiliary motor apparatus including a spirally formed spring, a shaft secured to one end of the spring and detachably connected to the main shaft for rotating the spring, means for securing the opposite end of the spring in stationary position, a separate shaft secured to the stationary end of the spring, means for releasing the spring when under tension, and means for transmitting the energy imparted to said shaft at the normally stationary end of the spring when released, to at least one of the front carriage wheels for rotating the same.

5. In motor vehicles having a driving shaft for rotating the rear carriage wheels, auxiliary means for rotating at least one of the front carriage wheels and including a spiral spring, means for connecting one end of the spring with the front wheel, means for detachably connecting the opposite end of the spring with the shaft for winding up the spring, and means for automatically disconnecting the spring from said shaft.

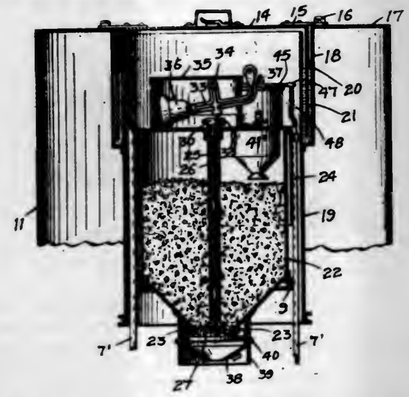
1,112,596. MEANS FOR TIRE INFLATION. LOUIS BURGGRAF, Jr., Oglesby, Ill. Filed May 28, 1913. Serial No. 770,540. (Cl. 152—11.)



In a means for tire inflation, the combination with an axle having an air supply channel therein and a pneumatic tired wheel on the axle, of the axle being provided in its free end with a socket, a member threaded in the socket and having a bore in alinement with the air passage of the axle, the inner end of the bore being countersunk, a nipple rotatable in the bore of the said member, a head on the nipple seated in the countersunk portion of the bore and a suitable conveying member extending from the other end of the nipple to the periphery of the wheel.

1,112,597. GAS-GENERATOR. CLAUD J. CLEFTON, Owatonna, Minn., assignor to The Clefton Company, Owatonna, Minn., a Corporation of Minnesota. Filed July 27, 1912. Serial No. 711,854. (Cl. 48—38.)

1. An acetylene generator comprising a tank adapted to contain a supply of water, a carbid can supported within said tank and means for controlling the discharge of the carbid from said can, an auxiliary carbid can mounted in the top of said first named can and partly within it and having a discharge opening through which the carbid from said auxiliary can is discharged into said first named can, a valve for closing the discharge opening in said auxiliary can, a stem for said valve projecting through the top of said auxiliary can, a cover for said tank between which and said first named carbid can the upper portion of said auxiliary can projects to allow access to said auxiliary valve stem when said cover is removed.



2. An acetylene generator comprising a tank adapted to contain a supply of water, a carbid can having discharge openings and means for controlling the discharge of the carbid from said can, an auxiliary carbid can having a discharge opening and a valve therefor, and a cover, said auxiliary can being positioned partly within said carbid can, whereby filling of said auxiliary can is permitted without opening said carbin can.

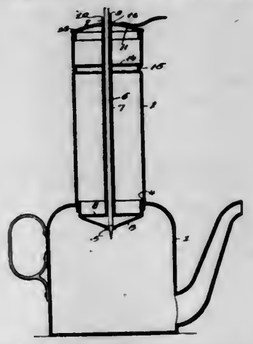
3. An acetylene generator comprising a tank adapted to contain a supply of water, a carbid can having a discharge opening and means for controlling the discharge of carbid from said can, an auxiliary carbid can mounted in the top of said first named can and partly within it and having a discharge opening within said first named can and a filling opening on the outside thereof, and a cover for said auxiliary carbid can.

4. An acetylene generator comprising a tank adapted to contain a supply of water, a carbid can mounted therein and having a discharge port, means for regulating the flow of carbid from said can, an auxiliary carbid can arranged to discharge its contents into said first named can, said auxiliary can being positioned partly within said carbid can, whereby filling of said auxiliary can is permitted without opening said carbid can, a valve normally closing the flow of carbid from said auxiliary can, and a rod within control of the operator for actuating said auxiliary can valve to release the carbid therein.

5. An acetylene generator comprising a tank adapted to contain a supply of water, a carbid can supported within said tank and having a discharge opening and means for controlling the discharge of the carbid from said can, an auxiliary carbin can mounted in the top of said first named can and projecting above the same and having a discharge opening within said first named carbin can, a valve for said discharge opening, said auxiliary can being adapted to contain a night charge of carbid and having a suitable opening and a cover therefor, and means for operating the valve of said auxiliary carbid can through the top thereof, said auxiliary can being located partly within said carbid can and accessible for filling purposes without opening said first named carbid can.

1,112,598. PERCOLATING COFEE-POT. WALTER H. COOK, New Orleans, La., Filed May 28, 1912. Serial No. 700,267. (Cl. 53—3.)

1. In a coffee pot, a boiling chamber, a percolating chamber communicating therewith, a tube projecting beyond the percolating chamber and having a stepped upper end, a needle valve to control the drip of coffee from the percolating chamber to the boiling chamber, the valve having a laterally projecting pin to engage upon the stepped upper end of the tube, a cover for the percolating chamber, the cover having an opening through which the tube projects and having designations corresponding to the steps upon the upper end of the tube and means for holding the cover when closed upon the percolating chamber in a definite position with relation to said tube.

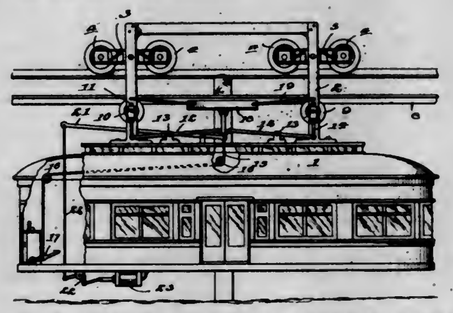


2. In a coffee pot, a boiling chamber, a percolating chamber communicating therewith, a tube projecting beyond the percolating chamber and having a stepped upper end, a needle valve to control the drip of coffee from the percolating chamber to the boiling chamber, the valve having a laterally projecting pin to engage upon the stepped upper end of the tube, and a perforated plate provided upon the lower end of the tube and supported upon the bottom of the percolating chamber, the plate in turn supporting the tube.

3. In a coffee pot, a boiling chamber, a percolating chamber communicating therewith, a tube projecting beyond the percolating chamber and having a stepped upper end, a needle valve to control the drip of coffee from the percolating chamber to the boiling chamber, the valve having a laterally projecting pin to engage upon the stepped upper end of the tube, and a removable cover closing the upper end of the percolating chamber and provided with an opening through which the tube projects.

4. In a coffee pot, a boiling chamber, a percolating chamber having an opening in its bottom communicating with the boiling chamber, a removable cover for the percolating chamber, a valve extending vertically through said percolating chamber and formed to regulate the effective size of said opening, a tube inclosing the valve, the upper ends of the valve and the tube projecting through the cover and the valve being supported by the tube and being adjustable lengthwise thereof, and a perforated screening plate for straining the infusion passing to said opening, said plate being removably supported within the percolating chamber and rigidly secured to the tube.

1,112,599. MONORAIL TRACTION SYSTEM. DAVID L. CURTIS, South Bend, Ind. Filed May 4, 1914. Serial No. 836,163. (Cl. 104—4.)

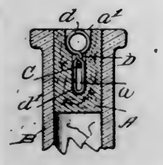


1. A monorail system including a main rail, an auxiliary rail, a car, a frame rising from the car, drive wheels car-

ried by the frame and coöperating with the main rail, steadying wheels adjustably mounted in the frame and cooperating with the auxiliary rail, and means operable from the car for adjusting the steadying wheels.

2. A monorail system including a main rail, an auxiliary rail, a car, a frame rising from the car, drive wheels carried by the frame and coöperating with the main rail, steadying wheels adjustably mounted in the frame and cooperating with the auxiliary rail, levers connected to said steadying wheels, a foot pedal mounted on the car, and a connection intermediate said foot pedal and levers.

1,112,600. CORK-EXTRACTOR. GEORGE JANES DAVISON, Richmond, Va., assignor of one-half to Moses J. Summerfield, Richmond, Va. Filed Mar. 27, 1913. Serial No. 757,139. (Cl. 215—53.)



1. A stopper for bottles and the like having an axial opening extending inwardly from one end thereof and terminating short of the opposite end thereof, and an extractor which is normally disposed wholly within the said opening and incased by the stopper and which has a limited movement whereby to partially expose the same, for the purpose described.

2. A stopper for bottles and the like having an axial opening extending therein from one end, the opposite end of the said stopper being closed, an extractor movable longitudinally in the said stopper opening and wholly incased by the stopper in its normal inner position, and means for limiting the outward movement of the extractor, substantially as set forth.

3. A stopper for bottles and the like having a closed end and an axial opening extending therein from its opposite end, a comparatively rigid extractor having a longitudinal opening and movable bodily with respect to the said stopper and into the said stopper opening, and a cross pin extending through the said stopper and through the said extractor opening, for the purpose described.

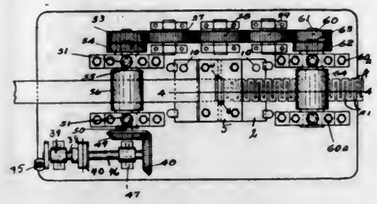
4. A stopper for bottles and the like having a closed end and an axial opening extending therein from its opposite end, an extractor movable within the said opening and entirely incased by the stopper in its normal position, the inner portion of said extractor having a longitudinal opening and the outer portion thereof also having an opening adapted to be exposed when the extractor is moved to an operative position, and a cross pin extending through the stopper and through the inner longitudinal opening of the extractor, for the purpose described.

5. A stopper for bottles and the like having a closed end and an axial opening extending therein from its opposite end, an extractor movable in the said opening and wholly incased by the stopper when in its normal position, said extractor being formed of wire, and a cross pin extending through the stopper and through the said extractor, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,112,601. PUNCHING-MACHINE. JOHN R. DEAN, North Girard, Pa., and AUGUST W. HOLMBERG, New York, N. Y., assignors, by direct and mesne assignments, of one-third to Walter K. Dean, North Girard, Pa., and two-thirds to said John R. Dean. Filed Nov. 22, 1913. Serial No. 802,408. (Cl. 164—50.)

1. In a punching machine for forming garment stays having slots formed therein extending alternately inwardly from opposite sides of the stay, the combination of a die actuating head; and a plurality of punching dies off-set to form slots extending from opposite sides of the stay, the dies overlapping and operating from opposite sides of the stay.



2. In a punching machine for forming garment stays having slots formed therein extending alternately inwardly from opposite sides of the stay, the combination of a die actuating head; and a plurality of punching dies off-set to form slots extending from opposite sides of the stay, the forward die being at one side of the stay to be punched and the rear die at the opposite side of the stay to be punched whereby the stay may be punched in sections forming a continuity in the arrangement of the slots, said dies being longer at their inner sides and severing the metal of the stay from the inner ends of the slots outwardly.

3. In a punching machine for forming garment stays having slots formed therein extending alternately inwardly from opposite sides of the stay, the combination of a die actuating head; and a plurality of punching dies off-set to form slots extending from opposite sides of the stay, the forward die being at one side of the stay to be punched and the rear die at the opposite side of the stay to be punched whereby the stay may be punched in sections forming a continuity in the arrangement of the slots, said dies being longer at their inner sides and severing the metal of the stay from the inner ends of the slots outwardly, said dies being also provided with guide extensions at their outer sides.

4. In a punching machine for forming garment stays having slots formed therein extending alternately inwardly from opposite sides of the stay, the combination of a die actuating head; a plurality of punching dies off-set to form slots extending from opposite sides of the stay, the forward die being at one side of the stay to be punched and the rear die at the opposite side of the stay to be punched whereby the stay may be punched in sections forming a continuity in the arrangement of the slots; and means for feeding the stay to correspond to the section punched.

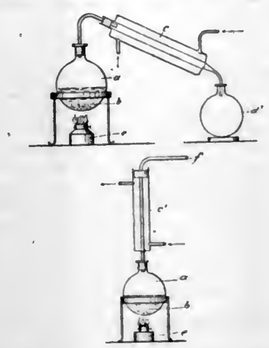
5. In a punching machine for forming garment stays having slots formed therein extending alternately inwardly from opposite sides of the stay, the combination of a die actuating head; a plurality of punching dies off-set to form slots extending from opposite sides of the stay, the forward die being at one side of the stay to be punched and the rear die at the opposite side of the stay to be punched whereby the stay may be punched in sections forming a continuity in the arrangement of the slots; and feeding means operating rotatively on the stay.

[Claims 6 to 8 not printed in the Gazette.]

1,112,602. PROCESS OF TREATING MINERAL OILS. JULIUS DEHNST, Halensee, near Berlin, Germany. Filed Apr. 17, 1906. Serial No. 312,070. (Cl. 196—26.)

1. The process of treating mineral oils which consists in adding sulfur to mineral oils, distilling a portion off before sulfureted hydrogen is evolved and heating the remaining oil until the evolution of sulfureted hydrogen has ceased.

2. The process of treating mineral oils which consists in adding sulfur to mineral oils, distilling off the portions boiling at and below 150 degrees centigrade and heating the remaining oil at temperatures above 150 degrees centigrade until the evolution of sulfureted hydrogen has ceased.



1,112,603. VEHICLE WHEEL-RIM. CHARLES W. GRESSLE, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 6, 1913. Serial No. 765,745. (Cl. 152—2.)

1. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; and a locking member attached to said rim so as to be bodily movable toward and away from the same, said member also being oscillatory into and out of engagement with the lug on said flange.

2. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim; and a locking member attached to said rim so as to be bodily movable toward and away from the same, said member also being oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon and adapted in one position to engage the lug on said flange and thereby secure the latter in place.

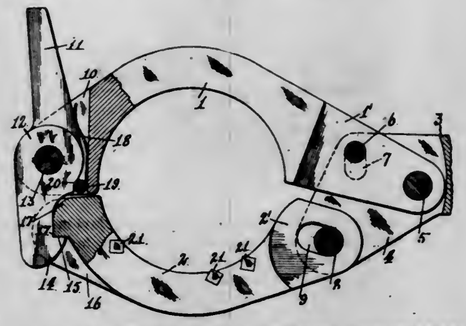
3. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim, said lug being provided with a shoulder; and a locking member attached to said rim so as to be bodily movable toward and away from the same, said member also being oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, and being adapted in one position to engage the shoulder on said lug.

4. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim, said lug being provided with a shoulder; a locking member attached to said rim so as to be bodily movable toward and away from the same, said member also being oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, and being adapted in one position to engage the shoulder on said lug; and means adapted to retain said member in such engaging position.

5. In a wheel, the combination with a tire-supporting rim and a split side-flange removably mounted on said rim; of means for locking said flange in place, said means including a lug on said flange adapted to project inside of said rim, said lug being provided with a shoulder; a locking member attached to said rim so as to be bodily movable toward and away from the same, said member also being oscillatory about an axis substantially parallel to a tangent to said rim at an adjacent point thereon, and being adapted in one position to engage the shoulder on said lug; and bolt and nut means adapted to retain said member in such engaging position.

[Claims 6 to 12 not printed in the Gazette.]

1,112,604. PIPE AND CASING TONGS. SAMUEL ALLEN GUIBERSON, Jr., San Francisco, Cal. Filed Mar. 7, 1914. Serial No. 823,194. (Cl. 81—66.)



1. A pipe and casing tongs comprising opposing jaws, a handle, a connection between the handle and the rear ends of the jaws for operating them to grip and to release the work; and an automatic latching device to lock the forward ends of the jaws, consisting of a spring controlled latch pivotally carried in one jaw, and formed with a beveled catch head, the end of the other jaw being formed to receive and to engage said head.

2. A pipe and casing tongs comprising opposing jaws, a handle, a connection between the handle and the rear ends of the jaws for operating them to grip and to release the work; an automatic latching device to lock the forward ends of the jaws, consisting of a spring controlled latch pivotally carried in one jaw, and formed with a beveled catch head, the end of the other jaw being formed to receive and to engage said head; and means for automatically holding the latch in position for engagement.

3. A pipe and casing tongs comprising opposing jaws, a handle, a connection between the handle and the rear ends of the jaws for operating them to grip and to release the work; an automatic latching device to lock the forward ends of the jaws, consisting of a spring controlled latch pivotally carried in one jaw, and formed with a beveled catch head, the end of the other jaw being formed to receive and to engage said head; and means for automatically holding the latch in position for engagement, consisting of a fixed pin carried by one of the jaws and a notch in the latch coacting with said pin.

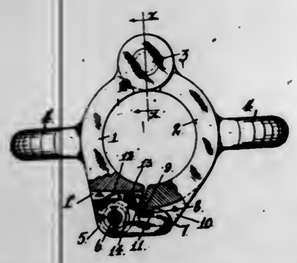
4. In a pipe and casing tongs, opposing jaws, one of said jaws having its forward end slotted, and the other of said jaws having its forward end grooved and beveled and shouldered in said groove; in combination with a spring-controlled latch pivotally mounted in the slotted forward end of the first jaw, said latch having a beveled catch-head adapted to coact with the grooved, beveled and shouldered forward end of the second jaw to automatically lock the two jaws together.

5. In a pipe and casing tongs, opposing jaws, one of said jaws having its forward end slotted, and the other of

said jaws having its forward end grooved and beveled and shouldered in said groove; in combination with a spring-controlled latch pivotally mounted in the slotted forward end of the first jaw, said latch having a beveled catch-head adapted to coact with the grooved, beveled and shouldered forward end of the second jaw to automatically lock the two jaws together, a fixed pin in the first jaw and a notch in the latch coacting with the pin to limit the movement of the latch and to hold it in position ready for engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,112,605. CASING-ELEVATOR. SAMUEL ALLEN GUIBERSON, Jr., San Francisco, Cal. Filed Mar. 7, 1914. Serial No. 823,195. (Cl. 57—9.)



1. A casing-elevator comprising opposing jaw-members having suspending lugs, said jaw-members being hinged together at one side, one of said jaw-members at its free extremity being grooved, and the other of said jaw-members having its free extremity grooved, beveled and shouldered; and a spring-controlled latch pivotally carried in the grooved free extremity of the first jaw-member, said latch having a beveled catch head adapted to enter and coact with the grooved, beveled and shouldered free extremity of the other jaw-member to automatically lock the two jaw-members together.

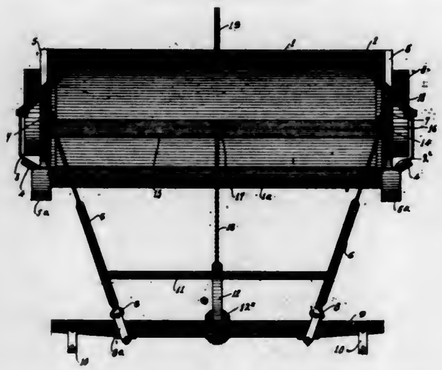
2. A casing-elevator comprising opposing jaw-members having suspending lugs, said jaw-members being hinged together at one side, one of said jaw-members at its free extremity being grooved, and the other of said jaw-members having its free extremity grooved, beveled and shouldered; a spring-controlled latch pivotally carried in the grooved free extremity of the first jaw-member, said latch having a beveled catch head adapted to enter and coact with the grooved, beveled and shouldered free extremity of the other jaw-member to automatically lock the two jaw-members together, and means for limiting the latch to hold it in position for engagement.

3. A casing-elevator comprising opposing jaw-members having suspending lugs, said jaw-members being hinged together at one side, one of said jaw-members at its free extremity being grooved, and the other of said jaw-members having its free extremity grooved, beveled and shouldered; a spring-controlled latch pivotally carried in the grooved free extremity of the first jaw-member, said latch having a beveled catch head adapted to enter and to coact with the grooved, beveled and shouldered free extremity of the other jaw-member to automatically lock the two jaw-members together, and means for limiting the latch to hold it in position for engagement, consisting of a fixed pin in the first jaw-member and a notch in the latch coacting with the pin.

4. A casing-elevator comprising opposing jaw-members having suspending lugs, said jaw-members being hinged together at one side, one of said jaw-members at its free extremity being grooved, and the other of said jaw-members having its free extremity grooved, beveled and shouldered; a fixed bolt traversing the groove of the free extremity of the first jaw-member with its ends countersunk below the outer surfaces of said jaw-member; and a spring controlled latch pivotally mounted on said bolt, said latch having a beveled catch head adapted to enter and to coact with the grooved, beveled and shouldered free extremity of the other jaw-member to automatically lock the two jaw-members together.

5. A casing-elevator comprising opposing jaw-members having suspending lugs, said jaw-members being hinged together at one side, one of said jaw-members at its free extremity being grooved, and the other of said jaw-members having its free extremity grooved, beveled and shouldered; a fixed bolt traversing the groove of the free extremity of the first jaw-member with its ends countersunk below the outer surfaces of the said jaw-member; a spring controlled latch pivotally mounted on said bolt, said latch having a beveled catch head adapted to enter and to coact with the grooved, beveled and shouldered free extremity of the other jaw-member to automatically lock the two jaw-members together, and means for holding the latch ready for use, consisting of the fixed pin in the first jaw-member and the notch in the latch coacting with the pin.

1,112,606. SCRAPER. CHARLES H. GUNN, Modesto, Cal. Filed Apr. 15, 1913. Serial No. 761,138. (Cl. 37—33.)

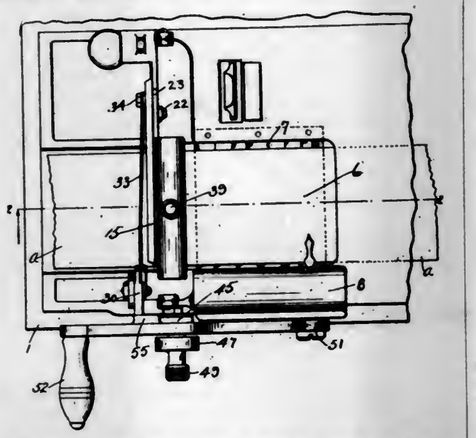


1. A device of the character described comprising a bowl, a frame comprising members rigidly disposed diagonally across each end of said bowl and projecting outwardly therefrom, a downwardly projecting member on each of said first members, wheels turnably disposed between said downwardly projecting members and the ends of said bowl, forwardly projecting members on said downwardly projecting members, said forwardly projecting members depending inwardly in front of said wheels and being secured to said bowl, downwardly projecting shoes on said last named members disposed in front of said wheels, runners disposed on the front of said bowl, and a draft means flexibly connected with said bowl, as described.

2. A device of the character described comprising a bowl, a frame secured to and projecting outwardly from each end of said bowl, wheels turnably disposed between said frames and said bowl, runners on the forward end of said bowl, draw bars flexibly connected with said bowl, a cross beam rigidly connected on said draw bars, another beam flexibly connected with the outer ends of said draw bars, a runner connected with both of said last named beams, a shoe on said runner, and means adjustably connecting said first named beam with said bowl, as described.

1,112,607. AUTOGRAPHIC REGISTER. WHITFIELD J. HAINER, Providence, R. I., assignor to Hainer Book-Keeping Machine Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 27, 1912. Serial No. 673,880. (Cl. 164—42.)

1. In an autograph register, a casing having a magazine chamber in which the rolls of record strips are mounted, feed rolls for said strips, a knife, clamping means for retaining said strips on both sides of said knife while being severed, and a hand lever for actuating said rolls when moved in one direction and for operating said knife when moved in the opposite direction.



2. In an autograph register, a casing having a magazine chamber in which the rolls of record strips are mounted, feed rolls for advancing said strips and retaining them on one side while being severed, a knife, a clamp operating on the side of the knife opposite said rolls to work in conjunction therewith for retaining the strips while being severed, connections between said knife and said clamp, and a hand lever for operating said roll to feed said strips when moved in one direction and for operating said knife and clamp when moved in the opposite direction.

3. In an autograph register, means for engaging and feeding one or more record strips, a knife for severing said strips, a clamping finger actuated by the movement of said knife to engage said strips while being severed, and a lever for actuating said feeding means when moved in one direction and for operating said knife when moved in the opposite direction.

4. In an autograph register, feed rolls for advancing one or more record strips, a knife for severing said strip, means for engaging the under side of said strips while being severed, and a hand lever for operating said feed rolls when moved in one direction and for simultaneously operating said knife and holding means when moved in the opposite direction.

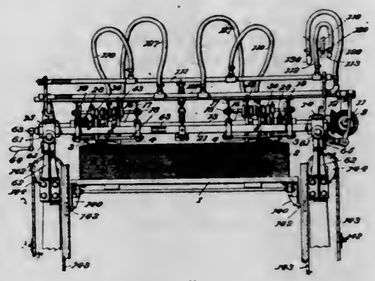
5. In an autographic register, feed rolls for advancing one or more record strips, a knife, a hand lever, means whereby a movement of said lever in one direction is caused to actuate said rolls to feed said strip and moved in the opposite direction to actuate said knife to sever the strip, and a clamping finger actuated by the movement of said knife to clamp one or more of said strips while being cut.

[Claims 6 to 20 not printed in the Gazette.]

1,112,608. RECOVERY OF VALUES FROM THE LEACH-WATER OF COPPER EXTRACTION. CLARENCE A. HALL, Mount Airy, Pa., assignor to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 14, 1912. Serial No. 725,627. (Cl. 23—13.)

The process of recovering salts and copper values from cinders of the class described, which consists in leaching the cinders with sufficient liquor for the extraction of substantially all of the copper values therefrom, treating the first leachings which contain practically all the salts of value other than copper for the recovery of such salts in addition to the copper content, and treating the remaining leachings for the recovery of the copper content only.

1,112,609. SHEET FEED OR SEPARATOR. CHARLES G. HARRIS, Niles, Ohio; Alfred F. Harris, administrator of said Charles G. Harris, deceased, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Feb. 19, 1910. Serial No. 544,753. (Cl. 101—40.)



1. In a sheet feed or separator, in combination, successive and progressingly acting means for combing a buckle in one or a plurality of sheets at the top of a pile of stock, means for engaging and holding the stock at a point near the engagement of the buckling means with the stock, such holding means preventing any portion of the stock from moving save the buckled portion, a separator located intermediate the buckling means and the holding means and designed to contact with the buckled portion of the stock while the buckling and holding means are in engagement therewith, and means for disengaging the buckling means from the stock, any buckled portion of the stock other than the top-most sheet being allowed to resume its previous position on the pile after the buckling means is disengaged therefrom.

2. In a sheet feed or separator, in combination, successive and progressingly acting means for combing a buckle in one or a plurality of sheets at the top of a pile of stock, means for engaging and holding the stock at a point near the engagement of the buckling means with the stock, such holding means preventing any portion of the stock from moving save the buckled portion, a separator located intermediate the buckling means and the holding means and designed to contact with the buckled portion of the stock while the buckling and holding means are in engagement therewith, and means for successively disengaging the buckling means and holding means from the stock, any buckled portion of the stock other than the top-most sheet being allowed to resume its previous position on the pile after the buckling means is disengaged from the latter and before the holding means is disengaged.

3. In a sheet feed or separator, in combination, a rotary buckler for successively and progressingly combing a buckle in one or a plurality of sheets at the top of a pile of stock, means for engaging and holding the stock at a point near the engagement of the combing buckler with the stock, such holding means preventing any portion of the stock from moving save the buckled portions, a separator, intermediate the combing buckler and the holding means, designed to contact with the buckled portion of the stock while the combing buckler and holding means are in engagement therewith, and means for disengaging the combing buckler from the stock.

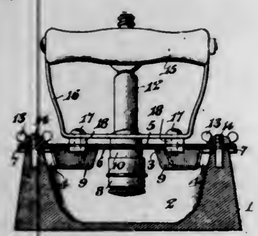
4. In a sheet feed or separator, in combination, a rotary buckler for successively and progressingly combing a buckle in one or a plurality of sheets at the top of a pile of stock, means for engaging and holding the stock at a point near the engagement of the combing buckler with the stock, such holding means preventing any portion of the stock from moving save the buckled portions, a separator, intermediate the combing buckler and the holding means, designed to contact with the buckled portion of the stock while the combing buckler and holding means are in engagement therewith, and means for successively disengag-

ing the combing buckler and the holding means from the stock.

5. In a sheet feed or separator, in combination, means for buckling one or a plurality of sheets at the top of a pile of stock, means for engaging and firmly holding the stock at a point near the engagement of the buckling means with the stock, such holding means preventing any portion of the stock from moving save the buckled portion, a separator located intermediate the buckling means and the holding means and designed to be lowered into contact with the buckled portion of the stock while the buckling and holding means are in engagement therewith, and means for raising such buckling means and holding means from engagement with the stock, the buckling means being disengaged therefrom before the holding means to allow any buckled portion of the stock other than the top-most sheet to resume its previous position on the pile.

[Claims 6 to 52 not printed in the Gazette.]

1,112,610. GAS-HEATED SAD-IRON. CHARLES WESTERMAN HARRIS and HERMANN BUCHHOLZ, Beaver Falls, Pa. Filed Mar. 21, 1914. Serial No. 826,134. (Cl. 158—23.1.)



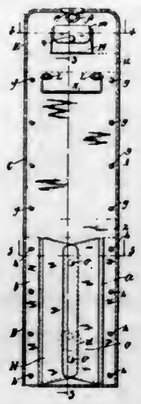
1. A sad iron including a hollow body having an imperforate inner wall and provided at the outer wall with an upper intermediate imperforate portion and having spaced outlet openings located at opposite ends of the intermediate portion, a top plate secured to the sad iron body and provided opposite the outlet openings with depending shields, and a centrally arranged burner carried by and depending from the top plate and located near the outer wall of the body, opposite the said intermediate portion thereof.

2. A sad iron including a hollow body having an imperforate inner wall and provided at the outer wall with spaced outlets, a top plate secured on the body, a centrally arranged handle carried by the top plate, a burner depending from the top plate and located between the said outlets, and a tube mounted on the top plate at the outer side of the said handle and communicating with the burner, said tube extending upwardly and outwardly at an inclination and adapted to hold a piece of rubber tubing out of the way of the operator.

1,112,611. FOLDING NECKTIE-HOLDER. LEOPOLD HAUSER, New York, N. Y., assignor of one-half to Simon Weil, New York, N. Y. Filed Sept. 17, 1913. Serial No. 790,227. (Cl. 190—43.)

1. A necktie holder comprising a main member having a back, an upper flap and an under flap, each of which flaps are connected to the back so that they can be moved from an extended or unfolded position to a folded position over the back, the holder having at the upper portion of the back a transversely extending rod for supporting the ties, the lower flap having thereupon overlapping inner flaps which provide between them on the one hand and the lower flap on the other a space for receiving the free ends of the ties when strung over the supporting rod.

2. A necktie holder comprising a main member having a body portion, an upper flap portion and an under flap portion, means for detachably securing the flaps together, a metallic tie supporting loop having a hinged connection to the back and inner flaps for receiving thereunder a portion of the ties when strung over the supporting loop, said inner flaps being hinged near the longitudinal side edges of a portion of the main member.



3. A necktie holder having a continuous strip of material which provides the outer portion of a main member comprising a back or body portion, an upper flap and an under flap, the holder also having a stiff tie supporting loop secured to the upper part of the body portion, a pair of inner flaps secured to the lower flap adjacent to the side edges thereof, and means for catching or detachably securing the side portions of the lower flap to the side portions of the body portion.

4. A necktie holder comprising a back, an upper flap and an under flap, a transversely extending tie supporting bar which is secured to the upper portion of the back, means for catching or detachably securing the top flap in place over and upon the under flap, means for catching or securing the side portions of the under flap to the side portions of the back, and overlapping inner flaps for receiving thereunder portions of the ties which have been placed on the supporting bar, the upper flap being provided with an opening for receiving a member upon which the holder may be hung, each of the flaps and also the back being provided with a stiffening member that is located between the lining of the holder and a strip that is continuous from the top flap to the lower flap and which serves as the outer portions of the upper flap, the body and the under flap.

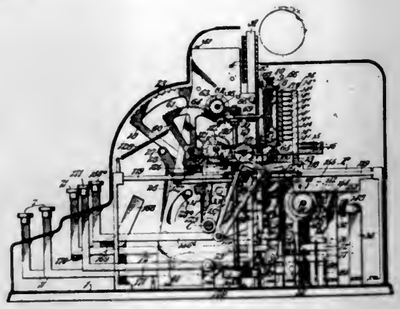
5. A folding necktie holder having a back, an under flap, an upper flap and a lock or catch for detachably securing the upper flap to the under flap, the lock or catch member which is on the upper flap having ears that are located one on the outside of the flap and one on the inside of the flap and each ear being provided with an opening for receiving a member or hook upon which the holder may be hung.

1,112,612. CALCULATING-MACHINE. JOHN I. HAYNES, St. Louis, Mo. Filed July 14, 1911. Serial No. 638,533. (Cl. 235—60.)

1. A calculating machine comprising an operating shaft, type-bars provided with shoulders, stop pins under control of the operator which coöperate with said shoulders to limit the movement of said type-bars in one direction and thus determine the position of the type thereon, an oscillating device coöperating with each type-bar and provided with a segmental-shaped rack that meshes with rack teeth on the type-bar, springs which tend to move said oscillating devices in one direction, a yieldingly operated member which is adapted to overcome the force of said springs and restore said devices and the type-bars to normal position, and means connected to the operating shaft of the machine for moving said yieldingly operated member into an inoperative position.

2. A calculating machine comprising an operating shaft, type-bars provided with shoulders, stop pins under control

of the operator which coöperate with said shoulders to limit the movement of said type-bars in one direction and thus determine the position of the type thereon, an oscillating device coöperating with each type-bar and provided with a segmental-shaped rack that meshes with rack teeth on the type-bar, springs which tend to move said oscillating devices in one direction, a yieldingly operated member which is adapted to overcome the force of said springs and restore said devices and the type-bars to normal position, means connected to the operating shaft of the machine for moving said yieldingly operated member into an inoperative position, and members connected to said oscillating devices and provided with indicating numbers which can be seen through a sight opening in the casing of the machine.



3. In a calculating machine, vertically disposed type-bars provided with rack teeth, a sector gear for each type-bar that meshes with said rack teeth, a segmental-shaped member integral with said sector gear type-bars, and arranged on the opposite side of the axis thereof, numbers on the periphery of said segmental-shaped member that correspond to the type numerals on said type-bars, yielding means that tends to move said sector gear so as to raise said type-bars upwardly, and means for locking said sector gear against movement.

4. In a calculating machine, type-bars, a pin carriage arranged to travel transversely of the type-bars and provided with pins which are moved into operative position by the depression of the key levers of the machine so as to determine the position of the type on the type-bars, a member on said carriage which moves automatically into position and prevents the movement of those type-bars which are not used during the printing of a number, and means for moving said member into an inoperative position when the pin carriage moves back to normal position.

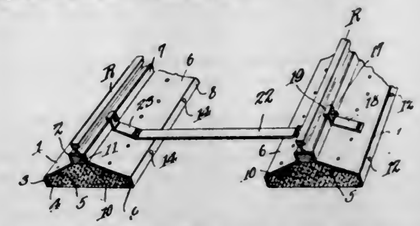
5. In a calculating machine, type-bars, a pin carriage provided with means under control of the operator for arresting the movement of said type-bars in one direction so as to determine the position of the type thereon, a stop plate on said carriage for arresting the movement of the type-bars that are not used during the printing of a number, automatic means for moving said stop plate into and out of operative position, and an accumulator comprising means for determining the position of the type on the type-bars when a total or sub-total is printed.

[Claims 6 to 38 not printed in the Gazete.]

1,112,613. RAIL-SUPPORT. FRANK O. HELLSTROM, Grove, N. D. Filed Feb. 18, 1914. Serial No. 819,448. (Cl. 238—5.)

1. A rail support including opposed casing members having spaced inwardly directed bottom portions, upwardly extending rail retaining portions, tie devices, and a plastic filling anchored between the casing portions and adapted to engage the road bed.

2. A rail support including opposed casing members having spaced inwardly extending bottom portions, and upwardly extending rail retaining portions, and a plastic material anchored between the casing members and completely filling the space therebetween and below the upwardly extending rail engaging portions said filling being adapted to bear downwardly upon the road bed.



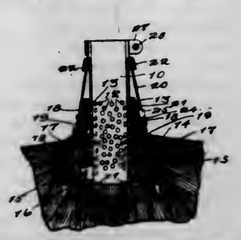
3. A rail support including opposed casing members having inwardly extending bottom portions and upwardly extending rail retaining portions, means connecting the casing members adjacent their bottoms for holding them against spreading, a plastic filling interposed between the members and anchored by said connecting means, a cushioning element interposed between the upstanding rail engaging portions and bearing upon the plastic material.

4. A rail support including opposed casing members having inwardly exfending bottom portions and upwardly extending rail retaining portions, means connecting the casing members adjacent their bottoms for holding them against spreading, a plastic filling interposed between the members and anchored by said connecting means, a cushioning element interposed between the upstanding rail engaging portions and bearing upon the plastic material, said rail engaging portions being extended upwardly above the cushioning member, and means extending transversely through the cushioning member and the upstanding rail engaging portions for holding said member and rail engaging portions together.

5. A rail support including opposed casing members having inwardly extending bottom portions and upwardly extending rail retaining portions, means connecting the casing members adjacent their bottoms for holding them against spreading, a plastic filling interposed between the members and anchored by said connecting means, a cushioning element interposed between the upstanding rail engaging portions and bearing upon the plastic material, said rail engaging portions being extended upwardly above the cushioning member, means extending transversely through the cushioning member and the upstanding rail engaging portions for holding said member and rail engaging portions together, and rail fastening devices engaged and held by said means.

[Claims 6 to 12 not printed in the Gazette.]

1,112,614. BROOM. JAMES C. HIGHTOWER, Atlanta, Ga., assignor of one-half to Paul F. Bauknight, Atlanta, Ga. Filed Nov. 3, 1913. Serial No. 798,987. (Cl. 15—24.)



1. In cleaning apparatus, the combination with a sleeve having its outer surface roughened, a layer of brush material surrounding the sleeve and engaging a portion of the roughened surface thereof, a supplemental attaching plate having its inner surface roughened and engaging a portion of the roughened surface of the sleeve and the exterior portion of said layer, and means to bind the layer and supplemental attaching plate to the sleeve.

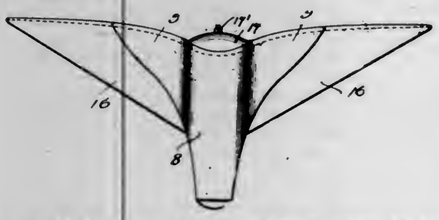
2. In cleaning apparatus, the combination with a sleeve perforated to provide outwardly extending teeth, a layer

of brush material surrounding the sleeve and engaging the lower portion of the toothed surface of the sleeve, supplemental attaching plates perforated for providing inwardly extending teeth engaging the upper portion of the toothed surface of the sleeve and the exterior of said layer, means binding the layer and supplemental attaching plates to the sleeve, and a handle having one end thereof inserted within the sleeve.

3. Cleaning apparatus comprising a tubular casing provided near its free end with tongues stamped therefrom, brush material surrounding the opposite end of the tubular casing and bound thereto, a lock-sleeve surrounding a portion of the tubular casing and brush material with the said tongues bent downwardly about the outer end thereof, and a contractible and expansible clamping ring engaging the tubular sleeve outwardly of and adjacent said tongues.

4. Cleaning apparatus comprising a tubular casing adapted to receive a handle and provided upon its exterior surface with friction means, brush material surrounding the tubular casing in engagement with the friction means with a portion of the friction means extending outwardly beyond the same, a supplemental plate having its inner face provided with friction means a portion of which engages the exposed friction means of the tubular casing and a portion of which engages the exterior surface of the brush material, means to bind the supplemental plate to the tubular sleeve, and means to bind the supplemental plate to the exterior surface of the brush material.

1,112,615. AIR-CRAFT. FREDERICK D. HOLLIDGE, Washington, D. C. Filed June 13, 1913. Serial No. 773,504. (Cl. 244—12.)



1. In an aeroplane, an air containing frame, an air-tight means inclosing said frame comprising an elastic and a rigid covering, the former of which automatically expands and contracts under barometrical air changes to provide, in conjunction with said rigid covering, lifting planes for assisting in the stabilization of the device.

2. In an air craft, an air containing body comprising an elastic covering a ribbed frame for distending the covering to form a plain unbroken surface in higher altitudes and adapted to be flexed between said ribs in lower altitudes, consistent with the barometrical atmospheric changes.

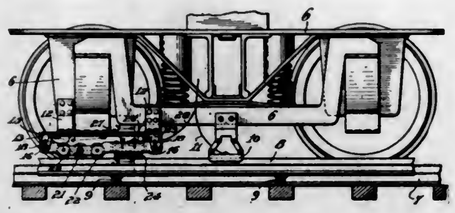
3. In an aeroplane, a frame including a rigid hollow elongated frame work, a fabric inclosing the frame work and supported thereby, a strut secured across the forward end of the frame work, wings extending over the body and secured to said strut, and a keel depending from said body, said keel being of an arcuate configuration and covered with flexible material for the purpose set forth.

4. In an air craft, a body including an elongated substantially cylindrical frame, said frame comprising a plurality of ribs and longitudinal strips, said body tapering toward the one end thereof, a flexible covering inclosing said frame adapted to contract and expand between said ribs under the influence of atmospheric changes, a strut extending transversely across said body portion, the midway portion of said strut being arched so as to conform to the curvature of said body, said strut tapering toward its extremities, a back plate arched over said body portion and having engagement with said strut, wings engaging said strut and said plate, and a keel depending from said body portion for stabilizing the craft.

5. In an air craft, a frame including an elongated tapering cylindrical body, comprising spaced apart ribs and longitudinally extending strips, a flexible elastic covering engaged over said frame, a back plate arched over the upper side of said frame, a strut comprising an elongated hollow element, the midway portion of which is arched and engaged with said frame, flexible wings engaging said plate and said strut, a keel depending from said frame, the covering of said frame extending downwardly around said keel and means associated with said frame for facilitating the withdrawing of air therefrom.

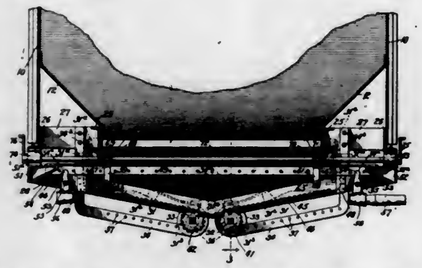
[Claims 6 to 15 not printed in the Gazette.]

1,112,616. THIRD-RAIL CLEANER. EDWARD FRED HORSTMANN, Aurora, Ill. Filed Nov. 3, 1913. Serial No. 798,898. (Cl. 104—176.)



A rail cleaner comprising a spring pressed frame; three spaced parallel cutter wheels mounted in said frame, the cutters on one wheel being disposed spirally thereon, the cutters on the second wheel being circular and disposed around said second mentioned wheel, and the cutters on the third wheel being spiral and in a different direction from those on said first mentioned wheel; vertical guides in said frame; a brush mounted in said vertical guides; and means for adjusting said brush in said guide, substantially as described.

1,112,617. DUMP-DOOR-OPERATING MECHANISM. WILLIAM J. HOSCEIT, Topeka, Kans., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 26, 1910. Serial No. 583,788. (Cl. 105—185.)



1. In a car having a dump door, a shaft for holding said door in a closed position, and a ratchet bar adapted to move said shaft with relation to its holding position.

2. In a car having a dump door, a shaft for holding said door in a closed position, a ratchet wheel fixed to said shaft, and a ratchet bar adapted to engage said wheel and to give said shaft a movement with relation to its supporting position.

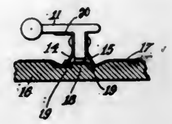
3. In a car having a dump door, a shaft for holding said door in a closed position, a ratchet wheel fixed to said shaft, a ratchet bar adapted to engage said wheel and to give it a rotary motion when reciprocated, and means by which said rotary motion may cause a movement of said shaft with relation to its supporting position.

4. A car having a bottom comprising a dump door, a supporting shaft for said door, a ratchet wheel fixed on said shaft, a ratchet bar meshing with and adapted to rotate said ratchet wheel in one direction when given a reciprocating movement, and means whereby the rotation of said shaft causes its displacement from its supporting position.

5. A car having a bottom comprising a dump door, a supporting shaft for said door, a ratchet wheel fixed on said shaft, a ratchet bar meshing with and adapted to rotate said ratchet wheel in one direction when given a reciprocating movement, means whereby the rotation of said shaft causes its displacement from its supporting position, and means by which said bar may be actuated from either side of the car.

[Claims 6 to 32 not printed in the Gazette.]

1,112,618. KEY FOR WATCHMEN'S REGISTERS. CHARLES H. JENKINS, Belleville, N. J., assignor to Newman Clock Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1911. Serial No. 666,317. (Cl. 234—41.)



1. The combination of a key for a watchman's clock, comprising a shank, a web secured to said shank, a ward on said web, and means on said ward for protecting the outer edge thereof against injury.

2. The combination of a key for a watchman's clock, comprising a shank, a web secured to said shank, a ward on said web having a die thereon, and means secured to said shank and projecting beyond said die to protect the latter from injury.

3. The combination of a key for a watchman's clock, comprising a shank, a web secured to said shank, a ward secured to said web having a die thereon, of a plate having a corresponding die and also having grooves adjacent said die, a record dial supported on said plate and located between said dies, and means on the key for flexing the dial into said grooves, whereby the said record dial is shedded from the die on said plate upon the separation of said dies.

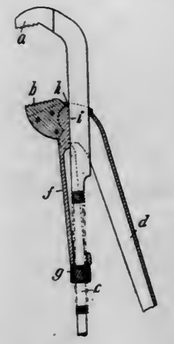
4. The combination of a key for a watchman's clock, a ward secured thereto having a die thereon, a plate adapted to support a record dial having a corresponding die thereon and grooves adjacent said die and means on the key for flexing the dial into said grooves whereby the said record dial is shedded from the die on said plate upon the separation of said dies.

5. The combination of a key for a watchman's clock, a ward secured thereto having a die thereon, a guard secured to the side of said ward and projecting beyond the same, a plate adapted to support a record dial thereon and having a die thereon corresponding to the die of the key ward, and a groove adjacent the die on said plate which receives the guard to indent the dial so that the latter will shed itself from the last mentioned die when the former die is removed therefrom.

[Claims 6 to 8 not printed in the Gazette.]

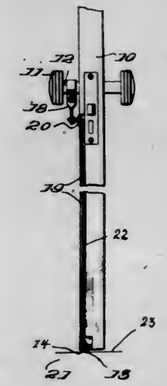
1,112,619. PIPE-TONGS. JOHAN PETTER JOHANSSON, Enköping, Sweden, assignor to Aktiebolaget Enkopings Verkstader, Enköping, Sweden. Filed June 26, 1913. Serial No. 775,835. (Cl. 81—79.)

Pipe tongs consisting of two legs provided with gripping jaws, one of said legs being provided with a thread, a nut engaging said thread, a sleeve surrounding said leg and having its lower end resting against said nut, the upper end of said sleeve being provided with a projection of circular segmental shape, the chord surface of said projection bearing against said first mentioned leg, the jaw associated with the other of said legs being provided with a rounded recess engaging the curved surface of said projection, and two segmental projections, one on each side of the last mentioned leg, facing the upper end of the



sleeve, said sleeve being provided with two corresponding recesses adapted to engage said two projections.

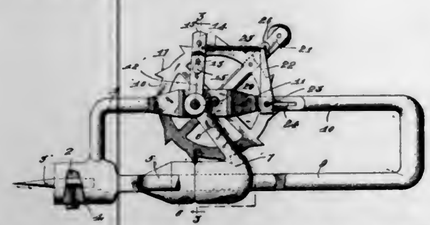
1,112,620. DOOR-HOLDING SPRING. GEORGE W. JOHNSON, Pigeon Cove, Mass. Filed June 19, 1913. Serial No. 774,680. (Cl. 16—6.)



1. A device of the class described comprising a resilient member adapted to be attached at one end beneath a door and having the intermediate portion depressed for engagement with the floor leaving the free end constantly spaced from the floor, a pull member connected to the elevated portion of the resilient member and prevented thereby from contacting with the floor, and means operatively associated with said pull member and controllable by the turning of a door knob for elevating said resilient member to release the depending portion thereof from contact with the floor.

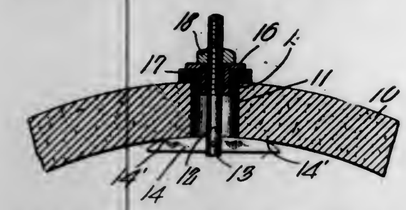
2. The combination with a door including a knob and its shank and having a recess in its lower edge and a channel in its vertical edge communicating with the recess, said door having a lateral guide aperture in the face thereof between the knob shank and the adjacent edge of the door and communicating with the channel, of a resilient member attached at one end of the door within the bottom recess, an arm attached to the shank of the knob, and a flexible pull member connected to said arm and extending through said guide and channel and concealed and protected within the same, said flexible member being connected to said resilient member and operating to elevate the same when the knob is rotated.

1,112,621. HAMMER-DRILL. FRANK JONES and WALDEMAR A. ENDTER, Rock Island, Ill. Filed Nov. 4, 1912. Serial No. 729,404. (Cl. 255—41.)



A hammer drill comprising a frame having primary and auxiliary parallel side members each having a yoke therein, a bit carried by the base of said primary member, a hammer head in the base of the yoke of said primary member, a shaft extending across the yoke in said auxiliary member, a hammer for causing said hammer head to operate the bit mounted on said shaft, an arm on one end of said hammer, a ratchet wheel journaled to said frame and adapted to engage said arm to rock the same thereby swinging the hammer away from said hammer head, and automatically active means for causing said hammer to strike said hammer head when the ratchet is disengaged from said arm.

1,112,622. OUTLET-VALVE FOR IRRIGATING DEVICES. GEORGE D. JONES, Kokomo, Ind. Filed Mar. 4, 1912. Serial No. 681,502. (Cl. 137—65.)



In a sub-soil irrigating device, a pipe having an opening; a plurality of superposed mica disks disposed on the exterior of the pipe about the opening; a support passing through the disks; an anchor on the support and engaging the interior of the pipe; adjusting means on the support and located outside of the pipe; and a sleeve surrounding the support and passing through the disks, the sleeve having a lateral flange of greater diameter than the opening and engageable by the adjusting means and one disk, the sleeve serving at once to protect the disks against contact with the support and to prevent relative lateral movement and mutual wearing friction between the disks.

1,112,623. WINDOW. JACKSON L. KAIL, Chicago, Ill. Filed Mar. 31, 1913. Serial No. 757,767. (Cl. 20—42.)

1. In combination, a window frame, upper and lower sashes, corresponding ends of the sashes having sliding and pivotal engagement with the window frame and devices connecting the other ends of the sashes, whereby the upper sash is moved downward and the connected ends of the sashes are moved toward the same side of the window frame when the lower sash is moved upward.

2. In combination, a window frame, upper and lower sashes, corresponding ends of the sashes having sliding and pivotal engagement with the window frame and lever mechanism connecting the other ends of the sashes, whereby the upper sash is moved downward and the connected ends of the sashes moved toward the same side of the window frame when the lower sash is moved upward.

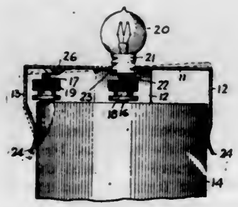
3. In combination, a window frame, upper and lower sashes, the lower end of each of the sashes having sliding and pivotal engagement with the window frame, and lever mechanism connecting the upper ends of the sashes, whereby the upper sash moves downward and the connected ends of the sashes move toward one and the same side of the window frame when the lower sash is moved upward, the lower end of one of the sashes moving slightly out of a vertical line as it moves relatively to the window frame.

4. In combination, a window frame, a pair of sashes normally disposed in substantially the same vertical plane, corresponding ends of the sashes having sliding and pivotal engagement with the window frame, levers pivoted to the other ends of each of the sashes, each of said levers being rigidly secured to one of a pair of meshing pinions substantially as described.

5. In combination, a window frame, a pair of sashes normally disposed in substantially the same vertical plane, corresponding ends of the sashes having sliding and pivotal engagement with the window frame, a pair of levers pivoted to the other end of each of the sashes, each lever of each pair being rigidly secured to a pinion meshing with the pinion secured to the corresponding lever of the other pair.

[Claims 6 to 10 not printed in the Gazette.]

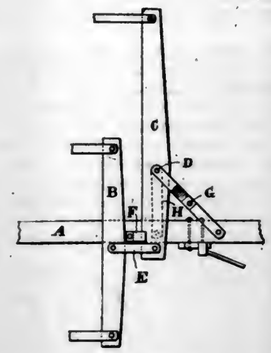
1,112,624. ELECTRIC-LAMP MOUNT. EDWARD S. KEOGH, Freeport, N. Y. Filed Dec. 11, 1913. Serial No. 805,954. (Cl. 240—8.5.)



An electric lamp mount, comprising a metallic socket plate having a screw-threaded opening to hold an electric lamp, said plate having integrally formed therewith, clips to extend over and grip the sides of an electric cell when forced therebetween; and a contact projection formed on the under side of said plate to engage one of the terminals of said electric cell.

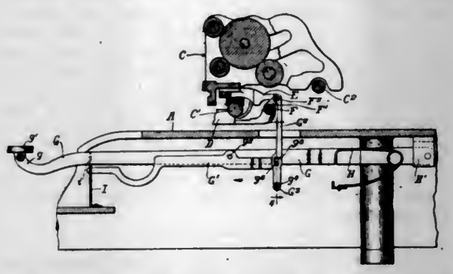
1,112,625. THREE-HORSE SWINGLETREE. RAGNAR KJUUS, Nes, near Aarnes, Norway. Filed Mar. 20, 1913. Serial No. 755,652. (Cl. 21—76.)

1. A three-horse swingletree comprising a beam, a swingletree pivotally connected therewith, a double tree pivotally connected with the swingletree and a stop arranged between the swingletree and double tree to limit the forward movement of the double tree when two horses are attached to the double tree and the swingle tree is left free.



2. A three-horse swingletree comprising a beam, a swingletree, a support between the beam and swingletree to which the latter is pivotally connected, a double tree, a link pivotally connecting the swingle and double trees, and a stop located on the beam between the swingletree and double tree whereby forward movement of the latter is limited when two horses are attached to the double tree and the swingletree is left free.

1,112,626. TYPE-WRITING MACHINE. THERON L. KNAPP, Woodstock, Ill., assignor to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 24, 1914. Serial No. 814,023. (Cl. 197—63.)



1. A carriage-stop device, comprising, in combination with a carriage-supporting frame and a rod adapted to rotate and slide endwise in said frame and provided with a stop-arm, means for rotating said rod to swing the stop-arm out of its carriage-arresting position, comprising a second rod arranged parallel with, and rigidly attached to, said rotative rod, a key-lever pivotally supported at its rear end, a secondary lever pivotally supported at its forward end and connected between its ends with the said key-lever, and a link connected with the rear end of the secondary lever and having sliding connection with said second rod.

2. The combination with a machine frame and a shift-frame mounted on the machine frame and adapted to support the paper-carriage, of a margin stop, consisting of a rod mounted to rotate in the shift-frame and provided with a stop-arm, and means for rotating said rod to swing the stop-arm out of its carriage-arresting position, comprising a key-lever pivoted at its rear end to the rear part of the machine frame, a secondary lever having pivotal connection at its forward end with the forward part of the machine frame and connected between its ends with said key-lever, and a link connected with the rear end of said secondary lever and having operative connection with said rotative rod.

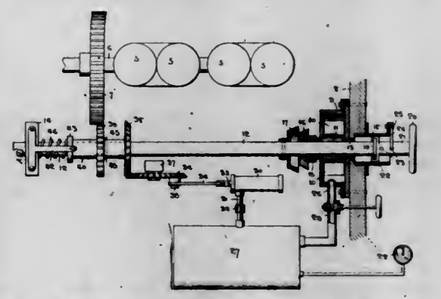
3. The combination with a carriage-supporting frame, of a margin stop, consisting of a rod mounted to rotate in said frame and provided with a stop-arm, and means for rotating said rod to swing the stop-arm out of its carriage-arresting position, comprising a key-lever pivotally supported at its rear end, a secondary lever pivotally supported at its forward end and connected between its ends with the key-lever, a link connected at its lower end with the rear end of said secondary lever and having operative connection at its upper end with said rotative rod, and means connecting the said link with said secondary lever, affording vertical adjustment of said link relatively to said secondary lever.

4. The combination with a carriage-supporting frame, of a margin stop, consisting of a rod mounted to rotate in said frame and provided with a stop-arm, and means for rotating said rod to swing the stop-arm out of its carriage-arresting position, comprising a key-lever pivotally supported at its rear end, a secondary lever pivotally supported at its forward end and connected between its ends with the key-lever, a link having operative connection at its upper end with said rotative rod, and means connecting the lower end of said link with said secondary lever, embracing an arm, parallel with the link, having pivotal connection with the said secondary lever and rigidly attached to the link by means affording adjustment of the said arm endwise relatively to the link.

5. The combination with a carriage-supporting frame and a margin stop, consisting of a rod mounted to rotate in said frame and provided with a stop-arm, of means for rotating said rod to swing the stop-arm out of its carriage-arresting position, comprising a substantially horizontal, vertically swinging lever, a link having operative connection at its upper end with said rotative rod, an arm connecting the lower end of said link with said lever, said arm being pivoted to the lever, and means affording adjustable and rigid connection of said arm with said link, comprising a slot in one of said parts and a clamp-screw inserted through the other of said parts and said slot.

[Claim 6 not printed in the Gazette.]

1,112,627. STARTING DEVICE. JOHN D. KNEEDLER, Sioux City, Iowa, assignor of one-half to Buel Couch, Sioux City, Iowa. Filed Apr. 20, 1912. Serial No. 692,085. (Cl. 123—179.)



1. In a starting device a driver member, a fluid motor, a spindle having a flanged end and adapted to be reciprocated, a guide adjacent to said flanged end, and non-rotatable means associated with the guide and engaging the flanged end for reciprocating the spindle, said spindle having a clutch member secured thereto, said fluid motor having a clutch member secured thereto and adapted to be alternately engaged and disengaged by the first said clutch member when the spindle is reciprocated.

2. In a starting device a driver member, a pump, a fluid motor, a spindle adapted to be reciprocated, a slidable gear member reciprocable with said spindle and adapted to be alternately moved into and out of operative relation with said pump, means for retaining the slidable gear member in either of several optional and alternate positions while the spindle is being reciprocated relative

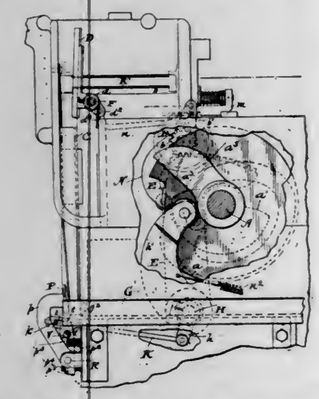
thereto, and means for alternately throwing the spindle into and out of operative relation with the fluid motor while the slidable gear mechanism is in either of two alternative positions.

3. In a starting device, a driver member, a pump, a fluid motor, a spindle adapted to be reciprocated, a slidable gear member keyed on said spindle and having limited longitudinal movement relative thereto and adapted to be reciprocated with the spindle, said slidable gear member being also adapted to be moved into and out of operative relation with said pump, means for retaining the slidable gear member against longitudinal movement while the said spindle is in either of several optional and alternative positions and while the latter is being reciprocated, and means for alternately throwing the spindle into and out of operative relation with the fluid motor while the slidable gear mechanism is in either of two alternative positions.

4. In a starting device, a driver member, a fluid motor, a spindle, a slidable gear member keyed to said spindle and movable longitudinally relative to the latter, means for normally tending to move said gear member into operative position, means to lock said gear member in either of several optional and alternative positions while the spindle is being reciprocated relative thereto, and means for alternately throwing the spindle into and out of operative relation with the fluid motor while the slidable gear mechanism is in either of two alternative positions.

5. In a starting device, a driver member, a pump, a fluid motor, a spindle, a slidable gear member keyed to said spindle, movable longitudinally relative to the latter and adapted to be moved into and out of operative relation with said pump, means for normally tending to move said gear member into operative position, means to lock said gear member in either of several optional and alternate positions while the spindle is being reciprocated relative thereto, and means for alternately throwing the spindle into and out of operative relation with the fluid motor while the slidable gear mechanism is in either of two alternative positions.

1,112,628. SLUG-DELIVERY MECHANISM FOR LINE-CASTING MACHINES. ARTHUR W. LE BOEUF, Woonsocket, R. I., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1912. Serial No. 736,489. (Cl. 199—9.)



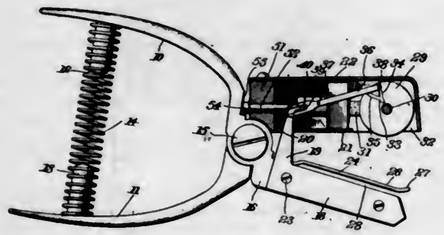
1. In a line casting machine, the combination with side trimming knives arranged so that the opening between them is substantially horizontal, and a slug chute arranged in front of and adjacent to the opening between said trimming knives, of a slug receiving shelf arranged in front of said trimming knives and adapted to assume a substantially horizontal position below the opening between said trimming knives whereby a slug pushed between said trimming knives will be delivered onto said shelf,—said shelf being tiltable about a horizontal forwardly extended axis, and means for tilting said shelf about said axis so as to carry it from said horizontal position to an inclined position such as will cause the slug thereon to slide from the shelf into said chute, and vice versa.

2. In a line casting machine, the combination with side trimming knives arranged so that the opening between them is substantially horizontal, and a slug chute arranged in front of and to one side of said trimming knives, of a forwardly extended and substantially horizontal rock shaft located below and in front of said trimming knives, a slug receiving shelf secured to said rock shaft in a substantially tangential position, mechanism including a cam and a spring for tilting said rock shaft so as to move the slug receiving shelf first to a horizontal slug receiving position, and then to an inclined slug discharging position and vice versa.

3. In a line casting machine, the combination with side trimming knives arranged so that the opening between them is substantially horizontal, and an inclined slug chute arranged with its open upper receiving end in front of and adjacent to said trimming knives, a slug receiving shelf which is tiltable about a horizontal forwardly extended axis and adapted to occupy a substantially horizontal position below and in front of the opening between said trimming knives and to be tilted into an inclined position whereby a slug thereon will be caused to slide into the open upper end of said slug chute, a galley arranged to receive slugs discharged from the lower end of said slug chute, a galley packer which normally occupies a position in substantial alinement with the left wall of said chute whereby it serves as the left end wall of the galley, a single prime mover, and means intermediate of said prime mover and tilting shelf and galley packer whereby said two parts are caused to move in proper synchronism.

4. In a line casting machine, the combination with side trimming knives arranged so that the opening between them is substantially horizontal, and a slug receiving shelf which is tiltable about a horizontal axis which is located below the opening between the trimming knives and extends forwardly from said trimming knives, said shelf being adapted to assume position such that its top surface is parallel with the openings between the trimming knives and a very short distance below the same, means for tilting said shelf about its axis to and from the receiving position above described, and a slug chute having an open upper end located in a position such that when the shelf is tilted a slug which slides from the low end of said shelf will fall into the open receiving mouth of said slug chute.

1,112,629. PRINTING DEVICE. MEYER LIEBMAN, New York, N. Y. Filed Mar. 14, 1914. Serial No. 824,800. (Cl. 101—63.)



1. In a printing device, the combination of a pair of pivotally connected jaws, one of said jaws having a handle, an impression member pivoted on one of said jaws, inking means for said member, and means operated by the opening movement of said jaws for moving said member to its inking position and applying the inking means thereto after said member reaches the inking position.

2. In a printing device, the combination of two pivotally connected elements, the free ends of which tend to remain spaced apart, an impression member carried by one of said elements, inking means for said member, and means for moving said impression member to its inking position and thereafter presenting the inking means to said member, said moving means being actuated by one of the pivotally connected elements.

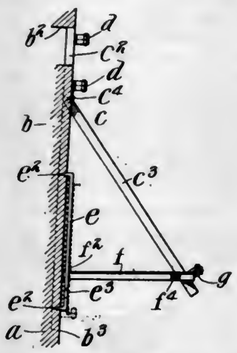
3. In a printing device, the combination of two pivotally connected elements, an impression member and inking means therefor carried by one of said elements, a casing inclosing said impression member and inking means, and actuating means for said impression member and inking means, said actuating means extending into said casing and being operated by the other of said elements, and handles for operating said elements.

4. In a printing device, the combination of two pivotally connected jaws terminating in handles, one of said jaws comprising a casing having an opening therein and the other jaw comprising a support for the sheet which receives the impression, an impression member pivoted within said casing, and means for operating said member to project the printing portion thereof through said opening into contact with a sheet on said support.

5. In a printing device, the combination of two pivotally connected jaws terminating in handles, one of said jaws comprising a casing having an opening therein, an inking means in said casing, an impression member pivoted in said casing and normally in contact with said inking means, means for operating said impression member to move the same to its printing position and back into contact with said inking means, and an element projecting into said casing and engageable by one of said handles to operate said inking means.

[Claims 6 to 14 not printed in the Gazette.]

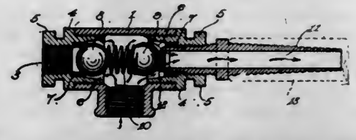
1,112,630. AWNING-BLIND HINGE AND HOLDER. JOHN LOCKHART, Tarrytown, N. Y. Filed Sept. 29, 1913. Serial No. 792,354. (Cl. 16—48.)



1. In a window shutter construction of the class described, a bar secured vertically to a side of the window frame, an arm, one end of which is connected with said bar and vertically movable thereon and the other end of which is hinged to the bottom part of a shutter; the hinge connection between said arm and shutter consisting of a part pivoted to said arm, a curved hinge member secured to the shutter, and a pintle passed through said part and said member.

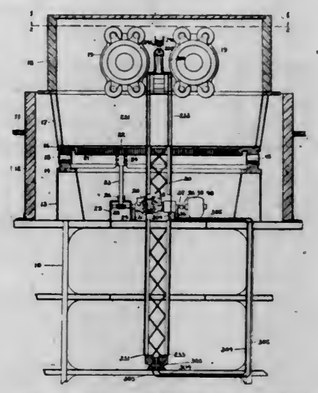
2. In a window shutter construction of the class described, a bar secured vertically to a side of the window frame, an arm, one end of which is connected with said bar and vertically movable thereon, and the other end of which is hinged to the bottom part of the shutter, said arm being composed of channel iron and adapted, when the shutter is closed, to inclose said arm, and the hinge connection between said arm and said shutter consisting of a part pivoted to said arm, a curved hinge member secured to the shutter, and a pintle passed through said part and said arm.

1,112,631. AIR-VALE. XYSTE LONGTIN, St. Johns, Quebec, Canada, assignor of one-half to Louis A. Gosselin, Montreal, Canada. Filed Jan. 31, 1913. Serial No. 745,347. (Cl. 137—30.)



A T-head coupling for pipes having two opposite removable tubular screw-threaded parts, each of which is provided at its inner end with an inwardly flaring chamber and an annular valve seat in the outer part of said chamber and internally screw-threaded beyond said seat, a pair of ball valves fitting the said seats a spring interposed between said valves and forcing them outward against said seats and a screw-threaded tubular valve opening device having a stirrup at its inner end and adapted to screw into either one of said removable parts, also provided with an outward integral extension adapted to protrude beyond said T-head and to receive the end of a tube.

1,112,632. CONTROL APPARATUS FOR POWER-DRIVEN MECHANISMS. CHARLES MATTHEWS MANLY, Brooklyn, N. Y. Filed Sept. 20, 1909. Serial No. 518,649. (Cl. 89—41.)



1. The combination of a gun, a hydraulic variable speed power mechanism for pointing the gun, and means for varying the speed of movement of the said power mechanism, comprising a manually operatable pump for controlling the variations in speed of the said power mechanism, substantially as described.

2. The combination of a gun, a hydraulic variable speed power mechanism for pointing the gun, and means for varying the speed and direction of movement of the said power mechanism, comprising a manually operatable pump for controlling the variations in speed and direction of movement of the said power mechanism, substantially as described.

3. The combination of a gun, hydraulic power operated means for moving the said gun at variable speeds and in different directions, and means comprising a manually operatable pump for controlling the speed and direction of movement of the said gun, substantially as described.

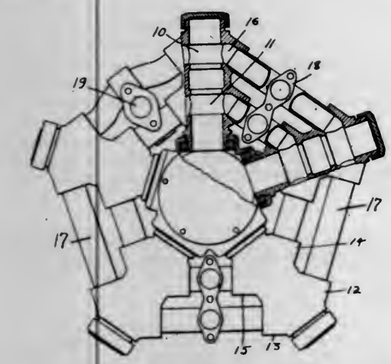
4. The combination of a gun, variable speed power mechanism for moving the gun at variable speeds in two directions, and means comprising a pump operated by manual power through a hand wheel or crank for controlling the variations in speed and direction of movement of the said gun, substantially as described.

5. The combination of a gun, variable speed power mechanism for moving the gun at variable speeds in two

directions, and means comprising a pump operated by manual power through a hand wheel or crank for controlling the variations in speed and direction of movement of the said gun, the said manually operated pump being so arranged that the number and direction of turns of the said hand wheel or crank determine the speed and direction of movement of the said gun, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,112,633. CYLINDER CONSTRUCTION FOR PUMPS OR MOTORS. CHARLES MATTHEWS MANLY, Freeport, N. Y. Filed Oct. 21, 1912. Serial No. 726,993. (Cl. 138—3.)



1. In a pump or motor construction, the combination of a plurality of fluid chambers, fluid transmitting connections between the same, and means for moving said chambers in an angular direction relative to each other to tighten their joints with the fluid transmitting connections.

2. In a pump or motor construction, the combination of a supporting part, a plurality of cylinders detachably connected thereto and extending in different angles therefrom, and a fluid transmitting pipe or tube connecting said cylinders and having tapered ends seated in tapered sockets in the adjacent faces of said cylinders.

3. In a radial cylinder pump or motor construction, the combination of a fluid chamber, cylinders carried by said fluid chamber and held against radial movement relative thereto, and fluid transmitting connections between said cylinders, said connections being held in place by the beforementioned connections for the cylinders.

4. In a radial cylinder pump or motor construction, the combination of a central chamber, a plurality of radially extending fluid chambers carried thereby, means for drawing said radial chambers toward the center of said central chamber, an intermediate fluid transmitting connection between said radial chambers having a thrust connection with the same whereby the radial movement of the said chambers tightens the joint between the chambers and the intermediate connection.

5. In a radial cylinder pump or motor construction, the combination of a central chamber having a series of radial bores, a plurality of radial fluid chambers mounted in said bores having collars for engaging the wall of the central chamber around the bore, tapered sockets in the adjacent walls of said chambers, and pipes having tapered ends fitting said bores.

[Claims 6 to 8 not printed in the Gazette.]

1,112,634. LIGHTNING-CONDUCTOR. LOUIS L. MAST, West Milton, Ohio, assignor to Delbert H. Mast, West Milton, Ohio. Filed July 22, 1911. Serial No. 640,025. (Cl. 173—31.)

1. A lightning conductor comprising in combination: a rod; a tubular coupling member; a transverse partition composed of a separate piece of material, located in and dividing said coupling member into approximately equal parts, the end of the rod being secured in one of said parts with the walls of said part in actual contact with the rod; and means for holding the partition in place in the coupling member.

2. A lightning conductor, comprising in combination: a rod; a tubular coupling member secured to the rod, a portion of the interior of said member being larger in diameter than the remainder of its interior, said portion of larger diameter being that which is in contact with the rod; and a transversely disposed member located in said larger portion of the coupling member, the diameter of said transverse member being greater than that of the smaller portion of the coupling member.

3. A lightning conductor, comprising in combination: a rod; a tubular coupling member secured thereto with a portion of said member projecting beyond the end of the rod, said projecting portion being of smaller diameter than the portion which is secured to the rod; and a transversely disposed member located in the larger portion of the coupling member, in juxtaposition to the end of the rod, said transverse member being too large to pass through the smaller portion of the coupling member.

4. A lightning conductor, comprising in combination: a rod; a cylindrical tubular coupling member secured thereto with a portion of its length projecting beyond the end of the rod, said projecting portion having a smaller internal diameter than the portion on the rod, thereby forming a shoulder at the point of change in diameters; and a disk, larger in diameter than the smaller portion of the coupling member, confined between said shoulder and the end of the rod.

5. A lightning conductor, comprising in combination: a rod; a cylindrical tubular coupling member secured thereto with a portion of its length projecting beyond the end of the rod, said projecting portion having a smaller internal diameter than the portion on the rod, thereby forming a shoulder at the point of change in diameters; a disk, larger in diameter than the smaller portion of the coupling member, confined between said shoulder and the end of the rod; and a screw thread carried by said projecting member and adapted to connect to a complementarily threaded coupling member on another rod.

1,112,635. RESILIENT HEEL. VICTOR MAY, Chicago, Ill. Filed Oct. 2, 1913. Serial No. 792,932. (Cl. 36—36.)

1. The combination with a heel having a socket therein, of a metallic socket-member having an opening in its top surrounded by a supporting flange to form an air space and secured in said socket; and a removable resilient pad fitting said socket-member, substantially as described.

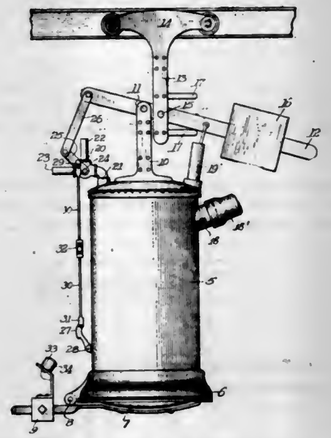
2. The combination with a heel having a socket therein, of a metallic socket-member provided with inwardly exposed perforations in its sides secured in said socket; and a removable resilient pad fitting said socket-member and arranged to engage said perforations, substantially as described.

3. The combination with a heel having a socket therein, of a metallic socket-member provided with inwardly exposed perforations in its sides and an opening in its bottom surrounded by a supporting flange to form an air space and secured to said socket; and a removable resilient pad fitting said socket-member, substantially as described.

4. The combination with a heel having a socket therein, of a metallic socket-member secured in said socket, there being an air passage leading from the inner end of said socket to an outside air supply and arranged to permit the passage of air thereto or therefrom; and a resilient pad in said socket, substantially as described.

5. The combination with a heel having a socket therein, of a metallic socket member secured in said socket, there being an air passage leading from the inner end of said socket through the heel to the interior of the shoe; and a resilient pad in said socket member, substantially as described.

1,112,636. AUTOMATICALLY CLOSING AND OPENING RECEPTACLES. THOMAS W. MCNEILL, Chicago, Ill., assignor to Reid, Murdoch & Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 8, 1913. Serial No. 788,532. (Cl. 73—177.)



1. In a device of the character described, a receptacle having a discharge opening at its lower end, a valve to close the opening; a pipe for connection to an air exhausting means, to exhaust the receptacle to hold said discharge valve closed; a valve in said air pipe; means movable by the increased weight of the filled receptacle to actuate the air valve, whereby to operate the valve closing the discharge opening, and means for holding said latter valve open until return of said movable means after the discharge of said receptacle.

2. In a device of the character described, a cylindrical receptacle having a discharge opening at its lower end; a counter balance valve to automatically close the opening; a pipe for connection to an air exhausting means to exhaust the receptacle to hold said discharge valve closed; a valve in said air pipe; pivoted lever to which said receptacle is attached at one side of its axis; a counterbalance weight for said receptacle, on the other side of the axis of said lever; a link connecting said lever and air valve; a latch for holding said discharge valve open, movable when the weight of said receptacle is overcome by said counter weight, to release said discharge valve and means, movable by said air-valve-moving-means to unlatch and release said discharge opening valve and a counter-weight to close said valve.

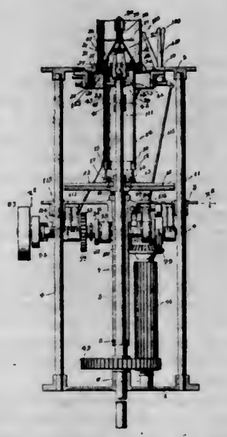
3. In a device of the character described, a receptacle 5, pivotally secured to a lever 12; a lever 12 pivoted as at 15, to a stationary part 13; a counter-balance weight 16 to overcome the weight of the receptacle; a fitting 18 for connection to a conduit for ingress of the material to the receptacle; a valve 7 for closing the lower open end of said receptacle; a counter balance weight 9, adapted to automatically close the said valve when released; a pipe 23 for connection to an exhaust means; an air valve 24 for controlling said exhaust means; means connected with the lever 12 for controlling said air valve and a latch 27, operable by means of the bar 12, for releasing the valve 7 when the receptacle has been discharged of its contents and the counter-weight 16 raises said receptacle.

1,112,637. PAPER-FASTENER. WILLIAM F. MERRILL, Brookline, Mass., assignor to Library Bureau, Cambridge, Mass., a Corporation of New Jersey. Filed Feb. 10, 1913. Serial No. 747,294. (Cl. 24—67.)

1. A paper fastener comprising a relatively long and narrow base having a narrower flexible binding arm integral with the base extending in a line from each end thereof and in the plane of the base, said arms adapted to be bent at right angles to the base at their junction therewith, a pair of integral flexible fastening prongs shorter than said arms projecting from each of said base ends on opposite sides of and parallel with said arms adapted to be folded on lines continuous with the folds of said arms and pressed flat upon the base to secure the latter to a cover sheet, and a narrow washer longer than the base having apertures near its ends through which said binding arms are passed to be afterward bent laterally over the washer.

2. A paper fastener comprising a relatively long and narrow base provided with longitudinal stiffening ribs extending nearly to the ends thereof, an integral flexible binging arm narrower than said base projecting from each end lengthwise of the base and adapted to be bent at right angles thereto, a pair of straight narrow flexible fastening prongs projecting integrally from each base end on opposite sides of the binding arm and shorter than said binding arm adapted to be folded on lines continuous with the folds of the binding arms and pressed flat upon the base to secure the latter to a cover sheet, and a washer longer than the base having an aperture near each end through which said binding arms are adapted to pass and be afterward folded over on the washer, said washer being stiffened by a central projecting rib extending longitudinally between said apertures.

1,112,638. CONCRETE-PIPE-MAKING MACHINE. VLADIMIR V. MESSER, Los Angeles, Cal. Filed Mar. 8, 1912. Serial No. 682,545. (Cl. 25—36.)



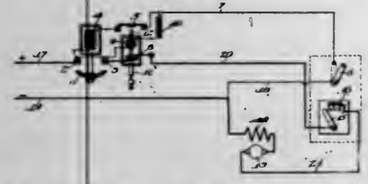
1. In a pipe making machine, a mold, a core mounted to move within said mold, a shaft on which said core is mounted, said shaft being provided with screw threads, a cone at the end of said core, tampers secured to said cone,

arms pivotally mounted upon said cone, said arms being provided with teeth for engaging the threads on said shaft, means for swinging said arms to bring said teeth into engagement with said threads, and means for swinging said arms to disengage said teeth from said threads.

2. In a pipe making machine, a mold, a core mounted to move within said mold, a shaft on which said core is mounted, said shaft being provided with screw threads, a cone at the end of said core, tampers secured to said cone, arms pivotally mounted on said cone, said arms provided with teeth for engaging the threads on said shaft, means for moving said arms to bring said teeth into engagement with said threads, a rod extending through said cone, a cross head on said rod, rollers on said cross head, said arms provided with inclined edge adapted to be engaged by said rollers, for disengaging said teeth from said threads.

3. In a pipe making machine, a mold, a core mounted to move within said mold, a shaft on which said core is mounted, said shaft being provided with screw threads having abrupt faces, a cone at the end of said core, tampers secured to said cone, arms pivotally mounted upon said cone, said arms being provided with teeth shaped to conform with said threads for engaging said threads, means for moving said arm to bring said teeth into engagement with said thread, and means for swinging said arms to disengage said teeth from said threads.

1,112,639. CIRCUIT-BREAKER. CHARLES H. MILLER, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Continuation of application Serial No. 262,407, filed May 26, 1905. This application filed Apr. 17, 1906. Serial No. 312,179. (Cl. 175—294.)



1. In a circuit breaker, in combination, an electroresponsive switch, an electroresponsive device responsive to overloads to deënergize said switch, said device tending to automatically return to normal position upon cessation of overloads to again energize said switch and means insuring against the automatic return of said device.

2. In combination, a circuit controller having an overload winding for effecting operation thereof, said controller after operation tending to automatically return to normal position, and manually controlled electrical means preventing such automatic return of said controller.

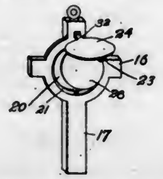
3. In a circuit breaker, in combination, an electroresponsive switch, an overload device responsive to deënergize said switch and tending to automatically move to again energize said switch upon cessation of overloads, a manual control switch and means insuring against said automatic movement of said overload device and necessitating operation of said control switch to reset said electroresponsive switch.

4. In combination, an electroresponsive circuit controller, an overload device controlling the same, said device having an operating winding responsive to overloads and a retaining winding effective after cessation of overloads, and common means for controlling at will said electroresponsive circuit controller and for deënergizing said retaining winding.

5. In a circuit breaker, in combination, a winding for setting said breaker, an overload magnet having an overload coil and retaining means effective after cessation of overloads, means adapted to be actuated by said magnet to open said breaker, and means adapted to control said breaker from a distant point at will.

[Claims 6 to 25 not printed in the Gazette.]

1,112,640. PENDANT. HENRY D. MIX, Providence, R. I., assignor to Wightman & Hough Company, Providence, R. I., a Corporation of Rhode Island. Filed July 13, 1914. Serial No. 850,552. (Cl. 63—19.)

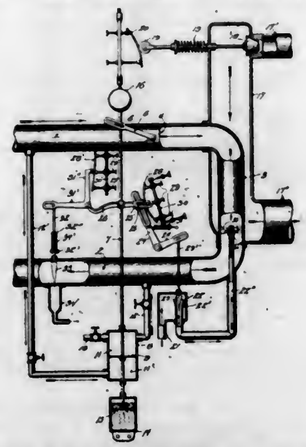


1. A pendant having a central recessed portion with a plurality of extending arms, a plate pivoted in said recessed portion and a closure having an extending portion pivoted in one of said arms.

2. A pendant comprising a body portion having a recess therein, a ring mounted in said recess, a plate hinged to said ring and a closure plate hinged to the body of the pendant for closing said recess.

3. A pendant comprising a central recessed member having a plurality of extending arms, a ring fixed in said recess, a plate hinged to said ring, and a closure having an extending neck portion pivoted to one of said arms above the plate hinge.

1,112,641. FLUID MIXING AND REGULATING DEVICE. ROLAND MOELLER, Milwaukee, Wis. Filed Nov. 28, 1911. Serial No. 662,906. (Cl. 48—154.1.)



1. A device of the character described comprising a fluid channel having a master valve therein, a master regulator in connection with said valve, by-passages connecting the regulator with the fluid channel upon opposite sides of the master valve, a secondary fluid channel in communication with said master channel, a controlling valve therefor, actuating mechanism for the secondary fluid channel controlling valve, and an adjustable surface interposed between the secondary valve mechanism and master regulator through which motion is transferred from said master regulator to the aforesaid secondary valve.

2. A device of the character described comprising a fluid channel having a master valve therein, a housing, a reciprocative piston mounted in the housing, a rod in connection with the piston, a by-pass in communication with the master fluid channel upon one side of the valve and housing below the piston, a second by-pass in communication with the fluid channel upon the opposite side of the master valve and housing above the piston, a secondary fluid channel in communication with said master channel, a controlling valve therefor, actuating mechanism for the secondary fluid channel controlling valve, a flexible cam surface interposed between the secondary valve mechanism and master regulator rod through which motion is transferred from said master regulator to the aforesaid secondary valve.

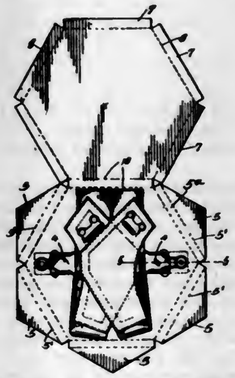
3. A device of the character described comprising a fluid channel having a master valve therein, a housing, a reciprocative piston mounted in the housing, means connecting the piston and master valve, a by-pass in communication with the master fluid channel upon one side of the housing piston, a secondary fluid channel in communication with said master channel, a controlling valve therefor, actuating mechanism for the secondary fluid channel controlling valve, an adjustable cam surface interposed between the secondary valve mechanism and piston through which motion is transferred from said piston to the aforesaid secondary valve.

4. A device of the character described comprising a fluid channel having a master valve therein, a housing, a reciprocative piston mounted in the housing, means connecting the piston and master valve, a by-pass in communication with the master fluid channel upon one side of the housing piston, a controlling valve for the by-pass, a secondary fluid channel in communication with said master channel, a controlling valve therefor, actuating mechanism for the secondary fluid channel controlling valve, an adjustable cam surface interposed between the secondary valve mechanism and piston through which motion is transferred from said piston to the aforesaid secondary valve.

5. A device of the character described comprising a fluid channel having a master valve therein, a master regulator in connection with said valve, by-passages connecting the regulator with the fluid channel upon opposite sides of the master valve, a secondary fluid channel in communication with said master channel, a controlling valve therefor, actuating mechanism for the secondary fluid channel controlling valve, a fixed flexible surface arranged to be engaged by the secondary valve actuating mechanism, means for adjusting the contour of said flexible surface at various points throughout its length, and means under control of the regulator carried by the secondary valve actuating mechanism for engagement with the aforesaid flexible surface.

[Claims 6 to 40 not printed in the Gazette.]

1,112,642. GARTER-CONTAINER. IRVIN MORGENSTERN, Cincinnati, Ohio. Filed June 14, 1913. Serial No. 773,795. (Cl. 229—22.)



A garter container comprising a box having a hexagonally shaped bottom and lid portion formed from a single sheet of material, a series of narrow side sections on the lid and bottom portions and being of substantially the same depth, a band of the same depth around the sides of the bottom portion and joining them together to form stiff side walls for the bottom of the box and rigid walls for the locking flaps, locking flaps folded on a score along the top of the side walls of said bottom portion thereby being hinged thereto and assuming a normal position parallel to the bottom of the box, said flaps thereby forming a lock for the lid of the box when said lid is closed and inserted under said flaps, said flaps being permanently connected to said side portions directly above the band, said band being permanently secured to said side walls of the bottom portion thereby imparting sufficient binding force to said walls to form a lock out of the straight flaps.

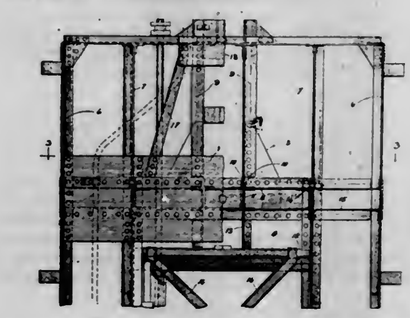
1,112,643. DEVICE FOR SETTING EYELETS IN FLEXIBLE MATERIAL. LORENZ MUTHER, West Newton, Mass. Filed Jan. 31, 1914. Serial No. 815,672. (Cl. 218—15.)

1. A device for setting eyelets in one of a plurality of layers of a flexible material, said device comprising an anvil and a coöperating setting device having a projecting setting-shoulder and a contracted portion above the setting-shoulder.

2. An eyelet setting device consisting of means for setting eyelets in one of the outside layers of a plurality of layers of material, comprising a lower anvil, an eyelet positioning device and an upper setting device having a slightly projected setting-shoulder and a contracted portion above the setting-shoulder.

3. The combination of a punching and eyelet setting device for setting eyelets in one or more of the layers of a plurality of layers of material, comprising a punch and a setting device having a projecting setting-shoulder and a contracted portion above the setting-shoulder.

1,112,644. RAILWAY-CAR. JOHN O. NEIKIRK, Morgan Park, Ill., assignor to Rodger Ballast Car Company, a Corporation of Maine. Filed July 27, 1909. Serial No. 509,860. (Cl. 105—76.)



1. In a car underframe, continuous side and intermediate sills extending from and secured to the end portion of said car underframe, a bolster extending continuously between said intermediate sills and articulated between said intermediate and side sills, and a center sill extending between and secured to said bolster and the end portion of said car underframe, said bolster having integral end flanges secured to said intermediate sills and said side sills.

2. In a car underframe, side sills, intermediate sills, and a center sill, all being rigidly connected to and extending from the end portion of the car underframe, a bolster comprising webs having flanges integral therewith, said bolster extending continuously from one intermediate sill to the other, an upper cover plate secured to said flanges and extending from one side sill to the other, gusset plates secured to and extending outwardly from said center sill, and under cover plates secured to said gusset plates, flanges and intermediate sills.

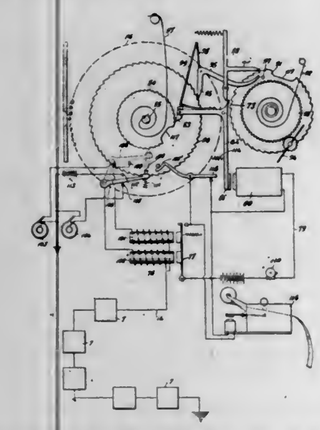
3. In a car underframe, side sills, intermediate sills, and a center sill, all being rigidly connected to and extending from the end portion of the car underframe, a bolster comprising webs having flanges integral therewith, said bolster extending continuously from one intermediate sill to the other, an upper cover plate secured to said flanges and extending from one side sill to the other, gusset plates secured to and extending outwardly from said center sill, under cover plates secured to said gusset plates, flanges and intermediate sills, and diagonal braces secured to and extending from the bolster to the end of the car underframe.

4. In a car, side, intermediate and center sills, all being rigidly connected to and extending from the end portion of the car underframe, a bolster comprising webs having flanges integral therewith, said bolster extending continuously from one intermediate sill to the other, a lower cover plate, said center sill being secured to and extending outwardly from said bolster, said flanged webs being connected to said intermediate sills by U-shaped braces and by said integral flanges, and gusset plates secured to said center sill and lower cover plate, said gusset plates, flanged web and lower cover plates being secured together, and said cover plate being secured to said intermediate sills.

5. In a car, side, intermediate and center sills, a bolster comprising webs having flanges integral therewith, said bolster extending continuously from one intermediate sill to the other, a lower cover plate, said center sill being secured to and extending outwardly from said bolster, said webs being connected to said intermediate sills by U-shaped braces and by said flanges, and gusset plates secured to said center sill and lower cover plate, said gusset plates, web flanges and lower cover plates being secured together, and said cover plates being secured to said intermediate sills, and the portion of said intermediate sills between the bolster and the proximate end of car underframe consisting of single built-up channels, and the portion of said intermediate sills extending inwardly of said bolster consisting of built-up I-beams.

[Claims 6 to 8 not printed in the Gazette.]

1,112,645. SIGNAL APPARATUS. JAMES D. NELSON, Cincinnati, Ohio. Filed Nov. 17, 1910. Serial No. 592,761. (Cl. 177—361.)



1. In combination with an alarm box capable of transmitting two distinct sets of signals, a circuit in which said box is located, means for indicating one set of signals transmitted by said box, independent and normally inoperative means for indicating the other set of signals transmitted by said box, and means controlled from said box and actuated by said first-mentioned means, for rendering said normally inoperative indicating means operative for the purpose of indicating said second set of signals.

2. In an alarm signal system, a circuit, means for transmitting two distinct sets of signals over said circuit, a device for visually indicating one set of signals transmitted by said means, and a normally inoperative mechanism for indicating the other set of signals, and means actuated by said device for rendering said mechanism operative.

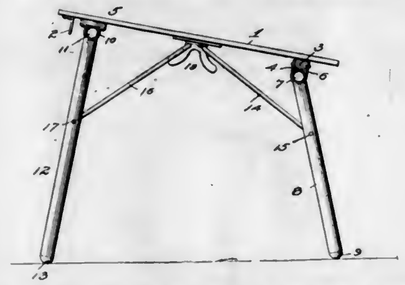
3. In combination with an alarm box capable of transmitting two distinct sets of signals, a circuit in which said box is located, a direct and alternating current source of supply for said circuit, means controlled by said box for alternately connecting said alternating and direct source of supply to said circuit, an indicating device for indicating one set of signals transmitted by said box, an independent indicating device for indicating the second set of signals indicated by said box, and means controlled from said box for rendering said independent indicating device operative for the purpose of indicating the second set of signals.

4. A signal box comprising a circuit breaker, a signal wheel having two sets of stops, a selective mechanism for engaging one or another set of stops and for actuating said circuit breaker, a clock mechanism for actuating said wheel and means for winding said clock mechanism and for simultaneously shifting the operative position of said selective mechanism.

5. A signal box comprising means for transmitting two sets of signals, a clock mechanism for actuating said means, a selective mechanism for controlling the operation of said means, winding means for winding said clock mechanism and for actusting said selective mechanism, and an electrically controlled locking mechanism for said clock mechanism and means adjusted by said clock mechanism for controlling said locking mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,112,646. CHIROPRACTIC APPARATUS. CHARLES P. NICHOLAS and JOSIAH M. MYERS, Davenport, Iowa. Filed Feb. 13, 1913. Serial No. 748,139. (Cl. 45—11.)



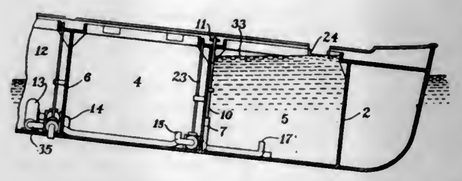
1. The combination with a table having a top and legs hinged thereto; of a base plate fixed to said top and having an aperture and also having depending lugs constructed and arranged to receive brace means and also having a stop, the said brace means engaging said legs and fitting said lugs, a turn-button pivotally mounted upon said plate and constructed and arranged to bring up against said stop and to hold said brace means against said lugs, a spring secured at one end to the top and movable between said top and said base plate, and a pin on said spring, extending through the aperture in the base plate to hold the turn-button against said stop.

2. The combination of a member, strips connected to the under side of said member near the ends thereof; one of said strips being deeper than the other, and the strips being constructed and arranged to serve in conjunction with the under side of the member to form horizontal recesses, transverse journal portions mounted on the under sides of the strips and arranged below said horizontal recesses, legs fixed to said journal portions, bail-

shaped stays pivoted to the legs and constructed and arranged in their folded positions to extend through said horizontal recesses, whereby their free portions are retained against the under side of the member, and means on the member constructed and arranged to coöperate with the stays and detachably secure the stays and the legs in their operative positions.

3. The combination with a table having a top and legs hinged thereto, of a base plate secured to said top provided with lugs extending vertically therefrom and provided with thickened body portions, said lugs provided with longitudinally extending notches near their inner portions, brace means engaging said legs and fitting within said notches for holding the legs in an extended position, a turn-button pivotally mounted upon said plate and provided with a rectangular body portion, the edges of said body portion fitting between said lugs at a spaced distance therefrom for holding said brace means in engagement with said lugs, means carried by said lugs for limiting the rotation of said button in one direction, said base plate provided with an aperture, a spring secured at one end to said top at a distance from said plate, a pin carried by the free end of said spring, said pin adapted to fit in said aperture for holding said turn-button in engagement with said means on the lugs, the upper portion of said lugs being beveled for facilitating the introducing of said brace means behind said lugs and into engagement with said notches.

1,112,647. CARGO-DISCHARGING MECHANISM. JAMES A. OUTTERSON, Carthage, N. Y. Filed June 16, 1913. Serial No. 773,928. (Cl. 214—1.)



1. A boat including in combination a cargo hold, a hatchway therein, means for supplying water to said hold for discharging floatable cargo through said hatchway, and means for removing the water from said hold.

2. A boat including in combination a cargo hold, a hatchway therein, means for supplying water to said hold for discharging floatable cargo through said hatchway, means for directing said cargo overboard from said hatchway, and means for removing said water from said hold.

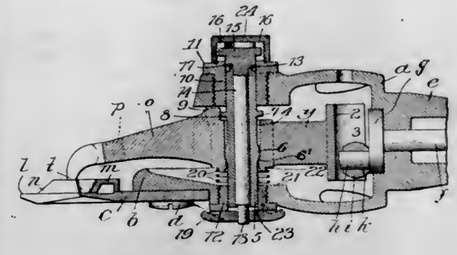
3. A boat including in combination a plurality of cargo compartments, means for supplying water to one of said compartments, means for transferring said water from one compartment to another compartment, and means for discharging said water from said last mentioned compartment.

4. A boat including in combination a cargo hold, a pump, inlet and outlet pipes connecting said pump with a source of water supply, outlet and inlet pipes connecting said pump with said cargo hold and valves in said pipes respectively for at one time directing water from without the boat into said cargo hold and at another time for directing said water from said cargo hold to without said boat.

5. A boat including in combination a plurality of cargo compartments, a pump, an inlet pipe connecting said pump with a source of water supply, an outlet pipe from said pump, inlet and outlet pipes connecting said pump with said cargo compartments, and valves in said pipes for at one time directing water from said source of supply into one cargo compartment and thereafter for directing the water from said cargo compartment into another of the cargo compartments and at another time for directing the water from said other cargo compartment to without said boat.

[Claims 6 and 7 not printed in the Gazette.]

1,112,648. SHEARING-MACHINE. ENOCH A. PALMER, Aurora, Ill. Filed Oct. 29, 1913. Serial No. 798,012. (Cl. 30—1.)



1. In a shearing machine, the combination of a cutter, a guard adjacent to the cutter, a cutter-actuating lever operatively connected with the cutter, a pivot post extending through said lever, securing means in operative engagement with the upper end of said pivot post, for preventing the rotation thereof, and an adjusting nut mounted beneath the oscillating lever and in engagement with a rigid part of said machine and in threaded engagement with the bottom end of said pivot post and out of engagement with all moving parts of the machine.

2. In a shearing machine, the combination of a cutter, a guard adjacent to the cutter, an oscillating cutter-actuating lever operatively connected with the cutter, a pivot post extending through said lever and provided with a head at its upper end, means in engagement with the head of the pivot post, for preventing the rotation of the post, an oscillating sleeve interposed between said post and the cutter-operating lever and provided with an annular downwardly and outwardly facing bearing in engagement with said lever, and means for adjusting the non-rotative pivot post longitudinally.

3. In a shearing machine, the combination of a cutter, an oscillating cutter-actuating lever operatively connected with the cutter, a pivot post extending through said lever and provided with a head, means in engagement with the head of the pivot post, for preventing the rotation of the post, a sleeve interposed between said post and the cutter-operating lever and provided with an annular downwardly facing convex bearing in engagement with said lever, said sleeve having a transverse surface portion in engagement with the lever above the level of said annular bearing.

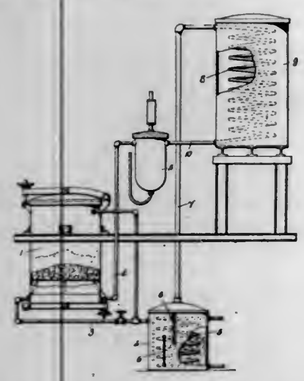
4. In a shearing machine, the combination of a cutter, a guard adjacent to the cutter, a cutter-actuating lever operatively connected with said cutter, a pivot post extending through said lever, means in engagement with one end of said post for preventing rotation thereof, and an adjusting nut in engagement with the other end of said post and bearing against a rigid part of the machine frame.

1,112,649. BAR-MAT. ALBERT PARR, Kenosha, Wis., assignor of one-half to Otto F. Windorf, Kenosha, Wis. Filed Mar. 29, 1913. Serial No. 757,493. (Cl. 20—78.)

A yielding rolling mat, comprising lengthwise extending bearing strips of canvas or the like spaced apart, and cross-wise extending parallel slats of resilient material of a width greatly exceeding their height and mounted on

top of and secured to the bearing strips, the bearing strips constituting spaced supports for the resilient slats permitting the slats to yield betwen them to form a spring like floor covering.

1,112,650. PROCESS OF TREATING FULLERS' EARTH. CHARLES L. PARSONS, Durham, N. H. Filed Aug. 29, 1906. Serial No. 332,528. (Cl. 87—12.)



1. A process of treating fullers' earth residues resulting from an oil refining process, which comprises adding to the said residues a solvent of the oil treated in the said process and a solvent of the coloring matter normally contained in said oil and separating said solvents and dissolved contents from the mass.

2. A process of treating fullers' earth residues resulting from an oil refining process which comprises adding to the said residues in a selected order of succession, a solvent of oil treated in the same process and a solvent of the coloring matter normally contained in said oil and separating the solvents and dissolved contents from the mass.

3. A process of treating fullers' earth residues resulting from an oil refining process which comprises adding to the residues a solvent of the oil treated in the said process and a solvent of the coloring matter normally contained in said oil, said first named solvent not being a solvent of the said coloring matter, and separating said solvents and dissolved contents from the mass.

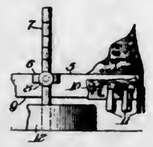
4. A process of treating fullers' earth residues resulting from an oil refining process, which comprises treating the same with a solvent of the oil treated in the said process and a solvent of coloring matter normally contained in said oil, said first named solvent not being a solvent of the said coloring matter, whereby said oil and coloring matter are dissolved, removing the said solvents from the mass and separating the dissolved oil from its solvent.

5. A process of treating fullers' earth residues resulting from an oil refining process, which comprises treating the same in a selected order of succession with a solvent of the oil treated in the said process and a solvent of the coloring matter normally contained in said oil, said first named solvent not being a solvent of the said coloring matter, whereby said oil and coloring matter are dissolved, removing the said solvents and dissolved contents from the mass and separating the dissolved oil from its solvent and the dissolved coloring matter from its solvent.

[Claims 6 to 12 not printed in the Gazette.]

1,112,651. SKIRT-GAGE. CHARLES H. PEARSE, Beloit, Wis., assignor of one-half to Charles H. Williams, Beloit, Wis. Filed July 17, 1913. Serial No. 779,526. (Cl. 33—10.)

A skirt gage, comprising, an annular member, supports connected thereto to hold the member elevated from the floor level, and detachable clasps engaging the lower edge of a skirt folded upon a rim of said annular member and removable from the rim by the removal of



the skirt therefrom, whereby said clasps maintain the said edge of the skirt folded as in a hem.

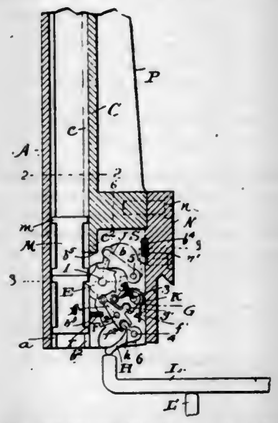
1,112,652. SPACE-BAR FOR JUSTIFYING MATRIX-LINES. DAVID PETRI-PALMEDO, Hoboken, N. J., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 10, 1911. Serial No. 659,500. (Cl. 199—4.)

1. An expansible space bar for justifying matrix lines, comprising a body wedge member and a relatively movable wedge bar of equal width,—said body wedge member having a vertical outer face and an inner face which is inclined toward the outer face from top to bottom, said inner face having formed in it and extending from top to bottom a dove-tailed groove of like depth from end to end,—and the wedge bar having a vertical outer face and an inner face which is inclined toward the outer face from the lower end to the upper end of said wedge bar,—there being formed on the inner inclined face of said wedge bar a projecting dovetailed rib which is of equal thickness from end to end and is slidably fitted in the groove in the inclined face of the body wedge member, said wedge bar having two pins fixed to it and projecting respectively over and under the body wedge member, the wedge bar being devoid of lateral projections and the body wedge member having no lateral projections except that it has two ears which project laterally at the lower edge thereof.

2. An expansible space bar for justifying matrix lines comprising a body wedge member and a relatively movable wedge bar of equal width, said body wedge member having a vertical outer face and having an inner face which is inclined toward the outer face from the top to the bottom thereof, said inclined inner face having formed in it and extending from top to bottom of said member a dovetailed groove of like depth from end to end, and said body member having projecting sidewise from both of the lower thin edges of said body member ears which are thicker than the thickness of said thin lower end of the wedge member, said ears being arranged with their outer surfaces in the same plane with the outer vertical surface of said body member,—and the wedge bar having a vertical outer face and an inner face which is inclined toward the outer face from the lower end to the upper

end of said wedge bar,—there being formed on the inner face of said wedge bar a projecting dovetailed rib which is of equal thickness from end to end and is slidably fitted in the groove of the inclined face of the body wedge member.

1,112,653. MATRIX-MAGAZINE. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, Bridgeport, Conn., a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,332. (Cl. 199—7.)



1. A matrix magazine having for the lower part of its rear wall a plurality of metal blocks set side by side and locked against relative displacement, each of said blocks being cut away in one side to form a recess for the escapement mechanism of a magazine channel.

2. A matrix magazine having a vertically grooved front wall, and a vertically grooved rear wall, the lower part of which is made up of a plurality of blocks set side by side and locked against relative displacement, each block having a vertical groove in its front face and a recess in one side, and escapement mechanisms located one in each recess and mounted on the block in which said recess is formed.

3. A matrix magazine having a vertically grooved front wall and a vertically grooved rear wall, the lower part of which is made up of a plurality of blocks set side by side and locked against relative displacement, each block having in one side a recess which extends to the front and lower edges of the block, and an escapement mechanism in each recess mounted on the block in which said recess is formed.

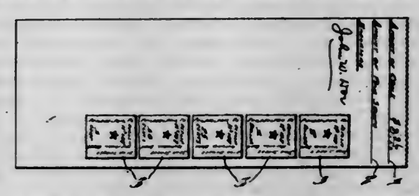
4. A matrix magazine, the lower part of whose rear wall is composed of a plurality of metal blocks secured side by side, each block having in one side a recess, studs fixed to the bottom of each recess and extending therefrom toward and close to the face of the adjacent block, and escapement mechanisms, the parts of which are mounted on said studs.

5. A matrix magazine, the lower part of whose rear wall is composed of a plurality of metal blocks secured side by side, each block having in one side a recess, studs fixed to the bottom of each recess and extending therefrom toward and close to the face of the adjacent block, a star wheel, two reciprocally acting restraining levers for engaging arms of the star wheel, and an operating lever, said star wheel and levers being mounted on said studs.

[Claims 6 to 9 not printed in the Gazette.]

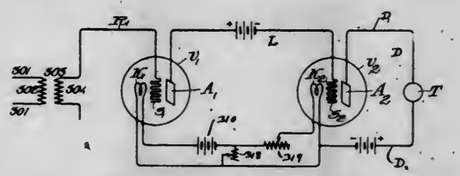
1,112,654. MEANS FOR CERTIFYING CHECKS OR OTHER INSTRUMENTS. CHARLES L. PFLEIDERER, Philadelphia, Pa. Filed June 7, 1911. Serial No. 631,705. (Cl. 11—13.)

A check, and stamps issued by the bank on which the check is drawn as certificates of deposit in said bank, said stamps pasted on the back of the check and all of the stamps of a depositor bearing the same number, and the



several stamps of an accumulated value equal to the face value of the check, substantially as described.

1,112,655. APPARATUS FOR RECEIVING OR RELAYING ELECTRIC SIGNALS. GEORGE W. PIERCE, Cambridge, Mass. Filed Aug. 5, 1913. Serial No. 783,088. (Cl. 179—171.)



1. Apparatus for receiving or relaying electric signals, having, in combination, an evacuated vessel, a cathode having provision for emitting negative ions, and an anode and its screen inclosed in said vessel, a second evacuated vessel, a second cathode having provision for emitting negative ions, and a second anode and its screen inclosed in said second vessel, means for conducting signal impulses to the first screen to vary its potential, a local circuit including a source of electromotive force and a conductive electrical connection between the first anode and second screen, and a second circuit having a connection with a signal indicating device and including a source of electromotive force and a connection between the second cathode and second anode.

2. Apparatus for receiving or relaying electric signals, having, in combination, at least one cathode having provision for emitting negative ions, an anode, a screen in proximity to the anode, a second anode, a second screen in proximity to the second anode, said elements being surrounded by gaseous conducting space, means for conducting the electric signal impulses to the first screen to vary its potential, a local circuit including a source of electromotive force and a conductive electrical connection between the first anode and second screen, and a second circuit connected with a signal indicating device and including a source of electromotive force and a connection between the second anode and a cathode.

3. Apparatus for receiving or relaying electric signals, having, in combination, at least one cathode, a plurality of anodes and screens therefor, said elements being surrounded by gaseous conducting space, a receptor connection to one screen, a conductive electrical connection between another screen and an anode, and a connection from another anode and a cathode to a signal indicating device.

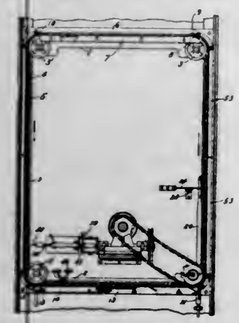
4. Apparatus for receiving or relaying electric signals, having, in combination, an evacuated vessel, a cathode, anode and screen inclosed therein, a second evacuated vessel and a second cathode, anode and screen inclosed therein a receptor connection to the first screen, a conductive electrical connection between the second screen and first anode, and a connection from the second anode and second cathode to a signal indicating device.

5. Apparatus for receiving or relaying electric signals, having, in combination, at least one cathode having provision for emitting negative ions, an anode, a screen in proximity to the anode, a second anode, a second screen in

proximity to the second anode, said elements being surrounded by gaseous conducting space, means for varying the potential of the first screen in response to the received signal impulses, means including a conductive electrical connection from the first anode to the second screen and an external unidirectional source of electro-motive force in the connection for maintaining a difference of potential between the second screen and first anode and having provision for causing variations in the potential of the second screen corresponding to variations in the potential of the first screen, and means having a connection with a signal indicating device for causing an electric current to flow between the second anode and a cathode.

[Claims 6 to 22 not printed in the Gazette.]

1,112,656. ADVERTISING-MACHINE. JOHN FRANK PORTER, Portland, Oreg.; Elsie O. Porter administratrix of said John Frank Porter, deceased. Filed Mar. 29, 1910. Serial No. 552,248. (Cl. 40—36.)



1. In an advertising machine, a display frame or housing having one or more display fronts or windows, an endless traveling conveyer adapted to receive and carry advertising cards completely around its course of travel and before said display fronts or windows, advertising cards adapted to be carried by said conveyer, means for continuously driving said conveyer, and means for automatically and successively holding said cards momentarily quiet, disconnected from said conveyer, before said display fronts or windows during their travel around the course of said conveyer.

2. In an advertising machine, a display frame or housing having oppositely facing display fronts or windows, an endless traveling conveyer mounted to travel near said fronts or windows and means for driving same, advertising cards adapted to be carried by said conveyer completely around its course of travel and before said display fronts or windows, and means operating automatically to hold said cards successively and momentarily quiet, disconnected from said conveyer, at two different positions before each of said display fronts or windows during their course of travel with said conveyer.

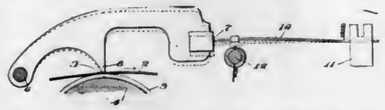
3. In an advertising machine, a display frame or housing having oppositely facing display fronts or windows, an endless traveling conveyer mounted to travel near said fronts or windows and means for driving same, advertising cards adapted to be carried by said conveyer completely around its course and before said display fronts or windows, and means whereby said cards are automatically and successively held momentarily quiet, disconnected from said conveyer, first before one window and then before the other during their travel around the course of said conveyer.

4. In an advertising machine, a display frame or housing having oppositely facing display fronts or windows, an endless traveling conveyer mounted to travel therein near said fronts or windows and means for continuously driving same, advertising cards adapted to be carried by said conveyer around its course of travel and before said display fronts or windows, and means operating automatically to successively receive and hold said cards momentarily quiet both at the bottom and at the top of each of said display fronts or windows during their travel around the course of said conveyer.

5. In an advertising machine, a display frame or housing having one or more display fronts or windows, an endless conveyer and means for driving same, advertising cards adapted to be carried by said conveyer, a supporting rack or magazine adjacent said conveyer and adapted to hold said cards, means coöperating with said conveyer to discharge said cards upon one end of said rack, and means coöperating with said conveyer to pick up said cards at the opposite end of said rack and carry them before said display fronts or windows, said conveyer being arranged to engage and carry said cards upon said rack from one end thereof to the other as it moves along adjacent thereto.

[Claims 6 to 14 not printed in the Gazette.]

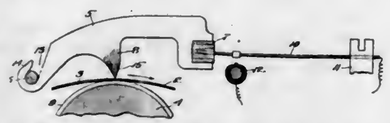
1,112,657. CIRCUIT-CONTROLLING FINGER FOR ELECTRICALLY-OPERATED MUSICAL INSTRUMENTS. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed June 3, 1911. Serial No. 631,053. (Cl. 84—161.)



1. In electrically-operated playing apparatus for musical instruments, the combination of a pivotally-mounted circuit-controlling finger having a point adapted to pass through the perforations in the music sheet, said point and the pivotal axis of the finger being located substantially in a straight line coinciding with the direction of movement of the music sheet where it passes said point, and means controlled by said finger for opening and closing a corresponding circuit.

2. In electrically-operated playing apparatus for musical instruments, the combination of a support for the music sheet, a contact bar, a pivotally mounted circuit-controlling finger having a point adapted to pass through the perforations in the music sheet, said point and the pivotal axis of the finger being located substantially in a straight line coinciding with the direction of movement of the music-sheet where it passes said point, and a contact wire controlled by said finger and movable into and out of contact with said bar.

1,112,658. CIRCUIT-CONTROLLING FINGER FOR ELECTRICALLY-OPERATED MUSIC-PLAYING APPARATUS. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Nov. 4, 1912. Serial No. 729,253. (Cl. 84—161.)



1. A circuit-controlling finger for electrically-operated music playing apparatus, said finger having a projection terminating in a point for controlling the movements of the finger, and a slot extending inward from one edge of the finger and terminating within the latter in a pivotal bearing to receive a supporting rod.

2. A circuit-controlling finger for electrically-operated music playing apparatus, said finger having a projection terminating in a point for controlling the movements of the finger, and a slot extending inward from one edge of the finger and terminating within the latter in a pivotal bearing to receive a supporting rod, said slot having a slightly contracted portion between the bearing and the open end of the slot.

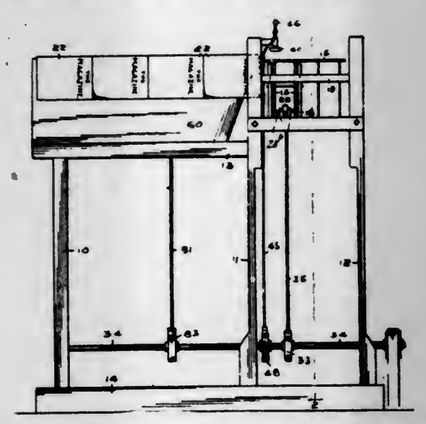
3. A circuit-controlling mechanism for electrically-operated music playing apparatus, comprising a finger having a projection terminating in a point for controlling the movements of the finger, said finger being provided with a pivotal bearing adapted to receive a transversely-extending rod and with a slot leading from said bearing to one edge of the finger, and a make-and-break device controlled by said finger.

4. A circuit-controlling mechanism for electrically-operated music playing apparatus, comprising a contact bar, a contact wire extending across the same, adjacent thereto, a supporting rod, and a finger pivotally mounted at one end upon said rod and connected at its other end to the contact wire, said finger being provided with a projection terminating in a point for controlling the movements of the finger and with a slot leading from said rod to one edge of the finger.

5. A circuit-controlling mechanism for electrically-operated music playing apparatus, comprising a pivotally-mounted finger having a point adapted to rest upon a music sheet and pass through perforations therein, the front edge of said point being formed at such an angle with respect to the directions of movement of the finger and the music sheet as to cause the point to slide down the sheet at the front end of a perforation, and a make-and-break device operated by the pivotal movements of the finger.

[Claim 6 not printed in the Gazette.]

1,112,659. MACHINE FOR OPENING SIGNATURES. EPHRAIM M. ROLLER, Pendleton, Ind., assignor to Roller Electric Company, Anderson, Ind., a Corporation. Filed Jan. 31, 1913. Serial No. 745,370. (Cl. 11—2.)



1. A machine for partially opening folded signatures comprising clamping jaws, means to support within said jaws a signature with its folded edge parallel to and projecting freely above said jaws, and means for applying pressure to the folded edge to cause the signature to spread laterally and open in the center.

2. A machine for partially opening folded signatures comprising clamping jaws, means to support within said jaws a signature with its folded edge parallel to and projecting freely above said jaws, means for moving said jaws against the sides of the signature, and means for applying pressure to the folded edge to cause the signature above the jaws to spread laterally and open in the center.

3. A machine for partially opening folded signatures comprising clamping jaws, means to support within said jaws a signature with its folded edge parallel to and projecting freely beyond said jaws, means for moving said jaws against the sides of the signature, means for applying pressure to the folded edge to cause the signature beyond the jaws to spread laterally and open in the center, and means for normally holding the clamping jaws apart.

4. A machine for partially opening folded signatures comprising clamping jaws for clamping a signature parallel with and adjacent to its folded edge, means for removing said clamping jaws against the signature, a stop arranged transversely of said clamping jaws to cause each signature to register with and be uniformly clamped by said clamping jaws, and means for applying pressure to the folded edge of the signature to cause said signature along its folded edge to spread laterally and open in the center.

5. A machine for partially opening folded signatures comprising clamping jaws, means to support within said jaws a signature with its folded edge parallel to and projecting freely beyond said jaws, means for applying pressure to the folded edge to cause the signature beyond the jaws to spread laterally and open at the center, means movably mounted to enter the central opening for successively removing each signature longitudinally when the jaws are opened, and means for successively receiving the signatures as they are removed from between the clamping jaws.

[Claims 6 and 7 not printed in the Gazette.]

1,112,660. LADDER-BRACKET. MARTIN V. RUSH, Anderson, Ind. Filed Mar. 25, 1914. Serial No. 827,170. (Cl. 20—85.)

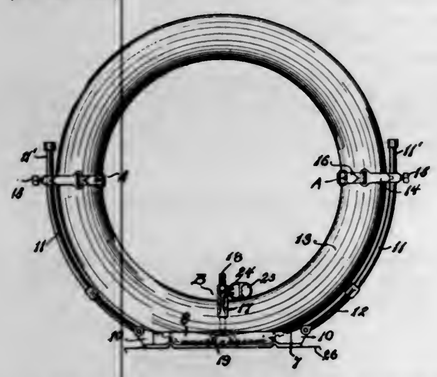
1. A ladder bracket comprising a strut member inclined at an angle to the vertical taken at one plane, said strut twisted intermediate its ends, a plurality of arms pivotally secured to the lower extremity thereof, S-shaped hooks rigidly secured to the extremities of said arms, a supporting member pivotally secured to the remote extremity of said strut, the remote extremity of said supporting member provided with oppositely extending ends, a cross bar extending between said ends, and hooks rigidly secured to said brace bar.

2. A ladder bracket comprising a strut member twisted intermediate its ends through substantially 90 degrees, arms pivoted to the lower extremity of said member and provided with outstanding ledges at their extremities, S-shaped hooks rigidly secured to said arms and abutting said ledges, a supporting member pivotally secured to the remote extremity of said strut, said supporting member bent intermediate its ends, the portion between the bend and the pivotal connection with the strut adapted to receive a plank thereon and to prevent the shifting thereof, the bent member pivotally secured to the remote extremity of said supporting member, the extremities of the supporting member and bend extending in opposite directions, and hooks rigidly secured to the forked end of the supporting member.

3. A ladder bracket comprising a strut member inclined at an angle to the plane of the ladder, a plurality of arms pivotally secured to the lower extremity of said strut member, S-shaped hooks secured to the extremities of said arms, a supporting member pivotally secured to the remote extremity of said strut, the remote extremity of said supporting member provided with means for detachably engaging a ladder.

4. A ladder bracket comprising a strut member, a plurality of arms secured to the lower extremity thereof, S-shaped hooks secured to the extremities of said arms, a supporting member pivotally secured to the remote extremity of said strut, and means carried at the remote extremity of said supporting member adapted to detachably engage a ladder.

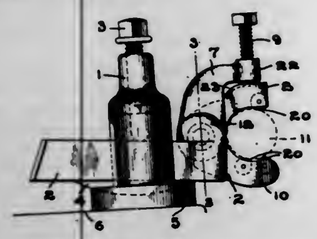
1,112,661. TIRE-HOLDER. PEIRCE D. SCHENCK, Dayton, Ohio. Filed Aug. 10, 1912. Serial No. 714,356. (Cl. 224—29.)



1. A tire holder comprising in combination an extended base plate having a tire receiving socket, a locking bar cooperating therewith to hold the tire in the socket, a pair of arms each pivoted at one end to an end of the base plate, and a yoke member adjustably carried on each arm for supporting the tire at a point above the socket.

2. A tire holder comprising in combination an extended base plate having a pair of tire receiving sockets extending longitudinally thereof and arranged side by side, a locking bar coöperating therewith to hold the tires in the sockets, a forked member at each end of the base the arms of which are pivoted to the base a substantial distance apart, a rod secured to the stem of each forked member, and a yoke member adjustably carried on each rod for supporting the tires at a point above the sockets.

1,112,662. NURLING-TOOL. CARL RUDOLF SCHLEY, Philadelphia, Pa. Filed Apr. 6, 1914. Serial No. 830,034. (Cl. 201—2.)



1. A nurling tool comprising a frame having a fixed arm at one end, and an adjusting screw at its other end, an arm pivoted at one end to an intermediate portion of the frame and engaged by the screw, and nurls carried by both of said arms, substantially as described.

2. A nurling tool comprising a frame having a fixed arm at one end, and an adjusting screw at its other end, an arm pivoted to the frame and engaged by the screw, said pivoted arm having a longitudinal groove in one edge into which the screw projects, and nurls carried by both of said arms, substantially as described.

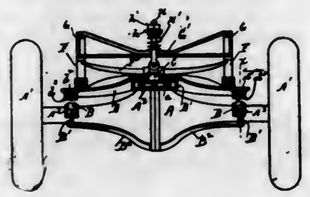
3. The combination with a stock, of a frame pivotally connected to the stock and having a fixed arm at one end, and an internally screw-threaded bearing at its other end, an arm pivoted at one end to an intermediate portion of the frame, a screw in said bearing engaging the pivoted arm, and nurls carried by both of said arms, substantially as described.

4. The combination with a stock, of a frame pivotally connected to the stock and having a fixed arm at one end, and an internally screw-threaded bearing at its other end, an arm pivoted at one end to an intermediate portion of the frame, a screw in said bearing engaging the pivoted arm, a plurality of nurls on one of said arms, and a single nurl on the other of said arms, substantially as described.

5. The combination with a stock having an enlargement at one end, of a frame having a fixed arm at one end and an internally screw-threaded bearing at its other end, an arm, a screw pivotally securing the last-mentioned arm to the intermediate portion of the frame and also securing the frame to the enlargement of the stock, a screw in said bearing engaging the pivoted arm, and nurls carried by both of said arms, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,112,663. BOLSTER MECHANISM FOR MOTOR-VEHICLES. PAUL J. SMITH, Galeton, Pa. Filed May 31, 1913. Serial No. 771,099. (Cl. 21—24.)

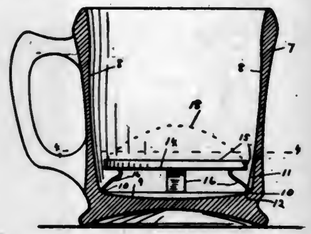


1. The combination in a device of the character described of a vehicle axle, a disk on the upper side thereof having a groove around its periphery of greater width over the axle than at the front and back of said disk, a bolster, a depending cylindrical flange thereon adapted to embrace the periphery of said disk, and having an annular groove of greater width at the sides than at the front and back thereof adapted to coincide with the groove around the periphery of said disk, a supporting pivot interposed between said axle and bolster, and a series of balls in said grooves, whereby said axle and bolster are locked together and lateral movement with relation to each other permitted, substantially as and for the purpose set forth.

2. In a device of the character described, an axle member, a disk on the upper side of the middle portion thereof having a groove around its periphery, a pivot ball centrally placed on said disk, side bearing surfaces adjacent to the ends of said axle member, a bolster member having a depending cylindrical flange forming a chamber at its middle portion adapted to embrace said disk, and provided with an endless groove in its interior wall, adapted to coincide with the groove in said disk, side bearing surfaces on the under side of said bolster member adapted to contact with the side bearing surfaces on said axle member, and a series of balls in the said grooves between the periphery of said disk and the inner wall of said chamber whereby said axle and bolster are locked together substantially as set forth.

3. The combination in a device of the character described, of an axle member, a disk on the upper side thereof having a groove around its periphery, said groove being wider at the sides of said disk toward the ends of the axle than at its front and back portions; spring pressed side bearing blocks on the upper side of said axle member; a pivot ball mounted on said disk; a bolster member, a depending cylindrical flange adapted to embrace said disk, and having an endless groove in the inner surface thereof, adapted to coincide with the groove in the periphery of said disk; a series of balls in said grooves adapted to lock said axle and bolster members together; side bearings on the ends of said bolster member having ball grooves in the under surface thereof; balls in said grooves adapted to engage said spring pressed blocks, and slotted plates secured on the under side of said side bearings adapted to retain said balls in said grooves; substantially as set forth.

1,112,664. SOAP-HOLDER FOR SHAVING-CUPS. DANIEL W. WARDWELL, Rome, N. Y. Filed Feb. 7, 1913. Serial No. 746,734. (Cl. 132—15.)



1. In combination a cup having a recess and a removable soap holder having a resilient member projecting therefrom and adapted to rotate with said soap holder in the cup and to enter said recess when opposite thereto and prevent rotation of said soap holder.

2. In combination a cup having a recess and a removable soap holder having a resilient member extending therefrom adapted when pressure is applied to said holder, to enter said recess when opposite thereto and prevent rotation of said holder.

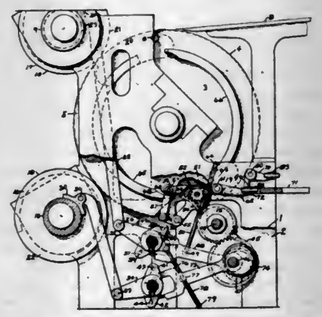
3. In combination a soap holder having downwardly and outwardly extending feet and a cup having a recess adapted to be entered by one of said feet and thereby prevent rotation of said soap holder.

4. In combination with a cup having a recess, a removable soap holder having downwardly and outwardly extending resilient feet whereby when pressure is applied to said holder one foot will enter said recess when opposite thereto and prevent rotation of said holder.

5. In combination with a cup having a recess, a soap holding platform and feet downwardly and outwardly extending from said platform beyond the edge thereof and adapted to hold said platform above the bottom of the cup and away from the walls thereof, one of said feet adapted to enter said recess when opposite thereto and prevent rotation of said holder.

[Claims 6 to 8 not printed in the Gazette.]

1,112,665. PRINTING-PRESS. JOSEPH WHITE, Piscataway township, Middlesex county, N. J., assignor to Hall Printing Press Company, Dunellen, N. J., a Corporation of New Jersey. Filed Sept. 28, 1910. Serial No. 584,190. (Cl. 101—89.)



1. In a printing machine, a printing couple, including a cylinder mounted in eccentric bearings, connections from said bearings to a rockshaft, a member making a plurality of rotations for each cycle of operation of the machine, a crank on said member, a reciprocating bar moved by said crank and arranged to move said rockshaft in one direction to trip the cylinder, and in another direction to throw the cylinder into printing relation.

2. In a printing machine, a movable member, a pivoted oscillatable member, connections between said oscillatable member and said movable member, a reciprocatable actuating device adapted to be positioned to engage said oscillatable member at either of the two opposite sides of its pivot, means to give said actuating device a plurality of complete reciprocations for each cycle of operation of the machine, and means to position said actuating device.

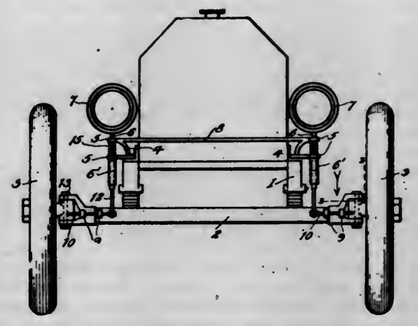
3. In a printing machine the combination of a printing couple including a cylinder, movable bearings for said cylinder, a rockshaft, connections from the rockshaft to the movable bearings, projections on opposite sides of the rockshaft, a reciprocating bar acting upon the projections during its forward stroke to rock the shaft to throw the cylinder into or out of impression relation, manually controlled setting mechanism for shifting the bar, and a guard for controlling the setting mechanism to permit the bar to move only at a specified time.

4. In a printing machine the combination of an impression cylinder, two form cylinders coacting with the impression cylinder, cylinder-moving means for each of the form cylinders, actuating means for each of the cylinder-moving means, and setting means connected from the first form cylinder-moving means to the second actuating means whereby the second form cylinder is always thrown into printing relation with the impression cylinder after the first form cylinder is tripped.

5. In a printing machine the combination of an impression cylinder, two form cylinders coacting with the impression cylinder, cylinder-moving means for tripping each of the form cylinders out of printing relation with the impression cylinder, actuating means for each of the cylinder-moving means, and setting means connected from the first cylinder-moving means to the second actuating means whereby the second form cylinder is always tripped after the first form cylinder.

[Claims 6 to 16 not printed in the Gazette.]

1,112,666. DIRIGIBLE AUTOMOBILE LAMP-SUPPORT. JOHN A. BAILEY, Brice, Tex. Filed Nov. 10, 1913. Serial No. 800,232. (Cl. 240—62.)



1. In combination, a motor vehicle, steering wheels therefor including steering spindles, lamps carried by the vehicles, and operating means for turning said lamps disposed in the path of the movement of the spindles and arranged for operative contact with the latter only upon turning of the wheels in one direction whereby to operate the lamp on the side corresponding to the direction of turn without operating the other lamp.

2. In combination, a motor vehicle, steering wheels therefor including steering spindles having actuating means extending therefrom, lamps carried by the vehicle, operating means normally out of active relation but disposed in the path of movement of said actuating means

whereby upon turning of the wheels to turn a lamp in accord with the change of direction of the travel of the vehicle.

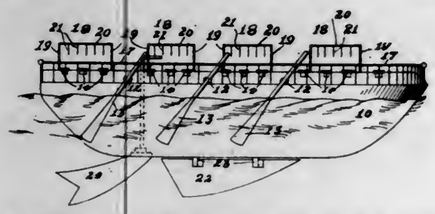
3. In combination, a motor vehicle including a steering wheel and spindle therefor formed with a cam member, a lamp, operating means for said lamp disposed in the path of movement of the cam member and adapted to be engaged thereby to turn the lamp in one direction of the turn of the steering wheel and out of the path of movement of the cam member when said wheel is turned in the opposite direction whereby to maintain the lamp stationary.

4. In combination, a motor vehicle, steering wheels therefor, lamps carried by said vehicle, operating means for said lamps comprising a connecting rod and a sliding member connected at one end to said connecting rod and adapted to be engaged at its other end with the steering wheel spindle when one of said wheels turns in one direction, said sliding member not being engageable by the spindle upon turning of the wheel in the opposite direction.

5. In combination, a motor vehicle, steering wheels therefor, lamps carried by said vehicle, operating means for said lamps comprising a connecting rod and a sliding member connected at one end to said connecting rod and adapted to be engaged at its other end with the steering wheel spindle when one of said wheels turns in one direction, said sliding member not being engageable by the spindle upon turning of the wheel in the opposite direction, and a spring normally tending to hold the lamp in its inoperative position.

[Claims 6 and 7 not printed in the Gazette.]

1,112,667. LIFE-BOAT. JOSEPH BALOGH and ANDREW THOMAS, Canaanville, Ohio. Filed Dec. 2, 1913. Serial No. 804,156. (Cl. 9—3.)

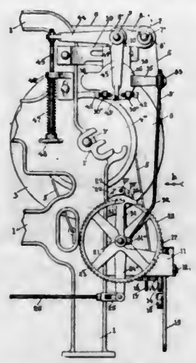


A life boat comprising a buoyant hull, the deck of said boat forming the top wall of the hull, said deck inclined upwardly toward the longitudinal axis thereof, seats arranged along the inclined sides of the deck, and hand hold devices arranged along the longitudinal axis of the boat.

1,112,668. LET-OFF MECHANISM FOR LOOMS. HENRY BARDSLEY, Providence, R. I., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed June 5, 1911. Serial No. 631,366. (Cl. 139—58.)

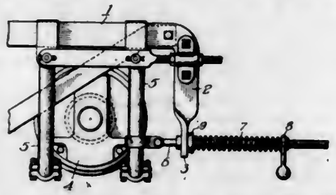
1. In a let off mechanism for looms, a beam having a friction surface, a whip roll or bar over which the warp passes from said beam, a rope acting on said friction surface to retard the rotation of said beam, a tension device for said rope, and mechanism, controlled by the movement of said whip roll, to automatically regulate the action of said tension device, said mechanism comprising two ratchets, a pawl for each ratchet and means to operate said pawl, a pawl shield, and connections intermediate said pawl shield and said whip roll, said connections including a friction disk device to transmit the movement of said whip roll to said pawl shield, and normally hold said shield in a fixed position.

2. In a let off mechanism for looms, a beam having a friction surface, a whip roll or bar over which the warp passes from said beam, a rope acting on said friction surface to retard the rotation of said beam, a drum loosely mounted on a stud to which drum said rope is attached, a ratchet on said drum, a hand lever carrying a pawl for rotating said ratchet, and a holdfast pawl for said ratchet, a torsion spring on said drum, attached at one end to move with said drum, and attached at its other end to a worm gear, and said worm gear loosely mounted on said stud, a worm in mesh with said form gear, fast on a horizontal shaft, and said horizontal shaft, loosely mounted in bearings, and two ratchet wheels fast on said shaft, having teeth extending in opposite directions, and a



lever loosely mounted on said shaft, a connector from said lever to communicate a rocking motion to said lever, two pawls mounted on the upper end of said lever to engage said ratchet wheels, respectively, a shield to engage said pawls, connections intermediate said shield and a friction disk, and said disk, and connections intermediate said disks and the roll over which the warp passes, the up and down movement of said roll causing the movement of said pawl shield.

1,112,669. SPRING-SEAT BUSHING FOR TENSION-RODS. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee, a Corporation of New York. Filed Jan. 9, 1912. Serial No. 670,280. (Cl. 105—238.)



1. A spring seat bushing for a tension rod comprising a hemispherical forward portion and a cylindrical rear portion.

2. As a new article of manufacture, a spring seat bushing having an opening therethrough to accommodate a tension rod and having a substantially hemispherical forward portion and a cylindrical rear portion of reduced diameter, said forward portion having a flat face adapted to act as a seat for the spring and having an annular rib surrounding said opening.

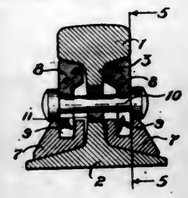
3. In combination, a supporting bar, a rod passing through said bar, a bushing slidably mounted on said rod, said bushing being provided with a conical face and said supporting bar being provided with a conical seat shaped to receive said bushing face to permit slight rocking movements of said rod with relation to said support.

4. In combination, a relatively fixed support, a rod longitudinally movable through said support and a bushing surrounding said rod, said bushing having a conical portion bearing against one side of said support, and an extension loosely passing through said support whereby said rod may rock with relation to said support.

5. In a generator suspension, means for supporting the generator, a tension rod tending to swing said generator in one direction, said rod passing through said support, a bushing on said rod, said bushing being provided with a conical face, and said support being provided with a conical shaped seat to receive said bushing face to permit slight rocking movements of said rod with relation to said support.

[Claim 6 not printed in the Gazette.]

1,112,670. RAIL-JOINT. ALEXANDER BOURRASSA, Chicago Heights, Ill. Filed Nov. 28, 1913. Serial No. 803,395. (Cl. 239—9.)



1. A rail-joint comprising slotted wedge members having bands thereon adapted to be inserted beneath the heads of abutting rails, grooved wedge bars engaging the lower edges of said wedge members and resting upon the flanges of the rails, and means engaging in the slots and extending through apertures in the web of a rail acting to prevent lateral displacement of said wedge members.

2. In a device of the class described coöperative interfitting wedge members engaged between the heads and flanges of abutting rails, certain of said wedge members provided with slots therein and bolts engaging in the slots and extending through the apertures of the web of a rail to prevent lateral displacement of said wedge members.

3. In a device of the class described coöperative wedge members engaging between the heads and flanges of abutting rail ends, certain of said members having vertical slots therein and bolts extending through apertures in the web of the rails and said slotted wedge members to prevent lateral displacement of the latter.

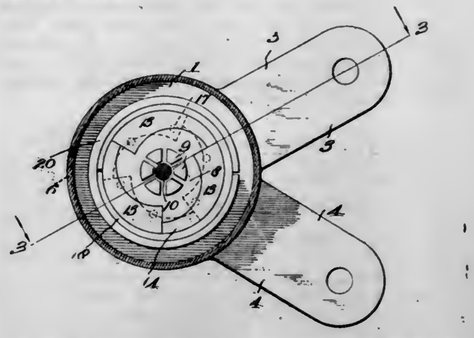
4. In a device of the class described coöperative oppositely disposed wedge members engaged between the heads and flanges of abutting rail ends on the inner and outer side of the rails respectively, certain of said members having open slots therein extending from the edge of the wedge member to near the middle thereof and other of said members provided with grooves to receive the lower edge of said slotted members, and a plurality of bolts engaging in the slots and extending through enlarged apertures in the rail web to hold said oppositely disposed slotted wedge members from lateral displacement independently of other connection with the rails, the enlarged apertures in said rail web permitting the insertion of the bolt heads therethrough in assembling.

5. In a device of the class described tapered splice bars having vertically extended slots therein and adapted to engage beneath the heads on each side of a rail, grooved wedge bars adapted to receive said splice bars therein, said bars acting to wedge one another between the heads and flanges of the respective rails, and one piece double headed bolts releasably connecting the splice bars by engagement in the vertical slots and extending through apertures in the web of a rail.

[Claim 6 not printed in the Gazette.]

1,112,671. SHOCK-ABSORBER. WILHELM J. BROCKER, Groton, and NELSON J. BAKER, Mystic, Conn. Filed Oct. 22, 1913. Serial No. 796,669. (Cl. 21—105.)

1. In a shock absorber the combination of two relatively rotatable members providing a casing; opposite and annularly disposed cam elements mounted on said members respectively; radially movable members associated with said cam elements and operable thereby; and a resistant means opposed to said cam actuated members, substantially as described.



2. In a shock absorber the combination of two relatively rotatable members providing a casing; oppositely disposed cam elements mounted on said members respectively; a retaining member; members connected to said retaining member engaging with said cam elements and operable thereby; and a resistant means surrounding and adapted to oppose said cam actuated members, substantially as described.

3. In a shock absorber the combination of two relatively rotatable members providing a casing; oppositely disposed cam elements mounted on said members respectively; a member located between said opposed cam elements; a plurality of cam blocks retained in spaced relation by said member, engaging with said cam elements and operable thereby; and a resilient band surrounding and adapted to oppose said cam blocks, substantially as described.

4. In a shock absorber the combination of two relatively rotatable members providing a casing; oppositely disposed cam elements having locking engagement with said members respectively; a plate located between said opposed cam elements; a plurality of cam blocks mounted to have radial movement on said plate; resilient means surrounding and adapted to oppose said cam blocks; and a second opposing resilient means surrounding the first named resilient means, substantially as described.

5. In a shock absorber the combination of two relatively rotatable members providing a casing; oppositely disposed cam elements having locking engagement with said members respectively; a plate located between said opposed cam elements and having radially disposed slots; a plurality of cam blocks engaging the opposed cam elements, respectively, and having pins engaging in said slots; resilient bands surrounding said cam blocks, respectively, and adapted to oppose said cam blocks; and a resilient band surrounding and adapted to oppose said resilient bands, substantially as described.

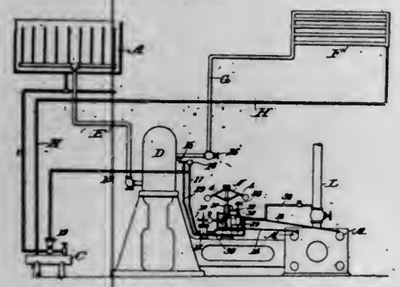
[Claim 6 not printed in the Gazette.]

1,112,672. SAFETY APPLIANCE FOR AMMONIA-COMPRESSORS. ALBERT L. BROWN, Little Rock, Ark. Filed Jan. 30, 1914. Serial No. 815,379. (Cl. 62—4.)

1. The combination with a compressor, of a piston valve, means for shutting down the engine operatively connected to the piston valve, a governor, a second piston valve controlled by the governor, and pipes leading from the pump cylinder and the first piston valve casing to the casing of the second piston valve, said latter valve normally cutting off flow from one pipe to the other in the casing thereof, but adapted to be moved so as to establish communication between said pipes when the governor reaches a predetermined speed.

2. The combination with a compressor, of a piston valve, means for shutting down the engine operatively connected to said piston valve, a governor, a second piston valve controlled by the governor, adjustable means of

connection between the second piston valve and the governor, whereby the valve may be set to be operated at various speeds of the governor, and pipes leading from the pump cylinder and the first piston valve casing to the casing of the second piston valve, said latter valve normally cutting off flow from one pipe to the other in the casing thereof, but adapted to be moved so as to establish communication between said pipes when the governor reaches the predetermined speed.



3. The combination with a compressor, of a piston valve, means for shutting down the engine operatively connected to said piston valve, a governor, a second piston valve, and adjustable collar on the stem of said second piston valve, a loose collar also mounted on said valve stem, an arm rigidly connected to the governor and extending below the loose collar, whereby the second valve is adjustably controlled by the governor, and pipes leading from the pump cylinder and the first piston valve casing to the casing of the second piston valve, said latter valve normally cutting off flow from one pipe to the other in the casing thereof, but adapted to be moved so as to establish communication between said pipes when the governor reaches the predetermined speed.

4. The combination with a compressor, of a piston valve, means for shutting down the engine operatively connected to said piston valve, a governor, a second piston valve, two adjustable collars on the stem of said second valve, a loose collar also mounted on said valve stem and arranged between the two adjustable collars, an arm rigidly connected to the governor and extending below the loose collar, and a spring interposed between the lower adjustable collar and the arm from the governor, whereby the second valve is adjustably controlled by the governor, and pipes leading from the pump cylinder and the first piston valve casing to the casing of the second piston valve, said latter valve normally cutting off flow from one pipe to the other in the casing thereof, but adapted to be moved so as to establish communication between said pipes when the governor reaches the predetermined speed.

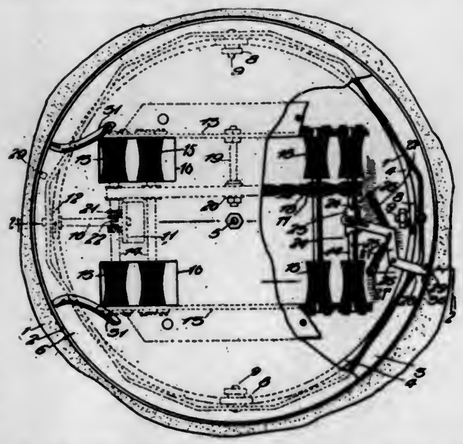
5. The combination with a compressor, of a piston valve, means for shutting down the engine operatively connected to the piston valve, a governor, a second piston valve controlled by the governor, and pipes leading from the source of supply of steam for running the engine and from the first piston valve casing to the casing of the second piston valve, said latter valve normally cutting off flow from one pipe to the other in the casing thereof, but adapted to be moved so as to establish communication between said pipes when the governor reaches a predetermined speed.

[Claims 6 and 7 not printed in the Gazette.]

1,112,673. TURN-TABLE. LEON W. BROWN, New York, N. Y., and PETER A. RASMUS, Paxton, Ill. Filed July 16, 1914. Serial No. 851,397. (Cl. 104—211.)

1. The combination with a turn table; of means operative by the wheels of a motor driven vehicle to cause rotation of said turn table, a double acting locking clutch in connection therewith and means for disposing said clutch to its effective position at predetermined points in the rotation of said turn table.

2. The combination with a turn table, pairs of parallel shafts mounted for rotation thereon, rollers on said shafts adapted to be engaged and rotated by the wheels of a motor driven vehicle on said turn table, and means in connection therewith to rotate said turn table upon the rotation of said shaft; of a double acting locking clutch on one of said shafts, an actuating lever for said clutch projecting beyond the peripheral edge of said table, and means adapted for engagement with said lever at predetermined points in the rotation of said turn table to lock the latter against rotation.



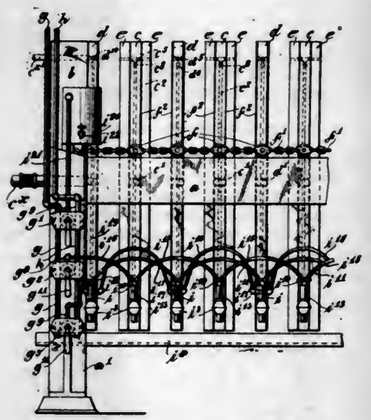
3. The combination with a pit, a turn table operatively mounted therein, pairs of parallel shafts rotatably mounted on said turn table, rollers on said shafts adapted to be engaged and rotated by the wheels of a motor driven vehicle on said turn table, means in connection therewith to rotate said turn table upon the rotation of said rollers and shafts, a double acting locking clutch on one of said shafts, an actuating lever for said clutch projecting beyond the peripheral edge of said table, and a pair of stops stationarily mounted in the pit at diametrically opposite points therein, said stops being adapted for engagement with said lever to lock said turn table against rotation at predetermined points in said pit.

4. The combination with a pit, a turn table rotatably mounted therein, a pair of parallel shafts rotatably mounted on said turn table, rollers carried on said shafts adapted to be engaged and rotated by wheels of a motor driven vehicle on said turn table, and means in connection therewith to rotate said turn table upon the rotation of said rollers and shafts, of a double acting locking clutch on one of said shafts, an angular lever fulcrumed intermediate of its ends on said turn table and having connection at one of its ends with said clutch member to actuate the latter, the opposite end of said lever projecting beyond the peripheral edge of said turn table, and a pair of stop members stationarily mounted in said pit at diametrically opposite points therein and arranged in the path of said actuating lever whereby to be engaged by the latter and lock said turn table against rotation in the pit at predetermined points.

5. The combination with a pit, a turn table operatively mounted therein, pairs of parallel shafts mounted for rotation on said turn table, rollers carried on said shafts adapted to be engaged and rotated by the wheels of a motor driven vehicle on said turn table, and means in connection therewith to rotate said turn table upon the rotation of said rollers and shafts; of a sleeve like locking member loosely mounted on one of said shafts and having teeth at the ends thereof, studs mounted on said last mentioned shaft beyond the ends of said sleeves adapted for engagement with the teeth on the latter when said sleeve is slided on said shaft, an angular lever fulcrumed intermediate of its ends on said turn table and having its inner end loosely engaged with said sleeve member to actuate the latter, the opposite end of said lever projecting beyond the peripheral edge of said turn table, and a pair of stop members rigidly mounted in said pit at diametrically opposite points therein adapted for engagement with the last mentioned end of said lever to lock said turn table against rotation at predetermined points.

[Claims 6 and 7 not printed in the Gazette.]

1,112,674. FILTER-PRESS. ALFRED BURGER, New Brighton, N. Y. Filed Apr. 8, 1911. Serial No. 619,699. (Cl. 210—13.)



1. In a filter press, the combination of a series of relatively movable plates and frames forming filter chambers, cocks for said chambers respectively, a common means for opening and closing said cocks, and flexible connections from the several cocks to said common means, whereby all of said cocks may be opened and closed from one point.

2. In a filter press, the combination of a series of relatively movable plates and frames forming filter chambers, cocks for said chambers respectively, said cocks comprising each a valve and a pneumatic valve operating device, a common pneumatic controlling device, and connections from the several pneumatic operating devices to said common controlling device.

3. In a filter press, the combination of a series of plates and frames forming filter chambers, cocks for the filter chambers respectively, each cock comprising a valve and a pneumatic valve operating device, a suction line, a pressure line, a valve adapted to control communication with the suction line and the pressure line, and connections from the several pneumatic valve operating devices to said controlling valve.

4. In a filter press, the combination of a series of relatively movable plates and frames forming filter chambers, means to introduce wash water at one side or at the other of each filter cake, cocks communicating with the chambers between the several cakes, means to open or close simultaneously the cocks of alternating chambers, and means to open or close simultaneously the cocks of the intermediate chambers, whereby the wash water may be directed through the filter cakes from one side thereof or from the other.

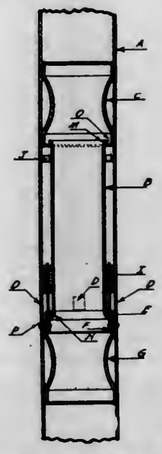
5. In a filter press, the combination of a series of relatively movable plates and frames forming filter chambers, cocks for said filter chambers, each cock comprising an air cylinder and a piston and a valve operated by the piston, a suction line, a pressure line, a valve to control communication with the suction line or the pressure line, and connections from the several air cylinders of the cocks to said controlling valve, whereby the several cock valves of the series may be opened or closed together.

1,112,675. TENSIONING DEVICE FOR SHUTTLES. DAVID H. CLARK, Greensboro, N. C. Filed June 20, 1914. Serial No. 846,357. (Cl. 139—46.)

1. The combination with a shuttle body provided with a recess at one end of the bobbin chamber and a shuttle eye mounted in the base of said recess at one side of its center, of a spring wire arranged in said recess contiguous to the shuttle eye and provided with a loop, one arm of which is engaged in the wall of the recess, the other arm of said wire normally bearing upon the base of the recess, said wire being inwardly extended from said latter arm and fixed to the shuttle body, and a regulating screw mounted in the shuttle body and coöperating with the latter end of the wire to elevate said latter arm and adjust the tension of said wire upon the thread.

2. The combination with a shuttle body having a circular recess at one end of the bobbin receiving chamber and a shuttle eye mounted in the base of said recess at one side of its center, of a resilient wire loop arranged in said recess and having one of its arms engaged in the wall thereof, the other arm of said loop being adapted to bear upon the thread adjacent the shuttle eye and hold the same upon the base wall of the recess, said wire being reversely bent from the latter arm and then extended inwardly and fixed at its other end to the shuttle body, and a regulating screw threaded in said body at one side of said recess and having a tapered portion coöperating with the latter end of said wire whereby the tension of said loop and the pressure of the loop arm upon the thread may be regulated.

1,112,676. WELL-CASING. ARTHUR L. COLLINS, San Francisco, Cal. Filed Oct. 30, 1913. Serial No. 798,260. (Cl. 166—5.)



1. In combination, an outer casing, an inner casing, and means for closing at the bottom the annular space between the two casings, said annular space opening at the top of the inner casing and communicating with the interior of the well, the outer casing having a series of holes above said closed bottom and below said open top.

2. In combination, an outer casing, an inner casing, the annular space between the two casings opening at the top of the inner casing and communicating with the interior of the well, the outer casing having a series of holes above said closed bottom and below said open top, means on the outer casing for supporting the inner casing, said inner

casing being movable relatively to the outer casing sufficiently to permit the holes in the outer casing to communicate below the inner casing with the central portion of the well.

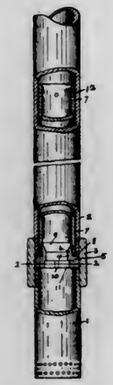
3. In combination, an outer casing, an inner casing, the annular space between the two casings opening at the top of the inner casing and communicating with the interior of the well, the outer casing having a series of holes above said closed bottom and below said open top, means for supporting the inner casing within the outer casing, said inner casing being movable relatively to the outer casing sufficiently to permit the holes in the outer casing to communicate with the central portion of the well, otherwise than over the top of the inner casing.

4. The combination, an outer casing, an inner casing, the annular space between the two casings opening at the top of the inner casing and communicating with the interior of the well, the outer casing having a series of holes above said closed bottom and below said open top, a collar at the lower end of the inner casing, and a seating ring for the collar in the outer casing, said inner casing being movable relatively to the outer casing sufficiently to permit the holes in the outer casing to communicate below the inner casing with the central portion of the well.

5. In combination, an outer casing, an inner casing, the annular space between the two casings opening at the top of the inner casing and communicating with the interior of the well, the outer casing having a series of holes above said closed bottom and below said open top, a collar at the lower end of the inner casing, and a seating ring for the collar in the outer casing, said inner casing being movable relatively to the outer casing sufficiently to permit the holes in the outer casing to communicate with the central portion of the well and resilient means for pressing said ring to said collar.

[Claims 6 and 7 not printed in the Gazette.]

1,112,677. PUMP-BARREL. RUDOLPH CONRADER, Erie, Pa. Filed Mar. 8, 1913. Serial No. 752,896. (Cl. 103—59.)



1. In a pump barrel, the combination of a tubing; a coupling screwed on to the tubing; a fitting screwed into the coupling having a beveled upper surface for the reception of a standing valve, and an insert secured to the fitting outside of said beveled surface and extending within the tubing.

2. In a pump barrel, the combination of a tubing; a coupling screwed on to the tubing; a fitting screwed into the coupling and having a screw threaded portion extending into the tubing; and an insert secured to the screw threaded portion of the fitting and extending within the tubing.

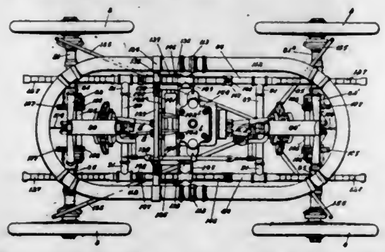
3. In a pump barrel, the combination of a tubing; a coupling screwed on to the tubing; a fitting screwed into the coupling, said fitting extending into the tubing and being exteriorly screw threaded with the screw threaded portion spaced from the inner surface of the tubing; and an insert having an interior screw thread screwed on to the screw threaded portion of the fitting and extending within the tubing.

4. In a pump barrel, the combination of a tubing; a coupling screwed on to the tubing; a fitting screwed into the coupling, the fitting having a portion extending into the tubing and having a beveled inner surface and a screw threaded exterior surface; and an insert having an interior screw thread screwed on to the fitting and extending into the tubing.

5. In a pump barrel, the combination of a tubing; a coupling screwed on to the tubing; a fitting having a flange portion exteriorly screw threaded and screwed into the coupling, said fitting having a portion extending into the tubing, said portion being exteriorly screw threaded; an insert interiorly screw threaded and screwed on to the screw threaded portion of the fitting; and a gasket on the flange forming a joint between the flange and the end of the insert and the end of the tubing.

[Claim 6 not printed in the Gazette.]

1,112,678. MOTOR-VEHICLE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and this application filed Apr. 6, 1914. Serial No. 829,995. (Cl. 21—90.)



1. In a motor vehicle, the combination of a driving axle, a motor supporting frame, a motor flexibly mounted on the frame, a flexible longitudinally extending driving shaft connecting the motor to the driving axle, and means connected with the motor and said frame for preventing the motor turning, relatively to the frame, about an axis extending longitudinally of the vehicle.

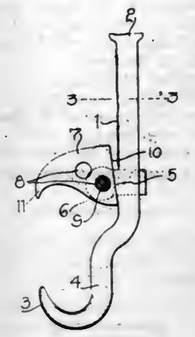
2. In a motor vehicle, the combination of a driving axle, a motor supporting frame, a motor supported on springs on said frame, a flexible longitudinally extending driving shaft connecting the motor to the driving axle, and a member extending transversely of the motor and connected thereto for preventing the motor turning, relatively to the frame, about an axis extending longitudinally of the vehicle.

3. In a motor vehicle, the combination of a motor supporting frame comprising side bars, a motor having laterally extended supporting arms or brackets, means connecting said arms to said side bars whereby the motor is supported thereon, a cross bar adjacent one end of said motor and connected to said frame, and means connecting said motor to said cross bar.

4. In a motor vehicle, the combination of a motor supporting frame comprising side bars, a cross bar connected to said frame, a motor, supporting arms or brackets extending laterally from the motor, means connecting said arms to said frame, and means connecting said motor to said cross bar, one of said means being flexible and permitting relative movement of the motor and adjacent parts of the frame and the other of said means being rigid and tending to limit the extent of said movement.

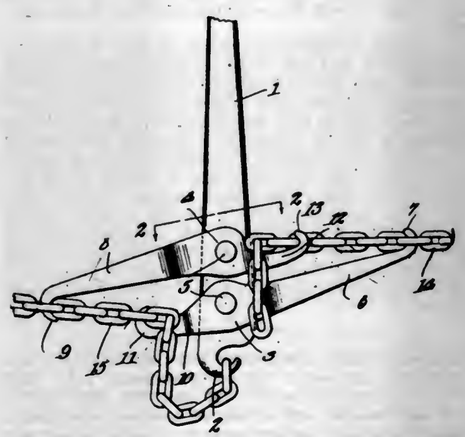
5. In a motor vehicle, the combination of a motor supporting frame comprising side bars, a motor having laterally extended supporting arms or brackets, means connecting said arms to said side bars whereby the motor is supported thereon, a cross bar adjacent one end of said motor and connected at both ends to said frame, and means connecting said motor to said cross bar at the middle portion of the cross bar.

1,112,679. CLAMP. JAMES HARRY CRAIG, Rimer, Pa. Filed Mar. 21, 1914. Serial No. 826,301. (Cl. 57—9.)



A device of the class described including a substantially flat shank, an offset hook members formed at one end, a yoke slidably mounted upon the shank, enlarged ends formed on said yoke and arranged in spaced relation, a plate mounted for pivotal movement between the yoke, a hook formed at the outer end of said plate and arranged in opposed relation with the hook on the shank and the inner longitudinal edge of the plate being disposed adjacent one of the flat faces of the shank whereby the corners of the plate will engage the shank and limit the pivotal movement of the plate and the sliding movement of the yoke when in its effective position.

1,112,680. CHAIN-TIGHTENER. WILLIAM CRAINE, Brookfield, N. Y. Filed Dec. 11, 1913. Serial No. 806,014. (Cl. 39—61.)

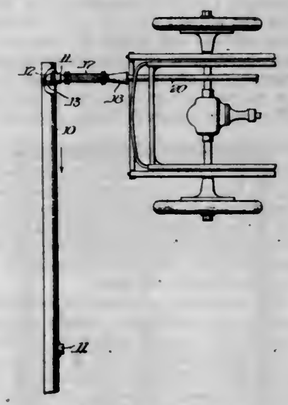


1. A device of the character described embodying a lever, and a pair of complemental members pivoted thereto and each having a pair of rigid hooks projecting in opposite directions from the lever, the hooks at one side projecting in the same direction, and the hooks at the other side projecting toward each other.

2. A device of the character described embodying a lever, a pair of complemental members pivoted thereto and each having a rigid short hook projecting to one side and a rigid long hook projecting toward the other side, the short and long hooks of one member projecting in directions similar to the long and short hooks, respectively, of the other member.

3. A device of the character described embodying a lever, a pair of complemental members pivoted thereto and each having a short hook projecting to one side and a long hook projecting toward the other side, the short and long hooks of the two members being reversed, the bills of the short hooks projecting away from and toward the shanks of the complemental long hooks, respectively, and the bills of the respective long hooks projecting in similar and opposite directions with respect to the bills of the short hooks.

1,112,681. EXHAUST-GAS CONVEYER. HERBERT W. CRANE, Chicago, Ill. Filed May 15, 1914. Serial No. 838,687. (Cl. 104—208.)



1. In a device of the class described, the combination of a main exhaust conduit, spaced inlets to said conduit said inlets being in the form of elbows, the opening within the conduit presenting in the direction of flow of gases through said conduit, and a flap valve controlling said inlet opening, substantially as described.

2. In a device of the class described, the combination of a main exhaust conduit, spaced inlets to said conduit said inlets being in the form of elbows, the opening within the conduit presenting in the direction of flow of gases through said conduit, and a flap valve hinged to said elbow and gravity actuated whereby the inward movement of the gases is not resisted but escape of gases in a rearward direction is prevented, substantially as described.

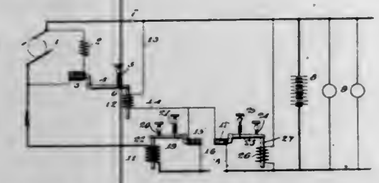
3. In a device of the class described, the combination of an exhaust main provided with spaced inlets thereto, a flexible tubular conduit removably connected to said main, said flexible tube terminating in a conical coupling by means of which said tube may be attached to the exhaust pipe of an automobile, substantially as described.

4. In a device of the class described, the combination of a waste gas conduit, a flexible tube removably connected thereto, said tube being provided with a conical coupling, and a hook carried by said conical member and adapted to be actuated upon the extension of said tube, substantially as described.

5. In a device of the class described, the combination of a waste gas conduit having spaced inlets thereto, one-way valves controlling said inlets, a flexible and expansible tube removably connected to said conduit, a coupling carried by said tube, a coupling hook, and means for actuating said conpling hook upon the extension of said tube, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,112,682. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Oct. 11, 1910. Serial No. 586,485. (Cl. 171—229.)



1. Means for regulating a generator comprehending regulating means, a coil for operating the same, means for affecting the current in said coil operated by current fluctuations and means for affecting the current in said coil responsive to voltage fluctuations.

2. Means for regulating a generator comprehending a regulating element, a coil for controlling the same, means for controlling the current in said coil comprising a current governing element and means for affecting the said element comprehending a current operated magnet and additional means for affecting the current in said coil comprising a current governing element and means for affecting said element comprehending a voltage operated magnet.

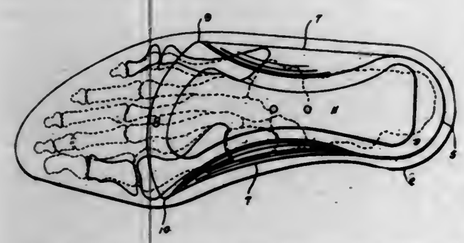
3. Means for regulating a generator comprehending a regulating element, a coil for operating the same, means for affecting the current in said coil comprehending a resistance varying element and means governing the same responsive to current fluctuations and additional means for affecting the current in said coil comprehending a resistance varying element and means responsive to voltage fluctuations for controlling the same.

4. Means for regulating a generator comprehending a regulating means electro-magnetic means for controlling the same actuated by a coil, means for controlling the current in said coil comprehending a resistance varying element and means affecting the same affected by the current output of the generator and an additional resistance varying element and means affected by the voltage of the generator for controlling the resistance thereof.

5. Means for regulating a generator comprehending means for controlling the magnetization thereof, a coil for operating said means, and means for governing the current in said coil comprehending a resistance element and means responsive to current fluctuations for affecting the latter, and an additional resistance element affecting said coil, and means responsive to voltage fluctuations for affecting said element.

[Claims 6 to 9 not printed in the Gazette.]

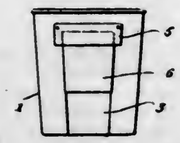
1,112,683. FOOT-BRACE AND ARCH-PROP. NEAL M. CREWS, Peoria, Ill. Filed Jan. 4, 1913. Serial No. 740,113. (Cl. 36—71.)



1. A foot and arch prop, comprising a body arched longitudinally to support the arch of a foot and having lateral extensions to embrace the foot at its intermediate portions, and a two-armed spring member attached on a line between its arms to the top of the arch portion of said body and having its arms extending downwardly at angles away from said body and from said line between its arms, whereby said body is fulcrumed on said spring member for a rocking action thereon.

2. A foot brace and arch support adapted to be inserted in a shoe, the central body portion thereof having substantially the curvature of the arch of the foot and a lateral curvature throughout its length, lateral side pieces having a general curvature to conform to the shape of the foot and to embrace the same, said lateral side pieces extending rearwardly to the inturn of the heel portion and forwardly to the inturn at the front end of the main foot portion, and a flat spring member bent intermediate its ends to a substantially inverted V shape, the apex of which is connected with the body portion substantially at the center of the arch form, the ends of the spring member being free and spaced from the body portion of the arch support.

1,112,684. CULINARY VESSEL. BELLE NORTHRUP CRIM, Jordanville, N. Y. Filed Jan. 22, 1913. Serial No. 743,615. (Cl. 53—1.)

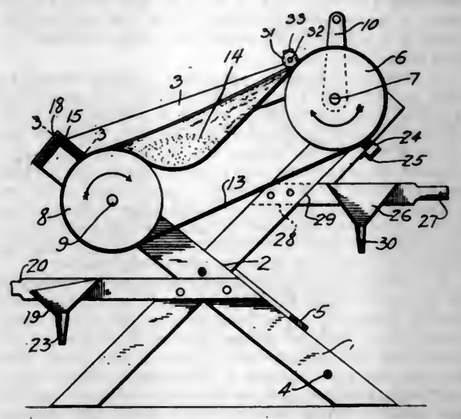


1. A culinary vessel comprising a body of generally circular form, said body being provided below its upper edge with a horizontal transverse slit at one side, said side of the body below the slit being reduced from a circular to a flattened condition, whereby a vapor outlet is formed between the upper circular and lower flat portions at such side of the vessel, a horizontal transverse retaining strip secured to the upper circular portion aforesaid and depending therefrom in spaced relation to the flattened portion, and a shield plate disposed in spaced relation to said flattened portion to form a vent passage communicating with the outlet, said shield being slidably fitted at its upper edge between the retaining strip and circular portion.

2. A culinary vessel comprising a body of generally circular form, said body being provided at one side below its upper edge with a horizontal transverse slit and reduced below said slit from a circular to a flattened condition, the portion of such side of the vessel above said slit retaining a circular formation, a retaining strip secured to said circular portion of the vessel at such side and depending below the slit and in spaced relation to the flattened portion, and a shield plate disposed in spaced relation to the flattened portion to provide a vapor passage communicating with said outlet, said shield being slidably fitted at its upper edge in position between the retaining strip and body of the vessel and arranged in the plane of the over-hanging circular portion of the vessel at the side named.

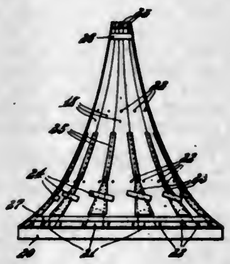
1,112,685. SEED CLEANING AND SEPARATING MACHINE. ARTHUR L. CRITCHFIELD, Fargo, Ind. Filed Oct. 15, 1913. Serial No. 795,362. (Cl. 130—18.)

A seed cleaning and separating machine comprising a frame, terminally circumferentially grooved rollers supported thereby in parallel relation but in different planes, an endless apron having corded edges engaging the grooves in the rollers and being of a length to permit its upper lead to sag to provide a seed receiving pocket, an adjustable wall coacting with the apron over the lower roller and constituting a cut-off, means coacting with the under portion of the higher roller to remove accumulated material therefrom, rollers carried by the frame and engaging the corded edges of the apron adjacent to the higher roller



to retain the edges in the grooves thereof, and means for revolving the latter roller.

1,112,686. PROCESS OF MANUFACTURING HORNS. ALFRED R. CUNNIUS, Brooklyn, N. Y., assignor of one-half to Lipman Kaiser, East Orange, N. J. Filed July 10, 1908. Serial No. 442,889. (Cl. 144—309.)



1. The method of making a phonograph horn, which consists in assembling separate layers of longitudinally extending tapered strips with reinforcing tapes between the layers, both layers being glued to said tapes.

2. In the method of making a horn of fibrous material, the following steps, assembling a layer of tapered elements upon a form and securing said elements together by adhesive means and then assembling a second layer of tapered elements upon the first layer and securing said second layer of elements together, so that said layer can be moved as one body, then separating said second layer from the first layer and applying an adhesive material between the same and then clamping said layers together on a form of proper contour with the joints between the elements of one layer breaking with the joints between the elements of the other layer.

3. In the method of making a horn of fibrous material, the following steps, assembling a layer of tapered elements upon a form and securing said elements together by adhesive means and then assembling a second layer of tapered elements upon the first layer and securing said second layer of elements together, so that said layer can be moved as one body, then separating said second layer from the first layer and applying an adhesive material between the same and then clamping said layers together on a form of proper contour, with the joints between the elements of one layer breaking with the joints between the elements of the other layer and then clamping a margin ring or band provided with adhesive material upon the outer or flaring end of the structure previously formed.

4. The method of making a horn, which consists in providing a plurality of strips or elements each made of two layers of veneer, the grain of one layer crossing the grain of another, arranging said elements in two layers in break-joint fashion so that the grain showing on the inner and outer surface of the horn shall run longitudinally with the strips while the grain of the other layers of veneer shall be inclined thereto and securing said layers together in any suitable way.

5. The method of making a phonograph horn, which consists in assembling tapered strips of fibrous material upon a form and securing the same temporarily thereto fastening said elements together by adhesive means, then temporarily securing an outer layer of similar elements upon said inner layer in break-joint fashion, pressing said layers firmly against the form to secure the contour thereof, spacing said outer layers so as to leave channels therebetween and inserting decorating pieces at the lower ends of said channels and after separating said layers and providing adhesive material therebetween, and then clamping the same firmly together on the form of desired contour until the adhesive material has set.

[Claims 6 to 17 not printed in the Gazette.]

1,112,687. REFRIGERATOR. FOREST V. DETWILER, Chicago, Ill. Filed May 4, 1908. Serial No. 430,653. (Cl. 62—55.)

1. A sectional refrigerator including wall panels constructed of sheet material, each provided with laterally projecting flanges, one of the flanges on one panel overlapping one of the flanges of the next adjacent panel, and means for securing the panels to each other to form unit members.

2. A sectional refrigerator including metallic wall panels each provided with laterally projecting flanges, one of the flanges on one panel resting against and being flanged over one of the flanges of the next adjacent panel, and interengaging means on the abutting flanges for securing the panels to each other to form unit members.

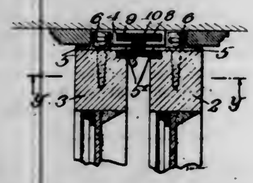
3. A refrigerator including metallic wall panels each provided with laterally projecting flanges, one of the flanges of one panel resting against one of the flanges of the next adjacent panel, one of said abutting flanges being provided with an aperture and the other being provided with a cut out portion to form a projecting ear adapted to pass through the said aperture to be bent against the face of the other flange for securing the panels together.

4. A refrigerator including metallic wall panels, each provided with laterally projecting flanges, means for securing one of the flanges of one section to one of the flanges of another section to form a wall, and insulating material supported by the respective panels intermediate the flanges thereof, a portion of the said insulating material extending over the abutting edges of the flanges.

5. A refrigerator including metallic wall panels, each provided with laterally projecting flanges, means for securing one of the flanges of one section to one of the flanges of another section to form a wall, insulating material supported by the respective panels intermediate the flanges thereof, a portion of the said insulating material extending over the abutting edges of the flanges, and means for securing the insulating material against displacement.

[Claims 6 to 40 not printed in the Gazette.]

1,112,688. WINDOW-SASH DEVICE. CHARLES DIPPLE, Jr., Brooklyn, N. Y. Filed Aug. 17, 1912. Serial No. 715,602. (Cl. 20—43.)

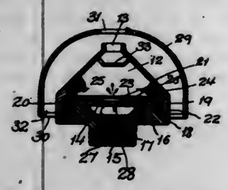


1. In a window construction, the combination with the frame, of a vertical guide located at the side of said frame, a pair of U-shaped strips arranged with their bases opposed to each other and freely engaging said guide and horizontally pivoted window sashes each having a part intermeshing with the U-shaped strips, said strips being adapted to be moved longitudinally to free the pivotal mountings of said sashes.

2. In a window construction, the combination with the frame and window sashes hung on horizontal pivots, of a stationary guide located vertically thereof, a pair of oppositely disposed independently movable U-shaped strips of less length than the opening in the frame and engaging said guide and the window sashes, to hold the sashes to the frame, each U-shaped strip being movable beyond the sash pivot to permit the sash to rotate.

3. In a window construction, the combination with sashes hung on horizontal pivots and the window frame, of a stationary guide secured to said frame and running the length thereof, a plate secured to each window sash and an independent U-shaped strip for each sash adapted to engage said plate and hold it to said guide, each of said strips being movable independently of each other beyond the sash pivot to permit the sash to rotate.

1,112,689. BUBBLING DRINKING-FOUNTAIN. JOHN J. DONOVAN, Boston, Mass. Filed Jan. 16, 1911, Serial No. 602,811. Renewed Mar. 25, 1914. Serial No. 827,247. (Cl. 137—109.)



1. A bubbling fountain comprising a casing, having an inlet at one side, a diaphragm chamber communicating with the inlet, and a delivering chamber provided with a bubbling outlet at the opposite side of the casing, the top of the diaphragm chamber being provided with a restricted port and with a larger port spaced from the restricted port, and a diaphragm movable in said chamber and having an orifice coinciding with the restricted port, said diaphragm being adapted to be seated against the top of the diaphragm chamber by liquid pressure to close the larger port therein, and restrict the quantity of liquid passing through the chamber, the diaphragm orifice being of greater area than the said restricted port, so that liquid under a relatively light pressure will flow therethrough without moving the diaphragm, so far as to close the said larger port.

2. A bubbling fountain comprising a casing having an inlet at one side, a diaphragm chamber communicating with the inlet and provided with a dished top, and a delivering chamber provided with a bubbling outlet at the opposite side of the casing, the top of the diaphragm chamber being provided with ports for permitting the passage of liquid to the delivering chamber, and a flat resilient diaphragm movable in said chamber and having an orifice coinciding with one of said ports, the diaphragm being adapted to be seated on the dished top of the diaphragm chamber and dished in conformity therewith.

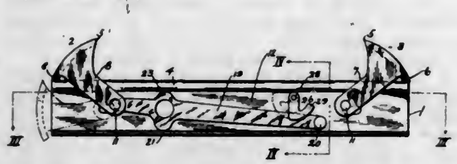
3. A bubbling fountain comprising a casing comprised of an inner section having an inlet, an outer chambered section having an outlet, said sections being detachably connected, a plate or septum clamped at its margin between the said sections and provided with ports, said sections and plate forming a diaphragm chamber and a delivering chamber, and a diaphragm movable against said plate by liquid pressure in the diaphragm chamber and having an orifice coinciding with one of said ports.

4. A bubbling fountain, having an outlet for a jet, a means for maintaining a jet of substantially uniform height regardless of the pressure acting on the liquid, comprising a wall having a plurality of ports, and a valve automatically operated by the water pressure and its own resiliency to open or close more or less of the ports as the pressure is low or high.

5. A bubbling fountain, comprising a conduit having an outlet, a partition crossing the conduit so as to form a chamber therein and having an inlet to the chamber, and means extending across a part of the inlet on the pressure side of the partition controlled by the pressure for closing such inlet to a greater or less extent in proportion to the pressure, said means having an inherent resiliency acting in opposition to the pressure and tending to uncover the inlet.

[Claims 6 and 7 not printed in the Gazette.]

1,112,690. LOGGING-BUNK. CLAYTON T. EAID, Portland, Oreg., assignor of one-third to Thomas H. Gavan, Camas, Wash. Filed Dec. 16, 1913. Serial No. 806,946. (Cl. 105—173.)



1. The combination with a bed-piece comprising a web, of crutch blocks, each straddling the web, and means comprehended within the web and blocks for adjustably securing the blocks to the web, respectively.

2. The combination with a bed-piece consisting of a single member, of blocks adjustable thereon for the purpose specified, and means comprehended within the web and blocks of securing them in their respective adjustments.

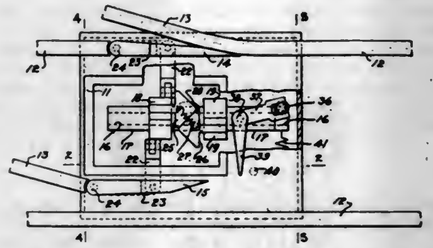
3. The combination with a bed-piece comprising a web, and crutch-blocks straddling the web, of means of adjustable connection between the web and blocks, respectively, comprising an elongated aperture and a pin correlatively disposed between the blocks and web.

4. The combination with a bed-piece comprising a web, and crutch-blocks straddling the web, of means of adjustable connection between the web and each block comprising an aperture having horizontally and transversely disposed portions in the web, and a pin extending from leg to leg of the block through said aperture.

5. The combination with a bed-piece and blocks, of means comprehended within the web and blocks for adjustably securing each block to the bed-piece comprising a correlative pin and aperture connection.

[Claims 6 to 23 not printed in the Gazette.]

1,112,691. SWITCH-OPERATING MECHANISM. AXEL S. ELIASON, New York, N. Y., assignor of one-fourth to Emil Nelson and one-fourth to Olof Person, New York, N. Y. Filed Aug. 5, 1913. Serial No. 783,206. (Cl. 104—24.)



1. A switch operating mechanism comprising in combination a horizontally oscillatable element disposed transversely in the path of the car and actuated thereby, a shiftable member working in a vertical plane, mechanism connected up with said element for shifting said member from one position to another in said plane, said mechanism being capable of receding out of the way of the member after setting it, a switch-point, an oscillatable connection between said switch-point and the member and means for retaining said member with the switch-point in its assigned position, said switch-point being capable of actuation independent of the car operated mechanism.

2. A single unit self-contained switch operating mechanism comprising in combination with the switch point, means for setting and resetting the latter including a pair of co-acting elements arranged to swing cross-wise past each other on a common center when moving from one position to another, and means for moving either element by the other.

3. A single unit switch operating mechanism comprising in combination with the switch point, interconnected elements having an oscillatable connection with the switch point so that the latter will set or reset when the elements are moved cross-wise past each other, and means for actuating said elements alternately, said switch point, said elements with their connection, and said means constituting a self-contained apparatus with the one and same mechanism.

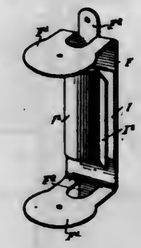
4. In a switch-operating mechanism, the combination of a switch-point, setting and resetting arms therefor pivoted so as to oscillate in opposite directions, latching means for said arms, said arms being connected so that one moves the other, and means for actuating the arms and effecting transposition of their said latching means.

5. In a switch-operating mechanism, the combination of a switch-point, a rotatable shaft, a pair of latched arms mounted on said shaft so as to swing in opposite directions transversely thereof, a connection from one of said arms serving to set or reset the switch-point as the arms are moved one way or the other, and a lever on the shaft normally positioned to one side of the latched arms operating to move either one of them by the other.

[Claims 6 to 14 not printed in the Gazette.]

1,112,692. SPOOL-HOLDER. RUSSELL FRASER, East Hampton, N. Y. Filed June 28, 1913. Serial No. 776,289. (Cl. 242—134.)

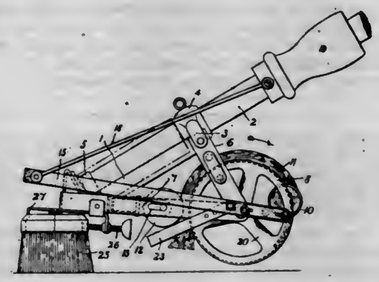
1. In combination with a wire-holding spool having a central bore, a pin extending through the said bore on which the spool is mounted to turn, a flat bearing plate having angular end lugs attached to the said pin, and attaching flanges on the end of the said bearing plate and arranged in the plane of the bearing plate, the attaching flanges projecting outwardly beyond the said lugs to permit of attaching the flanges to a support, the said attaching flanges being struck up from the material of the said lugs.



2. In combination with a wire-holding spool, a holder on which the said spool is mounted to turn, and a wire retainer in the form of a spring plate doubled up to provide two members of which one is attached to the said holder and the other member terminates in an angular flange bearing on the outermost layer of the wire on the said spool.

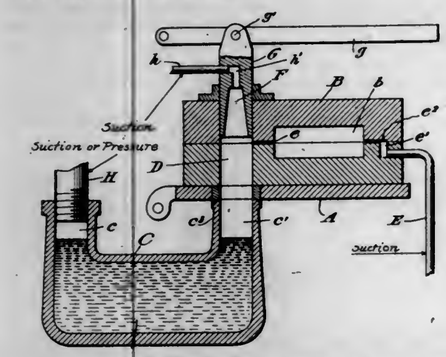
3. In combination with a wire-holding spool having a central bore, a pin extending through the said bore on which the spool is mounted to turn, a flat bearing plate having angular end lugs attached to the said pin, attaching flanges on the ends of the said bearing plate and arranged in the plane of the bearing plate, the attaching flanges projecting outwardly beyond the said lugs to permit of attaching the flanges to a support, and a wire retainer in the form of a spring plate doubled up to form two members of which one is attached to the said bearing plate, and the other member terminates in an angular flange bearing on the outermost layer of the wire on the said spool.

1,112,693. FLOOR-CLEANER. JAMES EDWIN GEE, Wood Green, England. Filed Apr. 5, 1913. Serial No. 759,196. (Cl. 15—43.)



In a floor cleaner, the combination of a frame, a drum provided with inclined spokes journaled in said frame, a swab carried by said drum, a wringer-roller mounted on said frame and adapted to yieldingly press against said swab, and means for rotating said drum to draw said swab into engagement with the wringer-roller comprising a pair of levers fulcrumed on opposite sides of said frame, a headed pawl carried in the rear arm of each of said levers and adapted to coöperate with the inclined spokes of said drum to rotate the latter in one direction, a pair of screws mounted in the rear arm of each of said levers, one to either side of said pawls, a spring provided with slotted ends slidably engaging each of said pairs of screws and bearing against the head of each of said pawls, a sleeve slidably mounted on said handle, and a pair of rods connecting said sleeve and the forward arms of said levers.

1,112,694. ART OF MAKING CASTINGS. CHARLES M. GREY, East Orange, N. J. Filed Jan. 4, 1912. Serial No. 669,351. (Cl. 22—209.)



1. In the art of making die castings, the improvement which consists in introducing metal from a reservoir into the die and utilizing the flow of metal to compress the air or gases and to force the same into a chamber separate from the die.

2. In the art of making die castings, the improvement which consists in forcing metal from a reservoir into the die and utilizing the flow of the metal to compress the air or gases and to force the same into a chamber separate from the die.

3. In the art of making die castings, the improvement which consists in forcing metal from a reservoir into the die and simultaneously exhausting air forwardly of the flowing metal prior to its entrance into the die through a passage separate from the die.

4. In the art of making die castings, the improvement which consists in forcing metal from a reservoir into the die, exhausting air forwardly of the flowing metal prior to its entrance into the die through a passage separate from the die, and utilizing the flow of the metal to compress the air or gas and to force the same into the separate passage.

5. In the art of making die castings, the improvement which consists in forcing the metal from the metal reservoir toward the die by applying pressure to the metal in said reservoir, whereby the oxid on the surface of said metal is driven by and beyond the inlet to the die, and unoxidized metal, only, is forced into the die.

[Claims 6 to 9 not printed in the Gazette.]

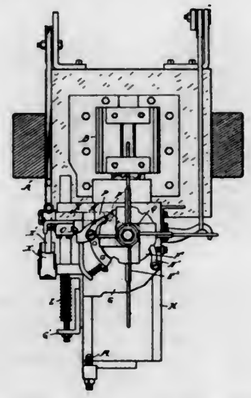
1,112,695. MULTIPLE-TUBE-FORMING MECHANISM. OTTO J. GROEHN, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 24, 1912. Serial No. 727,532. (Cl. 153—70.)

1. The combination with intermittently-operating dies of a core member upon which a blank is placed, insertible into operative relation to said dies, and means timed with the operation of said dies for alternately inserting and withdrawing said core member, and for reversing the same when withdrawn.

2. The combination with opposed, intermittently-operating dies of a series of core members upon which the blanks are placed successively insertible between said dies, and means operating to successively insert and withdraw said core members and to reverse the same when withdrawn for engagement with the blank.

3. The combination with opposed intermittently-operating dies of a core member upon which the blank is placed, a holder to which one end of said core member is attached, means for reciprocating said holder to insert and withdraw said core member in relation to said dies, and means for rotating said holder when withdrawn to reverse the position of said core member for engagement with the blank.

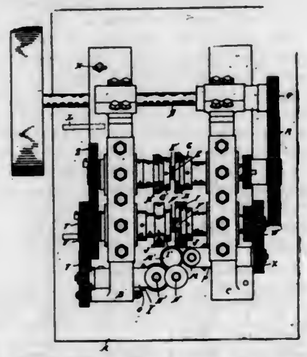
4. The combination with opposed intermittently-operating dies, of a series of core members upon which the blanks are placed, a head to which said core members are secured intermittently rotatable to successively register said core members with the dies, a slide upon which said head is mounted, means operating in timed relation to said dies for reciprocating said head and carrying the registering core member into and out of operative relation with the dies, and means operating upon the outward movement of said slide and complete withdrawal of the core member for partially rotating said head.



5. The combination with opposed intermittently-operating dies of a series of core members upon which the blanks are placed, a rotative head upon which said core members are mounted and from which they laterally project, a slide upon which said head is mounted, means for locking said head successively in position for registering the respective core members with said dies, means timed with the operation of said dies for reciprocating said slide to insert and withdraw the registering core member in operative relation with said dies, and means operating upon the complete withdrawal of said core member for unlocking said head and rotating the same to register another core member with the dies.

[Claims 6 to 9 not printed in the Gazette.]

1,112,696. MACHINE FOR FLANGING SHEET METAL. OTTO J. GROEHN, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 30, 1912. Serial No. 728,685. (Cl. 153—29.)



1. A machine for flanging sheet metal strips, comprising a bed, a side frame mounted thereon, a second side frame, laterally adjustably mounted upon the opposite side of said bed, guiding means for holding said frame in parallelism with the first-mentioned frame in each position of adjustment, a series of shafts formed in telescoping sections, extending between said frames, and having their corresponding sections mounted in the respective frames, a series of alined forming rolls mounted on the shaft sections of one of said frames, and a corresponding series of alined forming rolls mounted on the shaft sections of the opposite frame.

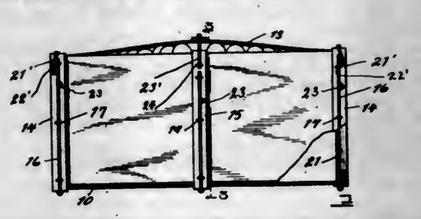
2. In a machine for flanging the opposite edge portions of sheet metal strips, the combination with parallel frames, of cross shafts extending between said frames and formed in telescopically engaging sections held from endwise movement in their respective frames, alined corresponding series of flanging and return-bending rolls mounted on the telescopic sections of the respective frames, one of said frames being laterally adjustable relative to the other frame, the series of rolls of said adjustable frame being adjustable therewith as an entity, and guiding means for holding said frame in parallelism with the other frame in each position of adjustment.

1,112,697. ARTIFICIAL TEETH. FRIEDRICH HEYDE, Tegel, near Berlin, Germany. Filed Sept. 15, 1913. Serial No. 789,846. (Cl. 32—9.)

1. In an artificial denture the combination of a tooth having a front opening, a recessed spring plate within said front opening and a back plate having a conical projection and shoulder for entering the recess of said spring plate and securing said back plate to the tooth.

2. In an artificial denture the combination of a tooth having a front opening, a recessed spring ring within said front opening having side projections and secured to said tooth by a bayonet joint, and a back plate having a conical projection and shoulder for entering the recess of said spring ring and securing said back plate to the tooth.

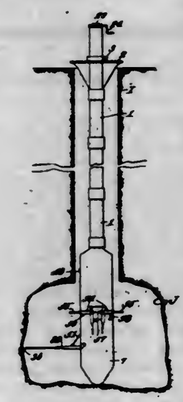
1,112,698. BOX OR CRATE. JAMES G. HICKEY and FRED J. BAIRD, Jacksonville, Fla. Filed Feb. 10, 1914. Serial No. 817,912. (Cl. 217—15.)



1. A crate or box of the character described, comprising a body portion embodying, a bottom, sides and a lid, tying elements flexibly connecting these parts together when in their knocked down condition and when assembled, and one of the tying elements being provided adjacent the lid with a loop portion which is resilient and longitudinally extensible.

2. A crate or box of the character described, comprising a body portion, a lid therefor, relatively non-extensible tying wires surrounding the opposite ends of the box to securely hold the ends of the lid from movement away from the body portion, and a relatively non-extensible tying wire surrounding the box at a point substantially equi-distantly spaced from the opposite ends of the box and provided with resilient and longitudinally extensible loop portions arranged adjacent the opposite longitudinal edges of the lid.

1,112,699. TESTER FOR BLAST-CAVITIES. JOSEPH A. HOUSTON, Eureka Springs, Ark. Filed June 5, 1913. Serial No. 771,920. (Cl. 33—174.)



1. A tester for cavities, including a casing, a flexible measuring element carried by the casing, means for projecting said element laterally from the casing, and means for automatically locking said first named means against further movement when the projected end of the measuring element is brought into contact with an obstruction.

2. A tester for cavities, including a casing, a flexible measuring element carried by the casing, mechanism for projecting said element laterally from the casing, means for locking said element against movement from the casing, and means carried by said element for engaging an obstruction and actuating the locking means.

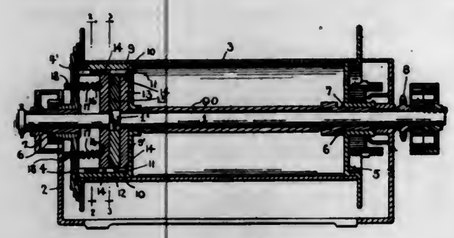
3. A tester for cavities, including a casing, a measuring element carried by the casing, mechanism for projecting said element from the casing, coöperating fixed and movable locking devices carried by the casing and measuring element respectively, and means upon the outer end of the measuring element adapted to engage and to be actuated by an obstruction in the path of said element to shift the movable locking device into engagement with the fixed locking device and stop the element projecting mechanism, said mechanism including means for automatically returning the measuring element and the mechanism to normal position.

4. A tester for cavities including a casing, a measuring element adapted to operate within the same, means for operating said element to project it beyond the casing, a lock for stopping the projection of the element, means carried by said element for engaging an obstruction and by such engagement actuating the lock, and means for automatically returning the element into the casing.

5. A tester for blast cavities and the like, including a casing, a cross head mounted to slide within the casing, a flexible measuring element connected to and adapted to be actuated by the cross head, means for guiding said element laterally within and from the casing, means for sliding the cross head, a device carried by the free end portion of the measuring element and adapted to contact with and to be actuated by an obstruction in the path of said element, and means operated by the said device when thus actuated for locking the cross head against movement in one direction.

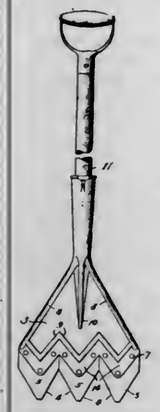
[Claims 6 to 12 not printed in the Gazette.]

1,112,700. FRICTIONAL DRIVING CONNECTION. EDMOND HOYE, Centralia, Ill., assignor of one-half to Joseph V. Langenfeld, Centralia, Ill. Filed Jan. 27, 1913. Serial No. 744,531. (Cl. 64—13.)



In a frictional driving connection, the combination with a shaft having a squared portion, a driving disk having a squared hole through it mounted on said portion, means for rotating the shaft, and a drum having a fixed head at one end, and a removable head closing its other end; of a cup-shaped friction ring whose inner wall surrounds said shaft at a slight distance from the squared portion thereof and whose periphery is fixed within said drum, internal keys carried by said ring and disposed parallel with the shaft, fastening screws passing through said removable head and detachably engaging the periphery of said ring, disks loose on the shaft at opposite sides of said driving disk and having notched edges slidably engaging said keys, adjusting screws passing through the removable head of said drum, and expansion springs between the inner ends of said adjusting screws and the outermost of the last mentioned disks, for the purpose set forth.

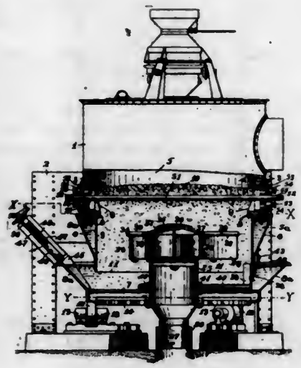
1,112,701. HAY-CUTTER. WILLIAM L. IWAN, South Bend, Ind. Filed Sept. 2, 1913. Serial No. 787,688. (Cl. 30—8.)



1. A hay-cutter comprising a cutter-head formed at its upper end with an integral handle-receiving socket and step, and provided on its marginal edges and centrally of its face with integral ribs, and a cutting blade secured to said head, for the purpose set forth.

2. A hay-cutter comprising a cutter-head formed at its upper end with an integral handle-receiving socket and step, and at its lower end with serrations, marginal ribs extending about the sides and lower end of said head, a rib disposed centrally of the face of said head, and a serrated cutter secured to said head and overlapping the serrations thereon, for the purpose set forth.

1,112,702. GAS-PRODUCER. EBENEZER A. W. JEFFERIES and GEORGE H. ISLEY, Worcester, Mass., assignors to The Morgan Construction Company, Worcester, Mass., a Corporation of Massachuetts. Filed Aug. 23, 1909. Serial No. 514,146. (Cl. 48—66.)



1. In a gas producer, a shell or casing inclosing a fuel chamber, rotatable arms extending from the center of the fuel chamber in a horizontal plane above the bottom of the fuel chamber, means for rotating said arms in a horizontal plane, and means extending into the fuel chamber in a horizontal plane for restraining the rotation of the fuel and spaced above said horizontal arms, whereby a horizontal stratum of fuel inclosed between said restraining means and said horizontally rotating arms is subjected to a cleaving or shearing action to prevent caking.

2. In a gas producer, a shell or casing inclosing a fuel chamber, an ash support spaced below said casing, a series of hollow rotatable arms extending from the center of said fuel chamber in a horizontal plane and spaced from the bottom of said ash support, means for rotating said arms about an axis corresponding with the axis of the fuel chamber, and means for supplying air to the fuel through said hollow arms.

3. In a gas producer, a casing inclosing a fuel chamber, an ash support spaced below said casing, a rotatable pipe extending upwardly from said ash support into said fuel chamber and concentric therewith, a series of hollow arms supported by said pipe in a horizontal plane within said fuel chamber and presenting a vertical wall to the mass of fuel, and means for rotating said pipe.

4. In a gas producer, a casing provided at its lower portion with vertical metal walls open at the bottom, an ash support spaced below the lower end of said casing, horizontal arms contained within the lower portion of said casing, means for rotating said arms about a vertical axis, and means for restraining rotation of fuel lying above said arms.

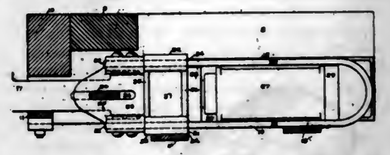
5. In a gas producer, a fuel chamber, a pipe extending upwardly into said chamber, hollow arms carried by said pipe and communicating therewith, said arms having at their upper edges openings for the admission of air into said chamber, means for rotating said pipe, and means for supplying air to said pipe.

[Claims 6 to 15 not printed in the Gazette.]

1,112,703. DRAFT-YOKE FOR RAILWAY-CAR DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Feb. 21, 1913. Serial No. 749,913. (Cl. 213—42.)

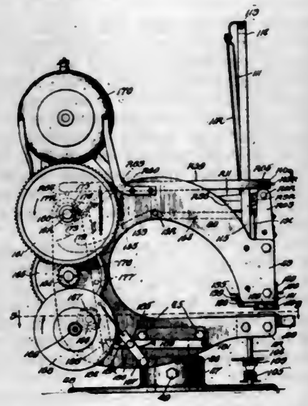
1. In a draft rigging, the combination of a draw bar with a draft yoke and a thimble, the said thimble being in sliding engagement with the draft yoke and adapted to engage the draw bar, the said thimble comprising a block provided with longitudinal slots for the passage of the limbs of the draft yoke.

2. In a draft rigging, the combination with a draw bar, draft gear and draft yoke, of a thimble, said thimble being



interposed between the draw bar and draft gear, and slidably engaging the draft yoke.

1,112,704. EYELETING-MACHINE. JEREMIAH KELLER, Chicago, Ill., assignor to Hanson & Zimmers, Chicago, Ill., a Copartnership Composed of Peter Hanson and Joseph B. Zimmers. Filed May 14, 1912. Serial No. 697,270. (Cl. 1—3.)



1. In a machine of the class described, the combination of a press-head, a male die mounted within the press-head and adapted to have longitudinal movement with respect to the same, an anvil disposed in line with the press-head, a female die mounted for transverse movement with respect to the line of movement of the press-head and adapted to coöperate with the male die for a punching operation, means for feeding washers one at a time to the anvil, means for feeding gromets one at a time beneath the press-head, means for actuating the male die, means for shifting the female die transversely, and means for actuating the press-head to rivet a gromet between the press-head and the anvil, substantially as described.

2. In a machine of the class described, the combination of a press-head, a male die mounted within the same and adapted to have longitudinal movement with respect to the same, an anvil beneath the press-head, a female die adapted to have transverse movement with respect to the press-head and anvil and adapted to coöperate with the male die for a punching operation, means for feeding gromets one at a time beneath the press-head, means for feeding washers one at a time to the anvil, means for actuating the male die to effect a punching operation, means for actuating the press-head for a stripping operation, and means for subsequently actuating the press-head for a riveting operation, substantially as described.

3. In a machine of the class described, the combination of a press-head, a male die mounted within the same and adapted to have longitudinal movement with respect to the same, an anvil beneath the press-head, a female die adapted to have transverse movement with respect to the press-head and anvil and adapted to coöperate with the male die for a punching operation, means for feeding gromets one at a time beneath the press-head, means for actuating the male die to effect a punching operation, means for actuating the press-head for a stripping operation, and means for subsequently actuating the press-head for a riveting operation, substantially as described.

4. In a machine of the class described, the combination of a press-head, a male die mounted within the same and adapted to have longitudinal movement with respect to the same, an anvil in line with the press-head, a female die mounted for transverse movement with respect to the anvil and press-head and adapted to coöperate with the male die for a punching operation, means for feeding washers one at a time to the anvil, means for feeding gromets one at a time to the press-head, means for actuating the male die to effect a punching operation, means for forcing the press-head toward the anvil, and means for forcing the anvil toward the press-head to effect a riveting operation, substantially as described.

5. In a machine of the class described, the combination of a vertically movable press-head, a vertically movable anvil disposed in line with the press-head, a vertically movable male die mounted within the press-head, a transversely movable female die mounted for movement into and out of the path of movement of the male die and adapted to coöperate with the male die for a punching operation, means for feeding washers one at a time to the anvil, means for feeding gromets one at a time beneath the press-head, means for actuating the male die to effect a punching operation, means for shifting the female die transversely, and means for forcing the press-head and anvil toward each other to effect a riveting operation, substantially as described.

[Claims 6 to 33 not printed in the Gazette.]

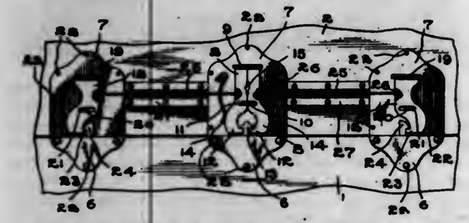
1,112,705. SHOCK-ABSORBER. THOMAS C. KINKAID, Philadelphia, Pa. Filed Oct. 12, 1912. Serial No. 725,374. (Cl. 21—105.)

A device of the character described, comprising a cylinder constructed to contain fluid, and a piston movable in the cylinder, said cylinder having in its inner face two pairs of longitudinal grooves forming by-passes, said pairs of by-passes of least transverse area adjacent the ends of the cylinder and increasing in transverse area to their other ends, the larger ends of said by-passes all located at a point intermediate the ends of the cylinder and all overlying the circumference of the piston when the latter is in normal position, and said piston when in ormal position covering the inner ends of said by-passes and closing communication through the same between the ends of said cylinder, substantially as described.

1,112,706. LOCK. JOHN F. KOCH, Wescosville, Pa., assignor of three-fourths to Cyrus Y. Schelly, Allentown, Pa. Filed Apr. 16, 1914. Serial No. 832,240. (Cl. 70—27.)

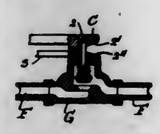
1. The combination with three lock casings adapted to be secured to one part, and three keepers adapted to be secured to a second part and to be projected in the lock casings when the two parts are together, of transverse parallel guide bars in all of the lock casings, two tumblers in the intermediate lock casing, said tumblers having their

upper ends movable against one of the bars and having recesses in their inner faces receiving the other of said bars, said tumblers in the end casings having their upper ends engaging one of the guide bars and having slots intermediate their ends receiving the other of said guide bars, all of said tumblers having hook shaped lower ends, springs in the casings normally holding the tumblers with their hook shaped ends in locked engagement with the keepers, and means compelling all of said tumblers to move together, substantially as described.



2. The combination with three lock casings adapted to be secured to one part, and three keepers adapted to be secured to a second part and to be projected in the lock casings when the two parts are together, of transverse parallel guide bars in all of the lock casings, two tumblers in the intermediate lock casing, said tumblers having their upper ends movable against one of the bars and having recesses in their inner faces receiving the other of said bars, said tumblers in the end casings having their upper ends engaging one of the guide bars and having slots intermediate their ends receiving the other of said guide bars, all of said tumblers having hook shaped lower ends, springs in the casings normally holding the tumblers with their hook shaped ends in locked engagement with the keepers, rods positioned between the tumblers in the end casings and the tumblers in the intermediate casing whereby the movement of the last-mentioned tumblers compels the movement of the tumblers in the end casings, longitudinal casings covering the rods between the lock casings, and said tumblers in the intermediate casing having key receiving recesses in their adjacent faces, substantially as described.

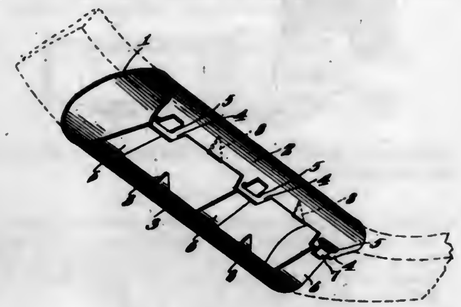
1,112,707. AUTOMATIC GAS-CONTROLLER. HENRY G. KRAGER, Lestershire, N. Y. Filed May 12, 1913. Serial No. 766,975. (Cl. 126—52.)



An automatic gas controller for gas burners comprising a gas supply pipe leading to the gas burner, a spring seated valve in said supply pipe for normally cutting off gas from the burner, a pivoted lever having one end arranged to be depressed when objects are placed over the burner, and having its other end provided with an inclined face and attached to the stem of said valve and arranged to open said valve when the first end is depressed, and to permit closing of the same by the spring when the objects are removed from over the burner, and manually operated means comprising a washer having an inclined face arranged to coact with the inclined face on the end of the lever for raising said spring valve, and controlling the opening in said valve independently of the control of the lever to permit a continuous flow of gas to the burner when objects are removed therefrom.

1,112,708. PROTECTOR FOR HARNESS-STRAPS. LORY L. LITTLEFIELD, Bellevue, Iowa. Filed June 16, 1914. Serial No. 845,457. (Cl. 54—1.)

1. A protector for belly bands and the like, embodying a plate having its edge portions curved back, one edge portion having slots, and the other edge portion having flexible tongues insertible through the said slots and adapted to have their free ends bent back.

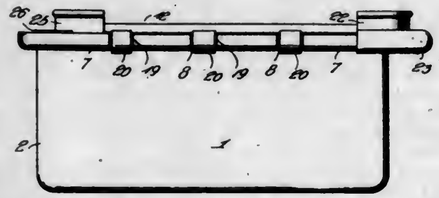


2. A protector for belly bands and the like, comprising a plate having its edge portions curved back, one edge portion having a longitudinal series of tabs, the tabs having slots, and the other edge portion having a longitudinal series of flexible tongues insertible through the said slots and adapted to have their free ends bent back.

3. A protector for belly bands and the like, embodying a plate having its edge portions curved back, one edge portion having slots, and the other edge portion having flexible tongues insertible through the said slots and adapted to have their free ends bent back, the said edge portions having inturned teeth.

4. A protector for belly bands and the like, comprising a plate having its edge portions curved back, one edge portion having a longitudinal series of tabs, the tabs having slots, and the other edge portion having a longitudinal series of flexible tongues insertible through the said slots and adapted to have their free ends bent back, the said edge portions having inturned teeth between the respective tabs and tongues.

1,112,709. SANITARY INSULATED RECEPTACLE. GUSTAV G. LOEHLER, Washington, D. C. Filed June 18, 1913. Serial No. 774,413. (Cl. 220—11.)



1. A receptacle of the class described having a cylindrical roll on one end and one side thereof, and longitudinally spaced roll sections on the other side, a cover for said receptacle having a semi-circular roll at one side and one end for slidable engagement with the roll at the corresponding end and side of the receptacle, the coöperating roll at the side of the cover and receptacle being adapted for pivotal movement when in a predetermined position, longitudinally spaced semi-circular roll sections on the other side of said cover positioned to slidably engage the roll sections of the other side of the receptacle, and means at the other end of said cover and receptacle for securing said members together in closed position.

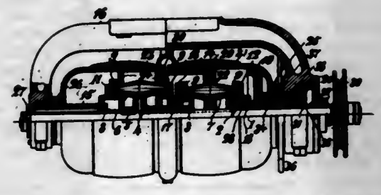
2. A receptacle of the class described having a cylindrical roll on one end and one side thereof and longitudinally spaced roll sections on the other side, a cover for said receptacle having a semi-circular roll at one side and one end for slidable engagement with the roll at the corresponding end and side of the receptacle, the coöperating roll at the side of the cover and receptacle being adapted for pivotal movement when in a predetermined position, longitudinally spaced semi-circular roll sections on the other side of said cover positioned to slidably engage the roll sections of the other side of the receptacle and shorter than said roll sections to adapt them when the cover is moved in one direction to be disengaged from said roll sections, said cover being slidable longitudinally relative to said receptacle for engaging and disengaging the roll sections and semi-circular roll sections of the two members, whereby the cover may be closed or opened.

3. A receptacle of the class described comprising inner and outer spaced shells provided at their upper edges with outwardly extending flanges, the flange of one shell forming air tight engagement with the flange of the other shell, said flanges performing the double function of supports for the inner shell and as means for spacing said shell, the flanges of the two shells being turned inwardly to form a substantially cylindrical roll extending around the sides and ends of the receptacle, said roll having longitudinal spaces or recesses formed therein at one side of the receptacle, a cover for said receptacle having a semi-circular flange continuous along one side and around one end thereof and adapted to engage the roll at the corresponding side and end of the receptacle the opposite side of said cover having longitudinally spaced down curved fastening lugs adapted to slidably engage the roll sections formed by the openings at the front of the receptacle.

4. The combination with a receptacle having a cylindrical roll on one end thereof, of a cover having a semi-cylindrical roll at one end for engagement with the roll of said receptacle and an upwardly extending flange on the end of said cover having the roll, said flange having at its lower or inner edge an extension shaped to fit the cover roll, the free edge of said extension being bent upon the edge of the semi-cylindrical roll of the cover to form a re-inforce and brace for said roll.

5. The combination with a receptacle having a cylindrical roll on one end thereof, of a cover composed of inner and outer shells spaced apart by an offset formed at the edge of said outer shell, said shells having semi-circular flanges at one end bent to form a semi-cylindrical roll, plates extending at right angles from the ends of said cover and arranged in engagement with the off-set portion of said outer shell, one of said plates having an extension at its lower edge shaped to encircle the roll on said cover and provide a re-inforce and brace therefor.

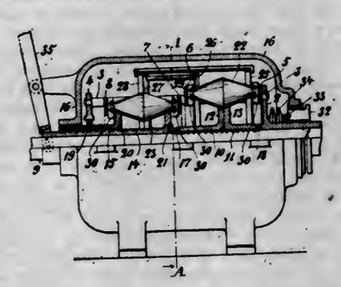
1,112,710. VARIABLE-SPEED GEAR. JENS CHRISTIAN MARTINS, Copenhagen, Denmark, assignor to Transmission Akts., Copenhagen, Denmark. Filed Aug. 25, 1913. Serial No. 786,517. (Cl. 74—26.)



1. Variable speed friction-gearing, comprising a fixed frame, a shaft, flanges displaceably but non-rotatably fixed thereon, two pulleys, rings connected with said pulleys, two planet-carriers one of which is non-rotatably connected with said fixed frame, two sets of double conical bodies adapted to roll between the circumference of said flanges and the inner surfaces of said rings, and means by which the other of said planet-carriers can be coupled to said fixed frame, to one of said pulleys, or be totally uncoupled.

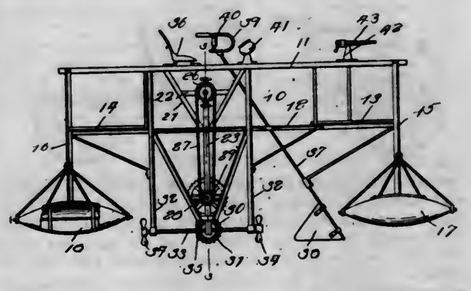
2. Variable speed-friction gearing, comprising a fixed frame, a shaft, flanges displaceably but non-rotatably fixed thereon, two pulleys, rings connected with said pulleys, two planet carriers one of which is non-rotatably connected with said fixed frame, two sets of double conical bodies adapted to roll between the circumference of said flanges and the inner surfaces of said rings, a sleeve non-rotatably connected with the other of said planet-carriers, and clutch-members on said sleeve adapted to coact with corresponding clutch-members on said fixed frame and on one of said pulleys respectively.

1,112,711. VARIABLE-SPEED FRICTION-GEARING. JENS CHRISTIAN MARTINS, Copenhagen, Denmark, assignor to Transmission Akts., Copenhagen, Denmark. Filed Sept. 27, 1913. Serial No. 792,179. (Cl. 74—26.)



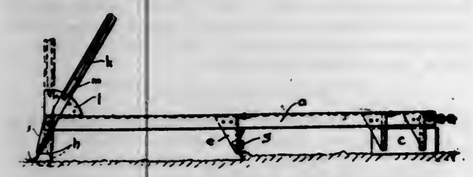
A friction-gearing comprising a fixed casing, a driving-shaft, a planet-wheel carrier arranged to rotate therewith, two sets of double conical bodies acting as planet-wheels, two sets of outer rings non-rotatably connected with each other, a set of flanges non-rotatably connected with said casing, a driven-shaft, a set of flanges non-rotatably arranged thereon, means for producing frictional contact between the double conical bodies and said flanges and rings, and means for effecting displacement of said flanges and rings longitudinally of said double conical bodies.

1,112,712. MARINE VELOCIPEDE. BENITO C. MATABAN, Seattle, Wash. Filed July 31, 1913. Serial No. 782,258. (Cl. 115—27.)



A marine velocipede comprising a main frame work including parallel longitudinal bars disposed one above the other, pontoon carrying bars extending from the longitudinal bars, plates depending from the longitudinal bars, a shaft supported by the upper ends of the plates, a sprocket wheel fixed to the shaft, a second shaft supported by the lower ends of the plates, a gear and sprocket fixed to the respective ends of said shaft, a second gear supported by the plates and in mesh with the first named gear, hangers supported by the main frame, and a shaft supported by the hangers, and means connecting the last named gear and shaft for rotating the latter, a sprocket chain trained around the sprockets, means for rotating the first named sprocket, propeller blades fixed to the ends of the horizontally supported shaft, rotary movement being imparted thereto upon operation of the sprocket chain.

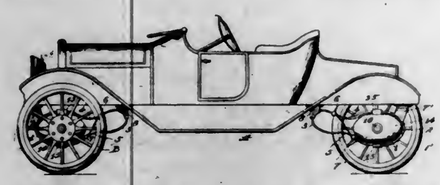
1,112,713. ROAD-SCRAPER. ANGUS MCCALLUM, Pontiac, Mich. Filed Dec. 13, 1913. Serial No. 806,377. (Cl. 37—5.)



1. A machine for evening roads, having in combination, a frame, a front blade that contacts the ground and that is carried by the frame, a middle blade carried by the frame, a rear blade or drag that is arranged to ride over the ground without cutting the same, the said rear blade being pivoted near its upper edge to the frame, and a lever pivotally mounted upon the frame and connected with the rear blade so as to tip only the rear blade when operated, the said rear blade being set with respect to the other two blades so that the tipping of the rear blade raises or lowers the frame upon the front blade as a fulcrum, thereby regulating the cut of the middle blade.

2. A machine for evening roads, having in combination, a frame, a front blade that contacts the ground and that is carried by the frame, a middle blade acting as a cutting blade and carried by the frame, a rear blade arranged to slide over the ground without cutting into the same, hangers attached to the rear blade and pivoted to the frame so as to carry the point of pivoting above the upper edge of the rear blade, and a lever attached to one of the hangers and fixable in various angular positions with respect to the frame upon which it is pivoted, said rear blade being arranged with respect to the middle and front blade so that tipping of the rear blade by operating the lever raises or lowers the frame on the front blade as a fulcrum, so as to regulate the cut of the middle blade.

1,112,714. CUSHIONING MEANS FOR VEHICLES. MICHAEL G. MCGUIRE, Chicago, Ill. Filed Aug. 2, 1913. Serial No. 782,625. (Cl. 21—50.)

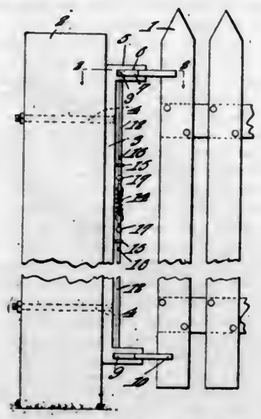


1. An axle cushioning spring for vehicles, embodying approximately S-shaped members arranged to exert resistance in opposite directions with a force to neutralize a distorting factor, the terminals of the members being arranged to overlie the intermediate bend and held assembled therewith for sliding movement thereon, and means for maintaining constant the vertex of a parabola formed by the spring support.

2. An axle cushioning spring for vehicles embodying approximately S-shaped members exerting resistance in opposite directions commensurate with a distorting force presented by an obstructive factor, the terminals of the springs being arranged for sliding movement on the intermediate bend, and means for maintaining constant the bends of the springs in use.

3. An axle cushioning spring for vehicles embodying approximately S-shaped members exerting resistance in opposite directions commensurate with the opposition presented by an obstructive factor, the terminals of the members being in contact with the intermediate bend and having sliding movement thereon, and clips shaped to conform to the curvature of the spring members for maintaining constant the bends of the spring against a distorting force in use.

1,112,715. GATE-LATCH. CLARENCE C. MILLER, Shellsburg, Iowa. Filed Apr. 20, 1914. Serial No. 833,209. (Cl. 70—28.)



1. In a latch device, a frame having an angular portion, a latch lever fulcrumed intermediate its ends to the free end of the said angular portion, one arm of the lever being wing-like, swinging adjacent the said angular portion and having a recess, the other arm of the lever projecting from the said angular portion for the engagement of an object to be held by the lever, and a spring-pressed rod guided by the frame and its angular portion and having one end adapted to bear against one side of the said wing-like arm and to engage in the said recess.

2. In a latch device, a frame having an angular slotted portion, a latch lever fulcrumed within the said angular slotted portion and having a wing-like portion movable within the slot and provided with a recess, and a spring-pressed rod guided by the frame and the said angular portion and having one end arranged to bear against one side of the said wing-like portion and to engage in the said recess.

3. In a latch device, a bar having an angular slotted end, a latch lever fulcrumed intermediate its ends within the free end of the said angular portion, one arm of the lever being semi-circular and working within the slot of the said angular portion, said arm of the lever having a recess, and the other arm of the lever being arranged to engage an object to be held by the lever, and a spring-pressed rod guided by the bar and angular end and having one end arranged to bear against one side of the said semi-circular arm of the lever and to engage in the said recess.

4. In a latch device, a pair of latch levers, and spring-separated locking rods having their remote ends engageable with the levers to hold them at normal positions.

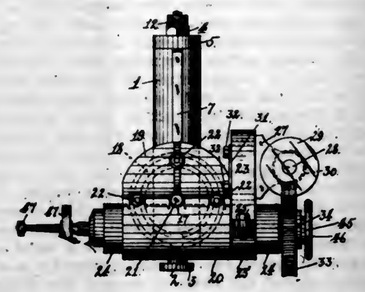
5. In a latch device, a pair of latch levers having wing like portions provided with recesses, and a pair of spring-separated locking rods having their remote ends adapted to bear against the said wing-like portions of the levers and to engage in the said recesses.

[Claims 6 to 10 not printed in the Gazette.]

1,112,716. TRAVERSE-MACHINE FOR LATHES. EDWARD N. MOOR, Oakland, Cal. Filed Mar. 17, 1914. Serial No. 825,249. (Cl. 51—7.)

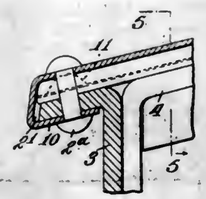
1. A traverse machine for lathes comprising a stock with means for securing it to the lathe member; a member fitted to said stock for lineal adjustment thereon; a spindle-carrier carried by said member and angularly adjustable with relation thereto; a spindle-housing clamped in the carrier, and having a tool-operating spindle therein; an arm carried by and radially extending from the spindle housing, said arm being angularly adjustable on said housing; devices adjustably carried by said radial arm; and devices carried by the spindle and coacting with the devices carried by the radial arm.

2. A traverse machine for lathes comprising a stock with means for securing it to the lathe member; a member fitted to said stock for lineal adjustment thereon; a spindle-carrier carried by said member and angularly adjustable with relation thereto; a spindle-housing clamped in the carrier, and having a tool-operating spindle therein; an arm carried by and radially extending from the spindle housing, said arm having an elongated lineal slot and being pivotally mounted for angular adjustment on said housing; devices carried by said arm and adjustable in the lineal slot thereof; and devices carried by the spindle and coacting with the devices carried by the radial arm.



3. A traverse machine for lathes comprising a stock with means for securing it to the lathe member; a member fitted to said stock for lineal adjustment thereon, said member having a circular bearing face; a split-carrier for the spindle, having a flange-body, a central bolt passing through the meeting edges of the split spindle carrier to clamp said carrier, said bolt also passing through the flange-body of the spindle carrier into the bearing face of the lineally adjustable member to pivotally connect said parts; and lateral bolts also clamping the spindle carrier and passing through the flange body into the bearing face and having a circular play in said face.

1,112,717. ROOF CONSTRUCTION. FRANKLIN GREAR NEAL, Halifax, Nova Scotia, Canada. Filed Nov. 15, 1912. Serial No. 731,594. (Cl. 108—5.)

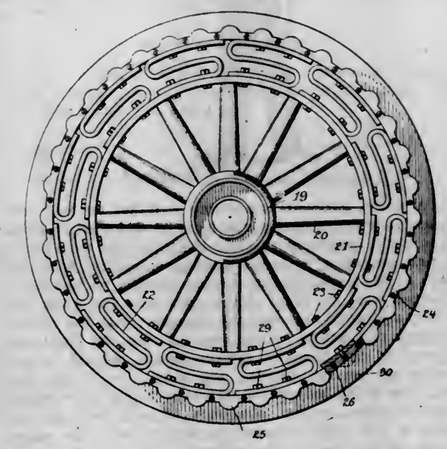


1. In car roof construction, the combination with longitudinal side beams and metal roof sections, of a transverse cover strip covering the adjacent transverse edges of the roof sections and having its ends turned downwardly across the longitudinal edges of said beams and bent inwardly beneath the latter and rivets passing through the beams and through the strip above and below said beams.

2. In car roof construction, the combination with longitudinal side beams and metal roof sections having their transverse edges turned upwardly, of a transverse cover strip overlapping the edges of the roof sections and having its ends turned downwardly across the longitudinal edges of said beams and cover strip and bent inwardly beneath said beams and rivets passing through the beams and through the strip above and below said beams.

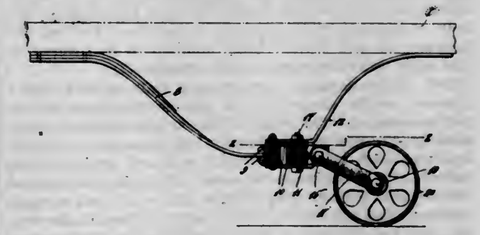
3. In car roof construction, the combination with longitudinal side beams and metal roof sections having their transverse edges turned upwardly and their longitudinal edges bent downwardly across the longitudinal edges of said beams, of a transverse cover strip overlapping the edges of the roof sections and having its ends turned downwardly across the longitudinal edges of said beams and cover strip and bent inwardly beneath said beams and rivets passing through the beams and through the strip above and below said beams.

1,112,718. SPRING-WHEEL. JOHN O. NELSON, Ashtabula, Ohio. Filed Apr. 18, 1912. Serial No. 691,551. (Cl. 152—8.)



The combination with a vehicle wheel of a spring tire including a plurality of substantially S-shaped springs having the inner lobes secured to the wheel felly, a jointed metal band connecting the outer lobes of said springs and comprising a plurality of curved sections each having tire retaining means on the outer face, and the end edge of each section having a tongue fitting in a groove formed in the adjacent end of the next section, a pivot pin passed through said tongue and groove of each two sections, the outer lobe of each of said springs extending along the inner peripheries of substantially four of said sections, bolts passed through said lobe and the two intermediate sections of said four sections, and a continuous flexible tire surrounding said jointed metal band.

1,112,719. TONGUE-SUPPORT. HENRY J. OWEN, Prairie du Rocher, Ill., assignor of one-half to Thomas J. Conner, Prairie du Rocher, Ill. Filed Dec. 16, 1913. Serial No. 806,997. (Cl. 21—206.)



A tongue support, comprising a laminated leaf spring fixedly secured to the tongue, a second leaf spring secured to the tongue in such manner as to permit lengthwise movements relative to the tongue, a caster block pivotally secured to said springs, a pair of arms adjustably pivotally secured to said caster block so that they may be placed at any desired angle relative to the caster block, and a caster wheel carried by the free ends of said arms.

1,112,720. UNION GARMENT. WILLIAM C. POWELL, St. Joseph, Mo. Filed Mar. 30, 1914. Serial No. 828,270. (Cl. 2—144.)

1. A union garment comprising a jacket or body section and a trousers section, the front of said sections being permanently secured together at the waist line from hip to hip and having a buttoned opening extending from the crotch to the neck, the seat of the trousers section being separated from the front at the sides from the waist line down to a place in approximate alinement with the crotch, side flaps and button connections between the front and the seat of the trousers section, means carried by the trousers section for drawing the waist line of the garment close to the body of the wearer to support the weight of the trousers section, the back of said body section having a flat skirt adapted to extend over the upper portion of the seat of the trousers section to cover the upper edge of the same and project downwardly over the seat or be tucked in and lie smooth against the seat of the wearer and expose the upper edge of the trousers section as may be desired.

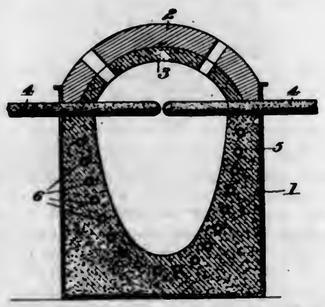
2. A union garment comprising a body section and a trousers section shaped to the wearer, the front of the body section and the front of the trousers section being formed as a pair of continuous half members vertically separated from the crotch to the neck and provided with buttons and button holes to secure the same, the rear of the trousers section being formed separately and secured together from the crotch height down the legs to the bottom, the seat portion of said trousers section being separated along the side from the crotch height up to the waist line and provided with a flap and button connection with the front, thereby forming a seat portion capable of being let down, the back of the body section having a flat skirt extending from hip to hip and adapted to be projected out over the seat portion or tucked in smoothly to lie over the seat of the wearer and expose the upper edge of the seat portion of the garment, as desired, and a belt strap carried by the trousers section to hold the same to the body of the wearer, hip pockets on said seat portion, the openings of said pockets being adapted to be covered by said skirt when the same is worn outside.

3. A union garment comprising a body section and a trousers section shaped to the wearer, the front of the body section and the front of the trousers section being formed as a pair of continuous half members vertically separated from the crotch to the neck and provided with buttons and button holes to secure the same, the rear of the trousers section being formed separately and secured together from the crotch height down the legs to the bottom, the seat portion of said trousers section being separated along the side from the crotch height up the waist line and provided with a flap and button connection with the front thereby forming a seat portion capable of being let down, the back of the body section having a skirt extending from hip to hip and adapted to be projected out over the seat portion or tucked in smoothly, as desired, hip pockets on said seat portion, the openings of said pockets being adapted to be covered by said skirt when the same is worn outside, and side pockets carried by the front of said trousers section the opening of said side pockets being concealed and of less length than the length of said side openings, the flap and button connection between the seat portion and the front of said trousers including visible buttons beneath the opening of the side pockets and invisible buttons in the mouth of the side pockets close to the waist line.

4. A union garment comprising a front consisting of two vertical half members permanently connected at the waist line and having a button and button hole conection in the front from the crotch to the neck, a back formed of two principal sections one a body section and the other a trousers section, said sections being permanently secured to the front along the sides from the waist line up and from the crotch height down whereby to leave the seat portion of the trousers section unattached from the front at the sides from the crotch height to the waist line, the trousers section and the body section being unattached from hip to hip and the body section having a projecting skirt adapted to be projected over the seat section to cover the upper edge of the same and project downwardly over the seat of the garment to give a coat effect or tucked in to expose said upper edge of the seat section of the garment as desired, a button and button hole connection for securing the side openings between the seat portion and the front of the trousers section, and a waist encircling means carried by the trousers section for securing the garment around the waist to support the weight of the trousers section.

5. A union garment comprising a jacket or body portion and a trousers section, the front of said sections being permanently secured together at the waist line from side to side and having a buttoned opening extending from the crotch to the neck, the sides of the trousers section being separated at the front from the waist line down to a place in approximate alinement with the crotch, button and button-hole connections between the seat portion of the trousers section and the front of the trousers section, the seat portion of the trousers section from side to side being separate from the back of the jacket section, the back of the jacket section including a flat skirt portion adapted to extend over the upper portion of the seat of the trousers section to give a coat effect, or be tucked in and lie smooth against the seat of the wearer and expose the upper edge of the trousers section to give a blouse effect as may be desired.

1,112,721. METHOD OF PREPARING BARIUM OXID. LEWIS E. SAUNDERS, Niagara Falls, N. Y. Filed Feb. 5, 1912. Serial No. 675,675. (Cl. 204—64.)

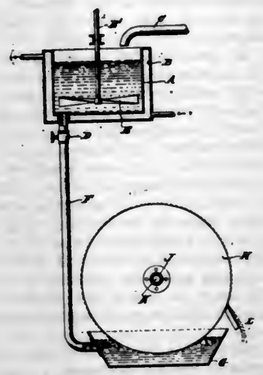


1. The method of preparing barium oxid, which consists in heating barium sulfate to its temperature of decomposition under non-reducing conditions.

2. The method of preparing barium oxid, which consists in electrically heating barium sulfate under non-reducing conditions to its temperature of decomposition under non-reducing conditions.

3. The method of preparing barium oxid, which consists in decomposing barium sulfate by the heat of an electric arc maintained out of contact therewith.

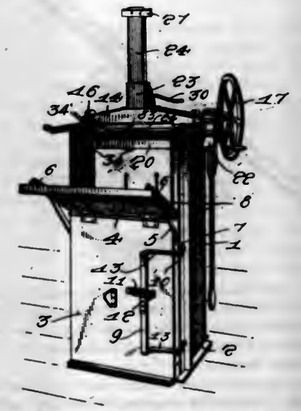
1,112,722. PROCESS OF EFFECTING SOLIDIFICATION OF FLUID NITRATE OF LIME. MAX SCHARFF, Ludwigshafen-on-the-Rhine, Germany, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed July 3, 1912. Serial No. 707,598. (Cl. 23—13.)



1. Process for effecting the solidification of fluid nitrate of lime, which comprises the steps of cooling the fluid while stirring the same until a viscous mass is obtained containing crystals of nitrate of lime, then forming a thin layer of this viscous mass on a cooled surface to complete the crystallization and solidification and scraping the thin hardened product from said surface.

2. The process of effecting the rapid solidification of fluid nitrate of lime, which comprises cooling the mass until crystallization sets in, thereby forming crystals that subsequently act as centers of crystallization and also reduce the total heat of crystallization, then forming the mass into a thin layer on a cooling surface to complete the crystallization and solidification, and scraping the thin, hardened product from said surface.

1,112,723. PAPER-PRESS. CHARLES SCHICK, Davenport, Iowa. Filed Sept. 15, 1913. Serial No. 789,851. (Cl. 100—5.)



1. A sheet metal baling press comprising a pair of side plates, a back plate, a cover secured to said side plates and provided with transversely extending angle members, an upwardly extending casing carried by said angle members, a plunger working in said casing and provided with a straight face adapted to lie snugly against the inner face of said casing, a pinion, rack teeth formed upon said plunger and meshing with said pinion whereby said plunger may be raised and lowered by the rotation of said pinion, and adjustable means for locking said plunger against longitudinal movement within said casing.

2. A sheet metal baling press comprising side plates, a back plate, transversely extending angle bars bracing said side plates and constituting a top reinforcement for said press, a casing carried by the upper edges of said angle bars, a plunger rod working in said casing and normally resting against the inner face of said casing, a plunger head carried by the lower end of said plunger rod and comprising a plurality of transversely extending angle bars for reinforcing said plunger head, and a swinging door carried by one of said side plates.

1,112,724. IRRIGATING-CONDUIT. JOHN E. SCHNEIDER, Cortez, Colo. Filed Dec. 2, 1912. Serial No. 734,598. (Cl. 137—65.)

1. An irrigating conduit constructed of sheet metal the wall of said conduit being longitudinally split at its outlet end to provide a free resiliently movable check gate extending into the conduit and acting to maintain a uniform flow of water from the outlet thereof under normal conditions.

2. An irrigating conduit constructed of sheet metal, the outlet end of said conduit being of rectangular form in cross section, one of said walls at its outlet end having a free resiliently movable portion extending into the conduit between the side walls thereof, and normally occupying a stationary position in contiguous relation to the opposed wall of the conduit to maintain a uniform flow of water from the outlet of the conduit under normal conditions.

1,112,725. METHOD OF MAKING PIPES FOR CHIMNEYS. FRIEDRICH SCHOFER, Waiblingen, near Stuttgart, Germany. Filed Feb. 17, 1913. Serial No. 749,012. (Cl. 106—44.)

1. The method of making fire-resisting cement articles, which comprises mixing cement with crushed brick that has been wetted with a small quantity of water, adding alcohol to the mixture, molding the mass so obtained and allowing the cement to set.

2. The method of making fire-resisting cement articles, which comprises mixing cement with burnt clay that has been wetted with a small quantity of water, adding to the mixture alcohol mixed with an oil, and molding the final mixture.

3. The method of making fire-resisting cement articles, which comprises mixing cement and a comminuted burnt clay filler with about six parts of water and adding to the mixture about five parts of an alcohol mixed with a small quantity of oil, shaking the mixture down in molds and allowing it to set.

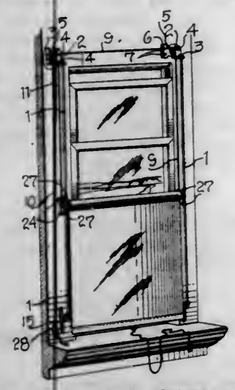
1,112,726. ADJUSTABLE SHADE-FIXTURE. ISAAC S. SHERWIN, Washington, D. C. Filed Dec. 20, 1913. Serial No. 807,998. (Cl. 156—27.)

1. In an adjustable shade fixture of the character described, the combination with supporting rods, of brackets therefor, said brackets including bracket members, and axially movable plates connected thereto and designed to support the upper ends of the rods, whereby the bracket is reversible and can be used at the left-hand or right-hand side of the window.

2. In an adjustable shade fixture of the character described, a rod supporting bracket, comprising a bracket member, and a plate pivotally connected thereto, said plate being provided with an apertured angularly disposed extremity formed with an opening to receive the upper end of a supporting rod.

3. As a new article of manufacture, a reversible bracket for an adjustable shade fixture, the same including a

bracket member formed with an opening, a pulley received in said opening, a pintle on which said pulley is journaled, and a rod supporting plate swiveled upon said pintle.

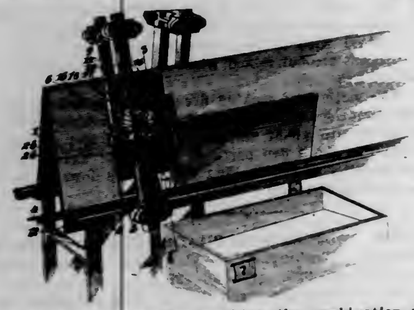


4. In an adjustable shade fixture, supporting rods, means for holding the same in position, shade roller supporting runners slidingly mounted on said rods and provided with upper and lower apertured flanges, and operating cords extending through the apertures in said flanges, said cords, in passing from the lower flange to the upper flange being inclined outwardly from the supporting rods, for the purpose specified.

5. In an adjustable shade fixture of the character described, supporting rods, means for holding the same in position, runners slidingly mounted on said rods and adapted to carry a shade roller, one of said runnera being formed with an opening to receive one of the gudgeons of the shade roller, a pin adapted to be inserted into said gudgeon and formed with an eye, and operating cords connected to said runners, one of said cords passing through said eye and designed to hold the pin in place.

[Claims 6 and 7 not printed in the Gazette.]

1,112,727. THROW-OFF DEVICE. GEORGE ANDREWS SMITH, South Hill, Va. Filed Sept. 26, 1913. Serial No. 792,028. (Cl. 214—6.)



1. In a board assorting machine, the combination with the conveyer that conveys the boards along and the fence against which the boards lie, of selective throwing out mechanism which comprises a standard, a roller carrying bracket vertically adjustable on said standard, a secondary standard adjustably carried by said primary stndard, and a resilient throw out finger carried by said secondary standard, substantially as shown and described.

2. In a throw out device for board assorting machines and the like, a primary standard, a guard member carried by said standard, a secondary standard supported from said primary standard, a resilient throw off finger carried by said secondary standard, and a shoe on said primary standard coöperative with said finger.

3. In a throw out device for board assorting machines and the like, a primary standard, a guard member carried by said standard, a secondary standard supported from said primary standard, a resilient throw off finger carried by said secondary standard, and a shoe on said primary standard coöperative with said finger, means for yieldably supporting said guard member on said standard, and means for yieldably supporting said throw out finger on said secondary standard.

4. Throw off devices for board assorting machines and the like, comprising a vertical standard, a roller carrying bracket vertically slidably mounted on said standard, means for holding said bracket in position on said standard, a secondary standard, an adjustable clamp bracket connection between said standards for supporting said secondary standard from said primary standard, a resilient throw off finger carried by said secondary standard, a shoe carried by said primary standard to coöperate with said finger and projecting a lesser distance than the projection of said finger, whereby when a board passes between said shoe and finger, said finger will tend to throw off said board when it passes the shoe, and means for restraining the action of said finger if the board be of a greater than the predetermined size for which the throw off mechanism is adjusted to operate.

5. Throw off devices for board assorting machines and the like, comprising a vertical standard, a roller carrying bracket vertically slidably mounted on said standard, means for holding said bracket in position on said standard, a secondary standard, an adjustable clamp bracket connection between said standards for supporting said secondary standard from said primary standard, a resilient throw off finger carried by said secondary standard, a shoe carried by said primary standaid to coöperate with said finger and projecting a lesser distance than the projection of said finger, whereby when a board passes between said shoe and finger, said finger will tend to throw off said board when it passes the shoe, and means for restraining the action of said finger if the board be of a greater than the predetermined size for which the throw off mechanism is adjusted to operate.

1,112,728. PIPE AND TUBE CUTTER. JAMES R. SMITH, Mechanicsville, N. Y. Filed Sept. 2, 1913. Serial No. 787,678. (Cl. 81—191.)

1. In a pipe and tube cutter, the combination with a cutter head, of a bodily and longitudinally shiftable feed screw carried thereby, cutters having a screw-threaded block engaged by the feed screw, and a cushion coöperating with the feed screw.

2. In a pipe and tube cutter, the combination with a cutter head, of a bodily and longitudinally shiftable feed screw carried thereby, a block having screw-threads engaged by the feed screw and guided by said head, said block being adapted for adjustment by said feed screw, means for turning the feed screw, a cushion coöperating with said feed screw, and a chain of cutters connected to the block and to the head.

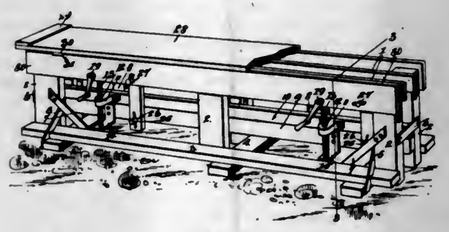
3. In a pipe and tube cutter, the combination of a cutter head which is bodily shiftable as an entirety, a cutting device bodily shiftable with said cutter head, adjusting means coöperating with the cutting device for causing it to make successively deeper cuts, and operating means common to the head and cutting device adapted for both bodily shifting the said head and adjusting the cutting device.

4. In a pipe and tube cutter, the combination with a cutter head, of a cutting device, said cutter head and cutting device being bodily shiftable together as an entirety, adjusting means on the head for adjusting said cutting device, means for bodily turning said cutter head, selective means operated by said turning means adapted, when set for use, to automatically operate said adjusting means, whereby the cutting device is caused to make successively deeper cuts as the cutter head is turned, and means for manually operating said adjusting means independently of the aforesaid automatic operation thereof by the manipulating means.

5. In a pipe and tube cutter, the combination with a movable cutter head, of a cutting device carried thereby, said cutter head and cutting device being bodily shiftable together as an entirety, adjusting means on the head for adjusting said cutting device, a rockable lever mounted on the bodily shiftable cutter head adapted for shifting said head and cutting device as an entirety, and means operated by said rockable lever coöperating with said adjusting means whereby the cutting device is automatically caused to make successively deeper cuts when the lever is rocked.

[Claims 6 to 10 not printed in the Gazette.]

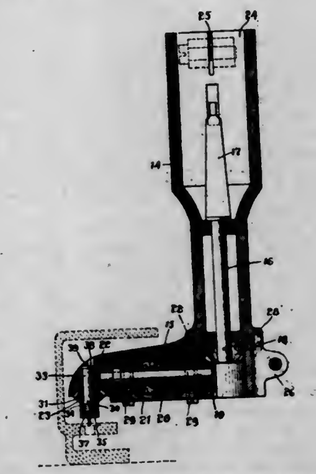
1,112,729. WORK-BENCH. THEODORE SWANSON, Lynn Center, Ill. Filed May 9, 1914. Serial No. 837,567. (Cl. 144—286.)



1. In a work bench, the combination of a framing that includes a plurality of oppositely disposed uprights, a horizontal guide rail secured upon the inner side of the upper ends of the said oppositely disposed uprights, means for holding the board to be planed edgewise between the guides and other devices for adjusting the said board holding means for moving the board vertically relatively to the guides and the planer, the said means comprising a longitudinally disposed bar that forms a rest for the board and feed screw connections that connect the bar and the framing for raising and lowering the bar, the said other means including hangers rigidly held at one side of the board supporting bar, other hangers loosely supported on the other side of the said supporting bar and screw rod devices operable from one side of the bench framing for moving the loosely held hangers up against the board to clamp it against the fixedly held hangers.

2. In a work bench, the combination of a framing that includes a plurality of oppositely disposed uprights, horizontal guide rails mounted upon the upper ends of the said uprights, means for supporting a board edgewise between the rails to be engaged by the planer, said means consisting of a longitudinal bar of a thickness less than that of the board to be planed having a lateral bracket at each end provided with an internally threaded vertical aperture, upper and lower fixedly held brackets, screw shafts mounted on the upper and lower brackets and engaging the threaded apertures in the brackets in the board supporting bar, means for turning the screw shafts for raising and lowering the said bar, and other means operable from one side of the bench framing for clamping and holding the board to be planed to its vertically adjusted positions said other means including loosely supported clamping bars for engaging that face of the board that extends beyond the front face of the longitudinal supporting bar and devices operable from the side of the bench for clamping the loosely held bars against the said board.

1,112,730. DRILL-PRESS ATTACHMENT FOR OFFSET DRILLING. DANIEL J. TRIVERS, Bridgeport, and JOHN M. SCHNEIDER, Long Hill, Conn. Filed May 18, 1914. Serial No. 839,259. (Cl. 77—55.)



1. An attachment of the character described comprising a body having a socket adapted to receive a stationary sleeve, a vertical shaft in said body having a head adapted to engage a rotating chuck, an arm adjustably secured to the body in the horizontal plane, horizontal and vertical shafts in said arm, bevel gears intermediate said shafts, whereby the motion of the chuck is transmitted to the vertical shaft in the arm, and means for securing a tool to said vertical shaft.

2. An attachment of the character described comprising a body, a vertical shaft therein, an arm adjustably secured to the body, a horizontal shaft in the arm geared to the shaft in the body, a vertical shaft in the arm geared to the horizontal shaft, the gear on said vertical shaft having a neck provided at its lower end with a dovetail groove, and a tool having a dovetail adapted to engage said groove.

3. An attachment of the character described comprising a body, an arm adjustably secured thereto, a vertical shaft in said arm having a head engaging the top of the arm, a bevel gear detachably engaging said shaft and having a neck provided at its lower end with a transverse dovetail groove, said shaft passing through the gear and below the neck, and a tool having a socket to receive the end of the shaft and a dovetail to engage the groove, said tool being locked to the neck after the engagement of the dovetail with the groove by the engagement of the end of the shaft with the socket.

4. An attachment of the character described comprising a body, an arm adjustable thereon, a detachable bearing block in said arm, a horizontal shaft mounted to rotate in said block, a vertical shaft having a head resting on the arm, bevel gear wheels on said shafts, the gear wheel on the vertical shaft having a neck with a transverse dovetail groove and the shaft passing through the gear wheel and below the neck, and a tool having a dovetail to engage said groove and a socket to receive the end of the shaft.

1,112,731. AEROPLANE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1911. Serial No. 618,061. (Cl. 244—2.)

1. In an aeroplane, the combination of a substantially rectangular framework; a pair of upright standards at the forward end and forming a part of the framework; a spring board extending transversely of and upon which the standards are fixed to support the forward end of the framework so that the ends of the spring board project out from the sides of the framework; wheels connected to the outer ends of said spring board; skids secured below said spring board; a second spring board fixed at one end to the framework in the rear of the first spring board and inclining relative to the line of flight to support the rear of the framework; and a wheel carried at the free end of said latter board.

2. In an aeroplane, the combination with the main frame, of starting and alighting means, comprising a pair of supporting standards at the front of and forming a part of the main frame; a resilient member extending transversely of the main frame and upon which the standards are secured so that the frame will rest upon said member centrally thereof, said member being inclined relative to the line of flight; wheels at the outer ends of said resilient member; skids connected to the bottom of said member so that they will be normally out of contact with the ground, but as the aeroplane alights and the resilient member is sprung from the shock of the main frame when the wheels come in contact with the ground, forcing said skids upon the ground to serve as a brake to retard the movement of the areoplane.

3. In an aeroplane, the combination with the main frame, of starting and alighting means, comprising a pair of supporting standards at the front of and forming a part of the main frame; a resilient member extending transversely of the main frame and upon which the standards are secured so that the frame will rest upon said member centrally thereof with the ends extending beyond the sides of the main frame, said member being inclined relative to the line of flight; wheels at the outer ends of said resilient member; skids connected to the bottom of said member so that they will be normally out of contact with the ground, but as the aeroplane alights and the resilient member is sprung from the shock of the main frame when the wheels come in contact with the ground, forcing said skids upon the ground to serve as a brake to retard the movement of the aeroplane; a second resilient member connected at one end to the main frame to incline downward relative to the line of flight; and a wheel connected to the free end of said second member.

4. In an aeroplane, the combination with the framework, of a resilient member extending transversely of and upon which the forward end of the aeroplane is supported; wheels at the outer ends of said resilient member; skids carried by said member so that they will be normally out of contact with the ground; a second resilient member having a forked end connected to the framework in an inclined position relative to the line of flight; a wheel connected to said member within the forked portion; and means to connect the second resilient member to the framework, comprising a cross-bar rigidly connected to the framework with one end of said resilient member resting upon and secured thereto, and a second cross-bar rigidly connected to the framework; said latter bar secured to and resting upon the said resilient member whereby to support the rear of the aeroplane.

5. In an aeroplane, the combination with the framework, of a pair of supporting standards at the front of and forming a part of the framework; a resilient member extending transversely of the main frame and upon which the standards are secured so that the forward end of the aeroplane will be supported upon the same; wheels at the outer ends of said resilient member; skids carried by said member so that they will be normally out of contact with the ground; a second resilient member connected to the framework in the rear of the first resilient member in an inclined position relative to the line of flight, said member having a forked end; a wheel connected to said member within the forked portion; and means to connect the second resilient member to the framework, comprising a member extending transversely of and rigidly connected to the framework, with one end of said resilient member resting upon and secured thereto, and a second member extending transversely of and rigidly connected to the framework; said latter member secured to and resting upon the resilient member whereby to support the rear of the aeroplane.

1,112,732. FIREARM-SUPPORT. GEORG UHL, New York, N. Y. Filed May 7, 1914. Serial No. 836,857. (Cl. 42—94.)

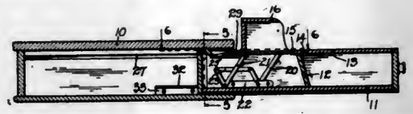
1. A gun support, consisting of a longitudinally extensible member, a socket thereon for the engagement of the gun and a foldable base or foot at the lower end of said member.

2. A gun support, consisting of a longitudinally extensible member adapted to be removably attached to the gun, a socket on said member for the engagement of the gun and a foldable base serving to support the gun when shooting in lying position, said base being connected to said member and adapted to engage around said member when in folded position.

3. A gun support, consisting of a longitudinally extensible member adapted to be removably attached to the gun, a socket on said member to engage the gun, a foldable foot or base to support said member in upright position and a foldable base to support the gun when shooting in lying position, said base being connected to said member and adapted to engage around the latter when in folded position.

4. A gun support, consisting of an extensible member, a socket thereon to engage the gun and a foldable base serving to support the gun when shooting in lying position, said base being pivotally connected to said socket and adapted to normally engage around said member when in folded position.

1,112,733. DRAWER CONSTRUCTION FOR TABLES OR THE LIKE. LOUIS C. UMPHREY and JOSEPH F. MCCLOUD, Morgantown, Ind., assignors to The Fulsmore Mfg. Co., Morgantown, Ind., a Corporation. Filed July 3, 1913. Serial No. 777,346. (Cl. 45—70.)

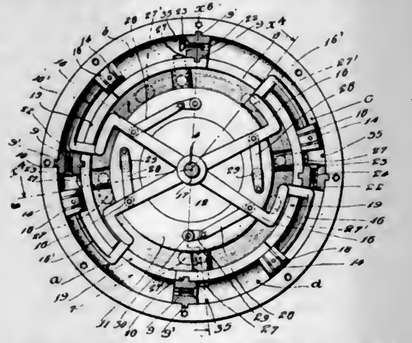


1. The combination with a table and the like, and a drawer operating therein, of an auxiliary drawer member adapted to fit in the main drawer, pivotal connections between the main drawer and auxiliary member, a stop at each side of said main drawer, and a rod oscillatably connected with said auxiliary member and having a crank arm at each end in position to engage said stop near the outward limit of movement of the main drawer.

2. The combination with a table and the like, and a drawer operating therein, of an auxiliary drawer member adapted to fit in the main drawer, a pair of bell crank levers pivotally connected with the forward and rear bottom portions of the auxiliary drawer member and also to the bottom of the main drawer so as to be parallel with each other, a link pivotally connecting each pair of bell crank levers together, and means connected with said auxiliary drawer member for engaging said stops near the outer limit of movement of the main drawer so as to elevate and hold elevated said auxiliary member.

3. The combination of a table and the like, a main drawer therein, said drawer being provided with a longitudinal slot on each side, the table or the like being provided with a stop at each side of said drawer, an auxiliary drawer member adapted to fit in the main drawer, a pair of bell crank levers pivoted to the lower part of the main drawer and with the lower part of the auxiliary member, a link pivotally connecting each pair of bell crank levers together, and a crank rod oscillatably connected with the auxiliary drawer member and having at each end a crank arm adapted to project through a slot in the main drawer and to engage the stop on the table or the like before the main drawer reaches its outward limit of movement.

1,112,734. ROTARY INTERNAL-COMBUSTION ENGINE. SHERIDAN VINCENT, Los Angeles, Cal. Filed Oct. 27, 1913. Serial No. 797,490. (Cl. 123—43.)

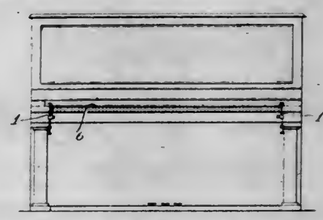


1. In an internal combustion engine, a fixed shaft, a casing rotatably mounted on said shaft and provided with a plurality of circumferentially extending cylinder chambers, and with fixed heads between said chambers, pistons working in the respective chambers, gearing connected to the respective pistons to move the casing forward in the movement of the pistons to and from said heads, intake ports for the respective cylinder chambers, spring-operated valves for said intake ports opening automatically under the suction in said chambers, exhaust ports for the respective cylinder chambers, and fixed means having a sliding engagement with said exhaust ports and provided with port means for opening the said exhaust ports in certain angular positions of the casing.

2. An internal combustion engine comprising a fixed shaft, a casing rotatably mounted on said shaft and provided with a plurality of circumferentially extending cylinder chambers and with heads between said chambers, pistons working in said cylinder chambers, arms connected to said pistons and rotatably mounted on said shaft, a gear wheel fixed on said shaft, a fixed member provided with an exhaust port, a flange extending inwardly from said casing and provided with exhaust ports registering with said ports in said fixed member at a certain point in the revolution of the casing, said flange engaging said fixed member and gear, pinions carried by said flange on the casing and engaging said gear wheel, cranks connected to the said pinions, and links connecting said cranks with the arms carrying the respective pistons aforesaid.

3. An internal combustion engine comprising a fixed shaft, a casing rotatably mounted on said shaft and provided with a plurality of circumferentially extending cylinder chambers and with heads between said chambers, pistons working in said cylinder chambers, arms connected to said pistons and rotatably mounted on said shaft, a gear wheel fixed on said shaft, a fixed member provided with an exhaust port, a flange extending inwardly from said casing and provided with exhaust ports registering with said ports in said fixed member at a certain point in the revolution of the casing, said flange engaging said fixed member and gear, pinions carried by said flange on the casing and engaging said gear wheel, cranks connected to the said pinions, links connecting said cranks with the arms carrying the respective pistons aforesaid, and means for supplying combustible and air to said cylinder chambers between the said pistons and heads.

1,112,735. WRIST SUPPORTING AND GUIDING ATTACHMENT FOR PIANOS AND THE LIKE. JOSEPH F. VOGEL, New York, N. Y. Filed Dec. 10, 1913. Serial No. 805,778. (Cl. 84—93.)



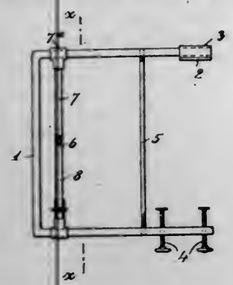
1. A wrist guide such as described, comprising two supporting brackets of approximate U-form and adapted for connection to a suitable support, a slide member for each bracket having sliding bearing on the arms thereof and movable in and out along said arms, an arm for each such slide member having a sliding bearing thereon and movable therealong, and a guide rod connecting the said slide arms of the two brackets.

2. A wrist guide such as described, comprising two supporting brackets of approximate U-form and adapted for connection to a suitable support, a slide member for each bracket having sliding bearings on the arms thereof and movable in and out along said arms, two arms for each such slide member, each having a sliding bearing on such slide member, and movable therealong, one of said arms being adapted to overlap the other arm, and guide rods connecting corresponding slide arms of the two brackets.

1,112,736. BRACKET. JOSEPH F. VOGEL, New York, N. Y. Original application filed Dec. 10, 1913, Serial No. 805,778. Divided and this application filed Mar. 26, 1914. Serial No. 827,366. (Cl. 248—19.)

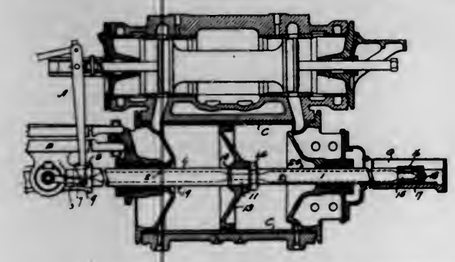
1. An attaching bracket such as described, comprising a U-shaped member, a tie member connecting the arms of

the U at points intermediate the ends and base of the U, said arms of the U being parallel between said base of the U and said tie member, said U shaped member provided, between the said tie member and the ends of its arms, with means for securing said bracket to a suitable support, and a slide member having sliding bearings on the arms of said bracket and movable in and out along said arms.



2. An attaching bracket such as described, comprising a U-shaped member, a tie member connecting the arms of the U at points intermediate the ends and base of the U, said arms of the U being parallel between said base of the U and said tie member, said U-shaped member provided, between the said tie member and the ends of its arms, with means for securing said bracket to a suitable support, a slide member having sliding bearings on the arms of said bracket and movable in and out along said arms, and an arm having a slide bearing on said slide member and movable thereon along.

1,112,737. PISTON-ROD. AXEL S. VOGT, Altoona, Pa. Filed Feb. 24, 1914. Serial No. 820,728. (Cl. 121—105.)



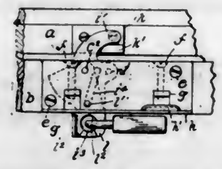
1. A hollow piston rod for engines having densified end portions, an intermediate densified piston head portion, and bearing portions between said intermediate piston head portion and said end portions.

2. A hollow piston rod for engines having densified end portions, an intermediate densified piston head portion including an annular flange and a clamping nut, and bearing portions between said intermediate piston head portions and said end portions.

3. A hollow piston rod for engines having a slotted cross-head portion, an intermediate piston head portion, and a reduced cylindrical guide shoe portion including a clamping nut.

1,112,738. LOCKING DEVICE FOR SLIDING DOORS. ALBERT VOIGT, New York, N. Y. Filed July 29, 1913. Serial No. 781,707. (Cl. 70—102.)

1. The combination with a pair of doors mounted to slide relative to each other, of a latch pivotally carried by one of the doors to swing on an axis parallel with the movement of the door, said latch consisting of a substantially rectangular plate of a width to come and occupy a position within the thickness of the door when in inoperative position, and of such length so that in operative position one end of the latch will project into the path of the other door, and the other end having an opening for the engagement of the hasp of a pad-lock to maintain the latch in operative position.



2. The combination with a pair of doors mounted to slide relative to each other, of a projection fixed to one end of the doors; a latch pivotally carried by the other door to swing on an axis parallel with the movement of the door, said latch consisting of a plate of a width to come and occupy a position within the thickness of the door and of such length so that the ends project beyond the lines of the door, one end of the latch adapted to project into the path of the other door to prevent endwise movement of the doors and formed with a hook to coöperate with the projection on the other door to draw the doors together, and the other end having an opening for the engagement of the hasp of a pad-lock, substantially as and for the purpose specified.

3. The combination with a pair of doors mounted to slide relative to each other, of a latch pivotally carried by one of the doors normally out of the path of the other door and adapted to be swung on its pivot to project into the path of such door; an auxiliary plate actuated by the latch; and means to engage with said latch and plate to lock the latch in position to project into the path of its companion door and thereby the doors against movement.

4. The combination with a sliding door, of means to lock said door against movement, comprising a latch pivoted to swing on an axis parallel with the movement of the door and normally out of the path of the door, one end of said latch when swung upon its pivot adapted to project into the path of the door and the other end having an opening; an auxiliary plate pivoted on an axis parallel with and actuated by the latch, said auxiliary plate also having an opening; and a lock to engage in the latch and plate openings to lock the latch in position with its end projecting into the path of the door.

5. The combination with a pair of doors slidable relative to each other, of means to lock said doors against movement, comprising a latch pivotally carried on the end of one of the doors to swing on an axis parallel with the movement of the doors, one end of said latch adapted to engage with the other door when swung on its pivot and the other end having an opening, and said latch normally maintained in position within the thickness of the door and out of engagement with the other door; a plate juxtaposed to the latch pivot on an axis parallel with the axis of the latch and actuated thereby and having an opening; and a lock operable by a removable key to engage in the latch and plate openings to lock the latch in position with its end in engagement with the one door.

[Claims 6 and 7 not printed in the Gazette.]

1,112,739. LOOM-HARNESS. PAUL A. WAGNER, Carlstadt, N. J. Filed Mar. 19, 1912, Serial No. 684,855. Renewed Mar. 4, 1914. Serial No. 822,477. (Cl. 139—14.)

1. In a loom harness, an annulus composed of gum upon and inclosing a core of fiber, and leashes engaged in said annulus.

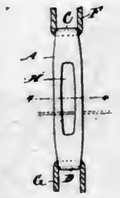
2. In a loom harness, an annulus composed of gum upon and inclosing a core of fiber, leashes engaged in said annulus, and a smaller annulus similarly composed, received within said first-named annulus and adapted to receive a warp-thread.

3. A heddle eye composed of gum in the form of a flattened annulus, and an inclosed core of fiber serving as a foundation for and to strengthen said annulus.

4. A heddle eye composed of gum in the form of a flattened annulus, and an inclosed core of fiber serving as a foundation for and to strengthen said annulus, and a smaller annulus received within said first-named annulus.

5. A heddle eye composed of gum in the form of a flattened annulus, and an inclosed core of fiber serving as a foundation for and to strengthen said annulus, and a smaller annulus similarly composed, and received within said first-named annulus and lying in the same plane therewith and cemented thereto.

1,112,740. HEDDLE FOR LOOM-HARNESS. PAUL A. WAGNER, Carlstadt, N. J. Filed June 12, 1911. Serial No. 632,700. Renewed Mar. 4, 1914. Serial No. 822,478. (Cl. 139—14.)



1. In a heddle, a mail comprising a metal body folded upon itself to form at each end a transverse bight with an integral intermediate body portion having an opening for the reception of a warp-thread, and a heddle-loop received in and held by each of said bights with a portion thereof lying transversely of the length of said body, said body, opening and loops lying in the same plane.

2. In a heddle, a mail comprising an annulus flattened upon itself to produce a body-portion and a bight at each end thereof, said body having an opening for the reception of a warp-thread, and a heddle-loop received in and held by each of said bights.

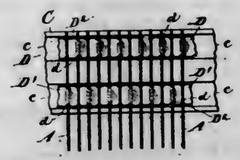
3. A mail comprising an annulus flattened upon itself to provide a body-portion, and a bight at each end thereof, said body having an opening therein for the reception of a warp-thread, and said bights adapted to receive and hold heddle-loops.

4. A mail comprising an annulus flattened upon itself to provide a body-portion of two parallel adjacent members and a bight at each end thereof joining said members, said body having a warp-eye therein formed by perforating both said members, and said bights adapted to receive and hold heddle-loops.

1,112,741. REED FOR LOOMS. PAUL A. WAGNER, Carlstadt, N. J. Filed Mar. 7, 1913, Serial No. 752,596. Renewed Mar. 4, 1914. Serial No. 822,479. (Cl. 139—87.)

1. In a reed, a series of dents, bands therefor, and a spacing member interlaced sinuously with such dents and partially inclosing the latter in its angular bends.

2. In a reed, a series of dents, bands therefor, and a yielding compressible spacing member interlaced sinuously with such dents and partially inclosing the latter in its angular bends, and constructed to vary the spaces between such dents by compression of said spacing member.



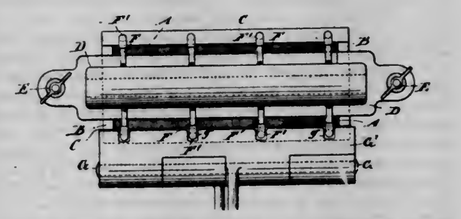
3. In a reed, a series of dents, bands therefor, and a spacing ribbon interlaced with such dents and partially inclosing the latter in its angular bends.

4. In a reed, a series of dents, bands therefor, and a spacing ribbon interlaced with such dents and partially inclosing adjacent dents in its angular bends, said ribbon having suitably spaced weakened portions adapted to facilitate such bending.

5. In a reed, a series of dents, bands therefor, and a spacing ribbon interlaced with such dents and partially inclosing adjacent dents in its angular bends, said ribbon having suitably spaced notches in its edges to facilitate such bending.

[Claims 6 to 9 not printed in the Gazette.]

1,112,742. METHOD OF MAKING REEDS FOR LOOMS. PAUL A. WAGNER, Carlstadt, N. J. Filed Mar. 5, 1913, Serial No. 752,040. Renewed Mar. 4, 1914. Serial No. 822,480. (Cl. 113—112.)

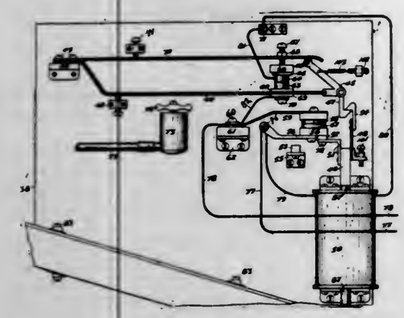


The method of making reeds which consists in assembling the dents in substantially parallel spaced relation, interposing a thin layer of solder between the side edges of their ends and the marginal bands, fluxing the bands and dents, applying heat at the terminal portions of the dents and applying yielding pressure to the bands to press the molten solder into the interstices between the dents and bands to fill the same and on cooling secure the parts in fixed position.

1,112,743. THERMOSTAT. JOHANN G. WALLMANN, Oakland, Cal. Filed Mar. 18, 1913. Serial No. 755,223. (Cl. 177—128.)

1. In a thermostat, an electric coil, a slidable core extending through said coil and having a post leading upwardly therefrom; a resilient thermo-bar secured to the upper end of said post; an upper horizontal thermo-bar secured at one end; a lower horizontal thermo-bar secured at one end; a resilient link connected to the free end of said lower horizontal thermo-bar and movably engaging the underside of said upper horizontal thermo-bar in proximity to its free end; separable locking-mechanism connecting and between said link and said resilient thermo-bar; an upper contact-carbon in connection with said upper horizontal thermo-bar, and a lower contact-carbon opposed to said contact-carbon and supported by said lower thermo-bar; a contact carbon below said lower

horizontal thermo-bar and resiliently supported by an arm fixed at one end and extending from said contact-carbon; a contact-carbon opposed to the contact-carbon last mentioned and supported by said post and having a pivoted arm in connection therewith; current-conducting means connected to said pivoted arm and running from said pivoted arm to and in connection with said upper contact-carbon, current-conducting means running to said pivoted arm and in connection with said arm, and current-conducting means in connection with said fixed arm and extending to and in connection with said lower contact-carbon.

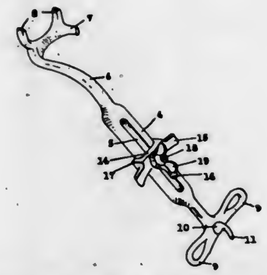


2. In a thermostat, the combination of an electric coil, a slidable core extending through said coil and having a post leading upwardly therefrom; a resilient thermo-bar secured to the upper end of said post; an upper horizontal thermo-bar secured at one end; a lower horizontal thermo-bar secured at one end; a resilient link connected to the free end of said lower horizontal thermo-bar and movably engaging the underside of said upper horizontal thermo-bar in proximity to its free end; separable locking-mechanism connecting and between said link and said resilient thermo-bar; an upper contact carbon in connection with said upper horizontal thermo-bar, and a lower contact-carbon opposed to said contact-carbon and supported by said lower thermo-bar; a contact-carbon below said lower horizontal thermo-bar and supported by a fixed support in connection therewith; a contact-carbon opposed to the contact-carbon last mentioned and connected to and supported by said post; current-conducting means in connection with the contact-carbon last mentioned and extending to and in connection with said upper contact-carbon; and current-conducting means extending to and in connection with said contact-carbon below said lower horizontal thermo-bar and extending to and in connection with said lower contact-carbon.

3. In a thermostat, the combination with a safety valve of an electric coil, a slidable core extending centrally through said coil and having a post leading upwardly therefrom, a resilient thermo-bar secured to the upper end of said post; an upper horizontal thermo-bar secured at one end; a lower horizontal thermo-bar secured at one end; a resilient link connected to the free end of said lower horizontal thermo-bar and movably engaging the lower side of said upper horizontal thermo-bar in proximity to its free end; separable locking mechanism connecting and between said link and said resilient thermo bar; an upper contact-carbon in connection with said upper horizontal thermo-bar, and a lower contact-carbon opposed to said contact-carbon and connected to said lower thermo-bar; a contact carbon below said lower horizontal thermo-bar and supported by a fixed support in connection therewith, a contact-carbon opposed to the contact carbon last mentioned and connected to and supported by said post; current-conducting means in connection with the contact-carbon last-mentioned and extending to and in connection with said upper contact-carbon; and current conducting means extending to and in connection with said contact-carbon below said lower horizontal thermo-bar and extending to and in connection with said lower contact-carbon.

4. In combination with a safety valve: an electric coil; an adjustable and slidable laminated core in said coil and having a post leading upwardly therefrom; a resilient thermo-bar secured to the upper end of said post; a resiliently connected link above said resilient thermo-bar; separable locking mechanism consisting of a pair of engageable dogs between and connecting said link and said resilient thermo-bar secured at one end; an upper thermo-bar engaging said link; a lower thermo-bar fixed at one end and at the other end connected to said link; a binding post above said upper thermo-bar; an upper-contact carbon and a lower contact-carbon between and in connection with said upper thermo-bar and said lower thermo-bar, said contact carbons being separably opposed and said upper contact carbon being in electrical connection with said binding post and said lower contact carbon having current-conducting means in connection therewith; a contact carbon below said lower thermo-bar resiliently supported from an insulated base, said base having electrical connection with said lower contact-carbon; a contact carbon opposed to said resiliently supported contact carbon and supported on one side by said post and on the other side supported by a pivoted arm in connection therewith; electrical connection between said pivot and said coil; a current-conducting wire leading from said binding post to said coil, and current-conductng wires for electrically feeding said device and leading to said pivoted arm and said insulated base.

1,112,744. COLANDER-HOLDER. JOSEPH WEH, Elizabeth, N. J. Filed Sept. 11, 1913. Serial No. 789,310. (Cl. 248—30.)



1. A support comprising a hook member adapted to engage about the spout of a faucet, and means projecting upward from said hook member to engage the under side of the horizontal portion of the faucet and prevent the hook from twisting around said spout.

2. A support comprising a hook member adapted to engage about the spout of a faucet, means for connecting the end of said hook member away from the faucet to a vessel, and means projecting upward from the hook to engage the under side of the horizontal portion of the faucet and prevent said hook from twisting around said spout.

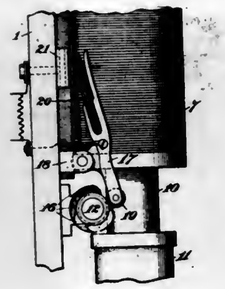
3. A support comprising a hook member adapted to engage about the spout of a faucet, adjustable means for connecting the end of said hook member away from the faucet to a vessel, and means projecting upward from the hook to engage the under side of the horizontal portion of the faucet and prevent said hook from twisting around said spout.

4. A support comprising a shank having a lateral hook adapted to take around the spout of the faucet and providing at the upper side of said hook a hollowed seat to engage the underside of the horizontal portion of the faucet, and supporting means on said shank.

5. A support comprising a shank having a lateral hook adapted to take around the spout of the faucet and projections upon the upper side of said hook forming between themselves a seat for the horizontal portion of the faucet and supporting means on said shank.

[Claims 6 to 9 not printed in the Gazette.]

1,112,745. CONTROLLER FOR ELEVATORS. CLARENCE W. WHEELER, Chicago, Ill. Filed Mar. 18, 1907, Serial No. 362,979. Renewed May 16, 1910. Serial No. 561,719. (Cl. 172—152.)



1. In motor controlling apparatus, the combination with starting resistance, of automatic means for controlling the same, an electric motor having three field windings, one being permanently connected across the mains, and another being in parallel with the starting resistance, resistance in circuit with said third field winding, and means for controlling said last named resistance to vary the strength of said third field winding.

2. In motor controlling apparatus, the combination with an electro-magnetic rheostat, of an electric motor having three field windings, one being permanently connected across the mains, and another being connected in parallel with the starting resistance of said rheostat, an electro-magnetic rheostat for the third field winding of said motor, and circuits and connections for effecting the automatic and successive operation of said electro-magnetic rheostats.

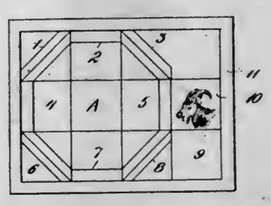
3. In motor controlling apparatus, the combination with an electro-magnetic rheostat, of an electric motor having three field windings, one being connected permanently across the mains, and another being in parallel with the starting resistance of said rheostat, electro-magnetic reversing switch mechanism for the motor, an electro-magnetic rheostat for the third field circuit, an electro-magnetic main line switch, an electro-magnetic relay for controlling the third field circuit rheostat, a manual switch for controlling directly said reversing switch mechanism, said electro-magnetic relay and said electro-magnetic main line switch, and circuits and connections for effecting the automatic operation of the reversing switch mechanism, main line switch and the first named electro-magnetic rheostat when the manual switch is in one position, and when in another position the additional operation of the electro-magnetic relay and the third field circuit rheostat after the first named electro-magnetic rheostat has performed its operation of cutting out the starting resistance and the second field winding.

4. In elevator motor controlling apparatus, the combination with an electric motor having a field winding, of starting resistance for said motor, switches for controlling said resistance, electro-magnetic means to positively close said switches, field resistance, electro-magnetic mechanism for controlling said resistance to vary the field strength of the motor, a master switch for controlling the said electro-magnetic means, a relay interposed between said master switch and said electro-magnetic mechanism, and means for preventing said electro-magnetic mechanism from operating until substantially all of the starting resistance has been cut out.

5. In a device of the class described, a motor having three field circuits, in combination with two variable resistance devices, one variable resistance device being associated with each of two of said field circuits, means for operating said variable resistance devices automatically and successively, an elevator car switch for controlling said operating means so as to effect the operation of one variable resistance device when in one position and of both successively and automatically when in another position, and a relay interposed between said car switch and one of said operating means.

[Claims 6 to 14 not printed in the Gazette.]

1,112,746. PUZZLE. JOHN I. WILEY, Los Angeles, Cal., assignor to W. H. Huff, Los Angeles, Cal. Filed Oct. 10, 1913. Serial No. 794,512. (Cl. 46—41.)



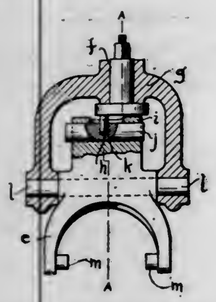
1. A puzzle consisting of a box containing a plurality of blocks of equal size and one block equal in area to two of the other blocks, and a space equal in area to one single block, certain of said blocks being inscribed with a portion of a definite figure or outline that is formed by proper arrangement of the blocks containing portions of the figure or outline, two of said blocks being so inscribed as to be interchangeable with each other for properly rearranging the blocks to form the original figure or outline by shifting the same without removing any of the blocks from the box.

2. A puzzle consisting of a box containing a plurality of blocks of equal size and a double block, said blocks occupying substantially the entire area of said box with the exception of a space equal to the area of one of said blocks, certain of said blocks being inscribed with a part of a definite figure or outline formed by proper arrangement of all of the blocks, such figure when disarranged by shifting the blocks being restored to original formation without removing any of the blocks from the box, by shifting all of the blocks to original position except two that are so inscribed as to be interchangeable with each other with relation to the figure or outline for the solution of the puzzle.

3. A puzzle consisting of a box containing a plurality of blocks occupying substantially the entire area of said box with the exception of a space equal to the square area of one of the blocks, certain of said blocks being suitably inscribed to form when properly arranged a definite uninterrupted outline, two of said blocks being so inscribed as to be interchangeable by shifting in the formation of the complete outline without removing any of the blocks from the box, the said space being in the center of and surrounded by said blocks forming the outline, one of the remaining blocks being blank and the other having a distinguishing mark, the block with the distinguishing mark being shiftable to the space in the center of said inscribed blocks, the said inscribed blocks being shiftable to reform the orgonal outline by transposing the two interchangeable blocks to solve the puzzle.

4. A puzzle consisting of a box containing 9 blocks of equal size and one double block, all of said blocks occupying substantially the entire area of said box with the exception of a space equal in area to one of said blocks, seven of said blocks and a portion of said double block being inscribed with marks to form when properly arranged a definite outline around said space and two of said marked blocks being so inscribed as to be interchangeable with each other to reform the outline when disarranged, by shifting without removing any of the blocks from the box; one of the remaining blocks bearing a suitable distinguishing representation and the other block being blank.

1,112,747. MOTION-CONVERTING DEVICE. RICHARD T. WINGO, Detroit, Mich., assignor of one-half to Detroit Tractor Company, a Corporation of Michigan, and one-fourth to George J. Baker and one-fourth to Frank E. Baker, Royal Oak, Mich. Filed Oct. 18, 1913. Serial No. 795,815. (Cl. 74—5.)

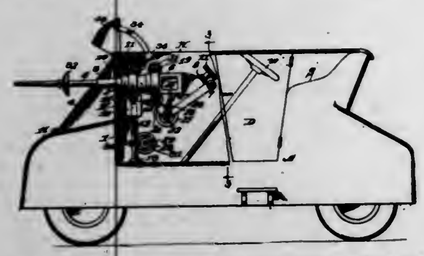


1. A motion-converting device, having in combination an oscillatory member, a member capable of part rotation, a sliding and rotating cross-pin in the oscillatory member and an eccentric pin on the member capable of part-rotative movement, and having a rotative and sliding engagement with the sliding and rotating cross-pin, substantially as described.

2. A motion-converting device, having in combination a pair of members journaled to have pivotal movements in perpendicular planes, a sliding and rotating cross-pin carried in one member and an eccentric pin carried on the other member capable of sliding and rotative movement in the cross-pin, substantially as described.

3. The combination with a shifting fork, supported to swing and provided with a head, of a cross-pin journaled to rotate and move longitudinally in said head, a spindle supported to have a part-rotative movement in a plane substantially perpendicular to the plane of the swinging movement of the shifting fork and an eccentric pin on the said spindle having a rotative and a sliding connection with the said rotating and sliding cross-pin, substantially as described.

1,112,748. ORDNANCE. CLARENCE GARFIELD YORAN, Manchester, Iowa. Filed Feb. 2, 1914. Serial No. 816,016. (Cl. 89—40.)

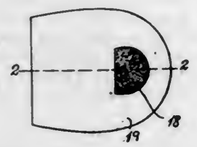


1. An ordnance comprising an apertured shield, a transverse shaft in rear of said shield, a plurality of guns pivotally supported on said shaft to swing in a vertical plane and having their barrels projecting through the apertures in said shield, supporting brackets depending from said guns and carrying bearings, a trigger operating shaft revolubly mounted in said bearings and carrying trigger tripping elements, means whereby said guns may be simultaneously rocked around their pivots and means whereby said trigger operating shaft may be rotated.

2. An ordnance comprising an apertured shield, a transverse shaft in rear of said shield, a plurality of guns pivotally supported on said shaft to swing in a vertical plane and having their barrels projecting through the apertures in said shield, supporting brackets depending from said guns and said shaft and carrying bearings, a trigger operating shaft revolubly mounted in said bearings and carrying trigger tripping elements, means whereby said guns may be simultaneously rocked around their pivots and means whereby said trigger operating shaft may be rotated.

3. An ordnance comprising an apertured shield, a horizontal shaft in rear of said shield, a plurality of spaced supporting plates pivoted to said shaft, a plurality of vertically adjustable supports forward of said shaft and in rear of said shield, a clamp on each of said supports, a plurality of links depending from said shaft and carrying bearings, clamps rising from said bearings, a plurality of guns removably held within the clamps on said supports and said bearings and removably secured to said supporting plates at their rear ends, a trigger operating shaft revolubly mounted in said bearings, trigger tripping fingers on said shaft, means whereby the latter may be rotated and means for effecting the vertical adjustment of said supports simultaneously, the barrels of said guns projecting loosely through the apertures in said shield.

1,112,749. RUBBER HEEL. ESSEX S. ABBOTT, Malden, Mass. Filed May 11, 1912. Serial No. 696,666. (Cl. 36—35.)



1. A rubber heel comprising a heel body provided with a tread surface and having an antislipping core integral therewith and composed of a plug of rubber having a filling of friction material distributed therethrough, said core extending inwardly from said tread surface, the rubber in said core being in sufficient proportion to insure a homogeneous union of the core with the heel body when vulcanized.

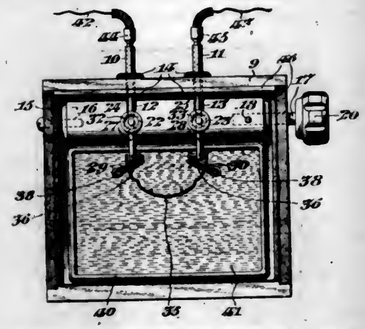
2. A rubber heel comprising a heel body provided with a tread surface and having an antislipping core integral therewith and composed of a plug of rubber having a filling of friction material distributed irregularly throughout the same, said core extending inwardly from the tread surface, the rubber in said core being in sufficient proportion to insure a homogeneous union of the core with the heel body when vulcanized.

3. A rubber heel comprising a heel body provided with a tread surface and having an antislipping core integral therewith and composed of a plug of rubber having a filling of fibrous material irregularly distributed throughout the same, said core extending inwardly from said tread surface, the rubber in said core being in sufficient proportion to insure a homogeneous union of the core with the heel body when vulcanized.

4. A rubber heel comprising a heel body provided with a tread surface and having an antislipping core integral therewith and composed of a plug of rubber having a filling of friction material distributed throughout the same, said core extending inwardly from said tread surface, the rubber in said core being in sufficient proportion to insure a homogeneous union between the core and the heel body when vulcanized, and an integral binding layer of rubber overlying said heel body and the inner end of said core.

1,112,750. ANNEALING AND TEMPERING APPARATUS. EDWARD H. ANGLE, New London, Conn., and ALBERT H. KETCHAM, Denver, Colo. Filed May 6, 1914. Serial No. 836,617. (Cl. 148—10.)

1. An apparatus of the class described, comprising an electrical conductor, a tempering bath, a horizontal oscillatory shaft in proximity to the tempering bath, means for holding the article to be treated in fixed relation to the oscillatory shaft and in circuit with the conductor, and means whereby rotation of the shaft to immerse the article in the tempering bath breaks the electrical circuit.



2. An apparatus of the class described, comprising an electrical conductor having suitably spaced terminals, a tempering bath, an oscillatory shaft or cylinder having radially extending standards provided with contact members respectively engageable with said terminals, and holding means carried by said standards and arranged to support the article being treated which completes the electrical circuit when said contact members are in engagement with said terminals, and which is plunged into said bath when said shaft or cylinder is rotated to break the connection between the contacts and terminals.

3. An apparatus of the class described, comprising spaced electrical contact terminals, a tempering bath, an oscillatory cylinder or shaft having lateral projections carrying contact members respectively engageable with said terminals, holders adjustably supported by said projections and having spring clips for holding a dental regulating arch, said clips being so formed and twisted as to hold said arch in such angular relation to the plane of the surface of the bath when the electrical contacts are operatively engaged, that its plane will assume a position substantially coincident with the plane of the surface of the bath when plunged therein by the rotation of said shaft or cylinder to break the circuit.

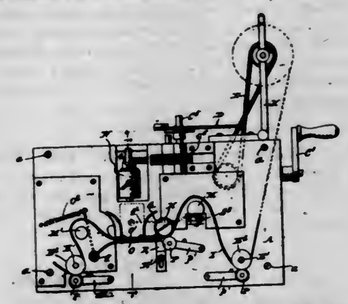
4. An apparatus of the class described, comprising spaced electrical contact terminals, an oscillatory shaft or cylinder carrying electrically conducting projections relatively insulated and having contact members respectively arranged to engage and disengage said terminals by the movement of said shaft, holders adjustably mounted in said projections and having spring clips depending therefrom whose free end portions are directed obliquely outward and returned upon themselves, for holding a dental regulating arch in circuit with said terminals and in such angular relation with respect to the surface of the bath that when said cylinder or shaft is rotated to break said circuit, the plane of the arch will substantially assume the plane of the surface of the bath when plunged into said bath.

5. An apparatus of the class described, comprising a casing, electrical contact terminals in said casing, an oscillatory mounting carrying relatively insulated spaced supports having means for electrically engaging said terminals, means adjustable in said supports for holding a dental regulating arch in circuit with said terminals, and a closure for said casing having an eyesight aperture therein through which the operator may peer.

[Claims 6 and 7 not printed in the Gazette.]

1,112,751. MOTION-PICTURE APPARATUS. THOMAS ARMAT, Washington, D. C. Filed Oct. 15, 1913. Serial No. 795,298. (Cl. 88—18.)

1. In motion picture apparatus, the combination with the lens and the shutter movable transversely of and intersecting the axis of the lens, of means for guiding and feeding the film horizontally across the axis of the lens with an intermittent movement, and means for adjusting the lens horizontally with relation to the film feeding means to position the axis of the lens with relation to the vertical centers of the pictures on the film.



2. In motion picture apparatus, the combination with a horizontally adjustable lens and a shutter movable transversely of and intersecting the axis of the lens in all positions of its adjustment, of means for guiding and feeding the film horizontally across the axis of the lens with an intermittent movement.

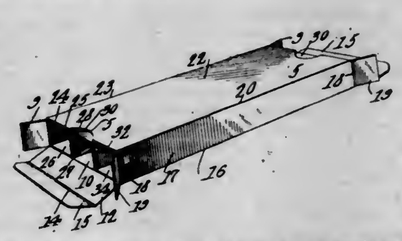
3. In motion picture apparatus, the combination with a horizontally arranged supporting frame embodying a top plate and bottom frame separably connected, a lens and horizontally arranged film guiding and feeding mechanism and lens adjusting mechanism mounted on the top plate, of drive gearing journaled in the bottom frame and separably associated in driving engagement with the film guiding and feeding mechanism on the top plate, whereby the top plate may be removed from the bottom frame carrying with it parts projecting above the same for giving access to the driving gearing and connections.

4. In motion picture apparatus, the combination with a horizontally arranged supporting frame, a horizontally adjustable lens carried thereby and a shutter journal thereon to move in a vertical plane intersecting the axis of the lens, of vertically arranged film guiding drums journaled on said frame in horizontal relation to each other, and means for coöperating with the top and bottom edges of the film for supporting and guiding the same horizontally.

5. In motion picture apparatus, the combination with the horizontally arranged frame, lens adjustable horizontally thereon and a shutter mounted to move in a vertical plane intersecting the axis of the lens, of a film feeding drum mounted on a vertical axis and projecting above the frame, and a guide arranged below the path of the film traveling to and around said drum in a horizontal direction, whereby the film will be supported in its horizontal travel across the axis of the lens.

[Claims 6 to 12 not printed in the Gazette.]

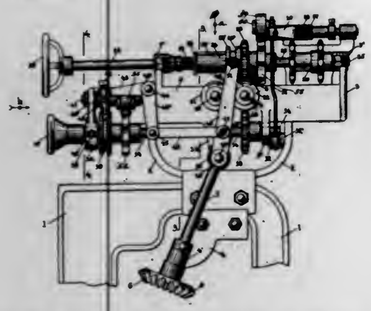
1,112,752. CIGAR BOX OR WRAPPING. JOSÉ RAMÓN AVELLANAL, Tampa, Fla. Filed Oct. 27, 1913. Serial No. 797,594. (Cl. 229—27.)



A box fashioned from a blank folded upon itself to form an outer wall at the extreme outer edges of the box and to form an inner wall comprising intermediate and terminal

reinforcing portions lying against a single side of the outer wall, the outer wall having a notch in its end and the inner wall being folded upon itself to form a rectangular intermediate cell disposed symmetrically with respect to the outer edges of the box and including a flat crown which extends entirely across the notch. the outer wall having a closure flap extended between the flat crown of the cell and the outer wall and accessible through the notch, the flat crown of the cell constituting a support for the flap immediately below the notch and throughout the entire extent of the notch.

1,112,753. PATTERN MECHANISM FOR LOOMS. HENRY BARDSLEY, Providence, R. I., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 16, 1912. Serial No. 726,010. (Cl. 139—79.)



1. In pattern mechanism for looms, a box pattern chain cylinder to carry a pattern chain, a worm gear slidably mounted and connected therewith, two worms, and means for revolving said worms, and automatic means to slide said first mentioned worm gear into engagement with one of said worms, and out of engagement with the other of said worms, to cause the revolution of said box pattern chain cylinder in a forward or backward direction.

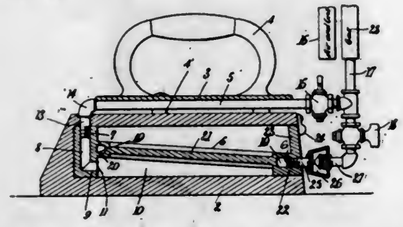
2. In pattern mechanism for looms, a box pattern chain cylinder to carry a pattern chain, a worm gear slidably mounted and connected therewith, two worms to revolve in opposite directions, and means for revolving said worms, and automatic means to slide said first mentioned worm gear into engagement with one of said worms, and out of engagement with the other of said worms, to cause the revolution of said box pattern chain cylinder in a forward or backward direction.

3. In pattern mechanism for looms, a box pattern chain cylinder to carry a pattern chain, a worm gear slidably mounted, and connected therewith, two worms, and means for revolving said worms, a second pattern chain cylinder to carry a pattern chain, and automatic means controlled thereby to slide said first mentioned worm gear into engagement with one of said worms, and out of engagement with the other of said worms, to cause the revolution of said box pattern chain cylinder in a forward or backward direction.

4. In pattern mechanism for looms, a box pattern chain cylinder to carry a pattern chain, a worm gear connected therewith, two worms to revolve in opposite directions, a second pattern chain cylinder to carry a pattern chain, said second pattern chain cylinder carried on a shaft having a pivotally mounted bearing at one end, and a worm gear on the other end, to be raised into engagement with one of said worms, and lowered out of engagement with said worms, and automatic means to slide the first mentioned worm gear into engagement with one of said worms, and out of engagement with the other of said worms, to cause the revolution of said box pattern chain cylinder in a forward or backward direction.

5. In pattern mechanism for looms, a box pattern chain cylinder to carry a pattern chain, means to rotate said cylinder, a second pattern chain cylinder on a shaft, and said shaft having a pivotally mounted bearing at one end, and a worm gear fast on the opposite end of said shaft, to coöperate with a driving worm, and said driving worm, and means, intermediate said first mentioned pattern chain cylinder, and said shaft, to cause the coöperation of said worm gear and said driving worm.

1,112,754. SAD-IRON. CHARLES A. BEACH, New York, N. Y. Filed Jan. 6, 1912. Serial No. 669,802. (Cl. 158—23.1.)



1. In a self-heating sad-iron, a body portion, a pair of burners arranged in said body portion connected together, one of said burners being formed with a baffle for the burners and the second burner acting as a support for the burner formed with the baffle, a supply nipple or pipe and independently controlled connectors between said pipe and the burners.

2. In a self heating sad iron, a body portion, a pair of burners arranged in said body portion, a supply pipe, means connected to said supply pipe for directing air and gas under pressure to one of said burners, and a second means connected to said supply pipe for directing gas and air to the other of said burners, said last mentioned means including a Bunsen mixer, said last mentioned burner being provided with a baffling member for confining the heat from both of said burners to a position near the bottom of said body portion.

3. In a self-heating sad-iron, a body portion, a pair of independent burners arranged in said body portion, said burners being arranged at opposite ends of said body portion, a supply pipe, means connected to said supply pipe for directing air and gas under pressure to one of said burners, and means connected to said supply pipe including a Bunsen mixer for supplying a combustible mixture to the other of said burners, the latter burner being provided with a central deflecting web designed to deflect the flame from said burners toward the bottom of said body portion.

4. In a self-heating sad iron, a body portion, a pair of burners arranged in said body portion rigidly secured together, one of said burners being formed so as to direct a blaze therefrom substantially parallel to the bottom of said body portion, a deflecting web or baffle secured to the other of said burners for deflecting the flame from both of the burners in order to retain the same adjacent the bottom of said body portion, and independent means for supplying a combustible mixture to said burners.

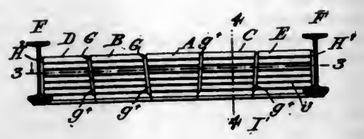
1,112,755. POISONOUS TABLET AND ANTIDOTE. JOHN A. BERGSTROM, Passaic, N. J. Filed Nov. 8, 1913. Serial No. 799,894. (Cl. 167—3.)

1. A poison medicinal tablet, provided with a cover containing an antidote.

2. A poison medicinal tablet, provided with a cover containing a mucilaginous antidote.

3. A poison medicinal tablet provided with a cover containing a vegetable antidote.

1,112,756. FIREPROOF ARCH. PHILIP H. BEVIER, New York, N. Y. Filed June 11, 1908. Serial No. 437,807. (Cl. 72—68.)



1. In a fireproof arch, tiles assembled in wedging engagement into rows, the adjoining tiles of each row abutting at their bottom edges, thereby producing an arch the bottom of which is continuous, said adjoining tiles having certain parts of their ends abutting and each tile being provided above the bottom edge and on the side walls and the top wall with a cut away portion positioned exteriorly of said abutting parts, whereby a mortar or cement receiving space is formed between each pair of abutting tiles.

2. In a fireproof arch, tiles assembled in wedging engagement into rows, the adjoining tiles of each row abutting at their bottom edges, whereby the resulting arch is provided with a bottom wall which is unbroken or continuous from side to side of the arch, each tile having at one end all the surfaces in substantially the same plane, the other end of each tile being provided with a cut away portion which is exteriorly to the abutting end surface, said cut away portions extending continuously along the top wall and the side walls but not at the bottom edge, whereby the adjoining tiles are assembled to produce a free or unobstructed mortar or cement receiving space exteriorly to the abutting end faces and above the engaging bottom edges thereof.

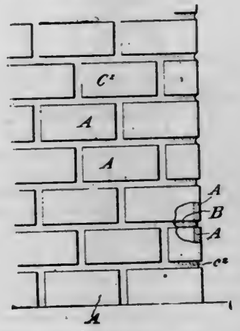
3. In a fireproof arch, tiles assembled in wedging engagement into rows, the adjoining tiles of each row abutting at their bottom edges lengthwise of the row, thereby producing a continuous tile surface at the bottom of the arch, each tile having at one end an abutting surface all the parts of which are in substantially the same plane and the other end of said tile having a surface some of which is cut away and other parts of which surface are positioned for engagement with the abutting surface of the next tile, said cut away surface of the tile extending continuously along the top wall and the side walls of each tile but not along the bottom edge thereof, whereby a mortar receiving space is provided between each pair of tiles exteriorly to the abutting surfaces thereof and above the abutting bottom edges of said tiles.

4. In a fireproof arch, tiles assembled in wedging engagement into rows, the adjoining tiles of each row abutting at their bottom edges lengthwise of the row, thereby producing a continuous tile surface at the bottom of the arch, each tile having on the side and top walls a beveled surface positioned exteriorly to an abutting surface on the end of said tile, whereby two adjoining tiles are positioned in abutting engagement at their ends and a mortar or cement receiving space is provided between a part only of the ends of said tiles, which space extends continuously along the top and side walls but is interrupted at the bottom end edges of the tiles, each row of tiles being spaced relative to an adjoining row or rows of tiles, and bonds of mortar or cement filling the spaces between adjoining rows of tiles so as to result in transverse concrete ribs and said bonds of mortar or cement filling the spaces exteriorly to the abutting end faces of each pair of adjacent tiles.

5. In a fireproof arch, a series of tiles assembled into rows, the adjoining rows being spaced apart to produce a substantially wide cement-receiving space between said rows, the adjoining tiles of each row being positioned for their ends to abut, the sides and top of each tile, at one end thereof, being beveled exteriorly of said abutting end face, whereby a cement-receiving space is provided next to the abutting faces of two adjoining tiles, said spaces extending continuously across the top and along two sides of each tile and said spaces being in communication with the substantially wide spaces between adjoining rows of tiles, the bottom edges of adjoining tiles in each row being unbroken at their ends and contacting with each other, thereby producing a bottom wall or under surface which is continuous from side to side of the arch.

[Claims 6 to 12 not printed in the Gazette.]

1,112,757. HOLLOW-TILE WALL. PHILIP H. BEVIER, New York, N. Y. Filed June 21, 1911. Serial No. 634,472. (Cl. 72—41.)



1. A hollow tile wall embodying hollow tiles the chambers of which are open through surfaces of said tiles, and slabs positioned between said tiles, with the edges of said slabs in the rear of the surface of the wall, the dimensions of each slab exceeding the dimensions of the opening of the tile chamber and said slab arranged to close said opening for precluding the admission of bonding material into the tile chamber.

2. A hollow tile wall embodying hollow tiles the chambers of which open through the surfaces of said tiles, imperforate slabs the dimensions of which exceed that of the openings of the tile chambers, each slab closing the opening in one tile chamber and precluding the entrance of bonding material into the tile chamber, and bonding material for uniting the slabs to the adjacent tiles, one edge of each slab being positioned in the rear of the surface of the wall and said edge of the slab being covered by the bonding material between the tiles.

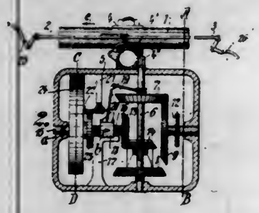
3. A wall embodying chambered open ended blocks, imperforate slabs closing the open ends of the blocks, the forward edge of each slab being in the rear of the exposed surface of the wall, and bonding material uniting the blocks and slabs into a solid structure, the forward edges of said slabs forming an abutment to preclude the entry into the open ended blocks of the bonding material in raking out the latter between the joints of said blocks.

4. A wall embodying hollow blocks open at their ends, and imperforate tile slabs positioned intermediate the opposing end faces of said blocks and united by bonding material to the blocks, the external dimensions of each tile slab being less than the end dimensions of said blocks and each slab being exterior to the chambers in two adjacent hollow blocks between which said slab is interposed.

5. A wall embodying hollow tile blocks provided with open ends, imperforate tile slabs positioned intermediate the opposing end faces of said hollow blocks and closing said open ends thereof, the length of each tile slab being less than the width of the hollow block and each slab being exterior throughout the surfaces and edge portions thereof to the chambers in two hollow blocks between which said slab is interposed, and bonding material uniting the face portions of the slabs to the end faces of said hollow blocks, the front edge portion of each slab being forwardly of the chambers in the hollow blocks.

[Claims 6 to 8 not printed in the Gazette.]

1,112,758. APPARATUS FOR FACILITATING THE STARTING OF VEHICLES AND VELOCIPEDES. GUSTAV BIRKNER, Malente-Gremsmühlen, Germany. Filed Nov. 24, 1913. Serial No. 802,758. (Cl. 185—39.)



In an apparatus for facilitating the starting of vehicles or velocipedes the combination of a casing, a vertical shaft in this casing united by a link connection with manually operable, horizontal rods, whereby the said shaft can be raised and lowered, a second shaft in the said casing having a coiled spring connected thereto and provided with a screw-threaded portion, a gear on the said second shaft meshing with a gear on the said vertical shaft, two bevel wheels on the latter shaft both the said wheels meshing alternatively with a bevel wheel in the said casing connected with a driving wheel of the vehicle or velocipede, a sliding rider on the said screw threaded portion provided with abutments acting on a bell crank lever connected to the said vertical shaft and a pawl on the said lever capable to be engaged with a ratchet wheel on the said second shaft, when the said lever is actuated by the said abutments and to be disengaged from the said ratchet wheel, when the said vertical shaft is lowered or raised by the said horizontal rods.

1,112,759. COMBINATION SLEEPING-ROBE. FREDERICK E. BISSELL and PETER K. KARBERG, Dubuque, Iowa, assignors to H. B. Glover Company, Dubuque, Iowa, a Corporation of Iowa. Filed Feb. 17, 1914. Serial No. 819,173. (Cl. 2—144.)

1. In a device of the character described, a front member, a rear member secured to the front member and provided with a free lower end, a foot attached to the front member, an extension at the upper portion of the heel portion of the foot, and means for removably securing the upper part of the extension.

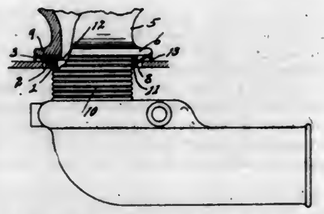
2. In a device of the character described, a front member, a rear member shorter than the front member, a foot, an extension for the upper part of the heel portion of the foot, and means for removably securing the extension of the heel about the rear member.

3. In a device of the character described, a front member, a rear member secured to the front member and provided with a free flap at its lower end, a foot portion secured to the front member, a heel portion provided with free extension flaps, and means for removably fastening the extension flaps to the front member about the rear member.

4. In a device of the character described, a front member, a rear member secured to the front member and having free ends at the lower end, feet having their upper parts integral with the front member and their treads secured to the front member, heels secured to the treads and to the front member and free at their upper ends, and means for removably securing their free ends about the front and rear members.

5. In a device of the character described, a combination garment having legs and feet, a front member, a foot secured to the front member, a rear member secured to the front member and shorter than the front member with a free lower end, a heel secured at its lower end to the foot and provided with flaps at its upper end, and means for removably securing the flaps of the heel to the leg of the garment.

1,112,760. FLOOR-PLATE FOR CLOSET-BOWLS AND THE LIKE. EDWARD W. N. BOOSEY, Detroit, Mich. Filed July 17, 1913. Serial No. 779,429. (Cl. 137—94.)



1. A floor plate comprising an apertured depending cone-shaped portion provided with a flange extending laterally from the base of the cone, a vertically extending circular rib upon the inner surface of the cone substantially midway of its length, said flange having portions upon opposite sides of the plate extending to said circular rib providing bolt receiving pockets substantially as described.

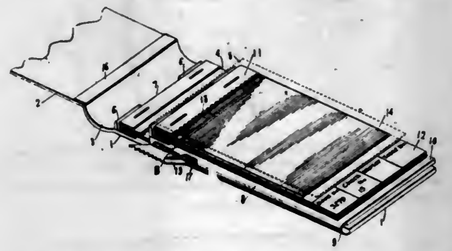
2. A floor-plate comprising a centrally apertured cone shaped portion provided with a flange extending laterally from the base of the cone, and a rib upon the inner surface of the cone-shaped portion positioned substantially midway of its length whereby a channel for calking material is formed between the rib and a fitting positioned within the aperture, and a channel between the rib and the base line of the cone for excess packing material, said flange having portions upon opposite sides of the plate extending horizontally to said rib providing pockets on the under side of the plate to receive bolt heads.

3. A floor plate comprising a centrally apertured cone shaped portion provided with a flange extending laterally from the base of the cone, and a rib upon the inner surface of the cone shaped portion extending at right angles to the flange and terminating below the upper surface thereof, said rib being so positioned on the cone that a channel for calking material is formed between the rib and a fitting positioned within the aperture in the cone, and a channel between the rib and the base line of the cone for excess packing material, said last named channel being bridged upon opposite sides of the plate, said bridges being coextensive with the flange and providing pockets upon the under side thereof.

4. A floor plate comprising a centrally apertured shallow cone-shaped portion provided with a circumferential flange extending laterally from the base of the cone, and a vertically extending circular rib upon the inner surface of the cone-shaped portion substantially midway of its length whereby a channel for calking material is provided between the rib and a fitting positioned within the aperture, and also a channel between the rib and the base line of the cone, said flange having portions upon opposite sides of the plate extending horizontally to said rib, said extending portions being slotted for the reception of fastening bolts, said rib, flange, and cone-shaped portion, being formed integrally.

1,112,761. MANIFOLDING SALES-BOOK. EDWARD K. BOTTLE, Niagara Falls, N. Y., assignor, by mesne assignments, to American Sales Book Company, Limited, a Corporation of Ontario. Filed Oct. 7, 1910. Serial No. 585,733. (Cl. 11—23.)

1. In a manifolding salesbook, in combination, a holder, an endwise removable pad of original sheets mounted upon said holder, a backing hinged to said holder along one edge thereof, a pad of duplicate sheets removably positioned upon said backing, and transferring means for reproducing writing on said duplicate pad, said duplicate pad being mounted above said original pad and nearer one end of said holder whereby any of the original sheets may be drawn over said duplicate sheets, permitting any desired number of duplicates to co-act with a single original.



2. In a manifolding salesbook, in combination, a holder, an original pad mounted thereon, a duplicate pad flexibly connected with said holder, and means for swinging said duplicate pad out of operative relation to said original pad.

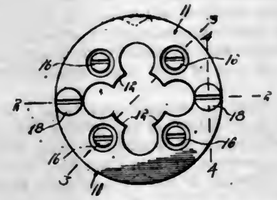
3. In a manifolding salesbook, in combination, a holder, an original pad removably mounted upon said holder, a backing hinged to said holder, a duplicate pad mounted on said backing, means for moving said duplicate pad out of operative position with said original pad, and a carbon transferring means connected with one of said pads whereby any desired number of duplicate sheets may be made with a single original sheet.

4. In a manifolding salesbook, in combination, a holder, an original pad removably mounted upon said holder, a backing hinged to said holder, a duplicate pad mounted on said backing, a carbon transferring means associated with one of said parts whereby any desired number of duplicate sheets may co-act with any single original sheet, and a tip-up for moving said duplicate pad out of operative relation to said original pad.

5. In a manifolding salesbook, in combination, a holder, an original pad mounted upon said holder, a backing hinged to said holder, a duplicate pad removably mounted on said backing, a carbon transferring means associated with one of said parts whereby any desired number of duplicate sheets may co-act with any single original sheet, and a tip-up for moving said duplicate pad out of operative relation to said original pad, said duplicate pad being positioned above said original pad and nearer one end of said holder whereby any of the sheets of the original pad may be laid over the duplicate pad.

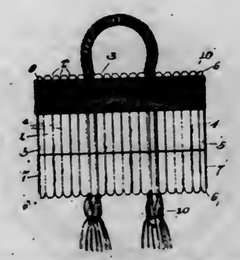
[Claims 6 to 36 not printed in the Gazette.]

1,112,762. SCREW-THREADING DIE. WILLARD E. BRACE, Elmira, N. Y., assignor of one-half to R. R. Rockwell, Elmira, N. Y. Filed Oct. 30, 1913. Serial No. 798,324. (Cl. 10—117.)



A screw threading die comprising a plurality of die members having screw passages therethrough, a uniting plate having threaded passages therethrough corresponding with the screw passages in the die members, screws engaged through the passages in the die members and in corresponding passages of the uniting plate, said passages in the die member being of greater diameter than the screws, and screws threaded in the uniting plate and disposed between adjacent faces of the die members, said last named screws having beveled heads coöperating with beveled surfaces formed on the die members whereby the inward movement of said screws will spread the die members away from each other.

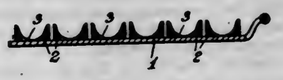
1,112,763. LOOM. BERTHA H. BRECKENFELD and MARY M. CAIN, Los Angeles, Cal. Filed July 21, 1913. Serial No. 780,165. (Cl. 139—12.)



1. A loom comprising a plate with notches in opposite edges thereof, said notches extending transversely of the edges in which they are formed, the corner portions of the plate having other notches which are arranged transversely of the first notches.

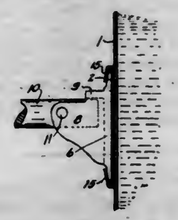
2. A loom comprising a plate formed of a plurality of detachably connected sections, each section having notches in opposite edges thereof, and each section having corner notches arranged transversely to the first notches.

1,112,764. BAKER'S UTENSIL. EDWARD E. BRODHEAD, New York, N. Y. Filed Apr. 26, 1912. Serial No. 693,499. (Cl. 107—19.)



A roll holder adapted for use in a roll splitting device and consisting of a base board, a series of roll receiving cradles formed of textile material, and a series of cradle supports, one at each side of each cradle and so secured to it as to support the same, but separated from the adjacent support of the next cradle by a space sufficient to permit the entry of a partition of a transfer box, all substantially as set forth.

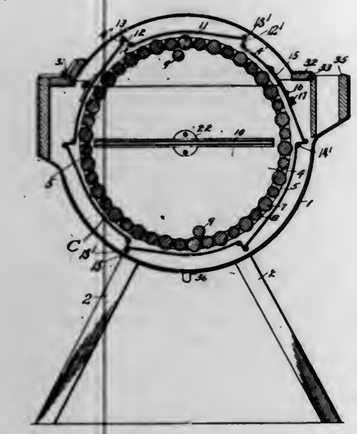
1,112,765. CLOTHES-DRIER. MARION J. BUCEY and HAROLD O. BUCEY, Redondo, Wash. Filed Jan. 9, 1913. Serial No. 741,057. (Cl. 126—342.)



In a clothes drier, the combination with a band removably clamped to a supporting tank; integral flanges formed on the upper and lower edges of said band and forming parallel guide channels therewith around the tank; carriers supported by and slidable in said guide

channels; a pair of brackets extending out from each carrier; a pin joining the brackets of each pair; a rod loosely mounted on said pin and slidable therealong; and a lug formed on the carrier adjacent one of the brackets thereon and leaving an open space between it and the other bracket whereby when said rod is slid under said lug it is held in extended horizontal position but when it is slid under said open space it is free to turn on the pin and lie in vertical folded position.

1,112,766. WASHING-MACHINE. HARRY BUDD, Independence, Kans. Filed June 16, 1910. Serial No. 567,124. (Cl. 68—18.)



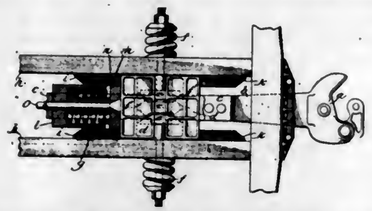
1. In a washing machine, a stationary box, a cylinder revolubly mounted in the box and comprising solid ends and a shell having outstruck portions forming shoulders, with the shoulders cut out to form radial mouths, and relatively large and small rollers revolubly mounted in the solid ends and extending in a circle adjacent to but spaced from the shell, with large and small rollers alternating, substantially as set forth.

2. In a washing machine, a box, a cylinder revolubly mounted in the box and comprising solid circular ends, having radial shoulders, forming bosses on their peripheries, a shell mounted on the peripheries of the ends and bent over said shoulders, and slit at the shoulders to form transverse mouths, rods extending across the cylinder and fixed to the shoulders at inner and outer positions, with the slit portions of said shell turned about the rods to form beads, and means for revolving the cylinder.

3. In a washing machine, a box, a cylinder revolubly mounted in the box and comprising solid circular ends, having radial shoulders forming bosses on their peripheries, a shell mounted on the peripheries of the ends and bent over said shoulders, and slit at the shoulders to form transverse mouths, rods extending across the cylinder and fixed to the shoulders at inner and outer positions, with the slit portions of said shell turned about the rods to form beads, metal bands secured to the inner faces of said ends adjacent the shell and provided with registering apertures, and rollers, having trunnion pins revolubly mounted in the apertures in said bands.

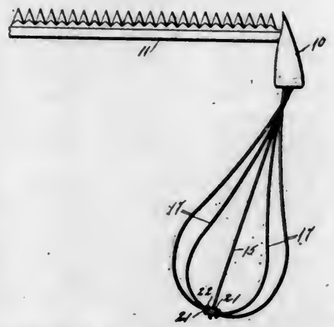
1,112,767. DRAFT-GEAR. LEWIS T. CANFIELD, Chicago, Ill., assignor to Union Draft Gear Company, Chicago, Ill., a Corporation of Illinois. Filed July 8, 1910. Serial No. 571,044. (Cl. 213—42.)

In a draft gear, in combination, front and rear main followers, buffing mechanism reacting between such followers, a draw-bar yoke extending about the main followers and in rear of the rear main follower, a pair of supplemental followers interposed between the rear end of the yoke and the rear main follower, a spring reacting between the supplemental followers, and a bolt fixed in the forward one of the supplemental followers and extending



rearwardly therefrom through and in sliding relation with the rear supplemental follower and the rear end of the yoke, and a key limiting the forward sliding movement of the bolt with respect to the yoke.

1,112,768. REVOLVING DIVIDER FOR MOWING-MACHINES. CARL A. CARRICK, Markey, Mich. Filed Oct. 31, 1912. Serial No. 728,905. (Cl. 56—30.)



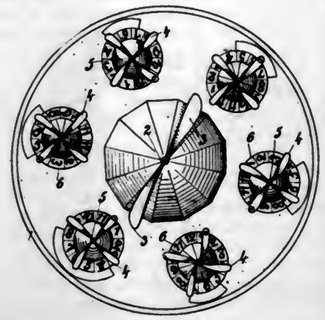
The combination with a sickle bar shoe having a vertical slot therein and having one side face roughened on the side edges of said slot, of a pivot pin engaged through said slot, a washer non-rotatably mounted on said pivot pin and having a roughened face engaging with the roughened edge portions of said slot for adjustably anchoring said pivot pin in said slot, a sleeve non-rotatably mounted on said pivot pin and having a roughened portion engaging with a roughened face of said washer, a revoluble hub on said sleeve, means for retaining said hub in place, stops carried by said sleeve and said hub for limiting rotation of said hub in both directions, and a divider carried by said hub.

1,112,769. GAME. ANTON CHOLEWA, Berlin-Wilmersdorf, Germany. Filed Dec. 22, 1913. Serial No. 808,300. (Cl. 46—56.)

1. A game similar to roulette comprising a plurality of fans, a propeller, means to rotate said propeller, said fans being adapted to be simultaneously rotated by a current of air produced by said propeller, and means to compare the positions of rest of said fans, substantially as set forth.

2. A game similar to roulette comprising a plurality of fans, a propeller, a clockwork for driving said propeller, said fans being adapted to be simultaneously rotated by a current of air produced by said propeller, and means to compare the positions of rest of said fans substantially as set forth.

3. A game similar to roulette comprising a plurality of fans, a propeller, a clockwork for driving said propeller, the latter being adapted for winding said clockwork, said fans being adapted to be simultaneously rotated by a current of air produced by said propeller, and means to compare the positions of rest of said fans, substantially as set forth.



4. A game comprising in combination, a base-plate, a number of pins vertically fixed to said base-plate, a fan turnable on each of said pins, a clockwork arranged on said base-plate, a vertical shaft driven by said clockwork, and a propeller firmly fixed to said vertical shaft, said fans being adapted to be simultaneously rotated by a current of air produced by said propeller and a number of signs arranged beneath each of said fans, substantially as set forth.

1,112,770. PROCESS OF MAKING EPSOM SALTS. GRAHAM CLARKE, Cleveland, Ohio, assignor to The Ohio Chemical & Mfg. Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 2, 1913. Serial No. 782,549. (Cl. 23—13.)

1. The process of making magnesium sulfate which consists in mixing a finely pulverized dry material containing magnesium oxid with a hot aqueous solution of ferrous sulfate, in agitating this solution, whereby ferrous hydrate is precipitated and an aqueous solution of magnesium sulfate is obtained, and in separating the precipitate and solution.

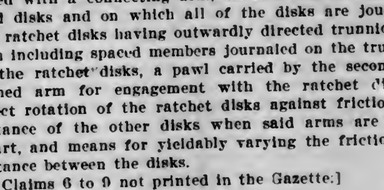
2. The process of making magnesium sulfate which consists in mixing a hot aqueous solution of ferrous sulfate and dry finely divided double oxid of magnesium and calcium, in agitating the mixture, in separating the ferrous hydrate from the solution, and in removing the calcium sulfate from the solution by fractional crystallization.

3. The process of making magnesium sulfate which consists in mixing a hot aqueous solution of ferrous sulfate with finely pulverized double oxid of calcium and magnesium in quantity insufficient to completely neutralize the solution, and subsequently adding pulverized magnesium oxid in quantity sufficient to complete the neutralization of the solution, and in agitating the mixture.

4. The process of making magnesium sulfate which consists in mixing with a hot aqueous solution of ferrous sulfate, a finely pulverized double oxid of calcium and magnesium, the quantity of such oxid being less than necessary to neutralize the solution, and then adding enough pulverized magnesium oxid to completely neutralize the solution, in agitating the mixture, separating the precipitated ferrous hydrate by filtration, and finally in separating the calcium sulfate from the solution by fractional crystallization.

1,112,771. SHOCK-ABSORBER. WILLIAM C. CORNWELL, Cincinnati, Ohio. Filed Jan. 16, 1913. Serial No. 742,374. (Cl. 21—105.)

1. A shock absorber for vehicles comprising a plurality of ratchet disks, other disks interposed between the ratchet disks, a common axis for all of the disks, an arm connected to one of the interposed disks, an arm including side members journaled on said axis adjacent the ratchet disks, and a pawl carried by the spaced members of said second-mentioned arm for engagement with both of said ratchet disks to rotate both ratchet disks against the frictional resistance of the interposed disks when the second arm is spread away from the first-mentioned arm.



2. A shock absorber for vehicles comprising a plurality of disks including a plurality of ratchet disks, one of the disks having an arm projecting therefrom, a common axis for all the disks, a second arm journaled on said axis and movable toward and away from the first-mentioned arm, and a spring pressed pawl carried by the second mentioned arm for engagement with said ratchet disks to rotate the latter against the frictional resistance of the other disks when said arms are spread apart.

3. A shock absorber for vehicles comprising a plurality of disks including a pair of ratchet disks, a common axis for the disks on which they are loosely journaled, an arm connected to one of the disks, an arm rotatably mounted adjacent one of the disks, a pawl carried by one of the arms to engage both of said ratchet disks to effect a rotation of the ratchet disk against frictional resistance of the other disks, and a compressible yieldable element mounted on the axis to vary the frictional resistance between the disks.

4. A shock absorber for vehicles comprising ratchet disks each having a depression on its inner side, fibrous disks mounted in the depressions of the ratchet disks, a metallic disk interposed between the fibrous disks and provided with a connecting arm, an axis common to all of said disks and on which all of the disks are journaled, the ratchet disks having outwardly directed trunnions, an arm including spaced members journaled on the trunnions of the ratchet disks, and a pawl carried by the second-mentioned arm for engagement with the ratchet disks to effect rotation of the ratchet disks against frictional resistance of the other disks when said arms are spread apart.

5. A shock absorber for vehicles comprising ratchet disks each having a depression on its inner side, fibrous disks mounted in the depressions of the ratchet disks, a metallic disk interposed between the fibrous disks and provided with a connecting arm, an axis common to all of said disks and on which all of the disks are journaled, the ratchet disks having outwardly directed trunnions, an arm including spaced members journaled on the trunnions of the ratchet disks, a pawl carried by the second-mentioned arm for engagement with the ratchet disks to effect rotation of the ratchet disks against frictional resistance of the other disks when said arms are spread apart, and means for yieldably varying the frictional resistance between the disks.

[Claims 6 to 9 not printed in the Gazette.]

1,112,772. COMPOSITION CONTAINING ANNEALED STEEL-WOOL AND RUBBER. JAMES P. CRANE, Chicago, Ill. Filed Mar. 18, 1911. Serial No. 615,254. (Cl. 106—3.)

1. A new compound of rubber and steel wool consisting of vulcanized rubber and annealed fibers of steel wool incorporated therewith throughout the mass.

2. A new compound of rubber and steel wool consisting of resilient vulcanized rubber and annealed steel wool fibers incorporated therewith throughout the mass.

3. A new compound of rubber and steel wool consisting of resilient vulcanized rubber and annealed fibers of steel wool incorporated with and disposed in a general longitudinal direction throughout the mass.

1,112,773. WELL-DRILL JAR. JAMES F. CRAVEN, Crafton, Pa. Filed Aug. 28, 1913. Serial No. 787,093. (Cl. 255—1.)

1. A drill jar link comprising reins having a filling block welded between the side faces of the reins at one end thereof to form the anvil, and a second filling block welded between the side faces of the reins at their other ends, the second filling block and reins being forged to form the shank or head.

2. A drill jar comprising reins of uniform cross section from end to end and having a filling block welded between the side faces of the reins at one end thereof to form the anvil, and a second filling block welded between the side faces of the reins at their other ends, the second filling block and the adjoining end portions of the reins being forged to form the shank or head.

3. A drill jar link comprising hexagonal rein bars of uniform cross section from end to end and having a hexagonal filling block welded between the inner side faces of the reins at one end to form the anvil, and a second hexagonal filling block welded between the inner faces of the rein bars at their other ends, the second filling block and the adjoining end portions of the rein bars being forged to form the shank or head.

4. A drill jar comprising two interlocked links, each link being formed of reins having filling blocks welded between the inner side faces thereof to form the anvil and shank.

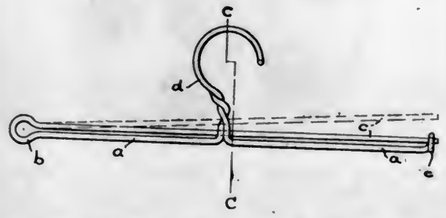
5. A drill jar comprising two interlocked links, each link formed of side rein bars of uniform cross section from end to end and having filling blocks welded between the side faces of the end portions of the links to form the anvil and shank.

[Claims 6 to 14 not printed in the Gazette.]

1,112,774. UMBRELLA. VAN DYKE CRUSER and ADOLPH ROSENBLUM, Brooklyn, N. Y. Filed Nov. 19, 1913. Serial No. 801,809. (Cl. 135—40.)

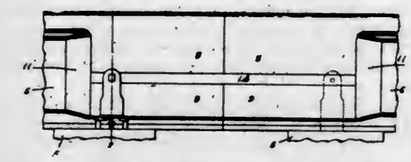
In an umbrella, the combination with a stick having a chamber formed therein provided with a slot, of ribs pivotally carried by said stick, a runner slidably mounted upon said stick having an extension, stretchers connecting said runner to said ribs, and a bowed spring arranged within said chamber free to expand at each end having a portion extending out through said slot in the path of travel of said runner, forming a frictional stop for said runner.

1,112,775. RUG-HOLDER. WILLIAM JEFFERSON CRUTCHER, Holden, W. Va. Filed Feb. 7, 1913. Serial No. 746,733. (Cl. 211—13.)



A holder made of a single rod having its end bent into the form of a hook e, a loop formed intermediate its ends and twisted and bent to form a suspending hook, and then bent back upon itself to be secured in the hook e, said suspending hook being bent outward and upward at the lower part of its shank and the first mentioned hook being so located that it shall hold the rebent portion of the rod in position to crimp the suspended article into the said bend of the shank of the suspending hook.

1,112,776. RAIL-JOINT. SAMUEL B. FEDRICK, Ruby, Tex. Filed May 28, 1914. Serial No. 841,560. (Cl. 239—8.)



1. A rail joint including key plates for engagement in complemental openings in the meeting ends of the rails, and means in engagement with said plates for securing the rails to a base.

2. A rail joint, in combination with a pair of rails, including key plates for sliding engagement in complemental grooves in the rails, and means in detachable engagement with the key plates for securing the rails to a base.

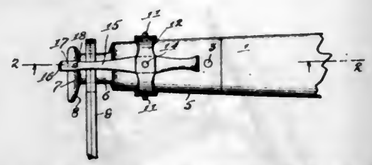
3. In combination with a pair of rails, a rail joint including key plates for engagement in complemental longitudinally extending grooves in the opposite sides of the rails, and securing members in connection with the key plates for holding the rails in engagement with the ties.

4. A rail joint, in combination with a pair of rails, each of which is provided on its opposite sides with elongated longitudinally extending openings, a key plate engaged in each pair of said openings on the opposite sides of said rail for preventing lateral thrust of the rails, and securing plates detachably engaged with said key plates and engaged with the ties for holding said rails in engagement with the latter.

5. A rail joint including a pair of rails, each of which is provided with elongated longitudinally extending slots on its opposite sides, whereby when the rails are engaged said slots are closed at their opposite ends, each of said slots provided with an opening its entire length and midway its vertical terminals, and a key plate carried on each side of the rails in said slots for preventing displacement of the rails.

[Claim 6 not printed in the Gazette.]

1,112,777. WHIFFLETREE-HOOK. JOHN M. FISCHER, De Soto, Mo. Filed Apr. 21, 1914. Serial No. 833,473. (Cl. 21—79.)

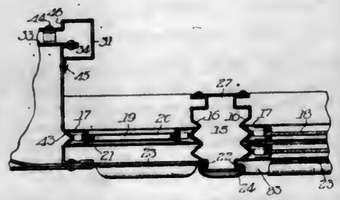


1. In a whiffle tree hook, the combination with a ferrule having a neck and a head formed thereon, and a yoke pivotally connected to the ferrule, a lever secured intermediate its ends to said yoke, a guarding pin depending from the forward end of the lever, the rear end of the lever constituting a handle and having the under surface thereof provided with a longitudinal recess, a leaf spring carried by the ferrule the free end of the spring bearing against the recess in the handle portion of the lever for maintaining the pin in a position above the head.

2. In a whiffle tree hook, the combination with a ferrule having a neck and a head formed thereon, said head having an opening therein, studs projecting from the opposite sides of the ferrule, of a spring yoke detachably connected about the studs, a lever carried by the yoke, a guarding pin depending from the forward end of the lever for removable engagement with the opening, the rear end of the lever constituting a handle portion and having its under surface provided with a longitudinal recess, a leaf spring, one end of said spring being secured to the ferrule, and the opposite end of the spring bearing against the longitudinal recess in the handle portion of the lever for maintaining the pin in engagement with the opening and preventing lateral movement of the same.

3. In a whiffle tree hook, the combination with a ferrule having a neck and a head formed thereon, said head having an opening therein, said ferrule further provided with a longitudinal groove adjacent the free end thereof, and means for fastening the ferrule to the whiffle tree, of a lever pivotally connected to the ferrule, a guarding pin carried by the forward end of the lever for engagement with the opening in the head, the rear portion of the lever having its under surface provided with a longitudinal recess, a leaf spring disposed in the recess in the ferrule and secured by the fastening means of the ferrule, the free end of the spring bearing against and slidably arranged within the recess in the lever for maintaining the pin in engagement with the opening and for preventing lateral movement of the parts.

1,112,778. CAR-BODY. GEORGE H. FORSYTH, Chicago, and ALBERT H. SISSON, Evanston, Ill., assignors to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1909. Serial No. 496,580. (Cl. 105—201.)



1. In a car-body, the combination of a pair of grooved upright members, a corrugated sheet-metal panel having flat marginal parts adapted to fit in the groves of said members, and means to secure the panel in place, substantially as described.

2. In a car-body, the combination of a post having grooves on opposite sides and a horizontally-corrugated covering or capping having inturned marginal flanges engaging in said grooves, and means to prevent displacement of said covering or capping, substantially as described.

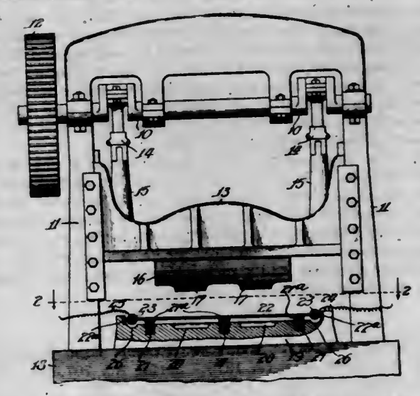
3. In a car-body, the combination of members having oppositely opening grooves therein, and a plate having a plurality of horizontal corrugations, the vertical edges of said plate being extended and engaging said grooves in the general plane of the plates, substantially as described.

4. A car-body having its exterior surface formed of interlocking fixed and independently removable metallic sections, substantially as described.

5. A car-body having its exterior surface formed of interlocking fixed and independently removable horizontally ribbed metallic sections, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,112,779. METHOD AND APPARATUS FOR FORMING METALLIC SHEETS AND THE LIKE. GEORGE H. FORSYTH, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 16, 1911. Serial No. 602,892. (Cl. 219—3.)



1. In an apparatus for forming sheets and the like, the combination of means for heating the sheet, resilient means for supporting said sheet, and means for first compressing said resilient means and then forming said sheet without removal from said apparatus, substantially as described.

2. In an apparatus for forming sheets and the like, the combination of electrical means for heating the sheet, resilient means for supporting said sheet, and means for first compressing said resilient means and then forming said sheet without removal from said apparatus, substantially as described.

3. In an apparatus for forming metallic sheets and the like, the combination of forming dies, and means to include the sheet while in operative position with reference to the dies in an electric heating circuit independent of said dies, substantially as described.

4. In an apparatus for forming metallic sheets and the like, the combination of forming dies, means to support the sheet in operative relation to but out of electrical contact with the dies, and a pair of heating electrodes arranged to be connected to the extremities of the sheet, substantially as described.

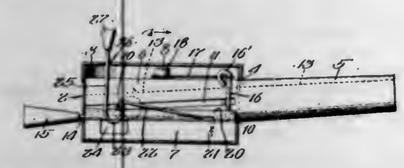
5. The method of forming sheets and the like which consists in heating said sheets on resilient supports in a forming apparatus, and forming said sheets substantially without removal from said apparatus, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,112,780. MARBLE-SHOOTER. JOHN E. FRANZEN, Chicago, Ill. Filed June 18, 1914. Serial No. 845,792. (Cl. 124—12.)

1. The combination with a box adapted to contain marbles, of a barrel part of which is within said box, a ham-

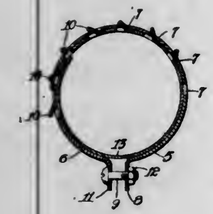
mer or ejector mounted within said box and in an opening in said barrel, a wire rod having a handle portion projecting out of said box for cocking said ejector or hammer, means for returning said wire rod to normal position prior to the release of said ejector or hammer, and a trigger projecting out of said box for releasing or discharging said ejector or hammer.



2. The combination with a box having a removable cover, of a barrel projecting partly into and out of said box, said box having a space therewithin about said barrel adapted to contain projectiles and the like and said barrel having a slot therethrough in the portion which is within said box, an ejector mounted in said box and barrel, a cocking device mounted in said box and projecting therefrom, means for returning said cocking device to normal position independently of the movement of said ejector, and a trigger projecting through the cover of said box for releasing said ejector when cocked.

3. The combination with a barrel having a slot in one end thereof, of a receptacle in which the slotted end of the barrel is mounted, an ejector spring mounted within said receptacle and said slotted end, a trigger mounted within said receptacle and having a projecting end extending to the exterior of said receptacle, a bent cocking rod similarly mounted, and a spring for returning said cocking rod to normal position.

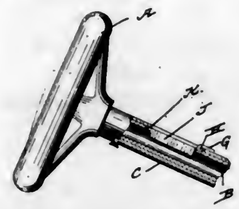
1,112,781. CLAMP. RALPH C. FRAZEE, East Hampton, N. Y. Filed May 13, 1913. Serial No. 767,390. (Cl. 137—28.)



A clamp for general circular objects comprising a clamping strip of metal having one end bent to form a terminal clamping lug and extending from said lug circumferentially more than one wind with its remaining end lapped beneath and extending past said clamping lug, said strip being provided with locking lugs remote from said clamping lug, a relatively short clamping strip of metal having openings formed therein coactive with said lugs upon said first named strip and having its end remote from said openings bent to form a clamping lug and disposed abreast of said first named clamping lug and on said underlapped portion.

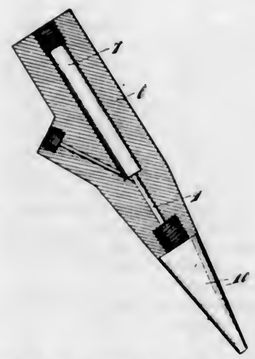
1,112,782. STEERING-WHEEL LOCK. CHESTER HENRY FRITSCHE, Los Angeles, Cal. Filed Mar. 5, 1914. Serial No. 822,559. (Cl. 70—90.)

In combination with the steering rod having a slot, an inclosing casing having a short slot communicating with the slot of the rod to allow one edge of the walls of said slots to form a keeper, a plate secured to the wall of the casing at one end of its slot, a lock casing hinged at one end to said plate and adapted to fit in the opening formed by said slots to retain the casing and rod, and a spring



catch in said casing to engage the keeper at the other end of said slots to secure the rod and casing together.

1,112,783. WELDING-TORCH. JAMES GALBRAITH, Chicago, Ill., assignor of one-half to Niels C. Sorensen, Chicago, Ill. Filed Mar. 12, 1914. Serial No. 824,141. (Cl. 158—109.)



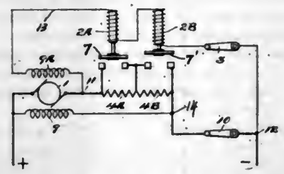
1. A welding torch comprising a body having an axial chamber therein, an axial discharge passage leading from one end of said body and a passage substantially smaller than said chamber passing through one corner of the latter and joining said first mentioned passage near the juncture of the latter with said chamber, substantially as described.

2. A welding torch comprising a body having a fuel gas reservoir chamber therein and a discharge passage leading from said chamber to the outside of said body, and an oxidizing gas passage of comparatively small bore passing through the corner of said chamber and communicating with said discharge passage near the juncture of the latter with said chamber, said oxidizing gas passage being disposed at an acute angle to said discharge passage, substantially as described.

1,112,784. MEANS FOR CONTROLLING ELECTRIC CURRENTS. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed May 1, 1905, Serial No. 258,378. Divided and this application filed Dec. 18, 1905. Serial No. 292,120. (Cl. 172—288.)

1. In motor controlling apparatus, the combination with a motor-armature and a field circuit, of starting resistance, electro-magnetic switches initially holding said starting resistance cut out, an extra field winding in series with the electro-magnets of said switches in a circuit in parallel to said starting resistance, and switching mechanism for closing said circuits.

2. In motor controlling apparatus, the combination with a motor-armature, of starting resistance in series therewith, a field winding for said motor, an extra field winding, a controlling circuit including said extra field winding, an electro-magnet in said controlling circuit, and means operated by said electro-magnet for controlling said starting resistance.



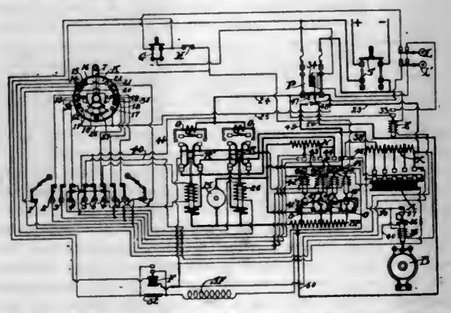
3. In current controlling apparatus, the combination with an electric motor, of starting resistance, a single controlling circuit, a series of switches connected to said resistance, a series of electro-magnets in said controlling circuit each having a single winding and automatically operated according to the varying potential across said starting resistance to control the said switches, an extra field winding in series with said electro-magnets, and means for controlling said electro-magnets.

4. In motor controlling apparatus, the combination with a motor-armature, of a field circuit, starting resistance in series with the motor-armature, a switch for controlling said starting resistance, an electro-magnet for operating said switch, a controlling circuit connected across said starting resistance and including said electro-magnet, an extra field winding in series with said electro-magnet, and means for controlling the supply of current.

5. In motor controlling apparatus, the combination with a motor-armature and a field circuit, of starting resistance, an extra field winding, swtiches initially short-circuiting said starting resistance, electro-magnets for operating said switches to insert said resistance when energized and for then permitting the switches to close successively to gradually cut out said resistance as the armature increases in speed, a switch for closing the circuit including said extra field winding and said electro-magnets in series with each other in a circuit in parallel with the starting resistance and in series with the motor armature, and a switch for closing the main armature circuit including the motor armature and said starting resistance in series with each other.

[Claim 6 not printed in the Gazette.]

1,112,785. TRACTION-ELEVATOR. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 26, 1913. Serial No. 763,713. (Cl. 172—152.)



1. In brake apparatus, the combination of a brake lifting electromagnet, a brake holding magnet, means controlled by the brake to complete a circuit for the brake holding magnet, and means for short-circuiting the lifting magnet winding after the circuit for the holding magnet is completed.

2. In brake apparatus, the combination with a brake, of a brake lifting magnet, a brake holding magnet, and means for connecting the said magnets in series during the lifting of the brake.

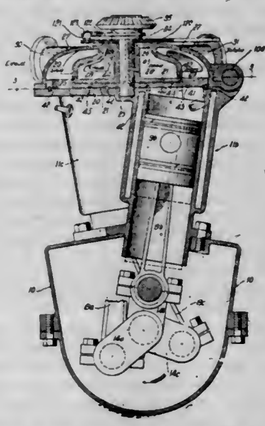
3. In brake apparatus, the combination of a brake lifting magnet coil, a brake holding magnet coil, means for connecting the said magnet coils in series during the lifting of the brake, and means for short circuiting the lifting coil after the brake is lifted.

4. The combination with an electric motor, of main starting resistance therefor, an electro-responsive brake having a brake lifting winding with terminals attached to the two ends of the main starting resistance, and additional electro-responsive means for holding the brake in its lifted position and dependent for its energization upon the lifting of the brake.

5. The combination with an electric motor, of main starting resistance therefor, an electro-responsive brake having a brake lifting winding with terminals attached to the two ends of the main starting resistance, and means brought into operation positively by the lifting of the brake for automatically holding the brake in its lifted position.

[Claims 6 to 28 not printed in the Gazette.]

1,112,786. INTERNAL-COMBUSTION-ENGINE VALVE. GEORGE F. GILLETTE, Los Angeles, Cal. Filed June 5, 1913. Serial No. 771,942. (Cl. 123—55.)



1. In combination with a ported cylinder and a piston therein and rotating mechanism driven by the piston, a stationary flat base plate at the cylinder head through which base plate the cylinder intake and exhaust ports extend, a single circular plate valve rotatable on said base plate and having exhaust and inlet ports extending therethrough adapted to register respectively with said cylinder exhaust and inlet ports, the exhaust port being closer to the rotation axis of the valve than the inlet port, a central drive shaft for said valve, a head mounted over the valve having concentric chambers connecting with the exhaust and intake ports of the valve, the intake chamber surrounding and enveloping the exhaust chamber, induction and exhaust pipes leading to and from the intake and exhaust chambers, the valve shaft projecting through the chambered head, a gear on the upper end of the valve shaft, and rotative connecting means between said gear and the rotating mechanism driven by the piston.

2. In combination with a plurality of cylinders each having intake and exhaust ports, pistons in said cylinders, and rotating mechanism driven by said pistons, a stationary flat base plate through which the ports of all the cylinders extend, a single rotating plate valve arranged on the base plate having intake and exhaust ports therethrough adapted each to register successively with the respective intake and exhaust ports of all the cylinders, and means to uniformly rotate said valve coöperatively with said rotating mechanism.

3. In combination with a plurality of cylinders arranged with their head ends symmetrically about a cen-

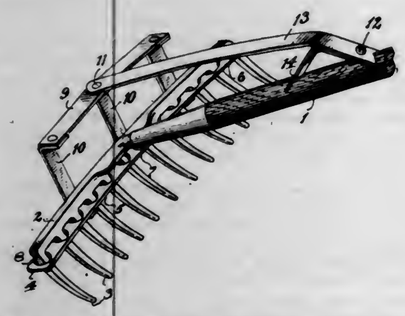
tral vertical axis, pistons in said cylinders, and rotating mechanism driven by said pistons, a stationary plate extending over the heads of all said cylinders, there being ports leading through said plate to said cylinders, said ports arranged symmetrically about said vertical axis, a single plate rotating valve upon said head plate having intake and exhaust ports extending therethrough adapted each to successively register with the respective intake and exhaust ports of all said cylinders, and means to uniformly rotate said valve coöperatively with said rotating mechanism driven by the pistons.

4. In combination, a crank case, a crank shaft therein, a plurality of cylinders arranged symmetrically with reference to a vertical axis, pistons in said cylinders connected with said crank shaft, a common stationary head plate for all said cylinders, induction and exhaust ports for said cylinders leading through said common head plate, the ports being arranged symmetrically about said vertical axis, all the induction ports being at a common distance from said vertical axis and all the exhaust ports being at another common distance from said vertical axis, a single plate rotary valve upon said head plate having inlet and exhaust ports leading therethrough adapted to successively register with the respective inlet and exhaust ports of all said cylinders, a head above said valve having concentric chambers therein connecting with the intake and exhaust ports thereof, a drive shaft for the valve extending upwardly through said head, and gear mechanism for rotating said shaft coöperatively with the crank shaft.

5. In combination, a crank case, a crank shaft therein, a plurality of cylinders mounted on the crank case symmetrically with relation to a vertical axis, pistons in said cylinders connecting with the crank shaft, a common head plate covering the heads of all said cylinders, intake and exhaust ports for said cylinders leading through said head plate, said ports being arranged symmetrically about said axis, and the exhaust ports being arranged closer to said axis than the intake ports, a rotary flat plate valve mounted on the head plate to rotate about said axis having intake and exhaust ports leading therethrough adapted to respectively register successively with the intake and exhaust ports of all the cylinders, the valve exhaust port being arranged closer to said axis than the intake port, a head above the valve having concentric chambers therein connecting with the exhaust and intake ports of the valve, the intake chamber surrounding and developing the exhaust chamber, a drive shaft for the valve projecting upwardly through said head, and gearing causing the coöperative rotation of the valve shaft and the crank shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,112,787. ATTACHMENT FOR RAKES. LEWIS C. GLOVER, Knoxville, Pa. Filed Sept. 3, 1913. Serial No. 787,839. (Cl. 56—146.)



1. A rake tooth clearer comprising a spring bar for attachment to a rake handle, and a tooth clearer bar consisting of two parts pivotally supported at their inner ends by the spring bar and mounted to permit their outer ends to swing toward the spring bar when the clearer is applied.

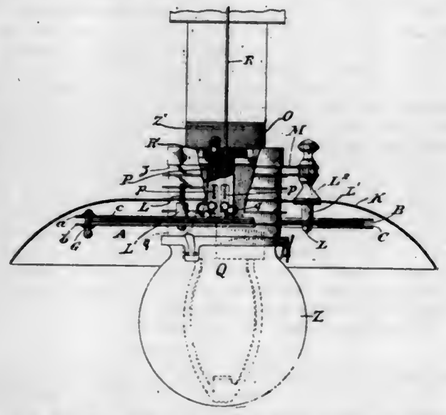
2. A rake tooth clearer comprising a bar having means at one end for attachment to a rake handle, and tooth clearer members swingingly connected to the other end of the bar, the free ends of said members having movement toward and away from the longitudinal center of said bar.

3. A tooth clearer for rakes comprising a jointed spring-actuated tooth clearer bar, a spring member for connection with a rake handle, a jointed cross bar, and uprights connecting the cross bar and the clearer bar.

4. A jointed tooth clearer bar, a jointed supporting bar, the joints in both bars being in alinement, means connecting said bars, and means on one of said bars for attachment to the handle of a rake.

5. The combination with a rake head having teeth and a handle connected to said head, of a spring bar connected to the handle, a jointed and pivotally connected apertured tooth clearing bar through which the teeth of the rake project, and a connection between the spring bar and the tooth clearer bar to permit lateral movement of the tooth clearer bar with respect to the teeth.

1,112,788. ELECTRICAL RESISTANCE. FREDERICK W. GORE, New York, N. Y. Filed Dec. 23, 1910. Serial No. 598,975. (Cl. 219—63.)



1. In an electrical resistance, a spool or bobbin, resistance coils wound clockwise thereon and in reverse directions to each other, and means for separating the windings of said coils.

2. In an electrical resistance, a spool provided with a separating member providing intermediate spaces adapted for the reception of resistance coils, one of said resistance coils occupying each of said spaces at the respective sides of the separating member, said resistance coils being wound clockwise in reverse directions to each other.

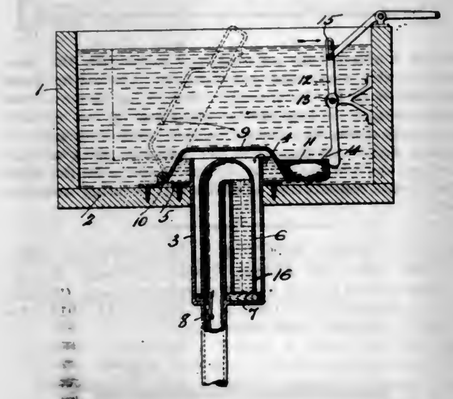
3. In an electrical resistance, a unitary spool embodying a separating member the respective faces of which are parallel, and a plurality of other members positioned in contact with the respective surfaces of the separating member, said members being fastened together and the edge portions of the second named members being deflected laterally with respect to the surfaces of the separating member, to form individual coil-receiving spaces, in combination with separate coils wound within said spaces and mechanically separated from contact with each other by the marginal portion of the separating member.

4. In an electrical resistance, a unitary spool embodying a separating member and a plurality of other members positioned in contact with the respective surfaces of, and attached rigidly to, said separating member, said second named members having their marginal portions deflected away from the separating member, combined with resistance coils wound upon the deflected marginal portions of the second named members, said coils being mechanically separated from contact with each other by the marginal portion of the separating member.

5. In an electrical resistance, a plurality of dished plates and a third plate interposed between the dished plates and united thereto into a unitary spool, and a plurality of resistance coils wound on the spool between the dished and interposed plates, said coils being mechanically separated by the interposed plate.

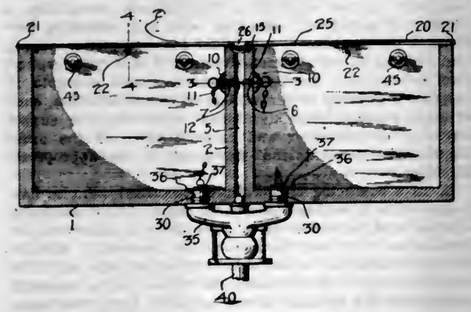
[Claims 6 to 10 not printed in the Gazette.]

1,112,789. FLUSH-TANK. HENRY S. GRAYBILL, Reading, Pa. Filed Aug. 17, 1911. Serial No. 644,012. (Cl. 4—5.)



In a flushing apparatus the combination with a reservoir having an open-top air chamber therein, of a discharging siphon having its shorter branch arranged in communication with the lower portion of said chamber, a hinged inverted float cup arranged to loosely cover said chamber, and operating means comprising a locking device for retaining or releasing said float cup, substantially as set forth.

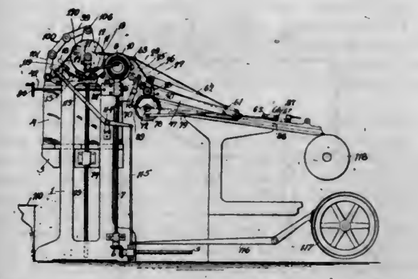
1,112,790. WASHTUB. ABEL HANSEN, Perth Amboy, N. J. Filed May 18, 1914. Serial No. 839,297. (Cl. 68—31.)



1. A compartment wash-tub having a dividing partition wall formed with a drain passage extending entirely therethrough, laterally extending overflow openings and an upwardly extending ventilating extension.

2. A compartment wash-tub having a dividing partition wall formed with a drain passage extending entirely therethrough, and an upwardly extending ventilating extension, and a tight cover having a ventilating strainer.

1,112,791. SHEET-FEEDING MACHINE. JAMES G. HARDIE, Canton, N. Y. Filed Mar. 1, 1909. Serial No. 480,810. (Cl. 101—39.)



1. In a sheet feeding machine having a suitable framework, the combination therewith of a power operated elevator, a power rotated main arbor, a power rotated comb arbor, with suitable sheet combing devices thereon, suitable connections between the main arbor and the comb arbor, one bearing of the comb arbor being pivotedly attached to said connections, and the other bearing of the comb arbor being slidably mounted in one of the aforesaid connections, means to press downwardly the slidable comb arbor bearing, means adapted to raise the slidably mounted bearing.

2. In a sheet feeding machine having a suitable framework, the combination therewith of a power operated elevator, a power rotated main arbor, a power rotated comb arbor with suitable combing devices thereon, suitable connections between the main arbor and the comb arbor, one bearing of the comb arbor being pivotedly attached to said connections, and the other bearing of the comb arbor being slidably mounted in one of the aforesaid connections, a spring adapted to press downwardly the slidable comb arbor bearing, a screw adapted to raise the slidable comb arbor bearing, means adapted to manually rotate said screw.

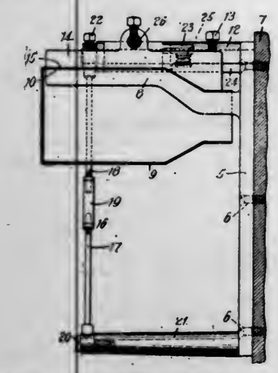
3. In a sheet feeding machine having a suitable framework, the combination therewith of an elevator suitably placed in said frame work and adapted to support a stack of sheets with means to advance the top sheet of said stack, a power operated pawl and ratchet in operative connection with said elevator, a depending arm attached to said frame work, a member adjustably pivoted to said depending arm, a shaft journaled in said adjustable member and in operative connection with said pawl and ratchet, a quadrant rigid upon said shaft and in frictional contact with said top sheet of stack.

4. In a sheet feeding machine having a suitable framework, the combination therewith of an elevator and suitably placed in said framework and adapted to support a stack of sheets with means to advance the top sheet of said stack, a power operated pawl and ratchet in operative connection with said elevator, a bell crank pivoted upon said framework with means to adjust it, an arbor journaled in said bell crank and at right angles to the course of travel of said top sheet, suitable connections between said arbor and said pawl and ratchet, a quadrant mounted upon said arbor and in frictional contact with said top sheet.

5. In a sheet feeding machine having a suitable framework, the combination therewith of an elevator suitably placed in said framework and adapted to support a stack of sheets and with means to advance the top sheet of said stack, a power operated pawl and ratchet in operative connection with said elevator, a shoe suitably pivoted and in operative connection with said pawl and ratchet, a depending arm attached to said framework, a member adjustably pivoted to said depending arm, a shaft journaled in said adjustable member and in operative connection with said shoe, a quadrant rigidly mounted upon said shaft and in frictional contact with said stack of sheets.

[Claims 6 and 7 not printed in the Gazette.]

1,112,792. DEVICE FOR STRAIGHTENING CANS. THOMAS H. HART, Everett, Mass. Filed July 30, 1913. Serial No. 781,933. (Cl. 153—39.)



1. A device for straightening a can having, in combination, a stationary former adapted to bear against the interior of said can, a support therefor, a movable former adapted to bear against the exterior of said can, a shaft fast at one end thereof to said support and constituting a pivot upon which said movable former is rotatably mounted, the median axial line of said pivot extending longitudinally of the bearing surfaces of said formers and a tie fastened at one end thereof to said support and at the other end thereof to the free end of said shaft.

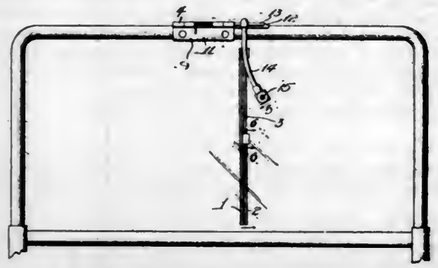
2. A device for straightening a can having, in combination, a stationary former adapted to bear against the interior of said can, a support therefor, a movable former adapted to bear against the exterior of said can, a shaft fast at one end thereof to said support and constituting a pivot upon which said movable former is rotatably mounted, the median axial line of said pivot extending longitudinally of the bearing surfaces of said formers and a tie consisting of two rods and a turn-buckle adjustably connecting said rods together, one of said rods pivotally connected to said support the other pivotally connected to the free end of said shaft.

3. A device for straightening a can having, in combination, a stationary former adapted to bear against the interior of said can, a support therefor, a movable former adapted to bear against the exterior of said can, a shaft fast at one end thereof to said support and constituting a pivot upon which said movable former is rotatably mounted, the median axial line of said pivot extending longitudinally of the bearing surfaces of said formers, a tie fastened at one end thereof to said support and at the other end thereof to the free end of said shaft and a spring interposed between said movable former and support.

1,112,793. WIND-SHIELD CLEANER. CHARLES J. HEINEMAN, Chicago, Ill., assignor to Emil Grossman M'f'g. Co. Inc., Brooklyn, N. Y., a Corporation. Filed Dec. 21, 1910. Serial No. 598,609. (Cl. 15—59.)

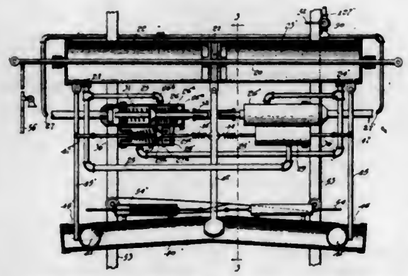
1. In a cleaner for automobile wind-shields, the combination with a carriage constructed to fit the frame of the wind-shield, whereby said frame constitutes a track for said carriage, of two rods depending from the opposite sides of said carriage, a wiper secured to one of said rods, and a spring stud carried upon the lower end of said other rod, said latter rod being bent laterally at said lower end.

2. In a cleaner for automobile wind-shields, the combination with a carriage, of a handle extending downwardly from one side of said carriage, a rod extending downwardly from the other side of said carriage, a vertically disposed wiper provided at its upper end with an elongated loop encircling the upper end of said rod and also with a loop encircling the lower end of said rod, said lower end of the rod being provided with an opening therethrough tapering toward the center of the rod, and a pin extending through said opening through the rod and having its opposite ends secured to said lower loop, whereby said wiper is pivoted to the lower end of said rod.



3. In a cleaner for automobile wind-shields, the combination with a carriage comprising two pivoted members constructed to fit the opposite sides of the frame of the wind-shield, of a longitudinal extension of one of said pivoted members, two depending rods secured to said extension and depending from the opposite sides of said carriage, and a wiper carried by one of said rods, the other of said rods constituting a handle for operating said carriage.

1,112,794. STABILIZER FOR AERONAUTICAL VEHICLES. WILLIAM FOREST HENSEL, Chicago, Ill., assignor to The Hensel Aero Stabilizer Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1913. Serial No. 784,033. (Cl. 244—29.)



1. The combination with an aeronautical vehicle having movable balancing plane portions, of means to automatically operate said balancing portions comprising a piston rod operatively connected with said balancing portions, a piston thereon, a cylinder for said piston, supply and exhaust valves for each chamber of said cylinder, and two independent gravity responsive means operable in response to tilting of the vehicle in either direction, each of said gravity responsive means operating the supply valve of one chamber and exhaust valve of the other chamber to cause piston movement in an appropriate direction.

2. In a balancing means for aeronautical vehicles having movable balancing plane parts, means to automatically operate said balancing parts comprising a piston rod for connection with said parts, a piston thereon, a cylinder for said piston, an intake valve and an exhaust valve for each chamber of the cylinder, the intake valves normally closed and the exhaust valves normally open, two oppositely inclined runways, gravity responsive movable parts in said runways, and operating connections, mechanically operable by pressure of said gravity responsive parts for opening the supply valve and closing the exhaust valve of the appropriate chamber in response to tilting of the vehicle.

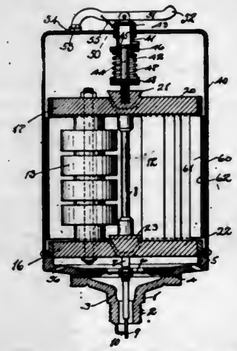
3. In a balancing means for an aeronautical vehicle having movable balancing wing parts, means to automatically operate said wing parts, comprising a power cylinder, a piston therein, a piston rod operatively connected with the wing parts, a tube providing oppositely inclined runways, two balls in said runways respectively, a supply valve and exhaust valve for each chamber of the cylinder, and lever means actuated by the balls for opening either supply valve and closing the corresponding exhaust valve extending into said runway for operation by the balls.

4. In a device of the character described, the combination with the double ended cylinder containing a piston and a connected part to be moved, an operating lever, supply valves for opposite ends of the cylinder, disposed at opposite sides of said lever for operation thereby, and normally open exhaust valves for opposite ends of the cylinder disposed on the sides of said lever opposite to the supply valves for the same chambers of the cylinder, controlled for closure by said lever, oppositely inclined runways associated with said lever, and gravity responsive means in said runways alternatively movable to operate said lever accordingly as the vehicle is tilted in one direction or the other.

5. In a device of the character described, the combination with the double ended cylinder containing a piston and a connected part to be moved, an operating lever, supply valves for opposite ends of the cylinder, disposed at opposite sides of said lever for operation thereby, an exhaust valve for each end of the cylinder disposed on the side of said lever opposite to the supply valve for the same chamber of the cylinder, said exhaust valves spring connected to said lever, oppositely inclined runways associated with said lever, and gravity responsive means in said runways alternatively movable to operate said lever accordingly as the vehicle is tilted in one direction or the other.

[Claims 6 to 8 not printed in the Gazette.]

1,112,795. IGNITER. ALBERT B. HERRICK, New York, N. Y., assignor to Matie C. Messler, Pawtucket, R. I. Filed Nov. 30, 1912. Serial No. 734,343. (Cl. 123—149.)



1. The combination of a spark plug adapted to enter an aperture in an engine cylinder; two magnets and two induction coils attached to said spark plug and arranged symmetrically thereon, said coils being connected to the terminals of said spark plug; a movable member mounted in said spark plug and adapted to be operated by the compression in the engine cylinder; an armature attached to said movable member; said armature being adapted, in the normal position of said member, to connect up said magnets and said coils in two separate magnetic circuits, said armature, when said member is operated, being adapted to connect up each of said magnets with the coil formerly in magnetic circuit with the other magnet, thereby reversing the direction of the magnetic flux through said coils.

2. The combination of a hollow spark plug adapted to enter an aperture in an engine cylinder; a magnet and an induction coil coöperatively mounted on said spark plug, an armature reciprocably mounted to coöperate with said magnet and induction coil; and a flexible diaphragm mounted in said hollow spark plug and connected to said armature to operate the same, said diaphragm being operable by the compression in the engine cylinder.

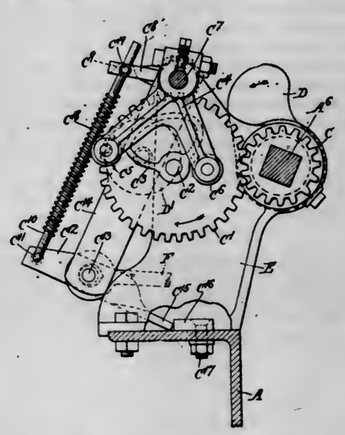
3. The combination of a hollow spark plug adapted to enter an aperture in an engine cylinder; a magnet and an induction coil coöperatively mounted on said spark plug, an armature reciprocably mounted to coöperate with said magnet and induction coil; and a flexible diaphragm mounted in said hollow spark plug and connected to said armature to operate the same, said diaphragm being operable by the compression in the engine cylinder; and a suitable support adapted to contact said diaphragm when operated.

4. The combination of a hollow spark plug adapted to enter an aperture in an engine cylinder; a magnet and an induction coil coöperatively mounted on said spark plug, an armature reciprocably mounted to coöperate with said magnet and induction coil; and a flexible diaphragm mounted in said hollow spark plug and connected to said armature to operate the same, said diaphragm being operable by the compression in the engine cylinder; and a soft metal support adapted to contact said diaphragm when operated to support the same against the combustion pressure in said cylinder.

5. The combination of a hollow spark plug adapted to enter an aperture in an engine cylinder; a magnet mounted on said plug; an induction coil mounted on said plug; an armature reciprocably mounted between said magnet and coil, and normally connecting the same in a closed magnetic circuit, said armature when operated, being adapted to vary the magnetic circuit between said coil and magnet, thereby inducing a current in said coil; a movable member mounted in said hollow spark plug and adapted to be operated by the compression in the engine cylinder, said member being connected to said armature to operate the same; and tension means adapted to control said movable member, whereby the latter will operate when a predetermined compression is reached.

[Claims 6 to 15 not printed in the Gazette.]

1,112,796. PLOW-LIFT. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Dec. 15, 1913. Serial No. 806,663. (Cl. 97—59.)



1. A plow lift mechanism comprising a movable part, a plow rod connected thereto, a spring actuated lock on the movable part, means for moving the movable part to lift or lower the plows and means to successively apply tension or pressure to the spring to cause it to engage or free the lock.

2. A plow lift mechanism comprising a swinging part, a plow rod connected thereto, a lock on the movable part, a spring to actuate it, means for moving the movable part to lift or lower the plows and means to successively apply tension or pressure to the spring to cause it to engage or free the lock.

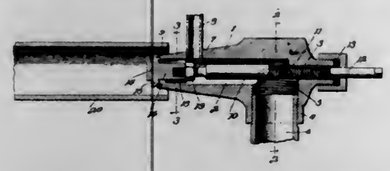
3. A plow lift mechanism comprising a depending swinging part, a plow rod connected to the lower end thereof, a lock on the movable part, a spring to actuate it, means for moving the part to lift or lower the plows and means to successively apply tension or pressure to the spring to cause it to engage or free the lock.

4. A plow lift mechanism comprising a depending swinging part, a plow rod connected thereto, a lock on the movable part containing a pivoted portion, a spring to actuate it, means for moving the movable part to lift or lower the plows and means to successively apply tension or pressure to the spring to cause it to swing the pivoted part and thus to engage or free the lock.

5. A plow lift mechanism comprising a pivoted link, a plow rod connected with the lower end thereof, a pivoted lock lever on the end of the link, a spring connected with the free end of such lever, means for swinging the link to lift or lower the plows and means to successively apply tension or pressure to the spring to cause it to rock the lock lever on its pivot.

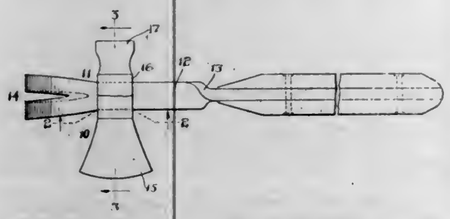
[Claim 6 not printed in the Gazette.]

1,112,797. GAS AND OIL BURNER. WILLIAM A. HINES, WILLIAM J. CURRY, JOHN D. MISKELLY, and SAMUEL A. MARSHALL, New Cumberland, W. Va.; said Marshall assignor to William A. Andrews, East Liverpool, Ohio. Filed Mar. 24, 1913. Serial No. 756,564. (Cl. 158—76.)



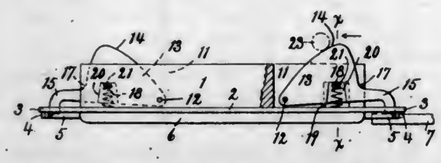
In a fuel burner of the class described, having a burner head formed with a fuel passage therein and formed at its discharge end with a valve seat, a valve coacting with said head and having a neck extending into the passage and having radially disposed ribs, said ribs extending to the periphery of the valve, means for adjusting said valve and neck with relation to the head, a fuel supply pipe opening into said passage, a fuel supply pipe also opening into said passage rearward of the first named fuel supply pipe, and a burner tube into which the discharge end of the burner head projects, said burner tube being concentric to the discharge end of the burner head and larger than the same to permit the entrance of air, the entrance end of said burner tube being adjacent to the discharge end of the head.

1,112,798. HANDLE-FASTENING. WILLIS F. HOBBS, Bridgeport, Conn., assignor to The Bridgeport Hardware Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 13, 1913. Serial No. 806,456. (Cl. 145—79.)



A tool comprising a metallic head provided upon one side with a recess which is rectangular in cross section and having at its edges transversely bent lugs integral with the head, and a metallic handle rectangular in cross section and fitted to the recess having at one side a transverse recess which receives the lugs which thereby retain the head rigidly upon the handle against longitudinal and transverse movement with relation thereto.

1,112,799. SHUTTLE. AZEL C. HOUGH, Janesville, Wis. Original application filed Nov. 26, 1913, Serial No. 803,309. Divided and this application filed Apr. 23, 1914. Serial No. 833,894. (Cl. 139—27.)



1. A shuttle, of the class described, provided with holding means for weft-units, and further provided with means for forcing such units from such holding means.

2. A shuttle, of the class described, provided with holding means for weft-units, and further provided with means for forcing such units from above from such holding means.

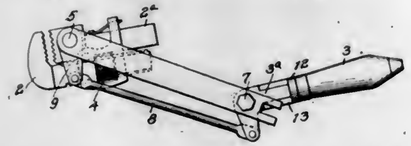
3. A shuttle, of the class described, provided with separable holding means for weft-units, and further provided with means for separating said holding means and engaging such units to release and positively eject the latter.

4. A shuttle, of the class described, provided with separable holding means for weft-units, and further provided with means for separating said holding means and projecting a weft-unit therefrom.

5. A shuttle, of the class described, provided with resilient separable holding means for weft-units, and further provided with means for forcibly ejecting such units from such holding means.

[Claims 6 to 9 not printed in the Gazette.]

1,112,800. WRENCH. GEORGE A. HUNSINGER, Pittsburgh, Pa. Filed Feb. 2, 1914. Serial No. 815,854. (Cl. 81—177.)



1. In a pipe wrench, the combination of an arm, a pair of gripping jaws pivotally mounted at one end thereof, means for adjusting said jaws to fixed relative positions, a handle pivotally mounted at the opposite end of the arm, and connecting means between said jaws and handle for effecting simultaneous pivotal movements thereof.

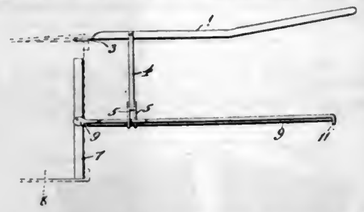
2. In a pipe wrench, the combination of an arm, a pair of gripping jaws pivotally mounted at one end thereof, means for adjusting said jaws to fixed relative positions, a handle pivotally mounted at the opposite end of the arm, and a rigid link pivotally connected at its opposite ends to said gripping jaws and handle, the connections of said link to the jaws and handle being eccentric with respect to their pivotal connections to said arm.

3. In a pipe wrench, the combination of an arm, a pair of gripping jaws provided with a pin pivotally mounted in one end of said arm, and having a crank arm rigidly secured thereto, means for adjusting said jaws to fixed relative positions, a handle pivotally mounted at the other end of said arm and provided also with a crank arm, and a link pivoted at its opposite ends to the outer ends of each of said crank arms.

4. In a pipe wrench, the combination of an arm, a pair of gripping jaws pivotally mounted at one end thereof,

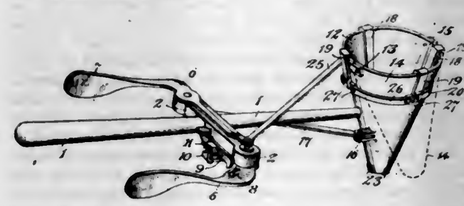
means for adjusting said jaws to fixed relative positions, a handle pivotally mounted at the other end of said arm, and a single means for locking said jaws and handle at a plurality of fixed positions with relation to said arm.

1,112,801. BOX-OPENER. EUGENE HYER, Salem, Mo. Filed May 15, 1914. Serial No. 838,835. (Cl. 145—21.)



In a box opener, the combination of two box engaging members, said members roughened on their inner surfaces, a horizontally movable lever fixed to each of said members, said levers pivotally mounted to each other in a manner adapted to close said members in engagement with the sides of a box, a standard mounted upon said levers, a lever pivotally mounted on the opposite end of said standard, and a chisel edged member fixed to the forward end of said lever approximately at right angles to said box engaging members.

1,112,802. ICE-CREAM-CONE SCOOP. CHARLES N. JAGER and CASPER J. JAGER, Baltimore, Md. Filed Sept. 8, 1913. Serial No. 788,690. (Cl. 107—48.)



1. An ice cream cone filler comprising a handle, a substantially conical body carried by said handle and comprising a pair of pivotally-connected segments, an operating trigger carried by said handle, a link engaging said trigger and engaging one of said segments for throwing the same to an open position when said trigger is operated, a knob carried by said trigger, a pawl engaging said knob for holding said trigger in a locked position.

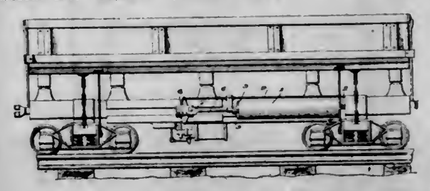
2. An ice cream cone filler comprising a handle, a plurality of laterally-extending fingers carried thereby, a plurality of angle-levers pivotally mounted upon said opposite sides of said fingers, a conical body carried by said handle, a cleaning frame carried by said conical body, one of said levers coöperating with said cleaning frame for oscillating the same upon said conical body, and means connected to said conical body and to the other of said angle-levers for throwing said conical body to an open position.

3. An ice cream cone filler of the class described comprising a handle, a plurality of pivotally-mounted, spring-actuated angle-levers carried by said handle, means engaging one of said angle-levers for holding the same in a locked position, a conical body carried by said handle and provided with a pivotally-mounted segment, means connecting said pivotally-mounted segment with said last-mentioned angle-lever whereby said pivotally-mounted segment may be held in an open position when said lever is thrown to a locked position, a cleaning frame carried by said body, and means connecting said cleaning frame to the other of said angle-levers for causing the oscillation of said cleaning frame upon said body when said last-mentioned angle-lever is operated.

4. An ice cream cone filler comprising a substantially conical body, a cleaning frame carried by said body, said body comprising a plurality of pivotally-connected segments, said cleaning frame comprising a plurality of sections, cleaning bars carried by each section and provided with overhanging upper ends and folded lower ends, said overhanging upper and folded lower ends fitting over the edges of said segments and constituting a guide for said cleaning bars, and means for operating said cleaning frame.

5. A device of the class described, comprising a substantially conical body, said body constituting a plurality of segments, a cleaning frame working upon said body, said cleaning frame comprising a plurality of sections, each section comprising a plurality of cleaning bars, each bar provided with an overhanging upper end and a folded lower end working upon the respective upper and lower edges of said segments, a connecting bar engaging the overhanging ends of said cleaning bars, a brace bar engaging said connecting bar and also engaging the lower ends of said cleaning bars, an operating link connected to said brace bar for the purpose of oscillating said sections upon said body, and a connecting band pivotally secured to the transverse bar of each section for connecting said sections together and causing the same to oscillate in unison.

1,112,803. CUSHIONING DEVICE FOR AIR-CYLINDERS OF DUMPING-CARS AND BRAKES. WILLIAM D. JONES, Patillas, Porto Rico. Filed May 13, 1913. Serial No. 767,397. (Cl. 121—45.)



1. In mechanism of the character described, a cylinder having a pressure inlet at one end, the other end being closed, a solid piston disposed within the cylinder, a tubular piston rod connected to the piston and extending out through the non-pressure end of the cylinder, a push rod disposed within the tubular piston rod and having frictional engagement therewith, and a cushioning device mounted upon the rod at the end adjacent the piston and projecting beyond the rod and adapted to be engaged by the piston head before the engagement of the head with the rod.

2. In a mechanism of the character described, a cylinder, a piston therein, a tubular piston rod passing out through one end of the cylinder, a loose rod disposed within the tubular piston rod and adapted to be engaged by the piston, and a spring loosely surrounding the tubular piston rod, less in length than the cylinder and disposed at the said end of the cylinder and engageable by said piston to cushion the blow of the piston against the end of the cylinder.

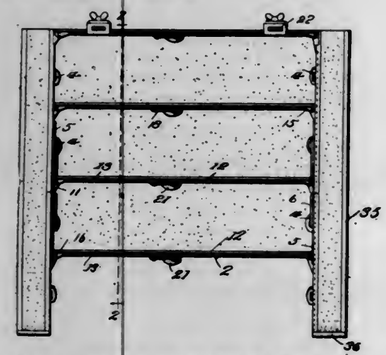
3. In a mechanism of the character described, a cylinder connected at one end to a source of fluid under pressure, a solid piston in the cylinder, a tubular piston rod passing out through the end of the cylinder opposite the pressure inlet, a push rod disposed loosely within the piston rod and adapted to be engaged by the piston, a coil spring mounted upon the inner end of the last-named rod and adapted to engage the piston before the piston engages the rod, and a spring surrounding the tubular piston rod at the end of the cylinder opposite the inlet end thereof, of less length than the cylinder and adapted to cushion the impact of the piston with said last-named end of the cylinder.

4. In a mechanism of the character described, the combination with a cylinder, a piston therein operating under pressure and a push rod extending into the cylinder, disconnected from the piston but disposed in the path of travel of the piston, of a cushioning spring engaging the

push rod and projecting beyond the end of the rod adjacent the piston and adapted to be engaged by the piston prior to the engagement of the piston with the rod.

5. In a mechanism of the character described, the combination with a cylinder, a piston therein operating under pressure, a tubular piston rod projecting through one end of the cylinder and a push rod extending loosely into the hollow piston rod and adapted to be engaged by the piston in its travel, of a shoulder formed upon the push-rod inward of the extremity of the rod adjacent the piston, and a spring disposed against said shoulder and normally projecting beyond the extremity of the push rod and adapted to be engaged by the piston prior to the engagement of the piston and the rod.

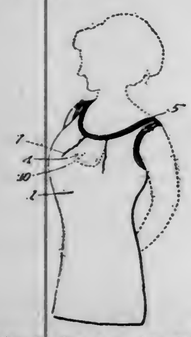
1,112,804. MOLD. WILBERT S. KAIL, Scio, Ohio, assignor of one-half to George Love, Scio, Ohio. Filed Nov. 25, 1911. Serial No. 662,515. (Cl. 25—118.)



1. A stair mold including spaced side plates, spaced form plates each including sections hingedly connected at their remote ends to the side plates, said sections being reduced in thickness at their adjacent ends to overlap each other and present smooth uninterrupted surfaces, and means for detachably securing said adjacent ends in overlapping position, said means including a keeper carried by one of the ends and extensible through a slot in the overlapping end, and a pivot latch carried by the slotted end and adapted for engagement with the keeper.

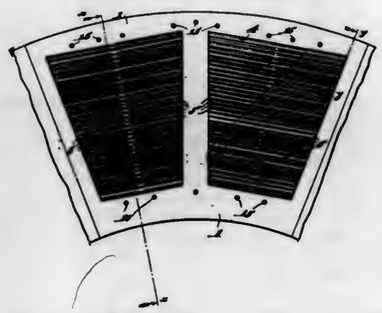
2. A stair mold including spaced side plates having their upper edges of right-line extent and their lower edges stepped to provide outwardly presented horizontal edge portions and rearwardly presented vertical edge portions, and form plates hingedly connected to the side plates adjacent the rearwardly presented vertical edge portions thereof.

1,112,805. UNDERWAIST-POCKET. ISAAC KAUFMAN, New York, N. Y. Filed Nov. 14, 1913. Serial No. 800,914. (Cl. 2—41.)



An underwaist having a pocket attached to the inner surface of the front thereof and at a point substantially at the center of the front thereof and ending a material distance from the sides of the garment, the upper edge of said pocket being substantially flush with the edge of the neck of said underwaist, beading attached to the upper edge of a wall of said pocket, beading also attached to and encircling the edge of the neck of the underwaist, ribbon running through said beadings and adapted by a drawing together of the ends thereof to simultaneously close the mouth of said pocket and tighten the upper portion of said underwaist.

1,112,806. SCREEN FOR DRY-PANS. DANIEL R. KEBNER and FREDRICK C. FERRELL, Zanesville, Ohio. Filed Mar. 19, 1914. Serial No. 825,750. (Cl. 83—56.)



1. A device of the class described comprising a frame having an opening therein; a plurality of spaced parallel screen bars traversing said opening; retaining bars secured to said frame having recesses adapted to receive the ends of said screen bars; pockets for the ends of said retaining bars provided in said frame; shoulders at opposite sides of said opening between which and said retaining bars the ends of said screen bars are held; and cleats on said frame for releasably holding said ends of said retaining bars in said pockets, substantially as described.

2. A device of the class described comprising a frame having an opening therein and recesses in its lower side adjacent said opening; shoulders on said frame extending into said opening; spaced parallel screen bars in said opening and having their ends extending under said shoulders; and retaining bars supporting said screen bars and having their ends secured in the recesses in said frame, substantially as described.

3. A device of the class described comprising a frame having an opening therein and recesses in its lower side adjacent said opening; shoulders on said frame extending into said opening; spaced parallel screen bars in said opening and having their ends extending under said shoulders; retaining bars supporting said screen bars and having their ends secured in the recesses in said frame; cleats against the under side of said frame and supporting said retaining bars; and rivets securing said cleats to said frame, the heads of said rivets at the upper side of said frame being deeply countersunk in the latter, substantially as described.

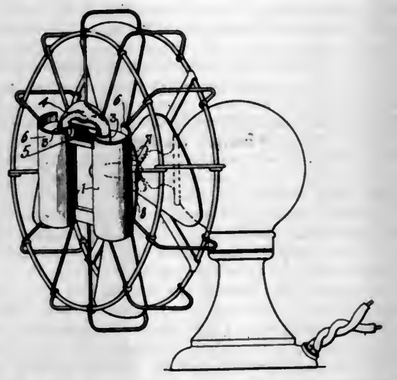
4. A device of the class described comprising a frame having an opening therein and recesses in its lower side adjacent said opening; shoulders on said frame extending into said opening; spaced parallel screen bars in said opening and having their upper corners recessed and their end portions extending under said shoulders; spaced supporting bars under said screen bars and provided with portions engaging the sides of said screen bars, the ends of said supporting bars being disposed in said recesses; cleats under said frame and locking the ends of said supporting bars in said recesses; and rivets securing said cleats to said frame substantially as described.

5. A device of the class described comprising a frame having an opening therein; a plurality of spaced parallel screen bars traversing said opening; retaining bars secured to said frame having recesses adapted to receive the

ends of said screen bars; pockets for the ends of said retaining bars provided in said frame; shoulders at the opposite sides of said opening between which and said retaining bars the ends of said screen bars are held; means on said frame for releasably holding said ends of said retaining bars in said pockets; and securing devices for said last mentioned means passing through the latter and said frame, the upper ends of said securing devices being deeply counter-sunk in said frame, substantially as described.

[Claim 6 not printed in the Gazette.]

1,112,807. DEVICE FOR DISTRIBUTING DISINFECTANTS OR OTHER FLUIDS. ALFORD T. KING, Atlanta, Ga. Filed Sept. 5, 1913. Serial No. 788,224. (Cl. 167—3.)



1. In a disinfecting device comprising two tubular receptacles arranged vertically side by side, rigidly connected one to the other to form a unitary structure and each having an opening in the upper end thereof, said openings being spaced apart, a wick having its ends extending into the respective receptacles and having a portion exposed between said openings, and attaching devices secured to said structure for mounting the same on the guard of an electric fan.

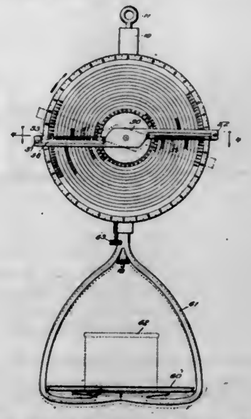
2. A disinfecting device comprising a tank having an opening in the upper end thereof, a wick extending into said tank and projecting beyond the upper end thereof, and an attachment device carried by said receptacle and comprising two plates, each secured at one end to said receptacle, and having their opposite ends bent toward each other, one of said plates having teeth along its lateral edge and the other of said plates having teeth along its transverse edge.

3. A disinfecting device comprising two receptacles each having an opening in the upper end thereof, a wick having its ends extending into the respective receptacles, and an attachment device carried by said receptacles and comprising two plates, each having one end rigidly secured to both of said receptacles, said plates having their free ends bent toward each other and provided with teeth adapted to engage a supporting structure.

4. A disinfecting device comprising a vertical receptacle having an opening in the upper end thereof, a flange extending upward from said receptacle and said opening, a wick extending through said opening into said receptacle and projecting beyond said flange, and a second flange extending upward from the outer edge of said receptacle spaced away from and projecting beyond the end of the first-mentioned flange.

5. A disinfecting device comprising two cylindrical receptacles spaced apart, a trough-shaped structure rigidly connected with said receptacles and bridging the space between them, a single wick having its ends extending into the respective receptacles and extending across the space between said receptacles above said trough-shapd member, and attaching devices rigidly secured to said receptacles.

1,112,808. COMPUTING-SCALE. GEORGE W. KONE, Rock Island, Ill. Filed Sept. 23, 1912. Serial No. 721,745. (Cl. 73—104.)



1. A computing scale, comprising, in part, a disk-dial provided with a plurality of concentric semi-circular series of indications reading progressively from a radial line, on one side of the axis, to a diametrically opposite radial line and another like series of indications reading progressively from the last mentioned radial line to the first mentioned line on the opposite half of the disk, a price beam for cooperation with said dial, means to support the dial for rotation from a normal position and return thereto, and means to support the beam for adjustment to other positions than normal.

2. A computing scale, comprising, in part, a frame, a disk-dial supported thereby provided with a plurality of concentric semi-circular series of indications reading progressively from a radial line, on one side of the axis, to a diametrically opposite radial line and another like series of indications reading progressively from the last mentioned radial line to the first mentioned line on the opposite half of the disk, and a price-beam extending diametrically across the disk, said disk and beam rotatable each with respect to the other and each with respect to said frame.

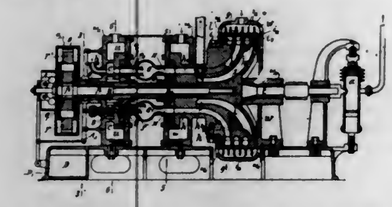
3. A computing scale, comprising, in part, a disk-dial provided with a plurality of concentric semi-circular series of indications reading progressively from a radial line, on one side of the axis, to a diametrically opposite radial line and another like series of indications reading progressively from the last mentioned radial line to the first mentioned line on the opposite half of the disk, one of each series of said indications reading progressively in opposite direction to that of the other of its respective series, and a price-beam extending diametrically across the disk, and rotatably adjustable with reference to a fixed point on the disk.

4. A computing scale, comprising, in part, a frame, a rotatable disk-dial having a series of concentric computative indications on each side thereof and a price-beam rotatably adjustable on the frame and crossing the front and rear sides of said disk.

5. A computing scale comprising a long narrow frame, a shaft extending through said frame from back to front near the middle thereof, indicating means upon the front end of said shaft, a pinion upon the rear end of the shaft, a sliding rack member coöperating with said pinion, said frame providing guiding bearings therefor, and said rack member movable vertically within the lateral confines of said frame, a lug extending backwardly from each side of said frame, a drum supported by and between said lugs within the lateral confines of said frame, flexible connections between said drum and sliding member, and a weight carried by said drum within the lateral confines of said frame, said indicating means being visible upon each side of said long narrow frame and the parts carried thereby.

[Claims 6 to 10 not printed in the Gazette.]

1,112,809. COMBUSTION-TURBINE. GUSTAV JOHANNES PAUL KOTHE, Reval, Russia, assignor of one-half to Martin Gumpel, Moscow, Russia. Filed Mar. 18, 1912. Serial No. 684,386. (Cl. 60—4.)



1. In a combustion turbine, a plurality of rotating combustion chambers adapted to retain the heat produced by combustion, and a valve-motion controlling said chambers, said valve-motion being so constituted as to be relieved of the pressure of the combustible charge prior and subsequent to combustion.

2. In a combustion turbine, means for supplying compressed air, means for supplying a combustible, a turbine wheel, a combustion chamber adapted to retain the heat produced by combustion, and a valve-motion adapted to consecutively connect the combustion chamber with the compressed air supply means, with the combustible supplying means, and with the turbine wheel.

3. In a combustion turbine, means for supplying compressed air, means for supplying a combustible, a turbine wheel, an exhaust, a combustion chamber having an inlet end and an outlet end and adapted to retain the heat produced by combustion, a valve motion adapted for consecutively connecting the inlet end of the combustion chamber with the compressed air supplying means and with the combustible supplying means, while the outlet end is closed, for connecting said outlet end with the turbine wheel while the inlet end of the combustion chamber is closed, and for finally connecting the inlet end of said chamber with the compressed air supplying means while the outlet end is connected with the exhaust.

4. In a combustion turbine, means for supplying compressed air, means for supplying a combustible, a turbine wheel, means for cooling the same, a combustion chamber adapted to retain the heat produced by combustion, and a valve-motion adapted to consecutively connect the combustion chamber with the compressed air supplying means, with the combustible supplying means, and with the turbine wheel.

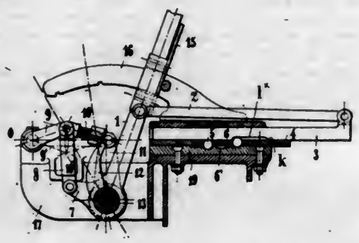
5. In a combustion turbine, means for supplying compressed air, means for supplying a combustible, a turbine wheel, peripheral cooling ribs provided on said wheel, a combustion chamber adapted to retain the heat produced by combustion, and a valve-motion adapted to consecutively connect the combustion chamber with the compressed air supplying means, with the combustible supplying means, and with the turbine wheel.

[Claim 6 not printed in the Gazette.]

1,112,810. CLUTCH AND GEAR SHIFTER. ARTHUR CONSTANTIN KREBS, Paris, France, assignor to Société Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France. Filed Jan. 17, 1912. Serial No. 671,754. (Cl. 74—39.)

1. In a clutch and gear shifter, the combination of a clutch; a gear shifter; a toggle connected to the clutch and adapted to unclutch the clutch when the toggle is on the dead center and to clutch the clutch when the toggle is on either side of the dead center and means operatively connecting the toggle with the shifter.

2. In a clutch and gear shifter, the combination of a clutch; a gear shifter, a toggle connected to the clutch and adapted to unclutch the clutch when the toggle is on the dead center and to clutch the clutch when the toggle is on either side of the dead center and means operatively connecting the toggle with the shifter for constraining the toggle to move to the dead center whenever the gear is shifted.



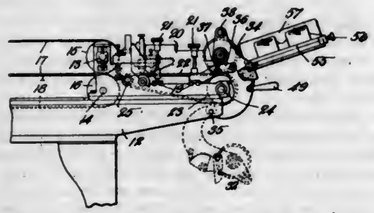
3. In a clutch and gear shifter, the combination of a clutch; a gear shifter, a toggle connected to the clutch and adapted to unclutch the clutch when the toggle is on the dead center and to clutch the clutch when the toggle is on either side of the dead center; means operatively connecting the toggle with the shifter for constraining the toggle to move to the dead center wherever the gear is shifted and an operating lever connected to said means.

4. In a clutch gear shifter, the combination of a frame; an unclutching lever; an unclutching fork connected to the unclutching lever; a fulcrumed operating lever; a pair of toggle links having one free end pivoted to the frame and the other free end pivoted to the unclutching lever; a link connecting said extension to the toggle joint of the links; a gear shifter and an operative connection between the gear shifter and the operating lever.

5. In a clutch gear shifter, the combination of a frame; a shaft rotatable thereon, an unclutching lever and an unclutching fork fixed on said shaft; an operating lever loosely mounted on said shaft and provided with a bent extension; a pair of links pivoted together at their adjacent ends to form a toggle joint and having the outer end of one link pivoted to the frame and the outer end of the other link pivoted to said unclutching lever; a rod connecting the free end of the bent extension with the toggle joint of said links; a gear shifter; and an operative connection between the operating lever and the gear shifter.

[Claims 6 to 12 not printed in the Gazette.]

1,112,811. COMBINATION FEED FOR SHEET MATERIAL. ELIE W. LABOMBARDE, Nashua, N. H. Filed June 8, 1912. Serial No. 702,418. (Cl. 101—39.)



1. A mechanism of the character described, comprising a feeder for removing blanks singly from the top of a pile, a carrier for advancing the blanks so removed, and means coöperating with said carrier to permit a pile of blanks to be placed on the carrier and to be retained thereon while the carrier advances the bottom blank of the pile.

2. A mechanism of the character described having sheet feeding belts and a stop to prevent the passage of more than one blank at a time, and a combing wheel and table adjacent said belts to supply blanks singly to said belts from the top of a pile on the table, said wheel and table being movable to permit a pile of blanks to be placed on the belts.

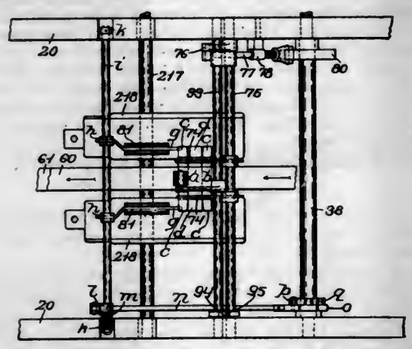
3. A mechanism of the character described, comprising a feeder for removing blanks singly from the top of a pile, a carrier for advancing the blanks so removed, means coöperating with said carrier to permit a pile of blanks to be placed on the carrier and to be retained thereon while the carrier advances the bottom blank of the pile, and means for increasing the space between the blanks as they leave the carrier.

4. A mechanism of the character described, comprising a feeder for removing blanks singly from the top of a pile, a carrier for advancing the blanks so removed, means coöperating with said carrier to permit a pile of blanks to be placed on the carrier and to be retained thereon while the carrier advances the bottom blank of the pile, and two sets of guides in alinement with each other for directing the side edges of the blanks.

5. A mechanism of the character described, comprising a feeder for removing blanks singly from the top of a pile, a carrier for advancing the blanks so removed, means coöperating with said carrier to permit a pile of blanks to be placed on the carrier and to be retained thereon while the carrier advances the bottom blank of the pile, and an adjustable inclined table for supplying blanks to said feeder.

[Claims 6 to 13 not printed in the Gazette.]

1,112,812. GLUER FOR TRAY-BOX MACHINES. ELIE W. LABOMBARDE, Nashua, N. H. Filed Feb. 17, 1913, Serial No. 748,817. Renewed Jan. 31, 1914. Serial No. 815,833. (Cl. 93—36.)



1. Mechanism for applying an adhesive to selected portions of box blanks, comprising an adhesive applier, means for carrying a blank past said applier, and a deflector for diverting a portion of the blank into a path of travel out of the plane of the applier.

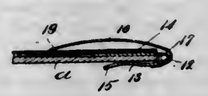
2. Mechanism for applying an adhesive to selected portions of box blanks, comprising a carrier for the blanks, guiding mechanism for causing different portions of the blanks to travel in different planes, and means for applying an adhesive to the portions traveling in one of said planes.

3. Mechanism for applying an adhesive to selected portions of box blanks, comprising a carrier for the blanks, rocking arms for deflecting portions of said blanks, and means for applying an adhesive to the portions of the blanks which are not deflected.

4. In mechanism of the character described, the combination with a glue wheel, of means for feeding blanks past said glue wheel, a deflector, and means for operating said deflector to cause it to divert a selected portion of the blank to cause it to move past the glue wheel without contact therewith.

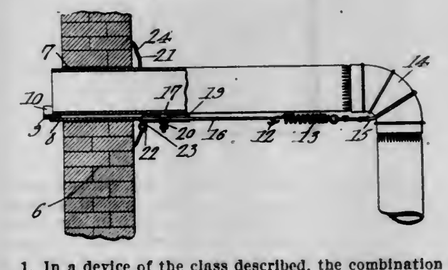
1,112,813. BOOK-MARKER. JOHN D. LANE, Cambridge, Mass. Filed May 29, 1914. Serial No. 841,755. (Cl. 11—12.)

1. A book marker consisting of an attaching member or clip and a marking member secured thereto, said attaching member consisting of a strip of flat vulcanized fiber bent to form two jaws, the end of one jaw being curved away from the other jaw, the marking member consisting of a strip of thin resilient sheet celluloid curved from end to end, one end being curved to a shorter radius than the main portion of said strip and extending around the outer side of and under the bend of the clip member, a staple extending through the two jaws of the clip member near the bend and through the end of the marking member which underlies the bend of the clip member.



2. A book marker consisting of an attaching member or clip and a marking finger secured thereto, said clip consisting of a flat strip of comparatively stiff material, the finger consisting of a strip of thin sheet material which is resilient relatively to the clip, the strip comprising the clip being bent to form two jaws and having means for reinforcing the bend, the resilient finger being longer than the clip and having a fastening uniting it to the clip, said finger being curved from said fastening to its free end.

1,112,814. STOVEPIPE-FASTENER. LINCOLN A. LOWE, Watson, Mo. Filed July 31, 1913. Serial No. 782,220. (Cl. 126—318.)



1. In a device of the class described, the combination of a fastener including a shank and an outstanding head, said shank provided with a longitudinal slot, a sliding stop mounted for sliding movement upon said shank, securing means extending through said slot and said sliding stop to lock the stop in adjusted position on the shank, a collar connected to said stop, and means for securing a stove pipe to said shank.

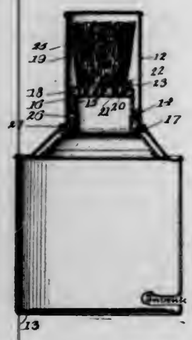
2. The combination with an apertured chimney wall and a stove pipe of a fastener including an elongated shank provided with a longitudinal slot, and a head outstanding therefrom and contacting with the inner surface of the chimney wall, a tension spring, the remote extremity of said shank being connected to said tension spring, the latter in turn connected to the stove pipe, the said fastener head provided with an upstanding stop limiting the movement of the stove pipe, and a sliding stop provided with overhanging ears embracing the shank sides, securing means extending through the said stop and through the shank slot to lock the stop in adjusted position on the shank, and a collar connected to the said stop and contacting with the external chimney surface.

3. In a device of the class described, the combination with an apertured chimney wall and a stove pipe fitting therein, of a fastener including an elongated shank provided with longitudinal slot therein, a head connected to the said shank and outstanding therefrom engaging the inner chimney wall surface, a bolt rigidly secured to the shank adjacent the head thereof and forming an adjustable abutment for the said stove pipe to regulate the length of pipe inserted within the said chimney aperture, an apertured collar fitting over the said stove pipe and contacting with the external chimney surface, a sliding stop projecting from said collar and comprising a plate with overhanging ears, the said overhanging ears overlapping the side edges of the said shank, and a bolt extending through the said sliding stop, and through the shank slot and adapted to lock the stop against sliding motion with re-

spect to the shank, and resilient means secured to the remote end of said shank and engaging the stove pipe for holding the same in rigid position within the said chimney aperture.

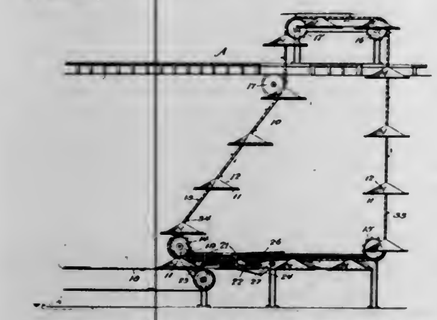
4. A stove pipe fastener comprising a shank and an outstanding head, means for securing said shank to a stove pipe, a stop mounted for sliding movement upon said shank, means engaging the said shank and sliding stop and adapted to lock the stop in adjusted position on the shank, and a collar connected to said stop and coacting with the outstanding head of the shank to hold said chimney rigid with respect to the chimney wall.

1,112,815. COMBINED OIL-CAN AND BRUSH. JAMES LYNAM, Newman, Cal. Filed Apr. 30, 1912. Serial No. 694,193. (Cl. 15—46.)



A liquid applying device including a can, a frusto-conical top for the can terminating in a discharge spout, a frusto-conical drip-flange encircling and spaced from the frusto-conical top and provided at its free edge with an extension spaced from the discharge spout, a brush having a valve head closing the discharge spout, and a cylindrical cap adapted at one end for engagement about the extension of the drip-flange.

1,112,816. AUTOMATIC TRANSFER MECHANISM FOR CONVEYERS. LAWRENCE D. MANCHESTER, Sioux Falls, S. D. Filed May 21, 1910. Serial No. 562,777. (Cl. 193—24.)



1. In combination with a vertically-disposed endless carrier provided with swinging cracker-carrying shelves and arranged to travel horizontally during a portion of its movement, a horizontally-traveling receiving belt disposed with relation to the carrier so as to receive crackers from the shelves of said carrier, and means for automatically transferring crackers from the shelves of the carrier to the receiving belt during the horizontal travel of the carrier, said transferring means and the receiving belt traveling in the same direction during the transferring operation.

2. In combination with a vertically-disposed endless carrier provided with swinging cracker-carrying shelves and arranged to move horizontally during a portion of its travel, a horizontally-traveling receiving belt disposed to travel in the opposite direction to the horizontal movement of the carrier and disposed with relation to the carrier so as to receive crackers from the carrying-shelves, and means for automatically transferring the crackers from the shelves of the carrier to the belt, said transferring means and the receiving belt traveling in the same direction during the transferring operation.

3. In a cracker conveyer, the combination with an endless carrier provided with cracker-carrying shelves, of a horizontally-traveling receiving table for the crackers, and an automatically-operating pusher-plate for transferring the crackers from the carrier to the receiving belt, said pusher-plate and receiving belt traveling in the same direction during the transferring operation.

4. In a cracker conveyer, the combination with an endless carrier provided with cracker-carrying shelves, of a horizontally-traveling receiving table for the crackers, and an automatically-operating pusher-plate for transferring the crackers from the carrier to the receiving belt, said pusher-plate and receiving belt traveling in the same direction and at the same rate of speed during the transferring operation.

5. In cracker conveying mechanism, the combination with a vertically-disposed endless carrier provided with cracker-carrying shelves and arranged to have horizontal travel during the unloading period, a horizontally-disposed traveling receiving belt, and automatically-operating means for transferring the crackers from the shelves of the carrier onto the receiving belt during the horizontal travel of the carrier, said transferring means and the receiver traveling in the same direction and at the same rate of speed.

[Claim 6 not printed in the Gazette.]

1,112,817. TOUGHENED-PITCH COMPOSITION. EMIL L. MANHAYFER, St. Louis, Mo. Filed Dec. 13, 1910. Serial No. 597,163. (Cl. 106—31.)

1. A composition of matter consisting of pitch having sufficient infusorial earth homogeneously incorporated therein to maintain the same plastic at normal temperatures and to increase the melting point thereof substantially in excess of the melting point of untreated pitch of a similar nature to the pitch therein contained.

2. A composition of matter consisting of pitch having sufficient kieselguhr homogeneously incorporated therein to render the same plastic at normal temperatures and to increase the melting point thereof substantially in excess of the melting point of untreated pitch of a similar nature to the pitch therein contained, and sufficient to resist, after the initial hardening of the same, the natural heat of the sun's rays without melting.

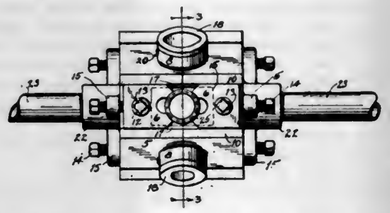
3. A composition of matter consisting of pitch having sufficient quantities of inert absorptive material homogeneously incorporated therewith to maintain the same plastic throughout a materially increased range of temperature, and to increase the melting point thereof substantially in excess of the melting point of untreated pitch of a similar nature to the pitch therein contained, said inert absorptive material being characterized by a specific gravity not exceeding 2.00, an absorptive property of at least 1 cc. of cresylic acid per gram, a loose weight not exceeding 25 lbs. per cubic foot, being capable of increasing the melting point of ordinary pitch when incorporated therewith in amounts of 15% by at least 20° F., and being capable of remaining in suspension in said pitch without more than 15% settling at 85° to 90° C. during an interval of four hours.

4. A composition of matter consisting of pitch having sufficient quantities of inert absorptive material homogeneously incorporated therewith to maintain the same plastic throughout a materially increased range of temperature, and to increase the melting point thereof substantially in excess of the melting point of untreated pitch of a similar nature to the pitch therein contained,

said inert absorptive material being characterized by a specific gravity not exceeding 1.8, an absorptive property of at least 1.55 cc. of cresylic acid per gram, a loose weight not exceeding 45 lbs. per cubic foot, being capable of increasing the melting point of ordinary pitch when incorporated therewith in amounts of 15% by at least 25° F. and being capable of remaining in suspension in said pitch without more than 10% settling at 85° to 90° C. during an interval of four hours.

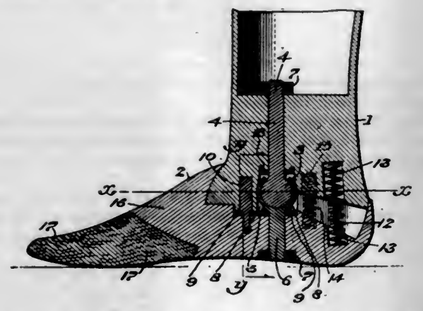
5. A composition of matter consisting of pitch having sufficient quantities of inert absorptive material homogeneously incorporated therewith to maintain the same plastic throughout a materially increased range of temperature, and to increase the melting point thereof substantially in excess of the melting point of untreated pitch of a similar nature to the pitch therein contained, said inert absorptive material being characterized by a specific gravity exceeding 1.0 and not exceeding 1.8, an absorptive property of at least 1 cc. of cresylic acid per gram, a loose weight not exceeding 25 lbs. per cubic foot, being capable of increasing the melting point of ordinary pitch when incorporated therewith in amounts of 15% by at least 20° F. and being capable of remaining in suspension in said pitch without more than 15% settling at 85° to 90° C. during an interval of four hours.

1,112,818. DIE-STOCK. JOHN B. MARTENS, Cleveland, Ohio. Filed July 19, 1913. Serial No. 780,042. (Cl. 10—114.)



A die stock comprising a hollow body which in cross section is a polygon having an even number of sides, alternate sides being formed each with a pair of outwardly projecting ribs parallel with each other and providing an outwardly opening rectangular recess between them, each side diametrically opposite one of said rectangular recesses being formed with a sleeve adapted to carry a bushing, a pair of end members for the body, each having a central tubular extension, lugs carried by the end members extending outwardly opposite the ends of the rectangular recesses, and adjustable dies within the rectangular recesses adjusted by set screws passing through the lugs.

1,112,819. ARTIFICIAL LIMB. CLYDE L. MCFARLAND, Philadelphia, Pa. Filed June 2, 1914. Serial No. 842,348. (Cl. 3—3.)

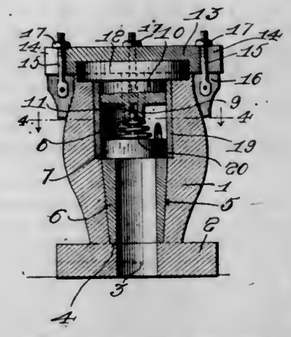


1. In an artificial limb, a universal joint for the ankle and foot members thereof, the same being composed of a ball and socket, the latter freely receiving the former, and stems connected with said socket and ball respectively and integral therewith, one of said stems being adapted to occupy said ankle member, and the other stem being adapted to occupy said foot members, said stems being provided with means for securing them to the respective members, the open end of said socket member having its wall inturned over the adjacent portion of the ball member.

2. In an artificial limb, a ball and socket joint for the ankle and foot members thereof, the socket member having at the top an inturned rim integral therewith and of less diameter than the greatest diameter of the ball member and freely inclosing the corresponding upper portion of the ball member and overhanging the same.

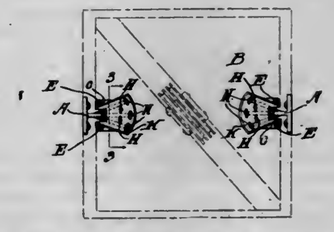
3. An artificial limb having ankle and foot members, and a rigid piece on one of said members, the other member having a recess therein adapted to receive said piece freely for limiting positively the side motions of said members one on the other.

1,112,820. MINE-PUMP. LEWIS MCISAAC, Inverness, Nova Scotia, Canada. Filed Sept. 27, 1913. Serial No. 792,193. (Cl. 103—66.)



A pot for a pump comprising a body, said body provided with a centrally located aperture having inclined walls upon the lower end thereof, a tapered lining engaging the inclined walls of said pot, a second lining positioned above said tapered lining, a spring pressed valve engaging the same, a removable cap provided with notches upon the edge thereof, flanges carried by the sides of said body, and bolts pivotally mounted between said flanges and engaging said notches for firmly holding said cover upon said body.

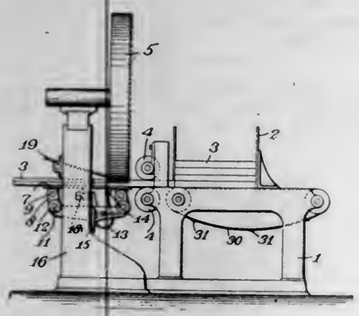
1,112,821. AUTOMATIC LUBRICATOR. EDWARD ROSELL MCKINZIE, Memphis, Tenn. Filed Dec. 8, 1913. Serial No. 805,279. (Cl. 184—21.)



1. In an automatic lubricator, the combination with the elevator and the vertical guides therefor, of the base plates formed with a series of converging cavities leading to the faces of said guides, lubricating sticks mounted in said cavities, and springs arranged in said cavities and engaging said sticks for forcing them into contact with the faces of the guides.

2. In an automatic lubricator, the combination with the elevator and the vertical guides therefor, of the base plate formed with a series of converging cavities leading to the faces of said guides, lubricating sticks mounted in said cavities, springs arranged in said cavities and engaging said sticks for forcing them into contact with the faces of the guides, a cover secured to said base plate for protecting the springs and lubricant and retaining the same in place, and screws for retaining the springs.

1,112,822. BAND-SAW MACHINE. EDWARD C. MERSHON, Saginaw, Mich., assignor to William B. Mershon & Company, Saginaw, Mich., a Corporation of Michigan. Filed Jan. 14, 1913. Serial No. 741,912. (Cl. 143—19.)



1. In a band-saw machine, the combination with the saw, of a gage plate or platen normally maintained in gaging position abreast the saw, and means on the opposite side of the saw for holding the stock against said gage plate, said gage plate being yieldable in a direction away from the saw as and for the purpose described.

2. In a band-saw machine, the combination with the saw, of a gage plate or platen having its guide face arranged opposite the breast of the saw, yielding means for holding said gage plate during normal operation in adjusted position for the desired width or thickness of cut and means operating on the stock at the opposite side of the saw to keep the stock engaged with said gage plate.

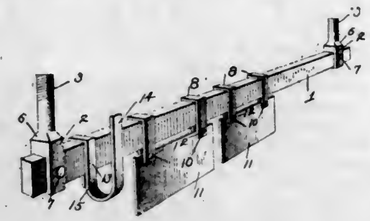
3. The combination with a band-saw, of an automatically yielding gage plate or platen having a guide face arranged opposite the breast of the saw-blade, a stop limiting the movement of the gage plate or platen toward the saw and adjustable to vary the width of cut and means for preserving the parallelism of the guide face and saw-blade in the various positions of adjustment of the gage plate or platen as and for the purpose described.

4. The combination with a band-saw, of a gage plate or platen having a guide face substantially parallel to and opposite the breast of the saw, yielding means acting on the gage plate to firmly hold the same in gaging position, a fixed stop or abutment limiting the movement of the guide plate or platen toward the saw and serving to determine the width or thickness of cut while allowing free movement of the guide plate or platen away from the saw under abnormal conditions as and or the purpose described.

5. The combination with a band saw, of a gage plate or platen mounted to be movable toward and away from the saw-blade opposite the breast thereof, a stop limiting its movement toward the blade and so as to determine the width or thickness of cut, yielding means operating on the said gage plate or platen and serving to hold it normally in gaging position against the counteracting force of the presser devices, and parallel motion links connected to the gage plate or platen for preserving the parallelism of its guide face with the face of the saw in its various positions of adjustment.

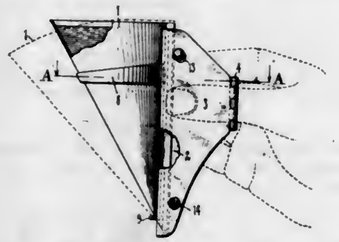
[Claims 6 to 8 not printed in the Gazette.]

1,112,823. LAMP AND TAG SUPPORT FOR VEHICLES. JACOB H. MERTZ, Washington, D. C., assignor of one-half to George F. Bell, Bluefield, W. Va. Filed Mar. 4, 1912. Serial No. 681,467. (Cl. 40—128.)



A tag support comprising a bar which is quadrilateral and rectangular in cross section, a clip having spaced end portions the opposed surfaces of which are parallel throughout their areas, said clip also having angularly disposed intermediate portions which snugly fit against three of the sides of the bar, one of the said end portions of the clip fitting along a portion of its inner surface against the fourth side of the bar, a tag located between the said parallel end portions of the clip and having its obverse surface bearing directly against the remaining portion of the inner surface of that end portion of the clip which fits against the said fourth surface of the bar whereby the obverse surface of the tag lies in the same plane as that in which the said fourth side of the bar lies, and a traction means passing transversely through the said end portions of the clip and through the tag and drawing the said end portions in close contact with the opposite sides of the tag to prevent relative movement of the tag and the clip, and positively fixing the obverse surface of the tag in the plane of the said fourth side of the bar, said traction means also drawing the clip in close contact with the sides of the bar whereby the clip and tag are positively held against movement with relation to the bar.

1,112,824. HOLDER FOR DRINKING-CUPS. CASPAR METTLER, New Haven, Conn., assignor to Robert B. Seward, Brooklyn, N. Y. Filed Feb. 9, 1912. Serial No. 676,623. (Cl. 65—13.)



1. A holder for drinking cups having free side edges comprising means for pinching the side edges of the cup together to seal the same.

2. A holder for drinking cups having free side edges, comprising means for pinching the side edges of the cup together to seal the same and positioning means for the cup.

3. A holder for drinking cups having free side edges comprising means for pinching the side edges of the cup together to seal the same and means for sustaining the walls of the cup when the cup is filled.

4. A holder for drinking cups having free side edges comprising means for pinching the side edges of the cup together to seal the same, means for sustaining the walls of the cup when the cup is filled and positioning means for the cup.

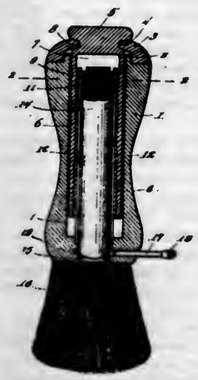
5. A holder for drinking cups having free side edges comprising jaws for pinching the side edges of the cup together to seal the same.

[Claims 6 to 14 not printed in the Gazette.]

1,112,825. WAY-SIGNAL OR DIRECTION-INDICATOR DEVICE. THOMAS A. MIELE, Cincinnati, Ohio, assignor to himself and Anthony Caruso, Cincinnati, Ohio. Filed Feb. 7, 1914. Serial No. 817,320. (Cl. 116—31.)

A way-signal or direction-indicator device for automobiles or other vehicles comprising a clamp, an arrow or pointer, a handled shaft journaled on said clamp and carrying said arrow or pointer, a circular member or ring on the shaft, a capped head mounted on the clamp and within which said ring is mounted, means for detachably-fastening the ring on the shaft and with a part thereof projecting beyond the periphery of the ring, shoulders or abutments in the capped head adapted to limit the rotary movement of the shaft by contact with said projection on the ring, recesses or countersinks made at intervals apart in the said periphery of the ring to suit the limit or various positions of travel of the arrow or pointer, and means under spring-control in the bottom of the capped-head to prevent the shaft from accidental movement and to hold said shaft and the arrow or pointer carried thereby in adjusted position.

1,112,826. SHAVING-BRUSH. COURTNEY N. MITCHELL, Detroit, Mich. Filed Nov. 12, 1912. Serial No. 730,844. (Cl. 15—38.)



1. In a shaving brush, a hollow open end body, a rotatable interiorly threaded tubular member within said body, a band threaded within said member, said band adapted to in turn support a cake of soluble solid, and means for locking said band against rotation whereby a rotation of said tubular member will advance said band and project said cake of soluble solid exteriorly of said body through said body opening, as and for the purpose set forth.

2. In a shaving brush, a hollow open end body, a rotatable interiorly threaded tubular member within said body, an exteriorly threaded band movable longitudinally of said tubular member, the threads of said band engaging the threads of said member, said band adapted to support a cake of soluble solid, said band being provided with diametrically opposite longitudinal grooves, rods rigid with said body and extending throughout the greater portion of the length of said tubular member, said rod adapted to extend through said grooves to hold said band against rotation, means for holding said tubular member against longitudinal movement during rotation, such rotation of said tubular member adapted to advance said band and project said cake of soluble solid through said body opening, as and for the purpose set forth.

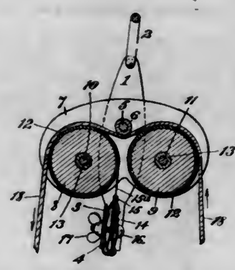
3. A brush including a hollow body portion having an opening formed at one end thereof, a tubular member mounted for rotation within the hollow of the said body portion, means for supporting the said tubular member incapable of movement longitudinally of the said body portion, a band adapted to support a cake of soluble solid, said band being supported by said tubular member, means for holding said band from rotation, the said tubular member when rotated adapted to advance the band and project the said cake through the said body opening, as and for the purpose set forth.

4. A brush including a hollow body portion having a constricted opening formed at one end thereof, a flanged collar carried by the said body portion, a cap mounted for rotation upon the said collar, the flange of the collar fitting within a recess provided therefor within the said cap to support the latter incapable of movement longitudinally of the said body, a tubular member depending from the said cap within the hollow of the said body, a longitudinally movable band carried by the said tubular member, means engaging the said band to prevent rotation thereof within the said tubular member, the said band adapted to support a cake of soluble solid and to project the said cake through the said constricted opening by rotating the said cap, as and for the purpose set forth.

5. A shaving brush including a hollow body portion having a constricted opening formed at one end thereof, a collar detachably secured to the said body, an annular inwardly directed flange formed integrally with the said collar, a cap supported by the said collar, the said cap having a recess formed therein within which the said annular flange is fitted, a tubular member depending from the said cap within the hollow of the said body, a band movable longitudinally within said tubular member, the rotation of the cap adapted to effect such movement, rods carried by the said body and disposed for engagement with the said band to hold the same from rotation with the said tubular member, the said band adapted to support a cake of soluble solid and to project the same through the said constricted opening according to the rotation of the said cap.

[Claim 6 not printed in the Gazette.]

1,112,827. RAZOR-BLADE SHARPENER. WILLIAM H. NEIL, Cincinnati, Ohio. Filed Feb. 27, 1914. Serial No. 821,513. (Cl. 51—16.)



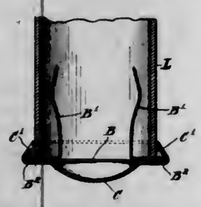
1. In a razor sharpening device, a pair of suspension-arms having a cross-bar, a rocker-frame mounted in said arms, a pair of rollers having blade sharpening and smoothing surfaces and mounted to rotate in said rocker-frame, a strap or strip of webbing or the like adapted to frictionally-engage said cross-bar in the suspension-arms and, also, the sharpening and smoothing rollers carried by the said rocker-frame, and a blade-carrier mounted in

said arms below the rollers and adapted to present the edge of the blade to said rollers for the sharpening and smoothing operation.

2. A razor-blade sharpener comprising a pair of parallel corresponding side-members, a pair of alined transverse bars or pins of circular cross-section adapted to suitably space and connect said side-members, a pair of buff-covered rollers having a coating of sharpening-paste thereon and mounted on said transverse pins between the side-members, a single bar or pin extending transversely across the space between the side-members parallel to said pair of transverse bars or pins and slightly below the common level of the upper peripheries of the pair of rollers and with its opposite ends extended somewhat beyond the outer faces of the said side-members, a suspension-frame composed of a pair of vertical arms having an upper transverse pivotal bail or swivel-bar and a lower transverse connecting-ligament and adapted to pivotally-support between them the roller-containing side-members on the said single transverse bar or pin whose outer extended ends are duly headed or riveted, a razor-blade holding-clamp adjustably and detachably mounted on the said lower connecting-ligament of the suspension-frame and adapted to present the edge of the blade to the sharpening surfaces of the rollers, and a strap or short strip of webbing or the like passing under the said single transverse bar or pin and over the peripheral surfaces of the two rollers to contact back and forth with the latter and rotate them in reverse directions for alternate engagement with both sides of the sharp edge of the razor-blade.

3. A razor-blade sharpener comprising a pair of vertical arms or bars having a transverse swinging or suspending bail to connect their upper ends and a notched horizontal bar or ligament to connect their lower ends, a transverse pin carrying a friction-roller and having its opposite ends in engagement with the said vertical arms intermediate their said upper and lower ends, a pair of corresponding horizontal side-members having centrally-alined holes therein that are adapted to engage said transverse pin and provide for a rocking-movement of the said side-members, a pair of buff-covered rollers surfaced with a sharpening-paste and mounted on a pair of horizontally-alined transverse pins in said side-members, a razor-blade carrier-clamp adjustably and detachably mounted on the lower notched ligament of the vertical arms and provided with two sets of gripping-jaws one of which sets is removable from the other, and a reciprocally movable or sliding strap or strip of webbing or the like passing under and in contact with the said friction-roller and, also, over and in contact with the sharpening-surfaces of the two rollers whereby the latter are rotated or driven in alternate directions first against one side of the sharp edge of the blade and then against the other side of said edge in the process of putting said edge in condition for use.

1,112,828. SUPPORT FOR TUBULAR LEGS OF FURNITURE. GEORGE E. NEUBERTH, Newark, N. J., assignor to Universal Caster & Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 11, 1913. Serial No. 784,152. (Cl. 155—33.)



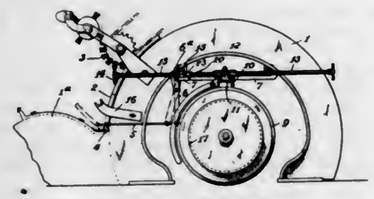
1. In combination with a support for a tubular leg which has a collar adapted to fit around the foot of the leg, a spring holder therefor comprising a strip bent inward forming two ears engaging overhanging portions of the said collar and bent upward at two places forming two spring arms for frictionally engaging the interior of the leg.

2. In combination with a support for a tubular leg which has a collar adapted to fit around the foot of the leg, a spring holder therefor comprising outwardly directed ears engaging and securing the said collar and upwardly directed spring arms for frictionally engaging the interior of the leg.

3. In combination with a support for a tubular leg having a collar for surrounding the leg, a spring holder therefor having members for frictionally engaging the interior of the leg and members engaging with the collar for securing the holder and support together when the leg is raised.

4. In combination with a support for tubular legs having a collar adapted to surround the foot of the leg, a spring holder therefor resiliently and frictionally engaging the interior of the leg and having means for directly engaging and thereby securing the collar.

1,112,829. SAFETY DEVICE FOR CARDING-MACHINES. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Oct. 1, 1908. Serial No. 455,761. (Cl. 19—3.)



1. In a carding machine, a power-controlling device comprising a manually operated rock-shaft, having an abutment member, held against longitudinal movement on the shaft, but having limited rotary motion thereon, and a spring urging said member to one extreme of its rotary movement, in combination with a card cylinder door, provided with a corresponding abutment member cooperating with said first mentioned member to block opening of the door in one position and to permit partial rotation of the rock-shaft against the spring when in its other position.

2. In a carding machine, a power-controlling device comprising a manually-operated rock-shaft having an abutment member capable of relative rotary movement thereon, and a spring on said rock-shaft adapted to resist relative rotary movement between the same and said abutment member, in combination with a card cylinder door provided with a corresponding abutment member coöperating with said first mentioned abutment member to obstruct rotational movement thereof against the tension of said spring.

3. In a carding machine, a power-controlling device comprising a manually-operated rock-shaft having an abutment member capable of rotational movement thereon, and a spring between said abutment member and rock-shaft to urge the same toward one extreme of its relative rotary movement, in combination with a card cylinder door provided with a corresponding abutment member cooperating with said first mentioned abutment member to block opening of the door in one position and to permit partial rotation of the rock-shaft against the spring when in its other position.

4. In a carding machine, a power-controlling device comprising a manually operated rock-shaft, two collars thereon, an abutment member between said collars adapted for relative rotary motion upon the rock-shaft and a spring between said abutment member and one of the collars adapted to urge said member to one extreme of its rotary movement, in combination with a card cylinder door provided with a corresponding abutment member cooperating with said first rotary abutment member to block opening of the door in one position and to permit partial rotation of the rock-shaft against the spring when in its other position.

1,112,830. RIGID-BRIDGE EYEGLASSES. FRIEDRICH PELS-LEUSDEN, Berlin, Germany. Filed June 26, 1913. Serial No. 775,857. (Cl. 88—50.)

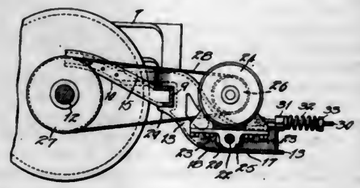
1. In an eyeglass mounting comprising a rigid bridge for connecting the lenses, the combination of clamping plates for gripping the nose, resilient arms engaged with said plates and connected with the mounting and finger pieces for spreading said plates, the finger pieces and the clamping plates being arranged so as to move simultaneously about different axes but in the same angular direction said axes being substantially perpendicular to the plane of the lenses.

2. In an eyeglass mounting comprising a rigid bridge for connecting the lenses, the combination of nose guards having arms of resilient material which are bent back upon themselves to form loops and have their free ends connected to the mounting, the plane of said loops being substantially that of the lenses, and finger pieces pivoted upon axes which are perpendicular to the lenses and coincident with the attaching points of said free ends, one end of each finger piece being engaged with a nose guard.

3. In an eyeglass mounting comprising a rigid bridge for connecting the lenses, the combination of clamping plates for gripping the nose provided with resilient arms connected with the mounting, and finger pieces, operatively connected with said plates, at a point above the connection of resilient arm and mounting for spreading them, the finger pieces and the clamping plates being arranged to move in substantially the same plane.

4. In an eyeglass mounting comprising a rigid bridge for connecting the lenses, the combination of clamping plates for gripping the nose provided with resilient arms connected with the mounting, and finger pieces having sliding engagement with said plates for spreading them, the finger pieces and the clamping plates being arranged to move simultaneously in the same angular direction and in substantially the same plane.

1,112,831. AXLE-GENERATOR SUPPORT. PAUL L. PFLAGER, Chicago, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 31, 1913. Serial No. 757,879. (Cl. 105—238.)



1. In a car truck, a frame, an axle generator, and a support for said generator carried by said frame, said support consisting of a single integral casting independent of said frame.

2. In a car truck, a frame, a single integral casting secured to said frame, a rock shaft mounted in said casting, and an axle generator mounted on said rock shaft, said casting being independent of said frame.

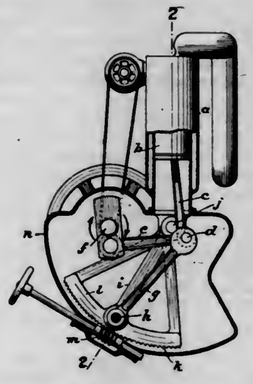
3. In a car truck, a frame, a single integral casting secured to said frame, a rock shaft mounted in said casting, an axle generator mounted on said rock shaft, and means for adjusting the position of said rock shaft in said casting to properly aline said axle generator, said casting being independent of said frame.

4. In a car truck, a frame, an integral casting secured to said frame, said casting comprising a pair of members spaced apart, downwardly curved and longitudinally extending side members, an end member extending between said side members, a rock shaft carried by said frame, and an axle generator carried by said rock shaft.

5. In a car truck, a frame comprising side members and an end sill, an axle generator support secured to said frame, said support comprising a pair of supporting members secured to said frame, downwardly and rearwardly extending side members, brace bars securing said side members together, a rock shaft mounted in said side members, and an axle generator mounted on said rock shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,112,832. VARIABLE-STROKE MECHANISM. JOSEPH PIERCE, Philadelphia, Pa., assignor of one-half to John Stuart Westney, Frederick W. Lawrence, Adolph Schwartz, and Henry C. George, Philadelphia, Pa. Filed Apr. 23, 1913. Serial No. 763,003. (Cl. 74—5.)



1. The combination, with a reciprocating element and a crank shaft, of a stroke-regulating rod, a connecting rod connected with the crank shaft, an arm pivoted on the stroke-regulating rod, said connecting rod and arm pivoted at a common point on the reciprocating element, and means to adjust the stroke-regulating rod to different positions, thereby varying the stroke of the reciprocating element.

2. The combination, with a reciprocating element and a crank shaft, of a stroke-regulating rod, a connecting rod connected with the crank shaft, an arm pivoted on the stroke-regulating rod, said connecting rod and arm pivoted at a common point on the reciprocating element, a quadrant suspending the stroke-regulating rod and turnable on an axis coincident with the point of connection between said reciprocating and connecting rod and arm when the reciprocating element is at one limit of its stroke, and means to adjust said quadrant on its axis, thereby varying the stroke of the reciprocating element.

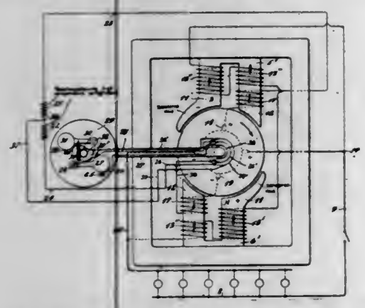
3. The combination, with a reciprocating element and a crank shaft, of a wrist pin on the reciprocating element, a relatively fixed stud whose axis is coincident with that of the wrist pin when the reciprocating element is at one limit of its stroke, a quadrant pivoted on said stud, a stroke-regulating rod carried by the quadrant, a connecting rod connecting the wrist pin and crank shaft, an arm connecting the wrist pin and stroke-regulating rod, and means to adjust the quadrant on its pivot, thereby varying the stroke of the reciprocating element.

4. The combination with a crank shaft and a reciprocating element including a pivoted rod, of a relatively fixed stud, a quadrant pivoted on said stud, two connecting rods each pivoted at one end on a common axis on said pivoted rod, the other end of one connecting rod being connected to the crank-shaft and the other end of the other connecting rod being pivotally connected to said quadrant, a rack on the quadrant and a worm engaging said rack, whereby the quadrant may be adjusted to vary the distance between said stud and said common axis when the reciprocating element is at one limit of its stroke.

5. The combination with a crank shaft and a reciprocating element including a pivoted rod, of a pivoted quadrant, two connecting rods each pivoted at one end on a common axis on said pivoted rod, the other end of one connecting rod being connected to the crank shaft and the other end of the other connecting rod being pivotally connected to said quadrant, said axis and the pivot of the quadrant being so relatively positioned that they coincide when the reciprocating element is at one limit of its stroke, and means to adjust the quadrant on its pivot, thereby varying the distance between said axis and the pivot of the quadrant when the reciprocating element is at the other limit of its stroke, whereby the stroke of the reciprocating element may be varied.

[Claims 6 to 8 not printed in the Gazette.]

1,112,833. AUTOMATIC REGULATION FOR ELECTRICAL APPARATUS. CECIL P. POOLE, South Orange, N. J., assignor, by mesne assignments, to Engineering Development Company, a Corporation of New York. Filed Apr. 13, 1912. Serial No. 690,584. (Cl. 171—223.)



1. An electrical apparatus comprising a magnetizable structure with a plurality of furcated pole pieces, an armature adapted to co-act with said pole pieces, a commutator carried by said armature, a plurality of sets of brushes adapted for contact with said commutator, a main winding for exciting at least one leg of each of said pole pieces, an auxiliary winding for oppositely exciting another leg of each of said pole pieces, electrical connections between one set of said brushes and said main coils, and electrical connections between another of said sets of brushes and said auxiliary coils.

2. An electrical machine comprising a magnetizable structure having a determined number of pole-piece parts, an armature structure adapted to co-act with said parts to complete a magnetic circuit, one of said structures being rotatably mounted, means for establishing a magnetic flux through said parts, and auxiliary means for opposing said flux in a number of said pole-piece parts less than said determined number, said auxiliary means including a magnetizing winding and a resistor, in series therewith, composed of material adapted to automatically offer a markedly increased resistance to the passage of current therethrough as the current flow increases in relatively small degree beyond a relatively determined value.

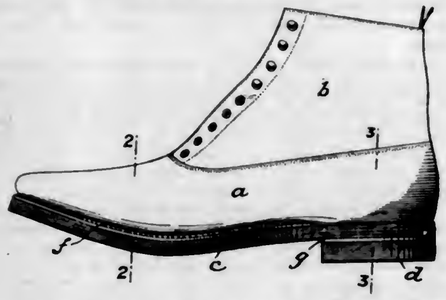
3. An electrical machine comprising a magnetizable structure having a determined number of pole-piece parts, an armature structure adapted to co-act with said parts to complete a magnetic circuit, one of said structures being rotatably mounted, means for establishing a magnetic flux through said parts, and auxiliary means for opposing said flux in a number of said pole-piece parts less than said determined number, said auxiliary means including a magnetizing winding, resistance in circuit therewith, and means for varying said resistance when the speed of rotation of said rotatably mounted structure exceeds a determined amount.

4. An electrical machine comprising a magnetizable structure having a determined number of pole-piece parts, an armature structure adapted to co-act with said parts to complete a magnetic circuit, one of said structures being rotatably mounted, means for establishing a magnetic flux through said parts, and auxiliary means for opposing said flux in a number of said pole-piece parts less than said determined number, said auxiliary means including a magnetizing winding, a resistance in circuit therewith, and means including a centrifugal governor for varying said resistance when the speed of rotation of said rotatably mounted structure exceeds a determined amount.

5. A dynamo electric machine having a plurality of pole piece parts, an armature, means for maintaining a substantially constant magnetic flux through some of said parts, means for varying the magnetic flux in other of said parts, said means including a magnetizing winding and a resistance automatically controlled by the speed of the machine.

[Claims 6 to 11 not printed in the Gazette.]

1,112,834. SHOE. WILLIAM F. RANDALL, Philadelphia, Pa., assignor to William T. Plummer, Philadelphia, Pa. Filed May 11, 1914. Serial No. 837,702. (Cl. 36—30.)



1. A shoe comprising a vamp and an outsole composed of a number of sheets of canvas impregnated with oil and stitched together and secured to the vamp.

2. A shoe comprising a vamp, a sole member composed of a number of sheets of canvas impregnated with oil and stitched together and secured to the vamp, and a heel member also composed of a number of sheets of canvas impregnated with oil and stitched together and secured to said sole member.

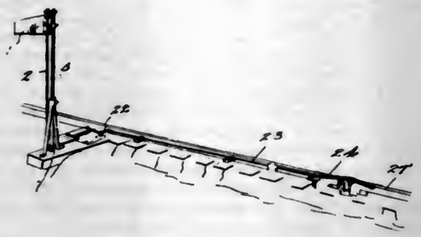
3. A shoe comprising a vamp, an outsole member composed of a number of sheets of canvas stitched together and impregnated with oil, and a welt between the vamp and outsole member and secured to both.

4. A shoe comprising a vamp, an outsole member composed of a number of sheets of canvas stitched together and impregnated with oil, and a welt between, and extending along the margin of, the vamp and outsole member from opposite sides of the front of the heel to the toe, and means securing the welt to both the vamp and outsole member.

5. A shoe comprising a vamp, a sole member composed of a number of sheets of canvas stitched together and impregnated with oil, a welt between the vamp and said sole member and secured to both, and a heel member also composed of a number of sheets of canvas stitched together and impregnated with oil and secured to said sole member.

[Claims 6 to 12 not printed in the Gazette.]

1,112,835. RAILWAY-CROSSING SIGNAL. JOHN F. REEDER, Shelbyville, Ill. Filed Nov. 7, 1913. Serial No. 799,736. (Cl. 246—45.)



The combination with a revoluble staff having a lever arm and a flag, of a rotary post and a bracket thereon to support the staff, a lever linked to the lever arm of the staff, and actuating mechanism connected to said lever arm including a draw bar and a fixed washer thereon, a stationary bracket, and a spring coiled about said draw bar between said washer and stationary bracket.

1,112,836. CONVEYER. JESSE W. RENO, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 28, 1913. Serial No. 763,953. (Cl. 104—165.)

1. An inclined elevator having longitudinal grooves formed in its tread surface, and a landing therefor provided with independently movable pivoted prongs which register with the said grooves.

2. An inclined elevator having longitudinal grooves formed in its tread surface, a comb landing therefor having a plurality of independently movable pivoted prongs which register with the said grooves.

3. In an inclined elevator, the combination with a series of treads operatively connected together in the form of an endless belt, having longitudinal grooves formed in its tread surface, a landing therefor having a plurality of independently movable pivoted prongs which register with the said grooves.

4. In combination, an inclined elevator having longitudinal grooves formed in its tread surface, a comb landing therefor, comprising a floor plate, a plurality of pivoted prongs which register with the said grooves, and means associated with the floor plate pivotally to support the said prongs.

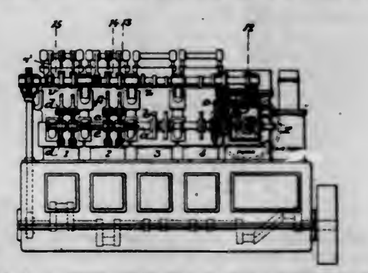
5. An inclined elevator having longitudinal grooves formed in its tread surface, and a landing therefor comprising a floor plate, prongs pivotally supported thereon and positioned to register with and extend into the said grooves.

[Claims 6 to 13 not printed in the Gazette.]

1,112,837. INTERNAL-COMBUSTION ENGINE. THEODOR REUTER, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 13, 1909, Serial No. 512,695. Renewed Apr. 8, 1913. Serial No. 759,819. (Cl. 123—41.)

1. In change-over mechanism for internal combustion engines having a plurality of cylinders, the combination with an air admission valve and an air starting valve for each of said cylinders, and a fuel-injection valve for each cylinder, of means for first setting all of the starting valves in action, and for then putting said valves out of action and bringing the fuel-injection valves into action in a predetermined sequence.

2. In change-over mechanism for multiple cylinder internal combustion engines, the combination with air admission and air starting valves for the respective cylinders, and fuel-injection valves for said cylinders, of means for first setting all of the starting air valves in action and then putting them out of action in a predetermined order at the same time that the corresponding fuel-injection valves are brought into action, and mechanism to operate said means in order to drive the engine forward or backward under the impetus of explosions in all the cylinders.



3. In a multiple cylinder internal combustion engine, air starting valves for the several cylinders, fuel valves also associated with the cylinders, rotary engine driven means and devices adapted to be actuated thereby to actuate the starting and fuel valves, in combination with a rotary starting and reversing mechanism including elements pertaining respectively to said engine driven devices and connections between said elements and said devices whereby the starting valves are first brought into action, and then put out of action in predetermined order, the fuel valves being correspondingly brought into action, and in proper time for running under combustion either forward or backward dependent upon the movement of the reversing mechanism.

4. In a multiple cylinder internal combustion engine, the combination with air starting valves for the several cylinders, fuel valves also associated therewith, a rotary engine driven shaft bearing eccentrics, and members actuated by the eccentrics and having double cam projections to actuate the starting and fuel valves of the several cylinders for forward and backward running, respectively, with an intermediate space enabling the valves to be put out of action, of a control device having elements connected with the double cam members of the starting valves and other elements connected with the double cam members of the fuel valves and so arranged that for running in either direction the several starting valves are first brought into action, after which the starting valves are put out of action in predetermined order at the same time that the fuel valves are correspondingly brought into action.

5. In change-over mechanism for multiple cylinder internal combustion engines, the combination with air starting valves associated with the respective cylinders, and fuel valves for said cylinders, of cam mechanism arranged to set all of the starting valves in action initially and to then put such valves out of action in a predetermined sequence and bring the corresponding fuel valves into action at the same time, and pumping means operative for supplying fuel to said fuel valves only as they are brought into action.

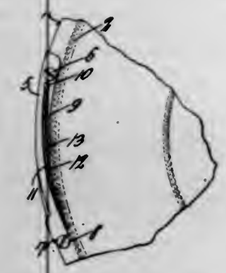
[Claims 6 to 13 not printed in the Gazette.]

1,112,838. STYLUS-GUIDING ATTACHMENT FOR SOUND-RECORDS. HARRISON W. ROGERS, Wheeling, W. Va., assignor of one-half to Charles W. Ebeling, Wheeling, W. Va. Filed May 20, 1913. Serial No. 768,831. (Cl. 181—17.)

1. The combination with a sound record disk, of a plate provided with a stylus guiding means, means for pivotally

connecting one end of the plate to the disk, and means for locking the plate in adjusted position, whereby the stylus guiding means of the plate may be positioned to guide the stylus into a selected point of the phonic groove.

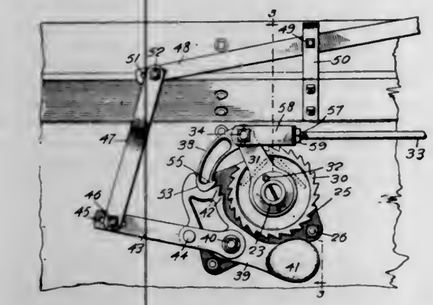
2. The combination with a sound record, of a plate provided with a stylus guiding means, means to adjustably attach the plate to the record, and means for coaction with the guiding means to insure the positioning of the stylus in a selected point of a sound groove.



3. The combination with a sound record, of a stylus guiding device, including a plate having a slot therein forming a tongue upon the side adjacent the phonic groove of the record, means for securing the end of the plate adjacent the closed end of the slot as the hinging point of the plate to the record, and means for adjustably securing the free end of the plate to the record to position the outlet of the slot relatively to a selected point of the phonic groove of the record.

4. The combination with a sound record, of a stylus guiding device for guiding a stylus to a selected point of the phonic groove of the record, including a plate provided with a stylus receiving slot therein, said slot providing a tongue upon the inner side of the plate, a resilient member carried by the free end of the tongue and having a tension toward the plate to assist in holding the stylus against the adjacent wall of the slot of the plate during the rotation of the disk, means for pivotally connecting the end of the plate adjacent the closed end of the slot to the record to permit the slotted end movement relatively to the phonic groove, and adjustable means for fixedly securing the plate to the record, such adjustment determining the position of the stylus receiving slot and consequently the point at which the stylus enters the phonic groove of the record.

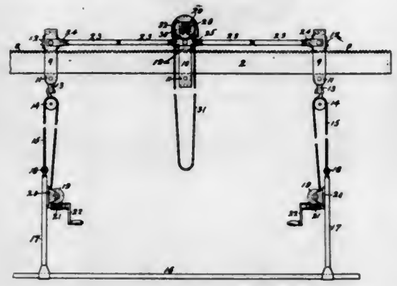
1,112,839. PAWL AND RATCHET FOR DUMPING-BOXES. HOMER F. ROTH, Sturgis, Mich., assignor to George W. Kirkpatrick, Sturgis, Mich. Filed Apr. 8, 1913. Serial No. 759,634. (Cl. 74—16.)



1. A pawl and ratchet mechanism, comprising a shaft, a ratchet wheel secured to the shaft, a rock lever journaled intermediate its ends below the shaft and having teeth at its upper end for engaging the ratchet wheel to hold the same from reverse movement, said lever being balanced to normally stand in engagement with the ratchet wheel, means for swinging the said lever into or out of engagement with the wheel, a pawl arm journaled on the shaft, means for swinging the said pawl arm toward and from the lever, the arm normally extending upwardly from the shaft, a pawl pivoted at one end to the outer end of the arm and extending toward the upper end of the rock lever, said lever having a recess at its upper end for receiving the free end of the pawl, the wall of the recess adjacent to the ratchet wheel being inclined and forming a cam surface for engagement by the rounded free end of the pawl to move the pawl out of engagement with the ratchet wheel when the pawl is moved toward the upper end of a lever beyond a predetermined distance.

2. A pawl and ratchet mechanism, comprising a shaft, a ratchet wheel secured to the shaft, a rock lever journaled intermediate its ends below the shaft and having teeth at its upper end for engaging the ratchet wheel to hold the same from reverse movement, said lever being balanced to normally stand in engagement with the ratchet wheel, means for swinging the said lever into or out of engagement with the wheel, a pawl arm journaled on the shaft, means for swinging the said pawl arm toward and from the lever, the arm normally extending upwardly from the shaft, a pawl pivoted at one end to the outer end of the arm and extending toward the upper end of the rock lever, the free end of the pawl and the upper end of the lever having engaging means for moving the pawl out of engagement with the ratchet wheel when the said pawl is moved toward the upper end of the lever beyond a predetermined distance.

1,112,840. SWINGING SCAFFOLD. NATHAN ROYACK, Brooklyn, N. Y. Filed June 10, 1914. Serial No. 844,216. (Cl. 20—82.)

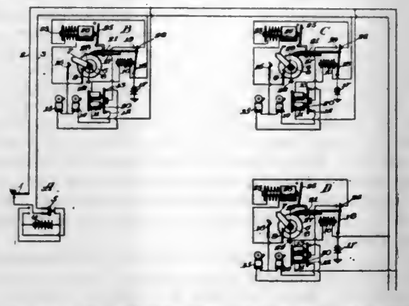


In a swinging scaffold, the combination of a track having straight and curved portions, hanger-heads movable along said track, a scaffold suspended from said hanger-heads, a power-carriage movable along said track and disposed between said hanger-heads, connections between said power-carriage and the hanger-heads comprising pivotally jointed links arranged for lateral movement, springs connected to said links and yieldingly controlling said lateral movement, and actuating means for said power-carriage engaging said track.

1,112,841. SELECTOR APPARATUS. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Feb. 15, 1910. Serial No. 543,973. (Cl. 177—332.)

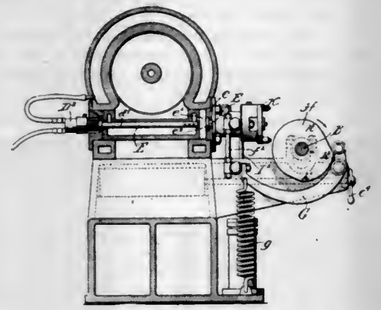
1. A selector mechanism comprising a step-by-step element, a pawl for stepping said element, a pawl for holding said element in stepped position, a magnet for controlling said holding pawl and a circuit for said magnet controlled by said stepping pawl.

2. In a substation selector apparatus, the combination of an electro-magnetic signal, a circuit therefor, a step-by-step element, a pawl for stepping said element, a holding pawl for said element, a magnet for said holding pawl and



a circuit for said magnet, said magnet-circuit and signal-circuit being controlled by said stepping pawl.

1,112,842. INTERNAL-COMBUSTION ENGINE. CHARLES E. SARGENT, Racine, Wis. Filed Apr. 21, 1910. Serial No. 556,897. (Cl. 123—81.)



1. The combination with a cylinder and piston therein, of a cylindrical valve-chamber connected to the cylinder by an opening radial with respect to the valve-chamber, air, gas and exhaust ports entering said chamber in the form of radial slots, a cylindrical oscillating valve adapted in a normal position to close said ports and provided with a space adapted to register with the ports alternately as the valve is oppositely rocked and means for rocking the valve.

2. The combination with a cylinder and piston therein, of a cylindrical valve-chamber connected to the cylinder by an opening radial with respect to the valve-chamber, air, gas and exhaust ports entering said chamber in the form of radial slots, a cylindrical oscillating valve adapted in a normal position to close said ports, and having a peripheral depression adapted to register with the ports alternately as the valve is oppositely rocked, and means for rocking the valve.

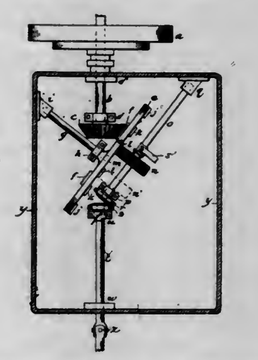
3. The combination with a cylinder and piston therein, of a cylindrical valve-chamber connected to the cylinder by an opening radial with respect to the valve-chamber, air, gas and exhaust ports entering said chamber in the form of radial slots, a cylindrical oscillating valve adapted to close said ports, and having a space adapted as the valve is rocked in one direction to open communication between the air and gas ports and the cylinder and as it is rocked in the opposite direction to open communication between the exhaust port and cylinder, and means for rocking the valve.

4. The combination with a cylinder and piston therein, of a cylindrical valve-chamber connected to the cylinder by an opening radial with respect to the valve-chamber, air, gas and exhaust ports entering said chamber in the form of radial slots, a cylindrical oscillating valve adapted in a normal position to close said ports and having a peripheral depression adapted as the valve is rocked in one direction to open communication between the air and gas ports and the cylinder and as the valve is rocked in the opposite direction to open communication between the exhaust port and cylinder, and means for rocking the valve.

5. The combination with a cylinder and piston therein, of a cylindrical valve-chamber connected to the cylinder by an opening radial with respect to the valve-chamber, air, gas and exhaust ports entering said chamber in the form of radial slots, a cylindrical valve within the chamber, adapted in its normal position to close the ports, and having two peripheral depressions, one of said depressions being arranged to open communication between the exhaust port and cylinder and between the air port and cylinder as the valve is rocked in opposite directions, the other of which is adapted to open communication between the gas and air ports, when said first depression opens the air port to the cylinder, whereby the gas and air are mixed as they enter, and means for rocking the valve.

[Claims 6 to 34 not printed in the Gazette.]

1,112,843. TRANSMISSION MECHANISM. HERMAN H. SCHMITT, Creswell, Oreg. Filed Feb. 14, 1913. Serial No. 748,341. (Cl. 74—41.)

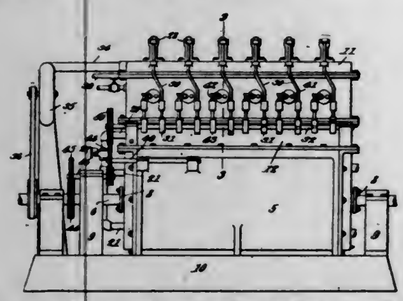


In a transmission mechanism, a casing having a driving and driven shaft associated therewith, said shafts being disposed in direct alinement, and having their opposing ends spaced apart, a bevel gear fixed to the inner end of the driving shaft, a miter gear fixed to the inner end of the driven shaft, a disk disposed in the space between the opposing ends of said shafts and in acute angular relation to the axes thereof, a ring of teeth on one face of said disk engaged with the bevel gear of the driving shaft, a plurality of concentric rings of teeth carried by the opposite face of the disk, a shaft arranged parallel with the disk, means carried by the last named shaft for engaging one ring of teeth of said plurality of rings of teeth at a time, and means carried by the last named shaft and engaged with the miter gear of the driven shaft to impart movement to the driven shaft upon rotation of the disk.

1,112,844. ROTARY INTERNAL-COMBUSTION ENGINE. JOHN SCHNITTER, Baltimore, Md. Filed Nov. 14, 1913. Serial No. 800,907. (Cl. 60—4.)

1. A rotary internal combustion engine, comprising a cylinder, a reservoir, and a series of pressure generating chambers, a rotor in said cylinder, an outlet port for each pressure generating chamber and an outwardly opening pressure valve for each port which opens into said reservoir, an air conduit for each generating chamber, a mechanically operated valve between said conduit and chamber, means for supplying air to said conduit under pressure, and a liquid fuel nozzle in said air conduit, whereby when the valve between the air conduit and generating

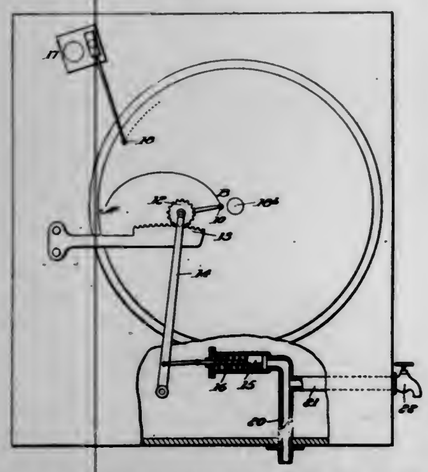
chamber is opened, the liquid fuel will be blown and sprayed into said generating chamber by the air passing through the conduit at a high velocity.



2. A rotary internal combustion engine, comprising a cylinder, a reservoir, and a series of pressure-generating chambers arranged in superposed relation and connected together to form a compact structure, a rotor in said cylinder, an outlet from said reservoir connected to said cylinder, an outlet port for each pressure-generating chamber and an outwardly opening pressure operated valve for each port and adapted to open into said reservoir, and means for blowing a spray of liquid fuel in said pressure-generating chambers through the medium of air at high pressure.

3. A rotary internal combustion engine, comprising a cylinder, a reservoir, and a series of pressure-generating chambers arranged in superposed relation and connected together to form a compact structure, a rotor in said cylinder, an outlet from said reservoir connected to said cylinder, an outlet port for each pressure-generating chamber and an outwardly opening pressure operated valve for each port and adapted to open into said reservoir, and means for blowing a spray of liquid fuel in said pressure-generating chambers, said fuel blowing means embodying a conduit for each generating chamber, an air pump connected to all of said conduits, and a fuel nozzle in each conduit between said chambers and pump, whereby the air is blown at a high velocity over said fuel nozzle to said chambers.

1,112,845. PRESSURE-GAGE. FREDERICK SCHUBERT, Selleraville, Pa. Filed Jan. 16, 1913. Serial No. 742,505. (Cl. 234—19.)



1. In a pressure recording apparatus, the combination with a movable recording sheet, of a pen adapted to indicate pressures on said sheet, means actuated by pressure variations for moving said pen bodily relatively to said recording sheet, and means for swinging said pen relatively to said bodily moving means.

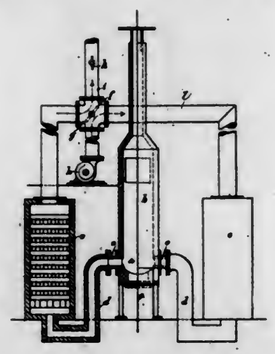
2. In a pressure recording apparatus, the combination with a movable recording sheet, of a pivoted arm actuated by pressure variations, a pen bodily movable by said arm and adapted to indicate pressures on said sheet, and means for moving said pen in an epicycloid relatively to the arc described by said arm.

3. In a pressure recording apparatus, the combination with a rotating dial, of a pen adapted to record pressures on said dial, means actuated by variations of pressure for bodily moving said pen substantially radially across said dial, and means for swinging said pen, in its bodily movement, in a path that intersects the line of its bodily movement at an acute angle.

4. In a pressure recording apparatus, the combination with a rotating dial, of a pen adapted to record pressures on said dial, means actuated by pressure variations for bodily moving said pen substantially radially across said dial, and means for imparting an independent movement to said pen, whereby when said pen is at or near the periphery of said dial its movement at the commencement of a drop in pressure is substantially concentric with that of the dial.

5. In a pressure recording apparatus, the combination with a rotating dial and means for marking time graduations thereon in its rotation, of a pivoted lever, means for swinging said lever consequent upon pressure variations, a pinion carried by said lever, a rack bar adjacent said dial with which said pinion engages, and a pen adapted to record pressures on said dial and rigidly secured to said pinion, for the purpose stated.

1,112,846. CUPOLA-FURNACE. EDUARD SCHÜRMANN, Koetzschenbroda, near Dresden, Germany. Filed Mar. 8, 1913. Serial No. 752,818. (Cl. 75—94.)

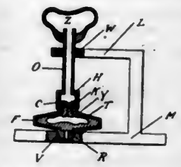


1. A cupola furnace comprising a cylindrical body having a melting chamber provided with ports in diametrically opposite positions, in the melting zone thereof, a stack rising from the said cylindrical body, and devices for passing a heated blast through one of the said ports into the said melting zone, causing the same to pass through the melting zone in a substantially horizontal direction and the carbonic acid gas generated to be withdrawn through the other port and discharged independently of the said stack so as to prevent the formation of carbonic oxid within the melting chamber.

2. A cupola furnace comprising a cylindrical body having a melting chamber provided with ports in diametrically opposite positions, in the melting zone thereof, a stack rising from the said cylindrical body, regenerators on both sides of the said cylindrical body, a pipe connection between the corresponding ends of the said regenerators, a pipe connection between each regenerator and one of the said ports, and means for creating a blast and alternately directing the flow of the same through one of the regenerators through the melting zone in a horizontal path and withdrawing the resultant carbonic acid gas into and through the other regenerator and discharging the same independently of the said stack.

3. A cupola furnace comprising a cylindrical body having a melting chamber provided with ports in diametrically opposite positions, in the melting zone thereof, a stack rising from the said cylindrical body, regenerators on opposite sides of the said cylindrical body, pipe connections from corresponding ends of the said regenerators to the said ports, a pipe connecting the opposite ends of the said regenerators, a butterfly valve within the last aforesaid pipe, and a blower by which and the said butterfly valve blasts of air are created and alternately directed through one regenerator through the said melting zone in a substantially horizontal path and the resultant carbonic acid gas withdrawn through the other regenerator and discharged independently of the said stack.

1,112,847. CENTERED MOLD FOR DENTAL CASTINGS. HEINRICH SCHWEITZER, New York, N. Y. Filed Jan. 6, 1914. Serial No. 810,571. (Cl. 22—69.)



1. In a device for dental castings and the like the combination of a mold and a mold cover, said mold having ascending tapering surface extensions on the upper end for the purpose of making a seal during the act of fluid pressure application, said cover having a central aperture and tapering surfaces surrounding said aperture for sealing the tapering top surface of the mold during the act of fluid pressure application.

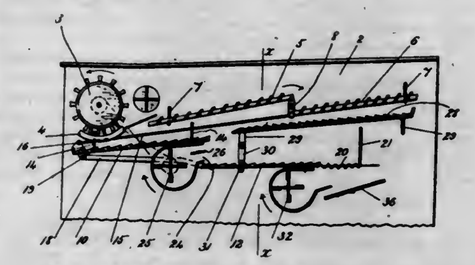
2. In a device for dental castings and the like the combination of a mold, a mold cover and a sealing head connected with a source of fluid pressure, said mold having a tapering surface extension on the upper end, said mold cover having a central aperture and tapering surfaces around said aperture for sealing the tapering top surface of the mold in the peripheral parts, said sealing head provided with means for making a seal against said cover.

3. A flask for the preparation of a mold for dental castings and the like and for sealing a mold during the act of casting consisting of a mold frame, a mold receptacle and a cover; said cover having a tapering surface extension with a central aperture and being provided with tapering surfaces on the inside for the preparation of tapered mold surfaces.

4. In a device for dental castings and the like the combination of a detachable mold having an uncovered tapering surface extension on the upper end, a base, a sealing head and a pressure flask consisting of a mold cover, mold frame and mold receptacle; said mold cover having tapering extensions on the interior surface for the formation of tapering mold surfaces, centering the mold and sealing the mold during pressure application in peripheral parts of the top surface, said cover also provided with a central aperture and a tapering extension on the exterior surface surrounding the aperture for making contact with the sealing head, said sealing head connected with a source of fluid pressure and movably adjusted on the base in concentrical relation with said mold receptacle, mold and mold cover substantially as described and shown.

5. In a device for dental castings and the like the combination of a mold, a detachable mold cover and a sealing head connected with a source of fluid pressure; said mold having tapering surfaces on its upper end, said mold cover having tapering extensions on its interior surface for making contact and seal with the upper mold surface, a central aperture and a tapering extension on its exterior surface surrounding the aperture; said sealing head provided with tapering surfaces for making seal and contact with the exterior tapering surface extension of said cover.

1,112,848. GRAIN-SEPARATOR. CHARLES SEAGREN, Holdrege, Nebr. Filed Jan. 7, 1914. Serial No. 810,850. (Cl. 130—24.)

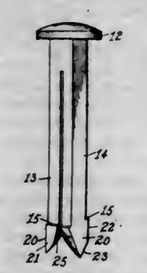


1. In a grain separator, the combination, with front and rear straw racks, of imperforate front and rear grain bottoms pivotally connected together and pivotally supported under the said racks, a chaffing screen secured to the rear end of the rear grain bottom, a return bottom extending under the rear straw rack and under the rear part of the front straw rack and delivering the material which falls on it onto the imperforate front end portion of the rear grain bottom, and means for delivering an air blast between the two bottoms and through the chaffing screen.

2. In a grain separator, the combination, with front and rear straw racks, of a front grain bottom, an imperforate rear grain bottom arranged behind the front grain bottom and provided with arms which project forwardly from its sides and have their front end portions pivoted to the front end portion of the front grain bottom, means for supporting and oscillating the said grain bottoms, a chaffing screen secured to the rear end of the rear grain bottom, a return bottom extending under the rear straw rack and under the rear part of the front straw rack and delivering the material which falls on it onto the imperforate front end portion of the rear grain bottom, and means for delivering an air blast between the two grain bottoms and through the chaffing screen.

3. In a grain separator, the combination, with front and rear straw racks, and a crank-shaft operatively connected with the adjacent end portions of the straw racks; of front and rear grain bottoms pivotally connected together and pivotally supported under the said racks, a connecting-rod arranged between the said crankshaft and the front end portion of the front grain bottom, a chaffing screen secured to the rear end of the rear grain bottom, a shaking return bottom extending under the rear straw rack and under the rear part of the front straw rack and delivering the material which falls on it onto the imperforate front end portion of the rear grain bottom, a driving connection between the rear grain bottom and the return bottom above it, and means for delivering an air blast between the two grain bottoms and through the chaffing screen.

1,112,849. SPIKE. JOSEPH SERTELL and WILLIAM F. RYAN, Indianapolis, Ind. Filed Oct. 27, 1913. Serial No. 797,563. (Cl. 85—13.)

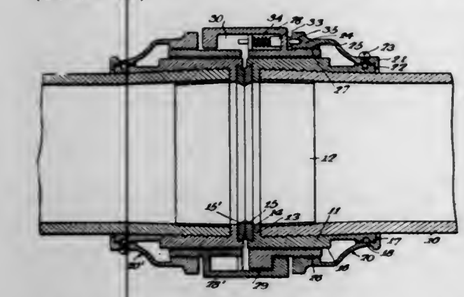


1. A split spike with the legs thereof rectangular in cross section and with the ends of each leg widened to

form shoulders thereon, the shouldered ends of the legs being beveled both longitudinally and transversely substantially as set forth to a single point at the extreme end of each leg, the points of the two legs being substantially diagonally opposite each other so that the legs will both spread and twist while being driven.

2. A split spike with the ends thereof provided with inner surfaces beveled both longitudinally and transversely so as to cause the legs to spread from each other and simultaneously twist, the end of one of said legs having an additional bevel for reducing the spreading movement of one of said legs to reduce the twisting movement of the head of the spike while the spike is being driven.

1,112,850. HOSE-COUPLING. HENRY G. SHERER, Waukegan, Ill. Filed Aug. 5, 1912. Serial No. 713,224. (Cl. 137—28.)



1. In a hose coupling, two anchor rings adapted to interlock, each providing lugs protruding outwardly from the normal annular surface of said ring near the edge thereof, and each further providing outwardly and forwardly extending members each having in its under side a recess open toward one lateral side thereof, the upper wall of each recessed member lying radially without the outer surface of each lug of the other ring whereby the lug may lie thereunder, each lug being annularly spaced from the adjacent recessed member a distance to receive a recessed member of the coacting anchor ring with its open side facing the lug, whereby relative rotation of the anchor rings so positioned draws each lug under, and covered by, the coacting recessed member.

2. In a hose coupling the combination of two coupling members each comprising an anchor ring having radially projecting lugs thereon and having laterally opening hooks projecting beyond the ends of said rings radially beyond the ends of the lugs for engagement with the lugs of the opposing member, and means carried by one of said members for restricting the opening of the said hook positively to prevent disengagement of said hook from its lug.

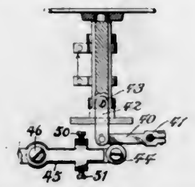
3. In a coupling, the combination with the hose ends, of duplicate coupling members each comprising in combination a compression sleeve secured to the hose end, a packing ring carried by the compression sleeve, an anchor ring mounted for axial movement relative to the compression sleeve and provided with parts to make engagement with the opposing anchor ring, an operating head rotatable relative to the anchor ring acting on the compression sleeve and anchor ring to change their axial relation to each other, and latch means for normally holding the anchor ring and head in predetermined rotative relation to the anchor ring, said latch means including a part movable into or out of the path of the parts of the anchor ring which make engagement with the opposing anchor ring.

4. In a coupling the combination with the hose ends, of duplicate coupling members each comprising in combination a compression sleeve secured to the hose end, a packing ring carried by the compression sleeve, an anchor member mounted for axial movement relative to the compression sleeve and provided with parts to make engagement with the opposing anchor member, an operating head acting on the compression sleeve and anchor member to change their axial relation to each other, and latching means automatically governed in its latching and unlatching movements by the operating head for positively locking said anchor members against disengagement from each other.

5. In a hose the combination of duplicate coupling members each comprising an anchor ring having radial lugs thereon and laterally opened hooks projecting from the forward end thereof radially and axially beyond the rings for engagement with lugs of the opposite anchor ring structure, a compression sleeve slidable axially within the anchor ring, packing means carried by the end of the compression sleeve, an operating head coöperating with the compression sleeve and its anchor ring movable to force the compression sleeve forward with reference to its anchor ring, and means for restricting the hook-opening after the hook has engaged an opposing lug, to lock the rings against disengagement.

[Claims 6 to 8 not printed in the Gazette.]

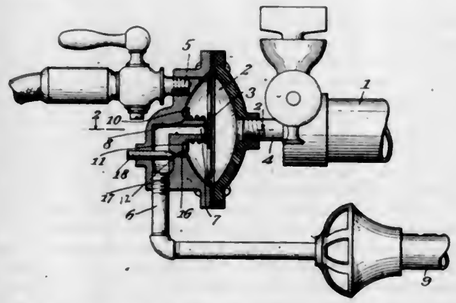
1,112,851. TYPE-WRITER. ZALMON G. SHOLES, New York, N. Y., assignor, by mesne assignments, to The Lawrence Manufacturing Company Limited, London, England. Filed Nov. 17, 1911. Serial No. 660,823. (Cl. 197—74.)



1. In a typewriter, a type-bar segment mounted for movement up and down, a pivoted lifting lever connected thereto, a roller for lifting said lever, a pivoted finger lever adapted to raise said roller, and means for adjusting at will the normal vertical relation between said finger lever and said roller, substantially as described.

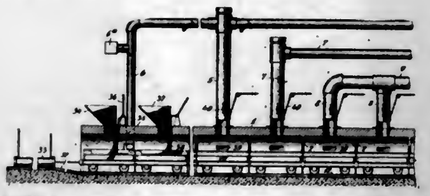
2. In a typewriter, a type-bar segment mounted for movement up and down, a pivoted lifting lever connected thereto, a roller for lifting said lever, a two part pivoted finger lever one part of which is adapted to directly lift said roller, a finger button on the other part of said finger lever, and adjustable means for transmitting movement from one part of said finger lever to the other, substantially as described.

1,112,852. GAS-REGULATOR FOR SELF-GENERATING STEAM-RADIATORS. JOHN S. SIMMONS, New York, N. Y. Filed Nov. 8, 1913. Serial No. 799,875. (Cl. 236—6.)



The combination, with the chamber having two heads, the valve diaphragm therebetween, the pressure pipe leading through one head, and the gas tube projecting from the other head toward the valve diaphragm, of an axially movable collar embracing the gas tube, a spring coiled on said gas tube between the valve diaphragm and the collar, a lever arm for moving said collar and compressing the spring axially, and an adjusting screw acting on said lever arm.

1,112,853. MANUFACTURE OF ZINC OXID. JAMES ARTHUR SINGMASTER, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 9, 1912. Serial No. 670,264. (Cl. 75—19.)



1. The process of producing sublimed zinc oxid and analogous products, which consists in forming a bed or layer comprising a reducible compound of the zinc or other relatively volatile metal and combustible material, igniting such bed, advancing the same during its combustion through a suitable chamber, simultaneously transmitting a combustion-supporting draft-current through the bed, and collecting the effluent from such bed at successive points along its path of movement.

2. The process of producing sublimed zinc oxid and analogous products, which consists in forming a bed or layer comprising a reducible compound of a relatively volatile metal and combustible material, advancing the same through an inclosing tunnel, previously heated to cause ignition and combustion of said bed or layer, simultaneously transmitting through said layer a combustion-supporting draft-current during its travel through said tunnel and collecting the effluent from said bed or layer.

3. The process of producing sublimed zinc oxid and analogous products, which consists in forming a bed or layer comprising a reducible compound of a relatively volatile metal and combustible material, igniting and advancing the same through a suitable combustion region; simultaneously with such movement transmitting an air current through said bed or layer, increasing such air supply coincidently with the advance of said bed or layer and collecting the effluent from the latter.

4. The process of producing sublimed zinc oxid and analogous products, which consists in forming a bed or layer comprising a compound of a relatively volatile metal, advancing the same through a heated zone, simultaneously with such advancing motion supplying a suitable gas to the said bed or layer, and collecting the effluent therefrom at a plurality of separated points along the path of movement of said bed or layer.

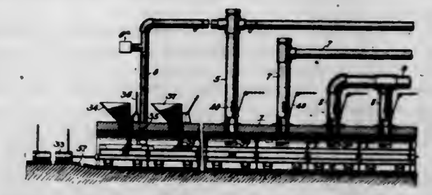
5. The process of producing sublimed metallic products, which consists in forming a bed or layer comprising a reducible compound of a relatively volatile metal and combustible material, igniting said bed or layer and collecting the non-metallic effluent arising in the early stages of the ensuing combustion, advancing such bed or layer during its combustion and separately collecting the metallic effluent.

[Claims 6 to 10 not printed in the Gazette.]

1,112,854. APPARATUS FOR THE MANUFACTURE OF ZINC OXID. JAMES ARTHUR SINGMASTER, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 18, 1912. Serial No. 671,821. (Cl. 75—19.)

1. A subliming furnace, comprising a refractory tunnel structure, a traveling grate surface adapted to move therein, means for transmitting combustion-supporting gas through said traveling grate surface, and a plurality of fume off-takes connected with said structure at intervals along the length thereof.

2. A subliming furnace, comprising a fume collecting combustion chamber suitable for the generation of metallic fume, a grate surface adapted to enter therein divided in sections, each section having independent draft-current supplying means movable therewith, and suitable means for removing metallic fume from the chamber.



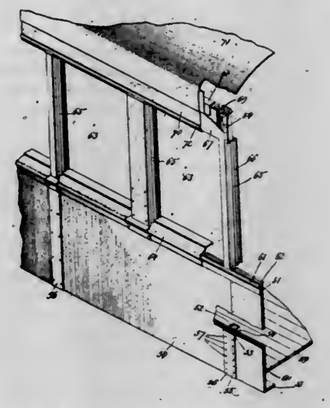
3. A subliming furnace, comprising a combustion space or chamber having a fume-collecting roof portion and suitable for inclosing a fume-generating charge, combined with a charge-carrying conveyance adapted for moving into and out of said chamber and divided into sections having individual air-supplying devices, and means for independently varying the supply of air through such devices.

4. A subliming furnace, comprising a tunnel structure, a continuous charge-carrying conveyance divided into sections having individual provisions for supplying combustion-supporting gas to the charge thereon, a track-way for said grate sections extending through the structure and means for collecting and conducting the effluent from the traveling charge.

5. A subliming furnace, comprising a tunnel structure suitable for confining the generation of metallic fume, and having fume-conducting means connected therewith, a continuous perforate grate surface adapted for movement through the structure and divided into sections, each having provision for independently supplying air to the charge thereon and means for varying the individual supplies to such sections.

[Claims 6 to 31 not printed in the Gazette.]

1,112,855. CAR CONSTRUCTION. ALBERT H. SISSON, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed July 20, 1910. Serial No. 572,872. (Cl. 105—201.)



1. In a car, the combination of a car post, a sheathing sash guides integral therewith, and a letter-board integral with said sheathing, substantially as described.

2. In a car, a letter-board comprising a plurality of sheets, one of said sheets having a continuation forming the top of the car, and a second of said sheets having a continuation forming a post of said car, substantially as described.

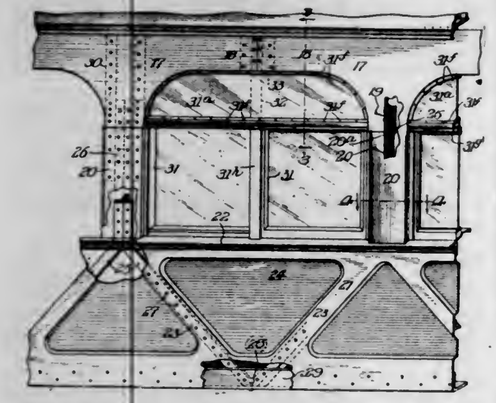
3. In a car, the combination of a car post, and a sheathing integral therewith, a portion of the car post extending above the main body of said sheathing, substantially as described.

4. In a car, the combination of an inner sheathing, and a car post formed integral with said sheathing and extending beyond the upper edge thereof, substantially as described.

5. In a car, the combination of sheathing having upper and lower portions, and a car post integral with one of said sheathing portions and extending on the inner side thereof between the upper and lower portions, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,112,856. CAR CONSTRUCTION. ALBERT H. SISSON, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 12, 1911. Serial No. 654,308. (Cl. 105—201.)



1. In a car construction, the combination of a sheathing having obliquely disposed strengthening members integrally formed therein, and reinforcing means coöperating with said members, substantially as described.

2. In a car construction, the combination of a belt rail, a sheathing extending below said belt rail, said sheathing having strengthening members integrally formed therein, a car post, and a separate sheathing for said car post, substantially as described.

3. In a car construction, the combination of a belt rail, a sheathing extending below said belt rail, said sheathing having obliquely disposed strengthening members formed therein, a car post, and a separate sheathing for said car post, substantially as described.

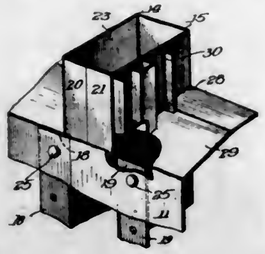
4. In a car construction, the combination of a sheathing having obliquely disposed strengthening members formed integrally therewith at an angle to each other, and reinforcing means within said strengthening members, substantially as described.

5. In a car construction, the combination of a belt rail, a sheathing extending below said belt rail and having obliquely disposed strengthening members formed therein, a car post having a window opening adjacent thereto, a second sheathing for said car post, and a third sheathing above said window opening and having a portion extending downwardly over said car post, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,112,857. SIDE-POST CONSTRUCTION FOR CARS. ALBERT H. SISSON, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed June 28, 1912. Serial No. 706,337. (Cl. 105—201.)

1. In a side post construction, a sheet metal channel provided with a pair of marginal alined slits, the margins on one side of the pair of slits bent inwardly toward each other to form a tubular portion and on the other side of the pair of slits bent outwardly to form a channel portion with wing flanges, the tubular portion constituting a window post, and the sheathing overlying and secured to the flanged channel portion, substantially as described.



2. In a side post construction, a sheet metal channel provided with a pair of marginal alined slits, the margins on one side of the pair of slits bent inwardly toward each other to form a tubular portion and on the other side of the pair of slits bent outwardly to form a channel portion with wing flanges, the tubular portion constituting a window post, and sheathing overlying and secured to the flanged channel portion and inwardly bent over the flanges in line with the slits and alongside the post to form a window sill, substantially as described.

3. In a side post construction, a sheet metal channel provided with spaced pairs of marginal alined slits, the margins of the channel between two pairs of slits bent inwardly toward each other to form a tubular intermediate portion and on the other sides of the two pairs of slits bent outwardly to form a channel portion with wing flanges, the tubular portion constituting a post between adjacent window openings, and the sheathing overlying and secured to the flanged channel portions, substantially as described.

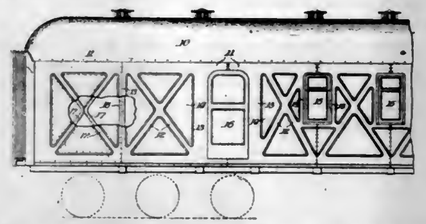
4. In a side post construction, a sheet metal channel provided with spaced pairs of marginal alined slits, the margins of the channel between two pairs of slits bent inwardly toward each other to form a tubular intermediate portion and on the other sides of the two pairs of slits bent outwardly to form a channel portion with wing flanges, the tubular portion constituting a post between adjacent window openings, the sheathing overlying and secured to the flanged channel portions, and inwardly bent over the lower flanges in line with the slits and alongside the posts to form window sills, substantially as described.

5. In a side post construction, a sheet metal channel provided with spaced pairs of marginal alined slits, the margins of the channel between the two pairs of slits bent inwardly toward each other and welded together to form a tubular portion, the margins of the channel beyond the tubular portion bent outwardly to form a channel portion with wing flanges occupying a plane slightly to the rear of the front face of the tubular portion constituting a post supporting adjacent window openings, the sheathing overlying and secured to the flanged channel portions above and below the window openings, the upper sheathing notched and inwardly turned to form an upper marginal finish for the opening and the lower sheathing notched and inwardly bent over the wing flanges and alongside the post to form a window sill, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,112,858. CAR CONSTRUCTION. ALBERT H. SISSON, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 12, 1911, Serial No. 654,308. Divided and this application filed July 18, 1913. Serial No. 779,676. (Cl. 105—192.)

1. In a car construction, the combination of a sheathing covering the side of the car and having obliquely and vertically disposed strengthening members and having window openings between said members, substantially as described.



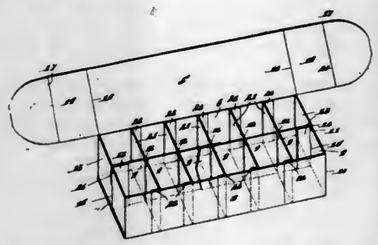
2. In a car construction, the combination of a sheathing covering the side of the car and having obliquely and vertically disposed strengthening members formed therein and having window openings between said members, substantially as described.

3. In a car construction, a sheet metal sheathing composed of integral unit sections of substantially I-shape, the upper and lower horizontal members forming portions respectively of the sheathing above and below contiguous window openings and the vertical portion separating the window openings, substantially as described.

4. In a car construction, a side sheathing composed of unit sections each comprising two horizontal portions integrally joined by a vertical portion, the space between the horizontal portions on the two sides of the vertical portion forming adjacent halves of contiguous window openings, substantially as described.

5. In a car construction, a side sheathing composed of a plurality of unit sections each comprising two horizontal portions integrally joined by a vertical portion, the horizontal portions respectively forming sections of the side sheathing beneath adjacent halves of contiguous window openings and the vertical portion forming a window post section separating adjacent window openings, the said units paneled to form between the panels obliquely disposed integral strengthening members, substantially as described.

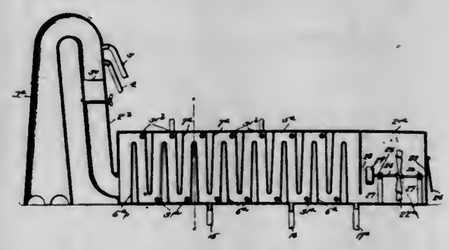
1,112,859. EGG-CARTON. CASSIUS C. SMILEY, Indianapolis, Ind. Filed Oct. 20, 1913. Serial No. 796,220. (Cl. 229—28.)



1. An egg carton comprising a flexible sheet cut out and forming the lid, bottom, front and rear sides of a carton; projections on said front and rear sides forming ends and certain egg compartment partitions; projections on the ends of said lid extending across said ends and between said bottom and lower edges of said ends; and partitions each formed of a separate sheet and extending laterally of the carton and having its ends secured to the front and rear sides of the carton, substantially as described.

2. An egg carton comprising a flexible sheet cut out and forming the lid, bottom, front and rear sides of the carton; projections on the ends of said front side, each projection having a portion forming a half of one end of the carton and a portion extending parallel with said front side midway between said front and rear sides, the ends of said projections overlapping; projections on the ends of said rear sides, each of said last mentioned projections forming the other half of one end of the carton and having its end portion engaging one of said first mentioned projections; lateral partitions each formed of a separate sheet and extending across said first mentioned projections having its ends secured to said front and rear sides, the intersecting points of said projections and partitions being provided with slits and interlocked; and extensions on the ends of said lid extending over said ends and disposed between the lower edges of said ends and said bottom, substantially as described.

1,112,860. FUME-CONCENTRATOR FOR SMELTERS. STEPHEN W. SMITH, San Jose, Cal. Filed Mar. 9, 1912. Serial No. 682,770. (Cl. 75—30.)



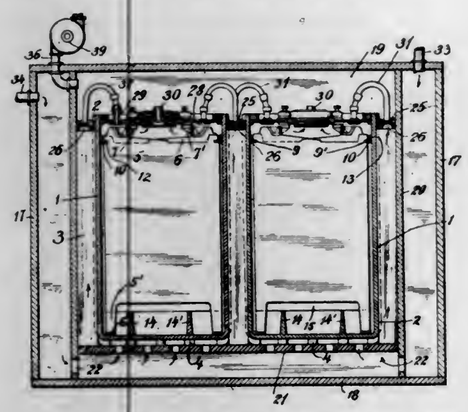
1. A fume concentrator for smelting furnaces including a fume chamber, a series of hollow and transversely disposed baffles projecting into the fume chamber alternately from opposite sides thereof, means for circulating a refrigerating medium through the hollow baffle members, a conduit leading from one end of the fume chamber to the furnace, reagent pipes entering the conduit for partially treating the fumes before they enter the fume chamber, a chamber communicating with the opposite end of the fume chamber, means within the said chamber for drawing the fumes positively through the conduit and fume chamber, reagent pipes entering the fume chamber at the bases of the hollow baffles upon opposite sides thereof and arranged to produce jets along the sides of the baffles so as to tend to propel the fumes through the chamber, and traps arranged at successive intervals in the length of the fume chamber at the base thereof.

2. A fume concentrator for smelting furnaces including a fume chamber, a conduit leading from one end of the fume chamber to the furnace, means for introducing reagents into the conduit to partially treat the fumes before they reach the fume chamber, a series of baffles projecting alternately from opposite sides of the fume chamber, a series of reagent pipes entering the fume chamber at the bases of the baffles upon opposite sides thereof and arranged to produce jets along the sides of the baffles, a second chamber communicating with the discharge end of the fume chamber, a series of revolving paddles mounted within the second chamber, means for dropping water upon the revolving paddles whereby the water is dashed into a spray and caused to effectively wash the fumes, means for introducing reagents into the said second chamber, and means for positively drawing the fumes through the conduit and chambers.

3. A fume concentrator for smelting furnaces including a fume chamber, a conduit leading from one end of the fume chamber to the furnace, means for introducing reagents into the conduit to partially treat the fumes before they reach the fume chamber, a series of transverse baffles projecting into the fume chamber alternately from opposite sides thereof, a series of reagent pipes entering the fume chamber at the bases of the baffles upon opposite sides thereof and arranged to produce jets along the sides of the baffles, a second chamber communicating with the discharge end of the fume chamber, paddles mounted within the second chamber, means for dropping water upon the revolving paddles whereby the same is dashed into a spray and caused to effectively wash the fumes, means for introducing reagents into the second chamber, a series of

traps arranged at intervals along the bottoms of the fume chamber and second chamber, a third chamber communicating with the discharge end of the second chamber, and means within the said third chamber for positively drawing the fumes through the conduit and the various chambers.

1,112,861. STORAGE BATTERY. ALMOND H. SNYDER, Lancaster, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Aug. 15, 1912. Serial No. 715,148. (Cl. 204—53.)



1. The combination of a series of storage batteries having their jars arranged adjacent one another so as to form vertical ventilating spaces between the adjacent sides of the jars, means for covering the tops of said spaces, covers for the jars, ventilating connections between the covered spaces and the interior of the jars, air ducts in the covers of the jars, and means for causing a flow of air through said spaces, connections and jars.

2. The combination of a closed compartment, a series of storage batteries within the compartment having their jars arranged adjacent one another so as to form vertical ventilating spaces between adjacent sides of the jars, means extending along the tops of the ventilating spaces to cover the spaces and form ventilating passageways along the same, covers for the jars having ventilating openings therein, ventilating connections between the passageways and certain of the openings in the covers of the jars, an air pipe communicating with the compartment below the vertical ventilating spaces, and a second air pipe communicating with the compartment above the covers for the said vertical ventilating spaces, whereby the interior and exterior of the jars may be ventilated.

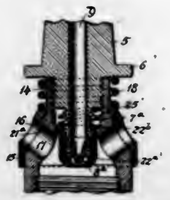
3. The combination of a series of storage batteries having their jars arranged adjacent one another so as to form vertical ventilating spaces between the adjacent sides of the jars, means for sealing the tops of said spaces, covers for the jars having air inlet openings therein, means connecting the openings with the tops of the sealed ventilating spaces, and air outlet ducts extending through the covers of the jars.

4. The combination of a series of storage batteries having their jars arranged adjacent one another, covers for the jars having ventilating air ducts therethrough, vertical spacing pieces between adjacent walls of the jars forming, with the walls of the jars, vertical and ventilating flues, ventilating connections between one end of the flues and the interior of the jars.

5. The combination of a series of storage batteries having their jars arranged adjacent one another, covers for the jars having inlet and outlet ventilating openings, vertical spacing pieces between adjacent walls of the jars forming therewith vertical ventilating flues, ventilating passageways communicating with the tops of the flues, connections between the passageways and the inlet openings through the covers of the jar, and means for creating a flow of air through said flues, passageways and jars, whereby the interior and exterior of the jars are ventilated.

[Claims 6 to 14 not printed in the Gazette.]

1,112,862. BUNSEN BURNER. OTTO SPAHR and LOUIS J. STRAUSE, Philadelphia, Pa., assignors to Strause Gas Iron Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1913. Serial No. 761,898. (Cl. 158—118.)



1. In a Bunsen burner, a device adapted for connection with a fuel conducting tube, an apertured air hood detachably connected with said device, an adjustable air regulating shutter on said air hood, means for maintaining said shutter in an adjusted position, a nipple connected with said device and extending into said air hood, a cap adjustable relatively to said nipple for regulating the fuel pressure and supply in said air hood and means for maintaining said cap in an adjusted position.

2. In a Bunsen burner having a mixing chamber, a conical nipple having a continuously open outlet aperture at its apex, and additional outlet openings located adjacent to said apex, and extending at right angles to the axis of the nipple, and a cap having an outlet leading to said mixing chamber, said cap being adjustable relatively to said nipple whereby said additional openings are opened or closed and the outlet of said cap is moved toward or away from said conical nipple.

3. In a Bunsen burner, a device adapted for connection with a fuel conducting tube, an apertured air hood detachably connected with said device, an internal flange in said air hood, a nipple connected with said device and extending into said air hood, a cap adjustable on said nipple for regulating the fuel pressure and supply in said air hood, a projection on said cap adapted to coöperate with said flange for preventing said cap from being disconnected from the nipple and a spring engaging said cap and exerting a force tending to move said projection toward said flange and adapted to maintain said cap in an adjusted position.

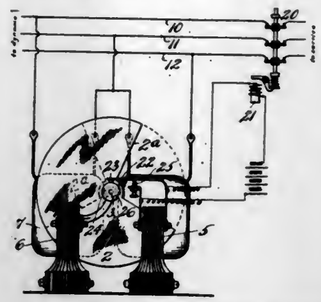
4. In a Bunsen burner having a tubular mixing chamber and air inlets leading thereto, a movable tubular shutter extending over said mixing chamber and having apertures adapted to be brought into and out of registry with said air inlets whereby the supply of air to the mixing chamber may be regulated, a shoulder on said burner and a spring having its one end in engagement with said shoulder and its other end in engagement with one end of said shutter and arranged to maintain said shutter in an adjusted position.

5. In a Bunsen burner, a mixing chamber, a fuel inlet connected therewith and tapering toward its exit end, said fuel inlet being provided with an axial opening and with transverse openings, and a cap on said inlet provided with an axial opening adapted to communicate with said transverse openings and adjustable to regulate the pressure and supply of fuel in said mixing chamber, said cap being inclined interiorly at an angle differing from the angle of the taper of said fuel inlet.

[Claims 6 to 8 not printed in the Gazette.]

1,112,863. REVERSE-PHASE SAFETY-RELAY FOR MOTOR-CIRCUITS. CHARLES H. SPANGLER, Reading, Pa. Filed June 4, 1913. Serial No. 771,608. (Cl. 175—294.)

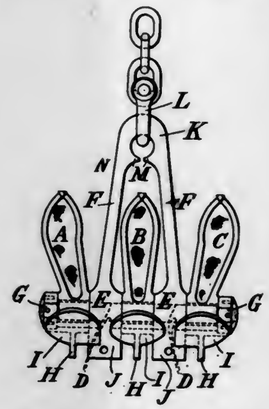
1. In combination with a multi-phase alternating current motor circuit, a pair of magnetic cores, an air-gapped non-magnetic disk pivotally supported between said cores and rocked on its pivot by the combined action of said cores, said rocking movement being limited in either direction by the boundary lines of said air gap.



2. In combination with a multi-phase alternating current motor circuit containing a circuit breaker and a pair of magnetic cores, an air gapped non-magnetic disk pivotally supported between said cores and rockable in one direction by the normal phase relation in the motor circuit, and in the reverse direction by a change of phase relation in said circuit, and breaker opening means operated by said reverse swing of the disk.

3. In combination with a multi-phase alternating current motor circuit containing a circuit breaker; a reverse phase operating device for said breaker comprising two magnetic cores having separate energizing coils in delta connection with the line wires, an air-gapped disk arranged to be swung in one direction by the combined action of the fluxes produced in said cores by a normal phase relation in said coils and in the other direction when the phases are reversed, and operating connections between said disk and circuit breaker whereby the latter is opened when the phases are reversed; the swinging movement of said air-gapped disk being limited by the boundary lines of said air gap.

1,112,864. STOCKLESS ANCHOR. AXEL FILIP WALDEMAR STÅHLBERGER, Dumbarton, Scotland. Filed Apr. 6, 1914. Serial No. 829,771. (Cl. 114—208.)



1. An anchor comprising a bifurcated shank and independently pivoted flukes within and without said shank.

2. An anchor comprising a bifurcated shank, a pivoted fluke within said shank and independently pivoted flukes without said shank.

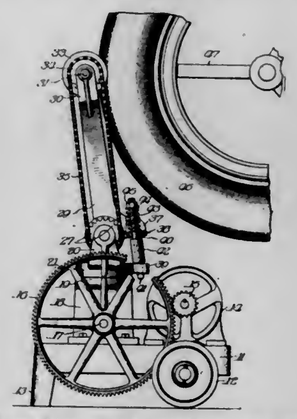
3. An anchor comprising a bifurcated shank, a rod carried by said shank, a plurality of flukes turnably and independently mounted on said rod, one being within and the remainder without said shank.

4. An anchor comprising a bifurcated shank, a pivoted fluke within said shank and normal to its pivot and independently pivoted splayed flukes without said shank.

5. An anchor comprising a bifurcated shank, independently pivoted flukes within and without said shank and tripping blades on said flukes.

[Claims 6 to 12 not printed in the Gazette.]

1,112,865. PORTABLE BUFFER. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Dec. 14, 1912. Serial No. 736,730. (Cl. 29—76.)

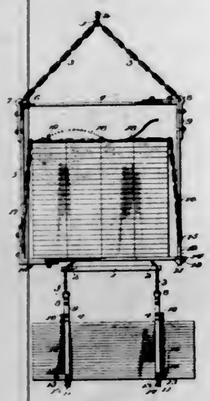


1. In a machine of the character described, the combination of a base, a motor mounted thereon, a pedestal mounted upon the base, a substantially vertical arm swiveled upon the pedestal and pivoted to swing in a vertical plane, a buffing roller carried by the arm, a driving connection between the motor and the roller, the arm provided with a lateral projection, a spring connection between the projection and a fixed portion of the device tending to swing the arm to press the roller against the tire, and a handle carried by the arm whereby to control the action of the spring and the movement of the arm about its swivel connection, substantially as described.

2. In a machine of the character described, the combination of a base, a motor mounted thereon, a pedestal mounted upon the base, a drive shaft journaled in the pedestal, a yoke, a transmission shaft journaled in the yoke, a shaft forming a swivel connection between the pedestal and yoke, intermeshing gears carried by the three shafts, a driving connection between the drive shaft and motor, an arm pivoted in the yoke for movement in a vertical plane, a roller carried by the arm and having an abrading surface, a driving connection between the transmission shaft and the roller, yielding means tending to swing the arm to cause the roller to bear upon the tire, and manually operable means to control the swinging of the arm and to turn the same upon its swivel connection, substantially as described.

3. In a machine of the character described, the combination of a base, a motor mounted thereon, a pedestal mounted upon the base, a drive shaft journaled in the pedestal, a yoke, a transmission shaft journaled in the yoke, a shaft forming a swivel connection between the pedestal and yoke, intermeshing gears carried by the three shafts, a driving connection between the drive shaft and motor, an arm pivoted in the yoke for movement in a vertical plane, a roller carried by the arm and having an abrading surface, a driving connection between the transmission shaft and the roller, the arm and yoke having laterally extending projections, a spring connecting said projections and tending to swing the arm to press the roller against the tire, and a handle carried by the arm whereby to control the action of the spring and to turn the arm about its vertical axis upon its swivel connection, substantially as described.

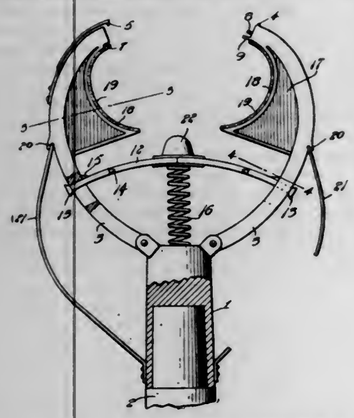
1,112,866. SLING. FRANK E. SLUTMAN, Brentwood, Cal. Filed May 17, 1912. Serial No. 697,996. (Cl. 57—11.)



1. In a sling, frame-sections, each including members rigid with respect to each other and extending substantially at right angles to each other, pivotal connection between the upper member of one of the frame-sections and the vertical member of the other frame-section, a latch for connecting the lower end of the vertical member of the first mentioned frame-section and the lower member of the second mentioned frame-section, and suspension means connected at the upper ends of the vertical members of the said frame-sections.

2. In a sling, frame-sections, each including members rigid with respect to each other and extending substantially at right angles to each other, pivotal connection between the upper member of one of the frame-sections and the vertical member of the other frame-section, a latch for connecting the lower end of the vertical member of the first mentioned frame-section and the lower member of the second mentioned frame section, a binder chain connected adjacent the lower end of the vertical member of the first-mentioned frame section, a binder chain connected adjacent the lower end of the vertical member of the second mentioned section, and means for connecting the ends of the chains.

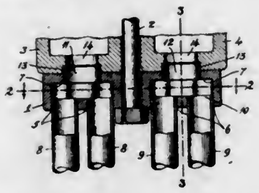
1,112,867. SHEEP HOOK OR CATCHER. JOSEPH TAYLOR and WILLIAM TAYLOR, Rowland, Nev. Filed Apr. 14, 1914. Serial No. 831,768. (Cl. 119—151.)



1. A tool of the class described comprising a pair of pivotally mounted jaws, a spring pressed trigger bar engaged with the jaws for holding the same open, flanges formed upon the jaws for engaging the animal's leg therebetween after the trigger bar has been shifted by contact with the animal's leg, and means carried by the extremities of the jaws for locking engagement, as and for the purpose set forth.

2. A tool of the class described comprising a ferrule, a pair of jaws pivotally connected to the ferrule, leaf springs having one of their ends connected to the ferrule and their other ends engaging the jaws, said jaws having slots formed therein, a trigger bar having its ends slidably engaged in the slots, inner and outer spaced shoulders carried by the trigger bar, the outer shoulders being adapted to engage the jaws to hold the same open, flanges carried by the jaws, said flanges having curved edges for engaging around the animal's leg, a buffer carried by the trigger bar which when engaged by the animal's leg shifts the trigger bar to disengage the outer shoulders from the jaws, whereby said jaws automatically close.

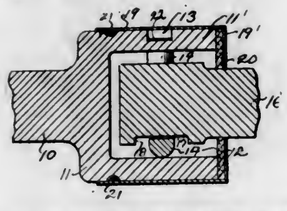
1,112,868. CONNECTING MEMBER FOR SUPERHEATER-ELEMENT ENDS. PETER THOMSEN, Cassel-Wilhelmshöhe, Germany, assignor to Schmidt'sche Heissdampf Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed June 18, 1914. Serial No. 845,789. (Cl. 122—462.)



1. A connecting member for joining a plurality of pipes to a single pipe, comprising a solid block having holes bored from one side to receive the plurality of pipes, and a hole bored from the other side, intersecting each of the first named holes, to receive the single pipe the cross section of the bore for the single tube being substantially equal to the combined cross section of the plurality of pipes.

2. A connecting member for joining a plurality of pipes to a single pipe, comprising a solid block having holes bored from one side to receive the plurality of pipes, and a hole bored from the other side, intersecting each of the first named holes, to receive the single pipe the cross section of the bore for the single tube being substantially equal to the combined cross section of the plurality of pipes, the smaller holes and the single larger hole being both extended past the central plane of the block.

1,112,869. UNIVERSAL JOINT. EDWARD J. TIRRELL, Flint, Mich. Filed Dec. 28, 1912. Serial No. 739,162. (Cl. 74—19.)



1. In a universal joint, a shaft having a casing formed on one end thereof, the wall of said casing being provided with a plurality of openings, a plurality of pins positioned within said openings and extending within the interior of the casing to form a triangular frame, and a second shaft projecting between said pins and formed with flattened faces for engagement with the pins intermediate their ends.

2. A universal joint comprising a shaft having a casing formed on one end thereof, the wall of said casing being formed with a plurality of openings, a plurality of pins journaled within said openings and extending within the casing to form a triangular frame, and a second shaft projecting between said pins and formed with flattened surfaces for engagement with the pins intermediate their ends.

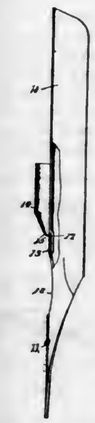
3. A universal joint including a shaft having a casing formed on one end thereof, the wall of said casing being provided with a plurality of openings, pins having their ends fitted within said openings, said pins extending within the casing to form a triangular frame, a second shaft extending within the casing between the pins and having flattened faces for engagement with said pins, and a sleeve surrounding said casing and covering the openings therein, whereby the pins are retained in their operative positions.

4. A universal joint comprising a shaft having a casing formed on one end thereof, the wall of said casing being provided with a plurality of openings, pins fitted within said openings and extending into the casing to form a triangular frame, a second shaft having its periphery recessed to provide flattened faces for engagement with said pins intermediate their ends, the recesses forming shoulders to limit the longitudinal movement of one shaft relative to the other, and a sleeve surrounding said casing and covering the openings therein, whereby the pins are retained in operative positions.

5. A universal joint including a shaft having a casing formed on one end thereof, three pins journaled at their ends within the wall of the casing, said pins extending within the casing to form a triangular frame, a second shaft extending between said pins, and having flat faces for engagement therewith, and means for retaining the pins in their operative positions.

[Claim 6 not printed in the Gazette.]

1,112,870. FOUNTAIN-PEN POINT. JOHN J. WALKOWC, Detroit, Mich. Filed June 5, 1913. Serial No. 771,939. (Cl. 120—115.)



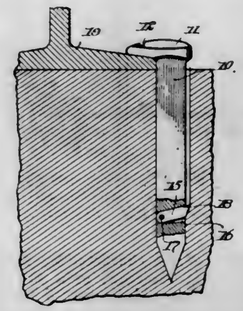
1. A split nib pen point including an aperture at the inner end of the split with a longitudinally directed channel communicating with the aperture, and an ink reservoir carried by the pen point and having a discharge orifice communicating with the channel.

2. A split nib pen point including an aperture at the inner end of the split and a longitudinally directed channel communicating with the aperture, and an ink reservoir carried by the pen point and converging at one end and having a discharging orifice at the converging end communicating with the channel.

3. A split nib pen point having a longitudinally directed channel, an ink reservoir carried by the pen point and having a discharge orifice communicating with the channel, and communicating means between the channel of the underface of the pen point.

4. The combination with a split nib pen point including an aperture at the upper terminal of the split and with a channel communicating with the upper end of the aperture, of an ink reservoir attached to the pen point and having an ink orifice providing for the discharge from the reservoir into the channel.

1,112,871. SPIKE. FREDRICK H. WALTER, Fennimore, Wis. Filed Mar. 21, 1914. Serial No. 826,312. Cl. 85—23.)



1. A spike provided with a transversely extending opening adjacent its penetrating end, the slot increasing in size toward its outer end, a locking pawl pivotally mounted in said slot and having its free end extending beyond the outer end of the slot with its free end cut at an incline to form a cam edge and having the outer end of its upper edge curved inwardly to form a penetrating point, a head at the upper end of said spike provided with rail-engaging lip having a seat formed therein, and a plate fitting beneath said lip and provided with arms fitting into said seat to secure said plate beneath said lip.

2. A spike provided with an opening adjacent its penetrating end, a locking pawl pivotally mounted in said opening with its free end extending beyond said spike and sharpened to form a penetrating point, a head for said spike provided with a rail-engaging lip, a plate fitting beneath said lip, and means releasably connecting said plate with said lip.

3. A spike, a locking pawl pivotally connected with said spike with its free end extending beyond the side of the spike and cut at an incline to form a cam and terminating in a penetrating point, and means releasably connected with the head of said spike for moving said spike to a position to swing said pawl to a locked position.

4. A spike, a locking pawl carried by said spike, and means connected with the head of said spike for moving said spike to a position to move said locking pawl to a locked position.

5. A spike, a head for said spike provided with rail-engaging lip, locking means carried by said spike, and means carried by the lip of the head of said spike for moving said spike to a position to move said locking means to a locked position.

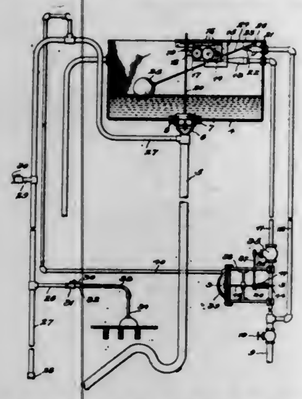
[Claims 6 to 8 not printed in the Gazette.]

1,112,872. VACUUM SYSTEM. JULIAN N. WALTON, Brooklyn, N. Y. Filed Dec. 8, 1913. Serial No. 805,271. (Cl. 230—15.)

1. In a structure of the character set forth, the combination with a liquid reservoir, of a fall tube leading therefrom, a vacuum member having communication with the tube, a valve controlling the passage of liquid through the fall tube, means for supplying liquid to the reservoir, and means actuated by the liquid supply for operating the valve.

2. In a structure of the character set forth, the combination with a liquid reservoir, of a fall tube leading

therefrom, a vacuum member having communication with the tube, a valve controlling the passage of liquid through the fall tube, means for supplying liquid to the reservoir, a motor actuated by the liquid supply, and means operated by the motor for periodically operating the valve.



3. In a structure of the character set forth, the combination with a liquid reservoir, of a fall tube leading therefrom, a vacuum pipe connected to the fall tube, a valve at the inlet end of the fall tube, two means for delivering liquid to the reservoir, a float valve controlling one of said means, a motor actuated by the liquid delivered through the other means, a cam member operated by the motor, and a device connected to the valve and periodically actuated by the cam member to periodically open the valve.

4. In a structure of the character set forth, the combination with a liquid reservoir, of a fall tube leading therefrom, a vacuum member having communication with the tube, a valve controlling the passage of liquid through the fall tube, means for periodically actuating the valve, and means operated by a predetermined vacuum in the vacuum member for preventing the opening movement of the valve.

5. In a structure of the character set forth, the combination with a liquid reservoir, of a fall tube leading therefrom, a vacuum member having communication with the tube, a valve controlling the passage of liquid through the fall tube, means for supplying liquid to the reservoir, a motor actuated by the liquid supply, means operated by the motor for periodically operating the valve, a valve controlling the liquid supply, and means for closing said valve when there is a predetermined vacuum in the vacuum member.

[Claim 6 not printed in the Gazette.]

1,112,873. DIVIDING, LANIFYING, AND BLEACHING BASS-FIBERS. LEON DE WOLF WANTE, St. Nicolas-Waas, Belgium. Filed Sept. 7, 1912. Serial No. 719,142. (Cl. 8—2.)

1. The process of producing bleached and softened bass-fibers, such as jute, hemp, flax, cocoa and the like fibers consisting in subjecting the steeped or retted fibers first to a bath composed of caustic alkali lye and a solution of an alkali metal salt of hypochlorous acid, and then softening the fibers.

2. The process of producing bleached and softened bass-fibers, such as jute, hemp, flax, cocoa and the like fibers consisting in subjecting the steeped or retted fibers first to a bath composed of equal volumes of caustic alkali lye of 36° Bé. and of a solution of an alkali metal salt of hypochlorous acid of 20° Bé., and then softening the fibers.

3. The process of producing bleached and softened bass-fibers, such as jute, hemp, flax, cocoa and the like fibers consisting in subjecting the steeped or retted fibers to a bath composed of caustic alkali lye and a solution of an alkali metal hypochlorite, pressing out or drying the fibers, and then subjecting them to a hot water bath containing a small percentage of a substance adapted to impart softness and luster.

4. The process of producing bleached and softened bass-fibers, such as jute, hemp, flax, cocoa and the like fibers consisting in subjecting the steeped or retted fibers to a bath composed of caustic alkali lye and a solution of an alkali metal hypochlorite, pressing out or drying the fibers, and then subjecting them to a hot water bath containing about 1% of glycerin.

5. The process of producing bleached and softened bass-fibers, such as jute, hemp, flax, cocoa and the like fibers consisting in subjecting the steeped or retted fibers to a bath composed of potash lye and a solution of an alkali metal hypochlorite, pressing out or drying the fibers, and then subjecting them to a hot water bath containing about 1% of glycerin.

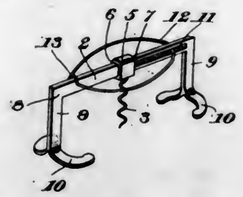
[Claim 6 not printed in the Gazette.]

1,112,874. VIBRATOR-LEVER AND VIBRATOR-CONNECTOR. WILLIAM WATTIE, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 15, 1910. Serial No. 597,469. (Cl. 139—79.)

1. As an improved article of manufacture, a vibrator lever for the head motion of a loom shuttle box and harness shedding mechanism, comprising a single piece of sheet metal of one thickness, made in the desired shape, with an open end slot at one end, and a separate piece, having an open end slot therein, and welded thereto at said open slot end, to form a double thickness of metal, and a stud or boss, made separate, and welded to the other end of said piece of sheet metal.

2. As an improved article of manufacture, a vibrator connector for the head motion of a loom shuttle box and harness shedding mechanism, comprising a single piece of sheet metal of one thickness, made in the desired shape, with an open end slot at one end, and a separate piece, having an open end slot therein, and offset, and welded thereto at said open end, to form two thicknesses of metal, with a space between, and a stud or boss, made separate, and welded to the other end of said piece of sheet metal.

1,112,875. CORK EXTRACTOR AND FASTENER. PATRICK JOHN WHELAN, Douglas, Ontario, Canada. Filed Oct. 31, 1913. Serial No. 798,576. (Cl. 215—53.)



1. A cork extractor and fastener comprising a corkscrew and a gripping member extending transversely across the corkscrew and free to turn with respect to the same, said gripping member having means to engage and grip the neck of the bottle, and means of adjusting the said neck gripping means.

2. A cork extractor and fastener comprising a corkscrew, a gripping member extending transversely across the corkscrew and free to turn with respect to the same, the ends of said gripping member being bent substantially at right angles and splayed out to engage and grip the neck of the bottle, a slot extending through one side of the said gripping member and terminating at the corkscrew, and a ring loosely engaging with the said slot and having a clip designed to engage with the gripping member, as and for the purpose specified.

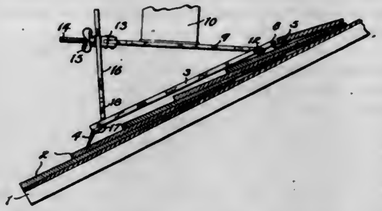
3. A cork extractor and fastener comprising means for engaging the cork consisting of a head having a groove therein, a corkscrew pivotally mounted in such head, a gripping member extending transversely across the corkscrew and free to turn with respect to the same, the ends of said gripping member being bent substantially at right angles and splayed out to engage and grip the neck of the bottle, a slot extending through one side of said gripping member and terminating at the head of the said corkscrew, a ring loosely engaging the said slot and having a clip designed to engage with the gripping member and means of turning the said ends into position to lie along the underface of the said gripping member.

4. A cork extractor and fastener comprising means for engaging the cork consisting of a head piece having a slot therein and a corkscrew pivotally mounted in such slot, a gripping member extending transversely across the cork screw and free to turn with respect to the same, one end of such gripping member being bent substantially at right angles and splayed outwardly to engage the neck of the bottle, the side remote from such end having a groove in and along the bottom face, an adjustable member having a threaded orifice therethrough engaging with the said groove, the ends of such member being splayed outwardly to engage the neck of the bottle, a threaded screw engaging with the said threaded orifice and held in position by collars engaging with its inner end, the outer end being provided with a knob, a slot extending through that side of the said gripping member remote from the adjustable end, such slot terminating at the corkscrew, a ring loosely engaging with the said slot and having a clip designed to engage with the gripping member, as and for the purpose specified.

5. A cork extractor and fastener comprising means for engaging the cork consisting of a head piece provided with a slot, a corkscrew pivotally engaging in such head piece, a gripping member extending transversely across the corkscrew and free to turn with respect to the same, one end of such member being bent substantially at right angles and having a groove therein, the other end of such gripping member being provided with a groove in and extending along its bottom face, an adjustable piece provided with a groove designed to engage with the groove in the said gripping means, such adjustable piece having a threaded orifice therethrough, a threaded screw engaging with such orifice and held in position by collars engaging its inner end, the outer end being provided with a knob, neck gripping means, one end of which is splayed outwardly to engage the neck of the bottle, the other end having a tongue adapted to fit the groove in the said adjustable member and the groove in the said opposite end of the said gripping member, and spring engaging with the said neck gripping means, as and for the purpose specified.

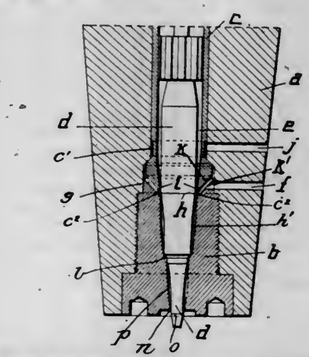
1,112,876. TEMPORARY BRACKET FOR SHINGLING ROOFS. HARRY WIDLUND, Manson, Iowa. Filed Mar. 2, 1914. Serial No. 821,913. (Cl. 20—86.)

A temporary bracket for shingle roofs including a frame having openings in the upper and lower ends thereof, a shingle engaging lip at the upper edge of the roof plate, shingle engaging prongs projecting downwardly from the lower end of the roof plate, a shelf provided at one end thereof with a hooked extension loosely engaging the upper opening of the roof plate, a slotted prop provided at the lower end thereof with a laterally projecting hook member adapted to have the end thereof inserted through the opening in the lower end of the roof plate when the prop is swung donwardly into inoperative position, but engaging the bottom of the roof plate to prevent withdrawal of the hook member from the opening of the roof plate when the prop is swung upwardly into operative position, a lateral lug projecting from the base of the prop and engaging the top of the roof plate to hold the prop against downward movement through the opening,



a threaded stem projecting from the swinging end of the shelf and received loosely within the slotted portion of the prop, and a clamping nut upon the threaded stem for locking the shelf in an adjusted position.

1,112,877. FUEL-INJECTOR. SVEN WIGELIUS, Stockholm, Sweden, assignor to Aktiebolaget Wigelius Motorer, Stockholm, Sweden. Filed Apr. 26, 1910. Serial No. 557,781. (Cl. 123—131.)



1. A fuel injector for combustion engines, comprising in combination, a tubular sleeve, a vertically movable tube within said sleeve, provided at its lower end with an annular valve, a plug secured into said sleeve from below, provided with a valve seat for said valve, a movable regulating spindle in said tube and said plug, and a shoulder upon said spindle constituting a valve with the lower end of said tube.

2. A fuel injector for combustion engines, comprising in combination, a movable tube, a central regulating spindle therein, forming with the wall of said tube, a channel, a shoulder upon said spindle said tube being contracted on one side of said shoulder, and the inner section of the tube on the other side being diverging toward the other side of the shoulder, substantially as described.

3. A fuel injector for combustion engines, comprising in combination, a contracted, movable tube, a central movable regulating spindle therein, adapted to contact when in its lower end-position with the contracted part of said tube, a fuel passage past the end of said tube, a shoulder on the spindle immediately below that part thereof contacting with said tube, and arranged at or near the mouth of the fuel passage said spindle being contracted below said shoulder, substantially as described.

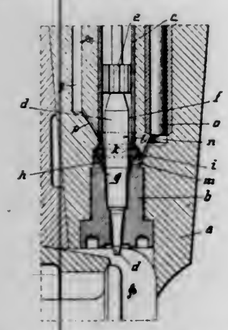
4. A fuel nozzle for combustion engines comprising in combination, a structure comprising an outer sleeve and an inner movable tube and a socket screwed into said sleeve below said tube, said structure having an air passage delivering to the cylinder of the engine and provided with contracted portions at spaced longitudinal points thereof, and having a forced feed fuel passage delivering to the air passage at one of the contracted portions thereof, and a spindle movable longitudinally in

said tube and socket and having enlargements or shoulder portions coacting with the contracted portions of said passage to vary during the movement of the spindle the cross sectional area of the air passage at more than one of the contracted portions, substantially as and for the purpose set forth.

5. A fuel nozzle for combustion engines comprising in combination, a structure comprising an outer sleeve and an inner movable tube, and a socket screwed into said sleeve below said tube, said structure having an air passage provided with gradually contracted portions at spaced points longitudinally thereof, and having a passage for fuel under pressure leading to said air passage at one contracted point thereof, and a spindle movable longitudinally in said tube and socket, said spindle having gradually enlarging portions coacting with the contracted portions to form valves and to vary during the movement of the spindle the cross sectional area of the air passage at more than one of the contracted portions, substantially as described.

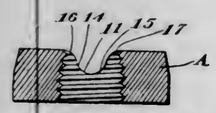
[Claims 6 and 7 not printed in the Gazette.]

1,112,878. FUEL-INJECTOR. SVEN WIGELIUS, Stockholm, Sweden, assignor to Aktiebolaget Wigelius Motorer, Stockholm, Sweden. Filed Apr. 26, 1910. Serial No. 557,783. (Cl. 123—131.)



In a fuel injector of the character described, the combination of an outer sleeve and a plug screwed into the same from below with a movable sleeve, an air inlet channel formed by the inner walls of said plug and the movable sleeve for supplying air, said movable sleeve limiting the cross-sectional area of said inlet channel, valve faces upon opposite sides of said sleeve and valve faces upon said plug and upon said outer sleeve for forming valves with the valve faces of said movable sleeve constituting a means for supplying fuel.

1,112,879. METHOD OF MANUFACTURING GRIP-NUTS. FREDERICK WILLIAM WRIGHT and CHARLES RICHARD ROOF, New Glasgow, Nova Scotia, Canada. Filed Nov. 24, 1913. Serial No. 802,820. (Cl. 10—86.)

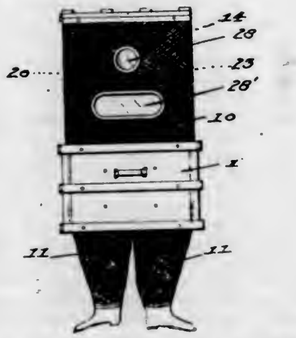


In the art of making grip nuts, pressing a recess into the upper side of the nut and forming filleted corners on such recess, and then pressing the sides of the recess toward each other, whereby the diameter of the perforation through the nut is smaller on one side than on the other.

1,112,880. BOTTLE-CROWN. CHARLES S. ZONNE, Minneapolis, Minn. Filed Feb. 26, 1914. Serial No. 821,132. (Cl. 215—10.)

A bottle crown formed from a single piece of sheet metal constituting a blank comprising two integral relatively large and small portions consisting of segments of circles of different diameters, their line of juncture being a chord common to the two circles, the relatively large body portion having a complete circular crimped flange, certain of which crimps extend outward in the relatively small lip-forming circular portion.

1,112,881. LIFE-PRESERVER AND TRUNK. NICHOLAS G. ABNATE, Baltimore, Md. Filed June 30, 1914. Serial No. 848,162. (Cl. 9—20.)



1. A life preserver and trunk, consisting of the main portion, the cover for said portion, and a bag fitting and received in said main portion and adapted to provide an upper canopy portion and lower leg receiving portions.

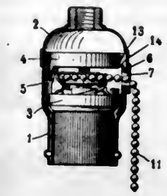
2. A life preserver and trunk, consisting of the main portion having openings in its bottom wall, a bag forming the lining for said main portion and consisting of lower leg receiving members, and an upper canopy portion, and means for securing the canopy portion in raised position.

3. A life preserver and trunk, consisting of the main portion and cover, a bag forming the lining for said main portion and comprising lower leg receiving members and an upper canopy portion, a supporting frame for retaining the canopy portion in extended position, and a cover connected with said upper portion.

4. A life preserver and trunk, consisting of the main portion and cover, a bag fitting the main portion and comprising lower leg members and an upper canopy portion, a frame for supporting the canopy, a ventilator mounted in the cover, and sight windows mounted in said canopy portion.

5. A life preserver and trunk, consisting of a main portion having an opening in its bottom wall, a cover for said opening, a cover for the main portion having an opening therein, a bag mounted in the main portion and providing a canopy and leg members, and a supporting frame for said canopy.

1,112,882. ELECTRIC SWITCH. FREDERIC BARR, New York, N. Y. Filed Apr. 21, 1911. Serial No. 622,526. (Cl. 173—354.)



1. A pull socket comprising a shell body having a slot in its upper end, a double flanged eyelet detachably carried by said shell in said slot forming a chain guide and having its flanges overlapping the edges of the body surrounding the slot and a shell cap on the body holding the eyelet in place.

2. A pull socket comprising, a porecinin carrying the switch parts and having a lateral projection, a shell inclosing said parts and consisting of a body and a cap, said body having a slot receiving said projection, a chain guide detachably fitted in said slot and having a flange on its inner end beneath said projection, said cap covering said projection.

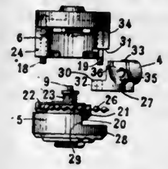
3. In a pull socket, a metallic shell-body having a slot, a chain guide having a groove removably fitting the edges of the metal around the slot and a shell-cap fitting the edge of the body and holding the chain guide in place.

4. In a pull socket, a metallic shell-body having a slot, a chain guide having a grove removably fitting the edges of the metal around the slot, a shell-cap fitting the edge of the body and holding the chain guide in place and a porcelain inside the shell having a projection for preventing relative displacement.

5. In electric light pull sockets the combination of a shell provided with a slot, a removable chain guide having means to coöperate with the walls of the slot, a cap to prevent the movement of the chain guide in one direction, and means for securing the cap and shell together.

[Claims 6 and 7 not printed in the Gazette.]

1,112,883. ELECTRIC SWITCH. FREDERIC BARR, New York, N. Y. Filed Apr. 29, 1912. Serial No. 693,936. (Cl. 173—354.)



1. In a pull switch, an insulating block provided with an annular insulating wall inclosing a switch chamber and extending only part way around such switch chamber, thereby leaving an opening in the side of the block, an insulating chain guide comprising an insulating base fitting in the opening in the side of the block and a projecting tubular guiding portion carried by said base, the said insulating base of the chain guide being substantially the thickness of the annular insulating wall and disposed in the opening to form a continuation of the said annular insulating wall of the block, with its outer surface flush with and conforming to the exterior surface of the insulating block and its inner surface substantially flush with the inner surface of the annular wall and shaped to guide and direct the chain into the tubular projecting portion of the chain guide, means securing the chain guide in position in the opening with its insulating base forming an insulating continuation of the insulating wall of the block and a metallic shell inclosing the block and fitting the exterior of the block and thereby engaging with the insulating base of the chain guide flush with the exterior of the block to brace the insulating chain guide against breakage, said shell having an opening therein through which the insulating tubular guiding portion of the chain guide projects, whereby to carry a pull chain from the switch chamber out through the metallic shell and completely insulated therefrom.

2. In a pull switch, the combination with an insulating block provided with a switch receiving chamber and with an annular wall partially inclosing said chamber and having an opening in one side for the passage of a switch operating chain, of a chain guide having a base fitting in the said chain opening and a screw passing down through the inclosing wall and through the base of the chain guide seated in the opening in said wall to thereby secure the chain guide in place.

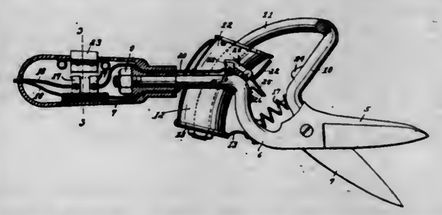
3. In a pull switch, an insulating switch block formed in two parts, an insulating chain guide having a base fitting in between the two parts of the switch block and a screw passing down through one of the parts of the switch block and through the base of the chain guide into engagement with the other part of the switch block to thereby secure the two parts of the block and the guide together.

4. In a pull switch, an insulating block having a chamber for the switch mechanism and a wall partially inclosing said chamber provided with an opening around one side for the passage of a switch operating chain, an insulating chain guide fitting in said opening and having a base portion forming substantially a continuation of the insulating inclosing wall, an oscillating switch operating member and a chain secured thereto and extending through said guide, said guide being grooved on the inner wall of its base portion for said chain and said operating member.

5. In a pull switch, the combination with a switch block formed in two parts, of a chain guide having an insulated portion engaged between the two parts of the block, and a current carrying screw securing the two parts of the block together and passing through the insulated portion of the chain guide to thereby secure the chain guide to the block.

[Claims 6 and 7 not printed in the Gazette.]

1,112,884. MOTOR FOR ELECTRIC SHEARS. HENRY M. BARBER, Chicago, Ill. Filed Apr. 17, 1913. Serial No. 761,651. (Cl. 172—126.)

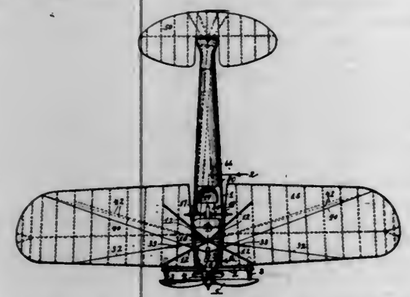


1. A device of the kind described comprising a frame made up of two stems pivoted together; two clamping bands secured on opposite sides of one of said stems; a pair of solenoids clamped in said clamping bands; bifurcated portions on the other of said stems providing armatures coöperating with said solenoids; a compression spring between said stems; a circuit breaker on one of said stems and adapted to engage said other stem to cause operation of said stems; and an electric circuit including said solenoids and circuit breaker, substantially as described.

2. A device of the kind described comprising a frame made up of two stems pivoted together, one of said stems being stationary and the other adapted to oscillate; two clamping bands secured to opposite sides of said stationary stem; two solenoids clamped in said bands; a support secured to the ends of said solenoids and to said stationary stem; two branch portions on said oscillating stem providing armatures for said solenoids; a compression spring between said stems resiliently holding said blades

in open condition; a spring pressed switch carried on one of said stems; a lug on the other of said stems adapted to engage and open said switch upon closing of said blades; and an electric circuit including said solenoids and said switch, substantially as described.

1,112,885. AEROPLANE. JUAN C. BATTISTA, New York, N. Y. Filed Apr. 8, 1913. Serial No. 759,586. (Cl. 244—29.)



1. A device of the character described comprising a body, a propeller and its motor, a central upstanding post, two planes one on each side of said post and adapted to swing around it in a plane substantially at right angles thereto, and a resilient member connected to both planes and adapted to move about the post as a center.

2. In a device of the character described, a central substantially upright post, two planes each adapted to be swung thereon, means for coupling them together and varying their angular position, and means adapted to return them to normal position when swung without disturbing their angular position.

3. In combination, a central substantially upright axis, two planes, a frame connected to each plane and loosely mounted on such axis, a connection between the planes and a spring secured thereto and to the central axis.

4. In combination, a central axis, two planes, a frame connected to each plane and loosely mounted on the axis, a connection between the two planes and a spring adapted to radially move around the central axis and which spring is connected with both planes.

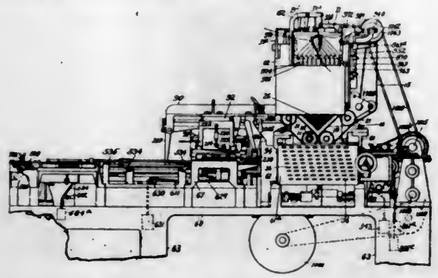
5. In combination, a central axis, two planes, a frame connected to each plane and loosely mounted on the axis, a connection between the two planes and a spring secured to the connection and to the central axis, and means borne against by the spring for resisting the flexing of the spring.

[Claims 6 to 42 not printed in the Gazette.]

1,112,886. MACHINE FOR MAKING, SETTING, AND JUSTIFYING TYPE. BENJAMIN F. BELLOWS, Cleveland, Ohio, assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed July 19, 1909. Serial No. 508,497. (Cl. 101—200.)

1. In a type casting and setting machine, the combination of a plurality of magazines, a set of differentiated controllers stored therein, matrix centering mechanism whose operation is differentially controlled by the several controllers, distributing mechanism whose operation is differentially controlled by the several controllers, mechanism for releasing the controllers singly from their magazines and introducing them into the matrix centering mechanism, and mechanism for carrying said controllers singly from the matrix centering mechanism and introducing them into the embrace of said distributing mechanism.

2. In a type casting and setting machine, the combination of a plurality of magazines, a set of differentiated controllers stored therein, a matrix carrier whereon are a plurality of matrices and which is movable in different directions to center any matrix thereon in operative position, matrix centering mechanism, means for releasing the controllers singly from their magazines and introducing them into a matrix centering mechanism whereby each becomes, for the time being, a part of such mechanism and causes a differentiation in its operation.



3. In a type casting and setting machine, the combination of a mold, a matrix carrier whereon are a plurality of matrices, and which is movable in different directions to center any matrix thereon over the mold, a corresponding set of differentiated controllers, matrix centering mechanism of which a controller is an essential element, a plurality of magazines in which said controllers are stored, and mechanism for releasing said controllers singly from said magazines, and carrying them to and introducing them into the matrix centering mechanism.

4. In a type casting and setting machine, the combination of a plurality of magazines, a set of differentiated controllers stored therein, a matrix carrier on which are matrices arranged in two relatively transverse sets of rows and which is movable in two directions to center any matrix in operative position, mechanisms adapted when moved to move the matrix carrier to bring any matrix to an operative position, said mechanism being adapted to be selectively operated by pressure from the controllers, and mechanism for releasing any controller from its magazine and conveying it to and pressing it against said matrix selecting and moving mechanism.

5. In a type casting and setting machine, the combination of a plurality of magazines, a set of differentiated controllers stored therein, a plurality of matrices, mechanisms adapted when moved to bring any matrix to an operative position, said mechanisms being adapted to be selectively operated by pressure from the controllers, mechanism for releasing any controller from its magazine, and conveying it to and pressing it against said matrix selecting and moving mechanism, controller distributing mechanism adapted to be selectively operated by pressure from the several controllers, means for conveying the controllers into operative relation with said distributing mechanism and for pressing them against the same to selectively operate said distributing mechanism.

[Claims 6 to 206 not printed in the Gazette.]

1,112,887. PROCESS FOR THE RECOVERY OF PULP FROM WASTE PAPERS. JOHN M. BURBY, Astoria, N. Y., assignor to The Pembee Company, New York, N. Y., a Corporation of New York. Filed June 15, 1911. Serial No. 633,417. (Cl. 92—14.)

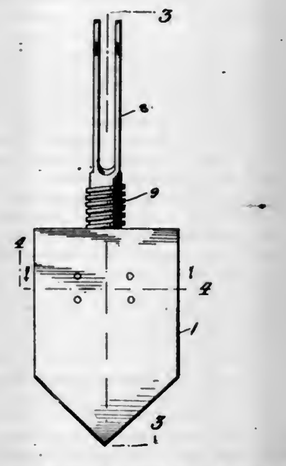
1. The process of recovering the pulp from printed waste papers made in part of mechanical wood pulp, the process consisting of the following steps: (1) pulping waste papers; (2) steeping the pulped material in a solution, made of not more than two parts by weight of caustic soda, or its equivalent of other alkali, to one thousand parts of water at a temperature of not more than about 150° F. and agitating it therein; (3) washing the pulped material in fresh water; and (4) separating the pulp fibers from all impurities, and collecting the cleaned pulp, substantially as herein set forth.

2. The process of recovering the pulp from printed waste papers made in part of mechanical wood pulp, the process consisting of the following steps: (1) pulping the waste news print papers in a solution, made of not more than two parts by weight of caustic soda, or its equivalent of other alkali, to one thousand parts of water at a temperature of not more than about 150° F.; (2) soaking and washing the pulped material in fresh water; and (3) separating the pulp from all impurities and collecting it; substantially as herein set forth.

1,112,888. HINGE. HERMAN BURCHESS, Chicago, Ill., assignor of one-half to Elias Ross, New York, N. Y. Filed Nov. 3, 1913. Serial No. 798,881. (Cl. 16—104.)

A hinge comprising a leaf having a pintle; a second leaf having an outwardly looped portion at one edge constituting a bearing for said pintle; and a reinforcing extension on said looped portion extending therefrom in a direction opposite to said second mentioned leaf, said extension being formed for fastening in position, substantially as described.

1,112,889. CULTIVATOR. WAYNE LESLIE CARTER and DELOS BUTTLES STULTS, Waverly, Ill. Filed Jan. 22, 1913, Serial No. 743,559. Renewed Apr. 24, 1914. Serial No. 834,222. (Cl. 97—11.)



1. In combination with a cultivator shovel standard having threads formed thereon, of a shovel having an interiorly threaded sleeve fixed thereto and adapted to engage the threads of the standard, a plurality of longitudinal grooves formed in the shank, a lever carried by the sleeve for engaging in one of the grooves, as and for the purpose set forth.

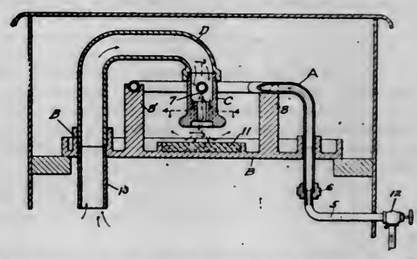
2. In combination with a cultivator shovel standard having threads formed thereon, of a shovel having an interiorly threaded sleeve mounted thereon and adapted to engage the threaded standard, ears formed upon the sleeve, said sleeve having a slot formed therein and located between the ears, a lever pivotally connected between the ears, a plurality of longitudinal slots formed in the standard, any one of which may be engaged by the lever to hold the shovel in different adjusted positions upon the standard.

1,112,890. WATERPROOF CEMENT. HARRY B. CHALMERS, Dedham, Mass. Filed Nov. 29, 1909. Serial No. 530,310. (Cl. 87—17.)

1. A cement comprising tetra-acetate of cellulose dissolved in a mixture of chloroform and acetone, and a small percentage of castor oil and carbolic acid.

2. A cement comprising tetra-acetate of cellulose, one pound, dissolved in a mixture of one half of a gallon of chloroform and one half of a gallon of acetone, said mixture containing by weight one per cent. castor oil and one per cent. carbolic acid.

1,112,891. HYDROCARBON-BURNER. DAVID CHAMBERS, Portland, Oreg. Filed June 30, 1914. Serial No. 848,228. (Cl. 158—53.)



1. A hydro-carbon burner comprising a rectangular pipe retort horizontally disposed, having one end connected with a source of fuel supply, its free end closed and a vertical discharge opening in the lower side of the retort near said closed end, an air pipe having its lower end connected with a source of air supply, its upper end opening downward over the free end of the retort, and a vertical cylindrical mixing chamber having its upper end rigidly secured in the upper end of the air pipe, also having an opening near the upper end in its side and receiving the free end of the retort through the same, also being provided with a vertical tube of less diameter rigidly secured within the lower part of the chamber with space around it and being alined with the retort discharge opening above it, substantially as described.

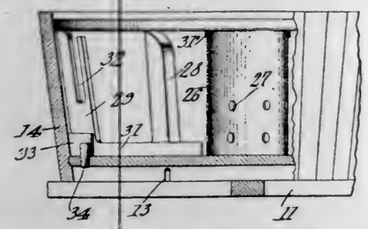
2. A hydro-carbon burner comprising a pipe retort of a rectangular form horizontally disposed, having one end connected with a source of fuel supply, its free end closed and a vertical discharge opening in the lower side of the retort near said closed end, an air pipe having its lower end connected with a source of air supply, its upper end opening downward over the free end of the retort, a vertical cylindrical mixing chamber having its upper end rigidly secured in the upper end of the air pipe, also having an opening near the upper end in its side and receiving the free end of the retort through the same, also being provided with a vertical tube of less diameter rigidly secured within the lower part of the chamber with space around it and being alined with the retort discharge opening above it, a frame to support said parts in operative position, and means to regulate the fuel supply, substantially as described.

1,112,892. WASHING-MACHINE. NIAL N. CHASE, Peoria, Ill. Filed Mar. 26, 1914. Serial No. 827,456. (Cl. 68—24.)

1. A washing machine, having a receptacle, a plurality of radiating ribs attached to the bottom of the receptacle, a plurality of upstanding ribs attached to the wall of the receptacle alined with the radial ribs, certain of said latter ribs being bifurcated to constitute a clothes grip, and a cover engaging the upper ends of the ribs of the wall to seal the receptacle.

2. A washing machine, having a receptacle, a concentrically disposed cylinder with perforations in the lower wall carried by the receptacle, a plurality of radiating ribs attached to the bottom of the receptacle, a plurality of upstanding ribs attached to the wall of the receptacle

and alined with the radial ribs, certain of said latter ribs being bifurcated to constitute a clothes grip, and a cover



engaging the upper ends of the ribs of the wall and the cylinder.

1,112,893. MAKING OF ALKALI CYANOGEN COMPOUNDS. JOHN COLLINS CLANCY, Colorado Springs, Colo., assignor of fifty-one one-hundredths to Portland Gold Mining Company, Colorado Springs, Colo., a Corporation of Wyoming. Filed June 22, 1912. Serial No. 705,173. (Cl. 23—13.)

1. The process of producing cyanogen compounds which consists in heating calcium cyanamid with alkali-metal sulfid in presence of a carbonaceous material at reacting temperatures.

2. The process of producing cyanogen compounds which consists in heating calcium cyanamid with its own weight of a mixture composed of equal weights of sodium sulfid and an alkali-metal salt in presence of carbonaceous material at reacting temperatures.

3. The process of producing cyanogen compounds which consists in heating calcium cyanamid with its own weight of a mixture composed of equal weights of sodium sulfid and sodium chlorid in presence of carbonaceous material at reacting temperatures.

1,112,894. TILE-LAYING MACHINE. CHARLES H. CLARK, Watertown, Wis. Filed Sept. 21, 1912. Serial No. 721,556. (Cl. 37—53.)

1. In a tile laying machine, a mole with means to advance it through the earth, associated with an expansion and smearing member at the rear end of the mole, said member being made of greatest diameter adjacent to its rear end and tapered at its top and sides from its greatest diameter thereof toward the rear end, and longitudinally straight and transversely cylindric at its lower side, with tile laying means.

2. In a tile laying machine, a mole, with means to advance it through the earth, and an expansion block connected to the rear end of the mole, said block being made of greatest diameter near its rear end and tapered at its top and side from its greatest diameter to both its front and rear, and made cylindric at its bottom.

3. In a tile laying machine, a mole, with means for advancing it through the earth, an expansion block in rear thereof, a tile carrier in rear of the expansion block, and a strap inset into the lower side of the expansion block and having means at its ends to connect it with the mole and carrier, respectively.

4. In a tile laying machine, an expansion block which is tapered at its top and lateral sides from the intermediate largest diameter thereof toward its rear end and is longitudinally straight and transversely cylindric at its bottom.

5. In a tile laying machine, an expansion block which is tapered at its top and lateral sides from the intermediate largest diameter thereof toward its rear end, said block being also tapered at its top and sides from said intermediate largest diameter toward its front end, and being longitudinally straight and transversely cylindric at its bottom.

[Claims 6 and 7 not printed in the Gazette.]

1,112,895. NUMERAL-WHEEL-RESETTING DEVICE. HART E. DELVIN, New York, N. Y. Filed July 22, 1912. Serial No. 710,849. (Cl. 235—144.)

1. In a device of the class described, the combination with a plurality of independent indicating disks, of a fixed shaft, a sleeve rotatable on said shaft and on which said disks are revolubly mounted, a toothed member longitudinally disposed in a slot formed in said sleeve, means for engaging said toothed member with the interior of said disks, means for turning them to a predetermined point uniformly and means for disengaging said disks when so turned, all of said means being combined with and dependent upon the rotation of said sleeve.

2. In a device of the class described, the combination with a plurality of numeral disks and a housing therefor, of a shaft for said disks, a sleeve revolubly mounted thereon having a longitudinal groove therethrough, a pawl plate carried in said groove pivoted at each end near the edge, a plurality of projections, corresponding to the numeral disks formed upon its outer opposite edge, means for causing said projections to engage internally with the numeral disks and means combined therewith whereby said disks may be rotated to a uniform position relative to the numerals thereon.

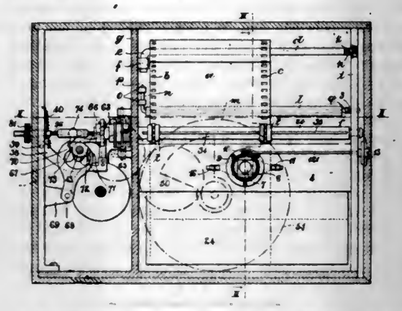
3. In a device of the class described, the combination with a shaft, a sleeve rotatable thereon, a frame therefor and a plurality of numeral disks mounted on said sleeve, of a plate fitted in a longitudinal slot in said sleeve and pivoted to oscillate in the slot, a lever attached to said plate at one end thereof, a spring adapted to force said plate inwardly, a cam set in the frame engaging said lever adapted to force said plate outwardly, a projection in a recessed portion of said disks, engaging means combined with said plate for intercepting said projections whereby they may be turned to register a uniform row of numerals, and means for actuating said plate.

4. In a device of the class described, the combination with a shaft and a plurality of numeral disks mounted thereon, of a sleeve intermediate of said shaft and said disks, a plate set in a groove formed longitudinally in said sleeve, means for causing said plate to engage with projections in said disks upon rotating the plate, said means constituting a lock for holding the plate out of engagement except when re-setting said disks and a rack and pinion mechanism for operating said plate.

5. In a device of the class described, the combination with a plurality of independently, rotatable indicating disks, of a tooth formed in an annular recess in each of said disks concentric with their bore, a sleeve upon which said disks are freely mounted to turn in either direction, said sleeve having a longitudinal opening, a shaft within said sleeve, a curved plate pivotally disposed in said opening, a gear at one end of said shaft, connections between said plate and said gear whereby the plate may be revolved around the shaft, a lever attached to the other end of said plate, an internal cam operatively engaging said lever whereby said plate may be raised from said shaft and caused to engage with the teeth formed in the disks, and means for revolving said gear whereby the numeral disks are revolved.

1,112,896. KINEMATOGRAPH CAMERA AND PROJECTING APPARATUS. CASIMIR DE PROSZYNSKI, London, England. Filed Mar. 20, 1913. Serial No. 755,693. (Cl. 88—18.)

1. In a kinematograph apparatus for use with a broad film and in combination with exposure means, means for feeding said film laterally, means for feeding said film longitudinally, and means for receiving the exposed film comprising a gutter in which said laterally and longitudinally movable film freely coils, substantially as and for the purpose hereinbefore set forth.



2. In a kinematograph apparatus for use with a broad film and in combination with film exposure means, means for feeding said film laterally, means for feeding said film longitudinally, and exposure gate through which said film is moved, and means for receiving the exposed film comprising a gutter located directly below said gate and in which said laterally and longitudinally movable film freely coils.

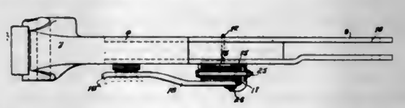
3. In a kinematograph apparatus for use with a broad film, and in combination with film exposure means, means for feeding said film laterally, means for feeding said film longitudinally, an exposure gate through which said film is moved, and means for receiving the exposed film comprising a curved gutter located directly below said gate and in which said laterally and longitudinally movable film freely coils, said curved gutter having a velvet strip on its central interior surface, substantially as and for the purpose hereinbefore set forth.

4. In a kinematograph apparatus for use with a broad film, and in combination with film exposure means, means for feeding said film laterally, means for feeding said film longitudinally, an exposure gate through which said film is moved and means for receiving the exposed film comprising a gutter located directly below said gate and in which said laterally and longitudinally movable film freely coils, said gutter having guiding means within it for aiding the film in its coiling action, substantially as hereinbefore set forth.

5. In a kinematograph apparatus for use with a broad film and in combination with film exposure means, means for feeding said film laterally, means for feeding said film longitudinally, an exposure gate through which said film is moved and means for receiving the exposed film comprising a gutter located directly below said gate and fitted with a central roller about which said film can freely coil.

[Claims 6 to 9 not printed in the Gazette.]

1,112,897. COUPLING-CENTERING DEVICE FOR RAILWAY-CARS. IRA S. DOWNING, Cleveland, Ohio. Filed Sept. 26, 1913. Serial No. 722,451. (Cl. 213—42.)



1. In combination in a car coupler, a coupler head, a shank therefor mounted for swinging movement, a carry member over which the shank moves, locking means carried centrally upon the lower side of the said member, a lever pivotally mounted upon the lower side of the shank, and spring means tending to hold the lever in parallelism with the shank, the free end of the lever having releasable engagement with the said locking means.

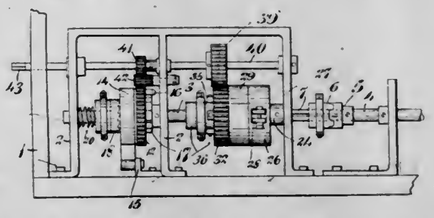
2. In combination in a car coupler, a coupler head, a shank therefor mounted for swinging movement, a carry member over which the shank moves, locking means carried centrally upon the lower side of the said member, a lever pivotally mounted upon the lower side of the shank, and spring means tending to hold the lever in parallelism with the shank and pressing the lever yieldingly against the under side of the carry member, the said locking means comprising means projecting downward from the carry member and adapted to prevent lateral movement of the end of the lever.

3. In combination in a car coupler, a coupler head, a shank therefor mounted for swinging movement, a carry member over which the shank moves, locking means carried centrally upon the lower side of the said member, a lever pivotally mounted upon the lower side of the shank, and spring means tending to hold the lever in parallelism with the shank and pressing the lever yieldingly against the under side of the carry member, the said locking means comprising a pair of projections spaced apart to receive the lever between them and having inclined faces.

4. In combination in a car coupler, a coupler head, a shank therefor mounted for lateral swinging movement, a carry iron over which the shank moves, locking means beneath the carry iron, and a lever pivotally mounted upon the lower side of the shank, with its free end in releasable engagement with the said locking means and freely movable with the shank when the engagement with the locking means is released, and spring means between the lever and shank tending to hold the shank in its central position when the lever is in engagement with the locking means.

5. In combination in a car coupler, a coupler head provided with a shank pivoted at its rear end to permit lateral swinging movement of the head and shank, a carry iron upon which the shank is slidably supported adjacent the head, a lever pivotally supported at its rear end upon the lower side of the shank and with its front end beneath the carry iron, locking means carried on the lower side of the carry iron and adapted to automatically engage the said free end of the lever when the shank reaches its central position and spring means between the lever and shank tending to hold the shank in central position when the lever is engaged by the said locking means.

1,112,898. MECHANICAL STARTER FOR INTERNAL-COMBUSTION ENGINES. ROBERT DRESSMANN, Covington, Ky. Filed Sept. 29, 1913. Serial No. 792,397. (Cl. 185—41.)



1. In a device of the character specified, a casing, an engine shaft and a starting shaft adapted to be coupled thereto, a clutch device comprising two members adapted to engage when rotated in one direction only, one member secured to the starting shaft and the other loosely mounted thereon, a spring secured to the loosely mounted member and to the casing adapted to rotate same to drive the tightly mounted member, a releasable friction clutch mounted on said starting shaft, and a train of gearing connecting the free member of the friction clutch with the loosely mounted clutch member whereby the rotation of the engine shaft may rewind the actuating spring and releasable means for holding the loosely mounted member against rotation.

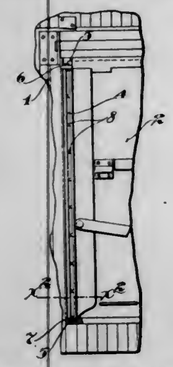
2. In a device of the character specified, the combination with the engine shaft, of a starting shaft, means for con-

pling the two together, a pawl carrier loosely mounted on the starting shaft and pawl thereon, with ratchet fixed to said shaft with which the pawl engages, a spring attached to the pawl carrier to rotate same and means for holding the spring under tension, a friction clutch on said starting shaft and means for releasing the same with train of gearing connecting the clutch with the pawl carrier whereby the spring may be rewound by the engine shaft when the clutch is connected.

3. In a device of the character specified, the combination with the engine shaft, of a starting shaft, means for coupling the two together, a pawl carrying gear loosely mounted on the starting shaft and pawl thereon, with ratchet fixed to said shaft with which the pawl engages, a spring attached to the pawl carrying gear to rotate same and means for holding the spring under tension, a friction clutch on said starting shaft with train of gearing connecting the clutch with the pawl carrying gear whereby the spring may be rewound by the engine shaft when the clutch is connected and means for engaging the friction clutch for the purpose described.

4. In a device of the character specified, an engine shaft, a starting shaft in alinement therewith, clutch to couple the two together, spring for rotating the shafts when connected, with pawl and ratchet device to transmit the action of the spring thereto, means connected to the ratchet device to hold the same against rotation, friction clutch on the starting shaft and train of gearing to rewind said spring, the pawl arranged to engage the ratchet to rotate the shaft in the forward direction and the train of gearing arranged to rewind the spring with the shaft rotating in the same direction.

1,112,899. LOCK FOR CAR-DOORS. JOHN EDMAN, Minneapolis, Minn., assignor to Edman Car Door Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Dec. 9, 1912. Serial No. 735,661. (Cl. 20—30.)



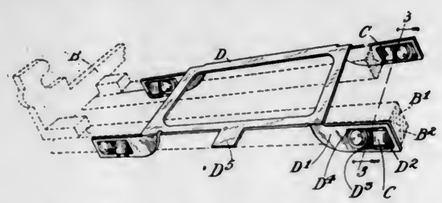
1. The combination with a car, and a car door movable through a door opening in the body of said car, of inner and outer vertically extended bars secured to the sides of the door opening, and a lock blade pivotally mounted to work between said bars and operative to secure said door against the inner of said bars and to release the same, said lock blade having a longitudinally extended flange offset from its pivotal axis and engageable with said outer bar when said lock blade is in operative position.

2. The combination with a car, and a car door movable through a door opening in the body of said car, of inner and outer vertically extended bars secured to the sides of the door opening, and a lock blade pivotally mounted to work between said bars, and having a channel-shaped back, said lock blade being operative to secure said door against the inner of said bars and to release the same, the flanges of the channel-shaped back of said lock blade being alternately engageable with opposite sides of the outer of said bars when said lock blade is in either an operative or an inoperative position.

3. The combination with a car, and a car door movable through a door opening in the body of said car, of relatively wide inner and relatively narrow outer vertically extended bars secured to the sides of said door opening, and a lock blade pivotally mounted to work between the said bars, and operative to secure said door against the relatively wide bar and to release said door for movement outward past said relatively narrow bar, said lock blade having a laterally projecting flange extending between said bars and engageable with said relatively narrow bar when said lock blade is in an operative position.

4. The combination with a car and a car door movable through a door opening in said car body, of relatively wide inner and relatively narrow outer vertically extended angle bars secured to the sides of said door opening, lock blades pivotally mounted to work between the extended flanges of said inner and outer angle bars, and operative to secure said door against the flange of the relatively large inner angle bars, and to release said door for movements outward past said relatively narrow outer angle bars.

1,112,900. ROLLER-BEARING AND SEPARATOR FOR THE ROLLERS. HERBERT ETHERIDGE, Wimbledon Park, England, assignor to The Bar-Lock Typewriter Company Limited, London, England. Filed May 23, 1914. Serial No. 840,472. (Cl. 64—50.)



1. In a roller-bearing the combination of, a plurality of rollers each having its end reduced to provide a shoulder, and a slotted plate whereof its opposite edges engage the ends of each roller on opposite sides of its axis, substantially as set forth.

2. In a roller-bearing the combination of, a plurality of rollers each having its end reduced to provide a shoulder, and a slotted plate whereof its opposite edges engage the ends of each roller on opposite sides of its axis close to the shoulder and close to the circumferential face of the reduced end, substantially as set forth.

3. In a roller-bearing the combination of, two rollers each having its ends reduced to provide a shoulder, and a slotted plate whereof its opposite edges engage the ends of each roller on opposite sides of its axis, said rollers being disposed in the slot with their axes at right angles to each other in parallel planes which are at right angles to the direction of travel of the plate, substantially as set forth.

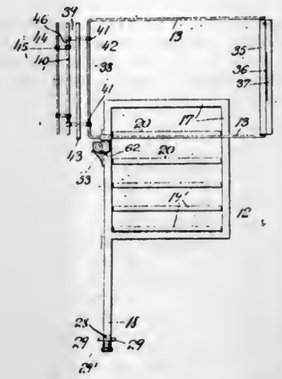
4. In a roller-bearing the combination of, a plurality of rollers each having its end reduced to provide a shoulder, a race wherein said rollers move, stops on said race, a slotted plate whereof its opposite edges engage the ends of each roller on opposite sides of its axis, said plate also having an approximately centrally situated tongue to engage said stops, substantially as set forth.

1,112,901. DISPLAY APPARATUS. EDWIN T. GRAY, New York, and JOHN J. DAULER, Brooklyn, N. Y. Filed July 21, 1913. Serial No. 780,175. (Cl. 211—20.)

1. The combination of a support, a wall paper display frame pivoted thereon, a border display frame pivoted on the wall paper display frame and means whereby said border display frame may be adjusted above and transversely of said wall paper display frame.

2. The combination of a support, a wall paper display frame adjustably carried by the said support, a border display frame carried by said wall paper display frame and

arranged to be folded up against the latter and means for adjusting said border display frame above said wall paper display frame and means for securing said border display frame in position.



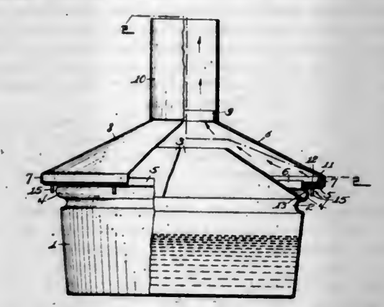
3. The combination of a support, a wall paper display frame carrried thereby, a border display frame carried by said paper display frame, means for adjusting said border display frame with relation to the said wall paper display frame and means for adjusting both of said frames laterally and vertically with relation to the said support.

4. The combination of a support, a first display frame pivoted thereon, interconnecting display shelves pivoted on said frame, a second display frame pivoted on said first display frame means for unfolding said display shelves from said first display frame and means for adjusting said second display frame above the said display shelves and a distance away from said first display frame, not less than the width of the widest of said shelves.

5. The combination of a support, a wall paper display frame pivoted thereon, a border display frame pivoted on said paper display frame, a border roll cradle secured to said border display frame and means for adjusting both of the said frames laterally and vertically.

[Claims 6 to 9 not printed in the Gazette.]

1,112,902. ORCHARD-HEATER. WILLIAM B. GREER, Wheeling, W. Va. Filed June 16, 1914. Serial No. 845,427. (Cl. 158—91.)



1. An orchard heater comprising a circular container, an external annular seat formed on said container adjacent to its upper end, an apertured ring mounted on said seat, a second apertured ring adjustably mounted on the first mentioned ring, a tapered cover having a central opening therein mounted over said container, said cover having a rim in engagement with one of said rings, and a stack mounted on said cover about said opening.

2. An orchard heater comprising a circular container, an external annular seat formed on said container adjacent to its upper end, an apertured ring mounted on said seat, a second apertured ring adjustably mounted on the first mentioned ring, a tapered cover having a central opening therein mounted over said container, said cover being seated upon one of said rings, and a stack mounted on said cover about said opening.

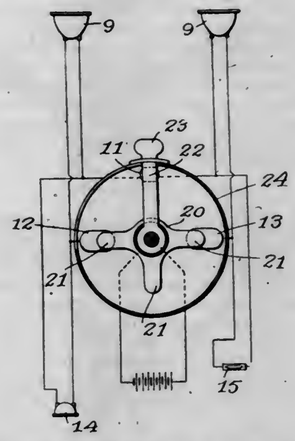
3. An orchard heater comprising a circular container, an external annular seat formed on said container adjacent to its upper end, an apertured ring mounted on said seat, a second apertured ring adjustably mounted on the first mentioned ring, a tapered cover having a central opening therein mounted over said container, said cover being seated upon one of said rings, a stack mounted on said cover about said opening, and an upwardly tapered shield having its lower end seated within and adjacent to the top of said container, said shield being open at both ends.

4. An orchard heater comprising a circular container, an external annular seat formed on said container adjacent to its upper end, an apertured ring mounted on said seat, a second apertured ring adjustably mounted on the first mentioned ring, a tapered cover having a central opening therein mounted over said container, said cover being seated upon one of said rings, a stack mounted on said cover about said opening, and an upwardly tapered shield having its lower end seated within and adjacent to the top of said container, said shield being open at both ends and terminating at its upper end adjacent to the opening in the cover.

5. An orchard heater comprising a circular container, an external annular seat formed on said container adjacent to its upper end, a ring mounted on said seat, said ring having a horizontal apertured portion, a second ring adjustably mounted on the first mentioned ring and having apertures for registration with those of the latter, a cover having an annular rim seated upon one of said rings outside said apertures, said cover having an opening therein, and a stack mounted on said cover about said opening.

[Claims 6 to 8 not printed in the Gazette.]

1,112,903. ELECTRICAL INSTALLATION. HENRY H. HAM, Shrewsbury, Mass. Filed May 1, 1913. Serial No. 764,773. (Cl. 171—97.)



1. The combination with two electrical devices, of a conductor connecting them with each other in series, and a switch having two contacts insulated from each other and movable to two positions, in both of which one of said contacts is connected with one terminal of the source of power, and with one of said devices on the side thereof opposite said conductor, and the other contact of said switch is connected with the other terminal of said source of power, in one of which positions one contact is connected with the other of said devices on the side thereof

opposite said conductor and in the other of which positions the last named contact is connected with said conductor at a point between said two electrical devices and otherwise insulated from the second of said devices.

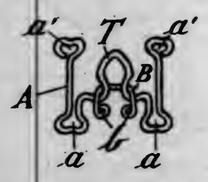
2. The combination with two electrical devices, of a conductor connecting them with each other in series, means for connecting one end of said conductor with a terminal of a source of power, the other end of said conductor also having a terminal, and a switch having two contacts insulated from each other and movable to two positions, in both of which one of said contacts is connected with one terminal of the source of power, and the other contact of said switch is connected with the other terminal of said source of power, and in one of which one contact is connected with said conductor at a point between said two electrical devices, said switch also being movable to a third position in which the circuit is electrically broken.

3. In an electric installation, the combination with a pair of lamps connected in series with each other, and having a terminal in the circuit between them and a terminal in the circuit beyond each lamp, of a switch having a member provided with contacts for a power circuit, and movable to a position in which each of said contacts is in contact with one of the last named terminals and out of contact with the first named terminal, and also movable to another position in which one of its contacts is in contact with the first named terminal and the other in electrical connection with both of the other terminals.

4. The combination with two electrical devices, of conducting means for connecting them with each other in series, and a switch having a portion thereof connected with one terminal of a source of power in all positions of the switch, and another portion insulated therefrom and connected with the other terminal of the source of power, said switch being movable to two positions, in one of which said other portion thereof is electrically connected with said conducting means at a point between said two devices, and in the other of which it is connected with it on one side of said conducting means.

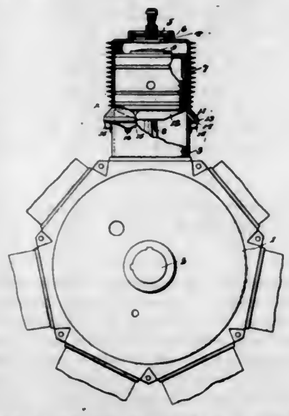
5. The combination with two electrical devices, a conductor connecting them with each other in series, means for connecting one end of said conductor with a terminal of a source of power, the other end of said conductor also having a terminal, and a switch having two contacts insulated from each other and movable to two positions, in both of which one of the last named contacts is connected with said terminal of the source of power, and in one of which the other contact of said switch is connected with the other terminal of said source of power, and in the other of which it is connected with said conductors at a point between said two electrical devices, said switch also being movable to a third position in which the circuit is electrically broken.

1,112,904. HOOK AND EYE. CHARLES HARKNESS, Providence, R. I., assignor to Henry C. Dexter, Central Falls, R. I. Filed July 11, 1910. Serial No. 571,361. (Cl. 24—228.)



A device of the character described, embodying a hook member comprising parallel side-bars spaced apart and provided with sewing eyelets at both ends, two of said eyelets adapted to be secured at the edge of the material to which the hook is attached, a tongue disposed between said side-bars, and connections extending between the base of said tongue and two of said eyelets forming shoulders back from said edge eyeleta and supports for the tongue which extend substantially parallel with said side-bars, all and every part of said elements lying in the same plane, and an eye-member adapted to snap over said tongue and engage said shoulders.

1,112,905. ROTARY GAS-ENGINE. SPENCER HEATH, Washington, D. C., assignor to Gyro Motor Company, Washington, D. C., a Corporation of the District of Columbia. Filed Sept. 8, 1911. Serial No. 648,369. (Cl. 123—44.)



1. A rotary gas engine including in combination, a crank casing, a cylinder carried thereby, said cylinder being provided with a plurality of auxiliary exhaust ports extending through the wall of the cylinder at points adjacent the inner extreme throw of the piston, a piston movable relative to said cylinder and adapted to uncover said auxiliary exhaust ports at each end of its stroke, means for supplying the combustion chamber of the cylinder with fuel gases from the crank casing, and yielding means for closing said auxiliary exhaust ports to prevent air passing through the same to the crank casing.

2. A rotary gas engine including in combination, a crank casing, a cylinder carried thereby, said cylinder being provided with a plurality of auxiliary exhaust ports extending through the wall of the cylinder at points adjacent the inner extreme throw of the piston, a piston movable relative to said cylinder and adapted to uncover said auxiliary exhaust ports at each end of its stroke, means for supplying the combination chamber of the cylinder with fuel gases from the crank casing, and yielding means operated by centrifugal force incident to the rotation of the cylinder for normally closing said auxiliary exhaust ports.

3. A rotary gas engine including in combination, a crank casing, a cylinder carried thereby, said cylinder being provided with a plurality of auxiliary exhaust ports extending through the wall of the cylinder at points adjacent the inner extreme throw of the piston, a piston movable relative to said cylinder and adapted to uncover said auxiliary exhaust ports at each end of its stroke, means for supplying the combustion chamber of the cylinder with fuel gases from the crank casing, said cylinder at the region of the auxiliary exhaust ports being thickened and formed with a shoulder, and a ring adapted to move outwardly on the cylinder to engage said shoulder to close said auxiliary exhaust ports, and means for yieldingly holding said ring on said shoulder.

4. A rotary gas engine including in combination, a crank casing, a cylinder carried thereby, said cylinder being provided with a plurality of auxiliary exhaust ports extending through the wall of the cylinder at points adjacent the inner extreme throw of the piston, a piston movable relative to said cylinder and adapted to uncover said auxiliary exhaust ports at each end of its stroke, means for supplying the combustion chamber of the cylinder with fuel gases from the crank casing, said cylinder having a thickened portion forming a shoulder in the region of the auxiliary exhaust ports, and said auxiliary exhaust ports being inclined toward a common point within the combustion chamber and opening through the face of said shoulder, and a ring surrounding the cylinder and movable longitudinally thereon into engagement with said shoulder for closing said auxiliary ports.

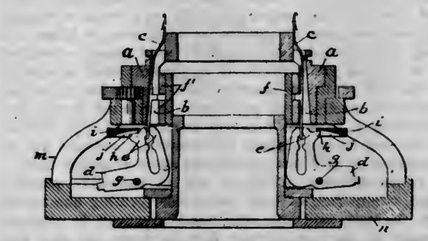
5. A rotary gas engine including in combination, a crank casing, a cylinder carried thereby, said cylinder being provided with a plurality of auxiliary exhaust ports extending through the wall of the cylinder at points adjacent the inner extreme throw of the piston, a piston movable relative to said cylinder and adapted to uncover said auxiliary exhaust ports at each end of its stroke, means for supplying the combustion chamber of the cylinder with fuel gases from the crank casing, said cylinder having a thickened portion forming a shoulder in the region of the auxiliary exhaust ports, and said auxiliary exhaust ports being inclined toward a common point within the combustion chamber and opening through the face of said shoulder, a ring surrounding the cylinder and movable longitudinally thereon into engagement with said shoulder for closing said auxiliary ports, and a spring for normally holding said ring against said shoulder.

1,112,906. BROOM. JOHN E. HEWETT, Wilmington, N. C. Filed Sept. 16, 1913. Serial No. 790,078. (Cl. 15—24.)

In a broom, the combination with a broom head having a stock projecting therefrom, and a stopper carried by said stock, of a hollow tubular handle open at each end, one end of said handle being arranged to embrace and frictionally engage said stock and stopper, the latter providing a closure therefor, a nozzle detachably arranged over the opposite end of said handle, and an air vent disposed within said hollow handle, the said vent terminating at a point adjacent said stopper in a bent portion to prevent passage of the liquid contents of the handle thereinto, the opposite end of said vent being open to the exterior of the handle at a point adjacent said nozzle, as and for the purpose set forth.

1,112,907. NEEDLE-CYLINDER MECHANISM. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 21, 1913. Serial No. 774,961. (Cl. 66—21.)

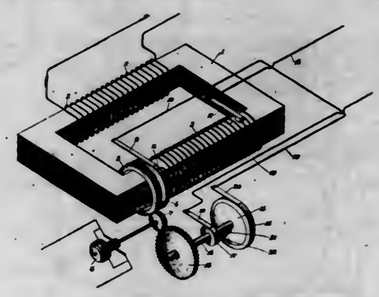
1. In a circular knitting machine, in combination, a needle cylinder, independent needles carried thereby, pivoted levers arranged under and adapted to engage the needles and move them into and out of operative position, said levers having outwardly extending shoulders, and a ring the inner part of which is adapted to rest loosely upon said shoulders and which is provided in its under and inner faces with grooves corresponding to the shoulders and into which the shoulders extend and are guided when the ring is in the position specified.



2. In a circular knitting machine, in combination, a needle cylinder, independent needles carried thereby, pivoted levers, thin relatively to their length and breadth, arranged under and adapted to engage the needles and move them into and out of operative position, said levers having at their upper needle-engaging ends outwardly extending shoulders, and a ring surrounding the needle levers having grooves, corresponding to the needle levers, adapted to receive and guide said shoulders.

3. A needle lever adapted to move the needles of an independent needle circular knitting machine into and out of operative position, the same comprising an L-shaped pivotal member thin relatively to its length and breadth, one arm of which has a pair of jaws adapted for engagement with the needle, and a shoulder projecting from one edge of the jaw-end of the arm in the plane of the extension of the lever whereby the lever may be guided in its pivotal movement.

1,112,908. TRANSFORMER. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Sept. 24, 1909. Serial No. 519,365. (Cl. 171—119.)



1. A transformer having a core forming a closed magnetic circuit carrying primary and secondary windings, one of said windings having a short circuit turn forming one terminal of the winding, said winding and turn being rotatable with respect to the core but fixed longitudinally with respect to the core, a brush adapted to move longitudinally with respect to the core to contact with the various turns of the winding and form the other terminal thereof and means for compensating for variations in the resistance of the circuit due to the movement of the brush with respect to the turn.

2. A transformer having a closed magnetic circuit and having a short-circuited turn of high resistance for forming one terminal of the transformer winding, a brush engaging said terminal and movable relatively about the turn, and means for compensating for variations in the resistance of the circuit, due to the movement of the brush with respect to the turn.

3. A transformer having a coil, a slip ring of high resistance forming one terminal of the coil, said slip ring being arranged to embrace the most of the transformer flux, a brush for said slip ring, and means for adjusting

the resistance of the circuit of said coil in accordance with the relative positions of said brush and slip ring.

4. A transformer having a coil in the form of a helix, a short-circuited turn of high resistance forming one terminal of the coil, said short-circuited turn being arranged to inclose the most of the transformer flux, a brush for making electrical connection with said short-circuited turn, a second short-circuited turn connected in circuit with the coil, a brush therefor, and means for adjusting the relative position of said last mentioned brush and short-circuited turn to regulate the resistance in circuit with the coil to compensate for resistance changes due to the rotation of said first mentioned short-circuited turn.

5. A transformer having a coil in inductive relation thereon, a slip ring of high resistance forming one terminal of the coil, said slip ring being arranged to embrace the most of the transformer flux, a brush for said slip ring, and means for compensating for resistance changes due to the rotation of said slip ring and responsive thereto.

[Claims 6 to 10 not printed in the Gazette.]

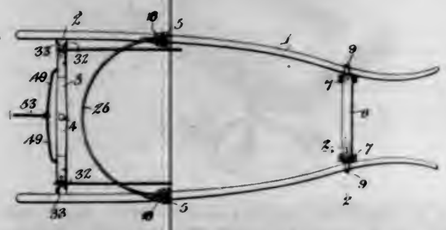
1,112,909. PROCESS OF CONVERTING CAST-IRON INTO STEEL OR MALLEABLE IRON. JOHN ALEXANDER HUNTER, Philadelphia, Pa. Filed June 3, 1913. Serial No. 771,375. (Cl. 148—8.)

1. In the manufacture of steel and malleable iron, the described process, which consists in submitting cast-iron at a high heat but below the melting point in a suitable mechanical device to the action of nitric acid, substantially as described.

2. In the manufacture of steel and malleable iron, the described process which consists in submitting cast-iron in solid form at a high heat in a suitable mechanical device to the action of nitric acid, substantially as described.

3. In the manufacture of steel and malleable iron, the described process, which consists in submitting cast-iron in solid form at a high heat in a suitable mechanical device to the action of nitric acid and then permitting the cast iron to cool within said device, substantially as described.

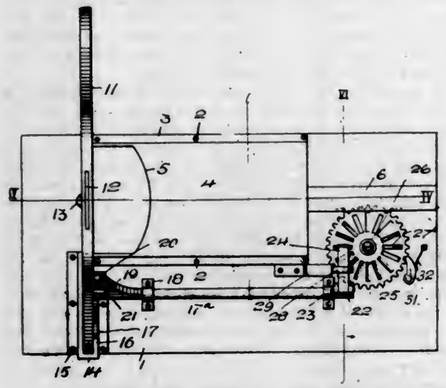
1,112,910. HORSE-RELEASING DEVICE. ROBERT A. JENNE, Eureka, Kans. Filed Apr. 1, 1913. Serial No. 758,206. (Cl. 21—75.)



1. A trace connection for a whiffle-tree comprising a casing, a trace connecting knuckle pivotally secured upon said casing and provided with a flat under surface, spring means for normally holding the same parallel with said casing, a locking lever pivotally secured upon said casing and provided with a flat outer end adapted to engage the under face of said knuckle for locking the same against pivotal movement upon said casing, spring means for normally holding said locking lever parallel with said casing, and means engaging said locking lever for releasing said lever from said trace engaging knuckle and allowing said trace engaging knuckle to swing to a forward position.

2. A device of the class described comprising a casing, a knuckle carried by said casing, said knuckle provided with a circular aperture upon the lower face thereof, a bridge portion straddling said aperture, a spring secured to said casing and provided with a hook fitting over said bridge portion for detachably securing said spring to said knuckle, and locking means engaging said knuckle for normally holding said knuckle against pivotal movement upon said casing.

1,112,911. RATCHET FEEDING MECHANISM FOR BREAD-CUTTING MACHINES. JOHN EDWARD JOHNSON, Moundsville, W. Va. Filed Apr. 15, 1913. Serial No. 761,304. (Cl. 74—54.)



1. A feeding mechanism comprising a longitudinally and intermittently movable shifting element, an intermittently revoluble actuating member for said element, said member provided with radially disposed recesses, a spring controlled pulling member engaging in said recesses for intermittently shifting said actuating member, a rock shaft for operating said actuating member, a pivoted element, and pins carried by said pivoted element and engaging with said rock shaft for alternately operating it in opposite directions.

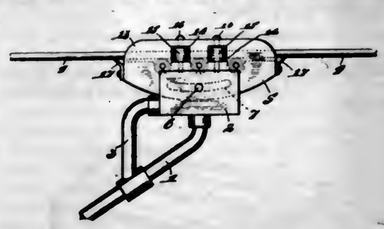
2. A feeding mechanism comprising a longitudinally and intermittently movable shiftable element, an intermittently revoluble actuating member for said element, said member provided with radially disposed recesses, a spring controlled pulling member engaging in said recesses for intermittently shifting said actuating member, a rock shaft for operating said actuating member, a pivoted element, pins arranged on said pivoted element and engaging with said rock shaft for alternately operating it in opposite directions, and a dog arranged to prevent movement of said actuating member in a direction opposite to that imparted to it by said pulling member.

3. A feeding mechanism comprising a longitudinally and intermittently movable shifting element, an intermittently revoluble actuating member for said element, said member provided with radially disposed recesses, a spring controlled pulling member engaging in said recesses for intermittently shifting said actuating member, a rock shaft for operating said actuating member, a radially disposed arm carried by said rock shaft, and a pivoted element provided with pins engaging with said arm for alternately rocking said shaft in opposite directions.

4. A feeding mechanism comprising a longitudinally and intermittently movable shifting element provided with a rack, an intermittently operating pinion engaging said rack for shifting said element and provided with spaced radially disposed recesses, a spring pressed pulling member engaging in said recesses for intermittently shifting said pinion, a dog arranged to prevent back rotation of said pinion, a rock shaft carrying said pulling member and adapted when actuated to shift said member, an arm projecting from said shaft, and a pivoted element provided with stops engaging with said arm for alternately locking said shaft in opposite directions.

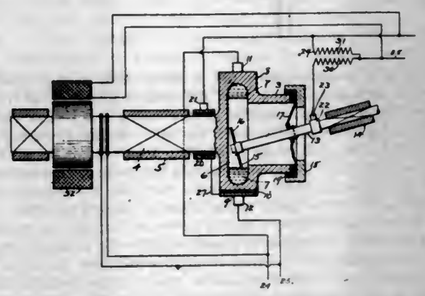
1,112,912. TROLLEY. HARVEY JOLLY, Michigan City, Ind. Filed July 23, 1913. Serial No. 780,619. (Cl. 191—62.)

The combination with a trolley pole and a conductor, of a harp adjustably mounted on the upper end of said pole; contact wheels mounted in said harp, engaging said conductor and maintaining said harp in parallel relation with said conductor; and an ice scraper secured to said harp and inclined upwardly and forwardly from said harp with its upper end spaced slightly from said conductor



and adapted to remove ice and sleet from the latter, substantially as described.

1,112,913. ELECTRIC-CURRENT CONVERTER. ALEXANDER T. KASLEY, Swissvale, Pa. Filed Oct. 12, 1905. Serial No. 282,421. (Cl. 171—253.)



1. A current interrupter comprising a rotatable casing, a conducting liquid annulus sustained within the casing by centrifugal force and forming a terminal of the interrupter, a contact agent forming a terminal of the interrupter, and pliant imperforate means for sealing the casing and for connecting the contact agent to the casing.

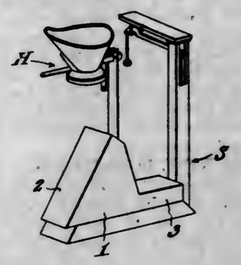
2. A current interrupter comprising a rotatable casing, a conducting liquid annulus sustained within the casing by centrifugal force and forming a terminal of the interrupter, a rotatable contact agent forming a terminal of the interrupter and adapted to move into and out of the liquid annulus during its rotation, and a pliant cover for the casing connecting the contact agent to the casing.

3. A current interrupter comprising a rotatable casing, a conducting liquid annulus sustained within the casing by centrifugal force and forming a terminal of the interrupter, a rotatable contact agent forming a terminal of the interrupter and adapted to move into and out of the annulus during its rotation, a flexible cover for the casing through which said contact agent projects, and means for securing the cover to the contact agent.

4. In a current interrupter a rotatable casing, a conducting liquid annulus sustained within the casing by centrifugal force and forming a terminal of the interrupter, a rotatable contact agent forming a terminal of the interrupter and adapted to move into and out of said liquid annulus, a pliant cover for the casing through which said agent projects, means for rigidly securing the agent to the cover, means for rigidly securing the cover to the casing, a circuit carrying a varying current, and means for rotating the casing and the agent synchronously with the current variations.

5. In combination in a current interrupter, a rotatable casing, a mercury annulus sustained within said casing by centrifugal force and forming a terminal of the interrupter, a contact agent operatively connected to said casing and adapted to move into and out of contact with said annulus and in synchronism with the current to be converted.

1,112,914. BAG-DEFLECTOR. EDWARD P. KENDALL, Bowdoinham, Me. Filed Dec. 8, 1913. Serial No. 805,385. (Cl. 73—3.)



The combination with a platform scales, and a bag holder and filler above the scale platform, of a bag deflector embodying a base seated on the scale platform and having an inclined deflecting plate at one end below the bag holder and filler, and against which the bag is adapted to rest when being filled, and a weight disposed on the said base.

1,112,915. LOCKING DEVICE. JAMES A. KEYES, New York, N. Y. Filed Mar. 16, 1912. Serial No. 684,098. (Cl. 187—48.)

1. In a locking device, in combination, a movable locking member, a locking bolt adapted to lock said member against movement in either direction, a movable ratchet member having two sets of teeth inclined in opposite directions, a pawl adapted to engage either of said sets of teeth and prevent movement of said ratchet member in one direction, means for setting said pawl in position to engage one of said sets of ratchet teeth, means for holding said pawl in an inoperative position, and means for operating said locking bolt and releasing said pawl.

2. In a locking device, in combination, a movable locking member, a locking bolt adapted to lock said member against movement in either direction, a movable ratchet member having two sets of teeth inclined in opposite directions, a pawl adapted to engage either of said sets of teeth and prevent movement of said ratchet member in one direction, means for setting said pawl in position to engage one of said sets of ratchet teeth, means controlled by said locking bolt for holding said pawl in an inoperative position, and means for operating said locking bolt and releasing said pawl.

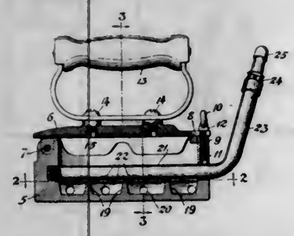
3. In a locking device, in combination, a movable locking member, a locking bolt adapted to lock said member against movement in either direction, a movable ratchet member having two sets of teeth inclined in opposite direction, a pawl adapted to engage either of said sets of teeth and prevent movement of said ratchet member in one direction, means for setting said pawl in position to engage one of said sets of ratchet teeth, means for holding said pawl in an inoperative position and for restoring the same to said position, and means for operating said locking bolt and releasing or restoring said pawl in position to engage said ratchet teeth.

4. In a locking device, in combination, a movable locking member, a locking bolt adapted to lock said member against movement in either direction, a movable ratchet member having two sets of teeth inclined in opposite directions, a pawl adapted to engage either of said sets of teeth and prevent movement of said ratchet member in one direction, means for setting said pawl in position to engage one of said sets of ratchet teeth, a cam operatively connected with said locking member and ratchet member and adapted to operate said means, means for holding said pawl in an inoperative position, and means for operating said locking bolt and releasing said pawl.

5. In a locking device, in combination, a movable locking member, a locking bolt adapted to lock said member against movement in either direction, a movable ratchet member having two sets of teeth inclined in opposite directions, a pawl adapted to engage either of said sets of teeth and prevent movement of said ratchet member in one direction, means for setting said pawl in position to engage one of said sets of ratchet teeth, a cam operatively and adjustably connected with said locking member and ratchet member and adapted to operate said means, means for holding said pawl in an inoperative position, and means for operating said locking bolt and releasing said pawl.

[Claims 6 to 18 not printed in the Gazette.]

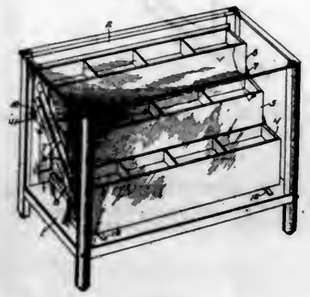
1,112,916. SELF-HEATING SAD-IRON. ROBERT B. KILLGORE, Short Hills, N. J., assignor to Strause Gas Iron Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 13, 1912. Serial No. 731,044. (Cl. 158—23.1.)



1. A sad iron comprising a hollow body having a solid bottom provided with air inlet channels extending transversely through said solid bottom toward the center thereof and a plurality of independent recesses commencing at the inner surface of said bottom and extending downwardly therein into connection with said air inlet channels and a burner adapted for connection with a source of fuel supply located in said body in registry with and above said recesses, the space between said burner and the inner surface of said bottom being entirely free throughout its length.

2. A sad iron comprising a hollow body having a solid bottom provided with air inlet channels extending transversely through said solid bottom toward the center thereof and a row of independent recesses commencing at the inner surface of said bottom and extending downwardly therein into connection with said air inlet channels, said row of recesses being located along the longitudinal median line of the body, and a burner adapted for connection with a source of fuel supply located in said body in registry with and above said recesses, the space between said burner and the inner surface of said bottom being entirely free throughout its length.

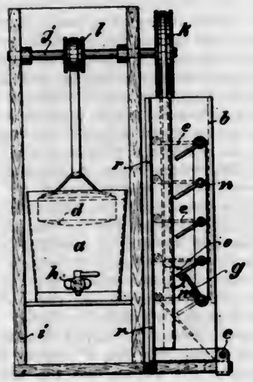
1,112,917. DISPLAY APPARATUS. MONROE KOHN, Chicago, Ill. Filed July 5, 1911. Serial No. 636,935. (Cl. 211—16.)



1. In a display apparatus, a show case, a door hinged at the bottom on one side of the case, a plurality of trays movably connected together and forming a series of steps extending downwardly from the side having the door to the opposite side, pins projecting from the ends of the uppermost tray, and hooks carried by the door in positions to engage with said pins when the door is opened, the open sides of the hooks being directed toward the door.

2. In combination, a series of trays, connecting means for the trays arranged to permit them to be adjusted from a step formation to a formation in which the trays lie in a single plane, and a number secured to the underside of one of the intermediate trays and projecting under one of the outer trays in a position to be grasped by a hand holding the latter tray when the trays are in the plane formation.

1,112,918. AUTOMATIC CATTLE-FEEDING APPARATUS. HEINRICH KUXMANN and GEORG SCHNEIDER. Bielefeld, Germany. Filed Apr. 15, 1912. Serial No. 690,863. (Cl. 119—56.)

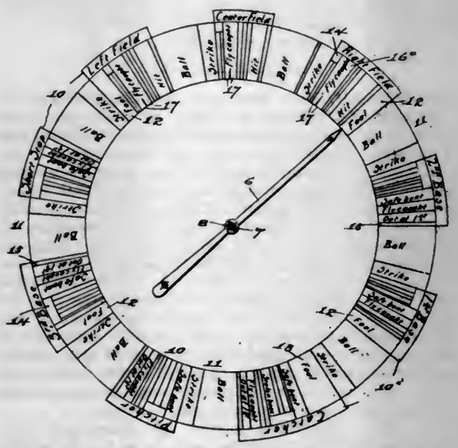


1. A stock feeding and watering apparatus comprising in combination, a frame, a receptacle for supplying water to a feeding place, a float upon the water within said receptacle, means for regulating said supply of water, a shaft horizontally disposed within said frame, a pulley and strap connection upon said shaft from which said float is suspended, a food receptacle comprising a plurality of superposed food containing compartments provided with trap bottoms adapted to be successively opened in harmony with the movements of said float, means connected to said shaft and to said receptacle for successively opening said trap bottoms upon the operation of said means regulating the supply of water, and means for normally holding the trap bottoms closed.

2. A stock feeding and watering apparatus comprising in combination, a frame, a receptacle tapering toward below for supplying water to a feeding place, a float upon the water within said receptacle, a cock for regulating said water supply, a shaft horizontally disposed within said frame above said receptacle, a pulley upon said shaft, a strap secured to said pulley from which said float is suspended, a food receptacle, a pulley upon the outer end of said shaft adapted to rotate in the same direction as said first-named pulley, a strap secured to said pulley from which said food receptacle is suspended, a plurality of superposed food containing compartments, hinged trap bottoms for said compartments, means for holding said trap bottoms normally closed and means for successively engaging said holding means in harmony with the operation of said water supply controlling means for opening said traps one by one, substantially as described.

3. A stock feeding and watering apparatus comprising in combination, a frame, a receptacle tapering toward below for supplying water to a feeding place, a float upon the water within said receptacle, a cock for regulating said water supply, a shaft horizontally disposed within said frame above said receptacle, a pulley upon said shaft, a strap secured to said pulley from which said float is suspended, a food receptacle, a pulley upon the outer end of said shaft adapted to rotate in the same direction as said first-named pulley, a strap secured to said pulley from which said food receptacle is suspended, a plurality of superposed food containing compartments, hinged trap bottoms for said compartments, cams supporting said bottoms opposite their hinged ends for normally holding said traps closed, links rotatably supported in the wall of said food receptacle carrying said cams, levers secured to said catches, and a slide traveling vertically within a groove of said receptacle in harmony with the lowering of said float and provided with a pin adapted to successively engage said levers for releasing said catches and opening said traps.

1,112,919. BASE-BALL GAME-BOARD. WILMOT LAKE, Washington, D. C., assignor of one-third to Austin Harveycutter and one-third to Herbert A. Wrenn, Washington, D. C. Filed Oct. 25, 1913. Serial No. 797,194. (Cl. 46—63.)



1. In a base ball game board, a dial divided into sections so as to apportion the dial with one section for each participating player of a team, apportionate play spaces grouped in each section and showing plays pertaining to that player, proportionate ball and strike spaces between said sections, and an indicator hand mounted on the dial.

2. In a base ball game board, the combination of apportionate sections grouped in dial form and representing each player of a participating team, each section containing indicia designating the plays of each player, and apportionate ball and strike spaces separating said sections.

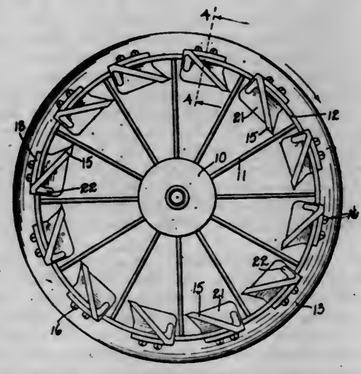
3. In a base ball game board, a dial depicted thereon and composed of apportionate player sections alternated with apportionate intervals for balls and strikes, said sections comprising relatively apportionate play spaces showing such plays as are possible by the player of a certain section together with assists to said player on the part of some other section player, and a suitable dial hand for indicating the plays.

4. In a base ball game board, the combination of a base ball diamond delineated on one portion of the board, a dial depicted on the other portion of the board and composed of alternate player sections and ball and strike intervals, said sections having grouped therein relatively apportionate play spaces so that any one of the sections will show a principal play and a relative play simultaneously, and an indicator hand central of the dial.

5. In a base ball game board, a single dial having apportionate denotations and a dial hand showing the result of every pitched ball and simultaneously showing the player or players participating in the movement of the ball.

[Claim 6 not printed in the Gazette.]

1,112,920. TRACTION-WHEEL. JOHN W. LAMBERT, Anderson, Ind. Filed Aug. 7, 1912. Serial No. 713,842. (Cl. 21—215.)

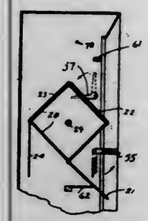


Tread plates adapted to be secured to the rim of a traction wheel and consisting of a tread plate portion, two parallel arm plates extending laterally from one end thereof, a brace plate between the inner one of said arm plates and said tread plate, a brace plate on the opposite side of said tread plate and extending for the length of the tread plate and at a right angle thereto, and a cross brace plate secured to said last-mentioned brace plate and the outer end of the tread plate.

1,112,921. CHANGEABLE PRISMATIC SIGN. JAMES H. LA PEARL, Los Angeles, Cal. Filed June 1, 1914. Serial No. 842,104. (Cl. 40—76.)

1. In a sign, the combination of a series of prisms spaced to permit of simultaneous rotation; leaves hinged to each of the longitudinal edges of each of said prisms; means for partially rotating said prisms at predetermined intervals; means for raising the leaf attached to the upper

front edge of each prism, after each partial rotation of said prism, and means for lowering the leaf attached to the bottom front edge of each prism, after each partial revolution thereof.



2. In a sign, the combination of a series of prisms spaced to permit of simultaneous rotation; leaves, one attached to each longitudinal edge of each prism, the width of each leaf being substantially equal to one half the distance between said prisms when the adjacent faces of the said prisms are parallel; means for partially rotating said prisms at regular intervals; means for raising the leaf attached to the upper front edge of each prism and means for lowering the leaf attached to the lower front edge of each prism until the said leaves are in alinement with the front surfaces of said prisms.

3. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes; leaves adapted to close the spaces between said prisms, one hinged to each longitudinal edge of each prism; means for partially rotating said prisms at regular intervals; means for raising the leaf attached to the upper front edge of each prism and means for simultaneously lowering the leaf attached to the lower front edge of each prism after each partial revolution of said prisms, all substantially as described and for the uses and purposes set forth.

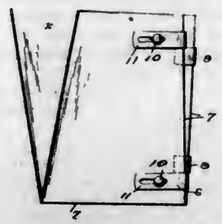
4. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes; leaves attached to the longitudinal edges of said prisms, adapted to close the spaces between the front surfaces of said prisms; prism rotating mechanism consisting of power mechanism adapted to transmit reciprocal motion to ratchet bars; ratchet bars adapted to engage and move in succession cross arms attached to said prisms; means for releasing said cross arms from said ratchet bar at the end of each forward motion of the ratchet bar; means for raising the leaves attached to the top front edges of said prisms and means for lowering the leaves attached to the lower front edges of said prisms, after each partial rotation of said prisms.

5. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes; leaves attached to the longitudinal edges of said prisms; prism rotating mechanism consisting of a ratchet bar adapted to engage successively the cross arms attached to each of said prisms; cross arms attached to each prism, one arm for each face to be exposed, a reciprocating bar connecting the said ratchet bars, driving mechanism adapted to intermittently move said connecting bar and attached ratchet bars, and means for releasing the cross arms from said ratchet bars at the end of the forward movement of said connecting bar; means for locking said prisms after each partial rotation; means for moving the leaves into alinement with the faces of the prisms thus closing the spaces between the said prisms.

[Claims 6 and 7 not printed in the Gazette.]

1,112,922. PANTS-PRESS. THOMAS F. LEAHEY, Poughkeepsie, N. Y. Filed Sept. 4, 1913. Serial No. 788,130. (Cl. 100—57.)

1. A device of the character specified comprising a body portion and inwardly folding side members with means for securing or holding the side members in folded position, said means consisting of clamps or clips slidably engaged with the outer edge of one side member and adapted to hook over or engage one edge of the body portion of the device, when the side members are folded in.



2. A device of the character specified comprising a body portion and inwardly folding side members with means for securing or holding the side members in folded position, said means consisting of clamps or clips slidably engaged with the outer edge of one side member and adapted to hook over or engage one edge of the body portion of the device, when the side members are folded in, the side members being slit or divided in half sections whereby the device, as a whole, may be doubled up for convenience in packing and carrying.

3. A device of the character specified comprising a body portion and inwardly folding side members with means for securing or holding the side members in folded position, said means consisting of clamps or clips slidably engaged with the outer edge of one side member and adapted to hook over or engage one edge of the body portion of the device when the side members are folded in, said clips or clamps having straight inner longitudinally slotted portions and inwardly curved or bent portions.

4. As an article of manufacture, a pants presser formed from a single blank or strip of fiber board and comprising a main or body portion and inwardly folding side members or flaps and means for securing or clamping the parts in folded position, said means consisting of transversely disposed clips or clamps engaged with the outer edge of one side member and adapted to hook over or engage one edge of the body portion of the device.

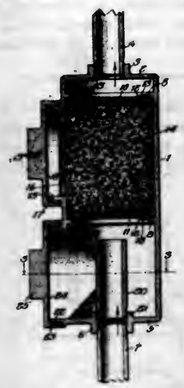
5. As an article of manufacture, a pants presser formed from a single blank of fiber-board and comprising the following parts: a body portion having convergent or inclined side margins and adapted to be folded transversely upon itself, an inwardly folding flap member on each of the opposite sides of the body portion, the first of said flap members being adapted to be folded against the body and the second to be folded over upon the first, and both flap members being slit or divided at the folding line of the body portion, whereby the flaps may be first folded inwardly and the device with the pants in it may be folded together in compact form.

[Claim 6 not printed in the Gazette.]

1,112,923. FILTER. HENRY N. LOOKER, Chicago, Ill., assignor of one-fourth to Oakley W. Platt and three-eighths to George W. Reynolds, Chicago, Ill. Filed May 15, 1914. Serial No. 838,640. (Cl. 210—15.)

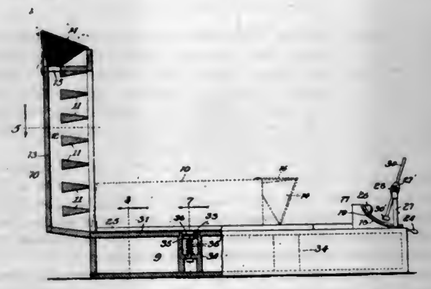
1. A filter including a chamber that constitutes a pipe section and having end walls constructed for the attachment of other pipe sections thereto; a filtering medium confined within the chamber adjacent the discharge end thereof; a pipe within the chamber at the intake end thereof and through which liquid is passed into the chamber, spacing intervening between the inner end of this pipe and the filtering medium and between the pipe and the longitudinal wall of the chamber whereby the pipe and the adjacent portion of the chamber coöperate to form a trap, longitudinal wall portions of the chamber having openings in position to afford access to the space of the trap and to the space that contains the filtering medium; and caps for covering said openings.

2. A filter including a chamber that constitutes a pipe section and having end walls constructed for the attachment of other pipe sections thereto; a filtering medium confined within and filling the chamber adjacent its discharge end; a pipe within the chamber at the intake end thereof and through which liquid is passed into the chamber, spacing intervening between the inner end of this pipe and the filtering medium and between the pipe and the longitudinal wall of the chamber whereby the pipe



and the adjacent portion of the chamber coöperate to form a trap whose space does not extend above the filtering medium, a longitudinal wall portion of the chamber having an opening below the filtering medium in position to afford passage from the space of the trap; and a closure for covering said opening.

1,112,924. GOLF GAME. WILLIAM D. LUKENS, Chicago, Ill. Filed Oct. 22, 1913. Serial No. 796,604. (Cl. 46—59.)



1. A game-apparatus comprising a bed, a tier of pockets at one end of the bed, a support at the opposite end thereof, a ball-seating block adjustable on said support for elevation relative to pockets in said tier, and means for securing the block in its different positions of adjustment.

2. A game-apparatus comprising a bed, a tier of pockets at one end of the bed, a support at the opposite end thereof, a ball-seating block adjustable on said support for elevation relative to pockets in said tier, and a rack-device on the block for releasably fastening it in its adjusted positions.

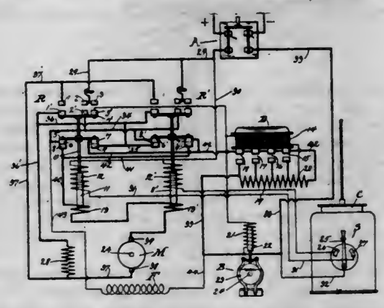
3. A game-apparatus comprising a bed, a tier of pockets at one end of the bed, a frame at the opposite end thereof having curvedly-slotted sides, a ball-seating block supported in the curved slots to be elevated and lowered for adjustment therein, and means for releasably securing said block in adjusted position.

4. A game-apparatus comprising a bed, a tier of pockets at one end of the bed, a frame at the opposite end thereof having curvedly-slotted sides, a ball-seating block having arms movably confined in the curved slots to be elevated and lowered therein for adjusting said block on the frame, and a rack extending backwardly from said block through the rear end of the frame and releasably engaging therewith.

5. A game-apparatus comprising a bed, a tier of pockets at one end of the bed, a support at the opposite end thereof, a spring-actuated club supported to swing behind said support, and a ball-seating block adjustable on said support for elevation relative to said pockets and to the path of said club.

[Claims 6 to 14 not printed in the Gazette.]

1,112,925. SYSTEM OF MOTOR CONTROL. WILLIAM D. LUTZ, Allendale, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 22, 1909. Serial No. 529,221. (Cl. 172—152.)



1. The combination of an electric motor, controlling mechanism therefor comprising reversing switches, magnet coils controlling said switches and in circuit with the motor armature when the latter is connected to receive current from the mains, and means for establishing a circuit through said coils when the reversing switches are open.

2. The combination of an electric motor, reversing switches therefor, and electro-magnetic devices each permanently connected in series with each other and the motor, said devices controlling said switches.

3. The combination of an electric motor, reversing switches therefor, electromagnetic means connected in the circuits established through the motor armature when the reversing switches are closed, and means associated with the reversing switches for establishing a local circuit through the armature and said electromagnetic means when the reversing switches are both open.

4. The combination of an electric motor, reversing switches, reversing switch magnets and opposing electromagnets permanently connected in the circuits established through the motor armature when the reversing switches are closed.

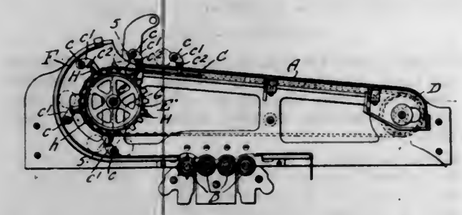
5. The combination of an electric motor, a reversing switch, an electromagnet comprising a solenoid and a core for operating the said switch, and an opposing magnet coil in position to control the said core only when the reversing switch is open, said opposing coil being connected in circuit with the motor armature and receiving the current flow through the armature independently of the position of the reversing switch.

[Claims 6 to 8 not printed in the Gazette.]

1,112,926. CONVEYER FOR CORN-HUSKING MACHINES. THEODORE F. MORSE, Silver Creek, N. Y. Filed Jan. 14, 1914. Serial No. 812,120. (Cl. 193—8?)

1. The combination of an endless conveyer having projecting flights which advance the articles being conveyed, and a rotary drum around which said conveyer travels and which is provided with projecting blades which approximately register and move with said conveyer flights as the latter pass around the drum, thereby forming containing compartments between said flights for the articles.

2. The combination of an endless conveyer provided with cross rods which advance the articles being conveyed, a rotary drum around which said conveyer travels and which is provided with blades which project outwardly and approximately register and move with said conveyer rods as the latter travel around the drum, thereby forming compartments between said conveyer rods for the articles, and means which retain the articles in said compartments.

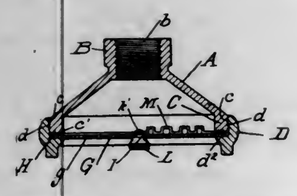


3. The combination of a conveyer comprising endless chains and cross rods connecting said chains, a rotary drum around which said conveyer travels and which is provided with blades which project outwardly between the conveyer chains and approximately register and move with said conveyer rods as the latter travel around the drum, thereby forming compartments between said conveyer rods for the articles being conveyed, and a plate which partially surrounds said drum and retains the articles in said compartments.

4. The combination of a conveyer comprising endless chains and cross rods connecting said chains, chain wheels around which said chains pass, a drum which is located between and turns with said chain wheels and is provided with blades which project outwardly between the conveyer chains in proximity to said conveyer rods, and a plate which partially surrounds said drum and cooperates with said drum to form compartments between said conveyer rods in which the articles being conveyed are confined as they pass around said wheels.

5. The combination of a conveyer comprising endless chains and cross rods connecting said chains, chain wheels around which said chains pass, a drum which is secured to and connects said chain wheels and is provided with blades which project outwardly between the conveyer chains in proximity to said conveyer rods, and a plate which partially surrounds said drum and cooperates with said drum to form compartments between said conveyer rods in which the articles being conveyed are confined as they pass around said wheels.

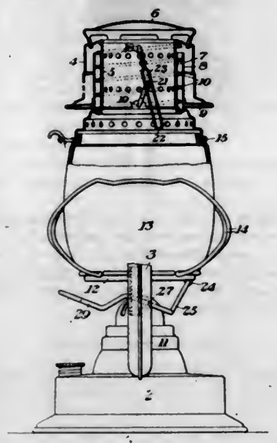
1,112,927. SHOWER-HEAD. ALBERT S. NEWTON, Providence, R. I. Filed Oct. 23, 1913. Serial No. 796,938. (Cl. 137—83.)



1. In a shower head, the combination with the body, of a plate upon the body provided with a central opening, and with a series of perforations arranged concentrically with the opening, a pin rotatably mounted in the opening, a head upon the pin exterior of the plate, an arm upon the pin extending across the series of perforations, and spaced projections upon the arm registering with the series of perforations, said projections being provided with flat faces in contact with the surface of the plate.

2. In a shower head, the combination with the body and neck, of a plate upon the body provided with an opening below the neck, and provided with annularly arranged perforations around the opening, a pin within the opening, a resilient arm fixed upon the pin inside the head extending across the perforations and having projections at intervals throughout its length in frictional contact with the plate and provided with non-contacting portions intermediate the annular series of perforations.

1,112,928. LANTERN. ARCHIBALD W. PAULL, Wheeling, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Mar. 12, 1914. Serial No. 824,216. (Cl. 240—32.)



1. A lantern having a vertically movable globe support, a vertically movable globe retainer, mechanism for raising and lowering said support, globe and retainer, and other mechanism arranged to raise the retainer independent of the globe and the support, said other mechanism having means whereby it operates to hold said retainer in its raised position; substantially as described.

2. A lantern having a vertically movable globe retainer, mechanism at the base of the lantern for raising the globe with its retainer, and other mechanism engaging the globe retainer for raising it from the globe, said other mechanism having means which operate to lock the globe retainer in its raised position; substantially as described.

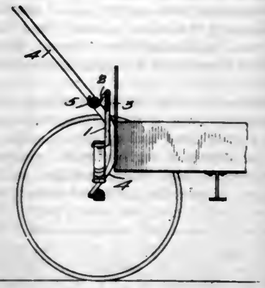
3. A lantern having a dome, a vertically movable globe retainer, a globe support, a crank pivotally connected to the globe support and to the lantern, a globe mounted on said support, a crank supported by the globe retainer, and a connection between said last mentioned crank and the lantern adapted to raise the globe retainer when the crank is moved in one direction, and also to permit the crank to move with relation thereto when the crank connected to the globe support is manipulated, substantially as described.

4. A lantern having a vertically movable globe support and a vertically movable globe retainer, means for simultaneously actuating the support and the retainer, and a rotary device for actuating the retainer separately from the support; substantially as described.

5. A lantern having a vertically movable globe retainer, lifting mechanism at the base portion of the lantern for raising the globe with its retainer, a lifting crank for the globe retainer, and a swinging fulcrum for said crank, said fulcrum having means for permitting vertical movement of the crank relatively thereto when the globe and its retainer are raised by the base mechanism, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,112,929. BUGGY-SHAFT SUPPORT. BRADY MURPHY PEADUE, Franklin, Ky. Filed July 11, 1913. Serial No. 778,556. (Cl. 21—108.)



The combination with a vehicle and shafts hinged thereto and a hollow standard rigidly secured to the front of the vehicle, of a hook pivoted in the standard, and a spiral spring inclosed in the latter and engaging the hook in front of its pivot, as described.

1,112,930. SWINGING-JACK JOURNAL FOR GANG-SAWS. FRANK PIERCE, Rutland, Vt., assignor to Lincoln Iron Works, Rutland, Vt., a Corporation of Vermont. Filed Oct. 13, 1913. Serial No. 794,948. (Cl. 125—18.)

1. A device of the kind described, comprising a rectangular-shaped hood having oppositely disposed openings and provided with oppositely disposed internal bosses, of a bearing arranged between said bosses, an eccentric bushing arranged within said bearing, a suspension pin fixed to said hood extending through said bushing, means for adjusting said bushing, and means for connecting said bearing to the gang saw frame.

2. A swinging jack journal for gang saws, comprising a bearing having a foot portion for connecting it to the gang saw frame, said bearing having a notch, an eccentric bushing arranged within said bearing having a projection extending into said notch, a set screw carried by said bearing engaging said projection, a hood arranged over said bearing, a suspension pin carried by said hood extending through said bushing, and suspension rods having a connection with said hood.

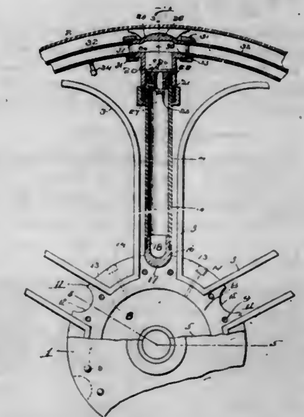
3. A swinging jack journal for gang saws having a suspension pin provided with a lubricating bore having a lateral, an eccentric bushing surrounding said eccentric pin, a support for said pin, a bearing surrounding said bushing, and means for connecting said bearing to the gang saw frame.

4. A device of the kind described, comprising a bell-shaped hood, having an extension provided with internally oppositely disposed bosses, a suspension pin fixed to said hood extending through said bosses, suspension rods connected to said extension, a bushing surrounding said suspension pin, means for adjusting said bushing, a bearing arranged upon said bushing within said hood, and means for connecting said bearing to the gang saw frame.

5. A swinging jack journal for gang saws, comprising a hood member having a suspension rod connected thereto, a fixed bearing, a set screw carried by said bearing, a suspension pin carried by said hood member extending through said bearing, and an eccentric bushing surrounding said suspension pin adapted to be engaged by said set screw for adjusting said bushing within said bearing.

[Claim 6 not printed in the Gazette.]

1,112,931. RESILIENT WHEEL. BENJAMIN R. PILCHER, Dothan, Ala. Filed Aug. 29, 1911. Serial No. 646,713. (Cl. 152—51.)



1. In a resilient wheel, a sectional air tube, a rim extending about the outer portion of the air tube, a hub, radial tubular members connected with the hub, cylinders having laterally extending port members, the cylinders constituting couplings and each having a main bore and a bore extending transversely thereof for connecting the sections of the tube substantially in line with the transverse bore, the radial members reciprocating in the cylinders, and resilient spokes between each pair of radial tubular members, concave socket members secured to the rim, the ends of the cylinders being convex and entering said socket members.

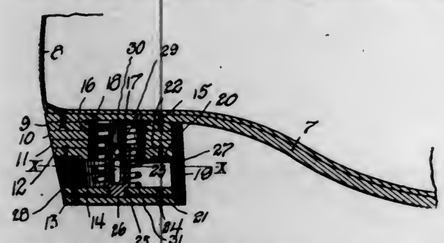
2. In a resilient wheel, a sectional air tube, a rim extending about the outer portion of the air tube, a hub, radial tubular members connected with the hub, cylinders having laterally extending port members for connection with sections of the tube, permitting the air to pass between the cylinders, bearing members carried by the rim and receiving the ends portions of the cylinders, such cylinders receiving the ends of the radial tubular members, concentric sleeves within the ends of the radial members, one of the sleeves being flanged, and a packing material between the flanged portions and the ends of the radial members.

1,112,932. CUSHIONED HEEL FOR FOOT-GEAR. JOHN PREITZER, Monaca, Pa. Filed June 1, 1914. Serial No. 842,147. (Cl. 36—38.)

1. A cushioned heel comprising a plurality of upper lifts provided with registering openings, a plunger fixedly secured within said openings, a lower lift, a metallic plate and a flexible band interposed between said upper lifts and said lower lifts, means for securing said band in position and for further securing said plate to said lower lifts, a cylinder secured to said plate and in which operates said plunger, and a coiled spring arranged within said opening and engaging said plate for supporting said lower lift.

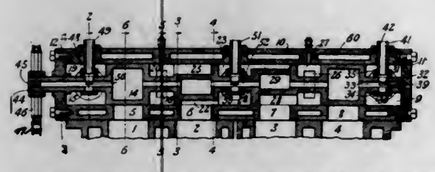
2. A cushioned heel comprising a plurality of upper lifts arranged to be secured to the sole of a shoe and provided

with a pocket, means for closing the top of said pocket, a plunger carried by said means, a lower lift, a metallic plate interposed between the upper and lower lifts, a cylinder having said plunger operating therein and con-



nected with said lower lift, a flexible member interposed between said upper lifts and said lower lift, and an elastic element for maintaining said lower lift extended, said elastic element surrounding said cylinder and bearing against the means for closing the upper end of said pocket.

1,112,933. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ERNEST E. PROULX, Williamsett, Mass. Filed May 5, 1913. Serial No. 765,532. (Cl. 123—190.)



1. The combination of a casing provided with a cylinder port, the casing having an inlet port located to one side of said port and out of alinement therewith longitudinally of the casing, the casing having another port located on the opposite side of the said cylinder port and also out of alinement therewith longitudinally of the casing, a cylindrical valve member rotatable in the casing to cover said inlet and exhaust ports and provided with a channel in the periphery arranged to connect the cylinder port with the said inlet port at a certain stage of the revolution of the valve, said channel having a portion extending around the valve member to constantly register with the inlet port, the valve having another channel in its periphery arranged to connect the said cylinder port with said exhaust port at another stage in the revolution of the valve and when the other channel is beyond said port-registering position, said latter channel having a portion extending around the valve member to constantly register with the exhaust port.

2. The combination of a casing provided with a cylinder port, the casing having an inlet port located to one side of said port, the casing having another port located on the opposite side of said cylinder port, a cylindrical valve member rotatable in the casing to cover said inlet and exhaust ports and provided with a channel in the periphery arranged to connect the cylinder port with the said inlet port at one stage in the revolution of the valve, said channel having an annular portion extending around the valve member to constantly register with the inlet port, said valve having another channel in its periphery arranged to connect said cylinder port with said exhaust port at another stage in the revolution of the valve and when the other channel is beyond said port-registering position, said latter channel having a portion extending around the valve member to constantly register with the exhaust port.

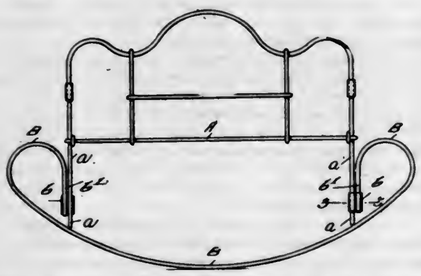
3. The combination of a casing provided with inlet and exhaust ports in its bore, a cylindrical valve member rotatable in its casing bore and provided with channels in its periphery arranged to register with said ports and put them in connection, the valve member having interior chambers closed to said channels and also to said ports of the casing, and having inlet and outlet ports the casing being provided with an inlet member and also an outlet member connecting respectively with end portions of the chamber in the casing to permit circulation of cooling fluid during the rotataion of the valve member, said inlet and outlet members passing through the exhaust channels of the valve member and provided with adjustable packing means therein.

4. The combination of a casing provided with inlet and exhaust ports in its bore, a cylindrical valve member rotatable in the casing bore and provided with channels in its periphery arranged to register with said ports and put them in connection, the valve member having interior chambers closed to said channels and also to said ports of the casing and having inlet and outlet ports, the casing being provided with an inlet member and also an outlet member connecting respectively with end portions of the chamber in the casing to permit circulation of cooling fluid during the rotation of the valve member, said exhaust channels of the valve member having an annular portion extending around the valve to constantly register with the exhaust ports in the casing during rotation of the valve member, said inlet and outlet members for the cooling fluid passing through said exhaust channel portions of the valve member.

5. The combination of a casing provided with a cylinder port, the casing having an inlet port located to one side of said port and out of alinement therewith longitudinally of the casing, the casing having another port located on the opposite side of the said cylinder port and also out of alinement therewith longitudinally of the casing, a cylindrical valve member rotatable in the casing to cover said inlet and exhaust ports and provided with a channel in the periphery arranged to connect the cylinder port with the said inlet port at a certain stage in the revolution of the valve, said channel having an annular portion extending around the valve member to constantly register with the inlet port, the valve having another channel in its periphery arranged to connect the said cylinder port with said exhaust port at another stage in the revolution of the valve and when the other channel is beyond said port-registering position, said latter channel having a portion extending around the valve member to constantly register with the exhaust port, the casing being provided with an inlet member and also an outlet member passing through said exhaust channel portions of the valve member and connecting respectively with end portions of the valve in the casing to permit circulation of cooling fluid during the rotation of the valve member.

[Claims 6 and 7 not printed in the Gazette.]

1,112,934. DOLL-BED FRAME. WILLIAM A. REDDICK, Niles, Mich. Filed Apr. 17, 1913. Serial No. 761,688. (Cl. 46—37.)



1. The improved detachable rocker for doll-bed frame consisting of a wire bent into convex form and having its terminal portions provided with a socket adapted to receive a bed leg, as described.

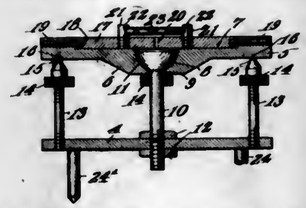
2. The improved rocker consisting of a wire bent into convex form as to its body and having end portions which are curved inward and then downward and provided with

sockets whose axis is vertical and adapted to receive a bed leg, as described.

3. The combination with a doll's bed-frame having vertical legs, of an improved rocker formed of a wire curved in its body portion and having bowed terminals, and keepers or sockets permanently attached to the said terminals for receiving the frame legs detachably.

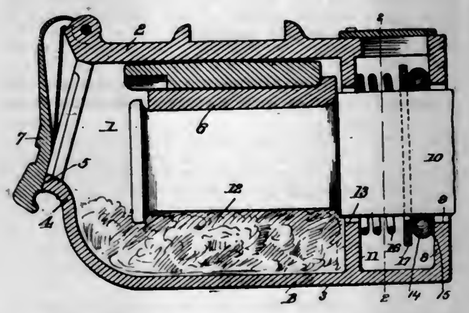
4. The combination with a bed-frame having vertical legs, of rockers formed of a wire having bowed end portions whose terminals project inwardly, and keepers or sockets secured to such terminals for receiving the frame legs, the same being constructed in the form of a double sleeve and arranged directly over the body of the rockers so that the frame legs passing through the keepers rest directly on the rockers when inserted in the keepers, as described.

1,112,935. LEVEL. FRED E. RIAL and FRANCIS E. MOORE, Los Angeles, Cal. Filed Nov. 5, 1912. Serial No. 729,702. (Cl. 248—47.)



In a device of the character described, a base having legs, a pedestal supported by the base and having a hemispherical head, the flat face of which is parallel with the plane of the lower ends of the legs, a platen having a shallow recess and a concaved socket at the bottom of the recess, the said head fitting within the said socket with its flat face disposed slightly below the bottom of the recess, a turret plate disposed in the said recess, means carried by the platen for holding the turret plate within the recess, a spirit level carried by the turret plate, and a series of adjusting members adjustably carried by the base to contact with the platen and to release the platen so that the turret plate will seat upon the said head.

1,112,936. JOURNAL-BOX. FREDRICK A. ROBERTS, Dickey, N. D. Filed Sept. 11, 1912. Serial No. 719,836. (Cl. 64—22.)



The combination with a journal box and journal, the box having a partition spaced from that wall through which the journal is projected, of a packing gasket encircling the journal and bearing against the inner face of that wall of the box through which the journal is projected, said gasket including a core consisting of an annular helical spring, and a sheaf of packing material covering the core, a washer loosely fitted on the journal and interposed between the gasket and the partition, a helical spring loosely wound around the journal and bearing at one terminal against the partition wall and at its opposite terminal against the washer for yieldably urging the washer against the gasket, whereby the gasket is yieldably held into engagement with the inner face of that wall of the box through which the journal is projected, the convolutions of the last-mentioned spring being disposed at right angles to the convolutions of the gasket spring.

1,112,937. MOLD. JOHN T. ROWLEY, Pittsburgh, Pa. Filed Jan. 28, 1913. Serial No. 744,637. (Cl. 22—144.)

A mold the lower end of which is closed by a gate adapted to be opened to discharge the contents of the mold, a water jacket formed in two sections surrounding said mold, and an expansible joint connecting said sections, substantially as described.

1,112,938. PROCESS FOR THE IMPROVEMENT OF INFERIOR-GRADE RUBBERS. DAVID SPENCE and WILLIAM F. RUSSELL, Akron, Ohio, assignors, by mesne assignments, to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Feb. 12, 1912. Serial No. 677,243. (Cl. 18—50.)

1. The process for the improvement of inferior grade rubber consisting in the treatment of the same with an alkaline element, in the absence of moisture.

2. The process for the improvement of inferior grade rubber consisting in the treatment of the same with an alkali metal or an alkaline derivative thereof, in the absence of moisture.

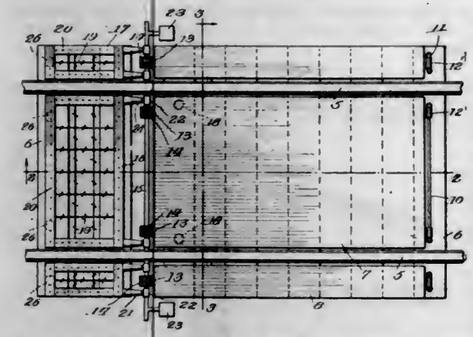
3. The process for the improvement of inferior grade rubber consisting in the treatment of the same with an alkali metal, alloy, mixture, or with a alkaline derivative or derivatives thereof, in the absence of moisture.

4. The process for the improvement of inferior grade rubber consisting in the treatment of the same with metallic sodium, in the absence of moisture.

1,112,939. CATTLE-GUARD. HENRY P. SPENCER, Shelbyville, Tenn., assignor of one-half to Edgar Earl Spencer, Burns, Tenn. Filed Apr. 23, 1914. Serial No. 833,956. (Cl. 39—42.)

1. A cattle guard comprising a central platform section disposed between the rails of a track, and wholly above the ties thereof and side sections disposed on opposite sides of the track rails and wholly above the ties, a strap secured to said central section and side sections and spanning the rails below the same, angle irons disposed in parallel relation longitudinally of and secured to the platform sections, said irons having eyes formed at one end thereof, pivot bars secured to one of the cross ties, on which said eyes are journaled, vertically disposed rack bars secured one to each of the angle irons, said rack bars at their upper edges being even with the plane of the platform, said bars disposed in horizontal alinement, a shaft journaled transversely of the track, a gate fixedly secured to said shaft, pinions carried by the shaft in mesh with said rack bars, counterweights carried by said shaft, coiled springs disposed between said platform and one of the cross ties, said springs normally holding said platform in raised position, said gate being disposed in horizontal relation when the platform is in raised position, and

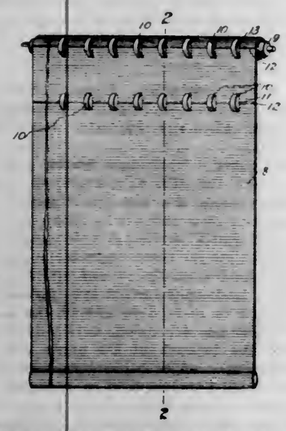
coöperating means between the platform and gate for limiting the movement of the latter.



2. A cattle guard including a gate comprising a central section disposed between rails of the track, and side sections disposed on opposite sides of the track rails, said sections each being formed of a substantially rectangular frame work, barbed wire strung on said sections, prongs secured on said sections, a shaft journaled transversely of the track rails, arms secured to said gate sections, and having eyes through which said shaft extends, said eyes being keyed on the shaft, said gate being disposed normally in horizontal position between and on each side of the track rails and wholly above the ties, an actuating platform, gear means between the platform and shaft for rotating the latter when the former is moved, for moving the gate into vertical position, and means carried by the arms for engaging said platform whereby to limit the movement of the gate.

3. A cattle guard comprising a platform pivoted at one end and free to move at the other end, said platform being disposed entirely above the ties of the track, a shaft journaled transversely of the track, co-acting means between the free end of the platform and the shaft for rotating the latter as the former is moved, a gate fixedly connected with the shaft and adapted to be moved from horizontal to vertical position as the latter is moved, and stop pins carried by the gate and adapted to engage the platform for limiting the movement of the gate.

1,112,940. WINDOW-SHADE. DAVID SPIVAK, New York, N. Y. Filed Sept. 13, 1913. Serial No. 789,621. (Cl. 156—10.)



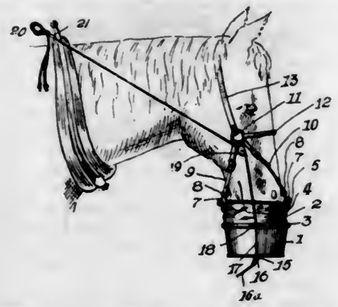
1. A shade, having a plurality of series of alined, spaced-apart, surface-projected sections, the individual sections in successive series being arranged to overlie the individual sections of preceding series, to permit rolling said shade.

2. A shade, having a plurality of series of alined, spaced-apart, surface-projected sections, the individual sections in successive series being arranged to overlie the individual sections of preceding series, to permit rolling said shade; and a meshed covering for the openings formed by said sections.

3. In combination, a shade having a plurality of spaced-apart projections, said projections being raised to provide lateral openings; and a roller having a series of form blocks shaped apart and shaped to coincide with said projections and to fit within the same.

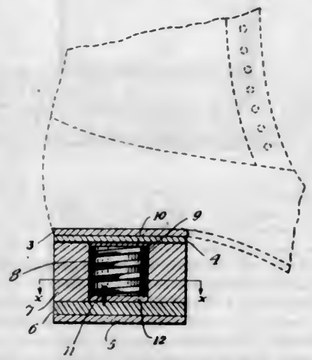
4. A shade having a plurality of outwardly-bowed sections forming with the body of the shade lateral openings, said bowed sections being arranged in horizontal lines in successive series; and a roller having a series of form blocks to register with and fit within said bowed sections when the shade is rolled thereon.

1,112,941. FEED-BAG. JAMES A. ST. JOHN, Niles, Ohio. Filed Apr. 17, 1912. Serial No. 691,277. (Cl. 119—66.)



A feed bag comprising a rigid imperforate cylindrical receptacle having a flat bottom riveted thereto and adapted to contain a quantity of feed, a band secured to the top of said receptacle, an annular flexible casing extending over the periphery of the said receptacle and secured to the lower end of said band, a stiffening ring for the upper end of said casing, diametrically opposed guide straps projecting laterally from said band, adjustable hangers connected to said ring and adapted to be attached to a halter, pulleys adapted to be suspended from the halter, an eye secured to the bottom of the receptacle, flexible members extending through said eye and up through the guide straps and over said pulleys for elevating the receptacle, and a member secured to said eye for limiting upward movement of said receptacle.

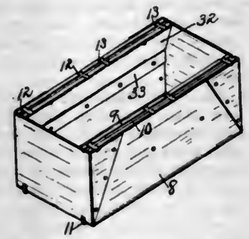
1,112,942. CUSHIONED HEEL. FRANK STOLLER, Kittanning, Pa. Filed June 24, 1914. Serial No. 847,052. (Cl. 36—38.)



1. A cushioned heel comprising a series of superposed lifts, one of the intermediate lifts being resilient, another of the intermediate lifts provided with a compartment closed by said resilient lift, a pair of plates arranged in said compartment, and a coiled spring interposed between and secured to said plates, one of said plates bearing against said resilient lift.

2. A cushioned heel comprising an upper lift, a tread lift, a resilient lift positioned against said tread lift, a lift of greater thickness than said resilient lift interposed between the upper lift and said resilient lift, said lift of greater thickness provided with a centrally disposed opening constituting a compartment, and cushioning means arranged in said compartment and interposed between said upper lift and said resilient lift.

1,112,943. DRAG-BOX. ELMER B. STONE, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 2, 1913. Serial No. 758,305. (Cl. 220—5.)



1. A receptacle having its upper edge and bottom provided with projections and recesses positioned to interengage with mating formations on a receptacle of like construction piled either crosswise of lengthwise thereof.

2. A receptacle having its upper edge and bottom provided with projections and recesses positioned to interengage with projections and recesses on a plural number of receptacles of like construction located in the same horizontal plane, either above or below, and arranged either lengthwise or crosswise thereof.

3. A receptacle composed of thin material and having an upper edge greater in breadth than the thickness of the metal composing the receptacle, said upper edge and the bottom having projections and recesses positioned to engage with projections and recesses on receptacles of like construction piled either crosswise or lengthwise one upon another.

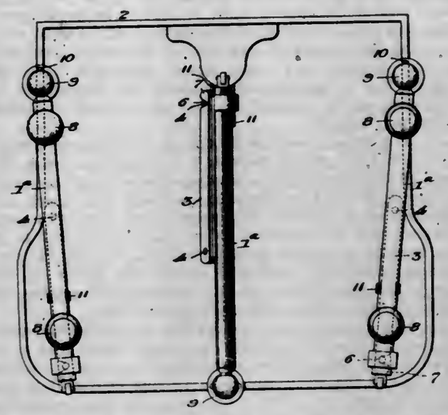
4. A receptacle having its upper edge and bottom provided with projections and recesses positioned to register with projections and recesses on receptacles of like construction piled either crosswise or lengthwise one upon another, said projections and recesses being of a construction to permit, when so piled, sliding movement in one direction and prevent sliding movement in another direction.

5. A receptacle having an upper edge and with projections and recesses upon said edge greater in breadth than the thickness of the metal composing the receptacle and upon the bottom positioned to interengage with projections and recesses on receptacles of like construction piled either crosswise or lengthwise one upon another, said recesses extending out at the end of the receptacle to permit sliding movement in one direction only when so piled.

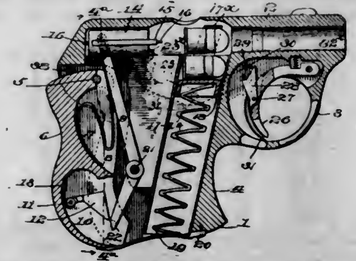
[Claims 6 to 17 not printed in the Gazette.]

1,112,944. FOLDING TYPE-WRITER SUPPORT. HARRY A. STONE, New York, N. Y., assignor to Folding-Stand Company, Inc., New York, N. Y., a Corporation of New York. Filed May 14, 1913. Serial No. 767,692. (Cl. 45—117.)

The combination with an object, of a foldable support attached thereto and portable therewith, composed of independent single legs which are independently jointed to the object and adapted to independently fold beneath said object to constitute a sub-base therefor, feet carried by, and projecting from the sides of, said legs, fastening devices for securing the legs in folded condition under said object, and braces jointed to certain of the legs and detachably connected to others of the legs, said braces being foldable alongside of the legs to which they are jointed and foldable with the said legs under the object.



1,112,945. AUTOMATIC MAGAZINE-FIREARM. WILLIAM TRABUE, Louisville, Ky. Filed Oct. 17, 1912. Serial No. 726,295. (Cl. 42—3.)



1. In a fire arm in combination with a reciprocatory breech block, and a magazine located beneath the breech block, a bell crank lever connected with the breech block; a vibrative member pivoted at the rear of the stock or handle, a spring dog located in the vibrative member and adapted to contact with one end of the bell crank lever, and to be released therefrom, a spring intermediate the vibrative member and the bell crank lever for forcing the breech block in contact with a cartridge when the breech block is released, and means adapted to hold and release the breech block in its retracted position.

2. In a fire arm such as described, in combination with a reciprocatory breech block, and a magazine located below the path of the breech block; a bell-crank lever pivoted within the handle or stock and pivotally connected at its upper end with the breech block; a vibrative member pivoted at its upper end within a recess in the rear of the stock or handle; a vibrative spring dog located within the recess in the front of the vibrative member and adapted to contact with the lower free end of the bell-crank lever and to be released therefrom; a main spring intermediate the vibrative member and the bell crank lever for forcing the breech block in contact with a cartridge when the breech block is released by a pull upon the trigger, and a sear adapted to hold and release the breech block and to give function to the trigger.

3. In a fire arm such as described, in combination with a reciprocative breech block and a bell-crank lever located within the stock or handle; a vibrative member and means

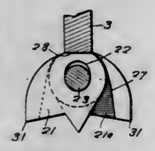
intermediate the vibrative member and the bell-crank lever for vibrating the latter, a sear pivoted to the stock or handle and provided at its rear extremity with a lateral stud or projection adapted to contact with the front end of the breech block to hold it in cocked position, and with a lateral pin or projection at its front end; a spring for forcing the rear end of the sear in the path of the breech block; and means connected with the trigger for contacting and actuating the lateral pin or projection at the front of the sear when a pull is exerted upon the trigger.

4. In a firearm such as described, in combination with a reciprocative breech block and the magazine below the path of the breech block, a spring actuated cartridge check or safety device pivotally connected with the breech and adapted to lie beneath the breech block and across the opening into the magazine, when the breech block is in its forward or breech closing position, to hold the cartridges within the magazine against the action of the spring follower therein, and to automatically release the cartridge when the breech block is retracted.

5. In a fire arm such as described, in combination with mechanism for reciprocating the breech block, and a vibrative actuating member located within a recess within the rear of the stock or handle; means intermediate the vibrative actuating member and the breech block actuating mechanism for controlling the vibrating actuating member and the vibrative stop or anchor adapted to automatically locate itself to rigidly hold the vibrative actuating member in its closed position, until manually released.

[Claims 6 and 7 not printed in the Gazette.]

1,112,946. DRILL. WALTER JOSEPH TURNBULL, New Orleans, La.; Emily Delaney Turnbull and Joseph T. Sullivan executors of said Walter Joseph Turnbull, deceased. Filed Dec. 20, 1913. Serial No. 807,888. (Cl. 255—75.)



1. In a drill, a stem having laterally spaced lugs at its lower end, a pair of blades arranged between the lugs, each of the said blades having an opening at its upper end, and a bolt passing through the openings of the blades and engaging the lugs of the stem to pivot the blades to the stem to permit the blades to swing toward and from each other into contracted or expanded position, said blades being similar and each being rabbeted on its inner face to receive the rabbeted portion of the other blade, a shoulder being formed between the rabbeted portion and the body portion of each blade for engagement by the inner edge of the other blade to limit the movement of the blades toward each other into contracted position, the openings of the blades being elliptical and having their long axes parallel with the axis of the stem to permit a limited longitudinal movement of the blade with respect to the stem, each blade having a plane portion at its upper end for engagement by the end of the stem to hold the blades in expanded position, each blade being notched at its lower end to form cutting points, the inner points of the blades registering with each other when the blades are expanded and registering with the other blade when in contracted position.

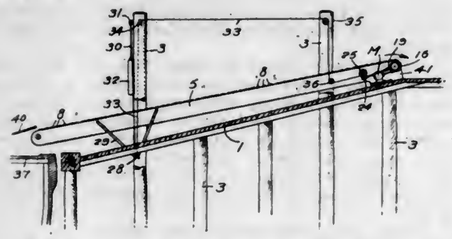
2. In a drill, a stem having laterally spaced lugs at its lower end, a pair of blades arranged between the lugs, each of the said blades having an opening at its upper end, and a bolt passing through the openings of the blades and engaging the lugs of the stem to pivot the blades to the stem to permit the blades to swing toward and from each other into contracted or expanded position, said blades being similar and each being rabbeted on its inner face to receive the rabbeted portion of the other blade, a shoulder being formed between the rabbeted portion and the body portion of each blade for engagement by the inner edge of the other blade to limit the movement of the blades toward each other into contracted position, the openings of the blades being elliptical and having their long axes parallel with the axis of the stem to permit a limited longitudinal movement of the blade with respect to the stem, each blade having a plane portion at its upper end for engagement by the end of the stem to hold the blades in expanded position, means for limiting the movement of the blades toward each other, each blade having its lower cutting end notched to form inner and outer points, the inner points being of less length than the outer points to cause the outer points to move away from each other when the blades are engaged with the work, said blades having a limited movement longitudinally of the stem, and means in connection with the blades and the stem for holding the blades in expanded position when the said blades are moved toward the stem.

4. In a drill, the combination with the stem adapted to rotate on its long axis, of cutting blades pivoted to the stem for swinging movement toward and from the axis of the stem into contracted and expanded position, means for limiting the movement of the blades toward each other, each blade having its lower cutting end notched to form inner and outer points, the inner points being of less length than the outer points to cause the outer points to move away from each other when the blades are engaged with the work.

5. In a drill, the combination with the stem adapted to rotate on its long axis, of cutting blades pivoted to the stem for swinging movement toward and from the axis of the stem into contracted and expanded position, the lower working ends of the blades being notched to form inner and outer points, the inner points being of less length than the outer to cause the blades to move away from each other when they engage the work, and means in connection with the stem and the blades for holding the blades expanded when they are in engagement with the work.

[Claim 6 not printed in the Gazette.]

1,112,947. CONVEYER. WALTER J. TURNBULL, deceased, by Joseph T. Sullivan and Emily D. Turnbull, executors, New Orleans, La. Original application filed Nov. 12, 1913, Serial No. 800,491. Divided and this application filed Mar. 18, 1914. Serial No. 825,533. (Cl. 193—3.)



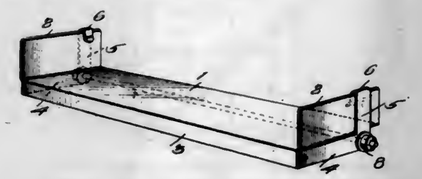
1. In an unloading device, an endless platform comprised of a series of units pivotally connected together, each of said units being provided with rollers, sprocket wheels carried by said conveyer at one end thereof and arranged to receive said rollers, a drive shaft for supporting said sprockets, means for actuating said drive shaft, and means operated by said drive shaft for raising or lowering the opposite end of the conveyer.

2. In an unloading apparatus, an endless conveyer comprising a series of units pivotally connected together, a drive shaft carried by said conveyer at one end thereof, sprocket wheels carried by said shaft and arranged to receive portions of said pivoted units for moving the latter, means for actuating said drive shaft, a gear carried by said drive shaft, an auxiliary gear normally out of engagement with said first named gear, means for bringing said auxiliary gear into engagement with said first named gear, an auxiliary shaft, a pair of winding drums carried by said auxiliary shaft, and means operated through the movement of said auxiliary gear for driving said winding drums.

3. In an unloading apparatus, an endless conveyer comprising a series of units pivotally connected together, a drive shaft carried by said conveyer at one end thereof, sprocket wheels carried by said shaft and arranged to receive portions of said pivoted units for moving the latter, means for actuating said drive shaft, a gear carried by said drive shaft, an auxiliary gear normally out of engagement with said first named gear, means for bringing said auxiliary gear into engagement with said first named gear, an auxiliary shaft, a pair of winding drums carried by said auxiliary shaft, means operated through the movement of said auxiliary gear for driving said winding drums, and cables carried by said winding drums and extending toward and fastened to the opposite end of said conveyer for raising or lowering the conveyer.

4. In an unloading apparatus, an endless conveyer comprising a series of units pivotally connected together, a drive shaft carried by said conveyer at one end thereof, sprocket wheels carried by said shaft and arranged to receive portions of said pivoted units for moving the latter, means for actuating the drive shaft, a gear carried by said drive shaft, an auxiliary gear normally out of engagement with said first named gear, means for bringing said auxiliary gear into engagement with said first named gear, an auxiliary shaft, a pair of winding drums carried by said auxiliary shaft, means operated through the movement of said auxiliary gear for driving said winding drums, cables carried by said winding drums and extending toward and fastened to the opposite end of said conveyer for raising or lowering the conveyer, and counterweights secured to the conveyer for holding the latter in its adjusted position.

1,112,948. SLAT CONVEYER. WALTER J. TURNBULL, deceased, by Joseph T. Sullivan and Emily D. Turnbull, executors, New Orleans, La. Filed Apr. 22, 1914. Serial No. 833,723. (Cl. 193—2.)



1. In an endless conveyer, a plurality of units, each unit comprising a body portion having upturned end flanges, and a downwardly turned side flange, said side flange having laterally bent extensions lying substantially parallel with the upstanding end flanges, said parallel flanges being provided with upwardly extending arms bent at their tops to engage the tops of the upwardly extending end flanges.

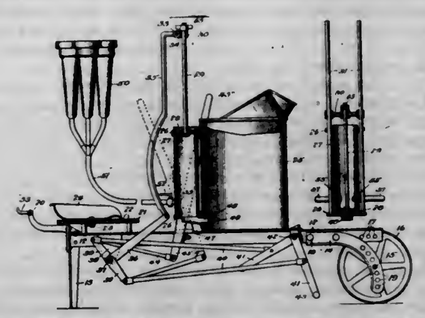
2. In an endless conveyer, a plurality of units, each unit comprising a body portion having upturned end flanges and a downwardly turned side flange, said side flange having laterally bent extensions lying substantially parallel with the upstanding end flanges, said parallel flanges being provided with upwardly extending arms bent at their tops to engage the tops of the upwardly extending end flanges, a pivot rod carried by said parallel flanges near one end thereof, and a second pivot rod carried by said parallel flanges underneath the body portion and adjacent to the downwardly extending flange.

3. In an endless conveyer, a plurality of units each comprising a flat body portion and upwardly extending end portions, said body portion having a downwardly extending stiffening flange, the body portions of the adjacent units overlapping and the end flanges of adjacent units overlapping, and means for locking the end flanges of adjacent units together.

4. In an endless conveyer, a plurality of units each comprising a flat body portion and upwardly extending end portions, said body portion having a downwardly extending stiffening flange, the body portions of the adjacent units overlapping and the end flanges of adjacent units overlapping, means for locking the end flanges of adjacent units together, said last named means comprising integral extensions at the ends of said stiffening members, said extensions being spaced apart from said upwardly turned ends to receive the upwardly turned ends of the adjacent section, and means for securing a portion of the extension to said upwardly turned ends.

5. In an endless conveyer, a plurality of units each comprising a flat body portion and upwardly extending end portions, said body portion having a downwardly extending stiffening flange, the body portions of the adjacent units overlapping and the end flanges of adjacent units overlapping, means for locking the end flanges of adjacent units together, said last named means comprising integral extensions at the ends of said stiffening members, said extensions being spaced apart from said upwardly turned ends to receive the upwardly turned ends of the adjacent section, means for securing a portion of the extension to said upwardly turned ends, a pair of pivot rods extending through said extensions, and rollers carried by said pivot rods.

1,112,949. MILKING-MACHINE. WILLIAM J. UEBLER, West Schuyler, N. Y. Filed Apr. 7, 1911. Serial No. 619,517. (Cl. 31—98.)



1. In a milking machine the combination with milking mechanism, of operating mechanism therefor comprising a pair of oppositely arranged treadles, a pair of oppositely arranged hand levers corresponding to said treadles, and mechanism for operatively connecting said treadles and levers with said milking mechanism, said means being constructed and arranged to cause said treadles and levers in each pair to move in opposite directions and to cause each treadle and the corresponding lever to move in opposite directions.

2. In a milking machine the combination with milking mechanism including a reciprocating part, of mechanism for reciprocating said part comprising a pair of treadle levers, a pair of hand levers, a rock shaft, a pair of arms on said rock shaft, a pair of connecting rods connecting each of said arms with one of said treadle levers, and with the corresponding hand lever, a third arm on said rock shaft, and a pitman connecting said last named arm with said reciprocating part.

3. In a milking machine the combination with portable manually operated milking mechanism, of separate power operating mechanism therefor, and means for detachably connecting said power operating mechanism and milking mechanism.

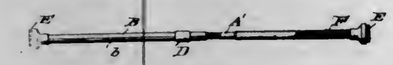
4. In a milking machine the combination with milking mechanism, of manual operating mechanism therefor,

power operating mechanism therefor, means for detachably connecting said manual operating mechanism and said milking mechanism, and means for detachably connecting said power operating mechanism and said milking mechanism.

5. In a milking machine the combination with manually operated milking mechanism including a reciprocating part provided with a knob, of separate power operated mechanism for reciprocating said part, a connecting rod operated by said power mechanism and provided with a pair of separable arms adapted to embrace said knob, and means for holding said arms in engagement with said knob.

[Claims 6 to 28 not printed in the Gazette.]

1,112,950. CURTAIN-ROD. EDWIN W. VAUGHAN, Worcester, Mass. Filed Aug. 13, 1913. Serial No. 784,499. (Cl. 156—19.)



1. As an article of manufacture, an extensible curtain rod comprising a tube, a screw threaded rod adapted to enter said tube, said tube having a screw thread on the inside thereof at a distance from the end and adapted to engage the threads of said rod, and a fixed separate metallic band surrounding said tube outside said thread at a distance from the end of the tube.

2. As an article of manufacture, an extensible curtain rod comprising an open seam tube, a screw threaded rod adapted to enter said tube, a member on the inside of said tube at a distance from its end constituting a thread adapted to engage the threads of said rod, and a seamless metallic band surrounding said tube, fixed thereto, extending beyond said thread member in both directions and holding it in condition to prevent the disengagement of said member from the tube.

3. As an article of manufacture, an extensible curtain rod comprising a sheet metal tube, a screw threaded rod adapted to enter said tube, said tube having on the inside thereof at a distance from its end, a thread member adapted to engage the threads of said rod, and a metallic band surrounding said tube outside said thread member and extending beyond the same in both directions longitudinally, said band gripping the tube on both sides of said member and holding it firmly against expansion and holding the thread member.

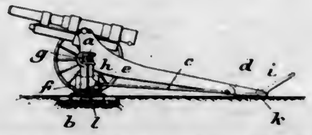
4. As an article of manufacture, an extensible curtain rod comprising a tube, a screw threaded rod adapted to enter said tube, a coiled spring member fixed to the inside of the tube having a normal external diameter slightly greater than the interior diameter of the tube and adapted to engage the threads of said threaded rod, and a metallic band surrounding said tube, said band at both ends gripping the tube at points on opposite ends of said coiled spring member to hold the tube and member securely together.

5. As an article of manufacture, an extensible curtain rod comprising a tube, a screw threaded rod adapted to enter said tube, said tube having on the inside thereof a wire adapted to engage the threads of said rod, and a seamless metallic band surrounding said tube and extending beyond said member longitudinally in both directions and reduced in diameter at its ends to cause it to grip said tube firmly at opposite sides of said wire.

[Claims 6 to 14 not printed in the Gazette.]

1,112,951. GUN-CARRIAGE. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Nov. 8, 1912. Serial No. 730,254. (Cl. 89—37.)

1. The combination with a gun carriage, of a support for the carriage comprising a frame having sockets in which the wheel axle of the carriage may slide with the carriage in a direction substantially parallel to the longitudinal axis of the gun, and means connecting the gun carriage to said support at a point beneath the plane of the axle.



2. In combination with a gun carriage having a trail, a pivoted frame having sockets in which the wheel axle of the carriage can slide in a direction substantially parallel to the longitudinal axis of the gun, and means connecting the trail to said pivoted frame at a point below the wheel axle.

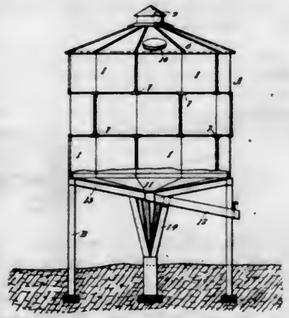
3. In combination with a gun carriage having a trail, and a platform, a forked frame pivotally mounted on said platform and having sockets in which the axle of said carriage can slide in a direction substantially parallel to the longitudinal axis of the gun, and thrust sustaining rods between said trail and said frame.

4. In combination with a gun carriage and a platform, a forked frame pivotally mounted on said platform and having sockets, bearings for the axle of the carriage fitted in said sockets, said axle and bearings being free to slide in a direction parallel to the longitudinal axis of the gun, and tension rods connecting said gun carriage to said frame at a point beneath the axle.

5. In combination with a gun carriage having a trail, a platform, a forked frame pivoted on said platform and having sockets forming elongated bearings in which the wheel axle of said gun carriage can slide, and tension rods connecting said trail to said frame at a point below said axle.

[Claims 6 and 7 not printed in the Gazette.]

1,112,952. STORAGE-BIN. WILLIAM F. WATKINS, Spokane, Wash., assignor, by direct and mesne assignments, to F. H. Hall and George Lapray, Spokane, Wash. Filed June 25, 1913. Serial No. 775,745. (Cl. 189—3.)

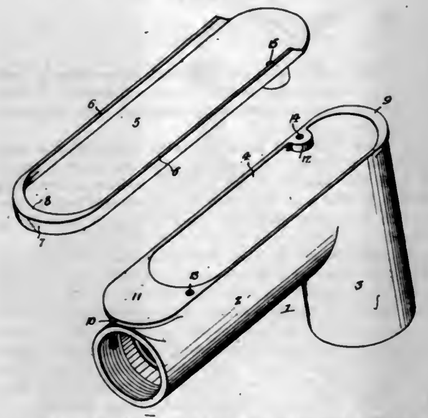


1. A sectional storage container comprising walls composed of a plurality of units, each unit consisting of a plate formed at its upper edge with a clamping flange and at its lower edge with a locking tongue, said flange and tongue being split intermediate their ends and the plate being bent into angular form at a point in alinement with the splits of the flange and tongue, each unit plate being also provided with locking members at its opposite end, the several units aforesaid being assembled in staggered relation whereby the ends of one unit are arranged opposite the angles at the bent intermediate portion of two adjacent plates, and members uniting the several units together and closing the split portions of the clamping flange and tongue of each plate.

2. A sectional storage container comprising walls composed of a plurality of units, each unit consisting of a plate formed at its upper edge with a U-shaped flange and at its lower edge with an offstanding tongue, said plate being bent intermediate its ends to give the same an angular form and said clamping flange and tongue being split to permit of said bending, the several units aforesaid being assembled by engaging the clamping flange of one unit with the locking tongues of adjacent units, and means uniting the units together at the split points of the clamping flange and tongue of each unit, whereby each unit is not only connected to its adjacent units but reinforced at said split portions.

3. A sectional storage container comprising walls composed of a plurality of units, each unit consisting of a plate formed at its upper edge with a U-shaped flange and at its lower edge with an offstanding tongue, said plate being bent intermediate its ends to give the same an angular form and said clamping flange and tongue being split to permit of said bending, the several units aforesaid being assembled by engaging the clamping flange of one unit with the locking tongues of adjacent units, and fastening means intermediate the several units aforesaid and comprising a member located at the split portions of the clamping flanges and tongues of said units and secured thereto so as to close said split portions and reinforce each unit at its angular intermediate portion.

1,112,953. OUTLET-FIXTURE FOR CURRENT-CONDUCTORS. WILMER M. WEBB, Philadelphia, Pa., assignor to H. T. Paiste Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 14, 1911. Serial No. 660,269. (Cl. 247—12.)



1. An outlet fixture having two branches and an opening; flanges at the ends of the opening extending parallel to the plane thereof; with a reversible cover formed with one end returned on itself for the reception of either flange.

2. An outlet fixture consisting of a hollow branched structure having an opening provided with flanges at a plurality of points; with a cover having a returned flange of limited extent for application to the opening of the structure in any of a plurality of positions.

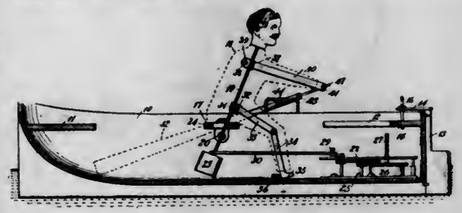
3. An outlet fixture consisting of a hollow branched structure having an elongated outlet opening provided with flanges at its opposite ends; and a reversible cover having a returned flange at one end formed to fit either flange of the outlet opening.

4. An outlet fixture consisting of a hollow branched structure provided with an outlet opening having an outwardly projecting flange; a cover having a returned flange formed to fit the flange of the outlet opening; and means for retaining the cover on the branched structure.

5. The combination in an outlet fixture of a hollow branched structure having an outlet opening provided with flanges at two opposite portions and having two holes; with a reversible cover having a returned flange capable of engagement with either of the flanges of said opening and having a screw capable of entering either of the holes of the branched structure to retain the cover in place thereon.

[Claim 6 not printed in the Gazette.]

1,112,954. MECHANICAL ROWBOAT. ROBERT E. C. WEIR, New York, N. Y. Filed Nov. 6, 1913. Serial No. 799,458. (Cl. 46—40.)



1. A mechanical rowboat embodying the combination of a hull and a motor therein; of a dummy arranged in the hull and embodying a pendent upright pivoted in the hull, a counterbalancing weight at the lower end of the upright, legs pivoted to the upright, arms also pivoted to the upright, and oars carried at the side of the hull and connected to the arms.

2. A mechanical rowboat embodying the combination of the hull and a motor therein, of a dummy arranged in the hull and embodying a pendent upright pivoted in the hull, a counterbalancing weight at the lower end of the upright, legs pivoted to the upright, arms also pivoted to the upright, oars carried at the side of the hull and connected to the arms, said oars having reduced portions slidably engaged with the arms and pendent supports for the oars carried by the sides of the hull.

3. The combination with the hull of a boat and a seat arranged transversely of the same and provided with a slot extending longitudinally of the hull, of a transverse pivot supported beneath the seat, a pendent upright fixed to the pivot below the seat and extending through the slot, a motor having a crank, a connection between the crank and upright, a cross member attached to the upright, arms pivoted thereto and having apertured end portions, inverted U-shaped brackets attached to the sides of the hull, oars having weighted portions near their inner ends and reduced inner extensions slidably engaged in the apertures of the arms, said weighted portions serving to counterbalance the weight of the blade portions of the oars, and interlocking loops carried by the supports and weighted portions of the oars to cause the oars to feather during their oscillation with the upright.

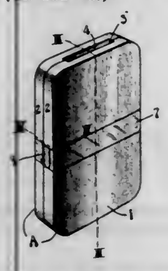
4. The combination with the hull of a boat and a seat arranged transversely of the same and provided with a slot extending longitudinally of the hull, of a transverse pivot supported beneath the seat, a pendent upright fixed to the pivot below its vertical center, a motor having a crank, a connection between the crank and upright, a cross member attached to the upright, arms pivoted thereto and having apertured end portions, inverted U-shaped brackets attached to the sides of the hull, oars having weighted portions near their inner ends and reduced inner extensions slidably engaging the apertures of the arms, said weighted portions serving to counterbalance the weight of the blade portions of the oars, interlocking loops carried by the supports and weighted portions of the oars to cause the same to feather during their oscillation with the upright a counterbalancing weight at the lower end of the upright, a second cross member fixed to the upright, hinged leg sections pivoted to the last mentioned cross member and a foot piece for engagement with the foot portions of said leg sections.

5. The combination with a hull and oar supports fixed to the sides of the hull, said supports including depending loops, of oars having loops in interlocking engagement with the first mentioned loops to adapt the oars for move-

ment in a substantially oval path to cause them to feather when oscillated and motor operative mechanism mounted in the hull for oscillating the oars.

[Claim 6 not printed in the Gazette.]

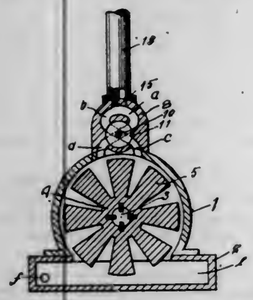
1,112,955. POCKET SAVINGS-BANK. FREDERICK WESTERBECK, St. Louis, Mo. Filed May 16, 1913. Serial No. 768,037. (Cl. 232—4.)



1. A pocket savings bank comprising two matching casing sections; each having a side member formed with an edge flange and a guard tongue and abutting against each other, a stay member fitting within and between the casing sections and having its ends spaced apart to receive the guard tongues between them and a securing band surrounding and binding the casing sections together.

2. A pocket savings bank comprising two matching casing sections formed with depressed band seats; each having a side member formed with an edge flange and a guard tongue and abutting against each other, a stay member fitting within and between the casing sections and having its ends spaced apart to receive the guard tongues between them, and a securing band seated in the band seats and surrounding and binding the casing sections together.

1,112,956. TWIN VACUUM-TURBINE. PETER F. WHITE and MERCER M. LEONARD, Leavenworth, Kans., assignors of one-fifth to William Kubina, Charleroi, Pa. Filed Apr. 28, 1914. Serial No. 834,997. (Cl. 60—4.)



1. A double turbine wheel comprising a cylinder having two compartments therein, a wheel mounted upon a single shaft and mounted in said compartments, gas feed pipes leading into each compartment, valves for controlling the flow of gas in said compartments and a reducing chamber underneath the turbine wheels whereby said turbine wheel may be operated by two separate and distinct gases which unite after their force has been spent to form a liquid, thus obviating the necessity of an exhaust into the atmosphere.

2. A turbine wheel comprising a cylinder having a partition therein, a turbine wheel mounted in each chamber at opposite sides of the partition, and means for leading two separate and distinct gases into said chambers, said gases adapted to unite after they have expended their force and form a liquid, thus obviating the necessity of an atmospheric exhaust.

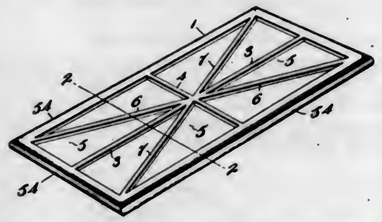
3. A method of rotating turbine wheels which consists in leading acetylene gas and hydrogen-chlorin gas into separate chambers to utilize combined forces, and permitting said gases to exhaust and unite to form a liquid.

4. A twin motor or turbine wheel comprising a casing, a partition in said casing, a rotor mounted in each of said chambers in opposite sides of the partition, means for controlling two separate gases for admission into said chambers, and a reducing chamber underneath the rotor to receive the said gases in the form of a liquid.

5. A double turbine comprising a casing having separate and distinct chambers, turbine wheels mounted upon a single shaft and disposed in said chambers, means for controlling two separate and distinct gases, one for each chamber, and a reducing chamber underneath the turbine wheels to receive the exhaust of the gases in the form of a liquid.

[Claim 6 not printed in the Gazette.]

1,112,957. CLOTH-BOARD MADE OF PULP MATERIAL. WYLE T. WILSON, Philadelphia, Pa. Filed Nov. 6, 1913. Serial No. 799,538. (Cl. 206—50.)



1. A cloth board of pulp material comprising a web member; a rounded edge member; and a plurality of bracing members integral with said web and edge members, substantially as described.

2. A cloth board of pulp material comprising a web member; a plurality of rounded edge members integral with said web member; and bracing members extending from side to side and from end to end of said board integral with said web and edge members, substantially as described.

3. A cloth board of pulp material comprising a web member; rounded edge members on the sides and ends of said board integral with said web member; a plurality of bracing members crossing each other at the center of said board extending from end to end and from side to side of said board and integral with said side and end members and said web member; and additional bracing members integral with said first named bracing members and with said edge and web members, substantially as described.

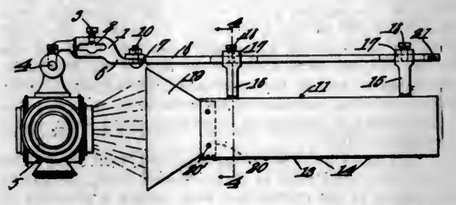
4. A cloth board formed of layers of pulp material provided with a web member; a rounded edge and with bracing members associated with said web member, substantially as described.

5. A cloth board formed of pulp material provided with a continuous edge member and with bracing members associated with said edge member, substantially as described.

1,112,958. AUTOMOBILE LAMP AND LICENSE-PANEL HOLDER. ANDREW WINDEN, Madelia, Minn. Filed Dec. 1, 1913. Serial No. 804,026. (Cl. 40—131.)

1. In a device of the character described, a bracket having a lamp standard and arm, a U-shaped supporting member, a clamping member carried by the said arm, the yoke portion of the supporting member having a slot receiving the said clamping member, and a license panel adjustable upon the arms of the supporting member.

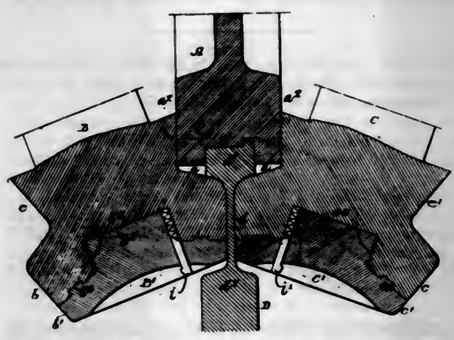
2. In a device of the character described, a bracket having a lamp standard, a U-shaped supporting member having its yoke portion adjustably connected to the bracket, U-shaped brackets having their terminals slidably engaging the arms of the said supporting member, and a license panel carried by the yoke portions of the said U-shaped brackets.



3. In a device of the character described, a bracket having a lamp standard, a supporting member attached to the bracket and projecting away from the said standard, a casing having one side attached to the supporting member, the other side and that end of the casing adjoining the said standard, being open, a license panel attached to the casing over the last mentioned side, and a light reflector having a flange secured within the open end of the casing.

4. In a device of the character described, a bracket having a lamp standard, a U-shaped supporting member having its yoke portion adjustably connected to the bracket, brackets slidably engaging the arms of the supporting member, a casing attached to the last mentioned brackets, that end of the casing adjacent the standard being open, a license panel carried by the casing, and adapted to be illuminated by light entering the open end of the casing and a light reflector carried by the open end of the casing.

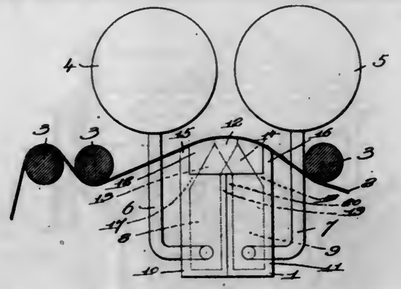
1,112,959. ROLLS FOR ROLLING STEEL WHEELS AND WHEEL-CENTERS. CLAUDE A. WITTER, Burnham, Pa. Filed May 11, 1910. Serial No. 560,645. (Cl. 80—58.)



A side bearing roller for machines of the character described, said roller having two bearing faces, one back of the other, the rear bearing face being arranged to rest against the sides of the roll which forms the tread and flange of the wheel, the forward bearing face being shaped to roll the web of the wheel, said roller having a threaded recess at its outer end, a section having a bearing face forming a continuation of the forward bearing face of the body portion of the roller and having a reduced threaded extension adapted to the recess in the body portion, and an annular tongue on one of said parts extending into an annular groove on the other part.

1,112,960. APPARATUS FOR STRIPING SURFACES. WILLIAM H. ADAMS and SUSAN S. ADAMS, Lawrence, Mass. Filed June 21, 1911. Serial No. 634,549. (Cl. 91—12.)

1. In an apparatus for striping flexible material, the combination with a member having a chamber for containing the striping material, of a plurality of pattern members separable from said first named member and over which the material being striped is adapted to be drawn, each of said pattern members provided with discharge ports through which the striping material is discharged and adapted to be detachably secured to said first mentioned member, said pattern members being of such shape that the material being striped entirely covers the discharge ports therein.



2. In an apparatus for producing stripes, the combination with a chambered member adapted to hold striping material and having an open top portion, of a plurality of pattern members separate from the chambered member over which the material being striped is adapted to be drawn, each of said pattern members adapted to be detachably secured to said chambered member and having a plurality of discharge apertures which communicate with said open top portion, said pattern members being of such shape that the material being striped entirely covers the discharge ports therein.

3. In an apparatus for producing stripes, the combination with a container for striping material provided with a plurality of separate chambers each adapted to contain striping material, of a plurality of pattern members separate from the container over which the material being striped is adapted to be drawn, each of said pattern members adapted to be detachably secured to said container and having a plurality of discharge apertures leading to the various chambers, said pattern members being of such shape that the material being striped entirely covers the discharge ports therein.

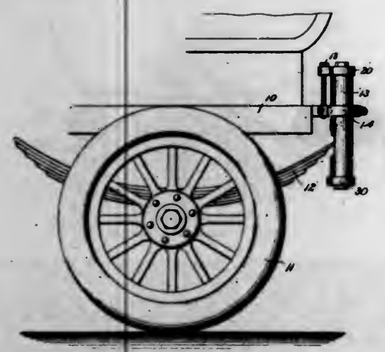
4. In an apparatus for striping flexible material, the combination with a container for striping material provided with a plurality of separate chambers each adapted to contain striping material, of a pattern member separate from and detachably secured to said container and over which the flexible material is adapted to be drawn, said pattern member having a plurality of discharge ports leading to the various chambers, said pattern members being of such shape that the material being striped entirely covers the discharge ports therein.

1,112,961. SHOCK-ABSORBER. HENRY ALBERT AHNERT, New York, N. Y. Filed Sept. 30, 1913. Serial No. 792,604. (Cl. 21—105.)

1. The combination with the frame and a main spring of a vehicle, of a cushioning device therefor comprising a tubular casing, means to clamp the casing adjustably to the frame, said casing having an opening on the side to admit the spring, a plunger adapted to reciprocate within the casing, said plunger comprising oppositely arranged spaced cups, hanger means comprising a pair of links pivoted within the plunger to oscillate between said cups and supporting the end of the spring, and variably effective cushioning devices seated in said cups and extending oppositely therefrom into coöperation with the opposite portions of the casing.

2. The combination with a vehicle frame and a main spring, of a shock absorber comprising a tubular vertically arranged casing, a clamping bracket connected to the frame and surrounding the casing, a lifting screw coöperating between the upper end of the casing and said bracket for varying the vertical position of the casing with respect

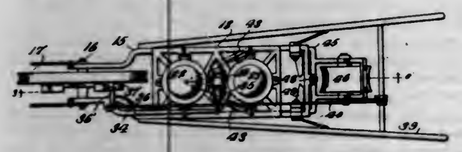
to the frame, a plunger within the casing, means to connect the end of the spring to the plunger for movement vertically within the casing, said plunger comprising a pair of oppositely arranged spaced cups, and a pair of coil springs seated in each of the cups and extending thence toward the end of the casing, the springs of one pair being heavier than those of the other and the springs of each pair being coiled reversely, substantially as set forth.



3. The combination with a vehicle frame and a main spring, of a shock absorber comprising a tubular casing having an open side, a clamp extending from the frame and embracing the casing and adjustably secured thereto, said casing having caps secured at its opposite ends, one of said caps having a projecting hub, a screw passing freely through said hub and threaded into said frame clamp for the purpose of adjusting the casing longitudinally through the clamp, a plunger within the casing and slidable longitudinally thereof, said plunger having an open space registering with the casing opening, means to pivotally connect the end of said main spring to the plunger through said openings, and cushioning devices between the plunger and said casing caps.

4. In a device of the character set forth, the combination with a vehicle frame and a main spring, of a shock absorber comprising a casing, means to secure the casing in rigid but adjustable position with respect to the frame, a movable member within the casing, means to connect the end of said main spring to the movable member within the casing, cushioning devices on opposite sides of said member to regulate the slidable movement thereof within the casing, one of said cushioning devices comprising a pair of coil springs one within the other and one shorter than the other under normal conditions, said casing including a cap at one end adapted to coöperate with one of said cushioning springs under a heavy load, the adjacent end of the casing being internally threaded, and a runner cooperating with said internal thread for coöperation with the larger of said springs to vary its effect, substantially as set forth.

1,112,962. SEEDER AND PLANTER. FRANCIS W. ALCORN, Darlington, Pa. Filed Dec. 20, 1913. Serial No. 807,968. (Cl. 111—15.)

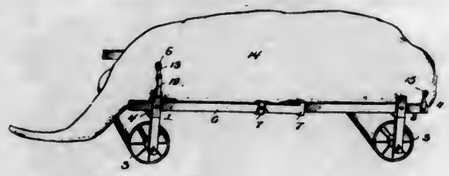


1. In a machine of the class described, a base frame having circular bottom plates and twin receptacles rising therefrom, each bottom plate having a discharge aperture, and the receptacles being provided with horizontal slots in their opposed faces, dropping plates mounted for oscillation on the bottom plates within the receptacles, each dropping plate having a plurality of pockets, and each dropping plate having an eyebolt connected with the rim thereof and extending through the slot of the receptacle, cut-off plates within the receptacles, an actuating lever, links connecting one arm of the lever with the eye bolts, tappet means to engage the other arm of the lever, and a retracting spring.

2. In a machine of the class described, twin receptacles having horizontal slots in their opposed faces, oscillatory seed plates in the receptacles, each having a plurality of pockets of various capacity and threaded recesses in the rim thereof opposite the pockets, eye bolts threaded into one recess of each dropping plate and extending through the slot of the receptacle, an actuating lever, tappet means engaging one arm of the lever, and links connecting the other arm of the lever with the eye bolts of the respective dropping plates.

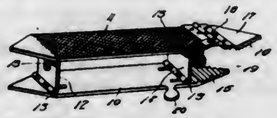
3. In a machine of the class described, a base frame having circular bottom plates provided with discharge apertures near their proximate edges, each bottom plate being surrounded by an upstanding flange, twin receptacles engaging the flanges and bolted on the base frame, said receptacles having horizontal slots in their opposed wall portions, and said receptacles being provided with interior lugs above said slots, dropping plates supported on the bottom plates, cut-off plates supported on the lugs, axial bolts assembling the cut-off plates with the dropping plates and the bottom plates, an eye bolt connected adjustably and detachably with each dropping plate and extending through the slot of the receptacle, a lever fulcrumed on the base frame, tappet means engaging one arm of the lever, links connecting the other arms of the lever with the eye bolts, and a retracting spring, each dropping plate being provided with a circumferentially arranged series of pockets with respect to which the eye bolts are adjustable.

1,112,963. COTTON-SACK CARRIAGE. EUGENE E. ALEXANDER, Wolfe City, Tex. Filed Sept. 23, 1913. Serial No. 791,376. (Cl. 21—65.)



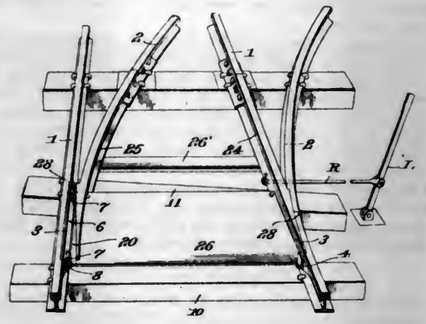
A sack carriage comprising front and rear members, supporting members journaled to the first mentioned members, angle bars fixed to the upper outer portions of the first mentioned members, longitudinally extensible bars connected with the said angle members the upper portions of the angle members at the outer ends of the first mentioned members projecting above the upper edges of the said angle bars.

1,112,964. NAPKIN-HOLDER. FRANK J. ANDERSON, Box Elder, Mont. Filed Apr. 10, 1914. Serial No. 831,049. (Cl. 24—7.)



A napkin holder comprising a pair of superposed plates, spring actuated members connecting the plates and holding the plates normally in closed position to clamp a napkin normally therebetween, the projecting end of one plate being formed with garment engaging teeth, a pivoted spring-pressed tooth member carried by the other plate for coöperative engagement with the toothed end of the first plate to grip a portion of a garment and thumb-pieces carried by the first named plate and the pivoted tooth member.

1,112,965. SWITCH. GEORGE W. ANDERSON, Hamilton, Ohio, assignor of one-half to Daniel P. Hayes, Hamilton, Ohio. Filed Nov. 29, 1913. Serial No. 803,748. (Cl. 104—12.)



1. In combination, two rails, each of said rails having their inner faces slotted, filler members within the slots, switch points between the rails, means for operating the switch points to permit one of the said points being received within the slot of one of the rails, and mechanism operated by the moving switch points for elevating one of the filler members to fill the space provided by the slot in the second rail.

2. In combination, main rails and side rails and switch points between the main and side rails, the main rails having their inner faces depressed, filler plates within the depressions, and means actuated by a movement of the switch points for alternately raising and lowering one of the filler blocks to fill the gap provided by the depression when the second gap is occupied by the end of one of the switch points.

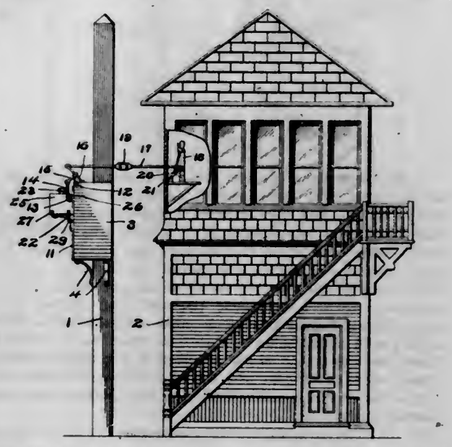
3. In combination, main rails and side rails, and switch points between the main and side rails, the main rails having their inner faces depressed, filler plates vertically movable within the depressions, means actuated by a movement of the switch points for alternately raising one of the switch points to fill the gap provided by one of the depressions and to lower the second filler plate when the depression provided therefor is occupied by one of the switch points.

4. In combination, main rails and side rails, and connected switch points between the main and side rails, means for moving the switch points toward either of the main rails, the said main rails having their inner faces depressed, filler plates within the depressions, mechanism actuated by the movable switch points for alternately raising one of the switch points to fill the gap provided by the depression and to lower the second filler plate to permit of one of the switch points having its end received within the depression of the second rail, and means connected with the mechanism for supporting the elevated filler plate.

5. In combination, main rails and side rails, and switch points between the main and side rails, filler plates within depressions and having their upper portions correspond with the heads of the rails, means for swinging the switch points to permit the end of one of the said points entering the depression in one of the rails, mechanism actuated by the switch points for operating the filler plates to alternately raise one of the said plates and lower the second plate, the lowered plate being disposed below the point arranged within the depression of one of the rails, the second plate being flush with the head and side of the head of the second rail.

[Claims 6 to 15 not printed in the Gazette.]

1,112,966. RAILROAD-SIGNAL. WILBER G. ANDERSON and FRED F. COSLETT, Dennison, Ill. Filed June 2, 1914. Serial No. 842,397. (Cl. 246—15.)



1. A railroad signal comprising a housing having slots therein, of signals pivotally supported in the housing and movable through the slots, said signals having flanged outer edges adapted to close the slots, means for drawing the signals out of the housing, and said means adapted to force the signals into the housing and hold the flanged edges against the outer face of the housing, substantially as described.

2. A railroad signal comprising a housing having slots therein, of signals pivotally supported in the housing and movable through the slots, said signals having flanged outer edges adapted to close the slots, bell-crank-levers supported on the housing, links connecting the bell-crank-levers with the signals, operating levers, and rods connecting the bell-crank-levers with the operating levers, said operating levers having means for locking the same in position to hold the signals in the casing and out of the casing in signaling position, substantially as described.

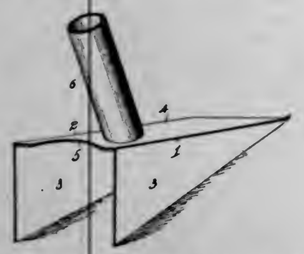
3. A railroad signal, comprising a housing having slots in its wall, signals pivotally supported in the housing and movable through the slots, a lamp support secured to the housing between the slots, pivoted blinds at opposite sides of the lamp support, and means compelling the movement of the blinds when the signals are moved to signaling position, substantially as described.

4. A railroad signal, comprising a housing having slots in its wall, signals pivotally supported in the housing and movable through the slots, a lamp support secured to the housing between the slots, pivoted blinds at opposite sides of the lamp support, and fingers projecting laterally from the blinds in position to be engaged by the signals when the latter are drawn to signaling position, whereby the blinds are elevated when the signals are thus moved, substantially as described.

5. A railroad signal, comprising a housing having slots in its wall, signals pivotally supported in the housing and movable through the slots, a lamp support secured to the housing between the slots, pivoted blinds at opposite sides of the lamp support, laterally projecting fingers on the blinds adapted to be engaged by the edges of the signals to lift the blinds when the signals are moved to signaling position, and fingers on the signals adapted to engage the first-mentioned fingers and force the blinds downwardly when the signals are lowered, substantially as described.

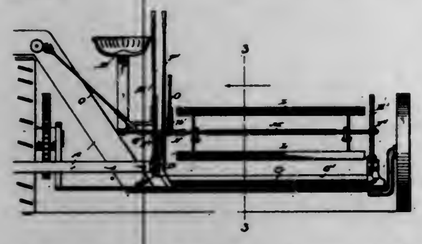
[Claims 6 and 7 not printed in the Gazette.]

1,112,967. STUMP-BURNER. FRANCIS M. BARFIELD, Summerland, Miss. Filed Apr. 30, 1912. Serial No. 694,281. (Cl. 110—21.)



A device of the character described comprising a sheet metal blank, said blank having oppositely inclined longitudinal edges and two parallel transverse edges, one of said transverse edges being of a greater length than the other, said blank being formed with two longitudinal parallel lines of fold which are spaced the distance equal to the length of the short transverse edge, whereby a body portion is formed, said body portion being formed along its relatively longer transverse edge with an intermediate recess, said blank being folded upon said lines of fold to form two sides, said sides arranged to set upon their inclined edges to support said body portion, and a tube having its lower end connected to said body portion near said concaved edge.

1,112,968. CHAIN-REEL. ALBERT A. BEALS, Clarence, Mo. Filed Sept. 18, 1913. Serial No. 790,433. (Cl. 56—22.)



1. A reel of the character described comprising a pair of cross heads spaced apart and connected, sprocket wheels carried by the ends of said cross heads, endless chains arranged over the said wheels and having cross slats, a shaft extending centrally through the cross heads and provided with sprocket wheels in engagement with the chains, standards pivotally supported at their lower ends, journal boxes for the shaft vertically adjustable on the standards, a lever having connections with said journal boxes for adjusting the same, a lever having connection with the cross heads whereby to tilt the same forwardly and rearwardly on the shaft, and a lever having connections for moving the standards on the pivots whereby to adjust the reel forwardly and rearwardly, for the purpose described.

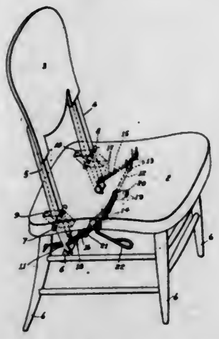
2. A reel of the character described comprising a pair of spaced chains having cross slats, crossheads having sprocket wheels on which the chains are arranged, a shaft having sprocket wheels for driving the chains and upon which the cross heads are tiltable forwardly and rearwardly, and uprights pivotally mounted at their lower ends and forwardly and rearwardly movable on their pivots and upon which the said shaft is vertically adjustably mounted whereby the said shaft may be adjusted vertically and horizontally.

3. A reel of the character described comprising a pair of spaced chains having cross slats, cross heads having sprocket wheels on which the chains are supported to travel, a driver shaft having sprocket wheels in engagement with the chains and on which the cross heads are mounted, and supporting standards carrying the shaft and pivotally mounted at their lower ends whereby the reel may be adjusted forwardly and rearwardly, substantially as described.

4. A reel of the character described, comprising a pair of cross heads, a pair of spaced chains having cross slats, a shaft having sprocket wheels for driving the chains, bearing members in which the end portions of the said shaft are journaled, a pair of tubular uprights upon which the said bearing members are mounted to move vertically, flexible connections extending upwardly through the tubular uprights and secured to said bearing members, and a lever for actuating the said flexible connections and to permit the raising and lowering of the reel for the purpose described.

5. A reel of the character described, comprising a pair of cross heads, a pair of spaced chains having cross slats, a sleeve extending between and rigidly connecting the said cross heads intermediate their sides, a shaft extending loosely through the said sleeve, sprocket wheels secured on the shaft at the ends of the said sleeve and engaging the spaced chains, a second sleeve disposed upon the shaft adjacent and connected to one of the cross heads and provided with a crank arm, and a lever having connection with the said crank arm whereby to rotate the sleeves and cross heads on the shaft and thus tilt the reel sides in relatively opposite directions.

1,112,969. CHAIR. JOHN K. BERGMARK, Cadillac, Mich. Filed Oct. 25, 1912. Serial No. 727,752. (Cl. 155—22.)

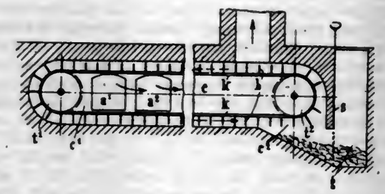


The combination with a chair having openings through the rear portion of its seat, of a back having lever-arms which pass through said openings, are pivoted therein and project below said seat, pivoted struts which abut against the projecting portions of said arms and support same in a substantially rigid and normally raised position, means for swinging said struts, and means causing an automatic engagement of said struts and arms and the raising of said back to its normal position.

1,112,970. APPARATUS FOR PURIFYING GASES. KARL BOMHARD, Berlin, Germany. Filed Sept. 19, 1911. Serial No. 650,272. (Cl. 110—183.)

1. The combination with a flue having a floor adapted to receive dust deposits; of drums at the ends of said flue, an endless chain extending over said drums, baffles carried by said endless chain and extending in a direction transverse said flue, the baffles carried by the upper flight of said chain lying near the top of the flue and the baffles carried by the lower flight of the chain lying near the bottom of the flue, and means to drive one of said drums.

2. The combination with a flue having a floor adapted to receive dust deposits; of drums at the ends of said flue, an endless chain extending over said drums, baffles carried by said endless chain and extending in a direction transverse said flue, the baffles carried by the upper flight of said chain lying near the top of the flue and the baffles carried by the lower flight of the chain lying near the bottom of the flue, means to drive one of said drums, and a dust collecting chamber at the outlet end of said flue.

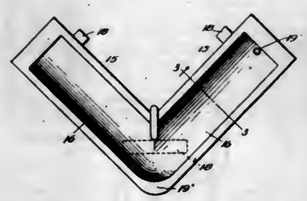


3. The combination with a flue having a floor adapted to receive dust deposits; of drums at the ends of said flue, an endless chain extending over said drums, baffles carried by said endless chain and extending in a direction transverse said flue, the baffles carried by the upper flight of said chain lying near the top of the flue and the baffles carried by the lower flight of the chain lying near the bottom of the flue, means to drive one of said drums, and a dust collecting chamber at the outlet end of said flue, provided with a series of dust gathering plates.

4. The combination with a flue having a longitudinally extending partition spaced above the floor of said flue, said floor being inclined downwardly from one side of the flue to the partition; of spaced drums in the flue on the side of the partition opposite the inclined floor, an endless chain extending around said drums, conveyer flights carried by said chain, and means to operate one of said drums.

5. The combination with a flue having a longitudinally extending partition spaced above the floor of said flue, said floor being inclined downwardly from one side of the flue to the partition; of spaced drums in the flue on the side of the partition opposite the inclined floor, an endless chain extending around said drums, conveyer flights carried by said chain, means to operate one of said drums, and a series of spaced baffles supported on said inclined floor and extending transversely thereof.

1,112,971. WATERING-TROUGH. JOHN F. BOWER, Williamsport, Pa. Filed Jan. 31, 1914. Serial No. 815,780. (Cl. 119—61.)

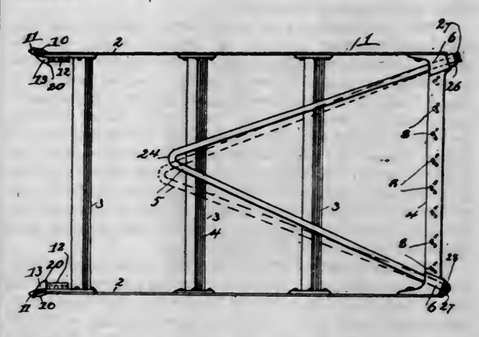


1. A road-side watering trough comprising a trough-shaped body of angular form presenting independent sections divergent from an intermediate point, said intermediate point adapted to project in the direction of the middle of the road and the outer faces of the independent sections being presented obliquely in the paths of teams approaching from opposite directions.

2. A road-side watering trough comprising a trough-shaped body open from end to end and including angularly related portions adapted to lie obliquely in the paths of teams approaching from opposite directions so that the tongues of vehicles striking the angular faces of the trough will be deflected outwardly without injury.

1,112,972. MECHANICAL CHISELING AND CLEANING DEVICE. FREDERICK JOSEPH BOWMAN, Cleveland, Ohio. Filed Nov. 24, 1913. Serial No. 802,757. (Cl. 75—154.)

1. In a chiseling device for a furnace, the combination with side bars of pilot members secured to their forward extremities, said pilot members provided with projecting outwardly curved portions, socket members secured to said pilot members and channeling tools projecting from said socket portions and inserted in the sockets in said socket members.



2. In a chiseling device for a furnace, in combination, a frame composed of side bars and transverse bars, a portion of said transverse bars having scraping members attached thereto, a laterally adjustable attaching means for said rake, pilot members attached to the front extremities, socket members attached to said pilot members, and channeling tools inserted in said socket members, said laterally adjustable attaching means permitting the alternate engagement of the channeling tools upon side bars of the rake.

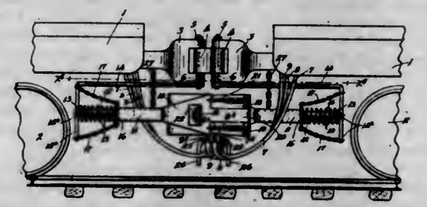
3. In a chiseling device for a furnace, the combination with side bars, of pilot members secured to the front ends of the side bars, socket members secured thereto and outwardly turned channeling tools inserted in said sockets, said pilot members provided with curved surfaces forming bearings for said tools.

4. In a chiseling device for a furnace, the combination with side bars, of projecting pilot members secured thereto, socket members attached to said side bars, outwardly extending channeling tools inserted in said sockets, one above the other, and having overlapping cutting edges, the sockets in said socket members provided with communicating openings for the discharge of dust.

5. In a chiseling device for a furnace, in combination, a side bar therefor, a pilot member attached thereto and having a projecting upper edge, a socket member attached to said pilot member, rigid channeling tools detachably secured in said socket member, and a spring channeling tool detachably secured in said socket member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,112,973. AUTOMATIC AIR-BRAKE HOSE-COUPLING FOR CARS. EDWARD J. BRICKER, Minneapolis, Minn., assignor of one-half to Orren E. Safford and one-tenth to William M. Chowning, Minneapolis, Minn. Filed July 10, 1911. Serial No. 637,592. (Cl. 188—13.)



1. The combination with a car having suitable car couplers and coupling hose for air brake systems, and the like, of automatically engageable hose couplers suspended from said car couplers, the said hose couplers having recessed heads and guide flanges, ports leading from said

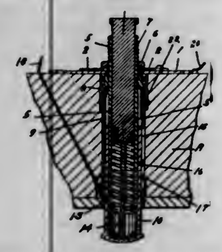
heads, coupling hose for communication with the said ports, and valves normally closing said ports and extending across the mouths of said recessed heads, the said guide flanges arranged to enter the recessed heads of connected hose couplers, to open said valves and aline the coöperating ports leading therefrom.

2. The combination with a car having suitable car couplers and coupling hose for air brake systems, and the like, of automatically engageable hose couplers suspended from said car couplers, the said hose couplers having recessed heads and guide flanges, a multiplicity of vertically spaced ports opening laterally from said heads, coupling hose for communication with said ports, and spring pressed valves hinged to said heads and extending across the mouths thereof for normally closing said ports, the said guide flanges arranged to enter the recessed heads of connected hose couplers, to open said valves, to aline the cooperating ports of connected heads and for drawing said connected heads laterally together.

3. The combination with a car and a car coupler connected therewith, said car coupler having a pivoted knuckle and a non-rotary knuckle pin connecting said knuckle to the coupler head, of an automatic hose coupling head having a telescopically extensible shank, a bracket connected to said knuckle pin and to which the relatively fixed section of said extensible shank is fulcrumed, a spring applied to said extensible shank tending to project said hose coupling head outward, and a flexible supporting connection between said coupler and said extensible shank, substantially as described.

4. The combination with cars having suitable car couplers, of hose coupling heads supported from said cars and adapted to be automatically engaged, said hose coupling heads having hinged valves yieldingly closed against the air pressure in the said heads and adapted to be automatically opened by a coöperating hose coupling head, when two coupling heads are forced together, the hinged ends of said valves being located outward of their free ends.

1,112,974. COMBINATION PRESSURE-GAGE AND DEFLATION-SIGNAL. JOHN H. BROWN, Midvale, Utah. Filed June 9, 1913. Serial No. 772,713. (Cl. 177—311.)



1. In a device of the class described the combination of a casing; a thimble slidable over the free end thereof; a graduated plunger operable in said casing and connected with said thimble by a rod to hold said thimble on said casing; a spring having one end secured to said plunger and the other end secured to said casing; means to fasten said casing to the felly of a wheel said means including a sleeve nut; an insulating case carried on said thimble and secured to said sleeve nut and provided with a longitudinal slot therein; a contact member carried on said insulating case; a contact point movable with said thimble; and an electric circuit adapted to be completed when said contact point and said contact member are touching.

2. In a device of the class described the combination of a tubular case provided with external threads on a portion thereof; a sleeve nut screwed thereon; a plate; clamping members pivoted thereto; a jam nut screwed on said case and engaging said clamp members; a thimble slidable over the free end of said case; a plunger secured to said thimble and operable in said case; a spring having one end fastened to said plunger and the other end secured to said case; an insulating case carried on said thimble and secured to said sleeve nut having a slot therein; a contact point operable in said slot; and a contact member carried on said insulating case to complete an electric circuit when said contact point and contact member are brought together.

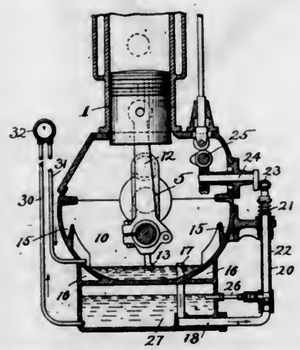
3. In a device of the class described the combination of a tubular case having external threads thereon; a fastening plate; clamp members pivoted thereto; outwardly extended flanges on said clamp members; a jam nut on said case engaging said flanges; a sleeve nut screwed on said case; a thimble over the free end of said case; a plunger operable in said case having a graduated scale on one end portion and fastened to said thimble at the other end; a spring secured to said plunger at one end and to said case at the other end; an insulating sleeve carried on said thimble and secured to said sleeve nut; a contact point on said thimble; and a contact member carried on said insulating sleeve adapted to complete an electric circuit when brought in touch with said contact point.

4. In a device of the class described the combination of a tubular case having external threads cut on a portion thereof; a fastening plate; clamp members pivoted thereto; outwardly extended flanges thereon; a jam nut on said case adapted to engage said flanges; a sleeve nut screwed on said case; a thimble slidable over the free end portion of said case; a plunger operable in said case having a graduated scale on one end portion; a rod connecting said plunger and said thimble; a spring carried on said rod with one end secured to said plunger and the other end fastened to said case; an insulating sleeve on said thimble and secured to said sleeve nut and provided with a longitudinal slot therein; a contact point on said thimble operable in said longitudinal slot; and a contact member secured on said insulating sleeve adapted to complete an electric circuit when said contact point is brought in contact therewith as and for the purposes described.

5. In a device of the class described the combination of a detachable casing; a plunger gage operable therein; a thimble slidable over the free end of said casing; a spring connecting said plunger gage and said thimble; a contact point movable with said thimble; an insulated casing within which said thimble telescopes; a contact member secured on said insulated casing; an electric circuit completed when said contact point and said contact member are contiguous.

[Claims 6 and 7 not printed in the Gazette.]

1,112,975. OIL-DISTRIBUTING MECHANISM. ALANSON P. BRUSH, Flint, Mich. Filed Sept. 26, 1912. Serial No. 722,440. (Cl. 123—136.)



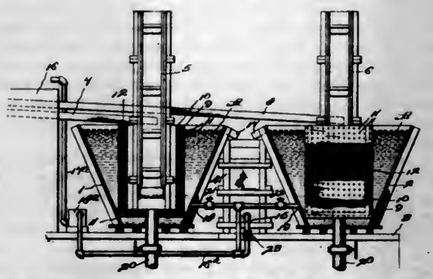
1. In lubricating mechanism for internal combustion engines, the combination of an air tight oil tank, an oil receptacle which is not air tight, a conduit connecting said tank and receptacle and through which oil may be forced from said tank into said receptacle by the air pressure in the former, a pipe leading from said oil receptacle and having its inlet end placed at a suitable elevation above the bottom of said receptacle, a pump constructed to pump either oil or air, which pump is connected on its suction side with the last mentioned pipe and is connected on its discharge side with said air tight oil tank.

2. In lubricating mechanism for internal combustion engines, the combination of an air tight oil tank, a conduit which leads from said tank to a suitable oil delivery point and through which oil may be forced by air pressure in the tank, an oil receptacle arranged to catch the oil discharged from said conduit, a pump connected on its suction side with said oil receptacle, and on its delivery side with said oil tank, said pump being constructed to pump oil or air, a fuel tank, and a conduit through which the top of the oil tank and the top of the fuel tank may be connected so as to maintain substantially the same air pressure in both.

3. In lubricating mechanism for internal combustion engines, the combination of an air tight oil tank, a conduit which leads from said tank to a suitable oil delivery point and through which oil may be forced by air pressure in the tank, an oil receptacle arranged to catch the oil discharged from said conduit, a pump connected on its suction side with said oil receptacle, and on its delivery side with said oil tank, said pump being constructed to pump oil or air, a fuel tank, a conduit through which the top of the oil tank and the top of the fuel tank may be connected so as to maintain substantially the same air pressure in both, and means which act automatically to prevent excessive air pressure in said tanks.

4. The combination with an internal combustion engine having a crank case which is not air tight, but which is arranged to hold lubricating oil, an air tight fuel tank, an air tight oil tank, a pump adapted to pump either oil or air, a pipe connecting said pump on its suction side with the crank case, means connecting the discharge side of said pump with said air tight oil tank, and an air line connecting said oil tank and fuel tank, whereby to maintain equal air pressure in both.

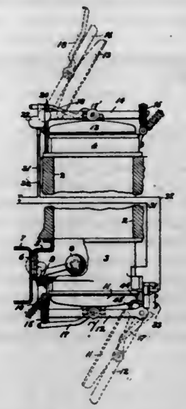
1,112,976. COAL-WASHING APPARATUS. EUGENE G. BURKS and NEENIAN HAYES, Birmingham, Ala. Filed Oct. 15, 1913. Serial No. 795,302. (Cl. 210—18.)



In a settling apparatus for coal washings the combination of a tank adapted to hold water, and having an overflow spout; a filtering vessel located within said tank and providing an annular space therewith, said vessel constructed with inner and outer perpendicular and perforated walls, and a granular filling between said walls; a sluice for delivering the material to be separated into said filtering vessel; an endless conveyer operable within the filtering vessel for carrying off the material collected therein; a well located adjacent said tank and adapted to receive the over-flow from the tank spout; a pump; and pipes connecting with said pump and well for carrying off the water from the well and delivering same to the sluice, substantially as described.

1,112,977. CLOSURE-LOCKING MEANS FOR GAS-RETORTS. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 20, 1914. Serial No. 839,734. (Cl. 48—124.)

1. The combination of a gas retort, closures for opposite ends of the retort, mechanism for locking one of the closures in closed position, and lock-releasing mechanism operatively connected to the other closure.



2. The combination of a gas retort, a closure for the rear end thereof, locking mechanism for securing said closure in closed position, a closure for the front end of the retort, and means actuated by the opening movement of the front end closure for unlocking the rear end closure.

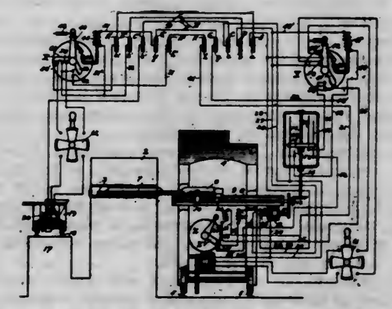
3. The combination of a gas retort, a closure for the rear end thereof, mechanism for locking said closure in closed position, a closure for the front end of the retort, operating means for the front end closure, and means actuated by the opening movement of the front end closure operating means for unlocking the mechanism which secures the rear end closure.

4. The combination of a gas retort, closures for the opposite ends thereof, an electrically operated device for locking one of said closures in closed position, a circuit for said device, and a controller for the circuit adapted to be actuated by the opening and closing movements of the other closure.

5. The combination of a gas retort, a closure for the rear end thereof, a locking device for said closure, an electrical device adapted to control the locking device, a circuit for said electrical device, a closure for the front end of the retort and a circuit controlling device operatively connected to and actuated by the movements of the front end closure.

[Claims 6 to 14 not printed in the Gazette.]

1,112,978. MEANS FOR CONTROLLING THE OPERATION OF GAS-RETORTS. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 2, 1914. Serial No. 842,411. (Cl. 202—5.)



1. In gas generating apparatus, the combination of a retort adapted to be charged at one end and discharged at its opposite end, a tool adapted to enter the retort, a

tool actuating motor, and conjointly operating motor controlling devices at opposite ends of the retort.

2. In gas generating apparatus, the combination of a retort adapted to be charged at one end and discharged at its opposite end, a tool actuating motor, and motor controlling devices at opposite ends of the retort and operatively connected to each other and to the motor for conjointly controlling the retort-entering movement of the tool.

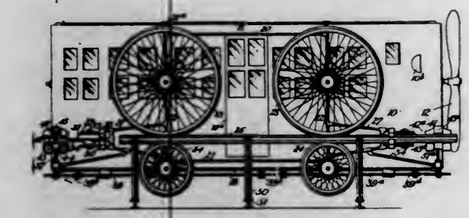
3. In gas generating apparatus, the combination of a retort adapted to be charged at one end and discharged at its opposite end, a tool actuating electric motor, an electric circuit for the motor, and controllers for the circuit located at opposite ends of the retort.

4. In gas generating apparatus, the combination of a retort adapted to be charged at one end and discharged at its opposite end, a tool actuating electric motor, a motor circuit, an electrically operated device for opening and closing the motor circuit, a controlling circuit for actuating said device, and conjointly operating controllers for the controlling circuit located at opposite ends of the retort.

5. In gas generating apparatus, the combination of a retort adapted to be charged at one end and discharged at its opposite end, a tool adapted to be entered in the retort, a tool actuating electric motor, a controlling circuit for the motor extending to and having interruptions at opposite ends of the retort, and circuit closing devices at opposite ends of the retort and adapted to be separately operated to close said interruptions.

[Claims 6 to 11 not printed in the Gazette.]

1,112,979. RAILWAY SYSTEM. ELISIARIO CASTANHO, Sao Paulo, Brazil. Filed Oct. 29, 1913. Serial No. 798,001. (Cl. 105—17.)



1. A railway, comprising an overhead track, a lower track below and in approximate vertical alinement with the overhead track, said overhead and lower tracks overlapping each other, and a car having upper and lower running wheels approximately in vertical alinement and spaced to run respectively on the top and below the overhead track, the overhead track having at the overlapping end a downward inclination in the direction of the lower track.

2. A railway, comprising an overhead track having treads at the top and bottom, a lower track below the overhead track, said tracks overlapping each other, and a car having upper and lower running wheels spaced to run respectively on the upper and lower sides of the overhead track, the overhead track at the overlapping end being inclined downwardly in the direction of the lower track and having the head at the under side thereof gradually diminishing at the incline.

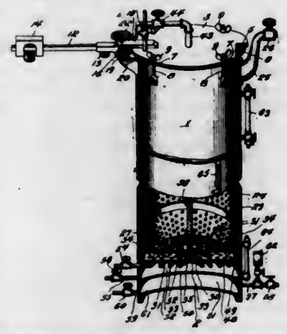
3. A railway car having upper and lower running wheels vertically spaced to accommodate a track rail therebetween, a horizontal wheel on the car inside the plane of the treads of the wheels to bear upon a track rail, at the inside thereof in rounding a curve, and laterally disposed hooked members extending outwardly to engage a track rail at the outside.

4. A railway car having upper and lower running wheels spaced from each other and in vertical alinement to accommodate a track rail therebetween, and hooked members extending outwardly and spaced to accommodate a track rail between them.

5. A car comprising a body having tapered ends, frame members extending longitudinally of the car at the top and bottom, members connecting the top and bottom frame members, side frames having connection with the top and bottom frame members, and running wheels mounted on said side frame.

[Claim 6 not printed in the Gazette.]

1,112,980. EXTRACTOR. JOHN H. CASTONA, Moss Point, Miss., assignor to Castona Improved Process Co., Gulfport, Miss., a Corporation of South Dakota. Filed May 7, 1912. Serial No. 695,799. (Cl. 203—6.)



1. An extractor of the character described comprising a vertically disposed outer vessel having an extraction chamber, a vapor outlet at its top, a bottom heating chamber, and a bottom rosin collection space between the extraction chamber and heating chamber and in communication with the former and out of communication with the latter means for heating said heating chamber, a receptacle for the material being treated disposed longitudinally within the extraction chamber, said receptacle having a perforate bottom and sides and spaced from the outer vessel for the escape of vapors into the intervening space, a pipe or tube extending vertically and axially through the receptacle, said pipe being perforate throughout its length for the injection of an extracting agent throughout the mass of material contained therein, and means for supplying the extracting agent to said perforate pipe or tube.

2. An extractor of the character described comprising an extracting vessel, a cover for closing the upper end thereof, said cover having an opening therein, a steam supply pipe fitting within said opening, a retaining ring arranged upon the under side of the cover and provided with a conical socket, a sealing gasket secured to the cover by said retaining ring and exposed within said socket, a removable perforated cage arranged within the vessel and in spaced relation thereto, a perforated steam injection pipe secured at its lower end to the bottom of the cage and extending upwardly to the top of the cage, the upper end of said injection pipe being adapted to enter said socket in the retaining ring and register with the steam supply pipe when the cover is closed, and a conical enlargement upon said steam injection pipe adapted for sealing contact with said gasket and to enter said conical socket.

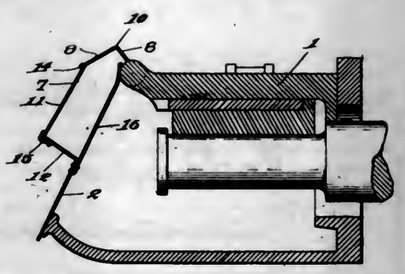
3. An extractor of the character described comprising an extracting vessel open at its top and provided at its bottom with a pair of superposed heads forming a steam chamber and a collection space above the same, a perforated cage supported within the vessel and in spaced relation thereto and terminating above said collection space, steam supply and exhaust pipes communicating with said steam chamber, a steam injection coil arranged within the collection space and between the same and the lower end of the perforated cage, means for closing the upper ends of the vessel and perforated cage, a perforated steam injection pipe supported at its lower end by the cage and extending upwardly thereinto, and a steam supply pipe carried by the cover and adapted to register with the perforated steam injection pipe when the cover is closed.

4. An extractor of the character described comprising an extracting vessel open at its upper end and provided at its lower end with a pair of spaced superposed concavo-convex heads, forming a bottom steam chamber closed against communication with the vessel and a collection space above said chamber and in communication with the vessel, steam supply and exhaust pipes communicating with the steam chamber, a valved outlet for the rosin communicating with the collection space, an outlet for the vapors at the upper portion of the vessel, a perforated cage support within and in spaced relation to the vessel and terminating above said collection space, a cover for closing the top of the vessel, a perforated steam injection pipe supported at its lower end by the cage, and a steam supply pipe extending through the cover and adapted for connection with the perforated injection pipe when the cover is closed.

5. An extractor of the character described comprising a vessel open at its top and provided at its bottom with a pair of spaced superposed heads forming a lower steam chamber out of communication with the vessel and an upper collection chamber in communication with the vessel, steam supply and exhaust pipes communicating with the steam chamber, an outlet for the rosin communicating with the collection space, a perforated cage supported within and in spaced relation to the vessel and terminating above the collection space, a perforated steam coil disposed within the collection space, a cover for closing the top of the vessel, a perforated steam injection pipe supported at its lower end by the cage and extending upwardly thereinto, and a steam supply pipe connected with the cover and adapted for connection with the perforated steam injection pipe when the cover is closed.

[Claim 6 not printed in the Gazette.]

1,112,981. CAR-JOURNAL-BOX LID. ROBERT COALE, Kansas City, Kans. Filed June 8, 1914. Serial No. 843,874. (Cl. 64—23.)



1. The combination with a journal box of the ordinary construction, of a lid hingedly connected to said journal box and provided with an opening formed near the upper marginal edge thereof, a box formed about said opening and projecting transversely of said lid upon the forward or outward side thereof, a lid hingedly connected to the upper end of said box, and a spring clip secured to the lower end of said box and engaging the outer surface of said lid for preventing the accidental opening thereof.

2. The combination with a journal box of the ordinary construction, of a lid hingedly connected to said journal box and provided with an opening formed near the upper marginal edge thereof, a box formed about said opening and projecting transversely of said lid upon the forward or outward side thereof, a lid hingedly connected to the upper end of said box, a spring clip secured to the lower end of said box and engaging the outer surface of said lid for preventing the accidental opening thereof, a flat spring secured to the inner surface of said first named lid and extending upwardly through the central portion of said opening.

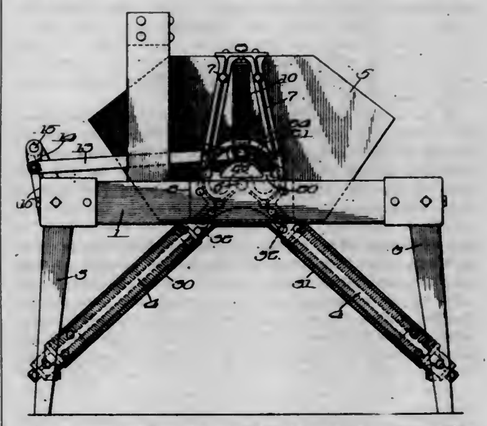
1,112,982. EMBALMING INSTRUMENT. ROLAND C. CONINE, Bath, N. Y. Filed June 30, 1914. Serial No. 848,227. (Cl. 27—18.)

1. A device of the character described comprising a tube, a branch pipe communicating with said tube adjacent one end of the latter, a rod slidable through said tube, a piston on said rod movable within said tube, a handle on said rod exteriorly of said tube, and a frame on the opposite end of said rod slidable and rotatable in said tube.

2. A device of the character described comprising a tube, a branch pipe communicating with said tube adjacent one end of the latter, a rod positioned within said tube, a handle on one end of said rod exteriorly of said tube, a piston secured on said rod and movable longitudinally through said tube, and a plurality of spring members secured to the opposite end of said rod slidable and rotatable in said tube.

3. A device of the character described comprising a tube, a branch pipe communicating with said tube adjacent one end of the latter, a rod positioned in said tube, a handle on one end of said rod exteriorly of said tube, a piston on said rod movable longitudinally through said tube, and a plurality of spring members secured in bowed position on the opposite end of said rod slidable and rotatable in said tube.

1,112,983. ACTUATING MECHANISM. HOWARD M. COX, Chicago, Ill., assignor to Judd Laundry Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 22, 1912. Serial No. 732,961. (Cl. 74—5.)



1. In combination, an oscillating body, a reciprocating sliding element, a spring connected at one end to said oscillating body and at the other end to said sliding element, and means for causing said element to reciprocate.

2. In combination, a stationary frame, a body pivotally supported thereon, an element slidingly mounted on said frame, a spring connected to said pivoted body and to said sliding element and means for causing said element to slide back and forth.

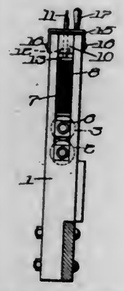
3. In combination, a stationary frame, a guide mounted thereon, a block slidable upon said guide, means for reciprocating said block, a body pivotally supported on said frame, and a spring connected at one end to said block and at the other end to said body.

4. In combination, a pivoted body, a reciprocating sliding block, a spring connected at one end to said block and at the other end to said body, a rotating eccentric, an eccentric rod connected to said eccentric and adapted to actuate said block backward and forward.

5. In combination, a pivoted body, an actuating spring connected thereto for oscillating said body about the pivot, means for actuating said spring, a sliding element for controlling the path of movement of the free end of said spring, and means for guiding said sliding element.

[Claims 6 and 7 not printed in the Gazette.]

1,112,984. WRINGER. HENRY S. JUDD, Wilmette, Ill., assignor to Judd Laundry Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 22, 1912. Serial No. 732,962. (Cl. 68—32.)



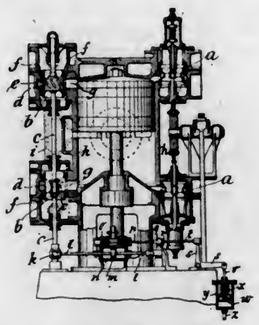
1. In a wringer, the combination of a frame provided with a pair of uprights, one at each end of the frame, said uprights having vertical slots therein which are open at the top, a pair of rollers in said frame one of which is vertically movable, a spring in each of said uprights for holding the movable roller to its work, a vertically movable cross bar extending from one upright to the other located above and backing up said springs and having its ends extending into said slots whereby its movement is confined to a vertical path, and a yoke on each upright pivoted to the sides thereof and extending across the top of the upright across the slot therein for holding the cross bar down on said springs, said yokes being capable of swinging clear of the top of the uprights to thereby release either end of the horizontal bar.

2. In combination, a pair of wringer rollers, one above the other, the upper one being provided with bearing blocks at the ends, a wringer frame having two upright members at the ends, each provided with a vertical slot open at the top, said bearing blocks sliding vertically in said slots, compression springs overlying the movable blocks, a cross bar extending across from one upright to the other located above and into said slots and being vertically movable therein, adjusting screws carried by said bar and acting upon said springs, yokes pivoted to the sides of the upright members and extending over the top thereof across the slots for holding the cross bar down, said yokes being capable of swinging outward to clear and release the cross bar at either end thereof, and an upstanding handle on each of said yokes for manipulating it.

1,112,985. UNIDIRECTIONAL-FLOW STEAM-ENGINE. JOHN DAVIDSON, Pendleton, and WILLIAM OLIVER LARMUTH, Salford, England. Filed Oct. 5, 1912. Serial No. 724,129. (Cl. 121—45.)

1. In a uni-directional flow steam engine, an auxiliary exhaust port in each extremity of the working cylinder, valve casings with openings communicating with the said exhaust ports, an auxiliary exhaust pipe independent from the main exhaust pipe in open communication with the said valve casings for supplying steam for auxiliary purposes, and a mechanically and positively actuated valve in each of the said casings with variable movement in relation to the said openings, for opening and closing the said openings to a variable extent during the working stroke of the piston and before the central exhaust ports are opened, for the purpose of varying the amount of steam passing during the working stroke through the said auxiliary exhaust ports in accordance with the momentary requirements and irrespective of the momentary pressure existing in the working cylinder.

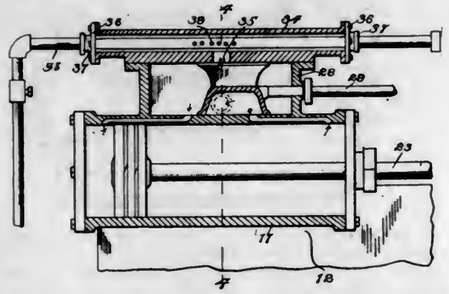
2. In a uni-directional flow steam engine, an auxiliary exhaust port in each extremity of the working cylinder, valve casings with openings communicating with the said exhaust ports, an auxiliary exhaust pipe independent from the main exhaust pipe in open communication with the said valve casings for supplying steam for auxiliary purposes, and a valve in each of the said casings operatively connected to the crank shaft of the engine and with a movement in relation to the openings to the said valve



casing, varying in accordance with the pressure momentarily existing in the said auxiliary exhaust pipe, for opening and closing the said openings to a variable extent during the working stroke of the piston and before the central exhaust ports are opened, for the purpose of varying the amount of steam passing during the working stroke through the said auxiliary exhaust ports in accordance with the momentary requirements and irrespective of the momentary pressure existing in the working cylinder.

1,112,986. [WITHDRAWN.]

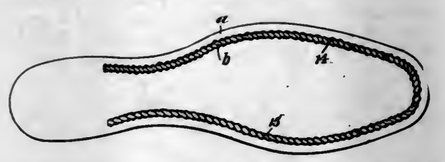
1,112,987. STEAM-ENGINE. ELZA R. DICKEY, Dugger, Ind. Filed June 16, 1913. Serial No. 774,036. (Cl. 121—46.)



1. A steam engine comprising, a cylinder, means to reciprocate the same, a steam chest mounted rigidly on the cylinder, a barrel carried by and movable with the steam chest and communicating therewith, a steam supply pipe extending through the barrel and provided intermediate its ends with a series of perforations, the barrel being disposed to slide on said pipe, a slide-valve arranged in the steam chest and operable by the means for reciprocating the cylinder, and an exhaust pipe communicating with the steam chest and movable with the cylinder.

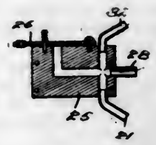
2. A steam engine comprising, a cylinder, a piston arranged within the cylinder, means for simultaneously reciprocating the piston and the cylinder, a steam chest mounted on and movable with the cylinder, a barrel carried by and movable with the steam chest and communicating therewith, a stationary steam supply pipe extending through the barrel and provided intermediate its ends with a series of perforations, a slide-valve arranged in the steam chest, means whereby the valve will be reciprocated simultaneously with the piston and the cylinder, an exhaust pipe connected with the steam chest, and a barrel in which said exhaust pipe is slidably mounted, the exhaust pipe being movable with the cylinder.

1,112,988. INNERSOLE. ELLIS DRAKE, Stoughton, Mass.; Frank E. Drake, executor of said Ellis Drake, deceased, assignor to George H. Lowe, Wellesley, Mass. Filed Oct. 20, 1910. Serial No. 588,070. (Cl. 36—22.)



An inner sole comprising a flat body, a rib bearing on one surface of said body adjacent the edge thereof, and stitches extending alternately transversely through the rib and beneath the contiguous face of said flat body but not through the opposite face of the latter, said stitches binding the rib to the body on both sides of the rib.

1,112,989. SILENT-TRAVEL ATTACHMENT FOR PLAYER-PIANOS. FRANCIS W. DRAPER, Richmond, Ind., assignor to Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed July 31, 1913. Serial No. 782,304. (Cl. 84—168.)

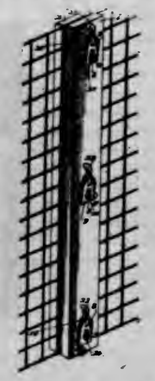


1. In a player piano, the combination with a bellows, a conduit leading thence to the action, a pneumatically controlled interrupter in this conduit, a second conduit leading from the bellows to the motor, and pneumatically controlled means in this conduit for increasing its carrying capacity; of a junction block having a four-way passage, tubes leading from two of the arms of said passage to the interrupter and to said means respectively, a valve in the third arm, means for actuating this valve by the movement of the rewind mechanism, a normally closed inlet valve to the fourth arm, and a manual for opening this valve.

2. In a player piano, the combination with a bellows, a conduit leading thence to the action, a pneumatically controlled interrupter in this conduit, a second conduit leading from the bellows to the motor, and pneumatically controlled means in this conduit for increasing its carrying capacity; of a junction block having a four-way passage, tubes leading from two of the arms of said passage to the interrupter and to said means respectively, a valve normally closing the third arm, connections between the rewind mechanism and this valve for opening it when the mechanism is actuated, and a manually operable valve normally closing the fourth arm.

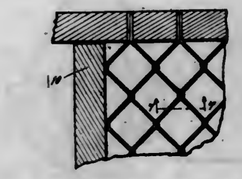
1,112,990. CLAMPING DEVICE. JESSIE D. DUDLEY, Barry, Ill. Filed Mar. 18, 1914. Serial No. 825,626. (Cl. 39—53.)

In a device for the purpose set forth, an inner plate having members provided with threaded bores embedded therein and lying flush with one of the faces of the plate, an adjustable headed and threaded member engaging with the threaded bore of the said embedded member, a locking nut for the said adjustable member, a second plate having an opening through which the head of the adjustable member passes, said second member having a stud arranged adjacent its opening, a locking clamp, said clamp including a body having a key-hole slot whereby the same may be passed over and brought into engagement with the head



of the adjustable member, the body having a channel to receive the stud, the body being further provided with a pivoted cam lever, a flat spring plate arranged upon the body and adapted to be engaged by the cam lever when the same is swung to secure the locking clamp upon the second mentioned plate.

1,112,991. VEGETABLE-CUTTER. ALBERT A. DUFNER, Des Moines, Iowa. Filed Oct. 20, 1913. Serial No. 796,343. (Cl. 146—7.)



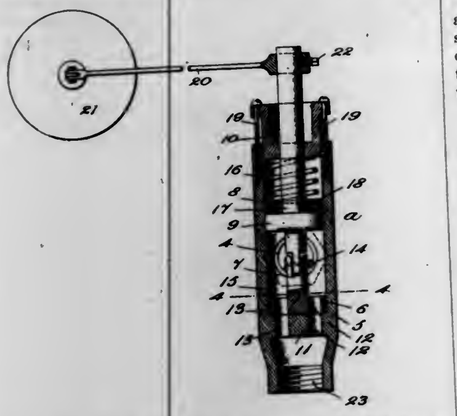
1. In a vegetable cutter, a frame, cutter blades therein, each having end portions mounted in the side frame members, the body of each blade being formed with a series of regular corrugations, the alternate portions of which are arranged to engage alternate portions of adjacent blades on either side, alternate portions of the blades at the sides of the device being engaged by the end frame members.

2. In a vegetable cutter, a frame, cutter blades therein, each having end portions mounted in the side frame members, the body of each blade being formed with a series of regular corrugations, the alternate portions of which are arranged to engage alternate portions of adjacent blades on either side, alternate portions of the blades at the sides of the device being engaged by the end frame members, said blades being formed with sharp upper edges so beveled that the sharp edges are together when the successive blades touch each other.

1,112,992. VALVE. PETER J. DUGAN, New York, N. Y. Filed Apr. 30, 1913. Serial No. 764,661. (Cl. 137—7.)

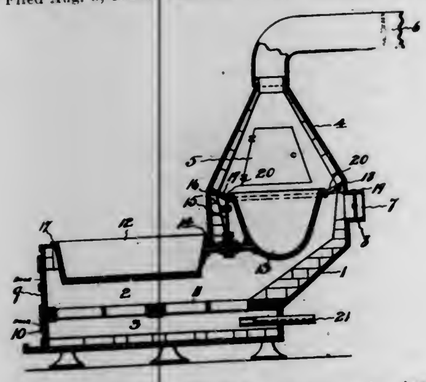
A valve comprising a casing having an inlet and an outlet, an apertured partition located in the casing between the inlet and outlet, an apertured valve rotatably and slidably mounted in the casing and having a stem section, a stem attached to said stem section and carrying a head which fits snugly and slidably in the casing at the opposite side of the inlet from that at which the outlet is

located, a bonnet attached to the casing and through which said stem passes, a packing located in the casing



against the head, a disk located against the packing and a spring interposed between the disk and bonnet.

1,112,993. FURNACE FOR USE IN THE ART OF ELECTROTYPING. GEORGE E. DUNTON, New York, N. Y. Filed Aug. 3, 1914. Serial No. 854,750. (Cl. 75—186.)



1. A furnace, for use in the art of electrotyping, having a dome, a ring projecting from said dome having a series of apertures, means controlling the passage of the products of combustion through said apertures, a melting pot mounted in said ring, a melting pot communicating with said first mentioned melting pot and means for heating said melting pots, substantially as described.

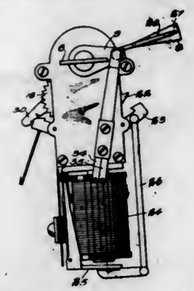
2. A furnace, for use in the art of electrotyping, having an open melting pot, a closed melting pot, a laterally extending ring in which said closed melting pot is mounted, apertures in said ring, means controlling the passage of the products of combustion through said apertures and means forming a communication between said melting pots, substantially as described.

3. A furnace, for use in the art of electrotyping, having a melting pot, a closed melting pot, means in which the closed melting pot is mounted having apertures, means controlling the passage of the products of combustion through said apertures and means forming a communication between said melting pots, substantially as described.

4. A furnace, for use in the art of electrotyping, having a plurality of melting pots, means forming a communication between said melting pots, one of said melting pots being closed by a cone-shaped dome, a ring projecting from said dome provided with apertures and slidable dampers controlling the passage of the products of combustion through said apertures, substantially as described.

5. A furnace, for use in the art of electrotyping, having a melting pot, a second melting pot, means in which said second melting pot is mounted having apertures, means controlling the passage of the products of combustion through said apertures and means forming a communication between said melting pots, substantially as described.

1,112,994. SPEED-INDICATOR FOR CALLING DEVICES. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 30, 1911. Serial No. 657,594. (Cl. 177—324.)



1. In a speed indicator for calling devices, a pair of pointers, means for moving one of said pointers at a predetermined speed, means for moving the other of said pointers in synchronism with the calling device being tested, and means whereby the first pointer is started in operation by the operation of the second pointer.

2. In a speed indicator for calling devices, a pair of pointers, means for moving one of said pointers at a predetermined speed, step-by-step means for moving the other of said pointers in synchronism with the calling device being tested, and means whereby the second pointer locks the first pointer against movement.

3. In a speed indicator for calling devices, a pair of pointers, means for rotating one of said pointers at a predetermined speed, means for rotating the other of said pointers a predetermined distance in synchronism with the calling device being tested, and means for stopping either of said pointers when the other reaches the limit of its movement.

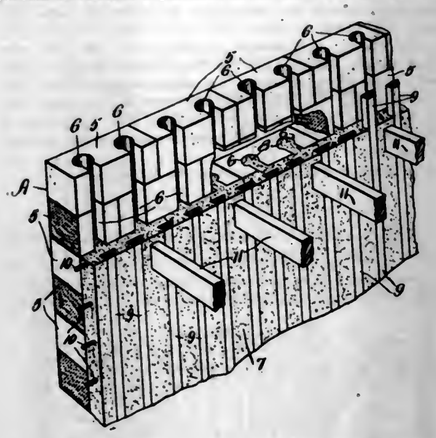
4. In a speed indicator for calling devices, a pair of pointers located adjacent to one another, means for moving one of said pointers at a predetermined speed, means for moving the other of said pointers and an escapement mechanism operated in synchronism with the calling device being tested for controlling the speed of said other pointer.

5. In a speed indicator for calling devices, a pair of pointers, means for moving one of said pointers at a predetermined speed, and means for moving the other of said pointers step by step in synchronism with the calling device being tested, means for limiting the extent of movement of said pointers, and means for stopping both of said pointers when one reaches the limit of its movement.

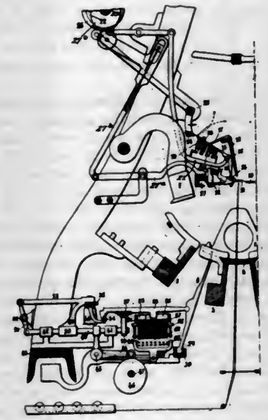
[Claims 6 to 9 not printed in the Gazette.]

1,112,995. BUILDING-WALL. ALFRED M. EVANS, Amherst Junction, Wis. Filed Nov. 26, 1913. Serial No. 803,253. (Cl. 72—16.)

The combination with an outer wall formed from a plurality of blocks, and a plastic covering for one side of the wall, of joists each having an end embedded in the plastic covering, the said wall being formed at intervals with substantially keyhole shaped slots opening through the cover side thereof and disposed vertically throughout the extent of the wall, the said covering filling the said slots for locking the blocks of the wall together and also for locking the covering thereto, means carried by the embedded end of each joist and extended into the larger portion of the slot adjacent thereto in the wall for anchoring the joists in the covering and wall, and reinforcing mediums embedded in the covering and disposed horizontally above and below the embedded ends of the joists.



1,112,996. LACE-MACHINE. JEAN FARIGOULE, Paris, France. Filed May 27, 1910. Serial No. 563,817. (Cl. 66—6.)



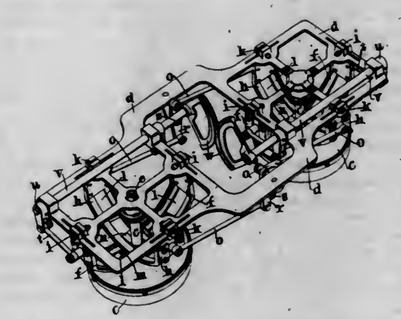
1. In a loom for the manufacture of lace, the carriages and bobbins, the combs for guiding the carriages, means for shifting the carriages, a point bar 10 for bringing the crossings to the center of the loom, movable points 11 independent from each other and arranged opposite the point bar 10, a jacquard for independently actuating each of said movable points 11, each of said points 11 being maintained engaged in the tissue in the operative position, during the required period, without being interfered with by the other points.

2. In a loom for the manufacture of lace, the carriages and bobbins, the combs for guiding the carriages, means for shifting the carriages, a point bar 10, for bringing the crossings to the center of the loom, movable points 11 independent from each other and arranged opposite the point bar 10, a bent lever 15 to which each point 11 is hinged, a needle 19 carried at the free end of each lever, perforated bars 20, a jacquard for actuating said perforated bars, said needle 19 being put in action when it encounters a solid part of said bars and remaining stationary when it encounters a perforation in said bars, a constantly rocking bar 24 into the path of which the bent lever is brought when said lever is put in action, the said lever being displaced by said rocking bar, a vertically movable box 27 into which the rear part of the respective point 11 is brought when the lever is displaced, the said box serving to bring the point 11 into the inoperative position, so that said points 11 may be lowered at the time they enter into the tissue.

3. In a loom for the manufacture of lace, a point bar 10 for bringing the crossings to the center of the loom, movable points 11 independent from each other and arranged opposite the point bar 10, a jacquard for independently actuating each of said movable points 11, the carriages 1 and the bobbins, two central comb bars 2, 3, a front catch bar 6, a rear catch bar 7, a lever 8 actuated to bring the carriages from said central comb bars either to a front catch bar or a rear catch bar, front and rear comb bars 4 and 5 to which said carriages are brought from said front and rear catch bars, the said front and rear comb bars being capable of receiving a to and fro motion in the longitudinal direction of the loom, so that during the operation of the movable points 11, the warp threads may be crossed together in any required manner.

4. In a loom for the manufacture of lace, the carriages 1, the operating levers 8, and the pull rods 33 placed in juxtaposition and having coöperating projections and recesses for jointing the levers and pull rods, the said recesses and projections being of different sizes for preventing the lateral escape of the inserted projection.

1,112,997. GYROSTAT. SEBASTIAN ZIANI DE FERRANTI, Grindleford, England. Filed Oct. 14, 1910. Serial No. 587,104. (Cl. 74—78.)



1. In combination, a body, and means for automatically opposing tilting couples acting thereon irrespective of the direction of the axes of said couples, said means including a pair of gyroscopic units each universally mounted thereon to swing relatively to said body through substantial angles in any direction, and means for restraining said units from simultaneously so swinging in the same rotational direction relatively to said body.

2. In combination, a body, and means for automatically opposing tilting couples acting thereon irrespective of the direction of the axes of said couples, said means including a pair of gyroscopic units each universally mounted thereon to swing relatively to said body through substantial angles in any direction, and means for constraining said units so to swing in opposite rotational directions relatively to said body.

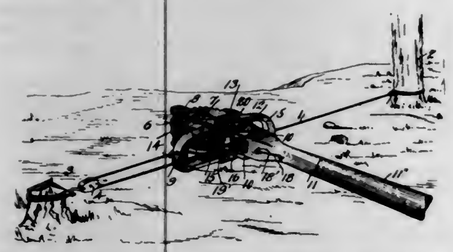
3. In combination, a body, and gyroscopic means for directly applying thereto precessional couples to oppose tilting couples acting on said body irrespective of the direction of the axes of said couples, said means including a pair of gyroscopic units each universally mounted thereon in stabilized equilibrium, and means for constraining said units to swing in opposite rotational directions relatively to said body.

4. In combination, a body, and gyroscopic means for directly applying thereto precessional couples to oppose tilting couples acting on said body irrespective of the direction of the axes of said tilting couples, said means including a pair of pendulous gyroscopic units, each universally mounted thereon, and means for constraining said units to swing in opposite rotational directions relatively to said body.

5. In combination, a body having a pair of gyroscopic units universally mounted thereon; and means for preventing said units swinging simultaneously in the same rotational direction in any the same directional plane while permitting swinging in opposite rotational directions in said same directional plane.

[Claims 6 to 26 not printed in the Gazette.]

1,112,998. STUMP-EXTRACTOR. ADOLF GRANLUND, Escanaba, Mich. Filed May 2, 1914. Serial No. 835,993. (Cl. 57—103.)



1. In an extracting device of the class described, the combination of a cable adapted to be fixed at one end portion to a stationary object, tensioning means engaging an intermediate portion of the cable, the other end portion of the cable being fixed to the tensioning means to form a stress exerting loop beyond the tensioning means, and means for actuating the tensioning means for causing the same to travel toward the stationary object.

2. In an extracting device of the class described, the combination of a cable adapted to be fixed at one end portion to a stationary object, tensioning means engaging an intermediate portion of the cable, the other end portion of the cable being fixed to the tensioning means to form a stress exerting loop beyond the tensioning means, a pulley about which said loop extends, means of connection for the pulley with the object to be extracted, and means for actuating the tensioning means for causing the same to travel along the cable toward the stationary object.

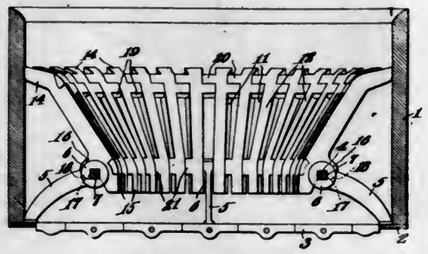
3. In an extracting device of the class described, the combination of a cable adapted to be connected at one end to a stationary object, a movable member operatively connected to the object to be extracted and around which the cable passes adjacent its other end, tensioning means to which the last mentioned end of the cable is connected whereby to form a stress exerting loop, said tensioning means embodying a frame through which the cable passes intermediate the movable member and the stationary object, and means for actuating said tensioning means to cause the same to move on the cable toward a stationary object and thereby exert tension upon the movable member aforesaid.

4. In an extracting device of the class described, the combination of a cable adapted to be fixed at one end portion to a stationary object, tensioning means comprising a capstan engaging an intermediate portion of the cable, the other end portion of the cable being fixed to the tensioning means to form a stress exerting loop beyond the tensioning means, and means for actuating the tension means for causing the same to travel toward the stationary object.

5. In an extracting device of the class described, the combination of a cable adapted to be connected to a stationary object at one end, said cable being connected with an object to be extracted, a drum engaging an intermediate portion of the cable, a frame in which the drum is mounted and to which the second end of the cable is connected, means for actuating the drum to cause the frame and drum to move along the cable toward a stationary object, and means coacting with the last mentioned means and locking the frame drum against movement toward the object to be extracted when the drum is actuated by the actuating means aforesaid, said locking means being releasable to permit free movement of the frame and drum on the cable away from the stationary object.

[Claims 6 to 11 not printed in the Gazette.]

1,112,999. GRATE. PAUL P. GREDELL, Quincy, Ill. Filed May 8, 1914. Serial No. 837,241. (Cl. 126—152.)



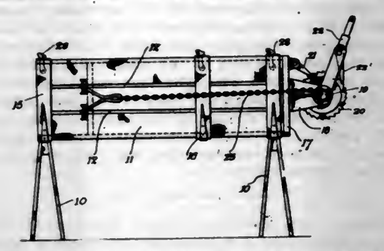
1. In a device of the class described, an annular support; and outwardly inclined upwardly extended bars assembled with the support to form an inverted frusto-conical grate, each bar being provided with oppositely extended spacing lugs upon its edges, the upper edge of one lug on each bar being alined with the lower edge of the other lug on the same bar, whereby the respective lugs on adjoining bars will coöperate to form a double width ring adjacent the top of the grate.

2. In a device of the clas described, an annular support; and outwardly inclined upwardly extended bars assembled with the support to form an inverted frusto-conical grate, each bar being provided with oppositely extended spacing lugs upon its edges, the upper edge of one lug on each bar being alined with the lower edge of the other lug on the same bar, whereby the respective lugs on adjoining bars will coöperate to form a double width ring adjacent the top of the grate, each bar being provided near its lower end with a single spacing lug, the single lugs coöperating to form a single width ring about the grate adjacent the lower end of the grate.

3. In a device of the class described, a fire pot; an annular support; legs between which the support passes, the legs engaging the fire pot; a plurality of outwardly slanting upwardly extended bars, each bar being provided adjacent its lower end in its outer edge with a downwardly opening notch which receives the support, the upper ends of the bars resting against the fire pot, and the bars coöperating to form an inverted, frusto-conical grate, each bar being provided with oppositely extended spaced lugs upon its edges, the upper edge of one lug on each bar being alined on the lower edge of the other lug on the same bar, whereby the respective lugs on adjoining bars will coöperate to form a double width ring adjacent the top of the grate, each bar being provided near its lower end with a single spacing lug, the single lugs coöperating to form a single width ring adjacent the lower end of the grate.

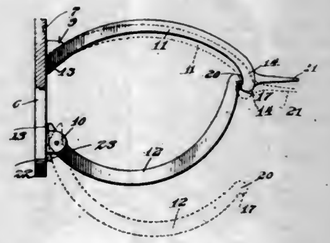
1,113,000. HAND-POWER HAY-BALER. GEORGE GORDON GREEN, Battelle, Ala. Filed Oct. 21, 1913, Serial No. 796,459. Renewed Aug. 19, 1914. Serial No. 857,610. (Cl. 100—12.)

In a baling press, a baling chamber having slotted sides, a pawl and ratchet mechanism at one end or said chamber, a pair of flexible tension members arranged on opposite sides of said press and arranged to be wound by said mechanism, a plunger movable in said chamber, a pivoted connection between one of said tension members and



said plunger and extending through a slot, and a hook carried by the other member and adapted to extend through a second slot for releasable engagement with the free edge of said plunger.

1,113,001. HARNESS-HANGER. ELMER E. GOAR, Stephen, Minn. Filed Jan. 20, 1914. Serial No. 813,285. (Cl. 248—22.)



1. In a device of the class described, a base, a pair of oppositely movable arms freely pivoted on said base for independent vertically swinging movement, means for supporting one of said arms normally horizontal, said arms being adapted for automatic interlocking engagement with each other on movement of the other of said arms to operative position.

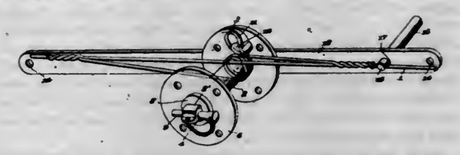
2. In a device of the class described, a base, a pair of oppositely movable arms freely pivoted on said base for independent vertical swinging movement and having their free ends interlocked in operative position, means for supporting one of said arms normally horizontal, and means for lifting said arms to permit the other of said arms to gravitate to inoperative position.

3. In a device of the class described, a base, a pair of pivotally movable arms freely pivoted on said base and having their free ends interlocked in operative position, means for slightly tilting one of said arms whereby the other of said arms gravitates to an inoperative position, and means for limiting the movement of the latter mentioned arm on its movement to an inoperative position.

4. In a device of the class described, a base, a pair of oppositely movable arms freely pivoted on said base for vertical swinging movement, one of said arms having its free end extended inwardly and formed to provide a pocket, and the other of said arms terminating in a hook adapted to be positioned in said pocket when said arms are operatively associated, and the side walls of said pocket being adapted to prevent casual separation of the arms when lateral pressure is brought to bear against the sides thereof.

1,113,002. WIRE-STRETCHER. CHARLES LAYTON GRAHAM, Ashley, N. D. Filed Sept. 16, 1913. Serial No. 790,082. (Cl. 30—56.)

1. In a tightener for wire fences, a spool having a head provided with an inturned hook adapted to receive a loop in the wire runner, a longitudinally adjustable operating lever for the spool, a handle for the lever, said handle having a reduced extension, the said extension having one of its faces concaved, and the said concavity adapted to receive the runner to hold the same against retrograde movement after a portion of the said runner has been looped upon the spool.



2. In a wire tightener, for fence runners, a spool a hook upon one head of the spool adapted to receive a loop in a runner, a longitudinally movable operating lever for the spool, said lever having spaced openings, a handle having a reduced portion passing through one of the openings, and the reduced portion of the said handle having a concave face adapted to serve as a runner-engaging lip.

3. In a wire tightener, for fence runners, a spool having an integral head and a removable head, a hook formed upon the integral head and arranged angularly thereof, a substantially V-shaped ridge increasing in width from the perimeter of the head and connected with the hook, a socket upon the outer face of the head, a longitudinally adjustable lever passing through the socket, said lever having spaced openings, a handle passing through one of the openings, and said handle having an inner concaved face.

1,113,003. WATER-HEATER. THOMAS GRIFFIN, Fulton, N. Y. Filed Apr. 11, 1914. Serial No. 831,249. (Cl. 122—249.)

1. A water heater comprising spaced inner and outer drums, a water coil disposed within the inner drum, a slidably mounted valve sleeve adapted to move against the inner drum and close the auxiliary passage extending between the said drums.

2. A water heater comprising an outer drum, an inner drum positioned therein of relatively smaller diameter and shorter length than the outer drum, means holding the said drums in spaced relation and defining an auxiliary passage extending therebetween, a heating coil positioned within the inner drum, inlet and outlet pipes communicating with said coil, a gas burner disposed within said inner drum and extending axially thereof, annular plates with outwardly extending pipes connected to the extremities of said outer drum, a valve sleeve slidably carried by the lower annular plate, said valve sleeve of substantially equal diameter to the diameter of the inner drum and adapted to contact therewith and close the said auxiliary passage.

3. A water heater comprising an outer drum, an inner drum positioned therein of relatively smaller diameter and shorter length than the outer drum, means holding

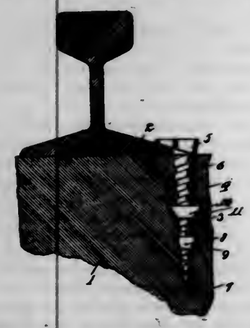
the said drums in spaced relation and defining an auxiliary passage extending therebetween, a heating coil positioned within the inner drum, inlet and outlet pipes communicating with said coil, a gas burner disposed within said inner drum and extending axially thereof, annular plates with outwardly extending pipes connected to the extremities of said outer drum, a valve sleeve slidably carried by the lower annular plate, said valve sleeve of substantially equal diameter to the diameter of the inner drum and adapted to contact therewith and close the said auxiliary passage, and doors closing openings provided in the side walls of the said drums, rendering the interior of said drums accessible.

4. A water heater comprising an outer drum, an inner drum positioned therein of relatively smaller diameter and shorter length than the outer drum, means holding the said drums in spaced relation and defining an auxiliary passage extending therebetween, a heating coil positioned within the inner drum, inlet and outlet pipes communicating with said coil, a gas burner disposed within said inner drum and extending axially thereof, annular plates with outwardly extending pipes connected to the extremities of said outer drum, a valve sleeve slidably carried by the lower annular plate, said valve sleeve of substantially equal diameter to the diameter of the inner drum and adapted to contact therewith and close the said auxiliary passage, doors closing openings provided in the side walls of the said drums, rendering the interior of said drums accessible, and a pair of dampers at the upper and lower extremities of the said annular plates.

5. A water heater comprising an outer drum, an annular plate with an inlet pipe communicating therewith rigidly secured to the lower extremity of said drum, an annular plate with an upstanding pipe detachably secured to the upper extremity of said drum, damper plates carried at the extremities of said pipes, an inner drum relatively smaller in diameter and length than the outer drum, spacing arms extending between the drums and holding the same in spaced relation, the space intermediate the drums defining an auxiliary passage, a pipe coil disposed within the inner drum, inlet and outlet pipes therefor communicating therewith, a gas burner extending axially of the said pipe coil, a cover detachably positioned upon the upper extremity of said inner drum, a valve sleeve slidably carried by the lower annular plate, handles secured to said valve sleeve extending through the said first mentioned pipe for the controlling of said valve sleeve, said valve sleeve substantially equal in diameter and adapted to abut with the said inner drum, and doors closing openings provided in the side walls of said inner and outer drums.

[Claims 6 to 8 not printed in the Gazette.]

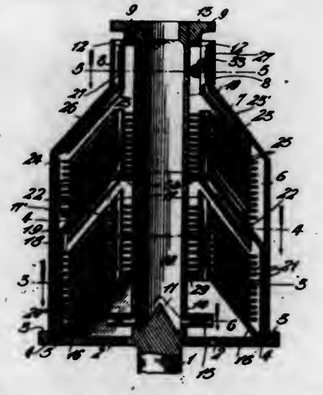
1,113,004. SPIKE. EDWARD HAEUSSNER, St. Louis, Mo. Filed Mar. 31, 1914. Serial No. 828,576. (Cl. 85—20.)



1. A spike having a cone-shaped shank and an elongated head and a rectangular head, the shank having a spiral enlargement and being formed with oppositely extending key-stone shaped lugs which interrupt the said spiral enlargement.

2. A spike including a shank and a rectangular head having the engaging portion thereof extending beyond the shank for a greater distance than the remainder of the head, the shank being cone-shaped and being integrally formed with a spiral enlargement which, at the reduced end of the spike, terminates in a point which projects centrally from the said end of the shank, the shank being formed with laterally extending lugs, one arranged at a right angle to the other, the sides of the lugs being disposed at an angle similar to the angular sides of the shank, the corners of the lugs being rounded, and the spiral enlargements communicating with one of the rounded corners of the lug.

1,113,005. CREAM-SEPARATOR. WILLIAM C. HARTMANN, Milwaukee, Wis., assignor of one-half to John M. Freisinger, Milwaukee, Wis. Filed Jan. 22, 1914. Serial No. 813,759. (Cl. 127—20.)



1. In a centrifugal cream separator, the combination of a casing, a hollow inlet tube extending from one end to the other of the casing and open at its outer end, said tube having discharge outlets at its inner end, a plurality of separating chambers arranged in said casing and disposed one above the other and each having upright pipes communicating with the chamber below, truncated cone shaped liner plates fixed to said pipes, said pipes having openings therein communicating with the spaces between the plates and cream chambers formed adjacent said inlet pipe.

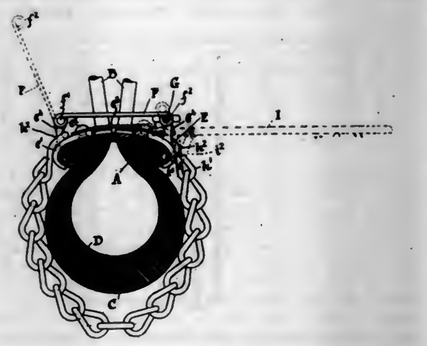
2. In a centrifugal cream separator, the combination of a casing, a hollow inlet tube extending from one end to the other of the casing and open at its outer end, said tube having discharge outlets at its inner end, a plurality of separating chambers arranged in said casing and disposed one above the other and each having upright pipes communicating with the chamber below, truncated cone-shaped liner plates fixed to said pipes, said pipes having openings therein communicating with the spaces between the plates, each chamber having an upwardly inclined top wall with discharge pipes mounted on the inner face thereof and having their lower ends positioned to receive the milk thrown out by said liner plates, said pipes opening through the top walls of said chambers and communicating with the chamber above, and cream chambers formed adjacent said inlet pipe.

3. In a centrifugal cream separator, the combination of a casing, a hollow inlet tube extending from one end to the other of the casing and open at its outer end, a cone-shaped dividing element extending longitudinally into said tube at its inner end, tubes radiating from the inner end of said inlet tube and communicating with the interior thereof, a truncated cone-shaped bowl mounted in the lower end of said casing and having milk discharge pipes extending upwardly from the flat top portion of said bowl adjacent the inclined wall thereof, said flat top having openings therein adjacent the inlet tube and a plurality of vertically spaced truncated cone-shaped liner plates fixed to said discharge pipes, said casing having cream and milk outlets.

4. In a centrifugal cream separator, the combination of a casing having an upwardly and inwardly inclined top terminating in a cylindrical neck, said neck having an inturned apertured flange at the mouth thereof, an inlet tube extending from one end to the other of the casing and fitting snugly within the flange in the neck thereof, the outer end of said tube being open, a cone shaped dividing element extending longitudinally into the inner end of said tube, radial pipes opening from said tube opposite said cone shaped element, a separating bowl surrounding the inner end of said tube, and having upwardly and inwardly inclined walls with an inturned flange forming a flat top portion closely engaging said tube pipes, extending upwardly from said flat top portion adjacent the inclined walls thereof, said flat portion having openings therein between said pipes and said tube, a plurality of liner plates attached to said pipes and spaced from each other, said plates being arranged concentrically and inclining downwardly, and means for discharging the separated milk and cream from said casing.

5. In a centrifugal cream separator, the combination of a casing having an upwardly and inwardly inclined top terminating in a cylindrical neck, said neck having an inturned apertured flange at the mouth thereof, an inlet tube extending from one end to the other of the casing and fitting snugly within the flange in the neck thereof, the outer end of said tube being open, a cone shaped dividing element extending longitudinally into the inner end of said tube, radial pipes opening from said tube opposite said cone-shaped element, a separating bowl surrounding the inner end of said tube and having upwardly and inwardly inclined walls with an inturned flange forming a flat top portion closely engaging said tube, pipes extending upwardly from said flat top portion adjacent the inclined walls thereof, said flat portion having openings therein between said pipes and said tube, a plurality of liner plates attached to said pipes and spaced from each other, said plates being arranged concentrically and inclining downwardly, and a hollow cream discharge tube extending transversely of said casing and adjustable to discharge thick or thin cream, and a milk discharge opening through said casing.

1,113,006. NON-SKID DEVICE FOR MOTOR-CYCLES. JOHN HAUERWAS, Jr., Milwaukee, Wis. Filed Mar. 21, 1913. Serial No. 755,827. (Cl. 152—14.)



1. The combination of a clip adapted to be detachably engaged with a wheel-rim and having a pair of inwardly extending projections, a chain adapted to pass around the wheel-tire, and having loops on its end-links adapted to engage said projections, and a strut-device connecting the ends of said projections.

2. The combination of a clip adapted to be detachably engaged with a wheel-rim and having a pair of projections on opposite sides of the rim, a chain adapted to pass around the wheel-tire, and having loops on its end-links adapted to engage said projections, and a strut-bar detachably connecting the ends of said projections and adapted to hold them at a fixed distance.

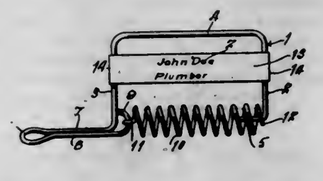
3. The combination of a clip adapted to be detachably engaged with a wheel-rim and having a pair of projections on opposite sides of the rim, a chain adapted to pass around the wheel-tire, and having loops on its end-links adapted to engage said projections, a strut-bar pivoted to one of said projections and having a free end adapted to lie adjacent to the other projection, and means for interengaging said free end and said other projection.

4. A device of the class described comprising a pair of hooked members adapted to engage on the opposite sides of a wheel-felly, a spring connecting them, and a bar adapted to engage said members to hold them in a fixed position relative to each other.

5. A device of the class described comprising a pair of hooked members adapted to engage the opposite sides of a wheel-felly, a plate-spring connecting them, a chain adapted to pass around the wheel-felly, and means on the respective members for engaging the respective ends of said chain.

[Claims 6 to 8 not printed in the Gazette.]

1,113,007. TOILET-PAPER HOLDER. SEVERIN M. HAUGE, Fort Dodge, Iowa. Filed Apr. 13, 1914. Serial No. 831,640. (Cl. 211—31.)



1. A toilet paper holder comprising a wire frame provided with an inwardly extending pintle, a spiral spring for supporting a roll of paper permanently connected at one end to said frame, and adapted to be compressed for attachment to said pintle.

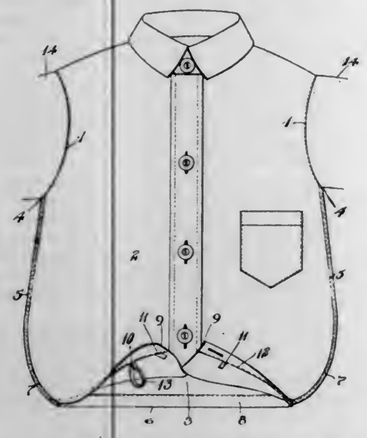
2. A paper holder comprising a wire frame having a supporting arm provided with a loop to receive a bolt for supporting the holder upon a toilet bowl, a spiral spring for supporting the paper roll, said spring having an eye at one end to permanently engage a hook on the frame, the opposite end of said spring being provided with a pintle-bearing to receive a pintle formed on the frame.

3. A toilet paper holder comprising a frame, an arm for supporting the holder, a spiral spring for supporting the paper roll, said spring being detachable at one end, and a combined sliding weight and advertising medium adapted to rest upon the roll of paper to prevent too free unwinding of the paper.

1,113,008. GARMENT. LOUIS H. HAYS, Cleveland, Ohio, assignor to The Kaynee Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 29, 1912. Serial No. 706,633. (Cl. 2—98.)

An open-front blouse formed with arm-holes, and having a body portion so cut that it increases in width from the bottom of the arm-holes downwardly for part of its length and is curved at its sides from the bottom of said part inwardly to the waist-line, the blouse being of less width at the waist-line than at the bottom of said part and being provided at the waist-line with a hem having open ends at the front and an open slot at a point removed from the front, in combination with a single cord

disposed in said hem and having its ends secured near the front by the seam of the hem, a portion of said cord



being adapted to project through said slot in the form of a loop.

1,113,009. SECTIONAL CORE FOR HOLLOW RUBBER ARTICLES. TOM HOWARD and GEORGE BENJAMIN CLEGG, Providence, R. I. Filed July 22, 1913. Serial No. 780,463. (Cl. 18—45.)

1. In a sectional core for hollow rubber articles, a plurality of substantially non-fusible sections forming the body of the core, fusible metal means for securing the substantially non-fusible sections of the core together, whereby on the application of a predetermined degree of heat to the core the substantially non-fusible sections are released one from the other and may be easily removed through an opening in the hollow article.

2. In a sectional core for hollow rubber articles, a plurality of substantially non-fusible longitudinal metal sections forming the body of the core, fusible metal means for detachably securing all of the sections of the core together, whereby on the application of a predetermined degree of heat to the core the fusible metal is fused and all of the sections are released one from the other and may be easily withdrawn through a small opening in the hollow rubber article.

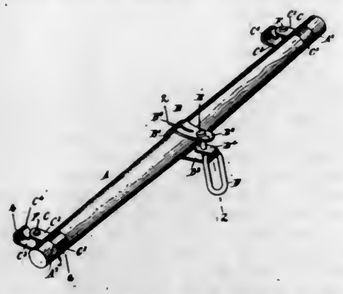
3. A core for hollow rubber articles constructed of a plurality of substantially non-fusible metal sections placed side by side and forming the body of the core, and fusible metal means in contact with each section and adapted to mechanically and fusibly secure the sections together, whereby on the application of a predetermined degree of heat the fusible metal will fuse and the sections will be automatically released one from the other.

4. A core for hollow rubber articles the body of which is constructed of a plurality of substantially non-fusible metal sections, said sections being in contact on their sides, and a fusible metal member in internal contact with each section and adapted to mechanically and fusibly secure the sections together, whereby on the application of a predetermined degree of heat to the fusible member, the said internal fusible member will become molten, thereby automatically releasing the sections one from the other.

5. A core for hollow rubber articles constructed of a plurality of substantially non-fusible metal sections, a fusible metal rod extending through the sections, said sections being firmly secured together by enlarging the ends of the rod.

[Claims 6 and 7 not printed in the Gazette.]

1,113,010. CLIP. DANIEL B. JACOBS, New York, N. Y. Filed Nov. 18, 1913. Serial No. 801,626. (Cl. 21—78.)

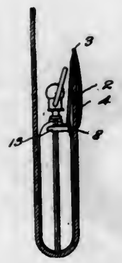


1. A clip, comprising a band adapted to be passed around a swingletree, doubletree or like device, the band terminating at one side in outwardly-extending flanges, of which one has a return bent portion to form a hook, a ring held in the said hook, and a bolt engaging the said flanges and the said hook, the bolt extending in the rear of the ring to lock the latter in place on the hook.

2. The combination with a swingletree, doubletree or like device having a peripheral groove, of a clip band surrounding the said device and having an inwardly-extending integral rib engaging the said groove to hold the band against lateral movement, the band terminating at one side in outwardly extending flanges, of which one is provided with a return bend to form a hook for the reception of a ring, and a bolt engaging the said flanges to hold the band clampingly in position on the said device.

3. As a new article of manufacture, a whiffletree clip, consisting of a band-like clip having approximately parallel flanges of unequal length, the longer flange being bent inwardly to form a hook, the flanges and hook having registering openings, and a bolt passing through the openings of the flanges and hook.

1,113,011. WATCH-GUARD. RICHARD JAHN, Brooklyn, N. Y. Filed Feb. 4, 1914. Serial No. 816,423. (Cl. 24—3.)

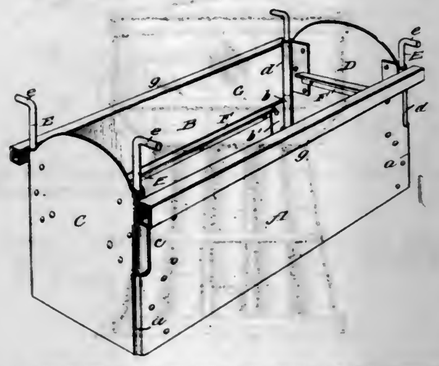


1. A safety watch guard, comprising a single piece of wire bent to present a spring attaching portion and a pair of laterally extending guard portions disposed at right angles thereto.

2. A watch guard comprising a single piece of wire having an intermediate attaching portion and laterally extending guard portions disposed at right angles thereto.

3. A safety watch guard comprising a single piece of wire bent to present a vertical shank, said shank including parallel legs bent at one end to present a spring attaching hook, and at their other ends bent at right angles to the shank to present oppositely disposed guard portions, and coverings mounted on the guard portions for the purpose set forth.

1,113,012. INTERIOR COLLAPSIBLE FORM FOR CONCRETE BURIAL-VAULTS. JAMES GUTHRIE JOHNSON, Carthage, Ill. Filed Aug. 29, 1912. Serial No. 717,701. (Cl. 25—130.)



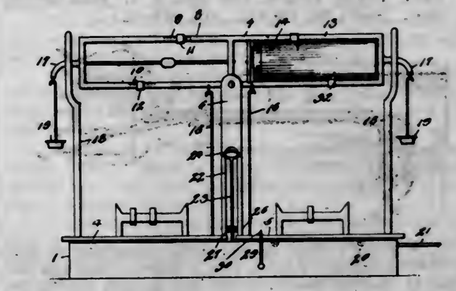
A collapsible interior form for burial vaults, comprising side and end walls, each of which is provided with side extensions bent inwardly to form curved vertical bearings, the extremities of which are bent flatwise and secured upon the inner surfaces of the walls, locking members comprising rods adapted for engagement vertically in the said wall bearings to lock the walls in operative position, and having angular ends forming handles, supplemental sections secured against the inner surfaces of the side walls and having their upper portions bent outwardly from the upper edges of the side walls, and downwardly and inwardly against the outer surfaces of said side walls, reinforcing bars secured to the side walls and against the lower edges of the said supplemental sections, all for the purpose described.

1,113,013. SYSTEM OF CAR-SIGNALING FOR GRADE-CROSSINGS. WALTER N. JOHNSON, Williamsport, Pa., assignor of one-half to Lewis C. Smith and Herman W. Smith, Williamsport, Pa. Filed July 29, 1913. Serial No. 781,811. (Cl. 246—28.)

In a system of car signaling for grade crossings, the combination with a car having chambers formed in the sides adjacent to the opposite ends thereof, of electric lamps disposed within said chambers, a local circuit including said lamps in series, switches for closing said circuit when the car passes over a crossing whereby the side lights will be visible to the motorman of a car approaching the crossing on another track, and pilot lamps connected in series in said circuit and disposed within the vestibule of the car whereby the motor man thereof will be advised as to the condition of the signaling system.

1,113,014. SCALE. JACK H. JONES, Mount Enterprise, Tex. Filed Oct. 3, 1913. Serial No. 793,237. (Cl. 73—3.)

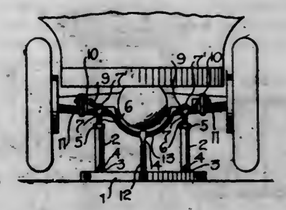
1. A scale including a plurality of platforms, a single beam centrally pivoted, sliding weights coöperating with one side of the beam, a computing cylinder coöperating with the opposing side of the beam, connections between the respective sides of the beam and the respective platforms, a knife operative between the platforms, one of the platforms being laterally movable with respect to its normal position.



2. A scale including a plurality of platforms, a single beam centrally pivoted, sliding weights coöperating with one side of the beam, a computing cylinder coöperating with the opposing side of the beam, connections between the respective sides of the beam and the respective platforms, a knife operative between the platforms, one of the platforms being laterally movable with respect to its normal position, and a track for supporting the laterally movable platform beyond its normal position.

3. A scale including a plurality of platforms, a single beam centrally pivoted, sliding weights coöperating with one side of the beam, a computing cylinder coöperating with the opposing side of the beam, connections between the respective sides of the beam and the respective platforms, a knife operative between the platforms, and means operating beneath one of the platforms for shifting the material thereon toward the other platform.

1,113,015. JACK. THOMAS P. JONES, Watkins, Minn. Filed May 15, 1913. Serial No. 767,818. (Cl. 57—43.)

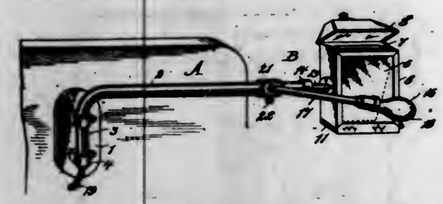


1. A device of the character described comprising vertically disposed standards, shanks adjustably engaged with the standards and having their upper extremities provided with sleeves, the bores of which being horizontally disposed, a shaft rotatably mounted within the sleeves and projecting beyond the shanks, such projected extremities of the shaft being formed into crank arms, hook members carried by the crank arms, means for imparting rotation to the shaft, and means adjustable through the sleeves of the shanks engageable with the shaft for holding such shaft against rotation.

2. A device of the character described comprising vertically disposed standards, shanks adjustably engaged with the standards and having their upper extremities provided with sleeves, the bores of which being horizontally disposed, a shaft rotatably mounted within the sleeves and projecting beyond the shanks, such projected extremities of the shaft being formed into crank arms, hook members carried by the crank arms, means for imparting rotation to the shaft, means adjustable through the sleeves of the shanks engageable with the shaft for holding such shaft against rotation, and brace members coacting with

the shanks and the base and being disposed on that side of the standard toward which the free extremities of the hook members project.

1,113,016. CHECK-HOLDER FOR AUTOMOBILE-DRIVERS. DANIEL JOSEPH, New York, N. Y. Filed Oct. 23, 1913. Serial No. 796,842. (Cl. 240—2.)

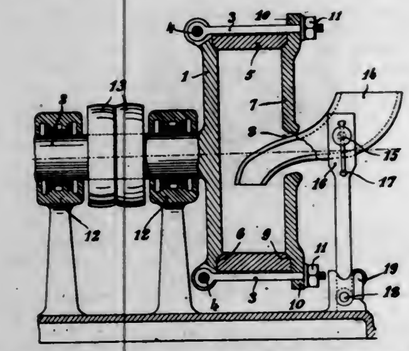


1. A driver's check holding device comprising an arm, a ticket receptacle thereon, and a lamp-carrying arm carried by the first-mentioned arm and movable thereon for adjustment to either side of the said receptacle, said receptacle being transparent on both sides.

2. A driver's check holding device comprising an arm, a ticket receptacle thereon, a lamp-carrying arm carried by the first-mentioned arm and movable thereon for adjustment to either side of the said receptacle, said receptacle being transparent on both sides, said arms being hollow, electric conductors passing therethrough, and a lamp on the second-mentioned arm.

3. The combination of a vehicle dash, a bracket thereon, an arm mounted on the bracket and extending beyond one of the side edges of the dash, a ticket-holding receptacle on the outer end of the arm and being transparent on both sides, said receptacle being disposed at a point outwardly from the side of the dash, and means on the arms and exterior to the receptacle to illuminate the latter.

1,113,017. INGOT-MOLD. HENRY JOUANNEAU, Paris, France. Filed July 7, 1913. Serial No. 777,663. (Cl. 22—65.)

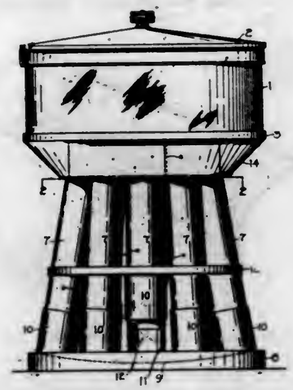


1. A rotary mold having an inlet opening for molten metal, in combination with a spout normally extending into said mold through said opening, a pivoted support for said spout adapted to be turned down withdrawing said spout from said mold and a removable fastening device for holding said support and spout in their normal position.

2. A rotary mold having a central opening for admission of molten metal, an inclined spout extending into said mold through said opening, a support for said spout and means for attaching said spout pivotally and adjustably to said support, thereby regulating such inclination.

3. A rotary mold having a central opening for the admission of molten metal, an inclined spout extending into said mold through said opening, a pivoted support for said spout which may be lowered to withdraw said spout from said mold, and means for pivotally adjusting the said spout on the said support to vary its inclination within the said mold and its point of discharge.

1,113,018. SANITARY SUGAR-CONTAINER. JOSEPH KANTOR, New York, N. Y. Filed Nov. 10, 1913. Serial No. 800,131. (Cl. 211—8.)



1. A sanitary container for cut sugar comprising a base, a container supported upon the base and a series of intermediate discharge tubes through which the sugar is deposited in single pieces at the lower end of said tubes upon the base or tray, and sliding covers for said tubes mounted telescopically therein, said tubes being cut away at their lower ends to give access to the lower lump of sugar in a discharge tube.

2. A sanitary container for cut sugar, comprising a base for a concave upper surface, a container provided with a cover, said container at its lower end having a conical central portion and a series of curved inclined guide ways, a series of discharge tubes communicating with the guide ways, telescopic covers at the lower ends of said discharge tubes, and a stop to limit the upward movement of said covers.

3. A container for cut sugar comprising a base, a receptacle for the sugar, having an internal conical portion provided with a series of radially inclined curved guide ways, a series of discharge tubes communicating with said guide ways, said tubes being cut away at their front lower ends to permit access to the sugar in single pieces, and telescopic covers adapted to be raised for giving access to the sugar.

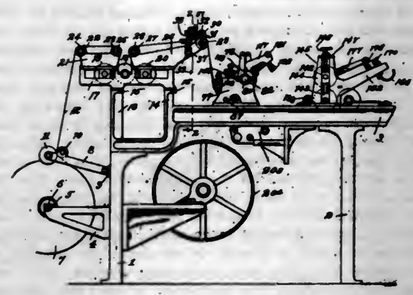
1,113,019. ENVELOP-MACHINE. T. WILLIAM KIENAST, New York, N. Y., assignor to Samuel Cupples Envelope Company, New York, N. Y., a Corporation of Missouri. Filed Sept. 6, 1912. Serial No. 718,924. (Cl. 93—63.)

1. In apparatus of the character described, the combination with means for forming a fold along the edge of a continuous web; of plates or fingers for opening the fold thus formed, means for severing the web into blanks, and means for folding over the seams on the creased line formed by the edge creasing device.

2. In apparatus of the character described, the combination with a preliminary edge creasing means, operating upon the continuous web to form a temporary fold, fold opening plates or fingers receiving the continuous web therefrom, and an edge cutting mechanism operating upon the continuous web after the fold is opened; of blank severing and folding mechanism, and means for turning over the edge of the blank on the creased line formed by the preliminary edge creasing means.

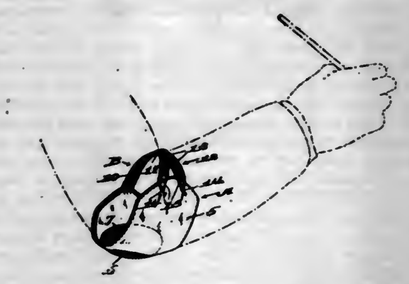
3. In apparatus of the character described, the combination with edge turning plates, and a folder bar against

which the paper is held during the edge turning operation; of creaser rolls, fold retaining fingers located between



the folder bar and crease rolls, and means for opening the folds thus formed.

1,113,020. WRITER'S ARM-REST. SAMUEL J. KING, Belton, S. C. Filed Feb. 24, 1914. Serial No. 820,791. (Cl. 2—190.)



1. A writer's arm rest comprising a bandage-like body portion consisting of a single thickness of flexible material adapted to be applied against the under surface of the fore-arm at the elbow; means for adjustably drawing the ends of said body directly toward each other against the adjacent side surfaces of the arm, to bind up the adjacent side muscles, to different degrees of tightness; and an arm-supporting pad secured to the central portion of the under surface of said body and adapted to lie beneath the point of the elbow.

2. A writer's arm rest comprising a bandage-like body portion consisting of a single thickness of flexible material adapted to be applied against the under surface of the fore-arm at the elbow; elastic means permanently connected to one end of said body and adapted for adjustable and removable connection to the other end thereof, to draw said ends directly toward each other and against the adjacent side surfaces of the arm, with varying degrees of tightness; and an arm-supporting pad secured to the central portion of the under surface of said body and adapted to lie beneath the point of the elbow.

3. A writer's arm rest comprising a bandage-like body portion consisting of a single thickness of flexible material adapted to be applied against the under surface of the forearm at the elbow; an elastic strap permanently connected to one end of said body and having a terminal ring; a second elastic strap passed through said ring and having its central portion engaged with the same, the two ends of the said second strap being adapted for adjustable and removable connection to the other end of said body, to draw the ends of the body directly toward each other and against the adjacent side surfaces of the arm, with varying degrees of tightness; and an arm-supporting pad secured to the central portion of the under surface of said body and adapted to lie beneath the point of the elbow.

1,113,021. MANUFACTURE OF FOOD PREPARATIONS OR EXTRACTS. ERNST KRAUSE, Steglitz, near Berlin, Germany. Filed Jan. 24, 1914. Serial No. 814,218. (Cl. 99—11.)

1. The method of manufacturing a food preparation or extract which consists in mixing animal albumen and yeast and subjecting the mixture to destructive digestion.

2. The method of manufacturing a food preparation or extract which consists in mixing blood and yeast and subjecting the mixture to a destructive digestion.

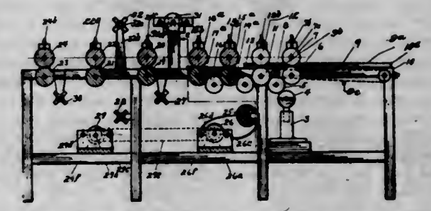
3. The method of manufacturing a food preparation or extract which consists in mixing the albuminous constituents of blood and yeast and subjecting the mixture to a destructive digestion.

4. The method of manufacturing a food preparation or extract which consists in mixing albuminous blood preparations and yeast and subjecting the mixture to a destructive digestion.

5. The method of manufacturing a food preparation or extract which consists in mixing defibrinated blood and yeast and subjecting the mixture to a destructive digestion.

[Claims 6 to 10 not printed in the Gazette.]

1,113,022. MACHINE FOR MAKING CHECK-BOOK COVERS. CHARLES H. KRAUSGRILL, Portland, Oreg. Filed Nov. 13, 1911. Serial No. 660,109. (Cl. 11—2.)



1. In an apparatus of the class described, the combination of cutters, means for feeding a cover blank to the cutters, the cutters being positioned for cutting slots in the blank leaving a stiffening back portion between the side portions of the blank and spaced therefrom, means for applying a strip connecting the side portions and the back portion, and means for guiding and maintaining the relative position of said side portions and back portion during the application of the strip.

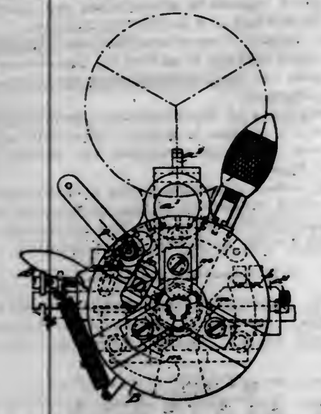
2. In mechanism of the class described, the combination with means for feeding a blank, of cutters disposed to act upon the blank while being fed, the said cutters being notched for forming spaced slots dividing the blank into side portions and an intermediate back portion spaced from the side portions and having webs connecting the back portion with the side portions, means for applying a strip connecting the side portions and the back portion, and means for guiding the blank during the application of the strip.

1,113,023. APPARATUS FOR TURNING, SHAPING, AND SCREW-THREADING RODS OR OTHER METAL BLANKS. HENRY STEPHEN LAND, county of Essex, England. Filed Dec. 31, 1912. Serial No. 739,508. (Cl. 10—87.)

1. In a lathe attachment of the character herein referred to for turning and screw-threading a metal blank, the combination of a turning tool box having a head plate, a laterally swinging screw-cutting die head pivotally attached to the head plate, and a detachable revoluble bushing interposed between the tool box and screw-cutting die head.

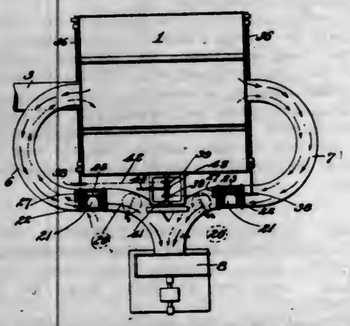
2. In a lathe attachment of the character herein referred to, for turning and screw-threading a metal blank, the combination of a turning tool box having a head plate, a laterally swinging screw-cutting die head pivotally attached to the head plate, a ball bearing device supported on the head plate intermediate of the tool box and screw-cutting die head, and a detachable bushing revolubly mounted in said ball bearing device.

3. In a lathe attachment of the character herein referred to for turning and screw-threading a metal blank, the combination of a turning tool box having a head plate, a screw cutting die plate pivotally attached to the head plate and capable of swinging from a position wherein it is concentric with the tool box into a position wherein it is clear of the face of the tool box head and vice versa, and means for locking the die plate in each position.



4. In a device of the character referred to herein for turning and screw-threading a metal blank, the combination with a turning tool box and a screw cutting die head pivotally mounted thereon of a revoluble support for the blank comprising a removable bush and a ball bearing device consisting of an outer ball race fixed in the wall of the tool box, an inner revolving ball race, balls interposed between the said races, a ring member bearing on the inner ball race and detachably connected to said bush, said ring having both an inwardly turned flange serving as an abutment for the bush and an outwardly extending flange serving as a cover for the ball bearing.

1,113,024. DUST-COLLECTOR. HENRY LECHTENBERG, Quincy, Ill., assignor to W. T. Lechtenberg. Filed Apr. 29, 1914. Serial No. 835,118. (Cl. 83—47.)



1. A dust collector comprising a housing having an inlet opening for the admission of a dust laden air current, a plurality of filtering devices arranged in said housing, each of said filtering devices being provided with an outlet passageway through which filtered air is discharged, suction pipes communicating with said outlet passageways, an exhaust fan for drawing air through said suction pipes, means for closing either of said suction pipes to prevent air from flowing outwardly through the outlet passageway of either of the filtering devices, normally closed closures adapted to be opened after a filtering operation to admit air into said outlet passageways from the exterior of the filtering devices, the exhaust fan being adapted to draw air into one of the filtering devices from its outlet passageway and thence into the suction pipe associated with the other filtering device.

2. A dust collector comprising a housing having an inlet opening for the admission of a dust laden air current, and a plurality of outlet openings, filtering devices between said inlet and outlet openings, suction pipes leading from said outlet openings adapted to receive air flowing from said filtering devices, an exhaust fan for drawing air through said suction pipes and the filtering devices associated therewith during the filtering operation, a valve for closing one of the suction pipes to prevent the flow of air from a filtering device to the said suction pipe, the last named suction pipe being provided wtih an inlet opening through which air may flow from the exterior of said housing and a closure adapted to be opened after the filtering operation to admit a current of air from the exterior of the housing into the last mentioned suction pipe, and means for controlling the movement of said air currents whereby the last mentioned air current entering a suction pipe is caused to flow into and through a filtering device in response to the movement of an air current in another filtering device.

3. A dust collector provided with filtering devices each having outlet opening through which air is discharged during the filtering operation and through which air is admitted during the cleaning operation, suction pipes leading from said outlet openings, each of said suction pipes being provided with an inlet opening for the admission of air during a cleaning operation, means for opening and closing said inlet openings, a suction device for drawing air through said suction pipes during the filtering and cleaning operations, closures associated with said suction pipes to prevent the flow of air from either of the filtering devices to the suction pipe leading therefrom, said closures being operable to permit the flow of air through both of the suction pipes and to the suction device during the filtering operation, and said closures being adapted to close one of the suction pipes during the cleaning operation so that the air current produced in response to the operation of said suction device will flow through the filtering devices successively and into the other suction pipe thereby removing dust from one of the filtering devices.

4. A dust collector comprising a housing open to receive dust laden air, filtering devices in said housing adapted to receive the dust, suction pipes communicating with both of said filtering devices adapted to receive the filtered air, and a suction device for drawing air through said suction pipes and filtering devices thereby drawing dust laden air to said filtering devices; combined with means for deflecting the air so that the air current produced in response to the operation of said suction device will flow through the filtering devices successively and then through one of the suction pipes to said suction device, thereby removing the dust from one of said filtering devices.

5. A dust collector comprising a housing open to receive dust laden air, filtering devices in said housing adapted to receive the dust, suction pipes communicating with both of said filtering devices adapted to receive the filtered air, and a suction device for drawing air through said suction pipes and filtering devices thereby drawing dust laden air to said filtering devices; combined with closures associated with said suction pipes for deflecting the air so that the air current produced in response to the operation of said suction device will flow into one of the suction pipes, through the filtering devices successively and then through another of the suction pipes, thereby removing the dust from one of said filtering devices.

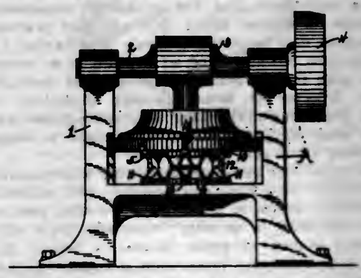
[Claims 6 and 7 not printed in the Gazette.]

1,113,025. CUSPIDOR-LIFTER. CHARLES THOMAS LEE, Blauvelt, N. Y. Filed Nov. 12, 1913. Serial No. 800,583. (Cl. 57—111.)

A lifter comprising a body, an arm attached to one side of the body and having an end portion spaced from the end thereof, said spaced end portion of the arm being approximately parallel with the adjacent end portion of the body and a rod rotatably mounted at the opposite side of the body and having an angularly disposed foot adapted to be

swung under the end of the body and the arm carried thereby.

1,113,026. SAFETY ATTACHMENT FOR PUNCH-PRESSES. COSTER J. MACK, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 26, 1912. Serial No. 716,965. (Cl. 164—107.)



1. The combination of a press machine comprising relatively movable plates, a safety attachment comprising a lazy tongs and guards at the ends thereof, connections between said plates and lazy tongs to extend the latter as the plates are moved toward each other, and means to retract the lazy tongs with a yielding force as the plates are separated.

2. The combination of a punch press comprising a lower plate, an upper plate movable toward and from the lower plate, guards, a lazy tongs connecting the guards, a pivotal connection between the lazy tongs and the lower plate, a slot and pin connection between the lazy tongs and the upper plate, and a spring placed under tension by the extension of the lazy tongs.

3. As an article of manufacture, a safety device comprising a lazy tongs, shields or guards pivoted to the ends of the lazy tongs, and stop devices to limit the pivotal movment of the guards.

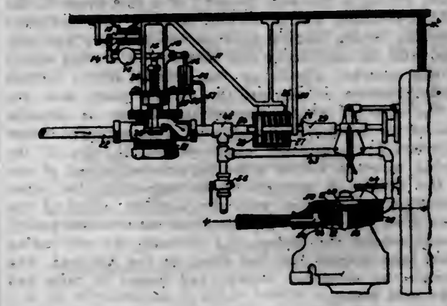
4. The combination of a lazy tongs, arms pivoted thereto, means to limit the rotation of said arms, and guide rollers carried by the arms.

5. In combination, a lazy tongs, guards connected to the ends of the lazy tongs, a slotted link connected to the lazy tongs, and a coil spring connected to and forming a means for retracting the lazy tongs.

[Claims 6 and 7 not printed in the Gazette.]

1,113,027. AUTOMATIC TRAIN-STOP. ANTHONY MASTRANGELO, Weehawken, N. J., assignor of one-half to Albert Edward Buckland, New York, N. Y. Filed Sept. 13, 1913. Serial No. 789,634. (Cl. 246—58.)

1. In an automatic train stop, a fluid conduit from the train pipe; a valve normally closing the finid flow from the train pipe to said conduit; a vent in said conduit; a valve controlling said vent; a suspended weight for operating said valves controlling the connection of the pipe with the conduit; means for maintaining said weight in inoperative position; and automatic means for rendering said weight operative whereby the valves are operated, the valve connecting the pipe to the conduit establishing communication therebetween and the valve controlling the vent closing the same.



2. In an automatic train stop a fluid conduit from the train pipe; a valve to normally close the fluid from the train pipe to said conduit; a vent in said conduit; a piston valve normally connecting said vent with the atmosphere; a normally inoperative weight for operating said valves; and automatic means for rendering said weight operative, whereby the valves are operated, the piston valve closing the vent and the first mentioned valve establishing communication between the train pipe and the conduit substantially as and for the purpose set forth.

1,113,028. OIL AND WATER ELEVATOR. THOMAS HARVEY MCDONALD, Tropico, and STEPHEN W. MACK, Glendale, Cal., assignors to McDonald Oil and Water Elevator Co., Aberdeen, Wash., a Corporation of Washington. Filed Nov. 24, 1911. Serial No. 662,330. (Cl. 103—6.)

1. In an oil and water elevator, the combination with a foot, having a foot-way therein; of a foot-wheel in the foot; descending tubing leading down to the foot-way; ascending tubing leading up from the foot-way and provided with an inlet above said foot-way; a driving shaft; driving sprocket wheels on the driving shaft; reverse ratchet clutches to connect the driving shaft with the driving sprocket wheels respectively; drums on opposite sides of the driving shaft; sprocket wheels for the drums respectively; a sprocket chain connecting one of the driving sprocket wheels with one of the sprocket wheels of one of the drums; a sprocket chain connecting the other driving sprocket wheel with the sprocket wheel of the other drum; and an endless pumping line led over

the pulley, wound around the drums, led through the descending tubing and around the foot-wheel in the foot-way and through the ascending tubing.

2. In an oil and water elevator, the combination with a foot having a foot-way therein; of a foot-wheel in the foot; descending tubing leading down to the foot-way; ascending tubing leading up from the foot-way and provided with an inlet above said foot-way; a driving shaft; driving sprocket wheels on the driving shaft; reverse ratchet clutches to connect the driving shaft with the driving sprocket wheels respectively; drums on opposite sides of the driving shaft; sprocket wheels for the drums respectively; a sprocket chain connecting one of the driving sprocket wheels with the sprocket wheel of one of the drums; a sprocket chain connecting the other driving sprocket wheel with the sprocket wheel of the other drum; an endless pumping line led over the pulley, wound around the drums, led through the descending tubing and around the foot-wheel in the foot-way, and through the ascending tubing; and means to raise and lower said pulley.

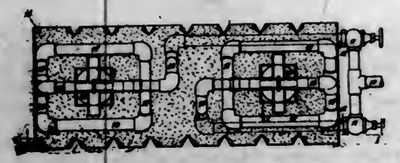
3. In an oil and water elevator, the combination with a foot having a foot-way therein; of a foot-wheel in the foot; descending tubing leading down to the foot-way; ascending tubing leading up from the foot-way and provided with an inlet above said foot-way; a driving shaft; driving sprocket wheels on the driving shaft; reverse ratchet clutches to connect the driving shaft with the driving sprocket wheels respectively; drums on opposite sides of the driving shaft; sprocket wheels for the drums respectively; a sprocket chain connecting one of the driving sprocket wheels with the sprocket wheel of one of the drums; a sprocket chain connecting the other driving sprocket wheel with the sprocket wheel of the other drum; an endless pumping line led over the pulley, wound around the drum, led through the descending tubing and around the foot-wheel in the foot-way, and through the ascending tubing; means to raise and lower said pulley; and means to raise and lower the foot.

4. In an oil and water elevator, the combination with a foot having a foot-way therein; a foot-wheel in the foot; descending tubing leading down to the foot-way; ascending tubing leading up from the foot-way and provided with an inlet; two drums; a pulley; an endless pumping line wound around the drums led over the pulley and through the descending tubing, through the foot-way around the foot-wheel and through the ascending tubing; and means to drive one of the drums.

5. In an oil and water elevator, the combination with a foot having a foot-way therein; a foot-wheel in the foot; descending tubing leading down to the foot-way; ascending tubing leading up from the foot-way and provided with an inlet; two drums; a pulley; an endless pumping line wound around the drums led over the pulley and through the descending tubing, through the foot-way around the foot-wheel and through the ascending tubing, and means to drive the drums simultaneously.

[Claims 6 to 14 not printed in the Gazette.]

1,113,029. LIQUID-FUEL-GAS GENERATOR. ROBERT I. MCKISSACK, New Orleans, La. Filed Jan. 2, 1914. Serial No. 810,094. (Cl. 158—54.)



1. In a device of the character set forth, the combination of a base pan having an air opening therethrough, an air shaft surrounding said opening and secured in upright position to said base pan, means to vary the area of said opening to regulate the quantity of air therethrough, the walls of said air-shaft having notches along the upper edge, a fuel distributer comprising a plurality of horizontal troughs supported in said notches and having open ends extending beyond the air-shaft, a nozzle pipe lying in certain of said troughs above the air-shaft and adapted initially to deliver liquid fuel along said troughs, and means serving to convey fuel to said nozzle pipe.

2. In a device of the character set forth, the combination of a base pan having a plurality of air openings therethrough, adjustable means to vary the area of said openings, an air-shaft secured to said pan and extending upwardly therefrom around one of said air openings, a fuel distributer supported upon said air-shaft and having a plurality of open-topped and open-ended troughs serving to convey liquid fuel initially outwardly beyond said air-shaft for delivery upon the pan between the adjustable openings, a nozzle pipe supported in a horizontal position upon one trough of said distributer, and pipes serving to convey fuel to said nozzle pipe and along planes at higher levels than said nozzle pipe, substantially as set forth.

3. In a liquid fuel gas generator of the kind described, the combination of a base pan provided with adjustable air controlling means, comprising leaf members integral with the base pan, a generator above the pan including a primary vaporizing pipe and associated superheating pipes, means to deliver liquid fuel into said generator, said generator also including a nozzle pipe having a jet opening directed upwardly and so disposed as to properly coöperate with the air admitted through said controlling means, a deflector or flame spreader adjustably connected to the primary vaporizer pipe and against which the flame from the jet impinges, and means to support the generator above said pan.

4. In a liquid fuel gas generator of the kind described, the combination of a base pan provided with adjustable air controlling means, a generator above the pan, said generator including a primary vaporizing pipe and a superheating system of pipes, means to deliver liquid fuel into said generator pipes, said generator including also a nozzle pipe having an upwardly directed jet adapted to deliver generated gas, at a point where it is properly mixed with the air admitted through said controlling means for heating the generator pipes, an extension gas conducting pipe connected to and leading from said nozzle pipe and an auxiliary burner provided with means for re-superheating the gas from the generator at a point of applied heat removed from the generator, and which may be utilized for various purposes and at varying distances from the generator.

5. In a liquid fuel gas generator of the kind described, the combination of a base pan provided with adjustable air-controlling means, a generator above the pan, said generator including a primary vaporizing pipe and a superheating system of pipes, means to deliver liquid fuel into said generator pipes, said generator including also a nozzle pipe having an upwardly directed jet adapted to deliver generated gas at a point where it is properly mixed with the air admitted through said controlling means, for heating the generator pipes, and means for re-superheating the gas at a point removed from the generator.

1,113,030. CLOTHING-PATCH. WILLIAM WALLACE MCLAURIN, Brookfield, Mass. Filed Jan. 7, 1913. Serial No. 740,648. (Cl. 2—126.)

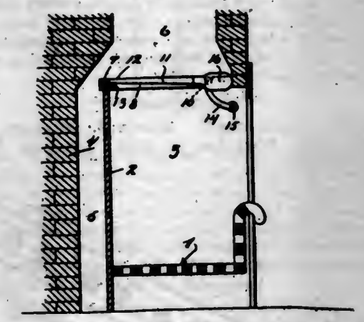
1. In an article of the class described, a piece of fabric intended for insertion in an opening in a garment a gummed backing for said piece of fabric, said backing having a greater area than the piece of fabric to expose a portion of the gummed surface, said exposed gummed surface being intended to adhere to a garment about an opening, and said backing being removable after the piece of fabric is stitched in the garment.

2. In an article of manufacture, a patch to be applied to an article to be repaired, a backing and support for said patch, said backing having greater dimensions than the patch, said backing having one face thereof gummed to retain said patch thereon temporarily, the gummed backing for said supporting member having the extended gummed face thereof adapted to be secured to an article to be repaired, the gummed face of said backing being applied by moistening, said patch being intended to be stitched to the article to be repaired, and said backing being intended to be removed after said patch has been secured by stitching.

1,113,031. SHOE-COUNTER. JOHN FRANCIS MCMAHON, Brooklyn, N. Y. Filed Jan. 17, 1914. Serial No. 812,772. (Cl. 36—68.)

A counter for shoes comprising a body of relatively inflexible material having a bottom portion, side portions and a tongue portion, the said side portions and tongue portion upstanding from the bottom portion and an attaching portion of relatively flexible material attached to the upstanding portions of the body and having a single thickness extending above the upper edges thereof.

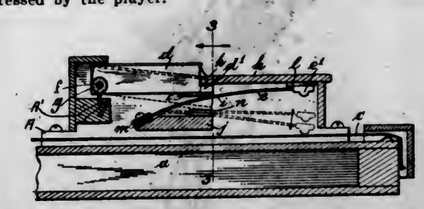
1,113,032. COAL-GRATE DAMPER. JAMES EDDIE MELTON, Senatobia, Miss. Filed Jan. 8, 1914. Serial No. 811,071. (Cl. 126—288.)



A damper comprising a frame, a plate having a relatively thick forward portion, said plate being journaled adjacent its thick portion within said frame, a downwardly projecting curved arm on said plate adjacent said thick portion; the metal in said thick portion of said plate and in said curved arm being so distributed as to produce equal weight on both sides of the pivotal axis of the plate, and said plate provided at its ends with portions cut-away to distribute the draft and permit of the passage of smoke and gas when the damper is closed.

1,113,033. ACTION FOR KEYED ZITHERS. FREDERICK MENZENHAUER, Jersey City, N. J. Filed July 5, 1913. Serial No. 777,393. (Cl. 84—116.)

1. In combination, a zither having a sound board and strings stretched over the same, an action frame attached to the said sound board, a series of spring hammers above the strings, means for attaching the rear ends of the springs to the said action frame, keys having their rear ends pivoted on the said action frame and each being pressed on at the under side of its free end by a corresponding spring hammer, and an alining board held on the top of the said action frame and engaged by all the keys and holding the same normally in the same plane against the pressure of the said spring hammers, the said alining board leaving the upper portions of the free ends of the keys wholly unobstructed to permit the keys to be pressed by the player.



2. In combination, a zither having a sound board and strings stretched over the same, an action frame attached to the said sound board, a series of spring hammers above the strings, means for attaching the rear ends of the springs to the said action frame, keys having their rear ends pivoted on the said action frame and each being pressed on at the under side of its free end by a corresponding spring hammer, and an alining board held on the top of the said action frame and engaged by all the keys and holding the same normally in the same plane against the pressure of the said spring hammers, the said alining board leaving the upper portions of the free ends of the keys wholly unobstructed to permit the key to be pressed by the player, the said alining board forming a stop for the free ends of the said spring hammers.

3. In combination, a zither having a sound board and strings stretched over the same, an action frame attached to the said sound board, a series of spring hammers above the strings, means for attaching the rear ends of the springs to the said action frame, keys having their rear ends pivoted on at the under side of its free end by a corresponding spring hammer, the free end of each key being provided at its bottom portion with a projection, and an alining board secured to the top of the said action frame and engaged by the projections of all the keys and holding the same normally in the same plane against the pressure of the said spring hammers, the said alining board being in a plane below the plane of the top of the keys to allow pressing of the keys by the player.

4. In combination, a zither having a sound board and strings stretched over the same, an action frame attached to the said sound board and provided with a cross bar having spaced stops, keys pivoted on the said action frame and adapted to rest on the said cross bar stops when pressed to their full extent, and spring hammers attached to the said cross bar and arranged above the said strings and below the said keys to be actuated by the latter, the said spring hammers bearing against the under side of the said keys, and each spring hammer being free to vibrate in the space between adjacent stops of the cross bar after the key is pressed down into contact with the cross bar.

5. In combination, a zither having a sound board and strings stretched over the same, an action frame attached to the said sound board and provided with a cross bar having spaced stops, keys pivoted on the said action frame and adapted to rest on the said cross bar stops when pressed to their full extent, spring hammers attached to the said cross bar and arranged above the said strings and below the said keys to be actuated by the latter, the said spring hammers bearing against the under side of the said keys, and each spring hammer being free to vibrate in the space between adjacent stops of the cross bar after the key is pressed down into contact with the cross bar, and an alining board attached to the said action frame and engaged by all the keys, the said board forming a stop to limit the upward movement of the keys.

[Claim 6 not printed in the Gazette.]

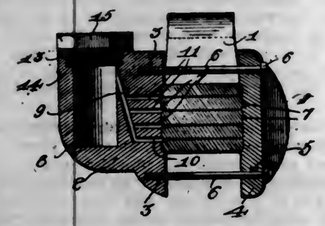
1,113,034. FOLDING MIRROR-FRAME. LAWRENCE A. MILLER, Carroll, Iowa. Filed Jan. 14, 1914. Serial No. 812,063. (Cl. 45—98.)

1. Supporting means for a mirror or like part, the same comprising two frames, one of such frames embodying spring side members, each of such members having a crimped segment, a reëntrant arm and an eye at the extremity of such arm and the other frame being pivotally supported in the eyes of the first mentioned frame and extending along the inner sides of the crimped members and engaging the crimps thereof to hold the two frames in the adjusted position.

2. In supporting means for a mirror or analogous part, a frame formed of a single wire and comprising a loop, offsets, crimped segments and reëntrant arms terminating in eyes concentric with the segments, said reëntrant arms converging toward the ends formed into the eyes, and a second frame of substantially triangular form pivotally supported in the eyes of the first mentioned frame and having its side members adapted to engage the crimps of the segments to hold the two frames in the required angular position.

3. In combination with a mirror or like part, clips having hooks at their outer ends for engaging opposite edges of the mirror and provided with offstanding ears and a frame comprising side members having their end portions bent laterally to provide journals which terminate in eyes, the latter engaging the ears of the clips and the journals engaging the said clips, said frame serving to hold the clips in position, and the frictional engagement of the parts acting to hold the mirror in the angular adjusted position.

1,113,035. SPRING-OILER. LEO S. MILLER, Denver, Colo. Filed Dec. 20, 1913. Serial No. 808,042. (Cl. 184—1.)



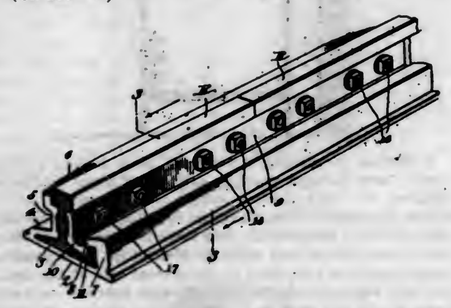
1. A leaf-spring oiler comprising a body, said body provided with a plurality of transverse grooves upon its inner face, a plate, said plate provided with a plurality of transverse grooves upon its inner face, said grooves adapted to receive the leaves of a spring, means for holding said plate and body in engagement with a spring, said body provided with a vertical reservoir, means for closing the open end of said reservoir, a passage leading from said reservoir and communicating with the inner face of the body whereby oil may be distributed from said reservoir to said inner face for efficiently lubricating a spring held in engagement therewith.

2. A leaf-spring oiler comprising a body, said body provided with a plurality of transverse grooves upon its inner face, means for holding said body in engagement with a leaf-spring, said grooves adapted to receive the several sections of a leaf-spring, said body provided with a vertical reservoir, said body also provided with a diagonal passage leading from the upper portion of said reservoir and terminating in an angular opening, said body also provided with short passages communicating with said diagonal passage, said short passages communicating at their outer ends with said transverse grooves whereby oil may be passed from said reservoir downwardly through said diagonal passage and through said short passages so as to communicate with said grooves for oiling the leaves of a spring carried therein, and means for closing the open end of said reservoir.

1,113,036. TIRE. HEZEKIAH E. MITCHELL, Coon Rapids, Iowa. Filed Feb. 27, 1914. Serial No. 821,477. (Cl. 152—18.)

The combination with a pneumatic tire outer case, provided with thickened marginal beads, of endless rings incorporated in said marginal beads, and an endless series of arched bands each terminally looped around said rings and extending throughout the cross sectional area of said outer case in which they are embedded throughout their length, the side edges of said arched bands being rounded and bearing against each other.

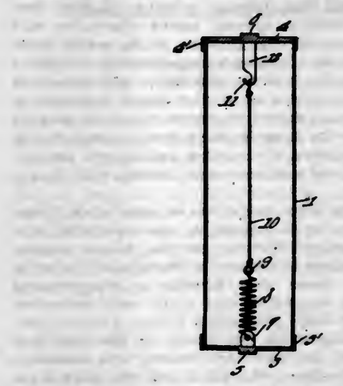
1,113,037. RAIL-JOINT. JOSEPH F. MONTINE, Nevinville, Iowa. Filed Jan. 28, 1914. Serial No. 813,963. (Cl. 239—6.)



1. In a rail joint, the combination with two rails having contiguous ends, of a joint chair including a base upon which the rails rest and having a side which embraces one of the faces of the rails, the base having its other side provided with a vertically projecting longitudinally extending wall, the upper edge of which being formed with an inturned flange and the lower face of the flange being inclined downwardly an angular brace, said brace being enlarged at the outer portion of its horizontal flange, the said upper face of the said enlargement being inclined, the brace member adapted to be inserted beneath the inturned flange of the chair and upon the rails, means for connecting the brace with the rails and with the rail engaging portion of the joint chair, and said means adapted to slide the brace member to bring its flanged portion into tight frictional engagement with the lower inclined face of the flange of the chair.

2. In a rail joint, the combination with two rails having meeting ends and the webs of the rails having openings, and said webs having recesses upon one of their faces which surround certain of the openings, of a joint chair including a base upon which the rails rest and having a side which is received within the fishing space at one side of the rails, the other side of the base being formed with a vertical wall, the upper edge of which having an angularly disposed inturned flange, bolts passing through openings in the first mentioned sides of the chair, nuts arranged within the recesses and engaging these bolts, an angular brace having its horizontal portion enlarged at its outer edge, the upper face of said enlargement being beveled, said brace adapted to be inserted over the webs of the rails beneath the flange of the vertical wall of the chair, the vertical member of the brace having openings which register with certain of the openings in the webs of the rails and with openings in the opposite side of the chair, bolts passing through the openings, and nuts for the bolts.

1,113,038. FUSE. GILES MOORE, Frankfort, Ind. Filed Oct. 11, 1913. Serial No. 794,645. (Cl. 175—278.)



A fuse, comprising a tubular case of insulation, two metal disks, one sealing each end of the case, a fixed apertured lug carried upon the inner side of one disk, a fixed hooked lug carried upon the inner side of the other disk, a coiled spring having one terminal connected to the apertured lug, and a fuse wire connected to the other terminal of the spring and having a loop fitting over the hooked lug, whereby the spring holds the wire taut.

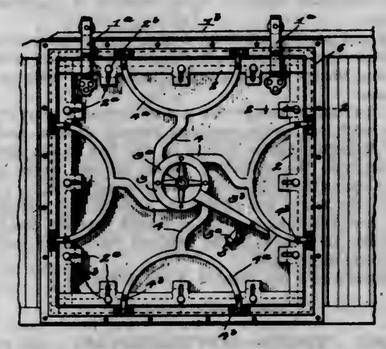
1,113,039. MECHANISM FOR TRANSMITTING MOTION. HENRY F. MOORE, Chicago, Ill., assignor, by mesne assignments, to W. S. Salter, Chicago, Ill. Filed May 5, 1913. Serial No. 765,594. (Cl. 74—14.)

1. In mechanism for transmitting motion to a horizontally movable grate member, the combination of said horizontal member, a crank shaft, means to rotate said crank shaft, a head, a connection between said crank shaft and said head, an additional head, a rigid hook on said first named head and a movable hook on said additional head, said movable hook adapted to co-act with said rigid hook, means to yieldingly hold said hooks out of engagement, a cam, a lever, said lever adapted to force said movable hook into engagement with said rigid hook when actuated by said cam, and a connection between said additional head and said horizontally movable grate member.

2. A horizontally movable member, a crank shaft, a head comprising separable parts, guides to said parts, means to join said parts together, and mechanism interposed between said crank shaft and said joining means to operate said joining means at determined intervals, in combination with a rock shaft, arms rigidly attached to said rock shaft to form a bell crank, a connection between said crank shaft and one of the parts of said head, a connection between the other part of said head and one of the arms forming said bell crank, and a connection between the other arm of said bell crank and the horizontally movable member of a grate.

3. A horizontally movable member, a crank shaft, a head comprising separable parts, guides to said parts, means to join said parts together, and mechanism interposed between said crank shaft and said joining means to operate said joining means at determined intervals, said interposed mechanism comprising a lever, a pawl on said lever, a ratchet wheel actuated by said pawl, a connection between said crank shaft and said lever, a cam wheel connected to said ratchet wheel to be operated thereby, an additional lever between said cam wheel and said joining means, said additional lever adapted to be actuated by said cam wheel and to operate said joining means, and a rock shaft, in combination with arms rigidly attached to said rock shaft to form a bell crank, a connection between said crank shaft and one of the parts of said head, a connection between the other part of said head and one of said arms to said bell crank, and a connection between the other arm to said bell crank and the horizontally movable member of a grate.

1,113,040. CAR-DOOR-SEALING DEVICE. RISDON DENT MOORE, Ardmore, Okla. Filed Nov. 9, 1912. Serial No. 730,375. (Cl. 16—63.)

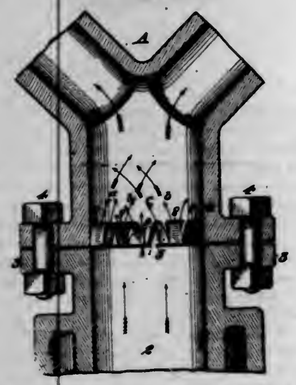


1. In combination with a car door, laterally movable plates attached to the door adjacent each edge thereof, a pivoted lever, links on the same side of the door as said movable plates connecting said lever with each of the

plates and having their outer ends extended beyond the said plates, said links being adapted to simultaneously project or retract the plates when the lever is rocked, and devices attached to the car adjacent the door opening adapted to be engaged by said projecting ends of the links, said ends and devices being so relatively formed as to press the plates closely against the door frame and door at the meeting edges thereof when the links are projected, substantially as described.

2. In combination with a freight car door, laterally movable plates attached to the door adjacent each edge thereof, a lever pivoted on the door, and links on the same side of the door as said movable plates connecting said lever with each plate to simultaneously project or retract the latter when the lever is rocked, said links having wedge-shaped ends extended beyond the plates; with devices attached to the door frame adjacent the door and opposite each lever end and adapted to be engaged by the wedge-shaped ends of the levers and press the plates closely against the door frame and door at the meeting edges thereof when the links are projected, substantially as described.

1,113,041. GASEOUS-FUEL MIXER. JOHN J. MURPHY, San Francisco, Cal. Filed May 12, 1914. Serial No. 838,057. (Cl. 48—180.)



1. In a vapor conduit, means for giving the vapor a rotary motion with a cylindrical body of the vapor rotating in one direction and an exterior cylindrical shell of vapor rotating in the opposite direction.

2. In a vapor conduit, means including a plurality of concentrically arranged deflecting members, for giving the vapor a swirling rifling motion with a cylindrical body of the vapor swirling in one direction, and a plurality of exterior cylindrical shells of vapor rotating in the opposite direction.

3. A gas mixer comprising a disk having a plurality of concentric circles of openings formed therein, and inclined deflecting blades formed on the disk at the ends of the openings.

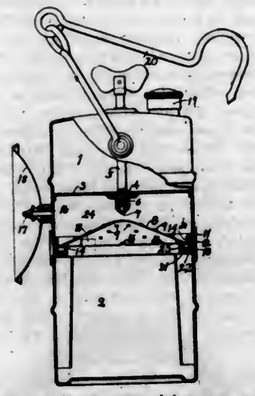
4. A gas mixer comprising a disk having a plurality of circles with concentric openings formed therein, and inclined deflecting blades formed on the disk at the ends of the openings, the deflecting blades in one circle being pitched opposite to those in the adjoining circle.

5. A gas mixer comprising a plurality of concentric rings, and deflecting blades interposed between the adjacent rings, the blades in the adjacent rings being inclined in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

1,113,042. MINER'S ACETYLENE-LAMP. YEIKICHI OHTSUKA, Tokyo, Japan. Filed Feb. 4, 1914. Serial No. 816,640. (Cl. 48—4.)

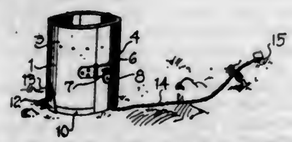
1. An acetylene lamp for mine use, comprising an upper water chamber, a lower gas-generating chamber, a connection for the chambers having a groove, means for discharging water from the water chamber to the gas generating chamber, said water passing into the groove to keep the connecting part constantly in a wet state and air tight, and means for effecting the discharge of the gas generated.



2. An acetylene lamp, comprising an upper shell having a bottom dividing wall forming a water chamber, said wall having a discharge opening, means coöperative with the opening to control the dropping of the water therethrough, a lower shell forming a gas-generating chamber, a removable connection between said shells, said connection having a flange producing an interior groove, a packing in said groove, means adapted to receive the water dropped and to discharge the same in the groove to maintain the packing in a wet state, the overflow passing into the generating chamber, and a burner communicating with the gas chamber.

3. An acetylene lamp, comprising an upper shell having a bottom dividing wall forming a water chamber, said wall having a central discharge opening, means coöperative with the opening to control the dropping of the water therethrough, a lower shell forming a gas-generating chamber, a ring connecting said shells, said connection having a notched flange producing a groove, a packing material in the bottom of the said groove, an apertured cone mounted beneath the discharge opening and extending over the flange whereby the water will flow toward the periphery of the shell and into the groove where it collects to continuously wet the packing material and form an air-tight connection between the shells, the water passing through the notches into the gas-generating chamber, said generating chamber being adapted to contain calcium carbid, which combines with the water to liberate acetylene gas, which escapes through the openings in the cone, and a burner carried by the upper shell and communicating with the gas space above the cone.

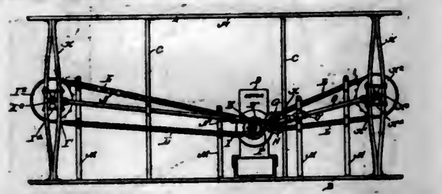
1,113,043. TRAP. ARTHUR ONDERDONK, Washington, D. C. Filed Apr. 2, 1914. Serial No. 829,121. (Cl. 43—24.)



1. A trap of the character described including a longitudinally divided body portion provided with impaling prongs, the sections of said body portion being hingedly connected together along one longitudinal edge, means for fastening said sections in closed relation to each other, one of said sections being provided with a bottom and the bottom including a hinged section, the other body section and said hinged bottom section being provided with means whereby they may be connected together with the hinged bottom section in closed position.

2. A trap of the character described, including a longitudinally divided body portion provided with impaling prongs, the sections of said body portion being hingedly connected together along one longitudinal edge, means for fastening said sections in closed relation to each other, one of said sections being provided with a bottom and the bottom including a hinged section, the other body section and said hinged bottom section being provided with means whereby they may be connected together with the hinged bottom section in closed position, the hinged section of the bottom being movable in a plane at right angles to the plane of movement of the body sections.

1,113,044. TRANSMISSION-GEAR FOR AEROPLANES. HARRY A. ORME, Wesley Heights, D. C. Filed July 15, 1911. Serial No. 638,699. (Cl. 244—25.)



In an aeroplane, the combination with the propeller shafts, of vertical supporting braces to which said shafts are connected, a power shaft having a gear thereon, a second shaft parallel therewith and provided also with a gear, said gears intermeshing, sprockets carried by the power and second shaft and also by the propeller shafts, sprocket chains passing around said sprockets, a link connecting the ends of the power and second shaft, an adjustable truss rod extending from the end of the second shaft to the support for a propeller shaft, and a second adjustable truss rod extending from the end of the second shaft to the opposite support for a propeller shaft, all of said parts being combined and arranged substantially as herein shown and described.

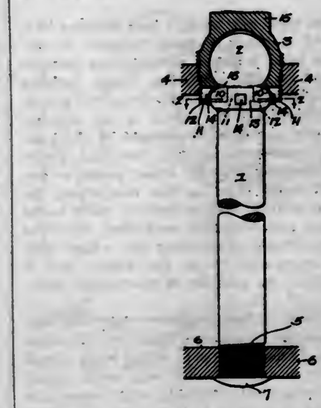
1,113,045. TENSION DEVICE FOR SHUTTLES. ALBERT FREDERICK PETITHORY, Phillipsburg, N. J. Filed Apr. 23, 1913. Serial No. 763,134. (Cl. 139—46.)

In a shuttle, the combination with a shuttle body, having a bobbin chamber and a recess in communication therewith through a restricted guide passage, a bobbin mounted in said bobbin chamber, and a secondary tension device arranged within the recess for action upon the thread passing from the bobbin through said guide passage, of a primary tension device arranged between the bobbin and guide passage, said tension device comprising a frame having side walls provided with slots inclined at an angle to the line of travel of the thread, and tension rollers revolubly mounted in said slots to engage the thread between them.

1,113,046. STAY-BOLT. HARVEY A. PIKE, South Orange, N. J. Filed June 17, 1914. Serial No. 845,669. (Cl. 85—1.5.)

1. In a stay bolt structure, the combination of a headed member, a socket plug receiving the head of said member, said plug having a concaved edge on its inner side with notches, a shoulder carried by the headed member adapted to the concaved edge, and lugs carried by said shoulder and disposed in the recesses formed by said notches.

2. In a stay bolt structure, the combination with a pair of boiler shells, of a headed member, a socket plug adapted to one of said walls and receiving said head, said plug projecting through the boiler wall; the inner edge of said plug being beveled or rounded and provided with notches, a rounded shoulder carried by the headed member and seating in open end of said plug, and lugs carried by said headed member and disposed in the recesses formed by said notches.



3. A stay bolt structure comprising a headed bolt, a socket plug receiving said head and adapted to be threaded into the shell of a boiler, said socket plug having its inner side concaved, and a rounded shoulder carried by the bolt and disposed in the concaved portion of said plug, said parts having coöperating projections and recesses.

4. A stay bolt structure comprising a headed bolt, a socket plug receiving said head and adapted to be threaded into the shell of a boiler, said socket plug carrying a concaved notched throat, a shoulder carried by the bolt, and lugs carried by said shoulder disposed in the recesses formed by said notches.

5. A stay bolt structure comprising a headed member, a socket plug adapted to be threaded into the shell of a boiler and receiving said head, said socket plug having its inner portion provided with a concaved throat with notched edges, a shoulder carried by the bolt, lugs carried by said shoulder and disposed in the recesses formed by said notches, and a spacing member carried by a second boiler shell and connected to said headed member.

[Claim 6 not printed in the Gazette.]

1,113,047. PLOW. ZENOS PORTER, Holliday, Utah. Filed June 10, 1913. Serial No. 772,809. (Cl. 97—27.)

1. In a device of the class described, a base member having terminal frogs, an upright rising from the base plate and intermediate the frogs and having an offset at its lower end, the upper end of said upright being threaded, a sleeve stepped on the offset, said sleeve being revoluble about the upright, a plow beam and handles associated with the sleeve, a cap member threaded on the upper end of the upright, and means for locking said cap member against rotation.

2. In a device of the class described, a base member having frogs, mold board members secured therein, an upright rising from the base, a sleeve revoluble about the upright and having a plow beam and handles, a pair of wings hingedly connected with the mold boards, a bracket extending rearwardly from the sleeve, and a jointed brace connecting the bracket with the wings.

3. In a device of the class described, a base member having frogs, mold board members mounted thereon, an upright rising from the base, a sleeve revoluble about the upright and having a forwardly extending beam, a cap member threaded upon the upright and having oppositely disposed slots, and a locking lever fulcrumed on the sleeve and having a locking member to engage a slot in the cap member.

4. In a device of the class described, a base member having frogs, mold board members secured thereon, an upright rising from the base, a sleeve revoluble on the upright and having a forwardly extending beam, handles connected with and extending rearwardly from the sleeve, a locking lever fulcrumed on the sleeve, a cap member fixed on the upright and having slots engaged by the locking lever, an arm extending rearwardly from the sleeve and having an upwardly extending cross piece, a cap member engaging the cross piece, a link connecting the cap member with the locking lever, a pair of mold board wings joined together and hingedly connected with the mold boards, a jointed brace connecting the wings with the arm extending rearwardly from the sleeve, and a pivot member connecting one member of the jointed brace with the cap member.

5. In a reversible plow, a base member, right and left hand mold board members supported thereon, extension wings for the mold board members, said wings being joined together and hingedly connected with said mold board members, a member supported revolubly with respect to the base member and including a forwardly extending beam and rearwardly extending handles, means for locking the revoluble member in adjusted position, a jointed brace connecting the revoluble member with the mold board wings, and means for securing said jointed brace in adjusted position.

1,113,048. RAIL CHAIR AND CLAMP. JOSEPH W. REESE, Salt Lake City, Utah. Filed Feb. 16, 1914. Serial No. 819,112. (Cl. 238—5.)

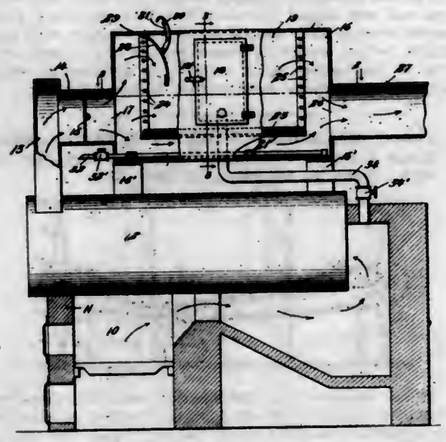
1. In combination with a metal tie of channel shape having portions of its bottom struck upward; of clamp engaging bolts secured in the side walls of said tie; curved clamp members bearing against said bolts and bent to engage the web portion of a rail and provided with a transverse channel near the foot of each; and a rail seat with the ends carried in said transverse channels.

2. In combination with a metal tie of channel shape having portions of its bottom struck upward; of clamp engaging bolts fastened through the side walls of said tie; opposed clamp members bent to engage the web portion of a rail placed therebetween and to bear against said bolts and with one end of each resting on the bottom of the tie and provided with a horizontal transverse recess therein; and a curved rail seat with the end portions carried in said recesses.

3. In combination with a metal tie of channel shape with upstanding side walls and bolts secured therein across said channel; of clamp members arranged in pairs and bent to engage the base flange and web portion of a rail placed therebetween; a foot portion on each clamp member adapted to bear against one of said bolts and on the bottom of said tie; a heel portion of each clamp bent to form a transverse seat channel; and a curved rail seat with the ends engaged in said transverse channels and supporting a rail.

1,113,049. INCINERATOR. SERAFIM PEREIRA REZENDEZ, New Bedford, Mass. Filed Feb. 26, 1914. Serial No. 821,194. (Cl. 110—8.)

1. The combination with the flue of a furnace of an incinerator comprising an inclosing casing having openings at its ends adapted to be connected to the flue, a grate above the bottom of said casing and between the openings in the ends thereof, a series of rods at each end of the grate and rising to the top of the incinerator, a steam admission pipe below the grate, a door in the side walls of said casing and above the grate, and adjustable means for deflecting onto the material to be incinerated the hot gases entering from said flue.



2. In an incinerator, the combination of a box having a heat inlet and an outlet and an opening to admit matter to be incinerated, a support for said matter located above the bottom of the box and between said inlet and outlet, means above the inlet for directing heat onto the support and the matter thereon which is to be incinerated, a steam pipe leading into said box, and means for shutting off the supply of heat entering said box through said inlet.

3. In an incinerator, the combination of a box having a heat inlet and an outlet, a pipe leading to the inlet and a pipe leading from said outlet, a support above the bottom of the box and below a line connecting the centers of the inlet and outlet, means above the inlet for directing heat onto the matter to be incinerated and means for shutting off the heat entering said box through said inlet.

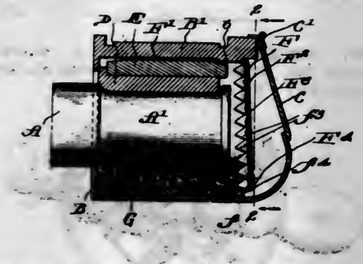
4. The combination with a furnace having a flue, of an incinerator set in said flue and comprising a box having an inlet and an outlet in its opposite end walls and a normally closed opening in its side wall, a supporting grate above the bottom of the box and below a line joining the centers of the inlet and outlet, an upwardly extending grating at each end of the supporting grate, means for directing heat onto the supporting grate, a steam pipe leading into said box, and means for shutting off the supply of heat entering said box through said inlet.

5. The combination with a box having an inlet and an outlet, of a grating extending horizontally across the box above the bottom and vertically at a distance from the ends of the box to the top of the latter, said grating forming an inclosure with the sides and top of the box, said inclosure having an entrance for the introduction of matter to be incinerated, and a device in the inclosure for deflecting on to said matter the hot gases entering the box through said inlet.

1,113,050. PACKING-GUARD FOR JOURNAL-BOXES. NATHANIEL J. ROGERS, Tuscaloosa, Ala. Filed Feb. 6, 1914. Serial No. 817,017. (Cl. 64—24.)

1. The combination with a journal box and a journal bearing mounted therein of a packing guard made of a piece of bent sheet metal, having its upper member mounted between said journal box and said bearing and held in place by the weight of the car, and having its outer member projecting down in front of the axle and below the lower edge of the same, with means for locking between said upper member to said journal box, substantially as described.

2. The combination with a journal box and a journal bearing mounted therein of a packing guard made of a piece of bent sheet metal, having its upper member mounted between said journal box and said bearing and held in place by the weight of the car, and having its outer member projecting down in front of the axle and below the lower edge of the same, the downwardly-depending member being provided with flanged edges projecting inwardly, with means for locking said upper member to said journal box, substantially as described.



3. The combination with a journal box and a journal bearing mounted therein of a packing guard made of a piece of bent sheet metal, having its upper member mounted between said journal box and said bearing and held in place by the weight of the car, and having its outer member projecting down in front of the axle and below the lower edge of the same, the downwardly-depending member being provided with flanged edges projecting inwardly, said inwardly-flanged edges being provided with teeth, with means for locking said upper member to said journal box, substantially as described.

4. The combination with a journal box having downwardly-projecting lugs on the lower side of its top, and a journal bearing mounted therein, of a packing guard made of a piece of bent sheet metal, having its upper member provided with recesses engaging said lugs, said upper member being mounted between said journal box and said bearing and held in place by the weight of the car, and having its outer member projecting down in front of the axle and below the lower edge of the same, substantially as described.

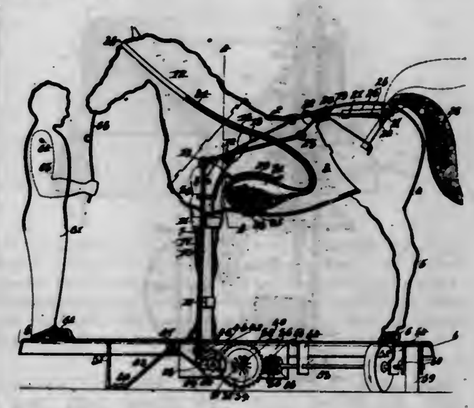
5. The combination with a journal box having downwardly-projecting lugs on the lower side of its top, and a journal bearing mounted therein, of a packing guard made of a piece of bent sheet metal, having its upper member provided with recesses engaging said lugs, said upper member being mounted between said journal box and said bearing and held in place by the weight of the car, and having its outer member projecting down in front of the axle and below the lower edge of the same, the downwardly depending member being provided with flanged edges projecting inwardly, substantially as described.

[Claim 6 not printed in the Gazette.]

1,113,051. TOY. DOMENICO RONCONI, Chicago, Ill. Filed Oct. 18, 1913. Serial No. 795,960. (Cl. 46—45.)

1. In a toy, a base, an "animal" figure mounted on the base and including rigid fore-legs, hind legs and a body pivoted to said fore-legs, a tail pivoted to the body, and means for first elevating the tail and then upon further movement move the body on its pivot to raise the rump of the "animal", the restoration of the aforesaid parts to their normal position being effected by gravity, and a clock works motor mechanism including traction wheels for moving the base and operating said elevating means.

2. In a toy, a base, an "animal" figure mounted on the base and including rigid fore-legs, hind legs and a body pivoted to said fore-legs, a tail pivoted to the body, an intermittently operating means for first elevating the tail and then upon further movement move the body on its pivot to raise the rump of the "animal", the restoration of the aforesaid parts to their normal position being effected by gravity.



3. In a toy, a base, an "animal" figure mounted on the base and including rigid fore-legs, hind legs and a body pivoted to said fore-legs, a tail pivoted to the body, and means for first elevating the tail and then upon further movement move the body on its pivot to raise the rump of the "animal", the restoration of the aforesaid parts to their normal position being effected by gravity, a pivot on which said base is mounted, and means for turning said base on its pivot during the movements of the "animal".

4. In a toy, a base, an "animal" figure mounted on the base and including rigid fore-legs, hind legs and a body pivoted to said fore-legs, a tail pivoted to the body, and intermittently operating means for first elevating the tail and then upon further movement move the body on its pivot to raise the rump of the "animal", a pivot on which said base is mounted, and means for turning said base on its pivot during the movements of the "animal".

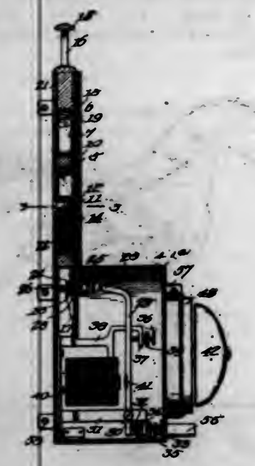
5. In a toy, a base, an "animal" figure mounted on the base and including rigid fore-legs, hind legs and a body pivoted to said fore-legs, a tail pivoted to the body, and means for first elevating the tail and then upon further movement move the body on its pivot to raise the rump of the "animal," the restoration of the aforesaid parts to their normal position being effected by gravity, a human figure form mounted on said base and including arms hinged to the body of the form to operate in unison, a connection between one of said arms and the animal figure, and a whip grasped by the hand of the other arm for engaging the "animal" body when said body is raised.

[Claims 6 to 22 not printed in the Gazette.]

1,113,052. SAFEGUARD LIFE AND TELEPHONE ATTACHMENT. ISRAEL E. ROSENTHAL, Argenta, Ark. Filed Feb. 27, 1913. Serial No. 751,005. (Cl. 179—5.)

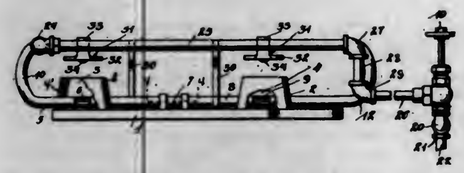
A device for engaging the hook of a telephone transmitter to move the same to sound an alarm, comprising a casing adapted to be arranged beneath the hook and having a vertical guideway opening below the hook, a slide movable in the guideway and adapted to engage the hook at its upper end, a trip for holding the slide in lowered position, a spring acting normally to move the slide upward into engagement with the hook, a spring normally holding the trip in engagement with the slide, a striker within the casing, said striker being pivoted at one end and being mounted to swing toward and from the trip and having at its upper end an angular arm for engaging the trip to trip the same when the striker is swung toward the trip, a magnet for moving the striker toward the trip, an open

electrical circuit in which the magnet is interposed, said circuit being adapted to be closed to energize the magnet,



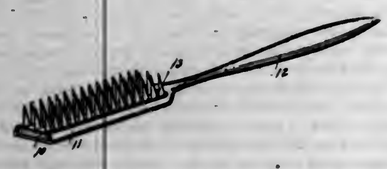
and a spring acting normally to move the striker away from the trip.

1,113,053. OIL-BURNER. GEORGE A. ROY, Gulfport, Miss. Filed Mar. 19, 1913. Serial No. 755,486. (Cl. 158—63.)



An oil burner comprising a base, mixing chambers mounted thereupon, burner pipes passing through said chambers, jets formed in said pipes and located in the chambers, the outer ends of said pipes terminating in horizontally disposed generating loops, said loops being arranged above the mixing chambers, having their body portions spanning the burner pipes and mixing chambers, valves, oil feeding pipes leading from the valves to the generating loops, means for feeding oil through the valves and pipes to the generating loops, and spreaders removably engaged upon the loops and above the jets, as and for the purpose set forth.

1,113,054. SOLUBLE BRUSH. FRANCIS W. SADLER, Norristown, Pa. Filed Oct. 17, 1911. Serial No. 655,128. (Cl. 15—39.)

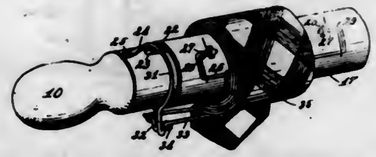


1. A tooth brush having an acting surface composed of pointed protuberances of a material soluble and disintegrable under the influence of moisture and the rubbing action of said protuberances against the teeth, the said protuberances being impregnated with an antiseptic cleansing agent.

2. A tooth brush having an acting surface composed of pointed protuberances of a material soluble and disintegrable under the influence of moisture and a rubbing action of said protuberances against the teeth, the said protuberances being molded from a material of the character described impregnated with an antiseptic, a cleansing agent, and an adhesive.

3. A tooth brush having an acting surface composed of pointed protuberances molded from paper pulp, an antiseptic, a cleansing powder, and an adhesive, said protuberances being soluble and disintegrable under the influence of moisture and the rubbing action of said protuberances against the teeth, whereby in the cleansing action disintegrated particles of the protuberances carrying the antiseptic agent will be left in the interstices between the teeth.

1,113,055. NECKTIE-ROLL. JOHN P. SAUERWALD, Baltimore, Md. Filed Jan. 5, 1914. Serial No. 810,491. (Cl. 223—19.)



1. A stretching and pressing device for neckties and the like comprising a handle, a cylinder rotatable upon the handle, means for rotating the cylinder, a locking device on the handle engaging the cylinder to hold the same from rotation, a clip carried upon the cylinder for engagement with one end of a necktie, said locking device being adapted to be released whereby said cylinder rotates to wind the necktie thereon, and a second clip carried on the handle for engagement with the outer end of the tie when wound.

2. A stretching and pressing device for neckties and the like comprising a handle having an extension, a cylinder rotatably mounted upon the extension, a spring having one end fixed to said extension and its opposite end secured to turn with the cylinder and adapted to be wound upon the rotation of the cylinder in one direction, a pawl on the handle engaging the cylinder to hold the same from turning when the spring is wound, a clip on the cylinder for engagement with one end of a necktie to hold it flat upon the cylinder, said pawl being adapted to be released from the cylinder whereby the latter is free to rotate and wind the necktie thereabout, and a second clip for engagement with the outer end of the necktie to hold the same flat and in wound position upon the cylinder.

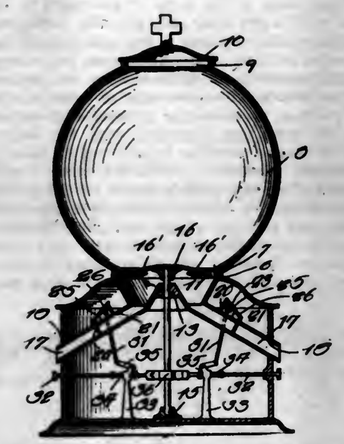
3. In a stretching and pressing device as specified, a handle, a cylinder on the handle, a clip on the cylinder for engagement with one end of an article to be pressed, means for rotating the cylinder, locking means for the cylinder to hold the same normally from rotation and adapted to be released to admit the turning of the cylinder whereby to wind the article thereabout, and a second clip mounted for adjustment around the handle adapted to engage the free end of the article to hold the same in wound position upon the cylinder.

4. A stretching and pressing device of the character described comprising a handle having a hollow barrel at one end, a spindle mounted for rotation in the barrel, a spring encircling the spindle and having one end connected to the barrel and its opposite end connected to the spindle, a cap on the outer end of the spindle for closing said barrel, a cylinder mounted on said cap and extending inwardly about the barrel, means for retaining the cylinder and spindle in their respective positions, a ratchet ring carried upon the cylinder, a finger operated pawl mounted upon the handle and normally engaging said ratchet ring whereby to hold the cylinder from rotation, a clip secured against one side of the cylinder, and a second clip carried by the handle and adjustable thereabout for engagement with the free end of an article wound upon the cylinder.

5. In a device of the character described, a cylinder, a support for the cylinder, a clip on the cylinder for engagement with one end of an article, a spring secured at one end to the support and at its opposite end to turn with the cylinder for normally urging the cylinder for rotation in one direction whereby to wind the article on the cylinder, and a second clip on the support adapted for engagement with the outer end of the article to hold the same upon the cylinder when wound.

[Claims 6 and 7 not printed in the Gazette.]

1,113,056. SUGAR-BOWL. JOHN L. SCHICK and ROY L. JACKSON, Washington, D. C. Filed Sept. 19, 1913. Serial No. 790,711. (Cl. 211—8.)



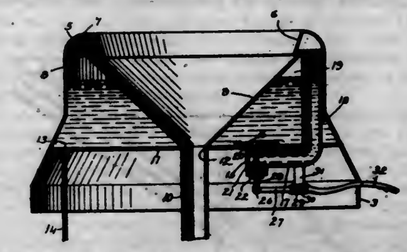
1. To a dispensing apparatus comprising a container, a discharge chute communicating with the container, a stop for the discharge chute, said stop being movable into and out of operative position, a second stop being located between the first stop and the container, means for moving the second stop into operative position when the first stop is moved out of operative position, said second stop being yieldably connected with the moving means, for movement of the first stop out of operative position without movement of the second stop.

2. A dispensing apparatus comprising a container, a discharge tube communicating with the container, a stop for the discharge tube movable into and out of operative position, a second stop for the discharge tube located between the first stop and the container, said second stop being movable toward and away from a wall of the tube and connections between the two stops for movement of the second stop away from the tube wall when the first stop is moved into operative position, said first stop being movable into inoperative position independently of the second stop.

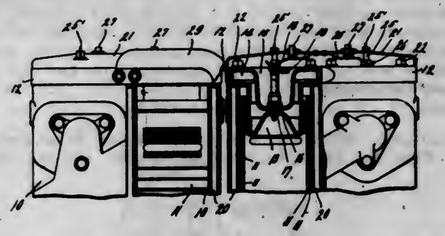
3. A dispensing apparatus comprising a container, a discharge chute communicating with the container, a stop for the discharge chute movable into and out of operative position, a second stop for the discharge chute located between the first stop and the container, and connections between the two stops for movement of the second stop into inoperative position when the first stop is moved into operative position, said first stop being movable into inoperative position independently of the second stop, and means for holding the second stop yieldably in operative position.

1,113,057. CUSPIDOR. HARRY F. SCHUMANN, Los Gatos, Cal. Filed Apr. 11, 1914. Serial No. 831,149. (Cl. 4—40.)

A device of the character described comprising a cylindrical outer casing, an inturned portion at the upper edge of the casing, a downwardly and inwardly extending flange formed at the free edge of the inturned portion, a flange within the cylindrical body portion and projecting inwardly, a funnel-shaped member formed at the free edge of the flange, the reduced end of the funnel-shaped member terminating in a drain pipe, a bottom within the cylindrical casing, the bottom, cylindrical casing, and funnel shaped member forming a chamber, an inlet pipe, an outlet pipe connected to the bottom and communicating with the chamber, and means to control the flow of liquid through the cuspidor.



1,113,058. ENGINE. LOUIS SCHWITZER, Indianapolis, Ind. Filed June 3, 1912. Serial No. 701,229. (Cl. 123—193.)



1. The combination, with an internal combustion engine having a cylinder head provided with a pocket in its upper surface, of a spark plug arranged in the bottom of said pocket, a cover detachably secured to cover said pocket and spark plug, a grounded spark-plug-engaging member carried by said cover and normally out of engagement with the spark plug, and an operating member engaging said spark-plug-engaging member and manually engageable from the exterior of the cover.

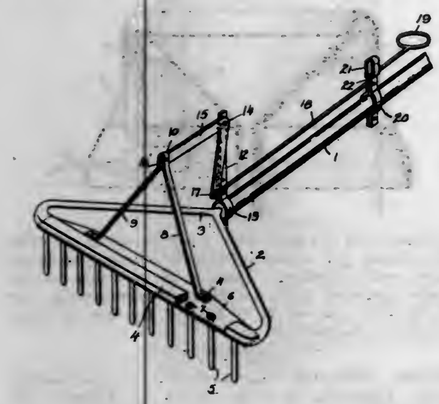
2. The combination, with an internal combustion engine having a cylinder head provided with a pocket in its upper surface, of a spark plug arranged in the bottom of said pocket, a cover detachably secured to cover said pocket and spark plug, a grounded spark-plug-engaging member normally out of engagement with the spark plug, and an operating member engaging said spark-plug-engaging member and manually engageable from the exterior of the cover.

1,113,059. RAKE-CLEANER. GILL A. SEBELIUS, Overly, N. D. Filed Feb. 11, 1914. Serial No. 818,096. (Cl. 55—146.)

1. A rake cleaner comprising a stripping bar, a pair of upwardly converging arms secured upon said stripping bar and formed integral at their upper terminals, a bell crank operatively connected with said rake and the upper terminals of said arms, an operating rod operatively connected with said bell crank, a bracket mounted upon said rake and slidably receiving said rod and a stop shoulder formed on said rod arranged to coöperate with said bracket to hold said stripping bar in inoperative position.

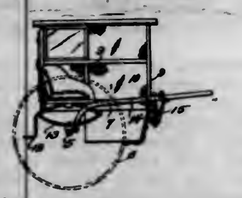
2. The combination with a rake comprising a handle having a head carrying teeth thereon of a stripping bar slidably mounted upon said teeth, a pair of upwardly converging arms secured upon said gripping bar and formed

integral at their upper terminals, a standard secured upon and extending at right angles to said handle, a bell crank pivoted on said standard and having one terminal pivotally connected with the upper terminals of said arms, a bracket mounted upon said handle, an operating rod slidable through said bracket and pivotally connected at one



terminal with said bell crank, said rod being offset intermediate its ends to provide a stop shoulder arranged to coöperate with said bracket to hold the stripping bar in inoperative position, and a hand grip formed on the free end of said rod and disposed adjacent to the free end of said rake handle.

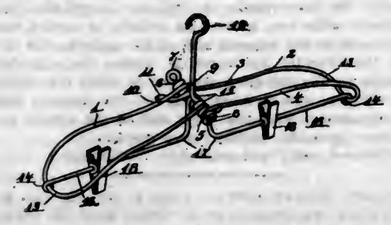
1,113,060. VEHICLE. CHARLES J. SHIMON, Solon, Iowa. Filed Mar. 14, 1914. Serial No. 824,629. (Cl. 21—56.)



1. A cart of the character described comprising the axle, wheels, shafts and body portion in combination with depending stirrups secured to the under side of said shafts and slightly in advance of the body portion, centrally arranged bolts passing through the shafts and through the bottom of said stirrups, tubular members through which said bolts pass, said tubular members extending and bearing between the stirrups and the under side of the shafts, a member affixed to the body portion and encircling and sliding upon said tubular member and springs bearing between said members and the under side of the shafts, and additional springs bearing between said members and said stirrups.

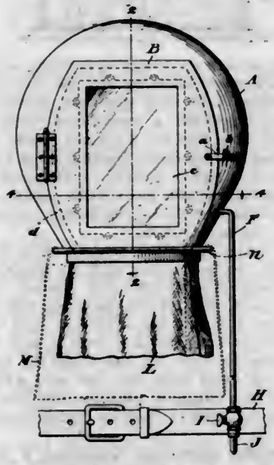
2. In a device of the character described the combination with a pair of stub shafts, of a cross-bar connecting said shafts, a pair of keepers secured to the other faces of said stub shafts in alinement with said cross-bar, said keepers being U shaped in cross section and having their free edges disposed outwardly and having alining openings formed vertically therein, a tongue, a cross bar carried by said tongue, a pair of braces engaging said tongue and said cross bar, said braces having terminal rear ends which project rearwardly beyond said cross bar and which are bent outwardly to form eyelets, said extensions being adapted to slidably enter said keepers and to have their eyelets vertically alined with the openings in said keepers substantially as set forth.

1,113,061. GARMENT-HANGER. EDWARD J. SNELL, Corning, N. Y. Filed Jan. 10, 1913. Serial No. 741,273. (Cl. 211—13.)



A garment hanger comprising a pivot member, a pair for folding arms in the form of substantially U-shaped loops of wire having their ends pivotally connected to the said pivot member adjacent to the ends thereof, the outermost curved portions of said arms being bent downwardly, a supporting hook attached medially to the pivot member, means for limiting the movement of said arms into extended position, a reinforcing guide member for each arm having its outer end connected with the outer curved portion of the arm medially thereof and its inner end portion inclined upwardly toward the pivot member, the inner ends of the said guide members being connected with the pivot member on opposite sides of the supporting hook, the outer end portions of the said guide members being arranged in substantial alinement with each other when the arms are extended, and an attaching device slidably mounted upon the outer portion of each guide member.

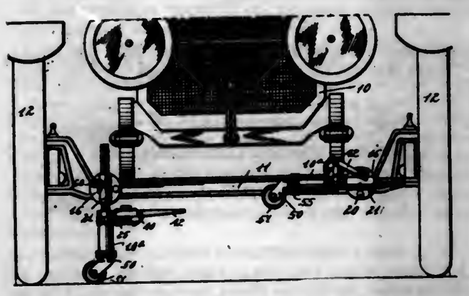
1,113,062. VENTILATED HELMET. GEORGE B. SPARKS, Woodbury, N. J. Filed Dec. 27, 1912. Serial No. 738,947. (Cl. 128—42.)



A helmet constructed to envelop the head and provided at its lower end with an opening and having a laterally extending flange surrounding such opening, a cape attached to the inner side of the helmet in line with the opening and adapted to encircle the neck of the wearer and a second cape secured to the lower portion of the helmet by means of the exterior flange thereof and adapted to envelop the shoulders of the wearer.

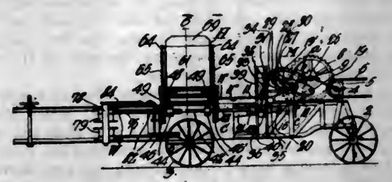
1,113,063. AUTOMOBILE-JACK. FRANKLIN A. SPENCER, Des Moines, Iowa. Filed July 15, 1912. Serial No. 709,833. (Cl. 57—15.)

In a device of the class described, the combination of a vehicle axle, a plate provided with a pivot and a number of openings concentric with said pivot, means for securing said plate to said axle, a second plate mounted upon the pivot of the first mentioned plate, means for adjustably securing a jack to said second plate, and a screw threaded



pin in said second plate to coact with the openings in the first plate to lock a jack in any one of a number of positions relative to the axle.

1,113,064. BALING-PRESS. JOSEPH F. STALLSMITH, Rosedale, Kans. Filed Aug. 19, 1912. Serial No. 715,932. Renewed May 7, 1914. Serial No. 837,074. (Cl. 100—25.)



1. A baling press, having a baling chamber, a power mechanism at the forward end, a plunger operably connected to the power mechanism, a hopper for the baling chamber open at one side of the press, the walls and top of said hopper being spring cushioned to yield outwardly, a self feed mechanism movable into and out of the hopper from a horizontal plane, and means for operably connecting said self feed mechanism to the power mechanism.

2. A baling press, having a baling chamber, a power mechanism, a plunger operably connected to the power mechanism, a hopper for the baling chamber open at one side of the press, the walls and top of said hopper being spring cushioned to yield outwardly, two arms pivotally connected to one side of the baling chamber and disposed to describe substantially a semi-circle in its movement from receiving to baling chamber feeding position, a feeding plate carried by the outer end of said arms, and means for operably connecting said arms to the power mechanism.

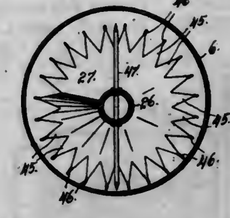
3. A baling press, having a baling chamber, a power mechanism, a plunger operably connected to the power mechanism, a hopper for the baling chamber open at one side of the press, the walls and top of said hopper being spring cushioned to yield outwardly, two arms pivotally connected to one side of the baling chamber and disposed to describe substantially a semi-circle in its movement from receiving to baling chamber feeding position, a feeding plate carried by the outer ends of said arms, an auxiliary plate mounted at the same side of the baling chamber as the arms, and disposed for coöperation therewith to seal the hopper during the feeding operation, and means for operating said arms operably connected to the arms and the power mechanism.

4. A baling press, having a baling chamber, a power mechanism, a plunger operably connected to the power mechanism, a hopper for the baling chamber open at one side of the press, the walls and top of said hopper being spring cushioned to yield outwardly, two arms pivotally connected to one side of the baling chamber and disposed to describe substantially a semi-circle in its movement from receiving to baling chamber feeding position, a feeding plate carried by the outer ends of said arms, an auxiliary plate mounted at the same side of the baling chamber as the arms, and disposed for coöperation therewith to seal the hopper during the feeding operation, two links one to each arm, two gear wheels at one side of the baling chamber and operably connected to the other ends of the respective links, and means for operating said gears in unison to cause said arms to describe a semi-circle from receiving to feeding position.

5. A baling press, having a baling chamber, a power mechanism, a plunger operably connected to the power mechanism, a hopper for the baling chamber open at one side of the press, the walls and top of said hopper being spring cushioned to yield outwardly, two arms pivotally connected to one side of the baling chamber and disposed to describe substantially a semi-circle in its movement from receiving to baling chamber feeding position, a feeding plate carried by the outer ends of said arms, an auxiliary plate mounted at the same side of the baling chamber as the arms, and disposed for coöperation therewith to seal the hopper during the feeding operation, two links one to each arm, two gear wheels journaled to one side of the baling chamber and operably connected to the other ends of the respective links, a shaft journaled upon the outside of the baling chamber and extended toward the power mechanism, gears mounted upon said shaft and in mesh with said first mentioned gears, and means for operating said last shaft to impart to the feeding arms a movement into and out of the hopper.

[Claims 6 to 13 not printed in the Gazette.]

1,113,065. AMALGAMATOR. FRED STRINGHAM, Denver, Colo. Filed June 27, 1913. Serial No. 776,092. (Cl. 83—67.)



1. An amalgamator comprising a pipe inclined to the horizontal, a feed screw journaled in the pipe, the thread of the screw being toothed at its outer edge and the outer extremities of the teeth being rounded to destroy the conveying function at the extreme outer edge of the screw thread, means for feeding the material to be treated, into the lower extremity of the pipe to maintain a pressure head therein, the upper extremity of the pipe being closed to cut off the escape of material except at the upper side, and means for rotating the feed screw, substantially as described.

2. A construction of the class described, comprising a pipe inclined to the horizontal, a feed screw journaled in the pipe and eccentrically arranged to leave a space above the thread of the screw, the entire length of the pipe, the thread of the screw being toothed at its outer edge to destroy the conveying function, means for feeding material to be treated into the lower extremity of the pipe, the upper extremity of the pipe being open on its upper side for the escape of the tailings, the lower portion of the upper end of the pipe being closed, and means for rotating the feed screw, a quantity of mercury being maintained in the lower part of the pipe, substantially as described.

3. The combination of a pipe inclined to the horizontal and having a feed opening at the upper side of its lower end and an amalgam discharge opening at the lower side of its lower end, a pipe communicating with the feed

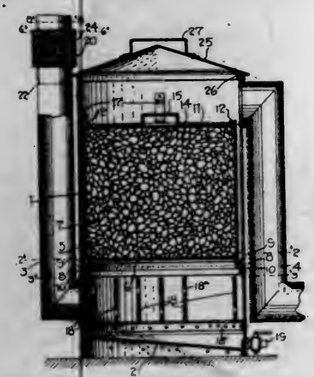
opening and a second pipe connecting with the amalgam discharge, a feed screw journaled in the inclined pipe and comprising a shaft and a plate spirally arranged thereon and having a toothed outer edge, the lower portion of the shaft for a short distance being devoid of the screw thread, means applied to the lower extremity of the feed screw to throw its axis out of parallelism with the axis of the pipe, and the inclined pipe having a discharge opening at the upper portion of its upper end.

4. The combination of an inclined pipe, a feed screw extending lengthwise thereof, and journaled therein, the pipe being equipped with means for feeding the material to be treated into the lower extremity of the pipe which contains a body of liquid mercury, the upper extremity of the pipe having a tailings discharge opening at its upper side, the outer edge of the thread of the feed screw being toothed and the outer extremities of the teeth being rounded to destroy their conveyer tendency, the shaft of the feed screw being equipped at suitable intervals with transversely arranged pins.

5. An amalgamator comprising a pipe inclined to the horizontal, its lower end being closed and its upper and lower sides of its lower extremity being respectively provided with inlet and outlet openings, a conduit connected with the upper opening for feeding the material to be treated, a second conduit connected with the lower opening to receive the amalgam, a shaft journaled in the inclined pipe and equipped with a spirally arranged plate forming a screw thread which is toothed at its outer edge, the thread being interrupted for a short distance at the lower end of the shaft, the feed screw being eccentrically arranged in the pipe to leave a space above the thread the entire length of the pipe, leaving an overflow opening for the discharge of the tailings.

[Claims 6 to 8 not printed in the Gazette.]

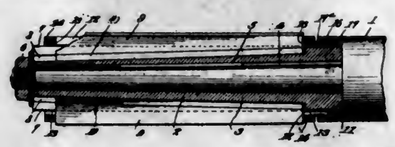
1,113,066. FILTERING DEVICE. MICHAEL G. SWARTWOOD, Manchester, and VERNON SWARTWOOD, Clay Center, Kans. Filed Dec. 29, 1913. Serial No. 809,360. (Cl. 210—4.)



1. In a filtering device, a main casing provided with inlet and outlet pipes, an annular inwardly inclined flange fixed to the inner wall of said casing adjacent the bottom thereof, an inner filtering casing provided upon its lower edge with an outwardly inclined downwardly-extending flange, a packing ring arranged between said first-named flange and the wall of the main casing upon which the flange of the filtering casing is adapted to seat, and means secured to the inner wall of said main casing adjacent its upper end to coöperate with said filtering casing and removably retain the same in position upon said packing ring.

2. In a filtering device, a main casing having inlet and outlet pipes, an inner filtering casing, supporting means for said inner casing secured to the inner wall of said outer casing, a plurality of leaf springs secured to the inner wall of said outer casing adjacent the upper end thereof and adapted to coöperate at their free ends with the upper edge of said inner casing to retain the latter in place within said outer casing.

1,113,067. REAMER. HARRY T. TAYLOR, Petal, Miss. Filed Mar. 23, 1914. Serial No. 826,646. (Cl. 77—75.5.)



1. A reamer head including a member, longitudinal cutter blades having their inner edges slidably engaging the said member, wedge bars fitting between the cutter blades, and means embracing the ends of the wedge bars for binding the cutter blades in position.

2. A reamer head embodying a member, longitudinal cutter blades having their inner edges slidably engaging the said member, wedge bars fitting between the blades and having their ends projecting beyond the ends of the blades, and binding nuts threaded upon the ends of the said bars.

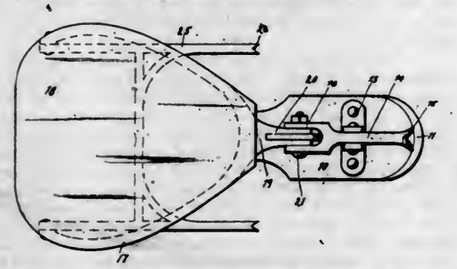
3. A reamer head embodying a member having longitudinal slots provided with inclined portions, cutter blades having their inner edges engaging the said slots and having inclined portions engaging the said inclined portions of the slots, wedge bars fitting between the free portions of the blades, and means embracing the ends of the said bars for binding the blades in place.

4. A reamer head embodying a member having longitudinal slots provided with inclined portions, cutter blades having their inner edges engaging the said slots and having inclined portions engaging the said inclined portions of the slots, wedge bars fitting between the free portions of the blades, the ends of the bars projecting beyond the ends of the blades, and binding nuts threaded upon the ends of the bars.

5. A reamer head including a member, longitudinal cutter blades having their inner edges slidably engaging the said member, wedge bars fitting between the cutter blades, means embracing the ends of the wedge bars for binding the cutter blades in position, and an adjusting nut threaded upon the said member, certain ends of the wedge bars and the adjusting nut having interengaging means.

[Claims 6 to 8 not printed in the Gazette.]

1,113,068. SHINGLER'S CHAIR. GEORGE A. THOMAS and CONRAD HEBERER, Valeria, Iowa, assignors of one-third to Athelbert H. Heberer, Mingo, Iowa. Filed Aug. 20, 1913. Serial No. 785,679. (Cl. 20—86.)



1. In a device of the class described, a plate having one edge designed to be inserted under a shingle or the like, an arm pivoted between its ends, and having a sharp downward extension at one end, spaced above the plate near the edge above mentioned, a seat supporting bracket pivoted to the other end of said arm, a cam pivoted to said arm and to said bracket, said cam being provided with a concave portion, said bracket being arranged with a portion extending into said concave portion and of such size as to permit considerable movement of said portion within the concave portion and to engage said cam above or below said concave portion when said bracket is moved to the respective limits of its movement within the concave portion, for thereby moving said cam.

2. In a device of the class described, a plate having one edge designed to be placed beneath a shingle or the like, a bar pivoted between its ends above said plate, and having on one end a downward extension designed to extend above said plate near the edge above described, a bracket, a cam, means for pivoting said bracket and cam to the other end of said bar, said cam being provided with a concave portion, said bracket having a portion received within said concave portion and capable of limited movement therein, and designed to engage said cam at each extreme of said movement.

1,113,069. ATOMIZER. SAMPSON TRASK, San Francisco, Cal. Filed Apr. 16, 1913. Serial No. 761,607. (Cl. 128—2.)

1. In an atomizer, a tube, a bulb carried on one end of said tube, and a conical atomizer head on the other end of said tube, said head having a plurality of relatively short capillary tubes for the retention of a liquid.

2. An atomizer comprising a receptacle and a removable atomizer closely fitting in the open end of said receptacle, said atomizer comprising a tube having a bulb on one end thereof forming a stopper for the receptacle, and an atomizer head on the other end of said tube, said head having a plurality of relatively short capillary passage ways therein.

1,113,070. SMOKE-CONSUMER. WILLIAM S. TUCKER, Myrtlewood, Ala. Filed Dec. 3, 1913. Serial No. 804,471. (Cl. 110—86.)

1. A smoke consuming appliance comprising a shell or casing embodying a gas chamber at one end a combustion chamber and a smoke space above the combustion chamber and in communication therewith at one end and a tube connected with the opposite end of the smoke space and extending through the combustion chamber over the fire and connecting with the gas chamber.

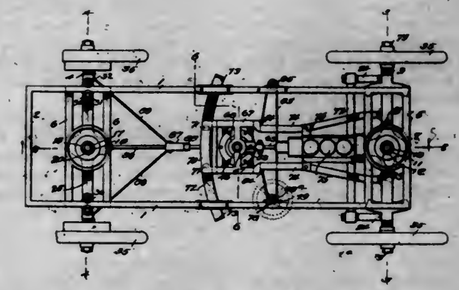
2. A smoke consuming appliance comprising a shell or casing, a gas chamber at one end and a combustion chamber and smoke space at the opposite end, the smoke space being arranged above the combustion chamber and in communication therewith near the gas chamber and a tapered tube extending through the combustion chamber over the fire therein and connecting at its larger end with the opposite end portions of the smoke space and at its smaller end with the gas chamber.

3. A smoke consuming appliance comprising a shell or casing embodying a gas chamber at one end having a burner outlet and a combustion chamber and smoke space at the opposite end, said smoke space being located above the combustion chamber and having communication therewith near the gas chamber, a cut-off for regulating the communication between the combustion chamber and smoke space and a tapered tube extending through the combustion chamber over the fire therein and connecting at its smaller end with the gas chamber and at its larger end with the before mentioned smoked space at the end remote from the gas chamber.

4. A smoke consuming appliance comprising a shell or casing having a gas chamber at one end providing a burner outlet and a damper controlled outlet for unconsumed particles and a smoke space and combustion chamber at its opposite end said smoke space being located above the combustion chamber and in communication therewith near the gas chamber, a cut-off for regulating the opening between the combustion and smoke space and a tapered tube extending through the combustion chamber and connected at its smaller end with the gas chamber and at its larger end with the smoke space at the end remote from the gas chamber.

5. In a smoke consuming appliance, a shell or casing embodying a gas chamber and a combustion chamber and smoke space at one side of the gas chamber with the smoke space above the combustion chamber and in communication therewith at one end, said gas chamber having a damper controlled outlet, and a tube extending through the combustion chamber over the fire therein and connecting the smoke space with the gas chamber the delivery end of such tube being deflected to cause unconsumed particles to be thrown to the bottom of the gas chamber.

1,113,071. AUTO-DRIVE. ALONZO OLLIF TURNER, Tampa, Fla. Filed Sept. 16, 1913. Serial No. 789,980. (Cl. 21—90.)



1. An automobile drive, comprising a substantially rectangular supporting frame, front and rear axles arranged below the frame, a bolster at each axle below the frame, each bolster carrying the lower section of a fifth wheel, the upper section of the front fifth wheel being rigid with the frame, a housing for each axle, a support for the upper section of the rear fifth wheel, a sliding connection between the frame and each end of the support, springs connecting each bolster with the housing of the adjacent axle, an auxiliary frame extending rearwardly from the front bolster, an arc-shaped guide bar arranged transversely of the frame at the rear end of the auxiliary frame, said frame having an extension moving on the guide bar, means for swinging the auxiliary frame, a motor supported by the auxiliary frame near the front axle, transmission mechanism supported by the auxiliary frame at its rear end and connected to the motor, a drive shaft extending from the transmission toward each axle, each drive shaft having a driving connection with the adjacent axle, the swinging means for the auxiliary frame comprising a vertical shaft journaled at one side of the frame, a steering wheel secured to the shaft, a reel secured to the lower end of the shaft, a pulley journaled on the frame at the opposite side from the steering shaft, a flexible member having its ends connected to the opposite sides of the auxiliary frame, said member passing from its connection

at the side adjacent to the shaft to the reel and winding on the reel and passing thence transversely of the frame and over the pulley to its connection with the opposite side of the auxiliary frame.

2. An automobile drive, comprising a substantially rectangular supporting frame, axles arranged below the frame, the front axle being at the front of the frame and the rear axle being near the rear of the frame, a bolster at each axle below the frame, each bolster carrying the lower section of a fifth wheel, the upper section of the front fifth wheel being rigid with the frame, a housing for each axle, a support for the upper section of the rear fifth wheel, a sliding connection between the frame and each end of the support, springs connecting each bolster with the housing of the adjacent axle, an auxiliary frame extending rearwardly from the front bolster, an arc-shaped guide bar arranged transversely of the frame at the rear end of the auxiliary frame, said frame having an extension moving on the guide bar, means for swinging the auxiliary frame, a motor supported by the auxiliary frame near the front axle, transmission mechanism supported by the auxiliary frame at its rear end and connected to the motor, and a drive shaft extending from the transmission toward each axle, each drive shaft having a driving connection with the adjacent axle.

3. An automobile drive, comprising a substantially rectangular frame, a front and rear axle below the frame, a housing for each axle, a bolster for each axle arranged above the axle, springs connecting each bolster to the adjacent axle housing, a pivotal connection between the front bolster and the frame, a support arranged transversely of the frame between the rear bolster and frame and movable with respect to the frame, a pivotal connection between the bolster and the support, an auxiliary frame extending rearwardly from the front bolster, said auxiliary frame being adapted to carry a motor, transmission mechanism carried by the auxiliary frame and connected to the motor, a driving connection between the transmission mechanism and each axle, means on the frame for swinging the auxiliary frame, a guide bar arranged transversely of the frame below the same at the rear end of the auxiliary frame, said frame having an extension moving on the guide bar.

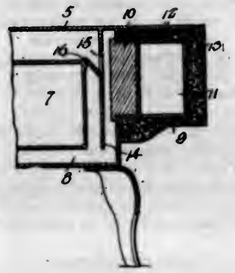
4. An automobile drive, comprising a substantially rectangular frame, a front and rear axle below the frame, a housing for each axle, a bolster for each axle arranged above the axle, springs connecting each bolster to the adjacent axle housing, a pivotal connection between the front bolster and the frame, a support arranged transversely of the frame between the rear bolster frame and movable with respect to the frame, a pivotal connection between the bolster and the support, an auxiliary frame extending rearwardly from the front bolster, said auxiliary frame being adapted to carry a motor, transmission mechanism carried by the auxiliary frame and connected to the motor, a driving connection between the transmission mechanism and each axle, and means on the frame for swinging the auxiliary frame.

5. An automobile drive, comprising a substantially rectangular frame, front and rear axles for the frame, a bolster for each axle and connected thereto, a pivotal connection between the front bolster and the frame, a support arranged transversely of the rear end of the frame and slidably connected to the frame, a pivotal connection between the rear bolster and the support, an auxiliary frame extending rearwardly from the front bolster and adapted to support a motor, transmission mechanism carried by the auxiliary frame, and adapted for connection with the motor, a driving connection between the transmission mechanism and each axle, and means on the frame for swinging the auxiliary frame.

[Claim 6 not printed in the Gazette.]

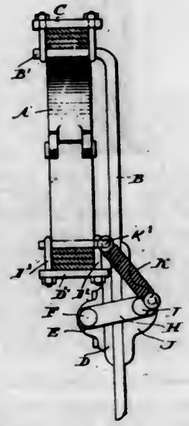
1,113,072. COMBINED STOVE AND FIRELESS COOKER. JAMES B. VAN ETTEN, Stroudsburg, Pa. Filed Mar. 26, 1913. Serial No. 756,983. (Cl. 126—1.)

The combination with a stove having an opening in one wall, of a fireless cooker body mounted on the stove at one side thereof and having a pocket coinciding with the opening in the wall of the stove for communication therewith,



and a heating unit fitted within the opening and extended within the pocket.

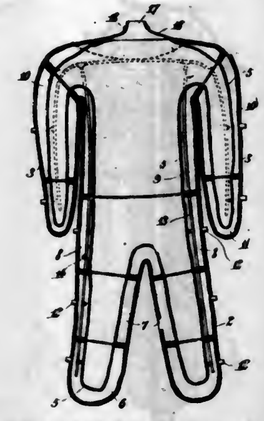
1,113,073. SHOCK-ABSORBER. CHARLES HOWARD VAN WERT and GEORGE BASTON VAN WERT, Kingston, N. Y.; said Charles H. Van Wert assignor to Walter H. Van Gaasbeek, Kingston, N. Y. Filed Oct. 4, 1913. Serial No. 793,498. (Cl. 21—105.)



A shock absorber for vehicles comprising two angle bars designed to be attached to the upper and lower of a pair of elliptical springs with the shank portions thereof in contact with each other, a bracket member projecting from the face of one of said bars, plates pivotally connected to said bracket member, a clamping shoe, a pin passing through said shoe and having heads countersunken in holes in said plates, headed lugs projecting one from the face of each plate beyond the pivotal connection of the shoe, a pin projecting from one of said angle bars which is clamped to the elliptical spring, and coiled springs connecting the projecting end of the pin upon said angle bar and said headed lugs, as set forth.

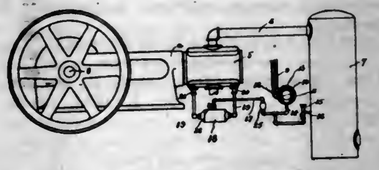
1,113,074. LIFE-SAVING SUIT. FREDERICK B. VODOELI, Mansfield, Mass. Filed June 10, 1913. Serial No. 772,884. (Cl. 9—20.)

The herein described life saving suit comprising a flexible body and a plurality of disconnected air chambers arranged in the body, the fabric of the air chambers forming a lining for the suit and said air chambers when inflated affording buoyancy and also forming insulators, each of said air chambers having a valve adapting it to be inflated or deflated independently of the others and projecting outwardly through the fabric of the body and an air tube arranged in and connected to the several air chambers



and providing a valve adapting it to be simultaneously inflated through the said tube.

1,113,075. CONTROLLING DEVICE FOR FLUID-COMPRESSORS. CHARLES WAINWRIGHT, Erie, Pa. Filed June 12, 1912. Serial No. 703,245. (Cl. 230—24.)

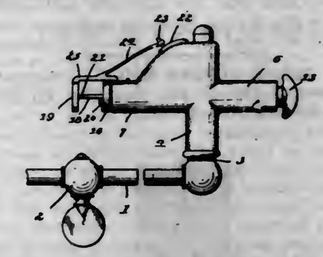


In an electrically operated fluid compressor, embodying a suitable compression chamber, receiving tank, and electric motor, the combination of a manually adjustable spring controlled valve communicating with the receiver and adapted for being opened by fluid pressure from said receiver, a pipe leading from said valve, a double branch pipe connected to the said pipe, one branch of which communicates with a fluid controlled switch whereby the motor circuit is opened or closed, the other branch leading through a suitable check valve and a vent, a reservoir disposed adjacent to the compression chamber and with which the last mentioned branch connects at a point between its ends, said reservoir having a pipe leading from each end and communicating with a fluid controlled valve provided in the ends of the compression chamber, said valves being adapted for being opened by the pressure of the fluid in the reservoir whereby the compression chamber is relieved of excessive pressure, simultaneously with the opening of the switch.

1,113,076. SAFETY GAS-BURNER. DAVID J. WALLACE, U. S. Navy. Filed Nov. 29, 1913. Serial No. 803,817. (Cl. 67—116.)

1. A safety gas burner, comprising a body having a gas passage, chambers arranged on opposite sides of the body and communicating with its passage, a ported valve mounted in the chambers for sliding movement across the passage, a spring in one of the chambers to hold the valve normally closed, mercury in the other chamber, and a piston mounted in said other chamber.

2. A safety gas burner, comprising a body having a gas passage, chambers arranged on opposite sides of the body and communicating with its passage, a ported valve mounted in the chambers for sliding movement across the passage, a spring arranged in one of the chambers to hold the valve normally closed, mercury in the other chamber, a piston in said other chamber, and a spring adapted to engage the piston when in one position.



3. A safety gas burner, comprising a body having a gas passage, chambers arranged on opposite sides of the body and communicating with its passage, a ported valve mounted in the chambers for sliding movement across the passage, a plug closing one of the chambers and provided with a stop, a spring mounted between the plug and the valve, a plug closing the other chamber, mercury between said last named plug and the valve, a piston carried by said last named plug, and a spring adapted to engage said piston when in one position.

4. A safety gas burner comprising a body having a gas passage, chambers arranged on opposite sides of the body and communicating with its passage, a ported valve mounted in the chambers for sliding movement across the passage, means in one of the chambers to hold the valve normally closed, mercury in the other chamber, a piston mounted in said other chamber, and an igniter carried by said piston, said igniter being actuated through the medium of said piston.

1,113,077. AIR-GUN. BYRON WILLETT, Plymouth, Mich. Filed Apr. 1, 1914. Serial No. 828,672. (Cl. 124—11.)

1. In a gun, a stock frame, a barrel frame telescoping said stock frame, a reciprocal trigger supporting member slidable in said stock frame, a break down lever adapted to move said member, and means for simultaneously connecting said frames and said lever.

2. In an air gun, a stock frame, a barrel frame telescoping said stock frame, a trigger member movable in said stock frame, a plunger adapted to be retracted by said trigger member, means for moving said trigger member, and detachable means connecting said frames and supporting the first mentioned means.

3. In an air gun, telescopic frames, a trigger member reciprocal in one of said frames, a plunger extending into the same frame and adapted to be engaged by said trigger member, a break down lever for moving said trigger member, and means connecting said frames and adapted to support said break down lever.

4. In an air gun, a barrel, telescopic frames at the inner end of said barrel, a plunger movable in said barrel and extending into one of said frames, a trigger member reciprocable in the same frame and adapted to engage said plunger, a break down lever adapted to shift said trigger member, and means connecting said frames and supporting said break down lever.

5. In an air gun, inner and outer barrels providing a projectile magazine, inner and outer frames at the inner end of said outer barrel, a stock carried by said inner frame, a spring actuated plunger arranged in said outer barrel and protruding into said inner barrel and into said

inner frame, a trigger supporting member reciprocal in said inner frame and adapted to engage said plunger, a break down lever adapted to shift said member, and means detachably connecting said frames and supporting said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,113,078. METAL SPOKED WHEEL. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Nov. 27, 1912. Serial No. 733,851. (Cl. 21—69.)

1. In a wheel of the class described, the combination with a tubular member adapted to receive an axle, of spaced rings encircling and firmly fixed to said member, sets of spokes, those of each set having their inner ends overlapping and welded to the side of the corresponding ring, and a rim secured to the outer ends of the spokes.

2. In a wheel of the class described, the combination with a tubular central member adapted to receive an axle, of spaced rings encircling and firmly fixed to said member, tie bars welded to the peripheral surfaces of the rings to connect them, sets of spokes having their inner ends overlapping and welded to the sides of the corresponding rings, and a rim secured to the outer ends of the spokes.

3. In a wheel of the class described, the combination with a tubular central member adapted to receive an axle, of spaced rings encircling and internally welded to said member, sets of spokes in different planes having their inner ends welded to the sides of the corresponding rings, and a rim secured to the outer ends of the spokes.

4. In a wheel of the class described, the combination with a hub structure, of sets of spokes in different planes secured to said structure, an annular member lying between the sets intermediate their ends and welded to all the spokes, and a rim connected with the outer ends of the spokes.

5. The combination with a hub structure and a rim, of sets of spokes in different planes, connecting the hub structure and rim, and ties passing obliquely from individual spokes of one set to non-corresponding spokes of the other set and welded to the spokes thus connected.

[Claim 6 not printed in the Gazette.]

1,113,079. VIBRATOR MASSAGE IMPLEMENT. NICK E. WILMES, San Francisco, Cal. Filed Dec. 6, 1913. Serial No. 805,033. (Cl. 128—16.)

1. The combination in a vibrator, of a casing, a shaft revolubly mounted in said casing, a centrifugal vibrator loosely mounted on said shaft, and means for connecting the vibrator with the shaft.

2. The combination in a vibrator, of a casing, a shaft revolubly mounted in said casing, a centrifugal vibrator loosely mounted on said shaft, means for connecting the vibrator with the shaft, a cover member inclosing the vibrator through which the upper end of the shaft extends, and a flexible rubber ring securing the cover to the casing.

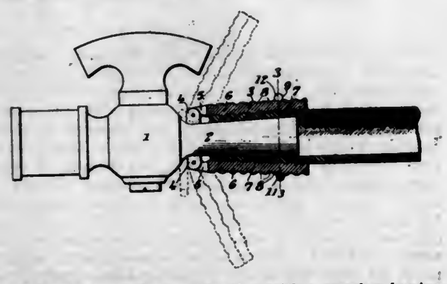
3. The combination in a vibrator, of a casing, a shaft revolubly mounted in said casing, a centrifugal vibrator loosely mounted on said shaft, and means for increasing the speed of the vibrator with relation to the shaft.

4. The combination in a vibrator, of a casing, a shaft revolubly mounted in said casing, a centrifugal vibrator loosely mounted on said shaft, means for connecting the vibrator with the shaft, a socket formed in the upper end of the shaft, a shank insertible into said socket, and means for locking the shank to revolve with the shaft.

5. The combination in a vibrator, of a casing, a shaft revolubly mounted in said casing, a centrifugal vibrator loosely mounted on said shaft, means for connecting the vibrator with the shaft, a socket formed in the upper end of the shaft, a shank insertible into said socket, means for locking the shank to revolve with the shaft, and means for securing a massage implement on the upper end of the shank.

[Claims 6 to 8 not printed in the Gazette.]

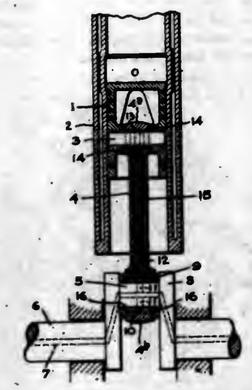
1,113,080. HOSE-COUPLING. GLEN E. WILSON, East Liverpool, Ohio. Filed Apr. 4, 1913. Serial No. 758,875. (Cl. 137—28.)



In a hose clamp, the combination with a member having a nozzle extending therefrom, said nozzle being of a restricted diameter toward its inner end and of circular configuration in transverse section, and brackets extending laterally from the nozzle adjacent the inner end thereof, of gripping devices pivoted at their inner ends to said brackets and movable with relation to said nozzle and spaced from each other along their longitudinal edges, and adjusting means movably mounted on said devices and having lateral manipulating portions disposed outwardly of the spaces between said devices, and adapted to be adjusted over the said brackets and to lie directly at one side thereof and suspended directly from the nozzle beyond the points of pivotal connection of the gripping devices with said brackets when it is desired to release the devices from the hose.

1,113,081. SYSTEM OF LUBRICATION. FRIEDRICH ZIEGLER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 8, 1912. Serial No. 724,544. (Cl. 184—6.)

1. The combination with a plurality of bearings of means for supplying lubricant under pressure at points intermediate between the ends of said bearings, and means for collecting the used lubricant from one of said bearings and directing it to points adjacent the ends of another of said bearings.



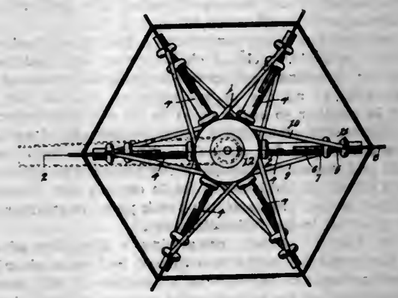
2. The combination of a pair of bearings, a connecting rod joining said bearings, means for supplying lubricant under pressure at points intermediate between the ends of each of said bearings and means for collecting the used lubricant from one of said bearings and applying it at points adjacent the ends of the other of said bearings, said last named means including a passage carried by the connecting rod.

3. The combination with a connecting rod, wrist pin, and crank pin, of means for supplying lubricant under pressure to the middle of each of said pins, and a passage in said connecting rod for conveying used lubricant from said wrist pin to points adjacent the ends of said crank pin.

4. The combination with a connecting rod, wrist-pin and crank-pin, of means for supplying fresh lubricant to the middle of said crank-pin, and passages in said rod for conveying lubricant from the crank-pin to the wrist-pin and back to the ends of the crank-pin.

5. The combination with a wrist-pin, of a connecting rod having a head provided with circumferential grooves surrounding said pin, a crank-shaft and pin having a duct for lubricant, radial holes in said pin, a bearing for said rod having a circumferential groove communicating with said holes, a pipe in said rod leading from said groove to an intermediate groove in the head of the rod, a passage conducting lubricant back from collecting grooves in said head to the bearing on the crank-pin, and outer grooves in said bearing with which said passage connects.

1,113,082. EXPANDING CARRIER-SPOOL. LORENZO ZENI, Scranton, Pa. Filed July 10, 1913. Serial No. 778,353. (Cl. 242—113.)



1. A carrier spool including a spindle, a hub keyed thereon, radial spokes carried by said hub, rods slidable in the outer terminals of said spokes, a U-shaped head for each of said rods, a pair of cup members rotatably mounted on said spindle and arranged on opposite sides of said hub, coil springs arranged interiorly of said cups and operatively connecting said cups and said hubs, and means operatively connecting said cups to said rods, said means being adapted to draw in the said rods reducing the circumference of the spool when the said cups are operatively rotated against the tension of the said springs.

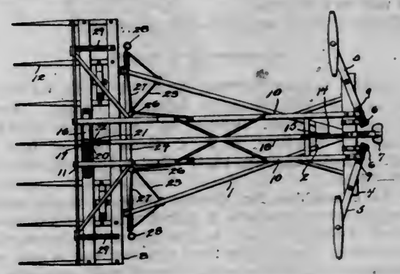
2. A carrier spool comprising a spindle, a hub keyed thereon, radial spokes carried by said hub, skein receiving means slidable in the outer terminals of said spokes, a pair of cup members rotatably mounted on said spindle and arranged on opposite sides of said hub, coil springs arranged interiorly of said cups and operatively connected with said cups and said hub and means operatively connecting said cups to said skein receiving means and arranged to draw in said skein receiving means whereby the circumference of the spool is reduced when said cups are operatively rotated against the tension of said springs.

3. A carrier spool including a spindle, a hub keyed thereon, spokes carried by said hub, skein receiving means slidable in the free terminals of said spokes, a pair of cup members rotatably mounted on said spindle upon opposite sides of said hub, coil springs mounted interiorly of said cups and having their terminals operatively connected with said spindle and the cups, and links operatively connecting the skein receiving means with said cups and adapted to draw in said rods reducing the circumference of the spools when said cups are operatively rotated against the tension of said springs.

1,113,083. PESSARY. MITCHELL BURDINE ARENDELL, McAlester, Okla. Filed June 25, 1913. Serial No. 775,748. (Cl. 128—21.)

A pessary including in combination a forked elastic stem formed at one end with a dovetail locking lug, a disk formed with a large central opening and a slot complementary to the lug, and a screw passed through the adjacent portions of the disk and lug.

1,113,084. RAKE. FRED J. ARGAST, Moffit, N. D. Filed Sept. 17, 1910. Serial No. 582,488. (Cl. 56—66.)



A rake comprising a suitable frame, a toothed member hingedly connected to the same, means for raising or lowering said member, a longitudinally sliding member located above said hinged member and adapted to be moved to and from the receiving projecting ends of the teeth of the hinged member, means for limiting the movement of said last named member in respect to the rear of the frame, swingletrees movably secured to the rear end of said frame and at the sides thereof, slotted plates

secured adjacent the ends of the trees, bars having their rear ends slidably connected to the slots of the plates and their forward ends to the longitudinally operated member of the device, and means connecting said bars adapted for attachment to the harness of the horses, whereby the longitudinally arranged member is operated independently of the toothed member of the device.

1,113,085. SHOE-MACHINE. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 31, 1910. Serial No. 579,864. (Cl. 12—126.)

1. In a machine of the class described an external V-shaped heel end abutment or rest having forwardly inclined, angularly related faces for supporting the heel end of an inverted shoe against downward displacement.

2. In a machine of the class described an external heel rest having diverging heel end embracing faces, portions 20 of which are formed to extend forwardly and downwardly at an angle to compel bodily forward movement of a last when the latter descends relatively to said rest and in coöperative relation therewith.

3. In a machine of the class described, an external heel rest having diverging heel embracing faces, portions of which are obliquely inclined forwardly to compel bodily forward movement of a last when the latter descends relatively to said rest and in coöperative relation therewith.

4. In a machine of the class described an external heel rest having rigid diverging faces to embrace the sides of the heel of a shoe containing a last and sustaining portions inclined to the plane of the shoe bottom to prevent downward displacement of the heel end of the last from normal position except when accompanied by forward movement of the last.

5. In a machine of the class described an external heel rest and a sole rest arranged to engage the forepart of a shoe containing a last, said heel rest having shoe supporting faces inclined forwardly into position to prevent downward movement of the heel end of the last about the sole rest as a fulcrum.

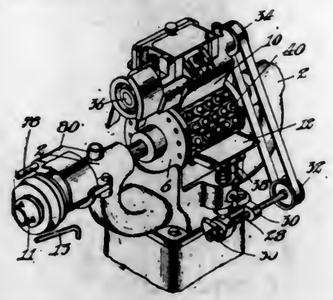
[Claims 6 to 19 not printed in the Gazette.]

1,113,086. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 13, 1912. Serial No. 703,476. (Cl. 12—51.)

1. In a machine for shaping shoes, a rotary carrier, operating means therefor, a plurality of supporting members on the carrier, and a plurality of beating elements each loosely confined by two adjacent supporting members to permit bodily movement of said elements outwardly under the influence of centrifugal force during the rotation of the carrier and inwardly under pressure of the work.

2. In a machine for shaping shoes, a carrier, operating means therefor, a plurality of beating elements each comprising a beating portion, a relatively narrow neck and a retaining head, and retaining means embracing the neck and permitting the beating elements to tip in different directions in planes angularly related to one another.

3. In a machine for shaping shoes, a carrier, operating means therefor, a plurality of beating elements and a plurality of supporting members connected to the carrier and arranged to confine the beating elements to the carrier while permitting sidewise movement of individual beating elements lengthwise of the carrier to adapt the beating elements to conform to the surface of the work as they strike the work and rub over it.

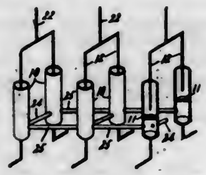


4. In a machine of the class described, a rotary carrier and a series of beating elements each having flanges on its inner end and loosely supported in the carrier and confined against dislodgment from the carrier under the action of centrifugal force by said flanges.

5. In a machine of the class described, a carrier and a plurality of beating elements having ball flanges on their inner ends and pivotally supported in the carrier by said flanges to permit universal tipping movement as the beating elements engage and rub over the work.

[Claims 6 to 22 not printed in the Gazette.]

1,113,087. OIL-SWITCH. HENRY PRICE BALL, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 11, 1905, Serial No. 282,233. Renewed Apr. 8, 1914. Serial No. 830,536. (Cl. 175—283.)



1. An electric switch, comprising a plurality of pairs of separable contacts, a closed chamber containing insulating fluid to reach pair, and means for transmitting pressure developed in one chamber to the insulating fluid in the other chambers, and thereby directing the fluid therein against the arc to extinguish it.

2. An electric switch, comprising a plurality of pairs of separable contacts, a closed chamber, for each pair, and means for directing any excess of pressure produced by the drawing of an arc in one chamber against the arc drawn in another so as to assist in its extinguishment.

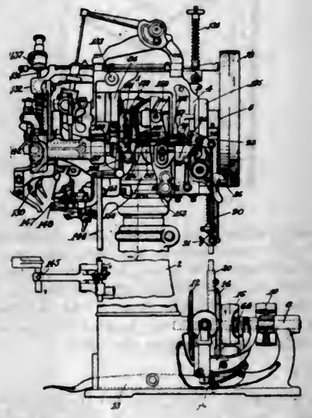
3. The combination with a polyphase circuit, of an electric switch comprising a break point in each leg of said circuit, and means for confining the pressure produced by the arc drawn at the break point in one leg and directing it against an arc drawn at the break point in another leg so as to assist in its extinguishment.

4. An electric switch, comprising a plurality of cooperating separable contacts arranged to form a plurality of break points and to break in succession at said points, a closed chamber for inclosing the contacts at each break point, and communicating passages between said chambers.

5. An electric switch, comprising a plurality of oil pots, an oil-communicating passage between said pots, fixed contacts within said pots, and a bridging contact arranged to disengage one of said contacts prior to the other.

[Claims 6 to 15 not printed in the Gazette.]

1,113,088. LASTING-MACHINE. ARTHUR BATES and ROBERT HENRY SILVESTER, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 27, 1910. Serial No. 569,025. (Cl. 12—2.)



1. A machine of the class described having, in combination, means for working an upper over a last, devices for controlling the speed of said means and connections serving to change the character of the operation effected by said upper over-working means on the shoe concurrently with the change in speed.

2. A machine of the class described having, in combination, means for operating upon successive parts of an upper to work it over a last and devices for varying the speed of such means and serving also to vary the character of their operation on different parts of the shoe.

3. A machine of the class described having, in combination, lasting means including pincers for working successive parts of an upper over a last, speed-controlling means, and connections therefrom to the pincers operating to vary the paths of said pincers as the speed in changed for operating on different parts of the shoe.

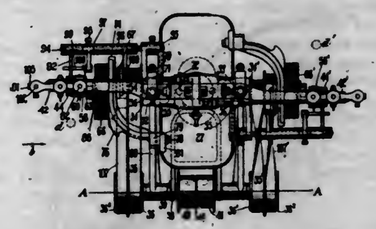
4. A machine of the class described having, in combination, means for working an upper over a last, a variable speed-gear for said means, means for manually controlling the operation of said speed-gear, and means for changing the character of the operation effected by said overworking means on the shoe, said means acting automatically after the speed controlling means has been operated.

5. A machine of the class described having, in combination, lasting mechanism, means for controlling the speed of said mechanism, means for suspending the operation of said mechanism, and a single device to operate both of said means.

[Claims 6 to 80 not printed in the Gazette.]

1,113,089. MACHINE FOR SETTING, BURNISHING, AND BRUSHING THE EDGES OF THE SOLES OF BOOTS AND SHOES. ZOTIQUE BEAUDRY, Lynn, Mass., assignor to Hamel Shoe Machinery Co. Inc., Lynn, Mass., a Corporation of Massachusetts. Filed Aug. 25, 1908, Serial No. 450,217. Renewed Mar. 5, 1914. Serial No. 822,766. (Cl. 12—77.)

1. A machine for setting and burnishing the edges of the soles of boots and shoes having, in combination, a uniting shaft journaled to rotate in permanent bearings in the frame of said machine, an edge burnishing iron fast to said shaft, an auxiliary bearing for said shaft located between said burnishing iron and one of said permanent bearings, and means forming a universal support connecting said auxiliary bearing to said frame.



2. A machine for setting and burnishing the edges of the soles of boots and shoes having, in combination, a rotary edge burnishing iron, a stationary rest for the finger consisting of a strap encircling a portion of said iron and projecting therebelow, and means to press said strap against said iron with a resilient pressure.

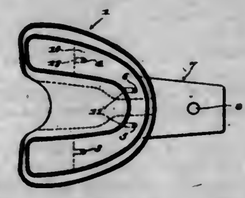
3. A machine for setting and burnishing the edges of the soles of boots and shoes having, in combination, a rotary edge burnishing iron, a flexible strap extending partly around and beneath a portion of said iron and arranged to form a rest for the finger, and means connected to the ends of said strap whereby said strap may be pressed against said iron.

4. A machine for setting and burnishing the edges of the soles of boots and shoes having, in combination, a rotary edge bushinging tool, a brush, a movable support upon which said brush is journaled, a wax holder and means regulated by said movable support to determine the position of said holder and the wax held therein relatively to said edge burnishing tool.

5. A machine for setting and burnishing the edges of the soles of boots and shoes having, in combination, a rotary edge burnishing tool, a brush, a movable support upon which said brush is journaled, a holder for a piece of wax, and means regulated by said movable support to determine the position of said wax relatively to said edge burnishing tool.

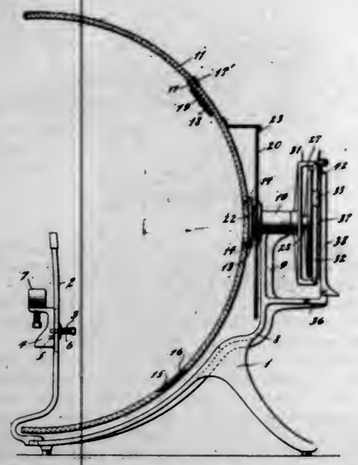
[Claims 6 to 15 not printed in the Gazette.]

1,113,090. SANITARY DENTAL IMPRESSION-TRAY. ROSCOE C. BELL, Mount Carmel, Ill. Filed May 21, 1914. Serial No. 840,077. (Cl. 32—6.)



A dental impression tray formed from a semi-rigid, semi-pliable, moisture proof fiber, a pair of headed studs projecting from the underside of the tray in transverse alinement with each other, said studs being located on opposite sides of the longitudinal center of the tray and beyond the transverse center thereof, and a second pair of headed studs projecting from the bottom of the tray on opposite sides of the longitudinal center thereof and adjacent to the rear portion of the tray and in transverse alinement with each other and immediately on opposite sides of the longitudinal center of the tray, and a handle comprising a plate having fork arms, the outer ends of said arms being provided with slots to engage the first-named pair of studs and the body of the plate between the inner ends of the arms being provided with slots to engage the second named pair of headed studs.

1,113,091. PERIMETER. WILLIAM BERG, New York, N. Y., assignor to General Optical Company, Inc., a Corporation of New York. Filed Apr. 30, 1913. Serial No. 764,732. (Cl. 88—20.)



1. In an instrument of the class described, a revoluble arc, a test object movably mounted thereon, means for moving said test object including a rotatable member, revoluble with said arc, recording means having a marker, and means operatively associated with said member for moving said marker correspondingly to the movement of the test object.

2. In an instrument of the class described, an arc revolubly mounted on a hollow sleeve, a rack slidably mounted on said arc and carrying a test object, a shaft passing through said hollow sleeve having a pinion in engagement with said rack, means for rotating said shaft, and means operatively associated with said means for recording the position of the test object.

3. In an instrument of the class described, the combination with a revoluble arc having a movable test object mounted thereon, means for moving said test object, means for recording the position of said test object including a rotatable member connected to said first named means having a spiral groove in the face thereof, and a marker adapted to travel in said groove.

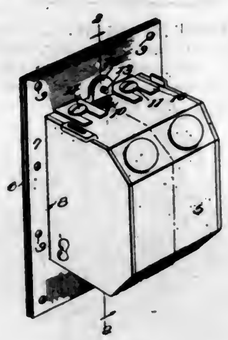
4. In an instrument of the class described, a revoluble arc, a rack slidably mounted thereon carrying a test object, a pinion and a rotatable member connected thereto for moving said rack, said pinion and rotatable member being revoluble with said arc, and recording means also revoluble with said arc having a movable marker operatively associated with said rotatable member for moving said marker correspondingly with the movement of said test object.

5. In an instrument of the class described, a revolubly mounted arc, a test object movably mounted on said arc, shifting means therefor, a recording mechanism including a marker connected to said shifting means and arranged to be revolved with said arc and to be moved correspondingly to the movement of the test object both of said movements being in a plane substantially parallel to the plane of rotation of said arc.

[Claims 6 to 9 not printed in the Gazette.]

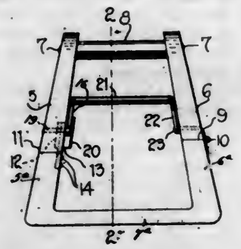
1,113,092. BOX-SUPPORTING FLUSH PLATE. FRANK R. BEUGLER, Binghamton, N. Y., assignor, by mesne assignments, to George C. Lee, Jr., and Herman M. Underwood, Binghamton, N. Y. Filed July 29, 1913. Serial No. 781,804. (Cl. 247—5.)

1. The combination with a switch box, or the like, of a supporting plate surrounding the box, the face of the plate extending beyond the box and being provided with means at either end and along the sides for attaching the plate to the wall flush with the surface of the plaster, and carrying bifurcated parts extending from its face for the purpose of attaching the box to the plate.



2. The combination with a switch box, or the like, of a supporting plate surrounding the box, the face of the plate being provided with screw holes at either end and along the sides for the purpose of attaching to the wall flush with the surface of the plaster, and carrying bifurcated parts extending from the face of the plate for the purpose of attaching the box to the plate.

1,113,093. STIRRUP. WILLIAM F. BIBLE, Jr., Greeneville, Tenn. Filed Feb. 18, 1914. Serial No. 819,591. (Cl. 54—49.)

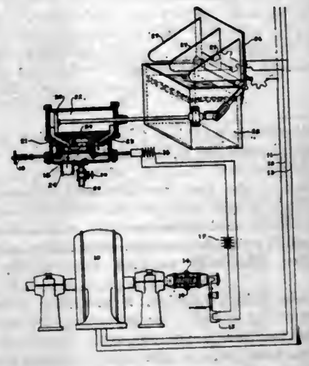


A stirrup comprising two two-part legs, the lower members of which are connected by a tread, and the upper members by a stirrup strap receiving bar, a hinge connecting the two members of one of the legs, a catch carried by the lower member of the other leg, the upper member of the latter leg being provided in its inner face with a recess to receive the head of the catch, a pair of curved levers pivotally connected with the upper members of the two legs, a releasing bar connecting the two levers, a dog carried by the lower end of one of the levers and disposed within the recess and arranged to engage the catch, a spring coacting with the lever to hold the catch and dog normally in locked engagement, and a shield for inclosing the catch dog and spring.

1,113,094. SYSTEM OF SPEED REGULATION. LOUIS E. BOGEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Apr. 19, 1909. Serial No. 490,961. (Cl. 171—229.)

1. In combination, a generator, a load circuit supplied thereby, a variable resistance, and automatic means for connecting said resistance across said load circuit when, and gradually decreasing its resistance value while, the speed of the generator exceeds only a predetermined abnormally high value, said resistance acting directly as an artificial load on the generator to decrease its speed.

2. In combination, a generator, a load circuit supplied thereby, a variable resistance, and means controlled by the speed of the generator for connecting said resistance across said load circuit when, and gradually decreasing the value of such resistance while, the speed of the generator exceeds only a predetermined abnormally high value and for gradually increasing the value of said resistance and disconnecting the resistance from the circuit upon a fall in the speed of the generator below such predetermined value, the insertion of said resistance acting directly to decrease the generator speed.



3. In combination, a generator, automatic means responsive to the speed of said generator for gradually increasing the electrical load on such generator when the speed of the generator rises above a predetermined abnormally high value, the increase in said electrical load acting directly to decrease the speed of said generator, and means for adjusting the rate at which such load is increased.

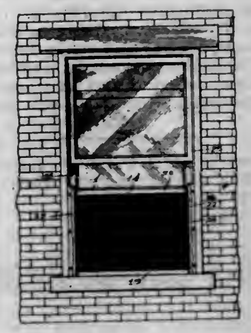
4. In combination, a generator, and means responsive to the speed of said generator for automatically and gradually increasing the electrical load on the generator while the speed of said generator exceeds only a predetermined abnormally high value and for automatically and gradually decreasing the electrical load on said generator upon a fall in speed of the generator below such predetermined value, said changes in the load on said machine directly affecting the speed of said generator.

5. In combination, a generator, means for automatically and gradually increasing the electrical load on the generator when the speed of the generator exceeds a predetermined abnormally high value and for automatically and gradually decreasing the electrical load on said generator upon a fall in speed of said generator below such predetermined value, changes in said load acting directly to change the speed of said generator, and means for adjusting the rate at which such load is increased or decreased.

1,113,095. ROLLING WINDOW-SCREEN. NATHANIEL BOIS, San Francisco, Cal. Filed Dec. 23, 1913. Serial No. 809,418. (Cl. 156—39.)

1. In a rolling window screen, the combination of suitable brackets adapted to be secured to the lower end of a window sash; a roller having a pinion on one end thereof and rotatably mounted within the brackets; a screen having the upper end thereof secured to the roller; means for securing the lower edge of the screen to the window sill; suitable retaining strips secured to each side of the window frame and adapted to engage and retain the side edges of the screen; a rack secured to one side of the window frame and arranged to engage the pinion on the roller when the window is raised and lowered and to unwind and wind the screen thereon; and means for disengaging the pinion from the rack.

2. In a rolling window screen, the combination of suitable brackets arranged to be secured to the lower edge of the lower sash of a window, one of the said brackets having a horizontal slot therein; a roller rotatably mounted within the brackets, one end of said roller being mounted within the horizontal slot; a suitable screen secured to the roller; a securing strip secured to the lower edge of the screen; means for securing the said securing strip to a window sill; retaining strips secured to each side of the window frame; a stationary rack secured to one side of the window frame and arranged to engage the pinion on the roller when the window sash is raised and lowered and to unwind and wind the screen thereon; and a bifurcated lever pivotally secured to the bracket with the horizontal slot and adapted to move one end of the roller in the said slot and to disengage the pinion on the roller from the stationary rack.



3. In a rolling window screen, the combination of suitable brackets arranged to be secured to the lower edge of the lower sash of a window, one of the said brackets having a horizontal slot therein; a roller rotatably mounted within the brackets; one end of said roller being mounted within the horizontal slot, a suitable screen secured to the roller; a securing strip secured to the lower edge of the screen; means for securing the said securing strip to a window sill; retaining strips secured to each side of the window frame; a stationary rack secured to one side of the window frame and arranged to engage the pinion on the roller when the window sash is raised and lowered and to unwind and wind the screen thereon; a bifurcated lever pivotally secured to the bracket with the horizontal slot and adapted to move one end of the roller in the said slot and to disengage the pinion on the roller from the stationary rack; and means for retaining the said lever and the pinion in engagement with the rack.

4. In a rolling window screen, the combination of suitable brackets arranged to be secured to the lower edge of a window sash, one of the said brackets having a horizontal slot therein; a roller rotatably mounted within the brackets, one end of the said roller being rotatably mounted within the horizontal slot; a suitable window screen secured to the roller; a securing strip secured to the bottom of the screen; buttons secured to the window sill and arranged to engage and retain the securing strip; suitable retaining strips secured to each side of a window frame and arranged to engage the edges of the screen; a pinion secured to the end of the roller mounted within the slot in the bracket; a stationary rack secured to one side of the window frame and arranged to engage the pinion on the roller and to rotate the said roller and unwind and wind the screen thereon when the window sash is raised or lowered; a bifurcated lever pivotally mounted upon the bracket having the horizontal slot therein, the bifurcated portion of the said lever being adapted to engage the end of the roller having the pinion thereon and to disengage the said pinion from the rack; and means arranged to retain the said lever in position where the pinion will be disengaged from the rack.

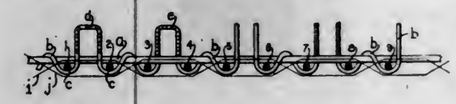
1,113,096. PROCESS OF PRODUCING HYDROGEN. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 29, 1913. Serial No. 798,005. (Cl. 48—198.)

The process of producing hydrogen by passing carbon monoxid and steam, at a temperature between 350° C. and 650° C., simultaneously over a catalytic agent in lumps containing more than 30% of nickel and a non-metallic, indifferent, refractory and porous material.

1,113,097. PROCESS OF PRODUCING HYDROGEN. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Filed Oct. 29, 1913. Serial No. 798,006. (Cl. 48—198.)

The process of producing hydrogen by passing carbon monoxid and steam, at a temperature between 350° C. and 650° C., simultaneously over a catalytic agent in lumps containing more than 30% of cobalt and a non-metallic, indifferent refractory and porous material.

1,113,098. WOVEN PILE FABRIC. JOHN C. BROOKS, Paterson, N. J. Filed Mar. 25, 1913. Serial No. 756,706. (Cl. 139—71.)



1. A pile fabric having body warp threads, weft threads and short separate tuft threads, each of which is bent over a body warp thread and passed under two separate weft threads.

2. A pile fabric having a plurality of body warp threads, weft threads situated entirely below the warp threads, and pile tufts each passing under two adjacent weft threads and over a warp thread.

3. A pile fabric having a plurality of body warp threads, weft threads, and pile tufts each passing under two adjacent weft threads and the portion of each tuft between the weft threads passing over a warp thread.

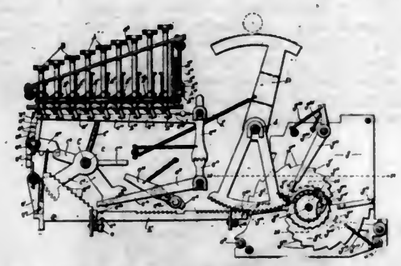
4. A pile fabric having a plurality of body warp threads, weft threads, and pile tufts each passing under one weft thread over a warp thread and under an adjacent weft thread.

5. A pile fabric having a plurality of warp threads, weft threads situated entirely below the warp threads, and pile tufts bound into the fabric by the weft threads, the two free ends of each tuft being situated on opposite sides of a warp thread.

1,113,099. CALCULATING-MACHINE. WILLARD LE GRAND BUNDY, Binghamton, N. Y., assignor to W. H. Bundy Recording Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 18, 1902, Serial No. 120,043. Renewed May 6, 1912. Serial No. 695,568. (Cl. 235—60.)

1. In a calculating machine, a key, a recording member, a movable controlling member for governing the setting of the recording member, a movable part between the key and the controlling member for limiting the movement of the controlling member, said movable part being movable relatively to the key, and means for connecting the key and the movable part and thereby returning the movable part with the key, said means being normally in inoperative position, substantially as described.

2. In a calculating machine, a key, a recording member, a movable controlling member for governing the setting of the recording member, a movable part between the key and the controlling member for limiting the movement of the controlling member, said movable part being movable relatively to the key, and means secured to the key and detachably engaging the movable part for returning the movable part with the key, said means being normally disengaged from the movable part, substantially as described.



3. In a calculating machine, the combination with two members, one comprising a key, and the other, movable means coöperating with the key; of movable means connected to one of the two members and detachably engaging the other of said members for returning one member with the other, said latter movable means being normally disengaged from the member with which said latter movable means detachably engages, substantially as described.

4. In a calculating machine, a recording member, a movable controlling member for governing the setting of the recording member, a part movable relatively to the controlling member into a plurality of operative positions for limiting the movement of the controlling member into a plurality of positions, a series of keys coöperating with the movable part for effecting the movement of said movable part into the predetermined position of a plurality of operative positions and thereby determining the position to be assumed by the controlling member, means for moving the controlling member relatively to the movable part into a plurality of operative positions, means for preventing the movement of the controlling member from its normal position, and means coöperating with the key to force the latter means from its operative position, substantially as and for the purpose specified.

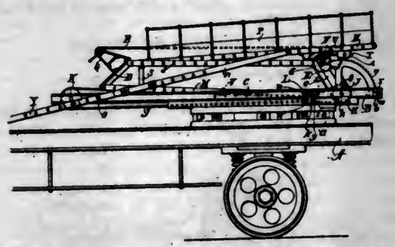
5. In a calculating machine, a key, a recording member, a stop, a movable controlling member movable means between the key and the controlling member, said means coöperating with the key and the controlling member for governing the setting of the recording member, said controlling member being movable relatively to the stop into and out of operative engagement therewith, means for holding the controlling member in its normal position in engagement with the stop connections between the key and the controlling member, and means movable independently of the key for forcing the former means from its operative position, substantially as and for the purpose set forth.

[Claims 6 to 85 not printed in the Gazette.]

1,113,100. LADDER-TRUCK. HARRY J. BUTLER, San Jose, Cal. Filed Jan. 30, 1914. Serial No. 815,472. (Cl. 228—28.)

1. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a higher point than the junction of the second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means for moving the foot of the second ladder in the opposite direction to the movement of the foot of the first-mentioned ladder.

2. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism including a vertically-swinging arm connected pivotally at one end to the foot of the said first-mentioned ladder and at the other end with the said rails, the said mechanism having a portion located when the said ladders have been lowered higher than the junction of the second ladder and platform whereby a pull is applied to the second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means for moving the foot of the said second ladder in the opposite direction to the movement of the foot of the first-mentioned ladder.

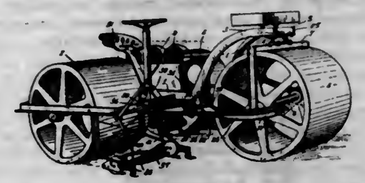


3. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, a third ladder pivotally connected with the said platform on the same side with the said first-mentioned ladder, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a point higher than the junction of the said second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said rails, means for moving the foot of the said second ladder, side braces pivotally connected at one end with the said third-mentioned ladder, and means for connecting the said braces and rails at different points.

4. In a ladder truck, the combination with a turntable, of supporting rails carried by the said turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a point higher than the junction of the said second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means actuated by the said ladder-operating mechanism for moving the foot of the said second ladder after the movement of the foot of the said first-mentioned ladder has been completed.

1,113,101. MOTOR LAND IMPLEMENT. AUBIN M. CHASE, Syracuse, N. Y., assignor to Chase Motor Truck Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 2, 1909. Serial No. 520,665. (Cl. 55—6.)

1. A motor land roller comprising a frame, two driving rollers movable in parallel paths, a steering roller, a motor, an implement arranged adjacent to one of the driving rollers and including a movable part, power-transmitting means between the motor and the driving roller contiguous to the implement, power-transmitting means between the motor and the other driving roller and the movable part of the implement, and a differential gearing between said power-transmitting means, substantially as and for the purpose specified.



2. A motor land roller comprising a frame, two driving rollers arranged in axial alinement and having their opposing ends spaced apart, a steering roller arranged in front of the space between the driving rollers, a motor supported by the frame, power-transmitting connections between the motor and the axles for the driving rollers including a differential gearing, a mower arranged adjacent to one of the driving rollers and including a movable knife, and power-transmitting means between the knife and the axle for the other driving roller, substantially as and for the purpose described.

3. A motor land roller comprising a frame, two driving rollers arranged in axial alinement, and having their opposing ends spaced apart, a steering roller arranged opposite to the space between the driving rollers, a motor supported by the frame, power-transmitting connections between the motor and the axles of the driving rollers, including shafts connected respectively to the driving rollers, and a differential gearing connecting the shafts, an implement arranged in front of one of the driving rollers and including a movable part, means for actuating the movable part, such means being arranged to receive its power from the side of the differential gearing opposite to that side to which is connected the roller contiguous to such implement, substantially as and for the purpose described.

4. A motor land roller comprising a frame, two driving rollers arranged in axial alinement and having their opposing ends spaced apart, a steering roller arranged opposite the space between the opposing ends of the driving rollers, a motor, connections between the motor and the driving rollers including a differential gearing arranged between the rollers and connected to the inner ends of the axles of the rollers, a mower arranged adjacent to one of the driving rollers and including a movable knife, and means for actuating the knife comprising a shaft extending parallel to the axes of the rollers and connected at one end to the outer end of the axle for the other driving roller, substantially as and for the purpose set forth.

1,113,102. SAFETY-SWITCH. HERBERT W. CHENEY, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed June 6, 1910. Serial No. 565,302. (Cl. 172—152.)

1. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, means for locking said switch in closed position, an actuating shaft, a device movable in response to movement of said hoist and coöperating with said actuating shaft at a plurality of points in its travel to operate the same, said shaft when operated by said device causing the opening of said switch.

2. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, locking means for retaining said switch in a closed position, a rocker shaft actuated by the operation of said hoist, a system of levers coöperating with said rocker shaft and said switch, one of said levers for biasing the switch to open position, and releasing the locking means to permit said switch to open with a snap action.

3. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, locking means for retaining said switch in a closed position, a rocker

1,113,096. PROCESS OF PRODUCING HYDROGEN. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 29, 1913. Serial No. 798,005. (Cl. 48—198.)

The process of producing hydrogen by passing carbon monoxid and steam, at a temperature between 350° C. and 650° C., simultaneously over a catalytic agent in lumps containing more than 30% of nickel and a non-metallic, indifferent, refractory and porous material.

1,113,097. PROCESS OF PRODUCING HYDROGEN. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Filed Oct. 29, 1913. Serial No. 798,006. (Cl. 48—198.)

The process of producing hydrogen by passing carbon monoxid and steam, at a temperature between 350° C. and 650° C., simultaneously over a catalytic agent in lumps containing more than 30% of cobalt and a non-metallic, indifferent refractory and porous material.

1,113,098. WOVEN PILE FABRIC. JOHN C. BROOKS, Paterson, N. J. Filed Mar. 25, 1913. Serial No. 756,706. (Cl. 139—71.)

1. A pile fabric having body warp threads, weft threads and short separate tuft threads, each of which is bent over a body warp thread and passed under two separate weft threads.

2. A pile fabric having a plurality of body warp threads, weft threads situated entirely below the warp threads, and pile tufts each passing under two adjacent weft threads and over a warp thread.

3. A pile fabric having a plurality of body warp threads, weft threads, and pile tufts each passing under two adjacent weft threads and the portion of each tuft between the weft threads passing over a warp thread.

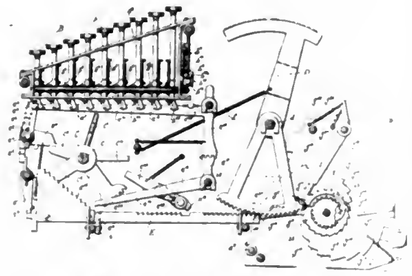
4. A pile fabric having a plurality of body warp threads, weft threads, and pile tufts each passing under one weft thread over a warp thread and under an adjacent weft thread.

5. A pile fabric having a plurality of warp threads, weft threads situated entirely below the warp threads, and pile tufts bound into the fabric by the weft threads, the two free ends of each tuft being situated on opposite sides of a warp thread.

1,113,099. CALCULATING-MACHINE. WILLARD LE GRAND BUNDY, Binghamton, N. Y., assignor to W. H. Bundy Recording Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 18, 1902, Serial No. 120,043. Renewed May 6, 1912. Serial No. 695,568. (Cl. 235—60.)

1. In a calculating machine, a key, a recording member, a movable controlling member for governing the setting of the recording member, a movable part between the key and the controlling member for limiting the movement of the controlling member, said movable part being movable relatively to the key, and means for connecting the key and the movable part and thereby returning the movable part with the key, said means being normally in inoperative position, substantially as described.

2. In a calculating machine, a key, a recording member, a movable controlling member for governing the setting of the recording member, a movable part between the key and the controlling member for limiting the movement of the controlling member, said movable part being movable relatively to the key, and means secured to the key and detachably engaging the movable part for returning the movable part with the key, said means being normally disengaged from the movable part, substantially as described.



3. In a calculating machine, the combination with two members, one comprising a key, and the other, movable means coöperating with the key; of movable means connected to one of the two members and detachably engaging the other of said members for returning one member with the other, said latter movable means being normally disengaged from the member with which said latter movable means detachably engages, substantially as described.

4. In a calculating machine, a recording member, a movable controlling member for governing the setting of the recording member, a part movable relatively to the controlling member into a plurality of operative positions for limiting the movement of the controlling member into a plurality of positions, a series of keys coöperating with the movable part for effecting the movement of said movable part into the predetermined position of a plurality of operative positions and thereby determining the position to be assumed by the controlling member, means for moving the controlling member relatively to the movable part into a plurality of operative positions, means for preventing the movement of the controlling member from its normal position, and means coöperating with the key to force the latter means from its operative position, substantially as and for the purpose specified.

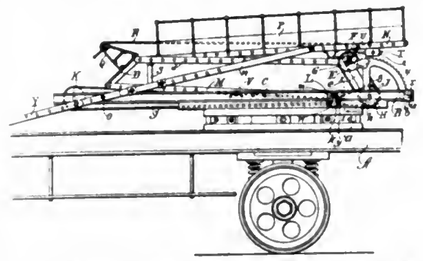
5. In a calculating machine, a key, a recording member, a stop, a movable controlling member movable means between the key and the controlling member, said means coöperating with the key and the controlling member for governing the setting of the recording member, said controlling member being movable relatively to the stop into and out of operative engagement therewith, means for holding the controlling member in its normal position in engagement with the stop connections between the key and the controlling member, and means movable independently of the key for forcing the former means from its operative position, substantially as and for the purpose set forth.

[Claims 6 to 85 not printed in the Gazette.]

1,113,100. LADDER-TRUCK. HARRY J. BUTLER, San Jose, Cal. Filed Jan. 30, 1914. Serial No. 815,472. (Cl. 228—28.)

1. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a higher point than the junction of the second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means for moving the foot of the second ladder in the opposite direction to the movement of the foot of the first-mentioned ladder.

2. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first mentioned ladder, the said mechanism including a vertically swinging arm connected pivotally at one end to the foot of the said first-mentioned ladder and at the other end with the said rails, the said mechanism having a portion located when the said ladders have been lowered higher than the junction of the second ladder and platform whereby a pull is applied to the second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means for moving the foot of the said second ladder in the opposite direction to the movement of the foot of the first-mentioned ladder.

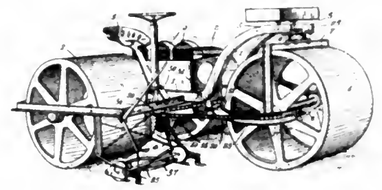


3. In a ladder truck, the combination with a turntable, of supporting rails carried by the turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, a third ladder pivotally connected with the said platform on the same side with the said first-mentioned ladder, ladder-operating mechanism constructed to move the foot of the first mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a point higher than the junction of the said second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said rails, means for moving the foot of the said second ladder, side braces pivotally connected at one end with the said third-mentioned ladder, and means for connecting the said braces and rails at different points.

4. In a ladder truck, the combination with a turntable, of supporting rails carried by the said turntable, a movable platform, a ladder pivotally connected with one side of the said platform, a second ladder pivotally connected with the other side of the said platform, ladder-operating mechanism constructed to move the foot of the first-mentioned ladder, the said mechanism having a portion located when the said ladders have been lowered at a point higher than the junction of the said second ladder and the said platform whereby a pull is applied to the said second ladder and platform to raise them, the foot of the said second ladder having a movable connection with the said supporting rails, and means actuated by the said ladder-operating mechanism for moving the foot of the said second ladder after the movement of the foot of the said first-mentioned ladder has been completed.

1,113,101. MOTOR LAND IMPLEMENT. AUBIN M. CHASE, Syracuse, N. Y., assignor to Chase Motor Truck Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 2, 1909. Serial No. 520,665. (Cl. 55—6.)

1. A motor land roller comprising a frame, two driving rollers movable in parallel paths, a steering roller, a motor, an implement arranged adjacent to one of the driving rollers and including a movable part, power-transmitting means between the motor and the driving roller contiguous to the implement, power-transmitting means between the motor and the other driving roller and the movable part of the implement, and a differential gearing between said power-transmitting means, substantially as and for the purpose specified.



2. A motor land roller comprising a frame, two driving rollers arranged in axial alinement and having their opposing ends spaced apart, a steering roller arranged in front of the space between the driving rollers, a motor supported by the frame, power-transmitting connections between the motor and the axles for the driving rollers including a differential gearing, a mower arranged adjacent to one of the driving rollers and including a movable knife, and power-transmitting means between the knife and the axle for the other driving roller, substantially as and for the purpose described.

3. A motor land roller comprising a frame, two driving rollers arranged in axial alinement, and having their opposing ends spaced apart, a steering roller arranged opposite to the space between the driving rollers, a motor supported by the frame, power-transmitting connections between the motor and the axles of the driving rollers, including shafts connected respectively to the driving rollers, and a differential gearing connecting the shafts, an implement arranged in front of one of the driving rollers and including a movable part, means for actuating the movable part, such means being arranged to receive its power from the side of the differential gearing opposite to that side to which is connected the roller contiguous to such implement, substantially as and for the purpose described.

4. A motor land roller comprising a frame, two driving rollers arranged in axial alinement and having their opposing ends spaced apart, a steering roller arranged opposite the space between the opposing ends of the driving rollers, a motor, connections between the motor and the driving rollers including a differential gearing arranged between the rollers and connected to the inner ends of the axles of the rollers, a mower arranged adjacent to one of the driving rollers and including a movable knife, and means for actuating the knife comprising a shaft extending parallel to the axes of the rollers and connected at one end to the outer end of the axle for the other driving roller, substantially as and for the purpose set forth.

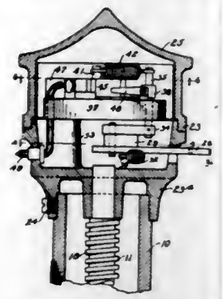
1,113,102. SAFETY-SWITCH. HERBERT W. CHENEY, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed June 6, 1910. Serial No. 565,302. (Cl. 172—152.)

1. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, means for locking said switch in closed position, an actuating shaft, a device movable in response to movement of said hoist and coöperating with said actuating shaft at a plurality of points in its travel to operate the same, said shaft when operated by said device causing the opening of said switch.

2. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, locking means for retaining said switch in a closed position, a rocker shaft actuated by the operation of said hoist, a system of levers coöperating with said rocker shaft and said switch, one of said levers for biasing the switch to open position, and releasing the locking means to permit said switch to open with a snap action.

3. In electric hoists and similar mechanisms, a safety switch normally biased to closed position, locking means for retaining said switch in a closed position, a rocker

shaft actuated by the operation of said hoist, a system of levers coöperating with said rocker shaft and said switch, one of said levers for biasing the switch to open position, releasing the locking means to permit said switch to open with a snap action, and means coöperating with said rocker shaft for resetting said switch.

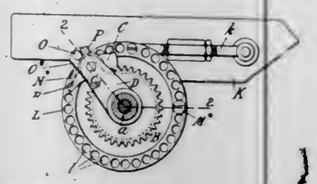


4. In electric hoists and similar mechanisms, a safety switch, a rocker shaft actuated by the operation of said hoist, a plurality of levers coöperating with the rocker shaft and said switch, and a plurality of resilient members alternately biasing the switch to closed and open positions.

5. In electric hoists and similar mechanisms, an indicator column, a threaded shaft therein, an indicator mounted movably thereon, a rocker shaft adapted to be actuated by said indicator when the latter is at any one of a plurality of points, a safety switch, means for normally locking the switch in closed position, and means coöperating with said rocker shaft and said switch to open said switch at predetermined points.

[Claims 6 to 10 not printed in the Gazette.]

1,113,103. TYPE-WRITING MACHINE. JOHN JOSEPH COOPER, London, England, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 25, 1911. Serial No. 623,166. (Cl. 197—114.)



1. In a typewriting machine, the combination with a rotatable platen and a line space mechanism therefor, of a ratchet wheel fast to said platen, a rotatable arm carrying a pawl for turning said platen by said ratchet wheel, a spring tending to return said arm to normal position, means for moving said pawl out of engagement with said ratchet at one limit of the throw of said arm, means for moving said pawl into engagement with said wheel at the other limit of said throw, and means for detaining said pawl in either of said positions while said arm rotates.

2. In a typewriting machine, the combination with a rotatable platen and a line space mechanism therefor, of additional means for revolving said platen, a stop for disconnecting said additional means, and means for positively arresting said platen by movement of said stop.

3. In a typewriting machine, the combination with a rotatable platen and a line space mechanism therefor, of a lever arranged to rotate said platen through a large angle by a small movement of the lever, a pawl driven by said lever, a ratchet wheel fast to said platen arranged to be engaged by said pawl to drive said platen, a stop arranged to arrest said pawl and lock it into engagement with said ratchet wheel, a stop arranged to arrest said pawl and move it from engagement with said ratchet wheel, and a detent to lock said pawl in each position.

4. In a typewriting machine, the combination with a rotatable platen and a line-space mechanism therefor, of a ratchet wheel having a fixed connection with the platen, an arm rotatable about the platen axis independently of the platen, a pawl carried by said arm and engaging the ratchet wheel to drive the ratchet wheel in either direction, means to hold the pawl in engagement with the ratchet wheel, means to limit the rotation of said arm in both directions, and means to automatically disengage the pawl at the completion of the forward movement of said arm.

5. In a typewriting machine, the combination with a rotatable platen and a line-space mechanism therefor, of a ratchet wheel having a fixed connection with the platen, a rotatable arm, a pawl carried thereby to engage the ratchet wheel, a stop to release the pawl from the ratchet wheel and positively limit the forward movement of said arm and permit the return movement of the arm independently of the ratchet wheel, and a stop to limit the return movement of the arm.

[Claims 6 to 49 not printed in the Gazette.]

1,113,104. WIRE-BENDING MACHINE. JOHN R. DEAN, North Girard, Pa. Filed Sept. 26, 1911. Serial No. 651,348. (Cl. 140—91.)

1. In a wire bending machine, the combination of two coil-forming pins; a wire-carrying shuttle; and a driving device for said shuttle for carrying the wire from said shuttle around said pins to form figure-8 coils, said device comprising means for maintaining a constant driving connection throughout the travel of the shuttle.

2. In a wire bending machine, the combination of two coil-forming pins; a wire-carrying shuttle; and two rotary drivers for actuating said shuttle to carry the wire around said pins to form figure-8 coils, said drivers simultaneously engaging said shuttle through a part of their travel.

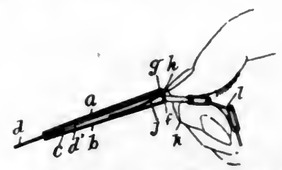
3. In a wire bending machine, the combination of two coil-forming pins; a wire-carrying shuttle; and two rotary drivers for actuating said shuttle to carry the wire around said pins to form figure-8 coils, said drivers simultaneously engaging said shuttle through a part of their travel, and said shuttle being continuously engaged throughout its travel by one or the other of said drivers.

4. In a wire bending machine, the combination of a figure-8 guide-way; coil-forming pins at the crossing of the guide-way; a wire-carrying shuttle arranged to travel in the guide-way; and a driving device for said shuttle for carrying the shuttle around said guide-way to form figure-8 coils on said pins, said device comprising means for maintaining a constant driving connection with the shuttle throughout the travel of the shuttle.

5. In a wire bending machine, the combination of a figure-8 guide-way; coil-forming pins arranged at the crossing of the guide way; a wire-carrying shuttle arranged in the guide-way; and two rotary drivers for actuating said shuttle in the drive-way to carry the shuttle through the guide-way around the pins to form figure-8 coils, said drivers simultaneously engaging said shuttle through a part of the travel.

[Claims 6 to 40 not printed in the Gazette.]

1,113,105. CUTTER FOR CIGAR-TIPS. FELIX DEMAN, New York, N. Y., assignor to Deman-Klous Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 16, 1914. Serial No. 824,861. (Cl. 131—38.)

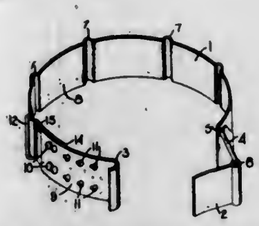


1. In a cigar-cutter, the combination, with a flat cutting-slide having a cutting perforation, of a flat case adapted to inclose the slide movably and having a cutting-notch at its lower end and space, at its upper end only, to permit a slight lateral movement of the slide, the case having an aperture at the upper end, and the slide having a lug to project therefrom with a stop to limit such projection, a tongue formed upon one of the flat sides of the case adjacent to the aperture, and the lug having a notch to engage such tongue and being projected outwardly through the aperture and such projecting end sloped so as to bear obliquely upon the tongue when the notch is disengaged therefrom, and a leaf-spring attached at one end to the opposite side of the case for pressing the lug to make such engagement, and sloped in opposition to the sloping end of the lug so as to push the lug and slide downwardly when the lug is released from the tongue.

2. In a cigar-cutter, the combination, with a flat cutting-slide having a cutting perforation, of a flat case having a cutting-notch at its lower end and closing flange at its edges and upper end, with aperture through the flange at such upper end, and fitted to the thickness of the slide at its lower end, and having space at its upper end for a slight lateral movement of the slide, a lug upon the upper end of the slide adapted to project through the aperture in the upper end of the case and having a tongue and notch engagement with one side of the case next such aperture, a leaf-spring having one end attached to the opposite side of the case for pressing the slide to make such engagement, and sloped to crowd the slide downwardly when released from such engagement, the slide having a recess in at least one edge, and the edge of the case having a stud fitted to such recess to restrict the outward movement of the slide.

3. In a cigar-cutter, the combination, with a flat-fitting slide having a cutting perforation, of a flat case adapted to inclose the slide movably and having a cutting-notch at its lower end and an aperture at its upper end, and space between the sides of the case at its upper end to permit a slight lateral movement of the slide, the slide having a lug to project through such aperture and having a tongue and notch engagement with one side of the case, a leaf-spring having one end attached to the opposite side of the case to press such lug into engagement with the case, and a yoke pivoted to the case adjacent to the projecting end of the lug and adapted to support the cigar-cutter while pressing the lug from such engagement.

1,113,106. PISTON-RING CLAMP. LOUIS O. DEMERS, Boston, Mass. Filed June 11, 1914. Serial No. 844,567. (Cl. 81—3.)



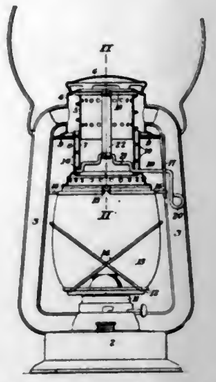
1. A piston ring clamp comprising a band formed at one end to present a hook, a link pivotally connected to the opposite end of the band, and adapted to extend beyond the hook when the clamp is closed, and a compression or strut member pivoted to the outer end of said link and engageable at its free end with said hook, whereby when the compression member is moved to locking position, the clamping ring is contracted.

2. A piston ring clamp comprising a band formed at one end to present a hook, a link pivotally connected to the other end of the band, and a compression member shorter than said link pivoted thereto, and engageable at its free end with said hook the parts being so constructed and arranged that the free end of the compression member may be engaged with the hook and the connected ends of the compression member and link moved to bring the link and compression member substantially into alinement to contract the clamping ring.

3. A piston ring clamp comprising a band formed at one end to present a hook and provided between its ends with projections to engage the end of the cylinder to prevent the band entering the cylinder, a compression member pivotally connected to the opposite end of the band and arranged to engage said hook and operating when moved into alinement with the ends of the band to contract the clamp.

4. A piston ring clamp comprising a band made in two sections adjustably connected together, one section being formed at its free end to present a hook, a link pivotally connected to the other end and a compression member shorter than said link pivoted to the outer end thereof and adapted to engage at its free end with said hook, the parts being so constructed and arranged that when the free end of the compression member is engaged with the hook the connected ends of the compression member and link may be moved to bring the link and compression member substantially into alinement thereby to contract the clamping member.

1,113,107. LANTERN. ALONZO L. EDWARDS, Wheeling, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Mar. 12, 1914. Serial No. 824,190. (Cl. 240—29.)



1. A lantern having a vertically movable globe retainer at its dome portion, and a lifting device for said retainer, said lifting device being journaled in the retainer, and also having a fulcrum within the retainer, which fulcrum is carried by the dome; substantially as described.

2. A lantern having a dome, a vertically movable globe retainer, a globe support, a globe supported thereon, means for holding the globe retainer in contact with the globe, a crank shaft rotatably mounted in the globe retainer, and a swinging link connected to said shaft and to a fixed portion of the lantern, substantially as described.

3. A lantern having a dome, a vertically movable globe retainer, a globe support, a globe supported thereon, a spring interposed between the dome and the globe retainer arranged to move the globe retainer downwardly with relation to the dome, a crank shaft journaled in the globe retainer, and a crank on said shaft within the globe

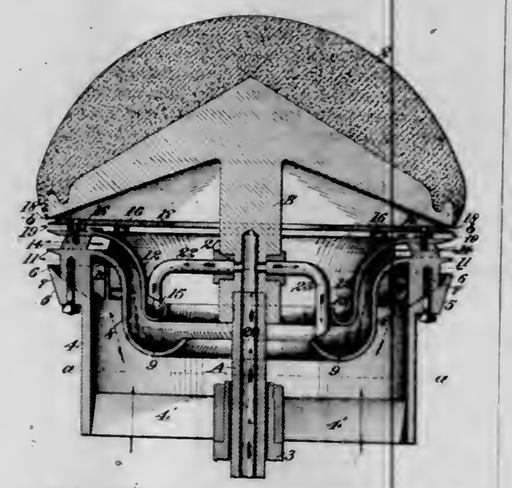
retainer, a link pivotally connected to said crank and to the dome, said shaft having an operating handle, substantially as described.

4. A lantern having a dome, a vertically movable globe retainer mounted therein, a globe support, a globe thereon, a spring interposed between the dome and the globe retainer and arranged to move the latter downwardly with relation to the dome, a crank shaft journaled in the globe retainer, a crank on said shaft within the globe retainer, a link pivotally connected to said crank and the dome, said shaft having an operating handle, and a guide for said crank shaft on the lantern, substantially as described.

5. A lantern having a dome, a globe retainer telescopically connected therewith, a crank shaft rotatably mounted in the globe retainer, a link connected to said crank and to the dome, said crank shaft and link being arranged to move the globe retainer from one extreme position to the other extreme position, means for limiting the movement of said crank shaft, and a compression spring arranged to retain the globe retainer in both of its extreme positions, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,113,108. CENTRIFUGAL OIL-BURNER. MILTON A. FESLER, San Francisco, Cal., assignor to Fess System Co., San Francisco, Cal., a Corporation of California. Filed Sept. 30, 1913. Serial No. 792,589. (Cl. 158—77.)



1. In a centrifugal oil burner, the combination of a rotary shaft, a plurality of superposed oil distributing plates, intermediate means by which the plates are supported and driven, said plates having their outer edges concentric and spaced apart, means for supplying oil to the inner peripheries of the plates, and means for delivering air above, below and between the plates.

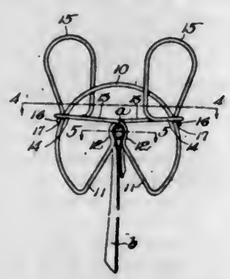
2. In a centrifugal oil burner, the combination with a rotary shaft, of a pair of superposed annular oil distributing plates, substantially ogee in cross section, carried by said shaft, vanes in the space between the plates, vanes below the lower plate, said latter vanes carried by the plates, and means for delivering corresponding quantities of oil to the inner margins of said plates.

3. The combination of a rotary shaft, a plurality of superposed oil distributing plates having their outer edges concentric, horizontally directed and spaced apart, means carried by said shaft for supporting said plates and for delivering air above, between and below the same, means for downwardly directing the air supplied above the plates, means for upwardly directing the air supplied below the plates, and means for simultaneously supplying oil to the inner peripheries of the plates.

4. A centrifugal oil burner including a pair of plates spaced apart, said plates having equal outside and unequal inside diameters and having their outer edges horizontally directed, said plates being substantially ogee in cross section, a rotary shaft and intermediate means by which the plates are supported and driven, means to deliver oil between the plates, and means to deliver air above, between and below the plates so as to impinge upon the passing oil.

5. A centrifugal oil burner having an upper rotating oil distributer and a lower rotating oil distributer, and means for delivering a co-acting air blast between said distributers.

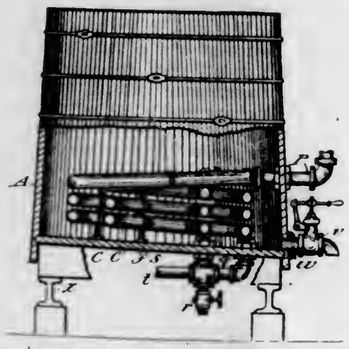
1,113,109. CLOTHES-PIN. GEORGE W. FIELD, East Milton, Mass., assignor to F. & F. Specialty Co., Boston, Mass., a Corporation of Maine. Filed Nov. 14, 1913. Serial No. 800,990. (Cl. 24—261.)



1. A clothes-pin formed of a single piece of wire and comprising a curved bow, gripping jaws, guide loops inclosing the bow, and finger loops extending from the guide loops beyond the bow, the ends of the wire extending into the guide loops outside of the bow.

2. A clothes-pin formed of a single piece of wire and comprising a curved bow, gripping jaws, guide loops inclosing the bow, and finger loops extending from the guide loops beyond the bow, the ends of the wire extending into the guide loops outside of the bow, the inner sides of the finger loops being adapted to abut when the jaws are open, to limit the maximum opening of the jaws.

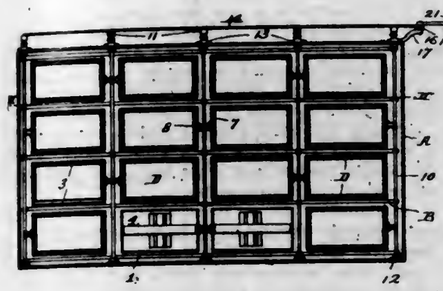
1,113,110. METHOD FOR COOKING CATSUP AND LIKE PRODUCTS. GEORGE R. FIELDS, Terre Haute, Ind., assignor to The Fields Company, a Corporation of Indiana. Filed Feb. 2, 1914. Serial No. 816,118. (Cl. 99—8.)



1. A process of cooking tomato catsup consisting in thoroughly pulping the stock, introducing the same into an open wooden tank so that the same is under atmospheric pressure, introducing a diffusing heat into all parts of the stock from within the tank, and spraying said stock when the coloring matter rises in said tank, with a cooling liquid.

2. The process of preventing the boiling over of catsup pulp and the escape of coloring matter contained therein which consists in spraying the boiling pulp with a cooler liquid.

1,113,111. APPARATUS FOR PRODUCING CRYSTAL ICE FROM RAW WATER. GEORGE H. FISHER, Leavenworth, Kans. Filed Jan. 29, 1914. Serial No. 815,178. (Cl. 62—108.)



1. In an apparatus of the character described, a congealing-can holder consisting of a U-shaped stand, and a skeleton band secured to the upper terminals of said stand; and means for actuating said holder.

2. In an apparatus of the character described, a congealing-can holder, a rock-shaft upon which said holder is mounted, a step-bearing on which said rock-shaft is mounted, and means for rocking said holder.

3. In an apparatus of the character described, a brine tank, congealing-cans therein, holders for said cans, rocker arms to actuate said holders, shafts carrying said rocker-arms, cranks mounted upon said shafts, said cranks extending in opposite directions, connecting-bars operably uniting the cranks, a lever to move said connecting-bars in opposite directions to each other, and means for actuating said lever.

1,113,112. PROCESS OF HARDENING CONCRETE STRUCTURES. SYLVESTER W. FLESHEIM, Cleveland, Ohio, assignor to The Master Builders Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 11, 1913. Serial No. 784,073. (Cl. 25—154.)

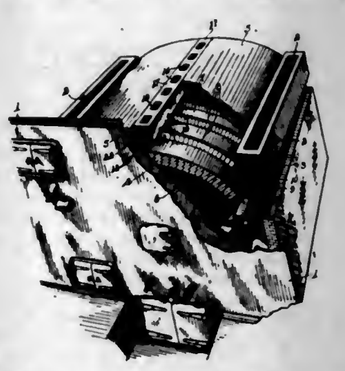
1. The process of hardening a concrete structure so as to prolong the life thereof which consists in applying to the surface of such structure prior to its setting a dry mixture of cement and irregular shaped grains of metallic iron, thoroughly rubbing the same into contact with the surface of said structure so as to moisten the same, and finally troweling the same to a smooth burnished surface.

2. The process of case-hardening the surface of a concrete structure which consists in (first) applying to the surface of said structure prior to its setting a layer of cement containing fine, irregular shaped grains of iron, (second) thoroughly rubbing the same into contact with said first structure, (third) troweling said surface to a smooth, burnished, metallic finish and (fourth) maintaining such surface in a moist condition until said concrete has become thoroughly hydrated and set.

3. The process of case-hardening the surface of a concrete structure which consists in applying to the surface of said structure prior to its hardening a layer of dry cement containing finely comminuted metallic iron particles and afterward rubbing and troweling the same into contact with said first structure until the said layer has become thoroughly wetted by the moisture from the concrete and the iron particles have become intimately interlocked and incased with cement-paste.

4. The process of hardening and rendering impervious, wear-proof, and impenetrable the surface of a concrete structure which consists in applying to the surface of said structure, prior to its setting, a dry layer of cement and finely divided metallic iron particles in substantially equal proportions by weight and thoroughly troweling said last layer upon the surface of said structure whereby such layer and such structure may become merged with each other and said iron particles firmly interlocked together.

1,113,113. FURNACE. JOHN R. FORTUNE, Detroit, Mich. Filed Dec. 5, 1911. Serial No. 664,066. (Cl. 110—29.)



1. In a furnace construction, inner and outer arches providing transverse air heating passages, and a longitudinal air inlet box forming the key of the outer arch and common to all of said passages intermediate the ends thereof.

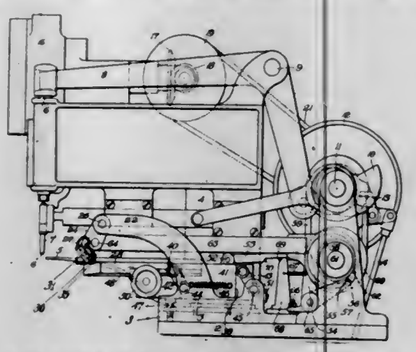
2. In a furnace construction, an inner arch, an outer sectional arch, said arches providing transverse air heating passages, a longitudinal air inlet box forming the key of said outer arch and having the arch sections seated in the side walls of said box, said box being common to all of said air passages intermediate the ends thereof, and means movable longitudinally of said box for controlling the admission of air thereto.

3. A roof construction for furnaces, comprising an inner arch, an outer sectional arch, transverse walls between said arches and providing a series of air passages having open ends, an air box mounted between the sections of the outer arch and constituting a key therefor, and partitions in said box providing air passages normally in communication with the series of air passages.

4. In a furnace having a fire chamber, the combination with arch plates at the sides of the fire chamber formed with seats and air passages, of arches over the fire chamber seated upon said seats and having a series of transverse air passages between them communicating with the passages in the arch plates, a member in the outer arch at the longitudinal center thereof forming a series of inlets for the said passages between the arches, and a slide damper for said member to control the flow of air therethrough.

5. In a furnace having a fire chamber, the combination with arch plates at the side of the fire chamber formed with seats and air passages, of an inner arch seated upon said seats, an outer arch seated upon said seats with a space between it and the inner arch, transverse walls between the arches dividing said space into a series of air passages having the ends thereof communicating with the passages in the arch plates, an air box in the longitudinal center of the outer arch and having the bottom thereof in communication with the transverse air passages and provided with transverse partitions above the transverse walls forming the air passages, a top on the box having openings, and a slide damper on the box to close said openings.

1,113,114. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. LOUIS G. FREEMAN, Cincinnati, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 18, 1909. Serial No. 523,144. (Cl. 12—67.)



1. In an apparatus for use in removing surplus material at and adjacent to the two end portions of the welt of a lasted and welted shoe, welt end rests comprising side members inclined transversely of the shoe in opposite directions and having sharpened inseam stitch cutting edges extending transversely of the shoe.

2. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt and inseam stitch cutting means comprising oppositely inclined members formed to receive an arched shank between them and having sharpened stitch cutting ends extending transversely of the shoe.

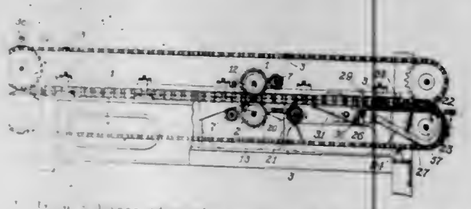
3. A welt butting machine having, in combination, means for removing surplus material at and adjacent to the two end portions of the welt, welt rests having stitch cutting front edges and a guard extending forwardly of said edges.

4. A welt butting machine having, in combination, means for removing surplus material at and adjacent to an end portion of the welt, a separate stitch cutter, and a guard extending in advance of the stitch cutter.

5. In a welt butting apparatus an inseam stitch cutter and a shoe guide and guard arranged to engage the shoe bottom at the inner side of the inseam and permit the shoe to slide therealong into operative relation to the stitch cutter.

[Claims 6 to 31 not printed in the Gazette.]

1,113,115. TOBACCO-STEMMING MACHINE. LOUIS HENRY GERDING and FREDERICK I. BILLINGS, Baltimore, Md., assignors to The Tobacco Stemming Machine Company, Baltimore, Md., a Corporation of Delaware. Filed Aug. 19, 1913. Serial No. 785,569. (Cl. 131—57.)



In a tobacco stemming machine, a frame, a pair of [illegible] bars, carriers for advancing the bars in a [illegible] with a pair of horizontally disposed stripping [illegible] having their axes located on opposite sides of the path of movement of the bars, said rolls being provided [illegible] teeth extending into the path of movement of the bars, the teeth of each roll extending outwardly in [illegible] essentially radial to the axis thereof and said [illegible] comprising liner and outer portions disposed at an [illegible] angle to each other and so arranged respecting the axis of the roll that the outer portions of the teeth, substantially in the path of movement of the bars, are inclined in the direction of said movement and away from a direct radial line, means for separating the rolls as the bars approach the same and for restoring the rolls to their initial positions as the bars pass, mechanism for advancing the bars and for holding the rolls substantially stationary during the stripping action and for thereafter rotating the same reversely in respect to the travel of the bars for discharging the stripped blades, and a rotating clearing device rotating in the same general direction as the stripping roll with which it coacts, and operating with a movement along the teeth substantially parallel with the length thereof and from the inner portions of the teeth toward their outer ends.

2. In combination in a tobacco stemming machine, stripping elements having teeth inclining forwardly toward their free ends in the direction of movement of the stems and leaves between said teeth, said stripping elements being substantially stationary when the stripping is done, and having a clearing movement to produce a wiping effect on the leaves from the heels of the teeth toward their points, and a clearing roller rotating in the same direction with the direction of rotation of the stripping elements, and having teeth inclined backwardly in respect to the direction of movement of the stripping rollers, and in the same general direction as the incline of the teeth of the stripping elements at the points of engagement therewith, substantially as described.

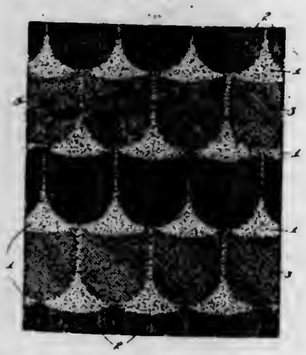
3. In combination stripping elements, means for drawing the tobacco stems between said stripping elements, and teeth on the stripping elements having their terminal portion flattened, substantially as described.

4. In combination stripping elements, means for drawing the tobacco stems between said stripping elements, and teeth on the stripping elements having their terminal portion flattened, and their extremities provided with burrs, substantially as described.

5. In a tobacco stemming machine and in combination, companion stripping elements, means for conveying tobacco leaves in a substantially rectilinear path to and between said stripping elements whereby the leaf blades are stripped from the stems and discharged at the front of the stripping elements and a rotary separating member isolated from the stripped blades and located in advance of the stripping elements and below the line of feed of the leaves but contiguous thereto for engaging the hanging portions of broken leaves, said member rotating at a speed for completely detaching the hanging portions of the broken leaves and removing the same.

[Claims 6 to 19 not printed in the Gazette.]

1,113,116. WATERPROOF ROOFING PRODUCT AND PROCESS OF MAKING THE SAME. SOLOMON H. GOLDBERG, Chicago, Ill. Filed July 11, 1910. Serial No. 571,285. (Cl. 91—67.9.)



1. The process of preparing ornamental roofing, consisting in coating the surface of a flexible absorbent material with a hot bituminous binder, while said binder is heated applying a layer of granular material, and before said binder is cool applying a layer of paint in designs.

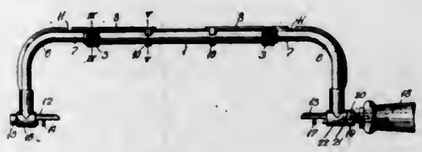
2. As a new article of manufacture a flexible strip of roofing material comprising a foundation of pliable absorbent fabric, a bituminous water proof binder associated with the face of the fabric, a facing of granular material adhesively secured in place in the binder and having portions projecting above the surface thereof and a water proof coloring material applied to a plurality of fields or areas of the facing, contrasting with the interposed spaces and forming designs, said coloring material being intimately associated with the binder and forming a covering and an intimate union with the surfaces to which it is applied.

1,113,117. HORSESHOE. STEVEN GRACEK, Elizabeth, Pa. Filed Oct. 15, 1913. Serial No. 795,191. (Cl. 168—31.)

1. The combination with a horse shoe having a removable toe piece fitted thereto by pins, said toe piece having oppositely inclined openings formed therethrough intermediate said pins, of a locking pin removably secured to the shoe and provided with prongs extending through said inclined openings of the toe piece.

2. The combination with a horse shoe having a removable toe piece fitted thereto by pins, said shoe having a threaded opening formed therein intermediate the pins of the toe piece and said toe piece having oppositely inclined openings therein extending to the threaded opening in the shoe, of a locking pin threadably secured in said shoe opening and having prongs formed thereon which extend through the inclined openings of the toe piece.

1,113,118. HACKSAW-FRAME. WILLIAM J. HARVEY, Flint, Mich. Filed June 13, 1914. Serial No. 844,859. (Cl. 145—34.)

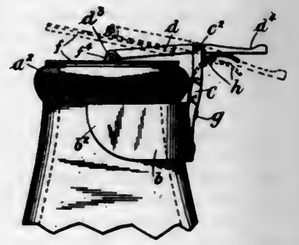


1. A hacksaw frame comprising a main tubular member having a longitudinal slot therein, a pair of frame members in telescopic engagement with the main member, a spline on each frame member projecting through the slot of the main member and having notches therein, a pair of locking rings mounted on the main member and adapted to be turned into engagement each with a notch of a spline, and means on the outer ends of the frame members for securing the hacksaw.

2. A hacksaw frame comprising a main tubular member having a longitudinal slot from end to end thereof with notches in the margins of the slot adjacent the ends, a pair of split locking rings rotatable on the tubular member each provided with a depending ear adapted to engage a notch of the slot and with an extending lug adapted to span the slot, a pair of frame members bent between their ends each in telescopic engagement with the tubular member, a spline on each frame member extending through the longitudinal slot and provided with notches adapted to be engaged by a lug of a locking ring, and means on the ends of the frame members for detachably securing a hacksaw blade thereto.

3. A hacksaw frame comprising a main tubular member having a longitudinal slot from end to end thereof with notches in the margins of the slot adjacent the ends, a pair of split locking rings rotatable on the tubular member each provided with a depending car adapted to engage a notch of the slot and with an extending lug adapted to span the slot, a pair of frame members bent between their ends each in telescopic engagement with the tubular member, a spline on each frame member extending through the longitudinal slot and provided with notches adapted to be engaged by a lug of a locking ring, a pair of split stop rings adapted to embrace the tubular member and extend through a notch of a spline of a frame member, and means on the ends of the frame members for detachably securing a hacksaw blade thereto.

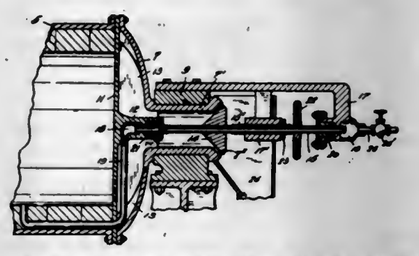
1,113,119. BOTTLE-CLOSURE DEVICE. FRED W. HOEFER, Lyndhurst, N. J., assignor to Richard Meyer, Hoboken, N. J. Filed Oct. 4, 1912. Serial No. 723,845. (Cl. 215—1.)



1. A closure device for vessels provided with a neck having an annular enlargement at the top thereof, said closure device being composed of a bottom arc-shaped clamping member having spring jaws adapted to partially inclose the top part of the neck and centrally of which is secured an upright support, a lever pivoted in said support, a cap plate to the central top portion of which said lever is pivoted, and a spring secured at the back of the clamping member and bearing on the under side of the outer end portion of said lever.

2. In a bottle closure, the combination of a spring clip adapted to engage the neck of a bottle, a lever, means comprising a pivot joint for connecting said lever and said clip, a stopper, a pivotal joint connecting said stopper to one arm of said lever the other arm of said lever forming a handle, and a spring tending to hold the stopper in closed position.

1,113,120. TUBE-MILL. GUY C. HOWARD, Everett, Wash. Filed Aug. 26, 1912. Serial No. 717,035. (Cl. 92—20.)



1. In a machine of the class described, the combination with the rotary barrel provided with an axially disposed opening at one end, of a valve non-rotatable with the barrel for regulating the effective area of said opening, and a water supply pipe extending through said valve and communicating with the interior of the barrel intermediate said opening and the opposite end of the barrel.

2. In a machine of the class described, the combination with the rotary barrel provided with an axially disposed opening at one end, through which the material is discharged from the barrel, of a conical valve for said opening coöperating with a seat provided therefor, and means for regulating the amount of opening of the valve with respect to said seat, said means including a water-supply pipe communicating with the interior of the barrel.

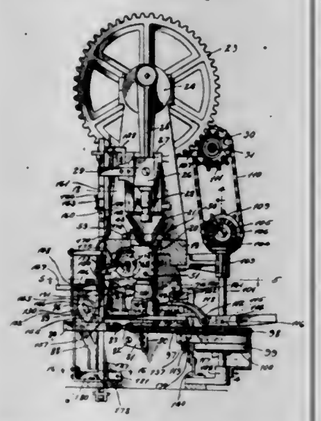
3. In a machine of the class described, the combination with the rotatable barrel provided with an axially disposed discharge opening, of a valve for said opening, a water supply pipe extending through the valve and into the barrel, and affording means for controlling said valve to regulate the effective area of said discharge opening.

4. In a machine of the class described, the combination with the barrel and a hollow trunnion therefor, which serves as the discharge opening of the barrel, of a valve movable axially of said trunnion for regulating the effective sizes of said opening, a water supply pipe extending through the valve, and communicative connections between the pipe and the interior of the barrel, said connections terminating in proximity to the mid length of the latter.

5. In a machine of the class described, the combination with the rotatable barrel provided with an axially disposed discharge opening, a water supply pipe extending through said opening and into said barrel, and a valve for said opening mounted upon said supply pipe and openable outwardly of the opening.

[Claim 6 not printed in the Gazette.]

1,113,121. MATERIAL-COMPRESSING MACHINE. GEORGE C. HUMPHREY, Los Angeles, Cal., assignor to California Fuel Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Sept. 20, 1913. Serial No. 790,899. (Cl. 100—20.)



1. A machine of the class described comprising a material compressing element, means for twisting and binding the materials compressed, thrust members for controlling the twisting and binding actions and a movable member coöperating with the compressing element for actuating the said thrust members.

2. A machine of the class described comprising a compressing member, a twisting member, mechanism for rotating the twisting member and a movable cam member coöperating with the compressing member for causing the actuation of the twisting mechanism.

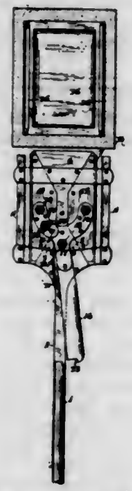
3. A machine of the class described comprising a compressing member, a member for shaping the material operated upon by the compressing member, a material separating and twisting member and a cam member coöperating with the compressing member for causing the operation of the material separating and twisting member.

4. A mechanism of the class described comprising a reciprocating compressing member, means for shaping materials compressed thereby, means for separating and twisting a binder about the same, means for cutting the binder and a cam member coöperating with the compressing member for accomplishing the separating, binding and cutting operations.

5. A mechanism of the class described comprising a material compressing element, mechanism for separating the materials compressed into proper lengths, mechanism for fastening a binder about said separated material, mechanism for cutting the binding material, a single movable actuating member and independent means extending from each of the said mechanisms to said movable actuating member, to operate them in conjunction with the movement of the compressing element.

[Claims 6 to 24 not printed in the Gazette.]

1,113,122. LIFTER FOR MOLDED OBJECTS. ROBERT E. HUNN, Oakland, Cal. Filed Nov. 4, 1913. Serial No. 799,121. (Cl. 57—9.)



1. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars, and having beveled outer edges, a lever movable in proximity to said handle, and operative connections between said lever and blocks whereby, with the movement of the lever in one direction, both of said blocks move outwardly, and, with the movement in the other direction, both blocks move inwardly.

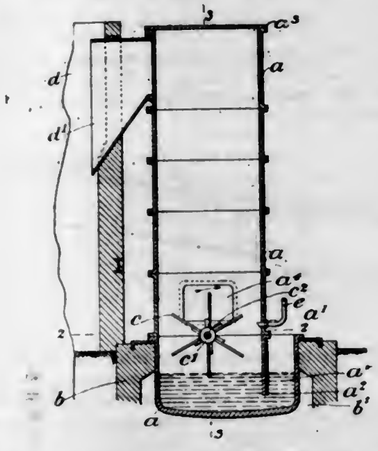
2. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, having undercut inner edges, blocks movable on said body to and from the respective side bars, and having beveled outer edges, a lever movable in proximity to said handle, and operative connections between said lever and blocks whereby, with the movement of the lever in one direction, both of said blocks move outwardly, and, with the movement in the other direction, both blocks move inwardly.

3. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars and having beveled outer edges, a lever movable into alinement with said handle, a spring for returning said lever in the opposite direction, and operative connections between said lever and blocks whereby, with the first-named movement of the lever, both of said blocks move outwardly, and, with its opposite movement, both blocks move inwardly.

4. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars and having beveled outer edges, a device movable in opposite directions relatively to the said body, and operative connections between said device and block whereby, by the movement of the device in one direction, both of said blocks move outwardly, and by its movement in the opposite direction both blocks move inwardly.

5. The combination of a body, a handle therefor, a plate secured to the under side of said body, parallel side bars, spaced from said body, and having undercut inner edges, supports secured to the upper side of said body, to the under side of which supports the bars are secured, blocks having beveled outer edges, and movable upon said plate and beneath said supports, a device movable on said body in opposite directions, and operative connections between said device and blocks whereby, by the movement of said device in one direction, said blocks are both moved outwardly, and, by its movement in the opposite direction, said blocks are both moved inwardly.

1,113,123. APPARATUS FOR PRODUCING LEAD OXID. WILLIAM INNES, Liverpool, England. Filed Apr. 19, 1913. Serial No. 762,280. (Cl. 75—19.)



1. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and forming an angle with the vertical, and the blades thereof engageable with the lead to throw the same upward to atomize it, and means for rotating said stirrer.

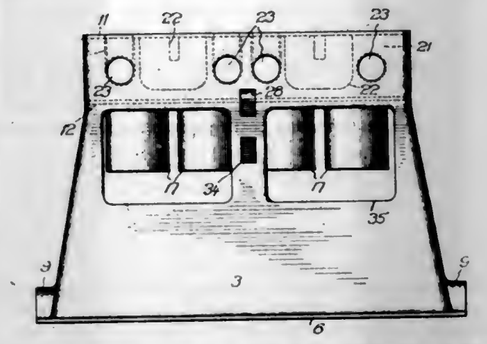
2. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and horizontal and the blades thereof engageable with the lead to throw the same upward to atomize it, and means for rotating said stirrer.

3. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and forming an angle with the vertical and the blades dipping into the lead to throw the same upward and atomize it, means for rotating said stirrer, and means for maintaining a constant level of the lead within the pot.

1,113,124. ENGINE-CASING. FREDRICK L. JACOBS and CLARE S. JACOBS, Detroit, Mich. Filed Oct. 20, 1913. Serial No. 796,165. (Cl. 123—195.)

1. An engine casing comprising walls having the edges thereof connected together, head plates arranged in the upper part of said casing and providing a water jacket, cylinder holders supported by said plates, members supported by said plates and providing valve rod guides and an inlet box arranged longitudinally of the water jacket of said casing and connected to some of said members and to a wall of said casing.

2. In an engine, valve rods, a casing comprising walls having the edges thereof connected together, top and bottom head plates arranged at the upper ends of said walls and providing a water jacket, cylinders supported by said plates, members supported by said plates and providing guides for said valve rods, and inlet means in connection with some of said members.



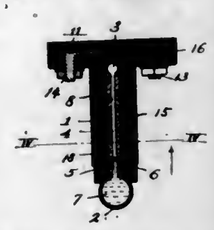
3. An engine casing comprising walls having the edges thereof connected together, top and bottom head plates arranged between the upper ends of said walls and providing a water jacket, cylinders supported by said top and bottom head plates, inlet and exhaust members supported by said head plates and providing valve rod guides, the exhaust members providing ports connecting the wall of said casing and the top head plate, and the inlet members having inlet ports through said water jacket to the top head plate of said casing.

4. An engine casing comprising walls having the edges thereof connected together, top and bottom head plates secured to the inner sides of said walls at the ends thereof and providing a water jacket, cylinders supported by said head plates, sectional members supported by said plates and providing vertical valve rod guides and constituting inlet and exhaust ports for said engine casing.

5. An engine casing comprising plates having the edges thereof connected together, top and bottom head plates arranged between said walls at the upper ends thereof and providing a water jacket, cylinder holders having the ends thereof mounted in said plates and adapted to support cylinders, and members connecting said plates and providing inlet and exhaust ports for said engine casing.

[Claims 6 to 15 not printed in the Gazette.]

1,113,125. THERMOSTATIC CIRCUIT-CLOSER. JOHN M. JOHNSON, Kansas City, Kans. Filed May 1, 1912. Serial No. 694,492. (Cl. 177—302.)



1. In combination, a thermostat receptacle comprising a tube, a base flange on the upper end of the tube, a tubular filling of fireproof, waterproof material within said tube, and a thermostat mercury tube fitted within said filling, said mercury tube having an integral bulb on one end, said bulb being exposed to atmosphere, and electrical contacts communicating with the interior of said mercury tube.

2. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, a circuit terminal extending into the lower portion of said tube, a circuit terminal extending into the upper portion of said tube, a fluid conductor in the tube, and a receptacle surrounding said tube except its bulb, which is exposed to atmosphere.

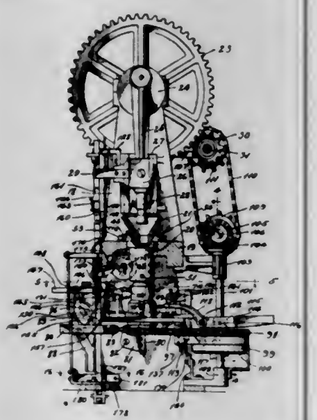
3. In a machine of the class described, the combination with the rotatable barrel provided with an axially disposed discharge opening, of a valve for said opening, a water supply pipe extending through the valve and into the barrel, and affording means for controlling said valve to regulate the effective area of said discharge opening.

4. In a machine of the class described, the combination with the barrel and a hollow trunnion therefor, which serves as the discharge opening of the barrel, of a valve movable axially of said trunnion for regulating the effective sizes of said opening, a water supply pipe extending through the valve, and communicative connections between the pipe and the interior of the barrel, said connections terminating in proximity to the mid length of the latter.

5. In a machine of the class described, the combination with the rotatable barrel provided with an axially disposed discharge opening, a water supply pipe extending through said opening and into said barrel, and a valve for said opening mounted upon said supply pipe and openable outwardly of the opening.

[Claim 6 not printed in the Gazette.]

1,113,121. MATERIAL-COMPRESSING MACHINE. GEORGE C. HUMPHREY, Los Angeles, Cal., assignor to California Fuel Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Sept. 20, 1913. Serial No. 790,899. (Cl. 100—20.)



1. A machine of the class described comprising a material compressing element, means for twisting and binding the materials compressed, thrust members for controlling the twisting and binding actions and a movable member coöperating with the compressing element for actuating the said thrust members.

2. A machine of the class described comprising a compressing member, a twisting member, mechanism for rotating the twisting member and a movable cam member coöperating with the compressing member for causing the actuation of the twisting mechanism.

3. A machine of the class described comprising a compressing member, a member for shaping the material operated upon by the compressing member, a material separating and twisting member and a cam member coöperating with the compressing member for causing the operation of the material separating and twisting member.

4. A mechanism of the class described comprising a reciprocating compressing member, means for shaping materials compressed thereby, means for separating and twisting a binder about the same, means for cutting the binder and a cam member coöperating with the compressing member for automatically causing the separating, binding and cutting operations.

5. A mechanism of the class described comprising a material compressing element, mechanism for separating the materials compressed into proper lengths, mechanism for fastening a binder about said separated material, mechanism for cutting the binding material, a single movable actuating member and independent means extending from each of the said mechanisms to said movable actuating member, to operate them in conjunction with the movement of the compressing element.

[Claims 6 to 24 not printed in the Gazette.]

1,113,122. LIFTER FOR MOLDED OBJECTS. ROBERT E. HUNN, Oakland, Cal. Filed Nov. 4, 1913. Serial No. 790,121. (Cl. 57—9.)

1. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars, and having beveled outer edges, a lever movable in proximity to said handle, and operative connections between said lever and blocks whereby, with the movement of the lever in one direction, both of said blocks move outwardly, and, with the movement in the other direction, both blocks move inwardly.

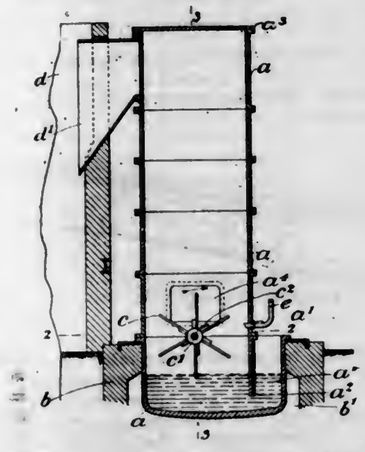
2. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, having undercut inner edges, blocks movable on said body to and from the respective side bars, and having beveled outer edges, a lever movable in proximity to said handle, and operative connections between said lever and blocks whereby, with the movement of the lever in one direction, both of said blocks move outwardly, and, with the movement in the other direction, both blocks move inwardly.

3. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars and having beveled outer edges, a lever movable into alinement with said handle, a spring for returning said lever in the opposite direction, and operative connections between said lever and blocks whereby, with the first-named movement of the lever, both of said blocks move outwardly, and, with its opposite movement, both blocks move inwardly.

4. In an implement of the character described, the combination of a body, a handle therefor, side bars spaced from the body, supporting means for said side bars secured to the body, blocks movable on said body to and from the respective side bars and having beveled outer edges, a device movable in opposite directions relatively to the said body, and operative connections between said device and block whereby, by the movement of the device in one direction, both of said blocks move outwardly, and by its movement in the opposite direction both blocks move inwardly.

5. The combination of a body, a handle therefor, a plate secured to the under side of said body, parallel side bars, spaced from said body, and having undercut inner edges, supports secured to the upper side of said body, to the under side of which supports the bars are secured, blocks having beveled outer edges, and movable upon said plate and beneath said supports, a device movable on said body in opposite directions, and operative connections between said device and blocks whereby, by the movement of said device in one direction, said blocks are both moved outwardly, and, by its movement in the opposite direction, said blocks are both moved inwardly.

1,113,123. APPARATUS FOR PRODUCING LEAD OXID. WILLIAM INNES, Liverpool, England. Filed Apr. 19, 1913. Serial No. 762,280. (Cl. 75—19.)



1. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and forming an angle with the vertical, and the blades thereof engageable with the lead to throw the same upward to atomize it, and means for rotating said stirrer.

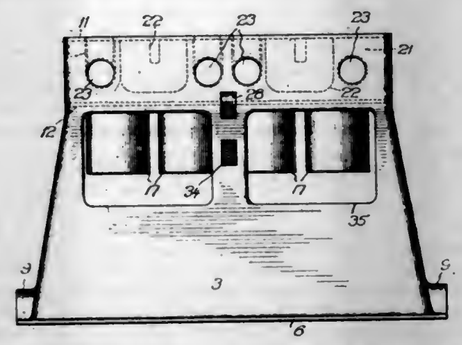
2. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and horizontal and the blades thereof engageable with the lead to throw the same upward to atomize it, and means for rotating said stirrer.

3. In apparatus for the production of lead oxid, in combination, a pot adapted to contain the metallic lead, means for maintaining the lead in a molten state, a rotatable stirrer in said pot, the axis of said stirrer being above the bath and forming an angle with the vertical and the blades dipping into the lead to throw the same upward and atomize it, means for rotating said stirrer, and means for maintaining a constant level of the lead within the pot.

1,113,124. ENGINE-CASING. FREDRICK L. JACOBS and CLARE S. JACOBS, Detroit, Mich. Filed Oct. 20, 1913. Serial No. 796,165. (Cl. 123—195.)

1. An engine casing comprising walls having the edges thereof connected together, head plates arranged in the upper part of said casing and providing a water jacket, cylinder holders supported by said plates, members supported by said plates and providing valve rod guides and an inlet box arranged longitudinally of the water jacket of said casing and connected to some of said members and to a wall of said casing.

2. In an engine, valve rods, a casing comprising walls having the edges thereof connected together, top and bottom head plates arranged at the upper ends of said walls and providing a water jacket, cylinders supported by said plates, members supported by said plates and providing guides for said valve rods, and inlet means in connection with some of said members.



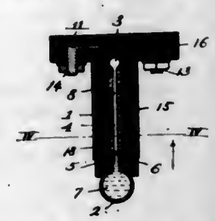
3. An engine casing comprising walls having the edges thereof connected together, top and bottom head plates arranged between the upper ends of said walls and providing a water jacket, cylinders supported by said top and bottom head plates, inlet and exhaust members supported by said head plates and providing valve rod guides, the exhaust members providing ports connecting the wall of said casing and the top head plate, and the inlet members having inlet ports through said water jacket to the top head plate of said casing.

4. An engine casing comprising walls having the edges thereof connected together, top and bottom head plates secured to the inner sides of said walls at the ends thereof and providing a water jacket, cylinders supported by said head plates, sectional members supported by said plates and providing vertical valve rod guides and constituting inlet and exhaust ports for said engine casing.

5. An engine casing comprising plates having the edges thereof connected together, top and bottom head plates arranged between said walls at the upper ends thereof and providing a water jacket, cylinder holders having the ends thereof mounted in said plates and adapted to support cylinders, and members connecting said plates and providing inlet and exhaust ports for said engine casing.

[Claims 6 to 15 not printed in the Gazette.]

1,113,125. THERMOSTATIC CIRCUIT-CLOSER. JOHN M. JOHNSON, Kansas City, Kans. Filed May 1, 1912. Serial No. 694,492. (Cl. 177—302.)



1. In combination, a thermostat receptacle comprising a tube, a base flange on the upper end of the tube, a tubular filling of fireproof, waterproof material within said tube, and a thermostat mercury tube fitted within said filling, said mercury tube having an integral bulb on one end, said bulb being exposed to atmosphere, and electrical contacts communicating with the interior of said mercury tube.

2. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, a circuit terminal extending into the lower portion of said tube, a circuit terminal extending into the upper portion of said tube, a fluid conductor in the tube, and a receptacle surrounding said tube except its bulb, which is exposed to atmosphere.

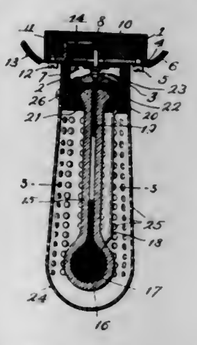
3. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, two disconnected circuit terminals extending into the lower portion of said tube, a fluid conductor in the tube establishing communication between said disconnected terminals, a receptacle surrounding said tube and leaving the bulb exposed to atmosphere, conductors carried by said receptacle to which the terminals are connected, and binding posts communicating with said conductors.

4. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, two disconnected circuit terminals extending into the lower portion of said tube, a fluid conductor in the tube establishing communication between said disconnected terminals, a receptacle surrounding said tube, but leaving the bulb exposed to atmosphere, a space being left between the tube and the interior of said receptacle, and insulating material impervious to moisture filling said space, substantially as described.

5. In combination, a thermostat receptacle formed of non-metallic fireproof and waterproof material, said receptacle consisting of a tubular portion, a base flange on the upper end thereof, wire-connecting devices mounted on said flange, a tubular filling of fireproof, waterproof material within said tube, a thermostat tube embedded in said filling but having an integral bulb which is uncovered, and electric connections between the thermostat and said wire-connecting devices.

[Claim 6 not printed in the Gazette.]

1,113,126. THERMOSTAT. JOHN M. JOHNSON, Kansas City, Kans. Filed Sept. 15, 1913. Serial No. 789,808. (Cl. 177—302.)

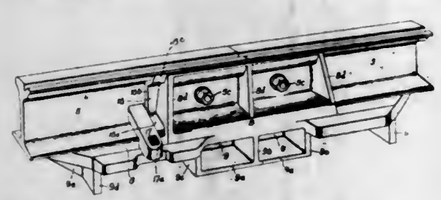


1. In a thermostat, a thermostatic unit comprising a thermometer tube with a bulb at one end, and a screw plug carrying the thermometer tube at the end remote from the bulb, said screw plug having central and peripheral contact terminals and said thermometer tube having spaced electric conductors sealed therein, one conductor being sealed into the bulb adjacent the tube in contact with the liquid in the thermometer and the other being sealed in the end of the tube remote from the bulb and normally out of contact with the liquid in the thermometer and both conductors being connected to the respective contact terminals of the plug, the first mentioned conductor leading outwardly from the bulb alongside the tube to the opposite end and there fastened to the screw plug.

2. In a thermostat, a thermostatic unit comprising a thermometer tube with a bulb at one end and a screw plug carrying a thermometer tube at the end remote from the bulb, said screw plug having central and peripheral contact terminals and said thermometer tube having spaced electric conductors sealed therein, one conductor being sealed into the bulb adjacent the tube in contact with liquid in the thermometer and the other being sealed into the end of the tube remote from the bulb and normally out of contact with the liquid in the thermometer and both conductors being connected to the respective contact terminals of the plug, the first mentioned conductor leading outwardly from the bulb alongside the tube to the opposite end and there fastened to the screw plug, a screw socket provided with spaced electric terminals and adapted to receive the screw plug with the electric terminals of the plug in contact with those of the socket, and a casing pervious to air and shaped to inclose the thermometer tube with its bulb and embrace a portion of the socket member.

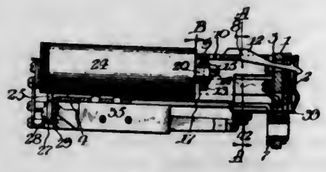
3. In a device of the class described, a housing, a cap thereon, a mercury-containing tube carried by said cap within said housing, and electric conductors extending from the exterior thereof, into and spaced apart within said tube; substantially as described.

1,113,127. RAIL-JOINT. CHARLES CALVERT LAMB, Chicago, Ill., assignor of one-half to Willard M. McEwen, Chicago, Ill. Filed Mar. 13, 1913. Serial No. 753,907. (Cl. 239—6.)



In a rail-joint for street-railway rails, the combination of a joint bar consisting of a horizontal base-plate for supporting the rail ends, and longitudinal side members made integral with and extending upwardly from said base-plate at opposite sides of the rails, one of said side members having inwardly, downwardly and upwardly facing surfaces that are located adjacent to and are spaced from the web, base-flanges and heads of the rails, and all of which are longitudinally inclined from end to end of the said side members, said side members being provided with bolt holes adapted to register with the bolt holes of the rail webs, a tapered wedge piece consisting of an upright member and integral base and top flange members; said upright and base and flange members being shaped on their inner surfaces to conform to the opposing faces of the webs, base-flanges and heads of the rails, and inclined on their outwardly, upwardly and downwardly facing surfaces to fit the inclined inwardly, downwardly and upwardly facing surfaces of the joint-bar, said wedge piece being provided with elongated bolt holes adapted to register with the bolt holes of the rail webs and joint bar and track bolts inserted through the bolt holes of said side members, the rail webs, and the wedge piece.

1,113,128. ANNUNCIATOR. OSCAR M. LEICH, Genoa, Ill., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Filed Mar. 4, 1912. Serial No. 681,442. (Cl. 175—336.)



1. In a device of the character described, the combination with a framework, of a removable coil and core mounted in said framework, a pole piece for said core, and an armature, said pole piece and armature being permanently mounted in said framework independently of the mounting of said coil and core.

2. In a device of the character described the combination with a framework, of a removable coil and core mounted in said framework, a pole piece for said core into which said core projects, and an armature, said pole piece and armature being permanently mounted in the said framework independently of the mounting of said coil and core.

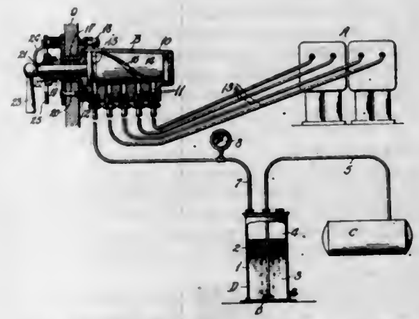
3. A device of the character described having a framework, an armature and a pole piece permanently mounted in said framework, and a removable coil and core secured in said framework independently of said armature and pole piece, said core entering said pole piece.

4. A device of the character described comprising a framework, an armature permanently mounted in said framework, a pole piece in inductive relation to said armature permanently mounted in said framework, and a removable coil and core secured in said framework, independently of the mounting of said armature and pole piece, said core being in inductive relation to said pole piece.

5. A device of the character described having a framework, an armature and a pole piece permanently mounted in said framework, and a removable coil and core mounted in said framework, said core entering said pole piece to accommodate for different lengths of core, said armature when attracted moving toward the axis of said core.

[Claims 6 to 21 not printed in the Gazette.]

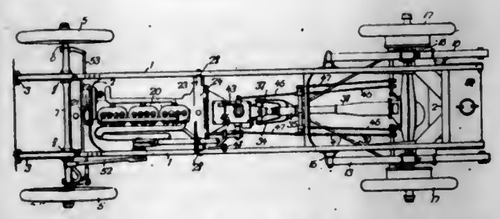
1,113,129. ENGINE-STARTER. WALTER L. MARR, Flint, Mich. Filed Mar. 15, 1913. Serial No. 754,545. (Cl. 137—26.)



1. In a distributing valve, the combination with a support, of a cap having a chambered portion extending through said support, a tapering casing secured to said cap and having a tapering bore formed therein, a longitudinal enlargement on the bottom of said casing provided with outlet and inlet ports communicating with the tapering bore of said casing, a tapering plug in said casing and having the large end thereof provided with an annular groove in communication with the inlet port of said casing, said plug having a spiral groove formed in the periphery thereof in communication with the annular groove of said plug and adapted by rotative movement of said plug to successively communicate with the outlet ports of said casing, a stem carried by the large end of said plug and extending through the chambered portion of said cap, means in the chambered portion of said cap for holding said plug normally seated in the bore of said casing, and means to facilitate rotating said stem.

2. In a distributing valve, the combination with a support, of a cap having a chambered portion extending through said support, a tapering casing secured to said cap and having a tapering bore formed therein, a longitudinal enlargement on said casing and having outlet and inlet ports formed therein communicating with the tapering bore of said casing, a tapering plug in said casing and having the large end thereof provided with an annular groove in communication with the inlet port of said casing, and a spiral groove throughout the length of said plug in communication with the annular groove thereof and adapted by rotative movement of said valve to successively communicate with the outlet ports of said casing, a stem carried by the large end of said plug and extending through the chambered portion of said cap, a coiled compression spring within the chambered portion of said cap and engaging the large end of said plug for holding said plug normally seated in the bore of said casing, and means at the outer end of said stem to facilitate adjusting the plug within said casing.

1,113,130. MOTOR-VEHICLE. WALTER L. MARR, Flint, Mich. Filed Apr. 28, 1913. Serial No. 764,073. (Cl. 21—90.)



1. In an automobile, a front axle, a rear axle casing, a rear axle in said casing, a chassis having the rear end thereof yieldingly supported on said axle casing, a power plant secured to the chassis and operatively connected to the rear axle, a rigid thrust member having a gimbal link connection with the power plant and secured to the rear axle casing to transmit driving thrust directly from the axle casing to the power plant, a brake mechanism on the rear axle casing provided with controlling members on the power plant and thrust member, and controlling mechanism for the power plant mounted thereon.

2. In an automobile, a front axle, a rear axle casing, a rear axle in said casing, a chassis, spring members articulated to the chassis and secured to the front axle and rear axle casing for yieldingly supporting the chassis thereon and permitting limited longitudinal movement of the chassis relative to the rear axle casing, a power plant secured to the chassis, a driving connection between the power plant and the rear axle, a rigid thrust member secured to the rear axle casing and having a gimbal ring connection with the power plant to transmit driving thrust directly thereto, brake operating mechanism supported on the rear axle casing, thrust member and power plant, and controlling mechanism for the power plant mounted thereon.

3. In an automobile, a chassis, a power plant pivoted centrally at its forward end to a forward transverse member of the chassis and at its sides to the side members of the chassis whereby limited angular movement of the side members of the chassis relative to the plant is permitted, a rear axle casing forming a housing for differential driving mechanism, a hollow thrust member rigidly secured to the rear axle casing and articulated to the power plant to transmit thrust from the rear axle casing to the power plant in line with the connection of the latter and the forward member of the chassis, brake mechanism mounted on the rear axle casing, thrust member and power plant, and spring secured on the rear axle casing and articulated to the chassis to oscillate longitudinally thereof.

4. In an automobile, a rear driving axle, a casing therefor, springs rigidly secured to the rear drive axle casing, a chassis, links articulating the springs to the chassis to permit limited longitudinal movement between them, a power plant pivoted at its forward end to a transverse member of the chassis and at its sides to side members thereof, a thrust member rigidly secured to the rear axle casing in longitudinal alinement with the front connection to the chassis, connected with a universal thrust joint at its forward end to the power plant, brake mechanism secured on the rear axle casing, thrust member and power plant, and driving connections extending from the power plant through the thrust member into the rear axle casing.

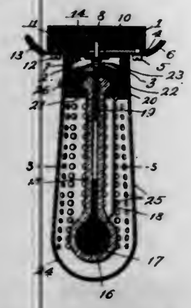
3. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, two disconnected circuit terminals extending into the lower portion of said tube, a fluid conductor in the tube establishing communication between said disconnected terminals, a receptacle surrounding said tube and leaving the bulb exposed to atmosphere, conductors carried by said receptacle to which the terminals are connected, and binding posts communicating with said conductors.

4. A thermostatic circuit closer, consisting of a tube having a bulb at one end and a chamber at its opposite end, said chamber communicating with said bulb through a bore in the tube, two disconnected circuit terminals extending into the lower portion of said tube, a fluid conductor in the tube establishing communication between said disconnected terminals, a receptacle surrounding said tube, but leaving the bulb exposed to atmosphere, a space being left between the tube and the interior of said receptacle, and insulating material impervious to moisture filling said space, substantially as described.

5. In combination, a thermostat receptacle formed of non-metallic fireproof and waterproof material, said receptacle consisting of a tubular portion, a base flange on the upper end thereof, wire-connecting devices mounted on said flange, a tubular filling of fireproof, waterproof material within said tube, a thermostat tube embedded in said filling but having an integral bulb which is uncovered, and electric connections between the thermostat and said wire-connecting devices.

[Claim 6 not printed in the Gazette.]

1,113,126. THERMOSTAT. JOHN M. JOHNSON, Kansas City, Kans. Filed Sept. 15, 1913. Serial No. 789,808. (Cl. 177—302.)

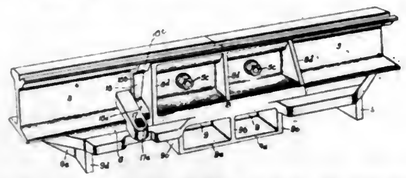


1. In a thermostat, a thermostatic unit comprising a thermometer tube with a bulb at one end, and a screw plug carrying the thermometer tube at the end remote from the bulb, said screw plug having central and peripheral contact terminals and said thermometer tube having spaced electric conductors sealed therein, one conductor being sealed into the bulb adjacent the tube in contact with the liquid in the thermometer and the other being sealed in the end of the tube remote from the bulb and normally out of contact with the liquid in the thermometer and both conductors being connected to the respective contact terminals of the plug, the first mentioned conductors leading outwardly from the bulb alongside the tube to the opposite end and there fastened to the screw plug.

2. In a thermostat, a thermostatic unit comprising a thermometer tube with a bulb at one end and a screw plug carrying a thermometer tube at the end remote from the bulb, said screw plug having central and peripheral contact terminals and said thermometer tube having spaced electric conductors sealed therein, one conductor being sealed into the bulb adjacent the tube in contact with liquid in the thermometer and the other being sealed into the end of the tube remote from the bulb and normally out of contact with the liquid in the thermometer and both conductors being connected to the respective contact terminals of the plug, the first mentioned conductor leading outwardly from the bulb and alongside the tube to the opposite end and there fastened to the screw plug, a screw socket provided with spaced electric terminals and adapted to receive the screw plug with the electric terminals of the plug in contact with those of the socket, and a casing pervious to air and shaped to inclose the thermometer tube with its bulb and embrace a portion of the socket member.

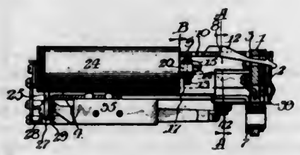
3. In a device of the class described, a housing, a cap thereon, a mercury-containing tube carried by said cap within said housing, and electric conductors extending from the exterior thereof, into and spaced apart within said tube; substantially as described.

1,113,127. RAIL-JOINT. CHARLES CALVERT LAMB, Chicago, Ill., assignor of one-half to Willard M. McEwen, Chicago, Ill. Filed Mar. 13, 1913. Serial No. 753,907. (Cl. 239—6.)



In a rail-joint for street-railway rails, the combination of a joint bar consisting of a horizontal base-plate for supporting the rail ends, and longitudinal side members made integral with and extending upwardly from said base-plate at opposite sides of the rails, one of said side members having inwardly, downwardly and upwardly facing surfaces that are located adjacent to and are spaced from the web, base-flanges and heads of the rails, and all of which are longitudinally inclined from end to end of the said side members, said side members being provided with bolt holes adapted to register with the bolt holes of the rail webs, a tapered wedge piece consisting of an upright member and integral base and top flange members; said upright and base and flange members being shaped on their inner surfaces to conform to the opposing faces of the webs, base-flanges and heads of the rails, and inclined on their outwardly, upwardly and downwardly facing surfaces to fit the inclined inwardly, downwardly and upwardly facing surfaces of the joint-bar, said wedge piece being provided with elongated bolt holes adapted to register with the bolt holes of the rail webs and joint bar and track bolts inserted through the bolt holes of said side members, the rail webs, and the wedge piece.

1,113,128. ANNUNCIATOR. OSCAR M. LEICH, Genoa, Ill., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Filed Mar. 4, 1912. Serial No. 681,442. (Cl. 175—336.)



1. In a device of the character described, the combination with a framework, of a removable coil and core mounted in said framework, a pole piece for said core, and an armature, said pole piece and armature being permanently mounted in said framework independently of the mounting of said coil and core.

2. In a device of the character described the combination with a framework, of a removable coil and core mounted in said framework, a pole piece for said core into which said core projects, and an armature, said pole piece and armature being permanently mounted in the said framework independently of the mounting of said coil and core.

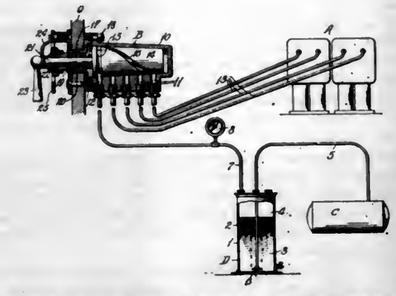
3. A device of the character described having a framework, an armature and a pole piece permanently mounted in said framework, and a removable coil and core secured in said framework independently of said armature and pole piece, said core entering said pole piece.

4. A device of the character described comprising a framework, an armature permanently mounted in said framework, a pole piece in inductive relation to said armature permanently mounted in said framework, and a removable coil and core secured in said framework, independently of the mounting of said armature and pole piece, said core being in inductive relation to said pole piece.

5. A device of the character described having a framework, an armature and a pole piece permanently mounted in said framework, and a removable coil and core mounted in said framework, said core entering said pole piece to accommodate for different lengths of core, said armature when attracted moving toward the axis of said core.

[Claims 6 to 21 not printed in the Gazette.]

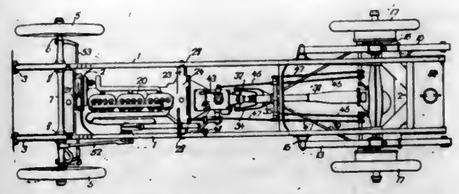
1,113,129. ENGINE-STARTER. WALTER L. MARR, Flint, Mich. Filed Mar. 15, 1913. Serial No. 754,545. (Cl. 137—26.)



1. In a distributing valve, the combination with a support, of a cap having a chambered portion extending through said support, a tapering casing secured to said cap and having a tapering bore formed therein, a longitudinal enlargement on the bottom of said casing provided with outlet and inlet ports communicating with the tapering bore of said casing, a tapering plug in said casing and having the large end thereof provided with an annular groove in communication with the inlet port of said casing, said plug having a spiral groove formed in the periphery thereof in communication with the annular groove of said plug and adapted by rotative movement of said plug to successively communicate with the outlet ports of said casing, a stem carried by the large end of said plug and extending through the chambered portion of said cap, means in the chambered portion of said cap for holding said plug normally seated in the bore of said casing, and means to facilitate rotating said stem.

2. In a distributing valve, the combination with a support, of a cap having a chambered portion extending through said support, a tapering casing secured to said cap and having a tapering bore formed therein, a longitudinal enlargement on said casing and having outlet and inlet ports formed therein communicating with the tapering bore of said casing, a tapering plug in said casing and having the large end thereof provided with an annular groove in communication with the inlet port of said casing, and a spiral groove throughout the length of said plug in communication with the annular groove thereof and adapted by rotative movement of said valve to successively communicate with the outlet ports of said casing, a stem carried by the large end of said plug and extending through the chambered portion of said cap, a coiled compression spring within the chambered portion of said cap and engaging the large end of said plug for holding said plug normally seated in the bore of said casing, and means at the outer end of said stem to facilitate adjusting the plug within said casing.

1,113,130. MOTOR-VEHICLE. WALTER L. MARR, Flint, Mich. Filed Apr. 28, 1913. Serial No. 764,073. (Cl. 21—90.)



1. In an automobile, a front axle, a rear axle casing, a rear axle in said casing, a chassis having the rear end thereof yieldingly supported on said axle casing, a power plant secured to the chassis and operatively connected to the rear axle, a rigid thrust member having a gimbal link connection with the power plant and secured to the rear axle casing to transmit driving thrust directly from the axle casing to the power plant, a brake mechanism on the rear axle casing provided with controlling members on the power plant and thrust member, and controlling mechanism for the power plant mounted thereon.

2. In an automobile, a front axle, a rear axle casing, a rear axle in said casing, a chassis, spring members articulated to the chassis and secured to the front axle and rear axle casing for yieldingly supporting the chassis thereon and permitting limited longitudinal movement of the chassis relative to the rear axle casing, a power plant secured to the chassis, a driving connection between the power plant and the rear axle, a rigid thrust member secured to the rear axle casing and having a gimbal ring connection with the power plant to transmit driving thrust directly thereto, brake operating mechanism supported on the rear axle casing, thrust member and power plant, and controlling mechanism for the power plant mounted thereon.

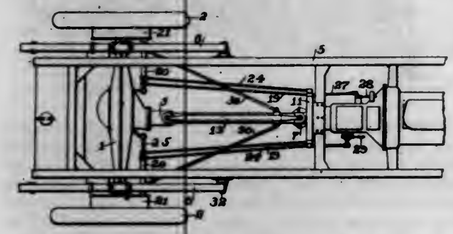
3. In an automobile, a chassis, a power plant pivoted centrally at its forward end to a forward transverse member of the chassis and at its sides to the side members of the chassis whereby limited angular movement of the side members of the chassis relative to the plant is permitted, a rear axle casing forming a housing for differential driving mechanism, a hollow thrust member rigidly secured to the rear axle casing and articulated to the power plant to transmit thrust from the rear axle casing to the power plant in line with the connection of the latter and the forward member of the chassis, brake mechanism mounted on the rear axle casing, thrust member and power plant, and spring secured on the rear axle casing and articulated to the chassis to oscillate longitudinally thereof.

4. In an automobile, a rear driving axle, a casing therefor, springs rigidly secured to the rear drive axle casing, a chassis, links articulating the springs to the chassis to permit limited longitudinal movement between them, a power plant pivoted at its forward end to a transverse member of the chassis and at its sides to side members thereof, a thrust member rigidly secured to the rear axle casing in longitudinal alinement with the front connection to the chassis, connected with a universal thrust joint at its forward end to the power plant, brake mechanism secured on the rear axle casing, thrust member and power plant, and driving connections extending from the power plant through the thrust member into the rear axle casing.

5. In an automobile, a chassis, a power plant pivotally secured at its forward end and at its sides to a transverse member and side members of the chassis respectively, a rear driving axle casing, springs longitudinally oscillatory on the chassis rigidly mounted on the rear axle casing, a hollow thrust member extending forward from the rear axle casing to which it is rigidly secured, a yoke secured to the forward end of the thrust member and a gimbal ring connection between the yoke and the rear portion of the power plant in substantial alinement with the forward pivotal connection of the power plant and chassis.

[Claims 6 to 8 not printed in the Gazette.]

1,113,131. AUTOMOBILE CONSTRUCTION. WALTER L. MARR, Flint, Mich. Filed June 21, 1913. Serial No. 775,034. (Cl. 21—90.)



1. The combination in an automobile, of a rear drive axle, a chassis yieldingly supported thereon, a power plant mounted on the chassis, a longitudinally disposed drive shaft having universal and extensible point connection with the power plant and operative connection with the rear drive axle, and a thrust rod arranged above and substantially parallel to the drive shaft having universal thrust joint connections at its ends with the rear drive axle and with the chassis adjacent the power plant.

2. The combination in an automobile, of a rear drive axle, a chassis yieldingly supported thereon, a power plant mounted on the chassis, a longitudinally disposed drive shaft having universal and extensible joint connection with the power plant and operative connection with the rear drive axle, a thrust rod above and substantially parallel to the drive shaft having universal thrust joint connections at its ends with the rear drive axle and with the chassis adjacent the power plant, and brake controlling and speed changing means mounted on the rear axle and power plant.

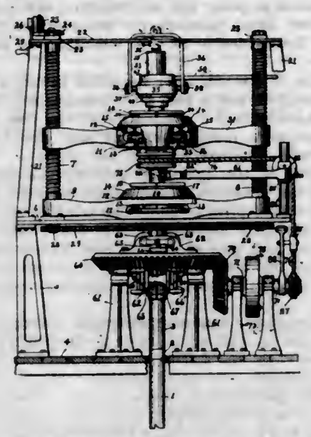
3. The combination in an automobile, of a rear drive axle having a forwardly extending torque member, a socket thereon, a chassis yieldingly supported on the drive axle, a socket thereon, and a thrust member directly above said torque member and detachably secured at its ends in the sockets, the sockets permitting angular movement of the member therein.

4. The combination in an automobile, of a rear drive axle, a torque member extending forwardly therefrom, a chassis yieldingly mounted on the axle, a transverse member secured on the chassis in advance of the axle, a socket secured on the thrust member adjacent the axle, a socket secured on the transverse member of the chassis, and a thrust member directly above said torque member and pivotally secured at its ends in the sockets.

5. The combination in an automobile, of a rear drive axle, a hollow torque member rigidly secured thereto, a chassis yieldingly mounted on the axle, a power plant secured on the chassis, a drive shaft extending from the plant through the hollow torque member and having a universal telescoping joint connection between the plant and the torque member, and a thrust member arranged directly above said torque member and having universal thrust joint connections at its ends with the torque member adjacent the axle and with the chassis adjacent the universal joint.

[Claims 6 to 13 not printed in the Gazette.]

1,113,132. ROTARY DRILL. GEORGE WATSON MCALLISTER, San Francisco, Cal. Filed Mar. 8, 1911. Serial No. 613,064. (Cl. 255—19.)



1. In a mechanism for continuously rotating a drill rod and comprising a driven wheel, two pairs of grooved rollers, the axes of one pair of rollers being at 90° to the axes of the other pair, adapted to contact with the part to be driven, and links connecting the journals of said grooved rollers whereby they may be drawn together to grip said driven rod, substantially as described.

2. In an apparatus for continuous drilling, a support for a drill, said support comprising a beam carrying antifriction bearings, a revoluble member supported upon said bearings, and frusto-conical shells adapted to contact with the drill rod to prevent its longitudinal movement and to permit its rotation with said revoluble support, substantially as described.

3. In an apparatus for operating a drill rod continuously a driven wheel, grooved rollers carried thereby, a drill extending between said grooved rollers, and semi-cylindrical shells adapted to be placed upon said drill rod and to contact with said rollers to rotate said rod, substantially as described.

4. In an apparatus for continuously rotating a drill rod means to rotate said drill rod continuously, means to support said drill rod to prevent its downward movement, and means whereby a fresh length of drill rod may be screwed into place at the top of the rods being rotated without stopping the rotation of said rods, substantially as described.

5. In an apparatus for continuously operating drill rods a set of drill rods, a driven wheel, rollers carried thereby to rotate said rods, a support to prevent the downward movement of said drill rods, a removable pulley adapted to be connected with a fresh section of drill rod, means to hold said fresh section of drill rod in a position over the rods being rotated, and a belt passing around said pulley to rotate said fresh section of rod more rapidly than the rods then in use, substantially as described.

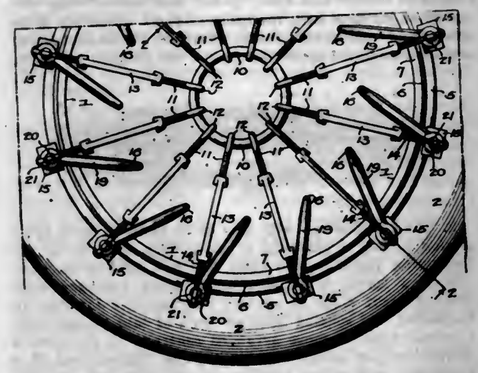
[Claims 6 to 10 not printed in the Gazette.]

1,113,133. TIRE-SETTING DEVICE. HOWARD A. MINER, Philadelphia, Pa. Filed Nov. 6, 1912. Serial No. 729,804. (Cl. 151—6.)

1. In a tire setting device, the combination of a plurality of arms, pressure blocks carried by the outer ends of said arms, means for confining the inner ends of said arms, and means independent of the arms and blocks for clamping said blocks against the tire.

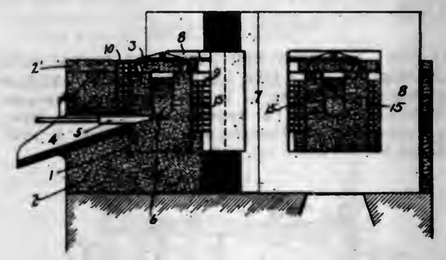
2. In a tire setting device, the combination of a plurality of longitudinally adjustable arms, pressure blocks adjustably carried at the outer ends of said arms, a ring for confining the inner ends of said arms, and means for clamping said blocks against the tire.

3. In a tire setting device, the combination with a tire and its rim, of a central ring normally unsupported, adjustable bolts radiating from said ring, pressure blocks adjustably mounted at the ends of said bolts, and screw clamping means including a member having a portion in engagement with the rim and a portion engaging said blocks to press the latter against the tire and the opposite edge of said rim.



4. In a tire setting device, the combination with a tire and its rim, of a centrally disposed and normally unsupported ring, a plurality of eye-bolts carried by said ring and radiating therefrom, a plurality of pressure blocks, bolts carried by said blocks, turn-buckles connecting said block bolts and eye-bolts in line, a plurality of clamping devices, each having a portion in engagement with one side of the rim, and screws carried by said clamping devices and engaging the blocks to force the latter against the tire and the opposite edge of said rim.

1,113,134. INDUCTION ELECTRIC FURNACE. WALTER S. MOODY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 18, 1906. Serial No. 339,481. (Cl. 219—64.)



1. An electric furnace comprising a crucible, a core passing through said crucible, and a primary winding divided into two parts connected in multiple with each other, one inside of said crucible and the other outside thereof.

2. An electric furnace comprising an annular crucible, a core passing centrally through said crucible, and a primary winding divided into two parts, one inside of said crucible and the other outside thereof, said winding consisting of thin copper tubing suitably insulated.

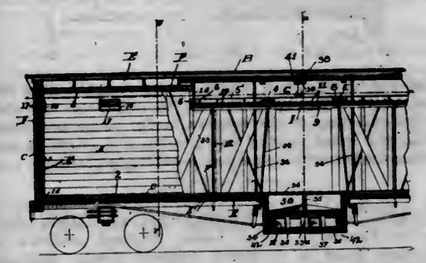
3. An electric furnace comprising a magnetic core, a primary winding surrounding one leg of said core and divided into two concentric coils connected in multiple with each other, and an annular crucible concentric with and located between said coils.

4. An electric furnace comprising an annular crucible, a core passing centrally through said crucible, and a primary winding concentric with said crucible and divided into sections connected in multiple.

5. An electric furnace comprising an annular crucible, a core passing centrally through said crucible, and a primary winding concentric with said crucible and divided into superposed sections connected in multiple.

[Claims 6 to 15 not printed in the Gazette.]

1,113,135. REFRIGERATOR-CAR. CHARLES A. MOORE, St. Paul, Minn., assignor to Moore Patent Car Co., a Corporation of Minnesota. Filed Apr. 17, 1907. Serial No. 368,791. (Cl. 62—17.)



1. In a refrigerating car having a provision chamber, an ice bunker in said provision chamber consisting of flanged metal beams attached to the upper part of the side walls of said car, longitudinally thereof, other flanged metal beams lying transversely of the car and framed into said longitudinal beams, a drainage tray supported on the flanges of said beams and having a drainage connection with the exterior of the car and angle bar slats supported above said drainage tray, having their apexes projecting upward to support and engage the ice in the bunker.

2. In a refrigerator car having a roof of uniform construction throughout its length, an ice bunker near the roof of said car and below it, transverse metal beams supporting and carried by the walls of said car, said beams extending through the floor of said bunker to divide the same into ice retaining compartments, and transverse metal slats carried in said bunker, and having upwardly projecting sharp edges adapted to engage and prevent the longitudinal racing of ice in the bunker when said car is in motion.

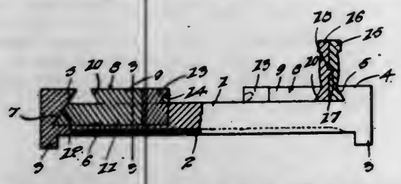
3. In a refrigerator car having a body of substantially uniform cross-section throughout its length, an ice bunker within said car body independent of the roof of said car and isolated from its ends, transverse metal beams carried by the side walls of said car and supporting said bunker, and projecting through the floor thereof, and transverse metal slats having sharp top edges supported by the floor of said bunker, said slats and beams forming an anti-skidding device adapted to prevent the longitudinal movement of ice within the bunker.

4. A refrigerator car having a body of substantially uniform cross-section throughout its entire length, an overhead ice bunker within said body below the roof of the car isolated from its ends and having a floor, the ends of said bunker having passages into the top of the provision chamber to permit circulation of air through said bunker and provision chamber, and a plurality of transverse beams carried by the side walls of the car and projecting above and supporting the floor of said bunker independent of the roof of the car, whereby ice resting upon said floor is prevented by said beams from racing due to longitudinal movement of the car.

1,113,136. RAIL-TIE. EDWIN L. OLIVER, Nichols, N. Y., assignor of one-half to William A. Osborne, Nichols, N. Y. Filed June 8, 1914. Serial No. 843,840. (Cl. 238—5.)

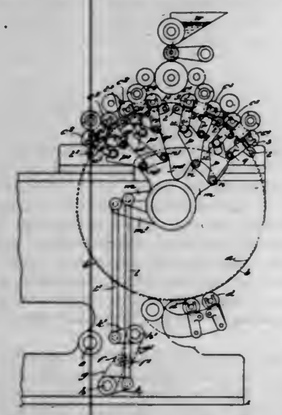
The combination with a rail tie having upstanding rail base engaging lugs having beveled inner faces, longitudinal recesses in the end portion thereof, said recesses having their outer end faces beveled in the same plane as is the bevel of the inner faces of the lugs of removable

clamping members mounted within the recesses, each of said removable clamping members comprising a plate mounted upon the tie and having its outer face beveled to coöperate with the beveled face of the lugs to hold rails in place, longitudinal ribs formed on the under faces of the



plates and fitting snugly within the recesses, the outer end faces of the ribs being beveled to coöperate with the beveled end faces of the recesses, wedge blocks positioned within the inner ends of the recesses and engaging and holding the removable clamping members in position.

1,113,137. ROTARY LITHOGRAPHIC MACHINE. RAYMOND PERCIVAL PAYNE, Leeds, England, assignor to George Mann & Company, Limited, Leeds, England. Filed Nov. 21, 1912. Serial No. 732,733. (Cl. 101—71.)



1. In a rotary lithographic machine, the combination of a design cylinder adapted for printing a design extending over more than half its periphery, a plurality of groups of inking rollers, and means adapted to operate each group in turn for inking the design cylinder during a complete revolution thereof throughout the process of printing.

2. In a rotary lithographic machine, the combination, with a design cylinder and its design plate, of a plurality of groups of inking rollers adapted to be used alternately during the progress of printing, and means operating to move the said groups of inking rollers continuously and alternately one group at a time into and out of contact with the design plate during the progress of printing.

3. In a rotary lithographic machine, the combination with a design cylinder and its design plate, of a plurality of groups of inking rollers adapted to be used alternately during the progress of printing, and means operating to move the said groups of inking rollers continuously and alternately a number at a time less than the whole of such groups, into and out of contact with the design plate during the progress of printing.

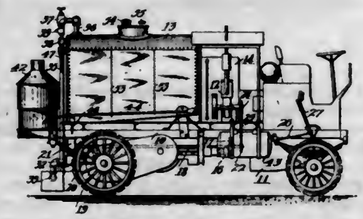
1,113,138. CABLE-SPLICE. AUGUSTUS J. PENOTE, Cleveland, Ohio. Filed June 14, 1911. Serial No. 633,048. (Cl. 173—268.)

1. The combination with two cable sections, each cable section having a plurality of conductors, of a splice for connecting together said cable sections, said splice comprising a series of sector-shaped blocks arranged with their straight sides in contact and together forming an insulating and spacing member, each of said blocks being provided with a groove arranged centrally in the curved surface thereof adapted to receive the jointed ends of a conductor, said groove inclining downwardly toward each end of said block, a splice jacket arranged around said blocks, a pin for locking said blocks in said jacket, a sleeve arranged to inclose said splice jacket, said sleeve being connected at its ends with the cable sections which are to be spliced and insulating material arranged within said sleeve and inclosing said splice jacket, for the purpose set forth.

2. The combination with two cable sections, each cable section having a plurality of conductors, of a splice for connecting together said cable sections, said splice comprising a series of sector-shaped blocks arranged with their straight sides in contact and together forming an insulating and spacing member, each of said blocks being provided with a groove arranged centrally in the curved surface thereof adapted to receive the jointed ends of a conductor, said groove inclining downwardly toward each end of said block and a splice jacket arranged around said blocks so as to hold said blocks in their relative positions.

3. In combination with two cable sections, each cable section having a plurality of conductors, of a splice for connecting together said cable sections, said splice comprising a series of sector-shaped blocks arranged with their straight sides in contact and together forming an insulating and spacing member, each of said blocks being provided with a groove arranged centrally in the curved surface thereof adapted to receive the jointed ends of a conductor, said groove inclining downwardly toward each end of said block, a splice jacket arranged around said blocks so as to hold said blocks in their relative positions, a sleeve arranged to inclose said splice jacket, said sleeve being connected at its ends with the cable sections which are to be spliced and insulating material arranged within said sleeve and inclosing said splice jacket, for the purpose set forth.

1,113,139. MACHINE FOR APPLYING BITUMINOUS MATERIALS AND THE LIKE TO ROADS. EDWARD C. PERRY and FRANK D. PERRY, Worcester, Mass., assignors to American Car Sprinkler Co., Worcester, Mass., a Corporation of Massachusetts. Filed July 3, 1912. Serial No. 707,509. (Cl. 137—63.)



1. An apparatus for heating and spraying heavy oils having, in combination, a wheel truck, a tank mounted thereon having a bottom slanting from the front to the rear and having a steam coil located therein, means mounted on the truck for producing superheated steam, means for conducting the superheated steam directly to said steam coil, a pump located directly under the rear end of the tank, a short pipe for conducting oil from the lowest point of the tank directly to said pump, a spray pipe below and closely adjacent to said pump, and a connection for conducting the oil under pressure from the pump directly to the spray pipe, said spray pipe extending transversely of the truck in the rear of the wheels.

2. An apparatus for heating and spraying heavy oils having, in combination, a wheel truck, a tank mounted thereon and having a steam coil therein, means mounted on the truck and connected to said steam coil for supplying steam thereto, a short connection extending downward from the bottom of the tank at the rear thereof, a pump supported by said connection and receiving said connection as its intake, and a spray pipe connected with the pump and located below and closely adjacent thereto, said spray pipe extending transversely of the truck in the rear of the wheels.

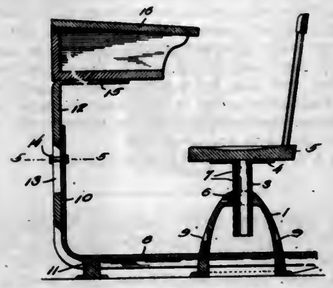
3. An apparatus for heating and spraying heavy oils having, in combination, a wheel truck, a tank mounted thereon having an outlet in the bottom thereof, means mounted on said truck for heating the oil in said tank to a high temperature, a pump located below and closely adjacent to said outlet, a short pipe extending downward from the bottom of said tank and connecting said outlet to said pump, a spray pipe located below and closely adjacent to said pump and extending transversely of said truck in the rear of the wheels, and a short direct connection between said pump and said spray pipe for conducting the heated oil under pressure from said pump to said spray pipe.

4. In an apparatus for spraying heavy oils, the combination of a tank having a bottom slanting down toward the rear, a steam coil located along the bottom of said tank, means mounted at the rear of said tank and movable therewith for producing superheated steam, a pipe extending from the superheating means to the front end of the steam coil, a straight vertical connection extending from the lowest part of the bottom of the tank at the rear, a pump supported by said vertical connection and receiving said connection as its intake, means at the front of the tank for propelling the vehicle and operating the pump, and a spray pipe directly connected with the pump.

5. In a machine of the class described, the combination, with a vehicle frame, of a tank on the frame for road surfacing material, a series of spray nozzles below the frame, a pump on the frame between the tank and nozzles and connected therewith, means for connecting the connection between the pump and nozzles with the top of the tank, and means for heating said connecting means and directing steam through the pump backward to draw the surfacing material from the spray nozzles back into the tank.

[Claim 6 not printed in the Gazette.]

1,113,140. SCHOOL-DESK. CORBIN JNO. PRIEST, Claremore, Okla. Filed Feb. 6, 1913. Serial No. 746,523. (Cl. 155—34.)



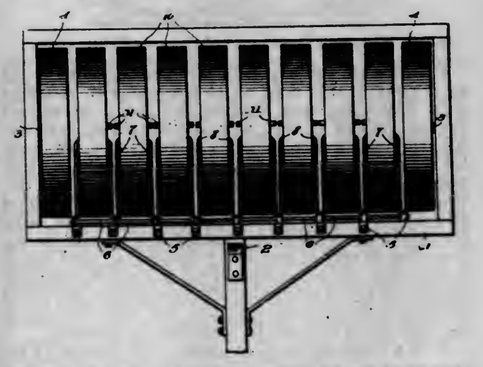
1. An independent combination chair and desk unit, comprising a pedestal adapted to rest upon the floor, a chair, including seat and back, supported by said pedestal, a horizontal beam slidable through and supported by said pedestal at a point between the seat and floor, and a vertical post adapted to support a desk, said beam and post being formed of a single continuous piece of metal, suitably bent, a bracket carried by said post, and a desk secured to said bracket.

2. A combination seat and desk comprising a pedestal of frusto-conical shape adapted to rest upon the floor, a seat post adjustably mounted in the upper end thereof, a relatively narrow beam slidable horizontally through the lower part of said pedestal, means for clamping said beam in adjusted position, and a desk supported by said beam.

3. A combination seat and desk comprising a pedestal, a seat carried thereby, a channel beam, and a desk supported by said beam, said pedestal having a pair of alined openings shaped to conform to and adapted to support the channel beam and through which said beam may be horizontally adjusted.

4. A combination seat and desk comprising a pedestal, a seat carried thereby, an inverted channel beam extending horizontally through said pedestal and having its forward end bent upwardly and projecting vertically, a post fitting between the flanges of such forward end of the channel beam, a desk supported by said post, and means for adjusting the position of said post vertically relative to said channel beam.

1,113,141. LAND-ROLLER. DAVID PULLEN, Hudson, Ky. Filed Mar. 31, 1914. Serial No. 828,560. (Cl. 55—6.)



1. A land roller comprising a frame having at its ends fixed axles, roller sections journaled upon the axles, bearings located on the opposite faces of the forward portion of the frame, shafts journaled in the bearings, arms carried by the shafts and roller sections journaled between the arms and located between the first mentioned roller sections.

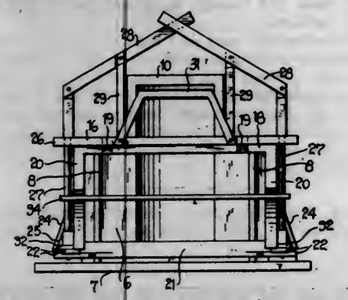
2. A land roller comprising a frame having at its ends fixed axles, roller sections journaled upon said axles, arms pivotally connected in the frame and arranged in pairs the rear ends of the said arms having offset extremities, guide strips fixed upon said extremities and disposed transversely of the arms and roller sections journaled between the offset extremities of each pair of arms.

1,113,142. MOLD. BOHUMIL SCHVERMA, Two Rivers, Wis. Filed Mar. 24, 1914. Serial No. 826,933. (Cl. 25—121.)

1. In a mold, side and end plates, a frame including expansible side and end sections to engage the respective mold plates, means for simultaneously moving said frame sections outwardly with respect to each other, and means on said frame sections with which said last named means coöperates to lock the frame sections against such relative movement, in their applied positions.

2. In a mold, side and end plates, a frame including a rectangular member, movable side and end sections mounted upon said member to engage the respective mold plates, manually operable means mounted upon said member and engaging means upon said frame sections to lock said sections against relative movement, and additional means upon said frame sections with which said manually operable means coöperates to move said frame sections outwardly from the mold plates.

3. In a mold, side and end plates, cleats secured to the outer faces of said plates provided with shoulders at their upper ends, a frame including a rectangular member adapted to engage said shoulders, relatively movable frame sections mounted upon said member for engagement with the respective mold plates, manually operable means mounted upon the ends of said frame member, and means carried by the frame sections with which said manually operable means coöperates to move said frame sections outwardly from the mold plates whereby the latter may be removed.



4. In a mold, side and end plates, cleats secured to the outer faces of said mold plates provided with shoulders upon their upper ends, a frame including a rectangular member adapted to rest upon said shoulders, relatively movable frame sections hingedly mounted upon said member for engagement with the respective mold plates, vertically movable rods mounted upon the corners of said rectangular member, blocks secured to the ends of each of said movable frame sections, each of said blocks being provided with an obliquely inclined groove, lugs on the lower end of each of said rods projecting at right angles to each other for engagement in the grooves of contiguous blocks, and means for moving said rods to force the frame sections outwardly with respect to each other away from the mold plates whereby the latter may be removed.

5. In a mold, side and end plates, cleats secured to the outer faces of said plates and provided upon their upper ends with shoulders, a frame including a rectangular member adapted to rest upon said shoulders, relatively movable frame sections hingedly mounted upon said member for engagement with the respective mold plates, blocks secured upon the ends of each of said frame sections, each block being provided with an obliquely disposed groove therein, plates carried by the frame sections each having an opening, the openings in the contiguous plates registering with each other when the frame sections are in their normal positions, vertically movable rods mounted upon the ends of the frame member at the corners of the frame, the lower ends of the respective rods being engaged in said coinciding openings to lock the frame sections against relative movement, lugs carried by said rods engaging in the inclined grooves of the contiguous blocks on said frame sections, and manually operable means for moving the rods at opposite ends of the frame member upwardly to move said frame sections outwardly with respect to each other away from the mold plates whereby the latter may be removed.

[Claims 6 to 8 not printed in the Gazette.]

1,113,143. BUSHING FOR TROLLEY-WHEELS, PULLEYS, &c. JOHN CESSNA SHARP, Chattanooga, Tenn. Filed Feb. 29, 1912. Serial No. 680,701. (Cl. 64—26.)

1. A bushing provided with a longitudinal opening to receive a shaft and a transverse opening substantially tangential to the shaft, said transverse opening extending through the bushing from one side of the periphery to the other and opening on its inner side to the longitudinal opening, in combination with a plug for feeding lubricant to the shaft longitudinally of the plug and through the inner lateral opening into the shaft opening, said plug being cut away on its inner side on the arc of the surface of the shaft at the lateral opening of the plug.

2. A bushing provided with a longitudinal opening to receive a shaft and transverse openings extending through the bushing from one side of the periphery to the other and opening on their inner sides into the longitudinal opening, in combination with plugs mounted in the transverse openings, for feeding lubricant to the shaft through the open inner sides of the transvers openings, said plugs being formed so that the course of least resistance to the passage of lubricant therethrough will be longitudinally of the plugs and being cut away on their inner sides within the open inner sides of the transverse openings.

3. A bushing provided with a longitudinal opening to receive a shaft and transverse openings extending through the bushing from side to side and opening on their inner sides to the longitudinal opening and closed on their outer sides, in combination with plugs mounted in the transverse openings, for feeding lubricant to the shaft through the open inner side of the latter, said plugs being arranged substantially tangential to the shaft when the parts are assembled and being formed between their ends with concave sections into which the shaft extends and from which the shaft receives the lubricant.

4. A bushing provided with a longitudinal opening to receive a shaft and a series of openings extending transversely through the bushing from side to side and arranged in a staggered relation, each of said transverse openings being laterally open between its ends to the longitudinal opening of the bushing, in combination with lubricant feeders mounted in said transverse openings and formed to conduct the lubricant longitudinally and to discharge the same between their ends, within the laterally open parts of the transverse openings.

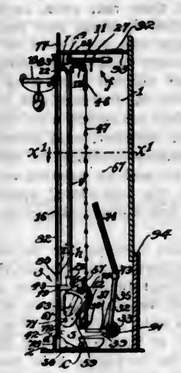
5. A tubular bushing provided with a longitudinal opening to receive a shaft and transverse openings substantially tangential to the shaft, said transverse openings extending through the bushing from one side of the periphery to the other and opening laterally on their inner sides to the longitudinal opening, in combination with lubricant-feeding plugs mounted in the transverse openings, cut away at their ends on the arcs of the circumference of the bushing, and also having their middle portions cut away on their inner sides at the laterally open parts of the transverse openings and fitting transversely on the shaft when the parts are assembled.

[Claims 6 to 9 not printed in the Gazette.]

1,113,144. PIVOTED BED. JAMES A. SOUTER, Los Angeles, Cal., assignor to Hughes Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Aug. 29, 1910. Serial No. 579,594. (Cl. 5—54.)

1. In a pivoted bed, a standard provided with a pivot and with a socket at one side of the pivot and extending on the other side of the pivot to form an elongate weight-carrying arm; said arm being provided with a seat for a mattress cross bar.

2. In a pivoted bed, a pivoting device comprising a link and a guide pin, a frame forming a facing, standards fastened to one side of the frame and provided with sockets; two of said standards being carried by the link of the pivoting device and the other two being connected with the first two standards by rails fastened in said sockets.



3. In a pivoted bed, a head standard provided with a rail hocket and a weight seat, and with a pivot pin seat and a guide pin seat between said rail socket and weight seat; the pivot pin seat being near the rail socket, the guide pin seat being between the pivot pin seat and the weight socket, and said standard being elongated to space the weight seat and the pivot pin socket widely apart.

4. In a pivoted bed, a support, a shifting fulcrum bar pivoted to the support and extending upwardly from its pivot, a standard provided at one end with a rail socket and near said socket with a transverse pivot pin seat and rearwardly of the pivot pin seat with a guide pin seat and beyond the guide pin seat with a weight seat; the weight seat and the pivot pin seat being yidely spaced apart; a weight carried by the weight socket; a pivot pin carried by the upper end of the fulcrum bar and seated in said pivot pin seat; a guide pin in the guide pin seat and a guide for the guide pin extending downward aslant toward the pivot of the fulcrum bar.

5. In a pivoted bed provided with side rails, cross pieces and weight-supporting bars, standards each provided with a single socketed lug, each lug being adapted to engage with and support the end of a side rail, means upon each standard to engage with and support a cross piece, and means on the standards at one end of the rails to engage and carry a weight-supporting bar.

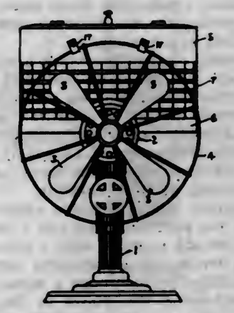
[Claims 6 to 16 not printed in the Gazette.]

1,113,145. SHAVING-CUP. DOMENICK STIRO, New York, N. Y. Filed Oct. 12, 1911. Serial No. 654,874. (Cl. 132—15.)

A sanitary shaving cup provided with a cover having a plain flat outer surface, said cover having on its underside near its periphery a suspending hook.

1,113,146. VAPORIZER FOR USE WITH ELECTRIC FANS. JOHN E. STRATFORD and JOHN A. ACKLEY, Houston, Tex., assignors to Diffuse-Zone Disinfecting Company, Houston, Tex., a Corporation of Texas. Filed Aug. 30, 1912. Serial No. 717,938. (Cl. 167—3.)

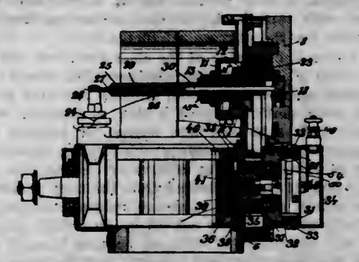
1. In a vaporizer of the character described having an arcuate portion in the lower side thereof, the combination with a plurality of fluid reservoirs, arranged in fixed position, one above the other, an open cage between said reservoirs, strips across said open cage, a plurality of wicks, whose upper ends extend into the upper reservoir and whose other ends are suspended in said cage above the lower reservoir, a plurality of wicks secured to the upper reservoir, whose lower ends extend into the lower reservoir, a frame work upon which said cage is mounted and means for securing said vaporizer upon the motor of a fan.



2. In a vaporizer, a frame having a portion of the bottom thereof arcuate and adapted to fit over a fan motor, said frame comprising a plurality of fluid reservoirs arranged in fixed position, one above the other, an open latticed cage between said reservoirs, a plurality of wicks for conducting fluid from one reservoir to the other and secured to the upper reservoir and means for securing said vaporizer upon the rear of the frame of a motor fan.

3. In a vaporizer, the combination with a frame having a portion of the bottom thereof arcuate and adapted to fit over a fan motor, said frame comprising a plurality of fluid reservoirs arranged in fixed position, one above the other, an open latticed cage between said reservoirs, a plurality of wicks for conducting fluid from one reservoir to the other and secured to the upper reservoir and means for securing said vaporizer upon the rear of the frame of a motor fan in such manner that when the fan is operated air will be drawn through said vaporizer.

1,113,147. MAGNETO-ELECTRIC IGNITION APPARATUS. ARNOLD ZAHRINGER, Stuttgart, Germany. Filed May 4, 1908. Serial No. 430,719. (Cl. 123—149.)



1. In a magneto electric machine, the combination, with a distributer shaft, an armature, and a side plate having an inward projecting portion arranged to support said distributer shaft and also having an annular recess, of a ring removably fitted in said annular recess and projecting beyond the plane of the side plate, for engagement with a corresponding recess in the pole shoes, said ring being arranged to form a centering device for the armature.

2. In a magneto electric machine, the combination, with a distributer shaft, an armature, and a side plate having an inward-projecting portion arranged to support said distributer shaft and also having an inner surface arranged to come opposite the end of the armature and lying in

one plane, said side plate having an annular ring receiving recess in the portion having the plane surface, of a removable centering ring fitted in said annular recess and projecting beyond the said plane of the inner surface of said side plane, said ring being arranged to form a centering device for the armature.

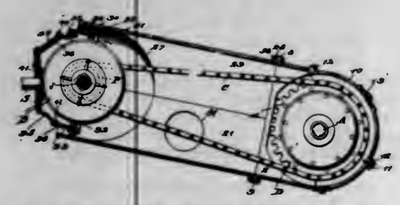
3. In a magneto electric apparatus, a side plate having a bearing flange cast integrally therewith and extending laterally therefrom, the outer extremity of the flange inturned to inclose a space on three sides, and a snugly fitting bush closing the fourth inner side of the space, said bush serving as a bearing.

4. In a magneto electric apparatus, a side plate having a bearing flange cast integrally therewith and extending laterally therefrom as an annulus, the outer extremity of the flange inturned to form an outer wall inclosing a space to form an oil chamber open on the inner side, and communicating with the bearing and a snugly fitting bearing bush closing the inner side of the space, an oil cup above and communicating with the chamber.

5. In a magneto electric ignition apparatus, the combination with the collecting ring and a brush holder coacting therewith and provided with a grooved portion, of a distributing device, and a connection between the brush holder and distributer comprising a metal tube having a forked end embracing the groove in the holder, a rod within the tube in contact therewith and bearing with its outer end upon the distributer, and a spring pressing the rod against the distributer and reacting on the tube.

[Claims 6 to 10 not printed in the Gazette.]

1,113,148. SPROCKET-CHAIN HOUSING. ELMER F. ALTMAN, Minneapolis, Minn. Filed July 24, 1913. Serial No. 781,012. (Cl. 74—31.)



1. In a sprocket housing of the class described, the combination with a chain member having a bell mouth; of a sprocket member comprising a band slidably fitting within said mouth, a body portion having a ring detachably connected with said band, and eyes projecting from said body portion for the purpose set forth.

2. In a sprocket housing of the class described, the combination with a chain member having a bell mouth; of a gear member comprising a band slidably mounted in said mouth, a body portion having a ring, a shoulder within the band which said ring fits, means for holding these parts connected, an inspection opening being provided in the body portion, means for removably closing this opening, and a pair of eyes projecting from the body portion.

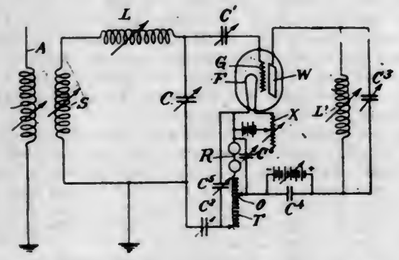
3. The herein described sprocket housing comprising a substantially globular body cut off by an oblique plane at its rear end and provided with an opening in said plane and with flanges around said opening, and flattened at its front end and cut off by a substantially vertical plane in which it is also provided with flanges, the side walls of said body portion having openings surrounded by flanges for attachment to the axle casings, two-part bearings within said latter openings, a cap for closing the open rear portion of said body, the cap being surrounded by a flange and pierced with an opening, bolts passing through this flange and through that in said oblique plane, a plug movably closing said rear opening, and a chain member detachably connected with the other flange.

4. The herein described chain and sprocket housing, the same comprising a power-sprocket member consisting of a body portion, shaft bearings therein, a band detachably connected with said portion and having an annular groove, and packing within said groove; a chain member made in two parts having meeting flanges along their sides and radial flanges at their rear ends, each part being pierced with an inspection opening, and plates removably closing said openings, the front end of said chain-member having a bell mouth slidably inclosing said packing; and a driven-sprocket member consisting of a body portion having an opening in its front end, a flange around this opening detachably connected with the flange at the rear end of the chain member, said driven sprocket member also having openings through its sides for the passage of the driven axle and an opening at its rear, a cap removably closing the last-named opening and itself having an opening, and a removable plug closing the opening in the cap.

5. In a sprocket housing for the chain drive of automobiles, the combination with the driving shaft, jack shaft at right angles thereto, power gear and power sprocket on the jack shaft, rear axle, driven sprocket thereon, and chain connecting said sprockets; of a chain member having a bell mouth at its front end, a driven-sprocket member adapted to be connected with the rear-axle housing, connections between said members; a power-sprocket member comprising a band sliding in said bell-mouth and surrounded with packing, a body inclosing the power gear and jack shaft and having eyes for the bearings of the jack shaft whereby this member is centered on said jack shaft irrespective of the movements of the other members.

[Claim 6 not printed in the Gazette.]

1,113,149. WIRELESS RECEIVING SYSTEM. EDWIN H. ARMSTRONG, Yonkers, N. Y. Filed Oct. 29, 1913. Serial No. 797,947. (Cl. 250—8.)



1. An audion wireless receiving system having a resonant wing circuit interlinked with a resonant grid circuit upon which the received oscillations are impressed, the resonant grid circuit having a capacity so related to the grid as to receive and retain the charge which accumulates thereon.

2. An audion wireless receiving system having a resonant wing circuit interlinked with a resonant grid circuit upon which the received oscillations are impressed, the resonant grid circuit having capacity so related to the grid as to receive and retain the charge which accumulates thereon, and an inductance through which the current in the wing circuit flows, the grid circuit including connections for making effective upon that circuit the potential variations resulting from a change of current in the wing circuit.

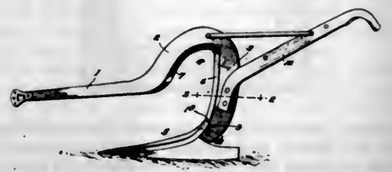
3. An audion wireless receiving system having a resonant wing circuit interlinked with a resonant grid circuit upon which the received oscillations are impressed, the resonant grid circuit having capacity so related to the grid as to receive and retain the charge which accumulates thereon, and an inductance in that portion of the connections which is common to the two circuits.

4. An audion wireless receiving system having a resonant wing circuit interlinked with a resonant grid circuit upon which the received oscillations are impressed, the resonant grid circuit having a capacity so related to the grid as to receive and retain the charge which accumulates thereon, an inductance in that portion of the connections which is common to the two circuits, and a transformer having its primary in the wing circuit and its secondary in the grid circuit.

5. An audion wireless receiving system having a resonant wing circuit interlinked with a resonant grid circuit upon which the received oscillations are impressed, the resonant grid circuit having capacity so related to the grid as to receive and retain the charge which accumulates thereon, and a telephone receiver in that portion of the connections which is common to the two circuits.

[Claims 6 to 18 not printed in the Gazette.]

1,113,150. PLOW. JERRY C. CHAMBERS, Daleville, Ala. Filed July 23, 1912. Serial No. 711,144. (Cl. 97—21.)



1. In a plow, the combination of a beam arched at its inner extremity and terminating in a downwardly extending standard having substantially arcuate recesses formed in the sides thereof adjacent their lower extremities, the inner face of said arched portions and the standard being beveled to form a cutting edge substantially straight throughout the greater portion of the length of the standard and handles secured in the recesses formed in the standard, the fixed extremities of said handles being disposed substantially in alinement with the beam.

2. In a plow, the combination of a beam arched at its inner extremity and terminating in a downwardly extending standard having substantially arcuate recesses formed in the sides thereof, the inner face of said arched portion and the standard being beveled to form a cutting edge, said recesses extending upwardly and opening through the rear edge of the standard and having their side walls converging toward the cutting edge thereof, and handles secured in said recesses.

3. In a plow, the combination of a beam arched at its inner extremity and terminating in a downwardly extending standard having substantially arcuate recesses formed in the sides thereof, the inner face of said arched portion and the standard being beveled to form a cutting edge terminating short of the free extremity of the standard to produce a seat defining a terminal shoulder, a share secured to the seat and bearing against the shoulder, and handles carried by the standard.

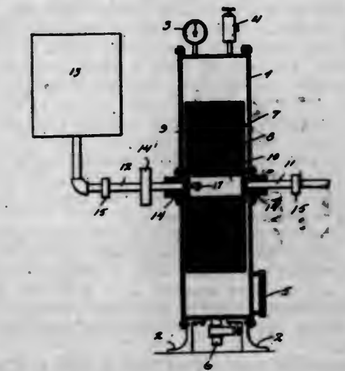
4. In a plow, the combination of a beam arched at its inner extremity and terminating in a solid downwardly extending standard substantially V-shaped in cross-section and having substantially arcuate recesses formed in the sides thereof, the inner face of said arched portion being beveled and forming with the inner face of the standard a continuous cutting edge, said recesses having their side walls converging toward the cutting edge of the standard, and handles secured in said recesses.

1,113,151. APPARATUS FOR MAKING LARD SUBSTITUTE. JESSE C. CHISHOLM, Dallas, Tex., assignor to The Chisholm Process Oil Refining Company, Dallas, Tex., a Corporation of Texas. Filed Oct. 8, 1912. Serial No. 724,633. (Cl. 87—12.)

1. In apparatus of the character described, the combination with a permeable rotatable drum comprising a catalytic agent in the form of a wire wound into layers, of means for rotating the drum, and means for supplying fatty material and hydrogen into the drum.

2. In apparatus of the character described, the combination with a permeable rotatable drum comprising a catalytic agent in the form of spirally wound wire, of means for rotating the drum, and means for supplying fatty material and hydrogen into the drum.

3. In apparatus of the character described, the combination with a perforated rotatable drum, of means for rotating the same, means for supplying fatty material and hydrogen into the drum, and a separate permeable annulus of catalytic material completely surrounding the supporting element for rotation therewith.

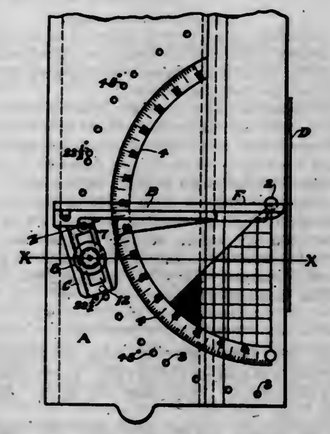


4. In apparatus of the character described, the combination with a perforated rotatable supporting element, of means for rotating the same, means for supplying fatty material and hydrogen into the supporting element, and a permeable annulus of considerable radial dimension completely surrounding the supporting element for rotation therewith and formed in layers of spirally wound wire having its engaging surface of a catalytic agent.

5. In apparatus of the character described, the combination with a relatively stationary outer casing, of a spool shaped supporting element rotatably mounted therein with its tubular portion perforated, a permeable catalytic annulus surrounding the tubular portion of the supporting element, means to supply oil into one end of said tubular portion, means to supply hydrogen into the opposite end of said tubular portion, and means to rotate the spool shaped supporting element.

[Claims 6 to 14 not printed in the Gazette.]

1,113,152. CUT-OFF GAGE FOR SAWING-MACHINES. FRANK H. CLEMENT, Rochester, N. Y., assignor to American Wood Working Machinery Co., Rochester, N. Y., a Corporation of Pennsylvania. Filed Nov. 1, 1913. Serial No. 798,664. (Cl. 143—169.)



1. In a cut-off gage, a gage body pivoted to a movable table, an independent stop block adjustable over said table,

means for adjustably connecting the stop block to the gage, selective means in the table, and corresponding selective means in the gage body and in the stop block, whereby certain principal angles may be selected instantaneously, and intermediate angles obtained by the separate adjustment in the independent stop block.

2. In a cut-off gage, a gage body pivoted to a movable table, a slot in said body substantially concentric to the pivot, a clamping block movable in said slot, selective means in the table and corresponding means in the gage body and in the clamping block, whereby either principal or intermediate angles can be obtained on the gage fence.

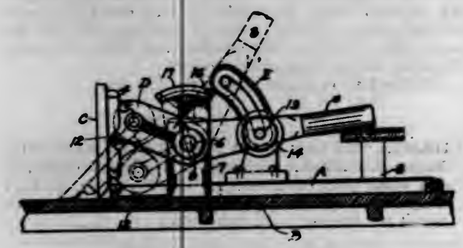
3. In a cut-off gage, a gage body pivoted to a movable table, an independent stop block movable upon said table and adjustably connected to the gage body, a stop pin hole in the gage body and a corresponding hole in the stop block, selective holes in the table and an interchangeable stop pin fitting both the gage body and the stop block, all operating substantially as described.

4. In a cut-off gage, a gage body pivoted to a movable table, a slot in said body substantially concentric to the pivot, a stop-pin hole in said body, a clamping block movable in said slot and provided with a similar stop-pin hole, and selective holes in said table arranged concentrically to the gage pivot, all operating substantially as described.

5. In a cut-off gage, a gage body pivoted to a movable table, a slot in said body substantially concentric to the pivot, a clamping block movable in said slot, a central clamping screw in the block, a stop-pin hole in the center of the screw, and a corresponding stop-pin hole in the gage permitting the interchange of the stop pin.

[Claim 6 not printed in the Gazette.]

1,113,153. MACHINE-GAGE. FRANK H. CLEMENT, Rochester, N. Y., assignor to American Wood Working Machinery Co., Rochester, N. Y., a Corporation of Pennsylvania. Filed Jan. 20, 1914. Serial No. 813,188. (Cl. 143—170.)



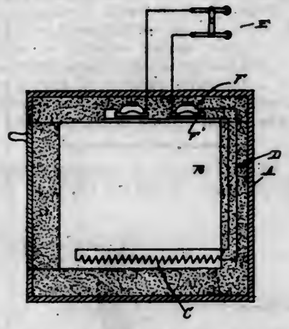
1. In a machine gage, a work guide or fence hinged to a base by means of pivoted links, a hand lever rigidly connected to the links and means for clamping the adjustable parts at the required angle.

2. In a machine gage, a work guide or fence hinged to a base by pivoted links, a rock shaft to which the links are fixed and which forms one pivot of said links, a hand lever rigid upon the rock shaft and adapted to adjust the fence to the required angle through said links.

3. In a machine gage, a work guide or fence, links pivoted thereto opposite its working face, a rock shaft upon which the links are rigidly secured at one end, bearings for said rock shaft on the gage base, a hand lever secured to the rock shaft and means for clamping the adjustable parts in the required position.

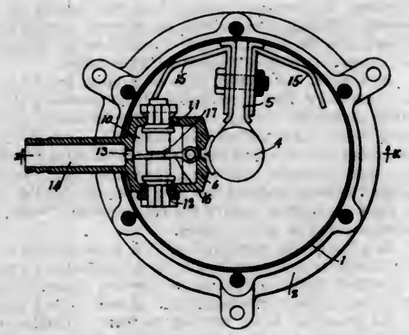
1,113,154. SAFETY DEVICE FOR ELECTRICALLY-HEATED COOKING APPARATUS. LLOYD GROFF COPEMAN, Flint, Mich. Filed Dec. 23, 1911. Serial No. 667,530. (Cl. 219—35.)

In an electrically heated apparatus, the combination with a heat insulated chamber, of an electric heater therein, an electric circuit in which said heater is connected, and a fusible link included in said circuit of sufficiently high electrical conductivity to avoid fusion from internally generated heat and of relatively low fusing point, said



link being positioned on the opposite side of said chamber from said heater and exposed to heat conducted or radiated from said chamber, and adapted to be fused by an abnormal heating of the contents of the chamber.

1,113,155. FLUID-MOTOR. WILLIAM P. ESPY, Springfield, Ohio. Filed July 9, 1913. Serial No. 778,153. (Cl. 138—1.)



1. In a fluid motor, the combination, with an inlet valve, of a valve shifting device having a part movable into different positions to subject different sides thereof to the action of the fluid, and a connection between said valve and said valve shifting device, whereby the initial movement of said valve in either direction will cause said part of said valve-shifting device to be moved into a position to subject one side of it to the action of the fluid, and the action of the fluid on said valve-shifting device will cause a further movement of said valve.

2. In a motor, the combination, with a cylinder, a piston mounted therein, one of said parts having a valve chamber communicating with the interior of said cylinder on both sides of said piston and having an inlet port, and connected valve members to control the communication between said valve chamber and said cylinder, of a valve-shifting device mounted in said valve chamber and arranged normally out of the path of the fluid entering said chamber, and a connection between said valve-shifting device and said valve members to cause said valve-shifting device to be moved into the path of the incoming fluid by the initial movement of said valve members, whereby the action of said fluid will cause a further movement of said valve members.

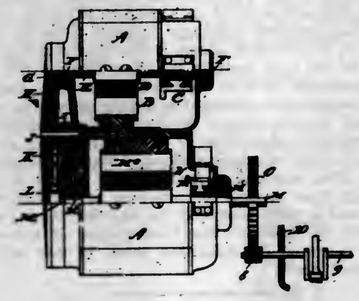
3. In a motor, the combination, with a cylinder, a piston mounted therein, one of said parts having a valve chamber communicating with the interior of said cylinder on both sides of said piston and having an inlet port, and connected valve members to control the communication between said valve chamber and said cylinder, of a vane arranged within said valve chamber and having one edge adjacent to said inlet port, means whereby the movement of said valve will cause said vane to move at a greater speed than that at which said valve moves and whereby the movement of said vane will impart further movement to said valve.

4. In a motor, the combination, with a cylinder, a piston mounted therein, one of said parts having a valve chamber communicating with the interior of said cylinder on both sides of said piston and having an inlet port, and a valve to control the communication between said valve chamber and said cylinder, of a vane pivotally mounted in said valve chamber on that side of said valve opposite said inlet port and having its free edge arranged adjacent to said inlet port, and a connection between said vane and said valve, whereby any movement imparted to one member will impart movement to the other member.

5. In a motor, the combination, with a part having a valve chamber, an inlet port leading to said valve chamber, two ports to permit the escape of fluid from said valve chamber, and valve members to control the flow of fluid through said last-mentioned ports, of a valve-shifting device pivotally mounted in said chamber and having one edge arranged adjacent to said inlet port, and a connection between said valve-shifting device and said valve members, whereby the movement of said valve members will impart movement to said valve-shifting device and the movement of said valve-shifting device will impart movement to said valve members.

[Claims 6 to 11 not printed in the Gazette.]

1,113,156. ENGINE-STARTER. FRANK E. FISHER, Detroit, Mich. Filed Feb. 21, 1913. Serial No. 749,783. (Cl. 74—57.)



1. In an appliance of the character described, in combination with the crank shaft of an internal combustion engine; an electric generator, an armature shaft for said generator, means mounted upon said armature shaft adapted for permanent driving connection with the crank shaft of the internal combustion engine, a motor, a train of gears driven by the motor adapted to actuate the armature shaft of the generator, a clutch mechanism designed to establish a driving relation between the motor and the armature shaft of the generator to start the engine and to disconnect said driving relation upon the engine operating under its own power.

2. In an appliance of the character described, in combination with the crank shaft of an internal combustion engine; a single unit comprising an electric generator, an armature shaft for said generator, a gear carried by said armature shaft and adapted for permanent driving connection with the crank shaft of the internal combustion engine, a motor, an armature shaft for said motor, a train of gears driven by the motor adapted to actuate the armature shaft of the generator, an automatic engaging and releasing clutch mechanism to connect the armature shaft of the motor through the train of gears with the armature shaft of the generator to start the engine upon the operation of the motor and adapted to release said driving connection upon the operation of the armature shaft of the generator by the engine operating under its own power.

3. In an appliance of the character described, in combination with the crank shaft of an internal combustion engine; an electric generator, an armature shaft for said generator, means mounted upon said armature shaft and adapted for permanent driving connection with the crank shaft of the internal combustion engine, an electric motor, an armature shaft for said motor, a train of gears connecting the armature shaft of the motor with the armature shaft of the generator, and an automatic engaging and releasing clutch mechanism coöperating therewith, whereby the motor may rotate the armature shaft of the generator and through it the crank shaft to start the engine, the driving connection between the motor shaft and the armature shaft of the generator being disconnected automatically through the action of the clutch mechanism upon the engine operating under its own power and remaining disconnected until the motor is again operated to start the engine.

4. In an appliance of the character described, the combination with a crank shaft of an internal combustion engine, an electric generator, an armature shaft for said generator, a gear upon said armature shaft adapted for permanent driving connection with the crank shaft of the internal combustion engine, an electric motor, an armature shaft for said motor, a train of gears driven by the motor adapted to actuate the armature shaft of the generator to rotate the crank shaft of the engine whereby the latter is started, a ball clutch mechanism designed to lock the armature shaft of the generator in driven relation with the train of gears and to release said generator shaft from its driven relation with the gears upon the generator being driven by the crank shaft of the internal combustion engine operating under its own power.

5. In an appliance of the character described, in combination with the crank shaft of an internal combustion engine; a single inclosed unit comprising a case, an electric generator housed within the case, an armature shaft for said generator, a gear upon said armature shaft and adapted for permanent driving connection with the crank shaft of the internal combustion engine, an electric motor directly above the generator within the case, an armature shaft for said motor, a train of gears driven by the motor adapted to rotate the armature shaft of the motor to start the engine, an automatically engaging and releasing ball clutch mechanism adapted to establish a driving connection between the motor and generator shaft when said shaft is actuated by the motor, and to cut off the motor connection with the generator shaft when the generator shaft is driven by the engine.

1,113,157. METAL WINDOW CONSTRUCTION. GEORGE H. FORSYTH, Chicago, Ill. Filed Oct. 27, 1908. Serial No. 459,775. (Cl. 189—73.)

1. The combination with a sash and sash-guide, of a pair of adjusting strips carried by the sash, and means tending to separate said strips in a direction oblique to the plane of the sash.

2. The combination with a sash and sash guide, of a pair of adjusting strips disposed therebetween, one engaging the sash and the other the guide, said adjusting strips relatively movable one to the other in a direction oblique to the plane of the sash, and spring means acting to separate said strips, substantially as described.

3. The combination with a sash and sash guide, of a pair of adjusting strips disposed therebetween, one engaging the sash and the other the guide, said adjusting strips relatively movable one to the other in a direction oblique to the plane of the sash, spring means acting to separate said strips, and manually operable means to neutralize the action of the separating means, substantially as described.

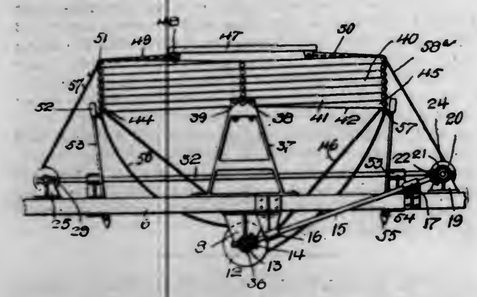
4. The combination with a sash and sash guide, of a pair of adjusting strips carried by the sash and one engaging the sash and the other the guide, and spring means

tending to separate said strips in a direction oblique to the plane of the sash and guide.

5. The combination with a sash and sash guide of a pair of adjusting strips carried by the sash and movable bodily relative thereto, one of the strips operating against the sash and the other against the guide, spring means tending to separate said strips in a direction oblique to the plane of the sash and guide.

[Claims 6 to 9 not printed in the Gazette.]

1,113,158. FIRE-ESCAPE. WILLIAM HENRY HALE, Pittsburgh, Pa., assignor of one-tenth to Paul Winfrey, one-tenth to William B. Shorter, one-tenth to B. J. Jetter, one-tenth to Louis Williams, and one-tenth to William Thomas, Pittsburgh, Pa. Filed Sept. 8, 1913. Serial No. 788,665. (Cl. 227—20.)

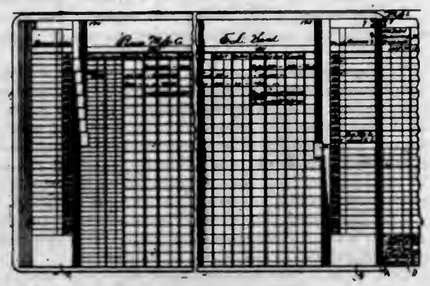


1. A fire escape comprising a lazy-tong structure, a drum, a cable winding upon said drum for extending said structure, a pair of locking members, a cable winding upon said drum for shifting said locking members to engage said structure, thereby maintaining it extended, a platform carried by the structure, a pair of drums, bracing cables winding upon said pair of drums and connected to said platform, and means for operating all of said drums in unison.

2. A fire escape comprising an extensible and contractible lazy-tong structure, means connected with the lower portion of said structure for extending it, locking members for said structure operated from said means, flexible bracing elements for said structure, and a pair of drums operated from said means for winding said bracing elements.

3. A fire escape comprising a lazy-tong structure provided with a platform, means connected to the lower end of said structure for extending it, a pair of locking members operated from said means and adapted to engage the lower portion of said structure for locking it, flexible bracing elements connected to said platform, and drums operated from said means for winding said bracing elements.

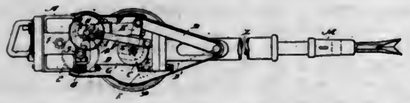
1,113,159. ACCOUNT-BOOK. WILLIAM O. JOHNSON, Blunt, S. D. Filed July 19, 1909. Serial No. 508,525. (Cl. 11—19.)



1. An account book having the pages thereof separated into groups, index sheets positioned between the various groups and projecting beyond the edges of the leaves thereof, both sides of each index projecting portion having numbered horizontal lines and adjacent faces of each pair of adjoining index sheets being similarly ruled and lettered to serve as a summary of the inclosed group, one face of each index sheet being designed to expedite reference to any leaf of the account book in the following group and the opposite face being designed to assist in the transmitting of notes from the leaves of the preceding group to a supplementary proof sheet adapted for use in conjunction with said account book.

2. The combination with an account book having the pages thereof separated into groups, of index sheets positioned between each two adjoining groups and projecting outwardly beyond the edges of the leaves thereof, both faces of each index sheet having numbered horizontal lines and adjacent faces of each pair of adjoining index sheets being similarly ruled and lettered to serve as a summary of the inclosed group, projections arranged on each leaf of the book opposite the space between two adjoining numbered lines of said index sheets, a supplementary proof sheet, means for flexibly attaching said proof sheet to said account book, an appropriate space being provided in the latter to receive said proof sheet, means for foldably disposing said proof sheet in the space, the whole being arranged so that one face of each of said index sheets may be used for reference to the following group of said account book and the opposite face of said index sheet be used for the transmission of accounts from the pages of the preceding group to said supplemental proof sheet.

1,113,160. MINING-MACHINE. GEORGE E. LYNCH, Columbus, Ohio, assignor to Joseph A. Jeffrey, Columbus, Ohio. Filed June 14, 1905, Serial No. 265,250. Renewed Mar. 2, 1914. Serial No. 822,074. (Cl. 125—14.)



1. The combination of a frame, a reciprocating tool mounted on the frame, a piston connected to the tool, an air compression cylinder in which said piston works, a toggle lever system connected to and adapted to retract the tool and piston, an electric motor mounted on the said frame, and power transmitting devices between the motor and toggle lever system adapted to convert the continuous rotation of the motor into a reversing or oscillatory movement of the toggle levers, said transmission devices comprising parts having a lost motion connection.

2. The combination of a frame, a reciprocating tool mounted on the frame, means comprising resilient means tending to force the tool forward, a toggle lever system

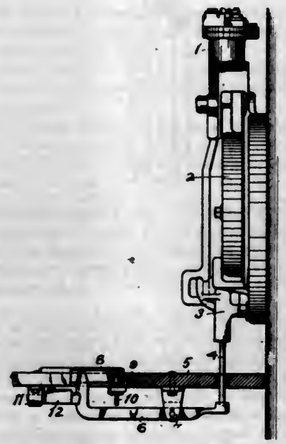
connected to and adapted to retract the tool, an electric motor mounted on the frame, and power transmitting devices between the motor and toggle lever system adapted to convert the continuous rotation of the motor into a reversing or oscillatory movement of the toggle levers, said transmission devices comprising parts having a lost motion connection.

3. In an apparatus of the character set forth, the combination of a frame, a reciprocating tool mounted on the frame, means comprising resilient means for forcing the tool forward, an electric motor mounted on the frame, and power transmission devices between the motor and tool for retracting the tool against the tension of the said resilient means and then releasing it, said transmission devices being constructed and arranged to transmit the power of the motor with a mechanical advantage that is variable throughout the retraction of the tool in approximately the same proportion as the resistance of the said resilient means.

4. The combination of a frame, a reciprocating tool mounted on the frame, a piston connected to the tool, an air compression cylinder in which said piston works, an electric motor mounted on the frame, means comprising a toggle joint for transmitting power from the motor to the piston and tool to retract the latter against the pressure of air, and means whereby the driving element of said toggle joint is limited to a movement of approximately ninety degrees from its position corresponding to maximum mechanical advantage.

5. The combination of a frame, a reciprocating tool mounted thereon, means comprising resilient means acting to force the tool forward, a toggle lever system having one arm mounted to swing about a fixed axis, and another arm connected to the tool, whereby the swinging of the first mentioned arm effects the retraction of the tool, an electric motor mounted on the frame, a disk mounted on the said fixed axis having a lost motion engagement with the first mentioned swinging toggle arm, and power transmission means for converting the continuous rotation of the motor into a reversing or oscillatory movement of the said disk.

1,113,161. PEDAL DEVICE FOR LOCOMOTIVE FIRE-DOORS. FREDERICK W. MARTIN, New York, N. Y., assignor to Albert G. Elvin, Somerville, N. J. Filed July 30, 1913. Serial No. 781,942. (Cl. 110—178.)



1. The combination with a controlling valve of a fire door apparatus for locomotives, of a pedal lever located beneath the deck for operating said valve, a tread extending up through an opening in the deck for actuating said lever, and counterweighted balancing arms for said tread pivoted beneath the deck.

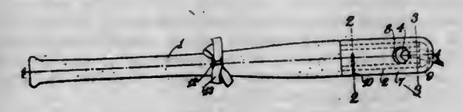
2. The combination of a tread extending up through an opening in the locomotive deck, balancing arms pivoted upon a fulcrum beneath the deck and engaging both ends of said tread, a counterweight carried by said arms, and a pedal lever pivoted beneath the deck and actuated by said tread.

3. The combination of a casing inserted in the locomotive deck, a tread of box form mounted for vertical movement in said casing, balancing arms pivoted upon a fulcrum beneath the said deck and engaging both ends of said tread, and a pedal lever pivoted beneath the deck and engaging said tread.

4. The combination of a pedal lever pivoted beneath the deck of a locomotive, a valve rod extending through the deck and engaging one end of said lever, a tread extending up through an opening in the deck, and balancing means engaging both ends of the tread for maintaining a level position of the same, said pedal lever having a projection engaging the bottom of said tread.

5. The combination of a pedal lever pivoted beneath the locomotive deck, a tread of box form extending up through an opening in the deck, balancing arms pivoted beneath the deck and engaging both ends of said tread, a counterweight carried by said arms, said lever having a projecting end engaging the bottom of said tread, and a valve rod actuated by said lever.

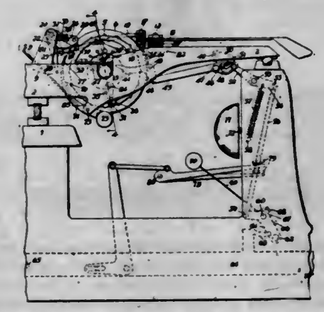
1,113,162. TOY BASE-BALL BAT. JAMES A. MURPHY, Holyoke, Mass., assignor of one-half to Thomas J. O'Connor, Holyoke, Mass. Filed July 30, 1913. Serial No. 781,999. (Cl. 46—46.)



1. In a toy baseball bat, the combination with a turned down portion thereon, of whistle producing means located at the ball-engaging end, and a cap, partially revoluble upon said turned down portion, and provided with openings, therein to form an entrance and an exit for air, whereby the whistle is rendered either operative or inoperative, as described.

2. A toy baseball bat having its ball engaging end formed with a tubular portion axially arranged, a closed end having an opening therein, a cap on the tubular portion having entrance and exit openings for air and cooperating with the opening in the closed end portion, whereby a whistle or sound producing device is formed at the ball engaging end of the bat, as described.

1,113,163. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 5, 1912. Serial No. 735,107. (Cl. 197—189.)



1. In a typewriting machine, in combination, sheet-advancing means, a paper-backing having a slot therein, an

oscillating paper-feeler having a path into said slot and intermittently retracted from sheet-controlled position away from said paper-backing to facilitate backing the bottom edge of the sheet over said slot, and an index-carrier operated to move with the sheet under the control of said paper-feeler.

2. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, means for giving said member a predetermined starting position, means for giving said member movement correlated with that of the platen from such position, and sheet-controlled means for controlling the said movement, including a paper-feeler having an intermittent actuation tending to press the working portion thereof into the paper-path.

3. In a typewriting machine, in combination, a platen, an oscillating paper-feeler controlled by the sheet during advancing movement thereof and retracted from sheet-controlled position during the time the sheet is at rest, a series of indices, and paper-feeler-controlled actuating means adapted to bring constant indices into indicating prominence coördinately with the arrival of the sheet into constant sheet positions.

4. In combination, typewriter mechanism including a platen, an oscillating paper-feeler controlled by the sheet during advancing movement thereof and retracted from sheet-controlled position during the time the sheet is at rest, and means under the control of said paper-feeler for rendering a part or parts of the typewriter mechanism inoperative for use.

5. In combination, typewriter mechanism including a platen, an operative member actuated to move simultaneously with the platen, indicating means called into operation through said member, means for giving said member a constant starting position, and a reciprocating paper-feeler pressed against the work-sheet by a part of said typewriter mechanism and connected to control the actuation of said operative member.

[Claims 6 to 29 not printed in the Gazette.]

1,113,164. MOP. BENJAMIN P. POLLOCK, Chicago, Ill., assignor of one-half to Charles E. Krebs, Chicago, Ill. Filed Aug. 18, 1913. Serial No. 785,288. (Cl. 15—56.)

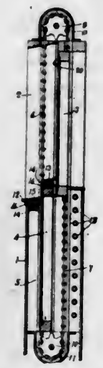
1. In a mop of the class described, the combination of a handle or stick, a cross head secured to one extremity thereof, and having a slot near each of its ends, and a pair of lever operated jaws, each jaw having a cross bar located wholly below the cross head, and a pair of arms extending through said slots, one through each slot, and pivoted to the opposite arms of the other jaw at a point above the cross head, said cross bars forming gripping means adapted to grasp a swab directly therebetween.

2. In a mop of the class described, the combination of a handle or stick, a cross head secured to one extremity thereof, and having a transversely extending slot near each of its ends, and a pair of lever operated swab gripping jaws, each jaw comprising a cross bar located wholly below the cross head and an arm at each end of the cross bar, the arms extending through corresponding slots in the cross head, and the arms of one jaw being pivotally connected to the opposite arms of the other jaw at a point above the cross head, the lower ends of said arms having lateral bends for engaging the end walls of the slots.

3. In a mop of the class described, the combination of a handle or stick, a cross head secured to one extremity thereof and having a transversely extending slot near each of its ends, and a pair of swab grippings jaws, each jaw comprising a cross bar located below the cross head, and two arms, each extending through a corresponding slot in the cross head and pivotally connected to an arm of the opposite jaw above the cross head, the lower ends of said arms having lateral bends for engaging the end walls of the slots, a jaw operating lever pivoted to said handle or stick, and connections between said lever and one pair of jaw arms.

4. In a mop of the class described, the combination of a handle or stick, a cross head secured to one extremity thereof, said cross head having a slot near each end, a pair of swab gripping jaws arranged side by side, each having a cross bar located below the cross head and a pair of arms projecting through said slots, the upper ends of one pair of arms being pivotally connected directly to the other pair, and each arm having an outward bend near its lower end, adapted to engage the end walls of the slots, the arms of one jaw having extensions continued beyond its pivoted connection with the arms of the other jaw, and a jaw operating lever pivoted to the handle or stick, and pivotally connected to said extensions of the arms.

1,113,165. WINDOW-CLEANING DEVICE. MILTON E. PUGH, Dayton, Ohio, assignor of one-third to Leo C. Pollock and one-third to Frank Hartman, Dayton, Ohio. Filed Aug. 16, 1913. Serial No. 785,113. (Cl. 15—59.)



1. In a window cleaner, two sashes operatively connected one to the other, whereby when either sash is moved into an inoperative position the other sash will be moved into an operative position, and means for automatically cleaning the glass of that sash which is being moved into an inoperative position.

2. The combination, with a window frame having a pocket, two sashes mounted in said frame, either of which is adapted to close the window opening and either of which may be moved into said pocket, a connection between said sashes to cause one of them to be moved into position to close said window opening when the other is moved into said pocket, and means arranged to automatically clean the glass of that sash which is being moved into said pocket.

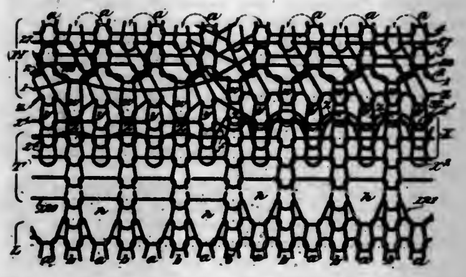
3. The combination, with a window frame having a pocket, two sashes mounted in said frame, either of which is adapted to close the window opening and either of which may be moved into said pocket, a connection between said sashes to cause one of them to be moved into position to close said window opening when the other is moved into said pocket, means arranged to automatically clean the glass of that sash which is being moved into said pocket, and means arranged within said pocket to dry the glass of that sash which has been moved into said pocket.

4. The combination, with a window frame, of two sashes mounted in said frame and connected one with the other to cause them to move simultaneously in opposite directions, a wiper carried by said frame and arranged to wipe the glass of one sash when movement is imparted to said sash, and a second wiper mounted upon said first-mentioned sash and adapted to wipe the glass of the second sash when movement is imparted to said second sash.

5. The combination, with a window frame, of two sashes mounted in said frame and connected one with the other to cause them to move simultaneously in opposite directions, a wiper carried by said frame and arranged to wipe the glass of one sash when movement is imparted to said sash, and a second wiper mounted upon said first-mentioned sash and adapted to wipe the glass of the second sash when movement is imparted to said second sash, and a drier arranged adjacent to the position occupied by said sashes when in their inoperative positions.

[Claims 6 to 9 not printed in the Gazette.]

1,113,166. WELTED KNIT FABRIC AND METHOD OF MAKING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Boston, Mass., a Corporation of New Jersey. Filed Mar. 7, 1914. Serial No. 823,121. (Cl. 66—4.)



1. A knit fabric having an integral outturned welt, the welt fabric having needle wales corresponding to sinker wales of the attached fabric.

2. In a knit fabric, a welt, an attached portion, and a uniting course having one needle loop in each needle wale of both said parts.

3. A knit fabric having an integral outturned welt, the welt fabric having sinker wales corresponding to needle wales of the attached fabric, and needle wales corresponding to sinker wales of the attached fabric.

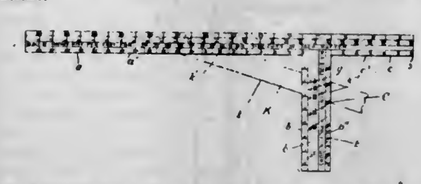
4. A knit fabric having an integral outturned welt, said welt and the attached part of said fabric having the same number of wales of knit loops, the welt fabric having sinker wales corresponding to needle wales of the attached fabric, and needle wales corresponding to sinker wales of the attached fabric.

5. A knit article of plain fabric having a welt united thereto by a course containing loops in all of the needle wales of the adjacent part of the article, said course having other loops engaging a course of the welt fabric.

[Claims 6 to 17 not printed in the Gazette.]

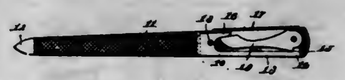
1,113,167. BUILDER'S APPLIANCE. ESAIAS T. STADIG, Cambridge, Mass., assignor of three-eighths to Arthur W. Weeden, Somerville, Mass., and one-fourth to George Johanson, Woodland, Me. Filed Mar. 24, 1913. Serial No. 756,290. (Cl. 33—112.)

1. A builder's appliance embodying an arm *a*, an arm *c* forming an extension of arm *a*, and a tang *b* having an edge *b''* lying perpendicular to the arm or extension *c* and meeting the same at a point *g*, said tang having marked thereon a scale of angle divisions described about a center point *s* located on said extension and intersecting said edge *b''* and said arm *a* having marked thereon a scale of divisions intersecting its edge *a'* and numbered to correspond with differing amounts of rafter rise per unit of run, the scale division corresponding to a specified rafter rise being located at a distance on the edge *a'* from the point *g* equivalent to the length of a common rafter having a run equal to the distance between the point *g* and the center *s* of the angle scale and the specified rafter rise; whereby the inclination of the said edge *a'* with respect to the edge of a jack rafter positioned in registration with the point of intersection of a selected rafter-rise scale division and said edge *a'* and with the point of intersection with the said tang edge *b''* of the angle scale division corresponding to the angle determined by dividing 180° by the number of sides in a polygon having the plan lines or outline of the roof for which said rafter is intended, will indicate the inclination of the side-cut for jack rafters having the specified rise in a roof of such outline.



2. A builder's appliance embodying an arm *a*, an arm *c* forming an extension of arm *a*, and a tang *b*, said arm *a* having marked thereon a scale of rafter rise divisions arranged to intersect a reference line carried on said arm *a*, said tang *b* carrying thereon a reference line lying perpendicular with respect to said first mentioned reference line and having marked thereon a scale of angle divisions described about a central point located upon the extension *c*, positioned upon a continuation of the said first mentioned reference line upon the arm *a*, which angle divisions intersect said perpendicular reference line on tang *b*; the scale division corresponding to a specified rafter rise being located on the arm *a* at a distance from the point at which the reference line on arm *a*, or its continuation, is intersected by the perpendicular reference line on the tang *b*, which is equivalent to the length of a common rafter having a run equivalent to the distance between the point of intersection, just mentioned, and the center of the angle scale, and having the specified rise; whereby the inclination of the said arm *a* with respect to a jack rafter positioned with its edge in registration with the point of intersection of a selected rafter-rise scale division and said reference line on the arm *a*, and with the point of intersection with the said perpendicular reference line on the tang *b* of the angle scale division corresponding to the angle determined by dividing 180° by the number of sides in a polygon having the plan lines or outline of the roof for which said rafter is intended, will indicate the inclination of the side-cut for jack rafters having the specified rise in a roof of such outline.

1,113,168. COMBINED NAIL-FILE AND CUTICLE-KNIFE. AUGUST HENKEL, Newark, N. J. Filed Jan. 13, 1912. Serial No. 670,974. (Cl. 30—23.)

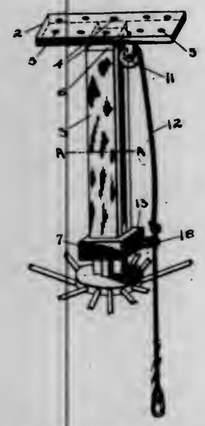


1. As a new article of manufacture, a combined nail file and cuticle knife comprising a casing, an implement mounted to swing on the casing, and a second implement having independent pivotal connection with the casing and terminating at one end in spaced members, one of which is adapted to engage the first mentioned implement when the second mentioned implement is actuated, to move the

first mentioned implement out of the casing, the said other spaced member being adapted to engage the first mentioned implement when the second mentioned implement is actuated to move the first mentioned implement into the said casing.

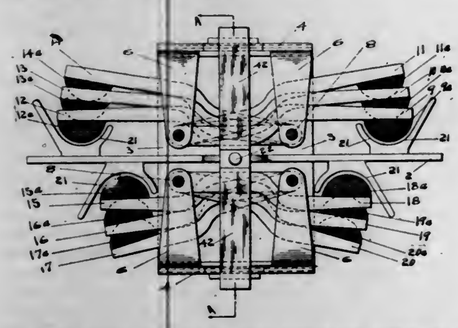
2. As a new article of manufacture, a combined nail file and cuticle knife comprising a casing, an implement mounted to swing thereon, a second implement mounted to swing on the casing, a tongue on the second implement and adapted to engage the first mentioned implement to move the same out of the casing, a shank on the second implement and adapted to engage the first mentioned implement to move the same into the casing, and a locking head formed with the shank for locking the first mentioned implement in open position on the casing.

1,113,169. CLOTHES-DRIER. OLAF KYLLO, Portland, Oreg. Filed May 26, 1914. Serial No. 841,029. (Cl. 68—34.)



In a device of the character described, a body portion, means to fasten said body portion to a ceiling, a slide to operate in said body portion, means on the slide to prevent lateral movement thereof, a cord attached to said slide, means to support said cord, a locking-pin to engage the slide, a link attached to said locking-pin through which said cord passes for the purpose of disengaging the locking-pin from the slide, a hub attached to the slide, and rods attached to the hubs to receive the articles to be dried, substantially as set forth.

1,113,170. COW-MILKING APPARATUS. GEORGE A. BRODIE, Portland, Oreg. Filed Dec. 20, 1913. Serial No. 807,802. (Cl. 31—96.)



1. The herein described milking apparatus, consisting of supporting means for cam-actuated reciprocating fingers, cams to open said fingers, means to operate said cams, teat seats fixed to said supporting means, springs to press said fingers toward said seats for the purpose of engaging the teats, pressure-pads to register with the udder hinged to said supporting means, means to hold the pressure-pads in normal engagement with said udder, and means to fasten the complete apparatus to the body of a cow, substantially as set forth.

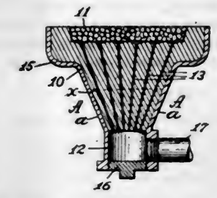
2. The herein described apparatus consisting of a center-plate, teat seats attached to said center-plate, supporting means for side-plates carried by said center-plate, said side-plates carrying arms, bearings attached to said arms, reciprocating fingers pivoted to said bearings, tips adjacent the ends of said fingers, cams pivotally mounted in said center-plate and said side-plate supporting means, said cams being adapted to open said fingers, springs passing from the side-plates to said fingers for the purpose of closing same and causing the tips to press the teats into said teat seats, pressure-pads to register with the udder hinged to said center-plate, means to hold said pressure-pads in normal engagement with the udder, means to regulate the tension of said springs, means to drive the cams, and means to fasten the complete apparatus to the body of a cow, substantially as set forth.

3. In a cow-milking apparatus, a center-plate, a bottom-plate attached to said center-plate, side-plates pivoted to said bottom-plate, arms projecting from said side-plates, bearings attached to said arms, fingers arranged in pairs pivoted to said bearings, teat seats passing transversely of said center-plate, pressure-pads to register with the udder hinged to said center-plate, means to hold said pressure-pads in normal engagement with the udder, cams fixed to a cam-shaft, said cam-shaft being rotatably mounted in the center-plate and bottom-plate, the highest points of said cams being arranged in echelon in such order that the highest point of each cam is a component part of ninety degrees past the cam above it and the highest point of the bottom cam ninety degrees past the top cam, springs to close said fingers, gears to drive said cams, means to lock and release said hinged parts, and means to attach the complete apparatus to the body of a cow, substantially as set forth.

4. In a device of the character described, a center-plate, a bottom-plate fixed to said center-plate, side-plates hinged to said bottom-plate, arms projecting from said side-plates, bearings attached to said arms, overlapping fingers arranged in pairs and adapted to co-act simultaneously pivoted to said bearings, tips attached to said fingers, teat seats passing transversely of the center plate, pressure-pads to register with the udder hinged to said center-plate, means to hold said pressure-pads in normal engagement with the udder, cams fixed to a cam-shaft, said cam-shaft being rotatably mounted in the center-plate and bottom-plate, the highest points of said cams being arranged in echelon in such order that the highest point of each cam is a component part of ninety degrees past the cam above it and the highest point of the bottom cam ninety degrees past the top cam, springs passing from the side-plates to the fingers, said springs being adapted to close said fingers and cause the tips to press the teats into said seats, means to drive said cams, means to lock and release said hinged parts, and means to attach the complete apparatus to the body of a cow, substantially as set forth.

5. In a device of the character described, a center-plate, a bottom-plate attached to said center-plate, side-plates hinged to said bottom-plate, arms fastened to said side-plates, bearings fixed to said arms, overlapping fingers arranged in pairs and adapted to co-act simultaneously pivoted to said bearings intermediate said arms, tips composed of tenacious material attached adjacent the ends of said fingers, teat seats passing transversely of the center-plate, pressure-pads to register with the udder hinged transversely of the upper portion of the center-plate, leaf springs attached to said center-plate and said pressure-pads to hold said pressure-pads in normal engagement with the udder, cams fixed to a cam-shaft, said cam-shaft being rotatably mounted in the center-plate and bottom-plate, the highest points of said cams being arranged in eschelon in such order that the highest point of each cam is a component part of ninety degrees past the cam above it and the highest point of the bottom cam ninety degrees past the top cam, springs attached to said side-plates and said fingers, each spring being adapted to close one pair of fingers and cause the tips to press the teats into the seats, means to drive said cams, latches to lock and release said hinged parts, and means to attach the complete apparatus to the body of a cow, substantially as set forth.

1,113,171. APPARATUS FOR BURNING EXPLOSIVE GASEOUS MIXTURES. FRANK CREELMAN, New York, N. Y., assignor to Gas and Oil Combustion Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1913. Serial No. 740,880. (Cl. 158—99.)



1. An apparatus for burning explosive gaseous mixtures comprising in combination a structure providing a combustion chamber, a mixture supply chamber adjacent to the combustion chamber, and a body between said chambers having a plurality of supply passages therein for the flow of the explosive mixture from the supply chamber to the combustion chamber, means for maintaining a supply of the explosive mixture in the supply chamber under pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propagation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture, said body having a heat discharging surface and being formed to provide a path of less resistance to the flow of heat from any point adjoining the combustion chamber to a heat discharging surface thereof than the path through said body from such point to the supply chamber.

2. An apparatus for burning explosive gaseous mixtures comprising in combination a structure providing a combustion chamber, a mixture supply chamber adjacent to the combustion chamber, and a body between said chambers having a plurality of supply passages therein for the flow of the explosive mixture from the supply chamber to the combustion chamber, means for maintaining a supply of the explosive mixture in the supply chamber under pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propagation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture, said body having a heat discharging surface and being shaped to provide a path of less length for the flow of heat from any point adjoining the combustion chamber to a heat discharging surface thereof than the path through said body from such point to the supply chamber.

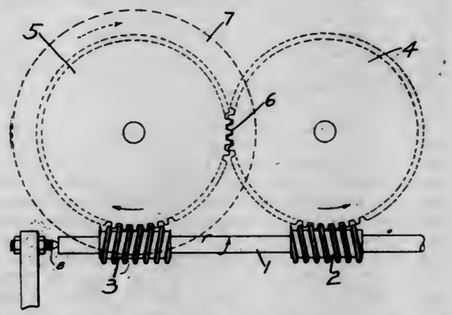
3. An apparatus for burning explosive gaseous mixtures comprising in combination a structure providing a combustion chamber, a mixture supply chamber adjacent to the combustion chamber, and a body between said chambers having a heat discharging surface and shaped with the portion thereof near the combustion chamber of greater cross sectional size than the portion thereof near the supply chamber to provide a path of less resistance to the flow of heat from any point adjoining the combustion chamber to a heat discharging surface of said body than the path through said body from such point to the supply chamber, and said body having a plurality of mixture supply passages therein leading from the supply chamber to the combustion chamber, means for maintaining a supply of the explosive mixture in the supply chamber under pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propagation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture.

4. An apparatus for burning explosive gaseous mixtures comprising in combination a structure providing a combustion chamber, a mixture supply chamber adjacent the combustion chamber, and a body between said chambers shaped with heat discharging sides slanting outwardly in the direction from the supply chamber to the combustion chamber to provide a path of less resistance to the flow of heat from any point adjoining the combustion chamber to a heat discharging surface of said body than the path through said body from such point to the supply chamber, and said body having a plurality of mixture supply passages therein leading from the supply chamber to the combustion chamber, said passages being spaced apart a greater distance at their delivery ends than they are adjacent to the supply chamber, means for maintaining a supply of the explosive mixture in the supply chamber under pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propogation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture.

5. An apparatus for burning explosive gaseous mixtures comprising in combination a structure providing a combustion chamber, a mixture supply chamber adjacent the combustion chamber, and a body between said chambers shaped with heat discharging sides slanting outwardly in the direction from the supply chamber to the combustion chamber to provide a path of less resistance to the flow of heat from any point adjoining the combustion chamber to a heat discharging surface of said body than the path through said body from such point to the supply chamber, and said body having a plurality of straight mixture supply passages therein leading from the supply chamber to the combustion chamber and spreading apart in the direction from the supply chamber to the combustion chamber, means for maintaining a supply of the explosive mixture in the supply chamber under pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propagation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture.

[Claims 6 to 18 not printed in the Gazette.]

1,113,172. WORM-GEAR. FRANCIS K. FASSETT, Dayton, Ohio. Filed Feb. 3, 1913. Serial No. 745,845. (Cl. 74—36.)



1. The combination of a worm-gear comprising two toothed wheels rotatably mounted with their teeth enmeshed and a pair of worms mounted upon a common shaft with one worm engaging each wheel, and a thrust bearing adapted to prevent longitudinal movement of the shaft in one direction.

2. The combination of a worm-gear comprising two toothed wheels rotatably mounted with their teeth enmeshed and a pair of worms mounted upon a common shaft with one worm engaging each wheel, and a thrust bearing adapted to push the shaft longitudinally as far as the worms and teeth will permit.

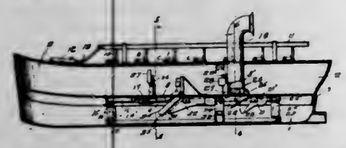
3. The combination of a worm-gear comprising two toothed wheels rotatably mounted with their teeth enmeshed and a pair of worms, one right hand and the other left hand, mounted upon a common shaft with one worm engaging each wheel, and a thrust bearing to hold the shaft in such position longitudinally that when it rotates in one direction only one wheel is driven by its worm and when rotated in the opposite direction only the other wheel is driven by its worm.

4. A worm-gear comprising a shaft with a right-hand and a left-hand worm rigidly secured thereto, a pair of gear wheels having their teeth enmeshed with each other, one of the gears being also enmeshed with each worm, and a thrust bearing whereby the shaft may be moved longitudinally and held in a position where the interlocking of the gears prevents further longitudinal movement thereof.

5. A worm-gear comprising a shaft with a right-hand and a left-hand worm rigidly secured thereto, a pair of gear wheels having their teeth enmeshed with each other, one of the gears being also enmeshed with each worm, and a thrust bearing whereby the shaft may be moved longitudinally and held in a position where the worms are prevented from acting simultaneously to drive their respective gears.

[Claims 6 to 11 not printed in the Gazette.]

1,113,173. SHIP. GREGORY KOVALEVITCH, South Portland, Oreg. Filed Aug. 2, 1913. Serial No. 782,718. (Cl. 114—77.)



1. The hull of a ship, comprising separable upper and lower sections, means for removably securing said sections together, a bottom for the upper section having openings therein communicating with the lower section, watertight closures for said openings, and means actuated by the rise of water in the lower section for operating said closures.

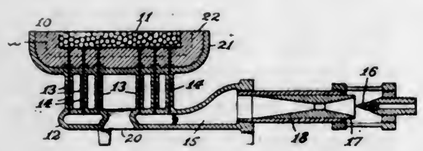
2. In a sectional hull for ships, the combination with a keel section, of a superposed section separably mounted thereon and jointed thereto, a bottom for the superposed section having an opening therein, a trap-door for closing said opening, a weighted lever for closing said door, a latch for normally holding said lever inactive, a float carried in the keel section and connected with said latch adapted to be actuated by the rise of water therein to trip the latch and release said weighted lever to close the trap-door, substantially as described.

3. In a sectional hull for ships, the combination with a keel section, of a superposed section separably mounted thereon and jointed thereto, a bottom for the superposed section having an opening therein communicating with the lower section, a hinged door for closing said opening, a weighted lever for closing said door, a latch for normally holding said lever inactive, a float carried in the keel section and connected with said latch adapted to be actuated by the rise of water therein to trip the latch and release said weighted lever to close the door, a latch for locking said door shut, a pivoted lever for pressing the door tightly closed to form a water-tight closure, and a latch for normally holding said last mentioned lever inactive and adapted to be tripped by the closing of the door to release the lever, substantially as described.

4. In a sectional hull for ships, the combination with a keel section, of a superposed section separably mounted thereon, a bottom for the superposed section having an opening therein, a sectional smoke funnel passing through said opening, a pivoted weight mounted on the lower section and connected at one end to the lower section of the funnel, a latch for normally holding said weight elevated, a float carried on said lower section and connected with said latch adapted to be actuated by the rise of water in the lower section to operate the latch to release said pivoted weight to disconnect the sections of the funnel, substantially as described.

5. In a sectional hull for ships, the combination with a keel section, of a superposed section separably mounted thereon, a bottom for said superposed section having a ventilator opening and a hatch-way therein, a separable smoke funnel passing through said hatch-way, closures for said ventilator opening and hatch-way, means for operating said closures and separating said sectional smoke-funnel, and floats carried in hollow shafts in said keel section adapted to be successively actuated by the rise of water in the keel section to operate said stack-separating means and said closing means, substantially as described.

1,113,174. APPARATUS FOR BURNING EXPLOSIVE GASEOUS MIXTURES. CHARLES E. LUCKE and FRANK CREELMAN, New York, N. Y., assignors to Gas and Oil Combustion Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1913. Serial No. 740,896. (Cl. 158—99.)



1. An apparatus for burning explosive gaseous mixtures comprising a burner body or head of refractory material and of low heat conductivity, a combustion bed of porous and permeable refractory material supported against the burner head, a mixture supply chamber adjacent to but spaced off from the burner head, a plurality of separated connecting members extending between the burner head and the supply chamber leaving a space between the burner body and the supply chamber through which a current of air induced by the heat from the structure may pass in contact with said connecting members, and a plurality of supply passages extending from the supply chamber to the combustion bed through said connecting members and through the burner head for the flow of the explosive mixture to the combustion bed.

2. An apparatus for burning explosive gaseous mixtures comprising a burner body or head of refractory material and of low heat conductivity formed with a recessed face, a combustion bed of loose pieces of refractory material in the recess in the burner head, a mixture supply chamber adjacent to but spaced off from the burner head, a plurality of separated connecting members extending between the burner head and the supply chamber and having heat discharging surfaces to limit the backward conduction of heat, and a plurality of supply passages extending from the supply chamber to the combustion bed through said connecting members and through the burner head for the flow of the explosive mixture to the combustion bed, said passages being of substantially uniform size throughout their lengths.

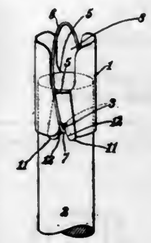
3. An apparatus for burning explosive gaseous mixtures comprising a burner body or head of refractory material and of low heat conductivity having a recess in one face forming a combustion chamber, a mixture supply chamber adjacent to but spaced off from the burner head, a plurality of separated connecting members extending between the burner head and the supply chamber and having heat discharging surfaces to limit the backward conduction of heat, a plurality of supply passages extending from the supply chamber to the combustion chamber through said connecting members and through the burner head for the flow of the explosive mixture to the combustion bed, means for maintaining a supply of the gaseous mixture in the supply chamber under a pressure sufficient to cause the mixture to flow through the supply passages with a velocity greater than the rate of propagation of inflammation through the mixture, and means within the combustion chamber for reducing the flow velocity of the mixture entering the chamber from the supply passages.

4. An apparatus for burning explosive gaseous mixtures comprising a burner body or head of refractory material and of low heat conductivity, a mixture supply chamber adjacent to but spaced off from the burner head, a plurality of separated tubular members extending between the burner head and the supply chamber, passages through the burner head connecting with the bores of said tubular members whereby through supply passages are provided for the flow of the explosive mixture from the supply chamber to and through the burner head, and means for reducing the flow velocity of the mixture escaping from the supply passages and preventing diffusion with other gas.

5. An apparatus for burning explosive gaseous mixtures comprising in combination a burner body or head of refractory material and of low heat conductivity, a combustion bed of porous and permeable refractory material supported against the burner head, a casing beneath the burner head providing a mixture supply chamber and formed with an opening for the passage of a cooling current of air upward therethrough toward the burner head, a plurality of separated tubular connecting members extending between said casing and the burner head, the burner head being formed with passages connecting with the bores of said tubes to provide through supply passages for the flow of the explosive mixture from the supply chamber to the combustion bed.

[Claims 6 to 15 not printed in the Gazette.]

1,113,175. MOP. HARRY B. WALLACE, St. Louis, Mo., assignor to Samuel Cupples Wooden Ware Company, St. Louis, Mo., a Corporation of Missouri. Filed May 29, 1914. Serial No. 841,720. (Cl. 15—56.)



1. In combination with a mop stick having a transverse aperture near one end thereof, a mop head formed of a strip of sheet metal having its ends brought together in overlapped relation so that the inner end of the mop head encircles the apertured end of the mop stick, a pair of registering notches in the inner edge of the overlapped ends of said mop head, which notches communicate with one end of the aperture in the mop stick, mop material located in the outer end of said mop head, and a binding wire passing through the aperture in the mop stick and the notches in the inner edge of the mop head and adapted to retain the overlapped ends of said mop head in overlapped relation, to retain the mop material in said head, and to restrict the inward and, also, rotary movement of and to retain said head on said stick.

2. In combination with a mop stick having a transverse aperture near one end thereof, a mop head formed of a strip of metal having its ends brought together in overlapped relation so that the inner end of the mop head encircles the apertured end of the mop stick, a pair of registering notches in the inner edge of the overlapped ends of said mop head, which notches communicate with one end of the aperture in the mop stick, a third notch in the inner edge of said mop head opposite said registering notches and communicating with the other end of the aperture in the mop stick, mop material located in the outer end of said mop head, and a binding wire passing through the aperture in the mop stick and all of said notches in the inner edge of said mop head and adapted to retain the overlapped ends of said mop head in overlapped relation, to retain the mop material in said head, and to restrict the inward and, also, rotary movement of and to retain said head on said stick.

1,113,176. SHEET-METAL HINGE. FRANK B. WORDEN, Jamestown, N. Y. Filed Feb. 9, 1914. Serial No. 817,674. (Cl. 4—18.)

1. A hinging member formed of sheet metal, return bent to form an eye, and having portions adjacent said eye telescoping with each other.

2. A hinging member formed of sheet metal, return bent to form an eye, and having portions adjacent said eye of tubular form and telescoping with each other.

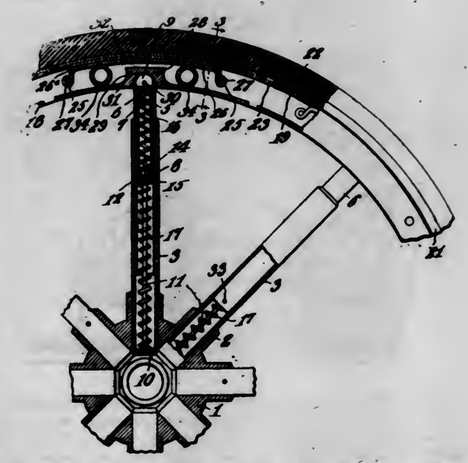
3. A hinging member formed of sheet metal, return bent to form an eye, and having portions adjacent said eye of tubular form and telescoping with each other, and a bushing in said eye.

4. A hinging member formed of sheet metal, return bent to form an eye, and having portions adjacent said eye fitted one within the other.

5. A hinging member formed of sheet metal, return bent to form an eye, and having portions adjacent said eye fitted one within the other and adapted to reinforce the body portion of said member and fixedly determine the size of said eye.

[Claims 6 to 10 not printed in the Gazette.]

1,113,177. SPRING-WHEEL. OTTO G. WORSLEY, Aurora, Ill. Filed Feb. 3, 1914. Serial No. 816,258. (Cl. 152—48.)



1. In a spring wheel, a hub; a rim; a main tubular spoke member secured to the hub; an auxiliary tubular spoke member connected with the rim and slidable within the main spoke member; a rod located within the main spoke member and held against longitudinal movement; an abutment adjustable along the rod and fitted within the

auxiliary tubular spoke member; means for holding the abutment fixed in adjusted positions; an abutment slidable on the rod toward and away from the hub bearing against the auxiliary spoke member and adapted to engage the adjustable abutment to limit the outward movement of the movable abutment; a compression spring located within the auxiliary spoke member and engaging the adjustably fixed abutment; and a spring located within the main spoke member and engaging the movable abutment.

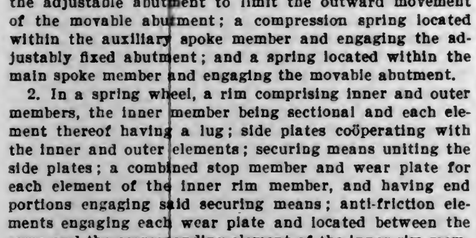
2. In a spring wheel, a rim comprising inner and outer members, the inner member being sectional and each element thereof having a lug; side plates coöperating with the inner and outer elements; securing means uniting the side plates; a combined stop member and wear plate for each element of the inner rim member, and having end portions engaging said securing means; anti-friction elements engaging each wear plate and located between the same and the corresponding element of the inner rim member upon the opposite side of the lug on the latter and between the same and the end portions of the combined stop member and wear plate, to limit circumferential movement of said anti-friction elements; a yieldable spoke connected with each element of the inner rim member and a hub to which the inner ends of the spokes are attached.

3. In a spring wheel, a rim, comprising inner and outer members, the inner member being sectional and each element thereof having a lug; a combined wear plate and stop member for each element of the inner rim member bearing against the outer member of the rim and provided with inwardly projecting end portions forming stops located on opposite sides of the lug of the corresponding rim element; anti-friction elements located between each stop and wear plate and corresponding element of the inner rim member, and respectively between said lug and said stops; a hub; and a yieldable spoke forming a connection between each element of the inner rim member and hub.

4. A spring wheel having telescoping spring-extended spokes; a hollow rim having a sectional inner member, with the elements of which the outer ends of the spokes are respectively connected; loose anti-friction elements located between each element of the inner rim member and the outer rim member; and stops carried respectively by the outer rim member and each element of the inner rim member to limit the circumferential movement in both directions of said anti-friction elements.

REISSUES.

13,805. VEHICLE-BED. THOMAS R. EDMONDSON, Tucson, Ariz., assignor of one-half to Edward G. Sporieder, Tucson, Ariz. Filed Sept. 3, 1914. Serial No. 859,960. Original No. 1,107,596, dated Aug. 18, 1914, Serial No. 786,285. (Cl. 21—43.)



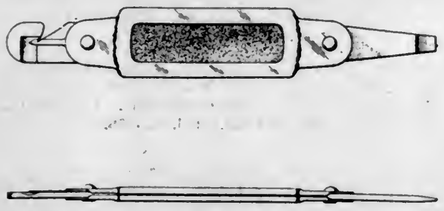
In a vehicle body, in combination, front and rear seats, hinged backs therefor locking means co-acting with the corners of each back and the sides of the seats to hold the backs in normal position, removable cushions associated with the back and seat portion of each, and means telescoping with one of said seats adapted to co-act with the back of the front seat to completely fill the space between the front and rear seats thereby permitting some of said removable cushions to be laid thereon to provide a smooth even bed.

DESIGNS.

46,490. CHIN-PLATE FOR VIOLINS. FREDERICK W. BECKER, New York, N. Y. Filed May 2, 1914. Serial No. 836,031. Term of patent 3½ years.

The ornamental design for a chin plate for violins consisting of a plate and the downwardly projecting slender spaced feet, substantially as shown and described.

46,491. COMBINATION NEEDLE THREADER AND SHARPENER. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 7, 1914. Serial No. 855,707. Term of patent 3½ years.

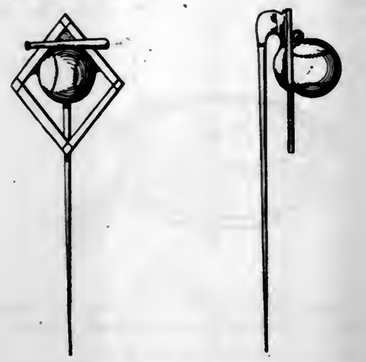


The ornamental design for a combination needle-threader and sharpener, as shown.

46,492. SHEET-METAL STOVE-BODY. ERNEST C. COLE, Chicago, Ill. Filed July 29, 1914. Serial No. 853,956. Term of patent 3½ years.

The ornamental design for a sheet metal stove body, as shown.

46,493. BADGE OR EMBLEM. SETH P. COLGAN, Orleans, Nebr., assignor of one-half to Charles S. Melick, Orleans, Nebr. Filed Apr. 15, 1914. Serial No. 832,137. Term of patent 3½ years.

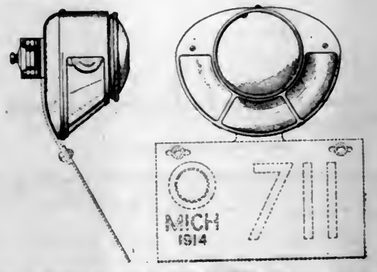


The ornamental design for a badge or emblem, as shown.

46,494. SHADE-BRACKET. MORGAN DAVIES, Denver, Colo. Filed July 25, 1914. Serial No. 853,178. Term of patent 14 years.

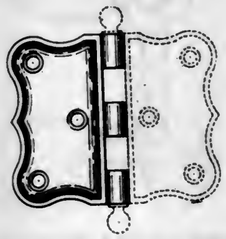
The ornamental design for a shade bracket, as shown.

46,495. VEHICLE-LAMP. CHARLES E. GODLEY, Detroit, Mich. Filed July 3, 1914. Serial No. 848,957. Term of patent 14 years.



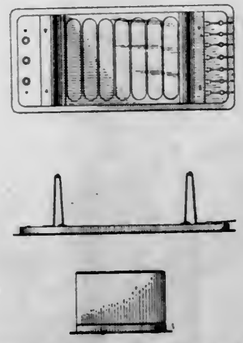
The ornamental design for a vehicle lamp, as shown.

46,496. HINGE-LEAF. JAMES C. GRIFFIN, Erie, Pa., assignor to Griffin Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1913. Serial No. 764,287. Term of patent 14 years.



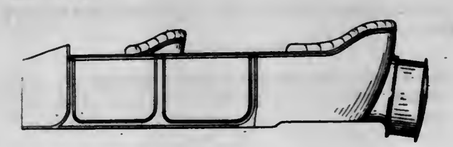
The ornamental design for a hinge leaf as shown.

46,497. FRAME FOR BEADWORK-LOOMS. CHARLOTTE V. GULICK, New York, N. Y., assignor to Camp Fire Outfitting Co., New York, N. Y., a Corporation of New York. Filed July 8, 1914. Serial No. 849,857. Term of patent 14 years.



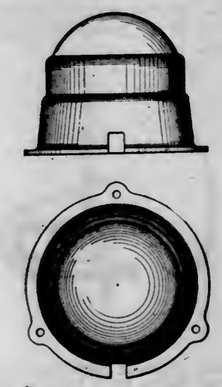
The ornamental design for a frame for a bead work loom, as shown.

46,498. AUTOMOBILE-BODY. GEORGE W. HARPER, Cleveland, Ohio., assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 4, 1913. Serial No. 782,955. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

46,499. HUB-CAP. DON T. HASTINGS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 24, 1911. Serial No. 640,363. Term of patent 7 years.

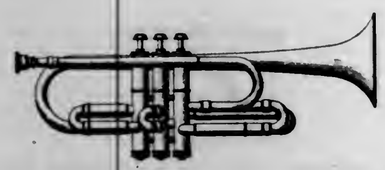


The ornamental design for a hub cap, as shown.

46,500. FRENCH-DRESSING BOTTLE. TOWNSEND DE M. HAWKES, Corning, N. Y. Filed July 16, 1914. Serial No. 851,414. Term of patent 14 years.

The ornamental design for a French dressing bottle, as shown.

46,501. CORNET. FRANK HOLTON, Chicago, Ill. Filed Feb. 9, 1914. Serial No. 817,705. Term of patent 14 years.

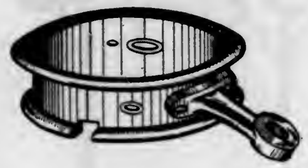


The ornamental design for a cornet, as shown.

46,502. HORN. EUGENE KAUFMANN, New York, N. Y. Filed July 30, 1914. Serial No. 854,186. Term of patent 7 years.

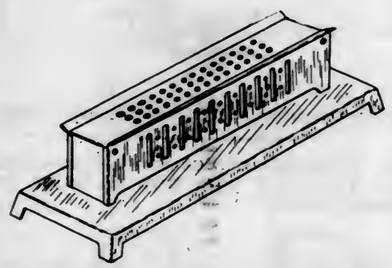
The ornamental design for a horn as illustrated.

46,503. CAM-RING FOR MECHANICAL INTERRUPTERS IN ELECTRICAL IGNITION SYSTEMS. ADOLF KRAUSS, Cannstatt, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany, a Corporation of Germany. Filed June 5, 1914. Serial No. 843,313. Term of patent 7 years.



The ornamental design for a cam ring for mechanical interrupters in electrical ignition systems, as shown.

46,504. CURLING-IRON HEATER. FRANK KUHN, Detroit, Mich., assignor to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed July 9, 1914. Serial No. 850,023. Term of patent 14 years.

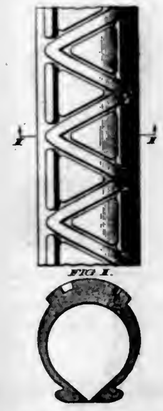


The ornamental design for a curling iron heater, substantially as shown.

46,505. STATUETTE. HUGO LEDERMAN, New York, N. Y. Filed July 31, 1914. Serial No. 854,403. Term of patent 7 years.

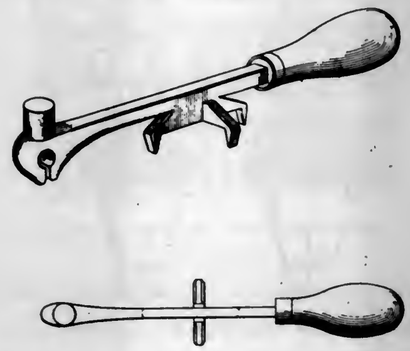
The ornamental design for a statuette, as shown.

46,506. TIRE. JOHN ELLWOOD LEE, Conshohocken, Pa. Filed July 28, 1913. Serial No. 781,664. Term of patent 14 years.



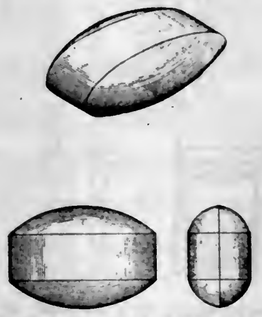
The ornamental design for a tire as shown.

46,507. COMBINATION-TOOL. CHARLES LINDSEY, Waynesboro, Miss. Filed Aug. 26, 1913. Serial No. 786,805. Term of patent 3½ years.



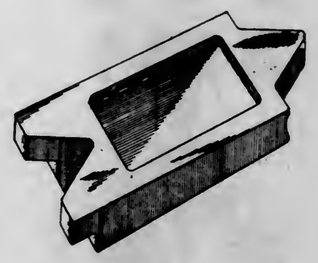
The ornamental design for a combination tool, as shown.

46,508. CAKE OF SOAP. THOMAS W. MCDOUGAL, Chicago, Ill., assignor to Armour & Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1914. Serial No. 836,028. Term of patent 7 years.



The ornamental design for a cake of soap, as shown.

46,509. BRICK FOR LOCOMOTIVE-ARCHES. JOHN P. NEFF, East Orange, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of New York. Filed July 24, 1913. Serial No. 781,031. Term of patent 14 years.

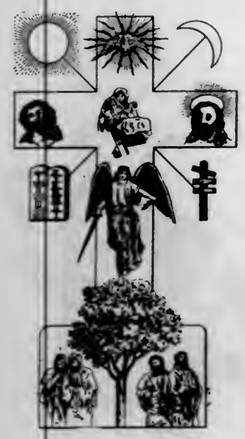


The ornamental design for a brick for locomotive arches, as shown.

46,510. SANITARY TOOTH-CLEANER. EDWIN G. OVER, Fort Worth, Tex. Filed June 17, 1914. Serial No. 845,744. Term of patent 14 years.

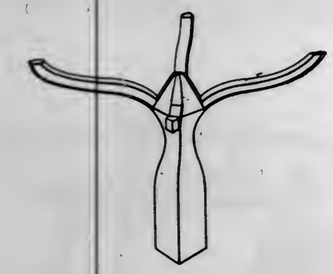
The ornamental design for a sanitary tooth-cleaner, as shown.

46,511. CRUCIFIX. MIKLOS PANCHULA, Dixonville, Pa. Filed Aug. 6, 1914. Serial No. 855,519. Term of patent 7 years.



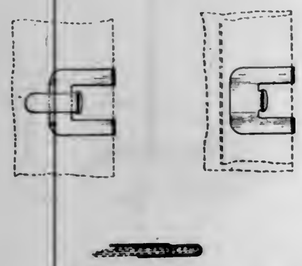
The ornamental design for a crucifix, as shown.

46,512. LAMP-SHADE STANDARD. JOHN M. RE MAKER, Springfield, Mass. Filed July 24, 1914. Serial No. 852,913. Term of patent 7 years.



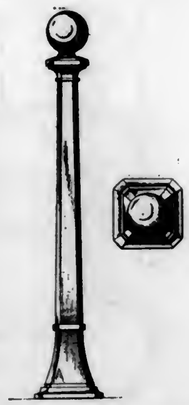
The ornamental design for a lamp shade standard, as shown.

46,513. FASTENER FOR PAPER BAGS. JOHANN SEEFRIED, Nuremberg, Germany. Filed Nov. 13, 1913. Serial No. 800,990. Term of patent 3½ years.



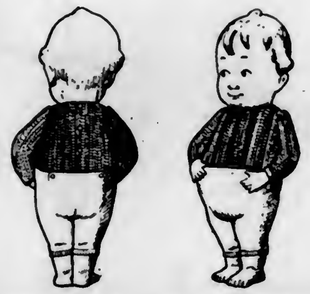
The ornamental design for a fastener for paper bags as shown and described.

46,514. LAMP-POST. EDWIN D. SMITH, St. Louis, Mo. Filed July 30, 1914. Serial No. 854,184. Term of patent 14 years.



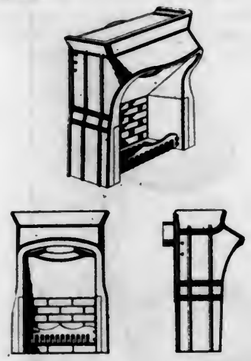
The ornamental design for a lamp post, as shown.

46,515. DOLL. THOMAS E. STUTSON, Newton, Mass. Filed Aug. 6, 1914. Serial No. 855,518. Term of patent 3½ years.



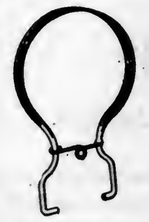
The ornamental design for a doll, as shown.

46,516. FIREPLACE. WALTER J. THURMOND, Columbus, Ga. Filed June 8, 1914. Serial No. 843,889. Term of patent 7 years.



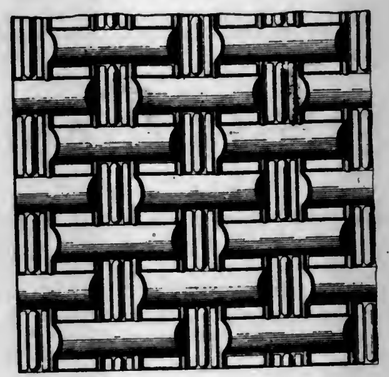
The ornamental design for a fire-place, as shown and described.

46,517. SPOOL-HOLDER. ROBERT R. TODD, Brookneal, Va. Filed July 3, 1914. Serial No. 848,960. Term of patent 14 years.



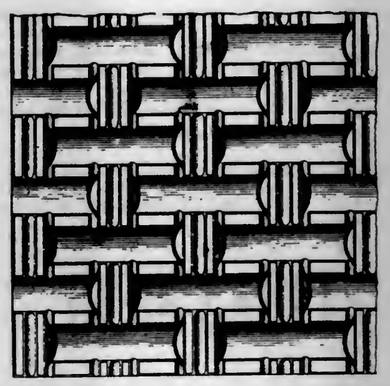
The ornamental design for a spool holder, as shown.

46,518. SHEET METAL. FRANK M. VOGAN, Canton, Ohio. Filed Aug. 20, 1913. Serial No. 785,791. Term of patent 7 years.



The ornamental design for sheet metal as shown.

46,519. SHEET METAL. FRANK M. VOGAN, Canton, Ohio. Filed July 12, 1912. Serial No. 709,075. Term of patent 7 years.



The ornamental design for sheet metal as shown.

46,520. INKSTAND. OSCAR P. WALBERG, Kimball, Minn. Filed June 22, 1914. Serial No. 846,693. Term of patent 7 years.

The ornamental design for an ink stand, as shown.

46,521. GEM-SETTING. CHARLES T. WITTSTEIN, Newark, N. J. Filed June 25, 1914. Serial No. 847,320. Term of patent 14 years.

The ornamental design for a gem setting as shown.

TRADE-MARKS

PUBLISHED OCTOBER 6, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 61,484. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed Feb. 15, 1912.

MARVELOUS

Particular description of goods.—Cold-Creams and Nail-Polish.

Claims use since December, 1902.

Ser. No. 62,346. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 22, 1912.

BLUE LABEL

Applicant disclaims the right to the exclusive use of a label colored blue.

Particular description of goods.—Prepared Tar, Pitch, and Asphalt for Roofing, Paving, Waterproofing, and other Construction Purposes.

Claims use since Mar. 8, 1912.

Ser. No. 62,350. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 22, 1912.

BLUE LABEL

Applicant disclaims the right to the exclusive use of a label colored blue.

Particular description of goods.—Papers, Felts, and Composite Fabrics for Roofing, Sheathing, and Waterproofing.

Claims use since Mar. 8, 1912.

Ser. No. 64,089. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHAS. JACQUIN ET CIE., INC., New York, N. Y. Filed June 10, 1912.

KULOFF

Particular description of goods.—A Concentrated Non-Alcoholic Summer Beverage.

Claims use since about Mar. 16, 1912.

Ser. No. 65,531. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EARNSDALE WORSTED CO., Clinton, Mass. Filed Aug. 31, 1912.

Motokloth

Particular description of goods.—Upholstering-Cloth.

Claims use since May 6, 1912.

Ser. No. 66,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRI DUJARDIN, New York, N. Y. Filed Nov. 9, 1912.

Which shows a basket formed of interlaced round and flat strips of material and with a cover lined at the right and left to indicate that different colors are used at the right and left, blue at the right and red at the left, and unlined at the center to indicate that no color other than the color of the material is employed.

Particular description of goods.—Fresh Fruits and Vegetables.

Claims use since September, 1911.

Ser. No. 68,674. (CLASS 12. CONSTRUCTION MATERIALS.) AMERICAN WEATHER STRIP COMPANY, Grand Rapids, Mich. Filed Feb. 24, 1913.

Windustite

Particular description of goods.—Weather-Strips.
Claims use since Jan. 15, 1913.

Ser. No. 71,091. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD K. MAGUIRE, New York, N. Y. Filed June 13, 1913.

Pilot Pills

The use of the word "Pills" as a part of the trademark being hereby disclaimed.
Particular description of goods.—A Medicinal Preparation for Internal Use as a Remedy for Headache, Constipation, and Biliousness, Put Up in the Form of Pills.
Claims use since February, 1913.

Ser. No. 72,539. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WILLIAM H. SHEETS, JR., & Co., Baltimore, Md. Filed Aug. 26, 1913.

RAVEN

Consisting of the word "Raven."
Particular description of goods.—Brushes—Namely, Wall-Brushes, Scrubbing-Brushes, Clothes-Brushes, Paint and Whitewash Brushes.
Claims use since as early as 1891.

Ser. No. 73,382. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. LASKER & SON, Galveston, Tex. Filed Oct. 15, 1913.

Said trade-mark consists of a flying angel printed in yellow and a ribbon above and a background of clouds below printed in blue.
Particular description of goods.—Wheat-Flour.
Claims use since Sept. 30, 1888.

Ser. No. 73,626. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOANNES-SPLANE CO., Los Angeles, Cal. Filed Oct. 27, 1913.

BEN-HUR

Particular description of goods.—Flavoring Extracts for Foods, Spices, Spanish Seasoning, Curry-Powder, Paprika, Celery-Salt, and Onion-Salt.
Claims use since Aug. 1, 1903.

Ser. No. 75,192. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) CORONAL COMPANY, Los Angeles, Cal. Filed Jan. 15, 1914.

Particular description of goods.—Analgesic Balm, Ant-Killer, Antiseptic Solution, Arnica Salve, Blackberry Cordial, Beef, Iron, and Wine, Bronchial-Cough Balm, Carbolic Salve, Infant-Cordial, Cold-Cream, Cold-Tablets, Complexion-Lotion; Fluid Extract Cascara Sagrada, Aromatic; Easy-Feet Tablets, Jamaica Ginger, Hair-Lotion, Hepatic Salts, Hydrogen Peroxid, Laxative Fig Syrup, Liniment-Cream, Massage-Cream, Milk of Magnesia, Peroxized Cream, Rice Powder, Sarsaparilla, Sachet-Powder, Talcum Powder, Tasteless Castor-Oil, Dentifrices, Theatrical Cold-Cream, White-Rose Eye-Water; White Pine and Tar, Mentholated; Witch-Hazel Salve; Remedies for Headache and Neuralgia Pains, Wounds, Cuts, and Abrasions, Summer Complaints; Coughs and Colds; Infantile Stomach Troubles; Corns, Constipation; Sore and Tired Feet, Diseased and Disordered Conditions of the Liver, Stomach, Kidney, and Bladder; Bruises and Sprains; Piles; Rheumatism; Sunburn; Toothache; Sore and Weak Eyes; Germicides; Mouth and Nasal Washes; a Lotion for Preserving the Color of the Hair; Disinfectants; Laxatives; Alteratives; Cathartics; Tonics for Toning Up the General System; Tonics for Female Weakness; Creams for Anointing, Greasing, and Softening the Skin; Powders for the Skin.
Claims use since about Apr. 5, 1913.

Ser. No. 75,334. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDERRIEDEN CANNING CO., Chicago, Ill. Filed Jan. 21, 1914.

RICE LAKE

Particular description of goods.—Canned Vegetables.
Claims use since Jan. 6, 1914.

Ser. No. 75,384. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNST HANDL, Chicago, Ill. Filed Jan. 23, 1914.

STROOPAL

"Stroopal."
Particular Destruction of goods.—Preparations for Purifying the Blood and the Treatment of Cancer.
Claims use since Jan. 1, 1914.

Ser. No. 75,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HIPON

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 1, 1911.

Ser. No. 75,912. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HIPON

Particular description of goods.—Canned Fruits, Canned Vegetables, Spices, Tea, Coffee, and Chocolate.
Claims use since Jan. 1, 1911.

Ser. No. 75,914. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HOMBRE GORDO

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 1, 1911.

Ser. No. 75,916. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

HOMBRE GORDO

Particular description of goods.—Canned Fruits, Canned Vegetables, Spices, Tea, Coffee, and Chocolate.
Claims use since Jan. 1, 1911.

Ser. No. 75,922. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BAKER BREAD COMPANY, Zanesville, Ohio. Filed Feb. 16, 1914.

SPLENDOR

Particular description of goods.—Bread.
Claims use since Feb. 10, 1914.

Ser. No. 75,969. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Feb. 18, 1914.

COMPASS

Particular description of goods.—Belting.
Claims use since June 1, 1913.

Ser. No. 75,995. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Feb. 18, 1914.

RED WING.

Particular description of goods.—Rubber Packing for Machinery.
Claims use since June 1, 1913.

Ser. No. 76,220. (CLASS 2. RECEPTACLES.) NORTH WESTERN STEEL & IRON WORKS, Eau Claire, Wis. Filed Feb. 27, 1914.

National

Particular description of goods.—Tanks.
Claims use since Jan. 1, 1914.

Ser. No. 76,243. (CLASS 39. CLOTHING.) THE HUISKAMP BROS. CO., Keokuk, Iowa. Filed Feb. 28, 1914.

HUISKAMP'S BILLY WHISKERS' KIDS

No claim being made to the exclusive use of the name "Huiskamp's."
Particular description of goods.—Leather Boots and Shoes.
Claims use since Aug. 1, 1913.

Ser. No. 76,358. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRUENSVELDER BROS., Peoria, Ill. Filed Mar. 5, 1914.

FAVORITE

Particular description of goods.—Pancake-Flour and also Powdered Milk.
Claims use since Jan. 15, 1914.

Ser. No. 76,407. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ABEN E. JOHNSON, Hastings, Mich. Filed Mar. 6, 1914.

GOOD LUCK

Particular description of goods.—Fishing-Tackle.
Claims use since Feb. 23, 1914.

Ser. No. 76,480. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE RIDER PACKING CO. INC., Crothersville, Ind. Filed Mar. 9, 1914.

FOOD KING

Particular description of goods.—Canned Tomatoes, Hominy, Sauer-Kraut, Pumpkin, Green Beans, Red Kidney-Beans, Beans with Pork and Tomato Sauce, and Catsup.
Claims use since the 1st day of January, 1914.

Ser. No. 76,646. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE INDEPENDENT GROCERS ASSOCIATED BAKING COMPANY, Columbus, Ohio. Filed Mar. 13, 1914.

Eatwell

Particular description of goods.—Bread.
Claims use since Oct. 8, 1912.

Ser. No. 76,798. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARREN P. MUNSELL, Princeton Junction, N. J. Filed Mar. 20, 1914.

BROWNEARTH

Particular description of goods.—Fresh and Canned Fruits and Vegetables; Milk and Butter; Eggs, Live and Dressed Poultry; Cured Hams, Bacon, and Fresh Sausage and Fresh Pork.
Claims use since Mar. 1, 1914.

Ser. No. 77,258. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALLEY CITY MILLING CO., Grand Rapids, Mich. Filed Apr. 6, 1914.

ROWENA

Particular description of goods.—Self-Rising Biscuit-Flour Made from Wheat.
Claims use since Dec. 19, 1913.

Ser. No. 77,650. (CLASS 31. FILTERS AND REFRIGERATORS.) THE GRISCOM RUSSELL COMPANY, New York, N. Y. Filed Apr. 22, 1914.

Particular description of goods.—Filters Intended for Purifying Feed-Water.
Claims use since Aug. 28, 1912.

Ser. No. 77,740. (CLASS 31. FILTERS AND REFRIGERATORS.) CARSTENS BROS., Ackley, Iowa. Filed Apr. 25, 1914.

Economy

Particular description of goods.—Refrigerators.
Claims use since Mar. 2, 1914.

Ser. No. 77,772. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DELGADO MILLS, Wilmington, N. C. Filed Apr. 27, 1914.

PALM

Particular description of goods.—Ginghams.
Claims use since about March, 1909.

Ser. No. 77,813. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY G. SEARS CO., Holyoke, Mass. Filed Apr. 27, 1914.

SQUARE SEAL

H G S G

Particular description of goods.—Canned Vegetables, Canned Fruits, Canned Salmon, Rolled Oats, Teas, Coffee, Cocoa, Spices, Honey, Maple-Syrup, Vinegar, and Dried Fruits.
Claims use since Jan. 1, 1914.

Ser. No. 77,825. (CLASS 17. TOBACCO PRODUCTS.) WILLIAM P. KAPP, New York, N. Y. Filed Apr. 28, 1914.

W.&G.

Particular description of goods.—Leaf-Tobacco.
Claims use since 1868.

Ser. No. 77,826. (CLASS 17. TOBACCO PRODUCTS.) WILLIAM P. KAPP, New York, N. Y. Filed Apr. 28, 1914. Under ten-year proviso.

FLOR DE VUELTA

Particular description of goods.—Leaf-Tobacco.
Claims use since 1886.

Ser. No. 77,986. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. R. PORTA, Tampa, Fla. Filed May 4, 1914.

AZUCARILLO-PO-OR-TA

Particular description of goods.—Headache and Indigestion Remedies.
Claims use since Dec. 28, 1913.

Ser. No. 77,997. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE G. G. CHEMICAL CORPORATION, New York, N. Y. Filed May 5, 1914.

G. G.
Phenoleum

No claim being made to the word "Phenoleum" herein.
Particular description of goods.—A Disinfectant.
Claims use since Jan. 1, 1914.

Ser. No. 78,314. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed May 15, 1914.

GOLDEN GATE

Particular description of goods.—Cotton Piece Goods.
Claims use since Dec. 1, 1908.

Ser. No. 78,515. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn. Filed May 25, 1914.

UNO

Particular description of goods.—Shade-Holders for Electric Lights.
Claims use since May 1, 1914.

Ser. No. 78,587. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PORTER COMPANY, Muskogee, Okla. Filed May 27, 1914.

Curako

Particular description of goods.—A Remedy for Headache.
Claims use since May 8, 1914.

Ser. No. 78,590. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MILTON SIMON, Salt Lake City, Utah, and Cincinnati, Ohio. Filed May 27, 1914.

The monogram being printed in red.
Particular description of goods.—Whisky, Gin, Brandy, Rum, and Cocktails.
Claims use since 1893.

Ser. No. 78,605. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LEON F. CAUMONT, New York, N. Y. Filed May 28, 1914.

YANKEE

Particular description of goods.—Neckties, Four-in-Hand-Necktie Forms and Holders, and Collar-Buttons Not Made of or Plated with Precious Metal.
Claims use since May, 1911.

Ser. No. 78,607. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FISHER FLOURING MILLS COMPANY, Seattle, Wash. Filed May 28, 1914.

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 7, 1914.

Ser. No. 78,817. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH L. NAFZIGER, Kansas City, Mo. Filed June 4, 1914.

GOLDEN KRUST BREAD

It is not intended to have the word "Bread," as shown in the drawing, form a part of the trade-mark.
Particular description of goods.—Bread.
Claims use since May 1, 1914.

Ser. No. 79,124. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) STANDARD GAS POWER COMPANY, Atlanta, Ga., and New York, N. Y. Filed June 15, 1914.

Particular description of goods.—Gas-Producers.
Claims use since May 1, 1914.

Ser. No. 79,187. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. W. WILK & COMPANY, Chicago, Ill. Filed June 17, 1914.

Particular description of goods.—Canned Salmon.
Claims use since June 1, 1914.

Ser. No. 79,195. (CLASS 12. CONSTRUCTION MATERIALS.) THE NATIONAL REFINING COMPANY, Cleveland, Ohio. Filed June 18, 1914.

Particular description of goods.—A Plastic Compound of Waterproof Gums and Long-Fiber Asbestos for Covering or Repairing Roofs.
Claims use since Mar. 27, 1914.

Ser. No. 79,230. (CLASS 17. TOBACCO PRODUCTS.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1914.

Schnapps

"Schnapps."
Particular description of goods.—Plug and Twist Tobacco.
Claims use since June 17, 1880.

Ser. No. 79,241. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUMAN HAIR GOODS INDUSTRY, New York, N. Y. Filed June 20, 1914.

RexSeal

Particular description of goods.—Human Hair.
Claims use since June 6, 1914.

Ser. No. 79,284. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BYRON TYLER, Kansas City, Mo. Filed June 22, 1914.

All words and numbers appearing on the drawing are disclaimed, the picture being the portrait of applicant.
Particular description of goods.—Macerated Wheat.
Claims use since May 14, 1914.

Ser. No. 79,298. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CARAMEL COMPANY, York and Lancaster, Pa. Filed June 23, 1914.

Creamery

Particular description of goods.—Caramels and Candies.
Claims use since April, 1890.

Ser. No. 79,352. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BRISTOL-MYERS COMPANY, New York, N. Y. Filed June 25, 1914.

No protection being claimed in this registration under the trade-mark statute for the following, viz: "Efervescenté Combinación Salina Laxante y Eliminador Indicada en Desórdenes Gástricos, Hepáticos y Renales También en Afecciones de la Piel Especialmente beneficioso en el Reumatismo y la Gota Bristol-Myers Co. Quimicos Fabricantes 277–281 Greene avenue Brooklyn Nueva York E. U. de A." No protection is claimed in this registration for the words "Sal Hepatica."
Particular description of goods.—Saline Laxatives, Uric-Acid Solvents, Hepatic Stimulants, and Eliminators of Toxic Products.
Claims use since September, 1897.

Ser. No. 79,401. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) KENWORTHY BROTHERS COMPANY, Boston, Mass. Filed June 27, 1914.

KENDEX

Particular description of goods.—Leather Substitute.
Claims use since on or about June 12, 1914.

Ser. No. 79,408. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GUSTAV A. HARTER, Chicago, Ill. Filed June 27, 1914.

NITROLITE

Particular description of goods.—Metal Shades and Reflectors.
Claims use since Apr. 22, 1914.

Ser. No. 79,607. (CLASS 39. CLOTHING.) MELANSON SHOE CO., Lynn, Mass. Filed July 7, 1914.

KINDERCRAFT

Particular description of goods.—Leather Shoes.
Claims use since June 11, 1914.

Ser. No. 79,615. (CLASS 32. FURNITURE AND UPHOLSTERY.) EDWARD MAURICE TREMBLE, Rochester, N. Y. Filed July 7, 1914.

KIDDIE-KOOP

Particular description of goods.—A Folding Crib for Children.
Claims use since Jan. 14, 1913.

Ser. No. 79,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRIPLEX BISCUIT CO., INC., Buffalo, N. Y. Filed July 7, 1914.

TRIPLEX

Particular description of goods.—Biscuits.
Claims use since May 1, 1914.

Ser. No. 79,621. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ALUMINUM GOODS MFG. CO., Manitowoc, Wis. Filed July 8, 1914.

No claim being made for the exclusive use of the words "Highest Quality Aluminum."
Particular description of goods.—Aluminum Toilet-Combs.
Claims use since May, 1914.

Ser. No. 79,628. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. J. COURTNEY CO., INC., Mundy Point, Va. Filed July 8, 1914.

PRIDE OF VIRGINIA

Particular description of goods.—Canned Fish, Roe, Fruit, Vegetables, and Oysters.
Claims use since 1883.

Ser. No. 79,687. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TASTY BAKING CO., Philadelphia, Pa. Filed July 9, 1914.

TASTYKAKE

Particular description of goods.—Bread, Cake, and Crackers.
Claims use since Feb. 25, 1914.

Ser. No. 79,731. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOME REMEDY COMPANY, Fredonia, N. Y. Filed July 11, 1914.

OmiBack

Particular description of goods.—Kidney-Pills.
Claims use since June 26, 1914.

Ser. No. 79,744. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE THOMAS MANUFACTURING COMPANY, Dayton, Ohio. Filed July 11, 1914.

KEROSAFE

Particular description of goods.—Oil-Lamps.
Claims use since Aug. 25, 1913.

Ser. No. 79,764. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed July 13, 1914.

STOP THIEF.

Particular description of goods.—Animal-Traps.
Claims use since Sept. 24, 1907.

Ser. No. 79,799. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BREWSTER, GORDON & CO., Rochester, N. Y. Filed July 15, 1914.

ORIEL

Particular description of goods.—Tea, Coffee, Canned Vegetables, Rice, Popcorn, Rolled Oats, Pearl-Barley, Bird-Seed, Dried Fruits, and Dried Vegetables.
Claims use since June 25, 1914.

Ser. No. 79,803. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) ECLIPSE MACHINE COMPANY, Elmira, N. Y. Filed July 15, 1914.

"Morrow"

Particular description of goods.—Coaster-Brakes.
Claims use since June 10, 1898.

Ser. No. 79,875. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. A. HORMEL & CO., Austin, Minn. Filed July 17, 1914.

Ensign

Particular description of goods.—Butter, Cheese, Eggs, and Poultry.
Claims use since the 1st day of May, 1914.

Ser. No. 79,899. (CLASS 32. FURNITURE AND UPHOLSTERY.) CHICAGO HARDWARE FOUNDRY COMPANY, North Chicago, Ill. Filed July 18, 1914.

Sani GLASS

The trade-mark consists of the word or term "Sani," provided with an under and forwardly-extending paraph or flourish upon which is impressed the word "Glass," no claim being made to the word "Glass."

Particular description of goods.—Tables, Stands, and Stools for Hotel, Restaurant, Soda-Fountain, Drug-Store, Summer-Garden, Hospital, Kitchen, Conservatory, and Domestic Uses.

Claims use since Mar. 10, 1914.

Ser. No. 79,918. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POWELL'S, New York, N. Y. Filed July 18, 1914.

MARINER

Particular description of goods.—Candies, Chocolates, and Nuts.

Claims use since June, 1913.

Ser. No. 79,962. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHNSTONE, SADLER AND COMPANY, LIMITED, London, England. Filed July 21, 1914. Under ten-year proviso.

Particular description of goods.—Whisky.

Claims use since 1885.

Ser. No. 79,965. (CLASS 17. TOBACCO PRODUCTS.) ERICH NOACK, Clifton, N. J. Filed July 21, 1914.

NONNICO

Particular description of goods.—Cigars, Cigarettes, and Cheroots.

Claims use since Apr. 1, 1914.

Ser. No. 80,008. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUMAN HAIR GOODS INDUSTRY, New York, N. Y. Filed July 23, 1914.

SANITEED

Particular description of goods.—Human Hair.

Claims use since May 21, 1914.

Ser. No. 80,020. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TOKSTAD-BURGER CO., New York, N. Y. Filed July 23, 1914.

Scandia

Particular description of goods.—Canned Fish, Canned Vegetables, Sandwich-Paste, Prepared Poultry, Meat Preserves, and Canned Fruits.

Claims use since Sept. 30, 1912.

Ser. No. 80,031. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NUTTO PRODUCT CO., INC., New York, N. Y. Filed July 24, 1914.

NOISETTE

Comprising the word "Noisette."

Particular description of goods.—Nut Pastes.

Claims use since April, 1913.

Ser. No. 80,050. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) ALEXANDER BROTHERS, Philadelphia, Pa. Filed July 25, 1914.

Particular description of goods.—Leather Belting.

Claims use since about June 1, 1914.

Ser. No. 80,054. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BENNETT MILLING CO., Geneva, Ill. Filed July 25, 1914.

COME AGAIN

Particular description of goods.—Wheat Pastry-Flour, Granulated Cornmeal, Sterilized Wheat-Bran, Graham Flour, Self-Rising Wheat-Flour, Buckwheat-Flour, Spring-Wheat Flour, Rye-Flour, Poultry Dry Mash, and Poultry Scratch Feed.

Claims use since May 8, 1914.

Ser. No. 80,056. (CLASS 39. CLOTHING.) HIGHLAND SHAKER SWEATER COMPANY, Camden, N. J. Filed July 25, 1914.

Particular description of goods.—Sweater-Coats, Sweaters, and Cardigan Jackets.

Claims use since June 29, 1914.

Ser. No. 80,072. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STERLING GUM COMPANY, INC., New York, N. Y. Filed July 25, 1914.

GOLF BALL

Particular description of goods.—Chewing-Gum.

Claims use since July 10, 1914.

Ser. No. 80,090. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEAUMONT MACARONI COMPANY, Beaumont, Tex. Filed July 27, 1914.

Particular description of goods.—All Kinds of Macaroni in Packages.

Claims use since Apr. 20, 1913.

Ser. No. 80,093. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EAGLE MANUFACTURING CO., Baltimore, Md. Filed July 27, 1914.

EAGLE

Particular description of goods.—Ice-Cream Cones.

Claims use since October, 1905.

Ser. No. 80,098. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLLY CONDENSED MILK CO., Amity, Oreg. Filed July 27, 1914.

HOLLY

Particular description of goods.—Condensed Milk.

Claims use since May 6, 1908.

Ser. No. 80,102. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed July 27, 1914.

TWILIGHT

The picture being fanciful.

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since January, 1914.

Ser. No. 80,103. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROLAND MORRILL, Benton Harbor, Mich. Filed July 27, 1914.

HEARTS OF GOLD

Particular description of goods.—Cantaloups or Muskmelons.

Claims use since on or about the 1st day of August, 1906.

Ser. No. 80,104. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATURE CEREAL COMPANY, Minneapolis, Minn. Filed July 27, 1914.

The picture being fanciful.
Particular description of goods.—Bread.
Claims use since Apr. 11, 1914.

Ser. No. 80,134. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NUTTO PRODUCT CO., INC., New York, N. Y. Filed July 28, 1914.

MACROPAN

Comprising the word "Macropan."
Particular description of goods.—Nuts and Nut Pastes.
Claims use since April, 1913.

Ser. No. 80,135. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NUTTO PRODUCT CO., INC., New York, N. Y. Filed July 28, 1914.

NUTTO

Comprising the word "Nutto."
Particular description of goods.—Nuts and Nut Pastes.
Claims use since April, 1913.

Ser. No. 80,138. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY SCHOENFELD, New York, N. Y. Filed July 28, 1914.

Particular description of goods.—Paprika in Cans and Boxes.
Claims use since Nov. 17, 1913.

Ser. No. 80,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & Co., Chicago, Ill. Filed July 30, 1914.

MELOINE

Particular description of goods.—A Preparation for Improving Ice-Cream.
Claims use since Oct. 20, 1909.

Ser. No. 80,185. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) NATIONAL METAL SEAL CORPORATION, Boston, Mass. Filed July 30, 1914.

DUPLEX

Particular description of goods.—Metal Closures for Containing Vessels.
Claims use since May, 1913.

Ser. No. 80,194. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CLARENCE P. BURTON, Dallas, Tex. Filed July 31, 1914.

Tex-O-Cide

Particular description of goods.—Floor-Sweeping Compounds.
Claims use since Feb. 1, 1912.

Ser. No. 80,211. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ROLL FABRIC COMPANY, Providence, R. I. Filed July 31, 1914.

Particular description of goods.—Pyroxylin-Coated Fabrics.
Claims use since Apr. 24, 1914.

Ser. No. 80,214. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. R. THOMAS' SONS, Youngstown, Ohio. Filed July 31, 1914.

SUN-KIST

Particular description of goods.—Teas and Coffees.
Claims use since June 13, 1914.

Ser. No. 80,215. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. R. THOMAS' SONS, Youngstown, Ohio. Filed July 31, 1914.

IDORA

Particular description of goods.—Canned Fruit.
Claims use since September, 1907.

Ser. No. 80,217. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) T. W. WOOD & SONS, Richmond, Va. Filed July 31, 1914.

Particular description of goods.—Poultry Foods.
Claims use since 1908.

Ser. No. 80,218. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMENDT MILLING CO., Monroe, Mich. Filed Aug. 1, 1914.

Lady Lee

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Apr. 1, 1914.

Ser. No. 80,220. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRAINARD ROLLER MILLS, Brainard, Nebr. Filed Aug. 1, 1914.

GA-SI-NO

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 12, 1914.

Ser. No. 80,223. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHIPPEWA MILLING COMPANY, Montevideo, Minn. Filed Aug. 1, 1914.

MONTE'S ENSIGN

Particular description of goods.—Wheat-Flour, Graham Flour, and Breakfast Food Made of Wheat.
Claims use since Mar. 16, 1914.

Ser. No. 80,221. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LOUISVILLE VARNISH CO., Louisville, Ky. Filed Aug. 1, 1914.

FIXALL

Particular description of goods.—Varnish.
Claims use since September, 1909.

Ser. No. 80,232. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LOUISVILLE VARNISH CO., Louisville, Ky. Filed Aug. 1, 1914.

VARNALL

Particular description of goods.—Varnish.
Claims use since May, 1913.

Ser. No. 80,235. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOSELEY & MOTLEY MILLING CO., Rochester, N. Y. Filed Aug. 1, 1914.

BIG B

Particular description of goods.—Mixed Feed and Bran.
Claims use since February, 1914.

Ser. No. 80,240. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PALMER CANDY COMPANY, Sioux City, Iowa. Filed Aug. 1, 1914.

BUNNY-HUG

Particular description of goods.—Candy.
Claims use since Apr. 21, 1914.

Ser. No. 80,242. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 1, 1914.

SOLACE

Particular description of goods.—Coffee.
Claims use since about Jan. 1, 1897.

Ser. No. 80,243. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 1, 1914.

ARISTOCRAT

Particular description of goods.—Coffee.
Claims use since about May 1, 1910.

Ser. No. 80,249. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. JACOBS ENTERPRISE MILL CO., St. Louis, Mo., and St. Jacob, Ill. Filed Aug. 1, 1914.

IXL

Particular description of goods.—Wheat-Flour.
Claims use since Apr. 8, 1891.

Ser. No. 80,258. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALLEY CITY MILLING COMPANY, Grand Rapids, Mich. Filed Aug. 1, 1914.

GRANENA

Particular description of goods.—Whole-Wheat Flour.
Claims use since 1895.

Ser. No. 80,260. (CLASS 46 FOODS AND INGREDIENTS OF FOODS.) R. C. WILLIAMS & CO., New York, N. Y. Filed Aug. 1, 1914.

F&F

Particular description of goods.—Canned Salmon.
Claims use since Feb. 15, 1914.

Ser. No. 80,373. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REGINA FLOUR MILL COMPANY, St. Louis, Mo. Filed Aug. 6, 1914.

The picture shown being fanciful.
Particular description of goods.—Wheat-Flour.
Claims use since Feb. 2, 1885.

Ser. No. 80,381. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EXCELSO DISINFECTANT CO., Jacksonville, Fla. Filed Aug. 7, 1914.

Excelso

Particular description of goods.—A Disinfectant for the Extermination of Mosquitos, Ants, Roaches, and other Insects.
Claims use since June 1, 1914.

Ser. No. 80,387. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PREMIER ELECTRIC COMPANY, Chicago, Ill. Filed Aug. 7, 1914.

"STICKALITE"

Particular description of goods.—Incandescent Electric Lamps.
Claims use since September, 1913.

Ser. No. 80,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAUERSTON & BROWN, Cincinnati, Ohio. Filed Aug. 7, 1914.

Mammoth

Particular description of goods.—Candy.
Claims use since October, 1901.

Ser. No. 80,427. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DELTA ELECTRIC COMPANY, Marion, Ind. Filed Aug. 10, 1914.

Particular description of goods.—Electric Hand-Lamps, Telephones, and Telephone Apparatus.
Claims use since October, 1912.

Ser. No. 80,428. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY FUSE & MANUFACTURING COMPANY, Chicago, Ill. Filed Aug. 10, 1914.

ECONOMY

The word "Economy."
Particular description of goods.—Safety-Fuses for Electrical Circuits.
Claims use since Oct. 1, 1911.

Ser. No. 80,430. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GORHAM MANUFACTURING CO., Providence, R. I. Filed Aug. 10, 1914.

Particular description of goods.—Silver-Polish in Cake or Powder Form.
Claims use since the year 1869.

Ser. No. 80,438. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MURPHY VARNISH CO., Newark, N. J. Filed Aug. 10, 1914.

Univernish

Particular description of goods.—Varnish.
Claims use since Apr. 21, 1914.

Ser. No. 80,510. (CLASS 33. GLASSWARE.) LIGHTING STUDIOS COMPANY, New York, N. Y. Filed Aug. 12, 1914.

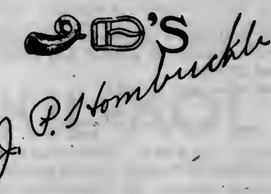
Particular description of goods.—Glass Lamp Shades and Globes.
Claims use since May 15, 1914.

Ser. No. 80,535. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CHLORIDE PROCESS COMPANY, Chicago, Ill. Filed Aug. 13, 1914.

CHLOROZONE

Particular description of goods.—Electrolytic Cells.
Claims use since about the 1st of August, 1914.

Ser. No. 80,586. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES P. HORNBUCKLE, Reidsville, N. C. Filed Aug. 15, 1914.



The signature being a facsimile of the applicant's.
Particular description of goods.—A Remedy for Catarrh, Headaches, Coughs, Colds, Croup, Pneumonia, Congestion of Throat, Lungs, and Bronchial Tubes.
Claims use since Aug. 1, 1914.

Ser. No. 80,603. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLD SPRING DISTILLING CO., St. Louis, Mo. Filed Aug. 17, 1914.

Glen Taket

Particular description of goods.—Blended Scotch Whisky.
Claims use since the 12th day of August, 1914.

Ser. No. 80,668. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed Aug. 18, 1914.

END-O-MICE

Particular description of goods.—Animal-Traps.
Claims use since July 22, 1914.

Ser. No. 80,809. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACME CHEMICAL MFG. CO. LMTD., New Orleans, La. Filed Aug. 26, 1914.

Puri Sana

Comprising the words "Puri Sana."
Particular description of goods.—A Medicinal Preparation for the Treatment of Blood and Skin Diseases.
Claims use since Aug. 15, 1914.

Ser. No. 80,818. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. M. R. Co., Reno, Nev. Filed Aug. 26, 1914.

H. M. R.

Particular description of goods.—A Remedy for Hay-Fever, Catarrh, Tonsilitis, Quinsy, and other Ailments of the Nose and Throat.
Claims use since July 8, 1914.

Ser. No. 80,821. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAVOL LABORATORIES, Chicago, Ill. Filed Aug. 26, 1914.

LAVOL

Particular description of goods.—A Remedy for All Diseases of the Skin and Scalp.
Claims use since January, 1913.

Ser. No. 80,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POND PHARMACAL COMPANY, New York, N. Y. Filed Aug. 26, 1914.

DIPS

Particular description of goods.—A Preparation to be Dissolved in Water for Treatment of the Feet.
Claims use since about July 1, 1913.

Ser. No. 80,824. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE RAILWAY CHEMICAL COMPANY, New York, N. Y. Filed Aug. 26, 1914.

TRACKOLINE

Particular description of goods.—Chemical Weed-Killing Compounds.
Claims use since July, 1911.

Ser. No. 80,825. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ROCK ISLAND BREWING CO., Rock Island, Ill. Filed Aug. 26, 1914.

Hopjoos

Particular description of goods.—A Carbonated Non-Alcoholic Beverage of Hop Nature.
Claims use since July 1, 1914.

Ser. No. 80,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AURELIUS S. HINDS, Portland, Me. Filed Aug. 27, 1914. Under ten-year proviso.

HINDS

Particular description of goods.—A Liquid Lotion or Emulsion for the Skin.
Claims use since 1876.

Ser. No. 80,881. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE COROVESSIS, New York, N. Y. Filed Aug. 29, 1914.

REGINA

Particular description of goods.—Medicine for Gall-Stones.
Claims use since Aug. 15, 1914.

Ser. No. 80,883. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. W. AND G. W. CAMPBELL, Columbus, Ohio. Filed Aug. 31, 1914.

Potasafras

Particular description of goods.—An Alterative for the Blood.
Claims use since about June 1, 1914.

Ser. No. 80,884. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CARTER PAINT CO., Liberty, Ind. Filed Aug. 31, 1914.

Particular description of goods.—Dry Cleaner.
Claims use since May 1, 1914.

Ser. No. 80,885. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CERESIT WATERPROOFING CO., Chicago, Ill. Filed Aug. 31, 1914.

Particular description of goods.—A Chemical Preparation for Rendering Cement, Mortar, and the Like Waterproof.
Claims use since July, 1909.

Ser. No. 80,897. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. B. GRANT, Denver, Colo. Filed Aug. 31, 1914.

FOR-GET-ME-NOT

Particular description of goods.—A Hair-Restorative and a Face-Cream.
Claims use since Aug. 10, 1914.

Ser. No. 80,912. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLIVER W. SMITH, Los Angeles, Cal. Filed Aug. 31, 1914.

TRY-ME

Particular description of goods.—A Preparation for Treating Ailing Feet.
Claims use since Aug. 1, 1914.

Ser. No. 80,945. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNO MANUFACTURING COMPANY, Chicago, Ill. Filed Sept. 2, 1914.

CEDAROMA

Particular description of goods.—Oils and Oil Preparations and Articles Having the Odor of Cedar for Perfuming Clothing, Table-Linens, Receptacles, Furniture, and other Household Articles, and for Preventing Moths and other Insects or Vermin from Destroying Furs, Clothes, or Tapestries, and for Use on Floors and in other Places.
Claims use since June, 1914.

Ser. No. 81,014. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed Sept. 8, 1914.

SUN-KIST

Particular description of goods.—Salt and Baking-Powder.
Claims use since Apr. 9, 1912.

Ser. No. 81,040. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE W. M. GRIFFIN COMPANY, Fort Wayne, Ind. Filed Sept. 8, 1914.

ZOLINE

Particular description of goods.—A Tonic Blood Remedy and Appetizer.
Claims use since May 10, 1906.

Ser. No. 81,048. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAGDALENA GREUB, Wathena, Kans. Filed Sept. 8, 1914.

KIL-KOL

Particular description of goods.—A Preparation for the Treatment of Cholera in Hogs.
Claims use since Apr. 15, 1914.

Ser. No. 81,049. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE HAMPSHIRE COMPANY, INCORPORATED, Fairfield township, Fairfield county, Conn. Filed Sept. 8, 1914.

Glacier

Particular description of goods.—Soft Drinks, Still and Carbonated; Natural Spring-Water, and Synthetic Mineral Water.
Claims use since July 1, 1913.

Ser. No. 81,055. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH A. HUSTON, Brownsville, Pa. Filed Sept. 8, 1914.

EPIDONNO

Particular description of goods.—Mange-Killer.
Claims use since Apr. 29, 1914.

Ser. No. 81,056. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM E. HAWLEY, St. Louis, Mo. Filed Sept. 8, 1914.

Bonita

The picture being fanciful.
Particular description of goods.—Detergent Paste.
Claims use since July 18, 1914.

Ser. No. 81,069. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MILLER & COMPANY, Fort Wayne, Ind. Filed Sept. 8, 1914.

FORGET-ME-NOT

The portrait shown being that of Cathryne Overholser.
Particular description of goods.—A Cleanser.
Claims use since Aug. 11, 1914.

Ser. No. 81,110. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE THIELE LABORATORIES COMPANY, Columbus and Upper Sandusky, Ohio. Filed Sept. 8, 1914.

Nucrosan

Particular description of goods.—Treatment and Prevention of Hog-Cholera.
Claims use since May, 1914.

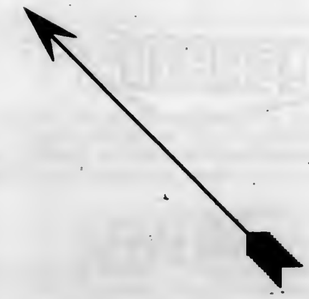
Ser. No. 81,113. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH J. VETTER, Brooklyn, N. Y. Filed Sept. 8, 1914.

THEO-LYPTUS

Particular description of goods.—An External Application for Relief of Coughs, Colds, Bronchitis, Asthma, Hay-Fever, Whooping-Cough, Catarrh, Headache, Chilblains, Insect-Bites, Piles, and Chapped Hands.
Claims use since December, 1913.

Ser. No. 81,133. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM T. HURSH, Mansfield, Ohio. Filed Sept. 9, 1914.

RED ARROW



Particular description of goods.—Liver-Tablets.
Claims use since May 1, 1913.

Ser. No. 81,164. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LES HERITIERS DE MARIE BRIZARD & ROGER, M. B. GLOTIN, ACHARD & GLOTIN, Bordeaux, France. Filed Sept. 10, 1914. Under ten-year proviso.

Particular description of goods.—Cordials and Liquors.
Claims use since the year 1872.

Ser. No. 81,170. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RENOUARD-LARIVIÈRE & CIE., Paris, France. Filed Sept. 10, 1914. Under ten-year proviso.

Particular description of goods.—Melissa Water.
Claims use since the year 1832.

Ser. No. 81,171. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROULLET & CIE., Cognac, France. Filed Sept. 10, 1914. Under ten-year proviso.

Particular description of goods.—Brandy.
Claims use since Apr. 15, 1850.

Ser. No. 81,184. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANTONIO PEREZ GARCIA, New York, N. Y. Filed Sept. 11, 1914.

SABINOSA

Particular description of goods.—Mineral Water.
Claims use since Sept. 3, 1914.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 6, 1914.

100,071. REMEDY FOR CERTAIN NAMED DISEASES. ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany.
Filed March 5, 1914. Serial No. 76,338. PUBLISHED AUGUST 4, 1914.

100,072. CIGARETTES. THE ALZANNE CIGARETTE COMPANY, New York, N. Y.
Filed April 17, 1914. Serial No. 77,516. PUBLISHED JULY 21, 1914.

100,073. READY-MIXED PAINTS AND WATERPROOFING AND RUSTPROOFING PAINTS. AMERICAN CHEMICAL & MANUFACTURING COMPANY, INC., Norfolk, Va.
Filed June 5, 1914. Serial No. 78,822. PUBLISHED AUGUST 4, 1914.

100,074. MEDICAL PREPARATION COMPRISING HERBS FOR USE IN FEMALE COMPLAINTS. ARMINDA J. ANDERSON, Leaday, Tex.
Filed May 7, 1914. Serial No. 78,053. PUBLISHED AUGUST 4, 1914.

100,075. COFFEE. FREDERICK S. ARMSTRONG, New York, N. Y.
Filed November 26, 1910. Serial No. 52,956. PUBLISHED JULY 28, 1914.

100,076. CERTAIN NAMED CHEMICAL AND PHARMACEUTICAL PREPARATION. AUBRY SISTERS, New York, N. Y.
Filed May 26, 1913. Serial No. 70,648. PUBLISHED AUGUST 4, 1914.

100,077. WHEAT-FLOUR. AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo.
Filed April 11, 1914. Serial No. 77,422. PUBLISHED JULY 28, 1914.

100,078. EXHAUSTERS, COOKERS, AND COOLERS USED IN CANNING OR PRESERVING FOODS. BAKER-SHIPPEE MANUFACTURING CO., Los Angeles, Cal.
Filed June 22, 1914. Serial No. 79,254. PUBLISHED AUGUST 4, 1914.

100,079. STERILE SOLUTIONS FOR INTRAMUSCULAR AND HYPODERMIC INJECTIONS. COLEMAN BARDOS, Jr., New York, N. Y.
Filed January 20, 1914. Serial No. 75,420. PUBLISHED AUGUST 4, 1914.

100,080. SERIES OF BOOKS. BARSE & HOPKINS, New York, N. Y.
Filed February 10, 1914. Serial No. 75,812. PUBLISHED JULY 21, 1914.

100,081. SHELLAC VARNISH. BERRY BROTHERS, Detroit, Mich.
Filed July 1, 1914. Serial No. 79,476. PUBLISHED AUGUST 4, 1914.

100,082. TONIC FOR STOCK, PARTICULARLY COWS. BLASDELL MILK PRODUCER CO., Ballinger, Tex.
Filed May 9, 1914. Serial No. 78,146. PUBLISHED AUGUST 4, 1914.

100,083. CANDY. FRANK E. BLOCK CO., Atlanta, Ga.
Filed April 3, 1914. Serial No. 77,191. PUBLISHED JULY 28, 1914.

100,084. CERTAIN NAMED METAL CASTINGS AND FORGINGS. BONNEY VISE & TOOL WORKS, INC., Philadelphia and Allentown, Pa., and New York, N. Y.
Filed May 26, 1914. Serial No. 78,549. PUBLISHED AUGUST 4, 1914.

100,085. PUMPS AND COMPRESSORS, PUMP-VALVES, WIND-KETTLES FOR PUMPS, PUMP-CONDUITS. A. BORSIG, Tegel, near Berlin, Germany.
Filed April 20, 1914. Serial No. 77,578. PUBLISHED AUGUST 4, 1914.

100,086. ELECTRIC LAMPS. THE BRADLEY & HUBBARD MFG. CO., Meriden, Conn.
Filed May 11, 1914. Serial No. 78,188. PUBLISHED AUGUST 4, 1914.

100,087. CERTAIN NAMED FOODS. THE BRANEX COMPANY, Grand Rapids, Mich.
Filed April 28, 1914. Serial No. 77,820. PUBLISHED JULY 28, 1914.

100,088. CERTAIN NAMED FOODS. THE BRANEX COMPANY, Grand Rapids, Mich.
Filed April 28, 1914. Serial No. 77,821. PUBLISHED JULY 28, 1914.

100,089. CERTAIN NAMED FOODS. BREWSTER, GORDON & Co., Rochester, N. Y.
Filed March 18, 1914. Serial No. 76,725. PUBLISHED JULY 28, 1914.

100,090. SCALP-TONIC. MILLIE G. BROCK, Centralia, Ill.
Filed September 10, 1913. Serial No. 72,761. PUBLISHED AUGUST 4, 1914.

100,091. X-RAY APPARATUS. CAMPBELL ELECTRIC COMPANY, Lynn, Mass.
Filed July 2, 1914. Serial No. 79,511. PUBLISHED AUGUST 4, 1914.

100,092. HYDROCARBON-ENGINES. THE CARLYLE JOHNSON MACHINE CO., Manchester, Conn.
Filed June 8, 1914. Serial No. 78,906. PUBLISHED AUGUST 4, 1914.

100,093. FOODS—NAMELY, HONEY, OLIVE-OIL, AND ALMONDS. CARMEL WINE COMPANY, New York, N. Y.
Filed March 16, 1914. Serial No. 76,668. PUBLISHED JULY 28, 1914.

100,094. OLIVE-OIL AND MACARONI. CELLA BROTHERS, INC., New York, N. Y.
Filed April 21, 1914. Serial No. 77,619. PUBLISHED JULY 21, 1914.

100,095. OINTMENT FOR HEMORRHOIDS. 20TH CENTURY MANUFACTURING CO., Minneapolis, Minn.
Filed May 16, 1914. Serial No. 78,341. PUBLISHED AUGUST 4, 1914.

100,096. GYRATORY CRUSHERS. CHALMERS & WILLIAMS, INC., Chicago, Ill.
Filed March 25, 1912. Serial No. 62,415. PUBLISHED AUGUST 4, 1914.

100,097. LAWN-MOWER SHARPENERS. THE CHESBRO MANUFACTURING COMPANY, Oneonta, N. Y.
Filed June 6, 1914. Serial No. 78,857. PUBLISHED AUGUST 4, 1914.

100,098. DIGESTIVE AGENT. CHIC-A-LAX MANUFACTURING CO., Minneapolis, Minn.
Filed June 27, 1914. Serial No. 79,405. PUBLISHED AUGUST 4, 1914.

100,099. CERTAIN NAMED CUTLERY AND TOOLS. THE COLLINS COMPANY, Collinsville, Conn.
Filed June 16, 1914. Serial No. 79,150. PUBLISHED AUGUST 4, 1914.

100,100. PARAFFIN-WAX FOR LAUNDRY USE AND FOR KITCHEN USE IN SEALING COVERS OR TOPS OF VESSELS. COLUMBIA WAX WORKS, New York, N. Y.
Filed December 29, 1913. Serial No. 74,873. PUBLISHED AUGUST 4, 1914.

100,101. DIGESTIVE TABLET. GEORGE A. COLVIN, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,784. PUBLISHED AUGUST 4, 1914.

100,102. GASOLENE, KEROSENE, AND LUBRICATING-OIL. THE CONTINENTAL OIL COMPANY, Denver, Colo.
Filed June 3, 1914. Serial No. 78,765. PUBLISHED AUGUST 4, 1914.

100,103. MACARONI, NOODLES, AND SPAGHETTI. PAUL DE MARTINI, Brooklyn, N. Y.
Filed March 30, 1914. Serial No. 77,053. PUBLISHED JULY 28, 1914.

100,104. RUBBER VEHICLE-TIRES AND INNER TUBES THEREFOR. DREADNAUGHT TIRE & RUBBER CO., Baltimore, Md.
Filed January 26, 1914. Serial No. 75,445. PUBLISHED MAY 19, 1914.

100,105. CANNED SHRIMP. DUNBARS, LOPEZ & DUKATE CO., New Orleans, La.
Filed January 17, 1913. Serial No. 67,964. PUBLISHED JULY 28, 1914.

100,106. METAL FENCING, GATES, AND FENCE-POSTS. DWIGGINS WIRE FENCE COMPANY, Anderson, Ind.
Filed June 22, 1914. Serial No. 79,256. PUBLISHED AUGUST 4, 1914.

100,107. FEED-MEAL FOR HORSES, MULES, AND COWS. EMPIRE COTTON OIL COMPANY, Atlanta, Ga.
Filed April 17, 1914. Serial No. 77,526. PUBLISHED JULY 14, 1914.

100,108. CHUTNEY, PICKLES, AND CONDIMENT SAUCES. ESCOFFIER (1907) LIMITED, London, England.
Filed February 26, 1914. Serial No. 76,175. PUBLISHED JULY 28, 1914.

100,109. CERTAIN NAMED CITRUS FRUITS. EUSTIS CITRUS GROWERS ASSOCIATION, Eustis, Fla.
Filed May 23, 1914. Serial No. 78,491. PUBLISHED JULY 28, 1914.

100,110. CERTAIN NAMED CITRUS FRUITS. EUSTIS CITRUS GROWERS ASSOCIATION, Eustis, Fla.
Filed May 23, 1914. Serial No. 78,492. PUBLISHED JULY 28, 1914.

100,111. TEAS. THE G. B. FARRINGTON COMPANY, New York, N. Y.
Filed December 2, 1905. Serial No. 15,140. PUBLISHED MARCH 24, 1914.

100,112. FELTS. THE FELTERS COMPANY, New York, Middleville, and Lestershire, N. Y., and Boston and Millbury, Mass.
Filed March 11, 1914. Serial No. 76,544. PUBLISHED JULY 21, 1914.

100,113. CHEESE. FERBEND & CO., Chicago, Ill.
Filed March 16, 1914. Serial No. 76,675. PUBLISHED JUNE 9, 1914.

100,114. TEA. J. A. FOLGER & CO., San Francisco, Cal.
Filed May 19, 1914. Serial No. 78,385. PUBLISHED JULY 28, 1914.

100,115. CERTAIN NAMED ARTICLES OF MACHINERY. THE GOOD ROADS MACHINERY COMPANY, Kennett Square, Pa.
Filed June 27, 1912. Serial No. 64,448. PUBLISHED AUGUST 4, 1914.

100,116. COFFEE. J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y.
Filed May 23, 1914. Serial No. 78,497. PUBLISHED JULY 28, 1914.

100,117. COFFEE. J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y.
Filed May 23, 1914. Serial No. 78,499. PUBLISHED JULY 28, 1914.

100,118. COFFEE. J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y.
Filed May 23, 1914. Serial No. 78,500. PUBLISHED JULY 28, 1914.

100,119. TALCUM POWDER. HALL & RUCKEL, New York, N. Y.
Filed February 14, 1913. Serial No. 68,544. PUBLISHED APRIL 15, 1913.

100,120. SOUP, PURÉE, AND CATSUP. THE HARBAUER COMPANY, Toledo, Ohio.
Filed April 8, 1914. Serial No. 77,308. PUBLISHED JULY 28, 1914.

100,121. WINES. ELI G. HECHT, Baltimore, Md.
Filed November 4, 1913. Serial No. 73,791. PUBLISHED AUGUST 4, 1914.

100,122. TRADE PUBLICATION ISSUED PERIODICALLY. MAX HEYMANN, New York, N. Y.
Filed May 16, 1914. Serial No. 78,327. PUBLISHED JULY 21, 1914.

100,123. CONDENSED MILK. HOLLAND FOOD CORPORATION, New York, N. Y.
Filed April 11, 1914. Serial No. 77,419. PUBLISHED JULY 28, 1914.

100,124. REMEDY FOR CERTAIN NAMED DISORDERS OF INFANTS AND CHILDREN. GEORGE W. KING, Thomaston, Ga.
Filed June 18, 1914. Serial No. 79,190. PUBLISHED AUGUST 4, 1914.

100,125. PICTURES, PRINTS, PAINTINGS, ETCHINGS, AND DRAWINGS. JOS. G. KITCHELL, New York, N. Y.
Filed December 16, 1913. Serial No. 74,637. PUBLISHED JULY 21, 1914.

100,126. PICTURES, PRINTS, PAINTINGS, ETCHINGS, AND DRAWINGS. JOS. G. KITCHELL, New York, N. Y.
Filed January 20, 1914. Serial No. 75,313. PUBLISHED JULY 21, 1914.

100,127. INTERNAL REMEDY FOR PURIFYING THE BLOOD AND FOR LAXATIVE PURPOSES. BERNHARD LAUER, Berlin, Germany.
Filed May 19, 1913. Serial No. 70,493. PUBLISHED AUGUST 4, 1914.

100,128. EVAPORATING-PANS AND SUGARING-OFF PANS. THE LEADER EVAPORATOR COMPANY, Burlington, Vt.
Filed January 16, 1914. Serial No. 75,231. PUBLISHED AUGUST 4, 1914.

100,129. MOTION-PICTURE FILMS. LIBERTY MOTION PICTURE COMPANY, Wilmington, Del., and Philadelphia, Pa.
Filed June 23, 1914. Serial No. 79,299. PUBLISHED AUGUST 4, 1914.

100,130. LAXATIVE BISCUITS. JOSEPH LINHART, New York, N. Y.
Filed March 12, 1914. Serial No. 76,586. PUBLISHED JULY 28, 1914.

100,131. INSULATORS. THE LOCKE INSULATOR MFG. CO., Victor, N. Y.
Filed June 6, 1913. Serial No. 70,906. PUBLISHED AUGUST 4, 1914.

100,132. COMPOUND OF BUTTER, SALT BRINE, AND CORN-SYRUP. V. LOPEZ & COMPANY, New York, N. Y.
Filed December 26, 1913. Serial No. 74,848. PUBLISHED JULY 28, 1914.

100,133. WINE APPETIZER. MARIANI AND COMPANY, New York, N. Y., and Paris, France.
Filed July 1, 1914. Serial No. 79,493. PUBLISHED AUGUST 4, 1914.

100,134. OILS AND LUBRICANTS FOR MOTOR-CYCLES. MARSHALL OIL COMPANY OF IOWA, Marshalltown, Iowa.
Filed July 31, 1913. Serial No. 72,071. PUBLISHED AUGUST 4, 1914.

100,135. ELECTRICAL INSULATING-TAPE. THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio.
Filed June 25, 1914. Serial No. 79,367. PUBLISHED AUGUST 4, 1914.

100,136. COUGH MEDICINES. ISIDORE B. MEYER, Denver, Colo.
Filed June 29, 1914. Serial No. 79,435. PUBLISHED AUGUST 4, 1914.

100,137. WHEAT-FLOUR. MODEL MILL COMPANY, Johnson City, Tenn.
Filed March 7, 1914. Serial No. 76,439. PUBLISHED MAY 19, 1914.

100,138. CELERY TONIC. J. MYER, CO., New York, N. Y.
Filed June 1, 1914. Serial No. 78,706. PUBLISHED AUGUST 4, 1914.

100,139. ELECTRIC BATTERIES, FLASH-LIGHTS, ELECTRODES, BRUSHES FOR DYNAMO-ELECTRIC APPARATUS, RESISTORS, AND CARBON SPECIALTIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed June 25, 1914. Serial No. 79,369. PUBLISHED AUGUST 4, 1914.

100,140. LIQUID POLISH AND CLEANER FOR FLOORS, WOODWORK, FURNITURE, AND THE LIKE. THE NATIONAL LABORATORIES CO., Cleveland, Ohio.
Filed March 16, 1914. Serial No. 76,702. PUBLISHED AUGUST 4, 1914.

100,141. [WITHDRAWN.]

100,142. CERTAIN NAMED NITROGEN PRODUCTS. NORSK HYDRO-ELEKTRISK KVÆLSTOFAKTIESELSKAB, Christiania and Notodden, Norway.
Filed September 12, 1913. Serial No. 72,823. PUBLISHED AUGUST 4, 1914.

100,143. SEWING-MACHINE NEEDLES. NORTHWESTERN NEEDLE COMPANY, Minneapolis, Minn.
Filed April 14, 1913. Serial No. 69,776. PUBLISHED AUGUST 4, 1914.

100,144. CERTAIN NAMED FOODS. NORTON & CURD COMPANY, Louisville, Ky.
Filed May 25, 1912. Serial No. 63,799. PUBLISHED FEBRUARY 17, 1914.

100,145. LUBRICATING AND CLEANING OIL. A & V OIL CO., Cambridge, Md.
Filed May 26, 1914. Serial No. 78,547. PUBLISHED AUGUST 4, 1914.

100,146. SHORTENING COMPOUND COMPOSED OF REFINED BEEF-FAT AND COTTON-SEED OIL. THE OXOLA MANUFACTURING COMPANY, Baltimore, Md.
Filed March 20, 1914. Serial No. 76,799. PUBLISHED JULY 28, 1914.

100,147. REMEDY FOR RENAL COLIC, DIABETES, AND BRIGHT'S DISEASE. JAMES H. PACE, Shellman, Ga.
Filed June 15, 1914. Serial No. 79,122. PUBLISHED AUGUST 4, 1914.

100,148. CANDY, WAFERS, LOZENGES, AND TABLETS. PACKAGE CONFECTIONERY COMPANY, Boston, Mass.
Filed April 7, 1914. Serial No. 77,292. PUBLISHED JULY 28, 1914.

100,149. MOUTH-WASH. E. CARLTON PALMER, Philadelphia, Pa.
Filed June 10, 1914. Serial No. 78,959. PUBLISHED AUGUST 4, 1914.

100,150. QUARTERLY PERIODICAL. THE PEERLESS PATTERN COMPANY, Beacon and New York, N. Y.
Filed May 14, 1914. Serial No. 78,283. PUBLISHED JULY 21, 1914.

100,151. CERTAIN NAMED CHEMICAL AND PHARMACEUTICAL PREPARATIONS. PIESSE & LUBIN, London, England.
Filed October 31, 1913. Serial No. 73,717. PUBLISHED AUGUST 4, 1914.

100,152. MEDICINAL OINTMENT. THE PROCALINE CO., New York, N. Y.
Filed June 20, 1914. Serial No. 79,245. PUBLISHED AUGUST 4, 1914.

100,153. PASTILS FOR USE IN ASTHMA, CATARRH, COUGHS, COLDS, HOARSENESS, AND SIMILAR TROUBLES. GEORGE HENRY PROCTOR, Newcastle-upon-Tyne, England.
Filed April 11, 1914. Serial No. 77,428. PUBLISHED AUGUST 4, 1914.

100,154. SASH-BALANCES. PULLMAN MFG. COMPANY, Rochester, N. Y.
Filed May 29, 1914. Serial No. 78,659. PUBLISHED AUGUST 4, 1914.

100,155. CIGARETTES. THE RANELAGH TOBACCO COMPANY, New York, N. Y.
Filed May 8, 1914. Serial No. 78,140. PUBLISHED JULY 21, 1914.

100,156. CIGARETTES, CIGARS, AND SMOKING-TOBACCO. R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C.
Filed November 3, 1913. Serial No. 73,778. PUBLISHED JULY 21, 1914.

100,157. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed June 1, 1914. Serial No. 78,712. PUBLISHED AUGUST 4, 1914.

100,158. BLOOD-RESTORATIVE. AMOS ROGERS, Ottawa, Ontario, Canada.
Filed March 13, 1912. Serial No. 62,147. PUBLISHED AUGUST 4, 1914.

100,159. OINTMENT FOR HUMAN USE. AMOS ROGERS, Ottawa, Ontario, Canada.
Filed March 13, 1912. Serial No. 62,148. PUBLISHED AUGUST 4, 1914.

100,160. CIGARETTES. GEORGE ROSE, Kansas City, Mo.
Filed May 18, 1914. Serial No. 78,367. PUBLISHED JULY 21, 1914.

100,161. SPECIAL TURKISH PASTRY CONSISTING OF COMBINATION OF CERTAIN INGREDIENTS AND CUT IN CERTAIN FORM. COSTAS SARANTIDES, New York, N. Y.
Filed March 12, 1914. Serial No. 76,589. PUBLISHED JULY 28, 1914.

100,162. POWDERED LYES. WILLIAM SCHIELD, St. Louis, Mo.
Filed April 17, 1912. Serial No. 62,945. PUBLISHED AUGUST 4, 1914.

100,163. WAFER CAPSULES, TABLETS, OR SHELLS FOR ADMINISTERING MEDICINES. JOHANN SCHMIDT, Nuremberg, Germany.
Filed March 13, 1914. Serial No. 76,619. PUBLISHED AUGUST 4, 1914.

100,164. CORDIALS. THE SCHUSTER COMPANY, Cleveland, Ohio.
Filed July 1, 1911. Serial No. 57,441. PUBLISHED AUGUST 4, 1914.

100,165. SALVE FOR THE TREATMENT OF INFECTIOUS DISEASES OF THE RESPIRATORY TRACT. EDWARD STEPHEN SCHWEITZER, Pittsburgh, Pa.
Filed June 22, 1914. Serial No. 79,282. PUBLISHED AUGUST 4, 1914.

100,166. MEDICATED OINTMENT. RAYMOND S. SCOFIELD, Ong, Nebr.
Filed June 1, 1914. Serial No. 78,713. PUBLISHED AUGUST 4, 1914.

100,167. PHOTOGRAPHIC CAMERAS, FILM-PACK ADAPTERS, AND CONTAINERS FOR THE LATTER. SENECA CAMERA MFG. CO., Rochester, N. Y.
Filed June 20, 1914. Serial No. 79,248. PUBLISHED AUGUST 4, 1914.

100,168. MONTHLY PAPER. EDWARD G. SIGGERS, Washington, D. C.
Filed May 1, 1914. Serial No. 77,937. PUBLISHED JULY 21, 1914.

100,169. FOOD FOR INFANTS AND INVALIDS. SMITH, KLINE & FRENCH CO., Philadelphia, Pa.
Filed February 4, 1914. Serial No. 75,692. PUBLISHED JULY 28, 1914.

100,170. REMEDIES FOR CERTAIN NAMED DISEASES, ANTISEPTIC WASHES, AND DISINFECTANTS. SMITH, KLINE & FRENCH CO., Philadelphia, Pa.
Filed February 7, 1914. Serial No. 75,772. PUBLISHED AUGUST 4, 1914.

100,171. LEATHER IN UNMANUFACTURED FORM. C. C. SMOOT & SONS CO., Alexandria, Va.
Filed May 16, 1914. Serial No. 78,338. PUBLISHED JULY 21, 1914.

100,172. TABLE-SYRUPS. SOUTHERN SYRUP COMPANY, Montgomery, Ala.
Filed April 13, 1914. Serial No. 77,452. PUBLISHED JULY 28, 1914.

100,173. FURNITURE-POLISH. STANSBURY & YOUNG, York, Pa.
Filed May 18, 1910. Serial No. 49,786. PUBLISHED AUGUST 4, 1914.

100,174. WHEAT-FLOUR. STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C.
Filed February 10, 1914. Serial No. 75,831. PUBLISHED JULY 14, 1914.

100,175. SAUCE PUT UP IN BOTTLES. PERCY STEET, New York, N. Y.
Filed April 9, 1914. Serial No. 77,364. PUBLISHED JULY 28, 1914.

100,176. NON-INTOXICATING BEVERAGE, OR, AS COMMONLY KNOWN, A NON-ALCOHOLIC SOFT DRINK. CONRAD STOEGER, Chicago, Ill.
Filed March 30, 1914. Serial No. 77,078. PUBLISHED AUGUST 4, 1914.

100,177. CERTAIN NAMED FOODS. STONE-ORDEAN-WELLS COMPANY, Duluth, Minn.
Filed March 18, 1913. Serial No. 69,170. PUBLISHED JULY 28, 1914.

100,178. ADDING AND RECORDING MACHINES. SUN TYPEWRITER COMPANY, Newark, N. J., and New York, N. Y.
Filed June 5, 1914. Serial No. 78,847. PUBLISHED AUGUST 4, 1914.

100,179. REMEDY FOR CERTAIN NAMED DISEASES. THE SWABINE CO., Cleveland, Ohio.
Filed June 10, 1914. Serial No. 78,964. PUBLISHED AUGUST 4, 1914.

100,180. DEODORANTS. TAKALON, INCORPORATED, New York, N. Y., assignor to Hall & Ruckel, New York, N. Y., a Corporation of New York.
Filed August 15, 1913. Serial No. 72,367. PUBLISHED OCTOBER 14, 1913.

100,181. COLD, MASSAGE, AND CLEANSING CREAMS, FACE, TALCUM, TOOTH, AND BATH POWDER, AND SKIN-LOTION. ADOLPH TAMM, St. Louis, Mo.
Filed February 14, 1914. Serial No. 75,906. PUBLISHED AUGUST 4, 1914.

100,182. PREPARATIONS FOR TREATING VARICOSE VEINS, VARICOSE ULCERS, PHLEBITIS, PILES, VARICOCELE, AND DISEASES OF FEMALES. MARTHA THIBAULT, Paris, France.
Filed February 23, 1912. Serial No. 61,693. PUBLISHED AUGUST 4, 1914.

100,183. FILES. VIXEN TOOL COMPANY, Philadelphia, Pa.
Filed August 9, 1913. Serial No. 72,276. PUBLISHED AUGUST 4, 1914.

100,184. POPCORN. MATT VOELKER, Waterloo, Wis.
Filed February 9, 1914. Serial No. 75,796. PUBLISHED JULY 28, 1914.

100,185. ELECTRIC MOTORS, ELECTRIC GENERATORS, ELECTRIC CONVERTERS, ELECTRIC TRANSFORMERS, CURRENT-RECTIFIERS, AND CURRENT-CONTROLLERS. WAGNER ELECTRIC MANUFACTURING COMPANY, St. Louis, Mo.
Filed June 1, 1914. Serial No. 78,720. PUBLISHED AUGUST 4, 1914.

100,186. TENTS, TARPAULINS, AND WATERPROOF BED-SHEETS. H. WENZEL TENT & DUCK CO., St. Louis, Mo.
Filed March 28, 1914. Serial No. 77,039. PUBLISHED JULY 21, 1914.

100,187. TENTS, TARPAULINS, AND WATERPROOF BED-SHEETS. H. WENZEL TENT & DUCK CO., St. Louis, Mo.
Filed March 28, 1914. Serial No. 77,040. PUBLISHED JULY 21, 1914.

100,188. FURNITURE-POLISH AND FLOOR-POLISH. THE A. WILHELM COMPANY, Reading, Pa.
Filed June 10, 1914. Serial No. 78,973. PUBLISHED AUGUST 4, 1914.

100,189. LIQUID PREPARATION USED INTERNALLY TO EXPEL URIC ACID FROM BLOOD, AND BENEFIT THE HUMAN SYSTEM. JOHN WILKINS CO. INC., New York, N. Y.
Filed May 23, 1914. Serial No. 78,507. PUBLISHED AUGUST 4, 1914.

100,190. PEANUTS, PEANUT-BUTTER, SALTED PEANUTS, AND PEANUT-CANDY. MORTIMER WILLIAMS, Petersburg, Va.
Filed May 26, 1914. Serial No. 78,570. PUBLISHED JULY 28, 1914.

LABELS

REGISTERED OCTOBER 6, 1914.

18,003.—*Title:* "OJEN DÁVILA." (For a Cordial.) HIJOS DE R. JIMINEZ DÁVILA, Port St. Mary's, Spain. Filed July 14, 1914.

18,004.—*Title:* "WATCH THE IMPROVED VICTORIA PLEATER." (For a Plaiter.) HUGH O'CONNOR & Co., Brooklyn, N. Y. Filed July 13, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISION OF THE EXAMINERS-IN-CHIEF.

BARBER *v.* WOOD.

Decided April 25, 1911.

1. ABANDONMENT OF INVENTION — SECTION 4897 CONSTRUED.

"It is believed to be certain that any state of facts which would constitute an 'abandonment' such as would bar an inventor seeking a patent under section 4886 would also constitute such an abandonment as would bar an inventor seeking a patent under section 4897."

2. PRIORITY — INTERFERENCE — FORFEITED APPLICATION — ABANDONMENT.

Where Wood, with knowledge that Barber was in the field, deliberately withheld his invention from the market and neglected to renew his forfeited application or to reassert his claims for a patent until practically the end of the period allowed by the statute, *Held* that such conduct on the part of Wood amounts to an abandonment of the invention within the meaning of that term as used in section 4897, and priority of invention is awarded to Barber.

ON APPEAL from a decision of the Examiner of Interferences awarding priority to Wood.

Mr. Walter F. Rogers for Barber.

Messrs. Southgate & Southgate for Wood.

Before SKINNER and BAYARD, Examiners-in-Chief, (third member absent.)

In the matter of the interference between the patent of Howard M. Barber, No. 757,248, granted April 12, 1904, on an application filed June 30, 1903, Serial No. 163,676, and the application of Henry A. Wise Wood, filed April 23, 1897, Serial No. 633,518, and renewed January 6, 1906, Serial No. 294,923, (Patent No. 1,049,435, January 13, 1913.)

SKINNER, *Examiner-in-Chief:*

The invention involved in this interference is a sheet-delivery mechanism for printing-presses.

The issue of the interference is set forth in a single count, which reads as follows:

In a printing machine, the combination of an impression cylinder, a receptacle for printed sheets, a reciprocating sheet-carriage and stationary ways therefor between said cylinder and receptacle, a fly arranged between said cylinder and receptacle, an endless carrier in said sheet carriage for receiving sheets from the cylinder, and means for operating said carriage, carrier and fly whereby sheets may be delivered printed side up by the carriage or printed side down by the fly.

Wood, the senior party, is involved in the interference upon a renewed application. Barber, the junior party, is involved in the interference upon a patent. Barber's patent issued, through inadvertence on the part of the Patent Office and without any knowledge thereof or fault on the part of Wood, prior to the forfeiture of Wood's original application. Under these circumstances Barber can take no present advantage from the fact that he is a patentee. Hence he must enter the interference bearing the burden of proof by a preponderance of the evidence which is usually borne by a junior party.

Both parties have presented testimony for consideration. Generally speaking, Barber's testimony is directed to establishing (1) that the device disclosed in Wood's original and renewed applications is inoperative, at least to the extent of rendering it improper to hold such applications a constructive reduction to practice of the invention in issue, and (2) that Barber placed the invention upon the market during the period of Wood's forfeiture and that Wood abandoned the invention under circumstances such that Barber, although a later inventor, is entitled to take a patent for the invention. The testimony submitted on behalf of Wood is intended as a refutation of the attack made in the testimony of Barber upon the operativeness of the device disclosed in the Wood applications. Additionally, considerable testimony was given by Wood himself with reference to the history of his invention.

Before us Barber contends that he should prevail on two grounds: (1) that the device disclosed in the Wood original and renewed applications is inoperative and (2) that Wood has abandoned the invention in the sense that he should be held to be estopped from claiming the same as against Barber. We shall proceed to consider these contentions, made by Barber, in turn.

* * * * * * *

It is held that the testimony fails to establish that the device disclosed in the Wood applications is inoperative. So far, therefore, as Barber's testimony on the subject of the operativeness of the Wood device is concerned Wood's original application is to be regarded as a constructive reduction to practice of the invention in issue.

We pass now to the second contention made on behalf of Barber, to the effect that Wood has abandoned his invention under circumstances which admit of the right of Barber to patent the same. The facts upon which this contention is based are substantially as follows: Wood's original application was allowed on January 21, 1904, but while in issue, awaiting the payment of the final fee, Barber's application, which had been copending with

that of Wood, was inadvertently issued on April 12, 1904, with the claim now in issue therein. Wood forfeited his application on June 23, 1904, and did not renew it until January 6, 1906, over a year and a half after Barber's patent issued. During the period of Wood's forfeiture Barber or his assignees, without knowledge of Wood in the field, so far as is known, extensively placed the invention upon the market by building and selling a number of machines. It was therefore Barber and not Wood who first placed the invention in the hands of the public, and Barber contends that this was done either with Wood's knowledge or under circumstances such that Wood should be presumed to have known of it, and that upon such knowledge it became the duty of Wood to promptly reassert his rights to a patent by renewing his application, if he ever intended to do so. It does not affirmatively appear from the testimony of either party that Wood had actual knowledge of the embodiment of the subject-matter of the invention in issue in the machines which Barber's assignees marketed. Wood seems to have known that such machines were upon the market; but he states that he had not inquired how these machines were constructed and operated until some time after the interference arose. During the taking of his deposition he produced a bound volume of patents and testified that he has in his possession bound volumes of all the patents issued in the United States upon printing machinery and similar devices and that he has made it a rule to familiarize himself with the state of the art. He does not state when he came into possession of these bound volumes; but it is altogether likely that he received them or the patents bound up therein within a reasonable time after such patents were issued by the Patent Office. Wood does not expressly testify that he had actual knowledge of the Barber patent prior to the renewal of his application; but it is highly probable that he did have such knowledge in view of his admitted regular practice of familiarizing himself with the patents in the art. We are satisfied that enough is shown by the testimony to warrent the conclusion that Wood had knowledge of a rival in the field for some time prior to the renewal of his application. Coupling the fact of such knowledge with his failure to renew his application until just prior to the end of the time allowed by the statute for that purpose, a presumption of acquiescence in the use of the invention which Barber had given to the public arises, such as in our judgment establishes that Wood has lost his right to a patent. As was said by the Supreme Court in the case of *Shaw* v. *Cooper*, (7 Pet., 292:)

> The doctrine of presumed acquiescence, where the public use is known, or might be known to the inventor, is the only safe rule which can be adopted on this subject.

The Examiner of Interferences ruled against the contention of Barber as to the abandonment of Wood. He held that Wood had an absolute statutory right to renew his forfeited application at any time he pleased within the two-year period provided for the purpose by section 4897, Revised Statutes, unless Wood had abandoned the invention to the public. The Examiner of Interferences held that the term "abandonment," as used in section 4897, Revised Statutes, does not include cases falling within the doctrine of equitable estoppel. He pointed out that in such cases the renewal applicant is not relying upon an actual but a constructive reduction to practice, that no case was known to him in which the doctrine of equitable estoppel had been applied against a party relying upon a constructive reduction to practice, and he pointed to certain decisions of the Court of Appeals of the District of Columbia, such as *Rolfe* v. *Hoffman*, (121 O. G., 1350; 1906, C. D., 588; 26 App. D. C., 336,) wherein it is asserted that the doctrine of equitable estoppel, which has been frequently applied since the case of *Mason* v. *Hepburn* (84 O. G., 147; 1898, C. D., 510; 13 App. D. C., 86) in cases where a party losing under its application has relied upon an actual reduction to practice, is not to be extended to any case not coming clearly within the facts of such cases. We do not think that it was the intention of the court to rule that if the facts of a case were otherwise the same the mere difference that a party was relying upon a constructive instead of an actual reduction to practice would prevent the application of the rule. It is believed that there is direct authority for holding that the term "abandonment," as used in section 4897, Revised Statutes, includes cases in which a party has lost his right to a later inventor by virtue of the equities arising from the course of conduct pursued by him. Before turning to the authorities to which we have just referred a brief reference will be made to the historical development of the present provisions of section 4897, Revised Statutes.

Under the act of 1863 when the final fee of allowed applications was not paid within six months the patent was withheld and the invention therein described became public property as against the applicant therefor. The succeeding act of 1864 merely extended the time when the previous law took effect for six months from the date of said act. The act of 1865 gave the unqualified right to make an application for the invention upon which the final fee had not been paid, provided the application was filed within two years after the date of the allowance of the original application. The act of 1870 (sec. 35) was like the act of 1865, but provided additionally that when an application was *rejected* or *withdrawn* prior to the passage of this act the applicant shall have six months from the date of such passage to renew his application or file a new one, and if he omit to do either his application shall be held to have been abandoned, and the section closed with the provision that upon the hearing of such renewed applications abandonment shall be considered as a question of fact. The succeeding act of January 22, 1874, which enacted present section 4897, Revised Statutes, omits all reference to rejected and withdrawn applications, which appeared in the preceding act of 1870, but provided

expressly, for the first time, that upon the hearing of renewed applications following forfeiture abandonment shall be considered as a question of fact. There can be no doubt that the term "abandonment" in section 35 of the act of 1870 and in present section 4897 of the act of 1874 have the same meaning, and there is authority for holding that the term "abandonment," as used in section 35 of the act of 1870, included circumstances such as are now recognized as giving rise to an estoppel in favor of a later inventor.

The first case in point coming to our notice is that of *ex parte Cochran*, (C. D., 1869, p. 30.) In that case Commissioner Fisher held that an inventor may not withdraw his application, make no effort to renew it for eight years, during which time the subject-matter of the invention has been incorporated into the substance of many subsequent inventions, and then file a new application and obtain a patent which to support the novelty of the invention shall relate back to the first application. His decision was subsequently reversed, upon appeal, by the Supreme Court of the District of Columbia. Following this case and the act of 1870 arose the case of *Gray* v. *Hale et al.* decided by Acting Commissioner Duncan and reported on page 129 of the Commissioner's Decisions of 1871. The facts of the last-mentioned case are similar in many respects to the one in hand, and the decision rendered by the Acting Commissioner is both a well-considered and exhaustive treatise on the subject of abandonment under such circumstances. This decision in the case of *Gray* v. *Hale et al.* was also reversed, upon appeal, by the Supreme Court of the District of Columbia, without an assignment of reasons by the court for such reversal. It is conjectured, however, that the court in rendering such reversal was merely following the prior decision in the Cochran case, which the record shows was urged as a precedent. Now it appears from the case of *The United States Rifle and Cartridge Company and E. Remington & Sons* v. *The Whitney Arms Company et al.* (11 O. G., 373; C. D., 1877, p. 197) that Cochran, following the decision by the Supreme Court of the District of Columbia in the case above mentioned, was still refused his patent by the Commissioner, but upon filing a renewed application for the same invention was granted a patent by the succeeding Commissioner. The validity of this patent was brought in question in the case last cited, and the Circuit Court for the District of Connecticut, by Judge Shipman, rendered an opinion adversely to the Cochran patent, holding that he had forfeited or abandoned his invention upon practically the same grounds that had formed the basis of the decision of Commissioner Fisher when the Cochran application was before him as an *ex parte* case. This decision in the case of *The United States Rifle and Cartridge Company and E. Remington & Sons* v. *The Whitney Arms Company et al.* appears to have virtually set aside the rulings of the Supreme Court of the District of Columbia in the preceding Cochran case and the case of *Gray* v. *Hale et al.*, so that the present status of the law on the subject of abandonment appears to be that set forth in the decisions rendered in those cases by the Commissioner and Acting Commissioner of Patents, respectively. The decisions in question clearly show that the term "abandonment" is broad enough to include situations giving rise to an equitable estoppel, and this conclusion is confirmed by the definition of "abandonment" to be found in the decision of *Farmer* v. *Brush*, (17 O. G., 150; C. D., 1880, p. 5,) wherein it was said that—

> If an inventor abandons or forgets his invention before its public use, it may become the property of a subsequent inventor. Abandonment, in the sense in which the term is here used, is the cessation of all effort to furnish the invention for public use. Such abandonment may be voluntary and absolute, as when the invention is deliberately thrown aside with a purpose never to resume it; but it also may occur when the invention is thrown aside, not with a purpose never to resume it. If it is merely laid aside temporarily, with an intention to resume it, there is no abandonment. But the question of abandonment in such case is not one of mere mental operation. A mere mental purpose or intention to give the public at some future time the benefit of a completed invention, unaccompanied by any corresponding acts or words, amounts to nothing; and the presumption raised by acts of the party of a purpose to abandon will not be overcome by his testimony that he mentally intended not to abandon it. Such testimony will be construed in connection with the acts of the party; and although it may throw light upon such acts, and, taken in connection with them, may determine their meaning and effect, yet it will not be always decisive when contradictory, rather than explanatory, of such acts.
>
> Now, a mere delay of two years in the application for a patent is not evidence of abandonment; but neglect to confer the benefits of the invention upon the public, whether it is or is not accompanied by neglect to apply for a patent, is evidence of abandonment. The inventor may voluntarily keep his invention secret as long as he sees fit to do so, provided he applies for a patent before another invents the device. He may abandon or forget his invention, provided he resumes or recalls it before another makes the invention. But his rights do not, in either case, relate back through the intermediate "*vacuum*" to the original invention, so as to give him the benefit of its date as against a rival inventor,

and by the language used by the court in the case of *Cain* v. *Park*, (86 O. G., 797; 1899, C. D., 278; 14 App. D. C., 42,) wherein the court says:

> From what has been heretofore said we are not to be understood as holding that a renewal application filed within the two years given therefor will under all circumstances relate back to the original and cut off all intermediate applicants and patentees. The statute contemplates the possible existence of facts and circumstances attending the action of the original applicant that might show an abandonment of the invention itself, notwithstanding there may have been no formal abandonment or withdrawal of his application. In such a case it would be wrong to allow him to come into the Office, instigated by the entry of a new and independent inventor into the field, and revive his original invention for the purpose of defeating his rival for reasons similar in their nature to those which controlled the decision of the following cases: *Mason* v. *Hepburn* (C. D., 1898, 510; 84 O. G., 147) and *Warner* v. *Smith*, (C. D., 1898, 517; 84 O. G., 311.)

But objection might be made to the conclusion previously stated, to the effect that the decision of the court in the case of *The United States Rifle and Cartridge Company and E. Remington & Sons* v. *The Whitney Arms Company et al.* appears to have virtually set aside the rulings of the Supreme Court of the District of Columbia in the Cochran case and the case of *Gray* v. *Hale et al.*, on the ground that the court rendering the decision in the first-mentioned case—namely, a circuit court of the United States—had such jurisdiction that its decision should be given the effect of a reversal of the Supreme Court of the District of Columbia at that time, or the theory of such an objection might be stated to be that the circuit court in question and the Supreme Court of the District of Columbia were coördinate

tribunals. Granting that if such an objection were made it would be well taken, we are none the less certain that the rulings of the Supreme Court of the District of Columbia on the points of law involved in the Cochran case and the case of *Gray* v. *Hale et al.* are no longer followed and are not regarded as correct expressions of the law by the present Court of Appeals of the District of Columbia, which has succeeded to the jurisdiction, formerly exercised by the Supreme Court of the District of Columbia, to entertain appeals from this Office in patent cases. To substantiate this position, we have but to point to the decision of the Court of Appeals of the District of Columbia in the case of *Mason* v. *Hepburn* (84 O. G., 147; 1898, C. D., 510; 13 App. D. C., 86) and the well-known line of subsequent cases following the doctrine therein laid down. In other words, we regard the decision of the present Court of Appeals of the District of Columbia in the case of *Mason* v. *Hepburn* as being a virtual confirmance of the application of the doctrine of equitable estoppel to patent cases, as set out in the heretofore-mentioned decisions of the Commissioner and Acting Commissioner of Patents in the Cochran case and the case of *Gray* v. *Hale et al.*, respectively

Nor can the force which we have thus attributed to the decision in the case of *Mason* v. *Hepburn* be avoided by pointing out that the inventor against whom the doctrine of equitable estoppel was applied in that case was seeking his patent under a different section of the statute than is the party Wood in this case. It is true that in that case Mason was seeking his patent under section 4886, Revised Statutes, while Wood in this case is seeking his patent at the present time under section 4897, Revised Statutes; but section 4886, Revised Statutes, provides for the issuance of a patent to a first inventor (if he be not subjected to certain enumerated bars, which are of no importance to the present discussion) unless his invention or discovery "is proved to have been abandoned." Section 4897, Revised Statutes, provides that an inventor who has forfeited an allowed application may renew the same, provided his second application be made within two years after the allowance of the original application, and this section directs that upon the hearing of renewed applications "abandonment shall be considered as a question of fact." It is believed to be certain that any state of facts which would constitute an "abandonment" such as would bar an inventor seeking a patent under section 4886 would also constitute such an abandonment as would bar an inventor seeking a patent under section 4897. In other words, there is no reason for holding that the "abandonment" contemplated by one section of the statute is not coextensive in scope or meaning with the "abandonment" contemplated by the other section. There is just as much reason and statutory authority for an application of the doctrine of equitable estoppel in a case arising under section 4897, Revised Statutes, as there was for the application of that doctrine in the decision of *Mason* v. *Hepburn*, arising under section 4886, Revised Statutes. If the bar of abandonment provided for in section 4886, Revised Statutes, is a sufficient statutory warrant for the application of the doctrine of equitable estoppel, then the bar of abandonment provided for by section 4897, Revised Statutes, is equally and for the same reasons a sufficient warrant for such an application of that doctrine, and from this conclusion it follows that an application of that doctrine in the case in hand cannot amount to an extension thereof, such as, in the cases cited by the Examiner of Interferences, the court has stated it is unwilling to make.

If the bars of abandonment set up in sections 4886 and 4897, Revised Statutes, are, as we believe, one and the same thing and the doctrine of equitable estoppel is not to be applied to a case arising under section 4897, as it has been applied in the *Mason* v. *Hepburn* decision to a case arising under section 4886, the result must be due to one of two causes—either that doctrine has been applied to cases arising under section 4886 under some clause of that section other than the clause relating to abandonment of invention or that doctrine has been so applied without any statutory authority whatsoever within our knowledge. As we find no clause of section 4886 other than that relating to abandonment which seems to call for or warrant an application of the doctrine, we are forced to the conclusion that it must be the abandonment clause, if any, which gives it statutory authorization. Now, whether this be the fact or whether the application of that doctrine calls not for and needs no statutory authorization, it is equally certain that it may be applied to a proper case arising under section 4897.

We are satisfied that the testimony in this case shows that Wood, with knowledge that Barber was in the field, deliberately withheld his invention from the market and neglected to renew his forfeited application or to reassert his claims for a patent until practically the end of the period allowed by the statute, and that such conduct on the part of Wood amounts to an abandonment of the invention within the meaning of that term as used in section 4897. Nor is a motive for Wood's conduct wanting. As early as 1898 Wood's original application had been involved in an interference with one Miehle, and Wood had lost the issue of that interference. The issue thus lost was a claim which dominates the subject-matter of this controversy, and such claim appeared in the patent duly granted to Miehle. Wood testifies to the repeated efforts made by himself and his attorney to find an anticipation for this claim of the Miehle patent (Q. 6, p. 53, Wood's record) and frankly states that it was his intention, if a satisfactory anticipation could not be found, to withhold the invention disclosed in his application until the Miehle patent should expire and then put it into machines, (Q. 8, p. 54, Wood's record.) He explains this testimony in X-Q. 26 by saying:

> * * * It was my intention to withhold the device from the market, and meanwhile to retain possession of the invention, either through application or patent, until the time stated.

He then proceeds to state that he gave his application no further thought; that the prosecution of that application in the Patent Office was in the hands of his attorney, who knew that the use of the device was debarred, and the witness says:

> I presume because of this he let the matter drag; as the device could not be used, nothing was to be gained by hurrying it through the Office. (X-Q. 28.)

Thus Wood states the underlying facts and himself draws the presumption flowing therefrom, which presumption explains the forfeiture of the original application and the protracted delay in renewing the same. Here, too, is the reason for his apparent indifference as to what a rival inventor was doing. Although a prompt reassertion of Wood's claims to a patent might have saved Barber expense, would not such action have hastened the day when the running of the prospective Wood patent should begin, and hence have virtually shortened the term of the monopoly it conveyed by subjecting it sooner and hence longer to the Miehle patent? Can it be doubted that the reason which caused Wood's attorney to "let the matter" of the prosecution of his application "drag" was other or different than that which Wood himself tells us impelled him to withhold the invention from the market?

What consideration has Wood given the public in return for the monopoly he seeks of it? Not the invention in contest surely, for although by his original application he first apparently tendered it, after it had been accepted on his own terms, by his forfeiture, he withdrew it again, that he might later exact a larger tribute. Unmindful of the public demand for the immediate enjoyment of his invention he waited to suit his own ends, and now, forgetful of the rights of a later and more diligent inventor, he seeks the whole reward. We think that he should not find it; that under the circumstances Barber, who alone has actually given the public consideration for the patent sought, is entitled to the patent he has obtained and to a decision in his favor as the one who is of right the first inventor within the true meaning and policy of the patent laws.

The decision of the Examiner of Interference awarding priority of invention to Henry A. Wise Wood, the senior party, is reversed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Daley patent, No. 644,664, for a furnace, *Held* infringed. *Underfeed Stoker Co. of America* v. *Sanford Riley Stoker Co.*, 215 Fed. Rep., 392.

(U. S. C. C. A.) Claims 1 and 2 of Letters Patent No. 648,897, issued May 1, 1900, to Joseph M. Christy, for a box-car loader, *Held* valid and infringed. *Ottumwa Box Car Loader Co.* v. *Christy Box Car Loader Co.*, 215 Fed. Rep., 362.

(U. S. D. C.) The Gilson patents, Nos. 1,004,643 and 1,004,644, for mechanism and process for making armored cable, *Held* valid and infringed. *National Metal Molding Co.* v. *Flexible Conduit Co.*, 215 Fed. Rep., 388.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1914.

Baum & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Berry Brothers (Inc.), corner Leib and Wight streets, Detroit, Mich., for registration of a trade-mark and trade-mark registered July 16, 1889, No. 17,815, to Baum & Co., Howard street, Spokane Falls, Wash., and a notice of such declaration sent by registered mail to said Baum & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Baum & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON. *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

William Kurzenknabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McNeely & Price, 170–172 North Fourth street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 21, 1896, No. 28,154, to William Kurzenknabe, 124 Franklin street, Chicago, Ill., and a notice of such declaration sent by registered mail to said William Kurzenknabe at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Kurzenknabe, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

Joseph D. Little, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Agricultural Chemical Co., 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered March 15, 1892, No. 20,845, to Joseph D. Little, Springfield, Ohio, and a notice of such declaration sent by registered mail to said Joseph D. Little at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph D. Little, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three successive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 18, 1914.

Kosmic Oil Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of E. F. Houghton & Company, 240–250 West Somerset street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered May 22, 1888, No. 15,500, to the Kosmic Oil Co., 20 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Kosmic Oil Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kosmic Oil Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	1	North Carolina	2	1
Arizona	....	....	North Dakota	5	....
Arkansas	2	....	Ohio	58	2
California	35	5	Oklahoma	5	1
Colorado	5	....	Oregon	4	....
Connecticut	21	1	Pennsylvania	71	3
Delaware	2	....	Rhode Island	11	....
Florida	4	2	South Carolina	1	....
Georgia	3	1	South Dakota	4	....
Idaho	1	....	Tennessee	5	1
Illinois	63	13	Texas	13	2
Indiana	22	1	Utah	3	....
Iowa	18	1	Vermont	1	....
Kansas	11	....	Virginia	6	....
Kentucky	6	1	Washington	6	....
Louisiana	1	1	West Virginia	6	1
Maine	2	....	Wisconsin	24	11
Maryland	10	2	Wyoming	1	3
Massachusetts	60	3			
Michigan	23	3	Alaska, District of	....	....
Minnesota	16	4	Canal Zone	....	....
Mississippi	1	....	District of Columbia	5	....
Missouri	19	2	Hawaii Territory	....	....
Montana	2	....	Philippine Islands	....	....
Nebraska	8	....	Porto Rico	....	....
Nevada	3	....	U. S. Army	....	....
New Hampshire	5	1	U. S. Navy	1	....
New Jersey	24	3			
New Mexico	1	....	Total to residents of the United States	720	92
New York	116	22			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	5	....	Newfoundland	....	....
Bermuda	1	....	New South Wales	....	....
British India	....	....	New Zealand	....	....
Bulgaria	1	....	Norway	1	....
British West Indies	....	....	Portugal	....	....
Canada	18	....	Queensland	....	....
Canary Islands	....	....	Russia	1	....
Cuba	....	....	Roumania	....	....
Denmark	....	....	Scotland	1	....
Dominican Republic	....	....	South Australia	....	....
Dutch East India	....	....	Spain	....	....
England	14	1	Sweden	1	....
France	7	....	Switzerland	2	1
Germany	16	....	Transvaal, South Africa	1	....
Greece	....	....	Victoria	1	....
Guatemala	1	....	Western Australia	....	....
Ireland	....	....			
Italy	1	....	Total to residents of foreign countries	73	2
Japan	....	....			
Mexico	1	....			

Attorneys.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 8, 1914.

By direction of the Assistant Secretary of the Interior, Order No. 2,002, of September 3, 1912, disbarring Silas C. Sweet, of Des Moines, Iowa, from practising before the United States Patent Office, has been canceled and revoked, and he is from September 2, 1914, restored to practice before the Patent Office under his former number, 296.

Respectfully,

W. F. WOOLARD,
Chief Clerk.

Notice.

A limited number of copies of the Definitions of the Revised Classes, bound in buckram, may be secured from the Office for $1 each.

Classification Bulletin No. 32 is ready for distribution, and copies may be purchased at 10 cents each.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 10, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 19	July 20	604
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	May 13	Aug. 14	719
175	3. Annealing and Tempering; Electric Heating and Rheostats: Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 18	Sept. 28	116
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Apr. 4	Aug. 28	768
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 2	Aug. 7	460
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	Aug. 18	651
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 25	Aug. 27	582
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 9	Sept. 21	1202
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 30	July 29	707
235	10. Carriages and Wagons	May 13	Aug. 22	1037
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 30	Sept. 21	236
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	May 22	July 24	1088
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 10	Aug. 18	458
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 24	Sept. 14	475
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 4	Aug. 27	913
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	Aug. 6	733
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	July 6	Sept. 18	215
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 8	Sept. 12	224
286	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 22	Sept. 8	287

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 27	Aug. 10	330
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 12	Aug. 1	498
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 11	Aug. 29	231
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 20	Aug. 22	454
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Apr. 25	Aug. 26	571
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 10	Sept. 14	200
106	26. Electricity, Generation; Motive Power.	Jan. 8	June 22	909
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 28	Aug. 27	551
65	28. Internal-Combustion Engines	July 3	Aug. 12	640
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 10	Aug. 25	492
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 10	Sept. 22	358
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 16	Aug. 25	368
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 14	Aug. 28	761
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	May 11	Sept. 5	401
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Aug. 7	Aug. 20	307
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 9	Sept. 15	621
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Aug. 7	Aug. 20	747
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 12	Aug. 25	918
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	Sept. 4	823
321	39. Water Distribution	Apr. 20	July 20	541
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 10	Sept. 12	1155
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 10	Sept. 10	413
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 28	Aug. 17	369
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 11	Sept. 12	237

Oldest new case, Jan. 8; oldest amended, June 22.
Total number of applications awaiting action..... 24,370

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 28	Sept. 4	1031
	Designs	Aug. 26	Sept. 14	323
	Labels and Prints	Oct. 1	Oct. 1	47

PATENTS

GRANTED OCTOBER 13, 1914.

1,113,178. PROCESS OF PRODUCING BARIUM AND STRONTIUM OXIDS. HARRY G. AKERS, Toronto, Ontario, Canada. Filed May 8, 1913. Serial No. 766,410. (Cl. 23—13.)

1. The continuous process of producing barium or strontium oxids from their crude carbonates which consists in mixing the carbonate with a flux to lower its melting point; adding a reducing agent to the charge; melting the charge at a temperature of approximately 1200° C.; igniting the evolved gases to heat the charge and to preheat the incoming charge; and maintaining a reducing atmosphere in the reacting vessel containing said charge, substantially as described.

2. The continuous process of producing barium or strontium oxids from their crude carbonates which consists in mixing the carbonates with a flux to lower the melting point; adding a reducing agent to the charge; melting the charge at a temperature of approximately 1200° C.; igniting the evolved gases to heat the charge and to preheat the incoming charge; maintaining a reducing atmosphere in the reacting vessel containing said charge; and causing the gases produced by the combustion of the fuel employed in heating the furnace to dilute and thereby lower the partial pressure of any evolved carbon dioxid from said charge, substantially as described.

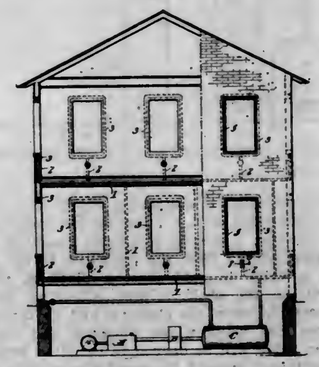
3. The continuous process of producing barium or strontium oxids from their crude carbonates which consists in mixing the carbonates with a flux to lower the melting point; adding a reducing agent to the charge; melting the charge at a temperature of approximately 1200° C.; refining the mass by again adding a reducing agent; causing the gases produced by the combustion of the fuel employed in heating the furnace to dilute any liberated carbon dioxid and thereby reduce its partial pressure; igniting the evolved gases to heat the charge and to preheat the incoming charge; and maintaining a reducing atmosphere in the reacting vessel containing said charge, substantially as described.

4. The continuous process of producing barium or strontium oxids from their crude carbonates in the form of a sludge which consists in mixing the carbonates with a flux to lower the melting point; adding a reducing agent to the charge; melting the charge at a temperature of approximately 1200° C. in a carbon lined furnace; igniting the evolved gases to heat the charge and to preheat the incoming charge; maintaining a reducing atmosphere in the reacting vessel containing said charge; and causing the gases produced by the combustion of the fuel employed in heating the furnace to dilute and thereby lower the partial pressure of any evolved carbon dioxid from said charge, substantially as described.

1,113,179. COMBINED INVISIBLE WINDOW-SCREEN AND VENTILATOR FOR BUILDINGS. DAVID WILEY ANDERSON, Richmond, Va. Filed Nov. 17, 1913. Serial No. 801,431. (Cl. 98—27.)

1. A combined invisible window screen and ventilator for buildings comprising, an air distributing tube or frame located on the outside of and surrounding an opening in a building, said distributing frame or tube being provided with perforations or openings whereby air under pressure is ejected therefrom to form a whirlpool sheet or film of air entirely across each opening.

2. A combined invisible window screen and ventilator for buildings comprising, a tube screen surrounding the outside portion of a window frame, said tube screen being provided with perforations at an angle with respect to the side of the tube screen and air under pressure ejected through said perforations in an outward direction to form a whirlpool film of air entirely across the window.



3. A combined invisible window screen and ventilator for buildings comprising, an air distributing tube or frame located in the outside of and surrounding an opening in a building, a volume pipe or chamber surrounding the distributing tube, said distributing tube having perforations therein through which air under pressure is ejected therefrom in an outward direction to form a whirlpool film or sheet of air across the opening.

4. A combined invisible window screen and ventilator for buildings comprising, an air distributing tube or frame located on the outside of and surrounding an opening in a building, a volume pipe or chamber within the building, pipes connecting the volume pipe or chamber with the distributing tube or frame, and automatically operated valves for supplying air to the distributing tube or frame, said distributing tube or frame being provided with perforations through which air under pressure is projected in an outward direction to form a whirlpool sheet or film of air across the said opening.

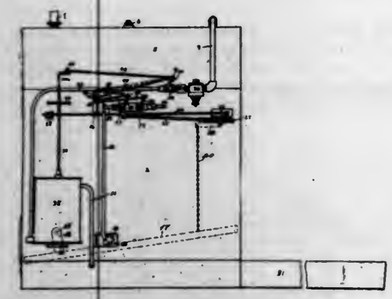
5. A combined invisible window screen and ventilator for buildings comprising, an air distributing tube or frame located on the outside of and surrounding an opening in a building, a volume pipe or chamber within the building, pipes connecting the volume chamber with the distributing tube, automatically operated means to cut off or supply air to the distributing tube, means within the building for medicating or disinfecting the air supplied to the distributing tube, said distributing tube or frame being provided with perforations so arranged that air under pressure will issue therefrom in an outward direction to form a whirlpool sheet of air entirely across the said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,113,180. APPARATUS FOR DESTROYING VERMIN. COLLIN C. ANDREWS, Auburn, Ind. Filed Apr. 16, 1913. Serial No. 761,430. (Cl. 119—159.)

1. In an apparatus for destroying vermin, the combination of an open-ended shell, a container for compressed air

supported thereby, a powder-receptacle mounted on the frame, a pipe leading from the container to the powder receptacle, a valve in said pipe, a platform pivotally mounted within the shell, a pipe extending from the powder receptacle below the platform and up through the same, and connections between the platform and the valve whereby the valve will be opened to permit a flow of air from the container through the powder receptacle and upward from the platform when the platform is depressed.



2. In an apparatus for destroying vermin, the combination of an open-ended shell, a container for compressed air supported thereby, a powder-receptacle mounted on the frame, a pipe leading from the container to the powder receptacle, a valve in said pipe, a platform pivotally mounted within the shell, a pipe extending from the powder receptacle below the platform and up through the same, connections between the platform and the valve whereby the valve will be opened to permit a flow of air from the container through the powder receptacle and upward from the platform when the platform is depressed, and means operated by said platform to agitate the contents of the powder receptacle.

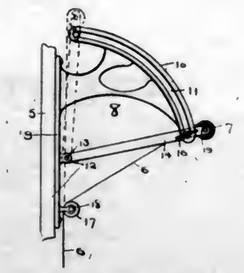
3. In an apparatus for destroying vermin, the combination of an open-ended shell, a container for conpressed air supported thereby, a powder-receptacle mounted on the frame, a pipe leading from the container to the powder receptacle, a valve in said pipe, a platform pivotally mounted within the shell, a pipe extending from the powder receptacle below the platform and up through the same, connections between the platform and the valve whereby the valve will be opened to permit a flow of air from the container through the powder receptacle and upward from the platform when the platform is depressed, and means to control the pressure of the air entering the powder receptacle.

4. In an apparatus for destroying vermin, the combination of an open ended shell through which fowls may pass, a platform pivotally mounted in the shell and adapted to be depressed by a fowl walking over it, a container mounted above the shell, a pipe leading therefrom, a plurality of valves connected to said pipe, pipes extending from said valves into the shell at different points, a slidable operating rod, a pin connected thereto, links connecting to said pin and to said valves to open them when the rod is actuated, a stationary pin to receive the ends of the links and thus hold the valves closed, and means connected to said rod and said platform whereby the rod is actuated whenever the platform is depressed.

5. In an apparatus for destroying vermin, the combination of a frame, a container for compressed air, a powder receptacle, an air conduit connecting the container with the receptacle, means for normally closing the conduit, a movable platform supported in the frame, a second conduit leading from the powder receptacle to a point in the vicinity of the platform, and means operated by the platform for opening the first-mentioned conduit, thereby admitting compressed air to the powder receptacle.

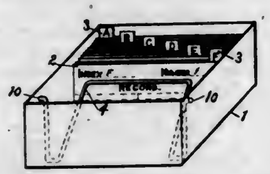
[Claims 6 to 12 not printed in the Gazette.]

1,113,181. ADJUSTABLE SHADE-SUPPORT. GIOVANNI ARDITO, Hoboken, N. J., assignor of one-half to Joseph Figallo, Hoboken, N. J. Filed Nov. 26, 1913. Serial No. 803,268. (Cl. 156—23.)



The combination in an adjustable shade support of a pair of bases to be secured to opposite sides of a window casing, brackets carried on the upper extremity of said bases and having arcuate guideways therein, roller mountings carried at the lower extremity of said bases, swinging arms pivoted to said bases between said brackets and said mountings, a shade roller mounted at the extremity of said arms, an idler roller secured in said mountings, and means carried by said arms to coact with said guideways in securing said shade rollers in any adjusted position with respect to said guide ways, the whole operating in such manner that the top of the window may be opened for the circulation of air while the bottom is still screened.

1,113,182. ENVELOP-FILE. FREDERICK C. AVERY, Chicago, Ill. Filed June 7, 1913. Serial No. 772,353. (Cl. 129—16.)

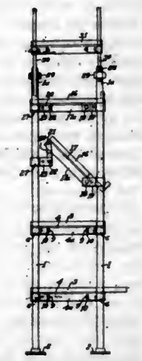


1. In an envelop file, a filing case, a plurality of indexed separating cards, a plurality of filing envelops said filing envelops having the word "Index" with an indicated space thereafter for the entry of the index character of the separating card to which the filing envelop may be assigned and the word "Record" with indicated spaces thereafter for a memorandum of the filing matter in the particular envelop.

2. In an envelop file, a filing case, a plurality of indexed separating cards, a plurality of filing envelops said filing envelops having the word "Index" with an indicated space thereafter for the entry of the index character of the separating card to which the filing envelop may be assigned and the word "Number" with an indicated space thereafter for the entry of consecutive numbers following a single index character of the separating card to which the filing of several filing envelops may be assigned and also having the word "Record" with indicated spaces thereafter for a memorandum of the filing matter in the particular envelop.

1,113,183. SHELVING. FREDERICK BAEHN, New York, N. Y. Filed Dec. 12, 1913. Serial No. 806,151. (Cl. 211—27.)

1. The combination with front and rear pairs of uprights, and a shelf, of a fitting mounted upon each of said uprights adaptable to slide therealong and to maintain said shelf secured at any elevation, and means connected to said fittings and shelf and coöperating with said fittings and shelf to set said shelf inclined at any angular position when set at any one of said different elevations.



2. The combination with uprights, and a shelf, of fittings to secure said shelf to said uprights adaptable to maintain said shelf secured at different elevations, and a link connecting said shelf with said fittings, said link and fittings being adaptable to maintain said shelf inclined at various angles when set at any one of said different elevations.

3. The combination with uprights, and a shelf, of fittings at the rear of said shelf adaptable to be secured to said uprights at different elevations, and a link connecting said shelf with said fittings, said link and fittings being adaptable to adjust said shelf at various angles.

4. Shelving including the combination of uprights, shelves, a steel-shape bracing strip for said shelves secured transversely thereto at each upright having a web disposed right-angularly to the shelf, rigid clamplug bands having portions adaptable to grip and embrace said uprights, the webs of said bracing-strips having openings, said clamping bands having lugs passing through said openings, and bolts passing through the webs and bands to grip them to said uprights and to release the grip for setting said shelves at different elevations.

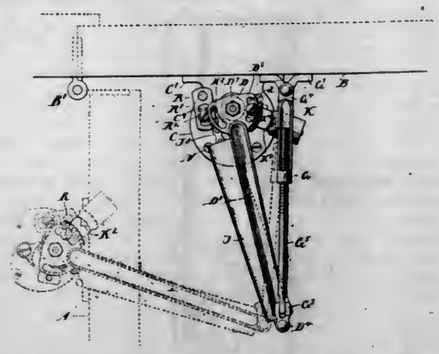
5. In a shelving the combination of tubular posts, rods adapted to slide within said posts, the ends of said posts being split to grip said rods, fittings adjustably secured to said posts, and adjustable shelves secured to said fittings.

[Claim 6 not printed in the Gazette.]

1,113,184. DOOR CLOSER AND CHECK. FRANCIS J. BAYER, New York, N. Y., and ALBERT J. ROSENTRETER, Boonton, N. J., assignors, by mesne assignments, to Bayer-Gardner-Himes Company, a Corporation of New Jersey. Filed July 1, 1913. Serial No. 776,761. (Cl. 16—88.)

1. In a door-closer, a plate adapted to be attached to a door, a shaft mounted vertically in said plate, an arm on the upper end of said shaft, a screw-threaded pin in the outer end of said arm, a link pivotally secured to said arm and adapted to be attached to the door-casing, a stud held on said plate, a tube detachably and pivotally secured to said arm by being screwed upon said pin and adapted to swing thereon beneath said arm, a follower in said tube, flexible connections from said follower to said stud, and a spring in said tube arranged to be compressed by said follower.

2. In a door-closer and check, a plate adapted to be attached to a door, a shaft mounted vertically in said plate, an arm on the upper end of said shaft, a screw-threaded pin in the outer end of said arm, a link pivotally secured to said arm and adapted to be attached to the door-casing, a stud held on said plate, a tube detachably and pivotally secured to said arm by being screwed upon said pin and adapted to swing thereon beneath said arm, a follower in said tube, flexible connections from said follower to said stud, a spring in said tube arranged to be compressed by said follower, a crank on the lower end of said shaft, a checking cylinder and piston, a pitman connecting said crank and piston, and a receptacle for checking liquid inclosing said crank and cylinder.



3. In a door-closer, a plate adapted to be attached to a door and having a vertical boss thereon, a shaft mounted in said boss, an arm on the upper end of said shaft, a sleeve rotatable on said boss and having teeth thereon, a stud on said sleeve, means on said boss for holding said sleeve against vertical movement, a pawl on said plate adapted to engage said teeth, a pin in the outer end of said arm, a link pivotally secured to said arm and adapted to be attached to a door-casing, a tube secured to said pin and adapted to swing thereon beneath said arm, a follower in said tube, flexible connections from said follower to said stud, and a spring in said tube arranged to be compressed by said follower.

4. In a door-closer, a plate adapted to be attached to a door, a shaft mounted therein, an arm on said shaft and connections therefrom to the door-casing, a sleeve inclosing said shaft and having teeth thereon, a pawl arranged to engage said teeth, a closing spring and connections therefrom to said sleeve and a washer on said shaft above said sleeve arranged to hold said sleeve against vertical movement.

5. In a door-closer, a plate adapted to be attached to a door, a shaft mounted therein, an arm on said shaft and connections therefrom to the door-casing, a sleeve inclosing said shaft and having teeth thereon, a pawl arranged to engage said teeth, a closing spring and connections therefrom to said sleeve, a cylindrical boss on said plate arranged to serve as a pivot for said pawl, and having an opening therein through said plate, a screw received in such opening and serving as a retaining means for said pawl, and a receptacle for checking liquid secured to said plate beneath the latter, said opening arranged to serve as a filling orifice for said receptacle.

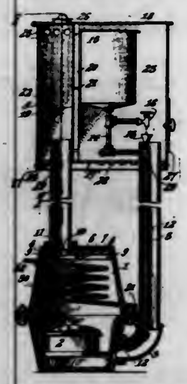
[Claims 6 to 11 not printed in the Gazette.]

1.113,185. TANK-HEATER. JOHN H. BERNHARD, McGregor, Iowa. Filed Nov. 20, 1913. Serial No. 802,107. (Cl. 126—360.)

1. In a device of the character described, a heating chamber, a burner located therein, and a warm air outlet at the top thereof, a drip plate within said chamber carried by and spaced from the top thereof, said drip plate being provided with an opening beneath said warm air outlet and having an upwardly projecting flange around said opening of a smaller diameter than said warm air outlet.

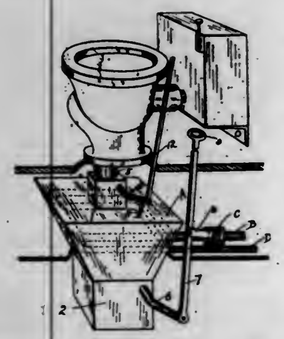
2. In a device of the character described, a heating chamber, a burner located therein, a fresh air intake for the lower end of said chamber and a warm air outlet from the top thereof, a coil within said chamber and opening

through the opposite sides thereof, a drip plate of greater diameter than said coil disposed within said heating chamber and spaced from the top and sides thereof, said plate having a warm air outlet surrounded by an upstanding flange and a depending apron around its outer edge, said flange being disposed below the warm air outlet from said heating chamber and being of less diameter than the same.



3. The combination with a submergible heating chamber having a burner therein, a fresh air inlet pipe and a warm air outlet pipe rising from said chamber, of a casing having openings in its bottom for the reception of said pipes, and a flange depending from said bottom, rods passing through said pipes near their upper ends and projecting through apertures in said flange, an upright partition in said casing between the upper ends of said pipes to form a flue and a fuel compartment, said flue having apertures in its bottom and side walls and said fuel compartment being provided with a reservoir for supplying fuel to said burner and air inlet holes in its bottom for furnishing air for said fresh air pipe.

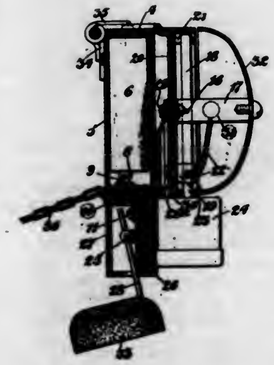
1,113,186. RAILWAY WATER-CLOSET. AUSTIN BERRY, Warden, Quebec, Canada. Filed Oct. 17, 1913. Serial No. 795,723. (Cl. 4—32.)



1. The combination with a water closet of a hopper comprising a body having inwardly sloping sides, an inlet pipe engaging with the soil pipe of the water closet, and an outlet pipe, a door suitably hinged in the inlet pipe beneath the said soil pipe and designed to open inwardly into the hopper, a crank adapted to operate the said door, a rod pivotally attached at its lower end to the said crank, a spiral spring connected at one end to the crank and at the other end to the top of the said hopper, a door suitably hinged in the outlet pipe and designed to open outwardly, a crank adapted to operate the said door, a link pivotally attached at its lower end to the said crank, the upper end of the said link terminating in a suitable handle and flushing means located in the said hopper adapted to be operated simultaneously with the outlet door, as and for the purpose specified.

2. The combination with a water closet of a hopper comprising a body having inwardly sloping sides, an inlet pipe engaging with the soil pipe of the water closet, and an outlet pipe, a door suitably hinged in the inlet pipe beneath the said soil pipe and designed to open inwardly into the hopper, a crank adapted to operate the said door, a rod pivotally attached at its lower end to the said crank, a spiral spring connected at one end to the crank and at the other end to the top of the said hopper, a door suitably hinged in the outlet pipe and designed to open outwardly, a crank adapted to operate the said door, a link pivotally attached at its lower end to the said crank, the upper end of the link terminating in a suitable handle, such link being provided with an orifice intermediate of its ends, a steam pipe extending into and around the upper side of the hopper, a water pipe extending into and around the upper side of the hopper and located above the said steam pipe, such pipe having perforations in its inner circumference next the hopper sides, a valve connected at one end to the water pipe and at the other end to a reservoir, a crank rigidly attached at one end to the water valve and at the other end pivotally attached to the orifice in the said link, as and for the purpose specified.

1,113,187. SIGNALING DEVICE. WILLIAM A. BISCHOFF, St. Louis, Mo. Filed May 12, 1913. Serial No. 766,984. (Cl. 177—317.)

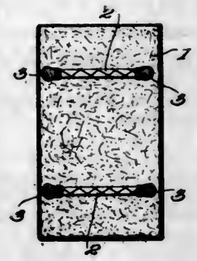


1. A signal device comprising a support, a case pivoted to said support, a spring actuating said case away from said support, signal mechanism carried by said case, a magnet for operating said signal mechanism, a battery in said case for energizing said magnet, a circuit for said battery to said magnet, means for holding said case close to said support in opposition to the power of said spring, and means for maintaining said circuit open when said case is held close to said support as aforesaid.

2. A signal device comprising a support, a case pivoted to the under side of said support, a signal supported by said case, an electromagnet supported by said case and arranged to operate said signal, a battery, a circuit from said battery to said electromagnet whereby said electromagnet may be energized from said battery, a lever operable to open and to close said circuit, means for moving said case and signal close against the under side of said support to permit the placing and removal of a water receptacle, and means for actuating said lever by the water within the receptacle effectively to close said circuit and enable said electromagnet to operate said signal.

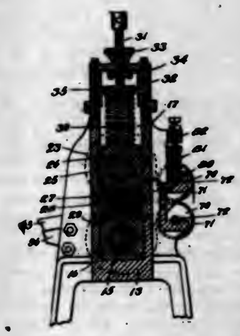
3. The combination with a support, a passage for discharging water from above said support, and a receptacle arranged to receive the water discharged through said passage, of a case pivoted to said support and extending below the plane of the upper edge of said receptacle, a spring holding said case in the position aforesaid, a signal carried by said case, an electromagnet carried by said case for operating said signal, a battery for energizing said electromagnet, a circuit from said battery to said electromagnet, a lever for opening and closing said circuit, means for moving said case above the plane of the upper edge of said receptacle to permit removal of said receptacle, and means in connection with said lever for actuating said lever to hold the circuit open when said case is held above the plane of the upper edge of said receptacle, said means being also actuated by the water in the receptacle to close said circuit when the water rises to a predetermined depth, substantially as described.

1,113,188. CORSET-PAD. BERTHA BOOKSTABER, New York, N. Y. Filed Jan. 8, 1914. Serial No. 811,084. (Cl. 2—73.)



A device of the character described comprising an elongated rectangular pad of resilient material, transverse ribs of flexible material secured thereto and spaced from the opposite ends thereof, the ends of said ribs terminating inside the edges of said pad and being provided with individual pads, and a covering over said pad and said ribs, for the purpose set forth.

1,113,189. ROLLER-PRESS FOR HIDES AND SKINS. FRANK A. BRADFORD, Boston, Mass. Filed Feb. 2, 1914. Serial No. 815,971. (Cl. 149—23.)



1. In a roller-press, the combination of a horizontally arranged lower pressure-roll and stationary bearing-blocks therefor, a horizontally arranged upper pressure-roll and vertically movable bearing-blocks therefor, spacing-blocks arranged between said bearing-blocks, and yielding bumping-blocks arranged on said spacing-blocks upon which the upper bearing-blocks normally rest, said spacing-blocks being removable in order that spacing-blocks of different thicknesses may be employed, substantially as described.

2. In a roller-press, the combination of a horizontally arranged lower roll and stationary bearing-blocks therefor, a horizontally arranged upper roll and vertically movable bearing-blocks therefor, bumping-blocks on which said upper bearing-blocks normally rest, main spacing-blocks supporting said bumping-blocks, and removable supplemental spacing-blocks arranged beneath said main spacing-blocks to hold the latter in different elevated positions according to the thickness of the supplemental spacing-blocks which are employed, substantially as described.

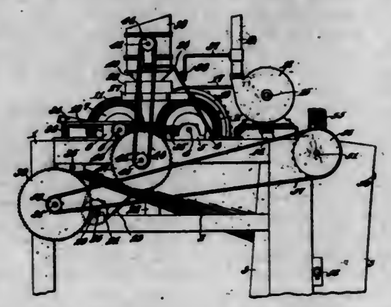
3. In a roller-press, the combination of a horizontally arranged lower roll and stationary bearing-blocks therefor, a horizontally arranged upper roll, vertically movable bearing-blocks therefor, a plurality of spacing-blocks arranged between the upper and lower bearing-blocks, some of which are removable, and bumping-blocks arranged on the uppermost spacing-blocks on which the upper bearing-blocks normally rest, substantially as described.

4. In a roller-press, the combination of a horizontally arranged lower-roll and stationary bearing-blocks therefor, and a horizontally arranged upper roll and vertically movable bearing-blocks therefor, a plurality of spacing-blocks arranged between the upper and lower bearing-blocks some of which are removable, the uppermost spacing-blocks having recesses, and bumping-blocks arranged in said recesses on which the upper bearing-blocks normally rest, substantially as described.

5. In a roller-press, the combination of a horizontally arranged lower roll and stationary bearing-blocks therefor, a horizontally arranged upper roll and vertically movable bearing-blocks therefor, bumping-blocks on which said upper bearing-blocks normally rest, supporting-blocks for said bumping-blocks having recesses in their bottom sides and removable spacing-blocks arranged in said recesses in the supporting-blocks to hold said blocks in different elevated positions according to the thickness of the spacing-blocks which are employed, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,113,190. EGG WASHING AND RINSING MACHINE. WILLIAM A. BRANDT, Healdsburg, Cal. Filed May 18, 1914. Serial No. 839,379. (Cl. 146—14.)



1. In a machine of the character described, coöperating brushes adapted to hold an article to be brushed therebetween, means for intermittently separating the brushes, and actuating means connected to the said brushes and the said means.

2. In a machine of the character described, a pair of brushes adapted to hold an article to be cleaned therebetween, one brush being slidably mounted to move to and from the other brush, retracting means operatively connected to the slidably mounted brush, and actuating means operatively connected to the brushes and to the said retracting means.

3. In a machine of the character described, coöperable brushes, one brush being movable to and from the other, a retracting lever operably connected to the said movable brush, and a rotary cam coöperable with the said lever for intermittently retracting the movably mounted brush from the other brush.

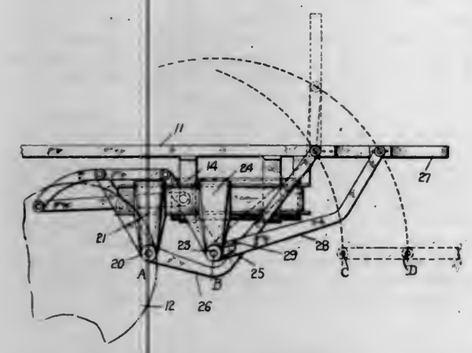
4. In a machine of the character described, coöperating

brushes, one brush being slidable to and from the other, a retracting lever operatively connected to the slidably mounted brush, a rotary cam coöperating with the said lever to intermittently retract the slidably mounted brush from the other brush, and actuating means operatively connected to the brushes and to the said cam.

5. In a machine of the character described, a pair of rotary brushes, one of the brushes being mounted to move to and from the other, means for intermittently retracting the movably mounted brush from the other brush, and actuating means operably connected to the brushes for continually rotating them.

[Claims 6 to 11 not printed in the Gazette.]

1,113,191. DEVICE FOR LOADING AND UNLOADING VEHICLES. JAMES L. BREESE, Jr., New York, N. Y. Filed Jan. 20, 1914. Serial No. 813,152. (Cl. 214—1.)



1. A device for hoisting freight from the ground to a vehicle bed, comprising pairs of elevating arms one of the ends of each of which is pivotally connected in substantially the same horizontal plane to the vehicle body, a platform to which the other ends of said arms are pivoted in a plane parallel to the aforesaid plane, and means for moving said arms and platform above and below the first mentioned plane.

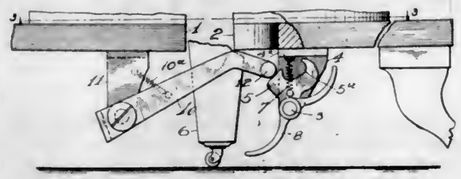
2. A device for hoisting freight and other articles to a vehicle bed, comprising pairs of elevating arms, one of the ends of each of which is pivotally connected in substantially the same horizontal plane to the vehicle body, a platform to which the other ends of said arms are pivoted in a plane parallel to the aforesaid plane, and means for positively and simultaneously moving each of said arms above and below the first mentioned plane, whereby the platform is raised from and lowered to the ground.

3. A device for raising a platform from the ground to a point where it is substantially flush with the bed of a vehicle, comprising pairs of elevating arms, a cross shaft, one of the ends of each of the said elevating arms being pivotally connected in a horizontal plane to said platform, the other ends of one pair of which are rotatably connected to said cross-shaft, a second cross-shaft the ends of the other pair of elevating arms being rigidly connected to the said second cross shaft in substantially the same horizontal plane with the aforesaid cross shaft, arms rigidly secured to and projecting from the first mentioned cross shaft and engaging with the first pair of the aforesaid arms, parallel arms rigidly secured to and projecting from each of said cross shafts, and power means for operating the last mentioned arms for raising and lowering the platform.

5. A device for hoisting freight and other articles to a vehicle bed, comprising a platform, pairs of elevating arms, one of the ends of each of which is pivotally connected in substantially a horizontal plane to said platform, and the other ends of said elevating arms pivotally connected in a substantially horizontal plane to said vehicle, and operating means for positively and simultaneously moving each of said arms above and below said last mentioned plane, whereby the platform is raised from and lowered to the ground, one of said pairs of elevating arms movable upwardly independently of the movement of said operating means, whereby the platform is adapted to be utilized as a tail board for the vehicle.

[Claims 6 to 10 not printed in the Gazette.]

1,113,192. PEDAL-OPERATED LOCK FOR EXTENSION-TABLES. CHARLES S. BURTON, Oak Park, Ill., assignor to Emil Tyden, Hastings, Mich. Filed Oct. 14, 1912. Serial No. 725,564. (Cl. 45—9.)



1. In a divided pedestal extension table, in combination with the two halves of the pedestal, engaging devices mounted on the bottom ends of said halves, respectively, comprising a horizontal rock shaft upon one of the pedestal halves extending transversely of the direction of extension of the table and protruding horizontally beyond the bottom of the pedestal; a member operated by the rocking of said rock shaft adapted for engagement; a latch mounted on the opposite pedestal half adapted to engage said rock-shaft-operated member when advanced there-toward, and a pedal cross bar on the protruding end of the rock shaft in position for engagement of its opposite ends by the foot of the operator for rocking the shaft in either direction.

2. In a divided pedestal extension table, in combination with the two halves of the pedestal, a horizontal rock shaft mounted upon one pedestal half extending horizontally transversely of the direction of extension of the table, and a pedal cross bar on said rock shaft positioned for engagement by the foot of the operator to rock the shaft in either direction; means for holding the rock shaft normally at position at which said pedal cross bar is inclined; an engaging device operated by the rocking of the shaft; a coöperating engaging device pivotally mounted on the opposite pedestal half, and means for holding it yieldingly normally in position for encounter with the rock-shaft-operated engaging device when the pedestal halves approach, the pedal cross bar having a range of movement from the first-mentioned inclined position to an oppositely inclined position, and the rock-shaft-operated engaging device being positioned on the rock shaft for movement of its point of engagement with the coöperating engaging device past the plane containing the axes of the rock shaft and said opposite engaging device in said range of movement of the pedal cross bar.

3. In a divided pedestal extension table, in combination with the two halves of the pedestal-engaging devices mounted on the bottom ends of said pedestal halves, respectively, comprising a horizontal rock shaft journaled upon one of said pedestal halves, extending transversely of the direction of extension of the table; a latch pivoted on the opposite pedestal half; a member mounted on the rock shaft for rocking therewith, having a notch for engagement of the latch; means holding the rock shaft normally in position for holding said member thereon with said notch above the rock shaft and opening upwardly, said member being adapted to receive the encounter of the latch when the pedestal halves are advanced toward each other, and to guide the latch to a position above said notch for engagement of the latch therewith by gravity, and means for rocking the rock shaft from its said normal position to carry the notch away from the parting plane of the pedestal halves and to the opposite side of the rock shaft from the pivot of the latch.

4. In a divided pedestal extension table, in combination with the two halves of the pedestal-engaging devices mounted on the bottom ends of said pedestal halves, respectively, comprising a horizontal rock shaft journaled upon one of said pedestal halves, extending transversely of the direction of extension of the table; a latch pivoted on the opposite pedestal half; a member mounted on the rock shaft for rocking therewith, having a notch for engagement of the latch; means holding the rock shaft normally in position for holding said member thereon with said notch above the rock shaft and opening upwardly, said member being adapted to receive the encounter of the latch when the pedestal halves are advanced toward each other, and to guide the latch to a position above said notch for engagement of the latch therewith by gravity; a spring connected with the latch for holding it normally in position for such encounter, and means for rocking the rock shaft from its said normal position to carry the notch away from the parting plane of the pedestal halves and to the opposite side of the rock shaft from the pivot of the latch.

5. In a divided pedestal extension table, in combination with the two halves of the pedestal-engaging devices mounted on the bottom ends of said pedestal halves, respectively, comprising a horizontal rock shaft journaled upon one of said pedestal halves, extending transversely of the direction of extension of the table; a latch pivoted on the opposite pedestal half; a member mounted on the rock shaft for rocking therewith, having a notch for engagement of the latch; means holding the rock shaft normally in position for holding said member thereon with said notch above the rock shaft and opening upwardly, said member being adapted to receive the encounter of the latch when the pedestal halves are advanced toward each other, and to guide the latch to a position above said notch for engagement of the latch therewith by gravity, and means for rocking the rock shaft from its said normal position to carry the notch away from the parting plane of the pedestal halves and to the opposite side of the rock shaft from the pivot of the latch, the rock shaft being free to be rocked in the opposite direction from its normal position by the pull of the latch in the notch of the notched member when the pedestal halves are drawn apart.

1,113,193. PERMUTATION-LOCK. THOMAS CARROLL, Dayton, Ohio. Filed Nov. 3, 1913. Serial No. 798,844. (Cl. 70—53.)

1. In a lock of the type specified, the combination with a housing having a series of internal steps of different diameters, of a spindle the periphery of which is provided with a series of peripheral steps of different diameters lying opposite those in the casing, a series of permutation devices mounted on said spindle and confined between the oppositely disposed steps on the casing and spindle, and means for maintaining said permutation devices on said spindle, the said spindle and permutation devices being removable from the housing in a body.

2. In a lock of the type specified, the combination with a housing having a series of internal shoulders of graduated diameters, of a spindle having a series of peripheral shoulders of correspondingly graduated diameters, a series of permutation devices mounted on said spindle and each of which is confined between a shoulder on the spindle and one on the housing, means on the spindle for maintaining said devices thereon, whereby said permutation devices and spindle may be removed from the housing in a body, a combination setting knob connected to said spindle and rotatable independently thereof, and means whereby said permutation devices may be actuated successively by the movements of said setting knob.

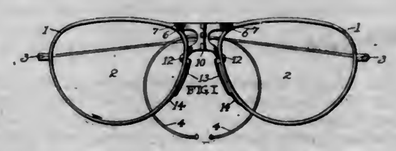
3. In a lock of the type specified, the combination with a housing the bore of which is provided with a series of annular steps of varying diameters, of a spindle the periphery of which is provided with a corresponding series of graduated steps, means for maintaining said spindle stationary within the housing, a series of permutation devices mounted upon said spindle and maintained from frictional contact with each other by the graduated or stepped surfaces of the housing and spindle, means on said spindle for maintaining said devices thereon and permitting them to be removed from the housing in a body, a combination setting knob and a connection between said knob and the spindle whereby the knob may be rotated independently of the spindle.

4. In a lock of the type specified, a housing having an opening provided with a series of steps of varying diameters, a spindle provided with a series of steps of varying diameters each of which lies opposite a coöperating step of the housing, a series of permutation devices each of which is confined by a step on the spindle and a step on the housing, and means on the spindle adapted to maintain said permutation devices thereon, whereby the spindle and rings may be removed from the housing in a body.

5. In a lock of the type specified, the combination with a housing, of a spindle mounted therein, a series of permutation devices mounted on said spindle and maintained from frictional contact with each other by means on the housing and spindle, means on the spindle and housing respectively for locking said spindle and devices in position therein, said means being adapted to permit the spindle and devices to be removed from the housing in a body, a knob attached to said spindle and rotatable independently thereof, and means whereby said permutation devices may be actuated successively by the movement of said knob.

[Claims 6 to 15 not printed in the Gazette.]

1,113,194. GOGGLES. OSWALD BEAUMONT CARSON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Filed Aug. 6, 1912. Serial No. 713,596. (Cl. 88—41.)



1. A guard for the purpose described, comprising a bearing portion having an arm integral therewith at the

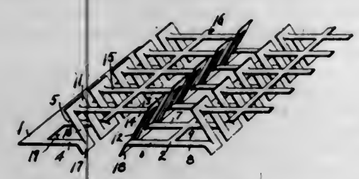
upper end thereof, said arm extending rearwardly and then reversely forwardly from the guard to engage a lens attachment, the guard being further provided with a forwardly offset portion at the lower end thereof, having its terminal portion secured to a lens attachment, substantially as described.

2. A blank for a goggle bridge and nose piece comprising a central portion having ears for engaging a hinged pintle, a pair of arms extending to the opposite side of the central portion from that on which the ears are located, one of said arms being of length to engage a lens attachment, and the other of said arms being of considerably greater length to permit of looping or reverse bending thereof, a guard depending from said second arm, and an offset attaching portion disposed at the lower ends of said guard, substantially as described.

3. A blank for a goggle bridge and nose piece comprising a bridge portion having ears for engaging a hinge pintle, a pair of arms projecting from said bridge portion and each arm being adapted to be secured to a lens, one of said arms being continued beyond its point of attachment to the lens, a guard carried by said arm, and a projection on the guard also adapted for attachment to the lens.

4. A combined bridge and nose piece for a goggle comprising a central portion adapted to engage a hinge pintle, rearwardly extending arms integral with the central portion and attached to the lens, one of said arms continuing beyond the lens in a reversely looped portion, and a guard carried by said reversely looped portion.

1,113,195. RETICULATED METAL FABRIC. NORRIS ELMORE CLARK, Plainville, Conn. Filed July 1, 1908. Serial No. 441,322. (Cl. 72—117.)



1. An integral openwork fabric comprising rods in one plane having laterally projecting bars, inclined arches projecting transversely therefrom and bars in another plane parallel to the plane of the first bars and connecting the upper ends of said arches, each arch consisting of two strands parallel to each other.

2. An expanded metal fabric comprising reticulated sections forming plaster receiving surfaces in one plane, reticulated sections forming plaster receiving surfaces in another plane spaced apart from but parallel to the first mentioned plane, the edges of the sections in one plane overlapping the edges of the adjacent sections in the other plane and inclined transverse strands connecting the adjacent overlapping edges of adjacent reticulated sections and forming dove-tailed shaped spaces.

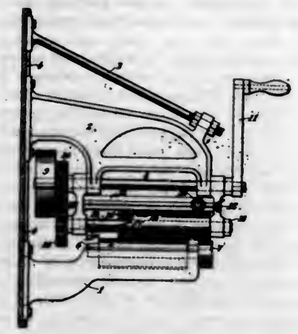
3. An integral reticulated fabric comprising parallel rods in one plane, bars in the same plane projecting perpendicularly from said rods, bars in another plane parallel to the first mentioned bars and transverse strands extending relatively at right angles to said rods and connecting the adjacent ends of bars in the two planes.

4. An integral openwork fabric comprising two series of rods lying in different but parallel planes, a series of parallel bars projecting laterally from each rod and transverse strands connecting the ends of the bars of adjacent rods and inclined so as to form dove-tailed shaped spaces between them.

5. An integral openwork fabric comprising a series of parallel rods, bars projecting laterally therefrom, parallel strands connected with said bars and extending at an angle thereto and having downwardly projecting feet and cross bars connecting the upper ends of opposite strands in a plane spaced apart from the plane of said rods.

[Claims 6 to 13 not printed in the Gazette.]

1,113,196. CAN-SMOOTHING MACHINE. JACOB B. CONOVER, Jersey City, N. J. Filed June 26, 1911. Serial No. 635,386. (Cl. 153—54.)



1. A can smoothing machine comprising an idler can-supporting roller for entering a can and supporting it from the inside, a rigid support for the idler can-supporting roller, a rigid carrier-supporting hanger in spaced relation to the can-supporting roller and its support, an actuating shaft journaled in the hanger having its axis in a plane with the axis of the idler can-supporting roller, a swinging roller carrier mounted to swing about the actuating shaft, a roller shaft journaled in the roller-carrier with its axis in a plane with the axis of the actuating shaft, a combined feed roller and pressure roller rotatable with the roller shaft, the latter roller and the idler can-supporting roller having a spaced relation to the actuating shaft such as will provide for the coöperation of these rollers by swinging the roller-carrier about the actuating shaft, mechanical connection between the actuating shaft and the roller shaft for actuating the latter from the former, and manually actuatable means for swinging the roller-carrier to shift the combined feed and pressure roller to or from coactive relation with the idler can-supporting roller.

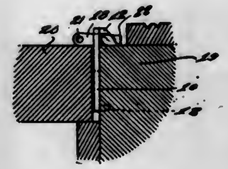
2. A can smoothing machine comprising an idler can-supporting roller for entering a can and supporting it from the inside, a rigid support for the idler can-supporting roller, a rigid carrier-supporting hanger in spaced relation to the can-supporting roller and its support, an actuating shaft journaled in the hanger above and parallel with the axis of the can-supporting roller, a swinging roller-carrier mounted to swing about the actuating shaft, a roller shaft journaled in the roller-carrier in parallel relation with the actuating shaft, a combined feed roller and pressure roller rotatable with the roller shaft, the latter roller and the idler can-supporting roller being relatively so spaced from the actuating shaft as to provide for the coactive relation of these rollers through the swinging of the roller-carrier about the actuating shaft, mechanical connection between the actuating shaft and the roller shaft for actuating the latter from the former, and manually actuatable means for swinging the roller-carrier to shift the combined feed and pressure roller to and from coactive relation with the idler can-supporting roller.

3. A can smoothing machine comprising a can-receiving horn, the outer portion of which is offset upwardly, an idler can-supporting roller supported at both its ends on the upwardly offset portion of the horn and projecting above the horn, the horn extending at the outside of the can-supporting roller and having a bearing at its outer end for the outer end of the can-supporting roller, a supplemental idler can-supporting roller projecting beyond the end of the horn concentric with the first can-supporting roller, a carrier-supporting hanger above the horn, an actuating shaft journaled in the hanger above and parallel with the axes of the can-supporting rollers, a swinging roller-carrier mounted to swing about the actuating shaft, a roller shaft journaled in the roller-carrier in parallel relation with the actuating shaft, a combined feed roller and pressure roller

rotatable with the roller shaft and adjustable longitudinally thereon, the latter roller and the can-supporting rollers being relatively spaced from the actuating shaft so as to permit their coactive relation through the swinging of the roller-carrier about the actuating shaft, mechanical connection between the actuating shaft and the roller shaft for actuating the latter from the former, and manually actuatable means for swinging the roller-carrier to shift the combined feed and pressure roller to and from coactive relation with the idler can-supporting rollers.

4. A can smoothing machine comprising a can-receiving horn, the outer portion of which is offset upwardly, an idler can-supporting roller supported at both its ends on the upwardly offset portion of the horn and projecting above the horn, the horn extending at the outside of the can-supporting roller and having a bearing at its outer end for the outer end of the can-supporting roller, a carrier-supporting hanger above the horn, an actuating shaft journaled in the hanger above and parallel with the axis of the can-supporting roller, a swinging roller-carrier mounted to swing about the actuating shaft, a roller shaft journaled in the roller-carrier in parallel relation with the actuating shaft, a combined feed roller and pressure roller rotatable with the roller shaft, the latter roller and the can-supporting roller being relatively spaced from the actuating shaft so as to permit their coactive relation through the swinging of the roller-carrier about the actuating shaft, mechanical connection between the actuating shaft and the roller shaft for actuating the latter from the former, and manually actuatable means for swinging the roller-carrier to shift the combined feed and pressure roller to and from coactive relation with the idler can-supporting roller.

1,113,197. WINDOW AND DOOR LATCH. WILLIAM A. COPE, Mullinville, Kans. Filed Oct. 1, 1913. Serial No. 792,898. (Cl. 16—8.)



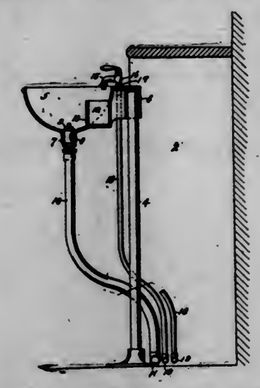
1. A fastening device of the character described comprising a plate, and tapered penetrating fingers extending from one edge of said plate adjacent the opposite ends thereof and extending diagonally from the plate in opposite directions.

2. A fastening device of the character described comprising a plate, and penetrating fingers extending from opposite ends thereof, said fingers extending diagonally from the plate in opposite directions to each other.

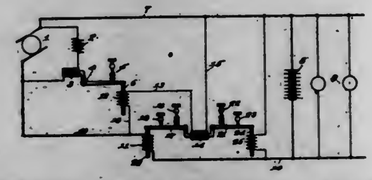
3. A fastening device comprising a plate comprising a plate, and penetrating fingers extending from opposite end portions of said plate in diverging relation to each other, one of said fingers being bent to extend beyond one of the side faces of said plate and the other of said fingers extending substantially flush with both of the side faces of said plate.

1,113,198. BARBER'S WASHBASIN. GIOVANNI CORNACCHIA, Brooklyn, N. Y. Filed Mar. 21, 1914. Serial No. 826,340. (Cl. 4—1.)

A barber's wash-basin comprising a main bowl, a shaving-brush chamber integrally formed within said bowl, a drain-passage extending through the wall of said chamber in spaced relation with the floor thereof and leading into said bowl, a projecting socket integrally formed on said bowl, a fixed support engaged by said socket for the pivotal movement of the bowl, a flexible drain pipe and flexible water-supply pipes connected to said bowl, and valves fixed upon said bowl and controlling said water-supply pipes.



1,113,199. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Oct. 11, 1910. Serial No. 586,481. (Cl. 171—229.)



1. Means for regulating a generator comprehending regulating means, a coil for operating the same, means for controlling the current in said coil and means for operating said controlling means operated by current fluctuations and operated by voltage fluctuations.

2. Means for regulating a generator comprehending a regulating element, a coil for governing the same, means for controlling the current in said coil comprising a current governing element and means for affecting said element comprehending a current operated magnet in circuit with the generator and means for affecting the said element comprising a voltage operated magnet in the circuit of the generator.

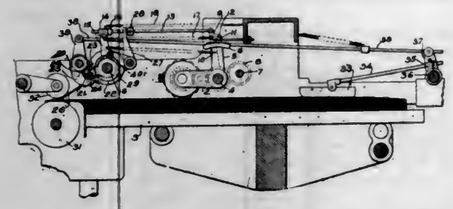
3. Means for regulating a generator, comprehending a regulating element, a coil for operating the same, means for controlling the current in said coil comprehending a resistance varying element and means responsive to current fluctuations for operating the said resistance element and means responsive to voltage fluctuations for controlling the resistance thereof.

4. Means for regulating a generator, comprehending a regulating means, electro-magnetic means for controlling the same actuated by a coil, means for controlling the current in said coil comprehending a resistance varying element and means for operating the same affected by the current output of the generator, and means affected by the voltage of the generator for controlling the resistance thereof.

5. Means for regulating a generator comprehending means for controlling the magnetization thereof, a coil for operating said means and means for governing the current in said coil comprehending a resistance element and means responsive to current fluctuations for operating the same and means responsive to voltage fluctuations for affecting the same.

[Claims 6 to 9 not printed in the Gazette.]

1,113,200. SHEET-FEEDING MACHINE. FRANK L. CROSS, Wollaston, Mass., assignor to Cross Paper Feeder Company, a Corporation of Maine. Filed May 16, 1910. Serial No. 561,605. (Cl. 101—39.)



1. A sheet feeding machine, having, in combination, a comber, a retarder for applying pressure to the sheets during the comb, and mechanism for actuating the retarder to intermittently apply such pressure to the sheets during each cycle of the machine, substantially as described.

2. A sheet feeding machine, having, in combination, a comber, a retarder for applying pressure to the sheets during the comb, and mechanism for actuating the retarder to intermittently apply such pressure to the sheets at regular intervals, substantially as described.

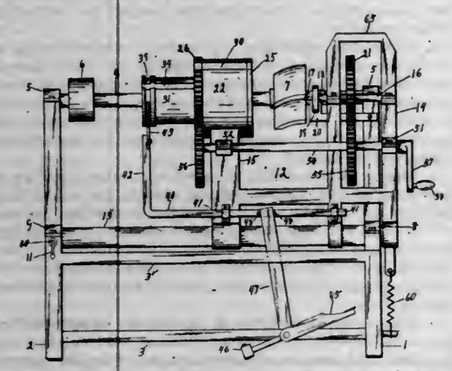
3. A sheet feeding machine, having, in combination, a comber, a retarder, and mechanism for actuating the retarder at regular intervals to apply pressure to the sheets during the comb and to render the retarder inactive when the comb exceeds a predetermined length, substantially as described.

4. A sheet feeding machine, having, in combination, a comber, a retarder for applying pressure to the sheets during the comb, and mechanism for relieving the pressure of the retarder after a predetermined interval, substantially as described.

5. A sheet feeding machine, having, in combination, a comber, a retarder, and mechanism for actuating the retarder to apply pressure to the sheets during each combing interval, and to relieve such pressure of the retarder at the end of a predetermined interval, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,113,201. SHAPING-MACHINE. JAMES A. CUMMINS, Louisville, Ky., assignor to Turner, Day & Woolworth Handle Company, Louisville, Ky., a Corporation of Kentucky. Filed May 16, 1914. Serial No. 838,917. (Cl. 142—1.)



1. A shaping machine comprising a fixed frame, a frame mounted to swing thereon, a cutter head mounted to rotate on the fixed frame, a centering spindle on the swinging frame, a chuck for holding work carried on the swinging frame, said chuck consisting of a rotatable head, a sleeve slidably mounted in said head, said sleeve and head having registering slots for the passage of work, work retaining members within said head adapted to be clamped on work by the advancement of said sleeve, and manipulative means for sliding said sleeve.

2. In a shaping machine, a cutter head in combination with work holding means comprising a spindle and a chuck, said chuck consisting of a chuck-casing, a rotative head therein, a sliding sleeve in the head, said casing, head and sleeve having registering slots for the passage of work, work clamping members within the sleeve and manipulative means for sliding said sleeve.

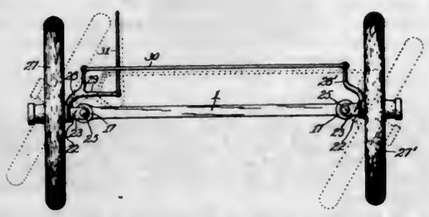
3. In a shaping machine, a cutter head in combination with work holding means comprising a spindle and a chuck, said chuck consisting of a casing, a rotative head mounted therein, a sliding sleeve in the head, said casing, head and sleeve having coinciding longitudinal slots for the passage of work, work clamping members within the sleeve, means for shifting said sleeve and means for simultaneously rotating said spindle and sleeve.

4. A shaping machine comprising a fixed frame, a frame mounted to swing thereon, a cutter head mounted to rotate on the fixed frame, a centering spindle mounted in the swinging frame, a chuck for holding work carried on the swinging frame, said chuck consisting of a rotatable head, a sliding sleeve in the head, said head and sleeve having coincident slots for the passage of work, work retaining members within the sleeve, a lever on the fixed frame operatively connected with and adapted to advance the sliding sleeve to clamp work between the retaining members, and means for rotating said spindle and chuck.

5. In a shaping machine, a chuck comprising a casing, a head rotatively mounted therein, a sleeve slidably mounted in said head, resilient work clamping members within said sleeve, coinciding slots in said casing, head and sleeve for the passage of work, manipulative means in engagement with said sleeve for actuating same.

[Claims 6 to 8 not printed in the Gazette.]

1,113,202. CUSHIONED VEHICLE-AXLE. EDWARD W. DAVIS, Indianapolis, Ind. Filed Aug. 29, 1910. Serial No. 579,517. (Cl. 21—141.)



1. A cushioned axle including an axle-bar having two cylindrical housings thereon, each housing having an apertured head on its upper end and a bushing in its lower end, an annular bearing secured fixedly in the apertured head, a sleeve movable longitudinally and rotatively in the bearing and the bushing and having a collar thereon, bearing balls on the collar, an annular cone supported on the balls, a spring supported on the cone and supporting the apertured head, a stub-axle having an ear extending opposite one end of the sleeve and an ear extending opposite the opposite end of the sleeve, and a pivot pin extending through the sleeve and the ears and secured fixedly to both the ears.

2. A cushioned axle including a main axle-bar having two housings thereon, each housing having an apertured head on its top and a bushing in its bottom, a sleeve movable longitudinally and rotatively in the head and the bushing and having a collar thereon, bearing balls on the collar, an annular cone supported on the balls, a spring supported on the cone and supporting the head, a pivot-pin extending through the sleeve, an oil-box on the top of the housing about the sleeve, a dust-cap on the top of the sleeve and extending over the oil-box and the upper portion of the housing, and a stub-axle connected to the sleeve and the pivot-pin and also the dust-cap.

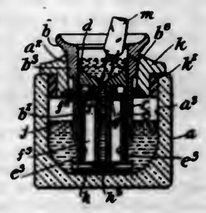
3. In a cushioned axle, the combination of an axle-bar, two cylindrical housings on opposite ends of the axle-bar, each housing having screw-threads in its lower end portion and an apertured head fixed in its upper end portion, a bushing inserted in the lower end portion and having a flange thereon extending into contact with said lower end, said bushing having screw-threads thereon engaging the screw-threads of the housing, a stub-axle having two ears, a pivotal element extending movably through said bushing and said head and secured to said ears, said element being seated against the inner or opposed faces of both of said ears, a collar fixed on said pivotal element at a distance from said bushing, and a spring interposed between said collar and said apertured head.

4. In a cushioned axle, the combination of an axle-bar, two cylindrical housings on opposite ends of the axle-bar, each housing having an apertured head on its upper end and a bushing removably secured in its lower end, the bushing having a flange thereon seated against said lower end, a sleeve extending through said bushing and said apertured head and movable longitudinally and rotatively therein, said sleeve having a collar thereon in the housing at a distance from said bushing, a spring interposed between said collar and said apertured head, a stub-axle having an ear extending onto the upper end of said sleeve and an ear extending under the lower end of said sleeve in contact therewith, and a pivot pin extending through said sleeve and the said ears, the pin having a head on one end and a nut on the opposite end thereof rigidly securing said sleeve to both of said ears.

5. In a cushioned axle, the combination of an axle-bar and cylindrical housings thereon, each housing including an apertured head on the upper end thereof, a bushing secured in the lower end of the housing, a stub-axle comprising an ear extending opposite said head and an ear extending opposite said bushing at distances therefrom, a sleeve movable longitudinally and rotatively in said head and in said bushing and extending from the lower one of said ears nearly to the upper one of said ears, said sleeve having a collar thereon above said bushing, a dust-cap seated upon the top of said sleeve in contact with the upper one of said ears and extending over said head, a pivot pin extending through said sleeve and said dust-cap and secured to both of said ears, and a spring extending about said sleeve between said collar and said head.

[Claims 6 and 7 not printed in the Gazette.]

1,113,203. INKSTAND. EMAY DAVIS, Brooklyn, N. Y. Continuation of abandoned applications Serial No. 710,651, filed July 20, 1912, and Serial No. 725,118, filed Oct. 11, 1912. This application filed Apr. 11, 1913. Serial No. 760,372. (Cl. 120—61.)



1. In an inkstand, a well the top of which is provided with an opening, a funnel having a sleeve adapted to be passed down through said opening, a vertically movable tubular plunger mounted in said sleeve and open at the bottom and provided with a cup-shaped top having a central tube which passes downwardly through said plunger and forms a part thereof, a support within the bottom portion of the plunger and forming top and bottom air chambers therein which are in communication, a spring mounted on said support and on which the top of the plunger rests, and a short air tube passed horizontally through the bottom part of said central tube and provided with a port which communicates with the central bore thereof and which limits the upward movement of the plunger, the ends of said air tube being in communication with the bottom portion of the well.

2. In an inkstand, a well, having a central top opening, a funnel having a sleeve which passes downwardly through said opening into the well, a vertically movable spring supported tubular plunger mounted in said sleeve and open at the bottom and provided with a top having a central tube which extends downwardly through said plunger and forms a part thereof, and a short air tube passed horizontally through the bottom of the plunger and through the bottom of said central tube and having a port which communicates therewith and the ends of which open into the bottom portion of the well.

3. In an inkstand, a well having a central top opening, a funnel having a sleeve which passes downwardly through said opening into the well, a vertically movable spring supported tubular plunger mounted in said sleeve and open at the bottom and provided with a cup-shaped top having a central tube which extends downwardly through said plunger and forms a part thereof, and a short air tube passing horizontally through the bottom of the plunger and through the bottom of the central tube and having a port which communicates therewith, and the ends of which communicate with the bottom portion of the well, the top of said well being also provided with means to permit air under pressure to escape therefrom.

4. In an inkstand, a well the top of which is provided with an opening, a funnel having a sleeve which passes downwardly through said opening, and a vertically movable plunger mounted in said sleeve and the top of which forms the bottom of said funnel and is provided with a tube which passes downwardly through said plunger and forms a part thereof, a support within said plunger and dividing the top and bottom parts thereof into separate air chambers which are in communication, and a spring mounted on said support and on which the top of the plunger rests, the plunger tube and the bottom of the plunger being also provided with an air tube which is passed horizontally therethrough, and which is in communication with the central tube of the plunger, and the ends of which open into the well.

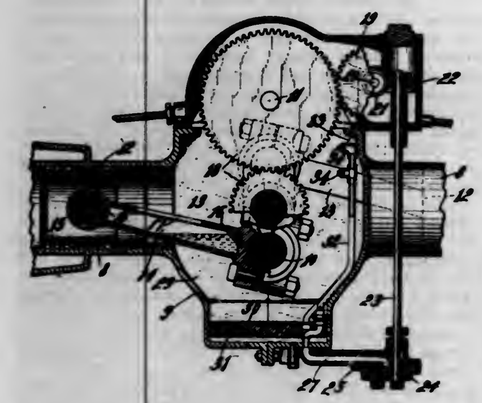
5. In an inkstand, a well having a central top opening, a funnel having a sleeve which passes downwardly through said opening into the well, a vertically movable spring supported tubular plunger mounted in said sleeve and open at the bottom and provided with a cup-shaped top having a central tube which extends downwardly through said plunger and forms a part thereof and a short air tube passed horizontally through the bottom of the plunger and through the bottom of the central tube thereof and having a port which communicates therewith, the funnel being also provided with an inwardly directed annular lip, and means to limit the upward movement of the plunger.

[Claims 6 to 13 not printed in the Gazette.]

1,113,204. LUBRICATING SYSTEM FOR ENGINES. FRANK M. DAVIS, Milwaukee, Wis. Filed July 17, 1913. Serial No. 779,444. (Cl. 121—115.)

1. A lubricating system, comprising an engine, having a cylinder and a crank case, a substantially horizontal hollow connecting rod forming part of the engine and having an inlet opening in its upper portion, a pipe within the crank case extending from a point at the bottom portion thereof to a position to spray a stream of oil into the connecting rod through said opening, and a pump forcing oil through said pipe from the bottom portion of the crank case.

2. A lubricating system, comprising an engine having a cylinder and a crank case, a substantially horizontal tubular connecting rod forming part of the engine and having an inlet opening in its upper portion, a pipe within the crank case and extending from a point near the bottom portion of the crank case to a position to spray a stream of oil into the connecting rod opening and to the engine bearings, and a pump for circulating the oil from the bottom portion of the crank case upwardly through the pipe.



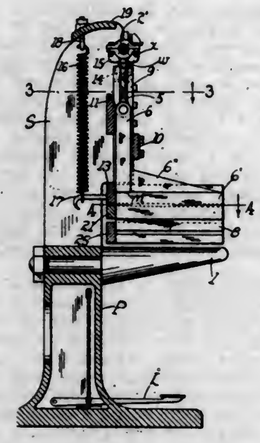
3. A lubricating system, comprising an engine having a cylinder and a crank case, a substantially horizontal tubular connecting rod forming part of the engine and having an inlet opening in its upper portion, a pump positioned adjacent to the crank case and having an inlet and an outlet passageway, the inlet passageway being in communication with the bottom portion of the crank chamber, a pipe connected to the outlet passageway and extending to a position to spray a stream of oil into the bore of the connecting rod and to the engine bearings, a cam shaft within the crank case and driven by the cranked shaft, a pump shaft extending from the pump into the crank case, and a driving connection between the cam shaft and the pump shaft.

4. A lubricating system, comprising an engine having a cylinder and a crank case, a substantially horizontal tubular connecting rod forming part of the engine and having an inlet opening in its upper portion, a pump positioned adjacent to the crank case and having an inlet and an outlet passageway, the inlet passageway being in communication with the bottom portion of the crank chamber, a pipe connected to the outlet passageway and extending to a position to spray a stream of oil into the bore of the connecting rod and to the bearings of the engine, a cam shaft within the crank case and driven by the cranked shaft, a pump shaft extending from the pump into the crank case, and a worm and gear connection between the cam shaft and the pump shaft.

5. A lubricating system, comprising an engine, a plurality of cylinders and a crank case, substantially horizontal tubular connecting rods forming part of the engine and having oil inlet openings in their upper portions, a pump positioned adjacent to the crank case and having an inlet and an outlet passageway, the inlet passageway being in communication with the lower portion of the crank chamber, pipes connected to the outlet passageway and extending to positions to spray streams of oil into the bores of the connecting rods and to the bearings of the engine, a cam shaft within the crank casing and driven by the cranked shaft, a pump shaft extending from the pump into the crank case, and a driving connection between the pump shaft and the cam shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,113,205. SEAM-FORMING MACHINE FOR SHEET-METAL WARE. RICHARD R. DIETRICH, St. Louis, Mo. Filed Jan. 14, 1914. Serial No. 812,032. (Cl. 113—12.)



1. In a seam forming machine, a suitable support for the stock, a pair of seam-element forming members loosely coupled together and normally spaced apart and operating to and from said stock-support, and a seam-finishing member traversing the seam-element forming members and cooperating with the stock support.

2. In a seam forming machine, a suitable member for the support of the stock, a pair of seam-element forming members normally spaced apart, compression springs interposed between said members, a third coöperating seam-element forming member reciprocating to and from the stock-support for actuating the first mentioned seam-element forming members, springs interposed between said actuating member and the adjacent seam-element forming member, and a seam-finishing member operating through the seam-element forming members and actuating member, and coöperating with the stock-supporting member.

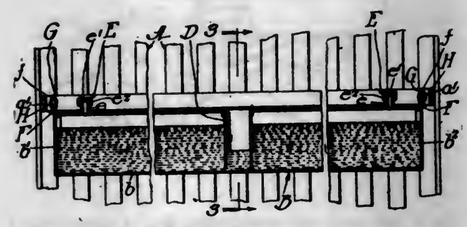
3. In a seam forming machine, a suitable member for the support of the stock, a pair of seam-element forming members normally spaced apart, a third coöperating seam-element forming member reciprocating to and from the stock-support and actuating the first mentioned seam-element forming members, and a seam-finishing member traversing the seam-element forming members and actuating member, and controlling said actuating member, and coöperating with the stock-supporting member.

4. In a seam forming machine, a suitable member for the support of the stock, a pair of seam-element forming members normally spaced apart for the reception of the stock, a third coöperating seam-element forming member reciprocating to and from the stock-support and spaced from the adjacent member of the pair aforesaid and actuating said pair, an abutment on one side of a face of one of the pair of the first mentioned seam-element forming members, a rib spaced from said abutment, a marginal ledge formation on the opposite side of said member, an offset leading therefrom toward the adjacent member of said pair, an abutment at a suitable distance from said offset, punches on the third seam-element forming member coöperating with the abutments, rib, ledge, and offset aforesaid, to form the component elements of the seam, a seam-finishing member traversing the several seam-element forming members and controlling the actuating member, and a punch on said finishing member coöperating with the stock supporting member to set the seam upon the assembling of the seam components.

5. In a machine of the character described, a suitable support for the stock, a cam-crank shaft, a plunger coupled to the wrist-pin of the crank, complementary plungers actuated by the cams and disposed on opposite sides of the first mentioned plunger, seam-element forming members loosely coupled together and actuated by the side plungers, and means on the first mentioned plunger for effecting control of said seam-element forming members independent of the actuation thereof by the complementary plungers.

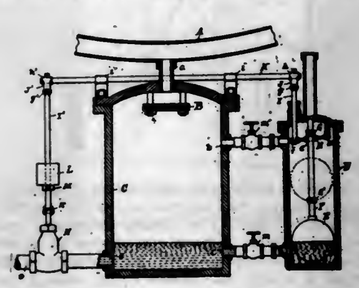
[Claims 6 to 10 not printed in the Gazette.]

1,113,206. WATERING DEVICE FOR POULTRY AND ANIMALS. CHARLES C. DRISCOLL, Chicago, Ill., assignor of one-half to Frederick S. Parke, Chicago, Ill. Filed June 4, 1912. Serial No. 701,512. (Cl. 119—77.)



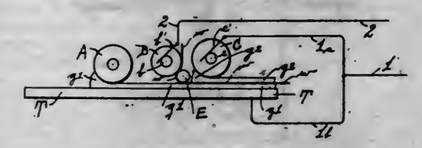
A watering fountain of the class described, comprising an elongated hollow tank, an open-ended tube arranged in an upright position in said tank intermediate the ends thereof, said tube having its upper end projecting through and in closed connection with the top wall of the tank and its lower end terminating adjacent the bottom of the same; the lower end of the tube dipping into the water contained in said tank when the latter is in normal position, said tank being closed at its ends and throughout its length, except for the opening into the same afforded by said tube, a normally closed air-valve in the top wall of said tank, lugs provided at the ends of said tank and projecting above the top wall thereof, supporting members, and alined pivot pins connecting said lugs with said supporting members; the tank being supported so as to be free to swing on a horizontal axis located above its center of gravity and automatically right itself when swung out of its normal position.

1,113,207. STEAM-TRAP. THOMAS DURANT, McKees Rocks, and CHARLES H. HANNOVER, Pittsburgh, Pa. Filed Nov. 14, 1912. Serial No. 731,342. (Cl. 137—103.)



In a steam trap the combination of a main collection chamber, a connection to a steam main, an outlet valve, a detachable auxiliary chamber so connected to the main chamber that water will stand at the same level in both, a float in the auxiliary chamber, a shaft fixed to the float, collars on the shaft adapted to engage a pivoted lever only at the extremity of movement of the float, said pivoted lever, connections from the lever to the outlet valve whereby the valve will be opened when the float reaches the top of the auxiliary chamber and closed when the float reaches the bottom of auxiliary chamber, substantially as and for the purposes described.

1,113,208. PROCESS AND APPARATUS FOR MAKING WIRE-GLASS. CORNELIUS D. EHRET, Philadelphia, Pa. Filed Oct. 20, 1910. Serial No. 588,033. (Cl. 49—86.)



1. The process of embedding a conductor of electricity in glass, which consists in passing an electric current through said conductor while being introduced into glass to heat said conductor, and passing electric current through the glass to heat the same while said conductor is being embedded in said glass.

2. The process of embedding a conductor of electricity in glass, which consists in passing electric current through the contact between said conductor and the glass as said conductor is being embedded in the glass.

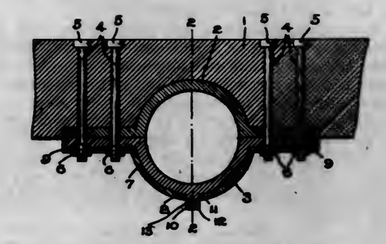
3. In the manufacture of wire glass, the combination with means for making layers of glass, means for introducing wire between said layers of glass, and means for passing electric current through said wire and said glass.

4. As an improvement in the process of embedding material in glass, the step which consists in passing an electric current through said material and said glass in series.

5. As an improvement in the art of making wire glass, the method which consists in mechanically embedding wire between layers of glass, and passing electric current through said wire and said layers of glass at the region of introduction of said wire between said layers.

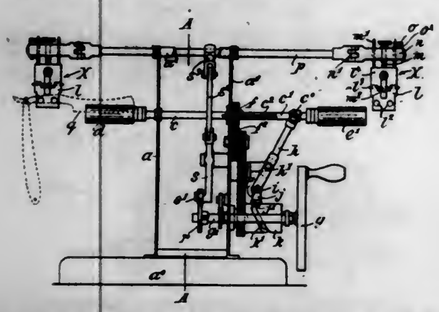
[Claim 6 not printed in the Gazette.]

1,113,209. NUT-LOCK FOR BEARINGS. EDWARD FLAHERTY, Morea Colliery, and CHARLES WARRILOW, Hazleton Heights, Pa. Filed July 19, 1913. Serial No. 779,920. (Cl. 64—10.)



The combination of two half bearings of semi-cylindrical form, having perforated extensions at their ends, bolts projected through said extensions, and nuts on the lower ends of the bolts, of a plate having a curved intermediate portion and straight ends, said plate snugly fitting the lower half bearing and having angular openings receiving the nuts, said plate at the center of its curved portion having an opening therein, a perforated lug integral with the lower half bearing and projecting through the opening in the plate, and a cross pin projected through the perforated lug, substantially as described.

1,113,210. APPARATUS FOR GRINDING AND SHARPENING RAZORS, KNIVES, AND THE LIKE. ENOCH GOOLNIK, Mile End, London, England. Filed May 7, 1914. Serial No. 836,916. (Cl. 51—7.)



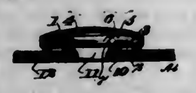
1. In a grinding machine, the combination, with a supporting frame, and a blade holder carried by the frame; of two shafts journaled in the frame and provided with sharpening rollers, driving mechanism for revolving the said shafts in opposite directions, a cam also revolved by the said driving mechanism, a radius-rod pivoted at one end to the frame and having a projection at its free end which engages with the said cam, a crosshead pivoted to the said radius-rod, and a lever pivoted to the frame and having its opposite ends operatively connected with the said shafts and with the said crosshead and operating to slide the said rollers longitudinally.

2. In a grinding machine, the combination, with a pair of sharpening rollers, of a rock-shaft arranged above and between the said rollers and provided with means for oscillating it, a bar pivoted to one end of the rock-shaft and provided with means for adjusting it on its pivot, a vertically adjustable block carried by the said bar, and a clamping device for a blade pivoted to the said block and provided with springs which normally hold it in a central position.

3. In a grinding machine, the combination, with a pair of sharpening rollers, of a rock-shaft arranged above and between the said rollers and provided with means for oscillating it, a bar pivoted to one end of the rock-shaft, an arm projecting from the rock-shaft and arranged at one side of the said bar, an adjusting screw between the said arm and pivoted bar, a vertically adjustable block carried by the said bar, and a clamping device for a blade pivoted to the said block and provided with springs which normally hold it in a central position.

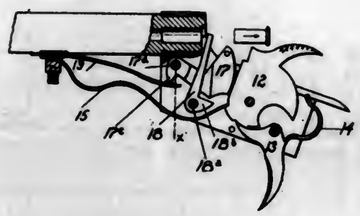
4. In a grinding machine, the combination, with a pair of sharpening rollers, of a rock-shaft arranged above and between the said rollers and provided with means for oscillating it, a bar pivoted to one end of the rock-shaft and provided with means for adjusting it on its pivot, a vertically adjustable block carried by the said arm and provided with guides, a screw for sliding the said block vertically, and a clamping device for a blade provided with a horizontal pivot which connects it to the lower part of the said block and having springs which normally hold it in a central position.

1,113,211. SNAP-FASTENER TOP. ABRAHAM H. GREENEBAUM, Baltimore, Md., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Dec. 24, 1913. Serial No. 808,567. (Cl. 24—220.)



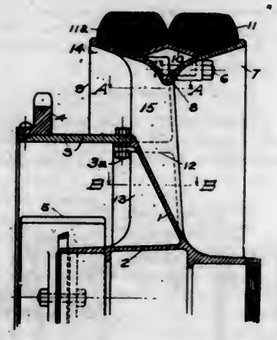
The improvement in artificial horn tops, comprising a metal filler, a metal spreader, and a metal back arranged in edge contact one upon the other, said back having an outwardly extended central flange, and a solid celluloid cover surmounting the filler and embossed in position with said filler and having a rim inclosing the edges of the said metal parts, said rim notched and closed in beneath the back and against it, and the flange of the back closed down upon the said notched rim and covering it, whereby the several parts of the top are secured in place and inseparably united and any desired finish, depth and angularity of the periphery rendered possible.

1,113,212. FIREARM. ALVAH E. GRIMES, Norwich, Conn. Filed Jan. 2, 1914. Serial No. 809,913. (Cl. 42—34.)



In a fire arm, the combination with a barrel and a breech frame, of a breech block pivoted in said frame and provided with a recess, an ejector arm pivoted in the frame and located in said recess, a spring having one end secured to the barrel, the breech block having a depending angular arm directly engageable with the free end of said spring, and the ejector arm provided with a rearwardly extended angle arm engageable directly by the said recoil block as the latter drops.

1,113,213. WHEEL FOR VEHICLES. CHARLES L. HEISLER, Schenectady, N. Y. Filed Feb. 5, 1912. Serial No. 675,479. (Cl. 152—7.)

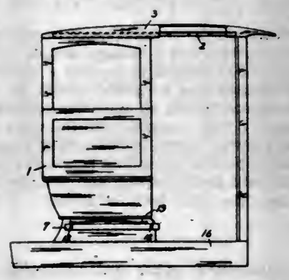


1. In a vehicle wheel, the combination of a hub, a rear rim section having a face which is outwardly tapered from front to rear, a plurality of spokes connecting said hub and rear rim section, a front rim section outwardly tapered from rear to front and fitting detachably on the rear rim section, a middle rim section fitting around the rear and front rim sections and having a double inwardly inclined peripheral face, and clamping bolts connecting the rear and front rim sections.

2. In a vehicle wheel, the combination of a hub, a rear rim section having an inclined peripheral face, a plurality of spokes connecting said hub and rear rim section, a detachable front rim section fitting on the rear rim section and having a peripheral face inclined reversely to that of said rear rim section, an outer middle rim section fitting over said front and rear rim sections and having a double inclined peripheral face, which forms, with the adjoining faces of said sections, two circumferential grooves for the reception of tires, and clamping bolts connecting the front and rear rim sections.

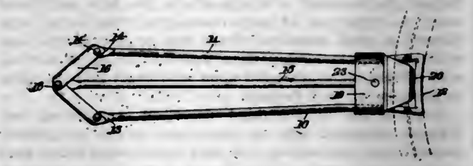
3. In a vehicle wheel, the combination of a hub, a rear rim section having an inclined peripheral face, a plurality of spokes connecting said hub and rear rim section, a detachable front rim section fitting on the rear rim section and having a peripheral face inclined reversely to that of said rear rim section, an outer middle rim section fitting over said front and rear rim sections and having a double inclined peripheral face, which forms, with the adjoining faces of said sections, two circumferential grooves for the reception of tires, and engaging notches in the front rim sections, and clamping bolts connecting said front and rear rim sections.

1,113,214. VEHICLE-DOOR. WILLIAM B. C. HERSHEY, Columbus, Ohio, assignor to The Excelsior Seat Company, Columbus, Ohio, a Corporation of Ohio. Filed Dec. 7, 1912. Serial No. 735,387. (Cl. 21—125.)



In combination with a vehicle body, a slidable door comprising a body portion, a rigid trackway at the top portion of said vehicle body, rollers for suspending said door from said trackway, a complemental slotted trackway carried by the side of said vehicle body and extending between its rear edge and the door opening, hangers passing through said slotted trackway forming its means of support on the vehicle body, means carried by said hangers for horizontally adjusting said last trackway away from the vehicle body, resilient means normally exerting a downward pressure on said trackway, and a guide member carried by the lower portion of said door for coöperation with the underside of said last trackway whereby the door is held in its operative position.

1,113,215. LIFTER FOR UTENSILS. HAROLD H. HIGGINS, Waltham, Mass., assignor of one-half to Lawrence E. Kean, Waltham, Mass. Filed Mar. 27, 1914. Serial No. 827,737. (Cl. 65—32.)



1. In a device of the class described, the combination of a substantially U-shaped spring member, the sides of which constitute handles and the end of which constitutes one of a pair of coöperating jaws, a member slidable on said U-shaped member and carrying the other of said pair of jaws, and a pair of links pivotally connected with the sides of said U-shaped member and with said slidable member, whereby said jaws are opened and closed when said sides are actuated.

2. In a device of the class described, the combination of a pair of spring moved handle members, a jaw carried thereby, a member slidable relative to said handle members and having a jaw adapted to coöperate with said first mentioned jaw, and a pair of links pivotally connected with said handle members and with said slidable member, whereby said jaws are opened and closed when said handle members are actuated.

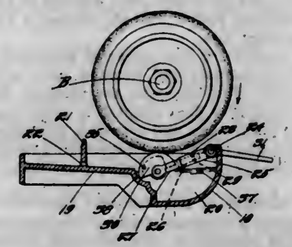
3. In a device of the class described, the combination of a pair of spring moved handle members, a jaw carried thereby, a member slidable on said handle members and having a jaw adapted to coöperate with said first mentioned jaw, and means connected with said handle members and with said slidable member, whereby said jaws are closed when said handle members are moved toward each other.

4. In a device of the class described, the combination with a pair of spring moved handle members, a jaw carried thereby, a member between said handle members and longitudinally movable relatively thereto and having a jaw adapted to coöperate with said first mentioned jaw, and a pair of links pivotally connected with said handle members and with said longitudinally movable member, whereby said jaws are opened and closed when said handle members are actuated.

5. In a device of the class described, the combination of a pair of spring moved handle members having an end portion bent down to form a jaw, a member slidable relatively to said handle members and having a jaw adapted to coöperate with said first mentioned jaw and a pair of links pivoted to said handle members and to said slidable member in such a way that said links form a V with its point directed continually away from the jaw members, whereby said jaws are closed when said handle members are moved toward each other.

[Claim 6 not printed in the Gazette.]

1,113,216. BURNISHING-MACHINE. FRANK HOLBROOK, Lynn, Mass., assignor to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Oct. 12, 1912. Serial No. 725,401. (Cl. 51—17.)



1. In a burnishing machine, the combination with a rotating burnishing wheel of a pivoted segment having a limited substantially arc-shaped wax applying surface, said segment being rotatable for a partial revolution by contact with the burnishing wheel, and a pivoted support under the control of the operator, said segment being pivotally mounted on said support whereby it is movable into and out of contact with the burnishing wheel to make its partial revolution.

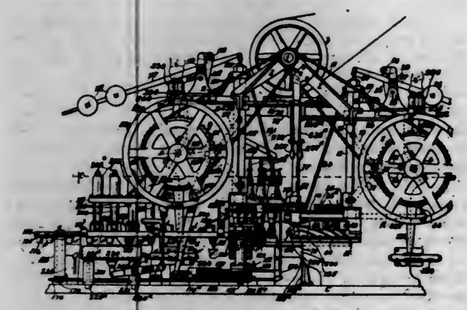
2. In a burnishing machine, a burnishing wheel, a wax-transferrer pivoted to be capable of oscillation and weighted on one side, and means for bringing the wax-transferrer into contact with the burnishing wheel.

3. In a burnishing machine, the combination with a burnishing wheel of a heated container for the burnishing agent, a transferrer comprising a journaled segment weighted on one side, a pivoted support therefor, and means for tilting said support on its pivot to move the transferrer into contact with the periphery of the burnishing wheel.

4. In a burnishing machine, the combination with a

burnishing wheel, of a heated container for the burnishing agent, a transferrer comprising a journaled segment, a pivoted support therefor comprising two separate parts, one part having a shank on which is an annular groove, the other part having a sleeve within which said shank is received, a pin in said sleeve to engage said annular groove, means for securing said pin in said groove, and means for tilting said support on its pivot to move the transferrer into contact with the periphery of the burnishing wheel.

1,113,217. MACHINE FOR MAKING PAPER RECEPTACLES. HENRY A. HOUSE, Bridgeport, Conn. Filed June 26, 1911. Serial No. 635,286. (Cl. 93—60.)



1. In a machine of the character described, comprising an intermittently rotatable conveyer, cup forming dies therein, paper blanking punches and dies, an intermittently rotatable carrier underlying the blanking dies, plaiter dies mounted on the carrier adapted to receive a paper blank, and plaiters adapted to force the paper blank through the plaiter dies into the forming dies.

2. In a machine of the character described comprising intermittently movable cup forming dies, intermittently movable plaiter dies overlying the forming dies, and plaiters overlying the plaiter dies, adapted to force a paper blank through the plaiter dies and deposit a plaited blank into the forming dies.

3. In a machine of the character described comprising intermittently movable cup forming dies, intermittently movable plaiter dies overlying the forming dies, plaiters overlying the plaiter dies, adapted to force a paper blank through the plaiter dies and deposit a plaited cup into the forming dies, and means for temporarily retaining it there while the forming dies are passing from under the plaiter dies.

4. In a machine of the character described comprising an intermittently rotatable forming die conveyer, forming dies mounted therein, an intermittently traveling punch conveyer overlying the die conveyer, cup forming punches removably located therein, means for ejecting the punches from their conveyer into the dies, means for applying pressure thereto, and means for extracting them therefrom and reseating them in the punch conveyer.

5. In a machine of the character described comprising a forming die conveyer, forming dies therein, an overlying traveling punch conveyer, cup forming punches removably seated therein, means for ejecting the punches from their conveyer into the dies at one point or station, means for applying pressure thereto, and means for extracting the punches from the dies and reseating them in the die conveyer at another point or station.

[Claims 6 to 32 not printed in the Gazette.]

1,113,218. QUARTZ LAMP. FREDERICK G. KEYES, Boston, Mass., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 10, 1913. Serial No. 747,316. (Cl. 176—42.)

1. In a mercury vapor apparatus, the combination with an exhausted container of quartz, a mercury anode therein, an anode condensing chamber, and a screen pervious to mercury vapor, interposed between the main body of said anode and the rest of the container and isolating an extension of the anode surface outside said screen.

2. A mercury vapor apparatus comprising a quartz container including a cathode portion, a vapor path portion and an anode portion, a mercury cathode in said cathode portion, a mercury anode in said anode portion and a screen interposed between said vapor path portion and said anode portion, said screen permitting the passage of liquid mercury constituting an active anode surface and pervious to the flow of mercury vapor from said vapor path portion.

3. A container for a mercury vapor apparatus comprising a tubular portion and a cathode portion and an anode portion, said anode portion embracing a suitable tubular condensing chamber and an anode pocket for mercury at the bottom thereof having an extension toward said tubular portion and a disk integral with the walls of the container of said device located between said tubular portion and said anode portion extending below the normal mercury level in said anode portion and dividing said anode extension from the main body of mercury in said anode chamber.

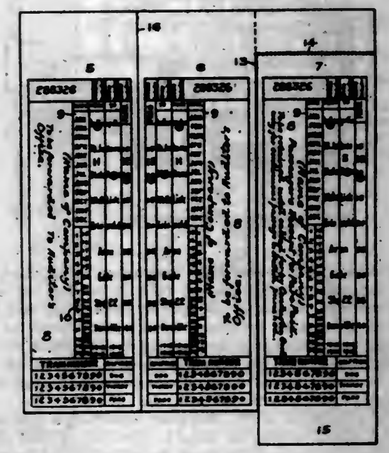
1,113,219. HARROW AND PULVERIZER ATTACHMENT. CHARLES ALBERT KIGGINS, Sharon Springs, Kans. Filed June 13, 1912. Serial No. 703,464. (Cl. 55—103.)

1. A device of the kind described comprising two frames arranged side by side, each frame consisting of a plurality of bars arranged transversely with respect to the line of travel, teeth carried by said bars, connecting bars arranged transversely with respect to the first mentioned bars, the inner bar of each frame projecting in advance thereof, a shaft supported from said projecting bars and crushing wheels having rims V-shaped in cross section, said wheels being arranged upon said shaft and traveling in advance of said frames.

2. A device of the kind described comprising two frames, arranged side by side, each frame comprising toothed bars, connecting bars, two of said connecting bars extending in advance of the frames, a draft plate supported by said forwardly extending bars, an operating lever upon the draft plate, bars arranged parallel to and above the forwardly extending bars, links pivotally connecting the bars carrying the draft plate, and the last mentioned bars the lever mounted upon the draft plate being operatively connected to said last mentioned bars.

3. A harrow comprising two frames adapted to be placed side by side, a member of each frame projecting in advance thereof, a draft plate supported by said projecting members, bars arranged transversely with respect to said frames, and extending forwardly to said draft plate, links pivotally connecting said bars with the harrow frames and a lever mounted upon the draft plate and operatively connected to said bars.

1,113,220. RECEIPT. WALTER H. KOCH, Indianapolis, Ind. Filed May 12, 1913. Serial No. 767,169. (Cl. 11—15.)



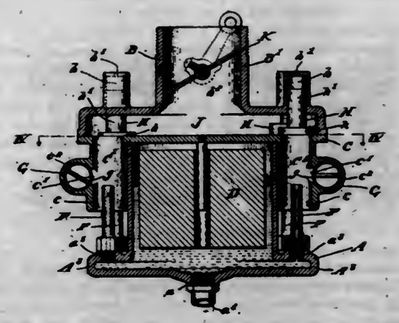
1. The combination with a pair of tickets formed out of the same sheet and folded together longitudinally of the ticket, a third ticket also formed out of the same sheet as the other two and folded in between said first two folded tickets, all of said tickets when folded as above described being bound together at one of their ends, said third ticket being separated by a slot from its adjacent ticket, and each of said tickets having columns and data so positioned on their several parts that they will be in register when the tickets are folded.

2. The combination with a pair of tickets formed out of the same sheet and longitudinally folded together, of the third ticket also formed out of the same sheet and folded in between said first two folded tickets, all of said tickets when folded as above described being bound together at one of their ends, said third ticket being perforated between its body portion and said binding and separated from its adjacent ticket by a slot extending from said perforation longitudinally of the ticket, each of said tickets having columns and data so positioned on their several parts that they will be in register when the tickets are folded.

3. The combination with a pair of tickets formed out of the same sheet and folded together longitudinally, of a third ticket also formed out of the same sheet and folded in between said first two folded tickets, all of said tickets when thus folded being bound together at one of their ends, said third ticket being perforated between its body portion and said binding and separated from its adjacent ticket by a slot extending from said perforation longitudinally of the ticket and being longer than the other tickets to facilitate its removal from said other two tickets, each of said tickets having columns and data so positioned on their several parts that they will be in register when the tickets are in said folded condition.

1,113,221. CARBURETER. RICHARD E. KRAUSE, Cleveland, Ohio, assignor to The Krause Carburetor Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 19, 1909. Serial No. 528,856. (Cl. 48—155.1.)

1. In a carbureter, the combination of a casing provided with a plurality of carbureting chambers; a common chamber into which each of said carbureting chambers discharges; an outlet from said common chamber; a throttle valve adapted to control the opening in said outlet; guideways formed in the casing opposite said carbureting chambers and communicating with the atmosphere; and a plurality of independently mounted valves each adapted to control the discharge from one of said carbureting chambers, said valves being provided with stems respectively projecting into said guide-ways.



2. In a carbureter, the combination of a mixing chamber; a plurality of guide-ways each of which communicates with the atmosphere and with said mixing chamber; a plurality of carbureting chambers opposite said guide-ways and communicating with said mixing chamber; a plurality of independently mounted valves of varying weights each of which is provided with a valve stem projecting into one of said guide-ways, each of said valves being adapted to control the discharge from its respective chamber into said mixing chamber.

3. In a carbureter, the combination with a reservoir for holding the gasolene, a mixing chamber arranged above said reservoir and separated therefrom; a series of carbureting chambers communicating at their upper ends with said mixing chamber and at their lower ends with the outside air; nozzles mounted on said reservoir and extending up into said carbureting chambers; the top wall of said mixing chamber being provided with openings in alinement with the openings from the mixing chamber into the carbureting chambers; a series of valves of varying weights in said mixing chamber and arranged so as to close the openings between the latter and the carbureting chambers; each of said valves being provided with a valve stem which extends up into the adjacent opening of said mixing chamber.

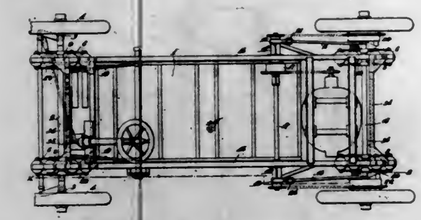
4. In a carbureter, the combination of a reservoir for holding the gasolene; a mixing chamber arranged above said reservoir and separated therefrom; a series of carbureting chambers communicating at their upper ends with said mixing chamber and at their lower ends with the outside air; nozzles mounted on said reservoir and extending up into said carbureting chambers; a series of valves of varying weights arranged in said mixing chamber so as to close the openings between the mixing chamber and the carbureting chambers, each of said valves being provided with a valve stem; and means in the upper wall of said mixing chamber for guiding said stems.

5. In a carbureter, the combination of a reservoir, for holding the gasolene; a mixing chamber arranged above said reservoir and separated therefrom; a series of carbureting chambers communicating at their upper ends with said mixing chamber and at their lower ends with the outside air; nozzles mounted on said reservoir and extending up into said carbureting chambers; and a series of valves of varying weights arranged in said mixing chamber so as to close the openings between the mixing chamber and the carbureting chambers, each of said valves being provided with a valve stem; the upper wall of said mixing chamber being provided with guide-ways adapted to re-

ceive said stems and in which the latter are adapted to slide, each of said guide-ways being closed and provided with an opening of an area reduced as compared with the area of the stem, each such opening communicating with the atmosphere.

[Claims 6 to 10 not printed in the Gazette.]

1,113,222. VEHICLE. JOHN M. LANSDEN, Jr., Newark, N. J. Filed Apr. 16, 1909. Serial No. 490,424. (Cl. 21—90.)



1. A spring supporting attachment for a vehicle axle, which comprises a frame and a hanger, the said hanger having portions straddling the axle and connected to the frame, spiral springs carried by the frame, and a block between the axle and frame.

2. A spring supporting attachment for a vehicle axle, which comprises a frame, spiral springs carried by the frame, and a hanger, the said hanger comprising a plurality of split fingers, two of said fingers being adapted to straddle an axle, and a block between the ends of the fingers and the frame.

3. In a vehicle, a spring supporting axle, and an attachment which comprises a frame, spiral springs carried by the fans, and a hanger, said hanger comprising a plurality of split fingers, two of said fingers being adapted to straddle the axle, a block between the fingers adapted to separate the frame and axle, and means on the fingers for drawing the frame toward the axle.

4. In a vehicle, a frame, and an axle, springs connecting the axle and frame and an alining device which includes two parallel rods pivoted to the axle and to the frame, and a bracket, the said bracket carrying a bearing and connections for the parallel rods.

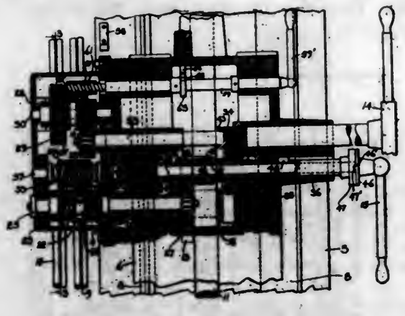
5. A vehicle having a frame and an axle, spiral springs interposed between the frame and axle, a bracket carried by the frame, a bracket carried by the axle, and unyielding, parallel alining rods pivoted to the brackets, the first mentioned bracket having a bearing located between the pivots.

1,113,223. LATHE. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 6, 1912. Serial No. 689,017. (Cl. 82—21.)

1. In a machine of the character described, a frame having a way provided thereon, a tool slide mounted on the frame and movable along the way, a rack on the frame and paralleling the way, two separate power transmission mechanisms, mounted on the slide, for coöperating with the rack and for independently moving the slide along the way, a separate clutch mechanism for controlling each power transmission mechanism and a single means mounted on the way for controlling the operation of both clutch mechanisms.

2. In a machine of the character described, a frame, a tool slide movable along the frame, a feed drive mechanism mounted on the slide, for moving it in one direction along the frame, a reversible traverse drive mechanism mounted on the slide, for moving it in both directions along the frame, and single means, mounted on the slide, for rendering one driving mechanism operative and the other inoperative, and for reversing the traverse drive mechanism.

3. In a machine of the character described, a tool-slide, a frame having ways along which the tool-slide is movable, a rack extending along the ways, a feed drive shaft and a traverse drive shaft, journaled on the frame and extending along the way, a feed drive mechanism mounted on the slide for coöperating with the rack in moving the slide



along the way, a traverse drive mechanism mounted on the slide, for coöperating with the rack in moving the slide along the way, means for operatively connecting said feed drive mechanism to said feed drive shaft, means for operatively connecting said traverse drive mechanism to said traverse drive shaft, and a single device, mounted on the slide, for rendering one mechanism operative and the other inoperative as a moving agent of the slide.

4. In a machine of the character described, a tool-slide, a frame along which the slide is movable, a feed drive shaft and a traverse drive shaft journaled on the frame, a feed drive mechanism and a traverse drive mechanism, mounted on the tool-slide, for independently moving the slide along the frame, means for operatively connecting said feed drive mechanism to, and for disconnecting it from, said feed drive shaft, means for operatively connecting said traverse drive to, and for disconnecting it from said traverse drive shaft, and a single lever mounted on the slide, for simultaneously actuating both of said means, and for thereby rendering the one mechanism operative and the other inoperative, as the driving agent of the slide.

5. In a machine of the character described, a tool-slide, a frame along which the slide is movable, a feed drive shaft, a traverse drive shaft journaled on the frame, a feed drive mechanism mounted on the slide, a traverse drive mechanism mounted on the slide, means for operatively connecting said feed drive mechanism to said feed drive shaft, means for operatively connecting said traverse drive mechanism to said traverse drive shaft, and a device for simultaneously actuating both of said means.

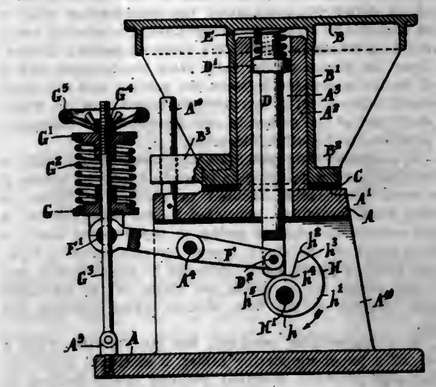
[Claims 6 to 43 not printed in the Gazette.]

1,113,224. MOLDING-MACHINE. WILFRED LEWIS, Philadelphia, Pa., assignor to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 15, 1912. Serial No. 683,977. (Cl. 22—45.)

1. In a jar molding machine the combination with the mold support and anvil, of a rotary cam journaled in the anvil, a lever pivotally connected to the anvil through which the cam lifts the mold support above the anvil, and means independent of the cam for exerting a lifting force on said lever assisting in the elevation and retarding the falling movements of the mold support, said means being adjustable to vary said force.

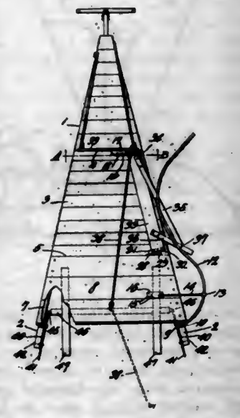
2. In a jar molding machine the combination with the mold support and anvil, of a rotary cam journaled in the anvil, a lever pivotally connected to the anvil through which the cam lifts the mold support above the anvil, and an adjustable resilient device connecting said anvil and lever and acting on the latter in a direction to aid in the elevation and to retard the falling movement of the mold support.

3. In a jar molding machine the combination with the mold support and anvil, of a rotary cam journaled in the anvil, a lever pivotally connected to the anvil through which the cam lifts the mold support above the anvil, and an adjustable fluid pressure cushion device pivotally connected to said anvil and to said lever, and acting on the latter in a direction to aid in the elevation of the mold support and to retard the falling movement of the mold support.



4. In a jar molding machine the combination with the mold support and anvil of a rotary cam journaled in the anvil, for lifting said mold support above and allowing it to fall back into engagement with said anvil, and fluid pressure means for exerting a lifting force on said mold support to aid in its elevation, and to retard its falling movement, said means being adjustable to vary said lifting force.

1,113,225. CORN-HARVESTER. THOMAS J. LOVE, Lincoln, Ill. Filed Nov. 13, 1913. Serial No. 800,844. (Cl. 56—103.)



1. A harvester including a movably supported body having a platform provided with upstanding front and back boards, a knife board interposed between said front and back boards and adjustable angularly in a horizontal plane, and means for tilting the board transversely.

2. In a harvester, the combination with a movably supported body, of a knife board, a bracket having spaced apertures, a pintle extending from one end of the knife board and movable to position in any one of the apertures, a pivoted bracket mounted for movement in a substantially vertical plane, a connection between said bracket and one end of the knife board, said knife board being adjustable angularly relative to the pivoted bracket, and means for holding the bracket against swinging movement.

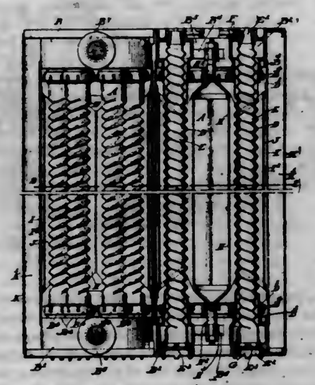
3. The combination with a body, of a pivoted bracket adapted to swing in a substantially vertical plane, cooperating means upon the bracket and body for securing said bracket against swinging movement, a knife board mounted on the bracket and adjustable angularly relative thereto, a second bracket having spaced apertures, and a pintle extending from one end of the knife board and adapted to be seated within one of the apertures.

4. The combination with a body, of a pivoted bracket adapted to swing in a substantially vertical plane, cooperating means upon the bracket and body for securing said bracket against swinging movement, a knife board mounted on the bracket and adjustable angularly relative thereto, a second bracket having spaced apertures, a pintle extending from one end of the knife board and adapted to be seated within one of the apertures, a knife extending laterally from the board and adjustable therewith, and a gathering finger extending over the knife and beyond one side of the body.

5. A corn harvester including a movably supported body, a plate having an arcuate flange formed with notches, said plate being fixedly mounted, a bracket pivotally mounted upon one side of the plate and adapted to swing in a substantially vertical plane, a locking bolt carried by the bracket and adapted to engage any one of the notches to hold the bracket against movement, a knife board mounted on the bracket and adjustable angularly relative thereto, a pintle connected to the other end of the knife board, supporting means adjustably engaged by the pintle, a shearing knife extending laterally from and movable with the knife board, and a gathering finger carried by the body and extending laterally therebeyond above and in front of the knife.

[Claim 6 not printed in the Gazette.]

1,113,226. APPARATUS FOR EFFECTING A TRANSFER OF HEAT FROM ONE FLUID TO ANOTHER. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Mar. 5, 1910. Serial No. 547,597. (Cl. 257—228.)



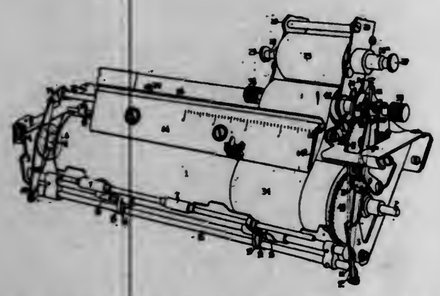
1. A device of the character described, comprising in combination, an opposed pair of chambered members having openings in their adjacent sides and a plurality of units secured between said chambered members and each consisting of hollow annular end members, and a series of double tube elements extending between said end members, and a casing surrounding the elements and connected to the end members of each unit, the interiors of said castings being in communication with the interiors of said chambered members through the axial openings in said end members, and said openings in said chambered members and the inner tubes of said double tube elements being open at their ends to the interiors of said chambered members through said openings in the latter.

2. A device of the character described, comprising in combination, an opposed pair of chambered members having openings in their adjacent sides, and a plurality of units secured between said chambered members and each consisting of hollow annular end members, and a series of double tube elements the inner tubes of said elements being open at their ends to the interiors of said chambered members through said openings formed in the latter, and means providing a series of channels each receiving one of said double tube elements and open at its ends to the interiors of said chambered members through the axial passages in said annular end members and said openings in said chambered members.

3. A device of the character described, having chambered end members and double tube elements connecting said end members and formed each of a poir of tubes arranged one within the other with a film like space between the two, tubes in communication with the chambers in said end members, and a central fluted cylinder surrounded by said elements, and a second internally fluted cylindrical member surrounding said elements.

4. In a device of the character described, the combination with chambered end members formed each with a circular series of axially extending bosses on its inner end, said bosses being hollow and open each to the chamber in the corresponding end member, double tube elements, one extending between each alined pair of bosses on the two end members and formed of two tubes, one within and separated by a film like space from the other, said space being in communication at its ends with the chambers in the end members, a central displacement member formed with ribs projecting between the adjacent pairs of elements, and an external casing member formed with ribs also projecting into the spaces between adjacent elements.

1,113,227. TYPE-WRITING MACHINE. CARL F. LUNDBERG, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 2, 1909. Serial No. 530,904. (Cl. 197—132.)



1. In a typewriting machine, the combination with a platen, of a tally strip mechanism having a winding spool secured to a rotatable shaft, a shaft-operating mechanism including a train of gears extending from said platen, and a clutch interposed between the shaft-operating mechanism and the shaft, the clutch including an inner member fast on the shaft, an outer jaw driven from the shaft-operating mechanism and loose on the shaft, an element interposed between the fast and loose members for connecting and disconnecting them as the loose member is rotated in one direction or the other, and means for displacing the interposed element relative to the jaws to permit the independent rotation of the platen and winding spool in either direction.

2. In a typewriting machine, the combination with a tally strip mechanism having a winding spool secured to a rotatable shaft, of a shaft-operating mechanism and a clutch interposed between the shaft-operating mechanism and the shaft, the clutch including an inner member fast on the shaft, an outer member driven from the shaft-operating mechanism and loose on the shaft, an element interposed between the fast and loose members for connecting and disconnecting them as the loose member is rotated in one direction or the other, means for displacing the interposed element relative to the jaws to permit the independent rotation of the shaft and platen, a shipper for shifting the clutch-engaging means, and a spring against whose tension the clutch-engaging means is shifted and held by the shipper when maintaining the jaws uncoupled, said shipper being mechanically held in working position.

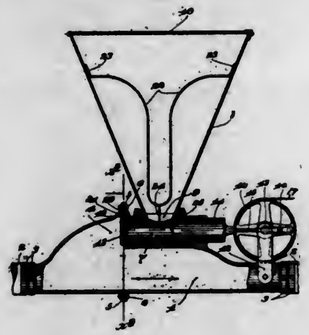
3. In a typewriting machine, the combination with a platen and a tally strip mechanism having a winding spool secured to a rotatable shaft, of a train of gearing extending from the platen to the tally strip mechanism, and a clutch device interposed between the gearing and the spool to permit independent or synchronous rotation of the winding shaft and of the platen in one direction and independent rotation in the other direction.

4. In a typewriting machine, the combination with a platen frame, of a foldable tally strip frame including a base section releasably secured to the platen frame, a winding shaft rotatably journaled in the base section, a second section mounted to swing on the winding shaft, a winding spool on the shaft, means for mechanically turning the shaft, a paper spool journaled in the swinging section, and means for arresting the throw of the swinging section relative to the base section when erecting the frame.

5. In a typewriting machine, the combination with a platen, of a paper-supporting tablet, a sectional paper arresting gage pivotally mounted, yielding means tending to throw the gage into effective position relatively to the leading edge of the paper upon the tablet, and detaining means normally maintaining the gage in ineffective position relatively to the leading edge of the paper.

[Claims 6 to 35 not printed in the Gazette.]

1,113,228. CHEMICAL FIRE APPARATUS. JOSEPH LUNOR, Minneapolis, Minn. Filed Apr. 28, 1913. Serial No. 763,992. (Cl. 169—9.)



1. In an apparatus of the kind described the combination with a water conduit having a chemical receiving section of very greatly increased cross-section of a cylinder expanded approximately parallel to said conduit, having its inner end opening into the expanded section thereof, leaving the said conduit with at least its full conducting capacity in the vicinity thereof, a yieldingly closed check valve normally closing the inner end of said cylinder and adapted to open into the expanded section of said conduit, a hopper opening into the intermediate portion of said cylinder, and a positive feed device working in said cylinder, for forcing the chemicals into said expanded chamber of said conduit to chemicalize the water therein.

2. In an apparatus of the kind described the combination with a water conduit, of a cylinder having a discharge end opening into said conduit, a hopper delivering into the intermediate portion of said cylinder, a check valve normally closing the delivery end of said cylinder, a reciprocating plunger working in said cylinder and having a notch therein, and an agitator within said hopper depending into said cylinder and arranged to be intermittently engaged by one end of said plunger and said notch for moving said agitator with said plunger in either direction of travel thereof.

1,113,229. MEANS FOR CRUSHING COAL AND SIMILAR SUBSTANCES. ROBERT W. LYLE, South River, N. J., assignor to William James Lyle, South River, N. J. Filed Dec. 27, 1911. Serial No. 668,051. (Cl. 83—52.)

1. In apparatus for crushing coal and similar substances, a flexible moving surface constituting an operative platform portion and comprising compositely the crushing means and the carrier for the material to be crushed and the screen for the deposit of the crushed material, said moving surface carrying crushing members projecting therefrom and having openings for the passage of the crushed material.

2. In apparatus for crushing coal and similar substances, a moving surface constituting an operative platform portion and comprising compositely the crushing means and the carrier for the material to be crushed and the screen for the deposit of the crushed material, said moving surface carrying crushing members projecting therefrom and having openings for the passage of the crushed material, and means for holding and retaining the substance to be crushed in contact with said moving operative platform portion of the crusher surface and subject to the action thereof during the travel of said crusher surface.

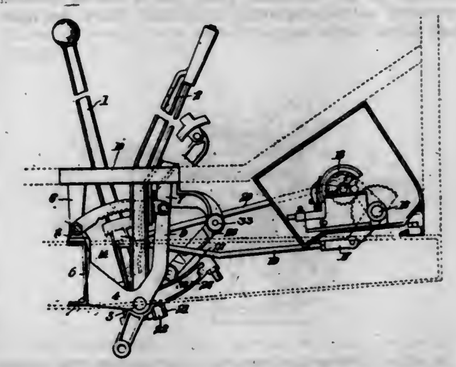
3. In apparatus for crushing coal and similar substances, a moving surface constituting an operative platform portion and comprising compositely the crushing means and the carrier for the material to be crushed and the screen for the deposit of the crushed material, said moving surface carrying crushing members projecting therefrom and having openings for the passage of the crushed material, and means for causing the discharge of crushed material carried by said moving crusher surface during the travel thereof.

4. In apparatus for crushing coal and similar substances, a moving surface constituting an operative platform portion and comprising compositely the crushing means and the carrier for the material to be crushed and the screen for the deposit of the crushed material, said moving surface carrying crushing members projecting therefrom and having openings for the passage of the crushed material, and means for causing the discharge of crushed material adhering in said openings during the travel of said crusher surface.

5. In apparatus for crushing coal and similar substances, a moving surface constituting an operative platform portion and comprising compositely the crushing means and the carrier for the material to be crushed and the screen for the deposit of the crushed material, said moving surface carrying crushing members projecting therefrom and having openings for the passage of the crushed material, means for holding and retaining the substance to be crushed in contact with said moving operative platform portion of the crusher surface and subject to the action thereof during the travel of said crushed surface, and means for discharging crushed material carried by said moving crusher surface as the operative platform portion thereof travels beyond said retaining means.

[Claims 6 to 110 not printed in the Gazette.]

1,113,230. CONTROL-LOCK. WILLIAM MACGLASHAN, Detroit, Mich., assignor to The Studebaker Corporation, South Bend, Ind., a Corporation of New Jersey. Original application filed Feb. 5, 1913, Serial No. 746,330. Divided and this application filed Mar. 9, 1914. Serial No. 823,305. (Cl. 74—39.)



1. A control for motor vehicles consisting of a control lever, controlling means connected thereto, a brake lever, a cam carried by the control lever, a follower, means constraining the same to move on a fixed path, and means connected to the brake lever for operating the follower to engage the cam and throw the control lever to neutral when the brake lever is operated.

2. A control for motor vehicles consisting of a control lever, a brake lever, a cam on the control lever, a follower, and means carried by the brake lever for operating the follower to throw the control lever to neutral when the brake is operated.

3. A control for motor vehicles consisting of a control lever, a brake lever, a cam on the control lever, a follower, and means carried by the brake lever for operating the follower to throw the control lever to neutral when the brake is operated, the cam being shaped to permit the follower to swing freely when the control lever is in neutral position and to lock the lever in that position when the brake is on.

4. A control for motor vehicles consisting of a control lever, a brake lever, a pivoted arm carrying a follower, follower means on the brake lever for swinging the arm, and a cam on the control lever to be engaged by the follower when the brake is applied, throwing the control lever to neutral position.

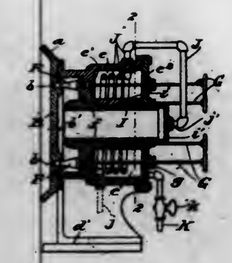
5. A control for motor vehicles consisting of a control lever, a brake lever, a pivoted arm carrying a follower, follower means on the brake lever for swinging the arm, and a cam on the control lever to be engaged by the follower when the brake is applied, throwing the control lever to neutral position, the cam having a surface inclined to the path of the follower, and a surface beyond said inclined surface in the direction of the traverse of the roller as the brake is applied conforming to the path of the follower when the controller is in normal position.

1,113,231. HYDROCARBON VAPORIZER AND BURNER. EDWARD MELTZER, New York, N. Y., assignor to Hydrocarbon Burner & Manufacturing Company, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 5, 1910. Serial No. 547,402. (Cl. 158—56.)

1. In a hydrocarbon vaporizer and burner, the combination of an oil vaporizing chamber, a heating chamber externally of said vaporizing chamber, means for introducing a heating agent to said heating chamber, a coiled oil pipe within said heating chamber, an oil vaporizing plate provided with openings, and passages leading from the vaporizing chamber and heating chamber to the said openings in the vaporizing plate.

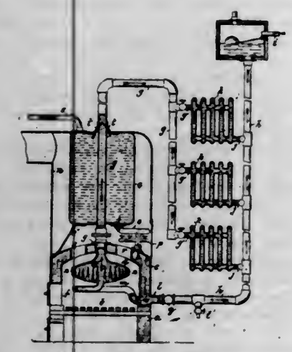
2. In a hydrocarbon vaporizer and burner, the combi-

nation of an oil vaporizing chamber, a heating chamber externally of said vaporizing chamber, means for introducing a heating agent to said heating chamber, a coiled oil pipe within said heating chamber, an oil vaporizing plate provided with openings, passages leading from the vaporizing chamber and heating chamber to the said openings in the vaporizing plate, and a mixing chamber forwardly of the vaporizing plate into which the openings in the vaporizing plate lead.



3. In a hydrocarbon vaporizer and burner, the combination of an oil vaporizing chamber, a heating chamber externally of said vaporizing chamber, means for introducing a heating agent to said heating chamber, a coiled oil pipe within said heating chamber, said heating chamber being provided with a detachable plate for introducing the coiled oil pipe therein.

1,113,232. WATER-HEATER. LUDWIG F. MERGOTT, Newark, N. J. Filed Nov. 28, 1910. Serial No. 594,435. (Cl. 122—165.)



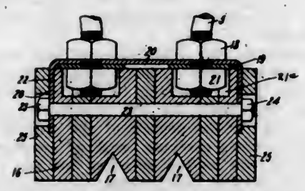
1. In an apparatus of the class described, a water chamber, a retort provided on its lower inner surface with a plurality of upwardly tapered heat radiating elements located within and circumferentially free from said water chamber, a circulating pipe extending from the top of said retort, a coiled pipe centrally connecting said retort with said water chamber, and a supplemental water chamber surrounding the circulating pipe, said supplemental chamber being located directly above the first named water chamber.

2. In an apparatus of the class described, a water chamber, a retort provided on its lower inner surface with a plurality of upwardly tapered heat radiating elements located within and circumferentially free from said water chamber, a circulating pipe extending from the top of said retort, a coiled pipe centrally connecting said retort with said water chamber, a supplemental water chamber surrounding the circulating pipe, said supplemental chamber being located directly above the first named water chamber, and a combustion chamber mounted upon the water chamber and inclosing the supplemental water chamber and flues formed in the first named water chamber communicating with said combustion chamber.

3. In an apparatus of the class described, a water chamber, a retort provided at its lower inner surface with a plurality of upwardly tapered heat radiating elements located within and circumferentially free from said water chamber, a circulating pipe extending from the top of said retort, a coiled pipe centrally connecting said retort with said water chamber, and a supplemental water chamber surrounding the circulating pipe, said supplemental water chamber being located directly above the first named water chamber, the circulating pipe being provided with a plurality of openings near the top of said supplemental water chamber and communicating therewith, and means interposed between the water chamber and supplemental water chamber for heating the water in the supplemental water chamber.

4. In an apparatus of the class described, a water chamber, a retort provided on its lower inner surface with a plurality of upwardly tapered heat radiating elements located within and circumferentially free from said water chamber, a circulating pipe extending from the top of said retort, a coiled pipe centrally connecting said retort with said water chamber, and a supplemental water chamber surrounding the circulating pipe, said supplemental chamber being directly above the first named water chamber, the circulating pipe being provided with a plurality of openings near the top of said supplemental water chamber and communicating therewith, a combustion chamber mounted upon the water chamber and inclosing the supplemental water chamber, and means located in said combustion chamber and interposed between the water chamber and supplemental water chamber for heating the water in the supplemental water chamber.

1,113,233. WHEEL FOR OIL-WELL DERRICKS. LEE C. MOORE, Pittsburgh, Pa. Filed Apr. 4, 1913. Serial No. 758,895. (Cl. 64—17.)



1. A wheel comprising a hub arranged to be secured to a shaft, spokes secured at their inner ends to said hub, a built-up rim, comprising segments lying side by side, U-shaped binding members secured to said spokes and embracing said rim, and circumferential bands rigidly connected to said spokes and supporting said rim.

2. A wheel comprising a hub arranged to be secured to a shaft, spokes secured at their inner ends to said hub, a built-up rim comprising segments lying side by side, U-shaped binding members secured to said spokes and embracing said rim, and circumferential bands lying between said U-shaped binding members and said rim and supporting the latter.

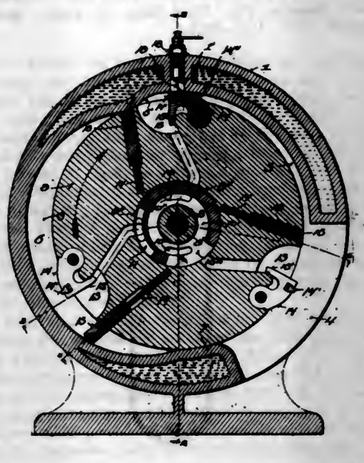
3. A wheel comprising a hub arranged to be secured to a shaft. a plurality of sets of spokes secured at their inner ends to said hub, a built-up rim comprising segments lying side by side, U-shaped binding members within said rim and secured to said spokes and having side arms embracing said rim, and a plurality of circumferential bands for supporting said rim, each band being rigidly secured to the outer ends of the spokes of one of said sets.

4. A wheel comprising a hub arranged to be secured to a shaft, spokes secured at their inner ends to said hub, circumferential bands on the outer ends of said spokes, a built-up rim supported by said bands, and circumferentially spaced U-shaped binding members lying within said bands and having their side arms connected to said rim.

5. A wheel comprising a hub arranged to be secured to a shaft, two series of oppositely disposed spokes secured at their inner ends to said hub, each pair of spokes converging toward their outer ends, U-shaped binding members each secured to a pair of oppositely disposed spokes, and a rim located between the arms of said binding members.

[Claims 6 and 7 not printed in the Gazette.]

1,113,234. ROTARY GAS-ENGINE. CHARLES W. MORGAN, Milwaukee, Wis., assignor, by direct and mesne assignments, to Gasoline Turbine Motor Company, Racine, Wis. Filed Dec. 4, 1913. Serial No. 804,585. (Cl. 123—17.)

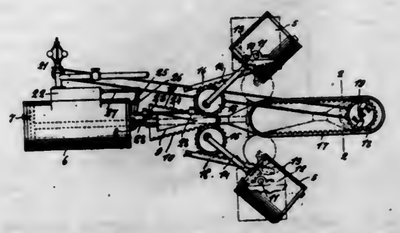


1. A rotary gas engine comprising a cylinder shell having a receiving chamber and a combustion chamber separated from each other and formed in its interior circular wall, the shell being provided with an exhaust port in communication with one end of the combustion chamber, a rotor mounted in the shell adapted to close the ends of the receiving chamber and the firing end of the combustion chamber, the rotor being provided with peripheral gas pockets, a shiftable combustion piston carried by said rotor in advance of each gas pocket, a shiftable receiving piston carried by said rotor rearwardly of each gas pocket, a vented centrally disposed head provided with a gas chamber carried by the shell, the same being arranged to successively establish communication with its vented portion to the exhaust port through the gas pocket and from its gas chamber through the gas pocket to the receiving chamber.

2. A rotary gas engine comprising a cylindrical shell provided with a gas receiving chamber and a combustion chamber separated from each other, the combustion chamber being of comparatively small area and having one end in communication with the atmosphere, a rotor having radially disposed pockets extending therethrough, a head carried by the shell adapted to control the inner ends of the pockets, the head being provided with an air chamber having a passage therethrough and a gas chamber in its periphery, a shiftable combustion piston carried by the rotor in advance of each pocket, and a shiftable receiving piston carried by said rotor rearwardly of each pocket.

3. A rotary engine comprising a shell provided with inner circular walls having an exhaust port therethrough, a combustion chamber formed in the circular wall in communication with the exhaust port and a receiving chamber formed in the circular wall spaced from the exhaust port and combustion chamber, a fixed head carried by the shell having a vented air chamber in communication with the exterior face of said head, and a gas chamber formed in the exterior walls of said head, a rotor having a circular face mounted within the shell, the rotor being provided with radial gas pockets extending from its periphery to the head, and a pair of shiftable pistons carried by the rotor upon opposite sides of the peripheral mouth of each gas pocket.

1,113,235. PUMP-OPERATING MECHANISM. ANDREW MOSER, Hickman, Nebr. Filed Mar. 9, 1914. Serial No. 823,428. (Cl. 103—62.)



1. The combination with a pair of oscillatory cylinders located opposite each other and containing each a plunger having a rod; of a pinion carried by the plunger rod of each cylinder, a reciprocatory member having converging racks on opposite sides in mesh respectively with the pinions on one side thereof, and stationary racks in mesh with the other sides of the pinions.

2. The combination with a pair of oscillatory cylinders located opposite each other and containing each a plunger having a rod; of a pinion carried by the plunger rod of each cylinder, a reciprocatory wedge-shaped member working between the cylinders and having racks on opposite sides in mesh respectively with the pinions on one side thereof, and stationary racks in mesh with the other sides of the pinions.

3. The combination with a pair of oscillatory cylinders located opposite each other and containing each a plunger having a rod; of a pinion carried by the plunger rod of each cylinder, a reciprocatory member having racks on opposite sides in mesh respectively with the pinions on one side thereoof, said racks being inclined at an oblique angle to the line of travel of the reciprocatory member and converging, and stationary racks in mesh with the other sides of the pinions.

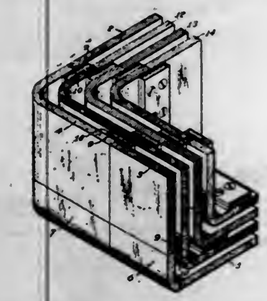
4. The combination with a pair of oscillatory cylinders located opposite each other and containing each a plunger having a rod; of a pinion carried by the plunger rod of each cylinder, a reciprocatory member having racks on opposite sides which are inclined, in opposite directions, to the line of travel of said member, and said racks being in mesh respectively with the pinions on one side, and stationary racks in mesh with the other sides of the pinions, said stationary racks being inclined to the line of travel of the reciprocatory member in a direction opposite the direction of the incline of the first-mentioned racks.

5. The combination with an oscillatory cylinder containing a plunger having a rod; of a pinion carried by the plunger-rod, a reciprocatory member having a rack in mesh with the pinion on one side thereof and inclined to the line of travel of the member, and a stationary rack in mesh with the other side of the pinion, said stationary rack being inclined to the line of travel of the reciprocatory member in a direction opposite the direction of incline of the first-mentioned rack.

1,113,236. SAFE CONSTRUCTION. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Nov. 28, 1913. Serial No. 803,484. (Cl. 109—1.)

Safe or vault construction comprising, edgewise abutting outer wall plates of unmachinable metal, uniting devices disposed on the inner side of said plates at the joints

between them, edgewise abutting inner wall plates disposed within the outer plates and in contact with the uniting devices of the outer plates, and uniting devices disposed on the inner surfaces of the inner plates at the joints between them and adapted to have their inner sur-



faces in contact with additional edgewise abutting wall plates having their inner edges provided with uniting devices, the joints between the edges of the outer wall plates breaking joint with the joints between the edges of the inner wall plates, combined substantially as set forth.

1,113,237. EDUCATIONAL DEVICE. LIZZIE L. MOULTON, Boston, Mass. Filed July 19, 1913. Serial No. 779,944. (Cl. 35—3.)

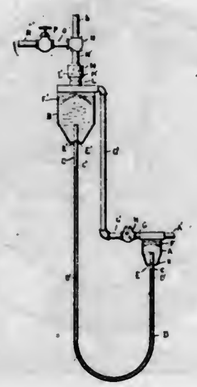
1. An educational device comprising, in combination, a chart having the earth's orbit marked thereon; graduations dividing said orbit into sections representing the months of the year and days of the months; and an adjustable member coöperating with said orbit divided into segments representing the seasons of the year and movable to bring said season segments into registration with the month sections comprising the different seasons and into registration with the days graduations marking the astronomical commencement and close of the seasons.

2. An educational device comprising, in combination, a chart having the earth's orbit marked thereon; graduations dividing said orbit into sections representing the months of the year and days of the month; and an adjustable member divided into segments chromatically differentiated from one another graphically to represent the seasons of the year and movable to bring said season segments into registration with the months sections comprising the different seasons and into registration with the days graduations marking the astronomical commencement and close of the seasons.

3. An educational device comprising, in combination, a chart provided with a portion having the earth's orbit marked thereon; graduations dividing said orbit into sections representing the months of the year and days of the month, an adjustable member filling a central opening in said chart and divided into segments representing the seasons of the year; and means providing a pivotal support for said member whereby the latter may be moved to bring said season segments into registration with the months sections comprising the different seasons and into registration with the days graduations marking the astronomical commencement and close of the seasons.

4. An educational device comprising, in combination, a chart having the earth's orbit marked thereon; graduations dividing said orbit into sections representing the months of the year; graduations for said month sections representing the days of the month; and an index element adapted to be placed in any of a series of holes on said orbit corresponding to the days graduations.

1,113,238. WATER-HEATING SYSTEM. JAMES MUNDORFF, Sharon, Pa. Filed May 16, 1913. Serial No. 768,027. (Cl. 137—53.)



1. In a water heating system, the combination of two chambers, a U-shaped pipe connecting the bottoms of said chambers and having a mercury column therein, and a second pipe leading from the top of one chamber to the top of the other and having therein means for preventing the passage of water therethrough in one direction only.

2. In a water heating system, the combination of two chambers, a pipe having its ends entering and extending above the bottoms of said chambers, perforations in each end adjacent said bottoms, a second pipe, having a check valve therein, connecting said chambers and means in said first pipe opposing the flow of water therethrough, as, and for the purpose, set forth.

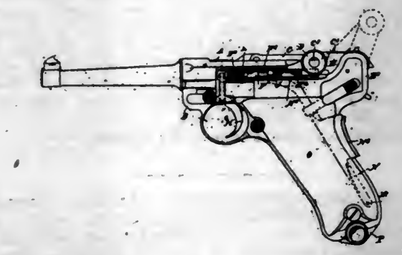
3. In a water heating system, the combination of two chambers, a baffle plate in each chamber, a pipe, having a check valve therein, entering said chambers above the baffle and a second pipe, located exteriorly of the chamber and having a mercury column therein, entering, and extending above the bottom of said chambers, said second pipe having its ends perforated above and adjacent the bottoms of the chambers.

4. In a water heating system the combination of two chambers, baffles located at the upper end of each chamber, a pipe having a check valve therein connecting the tops of said chambers, a U shaped pipe entering and extending above the bottom of said chambers and terminating below the baffles, perforations in both ends of the latter pipe, said perforations being flush with the bottom of the interior of the chambers, and a mercury column within said latter pipe, as and for the purposes set forth.

5. In a water heating system, the combination of two chambers, baffles therein, two pipes exteriorly located connecting said chambers, one of said pipes containing a mercury column which is normally free from both chambers, and the other a check valve, one of said chambers connecting directly with the main system and an expansion tank connecting with the other chamber.

[Claim 6 not printed in the Gazette.]

1,113,239. HAND-FIREARM. MANUEL NAVARRO and EVERARDO NAVARRO, Celaya, Mexico. Filed Feb. 20, 1914. Serial No. 819,957. (Cl. 42—4.)

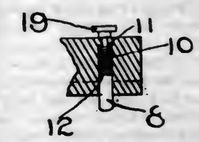


1. In a firearm of the type described, the combination of a locking and releasing lever for locking and releasing the firing pin, a breech having a toggle joint provided with a roller, and means connected with the said locking and releasing lever and controlled by the said roller for automatically unlocking the firing pin from the breech.

2. A firearm of the type described provided with a member adjustably secured on the locking and releasing lever for the firing pin, the said member in one position being out of the path of one of the rollers of the breech and the said member in another position being in the path of the said roller to cause the latter to impart movement to the said member and the said locking lever to automatically unlock the firing pin.

3. A firearm of the type described provided with a plate, and means for adjustably securing the said plate to the locking and releasing lever of the firing pin, the said plate projecting rearwardly beyond the rear end of the said locking and releasing lever, and the rear end of the said plate having a cam face adapted to be engaged by one of the rollers of the breech to automatically actuate the said locking and releasing lever to release the firing pin.

1,113,240. PRINTING DEVICE FOR BOOKBINDERS' PRESS-MARKS. AUGUST C. NIER and CHARLES P. OLESON, St. Paul, Minn. Filed July 11, 1913. Serial No. 778,527. (Cl. 101—169.)



1. A device for printing a bookbinder's press mark comprising a type holding bar longitudinally slotted to receive a type and formed with a succession of holes equidistant from one another, a type movable in said slot and having a hole in position to register with the successive holes in the type bar as the type is moved along the bar, and an adjusting pin movably held in the registering holes whereby to lock the type against longitudinal movement in the slot.

2. A device for printing a bookbinder's press mark comprising a type holding bar longitudinally slotted to receive a type and formed at the bottom of the slot with a succession of holes, a type movable in the slot and formed with a hole, and an adjusting pin extending through the hole in the type and into one of the holes in the bar whereby to lock the type against longitudinal movement.

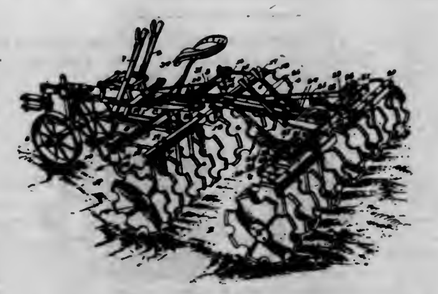
3. A device for printing a bookbinder's press mark comprising a type holding bar longitudinally slotted to receive a type and formed at the bottom of the slot with a succession of holes, a type movable in the slot, and a spring controlled adjusting pin extending through the type and adapted to enter the holes in the bar.

4. A device for printing a bookbinder's press mark comprising a type holding bar longitudinally slotted to receive a type, said bar having its face marked off into numbered spaces of equal length and being formed at the bottom with a succession of holes equi-distant from one another, a type movable in said slot, and a spring pressed adjusting pin extending through the type and adapted to enter the holes in the bar, the face of the type corresponding in length to the several spaces on the face of the bar.

5. A device for printing a bookbinder's press mark comprising a type holding bar marked off into numbered spaces of equal length and formed with a succession of correspondingly spaced holes, a type movable longitudinally of said bar, and an adjusting pin extending through said type and into the registering hole in the bar, whereby to lock the type against longitudinal movement.

[Claim 6 not printed in the Gazette.]

1,113,241. DOUBLE DISK HARROW. FRANK B. NIESZ, Canton, Ohio. Filed Aug. 11, 1910. Serial No. 576,708. (Cl. 55—83.)



1. In a double disk harrow, the combination with a front harrow section having horizontally swinging disk sections, of a rear harrow section having a central longitudinally extending draft bar, the front end of the draft bar flexibly connected with the front harrow section, rear disk-sections having vertical pivotal connections between the tops of the sections and the said draft bar, adjusting members connecting the rear sections and the draft bar, the draft bar and disk-sections having respectively loops and tongues separate and independent of the adjusting members, the tongues slidably passing through and engaging the loops.

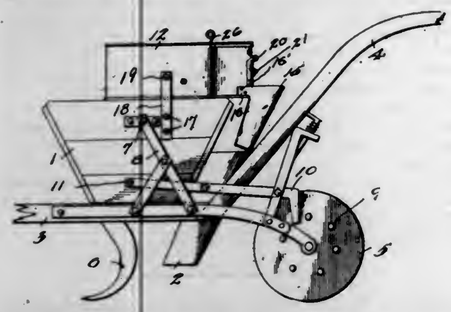
2. In a double disk harrow, the combination with a front harrow section having horizontally swinging disk sections, of a rear harrow section having a central longitudinally extending draft bar, the front end of the draft bar flexibly connected with the front harrow section, rear disk-sections having vertical pivotal connections between the tops of the section and the said draft bar, adjusting members connecting the rear sections and the draft bar, the draft bar and disk sections having respectively loops and tongues separate and independent of the adjusting members slidably passing through and engaging the loops.

1,113,242. SEED-PLANTER. ALVA B. PACE, Carrollton, Ga. Filed Nov. 28, 1913. Serial No. 803,544. (Cl. 111—33.)

1. The combination in a seed box having an outlet, a spout, and an adjustable gate for the outlet, of a pivoted inclined partition located in the box and having an opening above the box bottom, a plate formed integral with the partition and engaging the box top as a support, and an adjustable gate for regulating the area of the partition opening.

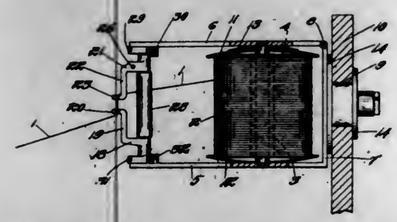
2. The combination with an oscillatable hopper and its spout, of a seed box having a feed space and opening and a spout located directly above the hopper spout, a mov-

able inclined partition having an adjustable opening therein and extending across said box, and having a top portion over the feed space, and a slotted gate with



adjusting means for regulating the area of the feed opening.

1,113,243. TENSION DEVICE AND AUTOMATIC TAKE-UP. CHARLES PARENT, Medford, Mass. Filed Apr. 16, 1913. Serial No. 761,438. (Cl. 242—147.)



1. In combination with a bobbin, a holder for the bobbin, a tension device to prevent too free rotation of the bobbin and which is controlled by the roll of thread and which diminishes as the roll of thread diminishes in diameter, a movable take-up arm through which the thread passes from the bobbin and which is moved in one direction by the draft of the thread from the bobbin, and a tension device for the take-up which is put under greater tension by the movement of said take up arm caused by the draft of the thread, said last tension device causing the said take-up to move in the reverse direction to take up slack in the thread, said take-up tension at all times during the draft of the thread being of less strength than the tension on the bobbin whereby the draft on the thread will not rotate the bobbin until the take-up arm has moved far enough to take up the slack, the continued draft of the thread then rotating the bobbin while the bobbin tension still remains greater than the tension on the take up arm.

2. In combination with a bobbin, a holder for the bobbin, a tension device to prevent too free rotation of the bobbin, two rotary thread arms rotating on an axis parallel with the axis of the bobbin and both adapted to be threaded with braiding thread and tension mechanism which is adapted to rotate said arms in opposite directions to each other.

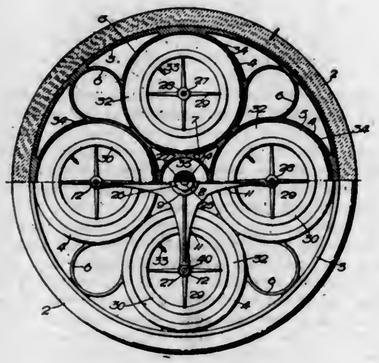
3. In combination with a bobbin, a holder for the bobbin, a tension device to prevent too free rotation of the bobbin, two rotary arms having thread eyes, and which when threaded up are turned in opposite directions by the draft of the thread, a spring which is put under tension by the rotation of either of said arms under the draft of the thread, and which when the draft on the thread is relaxed turns said arms backward in opposite directions to each other and takes up the slack of the thread.

4. In a braiding machine, a bobbin, two rotary thread arms rotating on an axis parallel with the axis of the bobbin and both adapted to be threaded with the braiding thread and tension mechanism which is adapted to rotate said arms in opposite directions to each other.

5. In a braiding machine, a bobbin, two rotary arms rotating on an axis parallel with the axis of the bobbin and having thread eyes, and which when threaded up are turned in opposite directions by the draft of the thread, a spring which is put under tension by the rotation of either of said arms under the draft of the thread, and which when the draft on the thread in relaxed turns said arms backward in opposite directions to each other and takes up the slack of the thread.

[Claims 6 to 12 not printed in the Gazette.]

1,113,244. RESILIENT WHEEL. RICHARD THOMAS PARK, South Melbourne, Victoria, Australia, assignor to R. T. P. Patent Wheels Proprietary Limited, Melbourne, Australia, a Corporation of Victoria, Australia. Filed June 17, 1914. Serial No. 845,719. (Cl. 152—46.)

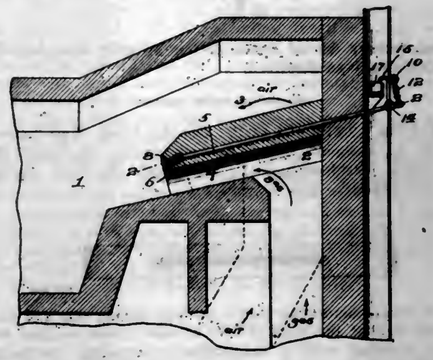


1. An improved resilient wheel comprising a hub and felly, a plurality of circular guide-ways mounted within the said hub and felly, a plurality of rotatable resilient members, a frame on each side of the said wheel providing means for supporting the said rotatable resilient members within the said guide-ways, one of the said frames having a central boss having an opening therein, a bolt fitting within the said boss and passing through the opening therein, a lock nut on the bolt on the outside of the said boss, the head of the bolt having a screw-threaded opening, the other frame having an outwardly extending portion within the hub and adjacent the head of the bolt, an axle having a screw-threaded portion passing through the said outwardly extending portion and screwed within the opening in the head of the bolt, the parts arranged as and for the purpose described.

2. An improved resilient wheel comprising a hub and felly, a plurality of circular guide-ways mounted within the said hub and felly, a plurality of rotatable resilient members, a frame on each side of the said wheel providing means for supporting the said rotatable resilient members within the said guideways, one of the said frames having a boss at its center, the other of the said frames having two outwardly stepped portions adjacent its center, the center-most stepped portions extending within the hub, and of a less diameter than the hub, the other stepped portion adjacent the outside of the hub of the wheel, an axle having bearings in the said frames, and a resilient member adapted to be placed in the space between the centermost stepped portion of the said frame and the hub of the wheel, the parts arranged as and for the purpose described.

3. An improved resilient wheel comprising a hub and felly, a plurality of circular guide-ways mounted within the said hub and felly, a plurality of rotatable resilient members, a frame on each side of the said wheel providing means for supporting the said rotatable resilient members within the said guide-ways, an axle, one of the said frames having outwardly extending portions at its center, one of the said portions extending within the hub of the wheel, and of a less diameter than the diameter of the hub, means between said frames and the axle to form a locking support for said axle, and a resilient member adapted to be placed in the space between the said hub portion and the hub, the parts arranged as and for the purpose described.

1,113,245. FURNACE-PORT COOLING SYSTEM. FRANK E. PARKS, Pueblo, Colo. Filed Apr. 12, 1912. Serial No. 690,338. (Cl. 75—119.)



1. In a regenerative-furnace, a port structure extending therein, and means for maintaining the integrity of the port structure comprising a water-cooled frame composed of separate hollow cooling elements and constituting a portion of the inner end of the port, a plurality of fluid circulating conduits connected to each cooling element, and means for supplying a cooling fluid independently to each conduit.

2. In a regenerative-furnace, a port structure extending therein, and means for maintaining the integrity of the port structure comprising a water-cooled frame having a plurality of independent chambers in the port structure adjacent the inner end thereof, and a plurality of sets of fluid circulating conduits connected to each chamber, whereby a fluid circulation may be maintained in one or more of said sets during the inaction of another of said sets.

3. In a port-structure of a regenerative-furnace, a water-cooled metal frame constituting an integral supporting portion of the inner exposed end of the port and forming the inner margin of the arch thereof and being flush with the inner end thereof, thereby maintaining a fixed port area.

4. In a port-structure of a regenerative-furnace, a water-cooled metal frame constituting a portion of the inner exposed end of the port and forming an arch whose longitudinal walls taper toward the inner end of the port at an angle to the inner port wall, and to the longitudinal wall of the arch.

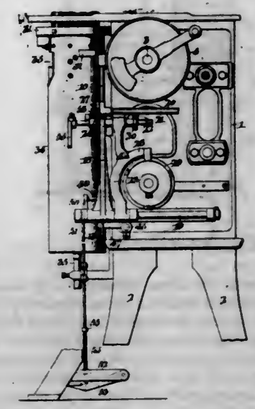
5. In a port-structure of a regenerative-furnace, a water-cooled metal frame constituting a portion of the inner exposed end of the port and comprising separate, symmetrical, arcuate, hollow blocks at an angle to the inner port wall, and to the longitudinal wall of the arch.

[Claims 6 and 7 not printed in the Gazette.]

1,113,246. STOP MECHANISM FOR KNITTING-MACHINES. ALBERT M. PIGEON, Philadelphia, Pa. Filed Oct. 25, 1912. Serial No. 727,701. (Cl. 66—7.)

1. In a knitting machine, the combination of a fabric receiver, adapted to rotate with the needle cylinder, and adapted to remain idle during the oscillations of the needle cylinder, and manually controlled means for causing the machine to automatically stop prior to the commencement of the rotation of said fabric receiver.

2. In a knitting machine, the combination of a fabric receiver, adapted to rotate with the needle cylinder and to remain idle during the oscillations of the needle cylinder, a manually shiftable member and means controlled thereby, whereby the pattern mechanism will cause the machine to automatically stop before the clutch shifting lever is moved to cause the fabric receiving cage to rotate.



3. In a knitting machine, the combination of a fabric receiver adapted to rotate with the needle cylinder, and to remain idle during the oscillations of the needle cylinder, a belt shifting lever, a spring for normally throwing the belt shifting lever to stop the machine, a latch for holding the belt shifting lever with the belt on the driving pulley, and manually controlled means for automatically releasing said latch to stop the machine before the parts of the machine are shifted to start the rotation of the fabric receiving cage.

4. In a knitting machine, the combination of a fabric receiver, adapted to rotate with the needle cylinder, and adapted to remain idle during the oscillations of the needle cylinder, a belt shifting lever, means for yieldingly holding said belt shifting lever with a belt on the idle pulley, a latch for holding said belt shifting lever with the belt on the driving pulley, a rod attached to said latch for shifting the same to release the belt shifting lever, an arm oscillated by the pattern mechanism, manually controlled means for permitting said rod to be engaged by said arm for automatically releasing the latch, through the shifting of the pattern mechanism.

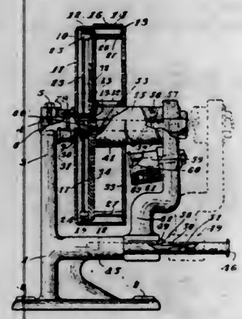
5. In a knitting machine, the combination of a fabric receiver, adapted to rotate with the needle cylinder, and adapted to remain idle during the oscillations of the needle cylinder, a belt shifting lever, means for yieldingly holding said belt shifting lever with a belt on the idle pulley, a latch for holding said belt shifting lever with the belt on the driving pulley, a rod attached to said latch for shifting the same to release the belt shifting lever, an arm oscillated by the pattern mechanism, a rock shaft, means carried by the rock shaft for holding said rod out of the path of movement of said oscillating arm, and a treadle for shifting the rock shaft to permit said rod to be engaged by said arm.

[Claims 6 and 7 not printed in the Gazette.]

1,113,247. FILM-WINDING DEVICE. GEORGE STEPHEN PROCTOR and JOHN BARRETT PRENDERGAST, Ottawa, Ontario, Canada. Filed June 3, 1913. Serial No. 771,463. (Cl. 88—18.7.)

1. In a device of the class described in combination, a frame; a spindle; a pulley; a peripherally flanged drum secured to said pulley and adapted to rotate on said spin-

die having a slit in the peripheral flange said slit being adapted to receive and have secured thereto the end of a film; guide pulleys adapted to guide the film into a spool carried by the aforesaid spindle, and guide rollers adapted to assist in and automatically adjust the arrangement of the film in its inward spiral rewinding.



2. In a device of the class described, a frame, a spindle, a peripherally flanged winding drum rotatably mounted on said spindle; a lateral projection from said frame, a spindle, said last mentioned spindle being parallel to the first mentioned spindle; a keyway therein, a sliding arm slidably secured on said last mentioned spindle; loose guide pulleys on said arm, said guide pulleys being adapted to give the film a helical twist; a spool carried by said first mentioned spindle and adapted to closely fit the interior of said winding drum.

3. In a device of the class described, a frame, a rotatably secured winding drum provided with a pulley; a plate secured to said frame; a film spool; radial adjusting screws rotatably mounted on said plate; star wheels mounted on said adjusting screws; a projection on said winding drum adapted to operate said star wheels; nuts rotatably secured to said adjusting screws; laterally projecting pins secured to said nuts; rollers mounted on said pins; said rollers being adapted by reason of the relative proportions of said star wheels and said adjusting screws to move radially toward the axis of said drum in synchronism with the inwardly accumulating coils of the film whose position said rollers are adapted to adjust.

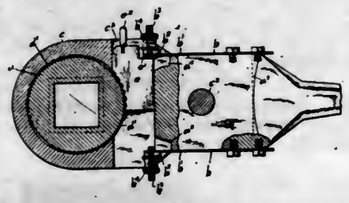
4. In a device of the class described, a frame, a winding drum rotatably secured thereto, a plate secured to said frame, said plate having radially adjustable rollers attached thereto, a spool adapted to be secured to said plate, said spool comprising two side disks having radial slots adapted to receive said radially adjustable rollers, and said disks being secured one to another by a drum having a slit and at the edges of the slit having pins fitted with rollers, said pins and rollers being arranged close to the inner periphery of said disks.

5. In a film winding apparatus, a frame, a winding drum mounted thereon; a spool secured to said frame; a sliding arm slidably secured to a projection on said frame; jockey pulleys rotatably secured to said sliding arm; a spring secured to said projection and adapted to lock said arm in its position nearest said winding drum.

[Claims 6 to 10 not printed in the Gazette.]

1,113,248. WRENCH FOR OPERATING DROP-BOTTOM CARS. CYRUS W. RICE, Philadelphia, Pa. Filed Feb. 1, 1913. Serial No. 745,556. (Cl. 81—60.)

In a wrench, a handle-bar provided with a recessed seat and curved walls, outer edges of said seat having offsets, a shiftable locking device having a projection through which extends tightening means, a yoke having a forked extension in reciprocating relation with said seat, a reversible flanged wrench-head, a ratcheted surface wedge having an offset and a ring, the latter being provided to insert and withdraw said wedge to or from said yoke extension, said wedge in its operative locked position bearing against the recessed surface of said wrench-head and when so seated, the tightening means of said locking device is in relation with the offset of said wedge to thereby prevent



displacement during manipulation of said wrench-head, substantially as described.

1,113,249. TYPE-CLAMP. GOLDEN RULE, Washington, D. C., assignor, by mesne assignments, to Daniel M. Clark, Washington, D. C. Filed July 30, 1913. Serial No. 782,019. (Cl. 101—52.)

A clamp comprising corner sections having side and end arms each of the arms of each of said corner sections being provided with a longitudinally-extending centrally-located slot forming one section of a spring seat, a finger extending from said arm above said slot, said arm having the sides of its upper portion cut away to form longitudinally-extending seats formed upon opposite sides of said finger to form a continuation of said finger above said slot, fingers extending from the lower portion of said arm beneath said first-mentioned finger and positioned in spaced relation to each other whereby the arms of said sections may be slidably connected, and resilient means positioned in the slots forming said spring seats and secured to said arms whereby said sections will be normally held in a contracted position.

1,113,250. ELECTRICAL DISPLAY. VICTOR E. RUMBARGER, Dayton, Ohio. Filed Jan. 14, 1909. Serial No. 472,177. (Cl. 240—104.)

1. The combination, with a lamp comprising a bulb and a base, of a shield completely encircling said bulb, and means for supporting said shield on said lamp with the inner surface of said shield out of engagement with the surface of said bulb, said shield having its inner end arranged near the inner end of said bulb and having its outer end terminating beyond the light-giving element of said lamp, thereby preventing the lateral diffusion of light by said lamp and causing the open end of the shield to be sharply defined by the light within the same.

2. The combination, with a lamp comprising a base and a bulb, of a shield extending entirely around said bulb

and having a substantially cylindrical outer portion of a diameter slightly greater than the largest diameter of said bulb, and means for supporting said shield in position about said bulb with its inner surface close to but out of contact with said bulb.

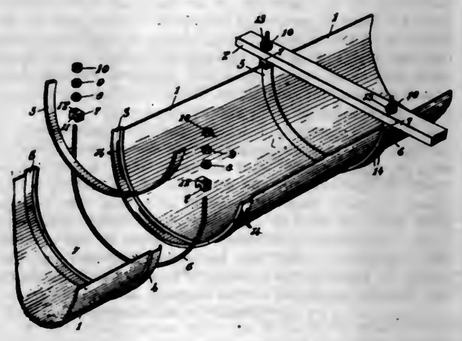
3. The combination, with a lamp comprising a base and a bulb, of a shield encircling said bulb and extending from a line near the inner end of said lamp to a line near the outer end of said bulb and even with or beyond the outer end of the light-giving element of said lamp and having its outer end open, thereby preventing the lateral diffusion of light and causing the outer end of the shield to be sharply defined by the light within the same, and means for supporting said shield with its inner surface close to but out of contact with said bulb.

4. The combination, with a lamp comprising a bulb and a lamp base, of a shield extending about said bulb and having a circumferential wall spaced away from said bulb, converging toward said base and engaging said bulb at a point beyond said base, and means for maintaining the end of said shield in contact with said bulb.

5. The combination, with a lamp comprising a bulb and a lamp base, of a shield extending about said bulb, having its outer end adjacent to the outer end of said bulb and beyond the light giving element thereof and having its circumferential walls spaced away from said bulb, converging toward said base and engaging said bulb at a point adjacent to said base, and means for retaining said shield on said lamp and for preventing electrical contact between the shield and the base.

[Claims 6 and 7 not printed in the Gazette.]

1,113,251. METALLIC FLUME. JULIUS H. SCHLAFLY, Canton, Ohio. Filed Nov. 26, 1911. Serial No. 661,985. (Cl. 61—5.)

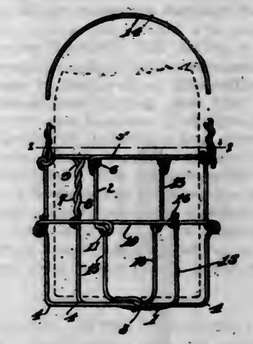


1. A metal flume consisting of a series of sections, the ends of the sections provided with channels and the channels of adjacent sections adapted to be seated one within the other, a clamping bar adapted to be seated in the channel of one of the sections, a yoke provided with screw threaded portions, tie blocks mounted upon the yoke, said tie blocks provided with grooves and the ends of the clamping bar adapted to be seated in the grooves, nuts mounted upon the yoke and in contact with the tie blocks, a hanger bar and means for adjusting the yoke with reference to the hanger, substantially as and for the purpose specified.

2. A flume consisting of a series of sections joined together at their ends, suspending hangers, and means for adjusting the flume sections to or from the suspending hangers.

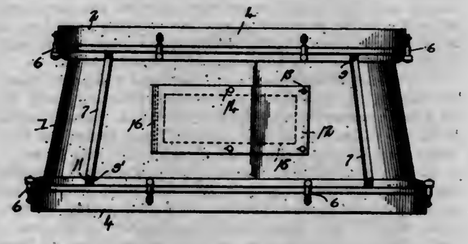
3. In a flume of the class described, a series of sections joined together, means for clamping the joined ends of the sections, suspending hangers, and means for adjusting the flume sections to or from the suspending hangers.

1,113,252. RECEPTACLE FOR CARRYING MILK-BOTTLES. EDWIN C. SCHREIBER, Chicago Heights, Ill. Filed Jan. 2, 1913. Serial No. 739,824. (Cl. 224—48.)



In a carrying receptacle, a base formed of a plurality of wires coiled upon each other at the center of the base and having their ends bent upwardly and forming sides for the receptacle, a wire having a plurality of loops formed therein forming a top for said receptacle and having one end bent downwardly and outwardly encompassing the side wires of the receptacle to form a brace therefor, said side wires inserted through said loops and bent upon themselves for connection to said top, and a bail wire connected to said top wire.

1,113,253. COLLAPSIBLE DRUM. THEODORE SCHREINER, Brooklyn, N. Y. Filed May 13, 1913. Serial No. 767,467. (Cl. 84—10.)



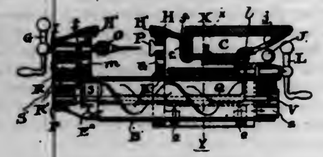
1. In a collapsible drum, the combination with a pair of drum heads, one of which is of smaller diameter than the other, of a flexible body portion connecting said drum heads, a plurality of peripherally arranged spacing and bracing rods to normally hold said drum heads in a separated position, a plurality of pins carried by said drum heads to coact with said rods, longitudinal notches being formed in the upper end of each rod to seat the adjacent pins and prevent collapse of said drum heads, transverse notches being formed in the lower end of each rod to facilitate the removable positioning of said rods and to similarly coact with adjacent pins, and means preventing casual lateral displacement of said rods at their lower ends.

2. In a collapsible drum, the combination with a pair of drum heads of different diameters capable of a telescopic action together, of a flexible body portion connecting said drum heads to permit such telescopic action and to prevent undue separation of the heads, and means for wedging said drum heads apart to their limit of separation, said means including a plurality of peripherally arranged pins carried by said drum heads, and a plurality of bracing rods, each rod being formed at its upper end with a longitudinal notch for engaging the adjacent pin preparatory to wedging said rods in position, and each rod being further

formed at its opposite extremity with a transverse notch for the lateral reception of a proper pin, and means preventing casual lateral displacement of said rods.

3. In a collapsible drum, the combination with a pair of drum heads of different diameters capable of a telescopic action together, of a flexible body portion connecting said drum heads to permit such telescopic action and to prevent undue separation of the heads, and means for wedging said drum heads apart to their limit of separation as determined by said body portion, said means including a plurality of peripherally arranged pins carried by each of said drum heads, and a plurality of bracing rods, flanges formed upon each of said rods at the ends thereof, each upper flange being provided with a longitudinal notch for engaging the adjacent pin preparatory to wedging said drum heads in their separated position, and each lower flange being formed with a transverse notch for the lateral reception of a proper pin, and means preventing casual lateral displacement of said rods at their lower ends.

1,113,254. COMPOUND METAL-WORKING IMPLEMENT. LOUIS SELLIER, Paris, France. Filed Nov. 27, 1911. Serial No. 662,705. (Cl. 29—32.)



1. The combination, with a work-supporting element embodying a fixed jaw-carrying body having a horizontal bore, a movable jaw-carrying body having an open-ended tubular portion slidable through said bore, and a fan mounted in said tubular portion; of a forge connected to one of said bodies and communicating with the outlet end of said tubular portion; means for rotating said fan, to force a blast of air through said tubular portion into said forge; and means for adjusting said movable body.

2. The combination, with an anvil and a support therefor having an open-ended air-chamber associated with it; of a forge connected with said support and communicating with the outlet end of said chamber; and means for forcing a blast of air through said chamber into said forge.

3. The combination, with an anvil, a support therefor having an open-ended air-chamber associated with it, and a fan mounted in said chamber; of a forge connected with said support and communicating with the outlet end of said chamber; and means for rotating said fan, to force a blast of air through said chamber into said forge.

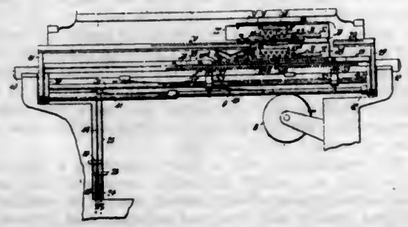
4. The combination, with an anvil, a support therefor having an open-ended air-chamber associated with it, and a fan mounted in said chamber; of a forge connected with said support and communicating with the outlet end of said chamber; and driving mechanism carried by said support and connected with said fan, for rotating the latter, to force a blast of air through said chamber into said forge.

5. The combination, with an anvil and a support therefor having a recessed block associated with it; of a forge provided with a yoke detachably engaged in said recess, to connect said forge to said support; and means carried by said support for forcing a blast of air into said forge.

[Claim 6 not printed in the Gazette.]

1,113,255. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 2, 1913. Serial No. 776,903. (Cl. 197—176.)

1. In a typewriting machine, the combination with a carriage, a rack bar and a coöperating member, of means to bring said rack bar and said member into engagement in any position of travel of the carriage, said carriage having a limited movement relatively to said member and in the direction of the carriage travel, and means to move the carriage through said limited movement when said member and rack bar are in engagement.



2. In a typewriting machine, the combination with a carriage, of a rack, a stop on the carriage, said carriage movable relatively to said stop in the direction of the carriage travel, and means to bring said stop and rack into engagement in any letter-space of the carriage, and to cause the carriage to move relatively to said stop in letter-spacing direction.

3. In a typewriting machine, the combination with a carriage, of an escapement mechanism controlling the movement of the carriage, a stop on the machine frame, a counter-stop on the carriage to co-act with said stop on the frame in any position of the carriage, said carriage having a limited movement relatively to said stop in the direction of the carriage travel, and means to bring said stops together and release the carriage to permit it to travel while said stops are together.

4. In a typewriting machine, the combination with a carriage, of an escapement mechanism controlling the movement of the carriage, a stop on the machine frame, a counter-stop on the carriage to co-act with said stop on the frame in any position of the carriage, said carriage having a limited movement relatively to said stop in the direction of the carriage travel, means to bring said stops together and release the carriage to permit it to travel while said stops are together, and means to automatically return the counter-stop to its initial position on the carriage when released from the carriage stop.

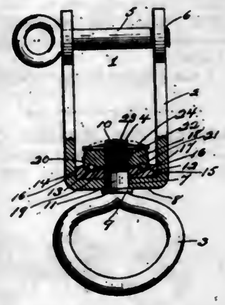
5. In a typewriting machine, the combination with a carriage, of a rack co-extensive with the carriage travel, a stop on the carriage, said carriage being movable relatively to said stop in the direction of its travel, a key, means operated thereby to bring said rack into engagement with the stop in any position of travel of the carriage, mechanism controlling the travel of the carriage and actuated by said key to release the carriage, and means to advance the carriage a distance determined by the relative movement of the carriage and stop.

[Claims 6 to 31 not printed in the Gazette.]

1,113,256. CLEVIS. ELMER L. SMITH, West Union, W. Va. Filed Mar. 22, 1913. Serial No. 756,246. (Cl. 59—95.)

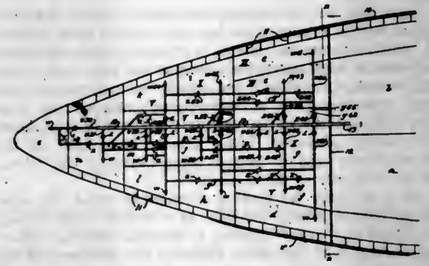
A device of the type described including a yoke having a central transverse portion and arms extending therefrom, the said central transverse portion being provided with a central aperture, a bearing plate having a central aperture in line with said central aperture in said central transverse portion, said bearing plate having its end portions in engagement with the arms of said yoke to prevent rotation of said bearing plate relatively to said yoke, said bearing plate being provided with an annular ball race in its outer face, an opposed bearing member provided with a central threaded aperture and an annular ball race on its inner face to register with the said ball race in the first mentioned bearing plate, a series of balls arranged in said ball races, a clevis eye having a stem provided with a threaded end, said stem being received in the central apertures of the said central transverse portion of the yoke,

and of the first mentioned bearing plate, the said threaded end of the said stem being threaded directly into the central threaded aperture of the second mentioned bearing plate, and means for locking said second mentioned threaded bearing plate to said threaded end of said stem to insure



rotation of said second mentioned bearing plate relatively to the first mentioned stationary bearing plate when said clevis eye and stem are rotated substantially as described.

1,113,257. METHOD AND MEANS FOR AUTOMATICALLY APPLYING DIFFERENTIAL AIR-PRESSURE TO COMPARTMENTS OF SHIPS. FRANK JULIAN SPRAGUE and FRANK DESMOND SPRAGUE, New York, N. Y. Filed Mar. 15, 1912. Serial No. 683,967. (Cl. 114—68.)



1. The combination with the fluid tight compartments of a vessel, of means for supplying compressed air to the several compartments, and reversibly operative means capable of effecting automatic differentiation of the air pressures therein in accordance with their respective distances from an injured compartment.

2. The combination with the fluid tight compartments of a vessel, of a source or reservoir of air under pressure, and means for admitting air therefrom into the compartments under pressures graduated serially with respect to the pressures in any one or more of them, said means being capable of automatically reversing the flow of air from one compartment to another.

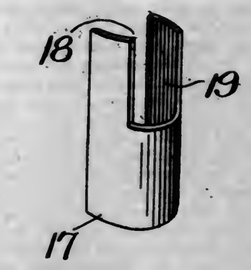
3. The combination with the fluid tight compartments of a vessel, of a source or reservoir of air under pressure, and means controlled by predetermined pressures in any one or more of the compartments for causing the admission or air under predetermined differentiated preasures reciprocally into and from the adjacent compartments.

4. The combination with the fluid tight compartments of a vessel, of a source or reservoir of compressed air, and means for admitting air therefrom to any one of the compartments when injured to expel the water, and at the same time automatically admitting the air under differentiated pressures serially into adjacent compartments more or less remote according as the initial pressures increase.

5. The combination with the fluid tight compartments of a vessel, of means for producing air pressures in the compartments, and relief valves capable of differentiating the pressures in opposite directions between said compartments.

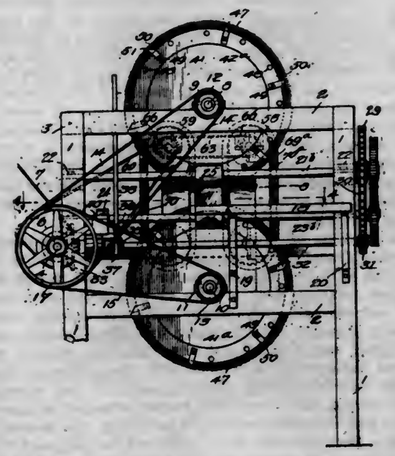
[Claims 6 to 35 not printed in the Gazette.]

1,113,258. VALVE-REMOVER. OLIVER E. STEWART, Brooklyn, N. Y. Filed Dec. 13, 1911. Serial No. 665,485. (Cl. 29—87.1.)



A valve lifter comprising a semi-cylindrical thimble, of uniform transverse thickness, the transverse sectional area of the space within the thimble being uniform throughout the length of the thimble, the thimble being provided with a slot leading in from one edge and located opposite the open side of the thimble, said thimble having at its opposite sides unbroken straight edges which extend the full length of the thimble.

1,113,259. BRICK-CLEANING MACHINE. JOSIAH OWEN SWISHER, Jacksonville, Fla. Filed May 22, 1913. Serial No. 769,203. (Cl. 125—6.)



1. A machine of the character specified, comprising a supporting frame, a plurality of series of shafts arranged transversely of the frame, the shafts of each series being in the same horizontal plane and arranged in spaced relation, and one of the said series being arranged directly above the other series and in spaced relation, each shaft of each series being in vertical alinement with the adjacent shaft of the other series, feed rollers journaled on the shafts of each series, said rollers being in alinement transversely of the machine and being arranged in such relation that the rollers of the succeeding pair of shafts will grasp a brick before it is released by the rollers of the preceding pair of shafts, a support for the brick in

front of the machine and at the first pair of rollers, shafts journaled above and below the said series and at right angles thereto, a cleaning wheel on each shaft, one of the said wheels having the lower portion of its periphery extending between the first and the second feed roller of the upper series and the other wheel having the upper portion of its periphery extending between the first and second roller on the lower series, each of the said cleaning wheels having an annular groove in its periphery, said grooves being filled with wire bristles, the free ends of the bristles extending beyond the wheels for engaging the brick to clean the same, radial blades secured to each wheel at the front side thereof and extending beyond the periphery of the wheel, said blades being arranged in spaced relation, the wheels engaging the upper and lower faces of the brick, endless cleaning belts mounted on each side of the feed rollers between the last and the next to the last feed rollers, said belts being arranged with their adjacent runs parallel and in spaced relation, each belt having laterally extending wire bristles on its outer face for engaging the sides of the brick, means for rotating the cleaning wheels in the same direction, means for moving the belts with their adjacent runs moving in opposite directions, a driving connection between the feed shafts at the front of the machine, means for rotating one of the said shafts, and means for disconnecting said shaft to and from its rotating means.

2. A machine of the character specified, comprising a supporting frame, cleaning wheels arranged one above the other and with the adjacent portion of their peripheries in spaced relation, wire bristles in connection with each wheel and extending beyond the periphery thereof, cleaning belts provided with laterally extending bristles, said belts being arranged behind the cleaning wheels and mounted for vertical movement with their adjacent runs parallel and in spaced relation, each of the cleaning wheels having radial cleaning blades arranged in spaced relation and extending beyond its periphery, and means for feeding a brick between the wheels and the adjacent runs of the belts, said means comprising upper and lower series of horizontal shafts arranged in the same plane and spaced apart from each other, the shafts of the upper series registering with the shafts of the lower series, a feed roller on each shaft, said rollers being in alinement and the rollers of the upper series being spaced apart from the rollers of the lower series to receive a brick between the same, the rollers of the series being spaced apart to permit each roller to grasp the brick before the succeeding roller releases the same, driving mechanism, a driving shaft for the machine, connections between the said driving shaft, the wheels and the belts for operating the same, and means for connecting and disconnecting the shafts and the driving shaft.

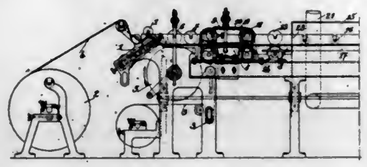
3. A machine of the character specified, comprising a supporting frame, cleaning wheels arranged one above the other and with the adjacent portion of their peripheries in spaced relation, wire bristles in connection with each wheel and extending beyond the periphery thereof, cleaning belts provided with laterally extending bristles, said belts being arranged behind the cleaning wheels and mounted for vertical movement with their adjacent runs parallel and in spaced relation, each of the cleaning wheels having radial cleaning blades arranged in spaced relation and extending beyond its periphery, and means for feeding a brick between the wheels and the adjacent runs of the belts, and means for operating the belts and the cleaning wheels.

4. In a machine of the character specified, a pair of cleaning wheels mounted to rotate on parallel axes in vertical alinement, wire bristles on the peripheral surface of each wheel, the free ends of the bristles extending beyond the said surface, a series of cleaning blades secured to the front face of each wheel and extending beyond the periphery thereof, said blades being arranged in spaced relation, each blade having its free end beveled, the wheels being spaced to engage the upper and lower faces of the brick, means for rotating the cleaning wheels and means for feeding a brick between the wheels.

5. In a machine of the character specified, a cleaning wheel comprising a pair of disks each having a hub at its center for receiving a shaft, each of the said disks having a laterally outward offset annular flange at its periphery, bristles of wire clamped between the flanges of the disks and with their free ends extending beyond the periphery of the disks, means for clamping the disks together on the bristles, and radial blades secured to the flange of one disk and extending beyond the periphery thereof, each blade having its outer end beveled, said bristles extending beyond the blades.

[Claims 6 to 11 not printed in the Gazette.]

1,113,260. MACHINE FOR MAKING CORRUGATED PAPER. JEAN TARDIEU, Caluire et Cuire, France. Filed June 14, 1912. Serial No. 703,686. (Cl. 34—48.)



1. In a machine for making corrugated paper, the combination with a drying chamber of a slotted table therein, coacting endless feed conveyers adjacent the inlet end of the drying chamber between which the paper passes, and similar coacting endless feed conveyers adjacent the outlet end of the chamber, the speed of the last mentioned conveyers being greater than that of the first mentioned.

2. In a machine for making corrugated paper, the combination with a drying chamber, of a slotted table therein over which the paper passes, a coacting pair of superposed endless feed conveyers adjacent the inlet end of the drying chamber, and between which the paper passes, a similar coacting pair of superposed endless feed conveyers adjacent the outlet end of the chamber, the speed of the outlet conveyers being greater than that of the inlet conveyers and a heated table adjacent the lowermost of each pair of conveyers.

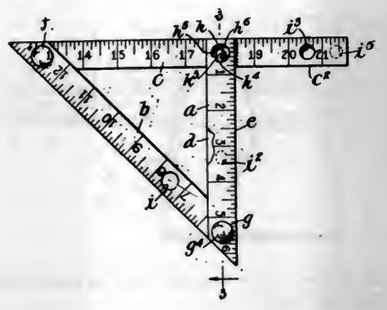
3. In a machine for making corrugated paper, the combination with a drying chamber, of a slotted table therein over which the paper passes, a coacting pair of superposed endless feed conveyers adjacent the inlet end of the drying chamber, and between which the paper passes, a similar coacting pair of superposed endless feed conveyers adjacent the outlet end of the chamber, the speed of the outlet conveyers being greater than that of the inlet conveyers, and rollers between the conveyers adapted to hold the paper against the aforesaid table.

4. In a machine for making corrugated paper, the combination with a drying chamber, of a sloted table therein over which the paper passes, a coacting pair of superposed endless feed conveyers adjacent the inlet end of the drying chamber, and between which the paper passes, a similar coacting pair of superposed endless feed conveyers adjacent the outlet end of the chamber, the speed of the outlet conveyers being greater than that of the inlet conveyers, and a pair of coacting feed rollers between the conveyers within the drying chamber.

5. In a machine for making corrugated paper, the combination with a drying chamber, of a sloted table therein over which the paper passes, a coacting pair of superposed endless feed conveyers adjacent the inlet end of the drying chamber, and between which the paper passes, a similar coacting pair of superposed endless feed conveyers adjacent the outlet end of the chamber, the speed of the outlet conveyers being greater than that of the inlet conveyers, rollers between the conveyers adapted to hold the paper against the aforesaid table and means for manually bringing all said rollers into and out of operation simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

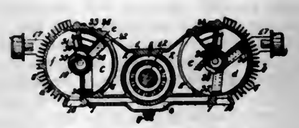
1,113,261. MECHANIC'S TOOL. ALBERT J. TOBIE, Westbury, N. Y. Filed Feb. 25, 1913. Serial No. 750,467. (Cl. 33—105.)



1. A combination tool of the class described composed of four parts, one of said parts being beveled at an angle of 45° at both ends and two of said parts being beveled at a corresponding angle at one end only, said parts being connected substantially as shown and described.

2. A tool of the class described composed of four parts one of which is beveled at an angle of 45° at both ends and two of which are beveled at an angle of 45° at one end, the beveled ends of the last named parts being respectively pivotally connected with the opposite ends of the part both ends of which are beveled, the fourth part being pivotally connected with one of the parts one end only of which is beveled and at a predetermined distance from the unbeveled end thereof, and the free end of the other part which is beveled at one end only being adapted to be detachably connected with said last named parts at the same point, and said fourth part being adapted to be swung parallel with the last named part and to be connected therewith at that end thereof which is connected with one end of the part both ends of which are beveled.

1,113,262. INTERNAL-COMBUSTION ENGINE. WILLARD IRVING TWOMBLY, New York, N. Y. Filed Feb. 16, 1911. Serial No. 608,889. (Cl. 123—18.)



1. In an internal combustion engine, the combination of a rotatable shaft; a cylinder adjacent to said shaft; fuel-intake and exhaust ports in the cylindrical walls thereof, a piston fulcrumed to oscillate in the cylinder controlling the opening and closing of the ports and connected to the shaft; and fixed means in the cylinder coöperating with the piston to separate the cylinder into fuel-pumping and combustion chambers.

2. In an internal combustion engine, the combination of a rotatable shaft; a cylinder adjacent to said shaft; fuel-intake and exhaust ports in the cylindrical walls thereof, a piston fulcrumed to oscillate in the cylinder controlling the opening and closing of the ports and connected to the shaft; and means in the cylinder coöperating with the piston to separate the cylinder into a pair of chambers and a fuel-pumping chamber at one end of the piston and the other a combustion chamber at the other end of the piston, comprising a fixed head extending between the walls of the cylinder and fulcrum of the piston.

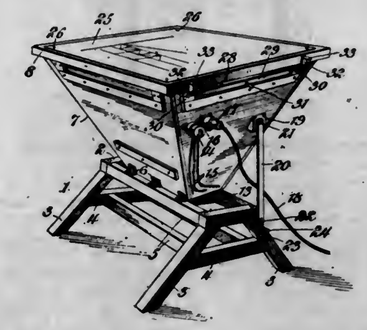
3. In an internal combustion engine, the combination of a rotatable shaft; a cylinder adjacent to said shaft; fuel-intake and exhaust ports in said cylinder, a piston to oscillate in the cylinder controlling the opening and closing of the ports and connected to the shaft; a fixed head in the cylinder, said head coöperating with the piston to separate the cylinder into fuel-pumping and combustion chambers; and a port in the piston controlled by the head to open and cut off oil communication between the fuel-pumping and combustion chambers at predetermined points in the oscillations of the piston.

4. In an internal combustion engine, the combination of a rotatable shaft having a crank; a piston chamber comprising a cylindrical drum located adjacent to said shaft; fuel-intake and exhaust ports in the cylindrical wall thereof; a segmental trunk piston having a hub portion with laterally-projecting trunnions whereby it is journaled in the ends of the drum to oscillate therein and controlling the opening and closing of the ports; a head in the piston chamber extending from the walls thereof to the piston and coöperating with one end of the piston to provide a fuel pumping chamber in the cylinder and with the other end of the piston to provide a combustion chamber in the cylinder; a crank fixed to one of the trunnions of the piston; and a connecting rod to connect the piston crank with the crank of the shaft.

5. In an internal combustion engine, the combination of a rotatable shaft having a crank; a cylindrical drum adjacent to said shaft; fuel-intake and exhaust ports in said drum, a piston to oscillate in said drum connected to the crank of the shaft; a head in the drum, said head with the piston separating the drum into two separate chambers, one of which constitutes a combustion chamber and the other a fuel pumping and compression chamber; and means to open and cut off communication between the combustion and fuel-pumping chambers at predetermined points in the oscillations of the piston.

[Claims 6 to 22 not printed in the Gazette.]

1,113,263. DRAWING-BOARD STRUCTURE. CHARLES B. ULRICH, Hancock, Mich. Filed Feb. 11, 1911, Serial No. 608,059. Renewed Mar. 9, 1912. Serial No. 682,757. (Cl. 35—12.)



1. A drafting structure comprising a basic member having an extended top portion, a light-box hinged at one edge of one end to one edge of the top portion of the basic member, said box being provided with a light transmitting working surface at the end thereof remote from that hinged to the basic member, light producing means lodged within the box for producing light to be transmitted through the working surface, and holding means between the box and the basic member for holding said box with its working surface level or inclined at will.

2. A drafting structure comprising a suitable support, a light box mounted thereon and open at the end carried by

the support, said light box being provided with a light transmitting working surface and with ventilating passages adjacent said surface, and light producing means lodged within the box near the open end thereof.

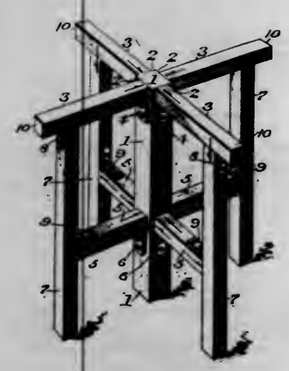
3. A drafting structure comprising a suitable support, an inverted frusto-pyramidal light box thereon open at the smaller end and provided at the larger end with a light transmitting working surface and with ventilating passages adjacent such surface, and light emitting means within the box adjacent the open end thereof.

4. A drafting structure comprising a basic member, a frusto-pyramidal light box hinged at the smaller end to the basic member and at the larger end provided with a light transmitting working surface, and adjustable holding means between the basic member and the box for holding said box with its working surface level or tilted, as desired.

5. A drafting structure comprising a basic member, a frusto-pyramidal light box having its larger end provided with a light transmitting working surface, hinge connections between one side of the small end of the box and the basic member, adjustable holding means between the basic member and the box for maintaining the box with its surface level or inclined, as desired, and light emitting means within the box at the smaller end thereof.

[Claims 6 to 12 not printed in the Gazette.]

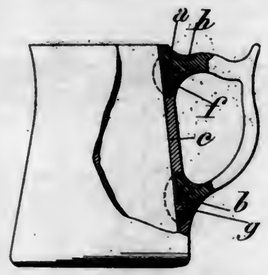
1,113,264. TRESTLE FOR TABLES, SCAFFOLDING, &c. BENJAMIN F. VANDERSLICE, Darby, Pa. Filed Apr. 1, 1913. Serial No. 758,133. (Cl. 20—83.)



A trestle composed of a central vertical column, upper and lower outwardly extending arms and vertical legs, similar butt hinges throughout, connecting said arms with said legs and column respectively, the inner hinges of said arms having their butts secured respectively to the under sides of said arms and the sides of said column below the arms causing said arms, when in operative position, to have thrust bearing against the column throughout the entire depth of the arms, the hinges of the lower arms connecting the latter with said legs and column being staggered on said lower arms, both upper and lower arms when in operative position being adapted to abut directly against the sides of said central column so that upward thrust of each leg is resisted by the entire end faces of the arms abutting against both the column and legs.

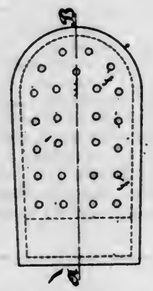
1,113,265. METAL RECEPTACLE. ANTOINE VIARD, Bron, France. Filed Apr. 21, 1913. Serial No. 762,571. (Cl. 22—203.)

In combination, a cast metal receptacle, a metal handle, and lugs on said handle embedded in the cast metal of which said receptacle is formed, said handle being provided with shoulders adjacent said lugs whereby the cast metal surrounding said lugs will abut said shoulders and



the outer surface of the receptacle will be flush with the surface of the handle.

1,113,266. BOOT-VENTILATOR. RICHARD WÄCHTER, Dresden, Germany, assignor, by mesne assignments, to Sponge Rubber Inner Heel Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1912. Serial No. 680,959. (Cl. 36—37.)

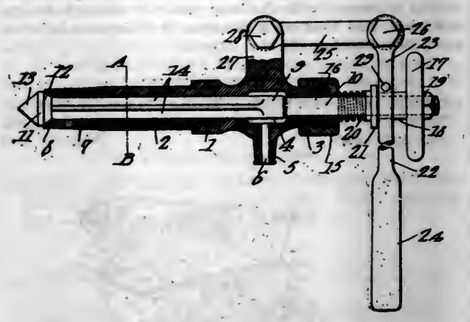


1. A boot ventilator comprising a piece of leather, an apertured, leather-covered cork-plate superposed on said leather-piece and connected thereto at one end, an india-rubber sponge inserted between said elements so as to hold the free ends thereof normally apart, and a tack connected to the leather-piece so as to engage the insole of the boot and keep the ventilator in its proper position.

2. A shoe heel cushion or ventilator comprising an apertured top member composed of a cork strip covered with leather, a yielding wedge-shaped india rubber sponge member and a bottom leather member, the top member and the bottom member being secured at one end thereof, the wedge-shaped member being secured in place between the top and bottom members, and the bottom member being provided with a depending holding tack that is directly secured to said bottom leather member at the free end thereof.

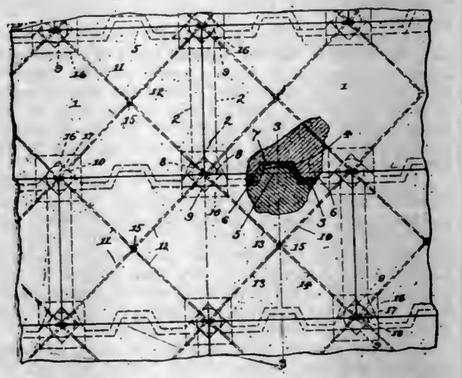
3. A shoe heel cushion or ventilator comprising a top member composed of a cork strip covered with leather and provided with vertically extending ventilating holes therethrough, a yielding wedge-shaped india rubber sponge member and a bottom member, the top and bottom members being secured at one end thereof by stitches which extend parallel to the front edge thereof and the bottom member being provided with a depending holding tack that is directly secured to said bottom member adjacent to the rear end thereof, said holding tack also passing through a reinforcing washer which is arranged between the bottom and the yielding wedge-shaped rubber member, the wedge-shaped rubber member also being secured to the bottom member.

1,113,267. GAGE-COCK. CHARLES A. WALKER, Pittsburg, Kans. Filed Aug. 28, 1913. Serial No. 787,188. (Cl. 136—3.)



In a device of the character described, a body having a valve seat and bore leading therefrom, a stem slidable through the bore, and having a valve coöperating with the said seat and longitudinal shear edges extending from the valve and coöperating with the walls of the bore, a hand wheel having a hub secured on the outer end of the stem, the hub being extended inwardly and having an exterior flange at its inner end, a lever disposed at right angles to the axis of the body and having a straight fork straddling the hub between the hand wheel proper and the flange, a link having one end pivoted between the ends of the fork arms, and having its other end connected to the body, a pin engaged through the arms of the fork, the said hub being disposed snugly between the said pin and the crotch of the fork, and a coiled wire spring upon the said stem between the body and hub.

1,113,268. BUILDING STRUCTURE. FRANK C. WATSON, Wallingford, Pa. Filed Oct. 2, 1909. Serial No. 520,717. (Cl. 72—44.)



1. A wall, composed of a series of superposed tiles, each tile having a plurality of flexible wires or rods passing therethrough and projecting beyond the notched edges thereof and into pockets or recesses formed by the notches as the tiles are assembled; and adjustable means forming a part of the wall structure, extending into said recesses, engaging said wires and shortening their effective length when said means is adjustetd, whereby the tiles will be drawn together.

2. A wall, composed of a series of superposed tiles, each having at its edge, upon one face, cut-away portions which, when the tiles are assembled, form pockets; one or more flexible wires extending through each tile and beyond the edges thereof, said wires being so placed that they terminate in the pockets; and adjustable means forming a part of the wall structure, extending into and substantially closing the pockets, said means engaging the wires and serving, when actuated, to shorten the effective length thereof, whereby the tiles will be drawn together in an edgewise direction.

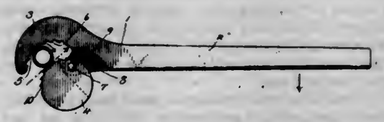
3. A wall, composed of a series of superposed tiles, each having a complete front face and a rear face having cut-away portions adjacent its edges, said cut-away portions forming pockets when the tiles are assembled; flexible wires passing through each tile and having their ends protruding beyond said cut-away portions; and adjustable means forming a part of the ultimate wall structure, said means engaging the wires of the adjacent tiles and serving, when actuated, to shorten the effective length of the wires and to thereby draw the tiles together.

4. A wall, composed of a series of superposed tiles having notched edges, each tile having a flexible wire or rod passing therethrough and beyond the notched edges of the tile; winding means forming a part of the ultimate wall structure and extending into the pockets formed by the notched edges, said means engaging the wires of the adjacent tiles and serving, when actuated, to shorten the effective length of the wires, whereby the tiles will be drawn and held together; and means for holding the aforesaid winding means against movement when once adjusted.

5. A wall composed of a series of superposed tiles, each tile having a groove or channel formed around its edges, and with lugs or projections formed upon the upper and lower edges of said tile and adapted to pass into the grooves of the next adjacent tile; a plurality of flexible wires or rods passing diagonally through each tile, the ends of the wires or rods projecting outwardly therefrom; and means for engaging and winding or twisting up said ends, whereby the effective length of said wires will be shortened and the tiles drawn together thereby and the grooves aforesaid will form a continuous channel for the reception of grouting or the like.

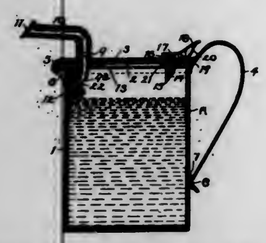
[Claims 6 to 12 not printed in the Gazette.]

1,113,269. PIPE-WRENCH. JOHN A. WATSON, Raymond, Ill. Filed June 5, 1912. Serial No. 701,765. (Cl 81—95.)



A wrench of the type described including a handled fixed jaw having an arcuate toothed face, the handle of said jaw having a fin-like formation underlying the arcuate toothed face of said jaw and a partially toothed pivoted circular jaw eccentrically hung from said fin-like formation, the said two toothed surfaces of the said jaws forming a semicircle when the pivoted jaw is in a closed position, the pivot of said circular jaw being located on the diameter line of the said semicircle formed by said toothed surfaces, each tooth on said jaws having a perpendicular wall in line with the radii of said pivoted circular jaw when the said circular jaw is in a closed position, the perpendicular walls of the teeth of said fixed jaw being parallel with the radial walls of the teeth of the pivoted jaw when said pivoted jaw is in an open position, the pivotal point of the said pivoted jaw bearing a fixed relation to the diameter of the said semicircle formed by the said two toothed surfaces on said jaws substantially as described and for the purposes set forth.

1,113,270. COVER FOR EVAPORATED-MILK CANS OR THE LIKE. FRIEDRICH C. K. WERNER, Brooklyn, N. Y. Filed Aug. 23, 1913. Serial No. 786,238. (Cl. 65—61.)



A dispensing holder for evaporated milk cans and the like, including a can receiving member, a hinge lug projecting from one side thereof, a latch shoulder projecting from the opposite side thereof, a cover, a transverse bar extending across and applied to the cover, one end of the bar projecting beyond the edge of the cover and having a pivotal connection with the before mentioned hinge lug, while the opposite end of the bar extends beyond the cover and terminates in a handle having a hook member at the end thereof adapted to engage with the before mentioned latch shoulder to hold the cover in position, a dispensing tube carried by the cover and having a pointed end adapted to penetrate the top of the can, and an air inlet tube carried by the cover and having a pointed end adapted to penetrate the can.

1,113,271. TIE-CLASP. CHARLES F. WILLINGHAM, Houston, Tex. Filed Jan. 12, 1912. Serial No. 670,765. (Cl. 2—11.)

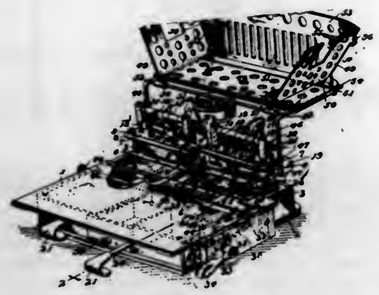
1. A device of the character described composed of a suitable clasp and a hasp hinged thereto in the rear thereof, a latch for locking said hasp in a closed position, a stationary stay having one end free secured to said hasp at its lower end on the inside, a sliding rivet engaging with said hasp and stay and regulating the free end of said stay relative to the hasp.

2. A device of the character described composed of a suitable clasp and a hasp hinged thereto on its rear side, a resilient member connected with said clasp and hasp, and tending to normally hold said hasp open, a latch for locking said hasp closed, a resilient stay secured to the inside of said hasp at its lower end and having its upper end free and a means having slidable engagement with said hasp and stay whereby the free end of the stay may be regulated relative to the hasp.

3. A device of the character described composed of a surrounding clasp and a hasp hinged thereto at one side, a resilient member engaging with said clasp and hasp tending to hold the hasp open, a latch carried by the clasp and arranged to engage with the hasp when the same is closed and lock the same closed, a resilient member normally tending to hold said latch in engagement with said hasp, a resilient stay rigidly secured at its lower end to the inside of the hasp and having one end free and means having slidable engagement with the stay and hasp whereby the position of the free end of the stay may be regulated relative to the hasp.

4. In a device of the character described, a surrounding clasp and a hasp hinged thereto on its rear side, said hasp having a lengthwise slot therein, a coil spring engaging with said clasp and hasp and tending to hold the hasp open, a latch carried by the clasp comprising a plurality of eyes and a pin adapted to pass therethrough and arranged to engage with the hasp and pass through an eye carried by said hasp when the same is closed and lock the same in a closed position.

1,113,272. CIGAR-MAKER'S TOOL. JASPER S. WINGET, York, Pa. Filed Nov. 23, 1908. Serial No. 464,070. (Cl. 131—48.)



1. A cigar maker's tool comprising a board, upper and lower former-carrying members located adjacent the inner edge of the board, the lower member movable under and away from the upper member, and the upper member movable vertically toward and away from the lower member, an operating mechanism adapted to positively actuate the upper member and yieldingly connected with the lower member, said operating mechanism constructed to move the lower member under the upper member and its continued movement causing the upper member to move downward by compressing the said yielding mechanism, the parts constructed and arranged to lock the two parts in their closing position when there is sufficient pressure from the amount of filler but permit them to separate when there is not a sufficient pressure, for the purpose described.

2. A cigar maker's tool comprising a board, two former carrying members movable toward and away from each other, one carrying a female former and the other a male former, and mechanism constructed and arranged to move the formers together and to lock them in the closed position when there is sufficient filler in the female member but permit them to separate when there is not sufficient filler, for the purpose described.

3. A cigar maker's tool comprising a board, relatively separable male and female bunch formers located adjacent the board, means for moving the formers toward and away from each other, a spring for normally separating the said members, the mechanism for moving the formers together being constructed to lock them against the separating pressure of the spring when there is sufficient filler in the formers but permitting the spring to separate them when there is not sufficient filler in the former.

4. A cigar maker's tool comprising a board, relatively separable male and female formers located adjacent the board, a toggle lever mechanism for moving the said members toward and away from each other, the toggles arranged to be in a vertical position when the two parts of the former are together, a member for operating the toggles, a spring tending to move the toggle mechanism into the separating position, the pressure of the bunch when there is the proper amount in the former adapted to cause sufficient friction to hold the toggle mechanism in the closing position against the separating action of said spring, the said spring separating the said members when there is not sufficient filler thereby proving to the operator that there is or is not a sufficient quantity of filler to properly make the cigar.

5. A cigar maker's tool comprising a board, a horizontally-movable female former and a vertically-movable male former, an operating member at the outer side of the board and having its inner end adapted to engage mechanism for moving the male member vertically, and a spring connection between the operating member and the horizontal movable former member, whereby the last said member is moved horizontally through the spring connection and permitted to continue its movement independent of the vertically-movable member to actuate the vertically-movable member independently of the horizontally-movable member.

1,113,273. AUTOMATIC TRAIN-CONTROL SYSTEM. MARTIN L. WINN, Russellville, Ark. Filed June 30, 1913. Serial No. 776,714. (Cl. 246—47.)

1. An automatic train control system comprising a plurality of guiding tubes located along a track in inclined relation to the said track and in overlapping relation with respect to one another, each of said tubes being provided at one end with a bent portion, a flexible connection extending through the tube within and around its bent portion, frames connected to the ends of the said flexible connection and movable in the same direction to move the said flexible connection in relatively opposite directions, and a rocking arm connected to the flexible connection intermediate the ends of the latter and movable from a horizontal to a vertical position and vice versa upon relatively opposite movements of said flexible connection, all for the purpose described.

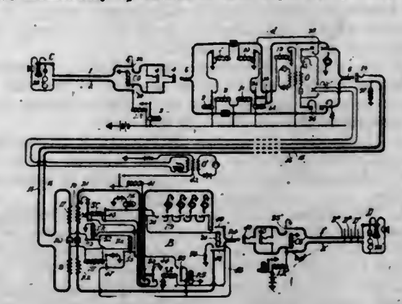
2. In a train control of the character described, a tripping arm pivoted to swing from a vertical to a horizontal position and vice versa, a support for said arm consisting of a base and spaced uprights, a pin mounted through the uprights and through the tripping arm and forming the pivot of the latter, spring members carried by the said uprights and engaging the said tripping arm to frictionally hold the latter in both of its positions, whereby to prevent accidental displacement thereof, and laterally projecting shields carried by the said tripping arm to cover and protect the said springs and supporting uprights, substantially as described.

3. In a train control of the character described, the combination of a protecting tube having bearings therein provided with squared apertures, a plunger consisting of a squared bar working through the said bearings, a Y-shaped arm secured to and extending upwardly from the outer end of the plunger, and a bumper plate having a flexible elastic connection with the upper portion of the said Y-shaped arm, substantially as described.

4. An automatic train control system comprising a plurality of guiding tubes located along a track, each guiding tube overlapping others and provided with a bent portion at one end, a plunger movably mounted within said bent portion, a flexible connection secured at one end to said plunger and extending through said guiding tube, a rocking arm secured to said flexible connection intermediate its ends and adapted to be swung thereby from a horizontal to a vertical position, and a plunger movable in the same direction as the first plunger and to which the opposite end of said flexible connection is secured whereby to swing the rocking arm back to a horizontal position.

1,113,274. TELEPHONE TRUNKING SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 10, 1910. Serial No. 596,650. (Cl. 179—49.)

1. In a telephone system, a trunk circuit for connecting calling and called sub-stations, comprising a trunk supervisory relay adapted to be operatively energized upon response from a called substation when connected thereto, a signal controlling relay for said trunk circuit adapted to be energized responsive to a responsive energization of the supervisory relay, a signal operated responsive to such energization of the signal relay, and means to prevent said signal relay from being energized responsive to an incidental momentary operation of said supervisory relay.



2. In a telephone system, the combination with a trunk circuit of a cord circuit connected to the incoming end thereof, a called subscriber's sub-station connected to the outgoing end thereof, a trunk supervisory relay connected to a talking strand of the called sub-station, adapted to be operatively energized upon response of the called subscriber, a signal controlling relay for said trunk circuit adapted to be energized responsive to a responsive energization of said supervisory relay, a trunk signal controlled by said signal relay, means for connecting calling current to said strand, and means to prevent any energization of said signal relay responsive to an incidental momentary operation of said supervisory relay.

3. A telephone system including a trunk circuit, a link circuit connected to the incoming end thereof, a called subscriber's line connected to the outgoing end thereof, a relay in bridge of said incoming end, energized by current from said link circuit, a supervisory relay for said trunk adapted to be energized upon response of the called subscriber, and having normally closed contacts controlling said bridged relay, a signal controlling relay, adapted to be energized responsive to energization of said supervisory relay and deënergization of said bridged relay, and means for momentarily holding the armature of said bridged relay attracted and said contacts open, after an energization of said supervisory relay.

4. In a telephone system, a trunk circuit, a relay in bridge of the incoming end thereof, an energizing circuit for said relay, a supervisory relay for said trunk adapted to be energized upon response of a connected called subscriber, a second relay, switch contacts on said supervisory relay adapted upon energization of said supervisory relay to interrupt the energizing circuit of the said bridged relay and include said second relay in said energizing circuit, means for momentarily holding the armature of said bridged relay attracted after its energizing circuit is opened, a signal controlling relay, and an energizing circuit therefor adapted to be closed upon energization of said second relay and deënergization of the bridged relay.

5. A telephone system, comprising a trunk circuit for connecting telephone lines, a cord circuit for connecting to the incoming end thereof, a slow relay in bridge of said incoming end, energized by current from said cord when connected to said trunk, a second relay, switch contacts for disconnecting said slow relay to deënergize it and substituting said second relay to be energized, a supervisory relay, adapted to be energized upon response of a called subscriber when connected to, for controlling said switch contacts, a signal controlling relay, and an energizing circuit therefor, adapted to be closed upon deënergization of said slow relay and energization of said second relay.

[Claims 6 and 7 not printed in the Gazette.]

1,113,275. PROCESS OF VARYING THE VELOCITY OF DETONATION OF EXPLOSIVES. CLIFFORD A. WOODBURY, Chester, Pa., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 18, 1912, Serial No. 698,345. Renewed Mar. 2, 1914. Serial No. 822,071. (Cl. 52—3.)

1. The process of determining the velocity of detonation of dynamite, which consists in utilizing grains of ammonium nitrate of a relatively large size to obtain a relatively low velocity of detonation.

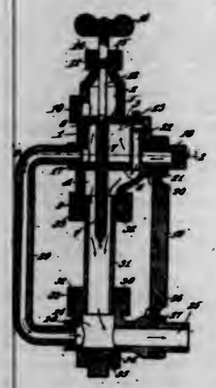
2. The process of making two explosives of different velocities of detonation, which consists in forming that one of relatively high velocity by the use of smaller grains of ammonium nitrate than the other one.

3. The process of reducing the velocity of detonation of an explosive comprising ammonium nitrate, which consists in increasing the size of the grains of ammonium nitrate.

4. The process of producing an ammonium nitrate explosive of relatively low velocity of detonation, which consists in introducing into such explosive ammonium nitrate in the form of relatively large grains.

5. The process which comprises producing explosives having varying velocities of detonation by adding thereto ammonium nitrate consisting of grains varying in size according to the rate of detonation desired.

1,113,276. ATOMIZING-LUBRICATOR. IRA M. WOODMANSEE, St. Louis, Mo. Filed Mar. 12, 1914. Serial No. 824,313. (Cl. 184—56.)



1. In an atomizing lubricator, upper and lower casings, a mixing tube terminally received by the casing, packing means carried by the casings and embracing the mixing tube, the upper casing having a steam chamber in communication with the mixing tube, having a steam inlet, and a lubricant tube extending through the said chamber, the lubricant tube having an inlet at one end and having its other end projecting into the mixing tube, the lower casing having an outlet, and a by-pass connecting the said steam chamber and the lower casing.

2. In an atomizing lubricator, a casing having primary and secondary steam chambers, a steam inlet leading to the primary steam chamber, and a lubricant tube passing through the secondary steam chamber and having an inlet, a mixing tube communicating with the secondary steam chamber, the mixing tube receiving the lubricant tube and having an outlet, and a trap tube in communication with the secondary chamber and projecting upwardly within the primary steam chamber.

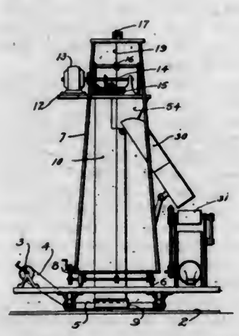
3. In an atomizing lubricator, a casing having primary and secondary steam chambers, a steam inlet leading to the primary steam chamber, and a lubricant tube passing through the secondary steam chamber and having an inlet, a mixing tube communicating with the secondary steam chamber, the mixing tube receiving the lubricant tube and having an outlet, and a trap tube in communication with the secondary chamber and projecting upwardly within the primary steam chamber, and discharge means connected to the primary steam chamber adjacent its bottom, for the discharge of the condensation.

4. In an atomizing lubricator, a casing having primary and secondary steam chambers, an inlet for the primary steam chamber and a lubricant tube extending through said chambers and having an inlet, a mixing tube in communication with the secondary steam chamber, the mixing tube receiving the nozzle end of the lubricant tube and having an outlet, and a trap in communication with the secondary steam chamber and projecting upwardly within the primary steam chamber.

5. In an atomizing lubricator, a casing having primary and secondary steam chambers, an inlet for the primary steam chamber and a lubricant tube extending through said chambers and having an inlet, a mixing tube in communication with the secondary steam chamber, the mixing tube receiving the nozzle end of the lubricant tube and having an outlet, and a trap in communication with the secondary steam chamber and projecting upwardly within the primary steam chamber, and discharge means in communication with the lower portion of the primary steam chamber for the escape of the condensation.

[Claims 6 to 11 not printed in the Gazette.]

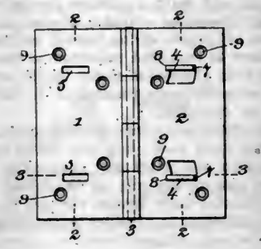
1,113,277. MACHINE FOR EXCAVATING TURF. CONSTANTINE ZELENAY, Tver, Russia. Filed Apr. 26, 1912. Serial No. 693,419. (Cl. 37—27.)



1. In a peat cutting and treating machine, in combination, a vertical tube, a hollow shaft therein carrying a conveyer screw, a shaft extending through said hollow shaft, both of said shafts being vertical, the lower end of said second shaft extending below the lower end of said first shaft, a screw-like cutting device carried by the lower end of said second shaft to cut the peat and to deliver it into said tube, said cutting device consisting of a truncated conical member having a plurality of helical passages therethrough, and having cutters at the lower edges of said openings, a motor, and gearing operatively connecting said motor with said shafts whereby the latter are driven by the former.

2. In a peat cutting and treating machine, in combination, a vertical tube, a hollow shaft therein carrying a conveyer screw, a shaft extending through said hollow shaft, both of said shafts being vertical, the lower end of said second shaft extending below the lower end of said first shaft, a screw-like cutting device carried by the lower end of said second shaft to cut the peat and to deliver it into said tube, said cutting device consisting of a truncated conical member having a plurality of helical passages therethrough, and having cutters at the lower edges of said openings, said cutters extending beyond the lower piece of said member, said member carrying a drill to facilitate the vertical movement of the cutting device, a motor, and gearing operatively connecting said motor with said shafts whereby the latter are driven by the former.

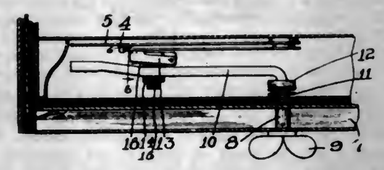
1,113,278. INTERLOCKING HINGE. FREDERICK C. ZOBEL, New York, N. Y. Filed Dec. 4, 1911. Serial No. 663,789. (Cl. 16—107.)



1. A door hinge having projections formed integral with one leaf and openings adapted to receive said projections formed in the other leaf, said projections being hook-shaped.

2. A door hinge composed of two leaves each of which is a duplicate of the other, and has an inwardly projecting tongue formed by stamping out and bending inwardly a portion of the hinge butt, whereby, when the hinge is closed the tongue on each leaf will enter the recess formed by stamping up the tongue on the other leaf.

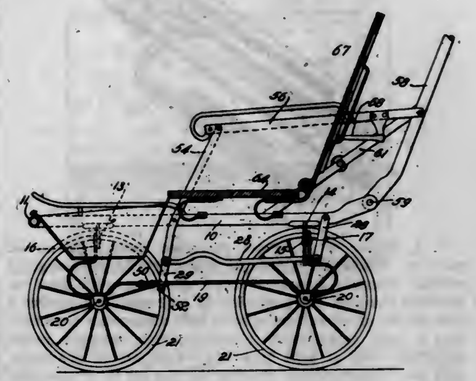
1,113,279. ALARM-CLOCK. VICTOR E. ADLAND, Chicago, Ill. Filed Jan. 14, 1911. Serial No. 602,584. (Cl. 161—3.)



The combination with a casing, and a clock therein, of an adjustable contact arm supported concentric and parallel with the clock hands and adjacent the plane of rotation thereof, said arm being bent inwardly near its outer end, a contact shoe carried by said arm and shiftable longitudinally thereon, the bent outer portion of said arm carrying said shoe into the path of the minute hand of said clock, a source of current, an alarm, and a circuit including said source of current, the alarm, the clock hands and said contact arm.

1,113,280. VEHICLE. GEORGE B. AMBLER, Leominster, Mass., assignor to F. A. Whitney Carriage Co., Leominster, Mass., a Corporation of Massachusetts. Filed Apr. 21, 1909. Serial No. 491,240. (Cl. 21—83.)

1. A vehicle of the character described comprising, in combination, a body frame; foldable wheel-carrying means connected to the frame; a pair of links pivoted to the body frame to move in a plane transverse to the direction of folding movement of the wheel-carrying means; a bar connecting said links to move therewith in substantial parallelism with said body frame; a tappet finger on the wheel-carrying means projecting into the plane of movement of said bar; guiding means proximate said tappet finger and rigid with the body frame to guide the movement of said bar; locking means on the wheel-carrying means to engage said bar at the respective limits of movement thereof in folding and erecting the wheel-carrying means; handle means pivoted on the body frame; and means connecting the handle means and one of the aforesaid links, whereby pivotal movement of the handle means rocks the said link and moves the said bar.



2. A vehicle of the character described comprising, in combination, a body frame; foldable wheel-carrying means connected to the frame; a pair of links pivoted to the body frame to move in a plane transverse to the direction of folding movement of the wheel-carrying means; a bar connecting said links to move therewith in substantial parallelism with said body frame; a tappet finger on the wheel-carrying means projecting into the plane of movement of said bar; locking means on the wheel-carrying means to engage said bar at the respective limits of movement thereof in folding and erecting the wheel-carrying means; handle means pivoted on the body frame; and means connecting the handle means and one of the aforesaid links.

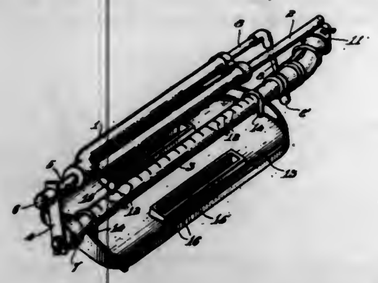
3. A vehicle of the character described comprising, in combination, a body frame; foldable wheel-carrying means connected to the frame; a pair of links pivoted to the body frame to move in a plane transverse to the direction of folding movement of the wheel-carrying means; a bar connecting said links to move therewith in substantial parallelism with said body frame; a tappet finger on the wheel-carrying means projecting into the path of movement of said bar; and locking means in the wheel-carrying means to engage said bar at the respective limits of movement of said bar in folding and erecting the wheel-carrying means.

4. A vehicle of the character described comprising, in combination, a body frame; foldable wheel-carrying means connected to the frame; a pair of links pivoted to the body frame to move in a plane transverse to the direction of folding movement of the wheel-carrying means; a bar connecting said links to move therewith; a tappet finger on the wheel-carrying means projecting into the plane of movement of said bar; and guiding means rigid with the body frame to guide the movement of said bar.

5. A vehicle of the character described comprising, in combination, a body frame; foldable wheel-carrying means connected to the frame; a pair of links pivoted to the body frame to move in the same plane; a bar connecting said links to move therewith in substantial parallelism with said body frame; a tappet finger on the wheel-carrying means projecting into the path of movement of said bar; handle means pivoted on the body frame to move in a plane substantially parallel to the plane of movement of links; and means connecting the handle means and one of the aforesaid links, whereby pivotal movement of the handle means rocks the said link and moves the said bar.

[Claims 6 to 30 not printed in the Gazette.]

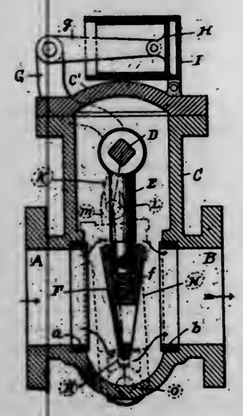
1,113,281. OIL-BURNER. LYCURGUS E. AMBROSE, Mena, Ark. Filed Nov. 3, 1913. Serial No. 798,936. (Cl. 158—64.)



1. A burner of the class described comprising an oil pan; an elongated vaporizing chamber and an elongated mixing chamber arranged above said pan with said vaporizing chamber positioned above said mixing chamber; a fuel supply communicating with said vaporizing chamber; and a pipe establishing communication between corresponding ends of said vaporizing and mixing chambers, said end of said mixing chamber having air inlet openings, said oil pan having openings therein positioned adjacent opposite sides of said mixing chamber, substantially as described.

2. A burner of the class described comprising an oil pan; an elongated vaporizing chamber and an elongated mixing chamber arranged above said pan with said vaporizing chamber positioned above said mixing chamber; a fuel supply communicating with said vaporizing chamber; a pipe establishing communication between corresponding ends of said vaporizing and mixing chambers, said ends of said mixing chamber having air inlet openings, said oil pan having openings therein positioned adjacent opposite sides of said mixing chamber; and upwardly extending flanges surrounding said openings and provided at the periphery of said pan, substantially as described.

1,113,282. EMERGENCY CHECK-VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed Nov. 4, 1912. Serial No. 729,525. (Cl. 137—4.)

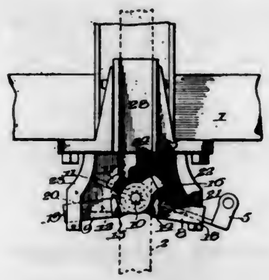


1. In valve mechanism, the combination of a casing having two valve seats, a valve on a pivot shaft in the casing and mounted to swing against either seat, a lever arm fixed on the pivot shaft of the valve, a collapsible elastic member pivoted to the casing and pivoted to said arm, the said member and arm forming a pair of toggle links adapted to hold the valve normally in position off both valve seats.

2. In valve mechanism, the combination of a valve casing having two valve seats, a shaft in the casing, a swinging valve carried rigidly on the shaft in position to swing against either of said seats, an arm on said shaft outside the casing, a plunger pivoted to said arm, a dashpot pivoted on the casing and coöperating with said plunger, a second arm on said shaft, a cylinder pivoted to said arm, a coöperating telescoping cylinder pivoted on the valve casing, and an adjustable spring therein holding said telescoping cylinders in expanded condition so that the cylinders and arm form adjustable spring toggle levers to hold the valve in normally open position or to hold it closed, substantially as described.

3. A double check-valve comprising a casing with two seats, a pivoted valve fixed on a rock shaft, spring toggle levers attached to said shaft and adapted to permit the valve to close against the seat on the inflow side of the casing, or to hold the valve against the seat on the outflow side when the difference in pressure between two sides surpasses a given and adjustable value, substantially as described.

1,113,283. SAFETY DEVICE. HENRY C. ANDERSON, Chicago, Ill. Filed Apr. 28, 1911. Serial No. 623,902. (Cl. 187—90.)



1. Apparatus of the character described comprising an elevator car, guides for said car, safety devices adapted for engaging the opposite sides of each of said guides, means controlled by the speed of the car for actuating said safety devices to engage the guides, said safety devices being rotatably mounted upon and adjustably associtaed with said means to thereby accommodate for varying distances between the guides.

2. An apparatus of the character described comprising an elevator car, a guide therefor, and safety devices adapted to engage the guide when the car reaches an undue speed, said safety devices including guide engaging jaws and additional jaws for limiting the distance said first aforesaid jaws may enter said guide.

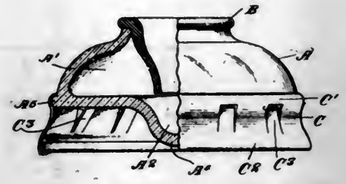
3. A safety device for elevators comprising a guide, jaws normally not in engagement with the elevator guide, and means operable upon undue increase in speed of the elevator for bringing said jaws into engagement with the guide, said means including a lever, a shaft carrying said jaws, and means for raising said shaft and jaws into engagement with the guide, said second mentioned means including a stationary member adapted to engage one end of said lever.

4. A safety device for elevators comprising a guide, jaws normally not in engagement with the elevator guide, means operable upon undue increase of speed of the elevator for bringing said jaws into engagement with the guide, said means comprising a lever and a shaft carrying said jaws and a spring for releasing said jaws.

5. Apparatus of the character described including an elevator car, a pair of guides therefor, safety jaws for said car for each guide, and governor controlled means for causing simultaneous engagement of the jaws with both of the guides aforesaid, said means comprising longitudinally extending means carrying said jaws, a lever secured thereto to operate said means, stationary members and projections carried by said means to engage said stationary members to cause simultaneous engagement of the jaws with both of the guides aforesaid.

[Claims 6 to 10 not printed in the Gazette.]

1,113,284. INKSTAND. FRANK M. ASHLEY, New York, N. Y. Filed July 14, 1911. Serial No. 638,457. (Cl. 120—73.)



1. An inkstand comprising a bowl having a circumferential bead, a circular base therefor, the internal diameter of the upper edge being smaller than that of the bead, the upper portion of said base forming a continuous unbroken band, peripheral slits below said continuous band, the material between the slits being bent inwardly to constitute springs adapted to spring under the bowl when the latter is inserted into the base.

2. An inkstand comprising a bowl having a downwardly projecting bottom portion, of a base consisting of a sheet metal ring having a lower internal diameter not less than the greatest diameter of the bowl and an upper internal diameter less than the greatest diameter of the bowl said ring having vertical slits, the material between the slits constituting springs, said springs being adapted to spring under the bowl when the latter is inserted into the base.

3. An inkstand comprising a bowl having a downwardly projecting bottom portion, of a base consisting of a sheet metal ring having a lower internal diameter not less than the greatest diameter of the bowl and an upper internal diameter less than the greatest diameter of the bowl said ring having vertical slits, the material between the slits constituting springs contiguous to each other, the bottom portion of the ring presenting a continuous unbroken band.

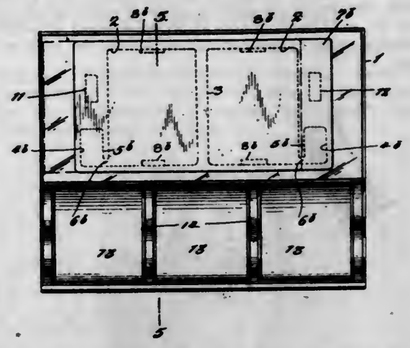
4. An inkstand comprising a bowl having a lower central enlargement and a peripheral bead, of a base consisting of a sheet metal ring having a continuous outer surface consisting of contiguous springs, and a contracted upper portion adapted to engage the bead, said springs being adapted to snap under the bowl and coöperate with said contracted portion and said bead to retain the bowl in place.

5. An inkstand comprising a bowl having a central downwardly projecting portion and an annular bead, of a base consisting of a ring having a continuous upper portion of a less diameter than the diameter of the bead, and a continuous lower portion of a diameter not less than the diameter of the bead, and vertically extending integral springs adapted to snap under the bowl and coöperating with the bead and the upper portion of the ring to hold the bowl in place, said springs forming a continuous outer surface.

[Claims 6 to 9 not printed in the Gazette.]

1,113,285. INKSTAND. FRANK M. ASHLEY, New York, N. Y. Filed Jan. 3, 1913. Serial No. 739,947. (Cl. 120—5.)

1. An inkstand having a base portion containing a plurality of reservoirs therein located in substantial alinement with each other, an ink dip formed for each reservoir extending at one side thereof, and a single cover for maintaining the main reservoirs closed at all times, said cover having a portion thereof for closing each ink dip, said cover being movable in the direction of the longitudinal disposition of the reservoirs to uncover one ink dip at a time while maintaining all of the reservoirs closed at all times.



2. An inkstand having a base portion containing a plurality of reservoirs therein and ink dips therefor located in substantial alinement with each other, and a single cover for maintaining the main reservoirs closed at all times, guiding means for the cover, said cover having a portion thereof for closing each ink dip, said cover being movable to uncover one ink dip at a time while maintaining all of the reservoirs closed at all times.

3. An inkstand comprising a base portion having two reservoirs therein, an ink dip for each reservoir located in alinement with said reservoirs, and a cover for closing the reservoirs adapted to open and close the ink dips, the ends of said cover extending over said dips and the intermediate portion of the cover extending over said reservoirs, guiding means for the cover comprising projections extending therefrom engaging with the base, said cover being movable longitudinally to cover and uncover the ink dips while maintaining the reservoirs covered at all times.

4. An inkstand comprising a base having two reservoirs therein located side by side, an ink dip for each reservoir consisting of a chamber extending exteriorly thereof, and a constricted opening between said chambers and reservoir, said ink dips and reservoirs being all located in substantial alinement, and a single cover for the base, the ends of which serve to open and close said ink dips, the reservoirs being closed by the body of the cover at all times.

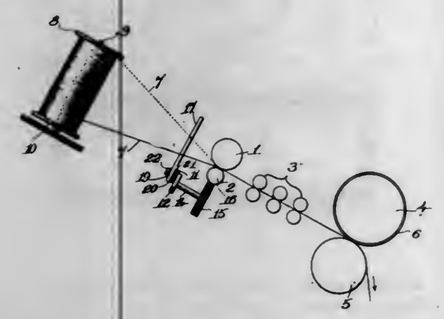
1,113,286. YARN-SPINNING APPARATUS. AMARIAH AVERY, Manchester, N. H. Filed June 10, 1912. Serial No. 702,647. (Cl. 118—7.)

1. In yarn spinning apparatus, a series of rolls through which the yarn is drawn from rotatable spools, a traverse-bar between the spools and rolls and reciprocated with a constant stroke, and a series of guides fixed thereon and each having an upwardly extended, diagonal slot through which the yarn passes from a spool to the rolls, the travel of the yarn up and down the slot and the bodily traverse of the guide laterally coöperating to prevent the traverses of the yarn on the rolls from reversing at points equidistant from the ends of the rolls.

2. In yarn spinning apparatus, a series of rolls to act upon the yarn drawn from rotatable spools, a series of laterally reciprocated yarn-guides between the spools and the rolls, to traverse the yarn as it passes through the rolls, and means on each guide to act upon the yarn with which the guide coöperates and cause the yarn as traversed on the rolls to reverse at points in irregular paths thereon.

3. In yarn spinning apparatus, drawing rolls, upright supports for rotatable spools from which yarn is drawn by the rolls, and a series of yarn guides reciprocated lat-

erally with a constant stroke in a plane substantially parallel to the axes of rotation of the spools and located between the latter and the rolls, each guide having an upwardly extended, diagonal slot through which the yarn passes from a spool to the rolls, the yarn traveling longitudinally of the slot as its point of departure from the spool rises and falls and acting in conjunction with the bodily traverse of the guide to cause the yarn as traversed upon the rolls to reverse its direction laterally at points in irregular paths at varying distances from the ends of the rolls.

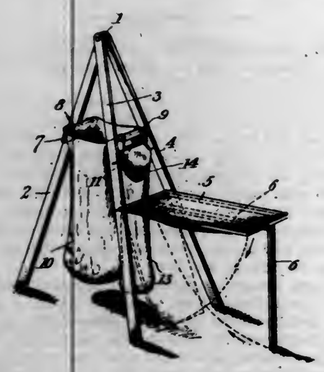


4. In yarn spinning apparatus, a series of rolls through which the yarn is drawn, and means to traverse the yarn upon the rolls as it passes therethrough, said means comprising a guide reciprocated laterally with a constant stroke and having an upwardly extended diagonal slot through which the yarn passes to the rolls, the resultant action of the lateral traverse of the yarn and its travel longitudinally in the slot causing the yarn as traversed on the rolls to reverse at points in irregular paths thereon, to prevent grooving or scoring of the roll surface.

5. In spinning apparatus, a traverse-bar reciprocated with a constant stroke, and a yarn-guide thereon having a foot laterally adjustable on the bars and an upturned portion provided with an elongated, diagonal slot for the passage of the yarn therethrough, the slot changing the lateral position of the yarn as it rises and falls in the slot.

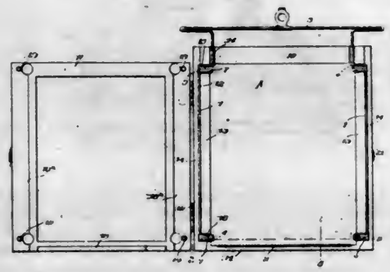
[Claims 6 and 7 not printed in the Gazette.]

1,113,287. BAG-HOLDER. BURR F. BARNES, Williamsport, Ohio. Filed July 1, 1912. Serial No. 706,999. (Cl. 83—26.)



A device for holding bags comprising a tripod, oppositely disposed crosspieces, one fastened at its ends to two of said legs and the other to the third leg and having its ends free, eyes fastened to said crosspiece, bail-shaped members pivotally mounted in the eyes of said crosspiece, the bail-shaped member upon said crosspiece having its hook ends on opposite sides of the leg to which the crosspiece is attached, the hooks upon the bail-shaped member designed to swing over the edges of the crosspiece and hold the edges of a bag thereover, as set forth.

1,113,288. LOADING DEVICE FOR CUT-FILM HOLDERS. FREDERICK W. BARNES and FRANK W. LOVEJOY, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed June 11, 1914. Serial No. 844,577. (Cl. 95—100.)



1. A loading device of the character described comprising two relatively movable clamping members, one of which is provided with positioning means for a film holding frame inserted between them, the members being formed to admit a film sheet edgewise when the latter is inserted within the said frame.

2. A loading device of the character described comprising two relatively movable clamping members provided with positioning means for a film holding frame inserted between them and with guides for directing a film sheet inserted between them within such frame.

3. A loading device of the character described comprising two relatively movable clamping members arranged to contact along three sides when closed together, the fourth side being open for the insertion of a film sheet, and means for positioning a film holding frame between the members to receive a film sheet so inserted.

4. In a loading device of the character described, the combination with a back board provided with raised film guiding ribs at its two sides and with depressions adapted to accommodate a film holding frame, of a relatively movable cover frame adapted to be superposed on the back board having one end spaced from the latter to permit the insertion of a film sheet between the guides and into the frame and having a raised rib at the other end forming a stop for the film sheet to position it in the frame.

5. A loading device of the character described embodying a back board having means for positioning a film holding frame laid thereon and guides for directing a film sheet into said frame.

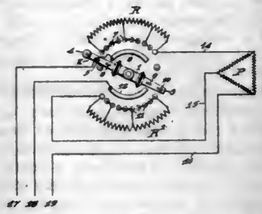
[Claims 6 to 11 not printed in the Gazette.]

1,113,289. MOTOR-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 9, 1911. Serial No. 648,532. (Cl. 172—179.)

1. A motor starting device provided with an element movable at a uniform rate of speed to increase the power supplied to the motor at intervals gradually diminishing in duration.

2. In a motor starter, in combination, voltage reducing means and controlling means therefor including an element movable at a uniform rate of speed to maintain all of said voltage reducing means in circuit until the motor has reached approximately one-half of its normal speed and thereafter vary said voltage reducing means at intervals gradually diminishing in duration.

3. In a device for starting electric motors in combination, voltage reducing means and a controlling element therefor, movable in steps of varying lengths to remove said voltage reducing means in a corresponding number of sections.

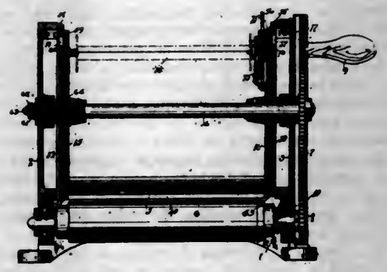


4. In a controller for starting electric motors, in combination, voltage reducing means and a controlling element movable in steps successively decreasing in length to remove said voltage reducing means in a corresponding number of sections.

5. In a controller for starting electric motors, in combination, voltage reducing means, a movable controlling element and a series of coöperating contacts therefor, controlling said voltage reducing means and connections between said voltage reducing means and said contacts necessitating varying degrees of movement of said controlling element to remove successive sections of said voltage reducing means.

[Claim 6 not printed in the Gazette.]

1,113,200. DUPLICATING-MACHINE. ALBERT H. BATES, East Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 7, 1910. Serial No. 585,748. (Cl. 101—126.)



1. The combination, with a movable printing bed and coöperating platen, of a series of typeholders each adapted to embrace a line of grooved type and provided with a composing fork at one end and an abutment at the other with an adjacent distributing opening, and mechanism for holding such sticks side by side on the bed.

2. The combination, with a member, of a coöperating platen and a series of composing sticks, each having sides with inwardly projecting edges to hold grooved type and each provided with a distribution device for limiting the direct exit of type therefrom, and means for holding said sticks in a page form on said member.

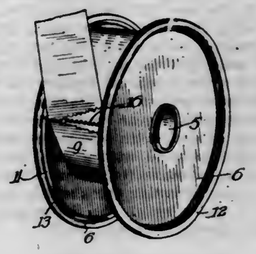
3. The combination, with a printing couple, of a series of composing sticks each having sides with inwardly projecting edges adapted to hold a line of grooved type and each provided with a fork at one end to coöperate with the type case to receive type directly therefrom, and means for holding said sticks side by side on one member of the couple.

4. The combination, with a rotary platen, of a rotary drum mounted on a parallel axis, a set of composing sticks having assemblage and distribution features, and means for holding said sticks on the surface of the drum parallel with the axis thereof, each stick being adapted to hold a line of type coöperating with the platen.

5. The combination, with a member mounted to turn on an axis, of a coöperating platen, a series of composing sticks each formed with a distributing head limiting the direct exit of type therefrom, and means for holding said sticks in a page form on said member.

[Claims 6 to 40 not printed in the Gazette.]

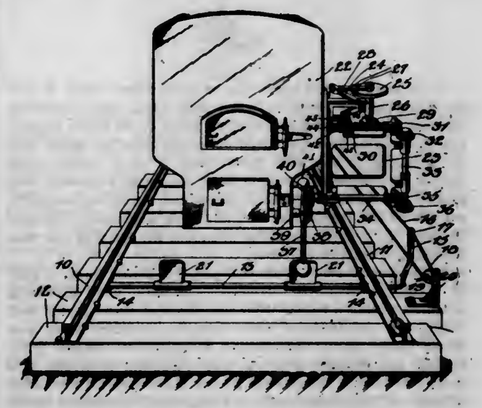
1,113,291. ADHESIVE-PLASTER SPOOL. PERRY S. BAUER, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,882. (Cl. 206—52.)



1. The combination of a spool having a circular groove formed in the inner face of each end wall extending about the entire periphery of said walls, and a cutter slidably engaging in said grooves, whereby the cutter may be moved about the entire periphery of the spool.

2. The combination of a spool having circular end walls bent outwardly adjacent their edges to form circular shoulders and upwardly and back upon themselves beyond said shoulders, and a cutter resting in said shoulders and having its edges bent up and disposed between the upwardly and bent back portions of said end walls, whereby said cutter is slidably and interlockingly engaged with said end walls and movable about the entire periphery of the spool.

1,113,292. SAFETY APPLIANCE FOR RAILWAY-TRAINS. CLARENCE E. BAUMER and JOHN CORREY, Troy, Ohio. Filed Mar. 1, 1913. Serial No. 751,525. (Cl. 246—59.)

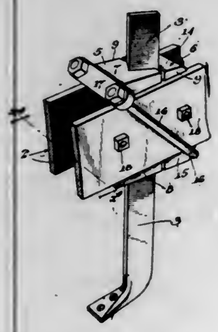


1. In a train stopping mechanism, the combination with a support, of a frame carried by said support, said frame provided with journals, shafts mounted in said journals, gearing connecting said shafts, one of said shafts be-

ing provided with a worm, an air brake operating device positioned above said worm and carried by said frame, said air brake operating device comprising a shaft, a gear attached to the lower end of said shaft and meshing with said worm, a disk attached to the upper end of said shaft, means for pivotally connecting said disk to an air brake operating lever, and an operating device connected to one of the shafts whereby motion may be imparted to all of the shafts, said worm and said air brake operating lever.

2. In an apparatus of the class described, the combination with a support, of a rectangular frame attached to one side of said support, said frame being provided with a lower and a side and a top set of extensions, each set of extensions being provided at their outer ends with journals, a series of shafts carried by said journals, meshing gears on said shafts, the shaft journaled in the upper set of extensions being provided with a worm positioned between the contiguous faces of said extensions, said frame being provided with an air brake operating lever, a bracket overhanging said worm, a journal formed in a vertical position upon the outer end of said bracket, a shaft in the journal of said bracket, a gear carried by the lower end of said shaft and meshing with said worm, said last-mentioned shaft being provided with a disk upon its upper end, pivotal air brake connecting means attached to said disk, and means for operating the shaft in the lower set of extensions for operating all the shafts and said disks and air brake connecting means.

1,113,293. CULTIVATOR-TOOTH CLAMP. CHARLES E. BEAN, Los Angeles, Cal., assignor to Killifer Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 4, 1913. Serial No. 799,128. (Cl. 55—94.)



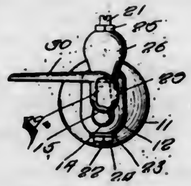
1. In combination with the parallel frame bars, a pair of clamping members between said bars, each clamping member having a recess with two faces at an angle to each other, the two faces of each clamping member being also at an angle to the said frame bars, a tooth shank lying within the recesses between said clamping members, and means extending diagonally across the clamping members, outside of the frame bars and engaging diagonally opposite corners of the said clamping members for holding the said clamping members together.

2. In combination with the parallel frame bars, a pair of clamping members between said bars, each clamping member having a recess with two faces at an angle to each other, the two faces of each clamping member being also at an angle to the said frame bars, a tooth shank lying within the recesses between said clamping members, and means extending diagonally across the clamping members, outside of the frame bars and engaging diagonally opposite corners of the said clamping members for holding the said clamping members together, each of said clamping members having laterally extending flanges on their upper and lower ends which project over the said frame bars.

3. In combination with the parallel frame bars, two clamping members between said bars, each of said clamping members having a recess with two faces at right angles to each other, both of said faces being at angles to the frame bars, a tooth shank between the said members and engaged in the said recesses, one of said members having a transverse groove in the outer corner thereof, and the other member having a transverse groove in the corner thereof, diagonally opposite the groove of the other member, and a shackle bolt extending diagonally across between the two members outside the frame bars, and engaging in the said two grooves.

4. In combination with the parallel frame bars, a pair of clamping members between said bars, each clamping member having a recess with two faces at an angle to each other, the two faces of each clamping member being also at an angle to the said frame bars, a tooth shank lying within the recesses between said clamping members, means extending diagonally across the clamping members, outside of the frame bars and engaging diagonally opposite corners of the said clamping members for holding the said clamping members together, and a pair of bolts extending through the said frame bars on opposite sides of the said clamping members.

1,113,294. SANITARY DRINKING-FOUNTAIN. DEAN P. BECKWITH, Elmira Heights, N. Y. Filed Oct. 16, 1913. Serial No. 795,540. (Cl. 137—109.)



1. In a sanitary drinking fountain, a valve casing, a valve in the casing, a discharge nozzle carried by the casing, means for opening and closing the valve, and means carried by the opening and closing means for covering the discharge nozzle until the valve is completely opened.

2. In a sanitary drinking fountain, a valve casing, a rotary valve in the casing, an upwardly directed discharge nozzle forming a part of the casing, a handle for rotating the valve, and means carried by the handle for covering the discharge nozzle until the valve is completely opened.

3. In a sanitary drinking fountain, a valve casing having an upwardly turned discharge nozzle, a rotary valve in the casing, means for varying the size of the opening of the valve, means for rotating the valve, and means for covering the nozzle until the valve is fully opened.

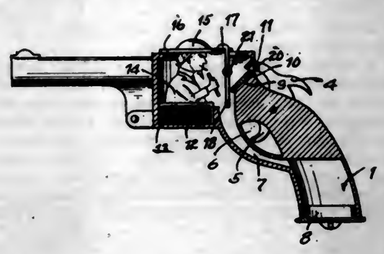
4. In a sanitary drinking fountain, a valve casing, a rotary valve in the casing, means carried by the valve for varying the size of the passage therethrough, an upturned discharge nozzle carried by the casing, a handle carried by the valve, a stop lug carried by the handle for engagement with the nozzle, and a horizontally extending arcuate finger arranged to pass over and cover the mouth of the discharge nozzle during the period of opening of the valve and until the valve is completely opened.

5. In a sanitary drinking fountain, a valve casing, a rotary valve in the casing, a discharge nozzle carried by the casing, a handle carried by the valve, a stop lug carried by the handle for engagement with the nozzle, and a horizontally extending arcuate finger arranged to pass over the mouth of the discharge nozzle during the period of opening of the valve and until the valve is completely opened.

1,113,295. TOY BANK. JOHN H. BEHNKEN, Somerset Center, Mich. Filed Jan. 29, 1914. Serial No. 815,228. (Cl. 46—36.)

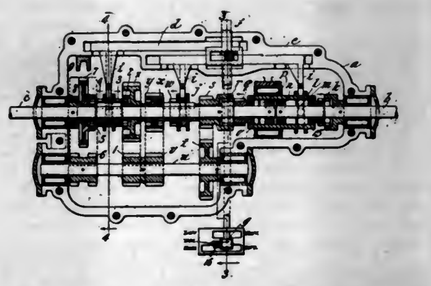
In a bank of the class described comprising a hollow stock, a casing carried by the stock, a figure mounted in the casing, a spring interposed between the figure and

bottom of the casing, a hammer carried by the stock, a plate pivotally mounted in the casing, a finger pivotally supported by the casing and normally engaging the figure to hold the same within the casing, a coin supporting plate mounted in the casing, said casing having a slot formed therein for the entrance of a coin to said plate,



whereby one edge of the coin engages the pivotally supported plate, and means carried by the hammer for forcing the coin downwardly upon the supporting plate to rock the pivoted plate, thereby shifting the finger to release the figure, as and for the purpose set forth.

1,113,296. CHAIN TRANSMISSION MECHANISM FOR AUTOMOBILES. WARREN J. BELCHER, Hartford, Conn. Filed Dec. 11, 1911. Serial No. 665,141. (Cl. 74—59.)



1. An automobile transmission mechanism comprising an engine shaft, a driving shaft, a counter-shaft, chain connections between said counter-shaft and said driving-shaft, a chain connection between said engine shaft and said counter shaft having a clutch member coöperating with said engine shaft, and said driving-shaft, operable when in one position to directly connect said engine shaft with said driving-shaft and disconnect the engine shaft from the counter-shaft and operable when in another position to connect the engine shaft with the counter-shaft and break the direct connection of the engine shaft with the driving-shaft.

2. An automobile transmission mechanism comprising an engine shaft, a driving shaft, a counter-shaft, a silent chain connection between said engine shaft and said counter-shaft, silent chain connections between said counter-shaft and said driving-shaft having clutch members for rendering said chain connections operable or inoperable, as desired, one of said last named chain connections arranged to drive from the counter-shaft to the driving-shaft in reversed direction, said reversing chain connection having sprocket-wheels arranged to carry a double-faced chain.

3. An automobile transmission mechanism comprising an engine shaft, a driving shaft, a counter-shaft, a chain connection between said engine and counter-shaft, chain connections between said counter-shaft and the driving-shaft having clutch members arranged to control said chain connections, and means for operating said clutch members to render said first chain connection operative before any one of the other chains can be operated.

4. An automatic chain transmission mechanism comprising an engine shaft, a counter-shaft, a driving shaft, means for connecting and disconnecting the engine shaft and counter shaft, gears mounted on said counter-shaft and driving shaft over which silent chains are adapted to run, silent chains to connect said gears, the gears on one shaft being fixed thereto, the gears on the other shaft being loose thereon, clutch members arranged to connect the loosely mounted gears to the shaft, as desired, so that a driving connection may be established from the counter-shaft to the driving shaft, one of said chain gear connections being a chain reverse mechanism to give the driving-shaft an opposite rotation to the counter-shaft.

5. An automobile chain transmission mechanism comprising an engine shaft, a counter-shaft, a driving-shaft, a chain driving mechanism from the engine shaft to the counter-shaft, one chain driving mechanism from the counter-shaft to the driving-shaft for each speed forward desired, a chain driving mechanism from the counter-shaft to the driving shaft for the reverse comprising a gear on the counter-shaft, a gear on the driving-shaft, two idler gears one above and the other below one of said gears, and a double-faced chain arranged for the teeth on one face to engage the teeth of one of said gears and both idler gears and the teeth on the other face to engage only the teeth on the other gears.

[Claims 6 to 10 not printed in the Gazette.]

1,113,297. PRESS. GEORGE W. BERNAUER, St. Charles, Mo. Filed Nov. 8, 1913. Serial No. 799,886. (Cl. 100—57.)

1. A machine of the character described comprising pressing-plates, means for forcing the same into engagement with the articles to be pressed, mechanism for increasing the pressure of said plates in supplement to said means, and members adapted to separate said plates and articles after operation of said means and mechanism.

2. A machine of the character described comprising pressing-plates, means for forcing the same into engagement with the articles to be pressed, devices for locking said means, and mechanism for increasing the pressure of said plates in supplement to said means.

3. A machine of the character described comprising pressing-plates, means for forcing the same into engagement with the articles to be pressed, devices for locking said means, mechanism for increasing the pressure of said plates in supplement to said means, and members adapted to separate said plates and articles after operation of said means and mechanism.

4. A machine of the character described comprising a stationary member, a rod projecting therethrough, a pressing-plate secured to said rod, threads upon said rod ex-

tending substantially above and below said member, a lever connected with said rod adapted to force said plate into engagement with the article to be pressed, and a wheel freely engaging said threads adapted to bear against said member, whereby the pressure of said plate may be increased.

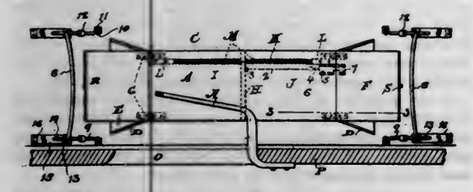
5. A machine of the character described comprising a stationary member, a rod projecting therethrough, a pressing-plate secured to said rod, threads upon said rod extending substantially above and below said member, a lever connected with said rod adapted to force said plate into engagement with the article to be pressed, devices for locking said lever, and a wheel freely engaging said threads adapted to bear against said member, whereby the pressure of said plate may be increased.

[Claims 6 and 7 not printed in the Gazette.]

1,113,298. PNEUMATIC AGITATOR FOR ICE-MAKING APPARATUS. FRANK L. BERRY, Spokane, Wash. Filed Sept. 28, 1910, Serial No. 584,168. Renewed Nov. 12, 1913. Serial No. 800,662. (Cl. 62—6.)

In a pneumatic agitator for ice making apparatus, the combination with a can-refrigerating receptacle, of a combined cross-bar and casing three vertical tubes one within the other extending downwardly from the cross bar into the can-refrigerating receptacle, the outside tube being perforated on sides and bottom and open at the top and adapted for connection with an air supply pipe, the intermediate tube having an open top and closed sides and bottom and the inner tube having closed sides and openings at the bottom and open at the top and adapted for connection with a heat supply pipe.

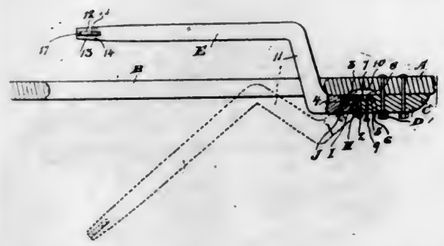
1,113,299. MAIL-BAG CATCHER. JOHN BIRNIE, Jr., Birnie, Manitoba, Canada. Filed Oct. 17, 1913. Serial No. 795,718. (Cl. 258—20.)



1. A mail-bag catcher comprising a receptacle each end of which is normally open; a partition positioned within said receptacle and vertically disposed, to divide the same into two compartments; a plurality of straight rods positioned within said receptacle to extend in substantially parallel relationship longitudinally thereof and passing through said partition one at each corner thereof; means mounted within each of the said compartments whereby the outer ends of said rods are supported; a coil spring mounted on each of the said rods in each of the said compartments on each side of the said partition with their inner ends abutting against the said partitions and their outer ends abutting against the supporting means for the outer ends of said rods; a trap door hinged at each end of said receptacle; means for latching said trap doors in open position, and a flexible connection for each of the said latching means attached to said partition near the upper portion thereof, as set forth.

2. A stripping frame for a mail-bag catcher comprising a substantially horizontal stripping bar which is curved inwardly so that the deepest point of the curve will be substantially mid-way the ends thereof; a lever connected with each end of said stripping bar and positioned substantially parallel to each other, and designed to normally occupy a position at an angle to the vertical; a straight stay rod pivoted at its upper end to each of the said levers, each stay rod also normally occupying an angular position to the vertical; a slotted bracket for each of the said stay rods through which the lower ends thereof extend, and a coiled spring mounted on the lower end of each of the said stay rods below each of the said brackets and performing the function of providing a yielding support for said stripping bar and its supporting levers, as set forth.

1,113,300. MAIL-BAG-SUPPORTING ARM. JOHN BIRNIE, Jr., Birnie, Manitoba, Canada. Filed Oct. 17, 1913. Serial No. 795,719. (Cl. 258—23.)

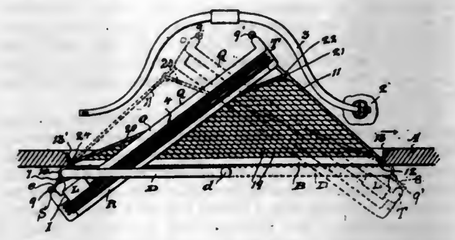


As a new article of manufacture, a mail-bag supporting arm comprising a base member provided in its inner flat side near one corner, with a pocket, which forms a corner shoulder; a supporting member provided with a stock which is connected thereto by an offset portion so that when the said arm is in position for use, the said supporting member will be positioned well away from the outer side of the car; a spring catch secured to the inner side of said stock and extending longitudinally thereof and provided with a head which normally rests in the said pocket and in locking engagement with said shoulder; hinging means positioned between the attached end of said catch and the head thereof whereby said stock is hinged to said base member, an arm hinged to said head and projecting thereabove and above said base member so that said head may be moved out of said pocket and so disengaged with said shoulder to permit said supporting arm to be swung on said hinging means.

1,113,301. MAIL-BAG CATCHER. JOHN BIRNIE, Jr., Birnie, Manitoba, Canada. Filed Oct. 17, 1913. Serial No. 795,720. (Cl. 258—20.)

1. A mail-bag catcher comprising a frame composed of a pair of horizontal members, one positioned above the other, and a pair of substantially vertically disposed end members connecting said horizontal members together; a movable frame comprising a vertically disposed member to each end of which is connected a substantially horizontally disposed member the outer ends of which are adapted to have hinged connection; the said frame designed to be positioned between said horizontally disposed

members of said movable frame and normally held at an angular position in respect thereto; means carried by the vertically disposed member of said movable frame in which the horizontal members of said frame have movement so that the position of said first mentioned frame and said movable frame may be reversed, and means whereby said first mentioned frame is locked and supported in operative position.



2. A mail-bag catcher comprising a suitable reversible frame designed to be supported at an angular position; a movable frame designed to be mounted within a mail car adjacent the door in the side thereof; a pair of compound sockets comprising vertical and horizontal socket members, mounted on said movable frame through the medium of said vertical socket members; means for holding said compound sockets from longitudinal movement on said movable frame; said first-mentioned frame being mounted to move within said horizontal socket members, and means whereby said first-mentioned frame is locked and supported in operative position.

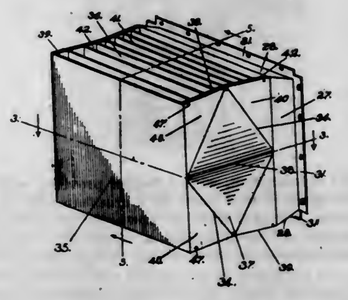
3. A mail-bag catcher comprising a suitable frame designed to be supported at an angular position; a movable frame comprising a vertical member provided at each end with an extension; means whereby said extensions are pivoted in a mail car at the door in the side thereof; means carried by said vertical member in which said first-mentioned frame is mounted to have longitudinal movement so that the position of said first-mentioned frame and said movable frame may be reversed; means carried by said vertical member and engaging with said first-mentioned frame to lock said first-mentioned frame from longitudinal movement, and means for laterally bracing said first-mentioned frame.

4. A mail-bag catcher comprising a suitable frame designed to be supported at an angular position; a movable frame comprising a vertical member provided at each end with an extension; means whereby said extensions are pivoted in a mail car at the door in the side thereof; means carried by said vertical member in which said first-mentioned frame is mounted to have longitudinal movement so that the position of said first mentioned frame and said movable frame may be reversed; means carried by said vertical member and engaging with said first-mentioned frame to lock said first-mentioned frame from longitudinal movement; means for laterally bracing said first-mentioned frame, comprising a rod removably connected with the outer end of said first-mentioned frame and designed to be removably supported at the door jamb of said mail car.

5. A mail-bag catcher comprising a suitable frame designed to be supported at an angular position; a movable frame comprising a vertical member provided at each end with an extension; means whereby said extensions are pivoted in the mail car at the door in the side thereof; means carried by said vertical member in which said first-mentioned frame is mounted to have longitudinal movement so that the position of said first-mentioned frame and said movable frame may be reversed; means carried by said vertical member and engaging with said first-mentioned frame to lock said first-mentioned frame from longitudinal movement; means for laterally bracing said first-mentioned frame, comprising a rod removably connected with the outer end of said first-mentioned frame and designed to be removably supported by the door jamb of said mail car; an extension rod pivoted in said first-mentioned rod near the outer end thereof, the inner end of said extension rod designed to be removably supported at the opposite jamb of said door, and a suitable net strung on said rods.

[Claims 6 and 7 not printed in the Gazette.]

1,113,302. CAR-VENTILATOR. GEORGE C. BREIDERT, Chicago, Ill., assignor to Auto Utilities Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1914. Serial No. 819,817. (Cl. 98—22.)



1. A car ventilator comprising a hollow structure, having an open side adapted to communicate with the interior of the car, oppositely disposed air ramming faces, exhaust orifices between said faces, and a set of deflecting strips extending through said hollow structure adjacent to each air ramming face disposed edgewise to said faces and extending from one exhaust orifice to the other.

2. A car ventilator comprising a hollow structure, having an open side adapted to communicate with the interior of the car, oppositely disposed air ramming faces, exhaust orifices between said faces, and a set of deflecting strips extending through said hollow structure adjacent to each air ramming face disposed edgewise to said faces but spaced therefrom and extending from one orifice to the other.

3. A car ventilator comprising a hollow structure, having an open side adapted to communicate with the interior of the car, oppositely disposed air ramming faces, exhaust orifices between said faces, parallel louvers extending across said exhaust orifices, and deflecting strips within said hollow structure adjacent to said air ramming faces respectively and extending edgewise across the same.

4. A car ventilator comprising a hollow structure, having an open side adapted to communicate with the interior of the car, oppositely disposed air ramming faces, exhaust orifices between said faces, a set of parallel louvers extending across each exhaust orifice from one air ramming face to the other, and deflecting strips within said hollow structure adjacent each air ramming face and extending from one set of louvers to the other.

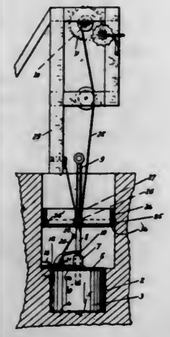
5. A car ventilator comprising a hollow structure, having an open side adapted to communicate with the interior of the car, an air ramming face, an exhaust orifice, and parallel deflecting strips within said hollow structure adjacent to and extending edgewise across said air ramming face.

[Claims 6 to 15 not printed in the Gazette.]

1,113,303. WELL-DIGGING APPARATUS. ROBERT BREWSTER and JOSEPH GOTTERTZ, Sheldon, Iowa. Filed Dec. 1, 1913. Serial No. 803,946. (Cl. 255—67.)

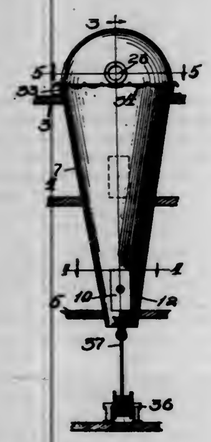
1. The combination, with a bucket provided with a cutter for digging a well hole, of a crossbar secured to the bucket, a cutter, for enlarging the well hole, pivoted to the crossbar and projecting radially beyond the periphery of the bucket, an operating rod slidable longitudinally in the crossbar and adapted to revolve the bucket, and a con-

necting-rod pivotally connecting the enlarging cutter with the bucket rod and controlling the positions of the enlarging cutter automatically.



2. The combination, with a bucket provided with a cutter for digging a well hole, of a crossbar secured to the bucket and provided with an upwardly projecting flange and a guard at one side edge, a cutter for enlarging the well hole, pivoted to the crossbar and projecting radially beyond the periphery of the bucket and engaging with the said flange and guard, an operating rod slidable longitudinally in the crossbar and adapted to revolve the bucket, and a connecting-rod pivotally connecting the enlarging cutter with the bucket rod and controlling the positions of the enlarging cutter automatically.

1,113,304. SELF-RETRIEVING SAFETY-BUOY FOR SHIPS. CHARLES T. BROWN, Chicago, Ill. Filed Nov. 15, 1912. Serial No. 731,561. (Cl. 9—10.)



1. The combination with a ship, of a safety buoy mounted therein and extending through and between the different decks thereof, doors in said buoy for giving access thereto at said different decks, and mechanism permitting release of the buoy to float to the surface with the submergence of the ship.

2. In a device of the class described the combination with a ship, of a safety buoy mounted therein and extending through several decks thereof, doors for access into said buoy at the different decks of the ship, illuminating means contained within said buoy, and means lighting the same automatically when said buoy is released from the ship.

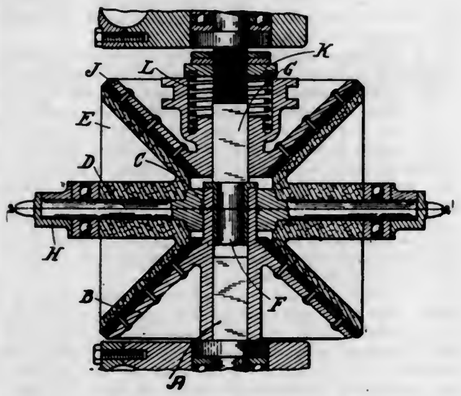
3. The combination with a ship of a life buoy releasably retained thereon, a plurality of water-tight compartments therein each one independently accessible from different portions of said ship, illuminating means mounted in said buoy at different points therein, and means automatically lighting said illuminating means as said buoy is removed from the ship.

4. The combination with a ship of a buoyant receptacle comprising a chambered casing, retaining means on said ship adapted to releasably engage said casing, a plurality of water-tight compartments in said casing each independently accessible from different decks of the ship, and means connecting said receptacle with the ship adapted to release the same therefrom when below certain depths of submergence.

5. A device of the class described comprising an elongated tapered casing, means causing the same to float uprightly in water, a plurality of independent illuminating means sealed within the top of said casing at different points, a supporting casing to support said casing when not immersed in water, and a spring actuated switch adapted to automatically light and maintain the circuit closed of said illuminating means as said casing leaves the supporting means.

[Claims 6 and 7 not printed in the Gazette.]

1,113,305. TRANSMISSION-GEARING FOR MOTOR-VEHICLES. GEORGE BROWN, London, England. Filed Mar. 31, 1913. Serial No. 757,999. (Cl. 74—34.)

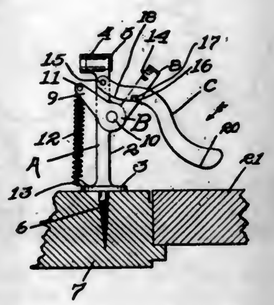


1. In combination, driven shafts, driven friction elements mounted thereon and each having a friction surface, a star mounted freely upon one of said shafts, friction pinions carried by said star in position to be normally gripped between said friction surfaces to impart a differential speed to the said driven friction elements and the shafts, and means for moving one of said driven friction elements on its shaft to cause it to free the friction pinions, substantially as set forth.

2. In combination, driven shafts, a driven friction cone fixed to one of said shafts, a boss on said cone, a star freely mounted on said boss, a second friction cone mounted to slide on its driven shaft, conical pinions carried by said star in position to be normally gripped between the two friction cones to impart a differential speed to the latter and the shafts, a spring engaging said second friction cone, and means for sliding said section friction cone on its shaft to cause it to free the friction pinions, substantially as set forth.

3. In combination, a driven shaft, a friction cone fixed thereto, a boss on said cone, a bearing inside said boss, a second driven shaft engaging said bearing, a bearing outside said boss, a star freely mounted on said outside bearing, friction pinions carried by said star, a second driven cone mounted on said second driven shaft, said friction pinions being in position to be normally gripped between said friction cones to impart a differential speed to the latter and the shafts, means for sliding said second cone on its shaft to cause it to free the friction pinions, an abutment on the said second driven shaft and a spring bearing at one end upon said abutment and at the other end engaging said second cone, substantially as set forth.

1,113,306. BURGLAR-ALARM. CIEIL BUJOER, St. Paul, Minn. Filed Apr. 13, 1914. Serial No. 831,427. (Cl. 116—42.)



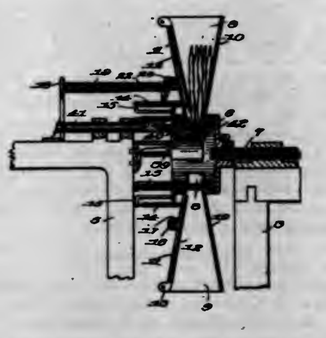
1. In a burglar alarm adapted for use and associated with two elements, one being movable and the other stationary, a standard having a holding socket for a cartridge and means of attachment for securing it to said stationary element, a cartridge adapted to be held in said socket, a hammer hinged to said standard and having a pointed free end, a catch pin on its side and a pair of lateral extensions, a helical spring attached to the free ends of said extensions and to a portion of said standard adapted to swing said hammer with its pointed end against said cartridge to fire it, and a catch arm pivoted by one end to said standard and formed with a cam surface extending longitudinally from said pivot connection and terminating in a notch, said cam surface being adapted as said catch arm is swung in one direction to engage the pin on said hammer and raise the hammer into retracted position, and said notch being adapted to engage said pin to hold said hammer in retracted position, the free end of said catch arm extending outwardly in the path of said movable member, whereby said movable member is adapted by its movement to disengage said catch arm from said catch pin on said hammer.

2. In a burglar alarm, a cartridge, a cartridge holding element, a hammer movably associated with said holding element, one of said elements having a catch shoulder, a spring associated with said holding element and hammer and adapted to cause said hammer to impinge against and fire said cartridge, and a catch arm movably mounted upon the other of said elements and having a cam surface adapted when said arm is moved in one direction to cooperate with and engage said catch shoulder and force said hammer and holding element apart against the tension of said spring to retract and releasably hold, in retracted position, one of said elements from the other.

1,113,307. BEAN-SNIPPING MACHINE. JOHN W. CARNOCHAN and FREDERICK H. DAMON, Rochester, N. Y. Filed Jan. 18, 1913. Serial No. 742,845. (Cl. 146—7.)

1. In a bean snipping machine, the combination with a rotatable holder arranged on a horizontal axis, of actuating devices for rotating the holder, and cutting means movable longitudinally of the axis of the holder for severing the ends of the beans.

2. In a bean snipping machine, the combination with a rotatable holder arranged on a horizontal axis, of actuating devices for rotating the holder, cutting means coöperating with the holder for serving the ends of the beans, and gripping devices acting to retain the beans in the holder until the ends are severed and to release them subsequently thereto.



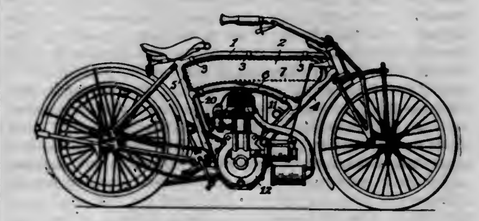
3. In a bean snipping machine, the combination with an intermittently rotating holder arranged on a horizontal axis, of actuating devices for rotating the holder intermittently, and cutting means movable longitudinally of the axis of the holder.

4. In a bean snipping machine, the combination with an intermittently rotating holder arranged on a horizontal axis, of actuating devices for rotating the holder intermittently, cutting means coöperating with the holder to sever the ends of the beans, and gripping devices acting to retain the beans in the holder until the ends are severed and to release them subsequently thereto.

5. In a bean snipping machine, the combination with a pair of rotatable holders arranged one above the other on horizontal axes, of actuating devices for rotating the holders, and cutting means coöperating with the holders for serving the ends of the beans while in the respective holders.

[Claims 6 to 31 not printed in the Gazette.]

1,113,308. OIL-TANK FOR MOTOR-CYCLES. LYMAN H. COBB, Fitchburg, Mass., assignor to Mary Elizabeth Johnson, trustee, Fitchburg, Mass. Filed Oct. 3, 1912. Serial No. 723,690. (Cl. 21—90.)



1. An oil tank for motorcycles, comprising a receptacle adapted to be suspended from the framework of the motorcycle, having a curved bottom with the opposite ends of the bottom lower than the central portion, a partition extending from the highest point of the bottom to one end forming an upper and a lower chamber, a pipe connecting one end of the upper chamber with the carbureter, and a pipe connecting said lower chamber with the crank case.

2. An oil receptacle for a motorcycle having an arched bottom, one end of which is lower than the other end, a partition extending from an intermediate point in the length of the bottom and dividing the receptacle into independent superposed chambers, and means, passing through the upper chamber, for affording communication with the lower chamber.

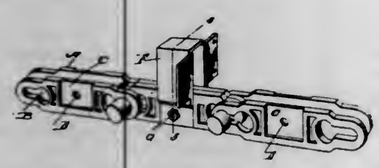
3. An oil receptacle for a motorcycle having an arched

bottom, a partition extending from an intermediate point in the length of said bottom to one end of the receptacle, and dividing said receptacle into independent superposed chambers, the bottom of each chamber constituted by the said arched bottom of the receptacle.

4. An oil receptacle for a motorcycle having an arched bottom, a partition within said receptacle tangential to said arched bottom at its highest point and extending from said point to one end of the receptacle, to form independent superposed chambers, and means extending through said partition, for affording communication with the lower of said chambers.

5. An oil receptacle for a motorcycle having an arched bottom, a partition extending from the highest point of said arched bottom to one end of said receptacle to form independent superposed chambers therein, and outlet pipes, located at the extreme ends of said arched bottom of the receptacle, for each of said chambers.

1,113,309. CHAIN AND FLIGHT CONNECTION. WILLIAM P. COLDREN, Lebanon, Pa. Filed June 18, 1913. Serial No. 774,432. (Cl. 193—8.)



1. The combination with a chain composed of a plurality of links, each link having a recess, intermediate its ends, said link being apertured at said recessed portion, of a flight connector consisting of a yoke portion having oppositely disposed wings adjacent the connecting member of said yoke the open ends of said yoke being apertured and contracted into parallel relation, said parallel ends being of such size and so spaced apart as to fit into the oppositely disposed recess of parallel links and a bolt passing through said links and yoke ends as set forth.

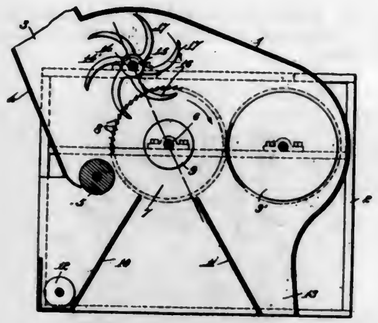
2. The combination with a chain composed of a plurality of links each link having an open recess intermediate its ends said link being apertured at said recessed portion of a yoke portion comprising a connection member, parallel members provided with oppositely disposed laterally extending wings, contracted portions and parallel free ends, said ends being apertured and so shaped and spaced apart as to fit into oppositely disposed recesses of parallel links, and a bolt passing through the apertured links and ends of yoke as set forth.

3. The combination with a pair of links, having side recesses of a yoke having oppositely disposed laterally projecting wings adjacent the connecting portion of said yoke, and free ends of said yoke being shaped and spaced apart as to fit into the oppositely disposed link recesses and a bolt passing through said opened yoke ends and links.

1,113,310. COTTON-MACHINE. JOSHUA C. CONRAD, Cement, Okla. Filed Feb. 9, 1912. Serial No. 676,501. (Cl. 13—12.)

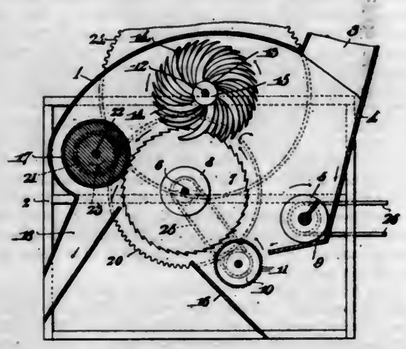
1. A cotton hulling machine comprising a cylinder of rotating saws, each saw being spaced from the adjacent saw by a spacing member, and means for feeding cotton to the lower edges of said saws, in combination with a plurality of rotating members mounted above and slightly in advance of and adapted to rotate in the same direction with said saws, each of said members comprising a plurality of arms presenting flat forward faces and convex in the direction of rotation and adapted to extend between the said saws, whereby all trash is removed from said saws when the latter and the former are in rotation, substantially as described.

2. A cotton hulling machine comprising a plurality of spaced rotary saws, an inclined cotton feeding breast, extending into proximity to said saws, a roller between said breast and said saws for conveying cotton to the latter, in combination with a plurality of rotary members adapted to rotate in the same direction with said saws, and arranged out of the path of the cotton on said breast and roller, and in advance of said saws; each member provided with a plurality of arms extending into the



spaces between said saws and curved rearwardly with relation to its direction of rotation; and said arms having their forward faces straight transversely, substantially as described.

1,113,311. COTTON-MACHINE. JOSHUA C. CONRAD, Cement, Okla. Filed Apr. 4, 1913. Serial No. 758,829. (Cl. 13—12.)



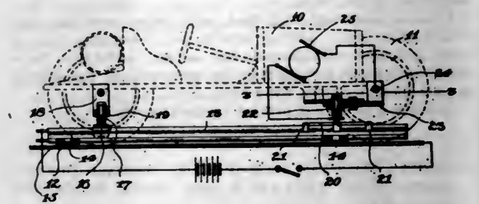
1. A machine for removing seed cotton from the hulls delivered from the gins or other separators, or from graboles, comprising a casing, a plurality of spaced rotary saws in said casing, a screw conveyer in said casing adapted to rotate on an axis parallel with that of the saws to convey the material slowly across the face of the latter, a bottom below said conveyer inclined toward said saws, and terminating at a distance therefrom, a picker cylinder arranged between said saws and adjacent edge of said bottom, and a beater arranged above said saws, the casing at the discharge end of said screw conveyer being open, substantially as described.

2. A machine for removing seed cotton from the hulls delivered from the gins or other separators or from graboles, comprising a plurality of spaced rotary saws, a screw conveyer for carrying the material across the face of said saws and a beater comprising a plurality of spaced rotary members each consisting of a hub and a plurality of arms, the arms of each of said members being arranged in advance of those of the preceding member to produce

a spiral formation, substantially as and for the purpose specified.

3. A machine for removing seed cotton from the hulls, comprising a casing, a plurality of spaced rotary saws in said casing, a screw conveyer in said casing adapted to rotate on an axis parallel with that of the saws to convey the material slowly across the face of the latter, a picker cylinder between said conveyer and said saws for conveying the material from the former to the latter, and a beater arranged above and coöperating with the saws to remove hulls and trash from the saws to deposit them in the conveyer, the casing at the discharge end of said screw conveyer being open whereby the hulls and trash are delivered from the machine, substantially as described.

1,113,312. TOY CAR. JOSHUA L. COWEN, New York, N. Y. Filed May 31, 1913. Serial No. 770,895. (Cl. 191—23.)



1. In a toy car construction, a substantially flat roadway, a rail mounted thereon and insulated therefrom, means extending from the car engaging the rail for guiding and steering the same, a car, and means for conveying current from said roadway through the wheels of the car to the motor.

2. In a toy car construction, a substantially flat roadway of conducting material, a rail mounted on the roadway and insulated therefrom, a car, and means extending from the car engaging the rail for guiding and steering the same and also for conveying current of one polarity to the motor, and ground wheels on the car formed of conducting material adapted to engage the roadway and convey current of opposite polarity to the motor.

3. In a toy car construction, a substantially flat metallic roadway, a rail mounted on the roadway and insulated therefrom, a car having a frame, ground wheels engaging the roadway, a truck pivoted to the frame of the car and having the front wheels mounted thereon, a shoe extending from the rear portion of the frame of the car engaging the rail, said roadway and rail being adapted to be connected to opposite poles of a source of electric current, and a shoe extending from the truck engaging the rail and serving to steer the car, one of said shoes serving to convey current of one polarity to the motor and the ground wheels conveying the current of another polarity to the motor.

1,113,313. BOAT-SEAT. ALBERT W. CROUCH, Milwaukee, Wis., assignor to Milwaukee Yacht & Boat Company, Milwaukee, Wis. Filed Apr. 30, 1913. Serial No. 764,597. (Cl. 9—7.)

1. In a boat the combination with a box-like structure arranged transversely of the boat, a seat at each extremity of said structure along each side of said boat, and a foot path over said box-like structure between said seats, and elevated above the floor level of the boat.

2. In a boat the combination with a box-like structure arranged transversely of the boat, a seat at each extremity of said structure along each side of said boat, a foot path over said box-like structure between said seats, and a step attached to said box-like structure to give accessibility to said foot path.

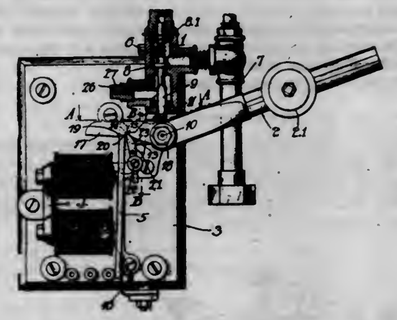
3. In a boat the combination with a box-like structure arranged transversely of the boat, a seat at each extremity of said structure along each side of said boat, and a foot path over said box-like structure between said seats, said foot path including a cover plate hinged to said box like structure.

4. In a boat the combination with a box-like structure arranged transversely of the boat, a seat at each extremity of said structure along each side of said boat, a foot path over said box like structure between said seats, and a step attached to said box-like structure to give accessibility to said foot path, said foot path including a cover plate hinged to said box like structure.

5. In a boat the combination with a box-like structure arranged transversely of the boat, a seat at each extremity of said structure along each side of said boat, a back for each seat, and a foot path over said box-like structure between said seats, said foot path including a cover plate hinged to said box-like structure.

[Claim 6 not printed in the Gazette.]

1,113,314. AIR-BRAKE-CONTROLLING MECHANISM FOR BLOCK-SIGNAL SYSTEMS. DAVID DALE, Chicago, Ill. Filed Dec. 12, 1913. Serial No. 806,176. (Cl. 137—4.)



1. A device of the class described, comprising a member mounted to swing up and down, a catch adapted to normally hold said member in its elevated position, a magnet arranged to actuate said catch for releasing said member, a detent adapted to lock said catch against accidentally releasing said member, and means adapted to be controlled by said magnet for retracting said detent to permit said catch to be actuated for releasing said member.

2. A device of the class described, comprising a fluid-pressure brake-controlling valve, mechanism adapted to normally urge said valve toward its open position, a catch adapted to hold said mechanism in its retracted position, a magnet arranged adjacent to said catch and adapted to actuate it so as to release said mechanism, a detent adapted to lock said catch against accidentally releasing said mechanism, and means adapted to be controlled by said magnet for retracting said detent to permit said catch to be actuated for releasing said mechanism.

3. A device of the class described, comprising a fluid-pressure brake-controlling valve, a weighted lever pivotally mounted adjacent to said valve and adapted to normally urge said valve toward its open position, a catch adapted to hold said lever in its retracted position, a magnet arranged in position to actuate said catch for releasing said mechanism, a gravity actuated detent adapted to normally engage said catch and lock it against accidentally releasing said lever, and means having a part thereof located between said catch and said magnet and adapted to be controlled by said magnet for elevating said

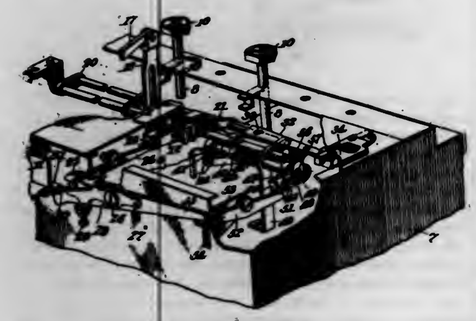
detent so as to permit said catch to be actuated for releasing said lever.

4. A device of the class described, comprising a supporting member, a fluid-pressure brake-controlling valve mounted on said member having the stem thereof extending below the casing, a weighted lever pivoted below said stem, a catch adapted to hold said lever in its elevated position, a magnet arranged to actuate said catch to release said lever, a cam carried by said lever and having a part thereof spaced away from said stem so as to permit of a movement of said lever before said cam engages said stem, said cam also having a gradually inclined portion adapted to have initial engagement with said stem so as to pry the valve from its seat, and an abruptly inclined portion adapted to quickly move said valve to a wide open position after it has been pried from its seat.

5. A device of the class described, comprising a supporting member, a fluid-pressure brake-controlling valve mounted on said member and having the stem thereof protruding from the casing, a weighted lever pivotally mounted on said supporting member, a cam surface on said lever adapted to engage said valve stem for opening said valve, an extension on said lever, a catch shiftably supported on said member and normally urged into position to engage said extension for holding said lever in its elevated position, a magnet arranged adjacent to said catch and adapted to actuate the same for releasing said lever, a detent mounted on an axis coincident with the axis of said lever and normally urged by gravity to engage said catch so as to prevent the accidental release of said lever, a dog pivotally mounted below said detent and engaging the under side of said detent, and a part carried by said dog and located adjacent to said magnet in advance of said catch, the under side of detent being inclined so that when said dog is actuated by said magnet said detent will be elevated so as to disengage said catch.

[Claim 6 not printed in the Gazette.]

1,113,315. KEY-LOCKING MECHANISM FOR WRITING AND ADDING MACHINES. WILLIAM L. DENCH, Pelham, N. Y., assignor to Elliott-Fisher Company, Harrisburg, Pa., a Corporation of Delaware. Filed July 7, 1909. Serial No. 506,318. (Cl. 235—59.)



1. The combination with adding mechanism and operating means therefor, relatively movable in a lateral direction to change their denominational relation and also having relative retractile movement, of locking mechanism effective during the retractile movement only to prevent the actuation of the operating mechanism.

2. The combination with adding mechanism, operating keys therefor and intermediate operating connections, said adding mechanism and keys having relative movement in one direction to change their denominational relation and also having relative movement in a retractile direction, and key locking means rendered effective by said retractile movement and serving to lock the keys until such retractile movement has been completed.

3. In a combined recording and adding machine, the combination with adding mechanism, recording mechanism, and keys common to both the adding and recording mechanisms and operative to cause the recording mechanism to print both inside and outside of the adding field, and said recording and adding mechanisms having relative lateral movement to change their denominational relation and to permit recording both within and without the adding field, and also having relative retractile movement, and key locking mechanism rendered effective by the relative retractile movement of the adding and recording mechanisms to lock the keys during that part of the retractile movement in which the recording mechanism is disposed opposite the adding field.

4. The combination with an adding mechanism, a traveling carriage movable back and forth across the adding field, recording mechanism, and keys controlling the operation of both the recording and adding mechanisms, of key locking means ineffective during the movement of the carriage in one direction and effective, during the retraction of the carriage across the adding field, to prevent the operation of the keys.

5. In a combined recording and adding machine, the combination with adding mechanism, recording mechanism, and keys, of automatic key locking mechanism operative to lock the keys during the retraction of the recording mechanism across the adding field.

[Claims 6 to 10 not printed in the Gazette.]

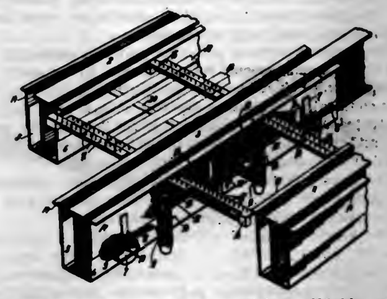
1,113,316. FOLDING BED-SPRING. RICHARD DUNCAN, Crofton, Nebr. Filed Feb. 6, 1913. Serial No. 746,630. (Cl. 5—68.)

A bed comprising a plurality of side rails, each side rail provided with a plurality of vertically extending notch portions terminating in inwardly extending pockets, a square cross bar fitting in the pockets at one end of said side rails and held within said pockets against rotary movement, a second cross bar circular in cross section mounted within the pockets at the opposite ends of said side rails, a spring connected to said transverse bars, a ratchet wheel carried by said second transverse bar, a pawl engaging said ratchet wheel for holding said second transverse bar against rotation in one direction, said second transverse bar adapted to tighten said spring when said second transverse bar is rotated, said first mentioned transverse bar being adapted to hold one end of said spring in a set position for preventing said end from sagging when pressure is brought to bear upon said spring, a clamping plate secured to the upper face of said first mentioned transverse bar, said spring adapted to be placed between said second mentioned transverse bar and said plate, and clamping screws passing through said first mentioned transverse bar and said plate for firmly holding said spring in engagement therewith.

1,113,317. CEMENT-FORMING APPARATUS. ADAM DZIEMIAN, Jersey City, N. J. Filed Jan. 22, 1912. Serial No. 672,659. (Cl. 25—131.5.)

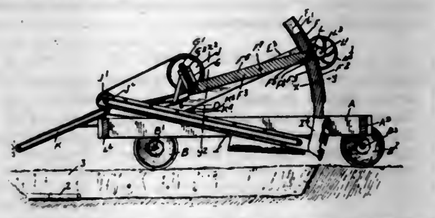
1. A molding apparatus for floors comprising channel shaped molds adapted to be adjusted around the floor beams, adjustable brackets carried by the sides of said channel shaped molds, transverse supports adapted to be supported by the brackets, and means located between the supports in combination with the brackets to brace said supports in lines parallel with said channel shaped mold.

2. A molding apparatus for floors comprising channel shaped molds adapted to be adjusted around the floor beams, adjustable brackets carried by the sides of said channel shaped molds, transverse supports adapted to be supported by the brackets, and means located between the supports in combination with the brackets to brace said supports in lines parallel with said channel shaped mold,



said transverse supports comprising slidable sections adapted to be engaged against the adjacent walls of adjacent molds.

1,113,318. DITCHING-MACHINE. GEORGE EDWARDS, Brussels, Ontario, Canada. Filed June 21, 1913. Serial No. 774,986. (Cl. 37—11.)



1. A ditching machine comprising a truck frame and supporting wheels, arc-shaped guide-ways extending upwardly from the supporting frame, an arc-shape cutting bar located between the guide-ways and slidable in a substantially circumferential direction, cutting knives supported thereby, a pivoted cutting bar lever connected at one end to the cutting bar, and means for reciprocating the opposite end of the lever, as and for the purpose specified.

2. A ditching machine comprising a truck frame and supporting wheels therefor, arc-shape opposing guide-ways extending upwardly from the truck, an arc-shape cutting bar held between the arc-shape guide-ways, cutting knives supported by the bar, means for adjusting such bar vertically to regulate the depth of the cut, a pivoted operating lever connected at one end to the cutting bar, and means for reciprocating the opposite end, as and for the purpose specified.

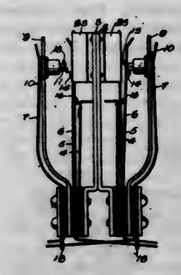
3. A ditching machine comprising a truck frame and supporting wheels therefor, opposing arc-shaped guide-ways extending upwardly from the truck, supplemental arc-shape guide-ways supported in the aforesaid arc-shape guide-ways, an arc-shape cutting bar slidably held between the supplemental guide-ways, means for adjusting the supplemental guide-ways vertically between the main arc-shape guide-ways, and means for reciprocating the arc-shape cutting bars, as and for the purpose specified.

4. A ditching machine comprising a truck frame and supporting wheels therefor, opposing arc-shape guide-ways extending upwardly from the truck, supplemental arc-shape guide-ways supported in the aforesaid arc-shape guide-ways, an arc-shape cutting bar slidably held between the supplemental guide-ways, means for adjusting the supplemental guide-ways vertically between the main arc-shape guide-ways, a cutting lever pivotedly supported in suitable bearings and connected at one end to the arc-shape cutting bar, and means at the opposite end for reciprocating the lever, as and for the purpose specified.

5. A ditching machine comprising a truck and supporting wheels therefor, arc-shape guide-ways extending upwardly from the truck, an arc-shape cutting bar supported between the guide-ways, a cutting knife carried by the cutting bar, a pivoted operating lever connected at one end to the cutting bar, and means for reciprocating the opposite end of the lever.

[Claims 6 to 10 not printed in the Gazette.]

1,113,319. LINE PROTECTIVE DEVICE. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 14, 1912. Serial No. 677,615. (Cl. 175—275.)



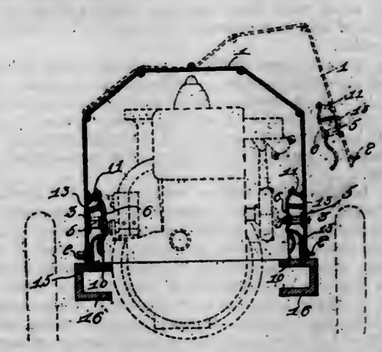
1. In a line protective device, a supporting arm, a heat coil having a U-shaped plate connected to one end of said coil, and a pair of openings in said plate through which said supporting arm is adapted to pass in order to secure said heat coil to said arm.

2. In a line protective device, a supporting arm, a heat coil having a U-shaped plate connected to one end of said coil, and a pair of angular openings in said plate through which said supporting arm is adapted to pass in order to secure said heat coil to said arm.

3. In a line protective device, a supporting arm, spring members mounted upon said arm, a heat coil, a U-shaped member connected to said heat coil and provided with rectangular openings in its end portions through which said supporting arm is adapted to pass, whereby said heat coil is firmly secured to said supporting arm.

4. In a line protective device, a ground plate, spring members suitably mounted thereon, a heat coil normally engaged by one of said spring members, said heat coil having a trigger provided with a pair of catches, and a lug carried by one of said spring members and engaging one of said catches, said heat coil being removable, whereby it may be turned over, said lug being adapted to engage the other catch when the heat coil is so turned.

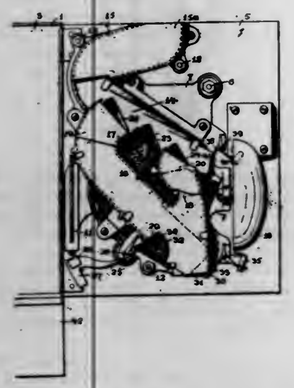
1,113,320. ENGINE-HOOD FASTENER. LESLIE FEAGAN, Malta Bend, Mo. Filed Feb. 9, 1914. Serial No. 817,608. (Cl. 70—82.)



A device of the class described comprising a support, socket members carried by said support, each socket member comprising an open-sided casing provided with an

overhanging upper end, a hood, a spring latch pivotally supported within said hood, said latch provided with a downwardly and forwardly bent end for fitting under said overhanging upper end, means for limiting the inward swing of the upper end of said latch, and means for exerting an outward pressure upon the upper end of said latch.

1,113,821. COIN-CONTROLLED PAY-STATION FOR TELEPHONES. ARTHUR B. FLAGG and WALTER H. LIVERMORE, Worcester, Mass., assignors to Livermore Pay Station Company, Boston, Mass., a Corporation of Maine. Filed Feb. 13, 1907. Serial No. 357,221. (Cl. 194—96.)



1. In a telephone pay station, a box, a vertical plate supported therein, a cover supported on one side of said plate, a coin channel obliquely disposed across said vertical plate and inclosed between said vertical plate and said cover, a second cover superimposed upon said first cover, and a coin channel crossing said first coin channel and inclosed between said first and second covers.

2. In a telephone pay station, a box inclosing a signal chamber having a single opening at its top for coins, a vertical plate supported in said chamber, a cover attached to said plate, a coin channel inclosed between said cover and said vertical plate and passing obliquely across said plate, a second cover superimposed upon said first cover, a coin channel inclosed between said first and second covers and crossing said first channel, and means for conducting coins from said receiving opening into one or the other of said coin channels according to the diameters of the coins.

3. A telephone pay station, comprising a box inclosing a sound signaling chamber, a series of sound signals contained in said chamber, a resonant plate supporting said sound signals, a series of coin channels, a plate supporting said coin channels, said channel supporting plate and said resonant plate having independent connections with said box.

4. A telephone pay station, comprising a box having a sound signaling chamber, a resonant plate supported in said chamber, a series of sound signals supported by said resonant plate, a telephone transmitter supported by said resonant plate, and coin distributing channels inclosed in said chamber independently of said resonant plate.

5. A telephone pay station, comprising a box inclosing a sound signaling chamber, a resonant plate supported on posts in said chamber, a series of sound signals supported by said resonant plate, and a series of coin channels supported on posts in said chamber independently of said resonant plate.

[Claims 6 to 9 not printed in the Gazette.]

1,113,322. SILVER-POLISH. ALBERT T. FLETCHER, Boston, Mass. Filed Jan. 5, 1914. Serial No. 810,349. (Cl. 87—5.)

1. The herein described polishing material which consists of a homogeneous gelatinized alkali-free cereal soap containing an abrasive in suspension.

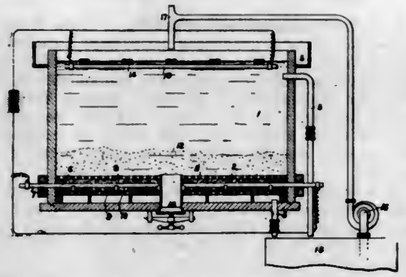
2. The herein described polishing material consisting of a gelatinous homogeneous mass, formed by emulsifying the soap powder (produced by subjecting a comminuted protein-containing substance to the action of a highly concentrated alkali and carbonating the free alkali) with water, and containing a finely divided abrasive held in suspension uniformly throughout the mass.

3. The herein described polishing compound consisting of emulsified and gelatinized cereal soap powder and an abrasive material in a homogeneous mixture.

4. The herein described process of making a polishing compound, which consists in emulsifying with water a cereal soap powder produced by subjecting a comminuted protein-containing substance to the action of a highly concentrated alkali, mixing a comminuted abrasive material with the emulsion, and causing the mixture to gelatinize with the particles of abrasive material held in a suspension.

5. The herein described process of making a polishing compound, which consists in emulsifying a cereal soap with water, mixing a comminuted abrasive material with the emulsion, and gelatinizing the mixture with the abrasive material in suspension.

1,113,323. TREATMENT OF REFRACTORY ORES. JOHN FOYE, HENRY EGBERT MOORE, and ROBERT BOYLE, Johannesburg, Transvaal, South Africa, assignors to Refractory Ores, Limited, Johannesburg, Transvaal, South Africa. Filed Mar. 31, 1913. Serial No. 758,016. (Cl. 204—15.)

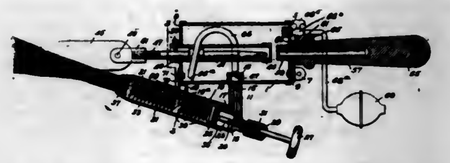


1. The process of treating refractory ore for the purpose of rendering it amenable to ordinary extraction methods, which consists in subjecting the ore in admixture with a solution of the salt of an alkaline metal, which is substantially a non-solvent of gold, to the passage of an electric current, whereby the acid component of the solution separates in proximity to the ore and the alkaline component away therefrom, and subsequently separating the ore and solution.

2. In apparatus for treating refractory ore for the purpose of rendering it amenable to ordinary extraction methods, the combination of a vat, a filter floor therein, a float adapted to float at the surface of solution in the vat, electric conductors thereon and adapted to project into the solution, an anode in the lower part of the vat, and means for separately drawing off solution from the vicinities of the anode and cathode respectively.

1,113,324. TOOL. LORENZO S. FROST, Cambridge, Mass. Filed May 9, 1910. Serial No. 560,303. (Cl. 158—27.)

1. A device of the class described, comprising, in combination, a tool, a fuel tank and an automatic forced blast burner assembled together for conjoint profitable use, said burner being arranged relatively to said tool to direct and distribute a forced blast flame simultaneously, effectively and directly diagonally along a substantial portion of the tool toward the active end of the latter and on the work operated on, said burner being arranged sufficiently close to said tank to heat the latter and automatically create the forced blast.



2. A device of the class described comprising, in combination, a tool, a fuel tank and a single forced blast burner, said burner being arranged relatively to said tool to distribute a forced blast flame simultaneously, effectively and directly both on the tool and the work operated on, said burner being arranged closely to and overlapping said tank sufficiently to heat said tank and thereby create a forced blast in said burner.

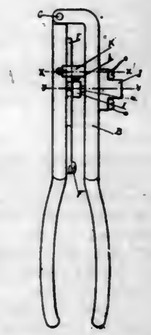
3. A device of the class described comprising, in combination, a portable tank; a tool carried therewith; and means simultaneously to direct flame on the tank, tool and the work operated on.

4. A device of the class described comprising, in combination, a portable tool carrying tank; a tool heating burner; and means to direct a portion of the flame from said burner on to said tank at will while said burner is in a position to be effective to heat said tool.

5. A device of the class described comprising, in combination, a portable tool carrying tank; a burner; and an adjustable baffle plate for directing a flame from said burner to said tank.

[Claims 6 to 14 not printed in the Gazette.]

1,113,325. IMPLEMENT FOR FORMING METAL BACKS FOR ARTIFICIAL TEETH. ERNEST DE WITT R. GARDEN, Los Angeles, Cal. Filed Sept. 29, 1913. Serial No. 792,471. (Cl. 81—15.)



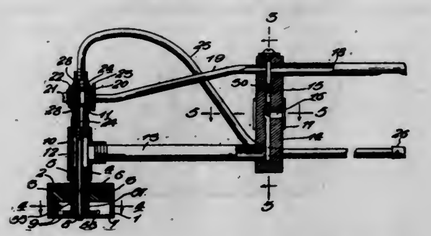
1. In an implement for forming metal backs for artificial teeth, a pair of hinged handle levers, a pair of pivoted levers mounted upon one of said levers, and a male forming member mounted upon the other handled lever, and adapted to coöperate with the pivoted levers upon the other lever, substantially as described.

2. In an implement of the character described, for forming metal backs for artificial teeth, a pair of handled levers hinged at their outer ends, a pair of levers pivotally mounted upon one of said handled levers, a chamber in said handled lever, and means within said chamber for holding the said levers normally open, a male forming member mounted upon the other handled lever, and coacting with the pivoted levers upon the first mentioned lever, means for closing the said pivoted levers secured to the second mentioned handled lever all arranged and operating substantially as shown and described.

3. In an implement of the character described, for forming metal backs for artificial teeth, a pair of hinged handled levers, a pair of levers, having tapered and beveled faces, pivotally mounted upon one of said hinged handled levers, a transverse chamber in said hinged handled lever, longitudinal slots perforating the wall of said chamber, pins in said levers projecting downwardly through the said slots into said chamber, a spring in said chamber, and under tension between said pins, and holding the said levers normally open, a male forming member yieldingly mounted upon the other of said hinged handled levers, and coacting with the said pivoted levers upon the first mentioned hinged handled lever, a yoke, having downwardly projecting limbs, said limbs being provided with beveled faces, said yoke secured to the second mentioned hinged handled lever, and adapted to contact with and swing the pivoted levers upon the first mentioned hinged handled lever inwardly, substantially as shown and described, and for the purpose specified.

4. In an implement of the character described, for forming metal backs for artificial teeth, a pair of hinged handled levers, a pair of spring opened levers pivoted upon one of said hinged handled levers, a male forming member, secured to the other hinged handled lever, by collar-screws slidably passing through said hinged handled lever, collars upon said collar-screws to limit the movement of the said male forming member inwardly, spring chambers mounted upon the outer side of the said hinged handled member, and springs in said chambers, and exerting tension upon the collar portion of said collar-screws to hold the male forming member in its inwardly normal position substantially as shown and described and for the purpose specified.

1,113,326. COMBINED SUPPLEMENTAL GAS RESERVOIR AND BURNER. JAMES MADISON GILBERT, Dallas, Tex. Filed Apr. 23, 1914. Serial No. 834,001. (Cl. 158—109.)



1. In a device of the character described, a gas supply pipe, a pressure pipe passing therethrough and projecting from the end thereof, a cap plate carried by the gas supply pipe, and a cup-shaped member carried by the cap plate and having, in its end, an opening through which the pressure pipe passes and a number of gas discharge openings whereby a combined burner and supplemental gas reservoir is provided.

2. In a device of the character described, a gas supply pipe, a pressure pipe passing therethrough and projecting from the end thereof, a cap plate having a boss and an opening therein, the latter being threaded into the end of the gas supply pipe, and a cup-shaped member surrounding the pressure pipe and carried by the cap plate, the end of said member having an opening through which the pressure pipe passes and a number of gas discharge perforations, the opening in the cap plate being of greater diameter than the pressure pipe passing therethrough.

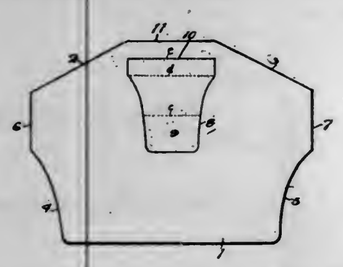
3. In a device of the character described, a cylindrical gas reservoir having a removable end plate provided with

an external boss and a bore extending through the boss and the plate and having its inner end threaded for the reception of a spreader, the opposite end of the reservoir having a central opening and a number of gas discharge openings surrounding the same, a gas supply pipe threaded around said boss, and a pressure pipe passing loosely through the gas pipe and the bore in the boss and entering the opening in the opposite end of the reservoir.

4. In a device of the character described, a cylindrical gas reservoir having a removable end plate provided with an external boss and a bore extending through the boss and the plate and having its inner end threaded for the reception of a spreader, a sleeve threaded into said inner end and having a lateral flange and a number of discharge perforations above the same, the opposite end of the reservoir having a central opening and a number of gas discharge perforations, a gas supply pipe threaded around said boss, and a pressure pipe passing loosely through the gas pipe and the bore and entering the opening in the opposite end of the reservoir.

5. In a device of the character described, a combined receptacle and burner including a cylindrical casing having one of its ends provided with a central opening and with a number of perforations surrounding the same, its remaining end being closed by a removable cover plate having a central boss and a bore therein, a T-coupling threaded around said boss, a valve casing in communication with the interior of the T coupling, a hollow conical valve in said casing and having ports establishing communication between its interior and the interior of the casing, an air pressure pipe threaded into said casing above the valve, a gas and air pressure pipe threaded into the discharge end of said valve, a gas supply pipe entering the shank of said T-coupling, means whereby said valve may be rotated, and means for retaining the same within its seat.

1,113,327. REINFORCING AND SHAPE-KEEPING CARD FOR CLOTHES. SOLOMON DAVID GILKERSON, Winnipeg, Manitoba, Canada. Filed June 25, 1912. Serial No. 705,692. (Cl. 211—34.)



A garment holding form comprising a main flat body constructed to fit within a garment, and a tab cut from said body along three of its sides forming a narrow strip at the top of said body, the fourth side remaining integral with said strip and parallel with the top of the main body, said tab being scored transversely beneath its line of connection with said strip to form a hinge portion of approximately the same width, as said strip, and the free end of said top being transversely creased, whereby said tab may be bent under the main body, thence upwardly at right angles thereto, and thence outwardly to form a holding member for the main body.

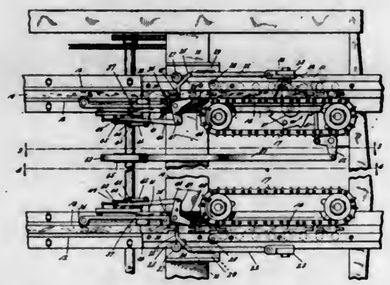
1,113,328. BABY-CARRIAGE. JOHN E. GOGGIN, Salem, Mass. Filed Nov. 5, 1913. Serial No. 799,897. (Cl. 21—12.)

1. In a device of the class described, the combination of a wheel supported frame; a detachable body therefor; an extensible framework pivotally mounted on the under side of said body and provided with downwardly extending cheeks adapted to coact with said frame to register said body when in their normal positions and to serve as rockers for said body when at right angles thereto; and means for securing the body to said frame.

2. In a device of the class described, the combination of a wheel supported frame; a detachable body therefor; a framework pivotally mounted on the under side of said body and provided with downwardly extending cheeks adapted to coact with said frame to register said body when in their normal positions and to serve as rockers for said body when at right angles thereto; and means for securing the body to said frame.

3. In a device of the class described, the combination of a wheel supported frame; a detachable body therefor; rocker members pivotally mounted on said body and adapted to register with said frame when the body is attached thereto and to be moved into position transversely of said body when the latter is detached from said frame; and means for normally securing the body to the frame.

1,113,329. BOX-MACHINE. JASON H. GREENSTREET, Indianapolis, Ind. Filed Dec. 5, 1911. Serial No. 664,117. (Cl. 1—14.)



1. In a box-blank machine, the combination of a material guide, an interrupter projectable into the material guide, an actuator for withdrawing the interrupter from the material guide, a continuously rotating driving member, and means controlled by the passage of material through the material guide for intermittently connecting the actuator with the driving member to withdraw the interrupter from the material guide.

2. In a box-blank machine, the combination of a material guide, an interrupter projectable into the material guide, an actuator for withdrawing the interrupter from the material guide, a continuously rotating driving member, and means for intermittently connecting the actuator with the driving member to withdraw the interrupter from the material guide.

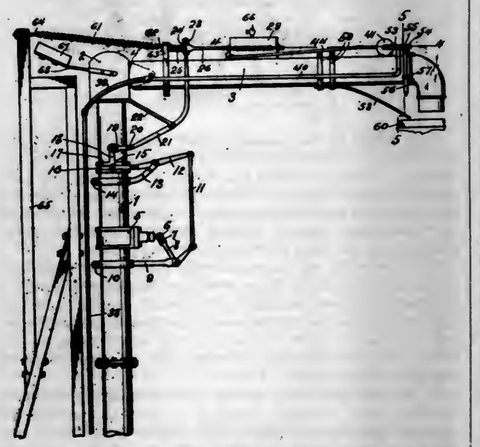
3. In a box-blank machine, the combination of a material guide, an interrupter projectable into the material guide, an actuator for withdrawing the interrupter from the material guide, a driving member, and means controlled by the passage of material through the material guide for intermittently connecting the actuator with the driving member to withdraw the interrupter from the material guide.

4. In a box-blank machine, the combination of a material guide, an interrupter projectable into the material guide, an actuator for withdrawing the interrupter from the material guide, a driving member, and means for intermittently connecting the actuator with the driving member to withdraw the interrupter from the material guide.

5. In a box blank machine, the combination of a material guide, a spacing finger movable into, along and out of the material guide, a stop for temporarily preventing movement of the spacing finger in one direction along the material guide, means controlled by the passage of material through the guide for intermittently projecting the stop into active position, and means for automatically withdrawing the stop from active position.

[Claims 6 to 18 not printed in the Gazette.]

1,113,330. STAND-PIPE. ROBERT B. GREENWAY, San Bernardino, Cal. Filed Feb. 2, 1914. Serial No. 815,949. (Cl. 137—21.)



1. In a stand pipe, a vertically movable delivery spout, a valve, a member carried by said spout and adapted to be operated by striking a locomotive tender, and means operated by said member for actuating said valve.

2. In a stand pipe, a vertically movable delivery spout, a valve, a resilient movable member carried by said spout and adapted to be flexed by striking a locomotive tender, and means operated by said member for actuating said valve.

3. In a stand pipe, a vertically movable delivery spout, a spring bar having one end secured to said spout and having its other end adapted to engage and be moved by a locomotive tender, when the spout is moved downwardly, a valve and means operated by said spring bar for actuating said valve.

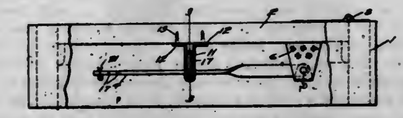
4. In a stand pipe, a pipe section provided with a cut-off valve, a vertically movable delivery spout into which said pipe section discharges, means for operating said cut-off valve, and means adapted to be operated by a tender of a locomotive for controlling said valve operating means.

5. In a stand pipe, a pipe section provided with a cut-off valve, a vertically movable delivery spout into which said pipe section discharges, and means operable by a locomotive tender for controlling the operation of said cut-off valve.

[Claims 6 to 24 not printed in the Gazette.]

1,113,331. CASEMENT AND DOOR LOCK. JAMES C. GRIFFIN, Erie, Pa., assignor to Griffin Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed June 24, 1914. Serial No. 847,003. (Cl. 16—6.)

1. In a casement and door lock, the combination of a hinge plate; a locking rod pivotally mounted on the plate and having a locking notch in the bottom thereof; a locking plate adapted to pass into the notch in the rod as the rod slides over the plate; and a trip device carried by the locking plate and adapted to lift the rod to disengage it from the plate.

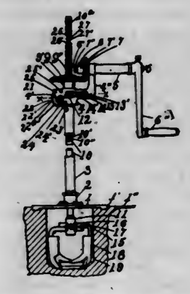


2. In a casement and door lock, the combination of a hinge plate; a locking rod pivotally mounted on the plate and having a locking notch in the bottom thereof; and a locking plate in the form of a loop with side flanges or feet extending therefrom, said loop having slots in the side walls thereof through which the locking rod extends, a side of the loop being adapted to enter the notch in the rod for locking the rod relatively to the plate.

3. In a casement and door lock, the combination of a hinge plate; a locking rod pivotally mounted on the plate and having a locking notch in the bottom thereof; a locking plate in the form of a loop with side flanges or feet extending therefrom, said loop having slots in the side walls thereof through which the locking rod extends, a side of the loop being adapted to enter the notch in the rod for locking the rod relatively to the plate; and a trip lever pivotally mounted within the loop with one end under the rod and the opposite end being adapted to be operated to trip the rod.

4. In a casement and door lock, the combination of a hinge plate formed with a securing base and a hinge lip with a return bend; a locking rod having notches in the bottom thereof and pivotally secured between the lip and the return bend on the hinge plate; a locking plate in the form of a loop having slots in the side walls thereof through which the locking rod passes, the sides of the loop being adapted to enter the notches in the rod to lock the rod in place; and a trip lever pivotally mounted between the sides of the loop and adapted to trip the locking rod.

1,113,332. POST-HOLE AUGER. JACOB S. HAMILTON, Plattsburg, Mo. Filed Nov. 3, 1913. Serial No. 798,944. (Cl. 255—19.)



1. In a post hole auger, a base adapted to rest upon the ground; a vertically disposed auger shaft having a spline formed in its upper end portion; screw threads formed on said upper end portion of said auger shaft; a horizontally disposed drive shaft; gear connecting means whereby said shafts are gear connected for rotatively driving said auger shaft; supporting means mounted on said base wherein said shafts are rotatably mounted with said auger shaft slidable therein; screw thread engaging means in said supporting means for disengageably engaging said screw threads; auger bit securing means on the lower end of said auger shaft; post hole auger bits adjustably secured on said auger shaft by said auger bit securing means; and rotating means on said drive shaft whereby the same is manually rotated.

2. In a post hole auger, a base adapted to rest upon the ground; anchor flanges formed on said base for engaging said ground; a support connection secured on the center of said base; a vertical support tube having its lower end secured in said connection; a bearing piece secured on the upper end of said tube; an auger shaft having its upper end portion slidably and rotatably mounted in said bearing piece and having its lower end portion similarly mounted in said connection; auger shaft rotating means for said auger shaft said rotating means being adapted to permit said shaft to slide therethrough; screw feeding means for said auger shaft; driving means for rotatively driving said auger shaft rotating means; and an auger head secured on the lower end of said auger shaft.

3. In a post hole auger, a base adapted to rest upon the ground; a vertical supporting tube securely mounted on said base; a slidably and rotatably mounted auger shaft passing longitudinally through said tube said auger shaft having a spline formed in its upper end portion and screw threads formed on the splined portion thereof; a bearing piece secured on the upper end of said tube; a spring having one of its ends secured on said bearing piece said spring being adapted to actuate its free end to move from said bearing piece; a block having screw threads formed on its inner surface for engaging said auger shaft threads said block being rigidly secured on the free end of said spring; a thumb button pivotally mounted over said spring for moving said block into said screw thread engagement and releasably holding the same therein.

4. In a post hole auger, a base adapted to rest upon the ground; a vertical support tube securely mounted on said base; a bearing piece secured on the upper end of said tube; a handle bracket formed on said bearing piece; a hollow handle formed with said bracket and extending horizontally therefrom; a drive shaft rotatably mounted in said handle; a slidably and rotatably mounted auger shaft passed longitudinally through said tube; gear connecting means whereby said shafts are gear connected; and rotative driving means on said drive shaft.

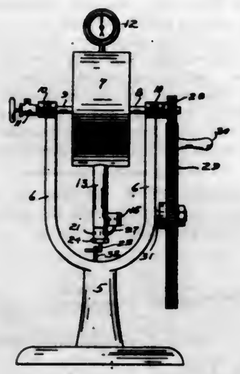
5. In a post hole auger, a base adapted to rest upon the ground; a vertical support tube securely mounted on said base; a bearing piece secured on the upper end of said tube; a bearing bracket formed with said bearing piece; a shift shaft rotatably mounted in said bearing bracket; a spindle formed with said shift shaft eccentric thereto; a lift wheel rotatably mounted and secured on said spindle said wheel having gear teeth formed thereon; a lift crank formed with said lift wheel; a slidably and rotatably mounted auger shaft passed longitudinally through said support tube said auger shaft having a spline formed in its upper end portion; screw threads formed on said splined portion of said auger shaft said screw threads being adapted to be engaged with the teeth of said lift wheel; rotating means for said shift shaft; snap fastening means for said shift shaft rotating means for detachably holding the same in two positions with the teeth of said lift wheel in and out of their said engagement respectively; a drive crank; shaft and gear connections whereby said auger shaft and drive crank are connected for holding said auger shaft against rotation while said lift wheel is in engagement therewith.

[Claim 6 not printed in the Gazette.]

1,113,333. METAL-CASTING DEVICE. CHRISTIAN F. HANSEN, Norfolk, Nebr. Filed Jan. 6, 1914. Serial No. 810,534. (Cl. 22—65.)

1. A device of the class described comprising a supporting means; a vacuum chamber; a rotatable element mounted upon said supporting means; a mold-carrying part carried by and disposed laterally to the rotatable element; a passage between the mold-carrying part and the vacuum chamber; means for actuating said rotatable element; and a valve for controlling said passage, said valve being opened automatically coincidentally with the actuation of said rotatable element.

2. A device of the class described comprising a supporting means; a vacuum chamber rotatably-mounted thereon; a mold-carrying part carried by said vacuum chamber; a passage between said chamber and mold-carrying part; means for rotating said chamber whereby the metal will be thrown into the mold by centrifugal force; and a valve for the control of said passage, said valve being opened automatically coincidentally with the rotation of the vacuum chamber.



3. A device of the class described comprising a supporting means; a drum rotatably-mounted thereon; means for creating a vacuum within the drum; a mold-carrying part carried by the drum; a valve-controlled passage between the drum and mold-carrying part; and means for rotating the drum and thereby causing the molten metal to be thrown into the mold cavity by centrifugal force.

4. A device of the class described comprising a supporting means; a vacuum drum rotatably mounted thereon; a mold-carrying part carried by the drum; means for rotating the drum; a passage between the drum and mold-carrying member; a valve for controlling said passage; and means for automatically opening said valve governed by rotation of the drum.

5. In a metal-casting device, a superstructure having a vacuum drum rotatably-mounted thereon and means for rotating the drum; a radial arm carried by the drum and having a bore communicating with the drum; a mold-carrying cup carried by the arm; a passage between said bore and cup, and a valve carried by the arm for controlling said passage; and means adapted for engagement with the valve whereby the valve is opened coincident with the actuation of said means for rotating the drum.

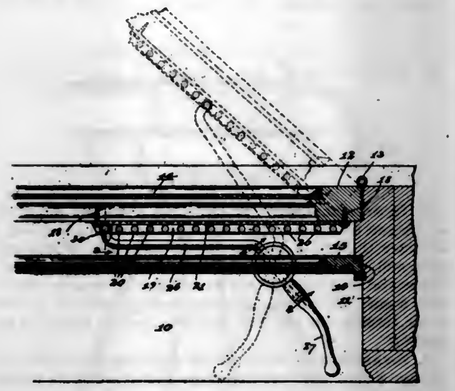
[Claims 6 and 7 not printed in the Gazette.]

1,113,334. SASH OR SHUTTER OPERATING AND FASTENING DEVICE. HOWARD E. HARBAUGH, Kenosha, Wis. Filed May 25, 1914. Serial No. 840,704. (Cl. 16—135.)

1. In a sash operating and locking mechanism, the combination of a stop-bar adapted to be attached to a hinged sash, a pivoted arm-supporting member, and an operating arm rotatably mounted in said arm-supporting member on an axis approximately at right angles to the pivot axis of the latter, said arm at one end slidably engaging said stop-bar, and said arm and stop-bar being provided with coöperating means for securing them against relative sliding movement at intervals lengthwise of said stop-bar.

2. In a sash operating and locking mechanism, the combination of a stop-bar adapted to be attached to a hinged sash, an operating lever, and means for supporting said lever with capacity for both vertical and horizontal swinging movement, said lever having an arm slidably engaging said stop-bar and a handle on the opposite side of said supporting means from said arm, and said arm and stop-bar being provided with coöperating means for securing them against relative sliding movement at intervals lengthwise of said stop-bar.

3. In a sash operating and locking mechanism, the combination of a stop-bar adapted to be attached to a hinged sash, a pivoted fulcrum member, and an operating lever rotatably mounted in said fulcrum member on an axis at right angles to the pivot axis of the latter, said lever having an arm slidably engaging said stop-bar and a handle, and said arm and stop-bar being provided with coöperating means for securing them against relative sliding movement at intervals lengthwise of said stop-bar.



4. In a sash operating and locking mechanism, the combination of a stop-bar adapted to be attached to a hinged sash, a pivoted fulcrum member, and an operating lever rotatably mounted in said fulcrum member on an axis at right angles to the pivot axis of the latter, said lever having an arm extending at an angle to its axis of rotation and at its free end slidably engaging said stop-bar and a handle also extending at an angle to its axis of rotation and on the same side of the latter with reference to the common plane of said axes, said arm and stop-bar being provided with coöperating means for securing them against relative sliding movement at intervals lengthwise of said stop-bar.

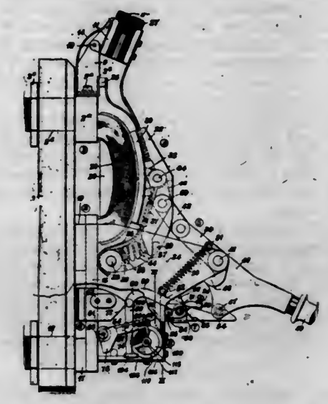
5. In a sash operating and locking mechanism, the combination of a stop-bar adapted to be attached to a hinged sash and having a channel portion formed with a plurality of holes spaced lengthwise thereof and an overhanging confining member, an operating arm carrying at its free end a stud slidably engaging the channel portion of said stop-bar and adapted to engage any of said holes, and means for supporting said arm with capacity for both vertical and horizontal swinging movement, the free end of said arm when raised to disengage said stud from said holes engaging said confining member and being then slidable lengthwise of said stop-bar to a new position of adjustment.

[Claims 6 to 8 not printed in the Gazette.]

1,113,335. CIRCUIT-BREAKER. FORD W. HARRIS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 6, 1910. Serial No. 575,999. (Cl. 175—268.)

1. The combination with a magnetizable core comprising a stationary portion and a movable portion, and a magnetizing coil for said core, of a rotatable member provided with one convolution of a helical thread of great pitch, and a supporting plate adjustably secured to the movable core member and adapted to rest upon the periphery of the helical thread, the edge of the plate and the axis of said helical member being in the same plane but non-parallel.

2. The combination with a magnetizable core comprising a stationary portion and a pivotally supported movable portion, and a magnetizing coil for said core, of a rotatable helical cam and an inclined plate adjustably secured to the movable core member and adapted to rest upon the periphery of the rotatable helical cam, the air-gap between the core members being dependent upon the position of the point of contact between said inclined plate and said cam helix.

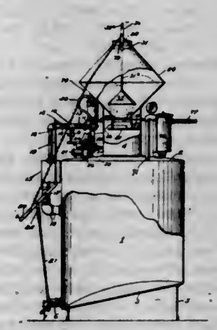


3. In a circuit interrupter, the combination with a stationary core, a pivotally mounted movable armature, and a magnetizing coil, of a supporting plate adjustably secured at each end of the free end of the movable armature by means of a screw and slot, of a rotatable helical cam member upon which the edge of said bearing plate rests, the edge of the plate and the axis of the cam member being in the same plane but non-parallel.

4. In a circuit interrupter, the combination with a tripping magnet comprising a stationary core, a magnetizing coil therefor and a pivotally supported movable armature, of a rotatable helical cam member, and a plate adjustably secured to the free end of said movable armature and having an inclined edge to be engaged by said cam member.

5. The combination with a release magnet for circuit interrupters comprising a stationary core, a magnetizing coil therefore and a movable armature provided with an attachment having an inclined surface, of a helical cam member adapted to engage said inclined surface to adjust the interrupter to trip at any predetermined amount of current.

1,113,336. ACETYLENE-GENERATOR. JOHN HARRIS, Cleveland, Ohio. Filed Jan. 18, 1912. Serial No. 671,856. (Cl. 48—52.)



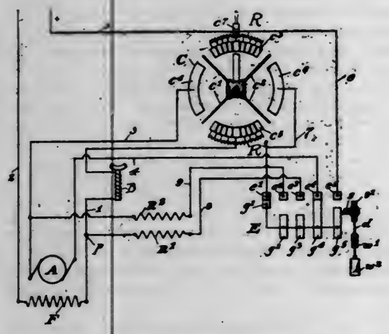
1. In an acetylene generator, the combination of a tank, a carbid receptacle thereabove, a shelf interposed between said receptacle and said tank, a ring suspended from the receptacle above said shelf and having its lower edge in close proximity to said shelf to form a carbid retaining wall thereabove, a feeding device within said ring, and means for reciprocating said device.

2. In an acetylene generator, the combination of a tank, a carbid receptacle thereabove, a neck connecting the same, a substantially circular shelf interposed between said receptacle and said tank in said neck, a ring suspended from the receptacle above said shelf, opposite portions of the shelf being cut away to provide clearance between the shelf and the neck, a reciprocable feeding device arranged to travel in the direction of said cut-away portions, and power operated means for reciprocating said device.

3. In an acetylene generator, the combination of a tank, a carbid receptacle thereabove, a shelf interposed between said tank and said receptacle, a ring suspended above said shelf and having its lower edge in close proximity to said shelf to form a carbid retaining wall thereabove, and a device within said ring for feeding carbid from said shelf into said tank.

4. In an acetylene generator, the combination of a tank, a carbid receptacle thereabove, a shelf interposed between the receptacle and the tank, a ring flexibly suspended above said shelf and having its lower edge in close proximity to said shelf to form a carbid retaining wall thereabove, and a feeding device in said ring having an operating rod extending through the wall of and outside the ring.

1,113,337. SAFETY LIMIT-STOP. LESTER C. HART, Youngstown, Ohio, assignor to O. R. Jones, Youngstown, Ohio. Filed Jan. 10, 1913. Serial No. 741,227. (Cl. 172—152.)



1. In a motor control system, a motor, a controller for the motor, and a switching device for stopping the motor comprising a means for opening the motor circuit between the motor and the controller, means for closing a circuit from the source through the motor field winding, and means for closing a local circuit through the motor armature exclusive of the controller.

2. In a motor control system, a motor, a controller for the motor, and a switching device operated by the motor and comprising means for separately exciting the motor field, and means for shunting the motor armature through a circuit independent of the controller.

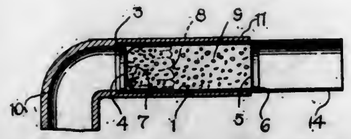
3. In a motor control system, a motor having a series field winding, a controller for the motor, a switching device for separately exciting the series field through a circuit independent of the controller, and connecting the motor armature in a closed circuit, and means operated by the motor for operating the switching device.

4. In a motor control system, a motor, a brake-winding, a controller for the motor, and a switching device for stopping the motor comprising a means for deënergizing the brake-winding, means for closing a circuit from the source through the motor field winding independent of the controler, and means for closing a local circuit through the motor armature.

5. In a motor control system, a motor, a reversing controller therefor and a device operated by the motor and comprising means for opening the motor circuit through the controller, means for closing a shunt around the armature, and means for closing a circuit through the motor field and independent of the controller and for including the armature in the motor circuit when the controller is reversed.

[Claim 6 not printed in the Gazette.]

1,113,338. CONFETTI CARTRIDGE AND GUN. GEORGE W. HARTMAN, McKeesport, Pa. Filed Jan. 26, 1914. Serial No. 814,509. (Cl. 124—9.)



1. In an amusement device of the character described, an air gun provided in its discharge end with a bore and a shoulder therein, a tubular breech insertible within said bore, and a confetti cartridge insertible within the breech, and containing confetti and provided with readily detachable means for holding confetti therein, whereby a blast of air through the gun will blow the confetti from the end thereof.

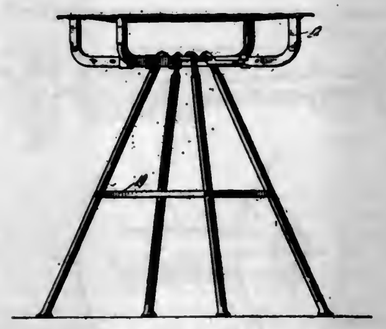
2. An amusement device of the character described, comprising a blow gun, the discharge end of which is formed with a bore and with an annular shoulder therein, a tubular breech insertible within the bore, and a confetti cartridge insertible within the breech, and formed at one end with an outwardly directed bead adapted to be held between said shoulder and the end of the breech, as and for the purpose set forth.

1,113,339. GAS-BURNER. WILLIAM HAWKS, Duluth, Minn., assignor to Hugo Manufacturing Company, Duluth, Minn., a Corporation of Minnesota. Filed Nov. 6, 1913. Serial No. 799,524. (Cl. 158—112.)

1. A burner comprising a tube having at its upper end an enlarged substantially-disk-shaped flaring annular portion, a screen within said enlarged portion, and an annular burner-cap including a diaphragm, a flange depending from the diaphragm and arranged to surround and loosely contact the side of the upper portion of the tube, an annular abutment within the flange arranged to seat on the top edge of the tube and to maintain the diaphragm above the plane of that edge, there being ports formed in the diaphragm inside of and adjacent to the abutment in a regularly-spaced annular series and leading upwardly through the diaphragm in an outwardly-deflected direction, and a flaring rim extending upwardly and outwardly from the diaphragm and having on its outer side grooves into which said ports lead.

2. A burner comprising a tube having at its upper end an enlarged annular portion, a screen within said enlarged portion, and an annular burner-cap including a diaphragm, a flange on the diaphragm arranged to engage said enlarged annular portion, an annular abutment on the cap arranged to seat on the top edge of said enlarged portion and to maintain the diaphragm above the plane of that edge, there being ports leading upwardly through the diaphragm, and a rim extending upwardly from the diaphragm and having on its outer side grooves into which said ports lead.

1,113,340. COLLAPSIBLE FIELD-CHAIR. JOHN HAYDUK, Brooklyn, N. Y. Filed Oct. 22, 1913. Serial No. 796,674. (Cl. 155—32.)



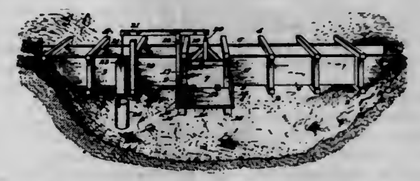
1. A collapsible field chair comprising in combination, a flexible seat portion, a disk member, seat supporting arms pivotally secured to said disk member, T-shaped members pivoted to said seat supporting arms and adapted to be attached to said flexible seat portion, locking arms pivotally mounted on said seat supporting arms and adapted at one end to engage the upper surface of said disk, a slidable member mounted on each of said seat supporting arms and adapted to engage said locking arms whereby said supporting arms are retained in extended position, legs journaled at one end in said disk member, a foot portion integral with each of said legs, an arm pivoted to each of said legs and adapted to detachably engage the adjacent leg whereby said legs are supported.

2. A collapsible field chair comprising in combination, a flexible seat portion, a disk member, folding seat supporting arms pivotally secured to said disk member, means pivoted to said seat supporting arms adapted for attaching the said flexible seat portion thereto, means pivotally connected to said seat supporting arms and adapted to engage said disk member and retain said supporting arms in the extended position, legs journaled in said disk member, and means carried by said legs whereby each leg may be detachably connected to the succeeding leg thereby forming a support for the said legs.

3. A collapsible field chair comprising in combination, a flexible seat portion, a disk member, folding seat supporting arms pivotally secured to said disk member, T-shaped members pivoted to the seat supporting arms and adapted for attachment to said flexible seat portion, lever means pivotally connected to said seat supporting arms having one arm adapted to engage said disk and a fastening member carried by said seat supporting arms whereby the other ends of said levers may be retained in such a position as to hold said lever in contact with said disk, thereby retaining said seat supporting arms in the extended position, legs journaled in said disk member, and means carried by said legs whereby each leg member may be detachably connected with the succeeding leg member thereby forming a support for said legs.

4. A collapsible field chair comprising in combination, a flexible seat portion, a disk member, folding seat supporting arms pivotally secured to said disk member, means pivoted to said seat supporting arms adapted for attachment to said flexible seat portion, means pivotally connected to said seat supporting arms and adapted to engage said disk member and retain said supporting arms in their extended position, legs journaled in said disk member, a foot portion integral with each of said legs, an arm pivoted to each of said legs and having a bayonet slot in the free end thereof, buttons carried by each of said legs and adapted to engage the bayonet slots of said arms whereby said legs are detachably connected to each other and thereby supported.

1,113,341. AUTOMATICALLY-OPERATED FLOOD-WATER-RELEASING FLUME. EDWARD W. HENRY, Cortez, Colo. Filed Oct. 18, 1913. Serial No. 795,938. (Cl. 61—46.)



1. In a device of the character described, a flume having an aperture indicating a predetermined water level therein, and an opening in one side thereof, a gate for normally closing said opening, a latch for said gate, a lever attached at one end to said latch, and a vessel attached to the opposite end of said lever below and in line with said aperture, which is adapted to be filled when the water in said flume rises to the level of and flows through said aperture, whereby the lever is tilted to raise the latch and release the gate.

2. In a device of the character described, a flume having an aperture indicating the maximum water level therein, an opening in one side thereof, a hinged gate for normally closing said opening, keepers on the flume at opposite ends of the gate, a latch bar adapted to rest in said keepers and against said gate, a lever connected at one end to said latch bar, and a vessel suspended from the opposite end of said lever, below and in line with said aperture, which is adapted to be filled, when the water in said flume rises to the level of said aperture, thereby to tilt the lever by which the latch is raised and the gate released.

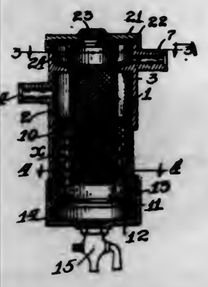
3. In a device of the character described, a flume having an outlet opening, and an aperture in one side at a point representing the maximum water level in said flume, a gate for normally closing said outlet opening, a latch for said gate, a lever, one end of which is connected to said latch, a vessel suspended from the opposite end of said lever, a spout extending from said aperture and positioned to discharge into said vessel, said vessel being filled when the water in said flume rises to the level of the said aperture, whereby the lever is tilted, which withdraws the latch and releases the gate.

4. In a device of the character described, a flume having an outlet, and an aperture in one side at a point representing the maximum water level in said flume, a vertical open-ended spout on said flume, in communication with said aperture, a gate for normally closing said outlet, a latch for said gate, a lever connected at one end to said latch, a connecting element extending through said spout and attached to the opposite end of said lever, a vessel attached to the lower end of said connecting element, and adapted to be filled when water in said flume rises to the level of said aperture, whereby the lever is tilted, which raises the latch and releases the gate, and means for supporting said gate, when the same is open.

5. In a device of the character described, a flume having an outlet, and an opening in one side at a point representing the maximum water level in said flume, a gate hinged at its lower edge to said flume for normally closing said outlet, a latch for said gate, a lever connected at one end to said latch, a rod depending from the opposite end of said lever, a vessel on the lower end of said rod, a spout on said flume surrounding said rod and communicating

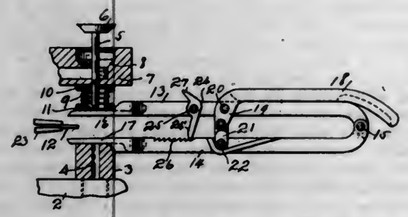
with said opening, said vessel being filled when the water in the flume rises to the level of the said opening, whereby the lever is tilted to raise the latch and release the gate, and a platform leading from said outlet which supports said gate when the same is open.

1,113,342. FILTERING DEVICE. HENRY A. HILLS, Grand Rapids, Mich. Filed June 22, 1912. Serial No. 705,165. (Cl. 210—16.)



A filter comprising a casing having an internal annular flange near its upper end, a cylindrical closed bottom filtering element therein having its upper edge flared and supported upon said flange and its lower end free, a removable head for said casing, an annular clamping member carried by said head and having a lower sharp edge adapted to clamp the upper edge of said filtering element upon said flange, and inlet and outlet openings for said casing disposed on opposite sides of said flange.

1,113,343. SPRING-CONTRACTING DEVICE. NORMAN JEROME HOAG, Skaneateles, N. Y. Filed Nov. 6, 1913. Serial No. 799,628. (Cl. 29—87.1.)



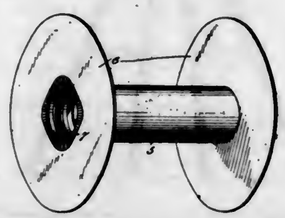
In a device of the class described, a pair of arms hinged at one end, the opposite ends thereof provided with forked jaws, a handle pivoted to the topmost arm, a link connecting said handle to the lowermost arm, a pawl carried by the topmost arm disposed between the handle and one end of said arms, and a series of ratchet teeth arranged on the lowermost arm and engaged by said pawl for adjustably holding said jaws apart, substantially as described.

1,113,344. NUT-LOCK. EZRA J. HODGES, Algona, Iowa. Filed Nov. 29, 1913. Serial No. 803,715. (Cl. 151—53.)

A nut lock comprising a washer, said washer comprising an inner and outer member, said inner member being rectangular in shape and having teeth formed upon its under face, said outer member having a rectangular opening formed therein adapted to be placed around said inner member, tongues formed on the outer edge of said outer member, said inner member capable of longitudinal movement in said outer member and being of greater thickness than said outer member, whereby when a nut is brought into engagement with said washer, the teeth of said inner member will be forced into a support, thus holding said outer member from rotation, and said tongues of

said washer adapted to be bent into engagement with the sides of a nut.

1,113,345. SPOOL. JOSEPH C. HOFFMAN, New York, N. Y. Filed Oct. 13, 1913. Serial No. 794,843. (Cl. 242—122.)



1. In a spool, the combination of a pasteboard tube and flanges, each of said flanges having a central opening substantially equal to the bore of the tube, with metallic tubular members, each having a lateral flanged portion, each of said tubular members fitting tightly into the opening of each of the flanges and said bore of the pasteboard tube, said metallic tubular members having means forming an anchor for adhesive material to secure the tubular members to the pasteboard tube, with said flanged portion of each of the metallic members contacting with the pasteboard flange.

2. In a spool, a tubular member; flanges having a central opening substantially equal to the bore of the tubular member; and a cup adapted to fit into each end of the bore of the tubular member and engage the central opening of each of the flanges and whereby said flanges are secured to the tubular member, each of said cups having means on the lateral surface thereof forming an anchor for adhesive material, whereby said cups are secured to said tubular member.

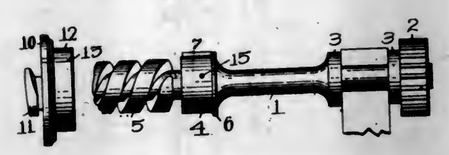
3. In a spool, a tubular member; flanges having a central opening substantially equal to the bore of the tubular member; a flanged cup for each end of said tubular member fitting snugly into the bore of the same and in the central openings of said flanges and whereby each of said flanges is secured to the opposite ends of the said tube, each of said cups having grooves in the lateral surface thereof forming an anchor for the adhesive material whereby the cups are secured to the tubular member.

4. In a spool, a tubular member; a flange at each end of said tubular member, each of the flanges having a central opening substantially equal to the bore of the tube; a flanged cup securing each flange to the tubular member by tightly engaging the flange's opening and the bore of the tube with the flanged portion of said cup against the face of the flange, said cup having in its lateral surface a pair of circular grooves and a knurled portion between said grooves, thereby forming an anchor for adhesive material to secure said cup to the tubular member.

5. In a spool, a tubular member; a flange at each end of said tubular member, each of said flanges having a central opening substantially equal to the bore of the tube; a flanged cup securing each flange to the tube, each of said cups comprising a cylindrical portion adapted to fit snugly into the bore of the tube and the openings of the flanges, said cylindrical portion having means forming an anchor for adhesive material to secure the cup to the tube, the flanged portion of said cups having a wavy surface forming an anchor for adhesive material, whereby the cup is secured to the flange.

[Claims 6 to 8 not printed in the Gazette.]

1,113,346. DISK CAM FOR GILL-DRAWING FRAMES. WILLIE HOLDSWORTH, Northboro, Mass., assignor of one-half to Harry Smith, Northboro, Mass. Filed Dec. 29, 1913. Serial No. 809,219. (Cl. 19—6.)

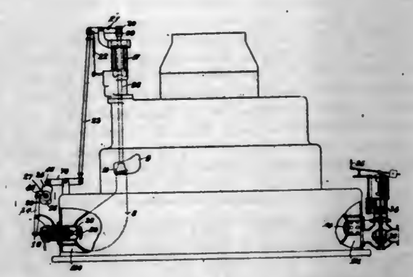


1. The combination with the bottom screw shaft for a gill-drawing frame, of a disk cam therefor, constructed to be moved into and out of position over the screw portion of said shaft and means whereby the disk cam can be placed in only one position on said screw shaft.

2. In a gill-drawing frame, the combination with a bottom screw shaft, of a hub thereon at the end of the screw, said hub being of a diameter as great as the diameter of the screw, and a disk cam fitting said hub and movable on the hub over the screw.

3. In a gill drawing frame, the combination with the bottom screw shaft having a hub thereon at the end of the screw thereof, of a diameter as great as the diameter of the screw and provided with a collar at the end of the hub opposite the screw, and with a fixed key, and a cam having a passage therethrough with a key-way therein fitting said hub and adapted to be moved over the screw on said hub, and a set screw for fixing said cam in a single position on said hub.

1,113,347. GAS-TURBINE. HANS HOLZWARTH, Mannheim, Germany, assignor of one-half to Erhard Junghaus, Schramberg, Germany. Filed Sept. 23, 1909. Serial No. 519,213. (Cl. 60—4.)



1. A gas turbine consisting of a rotor, a combustion chamber, means for leading the products of combustion to said rotor, valves for air and combustible in the combustion chamber, controlling gear for the said valves, a valve in the chamber for the products of combustion, adapted to be opened by the pressure of the exploded gases and means for holding it open for the requisite time.

2. A gas turbine consisting of a rotor, a combustion chamber, means for leading the products of combustion to said rotor, valves for air and combustible in the combustion chamber, controlling gear for the said valves, a valve in the chamber for the products of combustion, adapted to be opened by the pressure of the exploded gases, means for holding open said spring loaded valve for the necessary time, and means for opening the said valve a second time.

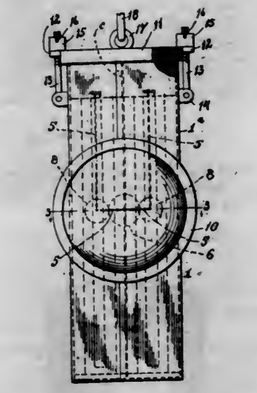
3. A gas turbine consisting of a rotor, a combustion chamber, means for leading the products of combustion to said rotor, valves for air and combustible in the combustion chamber, controlling gear for the said valves, a valve in the chamber for the products of combustion, adapted to be opened by the pressure of the exploded gases, means for holding open said spring loaded valve for the necessary time, a rotary controlling shaft and means provided on the said shaft for opening the said valve a second time.

4. A gas turbine consisting of a rotor, a combustion chamber, means for leading the products of combustion to said rotor, valves for air and combustible in the combustion chamber, controlling gear for the said valves, a spring loaded valve in the chamber for the products of combustion, adapted to be opened by the pressure of the exploded gases, means for positively holding it open for the requisite time, and positive means for forcing open the valve a second time.

5. A gas turbine consisting of a rotor, a combustion chamber, means for leading the products of combustion to said rotor, valves for air and combustible in the combustion chamber, controlling gear for the said valves, a member of variable length between said valves and said controlling gear, a valve in the chamber for the products of combustion, adapted to be opened by the pressure of the exploded gases and means for holding it open for the requisite time.

[Claims 6 to 9 not printed in the Gazette.]

1,113,348. STORAGE BATTERY. HARRY CROSS HUBBELL, Newark, N. J. Filed Dec. 7, 1909. Serial No. 531,761. (Cl. 204—29.)



In combination with a storage battery having a metal casing in contact with the electrolyte, the provision of a casing consisting of a single strip of metal bent into S-formation, each free end of said strip overlapping the opposite loop of the S and being brazed thereto, said casing having a bottom brazed thereto and a cover for its top.

1,113,349. AUTOMOBILE-VENTILATOR. ERNEST W. HULET and WILLIAM S. EATON, Cleveland, Ohio, assignors to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 2, 1912. Serial No. 674,938. (Cl. 98—21.)

1. In a ventilator, the combination of a rectangular frame bounding a narrow elongated horizontal opening, with a trough shaped sheet metal shutter fitted in said opening and connected by horizontal alined pivots to the end members of said frame.

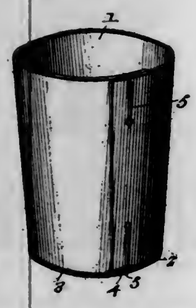
2. In a ventilator, a rectangular frame bounding a narrow elongated horizontal opening, and provided along its lower edge with means for attaching said frame to a support, with a trough shaped sheet metal shutter fitted in said opening and connected by horizontal alined pivots to the end members of said frame.

3. In a ventilator, the combination of a rectangular frame comprising a top member, bottom member, two end members, and a vertical member extending from the bottom member to the top member about midway between the two end members, means on the lower member of said frame for connecting the same to a support, with two trough shaped sheet metal shutters fitted into the narrow elongated openings through the frame on each side of the central vertical member, and connected to said frame on horizontal alined pivots.

4. In a ventilator, the combination of a rectangular frame bounding a narrow elongated horizontal opening, with a trough shaped sheet metal shutter fitted in said opening and connected by horizontal alined pivots to the end members of said frame, and an operating handle secured to said shutter for turning the same and for limiting the extent to which said shutter can be turned by engaging with the upper and lower frame members.

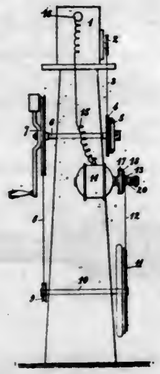
5. In a ventilator, the combination of a rectangular frame bounding a narrow elongated horizontal opening, the lower frame member being provided with means for attaching said frame to a support, and the upper frame member being provided with clamps adapted to engage with the lower member of a wind shield, and a trough shaped sheet metal shutter fitted in said opening and connected with said frame by horizontal alined pivots.

1,113,350. PLANT-POT. JESSE ERSKINE INMAN, Salt Lake City, Utah. Filed May 16, 1913. Serial No. 768,097. (Cl. 229—21.)



A pot constructed of a blank including a main section adapted when rolled to form a wall of the pot, a plurality of integral spaced circular sections adapted to form a double bottom for the pot, and means for connecting the meeting edges of the main section of the blank to hold same in pot wall forming relation, said means including a laterally extending member to underlie the bottom of the pot.

1,113,351. KINEMATOGRAPHIC APPARATUS. ERNEST ALBERT IVATTS, Paris, France, assignor to Society: Compagnie Generale de Phonographes Cinematographes et Appareils de Precision, Paris France. Filed Jan. 4, 1910. Serial No. 536,281. (Cl. 88—16.)



1. The combination in a kinematographic apparatus, of an electric lamp for illuminating the film, an electrical generator for furnishing current for said lamp, and a driving shaft geared to the film-operating mechanism and also to the electrical generator.

2. The combination in a kinematographic apparatus, of an electric lamp for illuminating the film, an electrical generator for furnishing current for said lamp, a driving shaft geared both to the film-operating mechanism and to the electrical generator, and clutches enabling the electrical generator to be started before the film-operating mechanism is set in motion.

3. The combination in a kinematographic apparatus, of an electric lamp for illuminating the film, an electrical generator for furnishing current for said lamp, a power shaft for driving both the film-operating mechanism and the electrical generator, clutches for connecting said two sets of devices with said shaft, and an automatic brake adapted to regulate and maintain a constant rate of rotation of the rotor of said electrical generator.

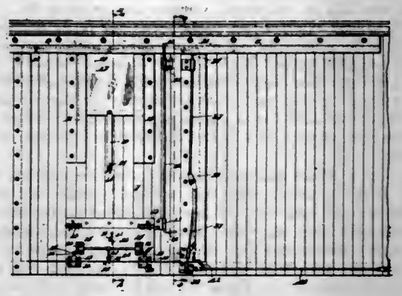
4. The combination in a kinematographic apparatus, of an electric lamp for illuminating the film, an electric generator for furnishing current to said lamp, a driving shaft, a pulley for actuating the film-moving mechanism, a pulley on the shaft of the electrical generator, and operative connections between said pulleys and the driving shaft.

5. The combination in a kinematographic apparatus, of an electric lamp for illuminating the film, an electrical generator for furnishing the current to said lamp, and driving connections between the generator and a shaft of the kinematograph whereby light for illuminating the film is generated simultaneously with the operation of the kinematograph by the same source of power.

1,113,352. CAR-DOOR. JOHN KARTHEISER, Aurora, Ill., assignor of one-half to Nicholas Kartheiser, Aurora, Ill. Filed Nov. 14, 1913. Serial No. 800,946. (Cl. 20—23.)

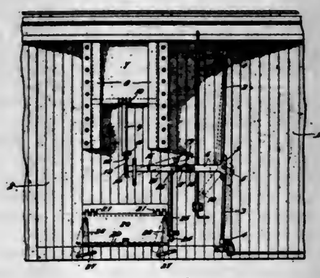
1. In combination, a car having a door opening; a door in said door opening; a track substantially U-shaped in cross section on said car; a rigid hanger secured on said door and having a portion extending between the legs of said U-shaped track, said hanger being adapted to move laterally of said track to permit movement of said door laterally from said door opening; a rod rotatably mounted on said door, having its upper end bent forming a lever engaging the bight portion of said track and a portion resting on the upper side of said track preventing downward movement of the rod, and its lower end bent forming an operating lever, substantially as described.

2. In combination, a car having a door opening; a door in said opening; a track substantially U-shaped in cross section disposed with its bight portion directed away from said door opening and its upper leg secured to said car above said door opening; hangers secured to said door and extending into said track and adapted to permit longitudinal and lateral movements of said door, said hangers



being adapted to engage the lower leg of said track and limit the outward movement of said door; and a lever mounted on said door, engaging the bight portion of said track and adapted to move said door laterally, substantially as described.

1,113,353. CAR-DOOR LOCK. JOHN KARTHEISER, Aurora, Ill. Filed Mar. 25, 1914. Serial No. 827,053. (Cl. 20—27.)



1. The combination with a car having a side door and auxiliary doors in said side door, of locks for said auxiliary doors; locks for said side door; a lever connected with the locks of said auxiliary doors; a lever connected with the locks of said side door; means connecting said levers; and a seal sealing said means, substantially as described.

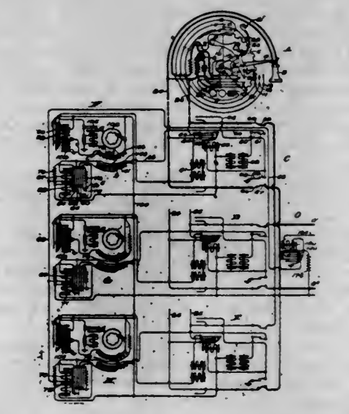
2. The combination with a car having a side door and auxiliary doors in said side door, of catches for each of said doors; locking bolts coöperating with said catches; two levers pivoted on said side door, said locking bolts being pivoted to said lever; and a hasp locking said levers against movement, substantially as described.

3. The combination with a car having a side door and auxiliary doors in said side door, of locks for said side doors; locks for said auxiliary doors; an actuating lever connected with the locks of said side door; an actuating lever connected with the locks of said auxiliary doors, corresponding ends of said levers, when the locks coöperating therewith are in locking position, being in registration with each other; and means engaging with said ends of said levers for locking the latter against relative movement, substantially as described.

4. The combination with a car having a side door and auxiliary doors in said side door, of locks for said side door; locks for said auxiliary doors; a substantially horizontally disposed actuating lever connected with the locks of said auxiliary doors, corresponding ends of said levers, when the locks coöperating therewith are in locking position, being in registration with each other; and means engaging with said ends of said levers for locking the latter against relative movement, substantially as described.

5. The combination with a car having a side door and auxiliary doors in said side door, of locks for said side doors; locks for said auxiliary doors; an actuating lever connected with the locks of said auxiliary doors, corresponding ends of said levers, when the locks coöperating therewith are in locked position, being in registration with each other; means engaging with said ends of said levers for locking the latter against relative movement, said means comprising a staple on one of said lever ends adapted to engage a slot provided in the other lever end; and a hasp on said last mentioned lever end adapted for engagement with said last mentioned staple, substantially as described.

1,113,354. AUTOMATIC TRUNKING SYSTEM. ALEXANDER E. KEITH, Hinsdale, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1913. Serial No. 754,803. (Cl. 179—18.)



1. In a telephone system, a plurality of groups of subscribers' lines, a single group of trunk lines, means whereby certain of said subscribers' lines can connect with any one of said trunk lines, and means whereby certain other of said subscribers' lines can connect with a lesser number of said trunk lines.

2. In a telephone system, a plurality of groups of subscribers' lines, a group of trunk lines, means whereby certain of said subscribers can select the first idle trunk line out of all of said group of trunk lines, and means whereby certain other of said subscribers have access to a part only of said trunk lines and are provided with means for selecting an idle one of said trunk lines.

3. In a telephone system, a plurality of groups of subscribers' lines, a group of trunk lines, a switching mechanism for each subscriber's line for automatically selecting idle trunks, means whereby certain of said switching mechanisms have access to all of said trunks, and means whereby certain other of said switching mechanisms have access to but part of said trunks.

4. In a telephone system, a plurality of groups of subscribers' lines, a group of trunk lines, a line switch for each of said subscribers' lines, a master switch controlling a group of said line switches, whereby said line switches are adapted to connect with an idle trunk, and means whereby certain of said line switches have access to all of said trunk lines, while other of said line switches have access to but part of said trunk lines.

5. In a telephone system, a plurality of groups of subscribers' lines, a group of trunk lines, means whereby the subscribers of one of said groups can connect with any of said trunk lines, means whereby the subscribers in another of said groups can connect only with a lesser number of said trunk lines, means whereby the subscribers of a third group can connect only with a still lesser number of said trunk lines, and means for preventing subscribers of different groups from connecting with the same trunk line.

[Claims 6 to 11 not printed in the Gazette.]

1,113,355. SELF-HOLDING TREAD OR MAT. JAMES A. KENT, Boston, Mass. Filed Aug. 9, 1913. Serial No. 783,989. (Cl. 20—79.)

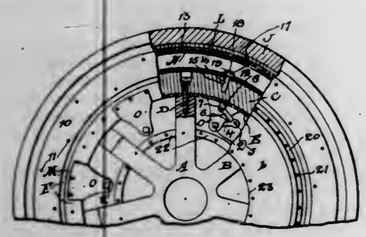
1. A tread mat of the character described comprising a body of flexible material, an under strip and an upper strip clamping the forward edge of said body betwen them, said upper strip having a depending curved flange or nose piece extending beyond the forward edge of said body.

2. A tread mat of the character described comprising a body of flexible material, an under strip and an upper strip clamping the forward edge of said body between them, said upper strip having a depending shoulder extending over the front edge of the body to protect the same, said strip being bent below said shoulder to form a curved flange or nose.

3. A tread mat of the character described comprising a body of flexible material, a metallic binding strip secured to the rear edge thereof and an under strip and an upper strip clamping the forward edge of said body between them, said upper strip having a depending curved flange or nose piece extending beyond the forward edge of said body, the under face of the binding strip and the under face of said under strip being provided with depending toothed ribs.

4. A tread mat of the character described comprising a body of flexible material, a metallic binding strip secured to the rear edge thereof and an under strip and an upper strip clamping the forward edge of said body between them, said upper strip having a depending curved flange or nose piece extending beyond the forward edge of said body, the under face of the binding strip being provided with depending toothed ribs, said under clamping strip being also provided with toothed ribs arranged at right angles to the first mentioned toothed ribs.

1,113,356. WHEEL AND TIRE THEREFOR. HENRY KITCHER, Toronto, Ontario, Canada. Filed Oct. 20, 1913. Serial No. 796,335. (Cl. 152—35.)



1. In a wheel and tire therefor, the combination with the felly; a pair of coupled plates between which said felly has radial movement; a tread associated with the said plates; an air tube positioned between said plates and said felly and said tread; means whereby the movement of said wheel is limited to prevent said felly from pinching said air tube; means whereby said air tube may be positioned and removed; means for preventing substantially circumferential displacement between said plates and said felly comprising a plurality of alined pairs of link members pivoted together at each side of the wheel and positioned between the spokes of the wheel and between said felly and the hub of the wheel; means for pivoting the outer ends of said coupled link members to the inner portion of said felly; a plurality of pairs of flange plates secured to said coupled plates and radially disposed between said spokes: the said link members being positioned between said flange plates, and means coupling the inner ends of each pair of said flange plates together and to which the inner ends of each pair of link members are pivoted, as set forth.

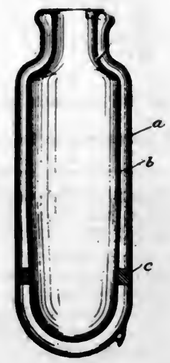
2. In a wheel and tire therefor, the combination with the felly; a metal ring-plate secured against the inner periphery of said felly; a pair of coupled plates between which said felly has radial movement; a tread associated with the said plates; an air tube positioned between said plates and said felly and said tread; the said ring-plate abutting against the said plates to limit the outward movement of said felly to prevent the pinching of the air tube; means whereby said air tube may be positioned and removed; means for preventing substantially circumferential displacements between said plates and said felly comprising a plurality of alined pairs of link members pivoted together at each side of the wheel and positioned between the spokes of the wheel and between said felly and the hub of the wheel; means for pivoting the outer ends of said coupled link members to the said metal ring plate; a plurality of pairs of flange plates secured to said coupled plates and radially disposed between said spokes; the said link members being positioned between said flange plates, and means coupling the inner ends of each pair of said flange plates together and to which the inner ends of each of the link members are pivoted, as set forth.

3. In a wheel and tire therefor, the combination with the felly; a pair of plates between which said felly has radial movement; a tread associated with said plates; a flexible envelop positioned between said plates and said felly and said tread, and provided with a plurality of holes; studs supported one in each of the said holes and extending into pockets formed in the said felly, the inner ends of said studs being rounded and projecting within the said envelop; an air tube within said envelop; heads of the said studs forming beads within said air tube to keep the same against movement; means whereby the movement of said wheel is limited to prevent said felly pinching said air tube, and means whereby said envelop and air tube may be positioned and removed.

4. In a wheel and tire therefor, the combination with the felly; a pair of plates between which said felly has radial movement; a tread associated with said plates; a flexible envelop positioned between said plates and said felly and said tread, and provided with a plurality of holes; studs supported one in each of the said holes and extending into pockets formed in the said felly, the inner ends of the said studs being rounded and projecting within the said envelop; the heads of the said studs forming beads within said air tube to keep the same against movement; means whereby the movement of said wheel is limited to prevent said felly pinching said air tube, and an annular plate closing a side opening formed in one of said plates through which said envelop and air tube are positioned and removed.

5. In a wheel and tire therefor, the combination with the felly; a pair of plates between which said felly has radial movement; a web plate permanently connecting said plates together at their outer ends; a tread carried by said plates and positioned against said web plate; an air tube positioned between said plates and said felly and said tread; the inner sides of said plates being offset outwardly to form horizontal flanges; a ring plate secured against the inner periphery of said felly and operating between the inner portions of said plates and designed to abut against said flanges to limit the radial downward movement of said felly to prevent the pinching of said air tube; an annular plate designed to close a side opening formed in one of said plates to permit of the placing and removing of said air tube; a plurality of flange plates carried by said plates and extending radially inward; tie bolts connecting said flange plates together, and link arms associated with the said bolts and said ring plates as set forth.

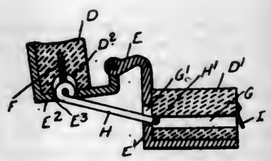
1,113,357. VACUUM-BOTTLE. JOSEPH F. LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 16, 1913. Serial No. 790,020. (Cl. 215—70.)



1. In a device of the character described, a double-walled structure provided with side walls which are plain cylinders, and curved end portions, said side walls being non-parallel, and supports insertible between the non-parallel portions of said walls and adapted to be wedged into contact with both walls.

2. A vacuum insulated container comprising a double-walled structure, the sides of which are plain cylinders non-parallel throughout at least a part of their length, and supports insertible between the non-parallel portions of said walls and movable toward the converging parts thereof to space said walls one from the other.

1,113,358. DOOR-STOP. JOSEPH LYLE LAWRENCE, Toronto, Ontario, Canada. Original application filed Oct. 29, 1913, Serial No. 798,117. Divided and this application filed Mar. 9, 1914. Serial No. 823,470. (Cl. 16—6.)



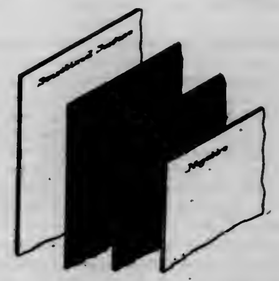
1. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other with a horizontal bore, of a link member swung on a vertical pivot in such recess at one end and entering at its free end into the horizontal bore, and spring pressure means designed to bear against the end of the link member when the dor members are in the closed position, as and for the purpose specified.

2. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other member with a horizontal bore, of a stop plate having an opening extending over the inner end of the bore and having a less vertical diameter than the bore, a link member swung on a vertical pivot in the recess and having an upturned free end entering the bore, the upturned portion engaging the inner face of the stop plate when the door members are in the open position, and means for preventing the rattling of the link member when the door members are in the closed position, as and for the purpose specified.

3. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other member with a horizontal bore, of a stop plate having an opening extending over the inner end of the bore and having a less vertical diameter than the bore, a link member swung on a vertical pivot in the recess and having an upturned free end entering the bore, the upturned portion engaging the inner face of the stop plate when the door members are in the open position, as and for the purpose specified.

4. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other with a horizontal bore, of a link member swung on a vertical pivot in such recess at one end and entering at its free end into the horizontal bore, a spring plate extending in front of the outer end of the bore to engage the end of the link when the door members are in the closed position, as and for the purpose specified.

1,113,359. PROCESS FOR COPYING FROM POLYCHROMIC-SCREEN NEGATIVES. ALFRED LEHNER, Helsterbach-on-the-Main, Germany, assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 17, 1910. Serial No. 538,514. (Cl. 95—2.)



1. In the art of copying from polychrome screen negatives, the process which consists in exposing the sensitive surface through a multicolor screen in which continuous lines of one color alternate with interrupted lines of the other color or colors employed in the screen and concurrently through a second screen also having continuous lines alternating with interrupted lines crossing the lines of the first screen, the continuous lines of the first screen being of a different color from that of the continuous lines of the second screen.

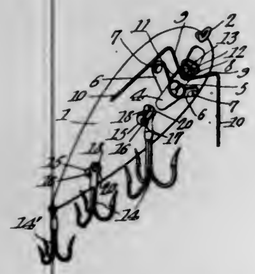
2. In the art of copying from polychrome screen negatives, the process which consists in exposing the sensitive surface to a multicolor screen in which continuous lines alternate with interrupted lines, and, concurrently through a second screen also having continuous lines of one color alternating with lines of other colors, said lines crossing the lines of the first screen, the continuous lines of the second screen being of the same color as one of the series of interupted lines of the first screen.

3. In the art of copying from polychrome screen negatives, the process which consists in exposing the sensitive surface to a multicolor screen in which continuous lines of one color alternate with interrupted lines of another color or colors, and, concurrently to a second screen also having continuous lines of one color alternating with interrupted lines of another color or colors the lines of the second screen crossing those of the first screen, the continuous lines of the second screen being of a color different from that of the continuous lines of the first screen, and

the colors of the second screen also being of different intensity from those of the first screen.

4. In the art of copying from polychrome screen negatives, the process which consists in exposing the sensitive surface through the multicolor screen in which continuous lines alternate with interrupted lines, and, concurrently through a second screen also having continuous lines of one color alternating with lines of other colors, and lines crossing the lines of the first screen, the continuous lines of the second screen being of the same color as one of the series of interrupted lines of the first screen and the colors of the one screen differing in intensity from those of the other screen.

1,113,360. ARTIFICIAL BAIT. EDWARD J. LOCKHART and EVELYN M. LOCKHART, Galesburg, Mich. Filed Aug. 4, 1913. Serial No. 782,972. (Cl. 43—30.)



1. In an artificial bait, a buoyant hook-carrying body, and a member separable from and attached to the body, the member being considerably smaller than the body and having an inclined water passage independent thereof.

2. In an artificial bait, a buoyant hook-carrying body, and a member formed from a blank separable from and having its terminals attached to the body, the member being considerably smaller than the body and having its intermediate portion bent to provide a corrugation, the corrugation being inclined and forming a water passage independent of the body.

3. In an artificial bait, a buoyant hook-carrying body, and an inclined tube considerably smaller than the body and attached thereto.

4. In an artificial bait, a buoyant hook-carrying body, and a relatively small inclined longitudinally split tube, having ears projecting from its edges and resting against and secured to the body.

5. In an artificial bait, a buoyant hook-carrying body, and a rearwardly inclined and tapered tube disposed below the body, the tube being split longitudinally at its top and having ears projecting from its edges and secured to the body.

[Claims 6 to 12 not printed in the Gazette.]

1,113,361. ARTIFICIAL BAIT. EDWARD J. LOCKHART and EVELYN M. LOCKHART, Galesburg, Mich. Filed Aug. 21, 1913. Serial No. 786,025. (Cl. 43—30.)

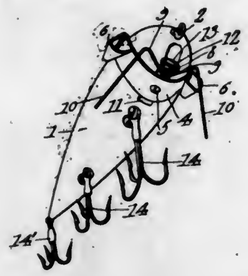
1. In an artificial bait, a buoyant hook-carrying body, and a member attached thereto and provided with inclined water passages at the sides of and independent of the body.

2. In an artificial bait, a buoyant hook-carrying body, and a member attached to the bottom thereof and provided with rearwardly inclined water passages at the sides of and independent of the body.

3. In an artificial bait, a buoyant hook-carrying body, and tubes carried by and independent of the body and arranged at opposite portions thereof.

4. In an artificial bait, a buoyant hook-carrying body, and inclined tubes carried by and independent of the body, and arranged at the sides thereof.

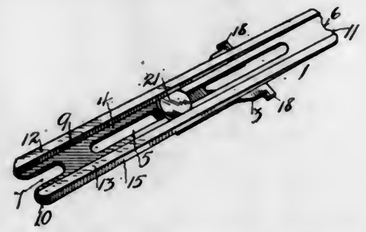
5. In an artificial bait, a buoyant hook-carrying body, and a member having its intermediate portion attached



thereto and having its terminals provided with water passages.

[Claims 6 to 13 not printed in the Gazette.]

1,113,362. SPACE-BAND FOR COMPOSING-MACHINES. JOHN T. LOCKWOOD, New York, N. Y. Filed Apr. 21, 1913. Serial No. 762,447. (Cl. 199—4.)



1. A wedge for space bands drawn up from sheet metal of uniform thickness to form corrugations extending longitudinally of the wedge, for the purpose set forth.

2. A wedge for space bands, drawn up from sheet metal of uniform thickness to form corrugations extending longitudinally of the wedge, for the purpose set forth, said corrugations decreasing in depth longitudinally of the wedge.

3. A wedge for space bands, drawn up from sheet metal of uniform thickness to form corrugations extending longitudinally of the wedge and to form longitudinal grooves, said grooves being defined by side walls arranged perpendicular to the face of the wedge.

4. A wedge for space bands, drawn up from sheet metal of uniform thickness to form corrugations extending longitudinally of the wedge and to form longitudinal grooves, said grooves being defined by side walls arranged perpendicular to the face of the wedge and decreasing in height longitudinally of the wedge.

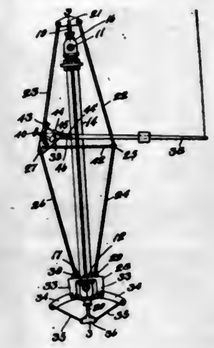
5. A wedge for space bands, drawn up from sheet metal of uniform thickness to form corrugations extending longitudinally of the wedge, said wedge having spaced face webs connected by intermediate perpendicular walls, said wedge having outer side walls.

[Claims 6 to 9 not printed in the Gazette.]

1,113,363. TEMPERATURE-REGULATOR. WILLIAM D. LUCE, Haverhill, Mass. Filed Apr. 17, 1914. Serial No. 832,447. (Cl. 236—5.)

1. A temperature regulator for a circulating fluid comprising an expansion pipe rigidly supported at one end only and having pipe connections at its ends to conduct the circulating fluid therethrough, an expansion-rod extending through said pipe in central longitudinal alinement therein, a pair of levers oppositely disposed and mounted at

opposite sides of said pipe and having their adjacent ends in engagement with the free end of said pipe, a pair of links respectively connecting the opposite ends of said levers and the adjacent end of said rod, to cause said pipe, as it expands in one direction, to move said rod in the opposite direction, and operating devices engaging the opposite end of said rod, substantially as described.



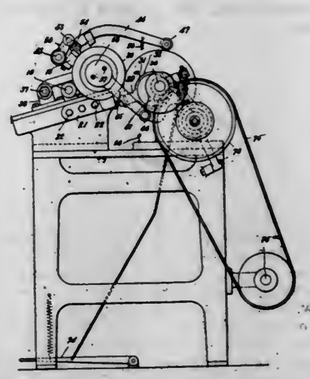
2. A temperature regulator comprising a support, an actuator arranged to be moved with relation to said support according to variations in temperature of a fluid, a toggle connecting said actuator and said support, a pivoted support, an operating arm pivotally mounted on said pivoted support, connections between said pivoted support and said toggle to cause the support to be swung on its pivot when the toggle is straightened, and an adjusting screw arranged to support said arm and to move in different positions relative to said support, substantially as described.

3. A temperature regulator comprising an upper and a lower support, an expansion pipe rigidly connected to said upper support and extending downward to said lower support, an expansion rod disposed within and extending throughout the length of said pipe, a lever mounted on said lower support and arranged to be actuated by said pipe on expansion thereof and to engage said rod to move the same upwardly, a pair of toggles pivoted at their upper ends to the upper end of said rod and at their lower ends to said lower support, a damper operating lever pivoted to the middle portion of one of said toggles, and a link connected to the middle portion of the other toggle and to said lever at one side of its pivot, substantially as described.

4. A temperature regulator comprising a support, an actuator arranged to be moved with relation to said support according to variations in temperature of a fluid, a pair of toggles connecting said actuator, and said support, and so arranged that, as said toggles are straightened, their middle pivots will be moved toward each other, an arm pivotally mounted on the pivot of one of said toggles, a link mounted on the middle pivot of the other toggle and pivoted to said arm at one side of the pivot on which said arm is mounted, whereby said arm will be swung on its pivot as the said middle joints are moved toward and from each other by said actuator and operating devices arranged to be engaged by said arm, substantially as described.

1,113,364. SCARFING-MACHINE. HARRY LYON, Brockton, Mass., assignor to John A. Barbour and Perley E. Barbour, doing business as Copartners under the name and style of The Brockton Rand Company, Brockton, Mass. Filed May 27, 1914. Serial No. 841,268. (Cl. 69—15.)

1. A scarfing machine, comprising, in combination, a table, a scarfing-knife movable in an inclined path relatively to stock backed by the table, mechanism governed by the thickness of the stock for successively confining the stock and operating the knife, said mechanism including a pressure member movable independently of the knife to press the stock against the table, and in unison with the knife, and means caused by contact of the pressure member with the stock to move the knife and pressure member forward in unison.



2. A scarfing machine comprising, in combination, a table, a scarfing-knife movable in an inclined path relatively to stock backed by the table, a pressure roll and means coöperating therewith for causing the roll to confine the stock and for operating the knife when the stock is confined, the operation of the knife being governed by the thickness of the stock.

3. A scarfing-machine comprising, in combination, a table, a slide movable in an inclined path relatively to stock backed by said table, a scarfing-knife attached to said slide, an oscillatory carrier mounted on the slide, a pressure roll mounted on said carrier and reciprocating mechanism connected with the carrier and operating, first, to press the roll against the stock, and then project the slide, knife, and roll in unison.

4. A scarfing machine comprising, in combination, a table, a slide movable in an inclined path relatively to stock backed by said table, a scarfing-knife attached to said slide, an oscillatory carrier mounted on the slide, a pressure roll mounted on said carrier, and reciprocating mechanism connected with the carrier and operating, in one direction to first press the roll against the stock and then project the slide, knife and roll in unison, and in the opposite direction to first move the roll from the stock and then retract the slide knife and roll in unison.

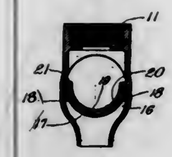
5. A scarfing machine comprising, in combination, a table, a slide movable in an inclined path relatively to stock backed by said table, a scarfing-knife attached to said slide, an oscillatory carrier mounted on the slide, a pressure roll mounted on said carrier, and reciprocating mechanism connected with the carrier and operating in one direction to first press the roll against the stock and then project the slide, knife, and roll in unison, and in the opposite direction to first move the roll from the stock and then retract the slide, knife, and roll in unison, the slide being provided with an adjustable contact piece which limits the retraction of the knife.

[Claims 6 to 18 not printed in the Gazette.]

1,113,365. FILTER. MICHAEL H. MALONEY, Plymouth, Mass., assignor of one-half to John J. Buckley, Plymouth, Mass. Filed Feb. 14, 1913. Serial No. 748,343. (Cl. 210—6.)

1. A filter comprising a barrel chamber with an inlet at one side and an outlet at an opposite side, and water purifying means consisting in half round strainer members having yielding frictional engagement with the barrel wall to cover the outlet and with a filter pad frictionally held therebetween by the spring action of said strainer members.

2. A filter comprising a barrel chamber having an inlet at one side and an outlet at an opposite side, the barrel having an enlarged dished out portion surrounding said outlet, and water purifying means consisting in half round strainer plates fitted one within the other in said barrel to cover said dished out portion there being filtering means interposed between said strainers, and said strainers and filtering means being held in place by yielding frictional engagement.



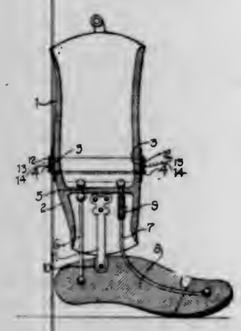
3. A filter comprising a barrel chamber having an inlet at one side, and an outlet at an opposite side, there being an enlarged dished out portion around said outlet, and water purifying means consisting in an outer half round strainer with struck out projections engaging shoulders at the sides of said dished out portion, an intermediate filtering member, and an inner strainer member of curved part round form, said strainer members being formed and adapted for coöperation to hold said filter member assembled between them with the yielding spring action and with a capability of manual displacement.

4. A filter comprising a barrel chamber having an inlet, and a lateral outlet, there being a dished out portion around said outlet, and water purifying means formed to be displaceably held in said barrel chamber by spring frictional engagement with the lateral walls thereof.

5. A filter comprising a barrel chamber having an inlet, and a lateral outlet, and water purifying means part circular in cross section, formed to yieldingly engage the sides of said barrel chamber to be held against casual displacement but with a capability of easy manual removal.

[Claims 6 and 7 not printed in the Gazette.]

1,113,366. ARTIFICIAL LEG. VETA L. MILLER, Cheyenne, Wyo. Filed Apr. 29, 1914. Serial No. 835,224. (Cl. 3—3.)

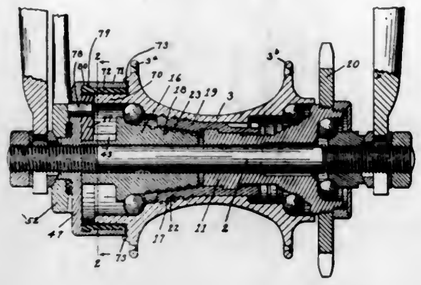


1. An artificial leg comprising a two-part socket one of which carries a foot, and means for detachably connecting the parts whereby to remove the foot from the socket proper when the latter is in place.

2. An artificial leg comprising a two-part socket one of which carries a foot, a sleeve secured around one of the sections, a collar secured around the other section and arranged to receive the sleeve, and locking means carried by one of the sections and co-acting with the sleeve to prevent accidental disconnection of the parts.

3. In an artificial leg, a leg socket composed of two sections, one of which carries a foot, a sleeve secured exteriorly of the upper end of the foot section, a collar surrounding the lower end of the leg section and arranged to be received in the sleeve, spring catches carried by the leg section, and pins or studs carried by the sleeve to engage with the spring catches.

1,113,367. COASTER-BRAKE. GALES P. MOORE, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Jan. 3, 1910, Serial No. 536,129. Renewed July 1, 1914. Serial No. 848,496. (Cl. 208—57.)



1. In a braking mechanism, a hub having a flange, a brake-drum for said hub and extending beyond said hub-flange, an anchoring member, a protecting flange upon said anchoring member of less internal circumference than said hub flange and extending toward said hub-flange and to a point adjacent thereto, said protecting flange lying about said brake-drum, and a brake between said protecting flange and said drum; substantially as described.

2. In a braking mechanism, a hub having a flange, a brake-drum for said hub and extending beyond said hub-flange, an anchoring member, a protecting flange upon said anchoring member and extending toward said hub-flange, said protecting flange lying about said brake-drum, a portion upon said hub-flange overlapping the edge of said protecting flange, and a brake between said protecting flange and said drum; substantially as described.

3. In a braking mechanism, a hub, a brake-drum therefor, an anchoring member, a flange upon said anchoring member and lying about said brake-drum, a brake between said flange and said drum, and interlocking parts upon said flange and said brake preventing lateral displacement of the latter; substantially as described.

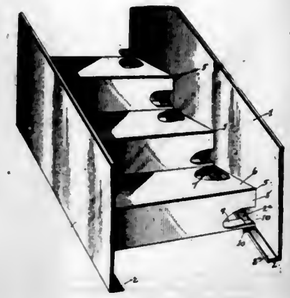
4. In a braking mechanism, a hub, a brake-drum therefor, an anchoring member, a flange upon said anchoring member and lying about said drum, a brake-ring between said flange and said drum, means for applying force to one end of said ring to contract the latter, and coöperating parts upon said flange and the other end of said ring and having inclined faces for causing said other end of said ring to move toward said drum into braking engagement; substantially as described.

5. The combination with a hub, a brake-drum therefor, and a brake-actuator, of an anchored brake-plate at the end of said hub and spaced therefrom, a brake anchored to said plate and lying outside of said drum to coöperate with the latter, and operating connection between said actuator and said brake and lying in the said space between said hub and said plate; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,113,368. STAIR STRUCTURE. JOHN T. NESDALL, Brooklyn, N. Y. Filed May 31, 1913. Serial No. 770,996. (Cl. 189—43.)

1. A stair-structure including two components, one of these being a pair of stringers provided with supporting sections integral with the body of the stringer; the second component comprising a combined riser-and-tread unit, the riser-portion thereof being provided with an anchoring flange adapted to engage with and rest upon the supporting section of the stringer, and the tread-portion thereof being also provided with a strengthening flange adapted to extend over and rest upon a supporting section of the stringer; the tread-and-riser unit being supported on said stringer independent of any other tread-and-riser unit thereon.



2. A stair-structure including two components, one of these being a pair of stringers provided with spaced supporting sections integral with the body of the stringer; the second component comprising a combined riser-and-tread unit, the riser-portion thereof being provided with an anchoring flange adapted to engage with and rest upon the supporting section of the stringer, and the tread-portion thereof being also provided with a strengthening flange adapted to extend over and rest upon a supporting section of the stringer; the tread-and-riser unit being supported on said stringer independent of any other tread-and-riser unit thereon.

3. A stair-structure including two components, one of these being a pair of stringers provided with spaced supporting sections integral with the body of the stringer; the second component comprising a combined riser-and-tread unit, the riser-portion thereof being provided with a plurality of pendant anchoring portions adapted to extend over and rest upon said supporting sections of the stringer, and a riser-strengthening flange integral with the body of the riser, and the tread-portion of the unit being provided with a strengthening and anchoring flange adapted to extend over and rest upon a supporting section of the stringer; the tread-and-riser unit being supported on said stringer independent of any other tread-and-riser unit thereon.

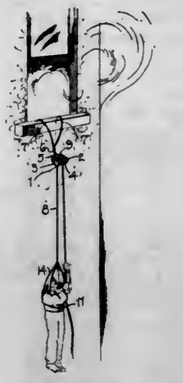
4. A stair-structure including, as components, a stringer provided with an integral angulated unit-supporting portion divided into sections, and a combined tread-and-riser component, said component being provided with integral stringer-attaching means including portions angulated with respect to each other, some of which portions extend over and rest upon the sections of said unit-supporting portions of the stringer.

5. A stair-structure including as one component a pair of stringers each provided with an angulated unit-supporting portion, and a series of combined tread-and-riser units adapted to rest upon said stringers one entirely independent of the other, and formed with integral means adapted to engage and rest upon the angulated portions of the stringer, said means including a plurality of flanges occupying relatively different planes and adapted to project through said stringer portion whereby said units may be removably attached to the stringers.

[Claims 6 to 11 not printed in the Gazette.]

1,113,369. PORTABLE FIRE-ESCAPE. KARL FREDRIK OLSON, Brockton, Mass. Filed June 17, 1914. Serial No. 845,672. (Cl. 227—11.)

1. A device of the character described comprising a U-shaped supporting plate, the opposite ends of said plate having angular openings formed therein, a cylindrical block disposed between the opposite ends of said plate and having angular extensions disposed through the angular openings in said ends, hooks connected at one end to said angular extensions, a cord passed around said block, and a body carrier connected to one end of said cord.



2. A device of the character described comprising a plate having its opposite ends disposed angularly in parallel relation with each other, said plate having angular openings formed therein, a block having angular extensions disposed through said angular openings, hooks secured at one end to said angular extensions, said plate having a central opening, a cord passed around said block and having one end disposed through the opening in said plate, and a body carrier connected to the free end of said cord after the same has been passed through the opening in the plate.

3. A device of the character described comprising a U-shaped supporting plate having angular openings formed in its opposite ends, a block having angular extensions at its ends disposed through the angular openings in said plate, rods connected at one end to the angular extensions, said rods being twisted rearwardly of the plate and being curved to provide hooks, a cord passed around said block, and a body carrier connected to one end of said cord.

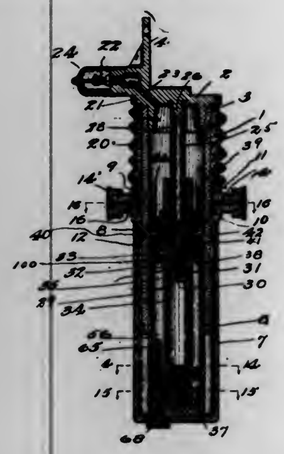
4. A device of the class described comprising a U-shaped plate having angular openings formed in its opposite ends, a cylindrical block having angular ends disposed through the openings in the ends of said plate, supporting hooks connected at one end to the angular ends of said block, said plate having a central opening therein, a cord passed around said block, one end of said cord being disposed through the central opening of said plate, and a body carrier connected to the free end of said cord after the same has been passed through the central opening in the plate.

1,113,370. PNEUMATIC SPRING FOR VEHICLES OR SHOCK-ABSORBERS. WILHELM L. OSTENDORF, Wilkinsburg, Pa., assignor of one-third to Albert Herman Klesa and one-third to Frank P. Scott, Winkinsburg, Pa. Filed Jan. 15, 1912. Serial No. 671,241. (Cl. 21—50.)

1. The combination with a bearing tube and a piston tube of a cylinder telescoping between said parts, a packed sliding joint between said piston tube and cylinder, a pump plunger projecting from said cylinder and a cylinder for said plunger connected to said piston tube, and means for introducing and retaining compressed air in the cylinder above said packed joint and plunger.

2. The combination with a bearing tube and piston tube, of a cylinder telescoping between said parts, a sliding joint between said piston tube and cylinder, an inner tube connected with said piston tube, a plunger connected to said cylinder and having its head within said inner tube, a gaseous fluid above said joint and a liquid fluid below said joint, and means for restoring and retaining these mediums in normal condition.

3. The combination with a bearing tube, a piston tube and a cylinder, an open center head for said piston tube and a sliding joint between said head and cylinder, an inner tube connected to said piston tube, a plunger connected to the cylinder and having its head in said inner tube, there being fluid in said piston tube, and means whereby said fluid may pass through said inner tube and plunger head to seal said sliding joint.



4. The combination with a bearing tube, a piston tube with a fluid therein and a cylinder, of an open center head for said piston tube and a sliding joint between said head and cylinder, an inner tube connected to said piston tube and passed through said head, a plunger to the cylinder with its head in said inner tube, means whereby said fluid may be forced through said inner tube and plunger head to seal the sliding joint, and means for restoring such fluid as passes through said joint to its proper position.

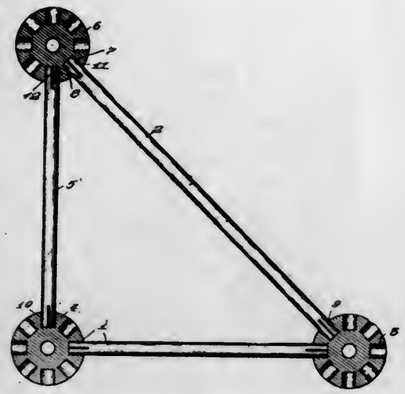
5. The combination with a bearing tube, a piston tube with a fluid therein, and a cylinder with compressed air retained therein, of an open center head for said piston tube and a sliding joint between said head and cylinder, an inner tube connected with said piston tube and passed through said head, a plunger to the cylinder with its perforated and valved head in said inner tube, and a valve in the piston tube whereby fluid may be passed from said piston tube through said inner tube and perforated head to seal the sliding joint as described.

[Claims 6 to 11 not printed in the Gazette.]

1,113,371. TOY CONSTRUCTION-BLOCKS. CHARLES H. PAJEAU, Chicago, Ill. Filed July 8, 1914. Serial No. 849,798. (Cl. 46—35.)

1. A toy comprising a plurality of rods equipped with slotted ends of uniform diameter, and a plurality of connecting members equipped with relatively angularly disposed bores of equal diameters, the resiliency of the slotted ends of said bars maintaining said ends normally at a peripheral size at least equal to the diameter of the said bores; the slotting of the said ends enabling the tips thereof to be contracted to an effective diameter smaller than the diameter of the said bores, thereby enabling the end of each rod to be inserted in one of said bores when presented out of axial alinement therewith.

2. A toy comprising a plurality of rods equipped with diametrically contractible and resilient tips, and a plurality of connecting members equipped with relatively angularly disposed bores, the resiliency of each tip normally maintaining the same at a size at least equal to the diameter of each bore, the contractibility of each end portion of a rod enabling the tip of said rod to be reduced in size to permit the insertion of the said end portion in one of said bores when presented to the latter out of axial alinement therewith.



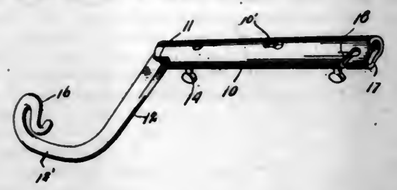
3. A toy comprising a plurality of rods equipped with diametrically contractible and resilient tips, and a plurality of connecting members equipped with relatively angularly disposed bores, the resiliency of each tip normally maintaining the same at a size at least equal to the diameter of each bore, the compressibility of each end portion of a rod enabling the tip of said rod to be reduced in size to permit the insertion of the said end portion in one of said bores when presented to the latter out of axial alinement therewith; each of said rods being made of resilient material, the resiliency thereof permitting a flexing of the main portions thereof and coöperating with the said contractibility of the end portions thereof to permit a plurality of rods to be simultaneously inserted in relatively angularly disposed bores in one of the said connecting members.

4. A toy comprising a plurality of rod members equipped with contractible ends normally of substantially equal diameter, and a plurality of connecting members equipped with relatively angularly disposed bores substantially equal in diameter to the said ends of the rod members; the lengths of said rods so proportioned as to permit the said rods and connecting members to be connected in triangular formation by inserting the adjacent ends of each pair of the rods in bores of a single connecting member; the relative lengths of the rods in adjacent triangular formations so proportioned as to enable the longer side of one triangle to form one of the short sides of a second triangle comprising the said rod and the connecting members at the ends thereof, together with a second pair of rods and another connecting member.

5. A toy comprising a plurality of rod members equipped with contractible ends normally of substantially equal diameter, and a plurality of connecting members equipped with bores disposed at angles of forty-five degrees and ninety degrees respectively, with each other; the diameter of each of said bores substantially equal to the said normal diameter of the ends of the rod members, the said rod members including lengths progressively increasing approximately in the ratio of one to the square root of two.

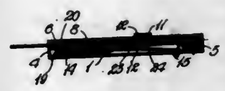
1,113,372. FENCE-WIRE TOOL. BYRON PORTER, Morgan, Utah. Filed Nov. 14, 1913. Serial No. 801,037. (Cl. 140—123.)

A fence wire tool comprising a tubular member having a notch formed in one end thereof, a crank member including a perforated shank detachably engaged in the notched end, means carried by the tubular member for holding the crank member so engaged, the outer end of the crank member being coiled, the opposite end of the tubular member having an inclined notch formed transversely therethrough, said latter end of the tubular member being reduced in diameter, the tubular member also



having a V-shaped notch in one side intermediate its length.

1,113,373. TICKET-HOLDER. GORDON E. ROEDDING and EDWARD B. ROEDDING, Detroit, Mich. Filed Oct. 17, 1913. Serial No. 795,802. (Cl. 206—40.)



1. A ticket holder comprising a casing, a lid carried thereby, means arranged within said casing and adapted to hold tickets in engagement with the lid thereof, said means locking said lid until all of the tickets are removed, and means movable upon said lid for ejecting tickets from said casing.

2. A ticket holder comprising a casing, a lid forming a part thereof, a feeding device within said casing for simultaneously holding tickets normally against the inner side of said lid and locking said lid until all of the tickets are removed, and an ejector movable longitudinally of said lid for successively ejecting tickets from an end of said casing.

3. A ticket holder comprising a casing having flanged side walls, a lid slidably mounted between the flanged walls of said casing, an ejector slidably supported by said lid, and means within said casing for simultaneously locking said lid and feeding tickets against the ejector of said lid.

4. A ticket holder comprising a flat oblong casing having flanged walls, a lid slidably mounted between the flanged walls of said casing, a feeding device arranged within said casing for simultaneously feeding tickets against said lid and locking said lid against movement while tickets are within said casing, and means carried by said lid to facilitate successively ejecting tickets from an end of said casing.

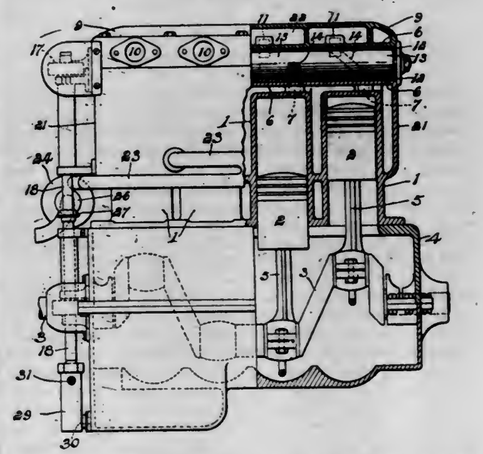
5. A ticket holder comprising a casing, a lid slidably supported by said casing, spring actuated means within said casing for simultaneously forcing tickets against said lid and locking said lid while tickets remain in said casing, and a manually actuated ejector slidable longitudinally of said lid for successively ejecting tickets from said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,113,374. INTERNAL-COMBUSTION ENGINE. WALTER C. SCHNEIDER, Detroit, Mich. Filed Jan. 24, 1912. Serial No. 673,067. (Cl. 123—190.)

1. The combination with an engine cylinder, of a barrel forming a valve seat, a rotary valve member in said barrel, inlet and exhaust passages opening into the cylinder and controlled by said valve member, the said passages at one side of the barrel opening into the same in a different plane transverse to the longitudinal axis of the barrel, to that in which the said passages at the opposite side of said barrel open into the same, and said valve member being formed with a passage which opens through the sides thereof and is adapted to register with said inlet and exhaust passages when said member is turned.

2. The combination with an engine cylinder, of a head on said cylinder forming a seat for a rotary valve member and provided with an inlet and exhaust passage leading from the cylinder and opening through ports in the seat arranged in the same transverse plane, and an inlet and an exhaust passage at the opposite side of said seat opening through ports therein arranged in the same transverse plane and in a different transverse plane to that in which the other ports are located, said last named passages being in communication with the exterior of the head; a rotary valve member engaging said seat to rotate therein and formed with a passage opening through opposite sides thereof with one open end of said passage in the plane of the ports at one side of the seat to register therewith, and its opposite open end in the plane of the ports at the opposite side of said seat to register therewith; and means for turning said valve member in timed relation to the movement of a piston in said cylinder.



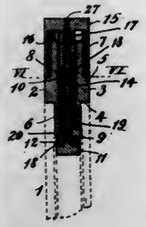
3. In an engine, the combination of a cylinder, a head on the cylinder, said head and cylinder being formed with a barrel forming a seat for a rotary valve and said cylinder being formed with an inlet and an exhaust passage opening through the seat and the head being formed with an inlet and an exhaust passage opening through the seat, a rotary valve member in the barrel and provided with a passage extending therethrough from side to side thereof diagonally to the longitudinal axis of said valve member to connect at one end with the passages of the cylinder and at its opposite end with the passages in the head, and means for rotating said member in timed relation to the movement of a piston in the cylinder.

4. In an engine, the combination of a plurality of cylinders, pistons in said cylinders, a head extending across the cylinders and formed with a seat for a rotary valve, inlet and exhaust passages opening into the cylinders and through the barrel and inlet and exhaust passages in the head extending from the barrel to the exterior of the head, a valve member rotatable within the barrel and formed with transverse passages, one passage opposite each cylinder extending through the valve member diagonally to the longitudinal axis of said member and adapted to register at one end with the passages leading to the cylinders and at the opposite end with the passages in the head, a vertical shaft, means for transmitting motion to said shaft in timed relation to the movement of the pistons, a gear on said shaft, and a gear secured to the valve member to engage said gear.

1,113,375. TIRE-VALVE. ALBERT J. SEAMAN, Dorchester, Mass., assignor of one-third to Thomas P. Borden, Boston, Mass., and one-third to Edward N. Robinson, Cambridge, Mass. Filed Dec. 5, 1911. Serial No. 664,095. (Cl. 152—12.)

1. In a valve for tires, the combination of a nipple adapted to be attached to a tire air tube the said nipple

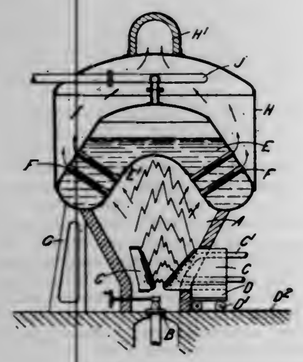
being provided with a valve seat and a spring-supporting shoulder, a valve having a screw threaded stem, a cap engaging such stem to draw the valve to its seat, and a nut on said stem and within the nipple for holding the spring under the desired tension, the nipple having its interior squared for preventing the rotation of the nut, substantially as set forth.



2. In a valve for tires, the combination of a nipple adapted to be attached to a tire air tube the said nipple being provided with a valve seat and a spring-supporting shoulder, a valve having a screw threaded stem, a cap engaging such stem to draw the valve to its seat, a nut on said stem for holding the spring under the desired tension, and a stop 21 on the valve stem and projecting outward therefrom for limiting the distance to which the stem may be screwed in to the nut, thereby limiting the tension of the spring, substantially as set forth.

3. In a valve for tires, the combination of a nipple adapted to be attached to a tire air tube, the said nipple being provided with a valve seat and a spring supporting shoulder, a valve having a screw threaded stem, a cap engaging such stem to draw the valve to its seat, a nut on said stem and within the nipple for holding the spring under the desired tension, and a positive stop on the valve stem for limiting the longitudinal movement of the nut on the valve stem, the nipple having independently of the cap means for preventing the rotation of the nut, substantially as set forth.

1,113,376. ELECTRIC FURNACE FOR FIXING NITROGEN FROM THE AIR. ERNEST KILBURN SCOTT, Belvedere, England. Filed June 25, 1913. Serial No. 775,715. (Cl. 204—31.)



1. In an electric furnace for fixing nitrogen from the air, the combination of a furnace chamber having apertures therein, a plurality of horn-shaped electrodes in said chamber utilizing three-phase alternating current, a carriage for each electrode adapted to be moved into or out of the furnace chamber through said apertures and to close said apertures when occupying their operative positions, an air supply duct arranged centrally within the furnace chamber and a water-cooled roof for the chamber so disposed relatively to the electrodes that the arc flames produced between the electrodes impinge directly against said water-cooled roof which constitutes a steam generator.

2. In an electric furnace for fixing nitrogen from the air, the combination of a furnace chamber, having an air inlet at its lower end, a steam generator comprising a water receptacle forming the top of the furnace chamber and provided with a steam outlet and a gas passage communicating with the furnace chamber and adapted to be surrounded throughout its length by the water in the receptacle, a superheater communicating with the steam outlet of the steam generator and exposed to the gases passing through said gas passage, and electrodes arranged in the furnace chamber.

1,113,377. COMPUTING CHEESE-CUTTER. ELLIS T. SILVIUS, Indianapolis, Ind., assignor to Specialty Manufacturing Company, Greenfield, Ind., a Corporation of Indiana. Filed Sept. 18, 1912. Serial No. 720,992. (Cl. 31—68.)

1. A cheese cutter including a rotatably supported table having an engagement portion, a movably guided knife for coöperaton with the table, and a movably guided actuator provided with movable means adapted for rigidly locking the actuator immediately adjacent to the engagement portion with the table.

2. A cheese cutter including a rotatably supported table, a guided actuator adapted to be moved with or independently of the table, and locking means movably secured on the actuator and normally locked rigidly in engagement with the table immediately adjacent to the connection of the locking means with the actuator, for detachably locking the actuator rigidly to the table adjacent to the point of engagement of the locking means with the table.

3. A cheese cutter including a frame and a table rotatably mounted horizontally thereon, locking means movably supported by the frame and guided by the table for partially rotating and also subsequently stopping the table, and horizontally movable means for controlling the locking means.

4. A cheese cutter including a locking appliance comprising a base plate having a locking block thereon and also an axial aperture extending through the plate and the block, the block having two projecting engaging portions on opposite sides of the aperture, and an operating arm on the base plate.

5. A cheese cutter including a rotatable turn-table, a movable actuating element provided with an axial stud, and a locking element rotatably mounted on the stud and having portions on opposite sides of the stud for engagement with a portion of the turn-table, the locking element having an operating arm.

[Claims 6 to 22 not printed in the Gazette.]

1,113,378. LAND-MARKER. WILLIAM H. SIMMONS and FLOYD G. SIMMONS, Cedar Springs, Mich. Filed Apr. 25, 1914. Serial No. 834,499. (Cl. 111—24.)

1. In a land marker, a supporting shaft, a series of marking teeth securely mounted on said shaft, a series of teeth revolubly mounted on said shaft, and springs for holding said revoluble teeth in normal position.

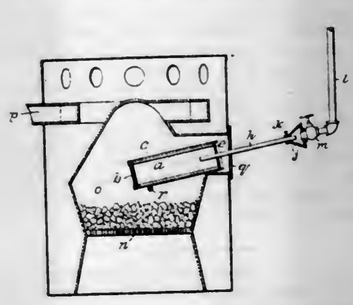
2. In a land marker, a supporting shaft, a series of teeth securely mounted on said shaft, a series of teeth adjustably mounted on said shaft, a supporting girt secured to the permanent teeth, and springs secured to the adjustable teeth and to the marker frame for holding the teeth in normal position.

3. In a land marker, a supporting shaft, a series of marking teeth securely attached to the shaft, a supporting girt securely attached to said permanent teeth, a series of teeth adjustably mounted on the shaft and made longer than the permanent teeth, and springs for drawing said adjustable teeth toward the work.

4. In a land marker, a supporting shaft, thills and handles mounted on said shaft, a cross bar mounted on the thills, a series of teeth permanently mounted near each end of the shaft, a series of longer adjustable teeth mounted on the shaft between the two series of permanent teeth, and springs for holding said adjustable teeth to the work.

5. In a land marker, a supporting shaft, a series of teeth permanently mounted on said shaft, a supporting girt secured to the permanent teeth, springs for actuating the adjustable teeth to hold them to the surface of the ground being marked, and the ends of all teeth curved backward.

1,113,379. GAS AND COAL BURNING FURNACE. CHARLES R. STEDMAN, Cleveland, Ohio. Filed Feb. 14, 1907. Serial No. 357,250. (Cl. 110—22.)



1. In a furnace, the combination with a fire chamber and flue suitable for burining solid fuel, of an intensifying chamber located wholly within said fire chamber having perforations through its inner end communicating with said fire chamber, means for supplying said intensifying chamber with combustible gas, and means for supplying said intensifying chamber with sufficient air to sustain combustion within said chamber.

2. In a furnace, the combination with a fire chamber and flue suitable for burning solid fuel, of a self-contained intensifying chamber located wholly within and having perforations through its inner end communicating with said fire chamber, means for supplying said intensifying chamber with combustible gas, means for supplying sufficient air to sustain combustion within said intensifying chamber, and means for removing said intensifying chamber from said fire chamber.

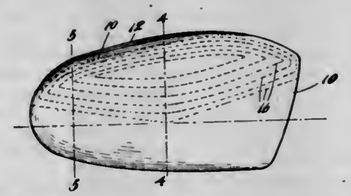
3. In a furnace, the combination with a fire chamber and flue suitable for burning solid fuel, of an intensifying chamber wholly within said fire chamber comprising a shell, a perforated end piece, a pipe projecting into said shell, means for supplying said pipe with combustible gas, and means for supplying sufficient air to sustain combustion within said intensifying chamber.

4. In a furnace, the combination with a fire chamber and flue suitable for burning solid fuel, of an intensifying chamber wholly within said fire chamber comprising a shell and a perforated end piece of fire resisting material, a closure for the other end of said shell, a pipe inserted through said closure into said shell, means for supplying said pipe with combustible gas, and means for supplying sufficient air to sustain combustion within said intensifying chamber.

5. In combination with the fire chamber of a furnace for solid fuel, a self-contained gas burning intensifying chamber located therein comprising an inner shell and a perforated inner end piece of refractory material, an outer casing, a closure for the outer end of said shell, a pipe inserted through said closure into said intensifying chamber, and means for supplying said pipe with gaseous fuel and air.

[Claims 6 and 7 not printed in the Gazette.]

1,113,380. ARCH-SUPPORT. MILTON E. STEPHENSON, Boston, Mass. Filed Mar. 12, 1914. Serial No. 824,292. (Cl. 36—71.)



1. The arch-support herein described consisting of upper and under covers and a molded filler of a cementitious composition which hardens upon drying, said filler being arranged between and adhesively secured to said covers.

2. The arch-support herein described consisting of upper and under covers and a molded filler of a cementitious composition which hardens upon drying and reinforced by textile material, said filler being arranged between and adhesively secured to said covers.

3. The arch-support herein described comprising a molded filler of a varying thickness and composed of a cementitious composition which hardens upon drying and is very rigid along its thickest portion and quite flexible along its thinnest portion.

4. The arch-support herein described comprising a molded filler composed of a cementitious composition which hardens upon drying, and numerous pieces of material, of different dimensions embedded in said composition which serve as reinforcements therefor.

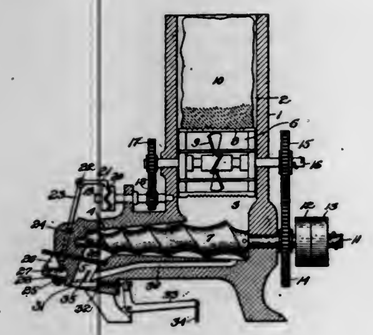
5. The arch-support herein described comprising a molded filler composed of a cementitious composition which hardens upon drying, and numerous layers of textile fabric superimposed and embedded in said composition.

[Claims 6 to 8 not printed in the Gazette.]

1,113,381. MACHINE FOR FILLING THE BOTTOMS OF SHOES. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Original application filed Jan. 3, 1907, Serial No. 350,588. Divided and this application filed Apr. 2, 1912. Serial No. 688,114. (Cl. 12—1.)

1. A machine for filling the cavity of a shoe bottom, having, in combination, a reservoir for the filler, a delivery

orifice, means for closing said orifice, and means for transporting filler from said reservoir to said orifice, so arranged that when said orifice is closed said transporting means will produce a movement of said filler toward said closed orifice and thence laterally away therefrom and back into position to be again moved forward by such transporting means, the latter being adapted and arranged to handle filler containing chunks of granulated material like comminuted cork.



2. A machine for filling the cavity of a shoe bottom, having, in combination, a filler chamber provided with a delivery orifice at its lower end, said chamber and orifice cooperating to tend to deliver the filler by gravity, a rotary feed screw for giving the adjacent filler a continuous forward movement, means coöperating therewith arranged to permit the filler to be forced toward said orifice and thence laterally away from adjacent said orifice and back into position to be again forced forward by said feed screw, said screw and coöperating means being adapted and arranged to handle filler containing chunks of granulated material like comminuted cork, and means at said orifice for controlling the delivery of filler into the shoe-bottom cavity.

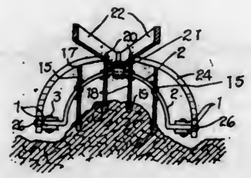
3. A machine for filling the cavity of a shoe bottom, comprising a filler chamber provided at its lower end with a delivery passage having a delivery orifice to tend to deliver the filler by gravity, means adapted to handle filler material containing chunks of granulated solid material and arranged for maintaining a continuous movement of the filler, including a worm screw extending toward the delivery passage for forcing the filler forward, and means coöperating therewith for deflecting the forced filler from said passage and permitting it to flow back into the chamber, said means directing said flow toward the top of the chamber, and a valve mechanism for controlling the delivery of filler through said orifice.

4. A machine for filling the cavity of a shoe-bottom, comprising a filler chamber for mixed filler of a sluggish, sticky, coherent nature, having a delivery orifice at its lower end, continuously operating power means in said lower end capable of delivering into a shoe-bottom, through said orifice, the required amount of said filler, and controlling means for varying the amount of filler so delivered in accordance with the requirements of a given shoe-bottom constructed and arranged to open and close said orifice, said continuously operating means, said controlling means, and said chamber containing provision and being constructed and arranged to maintain the aforesaid filler which is in the lower end of the chamber under continuous movement and substantially uniform pressure toward said orifice when the latter is closed and also the same when partially or fully open.

5. A machine for filling the cavity of a shoe-bottom, having, in combination, a filler chamber, devices for forcing the filler from said chamber and for packing it into the cavity of said shoe-bottom, and means for actuating said devices.

[Claims 6 to 29 not printed in the Gazette.]

1,113,382. AGRICULTURAL IMPLEMENT. WILLIAM B. THOMAS, Caledonia, Miss. Filed Sept. 22, 1913. Serial No. 791,186. (Cl. 55—3.)



1. A device of the class described comprising a frame, tooth carrying bars mounted in the frame and having curved portions, toothed standards mounted on the curved portions of the tooth carrying bars and having teeth formed on their opposite ends, a longitudinal beam secured on said tooth carrying bars, and handles carried by the longitudinal beam.

2. In a device of the class described comprising a supporting frame, tooth carrying bars mounted in said frame, bracket members adjustably mounted on the tooth carrying bars, standards mounted in said bracket members and having teeth formed on their opposite ends, a longitudinal beam, said tooth carrying bars being engaged through the longitudinal beam, handles connected with the longitudinal beam, brace members secured to the handles and to the supporting frame, and draft means secured to one end of the frame.

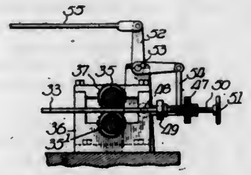
3. A device of the class described comprising a frame including longitudinal members, means for connecting the forward ends of the longitudinal members, bowed tooth carrying bars extended between the longitudinal frame members and having their opposite ends secured to the latter, bracket members mounted on said bowed tooth carrying bars, standards mounted in said bracket members and having teeth formed upon their ends, a longitudinal beam mounted upon said bowed tooth carrying bars, and draft means secured to one end of the frame.

4. A device of the class described comprising connected longitudinal frame members, curved tooth carrying bars, means for securing the ends of the curved tooth carrying bars to the longitudinal frame members, bracket members mounted on the tooth carrying bars, standards secured in said brackets and having teeth formed upon their opposite ends, a longitudinal beam, said curved tooth carrying bars being secured through the longitudinal beam, and handles carried by said beam.

5. A device of the class described comprising reversible frame members, curved tooth carrying bars having their ends directed outwardly, means for securing the outwardly directed ends in the frame members, said frame members being connected at their forward ends, standards mounted on the tooth carrying bars and having teeth formed upon their opposite ends, and reversible handles for the device.

[Claim 6 not printed in the Gazette.]

1,113,383. TUBE-ROLLING MACHINE. GEORGE J. THUST, Detroit, Mich. Filed Apr. 4, 1910. Serial No. 553,396. (Cl. 80—11.)



1. In a tube rolling machine, the combination of a series of sets of drawing rolls, a mandrel rod extending between the rolls of each set of said series, means normally positioned in front of one end of said mandrel rod and adapted to be moved out of alinement with said mandrel rod, and means for embracing the other end of said mandrel rod, both of said means being operable from a single end of said tube rolling machine.

2. In a tube rolling machine, the combination of a series of sets of drawing rolls, a mandrel rod extending between the rolls of each set of said series and having an end disposed adjacent each end of said machine, and separate means for engaging each end of said mandrel rod to maintain the rod in position between the rolls of said sets, both manually operable from a common station.

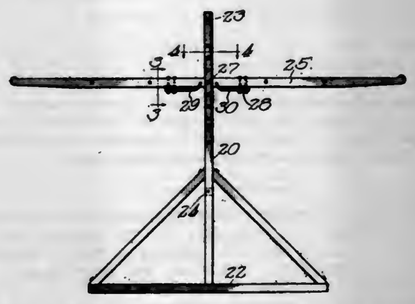
3. In a tube rolling machine, the combination of a series of sets of drawing rolls, a mandrel rod extending from end to end of the machine and disposed between the rolls of said sets, a swinging abutment normally positioned in alinement with an end of said mandrel rod to prevent movement of the mandrel rod when a tube is being rolled, and means for moving said abutment out of alinement with the mandrel rod to permit a tube to be delivered therefrom, said means being manually operable from adjacent the other end of said machine.

4. In a tube making machine, the combination of a series of drawing rolls, a mandrel disposed longitudinally of the machine and in coöperative relation with said rolls, a swingingly mounted abutment adapted to engage the delivery end of said mandrel to prevent longitudinal movement thereof, means adapted to be operated from the feed end of the machine for moving said abutment out of operative position with respect to the mandrel, and manual means disposed at the feed end of the machine for engaging the mandrel to maintain it in operative position when said abutment is moved to inoperative position.

5. In a tube making machine, the combination of a series of drawing rolls, a mandrel disposed in operative relation thereto, a swingingly mounted abutment adapted to engage the delivery end of the mandrel and prevent longitudinal movement thereof, operating means therefor mounted to be actuated from the feed end of the machine and means positioned to be operated from the feed end of the machine for engaging the mandrel near its feed end for holding the mandrel in operative position, said holding means comprising a pair of jaws adapted to be engaged with the mandrel.

[Claims 6 to 8 not printed in the Gazette.]

1,113,384. TEETER-LADDER AND THE LIKE. WILLIAM S. TOTHILL, Chicago, Ill. Filed Feb. 11, 1913. Serial No. 747,656. (Cl. 46—22.)



1. In a device of the character described, the combination of a support, a teeter device pivotally mounted thereon, and a plurality of flat springs mounted upon the said teeter device on opposite sides of said support, said springs being adapted at a predetermined point in the turning of said teeter device to contact said support and yieldingly oppose the turning of said teeter device.

2. In a device of the character described, the combination of a support comprising two standards spaced apart, a teeter device pivotally mounted upon said support, and flat springs mounted on said teeter device two at either side thereof arranged on opposite sides of said standards, said springs being adapted at a predetermined point in the turning of said teeter device upon said standards to be brought into contact with the standards whereby the turning of said teeter device is limited and cushioned.

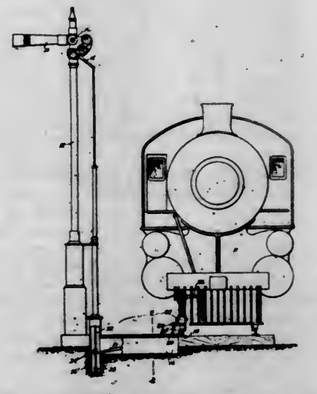
3. In a device of the type described, the combination of a support, a teeter device pivotally mounted thereon, and a spring carried by one of said members in such position that it is out of contact with the other member when the teeter device stands in horizontal position, but that it contacts said other member when the teeter device has moved to a certain predetermined inclined position.

4. In a device of the type described, the combination of a support, a teeter device pivotally mounted thereon, and springs mounted on said teeter device on opposite sides of said support, said springs being spaced away from said support when said teeter device is in horizontal position, but being adapted to contact said support when said teeter device has moved to a certain predetermined inclined position.

5. In a device of the type described, the combination of a support, a teeter device pivotally mounted thereon, and flat springs mounted on the teeter device on opposite sides of said support and extending toward the support, said springs being adapted at certain predetermined points respectively in the turning of said teeter device to contact said support and yieldingly oppose the further turning of said teeter device.

[Claim 6 not printed in the Gazette.]

1,113,385. AUTOMATIC TRAIN-STOP. BENJAMIN D. TRIPP, Binghamton, N. Y., assignor of one-fourth to Allen R. Kelly, New York, N. Y., and one-fourth to William J. Haskin and one-fourth to Merritt S. Squires, Binghamton, N. Y. Filed Mar. 15, 1913. Serial No. 754,507. (Cl. 246—59.)

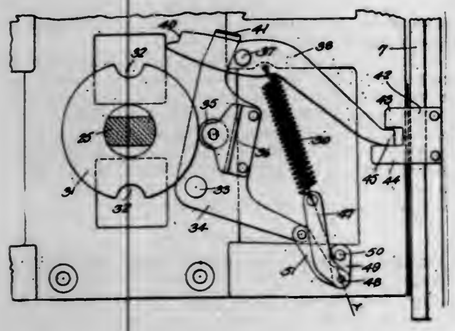


1. In a trip device for automatic railway stops, the combination of a casing, means to secure the casing in position, said casing having a downward extension at one end forming an anchor, a trip movable upwardly or downwardly at the opposite end of said casing, a signal rod movable vertically into and out of said downward extension and having a pair of spaced lugs thereon adjacent its lower end, a lever of the first class pivoted in said casing and extending from the trip to said rod and having loose connection with said rod between said lugs, and a counterweight on the lever between its fulcrum and the trip to cause operation of the trip downwardly by virtue of the movement of the signal mechanism from danger position.

2. In a trip mechanism for automatic train stops, the combination of a casing having an upward guide extension at one end, means to secure such end of the casing in fixed position through said guide, said casing having a downward extension at its opposite end, a standard se-

cured within the casing between its ends, a lever of the first class pivoted in said standard, a trip pivoted to one end of the lever and movable upwardly through said guide, signal mechanism including a rod extending into said downward extension, and a loose connection between the opposite end of the lever and said rod, substantially as and for the purposes set forth.

1,113,386. DISPLAY-RACK. ANTHONY VANDERVELD, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed July 2, 1913. Serial No. 777,084. (Cl. 211—16.)



1. In a device of the character described, a rack mounted for rotation, a disk connected to and rotatable with the rack, recesses provided in the disk edges, a lever mounted adjacent the disk and having means adapted to engage the recesses in the disk, a spring, connections between the spring and lever whereby said means on the lever will be held against the disk either in the recesses or against the disk edges and will be held with greater force when said means is located in a recess than when the rack has been rotated and said means carried out of a recess.

2. In a device of the character described, a rack mounted for rotation, a disk connected to and rotatable with the rack, a plurality of recesses provided in the disk edges, a lever mounted adjacent the disk and having means adapted to engage any of the recesses, means connected with the lever to cause said means to normally engage against the disk edges either in a recess or against the disk edges between the recesses, said connection of the lever operating means including elements whereby the pressure of the means carried by the lever against the disk is greater when in the recesses then when out of the recesses.

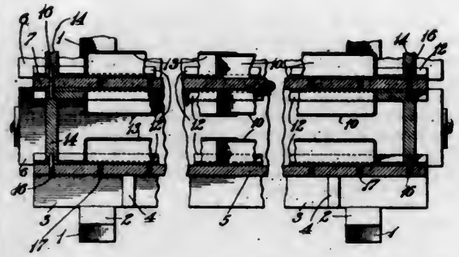
3. In a device of the character described, a rack mounted for rotation, mechanism associated with the rack for yieldingly holding the rack against rotation in a predetermined position, and means included in such mechanism for diminishing the force of the holding means acting on the rack when the rack has been rotatably moved from such predetermined position.

4. In a device of the character described, a rack mounted for rotation, mechanism associated with the rack for yieldingly holding it against rotation in a predetermined position, and elements included in such mechanism whereby upon rotative movement of the rack away from such predetermined position, the force of the holding means acting on the rack is automatically diminished.

5. In a device of the character described, a rack mounted for rotation, mechanism associated with the rack for yieldingly holding it in a predetermined position, said mechanism including a recessed disk mounted on and rotatable with the rack and a lever mounted adjacent the disk and having means to engage the disk edges, and means for lessening the pressure of such means against the disk edges automatically effected on rotation of the rack away from such predetermined position.

[Claims 6 to 11 not printed in the Gazette.]

1,113,387. MOLD FOR CEMENT BEAMS. JAY W. VAUGHAN, Detroit, Mich. Filed Aug. 9, 1911. Serial No. 643,193. (Cl. 25—121.)



1. A mold system for beams comprising bearing members, pallets disposed transversely thereon, division members forming with the pallets a series of adjacent mold pockets, a facing member on the inner face of each division member comprising two extensible sections whereby the length of a facing dress may be varied and end walls adjustably securable between the division members to correspond to the adjusted length of the facing members.

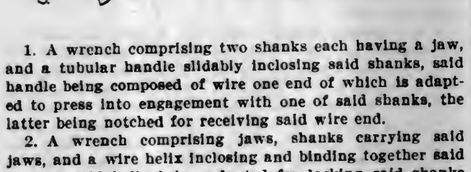
2. A mold system for beams comprising stringers, stops at one end thereof, a clamp bearing against the stops, a side wall secured in upright position against the clamps or the stringers, pallets transversely disposed across the stringers, one of which is contiguous to the side wall, division members each attached on the stringers between and by the pallets, extensible facing members on the proximate sides of the division members and side walls each having a section secured to the side wall and a section longitudinally shiftable on the side wall in telescopic engagement with the fixed section and end walls resting on the pallets between the division members and side walls longitudinally shiftable of the side walls in accordance with the adjusted length of the mold facings.

3. In a mold system for beams, a pallet, division members removably secured against the lateral margins thereof, a facing section on the inner face of each division member comprising a hollow plate having guide flanges longitudinally thereof against the side wall, and a movable section telescoping with the fixed section and moving in the guide flanges thereof, the exterior cross sectional contour of the facing sections providing the required facing dress to a molded beam, and end boards spanning the interval between the division members and longitudinally adjustable on the pallet whereby they may be moved into required relation to the adjusted facing plates.

1,113,388. AUTOMATIC CONTROLLING DEVICE. JOHN H. VANDER VEER, Brooklyn, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 15, 1910. Serial No. 587,177. (Cl. 172—179.)

1. The combination with a device movable in opposite directions into different operative positions and having means causing the same to normally assume an intermediate position, of four electro-responsive controlling windings therefor, two of said windings being of constant and opposed polarities and the other two windings being of the same polarity and simultaneously reversible to move said device into either of its operative positions from said intermediate position.

2. In combination, a device movable in two different operative positions, four electro-responsive controlling windings therefor, two of said windings being of constant and opposed polarities and the other two windings being of the same polarity and reversible in polarity, a control circuit for said latter windings, a shunt around said latter windings including two resistance sections and a tap from said shunt between said resistance sections constituting with one line of said former circuit an additional control circuit for said latter windings.



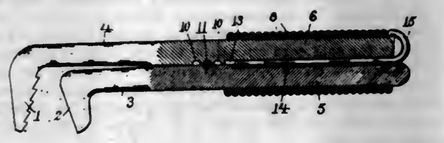
3. In combination, a plurality of devices each movable to two different operative positions, and separate electro-responsive operating means for each of said devices, all of said operating means being controllable through a single circuit to cause said devices to move to the same or different positions according to the relation thereof.

4. In combination, a plurality of devices each movable in opposite directions, separate electro-responsive means for moving each of said devices in either direction and a common control circuit for all of said electro-responsive means insuring movement of all of said devices in the same direction irrespective of the end-to-end relation thereof.

5. In combination, a plurality of devices each movable to a plurality of different operative positions, separate electro-responsive operating means for said devices, and series connections between certain of the operating windings of each of said devices for controlling the operation of all of said devices and changing the positions thereof at will.

[Claims 6 to 10 not printed in the Gazette.]

1,113,389. WRENCH. FREDERICK E. WALDEN, Worcester, Mass., assignor to Walden Tool Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 8, 1912. Serial No. 682,467. (Cl. 81—177.)



1. A wrench comprising two shanks each having a jaw, and a tubular handle slidably inclosing said shanks, said handle being composed of wire one end of which is adapted to press into engagement with one of said shanks, the latter being notched for receiving said wire end.

2. A wrench comprising jaws, shanks carrying said jaws, and a wire helix inclosing and binding together said shanks, said helix being adapted for locking said shanks against relative longitudinal displacement.

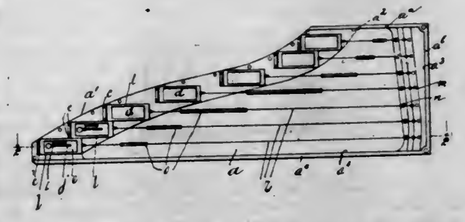
3. A wrench comprising jaws, shanks carrying said jaws, said shanks being slidable one along the other, and a removable binding means inclosing said shanks and adapted for locking them against relative longitudinal displacement.

4. A wrench comprising jaws, shanks carrying said jaws, said shanks being slidable one along the other, one or more notches being formed in both contacting surfaces, and a removable binding means inclosing said shanks and having a projection adapted to be introduced into two opposing notches of the shanks and thereby to lock the latter against relative longitudinal displacement.

5. A wrench comprising jaws, shanks carrying said jaws, a wire helix adapted to bind said shanks together, and means including a terminal of said helix for locking said shanks against relative longitudinal displacement.

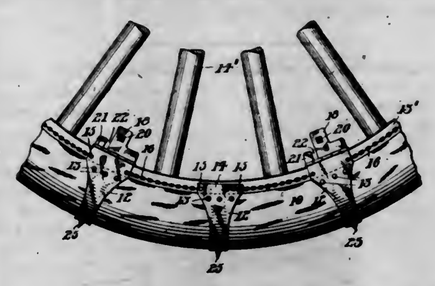
[Claims 6 to 10 not printed int he Gazette.]

1,113,390. INSTRUMENT FOR MEASURING THE TENSION AND THE SOUNDING LENGTH OF STRINGS. HERMANN WENZEL-SCHMIDT, Unionport, N. Y. Filed Oct. 7, 1912. Serial No. 724,488. (Cl. 84—43.)



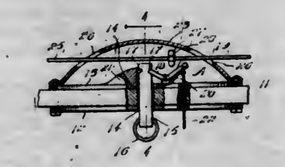
A tension meter for piano strings or the like, comprising a resonant board or plate, a series of adjustable tuning pins at one end of the said board, a series of spring balances at the opposite end thereof, strings each fastened at one end to the corresponding adjustable pin and at the opposite end to the corresponding spring-balance, an agraffe for each string and a series of bridges adjustably mounted in said board one for each string.

1,113,391. NON-SKID PROTECTOR FOR TIRES. ALEXANDER WERTEPNY, Belfield, N. D. Filed May 18, 1914. Serial No. 839,302. (Cl. 152—14.)



In a device of the class described, a tread plate embracing the tire, locking plates hinged to the edges of the end portions thereof, angularly projecting lugs and ears spaced from said lugs mounted upon the inner adjacent edges of said locking plates and forming slots between the adjacent ears and lugs, said lugs provided with perforations therethrough to receive a locking bolt to secure them together, the perforations being in alinement when the slots are alined.

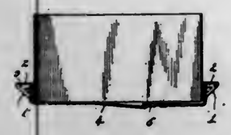
1,113,392. HORSE-TIE. HENRY WIEMER, Dow City, Iowa. Filed Apr. 12, 1913. Serial No. 760,687. (Cl. 119—115.)



A safety hitch comprising the combination with an attaching member, of a hitch bolt slidably passed there-

through, an angle latch pivoted adjacent the inner end of the bolt, one arm of said latch engaging the bolt to prevent retraction thereof, an actuating bar and a projection on the actuating bar adapted to engage the latch to release the bolt upon movement of said bar and a flexible member secured to the latch for also rocking the same to release the bolt.

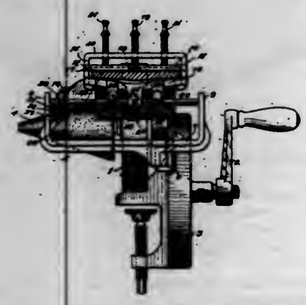
1,113,393. BOX-CARRIER. BENJAMIN C. WINANS, Livingston, N. J. Filed Nov. 26, 1913. Serial No. 803,333. (Cl. 224—49.)



1. A box carrier comprising a pair of handles consisting of plates, said plates being connected by triangularly disposed rods, a strap adjustably connecting certain of the rods and thus the handles, one rod of each handle arranged to engage the strap near its adjacent end, and other rods of the handles being disposed to facilitate gripping thereof, as and for the purpose set forth.

2. A box carrier comprising a pair of handles, each consisting of triangular shaped plates, rods having their ends, connected adjacent the corners of the plates, whereby said rods are disposed in triangular relation, an adjustable strap having its ends connected to certain of the rods certain of the other rods engaging the strap near its attached ends and the plates have certain of their edges engaging the sides of the box, the remaining rods being disposed to facilitate the gripping thereof to lift the box when resting upon the strap.

1,113,394. GRINDING-MACHINE ATTACHMENT. JOHN S. WINCRANTZ, Pittsburgh, Pa., assignor to Samuel S. Newman, Pittsburgh, Pa. Filed May 13, 1914. Serial No. 838,200. (Cl. 51—7.)



1. In combination in a grinding machine having a grinding wheel, a guide extending transversely of the axis of rotation of the wheel, a tool carrying frame mounted slidably on the guide, a movable clamping member guided at its ends on the frame, a screw threaded through the frame at the center of the clanp and swiveled thereto so as to move the clamp in both directions, and other screws threaded through the frame on either side of the first screw and bearing against the clamp.

2. In combination in a grinding machine having a grinding wheel, a guide extending transversely of the axis of rotation of the wheel, a tool carrying frame mounted slidably on the guide and having a concave tool engaging surface whereby the tool to be ground is engaged on one side near its edges leaving the central portion out of engagement, and a clamp for engaging the tool on its other face.

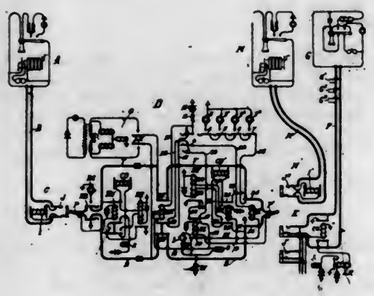
3. In combination in a grinding machine having a grinding wheel, a guide extending transversely of the axis of rotation of the wheel, a tool carrying frame mounted on the guide, and antifriction means on the frame above and below the said guide and in engagement therewith, the said antifriction means being spring supported on one side of the said guide.

4. In combination in a grinding machine having a grinding wheel, a guide extending transversely of the axis of rotation of the wheel, a tool carrying frame mounted on the guide, a spring supported wheel carried by the frame and engaging the lower side of the guide, and a pair of wheels on the frame above the guide and engaging the guide on opposite sides of the first wheel.

5. In combination in a grinding machine having a grinding wheel, a round guide rod extending transversely of the axis of rotation of the wheel, a tool carrying frame mounted on the rod, and rollers with cancave bearing rims carried by the frame and engaging the rod on the upper and lower sides thereof for permitting the frame to move longitudinally of the rod and rock transversely thereof.

[Claim 6 not printed in the Gazette.]

1,113,395. TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1913. Serial No. 739,655. (Cl. 179—51.)



1. A telephone system comprising a universal cord circuit adapted for interconnecting different types of telephone lines, supervisory apparatus for said circuit, a ringing key for said cord circuit, automatic ringing apparatus for said cord circuit, manual ringing apparatus for said cord circuit, said key when actuated being adapted to connect manual or automatic ringing apparatus in operative relation with the cord circuit according to the type of line connected with.

2. A telephone system comprising a universal cord circuit adapted for interconnecting magneto and common battery telephone lines, supervisory apparatus for said circuit, a ringing key for said cord circuit, automatic ringing apparatus, manual ringing apparatus, said key when actuated being adapted to connect either the manual or automatic ringing apparatus in operative relation with the cord circuit according to whether the line connected with is magneto or common battery respectively.

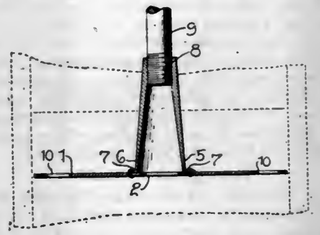
3. A telephone system comprising a universal cord circuit adapted for interconnecting different types of telephone lines, supervisory apparatus for said circuit, a ringing key for said cord circuit, automatic ringing apparatus, manual ringing apparatus, said key when actuated being adapted to connect the manual ringing apparatus and render the automatic ringing apparatus ineffective upon connection made with only one of the types of telephone lines.

4. A telephone system comprising a universal cord circuit adapted for interconnecting different types of telephone lines, supervisory apparatus for said circuit, a ringing key for said cord circuit, automatic ringing apparatus, manual ringing apparatus, said key when actuated being adapted to connect the automatic ringing apparatus and render the manual ringing apparatus ineffective upon connection made with only one of the types of telephone lines.

5. A telephone system comprising a universal cord circuit, adapted for interconnecting magneto and common battery telephone lines, supervisory apparatus for said circuit, a ringing key for said cord circuit, automatic ringing apparatus, manual ringing apparatis, said key when actuated being adapted to connect the manual ringing apparatus and render the automatic ringing apparatus ineffective upon connection made with a magneto line circuit only.

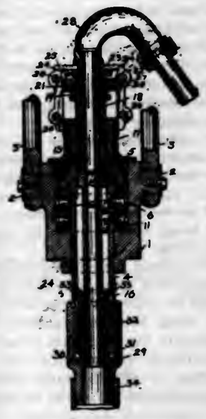
[Claims 6 to 10 not printed in the Gazette.]

1,113,396. CHURN. WILLIS B. WOODRUFF, Cadiz, Ky. Filed July 26, 1913. Serial No. 781,429. (Cl. 31—37.)



A device of the character described comprising a disk provided with a central opening and with a plurality of elongated equidistantly spaced radial openings having their inner extremities terminating in close proximity to the axis of such disk, the side walls of such openings being arranged in outwardly diverging planes, and an upwardly directed air chamber carried by the disk and disposed around the central opening, the diameter of the lower end of such air chamber being greater than the diameter of such central opening.

1,113,397. HYDRAULIC SWIVEL. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed July 30, 1913. Serial No. 782,123. (Cl. 255—25.)



1. In a hydraulic swivel, a trunnion-block, a swivel-stem supported within the same, a hose-stem within the swivel-stem, packing between the two stems, a gland beneath the packing, and means rotatable on the swivel stem for supporting the gland and adjusting the same.

2. In a hydraulic swivel, a trunnion-block, a swivel-stem supported within the same, a hose-stem within the swivel-stem, packing between the two stems, a gland beneath the packing, means for supporting the lower end of the gland, and means for causing the gland to adjust the packing while the swivel is rotating.

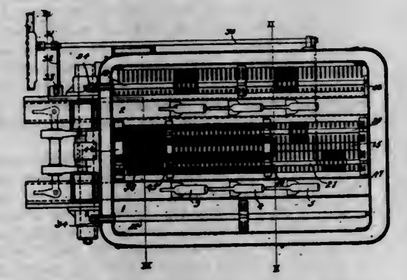
3. In a hydraulic swivel, a trunnion-block, a swivel-stem supported within the same, a hose-stem within the swivel-stem, packing between the two stems, a gland beneath the packing, means for supporting the lower end of the gland, and means rotatable with respect to the swivel-stem for causing the gland to adjust the packing.

4. In a hydraulic swivel, a trunnion-block, a swivel-stem therein, a hose-stem in the swivel-stem, separate packings between the two stems, and means for separately compressing the packings without removing or loosening the said parts of the swivel.

5. In a hydraulic swivel, a trunnion-block, a swivel-stem therein, a hose-stem in the swivel-stem, and a packing between the two stems, there being port-holes in the swivel-stem above the packing for the escape of material passing the packing.

[Claims 6 to 9 not printed in the Gazette.]

1,113,398. AUTOMATIC STOKER. CHARLES D. YOUNG, Pittsburgh, Pa. Filed May 17, 1911. Serial No. 627,830. (Cl. 110—44.)



1. In a furnace, the combination with a pair of underfeed troughs extending longitudinally of the furnace, of an intermediate V shaped grate, and rock grates between the outer edges of such grate and the sides of the trough.

2. In a furnace, the combination with a pair of underfeed troughs extending longitudinally of the furnace, of a grate intermediate the troughs and having its surface sloping upwardly from its central portion toward the sides of the troughs, and inclined rock grates between the upper edges of such grate and the edges of the troughs.

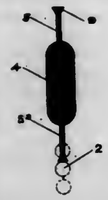
3. In a furnace, the combination with an underfeed trough, of a set of fixed grate fingers inclined downwardly from the edge of the trough, another set of fixed inclined grate fingers opposing the first set of fingers below such first set and spaced away therefrom, and a rock bar intermediate the two sets of fingers and provided with oppositely projecting sets of fingers for coöperating with the fixed sets of fingers.

4. In a furnace, the combination with an underfeed trough, of a set of fixed grate fingers inclined downwardly from the edge of the trough, another set of fixed inclined grate fingers opposing the first set of fingers below such first set of fingers and spaced away therefrom, and a rock bar intermediate the two sets of fingers and provided with oppositely projecting sets of inclined fingers for coöperating with the fixed sets of fingers, the set of fingers on the side of the rock bar away from the trough being longer than the other set of fingers on the rock bar.

5. In combination in a furnace, a central fixed grate bar extending longitudinally of the furnace and provided with two sets of oppositely and upwardly inclined grate fingers, a side rocking grate bar lying on each side of the central grate bar and provided with two sets of inclined oppositely projecting grate fingers, and an underfeed trough adjacent the outer side of each side grate bar.

[Claims 6 to 12 not printed in the Gazette.]

1,113,399. INSULATOR. LINN B. ABBOTT, Bridgeport, Conn. Filed June 12, 1911. Serial No. 632,656. (Cl. 173—28.)

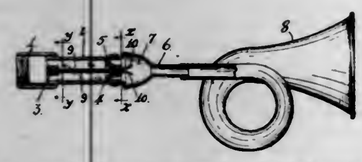


1. In an insulator for a conductor, the combination of two metal elements, the outer ends of each of said elements having yieldingly separable parts for engaging an end of the conductor between said parts, the inner ends of each of said elements being spaced apart from each other, and insulating material envcloping and embedding said inner ends for insulating from each other and mechanically securing said elements.

2. In an insulator for a conductor, the combination of two metal elements, the outer ends of each of said elements having two yieldingly separable spring blades for receiving and removably clamping between them an end of the conductor, the inner ends of each of said elements being spaced apart from each other, and insulating material enveloping and embedding said inner ends for insulating from each other and mechanically securing said elements, the spring blades of said elements extending within said insulating material.

3. The combination with a conductor having spherically shaped ends, of an insulator comprising two metal elements, the outer ends of each of said elements being perforated spring blades clamping between them a spherically shaped end of said conductor, the said spherically shaped end seating in said perforations, the inner ends of each of said elements being spaced apart from each other, and insulating material enveloping and embedding said inner ends for insulating from each other and mechanically securing said elements.

1,113,400. SIGNAL-SOUNDER. WILLIAM BAUMGARTNER, Mendocino City, Cal. Filed Apr. 6, 1914. Serial No. 829,781. (Cl. 116—19.)



1. In a signal-sounder, the combination of a pipe for receiving a pressure fluid-current; a pair of opposing, spaced reeds within said pipe, said reeds being fixed at one end and thence extending in the same direction as the flow of the fluid current; and a slotted barrier in the pipe, through the slot in which the free extremities of the reeds pass and beyond which they project.

2. In a signal-sounder, the combination of a pipe for receiving a pressure fluid-current; a pair of opposing, spaced reeds within said pipe, said reeds being fixed at one end and thence extending in the same direction as the flow of the fluid current; and a slotted barrier in the pipe, through the slot in which the free extremities of the reeds pass and beyond which they project, said pipe having an enlarged chamber enveloping the free extremities of the reeds.

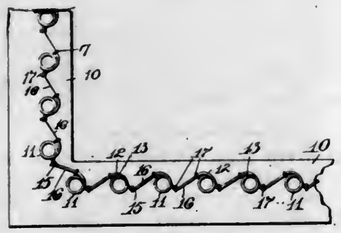
3. In a signal-sounder, the combination of a pipe for receiving a pressure fluid-current; a pair of opposing, spaced reeds within said pipe, said reeds being fixed at one end and thence extending in the same direction as the flow of the fluid current; and a slotted barrier in the pipe, through the slot in which the free extremities of the reeds pass and beyond which they project, said pipe having an enlarged chamber enveloping the free extremities of the reeds, and said reed extremities within said chamber being divergent one from the other.

4. In a signal-sounder, the combination of a pair of opposing, spaced reeds; a housing for said reeds having a support at its rear end in which the rear ends of the reeds are fixed, and a slotted block at its forward end through the slot in which the forward ends of the reeds pass and beyond which they project; a sound carrying pipe secured to the forward end of the reed-housing and enveloping the projecting ends of the reeds beyond the slotted block; and a connection with a source of fluid-pressure at the rear end of the reed housing.

5. In a signal-sounder, the combination of a pair of opposing, spaced reeds; a housing for said reeds having a support at its rear end in which the rear ends of the reeds are fixed, and a slotted block at its forward end through the slot in which the forward ends of the reeds pass and beyond which they project; a sound carrying pipe secured to the forward end of the reed-housing and formed with an enlarged chamber enveloping the projecting ends of the reeds beyond the slotted block; and a connection with a source of fluid-pressure at the rear end of the reed housing.

[Claims 6 and 7 not printed in the Gazette.]

1,113,401. HOLDING MEANS FOR STRANDS AND THE LIKE. EDWARD W. BECHLER, Newark, N. J., assignor of one-third to himself, and one-third to Claude H. Rivers and one-third to Harry Hopkinson, Elizabeth, N. J. Filed Feb. 19, 1914. Serial No. 819,747. (Cl. 24—131.)



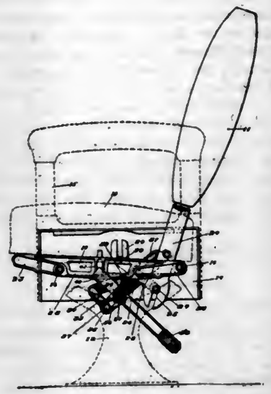
1. A holding means for strands and the like consisting of a single strip of material bent at intervals so as to form a series of closed loops, the parts forming the loops being separable transversely to permit the introduction and the holding of a strand in the loop, the portion of the strip between the strands forming spaces to permit the attachment of the strip to a support.

2. A holding means for strands and the like comprising a strip of material bent at intervals to form closed loops, the parts forming the loops being separable transversely from each other to permit the insertion and holding of a strand in the loop, the portions of the strip between the loops being bent so as to be tangential to opposite sides of the loops.

3. A strip for holding strands on tanners' frames and the like consisting of a wire bent into a series of closed loops which occur at intervals in the wire, the wire at one side of a loop being bent substantially at right-angles and then extending to the next loop so as to be tangential to said last mentioned loop whereby the loops are connected by a series of substantially tangential portions which are also substantially parallel to each other.

1,113,402. CAR-SEAT. FREDERICK BENNETT, Ravenswood, N. Y., assignor to Walker & Bennett Manufacturing Company, a Corporation of New York. Filed Feb. 25, 1911. Serial No. 610,867. (Cl. 55—2.)

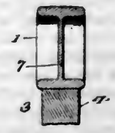
1. In a car seat, the combination of a shiftable back, a swinging arm having operative connection with the back and moving therewith in direction corresponding to the direction of movement of the back, means for mounting one end of the arm on a fixed center, a foot rest swinging around said center but at the side thereof opposite the side on which the arm is located, said foot rest adapted to shift with the back also in direction corresponding to the direction of movement of the back, and means for transmitting the movement of the arm reversely to the foot rest to shift the foot rest as described, said means including an elbow lever having sliding connection with said arm and with a part in connection with the foot rest.



2. In a car seat, the combination of a shiftable back, a swinging arm having operative connection with the back and moving therewith in direction corresponding to the direction of movement of the back, means for mounting one end of the arm on a fixed center, a foot rest swinging around said center but at the side thereof opposite the side on which the arm is located, said foot rest adapted to shift with the back also in direction corresponding to the direction of movement of the back, and means for transmitting the movement of the arm reversely to the foot rest to shift the foot rest as described, said means including an elbow lever having sliding connection with said arm and with a part in connection with the foot rest.

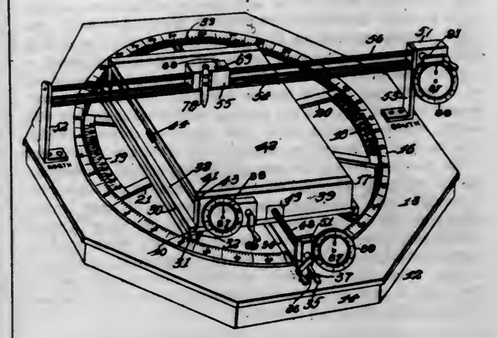
3. In a car seat, the combination of a shiftable back, a swinging arm having operative connection with the back and moving therewith in direction corresponding to the direction of movement of the back, means for mounting one end of the arm on a fixed center, a foot rest swinging around said center but at the side thereof opposite the side on which the arm is located, said foot rest adapted to shift with the back also in direction corresponding to the direction of movement of the back, and means for transmitting the movement of the arm reversely to the foot rest to shift the foot rest as described, said means including an elbow lever having sliding connection with said arm and with a part in connection with the foot rest and an elbow lever being arranged to lock with the foot rest to prevent movement of the parts by pressure on the foot rest.

1,113,403. GRIP-HANDLE FOR CAR-SEATS. FREDERICK BENNETT, Ravenswood, N. Y., assignor to Walker and Bennett Manufacturing Company, a Corporation of New York. Filed Apr. 9, 1912. Serial No. 689,624. (Cl. 155—2.)



A corner grip for the back of a car seat, consisting of a base portion secured to the back of a seat, a solid web projecting from the base portion and a grip section wider than the web.

1,113,404. DRAFTING INSTRUMENT. JOSEPH H. BLAIR, Bowling Green, Mo. Filed Dec. 18, 1912. Serial No. 737,506. (Cl. 33—26.)



1. A drafting instrument comprising a base, a compass circle secured thereon, a member rotatably mounted on said base and having arms provided with verniers registering with said circle, a frame adjustably mounted on said member and rotatable therewith, a drawing board slidably mounted in said frame, means on said member for adjusting said frame, means on said frame for adjusting said board, a support mounted on said base, a marker slidably mounted on said support and means on said support for moving said marker across said board.

2. A drafting instrument comprising a base, a graduated compass circle secured thereon, a rotatable member mounted on said base, verniers carried by said member and registering with the compass circle, an adjustable frame mounted on said member, means on said member for adjusting said frame, means connected to said adjusting means for indicating the distance through which said frame is moved, a drawing board slidably mounted in said frame, means on said frame for operating said board, means connected with the last named means for indicating the distance through which said board is moved, a support mounted on said base, a marker operatively located above said board and slidably mounted on said support, means on said support for moving said marker across said board and measuring means for indicating the distance through which said marker is moved, substantially as specified.

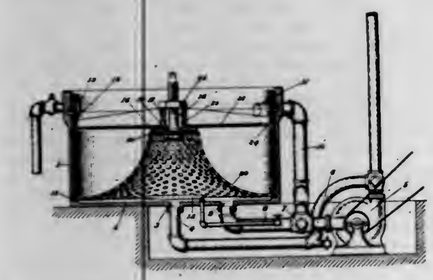
3. A drafting instrument comprising a base, a flanged compass circle secured on said base, a rotatable member mounted on said base inside the compass circle, arms radiating horizontally from said member, verniers formed on the ends of the arms, which are also arranged to register with the compass circle, an adjustable frame mounted on the rotatable member and having an adjustable drawing board mounted therein, means on said member for adjusting said frame, means on said frame for adjusting and operating said board, a support mounted on said base, a guide bar located above said board and mounted on said support, a marker supporting casing slidably mounted on said guide bar, and means on said support for moving said casing across said board.

4. A drafting instrument of the character described comprising a base, a rotatable member mounted thereon, an adjustable frame mounted on said member, having an adjustable drawing board mounted therein, horizontal arms radiating from said member, two double verniers formed on the ends of the arms, a compass circle located on said base, graduated and against which said verniers register, a support mounted on said base, a marker slidably mounted on a guide bar, which bar is mounted on said support, and said support being provided with means for moving said marker, means for indicating the distance through which said marker is moved, means on said rotatable member, and on said frame, for adjusting and operating said frame and board and for indicating the dis-

tance through which said frame and board are moved, substantially as specified.

5. A drafting instrument of the class described comprising a base, a graduated compass circle, and a central rotatable portion mounted on said base, a slidable frame having a slidable drawing board therein, mounted on said rotatable portion, means on said rotatable portion for sliding said frame, means on said frame for sliding said board, a support mounted on said base, a marker slidably mounted on a guide bar which bar is mounted on said support, means on said support for moving said marker across said board, means for indicating the distance through which said marker is moved simultaneously with the movement of the marker, means on said rotatable portion for indicating the distance through which said frame is moved simultaneously with the adjusting movements of said frame, means on said frame for indicating the distance through which said board is moved simultaneously with the adjusting movements of said board, horizontal arms projecting from said rotatable portion, verniers carried on the ends of said arms and registering with said compass circle, substantially as specified.

1,113,405. DYEING-MACHINE. ROBERT D. BOOTH, Philadelphia, Pa., assignor to The Psarski Dyeing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 16, 1911. Serial No. 654,922. (Cl. 8—19.)



1. In apparatus for dyeing permeable material by forcing dye carrying liquor through the same, a receptacle forming a chamber for receiving the material to be dyed and having a discharge with an imperforate area on each side thereof, and mass forming and liquor supplying means having liquor distributing openings opposed to the discharge and the imperforate areas, said mass forming and liquor supplying means, said discharge, and said imperforate areas being relatively located to establish substantially equal paths of travel for the dye liquor and to produce a resultant circulation for forcing the material against the imperforate areas and toward the discharge, and means for circulating the dye liquor.

2. In apparatus for dyeing permeable material by forcing dye-carrying liquor through the same, a receptacle forming a chamber for receiving the material to be dyed and having a foraminous discharge portion bounded by a non-foraminous portion, and liquor supplying means, each point of liquor inlet thereof being substantially equidistant from its opposed point of discharge and all of said liquor inlets being substantially in opposition to a non-foraminous portion, and means for circulating the dye liquor.

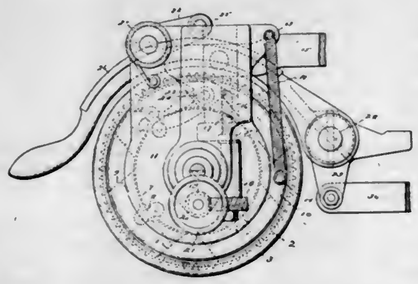
3. In apparatus for dyeing permeable material by forcing dye carrying liquor through the same, a receptacle forming a chamber for receiving the material to be dyed and having liquor supplying means, also having a foraminous discharge with a non-foraminous zone located between said liquor supplying means and the foraminous discharge and arranged in opposition to the liquor entrance, said discharge being substantially equidistant from all of its opposed points of supply, and means for circulating the dye liquor.

4. In apparatus for dyeing permeable material by forcing dye carrying liquor through the same, a receptacle forming a chamber for receiving the material to be dyed and having a foraminous discharge bounded by a non-foraminous zone, distributing means within the chamber and having its points of liquor supply in opposition to the non-foraminous zone and equidistant from the opposed center of discharge from the receptacle whereby the liquor flowing through different portions of the mass may have substantially the same length of travel and may force the mass against the non-foraminous zone and toward the discharge, and means for circulating the dye liquor.

5. In apparatus for dyeing permeable material by forcing dye carrying liquor through the same, a receptacle forming a chamber for receiving the material to be dyed and having a discharge with an imperforate area on each side thereof, a distributing member within the chamber and having its points of liquor supply equidistant from the opposed center of discharge from the receptacle whereby the liquor flowing through different portions of the mass may have substantially the same length of travel and may force the mass against the imperforate areas and toward the discharge, and means for circulating the dye liquor.

[Claims 6 to 12 not printed in the Gazette.]

1,113,406. FEED MECHANISM FOR HEADING-MACHINES. CHARLES T. BRENNAN, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Jan. 30, 1914. Serial No. 815,380. (Cl. 10—16.)



1. A feed mechanism for a heading machine consisting of a drum with an interior friction wall, friction blocks movable radially and circumferentially in said drum, an oscillatory box, links connecting said box and the friction blocks for moving the latter radially, guide blocks arranged between the ends of the friction blocks, and means for changing the circumferential positions of the guide blocks and friction blocks with relation to the oscillatory box.

2. A feed mechanism for a heading machine consisting of a shaft, a drum attached to the shaft, a box mounted on the shaft, means for oscillating the box, a ring attached to the box, blocks movable radially in the drum, and toggle links between the ring and the blocks and adapted when the ring moves in one direction to force the blocks outward, and when the ring moves in the opposite direction to allow the blocks to move inward.

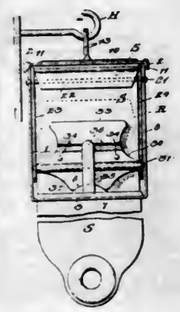
3. A feed mechanism for a heading machine consisting of a shaft, a drum fixed on the shaft, a box loose on the shaft, means for oscillating the box, a ring attached to the box, friction blocks movable radially in the drum, toggle links between the ring and the blocks, and guiding blocks between the ends of the friction blocks.

4. A feed mechanism for a heading machine consisting of a shaft, a drum fixed on the shaft, a box loose on the shaft, means for oscillating the box, a ring attached to the box, friction blocks movable radially in the drum, toggle links between the ring and the blocks, guide blocks between the ends of the friction blocks, and means for moving the guide blocks and causing them to shift the friction blocks into and out of operative positions.

5. A feed mechanism for a heading machine consisting of a shaft, a drum fixed to the shaft, a box loose on the shaft, means for oscillating the box, a ring attached to the box, friction blocks movable in the drum, toggle links between the ring and the friction blocks, and means for shifting the friction blocks into and out of operative positions.

[Claims 6 to 10 not printed in the Gazette.]

1,113,407. RAZOR-STROPPER. THEODORE BUMANN, Litchfield, Ill.; Caroline Bumann executrix of said Theodore Bumann, deceased. Filed Sept. 26, 1913. Serial No. 792,001. (Cl. 51—16.)



1. In a razor stropper, the combination with a suspended frame; of a rocking member pivoted at its upper end therein and having lips at opposite sides of its pivot, a strop passing over said upper end and both lips, and a razor-clip pivotally mounted within the lower end of said rocking member and having lips at its upper end for grasping the razor, its lower end being movably engaged with the bottom of said frame.

2. In a razor stropper, the combination with a suspended frame; of a rocking member pivoted at its upper end therein and having lips at opposite sides of its pivot, a strop passing over said upper end and both lips, a razor-clip having lips at its upper end for holding the razor-blade, a pendent tongue at its lower end, and trunnions between said lips and tongue pivoted in the rocking member, and a pair of lips upstanding from the bottom of the main frame and between which said tongue is loosely mounted.

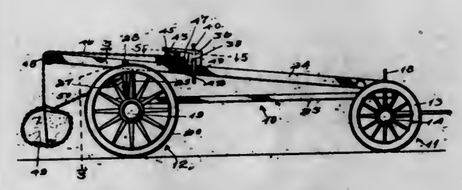
3. In a razor stropper, the combination with a suspended frame; of a rocking member pivoted at its upper end therein and having lips at opposite sides of its pivot, a strop passing over said upper end and both lips, a razor clip having lips at its upper end for holding the razor blade, a pendent tongue at its lower end, trunnions between said lips and tongue pivoted in the rocking member, a pair of lips upstanding from the bottom of the main frame and loosely receiving said tongue, the lips being pierced with eyes, and a spring mounted through said eyes and having upstanding arms loosely embracing said clip, for the purpose set forth.

4. In a razor stropper, the combination with a main frame whose bottom panel is divided into three bars, and a pair of upstanding lips on the intermediate bar; of a rocking member pivotally mounted within said frame, and having a head, a strop passing over the head of said member and on opposite sides of the intermediate bar, and a razor holding device pivotally mounted in said rocking member, the latter having its end disposed between said pair of lips.

5. In a razor stropper, the combination with a main frame consisting of a top plate, two side panels whereof one has a large hole for the passage of the razor blade, and a bottom panel having a pair of upstanding lips; of a rocking member including a head underlying the top of said frame and downturned side plates whereof that adjacent one side panel of the frame is solid and the other has a large hole, a pivot through said plates and the panels of the frame, and a razor-holder journaled between said plates and having means at its upper end to receive a razor blade, the lower end of said holder being loosely disposed between said lips, for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

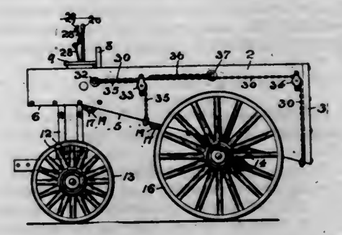
1,113,408. HOISTING MECHANISM. ALBERT C. BURLINGAME, Mandan, N. D. Filed Feb. 6, 1914. Serial No. 816,990. (Cl. 212—142.)



1. The combination with a wagon embodying a rear bolster and a forward bolster having a king-bolt engaging therewith, of a beam extending longitudinally of the wagon with its rear end extending a substantial distance beyond the rear end of the wagon, a bolster-support connected with the beam and engaging the rear bolster, an apertured bracket connected with the forward end of the beam and receiving the king-bolt, a pulley carried by the rear end of the beam, a flexible hoisting element engaging the pulley, and winding mechanism mounted upon the beam and connected with the flexible element.

2. Apparatus of the character described, comprising a beam adapted to be arranged above a wagon to extend longitudinally thereof, an apertured bracket connected with the forward end of the beam and adapted for detachable connection with the king-bolt of the forward truck of the wagon, a bolster-support connected with the rear portion of the beam and adapted to be arranged upon the rear bolster of the wagon with its ends having grooves to receive the stakes of the rear bolster, a pulley carried by the rear end of the beam, a flexible element for connection with the load and engaging the pulley, and winding mechanism mounted upon the beam and connected with the flexible element.

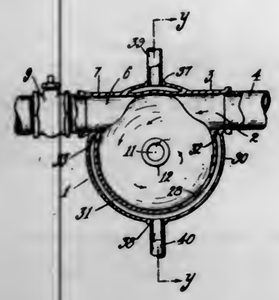
1,113,409. DUMPING-WAGON. JOHN P. CHRISTENSEN, Newark, N. J. Filed Apr. 13, 1911. Serial No. 620,730. (Cl. 21—20.)



A dumping wagon comprising an open body, a rear axle provided with wheels, springs mounted on said rear-axle so as to support the rear end of said body, a series of laterally extending downwardly and rearwardly inclined swing-gates pivotally connected with said body to close the bottom of the same, a shaft within said body, flexible connections between said shaft and said swing-gates, means for winding part of said flexible connections upon said shaft for simultaneously closing said swing-gates, the flexible connections of one of the swing-gates passing through the sides of said body to connect with said swing-gate within said body so as to avoid the springs between said body and said rear-axle, and guard-coverings com-

prising tubular-members mounted upon the inner sides of said body to protect said flexible connections from contact with the contents of said body when loaded.

1,113,410. MUFFLER. WALTER H. COFFILL, Oakland Beach, R. I. Filed Dec. 22, 1913. Serial No. 808,075. (Cl. 121—116.)



1. In a muffler of the type set forth, the combination of a substantially spherical casing provided with an exhaust gas inlet and a discharge gas outlet both tangentially disposed with relation to the casing and in alinement with each other, and with a gas outlet located at right angles to the discharge outlet, and means for closing the discharge gas outlet.

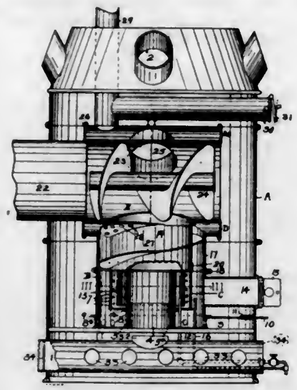
2. In a muffler of the type set forth, the combination of a substantially spherical casing provided with an exhaust gas inlet and a discharge gas outlet both tangentially disposed with relation to the casing and in alinement with each other, and with a gas outlet located axially of the casing at right angles to the discharge outlet, a valve in the discharge outlet, an outlet pipe located in the gas outlet and extending into the casing, and a plug adjustably mounted in the casing in alinement with the outlet and extending into the casing.

3. In a muffler of the type set forth, the combination of a casing comprising a spherical inner shell and a spherical outer shell spaced from the inner shell and provided with tangentially disposed adjacent openings, a web surrounding the openings and connecting the shells, also provided with tangentially disposed adjacent openings in alinement with the first mentioned openings, a web surrounding the last mentioned openings and connecting the shells, also provided with adjacent openings axially of the shells, a web surrounding the last mentioned openings and connecting the shells and pipes located in the openings within the webs.

1,113,411. FURNACE. GEORGE J. COMNINOS, Pittsburgh, Pa. Filed Apr. 8, 1914. Serial No. 830,377. (Cl. 126—116.)

1. In a furnace, an outer casing; a combustion chamber mounted in the lower portion of said casing; an annular burner mounted in said combustion chamber; a horizontally placed annular fumes chamber mounted on said combustion chamber and communicating therewith through an open port, said fumes chamber having a fumes outlet to the exterior of the casing; a circular air-mixing chamber extending axially through said fumes chamber; flues extending through said fumes chamber and connecting said mixing chamber with the crown of the casing, and an air flue extending from the bottom of said casing axially of said burner and said combustion chamber into said mixing chamber.

2. In a furnace, an outer casing; a combustion chamber mounted in the lower portion of said casing; an annular burner mounted in said combustion chamber; a horizontally placed annular fumes chamber mounted on said combustion chamber and communicating therewith through an open port, said fumes chamber having a fume outlet to the exterior of the casing; a circular air-mixing chamber extending axially through said fumes chamber; flues extending through said fumes chamber and connecting said mixing chamber with the crown of said casing, and an air flue extending from the bottom of said casing axially of said burner and said combustion chamber into said mixing chamber, the interior diameter of said last named flue increasing above said burner.



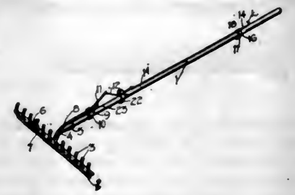
3. In a furnace, an outer casing, a combustion chamber mounted in the lower portion of said casing; an annular burner mounted in said combustion chamber; a horizontally placed annular fumes chamber mounted on said combustion chamber and communicating therewith through an open port, said fumes chamber having a fumes outlet to the exterior of the casing; a circular air-mixing chamber extending axially through said fumes chamber; a fresh air connection for one end of said mixing chamber; flues extending through said fumes chamber and connecting said mixing chamber with the crown of the casing, and an air flue extending from the bottom of said casing axially of said burner and said combustion chamber into said mixing chamber.

4. In a furnace, an outer casing; a combustion chamber mounted in the lower portion of said casing; an annular burner mounted in said combustion chamber; a horizontally placed annular fumes chamber mounted on said combustion chamber and communicating therewith through an open port, said fumes chamber having a fumes outlet to the exterior of the casing; a circular air-mixing chamber extending axially through said fumes chamber, said mixing chamber being connected at its end to a fresh air supply; flues extending through said fumes chamber and connecting said mixing chamber with the crown of the furnace; a mixing worm in said mixing chamber, and an air flue extending from the bottom of said casing axially of said burner and said combustion chamber into said mixing chamber.

5. A heater comprising an annular combustion chamber; an air chamber within the same and concentric therewith; an annular burner mounted on top of said air chamber and forming the throat thereof; an annular fumes drum superimposed upon said combustion chamber and receiving the fumes therefrom through an open port, the open bore of said drum communicating with the throat of said air chamber; inclosed ducts through said drum communicating with said bore, and a fumes pipe leading from said fumes drum.

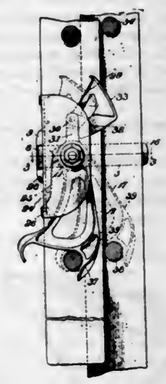
1,113,412. RAKE. ALFRED R. CONKLIN, New York, N. Y. Filed Nov. 19, 1913. Serial No. 801,946. (Cl. 55—146.)

In combination with a rake comprising a handle, a head and teeth, a clamp secured near the forward end of the rake, a stripping bar, projections formed on the stripping bar and extending between the teeth of the rake head, an extension formed on the opposite side of the stripping bar, and pivotally connected to the clamp, an angular projection formed integral with the rear end of the extension, means to normally hold the angular extension away from the rake handle, a flexible member secured to the free end of the angular projection, a clamp secured to the rake handle intermediate its ends, a pulley mounted in said



clamp, the flexible member being passed beneath the pulley and extending partly up the rake handle, and a member slidably mounted on the rake handle and connected to the free end of the flexible member, whereby when pull is exerted on the last mentioned member the stripping bar will be operated.

1,113,413. EXTENSION-LADDER LOCK. CHARLES R. CONABEE, Butler, Pa. Filed Jan. 6, 1914. Serial No. 810,595. (Cl. 228—25.)



1. In an extension ladder comprising movable and stationary sections, the combination of a side guard or guide carried by the movable section, a hook member mounted on said side guard, means automatically moving said member into position to engage the rungs of the stationary section, and a bolt passing through said side guard and hook member.

2. In an extension ladder comprising upper and lower sections, the combination of a side guard mounted on and engaging the side of the upper section at diametrically opposite points, a hook member mounted on said guard and automatically engaging the rungs on the lower section, and a bolt passing through said side guard at two points and through said hook member.

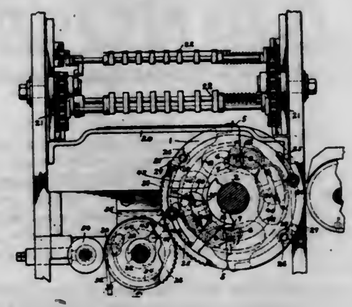
3. In an extension ladder comprising upper and lower sections, the combination of a side guard mounted on and engaging opposite faces of the side of the upper section, a hook member mounted on said guard and automatically engaging the rungs on the lower section, and a bolt passing through said side guard at two points and through said hook member.

4. In an extension ladder comprising upper and lower sections, the combination of a side guard mounted on one side of the upper section and having a stud or projection thereon, a hook member mounted on said projection, and means securing said side guard and member in place.

5. In an extension ladder comprising upper and lower sections, the combination of a side guard mounted on one side of the upper section and having a stud or projection thereon, a hook member mounted on said projection, and a bolt passing through the side of said ladder and said projection.

[Claims 6 to 13 not printed in the Gazette.]

1,113,414. FOLDING DELIVERY. ELLIS W. COOPER, Bloomfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Jan. 22, 1913. Serial No. 743,500. (Cl. 101—48.)



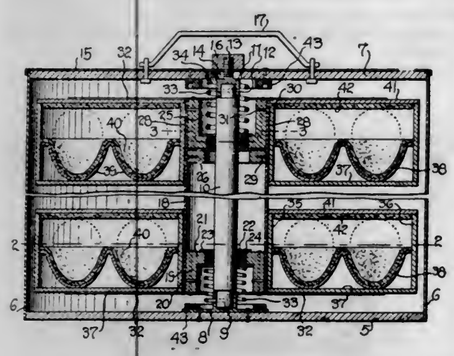
1. In a folding delivery, the combination with a rotary sheet carrier having holding devices for the leading edge of the sheet and a tucking blade, of a second rotary carrier provided with nipping jaws coöperating with the tucking blade, means for operating the holding devices to release the sheet, and means for simultaneously adjusting the position of the tucking blade with respect to the edge holding devices, the position of the nipping jaws with respect to the tucking blade, and the holding device operating means.

2. In a folding delivery, the combination with a rotary sheet carrier having holding devices for the leading edge of the sheet, of a tucking blade, a support for the tucking blade moving with the carrier and circumferentially adjustable with respect thereto, a second rotary carrier provided with nipping jaws, releasing means for the sheet holding devices including an actuator moving with the nipping jaw carrier, and connections between the tucking blade support and the nipping jaw carrier whereby a circumferential adjustment of the support effects a corresponding adjustment of the nipping jaws and the actuator for operating the sheet holding devices.

3. In a folding delivery, the combination with a rotary sheet carrier having holding devices for the leading edge of the sheet, of a tucking blade, a support for the tucking blade comprising heads adjustably connected to the ends of the carrier, of a rotary cylinder provided with nipping jaws coöperating with the tucking blade, and gearing between the support and the rotary cylinder whereby a circumferential adjustment of the support and tucking blade effects a corresponding circumferential adjustment of the nipping jaws.

4. In a folding delivery, the combination with a rotary sheet carrier having holding devices for the edge of the sheet, of a tucking blade, a tucking blade support comprising heads secured to and circumferentially adjustable with respect to the ends of the carrier, of a second rotary carrier provided with nipping jaws and a cam for effecting the release of the sheet holding devices, and gearing between the tucking blade support and the nipping jaw carrier, whereby a circumferential adjustment of the support effects a corresponding circumferential adjustment of the nipping jaws and cam.

1,113,415. ARTICLE-CARRIER. ALLEN J. COUGHENOUR, Kansas City, Mo. Filed Mar. 9, 1914. Serial No. 823,548. (Cl. 217—27.)



1. In a carrier of the class described, a case, a vertical rod centrally arranged in said case, a plurality of carton supporting spring members, means yieldably supporting said spring members within the case against vertical movement, and additional means arranged upon said rod for yieldably preventing lateral movement of said spring members and the cartons supported thereby with respect to the case.

2. In a carrier of the class described, a case, a vertical rod centrally arranged within the case, upper and lower series of vertically yieldable members mounted upon said rod, a plurality of article receiving cartons arranged between said members, and means mounted upon the rod to yieldingly prevent lateral shifting movement of the cartons with respect to the case.

3. In a carrier of the class described, a case, a vertically disposed rod permanently mounted upon the bottom of the case, spaced horizontally disposed spring members loosely mounted upon said rod, means yieldably holding said members against longitudinal movement with respect to the rod, and a plurality of article receiving cartons arranged between said spring members.

4. In a carrier of the class described, a case, a vertically disposed rod secured at its lower end centrally upon the bottom of the case, sleeves loosely mounted upon the upper and lower ends of said rod, horizontally disposed spring arms fixed to the respective sleeves, a plurality of article receiving cartons arranged between the upper and lower series of arms, and means for yieldably holding the sleeves against vertical movement upon said rod.

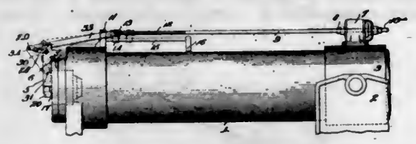
5. In a carrier of the class described, a case, a vertically disposed rod secured at its lower end centrally upon the bottom of the case, sleeves loosely mounted upon the upper and lower ends of said rod, horizontally disposed spring arms fixed to the respective sleeves, a plurality of article receiving cartons arranged between the upper and lower series of arms, means for yieldably holding the sleeves against vertical movement upon said rod, and means carried by said sleeves and coöperating with the rod to yieldably maintain the sleeves in concentric relation to said rod.

[Claims 6 to 13 not printed in the Gazette.]

1,113,416. BREECH-CLOSURE-OPERATING MECHANISM FOR GUNS. FRANCIS S. CRAVEN, U. S. Navy. Filed July 30, 1913. Serial No. 782,087. (Cl. 89—20.)

1. The combination with a gun having a breech closure and carrier therefor, of members connected to the closure; levers fulcrumed on the carrier operatively connected to said members; a motor fixedly mounted relative to the gun; and operative connections between said levers and the motor whereby to actuate said closure and the carrier.

2. The combination with a gun having a breech closure and a carrier therefor, of members connected to the closure; levers fulcrumed on the carrier operatively connected to said members; an actuating mechanism fixedly mounted relative to the gun; and operative connections between said actuating mechanism and said levers whereby to actuate said closure and the carrier.



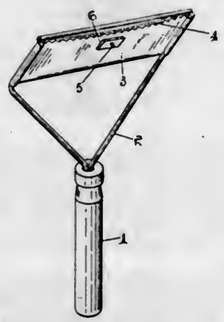
3. The combination with a gun having a breech closure and a carrier therefor, of members connected to the closure; levers fulcrumed on the carrier operatively connected to said members; a motor fixedly mounted relative to the gun; a shaft connected to be driven by the motor; and operative connections between said shaft and said levers whereby to actuate said closure and the carrier.

4. The combination with a gun having a breech closure and a carrier therefor, of members connected to the closure; levers fulcrumed on the carrier operatively connected to said members; a motor fixedly mounted relative to the gun; a shaft connected to be driven by the motor; a member connected to be driven by said shaft; and operative connections between said driven member and said levers whereby to actuate said closure and the carrier.

5. The combination with a gun having a breech plug and a swinging breech plug carrier, of members mounted to move on said plug carrier and connected to said breech plug; levers fulcrumed on said plug carrier and connected to actuate said plug connecting members; a motor; and operative connections between said motor and said levers to lock and unlock the breech plug and swing the breech plug carrier.

[Claims 6 to 10 not printed in the Gazette.]

1,113,417. SINGEING DEVICE. ERNEST C. DANIELS, Orangeville, Ontario, Canada. Filed Apr. 4, 1914. Serial No. 829,570. (Cl. 119—83.)



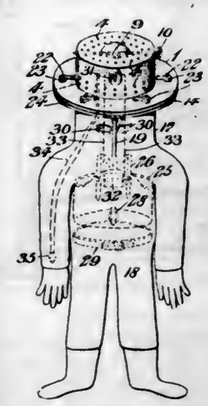
1. As a singer the combination of a handle; an elongated sheet metal pocket secured thereto having an opening along its forward side; and a filling of absorbent material in said pocket.

2. As a singer the combination of a handle; an elongated metal pocket secured thereto having an opening along one side; means for adjusting the width of said opening; and a filling of absorbent material in said pocket.

3. As a singer the combination of a handle; an elongated metal pocket secured thereto having an opening along one side, one edge of the opening being formed as a comb; and a filling of absorbent material in said pocket.

4. As a singer the combination of a handle; an elongated metal pocket secured thereto having an opening along one side; one edge of the opening being formed as a comb; means for adjusting the width of said opening; and a filling of absorbent material in said pocket.

1,113,418. LIFE-PRESERVING APPARATUS. LOUIS D'ELIA, Atlantic City, N. J. Filed Sept. 9, 1913. Serial No. 788,781. (Cl. 9—20.)



1. In a life saving apparatus, a helmet having an air and water intake in a wall thereof, and a chamber within the crown in communication with said intake and the interior of said crown, said intake being also adapted as a discharge for the water admitted into said chamber.

2. In a life saving apparatus, a helmet having a chamber within the same, an air intake in the wall of said helmet in communication with said chamber, and a port in said chamber forming a communication for the latter with the interior of said helmet.

3. In a life saving apparatus, a helmet having a chamber within the same, an air and water intake in a wall of said helmet in communication with said chamber, a port in said chamber forming a communication for the latter with the interior of said helmet, and a valve in the helmet adapted to open and close said port.

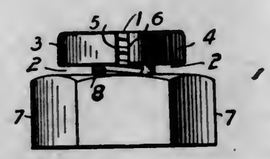
4. In a life saving apparatus, a helmet having a chamber within the same, an air and water intake in a wall of said helmet in communication with said chamber, a port in said chamber forming a communication for the latter with the interior of said helmet, a valve in the helmet adapted to open and close said port, and means on the helmet for operating said valve in opposite directions.

5. In a life saving apparatus, a helmet having an air and water receiving chamber therein, a port in said chamber adapted to form a communication between the latter and the interior of the helmet, a cam member in the helmet adapted to bear against one face of said valve, a resilient member in the helmet adapted to bear against the other face of said valve, and means for supporting said members.

[Claims 6 to 9 not printed in the Gazette.]

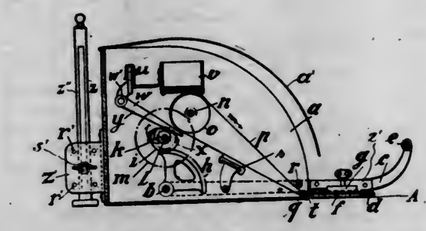
1,113,419. LOCK-NUT. HUBERT DOLLMAN, Birmingham, England. Filed Oct. 31, 1913. Serial No. 798,438. (Cl. 151—21.)

A lock nut having a thread formed therein and consisting of a body portion and a locking piece comprising two arc shaped spring tongues eccentrically disposed to the axis of the nut and extending around more than three fourths of the circumference of the bolt hole, said tongues being connected to said body portion at one part only, said tongues being integral with the body portion and with each other and formed by two right angle saw cuts, said locking piece being disposed wholly within the periphery of said body portion, the thread in said body portion being of uniform diameter throughout and the thread in said locking



piece being of uniform diameter throughout and being of less diameter than the thread in said body portion.

1,113,420. STAMP-AFFIXING MACHINE. WALTER DORNHEIM, Leipzig, Germany. Filed Sept. 28, 1912. Serial No. 722,925. (Cl. 216—54.)



1. A machine of the character described, comprising in combination a stamp receptacle, an endless stamp-conveying means, an oscillating shaft, elements connecting said conveying means intermittently in one direction, means for bringing said conveying means into engagement with the lowermost stamp in the receptacle, stationary means for removing the stamp from said conveying means, and an element for pressing the removed stamp against the article to which it is to be attached.

2. A machine of the character described, comprising in combination a stamp receptacle, an endless stamp-conveying means, elements for imparting uni-directional movement to said conveying means, elements for raising and lowering the stamp receptacle so as to bring the same intermittently into engagement with the stamp-conveying means, stationary means for removing the stamp from said conveying means, and a manually operable element for pressing the removed stamp against an article and operatively connected to actuate said elements.

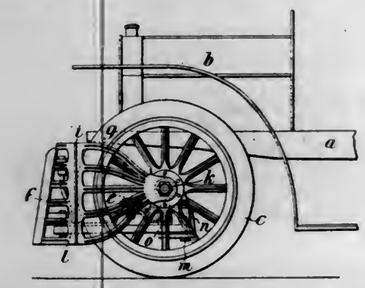
3. A machine of the character described, comprising in combination a stamp receptacle, an endless stamp-conveying means, elements for imparting uni-directional movement to said means, and for bringing said receptacle and said stamp-conveying means into intermittent engagement, adjustable means for moistening the surface of said conveying means, both of said last-named means being in permanent frictional engagement, stationary means for removing the stamp from said conveying means, and an element for pressing the removed stamp against the article to which it is to be attached.

4. A machine of the character described, comprising in combination a casing, a stamp receptacle mounted in said casing, an endless stamp-conveying means, elements for imparting uni-directional movement to said conveying means, and for bringing the same into intermittent engagement with the contents of said stamp receptacle, means stationary with respect to the casing for removing the stamp from said conveying means, and an element movable with respect to the casing, for pressing the removed stamp against the article to which it is to be attached, a support for said casing and means for adjusting said casing with respect to said support so as to bring the pressure means in horizontal position when said means are in operative position.

5. A machine of the character described, comprising in combination a casing, a rock-shaft mounted in said cas-

ing, actuating levers for said shaft, a bridge-plate connecting said levers, a toothed sector mounted on said rockshaft, stamp-conveying means and transmission elements interposed between said sector and said conveying means for imparting uni-directional movement to said conveying means when the rockshaft is oscillated alternately in opposite directions, a stamp receptacle and means for intermittently moving the stamp receptacle so as to bring the contents thereof into engagement with the conveying means; a wiper fixed to the casing, said bridge-plate being adapted to press the stamp removed from the conveying means by the wiper against the article to which the stamp is to be attached.

1,113,421. WHEEL-GUARD OR OBSTRUCTION-REMOVER FOR MOTOR ROAD-VEHICLES. GUSSER EVANOVITCH, London, England. Filed May 5, 1913. Serial No. 765,614. (Cl. 105—254.)



1. A fender for vehicles comprising a cradle, and means for mounting the cradle upon a vehicle axle, said means comprising a stirrup rigidly mounted on said axle, a bar having one of its ends pivotally mounted in said stirrup and its other end carrying said cradle, and means provided on said bar for engaging the steering gear.

2. A fender for vehicles adapted to embrace the front and front wheels of said vehicle, comprising a cradle composed of a central portion and end portions, means for pivotally connecting said end portions to said central portion, to permit lateral adjustment, a bar connected to said central portion, means for pivotally connecting said bar to the vehicle axle, and means for connecting said bar to the steering gear of the vehicle.

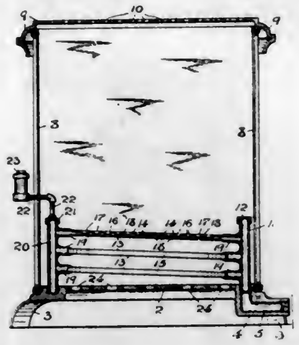
3. A fender for vehicles comprising a cradle composed of a central portion and end portions, means for connecting said end portions to the steering axles, and elastic connections between said end portions and said steering axles.

4. A fender for vehicles comprising a cradle mounted upon the front axles of a vehicle and arranged to embrace the front and front wheels of said vehicles, said cradle consisting of a central portion and two lateral wing portions pivotally connected thereto, the central portion being extensible laterally and means connecting said cradle directly with the steering gear of the vehicle.

5. A fender for vehicles comprising a cradle mounted upon the front axles of a vehicle and arranged to embrace the front and front wheels of said vehicle, said cradle being composed of a central portion and end portions, the central portion consisting of a vertical post and two sides, rods pivotally connected to said post and to said sides for adjusting the central portion laterally, the end portions being pivotally connected to said central portion, and means connecting said cradle directly with the steering gear of the vehicle.

1,113,422. RADIATOR. FREDERICK A. FELDKAMP, Newark, N. J., assignor to Electrolytic Products Co., a Corporation of New Jersey. Filed Dec. 30, 1911. Serial No. 668,593. (Cl. 257—136.)

1. A radiator comprising a base-member provided with an intake-member forming an inlet-passage for a heating fluid, said base-member being further provided with openings forming air-passages, a casing supported upon said base-member, a top plate provided with openings forming air-passages connected with said casing, a plurality of hollow honey-combed radiator-plates arranged within said casing, means for interconnecting said radiator-plates, and means for connecting said radiator-plates with said heating fluid inlet-passage.



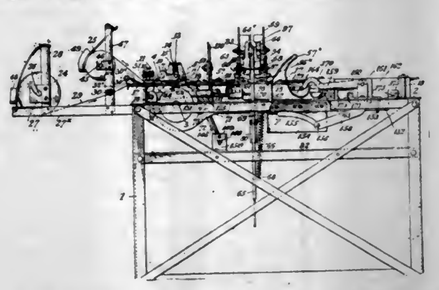
2. A radiator comprising a base-member provided with an intake-member forming an inlet-passage for a heating fluid, said base-member being further provided with openings forming air-passages, a casing supported upon said base-member, a top-plate provided with openings forming air-passages connected with said casing, a plurality of hollow-honey-combed radiator-plates arranged within said casing, means for interconnecting said radiator-plates, means for connecting said radiator-plates with said heating fluid inlet-passage, and an automatic air-relief mechanism communicating with said radiator-plates.

3. A radiator comprising a base-member provided with an intake-member forming an inlet-passage for a heating fluid, said base-member being further provided with openings forming air-passages, a casing supported upon said base-member, a top-plate provided with openings forming air-passages connected with said casing, a plurality of hollow honey-combed and substantially horizontally disposed radiator-plates arranged within said casing, means for interconnecting said radiator-plates, and means for connecting said radiator-plates with said heating fluid inlet-passage.

4. A radiator comprising a base-member provided with an intake-member forming an inlet-passage for a heating fluid, said base-member being further provided with openings forming air-passages, a casing supported upon said base-member, a top-plate provided with openings forming air-passages connected with said casing, a plurality of hollow honey-combed and substantially horizontally disposed radiator-plates arranged within said casing, means for interconnecting said radiator-plates, means for connecting said radiator-plates with said heating fluid inlet-passage, and an automatic air-relief mechanism communicating with said radiator-plates.

1,113,423. WRAPPING-MACHINE. JOHN H. FELMLEE, Wheeling, W. Va., assignor, by direct and mesne assignments, to The Progressive Manufacturing Company, Wheeling, W. Va., a Corporation. Filed Nov. 18, 1913. Serial No. 801,700. (Cl. 93—2.)

1. An automatic apparatus for wrapping articles comprising a frame having a boxing to receive the article to be wrapped, tilting shelves for supporting the article to be wrapped within the boxing and over the wrapping paper, means for releasing the shelves to allow the same to tilt, mechanism for depressing the article with the wrapper to a position below said boxing, a knife for cutting the wrapper, a horizontally movable plunger positioned adjacent to the boxing as the article and wrapper are depressed, said plunger serving to cause the wrapper to fold against one side of the article, reciprocating means for folding one edge of the wrapper over the top of the article, mechanism underneath which the article thus partially wrapped is moved by said horizontally movable plunger, means for folding the vertical flaps upon one side of the article as the latter is moved by said horizontally movable plunger, movable members for folding the top flaps down against the ends of the article, a conduit, the side walls of which are adapted to fold the other vertical side flaps as the article is advanced, and means for folding the bottom flaps up against the ends of the article, as set forth.



2. An automatic apparatus for wrapping articles comprising a frame having a boxing to receive the article to be wrapped, tilting shelves within the boxing, a vertically movable plunger and means for moving the same against the upper surface of the article and depressing the latter with the wrapper underneath, a vertically movable yoke with projections thereon adapted to release said shelves to allow the article to be depressed with the wrapper underneath, said shelves being adapted to be returned to their normal positions as the vertically movable plunger returns to its starting position, reciprocating means for folding one edge of the wrapper over the top of the article, horizontally movable plunger, a knife for cutting the wrapper, mechanism underneath which the article thus partially wrapped is moved by said horizontally movable plunger, means for folding the vertical flaps upon one side of the article as the latter is moved by said horizontally movable plunger, movable members for folding the top flaps down against the ends of the article, a conduit, the side walls of which are adapted to fold the other vertical side flaps as the article is advanced, and means for folding the bottom flaps up against the ends of the article, as set forth.

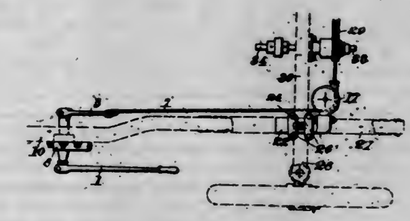
3. An automatic apparatus for wrapping articles comprising a frame having a boxing to receive the article to be wrapped, rock shafts journaled adjacent to the walls of the boxing, a knife for cutting the wrapper, a shelf projecting from each shaft, arms fixed to each shaft, a vertically reciprocating yoke, lugs projecting from the yoke and adapted to engage said arms to hold the shelves in horizontal positions within said boxing, a vertically movable plunger adapted to contact with the upper surface of the article and depress the latter with the wrapper underneath, reciprocating means for folding one edge of the wrapper over the top of the article, a horizontally movable plunger, mechanism underneath which the article thus partially wrapped is moved by said horizontally movable plunger, means for folding the vertical flaps upon one side of the article as the latter is moved by said horizontally movable plunger, movable members for folding the top flaps down against the ends of the article, a conduit, the side walls of which are adapted to fold the other vertical side flaps as the article is advanced, and means for folding the bottom flaps up against the ends of the article, as set forth.

4. An automatic apparatus for wrapping articles comprising a frame having a boxing to receive the articles to be wrapped, rock shafts journaled adjacent to the walls of the boxing, a knife for cutting the wrapper, a shelf projecting from each shaft, arms fixed to each shaft, a vertically movable plunger, a bar to which the same is fastened, a yoke supported by said bar and raised by the latter to its highest limit, means for preventing a lateral movement to the yoke, said vertically movable plunger adapted to contact with the upper surface of the article and depressing the latter with the wrapper underneath, reciprocating means for folding one edge of the wrapper over the top of the article, a horizontally movable plunger, mechanism underneath which the article thus partially wrapped is moved by said horizontally movable plunger, means for folding the vertical flaps upon one side of the article as the latter is moved by said horizontally movable plunger, movable members for folding the top flaps down against the ends of the article, a conduit, the side walls of which are adapted to fold the other vertical side flaps as the article is advanced, and means for folding the bottom flaps up against the ends of the article, as set forth.

5. An automatic apparatus for wrapping articles comprising a frame having a boxing to receive the article to be wrapped, rock shafts journaled adjacent to the walls of the boxing, a knife for cutting the wrapper, a shelf projecting from each shaft, arms fixed to each shaft, a vertically movable plunger, a bar to which the same is fastened, a yoke supported by said bar and raised by the latter to its highest limit, means for preventing a lateral movement to the yoke, said vertically movable plunger adapted to contact with the upper surface of the article and depressing the latter with the wrapper underneath, reciprocating means for folding one edge of the wrapper over the top of the article, a horizontally movable plunger, mechanism underneath which the article thus partially wrapped is moved by said horizontally movable plunger, means for folding the vertical flaps upon one side of the article as the latter is moved by said horizontally movable plunger, movable members for folding the top flaps down against the ends of the article, a conduit, the side walls of which are adapted to fold the other vertical side flaps as the article is advanced, and means for folding the bottom flaps up against the ends of the article, as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,113,424. STARTING MECHANISM FOR EXPLOSION-MOTORS. EDMOND FILLETTAZ, Neuilly-sur-Seine, France. Filed Dec. 12, 1913. Serial No. 806,255. (Cl. 123—185.)



1. In starting mechanism for explosion motors, the combination of a shaft in axial alinement with the motor shaft, a sleeve surrounding said shaft, a pulley eccentrically mounted on said sleeve, clutch mechanism between said pulley and said sleeve, a cord one end of which is attached to said pulley and adapted to rotate said pulley to cause rotation of said sleeve through said clutch mechanism, by traction on said cord, means for rotating said shaft by the rotation of said sleeve, means allowing rotation of said shaft in one direction without rotating said sleeve, means for clutching said shaft to said motor shaft, and means allowing the release of said last mentioned clutching means when the motor has attained a certain speed.

2. In starting mechanism for explosion motors, the combination of a shaft in axial alinement with the motor shaft, a sleeve surrounding said shaft, a pulley eccentri-

cally mounted on said sleeve, clutch mechanism between said pulley and said sleeve, a cord one end of which is attached to said pulley, a lever, means operated by said lever adapted to exert traction on said cord to rotate said pulley to cause rotation of said sleeve through said clutch mechanism, means for rotating said shaft by the rotation of said sleeve, means allowing rotation of said shaft in one direction without rotating said sleeve, means for clutching said shaft to said motor shaft, and means allowing the release of said last mentioned clutching means when the motor has attained a certain speed.

3. In starting mechanism for explosion motors, the combination of a shaft in axial alinement with the motor shaft, a sleeve surrounding said shaft, a pulley eccentrically mounted on said sleeve, clutch mechanism between said pulley and said sleeve, a cord one end of which is attached to said pulley, a hand lever, a toothed sector connected thereto and operated thereby, a second lever having its free end connected to the other end of said cord, a toothed sector connected to said latter lever gearing with the aforesaid sector and operated thereby to swing said latter lever and cause same to exert traction on said cord to rotate said pulley to cause rotation of said sleeve through said clutch mechanism, means for limiting the movement of said hand lever, spring governed means for maintaining said cord stretched, means for rotating said shaft by the rotation of said sleeve, means allowing rotation of said shaft in one direction without rotating said sleeve, means for clutching said shaft to said motor shaft and means allowing the release of said last mentioned clutching means when the motor has attained a certain speed.

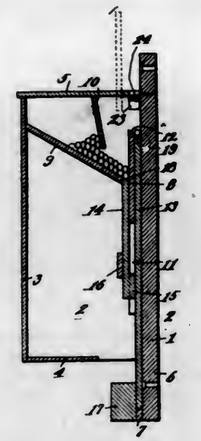
4. In starting mechanism for explosion motors, the combination of a shaft in axial alinement with the motor shaft, a sleeve surrounding said shaft, a pulley eccentrically mounted on said sleeve, clutch mechanism between said pulley and said sleeve, a cord one end of which is attached to said pulley, an operating lever, mechanism for exerting traction on said cord by the operation of said lever to rotate said pulley to cause rotation of said sleeve through said clutch mechanism, a casing inclosing said traction mechanism, means inclosed in said casing for maintaining said cord stretched, a guide pulley for said cord, a pivoted casing inclosing said guide pulley and having an inlet and outlet for said cord, means for attaching said latter casing to the suspension spring of a motor car, means for rotating said shaft by the rotation of said sleeve, means allowing rotation of said shaft in one direction without rotating said sleeve, means for clutching said shaft to said motor shaft, and means allowing the release of said last mentioned clutching means when the motor has attained a certain speed.

5. In starting mechanism for explosion motors, the combination of a shaft in axial alinement with the motor shaft, a sleeve surrounding said shaft, a pulley eccentrically mounted on said sleeve, clutch mechanism between said pulley and said sleeve, a cord one end of which is attached to said pulley and adapted to rotate said pulley by traction on said cord so as to initially cause a maximum angular speed of said pulley which progressively decreases and then again increases to the maximum and causes similar rotation of said sleeve through said clutch mechanism, means for rotating said shaft by the rotation of said sleeve, means allowing rotation of said shaft in one direction without rotating said sleeve, means for clutching said shaft to said motor shaft, and means allowing the release of said last mentioned clutching means when the motor has attained a certain speed.

[Claims 6 and 7 not printed in the Gazette.]

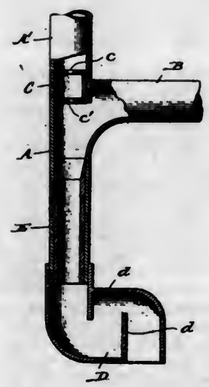
1,113,425. MATCH-BOX. WILLIAM S. FLINDER, Chambersburg, Pa. Filed Apr. 22, 1913. Serial No. 762,960. (Cl. 206—23.)

In a device of the character described, a case including sides, a vertically movable slide having its edges engaging the said sides, the upper end of the slide having a match groove and one upper corner of the slide being notched, the upright wall of the notch having a groove to receive one end portion of a match, and a leaf spring secured to that side of the case adjacent the said notch, the leaf spring being inclined upwardly from the said side of the case and the free end of the spring having a notch cooperating with the grooved wall of the aforesaid notch, whereby that end of a match carried by the upper end of the slide which projects over the notch will first contact with the basal portion of the spring when the slide is raised to start the upward swinging movement of the



other end of the match, and whereby the spring will clamp the first mentioned end of the match within the grooved wall of the notch and will serve as a brace between the match and grooved wall of the notch and the said side of the case to lock the slide against downward movement until the match is withdrawn.

1,113,426. SUCTION APPARATUS. ROBERT GALLOWAY, Buffalo, N. Y. Filed Aug. 9, 1912. Serial No. 714,274. (Cl. 230—13.)



1. In a suction apparatus, the combination with a fitting adapted to be connected with a supply system and having a suction branch communicating therewith intermediate the pressure and discharge ends, of a spray nozzle located within the fitting at the pressure side of the opening of the suction branch and embodying two parallel diaphragms in immovable relation with a distance chamber between and having central openings therein with cylindrical walls in alinement with each other and whose areas are less than the areas in cross section of the adjacent parts of the fitting and the distance chamber.

2. In a suction apparatus, the combination with a fitting adapted to be connected to a supply system and having a suction branch, of a nozzle consisting of a chambered casing having alined inlet and discharge openings in its opposite ends whose areas are equal and less than the areas in cross section of the adjacent parts of the fitting and the chambered casing, said nozzle being located within the fitting at the pressure side of the suction branch.

3. In a suction aparatus, the combination with a fitting adapted to be connected with a supply system and having a suction branch pipe, of a spray nozzle consisting of a chambered casing having inlet and discharge openings in its opposite ends whose areas are less than the areas in cross section of the adjacent parts of the fitting and the chambered casing, the water sealed trap attached to the discharge end of the said fitting through which both air and water are continuously discharged said trap having two inside baffle plates arranged zig-zag whereby the back flow of air into the suction chamber is prevented and a more efficient vacuum maintained.

4. In a suction apparatus, the combination with a fitting adapted to be connected with a supply system and having a suction branch pipe, of a spray nozzle consisting of a chambered casing having inlet and discharge openings in its opposite ends whose areas are less than the areas in cross section of the adjacent parts of the fitting and the chambered casing, the removable throat piece fitted within the said fitting below the suction branch pipe, the water sealed trap attached to the discharge end of the said fitting through which both air and water are continuously discharged said trap having two internal baffle plates arranged out of alinement whereby the back flow of air to the suction nozzle is prevented and a more efficient vacuum secured.

5. In a suction apparatus, the combination with a fitting adapted to be connected to a supply system and having a suction branch, of a nozzle located within the fitting and consisting of a chambered casing having two parallel diaphragms in immovable relation to each other and having alined inlet and discharge openings therein whose areas are equal and less than the areas is cross section of the adjacent parts of the fitting and chambered casing.

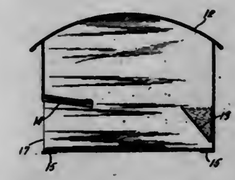
[Claim 6 not printed in the Gazette.]

1,113,427. BUTTON. WALTER FRANCIS GAUNT, Birmingham, England. Filed Sept. 6, 1911. Serial No. 647,941. (Cl. 24—90.)

In combination, a member having a solid penetrable body portion, a metal back plate with an attachment loop fixed thereto, a metal ornament or the like provided with chambered edges and backwardly projecting spikes, said ornament being pressed into the body of the member so that its outer surface is flush with the front of said body, the length of said spikes being such that the ends thereof will be bent upwardly by contact with said metal plate, and so that the substance of the body will extend over said chamfered edges of the ornament when the ornament has been inserted in the penetrable body.

1,113,428. DUST-HOOD FOR HOT-AIR REGISTERS. CHARLES C. GERHART, Clarksville, Tenn. Filed Dec. 12, 1913. Serial No. 806,169. (Cl. 98—51.)

1. A dust hood for hot air registers comprising a box frame open at its bottom to receive the hot air from the register and having a hot air outlet, a deflecting cover for the box frame, and a reticulated shelf in width less than the width of the box frame arranged therein adjacent to the hot air outlet whereby the hot air from the register is screened before passage thereof through the hot air outlet; substantially as set forth.



2. A dust hood for hot air registers comprising a box frame open at its bottom to receive the hot air from the register and having a hot air outlet, a deflecting cover for the box frame, a reticulated shelf in width less than the width of the box frame arranged therein adjacent to the hot air outlet whereby the hot air from the register is screened before passage thereof through the hot air outlet, and means for moistening the hot air before passage thereof through the hot air outlet; substantially as set forth.

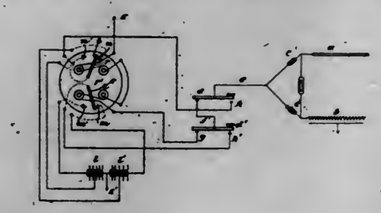
3. A dust hood for hot air registers comprising a box frame open at its bottom to receive the hot air from the register and having a hot air outlet, a deflecting cover for the box frame, and a reticulated shelf in width less than the width of the box frame arranged therein on or slightly above the upper line of the hot air outlet whereby the hot air from the register is screened before passage thereof through the hot air outlet; substantially as set forth.

4. A dust hood for hot air registers comprising a box frame open at its bottom to receive the hot air from the register and having a horizontal hot air outlet, a deflecting cover for the box frame, and a reticulated shelf in width less than the width of the box frame arranged horizontally therein adjacent to the hot air outlet whereby the hot air from the register is screened before passage thereof through the hot air outlet; substantially as set forth.

5. A dust hood for hot air registers comprising a rectangular box frome open at its bottom to receive the hot air from the register and having a longitudinal hot air outlet, a deflecting cover for the box frame, and a reticulated shelf in width less than the width of the box frame supported therein longitudinally thereof on or slightly above the upper line of the hot air outlet whereby the hot air from the register is screened before passage thereof through the hot air outlet; substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,113,429. SYSTEM OF CABLE-WORKING. JOHN GOTT, Hove, Brighton, England, assignor to Commercial Cable Company, New York, N. Y., a Corporation of New York. Filed May 2, 1912. Serial No. 694,750. (Cl. 178—63.)



1. The method of telegraphing on submarine lines which consists in transmitting a constantly alternating series of impulses of current, each impulse of current constituting a single unit of a signal, whereby each succeeding signal unit will be formed by a current impulse of changed polarity and no two successive signal units will be formed

by impulses of current of the same polarity, the reversals in polarity of the current to the line being controlled by the sending instrument, amplifying some of said signal impulses by an increased current and distinguishing such impulses as signals or units of signals by their strength and irrespective of their polarity.

2. The art of telegraphing which consists in throwing upon the line impulses of successively opposite polarity and varying the strength of such current impulses and distinguishing such impulses as signals or units of signals by their strength and irrespective of their polarity.

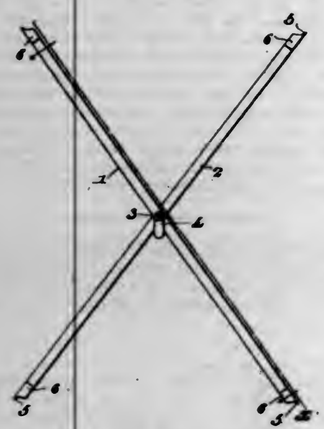
3. The art of telegraphing which consists in throwing upon the line impulses of successively opposite polarity and varying the strength of such current impulses and distinguishing such impulses as signals or units of signals by their strength and irrespective of their polarity, and receiving such impulses in accordance with their polarity.

4. A system of electric signaling comprising means for transmitting single signal unit impulses of current, means automatically controlled by said transmitting means for reversing the polarity after each signal impulse, means for varying the strength of said impulses, means for receiving such impulses, said means responding to said impulses in accordance with their polarity and distinguishing them as signals or units of signals by their strength and irrespective of their polarity.

5. A system of electric signaling comprising two transmitting keys, means whereby one key will transmit impulses of current of equal strength, means whereby the other key will transmit impulses of current of greater power than the impulse transmitted by the other key, and means whereby upon the opening of either key the polarity of the current to the line on the next key operation will be reversed.

[Claims 6 to 12 not printed in the Gazette.]

1,113,430. HOT-AIR-REGISTER ATTACHMENT. FRANK H. GREENAWALT, Pittsburgh, Pa. Filed Oct. 13, 1913. Serial No. 794,793. (Cl. 98—48.)

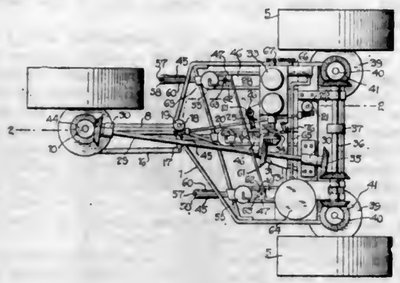


1. A frame comprising a pair of intersecting bars connected at their point of intersection, means on the ends of said bars for attaching a cloth thereto and means at the intersection of said bars for attaching the device to a register.

2. In a device of the class described a pair of intersecting bars connected at their point of intersection, a register engaging tongue secured to said bars, the ends of said bars being off-set on the side with said tongue and said ends being provided with spurs, substantially as described.

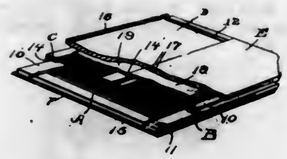
3. In a device of the class described a pair of bars pivotally connected at substantially their center, a register engaging tongue secured to said bars, the ends of said bars being off-set and spurs on the ends of said bars, substantially as described.

1,113,431. AGRICULTURAL APPARATUS. CHARLES GEORGE GORDON GROUPE, Jersey Shore, Pa. Filed Nov. 8, 1913. Serial No. 799,956. (Cl. 21—114.)



A device of the character described including a frame, supporting wheels therefor, a motor carried by the frame, operative connections between the motor and the wheel, such connections including a clutch mechanism, an element movably carried by the frame, a rock shaft carried by the frame, a bell lever co-acting with the clutch mechanism for throwing the same into and out of operative adjustment, an arm carried by the rock shaft operatively engaged with the bell lever, a flexible connection between the movable element and the rock shaft, whereby the movement of the rock shaft is under control of the movable element, a second arm carried by the rock shaft, and a retractible member pivotally engaged with the second arm and to the frame at a point below the rock shaft whereby the requisite tension is maintained on the flexible connection.

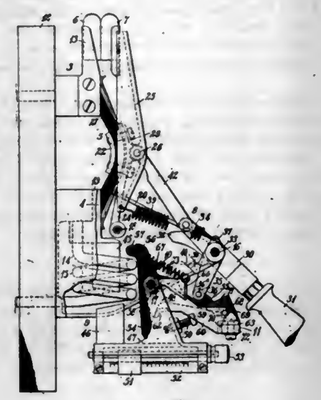
1,113,432. KNOCKDOWN CABINET. NIELS ANTON HANSEN, Seattle, Wash. Filed May 21, 1912. Serial No. 698,797. (Cl. 45—102.)



A knock down cabinet comprising duplicate sides having upright grooves in their inner faces near their rear edges and dove-tailed tongues along their upper and lower ends tapering toward said edges, a top and a bottom each having tapering dovetailed grooves to receive said tongues, the top having a groove in its inner face near its rear edge and the bottom being made thinner along its rear edge, a back removably engaging the grooves on the inner faces of the sides and top and resting on the thin portion of the bottom, and a front movably held in place.

1,113,433. CIRCUIT-INTERRUPTER. FORD W. HARRIS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 8, 1910. Serial No. 586,095. (Cl. 175—268.)

1. The combination with a plurality of circuit interrupters having individual automatic tripping devices and individual operating handles, of means associated with each handle for actuating its associated tripping device, and means for interconnecting said devices to secure concurrent opening of said interrupters and for permitting said interrupters to be closed separately.



2. The combination with a plurality of circuit interrupters, and means for effecting concurrent automatic opening thereof and for permitting independent closure of said interrupters, of means associated with the operating handle of each interrupter for manually effecting a concurrent opening of all of said interrupters.

3. The combination with a plurality of circuit interrupters, each provided with an operating mechanism and handle, a latch to restrain said mechanism, and a tripping device and magnet to release said latch, of means associated with each handle for releasing said latch, an intermediate member associated with each interrupter and adapted to be actuated by said operating mechanism to release said latch, and an interconnecting means for securing concurrent action of said intermediate members.

4. The combination with a plurality of circuit interrupters each provided with an operating mechanism and handle, means for restraining said mechanism, an automatic tripping device to release said restraining means and means associated with said handle for releasing said restraining means, of an interconnecting mechanism associated with each interrupter and adapted to be actuated by any interrupter to release said restraining means of all interrupters.

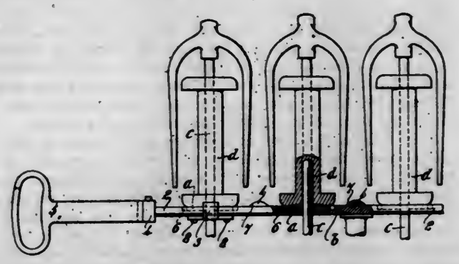
5. The combination with a plurality of circuit interrupters, each comprising coöperating stationary and movable contact members, an operating mechanism and handle for said movable members, means for restraining said operating mechanism, automatic means for releasing said restraining means and means associated with said handle for releasing said restraining means, of mechanical means dependent upon the opening of any interrupter for releasing said restraining means of the remaining interrupters, and means associated with said mechanical means for permitting independent closure of said interrupters.

[Claims 6 to 8 not printed in the Gazette.]

1,113,434. SPINNING-MACHINE. WILLIAM HARTLEY, Leicester, England, assignor of one-half to Thomas Fielding Johnson, Leicester, England. Filed Mar. 27, 1914. Serial No. 827,527. (Cl. 118—13.)

1. In a spinning machine, in combination, a bobbin lifter plate, washers carried thereby, and means adapted to be moved into engagement with the washers and serve to prevent displacement thereof during the operation of doffing the bobbins.

2. In a spinning machine, in combination, a bobbin lifter plate, washers carried thereby, and means adapted to separate the washers and bobbins prior to the doffing of the latter and to prevent displacement of said washers during the doffing operation.



3. In a spinning machine, in combination, a bobbin lifter plate, washers carried thereby by which the bobbins are supported, and a series of devices arranged to be brought into interposition between the bobbins and said washers to hold the latter upon the lifter plate when said plate and bobbins are separated for doffing the bobbins.

4. In a spinning machine, in combination, a bobbin lifter plate, washers carried thereby by which the bobbins are supported, and a series of devices (one for each washer) arranged to be brought into interposition between the bobbins and said washers to hold the latter upon the lifter plate when said plate and bobbins are separated for doffing the bobbins, and means for effecting a simultaneous movement of said devices to and from the operative position.

5. In a spinning machine having a bobbin lifter plate and washers carried thereby, the combination with the lifter plate of a series of transverse plates (one for each washer) extending over the lifter plate, a slide bar supported by the lifter plate and to which said transverse plates are attached, said bar being movable longitudinally to bring the transverse plates into and out of position over the washers, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,113,435. COMBINED BUCKLE AND STRAP-END ATTACHMENT. EMIL HARTMANN, Baltimore, Md., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Nov. 14, 1912. Serial No. 731,386. (Cl. 24—79.)

1. A combined buckle and strap-end attachment, comprising a frame having side-bars extending rearwardly and terminating in introverted flanges, end-bars and an intermediate cross-bar, with openings between the end-bars and cross-bars for the passage of the adjustable end of the strap, a sliding tongue arranged at one end of the frame in the flanged side-bars and provided with means coöperating with the frame to permit only a limited longitudinal movement therein toward and from the adjacent end-bar to grip the strap-end in adjusted position between itself and such end-bar and to release it, a strap-anchoring lever arranged adjacent to the opposite end of the frame, and bearings extending rearwardly from the front of the frame in which the lever is pivoted, whereby the strap-end may be clamped between the lever and the frame.

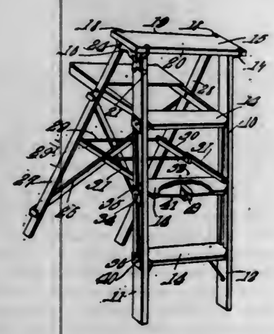
2. A combined buckle and strap-end attachment, comprising a frame having side-bars extending rearwardly and terminating in introverted flanges, end-bars and an intermediate cross-bar, with openings between the end-bars and cross-bars for the passage of the adjustable end

of the strap, a sliding tongue arranged at one end of the frame in the flanged side-bars and provided with stopping means coacting with the frame to limit its longitudinal movement therein toward and from the adjacent end-bar to grip the strap-end in adjusted position between itself and such end-bar and to release it, a strap-anchoring lever arranged adjacent to the opposite end of the frame, and bearings extending rearwardly from the frame in which the lever is pivoted and buttressed against the introverted ends of the flanged side-bars, whereby the strap-end may be clamped between the lever and the frame and the bearings supported against lateral spreading under strains.

3. A combined buckle and strap-end attachment, comprising essentially a buckle frame having rearwardly extending introverted side flanges adapted to support the tongue, end-bars, and an intermediate cross-bar between which and the end-bars are opening for the passage of the adjustable end of the strap, bearings extending rearwardly from and integral with the cross-bar at opposite sides of said frame alongside of said flanges, and a clamping lever fulcrumed in said bearings beneath the cross-bars, said frame having openings in its face and the clamping lever having projections arranged opposite said openings whereby a strap-end may be attached to the buckle by clamping it between the clamping-lever and the frame, combined with a tongue arranged in said flanges and slidable therein lengthwise of the frame between the cross-bar and one of the end-bars and adapted to engage and release the free end of the strap or belt.

4. A combined buckle and strap-end attachment, comprising essentially a buckle frame having rearwardly extending introverted side flanges adapted to support the tongue, end-bars, and an intermediate cross-bar between which and the end-bars are openings for the passage of the adjustable end of the strap, bearings extending rearwardly from opposite sides of said frame alongside of said flanges, and a clamping lever fulcrumed in said bearings beneath the cross-bar, said cross-bar having a series of openings extending crosswise of the frame, and said clamping lever having its strap-engaging part scalloped complementary to the openings in the cross-bar in alinement with said openings so as to force the strap into gripping relation with the cross-bar, and a tongue mounted in the side-flanges and slidable therein between the cross-bar and the adjacent end-bar and means to limit its movement between such cross-bar and end-bar, and having a transverse opening alined with the adjacent opening in the frame for the passage of the strap-end to be buckled, all combined and arranged to operate substantially as described.

1,113,436. LADDER. AARON HARTZLER, Goshen, Ind. Filed Mar. 2, 1912, Serial No. 681,119. Renewed Mar. 10, 1914. Serial No. 823,796. (Cl. 228—14.)

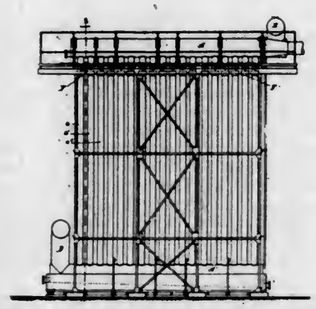


1. A ladder including longitudinally slotted stiles, a step interposed therebetween, a coupling member bearing upwardly against the step, washers bearing against the outer sides of the stiles and bridging the slots therein, nuts within and held against rotation by the coupling member, and truss rods inserted through the washers and into the coupling and nuts, said rods having heads at their outer ends.

2. A ladder including stiles, a step interposed therebetween, a coupling member bearing upwardly upon the bottom of the step, nuts housed within the coupling member, and rods inserted through the stiles and into the coupling member, said rods having heads at their outer ends and having their inner ends threaded to engage the nuts.

3. In a ladder, means connecting the stiles of said ladder said means comprising rods which extend through said stiles, a coupling receiving said rods, the terminals of said coupling spacing said rods from the under face of the step, nuts arranged on the inner end portions of said rods, said coupling holding the nuts against turning, and extensions formed integral with the coupling and contacting with the under face of the step of the ladder.

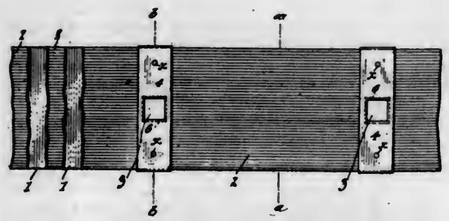
1,113,437. METHOD OF SEPARATING MOISTURE FROM BURNER-GASES. JOHN B. F. HERRESHOFF, New York, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Feb. 17, 1911. Serial No. 609,175. (Cl. 23—1.)



1. The process of separating moisture in a liquid state from pretreated burner gases, which consists in cooling said burner gases from 200° Fahr. to 100° Fahr. and removing the so-condensed liquid.

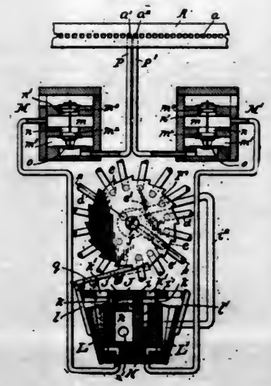
2. The process of separating moisture in a liquid state from pretreated burner gases, which consists in rapidly cooling said burner gases from 200° Fahr. to 100° Fahr. and removing the so-condensed liquid.

1,113,438. DRIVING-BELT. HENRY HESS, Wawa, Pa. Filed Oct. 22, 1909. Serial No. 524,014. (Cl. 74—42.)



The improved driving belt consisting of superposed layers of flexible material formed at intervals with tooth-engaging holes, a series of relatively stiff transverse members extending substantially the entire width of the belt and having holes therein and provided with thimbles surrounding said holes and extending into the holes in the layers of flexible material, and fastening devices extending through said transverse members and through the layers of the belt, said fastening devices serving to connect the transverse members to said layers and serving to connect said layers with each other; whereby the strains applied to the thimbles in driving the belt, will be distributed throughout the transverse extent of the same and to the several layers composing the belt.

1,113,439. STOP-OPERATING DEVICE FOR MUSICAL INSTRUMENTS. ROBERT HOPE-JONES, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Dec. 26, 1911. Serial No. 667,800. (Cl. 84—198.)



1. An apparatus for operating a plurality of stops comprising motor pneumatics for controlling the stops, a wind chamber, means for alternately exhausting and flushing said chamber, switching means for connecting one or more of said motor pneumatics with said wind chamber, and means for controlling said switching means.

2. An apparatus for operating a plurality of stops, comprising motor pneumatics for controlling the stops, a wind chamber, valve mechanism controlling the passage of the air to and from said chamber, switch mechanism for connecting one or more of said motor pneumatics with said wind chamber, a tracker having a pair of "on" and "off" ducts, and pneumatic actions coöperating with said tracker ducts and controlling said valve and switching mechanisms.

3. An apparatus for operating a plurality of stops comprising motor pneumatics for controlling the stops, a wind chamber, means for alternating exhausting and flushing said chamber, a rotary switch-valve for connecting one or more of said motor pneumatics with said wind chamber, and means for actuating said valve.

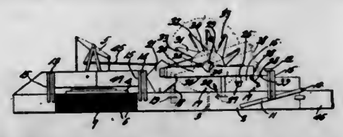
4. An apparatus for operating a plurality of stops comprising motor pneumatics for controlling the stops, a wind chamber, means for alternately exhausting and flushing said chamber, a rotary switch-valve for connecting one or more of said motor pneumatics with said wind chamber, and pneumatic means for actuating said valve.

5. An apparatus for operating a plurality of stops, comprising a case containing a wind chamber and a plurality of ports, a plurality of motor pneumatics for controlling the stops respectively connected with said ports, and a rotary valve having a port arranged to connect one or more of the first-named ports with said wind chamber.

[Claims 6 to 11 not printed in the Gazette.]

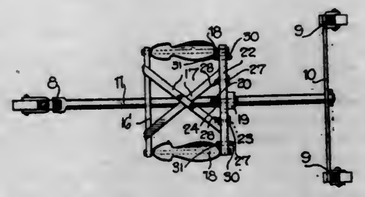
1,113,440. WATER-WHEEL. MARION HUGHES, Shawnee, Okla. Filed July 3, 1913. Serial No. 777,171. (Cl. 170—144.

1. The combination with opposed members forming a sluice and supplemental walls upstanding therefrom and detachably connected thereto, of a frame mounted on said walls and bridging the sluice, said frame being mounted for angular adjustment about a transverse axis, a water wheel carried by the frame, and means for supporting the frame in raised position, said frame being detachably mounted on the walls, and means for securing the frame in lowered position.



2. A structure of the class described including separate floats, separate means detachably connected to the floats for holding them spaced apart, separate means interposed between and detachable from said spacing means for bracing the structure against lateral distortion, a frame bridging the space between the floats and detachably mounted thereon, said frame being adjustable angularly about a transverse axis, a water wheel revoluble within the frame, means for supporting the frame in raised position, means for securing the frame in lowered position.

1,113,441. OPERATING-PEDALS FOR GRINDSTONES OR THE LIKE. SAMUEL HUNZIKER, Sutton, Nebr. Filed Aug. 13, 1913. Serial No. 784,654. (Cl. 74—81.)



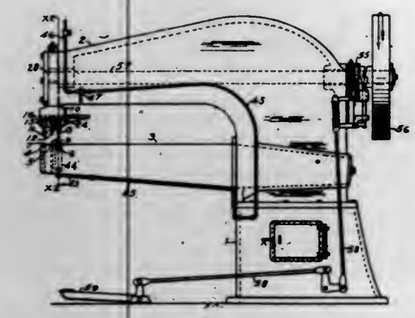
A device of the character described comprising a frame including a horizontally disposed longitudinally extending rod, a treadle frame mounted for oscillation upon said rod, said treadle frame consisting of a pair of spaced parallel bars mounted intermediate of their ends on said rod, brace members connected at their ends to said parallel bars, an arm projecting upwardly from said rod at one side of said treadle frame, a laterally projecting pin mounted in the upper end of said arm, a link loosely mounted intermediate of its ends upon said pin, said link having a plurality of openings formed therein on opposite sides of the pin, the adjacent bar of the treadle frame being also formed with a plurality of openings on opposite sides of said longitudinal rod, link bars pivotally connected at their opposite ends in one of the openings in said link and said bar on opposite sides of said longitudinal rod, a crank shaft mounted in the frame above the link, means for operatively connecting the opposite ends of said link with the shaft, and a rotatable member mounted on said shaft.

1,113,442. PUNCHING AND RIVETING MACHINE. LESLIE A. IRVIN, Los Angeles, Cal., assignor to Baker Iron Works, Los Angeles, Cal., a Corporation of California. Filed June 17, 1912. Serial No. 704,252. (Cl. 78—51.)

1. The combination with a stake having a vertical way therein, of an anvil carried by the stake and extending across the upper end of the way; a work-supporting element fitted in the way and provided with an axial slot to accommodate the anvil and to allow parts of the element

to project above the anvil; and pneumatic means to reciprocate the element in the way.

2. In a machine of the class described the combination with the reciprocating head, of a series of tools carried by said head, means to normally retract said tools, a slide provided with a tooth to move said tools separately in opposition to the retracting means, a lever to operate said slide, a latch on said lever and an arc rack provided with notches for the latch to hold the tooth in various positions for holding the tools respectively in operative position.



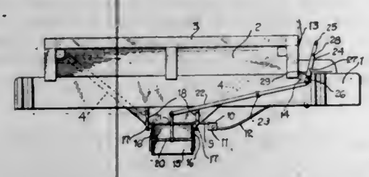
3. A machine of the character described comprising a holder having a channel, a plunger reciprocatably mounted in the holder and provided with a square head fitting in the channel, means to move the plunger to bring the head against the bottom of the channel, means to operate the holder and a die in line with the tool.

4. A machine of the character described comprising a holder having a channel, a plunger reciprocatably monnted in the holder and provided with a tool and provided with a square head fitting in the channel, said head having a beveled face, a wedge shaped tooth having a beveled face corresponding to and adapted to engage the beveled face of the head to move the plunger, means to operate the tooth, means to operate the holder, and a die in line with the tool.

5. In combination, a head, a tool mounted in the head, a stake having a vertical way forming a cylinder in axial alinement with said tool, a work-supporting plunger in said way formed with a slot at one end and formed with a single piston at the other end, an anvil projecting through said slot and having its ends seated in the stake, and means to supply fluid pressure medium to said vertical way.

[Claim 6 not printed in the Gazette.]

1,113,443. ROAD-REPAIRING MACHINE. JEFFERSON ISOM, Jr., near Albany, Oreg. Filed Apr. 18, 1914. Serial No. 832,956. (Cl. 21—86.)

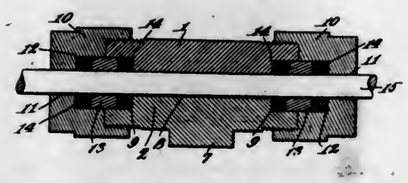


In a road repairing machine, a body having a hopper-shaped compartment, discharge openings in the bottom of the compartment, an inverted V-shaped distributer arranged longitudinally of the body and terminating at its sides with the inner walls of the openings, slides located beneath the openings, means for shifting the slides to open or close the openings, pivoted chutes disposed transversely of the body, and means for swinging the chutes beneath or away from the slides.

1,113,444. TAP-HOLDING CHUCK FOR NUT-TAPPING MACHINES. JOHN ALEXANDER JOHNSTON, Montreal, Quebec, Canada. Filed Dec. 20, 1910. Serial No. 598,405. (Cl. 10—129.)

A tap holding chuck for nut tapping machines comprising in combination a main chuck section, a tap holder removably secured thereto and having within it a crooked nut passage open at both ends and at one side, and a chuck cap closing the open side of said passage.

1,113,445. DUST AND WATER PROOF BOXING. JACOB J. KAUBLE, Reelsville, Ind. Filed May 27, 1913. Serial No. 770,246. (Cl. 64—10.)

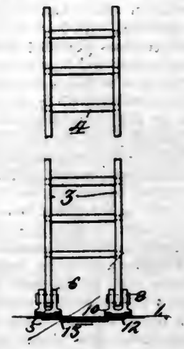


1. A boxing embodying a bearing comprising longitudinal sections, the edges of the sections having interengaging tongues and grooves spaced from the inner and outer surfaces of the bearing, the ends of the bearing having external threads, means connecting the sections for holding the threads thereof in alinement, apertured caps threaded over the ends of the bearing, packing means disposed between the ends of the bearing and the caps, and means carried by one section of the bearing for supporting the boxing.

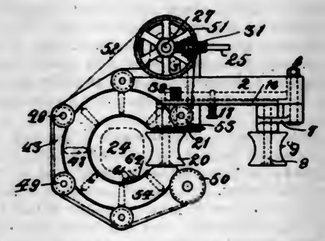
2. A boxing embodying a bearing having its terminals counterbored, socket nuts threaded over the ends of the bearing and having counterbores complementing and of the same diameter as the aforesaid counterbores, the counterbores of the nuts forming shoulder seatable against the ends of the bearing, the nuts having apertures alined with and of the same diameter as the bore of the bearing, glands of uniform diameter fitting in the complementing counterbores and extending partially into each, and packing disposed between the glands and the bottoms of the counterbores of both the bearing and nuts, the openings of the glads being in alinement with and of the same diameter as the bore of the bearing.

1,113,446. SHOE FOR LADDERS. CHARLES D. KLINE and EDWARD NALL, Akron, Ohio, assignors to the Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed May 23, 1914. Serial No. 840,503. (Cl. 228—5.)

A ladder shoe comprising a body portion of rigid material and provided with means for pivotally attaching it to a ladder stile, said body portion provided with a central depending portion and further provided with a pair of lateral flanges positioned above the plane of the central portion of the shoe, a covering of vulcanized cellular rubber extending transversely from side to side of the under face of the shoe and covering the central depressed portions to provide a gripping surface and extending laterally over the under faces of said lateral flanges, and hold-fast devices engaging said covering and said flanges for securing said covering in position.



1,113,447. WRAPPING-MACHINE. CURT KUENTZEL, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Aug. 6, 1913. Serial No. 783,431. (Cl. 242—6.)

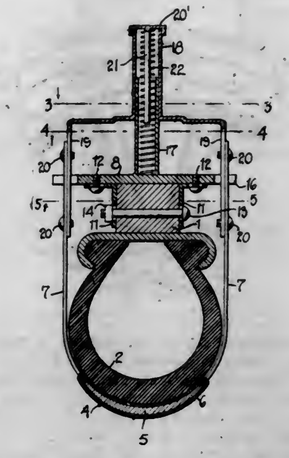


1. A winding machine comprising in combination a supporting frame, a pair of pivots thereon, one of said pivots embodying a rotatable shaft, an arm mounted on each of said pivots, rollers carried on the free ends of said arms, a bar connecting the free ends of said arms, the pivot for one of said rollers consisting of a rotatable shaft, means connecting the first pivotal shaft with one of said rollers for transmitting motion to the latter, said rollers adapted to support and rotate an annular object in a vertical plane, and a revoluble shuttle adapted to place a continuous strip of material helically about said object during its revolution.

2. In a machine of the character described the combination with a supporting frame, a pair of pivots thereon one of which embodies a revoluble shaft, means to revolve said shaft, an arm secured to each pivot, rollers carried by the free ends of said arms, means to connect the free ends of said arms, means for transmitting motion from said shaft to one of said rollers, said rollers arranged to support a revoluble and annular object in a vertical plane, said arms when oscillated adapted to change the vertical position of said object, means to lock said arms in a pre-determined position, and a shuttle carrying a continuous strip of material adapted to wind said strip helically on said annular object during its revolution.

3. The combination in a device of the character described of a supporting frame, a pair of pivots thereon one of which embodies a rotatable shaft, arms mounted on said pivots and arranged to swing in a vertical plane, rollers revolubly mounted on the free ends of said arms, means to connect the free ends of said arms whereby they swing in unison, said rollers adapted to support and permit an annular object mounted thereon to revolve in a vertical plane, means to transmit motion from said shaft to one of said rollers for revolving said object, a circularly-formed shuttle having a section thereof permanenetly removed and adapted to revolve about said object and wind a continuous strip of material on said object helically during the revolution of the latter.

1,113,448. TIRE-PROTECTOR. ALBERT S. LA HATTE, Galveston, Tex. Filed May 8, 1914. Serial No. 837,277. (Cl. 152—17.)



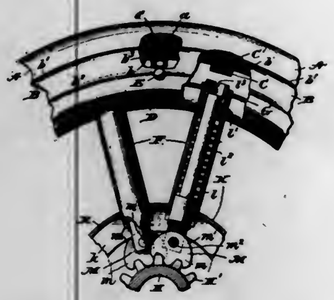
1. The combination with a wheel rim having a pneumatic tire secured thereto, of a protecting member applied to the periphery of the tire, U-shaped brackets carried by said protecting member and having their ends projecting upon opposite sides of the tire, a plate secured to the inner side of the felly of the wheel, bracing plates carried by the felly and having portions thereof secured to the plate, the outer ends of said plate being bifurcated to receive the projecting ends of the brackets, a tubular member carried by thee first plate, a second tubular member movably mounted upon the first member, a coil spring arranged within said tubular brackets, a removable cover for the second tubular member having an inwardly projecting plunger arranged within the coil spring, and angularly disposed arms connected with the second tubular member, and having their ends connected to the projecting ends of the U-shaped brackets, and movable in the bifurcated ends of the first plate, as and for the purpose set forth.

2. The combination with a wheel rim having a pneumatic tire secured thereto; of a protecting member applied to the periphery of the tire, U-shaped brackets carried by said protecting member and having their ends projecting upon opposite sides of the tire, a plate arranged upon the inner side of the wheel rim, angular plates having their horizontal portions adjustably secured to said plate and their vertical portions adjustably secured to opposite sides of the wheel rim, a tubular member carried by the first plate, a second tubular member removably mounted upon the first member, a coil spring arranged within the same, a connecting plate carried by the second tube and having annularly disposed arms, and means for removably securing the same to the ends of the U-shaped brackets, as and for the purpose set forth.

1,113,449. MOTOR-CAR WHEEL. LUTHER LEO LANE, Hillsboro, Tex., assignor to Texas Auto Specialty Manufacturing Co., a Corporation of Texas. Filed Feb. 21, 1907. Serial No. 358,601. (Cl. 152—28.)

1. In a vehicle wheel, a rim member, a hub, suitable connections between the rim member and hub for holding them in substantially the same plane, a plurality of radi-

ally movable devices, means normally tending to force all of said devices toward the center, a shifting member for each radially movable device and adapted upon movement from normal position to shift the corresponding movable device outwardly, and an operating member carried by the hub and having portions engaging all of said shifting members and upon a relative movement of the rim member and hub causing a movement of a majority of the shifting members, thereby causing a movement of a majority of the radially movable devices.



2. In a vehicle wheel, a rim member, a hub, suitable connections between the rim member and hub for holding them in substantially the same plane, a plurality of radially movable devices, means normally tending to force all of said devices toward the center, a shifting member for each radially movable device and adapted upon movement from normal position to shift the corresponding movable device outwardly, and an operating member carried by the hub and having projections engaging all of said shifting members and upon a relative movement of the rim member and hub causing a movement of a majority of the shifting members, thereby causing a movement of a majority of the radially movable devices.

3. In a vehicle wheel, a rim, a plurality of hollow spokes secured therein, a plunger mounted in the inner end of each spoke, means within each spoke for shifting each plunger yieldingly toward the center, a hub provided with teeth, and a plunger shifting member pivoted in the end of the plunger and engaging the teeth of the hub whereby upon the relative movement of the hub with respect to the rim the majority of the plungers are shifted radially.

4. In a vehicle wheel, a hub having a toothed portion, a rim, and means intermediate the hub and rim including a plurality of longitudinally yieldable members provided at their inner ends with toothed portions engaging the toothed portion of the hub.

5. In a vehicle wheel, a hub having a toothed portion extending therearound, a rim, a plurality of longitudinally movable members intermediate the hub and rim and having pivotally secured to their inner ends toothed members engaging the toothed portion of the hub.

[Claims 6 to 13 not printed in the Gazette.]

1,113,450. SUBMARINE TENDER. CESARE LAURENTI, Spezia, Italy, assignor to Società Fiat-San Giorgio, Spezia, Italy. Filed Jan. 3, 1913. Serial No. 739,942. (Cl. 114—0.5.)

1. A tender or lighter comprising an inner shell adapted to be closed watertight by a floating door at one end thereof and carried by an outer shell which latter for a portion of its length is in the form of a single hull and for another portion of its length projects beyond the aforesaid open end of the inner shell in the form of twin hulls connected together by a bridge or like frames, said floating door being lenticular in shape and adapted to be floated into position and provided with lugs or the like, said shell being provided with recesses provided therefor at the open end thereof through which said lugs on the door are adapted to pass when the door is in its longitudinal and slanting position, which recesses will be covered by said door when the door is in the upright transverse position so that in the last named position the door will close the inner shell watertight either from without or from within as required and for the purpose set forth.

2. A tender or lighter comprising an inner shell adapted to be closed watertight by a floating door at one end thereof and carried by an outer shell which latter for a portion of its length is in the form of a single hull and for another portion of its length projects beyond the aforesaid open end of the inner shell in the form of twin hulls connected together by a bridge or like frame, the entire bottom space between the extensions in the rear of the closed compartment being open, said bridge or like frame and the twin hulls being provided with guide rollers or pulleys for chains or the like so as to permit such chains or the like to be attached to a submarine substantially as and for the purpose set forth.

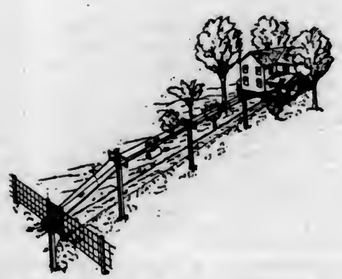
3. A vessel having a closed cylindrical compartment in its hull adapted to receive a vessel therein, an annular portal to said compartment, and means for closing said portal, said means comprising a floating lenticular shaped door.

4. A vessel having a closed cylindrical compartment in its hull adapted to receive a vessel therein, and provided with an annular portal or passageway, and a floating lenticular shaped door for closing said portal, said door being adapted to close inwardly or outwardly against said portal and be pressed thereagainst by the pressure upon said door.

5. A vessel having a compartment in its hull adapted to receive a vessel therein and provided with a circular portal or passage-way and a floating lenticular shaped door for closing said portal, said portal having recesses therein permitting said door to pass from the exterior to the interior of the passageway, and said door having projections thereon adapted to close said recesses.

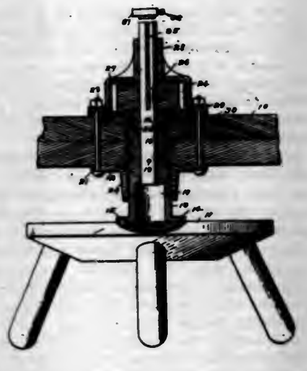
[Claims 6 and 7 not printed in the Gazette.]

1,113,451. RURAL-MAIL-DELIVERY APPARATUS. CLEMENT C. LEVASSEUR and DANIEL M. MORRIS, Mastelle, Iowa. Filed Mar. 26, 1914. Serial No. 827,325. (Cl. 104—146.)



Combined with supporting posts and trolley and draft-wires, substantially as described, a bracket having an inwardly disposed, upstanding lug, and a trolley-wire-supporting stirrup pivotally attached thereto and securely attached to the trolley wire.

1,113,452. DOLLY-SHAFT BEARING FOR WASHING-MACHINES. GEORGE W. LEWIS, Grinnell, Iowa. Filed Sept. 23, 1912. Serial No. 721,969. (Cl. 64—56.)



1. In a device of the class described, a support having an opening therein, a bearing at one end of said opening, a shaft slidably and rotatably mounted therein, a gear on said shaft, a casing for said gear having a second bearing for said shaft, a downwardly extending flange around the lower end of the opening in said support, a supporting bushing secured to the lower end of said shaft, provided with a cup at its upper end and capable of longitudinal movement in said opening, and means for limiting the movement of said shaft so that the cup of said bushing and surface of said shaft will not be exposed to material being worked upon beneath said support.

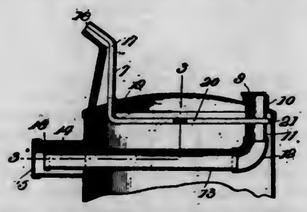
2. In a device of the class described, a support provided with an opening, a bearing at one end of said opening, a shaft slidably and rotatably mounted in said bearing, an annular flange around the other end of said opening, a supporting bushing on the other end of said shaft, capable of longitudinal movement in said bearing, and means for limiting the longitudinal movement of said shaft and bushing so that the upper end of said bushing will not extend below the lower edge of said annular flange, for the purposes stated.

3. In a device of the class described, a support provided with an opening, a bearing at the upper end of said opening, an annular flange at the lower end of said opening to lengthen it, a shaft slidably and rotatably mounted in said bearing, said shaft being provided with an enlarged portion at its lower end, said enlarged portion being slightly smaller in diameter than said opening and capable of longitudinal movement therein, and means for limiting the downward movement of said shaft so that the upper end of said enlarged portion will not extend below the lower edge of said sleeve to prevent the bearing portion of the shaft coming in contact with material worked upon beneath said support.

1,113,453. OIL-CAN. WILLIAM T. LOVE, Lomax, Ill., assignor to E. M. Love, Lomax, Ill. Filed Nov. 15, 1913. Serial No. 801,290. (Cl. 221—17.)

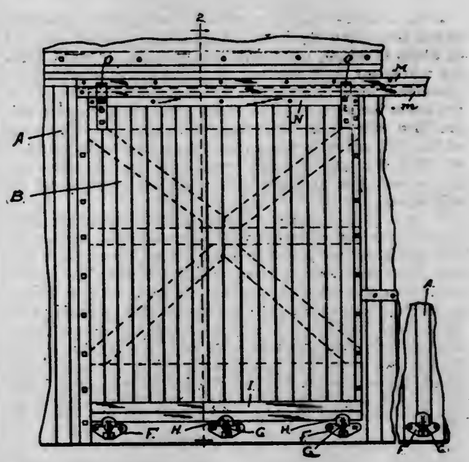
1. The combination with a receptacle having a filling aperture and a pouring spout, of an air tube in said pouring spout extending into said receptacle, a pipe connecting with said filling aperture and extending into said receptacle and opening into a chamber formed in the wall thereof on the pouring side of the can, whereby when the receptacle is tilted to pour therefrom the liquid will fill said chamber and close said filling pipe, and the level of liquid in the vessel being filled will close the pouring spout and prevent any further flow of liquid therefrom.

2. The combination with a receptacle having a filling aperture and a pouring spout, said receptacle being provided with a chamber formed in the wall thereof on the pouring side of the can, of an air tube in said pouring spout extending into the receptacle, a pipe connected with said filling aperture and extending downwardly and forwardly into said receptacle and opening into the chamber



formed in the wall thereof, whereby when the receptacle is tilted to pour therefrom the liquid will fill said chamber to close said filling pipe to exclude all air entering therefrom.

1,113,454. CAR-DOOR. FRED MATHEWS, Chicago, Ill., assignor to Clinton C. Murphy, Chicago, Ill. Filed Mar. 24, 1913. Serial No. 756,425. (Cl. 20—22.)

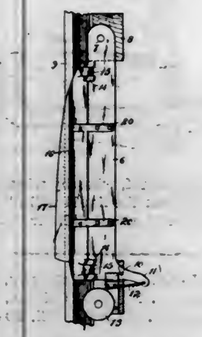


The combination with a railway car having a door opening and a door movable across said opening, of separate brackets arranged at spaced intervals on the car below said door opening provided with rollers upon which the door is movably sustained, and a retaining and weather-proofing strip secured to the car above the door opening which holds the upper edge of the door in proper position and guides it when the door is moved without sustaining any of the weight of the door, the upper edge of the door and said retaining strip being provided with elements which stand one above the other and normally out of contact with each other so as to provide means for slidably mounting the door which comes into operation in the event the normal sustaining devices below the lower edge of the door become ineffective for sustaining the same.

1,113,455. AUTOMATIC DANGER-SIGNAL FOR RAILWAYS. LEWIS C. MCADAMS and GEORGE S. ROBINSON, Los Angeles, Cal.; said Robinson assignor to David Carpenter, Los Angeles, Cal. Filed Aug. 14, 1911, Serial No. 644,050. Renewed Mar. 25, 1914. Serial No. 827,052. (Cl. 246—48.)

1. In a danger signal, a railway track having alongside one rail thereof a shoe, comprising two horizontal members, the lower member thereof hinged at one end, so

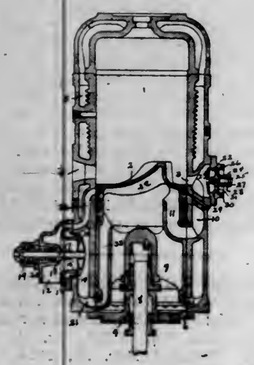
that the other end is capable of moving vertically, the upper member having an inclined tread normally above the tread of the rail, and hinged to the lower member on a horizontal line, the elevated end of said upper member having a cut-away angle, whereby its upper end may be swung outwardly by the car wheel.



2. In a danger signal, a railway track having alongside one of the rails a shoe, comprising a base member, one end of which is hinged so that its free end has a limited vertical movement, said free end having an arm to which the operative cable is attached, an upper member hinged to the lower member, so as to swing away from the rail, and provided with an inclined tread normally above the tread of the rail, and with means for coöperating with the wheel to swing the upper member away from the rail, and a signal or semaphore connected up with and operated by the said shoe.

3. In a danger signal, a railway track having alongside one rail thereof, a horizontally disposed shoe, comprising two members, the lower member hinged at one end, and the other free end secured behind a bracket so that it has a limited vertical movement, an upper member hinged to said lower member on a horizontal line, provided with an inclined top or tread, an angled or cut-away portion at one end of said upper member to provide a contact surface for the side of the car wheel, and a pair of springs secured to the lower member and bearing against the upper member to normally keep the said member in a vertical position.

1,113,456. GAS-ENGINE. JAMES MCINTOSH, Grove City, Pa. Filed July 27, 1910. Serial No. 574,098. (Cl. 123—74.)



1. In a gas engine, the combination of a cylinder; an inlet passage through which mixture is delivered to the cylinder; a pump connected with said passage; means closing said passage to the pump during part of the suction stroke of the pump; a pressure actuated valve for admitting air to the passage in position to precede a charge of mixture; and an intake independent of said valve for the pump.

2. In a gas engine, the combination of a cylinder; an inlet passage through which mixture is delivered to the cylinder; a pump connected with said passage; means closing said passage to the pump during part of the suction stroke of the pump; a valve for admitting air to the passage in position to precede a charge of mixture; means for varying the quantity of air admitted; and an independent intake for the pump.

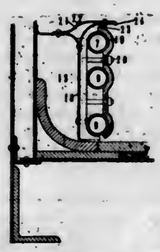
3. In a gas engine, the combination of a cylinder; a piston in the cylinder forming with one end of the cylinder a pump; an inlet passage forming a transfer port from the pump end of the cylinder to the combustion end of the cylinder through which mixture is delivered to the combustion end of the cylinder, said piston and transfer port being arranged to close the transfer port during part of the suction stroke of the piston; a valve for admitting air to the passage near the combustion end of the cylinder; and an independent intake for the pump.

4. In a gas engine, the combination of a cylinder; a piston in the cylinder; a transfer port; an air valve in the transfer port; a port in the end of the piston adapted to be brought into connection with the transfer port to receive air from the transfer port; and a separate intake for delivering mixture to the pump cylinder.

5. In a gas engine, the combination of a cylinder; a piston in the cylinder; an inlet passage forming a transfer port from the pump end of the cylinder to the combustion end of the cylinder; an air inlet valve on the said inlet passage; a port in the piston receiving air from said inlet passage, the said port being open to the piston and placed to be brought into register with the transfer port at the end of the power stroke of the piston whereby mixture is forced from the piston to the transfer port; an independent intake for delivering mixture to the pump end of the cylinder; and an inlet for air open at the end of the suction stroke of the piston for relieving the vacuum in the pump end of the cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,113,457. CAR-HEATING APPARATUS. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., assignor to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed Aug. 7, 1907. Serial No. 387,456. (Cl. 237—40.)



1. In a car heating apparatus, in combination, a flat air conduit extending from the floor of the car upward adjacent the inner wall of the car, and formed by a thin sheet metal wall rising from the floor and extending to the wall of the car; an air intake pipe communicating with said conduit; heating pipes extending substantially parallel with and in close proximity to the exposed upright face of said conduit; openings formed in said upright wall of the conduit in proximity to the heating pipes; and ventilators communicating with the interior of the car at the roof or ceiling thereof.

2. In a car heating apparatus, in combination, a sheet metal air conduit leading along the floor of the car adjacent one of the side walls thereof, and provided with outlets in its exposed wall, heating pipes arranged parallel with and in proximity to the exposed upright wall of the conduit, and serving at once to heat the air within and escaping from said conduit and to protect the conduit against injury, and foot rests mounted upon said conduit and overhanging the heating pipes, whereby they are adapted to direct the heated air toward the middle of the car.

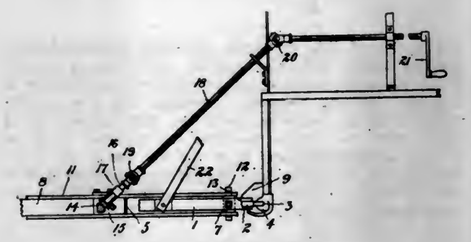
3. In car heating apparatus, in combination, an air downtake leading from the roof of the car downward to the floor thereof; heating means within the downtake and serving to temper the air passing through the same; an air conduit leading from said downtake along the floor of the car adjacent to one of the side walls thereof, said conduit being provided with openings; and heating pipes extending parallel with and in proximity to said conduit, and in position to impart heat to the air within the conduit and escaping through the openings in the wall thereof.

4. In car heating apparatus, in combination, a sheet metal air conduit extending along the floor of the car adjacent one of the walls thereof, and provided with outlets in its upright wall; heating pipes mounted closely adjacent the side of said conduit and extending along the same; and a combined foot rest and deflector mounted upon said conduit adjacent each seat of the car, said foot rest being formed to overhang said heating pipes and to serve as a protection against contact therewith, and also as a means of directing the warmed air inward from the side walls of the car.

5. In car heating apparatus, in combination, a sheet metal member extending along the floor of the car adjacent a side wall thereof and having its upper portion extending substantially to the side wall and its lower portion substantially to the floor whereby there is provided an air conduit, said conduit being provided with an air inlet, a sheet metal foot-rest extending upwardly and outwardly from said conduit, and heating means extending along said conduit beneath said foot-rest, said conduit being provided with openings adapted to discharge air toward said heating means.

[Claims 6 to 8 not printed in the Gazette.]

1,113,458. ADJUSTABLE TONGUE. CHARLES MCLEOD, Toronto, Ontario, Canada, assignor to Massey-Harris Company, Limited, Toronto, Canada. Filed Feb. 28, 1913. Serial No. 751,323. (Cl. 21—114.)



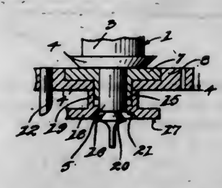
1. In mechanism of the class described the combination with a supporting base comprising two members, each adapted at its rear end for connection with the apparatus to be drawn and secured together at their forward ends to form a triangle, and a transverse member forming a tongue support connected at one end with the two former members at the apex of the triangle, and a rearwardly extending brace member connecting the other end of the tongue support with the member on which the tongue is pivoted adjacent said pivot, of a tongue pivoted on one of said first mentioned members adjacent to its rear end; a curved rack rigidly supported on the aforesaid members, and means carried by the tongue and engaging the rack whereby the angle of the tongue may be adjusted.

2. In mechanism of the class described a supporting base formed of three external members arranged in rhomboidal form in plan and a diagonal member connecting opposite angles of the rhomboid, a pivotal connection for a tongue being formed adjacent one obtuse angle, and a connection for tongue-adjusting mechanism adjacent the other obtuse angle, the side of the rhomboid opposite the pivotal connection for the tongue being provided with a curved rack.

3. In mechanism of the class described the combination with a supporting base formed of three external members arranged in rhomboidal form in plan and a diagonal member connecting opposite angles of the rhomboid, a vertical pivotal connection for a tongue being formed near the rear of the base and also two horizontal pivotal connections whereby the base may be connected with the apparatus to be drawn, the side of the rhomboid opposite the pivotal connection for the tongue being formed with a curved rack.

4. In mechanism of the class described the combination of a tongue supporting base, a curved rack rigidly supported on said base and facing rearwardly and upwardly; a tongue pivoted on said base behind the rack, and a spiral hoop gear carried by the tongue and engaging the rack whereby the angle of the tongue may be adjusted.

1,113,459. BALANCE-SHAFT FOR WATCH-MOVEMENTS. JOHN A. MEROZ, Waltham, Mass. Filed Dec. 23, 1913. Serial No. 808,318. (Cl. 58—140.)



1. In combination with the balance shaft of a watch, a disk frictionally secured thereto, a collar formed on said disk, said collar being externally screw threaded, and a second disk of larger diameter than the first mentioned disk and of substantially twice the thickness, said second mentioned disk having an internally screw threaded aperture adapted to fit the externally screw threaded collar and be held thereto, and a roller jewel mounted in the second mentioned disk.

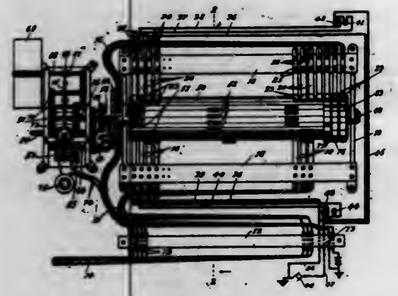
2. In combination with the balance shaft of a watch, a reduced portion formed thereon, a disk secured to the reduced portion, an externally screw threaded collar formed integral with the disk, a second disk of greater diameter than the first mentioned disk, said second disk having an internally screw threaded aperture centrally located with relation thereto, said second disk also having a centrally located concentric recess adapted to receive the first mentioned disk, a jewel pin carried by the second mentioned disk, and a safety roller threaded on the collar on the first mentioned disk and adapted to coöperate with the second mentioned disk in the operation of the watch movement.

1,113,460. ALARM SIGNALING APPARATUS. LOUIS A. MEYERS, Sauk Center, Minn., and OLIVER H. TRACY, Plaza, N. D. Filed Feb. 21, 1914. Serial No. 820,328. (Cl. 179—5.)

1. An automatic telephone-signaling machine comprising a plurality of sets of pairs of contact springs, one set being connected in line circuits and the other set in ringing circuits of the telephone system, a plurality of pairs of movable contacts connected in the line circuits of the telephone system and normally held so as to close said line circuits, a cylindrical member rotatably mounted in proximity with said movable contacts, means on the

cylindrical member to engage said contacts and move them to break the line circuits and close the ringing circuits, and means to rotate the cylindrical member.

2. An automatic telephone-signaling machine comprising a plurality of sets of pairs of contact springs, one set being connected in line circuits and the other set in ringing circuits of the telephone system, a plurality of pairs of movable contacts connected in the line circuits of the telephone system and normally held so as to close said line circuits, said movable contacts having projecting portions extending in a common plane, a cylindrical member rotatably mounted in proximity with said extended portions, cams on the cylindrical member engageable with the extended portions when the cylindrical member is rotated to move said contacts and break the line circuits and close the ringing circuits, and means to rotate the cylindrical member.



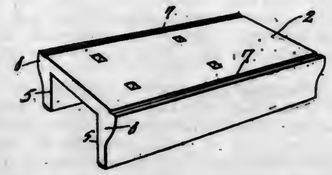
3. An automatic telephone-signaling machine comprising a plurality of sets of pairs of contact springs, one set being connected in line circuits and the other set in ringing circuits of the telephone system, a plurality of pairs of movable contacts connected in the line circuits of the telephone system and normally held so as to close said line circuits, said movable contacts having projecting portions extending in a common plane, a cylindrical member rotatably mounted in proximity with said extended portions, cams on the cylindrical member engageable with the extended portions when the cylindrical member is rotated to move said contacts and break the line circuits and close the ringing circuits, each of said cams being of such width as to simultaneously engage a fixed number greater than one of said extended portions, and means to rotate the cylindrical member.

4. An automatic telephone-signaling machine comprising a plurality of sets of pairs of contact springs, one set being connected in line circuits and the other set in ringing circuits of the telephone system, a plurality of pairs of movable contacts connected in the line circuits of the telephone system and normally held so as to close said line circuits, a device mounted for rotation in proximity to parts of said movable contacts, means on and movable with said device to engage said contacts and move them to break the line circuits and close the ringing circuits, and means to rotate the device.

5. An automatic telephone-signaling machine comprising a plurality of sets of pairs of contact springs, one set being connected in line circuits and the other set in ringing circuits of the telephone system, a plurality of pairs of movable contacts connected in the line circuits of the telephone system and normally held so as to close said line circuits, a device mounted for rotation in proximity to parts of said movable contacts, means on and movable with said device to engage said contacts and move them to break the line circuits and close the ringing circuits, means to rotate the device continuously, controllable means to render said rotating means operative, and means automatically terminating the action of said rotating means after a predetermined number of rotations of the device.

[Claims 6 to 10 not printed in the Gazette.]

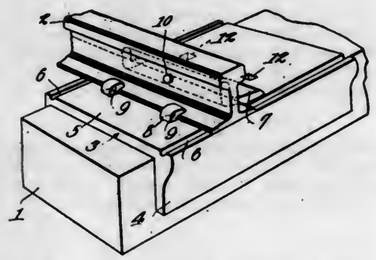
1,113,461. TIE-PLATE. WILLIAM E. MILLER, Palisade, Nev. Filed Aug. 4, 1913. Serial No. 782,987. (Cl. 238—2.)



1. A tie plate, having two paralleled ribs depending at right angles from the edges of the plate for embracing the rail carrying portion of the tie, the upper surface of the plate being provided with moisture draining recesses, said recesses being alined with the ribs to direct the collected moisture to each side of and away from the tie.

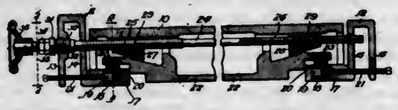
2. A tie plate, having two parallel depending ribs, the inner faces of which are at right angles to the under face of the plate while the outer face at the junction of the plate is projected longitudinally beyond the outer face of the ribs to form a reinforcement thereat, said ribs and the under side of the plate being disposed to embrace the tie, the upper surface of the plate at a point adjacent the approximate center line of the ribs being provided with two longitudinally disposed moisture draining recesses, said recesses being open at their ends.

1,113,462. COMBINED TIE-PLATE AND RAIL-BRACE. WILLIAM E. MILLER, Palisade, Nev. Filed Aug. 23, 1913. Serial No. 786,288. (Cl. 238—2.)



A device of this character, including a plate having parallel flanges for embracing the rail carrying portion of the tie, said portion being provided with a plurality of moisture draining recesses thereupon and also a plurality of spike receiving apertures, said recesses being alined with the flanges to direct the collected moisture to each side of and away from the tie, and a rail brace carried upon the upper face thereof and provided wtih a bolt receiving aperture to receive a bolt to secure the brace with the web of a rail.

1,113,463. ADJUSTING DEVICE. HARRISON J. MITCHELL, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed June 26, 1911. Serial No. 635,251. (Cl. 144—242.)



1. In an adjusting device, the combination of a frame, a member movable within said frame, oppositely acting means adjacent to its ends for moving said member, means for actuating said moving means in opposite directions to act upon both ends of the member, and means to shift the moving means in a common direction to act upon one end of the member for changing the angle of inclination between said member and said frame, substantially as described.

2. In an adjusting device for planers and the like, the combination of a frame, a movable engaging member within said frame, a pair of wedge blocks in contact with said engaging member near its ends, an adjusting rod for simultaneously actuating said wedge blocks and thereby moving said engaging member, and means for longitudinally moving said adjusting rod, whereby the positions of said wedge blocks are altered and the angle of inclination between said engaging member and said frame is changed, substantially as described.

3. In an adjusting device for planers and the like, the combination of a frame, a movable engaging member within said frame, a pair of wedge blocks in contact with said engaging member near its ends, an adjusting rod for simultaneously actuating said wedge blocks, and a sleeve engaging said adjusting rod, longitudinal movement of said sleeve correspondingly moving said adjusting rod and altering the positions of said wedge blocks, whereby the angle of inclination between said engaging member and said frame is changed, substantially as described.

4. In an adjusting device for planers and the like, the combination of a frame, a movable engaging member within said frame, a pair of wedge blocks in contact with said engaging member near its ends, an adjusting rod for simultaneously actuating said wedge blocks, a sleeve engaging said adjusting rod, longitudinal movement of said sleeve correspondingly moving said adjusting rod and altering the positions of said wedge blocks, whereby the angle of inclination between said engaging member and said frame is changed, and means for preventing movement of said sleeve, substantially as described.

5. In an adjusting device for planers and the like, the combination of a frame, a movable engaging member within said frame, a pair of wedge blocks in contact with said engaging member near its ends, an adjusting rod having threaded engagement with said wedge blocks, whereby on rotation of said adjusting rod the wedge blocks and the engaging member will be moved, and a sleeve loosely mounted on said adjusting rod and having threaded engagement with said frame, whereby on rotation of said sleeve said adjusting rod will be moved longitudinally, thereby changing the positions of said wedge blocks and the angle of inclination between said engaging member and said frame, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,113,464. ADJUSTABLE GUIDE. HARRISON J. MITCHELL, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed June 8, 1912. Serial No. 702,397. (Cl. 144—253.)

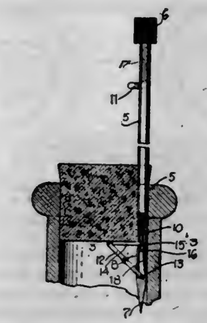
1. In a device of the character described, a bed plate, a guide plate extending longitudinally thereof, the bed plate provided with laterally spaced pairs of longitudinally alined slots, having undercut end walls oppositely inclined to the vertical, and clamps mounted on the guide plate and provided with claws engaging within the slots beneath the inclined walls thereof, substantially as described.

2. In a device of the character described, a bed plate, a guide plate, one of the plates provided with spaced pairs of slots having undercut end walls oppositely inclined to the vertical, a pair of clamps connecting the plates and comprising a fixed stud projecting from one of the plates and having a claw extending laterally at an inclination into engagement beneath the inclined wall of one of the slots of a pair, and a second clamp adjustably mounted on the same plate and having a claw engaging beneath the oppositely inclined wall of the other one of the pair of slots, substantially as described.

3. In a device of the character described, a bed plate, a guide plate extending longitudinally thereof, the bed plate provided with laterally spaced pairs of slots having undercut end walls oppositely inclined to the vertical, a series of pairs of clamps mounted upon the guide plate and provided with claws engaging within the slots beneath the inclined walls thereof, one pair of clamps comprising a fixed stud projecting beneath the guide plate and having a claw extending laterally at an inclination into engagement beneath the inclined wall of its slot, a bolt having threaded thereon a claw engaging beneath the oppositely inclined wall of its slot, substantially as described.

4. In a device of the character described, a bed-plate, a guide-plate, a dog on said guide-plate having an end adapted to engage a portion of the bed-plate, movable means of said guide-plate adapted to be shifted into and out of engagement with said dog and thereby control the adjustment of said dog with respect to said bed-plate, substantially as described.

1,113,465. CORK-EXTRACTOR. PEDER T. MOLLER, Seattle, Wash. Filed Jan. 13, 1914. Serial No. 811,889. (Cl. 65—46.)



1. A cork extractor comprising a shank adapted to be inserted between the neck of a bottle and the cork, a bracket consisting of two sections pivotally connected together, one of said sections being pivotally mounted upon the shank and the other having a slidable connection therewith, and movable means carried by the shank and connected to said latter bracket section to extend said bracket sections to their effective positions whereby the cork is removed from the bottle neck when the shank is extracted.

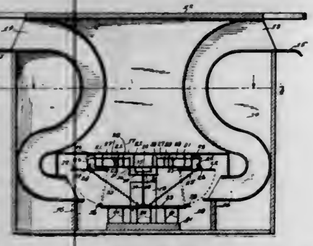
2. A cork extractor comprising a hollow shank adapted for insertion between the neck of a bottle and the cork, a bracket consisting of two sections pivotally connected together, one of said sections being pivotally mounted upon the shank, the other bracket section being slidably mounted in the bore of the shank, said bracket sections being adapted to be disposed in longitudinal alinement and entirely within the hollow shank, and a rod slidably mounted in the shank and connected to said latter bracket section whereby the bracket may be extended laterally from the shank beneath the cork and the cork removed when the shank is extracted from the bottle neck.

3. A cork extractor comprising a hollow shank adapted for insertion between the neck of a bottle and the cork, the wall of said shank having a longitudinal slot at one end, a bracket comprising two sections pivotally connected together, one of said sections being pivotally mounted in the bore of the shank and the other section being slidably mounted in said bore, said bracket sections being adapted to be disposed in longitudinal alinement

within the bore of the shank, a spring arranged in the shank bore and bearing against the first named bracket section to force the same outwardly through said slot, and a longitudinally movable rod arranged within the bore of the shank and connected to said latter bracket section whereby said bracket may be extended laterally from the shank beneath the cork and the cork removed from the bottle neck when the shank is extracted.

4. A cork extractor comprising a hollow shank adapted for insertion between the neck of a bottle and the cork, the wall of said shank being provided with a slot at one end, relatively movable bracket sections, one of said sections being pivotally mounted in the bore of the shank, a longitudinally movable rod in said shank connected to the other bracket section, a finger piece loosely connected to said rod, said shank being provided with an additional slot through which said finger piece extends and a notch in one edge of said slot, and a spring arranged in the shank and bearing against the finger piece to move said rod and normally dispose the bracket sections in their extended positions, said finger piece when the rod is retracted against the action of the spring being adapted for engagement in said notch to retain the bracket sections in longitudinal alinement within the bore of the shank.

1,113,466. MAIL-CATCHER. THOMAS J. MORRISEY, Jr., Belleville, Ill. Filed Mar. 21, 1914. Serial No. 826,370. (Cl. 258—20.)



1. A mail catcher comprising a housing having chutes extending into the same and provided at the outer ends of the chutes with means for engaging a mail sack to detach the same from supporting means and causing the sack to pass into the chute, a platform mounted in said housing intermediate the inner ends of said chutes, a support yieldably mounted in said housing above said platform, a closure hingedly connected with each end of said support, springs connecting said closures with said platform for normally holding said closures in a closed position, latches for engaging said closures having their stems slidably connected with said support, resilient means for normally holding said latches in an operative position, triggers pivotally connected with said support for engaging the stems of said latches, a rod connecting said triggers, and a bumper hingedly connected with said platform and having its upper end connected with said rod for causing said rod to be moved to a position to release one of said latches when said bumper is struck by a mail bag entering said housing.

2. A mail catcher comprising a housing having chutes extending into the same, a platform, springs positioned between said platform and the bottom of said housing, a supporting plate, springs connected with said supporting plate and the interior of said housing to yieldably suspend the supporting plate, guiding brackets carried by said plate, rods slidably carried by said brackets, latches carried by the outer ends of said rods, springs connecting said latches with certain of said brackets to normally hold said latches in an operative position, closures hingedly connected to said plate and provided with means for engaging said latches to releasably hold said closures in a raised position, springs connecting said closures with said platform for normally holding said closures in a lowered position, triggers carried by said plate, a rod connecting said triggers, a bumper pivotally connected with said platform and having its upper end connected with said rod to permit said rod to be moved with said bumper to bring one of said triggers into engagement with its rod to release its respective latch, a guiding rod slidably engaged by said bumper, and springs mounted upon said guiding rod upon opposite sides of said bumper to yieldably hold said bumper in a normal position.

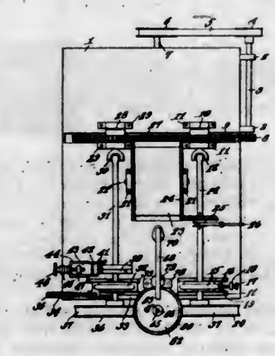
3. A mail catcher comprising a housing provided with an inlet, holding means mounted in said housing adjacent said inlet, a closure for said holding means, a support, a latch carried by said support for releasably holding said closure in an open position, a trigger carried by said support for actuating said last-mentioned means to move the same to a position to release said closure, a bumper hingedly connected with said holding means, said bumper comprising a frame, a strip of mesh carried by said frame, guiding means slidably engaged by the upper end portion of said bumper, resilient means engaging said guiding means to yieldably hold said bumper in a normal position, and means connecting said bumper with said trigger for causing said trigger to be moved with said bumper.

4. A mail catcher comprising a housing provided with an inlet, holding means mounted in said housing adjacent said inlet, a closure for said holding means normally held in a closed position, a latch for releasably holding said closure in an open position, a trigger for operating said latch, a bumper carried by said closure and comprising an outer frame, an inner frame, resilient means yieldably suspending said inner frame within said outer frame, a guiding finger extending above said bumper, resilient means engaging said guiding finger to yieldably hold said bumper in a normal position, and means connecting the bumper with said trigger for causing said trigger to move with said bumper.

5. A mail catcher comprising a housing having chutes extending into the same, a platform mounted in said housing intermediate the inner ends of said chutes, a support yieldably mounted in said housing upon said platform, a closure hingedly connected with each end of said support, yieldable means normally holding said closures in a closed position, latches for holding said closures in an open position slidably connected with said support, resilient means for normally holding said latches in an operative position, triggers for engaging said latches, and actuating means for said triggers moved to release one of said latches when said actuating means is struck by a mail bag entering the housing.

[Claim 6 not printed in the Gazette.]

1,113,467. ROCK-DRILL. JEREMIAH MORROW, Wellston, Ohio. Filed Nov. 18, 1913. Serial No. 801,662. (Cl. 255—3.)



1. In a device of the class described, a reciprocating drill; and circular elements engaging opposite sides of the drill, one circular element being power driven and one circular element being retractable from the drill; and means for retracting the retractable element from the drill.

2. In a device of the class described, a reciprocating drill; a laterally movable shaft having rotary means for engaging one side of the drill thereby to move the drill in the direction of its length; and mechanism for actuating the shaft laterally to move said means away from the drill.

3. In a device of the class described, a reciprocating drill; a laterally movable shaft having rotary means for engaging one side of the drill thereby to move the drill in the direction of its length; a cam on the shaft; and an abutment with which the cam coöperates.

4. In a device of the class described, a reciprocating drill; a laterally movable shaft having rotary means for engaging one side of the drill thereby to move the drill in the direction of its length; yieldable means for moving the shaft laterally; a cam on the shaft; and an abutment with which the cam engages.

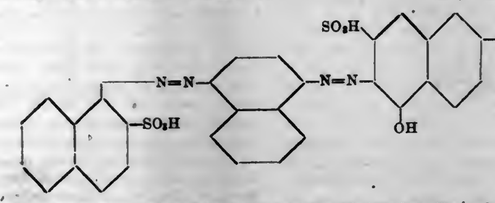
5. In a device of the class described, a reciprocating drill; a laterally movable shaft having rotary means for engaging one side of the drill thereby to move the drill in the direction of its length; a cam on the shaft; a movable abutment with which the cam engages; and means for holding the abutment in adjusted positions.

[Claims 6 to 13 not printed in the Gazette.]

1,113,468. MANUFACTURE OF AN AZO DYESTUFF WHICH MAY BE DEVELOPED ON THE FIBER. CARL MÜLLER, Biebrich-on-the-Rhine, Germany, assignor to the Firm of Kalle and Company, Aktiengesellschaft, Biebrich-on-the-Rhine, Germany. Filed Nov. 13, 1913. Serial No. 800,876. (Cl. 8—1.)

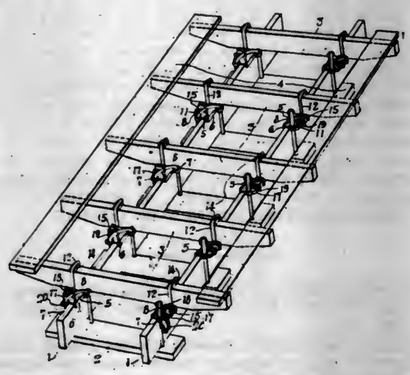
1. Process for producing an azo-dyestuff which after being developed on the fiber gives shades fast to washing and light, consisting in coupling 1-diazo-naphthalene-2-sulfonic acid with alpha-naphthylamin, diazotizing the obtained product and combining it with 2-amino-5-oxynaphthalene-7-sulfonic acid.

2. As a new product the alkali salt of the disazo-dyestuff of the following formula:



obtainable by combining 1-diazo-naphthalene-2-sulfonic acid with alpha-naphthylamin, diazotizing and coupling in an alkaline solution, with 2-amino-5-oxy-naphthalene-7-sulfonic acid; being a bronze-like powder, soluble in water with a red-violet color, from which solution acids precipitate the acid of the dyestuff in form of violet flakes, alkali hydroxid turning the color of the solution to blue and precipitating the alkali salt of the dyestuff; soluble in alcohol with a cherry-red; in sulfuric acid with a bluish-black color insoluble in ether and practically insoluble in benzene.

1,113,469. HAY-RACK. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed Jan. 19, 1914. Serial No. 812,884. (Cl. 21—74.)



1. In a hay rack, the combination, with intersecting beams, of a saddle to connect said beams, said saddle comprising two separable parts, U-shaped clips extending about the respective beams to connect the two parts of said saddle thereto, one of said parts being secured to the upper edge of the lower beam and the other of said parts to the lower edge of the upper beam, that part of said saddle which is secured to the lower beam having a laterally projecting portion provided with an aperture extending lengthwise of the beam and that portion of said saddle secured to the upper beam having a portion projecting beyond the side of said beam and adapted to enter said aperture, and means to retain said portion of said last-mentioned part in said aperture.

2. In a hay rack, the combination, with intersecting beams, of a saddle to connect said beams one to the other, said saddle comprising a plate supported on the upper edge of the lower beam and having a portion extending beyond the side of said beam and provided with an aperture, a U-shaped bolt extending about said plate and said beam to secure the former to the latter, said saddle also comprising an elongated plate arranged transversely to the upper beam, a U-shaped bolt extending about said upper beam for securing said plate thereto, said plate having a portion projecting beyond the side of said beam and arranged to enter said apertured portion of the first-mentioned plate when the two parts of said saddle have been brought into their normal relative positions, and means for retaining said plates in such positions.

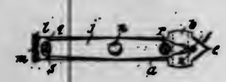
1,113,470. SIGHT FOR FIREARMS. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed Oct. 25, 1912. Serial No. 727,658. (Cl. 33—57.)

1. A sighting device consisting of an elongated body member adapted to be arranged recumbent upon and secured to a gun, a transversely sliding member containing

the sighting point, and means to adjust the sliding member transversely, said members having a joint including one end portion of the body member and comprising a transversely elongated head formed on one member and a transverse guideway in the other member receiving and embracing said head, the whole device lying low relatively to the surface thereof which rests on the gun.

2. In combination, a supporting member, a post pivoted thereto, a sighting member adjustable longitudinally of the post, and a rotary adjusting device for the sighting member having threaded engagement with the sighting member and rotative on an axis extending longitudinally of the post, said post and the supporting member limiting the movement of said device longitudinally of said axis and the surface of the supporting member affording limit of movement for said device being concentric to the axis of pivotal movement of the post in the supporting member, substantially as described.

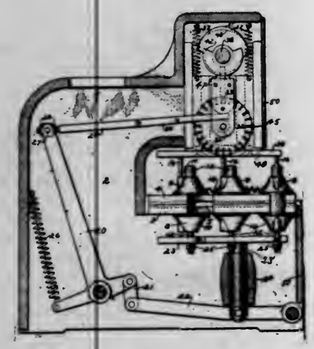
1,113,471. SIGHT FOR FIREARMS. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed Dec. 13, 1913. Serial No. 806,440. (Cl. 33—56.)



1. A sight including upper and lower plate members arranged face to face and the former being pivoted on the latter for movement in its own plane, the upper member having a sight notch and the lower member a hole to receive a screw for elevating the same and the upper member having a transverse slot coinciding with said hole, in combination with an elevating screw received in said hole, substantially as described.

2. A sight including upper and lower plate members arranged face to face and the former being pivoted on the latter for movement in its own plane, the upper member having a sight notch and the lower member a hole to receive a screw for elevating the same and the upper member having two transverse slots, one coinciding with said hole, and a headed screw penetrating the other slot and tapped into the lower member, in combination, with an elevating screw received in said hole, substantially as described.

1,113,472. LEATHER-GRADING MACHINE. ELMER P. NICHOLS, Manchester, N. H., assignor to Lacene Manufacturing Company, Manchester, N. H., a Corporation of Maine. Filed July 9, 1906. Serial No. 325,224. (Cl. 101—186.)



1. In a machine of the kind described, a grade marker for shoe soles, taps, and the like, combined with leather-engaging detecting means constructed and operating to detect by vertical pressure only, a thin spot in the leather, means to maintain said detecting means, and the leather, at their point of mutual engagement, relatively stationary during the detecting operation, connecting mechanism, including means actuated by said detecting means, to set said grade marker, means to lock the latter as set, and means to operate the marker to mark the leather piece, substantially as described.

2. In a machine of the kind described, a grade marker for shoe soles, taps, and the like, combined with leather-engaging detecting means constructed and operating to detect and select by vertical engagement, pressure and movement only, with relation to the leather, the thinnest spot among a plurality of edge spots engaged and detected in said leather, means for holding the leather stationary with relation to the engaging portions of said detecting means which engages the leather, while said edge-spots are being detected, connecting mechanism, including means actuated by said detecting means to set said grade marker, and separate and independent means to operate said grade marker to mark on the leather the detected grade, substantially as described.

3. In a machine of the kind described, grading means for shoe soles, taps, and the like, combined with means to detect the thinnest spot in a plurality of spots of different thicknesses in a predetermined area, said latter means including mechanism operating simultaneously at said plurality of spots, means for holding the leather stationary with relation to the portion of said detecting means which engages the leather, during the detecting operation, and connections from said detecting means for setting said grading means in accordance with the said thinnest spot, and means for operating said grading means as thus set, substantially as described.

4. In a machine of the kind described, detecting mechanism responsive to the varying thicknesses throughout a considerable portion of the length of a leather piece, grading means, means controlled by the detecting mechanism and constructed and arranged to respond to the thinnest spot detected in said predetermined length of stock for positioning said grading means with reference to the said thinnest spot, and means to maintain the leather piece stationary against lateral movement during said movement of the detecting mechanism, substantially as described.

5. In a machine of the kind described, edge-thickness detecting mechanism to detect thin spots at a plurality of points at each of the edges of a died piece of stock, and including edge-detecting devices located and restricted to operate at said plurality of edge-spots, mechanism for maintaining the died piece stationary against lateral movement with relation to said devices while the latter are operating at said plurality of edge-spots thereof, grading means, and mechanism controllably related to all of the edge-detecting devices but selectively controlled by the one or ones thereof which detects the thinnest of the plurality of said thin spots, for correspondingly adjusting said grading means, substantially as described.

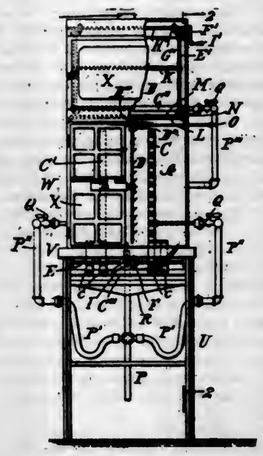
[Claims 6 to 76 not printed in the Gazette.]

1,113,473. BROILER-BAKER. HERRMAN NORECK, Norfolk, Va. Filed July 3, 1913. Serial No. 777,242. (Cl. 126—41.)

1. In a broiler-baker, movable upright burners in pairs adapted to project naked gas flames toward the food without intervening radiating plates, means for supporting food between the burners, adapted to expose the food to the direct action of the naked gas flames, and means for moving the burners toward or away from the food.

2. In a broiler-baker, movable upright burners in pairs adapted to project naked gas flames toward the food, means for supporting food between the burners, means for moving the burners toward or away from the food simultaneously, and means for moving the food support either toward or from either burner.

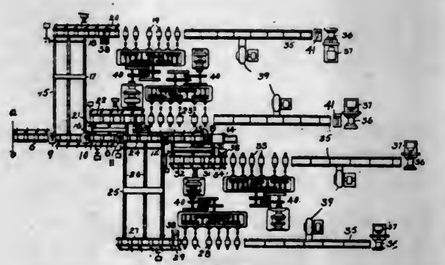
3. In a cooking apparatus, the combination of a pair of burners, a food support between the burners and means for moving the burners toward or away from the food support and for moving the food support toward or away from either of said burners.



4. In a cooking apparatus, upright movable gas burners in pairs adapted to project naked gas flames toward the food, a double grate for holding the food intended to be cooked, whose members may be spaced and locked apart at variable distances, and adjustable as a whole by the rod O and its accessories toward or from either burner, and slideways adapted to support the holder between the upright movable burners.

5. In a cooking apparatus, upright movable gas burners in pairs projecting naked gas flames toward the food intended to be broiled therein, an adjacent baker, means for passing the heat from the broiler to the baker, means for producing gas jets within the baker, means for changing the relative distance between the food to be baked and the burner.

1,113,474. MANUFACTURE OF METAL SHEETS. EDWIN NORTON, Paget West, Bermuda. Filed Apr. 15, 1914. Serial No. 831,950. (Cl. 29—18.)



1. The method of manufacturing metal sheets which consists in reducing a heated ingot or the like to a long plate, severing the plate into shorter plates, transferring the shorter plates laterally to separate reducing means, and causing the said shorter plates to be subjected to the action of the said reducing means substantially at the same time.

2. In a rolling mill, means for reducing a heated ingot or the like to a long plate, means for severing the said plate into shorter plates, reducing rolls arranged laterally of the severing means and at different distances therefrom, and means for delivering the shorter plates from the severing means to the reducing rolls substantially simultaneously.

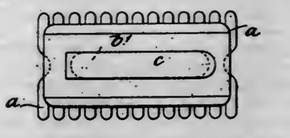
3. In a rolling mill, means for reducing a heated ingot or the like to a long plate, a shear table arranged to receive the said plate, means for stopping the travel of the plate on the table, two sets of shears on the table, one set opening toward one side of the table and the other set toward the other side of the table, means for transferring the short plates formed by the first set of shears laterally in the direction toward which the said set of shears open, a second stop for the plate when released from the first stop, the second stop being located so as to allow the rear end of the plate formed by the last shear in the first set to clear the frame of the said last shear, means for transferring the shorter plates formed by the second set of shears in the opposite direction from that in which the plates formed by the first set of shears were fed, and separate reducing rolls arranged to receive the several shorter plates.

4. The method of manufacturing metal sheets which consists in reducing a heated ingot or the like to a long plate, severing the plate into shorter plates, transferring the shorter plates laterally to separate reducing means, and causing the said shorter plates to be reduced in thickness at substantially the same time.

5. In a rolling mill, means for reducing a heated ingot or the like to a long plate, means for severing the said plate into shorter plates, reducing rolls arranged laterally of the shorter plates and at different distances therefrom, means for delivering the shorter plates from the severing means to the reducing rolls substantially simultaneously, means for conveying the finished sheets from the reducing rolls, and means for shearing the same into any desired lengths.

[Claims 6 to 8 not printed in the Gazette.]

1,113,475. SAFETY-RAZOR. WILLIAM EDMUND O'REILLY, Sofia, Bulgaria. Filed Jan. 3, 1914. Serial No. 810,126. (Cl. 30—12.)



1. A combined shaving and stropping blade holder for safety razors embodying a comb-like guard formed with a central, longitudinal projection which is adapted to extend through a longitudinal slot in the blade and is provided with blade-engaging means, said projection being of such a height that when the razor is placed upon the strop the surface of the latter will be disposed at an angle coincident with the angle to which said blade is beveled to form its cutting edge.

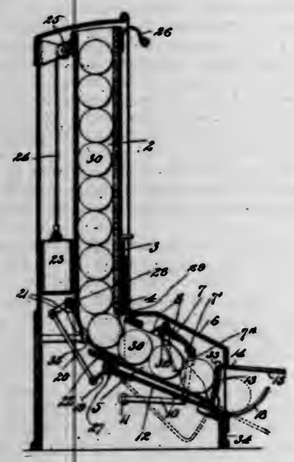
2. A combined shaving and stropping blade holder for safety razors embodying a comb-like guard formed with a central, longitudinal projection which is adapted to extend through a longitudinal slot in the blade and is undercut at its ends to overlap the blade, said projection being of such a height that when the razor is placed upon the strop the surface of the latter will be disposed at an angle coincident with the angle to which said blade is beveled to form its cutting edge.

1,113,476. DISPENSING-CABINET. WILLIAM H. OSMER, St. Louis, Mo. Filed Jan. 24, 1914. Serial No. 814,039. (Cl. 211—8.)

1. In a dispensing cabinet, a row of chutes spanned near their delivery end by a continuous, hinged, folding compression separating gage, adapted to fold down upon, engage and separate articles arranged to be discharged from said chutes.

2. In a dispensing cabinet, a row of chutes spanned near their delivery end by a continuous, hinged, folding compression separating gage graduated to fold down upon, en-

gage and separate articles of different size arranged to be discharged from its separate chutes, each of which, independently, carries articles of a uniform size.



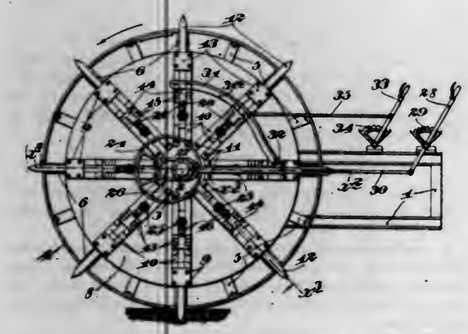
3. In a dispensing cabinet, one or more chutes spanned near the delivery end by a hinged, folding compression separating gage, a trip-rod connected with the gage and suspended below said chutes parallel and coextensive with said gage, so connected with the gage as to actuate it in separating articles being discharged from said chutes.

4. In a dispensing cabinet, one or more delivery chutes projecting at right angles between a hinged folding compression separating gage and a suspended parallel trip-rod so connected with said gage at each end thereof as to actuate the same in separating articles being discharged from said chutes.

5. In a delivery chute for dispensing cabinets, a hinged, folding compression separating gage actuated by a sweep-stroke discharge lever pivoted at its inner end and projecting between the bottom of said chute and a suspended continuous trip-rod connected at its ends with said gage, said gage and lever acting in conjunction with said trip-rod to separate the articles in the delivery chute and retain the contents thereof following the article being discharged from said chute.

[Claims 6 to 14 not printed in the Gazette.]

1,113,477. TRACTION-WHEEL. MANCEL W. PETERSON, Waubay, S. D. Filed Mar. 21, 1913. Serial No. 755,929. (Cl. 21—210.)



1. The combination with a vehicle wheel, of traction bars slidably mounted in said wheel, means for locking said traction bars in operative and inoperative positions, means for actuating said bar locking means and for moving said traction bars from operative to inoperative positions, and variable means for moving said traction bars from inoperative to operative positions.

2. The combination with a vehicle wheel, of traction bars slidably mounted on said wheel, pawl and ratchet devices for locking said traction bars to said wheel, means for rendering said pawls inoperative, permitting said traction bars to move, under the action of gravity, into inoperative positions, and means for moving said traction bars from inoperative to operative positions.

3. The combination with a vehicle wheel, of traction bars slidably mounted on said wheel, pawl and ratchet devices for locking said traction bars to said wheel, means for rendering said pawls inoperative, permitting said traction bars to move, under the action of gravity, into inoperative positions, and a variable throw eccentric for moving said traction bars from inoperative to operative positions.

4. The combination with a vehicle wheel, of traction bars slidably mounted on said wheel, means for locking said traction bars to said wheel in operative and inoperative positions, means, adapted to be set at will, for moving said traction bars from operative to inoperative positions, and variable means, adapted to be set at will, for moving said traction bars from inoperative to operative positions.

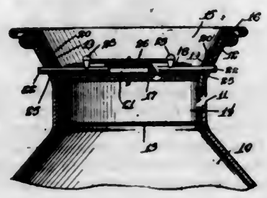
5. The combination with a vehicle wheel, of traction bars slidably mounted on said wheel, pawl and ratchet devices for locking said traction bars to said wheel, a releasing bar for moving said pawls out of engagement with said ratchet devices, and a variable throw eccentric for moving said traction bars from inoperative to operative positions.

[Claims 6 to 9 not printed in the Gazette.]

1,113,478. FIRE-KINDLER. LOREN R. PHILLIPS, Fruita, Colo. Filed Oct. 12, 1912. Serial No. 725,487. (Cl. 44—2.)

A fire kindler, composed of a plurality of bundles of tubular members, each bundle being triangular in shape, and a flexible sheet of inflammable material attached to said bundles with sufficient space between the bundles to form a fold that extends between each pair of adjacent bundles when the bundles are placed in close proximity.

1,113,479. MILK-CAN CLOSURE. HENRY C. PHIPPS, Fremont, Nebr. Filed Oct. 27, 1913. Serial No. 797,451. (Cl. 31—78.)



1. A receptacle provided with a neck, a closure fitting into the neck of said receptacle, and a locking device carried by said closure and comprising a body portion formed from a strip of sheet material having its side portions bent upwardly to form side walls and having its end portions bent upwardly to form attaching ears, means for rigidly connecting said attaching ears with said closure, a tubular housing extending longitudinally in said body portion and provided with slots, locking bolts slidably mounted in said housing, operating means carried by said bolts and passing through said slots whereby said bolts may be moved in said housing to cause their outer ends to extend through alined openings formed in said closure and the neck of said receptacle, a plate hinged to one of the side walls of said body portion and fitting between the operating means of said bolts when said bolts are in an extended position, and means for sealing said plate in a lowered position.

2. A receptacle, a neck for said receptacle, a closure carried by said neck, and a locking device comprising a body portion rigidly secured to said closure, locking means slidably mounted in said body portion and passing through alined openings formed in said closure and neck when in an extended position to hold said closure in engagement with said neck, operating means for said locking means, a plate pivotally connected with said body portion and fitting between said operating means to releasably hold said locking means in an extended position, and means for sealing said plate in a closed position.

3. A device of the character described comprising a receptacle, a closure for said receptacle and a locking device for said closure comprising a body portion, locking means slidably mounted in said body portion positioned in longitudinal alinement, operating means for moving said locking means to an extended position whereby the locking means will extend through openings formed in said closure and receptacle, and means carried by said body portion and fitting between said operating means to hold said locking means in an extended position.

4. In a device of the character described comprising a receptacle, a closure for said receptacle, locking means slidably connected with said closure and passing through the closure to engage the said receptacle when in an extended position, operating means for said locking means, and sealing means positioned between said operating means for holding said locking means in an extended position.

5. A receptacle provided with a neck and a closure fitting into the neck of said receptacle, and a locking device carried by said closure and comprising a body portion, a tubular housing extending longitudinally of said body portion and provided with slots, locking means slidably mounted in said housing, operating means carried by said locking means and passing through said slots whereby said locking means may be moved in said housing to cause their outer ends to extend through alined openings formed in said closure and the neck of said receptacle, an abutment movably connected with said body portion and fitting between the operating means of said locking means when said locking means are in an extended position, and means for removably holding said abutment in an operative position.

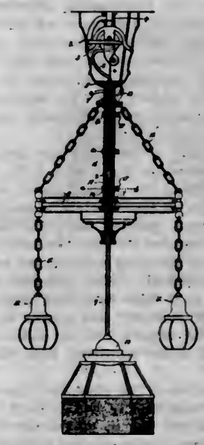
[Claim 6 not printed in the Gazette.]

1,113,480. EXTENSION-CHANDELIER. CONRAD M. PITEL, Meriden, Conn. Filed Feb. 26, 1913. Serial No. 750,759. (Cl. 240—71.)

1. An extension chandelier comprising a coupling-piece, a frame secured to the coupling-piece, a spring drum within said frame, a shell surrounding the frame, a pipe extending downward through the shell, a hollow rod extending through said pipe, cable connections between the rod and the drum, a drop light secured to the said rod, and a flexible electric conductor tube between the rod, and the source of supply, said flexible conductor tube also extending through said pipe and adapted to be coiled horizontally within the shell beneath the said drum.

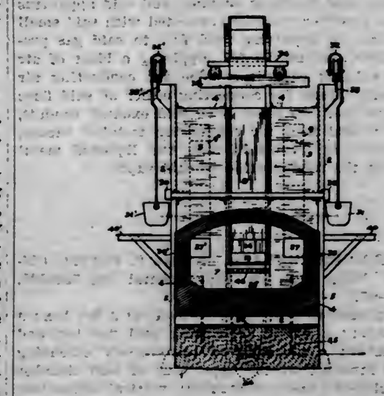
2. An extension chandelier comprising a coupling-piece, a frame secured to the coupling-piece, a shell surrounding the frame, a pipe extending downward through the shell, a hollow rod extending through said pipe, a drop light secured to said rod, and a flexible conductor tube between the rod and source of supply, said flexible conductor tube also extending through said pipe and adapted to be coiled horizontally in the said shell.

3. An extension chandelier comprising a suspension device, a shell inclosing the same, an outer pipe supported by said suspension device, a drop light, a burner pipe connected therewith and extending into said outer pipe, cable connections between the burner pipe and the suspension device, a flexible conductor tube extending from said drop light through said outer pipe, a split pipe surrounding the burner pipe, and screws extending through the outer pipe into engagement with said split pipe whereby the diameter of the split pipe may be adjusted.



4. An extension chandelier comprising a coupling-piece, a frame secured to the coupling-piece, a shell, a tube extending downward through the shell, a burner pipe extending through said tube, a drop light secured to said burner pipe, a flexible conductor extending through said tube to said burner pipe, a split tube surrounding the burner pipe, a frictional packing between the tube and pipe, and screws extending through the tube into engagement with said split tube whereby the diameter of the split tube may be adjusted.

1,113,481. APPARATUS FOR SMELTING ORES. JOHN A. PORTER, Pueblo, Colo. Filed Dec. 23, 1912. Serial No. 738,245. (Cl. 75—57.)



1. In an apparatus of the character described, the combination of a furnace having a rear wall, through a central opening in which ore to be treated is charged, condensing and regenerating flues opening through said rear wall on opposite sides of said central charging opening,

an exhaust conduit, a pipe for conducting air under pressure, means for connecting either of said flues with said pipe, and the other with said exhaust conduit, and means in said flues for condensing metallic vapors, and for separating from said flues the liquefied metal resulting from the condensation of said vapor.

2. In an apparatus of the character described, the combination of a furnace having a rear wall, through a central opening in which ore to be treated is charged, condensing and regenerating flues opening through said rear wall on opposite sides of said central charging opening, conduits for fluid fuel discharging adjacent to the openings of said flues into said furnace, an exhaust conduit, a pipe for conducting air under pressure, means for connecting either of said flues with said pipe, and the other with said exhaust conduit, and means in said flues for condensing metallic vapors, and for separating from said flues the liquefied metal resulting from the condensation of said vapor.

3. In an apparatus of the character described, the combination of a furnace having a rear wall, through a central opening in which ore to be treated is charged, said rear wall being formed immediately beneath said charging opening with a small opening for permitting the passage of a gas to said furnace through the body of ore charged thereinto from said charging opening, an exhaust conduit, a pipe for conducting air under pressure, means for connecting either of said flues with said pipe, and the other with said exhaust conduit, and means in said flues for condensing metallic vapors and for separating from said flues the liquefied metal resulting from the condensation of said vapor.

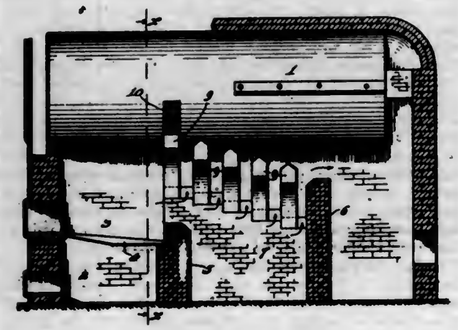
4. In an apparatus of the character described, the combination of a furnace having a rear wall, through a central opening in which ore to be treated is charged, said rear wall being formed immediately beneath said charging opening with a small opening for permitting the passage of a gas to said furnace through the body of ore charged thereinto from said charging opening, and said apparatus having a gas producer chamber connected with said small opening, an exhaust conduit, a pipe for conducting air under pressure, means for connecting either of said flues with said pipe, and the other with said exhaust conduit, and means in said flues for condensing metallic vapors and for separating from said flues the liquefied metal resulting from the condensation of said vapor.

5. In an apparatus of the character described, the combination of a furnace having a rear wall, through a central opening in which ore to be treated is charged, said rear wall being formed immediately beneath said charging opening with a small opening for permitting the passage of a gas to said furnace through the body of ore charged thereinto from said charging opening, and said apparatus having a gas producer chamber connected with said small opening, means for supplying fluid fuel to said gas producing chamber, and means for supplying a blast of air thereto, an exhaust conduit, a pipe for conducting air under pressure, means for connecting either of said flues with said pipe, and the other with said exhaust conduit, and means in said flues for condensing metallic vapors, and for separating from said flues the liquefied metal resulting from the condensation of said vapor.

1,113,482. BOILER-FURNACE. LYMAN S. POWELL, Chicago, Ill. Filed Sept. 20, 1913. Serial No. 790,880. (Cl. 110—97.)

1. The combination in a boiler furnace, of a fire box; a mixing chamber; a bridge separating said fire box and mixing chamber; a plurality of transversely extending baffle blocks arranged at the upper side of said chamber in spaced relation; and substantially vertical supporting surfaces at the sides of said mixing chamber, said blocks extending upwardly and outwardly at a comparatively steep inclination from substantially the medial or center line of said mixing chamber at both sides thereof, the upper ends of said blocks resting loosely against said supporting surfaces, substantially as described.

2. The combination in a boiler furnace, of a fire box; a mixing chamber; a bridge separating said fire box and mixing chamber; a longitudinally extending partition in said chamber arranged substantially medially thereof; and a plurality of transversely extending elongated baffle blocks arranged at the upper side of said chamber at either side of said partition, said blocks being spaced apart, the inner ends of said blocks resting upon said partition, the outer ends of said blocks being inclined upwardly at a comparatively steep inclination and resting loosely against the lateral walls of said chamber so as to permit of creeping of said ends upon said walls during expansion of said blocks, substantially as described.



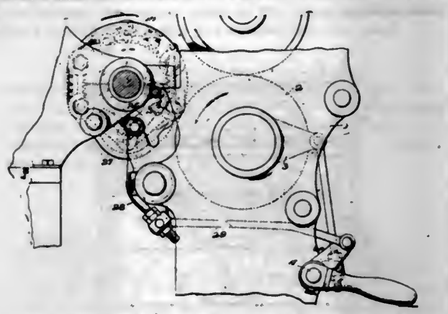
3. The cambination in a boiler furnace, of a fire box; a mixing chamber; a bridge separating said fire box and mixing chamber; a longitudinally extending partition in said chamber arranged substantially medially thereof; and a plurality of transversely extending baffle blocks arranged at the upper side of said chamber at either side of such partition, said blocks being spaced apart so as to form outlet passages for the products of combustion entering said mixing chamber from said fire box, and said blocks being arranged at progressively decreasing elevations, substantially as described.

4. The combination in a boiler furnace of a fire box; a mixing chamber; a bridge separating said fire box and mixing chamber; a longitudinally extending partition in said chamber arranged substantially medially thereof; and a plurality of transversely extending arcuate baffle blocks arranged at the upper side of said chamber at either side of said partition, said blocks being spaced apart and arranged at progressively decreasing elevations, the spaces between said blocks forming outlet passages for the products of combustion entering said mixing chamber from said fire box, the inner ends thereof resting upon said partition, the outer ends of said blocks being inclined upwardly and resting against the lateral walls of said chamber, substantially as described.

5. The combination in a boiler furnace of a fire box; a mixing chamber; a bridge separating said fire box and mixing chamber; a longitudinally extending partition in said chamber arranged substantially medially thereof; and a plurality of transversely extending baffle blocks arranged at the upper side of said chamber at either side of said partition, said blocks being spaced apart and arranged at progressively decreasing elevations, the spaces between said blocks forming outlet passages for the products of combustion entering said mixing chamber from said fire box, the inner ends thereof resting loosely upon said partition, the outer ends of said blocks being inclined upwardly and resting loosely against the lateral walls of said chamber, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,113,483. PRINTING-PRESS. CARL G. PRITCHARD, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Oct. 18, 1912. Serial No. 726,530. (Cl. 101—183.)



1. In combination with a printing press, a printing mechanism comprising a plurality of printing members, a second printing mechanism also comprising a plurality of printing members, means for changing the arrangement of the members of said first mechanism in each cycle of operation of the press and for changing the arrangement of the members of said second mechanism at a predetermined point in the cycle of operation of said first mechanism, and means for automatically preventing the operation of either mechanism in the event of any interruption in the feed supply.

2. In combination with a printing press, a plurality of separate and self-contained printing mechanisms each comprising a plurality of shiftable printing members, means for operating said mechanisms, means for changing the arrangement of the members of one mechanism in each cycle of operation of the press and for changing the arrangement of the members of another mechanism at a predetermined point in the cycle of the former mechanism, and automatically operated means for preventing the operation of either mechanism in the event of any interruption in the feed supply.

3. In combination with a printing press, a printing mechanism comprising a plurality of shiftable printing members, means for operating said mechanism, means for shifting the members of said mechanism at predetermined intervals, a second printing mechanism also comprising a plurality of shiftable printing members, means for operating said mechanism, means controlled by the actuation of the former mechanism for shifting the members of the second mechanism at other predetermined intervals, and means for automatically preventing the operation of either mechanism in the event of any interruption in the feed supply.

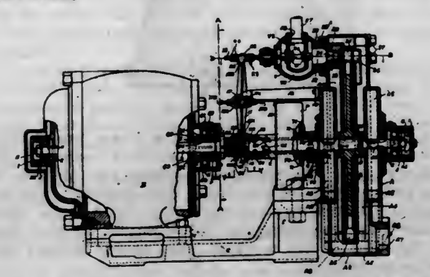
4. In combination with a printing press, numbering mechanism and dating mechanism for coöperating with the press, means for rotating both mechanisms in synchronism with the press, and means for changing the dating and number mechanism, one being changed in each cycle of operation of the press and the other at predetermined points in each cycle of operation of the former.

5. In combination with a printing press, a plurality of separate printing mechanisms each comprising a plurality of changeable printing members, a shaft for changing one of said mechanisms, an auxiliary shaft connected to another of said mechanisms, and means connected to said first mentioned shaft for actuating said auxiliary shaft at predetermined intervals in the operation of said first mentioned shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,113,484. HEADLIGHT-ENGINE AND GOVERNING MECHANISM THEREFOR. GUY SYDNEY RANSTEAD, Chicago, Ill. Filed Feb. 23, 1912. Serial No. 679,235. (Cl. 121—112.)

1. The combination in a turbine engine governing mechanism, of, a sleeve feathered to the engine shaft and rotatably secured against the housing or casing of the turbine engine; a controlling-valve-lever operating mechanism slidably mounted on said sleeve, laterally relative to the movement of governor or balance weights adjustably secured to arms operatively secured to an oscillating cam or screw threaded sleeve carried by said feathered sleeve; of governor or balance weight arms pivotally secured to and within a casing mounted on and adjustably secured to said feathered sleeve; a steam controlling valve lever adjustably secured in a bracket secured to the engine casing.



2. The combination is a turbine engine governing mechanism in combination with a turbine of, a feathered sleeve mounted on the engine shaft and rotatably held against the housing or casing of the turbine engine; a feathered cam or screw threaded sleeve mounted on said feathered sleeve and operatively connected to a controlling valve operating lever; said cam or screw threaded sleeve slidably operative laterally relative to an oscillating cam or screw threaded sleeve rotatably mounted on said feathered sleeve; an oscillating cam or screw threaded sleeve operatively connected to governor or balance weight arms pivotally secured to and within a casing or housing adjustably secured to said feathered sleeve.

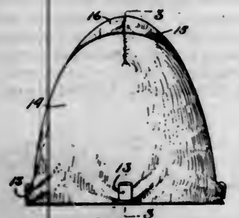
3. In a turbine engine governing mechanism, the combination, of a sleeve feathered upon the engine shaft; said sleeve rotatably secured against the turbine casing or housing from longitudinal movement with the engine shaft; of a governor or balance weight containing case adjustably secured on said sleeve; of governor weight arms pivotally secured to and within said governor case and operatively connected to an oscillating cam or screw threaded sleeve; an oscillating cam or screw threaded sleeve, mounted on said feathered sleeve, operating laterally a cam or screw threaded sleeve longitudinally feathered on said feathered sleeve; a longitudinally feathered cam or screw threaded sleeve, mounted on said feathered sleeve, operatively connected to a governing or controlling valve lever; a controlling valve operating lever pivotally mounted adjustably in a bracket secured to the engine casing; a balance or controlling valve operatively controlled by said governing mechanism.

4. In a turbine governing mechanism, the combination of, a governor or balance weight controlled oscillating cam or screw threaded sleeve moving laterally thereof a cam or screw threaded feathered sleeve; an oscillating cam or screw threaded sleeve controlled cam or screw threaded sleeve mounted on a feathered sleeve mounted on the turbine engine shaft; a feathered sleeve mounted on the engine shaft and rotatably secured from longitudinal movement therewith against the turbine casing; said feathered sleeve carrying said oscillating cam or screw threaded sleeve, and said cam or screw threaded feathered sleeve, and a casing or housing having mounted therein the said oscillating cam or screw threaded sleeve operating governor of balance weights.

5. The combination in a headlight steam or fluid turbine engine fluid governing and controlling mechanism of, an automatic steam and speed governing and controlling mechanism, substantially as described, mounted slidably adjustable longitudinally on a fluid turbine shaft, but operatively secured to the turbine casing.

[Claims 6 to 9 not printed in the Gazette.]

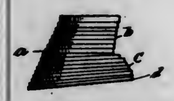
1,113,485. PLANT-PROTECTOR. JOHN W. RESH, St. Henry, Ohio. Filed Apr. 22, 1914. Serial No. 833,715. (Cl. 47—22.)



1. A plant protector comprising a frame formed of a plurality of inverted U-shaped members connected together at their arm connecting portions, the free ends of the arms of each member being bent outwardly and inwardly and then directed outwardly, and a fabric hood engaged over said members, the outwardly directed ends of the arms of the members being passed through the hood and clenched.

2. A plant protector comprising a plurality of inverted U-shaped members connected together at their arm connecting portions, and a fabric hood secured over said members, said hood having its top portion gathered and stitched to form a gripping projection.

1,113,486. HEEL-BLANK. FRANK E. RICHARDSON, Rowley, and CHARLES H. LITTLEFIELD, Haverhill, Mass. Filed Mar. 20, 1914. Serial No. 826,113. (Cl. 36—34.)



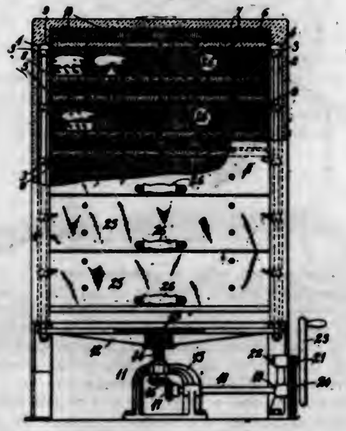
1. A heel-blank, for a heel of the character described, composed of a series of lifts and comprising a top section and a base-section, said base section being composed of a plurality of base lifts formed to extend onto the shank portion of the shoe to the extent to which the finished breast portion of the base is to project and to bear firmly against the shank at the breast edge, and a plurality of lifts disposed intermediate said base lifts and said top-section and projecting to decreasing distances with relation to the breast edges of said base lifts and to increasing distances with relation to the breast edges of the adjacent top section lifts, substantially as described.

2. A heel-blank, for a heel of the character described, composed of a series of lifts and comprising a top-section having a rearwardly inclined breast, and a base section composed of a plurality of base lifts formed to extend onto the shank portion of the shoe to the extent to which the finished breast portion at the base is to project, and to bear firmly against the shank at the breast edge, and a plurality of lifts disposed intermediate said base lifts and said top-section and projecting to decreasing distances with relation to the breast edges of said base lifts and forming a forwardly inclined breast portion, substantially as described.

1,113,487. ELECTRICALLY-HEATED APPARATUS. EDWARD E. ROSE, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 7, 1913. Serial No. 746,778. (Cl. 219—35.)

1. In an electric heating apparatus, the combination with a plurality of supporting members and a plurality of electric heating units disposed adjacent thereto, of means for varying the heat distribution on either side of said members.

2. In an electric oven, the combination with a plurality of shelves, and a plurality of electric heating units disposed between said shelves and adjacent thereto, of means for effecting a selective variation of heat on either side of said shelves.



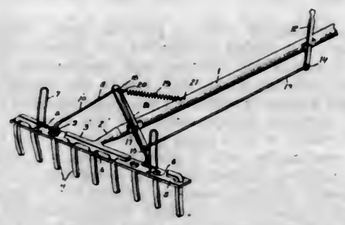
3. In an electric oven, the combination with a plurality of pairs of shelves and a plurality of electric heating units interposed between each pair of shelves, of adjustable means for effecting a selective variation of heat on either side of said pairs of shelves.

4. In an electric heating apparatus, the combination with a plurality of supporting members and a plurality of electric heating units disposed adjacent thereto, of means for effecting relative movement between and supporting members and said heating units for regulating the amounts of heat delivered to the several supporting members.

5. In an electric oven, the combination with a plurality of shelves and a plurality of electric heating units disposed between said shelves and adjacent thereto, of means for effecting relative movement between said shelves and said heating units for regulating the amounts of heat delivered to the several shelves.

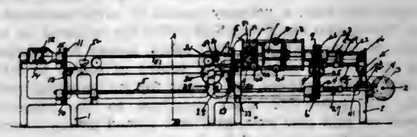
[Claims 6 to 13 not printed in the Gazette.]

1,113,488. RAKE. HARVIE W. RUCH, Oakland, Cal. Filed Jan. 21, 1914. Serial No. 813,424. (Cl. 55—145.)



The combination with a rake comprising a handle, a head and teeth, of a stripping bar having a plurality of apertures formed therein, slidably mounted on the teeth, U-shaped guide members secured to the stripping bars near each end, straddling the rake head, a V-shaped member, means pivotally secured at the free ends of the arms of the V-shaped member to the stripping bar, an operating lever secured to the handle of the rake near the end opposite the head, a bar pivotally connected to one end of the operating lever, a lever pivotally secured to the end of the rake handle near the head, the free end of the last mentioned bar being pivotally secured to the second mentioned lever, the end of the second mentioned lever opposite the pivotally connected bar being provided with an aperture for the reception of the bright portion of the V-shaped member, and a spring to normally hold the apertured end of the second mentioned lever in its raised position and thereby hold the stripping bar against the rake head.

1,113,489. SPINNING-MACHINE. HENRY RYDER, New York, N. Y., assignor, by mesne assignments, to Niagara Cordage Company. Filed Aug. 29, 1905, Serial No. 276,268. Renewed Mar. 6, 1914. Serial No. 822,966. (Cl. 28—6.)



1. A spinning machine comprising means for feeding fiber in straight fibers, means for feeding a wire and means for spinning said fibers parallel to each other spirally around said wire.

2. A spinning machine comprising a sleeve, means for feeding a wire to said sleeve, means for feeding straight fibers to said sleeve and means for spinning said fibers spirally parallel to each other around said wire.

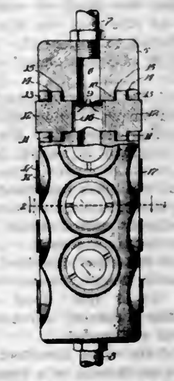
3. A spinning machine comprising a sleeve, means for feeding a wire to said sleeve, means for feeding straight fibers to said sleeve, means for keeping said wire and said fibers separate until they reach said sleeve and means for spinning said fibers parallel to each other spirally around said wire.

4. A spinning machine comprising a sleeve, means for feeding, separately to said sleeve, a wire and parallel fibers, means for spinning said fibers parallel to each other spirally around said wire, and means for giving to the yarn thus spun any desired amount of twist.

5. A spinning machine comprising a sleeve, means for feeding separately to said sleeve a wire and parallel fibers, means for spinning said fibers parallel to each other spirally around said wire, and means for winding the yarn thus spun onto a yarn spool.

[Claim 6 not printed in the Gazette.]

1,113,490. FLUID-GAGE. GEORGE H. SARGENT and FRANK G. DUNBAR, Chicago, Ill., assignors to Sargent Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 2, 1911. Serial No. 658,087. (Cl. 73—54.)



1. A gage comprising a cylindrical body equipped with a plurality of oppositely disposed rows of sight glasses, the glasses of adjacent rows being arranged with their longitudinal axes at angles to each other, and the glasses of opposite rows being arranged with their longitudinal axes in a common plane.

2. A gage comprising a body provided with a cylindrical sight glass having a faceted inner end and a cylindrical convex outer end, the facets on the inner end being arranged parallel with the longitudinal axis of said body, and also parallel with the generatrix of said outer end.

3. A gage comprising a cylinder provided with a plurality of sight glasses having their longitudinal axes disposed radially of the cylinder, said glasses having faceted inner faces and cylindrical convex outer faces, the facets on the inner ends and the generatrices of the outer ends of the glasses being disposed parallel with the axis of said cylinder.

4. A sight glass for gages and the like of substantially cylindrical form, the inner end of said glass being provided with parallel facets and the outer end being of cylindrical convex form, the facets on the inner end being disposed parallel with the generatrix of the outer end of the glass.

5. A gage comprising a cylindrical body, and a plurality of series of cylindrical sight glasses set radially in said body, the glasses of each series being arranged in staggered relation relatively to the glasses of adjacent series, one series of glasses being disposed diametrically opposite another series in the cylinder and each glass having its inner end provided with facets disposed parallel with the longitudinal axis of the gage and its outer end of cylindrical convex form.

1,113,491. PROCESS OF DETINNING. WALLACE SAVAGE, Piedmont, Ala. Filed Feb. 17, 1914. Serial No. 819,285. (Cl. 75—55.)

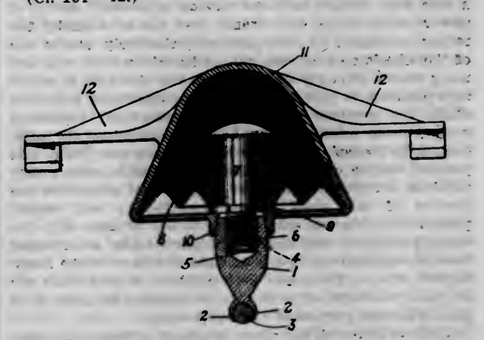
1. The process of detinning which consists in subjecting a coating of white tin to the action of a slime containing gray tin, whereby the white tin coating is transformed into gray tin.

2. The process of detinning which consists in subjecting a coating of white tin to the action of a slime containing a solution of a tin salt and a gray tin.

3. The process of detinning which consists in subjecting a coating of white tin to the action of a slime containing a solution of a basic halogen tin compound and gray tin.

4. The process of detinning which consists in subjecting a coating of white tin to the action of a slime containing tin ammonium chlorid and gray tin.

1,113,492. TROLLEY-WIRE HANGER. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 24, 1911. Serial No. 662,135. (Cl. 191—42.)



1. A trolley wire hanger comprising, a downwardly projecting stud having a screw-threaded lower end and an intermediate shoulder, an ear adapted to clamp a trolley conductor and provided with a screw-threaded socket having transversely slotted walls to engage the screw-thread-

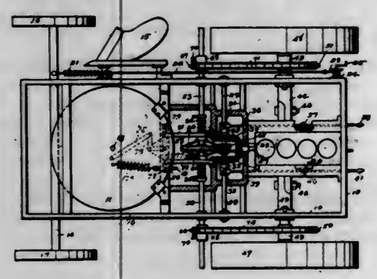
ed end of the stud, and a ring engaging said shoulder and into which the upper end of the ear is forced as it is screwed upon the stud.

2. The combination with a stud provided with a screw-threaded end and an intermediate shoulder, of a trolley ear having a transversely slotted body provided with an externally tapered upper end and a lower end adapted to grip a trolley conductor, a screw-threaded recess to engage the screw-threaded end of said stud, and a ring adapted to engage the stud shoulder and having a tapered inner surface to engage the tapered surface of the ear.

3. The combination with a stud having a screw-threaded end and an intermediate shoulder, of a ring adapted to engage said shoulder and having a tapering inner face, and a trolley ear adapted to grip a trolley conductor having a transversely slotted body to be engaged by said ring and provided with a screw threaded recess to engage the screw-threaded end of said stud.

4. The combination with a stud having a screw threaded end and an intermediate shoulder, of a ring adapted to engage said shoulder and having a tapering inner face, and a trolley ear adapted to clamp a trolley conductor and having only its upper portion transversely slotted, said portion being adapted to be engaged by said ring and provided with a screw threaded recess to said stud, whereby relative movement of said ear and said stud is permitted after engagement of said ring and said shoulder is effected.

1,113,493. TRACTION-ENGINE. HANS SCHLICHT, Walnut, Iowa. Filed Apr. 15, 1912. Serial No. 690,893. (Cl. 21—114.)

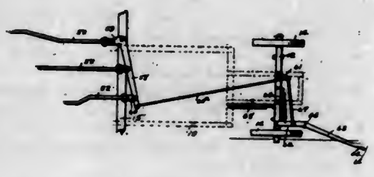


1. In a device of the class described, a frame, a rotary platform mounted thereon, a front axle fixed to said platform near the edge thereof, wheels on said front axle, a rear axle, wheels mounted thereon, a primary source of power mounted on said frame, and means whereby the rotary movement of said platform selectively causes one of the wheels on said rear axle to be driven from said primary source of power depending on the direction in which said platform is rotated, said means comprising a divided shaft, the portions of which are operatively connected with the rear wheels, a gear loosely mounted on the adjacent ends thereof, means for driving said gear from said primary source of power, means operated by said rotary platform for moving said gear in or out of gear with one portion of said shaft, means operated by said rotary platform for placing said gear in or out of gear with the other portion of said shaft, said parts being so arranged that when the front axle is at right angles with the longitudinal axis of the frame both portions of said shaft are in gear, while when said axle is turned the gear is in gear with one portion of the shaft only.

2. In a device of the class described, a frame, a rotary platform mounted near the front end thereof, a front axle fixed off center to the edge of said platform, wheels on said axle, a two part rear axle slidably mounted on said frame, the parts of said rear axle being capable of longitudinal adjustment with relation to each other, wheels on said rear axle, a primary source of power mounted on said frame, two shaft members rotatably mounted on said frame in alinement with each other, means for transmitting power from said primary source of power to either of said shaft members, and means for transmitting power from the respective shaft members to the respective wheels on said rear axle, and means whereby the rotation of said platform controls the transmission from said primary source of power to said shaft members.

3. In a device of the class described, a frame, a rotary platform mounted near the front end thereof, a front axle fixed off center to the edge of said platform, wheels on said axle, a two part rear axle slidably mounted on said frame, the parts of said rear axle being capable of longitudinal adjustment with relation to each other, wheels on said rear axle, a primary source of power mounted on said frame, two shaft members rotatably mounted on said frame in alinement with each other, means for transmitting power from said primary source of power to either of said shaft members, and means for transmitting power from the respective shaft members to the respective wheels on said rear axle, said last named means comprising sprocket wheels fixed to the wheels on said rear axle, sprocket wheels slidably mounted on said respective shaft members, means for fixing said last named sprocket wheels on said shaft members in any position of their longitudinal movement thereon, sprocket chains on the respective sprocket wheels on the rear wheels of the engine, and on the respective sprocket wheels on said shaft members, and means whereby the movement of said platform controls the transmission of power to said shaft members.

1,113,494. PLOW. HANS SCHLICHT, Walnut, Iowa. Filed May 26, 1913. Serial No. 770,060. (Cl. 97—81.)



1. In a device of the class described a frame, a front axle centrally pivoted thereon, a bar centrally pivoted on said frame, a plurality of plows having their beams pivoted to said bar, an arm on said front axle spaced apart from the middle thereof, a link connecting said arm and said bar, yielding means secured to said frame and to said front axle on the side thereof opposite said arm for overcoming the draft of said plows, an arm pivoted to said front axle near one side thereof and carrying a wheel designed to engage the land in a furrow, and a link connecting said last named arm and said first named arm.

2. In a device of the class described, a frame, plows pivoted thereto, and means whereby said plows are automatically moved farther apart when the device is turning a corner and are returned to normal position when the device once more travels in a direct line.

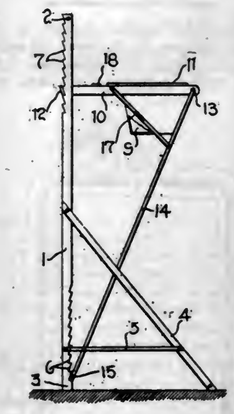
3. In a device of the class described, a frame, a plurality of plows pivoted thereto, and means whereby said plows are automatically moved apart from each other when the device is turning a corner.

4. In a device of the class described, a frame, a plurality of plows pivoted thereto, means whereby said plows are automatically moved apart from each other when the device is turning a corner, and means whereby said plows may be raised or lowered.

5. In a device of the class described, a frame, a plurality of plows pivoted thereto in a gang, means whereby said plows are automatically moved apart from each other when said device is turning a corner, an additional plow mounted on said frame near the forward end thereof, means whereby said plows may be raised or lowered, said plows being so arranged that on turning a corner said additional plow enters the ground while in ordinary straight plowing it travels in the last furrow.

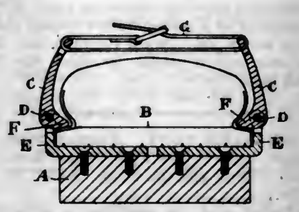
[Claim 6 not printed in the Gazette.]

1,113,495. PORTABLE WASHSTAND. FREDERICK WM. SCHMIDT, Conger, Minn. Filed Dec. 20, 1913. Serial No. 808,025. (Cl. 45—38.)



A device of the character described comprising standards having teeth adjacent their opposite ends, the teeth of each of the standards at one extremity being reversely disposed relative to the teeth at the opposite extremity, a supporting frame comprising spaced bars disposed inwardly of the standards and having adjacent extremities connected by a transverse bar, the extremities whereof being projected beyond the parallel bars and adapted to engage the teeth at the upper extremities of the standards, bracing means for the supporting frame engageable with the notches at the lower end of the standards.

1,113,496. SKEE-HARNESS. OLAF SELMER, Lillehammer, Norway, assignor to Christen Seeberg, Christiania, Norway. Filed Dec. 20, 1913. Serial No. 807,829. (Cl. 46—67.)



1. In a skee harness the combination with the skee-body of side lugs, one on each side of the skee-body, levers pivoted to said lugs and comprising each a short arm adapted to act upon the projecting rim of a boot sole for clamping the same to the skee-body, and a long arm for moving the short arm against the projecting rim of the boot sole.

2. In a skee harness the combination with the skee-body of side lugs, one on each side of the skee-body, levers pivoted to said lugs and comprising each a short arm adapted to act upon the projecting rim of a boot sole for clamping the same to the skee-body, and a long arm for moving the short arm against the projecting rim of the boot sole, and means for drawing the long arms toward each other and holding them in position.

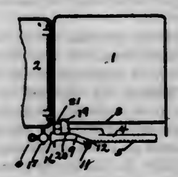
1,113,497. DEMOUNTABLE RIM. CARL J. SEVERSON, Minneapolis, Minn. Filed June 19, 1913. Serial No. 774,598. (Cl. 152—21.)

1. A transversely divided demountable wheel rim having one end bifurcated, and a lever intermediately pivoted to the bifurcated end of said wheel rim, inward of the ends of the prongs thereof, and pivotally secured, at one end, to the other end of said wheel rim, said lever arranged to be seated between said prongs.

2. A transversely divided demountable wheel rim having one end bifurcated, a lever intermediately pivoted to the bifurcated end of said wheel rim, inward of the ends of the prongs thereof, and pivotally secured, at one end, to the other end of said wheel rim, said lever arranged to be seated between said prongs, and means for locking said lever between said prongs.

3. A transversely divided demountable wheel rim having one end bifurcated, a lever intermediately pivoted to the bifurcated end of said wheel rim, inward of the ends of the prongs thereof, and pivotally secured, at one end, to the other end of said wheel rim, said lever arranged to be seated between said prongs and provided with side flanges overlapping the adjacent edges of said prongs, and means for locking said lever between said prongs.

1,113,498. LIGHTING DEVICE FOR OVEN-BURNERS. JOHN F. SKOOG, Erie, Pa., assignor to Erie Stove & Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1914. Serial No. 812,600. (Cl. 158—115.)



1. The combination of an oven chamber; an oven burner adapted to heat the oven chamber; a lighter tube accessible for lighting only from the oven and adapted to carry flame to the oven burner; and means for supplying fuel to the lighter tube independently of the oven burner.

2. The combination of an oven chamber; an oven burner adapted to heat the oven chamber; a lighter tube to carry flame to the oven burner; a gas conductor leading from the lighter tube to the oven chamber and accessible for lighting only from the oven chamber; and means for supplying fuel to the lighter tube independently of the oven burner.

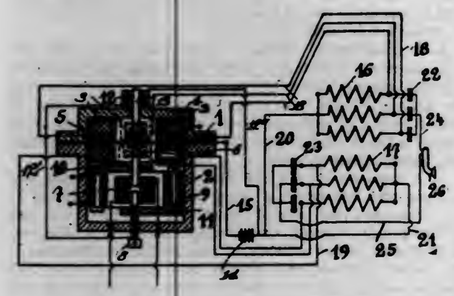
3. The combination of an oven chamber; an oven burner adapted to heat the chamber; a lighter tube adapted to carry flame to the burner; means for supplying fuel to the lighter tube in a direction transverse to the axis of said tube and independent of the oven burner; and a conductor leading from the lighter tube to the oven chamber.

4. The combination of an oven chamber; an oven burner adapted to heat the oven chamber; a lighter tube adapted to carry flame to the burner; a conductor leading from the lighter tube to the oven chamber, said conductor being spaced from the lighter tube to permit the transfer of flame from within the conductor to without the conductor along the lighter tube.

5. The combination of an oven chamber; an oven burner adapted to heat the oven chamber; a lighter tube adapted to convey flame to the burner; an auxiliary tube for supplying fuel to the lighter tube, said auxiliary tube being arranged in a direction parallel to the lighter tube; a transverse connection between the auxiliary tube and the lighter tube; means for supplying fuel to the auxiliary tube; and a conductor leading from the lighter tube to the oven chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,113,499. SOUND-MAGNIFYING APPLIANCE FOR TELEPHONIC AND TELEGRAPHONIC PURPOSES. HARALD SMITH, Magdeburg, Germany. Filed Apr. 18, 1914. Serial No. 832,676. (Cl. 179—171.)



1. In apparatus for the purpose set forth, a diaphragm, microphones at opposite sides of said diaphragm, a coil connected at one end to a microphone on one side of said diaphragm, a coil inductively related to said coil and connected at one end to a microphone on the other side of said diaphragm, a source of electric energy, means connected with said source and connecting said coils in parallel, an electro-responsive device, and means connected to said electro-responsive device and connecting said coils in series.

2. In apparatus for the purpose set forth, a diaphragm, microphones at opposite sides of said diaphragm, a coil connected at one end to a microphone on one side of said diaphragm, a coil inductively related to said coil and connected at one end to a microphone on the other side of said diaphragm, a source of electric energy, means connected with said source and said diaphragm and connecting said coils in parallel, an electro-responsive device, and means connected with said electro-responsive device and connecting said coils in series.

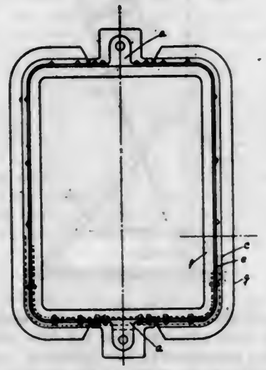
3. In apparatus for the purpose set forth, a diaphragm, microphones at opposite sides of said diaphragm, a coil connected at one end to a microphone on one side of said diaphragm, a coil inductively related to said coil and connected at its end opposite to said one end to a microphone on the other side of said diaphragm, a source of electric energy, means connected with said source and said diaphragm and connecting said coils in parallel, an electro-responsive device, and means connected with said electro-responsive device and connecting said coils in series.

4. In apparatus for the purpose set forth, a diaphragm, two groups of microphones disposed respectively on the opposite sides of said diaphragm, a group of coils connected to the group of microphones on one side of said diaphragm, a group of coils inductively related to said group of coils and connected oppositely to the group of microphones on the other side of said diaphragm, a source of electric energy, means connected with said source and said diaphragm and connecting said first named group of coils and said second named group of coils in parallel, an electro-responsive device and connecting said first named group of coils and said second named group of coils in series.

5. In apparatus for the purpose set forth the combination of a diaphragm, microphones at opposite sides of said diaphragm, a coil connected at one end to the microphone at one side of said diaphragm, a coil connected at one end to the microphone at the other side of said diaphragm, means electrically connecting the other ends of said coils to each other, an electric sound-producing appliance, and means including condensers connecting said sound-producing appliances to said coils.

[Claims 6 to 12 not printed in the Gazette.]

1,113,500. FOUNDRY-FLASK. IRVING R. SMITH, Milwaukee, Wis., assignor to Sterling Wheelbarrow Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 16, 1912. Serial No. 678,066. (Cl. 22—96.)



1. A foundry flask formed of rolled metal, having guide pin plates at its opposite ends and having reinforcing bars attached on the outside of the flask at the middle of its height extending from one guide pin plate to the other.

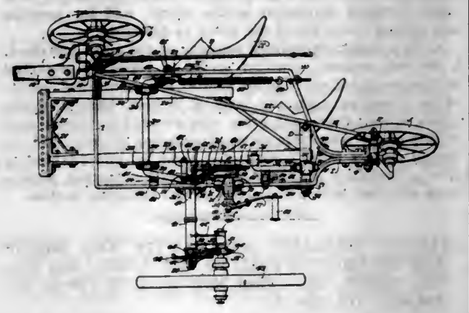
2. A foundry flask formed of rolled metal, having guide pin plates at its opposite ends and having reinforcing bars attached on the outside of the flask at the middle of its height extending from one guide pin plate to the other, said bars having projections for attaching them to the flask, and being provided with a relatively wide projecting flange forming a hand hold.

3. A foundry flask formed of rolled metal, having guide pin plates at its opposite ends, and having reinforcing bars attached on the outside of the flask at the middle of its height extending from one guide pin plate to the other, said bars consisting of a curved hollow central portion disposed with its hollow side toward the flask, and flanges on each side of said curved portion by which the bar is attached to the flask.

1,113,501. WHEELED PLOW. WILLIAM SOBEY, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Filed Apr. 23, 1909. Serial No. 491,833. (Cl. 97—58.)

1. In a wheeled plow, the combination with the frame and the plow hung thereon to shift to and from working position, of a swinging arm on said frame a toggle interposed between said arm and plow and shiftable to a dead center position to hold the plow in the ground, said toggle being arranged to yield longitudinally in the direction of its line of centers, and a spring interposed between said arm and said toggle for resisting the yielding movement of said toggle, substantially as described.

2. In a wheeled plow, the combination with the frame and plow hung thereon to shift to and from working position, of a toggle interposed between said frame and plow and arranged to shift to a dead center position to hold the plow in the ground and to yield longitudinally in such position without breaking the joint thereof, a spring for resisting the yielding movement of said toggle, and a shift lever pivoted at a fixed point on said frame and connected to said toggle for breaking the joint thereof and raising the plow, substantially as described.



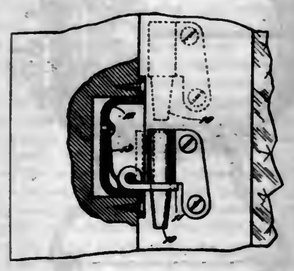
3. In a wheeled plow, the combination with the frame, a plow hung on said frame to shift to and from working position, of a rock arm on said frame, a raising and lowering toggle interposed between said arm and said plow and arranged to yield longitudinally in straight line position without breaking the joint thereof to yieldingly hold the plow in the ground, a spring for resisting the yielding movement of said toggle, and lever mechanism pivoted directly on said frame and connected to said toggle to raise and lower the plow, substantially as described.

4. In a wheeled plow, the combination with the frame, a plow hung thereon to shift to and from working position, and a land-side wheel connected to shift with the plow to automatically level the frame as the plow is raised and lowered, of a rock arm on said frame, a raising and lowering toggle connected to the arm and said plow and arranged to yield longitudinally in straight line position and in the direction of its line of centers without breaking the joint thereof, a spring for resisting the yielding movement of said toggle, and raising and lowering foot levers pivoted directly on said frame and connected to said toggle, substantially as described.

5. In a wheeled plow, the combination with the frame and plow hung thereon to shift to and from working position, of jointed toggle links interposed between said frame and plow and arranged to shift to a straight line position to hold said plow in the ground, a pivoted support for one of said links whereon said link is longitudinally movable in line with the pivot of said support, and a spring for yieldingly holding said link in position, substantially as described.

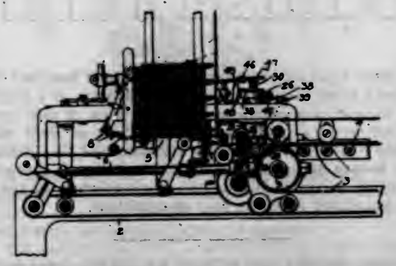
[Claims 6 to 22 not printed in the Gazette.]

1,113,502. WINDOW. EMIL STANECKY and LEA H. STANECKY, Chicago, Ill. Filed Apr. 10, 1912. Serial No. 689,935. (Cl. 20—46.)



A window construction comprising a frame; a sash slidably and swingingly mounted in said frame; a hinge member carried by said sash; a hinge member pivoted in said frame and arranged to coöperate with said first mentioned hinge member; and a stop on said sash located below the hinge member thereon and arranged to engage the hinge member on said frame and fold it into inoperative position upon elevation of said sash, substantially as described.

1,113,503. COUNTER FOR BOX-BLANKS. EDWIN G. STAUDE, Minneapolis, Minn. Filed Oct. 11, 1909. Serial No. 522,198. (Cl. 93—93.)



1. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism for holding the intermittently movable member, a pair of continuously revoluble rolls arranged for the passage of a box-blank between them, and mechanism connecting one of said rolls with said stop-mechanism to actuate the latter to release the intermittently movable member, substantially as described.

2. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism including an oscillating lever for holding the intermittently moving member, a pair of continuously revoluble rolls arranged for the passage of a box-blank between them, and means operatively associated with said rolls for oscillating said lever to release the intermittently moving member on a blank passing between said rolls, substantially as described.

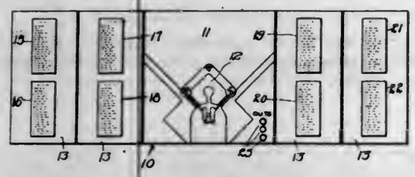
3. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism for holding the intermittently moving member, a pair of continuously revoluble rolls arranged for the passage of a box-blank between them, mechanism connecting one of said rolls with said stop-mechanism to actuate the latter to release the intermittently movable member, a lever connected with a device to off-set certain blanks in a stack of blanks, and means connecting said lever with one of the movable members to actuate the lever upon the completion of a pre-determined number of stops made by the intermittent moving member, substantially as described.

4. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism for holding one of said members from continuous movement, parallel shafts each carrying a revoluble roll, one of said shafts being a crank-shaft and connected with the stop-mechanism, a pinion and worm mounted on said shaft, and an upright shaft connected with said rotatable members and provided with a worm-gear meshing with the worm of the crank-shaft, substantially as described.

5. In a counting mechanism comprising rotatable members, stop-mechanism for holding one of said members from continuous movement, parallel shafts each carrying a revoluble roll, one of which is smaller in diameter than the other, one of said shafts being a crank-shaft, a pinion and worm mounted on said shaft, an upright shaft connected with said rotatable members and provided with a worm-gear meshing with the worm of the crank-shaft, and a lever connecting the crank-shaft, and co-acting with parts of the stop-mechanism to release the member held from continuous movement, substantially as described.

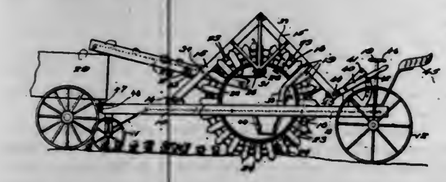
[Claims 6 and 7 not printed in the Gazette.]

1,113,504. BASE-BALL GAME. CHARLES M. STEELE, Chicago, Ill. Filed Oct. 17, 1913. Serial No. 795,649. (Cl. 46—63.)



A game apparatus for playing the game of base-ball comprising a game board having a representation of a playing field thereon, a plurality of schedules, each of said schedules embracing a plurality of designations of plays under a definite situation of the base runners, said play designations having distinguishing indicia, and chance controlled indicating means having indicia corresponding to the indcia associated with the play designations.

1,113,505. BEET-HARVESTING MACHINE. JOHN STONE, Pampa, Tex. Filed Apr. 17, 1913. Serial No. 761,811. (Cl. 55—108.)



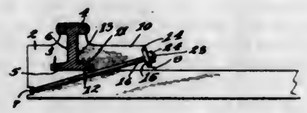
1. A device of the class described comprising a wheeled frame, alined annular plates carried thereby in parallel relation, a multiplicity of spring yokes each having arms engaged on each side of respective plates and projecting outwardly thereof, adjacent arms of the yokes on the two plates having coöperating gripping jaws each of the plates having cam portions thereon adapted to spread the spring yokes for coöperative gripping engagement with yokes on the other plate for engagement with a beet interposed, through a portion of their movement, the yokes being connected in annular series, and adapted to travel orbitally on the plates, one arm of each yoke being extended outwardly for tractive engagement with the earth when at the lower part of its orbit, for operating of the device, under forward movement of the frame, a topping and a conveyer device each operatively connected with the yokes, and means to move the yokes to inoperative position.

2. A device of the class described comprising a wheeled frame, a superstructure mounted thereon for vertical movement, means to adjust it vertically, stationary annular plates carried by the superstructure in parallel coaxial relation, beet gripping devices connected in annular series and orbitally movable on the plates, said gripping devices having extensions adapted for tractive engagement with the earth at the lower part of their orbit for movement of the gripping devices under forward movement of the frame, an annular internal rack being connected to each series of gripping devices concentric therewith, separate devices for acting upon the beets gripped by the gripping devices, and operative connections between the rack and the said separate devices.

3. A device of the class described comprising a wheeled frame, a vertically movable superstructure, means to adjust the superstructure vertically, stationary annular plates carried by the superstructure, in parallel coaxial relation, a series of U-shaped spring yokes on each plate, the yokes having rollers on each arm receiving the edges of the plates thereagainst, the yokes tending to spring with their arms inwardly, the plates being widened at certain parts of their length to bear opposed arms of the yokes on each plate into coengagement, gripping jaws formed on the coengaging arms, extensions formed on the yokes to engage the earth for orbital movement of the yokes around the plates, when the superstructure is in lowered position, under forward movement of the frame, and for opening and closing operation of the yokes as described.

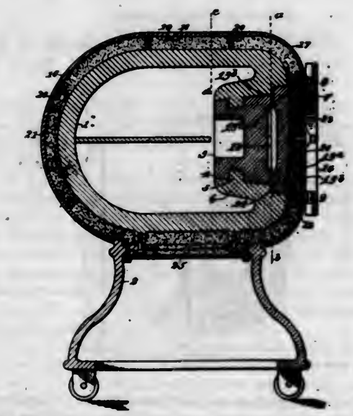
4. In a vegetable pulling machine of the class described, a wheeled support, parallel series of vegetable engaging devices mounted thereon for orbital movement and adapted to coengage upon the body of a beet, parallel guide plates spaced from each other and adapted to engage outwardly of the respective series of engaging devices, said engaging devices being constructed arranged and adapted to give a clearance inwardly thereof, and a topping mechanism mounted within the orbits of the engaging devices.

1,113,506. METALLIC RAILWAY-TIE AND MEANS FOR SECURING A RAIL TO THE SAME. GUS TAYLOR, Turlock, Cal. Filed Mar. 19, 1913. Serial No. 755,441. (Cl. 238—5.)



In a rail tie structure, a tie having a longitudinal groove formed in its upper surface and transverse grooves formed in its ends near the lower edge thereof, upstanding projections formed upon the ends of said tie and having their inner sides shaped to lie in abutting relation to one side of a T-rail, blocks having depending longitudinal projections formed upon their under surface, said projections extending beyond the ends of said blocks and lying in contact with the under surface of the base of a T-rail and seated in said longitudinally extending grooves to prevent lateral movement of the blocks, U-shaped members having their head portions seated in said transverse grooves, the legs of said U-shaped members extending upwardly diagonally across the sides of said tie and said blocks, plates mounted upon the ends of said legs and engaging the inner ends of said blocks, said plates adjustably held upon the ends of said legs for securely holding said blocks in binding engagement with the T-rail and said tie for preventing movement of the blocks and the T-rail.

1,113,507. BURGLAR-PROOF SAFE. ELLIS E. THOMPSON, Cedar Rapids, Iowa. Filed Sept. 15, 1913. Serial No. 789,790. (Cl. 109—4.)

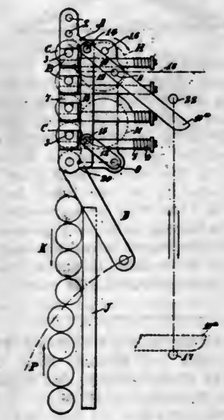


1. In a burglar-proof safe, a revoluble door adapted to interlock with the safe, and having an internal, shock-absorbing air-space with narrow radial extensions terminating short of the periphery, and opening toward the inner end of the door.

2. In a burglar-proof safe, a revoluble door, having formed therein a shock-absorbing air-space with narrow extensions terminating short of the periphery, and opening toward the inner end of the door, and a filling of soft metal in said openings.

3. In a burglar-proof safe, a revoluble door, having formed therein a shock-absorbing air-space terminating outwardly in narrow, radial extensions, unobstructed by bolts or other mechanism, the front and rear air-space walls being imperforate, and the front wall being constructed to burst at the center rather than at the sides.

1,113,508. PRINTING-PRESS. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 14, 1910. Serial No. 597,260. (Cl. 101—71.)

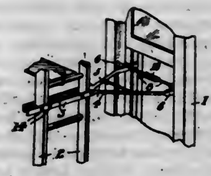


1. In a press the combination of a frame provided with ways and carrying means to deliver ink to an inking mechanism, a form and a roller inking mechanism comprising inking rollers provided with trucks, which inking mechanism is arranged to be reciprocated between the position for receiving ink from the ink delivering means and the position for inking the form, the rollers in the inking mechanism all mounted so that the trucks thereof will be rotated due to their engagement with the ways during the travel from the means to deliver ink to the inking mechanism, the rollers also mounted so that they will contact with the form only during the travel from the position in which they receive ink from the ink delivering means and so that they will be elevated in a manner to prevent their contacting with the form during any return movement over the form and means between the frame and rollers for causing said elevation of the rollers.

2. In a press a frame having carriage-ways and carrying a vertical form, a vertical reciprocating roller inking mechanism having all the rollers therein provided with trucks, said rollers being supported so as to ink the form on the downward stroke of the inking mechanism, and means to elevate all of the rollers prior to the return movement of the rollers over the form whereby the latter will not receive any ink during the upward stroke, the rollers being rotated on the downward stroke, prior to the engagement of the rollers with the form, due to the engagement of the roller trucks with the ways.

3. In a press a frame carrying means to deliver ink to an inking mechanism, a vertical form, a reciprocatory mechanism having inking rollers provided with trucks which travel on ways in the press, the rollers being rotated by the trucks on the ways when the inking mechanism is traveling forward toward the form from the means which delivers ink to the inking mechanism, and means for lifting the rollers from contact with the form when the inking mechanism is returning.

1,113,509. SCAFFOLD. GEORGE E. THRALL, WILLIAM S. THRALL and PERRY O. THRALL, Washington, D. C. Filed July 8, 1914. Serial No. 849,778. (Cl. 20—81.)

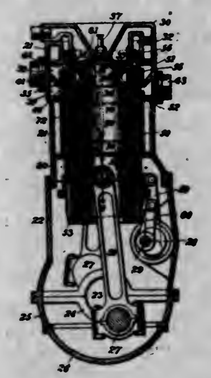


1. A ladder support for scaffolding comprising a pair of parallel arms, having diverging inner ends adapted to be secured to a support, and means for detachably securing said arms on opposite sides of a ladder.

2. The combination with a window frame and a ladder, of a pair of parallel arms embracing opposite sides of the ladder, and having diverging inner ends, longitudinally adjustable bars for clamping said diverging members to the sides of the window frame, and means for securing said parallel arms together.

3. The combination with a window frame and a ladder, of a clamping device comprising parallel arms embracing opposite sides of the ladder and having diverging inner ends provided with guides, longitudinally adjustable bars extending through said guides, devices for securing said bars within said guides, and means for detachably securing the arms together.

1,113,510. ENGINE. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 18, 1909. Serial No. 484,231. (Cl. 123—188.)



1. The combination with a casing having a head extending into one end thereof, said casing having inlet and outlet ports in different transverse planes and said head having a port coöperating with one of said ports to open said casing port to the interior of the casing, of a plurality of valves sliding between said casing and head and controlling the ports therein.

2. The combination with a casing having a head extending into one end thereof, said casing having inlet and outlet ports in different transverse planes and one of which is above the lower end of the extension on said head, of a plurality of coaxial sliding valves arranged between the extended part of said head and the surrounding

casing and controlling said ports, and positive means for sliding said valves.

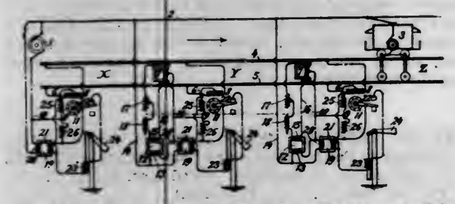
3. The combination with a casing having a head extending into one end thereof, said casing having inlet and outlet ports in different transverse planes, and said head having a port coöperating with one of said casing ports, of a plurality of coaxial sliding valves controlling all of said ports, and means for sliding said valves.

4. The combination with a casing having a head extending into one end thereof, said casing having inlet and outlet ports in different transverse planes and said head having a port coöperating with one of said casing ports, of a plurality of coaxial sliding valves controlling all of said ports, and positive means for sliding said valves.

5. The combination with a casing having a head extending into one end thereof, said casing having inlet and outlet ports in different transverse planes and said head having a port coöperating with one of said casing ports, of a plurality of coaxial sliding valves between the extended part of the head and the surrounding casing and controlling all of said ports, and means for sliding said valves.

[Claims 6 to 31 not printed in the Gazette.]

1,113,511. SYSTEM OF AUTOMATIC BLOCK-SIGNALING FOR ELECTRIC RAILWAYS. FITZHUGH TOWNSEND, New York, N. Y.; John J. Townsend, deceased, assignor to General Railway Signal Company, a Corporation of New York. Filed May 31, 1906. Serial No. 319,423. (Cl. 246—36.)



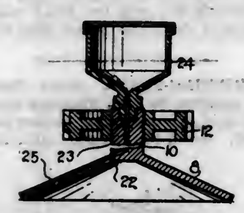
1. A signaling system for electric railways, comprising a trackway divided into block sections, reactance bonds, one positioned at each end of each section, each bond comprising a core and two coils thereon, one of said coils connected across the trackway and the other of said coils connected to one rail at one end and at its opposite end to the corresponding end of a similar coil of the adjacent bond.

2. A signaling system for electric railways, comprising a source of energy, a trackway divided into block sections, reactance bonds between the block sections, means for exciting a difference of potential between the rails of the block sections, a signal controlling device in each block section normally energized by the ucrrent returning along the rails and the current due to the difference of potential between the rails, means for changing the phase relation of said currents, a local circuit and a signal under the control of each signal controlling device.

3. A signaling system for electric railways comprising a source of energy, a trackway divided into block sections, reactance bonds, one connected across the rails at each end of each block section; a connection between adjacent reactance bonds including a reactance coil; means for exciting a difference of potential between the rails of the block sections, a signal controlling device in each block section including two coils, one of said coils connected across the rails, the other connected in shunt to said reactance coil, a local circuit and a signal under the control of each signal controlling device.

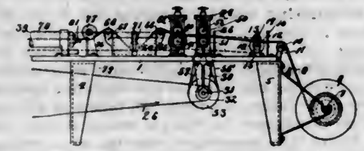
1,113,512. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. FRED ADRIAN TRUESDELL, Youngstown, Ohio. Filed Feb. 7, 1914. Serial No. 817,350. (Cl. 136—7.)

1. The combination with an engine having a combustion chamber provided with intake and exhaust ports, and a conical valve seat formed on the wall of said chamber, of a rotary valve mounted in the cylinder head and engaged upon said seat, said valve being provided with an opening to register with the intake and exhaust ports in the rotation of the valve, the surface of the valve which is opposed to said seat being provided with a groove, an absorbent material arranged in said groove, an oil cup carried by the valve to supply a lubricating oil to the absorbent material whereby a film of oil is supplied to the seating face of the cylinder head, and means for rotating the valve.



2. The combination with an engine cylinder provided with a combustion chamber having intake and exhaust ports and a valve seat formed upon the cylinder head, of a rotary valve disk provided with a stem centrally mounted in the cylinder head, said valve disk having an opening adapted to register with the intake and exhaust ports in each rotation or the valve, the surface of the valve disk which is opposed to the valve seat having a groove formed therein, the valve stem being provided with a central bore communicating with said groove, a strip of absorbent material arranged in said groove, an oil cup mounted upon the valve stem to supply oil to the bore thereof, and means for rotating said valve.

1,113,513. MACHINE FOR COVERING BEAD-CORES. WILLIAM C. TYLER and EDWARD NALL, Akron, Ohio, assignors to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Sept. 22, 1913. Serial No. 791,105. (Cl. 154—9.)



1. In a machine of the class described, the combination with means for progressively moving a bead core, means for trimming the edges thereof, means for coating the core with an adhesive cement, and means for wrapping a strip of fabric about said core during its progressive movement.

2. In a bead-forming machine, the combination of feeding mechanism for progressively moving the bead core, means for trimming the edges thereof, means for coating the exterior of said bead core with an adhesive cement, means for uniting said bead core with a strip of fabric, and means for alternately and successively curling up the edges of said strip and wrapping them on the core.

3. In a device of the class described, the combination of a feeding device for progressively moving a bead core, means for coating the bead core, means for primarily applying a strip of fabric whose edges are adapted to overlap to one face thereof, and mechanism for wrapping the laterally-extending edges of said strip of fabric about said core.

4. In a device of the class described, the combination of a feeding device for progressively moving a bead core, means for coating the bead core with a cement, means for primarily applying a strip of fabric to one face thereof, mechanism for wrapping the laterally-extending edges of said strip of fabric about said core in overlapped relation, and means for pressing the fabric into snug engagement with said core after its placement thereon.

5. In a machine of the class described, the combination of means to move the core progressively forward, means for coating the core with a cement, means for primarily applying a strip of fabric wider than the bead core to one face of the latter, a folding device for folding first one edge and then the other edge of the projecting portions of the strip over said bead core in overlapped relation, and means for pressing the strip into snug engagement with the core.

[Claims 6 to 10 not printed in the Gazette.]

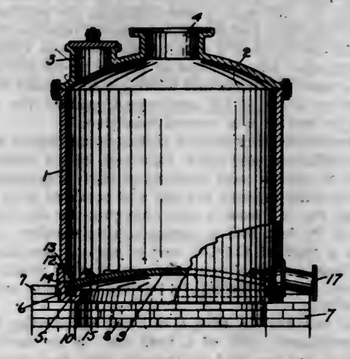
1,113,514. RESILIENT WHEEL. PETER TYSSELING, Pella, Iowa. Filed Jan. 13, 1914. Serial No. 811,874. (Cl. 152—8.)

1. In a device of the class described, a rim comprising a channel opening outwardly, a plurality of tire sections mounted therein, each comprising a block having a central opening in its lower surface to receive a spring, a spring mounted in said opening and supported in the bottom of said channel, a metal case countersunk in the outer surface of said block and having extensions countersunk in the sides and ends of said block and extending to the lower surface thereof, two extensions at the sides of said block having bolts formed on their inner ends, slidably mounted in the bottom of said channel, said bolts being inclined slightly toward each other adjacent to the lower surface of the block, the side extension of said casing being made of somewhat resilient material to permit said side extensions to be sprung apart for inserting the block into the casing, and means for pivoting said casings together in succession to permit some play of said blocks.

2. In a device of the class described, a rim comprising a channel opening outwardly, a plurality of tire sections mounted therein, each comprising a block having a central opening in its lower surface to receive a spring, a spring mounted in said opening and supported in the bottom of said channel, a metal case countersunk in the outer surface of said block and having extensions countersunk in the sides and ends of said block and extending to the lower surface thereof, two extensions at the sides of said block having bolts formed on their inner ends, slidably mounted in the bottom of said channel, said bolts being inclined slightly toward each other adjacent to the lower surface of the block, the side extension of said casing being made of somewhat resilient material to permit said side extension to be sprung apart for inserting the block into the casing, means for pivoting said casings together in succession to permit some play of said blocks, and a plate on the lower surface of each block having a central opening to permit the free reception of said spring, said plate being secured to the end extensions of said casing.

3. In a device of the class described, a rim comprising a channel opening outwardly, a plurality of tire sections mounted therein, each comprising a block having a central opening in its lower surface to receive a spring, a spring mounted in said opening and supported in the bottom of said channel, a metal case countersunk in the outer surface of said block and having extensions countersunk in the sides and ends of said block and extending to the lower surface thereof, two extensions at the sides of said block having bolts formed on their inner ends, slidably mounted in the bottom of said channel, said bolts being inclined slightly toward each other adjacent to the lower surface of the block for holding the block between them, the side extension of said casing being made of somewhat resilient material to permit said side extension to be sprung apart for inserting the block into the casing, a plate on the lower surface of each block having a central opening to permit the free reception of said spring, said plate being secured to the end extensions of said casing, a cylinder formed on one of the end extensions of each casing near the tread portion thereof and spaced cylinders formed on the opposite end extension of each casing, designed to form bearings in line with the adjacent single cylinder of the next successive block casing, said blocks being arranged in succession with said cylinders in line with each other, pins extending through the adjacent cylinders of the successive blocks.

1,113,515. STILL. JAMES A. ULLMAN, New York, N. Y. Filed Dec. 23, 1913. Serial No. 808,336. (Cl. 220—125.)



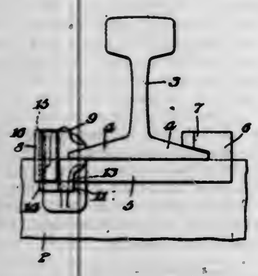
1. The combination of a casing having an interior supporting member provided with a groove, a bottom having a downwardly projecting flange resting in said groove of smaller size than the groove so as to leave channels on both sides thereof, said bottom curving upwardly from said flange to permit access to one of said channels from the exterior of the casing, and means for clamping the bottom to the casing.

2. A still comprising a casing having the lower end thereof inturned to form an inwardly projecting flange having a groove formed in its upper face, a bottom provided with a downwardly projecting flange adapted to rest in said groove and removable through the tops of the casing, removable abutments carried by the casing, and means to be interposed between said bottom and said abutments for securing the bottom in place.

3. In combination, a casing, an inwardly projecting flange formed integrally on the lower end of the casing and formed with a groove in the upper face thereof, a rigid bottom for the casing and removable through the top of the casing, a downwardly projecting flange formed on said bottom and adapted to rest in said groove, securing means within the casing for removably holding the bottom in position, and hook engaging means formed on the inner face of the bottom to facilitate the removal of the bottom from the casing.

4. In combination, a casing, a flange formed by the lower end of said casing and extended inwardly and formed with a groove in the upper face thereof, a bottom for the casing, a flange formed on the edge of said bottom and adapted to rest within the groove to support the bottom in place, means within the casing for removably holding the bottom in position, said bottom having a concaved under face to permit access to the groove from the exterior of the casing when the bottom is in position.

1,113,516. ANTICREEPER FOR RAILROAD-RAILS. DAVID F. VAUGHAN, Riverton, N. J. Filed July 31, 1914. Serial No. 854,248. (Cl. 238—4.)



1. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper adapted to engage said stationary part and comprising a bar extending beneath the rail and provided with means to engage the rail base, a shoe engaging the rail base and a part of the bar, and a locking member inserted between a part of the bar and a part of the shoe, one element of the anticreeper being formed of spring metal and sprung from a normal condition and holding said member in place and forcing parts of the anticreeper against the rail in tending to resume said normal condition.

2. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper adapted to engage said stationary part and comprising a bar extending beneath the rail and provided with means to engage the rail base, a shoe engaging the rail base and a part of the bar, and a spring locking member inserted between a part of the bar and a part of the shoe and sprung from a normal condition and forcing parts of the anticreeper against the rail in tending to resume said normal condition.

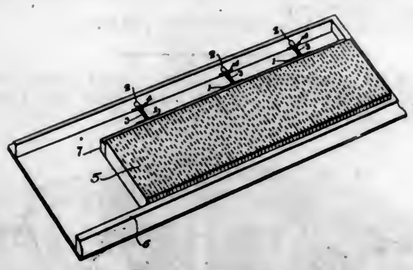
3. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper adapted to engage said stationary part and comprising a bar extending beneath the rail and having a hook at one end thereof engaging one side of the rail base and having an upwardly-extending portion on the other end thereof adjacent to the other side of the rail base and extending above the bottom of the rail, a shoe engaging the rail base and a part of the bar, and a locking member inserted between a part of the bar and a part of the shoe, one element of the anticreeper being formed of spring metal and sprung from a normal condition and holding said member in place and forcing parts of the anticreeper against the rail in tending to resume said normal condition.

4. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper adapted to engage said stationary part and comprising a bar extending beneath the rail and having a hook on one end thereof engaging one side of the rail base and having an upwardly-extending portion on the other end thereof adjacent to the other side of the rail base and extending above the bottom of the rail, a shoe engaging the rail base and a part of the bar, and a spring locking member inserted between a part of the bar and a part of the shoe and sprung from a normal condition and forcing parts of the anticreeper against the rail in tending to resume said normal condition.

5. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper adapted to engage said stationary part and comprising a bar extending beneath the rail and having a hook on one end thereof engaging one side of the rail base, and having an upwardly-extending portion on the other end thereof adjacent to the other side of the rail base and extending above the bottom of the rail, a shoe engaging the rail base and having a part extending between the upturned end of the bar and the rail, and a locking member inserted between a part of the shoe and the upturned end of the bar, one element of the anticreeper being formed of spring metal and sprung from a normal condition and holding said member in place and forcing parts of the anticreeper against the rail in tending to resume said normal condition.

[Claims 6 to 15 not printed in the Gazette.]

1,113,517. GALLEY-LOCK. IRA H. VOGT, Dayton, Ohio. Filed Feb. 11, 1914. Serial No. 818,159. (Cl. 101—54.)



1. In a galley lock, a base plate having a part adapted to be engaged by the thumb, a head block having a finger piece arranged to be engaged by the finger of the operator while said head block is in operative engagement with the wall of the galley, a slidable connection between said head block and said base plate, and a spring confined between said head block and said base plate.

2. In a galley lock, a base plate having a part adapted to be engaged by the thumb, a head block having finger pieces spaced away from the outer end thereof, a slidable connection between said head block and said base plate, and a spring confined between said head block and said base plate.

3. In a galley lock, an elongated base plate having a guide projecting from one face thereof, a head block slidably mounted on said guide and having a narrow portion provided on its opposite sides with finger pieces, and a spring to move said base plate and said head block apart.

4. In a galley lock, a base plate, a stud projecting from one face thereof, a head block slidably mounted on said stud, and a spring to move said base plate and said head block apart, said base plate and said head block having parts arranged to be engaged, respectively, by the thumb and fingers of the operator's hand, whereby said lock can be manipulated by the use of one hand only, said part of said head block being arranged to be engaged by the operator's hand while the head block is in operative engagement with the wall of the galley.

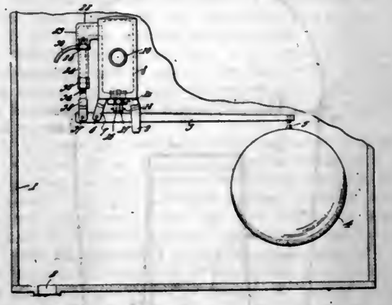
5. In a galley lock, a base plate, a stud projecting from one face thereof, a head piece slidably mounted on said stud, and a spring coiled about said stud and engaging said head piece, said head piece having parts arranged to be engaged by the fingers of the operator's hand while the head piece is in engagement with the wall of the galley.

[Claims 6 and 7 not printed in the Gazette.]

1,113,518. FLUSH-TANK REGULATOR. ERNEST G. WAGNER, Lewiston, Idaho. Filed Oct. 13, 1913. Serial No. 794,979. (Cl. 137—68.)

1. In a flush tank regulator, a reservoir provided with a continuously open regulating outlet discharging outside of the reservoir, having an inlet and a separate flushing outlet; a valve normally closing the flushing outlet thereby to establish a continuous flow from the inlet through the reservoir and out of the regulating outlet; a valve movable with respect to the regulating outlet to increase the flow therethrough; and a single float controlled means operatively connected with both valves to move the same toward open positions at once.

2. In a flush tank regulator, a reservoir provided with a continuously open regulating outlet discharging outside of the reservoir, the reservoir having an inlet and a separate flushing outlet; a valve normally closing the flushing outlet thereby to establish a continuous flow from the inlet through the reservoir and out of the regulating outlet; a valve movable with respect to the regulating outlet to increase the flow therethrough; a single float controlled means operatively connected with the valves to move the same toward open positions; and mechanism for adjusting the valve of the regulating outlet with respect to the float controlled means, thereby to vary the continuous flow through the regulating outlet.



3. In a flush tank regulator, a reservoir having a regulating outlet and provided with a flushing outlet; a needle valve controlling the regulating outlet; a valve controlling the flushing outlet; a float operated lever pivotally connected with the needle valve; and a fulcrum for the lever, the lever constituting means for operating the valve of the flushing outlet.

4. In a flush tank regulator, a reservoir having a regulating outlet and provided with a flushing outlet; a needle valve slidable in the reservoir and controlling the regulating outlet; a nut threaded upon the needle valve and adapted to engage the reservoir to adjust the needle valve with respect to the regulating outlet; a float controlled lever to which the needle valve is pivoted; a fulcrum for the lever; and a valve slidable in the flushing outlet and controlling the same, the last specified valve lying in the path of the lever, whereby both valves may be opened upon a single movement of the lever.

1,113,519. PLUMB-LIGHT. DAVID A. WALLACE, Chicago, Ill. Filed Apr. 21, 1913. Serial No. 762,538. (Cl. 240—8.4.)

1. In a device of the class described a container, an electric lamp mounted on the top thereof, a battery contained within said container, a plumb weight secured on the bottom of said container, and a non-rotatable protecting hood slidably mounted upon said container adapted to be moved upwardly to surround said lamp and shield the same from breakage.

2. In a device of the class described, a container, a lamp mounted on the top thereof, a plumb weight mounted on the bottom, a battery within said container adapted to light said lamp, a protecting hood slidably mounted upon said container adapted to surround said lamp, and a switch released by movement of said hood to disconnect the lamp from the battery when said hood is moved up to surround said lamp.

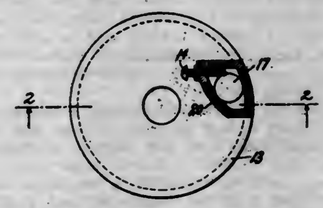
3. In a device of the class described a plumb, a lamp mounted thereon, a hood slidable upon said plumb adapted to surround and protect said lamp and a source of energy for said lamp adapted to be automatically disconnected from the lamp when said hood is moved upwardly around the lamp.

4. In a device of the class described a plumb, an electric light mounted thereon, and a protecting hood adapted to be extended over said light and acting simultaneously to disconnect the source of energy therefrom to extinguish the same.

5. In a device of the class described a casing, a cover, a lamp supported thereon, electrical means for lighting the lamp, and a protecting hood for the lamp movable independently of said lamp and acting to disconnect said means from the lamp.

[Claims 6 and 7 not printed in the Gazette.]

1,113,520. ELECTRIC-BOX CONNECTION. FREDERICK H. WARD, Brooklyn, N. Y. Filed Nov. 2, 1910. Serial No. 590,391. (Cl. 247—1.)



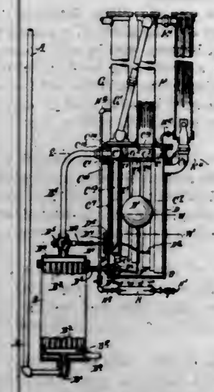
1. In combination with an electric outlet box, a spiral armored conduit adapted to be secured therein, said box having an inlet for said conduit and a screw to bind said conduit within said inlet, said screw adapted to enter said inlet at one side of its longitudinal center, said inlet larger at one side, said screw adapted to force said conduit to the smaller side of said inlet whereby the side of said screw and the side of said conduit are forced into frictional engagement.

2. In combination with an electric outlet box, a spiral armored conduit adapted to be secured therein, said box having an inlet for said conduit, and a screw to bind said conduit within said inlet, said screw adapted to enter said inlet at one side of its longitudinal center, said inlet having a larger clearance at one side, said screw adapted to force said conduit to the side of said inlet having the smaller clearance whereby said conduit is forced into frictional engagement at several points.

1,113,521. DISTILLING APPARATUS. ADDISON G. WATERHOUSE, New York, N. Y., assignor, by mesne assignments, to Atlas Still Mfg. Co., New York, N. Y., a Corporation of New York. Original application filed Mar. 13, 1909, Serial No. 483,334. Divided and this application filed Oct. 31, 1910. Serial No. 589,851. (Cl. 195—13.)

1. A distilling apparatus comprising a vaporizing chamber, a receptacle communicating therewith to receive discharge liquid therefrom, a thermal actuator in thermal

relation to the discharge liquid, and means controlled by the thermal actuator to regulate the flow of liquid through the still.



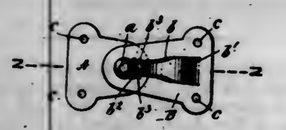
2. A distilling apparatus comprising a chamber having an inlet and an outlet spaced apart, tubes communicating with said chamber between the inlet and the outlet to receive liquid from said chamber, a receptacle to receive discharge liquid from said chamber, a thermal actuator in thermal relation to liquid in said receptacle, and means controlled by said actuator for regulating the flow of fluid to said chamber.

3. A distilling apparatus comprising a chamber having an inlet and an outlet, tubes spaced apart and communicating with said chamber between said inlet and outlet to receive liquid from said chamber, a casing containing said tubes, means to apply a heating fluid in said casing to said tubes, and a thermal actuator in thermal relation to liquid discharged from said chamber to control the flow of liquid through the still.

4. A distilling apparatus comprising a chamber, means to supply liquid to and discharge it from said chamber, tubes communicating with said chamber to receive liquid therefrom, said chamber having a vapor outlet, a condenser communicating therewith, a receptacle, means to discharge liquid from the chamber to said receptacle, a thermal actuator in thermal relation to discharge liquid in said receptacle, and means controlled by said thermal actuator for regulating the flow of liquid through said chamber and receptacle.

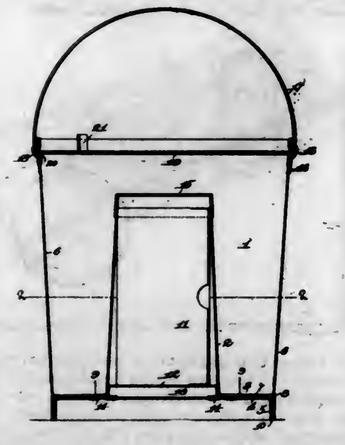
5. A distilling apparatus comprising a chamber, means to supply liquid to and discharge it from the chamber, tubes spaced apart and at their upper ends communicating with said chamber to receive liquid therefrom, a receptacle below said chamber inclosing said tubes and communicating with said discharge from said chamber, a condenser communicating with said receptacle.

1,113,522. GARMENT-CLASP. FRANK R. WATERMAN, Medford, Mass., assignor of one-half to Ernest J. Hall, Brockton, Mass. Filed Dec. 14, 1911. Serial No. 665,605. (Cl. 24—224.)



In a device of the character specified, a member bearing a stud, a slotted member adapted to receive said stud, a spring tongue integral with said slotted member and adapted to engage the side of the head of said stud and hold the same in operative position, and provided with lugs, said spring tongue being formed by the cutting of the slot in said slotted member, and the lugs thereon being adapted by the arching of said spring tongue and the spring pressure thereof to bear normally upon said slotted member.

1,113,523. RECEPTACLE. OSCAR J. WEEKS, New York, N. Y., assignor to The Weeks Carrier Company, New York, N. Y., a Corporation of New York. Filed May 10, 1913. Serial No. 766,703. (Cl. 229—23.)

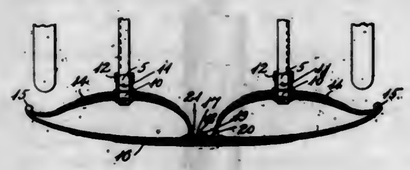


1. A receptacle having a well open at both ends flanges on the bottom of the well engaging with the bottom of the receptacle, a cap for closing the top of the well, and a plug for closing the bottom of the well.

2. A receptacle having a well open at both ends, the bottom of the receptacle being formed of superimposed layers of sheet material, flanges on the well lying in a horizontal plane between the layers of the bottom of the receptacle, a cap for closing the top of the well, and a plug for closing the bottom of the well.

3. A receptacle having a well open at both ends, both receptacle and well being formed of waterproof material, flanges on the bottom of the well engaging with the bottom of the receptacle, a cap for closing the top of the well, and a plug for closing the well at the bottom, said plug being formed of permeable material, which will swell when subjected to moisture.

1,113,524. SAFETY APPLIANCE FOR MOTOR-VEHICLES. ARTHUR B. WEIL and HERMAN F. STUHR, Cleveland, Ohio. Filed Jan. 7, 1913. Serial No. 740,664. (Cl. 213—39.)



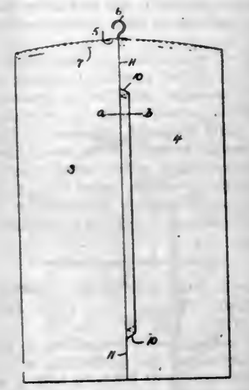
1. In combination with a motor vehicle frame, of a pair of semi-elliptical supporting springs one secured to each spring knuckle, a main bumper spring having each of its ends secured to one end of the corresponding supporting spring, and suitable sliding connections between the inner ends of said supporting spring and the main bumper spring.

2. In combination with a motor vehicle frame, of suitable clamps secured thereon, semi-elliptical supporting springs mounted in each clamp, a main bumper spring having each of its ends secured to one end of each bumper spring secured to one end of the corresponding supporting spring and having a suitable recess near its center, and a device carried by the inner end of each supporting spring engaging in said recess and providing a sliding joint between the supporting spring and the main bumper spring.

3. In combination with a motor vehicle frame, of a block resting upon the frame and having a recess provided with a serrated portion, a clamping member having a serrated portion engaging the serrated portion of the block, and another clamping member, means for drawing the clamping members together and supporting the entire device upon the frame, a bumper supporting spring mounted in each clamp, a main bumper spring extending across the machine and having each of its ends secured to the corresponding end of one of the supporting springs, and also having a recess near its center, and a pin carried by the inner end of each supporting spring and engaging in said recess.

4. A clamp for bumper springs comprising a block having a curved recess, a serrated portion within said recess, a clamping member having serrations adapted for engagement with said serrated portion, another clamping member coöperating with the first mentioned clamping member and having portions extending laterally beyond the sides of the block, U-shaped supporting clips engaging the lateral extensions of the second mentioned clamping member, suitable strips adapted to extend under the frame and from the arm of one of the U-shaped clips to the corresponding arm of the other, and clamping means provided upon both ends of each of said U-shaped clips.

1,113,525. MOTHPROOF BAG. JACOB WEINSTEIN, New Haven, Conn. Filed Mar. 27, 1914. Serial No. 827,541. (Cl. 206—7.)

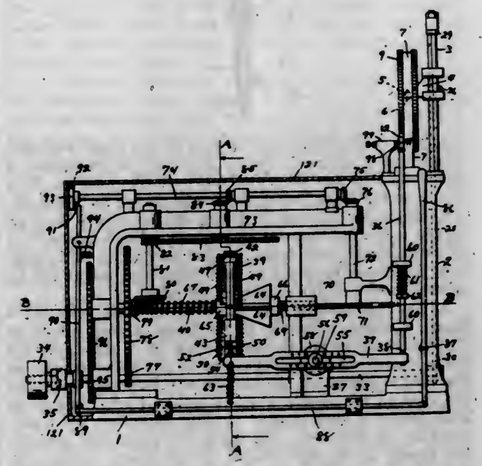


1. A moth-proof bag formed from flexible material including back and front members, the front members formed with outwardly projecting flaps shorter than the length of the bag and connected together at their ends and adapted to be folded upon themselves, and means for fastening the folded flaps against the faces of the bag.

2. A moth-proof bag formed from flexible material and provided at its front with a long opening shorter than the length of the bag the edges of the opening projecting beyond the faces of the bag forming two flaps connected together at their ends and adapted to be folded upon themselves and secured to the outer face of the bag.

3. A moth proof bag formed from flexible material and having a long opening at the front shorter than the length of the bag, the edges of the opening extended forming flaps, the upper and lower ends of which are curved and secured together, said flaps adapted to be folded upon themselves, and means for securing the folded flaps to the face of the bag.

1,113,526. MACHINE FOR HAMMERING METAL PACKING-RINGS. ALBERT W. WENZEL, Newark, N. J., assignor to American Piston Ring Company, a Corporation of New Jersey. Filed July 11, 1913. Serial No. 778,463. (Cl. 78—26.)



1. In a machine of the character described, a ring holder, a hammering member adapted to operate along the circumference of the ring, and means for imparting to the ring holder a predetermined varying feed with respect to said hammering member.

2. In a machine of the character described, a ring holder, a hammering member adapted to operate along the circumference of the ring, means for producing a relative feed between the ring and the hammering member, and means for predeterminedly varying said relative feed between the ring and hammering member.

3. In a machine of the character described, a ring holder, a hammering member adapted to operate along the circumference of the ring, means for producing a relative feed between the ring and the hammering member, a cam, and means whereby the cam predeterminedly varies said relative feed between the ring and the member.

4. In a machine of the character described, a ring holder, a hammering member adapted to operate along the circumference of the ring, means for producing a relative feed between the ring and the hammering member, a tripping cam for actuating the feeding mechanism, a controlling cam, and means whereby the controlling cam predeterminedly varies the actuation of the feed mechanism by the tripping cam.

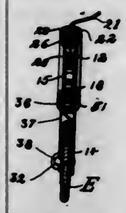
5. In a machine of the character described, a ring holder, a hammering member adapted to operate along the circumference of the ring, mechanism for producing relative feed between the ring and the hammering member, a tripping cam for actuating said feeding mechanism, a rotatable controlling cam connected with the ring holder, and connections between said controlling cam and the tripping cam whereby adjustment of said tripping cam is produced to predeterminedly vary the relative feed between the ring and hammering member.

[Claims 6 to 20 not printed in the Gazette.]

1,113,527. ERASER-HOLDER. ANTHONY E. YACCARINE, Brooklyn, N. Y. Filed Sept. 14, 1912, Serial No. 720,348. Renewed Feb. 28, 1914. Serial No. 821,834. (Cl. 120—36.)

1. The combination with a reel of the class described, comprising a housing, a spring-controlled reel pivotally

mounted therein, and a cord attached to said reel, of an eraser mounting comprising an extension to said housing fixedly supporting an eraser receiving stud, and a latch member pivotally attached to said reel housing and adapted to operatively engage said stud.



2. The combination with a reel of the class described comprising a frame, a sheave revoluble in the frame, a cord wound on the sheave to rotate it when drawn off, a spring on the frame connected to the sheave to be put under tension as the cord is drawn off the sheave, and arranged to rewind the cord on the sheave when released, of an extension on said frame, a stud carried by said extension, an eraser mounted on said stud, and means for removably securing the eraser on the stud.

3. The combination with a reel of the class described a frame, a sheave revoluble in the frame, a cord wound on the sheave to rotate it when drawn off, a spring on the frame connected to the sheave to be put under tension as the cord is drawn off the sheave, and arranged to rewind the cord on the sheave when released, of an extension on said frame, a stud carried by said extension, an eraser mounted on said stud, and means for removably securing the eraser on an arm pivoted on the frame to move its free end to and from the stud for engagement therewith, the end of the arm being arranged to engage the stud and retain the eraser on the stud.

4. The combination with a reel of the class described a frame, a sheave revoluble in the frame, a cord wound on the sheave to rotate it when drawn off, a spring on the frame connected to the sheave to be put under tension as the cord is drawn off the sheave, and arranged to rewind the cord on the sheave when released, of an extension on said frame, a stud carried by said extension, an eraser mounted on said stud, and means for removably securing the eraser on an arm pivoted on the frame to move its free end to and from the stud for engagement therewith, the end of the arm being arranged to engage the stud and retain the eraser on the stud, and a lug on the arm, the frame having a socket to be engaged by the lug to retain the arm closed on the eraser.

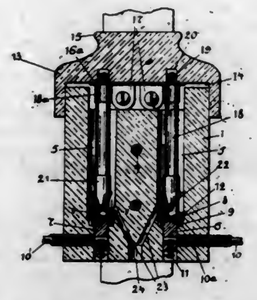
5. The combination with a reel of the class described a frame, a sheave revoluble in the frame, a cord wound on the sheave to rotate it when drawn off, a spring on the frame connected to the sheave to be put under tension as the cord is drawn off the sheave and arranged to rewind the cord on the sheave when released, said frame comprising a pair of plates, a casing securing the plates offset to form a bearing for the sheave, of an extension on said plates, a stud carried by said extension, an eraser mounted on said stud, and means for removably securing the eraser on the stud.

[Claim 6 not printed in the Gazette.]

1,113,528. FUSE-BLOCK. ULIN S. ANDERSON, deceased, Dallas, Tex., by Lou Belle Anderson, administratrix, Dallas, Tex. Filed Sept. 8, 1913. Serial No. 788,515. (Cl. 175—277.)

1. In a fuse block, an insulating body having parallel elongated recesses, binding posts, one mounted in the body at the bottom of each recess, sockets mounted on the ends of the binding posts within the recesses of the body, an insulating cap fitting on the body, a contact plate secured in the cap, and a pair of fuses removably attached to the plate and positioned so as to project into the recesses of the body, and engage in the sockets.

2. In a fuse block, an insulating body having a pair of parallel elongated recesses and a central wall between the recesses, binding posts mounted in the body at the bottom of the recesses, spring sockets mounted on the binding posts within the recesses, an insulating cap fitting on the body, a contact plate secured in the cap, fuses removably mounted on the plate and depending into the recesses of the body, said fuses having reduced ends entering the sockets, and means for fastening the block in an upright position.



3. A fuse block comprising an insulating body formed with two tubular apertures communicating with its top, a pair of binding posts mounted in said body at the lower end of said aperture, a cap superimposed upon the body, a socket superimposed upon each binding post within the correlated aperture, and means for mounting a pair of fuses upon the cap such as to establish a connection between the same.

4. A fuse block comprising an insulating body formed with two tubular apertures communicating with the top of the body, which apertures have communication with vent passages opening at the bottom of the body, a cap superimposed upon the body, and means for mounting upon the cap fuses received by said tubular apertures of the body.

5. A fuse block comprising an insulating body formed with two parallel tubular apertures opening in the top of the body, vent passages establishing communication between said tubular passages and the exterior face of the body, binding posts disposed adjacent to the bottom of each tubular passage, a socket surmounted upon each binding post, a cap separably surmounted upon said body, a metal plate mounted upon the under face of the cap, fuses being mounted in the tubular apertures of the body establishing electrical connection between said sockets and said metal plate.

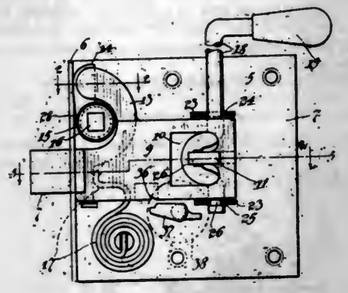
1,113,529. LOCK FOR VEHICLE-DOORS. WILLIAM HENRY APPLEBY, Chicago, Ill. Filed Jan. 10, 1913. Serial No. 741,238. (Cl. 70—42.)

1. A lock for vehicle doors comprising in combination a lock bolt, an oscillating rod projecting at a right angle to the path of movement of the lock bolt, a crank arm in said rod, an opposing lug on the lock bolt, the contacting surfaces between said lug and crank arm being in the form of opposing inclined planes.

2. A lock for vehicle doors comprising in combination a lock bolt, an oscillating rod projecting laterally at a right angle to the length of said bolt, inclined surfaces on said rod, and lock bolt in opposition to each other, whereby a force for retracting the lock bolt is directed away from the rod in a line through the longitudinal axis of the lock bolt.

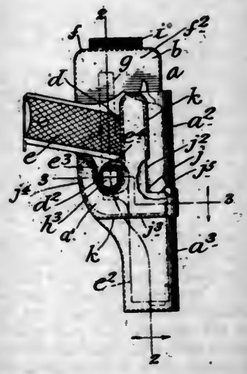
3. A lock for vehicle doors comprising in combination a lock bolt, a lug thereon provided with an inclined surface, a rod extending at a right angle to the path of movement of and adapted to engage said lug and actuate the lock bolt, a single piece dust cap, and means connecting said cap with the rod, whereby the rod is sustained against longitudinal movement, substantially as described.

4. A lock for vehicle doors comprising in combination a lock bolt, a rod projecting at right angles thereto, means connecting said rod and lock bolt, whereby on turning the rod the lock bolt is retracted, and a single piece dust cap inclosing said lock bolt, and the opposing surface of the rod provided with bearings for the rod, one of which locks the rod against longitudinal movement when the cap is in its operative position, substantially as described.



5. A lock for vehicle doors comprising in combination a lock bolt, a base support therefor, a spring automatically projecting said lock bolt, said lock bolt being provided with a shank plate having therein a slot, a lug projecting into said slot provided with an inclined face, a rod extending at a right angle to the path of movement of the bolt, having a crank arm bent therein, provided with a flat inclined face parallel to and opposing said lug, the inner end of said rod being provided with an annular groove and a detachable single piece cover projecting into said groove and maintaining said rod against longitudinal movement, substantially as described.

1,113,530. GUN-HOLSTER. FRANCIS H. AUDLEY, New York, N. Y. Filed Apr. 20, 1912, Serial No. 692,022. Renewed Mar. 16, 1914. Serial No. 825,156. (Cl. 224—2.)



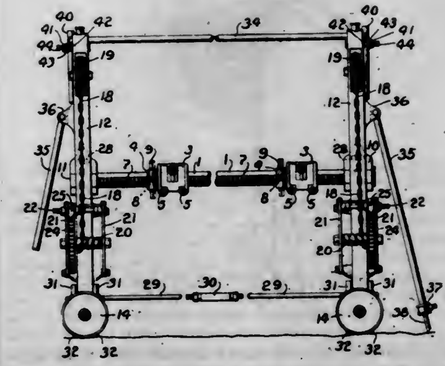
1. A holster for magazine guns, comprising a body adapted to inclose the barrel, breech and trigger guard portions of the gun, and being of less width than the distance from the end of the stock to the breech, to permit the stock to project laterally from the holster, the trigger guard inclosing portion of the holster being provided with a recess in its front wall disposed longitudinally of the holster, and a locking lug in line with said recess adapted to engage the finger guard, the lateral portions of the holster adjacent to said recess being adapted to engage the finger guard and hold the gun from lateral movement in the holster.

2. A holster for magazine guns, comprising a body adapted to inclose the barrel, breech and trigger guard portions of the gun, and being of less width than the distance from the end of the stock to the breech, to permit the stock to project laterally from the holster, the trigger guard inclosing portion of the holster being provided with a recess in its front wall disposed longitudinally of the holster, and a locking lug in line with said recess adapted to engage the finger guard, the lateral portions of the holster adjacent to said recess being adapted to engage the finger guard and hold the gun from lateral movement in the holster, and a brace for the said recessed front wall having portions extending around the edges thereof, and secured to the holster.

3. A holster comprising portions for receiving the barrel, breech and trigger-guard of a gun, the rear wall being extended beyond the front wall and provided with attaching means, the trigger guard inclosing portion of the holster having its front wall provided with a longitudinally disposed recess, open at the end nearer the attaching end of the holster, the portion of the holster on the outer side of said recess forming a trough to receive the trigger guard and hold the gun from lateral movement in the holster, a spring secured to the rear wall of the holster and a locking lug carried by said spring, and located in line with said recess, for engaging the trigger guard and locking the gun in the holster.

4. A holster provided with portions for inclosing the barrel, breech and trigger guard of a gun, the trigger guard inclosing portion having its front wall provided with a longitudinally disposed recess, and the portion thereof on the outer side of said recess forming a trough to receive the trigger guard and hold the gun from lateral movement in the holster, a spring plate secured to the rear wall of the holster, a locking lug for engaging the trigger guard, secured to said spring plate in line with said recess, provided with an inclined face and a stop secured to the back wall and engaging the spring plate to limit the outward movement thereof.

1,113,531. QUARRYING-MACHINE. ALBERT BALL and FRANK A. BALL, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed June 29, 1907. Serial No. 381,403. (Cl. 255—51.)



1. A quarrying machine comprising, in combination, a quarry bar, a supporting structure therefor having three or more supporting points for contact with the quarry bottom, means flexibly uniting the ends of said quarry bar to said supporting structure to permit the machine to flex and accommodate itself to the inequalities of the quarry bottom, and means for rendering said supporting structure rigid when in position for work.

2. A quarrying machine comprising, in combination, a quarry bar, a supporting structure therefor comprising

standards each having a plurality of supporting parts for contact with the quarry bottom, means flexibly supporting said quarry bar upon said standards to permit the latter to assume different angular positions with respect to said quarry bar so that said supporting parts may all rest firmly upon an uneven surface of the quarry bottom, and means for rendering said supporting structure rigid in the position thus assumed.

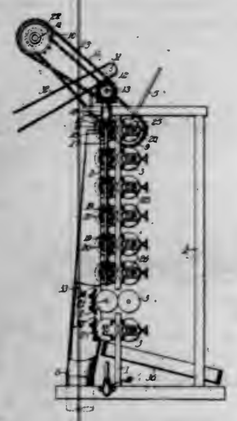
3. A quarrying machine comprising, in combination, a pair of end standards, supporting trucks therefor each having a pair of truck wheels, a quarry bar, independent flexible means for vertically adjusting the ends of said bar upon said stanards while permitting the latter to assume positions in different planes owing to inequalities of the surface on which the wheels rest, and means for clamping said quarry bar to said standards to rigidly secure the parts in the relative positions which they have assumed owing to such inequalities.

4. A quarying machine comprising, in combination, a pair of end standards, supporting trucks therefor each having a pair of truck wheels, a quarry bar, means flexibly uniting each end of said quarry bar to its respective standard and permitting the parts thus united to accommodate themselves to the positions assumed by the wheels upon the inequalities of the quarry bottom, and means rigidly to secure said parts in the position thus assumed.

5. The combination with a quarry bar of a truck supported frame therefor, means for flexibly supporting the bar upon the frame for purposes of transportation, means for vertically adjusting said bar on said frame, and means available during operation for fixedly holding the bar upon the frame and said frame in its assigned position upon the quarry bottom.

[Claims 6 to 16 not printed in the Gazette.]

1,113,532. MACHINE FOR TREATING CLOTH. ISRAEL BARNETT, Milwaukee, Wis. Original application filed Oct. 5, 1910, Serial No. 585,504. Divided and this application filed Nov. 18, 1910. Serial No. 593,022. (Cl. 19—9.)



1. A machine for separating animal fiber from non-fibrous material, comprising a series of rolls, an opposite series of rolls in frictional relation thereto, said rolls being adapted to disintegrate the mass, means for rotating said rolls at different speeds, and in opposite directions, means for feeding the unseparated material to said rolls and means for removing the non-fibrous material as it passes between the rolls.

2. In a machine for separating animal from vegetable fibers, a plurality of rubbing rolls for disintegrating the materials having frictionally engaging roughened surfaces.

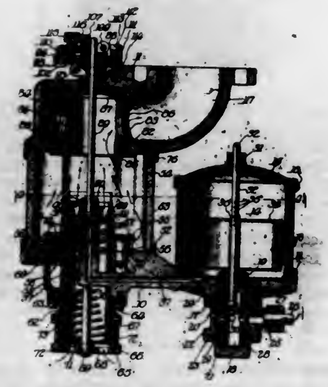
3. In a machine for separating animal from vegetable fiber, a plurality of oppositely rotating rolls in frictional engagement with each other, one of said rolls being formed of a plurality of felt disks.

4. In a machine for separating animal from vegetable fiber, a plurality of oppositely rotating rolls having frictional engaging surfaces, said rolls being arranged to rotate at different speeds to exert a rubbing and brushing disintegrating action upon the material to be separated.

5. In a machine for separating animal fiber from vegetable fiber after the latter has been reduced, the combination of a plurality of sets of oppositely rotating rolls arranged one above the other for exerting a rubbing and brushing action upon the materials to pulverize the reduced vegetable material.

[Claims 6 to 12 not printed in the Gazette.]

1,113,533. CARBURETER. RICHARD L. BARRETT, Chicago, Ill. Filed July 19, 1911. Serial No. 639,339. (Cl. 48—155.2.)



1. In a carbureter, the combination of a casing having a mixing chamber therein, and a nozzle communicating with said chamber, said nozzle having a liquid fuel inlet passage and an outlet slit extending radially therefrom and a plurality of air passages intersecting said slit, whereby the fuel and the air will be intimately mixed, substantially as described.

2. In a carbureter, the combination of a casing having a mixing chamber therein, a nozzle communicating with said chamber, said nozzle having a liquid fuel inlet passage and an outlet slit extending radially therefrom, a plurality of air passages intersecting said slit, and means between said fuel inlet passage and said air passages for finely dividing said fuel, whereby when the latter comes in contact with the air an intimate mixture will be obtained, substantially as described.

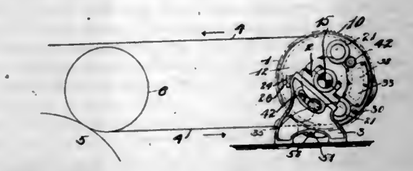
3. In a carbureter, the combination of a casing having a mixing chamber therein, a nozzle communicating with said chamber, said nozzle having a liquid fuel inlet passage and an outlet slit extending radially therefrom, a plurality of air passages intersecting said slit, and an apertured rib in said slit between said fuel inlet passage and said air passages, whereby the fuel will be finely divided and an intimate mixture will be obtained between the fuel and the air flowing through said air passages, substantially as described.

4. In a carbureter, the combination of a casing having a mixing chamber therein, a nozzle communicating with said chamber, said nozzle having a liquid fuel inlet passage and an outlet slit extending radially therefrom toward but not reaching the periphery of said nozzle, and a plurality of air passages extending through said nozzle and intersecting said slit, substantially as described.

5. In a carbureter, the combination of a casing having a mixing chamber therein, a nozzle communicating with said chamber, said nozzle having a liquid fuel inlet passage and an outlet slit extending from said inlet toward but not reaching the periphery of said nozzle, a plurality of air passages through said nozzle and intersecting said slit, and an apertured rib in said slit between said air passages and said inlet passage, the apertures of said rib being radially located between said air passages, whereby a portion of the fuel flowing through the apertures of said rib will be deflected to the outer edge of said slit before mixing with the air flowing through said passages, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,113,534. SUCTION APPARATUS FOR PAPER-MACHINES. ARTHUR E. BINNS, Norwich, Conn. Filed Sept. 18, 1913. Serial No. 790,435. (Cl. 92—53.)



1. In an apparatus of the character described, a perforated rotatable cylinder, relatively stationary heads engaging and closing the opposite ends of said cylinder, means supporting said cylinder located interiorly thereof and providing a suction space therein, and means for arjustably holding each of said relatively stationary heads in contact with the ends of said rotatable cylinder.

2. In an apparatus of the character described, a perforated rotatable cylinder, relatively stationary heads engaging and closing the opposite ends of said cylinder, means carried by said heads for supporting said cylinder, including two internally located and spaced cylinder supporting rolls extending longitudinally of the cylinder with their ends engaging said heads, said means providing a suction space between said rolls and beneath that part of the cylinder between said rolls, and means connecting and tensioning said heads against said cylinder ends and against said supporting rolls.

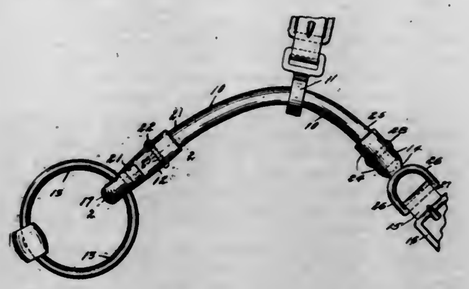
3. In an apparatus of the character described, a perforated rotatable cylinder, relatively stationary heads engaging and closing the ends of said cylinder, means carried by said heads for supporting said cylinder, including two internally located and adjacent cylinder engaging and supporting rolls and a filler to close the space below and between said rolls, said rolls and filler extending longitudinally of said cylinder with their ends engaged by said heads to form a suction space between said rolls and beneath that part of the cylinder between said rolls, and means including an adjustable tensioning spring, for holding said heads tensioned against the ends of said cylinder, supporting rolls and filler.

4. In an apparatus of the character described, a perforated rotatable cylinder, relatively stationary heads engaging and closing the ends of said cylinder, means carried by said heads for supporting said cylinder, including two internally located and adjacent cylinder engaging and supporting rolls and a filler to close the space below and between said rolls, said rolls and filler extending longitudinally of said cylinder with their ends engaged by said heads to form a suction space between said rolls and beneath that part of the cylinder between said rolls, and spring means adjustably connected with said heads and arranged to adjustably tension the same against the ends of said cylinder, supporting rolls and filler.

5. In an apparatus of the character described, a perforated rotatable cylinder, relatively stationary heads engaging and closing the ends of said cylinder, two internally located and adjacent cylinder engaging and supporting rolls carried by said heads and extending longitudinally of said cylinder, a centrally located longitudinally extending internal roll carried by said heads and engaging and closing the space between and below said cylinder supporting rolls, said heads engaging the ends of said rolls and providing a suction space between and above said rolls and beneath that part of the cylinder engaged by said supporting rolls; and spaced tension springs within said cylinder adjustably connected with said heads and arranged to adjustably tension said heads against the ends of said cylinder and said internally located rolls.

[Claims 6 to 19 not printed in the Gazette.]

1,113,535. HARNESS-HOOK. CHARLES BLUME, Chicago, Ill. Filed Aug. 28, 1913. Serial No. 787,091. (Cl. 24—123.)



In a harness hook, the combination of a hollow shank having a longitudinal opening, adapted to receive and surround the end of a strap, with a hook having interior recesses and shoulders on both the point and the base, said recesses being formed in line with the opening in the shank and adapted to receive and surround the end of the strap, and said shoulders being adapted to limit the movement of said strap, substantially as and for the purpose described.

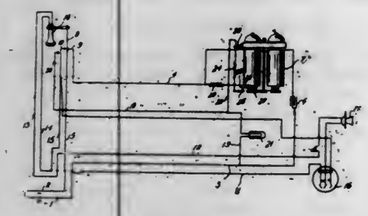
1,113,536. METALLIC POWER-BELT. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to James E. Cagney, Jr., Chicago, Ill. Filed May 23, 1912. Serial No. 699,152. (Cl. 74—64.)

The combination of a pair of side members having apertures each provided with a pair of oppositely disposed parallel walls, a cylindrical pin having flattened ends adapted to fit tightly in said apertures, a central member mounted to pivot on said pin and having a perforation through which said pin is disposed, a cylindrical casing of length less than the width of said central member disposed in said perforation, a plurality of anti-friction elements disposed in said casing and surrounding said pin, and a pair of disks of diameter greater than the internal diameter of said casing fitting in the ends of said perforations and provided at their centers with apertures shaped to fit snugly the flattened ends of said pins, whereby said pin, sidebars and disks are rigidly held together and the disks in contact with the ends of said casing.

1,113,537. TELEPHONE-LIGHTING SYSTEM. JAMES A. BOZE, Waxahachie, Tex. Filed Apr. 14, 1913. Serial No. 760,891. (Cl. 179—90.)

1. In a subscriber's telephone set lighting system, the combination with the ringing and line circuits, of an auxiliary lamp connected with said circuits and arranged to burn when said circuits are closed.

2. In a subscriber's telephone set lighting system, the combination with the ringing and line circuits, and the bell-coils thereof, of a lamp connected with said circuits and coils arranged so that a circuit through said lamp is closed when said coils are energized.



3. In a subscriber's telephone set lighting system, the combination with the ringing and line circuits, the switch hook, and the bell coils, of a contact coöperating with the talking circuit contact of the switch hook, a pair of normally open contacts associated with the bell coils, and a lamp connected with contacts named and also connected with said circuits.

4. In a subscriber's telephone set lighting system, the combination with the ringing and line circuits, of an auxiliary lamp connected with said circuits and arranged to burn when said circuits are closed, and a resistance element in series with said lamp.

5. In a subscriber's telephone set lighting system, the combination with the ringing and line circuits and the switch dial, of an auxiliary lamp connected with said circuits and arranged to burn when said circuits are closed, said lamp being located in position to illuminate the switch dial of an automatic telephone.

[Claim 6 not printed in the Gazette.]

1,113,538. TIMEKEEPER FOR TELEPHONES. CLARK L. BRAUCHER and EDWARD R. JOHNSON, Cincinnati, Ohio. Filed Apr. 14, 1913. Serial No. 760,954. (Cl. 248—20.)

1. A plate for mounting a watch having an orifice of a size smaller than the size of a desired time piece, a time piece casing, and means on the under side of the plate for mounting said casing thereon, said plate being of a length sufficient to accommodate a pad of paper for making a record.

2. A combination of a plate having a means of supporting the same, said plate having an orifice of a size smaller than the size of a desired time piece, pins on the under side of the plate near said hole, and a casing for a time piece, and means on the casing for detachably mounting the same on the pins, with said plate being of a length sufficient to accommodate a pad of paper for making a record.

1,113,539. MANUFACTURE OF MANGANESE STEEL. WILLIAM CAMPBELL, New York, N. Y., JOHN H. HALL, High Bridge, N. J., and HENRY M. HOWE, Bedford Station, N. Y., assignors to Taylor-Wharton Iron and Steel Company, a Corporation of New Jersey. Filed Aug. 10, 1908. Serial No. 447,742. (Cl. 75—1.)

1. A manganese steel alloy containing from nine to five per cent. of manganese and containing carbon within the following limits, viz., substantially 1.075 per cent. minus .04 of the percentage of manganese as one limit and 1.25 per cent. plus $\frac{1}{11}$ of the percentage of manganese as the other limit, and having the qualities of ductility and hardness substantially as described.

2. A manganese steel alloy containing from 9 to 6 per cent. manganese and containing carbon in an amount not exceeding the following limits, viz: 1.075 per cent. minus .04 of the percentage of manganese as one limit, and 1.075 per cent. plus $\frac{1}{11}$ of said percentage of manganese as the other limit.

3. A manganese steel alloy containing from 9 to 6 per cent. manganese and having combined therewith an amount of carbon not substantially exceeding the following limits, viz: 1.075 per cent. minus .04 of the percentage of manganese as one limit and 1.075 per cent. plus $\frac{1}{11}$ of said percentage of manganese as the other limit, said alloy being practically non-magnetic, and characterized by ductility combined with hardness.

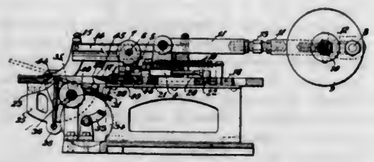
4. A manganese steel alloy containing less than 9 per cent. manganese and containing carbon within the following limits, viz: 1.075 per cent. minus .04 of the percentage of manganese as one limit, and 1.075 per cent. plus $\frac{1}{11}$ of the percentage of manganese as the other limit, said alloy being practically non-magnetic and presenting the appearance of a homogeneous substance when magnified to 100 diameters and having the characteristic of hardness combined with ductility.

1,113,540. INSOLE. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 28, 1907. Serial No. 365,142. (Cl. 36—22.)

1. An insole provided with transverse slits extending part way only through the thickness of the insole, said slits marking the beginning and the end of the stitch receiving rib, said insole being provided with a stitch receiving rib extending around the edge of the sole from one of said slits to the other and the edge of the heel being intact or solid.

2. An insole blank provided with transverse slits extending obliquely to the surface of the sole toward the toe end of the sole and part way only through the thickness of the sole arranged to mark the beginning and end of the stitch-receiving rib, said insole being provided with a stitching rib and having the edge of its heel portion intact or solid.

1,113,541. MACHINE FOR OPERATING ON INSOLES. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 19, 1907. Serial No. 384,511. (Cl. 12—40.)



1. A machine for operating on insoles, having in combination separated sole slitting knives, means for causing the knives to cut transverse slits extending part way only through the sole at the points where the stitch receiving rib begins and ends, gaging and supporting means for the sole, and means acting automatically to regulate the depth of said slits in soles of different thickness.

2. A machine for operating on insoles, having in combination separated sole slitting knives, means for causing the knives to cut transverse slits extending part way only through the sole at the points where the stitch receiving rib begins and ends, gaging means for the sole to determine the position of said slits, and means for supporting the sole in a plane inclined to that in which the knives cut.

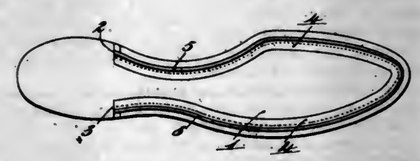
3. A machine for operating on insoles, having in combination a reciprocating cross head, slitting knives carried thereon, a sole support provided with a supporting surface inclined to the direction of movement of the cross head, a pivotally mounted presser foot movable bodily in the same direction as the cross head to engage the sole, and means for moving the presser foot on its pivot to clamp the sole against the work support.

4. A machine for operating on insoles, having in combination a work support, a reciprocating cross head, slitting knives therein, mechanism including a yielding connection for actuating the cross head, and a presser foot arranged to limit the forward movement of the cross head.

5. A machine for operating on insoles, having in combination a work support, a reciprocating cross head, slitting knives thereon, mechanism including a yielding connection for actuating the cross head, and a presser foot yieldingly connected to the cross head arranged to limit the forward movement of the cross head.

[Claims 6 to 10 not printed in the Gazette.]

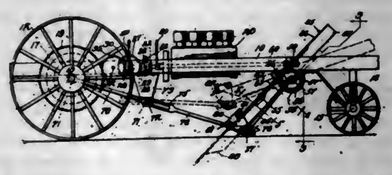
1,113,542. METHOD OF PREPARING INSOLES. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 28, 1907, Serial No. 365,142. Divided and this application filed June 15, 1914. Serial No. 845,187. (Cl. 12—146.)



1. The method of preparing insoles which consists in cutting transverse slits extending part way only through the thickness of the sole at the points where it is desired to have the stitch receiving rib begin and end, and in thereafter making a cut around the sole beginning at one of said slits and ending at the other to form a stitch receiving rib.

2. The method of preparing insoles which consists in cutting transverse slits in the sole extending obliquely toward the toe end of the sole at the points where it is desired to have the stitch receiving rib begin and end, and part way only through the thickness of the sole, and in thereafter making a cut around the sole beginning at one of said slits and ending at the other to form a stitch receiving rib.

1,113,543. CAPSTAN. CHARLES H. CLARK, Watertown, Wis. Filed Sept. 21, 1912. Serial No. 721,555. (Cl. 57—22.)



1. The combination with a motor driven capstan embracing a frame and a motor thereon operatively connected to the capstan, of a downwardly and rearwardly inclined anchor therefor, guides on the frame to guide the endwise movement of the anchor and operative connections between the motor and anchor to mechanically force the same into and withdraw it from the ground.

2. The combination with a motor driven capstan, of a downwardly and rearwardly inclined anchor therefor, guides carried by the frame for the upper and lower ends of the anchor, and operative connections between the motor and anchor, embracing a reversing gear mechanism, whereby the anchor may be forced into or withdrawn from the ground by said motor.

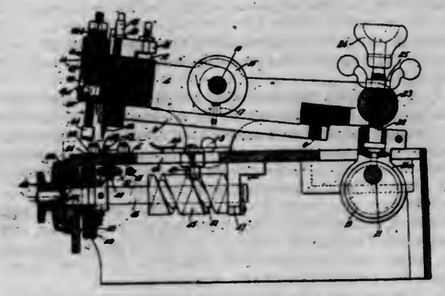
3. The combination with a motor driven capstan, embracing a frame and a motor thereon operatively connected to the capstan, of a downwardly and rearwardly inclined anchor therefor, guides carried by the frame for the upper and lower ends of the anchor, and rack and pinion mechanism operated by the motor for forcing the anchor into and withdrawing it from the ground.

4. The combination with a motor driven capstan, embracing a wheeled frame and a motor thereon operatively connected to the capstan, of an anchor therefor insertible into and withdrawable from the ground, a rack arranged longitudinally of the anchor, a rotative pinion mounted on the frame and meshing with said rack, and means whereby said pinion is driven from said motor, said anchor being swingable about the axis of said pinion as a fulcrum, whereby when the anchor is withdrawn from the ground the overweight of the upper end thereof swings the lower end of the anchor away from the ground.

5. The combination with a capstan, embracing a rigid frame, of an inclined anchor therefor insertible into and withdrawable from the ground, guide means for the upper end of the anchor carried by said frame, other guide means below and suspended from the frame for the lower end of the anchor, and operating means carried by the frame and co-acting with the anchor to positively withdraw the anchor from and insert it into the ground.

[Claims 6 to 17 not printed in the Gazette.]

1,113,544. SOLE-CUTTING AND MARKING MACHINE. MILLER COOK, Jr., Whitman, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 29, 1907. Serial No. 376,280. (Cl. 12—17.)



1. A sole-cutting and marking machine comprising provisions for locating the heel portion of a sole, an identification marker, and cutting means for making incisions in the sole adjacent the edges thereof, and simultaneously causing pressure between the sole and the identification marker.

2. A sole cutting and marking machine comprising provisions for locating the heel portion of a sole, cutting means for making incisions in the sole adjacent the edges thereof, a non-penetrating indenting marker arranged between said cutting means to produce an indented mark between the incisions made thereby, and a device arranged opposite to said marker for making an indented mark on the opposite side of the sole.

3. A sole cutting and marking machine comprising a support for a sole, an indenting marker held by said sup-

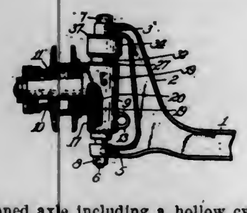
port, a cutter head movable toward and from the support, separated cutters and an intermediate indenting marker carried by said head adapted to bear on a sole placed on the support to produce cuts at the edges of the sole and an indented mark in line therewith directly opposite the mark produced by said first marker on the other surface of the sole.

4. A sole cutting and marking machine comprising means adapted to cut transversely the channel lips of a channeled sole, an adjustable gage for positioning the sole to receive said cuts at a distance from the heel end of the sole proportional to the size thereof, and a size marker adjustable simultaneously with said gage to indicate on the sole the size for which the adjustment is made.

5. A sole cutting and marking machine comprising means adapted to cut transversely the channel lips of a channeled sole, an adjustable gage for positioning the sole to receive said cuts at a distance from the heel end of the sole proportional to the size thereof, means for adjusting the gage, and a marker bearing size identification marks, adjustable by said means, for indicating on the sole the size for which the gage adjustment is made.

[Claims 6 to 22 not printed in the Gazette.]

1,113,545. CUSHIONED VEHICLE-AXLE. EDWARD W. DAVIS, Indianapolis, Ind. Filed Apr. 21, 1913. Serial No. 762,637. (Cl. 21—141.)



1. A cushioned axle including a hollow cylindrical supporting housing having a spring-seat therein, a coil spring supported upon the spring-seat, a hollow sleeve in the housing and supported by means of the spring, a steering arm fixedly connected to the housing, an axle-bar having an ear supported upon the sleeve and thereby mainly supporting the load of the axle bar, the latter having also an ear extending under the housing, and a pivot bolt secured to the ears and extending through the spring and the sleeve and enabling the two ears to jointly support the load.

2. A cushioned axle including a hollow cylindrical housing having a stub-axle on its side for support, the interior of the housing having a spring-seat therein, a coil spring seated upon the spring-seat, a bearing plate supported upon the spring, a hollow sleeve supported upon the bearing plate, a load supporting axle-bar having an ear supported upon the sleeve for mainly supporting a load and an ear extending under the lower end of the housing, and a pivot bolt extending through the ears and also through the spring and the sleeve and secured to the ears for enabling the two ears to jointly support the load.

3. A cushioned axle including a hollow cylindrical housing having a stub-axle and also a boss thereon, the housing having a spring-seat therein, a coil spring supported upon the spring-seat, a sleeve supported by means of the spring, a dust-cap supported upon the sleeve and extending about the upper portion of the housing, an axle-bar having an ear supported upon the dust-cap and an ear extending under the housing, and a pivot bolt secured to the ears and extending through the spring and the sleeve and also through the dust-cap.

4. A cushioned axle including a hollow cylindrical housing part having a supporting stub-axle on its side, the upper portion of the housing part having a cylindrical guide part removably secured thereto, the lower portion of the part having a spring-seat therein, a sleeve movably guided in the guide part of the housing, a spring supported upon the spring-seat and supporting the sleeve, an axle-bar having an ear supported upon the sleeve and an ear extending under the housing part, and a pivot bolt secured to the ears and extending through the spring and the sleeve.

5. A cushioned axle including a hollow cylindrical housing having a spring-seat in the lower portion thereof, a sleeve extending through and movably guided in the lower portion of the housing, a spring supported upon the spring-seat and extending about the sleeve, relatively movable bearing plates supported upon the spring and extending about the sleeve, a second sleeve supported upon the bearing plates and movably guided in the upper portion of the housing, a dust-cap supported upon the second sleeve and extending about the upper portion of the housing, an axle-bar having an ear that is seated upon the dust-cap and an ear that extends under the housing, and a pivot bolt secured to the ears and extending through the spring and the sleeves and also through the dust-cap.

[Claims 6 to 8 not printed in the Gazette.]

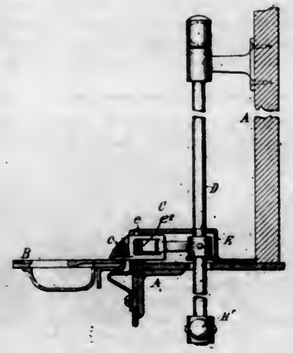
1,113,546. ELECTROLYTE FOR USE IN ELECTRO-METALLURGY. NICOLAS HENRI MARIE DEKKER, Paris, France. Filed Aug. 17, 1912. Serial No. 715,593. (Cl. 204—1.)

1. An electrolytic process for refining metals consisting in placing an anode and a cathode in an electrolyte consisting of a salt of the metal to be refined but no water except the water of crystallization of the salts in presence and passing a current from the anode through the electrolyte to the cathode.

2. An electrolytic process for refining metals consisting in placing an anode and a cathode in an electrolyte consisting of a salt of the metal to be refined but no water except the water of crystallization of the salts in presence, the electrolytic bath being prepared by melting a salt of the metal to be refined, and adding only the amount of water which is necessary for replacing the water of crystallization evaporated in the bath, owing to the heating and passing an electric current through the anode, electrolyte and cathode.

3. An electrolytic process for refining metals consisting in placing an anode and cathode in a bath containing a salt of the metal to be refined but no water except the water of crystallization of the salts in presence, the electrolytic bath being prepared by solving a salt of the metal to be refined in an alkaline or earthlike sulfate melted by means of heat in its water crystallization and passing a current through said anode, bath and cathode.

1,113,547. TRAP-DOOR LOCK FOR RAILWAY-CARS AND SIMILAR STRUCTURES. OLIVER M. EDWARDS, Syracuse, N. Y. Filed Nov. 11, 1910. Serial No. 591,776. (Cl. 105—184.)



1. In a car platform the combination, substantially as set forth, of a trap door mounted therein, locking means provided with a pivotally mounted locking bolt having a face adapted to coact with the door when closing to move it out of locking position and arranged relatively to the door and platform to be exposed to view when in position to lock the door in the platform, and operating means for actuating such bolt out of locking position to release the door.

2. In a car platform the combination, substantially as set forth, of a trap door mounted therein, locking means provided with a pivotally mounted locking bolt arranged above the surface of the platform and door in plain sight of the operator having a face which coacts with the door in closing the same, and operating means adapted to move such bolt into position to release the door.

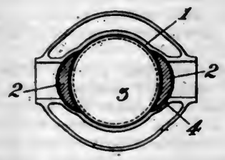
3. In a car platform the combination, substantially as set forth, of a trap door mounted therein, locking means provided with a pivotally mounted locking bolt arranged to engage with the upper surface of the door and movable in planes substantially parallel with such surface and having a face adapted to coact with the door in closing the same, and operating means adapted to move such bolt into position to release the door.

4. In a car platform the combination, substantially as set forth, of a trap door mounted therein, a pivotally mounted locking bolt arranged on its pivot at an angle to the platform and to engage with the supper surface of the door for locking the same in the platform, having an eccentric face to coact with the door in closing or moving the bolt out of locking position, and operating means for releasing the door from the locking bolt.

5. In a car platform, the combination of a trap door mounted therein, locking means provided with a pivotally mounted locking bolt arranged with its axial line at an angle to the plane of the platform, and having a cam face normally arranged in the path of the door as the door approaches the limit of its closed position, such cam face extending spirally around the axis of the locking bolt, and operating means connected to the bolt and arranged to withdraw the bolt out of operative position, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,113,548. METHOD OF MAKING ENGINE-CYLINDERS. MARTIN FISCHER, Zurich, Switzerland, assignor to Fischer Motor Corporation, a Corporation of New York. Original application filed Jan. 12, 1912, Serial No. 670,904. Divided and this application filed Apr. 29, 1914. Serial No. 835,103. (Cl. 29—148.)



1. A process for the construction of a motor of the character described consisting in boring the slide valve tracks, placing slide valves cut out of a solid cylinder in said bores, thereupon boring the cylinder proper, whereby all working surfaces are produced by turning, boring or circular grinding.

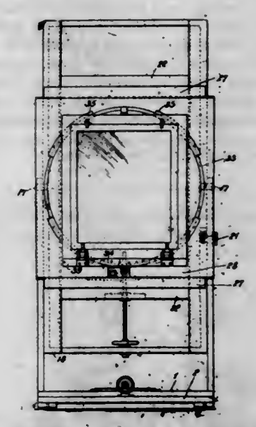
2. A method for the construction of motors consisting of boring a recess longitudinally in the side of the cylinder, inserting therein a slide valve, and finish-boring or grinding of the internal surface of the cylinder with the valve in position.

3. A method of machining engine cylinders consisting of forming in a hollow cylinder casting a longitudinal depression in the side to constitute a valve seat, forming the outside or back of a sliding valve to conform to said seat and securing it in the seat, and thereupon finish-boring the cylinder and interior face of the valve at the same time.

4. A method of constructing an engine cylinder and valve seat consisting of effecting a sectional cylindrical cut from the inside into the inner wall of the cylinder, and thereafter finishing the main inner surface of the cylinder.

5. A method of machining the interior of an engine cylinder with valve seat consisting of cutting on a cylindrical section the material away from the side of the proposed interior cylindrical surface on a radius less than the radius of the cylinder boring, fitting and securing a valve in said cylindrical sectional recess, and thereafter finishing the interior wall of the cylinder and the valve at the same time.

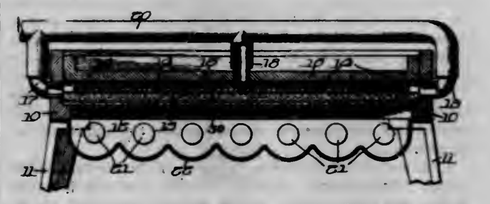
1,113,549. EASEL FOR PRINTING-FRAMES AND PHOTOGRAPHIC ENLARGEMENTS. EMIL FRANKE, New York, N. Y. Filed Oct. 30, 1912. Serial No. 728,696. (Cl. 88—24.)



1. In a photographic printing apparatus, the combination of a printing frame, means for supporting said printing frame composed of a swinging frame, a vertically movable frame mounted on said swinging frame, a horizontally movable frame mounted on said vertically movable frame, and a rotating frame mounted on said horizontally movable frame.

2. In a photographic printing apparatus, the combination of a printing frame, means for supporting said printing frame composed of a swinging frame, a vertically movable frame mounted on said swinging frame, a horizontally movable frame mounted on said vertically movable frame, a rotating frame mounted on said horizontally movable frame, and separate means for moving each of said frames.

1,113,550. PHOTOPRINTING APPARATUS. HYMAN ELI GOLDBERG, Chicago, Ill. Filed Jan. 22, 1912. Serial No. 672,560. (Cl. 101—204.)



1. In combination, type units having a transparent body and an opaque face, the type body being of substantial thickness, and a transparent tray having transparent stops thereon for holding the type units in position.

2. In combination, type units having a transparent

body and an opaque face, the type body being rectangular in outline and of substantial thickness, and a transparent tray having a partition adapted to hold the type units in position laterally.

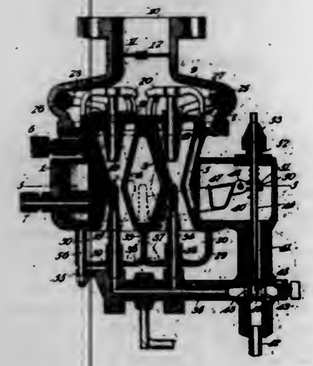
3. In combination, type units having a transparent body and an opaque face, the type body being of substantial thickness whereby one type unit may hold itself and other type units by mere edge-contact, a transparent tray for said type unit and transparent partitions in said tray for holding said type units in columns.

4. In a photoprinting outfit the combination of type units having a transparent body and an opaque type face, the type body being rectangular in outline and of substantial thickness, a rectangular transparent tray for holding said type units and a removable partition for dividing said type units into parallel columns.

5. In a photoprinting outfit the combination of type units having a transparent body and an opaque type face, the type body being rectangular in outline and of substantial thickness, a rectangular transparent tray for holding said type units and a transparent stop on said tray for holding the type units in position upon the tray, said stops having opaque portions coming flush with said type face for protecting the sensitized plate from the action of light.

[Claim 6 not printed in the Gazette.]

1,113,551. CARBURETER. CHARLES R. GREUTER, Saugus, Mass. Filed Apr. 30, 1912. Serial No. 694,141. (Cl. 48—155.1.)



1. A carbureter including a carbureting tube, means for supplying fuel to the tube, means for controlling the outlet of the mixture from the tube, and a bottom closure for the tube comprising a yieldingly mounted cap plate having an air supply opening and constituting a back-pressure relief valve.

2. A multiple carbureter including a casing having a plurality of Venturi tubes, means for separately supplying fuel to the several tubes, means for separately controlling the outlet of the mixture from the several tubes, and a bottom closure for all of the tubes comprising a single yieldingly mounted cap plate having a plurality of air supply openings therein, respectively for the several tubes.

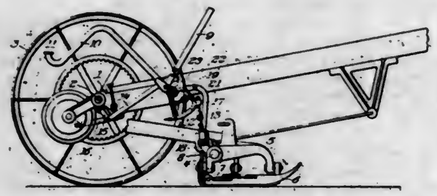
3. A carbureter including a series of carbureting units having differentially loaded suction controlled outlet valves, and differentially loaded suction controlled air inlet valves.

4. A carbureter including a series of carbureting units having differentially loaded suction controlled outlet valves, and differentially loaded suction controlled air inlet valves, said air inlet valves being loaded in inverse relation to said outlet valves.

5. A carbureter including a series of carbureting units, means for successively opening the outlets from said units as the suction from the engine increases, and differentially loaded valves controlling the air inlet openings of the carbureter units, said valves being inversely related to the means for bringing the carbureter units into action to provide for thinning out the mixture as the engine approaches its greatest capacity.

[Claims 6 to 13 not printed in the Gazette.]

1,113,552. MOWING-MACHINE. ALBERT GRIEVES, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Dec. 19, 1913. Serial No. 807,616. (Cl. 56—74.)



1. In a mowing machine, a main frame, a coupling frame adjustably connected therewith, a lever carried by said main frame, a toggle connection between said coupling frame and said main frame automatically locking said coupling frame in a predetermined position of adjustment, and means carried by said lever and operative during a movement in one direction thereof to retain said toggle connection in locking position.

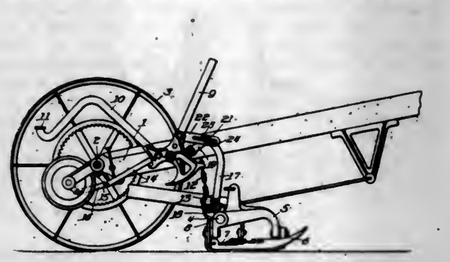
2. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivotally mounted upon said main frame and connected with said coupling frame, a toggle mechanism between said main frame and said coupling frame, and a cam carried by said lever and operative to move said toggle mechanism into locking position when said lever is moved in one direction and to retain said toggle mechanism in locking position during an initial part of the reverse movement of said lever.

3. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, toggle mechanism intermediate said main frame and said coupling frame and operative to lock said coupling frame in an elevated position at a predetermined position of adjustment of said lever in one direction, and a cam carried by said lever and operative to move said toggle mechanism into locking position and to hold it therein during a part of the movement of said lever in the reverse direction.

4. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivotally mounted upon said main frame and connected with said coupling frame, a toggle mechanism between said main frame and said coupling frame, a cam carried by said lever and operative to move said toggle mechanism in locking position when said lever is moved in one direction and to retain said toggle mechanism in locking position during an initial part of the reverse movement of said lever, and means carried by said lever and operative to unlock said toggle mechanism during the remainder of the reverse movement of said lever.

5. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a finger bar pivotally connected with said coupling frame, a lever pivotally mounted on said main frame, flexible connections between said lever and said coupling frame and finger bar operative to raise said coupling frame and said finger bar during an initial movement of said lever, toggle mechanism between said coupling frame and said main frame adapted to sustain said coupling frame in a raised position, a cam carried by said lever and operative to move said toggle mechanism into a locking position during an initial movement of said lever to raise said coupling frame and finger bar and to retain said toggle mechanism in a locking position during an initial movement of said lever in the reverse direction.

1,113,553. MOWING-MACHINE. ALBERT GRIEVES, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Dec. 22, 1913. Serial No. 808,111. (Cl. 56—74.)



1. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, a toggle connection between said main frame and said coupling frame and operative to lock said coupling frame in a predetermined position of adjustment, and a toggle controlling member pivotally mounted on said lever and engaging with said toggle mechanism.

2. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, a toggle connection between said main frame and said coupling frame and operative to lock said coupling frame in a predetermined position of adjustment, and a slotted toggle controlling member pivotally mounted on said lever and engaging with said toggle mechanism.

3. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, a toggle member having its lower end pivotally connected with said coupling frame, a second toggle member having one end pivoted upon said main frame and its opposite end pivotally connected with the upper end of said first toggle member, and a toggle controlling member pivotally mounted on said lever and having the upper ends of said toggle members slidable thereon.

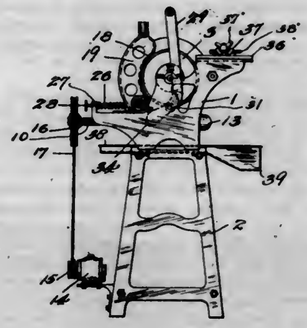
4. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, a toggle member having its lower end pivotally connected with said coupling frame, a second toggle member having one end pivoted upon said main frame and its opposite end pivotally connected with the upper end of said first toggle member, and a slotted toggle controlling member pivoted upon said lever and receiving the upper ends of said toggle members in a slidable manner.

5. In a mowing machine, a main frame, a coupling frame pivotally connected therewith, a lever pivoted on said main frame and operatively connected with said coupling frame, a toggle connection between said main frame and said coupling frame and operative to lock said coupling frame in a predetermined position of adjustment, and a toggle controlling member pivotally mounted on said lever and engaging with said toggle mechanism and operative to move said toggle mechanism into locking position when said coupling frame has reached a predetermined position of adjustment as controlled by said lever moving in one direction.

[Claim 6 not printed in the Gazette.]

1,113,554. IRONING-MACHINE. AXEL R. GUSTAFSON, Chicago, Ill. Filed Aug. 26, 1912, Serial No. 717,021. Renewed Mar. 16, 1914. Serial No. 825,030. (Cl. 68—9.)

In an ironing machine including its frame and a compression roll, the combination of a slidable concave heated iron having an anti-friction roller at each end, and a pair of levers pivoted in the frame having a connecting cross-bar, each of said levers having a cam edge to engage one of said rollers, whereby the concave iron may be pushed



from the compression roll, and a recess to engage the roller and hold the chest in extended position.

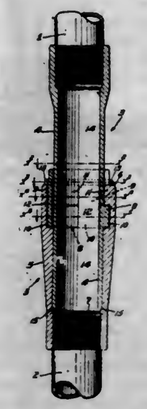
1,113,555. AGGREGATE FOR CONCRETE. FRANK M. HALDEMAN, Cleveland, Ohio, assignor to The Master Builders Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 4, 1914. Serial No. 836,326. (Cl. 106—24.)

1. A composition of matter containing cement, water, and finely disintegrated metallic iron particles, each of said iron particles having upon its surface a thin filmiform coating of magnetic oxid of iron.

2. A concrete structure having its surface portions formed of cement and finely disintegrated metallic iron particles, each of said iron particles being covered with a thin, substantially uniform filmiform coating of magnetic oxid of iron.

3. A concrete structure having its surface portions formed of finely disintegrated metallic iron particles, each of said iron particles being covered with a thin, substantially uniform filmiform coating of magnetic oxid of iron, and adjacent iron particles being surrounded and spaced apart by a matrix of set cement.

1,113,556. COUPLING. PAUL C. HILL, Taft, Cal. Filed June 10, 1913. Serial No. 772,909. (Cl. 137—28.)



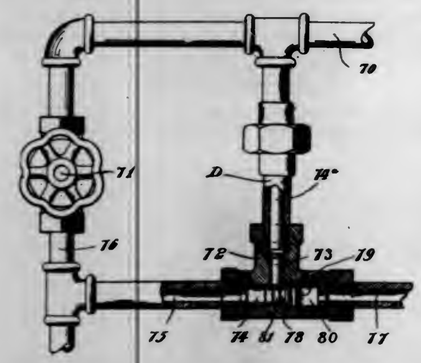
1. A three-piece tubular coupling for sections of pipe, said coupling comprising a male member, a female member and a unitary key-member; said female member being

adapted to embrace said male member for a substantial length, there being lugs on the exterior of the male member, and longitudinal slots communicating with a circumferentially extending groove cut internally of said female member; said lugs on the male member being adapted to pass through said slots and to be turned into said groove, said key-member having a series of fingers adapted to pass through said slots and into said groove to hold said lugs and groove in interlocking relation.

2. Coupling members for sections of pipe, said coupling members being longitudinally perforate so that liquid may pass through from one pipe section to another, lugs on the exterior of one coupling member; longitudinally extending slots communicating with a circumferentially extending groove on the interior of the second coupling member, said lugs on the first coupling member being adapted to pass through said slots and to be turned either to right or left into said groove; and key means adapted to pass into said slots after said lugs have been turned into said groove.

3. Coupling members for sections of pipe, said coupling members being longitudinally perforate so that liquid may pass through from one section of pipe to the next section of pipe, a series of externally-projecting lugs on one of said coupling members; a series of longitudinally-extending slots cut internally into the second coupling member, said slots communicating with an internally circumferentially extending groove, said slots being spaced apart so as to form internally-projecting shoulders on the second said coupling member, said lugs on the first coupling member being adapted to slide longitudinally through the slots in the second coupling member and to be turned either to right or left into said groove so as to lie beneath said shoulders of the second said member, said lugs and shoulders being thus adapted to interlock the coupling members longitudinally, and a unitary key member having a series of keys adapted to pass through said slots and into said groove so as to hold said lugs and shoulders in interlocked relation.

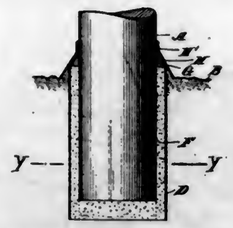
1,113,557. SANDING DEVICE. ALBERT EDMUND HUDSON, Calgary, Alberta, Canada. Filed Dec. 1, 1913. Serial No. 804,055. (Cl. 105—263.)



1. A sanding device adapted to be operated by the reduction of pressure in the train line pipe and comprising a casing, bores in said casing and a piston valve movable transversely across one of said bores, and balanced on opposite sides by the pressure from the main reservoir and the train line pipe, the bores being so arranged that on movement of the piston valve by reduction of pressure in the train line pipe the sander will be operated.

2. In a sanding device, the combination with the sanding device and a valve controlling the passage of air from the main reservoir to the sanding pipe, of a bypass, a valve movable transversely across said bypass, such valve being controlled by the pressure in the train line pipe, substantially as described.

1,113,558. WOOD POST AND METHOD OF PRESERVING SAME. JOHN WARREN ILLINGWORTH, Dorsey, Md. Filed Feb. 26, 1912. Serial No. 679,838. (Cl. 72—83.)

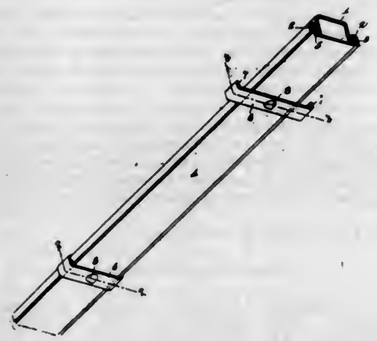


1. An article of manufacture comprising a wooden post, a porous casing of cement material embodying an excess of lime in its physical composition for the lower end thereof and adapted to be embedded in the ground, a shield encircling said post above said casing, and a quantity of unslaked lime between said shield and casing.

2. In combination with a wooden post, of a layer of porous cement material having an excess of lime in its physical composition, said layer being disposed under and about the butt end of said post and in immediate contact therewith, spaced vertical rods disposed about said post to reinforce the cement material and decrease the necessary amount of same, a sleeve of wire netting about the whole for retaining the cement in place, a short layer of pure lime resting upon the upper end of said layer of cement material to absorb moisture flowing down any fissures in said post and neutralize the deleterious influence of same, and a metallic collar for retaining the lime in position against the post, said collar extending outwardly from the post and beyond the base thereof and serving as a shed to deflect water from the base of the post at the surface of the ground.

3. In combination with a wooden post, of a casing of molded porous material containing an excess of lime for the butt end thereof adapted to be embedded in the ground, said casing directly contacting the fiber of the wood, the lime, through the action of moisture percolating through the porous material, being adapted to gradually work its way into the pores of the wood and preserve same from decomposition, the porous casing serving as a reservoir for the lime to use the same gradually and slowly upon the wood.

1,113,559. METAL MOLDING. GEORGE A. JORDAN, New York, N. Y., assignor of one-third to William H. Jordan and one-third to Christopher C. Jordan, Brooklyn, N. Y. Filed Nov. 7, 1912. Serial No. 729,936. (Cl. 247—8.)

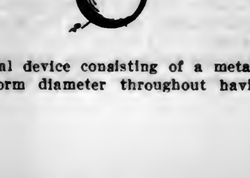


1. A metal molding, having side flanges and edge grooves, the sides of the grooves being substantially parallel to the side flanges of the molding, in combination with a metal capping, having flanges which enter and lie within the edge grooves of the molding, and fastening means for engaging the capping with the molding.

2. A metal molding, having integral side flanges and edge grooves, the sides of the grooves being substantially parallel to the side flanges of the molding, in combination with a metal capping, having flanges which enter and lie within the edge grooves of the molding, and fastening means, distortable after the capping is in place, to hold the latter in engagement with the molding.

3. A metal molding, having integral side flanges, and edge grooves, the sides of the grooves being substantially parallel to the side flanges of the molding, in combination with a metal capping, having flanges which enter and lie within the edge grooves of the molding, and a fastening clip, with a flexible portion, capable of being bent around the side flanges to hold the capping in place.

1,113,560. METAL MOLDING. GEORGE A. JORDAN, New York, N. Y., assignor of one-third to William H. Jordan and one-third to Christopher C. Jordan, Brooklyn, N. Y. Filed Dec. 11, 1912. Serial No. 736,099. (Cl. 247—8.)



1. A molding formed of sheet metal, with parallel ridges in the bottom, a wooden strip within the molding and lying between the ridges, so as to prevent the removal of the strip and a capping of sheet metal attached to the strip.

2. A metal molding, formed of a trough-shaped body, of sheet metal, parallel ridges in the bottom thereof, said ridges being inclined toward each other and tables on the edges, a wooden reinforce lying between the ridges and secured thereby to the body by the ridges in such a manner as to prevent removal of the strip, and a capping of sheet metal secured to the reinforce and resting on the tables.

3. A metal molding, formed of a trough-shaped body, of sheet metal, tables on the edges thereof, and edge flanges on the sides of the tables, a capping of sheet metal secured to the molding and resting on the tables, and between the flanges.

4. A molding formed of sheet metal, a reinforce within the molding, and inclined members integral with the molding for securing the reinforce between them and the bottom of the molding.

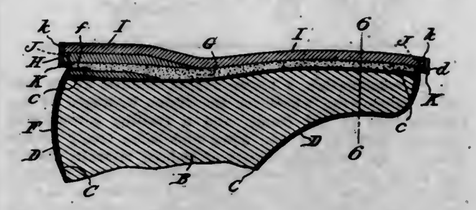
5. A molding formed of sheet metal, a reinforce within the molding, a foot on the reinforce and inclined members engaging over the foot to secure the reinforce in position.

[Claims 6 to 8 not printed in the Gazette.]

1,113,561. CATAMENIAL DEVICE. JOHN JORGENSON, San Francisco, Cal. Filed Sept. 2, 1913. Serial No. 787,564. (Cl. 128—51.)

A catamenial device consisting of a metal cylindrical shell of uniform diameter throughout having a hemispherical closed end, and a metal top having a body portion of the same diameter as said shell and having one end offset inwardly and engaged in the opposite end of the shell, the other end of said top being bent inwardly to extend within the top interior and being of conical formation and having a central opening, said shell and top providing a smooth uninterrupted metallic surface throughout the periphery of the entire device.

1,113,562. METHOD OF MAKING FOOTWEAR. WILLIAM J. KELLY, Reading, Pa., assignor to Curtis & Jones Co., Reading, Pa., a Corporation of Pennsylvania. Filed Apr. 25, 1912. Serial No. 693,202. (Cl. 12—142.)



1. The method of making shoes which consists in lasting a lining separately from the upper and attaching said lining to an insole, positioning a heel seat slip against the lining, positioning a counter over the lining and heel seat slip, thereafter lasting the upper, then fastening the upper directly to an outer sole on a line substantially within the edge of the insole, and thereafter sewing a welt to the upper and the outer sole by a seam positioned exteriorly to the aforesaid attachment of the upper to the outer sole.

2. The method of making shoes which consists in lasting a lining separately from the upper and uniting said lining to an insole, placing a heel seat slip against the lining, positioning a counter into lapping relation to said heel seat slip and the lining, then lasting the upper over said lining and the counter, then uniting the upper to the outersole independently of the lining and beneath the edge portion of the insole, and then sewing a welt and the upper to the outersole independently of the aforesaid attachment of the upper beneath the edge of the insole.

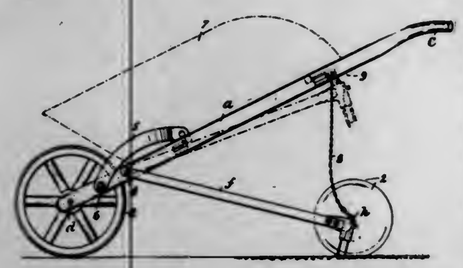
3. The method of making shoes which consists in lasting a lining separately from the upper, securing said lining to the insole by an adhesive, placing a heel seat slip against the lining, positioning a counter into lapping relation to said heel seat slip and the lining, then lasting the upper over said lining and the counter, then uniting an outwardly turned edge portion of the upper to an outersole on a line beneath the edge portion of the insole, and then sewing a welt and the outwardly turned edge portion of the upper to the outersole on a line exteriorly to the aforesaid atachment of the welt to said outersole beneath the edge of the insole.

4. The method of making shoes which consists in first lasting the lining of the shoe, placing a heel seat slip against the lining and the insole, positioning a counter over the lining and into lapping relation to the heel seat slip, then lasting the upper, then securing the outersole to the upper, leaving a free edge on the latter, applying a welt upon said free edge, and uniting the welt, upper and outersole together, by a seam independent of the aforesaid attachment of the outer sole to the upper.

5. The method of making shoes which consists in lasting the lining of the upper and securing the edge of said lining to the insole, placing a heel seat slip against the lining and insole, positioning a counter over the lining and into lapping relation to the heel seat slip, then lasting the upper, then securing an outersole to the upper independently of the attachment of the lining to the insole, and thereafter sewing a welt and the upper to the outersole on a line exteriorly of the aforesaid attachment of the upper to said outer sole.

[Claims 6 to 17 not printed in the Gazette.]

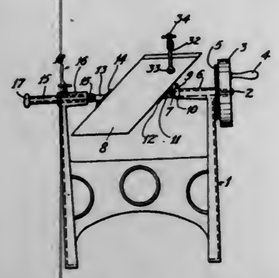
1,113,563. CULTIVATOR. TICE C. KEVITT, Paterson, N. J. Filed Feb. 4, 1914. Serial No. 816,472. (Cl. 97—42.)



1. In combination, a frame having handles at its rear end, a supporting wheel for the frame arranged at the forward end of the frame, and a trailing soil-working structure movable up and down and being freely flexible laterally and including a pair of slender laterally flexible side strips pivoted at their forward ends to said frame, a relatively heavy cross-bar connecting said strips and arranged substantially at their rearward extremities, and soil-working tools arranged in said cross-bar.

2. In a training soil-working structure, an elongated tool-holding member adapted to extend crosswise of its path of travel when in use, an extension projecting beyond one end of said member and adjustable longitudinally of the latter, said member and extension having interchangeable interlocking portions, means to hold the extension to said member, and soil-working tools carried by both said member and the extension.

1,113,564. ROTARY NEGATIVE-DEVELOPING MACHINE FOR PHOTOGRAPHERS. WALTER RELLAND LAINE, Los Angeles, Cal., assignor of one-third to Alexander Robb Merriman, Los Angeles, Cal. Filed Mar. 31, 1913. Serial No. 758,059. (Cl. 95—93.)

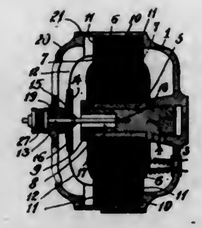


1. A tank, a shaft removably secured to one end of said tank and a longitudinally movable shaft at the other end of said tank and axially in line with the first mentioned shaft, said tank being rotatably supported by and between said shafts.

2. A rotary tank, a closure for said tank, shafting whereon said tank is supported, the end walls of said tank being at an oblique angle to said shafting and the side walls of said tank being substantially parallel to said shafting, and a rhomboidal cage adapted to fit within said tank to removably secure photographic plates in said tank at an oblique angle to said shafting.

3. The combination, with a rotary tank, of a plate-holding cage for insertion within and removal from said tank, said cage comprising a pair of loops or frames, one at each end of the cage; a plate-supporting member running along the mid-width of the cage from end to end thereof upon which the lower ends of the plates may rest, and a pair of corrugated members uniting said frames, the corrugations of said corrugated members being adapted to form runways for guides for the opposite edges of the plates.

1,113,565. ASYNCHRONOUS MOTOR. THOMAS L. LEE, Westfield, N. J., assignor to Hall Switch & Signal Company, a Corporation of Maine. Filed Nov. 9, 1912. Serial No. 730,304. (Cl. 172—280.)

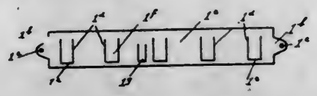


1. A motor comprising a frame piece, a central stud screw threaded thereto and carrying an inner fixed inductor member having alternating current field windings, an outer fixed inductor member carried by said frame piece, a second frame piece screw threaded to the first frame piece, a shaft journaled in said stud and said second frame piece, and a cup shaped armature of conducting material secured to said shaft and rotatable between said inductor members, all of the exciting windings being on the inner inductor member, said armature having one of its bearings in said second frame piece.

2. A motor comprising a frame piece, a central stud removably attached to said frame piece and carrying an inner fixed inductor member having alternating current field windings, an outer fixed inductor member, a second frame piece removably attached to the first frame piece, one of said frame pieces substantially encircling the magnetic parts of the motor, a shaft journaled in said stud and said second frame piece, and a cup shaped armature of conducting material secured to said shaft and rotatable between said inductor members.

3. A motor comprising a frame piece substantially encircling the magnetic parts of the motor, a stud removably attached to said frame piece, and carrying an inner fixed inductor member having alternating current field windings, a second frame piece removably attached to the first frame piece, a shaft journaled in said stud and said second frame piece, and a cup shaped armature of conducting material secured to said shaft and rotatable between said inductor members.

1,113,566. TENSIONING DEVICE FOR LACES. JOHN A. LEECHMAN, La Fayette, Ind. Filed Jan. 11, 1911. Serial No. 602,031. (Cl. 24—147.)



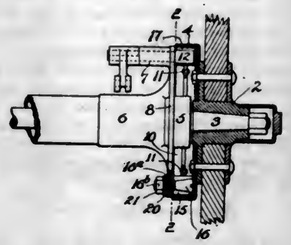
1. In a tensioning device for laces, the combination with a base plate made of resilient material and having a plurality of spring tongues stamped therefrom, said plate also having a lug at each end thereof, of a shaft journaled in said lugs and extending across the spring tongues, and a plurality of eyelet levers rigid with said shaft, there being an eyelet lever for each of said tongues, the levers extending on opposite sides of the shaft and being provided with eyelets at one of their ends, the opposite ends of the levers being in position for engagement by their respective tongues whereby the levers are held against accidental movement.

2. In a tensioning device for laces, the combination with a base plate made of resilient material and having a plurality of spring tongues stamped therefrom, said plate also having a lug at each end thereof, the lugs being turned at right angles to the plane of the plate, a shaft journaled in said lugs and extending across the said spring tongues, the base plate also having a tongue stamped therefrom and extending over the said shaft for holding the same from outward movement, said shaft being circular at the lugs and at the last mentioned tongue and being non-circular opposite the other tongues, a plurality of eyelet levers on said shaft, there being a lever for each of the spring tongues, said levers being rigid upon the non-circular portions of the shaft whereby they are all adapted to move together, the levers extending on opposite sides of the shaft and having an eyelet in one of their ends, the opposite ends being in position for engagement by the said spring tongues, whereby the levers are held against accidental movement.

3. An article of footwear having a pair of opposing flaps, a plate of resilient material for, secured to and normally concealed by each of said flaps, a shaft journaled on each of said plates, a plurality of eyelet levers rigid with each of said shafts, said levers projecting outwardly through their respective flaps and the levers of one flap normally extending outwardly from the other flap, said levers having eyelets in their outer ends, said eyelets being adapted for holding a lace, and resilient means for holding the said levers against accidental movement, the shafts being adapted to be rocked so as to move the eyelets on the respective flaps toward one another, whereby the lace is slackened.

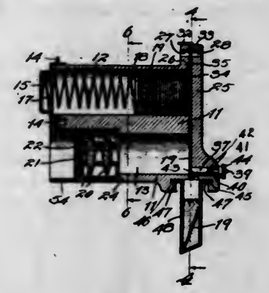
4. In an article of footwear, having a pair of opposing flaps, the combination with a base plate for, secured to and concealed beneath each of said flaps, each of said base plates having a plurality of spring tongues thereon, of a shaft journaled on each of said base plates and extending across the tongues thereon, a plurality of eyelet levers rigid with each of said shafts, said levers projecting on each side of their respective shafts and having one of their ends in position for engagement by the respective spring tongues, the opposite end of each lever being provided with an eyelet, said eyelets being adapted to hold a lace and the levers, when moved into one position, being adapted to hold the lace in tension and also being adapted, when the levers are moved into another position, to produce a slack in the lace, as and for the purpose specified.

1,113,567. BRAKE FOR AUTOMOBILES. ADAM S. LENHART and JAY L. WELLS, Hamburg, Pa. Filed Nov. 5, 1913. Serial No. 799,282. (Cl. 21—8.)



In a brake device for automobiles the combination with an axle carrying a drive-wheel brake-drum, and a fixed casing for said axle; a pair of spring-connected semi-circular brake shoes within said drum each having a pivot-pin abutting end, a pivot pin secured to said fixed casing, and means for spreading the opposite ends of the shoes; said pivot pin having a conical body portion interposed between said abutting ends and a screw-threaded portion, whereby the abutted ends of said shoes may be spread, substantially as set forth.

1,113,568. CAMERA. LOUIS MANDEL, Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,230. (Cl. 95—26.)



1. In a camera of the class described, a casing member formed of a single piece of material with parallel tubular chambers a connecting groove extending across the ends of the chambers, and being formed with a perforated projection at one end of the groove, and a slide movable in said groove provided with a perforation to register with the perforation in the projection of said casing member.

2. In a camera of the class described, the combination of a single casing member formed with chambers therein, with a groove extending across one end, and with a perforated projection at one end of the groove, of a slide for said groove having a perforation, and a longitudinally extending slot therein, the perforation registering with the perforation of the projection of the casing member in its lowermost position and the slot registering with the perforation in said projection when the slide is withdrawn.

3. In a camera of the class described, a transfer slide formed of metal with a bent extremity to constitute a hand-hold, with a longitudinally extending slot through which the camera may be sighted and with a rounded recess at the other end for engaging sensitized pieces.

4. In a camera of the class described, the combination with a casing member formed with a magazine chamber and an exposure chamber, with a groove extending across the open ends of the chambers, a back plate secured to the casing member covering the groove, a slide movable in said groove and a releasable stop at the bottom of the exposure chamber.

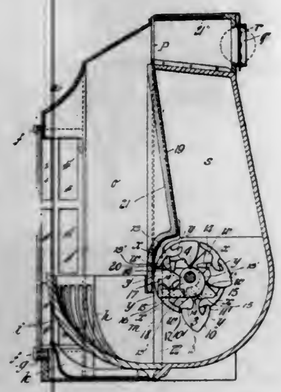
5. In a camera of the class described, the combination with a casing member formed with a magazine chamber and an exposure chamber for sensitized pieces, with a groove extending across the ends of the chambers, a plate positioned over the groove, means to move the sensitized pieces through the groove from the magazine chamber to the exposure chamber, and a releasable stop for positioning the sensitized pieces releasably at the rear of the exposure chamber.

[Claim 6 not printed in the Gazette.]

1,113,569. STOKER FOR FURNACES AND BOILERS OF THE UNDERFEED TYPE. JAMES MCCULLOCH, Glasgow, Scotland, assignor of one-half to Joseph O'Neil, Holyoke, Mass. Filed Oct. 12, 1912. Serial No. 725,510. (Cl. 110—44.)

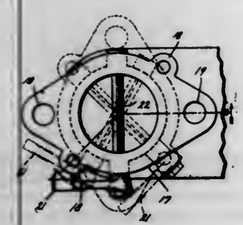
1. In a stove of the underfeed type, the combination, a forward and a rear section united together, a partition to divide the two sections to form a coal hopper and the heating section, a feed wheel mounted in the lower part of the coal hopper, means for rotating the feed wheel to advance the fuel through a passageway leading from the coal hopper to the fire box portion of the heating section, said feed wheel having a spider portion, the outer ends of the spokes of which are made arc-shaped, coal presser elements having arc-shaped recesses and mounted on the arc-shaped portions of the spokes, two lugs formed on the presser elements, means to project and withdraw the coal presser elements when the said wheel is rotated, said means comprising a fixed cam to engage one of the lugs

on the coal pressers to project the presser elements and a projection on the fixed cam engaged by the other lug on the presser elements to cause the retraction of said coal presses after the coal has been advanced to the fire box as described.



2. In an underfeed stove or furnace, the combination, a wheel device for feeding coal to the fire-box portion, curved projections on the wheel device, means for rotating said wheel, coal presser elements adapted to be extended beyond and drawn into the general curved surface of the wheel, said elements having curved recesses therein to receive the projections of the wheel device and about which said elements are adapted to be oscillated, fixed cams to cause the presser elements to be forced outward, each of the presser elements having lugs to engage the periphery of the cam surface, and interengaging projections on the cam, and coal presser elements to cause the same to be retracted, as described.

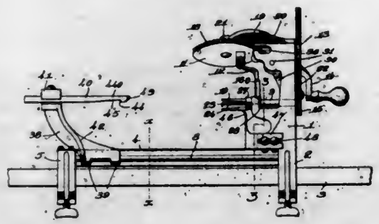
1,113,570. COUPLING FOR CARBURETERS. HOMER N. MOTSINGER, La Fayette, Ind., assignor to Motsinger Device Manufacturing Company, La Fayette, Ind., a Corporation of Indiana. Filed Jan. 29, 1914. Serial No. 815,157. (Cl. 137—69.)



1. The combination with a carbureter main body of a coupling head having a rotative connection with said main body, a second coupling head adapted for attachment to an inlet manifold, a portion forming a strut between said second coupling and the carbureter body, and bolts connecting said two coupling heads in such manner that tightening of the bolts will place the rotative connection between the first-mentioned coupling head and the carbureter body under a restraining friction.

2. The combination of a carbureter, a coupling head having a rotative connection with the main body of the carbureter, a second coupling head formed for attachment to an inlet manifold, bolts connecting the two coupling heads, and a throttle-valve-ring rotatably seated between the main body of the carbureter and the second coupling head whereby the carbureter and throttle-valve-ring may be rotatably adjusted relative to the second coupling head and clamped in position by the connecting bolts.

1,113,571. APPLE PARER AND CORER. FRED G. MOWER, Antrim, N. H., assignor to Goodell Company, Antrim, N. H., a Corporation of New Hampshire. Filed May 27, 1911. Serial No. 629,801. (Cl. 146—8.)



1. In an apple parer, the combination with a frame, of paring mechanism thereon, a reciprocating coring spoon holder, and a coring spoon sustained by the holder and provided with barbs at its side edges back of the cutting edge but situated in line therewith.

2. In an apple parer, the combination with a frame, of paring mechanism thereon, a reciprocating coring spoon holder, and a coring spoon sustained by the holder and having a semi-circular shape and provided at one end with a cutting edge, each side of said coring spoon being cut out thereby to form a neck of reduced width and two apple-withdrawing barbs.

3. In an apple parer, the combination with a frame, of a paring knife and means to operate it, a fork shaft having a fork thereon and a groove extending longitudinally thereof, a core doffer situated axially of the shaft and provided with a stem slidably mounted in the groove, the inner end of said stem being bent laterally through the groove and formed into a ring embracing the shaft, a lever pivoted to the frame, an eye also embracing the shaft in the rear of the ring and connected to the lever, and means to operate the lever.

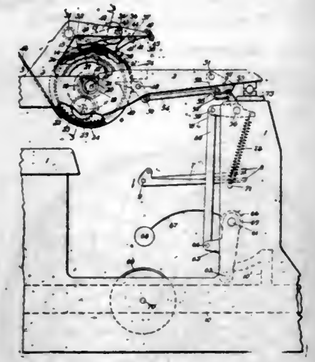
4. In an apple parer, the combination with a frame, of a paring knife and means to operate it, a fork shaft having a groove extending longitudinally thereof, a core doffer situated axially of the shaft and provided with a stem slidably mounted in said groove, a ring embracing the shaft and connected to the end of the stem, a lever pivoted to the frame and provided with means to engage said ring, and means to operate the lever.

5. In an apple parer, the combination with a frame, of paring mechanism thereof, a reciprocating coring spoon holder, and a coring spoon sustained by the holder and having a semi-circular shape and provided at one end with a cutting edge, said coring spoon being cut out at one side to form a neck of reduced width and an apple-withdrawing barb.

1,113,572. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 5, 1912. Serial No. 735,108. (Cl. 197—189.)

1. In a typewriting machine, in combination, a platen for advancing the sheet, indicating means, and paper-feeler means connected to call said indicating means into operation under the control of the leading end of the sheet.

2. In a typewriting machine, in combination, a platen, a series of indices, and means under the control of the leading end of the sheet for bringing said indices into indicating prominence coördinately with the arrival of said leading end at predetermined distances from the printing point.



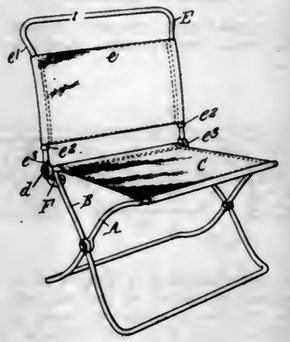
3. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, means for giving said member a predetermined constant starting position, and means for fixing said member movement coördinate with that of the platen from such position under the control of the leading end of the sheet and at a predetermined point in the progress of said leading end.

4. In a typewriting machine, in combination, a platen, an operative member, indices called into operation through said member, means for giving said member a constant starting position, and means for giving said member movement coördinate with that of the platen from such position under the control of the leading end of the sheet.

5. In a typewriting machine, in combination, a platen, an operative member, visual signaling means called into operation through said member, means for giving said member a constant starting position, and means for giving said member movement coördinate with that of the sheet from such position under the control of the leading end of the sheet.

[Claims 6 to 34 not printed in the Gazette.]

1,113,573. FOLDING OR CAMP CHAIR. ROBERT L. NOTMAN, Buffalo, N. Y., assignor to McKinnon Dash Company, Buffalo, N. Y. Filed Aug. 9, 1909. Serial No. 511,889. (Cl. 155—8.)

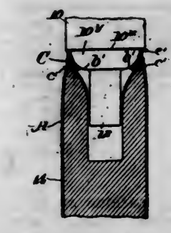


1. The combination of legs, a seat, and a back, and one of said legs being hinged together at the rear side of the seat, fixed hooked portions on one of said hinged parts adjacent to the hinge connection which are adapted to spring into interlocking engagement with said other hinged part and grip the same with a spring tension when the back is swung into the operative position whereby the back is positively held from forward or rearward movement.

2. The combination of crossed pivoted legs, one of said legs having laterally projecting pintles at the rear of the seat, a seat connecting said legs, and a back having a frame of inverted U-shape, the side rods of which are pivoted and movable laterally on said pintles, the lower ends of said side rods of the back being bent below the hinge pintles to form hooks which are adapted to engage with said legs and grip the same with a spring tension when the back is swung into its operative position to retain the back in this position.

3. The combination of legs comprising skeleton frames, a seat connecting said legs, a back having a skeleton frame, the side bars of which are pivoted to one of said leg frames at the rear side of said seat, the lower ends of the side bars of said back frame being bent below the pivotal connections of said bars to form hooks which are adapted to move laterally and embrace the side bars of said leg frame when the back is swung to operative position, the ends of said hooks being bent to overhang said side bars of said leg frame, whereby said hooks interlock with said side bars and hold the back from both forward and rearward movement.

1,113,574. METHOD OF ATTACHING FERRULES TO UMBRELLA-CASES. WILLIAM C. O'BRIEN, Baltimore, Md. Filed Nov. 23, 1911. Serial No. 662,000. (Cl. 218—14.)



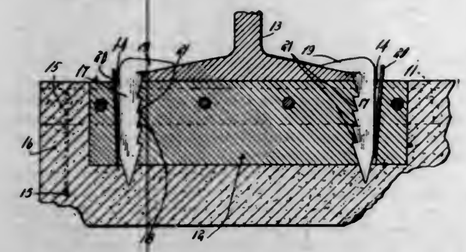
1. The method of attaching a fabric to a ferrule having an exterior annular groove spaced from its ends and shoulders at the margins of the groove, which comprises arranging a closed ring around the attaching portion of the fabric, passing the ferrule into the portion of the fabric inclosed by the ring until the ring lies substantially in the plane of said groove, and then expanding one of said shoulders and collapsing the walls of the groove by axial compression of the ferrule.

2. The method of attaching a fabric to a ferrule having an exterior annular groove and shoulders of unequal diameters at the margins of said groove, spaced from the ends of the ferrule, which comprises arranging a closed ring, having an internal diameter intermediate the diameters of said shoulders, around the attaching portion of the fabric, passing the ferrule into the portion of the fabric inclosed by the ring until the smaller shoulder has passed through the ring and the latter lies substantially in the plane of the groove, and then expanding the smaller shoulder and collapsing the walls of the groove by axial compression of the ferrule.

1,113,575. RAILROAD-TIE. CARL PETER, Medaryville, Ind. Filed July 7, 1914. Serial No. 849,461. (Cl. 238—4.)

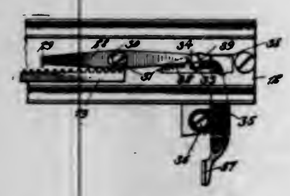
A railway tie comprising a body of concrete, longitudinal angle members secured in the body and disposed in parallel relation, blocks secured between the angle members and secured thereto at distances equal to the distance between the railway rails, said blocks having vertical openings formed therethrough, one end wall of each of the openings being formed with a vertical series of shoulders,

and spike members arranged to be driven through the openings, said spike members having oppositely disposed shoulders for coöperation with the shoulders of the walls



of the openings, and resilient elements carried by the spike members for forcing the spike members into interlocking engagement with the shoulders of the openings.

1,113,576. TYPE-WRITING MACHINE. OTTO PETERMANN, Groton, N. Y., assignor, by mesne assignments, to Corona Typewriter Company, Incorporated, a Corporation of New York. Original application filed July 7, 1909, Serial No. 506,442. Divided and this application filed Mar. 7, 1911. Serial No. 612,800. (Cl. 197—91.)



1. In a typewriting machine of the folding type, the combination of a machine frame, a carriage bed, pivotal means for permitting said carriage bed to be folded to abnormal position, a carriage feeding rack, a back-spacing dog carrier, a dog on said carrier adapted to engage the rack, and operative means for the dog carrier carried by the said pivotal means of the carriage bed.

2. In a typewriting machine of the folding type, the combination of a machine frame, a carriage bed, pivotal means for permitting said carriage bed to be folded to abnormal position, a carriage feeding rack, a back-spacing dog carrier mounted on said carriage bed, a dog on said carrier, and a lever mounted on said pivotal means for the carriage bed and operatively connected to move the dog carrier.

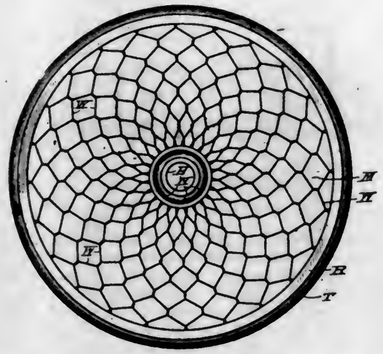
3. In a typewriting machine, the combination of a plurality of key-levers, a support, a carriage mounted upon said support and foldable into compact relation to another part of the machine, a rack movable with the carriage, a reciprocating back-spacing dog carrier mounted on the carriage bed, a dog on said carrier and reciprocating therewith, and means adapted to operate the dog carrier and movable with the carriage into its folded position.

4. In a typewriting machine, the combination of a plurality of key-levers, a support, a carriage mounted upon said support and foldable forward into compact relation to the key-levers, a rack movable with the carriage, a dog carrier having a dog to move the rack, and means operative from the front of the machine and adapted to operate the dog carrier and movable with the carriage and dog carrier into its folded position.

5. In a typewriting machine, the combination of a support, arms pivotally held to said support, a carriage mounted upon the arms and movable into compact relation to another part of the machine when not in use, a dog carrier having a dog, means adapted to be engaged by said dog to move the carriage in a direction opposite its letter-spacing movement, and means pivotally held to one of said arms adapted to operate said dog carrier and foldable with the carriage in its compact movement.

[Claims 6 to 20 not printed in the Gazette.]

1,113,577. VEHICLE-WHEEL. CASPER L. REDFIELD, Chicago, Ill. Filed Apr. 9, 1913. Serial No. 759,880. (Cl. 21—69.)



1. A wire mesh in the form of a disk, said mesh being formed by twisting adjacent wires together, and each wire extending from the center to the circumference of the disk.

2. The combination with an outer ring, and an inner ring, of wires extending from the inner ring to the outer ring, said wires being twisted together to form a mesh connecting the rings.

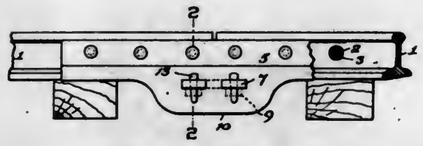
3. The combination with an inner ring, and an outer ring, of wires extending from the inner ring to the outer ring and twisted together to form a mesh connecting the rings, and means for adjusting the tension of said mesh.

4. In a woven wire mesh, the combination with the terminal twists of the wire, of a locking wire inserted in each twist and extending through several turns thereof.

5. In a woven wire mesh adapted to be placed under tension, the combination with the terminal twists of the wire, of a locking wire inserted in each twist, the wires of the twist and the locking wire being welded together to form means for connecting the mesh for placing it under tension.

[Claims 6 to 8 not printed in the Gazette.]

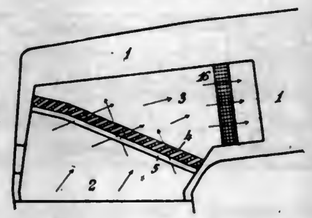
1,113,578. RAILWAY-RAIL JOINT. DANIEL REINERT, Temple, Pa. Filed Oct. 17, 1913. Serial No. 795,615. (Cl. 239—6.)



A railway joint comprising a pair of securing plates, bolts for securing said plates to the rail ends, bushings carried by the rail ends to receive the bolts, the bushings having a greater length than the thickness of the rail portion which they pass, one of said securing plates having a lateral extension underlying the rail ends and formed adjacent its edge with a reduced portion, the other of said plates having a depending portion formed with an opening to receive the first mentioned reduced portion, and a wedging key coöperating with the reduced portion beyond the plate formed with the opening, the length of

the bushing forcing the securing plates apart at their upper edges to permit a slight angular relation of their lower portions, for more effective coöperation of the wedging key.

1,113,579. APPARATUS FOR BURNING FUEL. J S ROGERS, New York, N. Y., assignor to Emily O. Rogers. Filed July 19, 1912. Serial No. 710,427. (Cl. 110—92.)

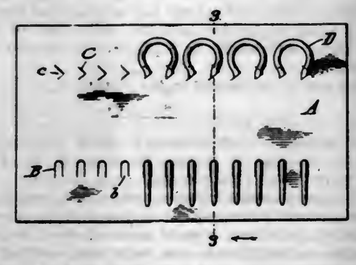


1. In a furnace, a wall situated in the combustion zone and extending across the path of the products of combustion, said wall comprising a plurality of series of bricks, the bricks of each series being arranged to form passage ways for the products of combustion in one substantially straight line from one face of said wall to the other, said passage ways extending obliquely to the line of draft, the passage ways formed by each series crossing those formed by the next adjacent series, and being in communication therewith.

2. In a furnace, a wall situated in the combustion zone and extending across the path of the products of combustion, said wall being provided with a plurality of series of direct substantially straight passage ways extending obliquely to the line of draft, the passageways of one series crossing those of the next series and being in communication therewith.

3. In a furnace, a wall situated in the combustion zone and extending across the path of the products of combustion, at a place where it may be heated to the temperature of gas ignition, said wall comprising a plurality of series of bricks, the bricks of each series being arranged to form substantially straight passage ways for the products of combustion, said passage ways extending obliquely to the line of draft, the passage ways formed by each series crossing those formed by the next adjacent series, and being in communication therewith.

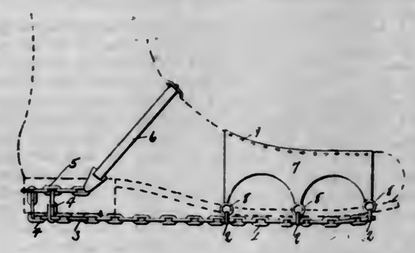
1,113,580. DISPLAY-CARD. BURNSIDE E. SAWYER, Fitchburg, Mass., assignor to Diadem Manufacturing Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Feb. 2, 1914. Serial No. 815,862. (Cl. 211—34.)



1. A display card having two parallel series of incisions formed therein, the incisions in one series being U-shaped, and each forming a tongue secured to the body of the card along an edge parallel to the axis of the series, and the incisions of the other series being V-shaped and each forming a tongue secured to the body of the card along an edge transverse to the axis of the series.

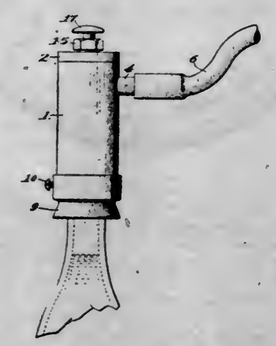
2. A display card for hairpins having two series of incisions formed therein, the incisions in the two series being alined transversely and so spaced longitudinally that each leg of each pin may extend through the card at one incision in each series, the incisions in one series being V-shaped with the point of the V on the axis of the series and the edges of the incisions forming oppositely inclined gripping elements effective to prevent accidental displacement of said pins.

1,113,581. ANTISLIPPING DEVICE. WILLIAM SCAGE, Pittsfield, Mass. Filed Jan. 8, 1914. Serial No. 811,063. (Cl. 36—62.)



A device of the kind described comprising a chain armor, said chain armor consisting substantially of a plurality of transverse chains including an intermediate chain, said transverse chains decreasing in length in a ratio of their distance from said intermediate chain, a ring, a plurality of longitudinal chains secured convergingly upon said ring and to the said transverse chains, said transverse chains being formed with rings at their ends and wherever connected to said longitudinal chains, a plurality of chains secured radially upon said first-mentioned ring, a chain secured to the free ends of said radial chains and concentric to said ring, securing elements carried by said last-mentioned chain at its opposite ends, and securing elements carried by the outer of said longitudinal chains.

1,113,582. BOTTLE-FILLING DEVICE. CONRAD SCHROEDER, Milwaukee, Wis. Filed Feb. 11, 1910. Serial No. 543,255. (Cl. 226—16.)



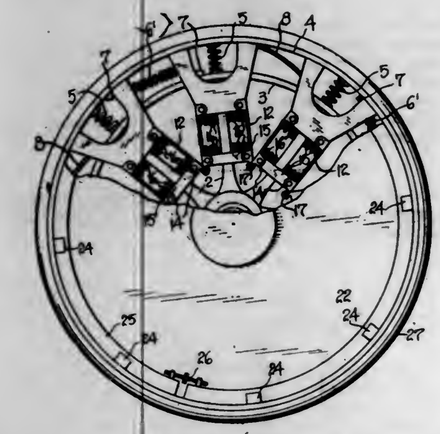
1. A device of the character described including a casing having an inlet port connected to a source of suitable fluid and a restricted outlet port, a post extending into said casing and having an opening communicating with said outlet port, a valve movable upon said post, resilient means for normally closing said valve, and means for operating said valve extending through said casing.

2. A device of the character described, comprising a casing having an outlet port in the bottom thereof and a suitable inlet port connected to a source of suitable fluid, a post extending upwardly from the bottom of said casing and having an opening in the side thereof communicating with said outlet port, a tubular valve fitted over said post, a spring normally closing said valve, and a rod connected to said valve and extending through said casing.

3. A device of the character described, including a casing having a restricted outlet port and a suitable inlet port connected to a source of fluid supply, said outlet port having a post surrounding the same and extending into the casing, a tubular valve fitted over said post, springs normally closing said valve, guide rods for the same fixed to one of the walls of the casing, and a rod connected to said valve and extending through said casing, said rod being guided in its movement by said guide rods and the casing.

4. A device of the character described, comprising a casing consisting of a cylindrical tube, having a top at one end and a bottom at the other, said bottom having an outlet port, a centering bell depending from said bottom and surrounding said port, a resilient washer arranged within said bell, means for connecting said casing to a source of suitable fluid, a post extending upwardly from said bottom, a valve slidably mounted on said post and serving to close said outlet port, a valve stem protruding through said top to operate said valve, rods extending upwardly from said bottom, springs surrounding said rods, and a cross piece attached to said valve and pressed upwardly by said springs to normally close said valve.

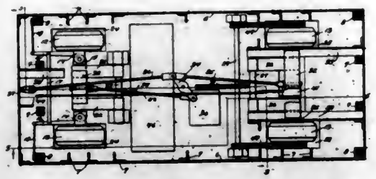
1,113,583. WHEEL FOR VEHICLES. WILLIAM T. SHEA and FRANK MANLEY, Silverton, Colo. Filed June 22, 1914. Serial No. 846,676. (Cl. 152—28.)



1. A device of the character described comprising an inner wheel, said inner wheel including radially disposed spokes, a rim surrounding the inner wheel, cushioning members interposed between the rim and the inner wheel, housings carried by the outer rim disposed inwardly and radially thereof and embracing the spokes of the inner wheel, and cushioning members interposed between the spokes and the sides of the housing, the inner extremities of adjacent housings being in contact one with the other.

2. A device of the character described comprising an inner wheel, said inner wheel including radially disposed spokes, a rim disposed around said inner wheel, cushioning members interposed between the rim and the inner wheel, housings secured to the rim and embracing the spokes of the inner wheel, each of said housings having one face open, inwardly disposed lugs carried by each of the housings at the lower extremity of its open face, a strap secured to said lugs and overlying the adjacent spoke, and cushioning members interposed between the spokes and the sides of the housings.

1,113,584. SELF-PROPELLED FREIGHT-TRUCK. JOHN SHEEHAN and GEORGE H. GILMAN, Buffalo, N. Y. Filed May 2, 1913. Serial No. 765,085. (Cl. 21—65.)



1. A truck comprising a chambered platform having a flat top and a flat slotted bottom, driving and steering wheels mounted to vertically move through the slots of said bottom and within said platform, and means for locking said wheels in a position to support and carry said truck.

2. A truck comprising a chambered platform having a flat top and a flat slotted bottom, driving wheels, motive power means connected with said driving wheels, steering wheels, means connected with said steering wheels for guiding the same, said driving and steering wheels being mounted to move vertically through the slots of said bottom and within said platform, and means for locking said wheels in a position to support and carry said truck.

3. A truck comprising a chambered platform having a flat top and a flat slotted bottom, two pairs of arms pivotally carried within the chamber of said platform, a pair of steering wheels carried by one pair of said arms and a pair of driving wheels carried by the other pair of said arms, whereby said wheels may vertically move through the slots of said bottom and within said platform, and means for locking said wheels in a position to support and carry said truck.

4. A truck comprising a chambered platform, two pairs of arms pivotally carried within the chamber of said platform, a pair of steering wheels carried by one pair of said arms and a pair of driving wheels carried by the other pair of said arms, whereby said wheels may vertically move within said platform, blocks slidably carried within said platform and engageable with the outer ends of said arms for locking said wheels in a position to support and carry said truck.

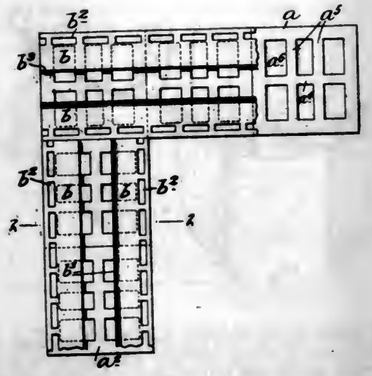
5. A truck comprising a chambered platform, two pairs of arms pivotally carried within the chamber of said platform, a pair of steering wheels carried by one pair of said arms and a pair of driving wheels carried by the other pair of said arms, whereby said wheels may vertically move within said platform, blocks slidably carried within said platform and means for moving said blocks, said blocks being engageable with the outer ends of said arm for locking said wheels in a position to support and carry said truck.

[Claims 6 and 7 not printed in the Gazette.]

1,113,585. BINDER FOR HOLLOW TILE BUILDING-BLOCKS. HERBERT H. SMITH, Bayshore, N. Y. Filed Aug. 5, 1913. Serial No. 783,093. (Cl. 72—103.)

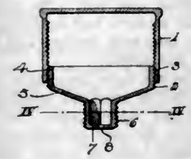
1. The herein described binder or binders for use in the construction of walls composed of hollow building tiles or blocks consisting of a thin strip or strips of sheet material of less transverse width than the walls and provided adjacent to one side edge with longitudinal slots or openings which are adapted to register with a side wall of the said tiles or blocks, the other side edge of said strip or strips being curved upwardly.

2. The herein described binder or binders for use in the construction of walls composed of hollow building tiles or blocks and consisting of a thin strip or strips of sheet metal of less transverse width than the walls and provided adjacent to one side edge with longitudinal slots or openings which are adapted to register with a side wall of said tiles or blocks, the other side edge of said strip or



strips being curved upwardly, and the body portion of said strip or strips being also provided at predetermined intervals with transverse slots or openings.

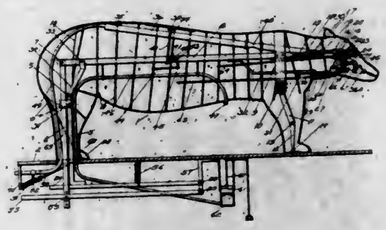
1,113,586. GREASE-CUP. EDGAR R. STODDARD, Detroit, Mich. Filed Sept. 21, 1912. Serial No. 721,681. (Cl. 184—38.)



As a new article of manufacture, a base for grease cups stamped and drawn from sheet metal and comprising a conical bottom wall having a concentric depressed portion that is formed when drawn from said bottom to provide inner oblong facets and an outer cylindrical side, said depressed portion constituting a nipple which has an end wall provided with a small concentric opening, said end wall being disposed at right angles to the facets to limit the inward movement of a tool placed in engagement with said facets, and the side walls of said nipple being relatively thicker than said bottom wall, whereby the outer cylindrical side can be screw threaded without materially weakening the nipple at the angles of the facets thereof.

1,113,587. MECHANICAL TOY. CHARLES THOMPSON, Portland, Oreg. Filed July 23, 1913. Serial No. 780,657. (Cl. 46—40.)

1. A mechanical bear comprising a frame, a pelt mounted on said frame, a pivot plate attached to said frame, vertical standards adapted to pivotally carry said pivot plate, horizontal actuating levers attached to the lower ends of said standards so as to raise or lower the standard, raising and lowering bars horizontally disposed within said frame, a circular band adapted to attach the forward end of said frame to the ends of said raising bars, swinging arms mounted at the top of the aforesaid standards and adapted to carry said raising bars at a point intermediate of the ends thereof, slide bearings attached to said standards so as to receive vertical slide bars pivotally attached at their upper ends to the rearward ends of said raising bars and at their lower ends to lifting levers, all so arranged as to raise said bear to a sitting or standing position or lower it to all fours, substantially as described.



2. In a mechanical bear having a frame, a pelt covering said frame and raising bars horizontally disposed within said frame and pivotally attached near the rear thereof so that the forward ends may be raised, horizontal extension bars attached to said raising bars, horizontal pivot bars pivotally mounted on said extension bars and provided with slide bearings, horizontal slide bars adapted to slide within said slide bearings, springs held between said slide bars and the aforesaid raising arms, hinge members hingedly attached at the forward ends of said slide bars and also hingedly attached to the inside of the bear's head, lower pivot extensions attached to the forward ends of said raised bars, pivot bars having projecting operating arms pivotally mounted on said lower pivot extensions, slides adapted to slide on said last mentioned pivot bars, short bars pivotally mounted on said last mentioned slides and attached to the inside of the bear's head, and springs vertically disposed between said last mentioned pivot bars and said first mentioned slide bars and means for actuating said mechanism so as to raise or lower the bear's head or turn it from side to side.

3. A mechanical bear comprising a frame, a pelt mounted on said frame, teats protruding therefrom, a tube connected with said teats, and also connected with a milk containing cylinder, provided with a weighted plunger adapted to force the milk through said tube and teats.

4. A mechanical bear comprising a frame, a pelt mounted on said frame, a feed tube provided with a filling opening and adapted to hold small articles, an extension tube connected with said feed tube by means of a contracted rubber tube and leading to the mouth of said bear, an air supply hose connected with said feed tube and an air supply source and means for admitting the air from said air supply source into said air hose and thence into and through said feed tube and extension in such manner as to force articles from said feed tube through said contracted rubber tube and through said extension tube to the bear's mouth.

1,113,588. ENGRAVER'S ADJUSTABLE TRANSFER AND METHOD OF MANUFACTURING SAID TRANSFER. LEONARD D. WARDIN, Los Angeles, Cal. Filed June 13, 1914. Serial No. 845,027. (Cl. 101—166.)

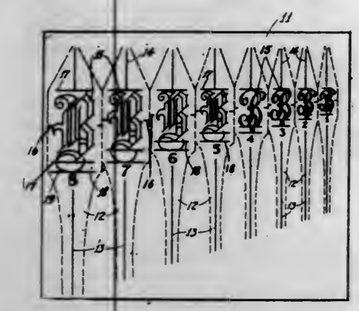
1. A sheet having a character embossed thereon, means on the side of said sheet reverse to said character to indicate around said character the outline of a convenient pattern, and centering lines upon said pattern to guide the engraver in locating said embossed character upon the article to be engraved.

2. A sheet having a character embossed thereon, marks on the side of the sheet reverse to said character to indicate around said character the outline of a convenient pattern, and centering indicators upon said pattern to guide the engraver in locating said embossed character upon the article to be engraved.

3. A sheet having a raised character thereon, centering indicators on the reverse side of said sheet located at opposite sides of said character, and pattern lines within which said centering indicators appear.

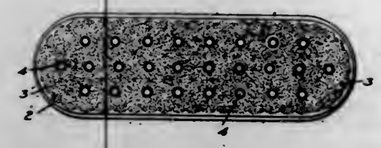
4. A sheet having a series of contiguous patterns printed

thereon, said patterns being graduated in size, a letter to be transferred being in relief on the opposite side of said sheet from said pattern lines, centering indicators being located on the opposite side of said sheet from said letter.



5. The method of preparing engravers' transfers which consists in marking out upon a sheet adapted to be embossed a series of contiguous patterns graduated from larger to smaller, centering lines being marked out between said characters; then embossing characters upon said sheet between said centering lines, and then in cutting out the individual patterns preparatory to using them.

1,113,589. CLOTHES-BRUSH. CHARLES WEIGEL, Minneapolis, Minn., assignor of one-half to Charles M. Thomsen, Minneapolis, Minn. Filed Dec. 23, 1912. Serial No. 738,297. (Cl. 26—4.)



1. A clothes brush having a cleaning surface composed of a set of flexible fingers formed with abrading surfaces adapted to lift the nap of a cloth surface, and a set of relatively softer and non-abrading bristles, the sets of fingers and bristles coöperating one to lift the nap by abrasion and the other to remove particles loosened and detached by the abrading surfaces, substantially as described.

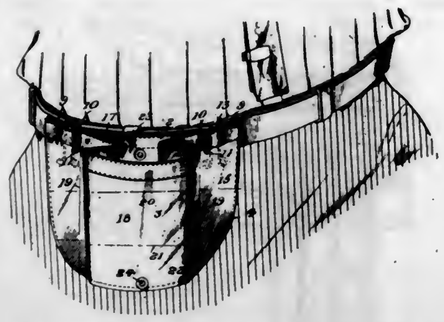
2. A brush comprising a back and fibrous bristles mounted therein and a series of fingers of resilient material mounted in said back and impregnated with a gritty substance, the shanks of said fingers being comparatively flexible and their tips operating to roughen a cloth surface.

3. A brush comprising a back and fibrous bristles mounted therein, and a series of abrasive fingers mounted in said back and having tips extending outwardly beyond said bristles.

4. A brush comprising a back, fibrous bristles mounted therein, and a series of rubber fingers mounted at intervals in said back, said fingers being provided with abrasive tips which are adapted to roughen a shiny cloth surface.

1,113,590. CARTRIDGE-HOLDER. JOHN BAKER WILLIAMSON, Louisville, Ky. Filed Sept. 23, 1913. Serial No. 791,423. (Cl. 224—5.)

1. A holder of the character described including front and rear plies of flexible material stitched to each other along their lateral and bottom edges, the front ply being greater in width than the rear ply and formed with oppositely disposed vertical folds or plaits located inward of the side margins of the front and rear plies whereby the front ply may be folded flat against the rear ply, the front ply being attached to the rear ply laterally of said folds and at its upper margin, the lateral margins of the front and rear plies so attached being adapted to be folded over upon the front ply.



2. A holder of the character described comprising front and rear plies of flexible material stitched to each other along their lateral and bottom edges, the front ply being greater in width than the rear ply, eyelets passing through the rear ply, and hooks attached to said eyelets and extending downward parallel to the outer face of the rear ply.

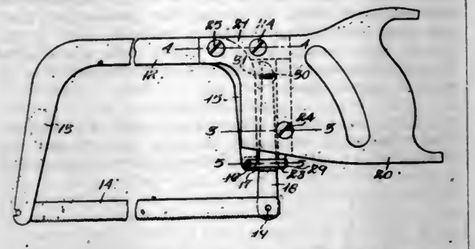
3. A holder of the character described comprising front and rear plies of flexible material stitched to each other along their lateral and bottom edges, the front ply being greater in width than the rear ply, the rear ply having a double thickness along its upper margin, the thickness of the rear ply being stitched to each other, eyelets extending through the front and rear plies adjacent the ends thereof and forming pockets, and supporting hooks having portions extending into said pockets and being connected to the material of the holder.

4. A holder of the character described, comprising front and rear plies of flexible material stitched to each other along their lateral and bottom edges, the front ply being greater in width than the rear ply and formed with parallel vertically disposed folds or plaits whereby the front ply may be folded flat against the rear ply, eyelets disposed adjacent the upper margins of the holder passing through the front and rear plies and disposed outward of the adjacent plait or fold to thereby define a pocket, supporting hooks attached to the material of the said holder within the pockets and extending downward parallel to the rear face of the pocket, and a fastening device comprising two members one attached to the bottom of the holder and the other attached adjacent the upper edge thereof.

5. A holder of the character described, comprising front and rear plies of flexible material stitched to each other along their lateral and bottom edges, the front ply being greater in width than the rear ply and formed with parallel vertically disposed folds or plaits whereby the front ply may be folded flat against the rear ply, a plurality of eyelets located outward of each fold and adjacent the upper edge of the holder and defining a pocket at each end of the holder, supporting hooks having portions disposed within said pockets, eyelets attaching said supporting hooks to the pockets, coacting fastening devices located one adjacent the lower edge of the holder and the other adjacent the upper edge thereof, the material forming the holder being foldable along said plaits and foldable at a plurality of points on lines extending transversely to the lines of said plaits.

1,113,591. HANDSAW. JOSEPH WOOD, Everett, Mass. Filed Mar. 4, 1914. Serial No. 822,341. (Cl. 145—33.)

1. A saw comprising a rigid frame having a back, a blade-engaging outer arm, and a lever-carrying inner arm, a handle having a slot in its forward portion, the sides of which form ears pivoted to the frame and bearing on opposite sides thereof, the inner end of said slot constituting an elongated abutment, a lever fulcrumed on the inner frame arm and having a shorter blade-engaging arm and a longer arm adapted to extend into said slot and bear on said abutment, the handle being adapted to swing to and from its operative position relatively to the blade, and the lever being moved to a blade-straining position by the abutment when the handle is moved to its operative position, and means for confining the handle in said position.



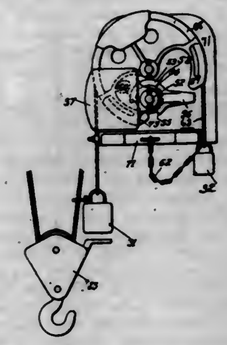
2. A saw comprising a rigid frame having a back, a blade-engaging outer arm, and a lever-carrying inner arm, a handle having a slot in its forward portion, the sides of which form ears pivoted to the frame and bearing on opposite sides thereof, the inner end of said slot constituting an elongated abutment, a lever fulcrumed on the inner frame arm and having a shorter blade-engaging arm and a longer arm adapted to extend into said slot and bear on said abutment, the handle being adapted to swing to and from its operative position relatively to the blade, and the lever being moved to a blade-straining position by the abutment when the handle is moved to its operative position, a fixed detent on the handle adjacent to the fulcrum of the lever, and a latch pivoted to the inner frame arm and adapted to engage said detent to confine the handle in its operative position.

3. A saw comprising a rigid frame having a back, a blade-engaging outer arm, and a lever-carrying inner arm, a handle having a slot in its forward portion, the sides of which form ears pivoted to the frame and bearing on opposite sides thereof, the inner end of said slot constituting an elongated abutment, a lever fulcrumed on the inner frame arm and having a shorter blade-engaging arm and a longer arm adapted to extend into said slot and bear on said abutment, the handle being adapted to swing to and from its operative position relatively to the blade, and the lever being moved to a blade-straining position by the abutment when the handle is moved to its operative position, and means for confining the handle in said position, the longer arm of the lever being provided with an adjustable runner contacting with the abutment whereby the tension of the blade may be regulated.

4. A saw comprising a rigid frame having a back, a blade-engaging outer arm and a lever-carrying inner arm, a handle composed of a wooden body having a slot in its forward portion forming two ears, and a metallic lining in said slot, the sides of the lining bearing on opposite sides of the frame, and a lining at the inner end of the slot constituting an elongated abutment, a pivot pin connecting said ears and the sides of the lining with the frame, and a lever fulcrumed on the inner frame arm and having a shorter blade-engaging arm and a longer arm adapted to extend into said slot and bear on said abutment, the handle being adapted to swing to and from its operative position relatively to the blade, and the lever being moved to a blade-straining position by the abutment when the handle is moved to its operative position, and means for confining the handle in said position.

1,113,592. SAFETY LIMIT-SWITCH. REUBEN I. WRIGHT and HARRY F. STRATTON, Cleveland, Ohio, assignors to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 30, 1912. Serial No. 728,682. (Cl. 175—287.)

1. In a switch, a shaft, a member oscillatable thereon and having a weight on one side of the shaft and an arm on the other side thereof, an oscillatable member having its ends disposed at opposite sides of the arm and arranged to engage either side of the said arm and move the weight to and slightly past its dead center, a pair of shoulders carried by the shaft, a pair of shoulders carried by the weight and arranged to engage the first named shoulders and move the shaft when the weight has been moved substantially to its dead center, and contact operating means carried by the shaft.

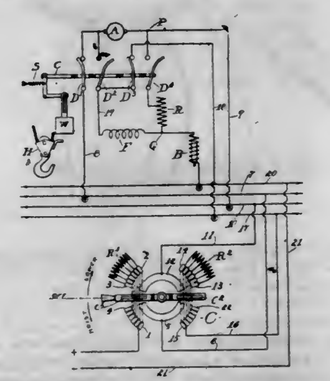


2. In a switch, stationary and movable contacts, cam surfaces connected with the movable contact, a cam for engaging said surfaces to open and close the contacts, a shaft for turning the cam, a weight, and means whereby the weight engages the shaft for moving the cam only when it has passed beyond its dead center.

3. In a gravity-operated switch, a weight, a shaft operated thereby, means whereby said shaft is rotated by the weight only when the center of gravity of the weight is descending, operating cams carried by the shaft, switch contacts, and means whereby said cams open or close the contacts whenever the shaft is turned by said weight.

4. In a mechanically-operated switch, stationary and movable contacts, an operating shaft, a cam carried by said shaft, cam surfaces by which a movement of the cam either causes the contacts to open or to close, a weight eccentrically mounted on said shaft, and means whereby said weight engages the shaft to turn it when the weight has passed its median position.

1,113,593. SAFETY LIMIT-STOP. REUBEN I. WRIGHT, Wickliffe-on-the-Lake, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 6, 1913. Serial No. 788,484. (Cl. 172—152.)



1. In a control-system for electric hoists, a motor having a series field, a controller mechanism for closing a

hoisting circuit through the motor, and a stopping device comprising means for opening the hoisting circuit and for closing a local dynamic braking circuit including the motor armatures and series field, said means directing the current through the armature and series field to cause the motor to run in the lowering direction when the controller mechanism is reversed.

2. In a control-system for electric hoists, a motor having a series field winding, an operator's switch for closing a hoisting or lowering circuit therefor, a stopping device comprising contacts for connecting the motor armature and series field in a local dynamic braking circuit and for opening the hoisting circuit, said contacts being included in a circuit which causes the motor to be operated in the lowering direction when the controller is moved to the lowering position.

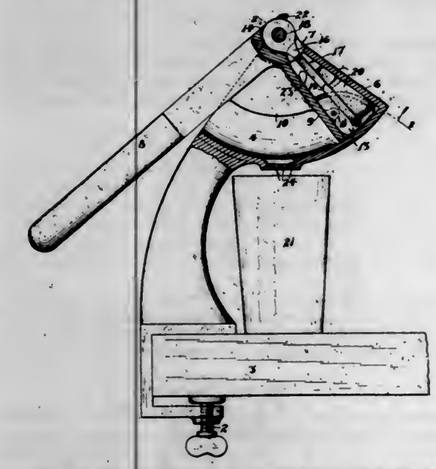
3. In a control-system for electric motors, a motor, forward and reverse circuits therefor, means operated by the motor when running in one direction and comprising contacts for opening the motor circuit corresponding to that direction and for connecting the motor armature and series field in a local dynamic braking circuit, and a circuit through the said contacts by which the motor can be reversed to restore the said means to its normal position.

4. In a motor control-system, an electric motor, a reversing controller mechanism therefor, and a device operated by the motor running in one direction comprising means for opening the motor circuit through the controller, and means for connecting the armature and field in a dynamic braking circuit exclusive of the controller mechanism, the said means connecting the armature and field in a circuit which, when the controller is reversed, causes the motor to run in the opposite direction.

5. In a control-system for electric motors, a motor having a series field, reversing controller mechanism for operating the motor in one direction or the other, a stopping device operated by the motor for disconnecting the motor from the controller mechanism and for including the motor armature and series field in a dynamic braking circuit exclusive of the controller mechanism, and a circuit including contacts of the controller mechanism and the said stopping device for reversing the motor to restore the device to its normal position.

[Claims 6 to 8 not printed in the Gazette.]

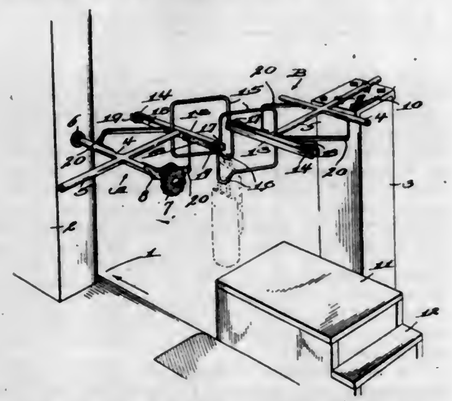
1,113,594. LEMON-SQUEEZER. ABRAHAM I. BARNWELL and PETER TORMEY, San Francisco, Cal. Filed Jan. 6, 1914. Serial No. 810,541. (Cl. 100—41.)



1. In a lemon squeezer, the combination of a suitable support, a receptacle supported thereon having a drain hole for the lemon juice, a cutter pivotally supported to swing through the open end of the receptacle, a handle for operating the cutter, and a presser plate having an elongated opening through which the cutter blade can move, and pivoted to move in the receptacle independently of the cutter.

2. In a lemon squeezer, the combination of a standard provided with means for securing it to the edge of a table or the like, and with a receptacle having a drain opening for fruit juices, and having a closed end and an open end, and walls extending upwardly and forming a pivot support, a handle and a cutter plate formed in one piece and pivotally connected to said walls, a knife secured to the cutter plate, and a presser plate pivotally supported on said walls and having an opening through which the knife can pass, and means extending from the side of the presser plate remote from the cutter plate and adapted to impinge against the closed end of the receptacle to arrest the presser plate.

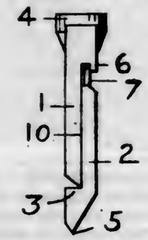
1,113,595. MAIL-BAG CATCHING AND DELIVERING APPARATUS. FRANK L. BARROIS, New Orleans, La. Filed Mar. 3, 1914. Serial No. 822,231. (Cl. 258—17.)



1. The combination of a mail-bag catching and delivering member having a lateral arm which is provided with a terminal seat and with a retaining spring extending thereacross; and a bag-supporting ring having a portion thereof adapted for reception in said seat, and an offset centering and retaining shoulder adapted for engagement with the upper edge of the seat.

2. The combination of a mail-bag catching and delivering member having a lateral arm which is provided with a terminal seat and with a retaining spring extending thereacross; and a substantially-rectangular bag-supporting ring having its rear member formed intermediate its ends with a centering and retaining shoulder adapted for engagement with the upper edge of the seat, the portion of said rear member directly beneath said shoulder being adapted for insertion in said seat.

1,113,596. FUSIBLE LINK FOR SPRINKLER-HEADS. GERARD DE P. BENNET, Brooklyn, N. Y., assignor to Holland Sprinkler Company, Inc., New York, N. Y. Filed May 20, 1914. Serial No. 839,832. (Cl. 169—5.)

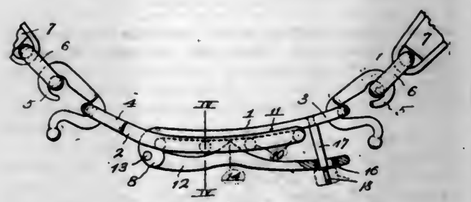


1. A fusible link comprising a plate of substantially the same length as width, having a knife edge at one end to one side of the medial line, a shoulder directly above said knife edge and parallel therewith, and a longitudinal recess in the outside face; a second member of substantially the same size provided with a knife edge at one end adapted to bear against the shoulder of the first member, a seat at the other end adapted to be engaged by a compressing member of a sprinkler head frame, and having a recess extending across the inside face; a locking member adapted to fit into the longitudinal recess of the first member and having one end projecting into the recess in the second member, the contiguous faces of the three members being joined and the recesses and the intermediate spaces being filled with an easily fusible medium, substantially as described.

2. A fusible link comprising a member one end of which is adapted to engage a pipe closure and having a longitudinal recess in its outside face; a second member of substantially the same size adapted to be supported by the first member and to be engaged by a sprinkder head frame, and having a portion overhanging the first member; a third member lying in the longitudinal recess of the first member and engaging the overhanging portion of the second member; the first member being joined to the second member, and the third member to the first by an easily fusible medium, substantially as described.

3. A fusible link comprising a rigid member one end of which is adapted to engage a pipe closure and having a longitudinal recess in its outside face; a second rigid member of substantially the same size engaging the first member and adapted to be engaged by a sprinkler head frame, and having a portion overhanging the first member; a third member lying in the longitudinal recess of the first member and projecting within the overhanging portion of the second member; the first member being joined to the second member and the third member to the first by an easily fusible medium which fills up the interstices between the first and third members, and between the first member and the overhanging portion of the second member.

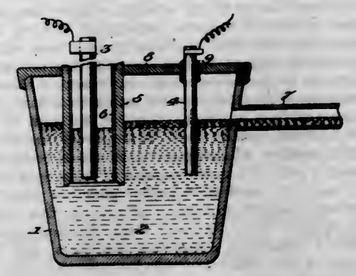
1,113,597. HAME-FASTENER. FREDERICK BRAIS, Kansas City, Mo. Filed July 21, 1913. Serial No. 780,180. (Cl. 54—27.)



A hame fastener, comprising in combination, a body portion having at one end thereof an eye adapted to receive a hook, and having a series of apertures in said body portion formed by transverse bars, a hook member comprising two legs each having a bend in one end thereof, said legs being pivoted together at their bended portions to form a hook adapted to be inserted through the apertures in said body portion and engage one of the said transverse bars, one of said legs having an aperture at the free end thereof, a pin mounted on the other of said legs, a button rotatably mounted on said pin, said button being adapted to extend through the aperture in said first mentioned leg and retain the said legs in spaced relation with respect to each other, and a projection carried by said first mentioned leg at a point midway between its extremities and adapted to extend between two of said transverse bars and above the other leg.

1,113,598. METHOD OF FIXING NITROGEN. JOHN E. BUCHER, Coventry, R. I., assignor to Nitrogen Products Company, a Corporation of Rhode Island. Filed Aug. 8, 1911. Serial No. 642,918. (Cl. 204—21.)

1. The cyclic method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with nitrogen to form a nitrid, collecting the haloid liberated during the electrolytic action, reacting on said liberated haloid with a reagent to form a halogen acid, treating said nitrid with said acid to form a substance comprising ammonia and to re-form the haloid salt above referred to, and separating said substance from said haloid salt.



2. The cyclic method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, and treating said nitrid with a hydrogen-halogen compound to form a substance comprising ammonia and to re-form the haloid salt above referred to.

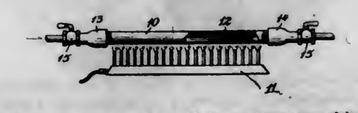
3. The cyclic method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, and treating said nitrid with a hydrogen compound to form a substance comprising ammonia and to re-form the haloid salt above referred to.

4. The cyclic method of fixing nitrogen which comprises electrolyzing a salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with a hydrogen compound to form a substance comprising ammonia and to re-form the salt above referred to, and separating said substance comprising ammonia from the said salt.

5. The method of fixing nitrogen which comprises electrolyzing a salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with an ammonia-halogen compound to form ammonia and a halogen salt of the metal above referred to.

[Claims 6 to 14 not printed in the Gazette.]

1,113,599. METHOD OF FIXING NITROGEN. JOHN E. BUCHER, Coventry, R. I., assignor to Nitrogen Products Company, a Corporation of Rhode Island. Original application filed Aug. 8, 1911, Serial No. 642,918. Divided and this application filed May 12, 1913. Serial No. 767,227. (Cl. 204—19.)



1. The cyclic method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with a hydrogen compound to form a substance comprising ammonia and a compound the base of which is the metal aforesaid, and reacting upon said compound with at least one reagent to reform the haloid salt above referred to said one reagent being halogenous in character.

2. The method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with a hydrogen compound to form a substance comprising ammonia and a compound the base of which is the metal aforesaid, and reacting upon said compound with at least one reagent to form a haloid salt the base of which is the metal first mentioned, said one reagent being halogenous in character.

3. The method of fixing nitrogen which comprises electrolyzing a salt of a metal capable of forming a nitrid, reacting upon the said electrically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with water to form ammonia, and reacting upon one of the residues of this last reaction, other than said ammonia, with at least one additional reagent to form an electrolyzable salt the base of which is the metal first mentioned.

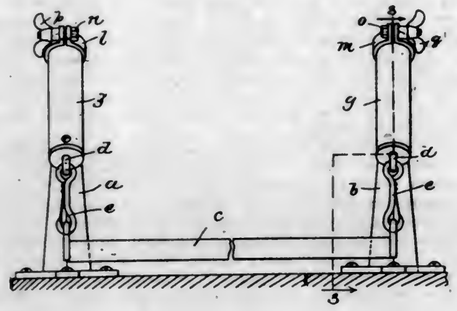
4. The method of fixing nitrogen which comprises electrolyzing a salt of a metal capable of forming a nitrid, reacting upon the said electrically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with a reagent which includes water forming constituents to form a substance comprising ammonia, and reacting upon one of the residues of this last reaction with at least one additional reagent to form an electrolyzable salt the base of which is the metal first mentioned.

5. The cyclic method of fixing nitrogen which comprises electrolyzing a haloid salt of a metal capable of forming a nitrid, reacting upon the said electrolytically separated metal with a nitrogenous reagent to form a nitrid, treating said nitrid with a hydrogen compound to form a substance comprising ammonia and also an oxygen compound of said metal, and converting said oxygen compound to a simple halogen compound of said metal preparatory to re-electrolyzation of the latter.

1,113,600. WATER-METER. THOMPSON R. BUTTS, Stockton, Cal. Filed Aug. 21, 1913. Serial No. 785,873. (Cl. 234—10.)

A marker mechanism for a device of the character described comprising a support, a plate secured to said support and having its ends bent inwardly and then outwardly forming two pairs of oppositely disposed slots on the face of said plate, a mark receiver disposed in one pair of said slots, a plate having bent ends slidably disposed in the other pair of said slots, a tubular member mounted on said last named plate, a marker disposed in sliding relation in said tubular member and projecting into engagement with said mark receiver, and a spring normally engaging the outer end of said marker to hold it in contact with said mark receiver, as described.

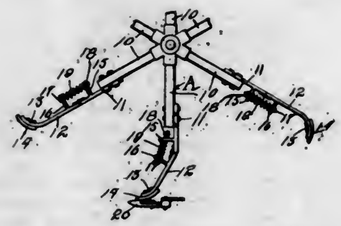
1,113,601. FLEXIBLE FOOT-REST. JOHN O. CALDWELL, Jr., Boston, Mass., assignor of one-half to John O. Caldwell, Sr., Boston, Mass. Filed Aug. 16, 1909. Serial No. 512,997. (Cl. 21—15.)



1. A foot rest comprising a pair of standards, casings secured rigidly to the upper ends of said standards and making an acute angle therewith, a spring contained in each of said casings, a rod projecting from the lower end of each casing, movable end-wise in and out of the same and engaged with said spring, and a foot piece hung from the said rods.

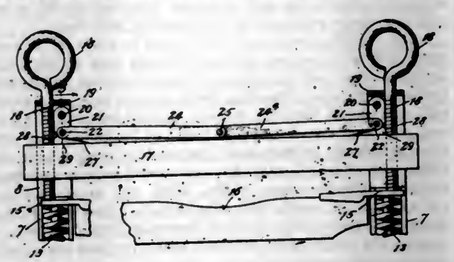
2. A foot rest for vehicles comprising a pair of standards adapted to be secured to the floor of the vehicle in front of the seat thereof, spring holders having guiding portions secured to the upper ends of said standards, rods engaged with the guiding portions of said spring holders and movable end-wise with respect thereto, said rods being so guided as to extend on a downward slant away from the vehicle seat, springs so engaged with said holders and with the respective rods, as yieldingly to resist downward movement of the latter, and a foot piece hung from said rods.

1,113,602. HARVESTER-REEL. STANLEY CHRISTENSEN, Powers Lake, N. D. Filed Apr. 30, 1913. Serial No. 764,629. (Cl. 56—22.)



In a harvester reel having corresponding radial arms at each end, an extension member, a second member hinged to the outer ends of each extension member, said second member having its free end curved and extended oppositely to the direction of rotation of the reel, rails connecting the free ends of corresponding second named members, lateral arms on each of said members, spring means carried by said arms for yieldingly holding the second member against movement in one direction, enlarged portions provided with a plurality of transverse slots formed on the inner end of each extension member, and a plurality of bolts mounted in each of said arms and engaged through respective slots in the enlarged ends in the corresponding extension member whereby said extension member may be adjusted bodily in a lateral direction.

1,113,603. CLOTHES-WRINGER. JOSEPH E. CONDON, Clinton, Iowa, assignor to Peter H. Kelly, Clinton, Iowa. Filed June 2, 1913. Serial No. 771,269. (Cl. 68—32.)



1. In a clothes-wringer, the combination with the adjustable roll of the device, and springs confined against its ends, of means provided with inclined surfaces and operating, when depressed, to place said springs under tension, members pivotally supported on the frame of the device to swing in a substantially vertical plane and adapted when swung to one position to engage said cam-surfaces and depress said first-named means, and means for releasing said members.

2. In a clothes-wringer, the combination with the adjustable roll of the device, and springs confined against its ends, of means provided with cam surfaces and operating, when depressed, to place said springs under tension, members pivotally supported on the frame of the device to swing in a substantially vertical plane and adapted when swung to one position to engage said cam-surfaces and depress said first-named means, and means connected with said members for releasing the latter.

3. In a clothes-wringer, the combination with the adjustable roll of the device, and springs confined against its ends, of means provided with inclined surfaces and operating, when depressed, to place said springs under tension, members pivotally supported on the frame of the device and releasably engaging said inclined surfaces, and a toggle connected with said members, for the purpose set forth.

4. In a clothes-wringer, the combination with the adjustable roll of the device and springs confined against its ends, of a pressure-bar having inclined surfaces thereon, set-screws adjustable therein for coöperation with the upper ends of the springs, members pivoted on the frame of the device for coöperation with said inclined surfaces, and a toggle connecting said members together, for the purpose set forth.

5. In a clothes-wringer, the combination with the adjustable roll of the device, and springs confined against its ends, of a pressure-bar, members pivotally supported on the frame of the device to swing in a vertical plane and adapted when swung to one position to engage said pressure-bar and depress it, and means connecting said members together for simultaneous operation.

[Claims 6 and 7 not printed in the Gazette.]

1,113,604. BOTTLE-STOPPER. CLAUDE B. DAVIS and DORSETT A. DAVISON, Richmond, Va., assignors to Cork Extractor Corporation of America, Richmond, Va. Filed Mar. 24, 1913, Serial No. 756,521. Renewed Mar. 16, 1914. Serial No. 825,153. (Cl. 215—53.)

1. The combination with a cork having a recess therein, of a coil spring seated wthin the recess and provided with a terminal penetrating the solid body of the cork, and an anchoring member engaging with and anchoring the terminal of the spring.

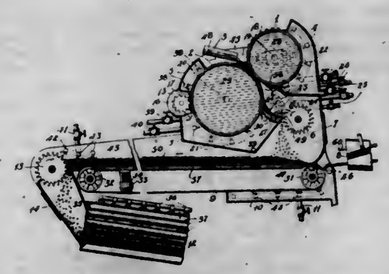
2. The combination with a cork having a recess in the upper portion thereof which opens through the top of the cork, of an extensible extractor adapted to be coiled within the recess and provided with a depending terminal penetrating the solid body of the cork below the recess, said extractor having an upper terminal adapted to overlie and engage the top of the cork, and an anchoring member for the depending terminal of the extractor.

3. The combination with a cork having a recess opening through the top thereof and extending into the body portion of the cork to a point substantially midway thereof, of an extensible extractor comprising a coiled spring concealed within the recess and provided with an inner depending terminal and an outer exposed gripping terminal, said inner terminal penetrating the solid body portion of the cork below the recess and an anchor engaging the inner terminal and located entirely within the solid body portion of the cork.

1,113,605. DEVICE FOR TURNING NIPPLES. ELLEN JANE DUROSS DESLOGE, St. Louis, Mo. Filed Sept. 6, 1910. Serial No. 580,658. (Cl. 128—18.)

As a new article of manufacture, a nipple turning device comprising an extended base for supporting the device in an upright position during the operation of turning the nipple, a stem tapering upwardly from said base to near the upper end of the stem and thence being enlarged into a rounded head of a size readily insertible in an ordinary nipple, said device being formed as an integral structure, and having its entire surface smooth and entirely free from crevices, hollows or protuberances.

1,113,606. PROCESS OF MAKING CEMENT. HARRY L. DUNCAN, New York, N. Y. Filed Nov. 13, 1903, Serial No. 180,996. Renewed Mar. 10, 1914. Serial No. 823,797. (Cl. 106—43.)



1. The cement process, that consists in congealing substantially molten furnace slag by contact with a congealing surface into a sheet or plastic material, in breaking up and annealing said material and in subsequently pulverizing and cooling the same to form slag material containing substantial proportions of active cement material; in treating furnace slag to produce inert cement material; and in mixing substantial proportions of said active cement material, said inert cement material, and Portland cement.

2. The cement process, that consists in congealing substantially molten furnace slag by contact with a congealing roll into a sheet of plastic material, breaking up said material and in piling the same upon a conveyer to anneal the same, and in subsequently pulverizing and cooling the same so as to form slag material containing substantial proportions of active cement material.

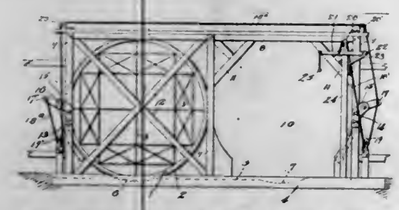
3. The cement process, that consists in congealing substantially molten furnace slag into a stream of plastic material, in breaking up and piling said material upon a conveyer, and in pulverizing and cooling said material to form slag material containing substantial proportions of active cement material.

4. The cement process, that consists in congealing substantially molten furnace slag into a stream of consistent material, in breaking up and piling said material upon a conveyer, and in subsequently cooling the same to form slag material containing substantial proportions of active cement material.

5. The cement process, that consists in congealing substantially molten furnace slag into a stream of plastic material, in annealing said material and in subsequently pulverizing and cooling the same to form slag material containing substantial proportions of active cement material.

[Claims 6 to 28 not printed in the Gazette.]

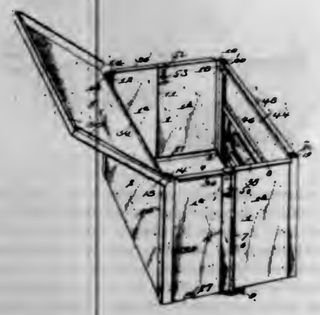
1,113,607. GATE. SAMUEL K. ECKERD, Sarita, Tex. Filed Nov. 29, 1913. Serial No. 803,702. (Cl. 39—7.)



1. The combination with a frame having a track formed with spaced recesses, of a wheel movable in the track and adapted to stand in said recesses, and a pair of actuating levers adapted for contact with said wheel for impelling it from one recess to the other.

2. The combination with a frame having a track and a wheel movable therein, of a lever pivoted in the frame and adapted for contact with said wheel, and means for moving said lever whereby the wheel is impelled.

1,113,608. FOLDING SHEET-METAL BOX. ORRIN G. FRANKS, Williamsport, Pa., assignor to W. J. Rouse, Williamsport, Pa. Filed Sept. 12, 1912. Serial No. 720,026. (Cl. 220—17.)



1. In a folding box, side walls made in hingedly jointed front and rear sections, a front wall hingedly jointed to the front sections, and a rear wall hingedly jointed to the rear sections, the said sections having inturned flanges at their extreme edges which are adapted when the box is set up to overlie the side marginal portions of the front and rear walls and to form bearings for said walls.

2. In a folding box, side walls made in hingedly jointed front and rear sections having inturned lugs at their upper and lower ends and adjacent their extreme edges, and having hinge pins extending between said lugs, and front and rear walls hingedly jointed to said respective front and rear sections and having terminal beads at their side edges which fit between said lugs and through which the hinge pins pass, the said sections having inturned flanges at their extreme edges which, when the box is set up, are adapted to overlie the side marginal portions of the front and rear walls to form bearings therefor, and to conceal the hinge joints between said front and rear walls and said side walls.

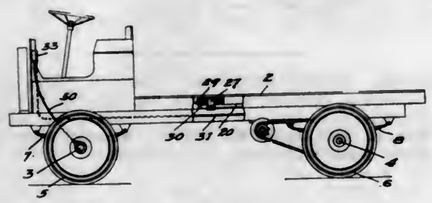
3. In a folding box, side walls made in hingedly jointed sections, front and rear walls hingedly jointed to the respective front and rear edges of said side walls, a bottom hinged to the lower edge of the front wall and having side flanges and slots adjacent thereto and spring fingers provided at the lower edges of the side walls to engage through the slots of the bottom, the side walls having flanges at their lower edges which carry the fingers, the latter being struck out from the side walls.

4. In a folding box, side walls made in hingedly jointed sections and having outturned flanges at their upper edges, front and rear walls hingedly jointed to the respective front and rear edges of said side walls, a top hingedly jointed to the upper edge of said rear wall and having flanges at its sides and front to fit over said side and front walls when the box is set up, and, when the box is folded, to receive the front wall of an adjacent folded box in nested relation, and a bottom hingedly jointed to the lower edge of the front wall and adapted to fold between the latter and the adjacent sections of the side walls.

5. In a folding box, hingedly jointed side and front walls, a bottom, an inset hinge joint connecting the bottom and the front wall, the front wall having a crimp at its lower edge and having a ledge which projects from the crimp and to which the bottom is hinged, spring fingers struck up from the ledge, and a panel resting upon the ledge and having its lower portion engaged by said fingers, the hinge joints between the front and side walls including beads which are formed with inturned side flanges to engage over the marginal side portions of said panel.

[Claims 6 to 11 not printed in the Gazette.]

1,113,609. WEIGHING MECHANISM AND MILEAGE-RECORDER. CHARLES B. GAMBLE, Minneapolis, Minn. Filed Oct. 13, 1913. Serial No. 794,867. (Cl. 234—1.)



1. The combination, with a vehicle body, its carrying wheels and springs, of a record sheet graduated to indicate the load on said vehicle body, a marking device mounted to move on said record sheet and mechanism actuated by the weight of the load on said vehicle body for operating said marking device, said mechanism including cylinders having a pipe connection between them and containing an inelastic fluid, and pistons for said cylinders, one of said pistons being connected with the vehicle body, the other of said pistons having means for connection with said marking device.

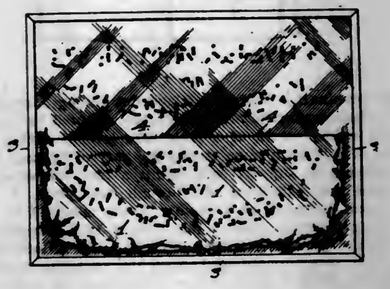
2. The combination, with a vehicle body, its axles and carrying wheels and supporting springs of a cylinder mounted on the rear axle of said vehicle, a plunger therefor, a lever pivoted at a point intermediate to its ends on said plunger and pivotally connected at one end to said vehicle body, a rod pivotally connected with said cylinder and having an adjustable connection with said lever, a second cylinder and plunger having a pipe connection with said first named cylinder, an inelastic fluid for said cylinders, the depression of said first named plunger forcing the fluid into said second named cylinder to actuate its piston, a record sheet, and a marker operatively connected with said second plunger and movable on said record sheet.

3. The combination, with a vehicle body, its carrying wheels and springs, of a record sheet graduated to indicate the load on said vehicle body and also graduated to indicate the miles of travel of said body, a marking device, mechanism actuated by the depression of the vehicle body under the weight of the load for operating said marking device to make a record of the load on the vehicle, and mechanism actuated by one of the carrying wheels for moving said sheet to indicate thereon the distance the vehicle has traveled.

4. The combination, with a vehicle body, its carrying wheels and springs, of a record sheet graduated transversely to indicate the load on said vehicle body and also graduated longitudinally to indicate the miles of travel of the vehicle, a marking device mounted to move transversely on said sheet, mechanism actuated by the depression of the vehicle body under load for operating said marking device, and mechanism actuated by one of the carrying wheels for moving said sheet lengthwise to indicate the distance of travel.

5. The combination, with a vehicle body, its carrying wheels and springs, of a record sheet graduated to indicate the load on said vehicle body and also graduated to indicate the miles of travel of said body, a marking device, and mechanism actuated by the depression of the vehicle body under load and by the movement of one of said carrying wheels for imparting a relative movement to said marking device and said record sheet for indicating on said sheet the load in tons and fractions thereof and the mileage of the vehicle.

1,113,610. MOTION-SLIDE FOR STEREOPTICONS. EARL L. GILMORE, San Francisco, Cal. Filed Dec. 9, 1913. Serial No. 805,645. (Cl. 88—26.)



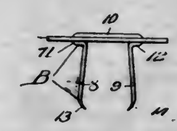
1. A motion slide for stereopticons composed of parallel transparent plates separated and secured at the edges thereof, one of the plates having a portion of a design thereon; a viscous, transparent liquid confined between the plates; and a movable member within the liquid between the plates and having thereon the remaining portion of the design.

2. A motion slide for stereopticons comprising parallel transparent plates separated by means of strips near the edges thereof, one of the plates having a portion of a design thereon; means for securing the strips and the plates together; a transparent viscous liquid confined between the plates; and a movable member between the plates and having thereon the remaining portion of the design.

3. A motion slide for stereopticons comprising parallel transparent plates, one of the plates having an undecipherable portion of a design thereon; a viscous liquid confined between the plates; and a movable member having the remaining undecipherable portion thereon, of the design to be shown, the said movable member being adapted to move the said undecipherable portion thereon into coincidence with the undecipherable portion on the plate and thereby complete and disclose a decipherable design.

4. A motion slide for stereopticons, comprising parallel transparent plates, one of the plates having an undecipherable portion of a design thereon; a viscous liquid confined between the plates; and a member pivotally secured between the plates and having the remaining undecipherable portion thereon of the design to be shown, the said pivoted member being adapted to move the said undecipherable portion thereon into coincidence with the undecipherable portion on the plate and thereby complete and disclose a decipherable design.

1,113,611. PIN-TICKET. LOUIS GITTELSOHN, Chicago, Ill. Filed July 15, 1912. Serial No. 709,433. (Cl. 40—25.)



1. A pin ticket comprising a ticket, and a pin member provided with a top portion resting upon the upper or outer face of said ticket and having prongs depending beneath said top portion and said ticket, each of said prongs comprising a straight body portion inclined from the normal to said ticket and a bent pointed end, the extremity of said end being disposed in substantially vertical alinement with the intersection of the prong and body portion, whereby said prongs may be pushed through a fabric without danger of injury to either the prongs or fabric and bent at their intersections with the body portion only to engage the ends of the prongs in the fabric.

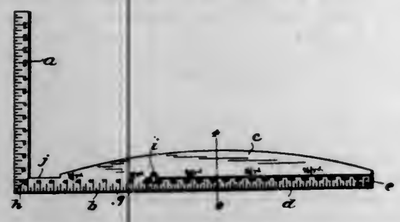
2. A pin ticket comprising a ticket, and a pin member provided with a top portion embracing a portion of said ticket and having a pair of prongs attached thereto bent or curved toward each other at their lower extremities, the remainder of each of said prongs being substantially straight and normally extended away from each other and the point of each prong being in substantially vertical alinement with the point of juncture of the prong and top portion and adapted to be thrust through the fabric and bent by hand to hook said points into the underside of the fabric in connection with which said pin ticket is used.

3. In a pin ticket the combination of a ticket, a wire loop, the ends of which are disposed through said ticket, and flexible wire prongs attached to each of said ends, the lower extremity of said prongs being sharpened and curved or bent sharply toward each other, said prongs being inclined away from each other so as to bring the points of the prongs and the junctures between the prongs and loop into substantial vertical alinement whereby said prongs may be thrust through the fabric, crossed and booked in the under side thereof to removably secure said pin ticket to said fabric.

1,113,612. MEASURE FOR GARMENT-CUTTERS. RUBIN GLASSMAN, Baltimore, Md. Filed Apr. 16, 1914. Serial No. 832,177. (Cl. 33—16.)

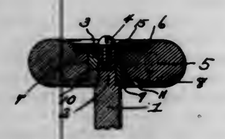
1. A tailor's garment-measuring instrument, consisting of a square having two arms at a right-angle and rigid with respect to each other; a convex curve-delineator at the inner edge of one arm and the same arm provided

along its straight edge with a rabbet; a supplemental length-measure hinged by one end to the extremity of the rabbeted arm and permitting said supplemental measure to be folded into said rabbet or extended so as to expose either its upper or lower surface; and a turn-button to confine the said supplemental measure when folded.



2. A tailor's garment-measuring instrument, consisting of a square having two arms one longer than the other and at a right angle with respect to each other—the longer arm for a portion of its length provided along its top surface with a rabbet and also provided with a graduated scale that commences at the angle-corner and progresses to the terminal end of the rabbet; a convex curve-delineator at the inner edge of said longer arm and extending to the terminal end of the rabbet; a supplemental length-measure hinged by one end to the terminal end of the rabbeted arm—the hinge permitting said supplemental measure to be extended and to fold back and have either its upper or lower surface exposed to view and said supplemental measure provided on its upper surface with a graduated scale whose smallest number is at its free end, and also provided on its lower surface with a graduated scale whose smallest number is next after the terminal end of said rabbet, whereby the different scales on opposite surfaces of the supplemental measure will read in continuation of the scale on both of said arm and rabbet.

1,113,613. VALVE-HANDLE. CHARLES A. GOOZEY, Woonsocket, R. I. Filed Dec. 31, 1913. Serial No. 809,765. (Cl. 137—4.)



1. The combination of a stem having a reduced end portion of angular form in cross-section and also having a threaded bore in said end portion, a handle having a countersink of greater length than width in its inner side and also having a bore in communication with said countersink, a metallic sleeve occupying said bore and having a flange of a shape and size to snugly occupy said countersink and also having a bore of angular form in cross-section receiving the angular portion of the stem and further having a shoulder and a reduced end portion, a washer arranged on said shoulder and in the outer portion of the handle and secured in position by the outer end portion of the metallic sleeve, a second washer arranged against the outer end of the sleeve, and a screw passed through the second-named washer and into the threaded bore of the stem.

2. A stem handle comprising a body having a central opening and also having a depression in its outer side and a countersink in its inner side in communication with said opening, a metallic sleeve arranged in the central opening in the body and having a flange snugly occupying said countersink, a washer secured on the sleeve and arranged in said depression, and a washer arranged over the first-named washer and the end of the sleeve and connected with the sleeve.

1,113,614. COLORED CAOUTCHOUC SUBSTANCES AND PROCESS OF MAKING SAME. KURT GOTTLOB, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 16, 1912. Serial No. 726,067. (Cl. 106—23.)

1. Process for the production of colored caoutchouc, which process consists in first treating caoutchouc materials with organic dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

2. Process for the production of colored caoutchouc like materials, which process consists in first treating caoutchouc like materials with organic dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

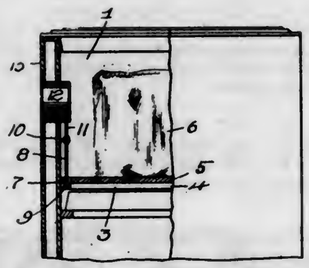
3. Process for the production of colored caoutchouc, which process consists in first treating caoutchouc materials with organic azo dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

4. Process for the production of colored caoutchouc-like materials, which process consists in first treating caoutchouc-like materials with organic azo dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

5. As new products vulcanized caoutchouc substances comprising caoutchouc vulcanized with sulfur and colored with organic dyes incorporated therewith before the vulcanization, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,113,615. SCALE. IRVIN G. GRENINGER, Vandergrift, Pa. Filed June 18, 1913. Serial No. 774,328. (Cl. 73—46.)

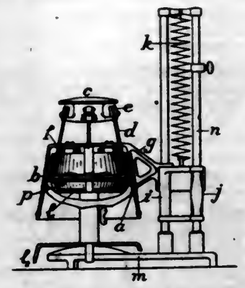


The combination with a refrigerator having a refrigeratory compartment formed therein and adapted to receive a refrigeratory agent, of a scale base located within the bottom of said compartment, a plate carried by said base and adapted to support said agent, a link connected to said base and extending up through said plate, a dial mechanism including an inclosing casing mounted in and projecting inwardly from a side wall of said refrigerator and visible from the front of said wall, and an operative connection between said mechanism and said link whereby the weight of said agent can be determined by observing said dial.

1,113,616. PIE TRIMMING AND CRIMPING MACHINE. GEORGE G. GRIM, Rochester, N. Y. Filed July 23, 1913. Serial No. 780,718. (Cl. 107—49.)

1. In a machine for trimming and crimping pies, the combination with a trimmer, of a crimper movable relatively to the trimmer, said crimper comprising a plurality of indeptndently movable sections.

2. In a machine for trimming and crimping pies, the combination with a conical trimmer having an interior surface adapted to engage pies of different sizes, of a series of crimping members movable within the trimmer, said crimping members being independently and yieldably supported.



3. In a machine for trimming and crimping pies, the combination with a guide, of a support vertically movable on the guide, a conical trimmer attached at its lower edge to the support, the upper edge of the trimmer being free, and a crimper movable relatively to the trimmer and mounted upon the support.

4. In a machine for trimming and crimping pies, the combination with a guide, of a support vertically movable on the guide, a conical trimmer attached at its lower edge to the support, the upper edge of the trimmer being free, and a series of crimping members independently mounted upon the support and movable relatively to the trimmer.

1,113,617. MOVING-PICTURE MACHINE. ROBERT C. GROH, St. Paul, Minn., assignor of one-half to Rudolph Steinmetz, Minneapolis, Minn. Filed Aug. 30, 1913. Serial No. 787,496. (Cl. 88—18.3.)

1. A motion picture machine comprising a frame having a display opening exposed at one side to daylight, a magnifying eye-piece having the walls thereof fitted to said opening and extending away from the light-receiving side thereof, a picture film strip, and means for guiding the same out of contact with the eye-piece and between the opening therefrom and the said frame opening.

2. A motion picture machine comprising a frame having a display opening exposed at one side to daylight, a magnifying eye-piece having the walls thereof fitted to said opening and extending away from the light-receiving side thereof, a roller carried by the frame at a point removed from the said frame-opening, a picture film strip running over said roller, a guide positioned adjacent the frame-opening for directing the film strip between the said frame-opening and the eye-piece, and means for moving and intermittently holding stationary said film strip.

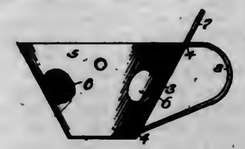
3. A motion picture machine comprising an extended frame having guides at the opposite ends thereof and having an opening near one of said guides, a picture film strip running over said guides and across said opening, and a magnifying eye-piece having the walls thereof fitted to said opening and extending away from the light-receiving side thereof.

4. A motion picture machine comprising an extended frame having guides at the opposite ends thereof and having an opening near one of said guides, an endless picture film strip running over said guides and across said opening, and a magnifying eye-piece having the walls thereof fitted to said opening and extending away from the light-receiving side thereof.

5. A motion picture machine comprising an extended frame having guides at the opposite ends thereof and having an opening near one of said guides, an endless picture film strip running over said guides and across said opening, and a magnifying eye-piece having the walls thereof fitted to said opening and extending away from the light-receiving side thereof, said eye-piece being removable to permit framing and removal of the film strip.

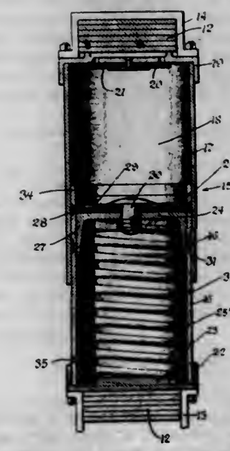
[Claims 6 to 11 not printed in the Gazette.]

1,113,618. CONICAL-SANITARY-CUP HOLDER. EDWARD CLAYTON HALDEMAN, Philadelphia, Pa. Filed Apr. 10, 1912. Serial No. 689,936. (Cl. 65—13.)



A cup holder comprising a body, a brace plate on the side of the same connected therewith, a handle connected with said plate, and a tongue rising from said plate and continuous thereof above said handle, said tongue being adapted to extend above the upper edge of the said body to sustain the portion of the side of the cup projecting above the body and to form an abutment against which said portion may be pressed by hand to control the cup in the holder.

1,113,619. SHOCK-ABSORBER. CHARLES H. HAMMERSMITH, Brookfield, Ill. Filed Sept. 12, 1913. Serial No. 789,414. (Cl. 21—105.)



1. The combination with running gear and frame elements, of a pneumatic shock absorber comprising coacting

chamber-forming parts relatively movable directly with the running gear and frame members for compression of the chambered air; a spring resisted yielding wall movable to enlarge said chamber under the action of the compressed air therein, and an inwardly opening check valve in the wall of said chamber open at its outer side to the atmosphere.

2. In a pneumatic shock absorber, a cylinder; a piston therein, means for rigid connection of said cylinder and piston with vehicle running gear and frame members respectively, whereby they may coact to compress air when the running gear and frame members, to which they are attachable, approach each other, said piston having therein a spring resisted yielding wall open at its outer face to the atmosphere.

3. In a pneumatic shock absorber, a cylinder; means to connect it with one element of a vehicle; a piston in said cylinder; means to connect it with another member of the vehicle, said piston comprising a hollow shell; a supplemental piston positioned entirely within the last mentioned piston and reciprocable therein, yielding means opposing the movement of said supplemental piston within said piston shell and an inwardly opening check valve being open to the atmosphere.

4. In a pneumatic shock absorber, a piston structure comprising a shell; a base for such shell; a movable piston head reciprocable in said shell; a stop for limiting the outward throw of said piston head with respect to said shell; yielding means normally maintaining said head against said stop; a cylinder coacting with said piston structure as a whole, said cylinder having a port therein and an outwardly closing check valve for said port, the outer side of said valve being open to the atmosphere.

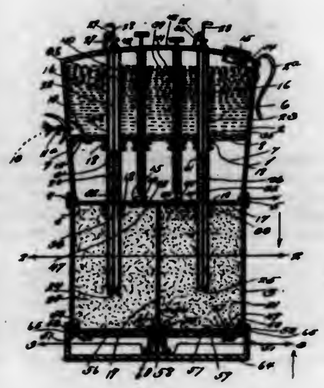
5. In a pneumatic shock absorber, the combination of a cylinder, a second cylinder positioned with tis open end telescoping within the open end of the first mentioned cylinder, a piston slidable within the second cylinder, resilient means acting upon said piston and normally holding the same in the open end of its cylinder, and an inwardly opening check valve in the first mentioned cylinder with its outer face open to the atmosphere.

1,113,620. DRILL. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 23, 1912. Serial No. 692,745. (Cl. 255—64.)

1. A drill steel, a tube surrounding it and forming together therewith a channel, a check valve and its cage located in said channel and means for locking the cage in position comprising a projection on the cage and a hole in the tube for receiving the projection.

2. A drill steel cruciform in cross section, a tube surrounding the steel forming inclosed channels, one or more of said channels being left valveless, a valve or valves located in the remaining channel or channels, a cage or cages and means for locking the cage or cages in position comprising a projection on each cage and a hole in the tube for receiving said projection.

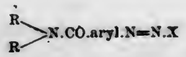
1,113,621. MINER'S ACETYLENE-GAS LAMP. WALTER HARRISON, Dewmaine, Ill. Filed Nov. 3, 1913. Serial No. 799,011. (Cl. 48—23.)



In a device as set forth, a casing having a water chamber in the top portion, and two carbid chambers in the lower portion, and a gas chamber between the carbid chambers and the water chamber, means for permitting water to pass from the water chamber into one or the other of said carbid chambers, means for controlling the gas from one or the other of the carbid chambers to the gas chamber, and means for consuming the gas from the gas chamber, the bottom of the carbid chambers having openings, an adjustable disk circular door for the opening provided with openings, so arranged relative to the openings of the bottom, that both openings of the bottom may be closed by the door, or only one opening at a time of the bottom may be opened, and a guard threaded on the lower portion of the casing for guarding the door against accidental movement.

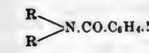
1,113,622. AZO DYES FOR WOOL. PETER HAUPTMANN and ALBERT ROHDE, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Sept. 4, 1913. Serial No. 788,137. (Cl. 8—1.)

1. The herein described new azo dyestuffs having most probably the formula,



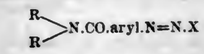
in which R stands for a suitable substituent and X for the radical of an azo dyestuff component, derivable from diazo compounds of disubstituted aminoarylcarbonylamino compounds and azo dyestuff components, which are after being dried and pulverized generally from yellowish to reddish powders soluble in water generally with a yellowish to bluish-red coloration; yielding upon reduction with stannous chlorid and hydrochloric acid a disubstituted aminoarylcarbonylamin and an aromatic amin; and dyeing wool generally from greenish-yellow to bluish-red shades fast to light and to milling, substantially as described.

2. The herein described new azo dyestuffs having most probably the formula:



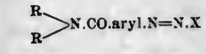
in which R stands for a suitable substituent and X for the radical of an azo dyestuff component, and being derivable from diazo compounds of disubstituted aminobenzoylamino compounds and azo dyestuff components, which are after being dried and pulverized generally from yellowish to reddish powders soluble in water generally with a yellowish to bluish-red coloration; yielding upon reduction with stannous chlorid and hydrochloric acid a disubstituted aminobenzoylamin and an aromatic amin; and dyeing wool generally from greenish-yellow to bluish-red shades fast to light and to milling, substantially as described.

3. The herein described new azo dyestuffs having most probably the formula,



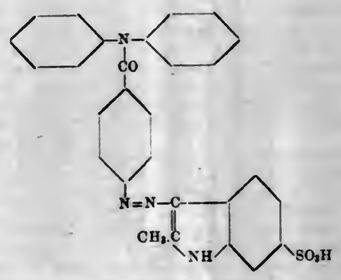
in which R stands for an aryl radical and X for the radical of an azo dyestuff component, derivable from diazo compounds of diarylaminoarylcarbonylamino compounds and azo dyestuff components, which are after being dried and pulverized generally from yellowish to reddish powders soluble in water generally with a yellowish to bluish-red coloration; yielding upon reduction with stannous chlorid and hydrochloric acid a diarylaminoarylcarbonylamin and an aromatic amin; and dyeing wool generally from greenish-yellow to bluish-red shades fast to light and to milling, substantially as described.

4. The herein described new azo dyestuffs having most probably the formula,



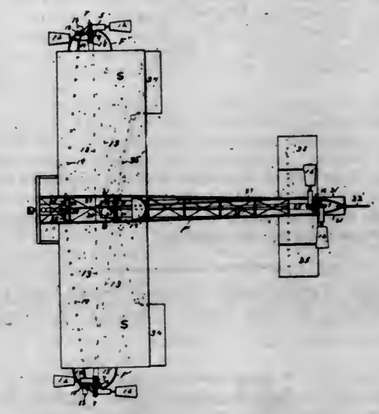
in which R stands for a suitable substituent and X for the radical of a ketol sulfonic acid, derivable from diazo compounds of disubstituted aminoarylcarbonylamino compounds and ketol sulfonic acids, which are after being dried and pulverized generally from yellowish to reddish powders soluble in water generally with a yellowish to bluish-red coloration; yielding upon reduction with stannous chlorid and hydrochlorid acid a disubstituted aminoarylcarbonylamin and an aminoketol sulfonic acid; and dyeing wool generally from greenish-yellow to bluish-red shades fast to light and to milling, substantially as described.

5. The herein described new azo dyestuff having most probably the formula:



which is after being dried and pulverized a yellowish-brown powder soluble in water with a yellowish coloration; yielding upon reduction with stannous chlorid and hydrochloric acid para-aminobenzoyldiphenylamin and amino-methylketolsulfonic acid; and dyeing wool from an acid bath pure yellow shades fast to light and to milling, substantially as described.

1,113,623. BALANCING MECHANISM FOR AEROPLANES. HERBERT E. HAWES, New York, N. Y. Filed June 8, 1912. Serial No. 702,513. (Cl. 244—25.)



1. In an aeroplane, a dual or twin balancing mechanism comprising vertically-acting lateral-balance propellers and ailerons disposed in opposite inter-related pairs and working in synchronism, connection for adjustment thereof, a similar propeller and movable planes located at the rear of the machine, connections for adjustment thereof, means for rotating the propellers, and a universal control-member capable of adjusting synchronously and equally the blades of the vertically-acting lateral-balance propellers and the ailerons independently of the longitudinal balancing mechanism, and vice-versa.

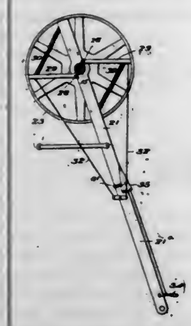
2. In an aeroplane, a dual or twin balancing mechanism comprising oppositely disposed pairs of ailerons and vertically-acting lateral-balance propellers having rocking blades adjustable to positive or lifting angles and to negative angles relative to the plane of rotation of the propellers, a similar propeller and movable planes located at the rear of the machine for governing the longitudinal balance connections for adjustment thereof, a universal control-member adapted and arranged to give equal and opposite adjustments synchronously to the lateral balancing members and independently of the longitudinal balancing members, and vice-versa, and means to rotate the propellers.

3. In an aeroplane having double-surfaced supporting planes a dual or double lateral and longitudinal balancing mechanism comprising a vertically-acting propeller having rocking blades and a pivoted aileron disposed at each side in interrelated pairs and working in synchronism, a similar propeller and pivoted elevating planes located at the rear of the machine, a universal control member for adjusting the lateral and longitudinal balancing devices independently, means for rotating the rear propeller, and shrouded or covered shafts for rotating the lateral-balance propellers; said shafts extending between the double wing-surfaces.

1,113,624. CLUTCH MECHANISM. WALTER C. HAYFORD, Lake, Ind. Filed Feb. 14, 1912. Serial No. 677,601. (Cl. 74—5.)

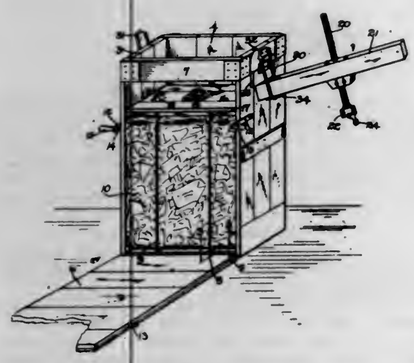
In a clutch mechanism, a two-part operating lever consisting of sections jointed together, releasable means for locking the parts of the lever together, and clutch

members operatively associated with the jointed outer part of the two-part lever, whereby on the release of the



locking means aforesaid for the parts of the lever, the clutch members will be released.

1,113,625. PAPER-PRESS. CHARLES B. HEIM, Marco, Ind. Filed Jan. 19, 1914. Serial No. 813,031. (Cl. 100—8.)



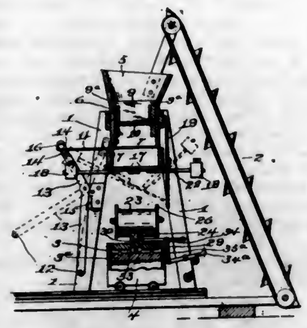
1. A baling press including a box open at its upper end, a screw beam adapted to lie across the top of the box for receiving a screw for pressing the contents of the box, a loop pivotally secured to one side of the box and pivotally connected with said screw beam near one end so that the screw beam cannot escape therefrom, a loop pivotally secured to the opposite side of the box adapted to be placed over the free end of the beam when it is placed upon the box, and a stop on the side of the box to engage the end of said screw beam when turned up and back for holding the same in an elevated position.

2. A baling press including a box open at its upper end, a screw beam adapted to be placed across the top of the box, a screw operating through said screw beam for pressing the contents of the box and having a socketed head adapted to receive and removably hold a hand bar, and a handle secured on said head projecting upward therefrom and to one side of the axis of the screw for operating said screw when not under strain.

1,113,626. MOLDING-MACHINE. ADAM HELLER, Baltimore, Md. Filed June 15, 1914. Serial No. 845,190. (Cl. 22—36.)

1. In a molding machine, a sand hopper, a screen box, and a plurality of diagonally arranged plates secured within the hopper and depending into the box for dividing the sand contained in the box into separate bodies.

2. In a molding machine, a sand box, sand-dropping doors hinged to the box, keepers secured to one of the doors and projecting beyond the hinged edge of the other door, and means engaging the projecting ends of the keepers for holding the doors in closed position.



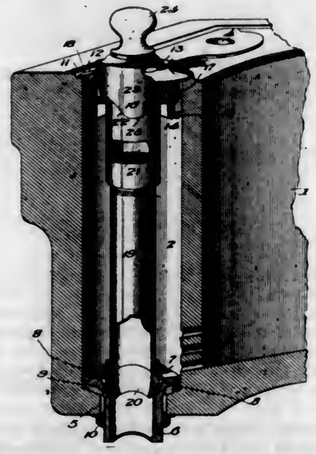
3. In a molding machine, a sand-box, sand-dropping doors hinged to the box, a slidable cut-off for controlling charges of sand to the box, keepers secured to one of the doors and projecting beyond the hinged edge of the other door, means engaging the projecting ends of the keepers for holding the doors in closed position, and means operated by the cut-off for opening the doors.

4. In a molding machine, a sand-box, a pair of gravity swinging doors for opening and closing the bottom of the sand box, means for locking and releasing the doors, levers pivoted to the frame of the machine, a hand rod connecting the levers, links connecting said levers with the slide for operating the slide, and a stop on the frame and engaged by the levers for limiting the outward movement of the slide.

5. In a molding machine, the combination with a flask, and a presser roller, of a sand packer fitting the flask, a roller track mounted on the packer, and a pair of levers having one end pivoted to the machine frame and the other end pivoted to the packer for permitting pivot movement of the packer during the swinging movement of the levers.

[Claims 6 to 8 not printed in the Gazette.]

1,113,627. INTEGRAL OVERFLOW AND WASTE-VALVE THEREFOR. WILLIAM A. HENN, Evansville, Ind., assignor to M. D. Helfrich, Vanderburg county, Ind. Filed May 11, 1914. Serial No. 837,900. (Cl. 4—24.)

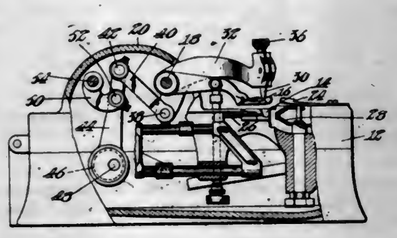


1. A lavatory or bath-tub having an overflow and waste chamber whose upper part is internally smooth and unbroken, in combination with a valve seat for the lower part of said chamber, a removable guide and support frictionally secured in the upper, smooth, internal part of said chamber, and a waste and overflow valve adapted to engage said seat and which passes through said guide and support, and means on the valve adapted to engage said guide and support when the valve is sufficiently raised, whereby said guide and support may be bodily removed with said valve from said chamber on sufficiently high raising of said valve.

2. A lavatory or bath-tub having an overflow and waste chamber whose upper part is internally smooth and unbroken, in combination with a valve seat for the lower part of said chamber, a removable guide and support which has an external expansible gasket, an internal cam support, and means for expanding said gasket, a waste and overflow valve adapted to rest on said seat, said valve being slidable and rotatable in said guide and support and provided with a cam adapted to coöperate with said cam support, and means on the valve adapted to engage said guide and support when the valve is sufficiently raised, whereby the guide and support may be bodily pulled out from said chamber.

3. A lavatory or bath-tub having an overflow and waste chamber whose upper part is internally smooth and unbroken, in combination with a valve seat for the lower part of said chamber, a removable valve support having external and internal ledges, an expansible gasket surrounding the support and resting on the external ledge aforesaid, a valve guide having a screw connection to the support and arranged to expand the gasket against the smooth and unbroken wall of the chamber, and a waste and overflow valve adapted to rest on said seat, said valve being slidable and rotatable in said guide and support, and means on the valve adapted to engage the internal ledge to support the valve, said valve being adapted, when sufficiently raised, to bodily pull the support and guide from the chamber.

1,113,628. BENDER-ACTUATING MECHANISM FOR BLINDSTITCH-SEWING-MACHINES. GEORGE S. HILL, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 30, 1912. Serial No. 739,302. (Cl. 112—4.)



1. In a blindstitch sewing machine, the combination of a driving shaft, an actuator upon said shaft, a reciprocating needle, a bender movable substantially at right angles to the path of the needle to bend the material being operated upon for penetration by the needle, a bender carrier and a linkage positively connecting said actuator and said carrier to move the bender unyieldingly while bending the material.

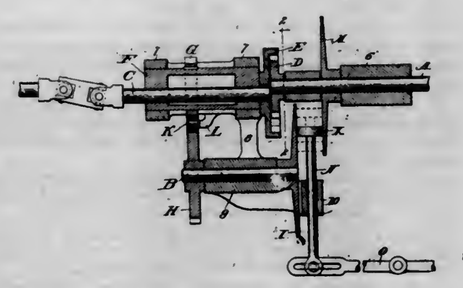
2. In a blindstitch sewing machine, the combination of a driving shaft rotating at approximately uniform speed, an eccentric actuator upon said shaft, a reciprocating needle, a bender movable substantially at right angles to the path of the needle to bend the material being operated upon for penetration by the needle, a bender carrier and a positively acting linkage connecting said actuator and said carrier and constructed and operated not only to move the bender unyieldingly to and from operative position but also to hold the bender in that position for a substantial portion of each rotation of the shaft.

3. In a blindstitch sewing machine, the combination of a reciprocating needle, a bender movable at substantially right angles to the path of the needle to bend the material being operated upon for penetration by the needle, a pivoted bender carrier to which the bender is rigidly secured and mechanism for actuating the bender comprising a driving shaft, rotating at approximately uniform speed, an eccentric actuator upon said shaft, a connecting rod one end of which is connected to said actuator, a link joining the opposite end of said rod to the bender carrier and a guiding link swinging about a fixed pivot and connected to said rod and located and operating to cause the bender to move from inoperative to operative position with increasing speed and to remain in operative position and in a substantially constant position relative to the path of the needle for a substantial portion of each rotation of the driving shaft.

4. A buttonhole finishing machine having, in combination, a work support provided with a slot, means for feeding the work, stitch forming mechanism including a needle reciprocating beneath and substantially parallel to the upper surface of the work support, a driving shaft rotating at approximately uniform speed also located beneath the work support and extending in a plane at right angles to the line of feed and to the path of the needle, an eccentric actuator upon said shaft, a bender movable substantially at right angles to the surface of the work support and to the path of the needle to bend the material being operated upon into said slot and into the path of the needle, a bender carrier oscillating about a fulcrum parallel to the driving shaft and a positively acting linkage connecting said actuator and said carrier.

5. In a buttonhole finishing machine, a driving shaft, a reciprocating needle, a bender movable substantially at right angles to the path of the needle to bend the material being operated upon for penetration by the needle, a bender carrier, in combination with mechanism for positively actuating the bender comprising an eccentric 46 on said shaft, a connecting rod 44, a link 40 and a guide link 50 mounted upon a fixed pivot 54 and connected at 52 to the rod, substantially as described.

1,113,629. VARIABLE-SPEED GEARING. JOSEF HOFFMAN, Cleveland, Ohio. Filed Mar. 23, 1914. Serial No. 826,584. (Cl. 74—35.)



1. In a variable speed gearing, the combination of a driving shaft, a driven shaft, gears between said shafts, a rotary sleeve in which one of said shafts is rotatably mounted eccentric to the other shaft, and variable speed gearing between said sleeve and the last mentioned shaft.

2. In a variable speed gearing, the combination of a driving shaft, a driven shaft eccentric thereto, an internal gear on the driven shaft, a pinion on the driving shaft meshing with said gear, a rotary sleeve in which the driven shaft is eccentrically mounted for rotation therein, and variable speed gearing between the driving shaft and the sleeve, to rotate the latter and revolve the driven shaft.

3. In a variable speed gearing, the combination of a driving shaft, a driven shaft eccentric thereto, an internal gear on the driven shaft, a pinion on the driving shaft meshing with said gear, a rotary sleeve in which the

driven shaft is eccentrically mounted for rotation therein, and variable speed friction gearing between the driving shaft and the sleeve, to rotate the latter and revolve the driven shaft.

4. In a variable speed gearing, the combination of a driving shaft, a pinion thereon, a driven shaft, an internal gear thereon meshing with said pinion, a rotary sleeve in which the driven shaft is rotatably mounted eccentric to the driving shaft, a counter shaft, gearing between the counter shaft and the sleeve to rotate the latter and thereby revolve the driven shaft, and variable friction gearing between the driving shaft and the counter shaft.

5. In a variable speed gearing, the combination of a driving shaft, a driven shaft eccentric thereto, direct driving means between said shafts, to rotate the latter and means to revolve the driven shaft with respect to the axis of the driving shaft, as the former rotates, to vary its effective speed of rotation.

[Claim 6 not printed in the Gazette.]

1,113,630. PROCESS FOR THE PRODUCTION OF CAOUTCHOUC SUBSTANCES. FRITZ HOFMANN and CARL COUTELLE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 3, 1911. Serial No. 652,641. (Cl. 23—24.)

1. The process of producing a caoutchouc substance which comprises polymerizing a butadiene hydrocarbon in the presence of urea.

2. The process of producing a caoutchouc substance which comprises polymerizing a butadiene hydrocarbon in the presence of about 1 to 2 per cent. of urea.

3. The process of producing a caoutchouc substance which comprises polymerizing isoprene in the presence of urea.

4. The process of producing a caoutchouc substance which comprises polymerizing isoprene in the presence of about 1 to 2 per cent. of urea.

1,113,631. PRODUCTION OF CAOUTCHOUC SUBSTANCES. FRITZ HOFMANN and CARL COUTELLE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 29, 1912. Serial No. 728,510. (Cl. 23—24.)

1. The process of producing caoutchouc substances which comprises polymerizing butadiene hydrocarbons by means of a small amount of polyhydroxy organic substance as the effective polymerizing agent.

2. The process of producing caoutchouc substances which comprises polymerizing butadiene hydrocarbons by means of a small amount of carbohydrate as the effective polymerizing agent.

3. The process of producing caoutchouc substances which comprises polymerizing butadiene hydrocarbons by means of a polyose as the effective polymerizing agent.

4. The process of producing caoutchouc substances which comprises polymerizing butadiene hydrocarbons by means of a starch as the effective polymerizing agent.

5. The process of producing caoutchouc substances which comprises polymerizing butadiene hydrocarbons in the presence of less than 5% of polyhydroxy organic substance.

[Claims 6 and 7 not printed in the Gazette.]

1,113,632. BAKING PREPARATION. ROBERT A. HOLBROOK, Chicago Heights, Ill., assignor to Victor Chemical Works, Chicago, Ill., a Corporation of Illinois. Filed Dec. 15, 1913. Serial No. 806,747. (Cl. 99—10.)

1. A baking preparation including in its composition a suitable carbonate, mono-calcium phosphate, and an alkali salt which will react, in a mixed dough, with the mono-calcium phosphate to form a mono-alkali phosphate.

2. A baking preparation including in its composition a suitable carbonate, mono-calcium phosphate and a di-alkali phosphate.

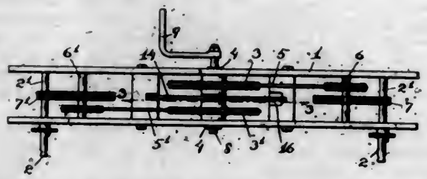
3. A baking preparation including in its composition a suitable carbonate, mono-calcium phosphate and di-sodium phosphate.

4. A baking acid comprising mono-calcium phosphate admixed with an alkali salt which will react in solution therewith to form a mono-alkali phosphate.

5. A baking acid comprising mono-calcium phosphate admixed with di-sodium phosphate.

[Claims 6 to 8 not printed in the Gazette.]

1,113,633. MEANS FOR REWINDING THE FILMS OF MOTION-PICTURE MACHINES. ARCHIE B. HOOVER, Paola, Kans. Filed Apr. 24, 1913. Serial No. 763,314. (Cl. 242—55.)

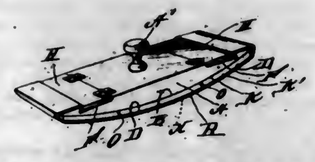


1. Means for rewinding the films of moving picture machines, having driven shafts for the film reels, comprising separate means for driving each of said reel-shafts, a single means including a driver shaft parallel with the driven shafts and adapted for engagement with either of the separate means to turn either of the reel-shafts, and single braking means having engagement with either of the separate means to prevent either of the reel-shafts from turning too rapidly.

2. Means for rewinding the films of moving picture machines, having driven shafts for the film reels, comprising separate means for driving each of said reel-shafts including wheels located centrally of said reel-shafts, an endwise adjustable shaft parallel with the driven shafts and engaging perforations of said wheels and having a single clutch member engaging with either of said wheels to turn either of the reel-shafts.

3. Means for rewinding the films of moving picture machines, having driven shafts for the film reels, comprising separate means for driving each of said reel shafts including adjacent wheels located centrally of said reel-shafts, a short central endwise adjustable shaft parallel with the driven shafts and engaging perforations of said wheels and having a single clutch member engaging with either of said wheels to turn either of the reel-shafts, and a single brake lever located between said wheels and having braking engagement with either wheel.

1,113,634. HAND-MIMEOGRAPH. JAMES OSBORNE HOPWOOD, Primos, Pa. Filed Jan. 27, 1914. Serial No. 814,840. (Cl. 101—58.)

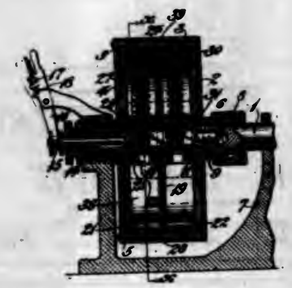


1. A hand mimeograph comprising a block with a suitable handle and recessed upon one face, clamping members hinged to the marginal edges of the recesses, a receptacle upon the opposite face of the block, a perforated closure for said receptacle, a sheet of ink carrying material within the receptacle, a sheet of fabric in contact with the perforated closure, and a stencil held against the outer face of said sheet of fabric, and means coöperating with said clamping members for holding and fastening said receptacle, stencil and sheet of fabric in place upon said block, as set forth.

2. A hand mimeograph comprising a block with a suitable handle and recessed upon one face, clamping members hinged to the marginal edges of the recesses, the under surface of the block being convexed, a curved receptacle engaging said convexed surface, a sheet of ink carrying fabric within said receptacle, a perforated closure to the latter, a sheet of cloth engaging the outer face of said closure, and a stencil in engagement with said sheet of cloth, the ends of the latter and stencil being held by said clamping members in the recesses in the block and holding the receptacle against the block, as set forth.

3. A hand mimeograph comprising a block with its upper face recessed near its ends, clamping members hinged to the adjacent edges of said recesses and their outer ends free and near the ends of the block, the under surface of the block being convexed, a handle upon the latter, a curved receptacle conforming to the convexed surface of the block and in contact therewith, a sheet of bristly material within said receptacle, a perforated closure for the latter, the ends of the closure and receptacle having registering apertures, fasteners passing through said apertures, a sheet of fabric in contact with said perforated closure, and a stencil engaging the outer face of said sheet of fabric, the ends of the latter and said stencil being held by said clamping members over the ends of the block and in said recesses and retaining the receptacle in place, as set forth.

1,113,635. SPEED-CHANGING MECHANISM. CHARLES W. HOTTMANN, Philadelphia, Pa., assignor of one-half to August H. E. Juergens, Philadelphia, Pa. Filed Aug. 6, 1912. Serial No. 713,517. (Cl. 192—18.)



1. In a speed changing mechanism, a driving member, a driven member forming therewith a plurality of annular fluid chambers, a plunger for each chamber, carried by said driving member and adapted to be automatically moved into its respective chamber, an actuator having wedge shaped portions coacting with each of said plungers to control its movement with respect to its chamber, and a member in each chamber completely closing the same and adapted to move a plunger out of its chamber.

2. In a speed changing mechanism, a driving member, a driven member forming therewith an annular fluid chamber, a plunger adapted to move into said chamber, yielding means for causing such movement of the plunger, means to completely close said chamber at one point and an actuator within the driving member and having sliding engagement with said plunger to limit its movement into said chamber.

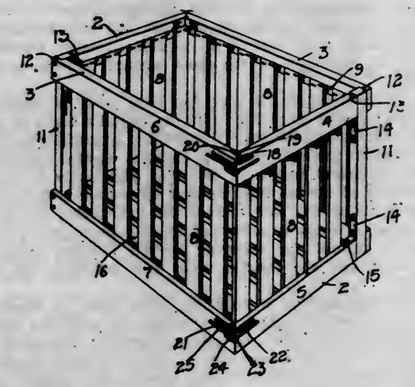
3. In a speed changing mechanism, a driving member, a driven member forming therewith an annular fluid chamber, a plunger adapted to move into said chamber, yielding means for causing such movement of the plunger, means to completely close said chamber at one point, an actuator within the driving member and having sliding engagement with said plunger to limit its movement into said chamber, and means for locking said actuator in the adjusted position given thereto.

4. In a speed changing mechanism, a driving shaft, an annulus fixedly carried by said driving shaft thereon, a driven member forming with the outer periphery of said annulus a plurality of annular fluid chambers, spring pressed plungers adapted to pass into said chambers and having their ends extending into said driving shaft, an adjusting device within said driving shaft having means coacting with said plungers to adjust their position within said chambers, and a device within each chamber to cause a plunger to be moved out of said chamber during each revolution of said driving member.

5. In a speed changing mechanism, a driving shaft, an annulus thereon having a flange at its outer periphery, a driven member loosely mounted on said driving shaft and forming with said annulus a plurality of annular fluid chambers, a plurality of plungers, one for each chamber and adapted to move thereinto, resilient means for causing such movement, a rod within said driving shaft and limiting the movement of said plungers, and a releasing device for each chamber to completely close the same at one point and coacting with a plunger to move the latter out of its chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,113,636. FOLDING CRATE. ARTHUR O. HUBBARD, Minneapolis, Minn., assignor to Puffer-Hubbard Mfg. Co., Minneapolis, Minn. Filed Aug. 16, 1909. Serial No. 513,184. (Cl. 217—48.)

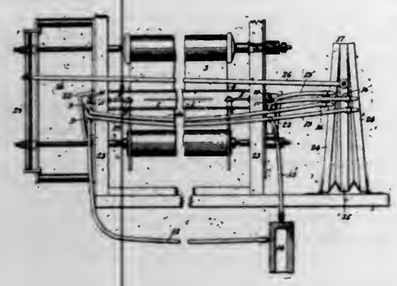


A folding crate comprising side and end panels, each panel having top and bottom rails, posts provided at the two diagonally opposite corners and in the plane of said end panels and secured to the rails of said side panels, angle plates secured to said posts in the angles formed by the intersection of said posts and the top and bottom rails of the end panels and pivotally connected with said top and bottom rails, hinges provided at the other diagonally opposite corners of the crate, a bottom hinged to one of said side panels and adapted to swing to a vertical position between the panels and into the space formed by said posts and brackets between the end and side panels, substantially as described.

1,113,637. SELF-ADJUSTING AUTOMATIC TRACKING MECHANISM. JOSEPH P. HULDER, New York, N. Y., assignor to Ludwig & Company, a Corporation of New York. Filed Nov. 12, 1910. Serial No. 592,052. (Cl. 84—161.)

1. In combination, a traveling note sheet; a tracker bar; two edge guides adapted to contact with the opposite edges of the sheet and to follow the lateral movement thereof in both directions; a pneumatic comprising two compartments having a common movable member; separate valve supports each provided with an atmosphere and an exhaust port which ports are cross connected with the opposite compartments of the pneumatic; valves controlling said ports operatively connected to the edge guides for movement therewith; and means controlled by said

pneumatic for maintaining normal relation between the sheet and the tracker.



2. In combination, a traveling note sheet; a tracker bar; a pneumatic having a movable member normally balanced under equal air tension; means controlled by said movable member for maintaining correct lateral relation between the sheet and the tracker; edge guides adapted to contact with the opposite edges of the sheet and to move laterally therewith in both directions and valve means, connected with the edge guides, arranged to control the admission of air on one side and the exhaustion of air on the other side of the movable member, whereby upon any deflection of the sheet normal relation is restored.

3. In combination, a traveling note sheet, a tracker, two edge guides contacting with the opposite edges of the sheet and movable laterally therewith, a pneumatic having a normally balanced movable member, means operative upon the lateral movement of either edge guide to cause movement of the movable member by simultaneously admitting air on one side thereof and exhausting air from the other, and means controlled by the movement of said movable member for restoring normal relation between the sheet and the tracker upon any deflection of the former.

4. In combination a traveling note sheet, a tracker, two self adjustable edge guides contacting with the opposite edges of the sheet and movable laterally therewith, a pneumatic having a normally balanced movable member, means operative upon the lateral movement of either edge guide to cause movement of the movable member by simultaneously admitting air on one side thereof and exhausting air from the other, said means being inoperative to cause such movement when both edge guides move an equal amount in opposite directions in accommodating themselves to the width of the sheet employed, and means controlled by the movement of said movable member for restoring normal relation between the sheet and the tracker upon any deflection of the former.

1,113,638. DEVICE FOR MOISTENING THE SOLES OF BOOTS AND SHOES. ARTHUR E. JAMES, Cranston, R. I. Filed Mar. 10, 1914. Serial No. 823,829. (Cl. 46—66.)

1. A device for moistening the sole of a boot or shoe having, in combination, a casing provided with a chamber adapted to contain water, a perforated foot rest of inflexible material located in said casing above said chamber and yielding means arranged to support said foot rest above said chamber.

2. A device for moistening the sole of a boot or shoe having, in combination, a casing provided with a chamber adapted to contain water, a perforated foot rest in said casing above said chamber, and springs arranged to support said foot rest above said chamber.

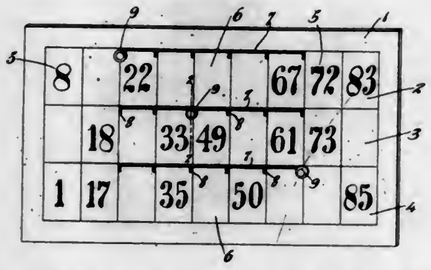
3. A device for moistening the sole of a boot or shoe having, in combination, a casing provided with a chamber adapted to contain water, a perforated foot rest in said casing above said chamber, a sponge located in said chamber, and yielding means arranged to support said foot rest above said chamber.

4. A device for moistening the sole of a boot or shoe having, in combination, a casing provided with a chamber adapted to contain water, a perforated foot rest in said casing above said chamber and yielding means arranged to support said foot rest above said chamber, said casing having an opening in one side thereof above said foot rest through which said boot may be inserted.

5. A device for moistening the sole of a boot or shoe having, in combination, a casing provided with a chamber adapted to contain water, a perforated foot rest in said casing above said chamber, yielding means arranged to support said foot rest above said chamber and a stop adapted to engage said foot rest and limit the distance to which said foot rest may be moved by said yielding means.

[Claims 6 to 9 not printed in the Gazette.]

1,113,639. LOTTO-CARD. EMIL JAUCH, Cincinnati, Ohio. Filed May 26, 1914. Serial No. 842,334. (Cl. 46—25.)



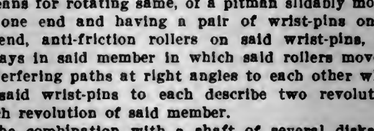
1. A card for the game of lotto, having numerals and blank spaces imprinted thereon in horizontal rows, said card provided with slots, one for each row, and indicator buttons secured to said card and longitudinally adjustable in said slots, for the purpose described.

2. A card for the game of lotto, having numerals and blank spaces imprinted thereon in horizontal rows, said card provided with horizontal slots, one for each row, with holding notches at intervals in the length of the slots, and indicator buttons secured in said slots, one for each slot, adapted to be shifted therein and retained by the notches.

3. A card for the game of lotto, having numerals and blank spaces imprinted thereon in horizontal rows, said card provided with slots, one for each row, and indicator buttons comprising interlocking members to loosely engage on opposite sides of the card, with a stud projecting above the slot to serve as a handle, for longitudinal adjustment of the button in the slot, for the purpose described.

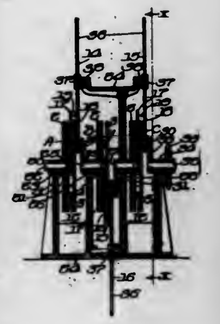
1,113,640. GARMENT-HANGER. EUGENE JENOI and SANDOR NAGY, Thorpe, W. Va.; said Jenoi assignor of one-half of the whole to Steve Kruchio, Rozalia Mary Szabo, and Sarah Kruchio, Uniontown, Pa. Filed July 3, 1913. Serial No. 777,205. (Cl. 2—53.)

A coat hanger formed of a chain comprising a pair of outer links and a plurality of intermediate links, each of said outer links consisting of a body portion provided with flanges and further having bendable connecting members for detachably connecting said links to the garments, the body portion of one of said outer links being slotted and the body portion of the other of said outer links having projecting therefrom an extension having a resilient hook, each of said intermediate links consisting of a plate pro-



vided with a rectangular flange, one end of said flange being slotted and the other end of said flange having projecting therefrom an extension having a resilient hook, said slots and extensions of said links providing means for detachably connecting the links together.

1,113,641. MULTIPLE-SPEED GEARING. EMIL G. JOHANSON, Chicago, Ill. Filed Nov. 24, 1913. Serial No. 802,613. (Cl. 74—5.)



1. In combination, a rotatable member, a pitman, a pair of wrist-pins connected with said pitman and rotary member to rotate with and reciprocate on the latter in non-intersecting paths, and means for transmitting the movements of said pitman into rotary movement in a second rotatable member.

2. In combination, a rotary element, a pair of non-intersecting slideways arranged at right angles to each other on said element, a pitman pivotally and slidably mounted in said slide-ways at one end and slidably mounted at the other end, a second rotary element, and means for rotating same by said pitman.

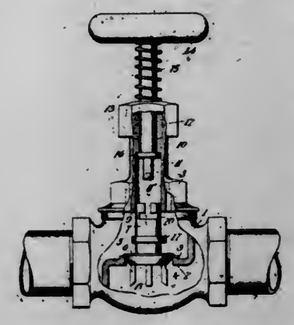
3. The combination with a rotatably mounted member and means for rotating same, of a pitman slidably mounted at one end and having a pair of wrist-pins on its other end, anti-friction rollers on said wrist-pins, and slide-ways in said member in which said rollers move in non-interfering paths at right angles to each other which cause said wrist-pins to each describe two revolutions for each revolution of said member.

4. The combination with a shaft of several disks secured to said shaft to rotate therewith, each disk provided with a slide-way arranged at right angles to the slide-way of the other disk, a pitman mounted at one end for sliding longitudinal movement and having a pair of wrist-pins mounted on its opposite end slidably mounted in said slide-ways.

5. The combination with a series of members such as A, B and C having a common axis of rotation, but each rotatable independently of the other members, each of said members being composed of a pair of disks each provided with a slideway arranged at right angles to the slideway of the other disk, a pitman for each of said members, said pitman having thereon a pair of wrist-pins mounted for to and fro movement in said slideways, means for rotating the first of the series of said members, and means for converting the pitman movement of the latter into a rotary movement in the second member, and so on.

[Claim 6 not printed in the Gazette.]

1,113,642. CHECK-VALVE. ALFRED JOHNSON and WALTER S. DURLIN, Marion, Ind. Filed Aug. 27, 1913. Serial No. 787,021. (Cl. 137—4.)



1. In a reciprocating check valve, the combination of a casing having an internal valve seat, a valve freely movable in said casing, and reciprocatory lifting means normally held retracted in spaced relation to the valve and terminating in an interlocking member adapted to positively connect with the valve upon depression and rotation of said lifting means whereby to admit of turning of the valve upon its seat and withdrawal of the same therefrom.

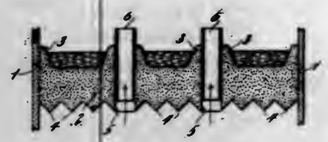
2. In a reciprocating check valve, the combination of a casing having a valve seat therein, a valve disposed upon said seat, a valve stem formed on said valve, lifting means for said valve adapted for free reciprocation in said casing and terminating in a key adapted to positively interlock with the valve stem aforesaid whereby to admit of rotation of the valve upon its seat and reciprocation of the same in the casing, a spring coöperating with the lifting means to hold said key normally spaced from the valve stem, and common guide means for the valve and lifting means aforesaid.

3. In a check valve, the combination of a casing having an internal valve seat, a valve freely movable in said casing, a valve stem extending upwardly from said valve and formed at its upper end with an interlocking key-receiving recess, a bonnet for said casing formed with an internal sleeve, a spring tensioned valve lifting member extending into said bonnet for free reciprocation into the casing and terminating in a key formed with opposing lugs adapted to interlock with the key-receiving recess in said stem to positively connect the lifting member with the valve, an annular flange on said valve stem adapted to coact with the bonnet sleeve to limit movement of the valve, and an annular flange on the lifting member coöperating with said sleeve to guide said lifting member in reciprocation of the same and inserting the key in the recess of the stem.

1,113,643. APPARATUS FOR THE EVEN DISTRIBUTION OF LIQUIDS. AUGUST JONAS, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 28, 1910. Serial No. 599,732. (Cl. 137—14.)

1. A liquid distributing means consisting of a rigid porous body adapted to support a liquid on its upper surface and being provided with a plurality of dripping projections depending from the under surface thereof, and

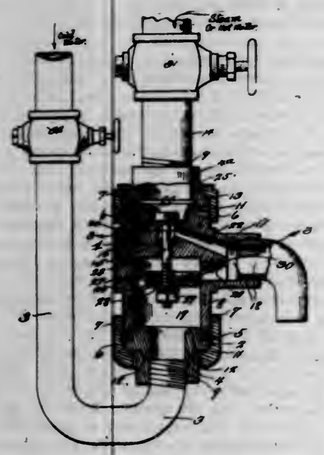
having free lower ends, said body and projections being formed of rigid porous material with the interstices of the projections in communication with the interstices of the body.



2. A liquid distributing means consisting of a rigid body adapted to support a liquid on its upper surface and provided with dripping projections depending from the under surface thereof and having free lower ends, said rigid body having open passages extending therethrough to above the normal level of liquid on said body for permitting the free upward passage of gases through said body, said body and projections being formed of rigid porous granular material with the interstices of the projections in communication with the interstices of the body.

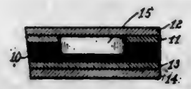
3. A liquid distributing means consisting of a rigid porous body adapted to support a liquid on its upper surface and made up of a plurality of rigid porous blocks, each of said blocks being provided with dripping projections depending from the under side thereof and having open passages extending therethrough to above the normal level of liquid on said body for permitting the free upward passage of gases through said body, and said blocks and projections being formed of rigid porous granular material with the interstices of the projections in communication with the interstices of the body.

1,113,644. VALVE. EDWARD F. JONES, St. Joseph, Mo. Filed Mar. 11, 1914. Serial No. 823,936. (Cl. 137—26.)



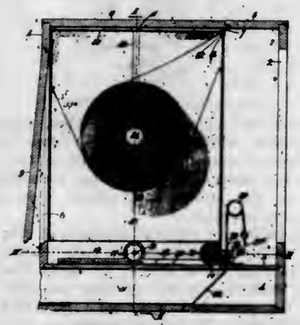
A valve comprising a casing having a partition wall and provided with a chamber above the wall in which the steam enters and a chamber below the wall in which the cold water enters, said wall having a central bore being enlarged at one end, the enlargement terminating in a valve seat at its upper portion, said casing having an outlet passage adjacent the wall and intermediate the chambers, a port of communication between the outlet passage and the enlargement of the bore below the valve seat, a port of communication between the passage and the lower chamber immediately adjoining the under surface of said wall, a plunger slightly smaller in diameter than the bore and guided therein and having a conical valve at its upper end coöperating with said valve seat to close the first port, a disk valve carried by the lower end of said plunger to control the second port, said disk valve being adjustable on the plunger and designed to contact with the under surface of said wall which constitutes an abutment when the disk valve is entirely raised to open the second port, a lock nut adjustable on the lower end of the plunger, a yieldable member between the nut and the disk valve, said disk valve having an annular depression on its upper surface forming a space between the partition wall and the disk valve to receive a portion of the steam pressure to cause the plunger to lower, which is also assisted in lowering by gravitation.

1,113,645. CUSHION-HEEL. ELIAS JONES, Indianapolis, Ind. Filed May 1, 1913. Serial No. 764,873. (Cl. 36—35.)



A heel for shoes and the like including a layer of rubber with a recess centrally located in the upper part thereof, a layer of leather secured upon said layer of rubber and correspondingly recessed, another flat imperforate layer of leather secured upon said recessed layer of leather and closing said recess to form an air tight chamber, and a layer of leather forming the tread portion of the heel.

1,113,646. PHOTOGRAPHIC APPARATUS. FLOYD D. JONES, Kansas City, Mo., assignor, by mesne assignments, to Commercial Camera Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 14, 1908. Serial No. 426,948. (Cl. 95—34.)



1. An apparatus of the character described, comprising a box having an opening at the top thereof and an exposure opening in its front wall, a box within the first named box removable through the top of the latter and provided with an exit-opening, feed rollers suitably journaled within the outer box below the inner one, a suitably journaled support for a roll of sensitized material within the inner box the web of material being adapted to extend therefrom through the exit opening and down to and between said feed rollers, means to operate said rollers to feed the web of material between them from the roll, and means to sever that portion of the material which has passed between said rollers.

2. An apparatus of the character described, comprising a box having an opening in its front wall, a box within the first named box and provided with an exit-opening, feed rollers suitably journaled within the outer box below the inner one, a suitably journaled support for a roll of sensitized material within the inner box from which the web of material is adapted to be extended through the exit opening and down to and between said feed rollers, means to operate said rollers to feed the web of material between them from the roll, and a reciprocatory knife operating independently of the feed rollers to sever that portion of the material which has passed between said rollers.

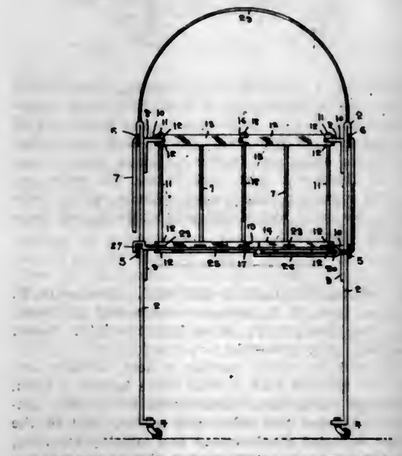
3. An apparatus of the character described, comprising a box having an opening in its front wall, a transverse guide within the box rearward of said opening, feed rollers suitably journaled within the box below the guide, a suitably journaled support for a roll of sensitized material within the box from which the web of material is adapted to be withdrawn to engage the guide and extended therefrom down to and between said feed rollers, means to operate said rollers to feed the web of material between them from the roll, means to receive the material fed past the rollers, a reciprocatory knife to operate between the feed rollers and the receiving means, provided with rack bars, a shaft suitably journaled and provided with cog pinions engaging said rack bars, a pivoted member engaging one of said pinions, and a handle at the outer side of the box for operating said member.

4. In a photographic apparatus, the combination with an outer casing forming an exposure chamber and having an opening at the top thereof and an exposure opening in one of its side walls, of an inner casing inclosed thereby and having an open top registering with the open top of the outer casing, a plane side wall of the inner casing being disposed opposite the exposure opening in the outer one and provided with an opening at its top edge, a drum journaled in the inner casing supporting the roll of sensitized material, a closure for the open top of the inner casing provided with a flange for excluding light from the opening at the top of its side wall and means for feeding a web of the sensitized material from the roll through said last mentioned opening and across the outer surface of said side wall past the exposure opening in the outer casing.

5. In a photographic apparatus, the combination with an outer casing having vertical channels in its side walls and forming an exposure chamber, of an inner removable casing inclosed thereby and having corresponding channels in its inner walls, said walls being offset in the region of the channels to form projecting ribs guided and supported in the channels of the outer casing, a reel adapted to be inserted in and removed from the channels of the inner casing and having bearings at the ends thereof, and means for feeding a web of sensitized material from the reel to position for exposure in the exposure chamber.

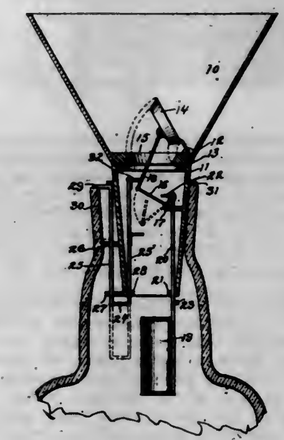
[Claims 6 to 13 not printed in the Gazette.]

1,113,647. COLLAPSIBLE CRIB. SIMON JONES, New York, N. Y. Filed Oct. 5, 1912. Serial No. 724,161. (Cl. 5—58.)



As a new article of manufacture, a collapsible crib, composed of two rigid sides, two ends hinged to the sides and hinged at their middles by top and bottom hinges, fingers at the bottom hinges on the inside adapted to stiffen the hinged ends, the ends having orifices in their tops, spreaders held in such orifices and adapted to brace the hinged ends and aid in preventing any accidental movement of the hinged parts, a longitudinal rod secured at its ends to one of the rigid sides and a slidable bottom having end slats made with loops which pass around the rod.

1,113,648. FUNNEL. KARL KARLSON, Brooklyn, N. Y., assignor of one-half to George J. F. Wilford, New York. N. Y. Filed Nov. 6, 1913. Serial No. 799,632. (Cl. 226—33.)

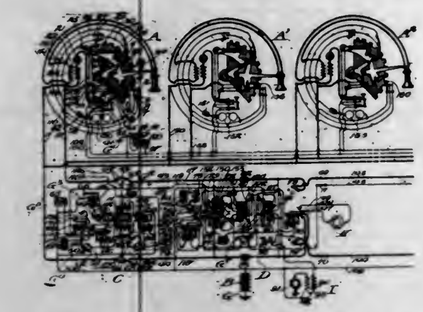


1. A funnel, a valve seat in said funnel, a valve carried by said seat, a bell-crank lever pivotally mounted in said funnel beneath said valve seat, a link connecting said valve with one arm of said lever, a rod slidably mounted in said funnel with its upper end bent to form a hook for engaging the remaining arm of said bell-crank lever, a float carried by said rod, a U-shaped valve-setting device slidably connected with said funnel with one arm extending into the funnel and the remaining arm extending outside said funnel and having its upper end portion bent to form an abutment finger, and a finger pivotally connected with the inner arm of said valve-setting device and engaging said bell-crank lever to move said valve to an open position.

2. A funnel, a valve seat in said funnel, a valve actuating means for said valve, a float, means carried by said float for releasably engaging said actuating means for releasably holding said valve in an open position, a U-shaped member slidably connected with said funnel having one arm extending into said funnel for engaging said actuating means to move said actuating means and opening said valve when said member is moved to its raised position, the outer arm of said member being bent to engage a bottle neck when a funnel is inserted in a bottle to move said member to its raised position, and means carried by said funnel for limiting the raising movement of said member and supporting said funnel in a receptacle.

3. A funnel provided with a valve seat, a valve, actuating means for said valve, means including a float releasably engaging said actuating means for releasably holding said valve in an open position, a member slidably connected with said funnel and having its inner portion provided with a movably mounted element engaging said actuating means to move said actuating means and open said valve when said member is moved to a raised position, and the outer portion of said member being provided with means for engaging a receptacle to raise said member when said funnel is placed in a receptacle.

1,113,649. NON-INTERFERING EXTENSION OR PARTY-LINE TELEPHONE SYSTEM. LEO KELLER, Los Angeles, Cal., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 16, 1908. Serial No. 438,750. (Cl. 179—17.)



1. In an automatic telephone system, a line, a plurality of telephones on said line, a ground connection common to said telephones, means at each telephone for using said ground connection in calling, means responsive to said ground connection to extend connection from the line, and a relay controlling the continuity of said ground connection, both sides of said line being normally closed or continuous between the central station and the said telephones.

2. In an automatic telephone system, a line, a plurality of telephones on said line, a hook-switch and calling dial for each telephone, cooperating to control the continuity of the talking circuit thereat, a ringing key located at and controlling the talking circuit of each telephone, a ground connection common to the different calling dials and ringing keys on the line, a single relay controlling the said ground connection, means having vertical motion to select groups or divisions of the exchange and rotary motion to connect with a line in the selected group or division, responsive to said calling dials, and means responsive to said ringing keys for supplying ringing current to signal the called subscriber.

3. In an automatic telephone system, a line, a plurality of ringing keys in said line, a ground connection common to the different ringing keys, means responsive to said ground and keys to signal the called subscriber, a ground cut-off relay, and energizing circuits for said relay, each energizing circuit being controlled by one of said keys.

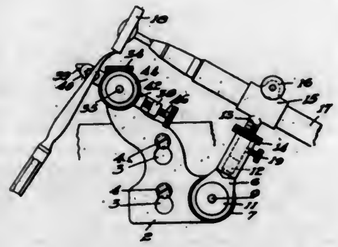
4. In a telephone system, a line, a plurality of telephones on said line, a ground connection common to the different telephones, a ground cut-off relay, a push-button and a switch-hook having springs in the line at each telephone, and energizing circuits for said relay, each of said circuits being controlled by one of said switch-hooks and push-buttons.

5. In a telephone system, a line, a plurality of telephones on said line, a ringing key in the line for each telephone, a ground connection common to the different telephones, automatic switches, means at each telephone for using said ground connection in controlling said automatic switches, means responsive to said ringing keys for supplying ringing current to signal the called subscriber, a ground cut-off relay, circuits controlled at each telephone for energizing said relay, and means for deënergizing said relay by the actuation of any ringing key, whereby ground is restored to the line for enabling the calling subscriber thereon to signal the called subscriber.

[Claims 6 to 15 not printed in the Gazette.]

1,113,650. TOOL-HOLDER. WILLIAM A. KELSEY, Minneapolis, Minn. Filed July 15, 1913. Serial No. 779,199. (Cl. 51—7.)

1. A tool holder comprising a supporting member, a jaw adapted for supporting a grinding device and having a ball and socket bearing on said supporting member and capable of adjustment at any desired angle with respect thereto, and a tool clamp carried by said member and having a rotary adjustment thereon.



2. A tool holder comprising a supporting member, a support for a grinding member having a ball and socket bearing on said member and capable of adjustment at any desired angle with respect thereto, and a tool clamp carried by said member and adjustable thereon.

3. A tool holder comprising a supporting member, a jaw adapted for supporting a grinding wheel carried by said member, said jaw being capable of adjustment in a direction at right angles substantially to the plane of said member, and a tool clamp carried by said member and rotatively adjustable thereon.

4. A tool holder comprising a supporting member, an arm mounted thereon and having freedom of adjustment with respect to said member, a grinding device support mounted on said arm and capable of adjustment therewith or independently thereof, and a tool clamp carried by said member and capable of rotary adjustment thereon.

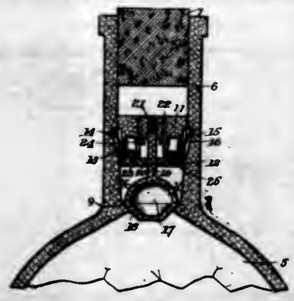
5. A tool holder comprising a supporting member, means for securing a grinding device at any angle with respect to said member, and a tool clamp carried by said member and capable of adjustment with respect to said securing means, whereby said grinding device may be seated at any desired angle to fit any cutting edge of a tool mounted in said clamp.

1,113,651. FIRE-ESCAPE. ALEXANDER KWIATKOWSKI, Middletown, Conn. Filed May 19, 1914. Serial No. 839,528. (Cl. 227—20.)

In a fire escape, a plurality of telescoping tubes carried by a vehicle, the opposite side of each tube being longitudinally grooved, a rope connected to the inner end of each tube and lying within said groove, each rope being connected at its other end to the adjacent rope, a reel supported on the lower tube, and having the rope connected to the adjacent tube wound thereon, and a rope connected to the outer end of the outer tube wound upon the reel at its other end.

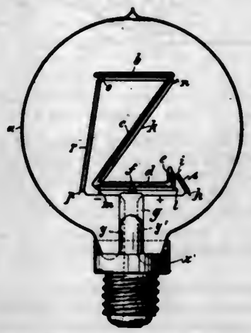
1,113,652. NON-REFILLABLE BOTTLE. BENJAMIN F. KLASS, New York, N. Y., assignor of one-half to Joseph P. Ryan, New York, N. Y. Filed May 10, 1913. Serial No. 766,780. (Cl. 215—65.)

1. A non-refillable bottle having a neck portion provided with an interior seat, a float valve having a stem, said bottle and valve being constructed of vitreous material, means to seat the valve, and a disk held in the neck against outward displacement and slidably receiving the stem of the valve for limited upward movement in unseating, said valve-seating means being carried by the disk, the disk embodying spaced upper and lower sections, said sections having passages therethrough located in staggered relation and terminating with extensions extending into the space between the sections.



2. A non-refillable bottle having a neck portion provided with a seat, a float valve having a reduced solid stem, means to seat the valve, and a disk held in the neck against outward displacement and slidably receiving the stem of the valve, said valve-seating means acting on the upper end of the stem and being inclosed by the disk, the disk having an interior opening providing upper and lower portions having passages therethrough, said passages terminating in extensions located within the area of the openings.

1,113,653. INCANDESCENT ELECTRIC LAMP. SIMON KLEIN, Vienna, Austria-Hungary. Filed Dec. 16, 1913. Serial No. 807,086. (Cl. 176—14.)

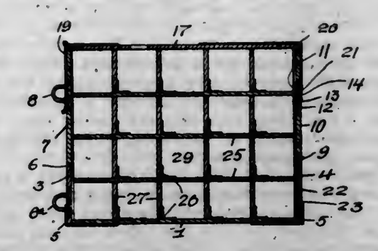


1. In an advertising or signaling device, in combination with a bulb, a non-conductive support disposed within the bulb and having the outline of a distinctive symbol, and a filament following the contour of the support and being secured thereto whereby said support acts to hold the filament so that the latter during incandescence gives the complete effect of the symbol and whereby the support acts also to itself provide a symbol which is visible in daylight.

2. In an advertising or signaling device, in combination, with a bulb, a glass support within the bulb having the outline of a distinctive symbol, a series of holding elements on the support, and a filament following the contour of the support and connected to said holding elements whereby said support acts to hold the filament so that the latter during incandescence gives the complete effect of the symbol and whereby the support acts also to itself provide a symbol which is visible in daylight.

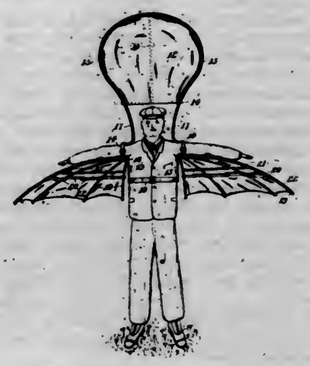
1,113,654. FOLDING BOX. MICHAL KOLTONSKI, Chicago, Ill. Filed Sept. 30, 1913. Serial No. 792,641. (Cl. 217—8.)

A folding box comprising a bottom having permanent end, front and rear walls secured thereto, pivot plates disposed on said permanent rear wall, foldable front and rear walls hinged to the upper edges of said permanent front and rear walls, foldable end walls hinged to the upper edges of said permanent end walls, pivot plates carried by said foldable rear wall, a lid, a hasp disposed on the edge of said lid, and straps carried by the rear edge thereof and provided with hooks adapted for engagement with the pivot plates of said foldable and permanent rear



walls, staples disposed on said foldable and permanent front walls adapted to receive said hasp, corner pieces secured to said lid, horizontal partitions having hinged longitudinal partitions secured thereto and detachable transverse partitions adapted to interlock the said hinged partitions.

1,113,655. PARACHUTE. JOHN KRAJNY, New Brighton, Pa. Filed June 4, 1914. Serial No. 842,986. (Cl. 244—21.)

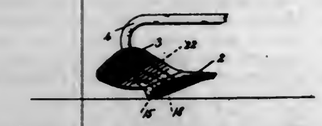


1. A device of the class described comprising a belt, shoulder straps secured to said belt, a collapsible canopy secured to said shoulder straps, foldable umbrella-shaped wings pivoted to said belt upon opposite sides thereof beneath said shoulder straps.

2. A device of the class described comprising a belt, pairs of lugs carried upon opposite sides of said belt, ribs hinged to said lugs, pivoted links connecting the adjacent ones of said ribs, expansion springs between the adjacent ones of said ribs, a flexible covering secured over said ribs and stops for said ribs carried by the tops of said lugs.

3. A device of the class described comprising a belt, pairs of lugs carried upon opposite sides of said belt, ribs hinged to said lugs, pivoted links connecting the adjacent ones of said ribs, expansion springs between the adjacent ones of said ribs, a flexible covering secured over said ribs and stops for said ribs carried by the tops of said lugs, shoulder straps carried by said belt, a balloon-shaped flexible canopy, a strengthening rope surrounding said canopy and having its ends extended and secured to said shoulder straps and a hoop secured at the mouth portion of said canopy.

1,113,656. PLOW. PHILIP KRUG, Hoisington, Kans. Filed June 5, 1914. Serial No. 843,207. (Cl. 97—18.)



1. The combination, with a mold board, and a frog or bottom plate secured thereto and provided with a slot; of a plow share provided with a projecting bearing block which projects through the said slot, a clamping plate having a hole which slips over the bearing block, and a locking cam pivoted to the bearing block and engaging with the said clamping plate.

2. The combination, with a mold board, and a frog or bottom plate secured thereto and provided with an inclined thrust lug and an inclined slot; of a plow share provided with a lug which bears on the thrust lug and having a projecting bearing block which projects through the said slot, a clamping plate having a hole which slips over the bearing block, and a locking cam pivoted to the bearing block and engaging with the said clamping plate.

3. The combination, with a mold board, and a frog or bottom plate secured thereto and provided with a slot; of a plow share having a projecting bearing block which projects through the said slot, said bearing block having a bearing hole provided with a key slot on one side, a clamping plate having a hole which slips over the bearing block, and a locking cam having a pin which is pivoted in the hole in the bearing block and provided with a projecting key on its free end portion which normally holds it in engagement with the block.

4. The combination, with a mold board, and a frog or bottom plate secured thereto and provided with slots; of a plow share provided with projecting bearing blocks which project through the said slots, a clamping plate having holes which slip over the bearing blocks, and locking cams pivoted to the bearing blocks and engaging with the clamping plate and operating to draw the plow share laterally against the frog or bottom plate and also upwardly against the bottom edge of the mold board.

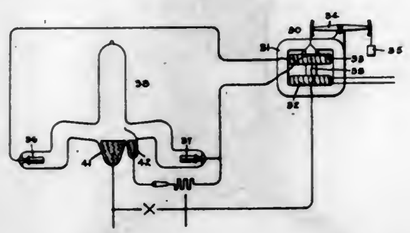
5. The combination, with a mold board having an offset plate at its bottom edge, said plate being provided with a slot or opening, of a plow share arranged against the said plate with its front face substantially flush with the front face of the mold board, said plow share having a block on its rear side which projects through the said slot or opening, a clamping plate, and clamping devices carried by the said block and operating to press the clamping plate against the aforesaid plate thereby locking the plow share in place.

1,113,657. VAPOR ELECTRIC APPARATUS. OBIAS O. KRUH, Czortkow, Austria-Hungary, assignor to General Electric Company, a Corporation of New York. Original application filed Apr. 12, 1905, Serial No. 255,091. Divided and this application filed Mar. 15, 1909. Serial No. 483,522. (Cl. 171—253.)

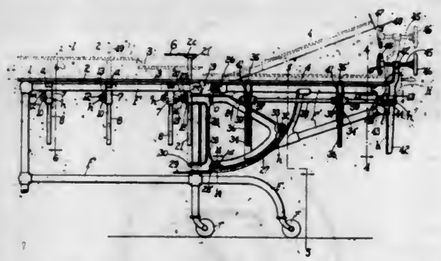
1. The combination of a vapor rectifier having a plurality of anodes and a cathode, a constant current transformer having relatively movable coils, connections between the anodes and the secondary of said transformer, and a circuit extending between an intermediate point on said secondary and the cathode of said rectifier, the inductance of the transformer producing the desired overlapping of the arcs in the rectifier.

2. The combination of a vapor electric device, having a cathode and a plurality of anodes, a transformer having considerable inductance, connections between the anodes and the secondary of said transformer, and a circuit extending between said cathode and an intermediate point on said secondary, the inductance of the transformer producing the desired overlapping of the arcs in the device.

3. The combination of a mercury arc rectifier, having a mercury cathode and coöperating anodes, a transformer having its primary and secondary coils separated so as to have considerable inductance, connections between the anodes and the secondary of said transformer and a circuit extending between said cathode and a point of intermediate potential on said secondary, the inductance of the transformer maintaining said device continuously conductive.



1,113,658. FRACTURE-TABLE. JOHN CARROLL LANDENBERGER, Salt Lake City, Utah. Filed May 11, 1914. Serial No. 837,883. (Cl. 128—16.)



1. A fracture table comprising a series of independently vertically adjustable sections having substantially horizontal disposed supporting surfaces, sections adjacent to one of the terminal members of said series disposed on opposite sides of the central axis of the table and capable of independent lateral or horizontal oscillation to and from said axis and of independent vertical adjustment in horizontal planes.

2. A fracture table comprising a series of independently vertically adjustable sections having substantially horizontal supporting surfaces, sections adjacent to one of the terminal members of said series disposed on opposite sides of the central axis of the table and capable of horizontal oscillation to and from said axis, said oscillating sections being susceptible of independent vertical oscillation, and of independent vertical adjustment.

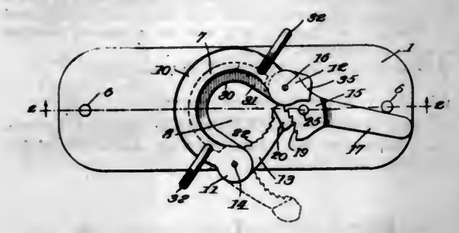
3. In a fracture table, a series of adjacent vertically adjustable sections having horizontal supporting surfaces, an independent hinged section mounted adjacent to one of the terminal members of said series, a resistance post on said terminal member positioned to engage the perineum of the patient, a vertically adjustable tension device on the hinged section, and horizontally adjustable member on said tension device for engaging the foot of the patient.

4. In a fracture table, a series of vertically adjustable sections, an independently vertically adjustable seat-supporting resistance post positioned on one of the sections to engage the perineum of the patient, and means on an adjacent section for securing a resistance post for engaging the axilla of the patient.

5. A fracture table comprising a suitable frame, a series of table sections having horizontal supporting surfaces carried thereby, rack-bars engaging the sections, guides for the rack-bars supported by the frame aforesaid, pinions engaging the rack-bars, means for actuating the pinions, a rack-and-pinion actuated resistance post on one of the sections, a pair of table sections hinged to the frame adjacent to the section supporting the resistance post, and tension members on said hinged sections coöperating with said resistance post.

[Claims 6 to 11 not printed in the Gazette.]

1,113,659. ELEVATOR-WRENCH. GEORGE FRANKLIN LEBUS, Electra, Tex. Filed Jan. 27, 1914. Serial No. 814,660. (Cl. 255—35.)



1. A device of the character specified, comprising a flanged nipple consisting of a tubular portion of greater diameter than the pipe and through which the pipe is adapted to pass, and a plate at the upper end of the tubular portion, said plate having a stop at each end thereof and on the upper face of the plate, a wrench comprising a split collar of a diameter to receive the union, the split of the collar being of the same diameter as the collar, said collar having a depending extension adapted to fit between the inner surface of the tubular portion of the nipple and the pipe, the wrench having a shoulder between the extension and the collar for engagement by the lower end of the union, said collar having at each end vertically spaced bearing lugs, a gripping jaw pivoted between one pair of lugs and adapted to swing toward the other pair and having its inner edge serrated for engaging the union, a lever pivoted between the other pair of lugs and having its inner end serrated and provided with a recess, the gripping jaw having a reduced extension fitting within the recess, said lever being adapted to engage one of the stops of the plate when the pipe is turned to force the gripping jaw into engagement with the union, said collar having oppositely arranged rings for engagement by lifting mechanism.

2. A device of the character specified, comprising a flanged nipple consisting of a plate having a central opening for permitting the passage of the drill pipe and a tubular portion extending downwardly from the opening for encircling the pipe, said nipple having stops on the upper face and at the ends of the plate, and a wrench comprising a split collar for engaging the pipe laterally and of a diameter to receive a union, the collar having a depending extension of a diameter to fit the pipe, the extension being split to permit it to engage the pipe laterally, the wrench having an annular shoulder between the collar and the extension for engagement by the lower end of the union, and having an annular shoulder between the collar and the extension for engaging the upper face of the plate, a gripping jaw pivoted to one end of the split collar and having serrations for engaging the union, a lever pivoted to the other end, said lever having a recess in its inner end, and the gripping jaw having a reduced lug fitting within the recess, the lever being adapted to engage a stop of the plate to force the gripping jaw toward the pipe, and a releasable lock in connection with the lever, the collar having an extension for engagement by the lock to permit the outward swinging movement of the lever to prevent the entire release of the gripping jaw until the lock is released.

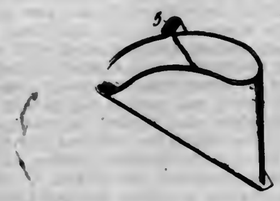
3. A device of the character specified, comprising a flanged nipple consisting of a plate having a central opening for permitting the passage of the drill pipe and a tubular portion extending downwardly from the opening for encircling the pipe, said nipple having stops on the upper face and at the ends of the plate, and a wrench comprising a split collar for engaging the pipe laterally and of a diameter to receive a union, the collar having a depending extension of a diameter to fit the pipe, the extension being split to permit it to engage the pipe laterally, the wrench having an annular shoulder between the collar and the extension for engagement by the lower end of the union, and having an annular shoulder between the collar and the extension for engaging the upper face of the plate, a gripping jaw pivoted to one end of the split collar and having serrations for engaging the union, a lever pivoted to the collar and adapted to engage the clamping mechanism and to cause the same to grip the union when the lever is swung in one direction, the lever being adapted to engage one of the stops of the plate to operate the clamping mechanism.

4. A device of the character specified, comprising a sleeve through which a drill pipe and its union are adapted to pass, a plate at the upper end of the sleeve and secured thereto, said plate having at each end an upwardly extending stop, a wrench comprising a split collar for engaging a union of the drill pipe laterally and having a depending extension adapted to fit the pipe, the wrench having internal and external shoulders at the junction of the extension therewith for engaging the lower end of the union and the upper face of the plate respectively, clamping means in connection with the collar for gripping the union, a lever pivoted to the collar and adapted to engage the clamping mechanism and to cause the same to grip the union when the lever is swung in one direction, the lever being adapted to engage one of the stops of the plate to operate the clamping mechanism.

5. A device of the character specified, comprising a wrench consisting of a split collar of a diameter to slip over a union laterally and having a depending extension of less diameter for receiving the pipe below the union, the wrench having a shoulder for engagement by the lower end of the union, a gripping jaw pivoted to one end of the collar, a lever pivoted to the other end and having an extension for engaging the gripping jaw to force it toward the union when the lever is swung in one direction, the gripping jaw having a reduced lug at its outer end and the lever a recess at its inner end for engagement by the lug, a releasable lock in connection with the lever for limiting the outward swinging movement of the same to prevent the entire release of the gripping jaw, and a nipple through which the pipe is adapted to extend, the extension being received between the pipe and the inner surface of the nipple, said nipple having stops for engagement by the outer end of the lever to cause the lever to operate the gripping jaw when the wrench is swung in one direction.

[Claims 6 to 8 not printed in the Gazette.]

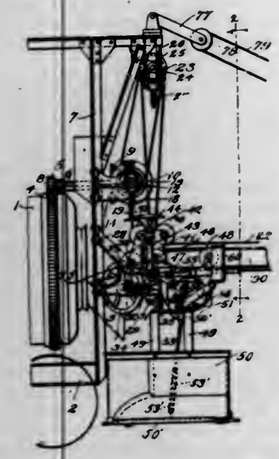
1,113,660. LIQUID-RECEPTACLE. LOUIS LERIO, Mobile, Ala. Filed May 9, 1910. Serial No. 560,255. (Cl. 220—8.)



A receptacle formed from a single semi-circular blank of material having its edges along its straight side folded many times in the same direction to form a sealing seam, so that the bottom of the body of the receptacle is folded into the seam so as to be sealed thereby, the said seam lying at right angles to the adjacent side of the receptacle and serving to stiffen said adjacent side to prevent its be-

ing flexed to the same degree as the other side of the receptacle when pressure is brought to bear against the latter during the operation of shaping the receptacle.

1,113,661. STOP MECHANISM FOR CONCRETE-DISTRIBUTERS. ERICH H. LICHTENBERG, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis. Original application filed Oct. 21, 1912, Serial No. 727,017. Divided and this application filed Sept. 8, 1913. Serial No. 788,742. (Cl. 104—180.)



1. The combination, with a boom and a trolley carriage therefor, of a cable for actuating the carriage, a sheave for driving said cable, oppositely disposed clutches for actuating the sheave, a lever for throwing the clutches, a cam on the carriage, and means actuated by the cam for shifting the lever to a neutral position on the return movement of the carriage.

2. In means of the class described, the combination of a support, a boom mounted for horizontal swinging movement on said support, a carriage movable longitudinally of the boom, operating mechanism for shifting the carriage along the boom, a controlling device for stopping and starting said operating mechanism, automatic stop means operable by the carriage at a predetermined point in the movement of the latter on the boom to actuate said controlling device to stop said operating mechanism, and connections intermediate said stop means and the boom for maintaining the stop means in operative relation to the controlling device irrespective of whatever position is assumed by the boom.

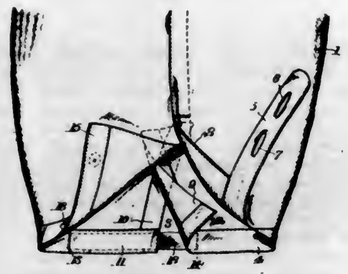
3. The combination, with a boom and a carriage movably mounted thereon, of a cable for actuating the carriage, a sheave for driving the cable, clutch and gear mechanism for driving the sheave, a lever for controlling the clutch mechanism, an angular arm connected with said lever and having an outstanding arm, a shield extending beneath the plane of the outstanding arm, means supporting and guiding said shield, and cams on the carriage extending inwardly therefrom and adapted to engage the supporting means of the shield for elevating the same when the carriage arrives at its innermost position on the boom, the shield being positioned for striking the outstanding arm of the angular arm when the shield is elevated for moving the connected parts to a position releasing the clutch.

4. In means of the class described, the combination of a supporting framework, a boom mounted thereon, means whereby the boom may be swung in a horizontal plane, a carriage movable lengthwise of the boom, cable driving means connected with the carriage to shift the same back and forth on the boom, a controlling device for said cable driving means, and automatic stop means on the boom comprising a vertically movable member operable by the carriage to be engaged with said controlling device to thereby affect the operation of the cable driving means.

5. In combination, a framework, a boom, means to move the boom on the framework, a carriage movable along said boom, an actuating cable connected with said carriage, means for operating said cable and thereby communicating movement to the carriage, and a stop device operable by the carriage at a predetermined point in its movement to render the cable operating means inactive, said stop device comprising an arm carried by the framework, and a coacting member movable with the boom and maintained in a position to operate said arm in whatever position the boom is arranged.

[Claims 6 to 14 not printed in the Gazette.]

1,113,662. KNICKERBOCKER-KNEE. MEYER J. LIEBERMAN, Baltimore, Md. Filed Mar. 28, 1913. Serial No. 757,300. (Cl. 2—122.)



1. Knickerbocker leg having at the knee two vertical slotted openings, one on each side, a non-elastic strap secured to one side of one slot and normally overlapping the other side, means for securing the strap to the other side of the slot in various positions to provide for adjustment to the size of the knee, the other slot having overlapping flaps one on each side of the opening, a tube in the outer flap, and an elastic band therein, fastened at its inner end in the tube, and at its outer end, to the flap on the other side of the slot at a point spaced back from the edge.

2. A knickerbocker having at each knee two vents, one on each side, having normally overlapping edges, a strap secured to the outer edge of one vent and overlapping the other edge, means for securing the strap and adjusting it to vary the circumference of the knee opening, and an elastic strap secured at its respective ends to the opposite sides of the other opening.

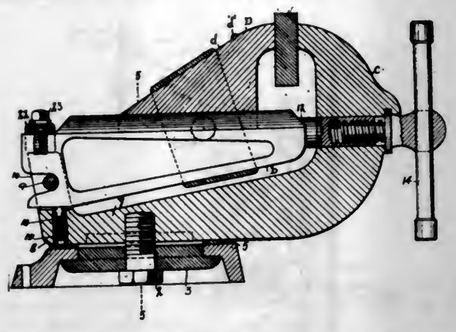
3. A knickerbocker knee having two vents, a non-elastic strap at one vent and means for adjusting it to vary the circumference of the knee, and an elastic strap at the other vent to maintain the tension of the garment at the knee.

1,113,663. BENCH-VISE. JOHN R. LONG, Akron, Ohio, assignor, by mesne assignments, to William A. Byrider, Akron, Ohio. Filed Oct. 27, 1913. Serial No. 797,613. (Cl. 81—41.)

1. In vises, a base of substantially dish shape having a flat top and a down flange about its edge and an opening in its center, a friction member inserted from beneath through said opening and bearing against the bottom of said base and provided with cheek portions projecting through said opening and provided with a channel between them, in combination with a jaw having a shank seated in said channel between said cheeks and a screw through said friction member and engaged in said shank and adapted to lock said parts together upon said base.

2. A vise having a base and a friction member rotatable in said base having a hub, an outer jaw having a shank fixed in said hub, a bar supported at one end on the rear

end of said shank and provided with a spindle engaged through the base of said jaw, an inner jaw slidably mounted on said bar and a yoke connecting said inner jaw operatively with said bar.



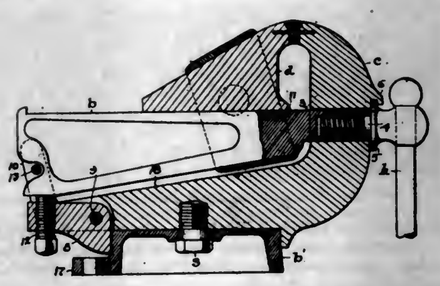
3. A vise having a base, a friction member rotatably mounted in said base and provided with a walled channel exposed above the base, an outer jaw having a tapered shank locked in said channel through said friction member, in combination with an inner jaw, a bar on which said inner jaw is slidably mounted and supported at one end on an upward extension of said shank and at the other end in the base of said outer jaw, means to draw said bar lengthwise to tightened position and a bolt under the heel of said bar bearing down upon the said base and adapted to lock the vise against rotation when it is engaged upon an object.

4. In a vise, an outer jaw having a tapered shank and an upturned outer extremity and a base on which said jaw is rotatably mounted, a bar having one end supported on said extremity and provided with a spindle at the other end projected through the base of the jaw and internally threaded, a rotatable tightening screw engaged in said spindle and a bolt in the rear of said shank adapted to lock said bar against rotation on said base, and an inner jaw slidably confined upon said bar.

5. A vise as described having an outer jaw member having a shank provided with an upturned divided outer end, a jaw supporting bar mounted at both ends on said jaw member and removably supported thereon, an inner jaw adjustably mounted on said bar and a yoke about said inner jaw confining the same operatively on said bar, in combination with a base supporting said jaw member, a locking bolt in the heel of said bar bearing upon said base and a screw in said bolt to take up wear.

[Claims 6 to 8 not printed in the Gazette.]

1,113,664. BENCH-VISE. JOHN R. LONG, Akron, Ohio, assignor, by mesne assignments, to William A. Byrider, Akron, Ohio. Filed Feb. 10, 1913, Serial No. 747,214. Renewed May 28, 1914. Serial No. 842,812. (Cl. 81—33.)



1. In vises, a base member constructed to be fixed upon a suitable support and having a jaw, a bar having a body inclined from its rear toward its front end on its under edge and having means to provide a limited adjustment thereof lengthwise on said member, a secondary jaw having a shank inclined reversely to said bar on its upper edge and a yoke slidably mounted over said bar and said secondary member and flaring to conform to said member and said bar respectively.

2. A vise having an elbow-shaped jaw member with a bore through the angle thereof, a bar having a tapered body provided with a threaded stem projecting into said bore and a screw engaging said stem and adapted to adjust said bar longitudinally, in combination with adjustable means supporting the outer end of said bar and a movable jaw and yoke slidably mounted on said bar.

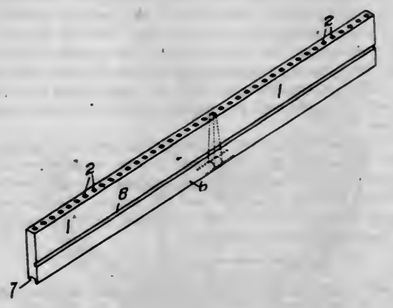
3. In vises, a bottom jaw member and a base therefor, a tapered bar slidably mounted on said member and means to adjust the said bar longitudinally, in combination with a movable jaw having a tapered shank and a yoke to operatively confine the same, a pivoted dog at the rear of said bottom jaw member and means adapted to cause said dog to lock on said base when pressure comes on said bar.

4. A vise as described having two jaw members and a combined supporting and locking bar mounted on one of said members and having the other member slidable thereon and a slidable yoke about said bar and the said jaw member mounted thereon.

5. A vise comprising a base member having a fixed jaw, a bar tapered in the direction of said fixed jaw and adjustably supported on said base member, a secondary jaw slidable on said bar, and a flaring yoke about said secondary member and said bar adapted to hold the said parts in working relations.

[Claims 6 and 7 not printed in the Gazette.]

1,113,665. SKELETON SLUG FOR TYPE-CASTING MACHINES. ELBERT FREMONT LONGWELL, New York, N. Y. Filed Apr. 11, 1911. Serial No. 620,318. (Cl. 199—2.)



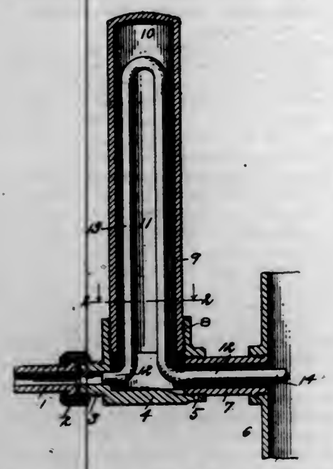
1. A skeleton slug provided with tapering holes extending through the slug transversely the length spaced according to lateral width or "set" of type size.

2. A skeleton slug provided with a top face adapted to receive printing characters, holes extending through the slug transversely throughout the length of the slugs and tapering toward the before-mentioned top face.

3. A skeleton slug provided with an edge adapted to receive printing characters and a series of tapering holes extending through the slug the axes of which are perpendicular to the edge of the small diameters of the holes in the plane of the edge.

4. A skeleton slug consisting of a body provided with a top face and a bottom face and provided with holes extending through the slug tapering to the top face and provided with two projections on bottom forming a support for the completed slug in a printing form.

1,113,666. GREASE-SUPERHEATER. FRANK LOWRY, Loudonville, Ohio, assignor to The Ohio Grease Company, Loudonville, Ohio, a Corporation of Ohio. Filed July 3, 1914. Serial No. 848,763. (Cl. 184—104.)



1. A steam supply line, an adjacent heating chamber communicating therewith, and a grease tube leading into the supply line and having a coil extending above its inlet and outlet ends into the heating chamber.

2. A steam supply line, an adjacent heating chamber communicating at its lower end therewith, and a grease tube passing through the lower end of the heating chamber into the steam supply line and having a coil extending upward into the heating chamber.

3. A steam supply line, an adjacent heating chamber communicating at its lower end therewith, and a grease tube passing through the lower end of the heating chamber into the steam supply line and having an inverted U-shaped coil extending upward into the heating chamber.

4. A steam supply line, an adjacent heating chamber, a nipple connecting the lower end of the chamber with the supply line, and a grease tube extending through the lower end of the heating chamber and the nipple into the supply line and having a coil extending upward into the heating chamber.

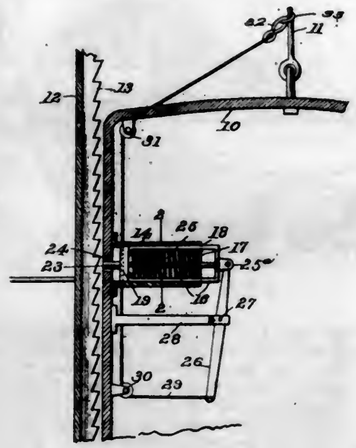
5. A steam supply line, an adjacent heating chamber, a nipple connecting the lower end of the chamber with the supply line, and a grease tube extending through the lower end of the heating chamber and the nipple into the supply line and having an inverted U-shaped coil extending upward into the heating chamber.

1,113,667. SLIDABLE BOLT. STEPHEN MAHAJ, Munhall, Pa. Filed Feb. 16, 1914. Serial No. 819,092. (Cl. 70—42.)

1. A spring-actuated bolt comprising a casing closed at one end and having longitudinal grooves upon its inner surface and alining perforations through the closed end thereof, a cage provided with side bars longitudinally slidable within said grooves and through said perforations, a bolt carried by and slidable with said cage and resilient means within said cage engaging the casing at its closed end and the forward end of the cage to project said bolt.

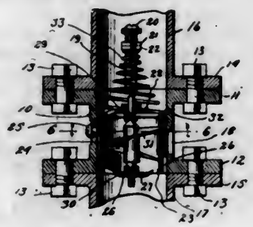
2. A spring-actuated bolt comprising a casing having a closed end, said casing having longitudinal grooves in its inner wall in alinement with perforations through said closed end, longitudinally slidable bars positioned within said grooves and projecting through said perforations, a head disk secured to the free ends of said bars, and a bolt centrally positioned exteriorly upon said disk, a helical expansion spring positioned within said casing and cage and bearing against said head disk and the closed end of the casing.

3. A spring-actuated bolt comprising a casing having longitudinal inner grooves and also having a closed outer end provided with perforations in horizontal alinement with said grooves, bars connected at their outer ends and slidably mounted in said grooves and perforations, a head



disk upon the free ends of said bars, a bolt projecting from the outer face of said disk and positioned within said opening, and expansion means between the closed end of said casing and said disk to project the bolt.

1,113,668. AUXILIARY-AIR-INLET AND MIXING DEVICE FOR INTERNAL-COMBUSTION ENGINES. EMILE MAITRE, Oakland, Cal. Filed Jan. 5, 1914. Serial No. 810,446. (Cl. 48—180.)

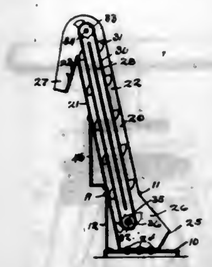


1. In a device of the class described, the combination of a tubular body having air ports therein, a tubular piston mounted for reciprocation in the bore of the body and yieldingly held against movement in position to close said air ports, and a rotary mixer mounted in the bore of the tubular piston.

2. In a device of the class described, the combination of a tubular body having air ports therein, a tubular piston mounted for reciprocation in the bore of the body, a bridge mounted on the body and extending across the bore thereof, a screw mounted on said bridge, a nut threaded on said screw, a spring having one end bearing against said nut and its other end against the tubular piston and yieldingly holding the piston in position to close said air ports, and a rotary mixer mounted in the bore of the piston.

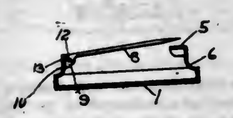
1,113,669. EARTH-ELEVATOR. CHARLES R. MAPLES, Cleveland, Ohio, assignor of one-half to Herman L. Reis, Cleveland, Ohio. Filed Feb. 26, 1912. Serial No. 679,890. (Cl. 193—6.)

The combination of a platform, an upwardly extending inclined trough resting on the platform and having its lower portion flared to form a hopper and having at its upper portion a downward chute, an endless elevator within the trough, mechanism mounted on the platform for driving said elevator, a brace on the rear side of the



trough adapted to abut the side of a wagon body, and an adjustable clamp carried by the trough to clamp the device against the side of the wagon body.

1,113,670. PIN. CHARLES F. MARKHAM, Providence, R. I. Filed Apr. 30, 1909. Serial No. 493,083. (Cl. 24—160.)



1. A pin comprising a body formed of sheet metal having ears bent to form a pin tongue joint and an abutment wall substantially perpendicular to the plane of the said body, and a pin tongue pivotally mounted between said ears and having a rearwardly extended portion arranged to bear against said abutment when the pin is closed, said abutment being located to the rear of the pivotal connection.

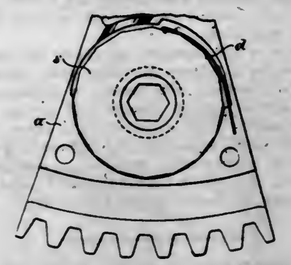
2. A pin comprising a body formed of sheet metal having a pin tongue joint formed of spaced apart ears connected by an integral tying web arranged substantially perpendicular to the plane of the said body, and a pin tongue pivotally mounted between said ears and having a rearwardly extended portion arranged to bear against said abutment when the pin is closed, said abutment being located to the rear of the pivotal connection.

3. A pin comprising a body formed of sheet metal having an integral neck portion provided with spaced apart ears and an intervening integral abutment wall perpendicular to the plane of the said body, and a pin tongue pivotally mounted between said ears and having a rearwardly extended portion arranged to bear against said abutment when the pin is closed, said abutment being located to the rear of the pivotal connection.

4. An article of the character described, comprising a body portion provided with a catch and joint member, said joint member having a closed rear end and a pin-tongue mounted in said joint member and provided with an enlarged head extending at an obtuse angle to the body of the pin-tongue and having a tail portion adapted to engage the closed rear end adjacent the body portion when said pin-tongue is moved to closed position.

5. An article of the character described, comprising a body portion provided with a catch and joint member said joint member having a closed rear end extending substantially at right angles to said body portion, and a pin-tongue mounted in said joint member and provided with an enlarged head having a straight top adapted to engage the inner surface of said closed rear end when the pin-tongue is moved to open position and with a tail portion adapted to engage said closed rear end adjacent the body portion when the pin-tongue is moved to closed position.

1,113,671. BOBBIN FOR MACHINES FOR THE MANUFACTURE OF PILLOW-LACE. AUGUST MATITSCH, Nottingham, England, assignor to The Firm of M. Faber & Co., Vienna, Austria-Hungary. Filed Nov. 18, 1912. Serial No. 732,045. (Cl. 66—6.)



1. A thin lace-machine bobbin, whose edges are provided with a large number of projections, in combination with a retaining spring arranged to engage said edges, the limit of idle motion being determined by the distance between said projections.

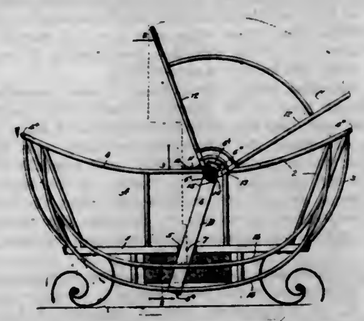
2. A thin lace machine bobbin having polygonal ends of many sides in combination with a retaining spring and in frictional engagement with a bobbin carriage.

3. A thin lace machine bobbin having polygonal ends, the corners of said ends operating as rotation retarding means and the length of the sides proportioned in accordance with the permissible slack.

4. The combination of a lace machine carriage having a circular bobbin seat, of a bobbin therein having polygonal ends and a spring engaging the edges of said ends.

5. A lace machine bobbin having polygonal ends and approaching a circle in shape.

1,113,672. PERAMBULATOR OR BABY-CAB. BERNARD H. MAY, Chicago, Ill. Filed May 12, 1913. Serial No. 767,096. (Cl. 21—12.)



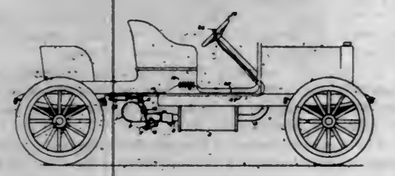
1. In means of the character set forth, the combination with a carriage-body, of a U-shaped support having a web disposed transversely below the carriage-body and arms extending upwardly at the sides of said body, top-attaching members provided at the upper ends of said arms, an independent carriage-top having coacting attaching members adapted to be secured to said arms, and a pivotal connection between said U-shaped support and the lower portion of the carriage-body.

2. In means of the character set forth, the combination of a carriage-body provided with a bottom and with sides, guides at the upper portions of said sides, arms pivotally connected with the lateral portions of said bottom and extending upward through said guides, said arms having downwardly turned ends affording top-attaching members, and a top adjustably secured to said members.

3. In means of the character set forth, the combination of a carriage-body comprising a bottom and sides, guides at the upper portions of said sides, a U-shaped member comprising arms pivotally connected with the lateral portions of said bottom and a web uniting the lower ends of said arms below said bottom, said arms having their upper ends extending through said guides and curved outwardly and downwardly, and a carriage-top secured to the extremities of said arms.

4. In means of the character set forth, the combination of a body having a bottom and sides, said sides provided at their upper portions with guides, a U-shaped support comprising a web disposed beneath said bottom and arms extending upwardly and housed in said sides, the upper ends of said arms extending through said guides and equipped with top-attaching members, a top secured to said members, and pivots connecting said arms with the lateral portions of the bottom of said body.

1,113,673. SIGNALING DEVICE. DONALD G. MCLEAN, Boston, Mass., assignor to The Randall-Faichney Company, Boston, Mass., a Corporation of Massachusetts. Filed July 2, 1912. Serial No. 707,213. (Cl. 177—311.)



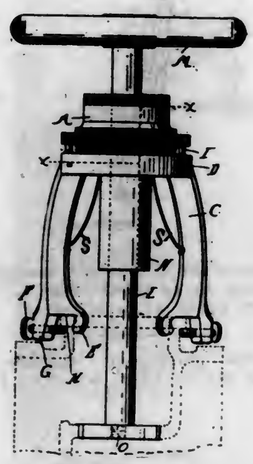
1. A signaling device comprising a horn, mounted on the exhaust pipe of an internal combustion engine, and having a movable part to operate it, in combination with a solenoid having a core connected with the movable part of the horn, an open-circuit battery for energizing the solenoid having two windings of unequal resistance, and a cut-out short circuiting one of the windings upon the closing of the energizing circuit and operating to throw the windings into series when said core has moved to a certain point, so as to decrease the amount of current passing from the battery automatically.

2. A signaling device comprising a horn mounted on the exhaust pipe of an internal combustion engine, a solenoidal operating device for controlling said horn, a battery for energizing the solenoid, a normally open circuit connecting the solenoid and battery, said solenoid having provision for operating on the closing of the circuit to draw a large amount of current supply from the battery and thereafter automatically to increase the resistance so as to reduce the amount of current passing from said battery.

3. A signaling device comprising a horn mounted in the exhaust pipe of an engine, and having a movable part to operate it, in combination with a solenoid of two unequal windings having a core connected with said movable part, a battery for energizing said solenoid and a spring situated between said core and said movable part controlling and equalizing the amount of sound passing from said horn.

1,113,674. VALVE-RESEATER. HIRAM MOORE, Hancock, Mich. Filed Sept. 11, 1911, Serial No. 648,813. Renewed Feb. 24, 1914. Serial No. 820,661. (Cl. 90—12.5.)

1. A valve reseating device comprising a centrally bored head, a plurality of legs hinged to said head at spaced points there about and provided at their lower ends with means engaging the valve case both interiorly and exteriorly to clamp the legs thereto, said legs being provided at their upper ends beyond the pivotal points with transverse end faces, and a collar surrounding said head and having a threaded engagement therewith and adapted to contact with the transverse end faces of the said legs to position the head and its bearing in proper relation to the valve seat.



2. A valve reseating device comprising a centrally bored head, a plurality of legs hinged to the head in spaced relation thereabout and provided at their lower ends with means engaging the valve case both interiorly and exteriorly to clamp the legs thereto, said legs having lugs projecting from the upper ends thereof beyond the pivotal points, and a collar in threaded engagement with the head and contacting with the end faces of the lugs to position the head and its bearing in proper relation to the valve seat.

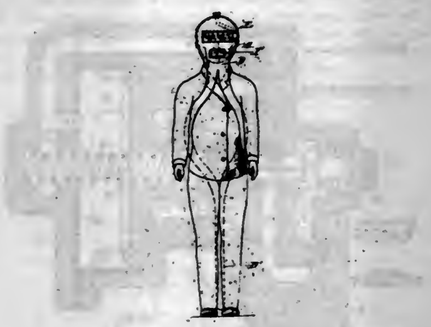
3. A valve reseating device comprising a centrally bored head, a plurality of legs pivotally secured to the head at spaced points thereabout, the lower ends of said legs being provided with means for engaging the inner face of the valve case and adjustable means engaging the outer face of the valve case for rigidly clamping the lower ends of the legs thereto, an adjustable means on said head to engage the upper ends of said legs to position the head in proper alinement with the valve seat.

4. A valve reseating device comprising a head, a plurality of legs hinged to the head at spaced points thereabout, said head having a tool bearing positioned centrally of the legs, each of said legs having a transverse bearing face at its lower end, said bearing faces being located at equal distances from the head and adapted to engage with a transverse bearing surface on the valve case, said legs also having fixed longitudinal bearing faces to engage the interior of the valve case, and adjustable members at the lower ends of the legs and arranged opposite the said longitudinal bearing faces and coacting therewith to clamp the valve case interiorly and exteriorly thereof.

5. In a valve reseating device comprising a head, a plurality of legs hinged to the head at spaced points thereabout, said head having a tool bearing positioned centrally of the legs, the legs being provided with transverse bearing faces at their lower ends, said bearing faces being located at equal distances from the head and adapted to engage a transverse bearing surface on the valve case, the legs being provided at the inner terminals of the transverse bearing faces with integral projecting lugs or faces arranged to extend into and engage the interior of the valve case, and adjustable members carried by the legs at the outer terminals of the said transverse bearing faces to engage the exterior of the valve case, whereby the legs are clamped thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,113,675. BREATHING DEVICE. GARRETT A. MORGAN, Cleveland, Ohio, assignor to The National Safety Device Company, Oberlin, Ohio, a Corporation of Ohio. Filed Aug. 19, 1912. Serial No. 715,697. (Cl. 128—42.)



1. The combination with a fireman's hood, of a device for supplying air thereto, said hood provided with an outlet opening in its upper end, a gravity valve in said opening, a tube having an inlet opening within said hood into which the wearer can exhale his breath, said exhaling tube having its outlet opening opposite the outlet opening for the hood and spaced therefrom, substantially as described.

2. The combination with a fireman's hood, of a tube for supplying air thereto, a separate tube into which the air exhaled by the wearer is discharged, and having an inlet opening arranged opposite the mouth of the wearer, and having an outlet opening at the upper end of the hood but spaced therefrom, the wall of said hood having an outlet opening opposite the outlet opening in said exhaling tube but spaced therefrom, and a gravity valve in the outlet opening in said hood.

3. The combination with a fireman's hood, of an air inlet therefor, an exhaling tube arranged within the hood, and having an outlet opening located within the hood, said hood having an outlet opening located opposite the outlet opening in said exhaling tube.

4. The combination with a fireman's hood provided with inlet and outlet openings, of an appliance located within the hood and controlled by the breath of the operator, for creating a circulation of fresh air in the hood.

5. In combination with a hood having an opening in its upper end, of a pair of flexible breathing tubes connected with the lower front face thereof, said tubes joined together intermediate of their ends, forming a loop of sufficient size to embrace the body of a fireman and rest upon his hips, and a single tube communicating with said pair of tubes at their point of juncture, and adapted to depend behind the wearer.

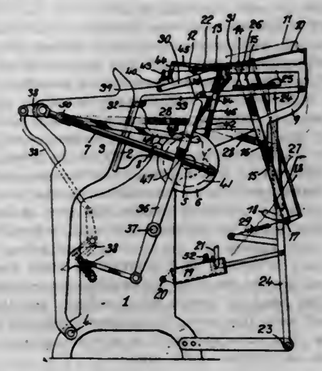
[Claims 6 to 9 not printed in the Gazette.]

1,113,676. TRIPPING MECHANISM FOR PLATEN-PRESSES. LEWIS E. MORRISON, Newark, N. J., assignor to himself and Matthias Plum, Newark, N. J. Filed Feb. 14, 1913. Serial No. 748,327. (Cl. 101—36.)

1. In a printing press the combination of suction means for separating the sheets, a pump for supplying the suction to said means, a platen, mechanism for removing the printed matter from said platen, an electrical circuit having its two normally open terminals supported on said mechanism and devices operable upon the closing of said terminals for rendering said pump inactive.

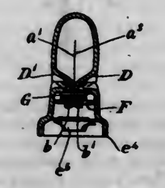
2. In a printing press the combination of printing means, a sheet separating device including a pump, grippers for delivering the printed sheet from said printing means, a normally open electric circuit having two terminals carried by said grippers and devices operable upon the closing of said terminals for rendering the said pump inactive to trip the said separating means.

3. In a printing press the combination of a sheet separating mechanism including a pump, a magnet on said pump, a normally open electrical circuit, including said magnet, means for closing said circuit to energize the said magnet and means operable by the latter for opening communication between the interior of said pump and the atmosphere to render said sheet separating mechanism inactive.



4. In a printing press the combination of a sheet separating mechanism including a pump, a magnet on said pump, a tripping mechanism including a second magnet, a normally open electric circuit including both of said magnets, means for closing said circuit to energize both of said magnets and devices rendered operative when the said magnets are energized for rendering said pump inactive to trip the said sheet separating mechanism and for actuating the said tripping mechanism to trip the said press.

1,113,677. VEHICLE CURTAIN-FASTENER. FRED A. NEIDER, Augusta, Ky., assignor to The F. A. Neider Company, Augusta, Ky., a Corporation of Kentucky. Filed Sept. 28, 1910. Serial No. 584,218. (Cl. 24—221.)



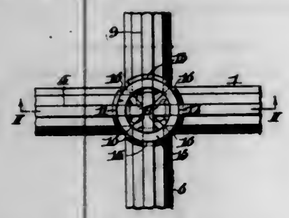
1. A vehicle curtain fastener comprising a base having an elongated boss formed thereon and provided with a longitudinally extending shoulder-receiving depression in the face thereof, a marginal rib along each end of the face, and a shoulder-receiving depression extending transversely across the face thereof and between the ribs at a point intermediate the ends of the boss, an elongated head pivotally secured to the boss and located axially, with relation thereto, and having shoulders formed thereon intermediate the ends thereof, for engaging the transversely extending depressions when the head is turned to an operative position, with relation to the boss, and for projecting into the longitudinally extending depression when the head is turned to an inoperative position, with relation to the boss, said shoulders being of such altitude, with relation to the depth of the longitudinally extending depression, that the head rests upon the marginal ribs when the boss is in the inoperative position, and means for holding the head against the face of the boss.

2. A vehicle curtain fastener comprising a base, an elongated boss formed on the base and having longitudinal and transverse depressions formed therein, marginal ribs

surrounding the ends of said longitudinal depression, an elongated head formed of sheet metal and conforming to the outline of said boss and pivotally mounted on said boss, means for yieldingly pivoting said head on said boss, strips formed integrally with the metal of said head and brought together at their lower edges to form shoulders adapted to engage said longitudinal or transverse depressions, and tangs formed on said strips, adapted to engage said boss to form a pivot for said head and a securing device for said yielding means.

3. A vehicle curtain fastener comprising, a head, oval in cross-section, and having shoulders formed on the inner face and located intermediate the ends thereof, a base having an oval boss formed thereon and provided, in the face of the boss, with a longitudinally extending shoulder-receiving slot, a marginal rib formed on each end of the boss and a transversely extending shoulder-receiving recess located midway between the ends of the boss and between the ribs, and a spindle for pivotally connecting the head in a central position, with relation to the boss and a spring for drawing the head against the face of the boss, said shoulders being so proportioned and located on the head, that they engage the transversely extending recess, when the head is turned to a position at right angles to the boss, and project into the longitudinally extending recess when the head is turned to a position parallel with the boss, and said ribs being so proportioned and located on the boss that each shoulder moves across one rib in passing from one recess to the other.

1,113,678. METAL SASH. THEODORE F. OECHSLE and AUGUST KUMPF, Philadelphia, Pa. Filed Dec. 10, 1913. Serial No. 805,709. (Cl. 189—36.)

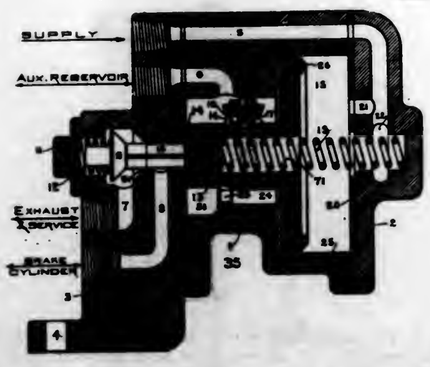


1. A metal sash including cross bars each of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially flush, each section of the cross bars adjacent the crossing point having a recess therein, and means common to all of said last named recesses for locking said cross bars in assembled position.

2. A metal sash including cross bars each of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially flush, each section of the cross bars adjacent the crossing point having a dove-tailed recess formed therein, and a locking ring common to all of said dove-tailed recesses for holding said cross bars in assembled position.

3. A metal sash including cross bars each of which is integral throughout its length, said cross bars having recesses formed therein whereby said bars may cross each other with their outer faces substantially flush, each section of the cross bars adjacent the crossing point having a dove-tailed recess formed therein, and a locking ring common to all of said dove-tailed recesses for holding said cross bars in assembled position, said locking ring being shaped in cross section to conform to said dove-tailed recesses and having grooves formed therein for permitting said locking ring to be placed in said dove-tailed recesses.

1,113,679. AIR-BRAKE VALVE. JOHN E. OSMER, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Oct. 10, 1910. Serial No. 586,133. (Cl. 188—1.)



1. In an air brake valve, a bracket for attachment to a car body, "straight air" ports and passages in said bracket, a valve for controlling said ports and passages, and a cylinder having emergency features, attachable to said bracket.

2. In an air brake valve, a piston, means for preventing rotation of said piston, an auxiliary reservoir in communication with a portion of one side of said piston, a main reservoir communicable to the other side of said piston, means for subjecting an additional portion of said first side of said piston to pressure from said auxiliary reservoir upon a reduction of pressure on said piston from said main reservoir, and means for establishing a pressure in said auxiliary reservoir less than that in said main reservoir, said means being adapted to permit the flow of air from said main reservoir to said auxiliary reservoir irrespective of the position of said piston.

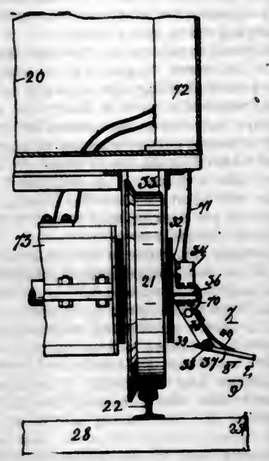
3. In an air brake valve, a bracket, "straight air" ports and passages in said bracket, a valve controlling said ports and passages, and a capped opening in said bracket opposite said valve through which said valve may be passed.

4. In an air brake valve, a piston controlling "automatic air" ports and passages, and a valve separate from said piston and controlling "stright air" ports and passages, said valve and piston being in axial alinement and said piston controlling movement of said valve.

1,113,680. SAFETY THIRD RAIL FOR ELECTRIC RAILWAYS. WALTER H. PARNELL, Jr., Brooklyn, N. Y. Filed May 6, 1907. Serial No. 372,067. (Cl. 191—20.)

1. In an electric railway system the combination of a vehicle and third rail sections, bell cranks fulcrumed adjacent to the third rail sections, movable cover rails extending from one of the arms of each bell crank, electric switches for the third rail sections, each electric switch having a switch plug extending from the other arm of the bell crank, a main feed wire in circuit with said plug, said switch also comprising a female member for the switch plug, an electric conductor connecting said female member with the third rail, a shoe extending from the vehicle and arranged to bear on the third rail sections under the movable cover rails.

2. In an electric railway system the combination of a vehicle and third rail sections, the accompanying ends of each pair of the latter separated from each other, bell cranks fulcrumed adjacent to the third rail sections, cover rails of insulating material hinged to one arm of each bell crank, electric switches for the third rail sections, each electric switch having a switch plug with spring jaws extending from the other arm of the bell crank, a main feed wire in circuit with said plug, said switch also comprising a female member for the switch plug, an electric insulated conductor connecting the female member of the switch with the third rail, a bracket extending from the vehicle, an arm pivoted to the bracket, a shoe supported on the swinging end of the arm and located to bear on the third rail sections under the said cover rails, and an electric motor in the vehicle in circuit with said shoe.



3. In an electric railway system the combination of a vehicle and third rail sections, the accompanying ends of each pair of the latter deflected downwardly and separated from each other, bell cranks fulcrumed adjacent to the third rail sections, cover rails hinged to one arm of each bell crank, electric switches for each third rail section, each electric switch having a switch plug extending from the other arm of the bell crank, a main feed wire in circuit with said plug, said switch also comprising a female member for the switch plug, an electric conductor connecting said female member with one of the third rail sections, and a flexible shoe extending from the vehicle arranged to bear on the third rail sections under the cover rails.

4. In an electric railway system the combination of a vehicle and third rail sections, the accompanying ends of each pair of the latter deflected downwardly and separated from each other, bell cranks fulcrumed adjacent to the third rail sections, cover rails hinged to one arm of each bell crank, electric switches for each third rail section, each having a switch plug extending from the other arm of the bell crank, a main feed wire in circuit with said plug, said switch also comprising a female member for the switch plug, an electric conductor connecting said female member with one of the third rail sections, a bracket extending from the vehicle, an oscillating arm pivoted to the bracket, a flexible shoe extending from the arm and arranged to bear on the third rail sections under the cover rails.

5. In an electric railway system the combination of a vehicle and third rail sections, bell cranks fulcrumed adjacent to the third rail sections, swinging arms located between the bell cranks, cover rails hinged to one arm of each bell crank and to the said swinging arms, electric switches of each third rail section, a flexible arm for each bell crank, spring jaws one for each electric switch extending from the flexible arm of a bell crank, a main feed wire in circuit with said jaws, an electric conductor extending from each electric switch to its accompanying third rail section, an oscillating arm extending from the vehicle and a flexible elliptic spring shaped shoe extending from the oscillating arm, the shoe located to bear on the third rail sections under the cover rails.

[Claim 6 not printed in the Gazette.]

1,113,681. ADHESIVE AND PROCESS OF MAKING SAME. FREDERICK H. PATCH, Manchester, Va. Filed Aug. 10, 1906. Serial No. 330,068. (Cl. 87—17.)

1. An adhesive compound composed of waste liquor of a sticky or adhesive character combined with a soapy compound and a binding material of the consistency of flour.

2. An adhesive compound composed of a liquor of a sticky or adhesive nature, saponified oils, and flour, substantially as herein set forth.

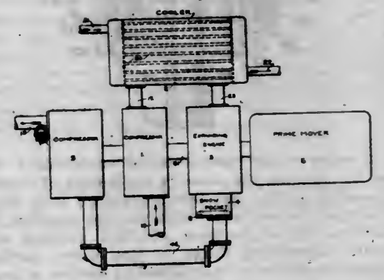
3. An adhesive consisting of a waste sulfite liquor, soapy compound, and flour, combined, substantially as set forth.

4. The process of treating waste liquors of a sticky or adhesive character, which consist in mixing therewith a quantity of flour, evaporating to a suitable consistency to hold in suspense a soapy composition, mixing therewith said soapy composition, and evaporating to the consistency desired substantially as set forth.

5. The process of treating waste liquor of a sticky or adhesive character with flour, and evaporating to dryness and mixing with clay and saw-dust.

[Claims 6 to 9 not printed in the Gazette.]

1,113,682. GAS DESICCATION. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 21, 1908. Serial No. 468,441. (Cl. 62—176.)



1. The process of desiccating gas by compressing the gas, cooling the compressed gas, expanding the cooled gas to about atmospheric pressure, removing the condensed moisture and compressing the desiccated gas as desired for use.

2. The process of desiccating gas for use above atmospheric pressure, by compressing the gas, cooling the compressed gas, expanding the cooled gas to a pressure at or above atmospheric pressure, removing the condensed moisture and compressing the desiccated gas as desired for use.

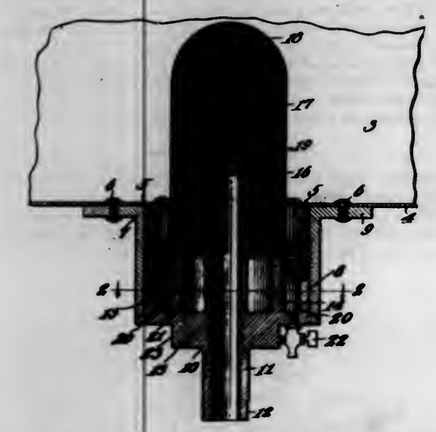
3. The process of desiccating gas by compressing the gas, cooling the compressed gas, expanding the cooled gas to about atmospheric pressure, utilizing the work of compression during one of the two preceding steps of the process, removing the condensed moisture, and compressing the desiccated gas as desired for use.

4. The process of desiccating gas for use above atmospheric pressure by compressing the gas, cooling the compressed gas, expanding the cooled gas to a pressure at or above atmospheric pressure, utilizing the work of compression during one of the two preceding steps of the process, removing the condensed moisture, and compressing the desiccated gas as desired for use.

1,113,683. TANK-OUTLET. WILLIAM Q. PFAHLER, Toledo, Ohio. Filed Jan. 8, 1914. Serial No. 811,108. (Cl. 210—16.)

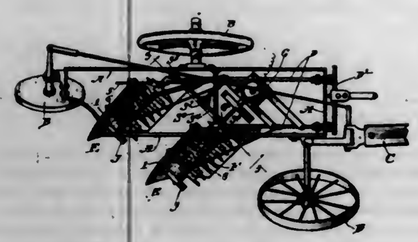
1. A device of the class described comprising a plug attaching and supporting member including a sleeve, means for rigidly securing the same to and extending below the side walls of a tank opening, a plug detachably secured

to the said sleeve and including a centrally extending pipe-like body portion, an outstanding disk carried by said body portion intermediate its ends, the said disk provided with two concentric upstanding sleeves, the outermost sleeve being detachably secured to the said plug attaching and supporting member sleeve, the said pipe body portion extending above the plug attaching member when secured thereto, the annular space between the said upstanding sleeves of the disk forming a dirt collecting receptacle, a cylindrical screen carried by and affixed to the innermost disk sleeve and extending above and encompassing the said pipe body portion, and means communicating with the said dirt receiving receptacle adapted to drain the same.



2. A device of the class described comprising a sleeve, means for securing the same to the bottom of a tank, a pipe provided with a disk intermediate its ends, the said disk engaging the said sleeve with the pipe extending above the bottom wall of the tank, said disk provided with a concentric upstanding flange, a wire screen carried by said flange spaced from the upstanding portion of the pipe and housing the same therein, the annuluar space between the screen and the said sleeve forming a dirt collecting receptacle, the annular space intermediate the pipe and the said annular flange defining a second foreign material collecting receptacle.

1,113,684. AGRICULTURAL APPARATUS. DARIUS T. PHILLIPS, Chicago, Ill. Filed June 14, 1912. Serial No. 703,619. (Cl. 97—23.)



1. An agricultural machine of the class described, comprising an earth digging and loosening member formed to receive the loosened earth, in combination with a rotary spiral pulverizing mechanism disposed above said member with its axis in the general line of movement of the earth along said digging member; and adapted to reduce the loosened earth to pulverized condition and positively discharge it beyond the line of travel of said digging member, sationary cutters projecting from said digging member into the general confines of said spiral mechanism for cutting stalks and other material and clearing said stalks and other material from said spiral mechanism, and a traveling supporting frome for said parts.

2. A mechanism for agricultural apparatus comprising an earth digging and loosening device having a receiving portion upon which the earth is thrown, in combination with a rotary cutter mechanism positioned to positively force the loosened earth along said receiving portion and pulverize it, stationary cutters projecting into shearing relation with said rotary cutter mechanism, and a fly wheel directly connected to said rotary pulverizing mechanism for steadying the action thereof.

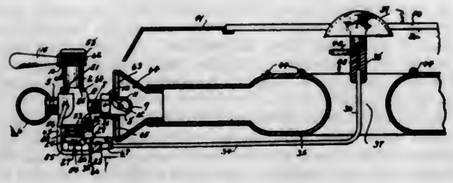
3. In agricultural apparatus of the class described, the combination of an earth digging and loosening member adapted to be propelled along and having a curved receiving board upon which the earth is thrown by said digging member, a rotary pulverizing mechanism having a plurality of spirally arranged cutters adapted to expel the earth from said board and simultaneously reduce it to a pulverized condition, and a plurality of stationary cutters cooperating with said rotary cutters for cutting stalks and other material and for clearing said rotary cutters of articles which become lodged between.

4. In agricultural apparatus of the class described, the combination of an earth digging and loosening member adapted to be propelled along and having a curved receiving board upon which the earth is thrown by said digging member, a rotary pulverizing mechanism having a plurality of spirally arranged cutters adapted to expel the earth from said board and simultaneously reduce it to a pulverized condition, and a plurality of stationary cutters coöperating with said rotary cutters for cutting stalks and other material and for clearing said rotary cutters of articles which become lodged between, and a fly wheel directly connected to said rotary pulverizing mechanism.

5. In an agricultural apparatus of the class described, the combination of a traveling earth digging and loosening member diagonally diaposed with respect to the line of travel thereof and having an upwardly curved mold board portion for receiving from said member the loosened earth, a rotary pulverizing mechanism operating adjacent to said mold board portion and having a plurality of cutting knives arranged in a spiral, and adapted to work the loosened earth along said mold board portion and simultaneously reduce it to pulverized condition, and a plurality of stationary cutting knives coöperating with said spirally disposed cutting knives and adapted to shear stalks and similar articles.

[Claims 6 to 9 not printed in the Gazette.]

1,113,685. AUTOMATIC GAS-COCK. ROSS M. G. PHILLIPS, New Haven, Conn., assignor to The Sentinal Automatic Gas Appliance Co., New Haven, Conn., a Corporation. Filed July 24, 1913. Serial No. 780,851. (Cl. 126—52.)



1. In an automatic gas-cock, the combination with the body and plug thereof, of an automatic valve located within the plug, a valve-stem depending from the valve, means co-acting with the projecting end of the said stem for automatically lifting the valve, a converting-stem connected with the valve and extending upward through the plug, and means connected with the upper end of the converting-stem for manually lifting the valve into its open position.

2. In an automatic gas-cock, the combination with the body and plug thereof, of an automatic valve mounted in the said plug, a valve-stem, means co-acting with the said stem for automatically opening the valve, a converting-stem connected with the valve in line with the said valve-stem, a cap connected with the converting-stem for the manual operation of the valve, a handle mounted in the plug for turning the same and co-acting with the said cap, and a spring located within the plug for normally holding the valve upon its seat.

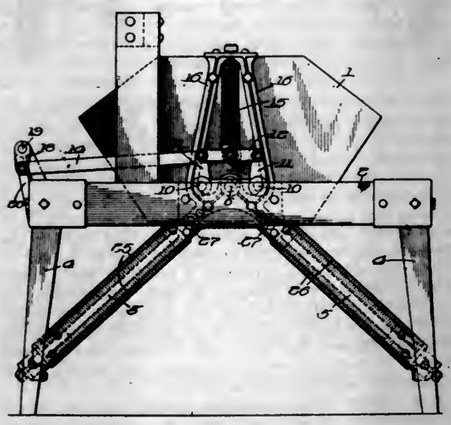
3. In an automatic gas-cock, the combination with a valve-body, of a valve-plug having a gas-port and a pilot-light port, an automatic valve located within the plug, means for automatically operating the said valve, means applied to the valve-body for connecting the pilot-light port of the plug to a pilot-light burner, and means for holding the said valve above its seat and for manually rotating the said plug.

4. In an automatic gas-cock, the combination with the body and plug thereof, of an automatic valve located within the said plug, a movable operating-head, a pilot-light burner moving therewith, a tubular operating-lever carrying the said head, supplying gas to the said pilot-light burner, and connecting the said head and valve, whereby the latter is automatically operated, means for lifting the said valve from its seat and holding it in such position, and means for manually rotating the said plug.

5. In an automatic gas-cock, the combination with a valve-body, of a plug located therein and having a gas-port and a pilot-light port, an automatic valve located in the plug, means for automatically operating the said valve, including a tubular operating-lever feeding a pilot-light burner from the said pilot-light port and means for holding the said valve above its seat and for manually rotating the said plug.

[Claims 6 to 9 not printed in the Gazette.]

1,113,686. ACTUATING MECHANISM. HENRY PLETSCH, Chicago, Ill., assignor to Judd Laundry Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 22, 1912. Serial No. 732,963. (Cl. 74—5.)



1. In combination, a stationary frame, an oscillating body pivoted thereto, a pair of rocker arms whose axes of rotation are remote from the axis of oscillation of said body, said arms being pivoted to said frame, a connecting rod, a spring connected at one end to said rod and at the other end to said body, said connecting rod being connected to said rocker arms and having its movement in part controlled by said rocker arms, and means for actuating said connecting rod.

2. In combination, a stationary frame, a pivotally supported body mounted thereon, a pair of pivotally supported rocker arms whose pivots are remote from the pivot of said body, said arms being pivoted to said frame, a link connecting the free ends of said rocker arms, means for rocking said arms and supported link back and forth, and a spring connected at one end to said link and at the other end to said body.

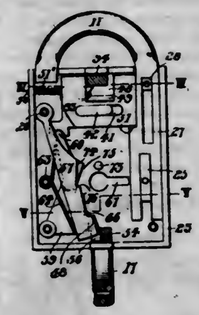
3. In combination, a stationary frame, an oscillating body pivoted thereon, a pair of rocker arms articulately supported upon said frame at points remote from the axis of oscillation of said body, means for rocking said arms, a link connecting the free ends of said rocker arms, and a spring connected at one end to said link and at the other end to said oscillating body.

4. In combination, a stationary frame, an oscillating body pivoted thereto, a pair of rocker arms whose axes of rotation are remote from the axis of oscillation of said body, said arms being pivoted to said frame, a connecting rod, a spring connected at one end to said rod and at the other end to said body, said connecting rod being connected to said rocker arms at the free ends thereof and having its movement in part controlled by said rocker arms, means for actuating said connecting rod, and auxiliary springs for coöperating with the first mentioned spring to reverse the direction of oscillation of said oscillating body.

5. In combination, a stationary frame, an oscillating body pivotally supported thereon, a pair of rocker arms pivotally attached to said frame at points remote from and on opposite sides of the axis of oscillation of said body, a link connecting the free ends of said arm, an actuating spring connected at one end to said link and at the other end to the upper part of said body, a connecting rod and means for actuating the same, said connecting rod being connected to the lower end of said spring and to said link, and auxiliary springs extending obliquely downward from said body in opposite directions, the lower ends of said auxiliary springs being attached to the lower part of said stationary frame.

[Claims 6 and 7 not printed in the Gazette.]

1,113,687. GARMENT-LOCK. JOHN POCHODZAJ, Pawtucket, R. I. Filed Apr. 8, 1914. Serial No. 830,408. (Cl. 45—13.)



1. A device of the class described comprising a casing, a bail slidingly mounted within said casing, a clasp having an extension within said casing, a hook secured to said casing, a finger pivoted to said hook and having an end positionable within said casing, a tumbler within said casing adapted for locking engagement with said bail, a rear lever within said casing, and having its free end in constant engagement with said tumbler, a resiliently mounted block within said casing adapted for locking engagement with said clasp extension and a spring pressed lever within said casing adapted for locking engagement with said hook finger.

2. A device of the class described comprising a casing, a bail, an extension upon said bail slidably mounted within said casing and provided with a side notch, a slidable tumbler within said casing adapted for engaging said notch when said bail is in its closed position, a rear lever pivoted within said casing and having its free

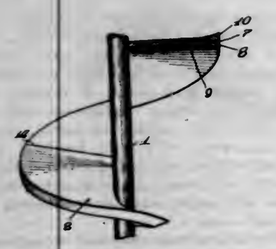
end in constant engagement with said tumbler, resilient means adapted for exerting an inward influence to said lever, and a key adapted for imparting an outward movement to said lever.

3. A device of the class described comprising a casing, a bail, an extension upon said bail slidably mounted within said casing and provided with a side notch, a slidable tumbler within said casing adapted for engaging said notch when said bail is in its closed position, a rear lever pivoted within said casing and having its free end in constant engagement with said tumbler, resilient means adapted for exerting an inward influence to said lever, said tumbler provided with a notch, a spring pressed block normally projecting within said notch, a clasp pivoted to said casing and having a notched extension extending within said casing and adapted for depressing engagement with said block upon the closing of said clasp with the bail in its closed position.

4. A device of the class described comprising a casing, a bail, an extension upon said bail slidably mounted within said casing and provided with a side notch, a slidable tumbler within said casing adapted for engaging said notch when said bail is in its closed position, a rear lever pivoted within said casing and having its free end in constant engagement with said tumbler, resilient means adapted for exerting an inward influence to said lever, said tumbler provided with a notch, a spring pressed block normally projecting within said notch, a clasp pivoted to said casing and having a notched extension extending within said casing and adapted for depressing engagement with said block upon the closing of said clasp with the bail in its closed position, a hook secured to the rear of said casing, a finger pivoted to the free end of said hook and having its notched free end adapted for movement interiorly of the casing, a front lever pivoted within said casing and having its lower side portion adapted for seating within the notch of said finger when said finger is in its closed position and resilient means engaging said front lever.

5. A device of the class described comprising a casing, a bail, an extension upon said bail slidably mounted within said casing and provided with a side notch, a slidable tumbler within said casing adapted for engaging said notch when said bail is in its closed position, a rear lever pivoted within said casing and having its free end in constant engagement with said tumbler, resilient means adapted for exerting an inward influence to said lever, a key adapted for imparting an outward movement to said lever, a hook secured to the rear of said casing, a finger pivoted to the free end of said hook and having its notched free end adapted for movement interiorly of the casing, a front lever pivoted within said casing and having its lower side portion adapted for seating within the notch of said finger when said finger is in its closed position and resilient means engaging said front lever.

1,113,688. HELICAL CONVEYER. GLEN M. PORTER, Chicago, Ill. Filed Sept. 24, 1913. Serial No. 791,508. (Cl. 170—156.)



1. A conveyer comprising a shaft and a helical blade mounted thereon, the said blade gradually diminishing in thickness from its outer peripheral edge portions to its portions contiguous to the shaft.

2. In a helical conveyer, a shaft and a composite helical member secured thereto, the said member comprising main and auxiliary portions, the latter of said portions mounted upon the former and so shaped and disposed as to make the resulting composite member increase in thickness radially outward from the said shaft.

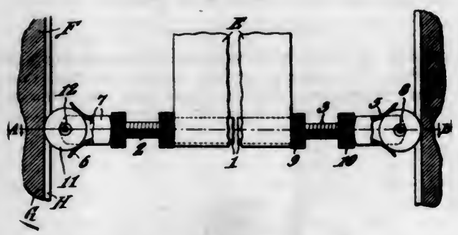
3. In a helical conveyer, a shaft, and a composite helical member secured thereto and comprising in contiguous formation main and auxiliary portions, the former of said portions tapering from a maximum thickness adjacent to the shaft to a minimum thickness adjacent to the periphery of the said member, the latter of said portions also of tapering radial section, the resulting helical member tapering in section from a minimum thickness at the shaft to a maximum thickness at its periphery.

4. In a helical conveyer, a helical member built up of superposed main and auxiliary portions, one thereof tapering in section from its periphery to its inner edge, the resulting composite member being of greater thickness at given points than at points radially inward therefrom.

5. A conveyer comprising a shaft and a helical blade mounted thereon; the said blade varying in thickness from a minimum at the portion contiguous to the juncture of the blade with the shaft, to a maximum at the outer peripheral edge portion of the blade, the intermediate portions increasing in thickness from the former to the latter of the aforesaid portions.

[Claims 6 to 8 not printed in the Gazette.]

1,113,689. CURTAIN-FIXTURE. AUGUST C. RADER, Upper Montclair, N. J. Filed Jan. 5, 1914. Serial No. 810,438. (Cl. 156—26.)



1. In a curtain fixture, the combination with a supporting structure including a retaining pin, of a member mounted on the pin to engage guides on a window frame, said member being mounted to shift radially relative to the pin in any direction, and yielding means carried on the supporting structure and engaging said member for pressing said member outwardly normally against the pin, said yielding means being adapted to resist upward and downward movement of the member relative to the pin.

2. A curtain fixture including a retaining pin, a roller mounted thereon and adapted to shift diametrically in any direction relative thereto, and yielding means engaging the periphery of the roller for pressing it outwardly normally against the pin, said yielding means being adapted to resist upward, downward and inward movement of the roller relative to the pin.

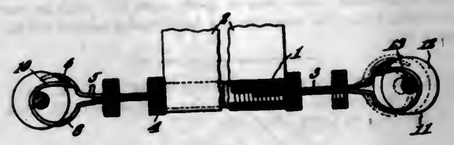
3. A curtain fixture including a forked member, means for connecting the same adjustably to a curtain, a roller mounted to slide diametrically in any direction relative to the forked member, means carried by the forked member for holding the roller against displacement relative thereto, and yielding means engaging the periphery of the roller for projecting it normally outwardly to position, said yielding means being adapted to resist upward, downward and inward sliding movement of the roller.

4. A curtain fixture including a forked member, means for connecting the same to a curtain, a retaining element carried by said member, a roller mounted to slide diametrically in any direction relative to said element, yielding means engaging the periphery of the roller for holding said roller normally projected to active position, said means being adapted to resist the sliding movement of the roller in any direction out of its normal position, and a device for adjusting said yielding means to vary the pressure exerted thereby upon the roller.

5. A curtain fixture including a forked member, means for adjustably connecting the same to a curtain, a retaining element carried by said member, a roller engaging said element and adapted to slide diametrically in any direction relative thereto, springs engaging the periphery of the roller at two points for holding the roller normally projected to one position and for resisting movement of the roller in any direction from said position.

[Claims 6 to 13 not printed in the Gazette.]

1,113,690. CURTAIN-FIXTURE. AUGUST C. RADER, Upper Montclair, N. J. Filed Jan. 5, 1914. Serial No. 810,437. (Cl. 156—26.)



1. A curtain fixture including a guide engaging roller, means for limiting the movement of the roller outwardly to active position, said roller being movable upwardly, downwardly and inwardly relative to said limiting means, and yielding means for retarding said upward, inward and downward movement of the roller relative to said limiting means.

2. A curtain fixture including a guide engaging roller, and means for connecting said roller to a curtain, said means including roller engaging springs for pressing the roller outwardly normally to its active position, and means for limiting such outward movement of the roller, said means being integral.

3. A curtain fixture including a stem, said stem having integral diverging springs formed with shoes, a roller having its periphery contacted by the shoes, said roller being formed with a peripheral groove, and means extending from one of the springs and into the groove for limiting the movement of the roller away from the shoes.

4. A curtain fixture including a stem, said stem having integral diverging springs formed with shoes, a roller having its periphery contacted by the shoes, said roller being formed with a peripheral groove, and an arcuate tongue extending from one of the shoes and into the groove for limiting the movement of the roller away from the shoes.

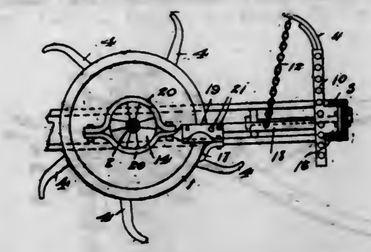
5. A curtain fixture including a stem, said stem having integral diverging springs formed with shoes, a roller having its periphery contacted by the shoes, said roller being formed with a peripheral groove, an arcuate tongue extending from one of the shoes and into the groove for limiting the movement of the roller away from the shoes, and means for varying the pressure of the springs upon the roller.

[Claims 6 to 9 not printed in the Gazette.]

1,113,691. LAND-BREAKING PLOW. ARTHUR REED, Fort Worth, Tex., assignor to Bennett W. Reed, Fort Worth, Tex. Filed Jan. 30, 1914. Serial No. 815,384. (Cl. 97—79.)

1. In a rotary drum plow, a scraper comprising a blade, a beam carrying the blade against the peripheries of the drums and pivoted at the other end to the frame of the plow, and a flexible member for holding said beam in operative position and for permitting said beam to break upwardly and to swing upwardly in case of accident.

2. In a rotary drum plow, a scraper comprising a blade, a beam pivoted at one end to the plow frame and carrying the blade at the other end in close proximity to the peripheries of the drums, means for holding said beam in operative position, and means for maintaining said blade in operative position relative to the peripheries of the drums.



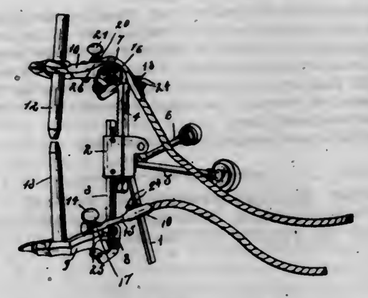
3. In a rotary drum plow, a scraper comprising a blade, a beam pivoted at one end to the plow frame and carrying the blade at the other end, means for holding said beam in operative position, and means for holding said blade in operative relation relative to the peripheries of the drums consisting of a roller and a standard attached to said beam carrying said roller and holding the same against the hubs of the drums.

4. In a rotary drum plow, a scraper comprising a blade, a beam pivoted at one end and carrying said blade near the other end and consisting of two parts connected together by a pivot bolt and a frangible pin, said blade being carried by said beam in close proximity to the peripheries of the plow drums, and means for holding said beam in operative position.

5. In a plow provided with rotary drums, scrapers for cleaning the peripheries of the drums, beams supporting said scrapers in close proximity to the peripheries of the drums, each beam being pivotally connected to the plow frame at one end and projecting between two drums at the other end, and a flexible member supporting each beam.

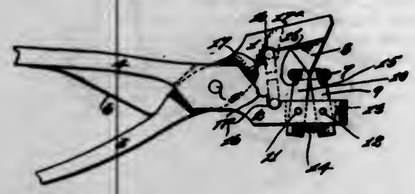
[Claim 6 not printed in the Gazette.]

1,113,692. ARC-LAMP. HARRY EMMERLING RINGE, Wyncote, Pa. Filed Mar. 6, 1911. Serial No. 612,639. (Cl. 176—103.)



A device of the kind described comprising two bars, means for separating and advancing said bars, two carbon holders, an arm formed upon each carbon holder, an insulating part at one end of each bar secured to one of said arms, an integral arm formed laterally and extending upwardly of each of said first-named arms, each of said laterally-extending arms having a flat top, terminal tips secured upon said upwardly-extending arms, a fork formed upon each of said terminal tips, each of said forks arranged to bear upon the flat top of one of said arms, thumb screws engaging said arms and arranged to bind against said fork and means on the arms co-acting with the forks and thumb screws to prevent relative movement between the tips and arms in the plane of the top of the arm.

1,113,693. TOOL FOR OPENING AND CLOSING CHAIN-LINKS. SAMUEL ROSENBERG, New York, N. Y., assignor to National Chain Company, New York, N. Y., a Corporation of New York. Filed July 17, 1914. Serial No. 851,454. (Cl. 81—15.)



1. A chain-link spreader and closer, comprising pivotally connected jaw-members, a pair of arms pivotally connected to one of said jaw members and adapted for insertion into a link and means carried by the other jaw-member adapted to force said arms apart by the closing movement of said jaws.

2. A chain-link spreader and closer, comprising pivotally connected jaw-members, a pairs of arms pivotally connected to one of said jaw members and adapted for insertion into a link and a wedge shaped nose-piece carried by the other jaw-member adapted to force said arms apart by the closing movement of said jaws.

3. A chain-link spreader and closer, comprising pivotally connected jaw-members, a pair of arms pivotally connected to one of said jaw-members and adapted for insertion into a link and a wedge shaped nose-piece carried by the other jaw-member adapted to force said arms apart by the closing movement of said jaws, each arm being provided at its upper end with a curved recess to receive the curved end of a link member.

4. A chain-link spreader and closer, comprising pivotally connected jaw-members, a pair of arms pivotally connected to one of said jaw-members and adapted for insertion into a link and a wedge shaped nose-piece carried by the other jaw-member adapted to force said arms apart by the closing movement of said jaws, each arm being provided at its upper end with a curved recess to receive the curved end of a link member, each jaw-member being provided with link retaining recesses.

5. A chain-link spreader and closer, comprising a pair of pivotally connected jaw-members, one of the jaw-members having an opening, a pair of arms located and pivotally secured in said opening, a spring normally maintaining the said arms in contact, and a nose-piece on the other jaw-member adapted to enter betwene said arms and spread the same apart.

[Claim 6 not printed in the Gazette.]

1,113,694. BANANA-HARVESTING DEVICE. ARNOLD N. ROTH, Quirigua, Guatemala. Filed May 22, 1914. Serial No. 840,241. (Cl. 56—99.)

1. A banana harvesting device, comprising a main bar, a loop at one end of the bar and toothed at its inner edge, and a comparatively small loop at the opposite end of the bar.

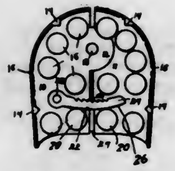
2. A banana harvesting device, comprising a main bar having an aperture, of angular form in cross-section, to receive a correspondingly shaped part of a placing implement, a loop at one end of said bar and toothed at its inner edge, and a comparatively small loop at the opposite end of the bar.

3. A banana harvesting device, comprising a main bar equipped for the engagement of a placing implement, means at one end of the bar for maintaining it in laterally extended position on a tree trunk, and means on the bar for engaging a banana bunch.

4. A banana harvesting device having loops to engage the trunk of a banana tree and a bunch of bananas on the tree, respectively; the trunk-engaging loop being toothed.

5. A banana harvesting device having loops to engage the trunk of a banana tree and a bunch of bananas on the tree, respectively; the trunk-engaging loop being provided with upper and lower sets of teeth, and the teeth of one set being arranged opposite the interdental spaces of the other set.

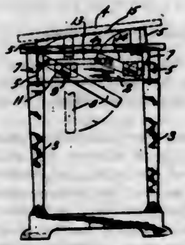
1,113,695. RENEWABLE RUBBER-HEEL DEVICE. WILLIAM M. SANFORD, Hartford, Conn. Filed Mar. 25, 1914. Serial No. 827,084. (Cl. 36—64.)



1. A heel device comprising a pair of members pivotally connected together and having tread devices, flanges on the said members having lugs suitable to be embedded in the material of a heel, and a locking device comprising a swinging arm pivotally mounted by one end on one of the said members and having a rack, a stop on the other of the said members, and resilient means for holding the said rack engaged with the said stop and the said locking device being housed in the space between the said flanges.

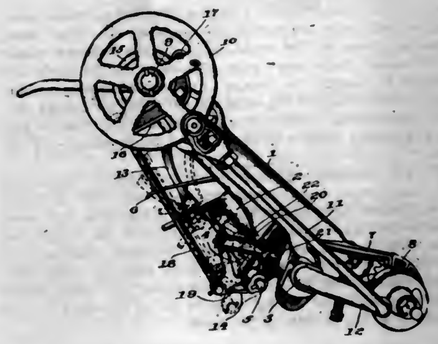
2. A heel device comprising a pair of members pivotally connected together and having tread members and having means for being secured to a heel comprising lugs for engaging with the side of the heel and a locking device comprising a swinging member on one of the said pair of members having a rack and a stop on the other of the said pair of members and one of the said tread members being arranged to serve as a spring member to hold the said rack engaged with the said stop.

1,113,696. PIANO-STOOL. EMERICH SCHWARZ, Chicago, Ill., assignor of one-half to Arthur C. Sander, Chicago, Ill. Filed July 11, 1913. Serial No. 778,577. (Cl. 155—22.)



The combination with a frame of a seat movable with respect thereto, a plurality of plates secured to said frame, each plate having a sector-shaped opening, a movable strap interposed between each pair of plates and extending into the sector-shaped openings thereof and arranged to be guided thereby, one edge of the stop resting in the crotch of said openings, and arms carried by the straps and in engagement with the seat aforesaid.

1,113,697. GRAIN-BINDER. JAMES A. SHARP, Springfield, Ohio, assignor to International Harvester Company, a Corporation of New Jersey. Filed Jan. 10, 1913. Serial No. 741,328. (Cl. 56—126.)



1. A grain binder having, in combination, a compressor mechanism including a rock shaft, a rotatable member connected with said shaft and adapted to rock it in a compressing direction, and yielding means for rocking said shaft in an opposite direction and controlling an angular movement of said rotatable member at a predetermined part thereof.

2. A grain binder having, in combination, a main frame, a compressor mechanism including a rotatable cam gear and a rock shaft, an operative connection between said gear and said shaft, and a spring mechanism for rocking said shaft in a direction controlling an angular movement of said gear at a predetermined part thereof.

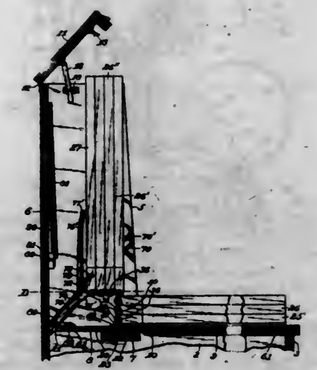
3. A grain binder having, in combination, a main frame, a compressor mechanism including a rotatable cam gear and a rock shaft, an operative connection between said gear and said shaft, and a spring mechanism carried by said shaft for rocking said shaft in a direction controlling an angular movement of said gear at a predetermined part thereof.

4. A grain binder having, in combination, a main frame, a knotter actuating shaft journaled in said frame, a cam gear wheel secured to said shaft, a lever pivotally mounted upon said frame and having one end thereof engaging with said cam wheel, a compressor shaft journaled in bearings carried by said frame, an arm secured to said shaft, a pitman connection between said arm and said lever, and a spring mechanism carried by said compressor shaft and adapted to engage with a fixed part of said main frame during a part of the operative movement of said compressor shaft.

5. A grain binder having, in combination, a main frame, a knotter actuating shaft journaled in said frame, a cam gear wheel secured to said shaft, a lever pivotally mounted upon said frame and having one end thereof engaging with said cam wheel, a compressor shaft journaled in bearings carried by said frame, an arm secured to said shaft, a pitman connection between said arm and said lever, and a spring-pressed plunger slidably mounted upon said compressor shaft and adapted to engage with said main frame during a part of the operative movement of said compressor shaft.

[Claim 6 not printed in the Gazette.]

1,113,698. FILING APPLIANCE. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed May 4, 1909. Serial No. 493,922. (Cl. 45—2.)



1. The combination of a series of leaves, means for connecting the leaves together and permitting their pivotal movement from a vertical to a horizontal position and vice versa, and guiding and carrying means for the rear leaf engaging therewith at or near its lower end for maintaining the rear leaf upright, the said means permitting bodily movement of the leaf vertically with respect to said carrying means as the leaves forward thereof are operated.

2. In a filing appliance, the combination of a series of leaves, means for connecting the leaves together and permitting pivotal movements from a vertical to a horizontal position and vice versa, and means for maintaining the rear leaf upright when one or more of the other leaves are operated, said means comprising an inclined guide, and a guide device provided with means for permitting the bodily movement of the leaf vertically during its forward movement.

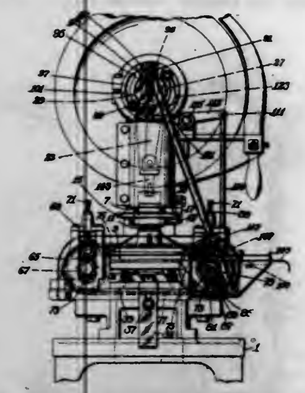
3. In a filing appliance, the combination of a series of leaves, means for connecting the leaves together and permitting pivotal movements from a vertical to a horizontal position and vice versa, and means for maintaining the rear leaf upright when one or more of the other leaves are operated, said means comprising a forwardly movable guide device provided with means permitting the bodily movement of the said rear leaf in a vertical direction during its forward movement.

4. In a filing appliance, the combination of a series of leaves having connections between them and operating when one or more of the leaves are reclined to move the lower edges of the remaining upright leaves forwardly, and paralleling means including a carriage movable with the rear leaf of the series for maintaining it and the remaining upright leaves in upright position and moving them bodily forward when one or more of the said leaves are operated, and connections between the carriage and the rear leaf permitting movement of said leaf relative to the carriage as any of the remaining leaves are operated.

5. A series of normally upright rectangularly-packed rotatable leaves with gearing connections between them, and guiding and carrying means connected with and operated by the rearmost leaf, whereby a forward rotation of one leaf to a prone position moves the upright leaves forward bodily to bring the foremost one thereof precisely into the normal upright plane of the rotated leaf, the said guiding and carrying means including connections between them and the rearmost leaf which permit movement of said leaf relative to the said means as any of the remaining leaves are operated.

[Claims 6 to 22 not printed in the Gazette.]

1,113,699. CUTTING-MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 21, 1912. Serial No. 738,026. (Cl. 164—22.)



1. A machine of the class described having, in combination, a tool past which a piece of material is fed, means for causing said tool to operate upon said piece at intervals, means for locating the first operation of the tool with respect to the piece, and means for controlling the presentation of said piece to said last mentioned means to vary said location.

2. A machine of the class described having, in combination, a tool for operating upon a piece of material, intermittently operated feed mechanism having a given extent of movement for advancing the material to the tool in a series of steps, and means for controlling the presentation of the piece to said mechanism to determine the position occupied by the forward edge of the piece at the end of the first step of the series.

3. A machine of the class described having, in combination, a tool for operating upon a piece of material, intermittently operated feed mechanism having a given extent of movement for advancing the material to the tool in a series of steps, and means for predetermining that portion of one of the movements of the feed mechanism which shall be imparted to the piece.

4. A machine of the class described, having in combination, a tool for operating upon a piece of material, intermittently operated feed mechanism having a given extent of movement for advancing the material to the tool in a series of steps, and means for causing to be imparted to the piece a fractional part of one of the movements of the feed mechanism.

5. A machine of the class described having, in combination, a tool for operating upon a piece of material, intermittently operated feed mechanism having a given extent of movement for advancing the material to the tool in a series of steps, and means for controlling the presentation of the piece to said feed mechanism to determine the location of the first operation of the tool with respect to the forward edge of the material.

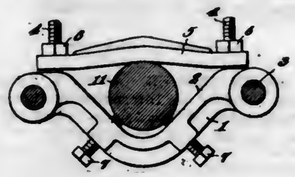
[Claims 6 to 32 not printed in the Gazette.]

1,113,700. WELDING-CLAMP. WALTER SIMPSON and EARL BIRNIE, Newark, Ohio. Filed May 1, 1914. Serial No. 835,732. (Cl. 78—96.)

1. In a welding clamp, a frame comprising cross bars and longitudinal rods connecting the cross bars; clamps cooperating with the cross bars; and a boxing support disposed substantially parallel to the cross bars, the boxing support being provided with means for slidably engaging the longitudinal rods to permit the boxing support to be adjusted in the direction of the length of the rods.

2. In a welding clamp, a frame; spaced gripping means on the frame; and a boxing support mounted on the frame for movement longitudinally of the frame.

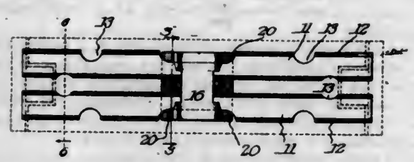
3. In a welding clamp, a frame; spaced grips cooperating with the frame, and independently movable, converging alinement devices mounted in the frame for adjustment toward and away from the grips.



4. In a welding clamp, a frame comprising cross bars; longitudinal rods connecting the ends of the cross bars; threaded studs on the cross bars; clamps through which the threaded studs pass; nuts adjustable on the studs and adapted to engage the clamps; and a boxing support disposed transversely of the longitudinal rods, the boxing support terminating in fingers which engage the rods to permit the boxing support to be adjusted longitudinally of the rods.

5. In a welding clamp, a frame comprising cross bars and longitudinal rods connecting the cross bars; a clamp on each cross bar; adjusting devices movable in the cross bars toward and away from the clamps of the respective cross bars; and a boxing support disposed substantially parallel to the cross bars, the boxing support being provided with means for slidably engaging the longitudinal rods, to permit the boxing support to be adjusted in the direction of the length of the rods.

1,113,701. BRAKE-SHOE. WILLIAM M. SIMPSON, Chicago, Ill., assignor to The Railway Materials Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 26, 1912. Serial No. 693,385. (Cl. 188—82.)

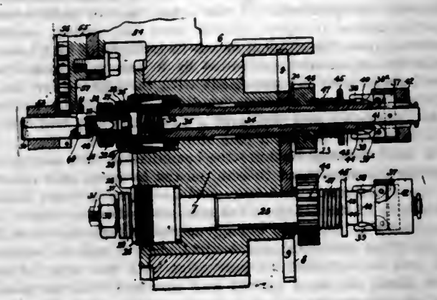


1. A brake shoe comprising an attaching lug formed from a metal strap bent into substantially U-shape with the extremities thereof projecting longitudinally of the shoe, said lug being provided with alined keyway apertures, a plurality of reinforcing members disposed in said apertures and resting upon said longitudinally projecting extremities of the lug, said members being narrower at the center than at the ends so that the outer edges thereof will lie substantially in alinement with the ends of said lug, and a body cast on said members.

2. A brake shoe comprising an attaching lug formed from a metal strap bent into substantially U-shape with the extremities thereof extending outwardly in opposite directions, said lug being provided with alined keyway apertures, a plurality of reinforcing members projecting through said apertures and engaged with said outwardly projecting extremities, the ends of the lug being disposed substantially in alinement with the sides of the reinforcing members, and a body cast on said members.

3. A brake shoe comprising an attaching lug formed from a metal strap bent into substantially U-shape with the extremities thereof extending outwardly in opposite directions, said lug being provided with alined keyway apertures, reinforcing means projecting through said apertures above said outwardly extending extremities, the ends of the said lug being disposed substantially in alinement with said reinforcing means, and a body cast on said reinforcing means and the extremities of said lug.

1,113,702. NUT-CROWNING MACHINE. ROY H. SMITH, Cleveland, Ohio. Filed Aug. 4, 1910. Serial No. 575,468. (Cl. 10—83.)



1. In a nut crowning machine, the combination with a plurality of rotating spindles, of means for automatically feeding a nut from a single blank holder upon each of the spindles successively, means for crowning a face of the nut, and means for successively removing the nuts from the spindles.

2. In a nut crowning machine, the combination with a plurality of rotating spindles, of means for presenting a nut blank in position to be engaged by a spindle, and means for successively bringing each spindle and the nut presenting means into operative relationship, means for successively crowning the faces of the nuts, and means for successively removing the nuts from the spindles after crowning.

3. In a nut crowning machine, the combination of a head, means for periodically rotating said head a predetermined distance, a plurality of rotating spindles carried by the said head, means for successively feeding the nuts upon said spindles, means for successively crowning one face of the nuts, and means for successively removing the nuts from the spindles and discharging the same.

4. In a nut crowning machine, the combination of a head, means for indexing said head, a plurality of rotating spindles carried by the said head, each spindle being provided with a threaded end portion, means for presenting a nut having a threaded opening to the spindles successively so that the nut will be threaded onto the spindle, means for presenting a cutting tool to each nut after being threaded upon the spindle for the purpose of crowning a face of the said nut, and means for removing the nut from the threaded spindle while the spindle is rotating in the same direction and discharging the nut.

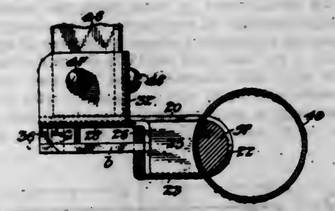
5. In a nut crowning machine, the combination of a head, means for indexing the said head, a plurality of rotating spindles carried by the head, a sliding head adapted to be reciprocated toward and from the first mentioned head, means mounted upon the sliding head for presenting a nut to a spindle upon each forward excursion of the head, a cutting tool carried by the sliding head and adapted to operate upon a nut previously threaded upon a spindle, and means carried by the sliding head operative upon the forward excursion thereof to engage a nut and remove the same from its carrying spindle.

[Claims 6 to 27 not printed in the Gazette.]

1,113,703. BEDPOST-BRACKET. ABRAHAM SONDACK, New York, N. Y. Filed Feb. 17, 1914. Serial No. 819,140. (Cl. 5—55.)

1. A bracket comprising a side member, a loop member for engagement with a support, a short side member, a transverse member, an auxiliary side member connected at one edge to the said transverse member, and means for securing the said auxiliary side member to the said side member so as to provide a socket between the same.

2. A bracket comprising a side member, a loop member for engagement with a support, a short side member, a transverse member, an inner side member in contact with the said side member, an auxiliary side member connected at one edge to the said transverse member, a spacer between the said inner side member and auxiliary side member, and devices for connecting the said side member, inner side member, spacer, and auxiliary side member.



3. A bracket comprising a side member, a loop member for engagement with a support, a short side member, a transverse member, an inner side member in contact with the said side member, an auxiliary side member connected at one edge to the said transverse member, a top member and a bottom member connected respectively to the said short side member and adapted when in position to contact with the said support, a spacer between the said inner side member and auxiliary side member, and devices for connecting the said side member, inner side member, spacer and auxiliary side member.

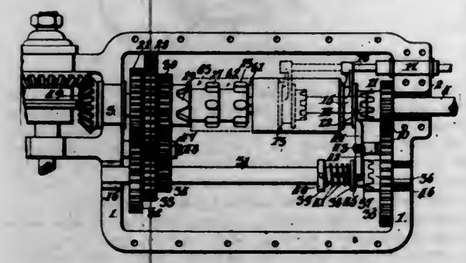
4. A bedpost bracket comprising a side member, a loop member for engagement with a bedpost, a short side member, a transverse member, an inner side member in contact with the said side member, an auxiliary side member connected at one edge to the said transverse member, a top member and a bottom member connected respectively to the said short side member and adapted when in position to contact with the said bedpost, an angle bracket connected to the said inner side member and adapted to be connected to a short rail of a bedpost, a spacer between the the said inner side member and auxiliary side member, and devices for connecting the said side member, inner side member, spacer and auxiliary side member.

5. A bedpost bracket comprising a side member, a loop member for engagement with a bedpost, a short side member, a transverse member having apertures therein, an inner side member in contact with the said side member, an auxiliary side member having lugs in one side thereof adapted to fit within the recesses in the said transverse member, a top member and a bottom member connected respectively to the said short side member and adapted when in position to contact with the said bedpost, an angle bracket connected to the said inner side member and adapted to be connected to a short rail of a bedpost, a spacer between the said inner side member and auxiliary side member, an end member connected to the auxiliary side member and extending between the same and the said inner side member and against the inner surface of which one face of the spacer contacts, and rivets passed through the said side member, inner side member, spacer and auxiliary side member to secure these parts in position.

1,113,704. CHANGE-SPEED GEARING. WILLIAM A. SORELLE, Clarendon, Tex. Filed July 9, 1913. Serial No. 778,202. (Cl. 74—59.)

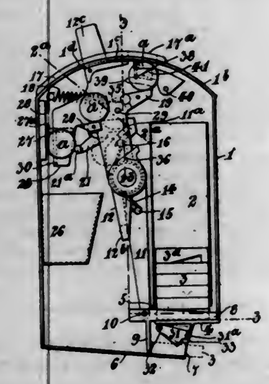
In a transmission mechanism, a driving shaft, the end of said driving shaft having a socket, a driven shaft arranged in longitudinal alinement with said driving shaft and having a reducing portion to rotatably fit into said socket, a counter shaft, a support including bearings for said shafts, a gear having a clutch face and secured to turn with said driving shaft, said driven shaft having a squared portion and a portion of circular cross section, a shiftable sleeve mounted on said driven shaft and including a squared bearing to fit the squared portion of said driven shaft, said shiftable sleeve having a clutch

face to engage the clutch face of said driving shaft gear when shifted into connection with the same, means for shifting said shiftable sleeve, a plurality of gears on said counter-shaft to turn with the same, a plurality of sleeves mounted on that portion of the driven shaft which is of circular cross section, said last named sleeves each having projecting ends, radial lugs on said projecting ends, gears carried by said sleeves to mesh with the counter-shaft gears, the radial lugs of one sleeve being spaced from the radial lugs of an adjacent sleeve a distance greater than the length of the lugs, said shiftable sleeve having lugs to coöperate with said aforementioned lugs and adapted to be successively brought into engagement with the aforementioned lugs, a gear loosely mounted on said counter-shaft to mesh with said driving shaft gear, a spring



pressed clutch member on said counter-shaft to continuously tend to engage said loose counter-shaft gear, said loose counter-shaft gear having a clutch face, a lever rockably mounted between said counter-shaft and said driving and driven shafts and continuously engaging said spring pressed clutch member, said shiftable sleeve being adapted to engage said lever to move said spring pressed clutch member out of its clutching position when said shiftable sleeve clutch face is engaged with said driving shaft gear clutch face, all being arranged substantially as shown and for purposes described.

1,113,705. COIN-CONTROLLED VENDING-MACHINE. ELIJAH F. SPAULDING, New York, N. Y. Filed Nov. 13, 1913. Serial No. 800,710. (Cl. 194—48.)



1. In a vending machine the combination of a casing, a two-part lever pivoted therein, means yieldingly connecting said levers together to cause said levers to move conjointly one by and with the other and to permit one lever to move independently of the other, one of said levers having means to eject articles from the casing, means separate from the ejecting means to lock one of said levers from movement and controlled by a coin to release the last named lever for movement with the other lever, and means to admit coins into the casing.

2. In a vending machine the combination of a casing, a two-part lever pivoted therein, means yieldingly connecting said levers together to cause said levers to move conjointly one by and with the other and to permit one lever to move independently of the other, one of said levers having means to eject articles from the casing, means separate from the ejecting means to lock one of said levers from movement and controlled by a coin to release the last named lever for movement with the other lever, said casing having an opening receiving one of said levers, said lever being provided with a shield to close said opening, said shield having a coin slot.

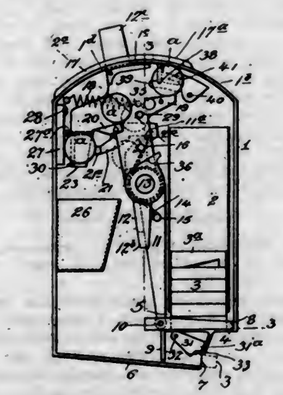
3. In a vending machine the combination of a casing, a two-part lever pivoted therein, means to cause said levers to move conjointly and to permit one lever to move independently of the other, one of said levers having means to eject articles from the casing, means to lock one of said levers from movement and controlled by a coin to release the last named lever for movement with the other lever, said casing having a curved wall provided with an opening to receive one of said levers, said lever being provided with a shield curved substantially corresponding to said wall and located adjacent thereto to close said opening at all positions of said lever, said shield having a coin slot in register with said opening when the lever is in its normal position, and adapted to register with a portion of said wall to prevent the entrance of a coin when said lever is moved from normal position.

4. In a vending machine the combination of a casing having an outlet, a two-part lever pivoted therein on the same axis, a spring connecting said levers together for movement together, one of said levers having means normally engaging the other, one of said levers having means to eject articles from said outlet, means to retain one of said levers from movement in the absence of a coin and adapted to be actuated by the coin to release said lever to permit conjoint operation of said levers for ejecting an article from the casing.

5. In a vending machine the combination of a casing having an outlet, a two-part lever pivoted therein on the same axis, a spring connecting said levers together for movement together, one of said levers having means normally engaging the other, one of said levers having means to eject articles from said outlet, a latch to engage said lever and adapted to be operated by the coin to release said lever therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,113,706. VENDING-MACHINE. ELIJAH F. SPAULDING, New York, N. Y. Original application filed Nov. 13, 1913, Serial No. 800,710. Divided and this application filed Feb. 28, 1914. Serial No. 821,627. (Cl. 211—8.)



1. In a vending machine the combination of a casing, means to support a stack of articles within the casing, an ejector, and means to guide said ejector below the stack of articles, said ejector having an opening to receive the lowermost article to draw the latter from the stack, said casing having a wall to receive articles from the ejector, and said ejector having a finger to push articles from said wall.

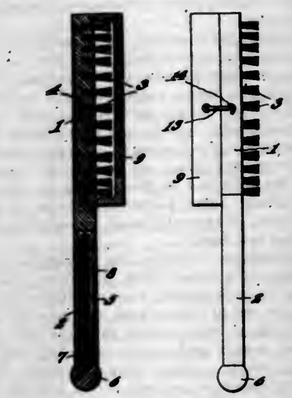
2. In a vending machine the combination of a casing, means to support a stack of articles within the casing an ejector, means to guide said ejector below the stack of articles, said ejector having an opening to receive the lowermost article to draw the latter from the stack, said casing having a wall to receive articles from the ejector, and said ejector having a finger to push articles from said wall, and a retarding device to engage articles pushed along the wall.

3. In a vending machine the combination of a casing, means to support a stack of articles within the casing, an ejector, and means to guide said ejector below the stack of articles, said ejector having an opening to receive the lowermost article to draw the latter from the stack, said casing having a wall to receive articles from the ejector, and said ejector having a finger to push articles from said wall, and a movable member carried by the casing in position to engage articles pushed along the wall.

4. In a vending machine, the combination of a casing, means to support a stack of articles within the casing, an ejector, means to guide said ejector below the stack of articles, said ejector having an opening to receive the lowermost article to draw the latter from the stack, said casing having a wall to receive articles from the ejector, and said ejector having a finger to push articles from said wall, a weight carried by the casing above said wall in position to engage articles pushed along the wall, and means to retain said weight hanging in position to be raised by articles passing thereunder.

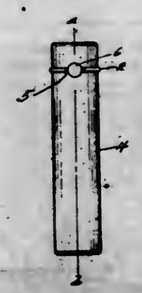
5. In a vending machine, the combination of a casing, means to support a stack of articles within the casing, an ejector, means to guide said ejector below the stack of articles, said ejector having an opening to receive the lowermost article to draw the latter from the stack, said casing having a wall to receive articles from the ejector, and said ejector having a finger to push articles from said wall, and a weight carried by the casing above said wall in position to engage articles pushed along the wall, said weight having a projection, said casing having a stop for said projection to retain the weight in position for articles to slide thereunder.

1,113,707. BRUSH. IRA L. STAUDT, Hainton, Pa. Filed Apr. 22, 1914. Serial No. 833,759. (Cl. 15—29.)



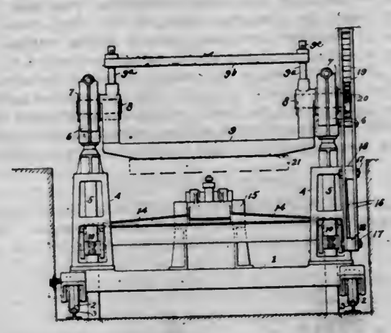
A brush including a back having bristles upon one face and a handle at one end, a cap adapted to inclose the bristles, hinge leaves secured to adjacent sides of the back and cap rim, a link having its ends hinged to the said leaves to enable the cap to be swung against either face of the back, and interengageable members carried by the opposite sides of the back and cap rim.

1,113,708. TUBULAR SHOT-CARTON. CHARLES H. STEVENSON, Wallingford, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Oct. 2, 1913. Serial No. 792,936. (Cl. 206—42.)



As a new article of manufacture, a tubular paper shot-carton comprising a paper cylinder having rounded, rimless ends and formed near one end with a depressed circumferential seat having a feeding-opening located in its bottom, a rotatable annular gate located in the said seat and formed with a shot-opening co-acting with the said feeding-opening, the said gate being formed from a single piece of wire smaller in cross-sectional diameter than the diameter of the feeding-opening, and means located within the ends of the paper cylinder for closing the same.

1,113,709. MOLDING-MACHINE. JOHN T. STONEY, Cleveland, Ohio. Filed Feb. 11, 1914. Serial No. 818,019. (Cl. 22—32.)



1. In a molding machine, the combination with a roll over molding table, a rack member, and a pinion member associated with said roll over table, one of said members being stationary, and the other adapted to move with the table, whereby the table is rolled over as it is raised, and means for raising the said table.

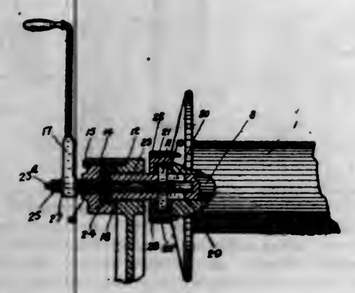
2. In a molding machine, the combination with a roll over table, a fixed rack member, and a pinion member associated with the table, means for raising and lowering the table, whereby the pinion is caused to turn by its engagement with the rack and cause the table to roll over.

3. In a molding machine, the combination with a roll over table, trunnions upon which said table is carried, journals for said trunnions, means for raising and lowering the said journals, a rack member mounted stationarily with respect to the table, a pinion carried by one of the

said trunnions and adapted to engage with the rack whereby the table will be rolled over as the same is raised.

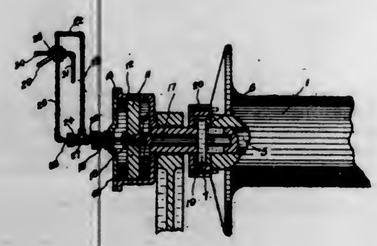
4. In a molding machine, the combination with a roll over molding table, trunnions upon which the said table is mounted, means for raising and lowering the said trunnions, a pinion carried upon one of said trunnions, a rack with which the said pinion is adapted to coöperate, said rack being stationarily mounted with respect to the table and its pinion, the teeth upon the rack being so arranged that the table is raised a short distance before the pinion and teeth upon the rack become coöperative.

1,113,710. CLUTCH-ACTUATING DEVICE. ERIC ALFRED STRAND, Vancouver, British Columbia, Canada. Filed Sept. 8, 1913. Serial No. 788,577. (Cl. 192—8.)



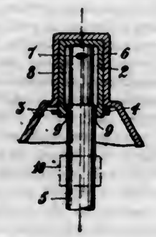
In a clutch actuating device, the combination with the main supporting shaft having an axial bore in one end, and diametrically opposed slots leading into the bore, a driving member mounted upon the shaft having an annular friction wedge ring, and a drum also mounted upon the shaft having a wedge screw co-acting with the wedge ring, of a casing secured on one drum end, a pin extending into the longitudinal bore of the supporting shaft and having a diametric slot, a key extending from such slot and through the diametric slots of the shaft into the casing of the drum, annular washers fitting within the casing to each side of the key, a reduced extension to the axial pin, a stationary internally threaded member, a threaded sleeve loosely mounted upon the reduced portion of the axial pin of the main supporting shaft, and nuts threaded on to the reduced portion to hold the sleeve from moving longitudinally, as and for the purpose specified.

1,113,711. STEAM FRICTION DEVICE. ERIC ALFRED STRAND, Vancouver, British Columbia, Canada. Filed Sept. 25, 1913. Serial No. 791,786. (Cl. 172—18.)



In a clutch actuating device, the combination with a main supporting shaft having an axial bore in one end thereof and a drum loosely mounted upon the shaft, of a pin slidably held in the bore, connecting means between the inner end of the pin and the drum, a piston mounted upon the outer end of the pin, a cylinder in which the piston operates, a duct extending longitudinally through the pin from the outer end thereof and leading into the cylinder at the opposite side of the piston, a stationary duct leading into the outer end of the cylinder, an inner steam duct leading through the aforesaid steam duct into the duct of the pin, means for feeding steam in the said ducts, means for exhausting steam therefrom and a controlling valve designed to alternately open the alternate ducts to the steam inlet and exhaust, as and for the purpose specified.

1,113,712. MEANS FOR SUPPORTING RAPIDLY-ROTATING BODIES. PER TEODOR SUNDBERG, Stockholm, Sweden, assignor to Maskin- och Brobyggnads Aktiebolaget, Helsingfors, Finland. Filed June 9, 1911. Serial No. 632,213. (Cl. 64—48.)



1. In a centrifugal machine, the combination with a vertical spindle, of a rotary body supported loosely upon the upper end of such spindle, the supporting surface of the spindle being of lesser width than the corresponding surface of the rotary body, said rotary body encircling and bearing against the spindle in a plane below the upper end of the spindle and arranged to oscillate about a point approximately in said plane, substantially as and for the purpose set forth.

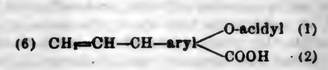
2. In a centrifugal machine, the combination with a vertical spindle, of a rotary body supported loosely upon the upper end of such spindle, and provided with a sleeve surrounding the end of the spindle, the supporting surface of the spindle being of lesser width than the corresponding surface of the sleeve, said sleeve encircling and bearing against the spindle in a plane below the upper end of the spindle and arranged to oscillate about a point approximately in said plane, substantially as and for the purpose set forth.

3. In a centrifugal machine, the combination with a vertical spindle, of a rotary body supported loosely upon the upper end of such spindle, the supporting surface of the spindle being of lesser width than the corresponding surface of the rotary body, said rotary body encircling and bearing against the spindle in a plane below the upper end of the spindle and arranged to oscillate about a point approximately in said plane, the part of the rotary body adjacent to the said end of the spindle as well as said end of the spindle being formed according to a sphere having its center in the said point, substantially as and for the purpose set forth.

4. In a centrifugal machine, the combination with a vertical spindle, of a rotary body supported loosely upon the upper end of such spindle and provided with a sleeve surrounding the end of the spindle, the supporting end of the spindle being of lesser width than the corresponding surface of the sleeve, said sleeve encircling and bearing against the spindle in a plane below the upper end of the spindle and arranged to oscillate about a point approximately in said plane, the part of the sleeve adjacent to the said end of the spindle as well as said end of the spindle being formed according to a sphere having its center in the said point, substantially as and for the purpose set forth.

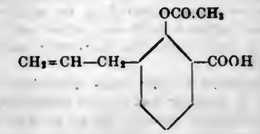
1,113,713. ACIDYL DERIVATIVES OF C-ORTHO-ALLYL-ORTHO-BENZOIC ACIDS. LUDWIG TAUB and HANS JOACHIM HAHL, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 20, 1913. Serial No. 808,024. (Cl. 23—24.)

1. As new products acidyl derivatives of C-ortho-allyl-ortho-oxybenzoic acids having most probably the following graphically represented formula:



being valuable antipyretics which are after being dried and pulverized whitish crystalline substances soluble in organic solvents, scarcely soluble in water and forming salts with alkali, alkali earths or heavy metals, substantially as described.

2. As a new product the acetyl-ortho-allyl-salicylic acid having most probably the formula:



having proved to be a valuable antipyretic, antineuralgic and antirheumatic, which crystallizes from benzene in the shape of colorless needles melting at 94 to 96° C. soluble in benzene, toluene and similar organic solvents and difficultly soluble in water and forms salts with alkalis, alkali earths and heavy metals the calcium salt being a crystalline powder substantially as described.

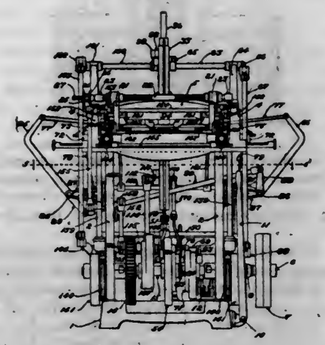
1,113,714. SUBSTANCE ISOLATED FROM THE APOCYNACEÆ AND PROCESS OF PRODUCING THE SAME. LUDWIG TAUB and GEORG FICKEWIATH, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 4, 1912. Serial No. 718,497. (Cl. 167—7.)

1. A physiologically active product which crystallizes from methyl alcohol in colorless shiny prisms of exceedingly bitter taste which begin to become liquid at about 130° and which melt at 135 to 140° to a clear liquid, insoluble in ligroin, difficultly soluble in cold water and more easily soluble in hot water, and possessing the valuable diuretic and cardiactonic properties of the apocynum.

2. The process of isolating a physiologically active product from the *Apocynaceæ*, which comprises forming an extract of such *Apocynaceæ*, concentrating the thus obtained extract to a syrupy consistency, treating the same with alcohol, diluting the alcoholic solution with water, filtering the same and adding to the filtrate acetate of lead, removing the excess of lead by means of sulfureted hydrogen, concentrating the liquid, extracting the same with chloroform, precipitating the new substance from this extract and finally recrystallizing the same from methlyic alcohol, the temperature being maintained throughout the process below that at which the decomposition of the new active substance takes place.

3. The process of isolating a physiologically active product from the *Apocynaceæ*, which comprises extracting such *Apocynaceæ* with tetrachlorid of carbon, concentrating the thus obtained extract to a syrupy consistency, treating the same with alcohol, diluting the alcoholic solution with water, filtering the same and adding to the filtrate acetate of lead, removing the excess of lead by means of sulfureted hydrogen, concentrating the liquid, extracting the same with chloroform, precipitating the new substance from this extract, and finally recrystallizing the same from methlyic alcohol, the temperature being maintained throughout the process below that at which the decomposition of the new active substance takes place.

1,113,715. PAPER-BOX MACHINE. EUGENE H. TAYLOR, Hyde Park, Mass., assignor to John F. Spaulding, Boston, Mass., and James G. Tewksbury, Somerville, Mass.; Ernest R. Spaulding, Wellesley, Mass., administrator of said John F. Spaulding, deceased; Anna Hughes Tewksbury administratrix of said James G. Tewksbury, deceased. Filed Mar. 28, 1907. Serial No. 364,956. (Cl. 93—51.)



1. In a box-machine, in combination, a hopper adapted to contain a supply of individual blank-units, pasting devices located at the same side of the path of the blank transferred from the hopper by said feeder as said hopper, a reciprocatory feeder by which a blank-unit is transferred from the hopper to the pasting devices and then between the separated forming devices by movement in the same general direction throughout, and forming devices including end and side-pressers at the other side of said path of movement from the hopper and pasting devices.

2. In a box-machine, in combination, a hopper adapted to contain a supply of individual blank-units, pasting devices located at the same side of the path of the blank transferred from the hopper by the feeder as said hopper, a reciprocatory feeder by which a blank-unit is transferred from the hopper to the pasting devices and then between the separated forming devices by movement in the same general direction throughout, and forming devices at opposite sides of said path of movement, the said forming devices including end and side-pressers and corner-turners, all at the other side of the said path of movement from the hopper and pasting devices.

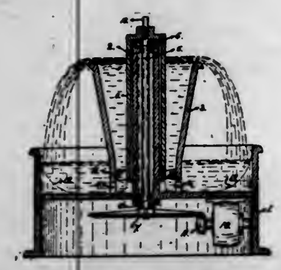
3. In a box-machine, the combination with a hopper for blanks, forming-devices, and pasting-devices arranged to act on a blank intermediate the hopper and forming-devices, of a feeder by which the blank is fed from the hopper to the forming-devices, having side-supports adjustable transversely of the feeder to suit the size of the blank and by which the blank is supported as the pasting-devices apply paste thereto.

4. In a box-machine, the combination with a hopper for blanks, forming-devices, and pasting-devices arranged to act on a blank between the hopper and the forming-devices, of a feeder having a plurality of feeding shoulders to engage a succession of blanks, and provided with transversely adjustable-supports for the outer portions of a blank, and means for operating the said feeder to advance a blank from the hopper to the pasting-devices and from the pasting-devices to the forming-devices by successive feed-movements.

5. In a box-machine, the combination with pasting-devices, feeding devices, and forming-devices, of ejecting devices at the rear of the forming-devices constructed to act at opposite ends of a box, and means to cause said ejecting devices to act along straight lines in ejecting a box from the machine.

[Claims 6 to 44 not printed in the Gazette.]

1,113,716. FOUNTAIN. NIKOLA TESLA, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,718. (Cl. 137—107.)



1. An artificial fountain consisting of an unobstructed conduit having an elevated overflow and adapted to be set in a body of water, and a propelling device for maintaining a rapid circulation of the water through the conduit.

2. An artificial fountain comprising in combination an unobstructed conduit having an elevated overflow and adapted to be set in a body of fluid, a propeller within the conduit for maintaining a rapid circulation of the fluid through the same, and a motor for driving the propeller.

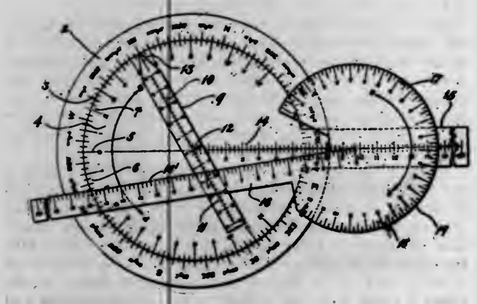
3. The artificial fountain herein described, comprising in combination a receptacle, a central hollow conduit with an elevated overflow placed therein, a propeller within the conduit, and a motor for driving the propeller, so as to maintain a rapid circulation of fluid through the conduit.

4. The artificial fountain herein described, comprising in combination, a receptacle, a conduit with elevated overflow set therein, a central hub extending up through the conduit, a rotary shaft extending therethrough, and a propeller carried by the shaft for maintaining a rapid circulation of fluid through the conduit.

5. An artificial fountain comprising in combination with an unobstructed passage from the normal to the elevated fluid levels, of a propeller for maintaining a rapid circulation of the fluid through such passage and producing thereby a cascade with the expenditure of little energy.

[Claim 6 not printed in the Gazette.]

1,113,717. COURSE-FINDING INSTRUMENT. ARTHUR E. THAYER, West Hartford, Conn. Filed July 30, 1913. Serial No. 781,906. (Cl. 235—61.)



1. An instrument of the class described comprising a compass-dial, a member having an indicating mark, said parts being relatively movable about an axis to bring said indicating mark opposite different graduations of the compass-dial, and a manually settable pointer pivotally mounted for movement about the same axis, said pointer having two series of graduations and being cooperative with the graduations of said compass-dial.

2. An instrument of the class described comprising a compass-dial, and a pointer pivoted concentrically to said compass-dial, manually settable to coöperate with the graduations of said dial, and having two separate scales provided with a common zero mark coincident approximately with the axis of rotation of said pointer and extending oppositely from said zero mark.

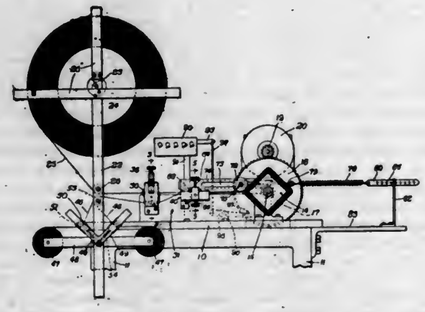
3. An instrument of the class described comprising a compass-dial, member having an indicating mark, said parts being relatively movable about an axis to bring said indicating mark opposite different graduations of the compass-dial, a pointer movable about the same axis, to coöperate with the graduations of the compass-dial, said pointer having two separate scales extending longitudinally thereof in opposite directions, said scales having a common zero substantially coincident with said axis.

4. An instrument of the class described comprising a compass-dial, a member having an indicating mark, said parts being relatively movable about an axis to bring said indicating mark opposite different graduations of the compass-dial, a pointer movable about said axis, to coöperate with the graduations of the compass-dial, having a graduated scale, a base scale and a movable scale, the three scales being adapted to be relatively adjusted into triangular relation with each other and said movable scale having a scale connected therewith, coöperative with said base scale.

5. An instrument of the class described comprising a compass-dial, a member having an indicating mark, said parts being relatively movable about an axis to bring said indicating mark opposite different graduations of the compass-dial, a pointer movable about said axis, to coöperate with the graduations of the compass-dial, having a graduated scale, a base scale and a movable scale, the three scales being adapted to be relatively adjusted into triangular relation with each other, and a graduated arcuate scale connected with said movable scale.

[Claim 6 not printed in the Gazette.]

1,113,718. MACHINE FOR WINDING INSULATED COILS AND THE LIKE. CHESTER H. THORDARSON, Chicago, Ill. Filed Jan. 24, 1913. Serial No. 744,002. (Cl. 242—10.)



1. A machine for winding flat wire coils with a thin insulating strip or strips between the turns thereof, comprising wire and strip supporting means, winding means and assembling and guiding means between the supporting and winding means, the guiding means embracing lateral fixed guides for separate engagement by the side edges of the wire and strip or strips.

2. A machine for winding flat wire coils with an insulating strip between the turns thereof, comprising winding means and wire and strip guiding and assembling means, the latter comprising closely spaced guide ways for the wire and strip having lateral fixed guide surfaces for engagement with the edges of the wire and strip for maintaining the wire in accurate lateral alinement relatively to the strip.

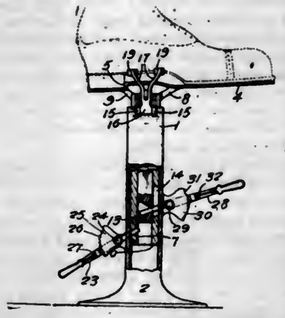
3. A machine for window flat wire coils with an insulating strip or strips between the turns thereof comprising winding means, wire pressing means and wire and strip guiding and assembling means between the wire pressing and the winding means, said guiding means embracing fixed lateral guide surfaces for engagement with the side edges of said wire and the strip or strips.

4. A machine for winding flat wire coils with an insulating strip between the turns thereof comprising winding means, wire pressing means for pressing out inequalities in the wire, with means for varying the pressure on said wire, and wire and strip guiding and assembling means between the wire pressing and winding means.

5. A machine for winding flat wire coils with an insulating strip between the turns thereof comprising a rotative winding form, with means to rotate it, and wire and strip guiding and assembling means in alinement with the winding form, the guiding means embracing fixed lateral guide surfaces to maintain the wire and strip in predetermined lateral relation.

[Claims 6 to 20 not printed in the Gazette.]

1,113,719. FOOT-REST. GAY L. TUFTS, Anahuac, Tex. Filed Oct. 21, 1913. Serial No. 796,445. (Cl. 15—58.)



1. A device of the character specified, comprising a tubular standard having a base, a foot rest, a casing slidable in the standard, the rest being connected with the upper end of the casing in spaced relation, and the said casing being tubular, a slide bar within the casing and fitting the same, substantially Y-shaped gripping members hinged to the standard at opposite sides of the rest, each member comprising a body hinged to the standard and diverting arms, the upper ends of the arms being at approximately a right angle to the body and extending inwardly toward the rest, each of the said arms having a gripping jaw for grasping the edge of the sole of a shoe, a link connecting each member between the gripping jaws and its hinge connection with the slide bar, the casing being slotted at its upper end for receiving the links, means in connection with the standard at one side thereof for raising and lowering the casing, and means in connection with the standard at the opposite side thereof for raising and lowering the slide bar, each of the said means comprising a lever, the standard having a laterally extending bracket at each lever, said lever being pivoted to the bracket, the standard having an opening through which the inner end of the lever extends, and the bracket having an arc-shaped series of teeth at its outer end, each lever having latch mechanism coöperating with the teeth of the bracket to hold the lever in position, the casing having an opening for receiving the inner end of one lever and the slide bar having an opening for receiving the inner end of the other lever.

2. A device of the character specified, comprising a tubular standard having a base, a foot rest, a casing slidable in the standard, the rest being connected with the upper end of the casing in spaced relation, and the said casing being tubular, a slide bar within the casing and fitting the same, substantially Y-shaped gripping members hinged to the standard at opposite sides of the rest, each member comprising a body hinged to the standard and diverging arms, the upper ends of the arms being at approximately a right angle to the body and extending inwardly toward the rest, each of the said arms having a gripping jaw for grasping the edge of the sole of a shoe, a link connecting each member between the gripping jaws and its hinge connection with the slide bar, the casing being slotted at its upper end for receiving the links, means in connection with the standard at one side thereof for raising and lowering the casing, and means in connection with the standard at the opposite end thereof for raising and lowering the slide bar.

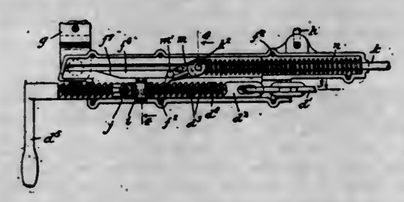
3. A device of the character specified, comprising a tubular standard having a base, a casing slidable in the standard and having rigid with the upper end thereof a foot rest, said casing being tubular, a slide bar within the casing and movable longitudinally thereof, gripping jaws hinged to the standard at opposite sides of the rest for engaging the sole of the shoe to hold the shoe to the rest, a link connecting each gripping jaw with the slide bar, the casing having slots at its upper end for receiving the links, means in connection with the standard at one side thereof for raising and lowering the casing, and means in connection with the standard at the opposite side thereof for raising and lowering the slide bar.

4. A device of the character specified, comprising a tubular standard having a base, a casing slidable in the standard and having rigid with the upper end thereof a foot rest, said casing being tubular, a slide bar within the casing and movable longitudinally thereof, gripping jaws hinged to the standard at opposite sides of the rest for engaging the sole of the shoe to hold the shoe to the rest, a link connecting each gripping jaw with the slide bar, means in connection with the standard at one side thereof for raising and lowering the casing, and means in connection with the standard at the opposite side thereof for raising and lowering the slide bar.

5. A device of the character specified, comprising a standard, a tubular casing movable in the standard and having a foot rest at its upper end, gripping jaws hinged to the standard at its upper end for engaging the sole of the shoe on the rest, a slide bar movable in the casing and connected with the gripping jaws to move the said jaws toward and from the rest when the slide bar is raised and lowered, means for moving the casing, and means for moving the slide bar.

[Claim 6 not printed in the Gazette.]

1,113,720. SLACK-ADJUSTER FOR RAILWAY-BRAKES. FRANK D. WARD, New York, N. Y., assignor to Sauvage-Ward Brake Company, Inc., a Corporation of Delaware. Filed July 28, 1913. Serial No. 781,489. (Cl. 188—50.)



1. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, and an automatic take-up device mounted on the car body and comprising two rods operatively connected to the dead lever and to the pull rod respectively and relatively stationary holding means engaging the first named of said rods to prevent positively movement thereof in one direction while permitting free movement thereof in the opposite direction, said first named rod being rotatable to be released from the holding means and therefore free to be moved bodily in an axial direction to permit the brakes to be swung from the wheels.

2. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, and an auto-

matic take-up device mounted on the car body and comprising a rack-bar operatively connected to the dead lever, a reciprocable take-up rod operatively connected to the live lever, relatively stationary holding means to prevent travel of the rack-bar in one direction, said means permitting free movement thereof in the opposite direction, the take-up rod being operative after excess travel to shift the rack-bar, and the rack-bar being rotatable to be released from the holding means and therefore free to be moved bodily in an axial direction to permit the brakes to be swung from the wheels.

3. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, and an automatic take-up device mounted on the car body and comprising two rods operatively connected to the dead lever and to the pull rod respectively, a stationary spring-pressed holding dog in engagement with the first named rod and a pawl operatively connecting the two rods, the first named rod being rotatable to be released from the dog and the pawl and therefore free to be moved bodily in an axial direction to permit the brakes to be swung from the wheels.

4. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, an automatic take-up device including supporting means mounted on the car body and comprising a rack-bar and a take-up rod, both slidably mounted in said supporting means, said rack bar being provided with two series of teeth, a pawl carried by the take-up rod, a shoulder being formed on the supporting means and coöperating with the pawl to hold the same out of engagement with the teeth of the rack during normal travel of the pull rod and permitting engagement of the pawl with one series of teeth of the rack upon excess travel of the pull rod, a spring-pressed holding dog carried by the supporting means and in engagement with the other series of teeth on the rack-bar, and means to return the pawl to normal position upon the release of the brakes.

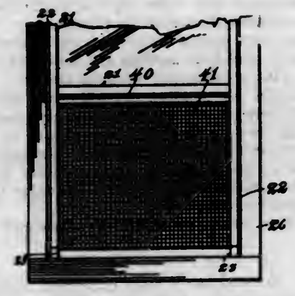
5. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, an automatic take-up device including supporting means mounted on the car body and comprising a rack-bar and a take-up rod, both slidably mounted in said supporting means, said rack-bar being provided with two series of teeth, a pawl carried by the take-up rod, a shoulder being formed on the supporting means and coöperating with the pawl to hold the same out of engagement with the teeth of the rack during normal travel of the pull rod and permitting engagement of the pawl with one series of teeth of the rack upon excess travel of the pull rod, a spring-pressed holding dog carried by the supporting means and in engagement with the other series of teeth on the rack-bar, and means to return the pawl to normal position upon release of the brakes, said rack-bar being rotatable to disengage the respective series of teeth from the pawl and the dog.

[Claims 6 to 8 not printed in the Gazette.]

1,113,721. KNOCKDOWN ROLLER-SCREEN. WILLIAM W. WATSON, Jamestown, N. Y. Filed July 18, 1913. Serial No. 779,848. (Cl. 156—39.)

1. A screen of the class described comprising side cases having open lengthwise channels therein on the two opposite sides of the window casing, said side cases having open ended sidewise housings on their lower ends, and a crosswise roll case insertible into said sidewise housings to detachably connect said side cases.

2. A screen of the class described comprising a tubular roller, a plug revolubly mounted in each end of said roller, a coil spring in each end of said roller attached to said roller at one end and to one of said plugs of the other, each of said plugs having an opening in its outer end, a tube connecting said plugs within said springs, a revolubly mounted pulley at each end of said roller, an angular shaped pin attached to each of said pulleys to fit within said openings in the outer ends of said plugs to turn said plugs with said pulleys, a tape attached to earch of said pulleys, a second pulley a spaced distance from each of said first mentioned pulleys, each of said tapes extending over said second pulley, a guide-piece attached to the end of each of said tapes, screen fabric attached to said roll at one end, and a cross-bar at the other end of said screen fabric detachably connected to said guide-pieces at each end.



3. In a screen of the class described, a side case having an open lengthwise channel on its inner side, said side case having a chute opening into said open lengthwise channel the full length thereof, a pulley revolubly mounted within said side case near each end thereof, a guide-piece slidably mounted in said chute, and a tape attached to said guide-piece and passing over said pulley at one end of said side case and attached to the pulley at the other end of said side case to be wound thereon, substantially as and for the purpose specified.

4. In a screen of the class described, a side case having an open lengthwise channel on its inner side, said side case having a chute opening into said open lengthwise channel the full length thereof, a pulley revolubly mounted within said side case near each end thereof, a guide-piece slidably mounted in said chute, a tape attached to said guide-piece and passing over said pulley at one end of said side case and attached to the pulley at the other end of said side case to be wound thereon, and means for holding said tape and pulleys from unwinding, substantially as and for the purpose specified.

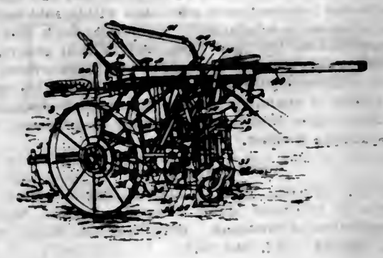
5. In a screen of the class described, a side case consisting of a channel strip and a removable cover therefor providing an open lengthwise channel near one edge, said side case having a channel or chute the full length thereof opposite said open lengthwise channel, a guide-piece operably movable the full length of said chute, a pulley revolubly mounted at the top of said side case in line with said chute, a second pulley revolubly mounted near the bottom of said side case, guide pulleys above said bottom pulley and below said top pulley, and a tape attached to said guide-piece at one end and passing over said pulley at the top of said side case and attached to the pulley at the bottom of said side case to be wound around the same, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,113,722. COMBINED COTTON CHOPPER AND CULTIVATOR. JOHN R. WEATHERLY, Charleston, S. C., assignor of one-half to Isadore Blank, Charleston, S. C. Filed July 21, 1913. Serial No. 780,334. (Cl. 97—45.)

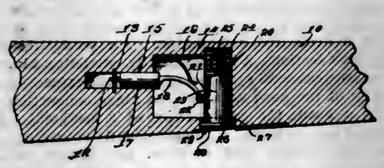
1. In a combined cotton chopper and cultivator, the combination with a wheel frame, of a shaft mounted on the frame, a cultivator frame loosely mounted upon the shaft, a cotton chopper frame resiliently supported from said shaft, a pole pivoted to the frame, a lever pivoted to the wheel frame, and means connected to the lever having a loose connection with the pole whereby upon the actuation of the lever the pole is operated for regulating the depth of penetration of the cultivator plows, and maintaining the parts which come in contact with the soil in a level position.

2. In a combined cotton chopper and cultivator, the combination with a wheeled frame, of a shaft mounted on the frame, a cultivator frame loosely mounted upon the shaft, a yoke connected to the shaft, a cotton chopper frame resiliently supported on said yoke, a pole pivoted to the frame, and means for actuating the pole for regulating the depth of penetration of the cultivator plows and maintaining the parts which come in contact with the soil in a level position.



3. The combination with a frame having wheels, of a yoke connected thereto a cotton chopper frame resiliently supported on the yoke, a shaft mounted on said cotton chopper frame, a cotton chopper eccentrically and adjustably mounted on said shaft, means for transmitting motion to said shaft from one of the wheels, and wheels connected to the cotton chopper frame for automatically moving the frame by the unevenness of the soil for insuring the proper depth of cut of the chopper.

1,113,723. GUN. THOMAS J. WILLIAMS, Utica, N. Y. Filed Mar. 17, 1914. Serial No. 825,292. (Cl. 42—69.)



1. A gun having its stock provided with a chamber and having a passage-way leading therefrom, the trigger of said gun extending into said passage-way, a piston slidably mounted in said passage-way, an arm extending from said piston into said chamber, and a plunger slidably mounted in said chamber and connected with said arm whereby when said plunger is moved inwardly said piston will be moved longitudinally in said passage-way to engage said trigger and actuate the same.

2. A gun having its stock provided with a chamber and with a passage-way leading therefrom, the trigger of said gun extending into said passage-way, a piston slidably mounted in said passage-way, and provided with an arm extending into said chamber, and means slidably mounted in said chamber and connected with the arm of said piston whereby said piston may be moved longitudinally in said passage.

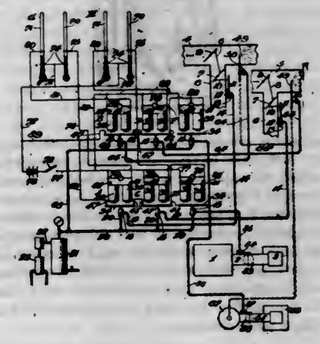
3. A gun having its stock provided with a chamber and with a passage leading therefrom, the trigger of said gun extending into said passage, a piston slidably mounted in said passage and provided with an arm extending into said chamber, a casing mounted in said chamber and provided with a slot, a plunger slidably mounted in said casing, a pivot ear extending from said plunger through said slot and connected with said arm, and means yieldably holding said plunger in a normal position.

4. A gun having its stock provided with a chamber and with a passage-way leading therefrom, the trigger of said gun extending into said passage, a casing mounted in said chamber and provided with a longitudinally-extending slot, a plunger slidably mounted in said casing and having its outer end formed into an enlarged head limiting its inward movement, a pivot ear extending from said plunger through said slot, a piston slidably mounted in said passage and provided with an arm extending into said chamber and pivotally connected with said pivot ear, a spring mounted in said casing and engaging the lower end portion of said plunger to yieldably hold the same in a normal position, and a spring mounted in said chamber and engaging the arm of said piston.

5. A gun having its stock provided with a chamber and with a passage-way leading therefrom, the trigger of said gun extending into said passage, trigger actuating means slidably mounted in said passage, and means for operating said trigger actuating means slidably mounted in said chamber and pivotally connected with said trigger actuating means.

[Claim 6 not printed in the Gazette.]

1,113,724. METHOD OF THERMOHUMIDITY CONTROL. FRANK D. WINDELL, Philadelphia, Pa., assignor of one-half to Henry Lewis Williams, Pittsburgh, Pa. Filed May 6, 1913. Serial No. 765,838. (Cl. 98—39.)



1. The method of temperature and humidity regulation, which consists in providing a source of temperature and of humidity changing mediums in communication with a plurality of inclosures, and of maintaining a predetermined temperature and a predetermined relative humidity in each of the plurality of inclosures, irrespective of the temperatures and relative humidities maintained in the other inclosures.

2. The method of temperature and humidity regulation, which consists in providing a source of temperature and of humidity changing mediums in communication with a plurality of inclosures, and of maintaining automatically a predetermined temperature and a predetermined relative humidity in each of the plurality of inclosures, irrespective of the temperatures and relative humidities maintained in the other inclosures.

3. The method of temperature and humidity regulation which consists in independently causing the temperature and humidity of each of a number of rooms or places to respectively control and maintain the temperature and humidity of each of said rooms at predetermined fixed points, and causing the temperature of all of said rooms under predetermined conditions to control the main source of temperature supply to all of said rooms.

4. The method of temperature and humidity regulation which consists in independently causing the temperature and humidity of each of a number of rooms or places, to respectively control and maintain the temperature and humidity of each of said rooms at predetermined fixed points, and causing the humidity of all of said rooms under predetermined conditions to control the main source of humidity supply to all of said rooms.

5. The method of temperature and humidity regulation which consists in independently causing the temperature and humidity of each of a number of rooms or places to respectively control and maintain the temperature and humidity of each of said rooms at predetermined fixed

points, and causing the humidity and temperature of all of said rooms under predetermined conditions to control the main supply of temperature and humidity to all of said rooms.

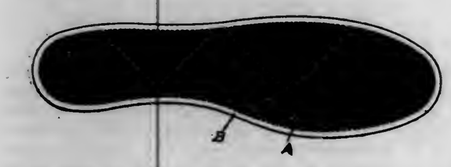
[Claims 6 to 10 not printed in the Gazette.]

1,113,725. DISPLAY CONTAINER AND STAND. CHRISTIAN WRAYGE, Jr., Cass Lake, Minn. Filed Sept. 24, 1913. Serial No. 791,483. (Cl. 211—21.)

1. A container consisting of semi-cylindric sections of reticulated material, having doorways provided therein, doors mounted in said doorways, conical top and bottom sections for said container, means for detachably connecting said sections, and means for supporting said container.

2. A container consisting of two cylindric sections, and conical top and bottom sections, said sections being detachably connected, doors for said cylindric sections, means for rotatably supporting said containers, said means connected with the conical sections, and means for supporting articles within said container.

1,113,726. MEDICATED INSOLE FOR FOOTWEAR. GEORGE S. YINGLING, Eau Gallie, Fla. Filed Mar. 18, 1914. Serial No. 825,600. (Cl. 36—43.)



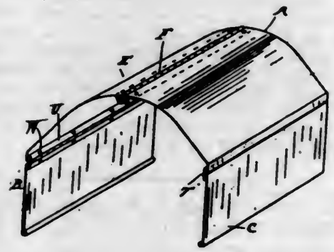
An insole for shoes and other footwear made up of a matted fiber of the bark of the palmetto tree, containing tannic acid in its makeup, and impregnated with a mixture of coal oil and oil of myrbane, as set forth.

1,113,727. TOILET ARTICLE. TADEUSZ ZDRODOWSKI, Pittston, Pa. Filed Apr. 24, 1914. Serial No. 834,285. (Cl. 15—29.)

1. A device of the class described comprising a brush back provided with bristles upon one face thereof and with a longitudinal groove in the said face closed at its inner end and open at its outer end positioned between the said bristles, a comb slidably-mounted in the open outer end of said groove, a vertically movable latch slidably-mounted upon the brush positionable transversely of said groove, and stop means for said latch.

2. A device of the class described comprising a brush back having bristles upon one face thereof and further provided with a longitudinal groove substantially circular in cross-section closed at its inner end and open at its outer end intermediately-positioned within said bristles, a comb having a substantially cylindrical back and slidably-mounted in the open outer end of said groove, the free end of said back being provided with a transverse slot, a latch slidably-positioned within said slot and traversing said groove, a spanning member across said slot, and a stop flange upon said latch positioned in alinement with said spanning member.

1,113,728. HOOD. ERNEST ZINNER, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed May 26, 1913. Serial No. 769,921. (Cl. 74—56.)



1. In a hood, the combination of a sectional top, including two sections, a longitudinally extending hinge connection between said sections, and a brace extending longitudinally of the hood adjacent the hinge connection.

2. In a hood, the combination of a sectional top, including two sections, a longitudinally-extending hinge connection between said sections, and braces extending longitudinally of the hood upon opposite sides of the hinge connection.

3. In a hood, the combination of a sectional top, including two sections, a longitudinally-extending hinge connection between said sections, a brace extending longitudinally of the hood adjacent the hinge connection, and a common means of attachment between said brace and the top and between the latter and the hinge connection.

4. In a hood, the combination of a sectional top, including two sections having laterally-extending flanges, a hinge having the leaves thereof connected to said flanges, and a brace extending longitudinally of the hood adjacent the hinge connection.

5. In a hood, the combination of a sectional top, including two sections having laterally-extending flanges, a hinge having the leaves thereof connected to said flanges, and braces extending longitudinally of the hood, arranged within the latter and secured to the sections upon opposite sides of said hinge connection.

[Claims 6 to 10 not printed in the Gazette.]

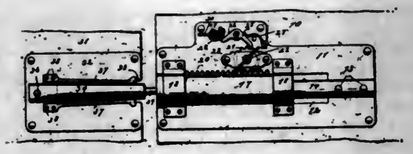
1,113,729. PERCUSSIVE TOOL. JOHN U. ADOLPH, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 6, 1912. Serial No. 675,887. (Cl. 121—10.)

1. In a percussive tool, a rotary chuck, an oscillating sleeve, a driving connection between the sleeve and chuck, a reciprocating work piston having a spiral tongue and groove connection with the sleeve for oscillating it and means preventing the piston from rotating comprising a fixed bar having a straight tongue and groove connection with said piston.

2. In a percussive tool, a rotary chuck, an oscillating sleeve, a clutch connection between the sleeve and chuck, a reciprocating work piston having a spiral tongue and groove connection with the sleeve for oscillating it and means preventing the piston from rotating comprising a

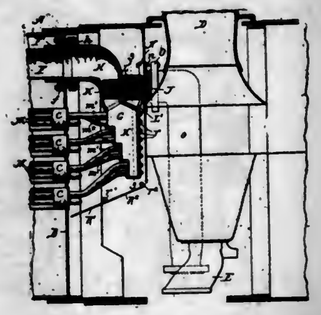
fixed bar having a straight tongue and groove connection with the piston.

1,113,730. CAR-COUPLING. ROBERT ADOLPH, Brooklyn, N. Y. Filed June 17, 1914. Serial No. 845,512. (Cl. 213—35.)



A car coupling comprising a tube adapted to be secured to a car platform and slitted at one end to form a plurality of spring jaws, a slide encompassing said tube and adapted to contract the jaws thereof, a rack integral with the slide, a manually operable pinion engaging the rack, a pivoted spring-influenced pawl adapted to engage and lock the pinion, said pawl being provided with a heel, and a cam adapted to engage said heel and swing said pawl out of engagement with the pinion, whereby said pinion is adapted to be unlocked.

1,113,731. LOCOMOTIVE-SUPERHEATER. ANDREW W. ANDERSON, Chicago, Ill. Filed Apr. 5, 1912. Serial No. 688,620. (Cl. 122—462.)



1. In a superheater for locomotives, the combination with a casting comprising therein a wet steam chamber connected to the steam supply and headers depending from and communicating with said chamber, of a second casting comprising therein a superheated steam chamber connected to the cylinder steam chests and headers depending therefrom in alternate relation to the headers depending from the wet steam chamber, means for yieldingly

connecting said castings, and superheating coils located in the boiler flues, each coil being connected at one end to a header depending from the wet steam chamber and at its other end to an adjacent header depending from the superheated steam chamber.

2. In a superheater for locomotives, the combination with a casting comprising therein a wet steam chamber connected to the steam supply and headers depending from and communicating with said chamber, of a second casting comprising therein a superheated steam chamber connected to the cylinder steam chests and headers depending therefrom in alternate relation to the headers depending from the wet steam chamber, the headers depending from the wet steam chamber being offset and underlying the superheated steam chamber, means for supporting said second casting upon said first casting and superheating coils located in the boiler flues, each coil being connected at one end to a header depending from the wet steam chamber and at its other end to an adjacent header depending from the superheated steam chamber.

3. In a superheater for locomotives, the combination with a casting comprising therein a wet steam chamber connected to the steam supply and headers depending from and communicating with said chamber, of a second casting comprising therein a superheated steam chamber connected to the cylinder steam chests and headers depending therefrom in alternate relation to the headers depending from the wet steam chamber, the headers depending from the wet steam chamber having projecting portions which underlie the superheated steam chamber and the headers depending from the superheated steam chamber having projecting portions underlying the wet steam chamber, and superheating coils located in the boiler flues, each coil being connected at one end to a header depending from the wet steam chamber and at its other end to an adjacent header depending from the superheated steam chamber.

4. In a superheater for locomotives, the combination with a casting comprising therein a wet steam chamber connected to the steam supply and headers depending from and communicating with said chamber, of a second casting comprising therein a superheated steam chamber connected to the cylinder steam chests and headers depending therefrom in alternate relation to the headers depending from the wet steam chamber, brackets projecting from said first casting for supporting the same upon the boiler shell, means for supporting said second casting upon said first casting, and superheating coils located in the boiler flues, each coil being connected at one end to a header depending from the wet steam chamber and at its other end to an adjacent header depending from the superheated steam chamber.

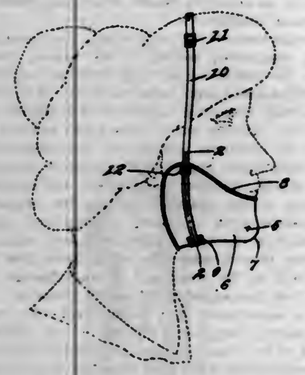
5. In a superheater for locomotives, the combination with a casting comprising therein a wet steam chamber connected to the steam supply and headers depending from and communicating with said chamber, of a second casting comprising therein a superheated steam chamber connected to the cylinder steam chests and headers depending therefrom in alternate relation to the headers depending from the wet steam chamber, brackets projecting from said first casting for supporting the same upon the boiler shell, ears projecting from said second casting, studs supported by said first casting and passing through enlarged holes in said ears for supporting said second casting upon said first casting, and superheating coils located in the boiler flues, each coil being connected at one end to a header depending from the wet steam chamber and at its other end to an adjacent header depending from the superheated steam chamber.

[Claim 6 not printed in the Gazette.]

1,113,732. FACIAL SUPPORTER. CORA H. ARCHIBALD, East Las Vegas, N. Mex., assignor of one-half to Josephine Abbie Aldrich, Gallup, N. Mex. Filed Nov. 19, 1913. Serial No. 801,928. (Cl. 128—3.)

A facial supporter formed of a single piece of material and conforming to the lower portion of a face, transverse reinforcing ribs formed upon the exterior of the supporter.

said supporter being formed with a pair of slots, and an attaching band extending through said slots and between



said ribs, whereby said band is held in proper position with respect to the supporter.

1,113,733. ARMORED PAVEMENT-JOINT. ROBERT D. BAKER, Detroit, Mich. Filed Apr. 2, 1913. Serial No. 758,423. (Cl. 94—1.)

1. A pavement joint comprising, the combination, with adjacent pavement sections, of a pair of armor plates in substantially parallel arrangement protecting the adjacent section edges and suitably secured to the material of the pavement, each plate extending to and making an obtuse angle with the surface of the pavement section to which said plate is secured.

2. A pavement joint comprising, the combination with adjacent pavement sections, of a pair of armor plates in substantially parallel arrangement and suitably secured to the material of the pavement, the upper portions of the plates diverging upwardly to the pavement surface, and the upper longitudinal edges of said plates being substantially flush with the pavement surface.

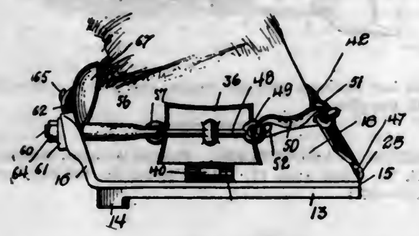
3. A pavement joint comprising, the combination, with adjacent pavement sections, of a pair of armor plates in substantially parallel arrangement and suitably secured to the material of the pavement, the upper portions of the plates diverging upwardly to the pavement surface, the upper longitudinal edges of said plates being substantially flush therewith, and the lower portions of said plates diverging downwardly.

4. A pavement joint comprising, the combination, with adjacent pavement sections, of a pair of armor plates in parallel arrangement and located between said adjacent pavement sections, the upper portions of said plates diverging upwardly and covering the exposed upper portions of the pavement joint, and the upper longitudinal edges of said plates being substantially flush with the pavement surface, and means for yieldingly spacing said plates apart.

5. A pavement joint comprising, the combination, with adjacent pavement sections, of a pair of armor plates in parallel arrangement and located between said adjacent sections, the upper portions of said plates diverging upwardly and covering the exposed upper portions of the pavement joint, the upper longitudinal edges of said plates being substantially flush with the pavement surface, and the lower portions of said plates diverging downwardly and being embedded within the material of the pavement, and means for anchoring said lower portions in such material.

[Claim 6 not printed in the Gazette.]

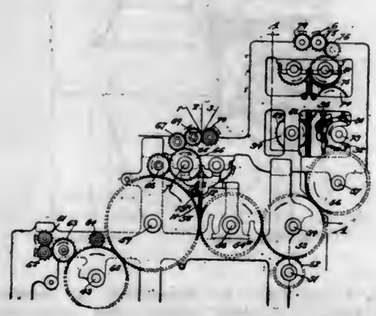
1,113,734. HORSESHOE. ANDREW BALAJTHY, Phoenixville, Pa. Filed Mar. 28, 1914. Serial No. 828,072. (Cl. 168—22.)



1. A horse shoe comprising a shoe body provided with heel members, hoof engaging side plates pivotally connected to said shoe body and each having its inner face provided with a cushion, a hoof engaging toe plate pivotally connected to the shoe body and having its inner face provided with a cushion, means for connecting said toe plate to said heel members, said means slidably connected to said side plates, a coupling bar extending in and connected to said heel members, and a protective member engaging the rear of the hoof and maintained in position by said coupling bar, said protective member having its inner face provided with cushions.

2. A horse shoe comprising a shoe body, a plurality of hoof engaging plates pivotally connected to said shoe body, said shoe body provided with upwardly extending heel members, means for connecting said plates to said heel members whereby the plates are maintained in position, each of said plates having its inner face provided with a cushion, a coupling bar extending in and connecting said heel members together and maintained in position by said means, and a protective member having its ends extending between the heel members and the hoof, and maintained in position by said coupling bar.

1,113,735. SHEET-ASSEMBLING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 12, 1913. Serial No. 748,039. (Cl. 101—120.)



1. In a sheet assembling machine, a sheet feeding device traveling at one speed, a sheet receiving device traveling at a higher speed and a sheet transfer mechanism including an endless carrier driven at a constant speed and a sheet engaging device carried thereby traveling at the speed of the sheet feeding device to take a sheet therefrom and traveling at the speed of the sheet receiving device to transfer the sheet thereto.

2. In a sheet assembling machine, a sheet feeding device traveling at one speed, a sheet receiving device arranged to travel at a higher speed and a sheet transfer mechanism including an endless carrier driven at a constant speed in a partly rectilinear and partly curved path and a sheet engaging device carried thereby arranged to take the sheet during a rectilinear portion of its travel at the speed of the sheet feeding device and to transfer the sheet during a curved portion of its travel at the speed of the sheet receiving device.

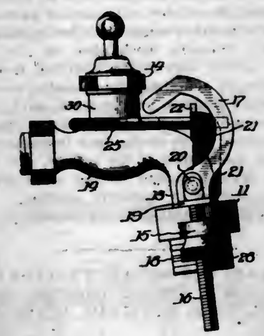
3. In a sheet assembling machine, a sheet feeding device arranged to travel at one speed, a sheet receiving device arranged to travel at a higher speed and a sheet transfer mechanism including a sheet engaging device traveling in a partly rectilinear and partly curved path and arranged to take the sheet during a rectilinear portion of its travel at the speed of the sheet feeding device and to transfer the sheet during a curved portion of its travel at the speed of the sheet receiving device.

4. In a sheet assembling machine, a power operated sheet feeding device, a rotary sheet receiving device and a sheet transfer mechanism including an endless carrier traveling in a partly rectilinear and partly curved path and a sheet engaging device carried thereby arranged to take the sheet at a rectilinear portion of its travel from the power operated sheet feeding device and to transfer the sheet during a curved portion of its travel to the rotary sheet receiving device.

5. In a sheet assembling machine, a power operated sheet feeding device, a rotary sheet receiving device and a sheet transfer mechanism including a sheet engaging device traveling in a partly rectilinear and partly curved path and arranged to take the sheet during a rectilinear portion of its travel from the power operated sheet feeding device and to transfer the sheet during a curved portion of its travel to the rotary sheet receiving device.

[Claims 6 to 12 not printed in the Gazette.]

1,113,736. FAUCET-ADAPTER. MATHEW F. BAYER, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Oct. 27, 1913. Serial No. 797,416. (Cl. 137—28.)



1. A faucet adapter comprising a body having a seat for a faucet spout and a pipe engaging nipple, a pair of faucet engaging hook members each having a shank adjustably connected to the body, and a loop member also adjustably connected to the body and arranged to assume a position at an angle to the axis of the hook members, substantially as described.

2. A faucet adapter comprising a body having a seat for a faucet spout and a pipe engaging nipple, a pair of faucet engaging hook members each having a shank adjustably connected to the body, a link member pivoted to the hook member, and a loop member adjustably connected to the link and extending at an angle to said link member, substantially as described.

3. A faucet adapter comprising a body having a seat for a faucet spout and a pipe engaging nipple, a pair of faucet engaging hook members each having a threaded shank extending through an aperture in the body, a nut threaded on each shank and adapted to bear against the body, a link member pivotally attached to the hook members, and a faucet engaging loop member having threaded stems passing through apertures of the link and extending at substantially right angles to the link, and a nut threaded on each of the stems and bearing on the link, substantially as described.

4. A faucet adapter comprising a body having a seat for a faucet spout and a pipe engaging nipple and provided with apertured ears, a pair of faucet engaging hook members each having a threaded shank extending through one of the apertured ears, a nut threaded on each shank and adapted to bear against the ear, a link member comprising a yoke pivotally attached by its legs to the hooks, a faucet engaging loop member having threaded stems passing through apertures of the yoke and extending transversely of the plane of the yoke, and a nut threaded on each of the stems and bearing on a yoke, substantially as described.

5. A faucet adapter comprising a body having a seat for a faucet spout and a pipe engaging nipple and provided with apertured ears, a pair of faucet engaging hook members each having a threaded shank extending through one of the apertured ears, a nut threaded on each shank and adapted to bear against the ear, a link member comprising a yoke pivotally attached by its legs to the hooks and having its cross bar provided with a spout engaging notch, a faucet engaging loop having threaded stems passing through apertures of the cross bar and extending transversely of the plane of the yoke, and a nut threaded on each of the stems and bearing on the yoke cross bar, substantially as described.

1,113,737. DISPLAY-CABINET. MEYER BAYUK, Glenside, Pa. Filed May 1, 1914. Serial No. 835,751. (Cl. 211—25.)

1. A cabinet composed of a body, a transparent lid therefor, a chamber rising stationarily from the rear portion of the frame of said body, said lid being hinged to the base of said chamber at the front thereof, the front face of said chamber being transparent, the rears of said body and chamber being open in communication with each other, and a leaf extending from the bottom of the body to the top of the chamber forming a common closure for the open rears of said chamber and body, said front face extending inclined forwardly from the top of said chamber to the bottom thereof.

2. In a cabinet, a box-receiving and supporting body having a transparent lid adapted to be opened, a stationary lid-receiving and supporting chamber rising from the frame of said body, the rears of said chamber and body

being open in communication with each other, and a member adapted to form a closure for said open rears of the body and chamber.

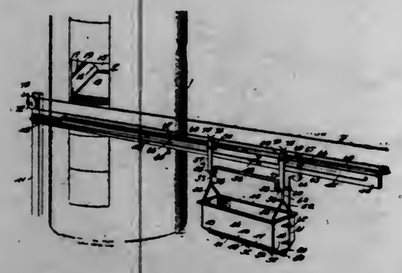
3. In a cabinet, a box-receiving body having a transparent lid, and means for supporting a box inclined in said body, a stationary chamber rising from the frame of said body at the rear thereof forming an inclosure for the lid of the box in open condition, the front face of said chamber being transparent and inclined, the rears of said chamber and body being open in communication with each other, a leaf adapted to form a common closure for the open rears of said body and chamber, and a catch adapted to engage separately with the lid of the box and with said leaf in closed position.

4. A cabinet of the character stated composed of a body adapted to receive a box, a transparent movable cover for said box, a lid inclosing chamber rising stationarily from said body, the front of said chamber being transparent and in inclined condition, the side of the frame of the box being partly transparent to expose the side of the box and partly formed of plates of non-transparent material with inturned inclined ledges adapted to support said box in the body in inclined position, said chamber and body being open at their rears and in communication, and a leaf adapted to close said rear openings common to both.

5. A cabinet for a body and its lid composed of a box-receiving body, means for supporting the box in inclined position therein, a transparent lid for said body, a stationary lid receiving chamber rising from the rear portion of said body, the front wall of said chamber being transparent, the rears of said chamber and body being open in communication with each other, and a closing leaf for said open rears common to both, said transparent front wall of said chamber being inclined from its top forwardly to its place of connection with the rear portion of said body.

[Claim 6 not printed in the Gazette.]

1,113,738. SILAGE-HANDLING APPARATUS. JOSEPH L. BEANE, Legrand, Iowa, assignor of one-third to Harm J. De Buhr, Aplington, Iowa, and one-third to James W. De Buhr, Legrand, Iowa. Filed Dec. 16, 1912. Serial No. 737,113. (Cl. 214—3.)



1. A device of the character specified, comprising a track extending alongside the places of disposal of the silage, a carrier for the silage having grooved wheels movable on the track, the carrier depending from the wheels and having an open bottom, the ends of the carrier extending below the sides and being beveled in opposite directions, a door hinged to the lower edge of each side and closing against the beveled ends, latch mechanism for holding the doors closed, a shaft journaled vertically at one end of the carrier and connected at its lower end with the latch mechanism for releasing said mechanism when the shaft is oscillated, said shaft having an angular lug at its upper end, a trip lever pivoted adjacent to each of the places of disposal and with its lower end in position for engagement by the angular lug of the shaft of the carrier, the upper end of each lever being forked, a flexible member supported between the arms of the forks of the said levers, said member having stops for engaging the said arms to hold the levers rigidly in vertical position, the flexible member being movable longitudinally for the purpose specified, and means for moving the carrier to and from the silo.

2. A device of the character specified, comprising a track carrier movable on the track, said carrier having an open bottom, doors hinged to the carrier for closing the bottom, latch mechanism for holding the doors closed, means for releasing the latches, a trip arranged adjacent to each of the places of disposal, said trips being mounted to swing out of operative position when engaged by the releasing mechanism, and means operable from the silo for holding any predetermined trip in operative position.

3. A handling mechanism for silage, comprising a track, a carrier movable on the track and having an open bottom, the ends of the carrier extending below the sides and being beveled in opposite directions, doors hinged to the sides and closing against the beveled ends, a latch mechanism for holding the doors closed, a shaft journaled in vertical position at one end of the carrier and connected with the releasing mechanism for releasing the latches when the shaft is oscillated, said shaft having an angular arm at its upper end, a plurality of trip levers pivoted adjacent to the track, the lower ends of the levers being in position to engage the arm of the shaft, said levers being mounted to be swung into inoperative position by the arm, means operable from one end of the track for holding any predetermined trip lever rigid, said means comprising a flexible member having stops and being movable longitudinally to bring the stops into engagement with the upper ends of the levers, and means operable from one end of the track for moving the carrier.

4. A handling mechanism for silage, comprising a track, a carrier movable on the track and having an open bottom, the ends of the carrier extending below the sides and being beveled in opposite directions, doors hinged to the sides and closing against the beveled ends, a latch mechanism for holding the doors closed, a shaft journaled in vertical position at one end of the carrier and connected with the releasing mechanism for releasing the latches when the shaft is oscillated, said shaft having an angular arm at its upper end, a plurality of trip levers pivoted adjacent to the track, the lower ends of the levers being in position to engage the arm of the shaft, said levers being mounted to be swung into inoperative position by the arm, and means operable from one end of the track for holding any predetermined trip lever rigid, and means operable from one end of the track for moving the carrier.

5. A handling mechanism for silage, comprising a track, a carrier movable on the track, means at one end of the track for moving the carrier, said carrier having dumping doors in its bottom, latch mechanism for holding the doors normally closed, releasing mechanism on the carrier for releasing the latches, and means operable from the said end of the track for actuating the releasing mechanism at any predetermined position on the track, said means comprising trip levers arranged at the places of disposal, each lever being mounted to be swung into inoperative position by the releasing mechanism of the carrier, and a longtudinally movable flexible member having stops for engaging the levers to hold them in operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,113,739. MEANS FOR MOVABLY SUPPORTING PATTERNS. FRANK J. BECKER, Hamilton, Ohio. Filed Aug. 28, 1913. Serial No. 787,044. (Cl. 22—96.)

1. A molder's flask comprising a frame adapted to be removably secured between the separable members thereof, and movable connections with the frame for supporting a pattern within the flask whereby it may be jarred independently of the frame.

2. The combination of a frame adapted to register with a molder's flask, and means for movably securing a pattern therein.

3. The combination of a frame adapted to register with the separable members of a molder's flask, and brackets loosely supported by the frame for supporting a pattern therein.

4. The combination of a flask, a frame removably secured between the cope and drag members thereof and in registration with the walls thereof, and brackets supported within the frame and universally movable in the plane thereof, said brackets being adapted to be immovably secured to a pattern.

5. A molder's flask comprising a frame adapted to be removably secured between and in registration with the separable members thereof, and brackets loosely connected with the frame for supporting a pattern therein.

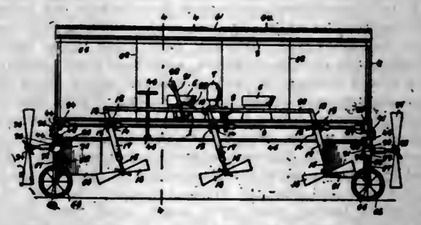
[Claim 6 not printed in the Gazette.]

1,113,740. BROOM. NORMAN H. BEEBE and HARRY E. SMITH, Wichita, Kans., assignors, by mesne assignments, to Patent Broom Machinery Company, Scott county, Iowa. Filed Dec. 9, 1910. Serial No. 596,523. (Cl. 15—19.)

1. The combination of a handle provided at one end with an annular groove, broom-straws arranged around the handle, clamping-jaws secured to the handle adjacent to th groove and acting to press the straws adjacent said groove into the latter, and extending away from the handle on each side of the groove, and means for holding the ends of the jaws together.

2. In a broom, the combination with a handle having a circumferential groove at or near one end, of clamps having half-round extensions at the center which embrace the handle, said extensions circumferentially fluted, said fluted portion fitting the circumferential groove of the handle, and a ring fitted to and embracing the fluted portion whereby to hold the latter in the groove of the handle.

1,113,741. FLYING-MACHINE. JAMES H. BENSCOTER, Perrysville, Pa., assignor of one-half to A. C. Wood, Perrysville, Pa. Filed Apr. 4, 1913. Serial No. 758,926. (Cl. 244—15.)



1. In a device of the character described the combination with a gliding surface, of a longitudinally extending drive shaft, gears secured to the longitudinally extending drive shaft at each end and at spaced intervals throughout its entire length, transversely extending transmission shafts in gear with the spaced gears on the longitudinal drive shaft, tubular members surrounding the transmission shafts and rotatable with relation thereto, U-shaped members formed intermediate the ends of the tubular members, the arms of the U-shaped members being formed integral with the tubular members, propeller shafts journaled in the U-shaped members and projecting through the bight portion thereof, propellers carried by the lower ends of the propeller shafts, gears carried by each propeller shaft and by each transmission shaft, said gears being in mesh and adapted to drive the propeller shafts, and arms formed integral with the tubular members near the inner ends thereof, said arms extending from the tubular members in an opposite direction from the U-shaped members, means connected to the arms to hold the same at the desired angle and thereby control the angle in which the propellers on the propeller shafts operate.

2. In a device of the character described, the combination with a gliding structure, of a longitudinally extending drive shaft, lateral transmission shafts in gear with the drive shaft, propellers in gear with the laterally extending transmission shafts, means to control the direction in which the propellers operate, gear casings secured to the gliding structure, at each end of the longitudinal drive shaft, transmission shafts journaled in the gear casings and extending vertically therethrough, horizontal propeller shafts journaled in the gear casings and adapted to be driven by the vertical transmission shafts, propellers carried by the free ends of the propeller shafts, each of said gear casings being rotatably mounted and adapted to swing laterally, rudders carried by the gear casings and adapted to move in unison therewith, axles secured to the gear casings and adapted to move in unison therewith, and wheels rotatably mounted on the free ends of the axles to provide a supporting means for the device when it is at rest on the earth.

3. In a flying machine, the combination of a gliding structure, a longitudinally extending drive shaft, vertical transmission shafts in gear with said drive shaft, gear casings receiving the transmission shafts and journaled thereon to swing laterally, horizontal propeller shafts journaled in said casings and in gear with the transmission shafts, steering and driving propellers mounted upon the propeller shafts, means connecting said gear casings for swinging the propellers laterally in unison, rudders fixed to said casings to swing therewith, axles slidably connected with the casings, and cushioning springs backing said axles.

1,113,742. MAGNESIUM SALTS OF ACYLATED AROMATIC ORTHO-OXYCARBOXYLIC ACIDS. RUDOLF BERENDES and ERICH RIETZ, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1914. Serial No. 810,429. (Cl. 23—24.)

1. The new products being chemically magnesium salts of acylated aromatic ortho-oxy-carboxylic acids, which salts are after being dried generally crystalline colorless powders soluble in alcohol and water and difficultly soluble in ether and acetone and which have proved to be valuable therapeutic compounds, substantially as described.

2. The new product being chemically the magnesium salt of acetyl-salicylic acid having most probably the formula:

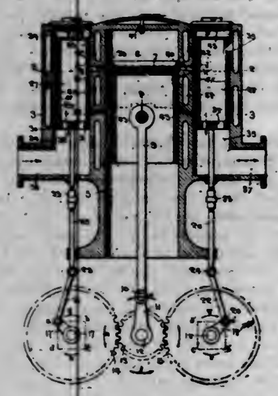
$$\left(C_6H_4\begin{matrix}O.OC.CH_3\\COO-\end{matrix}\right)_2Mg$$

which salt is after being dried a crystalline colorless powder soluble in alcohol and water and difficultly soluble in ether and acetone and which has proved to be a valuable therapeutic compound, substantially as described.

1,113,743. INTERNAL-COMBUSTION ENGINE. WILLIAM A. BESSERDICH, Clintonville, Wis. Filed June 10, 1912. Serial No. 702,864. (Cl. 123—188.)

1. In an internal combustion engine, a main cylinder, a main piston in the main cylinder, a valve cylinder, a valve in the valve cylinder, and a partition between the

main cylinder and the valve cylinder, said partition having a port in communication between said main cylinder and said valve cylinder, said partition having an inclined oil duct communicating with the main cylinder and with the valve cylinder, said valve having oil passages adapted to communicate alternately with the oil duct.



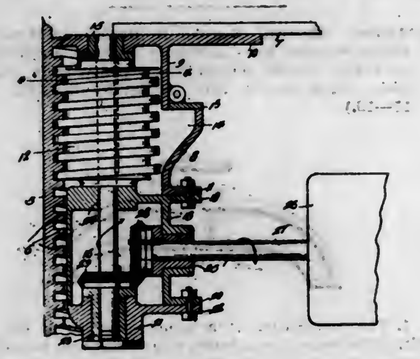
2. In an internal combustion engine, a main cylinder, a pair of valve cylinders on opposite sides of the main cylinder, a main piston in the main cylinder, a slide valve in each valve cylinder, a gas intake port communicating between the main cylinder and one valve cylinder and an exhaust port communicating between the main cylinder and the other valve cylinder, said main cylinder having a chamber for the explosion of gas and said main piston having an annular flange for covering both of said ports at the moment of explosion.

3. In an internal combustion engine, a main cylinder, a piston operable therein, auxiliary cylinders carried by said main cylinder and in communication with the top thereof, said auxiliary cylinders having inlet and exhaust ports, sleeves slidably mounted in said auxiliary cylinders, spiders carried by said sleeves, piston rods connected to said spiders, ported webs connecting said main cylinder and said auxiliary cylinders whereby lubricant can pass from said main cylinder to said auxiliary cylinders, and means actuated by a movement of said piston for reciprocating said sleeves in said auxiliary cylinders, said means being timed whereby said sleeves will have a single reciprocatory movement relatively to a double reciprocatory movement of said piston.

1,113,744. TRANSMISSION FOR ELEVATOR-CAR MOTORS. ANDREW G. BJORKSTRÖM, Brooklyn, N. Y. Filed Oct. 15, 1912. Serial No. 725,870. (Cl. 187—25.)

1. In transmission mechanism for elevator car motors, the combination of two casings, each including two chambers having alined bearings with their axes passing through both of said chambers, and a bearing having its axis at a right angle to the axis of said alined bearings; a shaft carried by said alined bearings of each of said casings; a worm rigid with each of said shafts disposed in one of said chambers of the respective casing it is associated with, the threads of both of said worms extending in the same direction; a rack for each of said worms; two bevel gears, one rigid with each of said shafts and disposed within the other chamber of its respective casing, said bevel gears being also disposed with their toothed portions facing in opposite directions with respect to each other; a counter-shaft carried by said bearings of said casings disposed at a right angle to the bearings of said first-mentioned shafts, and, bevel gears carried by said counter-shaft and co-meshing with said first-mentioned bevel gears to rotate said worms simultaneously in the same direction, substantially as and for the purpose set forth.

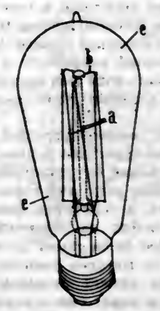
2. In transmission mechanism for elevator car motors, the combination of two casings each including two chambers adapted to contain lubricant and having alined bearings with their axes pasaing through both of said chambers, and a bearing having its axis at a right angle to the axis of said alined bearings; a shaft carried by said alined bearings of each of said casings; a worm rigid with each of said shafts disposed in one of said chambers of the respective casing it is associated with; a rack for each of said worms; two bevel gears, one rigid with each of said shafts and disposed within the other chamber of its respective casing; a counter-shaft carried by the said bearings of the said casings disposed at a right angle to the bearings of said first-mentioned shafts; and, bevel gears carried by said counter-shaft and co-meshing with said first-mentioned bevel gears to rotate said worms, substantially as and for the purpose set forth.



3. In transmission mechanism for elevator car motors, the combination of two casings, each including two chambers having alined bearings with their axes passing through both of said chambers; a shaft carried by said alined bearings of each of said casings; a worm rigid with each of said shafts disposed in one of said chambers of the respective casing it is associated with, the threads of both of said worms extending in the same direction; a rack for each of said worms; two bevel gears, one rigid with each of said shafts and disposed within the other chamber of its respective casing, said bevel gears being also disposed with their toothed portions facing in opposite directions with respect to each other; second bevel gears co-meshing with said first-mentioned bevel gears; and, means for rotating said second-mentioned bevel gears simultaneously in the same direction, to impart movement to said worms therethrough, substantially as and for the purpose set forth.

4. In transmission mechanism for elevator car motors, the combination of two casings, each including two chambers having alined bearings with their axes passing through both of said chambers, a vertical shaft carried by said alined bearings of each of said casings, a worm rigid with each of said shafts disposed in one of said chambers of the respective casing it is associated with, the threads of both of said worms extending in the same direction, complementary racks disposed in parallelism, one for each of the said worms, two bevel gears, one rigid on each of said vertical shafts and disposed within the other chamber of its respective casing, said bevel gears being also disposed with their toothed portions facing in opposite directions with respect to each other, a bearing formed within one of the said casings, the axes of the bearing extending in a transverse direction to the axes of the vertical shaft, a shaft journaled within said bearing, second bevel gears rigid with said last mentioned shaft and meshing with said first mentioned bevel gears to impart simultaneous movement to the said worms therethrough, and means for driving said last mentioned shaft, substantially as and for the purpose set forth.

1,113,745. ELECTRIC GLOW-LAMP. FRITZ BLAU, Berlin, Germany, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Apr. 17, 1906. Serial No. 312,123. (Cl. 176—39.)



1. The combination with a lamp stem and a central holder carried thereby, of a plurality of metallic filament loops mounted adjacent and substantially parallel with said holder and having their ends fastened to supports projecting perpendicularly from said holder near the stem, and straight uniformly elastic and refractory wires rigidly attached to and projecting perpendicularly from the end of said holder remote from the stem with their outer ends bent into hooks for engaging with the bends of said filament loops, said wires being flexible with respect to the supports so as to yield resiliently and longitudinally of said holder upon expansion and contraction of said filament loops.

2. The combination with a lamp stem and a central holder carried thereby, of a plurality of metallic filament loops mounted about said holder with their ends secured to rigid supports projecting from said holder near the stems and forming part of the electrical circuit of said loops, and straight uniformity resilient supports extraneous to the circuit rigidly attached to and projecting perpendicularly from the other end of said holder and engaging at their outer ends the bends of said loops, said resilient supports being yieldingly movable relative to said rigid supports by the expansion and contraction of said loops.

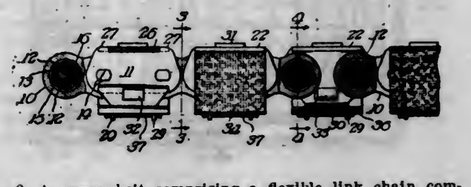
3. The combination with supporting means comprising a lamp stem and a central holder carried thereby, of a plurality of metallic filament loops arranged adjacent said holder and having their ends fastened to supports projecting from said holder near the stem and springs of refractory material projecting from the end of said holder remote from the stem and engaging the bends of said loops.

4. The combination with supporting means comprising a lamp stem, a central holder carried thereby and supports projecting from said holder near the stem, of a plurality of filament loops arranged adjacent said holder and having their ends fastened to said supports, and springs projecting from the end of said holder remote from the stem and engaging the bends of said loops.

5. The combination with supporting means comprising a lamp stem and a central holder carried thereby, of a plurality of metallic filament loops arranged adjacent said holder, arms projecting from said holder near said stem and supporting the portions of said filament loops adjacent said stem, and resilient arms projecting perpendicularly from the end of said holder remote from the stem with their outer ends bent into hooks for engaging the bends of said loops.

1,113,746. METALLIC POWER-BELT. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to James E. Cagney, Jr., Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,189. (Cl. 74—64.)

1. A power belt comprising a flexible chain composed of alternately arranged links and pairs of side bars, a substantially V-shaped housing secured to each pair of side bars, the side walls of said housing diverging upwardly to present inclined outer faces, a plate rigidly connected with the tops of said side bars and also rigidly connected with the upper ends of said housing, lugs on the side walls of each housing positioned to engage with corresponding depressions in the lower edges of the side bars whereby said housing is precluded from movement longitudinally of the chain, and a sheet of frictional material disposed over the outer faces of said housing.



2. A power belt comprising a flexible link chain composed of alternately arranged pivotally connected links and pairs of side bars, a metallic frame comprising a housing having upwardly diverging side walls and a spacing plate disposed over the side bars and rigidly connected with the upper ends of said housing, said side bars being provided with upwardly extending lips to engage in corresponding notches formed in the spacing plate and also provided with depressions on their lower edges to receive lugs struck inwardly from the side walls of said housing, said housing and spacing plate being thereby rigidly secured to the side bars, and a sheet of frictional material disposed about the housing.

3. A power belt comprising side bars arranged in pairs, links connecting the said side bars, a frame having inclined side members rigidly connected to and embracing a pair of side bars, and a sheet of frictional material secured to the said frame and disposed over the outer inclined faces of said side members of the said frame.

4. A power belt comprising side bars, arranged in pairs, links alternating with said side bars and pivotally secured thereto, a spacing member secured to the top of a pair of the said side bars, and inclined side members secured together at one end and engaging said spacing member at their other ends.

5. A power belt comprising side bars arranged in pairs, links alternating with and pivotally secured to said pairs, a plate of suitable metallic material disposed above said side bars having a plurality of apertures therethrough, a housing of suitable material bent to provide inclined side members, the edges of the said housing being formed to protrude through the recesses in the said top plate, means for preventing movement of the said plate and housing longitudinally of the side bars, and means for securing the parts in position.

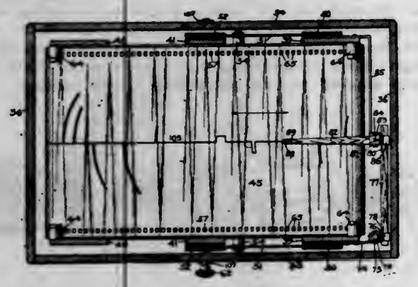
[Claims 6 to 13 not printed in the Gazette.]

1,113,747. CHART FOR VEHICLES. GEORGE E. BOYDEN, New York, N. Y., assignor to Alexander P. Browne, trustee, Boston, Mass. Filed Nov. 22, 1911. Serial No. 661,765. (Cl. 234—8.)

1. In combination with a motor vehicle and the steering mechanism thereof; an inclosing casing arranged beside the controller of the steering mechanism; a web upon which a chart may be produced or on which a chart is delineated, arranged in said casing; means for causing the web to travel relatively to the vehicle; means connected with the steering mechanism for either tracing the chart on the web, or producing on the web a chart; and means for causing the web to travel relatively to the vehicle at a predetermined speed relatively to that of the vehicle.

2. In combination with a motor vehicle and the steering mechanism thereof; a chart comprising a web, means for actuating the same, a tracing-arm and means for actuating the same; a casing in which the web and arms are in-

closed, said casing being arranged beside the controller of the steering mechanism; and operating connections between the web-actuating mechanism and the steering mechanism, and between the tracing-arm and the steering mechanism.



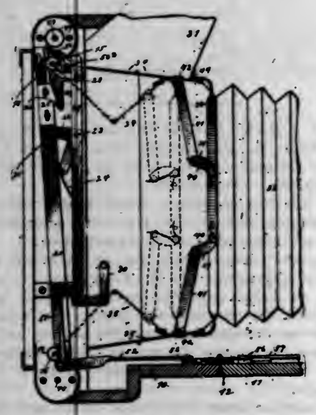
3. In combination with a motor vehicle and the steering mechanism thereof; an inclosing casing arranged beside the controller of the steering mechanism; a chart mechanism comprising a traveling web, and an indicator arranged to travel relatively to the web, both the chart mechanism and indicator being mounted in the casing; means connecting the web with one portion of the steering mechanism; and means connecting the indicator with another portion of the steering mechanism.

4. A chart mechanism for road vehicles comprising a web-supporting mechanism arranged in view of the operator; means for traversing said web; a pivoted tracing-arm arranged in coöperative relation to said web; and means for causing said tracing-arm to move in the arc of a circle across said web, whereby the tracing-arm may be caused to follow delineations upon the web or produce delineations thereon.

5. A chart mechanism for vehicles comprising a table over which said web may be traversed in a horizontal plane; web-supporting means arranged at opposite ends of the table; a pivoted tracing-arm extending over the table; means for traversing the web longitudinally of the table and relatively to the arm; and means for swinging the arm on its pivot transversely of the web.

[Claims 6 to 15 not printed in the Gazette.]

1,113,748. PHOTOGRAPHIC CAMERA. LOUIS BREUNIG, New York, N. Y. Filed Mar. 24, 1914. Serial No. 826,874. (Cl. 95—42.)



1. A photographic camera, provided with a focusing plate composed of an upper and a lower movable section, bellows, a collapsible frame extending into the rear end of said bellows, an observation opening formed in said frame and bellows, and means for folding the upper focusing plate section against said opening.

2. A photographic camera provided with a focusing plate composed of an upper and a lower movable section, bellows, a collapsible frame extending into the rear of the bellows, observation openings formed in said frame and bellows, a hood located exteriorly of the bellows and adapted to communicate with said openings, and means for folding the upper focusing plate section against said openings.

3. A photographic camera provided with a focusing plate composed of an upper and a lower movable section, a slidable lens bed, means for simultaneously opening the sections of the focusing plate and retracting the lens bed, an apertured bellows, a collapsible frame extending into said bellows and having an observation opening, said opening being adapted to be closed by the upper focusing plate section when in its open position.

4. A photographic camera provided with a focusing plate composed of an upper and a lower pivoted section, bellows, a collapsible frame extending into said bellows and composed of an upper and a lower jointed plate, the upper foldable plate being provided with an observation opening, and means for sustaining said plates in their open position.

5. A photographic camera provided with a focusing plate composed of an upper and a lower pivoted section, bellows, a collapsible frame extending into said bellows and composed of an upper and a lower jointed plate, bars connecting said plates, spring-influenced links pivoted to the bars, and braces connecting the links with the plates.

1,113,749. HEAD-ROD CONSTRUCTION FOR AWNINGS. HAROLD I. BROCKIE, Newark, N. J. Filed Sept. 12, 1913. Serial No. 789,550. (Cl. 156—15.)

1. In a head rod construction for awnings, a head rod having a slight bend outward at its ends, said ends having recesses near the ends to permit the suspension of a pulley.

2. In a head rod construction for awnings, a head rod with its ends bent slightly outward, the rod being perforated near the ends, the rod also having recesses in its top and bottom edges at the perforated places.

3. A head rod construction consisting in the combination of the folded top of an awning with a bent rod in the fold, fastening means for forcing the bent parts of the rod against a frame, the rod having recesses in its bottom edge, and pulleys suspended behind the rod and having their upper portions in the recesses of the rod.

4. A head rod construction consisting in the combination of a folded top of an awning, with a rod bent outward at its ends, the rod being in the fold of the awning, the rod being perforated near its ends, the rod being recessed at its top and bottom edges adjacent to the perforations, pulleys having eyes thereon, the top parts of the pulleys being adapted to rest in the recesses at the bottom edges of the rod, and fastening screws passing through the fold of the awning through the perforations in the rod and through the eyes of the pulleys, the screws when forced into a frame straightening the rod.

5. The combination of a head rod that is bent when it is unattached, with means for securing said head rod in position on a flat support, an awning with its upper edge between the support and the head rod, said securing means when in place on the support pressing said head rod into a flattened shape against the support.

1,113,750. ANVIL ATTACHMENT. MARTIN C. BUCHER, Reader, W. Va. Filed Apr. 1, 1914. Serial No. 828,744. (Cl. 78—7.)

1. In a device as set forth, the combination with a support and an anvil mounted thereon, of an arm member pivoted to the support having an arched rod and provided with an elongated opening between the arm member and the arched rod, said arm member at its free end terminating in a tool, a foot lever adjustably pivoted to the support constructed with a curved arm provided with an adjustably mounted pin having sliding connections in said elongated opening, and cushioning means for the arm member to cushion the same in its fall.

2. In combination, a support, an anvil mounted thereon, a bracket plate secured to the support, an arm member pivoted to the bracket plate, the free portion of which terminates in an angular part having a tool and a shoulder to engage the anvil, a spring device carried by the bracket plate to cushion the arm member in its fall, a foot lever adjustably pivoted to the support having a curved arm provided with an adjustably mounted pin having sliding connections with the arm member, said curved arm being so curved that it extends back partially toward the foot operating end of the lever, whereby when the pin is adjusted the leverage of the foot lever may be increased.

1,113,751. TRACTION-PLOW. WILMER G. BUCK, Warren, Ohio. Filed May 31, 1913. Serial No. 771,027. (Cl. 97—70.)

1. In a traction plow, the combination of a supporting frame, plows on said frame, a vertically slidable L-shaped lever for each plow, having one end engaging the plow beam, and means operatively connected for actuating said levers to raise and lower the plows, substantially as described.

2. In a traction plow, the combination of a supporting frame, plows on said frame, a vertically slidable L-shaped lever for each plow, one end engaging the plow beam, actuating means for said levers, and a crank arm connection between said actuating means and the other end of the lever, substantially as described.

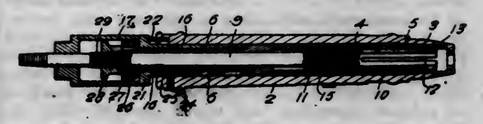
3. In a traction plow, the combination of a supporting frame, plows on said frame, a vertically slidable L-shaped lever for each plow, one end engaging the plow beam, actuating means for said levers, a crank arm connection between said actuating means and the other end of the lever, and gear mechanism for operating said crank arm, substantially as described.

4. In a traction plow, the combination of a supporting frame, a slidable L-shaped lever for each plow, having one end engaging the plow beam, means for actuating said levers to raise and lower the plows, a pivot for each plow beam, permitting it to swing in a horizontal plane, and that end of the L-shaped lever engaging the plow beam being arranged to permit of such swinging movement, substantially as described.

5. In a traction plow, the combination of a supporting frame, plows on said frame, a pivoted and vertically slidable L-shaped lever for each plow, one end of said lever engaging the plow beam, and means operatively connected for actuating said levers to give the end engaging the plow beam an initial downward movement, then raising the lever bodily upward, then giving said engaging end an upward movement, and then lowering the lever bodily downward, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,113,752. DENTAL HANDPIECE. ALEXANDER CAMPBELL, Los Angeles, Cal. Filed Apr. 7, 1914. Serial No. 830,166. (Cl. 32—15.)



1. In a dental hand piece, the combination with a casing having a forward portion thereof formed tapering, a part adapted to fit rotatively against the interior wall at such portion of the casing, said part being constructed as a sleeve extending to the body of the implement, a spindle passing through the sleeve, and a tool holder held in the outer end of the sleeve, a lateral projection extending into a longitudinal channel in the tool holder, an adjustable sleeve fitted on the first named sleeve and extending into the rear end portion of the casing, a bearing for the spindle, the same being arranged in rear of and carried by the adjustable sleeve, and a nut arranged on the spindle to cause the forward or rearward movement of the latter and the tool holding part, as described.

2. A dental-hand-piece comprising a casing, a spindle, a split tool holder whose outer end has a tapered shoulder, a sleeve receiving the tool holder and abutting the tapered shoulder on the outer end of the latter, an adjustable sleeve applied to the reduced rear portion of the first named sleeve and constructed integrally with an end bearing for the spindle, a screw interposed between the casing and the inner end of said bearing, a knurled ring applied to the inner end of the main sleeve, and a nut applied to the adjacent threaded portion of the spindle and bearing upon said ring, as described.

1,113,753. COLLAPSIBLE MOLD. JOHN W. CHAMBERS, Middleton, Mich. Filed Apr. 30, 1913. Serial No. 764,596. (Cl. 25—128.)

1. A collapsible mold including an inner shell composed of a plurality of normally spaced segmental plates, an outer shell composed of a like number of overlapping plates, means rigid with said segmental plates and slidably engaging said overlapping plates to maintain the latter adjustable thereupon, and means engageable with said segmental plates for adjusting said overlapping plates to increase and diminish the size of the mold.

2. A collapsible mold including an inner expansible shell, an outer expansible shell, means rigid with said inner shell and slidably engageable with said outer shell to maintain said outer shell thereupon, and means operable within the inner shell for expanding or contracting the mold.

3. A collapsible mold including an inner expansible shell, an outer shell composed of a plurality of shell sections, the said sections being disposed to overlap one another, certain of the said shell sections having alined slots formed therein, means rigid with said inner shell and working within said slots to provide for the lateral adjustment of said outer shell sections, and means carried by certain of said sections and engageable with other of said shell sections to maintain the said sections incapable of outward separation, as and for the purpose set forth.

4. A collapsible mold including an inner shell composed of a plurality of shell sections, an outer shell composed of a like number of shell sections, said outer shell sections being disposed to overlap one another, certain of the said outer shell sections having alined slots formed therein, means carried by certain of said outer shell sections adapted for engagement with other of said outer shell sections to maintain the said sections incapable of outward separation, and a removable fastening member rigid with said inner shell and working within said slots of said outer shell to maintain the latter upon said inner shell incapable of outward separation, and means operable within the inner shell and engageable with the said inner shell sections for adjusting said outer shell sections laterally to increase and diminish the size of the mold.

5. A collapsible mold including an inner expansible shell, an outer expansible shell, means connecting the said two shells to expand the latter according to the expansion of the former, an operating screw mounted concentrically within the said inner shell, screw arms connecting the said screw to the said inner shell, and turn-buckles operable upon the said arms the screw and arms providing for the expansion of said inner shell, as and for the purpose set forth.

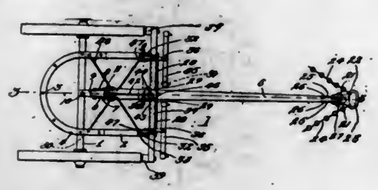
1,113,754. BUSHING. CHESTER E. CLEMENS, Cleveland, Ohio. Filed May 5, 1913. Serial No. 765,523. (Cl. 64—10.)

1. A bushing comprising an inner tubular member having apertures extending therethrough and an outer reinforcing member surrounding the inner member and closing the outer ends of said apertures, said apertures being arranged in lines which are inclined to the axis of the inner member, the inclination of the lines being such with reference to the length of the inner member that the axial pressure line exerted against the inner member will intersect but one line at any time.

2. A bushing comprising an inner tubular member having inclined slots extending therethrough and an outer reinforcing member surrounding the inner member and closing the outer ends of the slots, the inclination of the slots to the axis of the said inner member and the length of the slots being such that the axial pressure line within the interior of the inner member will intersect but one slot at any time.

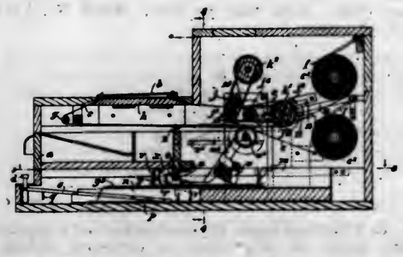
3. A bushing comprising an inner tubular member having inclined slots extending therethrough and an outer reinforcing member surrounding the inner member and closing the outer ends of the slots, the inclination of the said slots to the axis of the inner member and the length of the slots relative to the length of the inner member being such that the axial pressure line within the inner member will intersect but one of the slots at any time, the ends of the inner member being extended beyond the slots providing elongated surfaces therebeyond against which axial pressure can be exerted without collapsing the inner member.

1,113,755. DOUBLETREE-BRAKE. CLEMENT E. COLE, Floyd, Va. Filed June 1, 1914. Serial No. 842,202. (Cl. 21—9.)



In combination with the hounds of the forward running gear of the vehicle, a wagon tongue connected to the axle of the running gear, means bracing the hounds and the tongue relative to each other, a pair of reinforcing plates upon opposite sides of the rear portion of the tongue, a lever pivoted between said plates, a double-tree brake beam on the tongue and provided with brake shoes, a bar adjustably connecting the upper end of said lever and having a looped end engaging said brake beam, devices carried by the brake beam engaging the opposite sides of the tongue for guiding the beam and to guard against undue oscillation thereof, lugs extending down from the brake beam engaging the inner faces of the hounds to guard against undue oscillation of the beam as well as guiding the same, a second lever pivoted to the forward end of the tongue, and a rod connection adjustably connecting the lower ends of the first and second levers.

1,113,756. CASH-REGISTER, MEMORANDUM APPLIANCE, AND THE LIKE. ARTHUR WATERHOUSE COOKE and NICHOLAS CHARLES COOKE, Rock Ferry, England. Filed Apr. 16, 1912. Serial No. 691,084. (Cl. 235—5.)



1. An appliance of the kind described comprising means for feeding forward a record receiving strip, a sliding drawer actuating said feeding means, means for preventing the return of said drawer until it has been drawn out to the desired extent so that it travels on each occasion through the same distance, means for varying the extent of the movement transmitted from the drawer to the feeding means, a series of controlling members acting upon the said varying means, each of said controlling members producing a different degree of variation.

2. An appliance of the kind described comprising means for feeding forward a record receiving strip, a support for the strip during the writing of the record, means adjacent to said support for indicating the length of the strip occupied by each record, a sliding drawer actuating said feeding means, means for preventing the return of said drawer until it has been drawn out to the desired point so as to necessitate a movement of the drawer through the same distance on each occasion, means for varying the extent of the movement transmitted from the drawer to the feeding means, a series of controlling members acting upon the said varying means, said members bearing marks corresponding to marks on said indicating means so that the selection of the controlling member to be actuated may be made in accordance with the extent of the strip occupied by the record.

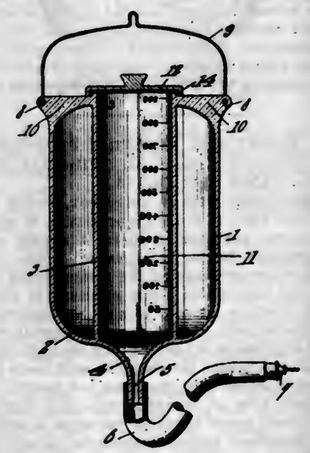
3. An appliance of the kind described comprising a casing inclosing the record receiving strip, said casing having an aperture through which access can be obtained to the strip for the purpose of making a record thereon, indicating means adjacent to said aperture for showing the length of the strip occupied by each record, said indicating means bearing a series of marks, one for each arbitrary unit of length of strip, means for feeding forward the strip, a sliding drawer in said casing actuating said feeding means, means for preventing the return of the said drawer until it has been drawn out to the desired point so as to necessitate a movement of the drawer through the same distance on each occasion, means for varying the extent of the movement transmitted from the drawer to the feeding means, means for controlling said varying means, said controlling means comprising a series of members bearing marks corresponding to the marks on the indicating means so that the controlling member can be selected to correspond with the length of the strip occupied by a record.

4. An appliance of the kind described comprising means for feeding forward a record receiving strip, a sliding drawer actuating said feeding means, means for preventing the return of said drawer until it has been moved forward to the desired point so as to necessitate a movement of the drawer through the same distance on each occasion, means for varying the extent of the movement transmitted from the drawer to the feeding means, means for locking the drawer against movement, said locking means being controlled by said feed varying means.

5. An appliance of the kind described comprising means for feeding forward a record receiving strip, means, comprising a rotatable shaft, for actuating the feeding means, a crank member carried by said shaft, a series of sliding members engaging with said crank member and each imparting a different degree of movement to it, a further sliding member and means for connecting to said member at will any one of the series of separate sliding members.

[Claims 6 to 34 not printed in the Gazette.]

1,113,757. GLASS IRRIGATOR. WILFORD H. CAUTCHER and GLENN C. DAVIS, Ingleside, Nebr. Filed Jan. 17, 1914. Serial No. 812,817. (Cl. 128—47.)



1. A tank adapted to be used for the injection of a warm liquid into the human system and comprising an outer tube having a bottom, a portion of the bottom being depressed, prolonged and diminished in diameter to form an integral, tapered, pipe-receiving nozzle, there being an inner tube within the outer tube and connected integrally with the bottom along the line of union between the nozzle and the bottom, the inner tube forming a reinforcement for the bottom, the tubes being of approximately the same height, and both tubes being open at the top, the outer tube constituting a water jacket for the inner tube.

2. In a device of the class described, a container including an outer tube and a bottom; an inner tube connected with the bottom, the bottom having an outlet communicating with the interior of the inner tube; arms extending between the tubes; ears on the outer tube and alined with certain of the arms; and suspension means connected with the ears.

3. In a device of the class described, a container including an outer tube and a bottom; an inner tube connected with the bottom, the bottom having an outlet communicating with the interior of the inner tube; arms extending between the tubes; and a closure for one tube supported by the arms and spaced by the arms from the top of said tube to afford an air inlet.

1,113,758. GARMENT-STAY. JOHN R. DEAN, North Girard, Pa., assignor of one-third to Walter Karl Dean, Meadville, Pa. Filed June 30, 1913. Serial No. 776,504. (Cl. 2—76.)

1. A garment stay formed of a flat resilient metal strip, said strip having transverse slits therein forming transverse portions joined by longitudinal portions, the longitudinal portions at the opposite sides of the transverse portions being out of alinement leaving the parts of the transverse portions between the longitudinal portions free to twist as the stay is flexed flatwise the metal at the edges of said slits being compressed.

2. A garment stay formed of a flat resilient metal strip, said strip having transverse slits therein forming transverse portions joined by longitudinal portions, the longitudinal portions at the opposite sides of the transverse portions being out of alinement leaving the parts of the transverse portions between the longitudinal portions free to twist as the stay is flexed flatwise the metal at the edges of said slits being compressed, and with the greater density of each of the crossings at same side of the stay.

1,113,759. COLORED CAOUTCHOUC SUBSTANCES AND PROCESS OF MAKING SAME. RUDOLF DITMAR, Gratz, Austria-Hungary, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 31, 1912. Serial No. 728,836. (Cl. 106—23.)

1. Process for the production of colored caoutchouc materials, which process consists in treating caoutchouc materials with organic vat dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

2. Process for the production of colored caoutchouc-like materials, which process consists in treating caoutchouc-like materials with organic vat dyes, and in vulcanizing them after being thus colored by heating with sulfur at the vulcanization temperature, substantially as described.

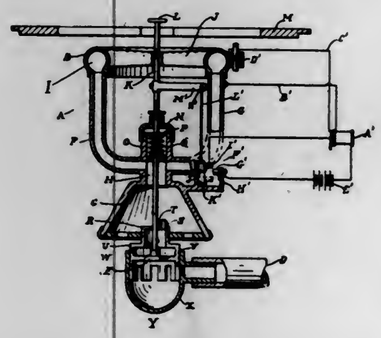
3. Process for the production of colored caoutchouc materials, which process consists in treating caoutchouc with a thioindigo dye, and in vulcanizing the same after being thus colored by heating with sulfur at the vulcanizing temperature, substantially as described.

4. Process for the production of colored caoutchouc-like materials, which process consists in treating a caoutchouc-like material with a thioindigo dye, and a vulcanizing the same after being thus colored by heating with sulfur at the vulcanizing temperature, substantially as described.

5. As new products vulcanized caoutchouc substances comprising caoutchouc vulcanized with sulfur and colored with organic vat dyes incorporated therewith before the vulcanization, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,113,760. STOVE. HERMAN DULZ, Detroit, Mich., assignor of one-fourth to Charles E. Grant, Detroit, Mich. Filed June 21, 1913. Serial No. 775,093. (Cl. 175—115.)



1. In a stove, the combination with an apertured top, a mixing chamber positioned below and spaced from said apertured top, an outlet at the upper end of said mixing chamber, a plurality of spaced conduits connecting said outlet with the apertured top, a valve chamber positioned below said mixing chamber, a valve in said chamber controlling the passage of gas from the valve chamber into the mixing chamber, a depressible rod for operating said valve extending up through said mixing chamber, the upper end of said rod projecting above said apertured top, a housing above said outlet and through which said rod extends, a collar fixed on said rod, a spring arranged in said housing and acting upon said collar to hold the valve to its seat, and a cap closing said housing.

2. In a stove, the combination of an apertured top, a mixing chamber positioned below and spaced from said apertured top, a connection between the mixing chamber and the apertured top, a valve chamber positioned below said mixing chamber, a valve in said chamber controlling the passage of gas from said valve chamber into the mixing chamber, a depressible rod operating said valve extending up through said mixing chamber and having the upper end thereof projecting above the apertured top, a laterally-extending arm carried by said rod, a projection on the mixing chamber, an igniter comprising a contact fixed to said projection, a coöperating contact, a movable member carrying said coöperating contact, guides on said projection for said movable member, a connection on said movable member and said arm, an electrical igniter for the burner, electrical connections for said igniter, and a switch for controlling said connections.

1,113,761. POTATO-DIGGER ELEVATING MEANS. TIMOTHY EARWOOD, Hemingford, Nebr. Filed Nov. 24, 1913. Serial No. 802,783. (Cl. 55—51.)

1. In combination, a potato digger having a digger shovel, an elevator conveyer, a box pivotally connected between the elevator conveyer and the potato digger having its bottom constructed of spaced apart rods, and means for changing the inclination of the box for controlling the action of the potatoes from the shovel to the elevator conveyer, means for feeding the potatoes up the shovel to the box and having connections with the elevator conveyer for operating the same, and means for raising and lowering the rear end of the elevator conveyer, and a cart having pivotal connections with the lower end of the box and disposed beyond said elevator conveyer.

2. In combination, a potato digger having a digger shovel, a box pivotally connected to the digger having its bottom constructed of spaced apart rods extending partially under the digger shovel, a conveyer chain having hooks directed toward the shovel and acting to feed the potatoes up the shovel toward and upon the bottom of said box, the pivotal connections between the box and the digger including means whereby the inclination of the box relative to the shovel and the digger may be changed, a cart having pivotal connections with the lower end of the box, and a second conveyer arranged between the lower end of the box and the cart and extending thereover, said means for changing the angle of the box also acting to change the angle of said cart.

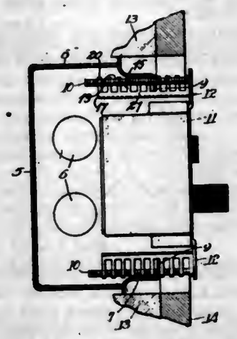
3. In combination, a potato digger having a digger shovel, a box pivotally connected to the digger having its bottom constructed of spaced apart rods extending partially under the digger shovel, a conveyer chain having hooks directed toward the shovel and acting to feed the potatoes up the shovel toward and upon the bottom of said box, the pivotal connections between the box and the digger including means whereby the inclination of the box relative to the shovel and the digger may be changed, a cart having pivotal connections with the lower end of the box, and a second conveyer pivoted to the lower end of the box, and disposed between the box and the cart and extending thereover, said means for changing the angle of the box also acting to change the angle of said cart, and means for changing the inclination of the second conveyer.

1,113,762. MOUNT FOR ELECTRIC FITTINGS. GUSTAVUS A. ECKMAN, Chicago, Ill. Filed Jan. 30, 1914. Serial No. 815,350. (Cl. 247—6.)

1. The combination with an outlet box, having an opening in its front face, of inwardly projecting flanges thereon, having screw receiving openings, a switch, ears projecting therefrom having attachment screw openings therein, the screw openings in the flanges being in alinement with the attachment screw openings in the switch ears, spacer members adapted to abut against the switch ears and transversely slotted for engagement with the flanges and attachment screws passing through the switch ears and into the flanges for clamping said parts together.

2. The combination with an outlet box having an opening in its front face, of inwardly projecting flanges thereon having tapped screw receiving openings, a switch, ears projecting therefrom having attachment screw openings therein, the screw openings in the flanges being in alinement with the attachment screw openings in the switch ears, attachment screws taking through said switch ears and into the tapped openings in the flanges, spacer mem

bers adapted to abut at their outer ends against said ears and U-shaped off-set portions on said spacer member passing around said screws, said off-set portions having a



plurality of transverse slots therein for adjustable engagement with said flanges.

1,113,763. LANTERN. HARRY C. ENGFER, Rochester, N. Y., assignor to Defiance Lantern and Stamping Company, Rochester, N. Y., a Corporation of Ontario, Canada. Filed Dec. 13, 1912. Serial No. 736,601. (Cl. 240—29.)

1. In a lantern, the combination with a globe support and a dome above the same, of a bell slidably mounted directly on the dome and movable vertically relatively to the dome and a rotary operating member for the bell movable about the dome as a center independently of the connection of the dome and bell.

2. In a lantern, the combination with a globe support and a dome above the same, of a bell slidably mounted directly on the bell and movable vertically relatively to the dome, a rotary operating member for the bell movable about the dome as a center and connections between the bell and its operating member comprising a cam surface on one part and a portion on the other coöperating therewith.

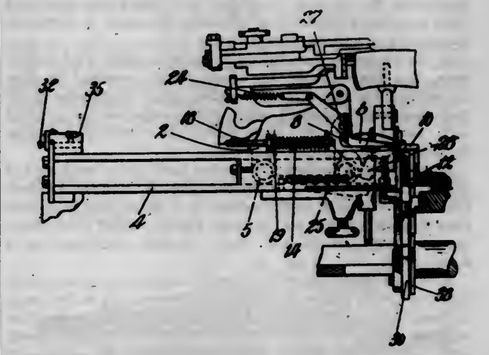
3. In a lantern, the combination with a globe support and a dome above the same, of a bell slidably mounted directly on the bell and movable vertically relatively to the dome, a rotary operating member for the bell movable about the dome as a center and connections between the bell and its operating member comprising coextensive cam surfaces on the bell extending peripherally thereof at an inclination to its axis and a projection on the operating member engaging between the surfaces whereby the bell may be moved positively in either direction.

4. In a lantern, the combination with a globe support and a dome above the same, of a bell movable vertically toward and from a globe on the support, and provided with a double cam slot extending peripherally thereof at an inclination to its axis and a rotary operating member for the bell formed of a length of wire to comprise a ring slidably encircling a cylindrical portion of the dome, a loop proceeding outwardly therefrom to constitute a finger portion and a free end proceeding from the loop and coöperating with the cam slot.

5. In a lantern, the combination with a globe support and a dome above the same comprising a center tube having an inner offset collar and a central chimney within and spaced from the collar, of a bell slidable vertically on the dome toward and from a globe on the support and guided between the collar and chimney and a rotary operating member for the bell comprising a ring portion encircling and rotatable on the collar.

[Claim 6 not printed in the Gazette.]

1,113,764. REBOUND CONTROL FOR LASTING-MACHINES. JOSEPH FAUSSE, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 30, 1910. Serial No. 600,073. (Cl. 12—14.)



1. In a machine of the class described, the combination with a heel lasting carriage and a slideway therefor, of means acting to move said carriage along the slideway, a finger on the carriage, a socket block on the slideway formed to receive the finger, and means for engaging the finger and arresting it by sliding friction while it is in the socket block, the finger and block being constructed and arranged to continue the friction throughout the possible movement of the finger into the socket block.

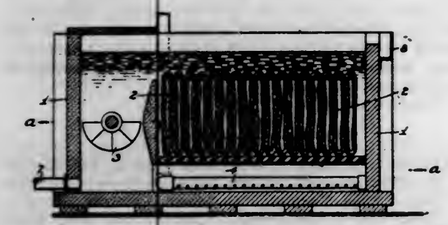
2. In a machine of the class described, the combination with a heel lasting carriage and means for automatically moving it rearwardly after the lasting operation, of a finger projecting rearwardly therefrom, and means for slidingly engaging said finger as the carriage approaches the end of said movement and continuing in engagement therewith to the end of the possible rearward movement of the carriage gradually stopping such movement and resisting return movement of the finger to prevent rebound of the carriage.

3. In a machine of the class described, the combination with a heel lasting carriage and means for automatically moving it rearwardly after the lasting operation, of a finger projecting rearwardly therefrom, a device in contact with said finger slides during the last portion of the rearward movement of the carriage and which checks said movement, a spring compressed by the resistance encountered by said finger and arranged to react to move the carriage forwardly to free the pin from said device.

4. In a machine of the class described, the combination

with a heel lasting carriage and means for automatically moving it rearwardly after the lasting operation, of a finger 28 and a spring 14 yieldingly projecting the finger from the carriage, a socket block 35 having in its front end a socket to receive the finger and a friction plug 36 projecting into the socket to engage the finger to resist both rearward movement of the finger and then forward movement thereof when the spring 14 reacts, substantially as described.

1,113,765. DYEING PROCESS. JAMES J. FEARON, Philadelphia, Pa., assignor of one-half to Charles J. Fox, Philadelphia, Pa. Filed May 2, 1913. Serial No. 765,041. (Cl. 8—5.)



1. As an improvement in dyeing skein yarn with sulfur dyes, the mode herein described, which consists in first subjecting the yarn to the action of a liquid dye bath, and then aerating a liquid bath in which the yarn is contained by passing air through said bath.

2. As an improvement in dyeing skein yarn with sulfur dyes, the mode herein described, which consists in first subjecting the yarn to the action of a liquid dye bath, then washing said yarn while still contained in a liquid bath, and aerating the bath during the washing operation by passing air through said bath.

3. As an improvement in dyeing skein yarn with sulfur dyes, the mode herein described, which consists in first subjecting the yarn to the action of a liquid dye bath, and then forcing air into and through the masses of yarn forming the skeins while the same are still contained in a liquid bath.

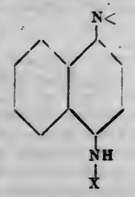
4. As an improvement in dyeing skein yarn with sulfur dyes, the mode herein described which consists in first subjecting the yarn to the action of a liquid dye bath, then washing said yarn while still contained in a liquid bath, and during the latter operation forcing air into and through the masses of yarn forming the skeins.

5. As an improvement in dyeing skein yarn with sulfur dyes, the mode herein described which consists in first subjecting the yarn to the action of a liquid dye bath, then washing said yarn by circulating wash water through a tub in which the yarn is contained, and, during the latter operation, aerating the bath by passing air through said wash water.

[Claim 6 not printed in the Gazette.]

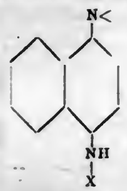
1,113,766. GREEN SULFUR DYE. JOSEPH FLACHSLAENDER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 9, 1911. Serial No. 643,190. (Cl. 8—1.)

1. The hereinbefore described new sulfur dyes obtained from leucoindophenols, containing the nucleus:



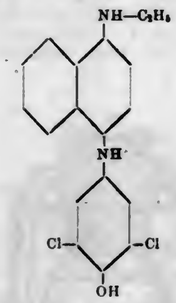
in which the amino group is substituted by at least one alkyl group, and in which X represents a phenolic radical which contain copper and are after being dried and pulverized black powders being soluble in a solution of sodium sulfid generally with a green coloration being soluble in concentrated sulfuric acid generally with a bluish coloration; and dyeing unmordanted cotton green shades, substantially as described.

2. The hereinbefore described new sulfur dyes obtained from leucoindophenols containing the nucleus,



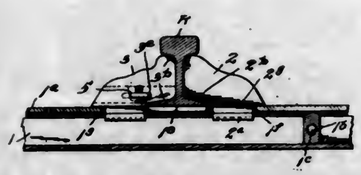
in which the amino group is a mono-alkyl substituted amino group, and X represents a phenolic radical, which are after being dried and pulverized black powders being soluble in a solution of sodium sulfid generally with a green coloration being soluble in concentrated sulfuric acid generally with a bluish coloration; and dyeing unmordanted cotton green shades, substantially as described.

3. The hereinbefore described new sulfur dye obtained from leucoindophenol of the formula:



which contains copper and is after being dried and pulverized a black powder soluble in a sodium sulfid solution with a green coloration and soluble in concentrated sulfuric acid and in caustic soda lye (30° Bé.) with a greenish-blue coloration; dyeing unmordanted cotton in pure green shades, substantially as described.

1,113,767. RAILWAY-RAIL SLEEPER AND FASTENER. GEORGE FRANKOVICH, Anaconda, Mont. Filed Dec. 22, 1913. Serial No. 808,243. (Cl. 238—5.)



1. In combination a railroad tie having a slot at the point of attachment of the rail; a member projecting above the tie having a shank detachably engaging said slot, and a head above the tie; a chair having a slot engaging said head, and means for locking the chair to said head.

2. In combination, a tie having a slot adjacent the rail, a chair adapted to engage said rail and having a groove on its under side, and a locking member having a head adapted to engage said groove and a flanged base adapted to engage the tie slot.

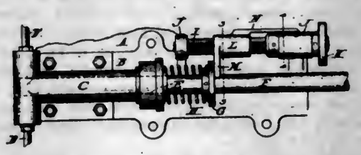
3. In combination a railroad tie provided with a slot at the point of attachment of the rail; a member having a shank detachably engaging said slot; said member projecting above the tie and having a head, a chair having a longitudinal slot engaging said head, and means for locking the chair to said head.

4. In combination, a tie having a slot adjacent the rail; a chair having a longitudinal T-shaped groove on its under side, a locking member having a head adapted to engage said groove and having a flanged base adapted to engage the tie slot, and means for preventing casual disengagement of the locking member and chair.

5. In combination with a railroad tie provided with slots at the point of attachment of the rails; members having shanks detachably engaging said slots, one of said members projecting above the tie and having a head, a chair having a longitudinal slot engaging said head, and means for locking the chair to said head.

[Claims 6 to 8 not printed in the Gazette.]

1,113,768. MANUAL CONTROL FOR THE FUEL-SUPPLY OF INTERNAL-COMBUSTION ENGINES. WILLIAM F. FREIDAG, Freeport, Ill., assignor to Stover Engine Works, Freeport, Ill., a Corporation of Illinois. Filed Nov. 15, 1912. Serial No. 731,524. (Cl. 123—139.)



1. The combination with an engine cylinder, of a plate detachably secured thereto and bearing pump mechanism comprising a reciprocating pump having a collar fixed to the plunger rod, a spring coiled about the rod between the pump and collar, to cause the return stroke of the plunger, a screw manually revoluble in bearings without advance, and a non-revoluble nut traveling along the screw and having an arm projecting into the path of said collar.

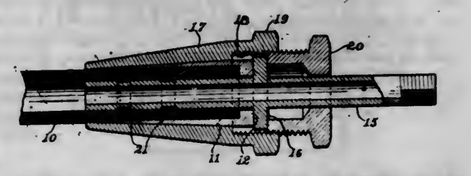
2. The combination with an internal combustion engine cylinder, of a plate detachably fixed upon the cylinder, a pump fixed to said plate and having an engine-reciprocated plunger bearing a collar at some distance from the pump barrel, a spring interposed between said barrel and stop and urging the plunger outward, a threaded shaft mounted on said plate alongside the plunger rod to rotate without advance and provided with a nut to engage the stop of the plunger and limit its outward movement, and an arm projecting from said nut and in sliding engagement with a fixed rectilineal portion of the structure, whereby all rotation of the nut is prevented whatever its position.

1,113,769. SELF CLOSING AND FOLDING UMBRELLA. SAMUEL S. FRETZ, Philadelphia, Pa. Filed Feb. 18, 1913. Serial No. 749,075. (Cl. 135—22.)

1. In an umbrella, a stick composed of inner and outer members telescopically arranged one within the other, upper and lower catches on said stick, and attached at one end to the inner members of said stick, a runner, a head on the lower catch separated from the nose thereof, the outer stick member having an opening through which said head is protrudable, a portion of the outer stick member forming a seat for the head and closing said opening below, whereby the umbrella is held in open condition by the action of the runner on the upper catch and said head of the lower catch on said portion and is adapted to be automatically released and closed by inward motion imparted to said head, thus releasing the inner stick member and permitting the runner to automatically force in the upper catch causing the automatic folding of the umbrella, said upper catch being constructed to recede from the outer member and enter the inner member in the operation of folding of the umbrella.

2. In an umbrella, a stick composed of telescopic members, upper and lower spring catches attached at one end to the inner member of said stick, the outer member being comparatively rigid throughout its length and the inner member formed with a folding section, the upper catch having a nose adapted to protrude through openings in the inner and outer members, the lower catch having a nose and a head extendable through separate openings in the inner and outer members, said head extending to a greater extent than said nose, and a runner movable on the outer member of the stick and engageable with said nose without withdrawing the head from its engagement in the openings of the inner and outer members.

1,113,770. HOSE-COUPLING. ALBERT GABROHN, Detroit, Mich. Filed June 8, 1912. Serial No. 702,480. (Cl. 137—28.)

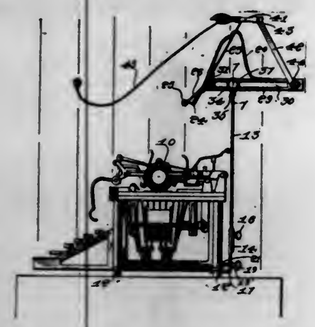


In a coupling, the combination with a flexible conduit formed of compressible material, a coupling tube extending into an end of the conduit and having annular grooves formed therein in which the walls of said conduit engage, a split sleeve on the conduit having an inwardly extending flange engaging the end of the conduit and formed with an outer surface which is tapered inward from the flanged end to the opposite end of the sleeve, said sleeve having slitted portions between the split edges thereof, a clamping sleeve arranged upon the split sleeve and adapted to depress the slitted portions of said sleeve and having an internal tapering bore to engage the tapered surface of the split sleeve and formed with an internally screw threaded bore at one end adjacent to the flanged end of the split sleeve, a peripheral flange on the coupling tube and against which the flanged end of the split sleeve abuts, and an externally threaded nut surrounding said coupling tube and engaging the flange thereof and entering said clamping sleeve to move said sleeve longitudinally of said split and slitted sleeve.

1,113,771. COPY-HOLDER FOR TYPE-WRITERS. EDWARD H. GARDNER, Madison, Wis. Filed Sept. 25, 1913. Serial No. 791,805. (Cl. 120—28.)

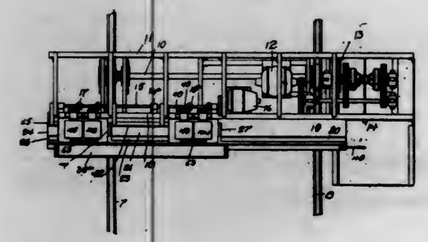
A device of the class described comprising a standard, a clutch carried upon the upper end of said standard

comprising a plurality of sections, one of said sections provided with a pair of integral flanges, said flanges provided with parallel inner faces, the outer faces of said flanges formed in the same vertical plane, a slotted arm slidably mounted between said flanges, a bolt passing through said clutch and said arm, a washer carried upon



said bolt and bearing upon said arm, a nut positioned upon said bolt and retaining said washer in position, said washer bearing evenly upon said arm for holding said arm in an adjusted position, said flanges adapted to carry the weight of said arm, and a book carrying plate fixed to the forward end of said arm.

1,113,772. MAGNETIC SKELP-CHARGING MACHINE. WILLIAM THOMAS GARLITZ, McKees Rocks, Pa. Filed Feb. 7, 1914. Serial No. 817,251. (Cl. 214—23.)



1. A magnetic skelp charging machine comprising a frame, feed rollers carried thereby, and stationary traction magnets arranged within said rollers.

2. A magnetic skelp charging machine comprising feed rollers constructed of non-magnetic material, and traction magnets arranged within said rollers.

3. A magnetic skelp charging machine comprising feed rollers constructed of non-magnetic material, and stationary traction magnets arranged within said rollers.

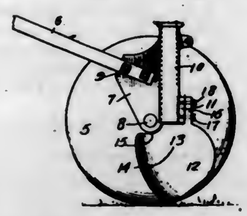
4. A magnetic skelp charging machine comprising feed rollers constructed of non-magnetic material, and traction magnets arranged within said rollers, the pole pieces of said magnets spaced from the inner faces of said rollers.

5. A magnetic skelp charging machine comprising feed rollers constructed of non-magnetic material, and stationary traction magnets arranged within said rollers, the pole pieces of said magnets spaced from the inner faces of said rollers.

[Claims 6 to 23 not printed in the Gazette.]

1,113,773. BOOT-FASTENER FOR DRILLS. THOMAS C. GARRITY, Lincoln, Kans. Filed Feb. 19, 1914. Serial No. 819,712. (Cl. 97—79.)

1. A device of the class described comprising a disk, a triangular plate in the lower apex of which said disk is journaled, a draw bar secured to said plate, a boot formed integrally with the rear edge of the plate, a bearing plate formed on said boot and extending at right angles to said disk, a scraper having its forward portion curved inwardly toward said disk, a lug extending upwardly from said scraper and at right angles thereto, and bearing against said bearing plate, a set screw on which said lug is pivoted, said set screw extending into said bearing plate, said lug above said set screw provided with an arcuate slot, and a second set screw extending through said arcuate slot and into said bearing plate, whereby the scraper may be adjusted relative to the disk.

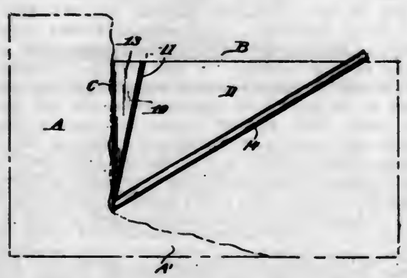


2. A device of the class described comprising a disk, a plate in which said disk is journaled, a draw bar secured to said plate, a boot formed on said plate, a scraper, a bearing plate formed on said boot disposed transversely of the scraper, a lug formed on said scraper transversely thereof, a set screw on which said lug is journaled, said screw extending into said bearing plate, said lug provided with a transversely disposed arcuate slot, and a second set screw extending through said slot and into said bearing plate whereby said scraper may be adjusted relative to said disk.

3. A device of the class described comprising a disk, a boot associated therewith, a bearing plate formed on said boot at right angles to the disk, a scraper, a lug on said scraper transversely thereof, a set screw on which said lug is pivoted, said set screw extending into said plate, said lug provided with an arcuate slot, and a second set screw extending through said slot and into said bearing plate, whereby said scraper may be adjusted relative to said disk.

4. A device of the class described comprising a disk, a scraper, a bearing plate associated with and disposed at right angles to said disk, a second bearing plate associated with and disposed in a plane at right angles to said scraper, a pivot bolt carried by one of said plates and extending through an opening in the other plate, one of said plates provided transversely thereof with an arcuate slot, and a bolt carried by the opposite plate and extending through said slot whereby to secure adjustment of said disk and scraper relatively to each other.

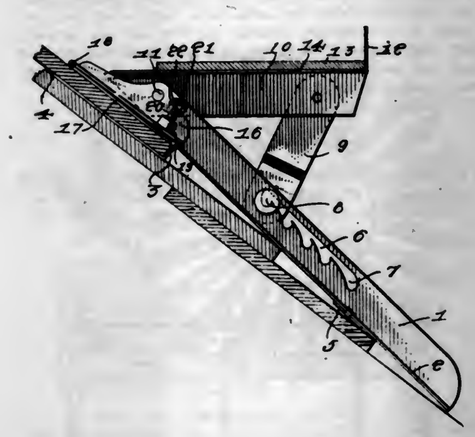
1,113,774. PATTERN FOR STUMP-BURNING FIRE-PLACES. JOSEPH W. GIBSON, Brantley, Ala. Filed Nov. 10, 1911. Serial No. 659,636. (Cl. 25—118.)



1. The combination with a rectangular plate provided with downwardly tapering triangular wings formed at right angles to and ending in, the same plane as that of said plate, said plate also provided near its upper end with an opening, and having a portion near its lower end cut away; of a rod adapted to coöperate with said cut away portion when said rod and plate are placed in position.

2. A pattern for a stump burning fire place to be formed in the ground adjacent to a stump, comprising a rectangular plate provided with a transverse slot adjacent to its upper end, and a rectangular notch centrally of its lower end, triangular wings formed with the plate disposed at right angles thereto on the same side of the plate and tapering to the bottom thereof, a rod coöperating with said pattern to form a tubular passage in the ground from the rectangular notch to a point remote from the stump.

1,113,775. SHINGLING-BRACKET. WILLIAM GIBSON, San Bruno, Cal. Filed Oct. 17, 1913. Serial No. 795,771. (Cl. 20—86.)



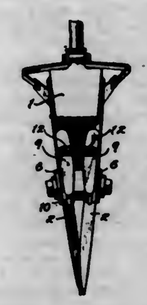
1. A bracket comprising a stock portion, a head pivotally secured thereto, means for angularly adjusting the same, a clamp comprising an angle portion pivotally secured to said stock portion and provided with a hinged leaf upon the lower face thereof, an off-set clamping portion carried by said stock portion and adapted to fit under a shingle or support, a threaded collar carried by said angle clamp portion, and a threaded pin passing therethrough and engaging said leaf portion for firmly clamping said leaf portion in engagement with a support.

2. A bracket comprising a stock portion, a head pivotally secured thereto, means for angularly adjusting the same, a clamp comprising an angle portion pivotally secured to said stock portion and provided with a hinged leaf upon the lower portion thereof, an off-set clamping portion carried by said stock portion and adapted to fit under a support, and means carried by said clamping portion and engaging said leaf portion for firmly clamping said leaf portion in engagement with a support.

1,113,776. SCRAPER FOR DISK DRILLS. ANTON GOETZ, Berwick, N. D. Filed May 1, 1914. Serial No. 835,615. (Cl. 97—79.)

1. The combination of a disk drill having a scraper supporting arm on the boot thereof, a pair of scraping bars arranged between the disks, lateral arms projecting from the scraping bars, means for pivotally connecting the lateral arms to the scraper supporting arm of the boot, and a spring interposed between the scraper bars to swing the same apart and hold them in yielding engagement with the disks.

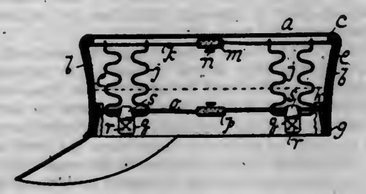
2. The combination of a disk drill having a scraper supporting arm upon the boot thereof, a pair of scraper bars arranged between the disks, lateral arms projecting from the scraper bars, means for adjustably connecting the lateral arms to the respective scraper bars so that they can be moved in and out thereon, means for pivotally connecting the lateral arm and mounting the device upon the scraper supporting arm of the boot, and yielding means acting upon the scraper bars to swing them apart and hold them in a yielding engagement with the disks.



3. The combination of a disk drill having a scraper supporting arm projecting from the boot thereof, a pair of scraping bars arranged between the disks, lateral arms projecting from the scraping bars toward one end thereof, positioning pins projecting from the scraping bars at the opposite ends thereof, means for pivotally connecting the lateral arm and mounting the device upon the scraper supporting arm of the boot, and a spring interposed between the scraper bars and engaging the positioning pins thereof, said spring serving to swing the scraper bars apart and hold them in a yielding engagement with the disks.

4. The combination of a disk drill having a scraper supporting arm projecting from the boot thereof, a pair of scraper bars interposed between the disks, lateral arms projecting from the scraper bars, means for adjustably connecting the lateral arms to the scrapper bars so that they can be moved in and out with respect thereto, a bolt pivotally connecting the lateral arms and engaging the scraper supporting arm of the boot, positioning pins projecting from the scraper bars, and a spring interposed between the scraper bars and engaging the positioning pins thereof, said spring serving to swing the scraper bars apart and hold them in a yielding engagement with the disks.

1,113,777. CAP. PHILIPP GOLDMANN, New York, N. Y. Filed Nov. 17, 1913. Serial No. 801,397. (Cl. 2—106.)



1. A stiffening device for caps comprising an adjustable annular wire member, a series of convoluted wire members swingingly mounted on the annular wire member, and a series of catches adapted for attachment to the interior of the cap to engage the convoluted members.

2. A stiffening device for caps comprising an adjustable annular wire member, a series of double convoluted wire members swingingly mounted on the annular wire member, and a series of catches adapted for attachment to the interior of the cap to engage the convoluted members.

3. A stiffening device for caps comprising a pair of adjustable annular wire members, a series of convoluted

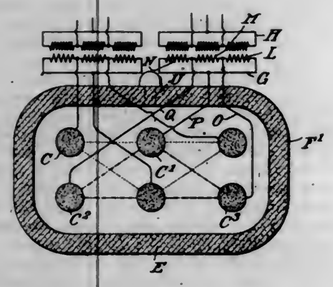
wire members swingingly mounted on one of the annular wire members, and a series of catch members mounted on the second annular wire member to engage the convoluted members.

4. In a cap the combination with the crown, of a pair of adjustable wire members positioned in the crown, a series of convoluted wire members swingingly mounted on one of the annular wire members, each member having a double row of convolutions, and a series of catch members mounted on the second wire member for engagement with the convoluted members.

5. In a cap the combination with a crown, of a pair of adjustable wire members positioned in the crown, a series of convoluted wire members swingingly mounted on one of the annular members, each member having a double row of convolutions, and a series of catch members, each formed of a single piece of metal slidingly mounted on the second wire member for engagement with the convoluted members.

[Claims 6 and 7 not printed in the Gazette.]

1,113,778. ELECTRIC FURNACE. JAMES H. GRAY, New York, N. Y. Filed Aug. 21, 1913. Serial No. 785,879. (Cl. 204—64.)



1. An electric arc furnace for the melting and refining of metals comprising a hearth for carrying the molten metal, and electrodes above the metal with their lower ends adjacent to the surface thereof to form an arc between each electrode and the metal, said electrodes comprising a plurality of groups of three each, the three electrodes of each group being connected to the respective terminals of a three-phase circuit arranged in delta so that the current passes successively down through each electrode and up through the other two electrodes of the group.

2. An electric arc furnace for the melting and refining of metals comprising a hearth for carrying the molten metal, and electrodes above the metal with their lower ends adjacent to the surface thereof to form an arc between each electrode and the metal, said electrodes comprising a plurality of groups of three each, the three electrodes of each group being connected to the respective terminals of a three-phase circuit arranged in delta so that the current passes successively down through each electrode and up through the other two electrodes of the group, the area covered by one group overlapping that covered by another group so as to distribute the effect as uniformly as possible.

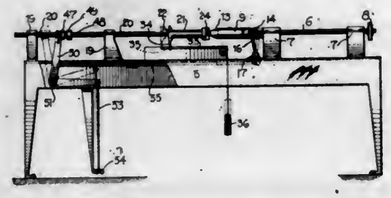
3. An electric arc furnace for the melting and refining of metals comprising an oblong hearth for carrying the molten metal, and electrodes above the metal with their lower ends adjacent to the surface thereof to form an arc between each electrode and the metal, said electrodes being six in number and being arranged in two groups of three each, the three electrodes of each group being connected to the respective terminals of a three-phase circuit arranged in delta so that the current passes successively down through each electrode and up through the other two electrodes of the group.

4. An electric arc furnace for the melting and refining of metals comprising an oblong hearth for carrying the molten metal, and electrodes above the metal with their lower ends adjacent to the surface thereof to form an arc between each electrode and the metal, said electrodes being six in number and being arranged in two groups of three each, the three electrodes of each group being connected to the respective terminals of a three-phase circuit arranged in delta so that the current passes successively down through each electrode and up through the other two electrodes of the group.

5. An electric arc furnace for the melting and refining of metals comprising a hearth for carrying molten metal and electrodes above the metal with their lower ends adjacent to the surface thereof to form an arc between each electrode and the metal, said hearth having tapered ends and said electrodes comprising groups of three each, one group at each end of the hearth.

[Claims 6 to 9 not printed in the Gazette.]

1,113,779. MACHINE FOR MAKING COILED WIRE SPRINGS. WILLIAM B. GREENLEAF, Nashville, Tenn. Filed Dec. 20, 1913. Serial No. 808,008. (Cl. 153—67.)



1. In a machine of the character described, an operating spindle, a chuck mounted on said spindle, means for holding the end of a wire in connection with said chuck, and a longitudinally shiftable freely rotatable mandrel adapted to engage and actuate said holding means, said mandrel being rotatable with the wire as it is wound about the same in the operation of the chuck.

2. In a machine of the character described, an operating spindle, a longitudinally shiftable former, a mandrel rotatably mounted in the former, means for shifting the mandrel and former into operative relation to the spindle, and means for connecting one end of a wire to the spindle whereby the same is wound about the mandrel and a succession of coils formed therein by the former, said mandrel being rotatable with said coils.

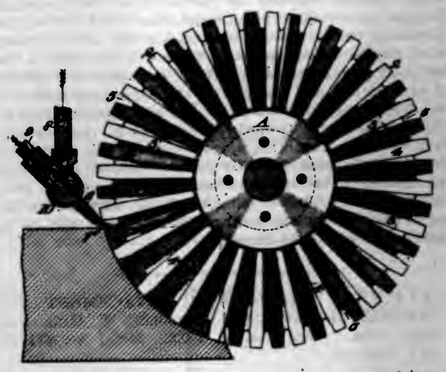
3. In a machine of the character described, an operating spindle, a chuck loosely mounted upon the spindle, a slidable clutch to lock the chuck upon the spindle, means for attaching one end of a wire to the chuck, a longitudinally shiftable former, and means to shift said former to operative position with relation to the chuck, and subseqeuently operate the clutch to lock the chuck upon the spindle.

4. In a machine of the character described, an operating spindle, a chuck loosely mounteld upon said spindle, a slidable clutch to lock the chuck upon the spindle, means for holding a wire in connection with said chuck, a longitudinally shiftable former, a mandrel carried by the former, and means to shift said former to operatively position the same with relation to the chuck and engage the mandrel with said wire holding means whereby the latter is actuated, and then subsequently shift said clutch to lock the chuck upon the operating spindle.

5. In a machine of the character described, an operating spindle, a chuck mounted upon said spindle, means for attaching one end of a wire to said chuck, a longitudinally shiftable shaft, a non-rotatable former mounted upon said shaft and having limited longitudinal movement with respect thereto, means for shifting the shaft to dispose the former in operative position with relation to the chuck, and gravity means connected to the former to yieldingly hold the same against longitudinal movement on the shaft in one direction and in engagement with the work.

[Claims 6 to 13 not printed in the Gazette.]

1,113,780. GRANITE AND STONE SAW. GUSTAV GRIESCHE and ANTHONY BECK, Oakland, Cal. Filed Dec. 9, 1913. Serial No. 805,498. (Cl. 125—18.)

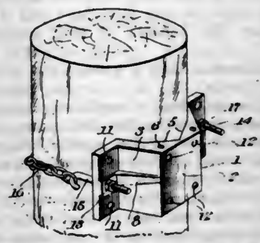


1. A stone and like sawing apparatus, comprising a circular revoluble disk having alternate teeth and radial depressions, a supply duct for abrasive material discharging contiguous to and in the plane of rotation of the disk, and a hydraulic pressure nozzle coacting with the supply duct to produce an action counter to the centrifugal action so as to maintain the abrasive material at the point of operation.

2. In a stone sawing appartus, an annular circular disk, a central hub and supporting shaft, said disk having alternate radial grooves and depressions with parallel sides, said grooves and depressions extending from the hub to the periphery and having a substantially equal depth.

3. In a granite and stone saw, a disk having radial corrugations of varying width upon both sides, said corrugations being of uniform depth throughout their lengths.

1,113,781. PIPE-VISE HOLDER. FREDRICK W. GRIFFIN, Jacksonville, Fla. Filed Dec. 20, 1913. Serial No. 807,975. (Cl. 81—41.)



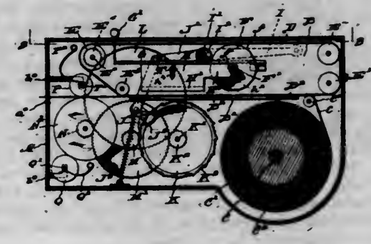
A holder of the class described comprising a yoke or body having a base wall, end walls diverging from the base wall and provided at their outer ends with outwardly extending feet, the base wall and end walls being provided on thir inner sides with spaced ribs, the body or yoke being also provided with lugs in the angles between the base wall and end walls and also with reinforcing ribs on the outer sides of the end walls.

1,113,782. FIREPROOF AND WOOD-PRESERVING PAINT. JAMES W. GRIMES, Springfield, Ohio, assignor of one-half to Charles D. Rawson, Des Moines, Iowa. Filed Feb. 24, 1913. Serial No. 751,148. (Cl. 134—44.)

1. An improved fire proof and preservative paint, comprising mixed sulfids of copper, mixed sulfids of lead, and tar residue.

2. An improved fire proof and preservative paint, comprising mixed sulfids of copper, mixed sulfids of lead, and tar residue formed by boiling sulfur sublimate, lead oxid, copper sulfate, and coal tar in about the proportions stated, and in the manner described.

1,113,783. APPARATUS FOR PRINTING AND DELIVERING TRANSFER-SLIPS. HENRY H. HESS and JOSEPH F. PARKER, Mobile, Ala., assignors to Paul P. Lockling Improved Automatic Passenger Fare Registering Company, Mobile, Ala., a Copartnership. Filed Jan. 16, 1914. Serial No. 812,528. (Cl. 107—187.)



1. In an apparatus of the character deacribed, the combination with a casing of means for carrying a paper strip mounted therein, a housing carrying clock mechanism with clock hands mounted in said casing, a printing wheel journaled in said housing, a printing ribbon mounted between said paper strip and said housing, a hand lever, means operated by said hand lever for pressing said housing downward toward said ribbon, means for automatically returning said housing to the initial position when released, and spring operated feed mechanism automatically operated upon the release of said lever for feeding said paper strip and said printing ribbon, substantially as described.

2. In an apparatus of the character described, the combination with a casing of means for carrying a paper strip mounted therein, a housing carrying clock mechanism with clock hands mounted in said casing, a printing wheel journaled in said housing, a printing ribbon mounted between said paper strip and said housing, a hand lever, means operated by said hand lever for pressing said housing downward toward said ribbon, means for automatically returning said housing to the initial position when released, and spring operated feed mechanism automatically operated upon the release of said lever for feeding said paper strip and said printing ribbon, with means for setting said printing wheel at the desired position, substantially as described.

3. In an apparatus of the character described, the combination with a casing of means for carrying a paper

strip mounted therein, a housing carrying clock mechanism with clock hands mounted in said casing, a printing wheel journaled in said housing, a printing ribbon mounted between said paper strip and said housing, a hand lever, means operated by said hand lever for pressing said housing downward toward said ribbon, means for automatically returning said housing to the initial position when released, and spring operated feed mechanism automatically operated upon the release of said lever for feeding said paper strip and said printing ribbon, with a secondary printing roller adapted to make an impression on the paper strip on the opposite side thereof from that made by the printing wheel and housing aforesaid, with means operated by said feed mechanism for rotating said secondary printing roller, substantially as described.

4. In an apparatus of the character described, the combination with a casing of means for carrying a paper strip mounted therein, a housing carrying clock mechanism with clock hands mounted in said casing, a printing wheel journaled in said housing, a printing ribbon mounted between said paper strip and said housing, a hand lever, means operated by said hand lever for pressing said housing downward toward said ribbon, means for automatically returning said housing to the initial position when released, and spring operated feed mechanism automatically operated upon the release of said lever for feeding said paper strip and said printing ribbon, with means for setting said printing wheel at the desired positon, with a secondary printing roller adapted to make an impression on the paper strip on the opposite side thereof from that made by the printing wheel and housing aforesaid, with means operated by said feed mechanism for rotating said secondary printing roller, substantially as described.

5. In an apparatus of the character described, the combination with a casing of means for carrying a paper strip mounted therein, a housing carrying clock mechanism with clock hands mounted in said casing, a printing wheel journaled in said housing, a printing ribbon mounted between said paper strip and said housing, a hand lever, a cam operated by said hand lever for pressing said housing downward toward said ribbon, springs for automatically returning said housing to the initial position when released, means for automatically restoring said hand lever to the initial position when released, and feed mechanism automatically operated upon the release of said lever for feeding said paper strip and said printing ribbon, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

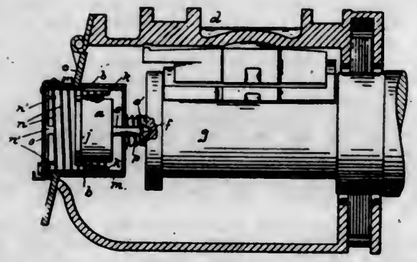
1,113,784. GUTTER SECTION. GERTRUDE HIGMAN, Los Angeles, Cal. Filed Nov. 29, 1913. Serial No. 803,755. (Cl. 94—2.)

1. A gutter section comprising a pair of sections each being formed with a horizontal portion and a medial vertical portion at right angles thereto, one end of the vertical portion of each section being extended beyond the same and its opposite end being receded from the remaining end of said section whereby on the laying of the horizontal portions in the same plane with each other the vertical portion of one section will overlap the end adjacent thereto of the horizontal portion of the other section, and a plurality of anchoring protuberances carried by the horizontal portion of each section and rising from the upper face thereof at one side of the vertical portion.

2. A gutter section comprising a pair of sections each being formed with a horizontal portion and a medial vertical portion at right angles thereto, one end of the vertical portion of each section being extended beyond the same and its opposite end being receded from the remaining end of said section whereby on the laying of the horizontal portions in the same plane with each other the vertical portion of one section will overlap the end adjacent thereto of the horizontal portion of anchoring the other section, a plurality of protuberances carried by the horizontal portion of each section and rising from the upper face thereof at one side of the vertical portion, the said protuberances being provided with inwardly beveled ends.

3. A gutter section comprising a pair of sections each being formed with a horizontal portion and a medial vertical portion at right angles thereto, one end of the vertical portion of each section being extended beyond the same and its opposite end being receded from the remaining end of said section whereby on the laying of the horizontal portions in the same plane with each other the vertical portion of one section will overlap the end adjacent thereto of the horizontal portion of the other section, a plurality of protuberances carried by the horizontal portion of each section and rising from the upper face thereof at one side of the vertical portion, the said protuberances being provided with inwardly beveled ends, one protuberance on one section being spaced from the end of the horizontal portion, and the other protuberance on the horizontal portion of the other section being extended so as to overlap the horizontal portion of the adjacent section when the sections are arranged in alinement and in the same plane with each other.

1,113,785. CYCLOMETER ATTACHMENT FOR WHEELS OF RAIL-CARS. FREDERIC W. HILD, Portland, Oreg. Filed Jan. 15, 1912. Serial No. 671,392. (Cl. 235—96.)



1. The combination with a journal end of a car-wheel axle and the journal box, of a housing provided in the cover of the journal box, a cyclometer having a projecting spindle, and means, supporting the cyclometer in said housing, adapted to hold the driving spindle in operative contact with the journal end, notwithstanding the movements of the latter in any direction; and a flexible inclosure between the housing of said spindle and the journal end.

2. The combination with a journal end of a car-wheel axle and the journal box, of a housing provided in the cover of the journal box, a cyclometer having a stem, means, yieldingly supporting the cyclometer in said housing adapted to hold the driving spindle in operative contact with the journal end, the devices being also adapted to hold said spindle in such operative contact with the journal end notwithstanding the movements of the latter in any direction; said spindle projecting through said housing and bearing against the opposing face of the journal end of the axle.

3. The combination with a journal end of a car-wheel axle and the journal box, of a housing provided in the cover of the journal box, a cyclometer having a spindle, means supporting the cyclometer in said housing, said supporting means adapted to slide longitudinally in the housing; and means whereby the spindle of the cyclometer is yieldingly held in operative contact with the journal end.

4. The combination with a journal end of a car-wheel axle and the journal box, of a housing provided in the cover of the journal box, a cyclometer having a spindle, means supporting the cyclometer in said housing, said supporting means adapted to slide longitudinally in the housing; means whereby the spindle of the cyclometer is yieldingly held in operative contact with the journal end; and a flexible inclosure for the exposed portion f said spindle in said journal box.

5. The combination with a journal end of a car-wheel axle and the journal box, of a housing provided in the cover of the journal box, a cyclometer having a projecting spindle, means yieldingly supporting the cyclometer in said housing, said supporting means adapted to slide longitudinally in the housing; means adapted to so hold the cyclometer as to cause its spindle end to yieldingly bear against the journal end; and a flexible inclosure for the projecting end of said spindle between the housing and the journal end.

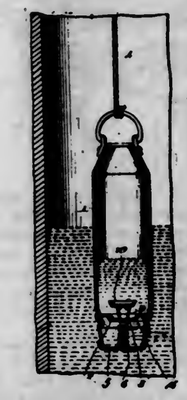
[Claims 6 to 9 not printed in the Gazette.]

1,113,786. EXHIBITING DEVICE. RUBEN PALMER JARVIS, Smith Center, Kans., assignor of two-thirds to Aloytious Fred Lutz and one-third to The Many Colored Electric Company, a Corporation, Beloit, Kans. Filed Mar. 1, 1911. Serial No. 611,623. (Cl. 40—130.)

An exhibiting device comprising a sign plate having means for forming a hood located along an edge of the same, a plurality of illuminating lamps arranged in groups, the members of each group being adapted to emit light of different colors, said lamps being supported in position to be covered by said hood, means adjacent each individual lamp for throwing the light emitted thereby upon the face of the sign plate, and for preventing the rays of light emitted by one lamp from reflecting from a lamp adjacent thereto, said last-named means being open at the top and the side adjacent the sign plate and being arranged to inclose each lamp except on top and on the side adjacent the sign plate, and objects carried upon the face of the sign plate to be exhibited.

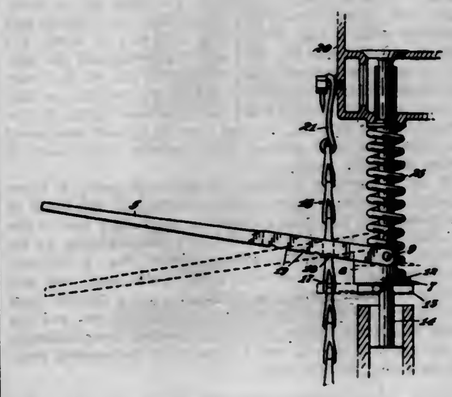
1,113,787. WELL-BUCKET. WILLIAM P. JAY, Davenport, Okla. Filed Oct. 7, 1913. Serial No. 793,931. (Cl. 103—35.)

1. A one piece well bucket having a metal filling and discharge opening, said metal bottom grooved and corrugated in said bucket a few inches above the lower end and a bar extending across said end and having a guide aperture, a stem movable through said aperture, a weighted disk like metal valve carried by a V-shaped guiding valve opening bracket and said stem, an expansion spring surrounding the stem between the cross bar and yoke shaped strip of metal the two ends of which are fixed to the valve and projecting downwardly therefrom, to the lower end of which the said stem and spring is attached, serving to normally hold the valve open, said valve, bottom and spring being inclosed by the lower end of the bucket.



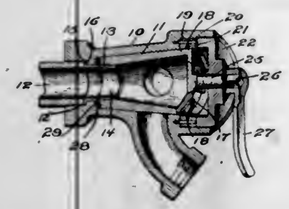
2. A one piece well bucket of the character described having a metal filling and discharge opening, a metal bottom rolled and crimped into said bucket a few inches from the lower end, a bar extending across said end opening having a guide aperture a weighted disk like valve with short slightly upturned edge, from which is a valve guiding tapered loop projecting through said filling and discharge opening, a stem depending from said loop and movable through said aperture, a coiled spring surrounding the stem between the bar and loop and serving to normally hold the valve open, said valve spring and bottom being protected by the lower tapered end of the bucket.

1,113,788. TOOL. FRANK JOHNSON, Glendale, Cal. Filed Dec. 22, 1913. Serial No. 808,119. (Cl. 29—87.1.)



A valve spring lifter, comprising a lever member formed with a yoke and having an open-ended longitudinally extending slot therein and formed with a plurality of notches on its underside arranged throughout the length of the slot, a spring engaging seat pivoted in the yoke, and a chain extending through the slot and adapted to have any of its links engaged in the notches on the lever member to form a fulcrum for the latter.

1,113,789. VALVE. JOHN D. JONES, Walla Walla, Wash. Filed Feb. 14, 1913. Serial No. 748,451. (Cl. 137—7.)



1. In a valve, a housing internally tapered and provided with an annular inwardly extending shoulder at its smaller end, a tubular valve member externally tapered complementary to the housing and internally tapered reversely thereto, a tapered sleeve inserted in the smaller end of the housing and positioned to engage the internal taper of the valve, and means to move the valve longitudinally when rotated.

2. In a valve, a housing internally tapered and open at its smaller end, a tubular valve member externally tapered complementary to the internal taper of the housing and internally tapered at its smaller end reversely to its external taper, a tapered tubular sleeve inserted in the smaller end of the housing and projecting into and fitting the internal taper of the valve, and means to move the valve member longitudinally to simultaneously vary its contact with the housing and sleeve.

3. In a valve, a housing internally tapered and provided with an outwardly facing annular shoulder at its smaller end, a valve member externally tapered complementary to the internal taper of the housing and internally tapered reversely to the external taper, a sleeve inserted in the smaller end of the housing and in position to engage the internal taper of the valve member, an annular gasket carried at the smaller end of the valve and positioned to engage the annular shoulder, and means to move the valve longitudinally to vary the contact of the valve with the tapered bore of the housing and the tapered bore of the sleeve and the contact of the gasket with the shoulder.

4. In a valve, a housing internally tapered, a valve externally tapered complementary to the taper of the housing, a cam member removably inserted in the housing and provided with a cam groove, the extremes of which are equally spaced from the ends of the housing and the middle of which is spaced from the smaller end of the housing farther than the extremes and opens through one side of said member, a lug on the valve member riding in the groove, means to hold the cam member against movement and close the open portion of its groove, and means to rotate the valve member.

5. In a valve, a housing internally tapered, a valve member externally tapered complementary to the taper of the housing, a cam ring inserted in the larger end of the housing and provided with a cam groove opening at its highest point through one side of the ring, a follower ring inserted in the housing against said cam ring and closing the open portion of its groove, a lug formed upon the valve member riding in said groove said cam and lug being adapted to move the valve member longitudinally as the valve is rotated, and a closure for the housing bearing upon the follower ring.

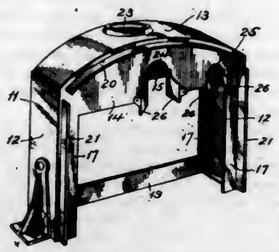
1,113,790. SLIP-CASING FOR RADIATORS. HENRY A. LASKO and CHRISTIAN M. SNAVELY, Lancaster, Pa. Filed Feb. 3, 1914. Serial No. 816,237. (Cl. 74—56.)

1. A removable slip casing for water circulating radiators, comprising a unitary structure removable bodily from a radiator.

2. A removable slip casing for water circulating radiators, removable bodily from and entirely free of said water circulating radiators to expose all parts of the latter.

3. A slip casing for water circulating radiators, removable bodily from said water circulating radiators to expose all parts of the latter, and means for removably securing said casing normally in position on a radiator.

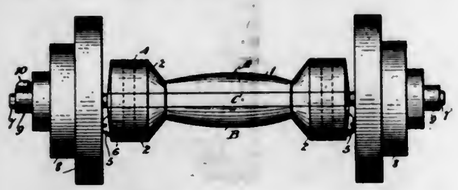
4. A removable slip casing for water circulating radiators, brackets on said casing, and means for removably securing said brackets in place to normally retain the casing in position on the radiator.



5. A removable slip casing for water circulating radiators, comprising a top wall, end walls extending from said top to the bottom of the water circulating member, said top wall having flanges depending from its front and rear edges, and the end walls having inwardly projecting flanges at the front and rear edges and a cross bar connecting the end walls at their front edges.

[Claim 6 not printed in the Gazette.]

1,113,791. CONVERTIBLE DUMB-BELL. ANTHONY J. LATELLA, New York, N. Y. Filed Feb. 26, 1914. Serial No. 821,184. (Cl. 46—69.)



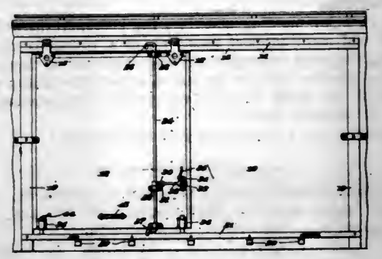
1. A dumb-bell divided longitudinally into three sections, adjustable weights on the extremities of the middle section, and means for removably securing the outer sections to the middle section and permitting the outer sections to be detached while the weights remain on the inner section, said outer sections being located between the said weights.

2. A dumb-bell divided longitudinally into three sections, adjustable weights on the extremities of the middle section, and means for removably securing the outer sections to the middle section and permitting the outer sections to be detached while the weights remain on the inner section, said outer sections being located between the said weights and having seats on their inner surface to receive springs whereby the dumb-bell is convertible from a solid handle to a resilient handle device.

3. A dumb-bell having a grip portion and weight enlargements at its ends, and said dumb-bell being divisible in two parallel planes at opposite sides of the center to form a central and two outer sections, spindles extending axially from the ends of the middle sections, adjustable weights on the spindles, and means for removably fastening the outer sections to opposite sides of the middle section and permitting the outer sections to be removed while the weights remain on the spindles.

4. A dumb-bell having a grip portion and weight enlargements at its ends, and said dumb-bell being divisible in two parallel planes at opposite sides of the center to form a central and two outer sections, spindles extending axially from the ends of the middle section, adjustable weights on the spindles, and means for removably fastening the outer sections to opposite sides of the middle section and permitting the outer sections to be removed while the weights remain on the spindles, the inner surfaces of the outer sections being formed with seats for receiving springs whereby the dumb-bell can be converted into a solid or yielding grip device.

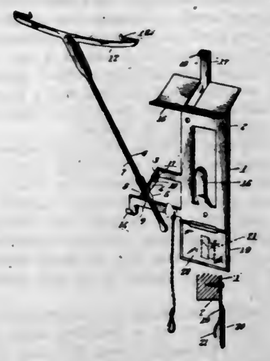
1,113,792. CAR-DOOR. ERNEST E. LAUGHON, Portsmouth, Va., assignor of one-third to James T. Jarrett, Portsmouth, Va. Filed Sept. 9, 1913. Serial No. 788,864. (Cl. 20—23.)



1. The combination with a door frame having stop cleats at opposite sides thereof, of a guide track mounted above the door frame and having a horizontal intermediate portion, an upstanding vertical portion and a depending vertical portion, an inverted substantially L-shaped plate fixed to the depending vertical portion of the track and having an inturned portion slightly elevated above the horizontal portion of said track, the said inturned portion of the plate being formed at intervals with notches, a door adapted to fit between the stop cleats, hangers fixed to the door and movably supported on the L-shaped plate, bearings carried by the door, a guard rail fixed below the door frame parallel with the track, a rock shaft journaled in the bearings and having crank terminals, one crank terminal being in the form of a hook straddling the L-shaped plate and adapted to engage in the notches in the inturned portion thereof, the other crank terminal being engageable with the guide rail, and an arm carried by the rock shaft for turning the same to swing the crank terminals whereby the door will be moved into engagement with or out of engagement from the stop cleats.

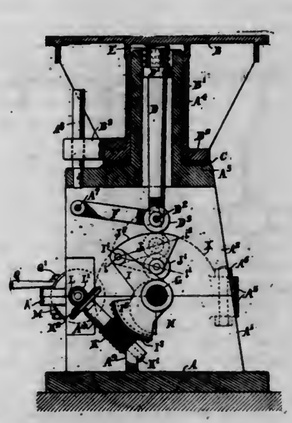
2. The combination with a door frame having stop cleats at opposite sides thereof, of a guide track mounted above the door frame and having a horizontal intermediate portion, an upstanding vertical portion and a depending vertical portion, an inverted substantially L-shaped plate fixed to the depending vertical portion of the track and having an inturned portion slightly elevated above the horizontal portion of said track, the said inturned portion of the plate being formed at intervals with notches, a door adapted to fit between the stop cleats, hangers fixed to the door and movably supported on the L-shaped plate, bearings carried by the door, a guard rail fixed below the door frame parallel with the track, a rock shaft journaled in the bearings and having crank terminals, one crank terminal being in the form of a hook straddling the L-shaped plate and adapted to engage in the notches in the inturned portion thereof, the other crank terminal being engageable with the guide rail, an arm carried by the rock shaft for turning the same to swing the crank terminals whereby the door will be moved into engagement with or out of engagement from the stop cleats, and a keeper on the door and engaged by the arm whereby the shaft can be locked against turning movement.

1,113,798. TABLE OR COUNTER ATTACHMENT. NICHOLAS LAULETTA, Philadelphia, Pa. Filed Apr. 22, 1913. Serial No. 762,857. (Cl. 65—29.)



An attachment comprising a plate having an outstanding lug, a shank pivotally connected with the lug, a sleeve carried by the shank, a rod slidably mounted in the sleeve, a spring member passing through the shank and having an eye which receives the pivotal connection between the shank and the lug and frictionally engages the said pivotal connection, said spring being adapted to bear against the rod and hold the same with relation to the sleeve.

1,113,794. MOLDING-MACHINE. WILFRED LEWIS and JOHN T. RAMSDEN, Philadelphia, Pa., assignors to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 15, 1912. Serial No. 683,951. (Cl. 22—45.)



1. In a jar molding machine, the combination with the mold support and anvil, of means for lifting the mold support above the anvil preparatory to collision comprising a cam and a thrust transmitting lever element interposed between the cam and the mold support and adjustable to vary the leverage with which the cam acts on the mold support in lifting the latter.

2. In a jar molding machine, the combination with the mold support and anvil, of means for lifting the mold

support above the anvil preparatory to collision comprising a rotating cam and a thrust transmitting element angularly adjustable about the axis of rotation of the cam to thereby vary the extent of movement imparted to the mold support on each rotation of the cam.

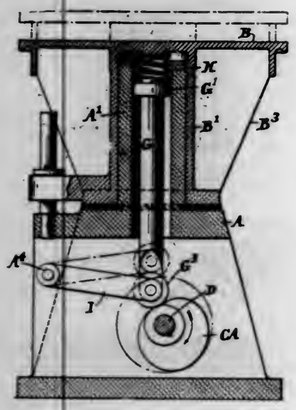
3. In a jar molding machine, the combination with the mold support and anvil, of means for lifting the mold support above the anvil preparatory to collision comprising a cam shaft journaled in the anvil, a cam carried by said shaft, a thrust transmitting element interposed between the cam and the mold support, and a fulcrum member angularly adjustable with the axis of said cam shaft and to which said element is pivoted.

4. In a jar molding machine, the combination with the mold support and anvil, of a rotating cam, a fulcrum member angularly adjustable about the axis of rotation of the cam, and a thrust transmitting element pivotally connected to said fulcrum element and interposed between said mold support and cam and oscillated by the latter to thereby alternately lift the mold support above the anvil and thereafter permit it to fall back into collision therewith.

5. In a jar molding machine, the combination with the mold support and anvil, of a rotating cam, a fulcrum member angularly adjustable about the axis of rotation of the cam, and a thrust transmitting element pivotally connected to said fulcrum element and interposed between said mold support and cam and oscillated by the latter to thereby alternately lift the mold support above the anvil and thereafter permit it to fall back into collision therewith, said thrust transmitting element having a convex thrust transmitting surface substantially concentric with the axis of rotation of the cam when in the position in which the mold support and anvil are free to collide.

[Claims 6 and 7 not printed in the Gazette.]

1,113,795. JAR-MOLDING MACHINE. WILFRED LEWIS, Philadelphia, Pa., assignor to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 15, 1912. Serial No. 683,978. (Cl. 22—45.)



1. In a jar molding machine, the combination with the anvil and mold support, of mechanism for regulating the movement of approach of the mold support and anvil comprising a cam retarding said movement of approach.

2. In a jar molding machine, the combination with the anvil and mold support, of mechanism for regulating the movement of approach of the mold support and anvil comprising a rotating cam retarding said movement of approach.

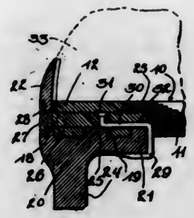
3. In a jar molding machine, the combination with the anvil and mold support, of mechanism for regulating the movement of approach terminating in impact of the mold support and anvil comprising a rotating cam exerting a retarding force opposing the movement of approach, said cam being so shaped that the retarding force exerted by it will be substantially constant with a given speed of rotation during one movement of approach but may be varied by varying the speed of rotation of the cam.

4. In a jar molding machine, the combination with the mold support and anvil of means for separating the mold support and anvil preparatory to collision comprising a cam formed with an ascending portion for moving the mold support away from the anvil and with a descending portion for retarding the approach of the mold support and anvil whereby the instensity of the blows struck on collision may be varied by varying the speed of rotation of said cam.

5. In a jar molding machine, the combination with the anvil and mold support members, of a rotatable cam for lifting the mold support above the anvil and having a portion of its cam surface shaped to retard the falling movement of the mold support, and means for rotating said cam at variable speeds.

[Claims 6 to 14 not printed in the Gazette.]

1,113,796. HORSESHOE. WILFRED P. LEWIS, St. Louis, Mo. Filed Sept. 24, 1913. Serial No. 791,635. (Cl. 168—40.)

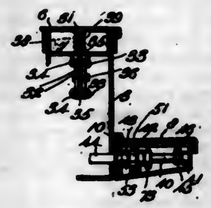


1. In a horseshoe, the combination with a shoe body, of a slotted toe calk secured on the front end of the shoe body, a plate passing through the shoe body and the slots in the toe calk to hold the same on the shoe body, and a wire-like locking member rigidly secured in the securing plate and projecting rearwardly and downwardly to have its free end engage the said toe calk on the under side thereof to hold the securing plate rigidly relatively to the said toe calk and said shoe body.

2. In a horseshoe, the combination with a shoe body having a reduced slotted toe portion, of a toe calk on the front end of the shoe body, a projection on the toe calk and passing through the slotted portion of the shoe body, slotted plates on the toe calk and rising upwardly above the horizontal plane of the shoe body, a securing member passing through the slots in the said plates to hold the toe calk on the shoe body, and a wire-like locking member on the said securing member and bent rearwardly and downwardly to engage the under side of the toe calk and rigidly lock the securing member thereto.

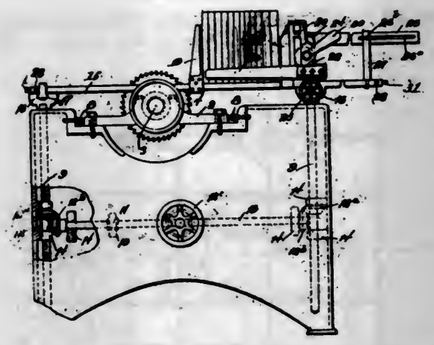
1,113,797. AUTOMATIC FARE-REGISTER. PAUL P. LOCKLING, Fruitdale, and JOSEPH F. PARKER, Mobile, Ala., assignors to Paul P. Lockling Improved Automatic Passenger Fare Registering Company, Mobile, Ala., a Copartnership. Filed Jan. 16, 1914. Serial No. 812,555. (Cl. 235—99.)

In a portable registering apparatus for cars, the combination of a casing, a shaft journaled in said casing and adapted to be connected with a register, a second casing swingingly mounted on the first-named casing, a depressible step mounted on said second casing, and a slip clutch connection between said depressible step and said shaft, whereby the register is operated when said shaft is in the



operative relation and said step is depressed, substantially as described.

1,113,798. WOODWORKING-MACHINE. HENRY LOHNES and JAMES P. RIAL, Kansas City, Mo. Filed Aug. 16, 1912. Serial No. 715,476. (Cl. 144—133.)



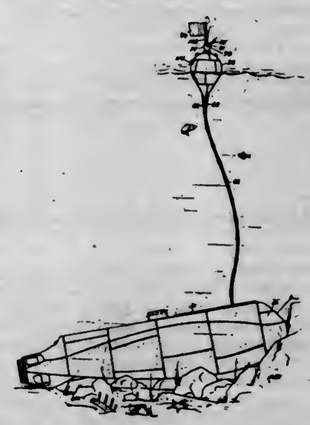
1. In combination, transverse bars, longitudinal bars adjustably connecting the transverse bars, two posts secured to the transverse bars, a third post for each of the transverse bars mounted thereon between the said two posts, a brace connecting each of the third posts with one of the two posts, a jaw mounted upon each of the third posts, a shaft paralleling the longitudinal bars and mounted in the third posts, cams mounted upon the shaft, one of such cams having a feather and spline connection with the shaft to move thereon and means for turning the shaft.

2. In combination with guide bars, slides mounted upon the guide bars, transverse bars mounted in the slides and adjustable therewith, relatively fixed and movable work engaging jaws mounted upon the transverse bars and operating means for the movable work gripping jaws having adjustable connection with the transverse bars to move therewith and admit of such work gripping jaws being adjusted toward or away from each other.

1,113,799. SIGNAL FOR SUBMARINE VESSELS. FRANCIS A. LOVEGROVE, Halifax, Nova Scotia, Canada. Filed Oct. 10, 1913. Serial No. 794,399. (Cl. 114—16.5.)

1. A signal for submarine vessels, comprising a buoy; means for holding the same on the hull of a submarine vessel; a flexible tube connecting and being in open communication with said buoy and vessel; a closure member for said buoy above the line of flotation thereof; means extensible through said tube and operable from within said vessel, for opening said closure member; and a visible signal adapted to be liberated and exposed above said buoy by the opening of said closure member.

2. A signal for submarine vessels, comprising a buoy; means for holding the same on the hull of a submarine vessel; a flexible tube connecting and being in open communication with said buoy and vessel; a closure member for said buoy above the line of flotation thereof; means extensible through said tube and operable from within said vessel, for opening said closure member; a signal flag mounted within said buoy to be held and released by said closure member; and means for elevating said flag above said buoy.



3. A signal for submarine vessels, comprising a buoy; means for holding the same on the hull of a submarine vessel; a flexible tube connecting and being in open communication with said buoy and vessel; a closure member for said buoy above the line of flotation thereof; means extensible through said tube and operable from within said vessel, for opening said closure member; an audible signal mounted within said buoy to be heard when said closure member is open; and means controllable from within the vessel for operating said audible signal.

4. In combination; a submarine vessel having an outwardly-opening containing well; a hollow buoy having a tubular connection, said buoy and said connection being adapted for stowing within said well; water-tight means for connecting the tubular connection of said buoy with the interior of said vessel; a sliding hatch to close said well; a mechanism for moving said hatch, embodying a rack and pinion, operative from within said vessel to expose said well; and a minor well for mounting said rack and pinion, said minor well being in communication with the first-mentioned well.

5. In combination; a submarine vessel having an outwardly-opening containing well; a hollow buoy having a tubular connection, said buoy and said connection being adapted for stowing within said well; water-tight means for connecting the tubular connection of said buoy with the interior of said vessel; a sliding hatch to close said well; a mechanism for moving said hatch, embodying a rack and pinion, operative from within said vessel to expose said well; a minor well for mounting said rack and pinion, said minor well being in communication with the first-mentioned well; and means, operative from within said vessel, for transferring any water contained in said minor well to the first mentioned well.

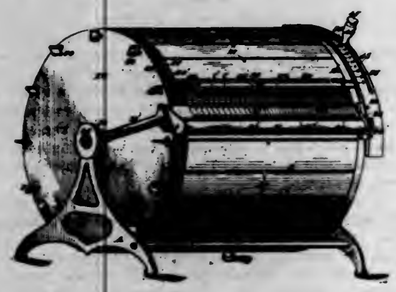
1,113,800. CHECK-ROWER STAKE. DAVID NEWMYER LUSE, Rockwell City, Iowa. Filed Jan. 31, 1914. Serial No. 815,749. (Cl. 171—42.)

1. A device of the character specified, comprising a rod provided at each end with a head and having an annular shoulder or stop between each head and the pipe or rod, each head having spaced bearing lugs extending longitudinally of the rod, a stake for each end of the rod, each stake having one end pointed and having at the other end a bearing lug fitting between the adjacent lugs of

the rod, a pivotal connection between the lugs at each end of the rod, a foot plate for each stake, each foot plate having a bearing through which the stake is passed, a pin rigidly connecting each plate to the stake, a stirrup on the rod, the body of the stirrup having a perforated lug, a roller journaled between the arms of the stirrup on the opposite side of the rod from the lug, and a yoke for connection with the stirrup, the yoke comprising a body having a hook for engaging the adjacent lug and arms each having a hook for engagement by the check wire.

2. A device of the character specified, comprising a rod provided at each end with a head and with a pair of longitudinally extending laterally spaced bearing lugs on the outer side of each head, a stake at each end of the rod, each stake having a lug received between the adjacent pair of lugs and pivoted thereto, a foot plate arranged transversely of each stake near the upper end thereof, a stirrup in connection with the rod and adapted for detachable connection with one end of a check wire, the stirrup comprising a body and arms extending on opposite sides of the rod, and a roller shaped to fit the rod journaled between the arms on the opposite side of the rod from the body.

1,113,801. INTEREST-CALCULATOR. JOHN M. MACLEAN, La Panza, Cal., assignor of one-third to Frank K. Lippitt and one-third to Thomas Maclay, Petaluma, Cal. Filed Nov. 12, 1913. Serial No. 800,517. (Cl. 235—87.)



1. In an interest calculator, the combination of a rotary drum having a series of longitudinal chambers and slots on its periphery communicating with said chambers, means for rotating said drum, a series of reels of interchangeable calculating rate charts mountable in said chambers and adapted to be unwound through the slots, and pivoted means turnable in concentric relation to the drum for engaging the charts singly to unwind same, said pivoted means being actuated by the movement of the drum rotating means.

2. In an interest calculator, the combination of a rotary drum having a series of longitudinal chambers and slots on its periphery communicating with said chambers, a series of reels of interchangeable calculating rate charts mountable in said chambers and adapted to be unwound through the slots, means movable around the surface of the drum for engaging the charts singly to unwind the same over the surface of the drum, stationary means for indicating on the chart the interest of a predetermined amount, and means coöperating with the drum and chart engaging means for determining periods of time.

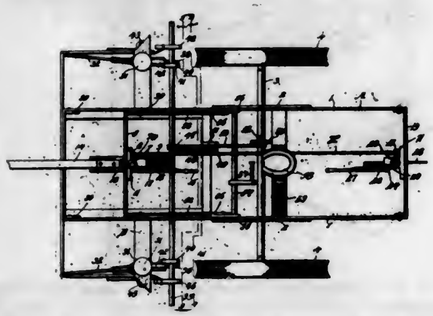
3. In an interest calculator, a rotary drum, means for holding a series of reels of interest calculating charts in said drum, means for rotating the drum to position the charts in reading relation to a reading line, and means for locking the drum against rotation, said means comprising rack bars and a pawl coöperating therewith.

4. In an interest calculator, a rotary drum, means for holding a series of reels of interest calculating charts in said drum, means for rotating the drum to position the charts in reading relation to a reading line, means for locking the drum against rotation, and means controlled by the locking of the drum for automatically engaging the calculating charts.

5. In an interest calculator, a rotary drum, means for holding a series of reels of interest calculating charts in said drum, means for rotating the drum to position the charts in reading relation to a reading line, means for locking the drum against rotation, means controlled by the locking of the drum for automatically engaging the calculating charts, and means for moving the chart engaging means around the drum independent thereof.

[Claims 6 to 37 not printed in the Gazette.]

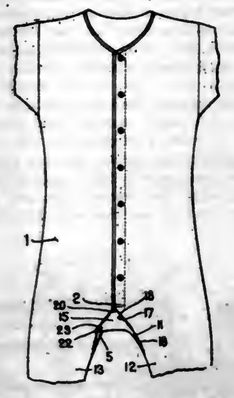
1,113,802. CORN-PLANTER. JAMES V. MARLEN, Modoc, Ill. Filed Aug. 4, 1911. Serial No. 642,287. (Cl. 111—6.)



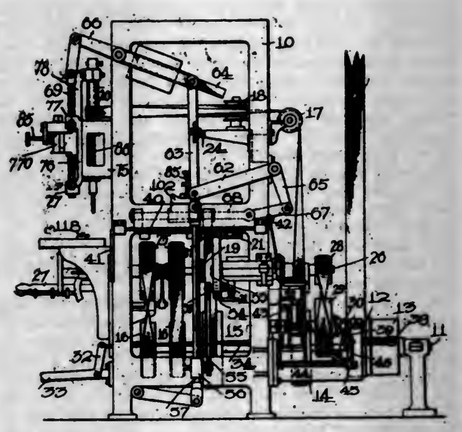
A planter comprising a frame, journaled wheels supporting the intermediate portion of the frame, a wheel pivotally mounted at the forward part of the frame and adapted to turn horizontally, a soil engaging member journaled at the rear part of the frame and pivoted to turn horizontally, the last mentioned wheel and the soil engaging member being located at the opposite sides of the first mentioned wheels, means connecting the last mentioned wheel and the soil engaging member to cause them to turn horizontally and simultaneously in the same direction and means for adjusting the soil engaging member vertically with relation to the frame.

1,113,803. UNION UNDERGARMENT. LESTER D. MARSH, Malden, Mass., assignor to Yale Knitting Company, Malden, Mass., a Corporation of Massachusetts. Filed Nov. 20, 1913. Serial No. 802,158. (Cl. 2—144.)

A union undergarment comprising a body having a posterior opening, an inner and an outer flap member for closing said opening, the inner flap member having a relatively narrow body provided at its lower end with a leg portion that is sewed into the leg of the garment and a narrow inwardly directed extension that extends only to the crotch, and the outer flap member having a sufficiently wide body to cover the body of the inner flap and provided at its lower end with a leg portion and with a lateral extension separated from the leg portion proper by a notch, which extension is brought forward through the crotch, the adjacent meeting edges of the leg portion and extension being sewed to the leg of the garment by a continuous seam that extends up the leg of the garment to a point on the front of the garment above the crotch, said lateral extension overlying and being detachably secured to the upper part of the leg portion of the inner flap.



1,113,804. BORING AND DRILLING MACHINE. LEVI G. MCKNIGHT, Gardner, Mass., assignor to L. G. McKnight & Son Co., Gardner, Mass., a Corporation of Maine. Filed Sept. 12, 1910. Serial No. 581,644. (Cl. 144—92.)



1. A boring and drilling machine having in combination, a shaft, means including a reversing clutch to drive said shaft in either direction, a clutch shaft, drill feeding devices operable thereby, a rotatable member loosely mounted on said clutch shaft and driven from said first named shaft, a clutch effective to connect said rotatable member to said clutch shaft, and manually operated means movable in a single direction to start said feed in either direction, the direction of feed being determined by the position of the reversing clutch.

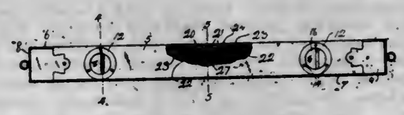
2. A boring and drilling machine having in combination a shaft, means including a reversing clutch to drive said shaft in either direction, a clutch shaft, drill feeding devices operable thereby, a rotatable member loosely mounted on said clutch shaft and driven from said first named shaft, a clutch effective to connect said rotatable member to said clutch shaft, means including a yoke for operating said clutch, normally yieldingly held in inoperative position, manually operated means to move said yoke to close the clutch, means to hold the yoke in operative position, an automatic device to release said yoke at a predetermined point in the operation of the machine, and means to render said automatic device inoperable at will.

3. A boring and drilling machine having in combination a shaft, means including a reversing clutch to drive said shaft in either direction, a clutch shaft, drill feeding devices operable thereby, a rotatable member loosely mounted on said clutch shaft and driven from said first named shaft, a clutch effective to connect said rotatable member to said clutch shaft, means including a yoke for operating said clutch, normally yieldingly held in inoperative position, manually operated means to move said yoke to close the clutch, means to hold the yoke in operative position, an automatic device to release said yoke at a predetermined point in the operation of the machine, and means to render said automatic device inoperable at will, said last named means including a rotating cam lug, a releasing lever located wholly outside of the path of said lug, and a lever extension hinged to said lever and movable at will into the path of said lug.

4. A drilling and boring machine having in combination a frame, brackets fixed to said frame, rods mounted to slide vertically in said brackets, a cross head secured to said rods, spindle frames secured to said cross head, and a bearing block for each spindle frame, said cross head having a longitudinal groove in its upper surface, said spindle frames each having a groove in its under surface transverse to said cross head, and said bearing blocks each having ribs on its upper and lower faces fitting said grooves and holding a spindle frame in rectilinear relation to said cross head.

5. A drilling and boring machine having in combination a frame, brackets fixed to said frame, rods mounted to slide vertically in said brackets, a cross head secured to said rods, and spindle frames secured to said cross head, said cross head having a T-slot in its front side and said spindle frame having a headed screw threaded therein, the head fitting the slot and the screw being effective to adjust the frame relative to the cross head.

1,113,805. LEVEL. DONALD MCNEIL, Halifax, Nova Scotia, Canada. Filed Oct. 25, 1913. Serial No. 797,310. (Cl. 33—213.)



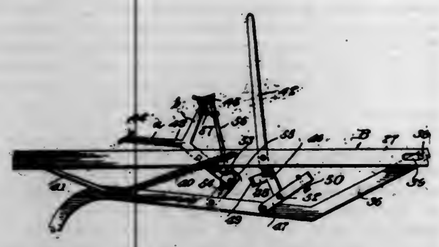
1. A spirit level comprising a body provided with a recess, a spirit tube arranged in said recess, adjustable means mounted in the body over which the ends of said tube extend and upon which the tube is wholly supported, and a plastic binding agent disposed over the ends of the tube and said adjusting means to prevent access to the adjusting means.

2. A spirit level comprising a body provided with a recess, a spirit tube arranged in said recess, flat head screws threaded in the body at opposite ends of the recess, the ends of the tube extending over and entirely covering the heads of said screws, said screws supporting the tube in spaced relation to the base of the recess, and a plastic binding agent disposed over the ends of the tube and the screw heads to prevent access to the latter.

1,113,806. MOTOR-PLOW. WILLIAM MEIDENBAUER, Waukesha, Wis. Filed Oct. 3, 1913. Serial No. 793,223. (Cl. 97—58.)

1. In a device of the class described, a main frame, a vertically adjustable plow carrying frame having side members provided with longitudinal slots, a plow beam having a cross bar guided in said slots, a spring connecting the plow beam with the frame and operating to move the plow beam in an upward and forward direction, and

means for lowering the plow beam against the tension of the spring and for locking said beam in lowered position.



2. In a device of the class described, a plow carrying frame including side members having longitudinal slots, a plow beam having a cross bar guided in said slots, a lifting spring connecting the plow beam with the frame and operating to force said beam in a forward direction, a crank connecting the plow beam with the frame, and plow adjusting means including a hand lever and a foot lever, each fulcrumed on the frame and each having a downwardly extending arm, and links connecting said arms with the plow beam; one of said links being provided with an extension having a set screw coöperating with a stop member on the lever arm to form a locking device whereby the plow beam may be secured with the plow in ground engaging position.

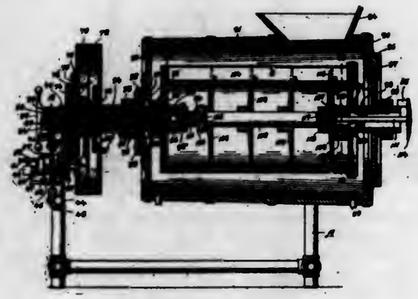
3. In a device of the class described, a main frame, a vertically adjustable plow carrying frame having side members provided with longitudinal slots, a plow beam having a cross bar guided in said slots, a spring connecting the plow beam with the frame and operating to move the plow beam in an upward and forward direction, means for lowering the plow beam against the tension of the spring and for locking said beam in a lowered position, and means for raising the plow beam with the tension of the spring and for locking said beam in a raised position.

4. In a device of the class described, a plow carrying frame including side members having longitudinal slots, a plow beam having a cross bar guided in said slots, a crank connecting the plow beam with the frame, a lifting spring connecting the plow beam with the frame and operating to force said beam in a forward direction, and plow adjusting means including a foot lever having upwardly extending divergent arms and a downwardly extending arm, a link connecting the downwardly extending arm with the plow beam, said link having a ratchet head, a treadle pivoted on one of the upwardly extending arms of the foot lever, and a suitably guided spring actuated dog pivotally connected with the treadle and engaging the ratchet head of the link.

1,113,807. ICE-CREAM FREEZER. CHRISPIN S. MEISENHELTER, York, Pa., assignor to Gustus Meisenhelter, York, Pa. Filed Feb. 28, 1913. Serial No. 751,356. (Cl. 259.)

1. In an ice cream freezer, a frame, a stationary tub supported on the frame, a frog supported on the frame, a revoluble sleeve extending through the head of the tub and having a clutch member, a freezer can supported for rotation within the tub and having a coöperating clutch member, a stationary tubular member supported by the frog and having a clutch member at its inner end, a shaft member, axial with respect to the freezer can, and extending through the clutch member associated with the freezer can, said shaft member having a clutch member coöperating with the clutch member on the stationary tubular member, and a connecting member threaded into the axial shaft member and bearing externally on the frog to form a closure for the chamber of the latter.

2. In an ice cream freezer, a frame, a stationary tub supported on the frame, a frog supported on the frame, a revoluble sleeve extending through the head of the tub and having a clutch member, a freezer can supported for rotation within the tub and having a coöperating clutch member, a stationary tubular member supported by the frog and having a clutch member at its inner end, a shaft member, axial with respect to the freezer can, and extending through the clutch member associated with the freezer can, said shaft member having a clutch member coöperating with the clutch member on the stationary tubular member, and a connecting member threaded into the axial shaft member and bearing externally on the frog to form a closure for the chamber of the latter; an obstructing collar on the axial shaft member adapted to engage the inner end of the clutch member associated with the freezer can, and a spring interposed between the frog and the revoluble sleeve.



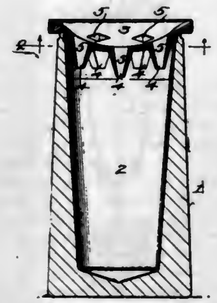
3. In an ice cream freezer, the combination with suitable supporting means, of a revoluble sleeve, a freezer can mounted for rotation, coöperating clutch members associated with the sleeve and with the freezer can, a stationary tubular member extending through the revoluble sleeve, a stationary shaft axial with respect to the freezer can and extending through the clutch member associated with the latter, coöperating clutch members on the axial shaft and the stationary tubular member, a connecting member extending through the stationary tubular member and having threaded engagement with the axial shaft, said connecting member having a duct extending therethrough and communicating through the axial shaft with the interior of the freezer can, and means for forcing cream under pressure through the duct of the connecting member.

4. In an ice cream freezer, the combination with supporting means including a frame, a tub supported on the frame and a frog mounted on the frame, of a freezer can mounted for rotation within the tub and having a clutch member, a revoluble driven sleeve having a clutch membed coöperating with the clutch member of the can, a stationary tubular member connected with the frog and extending through the revoluble sleeve, a shaft member axial with relation to the freezer can, coöperating clutch members on the axial shaft and on the stationary tubular member, a connecting member extending through the stationary tubular member and having threaded connection with the axial shaft, said connecting member having a duct and said axial shaft having an aperture through which said duct communicates with the interior of the can, and a handle on the connecting member abutting on the frog.

5. In an ice cream freezer, the combination with supporting means including a frame, a tub supported on the frame and a frog mounted on the frame, of a freezer can mounted for rotation within the tub and having a clutch member, a revoluble driven sleeve having a clutch member coöperating with the clutch member of the can, a stationary tubular member connected with the frog and extending through the revoluble sleeve, a shaft member axial with relation to the freezer can, coöperating clutch members on the axial shaft and on the stationary tubular member, a connecting member extending through the stationary tubular member and having threaded connection with the axial shaft, said connecting member having a duct, and said axial shaft having an aperture through which said duct communicates with the interior of the can, a handle on the connecting member abutting on the frog, a stationary collar on the axial shaft member, which latter extends through the clutch member of the freezer can, and a spring interposed between the revoluble sleeve and the frog.

[Claims 6 to 13 not printed in the Gazette.]

1,113,808. SALT-SHAKER. AARON MENDELSON, Brooklyn, N. Y. Filed Nov. 5, 1913. Serial No. 799,378. (Cl. 65—57.)



1. A condiment holder, comprising a chambered body, a cap detachably secured in the body and having a flange projecting outwardly thereof, said cap having a concavity in its outer side and depending into the body, and a series of tapered projections formed integral with the cap and projecting inwardly therefrom, said projections having tapered passages communicating with the concaved face and enlarging outwardly, and also having walls tapering inwardly to provide cutting edges adapted to break up cakes or lumps of the condiment and to discharge the same through the passages, the concavity serving to prevent the retention of the condiment on the cap by discharging the same through the passages and into the body.

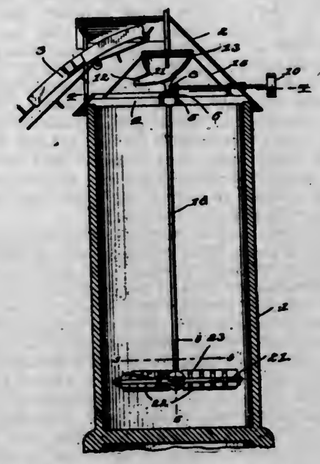
2. A condiment holder, comprising a chambered body, a cap detachably secured in the body and having a flange projecting outwardly thereof, said cap having a concavity in its outer side and depending into the body, and a series of tapered projections of rectangular cross section formed integral with the cap and projecting inwardly therefrom, said projections having tapered passages communicating with the concaved face and enlarging outwardly, and also having walls tapering inwardly to provide cutting edges adapted to break up cakes or lumps of the condiment and to discharge the same through the passages, the concavity serving to prevent the detention of the condiment on the cap by discharging the same through the passages and into the body, the exterior walls of the projections branching outward from each other toward the bottom of the body and spaced from the surrounding interior wall of the body and said flange facilitating the attachment and removal of the cap and preventing the holder from lying on its exterior wall should it tip over.

1,113,809. SILO-FILLER. WILLIAM H. MENGLE, Danville, Ill. Filed Jan. 28, 1914. Serial No. 815,037. (Cl. 100—56.)

1. A silo filler and packer comprising an open platform, a hopper supported thereon, means to rotate the hopper and a rotating packing device rotating with the hopper.

2. A silo filler and packer comprising an open platform, a hopper rotatably mounted thereon, means for rotating the hopper and a freely, vertically movable packing device rotating with the hopper.

3. A silo filler and packer comprising an open platform, a hopper rotatably mounted thereon, means for rotating the hopper, a shaft freely, slidable through the hopper and actuated thereby and a packing device carried by the hopper.

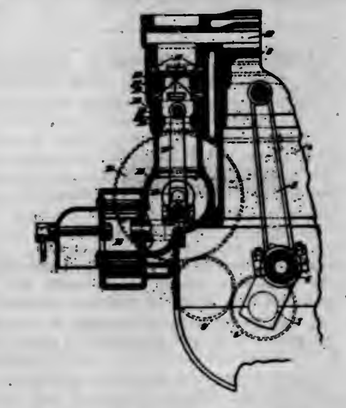


4. A silo filler and packer comprising an open platform, a hopper rotatably mounted thereon, means for rotating the hopper, a sectional shaft freely slidable through the hopper and actuated thereby and a packing device carried by the hopper.

5. A silo filler and packer comprising an open platform, a hopper rotatably mounted thereon, a shaft freely slidable through the hopper, a leveling and packing device carried by the shaft and means for driving the shaft and hopper.

[Claims 6 to 8 not printed in the Gazette.]

1,113,810. INLET-VALVE FOR GAS-ENGINES. ALBERT C. MENGES, Memphis, Tenn., assignor of one-half to John H. Hines, Memphis, Tenn. Filed Feb. 18, 1910. Serial No. 544,558. (Cl. 123—188.)



1. In an explosive engine the combination with the main cylinder and its piston of an auxiliary inlet cylinder in direct communication with the main cylinder, a separate lining in said auxiliary cylinder having independent longitudinally spaced ports connected by a passageway formed in the structure behind said lining, a hollow piston valve in said auxiliary cylinder provided with a port intermediate of its length and adapted to

register with the inner port of the lining, and means driven by the main piston for positively reciprocating said piston valve to control said lining ports, substantially as set forth.

2. In an explosive engine the combination with the main cylinder and its piston of an auxiliary inlet cylinder having an annular recessed portion near the upper end thereof and an open outer end communicating with said main cylinder, a lining sleeve for said inlet cylinder adapted to bridge said annular recessed portion and having ports near each end of said annular recess and communicating therewith, a hollow piston closed at the top and having a port intermediate its ends adapted to slide within said lining sleeve and arranged with its head adapted to control the upper ports and the intermediate port therein adapted to control the lower port in said sleeve lining, substantially as set forth.

3. In an explosive engine the combination with the main cylinder and its piston of an auxiliary inlet cylinder having an annular recessed portion near the upper end thereof, a lining sleeve for said inlet cylinder adapted to bridge said annular recessed portion and formed with ports adapted to communicate with the upper and lower extremities thereof, a hollow piston closed at the top having a port spaced from said closed top a distance equal to the distance between said sleeve ports and an annular recess above its said port, a packing ring mounted in said recess in said piston, and means for reciprocating said piston whereby when said piston is at the limit of its inward stroke a communication is established between the inward end of said inlet cylinder and its open upper end which communicates with the engine cylinder, substantially as set forth.

4. In an explosive engine the combination with the main cylinder and its piston of an auxiliary inlet cylinder having an annular recessed portion near the upper end thereof and an open end communicating with the main cylinder, a lining sleeve for said cylinder having vertically spaced ports adapted to communicate with each end of said recessed portion, a hollow piston closed at the top adapted to slide within said sleeve for controlling said ports, said piston having a port intermediate its ends adapted to register with the inner port in said sleeve, and the piston head being adapted to control said upper port, whereby a charge may be admitted from the lower part of said inlet cylinder through said piston port in register with said lower sleeve port into said annular recess, and then through said upper sleeve port into the upper part of said inlet cylinder, substantially as set forth.

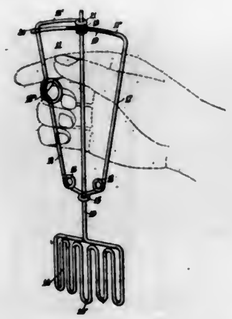
1,113,811. EYEGLASSES. EDWARD F. MESSIER, New York, N. Y. Filed Oct. 18, 1913. Serial No. 795,952. (Cl. 88—47.)

1. In an eyeglass the combination with a lens provided with a series of sockets located at the inner and outer face portions of the lens, a pair of clamping members having studs for engagement with the sockets, a screw fixed to one of the members, a nose guard and a spring bridge mounted on the screw, means coacting with the screw and the other clamping member for adjusting the clamps.

2. In an eyeglass the combination with a lens provided with pairs of sockets each pair being located at the inner and outer face portions of the lens, a pair of clamping members having studs for engagement with the sockets, a screw fixed to one of the members, a nose guard and a spring bridge mounted on the screw, said clamping members having extended portions to constitute a receptacle for housing the terminals of the nose guard and bridge, means coacting with the screw and the other clamping member for adjusting the clamps.

3. In an eyeglass the combination with a lens provided with pairs of sockets each pair being located at the inner and outer face portions of the lens, a pair of clamping members having studs for engagement with the sockets, a screw fixed to one of the members, a nose guard and a spring bridge mounted on the screw, said clamping members having extensions with closed ends to constitute a receptacle for housing the terminals of the nose guard and bridge, and a nut to engage the screw for adjusting the clamps.

1,113,812. MECHANICAL MOVEMENT. SIGMUND MESTEL, New York, N. Y. Filed Sept. 12, 1913. Serial No. 789,447. (Cl. 74—27.)



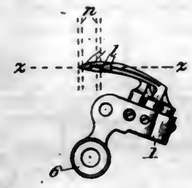
1. In a device of the character set forth, the combination of a shaft, a shrouded pinion secured adjacent one end of the shaft, and an actuator formed of a single piece of spring metal and having at its middle portion a bearing loop through which the shaft extends and being bent adjacent thereto into a plurality of spring coils, the parts of the actuator thence forming a pair of oppositely arranged hand grips and each terminating in an arm, the arm of one grip extending toward and substantially parallel to the other arm, one of said arms having a series of rack teeth meshing with said pinion and terminating in a hook over the other arm, and the arm opposite the rack terminating in a bearing loop surrounding the shaft and lying adjacent the pinion.

2. In a device of the character set forth, the combination of a round wire shaft having a polygonal seat adjacent one end, a shrouded pinion fitted upon said seat, and an actuator to rotate the shaft through said pinion, said actuator comprising a single piece of spring metal formed into a bearing loop at the middle portion thereof for cooperation with one portion of the shaft and having a pair of spring loops formed adjacent thereto, the two parts of the actuator thence forming hand grips and each having at the end thereof opposite the bearing loop an arm, the arm of one member extending toward and substantially parallel to the other arm, one arm having a series of rack teeth coöperating with said pinion and held by the shrouded pinion from movement lengthwise of the shaft, said rack arm terminating in a hook limiting the relative movement between the grip members in one direction, and the opposite arm terminating in a bearing loop surrounding the shaft adjacent said pinion, substantially as set forth.

1,113,813. LOOPER-CARRIER FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1909. Serial No. 503,844. (Cl. 112—5.)

1. A looper carrier having a plurality of pairs of looper-receiving sockets staggered relative to each other, whereby the pairs of loopers carried therein may be brought close together.

2. The combination of a looper carrier and a plurality of loopers supported thereon and arranged in parallel relation to each other, said carrier being formed with sockets for the respective looper shanks, the socket for the rearmost looper shank being staggered relative to the sockets for the looper shanks immediately in front thereof whereby the loopers carried therein may be brought close together.



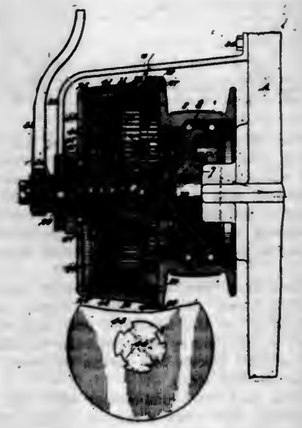
3. A looper carrier provided with a plurality of sockets staggered relative to one another, the centers of which are arranged in separate parallel planes at right angles to the pivotal axis of the carrier, which planes are located close to each other.

4. A looper-carrier provided with a plurality of sockets staggered relative to one another, the centers of which are arranged in separate parallel planes at right angles to the pivotal axis of the carrier, which planes are located close together, the center lines of said sockets being inclined relative to each other, whereby similar loopers mounted in said sockets may be positioned so that the beaks thereof are in substantially the same horizontal plane at the time of entering the needle loops.

5. A looper carrier having a plurality of fixed sockets formed therein, said sockets being located side by side and extending in the same general direction, a plurality of similar loopers mounted in said sockets and extending in substantially the same direction with their beaks side by side, said sockets also having their center lines inclined relative to each other, whereby said loopers are positioned so that the beaks thereof are in substantially the same horizontal plane at the time of entering the needle loops.

[Claim 6 not printed in the Gazette.]

1,113,814. CHANGE-SPEED MECHANISM FOR MOTOR-CYCLES. EDGAR W. MYERS, San Jose, Cal., assignor to Rudolph-Myers Manufacturing Co., San Jose, Cal., a Corporation of California. Filed Apr. 26, 1913. Serial No. 763,751. (Cl. 74—34.)



1. A variable speed transmission gearing for motorcycles, comprising a drive-shaft, a driving pinion secured to the shaft, a transmission pulley journaled on the shaft, a secondary driving pinion secured to the pulley, a disk 11 journaled on the shaft, a pair of stud bolts secured to said disk, a pair of intermediate gears on each stud bolt intermeshing with the driving pinion and the secondary pinion, a clutch member secured to the transmission pulley, a cone clutch member slidably mounted on studs projecting from disk 11 adapted to engage with the clutch member, means for throwing the clutch members into engagement to transmit motion from the driving pinion to the transmission pulley, and means for holding the cone clutch member stationary to transmit motion at another speed to the transmission pulley.

2. A variable speed transmission gearing for motorcycles, comprising a drive-shaft, a driving pinion secured to the shaft, a transmission pulley journaled on the shaft, a secondary driving pinion secured to the puley, a disk 11 journaled on the shaft, a pair of stud bolts secured to said disk, a pair of intermediate gears on each stud bolt intermeshing with the driving pinion and the secondary pinion, a clutch member secured to the transmission pulley, a cone clutch member slidably mounted on studs projecting from disk 11 adapted to engage with the clutch member, springs surrounding the studs upon which the cone is slidably mounted adapted to normally force the cone into engagement with the clutch member, a multiple disk clutch having a stationary member and adapted to engage with the disk 11, and means for throwing the multiple disk clutch into and out of engagement with the disk 11.

3. A variable speed transmission gearing for motorcycles, comprising a drive-shaft, a driving pinion secured to the shaft, a transmission pulley journaled on the shaft, a secondary driving pinion secured to the pulley, a disk 11 journaled on the shaft, a pair of stud bolts secured to said disk, a pair of intermediate gears on each stud bolt, intermeshing with the driving pinion and the secondary pinion, a clutch member secured to the transmission pulley, a cone clutch member slidably mounted on studs projecting from disk 11 adapted to engage with the clutch member, springs surrounding the studs upon which the cone is slidably mounted adapted to normally force the cone into engagement with the clutch member, a screw plug slidably and revolubly mounted on the outer end of the drive-shaft, a sleeve surrounding said plug, means for securing the sleeve against revolving movement, said sleeve having grooves formed in the outer end, a plurality of stationary disks having downwardly extending lugs engaging with said grooves slidably mounted on the sleeve, a plurality of revoluble disks mounted on the sleeve interposed between the stationary disks, means connecting the revoluble disks with the disk 11, and means on the screw plug for throwing the several disks into and out of engagement with the disk 11.

4. A two speed transmission gearing for motorcycles, including a shaft, a driving pulley mounted thereon, a driving pinion on the shaft and a second pinion carried by the pulley, a disk on the shaft and gears carried thereby and intermeshing with the above named pinions, cone clutch members upon the transmission pulley and the disk, and a multiple disk clutch having one stationary member, and means to engage said clutch with the before mentioned disk.

1,113,815. HORSE-PROTECTOR. JOHN W. NILSSON, Balfour, N. D. Filed Mar. 2, 1914. Serial No. 821,931. (Cl. 54—80.)

1. A protector of the class described comprising a rectangular strip of textile material, metallic braces clamped to said strip at its ends, and extending transversely of said strip, and an eye secured centrally to each of said metallic braces, said eye comprising a length of wire substantially U-shaped, and extending at its ends through said braces and clamped thereagainst for securing the eye in place, said eyes being adapted to be engaged by the bit ring holding straps of a bridle, whereby the protector may be swingingly depended below an animal's mouth.

2. A protector comprising a strip of flexible material, rigid braces secured transversely of said strip at its ends, and means for swingingly securing said braces centrally

of their length to a bridle, whereby the protector may be swingingly depended below an animal's mouth.

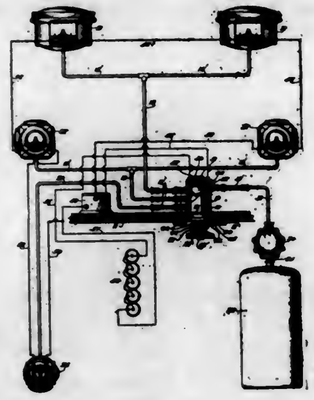
1,113,816. CUTTLEBONE-HOLDER. SAMUEL NOLAN, San Francisco, Cal. Filed Oct. 15, 1913. Serial No. 795,293. (Cl. 119—18.)

A holder for cuttle bone and the like, consisting in the combination with a slatted cage of a piece of wire bent into substantially V-shaped form with straight legs inserted between the slats of the cage with the legs projecting outward, said legs forming inclined planes converging at the apex of the bend within the cage and coacting frictionally with means on the cage automatically to project the holder toward the outside of the cage and thereby automatically clamp within the holder and against the cage articles that vary in size.

1,113,817. CONTROLLER FOR AUTOMOBILE GAS-LAMPS. AUGUSTUS M. O'BRIEN and WILLIAM D. FERRIS, Sharon, Pa. Filed Aug. 28, 1912. Serial No. 717,629. (Cl. 175—116.)

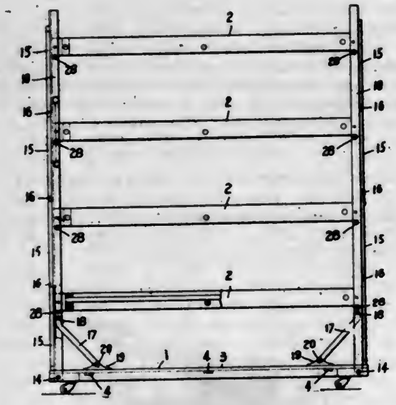
1. A controller for automobile gas lamps comprising a valve casing having inlet and discharge passages, a rotary valve in said casing having a bore extending axially therethrough, said valve having a passage extending therethrough and arranged entirely outside of and independent of said central bore for controlling communication between the inlet and discharge passages of said casing, an electrical contact device mounted on the inner end of said casing and a shifter for said contact device extending through said central bore, substantially as described.

2. A controller for automobile gas lamps comprising a valve casing having inlet and discharge passages, a rotary plug valve in said casing having a stem extending through the outer end of said casing, said valve having a passage extending therethrough and arranged entirely outside of and independent of said central bore for controlling communication between the inlet and discharge passages of said casing, a shifter for said valve on the outer projecting end of said valve stem, an electrical contact device mounted on the inner end of said valve casing and a shifting rod



for said contact device extending through the central bore of said valve stem and valve, substantially as described.

1,113,818. SHOE-RACK. EDWARD F. O'BRIEN, Somerville, Mass. Filed Apr. 28, 1913. Serial No. 763,998. (Cl. 211—14.)



1. In a shoe rack, the combination with end uprights, each provided with a vertically-extending channel-shaped member, of shoe-supporting shelf members sustained by the uprights and each having integral therewith at each end a projection extending longitudinally of the shelf and entering between the sides of the channel-shaped members, and means to clamp said projections between said sides.

2. In a shoe rack, the combination with end uprights each comprising two channel-shaped corner pieces, of shelves supported by the uprights, and each having at each end two projections to enter between the sides of the channel-iron corner pieces, and means to clamp the projections between said sides.

3. In a shoe rack, the combination with end uprights each comprising two channel-shaped corner pieces, of shelves supported by the uprights, and each having at each end two projections to enter between the sides of the channel-shaped corner pieces, supporting bolts extending transversely through the corner pieces and on which said projections rest, and means to tie the shelves to the corner pieces.

4. In a shoe rack, the combination with end uprights each comprising two channel-shaped corner pieces, of shelves supported by the uprights, and each having at each end two projections to enter between the sides of the channel-shaped corner pieces, supporting bolts extending transversely through the corner pieces and on which said projections rest, and locking members extending transversely through the corner pieces and said projections.

5. In a shoe rack, the combination with a base having connected side sills, of end uprights, each comprising two connected channel-shaped corner pieces, each corner piece being forked at its lower end, and the arms of the fork entering apertures in the side sill, means to detachably connect said forked lower ends of the uprights to the side sills and shelves supported by said corner pieces.

[Claims 6 to 8 not printed in the Gazette.]

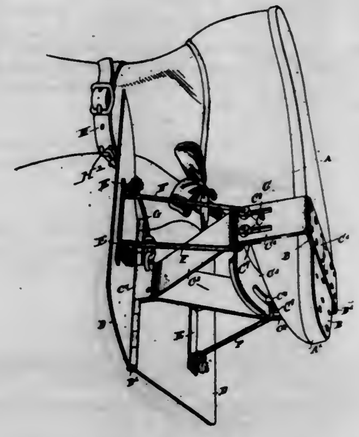
1,113,819. ELECTRICAL COUPLING OF SIGNAL-ARMS FOR RAILWAYS. ALFRED OESTERREICHER, deceased, Vienna, Austria-Hungary, by Leopoldine Oesterreicher, widow and guardian, and Julius Khu, coguardian, assignors to Brüder Redlich & Berger, Vienna, Austria-Hungary, a Firm. Filed Sept. 12, 1912. Serial No. 720,063. (Cl. 246—59.)

1. In a railway signaling apparatus, the combination, with a pivotally-mounted signal, and a signal-operating means; of a pair of inter-fitted rods movable independently of each other and connected, one to said signal, and the other to the said operating means; locking means carried by the first-named rod for releasable engagement with the other rod; and an electromagnet having a movable armature connected with the locking means, for engaging the latter with the said other rod when said magnet is energized.

2. In a railway signaling apparatus, the combination, with a pivotally-mounted signal, and a signal-operating means; of a pair of inter-fitted rods movable independently of each other and connected, one to said signal, and the other to the said operating means, the second-named rod having a beveled head; a locking bar pivoted to the first-named rod and having a portion arranged to engage said head; and an electro-magnet having a movable armature connected with said locking bar, for moving the latter into position to engage said head, and for holding the same in such engagement, when said magnet is energized.

3. In a railway signaling apparatus, the combination, with a pivotally-mounted signal, and a signal-operating means; of a pair of inter-fitted rods movable independently of each other and connected, one to said signal, and the other to the said operating means, the second-named rod having a beveled head; a locking bar pivoted to the first-named rod; an electro-magnet having a movable armature; and a fork connected to said armature and straddling said first-named rod and said bar, said fork having a roller bearing against the latter for moving the same into position to engage said head and for holding it in such engagement, when said magnet is energized.

1,113,820. SWIMMING DEVICE. ERIK GOTTFRIED ÖSTERBERG, Worcester, Mass. Filed Nov. 25, 1913. Serial No. 802,929. (Cl. 9—21.)



1. A swimming device, comprising foot-gear, a bracket attached to the forward end of the footgear and having a peak-shaped upper portion, wings hinged on the said upper portion of the bracket to swing into extended or folded position, the said bracket forming a stop for the wings when in folded position, flexible stops for limiting the movement of the wings when moving into extended position, and means for flexibly connecting the upper end of the bracket with the ankle of the wearer.

2. A swimming device, comprising a foot-gear, a bracket attached to the forward end of the footgear and having a peak-shaped upper portion and an adjustable plate connecting the side members of the bracket, wings hinged on the said upper portion of the bracket to swing into extended or folded position, the said bracket forming a stop for the wings when in folded position, and flexible stop members secured to the under side of the said wings and to adjustable plate of the said bracket to limit the movement of the wings when moving into extended position.

3. A swimming device, comprising a foot-gear, a bracket attached to the forward end of the footgear and having a peak-shaped upper portion, wings hinged on the said upper portion of the bracket to swing into extended or folded position, the said bracket forming a stop for the wings when in folded position, limiting stops for limiting the movement of the wings when moving into extended position, a brace extending longitudinally and connected at its forward end with the said upper portion of the bracket, and an ankle band adapted to be attached to the wearer's ankle, the rear end of the said brace being attached to the said ankle band.

4. A swimming device, comprising a shoe, an attaching plate secured to the sole of the shoe near the forward end thereof and bearing side arms projecting beyond the side edges of the sole, a bracket having a bottom attached to the said attaching plate, the said bracket having side members rising from the said bottom and terminating in upwardly and inwardly inclined top members, a cross plate connecting the upper ends of the side members with each other, the cross plate being integral, downwardly-extending retaining lugs, a longitudinally-extending pintle

carried by the said top members, wings hinged on the said pintle and adapted to swing up and down, the downward movement being limited by the said side members of the bracket, and cords held on the said lugs and connected with the under side of the said wings.

5. A swimming device, comprising a bracket adapted to be attached to the sole of a shoe and having a peaked upper end, wings pivoted to the upper peaked end of said bracket, cords secured to the wings and bracket, and a flexible brace having one end secured to the upper end of the bracket and carrying at its other end a strap adapted to be secured around the ankle of the wearer.

[Claim 6 not printed in the Gazette.]

1,113,821. LOCK FOR HAND-BAGS. JOHAN PARTMANN, New York, N. Y., assignor of one-half to John Nagy, New York, N. Y. Filed Oct. 25, 1913. Serial No. 797,206. (Cl. 190—55.)

1. A bag having two frame members, a stud on one of the frame members and provided with bearing openings at opposite ends, there being in the stud circular grooves communicating with the bearing openings and guideways extending outwardly parallel with the axes of the bearing openings from the circular grooves to the ends of the stud, a handle having a hollow terminal and a second terminal, the terminals of the handles being provided with pins for moving in the guideways and for rotating in the circular grooves, there being a recess in the stud extending through the outer surface of the stud between the said ends, the stud having a guideway extending from the hollow terminal of the handle to the recess, a tongue on the other frame member and provided with an opening, a bolt in the hollow terminal of the handle for movement through the guideway and into the opening in the tongue, and means for moving the bolt relatively to the handle.

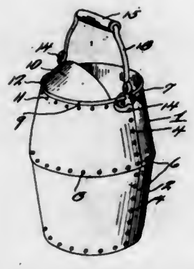
2. A bag having two frame members, a stud on one of the frame members with bearings at opposite sides, a handle having a hollow terminal and a second terminal, the terminals being journaled in the bearings, there being a recess in the stud extending through the outer surface of the stud between the said sides, the stud having a guideway extending from the hollow terminal of the handle to the recess, a tongue on the other frame member and provided with an opening, a bolt member in the hollow terminal of the handle for movement through the guideway and into the opening in the tongue, there being a slot in the side of the hollow portion of the handle, a pin secured to the bolt member and extending through the slot, a ring for movement on the handle, to which the pin is secured, and resilient means for holding the bolt member yieldingly relatively to the handle.

3. A bag having two frame members, a stud secured to one of the frame members and provided with a recess, a hollow handle secured to the stud, there being a guideway in the stud extending from the recess to the hollow portion of the handle, a tongue with an opening secured to the other frame member for movement in the recess, a bolt member in the hollow handle for movement in the guideway and into the opening in the tongue, there being a slot in the side of the hollow portion of the handle, a pin secured to the bolt member and extending through the slot, a ring for movement on the handle, to which the pin is secured, and resilient means for holding the bolt member yieldingly relatively to the handle.

4. A bag having two frame members, a stud secured to one of the frame members and provided with bearing openings at opposite sides, there being in the stud circular grooves communicating with the bearing openings and guideways extending outwardly parallel with the axes of the bearings from the circular grooves to the ends of the stud, a handle having terminals with pins for movement in the guideways and for rotating in the circular grooves, and means for securing the other frame relatively to the stud.

5. A bag having two frame members, a stud secured to one of the frame members and provided with bearing openings at opposite sides, there being in the stud circular grooves communicating with the bearing openings and guideways extending outwardly from the circular grooves, a hollow handle having terminals normally disposed in the bearing openings, pins on the terminals normally disposed in the circular grooves and adapted for movement in the guideways, there being in the stud a recess extending through the outer surface of the stud and a guideway extending from the recess to one of the bearing openings, a tongue on the other frame member for movement in the recess, and a bolt member in the hollow handle for movement in the last mentioned guideway and into the opening in the tongue.

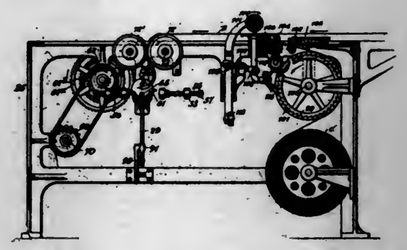
1,113,822. TURPENTINE-DIPPING BUCKET. HEYWARD A. PAXTON, De Land, Fla. Filed Feb. 16, 1914. Serial No. 818,978. (Cl. 220—33.)



A turpentine dipping bucket being constructed of three sheet metal blanks, two of said blanks being riveted and soldered together annularly, the uppermost one of which overlying the lowermost one to form a circular bulge substantially midway of the height of the bucket, the ends of said two blanks being secured together to form a vertical alined seam, and a concaved bottom having downwardly extending tongues overlapping one another laterally riveted and soldered to the interior surface of the bucket to close the lower end thereof.

1,113,823. NEWSPAPER WRAPPING AND LABELING MACHINE. ELMER THEODORE PETERSON, Cimarron, Kans. Filed Jan. 8, 1914. Serial No. 811,049. (Cl. 101—46.)

1. In a machine of the class set forth, the combination of a wrapping device including a head journaled for rotation around a fixed axis, a pair of spaced prongs secured at one end to said head and parallel to said axis, means to introduce papers between said prongs, said paper introducing means including a plurality of rollers acting upon the paper to carry it between the prongs, and means to shift the rollers transversely of said axis, and an ejector arm serving to deliver the paper from wrapping position so as to be grasped by said rollers to deliver the paper from the wrapping device.



2. In a machine of the class set forth, the combination of a wrapping device including a pair of parallel prongs spaced from each other normally in a vertical plane, means to introduce a paper between said prongs, said introducing means including a plurality of rollers, means to elevate said rollers periodically whereby they serve to deliver the paper after being wrapped, means to actuate the wrapping device periodically, and a quick-acting ejector arm serving to force the wrapped paper from the wrapping device into position to be grasped by said rollers when they are elevated.

3. In a newspaper wrapping machine, the combination of a wrapping device including a pair of spaced prongs, means to introduce folded papers in succession between said prongs and to deliver wrapped newspapers therefrom, said introducing and delivering means including a series of rollers having axes lying in substantially the same plane and means to shift said rollers along said plane whereby two of them act to introduce a newspaper and subsequently one of the introducing rollers acts with a third roller to deliver a folded newspaper, means to introduce in succession individual wrappers between the newspapers and one of said prongs, and means to rotate the prongs periodically so as to wrap each newspaper and its wrapper simultaneously.

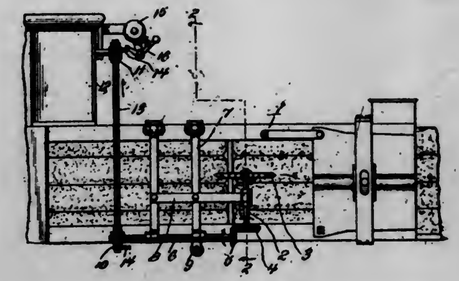
4. In a newspaper wrapping machine, the combination of a horizontal guide trough, a wrapping device comprising a head journaled for rotation at one end of said trough, and a pair of prongs connected to said head and movable around an axis coinciding with the axis of said trough, means to introduce a newspaper along said trough between said prongs, means to introduce wrappers into position to be wrapped with said newspapers, said last mentioned means including an oscillatory guide member movable into and out of the path of said prongs, and means to deliver the wrapped papers from the machine.

5. In a newspaper wrapping machine, the combination of a wrapping trough, wrapping devices operating in conjunction with said trough to form the paper into a roll, means to introduce an addressed and gummed wrapper into association with said newspaper whereby it will be wrapped simultaneously with the paper, said wrapper introducing means including a movable member adapted to move into and out of the path of the wrapping device periodically, and means movable along said trough to start the wrapped paper from the machine.

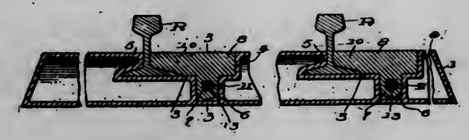
[Claims 6 to 12 not printed in the Gazette.]

1,113,824. INDICATOR ATTACHMENT FOR BALING-PRESSES. JOHN FRANK PICKERILL, Butler, Ill. Filed Oct. 28, 1913. Serial No. 797,829. (Cl. 33—132.)

A press attachment comprising a frame pivoted to the press, spring means for holding the frame toward the press, a shaft journaled for rotation in the frame and having a wheel adapted to be engaged by the material which is passed through the press, a second shaft journaled for rotation in the frame, means for rotating the second shaft from the first mentioned shaft, a sprocket wheel carried by the last mentioned shaft, a sprocket wheel journaled upon the press, a chain trained around the sprocket wheels, and buttons carried by the chain, said buttons adapted by their arrival at a predetermined point to indicate the completion of the bale.

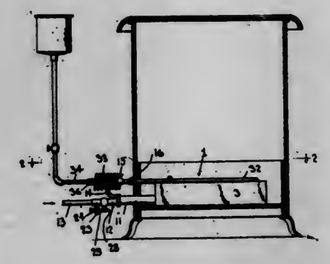


1,113,825. TIE FOR RAILWAY-RAILS. ANDREW J. PLANTZ, Appleton, Wis. Filed Jan. 21, 1914. Serial No. 813,484. (Cl. 238—5.)



A metallic tie and a rail engaging clamp, said tie having its sides inclined from its top to its bottom, in an outward direction, the said tie adjacent its ends being recessed to provide a horizontal straight wall, a vertical wall and a rail engaging lip disposed opposite the vertical wall, the horizontal wall being provided with a pocket, the metal forming the walls of the recess acting as a reinforcement for the sides of the tie, the clamp completely filling said recess in the tie and having one of its ends straight and adapted to abut with the vertical wall of the recess and its other end undercut to form a lip, the undersurface of the clamp having a depending apertured lug that snugly fits in the pocket in the tie, and a wedge member passing through the aperture in the lug and supported at intervals throughout its length by said tie.

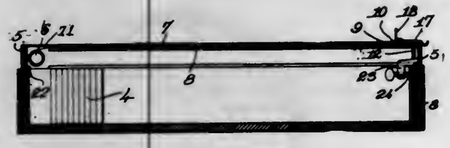
1,113,826. HYDROCARBON-BURNER. GILBERT PONTBRIAND, West Warren, Mass. Filed Apr. 3, 1913, Serial No. 758,679. Renewed May 14, 1914. Serial No. 838,468. (Cl. 158—53.)



In a burner of the character described, a body having therein burner openings, a fuel mixing chamber connected

with said body, a fuel supply chamber connected with said mixing chamber, a valved gas or oil injecting tube connected with said supply chamber, an injector nozzle arranged in said tube and comprising a short tube having a flared discharge end and having its inner end closed and provided with perforations, said inner end having a threaded passage, a spreader arranged in the outer end of said nozzle and having a threaded stem engaged with the threaded aperture in the inner end of the nozzle whereby the spreader is adjusted in the outer end of the nozzle, a gas or oil supply pipe connected with said injector tube, a steam pipe connected with said fuel supply chamber, and a steam controlling valve arranged in said chamber.

1,113,827. SANITARY COVER FOR FOOD-RECEPTACLES. PATRICK J. POWERS, Winthrop, and LEONARD L. GUIBORD, Arlington, Mass. Filed June 24, 1910. Serial No. 568,675. (Cl. 217—62.)



1. In a device of the class described, the combination with a frame provided with an opening and also provided with means to detachably secure it to the open side of a box or case, said frame having grooves in its opposite sides, of a spring roller journaled in the frame, a flexible closure secured to the roller and having its edges occupying said grooves, and clamping plates secured to the end of the closure, the ends of one of said plates entering and being guided by the grooves, the other plate having elongated edges which engage the inner face of the frame side and prevent the closure from twisting.

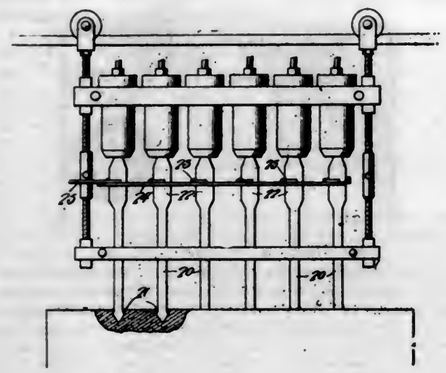
2. In a device of the class described, the combination with a frame provided with an opening and also provided with means to detachably secure it to the open side of a box or case, said frame having grooves in its opposite sides, of a spring roller journaled in the frame, a flexible closure secured to the roller and having its edges occupying said grooves, and clamping plates secured to the end of the closure and extending from one side to the other of the frame, the ends of one of said plates entering and being guided by the grooves and the ends of the other plate engaging the inner part of the frame.

3. In a device of the class described, the combination with a frame having two opposed grooved parallel sides and formed with an opening between said sides, of means to detachably secure said frame to the open side of a box, a spring roll journaled within the frame at one end, a flexible closure secured to the roll and having its edges occupying said grooves, and a plate extending from one side of the frame to the other and covering said roll.

1,113,828. STONE-CUTTING MACHINE. ALEXANDER W. PRATT, North Jay, Me. Filed May 28, 1912. Serial No. 700,304. (Cl. 125—2.)

1. In a stone cutting machine, the combination of an overhead track rail, a head yoke, a gang of pneumatic hammers carried thereby and arranged in a common plane, rollers supporting said yoke on the overhead track and permitting the yoke to be shifted along said rail in the plane in which the hammers are arranged, and screws for elevating and depressing said head yoke relatively to the overhead track rail.

2. In a stone cutting machine, the combination of an overhead track rail, a head yoke suspended therefrom and movable along the same, a gang of pneumatic hammers and cutting bits carried by said yoke and arranged in a common plane, and an adjustable guide for the cutting bits connected with and shiftable toward and away from the yoke.

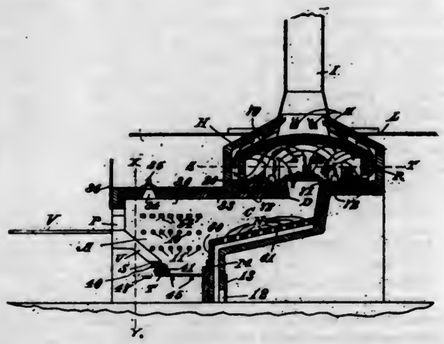


3. In a stone cutting machine, the combination of an overhead track rail, a head yoke suspended therefrom and movable along the same, a gang of pneumatic hammers and cutting bits carried by said yoke and arranged in a common plane, means supporting said yoke and permitting the same to be shifted lengthwise, a guide for said cutting bits, and screws located at opposite ends of the gang of hammers for adjusting said guide toward and away from the work.

4. In a stone cutting machine, the combination of a head yoke, a gang of pneumatic hammers carried thereby and arranged in a common plane, cutting bits carried by said hammers, and a common operating bar operatively connected with all of said bits and adapted to simultaneously oscillate said cutting bits on their longitudinal axes.

5. In a stone cutting machine, the combination of a head yoke, a gang of pneumatic hammers carried thereby and arranged in a common plane, cutting bits carried by said hammers, lever arms on said cutting bits, and a connecting rod common to all of said lever arms, whereby the bits may be oscillated on their longitudinal axes.

1,113,829. REFUSE-BURNER. HENRY RAGOT, Lawrence, Mass., assignor of one-half to Demarest Lloyd, Boston, Mass. Filed Oct. 12, 1912. Serial No. 725,440. (Cl. 110—12.)



1. In an incinerator, the combination of a primary furnace having a feed opening and a grate, and a primary flue which extends from the primary furnace and into which enter ducts from the outside air, with a secondary

furnace through the floor of which the said flue enters and having a domed ceiling, a plurality of secondary flues which extend at intervals from the bottom of the side walls of the secondary furnace and enter a stack, together with feed openings between the secondary flues as described.

2. In an incinerator, the combination of a primary furnace, and a primary flue which extends from the primary furnace, with a secondary furnace having a domed ceiling through the floor of which the said flue enters, and a plurality of secondary flues which extend at intervals from the bottom of the side wall of the secondary furnace, together with feed openings in the secondary furnace as described.

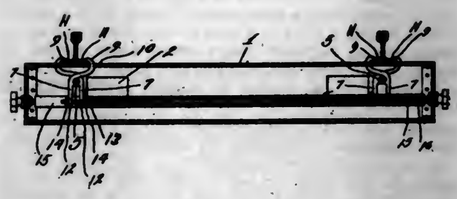
3. In an incinerator for waste material, a primary furnace having a feed opening, an inclined apron extending downward therefrom, and gate bars at the bottom thereof, together with a primary flue which extends from the primary furnace in a horizontal direction and is reduced in size as it extends and which terminates in a vertical flaring outlet, combined with a secondary furnace having a domed ceiling through the floor of which said outlet enters, a sill around said outlet, and flues which extend from the bottom of the vertical walls of the secondary furnace upward into a common stack, feed openings in the secondary furnace, and clean out openings in the secondary furnace as described.

4. In an incinerator for waste material, a primary furnace having a feed opening, an inclined apron which extends downward therefrom, and grate bars at the bottom of the apron, together with a primary flue which extends from the primary furnace in a horizontal direction and is reduced in size as it extends therefrom and which terminates in a vertical flaring outlet, and an air passage from the outside which connects by air ducts with the primary flue. combined with a secondary furnace having a domed ceiling through the floor of which said outlet enters, a sill around said outlet, and secondary flues which extend from the bottom of the vertical walls of the secondary furnace upward into a common stack, feed openings in the secondary furnace, and clean out openings in the secondary furnace as described.

5. In an incinerator for waste material, a primary furnace having a feed opening, an inclined apron which extends downward therefrom, and grate bars at the bottom of the apron, together with a primary flue which extends from the primary furnace in a horizontal direction and is reduced in size as it extends therefrom and which terminates in a vertical flaring outlet, and means for introducing heated air into said flue, combined with a secondary furnace having a domed ceiling through the floor of which said outlet enters, and flues which extend from the bottom of the vertical walls of the secondary furnace, feed openings in the secondary furnace, and clean out openings in the secondary furnace as described.

[Claims 6 to 15 not printed in the Gazette.]

1,113,830. COMBINED RAIL-TIE AND RAIL-FASTENER. GEORGE F. RICHMOND, Bingham, Ill. Filed June 22, 1914. Serial No. 846,546. (Cl. 238—4.)



1. In combination, a hollow tie having a transverse rod therein, jaw members arranged on opposite sides of said rod having eyes at their lower ends, and crossing above the rod and terminating in rail jaws passing through the upper wall of the tie and engaging opposite sides of the base of the rail, and means for adjusting the lower ends of the jaw members toward and from each other.

2. In combination, a hollow tie having a transverse rod therein, jaw members arranged on opposite sides of said rods having eyes at their lower ends, and crossing above the rod and terminating in rail jaws passing through the upper wall of the tie and engaging opposite sides of the base of the rail, a threaded rod mounted in one end of the tie and passing through the eyes of the lower ends of the jaw members, means on the threaded rod for adjusting the lower ends of the jaw members toward and from each other.

3. In combination, a hollow tie having transversely disposed rods therein, two pairs of clamping members, the clamping members of each pair being arranged upon opposite sides of each transverse rod and having their lower ends terminating in eyes, one clamping member of each pair comprising forks constructed from a single length of metal bent upon itself to form said eye at the lower end, the upper portions of the clamping members of each pair above the transversely disposed rod being crossed and terminating in rail clamping jaws protruding through the upper wall of the tie and engaging opposite sides of the base of each rail, a threaded rod mounted in each end of the tie and extending through the eyes of the clamping members of each pair, means on each threaded rod for adjusting the lower ends of the clamping members toward each other, means on the threaded rod beyond the end walls of the tie for adjusting the threaded rods, whereby the rails may be adjusted toward and from one another, and sleeves containing non-conducting heat and cold material mounted upon the said threaded rods.

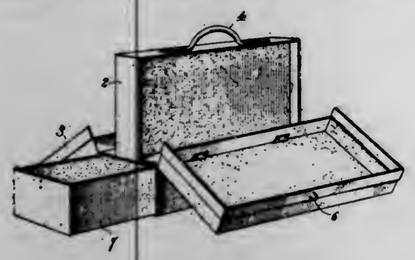
1,113,831. UPPER FOR TENNIS-SHOES. CHARLES HENRY ROPER, Belmont, Mass., assignor to Hood Rubber Company, Watertown, Mass., a Corporation of Massachusetts. Filed Apr. 28, 1913. Serial No. 764,222. (Cl. 36—57.)

A fabric shoe quarter for tennis and like shoes, comprising inner and outer layers stitched together near the edge of one layer, the other of said layers having an integral portion projecting beyond said line of stitching, said layers being turned inside out to bring said projecting portion between the two layers and the whole being united by a second line of stitching in proximity to the edge of said projecting portion.

1,113,832. CASE FOR RECEIVING TOOLS. CHARLES G. ROTH, Reading, Pa. Filed July 18, 1913. Serial No. 779,816. (Cl. 206—16.)

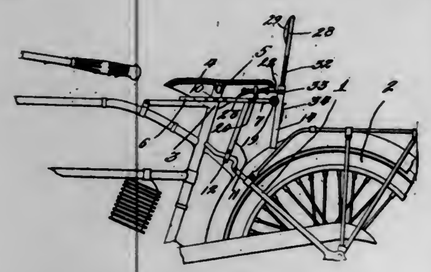
1. A tool kit comprising a hollow base adapted to receive sundry articles, a middle section rising from the base and having portions of the latter extending beyond the sides thereof, side sections hinged to the outer longi-

tudinal edges of the base to open outward and downward and to close upon the extended side portion of the base and against the sides of the middle section, and means for securing the several sections when closed.



2. A tool kit comprising a hollow base, a drawer adapted to slide within the hollow base, a fixed section rising centrally from the base and provided at its upper end with a handle, side sections hinged to longitudinal edge portions of the base and adapted to close upon side portions of such base and against the sides of the fixed section, means for securing the drawer when closed and other means for securing the side sections when closed against the fixed section.

1,113,833. ADJUSTABLE AND COLLAPSIBLE AUTOCYCLE SEAT-BACK. CHRISTAIN S. RUFF, Riverside, N. J. Filed May 13, 1914. Serial No. 838,338. (Cl. 208—138.)



1. In combination with a seat post of the frame of an auto cycle or the like, a main or dominant frame fastened to the seat post and provided with means engaging said frame of the cycle, an auxiliary frame having pivotal and yieldable connections with the dominant frame, and a seat back proper telescoping the auxuliary frame.

2. In combination with a seat post of the frame of an auto cycle or the like, a main or dominant frame fastened to the seat post and provided with means engaging said frame of the cycle, an auxiliary frame having pivotal and yieldable connections with the dominant frame, and a seat back proper telescoping the auxiliary frame, means in the auxiliary frame acting to throw the seat back proper upwardly, and devices for holding the seat back proper down against the action of the second means.

3. In combination with a seat post of the frame of an auto cycle or the like, a main or dominant frame adjustably connected to the seat post, said dominant frame having rearwardly extending forks terminating in eyes, an auxiliary frame having eyes, means passing through the eyes for connecting the auxiliary and dominant frame pivotally, said auxiliary frame having counterpoised resilient connections with the dominant frame, to permit the auxiliary frame to respond to the vibration of the cycle, and a yieldably mounted seat back telescoping the auxiliary frame.

4. In combination with a seat post of the frame of an auto cycle or the like, a main or dominant frame adjustably connected to the seat post, said dominant frame having rearwardly extending forks terminating in eyes, an auxiliary frame having eyes, means passing through the eyes for connecting the auxiliary and dominant frame pivotally, said auxiliary frame having counterpoised resilient connections with the dominant frame, to permit the auxiliary frame to respond to the vibration of the cycle, said auxiliary frame comprising tubular members having their lower ends closed, a seat back comprising side bars telescoping said tubular members, resilient means interposed between the lower ends of the side bars and the lower closed ends of the tubular members acting to force the back upwardly, devicea for holding the back down against its resilient means, and means for holding the back in vertical adjusted position.

1,113,834. WATERPROOF RECEPTACLE. WALTER R. RUMAGE, Stapleton, N. Y. Filed Sept. 3, 1913. Serial No. 787,859. (Cl. 224—26.)

1. As an article of manufacture, a water proof receptacle adapted to be attached to a belt of a person, the receptacle comprising a body portion curved in the direction of the length thereof and formed with a mouth at a lateral end thereof, a cover, packing between the interior of the cover and said mouth and yielding means for holding the cover to compress the packing against the mouth, the material within the receptacle being removable by inclining the receptacle when opened.

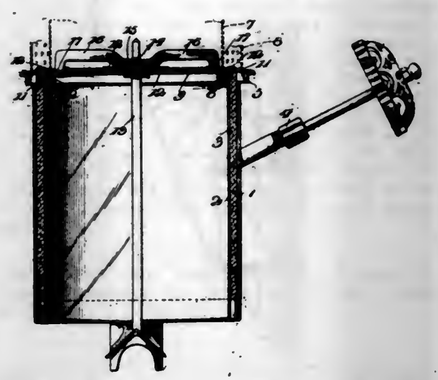
2. As an article of manufacture, a belt buckle containing a water proof chamber forming a water proof receptacle, the receptacle comprising a body portion formed with a mouth, a cover formed with an inclined edge, packing within the cover and yielding means formed with an inclined portion engaging said inclined edge of the cover for holding the cover to compress the packing against the mouth.

3. As an article of manufacture, a water proof receptacle adapted to be attached to a belt of a person, the receptacle comprising a body portion curved in the direction of the length thereof and formed with a mouth at a lateral end thereof, a cover formed with an inclined edge, a spring formed with one inclined portion to engage said inclined edge of the cover to hold the same snugly against the mouth and with another inclined portion at the end thereof by means of which the spring is bent by the cover to permit the latter to snop into place, the material within the receptacle being removable by inclining the receptacle when opened.

4. As an article of manufacture, a water proof receptacle adapted to be attached to a belt of a person, the receptacle comprising a body portion formed with a mouth, a cover having a pivot at a lateral end thereof and an inclined edge at the other end, a spring hinge portion attached to the body and engaging the pivot on the cover and another spring having an inclined portion engaging the inclined edge of the cover to hold the same snugly against the mouth, the material within the receptacle being removable by inclining the receptacle when opened.

5. As an article of manufacture, a belt buckle having means for attaching the belt thereto, said buckle having a hollow body portion formed with a curve in the direction of its length and provided with a mouth, a cover pivoted to the body, packing between the body of the cover and the mouth and readily operable means for locking the cover to the body to compress the packing in snug water tight fit against the mouth.

1,113,835. WICK-REGULATOR FOR BLUE-FLAME WICK-STOVES. HENRY RUPPEL, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 16, 1912. Serial No. 731,901. (Cl. 67—66.)



1. In a blue-flame stove of the type described, the combination with the wick tubes, wick and combustion sections, of a diaphragm at the upper end of the wick tubes, said diaphragm having radial arms projecting outward over the path of travel of the wick, for the purpose described.

2. In a blue-flame burner of the type described, the combination with the wick tubes, wick and combustion sections, of a diaphragm spanning the open upper end of the inner wick tube, said diaphragh having an L-shaped annular flange, the outer edge of the flange provided with upwardly and outwardly projecting wick engaging prongs, for the purpose described.

3. In a blue-flame burner of the type described, the combination with the wick tubes and combustion sections, of a perforated diaphragm spanning the upper end of the inner wick tube, said diaphragm provided with prongs projecting radially in the path of the wick, a central hub-portion and radial extending arms engaging the outer edges of the top of the diaphragm, all combined for the purpose described.

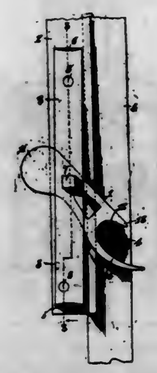
4. In a blue flame wick stove, the combination with wick tubes, and superimposed perforated combustion sections to produce a blue flame, of a wick stop comprising radial arms supported at points below one of said perforated combustion sections and projecting into the path of travel of the wick at points above the tops of the wick tubes to limit the upward movement of the wick.

5. In a blue flame wick stove, the combination with wick tubes and superimposed perforated combustion sections to produce a blue flame, of a wick stop comprising radial arms supported at points below one of said perforated combustion sections, and extending upward and then horizontally into the path of travel of the wick to limit the upward movement of the wick at a point above the tops of the wick tubes.

[Claim 6 not printed in the Gazette.]

1,113,836. AUTOMATIC LOCK FOR EXTENSION-LADDERS. HARRY C. RUSSELL, Nashua, N. H. Filed Nov. 18, 1913. Serial No. 801,736. (Cl. 228—25.)

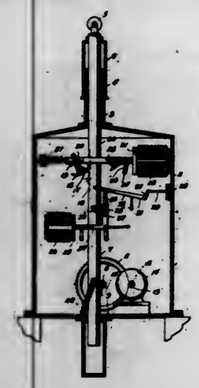
The combination with an extension ladder, of a housing consisting of a metallic bar extending longitudinally of one side of the extension ladder and having its terminal portions bent inwardly at right angles and abutting against the extension ladder and spacing the body portion of the bar from the same, center and end bolts piercing the housing and the adjacent side of the ladder and located at the central and upper and lower portions of the said housing, and a gravity acting automatic hook mounted on the central pivot bolt and having an upper weighted portion and a lower engaging portion, the end bolts forming stops within the housing for limiting the swing of the said lower engaging portion of the hook, whereby the latter is maintained in proper position for automatic engagement with the rung of a base ladder, said bar forming a housing for the hook in both its upright and inverted vertical positions



1,113,837. AUTOMOBILE-WHEEL. SYLVESTER SALLY, Spokane, Wash., assignor of one-third to William Smith, Spokane, Wash. Filed Jan. 14, 1913. Serial No. 742,040. (Cl. 152—28.)

A vehicle wheel construction comprising a felly, spaced centrally disposed inner and outer revoluble rings, spokes connecting the outer ring with the felly, the said inner and outer rings being spaced relatively, yieldable devices interposed between said inner and outer rings, a sleeve passing through the inner ring and extending beyond one end thereof and provided with an integral disk lying at one side of the rings, the said sleeve having a flared end, and a removable disk disposed parallel with the fixed disk and having detachable connection with the flared end of said sleeve and lying at the opposite sides of said rings, the said rings having substantially convex side surfaces operating over the inner surfaces of said disks, the engagement of the removable disk with the flared end of the sleeve serving to limit the adjustment of the removable disk with relation to the fixed disk and to prevent the removable disk from unduly bearing against the said inner and outer rings.

1,113,838. AUTOMATIC TRAIN-STOPPING APPARATUS. JOHN SCHAEFER, Gilmanton, Wis. Filed Mar. 17, 1914. Serial No. 825,330. (Cl. 246—59.)



1. In train stopping apparatus, a track instrument comprising a rod capable of movement to active and inactive positions, an electric motor for moving said rod to active position, a catch for holding said rod in active position, an electromagnet for operating said catch, an electric circuit including said magnet and motor in series, and means operable to short circuit said motor succeeding the movement of the rod to active position.

2. In train stopping apparatus, a track instrument comprising a rod capable of movement to active and inactive position, an electric motor for moving said rod to active position, a catch for holding said rod in active position, an electromagnet for operating said catch, an electric circuit including said magnet and motor in series, and a switch operable from said rod to short circuit said motor succeeding the movement of the rod to active position.

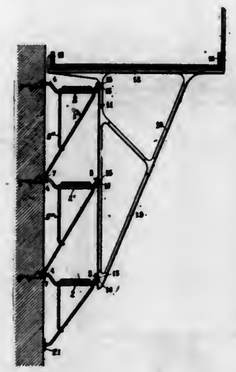
3. In train stopping apparatus, a track instrument comprising a rod capable of movement to active and inactive positions, an electric motor for moving said rod to active position, a catch for holding said rod in active position, an electromagnet for operating said catch, an electric circuit including said magnet and motor in series, a switch for short circuiting said motor, and means for actuating said switch previous to the rod reaching the limit of its movement to active position.

4. In train stopping apparatus, a track instrument comprising a rod capable of movement to active and inactive positions, an electric motor for moving said rod to active position, a catch for holding said rod in active position, an electromagnet for operating said catch, an electric circuit including said magnet and motor in series, a switch for short circuiting said motor, means for actuating said switch previous to said rod reaching the limit of its movement to active position, and an electromagnet adapted to be connected in series in said circuit to actuate said last means.

1,113,839. SCAFFOLDING FOR BUILDINGS AND THE LIKE. EMIL SCHÄRER, Zurich, Switzerland. Filed Dec. 1, 1911. Serial No. 663,386. (Cl. 20—84.)

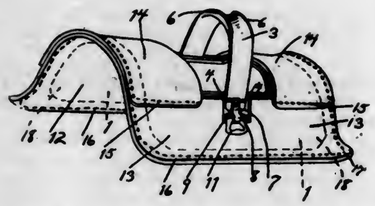
1. The combination with an outside wall of a building, of a plurality of superposed supporting brackets extending outwardly from said wall, a work supporting bracket extending vertically along said supporting bracket, collars for connecting said working bracket with said supporting brackets, and pins supporting said working bracket on said collars, substantially as described.

2. The combination with the outside wall of a building, of a plurality of superposed supporting brackets extending outwardly from said wall, said brackets having upwardly projecting ends, ring-like collars adapted to surround and be supported by said ends, a single scaffolding bracket extending vertically along said supporting brackets, and means for securing said scaffolding brackets to said collars.



3. The combination with the outside wall of a building, of a plurality of sockets therein arranged in superposed relation, and superposed supporting brackets connected with said sockets at their upper end and having eyes at their lower end, the vertical height of said brackets being equal to the distance between two successive sockets, the eye of one bracket surrounding the next lower bracket at the point at which it engages the corresponding socket.

1,113,840. NECK SHIELD AND PAD. EARLE SCHUBB, Wamego, Kans. Filed May 27, 1913. Serial No. 770,241. (Cl. 54—67.)



1. A neck shield comprising an arched metal plate having a central opening in the arched portion thereof, a metallic strap having its ends secured to the side portion of the plate adjacent the side of the opening and arching the opening, the arch of the strap extending higher than the arched ends of the plate and designed to be engaged concentrically by the straps of the hames, said arched strap having means to receive the strap of the hame, and a covering for the plate comprising an inner sheath, two outer side sheaths and two end arched sheaths suitably stitched together.

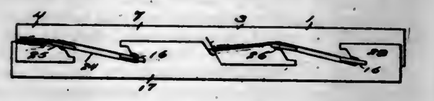
2. A neck shield comprising an arched metal plate having a central opening in the arched portion thereof and provided with a covering, and a metallic strap having its ends secured to the side portions of the plate adjacent opposite sides of the opening and having a curved arch spaced above and arching the opening and designed to be concentrically engaged by the straps of a pair of hames, said curved arch of the metallic strap having forward and rear curved flanges to prevent displacement of the straps of the hames.

3. A neck shield comprising an arched metal plate having a central opening in the arched portion thereof and provided with a sheath covering, a metallic strap having its ends secured to the opposite side portions of the plate

adjacent the opening, the ends of the arched strap terminating in tongues bent to form rolls, bolts received in the rolls, and loops pivoted on the bolt.

4. A neck shield comprising an arched metal plate having a central opening, and a metallic strap provided with a curved arch spaced above and arching the opening, the inner face of the metal plate having a sheath covering, the outer side faces of the opposite sides of the metal plate having sheaths, a pair of sheaths engaging and arching over the end portions of the plate beyond said opening and stitched to the side sheaths, the side sheaths and the inner sheath having their lower side edge portions stitched together, the end edge portions of the side sheaths, the outer arched sheaths and the inner sheath being stitched together beyond the ends of the metal plate, the end edges of the inner and outer sheaths and the corners thereof and the lower side edges being curved or deflected outwardly and upwardly to avoid abrupt corners.

1,113,841. METALLIC RAILROAD-TIE. WILLIAM N. SEWELL, Winchester, Ky. Filed Dec. 12, 1913. Serial No. 806,341. (Cl. 238—5.)



1. A cross tie comprising complementarily formed sections inclined planes formed on the complementary sections, and rail gripping projections secured to each of said sections and adapted to engage the corresponding inclined planes of the other section.

2. A cross tie comprising two complementarily formed interlocking sections, inclined planes formed on each of said sections, rail gripping projections extending from each of said sections and adapted to engage the corresponding inclined planes of the other section, and means for moving the two sections longitudinally as said sections are drawn together.

3. A cross tie comprising complementarily formed sections, each of said sections being provided with an inclined slot extending substantially one half the width of the section, portions of each of said sections adapted to engage the inclined slots of the other section, and rail-gripping means carried by each of said sections.

4. A cross tie comprising complementarily formed sections, means adapted to move said sections longitudinally relative to one another as said sections are drawn together, and rail-gripping means rigid with the sections adapted to approach each other as the sections are drawn apart.

5. A cross tie comprising interengaging sections adapted to approach and recede one from the other, rail-gripping means carried by the sections, said sections adapted to draw the rail-gripping means together as the sections recede from each other.

[Claims 6 to 8 not printed in the Gazette.]

1,113,842. RODENT-EXTERMINATOR. CLYDE J. SILL, Perris, Cal. Filed June 24, 1913. Serial No. 775,500. (Cl. 119—52.)

1. A rodent exterminator, comprising a base, having a bore therethrough and tapered edges, a flanged tubular shell supported on said base having a plurality of openings in the walls of said shell adapted to form access therein, a feed pan provided with orifices secured within said shell and resting upon said base, a container having an orifice in its truncated conical end adapted to be supported in inverted position by said shell, and a closure for said container, whereby grain or poisoned material contained in said container may be sealed when being transported.

2. A rodent exterminator, comprising a base member having a centrally disposed and transversely extending drain bore therethrough, a metallic container holder provided with openings in the sides thereof and rigidly secured to said base, a container detachably mounted on said holder, said container having an outlet for the exit

of its contents to the base member, and means disposed over the bore in said base member to prevent the escape of grain through said bore but permitting the escape of rain water.

1,113,843. FOUNTAIN SHAMPOO-COMB. GERTRUDE SMITH, Valdosta, Ga. Filed Nov. 10, 1913. Serial No. 800,164. (Cl. 132—3.)

1. In combination, a fountain comb body having a neck, a rubber band surrounding the neck, means forming a part of the neck to hold the rubber band in place, a hollow flexible rubber bulb having a mouth end passing over said band and held thereto by said means, a removable tapering rubber valve insertible in the passage of the neck and provided with a bead, said band being extended beyond the neck engaging the bead of the valve to hold the valve in place, the top of the bulb adapted to be depressed to contact with the valve to shut off the flow of the solution.

2. In combination, a fountain comb body having a neck, a packing band surrounding the neck, means forming a part of the neck to hold the band in place, a hollow flexible bulb having a mouth end passing over said band and held thereto by said means, said band being extended beyond the neck, a removable valve in the passage of the neck and provided with means forming a part thereof to be engaged by the extended portion of the band to hold the valve in place.

1,113,844. COMBINATION-TOOL. LOUIS B. SMITH, Lewistown, Mont. Filed Jan. 21, 1914. Serial No. 813,427. (Cl. 81—125.)

1. In a wrench, a main shank having jaw elements comprising a fixed wall, and a wall movable toward and from the fixed wall, and an auxiliary shank slidable on the main shank and having a jaw forming an end wall at the outer ends of the walls on the main shank and movable forward and back with the sliding of the said auxiliary shank.

2. In a wrench, a main shank having jaw elements comprising a forwardly projecting fixed wall at one side, a forwardly projecting movable wall opposite the fixed wall and adjustable toward and from the latter, there being a lateral shoulder between the said walls at the base of one of said walls; and a second shank slidable on the main shank and having a lateral jaw forming a main wall disposed across the front of the space between the side walls of the main shank.

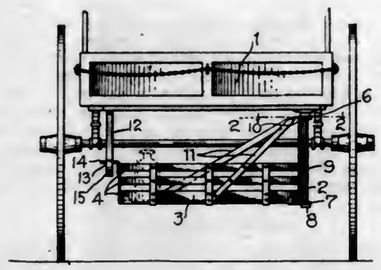
3. In a wrench, a main shank having elements comprising a forwardly projecting fixed wall, and a second forwardly projecting wall movable toward and from the fixed wall, an auxiliary shank slidable on the main shank and having a jaw forming an end wall at the outer ends of the walls on the main shank, a loop on which the auxiliary shank has rocking movement, said loop embracing the main shank, a rack on the main shank with which the loop is adapted to engage, and a spring between the shanks.

4. In a tool of the character described, a main shank having laterally disposed elements at opposite sides of the shank rearward of the front end, jaw elements on the main shank projecting forwardly in front of the said laterally disposed elements, the said jaw elements comprising a fixed side wall and an opposite movable wall resting at its base against the forward side of the adjacent laterally disposed element and having a member adjustably mounted at the base of the fixed wall, an auxiliary shank slidable on the main shank and formed with a lateral jaw forming an end wall at the outer ends of the walls on the main shank, a loop carried by the auxiliary shank and embracing the main shank rearward of the laterally disposed elements, and a rack on the main shank engageable by said loop.

1,113,845. RECEPTACLE ATTACHMENT FOR VEHICLES. CLESTIC C. STEVENS, Randolph, Vt., assignor of one-half to Isaiah B. Frost, Randolph, Vt. Filed Nov. 26, 1913. Serial No. 803,217. (Cl. 224—29.)

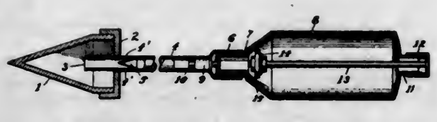
1. In an attachment of the class described, a receptacle formed of transverse and longitudinally extending strips spaced one from the other, one of the longitudinal strips being extended upwardly to a point some distance above the upper edge of the receptacle and thence bent downwardly to the bottom thereof, the upper and lower ends of said last mentioned upwardly and downwardly bent strip being in turn bent laterally, and means engaged with said laterally bent ends to hingedly support the receptacle on an object.

2. In an attachment of the class described, a receptacle formed of a plurality of longitudinal and transverse spaced apart strips, one of the longitudinal strips being continued and bent upwardly to a point some distance above the upper edge of the receptacle at one end thereof, said strip being thence bent downwardly to the bottom of the receptacle and the upper and lower ends of this upwardly and downwardly bent portion of the strip being in turn bent laterally, a rod loosely disposed through said last mentioned laterally bent portions of the strip whereby to hingedly mount the receptacle on a support,



bracing means between the upper end of said upwardly bent portion of the strip and the sides of the receptacle, and means arranged between said rod and one end of the receptacle to prevent a loose movement therebetween.

1,113,846. SELF-HEATING SOLDERING-IRON. BENJAMIN SHINSAKU SUZUKI, Seattle, Wash. Filed June 23, 1914. Serial No. 846,846. (Cl. 158—27.)



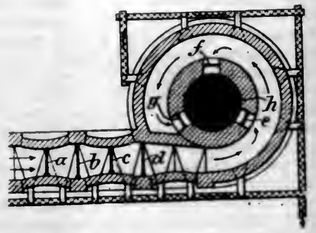
1. In a soldering device, the combination of a hollow head, a tube having connection with such head and constituting a generator and burner, a regulator arranged within such tube and consisting of a sleeve and absorbent material carried by said sleeve, a tank having connection with the tube, and a valve for regulating the discharge from the tank to the tube.

2. A soldering device comprising a hollow head, a metal end secured to the base of the hollow head and provided with a threaded opening, a tube adapted to make screw thread connection with the metal end and formed in its sides with openings, a nozzle arranged within the tube and extending across the openings in the sides thereof, a regulator arranged within the outer portion of the tube, a tank having connection with the tube, and a valve for regulating the discharge of the fuel from the tank into the tube.

1,113,847. FISHING-ROD. ORTON A. TURNER, Coldwater, Mich. Filed Oct. 14, 1912. Serial No. 725,684. (Cl. 43—16.)

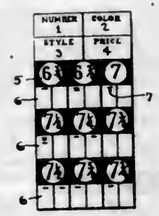
The combination with a fishing rod having a hollow handle, the bore of which is open at one end, of a scale arranged within the handle bore and including a casing and a balance spring arranged therein, a transversely disposed pin centrally mounted in the handle bore, an elongated loop connected to one end of the scale casing and slidable upon said pin whereby said scale may be extended beyond the open end of the bore, and means for closing the open end of the handle bore to retain the scale therein.

1,113,848. APPARATUS FOR REMOVING DUST FROM EXHAUST-GASES. FREDRIK VALEUR, Gmunden, Austria-Hungary. Filed Apr. 10, 1914. Serial No. 831,007. (Cl. 110—119.)



In an apparatus for separating and collecting dust from exhaust gases, the combination of a chimney; a horizontal flue opening tangentially thereinto; and a plurality of framed, vertical, screens built into said flue throughout the entire length thereof, in spaced, parallel relation to one another and occupying the entire cross-sectional area of said flue, said screens dividing the interior of the flue transversely into separate compartments, to contract the cross-sectional area of the said flue at the points where the screens are located, whereby the gases passing through the flue are momentarily condensed in front of each screen and their velocity momentarily reduced, to permit the dust to precipitate in said compartments.

1,113,849. HAT-SIZE TICKET. JULIUS H. WEIN, Butte, Mont. Filed Aug. 28, 1913. Serial No. 787,151. (Cl. 11—15.)



1. An article of the character described comprising a card of rectangular configuration, one face of the latter having thereon a predetermined sized area different in color from the surrounding card surface, means within said area for indicating the size of the hat, bars on the other face of said card different in color from the card surface and having a series of alined inclosed areas whose color corresponds with that of the card surface, means within said inclosed areas for designating various hat sizes, lines arranged on the surface of said cards in planes at right angles to each other whereby to form two rows of two blocks, means within said blocks for designating the number, color, style, and price respectively of the goods to which the card is applied, and a series of blocks arranged contiguous to said inclosed areas within said bars, said blocks having therein means coöperating with the means in said inclosed areas, substantially as and for the purpose set forth.

2. An article of the character described comprising a card of substantially rectangular configuration, one face of the latter having thereon a predetermined sized area whose color differs from that of the surrounding card surface, means within said area for indicating the size of the article to which said card is applied, the other face of said card having thereon three bars of equal width arranged in spaced relationship and extending transversely thereof, the surface of said bars differing in color from that of the surrounding surface of the card, said bars having arranged within the space which they embrace, a series of predetermined sized areas, the latter having a color corresponding to the card surface, a line extending transversely from the upper edge of one of said bars to the upper edge of said card, a second line intersecting the first and disposed in a plane at right angles thereto, whereby to form two rows of two blocks, means within the latter to indicate the number, color, style and price respectively of the articles to which the card is to be applied, a plurality of lines arranged in spaced relation intermediate the bars and between one of the latter and the lower edge of the card whereby to form a plurality of blocks, means within said blocks coöperating with the means in said inclosed areas whereby a memorandum of the number of articles sold and still remaining unused, of any of the various sizes indicated may be readily kept to indicate at a glance the condition of the stock.

1,113,850. IGNITER MECHANISM. ERNEST C. WILCOX and BURTON L. LAWTON, Meriden, Conn., assignors to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed Jan. 16, 1914. Serial No. 812,517. (Cl. 123—168.)

1. In a timer and distributer, a shaft having a cam thereon, a case mounted upon said shaft, said parts being relatively rotatable, two contacts held within said case, said contacts being normally in engagement, with means for intermittently separating said contacts operated by said cam, and an opening in the side of said case laterally of the ends of said contact points to permit a tool to be inserted between said points.

2. In a timer and distributer, a shaft having a cam thereon, a case mounted upon said shaft, said parts being relatively rotatable, two contacts held within said case, said contacts being normally in engagement, with means for intermittently separating said contacts operated by said cam, and an opening in the side of said case laterally of the ends of said contact points to permit a tool to be inserted between said points, and another opening arranged in line with said points.

3. In a timer and distributer, a shaft having a cam thereon, a case mounted upon said shaft, said parts being relatively rotatable, two contacts held within said case, said contacts being normally in engagement, with means for intermittently separating said contacts operated by said cam, and an opening in the side of said case laterally of the ends of said contact points to permit a tool to be inserted between said points, and a cover for said opening mounted on said case.

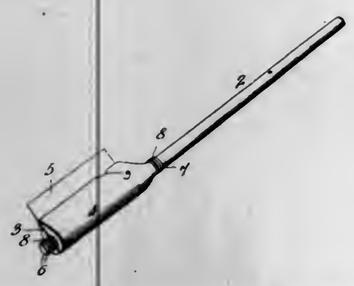
4. In a device of the character described, a shaft, a cam thereon, two contact points, one fixed and the other movable, an arm carrying said movable contact point, said arm comprising two spaced plates connected at one end, a pivot mounting for the other end of said arm, an antifriction bearing between said arms arranged for engagement by said cam to move said movable point.

5. In a device of the character described, a shaft, a cam thereon, two contact points, one fixed and the other mov-

able, an arm carrying said movable contact point, said arm comprising two spaced plates connected at one end, a pivot mounting for the other end of said arm, an anti-friction bearing between said arms arranged for engagement by said cam to move said movable point, and a spring normally operating to move said arm in a direction to move the movable point into contact with the stationary point.

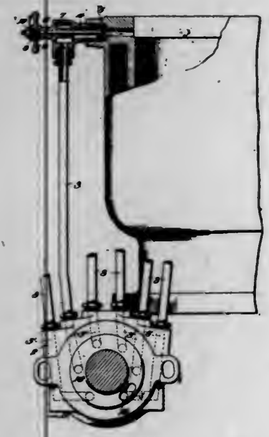
[Claims 6 to 12 not printed in the Gazette.]

1,113,851. SAFETY-RAZOR-BLADE HOLDER. ARTHUR E. WILDE, New York, N. Y. Filed Mar. 21, 1913. Serial No. 756,051. (Cl. 30—25.)



A safety razor blade holder comprising a relatively thin handle portion and a relatively wide pair of flexible jaws formed integral with one end of the handle, said jaws being each substantially semi-pyriform in cross section and provided at their free ends with reduced coöperating neck portions and further provided in one edge with a notch to take the corner portion of a razor blade, and elastic bands embracing the said neck portions and the jaws at their point of connection with the handle.

1,113,852. SELF-STARTER. ALEXANDER WINTON, Cleveland, Ohio, assignor to Winton Gas Engine and Manufacturing Company, Cleveland, Ohio. Filed Sept. 11, 1912. Serial No. 719,846. (Cl. 123—181.)

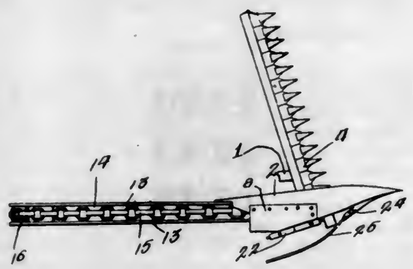


1. In a self-starter for explosive engines, the combination with an explosive cylinder, of a pressure supply, a communication between the supply and said cylinder, a normally freely opening and closing check valve within said support and outwardly closing in respect to the cylinder, and means for locking said valve in its closed position, for the purpose described.

2. In a self-starter for explosive engines, the combination with the cylinder thereof, of a pressure supply, a valve casing in communication with the supply and with the said cylinder, a check valve in said communication and outwardly closing, a valve stem rigidly carried by the valve and normally freely movable back and forth through the casing and projecting beyond its outer end, a shoulder on the projecting end of the valve stem, a longitudinally movable member on the end of the casing and adapted to engage the valve stem shoulder for locking and releasing the valve in respect to its seat, for the purpose described.

3. In a self-starter for explosion engines, the combination with the cylinder thereof, of a pressure supply, a valve casing in communication with the supply and with the said cylinder, a check valve in said communication and outwardly closing, a valve stem rigidly carried by the valve normally freely movable back and forth through the casing and projecting beyond its outer end, a shoulder adjustable on the projecting end of the valve stem, the casing surrounding the valve stem having a screw threaded projection and a thumb nut on said screw-threaded portion of the casing and adapted to engage the valve stem for forcing the valve stem outwardly for locking the valve in its closed position and releasing it so that it can be automatically opened by the pressure.

1,113,853. GRASS-DISTRIBUTER FOR MOWING-MACHINES. BERT WOOD, Vernonia, Oreg. Filed May 29, 1914. Serial No. 841,840. (Cl. 56—30.)

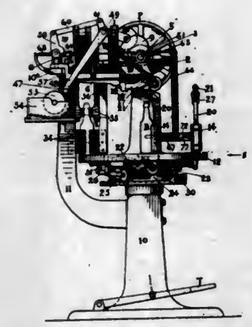


1. In combination with a mowing machine shoe having an inclosure and provided with a recess on one side, a grass guide stick pivoted in said recess and provided with a conveyer chain operating thereon and parallel therewith, and means for automatically operating the chain.

2. In combination with a mowing machine shoe having an inclosure and provided with a recess on one side, a grass guide stick pivoted in said recess and provided with a conveyer chain operating thereon and parallel therewith, and means for automatically operating the chain, the rear portion of said recess being constructed with means to support the stick.

3. In combination with a mowing machine shoe having an elongated recess on one side, a plate secured to the shoe and arching over the recess thereby forming an inclosure or housing, a sprocket wheel mounted in bearings of the housing, a shaft mounted in said housing having a traction wheel and provided with gear connections to said sprocket to impart motion thereto, a grass guide stick arranged in the said recess to have a partial pivotal movement, the upper and lower faces of said stick having guide flanges, a sprocket wheel mounted in the upper rear end of the stick, a conveyer chain traveling over both of said sprockets, said recess having an abutment shoulder inclined upwardly and rearwardly to support the stick.

1,113,854. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass., assignor to Economic Machinery Company, Worcester, Mass., a Corporation of West Virginia. Filed Sept. 18, 1912. Serial No. 720,913. (Cl. 216—13.)



1. In a labeling machine, the combination of a horizontally rotatable table or carrier, and means for imparting motion thereto, a series of upright supporting rests mounted on said carrier that move in a circular path, an overhead bottom-delivery label-holder, glue-applying pickers that move to and fro for taking labels from the label-holder and presenting the same in front of the bottle supported by one of said rests, a moving grip-device, means for advancing and actuating said grip-device, and means for wiping the labels upon the bottle as the table or carrier advances.

2. In a labeling machine, in combination, a rotary table carrier, upwardly projecting members carried thereon for supporting a bottle or article to be labeled in approximately upright position to receive the label upon its advance surface, a picker-carrier fulcrumed upon an axis stud disposed above the height of the bottle and over one side of the bottle-carrier for swinging the pickers in a plane approximately tangential to the circular path of the bottle-supporting means, and for presenting the label to the advancing bottle, a bottom-delivering label-supply holder above and in line with said glue-applying pickers, means for operating said pickers, means for supplying paste to the pickers, and means for operating said rotary carrier.

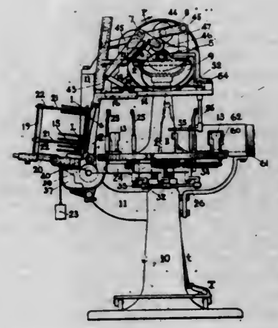
3. In a labeling machine of the class described, a rotating rest-carrier table, movable about an upright axis member, a plurality of upright supporting rests mounted on said table, an actuating gear fixed to said rest-carrier, a swinging picker-carrier fulcrumed on a horizontal axis above the side of said table; glue-applying pickers attached to said picker-carrier adapted to swing in a plane tangential to the circular path of the supporting-rests, a horizontal overhead operating shaft having a pinion thereon that meshes with said table-actuating gear, and a cam that actuates said picker-carrier, a label-holder in alinement with said pickers, a glue-box, and a glue-distributing roller moving in central alinement with the pickers, and having a rocking axle with cam-engaging arm, a cam mounted on the operating-shaft that actuates said rocking axle, and means for rotating said operating shaft.

4. In a machine of the class specified, in combination, a revolving bottle-carrier having means for supporting a bottle thereon to travel in a circular path; a pair of label-delivering pickers that move to meet the advancing bottle for depositing a label against the surface thereof and then retreat from the advancing bottle by a movement approximately in the general direction in which the bottle is moving, means for imparting movement to said pickers, and means for rotating said bottle carrier.

5. In a machine of the class specified, in combination, a horizontally rotatable bottle-carrier, means thereon for the support of a bottle to be carried in a circular path, a set of label-gumming and delivering devices that bring the labels in front of the advancing bottle and then retreat in the general direction of the bottle movement, means traveling with said carrier for gripping the labels to the bottle surface as the movement of said delivering means is reversed, a label-holder, gum-supplying means, means for rotating said bottle-carrier, and means for controlling the label-gumming and delivering devices.

[Claims 6 to 44 not printed in the Gazette.]

1,113,855. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass., assignor to Economic Machinery Company, Worcester, Mass., a Corporation of West Virginia. Filed Jan. 13, 1913. Serial No. 741,624. (Cl. 216—13.)



1. In a labeling machine, in combination with label-delivering and label-affixing means, a horizontally rotatable carrier having means at intervals thereon for supporting bottles in upright position and carrying the same in a circular path, means for actuating said rotatable carrier, a picker-guide disposed above said path at one side of the circle, a reciprocating picker-carrier-slide mounted upon said guide, a pair of glue-applying pickers firmly secured to said slide in a relatively depending position and traveling between said guide and the plane of the bottle-carrier, and means for imparting reciprocative movement to said picker-slide.

2. In a labeling machine, in combination, a rotary bottle-carrier provided with means for supporting bottles in upright position thereon, and carrying the same in a circular path, a reciprocating picker-carrier-slide, a guide therefor arranged over one edge of said bottle-carrier approximately tangential to the path of the bottles, depending pickers mounted on said picker-carrying-slide, a rear-charged forward-delivery label-holder adapted for sustaining packs of labels in edgewise upright order and disposed in alinement with the path of said pickers, a carrier-operating shaft, a cam mounted on said shaft, and connections for actuating said picker-carrier-slide, said cam formed to produce a dwell in the picker movement when near the label-holder.

3. In combination, a horizontally rotatable carrier, provided with means for sustaining bottles or the like in upright position thereon and moving the same in a circular path; a reciprocating picker-carrier-slide, depending glue-applying pickers mounted upon said slide, a guide for said picker-carrier-slide arranged substantially tangential to the circular path of the bottles and approximately parallel with the plane of the rotatable carrier, a label-supply holder adapted for holding a pack of labels in approximately edgewise upright position, at the end of the reciprocating picker movement, an upwardly and downwardly moving glue-distributing roller, means for reciprocating said picker-carrier-slide, and means for operating said glue-distributing roller; a grip mechanism, and wiper appliances for affixing the label to the bottle or the like.

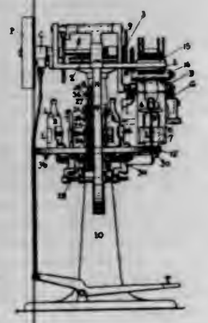
4. In a labeling machine, a rotatable carrier table, having devices thereon for supporting a succession of bottles in upright order and carrying the same in a circular

path, and label-gripping devices moving with said carrier; a reciprocating picker-carrying-slide, a pair of glue-applying picker-plates attached to said slide approximately in transverse dependent relation, a guide-way upon which said picker-slide is mounted to move parallel to the plane of said bottle-carrier and introvenient with the circular path of the bottles thereon, a label-supply holder in alinement with the path of said pickers, a glue-distributing roller, an upward and downwardly moving carrier for said roller, a guide therefor, means for reciprocating said roller-carrier and said picker-carrying-slide, a wiping-on means, and a grip-controlling mechanism acting beneath the carrier-table.

5. In a labeling machine, in combination, a rotary bottle-carrier provided with means for supporting bottles in upright position thereon, and carrying the same in a circular path, a reciprocating picker-carrying-slide, a guide therefor arranged above one edge of said bottle-carrier in approximately tangential relation to the path of the bottles, depending pickers mounted on said picker-carrying slide, a rear-charged forward-delivery label-holder adapted for sustaining packs of labels in edgewise upright order, and in deliverable alinement with the path of said pickers, a carrier-operating shaft, a cam fixed on said shaft, and connections for actuating said picker-carrier slide, said cam formed to produce a dwell in the picker movement when near the label-holder, a glue-supply reservoir, a glue-distributing roll, an upwardly and downwardly reciprocating carrier having said roll mounted thereon, an upright guide for said roll-carrier, a cam on said operating-shaft, with connections for elevating and depressing said roll-carrier, the downward reciprocative movement of said roll-carrier being timed for occurring approximately coincident with the dwell in the picker movement.

[Claims 6 to 24 not printed in the Gazette.]

1,113,856. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass., assignor to Economic Machinery Company, Worcester, Mass., a Corporation of West Virginia. Filed Mar. 7, 1913. Serial No. 752,566. (Cl. 216—13.)



1. In a labeling machine, in combination, a movable carrier, means thereon for supporting bottles or the like upright while moving with said carrier, a wiper-supporting plate bridging the path of the carrier, a pair of movable wiper-carrying heads mounted on said wiper-supporting plate, wipers attached to said heads between which the bottles pass, means for operating said movable wiper devices, and actuating devices connected with said movable carrier for imparting motion to said wiper operating means.

2. In a labeling machine, in combination with a rotatable carrier or table provided with means for supporting bottles or the like thereon in upright position; of a pair of movable wipers, a connection for effecting opposite movement of said wipers in unison, an operating lever for imparting motion thereto, and a contacting device carried by said rotatable table for actuating said operating lever at a predetermined position in the rotation.

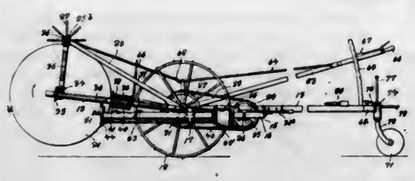
3. In a labeling machine, the combination with a movable bottle-carrier provided with means for supporting and advancing bottles or the like; of a wiper-supporting element, means for attaching said element to the machine frame, a pair of oppositely disposed wiper-carrying arms pivotally mounted upon said supporting element, and means actuated from said bottle-carrier, for moving said wipers while the bottle passes between them.

4. In a labeling machine, a wiper-unit-compound consisting of an inverted approximately U-shaped supporter having the several wiper elements mounted thereon in their predetermined working relation in respect to each other, said supporter adapted for ready attachment to and detachment from the machine frame without disturbing the relation of the wiper elements in respect to each other upon said supporter.

5. In a labeling machine, the combination with means for giving and presenting labels at a predetermined position across the path of the bottles, a continuously moving bottle-carrier having means for supporting a series of bottles or the like thereon in upright successive order, gripping devices that move with said carriers, for respectively clamping the labels as presented to the bottles, and a wiper compound comprising an overhanging bifurcated supporter straddling the path of the bottles, and having pairs of wipers mounted upon its depending limbs, between which the bottles are successively passed.

[Claims 6 to 8 not printed in the Gazette.]

1,113,857. CORN-HARVESTER. FRANK R. WRIGHT, Winfred, S. D. Filed June 1, 1912. Serial No. 701,000. (Cl. 56—111.)



1. In a corn harvester, a picker drum supported for rotation and having stalk engaging teeth, means for rotating the drum to move the forward portion thereof upwardly, a beating device including a rotating shaft and arms radiating from said shaft and engaging the spaces between the picker teeth, said beating device being supported above the picker drum, and means for driving the cleaning device to move the forward portion thereof in a downward direction.

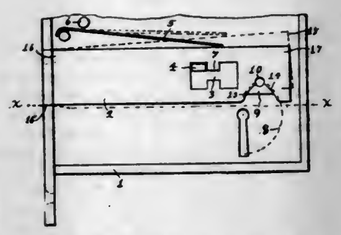
2. In a corn harvester, a picker drum supported for rotation, means for driving the drum to move the forward portion thereof in an upward direction, stalk engaging teeth on said drum, said teeth being curved and provided with flat inner surfaces facing the drum, a shaft supported for rotation and in parallel relation to the axis of the picker drum, arms radiating from said shaft and engaging the spaces intermediate the picker teeth, and means for transmitting motion from the drum to the shaft having the radial arms to move the latter forwardly and downwardly.

3. In a corn harvester, a main carrying frame, an auxiliary frame pivoted thereon and including arms constituting side members, a picker drum supported on the auxiliary frame and having rows of spaced picker teeth, a trough supported on the side members of the auxiliary frame in rear of the picker drum, an endless conveyer in said trough, supporting means for the endless conveyer including shafts having sprockets, bevel gearing connecting one of said shafts with the picker drum to rotate the latter, and means for driving said shaft to actuate the picker drum and the conveyer.

4. In a corn harvester, a main carrying frame, an auxiliary frame pivoted thereon, rotary supporting means for the main frame including a bull wheel, a main driving shaft supported on the main frame in rear of the bull wheel, means including a clutch transmitting motion to said shaft from the bull wheel, a picker drum and a conveyer supported on the auxiliary frame, means for driving said picker drum and conveyer including a shaft having a knuckle joint, means for transmitting motion to said shaft from the main driven shaft; a beating device supported on the auxiliary frame above the picker drum, and means for transmitting motion to the beating device from the picker drum.

5. In a corn harvester, a main carrying frame, an auxiliary frame pivoted thereon, a picker drum, a beating device and a conveyer supported on the auxiliary frame, means for adjusting the auxiliary frame and for supporting it at various adjustments, rotary supporting means for the main frame including a bull wheel, a main driven shaft supported for rotation on the main frame and deriving motion from the bull wheel, a longitudinally disposed husking trough comprising a plurality of pairs of husking rolls arranged in approximately semi-circular series and supported on the main frame adjacent to the auxiliary frame, means for driving the picker drum and the conveyer including a shaft having a knuckle joint and bevel gearing connecting said shaft with the main driven shaft, means for transmitting motion from the picker drum to the cleaning device, an operating shaft extending axially through the husking trough, means including an internal gear carried by said shaft for transmitting motion therefrom to the rolls constituting the trough, a spiral conveyer on said axial shaft, an elevator including an endless conveyer supported to receive husked ears discharged over the tail end of the husking trough, means for transmitting motion to said conveyer from the shaft extending axially through the husking trough, and means for driving said shaft consisting of intermeshing bevel gears mounted respectively on said shaft and on the main driven shaft.

1,113,858. LOCK. JAMES M. WRIGHT, Keokuk, Iowa. Filed Aug. 8, 1912. Serial No. 714,132. (Cl. 70—78.)



1. In a lock, a bolt, means for mounting the same for sliding and oscillatory movements and for locking the same against sliding movements unless swung to a predetermined position, the bolt having a talon provided with a key gap, and a web connecting the talon walls, in combination with a key having a bit arranged to engage the key gap for imparting a sliding movement to the bolt, and having a cleft to engage the web for swinging the bolt to sliding position.

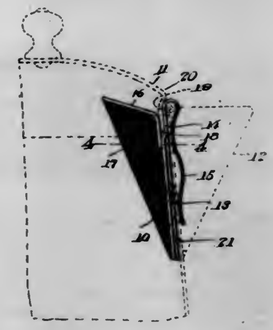
2. In a lock, a case including a face plate, a lock bolt mounted for sliding and oscillatory movements through the face plate, means for locking the bolt against sliding movements unless swung to a predetermined position, the lock bolt having a talon provided with a key gap and a web connecting the talon walls, in combination with a key having a bit arranged to engage the key gap for imparting a sliding movement to the bolt, and having a cleft to engage the said web for swinging the bolt to sliding position.

3. In a lock, a plurality of juxtaposed bolts, means for mounting the same for sliding and oscillatory movements and for locking the same against sliding movements unless swung to predetermined positions, each bolt having a talon provided with a key gap, and a web connecting the talon walls, in combination with a master key having a bit arranged to engage the key gaps of all the bolts to impart a sliding movement to the bolts, and selective keys each having a bit arranged to engage the key gap of one bolt, the key bits having clefts to engage the webs of the respective bolts for swinging the bolts to sliding positions.

4. In a lock, a case including a face plate, a plurality of lock bolts arranged side by side and mounted for sliding and oscillatory movements through the face plate, means for locking the bolts against sliding movements unless swung to predetermined positions, each bolt having a talon provided with a key gap, and a web connecting the talon walls, in combination with a master key having a bit arranged to engage the key gaps of all the bolts to impart a sliding movement to the bolts, and selective keys each having a bit arranged to engage the key gap of one bolt to impart a sliding movement thereto, the key bits having clefts to engage the respective webs for swinging the bolts to sliding positions.

5. In a lock, a case, a bolt therein, means for mounting the bolt for sliding and oscillatory movements, and including a coöperating fence and gate carried by the case and bolt, the fence and gate locking the bolt against sliding movements, unless swung to a predetermined position, the bolt having a talon provided with a key gap and a web connecting the talon walls, the web being narrower than the bolt and being disposed between the sides thereof, in combination with a key having a bit arranged to engage the key gap of the bolt for imparting a sliding movement to the bolt and having a cleft arranged to engage the said web for swinging the bolt to sliding position.

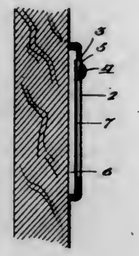
1,113,859. STRAINER FOR COFFEE-POTS. HANS C. ZEUNERT, Chicago, Ill. Filed Feb. 7, 1914. Serial No. 817,236. (Cl. 53—3.)



1. In a strainer for a receptacle having a cover, a main frame, an auxiliary frame carried by the first mentioned frame, a screen supported on the said frames, means for supporting the main frame upon the receptacle, and a seat formed by offsetting portions of the main frame, between the body thereof and the said auxiliary frame, with portions of the cover of the receptacle adapted to engage the seat and lie between the main frame and the said auxiliary frame.

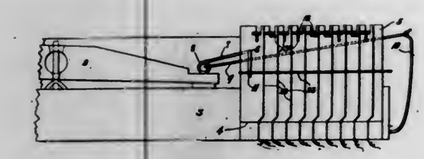
2. In a strainer for a receptacle having a cover, a main frame, an auxiliary frame carried by the first mentioned frame, a screen supported on the said frames, means for supporting the said main frame upon the receptacle, a seat formed by offsetting portions of the main frame, between the body thereof and the said auxiliary frame, with portions of the cover of the receptacle adapted to engage the seat and lie between the main frame and the said auxiliary frame, and a sealing member carried by the main frame and adapted to engage the inner face of the receptacle to effect a seal between the main frame and the receptacle.

1,113,860. CARD OR LABEL HOLDER. HERMAN AMES, St. Paul, Minn. Filed June 1, 1912. Serial No. 701,034. (Cl. 40—17.)



As a new and improved article of manufacture, a card or label holder formed of a single piece of material and comprising a body of oblong rectangular form, said body being provided in its front wall with a display opening of corresponding form and being rabbeted on its rear face to provide a recess of greater length and width than said opening, the upper cross bar of the holder having a longitudinal slot corresponding in length with the recess and communicating with the upper portion thereof, the portion of said cross bar below said slot being enlarged and projecting outwardly beyond the face of the bar and having its rear surface beveled downwardly and inwardly to provide an inclined chute, substantially as described.

1,113,861. KEY MECHANISM FOR ORGANS. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Dec. 19, 1913. Serial No. 807,631. (Cl. 84—59.)



1. In a device of the class described, the combination of a rock-shaft constituting an electrical conductor, having an eccentric portion, a circuit controller, said rock shaft being oscillatory to move said eccentric portion into and out of operative positions, and means for operating said circuit-controller to carry the same against said eccentric portion when the latter is in operative position.

2. In a device of the class described, the combination of a rock shaft constituting an electric conductor, having an eccentric portion, a circuit controller, said rock shaft being oscillatory to move said eccentric portion into and out of operative positions, means for operating said circuit controller to carry the same against said eccentric portion when the latter is in operative position, and means for positively preventing said circuit controller engaging said eccentric portion, when the later is in inoperative position.

3. In a device of the class described, the combination of a plurality of rock shafts of conducting material, having crank portions, each rock shaft being oscillatory to bring the respective crank portions into operative and inoperative positions, circuit closers, organ keys, and means actuated by said keys for causing the circuit closers to engage said eccentric portions when the latter are in their operative positions.

4. In a device of the class described, the combination of a plurality of strips, rock shafts supported approximately centrally below the respective strips and having crank portions, each shaft being oscillatory to cause the movement of its respective crank portions into vertical and horizontal positions, the respective crank portions when in horizontal positions extending back of the rear edges of the respective strips, keys spring circuit closers, means actuated by said keys for advancing said circuit closers in sets against crank portions when the same are in horizontal positions, the strips being adapted to prevent circuit closers from engaging those crank portions which are vertical.

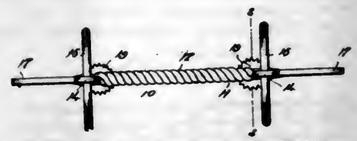
5. In a device of the class described the combination of a rock shaft of wire, constituting an electric conductor, having bent therein at different points in its length a plurality of crank portions, circuit controllers, said rock shaft being oscillatory to move said crank portions into and out of operative positions, and means for operating said circuit controllers to carry the same against said crank portions when the latter are in their operative positions.

1,113,862. GAS-FIXTURE. JOHN THOMAS BAKER, Baltimore, Md. Filed Apr. 26, 1912. Serial No. 693,356. (Cl. 137—7.)

1. In a locking device for gas valves, the combination with a valve casing having a rotary valve stem therein, a handle fixedly mounted upon said stem and lying above the casing, a locking pin carried by said stem and extending radially therefrom, of a spring carried by the casing and having a free portion bearing against one end of the handle and apertured for the reception of the pin on a predetermined adjustment of said handle, and means extending laterally from the free end of the spring and disposed in the path of travel of the pin and adapted to be engaged by the latter during rotation of the handle, whereby to disengage the free end of the spring from the end of the handle, to permit the pin to enter the aperture in the spring upon the required adjustment of the handle, and a manipulating extension formed on the said free end of the spring and extending normally at an acute angle thereto and lying above the handle, and adapted to be engaged by the hand of the operator so as to permit lateral pressure of the hand to effect the release of the spring from the pin to permit the handle to be operated.

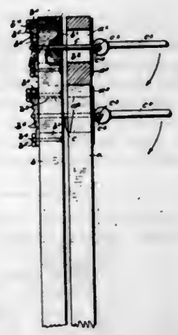
2. In a locking device for gas valves, the combination with a valve casing having a rotary valve stem therein, a handle fixedly mounted upon said stem and lying above the casing, and a locking pin carried by said handle and extending radially therefrom, of a spring having one end fixedly secured to the casing and its free end bearing against one end of the handle and apertured for the reception of the pin on a predetermined adjustment of the said handle, said free end of the spring having a concavo-convex portion extending laterally therefrom and disposed in the path of travel of the pin and adapted to be engaged by the latter during rotation of the handle whereby to disengage the free end of the spring from the end of the handle to permit the pin to enter the aperture in the spring upon the required adjustment of the handle, and a manipulating extension formed on the free end of the spring and disposed above the said concavo-convex portion and above the handle, and adapted to be engaged by the hand of the operator to permit lateral pressure of the hand to effect the release of the pin from the spring, to permit the handle to be operated.

1,113,863. BRIDLE-BIT. SAMUEL A. BASKIN, Temple, Ga. Filed Nov. 16, 1912. Serial No. 731,779. (Cl. 54—7.)



As a new article of manufacture, a bridle bit comprising a single piece of material forming a bar having enlarged portions adjacent the ends thereof, said enlarged portions provided with transverse apertures, rings passing loosely through the said apertures to swing on the enlarged portions of the bar, curved extensions formed by bending the ends of the piece of material upwardly upon themselves beyond the said enlarged portions of the bar, with the extremities of the curved extensions bifurcated and the said extensions passing through the rings mounted on the enlarged portions of the bar, and toothed wheels journaled on the bifurcated portions of the said extensions, with the toothed wheels projecting inwardly beyond the vertical planes of the said rings and the said toothed wheels having their faces lying in planes perpendicular to the planes of the said rings and the said enlarged portions of the bar.

1,113,864. CLAMP. ALFRED J. BANKS, Montour, Iowa. Filed May 5, 1914. Serial No. 836,436. (Cl. 39—53.)

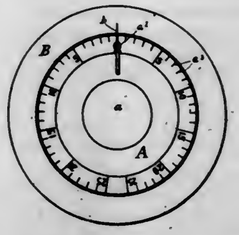


1. A device of the class described, comprising inner and outer members provided with registering slots at different points thereof, rods passed through the registering slots of both members, a slotted block, provided with transverse grooves arranged on an incline, on one of said members in the position of each slot therethrough, each of said rods having a T-head adapted to rest in one of the grooves of a corresponding block to adjust the degree of clamping, and an eccentric lever in pivotal connection with the opposite end of each of said rods.

2. A device of the class described, comprising inner and outer members provided with registering slots at different points thereof, rods passed through the registering slots of both members, a slotted block, provided with transverse grooves arranged on an incline on one of said members in the position of each slot therethrough, each of said rods having a T-head adapted to rest in one of the grooves of a corresponding block to adjust the degree of clamping, an eccentric lever in pivotal connection with the opposite end of each of said rods, and means for adjustably locking each of said blocks in desired position with respect to the corresponding slot.

1,113,865. PERMUTATION-LOCK DIAL. WILLIAM T. BENHAM, Rising Sun, Ind. Filed Jan. 28, 1913. Serial No. 744,606. (Cl. 70—56.)

In a dial lock of the character indicated, the combination of a rotatable dial plate having its outer circumferential space marked in equal fractional divisions of rotation numbered in forward succession in both directions from a common starting point through or approximately through half a rotation in each case, in combination with a relatively fixed part of the structure having a single gage



mark adjacent to the edge of the dial to mark entire or partial rotations of the latter by coincidence of dial marks with said fixed gage mark.

1,113,866. DIAL AND DIAL-RIM OF COMBINATION-LOCKS. WILLIAM T. BENHAM, Rising Sun, Ind. Filed Jan. 28, 1913. Serial No. 744,607. (Cl. 70—56.)

1. A dial for combination locks, having a fixed member and a rotatable member, a notched gage on said fixed member, a lever on said rotatable member whose free end overlaps the notched gage, a roller on said lever adapted to contact with the notched gage and a spring adapted to press said roller against the notched gage.

2. In combination locks, the combination of a fixed dial rim with notches graduated therein, and holes therein indicating groups of these graduation units, and a dial adapted to rotate within said rim, having graduations and groups of its units of graduation corresponding to those on the rim, a lever fixed to the dial and adapted to overlap the rim, and a pin through the lever adapted to seat in the holes in the rim.

3. A dial for combination locks, having a fixed member and a rotatable member, a notched gage on said fixed member, a gage formed by a series of holes in said fixed member, a lever on the rotatable member whose free end overlaps the gages on said fixed member, a roller on said lever adapted to contact with the notched gage, a spring adapted to press said roller against the notched gage, a pin through said lever adapted to enter said holes in the fixed member and a spring adapted to normally hold said pin free of said holes.

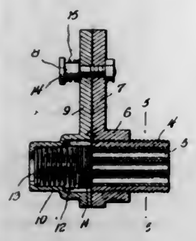
4. In combination locks, the combination of a rotatable dial, and a fixed dial rim, the dial being graduated and the rim having notches on radii of the said graduations, and a lever adapted to be used in rotating said dial, and to overlap said notched rim, and a rotating point on said lever adapted to seat in said notches.

5. In combination locks, the combination of a fixed dial rim with notches graduated therein, and holes therein indicating groups of these graduation units, and a dial adapted to rotate within said rim, having graduations and

groups of its units of graduation corresponding to those on the rim, a lever fixed to the dial and adapted to overlap the rim, a roller on the lever adapted to seat in the notches of the rim and a pin through the lever adapted to seat in the holes in the rim.

[Claim 6 not printed in the Gazette.]

1,113,867. AIR-VALVE FOR INTERNAL-COMBUSTION ENGINES. MARCELLUS R. BENNETT, Wilkes-Barre, Pa. Filed Jan. 17, 1914. Serial No. 812,782. (Cl. 137—26.)



1. The combination with the intake pipe of an internal combustion engine of an air supply valve in said pipe comprising a series of tubes arranged side by side and opening into said pipe, and a closure covering the outer ends of said tubes and movable over the same whereby any number of said tubes may be uncovered to vary the volume of air flowing into the manifold in accordance with the speed of the engine.

2. The combination with the intake pipe of an internal combustion engine, of an air supply valve in said pipe comprising a series of tubes arranged side by side and opening into said pipe, a closure plate covering the outer ends of said tubes and movable over the same whereby any number of said tubes may be uncovered, means for swinging said plate, and means for restoring said plate to normal position.

3. The combination with the intake pipe of an internal combustion engine, of an air supply valve in said pipe comprising a series of tubes arranged side by side and opening into said pipe, a closure plate covering the outer ends of said tubes and movable over the same whereby any number of said tubes may be uncovered, means for swinging said plate, and a spring for restoring said plate to normal position.

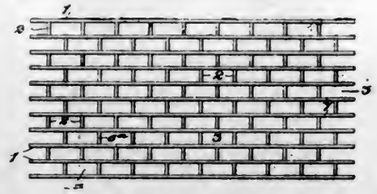
4. The combination with the intake pipe of an internal combustion engine, of an air supply valve in said pipe comprising a series of tubes arranged side by side and opening into said pipe, a sleeve surrounding said tubes, a plate connected to the outer end of said sleeve and having an opening therein coaxial with the sleeve, and a closure plate pivoted upon said first plate and normally closing the outer ends of said tubes.

5. The combination with the intake pipe of an internal combustion engine, of an air supply valve in said pipe comprising a series of tubes arranged side by side and opening into said pipe, a sleeve surrounding said tubes, a plate connected to the outer end of said sleeve and having an opening therein coaxial with the sleeve, a closure plate pivoted upon said first plate and normally closing the outer ends of said tubes, and means for swinging said closure plate to uncover the outer ends of said tubes.

[Claims 6 to 8 not printed in the Gazette.]

1,113,868. SIDEWALK AIR AND LIGHT GRATING. ELLIAS BERSON, New York, N. Y. Filed Dec. 27, 1913. Serial No. 808,978. (Cl. 189—82.)

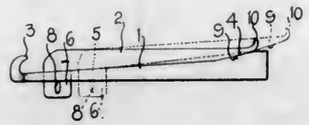
1. A sidewalk grating comprising bars arranged side by side in parallel and spaced relation, said bars having apertures extending therethrough and disposed adjacent their upper edges, and connecting and spacing blocks disposed between every pair of adjacent bars, the blocks at one side of each bar being staggered with respect to the blocks at the opposite side and all the blocks having lugs extending into the opening of the bars and riveted thereto, the upper edges of the bars and blocks being in the same plane, whereby the blocks prevent slipping of shoes longitudinally of the bars.



2. A sidewalk grating comprising bars arranged side by side in parallel and spaced relation, said bars having apertures extending therethrough and disposed adjacent their upper edges, and connecting and spacing blocks disposed between every pair of adjacent bars, said blocks having lugs extending into the opening of the bars and riveted thereto, the blocks between each pair of bars being staggered with respect to the blocks between adjacent bars, and said blocks being of less vertical dimensions than the bars, the upper edges of the bars and blocks being in the same plane, whereby the blocks prevent slipping of shoes longitudinally of the bars.

3. A sidewalk grating consisting of a plurality of units, each unit consisting of a bar having extending from one side thereof a plurality of connecting and spacing blocks spaced apart longitudinally thereof, and each block having a lug extending from the side edge thereof, and each bar having an opening between each pair of blocks, whereby the lugs of one unit can enter the openings of the adjacent unit, and said entered lugs being upset for permanently fastening the units together, the upper edges of the bars and blocks being in the same plane, whereby the blocks prevent slipping of shoes longitudinally of the bars.

1,113,869. GUY-ROPE ANCHOR. JOE BILBIE, Matewan, W. Va. Filed May 2, 1914. Serial No. 835,991. (Cl. 57—126.)



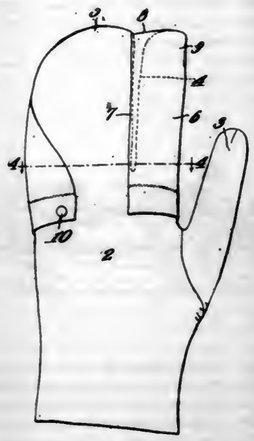
A guy rope anchor comprising a stock provided at one end with a hook and at its other end with a cam and intermediate of its ends with a longitudinal slot, a grip having one end provided with a transversely orificed lug to engage the slot and its other end with an upstanding spur and with a cam to engage that of the stock, the stock and grip being of the same width from end to end, whereby when seated in an opening, lateral play of the anchor therein will be precluded.

1,113,870. COMBINATION GLOVE AND MITTEN. CECIL BILLINGS, Coldwater, Kans. Filed Nov. 28, 1913. Serial No. 803,611. (Cl. 2—9.)

1. A fingered glove having a flap adapted to be wrapped around the fingers, said flap having a pocket adapted to engage over the end of one finger.

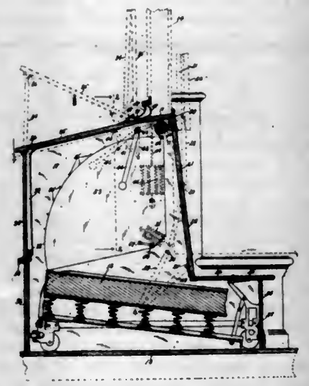
2. A glove embodying a pair of stalls, one being adapted to accommodate the index finger, and a flap attached to the other stall and adapted to be wrapped around the first mentioned stall, the flap having a pocket to engage over the free end of the first mentioned stall.

3. A glove embodying a pair of stalls, one being adapted to accommodate the index finger, and a flap attached to the other stall and adapted to be wrapped around the first mentioned stall, the flap having a pocket to engage



over the free end of the first mentioned stall, and interengaging means carried by the free end of the flap and the glove body for maintaining the flap in wrapped condition.

1,113,871. ADJUSTABLE COMPARTMENT FOR BEDS. NORMAN D. BISHOP, Los Angeles, Cal., assignor to California Trading Company, a Corporation of California. Filed Dec. 18, 1913. Serial No. 807,567. (Cl. 20—1.11.)



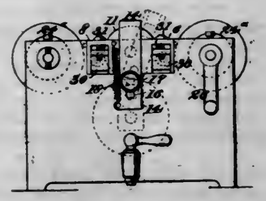
1. A compartment for a bed adapted to extend through an opening in the wall of a building, comprising side walls, suitable adjustable means in the form of a seat for closing the front portion of the compartment which is disposed in the interior of the building, adjustable means including relatively movable sections for closing the rear portion of the compartment which is disposed on the exterior of the building, means operatively connected with the sections for moving the same to open the rear portion of the compartment, sector plates pivotally mounted on the side walls, a roller curtain mounted on the side walls and provided with eyelets, and pins on the sector plates adapted to fit in said eyelets as set forth.

2. A compartment for a bed having side walls, adjustable means including relatively movable sections placed on the side walls for closing the rear portion of the compartment, and means for closing the front portion of the compartment, including sector plates pivotally mounted on the side walls, a spring actuated roller mounted on the side walls, a curtain provided with eyelets and having one end thereof secured to the roller, and having the other end thereof secured to the sector plates, and pins on the sector plates adapted to fit in the eyelets when the sector plates are turned as set forth.

3. In a compartment for a bed, the combination of side walls, means including relatively movable sections on the side walls at the rear of the compartment, means operatively connected with said sections for moving the same to open the rear portion of the compartment, sector plates pivotally mounted on the side walls, a roller curtain mounted on the side walls and provided with eyelets, and pins on the sector plates adapted to fit in said eyelets as set forth.

4. A compartment for a bed having side walls, means including relatively movable sections placed on the side walls for closing the rear portion of the compartment, sector plates mounted on the side walls, a spring actuated roller mounted on the side walls, a curtain on the roller for closing the front portion of the compartment, eyelets in the curtain, and pins on the sectors adapted to fit in said eyelets as set forth.

1,113,872. DEVICE FOR INKING AND DAMPENING PRINTING-RIBBONS. ABRAHAM BLOCK, San Francisco, Cal., assignor of one-eighth to Anthony Santos, Oakland, Cal., and one-eighth to Thomas Hourihan, one-eighth to Frank W. Freechtle, and one-eighth to Clair A. Crowley, San Francisco, Cal. Filed Oct. 14, 1912. Serial No. 725,645. (Cl. 91—51.)



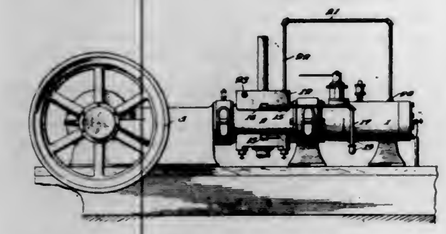
1. In an apparatus for re-inking or moistening printing ribbons, a receptacle having a reservoir for fluid, a cylinder arranged in the receptacle and adapted to travel through the liquid in the reservoir, reels for receiving and delivering the ribbon to be treated, bearings for said reels, said bearings including a driving mechanism for one of the reels, a pressure roller adjustable above the cylinder to press the ribbon thereupon, means for adjusting the pressure of the roller and the ribbon upon the cylinder, said means comprising sliding bolts, means for locking the bolts, and springs connected to the bolts for automatically releasing the pressure roller when the locking means release the bolts.

2. In an apparatus for re-inking or moistening printing ribbons, a receptacle having a reservoir for fluid, a cylinder arranged in the receptacle and adapted to travel through the liquid in the reservoir, reels for receiving and delivering the ribbon to be treated, bearings for said reels, said bearings including a driving mechanism for one of the reels, a pressure roller adjustable above the cylinder to press the ribbon thereupon, means for adjusting the pressure of the roller and the ribbon upon the cylinder, said means comprising sliding bolts, means for locking the bolts, and springs connected to the bolts for automatically releasing the pressure roller when the locking means release the bolts, and adjustable rollers for taking up the slack of the ribbon, said rollers being arranged parallel to the sides of and adjacent to the pressure roller.

3. In an apparatus for re-inking printing ribbons, a receptacle for liquid having end walls provided with apertures, pressure and guide rollers for the ribbons, a transferring cylinder over which the ribbon is moved, and

bearing plates detachably mounted in the apertures of the receptacle for supporting said rollers and cylinders and whereby they may be bodily and simultaneously lifted from the receptacle.

1,113,873. MEANS FOR COOLING THE VALVE-CHESTS OF AIR-COMPRESSORS. CLEMENT W. BORING, Bradford, Pa. Filed June 5, 1913. Serial No. 771,993. (Cl. 230—6.)



1. The combination with an air compressor having a water-jacket surrounding the same and an open receptacle above and surrounding the air discharge valves, a gas engine for driving the compressor piston, a water-supply for the lower end of the water-jacket, a discharge for the upper end of the water-jacket and connected to the water-jacket of the gas engine, and a water discharge for the water-jacket of the gas engine and discharging into the open receptacle.

2. The combination with an air-compressor cylinder and its piston, a water jacket surrounding the compressor cylinder, a water cooled gas engine operating the compressing piston, a water-supply for the lower end of the water jacket of the compressor, a discharge for the upper end of the water-jacket, said discharge connected to the water-jacket of the gas engine, a discharge for the water-jacket of the gas engine and communicating with the open receptacle and an overflow pipe for the said open receptacle.

3. The combination with an air compressor and its piston, a water-jacket surrounding the said cylinder, a gas engine operating the air compressing piston, a water supply for the lower end of the water-jacket of the compressing cylinder, a discharge for the upper end of the water-jacket and extending along the sides of the cylinders and downwardly and connected to the lower end of the water-jacket of the engine cylinder, a discharge for the upper end of the water-jacket of the engine-cylinder and extending upwardly, forwardly and downwardly into the open receptacle, and a water discharge for said open receptacle.

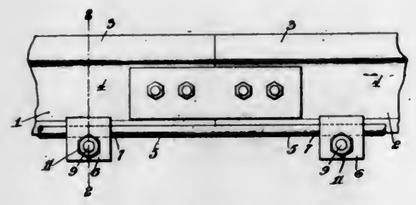
4. The combination with an air compressor and its piston, a water jacket surrounding the said compressor cylinder, a gas engine operating air compressing piston, a water supply for the lower end of the water jacket of the compressing cylinder, a discharge for the upper end of the water jacket of said compressing cylinder, and extending horizontally along the sides of the cylinder, and turned downwardly and connected to the lower end of the water jacket of the engine cylinder adjacent or nearest the compressing cylinder, a discharge for the upper end of the water jacket of the engine cylinder at the opposite end from the entrance of the water, and an open receptacle above and surrounding the air valves of the compressing cylinder, and into which the discharge of the engine cylinder passes, and said open receptacle having a discharge at its upper end to maintain a predetermined water level in the receptacle.

1,113,874. TOY. FRANK J. BOYLE, Galveston, Tex. Filed May 29, 1914. Serial No 841,854. (Cl. 46—40.)

1. In a toy, a plurality of relatively movable members, a plurality of figures having pivotal connection with the members and movable when the members are actuated, said figures constituting stop members to limit the relative movement of the said members, an intermediate figure having pivotal connection with the members and operable simultaneously with the first mentioned figures when the said members are actuated, and an auxiliary figure carried by the intermediate figure and freely oscillable thereon to be actuated when the said intermediate figure is operated.

2. In a toy, the combination with a plurality of members, of outer and an intermediate figure, each having independent pivotal connection with the members, with the said outermost figures constituting means for limiting the relative movement of the said members, and an auxiliary figure mounted to swing on the intermediate figure and operable therewith to move toward either of the said outermost figures when the said members are actuated.

1,113,875. RAIL-BOND. GEORGE H. BURGE, Huntsville, Mo., assignor of one-half to R. G. Burge, Huntsville, Mo. Filed Oct. 9, 1912. Serial No. 724,811. (Cl. 173—277.)



1. The herein described means for bonding two rails, including a conducting member arranged upon the edges of the base flanges of the rails, bolts having hooked ends engaging the operative longitudinal edges of the rails and having their shanks extending transversely of and beneath the base of the rails, a clip for each of the bolts, said clips each including a base having an upper flat face upon which the rails rest, an overlying lip formed upon the outer end of the clip and having an inclined under face which rests upon the upper surface of the base flange of the rail, an aperture at the juncture of its base and lip within which the conductor is received, and adjustable means upon the bolts for moving the clip toward the rails to compress the rails and to wedge the lip and base portions of the clips against the rails.

2. The herein described means for bonding two rails including a conducting member arranged upon the edges of the base flanges of the rails, bolts having hooked ends engaging the opposite longitudinal edges of the rails and having their shanks extending transversely of and beneath the base of the rails, a yieldable clip for each of the bolts, said clips each including a base having an upper flat face upon which the rails rest, a lip formed upon the outer end of the clip and having an inclined under face which rests upon the upper surface of the base flange of the rail, said lip being disposed above and in superposed relation with the flat surfaces of the base for its entire length, the base portion of the clip having an inclined undersurface through which the bolt passes, an aperture at the juncture of the base and lip within which the conductor is received, and means upon the bolts for moving the clips toward the rails to compress the conductor against the rails and to spread the lip and base portion of the clips against the rails.

1,113,876. COAL-WASHER AND ORE-CONCENTRATOR. ALONZO C. CAMPBELL, Asheville, N. C. Filed May 3, 1913. Serial No. 765,277. (Cl. 83—88.)

1. A machine of the class described provided with a pan, means for oscillating the pan and imparting percussive action to the same, transversely-extending swinging riffles within the said pan and inclined forwardly and downwardly, the riffles being fulcrumed at their elevated ends and the forward end of one riffle extending approximately half way under the next riffle ahead.

2. A machine of the class described provided with a pan, legs for supporting the pan and mounted to swing, one of the legs being at the head of the pan and being longer than the other leg at the rear end of the pan, means for oscillating the pan and imparting percussive action to the same, and transversely-extending swinging riffles within the said pan and inclined forward and downwardly, the riffles being fulcrumed at their elevated ends, and the forward end of one riffle extending approximately half way under the next riffle ahead.

3. A machine of the class described, provided with a pan, provided at its head with a transverse barrier forming with the head end of the pan a concentrate pocket provided in its bottom with discharge openings, means for oscillating the pan and imparting percussive action to the same, transversely-extending swinging riffles within the said pan and inclined forwardly and downwardly, the riffles being fulcrumed at their elevated ends and the forward end of one riffle extending approximately half way under the next riffle ahead.

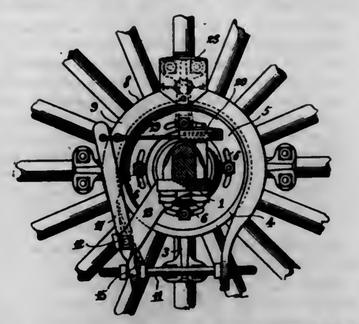
4. A machine of the class described, provided with a pan, provided at its head with a transverse barrier spaced from the head end to form with the same a concentrate pocket, the barrier having openings leading to the said pocket and the latter having discharge openings in its bottom, a screen in the head end of the pan and terminating at the said barrier above the openings therein, means for oscillating the pan and imparting percussive action to the same, and transversely extending swinging riffles within the said pan and inclined forwardly and downwardly, the riffles being fulcrumed at their elevated ends and the forward end of one riffle extending approximately half way under the next riffle ahead.

5. A machine of the class described provided with a pan provided with riffles, swing legs pivotally connected with the pan to allow the pan to oscillate, the legs being of unequal length and the shorter one being at the tail end of the pan, a revoluble wheel provided at its peripheral face with a percussion lug adapted to engage the head of the said pan, the legs of the pan being approximately vertical at the inception of the percussive stroke, a flexible connection attached at one end to the head of the pan and extending upwardly and forwardly, and a spring device connected with the other end of the said flexible connection.

[Claims 6 to 15 not printed in the Gazette.]

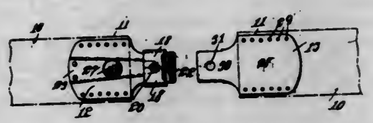
1,113,877. HUB-BAND BRAKE. FAY H. CHAPMAN, Avoca, N. Y. Filed Feb. 27, 1914. Serial No. 821,493. (Cl. 21—8.)

1. In a vehicle brake, the combination of a band secured to the spokes of the wheel, a bracket secured to the axle, a brake band arranged to coöperate with the wheel band and having one end connected with the said bracket, a lever mounted upon the bracket, means adjustably connecting the opposite end of the brake band with the lever, a flexible connection attached to the said lever, and a guide pulley mounted upon the aforesaid bracket and having the flexible connection passing therearound.



2. In a vehicle brake and in combination with a wheel band, a brake band arranged to coöperate with the wheel band and having one end formed with a sleeve, a bracket secured to the axle, a pin projecting laterally from such bracket and adapted to pass through the sleeve of the brake band, said pin and sleeve having registering notches, a spring catch secured to the brake band and adapted to engage the notch in the pin to hold the brake band in place thereon, and operating means for such brake band.

1,113,878. WEARING-APPAREL FASTENER. JAMES B. CONDE and CHARLES C. MOSCONY, Philadelphia, Pa. Filed Nov. 29, 1913. Serial No. 803,742. (Cl. 24—230.)

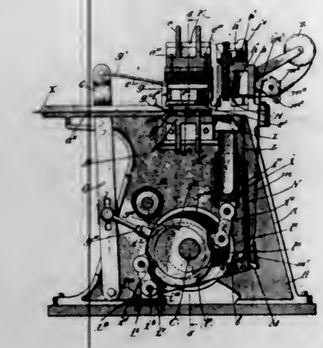


In an apparel fastening device, the combination with a socket member for connection with one flap of the apparel and consisting of a plate having a longitudinally struck tapered portion forming a tapered recess in the rear of the plate, a spring-like locking member carried on the under side of the plate, said locking member being tapered to conform to the recess in the plate, a locking head on the tapered end of the locking member and projecting through an opening in the plate, oppositely bent ears on the plate, each provided with a semi-circular cut away portion forming an opening registering with the opening in the plate and through which the locking member normally projects, a button projecting through an opening in the plate and connected to the locking member for moving the locking portion thereof out of the opening in the plate, and a tongue member for connection with the other flap of the apparel and provided with an opening adapted to register with the opening in the plate of the socket member when the tongue member is engaged therewith so that a portion of the locking member which passes through the opening in the plate will pass through the opening in the tongue member to lock the members together.

1,113,879. MACHINE FOR MAKING BUTTER-DISHES. EDWARD CRAIG, St. Joseph, Mich., assignor, by mesne assignments, to Saranac Machine Co., St. Joseph, Mich., a Corporation of Michigan. Filed Oct. 30, 1903. Serial No. 179,152. (Cl. 93—42.)

1. A machine for making dishes, comprising devices for feeding and cutting the material, devices for forming and

stapling the dishes, devices for feeding the wire, and means for operating all of said devices; said means including a shaft provided with reduced eccentric end portions, vertically reciprocating members connected with the said cutting devices and provided with ways, and blocks mounted on said eccentric end portions and adapted to reciprocate horizontally in said ways provided in the lower end portions of said vertically reciprocating members.



2. A machine for making dishes, comprising devices for feeding and cutting the sheet material, devices for forming and stapling the dishes, devices for feeding the wire, and means for operating all of said devices; said means including a lever fulcrumed at its lower end and connected at its upper end with the device for feeding the sheet material, and an eccentric device connected with an intermediate portion of said lever, together with a shaft having its ends connected with said cutting device, the said eccentric device being mounted upon an intermediate portion of the shaft, and the said stapling and wire-feeding devices being also connected with intermediate portions of said shaft, the said lever being disposed at one side of the path of travel of the sheet material, but having its upper end portion bent toward the center of the machine, whereby the sheet material passes below the upper portion of the lever.

3. A machine for making dishes, comprising devices for feeding and cutting the sheet material, dish-forming and stapling devices, wire-feeding devices, and means for operating all of said devices; said means including an upright lever fulcrumed at its lower end and connected at its upper end with the device for feeding the sheet material, a drive shaft connected at its ends with the said cutting device, an eccentric cam mounted on an intermediate portion of said shaft, and an eccentric strap on said cam connected with an intermediate portion of the said lever, the said lever being disposed at one side of the path of travel of the sheet material, but having its upper end portion bent toward the center of the machine, whereby the sheet material passes below the upper portion of the lever.

4. A machine for making dishes, comprising devices for feeding and cutting the sheet material, dish-forming and stapling devices, wire-feeding devices, and means for operating all of said devices; said means including an eccentric cam and fulcrumed strap adapted for operating the dish-forming devices, together with a shaft having its ends connected with said cutting device, the said cam being mounted upon an intermediate portion of the shaft, and the said stapling devices being also connected with an intermediate portion of said shaft.

5. A machine for making dishes, comprising devices for feeding and cutting the sheet material, dish-forming and stapling devices, wire-feeding devices, and means for operating all of said devices; said means including a drive shaft connected at its ends with the said cutting device, an eccentric cam on said shaft, an eccentric strap on said cam, a link connecting one side of said strap with a stationary portion of the machine, and another link connecting the other side of said strap with the said dish-forming deivces, together with means for connecting the said stapling and wire-feeding devices with intermediate portions of said shaft.

[Claims 6 to 37 not printed in the Gazette.]

1,113,880. TOWEL-RACK. MARY J. DARLING, Providence, R. I. Filed Oct. 7, 1913. Serial No. 793,912. (Cl. 45—32.)

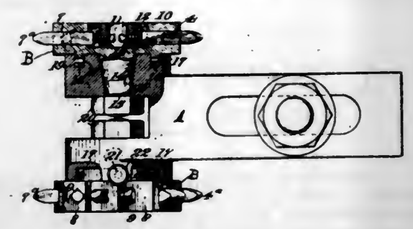
1. A towel rack comprising a support, a block pivoted upon the support and having limiting shoulders thereon, towel supporting arms pivoted to the block and adapted to engage said shoulders and a connector removably engaged with the outer ends of the arms and adapted to prevent relative movement therebetween.

2. A towel rack comprising a support, a block pivoted upon the support and having limiting shoulders thereon, towel supporting arms pivoted to the block and adapted to engage said shoulders, a connector removably engaged with the outer ends of the arms and adapted to prevent relative movement therebetween and sleeves rotatably mounted upon the arms.

1,113,881. FLYING-MACHINE. EARL R. DAVIS, Cincinnati, Ohio. Filed Feb. 10, 1914. Serial No. 817,885. (Cl. 244—14.)

A flying machine comprising a nacelle of pisciform contour, said nacelle comprising a forward body portion or car and a rearwardly extending tail, a fixed tail plane at the rear of the tail of the body, a vertical rudder in proximity thereto, an elevating tail plane pivoted for vertical movement at the rear edge of the fixed tail plane, said fixed tail plane being arranged in the line of the longitudinal center of the body and the movable tail plane having a neutral position coinciding with said line and being adjustable above and below the same, dihedral wings projecting laterally from the car and at a point adjacent the top thereof so that the point of suspension when the machine is in flight will be wholly above the longitudinal center line of the car, a motor, and means arranged within the bottom of the car to carry and arrange the load weight below the horizontal longitudinal center of the car, a propeller shaft driven by the motor and arranged on a line coinciding with the horizontal longitudinal center of the car between the point of suspension and load weight, and a propeller operated by said shaft and arranged so that the lifting portion of its thrust will elevate the forward end of the body to a degree to throw the center of weight slightly forward of the vertical line of the point of suspension when the machine is in flight.

1,113,882. MULTIPLE-TOOL HOLDER. TRAYHARN DAVIS, Oakland, Cal. Filed Apr. 28, 1914. Serial No. 834,947. (Cl. 29—48.)

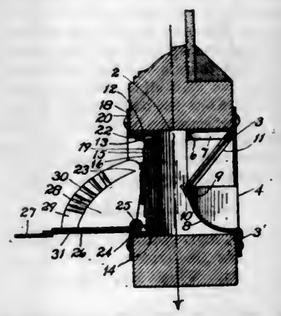


1. In a multiple tool holder, the combination of a holder having an enlargement formed in its outer end with an annular groove cut in the face thereof, a circular tool head carried by the enlarged end of the holder and turnable therein, a plurality of radially disposed tools secured in the tool head, an annular flange formed on the inner face of the tool head and adapted to project into the annular groove on the holder, said flange having a plurality of perforations extending therethrough, one perforation opposite each tool, a pin insertible through the holder and any of said perforations to lock any selected tool in position, slots formed in the tool head in which the tools are mounted, means for securing the tools in their respective slots, a secondary holder centrally mounted in the tool head, and a plurality of set-screws carried by the secondary holder to form an adjustable stop for each tool.

2. In a multiple tool holder, the combination of a holder, a tool head having a plurality of radially disposed slots formed therein turnably mounted on the holder, means for locking the head against turning movement, a tool in each slot, a secondary holder centrally mounted in the tool head having slots formed therein into which the inner end of each tool is adapted to project, and a plurality of set-screws carried by the secondary holder, one for each slot.

3. In a multiple tool holder, the combination of a holder, a tool head having a plurality of radially disposed slots formed therein turnably mounted on the holder, means for locking the head against turning movement, a tool in each slot, a secondary holder centrally mounted in the tool head having slots formed therein into which the inner end of each tool is adapted to project, a plurality of set-screws carried by the secondary holder, one for each slot, and means on the head for locking each tool.

1,113,883. VENTILATOR. PHILIP S. DELANY, Kansas City, Mo., assignor to Universal Ventilating Company, Kansas City, Mo., a Corporation of Maine. Filed Aug. 19, 1912. Serial No. 715,897. (Cl. 98—31.)



1. In a ventilator, the combination with a sash, having an opening therein, of separate boxes projected into said opening from inner and outer faces of the sash and each provided with a screen opening, a removable screen covering the opening in the inner box, and a removable screen covering the opening in the outer box and adapted for removal through the opening in the inner box.

2. In a ventilator, the combination with a sash, having an opening therein, of separate boxes projected into said opening from inner and outer faces of the sash and each provided with a screen opening, a removable screen covering the opening in the inner box, a removable screen covering the opening in the outer box and adapted for removal through the opening in the inner box, and means on said boxes for yieldingly holding the screens in place.

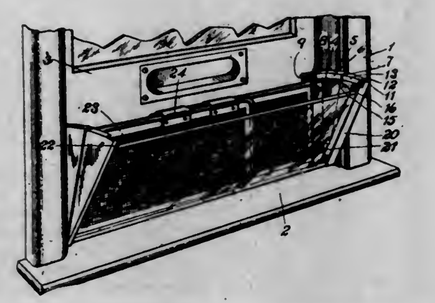
3. The combination with a sash having an opening therein, of a box projected into said opening from the outer face of the sash, and having a closed upper portion and open lower portion, an upwardly and inwardly curved deflector projecting into the box from the bottom of the open lower portion thereof, and a screen supported on the upper edge of the deflector and bearing against the upper portion of the box.

4. The combination with a sash having an opening therein, of a box projected into the opening from the outer face of the sash and comprising an open lower portion having an inwardly and upwardly curved deflector entering the box from the bottom of said opening, and having inwardly and outwardly extended lips on its upper edge, the said box comprising a closed upper portion having a flange within the sash above the inner edge of the deflector forming a restricted opening, and a screen adapted for projection through the restricted opening and supported in an inclined position by the lips on the deflector and outer closed portion of the box.

5. In a ventilator, the combination with a sash having an opening therein, of a box in the outer portion of said opening having a lower mouth and an inwardly and upwardly curved deflector, the upper portion of said deflector having an outwardly facing lip and inwardly facing clips, and a screen supported on said lip and yieldingly held by said clips, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,113,884. BRACKET. PHILIP S. DELANY, Kansas City, Mo., assignor to Universal Ventilating Company, Kansas City, Mo., a Corporation of Maine. Filed Oct. 8, 1912. Serial No. 724,501. (Cl. 98—31.)



1. A bracket comprising movably related members, one having a keeper and the other a slide adapted for travel in the keeper, and a friction device on one of the members yieldingly wiping the other member, for the purpose set forth.

2. A bracket comprising movably related members, one having a keeper and the other a slide adapted for guided travel in the keeper, and a flat spring on one of said members yieldingly and constantly engaging the other member, for the purpose set forth.

3. A bracket comprising movably related members, one provided with an overhanging keeper and the other with a slide underlying the keeper, and a flat spring on one of

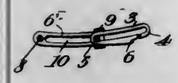
said members yieldingly engaging the other member, for the purpose set forth.

4. A bracket comprising movably related members, one having a lateral lip and depending flange forming a keeper hood, the other having a lateral lip and depending flange located within like parts of the first named member and slidable therein, and a resilient member fixed to one of said members and yieldingly engaging the other, for the purpose set forth.

5. A bracket comprising movably related members, one having a lateral lip and depending flange forming a keeper hood, the other having a lateral lip and depending flange located within like parts of the first named member and slidable therein, a resilient member fixed to one of said members and yieldingly engaging the other, and a flat spring fixed to the under side of the slide lip and having a free portion extended upwardly to engagement with the keeper lip.

[Claims 6 and 7 not printed in the Gazette.]

1,113,885. EXPANSIBLE SECURING DEVICE FOR WATCH-BRACELETS. CHARLES L. DEPOLLIER, New York, and EDWARD C. DUNCUFF, Mount Vernon, N. Y., assignors to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,745. (Cl. 24—238.)



1. A device for securing a watch to an expansible bracelet at each end thereof, comprising an expansible link structure consisting of two interlocked members slidable in relation to each other, one member being composed of an open link having a resilient upper portion provided with a hump and having a hook at one end, and another member composed of two side pieces connected together at each end, one end having an outwardly projecting portion adapted to slide over said hump and rest in front thereof to lock said hook when the structure is in its contracted position.

2. A device for securing a bracelet together at any intermediate portion thereof, comprising an expansible link structure consisting of two interlocked members slidable in relation to each other, one member being an open link separated on a diagonal line at its forward end to form a hook, and having a resilient upper portion provided with a hump and adapted to open and close said hook, and another member composed of two side pieces connected together at one end and the other end of said side pieces being connected by an outwardly projecting portion adapted to slide over said hump and rest in contact with the front thereof to close and lock said hook when the link structure is in closed position.

3. A device for securing a watch to an expansible bracelet, comprising an expansible link structure composed of two link interlocked members slidable in relation to each other, one member consisting of an open link having a hook at one end thereof and provided with an upper resilient portion, the other member having means at one end thereof for locking said hook and resilient member for the purpose set forth.

1,113,886. SEPARABLE REVERSIBLE BEE-TRAP. ANDREW C. DOUGLASS, Sonoma, Cal. Filed Apr. 1, 1913. Serial No. 759,263. (Cl. 6—4.)

1. A reversible bee trap comprising a casing having a removable bottom secured thereto and apertures within the said casing and bottom; and a reciprocating slide within the casing having converging wings and a removable bottom secured thereto, and apertures within the said slide and removable bottom, adapted to register with the apertures within the casing and removable bottom secured thereto for the purpose of permitting passage through the slide and converging wings therein in one direction only when the said slide is in one end of the casing and to permit passage in the opposite direction only when the slide is in the other end of the casing.

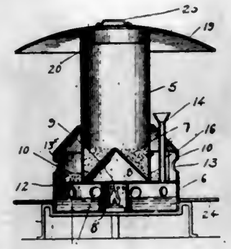
2. A reversible bee trap comprising a casing having a removable bottom secured thereto and apertures within the said casing and bottom; a reciprocating slide within the casing having converging wings and a removable bottom secured thereto and apertures within the said slide and removable bottom adapted to register with the apertures within the casing and the removable bottom secured thereto for the purpose of permitting passage through the slide and the converging wings therein in one direction only when the said slide is in one end of the casing and to permit passage through the said slide in the opposite direction only when the slide is in the other end of the casing; and means for moving the slide from one end of the casing to the other.

3. In a reversible bee trap, the combination of a casing having apertures therein and depending sides whose lower edges are provided with projections; a bottom having apertures therein and adapted to engage the projections on the lower edges of the casing; a reciprocating slide within the casing having converging wings and apertures therein and depending sides whose lower edges are provided with projections; a bottom having apertures therein and adapted to engage the projections on the lower edges of the reciprocating slide the said apertures within the slide and the bottom secured thereto being adapted to register with the apertures within the casing and the removable bottom secured thereto for the purpose of permitting passage through the slide and the converging wings therein in one direction only when the said slide is in one end of the casing and to permit passage through the said slide in the opposite direction only when the slide is in the other end of the casing; an extension integral with the upper portion of the reciprocating slide adapted to move the said slide from one end of the casing to the other; and means for retaining the bottom against longitudinal movement on the casing and the slide.

4. In a reversible bee trap the combination of a casing having apertures therein and depending sides provided at the lower edges thereof with lateral projections and central lugs; a bottom having apertures therein and adapted to engage the lateral projections and the lugs on the lower edges of the casing; a reciprocating slide having apertures and converging wings therein and depending edges with lateral projections and lugs on the lower edges thereof within the casing; a bottom having apertures therein and adapted to engage the lateral projections and the lugs on the bottom of the said slide; the apertures within the reciprocating slide and the bottom secured thereto being adapted to register with the openings in the casing and the bottom secured thereto for the purpose of permitting passage through the said slide and the wings therein in one direction only when the said slide is at one end of the casing and to permit passage in the opposite direction only when the slide is at the other end of the casing; and an extension integral with the reciprocating slide by means of which the said slide may be moved within the casing.

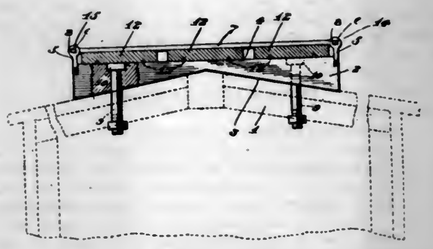
1,113,887. FEED AND WATER RESERVOIR. PHILIP DRAGAN, CHARLES DE GEORGE, and RAYMOND PALMERO, Philadelphia, Pa. Filed May 28, 1912. Serial No. 700,357. (Cl. 119—52.)

A device of the class described comprising a body having an imperforate horizontal partition forming superposed chambers and also having side perforations to permit access to both of said chambers, said body being formed with a central opening in its bottom, a circular flange rising from the bottom concentric to the opening, a tube removably telescoped in the circular flange and abutting against said partition and having apertures con-



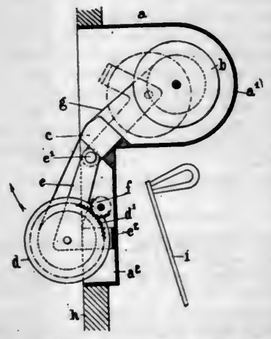
tiguous to the latter, a heater in the tube, and a feed hopper rising from the partition and having a cone-shaped bottom to form a dead air space directly above the tube containing the heater.

1,113,888. RUNNING-BOARD STRUCTURE OF BOX-CARS. NELS DROLSON, Superior, Wis. Filed Jan. 28, 1914. Serial No. 815,014. (Cl. 105—194.)



A saddle for car roofs including a member adapted to be bolted to the roof of the car, said member being provided with terminal spaced eyes, and a cover plate having terminal eyes to be secured to the eyes of the saddle, the upper surface of the saddle being formed with spurs to engage the floor boards.

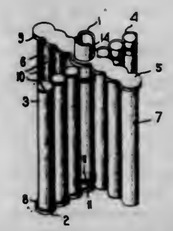
1,113,889. MECHANICAL PIANO. URBAIN DRYVERS, Paris, France. Filed May 12, 1913. Serial No. 767,152. (Cl. 84—161.)



1. In a player piano a tracker in stationary position, fixed bearings for a note roll and a swinging cradle carrying bearings for the take-up roll, said cradle serving to hold the note sheet upon the tracker during the operation of the instrument but being movable to position wholly within the casing when the player mechanism is not in use, substantially as described.

2. In a player piano, a casing, a roll box fitted in fixed position therein and having in its upper portion an inwardly extending bay, a fixed tracker carried by said roll box and fixed bearings therein for a music roll, in combination with a swinging cradle having bearings for a take-up roll and pivotally mounted with relation to said roll box so that it may be swung into said inwardly extending bay when the player mechanism is not in use, substantially as described.

1,113,890. HYPODERMIC CASE. GEORGE HENRY ELWELL, Boston, Mass., assignor to Frank B. Hopewell, trustee, Newton, Mass. Filed Nov. 3, 1913. Serial No. 798,979. (Cl. 206—43.)



1. A case of the character described comprising a pair of pivoted sections presenting wings extending at either side of the pivotal axis, two of said wings being recessed in parallelism to the pivotal axis to form vial pockets, the other two of said wings forming closures for the said pockets, whereby when the sections are swung into parallelism the case is closed and when swung at right angles the case may support itself in upright position with the several vials exposed and accessible.

2. A case of the character described comprising a pair of pivoted sections presenting wings extending at either side of the pivotal axis, two of said wings being recessed in parallelism with the pivotal axis to form vial pockets, means in each of said pockets for retaining a vial therein, the other two of said wings forming closures for the said pockets, whereby when the sections are swung into parallelism the case is closed, and when swung at right angles the case may support itself in upright position with the several vials exposed and accessible.

3. A case of the character described comprising a pair of sections, one presenting a central tubular member and the other pivoted on said tubular member, and both presenting wings extending at either side of the pivotal axis, two of the said wings being recessed in parallelism with the pivotal axis to form laterally open vial pockets, resilient means for retaining vials in said pockets, the other two of said wings forming closures for the said pockets, whereby when the sections are swung into parallelism the case is closed and when swung at right angles the case may support itself in upright position with the several vials exposed and accessible.

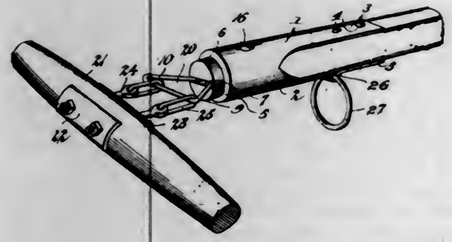
4. A case of the character described comprising a pair of interlocking sections, one presenting a central tubular member forming a cellular compartment adapted to receive the barrel of a hypoedermic syringe provided with a transverse finger piece, and the other pivoted on said tubular member and slidable relatively and longitudinally thereof, both presenting wings extending at either side of the pivotal axis, two of said wings being recessed in parallelism with the pivotal axis to form laterally open vial pockets, resilient means for retaining vials therein, the other two of said wings forming closures for said pockets, a spring secured at one end in said tubular member, its other end extending through a guiding slot in the side of

the tubular member and secured to the pivoted section, thereby determining the path of opening and closing movement of the pivoted section, said spring being tensioned normally to hold the sections in open position, means for holding the hypodermic syringe in position in the central cellular compartment in such a manner that the finger piece of the syringe will hold the pivoted section in closed position, whereby when the sections are swung into parallelism and the hypodermic syringe is in position the case will be closed, and when the hypodermic syringe is removed the spring will operate to move the sections to open position, whereby the case will support itself in upright position with the several vials exposed and accessible.

5. A case of the character described comprising a pair of interlocking sections, one presenting a central tubular member forming a cellular compartment adapted to receive the barrel of a hypodermic syringe provided with a transverse finger piece, and the other pivoted on said tubular member and slidable relatively and longitudinally thereof, both presenting wings extending at either side of the pivotal axis, two of said wings being recessed in parallelism with the pivotal axis to form laterally open vial pockets, resilient means for retaining vials therein, the other two of said wings forming closures for said pockets, a spring secured at one end in said tubular member, its other end extending through a guiding slot in the side of the tubular member and secured to the pivoted section, thereby determining the path of opening and closing movement of the pivoted section, said spring being tensioned normally to hold the sections in open position, the tubular member having L-shaped slots near its upper end with which the finger piece of the hypodermic syringe may coöperate to form a bayonet joint, and so positioned that the projecting ends of the finger piece may engage the movable section to hold it in closed position.

[Claims 6 to 8 not printed in the Gazette.]

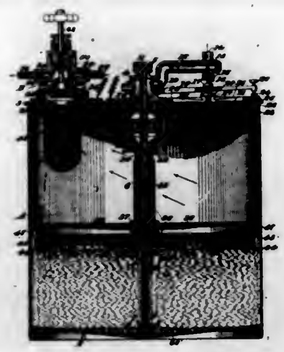
1,113,891. NECK-YOKE AND CAP FOR DRAFT-POLES. BERNARD J. EVERS, St. Elizabeth, Mo. Filed Apr. 18, 1914. Serial No. 832,795. (Cl. 21—92.)



A pole having a cap secured thereto, a head closing one end of the cap and disposed in advance of the forward end of the pole and provided with a slot therein, a neck yoke, a clevis having a shank extending into the pole and provided with a substantially triangular portion fitting in said slot, means connecting the clevis with the neck yoke, and a retaining device extending through the shank of the clevis and through the pole.

1,113,892. CARBURETER. ADOLPH F. FELLER, Berkeley, Cal. Filed Aug. 16, 1913. Serial No. 785,077. (Cl. 48—169.)

1. A carbureter comprising in combination a tank adapted to contain volatile fuel, a casing mounted in the head of the tank communicating with the interior of the tank, a tube secured to the casing extending down into the tank, an enlarged chamber formed in said tube, means in said chamber for heating the air passing therethrough, a secondary tube slidably mounted on the casing tube, a float secured on the secondary tube, and air distributing means formed on the bottom of the float.



2. A carbureter comprising in combination a tank adapted to contain volatile fuel, a casing mounted in the head of the tank communicating with the interior of the tank, a tube secured to the casing extending down into the tank, a secondary tube slidably mounted on the casing tube, a wire faoric covered air distributing cap secured on the end of the secondary tube, a float secured on said tube, a plurality of vertically disposed distributing plates on the bottom of the float, a downwardly projecting annular flange on the bottom of the float, the outer portion of said bottom having a plurality of perforations formed therearound.

3. A carbureter comprising in combination a tank adapted to contain volatile fuel, a casing mounted in the head of the tank communicating with the interior of the tank, a tube secured to the casing extending down into the tank, an enlarged chamber formed in said tube, heating means in said chamber, a secondary tube slidably mounted on the casing tube, a float secured on the secondary tube, air distributing means formed on the bottom of the float, a pipe closed at its upper end extending down through the casing, casing tube and float, and secured in the bottom of the tank and having inlet openings in the lower end thereof communicating with the interior of the pipe, a float in said pipe, and a liquid level indicating rod secured to said float.

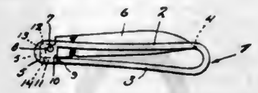
4. In a carbureter, a tank, an enlarged housing in the tank interior depending from the tank top, a heater located within said housing and having a series of spaced vertically disposed passages, a tube extending downwardly from the housing, and a float slidably connected to said tube and having its under face communicating therewith.

5. In a carbureter, a tank, a vertical guide in the tank interior, a tube surrounding said guide in spaced relation thereto, a float slidable on the tube and having a downwardly extending marginal flange, a cap slidably engaged with the guide, arms connecting the cap and the float; said arms being covered with mesh fabric, a series of spaced distributing plates secured beneath the float and extending from said arms to said flange, and fabric parts set at an angle and extending across the spaces between said distributing plates.

[Claim 6 not printed in the Gazette.]

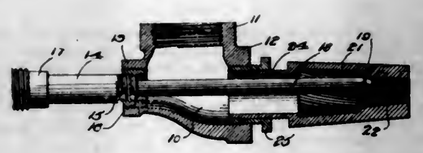
1,113,893. POCKET-KNIFE. GEORGE E. FINKENBINER, Goshen, Ind., assignor of one-half to Albert J. Berkey, Goshen, Ind. Filed July 8, 1913. Serial No. 777,942. (Cl. 30—10.)

A knife consisting of a resilient handle formed of one piece of spring steel comprising substantially parallel arms, one of the arms being bifurcated, ears formed on the bifurcated arm, said ears extending upward to the level of the upper face of said other arm, said other arm having a tongue formed on its end to fit between said ears, a blade pivoted between said ears on said bifurcated arm and having its butt end in contact with the tongue on the end of the other arm, said last mentioned arm being held



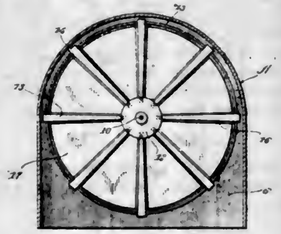
apart from said bifurcated arm only by said tongue and the tang of the knife blade, said blade being adapted to be disposed within said bifurcation.

1,113,894. OIL-BURNER. MICHAEL J. FITZPATRICK, Plattsburg, N. Y. Filed Mar. 22, 1913. Serial No. 756,206. (Cl. 158—76.)



In an oil burner, a casing having a fuel pipe opening, an atomizing fluid inlet at right angles thereto, a tapering nozzle having an adjustable connection with said casing, the bore of said nozzle having spiral grooves thereon, and a fuel pipe extending eccentrically through said casing and nozzle and terminating adjacent said spiral grooves.

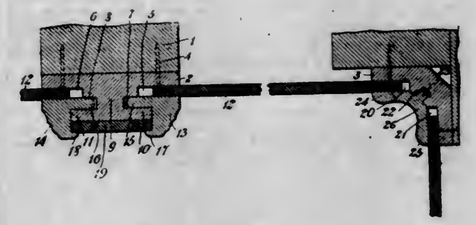
1,113,895. VEGETABLE-CUTTER. RAYMOND W. FLANAGAN, Berwick, Pa. Filed Feb. 11, 1914. Serial No. 818,079. (Cl. 146—11.)



A vegetable cutter comprising a casing, a shaft journaled transversely in the casing, a disk fixed to the shaft interiorly of the casing, a hoop concentric to the disk, cutting blades fixed to the disk and hoop and disposed radially with respect to the shaft, means for feeding material into the path of the blades, means for rotating the shaft, a sleeve carried by the shaft, a gage disk supported by the shaft, resilient means acting upon the gage disk to move the same toward the cutting blades, means for retracting the disk from the plane of the cutting blades, and means on a series of the blades and engageable with the gage disk for guiding the latter and rotating it in unison with the blades.

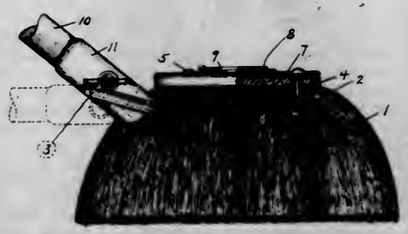
1,113,896. MOLDING. WILLIAM R. FRIEDEL, Memphis, Tenn. Filed Feb. 14, 1914. Serial No. 818,680. (Cl. 20—15.)

A molding strip comprising a body provided with a rabbet on each side and a groove merging into said rabbet, said body being also formed with a face portion arranged on one side of said groove and falling short of the edges of the body, and retaining strips co-acting with said rabbets and said groove for holding in place a wall board extending into said rabbets and arranged on the surface of said face, each of said strips having a bead extending into said groove, and an overhanging edge overhanging the



board arranged on said face, whereby said strips clamp the board on said face in position, and the boards having their edges in said rabbets.

1,113,897. BRUSH OR MOP. FRANK H. FRENCH, Preston, Iowa. Filed Dec. 30, 1913. Serial No. 809,536. (Cl. 15—13.)



1. A cleaning implement comprising a handle, an annular member secured thereto, a plurality of fibers looped over the said annular member, a disk of cushioning material bearing with one face against the looped portions of the said fibers, a cap member bearing against the other side of the said disk, and fastening means connecting the said members and extending through the said disk and clamping the fibers and the cushioning disk therebetween.

2. A cleaning implement comprising a handle, an annular member secured thereto, a plurality of fibers looped over the said annular member, a disk of pervious material bearing with one face against the looped portions of the said fibers, an apertured cap member bearing against the other side of the said disk, fastening means connecting the said members and clamping the fibers and the pervious disk therebetween, and a movable cover for the aperture in the said cap member, the portion of the cap member adjacent to the said aperture being raised to form an oil receptacle between the said cap member and the said pervious disk.

3. A cleaning implement comprising a handle, an annular member secured thereto, a plurality of fibers looped over the said annular member, a disk of pervious material bearing with one face against the looped portions of the said fibers, an apertured cap member bearing against the other side of the said disk, fastening means connecting the said members and clamping the fibers and the pervious disk therebetween; and a movable cover for the aperture in the said cap member, the said aperture permitting access to the upper face of the said pervious disk for the application of oil or polish thereto.

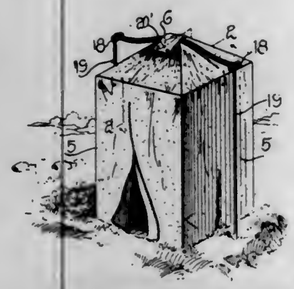
4. In a brush or mop, a handle, an annular member attached thereto, a brush member carried by the said annular member, an oil-distributing disk contacting with the brush member; a reinforcing disk for the said oil-distributing disk, the latter projecting laterally beyond the said reinforcing disk, the projecting portions adapted to

act as a cushioning bumper for the brush or mop; and means for securing the said reinforcing and oil-distributing disks and the said brush member to the said annular member.

5. A cleaning implement including an annular member, a plurality of fibers looped over the same, a pervious member engaging loop portions of the said fibers, and a cap member reinforcing the said pervious member, the said cap and pervious members being relatively so shaped as to afford a chamber therebetween for receiving oil.

[Claim 6 not printed in the Gazette.]

1,113,898. TENT-SUPPORT. DANIEL W. HOUSE, Mobridge, S. D. Filed Feb. 7, 1914. Serial No. 817,319. (Cl. 135—3.)



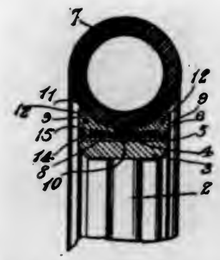
1. The combination with a tent body provided with an opening at its apex, of wire stretching members adapted for engagement upon the inner side of the top wall of the tent and extending through said opening, means pivotally connecting said members, rods connected to said members and extending exteriorly of the tent, and supporting rods connected to said latter rods and adapted to be embedded in the ground to retain said stretching members in spaced relation against the top wall of the tent upon the opposite sides of said opening.

2. The combination with a tent body provided with an opening in its apex, of a pair of stretching members each constructed from a length of wire having eyes formed therein adjacent its ends, the extremities of said wire being adapted to be disposed through the opening in the top wall of the tent, a bolt disposed through said eyes and pivotally connecting the stretching members, oppositely extending wires connected to the extremities of the stretching members and disposed exteriorly over the top of the tent, and supporting rods pivotally connected to said latter wires and adapted to be embedded in the ground whereby the stretching members may be retained in spaced relation and in stretching engagement against the inner side of the top wall of the tent on opposite sides of the opening therein.

3. The combination with a tent body, of corner posts therefor each provided with a headed stud, a pair of connected relatively movable stretching members adapted for engagement with the top wall of the tent, means for moving said members and engaging the same with said tent wall, each of said members being provided with loops to detachably receive the headed studs upon a pair of the corner posts whereby said stretching members and the posts mutually brace each other.

1,113,899. DEMOUNTABLE RIM. LOUIS M. HOVERSON, Brandon, S. D. Filed May 23, 1914. Serial No. 840,612. (Cl. 152—21.)

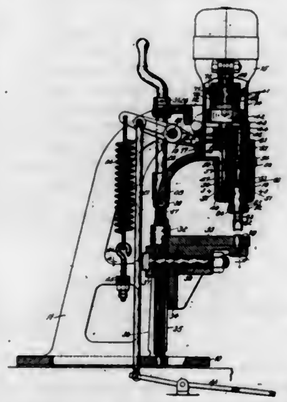
1. A device of the class described comprising the combination with a flanged tire and felly; of a rim positioned upon said felly, removable side flanges having portions engaged against the outer faces of the flanges of the tire to force the latter against the rim, locking flanges carried by said rim, locking ribs carried by said removable side flanges and engaged with said locking flanges to prevent outward movement of said side flanges, said removable side flanges being in the form of transversely split rings, and means for drawing the opposite ends of each flange toward one another to clamp said side flanges against movement.



2. A device of the class described comprising the combination with a felly, a rim positioned upon said felly, and a tire positioned upon said rim; of removable side flanges having inwardly directed portions for engagement between the main portions of the tire and the outwardly directed flanges thereof to force said outwardly directed flanges against the rim, the outer faces of said inwardly directed portions being concave to conform to the curvature of the main portion of the tire, means for tightening the side flanges and preventing movement thereof independently of the tire and rim, and means carried by said side flanges and said rim to prevent outward movement of said side flanges.

3. A device of the class described comprising the combination with a tire, rim and felly; of removable side flanges positioned upon said rim, the flanges of said tire being engaged upon said rim, said side flanges having inwardly directed portions for engagement with the outer faces of the flanges of said tire to press said tire flanges against the rim, said rim having locking flanges formed along its opposite edges with inclined inner faces, said side flanges being provided with locking ribs having inclined faces for engagement with the inclined faces of said locking flanges to prevent outward movement of said side flanges, said removable side flanges being transversely split, and means for drawing together the opposite ends of said side flanges to clamp the latter upon the rim.

1,113,900. RIVETING MACHINERY. MANETHO C. JACKSON, Madison, Wis. Filed Mar. 13, 1913. Serial No. 753,970. (Cl. 78—53.)



1. A mechanism of the class described comprising a source of power, a reciprocating element driven from said source, a tool arranged to be engaged and operated by said reciprocating element, mechanism for transmitting power from said source to rotate said tool, and a friction clutch arranged to permit said power-transmitting mechanism to move independently of said tool when said tool is being acted upon by said reciprocating element.

2. A mechanism of the class described, comprising a source of power, a hammer operated from said source, a tool arranged to be engaged and operated by said hammer, mechanism normally adapted to turn said tool, and a friction clutch arranged to permit said mechanism to move independently of said tool when said tool is being acted upon by said reciprocating element.

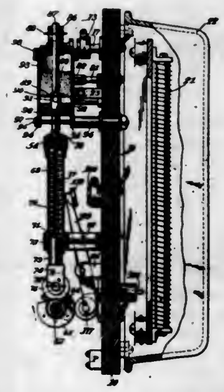
3. In combination, a source of power, a reciprocating element driven from said source, a tool arranged to be engaged and operated by said reciprocating element, and mechanism for normally continuously rotating said tool arranged to permit said tool to remain nonrotating while the latter is being acted upon by said reciprocating element.

4. In combination, a source of power, a hammer operated from said source, a tool arranged to be engaged and operated by said hammer, and mechanism for normally continuously rotating said tool arranged to permit said tool to remain nonrotating while the latter is being acted upon by said hammer.

5. In combination, a source of power, a hammer operated from said source, a tool arranged to be engaged and operated by said hammer, and power-transmitting mechanism interposed between said source and said tool for rotating said tool, said power-transmitting mechanism arranged to permit said tool to remain nonrotating while the latter is being acted upon by said hammer.

[Claims 6 to 12 not printed in the Gazette.]

1,113,901. MOTOR-CONTROLLER. CLAY JEWELL, Baltimore, Md. Filed Aug. 24, 1912. Serial No. 716,926. (Cl. 172—289.)



1. In a motor controller, the combination with a starting resistance, of short circuiting means coöperating with said resistance, and a device for operating the short circuiting means comprising a bar, a tubular member, and a plunger member working in the tubular member, one of said members being connected to the bar and the other member being held in yielding relation thereto.

2. In a motor controller, the combination with a starting resistance, of a series of contact blocks connected with different points in said resistance, a series of pivotally mounted short circuiting members adapted to cooperate with the contact blocks, and means for operating said members comprising a bar, a tubular member connected to the bar, a plunger fitting in the tubular member and projecting from one end thereof, and means for reciprocating said plunger so as to actuate the operating means.

3. In a motor controller, the combination of a starting resistance, a series of contact blocks connected with different points in said resistance, a series of electrically connected and pivotally mounted short circuiting members coöperating with said contact blocks, means for successively moving the short circuiting members into engagement with the contact blocks comprising a bar, a tubular member secured thereto, a plunger having a stem working in the tubular member and projecting therefrom, a spring surrounding the stem and interposed between the plunger and bar and means for actuating the plunger, for the purpose described.

4. In a motor controller, the combination of a starting resistance, a series of contact blocks suitably mounted and electrically connected with different points of said resistance, a series of pivotally mounted, independently movable, electrically connected short circuiting members, means for successively moving the short circuiting members into engagement with the contact blocks comprising a bar adapted to engage the short circuiting members, a cylinder connected to move with the bar, a plunger resiliently telescoping in the cylinder and having a part projecting from said cylinder, means associated with the plunger for reciprocating the bar and means for retarding the movement of the bar and cylinder.

5. In a motor controller, the combination with a starting resistance, of short circuiting means coöperating with the resistance, a device for operating the short circuiting means comprising a bar, a tubular member, and a plunger member working in the tubular member, one of said members being connected to the bar, a yieldable element interposed between the bar and the other member, and means adapted to move said bar and the members associated therewith to operate the short circuiting means.

[Claims 6 to 15 not printed in the Gazette.]

1,113,902. PROCESS OF TREATING TOBACCO. LEO W. LAWRENCE and FREDERIC F. BAHNSON, Winston-Salem, N. C. Filed Aug. 28, 1914. Serial No. 859,094. (Cl. 131—6.)

1. The process of treating tobacco, which consists in subjecting it to the repeated action of successive atmospheres of definitely controlled humidity alternately varied in degree sufficient to thoroughly moisten and thoroughly dry the tobacco.

2. The process of treating tobacco, which consists in subjecting it to the repeated action of successive atmospheres of definitely controlled humidity alternately varied in degree sufficient to thoroughly moisten and thoroughly dry the tobacco and of substantially uniform temperature.

3. The process of artificially aging tobacco, which consists in subjecting cured or partly cured tobacco to the repeated action of successive atmospheres of definitely controlled humidity alternately varied in degree sufficient to thoroughly moisten and thoroughly dry the tobacco.

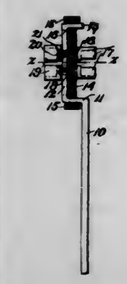
4. The process of artificially aging tobacco, which consists in subjecting it to the action of a maintained highly humid atmosphere, then subjecting it to the action of an atmosphere of maintained relatively low humidity, and then repeating these steps in order until the tobacco is properly aged.

1,113,903. WRENCH. LEOPOLD LEER, New York, N. Y. Filed May 25, 1914. Serial No. 840,706. (Cl. 81—170.)

1. An adjustable wrench having a stock consisting of a straight portion with a right-angled bend at each end thereof oppositely disposed, and an integral handle projecting from one of said bends parallel with said straight portion of the stock, a screw threaded shaft supported between and by said right-angled bends, and oppositely disposed jaws adapted to be either brought together or separated by means of said screw threaded shaft.

2. In an adjustable wrench having a stock and handle formed of a single piece of metal, said stock having a straight portion and a right-angled bend at each end thereof oppositely disposed, the handle portion projecting at right angles to one of said bends and parallel with said

straight portion, the combination of a screw threaded shaft journaled in openings in said oppositely disposed bends, and oppositely disposed jaws having angular gripping surfaces.



3. In an adjustable wrench, the combination of a stock and handle formed of a single piece of metal, said stock having a straight portion provided with a longitudinal slot and a right angled bend at each end oppositely disposed, the handle portion projecting at right angles to one of said bends parallel with said straight portion, a double screw-threaded shaft journaled in openings in said oppositely disposed bends, two jaws having oppositely threaded holes through which said screw threaded shaft passes, said jaws being provided with integral shanks extended into said longitudinal slot in the stock and slidable therein whereby said jaws are held in line as they are moved.

4. In an adjustable wrench, the combination of a stock and handle formed of a single piece of metal, said stock having a straight portion provided with a longitudinal slot and a right angled bend at each end oppositely disposed, the handle portion projecting at right angles to one of said bends parallel with said straight portion, a double screw threaded shaft journaled in openings in said oppositely disposed bends, two jaws provided with angular gripping surfaces and having oppositely threaded holes through which said screw threaded shaft passes, said jaws being provided with integral shanks extended into said longitudinal slot in the stock and slidable therein whereby said jaws are held in line as they are moved.

5. In an adjustable wrench, the combination of a stock and handle formed of a single piece of metal, said stock having a straight portion provided with a longitudinal slot and a right angled bend at each end oppositely disposed, the handle portion projecting at right angles to one of said bends parallel with said straight portion, a double screw threaded shaft journaled in openings in said oppositely disposed bends, two jaws having oppositely threaded holes through which said screw threaded shaft passes, said jaws being provided with integral shanks extended into said longitudinal slot in the stock and slidable therein, whereby said jaws are held in line as they are moved, and auxiliary jaws detachably secured to the ends of said shanks.

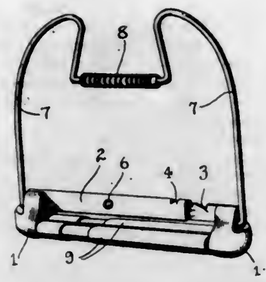
[Claim 6 not printed in the Gazette.]

1,113,904. PAPER OR THE LIKE FOR WRAPPING OR PARCELING SWEETMEATS OR OTHER SUITABLE FOODSTUFFS. JOHN MACKINTOSH, Halifax, England. Filed May 29, 1913. Serial No. 770,592. (Cl. 99—8.)

Waxed paper for wrapping toffee to which is applied an additional or extra flavor corresponding with the flavor of the article to be wrapped as will disguise the paraffin or wax flavor and prevent absorption of flavor from the article by the wrapper, as set forth.

1,113,905. SPREADER FOR TUBULAR FABRICS. HARRY C. PEASE, Grand Rapids, Mich., assignor to The Grand Rapids Textile Machinery Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 28, 1914. Serial No. 821,781. (Cl. 26—16.)

1. A spreader for tubular fabrics, comprising separate side members, an extensible connecting member, and longitudinally extensible rollers journaled at their respective ends in said side members.

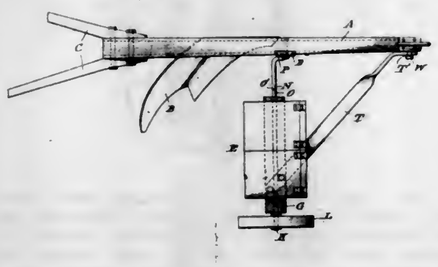


2. A spreader for tubular fabrics, comprising separate side members, extensible connecting means attached at its ends to said side members, means for holding said connecting means adjusted, and extensible rollers journaled in said side members and extending between the same.

3. A spreader for tubular fabrics, comprising separate side members, extensible connecting means composed of a channel member attached to one side member and having a detent, a ratchet bar attached to the other member and extending into the channel member and engaged by said detent, and longitudinally extensible rollers extending between said side members.

4. A spreader for tubular fabrics, comprising separate side members converging at their upper ends, a spring attached to the upper ends of said members to draw them together, a channel bar attached to one member and having a detent, a ratchet bar attached to the other member extending within said channel bar and engaged by the detent, and two longitudinally extensible rollers arranged parallel and extending between the lower ends of the side members.

1,113,906. COMBINATION PLOW AND DRILL. BONNIE PHELPS, Oklahoma, Okla. Filed Apr. 30, 1914. Serial No. 835,502. (Cl. 111—32.)



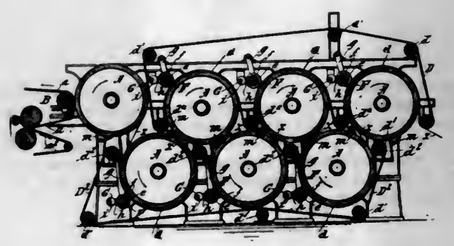
In combination with a plow beam, a seed hopper, a frame upon which the same is mounted, a shaft fastened to the frame, one end of which forms a spindle, a wheel journaled upon the spindle, the other end of the shaft bent at right angles at two locations and having a portion which extends beyond the end of the frame and which terminates in a hook, a rod fastened to the beam and having an aperture in its ends engaged by said hook, a bar fastened at one end to the frame and in diagonal relation to the said hopper, its other end bent at an angle and apertured, a headed pin upon said beam and with which the angled end of the bar has a loose pivotal connection.

1,113,907. PIGMENT AND PAINT. OSCAR WARREN PICKERING, Springfield, Mass., assignor to Pickering Paint and Pigment Company, a Corporation of West Virginia. Filed Aug. 5, 1913. Serial No. 783,014. (Cl. 134—67.)

1. A new pigment comprising lead aluminate.
2. A paint comprising lead aluminate and a vehicle.
3. A paint comprising lead aluminate and an oil.
4. A paint comprising lead aluminate and a drying oil.
5. A paint comprising lead aluminate, an oil, and a drier.

[Claims 6 to 8 not printed in the Gazette.]

1,113,908. DRYING AND SURFACE-FINISHING PAPER. CHARLES E. POPE, Holyoke, Mass., assignor of three-fifths to Japanese Tissue Mills, Holyoke, Mass., a Corporation of Massachusetts. Filed Dec. 15, 1913. Serial No. 806,788. (Cl. 34—48.)



1. The combination with each tier of the tiers of hollow rotating drier drums and endless aprons of the drying portion of a paper making machine, of a plurality of pressure rolls arranged to press the web of paper against a plurality of the drums of each tier.

2. In a drying and finishing apparatus comprised in a paper machine, tiers of paper advancing and drying drums arranged to feed the moist web of paper so that one surface shall be in direct contact with the drums of the upper tier and the other surface in direct contact with the drums of the lower tier, a plurality of pressure rolls for each tier of drums each in peripheral proximity to a drier drum and means for imparting a pressure bearing to each of said rolls in a direction toward the drum adjacent thereto so as to press against the surface of the drum the web progressively moving between such roll and drum.

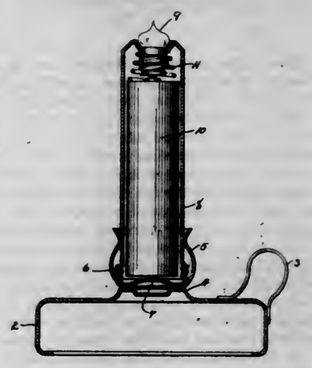
3. In a drying and finishing apparatus comprised in a paper machine, tiers of paper advancing and drying drums arranged to feed the moist web of paper so that one surface shall be in direct contact with the drums of the upper tier and the other surface in direct contact with the drums of the lower tier, endless aprons in partially encircling relations to drums of both tiers, a plurality of pressure rolls for each tier of drums each in peripheral proximity to a drier drum and in contact against the endless apron and means for imparting a pressure bearing to each of said rolls in a direction toward the drum adjacent thereto so as to press, through the medium of the apron, against the surface of the drum, the web progressively moving between such roll and drum.

4. In a drying and finishing apparatus comprised in a paper machine, tiers of paper advancing and drying drums, an endless apron portions of which respectively have partially encircling relations to the upper portions of the upper tier drums and to the lower portions of the lower tier drums, and guide rolls for the looped portions of said aprons between the drums, those for such portions of the apron for the upper tier of drums having their locations nearer to the upper tier drums which are next forward of the adjacent lower tier drums than to such upper tier drums as are to the rearward of the respectively adjacent lower tier drums, rolls individual to and adjacent drums of each tier and in contact against portions of the aprons in engagement around the drums, and means for imparting a pressure bearing to each of said rolls in a direction toward the adjacent drum.

5. In a drying and finishing apparatus comprised in a paper machine, tiers of paper advancing and drying drums arranged to feed the moist web of paper so that one surface shall be in direct contact with the drums of the upper tier and the other surface in direct contact with the drums of the lower tier, endless aprons in partially encircling relations to drums of both tiers, a plurality of pressure rolls for each tier of drums each in peripheral proximity to a drier drum and in contact against the endless apron and means for imparting a pressure bearing to each of said rolls in a direction toward the drum adjacent thereto so as to press, through the medium of the apron, against the surface of the drum, the web progressively moving between such roll and drum, which means includes provision for varying the pressure bearing of the roll.

[Claims 6 to 18 not printed in the Gazette.]

1,113,909. PORTABLE ELECTRIC LAMP. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed May 15, 1914. Serial No. 838,680. (Cl. 240—8.5.)



1. A portable electric lamp comprising a candle-stick provided with a metal socket having a pressure point, a casing adapted to be turned into said socket, an incandescent bulb mounted in the upper end of the casing, a battery in the casing and resting on said pressure point, and a spring between the top of the battery and the casing adapted to be compressed by turning the casing into the socket.

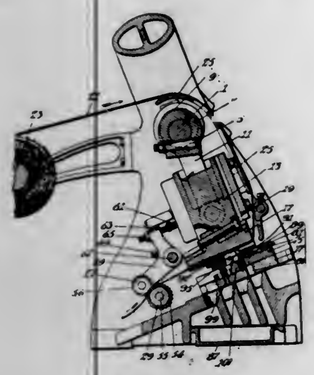
2. A portable electric lamp comprising a candle-stick having a base formed from sheet metal, a cup-shaped shell mounted on said base, a metal socket within said shell and formed in its bottom with a pressure point, a tubular casing adapted to be turned into said socket, said casing provided at its upper end with an incandescent lamp, a battery within said casing and resting on said pressure point, a spring between the upper end of the battery and casing and adapted to be compressed by turning the casing into the socket.

1,113,910. PUNCHING-MACHINE. JOHN H. RIGBY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 21, 1912. Serial No. 738,015. (Cl. 164—89.)

1. A machine of the class described having, in combination, a plunger and a driving shaft from which said plunger is driven, a rigid connecting rod between said shaft and plunger, there being a certain amount of play between said shaft and plunger, a rigid support toward and from which said plunger moves, and rigid stops for preventing overthrow of said plunger due to said play.

2. A machine of the class described having, in combination, a plurality of hollow punches, a cutting block for

forcing the material to be punched against the punches, a backing strip located between the cutting block and the material to be punched and adapted to receive the ends of the hollow punches, and stops carried by the cutting block for limiting its approach to the punches.



3. A machine of the class described having, in combination, a plurality of hollow punches, a cutting block for forcing the material to be punched against the punches, a backing strip located between the cutting block and the material to be punched and adapted to receive the ends of the hollow punches, a driving shaft, a rigid connecting rod between said shaft and cutting block, there being a certain amount of play in the bearings of said rod whereby the cutting block will approach nearer to the punches when thin material is being punched and the resistance to its approach is less than when thick material is being punched, and rigid stops for preventing said approach.

4. A machine of the class described having, in combination, a series of punches, means for pressing a piece of material against said punches, a yielding stripper plate for removing the punched material from the punches, and a support for the margin of the material, said support having its effective surface approximately in the plane of the similar surface of the stripper plate and being yieldable independently of said plate.

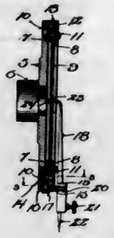
5. A machine of the class described having, in combination, a series of punches, a cutting block, means for causing relative movement of said punches and block, a yielding stripper plate through which said punches may be forced, said plate being adapted to support the piece of material to be punched with its margin projecting beyond the edge of said plate, a yielding edge gage against which the edge of said projecting margin is placed, and a support for said margin yieldable independently of said edge gage and stripper plate.

[Claims 6 to 9 not printed in the Gazette.]

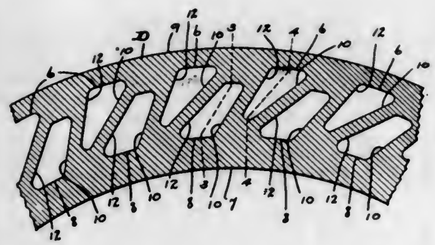
1,113,911. GRAPHOPHONE AND GRAMOPHONE SOUND-BOX. ALBERT L. ROETHE, Milwaukee, Wis. Filed Dec. 26, 1912. Serial No. 738,716. (Cl. 181—11.)

1. In a graphophone or gramophone sound-box, the combination of a casing, a diaphragm insulated therein, a ring of insulating material encompassing the casing, a clamping-band by which the insulating ring is held in place and which is provided with a flat faced outer lug, a recessed and slotted spring-plate facing the band-lug, a bar opposing the spring-plate, fastening screws extending through the bar and the spring-plate slots into said band-lug, a stylus-arm having the socket-end thereof fastened to said spring-plate and extended through the recess of the same, the other end of the arm being an inturned fork; and a plate connected with the fork branches of said arm and attached to said diaphragm centrally of the same.

2. In a graphophone or gramophone sound-box, the combination of a casing, a diaphragm insulated therein, a ring of insulating material encompassing the casing, a clamping-band by which the insulating ring is held in place and which is provided with a flat faced outer lug, a recessed and slotted spring-plate facing the band-lug, a bar opposing the spring-plate, fastening screws extending through the bar and the spring-plate slots into said band-lug, a stylus-arm having the socket-end thereof provided with oppositely extending lateral wings held by screws in connection with said spring-plate through the recess of which said end of the arm extends, the other end of said arm being an inturned fork; and a plate connected with the fork branches of said arm and attached to said diaphragm centrally of the same.



1,113,912. CORE FOR RESILIENT WHEEL-TIRES. FREDERICK V. ROESEL and CHARLES H. FRANKS, Akron, Ohio. Filed Jan. 13, 1913. Serial No. 741,733. (Cl. 152—5.)

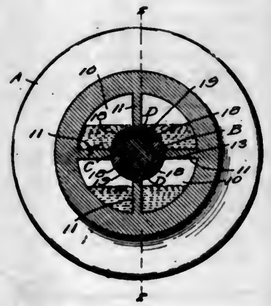


1. A flexible core for a resilient wheel-tire, which core comprises an elastic and compressible body having two rows of holes, the holes of each row of holes being spaced circumferentially and arranged transversely of the core and extending from side to side of the core and alternating with the holes in the other row of holes, each hole in each row of holes extending between the adjacent holes of the other row of holes, the circumferentially facing walls of all of said holes being inclined in the same direction circumferentially of the core, the holes of one row of holes being substantially triangular in cross-section, and the holes of the other row of holes being trapezoidal in cross-section.

2. A core for a resilient wheel-tire, which core comprises an elastic and compressible body having two rows of holes, the holes of each row of holes being spaced circumferentially and arranged transversely of the core and extending from side to side of the core and alternating with the holes of the other row of holes, the holes of the outer row of holes being substantially triangular in cross-section, the holes of the inner row of holes being trapezoidal in cross-section, each trapezoidal hole extending between the adjacent triangular holes, and the circumferentially facing walls of all of said holes being inclined in the same direction circumferentially of the core.

3. A flexible core for a resilient wheel-tire, which core comprises an elastic and compressible body having two rows of holes, the holes of each row of holes being spaced circumferentially and arranged transversely of the core and extending from side to side of the core and alternating with the holes in the other row of holes, each hole of each row of holes extending between the adjacent holes of the other row of holes, the holes of one row of holes being substantially triangular in cross-section, the holes of the other row of holes being trapezoidal in cross-section, each circumferentially facing wall of each trapezoidal hole being substantially parallel with the adjacent circumferentially facing wall of the adjacent triangular hole, and said walls being inclined in the same direction circumferentially of the core.

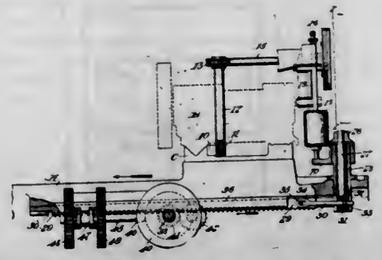
1,113,913. TROLLEY-WHEEL. JOHN CESSNA SHARP, Chattanooga, Tenn. Filed Sept. 13, 1912. Serial No. 720,171. (Cl. 64—26.)



1. In a device of the kind set forth, a body having an axial opening and lubricant chambers, a bushing tightly fitting said axial opening and sealing the same, said bushing being formed with a longitudinal opening and transverse openings, the transverse openings being laterally open between their ends to the longitudinal opening, a shaft mounted in the longitudinal opening of the bushing and extending into the laterally-open parts of the transverse openings, lubricant feeders mounted in the transverse openings and extending across the laterally open parts of the latter and having their sections within said laterally-open parts cut away on the arc of the circumference of the adjacent part of the shaft and receiving the same, said lubricant feeders being adapted to conduct lubricant from each of its ends to its said cut away section, and partitions between the lubricant chambers for causing the lubricant to hug the outer surface of the bushing, said partitions being spaced from each other and having their inner ends in close contact with the outer surface of the bushing.

2. In a device of the kind set forth, a hollow body having axial openings and having its hollow portion provided with a series of inwardly-extending spaced partitions which divide it into a series of separated lubricant chambers, a bushing whose ends are tightly fitted in the axial openings of the body and whose intermediate part extends across the hollow part of the body, said bushing being formed with a longitudinal opening to receive a shaft and provided with a plurality of sets of lubricant feeders, each of which feeders extends transversely of the bushing and has a section between its ends exposed to the longitudinal opening of the bushing, said feeders having their ends arranged to receive lubricant from said chambers and being formed to feed the lubricant longitudinally from their ends to their said intermediate exposed sections, their latter sections being arranged to be in operative relation with the surface of the shaft and said partitions having their inner edges fitted to the circumferential surface of the bushing and being so arranged that some of them will be in planes approximately parallel with the planes of the feeders and between the sets of the latter and others will be in a plane perpendicular to and between the ends of the feeders.

1,113,914. GRINDING-MACHINE. HARRY T. SHEARER, Waynesboro, Pa. Filed Apr. 19, 1913. Serial No. 762,360. (Cl. 51—4.)



1. An automatic cross feed for the grinding wheel of grinding machines comprising a reciprocating rack-bar mounted on the grinding wheel carriage and adapted to move independently thereof for a limited distance, feed mechanism connected with the grinding wheel base, a reciprocating plunger for operating said mechanism, and a cam connected with said rack-bar to have a limited independent movement and mounted to operate said plunger, substantially as set forth.

2. An automatic feed mechanism for the grinding wheel of grinding machines comprising a wheel base, the grinding wheel carriage on which the wheel base is mounted, a rack-bar carried on said grinding wheel carriage and mounted to have a limited independent movement, gearing connected with said rack-bar for operating the carriage, reversing mechanism, gearing for feeding said wheel base forward step by step, a vertically reciprocating plunger connected to operate said feeding mechanism, and a cam mounted to operate said reciprocating plunger and connected with said rack-bar to have a limited independent movement, substantially as set forth.

3. In a grinding machine the combination of a grinding wheel carriage, a grinding wheel base mounted to slide transversely on said carriage, mechanism for feeding said grinding wheel base toward and from the work step by step, a reciprocating plunger mounted on said grinding wheel carriage for operating said mechanism, a cam for operating said plunger, a rack-bar mounted on said grinding wheel carriage to have a limited independent movement, a connection between said rack-bar and said cam adapted to permit a limited independent movement between said parts, and gearing connecting said rack-bar with the driving mechanism, substantially as set forth.

4. In a grinding machine the combination of a grinding wheel carriage, mechanism for traversing said carriage, a grinding wheel base mounted to slide transversely on said carriage, mechanism for sliding said wheel base step by step, a reciprocating plunger for operating said mechanism, and a cam for operating said plunger connected to said grinding wheel carriage, substantially as set forth.

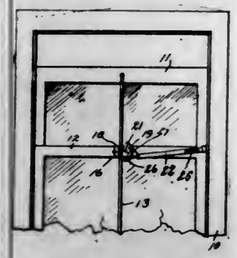
5. In a grinding machine the combination of a grinding wheel carriage, a grinding wheel base mounted to slide transversely thereon, mechanism for sliding said grinding wheel base step by step, a reciprocating plunger for operating said mechanism, a cam for reciprocating said plunger, a rack-bar on said carriage connected with said cam, and traversing and reversing mechanism geared to said rack-bar, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,113,915. SASH-LOCK. JAMES E. SHEPPARD, Colton, Cal. Filed Sept. 29, 1913. Serial No. 792,469. (Cl. 16—118.)

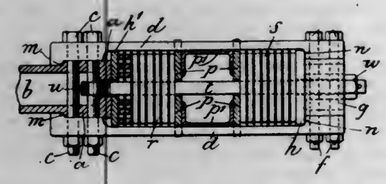
The combination with the upper and lower sashes of a window, of a rod secured to the top rail of the upper sash

and extending vertically downward past the top rail of the lower sash, an abutment plate on the top rail of the lower sash engaging one side of said rod, a segmental cam on the top rail of the lower sash engaging the opposite side of said rod and serving to clamp said rod against said abutment plate, a link pivotally secured to said cam and slidably connected to said bottom sash and adapted to



terminally engage the inner face of the window casing and lock said lower sash stationary, and means for rotating said cam to release said rod and to simultaneously withdraw said link whereby both sashes may be moved relatively to each other.

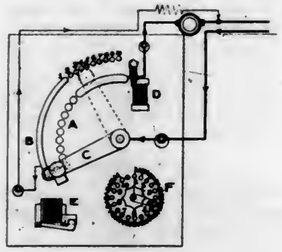
1,113,916. CENTRAL BUFFING AND DRAW GEAR FOR RAILWAY AND LIKE VEHICLES. ALEXANDER SPENCER, London, England. Filed Feb. 2, 1914. Serial No. 815,994. (Cl. 213—42.)



In central buffing and draw gear, a draw bar formed with outwardly projecting shoulders near its inner end, two links formed with bolt holes and constituting the sides of a shackle and each having at each end an inwardly projecting portion, the inwardly projecting portions at the outer ends of said links engaging the outwardly projecting shoulders of said draw bar, bolts connecting said links to said draw bar, a rod pivoted at one end to one of said bolts and extending between said links, a fixed member extending between said links and through which said rod extends, a spring threaded on said rod between said fixed member and the end of said draw bar, an abutment block constituting the end of the shackle and formed with bolt holes, a flange on said abutment block adapted to be engaged by the inwardly projecting portions at the inner ends of said links, a spring threaded on said rod between said fixed member and said abutment and tending to force the said flange against the inwardly projecting portions at the inner ends of said links and also tending to force the inwardly projecting portions at the outer ends of said links against the outwardly projecting shoulders of said draw bar, a nut on the end of said rod adapted to bear on said abutment, and bolts extending through the bolt holes of said abutment and the corresponding bolt holes of said links.

1,113,917. SHUNT-REGULATOR FOR VARIABLE-SPEED MOTORS. JOHN GEORGE STIRK, Halifax, England. Filed Jan. 26, 1911. Serial No. 604,893. (Cl. 172—179.)

1. A shunt regulator for controlling variable speed motors comprising a resistance adapted to be inserted in the shunt field of the motor and divided into a number of steps, two multiple way switches operatively connected to the resistance, each switch having studs and contact arms, circuits connecting the studs of one switch to the like studs of the other switch and cross connecting the contact arms.



2. A shunt regulator for the control of variable speed motors comprising a resistance adapted to be inserted in the shunt field and divided into a number of steps, a multiple way switch having segmental studs, means for cross connecting the contact arms and means for operatively connecting the contact arms to the resistance by the segmental studs.

1,113,918. SPOON-HOLDER. ROMILLY TRENOWITH, McGill, Nev. Filed July 17, 1913. Serial No. 779,603. (Cl. 65—65.)

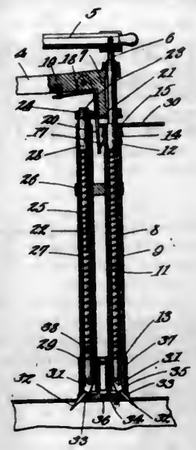
An article of the character described comprising a resilient strip of uniform width, bent intermediate its ends to form upper and lower resilient jaws, the former being concaved longitudinally and having its free end extended upwardly substantially at right-angles thereto and notched to form oppositely disposed spoon retaining fingers, the latter having its free end folded back into underlying relation with respect thereto to form an auxiliary jaw to cooperate with said lower jaw, said auxiliary jaw having its free end folded inwardly and brought to an offset and underlying position with respect to said auxiliary jaw substantially as and for the purpose set forth.

1,113,919. VENDING-MACHINE. LESLIE A. VANDIVER, Chicago, Ill., assignor to Star Novelty Manufacturing Co., Shelbina, Mo. Filed Sept. 22, 1913. Serial No. 791,229. (Cl. 211—8.)

1. In a vending machine, article engaging means including parallel spindles, means for shifting the spindles toward an article to be engaged, a needle pivotally connected to each spindle, a thimble shiftable relative to the spindles and having downwardly diverging apertures for the reception of the respective needles, and yielding means for holding the thimble normally in position to house the points of the needles.

2. In a vending machine, article engaging means including needles adapted to swing about parallel axes, means for pressing the needles against an article to be engaged, and a thimble movable against and adapted to be stopped by said article to be engaged, the said thimble being movable relative to and engaging the needles for spreading apart the points of the needles while entering an object.

3. In a vending machine, article engaging means including a thimble movable against and adapted to be stopped by said article, needles slidably mounted in the thimble and adapted to swing about parallel axes, means for projecting the needles through and beyond the end of the thimble and into engagement with the article engaged by the thimble, said thimble constituting means for swinging the needles apart during such movement.

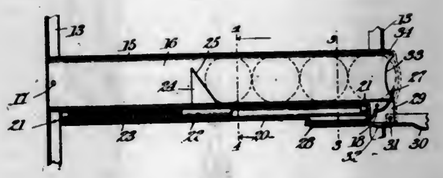


4. In a vending machine, article engaging means including a thimble, needles slidably mounted in the thimble and adapted to swing about parallel axes, means for projecting the needles through the thimble and into engagement with an article engaged by the thimble, said thimble constituting means for swinging the needles apart during such movement, and means adapted to be placed under compression by such movement of the needles relative to the thimble, for pressing the thimble yieldingly against the engaged object.

5. In a vending machine, the combination with parallel sleeves, a thimble connected to the free ends thereof, and means for detachably securing the thimble to the sleeves, of a spindle within each sleeve, means upon the spindles for holding the sleeves normally projected beyond one end of the spindles, needles pivotally connected to the respective spindles and having their points normally protected by the thimble, and means for directing the thimble and needles toward an object to be engaged, said thimble constituting means for swinging the needles apart while entering the object engaged by the thimble.

[Claims 6 to 11 not printed in the Gazette.]

1,113,920. COIN-HOLDER. JESSE C. WAUGH, St. Paul, Minn. Filed June 27, 1914. Serial No. 847,778. (Cl. 133—6.)



1. A coin holder, comprising in combination, a receptacle having an open end for receiving and delivering coins, means to hold coins therein, a guide associated with said receptacle and communicating with the latter throughout its length, a follower common to and movable in said receptacle and guide, and means in said guide to cause the follower to force the coins in said receptacle toward said open end.

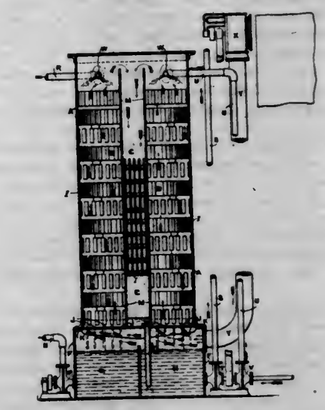
2. A coin holder, comprising in combination, a coin receptacle having a delivery end, means at said delivery end for holding the coins therein, a guide associated with said receptacle, a follower having a slide in said guide and an arm in said receptacle to bear on coins in the latter, and means in said guide bearing on said slide to force said arm into ejecting contact with said coins.

3. A coin holder, comprising in combination, a coin receptacle having a delivery end, means for holding coins in said delivery end, a guide associated with said receptacle and communicating therewith throughout its length, a follower having a slide in said guide and an arm in said receptacle to bear on coins in the latter, and means in said guide bearing on said slide to force said arm into ejecting contact with said coins.

4. A coin holder, comprising a receptacle having an open end and provided with a longitudinal slot at one of its edges, a sleeve associated with said receptacle and connecting with said slot, a follower arranged within said sleeve, an arm carried by said follower and projecting through said slot for engagement with the innermost coin edge, means for actuating said follower to move the coins into the mouth of said receptacle, and a yielding detent also associated with said receptacle and projecting into the open end thereof for engagement with the innermost coin edge, whereby to restrain outward movement of the coins.

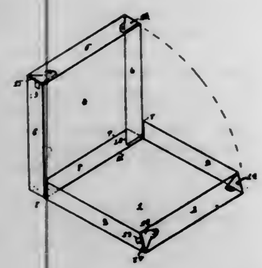
5. A coin holder, comprising a receptacle having an open end and provided in one of its edges with a longitudinal slot, a tubular guide associated with said receptacle and connecting with said slot, a follower arranged in said guide, an arm carried by said follower and projecting into said receptacle for engagement with the innermost coin edge, the coin-engaging edge of said arm being inclined, means for actuating said follower to move the latter toward the open end of said receptacle, and means associated with the open end of said receptacle for restraining outward movement of the guide.

1,113,921. COOLING-TANK. WILFRED WHITELEY and WALTER SPENCER, Elland, England. Filed July 8, 1913. Serial No. 777,874. (Cl. 259.)



A cooling apparatus comprising a casing having a plurality of partitions forming central and side compartments, baffle plates in said compartments, a tank arranged below said casing, compartments formed in said tank, a pipe connecting one of said compartments with the lower end of the central compartment of said casing, the bottom of said central compartment being closed against the admission of air, a bottom provided with openings for said casing, said openings being disposed beneath said side compartments, means for introducing a current of air to said tank, an exhaust in said central compartment, and means for introducing hot water to the upper ends of said side compartments, as and for the purpose specified.

1,113,922. COLLAPSIBLE BOX. ALLISON H. WILSON, Hamilton, Ohio. Filed Apr. 1, 1912. Serial No. 687,575. (Cl. 229—31.)



1. A collapsible box formed from an integral blank consisting of a bottom forming panel and a cover forming panel joined by a common rear wall; each of the said panels having two side wall flaps and a front wall flap, the side wall flaps having corner flaps, each corner flap having an oblique crease, the portion beyond which crease is secured to the corresponding front wall, the fold line joining each of the corner flaps of the bottom member with its side wall being oblique.

2. A collapsible box formed from an integral blank consisting of a bottom forming panel, and a cover forming panel joined by a common rear wall; each of the said panels having two side wall flaps and a front wall flap, the side wall flaps having corner flaps, each corner flap having an oblique crease, the portion beyond which crease is secured to the corresponding front wall, the fold line joining each of the corner flaps of the bottom member with its side wall being oblique, and corner tongue stops cut from the side walls with their free ends abutting against the front wall.

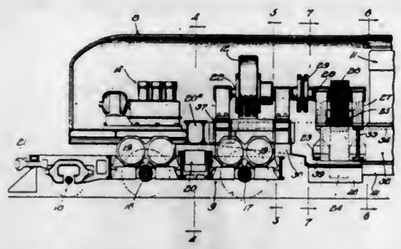
3. A collapsible box formed from an integral blank consisting of a rectangular bottom and four side wall flaps extending therefrom; two opposite side walls having oblique ends and the other two opposite side walls having corner flaps joined by a fold line, each corner flap having an oblique crease, the portion beyond which crease is secured to the corresponding adjacent wall and corner tongue stops cut from two opposite side walls with their free ends abutting against the corresponding adjacent walls.

4. A collapsible box formed from an integral blank consisting of a rectangular bottom and four side wall flaps extending therefrom; two opposite side walls having corner flaps joined by an oblique fold line, each corner flap having an oblique crease, the portion beyond which crease is secured to the corresponding adjacent wall and corner tongue stops cut from two opposite side walls with their free ends abutting against the corresponding adjacent walls.

5. A collapsible box formed from an integral blank consisting of a rectangular bottom and four side wall flaps extending therefrom; two opposite side walls having oblique ends and the other two opposite side walls having corner flaps joined by an oblique fold line, each corner flap having an oblique crease, the portion beyond which crease is secured to the corresponding adjacent wall and corner tongue stops cut from two opposite walls with their free ends abutting against the corresponding adjacent walls.

1,113,923. ELECTRIC LOCOMOTIVE OR THE LIKE. JOSEPH H. AMES, Chicago, Ill. Filed July 18, 1913. Serial No. 779,806. (Cl. 105—239.)

1. In an electric vehicle, the combination with a pair of trucks, of a prime mover mounted in the vehicle between the trucks, the elevation of the driving shaft of the prime mover being limited by the available head room, a generator mounted over one of the trucks and with its shaft at a greater elevation than the driving shaft of the prime mover, and an operative connection from the driving shaft of the prime mover to the shaft of the generator.



2. In an electric vehicle, the combination with a pair of trucks, of a prime mover supported by the vehicle between the trucks, a generator supported by the vehicle at an elevation greater than that of one of the trucks, and an operative connection from a driving shaft of a prime mover to the driving shaft of the generator.

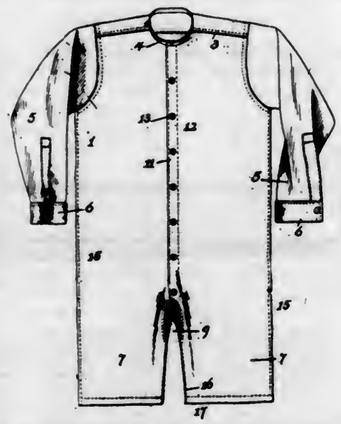
3. In an electric vehicle, the combination with a pair of trucks, of a prime mover supported by the vehicle between the trucks, the lower portion of the prime mover being mounted below the upper portions of the trucks, a generator supported by the vehicle at an elevation greater than that of the trucks, and an operative connection from the driving shaft of a prime mover to a shaft of the generator.

4. In an electric vehicle, the combination with a pair of trucks, of a pair of prime movers supported by the vehicle on opposite sides of the centetr line thereof, a generator supported by the vehicle at each end thereof, and an operative connection from each prime mover to a generator.

5. In an electric vehicle, the combination with a pair of trucks, of a prime mover supported by the vehicle on each side of the center line thereof, a generator supported by the vehicle at each end thereof with its shaft lying on the center line of the vehicle, and an operative connection from each prime mover to a generator.

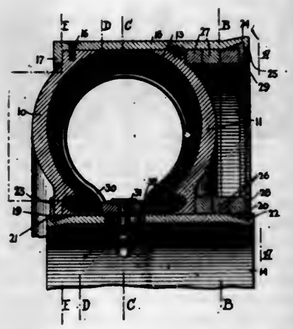
[Claims 6 to 23 not printed in the Gazette.]

1,113,924. SHIRT AND DRAWERS. JOSEPH M. ATKINSON, Baltimore, Md., assignor to Oppenheim, Oberndorf & Co., a Firm composed of Eli Oppenheim, Isaac A. Oppenheim, and David Oberndorf, Baltimore, Md. Filed Sept. 21, 1912. Serial No. 721,540. (Cl. 2—144.)



An overshirt and drawers for men's wear, consisting of the front having two vertical pieces of textile fabric—a right and left—the top of both pieces commencing at the shoulder-seams and extending downward therefrom to the bottom of the two legs, and said two front pieces separated from each other by a vertical opening that includes the neckband and extends to and forms an open-crotch; the back of the garment extending from the shoulders to said leg-bottoms, said back portion being of the same length from the shoulder-seam down as said front portions, and each leg of said garment provided with a separate V-shaped piece of elastic material inserted in the inseam of the leg, the broadest part of said V-shape being uppermost and forming an elastic edge to said open-crotch, whereby the elastic edges of said open-crotch contacting with the inner part of the wearer's thigh will produce a slight down-pull on the front or bosom part of the garment and keep same drawn smoothly.

1,113,925. PNEUMATIC-TIRE MOLD. GEORGE E. BATCHELLER, Mount Vernon, N. Y. Filed Nov. 26, 1912. Serial No. 733,595. (Cl. 18—17.)



1. The herein described pneumatic tire apparatus comprising, in combination, a pair of side plates having oppositely disposed annular concave surfaces adapted to conform to the sides of tires of different types or sizes, said plates having inner and outer rims with smooth cylindrical faces, means to adjust said side plates toward and from each other according to varying sizes of tires, devices to lock the side plates in different positions relatively to each other, means coöperating with said plates to maintain them in proper radial alinement notwithstanding the aforesaid adjustments, said means comprising inner and outer cylindrical rings fitted to said plate rim faces, a bag for a pressure fluid within and spaced from the side plates, and means to introduce a pressure fluid into the bag aforesaid through one of said cylindrical rings irrespective of the aforesaid relative adjustment of the side plates toward and from each other.

2. In a pneumatic tire apparatus, the combination of a pair of side plates having opposed surfaces adapted to conform to the sides of a tire and adjustable toward and from each other, a pair of radially spaced rings coöperating in close contact with said plates to maintain them in proper radial alinement, one of said rings being rigidly secured to one of said side plates, and means extending through one of said rings to introduce and control a pressure fluid within the space between said plates.

3. The herein described pneumatic tire apparatus comprising a pair of side plates having opposed surfaces adapted to conform to the sides of a tire to be treated and movable toward and from each other, radially spaced rings coöperating directly with the inner and outer rims of both of said plates to maintain them in perfect radial alinement, said rings having opposed cylindrical surfaces and circular grooves forming edge flanges, locking devices including split rings seated in said grooves and serving in connection with said flanges to prevent lateral displacement of said plates, and means to introduce a pressure fluid into the space between said plates and through one of said alining rings.

1,113,926. VARNISH. WALLACE APPLETON BEATTY, New York, N. Y., assignor, by direct and mesne assignments, to George W. Beadle, New York, N. Y. Filed Jan. 3, 1913. Serial No. 740,075. (Cl. 134—26.)

1. The herein described new varnish containing a condensation product of a ketone, a phenol and an aldehyde in the form of a gum dissolved in a solvent.

2. The herein described new varnish having an acid reaction containing a condensation product of a ketone, a phenol and an aldehyde in the form of a gum dissolved in a solvent.

3. The herein described new varnish composed of a condensation product of acetone, phenol and formaldehyde and a solvent.

4. The herein described new varnish having an acid reaction and composed of a condensation product of acetone, phenol and formaldehyde and a solvent.

5. The herein described new varnish composed essentially of a condensation product of a ketone, a phenol and an aldehyde in the form of a gum dissolved in a hydrocarbon, substantially as described.

1,113,927. PROCESS OF MANUFACTURING ACETIC ANHYDRID. WALLACE A. BEATTY, New York, N. Y., assignor, by direct and mesne assignments, to George W. Beadle, New York, N. Y. Filed Apr. 30, 1912. Serial No. 694,275. Renewed Jan. 21, 1913. Serial No. 743,420. (Cl. 23—24.)

1. A process of producing certain anhydrids which comprises mixing sulfuric anhydrid with carbon tetra-chlorid and reacting with the products thereby produced, upon a salt of the acid, the anhydrid of which is desired, substantially as described.

2. A process of producing acetic anhydrid which comprises mixing sulfuric anhydrid with carbon tetra-chlorid and reacting with the products thereby produced, upon an alkali metal acetate, substantially as described.

3. A process of producing acetic anhydrid which comprises mixing sulfuric anhydrid with carbon tetra-chlorid and reacting with the products thereby produced, upon an ecetate, substantially as described.

4. A process of producing acetic anhydrid which comprises mixing sulfuric anhydrid with carbon tetra-chlorid and reacting with the products thereby produced, upon an alkali metal acetate and an alkaline earth metal acetate, substantially as described.

5. A process of producing acetic anhydrid which comprises mixing sulfuric anhydrid with carbon tetra-chlorid and reacting with the products thereby produced, upon sodium acetate, substantially as described.

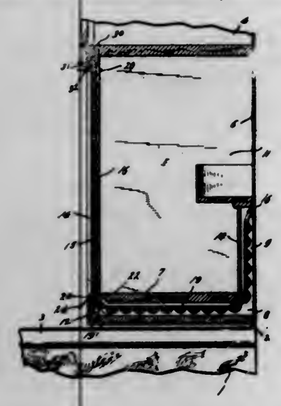
[Claims 6 to 13 not printed in the Gazette.]

1,113,928. KITCHEN-CABINET. HENRY W. BERTRAM, Frankfort, Ind., assignor to McDougall Company, Frankfort, Ind., a Corporation of Indiana. Filed July 12, 1913. Serial No. 778,657. (Cl. 45—16.)

1. In a kitchen cabinet, the combination with the main body, the work table surmounting the main body, and the superstructure arranged above the work table and having a floored compartment above the work table, of guide-ways arranged at the front corners of said compartment and extending rearwardly beneath the floor of the compartment, a flexible curtain arranged between said guide-ways and projectable beneath the floor of the compartment, and a strike bar having a free upper face and carried by the free edge of said curtain to coöperate with the forward edge of the compartment floor to close the slot between such floor and the curtain and form a continuation of said floor when the curtain is lowered, and a lock arranged in the upper part of the compartment, and a projection carried by the curtain to engage the lock when the curtain is raised to closing position.

2. In a kitchen cabinet, the combination with the main body, the work table surmounting the main body, and the superstructure arranged above the work table and having a floored compartment above the work table, of guide-ways

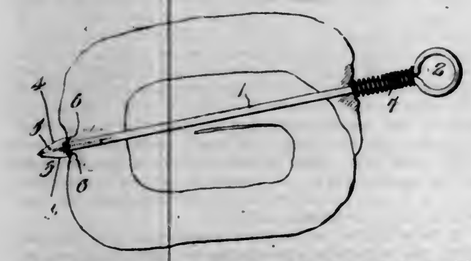
arranged at the front corners of said compartment and extending rearwardly beneath the floor of the compartment, a flexible curtain arranged between said guide-ways and projectable beneath the floor of the compartment, and a bar having a free upper face and carried by the free edge of said curtain to coöperate with the forward edge of the compartment floor to close the slot between such floor and the curtain and form a continuation of said floor when the curtain is lowered, said bar and the floor having oppositely inclined adjacent surfaces meeting at their upper corners, and a supporting bar for supporting the forward face of the first mentioned bar when the curtain is lowered.



3. In a kitchen cabinet, the combination with the main body, the work table surmounting the main body, and the superstructure arranged above the work table and having a floored compartment above the work table, of guide-ways arranged at the front corners of said compartment and extending rearwardly beneath the floor of the compartment, a flexible curtain arranged between said guide-ways and projectable beneath the floor of the compartment, and a bar having a free upper face and carried by the free edge of said curtain to coöperate with the forward edge of the compartment floor to close the slot between such floor and the curtain and form a continuation of said floor when the curtain is lowered.

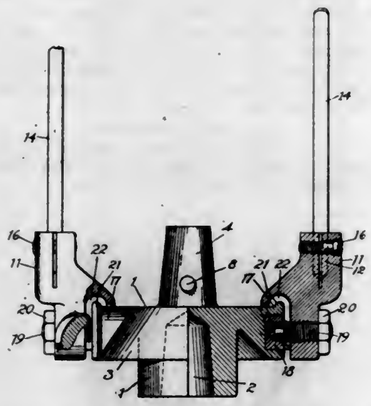
4. In a kitchen cabinet, a floored compartment, guide-ways arranged at the front corners of said compartment and extending rearwardly beneath the floor of the compartment, a flexible curtain arranged between said guide-ways and projectable beneath the floor of the compartment, and a bar having a free upper face and carried by the free edge of said curtain to coöperate with the forward edge of the compartment floor to close the slot between such floor and the curtain and form a continuation of said floor when the curtain is lowered.

1,113,929. MEAT CLAMP OR SKEWER. JOHN W. BROWN, United States Soldiers' Home, D. C. Filed Mar. 9, 1914. Serial No. 823,453. (Cl. 17—14.)



A meat clamp comprising a straight shank formed with a flat pointed head having sharpened edges and angular stop shoulders at the inner end of the head, an enlarged handle, and a compressible tension spring coiled about the shank contiguous to the handle.

1,113,930. GRINDING-MACHINE. LUCIAN W. BUGBEE, Southbridge, Mass. Filed Oct. 8, 1912. Serial No. 724,513. (Cl. 51—3.)



A tool of the character described, including a base, a shield member depending around and flaring outwardly from said base, said shield having portions projecting from diametrically opposite sides thereof, said portions having pivot bearings formed therein, an annulus having pivots adjustably engaged in the said bearings, said annulus having lugs projecting upwardly therefrom at diametrically opposite points thereon and disposed above the pivots carried by the annulus, and spaced guide members removably secured to and extending upward from the said lugs of the annulus.

1,113,931. SCALE ATTACHMENT FOR SUPPORTING WAGON-BEDS. CHARLES E. BURNETT, North Rose, N. Y., assignor of one-fourth to Cassius M. Clapp, one-fourth to Thomas B. Welch, and one-fourth to Merritt E. Newberry, North Rose, N. Y. Filed Apr. 29, 1912. Serial No. 694,035. (Cl. 73—8.)

1. The combination in a scale attachment for a wagon of a base plate, a supporting plate extending parallel to said base plate, scale levers interposed between said supporting plate and the base plate for the purpose of supporting the supporting plate, fulcrums supporting said levers, mounted at the ends of the base plate, tie rods connecting the supporting plate to the fulcrums on the base plate and preventing the lateral movement of the supporting plate without interfering with its vertical movement.

2. The combination in a scale attachment for a wagon of a base plate, fulcrums fastened at the ends thereof, scale levers fulcrumed thereon and extending toward each other, a supporting plate mounted over said base plate and having fulcrums thereon, knife edges on said scale levers and loose bearings interposed between said knife edges and said fulcrums, tie rods fastened in said first named fulcrums and extending toward each other, passing loosely between the second named fulcrums and the loose bearings, hooks on the supporting plate to which said tie rods are fastened.

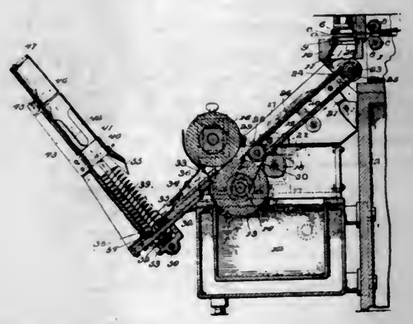
3. The combination in a scale attachment for supporting wagon beds, of a base plate, a supporting plate over said base plate, scale levers, fulcrums and knife edges interposed between the supporting plate and base plate supporting the supporting plate from the base plate, upright stakes clamped near the ends of the supporting plate and adjustable along the supporting plate toward and away from each other.

4. The combination in a scale attachment for a wagon of a base plate, scale levers mounted thereon and extending toward each other, a bracket on said base plate, a scale lever pivotally mounted on said base plate and extending between and transversely to said scale levers and being connected thereto, said bracket and said transverse lever extending downwardly from said base plate, a scale beam mounted to swing in said bracket, said transverse lever extending downwardly from the base plate and then up over said scale beam, a pin interposed between the end of said transverse lever and said scale beam whereby the movement of the transverse lever is communicated to the scale beam.

5. The combination in a scale attachment for a wagon of a base plate, scale levers mounted thereon and extending toward each other, a bracket on said base plate, a scale lever pivotally mounted on said base plate and extending between and transversely to said scale levers and being connected thereto, said bracket and said transverse lever extending downwardly from said base plate, a scale beam mounted to swing in said bracket, said transverse lever extending downwardly from the base plate and then up over said scale beam, a pin interposed between the end of said transverse lever and said scale beam whereby the movement of the transverse lever is communicated to the scale beam, said bracket and said lever being so shaped as to avoid and pass around the springs or other member of the wagon construction.

[Claims 6 to 15 not printed in the Gazette.]

1,113,932. MECHANISM FOR PACKING DISKS AND THE LIKE. HARRY L. COMPTON, Washington, D. C., assignor to American Dairy Supply Company, Augusta, Me., a Corporation of Maine. Filed Mar. 12, 1913. Serial No. 753,866. (Cl. 93—6.)



1. In combination, a nozzle adapted to receive a packing tube in longitudinal continuation thereof, an elongated slideway arranged approximately in longitudinal continuation of said nozzle, a pair of elongated feed screws arranged approximately parallel with said slideway to feed disks along said slideway while maintaining the disks out of contact with each other and in approximately parallel positions with their side faces exposed and to bring said disks together to form a column and to feed the column forwardly through said nozzle and in said tube, and means for delivering disks separately into said screws and onto said slideway.

2. In combination, a chute to receive disks successively and to deliver the same downwardly, a guideway arranged approximately at right angles to the line of the travel of the disks down said chute and adapted to receive the disks from said chute, a pair of parallel right and left oppositely rotating feed screws arranged parallel with said guide way and adapted to guide and propel the disks along said guideway, while maintaining the disks out of contact with each other, and a nozzle into which the disks are forced by said feed screws.

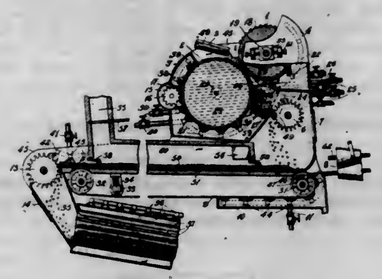
3. Means for assembling disks in a stack or column and for feeding said column longitudinally in a packing tube comprising elongated coöperating parallel oppositely rotating right and left hand feed screws and means for alining and guiding the disks while being propelled by said screws, said screws being arranged to feed a series of disks forwardly while maintaining the disks out of contact with each other and with their side faces exposed and to force said disks forwardly when brought together and assembled to form a column.

4. In combination, a nozzle, means for removably holding a packing tube in alinement with and continuation of said nozzle, and screw feed mechanism for receiving disks and feeding same forwardly and out of contact with each other and then assembling the same in a column and feeding the column longitudinally through said nozzle and into said tube.

5. In combination, a nozzle, means for removably holding a packing tube in longitudinal continuation of said nozzle to receive a column of disks fed longitudinally through the nozzle, and mechanism for separately receiving disks and feeding the same forwardly out of contact with each other and toward said nozzle and then assembling the same to form a column and for feeding the column longitudinally through said nozzle.

[Claims 6 to 23 not printed in the Gazette.]

1,113,933. APPARATUS FOR MAKING CEMENT. HARRY L. DUNCAN, New York, N. Y. Continuation of application Serial No. 180,996, filed Nov. 13, 1903. This application filed June 20, 1910. Serial No. 567,784. (Cl. 75—146.)



1. In cement apparatus, a pair of congealing rolls, means to adjust the distance between said rolls, means to circulate cooling fluids through the interior of said rolls, cooling chambers arranged adjacent said congealing rolls and means to supply fluid cooling jets to the portions of said rolls within said chambers, a corrugated cooled feed roll provided with a disengaging scraper coöperating with the larger of said congealing rolls, means to supply substantially molten furnace slag to said larger congealing roll adjacent said feed roll to be thereby fed in regulated quantities between said congealing rolls and converted into a consistent plastic slag stream, a stationary cooled conveyer coöperating with said larger congealing roll to disengage the slag stream therefrom and guide the same over said conveyer, a rotating breaker coöperating with said conveyer to disintegrate said slag stream into plastic particles, means to direct gaseous and liquid cooling jets upon said breaker and said slag stream on said conveyer.

a moving conveyer to receive the said slag particles, adjustable speed devices to operate said conveyer, a substantially inclosed annealing chamber and heating means coöperating with said moving conveyer, fluid cooling jets arranged adjacent the discharge end of said conveyer, a rotating disintegrator coöperating with said conveyer to disintegrate the slag material delivered therefrom and a chute and a rotating ribbed cooling cylinder to receive and cool said disintegrated slag particles to form active slag cement material.

2. In cement apparatus, a pair of congealing rolls, means to adjust the distance between said rolls, means to circulate cooling fluid through said rolls, a feed roll cooperating with one of said congealing rolls, means to supply substantially molten furnace slag adjacent said feed roll to be thereby fed in regulated quantities between said congealing rolls and converted into a consistent plastic slag stream, a stationory conveyer coöperating with said rolls to receive the slag stream therefrom, a rotating breaker coöperating with said conveyer to disintegrate said slag stream into plastic particles, a moving conveyer to receive said slag particles, an annealing chamber coöperating with said moving conveyer and disintegrating and cooling means coöperating with said moving conveyer to receive and cool the disintegrating slag particles and form active slag cement material.

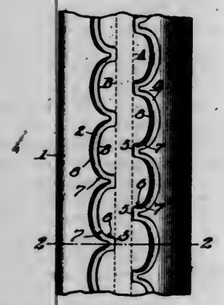
3. In cement apparatus, a coöperating pair of congealing rolls, means to supply cooling fluid to said rolls, means to feed highly heated furnace slag to said rolls, to be thereby converted into a consistent plastic slag stream, a breaker coöperating with said rolls to disintegrate said slag stream into particles, a conveyer to receive said slag particles, means to anneal said slag particles on said conveyer and cooling means to receive and cool the slag particles from said conveyer.

4. In cement apparatus, a pair of congealing rolls, means to supply cooling fluid to said rolls, means to supply highly heated furnace slag to said rolls to be converted into a consistent plastic slag stream, a conveyer coöperating with said rolls, annealing means coöperating with said conveyer to anneal the slag material therefrom and cooling means to receive and cool the slag material from said conveyer.

5. In cement apparatus, means to form from substantially molten furnace slag a substantially consistent plastic slag stream, a conveyer, means to disintegrate said slag stream into particles and deliver the same to said conveyer, means to anneal said slag material on said conveyer and cooling means to receive and cool the slag material from said conveyer and form active slag cement material.

[Claims 6 to 22 not printed in the Gazette.]

1,113,934. TREAD FOR RESILIENT TIRES. EDWARD F. EDGECOMBE, Cuyahoga Falls, Ohio. Filed July 9, 1914. Serial No. 849,945. (Cl. 152—14.)



1. A resilient tire having a tread including, a continuous unbroken crown, continuous abutments comprising the walls of continuous grooves located on each side of said crown, said abutments being curved and having portions adjacent said crown and substantially parallel to the center line of the tire, said abutments then extending rapidly away from the center line of the tire and having a tangent at substantially right angles thereto, said abutment continuing in a curved line so that the portion of said abutment farthest from the center line of said tire has a tangent substantially parallel to the center line of said tire.

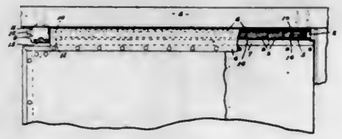
2. A resilient tire provided with a tread comprising a continuous unbroken crown, abutments on each side of said crown, said abutments comprising the side walls of grooves formed in the body of said tire, said abutments comprising a continuous series of flat arches joined at their feet and arranged with the middle of the arch farthest from the center line of the tire, substantially as described.

3. A resilient tire including a body portion, a tread formed upon said body portion, said tread including a continuous unbroken crown forming the middle of the tread, a pair of congruous abutments on each side of said crown, said abutments comprising the side walls of grooves formed below the wear surface of said tire, said grooves being continuous and comprising a series of connected arches having the foot of each arch toward the middle of the tire and the bow of the arch beyond the normal tread and parallel thereto.

4. A resilient tire comprising in combination a body portion, a tread formed upon said body portion, said tread having a substantially continuous crown portion including the center line of the tire, continuous abutments on each side of said crown portion, said continuous abutments comprising walls of continuous grooves, the walls of each groove being substantially parallel on a cross section thereof, said abutments comprising a series of continuous flat arches having the feet of the arches nearest the center of the tire and the bows of the arches farthest from the center of said tire, the feet of the arches of the groove on one side of said crown being arranged opposite the bows of the arches of the groove on the opposite side of the crown.

5. A resilient tire including a body portion, a tread formed upon said body portion, said tread including a continuous crown, a continuous abutment formed on said body portion and below the wear surface thereof, said abutment being curved in such a manner as to present a surface having a tangent at right angles to any tractive force delivered against said abutment in any direction on one side of the center line of said tire.

1,113,935. HINGE MECHANISM FOR RAILWAY-CAR TRAP-DOORS. ROY T. AXE, Syracuse, N. Y., assignor to Oliver M. Edwards, Syracuse, N. Y. Filed Aug. 22, 1912. Serial No. 716,347. (Cl. 105—84.)



1. A hinge mechanism for trap doors comprising a barrel, an arbor or staff extending through the barrel, and a plurality of springs movable into the barrel and onto the arbor through the same end of the barrel and being independently connected to the barrel and the arbor, substantially as and for the purpose described.

2. A hinge mechanism for trap doors comprising a barrel, an arbor or staff extending through the barrel, a plurality of springs movable into the barrel and onto the arbor through one and the same end of the barrel, and being independently connected to the barrel and to the arbor, the springs being movable into and out of operative engagement with the barrel and the arbor by an axial movement, substantially as and for the purpose specified.

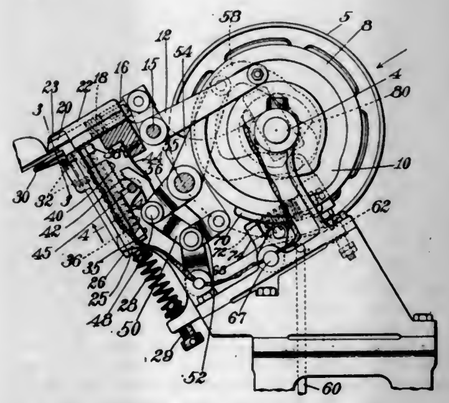
3. A hinge mechanism for trap doors comprising a barrel, an arbor or staff extending through the barrel, and a plurality of springs movable into the barrel on the arbor through one end of the barrel and being independently connected to the barrel and the arbor, the springs having a sliding and interlocking engagement with the arbor and the barrel, substantially as and for the purpose set forth.

4. A hinge mechanism for trap doors for railway car platforms comprising a fixed arbor formed with a lengthwise groove opening through one end face thereof, and a plurality of independently acting springs coiled about the arbor, each having a portion thereof bent to enter the groove, and another portion connected to the door, the springs being slidable by an endwise movement into operative connection with the arbor and the door, substantially as and for the purpose described.

5. A hinge mechanism for trap doors for railway car platforms comprising a spring barrel associated with the door and having a portion formed with a lengthwise channel extending laterally from the interior of the barrel portion thereof, and a plurality of coil springs arranged side by side in the barrel, each spring being adapted to be connected at one end to a fixed point relatively to the door and having its other end provided with an arm extending into the channel and movable therein by an endwise movement of the spring, substantially as and for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,113,936. STITCH-DOWN-LASTING MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 29, 1909. Serial No. 530,475. (Cl. 12—7.)



1. A machine of the class described having, in combination, a shoe forming tool shaped and arranged to force an upper into the angle between the side of a last and a projecting portion of the shoe sole, a support for the shoe, and power driven mechanism for relatively reciprocating the tool and support to clamp the marginal portion of the upper and sole securely and then to move the tool in the direction to tighten the upper over the last and tuck it into said angle.

2. A machine of the class described having, in combination, a shoe forming tool shaped and arranged to force an upper into the angle between the side of a last and a projecting portion of the shoe sole, and actuating mechanism to which the tool is yieldingly connected for rapid reciprocation from and toward the side of the last in a line substantially parallel with the sole edge to form the upper against the last in said angle.

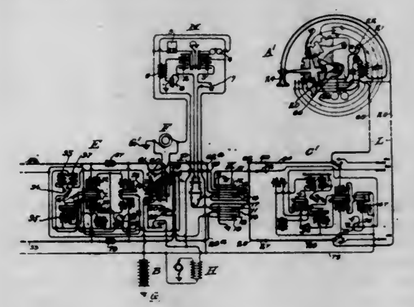
3. A machine of the class described having, in combination, a shoe forming tool shaped and arranged to force an upper into the angle between the side of a last and a projecting portion of the shoe sole, said tool having a lower face to engage an out-turned flange of the upper and a beveled end face to enable it to reach into the angle under an overhanging portion of the side of the last, additional clamping means for pressing the flange against the projecting portion of the shoe sole, and means for reciprocating said tool in a direction agreeing with the plane of said flange.

4. A machine of the class described having, in combination, a shoe forming tool shaped and arranged to force an upper into the angle between the side of a last and a projecting portion of the shoe sole, a support for the lower side of the sole, and automatically operated means for relatively actuating said tool and support in directions substantially perpendicular to one another to force the upper downwardly and inwardly in said angle.

5. A machine of the class described having, in combination, a shoe forming tool shaped and arranged to force an upper into the angle between the side of a last and a projecting portion of the shoe sole, a support for the lower side of the sole, and automatically operated means for actuating said support to apply pressure to the upper along the top face of the sole and for actuating the tool to force the upper against the side of the last in said angle.

[Claims 6 to 38 not printed in the Gazette.]

1,113,937. TELEPHONE-TESTING SYSTEM. EDWARD A. MELLINGER, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 10, 1909. Serial No. 506,928. (Cl. 179—27.)



1. In an automatic or semi-automatic telephone exchange system employing connectors for completing the final connection with the lines of called subscribers, a test set, means for connecting the same with a connector, whereby the said test set may be placed in connection with any of the subscribers' lines terminating in said connector, and means for preventing a connection being extended to said connector while said test set is connected thereto.

2. In a telephone system, a connector having subscribers' lines terminating thereat, means for extending connection to said connector for extending a call to any of said lines, a test set, means for connecting said test set with the said connector, whereby the test set may be placed in connection with any of said lines, and means for preventing a connection being extended to said connector while said test set is connected thereto.

3. In a telephone system, a connector having subscribers' lines terminating thereat, a test jack for said connector, a trunk leading to said connector, a switch for disconnecting the trunk from the connector and connecting the said jack therewith, testing means, and a plug for connecting said testing means with said jack, whereby the connector may be used for placing said testing means in connection with any of said lines.

4. In a telephone system, an automatic switch, a line leading thereto, a plurality of lines leading therefrom, a jack normally disconnected from the said switch, a telephone set connected to said jack, means at the said switch

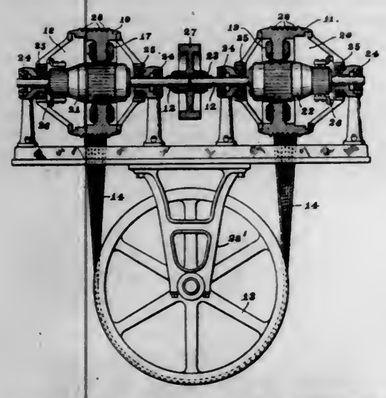
for connecting the jack therewith, and means for preventing a connection being extended to said switch while said jack is connected therewith.

5. In a telephone system, an automatic switch, a line leading thereto, a plurality of lines leading therefrom, a jack normally disconnected from said switch, a telephone set connected to said jack, and means at the switch for connecting the jack therewith and opening the line circuit thereof.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

13,806. ELECTRIC ELEVATOR SYSTEM. ETHELBERT M. FRASER, Yonkers, N. Y., assignor, by mesne assignments, to General Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 28, 1914. Serial No. 835,580. Original No. 1,093,583, dated Apr. 14, 1914, Serial No. 711,957. (Cl. 172—152.)



1. In an electric elevator system, the combination with two electric motors having rotatable armatures and field structures rotatable in opposite directions of a plurality of pulleys, two of said pulleys being secured to and driven by said field structures, and power-transmitting means engaging said pulleys.

2. In an electric elevator system, the combination with two electric motors having their armatures mechanically coupled together and their field structures rotatable in opposite directions, of means for varying the field strength of either or both of said motors, and power-transmitting means driven by said field structures.

3. In an electric elevator system, the combination with a car, of a counterweight, two electric motors having rotatable field structures and armatures, means for varying the field strength of said motors, a plurality of sheaves, two of said sheaves being operated by said field structures, and power-transmitting means connecting said car and counterweight and engaging said sheaves.

4. The method of operating an electric elevator driven by two electric motors or dynamos, having their armature shafts mechanically connected together and their field magnets rotatable in opposite directions, which consists in making the field strength of the two motors or dynamos unequal so that one motor or dynamo will always act as a motor when the other acts as a dynamo, and transmitting the reactive thrust of the armatures on the field magnets to an elevator car and counterweight.

5. The method of controlling an elevator car driven by two electric motors or dynamos, having their armature shafts mechanically connected together and their field magnets rotatable in opposite directions, which consists in varying the field strength of either or both of said motors or dynamos to control the direction of rotation of said field magnets.

6. In an electric elevator system, the combination with two electric motors having their armatures mechanically coupled together and field structures rotatable in opposite directions, of means for varying the relative speeds and direction of rotation of said field structures, and a flexible connector engaging said field structures.

7. In an electric elevator system, the combination with two electric motors having rotatable armatures and field magnets rotatable in opposite directions, of a sheave or pulley connected to the field magnets of each motor and driven thereby, an independent idler sheave or pulley, and a flexible connector engaging all of said sheaves or pulleys.

8. In an electric elevator system, the combination with two electric motors having armatures mechanically coupled together and independently rotatable field structures, of a sheave or pulley driven by each of said field structures, an independent idler sheave or pulley, a flexible connector engaging all of said sheaves or pulleys, and means for controlling the speed and direction of rotation of said field structures.

9. In an electric elevator system, the combination with two electric motors having armatures mechanically coupled together and independently rotatable field structures, of a sheave or pulley carried by each of said field structures and driven thereby, an independent idler sheave or pulley, a flexible connector engaging all of said sheaves or pulleys, and means for varying the field strength of either or both of said motors.

10. The combination with two electric motors having their armatures mechanically coupled together and their field structures rotatable in opposite directions at the same speed, of a pulley or sheave carried by each of said field structures, an independent idler sheave or pulley, a flexible connector engaging all of said pulleys or sheaves, and means for varying the speed and direction of rotation of said field structures.

11. The combination with the power mains or source of current supply, of two electric motors having rotatable field magnets electrically connected in series across the power mains, armatures electrically connected in multiple across the power mains and their armature shafts mechanically coupled together, a pulley or sheave carried by the field structure of each motor, an independent idler sheave or pulley, and power-transmitting means engaging all of said pulleys or sheaves and driven by the two first-mentioned pulleys or sheaves.

12. The combination with the power mains or source of current supply, of two electric motors having rotatable field magnets electrically connected in series across the power mains, armatures electrically connected in multiple across the power mains and their armature shafts mechanically coupled together, a pulley or sheave driven by the field magnets of each motor, an independent idler sheave or pulley, power-transmitting means engaging all of said pulleys or sheaves and driven by the two first-mentioned pulleys or sheaves, and means for varying the speed and direction of rotation of said field magnets.

13. In an electric elevator system the combination with a car, of a counterweight, two electric motors having rotatable fields and armatures, said armatures being mechanically coupled together, means for varying the field strengths of said motors, a pulley driven by each of said fields, an idler pulley, and a flexible connector connected at one end to said car and passing over one of the pulleys driven by one of said fields to said idler pulley and thence in the opposite direction over the pulley driven by the other of said fields and connected at its other end to said counterweight.

14. The method of operating an electric elevator driven by two electric motors or dynamos, having their armature shafts mechanically connected together and their field magnets rotatable in opposite directions, which consists in transmitting the reactive thrust of the armatures on the field magnets to an elevator car and counterweight and making the field strength of the two motors equal to stop the car and varying the field strength of either or both of said motors to move the car up or down.

15. In an electric elevator system, the combination with a car, of two electrically operating machines, each having two electrically and magnetically coöperating rotors, one rotor of one of said machines being connected to a rotor of the other machine, and the other two rotors being connected so that when the four rotors are coöperating to cause an actuation of the car the rotors in one machine will rotate in the same direction and the rotors in the other machine will rotate in directions the reverse of each other, and a flexible connector connected to said car engaging one rotor of each machine.

16. An elevator system comprising in combination a car, a counterweight, two electric machines each of which comprises two rotors, one of which includes a field and the other an armature, and a flexible connector between said car and counterweight and actuated by said electric machines for moving said car and counterweight, one of the rotors of one of said machines being connected to a rotor of the other machine, whereby said connected rotors will rotate in certain timed relation in respect to each other, the other rotors constituting means for driving said connector, the rotors in one machine rotating in the same direction when the rotors in the other machine rotate in directions reverse to each other when the car is being moved.

17. In an electric elevator system, the combination with a source of current supply of substantially constant voltage, of a car, two electric machines each having two rotors, one of said rotors including a field and the other rotor an armature, one of the rotors of one machine being driven by one of the rotors of the other machine, and power-transmission means connected to said car and actuated by the coöperation of the other rotors of said machines, the said machines being so arranged that the rotors of one machine rotate in the same direction relative to each other when the rotors of the other machine rotate in the opposite directions relative to each other.

18. In an electric elevator system, the combination with the power mains or source of current supply, of a car, a motor-generator set comprising two electric machines operating simultaneously the one as a motor and the other as a generator and also operating interchangeably as such, each machine having electrically and magnetically coöperating rotatable elements, one of which includes a field and the other an armature, a power-transmitting member connected to one of the rotatable elements of one of the machines, a power-transmitting member connected to one of the rotatable elements of the other of said machines, and power-transmission means between the car and said members and driven by said members, the rotors of each machine being connected to said source of current supply, the current thus supplied to the rotors providing the energy for actuating the car, one of said rotors rotating in a direction the reverse of the other three.

19. In an electric elevator system, the combination of a car, a counterweight, two electric machines each having electrically and magnetically coöperating rotors, three of which rotors rotate in the same direction and the fourth of which rotates in a direction the reverse of the other three, and power-transmitting means intermediate the car and counterweight and actuated by said machines.

20. In an electric elevator system, the combination of a car, a counterweight, two electric machines each having electrically and magnetically coöperating rotors, three of which rotors rotate in the same direction and the fourth of which rotates in a direction the reverse of the other three, power-transmitting means intermediate the car and counterweight and actuated by said machines, and electrical means for reversing one rotor of each machine.

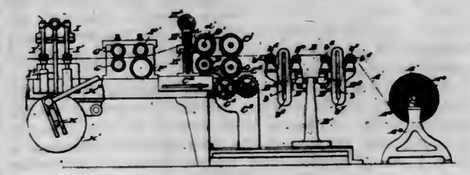
21. In an electric elevator system, a car, and a counterweight, power-transmitting means intermediate of said car and counter-weight, two electric machines, each comprising coöperating rotors that include an armature and a field, one of the rotors of one of the machines being connected to one of the rotors of the other machine, and the other two rotors mechanically coöperating through said power-transmitting means to move the car, three of the rotors of said machines rotating in one direction when the fourth rotor rotates in the opposite direction.

22. In an electric elevator system, a car, and two electric machines, each comprising coöperating rotors that include an armature and a field, one of the rotors of one of the machines being connected to one of the rotors of the other machine, and the other two rotors mechanically coöperating to actuate the car, three of the rotors of said machines rotating in one direction when the fourth rotor rotates in the opposite direction, a flexible connector connected to said car and actuated by said mechanically coöperating rotors, and electrical means for controlling the motion of the rotors which mechanically actuate the car.

23. In an electric elevator system, the combination with a car, of a counter-weight, power-transmitting means connecting said car and counterweight, and two electric machines each having two rotors, one rotor including a field and the other an armature, the rotor of one machine being connected to the rotor of the other machine and both said connected rotors continuously rotating when the system is in operation, the other two rotors being mechanically connected by said power-transmitting means and mechanically coöperating to actuate the car, said last mentioned rotors rotating only when the car is being moved, all of said rotors being arranged so that when the car is being moved the rotors in one machine will rotate in the same direction and the rotors in the other machine will rotate in directions which are the reverse of each other.

24. In an electric elevator system, the combination with a car, of a counter-weight, power-transmitting means connected to said car and counterweight, and two electric machines, each having two rotors, one rotor including an armature and the other rotor including a field, a rotor of one electric machine being mechanically connected to a rotor of the other electric machine and both of said rotors constantly rotating when the system is in operation, the other two rotors being also mechanically connected by said power-transmitting means and rotating only when the car is being moved, the construction being such that when the car is being moved the rotors in one electric machine will rotate in the same direction and the rotors in the other electric machine will rotate in directions the reverse of each other.

13,807. PAPER-BOX MACHINE. HORACE INMAN, deceased, Amsterdam, N. Y., by the assignee, Inman Manufacturing Co., Inc., Amsterdam, N. Y., a Corporation of New York. Filed June 26, 1913. Serial No. 775,974. Original No. 986,086, dated June 27, 1911, Serial No. 296,306. (Cl. 93—47.)



1. In a machine of the character described, the combination of printing devices including a rotary printing cylinder having a form extending but partially over its surface, a rotary impression cylinder coöperating with said printing cylinder, means for scoring, folding and pasting a blank, and feeding devices including a rotating cylinder, and a rotary disk coöperating with said cylinder and having a portion of its periphery cut away, substantially as described.

2. In a machine of the character described, the combination of printing devices including a rotary printing cylinder having a form extending but partially over its surface, a rotary impression cylinder coöperating with said printing cylinder, means for scoring, folding and pasting a blank, and feeding devices including a rotating cylinder, and a plurality of feed disks each having a portion of its periphery cut away, whereby the extent of each feed movement imparted to a blank may be adjusted, substantially as described.

3. A machine of the character described including continuously rotating printing rolls, intermittently operating devices for feeding, scoring, folding and pasting a blank, and means for operating said devices, said feeding and printing devices being so constructed that the feed devices are caused to operate slightly before the printing devices, so that the feeding of a blank commences before the printing thereof begins.

4. A machine of the character described including continuously rotating printing rolls, intermittently operating devices for feeding, scoring, folding and pasting a blank, and means for operating said devices, said feeding and printing devices being so adjusted that the feed devices are caused to operate slightly before the printing devices, so that the feeding of a blank commences before the printing thereof begins, and slack take-up devices.

5. In a machine of the character described, the combination with means for longitudinally scoring, folding, and pasting a blank, and intermittently operating printing devices adapted to operate upon the blank prior to said means, of intermittently operating feed devices, for feeding to the printing devices, cutting devices and a second set of independently operating feed devices, for feeding to the cutting devices, and a blank adjusting device arranged between the two sets of feed devices, substantially as described.

6. In a machine of the character described, the combination with means for longitudinally scoring, folding, and pasting a blank, and intermittently operating printing devices adapted to operate upon the blank prior to said means, of intermittently operating feed devices for feeding to the printing devices, cutting devices and a second set of independently operating feed devices adapted to feed the blank to the cutting devices, and blank adjusting devices arranged intermediate of said sets of feed devices.

7. In a machine of the character described, the combination with means for longitudinally scoring, folding, and pasting a blank, and intermittently operating printing devices adapted to operate upon the blank prior to said means, of intermittently operating feed devices, for feeding to the printing devices, cutting devices and a second set of independently operating feed devices adapted to feed the blank to the cutting devices, and an adjustable roller arranged between the two sets of feed devices.

8. In a machine of the character described, the combination with rotary printing devices arranged to operate intermittently, of rotary feed devices having cut-away portions, cutting and supplemental feeding devices, and scoring devices, means for operating said devices, the rotary printing and feed devices being connected to operate in unison and the supplemental feeding devices and cutting and scoring devices being connected to operate in unison, substantially as described.

9. In a machine of the character described, the combination with rotary printing devices arranged to operate intermittently, of rotary feed devices having cut-away portions and adapted to be intermittently operated, a second set of supplemental feeding devices, and scoring devices, the rotary printing and feed devices being connected to operate in unison and the second set of feeding devices and scoring devices being connected to operate in unison, and an adjustable take-up roller arranged between the two sets of devices, substantially as described.

10. In a machine of the character described, the combination with means for longitudinally scoring a blank, and rotary printing devices arranged to operate intermittently, of rotating feed devices having cut away portions and arranged to operate intermittently on a blank, means to operate said feeding devices slightly before the printing devices, cutting devices, and supplemental feeding devices arranged to feed to the cutting devices and means to operate said second feeding devices intermittently and slightly after the first feed devices.

11. In a machine of the character described, the combination with means for supporting a roll of material, of means for cutting and cross scoring blanks from the roll of material, means for longitudinally scoring said blanks, printing devices arranged to operate intermittently, feeding devices arranged to rotate and operate intermittently on the material, slack take-up devices between said means for supporting the roll of material and the printing devices, supplemental feed devices arranged to operate intermittently, and an adjustable roller between the two sets of feed devices.

12. In a machine of the character described, the combination with the rotary printing devices arranged to rotate continuously and operate intermittently, rotary feeding devices arranged to operate in unison with the printing devices, a second set of feeding devices arranged to operate intermittently, scoring devices arranged to operate in unison with said second set of feeding devices, a dieing device, a pasting device, cutting and scoring devices and a third set of feeding devices arranged to operate intermittently to feed from the cutting and scoring devices.

13. In a machine of the character described, the combination with feeding devices arranged to operate intermittently, of a longitudinal cutting device operating in unison therewith, a transverse cutter arranged to operate intermittently, and guides between the two cutters, comprising arms and a plate above the arms, the latter having adjusting pins, substantially as described.

14. In a machine of the character described, the combination with the main frame of the machine, of an auxiliary frame, a stationary die-piece mounted therein, and having a plunger passage formed therefrom and opening laterally through one face of the die piece, a plunger coöperating with said die piece and yieldable laterally thereof, a movable side piece adapted to close said lateral opening in the plunger passage, and means for moving the same in said auxiliary frame, substantially as described.

15. In a machine of the character described, the combination with the die-piece having formed therein a plurality of openings, each surrounded on three sides by the body of the die piece, of a movable side piece, adapted to close the fourth side of all of said openings, and toggles for operating the side piece, substantially as described.

16. In a machine of the character described, the combination with the auxiliary frame, of a die-piece adjustably mounted in said frame and having a plurality of openings therein, a movable side piece for closing one side of each of the openings in the die piece, means for moving the side piece, and adjusting devices for said means, substantially as described.

17. In a machine of the character described, the combination with a die-piece having an opening, of an intermittently-operating plunger, and means for stopping the plunger in three relatively variable positions relative to the die-piece, substantially as described.

18. In a machine of the character described, the combination with a die-piece having an opening, of a reciprocating plunger, and a variable stop motion device controlling the motions of the plunger, whereby the plunger may be stopped at three relatively variable positions with relation to the die-piece, substantially as described.

19. In a machine of the character described, the combination with the die-piece having an opening, of a reciprocating plunger, a transverse cutter, and means for intermittently operating the plunger and the cutter on the stroke toward the die-piece, the cutter being arranged to operate during an intermission of the movement of the plunger, and while the blank to be served is engaged by the plunger, substantially as described.

20. In a machine of the character described, the combination with a die-piece and transverse cutter, of an intermittently-operating plunger, means for operating the plunger to grasp the material between the die-piece and plunger and holding the plunger stationary for an interval, means for operating the cutter while the plunger is thus held stationary, means for thereafter forcing the plunger into the die and allowing it to rest therein, and means for elevating the plunger, substantially as described.

21. In a machine of the character described, the combination with a die-piece having a movable side piece, of an intermittently-operating plunger adapted to move laterally of the die piece and in the direction of the path of movement of the movable side piece, means for moving the plunger to grasp the material between the die and plunger, means for moving the plunger into the die and then for moving the side piece to press the material between the plunger and sides of the die, and means for elevating the plunger, substantially as described.

22. In a machine of the character described, the combination with a die-piece having a movable side, of a counter balanced laterally yieldable plunger, and means for moving the plunger and stopping the same at three points with relation to the die, substantially as described.

23. In a machine of the class described, the combination of a die having a plunger passage therein, a movable member forming one side of the die, and a reciprocating laterally yieldable plunger coöperating with said die.

24. In a machine of the class described, the combination of a die having a plunger passage therein, a movable member forming one side of the die, and a reciprocating plunger coöperating with said die and adapted to yield in the direction of movement of said member.

25. In a machine of the class described, the combination of a die having a plunger passage therein, a movable member forming one side of the die, a reciprocating plunger coöperating with the die, and guiding means for the plunger adapted to permit the latter to yield in the direction of movement of said member.

26. In a machine of the class described, the combination of means for feeding a strip of material through the machine, intermittently operating scoring and dieing means adapted to form blanks with the securing flaps on the adjacent ends of the blanks, adjustable pasting mechanism, adjustable blank severing means, adjustable forming mechanism, and means whereby the length of feed between successive operations of the scoring and dieing means may be varied.

27. In a machine of the class described, the combination of means for feeding a strip of material through the machine, intermittently operating scoring and dieing means adapted to punch out portions of the material at the adjacent ends of the blanks to form the securing flaps, adjustable pasting mechanism, adjustable blank severing means beyond said pasting mechanism, adjustable forming mechanism comprising a member movable longitudinally of the machine to secure the sides of the box together, and means whereby the length of the feed between successive operations of the scoring and dieing means may be varied.

28. In a machine of the class described, the combination of means for feeding a strip of material through the machine, intermittently operating scoring and dieing means adapted to punch out portions of the material at the adjacent ends of the blanks to form the securing flaps, adjustable pasting mechanism, forming mechanism adjustable to make boxes of different sizes and comprising a reciprocating plunger and a member movable longitudinally of the machine to secure the sides of the box together, blank severing means, and means for varying the length of the feed between successive operations of the scoring and dieing means.

29. In a machine of the class described, the combination of means for feeding a strip of material through the machine, intermittently operating scoring and dieing means adapted to punch out portions of the material to form the securing flaps on the adjacent ends of the blank whereby one arrangement of dies is adapted to make blanks for boxes of different length, adjustable pasting mechanism, forming mechanism comprising a reciprocating plunger, a die having a side movable longitudinally of the machine to secure the sides of the box together, blank severing mechanism adjustable to suit blanks of different lengths, and means for varying the length of feed between successive strokes of the scoring and dieing mechanism.

30. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material while the same is stationary, printing mechanism, two independently operating web feeding devices, means whereby the feed of said devices may be relatively adjusted and adjustable means for determining the minimum length of web between said devices.

31. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material while the same is stationary, printing mechanism, two independently operating web feeding devices, means whereby the feed of said devices may be relatively adjusted and means adjustable transversely of the web for determining the minimum length of web between said devices.

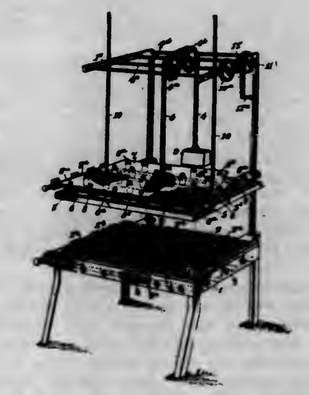
32. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material while the same is stationary, printing mechanism, two independently and intermittently operating web-feeding devices, the first of which to receive the web feeds the web a greater distance than the second, and means for drawing the web back through said first feeding device between successive forward feeding operations thereof.

33. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material while the same is stationary, printing mechanism, two independently and intermittently operating web feeding devices, the first of which to receive the web feeds the web a greater distance than the second, means for drawing the web back through said first feeding device between successive forward feeding operations thereof, and means for determining the minimum length of web between said devices.

34. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material, while the same is stationary, printing mechanism, two independently and intermittently operating web-feeding devices, the first of which to receive the web feeds the web the same distance for different lengths of blanks and the other of which feeds the web a distance dependent upon the length of the blank, and means for drawing the surplus of web, fed by said first device, over that fed by said other device, back through said first device between successive forward feeding operations of the latter.

35. In a machine of the class described, the combination of scoring and dieing mechanism arranged to operate on a web of material while the same is stationary, printing mechanism, two independently and intermittently operating web feeding devices, the first of which to receive the web feeds the web the same distance for different lengths of blanks and the second of which feeds the web a distance dependent upon the length of the blank, means for drawing the surplus of web, fed by said first device, over that fed by said other device, back through said first device between successive forward feeding operations of the latter, and adjustable means for determining the minimum length of web between said devices.

13,808. BAKING APPARATUS. OLE C. NUUBSON, Duluth, Minn. Filed Jan. 6, 1914. Serial No. 810,685. Original No. 1,031,085, dated July 2, 1912, Serial No. 631,460. (Cl. 107—66.)



1. In a baking apparatus, the combination with a suitable support, of a lower baking plate, an upper baking

plate, a cover sheet extending over said upper plate and spaced therefrom, said upper plate having steam exhaust ports extending therethrough, nipples mounted upon said upper plate and extending through said cover sheet, said nipples having steam exhaust passages formed therein communicating with the steam exhaust passages in said upper plate and means for applying heat to one of said plates.

2. In a baking apparatus, two relatively movable baking plates adapted to compress a layer of dough into a thin wafer-like form and provided with matching channels extended along the baking surfaces for the collection of steam generated in the dough during the baking operation, said channels being in communication with the atmosphere for the escape of the collected steam.

3. In a baking apparatus, two relatively movable baking plates adapted to compress a layer of dough into a thin wafer-like form and provided with matching channels for the collection of steam generated in the dough during the baking operation, said channels having communication with the atmosphere for the escape of the collected steam and located to mark lines of division in the baked product for the separation thereof into smaller sections.

4. In a baking apparatus, means for compressing a layer of dough into a thin wafer-like form and baking it in such form, said compressing and baking means having channels for the collection of steam generated in the dough during the baking operation, said channels having communication with the atmosphere for the escape of the collected steam and located to mark division lines in the baked product for the separation of the latter into smaller sizes for packaging and marketing.

5. In a baking apparatus, two baking plates movable toward and from each other and adapted to be moved into such close relation as to compress a layer of dough into a thin wafer-like form for baking, the dough engaging faces of the plates having matching corrugations and matching intercommunicating channels, the latter extending along said faces and constituting collection means for steam generated in the dough during the baking operation and communicating with the atmosphere for the escape of the steam so collected and said channels also defining in the baked product division lines for the separation thereof into smaller sections.

6. In a baking apparatus, a baking plate having its active surface corrugated and provided with channels extending therealong for the collection of steam generated during the baking operation, said channels communicating with the atmosphere for the escape of the collected steam.

7. In a baking apparatus, a baking plate having its active surface corrugated and provided with channels for the collection of steam generated during the baking operation, the channels being located and extended in directions to define in the baked product division marks for the separation of the baked product into smaller sections, and also communicating with the atmosphere for the escape of the collected steam.

8. In a baking apparatus, a baking plate having a substantially flat baking surface with channels formed therein and extending therealong for the collection of steam generated during the baking operation and communicating with the atmosphere for the escape of the collected steam.

9. In a baking apparatus, a baking plate having a substantially flat active face provided with numerous corrugations, and channels dividing the corrugated surface into sections, said channels constituting collection and escape means for steam generated during the baking operations and producing division marks in the baked product for the separation of the latter into smaller sections.

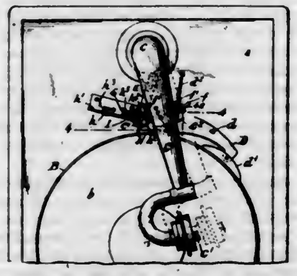
10. In a baking apparatus, a suitable support, a baking plate mounted therein and provided with heating means, another baking plate also provided with heating means and located above the first-named plate, a chain connected to and suspending the second-named plate, a counterweight carried by the chain at the end thereof remote from the second-named plate, guiding means for the second-named plate, and manipulating means for the second-named plate including sprocket wheel supporting means for the chain between said second-named plate and the counterweight.

11. In a baking apparatus, a suitable support, a baking plate mounted therein and provided with a corrugated upper surface, another plate mounted in the support for movement toward and from the first-named plate and provided with a corrugated lower surface adapted to that of the first-named plate for compressing a layer of dough into a thin wafer-like form, a counterweight for the second-named plate, and manipulating means for moving the second-named plate toward and from the first-named plate, one of the plates being provided with channels having ports leading therefrom for the collection and escape of steam generated in the dough during the baking operation, and both of the plates being provided with means for the application of heat thereto.

12. In a baking apparatus, a suitable support, a baking plate mounted therein and provided with a corrugated upper surface, another plate mounted in the support for movement toward and from the first-named plate and provided with a corrugated lower surface adapted to that of the first-named plate for compressing a layer of dough into a thin wafer-like form, a counterweight for the second-named plate, and manipulating means for moving the second-named plate toward and from the first-named plate, one of the plates being provided with channels having ports leading therefrom for the collection and escape of steam generated in the dough during the baking operation and both of the plates being provided with means for the application of heat thereto, the channels being arranged in number and location to produce division marks in the baked product for facilitating the separation of the latter into smaller sections.

13. In a baking apparatus, a baking plate having its active face corrugated and provided with intersecting channels dividing the corrugated face into sections and having means for the escape of steam collected in the channels during the baking operation.

13,809. STOP MECHANISM FOR PHONOGRAPHS. GEORGE H. TAGGART, New York, N. Y. Filed July 17, 1914. Serial No. 851,643. Original No. 1,080,386, dated Dec. 2, 1913, Serial No. 645,060. (Cl. 74—46.)



1. The combination with an instrument having a driven rotating device and an arm which traverses said rotating device, of stop mechanism for said rotating device comprising a pivoted spring-actuated brake lever adapted to swing on its pivot into and out of engagement with said rotating device, a releasing device pivoted on a stationary part of said instrument, a wheel of relatively large diameter pivoted on said releasing device, said releasing device being adapted to be swung on its pivot to move said wheel into and out of engagement with said brake lever for controlling respectively the releasing and applying of the same, and means operated by said arm for actuating said releasing device, said releasing device and wheel together acting as a toggle mechanism to facilitate the swinging of said brake lever on its pivot, substantially as described.

2. The combination with an instrument having a driven rotating device and an arm which traverses said rotating device, of stop mechanism for said rotating device comprising a pivoted spring-actuated brake lever adapted to swing on its pivot into and out of engagement with said rotating device, a releasing device pivoted on a stationary part of said instrument, a wheel pivoted on said releasing device, said releasing device being adapted to be swung on its pivot to move said wheel into and out of engagement with said brake lever for controlling respectively the releasing and applying of the same, and means operated by said arm for actuating said releasing device, said releasing device and wheel together acting as a toggle mechanism to facilitate the swing of said brake lever on its pivot, substantially as set forth.

3. The combination with an instrument having a driven rotating device and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a spring-actuated brake, a releasing arm pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said brake having a face which is substantially concentric with the pivot of said brake releasing arm, said releasing arm being adapted to be swung on its pivot to move said wheel into and out of engagement with said concentric face for controlling respectively the releasing and applying of said brake, the concentric face of the brake being provided with a slightly raised end portion which resists the rolling off of said wheel from said face and means connected to said swinging arm which moves said releasing arm to cause the brake to be released when the swinging arm is moved to commence the operation of said instrument and to cause the brake to be applied, substantially as set forth.

4. The combination with an instrument having a driven rotating device and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a spring-actuated brake, a releasing arm pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said releasing arm being adapted to be swung on its pivot to move said wheel into and out of engagement with said brake for controlling respectively the releasing and applying of said brake, the brake being provided with a slightly raised end portion, and means connected to said swinging arm which moves said releasing arm to cause the brake to be applied, substantially as set forth.

5. The combination with an instrument having a driven rotating device, and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a spring-actuated brake, a releasing arm pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said brake having a face which is substantially concentric with the pivot of said brake releasing arm, said releasing arm being adapted to be swung on its pivot to move said wheel into and out of engagement with said concentric face for controlling respectively the releasing and applying of said brake, the concentric face of the brake being provided with a slightly raised end portion which resists the rolling off of said wheel from said face, and means connected to said swinging arm which move said releasing arm to a position at which the point of contact of said wheel is beyond the raised position of the concentric face of the brake, to cause the wheel to roll out of engagement with the brake and thereby cause the brake to be applied, substantially as set forth.

6. The combination with an instrument having a driven rotating device and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a spring-actuated brake, a releasing arm pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said releasing arm being adapted to be swung on its pivot to move said wheel into and out of engagement with said brake for controlling the releasing of said brake, the brake being provided with a slightly raised end portion, and means connected to said swinging arm which moves said releasing arm to a position at which the point of contact of said wheel is beyond the raised portion of the brake, to cause the wheel to roll out of engagement with the brake and thereby cause the brake to be applied, substantially as set forth.

7. The combination with an instrument having a driven rotating device and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a brake, a releasing arm which is pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said brake having a curved face on which said wheel is adapted to engage, and actuating devices carried by the swinging arm which are adapted to engage on opposite sides of said releasing arm and one of which actuates the releasing arm to cause the brake to be released when the swinging arm is moved in one direction, and the other of which actuates the releasing arm to cause the brake to be applied when the swinging arm is moved in the opposite direction, substantially as set forth.

8. The combination with an instrument having a driven rotating device and a swinging arm which traverses said rotating device, of stop mechanism for said rotating device comprising a brake, a releasing arm which is pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing arm, said brake having a face on which said wheel is adapted to engage, and actuating devices carried by the swinging arm which are adapted to engage on opposite sides of said releasing arm and one of which actuates the releasing arm to cause the brake to be released when the swinging arm is moved in one direction, and the other of which actuates the releasing arm to cause the brake to be applied when the swinging arm is moved in the opposite direction, substantially as set forth.

9. The combination with an instrument having a driven rotating device and a swinging device which traverses said rotating device, of stop mechanism for the instrument comprising a stop device and actuating devices which are movable with the swinging device for causing the releasing and applying of said stop device by opposite movements of the swinging device, one of said actuating devices being slidably arranged on the swinging device and adapted to be held in a set position for causing said stop device to be applied to said rotating device at any desired position of said swinging device substantially as set forth.

10. The combination with an instrument having a driven rotating device and a swinging device which traverses said rotating device, of stop mechanism for the instrument comprising a stop device and fingers carried by the swinging device for causing the releasing and applying of said stop device by opposite movements of the swinging device, one of said fingers being slidably arranged on said swinging device and adapted to be held in a set position for causing the stop device to be applied to said rotating device at any desired position of said swinging device, substantially as set forth.

11. The combination with an instrument having a driven rotary device and a swinging device which traverses said rotary device, of stop mechanism for the instrument comprising a stop device, actuating devices which are movable with the swinging device for causing the releasing and applying of said stop device by opposite movements of the swinging device, and one of which is adjustable relatively to the swinging device for regulating the operation of said stop device with respect to the desired movement of said swinging device, and means coöperating with said adjustable device for adjusting the same by the movement of said swinging device, substantially as set forth.

12. The combination with an instrument having a driven rotary device and a swinging device which traverses said rotary device, of stop mechanism for the instrument comprising a stop device, fingers carried by the swinging device for causing said stop device to be released and applied by opposite movements of the swinging device, one of said fingers being adjustable relative to the swinging device for regulating the operation of the said stop device with respect to the desired movement of the swinging device, a latch for holding said adjustable finger during the movement of the swinging device in one direction, means for adjusting said finger by the movement of the

swinging device in the opposite direction, and means for actuating said latch to engage and release said adjustable finger, substantially as set forth.

13. The combination with an instrument having a driven rotary device and an arm which traverses said rotary device, of stop mechanism for the rotary device comprising a brake, a releasing device which is movable to cause the brake to be applied and released, fingers projecting from said arm at opposite sides of said releasing device for actuating the same, one of said fingers being adjustable, means for shifting said adjustable finger when the arm is moved in one direction, a latch which is moved by said releasing device to hold said adjustable finger, and means for releasing said latch, substantially as set forth.

14. The combination with an instrument having a driven rotary device and an arm which traverses said rotary device, of stop mechanism for the rotary device comprising a brake, a releasing device which is pivoted to a stationary part of said instrument, a wheel pivoted on said releasing device, said releasing device being adapted to be swung on its pivot to move said wheel into and out of engagement with said brake for causing the releasing and applying thereof, fingers projecting from said arm at opposite sides of said releasing device for actuating the same, one of said fingers being adjustable, means for shifting said adjustable fingers when the arm is moved in one direction, a latch which is moved by said releasing device to hold said adjustable finger, and means for releasing said latch, substantially as set forth.

15. The combination with an instrument having a driven rotating device and a swinging device which traverses said rotating device, of stop mechanism for said rotating device comprising a brake lever, a releasing arm pivoted on a stationary part of said instrument and provided with a wheel of relatively large diameter adapted to roll into and out of engagement with said brake lever for shifting the brake lever for releasing and applying of the brake to said rotating device, said releasing device and wheel together acting as a toggle mechanism to facilitate the shifting of the brake lever, devices movable with said swinging device for actuating said releasing arm, and means for yieldingly holding the wheel of said releasing arm in engagement with said brake lever actuated by one of said movable devices, substantially as set forth.

16. The combination with an instrument having a driven rotating device and an arm which traverses said rotating device, of stop mechanism for said rotating device comprising a spring actuated brake, a releasing arm pivoted at one end on a stationary part of said instrument, a wheel pivoted on the other end of said releasing device, said releasing device being adapted to be swung on its pivot to move said wheel into and out of engagement with the brake for releasing and applying the brake, said brake having a raised portion which resists the rolling off of the wheel from engagement with said brake, and means connected to the swinging arm for moving the releasing device into and out of engagement with the brake, substantially as set forth.

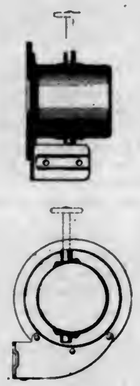
17. An instrument having a driven rotating device in combination with means for stopping the rotation of said device, means for controlling the operation of said stopping device, means consisting of two members movable relative one to the other, one of said parts movable around a fixed pivot, the other part being adapted to engage the stopping means, said parts forming when their axes of movement and the point of engagement with the stopping means are in alinement one with the other, a rigid brace holding the stopping means in inoperative position, and an arm adapted to traverse said rotating device and to change the alinement of one of the pivotal axes of the brace relative to the other axes and the point of bearing of the brace on the stopping means.

18. An instrument having a driven rotating device in combination with spring actuated means for stopping said device, a brace consisting of two parts or members one movable around a fixed pivot and having the other pivotally connected to it, said parts being adapted when shifted to a position where their pivotal axes are in alinement with the point of contact of the second member with the stopping means to hold the latter in inoperative position, and an arm adapted to traverse the rotating device and in its movement shift the pivotal connection between said members out of alinement of the other pivotal axis and point of contact with the stopping means.

19. An instrument having a driven rotating device in combination with a brake lever subjected to pressure tending to cause the lever to engage the rotating device, a brace consisting of two parts or members pivotally connected, one of said members being movable around a fixed pivot, said brace being adapted to be shifted to a position where its pivotal axes will coincide with a line bisecting the brake lever at a point intermediate its end and center of movement, and an arm adapted to traverse the rotating device and in its movement to move one of its pivotal points out of line bisecting the lever.

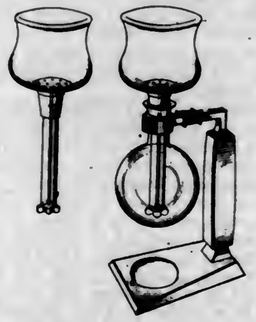
DESIGNS.

46,522. HORN-CASING. EMANUEL AUFIERO, Brooklyn, N. Y., assignor to E. A. Laboratories, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Aug. 18, 1914. Serial No. 857,410. Term of patent 7 years.



The ornamental design for horn casing, as shown.

46,523. COFFEE-PERCOLATOR. GERHARD BEHREND, New York, N. Y., assignor to The Silex Co., Inc., New York, N. Y., a Corporation of New York. Filed July 9, 1914. Serial No. 850,017. Term of patent 7 years.

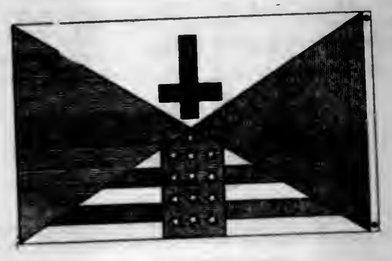


The ornamental design for a coffee percolator as shown.

46,524. HAIR-PIN. PHILIP BERNSTEIN, New York, N. Y. Filed May 11, 1914. Serial No. 837,951. Term of patent 3½ years.

The ornamental design for a hair pin, as shown.

46,525. HOME-FLAG. ZED HETZEL COPP, Philadelphia, Pa. Filed July 30, 1914. Serial No. 854,190. Term of patent 14 years.



The ornamental design for a home flag as shown and described.

46,526. POLISHER. MYRON GOODWIN, Berwick, Me. Filed May 29, 1914. Serial No. 841,920. Term of patent 14 years.

The ornamental design for a polisher, as shown.

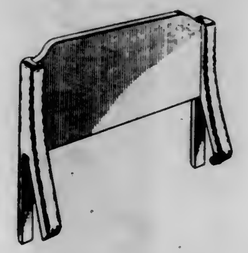
46,527. STAND. CHARLES F. GRAINGER and WILLIAM C. BROHM, Louisville, Ky., assignors to Grainger & Company, Louisville, Ky., a Corporation of Kentucky. Filed July 31, 1914. Serial No. 854,409. Term of patent 14 years.

The ornamental design for a stand, as shown.

46,528. SMOKING SET. EZEKIEL HALL, Sharon, Mass. Filed Aug. 19, 1914. Serial No. 857,604. Term of patent 14 years.

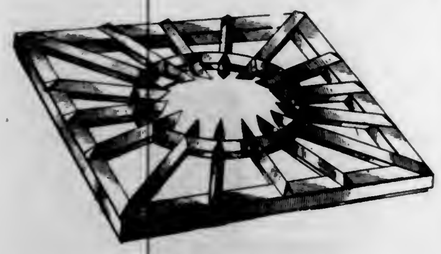
The ornamental design for a smoking set, as shown.

46,529. SINK-GUARD. FRANK H. HUSSEY, Beverly, Mass. Filed July 10, 1914. Serial No. 850,271. Term of patent 14 years.



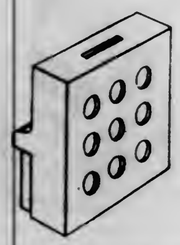
The ornamental design for a sink guard, as shown.

46,530. GRATE. JAMES E. KENNEDY, Washington, D. C. Filed Aug. 18, 1914. Serial No. 857,417. Term of patent 14 years.



The ornamental design for a grate, as shown.

46,531. SAVINGS-BANK. ROBERT KLINE, Cleveland, Ohio, assignor to The B-O-C. Mfg. Co., Cleveland, Ohio. Filed July 16, 1914. Serial No. 851,412. Term of patent 3½ years.

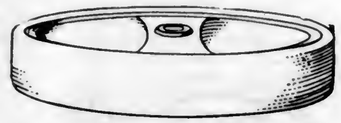


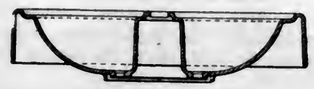
The ornamental design for a savings bank as shown.

46,532. PIN. JOHN KRAUSE, San Francisco, Cal. Filed Aug. 5, 1914. Serial No. 855,329. Term of patent 3½ years.

The ornamental design for a pin as shown.

46,533. BASIN. EMIL F. METZGER, Peoria, Ill. Filed July 25, 1913. Serial No. 781,245. Term of patent 14 years.





The ornamental design for a basin, as shown.

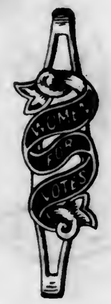
46,534. FINGER-RING, BRACELET, BREASTPIN, OR SIMILAR ARTICLE OF JEWELRY. JOHN M. MILLER, Providence, R. I. Filed May 18, 1914. Serial No. 839,455. Term of patent 7 years.

The ornamental design for a finger ring, bracelet, breast pin, or similar article of jewelry, substantially as shown.

46,535. FINGER-RING, BRACELET, BREASTPIN, OR SIMILAR ARTICLE OF JEWELRY. JOHN M. MILLER, Providence, R. I. Filed May 18, 1914. Serial No. 839,456. Term of patent 7 years.

The ornamental design for a finger ring, bracelet, breast pin, or similar article of jewelry, substantially as shown.

46,536. FINGER-RING, BRACELET, BREASTPIN, OR SIMILAR ARTICLE OF JEWELRY. JOHN M. MILLER, Providence, R. I. Filed May 18, 1914. Serial No. 839,457. Term of patent 7 years.

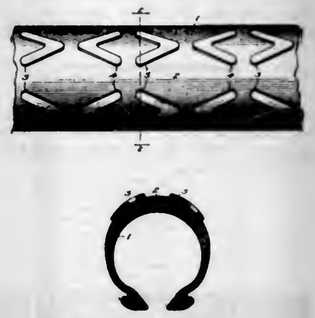


The ornamental design for a finger ring, bracelet, breast pin, or similar article of jewelry, substantially as shown.

46,537. VEHICLE-TIRE. WILLIAM D. MORRIS, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed Oct. 15, 1913. Serial No. 795,375. Term of patent 14 years.

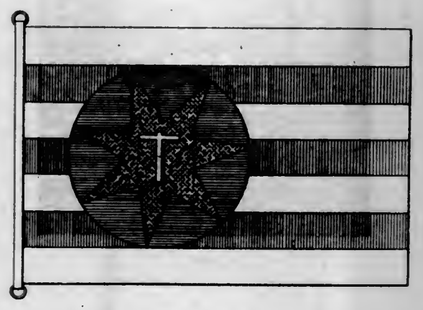
The ornamental design for a vehicle tire as shown and described.

46,538. VEHICLE-TIRE. WILLIAM D. MORRIS, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed Oct. 15, 1913. Serial No. 795,376. Term of patent 14 years.



The ornamental design for a vehicle tire as shown and described.

46,539. FLAG. JOHN B. MUNSON, Phillipsburg, N. J. Filed Aug. 10, 1914. Serial No. 856,144. Term of patent 7 years.



The ornamental design for a flag, as shown and described.

46,540. TOY. GEORGE OTSTOT, Springfield, Ohio. Filed Aug. 8, 1914. Serial No. 855,912. Term of patent 7 years.

The ornamental design for a toy, as shown.

46,541. ARTIFICIAL-LIGHT INCLOSURE. CHARLES B. OTT, Woodlawn, W. Va. Filed Aug. 26, 1914. Serial No. 858,752. Term of patent 3½ years.

The ornamental design for an artificial light inclosure, as shown.

46,542. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,914. Term of patent 7 years.

The ornamental design for a rug, substantially as shown.

46,543. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,915. Term of patent 7 years.

The ornamental design for a rug, substantially as shown.

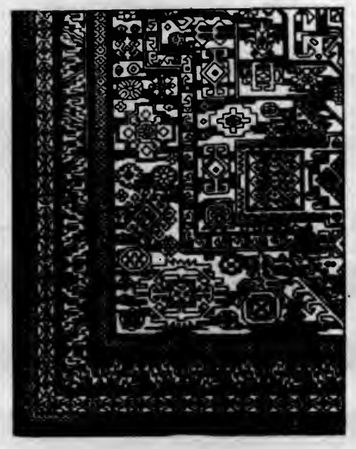
46,544. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,916. Term of patent 7 years.

The ornamental design for a rug, substantially as shown.

46,545. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,917. Term of patent 7 years.

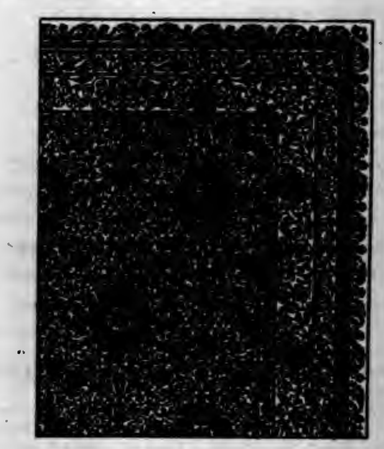
The ornamental design for a rug, substantially as shown.

46,546. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,918. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

46,547. RUG. ROBERT F. RIDDELL, Flushing, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,919. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

46,548. BOOT. EMMETT A. SAUNDERS, Mishawaka, Ind. Filed July 14, 1914. Serial No. 850,993. Term of patent 14 years.

The ornamental design for a boot, as shown.

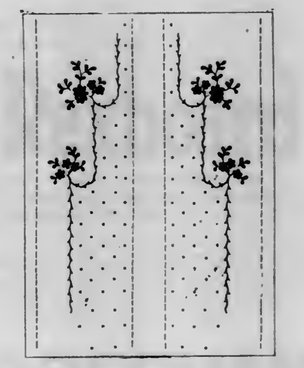
46,549. RUG. FRANCIS SCHINDLER, Scarsdale, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,910. Term of patent 7 years.

The ornamental design for a rug, substantially as shown.

46,550. RUG. FRANCIS SCHINDLER, Scarsdale, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,911. Term of patent 7 years.

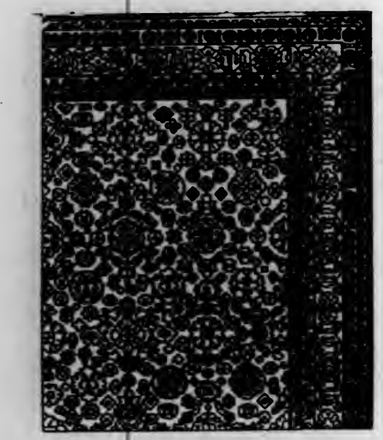
The ornamental design for a rug, substantially as shown.

46,551. WAIST-FRONT. HENRY SCHWARBER, Weehawken, N. J., assignor to Inflexible Co., West New York, N. J. Filed June 30, 1914. Serial No. 848,316. Term of patent 3½ years.



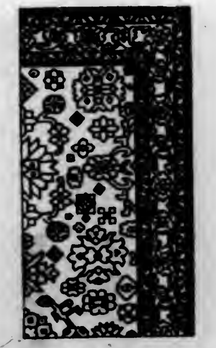
The ornamental design for a waist front as shown.

46,552. RUG. WILLIAM A. SPRING, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,921. Term of patent 7 years.



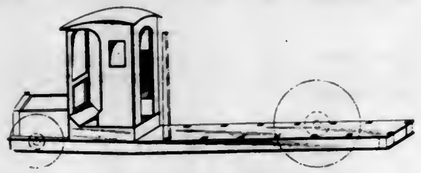
The ornamental design for a rug, substantially as shown.

46,553. RUG. WILLIAM A. SPRING, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,922. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

46,554. MOTOR-TRUCK BODY. MOSES S. WALTON and WALTER B. JOSLYN, Los Angeles, Cal. Filed Aug. 19, 1913. Serial No. 785,564. Term of patent 7 years.



The ornamental design for a motor truck body as shown.

TRADE-MARKS

PUBLISHED OCTOBER 13, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 49,146. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE AMERICAN SHOE POLISH COMPANY, Chicago, Ill. Filed Apr. 16, 1910.

Particular description of goods.—Shoe Blackings and Polishes.

Claims use since Mar. 1, 1910.

Ser. No. 58,371. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Lakewood, Ohio. Filed Aug. 25, 1911.

NATIONAL

Particular description of goods.—Dry-Cell Electric Batteries.

Claims use since July 15, 1911.

Ser. No. 61,749. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. MCMAHAN & Co., Houston, Tex. Filed Feb. 26, 1912.

No claim being made to the word "Rice," the star being printed in red.

Particular description of goods.—Head-Rice.

Claims use since Apr. 15, 1901.

Ser. No. 63,240. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE FEIS COMPANY, Chicago, Ill. Filed May 1, 1912.

The same being the letter "F" contained in a scroll.

Particular description of goods.—Shoe Dressings and Polishes.

Claims use since March, 1905.

Ser. No. 63,398. (CLASS 12. CONSTRUCTION MATERIALS.) FLINTKOTE MANUFACTURING CO., Boston, Mass. Filed May 7, 1912.

Rexboard

The syllable "board" being disclaimed.

Particular description of goods.—Artificial Board.

Claims use since on or about Apr. 24, 1912.

Ser. No. 66,904½. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) COMPAGNIE FRANCAISE DE LA CHAMOISERIE NOUVELLE, Paris, France. Filed Nov. 15, 1912.

DOECHAM

The trade-mark consists of the invented word "Doecham."

Particular description of goods.—Brief-Cases, Portfolios, Card-Cases, Purses, Cigar-Cases, Cigarette-Cases,

Riding - Saddles and Harness - Saddles, Harness, Bridles, Reins, Traces, Saddle-Bows, Straps for Baggage and Horse Equipments, Bands for Baggage and Horse Equipments, Breechings, Pack - Saddles, Trace - Bands, Throat - Lashes, Chin-Pieces, Cruppers, Docks, Hind-Girths, Back-Bands, Stirrup-Straps, Halters, Martingales, Muzzles, Blinkers, Heading - Reins, Trace - Straps, Saddle - Bags, Shabracks, Belly - Bands, Loin - Straps, Shoemakers' Stirrups, Bags, Portmanteaux, Suitcases, Brief Bags and Cases, Game-Bags, Satchels.

Claims use since about Oct. 18, 1911.

Ser. No. 68,066. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STRUBY-ESTABROOK MERCANTILE COMPANY, Denver, Colo., assignor to The Morey Mercantile Company, Denver, Colo., a Corporation of Colorado. Filed Jan. 22, 1913.

Particular description of goods.—Canned Fruits, Canned Fish, Teas, Canned Vegetables, Spices, Bird-Seed, Catsup, Cheese, Chilli Sauce, Chilli Peppers, Candy, Citron, Condensed Milk, Cranberry Sauce, Crystallized Fruits, Fresh Fruits, Dried Fruits, Evaporated Fruits, Extracted Honey, Farina, Rolled Oats, Spaghetti, Macaroni, Wheat - Flour, Crushed Fruits, Fruit Jams, Fruit Jellies, Mince-Meat, Molasses, Olives, Olive-Oil, Pickles, Fruit Preserves, and Flavoring Extracts for Foods.

Claims use since Nov. 1, 1906.

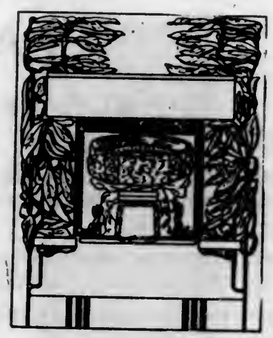
Ser. No. 68,133. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) BLISS BROTHERS COMPANY, Attleboro, Mass. Filed Jan. 27, 1913.

COLONIAL DAME
B CO

Particular description of goods.—Lockets, Bracelets, Ribbon and Metal Fobs, Charms, Hat-Pins, Scarf-Pins, Link-Buttons, Waist Sets Consisting of Cuff-Buttons and Stud-Buttons or Collar-Buttons, and Chains, All of Said Goods Being Made of Precious-Metal Ware.

Claims use since Sept. 1, 1912.

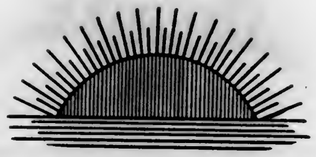
Ser. No. 68,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AGOSTINO NOVARO, Onegilia, Italy. Filed Jan. 28, 1913.



Particular description of goods.—Pure Olive-Oils.

Claims use since Nov. 24, 1909.

Ser. No. 68,319. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE ROYAL BRUSH COMPANY, Osaka, Japan. Filed Feb. 4, 1913.



Particular description of goods.—Tooth and Toilet Brushes.

Claims use since January, 1905.

Ser. No. 69,501. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WYATT METAL WORKS, Dallas, Tex. Filed Mar. 31, 1913.

SERVIS

Particular description of goods.—Galvanized Metal.

Claims use since Mar. 12, 1913.

Ser. No. 69,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BENJAMIN C. BUXTON, Middletown Springs, Vt. Filed Apr. 16, 1913.

JUSTAMERE.

"Justamere."

Particular description of goods.—Butter, Cheese, Buttermilk, Fresh Milk, Fresh Cream, and Fresh Fruit, Hams and Bacon, Maple-Syrup, and Honey.

Claims use since September, 1911.

Ser. No. 69,886. (CLASS 7. CORDAGE.) BEEBE CORDAGE MFG. CO., Rockaway, N. J. Filed Apr. 18, 1913. Under ten-year proviso.

BEEBE

Particular description of goods.—Clothes - Lines, Sash-Cord, Horse-Ties, Factory-Banding, and Twine.

Claims use since about 1848.

Ser. No. 70,042. (CLASS 37. PAPER AND STATIONERY.) NEUE PHOTOGRAPHISCHE GESELLSCHAFT, AKTIENGESELLSCHAFT, Steglitz, near Berlin, Germany. Filed Apr. 24, 1913.

NPG

Particular description of goods.—Non-Sensitized Photographic Papers.

Claims use since Feb. 28, 1905.

Ser. No. 70,973. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE F. T. B. INC., Brooklyn, N. Y. Filed June 9, 1913.

No claim being made to the representation of the lounge-bed.

Particular description of goods.—Divanettes.

Claims use since May 15, 1913.

Ser. No. 71,075. (CLASS 15. OILS AND GREASES.) PENN OIL & SUPPLY CO. LTD., Oil City, Pa. Filed June 12, 1913.

SILVER LEAF

Particular description of goods.—Lubricating-Oil.

Claims use since the latter part of the year 1909.

Ser. No. 71,324. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAN TALMAGE'S SONS' COMPANY, New York, N. Y. Filed June 23, 1913.

M
B

Particular description of goods.—Rice-Flour.

Claims use since the year 1880.

Ser. No. 71,652. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DAIMLER - MOTOREN - GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

Particular description of goods. — Automobiles, Motor-Boats, Automobile Transport-Wagons, Chassis, Motor-Bicycles, Motor-Tricycles, Trailers for Use with Motor Bicycles and Tricycles, Motor - Sleighs, Airships, Awnings, Hoods, Wind-Screens, Dust-Guards, and Dress-Guards for Use in Vehicles, Flying-Machines, Aeroplanes, Monoplanes, Biplanes, Inflated Aeroplanes, Framework for Flying-Machines, Flying-Machine Cars, Flying-Machine Chassis and Spring Suspensions Therefor, Flying-Machine Cradles, Flying-Machine Buffers, Flying-Machine Slippers, Rudders, Steering-Wheels, Steering-Rods, Steering-Levers, Screw-Propellers, Tire-Tools.

Claims use since November, 1910.

Ser. No. 71,653. (CLASS 32. FURNITURE AND UPHOLSTERY.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

Particular description of goods.—Picture-Frames, Mirrors, Bedsteads, Boot and Shoe Stands, Commodes, Desks, Flower - Stands, Hat, Coat, and Umbrella Stands, Mattresses, Draft-Screens, Seats, Sofas, Stools, Tables, Towel-Racks, Arm-Rests, Seat-Backs, Cabinets, Draft-Excluders, Drawers, Foot and Leg Rests, Head and Back Rests, Cupboards, Bookcases, Book - Slides, Chests, Dressers, Sideboards, Wardrobes, Washstands, Chairs, Shelves, Trestles, Beds, Cane Seatings, Pneumatic and Inflated Mattresses, Bolsters and Pillows, Seat-Pads.

Claims use since November, 1910.

Ser. No. 71,950. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAY CHOCOLATE COMPANY, Boston, Mass. Filed July 24, 1913.

JAY CHOCOLATE & CO. BEST IN BOSTON CHOCOLATES

No claim being made for any of the words appearing thereon.

Particular description of goods.—Candy.

Claims use since May 14, 1913.

Ser. No. 72,109. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Aug. 1, 1913.

INTERNATIONAL

Particular description of goods.—Fertilizer-Distributers, Fodder, Stalk, and Ensilage Cutters, Hay Presses, Loaders, Rakes, Stackers, and Feed-Grinders, Binders, Reapers, Mowers, Headers, Header-Binders, Corn-Binders, Corn Pickers, Huskers, and Shredders, Seeders, Drills, Planters, Harrows, Cultivators, Land Packers and Rollers, Combined Rakes and Stackers, and Separate Parts for Each of Said Machines.

Claims use since September 1, 1904.

Ser. No. 72,540. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WILLIAM H. SHEETS, JR., & Co., Baltimore, Md. Filed Aug. 26, 1913.

Consisting of the representation of a star.

Particular description of goods.—Brushes—Namely, Wall-Brushes, Scrubbing-Brushes, Clothes-Brushes, Paint and Whitewash Brushes.

Claims use since as early as 1881.

Ser. No. 72,626. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAS. S. MASON CO., Philadelphia, Pa. Filed Sept. 2, 1913.

Particular description of goods.—Shoe, Boot, and Leather Dressings.

Claims use since July, 1911.

Ser. No. 73,287. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN CHAIN COMPANY, INCORPORATED, Bridgeport, Conn. Filed Oct. 9, 1913. Under ten-year proviso.

NIAGARA

Particular description of goods.—Chain and Halter-Chains, Dog-Chains, Chain Cow-Ties, Tie-Out Chains, Hammock-Chains, Swing-Chains, Coil-Chains, Guard-Chains, Well-Chains, Antispreader-Chains, Fire-Door Chains, Chain Pipe-Hangers, Fish-Net Chains, Agricultural-Implement Chains, Seal-Pin Chains, Hose-Coupler Chains.

Claims use since before Jan. 1, 1892.

Ser. No. 73,631. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SIERRA CHEMICAL COMPANY, Los Angeles, Cal. Filed Oct. 27, 1913.

SAVEX

Particular description of goods.—Washing-Powder.

Claims use since Oct. 1, 1913.

Ser. No. 73,917. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN ENGLISH BAKING COMPANY, Troy, N. Y. Filed Nov. 12, 1913.

ONE-DUR

Particular description of goods.—Bread.

Claims use since Oct. 17, 1913.

Ser. No. 73,982. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) PAUL OSCAR HAGEN, Brooklyn, N. Y. Filed Nov. 14, 1913.

Red Jacket

Particular description of goods.—Washing-Machines.

Claims use since Apr. 1, 1913.

Ser. No. 74,141. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MOTOR AND GEAR IMPROVEMENT COMPANY, Wilmington, Del., and New York, N. Y. Filed Nov. 22, 1913.

MAGIC

Particular description of goods.—Wheels.

Claims use since the 1st day of May, 1913.

Ser. No. 74,556. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERDAN & COMPANY, Toledo, Ohio. Filed Dec. 13, 1913.

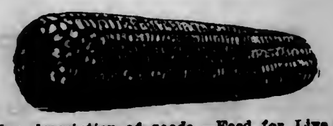
CHIEF

The picture shown being fanciful.

Particular description of goods.—Cereal Breakfast Food, Canned Mushrooms, Rolled Oats, Split Peas, Sago, Pearl-Barley, Pearl-Tapioca, Rice, Farina, Canned Molasses, Mustard, Wheat-Flour, and Self-Rising Pancake-Flour.

Claims use on wheat-flour since January, 1911; on self-rising pancake-flour since December, 1911; on breakfast food, split peas, pearl-tapioca, rice, rolled oats, sago, pearl-barley since July, 1912, and on molasses since December, 1911; on farina since July, 1912; on prepared mustard since July, 1913; on mushrooms since June, 1913.

Ser. No. 74,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill. Filed Dec. 13, 1913.



Particular description of goods.—Feed for Live Stock, Consisting of a Mixture of Alfalfa, Corn, Oats, and Molasses.

Claims use since Dec. 1, 1913.

Ser. No. 75,014. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) M. RUMELY COMPANY, Laporte, Ind. Filed Jan. 7, 1914.

ADVANCE

Particular description of goods.—Motor-Plows and Plow-Drawing Tractors.

Claims use since about 1881.

Ser. No. 75,101. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHEFFIELD-KING MILLING CO., Minneapolis, Minn. Filed Jan. 10, 1914.

FAIRYBOW

Particular description of goods.—Wheat-Flour and Mill Feeds.

Claims use since the 1st day of November, 1913.

Ser. No. 75,145. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN-CROSBY COMPANY, Minneapolis, Minn. Filed Jan. 12, 1914.

WHEAT A LAXA

The word "Wheat" being hereby disclaimed.

Particular description of goods.—Wheat-Flour.

Claims use since the 30th of December, 1913.

Ser. No. 75,358. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) FRANK W. HALE, Somerville, Mass. Filed Jan. 22, 1914. Under ten-year proviso.

HALE

Particular description of goods.—Tools and Supplies Used in Piano and Organ Tuning, Regulating, and Repairing, Consisting of Tuning-Hammers and Parts; Tools for Boring Piano-Action Parts; Hammer-Head-Extracting Devices; Hammer-Shank-Bending Tongs; Felt-Pickers; Bridle-Strap Inserters; Adjustable Screw-Driver Handles for Piano-Work, Regulating-Button Drivers; Action-Wire-Bending Instruments; Screw-Handles for Piano-Work; Piano-Capstan-Screw Wrenches; Piano-String-Coil Lifters; Tuning-Pin Drivers; Tuning-Pin Bits; Tuning-Pin Extractors; Flange-Pin Holders; Flange-Pin Punches; Ivory Clamps; Music-Wire Holders; Rubber Mutes; Tuning-Forks; Piano-Player Bellows-Pumps; Key-Easing Pliers; Gages for Measuring Piano Hardware; Pliers Used in Piano-Work; Organ-Tuning Cones; Oil-Can Spouts for Piano-Work; Piano, Piano-Player, or Organ Action Parts Consisting of Wood or Felt Sections of the Action and the Wires and Pins Used in Connection Therewith; Music-Wire; Tuning-Pins.

Claims use since Jan. 1, 1885.

Ser. No. 75,717. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROYCROFTERS, East Aurora, N. Y. Filed Feb. 5, 1914.

The Goodie Box

Particular description of goods.—Butter, Butternuts, Hickory-Nuts, Popcorn, Candles, Cheese, Mince-Meat, Fruit Preserves, Honey, Cookies, Maple-Sugar, Bread, Potatoes, and Fresh Apples.
Claims use since Mar. 1, 1913.

Ser. No. 75,911. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUIS R. YANGCO, Manila, Philippine Islands. Filed Feb. 14, 1914.

Particular description of goods.—Dried Fruits and Dried Vegetables.
Claims use since Jan. 1, 1911.

Ser. No. 76,204. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) BERNARD SAYERS AND SONS, North Berwick, Scotland. Filed Feb. 26, 1914.

STOPUM

Particular description of goods.—Golf-Heads of All Kinds.
Claims use since May, 1913.

Ser. No. 76,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CRESCENT MILL & ELEVATOR CO., Denver, Colo. Filed Mar. 5, 1914.

SWEET SIXTEEN

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Sept. 3, 1913.

Ser. No. 76,591. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE TETRA COMPANY, Chicago, Ill. Filed Mar. 12, 1914.

Consists of a circular red background edged with blue and bearing a quadrangular figure, three sides of which are white and the fourth being blue. The corners of these sides are connected by crossed blue bars, which, together with the blue side of the said figure, form a figure 4. On the said bars appears the word "Tetra" in white letters. No claim is made to the exclusive use of the descriptive word "Company."
Particular description of goods.—Gauzes, Bandages, Surgeons' Operating-Coats, Surgeons' Operating-Masks, Compresses, and Elastic Bandages.
Claims use since Oct. 15, 1913.

Ser. No. 76,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BREWSTER, GORDON & CO., Rochester, N. Y. Filed Mar. 18, 1914.

VETERAN

Particular description of goods.—Coffee, Tea, Molasses, Canned Vegetables and Fruits, Macaroni and Spaghetti, Tapioca, Sago, Olives, Rice, Raisins, Catsup, Canned Fish.
Claims use since 1890.

Ser. No. 77,184. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) AUGUST EMIL FRAASS, New York, N. Y. Filed Apr. 3, 1914.

PFAU

Particular description of goods.—Surgical Instruments.
Claims use since Mar. 23, 1914.

Ser. No. 77,496. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) UNION PAINT & VARNISH CO., Providence, R. I. Filed Apr. 15, 1914.

PANOPLIX PRESERVER PAINTS

No claim being made to the words "Preserver Paints."
Particular description of goods.—Paints, Varnishes, and Consisting of a Pigment Either Dry or Mixed with a Suitable Vehicle so that It May be Spread or Used as a Coating for Any Surface.
Claims use since Oct. 1, 1913.

Ser. No. 77,981. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) KATZMAIER COAL CO., Kansas City, Mo. Filed May 4, 1914.

Alburn

Particular description of goods.—Coal.
Claims use since Mar. 25, 1914.

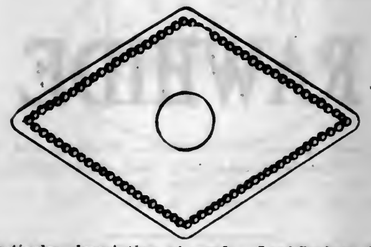
Ser. No. 78,214. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. S. BARNET & SONS, INC., Rochester, N. Y., and Lynn, Mass. Filed May 12, 1914.

CZARINA

"Queen of all Russias"

Disclaiming as a part of said trade-mark the words which appear in the drawing—namely, "Queen of all Russias."
Particular description of goods.—Calfskin Leather.
Claims use since May 1, 1914.

Ser. No. 78,215. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) BETTS SPRING CO., San Francisco, Cal. Filed May 12, 1914.



Particular description of goods.—Leaf-Springs for Vehicles and the Like.
Claims use since Jan. 28, 1914.

Ser. No. 78,247. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LIBBY, MCNEILL & LIBBY, Chicago, Ill. Filed May 13, 1914. Under ten-year proviso.

Hanover

Particular description of goods.—Sauer-Kraut.
Claims use since Jan. 1, 1895.

Ser. No. 78,543. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WESTERN CHEMICAL PRODUCTS COMPANY, Chicago, Ill. Filed May 25, 1914.

JOY

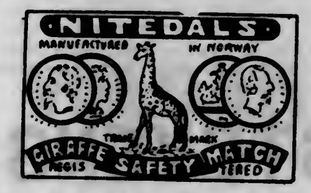
Particular description of goods.—Detergent Compound in Solid Form, Commonly Known as Laundry Aid.
Claims use since Apr. 27, 1914.

Ser. No. 78,589. (CLASS 5. ADHESIVES.) PUNCTURE SEAL MANUFACTURING COMPANY, Dayton, Ohio. Filed May 27, 1914.

ZIMCO

Particular description of goods.—A Puncture-Proofing Substance for the Inner Tube of a Pneumatic Tire.
Claims use since May 5, 1914.

Ser. No. 78,626. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) NITEDALS TAENDSTIKFABRIK, Grönvold, near Christiania, Norway. Filed May 28, 1914. Under ten-year proviso.



Particular description of goods.—Matches.
Claims use since the year 1879.

Ser. No. 78,637. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HERMAN E. S. CHAYES, New York, N. Y. Filed May 29, 1914.

PARALELLOMETER

Particular description of goods.—Dental Instruments.
Claims use since about the 1st day of March, 1913.

Ser. No. 78,638. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HERMAN E. S. CHAYES, New York, N. Y. Filed May 29, 1914.

PARALELLODRILL

Particular description of goods.—Dental Instruments.
Claims use since about the 1st day of March, 1913.

Ser. No. 78,685. (CLASS 11. INKS AND INKING MATERIALS.) THE COMMERCIAL PASTE CO., Columbus, Ohio. Filed June 1, 1914.

Penart

Particular description of goods.—Writing-Ink.
Claims use since about Jan. 1, 1914.

Ser. No. 78,879. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NORMA COMPANY OF AMERICA, New York, N. Y. Filed June 6, 1914.

Norma

Particular description of goods.—Ball and Roller Grinding-Machines, Ball and Roller Turning-Machines, and Ball

and Roller Polishing-Machines; Ball-Bearing and Roller-Bearing Grinding-Machines, Ball-Bearing and Roller-Bearing Turning-Machines, and Ball-Bearing and Roller-Bearing Polishing-Machines.
Claims use since Mar. 17, 1904.

Ser. No. 78,898. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE TORONTO RUBBER CO., Toronto, Ohio. Filed June 6, 1914.

AE-ONITE

Particular description of goods.—Hoof-Pads.
Claims use since March, 1913.

Ser. No. 79,015. (CLASS 12. CONSTRUCTION MATERIALS.) STEVENS BROS. & Co., Stevens Pottery, Ga. Filed June 11, 1914. Under ten-year proviso.

STEVENS

Particular description of goods.—Fire-Brick.
Claims use since Apr. 1, 1865.

Ser. No. 79,141. (CLASS 37. PAPER AND STATIONERY.) THE ST. JOSEPH PAPER COMPANY, St. Joseph, Mo. Filed June 16, 1914.

WEILOW

Particular description of goods.—Lead-Pencils, Rubber Erasers, Paper Envelops, Blotting-Paper, Steel Pens, Fountain-Pens, Writing-Paper, and Penholders and Paper Tablets.
Claims use since Jan. 1, 1911.

Ser. No. 79,148. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FRANCIS HIDER, London, England. Filed June 16, 1914.

HIDERSINE

Particular description of goods.—Resin.
Claims use since the month of January, 1914.

Ser. No. 79,162. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MCCLINTON'S LIMITED, Donaghmore, Ireland. Filed June 16, 1914.

SHEILA

The trade-mark consists of the word "Sheila."
Particular description of goods.—Soap for Laundry, Shaving, and Toilet Purposes, Washing-Powders, Washing Compounds, Deodorants, Detergents, and Powder, Paste, and Liquid Polishes for Cleaning Gold, Silver, Silver-Plate, and Similar Substances.
Claims use since about June 29, 1907.

Ser. No. 79,276. (CLASS 39. CLOTHING.) THE RILEY SHOE MANUFACTURING CO., Columbus, Ohio. Filed June 22, 1914.

NATURAL TREAD

Particular description of goods.—Leather, Canvas, or Cloth Shoes.
Claims use since about Mar. 1, 1913.

Ser. No. 79,317. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE L. D. CAULK COMPANY, Milford, Del. Filed June 24, 1914.

SANITRAY

Particular description of goods.—Plaster-of-Paris-Impression Holders Used in the Practice of Dentistry.
Claims use since May 12, 1914.

Ser. No. 79,322. (CLASS 37. PAPER AND STATIONERY.) THE DENNEY TAG COMPANY, West Chester, Pa. Filed June 24, 1914.

RAWHIDE

Particular description of goods.—Shipping and Merchandise Tags, Baggage-Checks, and Factory-Tabs and Numbered and Couponed Cotton Tags.
Claims use since the 1st day of January, 1906.

Ser. No. 79,427. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE ELECTRIC AND ORDNANCE ACCESSORIES COMPANY LIMITED, Birmingham, England. Filed June 29, 1914.

STELLITE

Particular description of goods.—Automobiles.
Claims use since July, 1913.

Ser. No. 79,465. (CLASS 39. CLOTHING.) E. G. STEARNS, Chicago, Ill. Filed June 30, 1914.

Particular description of goods.—Rubber Boots and Shoes.
Claims use since January, 1912.

Ser. No. 79,548. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. ADAMS, Anderson, Ind. Filed July 6, 1914.

Butter-Krust

Particular description of goods.—Bread.
Claims use since July 1, 1908.

Ser. No. 79,556. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE BASLER MACHINERY CO., Lynn, Mass. Filed July 6, 1914.

"VELVETFLEX"

Particular description of goods.—Leather Treated with a Tempering Solution.
Claims use since June 26, 1914.

Ser. No. 79,629. (CLASS 17. TOBACCO PRODUCTS.) FERNANDEZ Y GARCIA, Habana, Cuba, and New York, N. Y. Filed July 8, 1914. Under ten-year proviso.

Particular description of goods.—Cigars.
Claims use since Nov. 8, 1878.

Ser. No. 79,636. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) LEMLEY PRESTON WHITCOMB, Oshkosh, Wis. Filed July 8, 1914.

ITZ WHITZ
TRADE MARK

No claim is made to the words "Trade" and "Mark."
Particular description of goods.—Baby Jumpers or Exercisers.
Claims use since May 1, 1914.

Ser. No. 79,651. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. W. SURBRUG, New York, N. Y. Filed July 8, 1914.

"MUTHOL"

Particular description of goods.—Medically-Prepared Petroleum-Oil to be Used in Relieving Irritation of the Throat, Constipation, Hemorrhoids, and other Internal Disorders.
Claims use since May 14, 1914.

Ser. No. 79,654. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed July 9, 1914.

JUSTICE

Particular description of goods.—Fertilizers.
Claims use since 1890.

Ser. No. 79,655. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed July 9, 1914.

VULCAN

Particular description of goods.—Fertilizers.
Claims use since 1907.

Ser. No. 79,657. (CLASS 10. FERTILIZERS.) BOWKER FERTILIZER CO., New York, N. Y. Filed July 9, 1914.

APEX

Particular description of goods.—Fertilizers.
Claims use since Jan. 1, 1900.

Ser. No. 79,664. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH H. GARTSIDE, Philadelphia, Pa. Filed July 9, 1914. Under ten-year proviso.

Iron Rust Soap

Particular description of goods.—A Cleaning Preparation for Removing Iron-Rust, Ink, Fruit, and Medicine Stains from Clothing, Marble, &c.
Claims use since December, 1894.

Ser. No. 79,671. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) JULIUS KLUGMAN, New York, N. Y. Filed July 9, 1914.

Word "Brand" not being exclusive.
Particular description of goods.—Furs.
Claims use since June 15, 1914.

Ser. No. 79,700. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ALLEN-SPONSEL COMPANY, Hartford, Conn. Filed July 10, 1914.

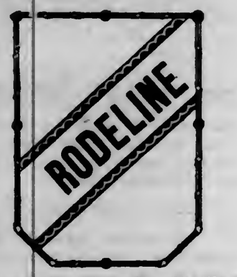
BULL DOG

Particular description of goods.—Sash-Cord Fasteners and Sash-Chain Fasteners.
Claims use since July 7, 1914.

Ser. No. 79,766. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SOCIÉTÉ RODIER, Paris, France. Filed July 13, 1914.

Particular description of goods.—Textile Fabrics, Cotton and Silk Piece Goods.
Claims use since June 3, 1914.

Ser. No. 79,767. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SOCIÉTÉ RODIER, Paris, France. Filed July 13, 1914.



Particular description of goods.—Textile Fabrics, Cotton Piece Goods.
Claims use since June 17, 1914.

Ser. No. 79,771. (CLASS 12. CONSTRUCTION MATERIALS.) THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS (1900), LIMITED, London, England. Filed July 14, 1914. Under ten-year proviso.

Particular description of goods.—Portland Cement.
Claims use since at least the year 1871.

Ser. No. 79,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

PRINZ

Particular description of goods.—Biscuit.
Claims use since at least July 9, 1914.

Ser. No. 79,788. (CLASS 2. RECEPTACLES.) THE NATIONAL GRAVE VAULT COMPANY, Galion, Ohio. Filed July 14, 1914.

Purity

Particular description of goods.—Grave-Vaults.
Claims use since Apr. 1, 1914.

Ser. No. 79,869. (CLASS 39. CLOTHING.) DOERNBERG & STEIN, New York, N. Y. Filed July 17, 1914.

Powder Puff

Particular description of goods.—Textile Undergarments Known as Combination-Suits.
Claims use since June 26, 1914.

Ser. No. 79,872. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GALLET, PELLERIN ET CIE., Paris, France. Filed July 17, 1914.

Particular description of goods.—Soaps, Soap Pastes, and Soap Powders.
Claims use since the 2d day of January, 1891.

Ser. No. 79,889. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NÜRNBERGER METALL- UND LAKIERWARENFABRIK VORMALS GEBRÜDER BING, AKTIENGESELLSCHAFT, Nuremberg, Germany. Filed July 17, 1914.

Bing Constructor

No claim being here made to the word "Bing" in itself.
Particular description of goods.—Building Material for Mechanical Toys.
Claims use since Oct. 31, 1913.

Ser. No. 79,906. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE GENERAL FIREPROOFING CO., Youngstown, Ohio. Filed July 18, 1914.

GF
YOUNGSTOWN, OHIO.

The exclusive use of the words "Youngstown, Ohio" being hereby disclaimed.
Particular description of goods.—Metallic Filing Cases and Cabinets in Both Sectional and Solid Construction.
Claims use since June 1, 1914.

Ser. No. 79,919. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES H. RHODES & COMPANY, Chicago, Ill. Filed July 18, 1914.

ROCOM

Particular description of goods.—A Coarse-Powder Cleaner Used for Polishing Metal.
Claims use since about the 10th day of May, 1914.

Ser. No. 79,925. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FREDERICK HERBERT GROSS, Boston, Mass. Filed July 18, 1914.

Particular description of goods.—Metal-Cleaner for Solid and Plated Gold and Silver Ware.
Claims use since Mar. 6, 1914.

Ser. No. 79,988. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) THE OAKWOOD CHINA CO., Chester, W. Va., and East Liverpool, Ohio. Filed July 22, 1914.

No claim being made to the word "China."
Particular description of goods.—Crockery, Earthenware, and Porcelain.
Claims use since June 1, 1910.

Ser. No. 79,989. (CLASS 2. RECEPTACLES.) PUBLIC SERVICE CUP COMPANY, Brooklyn, N. Y. Filed July 22, 1914.

SKOONAS

Particular description of goods.—Paper Cups.
Claims use since July 10, 1914.

Ser. No. 80,128. (CLASS 10. FERTILIZERS.) THOMAS P. LIPPITT, Charles Town, W. Va., and Washington, D. C. Filed July 28, 1914.

LA-ME-JOR

Particular description of goods.—Fertilizers.
Claims use since July 15, 1914.

Ser. No. 80,129. (CLASS 10. FERTILIZERS.) THOMAS P. LIPPITT, Charles Town, W. Va., and Washington, D. C. Filed July 28, 1914.

PROGRESO

Particular description of goods.—Fertilizers.
Claims use since July 15, 1914.

Ser. No. 80,170. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN PIN COMPANY, Waterbury, Conn. Filed July 30, 1914.

Ampinco

Particular description of goods.—Wastes, Overflows, Combined Wastes and Overflows, Waste Parts, Strainers, Traps, Elbows, Plugs, Pipe-Couplings, Supply-Pipes, Waste-Pipes, Stoppers, Sink-Couplings, Flanges or Escutcheons, Chain-Stays, Cock-Hole Covers, Basin-Clamps, Hopper-Clamps, Cock-Plates, Trap-Covers, Lavatory-Brackets, Tank-Brackets, Basin-Cocks and Parts Thereof, Stall-Fittings, Pipe-Holders, Closet-Screws, Metal Washers, Closet-Flanges, Bolts, Nuts, Spray-Heads, Ring Cup Tops, Soap-Holders, Metal Tank-Valves and Parts thereof, Refill-Tubes, Valve-Balls Made Partly of Metal, Floats, Cones for Siphon-Valves, Float-Rods, Tank-Cocks, Metal Curtain-Rods, Metal Curtain-Brackets, Metal Vestibule Brackets and Sockets, and Metal Pole-Sockets.
Claims use since June 19, 1914.

Ser. No. 80,181. (CLASS 43. THREAD AND YARN.) LEES MFG. CO., Westport, Conn. Filed July 30, 1914.

OCTAGON KNITTING COTTON

Comprising the word "Octagon," printed upon a band consisting of two concentric octagons, the exclusive independent use of the representation of the ball of cotton and the words "Knitting Cotton" not being claimed.
Particular description of goods.—Threads and Yarns Made from Cotton, Mercerized Cotton, Linen, and Silk.
Claims use since Sept. 1, 1913.

Ser. No. 80,209. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio. Filed July 31, 1914.

STAGGARD

Comprising the word "Staggard."
Particular description of goods.—Elastic Tires.
Claims use since the 1st day of February, 1909.

Ser. No. 80,300. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEO T. PARKER, Lynchburg, Ohio. Filed Aug. 4, 1914.

GON-O-VENT

Particular description of goods.—Preventives of Gonorrhea, Syphilis, and Choncroid.
Claims use since July 30, 1914.

Ser. No. 80,354. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AMERICAN PIN COMPANY, Waterbury, Conn. Filed Aug. 6, 1914.

AMPINCO

Particular description of goods.—Toilet-Pins.
Claims use since the 27th day of July, 1914.

Ser. No. 80,355. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AMERICAN PIN COMPANY, Waterbury, Conn. Filed Aug. 6, 1914.

Atlas

Particular description of goods.—Toilet-Pins.
Claims use since the 27th day of July, 1914.

Ser. No. 80,382. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MINNIE A. FILIPPI, Chicago, Ill. Filed Aug. 7, 1914.

KASPÉ

Particular description of goods.—Pills for Constipation and as a Mild Laxative, Tooth-Paste, Salve, Talcum Powder.
Claims use since Oct. 1, 1912.

Ser. No. 80,398. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) EISENSTADT MANUFACTURING COMPANY, St. Louis, Mo. Filed Aug. 8, 1914.

"Priscilla"

Particular description of goods.—Finger-Rings.
Claims use since June 1, 1914.

Ser. No. 80,442. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE SEYMOUR METAL GOODS COMPANY, Seymour, Conn. Filed Aug. 10, 1914.

NU-GUARD

Particular description of goods.—Safety-Pins.
Claims use since June 24, 1914.

Ser. No. 80,454. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BRISTOL-MYERS COMPANY, New York, N. Y. Filed Aug. 11, 1914.

MYLO

Particular description of goods.—Soap.
Claims use since July 24, 1914.

Ser. No. 80,506. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LOS ANGELES SOAP COMPANY, Los Angeles, Cal. Filed Aug. 12, 1914.

WESTERN STAR

Particular description of goods.—Soap.
Claims use since 1896.

Ser. No. 80,523. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ZENBEI MIWA, Tokyo, Japan. Filed Aug. 12, 1914.

MITSUWA

Particular description of goods.—Soap.
Claims use since Aug. 3, 1913.

Ser. No. 80,532. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Aug. 13, 1914.

J-M

Particular description of goods.—Electrical Lamps and Lights, Electrically-Heated Pads, Blankets, and Caps, a Fiber-Conduit Through Which Electric Wires are Run, and a Composite Wood Made of Asbestos and Binding and Insulating Materials and Used for Electrical Insulation.
Claims use since the 1st day of January, 1912.

Ser. No. 80,533. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Aug. 13, 1914.

J-M

Particular description of goods.—A Grease or Dressing for Softening and Preserving Leather, Rubber, and Canvas Machinery-Belting.
Claims use since the 12th day of June, 1911.

Ser. No. 80,683. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN B. RICE, Spencer, Ind. Filed Aug. 19, 1914.

AXUELL

Particular description of goods.—Pile and Eczema Remedy.
Claims use since about 1913.

Ser. No. 80,691. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE UNITED JEWELERS INC., New York, N. Y. Filed Aug. 19, 1914.

HALLMARK

Particular description of goods.—Apparel-Belts.
Claims use since Aug. 4, 1914.

Ser. No. 80,708. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) PUZIELLO, LUCCARO & CO., New York, N. Y. Filed Aug. 20, 1914.

The exclusive independent use of the words "Anice Fino" not being claimed.
Particular description of goods.—Cordials.
Claims use for sixty years last past.

Ser. No. 80,715. (CLASS 27. HOROLOGICAL INSTRUMENTS.) WESTERN CLOCK CO., Peru, Ill. Filed Aug. 20, 1914. Under ten-year proviso.

LA SALLE

Particular description of goods.—Clocks.
Claims use since Sept. 5, 1888.

Ser. No. 80,731. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE TEMCO ELECTRIC MOTOR COMPANY, Leipsic, Ohio. Filed Aug. 21, 1914.

TEMCO

The word "Temco."
Particular description of goods.—Electric Drills, Grinders, Buffers, and Parts Thereof.
Claims use since about Dec. 4, 1911.

Ser. No. 80,887. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ERNECKE & SALMSTEIN COMPANY, Chicago, Ill. Filed Aug. 31, 1914.

Ernsalite

Particular description of goods.—Enamel Paint.
Claims use since the 15th of June, 1914.

Ser. No. 80,902. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE HERSCHEDE HALL CLOCK COMPANY, Cincinnati, Ohio. Filed Aug. 31, 1914.

Particular description of goods.—Clocks and Clock Parts.
Claims use since January, 1903.

Ser. No. 80,920. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BOTANICAL MANUFACTURING CO., Dover, Del., and Philadelphia, Pa. Filed Sept. 1, 1914.

RAT CORN

Particular description of goods.—A Preparation to Exterminate Rodents.
Claims use since Jan. 1, 1906.

Ser. No. 80,939. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) J. H. FAW, INC., New York, N. Y. Filed Sept. 2, 1914.

RED SEAL

Particular description of goods.—Spark-Plugs.
Claims use since July, 1911.

Ser. No. 81,010. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPRAYENE COMPANY, Woodstown, N. J. Filed Sept. 5, 1914.

SPRAYENE
DIDIT

Particular description of goods.—An Insecticide.
Claims use since on or about July 1, 1914.

Ser. No. 81,012. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Sept. 5, 1914.

FLIRT

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since Aug. 4, 1910.

Ser. No. 81,073. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed Sept. 8, 1914.

COLITE

Particular description of goods.—Electric Batteries.
Claims use since Aug. 3, 1914.

Ser. No. 81,105. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Sept. 8, 1914.

The National Call

Particular description of goods.—Alarm-Clocks.
Claims use since July 1, 1914.

Ser. No. 81,111. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE THIELE LABORATORIES COMPANY, Columbus and Upper Sandusky, Ohio. Filed Sept. 8, 1914.

The facsimile signature being that of Ludwig A. Thiele.
Particular description of goods.—A Treatment and Prevention of Hog-Cholera.
Claims use since May, 1914.

Ser. No. 81,172. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SITROUX IMPORTING CO., New York, N. Y. Filed Sept. 10, 1914.

Particular description of goods.—Hair Switches and Hair Wigs.
Claims use since May 15, 1914.

Ser. No. 81,341. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE INTER-STATE BREWING CO., Sioux City, Iowa. Filed Sept. 19, 1914.

NUTONIC

Particular description of goods.—A Salt Tonic.
Claims use since June, 1909.

Ser. No. 81,345. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MALT-DIASTASE COMPANY, New York, N. Y. Filed Sept. 19, 1914.

TEXTASE

Particular description of goods.—Malt Extracts.
Claims use since the year 1913.

Ser. No. 81,346. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MALT-DIASTASE COMPANY, New York, N. Y. Filed Sept. 19, 1914.

DIAX

Particular description of goods.—Malt Extracts.
Claims use since the year 1910.

Ser. No. 81,347. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MALT-DIASTASE COMPANY, New York, N. Y. Filed Sept. 19, 1914.

Particular description of goods.—Malt Extracts.
Claims use since the year 1904.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 13, 1914.

100,191. POULTRY FOR BREEDING PURPOSES. LEIGH S. BACHE, Boundbrook, N. J., assignor to William W. Smalley, Boundbrook, N. J.
Filed March 4, 1914. Serial No. 76,309. PUBLISHED AUGUST 4, 1914.

100,192. CERAMIC ENAMEL. THE BALTIMORE ENAMEL & NOVELTY COMPANY, Baltimore, Md.
Filed May 2, 1914. Serial No. 77,946. PUBLISHED AUGUST 4, 1914.

100,193. CHEWING-GUM. BON-BON COMPANY, New York, N. Y., assignor, by mesne assignments, to The Sterling Gum Company, Inc., a Corporation of New York.
Filed September 14, 1910. Serial No. 51,815. PUBLISHED AUGUST 4, 1914.

100,194. CERTAIN NAMED PAPER AND STATIONERY SUPPLIES. GEO. BORGFELDT & Co., New York, N. Y.
Filed June 17, 1914. Serial No. 79,167. PUBLISHED AUGUST 4, 1914.

100,195. PAINT AND VARNISH CLEANSER AND POLISH. FREDRICK W. BOYER, Cleveland, Ohio.
Filed May 2, 1914. Serial No. 77,948. PUBLISHED AUGUST 4, 1914.

100,196. PLAYER-PIANOS AND PIANO-PLAYERS. MELVILLE CLARK PIANO COMPANY, Chicago, Ill.
Filed June 25, 1914. Serial No. 79,365. PUBLISHED JULY 28, 1914.

100,197. FRUIT CAKE. COLLIN STREET BAKERY, Corsicana, Tex.
Filed April 28, 1913. Serial No. 70,087. PUBLISHED AUGUST 4, 1914.

100,198. CERTAIN FOOD PREPARATION. EMMA E. CURTIS, Melrose, Mass.
Filed March 21, 1914. Serial No. 76,809. PUBLISHED AUGUST 4, 1914.

100,199. COFFEE. RAFAEL DEL CASTILLO & COMPANY, New York, N. Y.
Filed June 12, 1914. Serial No. 79,040. PUBLISHED AUGUST 4, 1914.

100,200. PICTURE-PROJECTION APPARATUS. EASTMAN KODAK CO., Rochester, N. Y.
Filed May 2, 1913. Serial No. 70,176. PUBLISHED AUGUST 4, 1914.

100,201. CITRUS FRUITS—NAMELY, GRAPE-FRUIT, TANGERINES, AND ORANGES. FLOWERREE GROVES, Fort Myers, Fla.
Filed June 2, 1914. Serial No. 78,761. PUBLISHED AUGUST 4, 1914.

100,202. ENTIRE-WHEAT BREAD. AUGUSTINE L. FROST, Minneapolis, Minn.
Filed May 9, 1914. Serial No. 78,155. PUBLISHED AUGUST 4, 1914.

100,203. CANDY. FUERST & KRAEMER, LTD., New Orleans, La.
Filed April 16, 1914. Serial No. 77,506. PUBLISHED JULY 21, 1914.

100,204. CANDIES, CAKES, CONFECTIONERY, AND THE LIKE. THE GOLDEN PHEASANT, San Francisco, Cal.
Filed April 9, 1914. Serial No. 77,344. PUBLISHED AUGUST 4, 1914.

100,205. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,058. PUBLISHED AUGUST 4, 1914.

100,206. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,059. PUBLISHED AUGUST 4, 1914.

100,207. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,060. PUBLISHED AUGUST 4, 1914.

100,208. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,062. PUBLISHED AUGUST 4, 1914.

100,209. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,066. PUBLISHED AUGUST 4, 1914.

100,210. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,069. PUBLISHED AUGUST 4, 1914.

100,211. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,071. PUBLISHED AUGUST 4, 1914.

100,212. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,072. PUBLISHED AUGUST 4, 1914.

100,213. COFFEE. JELLICO GROCERY COMPANY, Jellico, Tenn.
Filed March 5, 1914. Serial No. 76,363. PUBLISHED JULY 21, 1914.

100,214. CORN IN THE FORM OF CEREAL FOODS. EDWARD L. KASTLER, Racine, Wis.
Filed May 13, 1914. Serial No. 78,245. PUBLISHED AUGUST 4, 1914.

100,215. SAUSAGE-BINDER. BERTH. LEVI & Co., Chicago, Ill.
Filed April 24, 1911. Serial No. 55,934. PUBLISHED AUGUST 4, 1914.

100,216. CERTAIN NAMED FOODS. A. & W. LINDT, Berne, Switzerland.
Filed January 28, 1914. Serial No. 75,498. PUBLISHED AUGUST 4, 1914.

100,217. CERTAIN NAMED MUSICAL INSTRUMENTS AND SUPPLIES. THE LISZT CO., New York, N. Y.
Filed May 7, 1914. Serial No. 78,086. PUBLISHED AUGUST 4, 1914.

100,218. CANDY. WILLIAM B. MULFORD, New York, N. Y.
Filed May 21, 1910. Serial No. 49,864. PUBLISHED AUGUST 4, 1914.

100,219. PAPER WRAPPERS FOR FOOD PRODUCTS. NASHUA CARD GUMMED & COATED PAPER COMPANY, Nashua, N. H.
Filed July 3, 1914. Serial No. 79,538. PUBLISHED AUGUST 4, 1914.

100,220. CEREAL FORM OF MEAL MADE FROM A MIXTURE OF WHEAT, RYE, CORN, AND FLAX. NATURE CEREAL COMPANY, Minneapolis, Minn.
Filed September 5, 1913. Serial No. 72,693. PUBLISHED AUGUST 4, 1914.

100,221. NON-ALCOHOLIC CARBONATED FLAVORED BEVERAGE AND SYRUP FOR MAKING THE SAME. JOHN C. O'DELL, Rome, Ga.
Filed May 4, 1914. Serial No. 77,985. PUBLISHED JULY 28, 1914.

100,222. TOILET-PAPER. PAPER SALES COMPANY, Chicago, Ill.
Filed October 20, 1913. Serial No. 73,519. PUBLISHED AUGUST 4, 1914.

100,223. FRESH TOMATOES. THOS. J. PETERS, Perrine, Fla.
Filed February 10, 1914. Serial No. 75,832. PUBLISHED JULY 28, 1914.

100,224. OLIVE-OIL. ROME IMPORTING CO., New York, N. Y.
Filed May 15, 1914. Serial No. 78,313. PUBLISHED AUGUST 4, 1914.

100,225. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. ADOLPHE SCHWOB, New York, N. Y.
Filed May 29, 1914. Serial No. 78,665. PUBLISHED JULY 28, 1914.

100,226. BREAD. SOUTH BEND BREAD CO., South Bend, Ind.
Filed July 11, 1912. Serial No. 64,977. PUBLISHED DECEMBER 10, 1912.

100,227. WHEAT-FLOUR. STANDARD MILLING COMPANY, New York, N. Y.
Filed November 13, 1913. Serial No. 73,957. PUBLISHED JULY 28, 1914.

100,228. WHEAT-FLOUR. THOMPSON MILLING COMPANY, Lockport, N. Y.
Filed May 26, 1914. Serial No. 78,568. PUBLISHED AUGUST 4, 1914.

100,229. CANNED FISH, HAM, POULTRY, AND BEEF. WILLIAM UNDERWOOD COMPANY, Boston, Mass.
Filed January 22, 1914. Serial No. 75,374. PUBLISHED JULY 28, 1914.

100,230. NATURAL ORNAMENTAL STONE FOR PERSONAL ADORNMENT. VIRGINIA FAIRY STONE COMPANY, Beckley, W. Va.
Filed January 15, 1914. Serial No. 75,206. PUBLISHED AUGUST 4, 1914.

100,231. HONEY. WESTERN HONEY PRODUCERS, Sioux City, Iowa.
Filed May 19, 1914. Serial No. 78,407. PUBLISHED AUGUST 4, 1914.

LABELS

REGISTERED OCTOBER 13, 1914.

18,005.—*Title:* "ELEGANTES." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed September 26, 1914.

18,006.—*Title:* "SUPERIOR CIGARS." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed September 26, 1914.

18,007.—*Title:* "STANWICK." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed September 26, 1914.

18,008.—*Title:* "SELECCION ESPECIAL." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed September 26, 1914.

18,009.—*Title:* "BARKER'S NERVE AND BONE LINIMENT." (For Liniment.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed July 31, 1914.

18,010.—*Title:* "PERFECTION." (For Stamping-Paste.) EDWIN BROWN, New York, N. Y. Filed May 9, 1914.

18,011.—*Title:* "SLIPPON. (For Hair-Nets.) MESSRS. BURNET & TEMPLE LTD., London, England. Filed September 25, 1914.

18,012.—*Title:* "MOTHER'S HAIR TONIC." (For Hair-Tonic.) VICTOR F. CAVENEGET, Newark, N. J. Filed August 5, 1914.

18,013.—*Title:* "USEFUL AND JUST." (For Provisions.) DEPORTH BROS., New York, N. Y. Filed July 2, 1914.

18,014.—*Title:* "CHAMPANOLA." (For a Beverage.) I. DUSOL, Los Angeles, Cal. Filed July 14, 1914.

18,015.—*Title:* "EMMER BREAKFAST FOOD." (For Breakfast Food.) EMMER PRODUCTS COMPANY, Worland, Wyo. Filed March 23, 1914.

18,016.—*Title:* "IMPROVED EMMER FOOD." (For Emmer Food.) EMMER PRODUCTS COMPANY, Worland, Wyo. Filed March 23, 1914.

18,017.—*Title:* "EMMER STOCK AND POULTRY FOOD." (For Stock and Poultry Food.) EMMER PRODUCTS COMPANY, Worland, Wyo. Filed March 23, 1914.

18,018.—*Title:* "KITCHEN CLEANER." (For a Cleaning Compound.) FITZPATRICK BROTHERS, Chicago, Ill. Filed September 9, 1913.

18,019.—*Title:* "SPRING-ROOT." (For Chewing-Gum.) FRANK H. FLEER CORPORATION, Philadelphia, Pa. Filed September 26, 1914.

18,020.—*Title:* "CHICAGO SUBWAY." (For Cigars.) H. B. FRANKLIN & CO., Chicago, Ill. Filed July 13, 1914.

18,021.—*Title:* "LUCELLA HABANA CIGARS." (For Cigars.) R. GANGEMI & CO., New York, N. Y. Filed July 24, 1914.

18,022.—*Title:* "BULLFROG." (For Fishing-Lines.) R. J. HILLINGER, Chicago, Ill. Filed July 2, 1913.

18,023.—*Title:* "VINO MEZCAL DE TEQUILA." (For a Remedy for Liver and Kidney Complaints.) HOUCK & DIETER CO., El Paso, Tex. Filed September 29, 1914.

18,024.—*Title:* "HORLICKS MALT-OAT MILK." (For Malt-Oat Milk.) ARNOLD A. HORLICK, Milwaukee, Wis. Filed August 10, 1914.

18,025.—*Title:* "UNITED." (For Milk.) HUDSON CONDENSED MILK CO. INC., New York, N. Y. Filed September 17, 1914.

18,026.—*Title:* "BLUE BIRD RACING AEROPLANE." (For a Flying Toy.) IDEAL AEROPLANE & SUPPLY CO., New York, N. Y. Filed September 26, 1914.

18,027.—*Title:* "SWEETMASH 100 PROOF CORN WHISKEY." (For Corn Whisky.) JOSSELSON BROS., Catlettsburg, Ky. Filed July 26, 1913.

18,028.—*Title:* "KRUMBLES." (For Prepared Cereal Foods.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed August 22, 1914.

18,029.—*Title:* "CONSULT ELCARO." (For Games.) PETER J. NAGLE, Rochester, N. Y. Filed June 24, 1914.

18,030.—*Title:* "NATSCO." (For a Substitute for Potassium Iodid and Iodin Resublimed.) NATIONAL STEEL & COPPER PLATE COMPANY, Chicago, Ill. Filed September 26, 1914.

18,031.—*Title:* "NEW LUSTRE." (For a Polish.) NEW LUSTRE MFG. CO., Kansas City, Mo. Filed September 14, 1914.

18,032.—*Title:* "PAXTON & WINDHAM'S NEW LIFE ANGEL TONIC." (For a Medicine.) PAXTON & WINDHAM, Birmingham, Ala. Filed June 26, 1914.

18,033.—*Title:* "MARCA PETRI." (For Cigars.) PETRI ITALIAN-AMERICAN CIGAR CO., INC., San Francisco, Cal. Filed August 7, 1913.

18,034.—*Title:* "FRONT LABEL FOR CAN." (For a Lubricating Fluid.) POWER GAS PRODUCTS COMPANY, Minneapolis, Minn. Filed March 18, 1914.

18,035.—*Title:* "ODOR KILLER." (For a Disinfectant.) REPUBLIC CHEMICAL PRODUCTS CO., Chicago, Ill. Filed August 31, 1914.

18,036.—*Title:* "CRYSTAL SPARKLE." (For a Cleansing Preparation.) REPUBLIC CHEMICAL PRODUCTS CO., Chicago, Ill. Filed August 31, 1914.

18,037.—*Title:* "TRIPOLI BRAND." (For Macaroni.) THE SAVARESE MACARONI CO., Brooklyn, N. Y. Filed August 28, 1914.

18,038.—*Title:* "909 'ONE'S ENUFF.'" (For Medicines.) EMIL M. SCHER and H. P. SKOURUP, Chicago, Ill. Filed March 12, 1914.

18,039.—*Title:* "SMUCKER'S APPLE BUTTER." (For Apple-Butter.) JEROME M. SMUCKER, Orrville, Ohio. Filed July 24, 1914.

18,040.—*Title:* "SPALDING 'OFFICIAL NATIONAL LEAGUE' BALL." (For Base-Balls.) A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y. Filed September 22, 1914.

18,041.—*Title:* "STANDARD DELICIOUS PICKLES." (For Sweet Mixed Pickles.) THE STANDARD PICKLE CO., INC., Hartford, Conn. Filed April 30, 1914.

18,042.—*Title:* "SOIL-TONE." (For a Mineral Fertilizer.) CHARLES R. STUART, Los Angeles, Cal. Filed August 24, 1914.

18,043.—*Title:* "BLUE ROSE BRAND." (For Fruits.) FRANK A. STUART, Marshall, Mich. Filed July 29, 1914.

18,044.—*Title:* "TUNA." (For Tinned Sea-Fish.) VAN CAMP SEA FOOD COMPANY, Los Angeles and San Pedro, Cal. Filed June 29, 1914.

18,045.—*Title:* "LIQUID WOOD RENEW." (For Furniture-Polish.) WOOD RENEW MANUFACTURING CO., Escanaba, Mich. Filed June 22, 1914.

PRINTS

REGISTERED OCTOBER 13, 1914.

3,745.—*Title:* "COOKS THORO-BREAD." (For Bread.) W. A. ADAMS ADVERTISING CO., Philadelphia, Pa. Filed September 18, 1914.

3,746.—*Title:* "CAMPBELL." (For Sewing-Machines.) CAMPBELL BOSWORTH MACHINERY COMPANY, Boston, Mass. Filed December 24, 1913.

3,747.—*Title:* "BUTTER-KRUST BREAD." (For Bread.) EXCELSIOR BAKING COMPANY, Minneapolis, Minn. Filed August 20, 1914.

3,748.—*Title:* "GERMICIDE HAIRTONE." (For a Preparation for the Hair and Scalp.) GERMICIDE HAIRTONE COMPANY, Wagoner, Okla. Filed August 18, 1914.

3,749.—*Title:* "GOERZ V. P. ROLL FILM TENAX." (For Photographic Films.) C. P. GOERZ AMERICAN OPTICAL CO., New York, N. Y. Filed August 4, 1914.

3,750.—*Title:* "FALSTAFF AND HAPPINESS." (For Beer.) WM. J. LEMP BREWING CO., St. Louis, Mo. Filed July 17, 1914.

3,751.—*Title:* "BAG." (For Bags.) MILWAUKEE BAG CO., Milwaukee. Wis. Filed August 13, 1914.

3,752.—*Title:* "DAS GUTE BIER." (For Beer.) THE MONUMENTAL BREWING CO., Highlandtown, Md. Filed August 27, 1914.

3,753.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed September 8, 1914.

3,754.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed September 8, 1914.

3,755.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed September 8, 1914.

3,756.—*Title:* "WORTH FIGHTING FOR." (For Chewing-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed September 11, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

PERKINS *v.* FORTESCUE.

Decided October 6, 1914.

INTERFERENCE—DECLARATION—APPLICATIONS OWNED BY THE SAME ASSIGNEE.

Where the applications of P. and L. are assigned to the same assignee and an interference is declared between the applications of P. and F., and thereafter L. copies the claims of the issue and the assignee requests that L. be added to the interference and files a statement that as between P. and L. the latter is the first inventor, *Held* that the party L. may be added to the interference.

ON APPEAL.

RECTIFIER SYSTEM.

Mr. Albert G. Davis for Perkins.

Mr. Wesley G. Carr for Fortescue.

EWING, *Commissioner:*

The party Perkins has appealed from the decision of the Examiner of Interferences refusing to suspend the times for taking testimony until the application of the party Lyle can be added to the interference.

Claims corresponding to the counts of the issue were made in the Lyle application by an amendment filed August 7, 1914. The Examiner refused to add this party to the interference because the application of Lyle and the application of Perkins are owned by the same party.

In a paper filed September 25, 1914, the attorney for Lyle, who is also the attorney of record for Perkins, makes the following statement:

• • • To facilitate the proceedings and simplify the situation we are willing formally now to admit that as between Lyle and Perkins, Perkins is later in point of time than Lyle with respect to the inventions respectively disclosed by their two applications.

In view of this admission there is no question of priority to be decided by this Office between Lyle and Perkins. The interference is therefore remanded to the Primary Examiner, with directions to add the application of Lyle thereto.

If the party Fortescue objects to contesting priority with two applicants whose applications are owned by the same assignee, he may raise the question on petition.

The decision of the Examiner of Interferences is reversed.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Seventh Circuit.

JONES *v.* EVANS.

Decided April 14, 1914.

215 FED. REP., 586.

1. PATENTS—CONSTRUCTION—IMPLIED TERMS OF CLAIMS. Elements in claims should be read with reference both to the structure and the function given in the description of the invention and interpreted to include such connections and relations of the several means of the combination which are named as are implied therewith to make them operative.

2. SAME—VALIDITY AND INFRINGEMENT—WINDOW-LIFTER. The Evans patent, No. 815,914, for a window-lifter, construed and *Held* sufficiently specific to cover a structure erected in the particular manner shown in the drawings; also *Held* valid and infringed.

APPEAL from the District Court of the United States for the District of Indiana; Albert B. Anderson, Judge.

Suit in equity by John A. Evans against James E. Jones. Decree for complainant, and defendant appeals. Affirmed.

Mr. Russell Wiles for the appellant.

Mr. Arthur M. Hood for the appellee.

Before BAKER, KOHLSATT, and MACK, Circuit Judges.

KOHLSATT, *Cir. J.:*

This case comes before us on appeal from the decree of the district court holding claims 1, 4, 5, and 6 of Patent No. 815,914, granted to patentee March 20, 1906, for a window-lifter, to be valid and infringed. Those claims read as follows, viz:

1. In a window or other lifter, the combination of a rotatable fulcrum or carrying block, a pair of links pivoted at different points to the block, and a connecting-arm to which the links are pivoted at a point on the other side of its center to the object to be lifted.

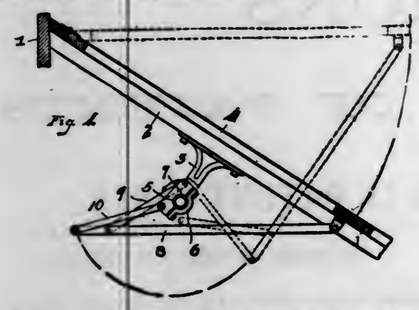
4. In a window or other lifter, the combination of operating means, a rotatable fulcrum or carrying block, and means comprising a connecting-arm and two shorter arms or links, the two shorter arms or links being pivoted to a connecting-arm at one side of its center, the said arm being pivoted at a point on the other side of its center to the object to be lifted.

5. In a window or other lifter, the combination of operating means a carrying or rotatable fulcrum-block and means comprising a connecting-arm and two shorter links or arms, the shorter links being pivoted to opposite sides of the carrying or fulcrum block at different points, and also pivoted to opposite sides of a connecting-arm at one side of its center, the said arm being pivoted at a point on the other side of its center to the object to be lifted.

6. In a window or other lifter, the combination with a connecting-arm and a rotatable fulcrum or carrying block

of two links pivoted to the fulcrum-block and a connecting-arm, and operating upon the connecting-arm, one of the links exerting a pushing action upon the arm while the other link exerts a pull upon the arm the said connecting-arm being pivoted to the object to be lifted and to the two links at points on opposite sides of its center.

The following is a reproduction of Figure 1 of the drawings of the patent in suit:



1 represents a wall, sill-door, beam, or gable; 2 represents the frame, 3 the usual bracket-support, 4 a hinged ventilator, to be operated by the device of the patent, 5 a pipe-shaft, which may have an operating gear or lever at one or both ends, 6 a cap-sleeve bearing upon the pipe-shaft, 7 a block removably secured to the cap-sleeve 6; 8 is a connecting-arm pivoted to the ventilator and at the opposite end, having pivoted to it at different points and on opposite sides the two links 9 and 10 which are also pivoted to different points of the block 7, the connecting-arm 8 being pivoted to the object to be lifted and to the two links 9 and 10 at points on opposite sides of its center. The drawing shows the arms 9 and 10 pivoted at opposite ends of the block 7. This, patentee claims, may be varied. When power is applied through pipe-shaft 5, it is communicated by the links 9 and 10 to the connecting-arm 8, so that a swinging and lifting movement is imparted. Thus as block 7 is turned on the shaft 5, it pushes the link 9 down on the arm 8, while the outer link 10 pulls on the arm 8 so that the pivotal connection of the link 10 with the arm 8 moves farther away while the pivotal connection of the link 9 with arm 8 moves nearer to the pivotal point of shaft 5.

By this means,

says the patentee,

I secured a peculiar twisting or what is an equivalent of an eccentric action, so that I have combined in this device a lifting and pulling effect, whereby the whole movement of the ventilator is made with the minimum application of power and with no possibility of a dead-center.

Appellant denies validity, but does not dispute infringement if the patent be valid.

Many patents in the prior art are set out in the answer, but appellant now urges only Patent No. 706,829, granted to E. F. Johnson, August 12, 1902, for means for operating and locking scuttle-covers, and Patent No. 112,498, granted to E. G. Russell, March 7, 1871, for a mechanical movement. These we will discuss later.

For the patent it is contended that it is new; that by means of the relative arrangement of its parts the labor of operation is greatly reduced, whereby a series of ventilating windows or covers can be harnessed up together and worked as one, or separately. The saving of power in operation is approximately thirty per cent., while the range of lift or opening is increased. Appellant asserts that patentee devised a structure embodying two separate and distinct principles: (1) the generic principle of a balanced push and pull; and (2) the specific principle of transmitting that push and pull through crossed links as shown in the patent drawing, to secure a particular leverage, but that he actually undertook to patent what appellant's counsel term the genus only—the generic principle of a balanced push and pull. In support of this contention, appellant cites patentee's declaration in his copending application filed May 27, 1905, which resulted in Patent No. 843,881, granted February 12, 1907, for a window-lifter, which reads:

This invention is, in fact, within the principle of my invention as described in my application, Serial No. 250,588, filed March 17, 1905, for a window lifter [on which the patent in suit was granted] in which I have described a window lifter having the power applied through two links to different points of a connecting arm, so that I secure a combined pushing and pulling effect—

and also the above-quoted language from the specification of the patent in suit (lines 71 to 76), and also, as he alleges, that nowhere in the patent in suit is there anything remotely indicating that it is limited to a structure in which the links 9 and 10 are crossed instead of parallel, or that such arrangement is desirable, and also the alleged absence of indication of any intention to limit the claims to any particular manner of erection with reference to the window. As to the recital in said Patent No. 843,841, appellant has acquired no interest therein, nor is there any mutuality between appellant and appellee. The terms of an earlier patent cannot be modified by a later patent. The language, however, is not inconsistent with the construction placed by appellee upon the present claims. The general principle is the same in both, but the claims are different. Even were it otherwise, the scope of a patent must be determined from the instrument itself, read in view of the prior art. In setting up the alleged absence of reference in the specification to the effect that the links 9 and 10 are to be crossed save as contained in the lines 71 to 76, in support of his contention as aforesaid, appellant failed to call attention to the remainder of the specification. Beginning at line 77, it reads:

As the block 7 turns on the shaft 5, the arm 9 pushes down on the arm 8 while the outer arm 10 pulls on the arm 8, so that the pivotal connection of the link 10 with the arm 8 moves farther away, while the pivotal connection of the link 9 with the arm 8 moves nearer to the pivotal point of the shaft 5. By this means I secured a peculiar twisting, or what is an equivalent of an eccentric action, so that I have combined in this device a lifting and pulling effect, whereby the whole movement of the ventilator is made with the minimum application of power and with no possibility of a dead-center.

(1) While the use of the term "for example" is somewhat misleading, we are of the opinion that the specification is ample to establish the fact that the patentee claimed specifically the device shown in the drawings and specification, viz., a structure erected in the particular manner shown in the

drawings, even though not described in terms in the specification, thus covering the advantages of reduced power and wide rotation.

It was said in *Carnegie Co.* v. *Cambria Co.*, (185 U. S., 403–432; 22 Sup. Ct., 698, 710; 46 L. Ed., 968:)

Whether the claim would be void if construed to include cupola metal, it is unnecessary to consider. It clearly includes metal from blast furnaces, and is not rendered void by the possibility of its including cupola metal.

In *Brill* v. *Washington Railway & Electric Co.* (215 U. S., 527–532; 30 Sup. Ct., 177; 54 L. Ed., 311) the Court held that while the ball-and-socket arrangement there involved was not described in the claims, it was covered by the specification, and gave the plaintiff the benefit of the doubt.

Elements in claims should be read with reference both to the structure and the function given in the description of the invention. (*Louden* v. *Strickler*, 195 Fed., 751–756; 115 C. C. A., 551, C. C. A. 7th Cir.) We said in *Duncan* v. *Stockham*, (204 Fed., 781–789; 123 C. C. A., 133, 141:)

The claim in suit does not name all the various means shown in the specifications and drawings for connection of the means or elements named therein to make them operative in the combination; but we believe the claim is nevertheless sufficient for enforcement, on reference to the specifications. It is to be interpreted to include such connections and relations of the several means of the combination which are named, as implied therewith to make them operative, in conformity with the specifications, (citing a number of cases.)

The Supreme Court has said, in *McClain* v. *Ortmayer*, (141 U. S., 425; 12 Sup. Ct., 78; 35 L. Ed., 800:)

It is true that, in a case of doubt, where the claim is fairly susceptible of two constructions, that one will be adopted which will preserve to the patentee his actual invention.

This is followed in *Robins Conveying Belt Co.* v. *American Road Mach. Co.*, (145 Fed., 923; 76 C. C. A., 461.)

We held in Case No. 1995 (*Horton Mfg. Co.* v. *White Lilly Mfg. Co.*, 213 Fed., 471; decided at the January, 1914, session of the court) that while claims do not in terms call for certain features of the invention—

those features may, for the purpose of restricting the claim so that it shall meet the requirements of the inventive idea, be gathered from the specification, (citing *Klein* v. *Russell*, 19 Wall., 433–466; 22 L. Ed., 116; *Burke* v. *Partridge*, 58 N. H., 351; *Jones* v. *Barker*, C. C., 11 Fed., 600; *Walker on Patents*, sec. 185.)

(2) Taking into consideration, therefore, the fact that the combination of the four claims in suit, when construed as aforesaid, covers the specific device erected exactly as set out in the specification and drawings, whereby there is secured high leverage between the shaft and window, resulting in a device which minimizes the power necessary to operate it and an increased rotation, we have little difficulty in finding a patentable degree of invention, provided the prior art contains no anticipating devices. The combination employed is new in the window-lifting art, though it contains only old elements. The result attained is very desirable, adding substantially to the efficiency of the window-lifting service of greenhouses in particular and of other similar applications of lifting power.

As above stated, counsel particularly limit their reference to the prior art to the Johnson and Russell patents. The latter may, in view of our construction above set out, be left without further discussion. It is for a "mechanical movement," and would be in point as an anticipation only in case the claims in suit were limited to a generic patent as insisted by appellant; and against the claims as construed appellant concedes that the Russell is no stronger than the Johnson patent on the question of mechanical skill versus invention.

It is urged by appellant that the Johnson patent, by the shifting of a pivot only a few inches, would become a complete anticipation of the claims in suit, and that to make such change would involve only mechanical skill. Various arrangements of the parts of the Evans device are suggested and shown in the briefs. None of them seems to have appealed to appellant in selecting his lifting device. Nor had it occurred to any one before Evans, to attempt the combination of the claims in suit and secure the advantages which appellant has sought to appropriate. The shifting of the pivot does not appeal to us as a mere matter of mechanical skill. It involved an entirely different result in the way of efficiency. Its utility appellant must concede. It is not an easy matter to determine just where the domains of mechanical skill and inventive thought have erected their boundaries. It, however, has been the policy of the law, in order to secure advances in the liberal arts, to extend to the domain of invention the benefit of any doubt with respect to the question of the absence or presence of invention. In the present case the advantages obtained by the device of the claims in suit, as above construed, the desirableness of which seems to have appealed to the acquisitiveness of appellant, together with the presumptions arising from the grant, sufficiently attest the validity of the claims in suit. Infringement being conceded, there remains only to affirm the decree of the district court.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Murphy patent, No. 587,678, for a self-feeding furnace, claims 14 and 17 construed and *Held* valid and infringed. *Masonic Fraternity Temple Ass'n* v. *Murphy Iron Works*, 215 F., 590.

(U. S. C. C. A.) The Evans patent, No. 815,914, for a window-lifter, construed and *Held* valid and infringed. *Jones* v. *Evans*, 215 F., 586.

(U. S. D. C.) The Woodward patent, No. 890,582, for improvements in sewing-machines, *Held* not infringed. *Union Special Mach. Co.* v. *Singer Mfg. Co.*, 215 F., 598.

(U. S. D. C.) Patent No. 973,902, for a cleat to secure prepared roofing, *Held* to involve patentable invention, valid, and infringed. *Woerheide* v. *H. W. Johns-Manville Co.*, 215 F., 604.

Amendment of Rules of Practice.

(ORDER No. 2,158.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 9, 1914.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 165 of the Rules of Practice of the United States Patent Office is amended by adding the following:

In view of the conditions arising from the European war, the provision that an application will not be withdrawn from issue after the case has received its date and number "for the purpose of enabling the inventor to procure a foreign patent" will not be insisted upon and upon a proper showing such an application may be withdrawn from issue until the foreign applications can be filed.

This amendment of the rule will be in force for one year from the date of its approval by the Secretary of the Interior.

So that the rule, as amended, will read as follows:

165. After notice of the allowance of an application is given, the case will not be withdrawn from issue except by approval of the Commissioner, and if withdrawn for further action on the part of the Office a new notice of allowance will be given. When the final fee has been paid upon an application for Letters Patent, and the case has received its date and number, it will not be withdrawn or suspended from issue on account of any mistake or change of purpose of the applicant or his attorney, nor for the purpose of enabling the inventor to procure a foreign patent, nor for any other reasons except mistake on the part of the Office, or because of fraud, or illegality in the application, or for interference. (See Rule 78.)

In view of the conditions arising from the European war, the provision that an application will not be withdrawn from issue after the case has received its date and number "for the purpose of enabling the inventor to procure a foreign patent" will not be insisted upon and upon a proper showing such an application may be withdrawn from issue until the foreign applications can be filed.

This amendment of the rule will be in force for one year from the date of its approval by the Secretary of the Interior.

This amendment will be in force for one year from October 8, 1914.

THOMAS EWING,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 6, 1914.

Lexington Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Uncle Sam Cleanser and Manufacturing Co., 361 South First West street, Salt Lake City, Utah, for registration of a trade-mark and trade-mark registered April 24, 1906, No. 51,902, to the Lexington Manufacturing Co., 2009 Eutaw Place, Baltimore, Md., and a notice of such declaration sent by registered mail to said Lexington Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lexington Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1914.

Baum & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Berry Brothers (Inc.), corner Leib and Wight streets, Detroit, Mich., for registration of a trade-mark and trade-mark registered July 16, 1889, No. 17,815, to Baum & Co., Howard street, Spokane Falls, Wash., and a notice of such declaration sent by registered mail to said Baum & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Baum & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

William Kurzenknabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McNeely & Price, 170–172 North Fourth street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 21, 1896, No. 28,154, to William Kurzenknabe, 124 Franklin street, Chicago, Ill., and a notice of such declaration sent by registered mail to said William Kurzenknabe at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Kurzenknabe, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 23, 1914.

Joseph D. Little, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Agricultural Chemical Co., 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered March 15, 1892, No. 20,845, to Joseph D. Little, Springfield, Ohio, and a notice of such declaration sent by registered mail to said Joseph D. Little at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph D. Little, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three successive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Trade-Marks	506—No. 100,232 to No. 100,737,	inclusive.
Labels	None.	
Prints	None.	
Reissues	3—No. 13,810 to No. 13,812,	inclusive.
Total	1320	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	....	2	North Carolina	7	2
Arizona	1	....	North Dakota	....	....
Arkansas	1	....	Ohio	44	29
California	38	10	Oklahoma	3	1
Colorado	9	4	Oregon	9	2
Connecticut	26	9	Pennsylvania	66	33
Delaware	....	3	Rhode Island	7	6
Florida	7	....	South Carolina	1	1
Georgia	4	3	South Dakota	1	....
Idaho	2	....	Tennessee	6	13
Illinois	84	53	Texas	11	4
Indiana	20	6	Utah	5	1
Iowa	21	4	Vermont	2	1
Kansas	8	....	Virginia	7	10
Kentucky	3	1	Washington	14	3
Louisiana	4	3	West Virginia	2	1
Maine	1	1	Wisconsin	11	12
Maryland	6	7	Wyoming	1	....
Massachusetts	48	29			
Michigan	28	10	Alaska, District of	....	....
Minnesota	16	11	Canal Zone	....	....
Mississippi	1	....	District of Columbia	5	4
Missouri	29	23	Hawaii Territory	....	....
Montana	13	2	Philippine Islands	....	....
Nebraska	7	2	Porto Rico	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	....	8	U. S. Navy	....	....
New Jersey	32	17			
New Mexico	....	....	Total to residents of the United States	733	456
New York	122	125			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	....	1	Natal	....	....
Austria-Hungary	5	5	Netherlands	1	....
Belgium	....	1	New South Wales	1	....
British India	....	....	New Zealand	1	....
Bermuda	1	....	Norway	1	1
British West Indies	....	....	Portugal	....	1
Canada	8	1	Queensland	1	....
Cape Colony	....	....	Roumania	....	....
Chile	....	....	Russia	1	....
Costa Rica	....	....	Scotland	2	....
Cuba	1	....	South Australia	....	....
Denmark	1	....	Spain	....	1
England	20	11	Sweden	....	....
Finland	....	....	Switzerland	1	2
France	3	8	Transvaal, South Africa	....	....
Germany	35	16	Victoria	3	....
India	....	....	Wales	1	....
Ireland	....	1			
Italy	1	....	Total to residents of foreign countries	78	49
Luxemburg	....	....			
Mexico	....	....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Correction of Drawings.

RULE 72. • • • • •

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 17, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 20	July 24	508
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	May 13	Aug. 18	710
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 18	Oct. 1	99
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 4	Sept. 8	756
167	5 Bookbinding; Harvesters; Jewelry; Music.	June 2	Aug. 8	455
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	Aug. 25	645
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 25	Sept. 1	570
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 11	Sept. 28	1187
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 30	July 29	709
235	10. Carriages and Wagons	May 16	Sept. 2	1022
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 30	Oct. 2	222
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	May 23	Aug. 6	1070
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 10	Sept. 10	445
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 24	Sept. 21	465
308	15. Bread, Pastry, and Confection Making; Cooking; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 12	Sept. 2	890
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 5	Aug. 12	739
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	July 7	Sept. 25	212
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 10	Sept. 15	233
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	June 22	Sept. 11	284
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 4	Aug. 12	321

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new applications and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 12	Aug. 10	493
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 17	Sept. 10	227
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 20	Sept. 8	441
144	24. Apparel; Apparel Apparatus; Sewing Machines.	May 4	Aug. 26	564
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 10	Sept. 19	181
106	26. Electricity, Generation; Motive Power.	Jan. 8	July 3	884
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 3	Aug. 27	491
65	28. Internal-Combustion Engines	July 16	Aug. 26	608
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 10	Sept. 2	487
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 10	Oct. 1	337
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 19	Sept. 15	363
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 21	Sept. 8	743
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	June 19	Sept. 14	392
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Aug. 7	Sept. 9	301
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 9	Sept. 18	615
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Aug. 20	Aug. 20	728
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 18	Sept. 2	886
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	Sept. 11	811
321	39. Water Distribution	Apr. 20	July 28	531
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 21	Sept. 18	1142
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 11	Sept. 18	371
279	42. Railway Signaling; Signals: Electricity-Transmission to Vehicles.	June 5	Sept. 5	364
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 18	Sept. 18	252

Oldest new case, Jan. 8: oldest amended, July 3.
Total number of applications awaiting action..... 23,844

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Aug. 3	Sept. 17	936
	Designs	Aug. 26	Sept. 14	348
	Labels and Prints	Oct. 1	Oct. 1	86

PATENTS

GRANTED OCTOBER 20, 1914.

1,113,938. WINDOW-SASH AND SIMILAR STRUCTURE. ROY T. AXE, Syracuse, N. Y., assignor to Oliver M. Edwards, Syracuse, N. Y. Filed Nov. 18, 1910. Serial No. 592,991. (Cl. 189—78.)

1. A frame of the character described comprising a plurality of metal pieces of different shapes in cross section, one of said pieces being formed with front and rear opposing projecting portions and another of said pieces being located between the planes of said projecting portions and being secured to said portions, the inner piece being formed with means for holding the glass from displacement outwardly in one direction and with a rabbet arranged relatively to one of the projecting portions of the outer piece to provide a recess, and a third piece for coacting with said means and holding the glass from displacement in the opposite direction, said third piece projecting into the rabbet and fitting the same and having a portion located out of the rabbet for coacting with the glass to hold the same, substantially as and for the purpose described.

2. A frame of the character described comprising a plurality of pieces of metal differing in cross section and secured together, one of which is formed with opposing projecting portions and the other of which is provided with a rabbet adapted to form one side and the bottom of a recess at one side of the glass, the other side of which recess is formed by the margin of one of said opposing projecting portions, and glass holding means having a portion held in the recess and being of substantially the same cross sectional shape as the recess, the piece formed with the rabbet, and the glass holding means coacting with opposite sides of the glass, substantially as and for the purpose specified.

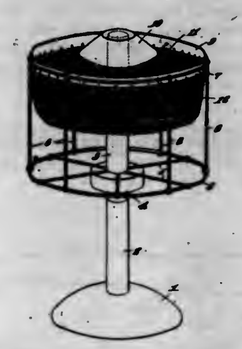
3. A frame of the character described comprising a plurality of pieces of metal differing in cross section and secured together, one of which is provided with a projecting rib arranged in position to engage the glass and hold the glass against lateral movement in one direction and with a rabbet forming one side and the bottom of a recess, said piece formed with the rib and rabbet being arranged within another of such differing pieces and secured thereto and a projecting portion of such other piece being arranged to complete said recess, and means extending into the recess and holding the glass against lateral movement in the opposite direction, substantially as and for the purpose described.

4. A frame of the character described comprising a plurality of pieces of metal differing in cross section and secured together, one of which is provided with a projecting rib arranged in position to engage the glass and hold the glass against lateral movement in one direction and with a rabbet forming one side and the bottom of a recess, said piece formed with the rib and rabbet being arranged within another of such differing pieces and secured thereto and a projecting portion of the last-mentioned piece being arranged to complete said recess, and glass holding means having a portion arranged within the recess and provided with a rib located outside of the recess and opposed to the first-mentioned rib in position to hold the glass from lateral movement in the opposite direction, substantially as and for the purpose specified.

5. A frame of the character described comprising a plurality of metal pieces of different shapes secured together, one of said pieces being formed with opposing sides for receiving the others, and one of said other pieces being formed with a rabbet arranged contiguous to one of said opposing sides forming therewith a continuous recess or groove, and glass holding means extending into the groove, the metal piece formed with the rabbet being secured to said opposing sides and arranged between the same and provided with means coacting with the glass holding means for holding the glass from displacement, substantially as and for the purpose described.

[Claims 6 to 17 not printed in the Gazette.]

1,113,939. MAIL-BAG RECEIVER. JOHN M. ALLEN, Anaconda, Mont. Filed Jan. 12, 1914. Serial No. 811,707. (Cl. 258—20.)



1. In a mail receiver, a rotary frame including a pair of concentric rings, and an annular bag-receiving pocket having its edges attached to the said rings.

2. In a mail bag receiver, a rotatable frame including a cap and a surrounding ring, and an annular pocket having its edges secured to the said ring and the periphery of the cap.

3. In a mail bag receiver, an upright rotatable shaft, a pair of upper concentric rings, means for supporting the inner ring from the upper end of the shaft, means for supporting the outer ring from the lower portion of the shaft, and an annular bag-receiving pocket having its edges secured to the said rings.

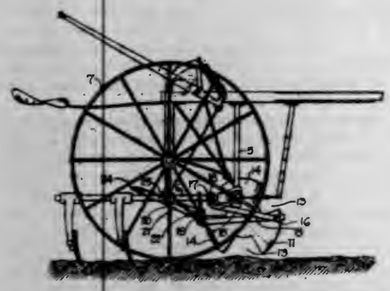
4. In a mail bag receiver, a rotatable frame including a pair of concentric rings, a rim member secured within the outer ring, with its edges projecting above and below

the said ring, and an annular pocket having its edges secured to the inner ring and the lower edge of the rim member, respectively.

5. In a mail bag receiver, an upright rotatable shaft, a cap carried by the upper end of the shaft, a ring supported below the periphery of the cap, a second ring concentric with the aforesaid ring, means for supporting the second mentioned ring from the lower portion of the shaft, and an annular pocket having its edges secured to the respective rings.

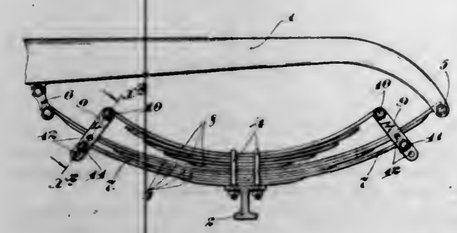
[Claim 6 not printed in the Gazette.]

1,113,940. COTTON-CHOPPER. GEORGE P. ARTHUR, deceased, Midland, Tex., by Eugenia C. Arthur, executrix, Midland, Tex. Filed Jan. 23, 1914. Serial No. 813,982. (Cl. 97—49.)



The combination with a cultivator, of a cotton chopper attachment therefor including a rectangular frame, obliquely disposed bars mounted in said frame, a chopping disk arranged between said bars and having its axis journaled therein and disposed at a right angle to the plane of said bars, attaching bars pivotally connected to the forward end of said frame, means for detachably clamping said bars upon the cultivator frame, foot bars mounted upon the rear end of the chopper frame, and a plurality of chains connected to the rear end of said frame and adapted to be adjusted upon the cultivator frame to raise or lower the rear end of the chopper frame and dispose the chopping disk at a desired height above the ground.

1,113,941. SPRING AND SHOCK-ABSORBER. VICTOR ANDERSEN, Detroit, Minn. Filed May 29, 1913. Serial No. 770,663. (Cl. 21—105.)



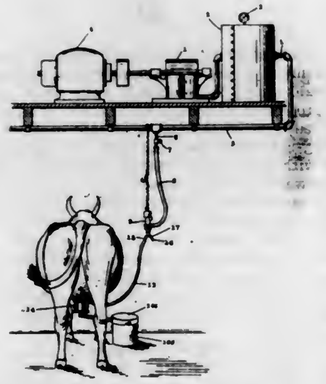
1. The combination with a main spring, of a supplemental spring comprising a plurality of leaves separated at their ends, means connecting the ends of one of the leaves of said supplemental spring to said main spring, whereby the leaves of said supplemental spring will be successively brought together in the direction of the tension on said main spring, under increased load, and whereby the leaves of said supplemental spring will be successively brought together in reverse order, under the action of the recoil of said main spring.

2. The combination with a main spring, of a supplemental spring comprising a plurality of leaves separated at their ends and varying in length from the outer to the inner, and means connecting the ends of the major leaf of said supplemental spring to said main spring, whereby the leaves of said supplemental spring will be successively brought together from the major to the minor leaf, under increased load, and whereby the leaves of said supplemental spring will be brought together in reverse order, under the action of the recoil of said main spring.

3. The combination with main and supplemental springs mounted one upon the other and comprising a plurality of leaves, the leaves of both springs varying in length in the same direction, the leaves of said supplemental spring being separated at their ends, and adjustable means connecting the major leaf of said supplemental spring with one of the lesser leaves of said main spring.

4. The combination with main and supplemental springs mounted one upon the other and comprising a plurality of leaves, the leaves of said supplemental spring being separated at their ends, the leaves of both springs varying in length in the same direction, of an auxiliary leaf forming a part of said main spring and of a length greater than the minor leaf thereof, and adjustable means connecting the major leaf of said supplemental spring with said auxiliary leaf.

1,113,942. MILKING-MACHINE. OSCAR ANDERSON, Newark, N. J. Filed Nov. 1, 1912. Serial No. 729,028. (Cl. 31—99.)



1. In a milking machine, the combination of means for producing a partial vacuum, a suction device adapted to be applied to a cow, a pulsator alternately placing said suction device in communication with said partial vacuum and the atmosphere, means for preventing the milk from passing from said suction device to the vacuum producing means, and means for discharging the milk from said suction device into the atmosphere.

2. In a milking machine, the combination of means for producing a partial vacuum, a suction device adapted to be applied to a cow, a pulsator alternately placing said suction device in communication with said partial vacuum and the atmosphere, a movable partition for preventing milk from passing from said suction device to the vacuum producing means, and means for discharging the milk from said suction device into the atmosphere.

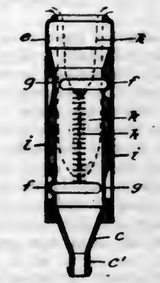
3. In a milking machine, a body portion providing a chamber, means for exhausting air from one end of said chamber, means at the other end of said chamber for admitting milk to said chamber, means also at said last-mentioned end of the chamber for discharging milk into the atmosphere, and a partition extending transversely of said chamber between its said ends and adapted to move under variations of air pressure in said chamber.

4. In a milking machine, a body portion providing a chamber, means for exhausting air from one end of said chamber, means at the other end of said chamber for admitting milk to said chamber, means also at said last-mentioned end of the chamber for discharging milk into the atmosphere, and a partition extending transversely of said chamber between its said ends and slidably engaging the walls thereof.

5. In a milking machine, a body portion providing a chamber, means for exhausting air from one end of said chamber, means at the other end of said chamber for admitting milk to said chamber, means also at said last-mentioned end of the chamber for discharging milk into the atmopshere, and a slidable transverse partition between said ends of the chamber imperviously engaging the side walls thereof.

[Claims 6 to 32 not printed in the Gazette.]

1,113,943. METHOD OF MECHANICAL MILKING. OSCAR ANDERSON, Kearney, N. J. Filed Mar. 21, 1914. Serial No. 826,183. (Cl. 31—102.)



1. The method of milking, consisting in subjecting the teat to suction, squeezing and manipulation on the lower muscular part, while the upper hollow part is protected from being squeezed or manipulated.

2. The method of milking consisting in subjecting the teat to suction and to intermittent squeezing in such a manner as to create a longitudinal back and forth rubbing movement over the teat.

3. The method of milking consisting in subjecting the whole length of the teat to suction and the lower part to squeezing on two sides.

4. The method of milking consisting in subjecting the teat to suction and to intermittent squeezing over the lower part in such a manner as to simultaneously create a rubbing movement over said part and inclosing the upper or hollow part in a rigid casing forming an airspace around said upper part.

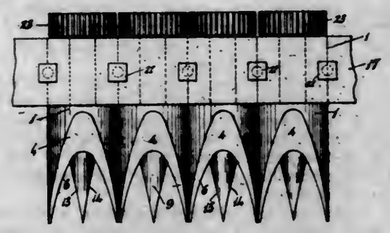
5. The method of milking consisting in subjecting the teat to suction over the whole length and to intermittent squeezing over the muscular part only in such a manner as to simultaneously create a light rubbing movement along said part and in providing a rigid air-chamber around the teat near the udder.

[Claims 6 to 10 not printed in the Gazette.]

1,113,944. CUTTER FOR MOWERS, REAPERS, HARVESTERS, AND THE LIKE. JAMES L. AUBLE, Cincinnati, Ohio, assignor of one-half to H. A. Barrett, Cincinnati, Ohio. Filed June 14, 1911. Serial No. 633,168. (Cl. 56—45.)

1. A device of the character specified, comprising a tubular member having a recess therein for a coöperating member and a bevel through its wall to form a longitudinally inclined cutting edge, a coöperating member inclosed in the tubular member and beveled to form a longitudinally inclined cutting edge and means for rotating one member with reference to the other to obtain a shearing cut.

2. A device of the character specified, comprising a tubular member having a conical recess at one end, a conical member to fit in said recess, a longitudinally inclined bevel through the wall of the tubular member, and a corresponding bevel on the conical member to form cutting edges at heir ends and means for imparting rotary movement between the members to obtain a shearing cut.



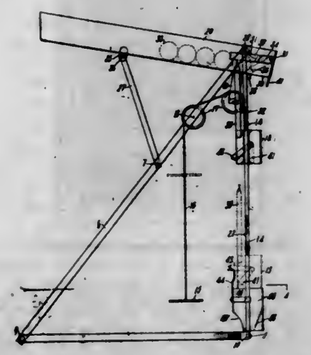
3. A mower comprising a tubular member beveled through its wall on opposite sides toward its forward end to form longitudinal cutting edges where the beveled surfaces intersect the interior surface of the tubular member, a coöperating member fitting within said tubular member, and provided with a tapering cutting edge coöperating with the cutting edges on the tubular member and means for imparting a rotary movement between said coöperating members to obtain a shearing cut.

4. A cutter for mowers, comprising a series of tubular casings, arranged in a horizontal row, with each casing having its projecting end beveled above and below to form a curved recess, and a cutting tooth fitted within said casing having a substantially pointed beveled end, with means for simultaneously imparting a rotary movement between each tooth and its respective casing, for the purpose specified.

5. A cutter for mowers, comprising a series of tubular casings, with outwardly flared conical recesses, arranged in a horizontal row with each casing having its projecting end beveled above and below to form a curved recess, and a cutting tooth fitted within said casing, with the conical surfaces coinciding, and having a substantially pointed beveled end, with means for simultaneously imparting a rotary movement between each tooth and its respective casing, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,113,945. MECHANICAL TOY. BENJAMIN F. BAIN, Pittsburgh, Pa. Filed Dec. 15, 1913. Serial No. 806,778. (Cl. 46—37.)



1. A mechanical toy, comprising a frame, a car mounted to move vertically in said frame, a receptacle at the upper end of the frame arranged to hold a supply of ponderous bodies, and having a bottom opening lying above said car, and means arranged to release a single body

from said receptacle and permit it to drop by gravity directly into said car.

2. A mechanical toy, comprising a frame, a car mounted to move vertically in said frame, means for elevating the car, a receptacle at the upper end of the frame arranged to hold a supply of ponderous bodies, means controlled by the car for releasing a single body from said receptacle when the car reaches its upper position and for causing said body to drop by gravity directly into said car, and means for automatically releasing the body from the car as the car descends.

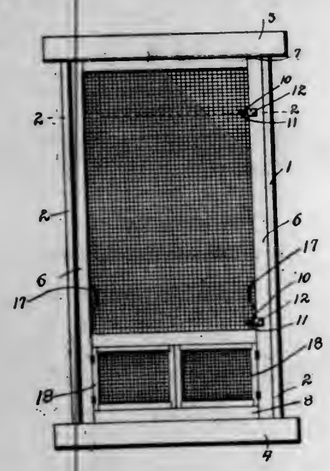
3. A mechanical toy, comprising a frame, a car mounted to move vertically in said frame, means for elevating the car, a load receptacle at the upper end of the frame provided with a bottom discharge opening located in a position to discharge the loads into the top of said car, and a gate controlling said opening and arranged to be operated by said car.

4. A mechanical toy, comprising a frame, a car mounted to move vertically in said frame, means for elevating the car, a load receptacle at the upper end of the frame provided with a bottom discharge opening located in a position to discharge the loads into the top of said car, a gate controlling said opening and arranged to be operated by said car, and means for automatically opening the car bottom to release the load therefrom when the car reaches its bottom position.

5. A mechanical toy, comprising a frame, a car mounted to move vertically in the frame and having an open bottom, a movable gate controlling said opening, a load receptacle at the upper end of the frame having a discharge opening located in a position to discharge the load into the top of said car, a gate controlling said opening and arranged to be operated by the car, and a stop at the bottom of the frame for automatically operating the car bottom as the car descends.

[Claims 6 to 10 not printed in the Gazette.]

1,113,946. FASTENING DEVICE FOR SCREENS. THOMAS E. BARTON, Washington, D. C. Filed Jan. 4, 1913. Serial No. 740,193. (Cl. 16—119.)



In combination with a window frame having a socket formed in one side sill thereof, of a screen having a bore formed in one of its stiles for registry with the socket of the frame, a bolt slidably engaged in the said bore, a longitudinal recess formed in the bolt and intermediate its ends to produce spaced shoulders, a plate attached to the outer surface of the screen stile and adjacent the bolt, said plate being provided with a right angle flange, the inner end of which engages the recess formed in the bolt, said bolt having its outer end adapted to engage the socket formed in the side sill of the window frame, the sliding movement of said bolt when withdrawn from engagement with the socket being limited upon engagement of one of the shoulders with the right angle flange.

1,113,947. PROCESS OF SOLDERING CHAIN. CHARLES A. BECKER, Newark, N. J. Filed June 20, 1913. Serial No. 774,781. (Cl. 113—112.)

1. A process of soldering chain made from solder wire, consisting in coating the chain with a soldering salt, removing a portion of said coating, subjecting the chain to heat sufficient to melt the soldering salt but insufficient to melt the solder, removing all soldering salt from the surface of the chain other than the joint surfaces of the links, and closing the joints by heating the chain.

2. A process of soldering chain made from solder wire, consisting in coating the chain with a soldering salt, mechanically removing a portion of said coating, subjecting the chain to heat sufficient to melt the soldering salt but insufficient to melt the solder, mechanically removing all soldering salt from the surface of the chain other than the joint surfaces of the links, and closing the joints by heating the chain.

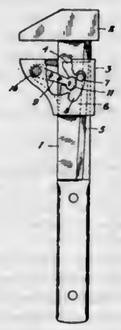
3. A process of soldering chain made from solder wire, consisting in coating the chain with a soldering salt, removing a portion of said coating, subjecting the chain to heat sufficient to melt the soldering salt but insufficient to melt the solder, rubbing the chain to remove all soldering salt except from the joint surfaces of the links, and closing the joints by heating the chain.

4. The process of soldering chain links having solder cores, which consists in boiling the links in a solution of fusible flux, removing the solvent of the flux adhering to the links, removing the flux adhering to the surfaces of the links, heating the links to a temperature at which the residual flux in the joints melts, removing the flux which issues from the joints by reason of the melting, and heating the links to the soldering temperature.

5. The process of soldering links having solder cores, which consists in boiling the links in a solution of fusible flux, evaporating the solvent of the flux adhering to the links, removing the dry flux adhering to the surfaces of the links, heating the links to a temperature at which the residual flux in the joints melts, removing the flux which issues from the joints by reason of the melting, and heating the links to the soldering temperature.

[Claim 6 not printed in the Gazette.]

1,113,948. MONKEY-WRENCH. ELIAS A. W. BEEMER, Hamilton, Ontario, Canada. Filed Feb. 12, 1913, Serial No. 748,036. Renewed Mar. 16, 1914. Serial No. 825,155. (Cl. 81—150.)



1. In a wrench the combination with the shank having a friction face formed longitudinally on one side of the shank facing toward the other edge of the same, of a sliding jaw movable on the shank and having a recess therein; a friction block in said recess adapted to engage the friction face; and a toggle pivoted at one end in the block and at the other end in the jaw.

2. In a wrench the combination with the shank having a friction face formed longitudinally on one side of the shank facing toward the other edge of the same, of a sliding jaw movable on the shank and having a recess therein; a friction block in said recess adapted to engage the friction face; a toggle pivoted at one end in the block and at the other end in the jaw; and a spring engaging said toggle and the jaw tending to press the said block into engagement with the said face.

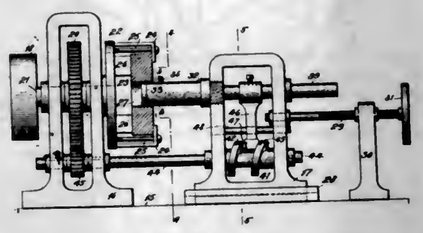
3. In a wrench the combination with the shank having a friction face formed longitudinally on one side of the shank facing toward the other edge of the same and outwardly beveled, of a sliding jaw movable on the shank and having a recess therein; a friction block in said recess adapted to engage the friction face; and a toggle pivoted at one end in the block and at the other end in the jaw.

4. In a wrench the combination with the shank having a friction face formed longitudinally on one side of the shank facing toward the other edge of the same and inclined from the back toward the front at the handle end of the shank, of a sliding jaw movable on the shank and having a recess therein; a friction block in said recess adapted to engage the friction face; and a toggle pivoted at one end in the block and at the other end in the jaw.

5. In a wrench the combination with the shank having a friction face formed longitudinally on one side of the shank facing toward the other edge of the same outwardly beveled and inclined from the back toward the front at the handle end of the shank, of a sliding jaw movable on the shank and having a recess therein; a friction block in said recess adapted to engage the friction face; and a toggle pivoted at one end in the block and at the other end in the jaw.

[Claim 6 not printed in the Gazette.]

1,113,949. DEVICE OR MECHANISM FOR DRILLING SQUARE OR IRREGULAR HOLES. FREDRIK BIRCHLAND and GUSTAF BIRCH, Brooklyn, N. Y. Filed Dec. 4, 1912. Serial No. 734,894. (Cl. 77—61.)



1. Mechanism for transforming a round hole in a piece of work into a polygonal hole of predetermined shape, comprising a holding-member for the work, a tool-holder member adapted to enter said round hole, a cutting-tool carried by said tool-holder member, means for projecting said tool laterally from and withdrawing it into said tool-holder member at intervals for cutting the angles in the hole, and means for rotating one of said members.

2. Mechanism for transforming a round hole in a piece of work into a polygonal hole of predetermined shape, comprising a holding-member for the work, a tool-holder member adapted to enter said round hole, a cutting-tool carried by said tool-holder member, means for projecting said tool laterally from and withdrawing it into said tool-holder member at intervals for cutting the angles in the hole, and means for rotating one of said members, combined with means for effecting a gradual advance relatively between the work and cutting-tool.

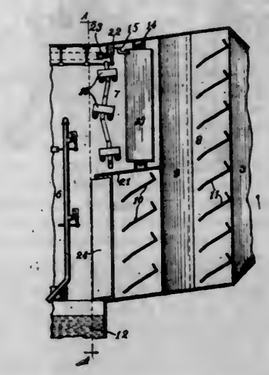
3. Mechanism for transforming a round hole in a piece of work into a polygonal hole of predetermined outline, comprising a holding-member for the work, a tool-holder member, a cutting-tool carried by said tool-holder member, means for projecting said tool laterally against the wall of the hole and withdrawing it therefrom at intervals for cutting the angles in the hole, and means for rotating one of said members.

4. Mechanism for transforming a round hole in a piece of work into a polygonal hole of predetermined outline, comprising a holding-member for the work, a tool-holder member, a cutting-tool carried by said tool-holder member, means for projecting said tool laterally against the wall of the hole and withdrawing it therefrom at intervals for cutting the angles in the hole, and means for rotating one of said members, said means for projecting and withdrawing said tool comprising a gear wheel timed to rotate correspondingly with said rotating member, and an actuating pinion wheel connected to be driven by said gear wheel and of such predetermined ratio with respect thereto that while said rotating member is making one rotation said pinion wheel will make as many rotations as there are angles to be cut in the wall of said hole, combined with means for effecting a gradual advance relatively between the work and cutting tool.

5. Mechanism for transforming a round hole in a piece of work into a polygonal hole of predetermined outline, comprising a holding-member for the work, a tool-holder, a cutting-tool carried by said tool-holder, means for rotating the work, cam-mechanism for effecting during such rotation the gradual projection of said tool against the wall of the hole and a like withdrawal of the same therefrom for cutting angular sides in the hole, and means for causing said cam-mechanism to project and withdraw said tool as many times during each rotation of the work as there are angles to be cut in the walls of the hole, combined with means for effecting a gradual advance relatively between the work and cutting tool.

[Claims 6 and 7 not printed in the Gazette.]

1,113,950. AIR-CONDITIONING APPARATUS. ALLEN A. BLOMFELDT, Chicago, Ill. Filed Feb. 20, 1913. Serial No. 749,657. (Cl. 98—43.)

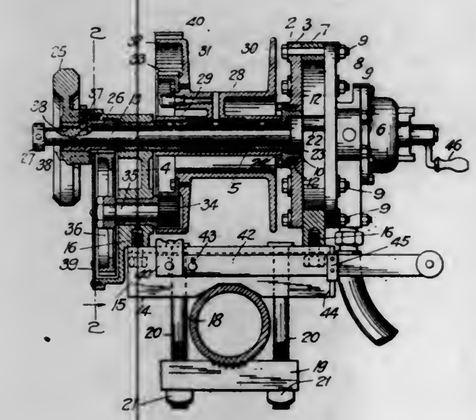


1. Air conditioning apparatus, comprising a casing, means adapted to cause air to flow through said casing, a plurality of heating coils of substantially oblong cross-section located in said casing one above the other across the path of the air, and a water supply located above the uppermost of said coils and adapted to discharge a sheet of water onto said uppermost coil, said coils being arranged so that the water will fall in a sheet from one of said coils adjacent to one of its edges and strike the next coil below adjacent to one of its edges and then fall in a sheet from said next coil adjacent to the opposite edge thereof.

2. Air conditioning apparatus, comprising a casing, means adapted to cause air to flow through said casing, a plurality of heating coils of substantially oblong cross-section arranged in said casing one above the other with their long dimensions transverse to the flow of air, said coils being offset with respect to each other and having their upper faces inclined, and a water supply located above the uppermost of said coils and adapted to discharge a sheet of water onto said uppermost coil adjacent to one of its edges, said water traveling along the inclined surface of said coil and being discharged in a sheet therefrom and falling onto the next coil, traveling along the upper surface of said next coil and falling in a sheet from the edge thereof.

3. Air conditioning apparatus, comprising a casing, means adapted to cause air to flow through said casing, a plurality of heating coils of substantially oblong cross-section arranged in said casing one above the other in staggered relation with their long dimensions transverse to the flow of air with alternate coils having their upper faces inclined in respectively opposite directions, and a water supply located above the uppermost of said coils and adapted to discharge a sheet of water onto said uppermost coil adjacent to one of its edges, said water traveling along the inclined surface of said coil and being discharged in a sheet therefrom and falling onto the next coil, traveling along the upper surface of said next coil and falling in a sheet from the edge thereof.

1,113,951. HOISTING-MACHINE. WILLIAM A. BOX, Denver, Colo. Filed Jan. 14, 1914. Serial No. 812,052. (Cl. 57—86.)



1. A hoist comprising a supporting frame including an element for clamping it on a column, a motor-driven winding drum mounted on said frame, and having a brake-surface, a brake-band disposed to frictionally engage said surface, and a lever adjustably mounted on said element, the ends of the said band being attached respectively to the said lever and to the said element.

2. A hoist comprising a supporting frame including an element for clamping it on a column, a winding drum rotatably mounted on said frame, a rotary shaft, a motor secured on the frame in driving connection with said shaft to said drum, including a driving member composed of a pinion and a fly-wheel rigidly connected together and slidably mounted on the shaft, and means for holding said member for rotation with the shaft, at different points of the same.

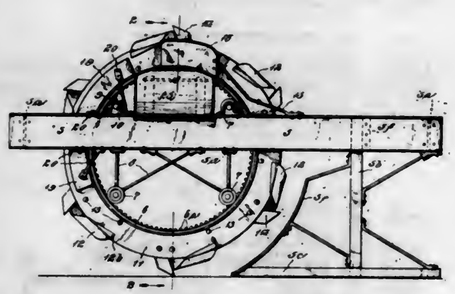
3. A hoist comprising a supporting frame including an element for clamping it on a column, a winding drum rotatably mounted on said frame, a rotary shaft, a motor secured on the frame in driving connection with said shaft, gearing for transmitting the movement of said shaft to said drum, including a driving member slidably mounted on the shaft, and means for holding said member for rotation with the shaft, at different points of the same.

4. A hoist comprising a supporting frame including an element for clamping it on a column, a winding drum rotatably mounted on said frame, a rotary shaft, a motor secured on the frame in driving connection with said shaft, gearing for transmitting the movement of said shaft to said drum, including a driving member slidably mounted on the shaft, and a spring-held catch for holding said member for rotation with the shaft at different points thereof, by its position in indentations in the circumferential surface of the same.

5. A hoist comprising a supporting frame composed of two separate parts, a tubular bearing connecting the same, an annular member secured to one of said parts, and a clamping element secured to the said member and to the other part, a motor mounted on the frame in engagement with the outer surface of said member, a shaft supported in said bearing and having a crank-connection with the motor, which extends in the inner space of said annular member, a winding drum mounted for rotation on said bearing, and gearing on the other frame-part, for transmitting the movement of the shaft to the said drum.

[Claim 6 not printed in the Gazette.]

1,113,952. TRENCH-DIGGING MACHINE. HOWARD S. BROWN, Brazil, Ind., assignor of one-fourth to John T. Pierson, Terre Haute, Ind., and one-fourth to Charles D. Pierson, Lewis, Ind. Filed Aug. 2, 1913. Serial No. 782,546. (Cl. 37—17.)

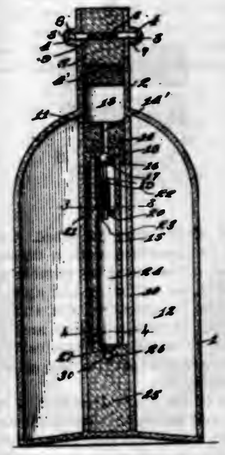


In a trench-digging machine, a supporting frame, a digging member rotatably mounted on said frame and composed of a wheel having peripheral angular flanges, shovels secured between said flanges and having their cutting edges extending obliquely and laterally from said wheel, flat pointed blades arranged centrally of said shovels and in front of their cutting edges, and plates secured to said supporting frame, and adapted to engage the edges of said shovels.

1,113,953. NON-REFILLABLE BOTTLE. CHARLES R. BROWNING, Madrid, Nebr. Filed Apr. 5, 1913. Serial No. 759,182. (Cl. 215—15.)

1. A bottle having a closed neck, a tube formed integrally with the body of said bottle, a second tube slidably mounted in said first tube, valve mechanism in said second tube, said first tube provided with an aperture communicating with the interior of said bottle, the body of said bottle provided with a slot, and a discharging vent passing through said slot and into said tubes for facilitating the dispensing of liquid contained in said bottle.

2. A bottle provided with a closed neck having a tube formed integrally therewith, said tube provided with an opening communicating with the interior of said bottle,



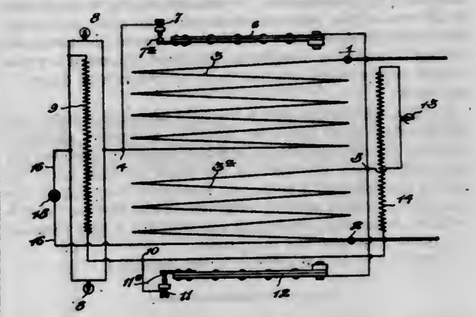
a second tube slidable in said first tube having valve means therein, said first and second mentioned tubes provided with discharge vents to facilitate the dispensing of liquid contained in said bottle.

1,113,954. HOSE-SUPPORTER. FRANK S. CALLOWAY, Fairhaven, Mass. Filed Mar. 28, 1914. Serial No. 828,028. (Cl. 24—81.)

A hose supporter comprising a pair of wire clasps, one end of the wire of each of the clasps being coiled, and a coiled wire connecting member, said connecting member being of slightly greater diameter than the coiled portions of the clasps, the convolutions of the clasps being adapted for engagement within the opposite ends of the connecting member and to engage between the convolutions thereof, the convolutions of the clasps and the convolutions of the connecting member being disposed at the same angle with relation to the common longitudinal axis of the coiled portions of the clasps and the connecting member, whereby the clasps may be readily removed from or attached to the connecting member by the turning of the same with relation to the member.

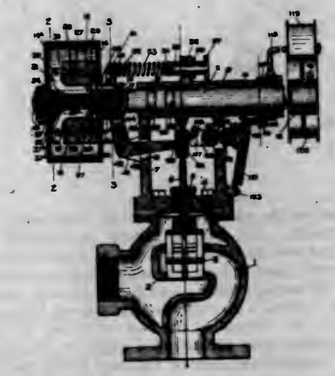
1,113,955. ELECTRIC INCUBATOR. EUGENE F. A. CAREY, Missoula, Mont. Filed June 16, 1914. Serial No. 845,432. (Cl. 219—20.)

In an electric incubator, a heater circuit; a second heater circuit connected therewith; a thermostat controlling the operation of the second circuit at a predetermined temperature; a third circuit connected with the first and second circuits; and a thermostat in the second circuit controlling the operation of the third circuit at a predetermined temperature higher than that at which the first thermostat is operated; one or more low voltage lamps in series in the second and third circuits; and electrical connections including a push button, connecting lamps in the second circuit directly with the supply terminal of the first circuit for putting full voltage across the terminals



of the lamps, whereby the interior of the incubator may be illuminated substantially as described.

1,113,956. CONTROLLING DEVICE FOR FLUID-ACTUATED MOTORS. RUDOLPH CONRADER, Erie, Pa. Filed Nov. 14, 1910. Serial No. 592,345. (Cl. 121—112.)



1. In a controlling device for fluid actuated motors, the combination of a governor spindle; a carrier slidingly mounted on the spindle; a weight forming the centrifugal element of the governor mounted on the carrier; and devices actuated by the weight for moving the weight and carrier bodily axially with the movement of the weight under the influence of centrifugal force.

2. In a controlling device for fluid actuated motors, the combination of a governor spindle; a carrier slidingly mounted on the spindle; a weight forming the centrifugal element of the governor mounted on the carrier; a mounting locked against axial movement relatively to the shaft; and a connection between the mounting and the weight for moving the weight and carrier bodily axially on the shaft with a movement of the weight under the influence of centrifugal force.

3. In a controlling device, for fluid actuated motors, the combination of a governor spindle; a carrier slidingly mounted on the spindle; a weight pivotally mounted on the carrier, and having its axis parallel with the axis of the carrier; a mounting fixed against axial movement relatively to the spindle; and a link connecting the mounting with the weight, and adapted to move the weight and carrier bodily axially relatively to the spindle with a movement of the weight under the influence of centrifugal force.

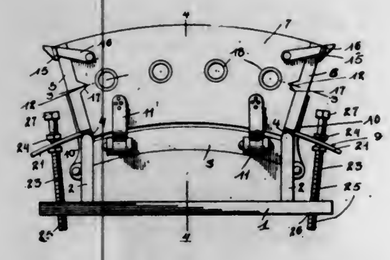
4. In a controlling device for fluid actuated motors, the combination of a governor spindle; a carrier mounted on

the spindle; a weight pivotally mounted on the carrier, with its pivot parallel to the axis of the spindle; a mounting rotatively mounted on the spindle; a link pivotally connected to the mounting; a connection rotatively mounted on the weight and connected with the link; and a device communicating the relative movement between the mounting and the weight in an axial direction as the weight moves under the influence of centrifugal force to the valve.

5. In a controlling device for fluid actuated motors, the combination of a governor spindle; a carrier slidingly mounted on the spindle; a weight pivotally mounted on the carrier with the axis of the pivot parallel with the axis of the spindle; a mounting rotatively mounted on the spindle and locked against axial movement thereon; and a rotative connection carried by the weight; a link between the connection and the mounting.

[Claims 6 to 16 not printed in the Gazette.]

1,113,957. MOLD FOR MAKING CONCRETE STAVES. LEWIS C. COVAULT and JOHN D. REESE, Mechanicsburg, Ohio. Filed Nov. 26, 1912. Serial No. 733,647. (Cl. 25—121.)

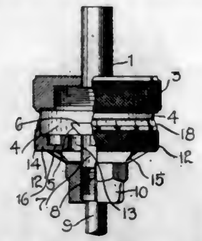


1. A mold of the character described comprising a base frame including sills having curved or rounded upper edges, hinged side and end walls, the said end walls being provided with base flanges, the side walls extending upwardly in diverging relation and the end walls being longitudinally curved, a correspondingly curved bottom wall resting upon the flanges of the end walls and having extensions resting upon the rounded edges of the sills and projecting beneath and beyond the side walls, and means upon the base frame engaging said extensions to bend or flex and vary the curvature of said bottom wall.

2. A mold of the character described comprising a base frame including sills having curved or rounded upper edges, substantially diverging side walls hinged to the base frame and provided on their inner faces with longitudinally extending ribs, longitudinally curved end walls hinged to the base frame and provided with base flanges and having recesses receiving the ends of said ribs, one of said end walls being provided with a longitudinally extending groove, a curved bottom wall resting upon the flanges of the end walls and provided with extensions resting upon the rounded edges of the sills and projecting beneath and beyond the side walls, and means upon the frame engaging said extensions to bend or flex and vary the curvature of said bottom wall.

3. A mold of the character described comprising a base frame including sills having curved or rounded upper edges, hinged side and end walls, the said end walls being provided with base flanges, the side walls extending upwardly in diverging relation and the end walls being longitudinally curved, a curved bottom wall resting upon the flanges of the end walls and provided with slotted extensions, resting on the rounded edges of the sills and projecting beneath and beyond the side walls, and adjusting devices upon the base frame engaging said slotted extensions to bend or flex and vary the curvature of said bottom wall.

1,113,958. ADJUSTABLE BORING-TOOL. LAWRENCE CRANCE and ALVIN E. FENSTERBUSCH, Moline, Ill. Filed Jan. 24, 1914. Serial No. 814,213. (Cl. 29—108.)



1. In a device of the class described, a spindle, a head formed thereon and provided with a diametrical channel on its under face, a tool carrying member slidably mounted in said channel, an adjusting nut applied to the head and provided with an eccentric slot therein, and a pin carried by the tool carrying member and engaged within said slot whereby to adjust said tool carrying member to various positions with respect to the spindle, upon rotation of the adjusting nut.

2. In a device of the class described, a spindle, a head formed thereon and provided with a diametrical channel on its under face, a tool carrying member slidably mounted in said channel, an adjusting nut applied to the head and provided with an eccentric slot therein, a pin carried by the tool carrying member and engaged within the aforesaid slot whereby to slide the tool carrying member in the channel as said adjusting nut is rotated, and means for clamping the tool carrying member in any adjusted position with relation to the spindle.

3. In a device of the class described, a spindle, a head formed on said spindle and provided with a diametrical channel in its under face, a tool carrying member mounted in said channel, a sleeve extending laterally from the tool carrying member to engage the shank of a tool, an adjusting nut applied to the head and provided with an eccentric slot therein, a pin carried by the tool carrying member and engaged within the aforesaid slot whereby to slide said tool carrying member in the channel upon rotation of the adjusting nut, and a clamping member mounted upon the sleeve to clamp the tool carrying member in any adjusted position with relation to the spindle.

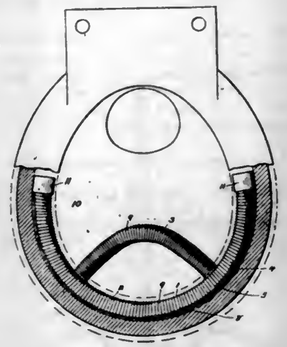
4. In a device of the class described, a spindle, a head formed thereon and provided with a diametrical channel on its under face, a tool carrying member slidably mounted in said channel, an adjusting nut applied to the head and provided with an eccentric slot therein, a pin carried by the tool carrying member and engaged with the aforesaid slot whereby to adjust said member to various positions with respect to the spindle upon the rotation of the nut, and clamping means having engagement with the head and said tool carrying member to clamp the latter in any adjusted position with respect to the spindle.

5. In a device of the class described, a spindle, a collar formed thereon, and provided with a dove tail diametrical channel in its under face, a tool carrying member provided with an elongated dove tail head slidably mounted in the dove-tail channel of the first mentioned head, an adjusting nut applied to the head and provided with an eccentric slot, a pin carried by the head of said tool carrying member and received in the aforesaid slot whereby to slide the tool carrying member and parts carried thereby in the channel as said adjusting nut is rotated, and means in connection with said head for clamping the tool carrying member in any adjusted position.

[Claim 6 not printed in the Gazette.]

1,113,959. DISINFECTING AND DEODORIZING DEVICE. CHARLES P. DANKS, Lawrenceville, Ill. Filed Mar. 3, 1914. Serial No. 822,158. (Cl. 4—30.)

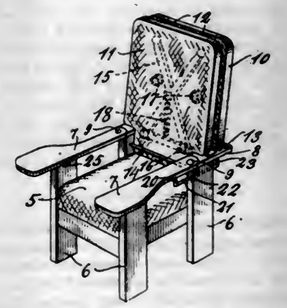
1. A device of the character described including a main coil, a relatively short auxiliary coil connected thereto intermediate the ends of said main coil, a metallic spring embracing the said main coil longitudinally thereof and lying opposite to said auxiliary coil, a suitable filling of absorbent material for said main coil, and a suitable filling of absorbent material for said auxiliary coil, said main coil and said auxiliary coil being oppositely bowed when in operative position, the surface of said main coil forming a closure for the ends of said auxiliary coil, substantially as described and for the purposes set forth.



2. A device of the character described including a main coil, a relatively short auxiliary coil connected thereto intermediate the ends of said main coil, a suitable filling of absorbent material for said main coil, and a suitable filling of absorbent material for said auxiliary coil, said main coil and said auxiliary coil being oppositely bowed when in operative position, the surface of said main coil forming a closure for the ends of said auxiliary coil, substantially as described and for the purposes set forth.

3. A device of the character described including a main coil, a relatively short auxiliary coil connected thereto intermediate the ends of said main coil, a suitable filling of absorbent material for each coil, the said two coils being adapted to be oppositely bowed in such manner that said auxiliary coil extends into the space encompassed by the bowed main coil substantially as described and for the purposes set forth.

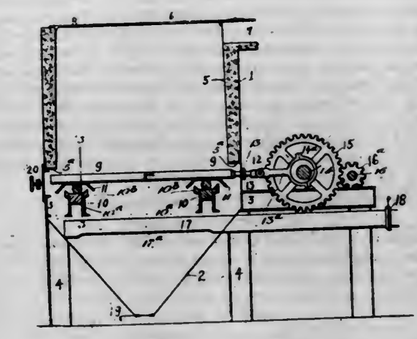
1,113,960. CONVERTIBLE CHAIR. HARRY J. DAVIDSON, Chicago, Ill. Filed Aug. 7, 1913. Serial No. 783,593. (Cl. 155—6.)



1. A chair having arm rests which are pivoted to swing in a horizontal plane, a pivoted back rest adjustable into horizontal position, and means actuated by the back rest for swinging the arm rests inward when the back rest is swung to horizontal position.

2. A chair having arm rests which are pivoted to swing in a horizontal plane, a pivoted back rest adjustable into horizontal position, rods extending in the direction of the length of the arm rests and supported on the chair for rocking movement, said rods having crank arms at one end which are connected to the arm rests, and the other ends of said rods having an oblique arm which extends in front of the back rest and is engageable thereby when the latter is swung to horizontal position.

1,113,961. ORE-ROASTER. GEORGE H. DERN, Salt Lake City, and THEODORE P. HOLT, Park City, Utah. Filed Apr. 9, 1914. Serial No. 830,669. (Cl. 75—134.)



1. In an ore roaster adapted for roasting a single columnar charge by internal combustion thereof, a charge-holding chamber, a crushing grate consisting solely of independent oppositely movable sections each of open form arranged and adapted for directly supporting the single columnar charge in said chamber and for crushing or disintegrating the ore when said sections are moved, to discharge the disintegrated ore through said grate, means for operating said sections in opposite directions to each other, a combined collecting and air pressure chamber located below said grate and means for introducing a blast of air into said last-named chamber and upwardly through said grate into a charge supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

2. In an ore roaster adapted for roasting a single columnar charge by internal combustion thereof, a charge-holding roasting chamber, a crushing grate consisting solely of independent oppositely movable sections each of open form arranged and adapted for directly supporting the single columnar charge in said chamber and for crushing or disintegrating the ore when said sections are moved, to discharge the disintegrated ore through said grate, means for operating said sections in opposite directions to each other, said roasting chamber having walls which overhang the ends of the sections of the grate, whereby access of ore between the ends of the grate sections and the walls of the roasting chamber is prevented, a combined collecting and air pressure chamber located below the grate and means for introducing a blast of air into said last named chamber and upwardly through the grate into a charge of ore supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

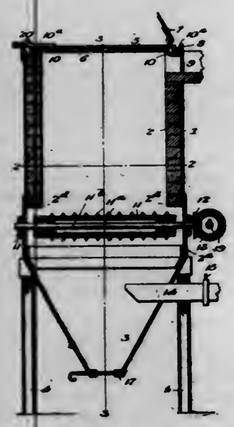
3. In an ore roaster adapted for roasting a single columnar charge by internal combustion thereof, an upper roasting chamber for holding said charge, an air distributing crushing grate composed of independent, movable crushing parts or sections collectively arranged and adapted for directly supporting a single columnar charge in said chamber, and for crushing or disintegrating the ore when said sections are moved, to discharge the disintegrated ore through said grate, a combined collecting and air pressure chamber located below said grate, and means for regularly and at will introducing an air blast into said collecting and air pressure chamber.

4. In an ore roaster adapted for roasting a columnar charge by internal combustion thereof, a charge-holding roasting chamber, a crushing grate having relatively movable crushing sections arranged and adapted for directly supporting the columnar charge in said chamber and for crushing or disintegrating the ore when said sections are moved, to discharge the disintegrated ore through said grate, roller bearings supporting said grate, guards carried by the grate sections adapted for the protection of the roller bearings, and means for introducing a blast of air upwardly through said grate into a charge supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

5. In an ore roaster adapted for roasting a columnar charge by internal combustion thereof, a charge-holding roasting chamber, a crushing grate having relatively movable crushing sections arranged and adapted for directly supporting the columnar charge in said chamber, said sections having grate bars equipped with teeth or projections adapted for crushing or disintegrating the ore when said sections are moved, to discharge the disintegrated ore through said grate, and means for introducing a blast of air upwardly through said grate into a charge supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

[Claim 6 not printed in the Gazette.]

1,113,962. ORE-ROASTER. GEORGE H. DERN, Salt Lake City, and THEODORE P. HOLT, Park City, Utah. Filed Apr. 9, 1914. Serial No. 830,670. (Cl. 75—134.)



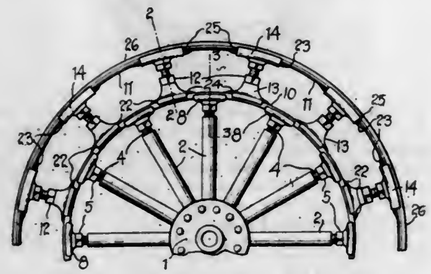
1. In an ore roaster adapted for roasting a single columnar charge by internal combustion thereof, an upper roasting chamber for holding said charge, an air distributing crushing grate comprising rockable or rotatable rolls collectively arranged and adapted for directly supporting a single columnar charge in said chamber and for crushing or disintegrating the ore when said rolls are rocked or rotated, to discharge the disintegrated ore through said grate, a combined collecting and air pressure chamber located below said grate, and means for introducing an air blast into said collecting and air pressure chamber and upwardly through said grate into a charge supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

2. In an ore roaster adapted for roasting a single columnar charge by internal combustion thereof, an upper roasting chamber for holding said charge, an air distributing crushing grate comprising rockable or rotatable rolls which are provided with teeth, said rolls being separated from each other by free discharge spaces and collectively arranged and adapted for directly supporting the single columnar charge in said chamber and for crushing or disintegrating the ore when said rolls are rocked or rotated, to discharge the disintegrated ore through said grate, a closed combined collecting and air pressure chamber located below said grate, and means for regulably and ar will introducing an air blast into said collecting and air pressure chamber and forwardly through said grate into a charge supported thereon for the purpose of roasting the charge solely by internal combustion thereof.

3. An ore roaster having a charge-holding roasting chamber, in combination with a charge-supporting grate having rockable or rotatable rolls whose outer ends are overhung by the lower part of the walls of said roasting chamber.

4. An ore roaster having a charge-holding roasting chamber, in combination with a charge-supporting grate having rockable or rotatable rolls whose outer ends are overhung by the lower part of the walls of said roasting chamber, and a combined air pressure and collecting chamber located below said grate.

1,113,963. WHEEL. MILTON L. DONAWAY, South Bellingham, Wash. Filed Apr. 15, 1914. Serial No. 832,021. (Cl. 152—29.)



1. A vehicle wheel comprising a hub, spokes extending radially from the hub, an inner rim carried upon the outer ends of the spokes, an outer concentric rim, spacing members disposed between said outer and inner rims, said spacing members comprising adjustably connected clamping plates for engagement against the opposing faces of said rims, cushioning blocks disposed between said clamping plates and said rims, and means for resiliently holding said spacing members in adjusted position with relation to the rims.

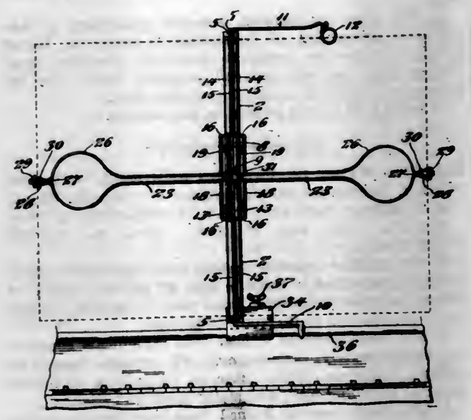
2. A vehicle wheel comprising a hub, spokes extending radially from said hub, an inner rim carried upon the outer ends of said spokes, an outer concentric rim, pairs of spaced lugs formed at intervals upon the inner face of the outer rim, spacing members disposed between said inner and outer rims, said spacing members including plates for engagement between the pairs of lugs on the inner face of said outer rim, and a cushioning block disposed between each plate and the inner face of the outer rim, the opposite ends of said cushioning blocks being adapted to project beyond the opposite sides of said plates for engagement with the adjacent lugs, as and for the purpose described.

1,113,964. FINISH-REMOVER. GUSTAVE DOSSELMAN and PERCY NEYMANN, Chicago, Ill., assignors, by mesne assignments, to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Original application filed June 24, 1903, Serial No. 162,885. Divided and this application filed Apr. 8, 1907. Serial No. 366,907. (Cl. 87—5.)

1. The finish remover comprising approximately equal parts of alcohol and acetone with which several per cent. of waxy thickening material including paraffin has been incorporated thickening the remover to substantially semi-pasty consistency and effectively preventing excessive evaporation of the volatile material in the remover.

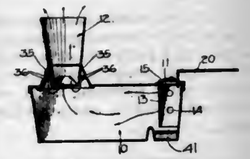
2. The substantially fluent finish remover consisting substantially of approximately equal parts of alcohol and acetone with which thickening material including paraffin has been incorporated increasing the consistency of the remover and effectively retarding excessive evaporation of the volatile material in the remover.

1,113,965. MUSIC-LEAF TURNER. JOHN DOUGHERTY, Philadelphia, Pa. Filed Dec. 26, 1913. Serial No. 808,902. (Cl. 84—17.)



In a music leaf turner a jaw provided with means for attachment to an object, a spring actuated clamp carried by the frame for engaging the fold of a sheet of music, a music support carried by the frame adapted to support and hold the covers of the sheet of music, a spring provided with indents carried by the frame and a music leaf turning arm consisting of a vertical portion journaled to the frame, an offset intermediate the ends of said vertical portion co-acting with the spring carried by the frame for holding the turning arm in different positions, an extension, the end of which is coiled to form a clamp and a crank handle for operating the music leaf turning arm.

1,113,966. HEATER. EMANUEL W. DUNN, San Francisco, Cal. Filed Oct. 6, 1913. Serial No. 793,725. (Cl. 158—91.)



1. An orchard heater, comprising a combustion receptacle, an air inlet tube for the receptacle, a combustion outlet stack for the receptacle, auxiliary air inlet means admitting air to the stack, and means to feed fuel into the air inlet tube and into the draft of air drawn through the air inlet tube into the receptacle.

2. An orchard heater, comprising a combustion receptacle, an air inlet tube for the receptacle, a combustion outlet stack for the receptacle, auxiliary air inlet means admitting air under the lower edge of the stack, and means to feed fuel into the air inlet tube and into the draft of air drawn through the air inlet tube into the receptacle.

3. An orchard heater, comprising a combustion receptacle, an air inlet tube extending into the receptacle, a combustion outlet stack for the receptacle, auxiliary air inlet means admitting air under the lower edge of the stack, and means to feed liquid fuel into the air inlet tube.

4. An orchard heater, comprising a combustion receptacle, a perforated air inlet tube extending into the receptacle, a damper at the outer end of the tube to control the inlet of air thereto, a combustion outlet stack on the receptacle, means to admit air under the lower edge of the stack to its peripheral portions, and means for feeding liquid fuel into the perforated inlet tube to be carried by the air draft into the receptacle.

5. An orchard heater, comprising a combustion receptacle, an air inlet tube extending downwardly into the receptacle open to atmosphere at its upper end and open to the receptacle interior at its lower end and having perforations in its walls inside the receptacle, a combustion outlet for the receptacle, means for feeding auxiliary air into the combustion outlet, and means for feeding fuel into the tube above the perforations therein into the draft of air drawn through the inlet tube.

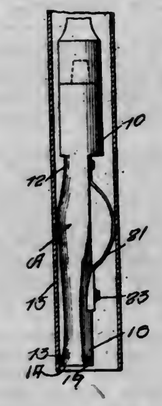
[Claim 6 not printed in the Gazette.]

1,113,967. PROCESS OF CLEANING SURFACES. GEORGE DURHAM and CHARLES W. MCGUIRK, Scranton, Pa. Filed July 10, 1914. Serial No. 850,107. (Cl. 87—5.)

1. The herein described process which consists in causing to impinge at high velocity against a surface to be cleaned, a stream containing oil in a state of extremely fine subdivision in an excess of water.

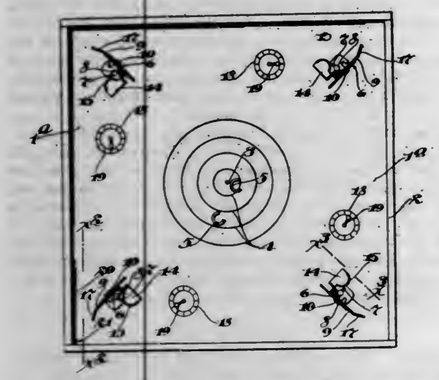
2. The herein described process which consists in admitting to a stream containing oil in an excess of water at or near the point of ejectment of the stream air at high velocity, and in causing the stream to impinge against the surface to be cleaned.

1,113,968. DRILL-BIT. ARTHUR L. EDWARDS, Lewistown, Mont. Filed Nov. 12, 1913. Serial No. 800,655. (Cl. 255—73.)



A drill bit for boring tools comprising a shank of a size to move laterally in an associated casing, said shank having a cutting edge disposed outwardly of the side limits of the remainder of said shank, and a bow spring having one end fixed to the shank and its other end slidably engaged therewith, said spring being adapted to cooperate with an associated casing to constantly tend to move the shank laterally in the casing whereby the cutting edge will be shifted to a position outwardly of the exterior limits of the casing when said cutting edge has been moved out of the casing.

1,113,969. TOY HORSESHOE GAME. JOHN A. EKELUND, Minneapolis, Minn., assignor to Ekelund Toy and Novelty Company, Minneapolis, Minn., a Corporation of South Dakota. Filed Aug. 4, 1913. Serial No. 782,816. (Cl. 46—59.)



1. In a game apparatus of the kind described, the combination with a board having a peg or target, of a toy throwing man having a fixed leg and a pivoted leg, the said fixed leg being anchored to said board, and the said pivoted leg being under tension to move toward said target, and having a hand portion adapted to hold a horseshoe or the like for projection toward said target.

2. In a game apparatus of the kind described, the combination with a board having a peg or target, of a toy throwing man having a fixed leg and a pivoted leg, the said fixed leg being anchored to said board, and the said pivoted leg being under tension to move toward said target, having a hand portion adapted to hold a horseshoe or the like for projection toward said target, the said hand being capable of pivotal adjustments in respect to the said pivoted leg.

3. In a game apparatus of the kind described, the combination with a board having a peg or target, and a headed stud located at a distance therefrom, of a catapult having a spring pressed throwing member and a relatively fixed body member, the latter having a horizontally bent base portion formed with a slot for interlocking engagement with the said headed stud, the said slot having an enlarged portion adapting it to be applied to and removed from said stud.

4. In a game apparatus of the kind described, the combination with a board having a peg or target, and a headed stud located at a distance therefrom, of a catapult having spring pressed throwing member and a relatively fixed body member, the latter having a horizontally bent base portion formed with a slot for interlocking engagement with the said headed stud, the said slot having an enlarged portion adapting it to be applied to and removed from said stud, and the said catapult being pivotally adjustable on said stud.

5. In a game apparatus of the kind described, the combination with a board having a raised rim and a clamping bar pivotally attached thereto, of toy throwing men having base flanges for securing them in upright positions to said board and which flanges are adapted to be clamped between said holding bar and the adjacent rim to hold the said men laid down on said board in closely assembled position.

1,113,970. PAINT OR VARNISH REMOVER AND THE PREPARATION THEREOF. CARLETON ELLIS, White Plains, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 18, 1907. Serial No. 358,101. (Cl. 87—5.)

1. The paint or varnish remover comprising approximately water insoluble higher ketonic condensation products 10 parts, chlor benzol 5 parts, benzol 3 parts, kerosene 2 parts, ceresin wax 1 part, and wood flour 7 parts.

2. The paint or varnish remover comprising approximately higher ketonic condensation products 10 parts, organic wax solvents 10 parts, wax 1 part and stiffening material 7 parts.

3. The paint or varnish remover comprising approximately water insoluble higher ketonic condensation products 10 parts, hydrocarbon wax solvents 10 parts and stiffening material, including wax bodies.

4. The paint or varnish remover comprising higher ketonic condensation products, hydrocarbon wax solvents including benzol and stiffening material, including a waxy body.

5. The paint or varnish remover comprising a considerable proportion of substantially saturated higher ketone condensation products including pinacolin, penetrating finish solvent material including benzol and incorporated stiffening material including wax.

[Claims 6 to 22 not printed in the Gazette.]

1,113,971. PAINT OR VARNISH REMOVER. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Mar. 27, 1907. Serial No. 364,749. (Cl. 87—5.)

1. The finisher remover formed from ingredients comprising approximately carbolic acid 35 gallons, benzol 28 gallons, acetone 30 gallons, wood flour 12 pounds, ceresin wax 2 gallons and methylamin 10 gallons.

2. The finish remover formed from ingredients comprising approximately carbolic acid 35 gallons, benzol 28 gallons, loosening solvent material 30 gallons, stiffening material including wax, and methylamin 10 gallons.

3. The finish remover formed from ingredients comprising carbolic acid, penetrating finish solvent material, loosening finish solvent material, stiffening material including waxy bodies and methylamin.

4. The finish remover formed from ingredients comprising carbolic acid, penetrating and loosening finish solvent material, stiffening material and methylamin.

5. The finish remover consisting in larger part of volatile organic finish softening material incorporated with stiffening material and finish loosening phenolic material and methylamin.

[Claims 6 and 7 not printed in the Gazette.]

1,113,972. PAINT OR VARNISH REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, a Corporation of West Virginia. Filed Mar. 22, 1912. Serial No. 685,610. (Cl. 87—5.)

1. The finish remover comprising approximately benzol 25 parts, benzin 20 parts, acetone 47 parts, ceresin 3 parts and oleic acid 5 parts.

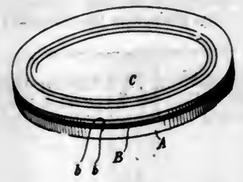
2. The finish remover comprising approximately benzol 25 parts, benzin 20 parts, loosening finish solvent material 47 parts, mineral wax 3 parts and oleic acid 5 parts.

3. The finish remover comprising approximately benzol 25 parts, benzin 20 parts, loosening finish solvent material 47 parts, mineral wax 3 parts, and saponifiable fatty acid material 5 parts.

1,113,973. DISK SOUND-RECORD. VICTOR H. EMERSON, New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed June 29, 1905. Serial No. 267,589. (Cl. 181—17.)

1. An impressed disk sound-record composed of a body of cardboard or the like, a facing of celluloid or the like containing the sound-record impressed therein, and a sheet of paper or the like interposed between the said body and the said facing, and the three secured together by shellac or the like.

2. A disk for sound-records composed of a body of cardboard or the like, a facing of celluloid or the like, and a sheet of paper or the like interposed between the two, and the three secured together by shellac or the like.

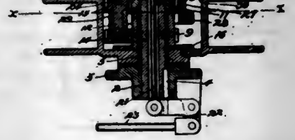


3. A sound record disk composed of a sheet of paper or the like coated on both sides with shellac or the like, a main portion or body of card-board or the like secured to the shellac or the like on one side of said sheet, and a coating or surface of sound-record-receiving material secured to the shellac on the other side of said sheet.

4. A sound record disk composed of a sheet of paper or the like coated on both sides with shellac or the like, a main portion or body of card-board or the like secured to one side of said sheet, and a coating or surface of sound-record-receiving material secured to the other side of said sheet.

5. A sound record tablet comprising a body portion consisting of a plurality of separate sheets of fibrous material united by an adherent under heat and pressure and a surface portion consisting of a coating of shellac-like record material.

1,113,974. CABLE-REEL FOR HAULAGE MECHANISM. DUDLEY T. FISHER, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Sept. 25, 1907, Serial No. 394,508. Renewed Nov. 8, 1911. Serial No. 659,245. (Cl. 57—82.)



1. The combination of a shaft, a reel rotatable about the shaft and provided with a central chamber containing the shaft, a gear wheel in the said chamber connected to the reel and rotatable therewith, a second gear of different diameter from the first mounted stationarily within the chamber co-axially with the first gear, a shaft parallel to the reel axis and revoluble bodily around it, gear wheels on the said parallel shaft meshing respectively with the two aforesaid gear wheels, a support and driver for the shaft located partly within the chamber and extending axially to a point outside thereof, and means for applying power to the said support and driver to cause the bodily movement of the parallel shaft about the reel axis.

2. The combination with a cable reel and a vertically arranged stationary shaft about which it is rotatable, of a motor mounted on the shaft at the upper end thereof above the reel with its armature rotatable about the axis of the shaft, a stationary gear wheel mounted concentrically with the shaft, a rotary gear wheel mounted concentrically with the shaft and secured to the reel, the two said gear wheels having different diameters, and other gear wheels meshing with the aforesaid and connected together and with the armature for revolution therewith around the axis of the reel.

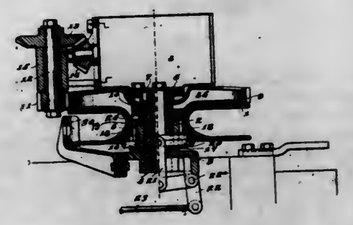
3. The combination with a vertically arranged stationary shaft, and a rotatable reel concentric with the shaft and having an enlarged central chamber having tight bottom and side walls for the retention of lubricant, of a motor mounted on the shaft at the upper end thereof, and power transmitting and speed reducing gearing positioned in the lubricant chamber and carried in part by the motor armature.

4. The combination of a reel mounted on a vertical axis and having a relatively large central chamber, a motor above the reel having an armature with revolving projections extending downward into said chamber, and planetary gear wheels carried by the said revolving projections and serving to transmit power to the reel.

5. The combination with a vertically arranged shaft, and a reel mounted for rotation about the said shaft and having an enlarged central chamber having tight bottom and side walls for the retention of lubricant, of power transmitting and speed reducing gearing in the said lubricant chamber, means entering said chamber at the top for suspending some of the said gearing, and means for applying power to the gearing through the said suspending means.

[Claims 6 to 16 not printed in the Gazette.]

1,113,975. CABLE-WINDING MECHANISM FOR LOCOMOTIVES. DUDLEY T. FISHER, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Original application filed Sept. 20, 1907, Serial No. 393,829. Divided and this application filed Nov. 10, 1911. Serial No. 659,629. (Cl. 57—82.)



1. In a winding mechanism, the combination of a reel mounted for rotation about a vertical axis, a motor mounted above the reel with its axis horizontal and intersecting the reel axis, a gear wheel mounted coaxially with the reel between it and the motor, a power transmitting connection between the gear wheel and the reel, a vertical power shaft, a pinion on the power shaft meshing with the gear wheel and gearing between the power shaft and the motor, the said motor being operable independently of all parts except the said power transmitting elements and the reel.

2. In a winding mechanism, the combination of a reel mounted for rotation about a vertical axis, a motor mounted above the reel with its axis horizontal and intersecting the reel axis, a spur gear wheel mounted co-axially with the reel between it and the motor, a manually controllable clutch between the gear wheel and the reel, a vertical power shaft, a pinion at the lower end of the shaft meshing with the spur gear wheel, and gearing between the upper end of the power shaft and the motor, the said motor being operable independently of all parts except the said power transmitting elements and the reel.

3. In a winding mechanism, the combination of a reel mounted for rotation about a vertical axis, a motor mounted above the reel with its axis horizontal and intersected by the reel axis, a gear wheel mounted between the reel and the motor for rotation coaxially with the reel, a manually controllable clutch between the gear wheel and the reel, and gearing between the gear wheel and the motor, the said motor being operable independently of all parts except the said power transmitting elements and the reel.

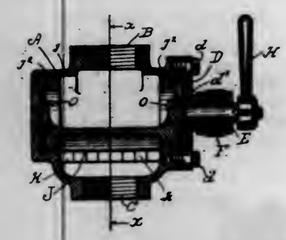
4. In a winding mechanism, the combination of a reel provided with a hub having an apertured web, a gear wheel

mounted for rotation concentrically with the reel and provided with notches at points adjacent the apertures of the web, means for applying power to the gear wheel to rotate it, and a manually controllable clutch device comprising a plurality of pins adapted to extend through the apertures of the web and engage the notches of the gear wheel.

5. In a winding mechanism, the combination of a reel mounted for rotation about a vertical axis, a stationary vertical mast upon which the reel has a bearing, a gear wheel mounted above the reel and having a bearing on the said mast, the said gear wheel being provided with an oil reservoir and with ducts leading from the oil reservoir to the said mast, a power connection between the gear wheel and the reel, and means for applying power to the gear wheel to rotate it.

[Claims 6 to 12 not printed in the Gazette.]

1,113,976. VALVE. EMANUEL FISHER, Providence, R. I., assignor of one-half to Frederick S. Peck, Barrington, R. I. Filed Oct. 21, 1912. Serial No. 726,861. (Cl. 137—7.)



1. In a valve, a casing provided with a port and a valve seat surrounding the same with a clearance upon each side of said seat, and a valve member rotatably mounted and comprising a transversely curved web provided with working faces adapted to coöperate with said port and seat and to permit of a double opening, whereby the fluid may flow through at either side of the valve member and permitting the fluid to flow across the seat upon opposite sides of said port when the valve is open.

2. In a valve, a casing provided with a port having a series of connected V-shaped openings and a valve member rotatably mounted and having a transversely curved web for coöperation with said seat and to straddle said port when the valve is closed, there being a clearance upon each side of said seat whereby fluid is permitted to flow across the seat upon both sides of the port when the valve is open.

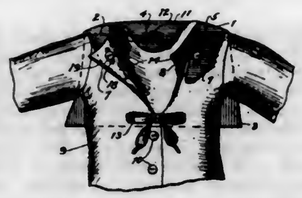
3. In a valve, a cylindrical casing provided with recessed portions providing clearances and a valve seat intermediate the same and provided with a port, and a valve rotatably mounted in the casing and comprising a web provided with bearing faces interspaced from each other substantially the width of the port and adapted to slide upon said seat and permit of the flow of fluid on both sides of the valve and to permit fluid to flow across the seat upon both sides of the port when the valve is open.

4. In a valve, a cylindrical casing provided with recessed portions providing clearances and a valve seat intermediate the same and provided with a port comprising a series of connected V-shaped openings, and a valve rotatably mounted in said casing and comprising a web provided with two parallel curved bearing faces interspaced from each other substantially the width of the port and adapted to slide upon said seat to permit fluid to flow through the inlet opening of the casing simultaneously around both sides of the valve.

5. In a valve, a cylindrical casing provided with recessed portions providing clearances and a valve seat intermediate the same and provided with a port comprising a plurality of V-shaped openings, a valve comprising a web provided with parallel interspaced working faces adapted to engage the seat and spaced apart substantially the width of the port and constructed to permit the flow of fluid from the opening in the casing substantially around both sides of the valve, extension rings upon the ends of the valve, and a valve stem for said valve.

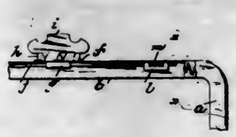
[Claims 6 to 10 not printed in the Gazette.]

1,113,977. DETACHABLE AND REVERSIBLE COLLAR FOR BLOUSES. WILLIAM FREEDMAN, Brooklyn, N. Y. Filed Mar. 28, 1914. Serial No. 827,786. (Cl. 2—62.)



A detachable and reversible collar for a garment having lapels in front and fastening means beneath the lapels, the collar comprising an extended flat body to hang down the wearer's back, and being provided with an incut side to fit around the back of the wearer's neck and with projecting portions at the ends of said side and another projection at the middle of said side, the last-named projection being adapted to be secured to the back of the garment, and the other projections being adapted to pass forward over the wearer's shoulders and be secured beneath the lapels by said fastening devices.

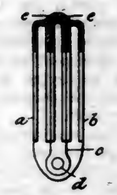
1,113,978. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 5, 1912 Serial No. 675,515. (Cl. 70—116.)



1. The combination with a pair of jaws, one of which has a slot therein, of a catch member provided with a means of pivotal connection extending through the slot of said last mentioned jaw, and having interlocking engagement with the other jaw, said catch member having one side thereof provided with an integral extension folded back upon itself, the folded extension projecting through said slot, a channel-shaped spring clip frictionally secured to the inner portion of one of said jaws and in close proximity to the pivotal connection of said catch member, said clip being provided with apertures and a central depressed portion, and a torsion spring, one end of which is secured in the apertures and central depression of said clip and the other end of which is secured to and passes through the folded extension of the catch member.

2. The combination with a pair of jaws, a catch member mounted upon one of said jaws, and having interlocking engagement with the other jaw, a channel-shaped spring clip frictionally secured to the inner portion of one of said jaws and in close proximity to said catch member, said spring clip consisting of a single piece of metal channeled and provided with spring holding means, and a spring, one end of which passes through the spring-holding means of said clip and the other end of which is secured to the catch member.

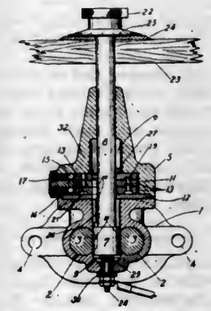
1,113,979. BAG-FRAME. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed June 5, 1912. Serial No. 701,735. (Cl. 150—29.)



1. In a device of the character described, two outside U-shaped bag frame members, an intermediate U-shaped bag frame member, and means for pivotally connecting the lower ends of said bag frame members, the outside bag frame members each comprising a main body portion and end members extending therefrom formed from an unbroken flat piece of sheet metal, and a continuous reinforced upwardly and outwardly projecting flange extending around the inner edge of said body portion and the end members, and adapted to inclose said intermediate member when said outside frame members are in closed position, the intermediate frame member comprising an unbroken channeled body portion having end members extending therefrom, the intermediate frame member being adapted to underlie the abutting flanges extending along the inner edges of the outside frame members and to lie within the space between the flanges extending from said outside frame members.

2. In a device of the character described, two outside bag frame members, an intermediate bag frame member, and means for pivotally connecting the lower ends of said bag frame members, the outside bag frame members each comprising a channeled strip formed from an unbroken flat piece of sheet metal, and a continuous flange extending around the inner edge of each of said members, said flange being formed by overlapping the metal of which said frame members are formed and adapted to inclose said intermediate member when said outside frame members are in closed position, the intermediate member comprising a channeled strip formed from an unbroken flat piece of sheet metal, the intermediate frame member being adapted to underlie the flanges extending along the inner edges of the outside frame members and to lie within the space between the flanges extending from said outside frame members.

1,113,980. AUTOMOBILE-LOCK. CLAUDE E. FURGASON, Lansing, Mich. Filed Mar. 20, 1914. Serial No. 826,072. (Cl. 70—90.)



1. The combination in an automobile lock, of a main body provided with openings adapted to slidably receive the gear shifting rods of an automobile, and a bolt adapted to simultaneously engage with notches formed in said gear shifting rods.

2. The combination in an automobile lock, of a main body provided with openings adapted to slidably receive the gear shifting rods of an automobile; a bolt adapted to simultaneously engage with notches formed in said gear shifting rods, and means for operating said bolt.

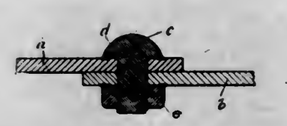
3. The combination in an automobile lock, of a main body provided with openings adapted to slidably receive the gear shifting rods of an automobile; a bolt adapted to simultaneously engage with notches formed in said gear shifting rods; means for operating said bolt, and means for locking said bolt in position.

4. The combination in an automobile lock, of a main body provided with openings adapted to slidably receive the gear shifting rods of an automobile; a bolt adapted to simultaneously engage with notches formed in said gear shifting rods; means for operating said bolt, and a lock for locking said bolt in position.

5. The combination in an automobile lock, of a main body adapted to be attached to an automobile frame, and provided with openings adapted to slidably receive the gear shifting rods of an automobile; a bolt adapted to simultaneously engage with notches formed in said gear shifting rods; means for operating said bolt, and a combination lock for locking said bolt in position.

[Claim 6 not printed in the Gazette.]

1,113,981. STRUCTURAL CONNECTION. CHESTER F. GAILOR, Hartford, Conn. Filed Feb. 3, 1913. Serial No. 745,784. (Cl. 151—1.)



A structural iron work connection comprising a pair of lapped metal members having registering openings therein, a headed metal bolt passed through said openings and having its head engaging the adjacent metal member and cohesively united thereto by welding at the exposed contacting faces, a nut mounted on the other end of the bolt and engaging its adjacent metal member and cohesively united to the said metal member and bolt by welding at the exposed contacting faces alone.

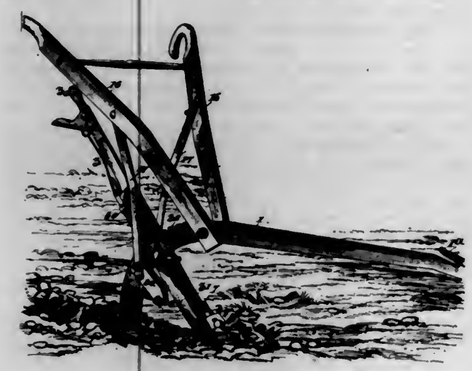
1,113,982. PLOW. EDWARD O. GAY, Red Springs, N. C., assignor of one-third to William Jones and one-third to Martin McKinnon, Red Springs, N. C.; Jno. H. McKay administrator of said Gay, deceased. Filed Oct. 3, 1913. Serial No. 793,166. (Cl. 97—26.)

1. In a plow having a fixed runner, a beam whose rear end curves downwardly and pivotally joins with the rear end of the runner, a plow carrying standard pivotally mounted on the front end of the runner, and means for reciprocatably moving the plow with respect to the standard, and simultaneously raising and lowering the plow beam as the said standard is swung in reverse directions.

2. In a plow point having a fixed runner, a standard pivotally connected to the front end of the runner, a plow beam pivotally connected to the rear end of the runner, a plow point carried by the standard, and means for maintaining a relatively fixed relation between the plow point, the beam and the runner as the plow is adjusted to its digging positions.

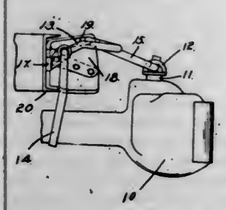
3. In a plow of the character stated, the combination with the beam having a downwardly curved rear end, a runner pivotally mounted on the said end and projected forwardly therefrom, a standard pivotally mounted on the front end of the runner, a plow carried on the standard, and means operable through the backward and forward movements of the standard for effecting a sliding movement of the plow on the standard and simultaneously raising and lowering the draft end of the plow beam.

4. In a plow, a plow carrying standard pivotally mounted to swing backwardly and forwardly, and means for reciprocably moving the plow point with respect to the standard, the said means comprising a plow carrier slidable on the standard, a bracket projected inwardly from the rear end of the beam, a slotted link slidable on the said bracket and pivotally connected to the plow carrier and a second link pivotally connected at one end to the slotted link, and pivotally connected at the upper end to the standard.



5. In a plow having a fixed runner, a beam having a downwardly curved rear end pivotally connected to the rear end of the runner, a standard pivotally connected to the front end of the runner, a plow point carrier mounted to slide upon the standard, means for simultaneously moving the plow point on the standard and the beam relatively to the plow point when the said standard is moved backwardly or forwardly, the said means consisting of a slotted link pivotally connected to the upper end of the plow carrier and slidably connected with the beam, a second link disposed at substantially right angles to the slotted link and projected vertically therefrom, the said link being pivotally mounted on the slotted link and a pivotal connection that joins the said second link with the upper end of the standard, the said connection consisting of a cross bolt on the standard that bears against the under edge of the beam as the parts are adjusted for use.

1,113,983. UNCOUPLING MECHANISM. GEORGE HENRY GILMAN and HENRY MILLS ROBERTSON, St. Paul, Minn. Filed Jan. 12, 1914. Serial No. 811,615. (Cl. 213—59.)

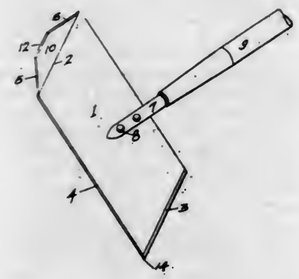


1. Uncoupling mechanism comprising a revoluble uncoupling element adapted to be engaged directly with the locking pin of a coupler, a bearing member for the end of said element remote from the coupler and a bearing member for the other end of said element provided with an elongated bearing slot in which said element is slidably as well as revolubly mounted which slot is inclined from the horizontal at an angle which causes the rod to positively move the pin vertically from its locking position when the coupler moves outwardly beyond its normal outer limit.

2. Uncoupling mechanism comprising a revoluble uncoupling rod formed at the outer end with an angularly disposed handle and at the other end with a cranked portion adapted to extend through the eye of the locking pin of a coupler, a bearing member for the outer end of said rod, and a bearing member for the inner end thereof provided with an elongated bearing slot in which said rod is slidably as well as revolubly mounted, which slot is inclined from the horizontal at an angle which causes the rod to positively move the pin vertically from its locking position when the coupler moves outwardly beyond its normal outer limit.

3. Uncoupling mechanism comprising a revoluble uncoupling rod formed at the outer end with an angularly disposed handle and at the inner end with a cranked portion adapted to extend through the eye of the locking pin of the coupler, a bearing member for the outer end of said rod, a bearing member supporting the rods between the handle and the cranked portion thereof provided with an elongated bearing slot above the eye of the pin in the locking position of the latter in which said element is slidably as well as revolubly mounted, and means providing a loose connection between the inner extremities of the rod and the end of the car which allows the rod to move in and out to the extent of the normal movement of the coupler which transmits the stress on the rod to the end of the car if the coupler moves outwardly beyond its normal limit.

1,113,984. LAWN-EDGING TOOL. WILLIAM Q. GLASS, Long Beach, Cal. Filed Oct. 7, 1913. Serial No. 793,853. (Cl. 97—28.)

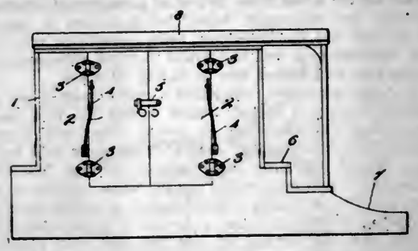


1. As a tool for trimming and ditching the edge of a lawn, the combination with a suitable handle, of a blade secured to said handle having the shape of a parallelogram at the base thereof, a cutting edge on the front of said base substantially at right angles to said handle, a cutting edge on one end of said base at an acute angle to said front edge, and an upturned end at the other end of said base having a cutting edge parallel to the base and a diagonal cutting edge at each side of said upturned portion extending from the edge thereof to the base, as described.

2. As a tool for trimming and edging a lawn, the combination of a blade having cutting edges on two of its sides, and one of said edges being at an angle acute to the other, and one end of said blade having the form of a trapezoid being bent upwardly to form an auxiliary cutting edge at right angles to said blade, and a handle secured to said blade at right angles to the front edge thereof, as described.

1,113,985. PARCEL-DELIVERY-VEHICLE BODY. ROBERT ENSLEY GREENE, Memphis, Tenn. Filed Nov. 13, 1913. Serial No. 800,797. (Cl. 21—7.)

1. In a vehicle body the combination of a tier of shelves extending across the front portion of said body; a tier of shelves extending across the rear portion of said body; a pair of outwardly swinging doors on each side of said body and located between said front and rear shelves; and a plurality of tiers of shelves carried by said doors, substantially as described.



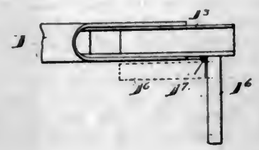
2. In a vehicle body provided with a bottom compartment the combination of a tier of shelves extending across the front portion of said body above said compartment; a tier of shelves extending across the rear portion of said body above said compartment; a pair of outwardly swinging doors on each side of said body and located between said front and rear shelves; and a plurality of tiers of shelves carried by said doors, substantially as described.

3. In a vehicle body provided with a bottom compartment having partially cut away sides, the combination of tiers of shelves at the front and rear of said body above said compartment; a pair of doors located on each side of said body positioned between said tiers of shelves and fitting said cut-away sides; and a tier of shelves carried by each door, substantially as described.

4. In a vehicle body provided with a bottom compartment having partially cutaway sides, the combination of tiers of readily removable inclined shelves at the front and rear of said body above said compartment; a pair of outwardly swinging doors located on each side of said body, positioned between said tiers of shelves, and fitting said cutaway sides; and tiers of shelves cut away at their meeting ends carried by said doors, substantially as described.

5. In a vehicle body the combination of a plurality of tiers of shelves located on the inside thereof; a pair of outwardly swinging doors on each side of said body between said tiers of shelves; a tier of shelves on each door adapted to swing in and out of said body; and a roof extending over said body and beyond the sides thereof to protect said last mentioned shelves when in their swung out positions, substantially as described.

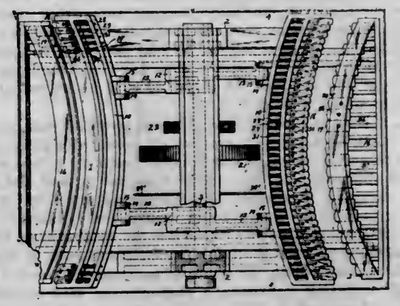
1,113,986. WIRE-STRIPPER. THOMAS L. GREGSON and JAMES I. PAYETTE, Chicago, Ill. Filed May 26, 1913. Serial No. 769,831. (Cl. 81—9.5.)



1. The combination with a pair of pliers of wire stripper blocks pivoted on said pliers, wire stripping means mounted in said blocks, said blocks being free to rotate through an angle of 90 degrees away from the pliers and means for limiting said rotation.

2. The combination with a pair of pliers of wire stripper blocks pivoted on said pliers, wire stripping means mounted in said blocks, said blocks being free to rotate through an angle of 90 degrees away from the pliers and means for limiting said rotation, said blocks being apertured and provided with opposed knives in said apertures.

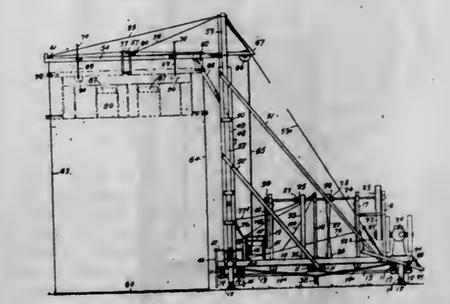
1,113,987. SPRING-MANUFACTURING MACHINE. EDWARD J. HARVEY, Racine, Wis., assignor to Harvey Spring & Forging Company, Racine, Wis., a Corporation of Wisconsin. Filed Apr. 12, 1913. Serial No. 760,571. (Cl. 148—36.)



1. In a machine of the described class, the combination of a liquid tank, an oscillating platform, means for pivotally supporting said platform in connection with said tank, a clamping mechanism supported on the respective ends of said platform, a motor, manually operated means for connecting said motor both with said platform and clamping mechanism, whereby the power of the motor may be utilized for both oscillating said platform and operating said clamping mechanism and whereby metal is retained in its required shape while being tempered.

2. In a machine of the described class, the combination of a liquid tank, a pair of standards supported from said tank, a platform pivotally supported from said standards, a clamping mechanism supported on the respective ends of said platform, a motor, a revoluble shaft, a gear wheel, loosely supported on said shaft, a clutch, rigidly connected to said shaft, a manually operated rod connected with said clutch, means connected with said rod for manually throwing said clutch into locking engagement with said wheel, whereby the revoluble movement of said wheel will be communicated to said clutch and shaft, means for communicating motion from said shaft, when revolved, to said clamping mechanism, whereby the heated metal will be forced into the required shape, and automatic means, connected with said revoluble shaft for actuating said pivotally supported platform after said metal has been clamped.

1,113,988. HAY AND GRAIN STACKER. JAMES M. HARVEY and JOHN A. HARVEY, Ogden, Kans. Filed Nov. 26, 1912. Serial No. 733,605. (Cl. 57—53.)



1. A stacker comprising an elevated supporting member, a platform provided with a plane portion and with a tilting portion movably connected with said plane portion, means for raising and lowering said platform, mechanism carried by said elevated supporting member for engaging

said movable portion of said platform so as to sustain said movable portion on said platform, and means for lowering the portion of said platform opposite said movable portion thereof in order to tilt said platform.

2. A stacker comprising a traveling framework, an elevated supporting member carried thereby, a platform movable relatively to said elevated supporting member, hooks mounted upon said elevated supporting member and adapted to engage a portion of said platform in order to cause said platform to tilt, and means controllable by the travel of the machine for throwing said hooks out of the path of travel of said fork.

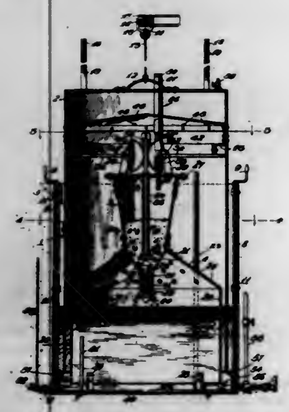
3. A stacker comprising a carriage provided with wheels for engaging a track, a framework mounted rigidly upon said traveling carriage and provided with a vertically disposed slideway, a sliding frame mounted in said slideway and carrying horizontal rails extending laterally to the line of travel of the carriage, means controllable at the will of the operator for adjusting the said sliding frame to different heights relatively to said framework, a jointed platform for holding the material to be stacked, and a plurality of flexible connections supported by said horizontal rails and secured to said jointed platform, and mechanism controllable by the operator for virtually varying the length of said flexible connections in order to raise and lower said jointed platform.

4. A stacker comprising a traveling carriage resting upon a track and movable relatively to the same, a framework mounted rigidly upon said carriage and provided with a vertically disposed slideway, a sliding frame mounted in said slideway and having horizontal rails extending at right angles to the general path of travel of said carriage, hoisting mechanism, a jointed platform movable vertically by said hoisting mechanism, and means common to said hoisting mechanism and said carriage for actuating the same either simultaneously or separately at the will of the operator.

5. A stacker comprising a traveling carriage, an elevated supporting member carried thereby, hoisting mechanism, a jointed elevating platform movable vertically toward and from said elevated supporting member by means of said hoisting mechanism, means common to said carriage and said hoisting mechanism for actuating the same so as to tilt said platform in the general direction of the travel of the carriage and at points lateral to said path of travel of said carriage.

[Claims 6 and 7 not printed in the Gazette.]

1,113,989. ACETYLENE-GAS GENERATOR. JOHN K. HAWKINS, Mohawk, Tenn. Filed Mar. 23, 1914. Serial No. 826,619. (Cl. 48—38.)



1. A gas generator comprising a water tank, a gas bell therein, a carbid hopper within said bell and supported by said water tank, means for controlling the discharge of carbid from said hopper, means for conducting the generated gas from said bell, a hopper filling tube depending through the top of said bell and a removable closure for said tube, the latter being formed of a number of telescopic sections, the uppermost thereof being secured to the top of the bell and the lowermost being secured to said hopper, whereby said bell is allowed vertical movement and access into said hopper may be had at all times.

2. A gas generator comprising a water tank, a gas bell slidable therein, a carbid hopper within the bell, means controlling the discharge of carbid from said hopper, means for conducting the generated gas from said bell, a cone shaped deflecting plate secured to said bell in a plane above said hopper and spaced below the top of said bell, a section of tubing carried rigidly by said hopper and projecting into its interior, a section of tubing depending rigidly through the top of said bell and said reflecting plate, a number of telescopic sections of tubing between said first mentioned sections and a removable closure for the uppermost section.

3. A gas generator comprising a water tank, a gas bell slidable therein, a gas outlet from said bell, a projection on the interior of the bell, a carbid hopper within said bell and supported rigidly by said tank, said hopper having a funnel shaped lower end, a valve within said hopper and coacting with said funnel shaped end, a valve stem rising from said valve and projecting above said hopper, rack teeth on opposite sides of the upper end of said stem, posts rising from said hopper, levers pivoted to said posts and segmental gears on the inner ends of said levers and in mesh with said rack teeth, the outer ends of said levers projecting into the downward path of the projection on said bell.

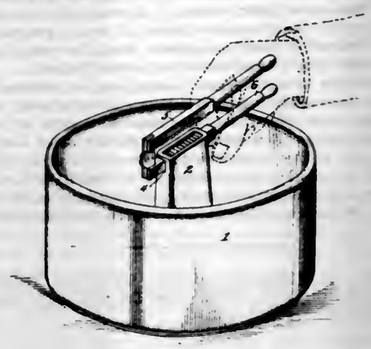
4. A gas generator comprising a water tank, a gas bell slidable therein, a gas outlet from said bell, a plurality of brackets projecting inwardly from said bell near its top, a ring secured to said bracket, a carbid hopper within said bell and rigidly supported by said water tank, said hopper having a funnel shaped lower end, a valve within said hopper and coacting with said lower end, a valve stem rising from said valve and projecting above said hopper, rack teeth on opposite sides of the upper end of said stem, posts rising from said hopper, levers pivoted to said posts, and projecting outwardly into the downward path of said ring, and segmental gears on the inner ends of said levers and in mesh with said rack teeth.

5. A gas generator comprising a water tank, a gas bell slidable therein, a gas outlet from said bell, a plurality of brackets projecting inwardly from said bell near its top, a ring secured to said brackets, a carbid hopper within said bell and rigidly supported by said water tank, said hopper having a funnel shaped lower end, a valve within said hopper and coacting with said lower end, a valve stem rising from said valve and projecting above said hopper, rack teeth on opposite sides of the upper end of said stem, posts rising from said hopper, levers pivoted to said posts, and projecting outwardly into the downward path of said ring, segmental gears on the inner ends of said levers and in mesh with said rack teeth and a cone shaped deflecting plate secured to said bell between said ring and its top, said plate having openings around its edge above the spaces between said brackets and above the space between said ring and the bell, whereby said hopper, the parts carried thereby, the ring and the brackets are shielded against drippings from the top of the bell.

1,113,990. NUT-BOWL. EMMA E. HENDERSON, Denver, Colo. Filed Apr. 30, 1914. Serial No. 835,477. (Cl. 146—3.)

1. A nut-bowl provided with a support projecting upward centrally from the bottom of the bowl, having a seat at its upper end, in combination with a nut-cracker comprising a pair of pivoted jaws, one of the jaws of which is secured in said seat leaving the other jaw in position for pivotal movement.

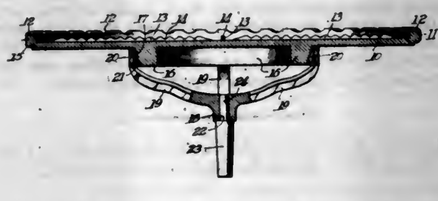
2. The combination with a nut-bowl, of a support of elongated shape in cross-section projecting upwardly from the bowl, and formed at its upper end with a recessed seat extending throughout the longer diameter of the support, and a nut-cracker consisting of co-acting pivoted members having one of its pivoted members secured in said seat, whereby the cracker is suitably supported for use in cracking nuts, and also serves as a handle for the bowl.



3. The combination with a nut-bowl, having a standard projecting centrally from the bottom of the bowl, and provided at its upper end with a seat, of a nut-cracker consisting of a pair of co-acting members, one of said members resting on said seat, and means for securing said member to adapt the nut-cracker to serve as a bowl handle.

4. The combination with a nut-bowl provided with a standard projecting upward from the center of the bowl and a nut-cracker consisting of two co-acting pivoted members each having a handle, and one of which is detachably secured to said standard and adapted to serve as a handle for the bowl.

1,113,991. TABLE FOR INSTRUMENTS AND THE LIKE. FRANK B. HENDERSON, Chicago, Ill. Filed Nov. 22, 1913. Serial No. 802,340. (Cl. 45—31.)



1. The combination of a table top, a downwardly tapering extension upon the lower side thereof, a support for the top provided with a band having a vertically disposed inner wall spaced from the extension, and a layer of elastic cement securing the band to the extension.

2. The combination of a table top formed of frangible material, a downwardly tapering extension of frangible material formed upon the lower side thereof, a support for the table top, a metallic band having a vertical inner wall surrounding the extension in spaced relation thereto, and a layer of elastic cement between the band and the extension securing them together.

3. The combination of a glass table top, a support therefor, a downwardly tapering glass extension formed upon the lower side of the table top, a metallic band upon the support having its inner wall disposed vertical and surrounding the glass extension in spaced relation thereto and a layer of elastic cement positioned between the band and the extension, and securing them together.

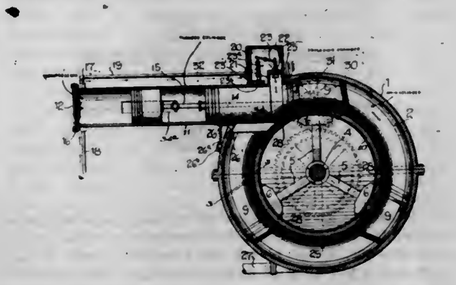
1,113,992. GARMENT. EDMUND C. HEYN, Catonsville, Md., assignor to The B. V. D. Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 23, 1913. Serial No. 796,871. (Cl. 2—96.)

1. A connecting means for upper and lower garments comprising a tab secured to the upper garment at the upper marginal end of a longitudinal slit formed in said garment, fastening means carried by the tab, and complementary fastening means secured to the lower garment in that portion registering with the tab when the garments are in wearing position.

2. An upper garment formed with opposing longitudinally extending slits, tabs secured to the upper marginal end of the strips, fastening means carried by the tabs, and complementary fastening means carried by the lower garment in those portions registering with the tabs when the garments are in wearing position.

3. An undershirt formed with opposing longitudinally extending slits opening through the lower edge of the garment, tabs secured to the garment at the upper marginal end of the slits, a series of button holes formed longitudinally of the tabs, and drawers provided with a longitudinal series of butons on those portions of the drawers registering with the tabs when the garments are in wearing positions.

1,113,993. ROTARY GAS-ENGINE. CHARLES H. HILDRETH and CLIFTON C. DAUBENSPECK, Olifield, Ill. Filed Jan. 3, 1914. Serial No. 810,201. (Cl. 123—15.)



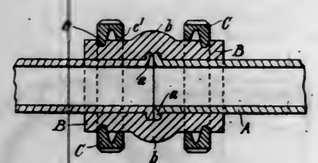
1. An engine of the class described including a casing provided with a passage-way, a rotor operatively mounted therein, a tubular extension formed on said casing substantially tangential thereto and communicating therewith, a hinged member mounted at the junction of the extension and said casing adapted to normally form an obstruction in the passage-way of the casing, said hinged member being designed to conform respectively to the outline of the casing and the extension to complete the formation thereof, one at a time, at the junction of said extension and casing, means for supplying an explosive mixture to said extension, means within said extension for

compressing the mixture therein, and additional means for passing the compressed mixture to the inner end of said extension at predetermined times.

2. An engine of the class described including a casing provided with a passage-way, a rotor operatively mounted therein, an extension formed on the casing substantially tangential to the periphery of the latter and communicating with the interior thereof, the inner end of said extension at the point of communication thereof with the casing being designed to form an explosion chamber, an oscillating valve member mounted at the junction of the extension and casing and adapted to form an obstruction in the passage-way of the latter and also designed to form a wall of said explosion chamber, said valve member being also designed to conform respectively to the contour of the extension and casing at the juncture thereof when said valve member is respectively disposed to the extremities of its movement, means to supply an explosive mixture to said extension, means for compressing the mixture in said extension, and means coöperating with the last referred to means for admitting the compressed mixture to the explosion chamber at predetermined times.

3. An engine of the class described comprising a tubular member of annular design formed in sections secured one to the other to form a casing having a passage-way, pistons operatively mounted therein, a tubular extension formed on one of the sections of said annular member, substantially tangential thereto and communicating with the interior thereof, a valve member hinged at the point of junction between the extension and the one section of the casing, said valve member being designed on its one face to conform to the contour of the tubular casing when said valve is disposed in one position and having its opposite face designed to conform to the contour of the tubular extension when said valve is disposed in an opposite position, said valve member in the last mentioned position forming an obstruction in the passage-way of the casing, means for supplying an explosive mixture to the outer end of said extension, means for compressing said mixture in the extension, and means for admitting the compressed mixture at predetermined times to the inner end of the extension at the junction thereof with the casing.

1,113,994. JOINT FOR BREWERS' AND LIKE PIPES. HENRY HILL, Hoxton, London, England. Filed Sept. 4, 1913. Serial No. 788,042. (Cl. 137—28.)



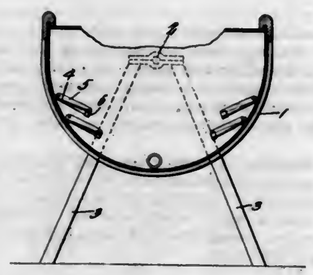
1. Joint for brewers' pipes comprising in combination abutting flanged pipe ends, a rubber sleeve inclosing said abutting ends, rings placed on respective ends of said sleeve and a plurality of worms formed on the interior of each ring each worm being of decreasing diameter outward from the side disposed toward said abutting ends and the commencement of the large diameter part of each worm being arranged substantially diametrically opposite to the commencement of the corresponding part of another worm on the same ring.

2. Joint for brewers' pipes comprising in combination abutting flanged pipe ends, a rubber sleeve surrounding said abutting ends, rings placed on respective ends of said sleeve and two worms of a double threaded screw formed on the interior of each ring each worm being of gradually decreasing diameter and gradually increasing depth outward from the side of the ring disposed toward said abutting ends.

3. Joint for brewers' pipes; comprising in combination abutting flanged pipe ends, a rubber sleeve inclosing said ends, rings placed on respective ends of said sleeve two worms of a double threaded screw formed on the interior of each ring each worm being of decreasing diameter outward from the side of the ring disposed toward said abutting ends and the commencement of the large diameter part of one worm being arranged substantially diametrically opposite to the commencement of the corresponding part of the other worm and means upon the exterior of each of said rings to facilitate the turning thereof.

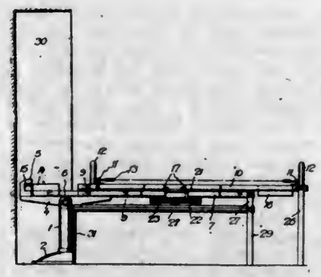
4. Joint for brewers' pipes; comprising in combination abutting flanged pipe ends, a rubber sleeve inclosing said ends and rings placed on the respective ends of said sleeve said rings each having a roughened outer surface and formed on its interior with two worms of a double threaded screw each worm being of gradually decreasing diameter and gradually increasing in depth outward from the side of the ring disposed toward said abutting ends.

1,113,995. WASHING-MACHINE. GEORGE H. HUENERGARDT, College View, Nebr. Filed Dec. 23, 1912. Serial No. 738,329. (Cl. 68—21.)



In a washing machine, the combination with a tub mounted for oscillation, of opposed dashers arranged transversely within the tub and inclined downwardly and inwardly, each of said dashers having a straight edge bearing against the adjacent wall of the tub and preventing leakage between the dasher and wall, each dasher also having corrugations extending from points adjacent said straight edge to the opposed free edge of the dasher, said corrugations gradually increasing in depth toward the free edge of the dasher, said corrugations being extended substantially at right angles to said straight edge.

1,113,996. BED. LEWIS C. HUNTER, Detroit, Mich. Filed Jan. 24, 1914. Serial No. 814,025. (Cl. 5—18.)



1. A bed structure comprising uprights, connected arms pivotally supported by said uprights, longitudinal supports carried by said arms, a bed frame shiftable longitudinally

of said supports, and inter-locking means between said bed frame and said supports whereby said bed frame can be swung in a horizontal plane at an angle to said supports.

2. A bed structure comprising uprights, side arms pivotally mounted in the upper ends of said uprights, a bed frame movably supported from said side arms and capable of shifting longitudinally thereof, and means in connection with said bed frame and said arms for preventing said frame from becoming accidentally displaced.

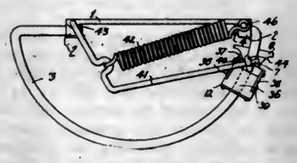
3. A bed structure comprising uprights, side arms pivotally supported thereby, a bed frame movable longitudinally of said side arms, means carried by the inner ends of said bed frame to prevent the same from becoming accidentally displaced relatively to said side arms, and means carried by the outer end of said bed frame for supporting said frame in a horizontal position.

4. A bed structure comprising uprights, arms pivotally supported thereby, a bed frame movable longitudinally of said arms, means carried by the outer end of said bed frame for supporting the same in a horizontal position, and means carried by said arms to facilitate swinging said bed frame to a vertical position.

5. A bed structure comprising uprights, side arms pivotally supported thereby, supports carried by said side arms, a bed frame movable upon said supports, means carried by the outer ends of said supports and coöperating with said uprights in supporting said bed frame in a horizontal position, and means carried by said side arms to facilitate swinging said bed structure to a vertical position.

[Claims 6 to 19 not printed in the Gazette.]

1,113,997. CONTROLLER FOR DOORS AND LIKE MOVABLE STRUCTURES. DAVID JAMES HURLEY, Sale, Victoria, Australia. Filed June 17, 1913. Serial No. 774,181. (Cl. 16—46.)



1. The combination with a screw plate for attachment to a door frame, of a curved rod pivotally supported on said plate over the path of the door, a bracket fitted to the door and engaging said rod, a casing surrounding said rod and detachably secured to the bracket, pieces of gripping material fitted within said casing, curved plates and a screw in said casing designed to press said pieces upon the rod, a member fitted to said bracket and disposed to receive and have sliding engagement with the outer end of an arm fitted to the screw plate, and a spring connection between said arm and plate, substantially as described.

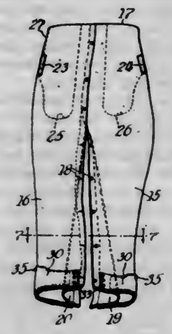
2. The combination with a curved rod to be set over the path of the door, of a bracket fitted to and loosely engaging said rod, said bracket being carried by the door, a casing detachably connected to said bracket by hook-like members, and adjustable gripping devices in said casing.

3. The combination with a curved rod to be set over the path of the door and having fixed pivotal supports to be secured to the door frame, of a bracket fitted to the door and a casing detachably fitted to said bracket and having internally disposed gripping members for engaging said rod, substantially as described.

4. The combination with a plate to be affixed to the door frame, said plate having slots with enlarged ends, of a curved rod having recesses adjacent to its ends and adapted to engage the narrow portions of the slots in the said plate.

5. The combination with a plate to be affixed to the door frame, said plate having slots adapted to receive the ends of a curved rod and support it over the path of the door, of pawls for retaining the ends of said rod in engagement with the slots.

1,113,998. SKIRT. KATHERINE JOHNSON, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,909. (Cl. 2—41.)



1. A skirt of the character described, divided at the front and back to produce two connected sections, an interior portion for each section, the edges of the interior portions being connected with the inner edges of the respective sections and coöperating therewith to form leg portions, the upper portion of said interior portions being shaped to coöperate to form an open crotch portion, fastening devices for securing the crotch portion closed, and means whereby the edges of one of the said sections may be secured directly to the respective adjacent edges of the other section to produce a skirt form, the edges of each section being also adapted to be secured one directly to the other to conceal and inclose the said interior portions to convert the garment from a skirt form into a trousers form.

2. A skirt of the character described, divided at the front and back to produce two connected sections, an interior portion for each section, the edges of the interior portion being connected with the inner edges of the respective sections and coöperating therewith to form leg portions, the upper portion of said interior portions being shaped to coöperate to form an open crotch portion, fastening devices for securing the crotch portion closed, and separable fastening means extending along the edges of the two sections, the fastening means along the edges of one section directly coöperating with the fastening means along the respective adjacent edges of the other section to separably secure the two sections one directly to the other to produce a skirt form, and the fastening devices along the edges of each section adapted to coöperate with each other to inclose the said inner portions and convert the garment from a skirt form into a trousers form,

3. A skirt of the character described, divided at the front and back to produce two connected sections, an interior portion for each section, the edges of said portions being connected directly with the respective inner edges of the respective sections and coöperating therewith to form leg portions, the upper portion of said interior portions being shaped to coöperate to form an open crotch portion, fastening devices for securing the crotch portion closed, means whereby the edges of one of the said sections may be secured directly to the respective adjacent edges of the other section to produce a skirt form, the edges of each section being also adapted to be secured one directly to the other to inclose the respective inner portions and to convert the garment from a skirt form into a trousers form, pocket openings extending through the said sections, and pockets connected with the openings and disposed inside of the garment.

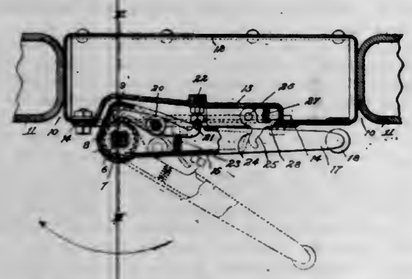
4. A skirt of the character described divided at the front and back to produce two connected sections, an interior portion for each section, the edges of said portions being secured directly to the respective edges of the respective sections to form leg portions, the upper part of said portions being detached and shaped to form an open crotch portion, the edges of which crotch portion are

adapted to overlap, fastening devices extending along the edges of the said sections, the fastening devices on the edges of each section adapted to coöperate to secure the adjacent edges of the sections one directly to the other to produce a skirt form, and to be detached to convert the garment into a divided skirt, pocket openings in each of the said sections, and pockets connected with the openings and arranged within the skirt.

5. A skirt of the character described divided at the front and back to produce two connected sections, an interior portion for each section, the edges of said portions connected with the edges of the sections to form leg portions, the upper part of said portions being detached and shaped to form an open crotch portion, the edges of which crotch portion are adapted to overlap, fastening devices extending along the edges of the said sections and adapted to coöperate to secure the adjacent edges of the sections one directly to the other to produce a skirt form, and to be detached to convert the garment into a divided skirt, and a portion attached to each of the sections adjacent the bottom thereof, one end of each of said portions being detachably connected with the respective sections adjacent one edge of the latter, the detachable end of the last said portion being adapted to be fastened directly to the other edge of the respective section, to take up or fold the said interior portion to convert the garment from its divided skirt form to its trousers form.

[Claim 6 not printed in the Gazette.]

1,113,999. HAND-BRAKE. WILNER E. JOHNSON, Brooklyn, N. Y., assignor to Megosin Company, Inc., a Corporation of New York. Filed June 17, 1914. Serial No. 845,627. (Cl. 188—56.)



1. In a car, an inner wall provided with a recess, a brake-staff journaled on an axis adjacent said wall, a hand lever having one end journaled on the axis of said brake-staff, and means adapting said hand lever to move said brake-staff on its axis when said hand lever is moved away from said inner wall, said means including parts mounted on said hand lever and extending toward said inner wall, said parts being housed in said recess when the hand lever is nearest to said wall.

2. In a car provided with a recess in an inner wall thereof, a brake-staff journaled adjacent to said wall, a ratchet on the upper end of said brake-staff, a hand lever having one end oscillatably mounted adjacent to the upper end of said brake-staff, and provided with a projecting arm, said pawl being disposed within said recess when the hand lever is nearest said wall, and an abutment in said recess adapted to engage said arm to release said pawl from said ratchet.

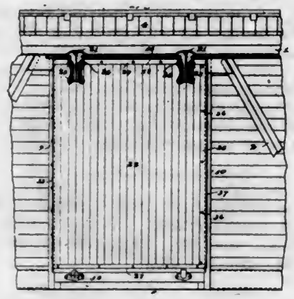
3. In a car, provided with adjacently disposed doorways, and an upright column between said doorways, the combination with the inner wall of said column provided with a recess, of a brake operating hand lever provided with attachments, said attachments being disposed within said recess when said hand lever is disposed adjacent to said wall.

4. In a car having an inner wall provided with a recess, a brake-staff mounted adjacent said wall, a hand lever carried by said brake-staff and having ratchet connection therewith, portions of said ratchet connection being mounted on said hand lever and extending into said recess when the hand lever is against said inner wall, and means mounted within said recess for releasing said ratchet connection when said hand lever is adjacent to said wall.

5. In a car, having an inner wall provided with a recess, a brake-staff having its axis adjacent said wall, a hand lever having a ratchet connection with said brake-staff, and a housing for said ratchet connection having a protuberant portion extending toward said wall, said housing being carried by said hand lever and entering said recess when the hand lever is adjacent to said wall.

[Claims 6 to 14 not printed in the Gazette.]

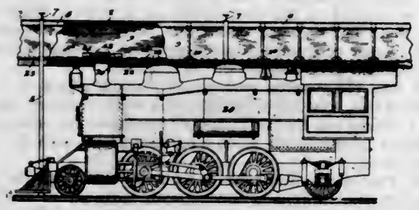
1,114,000. CAR STRUCTURE. BELDEN D. JONES, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Substitute for application Serial No. 706,967, filed July 1, 1912. This application filed May 22, 1914. Serial No. 840,167. (Cl. 20—22.)



1. The combination with a car body provided with a door opening positioned outward beyond the plane of the car side and a door adapted to be moved across said opening, of a track for supporting said door at its upper end, comprising a Z bar having its parallel bars horizontally arranged and its central bar arranged vertically, said door having a vertically extending bar positioned inside of the vertical portion of said Z bar and coöperating therewith to prevent lateral movement of the door.

2. The combination with a car body having a Z bar side plate arranged with its central web extending vertically substantially in the plane of the car side and its upper web extending inward beyond said plane and its lower web extending horizontally outward beyond the plane of the car side, of a door opening having the lower horizontal web of the car plate closing its upper edge, a door for closing said opening, said door having a roller at its upper end, and a track for supporting said roller comprising a Z bar having its upper horizontal flange secured to the lower horizontal flange of said side plate.

1,114,001. SMOKE-ABATING SYSTEM FOR RAILWAY-STATIONS. ROBERT A. ILG, Chicago, Ill. Filed Mar. 9, 1914. Serial No. 823,559. (Cl. 104—208.)



1. In a smoke-abating system for railway stations, the combination of a smoke conduit extending above a railway track, means for maintaining a vacuous condition therein, a series of normally closed valves in the bottom wall of said conduit, and means actuated by a locomotive on said track for opening said valves successively as it travels therebeneath.

2. In a smoke-abating system for railway stations, the combination of a smoke conduit extending above a railway track, means for maintaining a vacuous condition therein, a series of valves in the bottom wall of said conduit, means for maintaining said valves normally closed against the suction existing in the conduit, and means actuated by a locomotive on said track for opening said valves successively as it travels therebeneath.

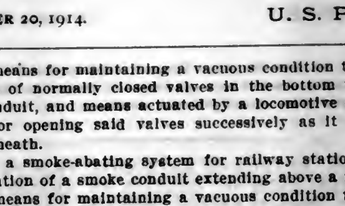
3. In a smoke-abating system for railway stations, the combination of a smoke conduit extending above a railway track and having a longitudinal slot in its lower wall, a series of hinged shutter-valves normally closing said slot, means for maintaining a vacuous condition in said conduit, means for maintaining said valves normally closed against the suction existing in the conduit, and means actuated by a locomotive on said track for opening said valves successively as it travels therebeneath.

4. In a smoke-abating system for railway stations, the combination of a smoke conduit extending above a railway track and having a longitudinal slot in its lower wall, a series of shutter-valves hinged adjacent to one edge of said slot and extending transversely of the latter in edgewise overlapping relation, means for maintaining a vacuous condition in said conduit, means for maintaining said valves normally closed against the suction existing in the conduit, and means actuated by a locomotive on said track for opening said valves successively as it travels therebeneath.

5. In a smoke-abating system for railway stations, the combination of a track-shed having a longitudinal slot located centrally above a track, a series of valves normally closing said slot, and a shoe mounted on the smoke-stack of a locomotive for opening said valves successively as said locomotive travels therebeneath.

[Claims 6 to 10 not printed in the Gazette.]

1,114,002. GARMENT-HANGER. LOESER KALINA, New York, N. Y. Filed Mar. 8, 1913. Serial No. 752,975. (Cl. 211—13.)



1. A garment hanger, comprising side arms made in foldable sections, a casing open at the sides and adapted to hold the said side arms in extended or folded position, and a cover mounted to slide up and down on the said casing to open and close the open sides thereof.

2. A garment hanger, comprising side arms made in foldable sections, a casing open at the sides and adapted to hold the said side arms in extended or folded position, a cover slidable on the said casing to open and close the open sides thereof, and a top plate mounted to turn on the top of the said casing and slidingly engaged by the said cover to allow of turning the top plate and cover at the time the latter is in open position.

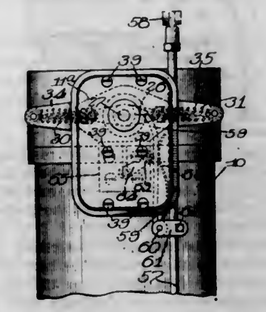
3. A garment hanger, comprising side arms made in foldable sections, a casing open at the sides and adapted to hold the said side arms in extended or folded position, the casing being provided with vertical guideways adjacent the open side arms, a cover having side arms slidable in the said guideways, and a top plate held on the said casing and limiting the cover in its outward sliding movement.

4. A garment hanger, comprising side arms made in foldable sections, a casing open at the sides and adapted to hold the said side arms in extended or folded position, the casing being provided with vertical guideways adjacent the open side arms, a cover having side arms slidable in the said guideways, and a top plate held on the said casing and limiting the cover in its outward sliding movement, the said top plate being mounted to turn on the casing and slidingly engaged by the said cover.

5. A garment hanger, comprising side arms made in foldable sections, a casing open at the sides and adapted to hold the said side arms in extended or folded position, a cover slidable on the said casing to open and close the open sides thereof, and a spring device held in the middle of the top portion of the casing and adapted to be engaged by the said side arms to start the same on sliding the cover into an open position.

[Claims 6 to 9 not printed in the Gazette.]

1,114,003. MAGNETO. EDMUND JOSEPH KANE, Chicago, Ill. Filed Aug. 25, 1911. Serial No. 645,934. (Cl. 123—149.)



1. In a magneto for explosive engines the combination with a rotor or inductor, of a plurality of magnets secured together and encircling the rotor or inductor, opposed pole pieces secured to the said magnets and coöperating with the rotor or inductor, a coil wound around one of the said pole pieces, side plates secured to the magnets and forming therewith a complete closure for the rotor or inductor, a shaft journaled in said side plates for supporting the said rotor or inductor, and means for imparting an oscillatory movement to the said rotor or inductor shaft by the running of the engine.

2. In a magneto for explosive engines the combination with a rotor or inductor, a plurality of magnets secured together and encircling the rotor or inductor, opposed side plates secured to the magnets and forming therewith a complete closure for the rotor or inductor, an oscillating shaft journaled in the said side plates for supporting the said rotor or inductor, elastic means for controlling the oscillating movement of the rotor, and an arm on one of the said side plates for supporting the said elastic means.

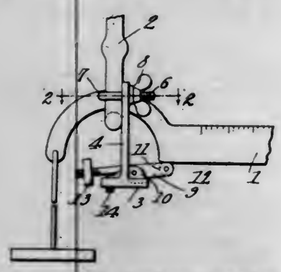
3. In a magneto for explosive engines the combination with a rotor or inductor, of a plurality of magnets, secured together and encircling the rotor or inductor, opposed side plates secured to the magnets and forming therewith a complete closure for the rotor or inductor, a shaft journaled in the said side plates for supporting the said rotor or inductor, a pair of springs adapted to control the movement of the said rotor or inductor shaft and a pair of opposed arms cast integral with one of said side plates and being adapted to support one end of each of said springs at their outer extremities.

4. In a magneto for explosive engines the combination with a rotor or inductor, of a plurality of magnets secured together and encircling the rotor or inductor, opposed side plates secured to the magnets and forming therewith a complete closure for the rotor or inductor, a shaft journaled in the said side plates for supporting the said rotor or inductor, opposite pole pieces secured to the said magnets on the interior of the closure, and means for securing the said side plates to the said pole pieces of the magnets.

5. In a magneto for explosion engines, the combination with a rotor or inductor, of a plurality of magnets secured together and encircling the inductor or rotor, said magnets being formed of relatively hardened steel, opposed side pieces secured to the magnets and forming therewith a complete closure for the rotor or inductor, pole-pieces of relatively soft iron removably secured to the magnets on the interior of the closure, and a coil secured to one of the pole-pieces.

[Claim 6 not printed in the Gazette.]

1,114,004. SCALE ATTACHMENT. EDWARD P. KENDALL, Bowdoinham, Me. Filed Oct. 18, 1913. Serial No. 795,896. (Cl. 73—177.)



1. In a device of the character described, a U-shaped body, means carried by the arms of the body for engaging the side members of a scale beam loop, and lifting means carried by the intermediate portion of the body coöperable with the scale beam.

2. In a device of the character described, a U-shaped body, means carried by the arms of the body for engaging the said members of a scale beam loop, lifting means carried by the intermediate portion of the body coöperable with the scale beam, and means carried by the intermediate portion of the body for limiting the movement of the lifting means.

3. In a device of the character described, a U-shaped body, the arms having transverse slots, bolts passing through the said slots and having hooks to engage over the side members of a scale beam loop, thumb nuts carried by the bolts to engage the arms of the said body, and lifting means carried by the intermediate portion of the body coöperable with the scale beam.

4. In a device of the character described, a member attachable to the frame of a scale beam, a lever fulcrumed upon the said member and having scale beam engaging means at one end, a weight carried by the other end of the lever, and an adjustable stop carried by the said member to limit the movement of the lever.

5. In a device of the character described, a member attachable to a frame of a scale beam, a pair of levers fulcrumed upon the said member, a roller terminally journaled between certain arms of the said levers and adapted to engage the lower edge of a scale beam, and weights carried by the other arm of the levers.

[Claims 6 to 10 not printed in the Gazette.]

1,114,005. RAIL-JOINT. EDWARD F. KENNEY, Westmont borough, Pa. Filed Mar. 6, 1911. Serial No. 612,441. (Cl. 151—38.)

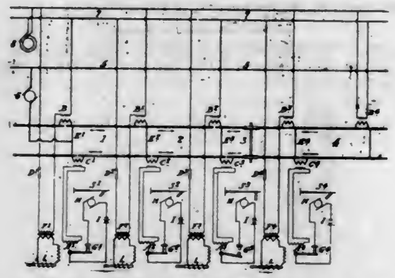
A spring-washer, comprising a central plate portion with integral thickened ribs of substantially trapezoidal section on two opposite edges thereof, said washer being provided with a central bolt opening and bowed in the direction of its fibers and of the ribs aforesaid.

1,114,006. METHOD OF EMBEDDING THIN PRINTED LABELS MADE OF GELATIN IN TRANSPARENT SOAP. HERMANN KESTNER, Mülhausen, Germany. Filed Nov. 26, 1913. Serial No. 803,359. (Cl. 25—7.)

1. A method of embedding thin printed labels made of gelatin in cakes of transparent soap, consisting in forming in the body of the cake a sheath-shaped slit to receive the label, placing the thin gelatin label between two strips of stiff paper, inserting the said strips with the label between them into the aforesaid slit, withdrawing first one and then the other of the said strips, and then passing the cake between pressing rollers to close the slit and force the air out of same.

2. A method of embedding thin printed labels made of gelatin in cakes of transparent soap, consisting in forming in the body of the cake a sheath-shaped slit to receive the label by means of a chisel-like blade formed with cutting edges at each side and also at its front end, placing the thin gelatin label between two stiff strips of paper which are slightly wider than the label and in one of which a number of pin-pricks are formed to prevent displacement of the label thereon, inserting the said strips with the label between them into the aforesaid slit, withdrawing first one and then the other of the said strips, and then passing the cake between pressing rollers to close the slit and force the air out of same.

1,114,007. ELECTRICAL SIGNALING SYSTEM. EDWARD E. KLEINSCHMIDT, New York, N. Y., assignor to Hall Switch & Signal Company, a Corporation of Maine. Filed Jan. 12, 1909. Serial No. 471,837. (Cl. 246—36.)

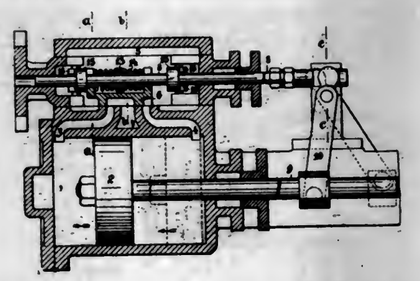


1. In a signaling system, the combination of rails having breaks therein, bonds across the rails dividing them into track circuits comprising adjacent bonds and the intervening rails, ironless track transformers having their secondaries each connected across a break in the corresponding one of said track circuits, a source of alternating current, primaries for said track transformers connected to said source, said primaries being arranged to impress currents of relatively opposite polarity upon adjacent track circuits, signals, means for each track circuit controlling the indication of a signal, said means being operated from the track circuit current and being arranged to be short-circuited by the wheels and axle of a car in said circuit.

2. In a signaling system, the combination of track rails, bonds across the rails dividing them into track circuits comprising adjacent bonds and intervening rails, a break in one of the rails of each track circuit, ironless track supply transformers, one for each circuit having its secondary connected across the break in the corresponding track circuit which it supplies, a source of alternating current, primaries for said track supply transformers connected with said source, said primaries being arranged to impress currents of relatively opposite polarity upon adjacent track circuits, a second break in one of the rails of each track circuit at the opposite end of the track circuits from the first break, ironless track relay transformers, one for each track circuit, the primaries of the track relay transformers being connected across said second breaks in the rails, multiple-phase relays, and signal operating circuits controlled by said relays, the secondaries of said relay transformers being in circuit each with a coil of the corresponding relay, the other coil of each relay being energized from the primary side of the track transformer for the adjacent track circuit.

3. In a signaling system, the combination of track rails, bonds across the rails dividing them into track circuits comprising adjacent bonds and intervening rails, a break in one of the rails of each track circuit, ironless track supply transformers, one for each circuit having its secondary connected across the break in the corresponding track circuit which it supplied, a source of alternating current, primaries for said track supply transformers connected with said source, said primaries being arranged to impress currents of relatively opposite polarity upon adjacent track circuits, a second break in one of the rails of each track circuit at the opposite end of the track circuits from the first break, ironless track relay transformers, one for each track circuit, the primaries of the track relay transformers being connected across said second breaks in the rails, multiple-phase relays, line relay transformers, and signal operating circuits controlled by said relays, the secondaries of said relay transformers being in circuit each with a coil of the corresponding relay, the other coils of the relays being in circuit each with the secondary of the corresponding line relay transformer, the primary of which is in circuit with the primary of the track supply transformer for the adjacent track circuit, each of said line delay transformers being provided with iron which is substantially saturated magnetically when said adjacent track circuit is carrying its regular current with no car on the rails of the circuit.

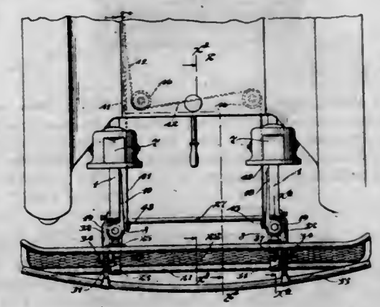
1,114,008. DUPLEX STEAM-PUMP. JOHAN KOFOED, Christiania, Norway. Filed Oct. 31, 1913. Serial No. 798,412. (Cl. 121—4.)



In a duplex pump a steam chest, two steam cylinders, a piston in each cylinder, a slide valve for each cylinder, a rod yieldingly connected with each valve, connecting means between each valve and the piston of its corresponding cylinder, collars on the said rods adapted to move the corresponding slide valve when the piston of the corresponding cylinder approaches the end of its stroke, projections on said slide valves, springs between said collars and said projections, and rocker arms pivoted on the steam chest to coöperate with the said rods for the purpose of transmitting the motion from the rod of one slide valve to the other side valve.

1,114,009. AUTOMOBILE-FENDER. WILLIAM A. LINQUIST, Minneapolis, Minn. Filed Sept. 5, 1912. Serial No. 718,646. (Cl. 105—130.)

1. The combination with a vehicle, of upright bearing sleeves carried by the front portion of the frame thereof and having forwardly offset vertical guides, of plunger bars working vertically through said bearing sleeves and having shoes at their lower ends, and a fender attached to said shoes having its upper portion held for vertical movements by the offset guides of said bearings.



2. The combination with a vehicle, of upright bearing sleeves secured to the front portion of the frame thereof, tubular plunger bars working in said bearing sleeves and provided with vertical slots and having shoes at their lower ends, abutments within said tubular plunger bars having stems projecting through the slots thereof and anchored to said bearing sleeves, and a fender attached to said shoes and movable downward therewith.

3. The combination with a vehicle, of bearing sleeves secured to the front of the frame thereof, and plunger bars working in said bearing sleeves and provided at their lower ends with shoes, guide bars secured at their lower ends to said sleeves, means for holding said plunger bars and shoes raised and for releasing the same, and a fender comprising a marginal frame and netting, the lower bar of said frame being attached to the front ends of said shoes, and the upper bar of said frame having guides mounted to slide vertically on said guide bars.

4. The combination with a vehicle, of vertical guides on the front portion of the frame thereof, plunger bars mounted to move vertically in said guides and having vertically spaced teeth, shoes applied to the lower ends of said plunger bars, a fender attached to said shoes, a rock shaft journaled to the said vertical guides and having retaining dogs simultaneously operative on the vertically spaced teeth of said plunger bars, and means operative on said rock shaft to simultaneously release said retaining dogs and thereby permit said plunger bars, shoes and fender to be lowered.

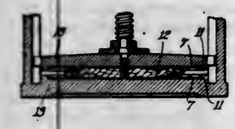
5. The combination with a vehicle, of vertical guides on the front portion of the frame thereof, plunger bars mounted to move vertically in said guides and having vertically spaced teeth, shoes applied to the lower ends of said plunger bars, a fender attached to said shoes, a rock shaft journaled to the said vertical guides and having retaining dogs simultaneously operative on the vertically spaced teeth of said plunger bars, and means operative on said rock shaft to simultaneously release said retaining dogs and thereby permit said plunger bars, shoes and fender to be lowered, the said tripping means comprising a forwardly spring-pressed tripping bar, supported in front of said fender.

1,114,010. METAL SOUND-RECORD. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 14, 1910. Serial No. 561,311. (Cl. 181—17.)

1. As an article of manufacture, a double-faced disk sound-record consisting of two metallic surfaces each provided at its rear with an inturned lip, and a connecting layer of material that will spread under pressure uniting said lips.

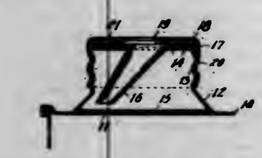
2. A two part sound-record consisting of two metal shells each containing a sound-record on its face and an

inturned lip at its rear, and non-metallic material that will spread under pressure uniting said lips.



3. A double-faced sound-record consisting of two metallic shells each having a sound-record on its face and having an inturned lip at its rear, and an interposed material that will spread under pressure engaging said lips and locking said shells together.

1,114,011. REVERSIBLE POURING-SPOUT FOR CANS. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed Jan. 15, 1913. Serial No. 742,107. (Cl. 221—24.)



1. A sealed can having a reversible, attachable spout and comprising, in combination: a can body having an opening therein; a threaded nozzle piece having a perforated top and an imperforate bottom secured in position over the opening in the body, said bottom normally forming a seal over said opening, but being adapted to be perforated; a reversible spout of less height than the height of said nozzle piece, and having a flange at the base thereof; and a perforated, screw cap coperating with the screw nozzle and adapted to clamp the flange of the spout between it and the top of the nozzle, substantially as specified.

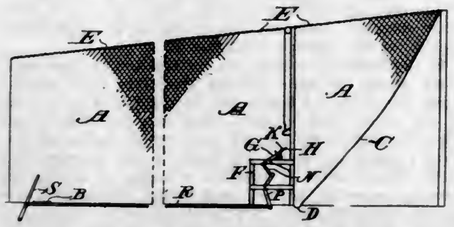
2. A sealed can having a reversible, attachable spout and comprising, in combination: a can body having an opening therein; a nozzle piece having a perforated top and an imperforate bottom and secured over the opening in said body, said imperforate bottom normally forming a seal over said opening and being adapted to be perforated; a reversible spout of less height than the height of said nozzle piece; and a cap coöperating with said nozzle piece and adapted to hold the spout in place on the nozzle piece, substantially as specified.

3. A can provided with a screw nozzle, and having a seal normally closing the pouring opening, a reversible, attachable pouring spout of less height than the height of the screw nozzle and a perforated screw cap coöperating with said screw nozzle and adapted to clamp the pouring spout in position, substantially as specified.

1,114,012. BASE-BALL APPARATUS. ALEXANDER MCMILLAN, Chelan, Wash. Filed Jan. 3, 1914. Serial No. 810,195. (Cl. 46—59.)

1. A mechanical baseball pitcher comprising means for discharging the ball, a spring for actuating said discharging means, a resetting spring adapted to come into play when the tension of the discharging spring is relieved, and means for relieving the tension of said discharging spring in order to permit the resetting spring to do its work and to subsequently renew the tension of said discharging spring to varying degrees.

2. A mechanical baseball pitcher comprising means for discharging the ball, a spring for actuating said discharging means, a resetting spring adapted to come into play when the tension of the discharging spring is relieved, a lever arranged adjacent the batter's position and operatively connected to said discharging spring for relieving the tension thereof in order to permit the resetting spring to do its work and to subsequently renew the tension of said discharging spring, and means for retaining the lever at different positions to vary as well as renew the tension of said discharging spring.



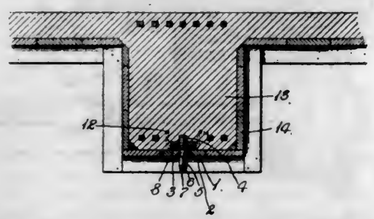
3. In a mechanical baseball pitcher, the combination with a pivoted pitching arm, of an adjustable extension on the end of said arm for regulating the trajectory of the ball, said extension comprising two lateral portions embracing the end of the arm, and a cross piece bent out of the plane of said lateral portions, a bolt passed through the end of the arm and the embracing portions of the extension, and a nut on said bolt for clamping said extension at various angles with respect to the arm.

4. In a mechanical baseball pitcher, the combination with a pivoted pitching arm having a hook on its end, of a trip having a roller adapted to engage said hook for holding the arm in set position.

5. The combination with a mechanical baseball pitcher, of a magazine adapted to hold a plurality of balls, means to guide the balls from the magazine to the pitcher, a forked check lever for releasing one ball at a time from the magazine, resilient means for normally holding said check lever in holding position, and means for operating said check lever from a distance.

[Claim 6 not printed in the Gazette.]

1,114,013. CONCRETE-INSERT. WILLIAM B. MILLAR, Detroit, Mich. Filed Jan. 16, 1914. Serial No. 812,553. (Cl. 72—105.)



1. In a concrete insert, the combination with a perforated mold board, of a pin having a head adapted to be forced through the perforation of said board to retain said board in engagement therewith, a block detachably connected to said pin and provided with transverse openings, and an anchoring member mounted in the openings of said block and having the ends thereof disposed at an angle relatively to said block.

2. In a concrete insert, the combination with a perforated mold board, of a pin having one end thereof threaded, a head carried by the opposite end of said pin and adapted to retain said pin in engagement with said mold board, a block screwed upon the threaded end of said pin, and an anchoring member extending through said block and having the ends thereof disposed at an angle relatively to said block.

3. In a concrete insert, the combination with a perforated mold board, of a pin having a head adapted to be forced through the perforation of said board to retain the board upon said pin, a block detachably mounted upon said pin, and a malleable anchoring member extending through said block.

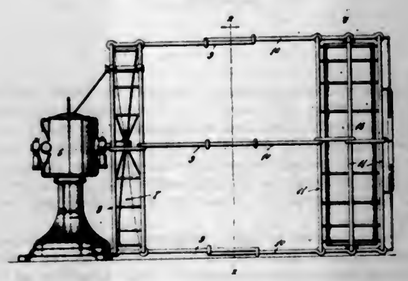
1,114,014. PACKAGE-TIE. CLIFTON I. MILLER, Washington, D. C., assignor of one-half to Edward J. Newcomb, Washington, D. C. Filed Dec. 16, 1913. Serial No. 806,972. (Cl. 24—18.)

1. In a package tie, a clasp consisting of upper and lower members, at least one of which is resilient, whose outer parts are free, said members being connected together in the region of their central portion, the lower of said members having an upwardly extending arch where said members are connected together, and a cord extending through the crown of the arch and provided with an upper retainer, the free portion of said cord being adapted to lie in the arch.

2. In a package tie, a clasp consisting of members, at least one of which is resilient, one of said members having lips embracing the edges of the other member at substantially the central portion thereof.

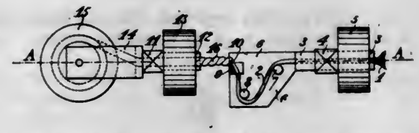
3. The hereindescribed package tie, consisting of a lower member of double compound curve formation having at its central part an arch, and provided with lips at its edges, an upper resilient member secured to the arched portion of the lower member by the lips aforesaid, said upper and lower members having divergent ends and also provided with a hole extending through the central portion thereof in the vicinity of the arch, and a cord extending through the hole and provided with a knot or retainer lying above the upper member and having its portion below the lower member adapted to lie in the arched portion aforesaid.

1,114,015. DIFFUSER FOR ELECTRIC FANS. GUSTAV H. MOLL, St. Louis, Mo. Filed July 14, 1913. Serial No. 778,980. (Cl. 230—1.)



In combination with a power driven fan, a secondary fan comprising a blade mounted for rotation in the path of air from the power driven fan, said blade having a plane body portion provided at opposite margins with oppositely bent portions forming continuations of the plane body portion, whereby the plane body portion will be automatically rotated by the blast from the power driven fan to change the course of the blast.

1,114,016. DEVICE FOR SPINNING SCREW-FORMED WINDINGS OR CURLS OF HAIR OR LIKE MATERIAL. AXEL EMIL MÖLLER, Copenhagen, Denmark. Filed Sept. 10, 1913. Serial No. 789,054. (Cl. 118—8.)



1. In a device for curling hair and like material, the combination with a hollow curling shaft, of guides, for the twisted uncurled portion of the material to be curled, situated approximately in line with the longitudinal axis of said shaft and at approximately right angles to the latter.

2. A device for curling hair and like material comprising a hollow rotatable shaft having its axis in alinement with the axis of the twisting member, a head carried by the latter, and guides on said head arranged to feed the twisted material to said shaft and in a path at right angles to the longitudinal axis of the latter.

3. A device for curling hair and like material comprising a hollow rotatable member adapted to twist the material, a hollow rotatable shaft having its axis in alinement with the axis of the twisting member, a head carried by the latter, guides on said head arranged to feed the twisted material to said shaft and in a path at right angles to the longitudinal axis of the latter, and a storage reel for the curled material mounted on the hollow shaft.

1,114,017. PROCESS OF MANUFACTURING ALCOHOL FROM GARBAGE. JAMES J. MORGAN, Chicago, Ill. Filed Sept. 20, 1909. Serial No. 518,478. (Cl. 195—6.)

1. The process of manufacturing alcohol from garbage which consists in introducing into a mass of garbage a dilute solution of mineral acid and subjecting the same to the action thereof until the carbohydrates are converted into glucose, neutralizing said acid and other acid or acids present after such conversion, then introducing a fermenting agent, and finally recovering the alcohol by distillation; substantially as described.

2. The process of manufacturing alcohol from garbage which consists in introducing into a mass of garbage a dilute solution of mineral acid and heating the same and subjecting such mass of garbage to the action of the acid until the carbohydrates are converted into glucose, neutralizing said acid and other acid or acids present after such conversion, then introducing a fermenting agent, and finally recovering the alcohol by distillation; substantially as described.

3. The process of manufacturing alcohol from garbage which consists in introducing into a mass of garbage a dilute solution of mineral acid and heating the same to a temperature approximating the boiling point of water and subjecting it to the action of the acid until the carbohydrates are converted into glucose, neutralizing said acid and other acid or acids present after such conversion, then introducing a fermenting agent, and finally recovering the alcohol by distillation; substantially as described.

4. The process of manufacturing alcohol from garbage which consists in introducing into a mass of garbage a dilute solution of mineral acid and subjecting the same to the action thereof until the carbohydrates are converted into glucose, adding lime for neutralizing said acid and other acid or acids present after such conversion, then introducing a fermenting agent, and finally recovering the alcohol by distillation; substantially as described.

5. The process of manufacturing alcohol from garbage which consists in reducing the garbage to a substantially homogeneous mass, mixing therewith a dilute solution of mineral acid to form a mixture of proper fluidity for boiling, heating such mixture until the carbohydrates are converted, thereupon neutralizing said acid and other acid

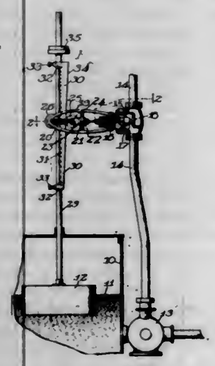
or acids present, then introducing a fermenting agent, and finally recovering the alcohol; substantially as described.

[Claim 6 not printed in the Gazette.]

1,114,018. REPLACING PROCESS. GEORGE MOORE, Joplin, Mo. Filed Mar. 9, 1914. Serial No. 823,501. (Cl. 75—18.)

The process of treating metal bearing material consisting of sands and slimes which comprises moving a compact column of such material downwardly while moving a fluid upwardly in contact with the material and retarding the movement to prevent agitation and separation of the sands and slimes.

1,114,019. AUTOMATIC VALVE. WILLIAM L. MORRIS, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Sept. 9, 1911. Serial No. 648,437. (Cl. 137—104.)



1. The combination with a valve, of an adjustable member with an inclined surface movable relatively to the valve, means to support said member in its adjusted position, and operative connection between the member and the valve to open and close the latter in accordance with the movement of the member.

2. The combination with a valve, of a rod movably supported adjacent the valve, a member graduated in width adjustably positioned on and movable with the rod relatively to the valve, and means supported by the valve and having connection with the said member to operate the valve in accordance with the movement of the rod.

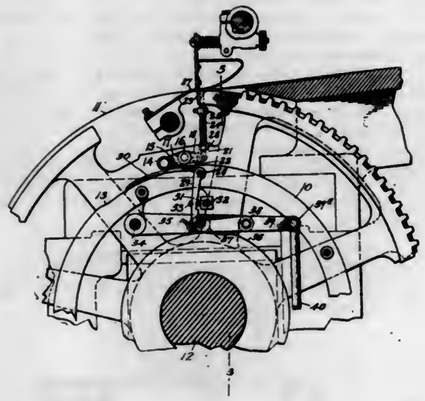
3. The combination with a valve having a valve stem movable therein, of a frame attached to the valve, a member with opposite faces one of which is inclined adjustable and movable in said frame, and means bearing resiliently upon one of said faces and operatively connected to move the stem in accordance with the movement of the said member.

4. The combination with a valve having a valve stem movable therein, of a frame attached to the valve, a member with faces forming a wedge-shaped piece and movable through the frame, a support for the member, rollers one of which bears on one of the wedge faces, the other bearing oppositely on the support, resilient means to draw the rollers together, and means operated by the movement of the rollers to move the stem of the valve.

5. The combination with a valve having a valve stem movable therein, of a frame attached to the valve, a member formed with one grooved side and another side with a surface inclined toward the grooved side, the member being movable through the said frame, a support for the member in engagement with its grooved side, bearing members, one of which is movable along one of the wedge sides, the other being movable on the support, resilient means to press the said bearing member together, and means connecting one of said bearing members to the valve stem whereby the valve is opened and closed in accordance with the movement of the said member through the frame.

[Claims 6 and 7 not printed in the Gazette.]

1,114,020. SHEET-DETECTOR. IRVING F. NILES, Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Mar. 21, 1912. Serial No. 685,246. (Cl. 101—36.)



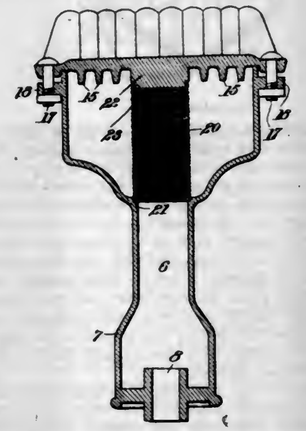
1. An impression cylinder, a plurality of feelers located beneath the sheet path carried by the cylinder and independently movable to detect the absence of a sheet from the impression cylinder, a throw-out mechanism, and connections between the said feelers and the throw-out mechanism whereby the detector movement of any one of the feelers will cause the actuation of the throw-out mechanism.

2. An impression cylinder, grippers and feelers located beneath the sheet path carried by the cylinder, the feelers being movable to operative position after actuation of the grippers, said feelers having respectively a further and independent movement to detect the absence of a sheet from beneath the grippers, a throw-out mechanism, and connections between said feelers and the throw-out mechanism, whereby the detector movement of any one of the feelers will cause the actuation of the throw-out mechanism.

3. In combination, an impression cylinder, grippers, a shaft longitudinally mounted in the cylinder, a plurality of feelers carried by the cylinder and adapted to move into operative position after the actuation of the grippers, the said feelers being further movable independently to detect the absence of a sheet from beneath the grippers, a throw-out mechanism controlled by the movement of said shaft, and connections between the respective feelers and the said shaft whereby the detector movement of any one of the feelers will cause a movement of the said shaft to actuate the throw-out mechanism.

4. In combination, an impression cylinder, grippers, a rock-shaft longitudinally mounted in the cylinder, a plurality of feelers carried by the cylinder and adapted to move into operative position after the actuation of the grippers, the said feelers being further movable independently to detect the absence of a sheet from beneath the grippers, a throw-out mechanism controlled by the movement of the said rock-shaft, and connections between the respective feelers and the said rock-shaft whereby the detector movement of any one of the feelers will cause a movement of the said rock-shaft to actuate the throw-out mechanism.

1,114,021. GAS-BURNER. FREDERICK H. OEHLKE, Lorain, Ohio, assignor to The Hoffman Heater Company, Lorain, Ohio, a Corporation. Filed Dec. 23, 1913. Serial No. 808,358. (Cl. 158—112.)



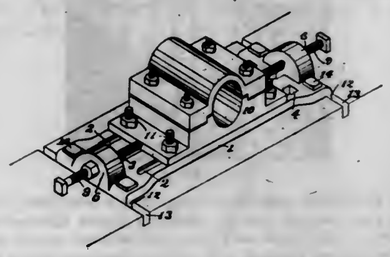
1. A gas burner having a hollow flattened elongated shell with an enlarged chamber at the middle, a cap on said shell with discharge openings at opposite sides thereof, a mixing tube opening into said chamber, and a hollow perforated cylindrical diaphragm connecting at its lower end to the upper end of the tube, said cap having a projection on its under side engaging the upper end of said diaphragm to hold it in position and said diaphragm being located within said chamber and spaced on all sides from the walls thereof.

2. A gas burner having a hollow shell, a cylindrical perforated diaphragm within said shell, the upper end of the diaphragm being below the upper edge of the shell, a mixing tube opening into the lower end of said diaphragm, and a cap on the shell, the cap having a projection on its under side, depending into the shell and engaging the upper end of the diaphragm.

3. A gas burner comprising an elongated shell enlarged at the middle, a hollow perforated diaphragm located in said enlarged part, and spaced from the walls thereof, and a cap over the shell, having ribs on opposite sides thereof resting on the shell and forming discharge grooves between the ribs, said cap having depending ribs on the under side thereof, fitting within the shell, and also having a projection at the middle engaging said diaphragm.

4. A gas burner of the flat type, comprising an elongated flattened shell provided with an enlarged chamber at the middle, a mixing tube communicating with said chamber, said shell having outlet opening at opposite sides of the top, a cap upon said shell, and a tubular perforated diaphragm located within said middle chamber and spaced therefrom entirely around the same, the lower end of said diaphragm resting on the bottom of the chamber in line with the mixing tube, and the upper end of said diaphragm being closed and held in position by the cap.

1,114,022. SOLE-PLATE. JOHN J. OLBRANTZ and JOSEPH EMANUEL, Larson, Wash. Filed Mar. 5, 1914. Serial No. 823,268. (Cl. 64—52.)



1. A sole plate provided with means for anchoring it in fixed position upon a timber and having a plurality of series of complemental longitudinal slots toward each end, said slots comprising a centrally placed pair constituting one series and two pairs lying at opposite sides of the center and constituting another series, said slots having sides undercut to hold bolt heads and being enlarged at one end to pass the bolt heads, said enlargement being at the outer ends of the central slots and at the inner ends of the outer slots.

2. A sole plate provided with means for anchoring it in fixed position upon a timber and having a plurality of series of complemental longitudinal slots toward each end, said slots comprising a centrally placed pair constituting one series and two pairs lying at opposite sides of the center and constituting another series, said slots having sides undercut to hold bolt heads and being enlarged at one end to pass the bolt heads, said enlargement being at the outer ends of the central slots and at the inner ends of the outer slots, and an upstanding lug at each end threaded to receive adjusting bolts.

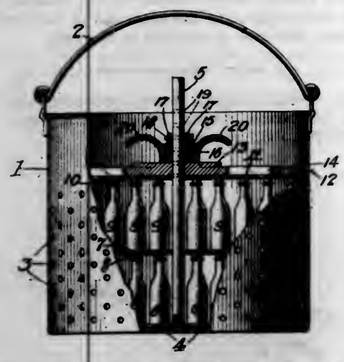
3. A sole plate having transverse ribs adapted to be let into a supporting timber and holes for securing bolts, and also having a plurality of series of complemental longitudinal slots toward each end, said slots comprising a centrally placed pair constituting one series and two pairs lying at opposite sides of the center and constituting another series, said slots having sides undercut to hold bolt heads and being enlarged at one end to pass the bolt heads, said enlargement being at the outer ends of the central slots and at the inner ends of the outer slots.

1,114,023. STERILIZING APPARATUS. BURT CADY OLNEY, Rome, N. Y. Filed Nov. 4, 1912. Serial No. 729,391. (Cl. 53—1.)

1. Sterilizing apparatus comprising a base plate, a vertical post carried thereby, clamping plates adapted to be placed co-axial with said post and between which sealed containers are adapted to be placed, clamping means to cooperate with the uppermost plate, said clamping means comprising a vertically adjustable exteriorly threaded sleeve on said post, a clamping nut having threaded engagement with said sleeve, and a clamping head interposed between said clamping nut and the uppermost plate.

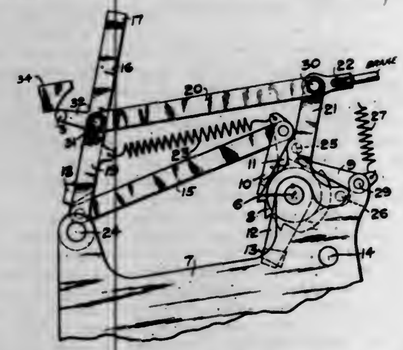
2. Sterilizing apparatus comprising a base-plate, a vertical post, a clamping plate adapted to be placed on the tops of the containers, a vertically adjustable exteriorly threaded sleeve carried by said post, a locking pin carried by said sleeve adapted to engage in any one of a series of

suitable holes provided in said post, and a clamp nut having threaded engagement with said sleeve and adapted to be screwed down to exert a pressure on said clamping plate.



3. Sterilizing apparatus comprising a base plate, a vertical post carried thereby, clamping plates adapted to be placed co-axial with said post and between which sealed containers are adapted to be placed, clamping means to cooperate with the uppermost plate, said clamping means comprising a vertically adjustable exteriorly threaded sleeve on said post, and a clamping nut having threaded engagement with said sleeve.

1,114,024. FOOT CONTROL MECHANISM FOR MOTOR-VEHICLES. SAMUEL R. M. ORUM, Detroit, Mich. Filed Aug. 30, 1913. Serial No. 787,427. (Cl. 74—81.)



1. In a control mechanism for motor vehicles, the combination of a power controller device having a series of positions, a foot lever device having connections for advancing the controller step-by-step to its different positions by successive short traverses of the foot lever, and means operated by a longer traverse of said foot device for returning the controller to its off position.

2. In a control mechanism for motor vehicles, the combination of a power controller device having a series of positions, a foot lever device having connections for advancing the controller step-by-step to its different positions by successive short traverses of the foot lever, a brake device, and means operated by a longer traverse of said foot lever for turning off the controller and applying the brake.

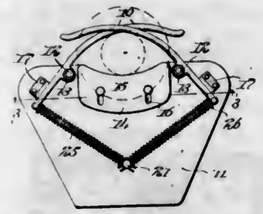
3. In a control mechanism for motor vehicles, the combination of a power controller device, a compound foot lever device having two members, means connected to one member for advancing the controller step-by-step, and means operated by the other lever member for throwing off the controller.

4. In a control mechanism for motor vehicles, the combination of a power controller device, a compound foot lever device having two members, means connected to one member for advancing the controller step-by-step, a brake device, and means operated by the other lever member for throwing off the controller and applying the brake.

5. In a control mechanism for motor vehicles, the combination of a power controller device, a foot lever device comprising a member having a fixed fulcrum, another lever member pivoted upon the first and movable independently thereof during short traverses and coincidentally therewith upon a longer traverse, means connected to the second lever member for advancing the controller step-by-step, and means operated by the first lever member for throwing off the controller.

[Claims 6 to 8 not printed in the Gazette.]

1,114,025. MAIL-CATCHER. PERLEY H. OVERPECK, Rockville, Ind. Filed Mar. 17, 1914. Serial No. 825,340. (Cl. 258—22.)



1. A mail bag comprising a base plate, jaws pivotally connected with said base plate, fingers pivotally connected with the inner ends of said jaws, a guiding pin slidably engaged by said fingers to guide the sliding movement of said fingers, spindle springs mounted upon said fingers and engaging said pin, abutments carried by said fingers and engaging the opposite ends of said springs whereby said springs will serve to yieldably hold said jaws in an open and in a closed position, a trigger plate slidably connected with said base plate between said jaws for engaging the inner end portions of said jaws, and abutments carried by said base plate for limiting the pivotal movement of said jaws in one direction and prevent said jaws from closing beyond a desired amount.

2. A mail catcher comprising a base plate, jaws provided with bearings adjacent their inner ends, pivot pins carried by said base plate and passing through said bearings to pivotally mount said jaws, a guide pin carried by said base plate, fingers pivotally connected with the inner ends of said jaws and provided with slots through which said guide pin passes, abutments carried by said fingers adjacent said jaws, spiral springs mounted upon said fingers between said pin and said abutments, means for limiting the pivotal movement of said jaws in one direction, and a trigger carried by said plate between said jaws for engaging the inner end portions of said jaws when moved inwardly and swing said jaws past a dead center to permit said springs to move said jaws to a closed position.

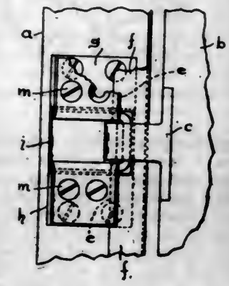
3. A mail catcher comprising a base, jaws pivotally connected with said base, a guide carried by said base, fingers pivotally connected with said jaws and slidably connected with said guides, resilient means mounted upon said fingers and engaging said guide to form resilient means for releasably holding said jaws in an open position and for moving said jaws to a closed position, and a trigger carried by said base between said jaws for engaging the inner ends of the same when moved inwardly to swing said jaws toward a closed position and permit said springs to close said jaws.

4. A mail catcher comprising a support, jaws pivotally connected with said support, a trigger plate slidably connected with said support between said jaws and engaged by said jaws when the same are moved to a set position, a guide carried by said base, fingers pivotally connected with the inner end portions of said jaws and slidably connected with said guide, and resilient means mounted upon said fingers between said guide and the pivot ends of said fingers.

5. A mail catcher comprising a base, gripping means movably connected with said base, a trigger carried by said base and operated by a sack to move said gripping means from a set position, and common means for releasably holding said gripping means in a set position and moving said gripping means to a closed position after being partially moved from a set position by said trigger.

[Claims 6 and 7 not printed in the Gazette.]

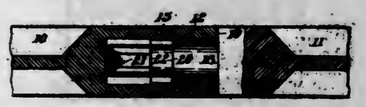
1,114,026. CONCEALED HINGE. CARL B. PARSONS, Detroit, Mich. Filed Feb. 5, 1914. Serial No. 816,671. (Cl. 16—105.)



1. A concealed hinge, comprising a mortise casing consisting of an upper and lower plate of thin metal and a box-like housing of thin metal, also blocks securely fastened to the upper and lower plates by such means as welding, devices for fastening the upper and lower plates and the blocks to the door post, a pin-carrying element having the portion carrying a pin fitting into the box-like housing, a hinge arm, a pin for securing the hinge arm to the pin-carrying element, and screws for securing the pin-carrying element to the plates and blocks of the mortise casing.

2. A concealed hinge, having in combination a mortise casing provided with upper and lower plates and a housing, a pin-carrying element provided with upper and lower plate portions that are rabbeted at the outside edge, a pin fastened to the pin-carrying element, a hinge arm secured to the pin and means for securing the plate portions of the pin-carrying element securely against the plates of the mortise casing, whereby the rabbeted edge may clamp the turned-in edge of the metal body panel against the plates of the mortise casing.

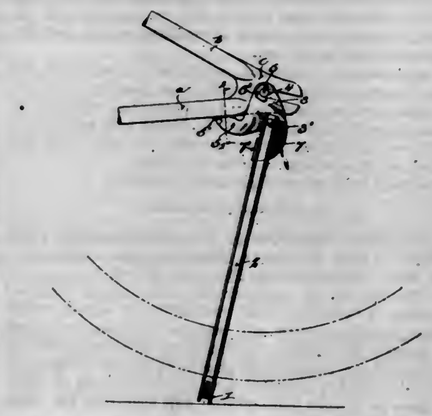
1,114,027. RAIL-JOINT. FRANK PASTOR, Akron, Ohio, assignor of one-half to Frank Csema, Akron, Ohio. Filed July 28, 1914. Serial No. 853,587. (Cl. 239—8.)



1. A rail joint comprising complementally formed rail ends, one of said ends provided with a central longitudinal bore opening at the end of the rail and having the sides of said bore at a point substantially centrally thereof contracted to form an elliptical slot, the other of said rail ends having a centrally longitudinally projecting spindle formed with a central contracted portion and a terminal flattened head, the head of said spindle adapted for passing through said elliptical slot during the assembling or disassembling operation.

2. A device of the class described comprising a rail end having a central longitudinal socket opening at the end of the rail and having the inner end of the socket opening at the bottom of the rail, inwardly positioned portions of the rail intersecting said bore and forming an elliptical passage between the opposite end portions of said socket at the opposite sides of said inwardly positioned portions, a second rail end, a longitudinally positioned centrally projecting cylindrical spindle thereon having a terminal flattened head and an intermediate contracted cylindrical connecting portion, the said spindle adapted for seating within said socket upon a passing of said head through said elliptical opening.

1,114,028. HEAD FOR BICYCLE-STANDS. EWALD F. PAWSAT, Sheboygan, Wis., assignor to Wald Manufacturing Company, Sheboygan, Wis. Filed June 16, 1914. Serial No. 845,436. (Cl. 208—75.)



A head for stands of the described character comprising a flat body portion provided with an axle-receiving aperture, and a leg pivoting aperture upon a lower plane than the axle aperture, a load-sustaining arm extending from the body portion forwardly of the same, a leg-sustaining arm extending from the body portion below the axle aperture and forwardly of the same, a load-sustaining lug extending inwardly from the end of the load-sustaining arm, a leg-sustaining lug extending outwardly from the leg-sustaining arm, each of said lugs being upon lower planes than the axle aperture and in advance of the same with reference to a vertical line extending therethrough.

1,114,029. PROCESS OF AGGLOMERATING FINE ORES. JAMES H. PAYNE, Baltimore, Md. Filed Feb. 21, 1914. Serial No. 820,156. (Cl. 75—73.)

1. A process of nodulising ores containing sulfur in material amounts which comprises heating said ore to a point of incipient fusion while agitating the same, and while avoiding the presence of sufficient free oxygen to burn the sulfur of said ore, thereby avoiding over-fusion of the ore.

2. A process of treating ores containing material quantities of sulfur, which comprises heating a stream of said ore, while agitating and rolling the particles thereof; introducing a flame of air and fuel in counter current with

said stream of ore, while preventing the entrance of sufficient air, over the amount necessary for the combustion of the fuel, to burn material quantities of the sulfur, and discharging the treated ore at the lower end of the furnace.

3. A process of agglomerating fine ores containing material quantities of sulfur, which comprises heating a continuous stream of said ore while agitating and rolling the particles thereof, introducing a flame of air and fuel in counter current to said stream of ore, while preventing the entrance of sufficient air, over the amount necessary for the combustion of the fuel, to burn material quantities of the sulfur, heating said ore by means of said flame to the point of incipient fusion, and discharging the resulting nodules at the lower end of the furnace.

4. A process of agglomerating fine ores containing material quantities of sulfur, which comprises nodulizing said ore while agitating and rolling the ore particles by applying heat practically devoid of oxidizing action upon the sulfur contained in the ore.

5. A process of nodulizing ore containing sulfur in the form of metal sulfid, which comprises heating said ore, by a flame applied thereto, to a temperature sufficient for incipient fusion, agitating said ore during said heating operation, and avoiding contact of said ore with sufficient amounts of free oxygen to burn the sulfur.

[Claims 6 to 9 not printed in the Gazette.]

1,114,030. PROCESS OF AGGLOMERATING FINE ORES. JAMES H. PAYNE, Baltimore, Md. Filed Apr. 10, 1913. Serial No. 760,260. (Cl. 75—65.)

1. The process of agglomerating comminuted material containing a relatively high proportion of sulfur which consists in mixing with said material a substance which will prevent the complete fusion of the mixture under the influence of the temperature generated by the oxidization of sulfur, applying sufficient heat to said mixture to cause the same to become semi-plastic, and agitating the mass by rolling the same.

2. A process of agglomerating comminuted ores of an acid character, containing a relatively high proportion of sulfur, which comprises mixing with said ores a substance having a more strongly acid character than said ores, in amount sufficient to prevent over fusion, applying sufficient heat to said mixture to cause the same to become semi-plastic, and while in said condition, causing the particles to agglomerate with each other.

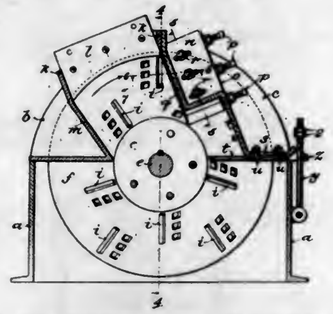
3. The process of agglomerating fine sulfid ore of copper which consists in mixing with said ore a substance which raises the point of complete fusion of the mixture above the temperature generated by the oxidization of sulfur, applying sufficient heat to said mixture to cause the same to become semi-plastic, and agitating the mass by rolling the same.

4. The process of agglomerating comminuted material containing a relatively high proportion of sulfur which consists in mixing with said material a quantity of silicious material, applying sufficient heat to said mixture to cause the same to become semi-plastic, and agitating the mass by rolling the same.

5. The process of agglomerating fine sulfid ore of copper which consists in mixing with said ore a quantity of silicious material, applying sufficient heat to said mixture to cause the same to become semi-plastic, and agitating the mass by rolling the same.

1,114,031. WOOD-CHIPPING MACHINE. GEORGE M. PELTON, Milwaukee, Wis., assignor to The Filer & Stowell Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 3, 1911. Serial No. 600,401. (Cl. 83—75.)

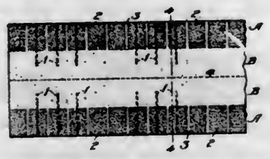
1. In a wood chipping machine the combination of a rotary cutter head having inwardly converging conical faces and provided with knives, a case in which said cutter head is mounted having a section formed with inwardly converging knife seats in planes approximately tangent to the conical faces of the cutter head, stationary knives removably attached to said converging seats and adapted to coöperate with the knives of the rotary cutter head, and a V-shaped knife removably attached to the case in a plane approximately radial to the cutter head and adapted to coöperate with the knives of the cutter head to reduce to chips fragments of wood escaping the other stationary knives.



2. In a wood chipping machine the combination of a case comprising a base and a knife supporting section mounted thereon and having inwardly converging knife seats terminating along their outer sides with laterally offset walls and formed with transversely elongated bolt holes, knives fitted to said seats, bolts passing through said knives and the holes in said seats and provided at their outer exposed ends with nuts for adjustably securing the knives to their seats, adjusting screws threaded in said offset walls and bearing at their inner ends against the outer edges of the knives, said adjusting screws and the nuts on said bolts being accessible outside of the knife supporting section of the case, and a rotary cutter head mounted in said case and provided with knives arranged to coöperate with the other knives.

3. In a wood chipping machine the combination of a rotary cutter head having inwardly converging conical faces and provided with knives, a case in which said cutter head is mounted having a removable section formed with inwardly converging knife seats in planes approximately tangent to the conical faces of the cutter head and on its lower side another knife seat approximately radial to the cutter head and perpendicular to its conical faces, and knives attached to said converging seats and a V-shaped knife attached to said radial seat and adapted to coöperate with the knives of the cutter head to reduce to chips any splinters or fragments escaping the other stationary knives.

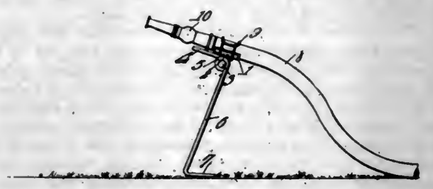
1,114,032. ROOFING AND SIDING MATERIAL. JOHN R. POWELL, Waukegan, Ill., and BENJAMIN G. CASLER, Tonawanda, N. Y. Filed Apr. 30, 1913. Serial No. 764,577. (Cl. 108—7.)



1. As an article of manufacture, a roofing fabric strip comprised of an asphalt coated fabric having the portion intended to be exposed to the weather protected at intervals by exposed embedded grit distributed in spaced tesellæ alternating with the exposed asphalt coated surface of the fabric.

2. As an article of manufacture a roofing fabric strip comprised of an asphalt coated fabric having the portion intended to be exposed to the weather protected at intervals by exposed embedded grit distributed in spaced tesellæ alternating with narrow exposed portions of the coated surface of the fabric.

1,114,033. HOSE-SUPPORT. EWALD PRAEGER, San Antonio, Tex. Filed Oct. 18, 1912. Serial No. 726,559. (Cl. 248—29.)



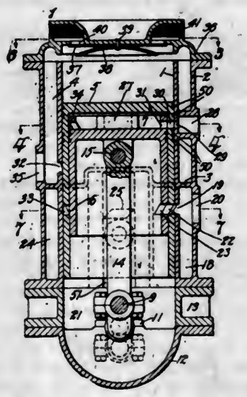
1. In a device of the class described, a hose supporting bracket; and a two part standard pivoted to the bracket, the standard being provided at its ground engaging ends with fixed, open loops disposed at an angle to the standard, the loops acting as supporting bases and as hose-engaging clips when the standard is in different positions.

2. In a device of the class described, a hose supporting bracket and a standard pivoted intermediate its ends to the bracket, the standard being provided at one end with an angularly disposed nozzle rest constituting the sole means for preventing a tilting of the standard on the bracket.

3. In a device of the class described, a hose supporting bracket; an angular standard pivoted intermediate its ends to the bracket, one end of the standard constituting a nozzle rest, and the other end of the standard being provided with a combined hose and ground-engaging means projecting in a direction opposite to the nozzle rest.

4. In a device of the class described, a hose supporting bracket and a standard pivoted to the bracket, the standard being provided at one end with a nozzle rest and terminating at its other end in resilient arms disposed at an angle to the nozzle rest, the arms being provided with hose engaging loops.

1,114,034. GAS-ENGINE. SYDNEY I. PRESCOTT, Brooklyn, N. Y., assignor to Motorflex Equipment Company, New York, N. Y., a Corporation of New York. Filed Apr. 13, 1912. Serial No. 690,553. (Cl. 123—50.)



1. In a gas engine, the combination with a support, of a pair of power pistons concentrically mounted in the support, a crank shaft, operating connections between the pistons and crank shaft, an exhaust conduit intermittently open to the space between the pistons, and means coöperating with the conduit for producing a blast of air through said conduit to the atmosphere during the power stroke.

2. In a gas engine, the combination with a support, of a pair of power pistons concentrically mounted in the support, a crank shaft, operating connections between the pistons and crank shaft, an exhaust conduit intermittently open to the space between the pistons, and intermittently operating means coöperating with the conduit for producing a blast of air through the conduit to the atmosphere before the conduit opens during the power stroke, said means being timed to go out of action before the conduit closes to the space between the pistons.

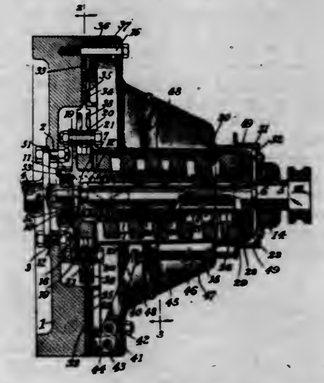
3. In a gas engine, the combination with a support, of a pair of power pistons concentrically mounted in the support, a crank shaft, operating connections between the pistons and crank shaft, an exhaust conduit intermittently open to the space between the pistons, and means coöperating with the conduit for producing a blast of air through said conduit to the atmosphere before the conduit opens, said means including one of the power pistons operating as an air piston.

4. In a gas engine, the combination with a cylinder, of a pair of power pistons concentrically mounted within the cylinder, a crank shaft, operating connections between the pistons and crank shaft, an exhaust conduit intermittently open to the space between the pistons, and means coöperating with the conduit for producing a blast of air through said conduit to the atmosphere during the power stroke.

5. In a gas engine, the combination with a cylinder having an ignition chamber in its wall, of a pair of power pistons concentrically mounted within the cylinder and each having an ignition port in its wall adapted to open the space between the pistons to the ignition chamber, a crank shaft, operating connections between the pistons and crank shaft, an exhaust conduit intermittently open to the space between the pistons, and means coöperating with the conduit for producing a blast of air through said conduit to the atmosphere during the power stroke.

[Claims 6 to 63 not printed in the Gazette.]

1,114,035. CLUTCH. SYDNEY I. PRESCOTT, Brooklyn, N. Y., assignor to Motorflex Equipment Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1913. Serial No. 807,404. (Cl. 192—7.)



1. The combination with a motor driven member, of a transmission shaft, means interposed between the motor driven member and the transmission shaft for absorbing shock due to variations in speed of the motor driven member and the transmission shaft said means including operating connections and a longitudinally immovable member and being arranged to transmit power without yielding under a load below normal but arranged to yield to a limited extent under load above normal, a clutch member interposed between the motor driven member and the longitudinally immovable member, and connections for controlling relative movement of said clutch member and said motor driven member in and out of driving engagement.

2. The combination with a longitudinally immovable motor driven member, of a transmission shaft, means interposed between the motor driven member and the transmission shaft for absorbing shock due to variations in speed of the motor driven member and the transmission shaft said means including operating connections and a

longitudinally immovable member and being arranged to transmit power without yielding under a load below normal but arranged to yield to a limited extent under load above normal, a longitudinally movable clutch member interposed between the motor driven member and the longitudinally immovable member, and connections for controlling movement of said clutch member in and out of driving engagement with the motor driven member.

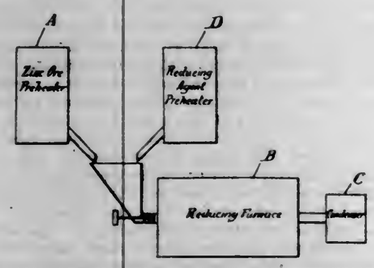
3. The combination with a motor driven member, of a transmission shaft, means interposed between the motor driven member and the transmission shaft for absorbing shock due to variations in speed of the motor driven member and the transmission shaft said means including operating connections and a longitudinally immovable member and being arranged to transmit power without yielding under a load below normal but arranged to yield to a limited extent under load above normal, a clutch member supported by and rotatable with the longitudinally immovable member, and connections for controlling relative movement of said clutch member and said motor driven member in and out of driving engagement.

4. The combination with a motor driven member having a frictional driving surface, of a transmission shaft, means interposed between the motor driven member and the transmission shaft for absorbing shock due to variations in speed of the motor driven member and the transmission shaft said means including operating connections and a longitudinally immovable member and being arranged to transmit power without yielding under a load below normal but arranged to yield to a limited extent under load above normal, a longitudinally floating member supported by and rotatable with the longitudinally immovable member and having a frictional driving surface adapted for engagement with the frictional driving surface of the motor driven member, and connections for controlling movement of said floating member in and out of engagement with the motor driven member.

5. The combination with a motor flywheel having a frictional driving surface, of a transmission shaft, means interposed between the motor flywheel and the transmission shaft for absorbing shock due to variations in speed of the motor flywheel and the transmission shaft said means including operating connections and a longitudinally immovable member and being arranged to transmit power without yielding under a load below normal but arranged to yield to a limited extent under load above normal, a longitudinally floating member supported by and rotatable with the longitudinally immovable member and having a frictional driving surface adapted for engagement with the frictional driving surface of the motor flywheel, and connections for controlling movement of said floating member in and out of engagement with the motor flywheel.

[Claims 6 to 24 not printed in the Gazette.]

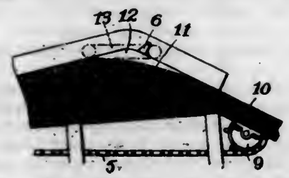
1,114,036. METALLURGY OF ZINC. AUGUSTIN LÉON JEAN QUENEAU, Torresdale, Pa., assignor to Queneau Electric Zinc Furnace Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 17, 1908. Serial No. 467,986. (Cl. 75—153.)



1. The method of extracting and recovering zinc from zinc ore, which consists in preheating said zinc ore, separately charging into a reducing furnace the ore in the preheated state and a reducing agent, intimately mixing them within the furnace, subjecting the mixture to a reducing atmosphere and a reducing temperature with exclusion of air, thereby releasing the zinc in the form of zinc vapor, and condensing said vapor to the metallic state.

2. The method of extracting and recovering zinc from zinc ore, which consists in preheating said zinc ore to a temperature above that at which the reducing agent to be used would burn in air, separately charging into a reducing furnace the ore in the preheated state and a reducing agent, intimately mixing them within the furnace, subjecting the mixture to a reducing atmosphere and a reducing temperature with exclusion of air, thereby releasing the zinc in the form of zinc vapor, and condensing said vapor to the metallic state.

1,114,037. CONVEYER. EDWARD J. QUINN and JOSEPH M. MALLEY, Worcester, Mass., assignors to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 17, 1913. Serial No. 748,815. (Cl. 193—8.)



1. A conveyer including a track, two adjacent portions of the track having different slopes, the sides of the track being depressed below the center thereof at the point where the said two portions meet.

2. A conveyer including a track, two adjacent portions of the track having different angles, the sides of the track being rounded off at the point where the said two portions meet, and the center of the track being raised above the sides thereof at said point.

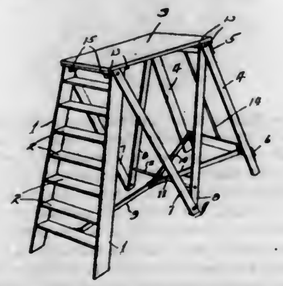
3. A conveyer including a track, two adjacent portions of the track having different angles, the end of each portion nearest the other portion having its sides depressed below its general plane, but having its center lying in said plane.

4. A conveyer provided with an inclined track having a slot, with portions of the track upon each side of the slot raised above the face of the track, and means guided by said slot for moving articles over said track.

5. A conveyer including a track having raised sides, two adjacent portions of the track having different angles, with the face of the track depressed upon each side of the center where the two portions meet.

[Claims 6 to 8 not printed in the Gazette.]

1,114,038. STEP-LADDER. CHARLES G. REVENY, Oakland, Cal. Filed Jan. 31, 1914. Serial No. 815,580 (Cl. 20—83.)

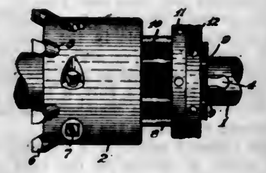


1. A step ladder comprising a frame, each side of which consists of a front and a rear inclined supporting member, two intermediate supporting members, having their lower ends pivoted to each other and their top ends pivoted, one to the top end of said front and one to the top of said rear supporting members and a platform supported by the top of said members, and a folding brace rod connecting the said front and said rear supporting members.

2. A step ladder comprising the combination of a frame, each side of which consists of a front and a rear inclined supporting member, two intermediate supporting members, having their lower ends pivoted to each other and the upper ends pivoted one to the top of said front member and one to the top of said rear member, connecting strips between the sides of said frame, a brace rod hinged at its center and pivotally attached to the connecting strips of said front and said rear supporting members, a notch adjacent the center of said supporting member adapted to engage the connecting strip of said intermediate supporting members, and a platform supported on the top of said supporting members and means for preventing movement thereon.

3. A step ladder comprising in combination a frame, each side consisting of four pivotally attached supporting members, which when extended have the form of an inverted letter W, a brace rod hinged at its center and pivotally attached adjacent the bottom of the front and rear supporting members and holding the center support so as to prevent relative movement between the said supporting members, steps between the front pair of said supporting members, a platform on the top of said supporting members, cleats on the underside of said platform to prevent movement thereof, connecting strips between the rear pair of supporting members, adjacent the top and bottom thereof, a slide rail attached to said connecting strips and said platform being slidably connected to said rail to allow the folding of the same.

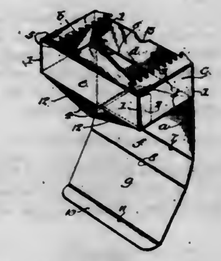
1,114,039. BORING AND REAMING TOOL. JOHN M. RICHARDS, Beaver Falls, Pa., assignor to Standard Connecting Rod Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed Sept. 17, 1909. Serial No. 518,242. (Cl. 77—14.)



1. In a device of the character described, the combination of a spindle, a head having a bore in which said spindle is fixed and adapted to rotate therewith, the forward end of said head being of greater diameter than the rear end thereof and having a number of openings inclined from the outer periphery to the bore thereof, and a corresponding number of horizontally disposed openings extending from the rear of said head and intersecting said inclined openings, cutter tools secured in said inclined openings and rods adapted to be seated in said horizontal openings and to engage the rear ends of the cutters, and means to advance and lock said rods against the rear ends of said cutters.

2. In a device of the character described, the combination of a rotatable shaft, a cylindrical head rigidly secured thereon, the said head having an extension of less diameter than the major part thereof, the said head having a plurality of openings divergently disposed therein, the rear end of said head on a line with the extension thereof, having a plurality of openings therein, cutting tools seated in the divergent openings in the front portion of the head, adjusting rods seated in the openings in the rear portion of the head, and adapted to engage against the rear ends of the cutting tools and an adjusting nut mounted on the extension of the head adapted to engage against the adjusting rods for the purpose of moving the same toward the rear ends of the cutting tools.

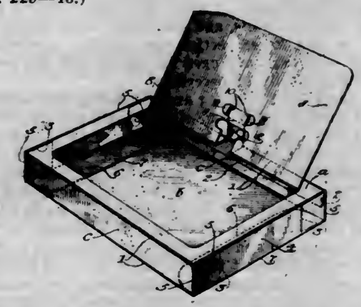
1,114,040. FOLDING PAPER BOX. RALPH R. RICHARDSON, Chicago, Ill. Filed May 8, 1912. Serial No. 695,942. (Cl. 229—33.)



1. A folding paper box comprising connected side and end walls, the opposite end walls having inturned flaps at their upper and lower edges, and a folding bottom connected to the lower edge of one of said side walls and overlapping said lower end flaps and having an upturned extension arranged between the opposite side wall and said upper and lower end flaps, said extension having an inwardly folded portion overlapping said upper end flaps, substantially as described.

2. A folding paper box comprising connected front, end and rear walls, said end walls having inturned flaps at their upper and lower edges, and a folding bottom connected to the lower edge of said front wall and overlapping said lower end flaps and having an upturned extension at its rear edge arranged between said rear wall and said upper and lower end flaps, said extension having an inwardly folded portion forming a cover for the box and arranged to overlap said upper end flaps, substantially as described.

1,114,041. DISPLAY-CARTON. RALPH R. RICHARDSON, Chicago, Ill. Filed May 8, 1912. Serial No. 695,943. (Cl. 229—43.)



1. A carton having an integral hinged lid, and a tongue cut out of the box body and said lid and forming, when the lid is closed, with said box body and lid a complete closure, said tongue extending across the hinged edge of said lid and arranged to engage with the lid to hold the same elevated.

2. A carton having a lid integral with the upper side wall thereof and hinged to said side wall adjacent its rear edge, and a hinged tongue cut out of said upper side wall and said lid, extending across the hinged edge of said lid and having projections arranged to interlock with slits in the lid to hold the same in raised position.

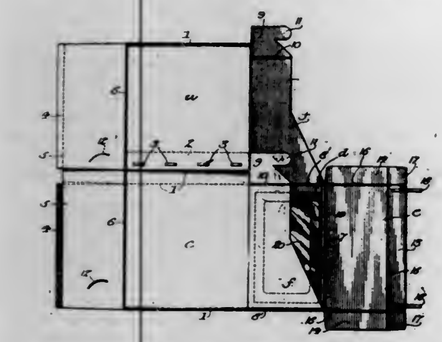
3. A carton having a hinged lid and a cut-out tongue with narrow connecting portions holding said tongue within its cut out space, said tongue being shiftable to

operative position by severing said connecting portions, and arranged to interlock with said lid to hold the same raised.

4. A carton having connected side walls and terminal flaps for closing the ends thereof, a hinged lid cut-out of one of said side walls, and held in its cut-out space by narrow, connecting portions, and means integral with the carton for holding said lid in raised position, substantially as described.

5. A carton having connected side walls and terminal flaps for closing the ends thereof, a hinged lid cut-out of one of said side walls and a cut-out hinged, tongue arranged to interlock with said lid, said cut-out lid and tongue being held in their cut-out spaces by narrow connecting portions, substantially as described.

1,114,042. PASTEBOARD SHIPPING AND DISPENSING BOX. RALPH R. RICHARDSON, Chicago, Ill. Filed May 8, 1912. Serial No. 695,944. (Cl. 229—43.)



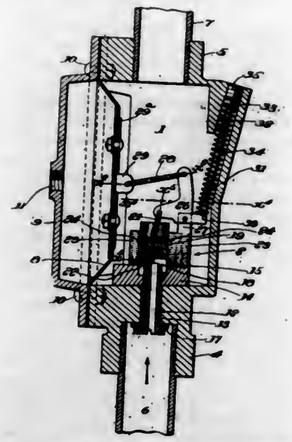
1. A pasteboard shipping and dispensing box comprising integral side, top and botom walls having integral folding flaps for closing the rear of the box, and a front formed of upper and lower sections, said lower front section being hinged to said bottom wall and having inwardly extending side flaps against the inner faces of said side walls, and interlocked at their rear ends with the folding flaps of said side walls, and said upper front section being hinged to said lower section and having connected, top and side edge flaps arranged to engage said top and side walls, substantially as described.

2. A pasteboard shipping and dispensing box comprising integral walls forming four sides of said box, flaps formed integral with said walls for closing the fifth side of said box and a front section for closing the sixth side of said box, comprising upper and lower hinged sections the lower section being hinged to one of said first mentioned walls and having integral side flaps engaging the walls adjacent the wall on which said lower section is hinged, an upper section having top and side edge flaps arranged to engage the side walls adjacent thereto when in closed position.

3. A pasteboard shipping and dispensing box comprising integral side top and bottom walls having integral folding flaps for closing the rear of the box and a front wall formed of upper and lower sections said front section being hinged to one of said walls and having inwardly extending side flaps against the inner faces of the walls adjoining that wall to which said lower front section is hinged and interlocked at their rear ends with the folding flaps of said side walls and said upper front section being hinged to said lower section and having edge flaps integral with its periphery.

4. A pasteboard shipping and dispensing box comprising integral side top and bottom walls having integral folding flaps for closing the rear of the box and a front form of upper and lower sections, said lower front section being hinged and having inwardly extending side flaps against the inner faces of the side walls and interlocked at their rear ends with the folding flaps of said side walls.

1,114,043. GAS-PRESSURE REGULATOR. JAMES R. RICKETTS, Los Angeles, Cal., assignor to Perfection Gas Regulator Company, Los Angeles, Cal., a Corporation of California. Filed July 30, 1913. Serial No. 782,023. (Cl. 50—26.)



1. In a gas pressure regulator, a chamber having an inlet and outlet, a diaphragm in the chamber, a spring for resisting movement of the diaphragm, the chamber having an off-set recess with converging walls, a valve cylinder with a base, said base having inclined faces adapted to fit said converging walls, a valve sliding in said cylinder, the cylinder having a port, and means operated by the diaphragm for moving the valve.

2. In a gas pressure regulator, a chamber with an inlet and outlet and having an off-set recess formed with an inclined socket, a spring with one end projecting into said socket, a pivoted lever having an arm against which the spring bears, a diaphragm, a link between said lever and diaphragm, and a sliding valve connected with said lever and movable toward and from said inlet.

3. In a gas pressure regulator, a chamber having an inlet and an outlet, a thimble in the inlet and having a beveled end forming a valve seat, a valve cylinder to which said thimble is screwed to hold the cylinder in position, such cylinder having a port, a valve sliding in the cylinder, a diaphragm in the chamber, and means operated by the diaphragm for sliding the valve.

4. In a gas pressure regulator, a chamber having an inlet and an outlet, a thimble in the inlet and having a beveled end forming a valve seat, a valve cylinder to which said thimble is screwed to hold the cylinder in position, such cylinder having a port, a valve sliding in the cylinder, a diaphragm in the chamber, means operated by the diaphragm for sliding the valve, said valve being cupped in its lower portion, and a yielding material in said cupped portion for coacting with said thimble seat.

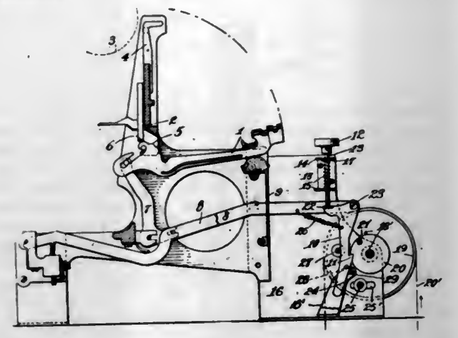
5. In a gas pressure regulator, a chamber having an inlet and an outlet, a thimble in the inlet and having a beveled end forming a valve seat, a valve cylinder to which said thimble is screwed to hold the cylinder in position, such cylinder having a port, a valve sliding in the cylinder, a diaphragm in the chamber, means operated by the diaphragm for sliding the valve, the upper portion of said valve being cupped and provided with lubricating ducts.

[Claims 6 to 8 not printed in the Gazette.]

1,114,044. TYPE-WRITING-MACHINE OPERATOR. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 16, 1910. Serial No. 549,723. (Cl. 197—13.)

1. In a typewriting machine, the combination with a power driven actuator, of a series of type-bar levers;

latches pivoted to said levers and having hook portions; a fixed stop with which said latches normally engage; depressible finger keys having stems mounted for vertical movement and adapted to engage with the latches when depressed to throw the hook portions of the latches into the path of the actuator to be engaged thereby to operate the type-bars; a universal let-off which said latches engage to throw them out of engagement with the actuator; pins carried by said latches; fixed by-pass pins about which said latch pins move through their normal orbit of movement; and springs to return the latches to normal position against the fixed stop out of the path of the actuator.



2. In a typewriting machine, the combination with a power driven actuator, of a series of type-bars; type-bar levers; latches having hook portions and pivoted to said levers; keys having stems mounted for vertical movement and engaging with the latches to project them into the path of the actuator which engages with the hook portions of the latches to operate the type-bars; a bar with which said latches engage to throw them out of engagement with the actuator, said bar being adjustable to control the engagement of the latches with the actuator to regulate the pressure of the type-bar blow at the printing point; springs to return the latches to normal position; pins connected to said latches; and fixed by-pass pins about which said latch pins move through their normal orbit of movement, but with which they engage when the key remains depressed to hold the latches out of the path of the actuator to prevent repeated operation of the type-bars.

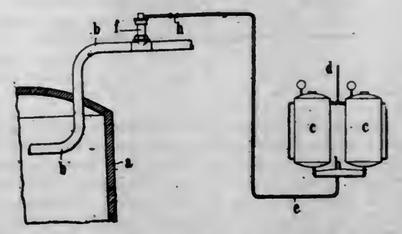
3. In a typewriting machine, the combination of type-bar levers; latches having hook portions and pivoted to the said levers; finger keys having vertically movable stems to engage with the latches to rock the same and project them forwardly; a power driven actuator comprising a shaft having a series of disks fixed thereon and spaced apart, and a rod passing through the disks parallel with the shaft to form trips to engage with the hook portions of the latches when the latter are projected forward and into the path of the actuator by the finger keys; and a universal let-off with which said latches engage to throw them out of engagement with the actuator.

4. In a typewriting machine, the combination with the type-bars, of levers connected thereto; latches having hook portions and pivoted to said levers; a power actuator comprising a shaft extending transversely of the levers with disks fixed thereon and spaced apart, and a rod passing through said disks parallel with the shaft to form a trip; depressible keys having stems to engage with and project the latches into the path of the actuator so that the trip will engage with the hook portions of the latches to operate the type-bars; pins carried by said latches; and fixed stop pins with which said latch pins engage to maintain said latches out of the path of the actuator when a key remains depressed after a type-bar has been actuated to prevent repeated operation of said type-bar.

5. In a typewriting machine, the combination with a series of pivotally supported type-bars, of fulcrumed levers connected to said type-bars; latches pivotally connected to said levers; a fixed stop; springs to normally maintain the latches in engagement with said stop; a power actuator extending transversely of the levers; depressible finger keys having stems to engage with the latches to project them into the path of the actuator to operate the type-bars; an adjustable let-off with which the latches engage to throw them out of engagement with the actuator; and a series of fixed stops out of the normal path of the latches, but with which the latches engage when the finger keys remain depressed and in engagement with the latches to prevent repeated operation of the type-bars.

[Claims 6 to 19 not printed in the Gazette.]

1,114,045. TREATMENT OF COAL-TAR OR ITS PRODUCTS FOR THE REMOVAL OF THE PROPERTIES THEREIN TENDING TO INDUCE PITCH-CANCER. HERBERT W. ROBINSON, Sedgley, England. Filed Feb. 11, 1914. Serial No. 817,992. (Cl. 196—26.)



1. A process for treating tar or pitch with the object of removing therefrom the properties tending to induce pitch cancer, the process consisting in mixing with the tar or pitch less than 1% of a substance yielding an aldehyde.

2. A process for treating tar or pitch with the object of removing therefrom the properties tending to induce pitch cancer, the process consisting in mixing with the tar or pitch less than 1% of a substance containing and yielding an aldehyde.

3. A process for treating tar or pitch with the object of removing therefrom the properties tending to induce pitch cancer, consisting in adding less than 1% of an aldehyde to the tar or pitch before the completion of the distillation.

4. A process for treating tar or pitch with the object of removing therefrom the properties tending to induce pitch cancer, consisting in adding less than 1% of formalin to the tar or pitch before the completion of the distillation.

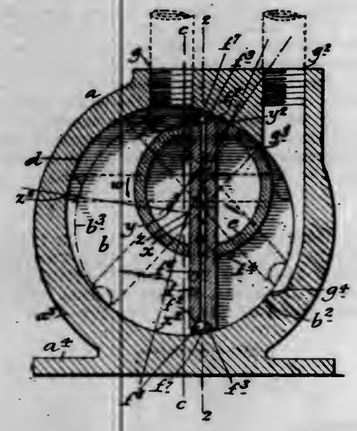
5. A process for treating tar or pitch with the object of removing therefrom the properties tending to induce pitch cancer, consisting in adding less than 1% of a substance yielding an aldehyde to the tar during the distillation thereof at a stage after the separation of the carbolic acid fraction and before the separation of the heavy oil fraction.

[Claims 6 to 8 not printed in the Gazette.]

1,114,046. VACUUM-PUMP. AMANDUS C. ROESSLER, Mineola, N. Y. Filed June 2, 1910, Serial No. 564,557. Renewed Aug. 24, 1914. Serial No. 858,345. (Cl. 230—30.)

1. In a vacuum pump the combination of a hollow casing having a truly concentric portion, and an enlarged non-concentric portion, whereby the casing is made of greater capacity on one side than the other, the curvature of the concentric and non-concentric portions being such that they will engage the ends of all equal chords drawn through a center of rotation, a sliding piston blade journaled within the casing on said center of rotation, said casing having an inlet port on the side of the casing of greater capacity and an outlet port on the side of lesser capacity, said ports being so disposed with respect to each other that the blade will commence to open the outlet port

substantially at the same time that the inlet port is closed to avoid the compressing of the fluid within said casing.



2. In a vacuum pump, the combination with a casing having a truly circular portion and an enlarged non-concentric portion, whereby the casing is of greater capacity on one side than on the other, a sliding piston blade journaled in said casing and having its axis of rotation disposed on the side of a vertical line passing through the axis of the truly circular portion, adjacent to the side of the casing having the lesser capacity, and above said axis, the curvature of the said portions of the casing being such that they will engage the ends of all equal chords passing through said axis of rotation of the blade, said casing having an inlet port on the side of greater capacity and an outlet port on the side of lesser capacity, and said ports being so located with respect to each other that the blade will commence to open the outlet port substantially synchronously with the closing of the inlet port by the other end of said blade, to avoid compressing the fluid in said casing.

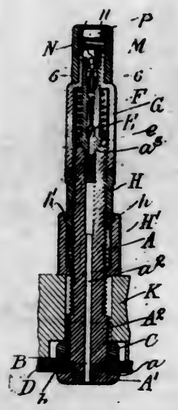
3. In a vacuum pump the combination with a hollow casing having a truly cylindrical portion and a non-concentric portion described from a plurality of different centers with different radii, whereby the casing is made of greater capacity on one side than on the other, a sliding piston blade journaled eccentrically in said casing and having its axis of rotation located at one side of a vertical line passing through the axis of the truly cylindrical portion of the casing and on the side of the casing of lesser capacity, and located above the said axis, the interior surface of the casing being on such radii that it will engage the ends of all equal chords passing through the axis of rotation of said blade, said casing having an inlet port on the side of greater capacity, located substantially at the beginning of said enlarged portion of the casing, and an outlet port on the side of lesser capacity and so located that said blade will commence to open it at substantially the same time that the inlet port is closed by the other end of the blade to avoid compressing the fluid within the casing.

4. In a vacuum pump the combination with a casing, of a sliding rotary piston blade journaled eccentrically therein, and provided on its opposite longitudinal edges with oil grooves, extending longitudinally of said edges and perpendicularly with the axis of the rotation of the blade, whereby said grooves will carry a body of oil and effect a self sealing junction between the edges of the blade and the end walls of the casing and means communicating with said grooves for supplying oil thereto.

5. In a vacuum pump the combination with a casing, of a sliding rotary piston blade journaled eccentrically therein, and provided on its opposite longitudinal edges with oil grooves, extending longitudinally of said edges, whereby said grooves will carry a body of oil and effect a self sealing junction between the edges of the blade and the end walls of the casing, said blade being also provided with an oil passage extending from one end to the other, and with lateral passages extending from said longitudinal passage to said longitudinal grooves.

[Claims 6 to 8 not printed in the Gazette.]

1,114,047. SAFETY-VALVE FOR PNEUMATIC TIRES. HARVEY J. RUGGLES, Jackson, Mich. Filed Aug. 6, 1912. Serial No. 713,567. (Cl. 152—12.)



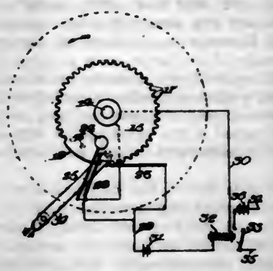
1. The combination with a valve stem having a passage therethrough with a valve seat at its outer end; a case mounted on the stem and constructed with a reduced portion providing a valve working chamber, and forming an abutment; a safety valve closely fitting and working within said chamber; said reduced casing portion having grooves formed adjacent the valve providing air passages; a spring surrounding said valve and having its respective ends engaging with the valve and said abutment and normally holding the valve seated under tension; a check valve mounted on said safety valve; and a second case mounted on the first case and provided with openings forming air passages.

2. The combination with a valve stem having a longitudinal passage with a valve seat at its outer end, a spring-pressed safety valve normally engaging said valve seat, a valve case housing said valve and adjustable on the valve stem for tensioning the spring, and an expanding nut mounted on the stem and comprising telescoping parts, one adapted to lock said valve case, and the other part adapted to clamp against the rim of a wheel.

3. The combination with a valve stem having a longitudinal passage with a valve seat at its outer end, a spring-pressed safety-valve normally engaging said valve seat, a valve case housing said valve and adjustable on the valve stem for tensioning the spring, and an expanding nut mounted on the stem and comprising telescoping parts, one adapted to lock said valve case, and the other part adapted to clamp against the rim of a wheel, said expending nut completely covering the portion of the stem extending between the case and rim.

4. The combination with a valve stem having a longitudinal passage with a valve seat at its outer end, a spring-pressed safety valve normally engaging said valve seat, a valve case housing said valve and adjustable on the valve stem for tensioning the spring, an expanding nut mounted on the stem and comprising telescoping parts, one adapted to lock said valve case, and the other part adapted to clamp against the rim of a wheel, the outer part of said nut having an annular groove in its bore, and a gasket in said groove hugging the inner part of the nut for the purpose specified.

1,114,048. CALLING DEVICE. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Sept. 1, 1910. Serial No. 580,068. (Cl. 177—365.)



1. A signal sending apparatus having a current impulse controlling device, an impulse sending relay under the control thereof, and auxiliary means for close-circuiting said relay during the movement of said device in one direction.

2. A signal sending apparatus having a current impulse controlling device, an impulse sending relay under the control thereof, and auxiliary means for close-circuiting said relay during the movement of said device in one direction and opening said closed circuit during the reverse movement to permit said impulse device to intermittently operate said relay during said reverse movement.

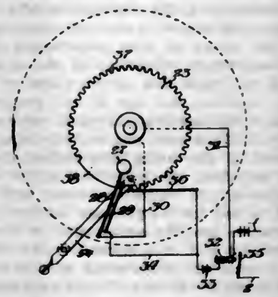
3. A signal sending apparatus having a current impulse controlling device, a relay for transmitting impulses operable thereby, and auxiliary means controlled by said device to operate said relay to send one prolonged impulse during the movement of said device in one direction.

4. A signal sending device comprising a circuit controlling current impulse controlling mechanism having means for transmitting a plurality of impulses followed by a prolonged impulse, means for moving said mechanism, and means for arresting the movement of said mechanism before the completion of the prolonged impulse aforesaid.

5. A signal sending device comprising a circuit controlling current impulse controlling mechanism having means for transmitting a plurality of impulses followed by a final impulse, means for moving said mechanism, and means for arresting the movement of said mechanism before the completion of the final impulse aforesaid.

[Claims 6 to 16 not printed in the Gazette.]

1,114,049. SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Original application filed Sept. 1, 1910, Serial No. 580,068. Divided and this application filed Jan. 20, 1911. Serial No. 603,679. (Cl. 177—342.)



1. A signaling system having a signal sending station and signal receiving stations all united by a common line circuit, a selective circuit closing element at each receiving station, a magnet for operating each element, and a controlling magnet for each element, a signal sending device at the central station having impulse sending mechanism adapted for a forward and reverse movement, and means associated therewith to effect the operative actuation of the controlling magnets during the forward and reverse movements of said mechanism, and effecting the operative actuation of the selector magnets during the movement of said mechanism in one direction only.

2. A signaling system having a signal sending station and signal receiving stations all united by a common line circuit, a selective circuit closing element at each receiving station, a magnet for operating each element, and a controlling magnet for each element, a signal sending device at the central station having impulse sending mechanism adapted for a forward and reverse movement, and means associated therewith to effect the operative actuation of the controlling magnets during the forward and reverse movements of said mechanism, and effecting the operative actuation of the selector magnets during the movement of said mechanism in one direction only, said means including a relay and a source of current for impulse transmitting purposes.

3. A signaling system having a signal sending station and signal receiving stations all united by a common line circuit, a selective circuit closing element at each receiving station, a magnet for operating each element, and a controlling device for each element, a signal sending device at the central station having impulse sending mechanism adapted for a forward and reverse movement, and means associated therewith to effect the operative actuation of the controlling magnets during the forward and reverse movements of said mechanism, and effecting the operative actuation of the selector magnets during the movement of said mechanism in one direction only, said means including a relay, a source of current for impulse transmitting purposes, and a frictional circuit controlling element for said battery.

4. A signaling system comprising a signal sending station and substations, step by step signal receiving apparatus at each substation, holding means for each step by step apparatus, and a call box at the central station adapted to be set into position to send a call for any predetermined station and having means to control the step by step apparatus to select any desired station, when returning to normal position and also having means to control the holding means aforesaid during the setting operation of said call box in accordance with the desired substation.

5. A signaling system comprising a signal sending station and substations, a call box at the sending station adapted to be set by hand in position to select any predetermined station, and having automatic means operable when returning to normal position after the said operation to select the desired station, selective signal receiving devices at each substation having means whereby said devices are initially placed in condition to be selected for operating under control of the said call box, and means associated with said call box during the setting operation of said call box to control the last aforesaid means.

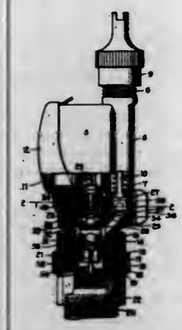
[Claims 6 and 7 not printed in the Gazette.]

1,114,050. PRESSURE-GAGE. EDWARD S. SAVAGE, Rochester, N. Y. Filed Sept. 24, 1913. Serial No. 791,644. (Cl. 73—31.)

1. In a pressure gage the combination, with pressure-indicating means, a casing inclosing said means, and a cover swingingly mounted on the casing; of a valve controlling the admission of pressure to the pressure-indicating means and operatively associated with the cover so as to be opened and closed by movement of the cover to open or closed position respectively.

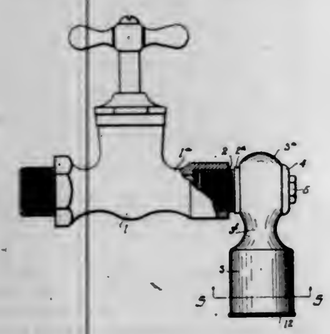
2. A pressure-gage having, in combination, pressure-indicating means; a casing inclosing said means and provided with an air-inlet passage and a branch passage connecting the air-inlet passage with the pressure-indicating means; a check-valve controlling said branch-passage; a spring holding the check-valve normally closed; a manually-operable member pivotally mounted on the casing;

and coöperating devices connected with said member and said valve whereby the valve is forced open, when the manually-operable member is swung in one direction, to admit pressure to the pressure-indicating means.



3. A pressure-gage having, in combination, a casing provided with a body-portion to receive pressure-indicating means, a neck adapted for connection with a tire-nipple, upper and lower air-passages in said neck, an air-inlet passage communicating with the lower air-passage, and a valve-chamber communicating with the upper air-passage and the air-inlet passage; pressure-indicating means, including a Bourdon tube, in the body-portion of the casing; coupling-means located in the upper and lower air-passages in the neck of the casing and securing the Bourdon tube in operative position, said means having a solid portion, forming a closure between said upper and lower air-passages, and a passage for connecting the Bourdon tube with the upper air-passage; a valve-cage provided with a valve-seat located in the valve-chamber between its points of communication with the upper air-passage and the air-inlet passage; a valve coöperating with the valve-seat; and manually-operable means, external to the casing, for controlling said valve.

1,114,051. FOUNTAIN-FAUCET. STEPHEN SCHWARTZ, Cleveland, Ohio, assignor, by mesne assignments, to Louis F. Schroeder, Cleveland, Ohio. Filed Jan. 23, 1911, Serial No. 604,040. Renewed Mar. 13, 1914. Serial No. 824,553. (Cl. 137—110.)



1. In a fountain faucet, a rotatably mounted fountain cup provided with an inlet port at one end and a central discharge opening at the other and having an enlarged cylindrical shaped chamber, a second cup having an enlarged strainer chamber communicating with said inlet port and provided with perforated cylindrical walls spaced from the walls of said fountain cup to provide an annular chamber between the walls of said cups, and an imperforate cap threaded to the outer end of said second cup whereby access may be obtained to said enlarged strainer chamber and spaced inwardly from said central discharge opening.

2. In a fountain faucet, a rotatably mounted fountain cup provided with inlet and outlet ports, a cylindrical shaped perforated cup mounted in and spaced from the walls of said fountain cup to form an annular chamber within the walls of the latter, said perforated cup being provided with an enlarged chamber communicating with said inlet port, a strainer member mounted within said enlarged chamber of said strainer cup, and an imperforate thumb cap threaded to the outer end of said strainer cup and adapted to removably retain said strainer member therein.

3. In a fountain faucet, the combination with a rotatably mounted fountain cup provided with an inlet port opening at one end and a central discharge opening at the other; of a cylindrical strainer cup having an enlarged strainer chamber communicating with said inlet port and having its cylindrical walls perforated and spaced from the walls of said fountain cup to provide an annular chamber between the walls of said cups, a cylindrical strainer member mounted in said strainer chamber, and a cap removably secured to the outer end of said perforated cup and adapted to removably retain said cylindrical strainer member therein.

4. In a fountain faucet, a fountain cup provided with a sleeve head and having a duct communicating with the latter and provided at one end with a threaded opening, a perforated cup provided with a threaded hollow stud portion mounted in said threaded opening, said threaded stud being provided with an angular key receiving portion, and an imperforate cap threaded to the lower end of said perforated cup.

1,114,052. FOUNTAIN-PEN. WALTER A. SHEAFFER, Fort Madison, Iowa. Filed Nov. 18, 1912. Serial No. 732,087. (Cl. 120—46.)

1. In a fountain pen, the combination of a casing having a longitudinally extending slot, an elastic ink reservoir in the casing, a reservoir compressing plate mounted to move transversely in the casing, means to prevent longitudinal movement of the plate, a stop on the outer side of the plate, and a plate compressing lever arranged in the slot in the casing and fulcrumed intermediate its ends, both of said ends being free and the inner one being thick and beveled, and adapted to engage said stop when the lever is substantially at right angles to the casing.

2. In a fountain pen, the combination of a casing, an elastic ink reservoir therein, a reservoir compressing plate mounted in the casing to move transversely, means for preventing longitudinal movement of the plate, a stop projection on the outer side of the plate of triangular shape in side elevation, one face of said projection being perpendicular to the length of the plate and the other inclined longitudinally toward one end of the plate and a lever fulcrumed to the casing intermediate its ends and having both ends free, the inner end of the lever being thick and beveled, and adapted to coact with said stop substantially as and for the purposes set forth.

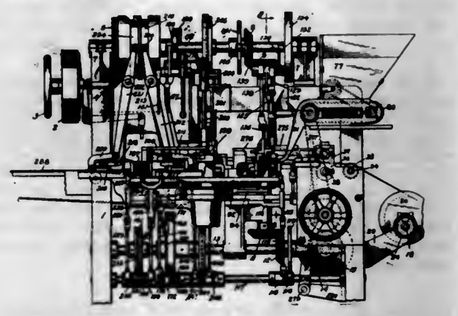
3. In a fountain pen, the combination of a casing having a longitudinal slot, a compressible ink reservoir in said casing, a reservoir compressing member arranged in the casing between one of its walls and said reservoir and adapted to be pressed into contact with such wall of the casing by the reservoir, a lever arranged in the slot in the casing and fulcrumed intermediate its ends, one end of said lever having a longitudinal extending open slot to form a ductile element adapted to be bent out of alinement with the lever and to be connected by said member when the reservoir is distended whereby the lever is held in closed position, and means for limiting the closing movement of said lever.

4. A lever for compressing a fountain pen reservoir having one end thick and the other thin, the thick end having a longitudinally extending open slot therein to form a ductile element adapted to be bent out of alinement with the lever.

5. A lever for compressing a fountain pen reservoir having a longitudinally extending open slot in one end thereof to form a ductile element adapted to be bent out of alinement with the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,114,053. CIGARETTE-PACKING MACHINE. ELBERON D. SMITH, Brooklyn, N. Y., assignor to American Machine & Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed May 20, 1913. Serial No. 768,806. (Cl. 93—4.)



1. In a cigarette packing machine, the combination with means having an intermittent movement in one direction only for forwarding a plurality of cigarettes, of means in the path of movement of the forwarding means for removing said cigarettes from the forwarding means and for collocatively compressing said cigarettes while so removed and for replacing them in the forwarding means.

2. In a cigarette packing machine, the combination with a source of cigarette supply, of means having an intermittent movement in one direction only for forwarding a plurality of cigarettes from said source of supply, and means in the path of movement of the forwarding means for removing said cigarettes from the forwarding means and for collocatively compressing said cigarettes while so removed and for replacing them in the forwarding means.

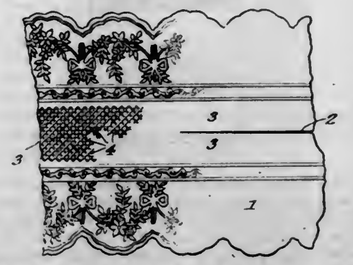
3. In a cigarette packing machine, the combination with a source of cigarette supply of means for separating from the source of supply a definite number of cigarettes, means having an intermittent movement in one direction only for collocatively forwarding the cigarettes so separated, and means in the path of movement of the forwarding means for removing said cigarettes from the forwarding means and for collocatively compressing said cigarettes while so removed and for replacing them in the forwarding means.

4. In a cigarette packing machine, the combination with a source of cigarette supply, of means for separating from the source of supply a definite number of cigarettes, means for collocatively forwarding the cigarettes so separated, means in the path of movement of the forwarding means for removing said cigarettes from the forwarding means and for collocatively compressing said cigarettes while so removed and for replacing them in the forwarding means, the removing and compressing means being spaced from the separating means a sufficient distance to enable the operator to remove from the forwarding means any defective cigarette and replace it with a perfect cigarette before the collocation reaches the removing means.

5. In a cigarette packing machine, the combination with means having an intermittent movement in one direction only for forwarding a plurality of cigarettes, of means in the path of movement of the forwarding means for removing said cigarettes from the forwarding means and for collocatively compressing said cigarettes while so removed and for replacing them in the forwarding means, and means for thereafter folding a sheet of wrapping material around the collocation of compressed cigarettes.

[Claims 6 to 57 not printed in the Gazette.]

1,114,054. EDGING-STRIP FOR PAPER BOXES. HARRY BRIDGMAN SMITH, Brooklyn, N. Y. Filed Jan. 24, 1913. Serial No. 743,959. (Cl. 229—8.)



1. As a new article of manufacture, an ornamental edging strip for boxes, having an attaching edge for attaching said strip to the box, said attaching edge having embossings therein forming pockets to receive the attaching adhesive, said strip having ornamental embossings on the body thereof.

2. As a new article of manufacture, an ornamental edging strip for boxes, having an attaching edge for attaching said strip to the box, said attaching edge having embossings therein forming pockets to receive the attaching adhesive, said strip having ornamental embossings on the body thereof, said edge embossing being arranged to produce substantially the same longitudinal contraction in said strip at different points on the width thereof to prevent puckering at said attaching edge.

3. As a new article of manufacture, an ornamental edging strip for boxes, having an attaching edge for attaching said strip to the box, said strip having embossings on the inner and outer edges thereof for producing a substantially equal thickening of the strip on said edges whereby a supply stack of said strips superposed upon each other will be of substantially equal height on its opposite edges, thereby facilitating the automatic feeding of said strips from said stack.

1,114,055. METAL ALLOY. EDWARD SMITH, London, England. Filed Jan. 30, 1914. Serial No. 815,539. (Cl. 75—1.)

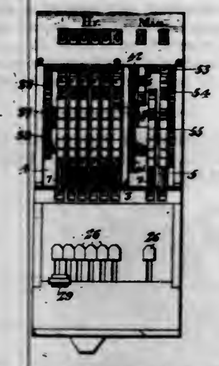
1. A white metal alloy consisting of copper 40, nickel 8½, zinc 5, tin 2½ and lead 1.

2. The process of preparing a white metal alloy by mixing granulated nickel and a flux consisting of silica in a crucible and heating until molten, then adding half the requisite quantity of copper gradually and when mixed adding the rest of the copper in bulk, then adding the zinc and finally adding the tin and lead together.

1,114,056. REGISTER FOR ADDING-MACHINES. JOHN ASBURY SMITH, Harrisburg, Pa., assignor to Elliott-Fisher Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 14, 1907. Serial No. 406,482. (Cl. 235—117.)

1. In a register of the character described, the combination with an alined series of registering wheels, of an alined series of operating wheels geared thereto, the gearing between certain of the wheels being of different ratios, carrying devices arranged to engage and advance the operating wheels, and selectors for the carrying devices, certain of said selectors being operable by certain of the oper-

ating wheels and one of said selecting devices being operable by a registering wheel.



2. In a register of the character described, the combination with an alined series of registering wheels, of an alined series of operating wheels geared thereto, the gearing between one of said operating wheels and its registering wheel constituting a reducing train, carrying devices arranged to engage and advance the operating wheels, a series of selectors for said carrying devices, carrying lugs movable with certain of the operating wheels to operate certain of the selectors, and a carrying lug movable with the registering wheel which is operated by the reducing gearing, to operate another selector.

3. The combination with an alined series of registering wheels, of an alined series of operating wheels geared thereto, carrying devices arranged to engage and operate the operating wheels, and selectors for the carrying devices, each of certain of the operating wheels having a single carrying lug arranged to operate a selector, and one of the registering wheels having a plurality of carrying lugs arranged to operate another of the selectors.

4. In a register of the character described, the combination with two parallel shafts, of a series of registering wheels mounted on one shaft, a series of operating wheels mounted on the other shaft and geared to the registering wheels, and resetting mechanism including means whereby different registering wheels will be reset, one through the medium of its operating wheel and another independently of its operating wheel.

5. In a register of the character described, the combination with two parallel shafts, of a series of registering wheels mounted on one shaft, a series of operating wheels mounted on the other shaft and geared to the registering wheels, the gearing between certain registering wheels and their operating wheels differing in ratio, resetting means arranged to rotate both shafts, resetting dogs carried by certain of the operating wheels, resetting cams carried by one of the shafts and arranged to engage said dogs, a resetting cam carried by the other shaft, and a resetting dog carried by one of the registering wheels in position to be engaged by said last named resetting cam.

[Claims 6 to 8 not printed in the Gazette.]

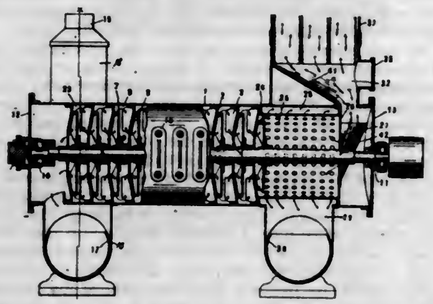
1,114,057. STACK-COVER. WILBER BRADEN SPALDING, Wamego, Kans. Filed June 4, 1914. Serial No. 843,021. (Cl. 108—2.)

1. In an apparatus of the character described, a cover mounted at one of its ends for pivotal and vertical sliding movement, cables connected to the pivoted end of the cover, a drum upon which said cables are adapted to be wound, a cable connected to the free end of the cover and normally supporting said cover in a horizontal position, a second drum for said latter cable, and means for independently operating said drums to move the cover vertically or swing the same from its horizontal position to an inclined position.

2. In an apparatus of the character described, spaced vertical guides, slide blocks mounted in said guides, a cover pivotally mounted at one of its ends upon said slide blocks, means connected to the other end of said cover to swing the same from a horizontal position to an upwardly inclined position with respect to said guides, and additional means connected to the slide blocks to move the same vertically in the guides and adjust the position of said cover thereon.

3. In an apparatus of the character described, spaced vertical guides, slide blocks mounted in said guides, a cover pivotally mounted at one of its ends upon said slide blocks, cables connected to said slide blocks, a drum upon which said cables are adapted to be wound, a cable connected to the free end of the cover and normally supporting said cover in a horizontal position, a second drum for said latter cable, and means for independently operating said drums to adjust the cover upon said vertical guides or swing the same upwardly to an inclined position with respect thereto.

1,114,058. CLEANING APPARATUS AND DUST-SEPARATOR. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 22, 1907. Serial No. 403,317. (Cl. 83—48.)



1. In a dust separating apparatus, a casing having an inlet and an outlet, means within said casing for creating a suction or vacuum and for imparting a rotary movement to a volume of air, and a tubular perforated member constituting a vacant chamber located between the suction apparatus and the exhaust for flow of air out at the end of said tubular member, and through which said volume of air is forced.

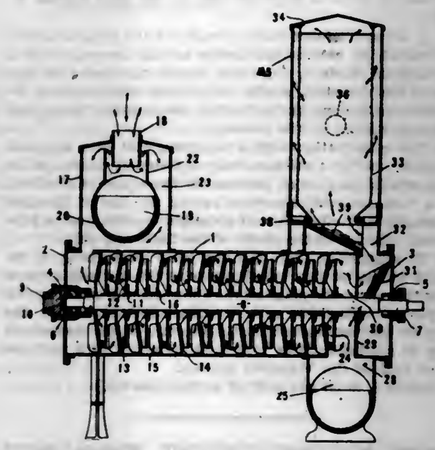
2. In a dust separating apparatus, a casing having an inlet and exhaust, a rotating member within the casing for creating a suction, a tubular perforated member constituting a vacant chamber located between the rotating member and exhaust and of a size in diameter greater than that of said rotating member and out at the end of which a volume of air is forced to the exhaust.

3. In a dust separating apparatus, a casing having an inlet and an exhaust, a rotary means within said casing for creating a suction, a tubular perforated member constituting a vacant chamber located beyond the rotary means and through and out at the end of which a volume of air passes to the exhaust, and a receiver located under said perforated member.

4. In a dust separating apparatus, a casing having an inlet and an exhaust, rotary means located within the casing for creating a suction, a tubular perforated member constituting a vacant chamber located between the rotary member and exhaust for flow of air out at the end of said tubular member, said casing having a passage leading from the end of said tubular perforated member to the exhaust, and a receptacle located opposite the tubular perforated member.

5. In a dust separating apparatus, a tubular case having an inlet opening at one end and an exhaust opening at the opposite end, a tubular perforated member smaller in diameter than the case and located at the exhaust opening through which tubular member from end to end air passes to the exhaust opening, a rotary member located at one end of said tubular member to impart rotary movement to the air passing through said tubular member, and a receptacle located underneath and opposite the side of said tubular member to receive matter passing through the perforation therein.

1,114,059. SUCTION CLEANER AND DUST-SEPARATOR. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 22, 1907. Serial No. 403,318. (Cl. 83—48.)



1. In a dust separating apparatus, a case having an inlet chamber, a closed dust receptacle opening out of the case, impellers rotatably mounted in the case, deflector plates secured within the case at a point adjacent to the opening into the receptacle, and means for decreasing the area of the opening from the impellers at the periphery thereof to accelerate the flow of fluid therefrom.

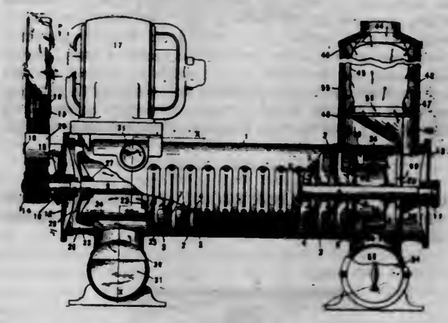
2. In a dust separating apparatus, a case having an inlet chamber, a dust receptacle opening out of the case, a deflector plate secured within the case adjacent to the edge of the opening into the dust receptacle, and an impeller having a wall arranged transverse to its axis, said wall and deflector plate converging at a point adjacent to the opening from the impeller case into the dust receptacle.

3. In a dust separating apparatus, a case having an inlet chamber, a dust receptacle opening out of the case, a deflecting plate extending in a direction oblique to the axis of said case and fixed thereto at a point adjacent to one edge of the opening into the dust receptacle, an impeller rotatably mounted in the case and having a wall arranged transverse to the axis of said case whereby the deflecting plate and wall of the impeller converge to a point adjacent to the opening into the dust receptacle to accelerate the flow of fluid and increase the separating action.

4. In a dust separating apparatus, a case provided with an inlet chamber and having a plurality of communicating impeller compartments connected with the inlet chamber, a series of rotary impellers located in said compartments for producing increased air pressure in each of the succeeding chambers, said case having a plurality of openings of material width through its wall located substantially in the plane of rotation of some of the impellers, and closed receiver chambers located opposite said openings and separated from the chamber within the case to receive material thrown off by said impellers through said openings.

5. In a dust separating apparatus, a case provided with an inlet chamber and having a plurality of communicating impeller compartments connected with the inlet chamber, said case having an opening located substantially in the plane of rotation of the impellers at each end of the case and also having openings located substantially in the plane of rotation of intermediate impellers, and closed receiver chambers separated from the chamber within the case and in line with said openings to receive material thrown off by the impellers through said openings.

1,114,060. DEVICE FOR COLLECTING AND SEPARATING DUST. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 22, 1907. Serial No. 403,319. (Cl. 83—48.)



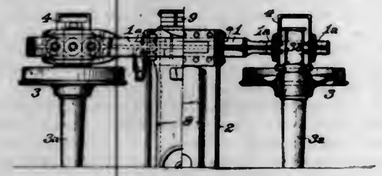
1. In an apparatus for collecting and separating dust, a case, a cylindrical tube constituting a passage within the case, the latter having a tangentially arranged inlet opening and an outlet opening located on diametrically opposite sides of the tube, a cap overlapping the end of the tube at one side of said openings but permitting entrance of air thereinto, and means for rotating the cap.

2. In an apparatus for collecting and separating dust, a case, means for causing a flow of air through said case, a cylindrical tube constituting a passage within the case, a cap closely fitting the end of the tube and the sides thereof but permitting the entrance of air thereinto, said case having an opening through its wall located opposite the edge of said cap whereby flow of air directly into the passage between the cap and tube is insured, said case having a second opening through its wall into a dust receptacle, the dust receptacle, and means for rotating the cap.

1,114,061. CAR-TRUCK. HAL R. STAFFORD, Plainfield, N. J. Filed May 12, 1914. Serial No. 838,183. (Cl. 105—243.)

1. In a railroad truck, the combination of two integral cast metal side members, each provided with pedestal jaws and having a central opening, the width of the lower portion of which is greater than that of its upper portion, bolster guide shoes fitted in the upper narrower portions of the side member openings, a spring plank secured horizontally at its ends to the sides of the wider lower portions of said openings, a bolster supported on the spring plank and fitted to move vertically between the guide

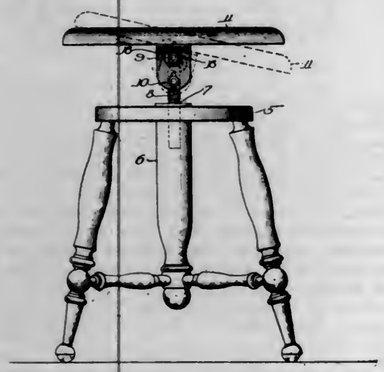
shoes, the maximum width of said bolster being less than that of the narrower upper portions of the side member openings, and bolts extending transversely to the bolster and detachably connecting the guide shoes to the side members.



2. In a railroad truck, the combination of two side members, each provided with pairs of pedestal jaws, axle boxes fitted with the capacity of relative vertical movement in the pedestal jaws, equalizers, each seated on one only of the axle boxes, independently of the others, and nests of helical springs interposed between the equalizers and bearings in the side members, and disposed symmetrically with the longitudinal central planes of the axle boxes.

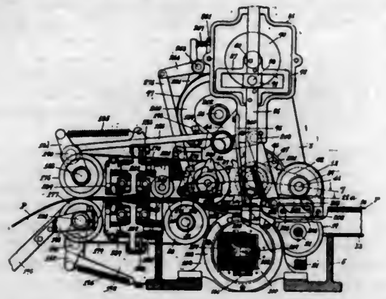
3. In a railroad truck, the combination of two integral cast metal side members, each provided with pairs of pedestal jaws; bolster guide shoes detachably connected to the side members; a wrought metal spring plank, of channel section, secured at its ends to the side members, below the bolster guide shoes; axle boxes fitted with the capacity of relative vertical movement in the pedestal jaws; equalizers seated on the axle boxes; nests of helical springs interposed between the equalizers and bearings in the side members; a bolster fitted to move vertically between the guide shoes; and springs supporting said bolster on the spring plank.

1,114,062. ADJUSTABLE STOOL. JOHN H. STEINMETZ, Chicago, Ill. Filed Dec. 9, 1912. Serial No. 735,700. (Cl. 155—22.)



An adjustable stool, comprising a base, a post vertically adjustable thereon, a pair of pins extending laterally from each side of the post, a seat, a pair of members secured to said seat and extending downwardly therefrom on each side of said post, each member being provided near its lower ends with a longitudinally extending slot engaged with the lower pin on said post to provide a sliding and pivotal connection between said post and said member, each member being provided above said slot with an arcuate slot engaged with the upper pin of said post and a central boss having a depression, said depression in the ends of said slot forming a central and two lateral seats for the reception of said upper pin and by means of which said seat is adjustably supported upon said upper pin.

1,114,063. PAMPHLET-STITCHING MACHINE. ALBERT A. STURTEVANT, Hartland, Vt., and WILLIAM H. HONISS, Hartford, Conn. Filed May 29, 1902. Serial No. 109,428. (Cl. 112—41.)



1. A supporting table for the purpose specified, comprising a V-shaped saddle portion, merging into a flat inclined surface extending above the plane of the apex of the V-portion.

2. A supporting table for the purpose specified, comprising a V-shaped saddle portion, merging into a flat inclined surface extending above the plane of the apex of the V-portion, and curving thence into a plane surface approximately parallel with the line of the apex of the V-portion.

3. A supporting and feeding table for the purpose specified comprising a V-shaped saddle portion merging into a flat inclined surface, extending above the plane of the apex of the V-portion, and a pair of feed rolls having a V-shaped driving contour for feeding the pamphlet along the V-shaped surface of the former.

4. The combination with a flattening roll of a supporting table having a substantially flat surface arranged in substantially tangential relation to the circle of the roll, and a V-shaped saddle portion having the line of its apex merging into the flat plate at an angle thereto, and in substantial relation to the circle of the flattening roll.

5. A supporting and feeding table comprising a V-shaped saddle portion merging into a flat inclined surface extending above the plane of the apex of the V-portion, and a pair of cylindrical rolls meeting substantially in the plane of the inclined surface, the circle of the upper roll being in a substantially tangential relation with the line of the apex of the V-shaped portion.

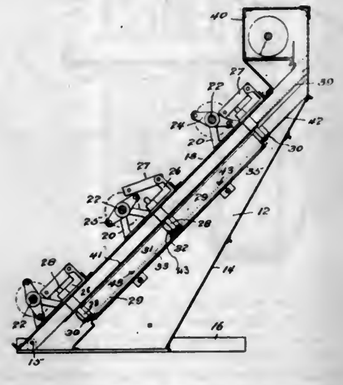
[Claims 6 to 56 not printed in the Gazette.]

1,114,064. SCREEN OR SEPARATOR. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed Nov. 17, 1910. Serial No. 592,858. (Cl. 83—56.)

1. In a separator, the combination with an inclined, normally fixed or stationary box or casing and one or more flat screens inclosed therein and supported thereby, of foot bars with which the said box or casing is pivotally connected at its lower end, and adjusting means for varying the angle of inclination of said box or casing on its pivotal connection with said foot bars, said adjusting means comprising threaded eye-bolts provided with adjusting nuts, and brackets engaged by said adjusting nuts.

2. In a separator, the combination with an inclined, normally fixed screen box or casing, and one or more flat metallic screens supported thereby, of adjusting means for varying the angle of inclination of the said box or casing and of the said screen or screens, percussive means for jarring the said screen or screens, and transverse baffle bars on the upper surface or surfaces of said screen or screens, and over which the descending material passes, said baffle bars serving to check the downward movement of the material on said inclined screen or screens at intervals.

3. In a separator, the combination with an inclined, wire mesh screen, comprising longitudinal and transverse wires, and the entire surface of which is disposed in the same plane, of means for retarding or checking the downward movement of the material thereon, said means comprising baffle bars on the upper surface of said screen and arranged transverse to the downward movement of the material on the screen, and over which baffle bars the descending material passes, and means for percussively jarring said screen.

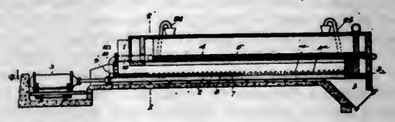


4. In a separator, the combination with an inclined casing provided at its upper end with a coarse or scalping screen, of a receiving plate about equal in length to said scalping screen and on which all of the material passing through said scalping screen will be received, and an inclined wire cloth screen which is practically in the extended plane of said receiving plate and to which screen the material received on said plate will slide or be discharged.

5. In a separator, the combination with an inclined casing provided at its upper end with a relatively short coarse or scalping screen, of a receiving plate of a length about equal to said scalping screen and on which all of the material passing through said scalping screen will be received, and an inclined metallic screen which is practically in the extended plane of said receiving plate and to which screen the material received on said plate will slide or be discharged.

[Claims 6 and 7 not printed in the Gazette.]

1,114,065. COKING PROCESS. LELAND L. SUMMERS, Chicago, Ill. Filed May 13, 1913. Serial No. 767,357. (Cl. 202—8.)

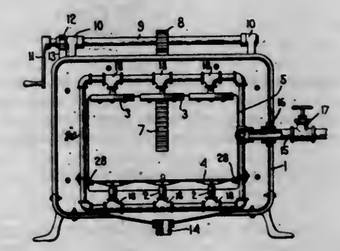


1. The herein described process which consists in feeding carbonaceous material to an externally heated closed retort, inserting gases heated to a point sufficient to cause the carbonaceous material to assume the plastic condition into the freshly charged portion of the material, causing the gases to travel through the freshly charged material toward the source of heat, and conveying the material through the retort.

2. The herein described process which consists in feeding carbonaceous material to an externally heated closed retort, inserting into the freshly charged portion of the material hot gases taken from a more fully coked portion of the material nearer the discharge end of the retort, causing said gases to travel through the freshly charged portion of the material toward the source of heat, and conveying the material through the retort.

3. The herein described process which consists in feeding carbonaceous material to a closed retort heated so as to cause the products of distillation to pass toward the source of heat, further heating an intermediate portion of the material between the freshly charged material and the more fully coked portion of the charge to cause the intermediate portion to assume a uniform plastic condition and then compressing the intermediate portion between the freshly charged material and the more fully coked portion of the charge.

1,114,066. APPARATUS FOR CLEANSING AND STERILIZING TUMBLERS. WILLIAM R. TEMPLETON, Roslindale, Mass. Filed Oct. 18, 1913. Serial No. 796,054. (Cl. 141—7.)



1. In an apparatus for washing and sterilizing tumblers, the combination with a casing, of a plurality of vertically-disposed rectangular-shaped pipe portions situated within the casing and connected together, means to supply a washing and sterilizing fluid to said pipe portions, spraying devices depending from the upper horizontal members of said rectangular portions, nozzles projecting upwardly from the lower horizontal members of said portions, a tray to support tumblers to be washed having openings through which the liquid from the nozzles is delivered into tumblers supported on the tray, and means carried by the vertical legs of the rectangular portions to removably sustain said tray.

2. In an apparatus for washing and sterilizing tumblers, the combination with a substantially fluid-tight inclosing casing having a door opening and a door for closing said opening, an inlet pipe leading into said casing, a plurality of vertically-arranged rectangular pipe portions situated within the casing and extending transversely thereof, means connecting said rectangular pipe portions to each other and to the inlet pipe, a tumbler-receiving tray slidably sustained by the vertical legs of said rectangular pipe portions, spraying devices secured to the upper horizontal sides of said rectangular pipe portions, and nozzles secured to the lower horizontal sides thereof.

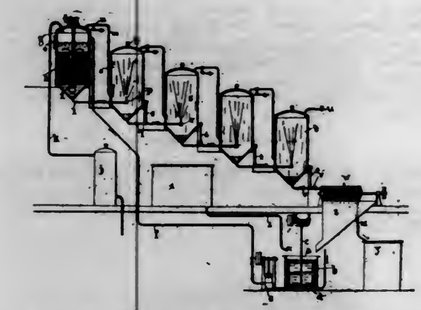
1,114,067. TREATMENT OF OILS, FATS, AND THE LIKE. NILS TESTRUP, London, England, assignor to Lever Brothers, Limited, Port Sunlight, England. Filed Mar. 20, 1911. Serial No. 615,550. (Cl. 87—12.)

1. A process for the treatment of organic substances consisting in exposing the substance mixed with a catalytic material to the action of hydrogen while being injected in a state of minute sub-division; as set forth.

2. A process for converting unsaturated organic substances into more fully saturated substances consisting in exposing the same admixed with a catalytic material injected in the form of mist to the action of hydrogen; as set forth.

3. A process for converting unsaturated oleaginous substances into more fully saturated substances consisting in mixing the same with a catalytic metal and spraying the same by injection into an atmosphere of hydrogen; as set forth.

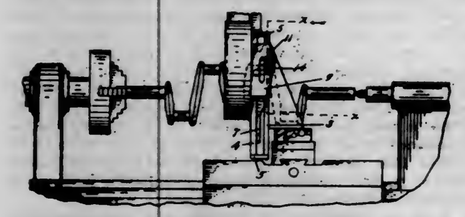
4. A process for hardening fatty matters consisting in exposing the same mixed with a finely divided catalytic material injected in the form of a mist to the action of hydrogen, as set forth.



5. A process for the treatment of fatty matters consisting in mixing the same with finely divided catalytic metal heating the same to an elevated temperature and spraying the mixture by injection into an atmosphere of hydrogen.

[Claims 6 to 22 not printed in the Gazette.]

1,114,068. DEVICE FOR TURNING CRANK-PINS ON ENGINE-SHAFTS. AUGUST THOMAS, Salt Lake City, Utah. Filed May 25, 1914. Serial No. 840,939. (Cl. 82—9.)



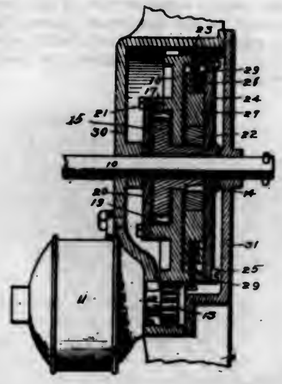
1. A device for turning crank pins integral with a crank shaft, comprising a lathe; means for rotating the shaft on its axis; a cutting tool; a carrier for said tool; and means for securing the carrier on the lathe which will allow limited lateral and vertical movement of said carrier, said means consisting of a transversely movable tool rest and a vertically movable housing.

2. An attachment for a lathe to turn crank pins integral with a crank shaft, comprising a cutting tool; a carrier for said tool; means to secure said carrier on the lathe which will allow said carrier the same movement as is imparted to the pin, said means consisting of a transversely movable tool rest; a vertically movable housing; and means to guide said carrier longitudinally along the pin, said means consisting of a guide case operable in said housing; and a grip case laterally movable in said guide case.

3. An attachment for a lathe to turn crank pins integral with a crank shaft, comprising a cutting tool; a carrier for said tool; a tool rest transversely movable on the lathe; a vertically movable housing; a guide case operable in said housing; a grip case laterally movable in said guide case; and means to detachably fasten said grip case on said shaft.

4. An attachment for a turning lathe to turn crank pins integral with a crank shaft, comprising a tool for operating on said pin; a carrier for said tool; a tool rest transversely movable on the lathe; a vertically movable housing; a guide case operable in said housing; a grip case laterally movable in said guide case; and means to detachably fasten said grip case on said shaft.

1,114,069. SELF-STARTER. GEORGE F. TROTTER, Des Moines, Iowa, assignor of one-half to A. M. Millard, Des Moines, Iowa. Filed Apr. 18, 1913. Serial No. 762,136. (Cl. 74—59.)



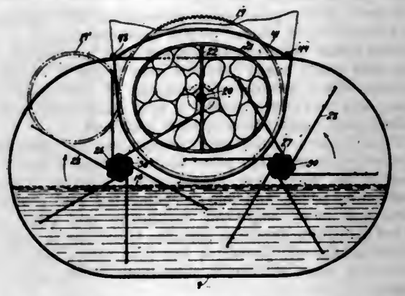
1. In a device of the class described, a dynamo motor having a shaft, an engine shaft, a gearing mechanism mounted thereon, a gearing device on the dynamo shaft, means for operatively connecting said gearing mechanism and said gearing device, said gearing mechanism including a second gearing device loosely mounted on the engine shaft, a ratchet clutch arranged between the second gearing device and the engine shaft for permitting the engine shaft to be run from the motor shaft and arranged to be inoperative when the engine shaft travels faster than the motor shaft, a disk fixed to the engine shaft, centrifugal friction devices carried by the second gearing device, arranged to frictionally engage said disk, and yielding devices for counteracting the centrifugal action of said friction devices.

2. A device of the class described, comprising a motor dynamo having a shaft, an engine shaft, means for gearing the motor dynamo shaft to the engine shaft, comprising a gearing device on one of said shafts, a ratchet device for operatively connecting the gearing device with the shaft on which it is mounted, a gearing device on the other shaft operatively connected with said first gearing device, a disk fixed on the engine shaft, weights slidably mounted on the gearing device on the engine shaft, yielding means for causing said weights to frictionally engage said disk when the engine shaft is rotated below a predetermined speed and arranged to permit the weights to slide away from the disk when a certain predetermined speed has been reached.

3. In a device of the class described a motor having a shaft, a gear on said shaft, a sleeve designed to be fixed on an engine shaft, a gear loosely mounted on said sleeve in mesh with said first gear, coacting ratchet members on said sleeve and said gear, a disk fixed on said sleeve, said gear being formed with a laterally extending annular flange, weights designed to frictionally engage said disk, a yielding device arranged between said weights and said flange for holding said weights in frictional engagement with said disk in such a manner that the rotation of the disk will cause rotation of the weights, until a certain predetermined speed has been attained by the disk.

4. In a device of the class described a motor having a shaft, a gear on said shaft, a sleeve designed to be fixed on an engine shaft, a gear loosely mounted on said sleeve in mesh with said first gear, coacting ratchet members on said sleeve and said gear, a disk fixed on said sleeve, said gear being formed with a laterally extending annular flange, weights designed to frictionally engage said disk, a yielding device arranged between said weights and said flange for holding said weights in frictional engagement with said disk in such a manner that the rotation of the disk will cause rotation of the weights, until a certain predetermined speed has been attained by the disk and an oil tight casing inclosing said sleeve, ratchet devices carrying disks, said motor being mounted on said casing.

1,114,070. FOOD-HANDLING APPARATUS. HENRY TRUST, New York, N. Y. Filed June 10, 1913. Serial No. 772,798. (Cl. 146—14.)



1. In a machine of the class described, means for feeding food therethrough, said means comprising hoops rotating within a declined outer container, and arms adapted to pass between said hoops and engage the food passing therethrough, said arms having fingers of different lengths.

2. In a machine of the class described, means for feeding food theretohrugh, said means comprising hoops rotating within a declined outer container, and arms adapted to pass between said hoops and engage the food passing therethrough, said arms having cutting fingers of different lengths in combination therewith.

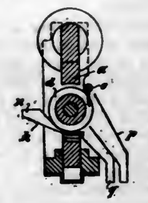
3. In a machine of the class described, means for feeding food therethrough, said means comprising hoops rotating within a declined outer container, and arms adapted to pass between said hoops and engage the food passing therethrough, said arms tangentially mounted.

4. In a machine of the class described, means for feeding food therethrough, said means comprising elliptical hoops rotating within an outer container, and arms adapted to pass between said hoops and engage the food passing therethrough.

5. In a machine of the class described, means for feeding food therethrough, said means comprising hoops rotating within a declined outer container, and arms adapted to pass between said hoops and engage the food passing therethrough, a container for water below said arms into which the peelings from said food may drop and through which said arms may pass.

[Claims 6 and 7 not printed in the Gazette.]

1,114,071. MAGNETIC SEPARATOR. GEORG ULLRICH, Magdeburg, Germany, assignor to Fried. Krupp, Aktiengesellschaft, Grusonwerk, Magdeburg-Buckau, Germany, a Joint-Stock Company. Filed July 3, 1913. Serial No. 777,218. (Cl. 83—71.)



1. A magnetic separator having poles, one of which comprises lamellæ parallel with the direction of feed across the field, and means for individually adjusting the lamellæ, and having the magnetic field across which the material to be separated is conducted, subdivided into partial fields, each partial field being adjustable, and means for conducting the material to be separated through the field gap.

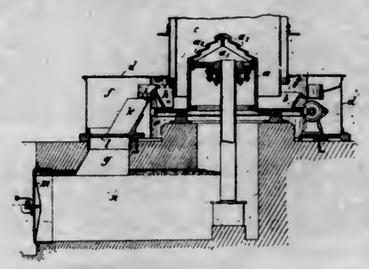
2. A magnetic separator having its magnetic field subdivided into partial fields, said partial fields comprising interchangeable lamellæ for each pole arranged side by side parallel with the direction of travel of the material across the field, said lamellæ being adjustable for regulating the width and the gap of said partial fields; and means for conducting material to be separated through the field gap.

3. A magnetic separator having its magnetic field subdivided into partial fields, comprising a stepped cylinder by which the magnetic material is attracted, said cylinder revolving in the direction of travel of the material to be separated, a lower pole stepped to conform with said cylinder, and means for feeding the material to be separated into the gap between the cylinder and the pole.

4. A magnetic separator having its magnetic field subdivided into partial fields, comprising a stepped cylinder by which the magnetic material is attracted, said cylinder revolving in the direction of travel of the material to be separated, a pole stepped to conform with said cylinder, and means for feeding the material to be separated into the gap between the cylinder and the pole.

5. A magnetic separator having its magnetic field subdivided into partial fields, comprising a stepped cylinder by which the magnetic material is attracted, said cylinder revolving in the direction of travel of the material to be separated, and upper and lower poles stepped to conform with said cylinder, and means for feeding the material to be separated into the gap between the cylinder and one of the poles.

1,114,072. GAS-PRODUCER. ANTON VON KERPELY, Vienna, Austria-Hungary. Filed Oct. 11, 1911. Serial No. 654,156. (Cl. 48—66.)

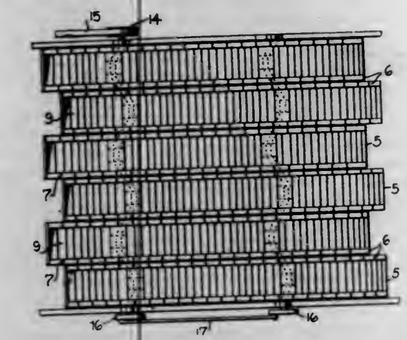


1. A gas producer comprising a stationary shaft, a grate therein, a rotary ash-pan carrying said grate and surrounding the lower end of the shaft, sealing means for the shaft, consisting of an annular gas tight chamber in fixed connection with the shaft surrounding the lower end of the same and the rotatable pan and having a gas tight joint with the latter, means for discharging ashes automatically over the outer edge of the ash pan, said discharge depending upon the rotation of said pan, a gas tight ash discharging chamber at the discharge point of the ashes in connection with the annular gas tight chamber, and means for withdrawing the ashes from the said discharging chamber.

2. A gas producer comprising a stationary shaft, a grate therein, a rotary ash pan carrying said grate, and surrounding the lower end of the shaft, sealing means for the shaft, consisting of an annular gas tight chamber in fixed connection with the shaft surrounding the lower end of the same and the rotary pan and having a gas tight joint with the latter, means for discharging the ashes automatically over the outer edge of the ash pan, said discharge depending upon the speed of rotation of said pan, a gas tight ash discharging chamber at the discharge point of the ashes in connection with the annular gas tight chamber, a gas-tight collecting chamber capable of being alternately put into communication with the ash discharge

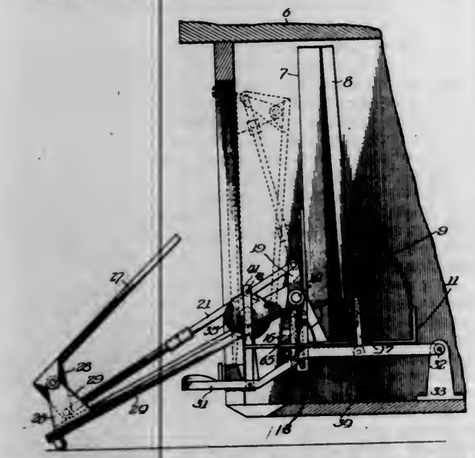
chamber and the exterior, an abutment plate for discharging the ashes accumulated in the pan over the upper edge of the latter, a chute leading from said upper edge to the collecting chamber, and a slide plate for alternately establishing and shutting off the communication with said collecting chamber.

1,114,073. STRAW-DECK FOR SEPARATORS. WILLIAM C. WACHTER, Medicine Lake, Mont. Filed Feb. 8, 1913, Serial No. 747,127. Renewed Mar. 28, 1914. Serial No. 828,099. (Cl. 130—26.)



A straw deck for grain separators comprising a plurality of curved sections, each of said sections consisting of a pair of spaced side walls provided upon their upper edges with teeth and upon their lower edges with relatively fine teeth, the teeth on the lower edges of said walls having inclined edges facing forwardly, said side walls having the upper edges curved downwardly at their forward ends and the lower edges curved upwardly at the rearward ends thereof, riddle plates secured at their ends to the inclined edges of the teeth on the lower edges of the side walls for arrangement in spaced relation to one another, and means in connection with said sections to alternately reciprocate the same in opposite directions.

1,114,074. PLAYER-PIANO PEDAL MECHANISM. WILLIAM T. WAITE, Laporte, Ind., assignor to The Orpheola Company, Laporte, Ind., a Corporation of Indiana. Filed May 29, 1913. Serial No. 770,580. (Cl. 84—169.)



1. In a player piano pedal mechanism, the combination of a pivotally mounted player pedal, foot operated means for moving said pedal into operative and inoperative positions and means releasable by said foot operated means adapted to positively lock said pedal in both positions.

2. In a player piano pedal mechanism, the combination of a player pedal, a positioning pedal, means operated by the positioning pedal for positively moving said player pedal into operative and inoperative positions, means for automatically locking said player pedal in operative position, and means for automatically locking said player pedal in inoperative position.

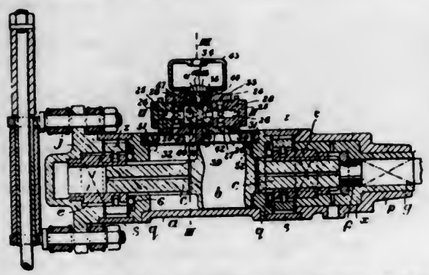
3. In a player piano pedal mechanism, the combination of a panel board, player pedals mounted thereon, a positioning pedal, connections between said positioning pedal and said panel board whereby said board is raised and lowered upon alternate actuations of said positioning pedal, and means controlled by said positioning pedal for locking said panel board in both positions.

4. In a player piano pedal mechanism, the combination of a pivotally mounted panel board forming a door in the front of the piano case, player pedals mounted thereon, a positioning pedal, and means connecting said positioning pedal and panel board for oscillating said panel board on its pivot alternately in opposite directions to move said player pedals into operative and inoperative positions respectively upon successive actuations of the positioning pedal.

5. In a player piano pedal mechanism, the combination of a shaft, a panel board carried thereby, player pedals mounted on said panel board, a positioning pedal and connections between said shaft and said positioning pedal whereby the shaft is alternately rotated in opposite directions to raise and lower the panel board upon successive actuations of the positioning pedal.

[Claims 6 to 14 not printed in the Gazette.]

1,114,075. PERCUSSIVE HAMMER, DRILL, AND THE LIKE. WILLIAM HENRY WAKFER, South Norwood, England, assignor of one-half to Samuel Peck, Wallington, England. Original application filed June 16, 1913, Serial No. 773,993. Divided and this application filed Feb. 14, 1914. Serial No. 818,692. (Cl. 121—20.)



1. A percussive tool, comprising a cylinder, a valve chest connected with the cylinder, a slide valve in the chest having cupped ends, a liner in which the valve slides, and hollow ported plugs screwed into the valve chest and forming seats for respective ends of the valve and adapted to axially adjust the liner.

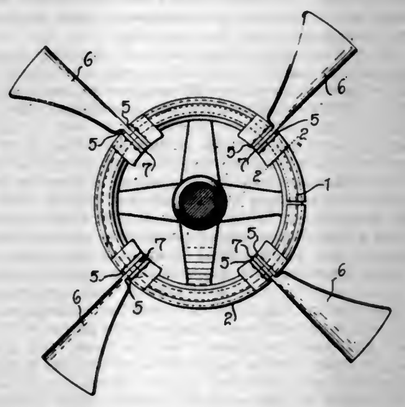
2. A percussive tool, comprising a cylinder, a piston hammer in said cylinder, a valve chest connected with the cylinder, a slide valve in the valve chest adapted to control admission of pressure fluid to and exhaust from the two sides of said piston, a liner in the chest for said slide valve, and hollow ported plugs secured in the valve chest and forming seats for respective ends of said valve and adapted to adjust said liner, the slide valve being formed with a cavity arranged to open one or the other of two auxiliary exhaust ports to the exhaust passage.

3. A percussive tool, comprising a cylinder reversible end for end, a piston hammer in said cylinder, a valve chest connected with the cylinder, a piston slide valve in the valve chest adapted to control admission of pressure fluid to and exhaust from the two sides of said piston, a liner in the valve chest for the slide valve, and hollow ported plugs in the valve chest forming seats for respective ends of said valve and adapted to adjust said liner, the piston valve being formed between its ends with a cavity which is adapted to open one or the other of two auxiliary exhaust ports to the exhaust passage, said auxiliary exhaust ports being arranged near the middle of the cylinder at the inner ends of passages extending from ports at respective ends of the cylinder.

4. A percussive tool, comprising a cylinder reversible end for end, a piston hammer in said cylinder, a valve chest connected with the cylinder, a piston slide valve in said chest adapted to control admission of pressure fluid to and exhaust from the two sides of said piston, hollow ported plugs secured in the ends of the valve chest and adapted to act as seats for respective ends of said valve, each of said plugs being formed with ports communicating with the hollow space of the respective plug, said valve being formed between its ends with a cavity adapted to uncover in alternation two auxiliary exhausts, the ports and passages of which are symmetrically formed in said cylinder, said auxiliary exhaust communicating with the main exhaust when uncovered by said valve, and a throttle valve on the common exhaust connection.

5. A percussive tool, comprising a cylinder, a piston hammer in said cylinder, a valve chest, a piston slide valve in the latter adapted to control admission of pressure fluid to and exhaust from the two sides of said piston, a liner in the valve chest for said valve, hollow ported plugs secured in said valve chest and forming seats for respective ends of said valve and adapted to adjust said liner, and a lubricant receptacle comprising a spigot portion adapted to be secured in an aperture in said chest, said spigot portion inclosing lubricant passages adapted to communicate with lubricant ports in said liner.

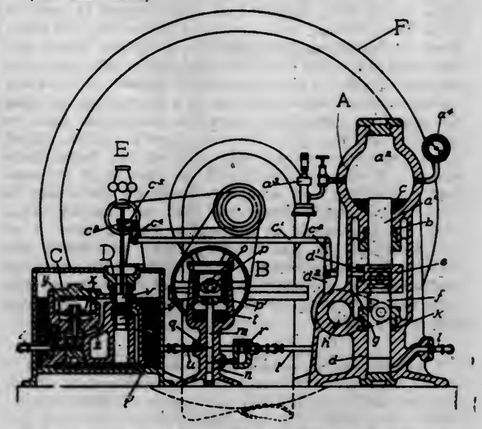
1,114,076. FAN ATTACHMENT FOR SEWING-MACHINES. JOHN D. WARRELL, Deweyville, Tex. Filed Apr. 1, 1914. Serial No. 828,856. (Cl. 230—8.)



1. A device of the class described including a split band substantially arcuate in cross section, the annular edges of said band being bent upon themselves to form beadings, retaining rings arranged within said beadings, and a plurality of fan blades secured to the outer faces of said band at one side thereof.

2. A device of the class described including a split band, substantially arcuate in cross section and having its annular edges bent upon themselves to form projections, yieldable retaining rings arranged within said projections, perforated ears formed integral with the band and projecting upwardly from the outer face at one side thereof, and a plurality of fan blades having reduced portions adapted to be secured to said perforated ears, as and for the purpose set forth.

1,114,077. HIGH-PRESSURE PRIME MOVER. HENRY E. WARREN, Ashland, Mass., assignor to The Lombard Governor Company, Ashland, Mass., a Corporation of New Jersey. Filed Mar. 17, 1913. Serial No. 754,678. (Cl. 121—114.)



1. A governor for controlling the speed of prime-movers, consisting of a plunger connected with the gate operating mechanism, a primary system of high tension fluid pressure by which the plunger is actuated, a pump to produce such pressure upon one end of the plunger, a secondary low pressure system, an automatically operating valve connecting the two systems, which maintains the difference in pressure between them, and a valve in the low pressure system actuated by the prime-mover, which regulates the supply of fluid to be pumped, and the amount of fluid withdrawn from the secondary system.

2. A governor for controlling the speed of prime-movers under high pressure, consisting of a plunger, connected with the gate operating mechanism and actuated by established pressure in one direction, a pump to produce pressure to actuate the plunger in the other direction, a low pressure fluid system including the fluid supply for the pump, an automatically operating valve connecting the high pressure and low pressure systems, which maintains the low pressure in the latter, a valve in the low pressure system controlled by the speed of the prime-mover, which regulates the supply of fluid to be pumped, and the amount of fluid from time to time withdrawn from the secondary system.

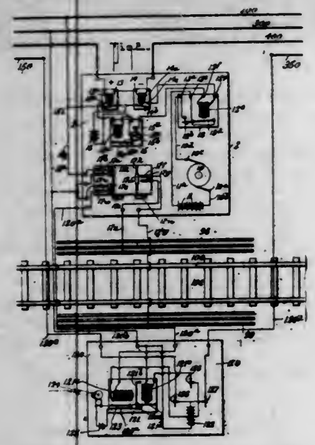
3. A governor for controlling the speed of prime-movers, consisting of a ram constantly opposed by established pressure in one direction and actuated in the other direction by fluid from a high pressure pump, a valve in the connection between this high pressure system and a low pressure system, which maintains the fluid pressure in the latter at a definite ratio to that in the former, a fluid reservoir, and a regulating valve which controls the communication between the low pressure system and the reservoir and between the reservoir and the piston chamber of the pump.

4. In a governor for motors, a ram connected with the gate mechanism, a high pressure pump to actuate the ram in a direction to move the gate, means to quickly relieve the pressure without stopping the pump, consisting of a ratio-valve connected with the conduit between the pump and ram chamber, connection between the ratio-valve and the pump-fluid reservoir, and between said reservoir and the pump cylinder, and a valve controlled by the speed of the motor to open and close either of said connections.

1,114,078. TRAIN SIGNALING AND CONTROLLING SYSTEM. JEAN F. WEBB, Jr., Denver, Colo., assignor to The Electric Signagraph and Semaphore Company, Incorporated, New York, N. Y. Filed June 8, 1908. Serial No. 437,462. (Cl. 246—21.)

1. In an electric system of the character stated, a despatcher's station and a series of semaphore stations, a

semaphore selecting mechanism, and a coöperating semaphore operating mechanism at each semaphore station, said operating mechanism including means for moving the semaphore from out of any position it may be in to its opposite position when affected by an electrical impulse of the same character as that required to move it to the first position, three line wires connecting said semaphore stations with said despatcher's station, direct current operative means connected with two or said line wires and controllable at the despatcher's station for actuating a predetermined semaphore selecting mechanism to bring the respective semaphore operating mechanism into cooperative relation with the despatcher's station, direct current operative means controlled at the despatcher's station and connected with said two line wires for completely actuating said semaphore operating mechanism to move the respective semaphores from one position to another and back again at the will of the operator, a return signal at the despatcher's station, and means controllable by the movement of said semaphore operating mechanism and connected with one of the said two line wires and with the third of said line wires for operating said return signal.



2. In a semaphore-operating and signaling system, a despatcher's station and switch-board, a set of semaphore stations each including a selecting mechanism and an operating mechanism, said operating mechanism including means for moving the semaphore from out of any position it may be in to its opposite position when affected by an electrical impulse of the same character as that required to move it to the first position, a selecting circuit and an operating circuit connecting said stations and including a pair of common line wires, sources of electric energy for said selecting and operating circuits, means at the despatcher's station for controlling the operation of the selecting circuit to operate the semaphore selecting mechanism and thereby operatively connect a particular semaphore operating mechanism coöperatively with the operating circuit, means under control of the despatcher for bringing the operating circuit into operation to cause the semaphore operating mechanism of the semaphore station so selected to operate to move the semaphore from out of any position it may be in to its opposite position, return signals at the despatcher's station, a main return signal setting circuit common to all of said stations, said signal setting circuit including one of said pair of line wires, and including a third line wire connecting said stations, return signal selecting and setting mechanism at the despatcher's station, coöperating with said second mentioned means to select and set the return signals, operative connections between said signal setting mechanism and said return signal circuit for setting a selected one of said signals at the despatcher's station when the selected semaphore is operated.

3. In a system of the class described, a despatcher's station and switchboard, a set of semaphore stations each including selecting mechanism and semaphore operating mechanism, said operating mechanism including means for moving the semaphore from out of any position it may be in to its opposite position when affected by successive electrical impulses of the same character, a main selecting circuit connecting said stations, an operating circuit also connecting said stations, said circuits including common line wires, means at the despatcher's station for bringing into operation the selecting circuit to operate said selecting mechanisms to select a particular semaphore station, means under control of the despatcher for bringing the operating circuit into operation to set the semaphore operating mechanism of the selected semaphore into operation to move the selected semaphore from any position to another, a return signal setting circuit connecting said stations, means governed by the movement of the respective semaphores for energizing said return signal setting circuit, return signals at the despatcher's station; return signal selecting and operating mechanisms coöperative with said second mentioned means at the despatcher's station and connected with said signals and with said return signal setting circuit whereby a signal will be set corresponding to the selected semaphore, and means for disconnecting the respective return signals.

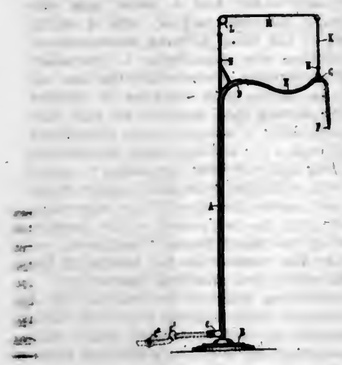
4. In a semaphore operating and signaling system, a despatcher's station, a set of semaphore stations, semaphore selecting and semaphore operating mechanisms at each of said semaphore stations, a selecting circuit connecting said semaphore stations with said despatcher's station, said despatcher's station including a selecting switch in said selecting circuit, an operating circuit connecting said stations all being arranged whereby the despatcher may select a predetermined station and effect the operation of the semaphore at said station, combined with a way station, circuit connections between said way station and predetermined semaphore operating mechanisms and means at said way station controlled by the way station operator for manipulating said connections to effect the operation of predetermined semaphores and thereby cause said predetermined semaphores to move in one direction independently of the despatcher.

5. In a semaphore operating and signaling system, a despatcher's station, a set of semaphore stations, semaphore selecting and semaphore operating mechanisms at each of said semaphore stations, a selecting circuit connecting said semaphore stations with said despatcher's station, said despatcher's station including a selecting switch in said selecting circuit, an operating circuit connecting said stations all being arranged whereby the despatcher may select a predetermined station and effect the operation of the semaphore at said station, combined with a way station, circuit connections between said way station and predetermined semaphore operating mechanisms, means at said way station controlled by the way station operator for manipulating said connections to effect the operation of predetermined semaphores and thereby cause said predetermined semaphores to move in one direction independently of the despatcher, a set of return signals in the despatcher's station, and means controlled by the movement of the semaphores for setting the return signals, a special signal in the despatcher's office, and means controlled by the semaphores so set by the way station operator for operating said special signal in the despatcher's office.

[Claims 6 to 41 not printed in the Gazette.]

1,114,079. SPRINKLER. WILLIAM WEBSTER, London, England. Filed Aug. 1, 1913. Serial No. 782,430. (Cl. 137—59.)

1. A sprinkler for liquids comprising a stand, a length of flexible piping mounted thereon, and means for connecting the piping at one end to a source of liquid supplied under pressure, said length of flexible piping being free to extend out laterally from the stand in a great variety of sinuous forms, a nozzle at the free end of said flexible piping and means for supporting said flexible piping at a single point at a distance from its free end, the supporting means being such as to leave the piping at liberty to turn freely in all directions around the point of support, while permitting also of a wide freedom of sinuous movement of said piping both behind and in front of the point of support.



2. A sprinkler for liquids, comprising a stand, a length of flexible piping mounted thereon and means for connecting it at one end to a source of liquid supplied under pressure, said length of flexible piping being free to extend out laterally from the stand in a great variety of sinuous forms, a nozzle at the free end of said flexible piping, a springy support revolubly mounted on said stand, means supporting said flexible piping from the springy support at a single point near its free end.

3. A sprinkler for liquids, comprising a stand, a length of flexible piping mounted thereon and means for connecting it at one end to a source of liquid supplied under pressure, said length of flexible piping being free to extend out laterally from the stand in a great variety of sinuous forms, a nozzle at the free end of said flexible piping, and means for supporting said flexible piping at a point near to its free end, said supporting means comprising a chain with a swivel joint therein, a clip holding the piping at the lower end of said chain, a springy support with an arm carrying the chain, and means for carrying said springy support in a revoluble manner on the stand.

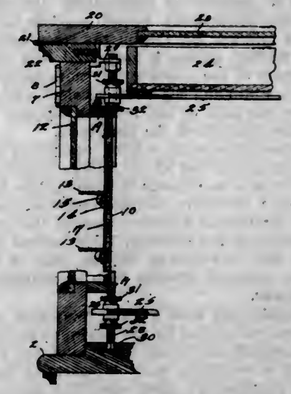
4. A sprinkler for liquids comprising a stand, a plurality of lengths of flexible piping mounted thereon, and means for connecting each length of piping at one end to a source of liquid supplied under pressure, each length of piping being free to extend out laterally from the stand in a great variety of sinuous forms, nozzles at the free ends of said lengths of flexible piping and revoluble supports attached to each length of piping separately at a single point near its free end.

5. A sprinkler for liquids comprising a stand having a head portion and a base portion, with means flexibly connecting said portions and normally keeping said head portion in an approximately upright position over the base portion, a plurality of lengths of flexible piping and means supporting them from said head portion of the stand in such manner as to leave each length of the piping free to be contorted into a great variety of forms by the flow of liquid therethrough, means for supplying liquid under pressure to said flexible piping, and nozzles at the outer ends of the respective lengths of piping.

[Claims 6 to 9 not printed in the Gazette.]

1,114,080. STOCK-DISPLAY CABINET. SIGMUND WEIL and GEORGE GRIER WATERS, Atlanta, Ga. Filed Dec. 22, 1913. Serial No. 808,195. (Cl. 211—16.)

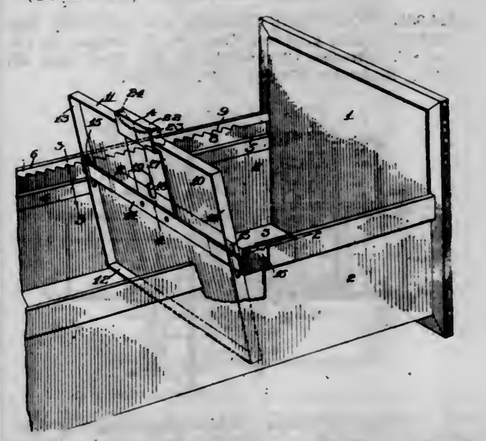
1. The combination in a display cabinet having corner posts and hinged glass doors between pairs of posts, of a series of supporting posts and a plurality of independently adjustable shelves thereon, each of said shelves having an outwardly projected corner lug slotted and embracing a post, and means for securing said lugs in adjusted position with relation to the supporting posts.



2. The combination in a display cabinet having four corner posts and hinged doors between the posts, a threaded post adjacent each corner post, a supporting post having projected slotted corner lugs surrounding the threaded posts, and clamp nuts on each threaded post for supporting the shelf in adjusted position.

3. The combination with a display cabinet having four corner posts and hinged doors between said posts, an upright threaded post adjacent each corner post, a series of supporting panels each having corner lugs projecting therefrom and slotted to embrace a threaded post, an upper and a lower clamp nut for each lug, and a tray supported upon each shelf.

1,114,081. FOLLOWER FOR FILING-RECEPTACLES. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1913. Serial No. 807,490. (Cl. 129—28.)



1. The combination with a filing receptacle provided with side walls having inwardly opening channels at their tops embodying inwardly and thence downwardly turned flanges and a plurality of vertically disposed teeth formed in said flanges, of a follower movable in the receptacle and provided with vertical guides, a horizontal lock bar extending transversely of the follower and movable vertically in the said guides into and out of engagement with the teeth and shoes at the ends of the follower adapted to run in the respective channels of the receptacle.

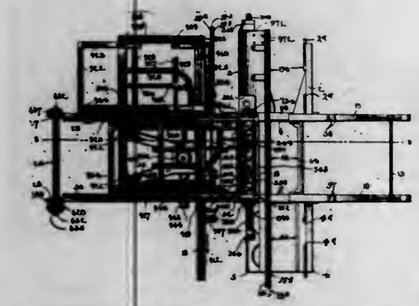
2. The combination with a filing receptacle provided with side walls having inwardly opening channels at their tops embodying inwardly and thence downwardly turned flanges and a plurality of downwardly projecting teeth formed in the downwardly turned portions of the said flanges, of a follower movable in the receptacle and provided with vertical guides, a horizontal lock bar extending transversely of the follower and movable vertically in the said guides into and out of engagement with the teeth and shoes at the ends of the follower adapted to run in the respective channels of the receptacle.

3. The combination with a filing receptacle, a follower therein, a lock rod carried by the follower and coöperating with the receptacle and means for guiding the follower in the latter, of a vertically movable operating member for the lock rod comprising a plate connected thereto and disposed vertically on the follower, being formed to proceed horizontally and to overhang the top edge of the latter and a spring disposed between such overhanging portion and the follower.

4. The combination with a filing receptacle, a follower therein, a lock rod carried by the follower and coöperating with the receptacle and means for guiding the follower in the latter, of a vertically movable operating member for the lock rod comprising a plate connected thereto and disposed vertically on the follower, being formed to proceed horizontally and to overhang the top edge of the latter, a pocket in such overhanging portion of the operating member and a spring retained in said pocket between the latter and the top face of the follower.

5. The combination with a filing receptacle, a follower therein, a horizontally disposed and vertically movable lock rod carried by the follower and coöperating with the receptacle, said follower being provided with vertical guides for the lock rod, and means for guiding the follower in the receptacle, of a vertically movable operating member for the lock rod rigidly connected thereto comprising a slotted plate disposed against the rear face of the follower and having a horizontally disposed portion arranged to overhang the top face of the latter, a spring disposed between such overhanging portion and the follower and a rearwardly projecting ear on the latter cooperating with the slot in the operating member to guide the same.

1,114,082. COMBINED CUTTING AND SEWING MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed May 29, 1913. Serial No. 770,684. (Cl. 112—24.)



1. A cutting-and-sewing machine comprising a product-severing mechanism; a tensioning mechanism; a feeding mechanism which is operable across the width of the goods to draw an end portion of the goods in a straight path into position for operation thereon, transversely to the direction of the feed of the goods, of the severing and tensioning mechanisms; a sewing mechanism operable to sew the goods in a tautened portion thereof and located between the tensioning and feeding mechanisms; mechanism operatively connected with the sewing mechanism for causing it to travel while sewing; mechanism for actuating the tensioning and feeding mechanisms positively for tatuening the goods between them; means for actuating the product-severing mechanism to cut off predetermined lengths of the sewn goods; and means for holding the advancing end portion of the goods stationary during the severing operation.

2. In a cutting-and-sewing machine, the combination of a sewing machine comprising an upper arm carrying stitch-forming instrumentalities and a lower arm also carrying stitch-forming instrumentalities, with a cutter operatively adjacent to the stitch-forming instrumentalities, the sewing machine also comprising a drive-shaft from which the stitch-forming instrumentalities are operated; a support on which said machine is slidably mounted; means for moving said machine on said support; a feeding mechanism; a master device operatively connected with said means for automatically determining the path of its cutting and stitching operations; a main drive-shaft operatively connected with said master device for actuating it; and means for operatively connecting the main drive-shaft with the drive-shaft of the movable sewing machine during the travel thereof; and means cooperating with the feeding mechanism for tensioning the material during the cutting and stitching operations.

3. In a cutting-and-sewing machine, the combination of a plurality of cutting and stitch-forming structures, with a feeding device common to both structures, and a master device for reciprocating either of the structures transversely to the line of feed.

4. In a cutting-and-sewing machine, the combination of a plurality of cutting and stitch-forming structures, with a feeding mechanism, and a master device operatively connected with each structure for moving the same relatively to the line of feed, and intermediate said structures and device, adjustable members for varying the range of movement of one of said structures during the operation of both structures.

5. In a cutting-and-sewing machine, the combination of a sewing apparatus movable on a support and having an upper and a lower arm, each arm carrying a cutter-supporting wheel; an endless band-cutter mounted on said wheels, one run of the cutter operating to cut an edge to be sewn; means for driving the band-cutter; and means for moving the sewing apparatus on said support.

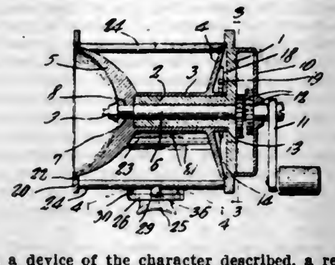
[Claims 6 to 137 not printed in the Gazette.]

1,114,083. NON-REFILLABLE BOTTLE. GEORGE JAMES WELCH, Wanganui, New Zealand. Filed Mar. 26, 1913. Serial No. 756,862. (Cl. 215—69.)

In non-refillable bottles, a neck for the bottle formed with a constricted portion and a chamber beneath such portion having sides inclining inward toward the bottom end and formed with a ledge part way down its inclined side, and a stopper inclosed within the chamber and capable of limited vertical movement therein such stopper being formed with tapering sides having a shoulder thereon part way down and being adapted to fit the chamber above and below the ledge therein and to inclose a space between the ledge and the shoulder substantially as and for the purposes specified.

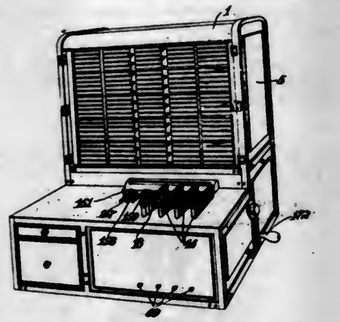
1,114,084. CASTING-REEL. ELISHA FORD WELLS, Miami, Fla. Filed Sept. 22, 1913. Serial No. 791,169. (Cl. 242—84.1.)

1. In a device of the character described, a plate, a reel rotatably carried thereby, and a guard surrounding the reel and attached to the said plate, the guard including a split ring loosely surrounding the free flange of the reel to form an annular slot, and parallel juxtaposed bars extending from the end of the ring and attached to the plate to provide a slot opening into the aforesaid slot.



2. In a device of the character described, a reel frame having one end open and a reel rotatably carried by the frame, a member attachable to a fishing pole or rod and having a seat and radial notches, a turret pivoted upon the said seat and attached to the said frame, the turret having a radial slot, and a spring catch disposed between the seat and turret and projecting in the said slot to snap into engagement with the said notches for holding the said frame at various angular positions with respect to the said member.

1,114,085. REGISTER. GEORGE WHITE, Jersey City, N. J., assignor, by mesne assignments, to Automatic Book-Keeping Register Company, a Corporation of Delaware. Filed June 16, 1910. Serial No. 567,128. (Cl. 235—2.)



1. In a register, the combination with a printing mechanism including therein a type member and actuating means therefor, of a filing device, means normally locking same, an identification key, means actuated by said identification key to set a type member in said printing mechanism, and to make said locking means inoperative, and means actuated by said actuating means whereby with each actuation thereof, said identification key will be restored to normal and said filing device will be closed and locked.

2. In a register, the combination with a printing mechanism including therein a type member and actuating means therefor, of a filing device, means normally locking same, an identification key, means actuated by said identification key to set a type member in said printing mechanism, and to make said locking means inoperative, means actuated by said actuating means whereby with each actuation thereof, said identification key will be restored to normal and said filing device will be closed and locked, and means actuated by the opening of said filing device whereby said main actuating means is locked until said filing device is opened.

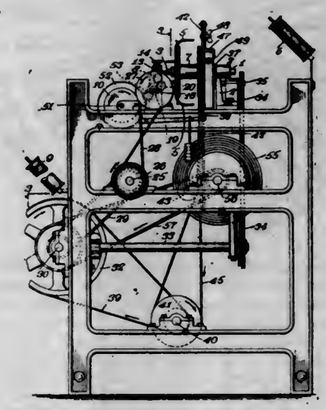
3. In a register, the combination with a printing mechanism including therein a type member and rotatable actuating means therefor, of a filing device, means normally locking same, an identification key, means actuated by said identification key to set a type member in said printing mechanism, and to make said locking means inoperative, means whereby said identification key is held in an adjusted position, and means actuated by said actuating means whereby with each rotation thereof, said identification key will be restored to normal and said filing device will be closed and locked.

4. In a register, the combination with a printing mechanism including therein a type member and rotatable actuating means therefor, of a filing device, means normally locking same, an identification key, means actuated by said identification key to set a type member in said printing mechanism, and to make said locking means inoperative, means whereby said identification key is held in an adjusted position, means actuated by said actuating means whereby with each rotation thereof, said identification key will be restored to normal and said filing device will be closed and locked, and means actuated by the opening of said filing device whereby said main actuating means is locked until said filing device is opened.

5. In a register, the combination with a printing mechanism embodying therein an identification type member, a rack acting thereon to set same, and actuating means for said printing mechanism, of a filing device, means normally locking same, a key rack adapted to engage the rack of said identification type member, an identification key connected with said key rack, means carried by said key rack coöperating with the locking means for said filing device whereby the movement of said rack will make said locking means inoperative, means adapted to close said filing device and means actuated by said first mentioned actuating means whereby with each actuation thereof, said identification key will be restored to normal and said filing device will be closed and locked.

[Claims 6 to 75 not printed in the Gazette.]

1,114,086. CHENILLE-MACHINE. CHARLES WIEBKE, Newark, N. J. Filed Nov. 11, 1912. Serial No. 730,578. (Cl. 139—40.)



1. In a chenille machine, the combination of a stationary loop-forming pin, a flier for winding a surface thread on the loop-forming pin, and a bodily yieldable driven feed-regulating roller for controlling the feeding of the coils of the surface thread from the loop-forming pin.

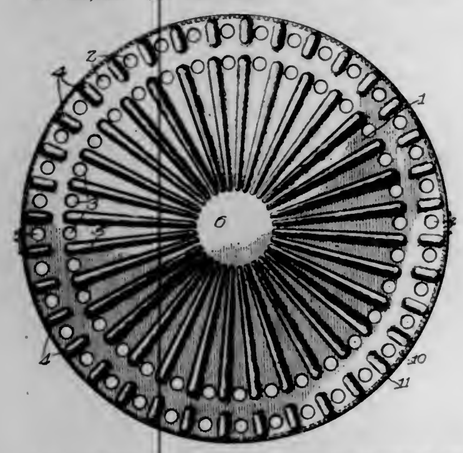
2. In a chenille machine, the combination of a plurality of stationary loop-forming pins, a flier for each loop-forming pin for winding a surface thread on the loop-forming pin, a separate feed-regulating roller coöperative with each loop-forming pin to control the movement of the coils of the surface thread therefrom, independent means for varying the coöperative relationship of each feed-regulating roller and its loop-forming pin, and means for driving the feed-regulating rollers.

3. In a chenille machine, the combination of a plurality of stationary loop-forming pins, a flier for each loop-forming pin for winding a surface thread on the loop-forming pin, means for supplying a primary binder thread to each loop-forming pin within the coils of the surface thread, means for supplying a secondary binder thread to each loop-forming pin at the outside of the coils of the surface thread, such latter means including for each loop-forming pin a rigid-surfaced yieldable feed-regulating roller cooperative with the loop-forming pin for controlling the movement of the coils of the surface thread therefrom; means for each loop-forming pin for independently varying the coöperative relationship of the feed-regulating roller and its loop-forming pin, and means for driving the feed-regulating rollers.

4. In a chenille machine, the combination of a rotative flier, a thread-carrying bobbin rotatively mounted coaxially with the flier for supplying thread to the flier, and mechanism for winding thread on the bobbin while the bobbin is in the thread-supplying position relatively to the flier.

5. In a chenille machine, the combination of a rotative flier, a thread-carrying bobbin rotatively mounted coaxially with the flier for supplying thread to the flier, and mechanism for selectively rotating at will either the flier to take thread from the bobbin or the bobbin to take thread thereon.

1,114,087. HEAT DISTRIBUTER OR PLATE. STUART B. WILBUR, Chicago, Ill. Filed Feb. 26, 1913. Serial No. 750,767. (Cl. 126—215.)

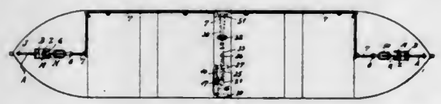


1. A portable heat distributer for cooking utensils comprising a top plate having radiating ribs extending from a point adjacent the center thereof to a point adjacent the periphery thereof and also having a series of openings arranged in alternate relation with regard to said ribs adjacent the outer terminal thereof, a lower substantially semi-spherically shaped plate secured at its upper edge to the under surface of the upper plate at a point beyond the ribs and holes, the lower plate being adapted to receive the direct action of the flame and separated from the upper plate by an unobstructed space, the upper plate having a depending annular supporting flange and the upper and lower plates having an annular series of registered holes at a point adjacent said flange, substantially as and for the purpose described.

2. A portable heat distributing member comprising an upper plate having a downwardly projecting edge flange extending therearound to constitute a support, a concavo-convex lower plate, the lowermost central portion thereof being substantially parallel to the lower edge of said flange, and the upper outer edge being in contact with the upper plate adjacent the outer edge of the latter, the lower plate being separated from the upper plate by an unobstructed space and said lower plate being free from openings leading into said space, the upper plate having a series of openings communicating with said space between the plates, and an auxiliary series of openings therethrough adjacent the outer edge thereof in communication with the space between the under surface of the lower plate and the inner surface of said supporting flange.

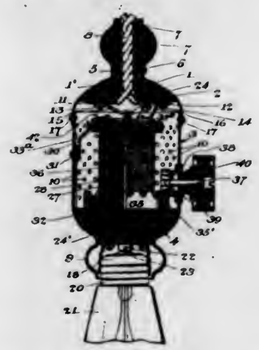
3. A portable heat distributing member comprising an upper circular plate, having a downwardly projecting peripheral supporting flange, said upper plate having two concentrically arranged annular series of openings adjacent said peripheral flange, a lower plate having a concavo-convex central portion connecting with a flat peripheral portion at the upper edge thereof which said flat peripheral portion contacts with the under surface of the upper plate at a point outside of the inner series of openings therein and having a series of openings in registration with the outer series of openings of the upper plate, the concavo-convex portion of the lower plate being imperforate, a supporting flange projecting downwardly from said flat peripheral portion of the lower plate, and the peripheral flange of the upper plate having a bent portion overlying the lower edge of said supporting flange of the lower plate.

1,114,088. AUTOMATIC BOAT-RELEASER. WILLIAM FRANCIS WILLIAMS, Fishguard, England. Filed Apr. 25, 1914. Serial No. 834,526. (Cl. 9—23.)



A boat-releasing gear, comprising in combination, shackles of the lower blocks of the falls, spring-pressed bolts engaged by said shackles, cords to withdraw said bolts upon the boat being water-borne, a spring connected with said cords, and a lever to set the spring in tension for a withdrawal of the bolts, substantially as and for the purpose set forth.

1,114,089. ELECTRIC-LIGHT-ADJUSTING SOCKET. DAIJI YAMADA, Santa Ana, Cal. Filed Nov. 17, 1913. Serial No. 801,414. (Cl. 219—49.)

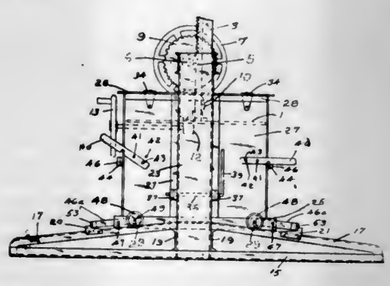


1. An electric lamp socket provided with means for attachment thereto of an electric lamp bulb and with connections for said bulb and for an electric supply circuit, a member rotatably mounted on said socket and provided with a series of resistance sections, contacts carried by said rotatable member and connected to said wires, a fixed contact coöperating with the aforesaid contacts, and electric circuit connections including said fixed and movable contacts for connecting one or more of said resistance sections in series with the electric lamp, according to the rotative position of said rotatable member, and means for rotating said rotatable member comprising a handle outside of the socket and connections between said handle and spool for rotating said spool by operation of said handle.

2. An electric lamp socket comprising a casing, a pin contained in said casing and supported thereon, a spool rotatably mounted on said pin, a series of resistance sections wound on said spool, a series of contacts on said spool connected respectively to said resistance sections, a contact spring mounted on said casing and adapted to coöperate with said contacts on said spool, electric supply circuit connection connected to the lamp and to said fixed contact for including one or more of said resistance sections in series with the lamp according to the rotative position of said spool, means for rotating said spool, comprising a gear member carried by said spool, a shaft rotatably mounted in said casing, a pinion carried thereby, engaging the aforesaid gear member, and a handle on said shaft.

3. An electric lamp socket comprising a casing provided at one end with two contact springs for connection respectively to the wires of an electric supply circuit, a pin extending centrally in said casing for engaging one of said contact springs, a spool rotatably mounted on said pin, a contact ring carried by said spool and engaging the other of said contact springs, a series of contacts carried by said spool and connected to said contacts, a fixed contact spring engaging the contacts carried by said spool, and contact means carried by said socket for engagement respectively with the terminals of an electric lamp bulb, electric lamp bulb, one of said contact means being connected to said pin, and the other of said contact means being connected to the aforesaid contact spring coöperating with the series of contacts on the spool, a gear member carried by said spool, a shaft rotatably mounted in said casing and provided with an operating handle, and a gear member carried by said shaft for engaging the aforesaid gear member on said spool.

1,114,090. BALING-PRESS. JOHN YOUNG, Chillicothe, Ohio. Filed Aug. 12, 1912. Serial No. 714,593. (Cl. 100—19.)



1. A baling press comprising a frame-work, a receptacle, a plunger for reciprocation in said receptacle, a plurality of racks carried by said plunger, a shaft carried by said framework, a plurality of gears upon said shaft for coaction with said racks, a gear wheel, an internally and externally toothed idler carried by said shaft, a pinion slidably keyed to said shaft and constructed to mesh with said internal gearing, hand operable means for reciprocating said plunger when said pinion is out of mesh, and supplemental hand operable means for reciprocating said plunger when said pinion is in mesh, said last means increasing the effectiveness of said plunger under the same condition of applied manual force.

2. A baling press comprising a base, a plunger, a receptacle, operating levers pivotally carried by said receptacle, and rollers rotatably mounted on one end of said levers and adapted to bear on said base.

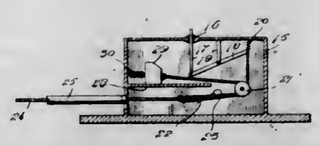
3. A baling press comprising a base, a trackway forming a portion of said base, a plunger, a receptacle, operating levers pivotally carried by said receptacle opposite each other on opposite ends, a connecting piece between said levers, and rollers rotatably mounted on said levers and adapted to bear on said trackway.

4. A baling press comprising a base, a plunger, a receptacle, operating levers pivoted intermediate their ends, and rollers carried by one end of said levers and adapted to facilitate movement of said receptacle on said base when the opposite ends of said levers are moved.

5. A baling press comprising a base, a trackway forming a portion of said base, a plunger, a receptical, a U-shaped operating lever whose legs are pivoted to said receptacle intermediate their ends, and rollers carried by the free ends of said legs adapted to permit movement of said receptacle by upward movement of the joining piece of said U-shaped lever.

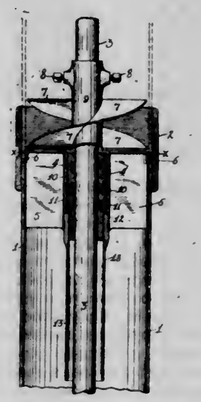
[Claims 6 and 7 not printed in the Gazette.]

1,114,091. TRAIN-STOPPING DEVICE. LOUIE A. ZETTEL, Flint, Mich. Filed July 31, 1913. Serial No. 782,323. (Cl. 246—59.)



The combination with an air valve carried by a train in the air brake system, of a housing located between the rails of a railway, a pivoted lever mounted in the housing, a plunger pivotally connected to one end of the lever, a spring connected to the other end of the lever and to the housing for holding the plunger normally withdrawn into the casing, a pulley mounted in the housing, a sliding spring-held block, a pair of cables trained around the pulley, one of the cables being connected with the block and the other to the lever, and a cable connected to both of said cables for rocking the lever to project the plunger above the housing and position the block under the plunger.

1,114,092. TUBULAR PROPELLER-PUMP. ALDEN T. AMES, Niles, Cal. Filed Dec. 16, 1913. Serial No. 806,976. (Cl. 103—43.)



1. In a pump of the described class, the combination of a pipe; a rotatable shaft in the axis thereof; a shaft bearing fixed in the pipe; a propeller having a hub fixed to the shaft, above the shaft bearing; and a sleeve-guard extending from the base of the propeller hub, said sleeve-guard inclosing the top of the shaft bearing and enveloping said bearing below the top.

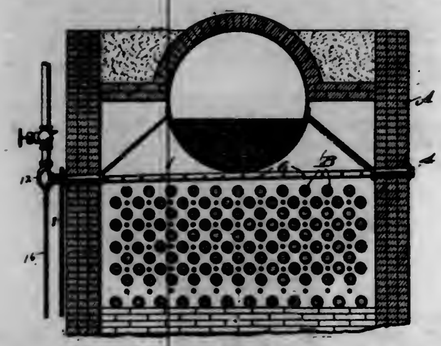
2. In a pump of the described class, the combination of a pipe; a rotatable shaft in the axis thereof; a shaft bearing fixed in the pipe; a propeller having a hub fixed to the shaft above said bearing; and a sleeve-guard extending from the base of the shaft bearing and enveloping the shaft below said bearing.

3. In a pump of the described class, the combination of a pipe; a rotatable shaft in the axis thereof; a shaft bearing fixed in the pipe, a propeller having a hub fixed to the shaft above said bearing; a sleeve-guard extending from the base of the propeller-hub, said sleeve-guard inclosing the top of the shaft bearing and enveloping said bearing below the top; and a second sleeve-guard extending from the base of the shaft bearing and enveloping the shaft below said bearing.

4. In a pump of the described class, the combination of a pipe; a rotatable shaft in the axis thereof; a shaft bearing fixed in the pipe and provided with radial deflector plates, cut out around the hub from their tops downwardly; a propeller having a hub fixed to the shaft above the shaft bearing; and a sleeve-guard extending from the base of the propeller hub into the cut out portions of the deflector plates, said sleeve-guard inclosing the top of the shaft bearing and enveloping said bearing below the top.

5. In a pump of the described class, the combination of a pipe; a rotatable shaft in the axis thereof; a shaft bearing fixed in the pipe and provided with radial deflector plates, cut out around the hub from their tops downwardly; a propeller having a hub fixed to the shaft above the shaft bearing; a sleeve guard extending from the base of the propeller hub into the cut out portions of the deflector plates, said sleeve-guard inclosing the top of the shaft bearing and enveloping said bearing below the top; and a second sleeve-guard extending from the base of the shaft bearing and enveloping the shaft below said bearing.

1,114,093. BOILER. JOHN E. ANGELL, St. Louis, Mo. Filed Aug. 1, 1910. Serial No. 574,934. (Cl. 122—392.)



1. In a soot cleaner, a steam-jet pipe having outlets through one side thereof, a steam supply pipe for delivering steam to said jet pipe, a chamber connecting said supply pipe with one end of said jet pipe, an oblique partition in said chamber, a second partition in said chamber of larger area than the entrance to said jet pipe, said partitions forming a tortuous passage in said chamber between said supply pipe and said jet pipe, and an outlet from said chamber below said partitions, substantially as described.

2. In a soot cleaner, a steam-jet pipe, a supply pipe for supplying steam to said jet pipe, a chamber at one end of said jet pipe for receiving condensed moisture discharged from said jet pipe, parts in said chamber forming a tortuous passage between said supply pipe and said jet pipe, a passage for withdrawing condensed steam from said chamber, and means for rocking said jet pipe.

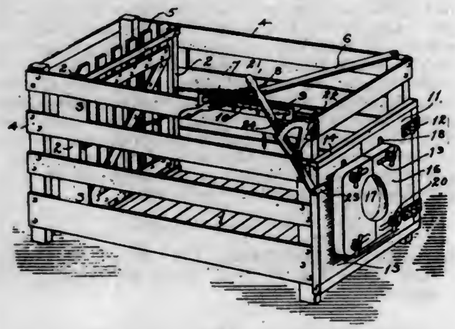
3. In a soot cleaner, a steam-jet pipe mounted in an inclined position, a pipe for supplying steam to said jet pipe, a chamber connected with and extending below the lower end of said jet pipe for receiving condensed moisture discharged from said jet pipe, a passage from the lower end of said chamber, and automatic means for regulating the flow of the condensed moisture through said passage, substantially as described.

4. In a soot cleaner, a steam-jet pipe, a trough in said pipe arranged to collect condensed moisture, a pipe for supplying steam to said jet pipe, a chamber supported by said steam supply pipe and connecting said supply pipe with one end of said jet pipe to receive moisture discharged from said jet pipe, a discharge outlet from said chamber, and a trap controlling said discharge outlet, substantially as specified.

5. In a soot cleaner, an inclined jet pipe, a chamber connected to the lower end of said jet pipe, a trough in said jet pipe for accumulating and conducting the moisture in said pipe, a steam supply pipe opening into said chamber, a partition wall supported within said chamber between the supply pipe and the jet pipe, and an outlet from said chamber, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,114,094. STOCK-RACK. OLIVER C. APPLE, Urbana, Ohio. Filed Feb. 15, 1913. Serial No. 748,524. (Cl. 119—99.)



1. In a stock rack, an inclosure, two relatively movable doors therefor, yoke pieces carried by the doors adapted to engage the neck of the animal, said yoke pieces being adjustable to different positions upon the door, to accommodate animals of different sizes, substantially as specified.

2. In a stock rack, an inclosure, a sliding door therefor, a yoke divided into separable pieces, one of the yoke pieces being adjustably secured to the sliding door, the other yoke piece being adjustably secured to that portion of the structure upon which the door abuts when closed, whereby when the sliding door is closed, the yoke pieces will register, one with the other, substantially as specified.

3. In a stock rack, an inclosure, a stanchion located at one end thereof, comprising a movable member and a normally stationary member, and a divided yoke, the portions of which are adjustably secured to said movable and normally stationary members in positions to register one with the other, when the stanchion is closed, said divided yoke members, being adjustable upon their supporting members, substantially as specified.

1,114,095. PROCESS OF BLEACHING OILS AND FATS. CHARLES BASKERVILLE, New York, N. Y. Filed Jan. 24, 1913. Serial No. 744,046. (Cl. 87—12.)

1. The process of bleaching oils and fats, which consists in treating them with a mixture of an inorganic absorbent having the essential qualities of fullers' earth, and an organic absorbent.

2. The process of bleaching oils and fats, which consists in treating them with a mixture of fullers' earth and a fibrous organic absorbent.

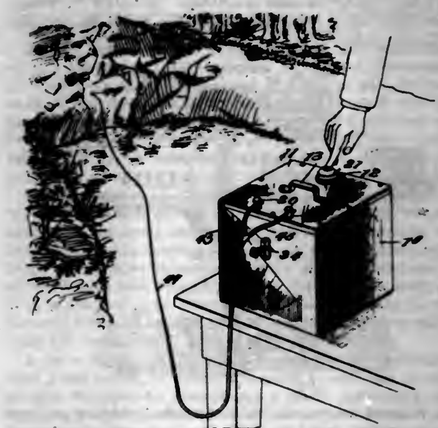
3. The process of bleaching oils and fats, which consists in treating them with a mixture of fullers' earth and a cellulosic material.

4. The process of bleaching oils and fats, which consists in treating them with an inorganic absorbent, an organic absorbent, and an electrolyte.

5. The process of bleaching oils and fats, which consists in treating them with an inorganic absorbent, an organic absorbent, and sodium chlorid.

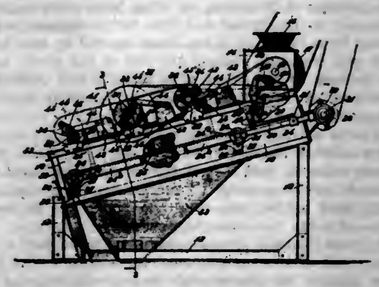
[Claims 6 to 9 not printed in the Gazette.]

1,114,096. MINER'S BLASTING-BOX. JOSEPH BEENECK, Nanticoke, Pa. Filed Dec. 11, 1912. Serial No. 736,150. (Cl. 175—115.)



A blasting box including a casing, a battery carried by the casing, wires forming a circuit connected to the battery, said circuit being broken at two points, a circuit closer adapted to close the circuit at one of said points, a lock having a bolt projectable to close the circuit at the other of said points, said bolt acting as a conductor, and a key for operating the bolt, said key being withdrawable from the lock only in the open circuit position of the bolt.

1,114,097. VIBRATING SCREEN OR SEPARATOR. WILLARD J. BELL, Newaygo, Mich. Filed June 3, 1912. Serial No. 701,275. (Cl. 83—56.)



1. In a separator, the combination with an inclined screen, of means for shaking the same, means for imparting vertical or up and down movement to said screen while it is being shaken, means whereby the extent of said vertical or up and down movements may be varied, and means, comprising hammers and impact bars, for jarring said screen percussively.

2. In a separator, the combination with a screen casing, of a screen frame housed within said casing, cross-shafts on which said screen frame is supported, wheels on the opposite ends of said shafts outside of said casing, means for imparting lengthwise reciprocating movements to said screen frame, pivotally mounted adjustable brackets at the sides of the said casing and having tracks on which said wheels run, said tracks being inclined to the plane of the lengthwise reciprocating movements of said frame, so as to impart vertical or up and down movements to the latter, said brackets each having a plurality of holes below their pivots, and fastening bolts adapted to enter different holes in said brackets to secure the latter in different positions; whereby, by varying the positions of said brackets, the extent of the up and down movements of the said screen frame may be varied.

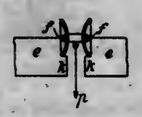
3. In a separator, the combination with an inclined metallic screen, of gravity-impelled hammer bars for jarring the same percussively, impact bars through which the force of the said hammer bars is conveyed to said screen, brackets and pivot pins for supporting said hammer bars, said hammer bars and brackets being each provided with a series of holes for the reception of said pivot-pins so that by changing the positions of said pins the lengths of the working ends of the said hammer bars may be varied to vary the force of the blows delivered thereby.

4. In a separator, the combination with an inclined metallic screen, of hammers or hammer bars for jarring the same percussively, impact bars through which the force of the said hammers or hammer bars is conveyed to said screen, said impact bars comprising cushioning non-metallic portions at both ends of said bars, said cushioning portions receiving and delivering the impact of said hammers or hammer bars, to cushion or soften the impact of the hammer blows.

5. In a separator, the combination with an inclined metallic screen, of hammers or hammer bars for jarring the same percussively, impact bars through which the force of the said hammers or hammer bars is conveyed to said screen, said impact bars consisting of metallic sleeves or tubes and wooden blocks therein and projecting beyond the opposite ends of said sleeves or tubes and receiving and delivering the impact of said hammers or hammer bars, to cushion or soften the receiving and delivering impact of the hammer blows.

[Claims 6 and 7 not printed in the Gazette.]

1,114,098. METHOD OF AND APPARATUS FOR CUTTING PLATE-GLASS. MAX BICHEROUX, Herzogenrath, Germany, assignor to Bicheroux, Lambotte and Cie., Gesellschaft mit beschrankter Haftung, Herzogenrath, Germany. Filed July 25, 1912. Serial No. 711,439. (Cl. 49—14.)



1. The method of separating plastic sheets of plate glass into successive portions each wholly free from adjacent portions which consists in cutting out and removing a narrow waste strip between said successive portions.

2. In apparatus for cutting plastic plate glass, the combination with a plane pouring table divided transversely into spaced sections having substantially parallel cutting edges adjacent to the intervening spaces, of movable cutting devices having two shearing edges in position to coact with said edges, respectively, to cut from a plastic glass sheet a strip substantially equal in width to the space between consecutive table sections.

3. In apparatus for cutting plastic plate glass, the combination with pouring tables spaced apart in the same plane, of rotary cutting devices arranged to traverse the space between consecutive tables and sever glass thereon along the margins of both adjacent tables.

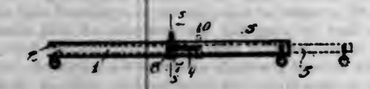
4. In apparatus of the class described, the combination with two spaced pouring tables fixed in the same plane, having cutting margins adjacent to the space between

them, and provided on their opposing edge faces with projecting shoulders parallel to the face of the table, of shearing rollers arranged to move along said margins, respectively, in cutting relation with the same and with the corresponding shoulders.

5. In apparatus of the class described, the combination with spaced pouring tables fixed in the same plane and having parallel cutting edges next the spaces between them, of a pair of cutting rollers mounted on the same shaft and arranged to advance between consecutive tables while making shearing contact with the margin of each, whereby a narrow strip of glass upon the table may be cut out, leaving spaced body portions of the glass.

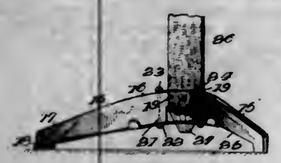
[Claim 6 not printed in the Gazette.]

1,114,099. SWINGLETREE. LOUIS C. BIGBIE, Edison, Ga. Filed Aug. 13, 1913. Serial No. 784,648. (Cl. 21—78.)



A device of the character described, comprising a tubular body portion, a closure at one end of said tubular body portion, the opposite end of said tubular body portion being provided with a slot, said tubular body portion being provided with centrally located longitudinally extending slot, each of said slots communicating with the interior of the body portion, a trace securing ring secured to the closed end of the tubular body portion, an extension slidable in the tubular body portion, a trace securing ring secured to one end of the extension and adapted to be held in the slotted end of the body portion, a ring encircling the tubular body portion, said ring being provided with an internally screw threaded aperture, a set screw adapted to extend through the aperture and through the slot in the tubular body portion so that its free end will engage the slidable extension, and means carried by the ring to secure the same to a whiffletree.

1,114,100. TREE-STAND. ULRICK BLOMBERG, Sioux City, Iowa. Filed Sept. 23, 1913. Serial No. 791,439. (Cl. 248—38.)



1. A support for trees comprising a convex plate formed with a central aperture which receives the base of the tree, said plate being provided with extensions, each of said extensions having a key-hole slot formed therein, legs, a member provided with a head arranged on each of the legs and disposed to enter the slots of the plate, whereby the legs have a pivotal connection with the plate.

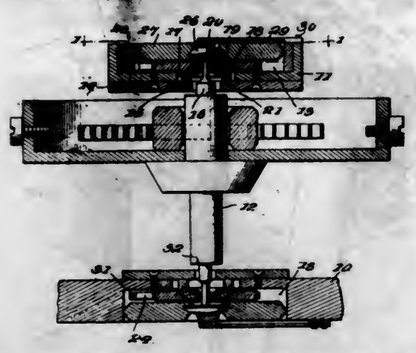
2. A support for trees comprising a convex plate formed with a central aperture disposed to receive the base of the tree, the plate being provided with extensions, each of the extensions adjacent its terminal being formed with ears disposed at right angles to the extension, there being a slot arranged in each of said extensions, legs supported on each of the extensions and disposed between the ears formed integral therewith, said legs carrying members which extend within the slots formed in the extensions, whereby they have a pivotal connection with the plate, the legs contacting with the tree above the plate.

3. A device of the character described including a plate, guides carried by the plate, the plate having slots formed therein adjacent said guides, supporting legs disposed between said guides, and means carried by said legs pivotally connecting the legs with the plate and disposed to engage in said slots.

4. A device of the character described including a plate having guides formed thereon, and legs detachably mounted upon the plate, said legs being pivotally connected with the plate in advance of said guides and disposed between the guides.

5. A device of the character described including a plate having guides formed thereon, and legs detachably connected with the plate and arranged between said guides, said legs being disposed to contact with the plate upon their inner edges and having free pivotal connection with the plate upon one side of the said guides.

1,114,101. WATCH MECHANISM. WILLIAM F. BOAST, Sterling, Colo. Filed Sept. 3, 1913. Serial No. 787,900. (Cl. 58—140.)



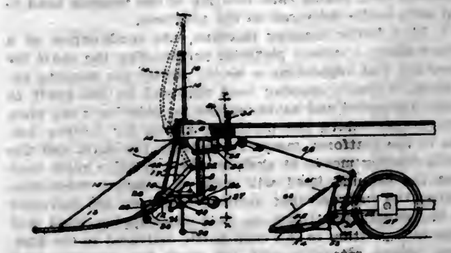
1. A pivot bearing for balance staffs including an inner jewel-carrying member yieldably mounted for lateral movement, and an outer jewel-carrying member yieldably mounted for movement toward and away from the inner member.

2. A pivot bearing for balance staffs including a support provided with a bearing receiving recess, a stop-plate secured against the unrecessed face of the support and perforated for the passage of the pivot, a ring mounted in the recess and provided in its lower edge with notches, an inner jewel-carrying member positioned in the recesses and for longitudinal movement therein, leaf-springs engaging against the peripheral edge of the inner jewel-carrying member and having their outer ends passed through the notches of the ring and clamped between the ring and support, a jewel carried by said member and perforated for the passage of the pivot, an outer jewel-carrying member mounted in the recess and free for movement toward and away from the pivot, a cap-jewel carried by said latter member and engaging against the end of the pivot, and a spring secured by one end to the support and bearing by its free end against the cap-jewel to yieldably hold the same against the pivot.

3. A pivot bearing for balance staffs including a support provided with a bearing receiving recess, a jewel yieldably supported in said recess for lateral movement and perforated for the passage of the pivot, and a cap jewel yieldably held against the end of the pivot for movement toward and away from the first jewel.

4. A pivot bearing for balance staffs including a support provided with a bearing receiving recess, a stop plate secured against the unrecessed face of the support and perforated for the passage of the pivot, a ring mounted in the recess and provided with notches, a jewel carrying member positioned in the recess, leaf springs seating at their outer ends in the notches of the ring and engaging the peripheral edge of the jewel carrying member with their inner ends, a jewel carried by said member perforated for the passage of the pivot, an outer jewel carrying member mounted in the recess, and a cap jewel carried by said member and bearing against the end of the pivot.

1,114,102. FENDER. JAMES D. BOWLBY, Seattle, Wash. Filed May 12, 1913. Serial No. 766,980. (Cl. 105—130.)



1. In a fender of the class described, the combination with a car, of brackets adapted to project downwardly from said car, a shaft removably articulated with the lower ends of said brackets, links pivotally connected with said shaft and with the upper portions of said brackets said links being adapted to guide said shaft when said shaft is raised and hooks adapted automatically to close to hold said shaft when said shaft is lowered onto said brackets.

2. In a fender of the class described, the combination with a car frame having downwardly projecting brackets secured to the front end thereof, of a shaft removably connected with the lower end portions of said brackets, a front scoop-frame mounted on said shaft, a stay-bar associated with said scoop-frame and said shaft, a lever-arm that is adapted to be connected with said stay-bar to actuate said scoop-frame and weight controlled locking mechanism for locking said lever-arm to said stay-bar.

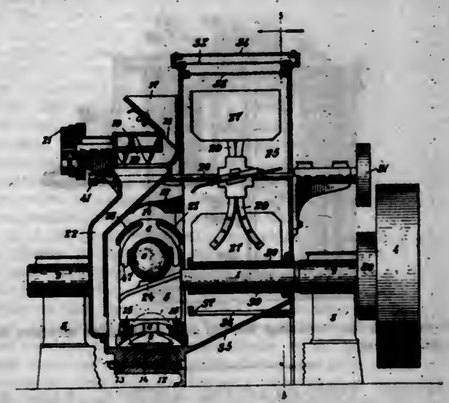
3. In a fender of the class described, the combination with a car frame, of brackets secured to said car frame to project downwardly therefrom, a shaft removably associated with the lower end of said brackets, automatically operative means for securing said shaft in its normal position when said shaft is lowered into said position on said brackets, an upright front frame mounted on said shaft with its bottom edge articulated therewith, vertical guide-rods secured to the top surface of said car frame, means for slidably connecting the top edge of said upright front frame with said vertical guide-rods, and a scoop-frame mounted on said shaft and adapted to swing thereon from a substantially horizontal plane to a substantially vertical plane.

4. In a fender of the class described, the combination with a car frame, of brackets secured to said car frame to project downwardly therefrom, a shaft removably associated with the lower end of said brackets and automatically operative means for securing said shaft in its normal position when said shaft is lowered into said position on said brackets.

1,114,103. PULVERIZING-MILL. BENJAMIN C. BRADLEY, Canton, Ohio. Filed Mar. 18, 1912. Serial No. 684,409. (Cl. 83—45.)

1. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided with grinding balls, a grinding ring, a fan chamber located at one side of the grinding mechanism, said fan chamber inclosed by screens of different mesh, a fan located within the chamber and means for actuating the fan, a shield located below the fan and provided with a downwardly inclined portion, said downwardly inclined portion extended below the carrier shaft, substantially as and for the purpose specified.

2. In a pulverizing mill the combination of a shaft, a carrier mounted upon said shaft, grinding elements carried by the carrier and a fixed grinding ring, a fan chamber located at one side of the carrier, said fan chamber inclosed by screens of different mesh, a curved plate located below the fan and between the lower spaced ends of the screen having the larger mesh, said plate provided with openings and one end of said plate spaced from the screen having the larger mesh, substantially as and for the purpose specified.



3. In a pulverizing mill the combination of a shaft, a carrier mounted upon said shaft, grinding elements carried by the carrier and a fixed grinding ring, a fan chamber located at one side of the carrier, said fan chamber inclosed by screens of different mesh, a curved plate located below the fan and between the lower spaced ends of the screen having the larger mesh, said plate provided with openings and one end of said plate spaced from the screen having the larger mesh, and a shield located between the fan and said plate, substantially as and for the purpose specified.

4. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, grinding elements carried by the carrier and a fixed grinding ring, a fan chamber located at one side of the carrier, said fan chamber inclosed by screens of different mesh, a curved plate located below the fan and between the lower spaced ends of the screen having the larger mesh, said plate provided with openings, and one end of said plate spaced from the screen having the larger mesh and a shield located between the fan and said plate, said shield located within the fan chamber, substantially as described.

5. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided with grinding elements, pushers provided with spaced arms, one of said arms pivotally connected to the carrier and the other arm pivotally connected to a plate detachably connected to the carrier, said pushers adapted for contact with the rear surfaces of the grinding elements, a fixed grinding ring located concentric with the carrier, a fan chamber located at one side of the carrier provided with the grinding elements, a feed spout curved at its bottom or lower end and provided with an opening leading into the grinding chamber, substantially as and for the purpose specified.

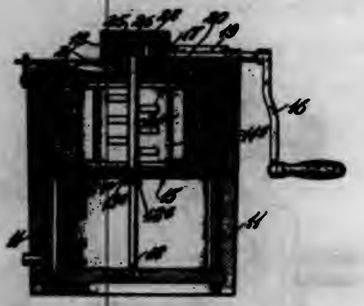
[Claims 6 to 8 not printed in the Gazette.]

1,114,104. ICE-CREAM FREEZER. HERMAN J. BRIELMAIER, St. Louis, Mo. Filed Sept. 20, 1913. Serial No. 790,834. (Cl. 62—149.)

1. In combination with an ice cream freezer tub and crank operating gear, a false bottom for said tub coöperating therewith to retain ice, means independent of said crank operating gear for supporting said false bottom above the bottom of said tub and for preventing it from rotating with respect thereto, and a short ice cream can journaled for rotation on said false bottom and coöperating with said operating gear.

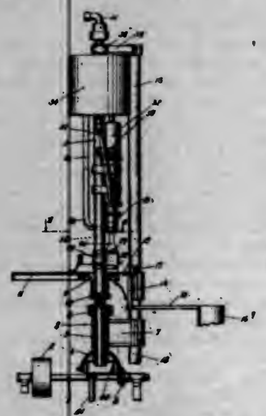
2. In combination with an ice cream freezer tub and crank operating gear, a false bottom for said tub, means independent of said crank operating gear for supporting said false bottom above the bottom of said tub, and a short ice cream can journaled for rotation on said false

bottom and coöperating with said operating gear, said false bottom having a side wall terminating below the top



of said can for retaining the ice and salt water mixture at a fixed level.

1,114,105. BOTTLE-CAPPING MACHINE. LOUIS H. BAINKMAN, Glen Ridge, N. J., assignor to General Industries Company, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1913. Serial No. 742,816. (Cl. 113—2.)



1. In a bottle capping machine, the combination of a rotary shaft, a rotary platform surrounding the shaft for receiving and supporting a bottle during the capping operation, a single capping head mounted on the shaft to rotate therewith and having means for securing a cap upon each bottle fed to the platform, means for feeding bottles to the platform, means for driving the shaft and the bottle feeding means at predetermined relative rates such that the capping head will make a complete revolution during the interval that successive bottles are delivered to the capping platform so that the capping head will come into position to cap each bottle delivered to the platform, and means for causing relative reciprocatory movement between the platform and capping head once during each revolution of the shaft to cap each bottle delivered to the platform.

2. In a bottle capping machine, the combination of a rotary table carrying bottles to be capped, and a rotary capping platform, the table being of relatively large diameter and provided with a number of bottle supports and the capping platform being of relatively small diameter, a single rotary capping head having cap-securing devices carried at its lower end, means for rotating said capping head and the table at such relative rates that the capping head is rotated once during such movement of the table as corresponds to the distance between its successive bottle supports, means for transferring the bottles from the table to the capping platform one for each revolution of the capping head, and means for causing relative reciprocatory movement between the capping head and the platform once during each rotation of the capping head to cap each bottle delivered to the platform.

3. In a bottle capping machine, the combination of a rotary shaft, a rotary platform surrounding the shaft for receiving and supporting a bottle during the capping operation, a single capping head mounted on the shaft to rotate therewith and having means for securing a cap upon each bottle fed to the platform, means for feeding bottles to the platform, means for driving the shaft and the bottle feeding means at predetermined relative rates such that the capping head will make a complete revolution during the interval that successive bottles are delivered to the capping platform so that the capping head will come into position to cap each bottle delivered to the platform, means rotatable with the shaft for engaging each bottle fed to the platform to move it around the shaft synchronously with the capping head in position to be capped, and means for causing relative reciprocatory movement between the platform and capping head once during each revolution of the shaft to cap each bottle delivered to the platform.

4. In a bottle capping machine, the combination of a rotary table carrying bottles to be capped, and a rotary capping platform, the table being of relatively large diameter and provided with a number of bottle supports and the capping platform being of relatively small diameter, a single rotary capping head including a fluid pressure controlled capping piston carrying cap-securing devices at its lower end, means for rotating said capping head and table at such relative rates that the capping head is rotated once during such movement of the table as corresponds to the distance between its successive bottle supports, means for transferring the bottles from the table to the capping platform one for each revolution of the capping piston, and means for causing automatic reciprocation of the capping piston once during each revolution thereof to cap each bottle delivered to the platform.

5. In a bottle capping machine, the combination of a rotary shaft, a rotary platform surrounding the shaft for receiving and supporting a bottle during the capping operation, a single capping head mounted on the shaft and carried close to the axis of rotation to rotate with the shaft and having a reciprocatory fluid pressure controlled capping piston carrying means for securing caps upon bottles, means for feeding bottles to the rotary platform, means for driving the shaft and bottle feeding means at predetermined relative rates such that the capping head will make a complete revolution during the interval that successive bottles are delivered to the capping platform to come into position to cap each bottle delivered to the platform, and means including fluid pressure controlling apparatus for causing automatic reciprocation of the capping piston once during each revolution of the capping head to cap each bottle delivered to the platform.

[Claims 6 to 13 not printed in the Gazette.]

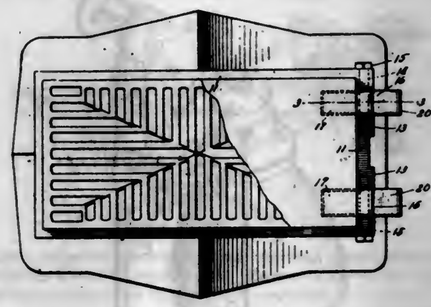
1,114,106. OIL-PRESS BOX. NIMROD W. L. BROWN, Marietta, Ga. Filed Jan. 7, 1913. Serial No. 740,638. (Cl. 100—54.)

1. A press box having a wall provided with an aperture, and a rocking closure within said aperture projecting into the box and hinged thereto.

2. A press box having a wall provided with an aperture, and a loosening tool serving as a rocking closure for said aperture projecting into the box and hinged thereto so that it may be rocked and its inner end swung into the cavity of said box.

3. A press box having a wall provided with an aperture, and a loosening tool projecting through said aperture into the box and hinged thereto, said tool remaining in said box while the contents thereof are under pressure and adapted to be rocked to swing its inner end into said box.

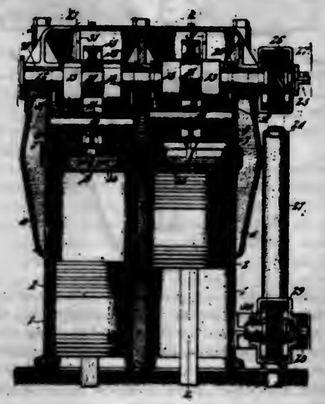
4. A press box having a wall provided with an aperture, and a loosening tool projecting through said aperture into the box and hinged thereto, the end of said tool within the box fitting a recess in the box and conforming to the inner surface thereof and adapted to be rocked to force a portion of the contents of the box therefrom.



5. A press box for oil presses having a wall provided with an aperture, a cake loosening tool projecting through said aperture into the box and serving also as a closure for said aperture, and a hinged connection between the tool and the box to permit said tool to rock and force an edge of the cake face foremost from the box.

[Claims 6 to 31 not printed in the Gazette.]

1,114,107. INTERNAL-COMBUSTION ENGINE. WILLIAM C. CARTER, St. Louis, Mo., assignor to Carter Carbureter Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 25, 1912. Serial No. 693,086. (Cl. 123—188.)



1. A four-cycle internal combustion engine provided with valves and a valve-actuating member that is operated by the suction and pressure in the cylinders to automatically open the intake ports and exhaust ports, respectively, and means that positively moves said valve-actuating member to close said ports.

2. A four-cycle internal combustion engine provided with valves and a valve-operating member that is moved automatically by the suction and pressure in the cylinders to open the intake ports and exhaust ports, respectively, and means that positively moves said member so as to cause the valves to close said ports, said means also operating to hold the valves at rest and in position to close both the intake and exhaust ports on the compression and power strokes of the pistons.

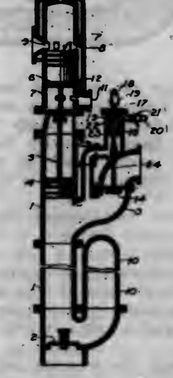
3. A four-cycle internal combustion engine comprising a cylinder provided with an intake port and with an exhaust port, an expansion valve arranged in said cylinder for controlling the inlet and exhaust of the gases to and from said cylinder, means whereby the suction and pressure created in the cylinder on the suction and scavenging strokes, respectively, of the piston causes said valve to move automatically to open said ports, and means for moving said valve to close said ports at the proper periods in the cycle of operations of the engine.

4. A four-cycle internal combustion engine comprising a cylinder provided with an intake port and with an exhaust port, an expansion valve arranged in said cylinder for controlling the inlet and exhaust of the gases to and from said cylinder, means whereby the suction and pressure created in the cylinder on the suction and scavenging strokes, respectively, of the piston causes said valve to move automatically to open said ports, and means which limits the opening movement of said valve and also holds the valve in coöperative position with both ports on the compression and power strokes of the piston.

5. A four-cycle internal combustion engine comprising a cylinder provided with intake and exhaust ports, a ring-shaped expansion valve reciprocatingly mounted inside of the cylinder for controlling the inlet and exhaust of the gases to and from the cylinder, means whereby the suction and pressure created in the cylinder on the suction and scavenging strokes, respectively, of the piston causes said valve to move automatically to open said ports, and means for positively moving said valve to close said ports after the burnt charge has been expelled from the cylinder.

[Claims 6 to 35 not printed in the Gazette.]

1,114,108. METHOD AND APPARATUS FOR PUMPING LIQUIDS. HENRY M. CHANCE and THOMAS M. CHANCE, Philadelphia, Pa. Filed July 24, 1913. Serial No. 780,997. (Cl. 103—67.)



1. A pump for pumping liquids comprising in combination a conduit adapted to contain liquid to be pumped and adapted to be used as a pump main through which liquid may be raised, one end of said conduit being relatively higher than the other end, the upper portion of said conduit being provided with a discharge outlet and the lower portion being provided with a valved inlet, an accumulator in operative relation to the lower portion of said conduit and means near the upper portion of said conduit for applying pressure and energy to liquid contained in said conduit and for transmitting said pressure and said energy to said accumulator.

2. A pump for pumping liquids, comprising in combination a pipe, one end of which is relatively higher than the other end, a discharge outlet near the upper end of said pipe, a valved inlet near the lower end of said pipe, an accumulator near the lower end of said pipe and means for applying power impulses near the upper end of said pipe to liquid contained in said pipe.

3. A pump for pumping liquids comprising in combination a vertical pipe, a valved inlet and an accumulator near the lower end of said pipe, a discharge outlet near

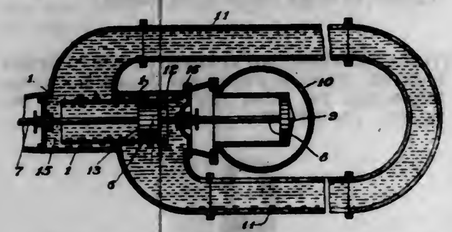
the upper end of said pipe and means in operative relation to the upper part of said pipe for applying pressure and energy to liquid contained in said pipe.

4. A pump main adapted to convey liquid from a lower to a higher elevation provided with an inlet for liquid near its lower end and a discharge outlet near its higher end, a prime mover operatively arranged to transmit energy to the higher end of said main and an accumulator in operative relation to the lower end of said main.

5. A method of pumping liquid which consists in imparting downward movement and velocity to a confined body of liquid, in causing said velocity to store energy in an accumulator, in causing the resistance of said accumulator to bring said body of liquid to rest, in causing said accumulator to react upon and to impart upward movement and velocity to said body of liquid, in causing said upward movement to discharge liquid from the upper portion of said body of liquid and to permit new liquid to flow into the lower portion of said body of liquid.

[Claims 6 to 10 not printed in the Gazette.]

1,114,109. APPARATUS FOR PUMPING LIQUIDS. HENRY M. CHANCE and THOMAS M. CHANCE, Philadelphia, Pa. Filed Jan. 17, 1914. Serial No. 812,663. (Cl. 103—67.)



1. An apparatus for pumping liquids comprising in combination two pump chambers, a conduit providing free communication between said pump chambers, an accumulator isolated from said pump chambers, and means for connecting a movable member of said accumulator with a piston arranged to operate in one of said pump chambers.

2. An apparatus for pumping liquids comprising in combination two pump chambers, an inlet valve, a piston adapted to operate in each of said chambers, a conduit providing free communication between said pump chambers, an accumulator isolated from said pump chambers said conduit and said piston, and means for operatively connecting said piston with a movable member of said accumulator.

3. An apparatus for pumping liquids comprising in combination two pump chambers, an inlet valve, pistons operatively connected and adapted to work in said pump chambers, a conduit providing free communication between said pump chambers, an accumulator isolated from said pump chambers said conduit and said pistons, and means for operatively connecting one of said pistons with a movable member of said accumulator.

1,114,110. ELECTRIC-LAMP BRACKET. JOSEPH CHASSAING, St. Louis, Mo., assignor to Shiras Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 16, 1914. Serial No. 824,961. (Cl. 248—8.)

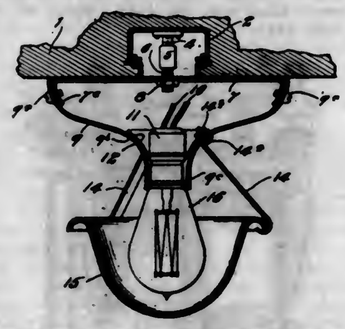
1. An electric lamp bracket comprising a hooked member adapted to engage a horizontally disposed support and having means for engaging a vertical member whereby the bracket is prevented from lateral movement, and a lamp adjustably mounted on said bracket.

2. An electric lamp bracket comprising a vertical member having a hook at its upper end, a U-shaped clip carried by said bracket, and a lamp also carried by said bracket, said lamp being adjustable with respect to the bracket.

3. A portable lamp bracket comprising a hooked member having a U-shaped clip removably secured therein, a

post rotatably mounted therein, and a lamp hinged to the outer end of said post.

1,114,111. LIGHTING-FIXTURE. JOSEPH CHASSAING, Chicago, Ill., assignor to Shiras Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 21, 1914. Serial No. 833,377. (Cl. 240—92.)



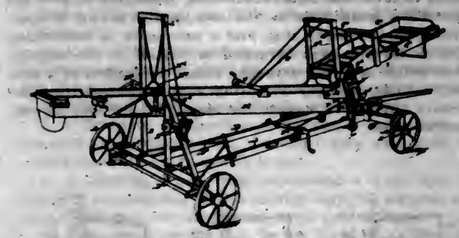
1. A lighting fixture comprising a retaining strap, means for securing the same to the desired supporting structure, a canopy portion secured to the retaining strap and adapted to cover the mountings thereof, a socket supported by the canopy, holders secured on the exterior of the canopy portion, and a suitable globe adapted to be supported by said holders.

2. A lighting fixture comprising a canopy adapted for attachment to a ceiling, a lamp supported on and depending below the canopy, a globe having an outwardly turned and downwardly directed rim portion, resilient holders secured to the outer portion of said canopy and having depending hooked extremities adapted to engage beneath the downwardly directed rim of the globe to support it from the canopy; said holders having spring tendency to hold them in engagement with the globe.

1,114,112. PORTABLE ELEVATOR. JOHN V. CIZEK, Clutier, Iowa. Filed Mar. 11, 1912. Serial No. 683,167. (Cl. 193—18.)

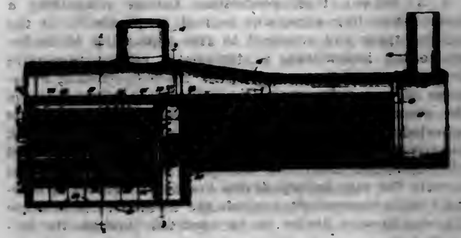
In an elevator, the combination of a supporting frame, the frame having slotted yokes near the front end for the driving shaft to pass through, a discharging conveyer mounted over said frame pivotally at its forward end, bearings for the driving shaft attached thereto, a shaft mounted therein and passing through the yokes, a bevel gear thereon, a receiving conveyer pivotally attached to

the discharging conveyer at its forward end, a driving shaft therefor provided with a bevel gear, a telescoping cross-shaft with pinions thereon meshing with said bevel-



gears, respectively, and brackets for said shafts attached slidably together, whereby the distance between the said driving shafts may be varied, as specified.

1,114,113. HEAT GENERATION. JAMES P. COLE, Glenview, Ill. Filed Apr. 12, 1911. Serial No. 620,708. (Cl. 110—28.)



1. In a furnace, the combination of a combustion chamber having vertically and laterally extending walls dividing the chamber into a series of combustion flues, means for delivering pulverized fuel in suspension to said flues, and means for supplying gas to said flues.

2. In a furnace, the combination of a combustion chamber having refractory walls extending vertically and laterally to divide the combustion chamber into a series of flues, means for delivering pulverized fuel in suspension of said flues, and means for supplying gas to said flues.

3. In a furnace, the combination of a combustion chamber having refractory walls extending vertically and laterally to divide the combustion chamber into a series of flues, said walls having ducts leading to said flues and extending between them, means for delivering pulverized fuel in suspension to said flues, and means for supplying gas to said flues.

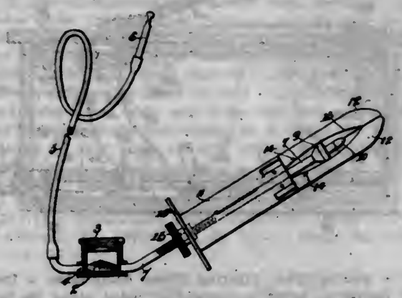
4. In a furnace, the combination of a combustion chamber having vertically and laterally extending walls dividing the chamber into a series of combustion flues, means for delivering pulverized fuel in suspension to some of said flues, other flues for combustible gas, means for supplying gas to said latter flues, and ducts leading from the gas flues to the flues to which the pulverized fuel in delivered.

5. In a furnace, the combination of a combustion chamber having vertically and laterally extending walls dividing the chamber into a series of combustion flues, means for delivering pulverized fuel in suspension to said flues, a chamber adjacent one end of said combustion chamber to which the products of combustion pass, and means for supplying gas to said flues.

[Claims 6 to 9 not printed in the Gazette.]

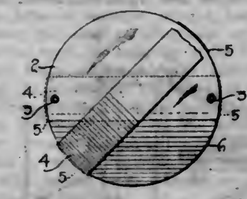
1,114,114. POWDER-APPLICATOR. WILLIAM E. COCHENOUR, Vancouver, British Columbia, Canada. Filed Apr. 30, 1914. Serial No. 835,448. (Cl. 128—25.)

A dry powder vaginal applicator, comprising the combination with a powder holding receptacle having an inlet and an outlet aperture, a mouthpiece connected by a flexible tube to the inlet aperture, a substantially rigid tubular stem connected to the outlet aperture said stem having a removable contracted tip and a conical enlargement adjacent thereto, a substantially parallel sleeve slidably mounted on the tubular stem between the enlargement and the receptacle, said sleeve having dilator mem-



bers pivotally mounted on the outer end, said dilator members folding over the tubular stem and forming when so folded a uniform prolongation of the sleeve, the inner edges of the dilator members being inclined toward the tube adjacent to their pivots so as to be engaged by the conical enlargement of the stem when that stem is outwardly drawn, and a nut rotatably mounted on the end of the sleeve and engaging a thread on the stem.

1,114,115. RECEPTACLE. CHARLES COCHRAN, Meadow, Oreg. Filed Mar. 2, 1914. Serial No. 821,959. (Cl. 220—58.)

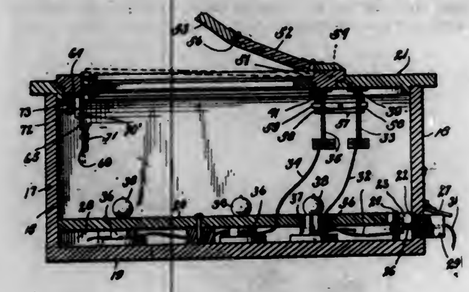


In combination with a receptacle having its ends normally closed and having diametrically opposed openings produced in the peripheral portions of one of the ends, a closure member for said openings mounted upon the receptable and capable of uninterrupted axial rotation, said member comprising an elongated flat member terminating at its opposite extremities in segmental flanges adapted to snugly bear against the periphery of the receptacle, and normally holding the member against movement away from the receptacle, said member having its under surface free and unobstructed, the segmental flanges of the closure member affording the only connection with the receptacle and capable of free axial rotation relative to the receptacle.

1,114,116. PHOTOGRAPHIC-PRINTING APPARATUS. HENRY C. COFFMAN and BENJAMIN F. VAN HORNE, Gary, Ind. Filed Sept. 12, 1913. Serial No. 789,579. (Cl. 95—73.)

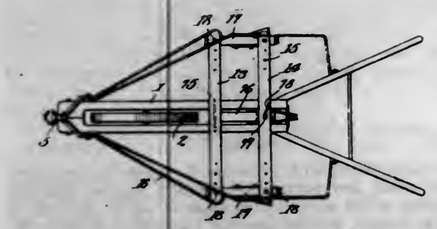
1. In a photographic printing apparatus the combination of a casing having a printing frame receiving opening in its top, electrical conductors disposed within said casing, lamps conducting said conductors, means for connecting one end of said conductors with an electrical source, a printing frame seated in the opening in the top of said casing, a hinged back included in said printing frame, means for connecting the other ends of said conductors operated by the movement of the hinged back to biosed position, a slidable plate adapted for movement into engagement with the conductors simultaneously in-

dependent of the movement of the hinged back to closed position, spring means normally holding the plate out of engagement with the conductors, and means for moving said plate against the influence of said spring means.



2. A photographic printing frame comprising a frame body having a negative supporting ledge along its inner edge, a hinged back secured to said frame body for confining a negative upon said ledge, a plunger slidable in the frame body and having a portion thereof overlying the ledge, spring means constantly tending to elevate said plunger to lift a negative thereabove, a sear for locking said plunger depressed, a push button mounted in the frame body, and connections between said push button and said sear whereby the depression of the former will disengage the latter from the plunger and release same to the influence of said spring means.

1,114,117. CULTIVATOR. EUGENE MACON COLE, Charlotte, N. C. Filed Dec. 7, 1912. Serial No. 735,519. (Cl. 97—10.)

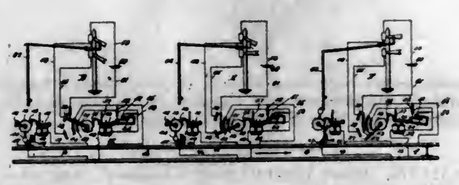


1. In a machine of the class described, the combination with a cross beam and longitudinal beams connected thereto, of a longitudinal strip pivotally mounted between the longitudinal beams, a furrow opener connected to said strip, an adjusting bolt extending upwardly from the strip and through the transverse beam, a forked wedge straddling the bolt and interposed between the strip and cross beam, and means engaging the bolt and the cross beam for binding the wedge between said cross beam and strip.

2. The combination with wheel supported central beams, and a pair of spaced transverse beams supported thereby, of side strips connecting the end portions of the transverse beams and adjustable toward and from each other, a strip supported between and adjustable upwardly and downwardly relative to the central beams, and furrow openers carried by the respective strips.

1,114,118. RAILWAY-TRAFFIC-CONTROLLING SYSTEM. CLYDE J. COLEMAN, New York, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, New York, N. Y., a Corporation of Maine. Filed July 30, 1910. Serial No. 574,672. (Cl. 246—30.)

1. A railway traffic-controlling system comprising a traffic-controlling apparatus located in proximity to the railway track and arranged to give a plurality of traffic-controlling indications, a step-by-step electro-translative device arranged in control of the traffic-controlling apparatus to cause the traffic-controlling apparatus to give the successive indications as the step-by-step device is operated each successive step, and a succession of controlling electric circuits each arranged in control of the step-by-step device and each arranged under the control of a railway vehicle, whereby a moving vehicle controls the successive circuits to operate the step-by-step device its successive steps.



2. A railway traffic-controlling system comprising a traffic-controlling apparatus located in proximity to the railway track and arranged to give a plurality of traffic-controlling indications, a step-by-step electro-translative device arranged in control of the traffic-controlling apparatus to cause the traffic-controlling apparatus to give the successive indications as the step-by-step device is operated each successive step, and a plurality of track circuits each including a portion of the track rails and each arranged under the control of a railway vehicle to operate the step-by-step device one step, whereby a moving vehicle successively controls the track circuits to cause the step-by-step device to be operated through its successive steps.

3. A railway traffic-controlling system comprising a home-and-distant signaling apparatus located in proximity to the railway track, a step-by-step electro-translative device arranged when operated one step to control the home signal and when operated another step to control both the home and distant signals, and two track circuits each arranged under the control of a railway vehicle to operate the step-by-step device one step, whereby when both track circuits have been controlled by a moving vehicle the step-by-step device has been operated two steps, and both the home and distant signals are controlled.

4. A railway traffic-controlling system comprising a home and distant apparatus located in proximity to the railway track, local circuits in control of the home and distant apparatus, one for the home apparatus and the other for both a step-by-step electro-translative device arranged in control of the local circuits, and a plurality of track circuits including the track rails and each arranged under the control of a railway vehicle to operate the step-by-step device one step, the electro-translative device being adapted to receive an impulse for controlling the home traffic-controlling apparatus as a moving railway vehicle passes off one track circuit, and to receive an additional impulse for controlling the home-and-distant traffic-controlling apparatus as the vehicle passes off a track circuit in advance.

5. A railway home and distant signal system comprising a home and distant signal apparatus located in proximity to the railway track, local signal circuits in control of the signal apparatus, track circuits including the track rails, and a step-by-step electro-translative device controlled by track circuits and arranged in control of the local signal circuits, the electro-translative device being adapted to receive signal-controlling impulses from the movement of a railway vehicle over the track circuits and to be actuated by a predetermined number of impulses to control the home signal and to be actuated by a predetermined number of additional impulses to control both signals.

[Claims 6 to 14 not printed in the Gazette.]

1,114,119. FINISHING COMPOSITION AND METHOD OF PREPARING SAME. MICHAEL F. COUGHLIN, Stoughton, Mass., and CHARLES E. SWETT, Providence, R. I., assignors to Frederic H. Kennard, Newton Center, Mass. Filed Sept. 22, 1913. Serial No. 791,198. (Cl. 134—9.)

1. A finishing composition containing a waxy body intimately compounded with the constituents of waste sulfite liquor, the waxy body in sufficient proportion to form a composition readily emulsifiable with water.

2. A finishing composition containing a waxy body intimately compounded with a soluble soap and with the constituents of waste sulfite liquor.

3. A finishing composition containing a waxy body intimately compounded with a soluble soap, an alkaline substance and the constituents of waste sulfite liquor.

4. A finishing composition in the form of an emulsion containing a waxy body, and the constituents of waste sulfite liquor.

5. A finishing composition in the form of an emulsion containing a waxy body, a soluble soap, and the constituents of waste sulfite liquor.

[Claims 6 to 9 not printed in the Gazette.]

1,114,120. BLEACHED-WASTE SULFITE LIQUOR AND PROCESS OF PREPARING SAME. MICHAEL F. COUGHLIN, Stoughton, Mass., and CHARLES E. SWETT, Providence, R. I., assignors to Frederic H. Kennard, Newton Center, Mass. Filed Feb. 21, 1914. Serial No. 820,274. (Cl. 252.)

1. As a new product, a bleached waste sulfite liquor, characterized by the presence therein of products derived from the reduction of the constituents of the liquor, and by a comparatively high degree of color stability under exposure to air as compared with products obtained by direct reduction of the waste sulfite liquor.

2. The process of bleaching waste sulfite liquor, which comprises first reacting thereon with an oxidizing agent, and thereafter bleaching the oxidized liquor.

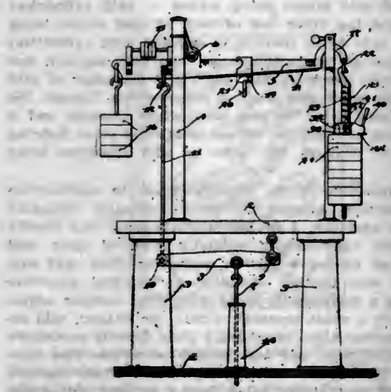
3. The process of bleaching waste sulfite liquor, which comprises first reacting thereon with an oxidizing agent, and thereafter bleaching the oxidized liquor by means of a reducing agent.

4. The process of bleaching waste sulfite liquor, which comprises first reacting thereon with an oxidizing agent, and thereafter bleaching the oxidized liquor by means of a hydrosulfite.

5. The process of bleaching waste sulfite liquor, which comprises first reacting thereon with a permanganate, and thereafter bleaching the oxidized liquor by means of a reducing agent.

[Claim 6 not printed in the Gazette.]

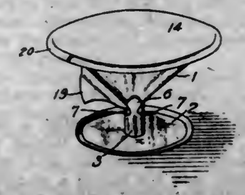
1,114,121. SCALE. WALTER A. CRAGIN, Winifred, Mont. Filed Sept. 19, 1913. Serial No. 790,789. (Cl. 73—100.)



1. The combination with a scale beam having a counterpoise stem graduated to indicate pounds and provided with numerals of corresponding denominations, of a traveling indicator head mounted on said counterpoise stem and having a character identifying the scale, and a platen, carried by said traveling indicator head and cooperating with said numerals and character, for simultaneously impressing on a ticket the weight of a load on said scale and the character identifying said scale.

2. The combination with a scale beam having a counterpoise stem graduated to indicate pounds and provided with type numerals of corresponding denominations, of a traveling indicator head mounted on said counterpoise stem and having a type character identifying the scale, a movable platen, mounted on said traveling indicator head and coöperating with said type numerals and character, for simultaneously impressing on a ticket the weight of a load on said scale and the character identifying said scale.

1,114,122. SANITARY DISH-HOLDER. DAVID F. CURTIN, Chicago, Ill. Filed Dec. 6, 1913. Serial No. 805,035. (Cl. 65—13.)



1. A device of the character specified, comprising a holder, a base and a standard for connecting the holder to the base, said holder being of conical form and arranged with its apex downward and having an opening at its apex and having its upper edge bent outwardly and downwardly to form a rounded margin and having a slot leading from the said rounded edge or margin to the opening at the apex, the material of the holder at one side of the slot being offset laterally outward beyond the material at the other side, the standard having its upper end notched or recessed to form leaves engaging the outer face of the holder at the apex and secured thereto, said notches or recesses extending below the apex, and the base having a central opening for engagement by the standard, said holder being adapted to receive a conical dish of paper or the like.

2. A device of the character specified, comprising a holder, a base and a standard for connecting the holder to the base, said holder being of conical form and arranged with its apex downward and having an opening at its apex and having a slot leading from the upper edge to the opening at the apex, the material of the holder at one side of the slot being offset laterally outward beyond the material at the other side, the standard having its upper end notched or recessed longitudinally and being secured to the holder around the apex with the opening registering with the bore of the standard, the lower end of the standard being connected to the base, said holder being adapted to receive a conical dish of paper or the like having a radial flange passing through the slot.

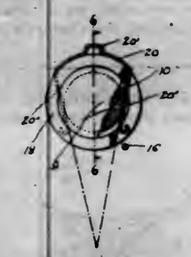
3. A device of the character specified, comprising a holder of conical form having an opening at its apex and a slot leading from the opening to near the large end of the holder, said holder being adapted to receive a conical dish of paper or the like having a radial flange passing through the slot, the material of the holder at one side of the slot being offset laterally with respect to the material at the other side, a tubular standard connected to the holder at the apex, and a base to which the standard is connected.

4. A device of the character specified, comprising a holder of conical form having an opening at its apex and a slot leading from the opening to near the large end of the holder, said holder being adapted to receive a conical dish of paper or the like having a radial flange passing through the slot, the material of the holder at one side

of the slot being offset laterally with respect to the material at the other side, and a support for the holder.

5. A device of the character specified, comprising a holder of conical form having an opening at its apex and a slot leading from the opening to near the large end of the holder, said holder being adapted to receive a conical dish of paper or the like having a radial flange passing through the slot, and a support for the holder.

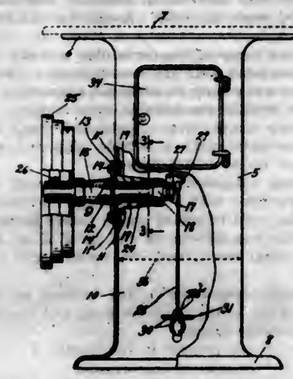
1,114,123. THREADLESS NUT OR COLLAR. HUBERT DALTON, New York, N. Y. Filed Feb. 7, 1914. Serial No. 817,148. (Cl. 74—8.)



1. In a device of the class described, a shaft having formed in the cylindrical surface thereof an annular groove, a cylindrical nut mountable upon said shaft to overlie said groove, said nut having a plurality of channels cut in its outer cylindrical surface, one of said channels having a straight bottom and being so deep that it cuts through and opens into the bore of the nut, both of said channels being non-parallel and cut in a common plane normal to the axis of the bore of the nut, and a single resilient generally U-shaped bent-wire locking member so conformed that portions thereof are readily insertible in said channels so that by virtue of the resiliency of said member and the non-parallelism of said channels said member when thus inserted in said channels is prevented from accidental disengagement from the nut, the portion of said member which lies in the bore-intersecting channel being adapted to enter the shaft's annular groove when the said bore-intersecting channel overlies any portion of said annular groove, said locking member carrying a portion which projects from the outer cylindrical surface of the nut and which is manipulable to displace from its normal engagement with said annular groove the portion of said member which lies in the said bore-intersecting channel so that said nut may be readily demounted from or mounted upon said shaft.

2. In a device of the class described, a shaft having formed in the cylindrical surface thereof an annular groove, a cylindrical nut mountable upon said shaft to overlie said groove, said nut having a plurality of channels cut in its outer cylindrical surface, one of said channels having a straight bottom and being so deep that it cuts through and opens into the bore of the nut, both of said channels being non-parallel and cut in a common plane normal to the axis of the bore of the nut, and a single resilient generally U-shaped bent-wire locking member so conformed that the legs of the U converge more and more as they leave the bow of the U, said legs being readily insertible in said channels so that by virtue of the resiliency of said member and the non-parallelism of the said channels said legs when thus inserted in said channels are prevented from accidental disengagement from the nut, the leg which lies in the bore-intersecting channel being adapted to enter the shaft's annular groove when the said bore-intersecting channel overlies any portion of said annular groove, the bow of said locking member carrying a portion which projects from the outer cylindrical surface of the nut and which is manipulable to displace from its normal engagement with said annular groove the leg which lies in the said bore-intersecting channel so that said nut may be readily demounted from or mounted upon said shaft.

1,114,124. SHAFT-HANGER. HUBERT DALTON, New York, N. Y. Filed Mar. 28, 1914. Serial No. 827,849. (Cl. 64—14.)



1. In apparatus of the class described, in combination with a vertical support having a vertically elongated transverse aperture, a horizontally arranged and readily demountable shaft-hanger normally mounted upon said support and having a portion projecting from said support, the said portion including an integral structure comprising a horizontally-bored cylindrical member adapted to sleeve a shaft mounted within the hanger, said integral structure also comprising a plate directly mountable upon said support, and said integral structure also comprising a pair of substantially horizontal struts one end of each of said struts being joined to said cylindrical member and the other end of each of said struts being joined to said plate thereby to support said cylindrical member and yet space the same from said support, one of said struts overlying said shaft and the other of said struts lying below said shaft, a cross-section through the first-mentioned strut defining an upright triangle and a cross-section through the second-mentioned strut defining an inverted triangle.

2. In apparatus of the class described, in combination with a vertical support having a vertically elongated transverse aperture, a horizontally arranged and readily demountable shaft-hanger normally mounted upon said support and having a portion projecting from said support, the said portion including an integral structure comprising a horizontally-bored cylindrical member adapted to sleeve a shaft mounted within the hanger, said integral structure also comprising a plate directly mountable upon said support, and said integral structure also comprising a pair of substantially horizontal struts, one end of each of said struts being joined to said cylindrical member and the other end of each of said struts being joined to said plate thereby to support said cylindrical member and yet space the same from said support, one of said struts overlying said shaft and the other of said struts lying below said shaft, a cross-section through the first-mentioned strut defining an upright triangle and a cross-section through the second-mentioned strut defining an inverted triangle, the bases of said triangles being parallel.

3. In apparatus of the class described, in combination with a vertical support having a vertically elongated transverse aperture, a horizontally arranged and readily demountable shaft-hanger normally mounted upon said support and having a portion projecting from said support, the said portion including an integral structure comprising a horizontally-bored cylindrical member adapted to sleeve a shaft mounted within the hanger, said integral structure also comprising a plate directly mountable upon said support, and said integral structure also comprising a pair of substantially horizontal struts one end of each of said struts being joined to said cylindrical member and the other end of each of said struts being joined to said plate thereby to support said cylindrical

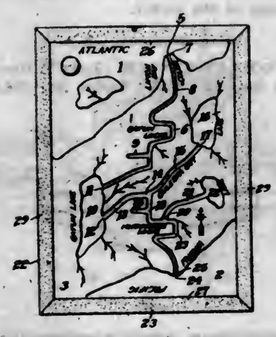
member and yet space the same from said support, one of said struts overlying said shaft and the other of said struts lying below said shaft, a cross-section through the first-mentioned strut defining an upright triangle and a cross-section through the second-mentioned strut defining an inverted triangle, the bases of said triangles being parallel and spaced above and below said shaft.

4. In apparatus of the class described, in combination with a vertical support having a vertically elongated transverse aperture, a horizontally arranged and readily demountable shaft-hanger normally mounted upon said support and having a portion projecting from said support, the said portion including an integral structure comprising a horizontally-bored cylindrical member adapted to sleeve a shaft mounted within the hanger, said integral structure also comprising a plate directly mountable upon said support, and said integral structure also comprising a pair of substantially horizontal struts one end of each of said struts being joined to said cylindrical member and the other end of each of said struts being joined to said plate thereby to support said cylindrical member and yet space the same from said support, one of said struts overlying said shaft and the other of said struts lying below said shaft, the first-mentioned strut being of an inverted T cross-section and the second-mentioned strut being of a T cross-section.

5. In apparatus of the class described, in combination with a vertical support having a vertically elongated transverse aperture, a horizontally arranged and readily demountable shaft-hanger normally mounted upon said support and having a portion projecting from said support, the said portion including an integral structure comprising a horizontally-bored cylindrical member adapted to sleeve a shaft mounted within the hanger, said integral structure also comprising a plate directly mountable upon said support, and said integral structure also comprising a pair of substantially horizontal struts one end of each of said struts being joined to said cylindrical member and the other end of each of said struts being joined to said plate thereby to support said cylindrical member and yet space the same from said support, one of said struts overlying said shaft and the other of said struts lying below said shaft, a cross-section through the first-mentioned strut defining an upright triangle and a cross-section through the second-mentioned strut defining an inverted triangle the vertical distance in a given plane between the upper and lower limits of said portion being less than the horizontal distance in the same plane between the side limits of said portion.

[Claims 6 to 10 not printed in the Gazette.]

1,114,125. PUZZLE. FRED W. DOLL, Allentown, Pa., assignor of one-half to A. H. Balliet, Allentown, Pa. Filed Apr. 30, 1914. Serial No. 835,339. (Cl. 46—41.)



1. In a game apparatus, a pair of spaced relatively large pools, a body of mercury to be transmitted from one pool to the other, a spacing between the pools having a tortuous passage through it from one of the large pools to the other and a smaller pool within the spacing body communicating with the passage, and lying a considerable distance to one side of a line joining the points of communication of the passage with the two large pools.

2. In game apparatus, a pool representing water, a material bounding the same representing land and having a canal through a portion of the land communicating with the pool through a small opening, a projecting land portion causing the canal terminal to project into the pool, the coast outlined being there convex and a quantity of mercury intended to be passed into said canal.

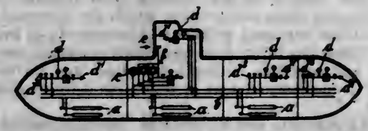
3. In game apparatus, a pair of spaced pools representing water, a volume of mercury in one of said pools and a spacing material representing land projecting outwardly into each pool having a canal therethrough communicating with each pool through the land projection therein and a smaller pool between the large pools communicating with the canal and corresponding substantially in capacity to the volume of mercury.

4. In game apparatus, a pair of spaced pools representing water, mercury in one of said pools and spacing material between the pools having a passage therebetween forming a communication between the pools and having storage space on each side of a line between the terminals of the passage representing lakes and corresponding substantially to the quantity of mercury used and communicating with the passage.

5. In game apparatus, a pair of spaced pools representing the Atlantic and Pacific Oceans, a spacing material between representing an isthmus and having a passage through it from ocean to ocean to represent the Panama Canal with spaces communicating with the passage representing lakes located on opposite sides of the canal and a volume of mercury substantially corresponding in size to the content of one of these lakes.

[Claims 6 to 9 not printed in the Gazette.]

1,114,126. MEANS FOR DISTRIBUTING OXYGEN. ALEXANDER BERNHARD DRÄGER, Lübeck, Germany. Filed Jan. 15, 1913. Serial No. 742,217. (Cl. 137—78.)



1. In a plant for distributing oxygen in a casing having a plurality of compartments, a plurality of oxygen reservoirs in the casing, main pipes leading from the respective reservoirs and running through all the compartments, and a tapping device in each compartment for each main pipe.

2. In a plant for distributing oxygen in a casing having a plurality of compartments, a plurality of oxygen reservoirs in the casing, main pipes leading from the respective reservoirs and running through all the compartments, a tapping device in each compartment for each main pipe, and an indicating apparatus for indicating the pressure in the main pipes.

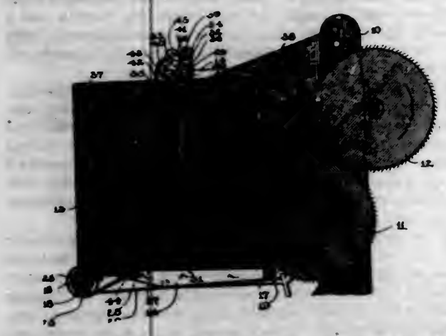
3. In a plant for distributing oxygen in a casing having a plurality of compartments, a plurality of oxygen flasks in the casing distributed in groups, a plurality of main pipes corresponding in number to the groups, each main pipe connected to the flasks of one of the groups and running through all the compartments, and tapping devices in each compartment on the respective main pipes.

4. In a plant for distributing oxygen in a casing having a plurality of compartments, a plurality of oxygen flasks in the casing distributed in groups, a plurality of main pipes corresponding in number to the groups, each main pipe connected to a different group of flasks and running through all the compartments, a main tapping device for each main pipe, and an emergency tapping device in each compartment on each main pipe.

5. In a plant for distributing oxygen in a casing having a plurality of compartments, a plurality of oxygen reservoirs in the casing, main pipes leading from the respective

reservoirs and running through all the compartments, tapping devices in each compartment on the respective main pipes, means for indicating the pressure in the main pipes, a single outlet nozzle connecting the members of each group of tapping devices, and cocks intermediate each outlet nozzle and the respective main pipes.

1,114,127. TOBACCO-FEED FOR CIGARETTE-MACHINES. ALEXANDER L. EWERS, Durmid, Va., assignor to United Cigarette Machine Co., Ltd., London, England, a Corporation of Great Britain and Ireland. Filed Apr. 26, 1913. Serial No. 763,765. (Cl. 131—39.)



1. In a cigarette machine, the combination with a tobacco feed hopper having tobacco delivery means therein, of a partition arranged within and transversely of the hopper dividing the latter into two compartments, said partition having an upwardly traveling face exposed in the compartment opposite the delivery means for maintaining a substantially constant level of tobacco in the said compartment.

2. In a cigarette machine, the combination with a tobacco feed hopper having delivery rolls therein located one above the other and between which the tobacco is fed, of a partition arranged within and transversely of the hopper dividing the latter into two communicating compartments, said partition having a traveling face moving upwardly in the compartment in which the delivery rolls are located.

3. In a cigarette making machine, the combination with a tobacco feed hopper having delivery rolls, of a transverse swinging partition therein having a movable face.

4. In a cigarette making machine, the combination with a tobacco feed hopper having delivery rolls, of a transverse swinging partition therein the lower end of which terminates at a point slightly above the bottom of said hopper, said partition having a movable face.

5. In a cigarette making machine, the combination with a tobacco feed hopper having delivery rolls, of a transverse swinging partition therein extending nearly to the bottom of said hopper and having a movable front and rear face, said partition being fulcrumed at its upper end.

[Claims 6 to 13 not printed in the Gazette.]

1,114,128. MATRIX. CLAUDE L. FRIEL, Los Angeles, Cal., assignor of one-half to Legrand Friel, Los Angeles, Cal. Filed May 9, 1913. Serial No. 766,484. (Cl. 199—12.)

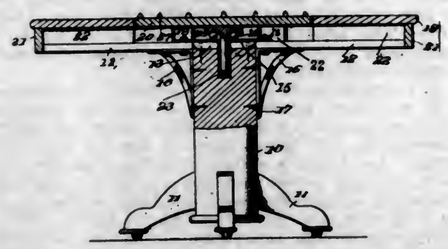
1. A polygonal matrix having a central transverse hole, said hole being eccentric to the weight, said matrix having a plurality of casting edges, each casting edge having a different character.

2. A polygonal matrix having an egg shaped central transverse hole therein so located that the smaller end of the hole is nearest to the top edge of the matrix and the bottom portion of the matrix is the heaviest, said matrix having different characters in each of its casting edges and each edge forming a casting edge.

3. A polygonal matrix having a kerf in one edge near the top and a notch at the top of the other edge on the outer side thereof, said matrix having a central hole eccentric to its weight, and having a plurality of casting edges with different characters in each of said edges.

4. A polygonal matrix having a central transverse hole, the center of magniture of which is eccentric to the center of gravity of the matrix, said matrix having a plurality of casting edges, each edge having a different character.

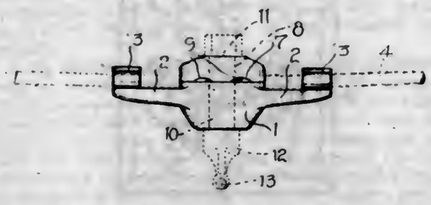
1,114,129. REVOLVING TABLE. WILLIAM B. GAGE, Columbia, Mo. Filed Jan. 6, 1912. Serial No. 669,895. (Cl. 45—26.)



1. A table comprising a central standard, a plurality of arms extending radially from the standard, a bracket secured to the standard below each of said arms, said bracket forming a support for the arms, a plate mounted on the upper end of the standard, said plate being of a diameter in excess of that of the standard, its edge portion which projects beyond the standard being connected to the arm supporting brackets by bolts which pass through the arms, and a table rotatably supported by said plate.

2. In a table, a central standard, a plurality of radial arms disposed at their inner ends upon the standard, a fixed top section supported by the arms and having a central opening, a holding plate having a central socket fitted within the upper end of the standard, the inner ends of the arms abutting against the walls of the socket and the plate resting upon the said inner ends of the arms, a rotatable top section arranged within the opening in the fixed top section, and a plate secured to the under side of the said rotatable top section and having a central stud rotatably fitting in the socket.

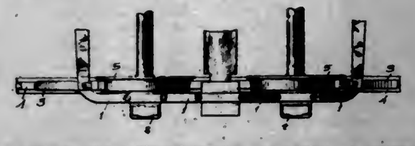
1,114,130. TROLLEY-HANGER. JOHN T. GARY, Atlanta, Ga. Filed Oct. 11, 1913. Serial No. 794,664. (Cl. 191—40.)



1. In a trolley hanger, a body member having a pair of oppositely extending arms formed thereon, the upper face of said body having a transversely extending arcuate groove formed therein to receive a suspension wire, the upper face of said body being disposed in a plane slightly above the upper faces of said arms whereby the base of the groove in the body is disposed in the same plane as the upper faces of said arms to provide an even bearing surface for said suspension wire the entire length of the hanger, flanges formed on the outer ends of said arms for engagement with the suspension wire, said flanges being disposed to one side of the longitudinal center of said groove to force said suspension wire to frictionally engage one side wall of said groove, a cap member for application to said body to retain the wire in place therein, and means to secure said cap member and body together.

2. In a trolley hanger, a body member having a pair of oppositely extending arms formed thereon, the upper face of said body having a transversely extending groove formed therein to receive a suspension wire, flanges formed on the outer ends of said arms for engagement with the suspension wire, a cap member adapted for application to the upper face of said body, said cap member having a plurality of transversely extending grooves of various depths formed in the contacting face thereof, and one of said grooves being adapted for coöperation with the groove in the upper face of the body, and means to clamp said cap member and body together.

1,114,131. WHEEL-FENDER FOR RAILROAD-TRUCKS. ISAAC N. GATES, Richmond, Cal. Filed Jan. 20, 1914. Serial No. 813,588. (Cl. 105—131.)

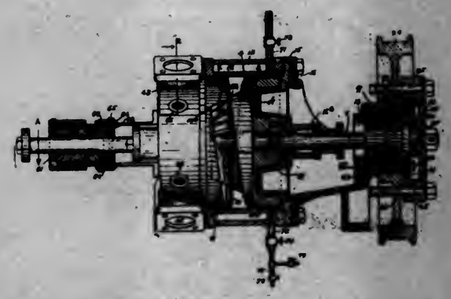


1. A fender for railroad trucks comprising an extension integral with the top truss bar of a truck and arranged to lie directly over the rail in front of the wheel of the said truck.

2. A fender for railroad trucks comprising an offset extension integral with the top truss bar of a railroad truck and arranged to lie directly over the rail and adjacent thereto, and in front of the wheel of the said truck.

3. A fender for railroad trucks comprising a top truss bar extended and offset on both ends so as to lie directly in front of the wheels of the truck, the said extended ends being also inclined so as to lie adjacent to the rails on which the said wheels ride; and means integral with the truck arranged to support the offset extensions of the top truss bar.

1,114,132. GAS-ENGINE. GUSTAV GEHRANDT, Chicago, Ill. Filed July 24, 1912. Serial No. 711,367. (Cl. 123—8.)



1. A gas engine comprising a casting and a rotating piston coöperating therewith, a shaft upon which said piston is mounted, said piston and said casting each having a pair of spiral faces and beveled faces connecting the same, all faces of said casting being perforated, means for permitting the expanding gases to pass through the perforations in the beveled faces of said casting, and means permitting the exhaust gases to pass through perforations in the spiral faces of said casting.

2. A gas engine comprising a casting having spiral faces and beveled faces, a shaft, a rotary piston also having spiral faces and beveled faces, the spiral faces upon said piston being turned toward and being adapted to come into engagement with the spiral faces upon said casting, and an ignition chamber within the casting, the spiral faces of said casting being provided with perforations through which the exhaust gas is adapted to pass, and the beveled faces of said casting being provided with perforations through which the expanding gas is adapted to pass.

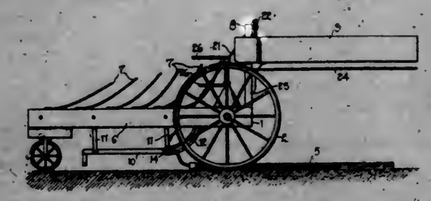
3. A gas engine comprising a casting, means for dividing said casting into an ignition chamber and an exhaust chamber, said casting having spiral faces and beveled faces, a rotating piston having spiral faces and beveled faces similar to the faces upon said casting, the spiral faces of said casting being provided with perforations through which the exhaust gas is adapted to pass, and the beveled faces of said casting being provided with perforations through which the expanded ignited gas is adapted to pass.

4. A gas engine comprising a casting having spiral faces and beveled faces, a rotating piston mounted thereupon having spiral faces and beveled faces, said faces upon the piston being turned toward the faces upon said casting, a pair of cams, one of said cams being fixed against rotation, said cams being also provided with spiral faces and with beveled faces extending through the same number of degrees of arc and being of the same pitch as the corresponding faces upon said casting and said piston.

5. A gas engine comprising a casting, divided into an interior ignition chamber and an exhaust chamber, said casting having spiral faces and beveled faces, said spiral faces extending through a relatively large number of degrees of arc and said beveled faces extending through a relatively small number of degrees of arc, a rotating piston shaped similarly to said casting, the beveled faces of said casting being perforated, means for admitting gas within the casting, the gas being adapted to pass through said perforations and bear upon said rotating piston, and a shaft upon which said piston is carried.

[Claims 6 to 11 not printed in the Gazette.]

1,114,133. GRAIN-SHOCKER. GUY J. GLENN, Imbler, Oreg. Filed Apr. 20, 1914. Serial No. 833,226. (Cl. 56—121.)



1. A device of the character described comprising a suitably supported draper, a carrier projecting rearwardly from such draper and upon which the same is adapted to deliver, and a plurality of upwardly disposed rearwardly inclined springs overlying the draper for causing the sheaves to assume a substantially vertical position.

2. A device of the character described comprising a suitably supported draper, a carrier projecting rearwardly from such draper and upon which the same is adapted to deliver, a plurality of upwardly disposed rearwardly inclined springs overlying the draper for causing the sheaves to assume a substantially vertical position, and means for causing a separation of the lower ends of the sheaves after being delivered to the carrier.

3. A device of the character described comprising a draper, a carrier coacting therewith and upon which the same is adapted to deliver, and power driven means for

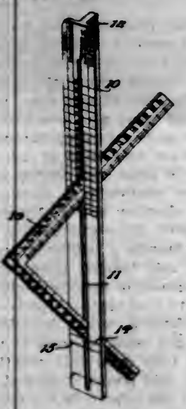
causing the sheaves to be delivered alternately upon opposite sides of the carrier, said means including a controlling trip adapted to be engaged by a sheaf.

4. A device of the character described including a suitably supported draper, a carrier upon which the draper is adapted to deliver, and a cone-shaped member interposed between the draper and carrier for causing a separation of the lower ends of the sheaves after being delivered upon the carrier.

5. A device of the character described comprising a draper, a carrier coacting with the draper and upon which the same is adapted to deliver, a vertically disposed shaft positioned intermediate the draper and the carrier, operating means for the shaft, and means for controlling the direction of rotation of the shaft, said last mentioned means being under control of a sheaf during its delivery from the draper to the carrier.

[Claims 6 to 9 not printed in the Gazette.]

1,114,134. MEASURING IMPLEMENT. AXEL W. GUSTAFSON, St. Joseph, Mich. Filed Feb. 20, 1913. Serial No. 749,700. (Cl. 33—92.)



1. An implement of the class described including a head member having a longitudinal slot, ribs extending from said head at each side of the slot, said head member having an initial graduation upon one face transversely of the slot and a plurality of other graduations upon said face and transversely of the slot, a member including arms at right angles to each other and inserted through the slot and between the ribs, and clamping means applied to the ribs and compressing them against the right-angled member.

2. The combination with a carpenter's square including a blade and a tongue, of a head member having a longitudinal slot to receive the members of the square, said head member having an initial graduation transversely of the slot and a plurality of other graduations transversely of the slot indicating the distances from a predetermined graduation on the tongue of the square to graduations on the blade of the square, ribs spaced apart and extending from the head at each side of the slot, and clamping means applied to said ribs to compress them on the members of the square.

3. A device of the class described comprising a stock having a longitudinal slot, ribs spaced apart and extending from said stock at each side of the slot, said stock having a plurality of graduations at each side of the slot and toward one end of the stock and respectively indicating various pitches of common rafters, hip rafters and valley rafters, said stock having other transverse graduations at each side of the slot and denoting the starting points to the various measurements, an implement having members at right angles to each other and uniformly graduated and inserted through said slot and between the ribs, and a clamp means applied to said ribs to compress them upon the right-angled implement.

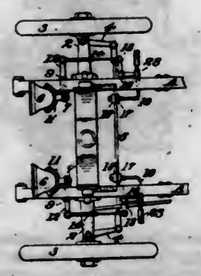
1,114,135. METHOD OF FASTENING SHEET MATERIAL. THEODOR B. HAFERTEP, Chicago, Ill. Filed Dec. 8, 1913. Serial No. 805,387. (Cl. 29—148.)

1. The method of fastening a plurality of overlapped sheets which consists in providing alined perforations therein, equipping at least one of said sheets with a bur presented by the walls of the said alined perforations at one end thereof, inserting into the said alined perforations from the other end thereof a tapering screw having a tip smaller than the said bur and having a thread of greater diameter than the said bur, and forcibly rotating the said screw to cause the said thread to engage the end of said bur to clamp the said sheets between the said thread and the head of the screw.

2. The method of fastening a plurality of overlapped sheets which consists in forming a perforation extending through the said sheets and in equipping at least one of said sheets with a bur presented by the walls of the perforation at one end thereof, inserting through the said perforation from the other end thereof a tapering screw having a tip smaller than the bore of the perforation and having a thread of greater outside diameter than the said bur, forcibly rotating the said screw to cause the said thread to engage the said bur to flare the latter outwardly into a flange around the edge of the perforation, and continuing the said forcible rotating of the screw to cause the said thread and the head of the screw to coact to clamp therebetween the portions of the said sheets adjacent to the said perforation.

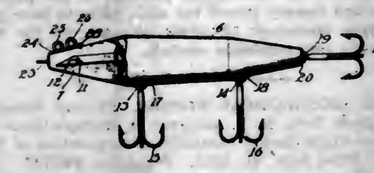
3. The method of fastening a plurality of overlapped sheets which consists in forming a perforation extending therethrough and equipping at least one of the said sheets with a bur presented by the walls of the perforation at one end thereof; inserting through the said perforation from the other end thereof a tapering screw having a tip smaller than the bore of the perforation and having a thread provided with a flange presenting a gradually increasing angle between the said flange and the axis of the screw; and forcibly rotating the said screw to cause the flange of the said thread to engage the exposed end of the bur and successively thereafter to flare the bur outwardly of the perforation, to flex the flanged material to decrease the bore of the flanged portion thereof, and to clamp the portions of the sheets adjacent to the shank of the said screw between the said thread and the head of the screw.

1,114,136. STEERING ATTACHMENT FOR AUTOMOBILE-LAMPS. CHARLES B. HALL, Oakland, Cal., assignor to Oscillating Light Co., Inc., Oakland, Cal., a Corporation of California. Filed Nov. 1, 1913. Serial No. 798,653. (Cl. 240—62.)



In combination with a vehicle frame and the tie rod connecting the steering knuckles, a rotatable lamp, a bell crank pivoted to the frame, a connection between the lamp and one arm of the bell crank, a bracket having one end rigidly connected to the tie rod, and having its opposite end angularly disposed and arranged to extend parallel and in spaced relation to the tie rod, a vertical sleeve extending upwardly from the opposite end of said bracket, a vertical rod adjustable in said sleeve, means for locking said rod relative to said sleeve, an adjustable link disposed between said rod and the other arm of the bell crank, said adjustable link being disposed approximately parallel to said tie rod, and connections between the ends of said link and said bell crank and vertical rod to allow the link to have vertical reciprocatory movement at its ends.

1,114,137. FISH BAIT OR LURE. CHARLES HEDDON, Dowagiac, Mich. Filed Feb. 27, 1914. Serial No. 821,438. (Cl. 43—30.)



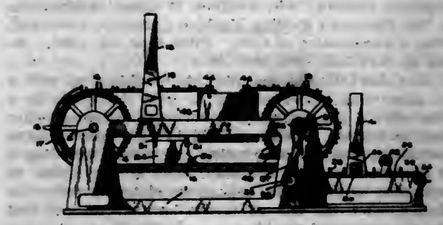
1. In a fish lure, the combination with a body portion, of a hook associated therewith, and means for varying the degree of wabble effected by the lure when retrieved, said means comprising means for securing the line at a plurality of points at varying distances from the forward end of said body portion.

2. In a fish lure, the combination with a body portion, of a hook associated therewith, means for varying the degree of wabble effected by the lure when retrieved, said means comprising means for attaching the line at substantially the forward point of said body, and alternative means for attaching the line at a plurality of points at varying distances from said forward end.

3. In a fish lure, the combination with a body portion, of a hook associated therewith, and means for varying the degree of wabble effected by the lure when retrieved, said means comprising a plurality of eyes to which the line may be attached, one of said eyes being located at the forward end of said body substantially in line with the major longitudinal axis thereof, the other eyes being located at successive points rearward thereof.

4. In a fish lure, the combination with a body portion, of a hook associated therewith, and means for varying the degree of wabble effected by the lure when retrieved, said means comprising variable line fastening means including an eye located at the forward end of said body and a member bent upon itself to form a plurality of loops, said member being secured at the rear end thereof to said body and having a portion thereof bent downward over the forward end of said body and adapted to be secured between said body and said eye.

1,114,138. SANDWICH-CAKE MACHINE. CHESTER W. HITCHNER, Philadelphia, Pa. Filed May 9, 1913. Serial No. 766,531. (Cl. 91—3.)



1. An apparatus of the character described, comprising an endless conveyer consisting of a series of cake receiving frames, said frames having openings therein, means for depositing cakes in the frames, and means for applying filling to the cakes through the openings in the frames, substantially as described.

2. An apparatus of the character described, comprising a conveyer consisting of a series of cake receiving frames having openings therein, means for depositing cakes in the frames, actuating means for reversing the frames, and means for applying filling to the cakes through the openings in the frames after the latter are inverted, substantially as described.

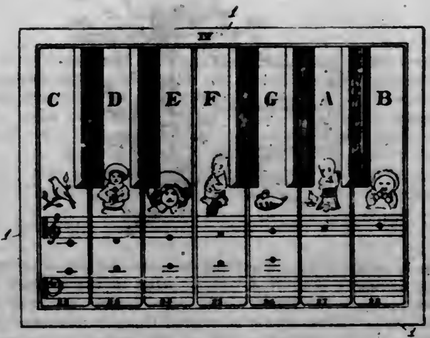
3. An apparatus of the character described, comprising an endless conveyer consisting of a series of cake receiving frames, said frames having openings therein, each frame having pins projecting therefrom, the pins at one end of the frame longer than the others, means for depositing cakes in the frames, and means for applying filling to the cakes through the openings in the frames, substantially as described.

4. An apparatus of the character described, comprising a conveyer consisting of a series of cake receiving frames having openings therein, each frame having pins projecting therefrom, the pins at one end of the frame longer than the others, means for depositing cakes in the frames, actuating means for reversing the frames, and means for applying filling to the cakes through the openings in the frames after the latter are inverted, substantially as described.

5. An apparatus of the character described, comprising an endless conveyer consisting of a series of cake receiving frames, said frames having openings therein, said frames having cake receiving depressions therein, means for depositing cakes in the frames, and means for applying filling to the cakes through the openings in the frames, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,114,139. EDUCATIONAL GAME. FRANCES A. J. HOFFMANN, San Francisco, Cal. Filed Feb. 12, 1914. Serial No. 819,099. (Cl. 35—12.)



1. An educational game comprising a series of cards, each representing an octave on the keyboard of a piano; and a second series of cards each one representing one key only on one of the first series of cards.

2. An educational game comprising a series of cards, each representing an octave on the keyboard of a piano and each key having a different picture thereon; and a second series of cards each one of which represents one key only on the first series.

3. An educational game comprising a series of cards, each representing an octave on the keyboard of a piano, each key of the said keys having a picture thereon; and a second series of cards, each one of which has printed thereon a portion of a treble and a bass clef, and a note printed in the clef to represent one only of the keys represented in the first series of cards.

4. An educational game comprising a series of cards, each card representing a different octave on the keyboard of a piano, each key having a different picture thereon;

and a second series of cards having a portion of a bass and treble clef and a note printed thereon representing one only of one of the piano keys represented on the first series of cards.

5. An educational game comprising a series of cards, each card representing an octave on the keyboard of a piano, and each key having thereon a different picture and the note in written music representing that particular key; and a second series of cards each one of which has a note in written music thereon representing one only of the keys represented in the first series of cards and a suitable verse indicating a characteristic of that note and a reference to the picture on the key corresponding to that card.

[Claims 6 and 7 not printed in the Gazette.]

1,114,140. HARDENING CEMENTITIOUS MATERIALS. AARON C. HORN, New York, N. Y. Filed Oct. 9, 1912. Serial No. 724,742. (Cl. 106—24.)

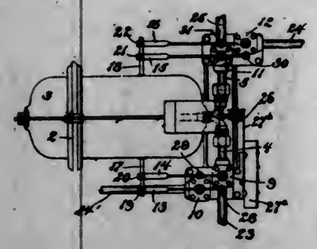
1. The process of making a hardened concrete which comprises incorporating with cement materials a quantity of active magnetite, ferrous sulfate and black oxid of manganese, in working up to a plastic mass with water and in forming into any desired shape.

2. A new cementitious material comprising Portland cement and a mixture of magnetite, ferrous sulfate and black oxid of manganese.

3. A new cementitious material comprising hydraulic cement and a mixture of magnetite, ferrous sulfate and black oxid of manganese.

4. A new cementitious material comprising hydraulic cement and a mixture of comminuted magnetite, ferrous sulfate and black oxid of manganese.

1,114,141. TRAP. ARTHUR M. HOUSER, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed June 9, 1910. Serial No. 565,999. (Cl. 137—103.)

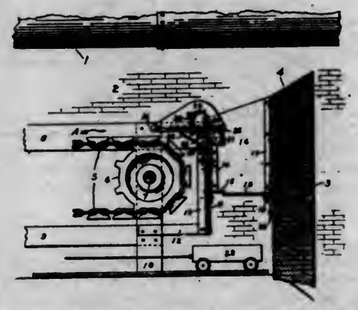


1. A steam trap comprising in combination, a tilting tank having a conduit, a valve casing in the conduit, a main pressure controlled piston valve loosely mounted in said casing and having a restricted passage therethrough leading to the discharge side of the casing, a pressure chamber above said valve adapted to receive a predetermined amount of pressure from the tank to normally hold the valve closed on its seat, a pilot valve for said restricted passage and constructed to have a lesser cross-sectional area than that of the main valve, and a connection between the pilot valve and the tank whereby the former is actuated on the tilting of the tank, substantially as and for the purpose set forth.

2. In a steam trap, a tilting tank having an exhaust conduit, a valve casing in the conduit, a main piston valve loosely mounted in said casing subject to pressure from the tank and having a restricted passage leading to the discharge side of the casing, a pressure chamber above said valve for receiving a predetermined amount of pressure from the tank past the piston to normally hold the valve closed on its seat, a pilot valve in said pressure chamber controlling the said restricted passage and having a lesser cross-sectional area than that of the main valve, and means actuated by the tilting of the tank for operating the pilot valve thereby exhausting the pressure in the pressure chamber through the said restricted passage whereby the main valve is caused to rise by the action of the pressure from the tank to empty the tank.

3. In a steam trap, a tilting tank having an admission conduit; a valve casing in the conduit having a pressure inlet opening; a main piston valve loosely mounted in said casing subject to pressure from the inlet side of the casing and having a restricted passage therethrough leading to the discharge side of the casing; a pressure chamber above said valve adapted to receive a predetermined amount of pressure from the inlet side of the casing and past the piston to normally hold the valve closed down on its seat; a pilot valve extending through the casing for controlling the said restricted passage and having a lesser cross-sectional area than that of the main valve; and means actuated by the tilting of the tank for operating the pilot valve, whereby to exhaust the pressure in the pressure chamber and thereby permit the main valve to have positive lifting movement to admit pressure to the tank through the said admission conduit.

1,114,142. MECHANICAL STOKER. HARVEY ISERMAN, New Hyde Park, N. Y., assignor to Multiple-Grate-Bar Endless Chain Stoker Company, a Corporation of New York. Filed Sept. 11, 1911. Serial No. 648,747. (Cl. 110—40.)



1. In a mechanical stoker, an endless traveling grate, a frame for supporting said grate, a rear plate carried by said frame, stops and trunnions mounted on said rear plate, a bottom plate mounted on said trunnions and normally engaging said stops, and a covering of fire resistant material for said bottom plate.

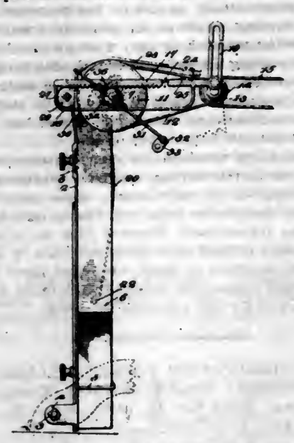
2. In a mechanical stoker, an endless traveling grate, a frame for supporting said grate, a rear plate carried by said frame, stops and trunnions mounted on said rear plate, a bottom plate mounted on said trunnions and normally engaging said stops, springs mounted on said rear plate and tending to return the bottom plate to engagement with the stops, fire brick mounted on the bottom plate, means for securing the fire brick to the bottom plate and means for preventing displacement of the fire brick on the bottom plate.

1,114,143. PAPER-FEEDING MACHINE. OLIVER W. JOHNSON, Geneva, Ohio, assignor, by mesne assignments, to The Cleveland Folding Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 14, 1909. Serial No. 517,683. (Cl. 101—39.)

1. In a sheet feeding machine, the combination with a sheet supporting holder adapted to hold the sheets in a pile on edge, a support for said holder, a stripping roller against which the sheets are held by the holder, means for actuating the stripping roller, and means including a stop roller attached to the main body of the holder in such manner as to directly engage the stripping roller immediately after the last sheet has been drawn out and fed to the connected machine.

2. In a sheet feeding apparatus, a holder adapted to hold a pile of sheets, a stripping roller adapted to strip

the sheets from the pile, a stop roller mounted in the holder, means for actuating said stripping roller, a shaft on which said stop roller is mounted, a stop cam secured to said shaft, the means for operating the stripping roller including a driving device, and a clutch securing it to the shaft on which the stripping roller is mounted, and a shipper lever arranged to be engaged by the stop cam to disengage the driving device, the stop roller being arranged to automatically receive motion so as to turn its shaft upon the pile of sheets becoming exhausted.



3. In a sheet feeding mechanism, the combination of a sheet supporting holder, a stripping roller adapted to strip sheets one by one from the holder, a shaft on which the roller is mounted, a belt pulley on the shaft, a pinion carried by the pulley, a driving countershaft having a belt pulley and a crank, and a rack connected to the crank and engaging the pinion.

4. In a sheet feeding apparatus, the combination of a sheet supporting holder, a stripping roller adapted to strip sheets from the pile supported in said holder by frictional engagement therewith, a shaft on which said stripping roller is mounted, a pawl and ratchet connection between the stripping roller and the shaft, a belt pulley on the shaft, a pinion carried by the pulley, a driving shaft having a belt pulley and a crank, and a rack connected to the crank and engaging said pinion.

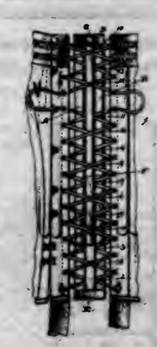
5. In a sheet feeding apparatus, a holder adapted to hold a lift or pile of sheets, a roller adapted to strip the sheets from the pile, a shaft upon which said roller is mounted, a ratchet secured to the shaft, a pawl carried by the roller and engaging said ratchet, driving devices mounted on said shaft, a spring pressed clutch adapted to hold said driving devices fast on the shaft, a shipper lever operatively connected to said clutch and provided at its free end with a sleeve, a cam arranged to engage said sleeve, a shaft to which the cam is secured, the holder having bearings in which said shaft is journaled, and a roller mounted on said last named shaft and arranged to engage the stripping roller when the supply of sheets is exhausted.

[Claims 6 to 11 not printed in the Gazette.]

1,114,144. PROTECTOR FOR CORSETS. EMIL A. KANN, New York, N. Y. Filed Mar. 5, 1914. Serial No. 822,655. (Cl. 2—74.)

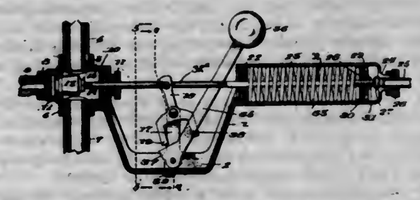
1. A protector for corsets comprising a double member having two parts substantially parallel to each other and connected at top and bottom, and a single member having its ends attached to the double member, one of said ends being detachable whereby the single member may be detached and threaded through the lacings of a corset, substantially as described.

2. A protector for corsets having a double member having two parts spaced from each other and substantially parallel to each other, said two parts having stays or stiffeners therein and being connected at top and bottom, and a single member also having a stiffener therein and having one of its ends secured to the two part member at



the bottom and its opposite end secured to the two part member by a separable fastener, whereby the single member may be detached and threaded through the lacings of a corset, the double member protecting the wearer, substantially as described.

1,114,145. AUTOMATIC VALVE-OPERATING MECHANISM. FREDERICK D. KASTNER, Salina, Kans. Filed Aug. 7, 1913. Serial No. 783,589. (Cl. 103—89.)

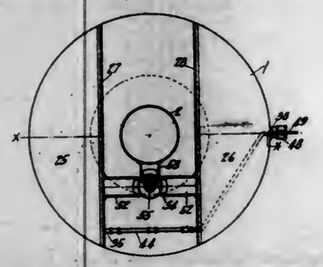


1. In a device of the class described, a supporting frame, longitudinally spaced valve and piston casings mounted on said frame in the same horizontal plane, a valve seat at the outer end of said valve casing, a valve for engagement with said seat, a lever fulcrumed intermediately of its ends on said frame, a valve stem attached to said valve and engaged with the upper end of said lever, a piston rod extending through the casing thereof with its free end bent to form a loop, an arm pivoted to one end of said frame and having a weight on its free end and means on its other end for limiting the swinging movement of said arm in one direction, said arm extending through said piston rod loop and limited in its opposite movement thereby, means on said arm for engaging the free end of said lever and a pressure controlled piston fixed on said piston rod for operating said rod and actuating said arm to shift said lever in opposite directions.

2. In a device of the class described, a frame having a combined four-way fitting and valve casing thereon, a water supply pipe and by-pass pipe connected with said valve casing and fitting, a pipe to connect the fitting with a motor pump, a valve in said valve casing designed to open and close said by-pass pipe, a stem connected with said valve, a valve operating lever pivoted in said frame and connected at one end with said valve stem, said lever having its other end forked, a valve operating arm pivotally mounted in said frame and having an over-balancing weight, a stop on said arm for engagement with said frame to limit the movement of the arm in one direction, a stud carried by said arm and adapted to engage the forked end of said valve operating lever, whereby the latter is actuated by said arm to open and close said valve when said arm is swung in one direction or the other, a spring casing arranged on said frame, a piston slidably mounted in said casing and adapted to be moved

in one direction by fluid pressure, a spring to move said piston in the opposite direction, and a piston rod connected with the piston and having a loose connection with said lever operating arm.

1,114,146. WATER-TREATING APPARATUS. CASS L. KENNICOTT, Chicago Heights, Ill. Filed Apr. 6, 1914. Serial No. 830,042. (Cl. 210—1.)



1. In a water treating apparatus, a downtake, means for filtering sediment from the water and means for washing sediment from the filtering means into the downtake.

2. In a water treating apparatus, a downtake, a filter, means for delivering water to the filter for the purpose of washing the filtering material and means for conveying the wash water from the filter into the downtake.

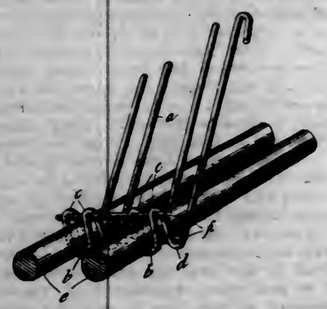
3. In a water treating apparatus, a sedimentation tank, a conduit leading into the tank, a filter containing material for filtering water, means for delivering water to the filter for the purpose of washing the filtering material and means for conveying wash water from the filter into the conduit.

4. In a water treating apparatus, a sedimentation tank, a conduit leading into the tank, a filtering compartment formed in the tank, means for delivering wash water to the filtering compartment and means for conveying water from the filtering compartment into the conduit.

5. The combination with a water softener having a conduit for water therein, of a filter for filtering sediment from the water and means for washing the sediment from the filter into the conduit.

[Claims 6 to 10 not printed in the Gazette.]

1,114,147. ADJUSTABLE FASTENING MEANS FOR RIGIDLY SECURING STIRRUPS OR SHEAR MEMBERS TO TENSION AND OTHER BARS USED IN REINFORCING CONCRETE CONSTRUCTION. WILLIAM RUSSELL KERR, Malvern, Victoria, Australia, assignor of one-half to William Henry Murphy, Hawthorn, Victoria, Australia. Filed Dec. 10, 1913. Serial No. 805,794. (Cl. 72—112.)



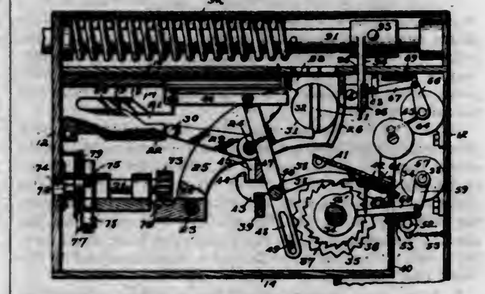
1. In reinforcing members for concrete construction, a main reinforcing bar, a shear member having a looped and doubly bent end doubly embracing said bar, and transversely disposed pins, keys or wedges inserted between and bearing against the bends of said shear member and said bar one bearing against the top and the other against the bottom of said bar.

2. In reinforcing members for concrete construction, a main reinforcing bar, a shear member having a looped end, said looped end being doubly bent in opposite directions and embracing said bar, and transversely disposed pins or keys combining with said bent portions of said shear member to exert a triangular grip on opposite sides of said bar, substantially as and for the purposes set forth.

3. In reinforcing members for concrete construction, a main reinforcing member or bar, a shear member having a looped end passing around said bar, double bends in said said shear member on opposite sides of said main bar, and pins or keys passed transversely through the loops formed by said bends above and below said main bar, substantially as and for the purpose set forth.

4. In reinforcing members for concrete construction, a plurality of main reinforcing members arranged parallel with and alongside of each other, shear members each having a loop and doubly bent end doubly embracing said bars, and two transversely disposed pins or keys bearing on opposite sides of said main bars, said pins or keys locking the shear members to their respective main bars and forming a rigid connection between said main bars, substantially as and for the purposes set forth.

1,114,148. COMBINATION POCKET-BILLIARD RACK AND REGISTER. GEORGE GUSTAVUS KITZEMAN, Des Moines, Iowa. Filed Nov. 11, 1913. Serial No. 800,410. (Cl. 194—32.)



1. In a device of the class described, a coin controlled mechanism, means for adjusting said mechanism so that it may be controlled by one or more coins, means whereby the number of coins deposited in the machine may be indicated, and means whereby the number of operations of the machine may be indicated regardless of the number of coins deposited at each operation.

2. In a device of the class described, a coin controlled mechanism including a casing, a slidable coin receiving frame, having coin receiving openings, a plurality of levers, each provided with a coin receiving slot below one of said openings, a toothed cylinder, pawls operatively connected therewith, and means whereby said levers may be operated for moving said pawls and operating said cylinder, said means being so constructed and arranged that one or more of said pawls is operated, depending upon the position of said sliding frame.

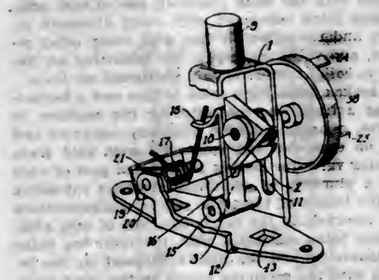
3. In a device of the class described, a coin controlled mechanism including a casing, a frame slidable therein, having coin receiving openings, levers pivoted between their ends below said openings, said levers having at one end coin receiving means, a second frame slidably mounted, and means thereon for successively engaging and moving one or more of said levers when said second frame is moved toward the first frame.

4. In a device of the class described, a coin controlled mechanism including a casing, a frame slidable therein, having coin receiving openings, levers pivoted between their ends on said frame below said openings, said levers having at one end coin receiving means, a second frame slidably mounted, means thereon for successively engaging and moving one or more of said levers when said second frame is moved, said levers being arranged to stand normally out of position to be engaged by said last named means, and to be moved to position for such engagement when coins are dropped upon said levers.

5. In a device of the class described, a coin controlled mechanism including a casing, a frame slidable therein, having coin receiving openings, levers pivoted between their ends on said frame below said openings, said levers having at one end coin receiving means, a second frame slidably mounted, means thereon for successively engaging and moving one or more of said levers when said second frame is moved, said levers being arranged to stand normally out of position to be engaged by said last named means, and to be moved to position for such engagement when coins are dropped upon said levers, said frames being so arranged that the position of the first frame determines the number of levers operated.

[Claims 6 to 13 not printed in the Gazette.]

1,114,149. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 21, 1912. Serial No. 732,699. (Cl. 175—290.)



1. In an electric switch, a bodily movable spindle, a rotatable block carried thereon, a contact member movable with said block, means for tripping said block, a returning lever for said spindle, and a common means for returning said lever and tripping means to their initial positions after said block is tripped.

2. In an electric switch, a bodily movable spindle, a block carried thereon, a contact member movable therewith, a pivoted member having a struck-out portion adapted to engage said block upon movement of said spindle, and a single spring for returning said block to its operable position and holding said tripping means under pressure.

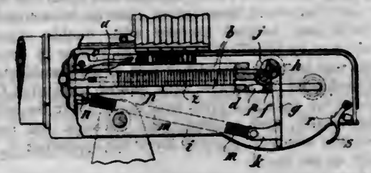
3. In an electric switch, the combination of a movable spindle, a push button for actuating said spindle, a block carried on said spindle, a contact member movable with said block, means for rotating said block, a returning member for said spindle, and a single means normally holding said rotating means under pressure and operated upon actuation of said push button to actuate said returning member.

4. In an electric switch, a bodily movable spindle, a rotatable block carried thereon, a contact member movable therewith, a tripping member therefor pivoted beneath said block having a struck-up portion adapted to engage said block, a member underlying said spindle and a spring holding said pivoted member under pressure and actuating said underlying member to return said spindle to its normal position after each rotary movement of said block.

5. In an electric switch, the combination of a bodily movable spindle, a frame having ways in which said spindle moves, a block carried upon said spindle, a contact movable with said block, a pivoted tripping member for said block, a pivoted frame extending beneath said spindle and means engaging said frame and tripping member for holding said tripping member in the path of said block and returning said spindle to its operable position after each rotary movement of the block.

[Claims 6 to 16 not printed in the Gazette.]

1,114,150. AUTOMATIC FIREARM. MATHIAS KNÖTGEN, Cologne, Germany, assignor to The Firm of Gesellschaft zur Verwertung von Feuerwaffen-Patenten M. B. H., Cologne, Germany. Filed May 2, 1914. Serial No. 835,971. (Cl. 89—2.)

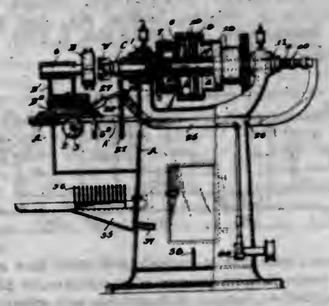


1. In an automatic firearm, the combination of a breech block adapted to move backward and forward, a pivotally arranged lever, behind the breech block when in closing position the lever-pivot being located slightly beside the longitudinal axis of the breech block, a spring attached to the free end of said lever and to the front end of the breech block.

2. In an automatic firearm, the combination of a breech block adapted to move backward and forward, a pivotally arranged lever, behind the breech block when in closing position the lever-pivot being located slightly beside the longitudinal axis of the breech block, a spring attached to the free end of said lever and to the front end of the breech block, with an intermediate pressure block, pivotally fitted to the breech block, and adapted to bear flat against the breech lever.

3. In an automatic firearm, the combination of a breech block adapted to move backward and forward, a pivotally arranged lever behind the breech block when in closing position the lever-pivot being located slightly beside the longitudinal axis of the breech block, a spring attached to the free end of said lever and to the front end of the breech block, with an intermediate pressure block, pivotally fitted to the breech block, with an igniting pin against which the said lever projects the said intermediate block.

1,114,151. NUT-FACING MACHINE. VICTOR R. KOONTZ, Waynesboro, Pa. Filed Oct. 3, 1910. Serial No. 585,130. (Cl. 10—83.)



1. A facing machine comprising a carriage, a cutter-head mounted on said carriage, means for adjusting said carriage to and from the work, a work carrying shaft mounted to slide longitudinally, a clutch on said work carrying shaft comprising a main part with two engaging faces, a driving element on a sleeve surrounding said main shaft adapted to engage with one of its faces, a reversing element on the shaft adapted to engage with its other face, means for holding said driving element and said reversing

element a predetermined distance apart, and means for sliding said shaft to throw said main clutch into engagement with either of said driving and reversing elements, substantially as set forth.

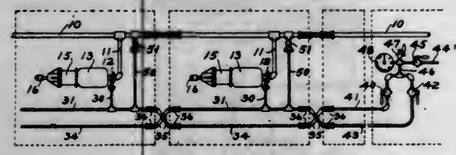
2. A facing machine comprising a cutter-head, an adjustable carriage carrying said cutter-head, a work carrying shaft, means for driving said shaft in either direction, a pivoted work holding yoke, and a connection from the cutter-head carriage to said work holding yoke for throwing it toward and from the work as said carriage is moved, substantially as set forth.

3. A facing machine comprising a cutter-head, means for adjusting said cutter-head toward and from the work, a work carrying shaft mounted to slide in its bearings, a main clutch-part carried thereby with double engaging faces, two rotary members mounted to rotate in opposite directions one mounted on either side of said main clutch-part and adapted to engage with one of its clutch-faces, a pivoted lever engaging with said main shaft for sliding it longitudinally, and a connection between the cutter-head carriage and said pivoted lever for operating it, substantially as set forth.

4. A facing machine comprising a frame, a sliding carriage a main shaft, a cutter-head mounted on one of said parts, a work support mounted on the other, a reversing pulley mounted loosely on the shaft, a sleeve surrounding said shaft to one side of said pulley, a clutch-part with clutch faces mounted on said sleeve and keyed to said shaft, said shaft being mounted to have a limited longitudinal movement, a driving pulley on said sleeve alongside said clutch-part and formed with a face to engage with one of the clutch-faces thereof, and means for sliding said shaft longitudinally to couple one or the other of said pulleys to said clutch-part, substantially as set forth.

5. A facing machine comprising a frame, a carriage, a main shaft having longitudinal movement, a cutter-head mounted on one of said two elements first mentioned, a work support mounted on the other of said two elements, a pulley mounted loosely on the shaft and formed with a clutch-face, a sleeve mounted on said shaft to one side of said pulley, a double-faced clutch-part keyed through said sleeve and shaft and formed with a clutch-face adapted to engage with the center face of the pulley, a spring interposed between a collar on said shaft and the end of said sleeve for normally holding said shaft and sleeve at the extreme of one limit of movement, a lever for sliding said shaft against the action of said spring, and a connection between said carriage and said lever, whereby the movement of said carriage will operate said shaft, substantially as set forth.

1,114,152. AIR-BRAKE APPARATUS. FRANK KOSIER and THOMAS H. KOSIER, Ludlow, Ky., and THOMAS BEMIS, Indianapolis, Ind. Filed Feb. 7, 1913. Serial No. 746,722. (Cl. 188—12.)



1. An air brake system including a train line running from and controlled in the cab of the engine, a plurality of brake cylinders, auxiliary reservoirs and triple valves connected with said train line, a retaining valve for closing the exhaust port of each triple valve, a plurality of additional air lines in communication with the main reservoir, one of said air lines leading to some of the retaining valves and the other air line or lines leading to other retaining valves, and valve mechanism for controlling said plurality of additional air lines, whereby air may be introduced through both of said additional air lines or either of them, as desired.

2. An air brake system including a train line running from and controlled in the cab of the engine, a plurality of brake cylinders, auxiliary reservoirs and triple valves connected with said train line, a retaining valve for closing the exhaust port of each triple valve, a plurality of additional air lines in communication with the main reservoir, one of said air lines leading to some of the retaining valves and the other air line or lines leading to other retaining valves, and valve mechanism for controlling each additional air line as well as both additional air lines.

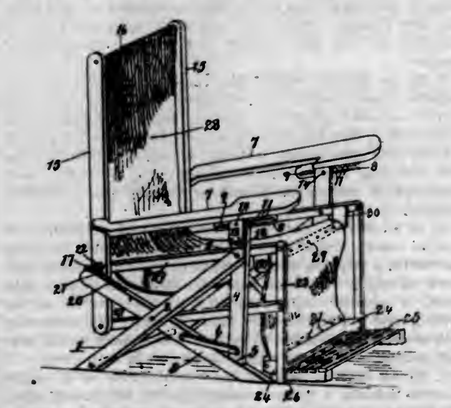
3. An air brake system including a train line running from and controlled in the cab of the engine, a plurality of brake cylinders, auxiliary reservoirs and triple valves connected with said train line, a retaining valve for closing the exhaust port of each triple valve, a plurality of additional air lines in communication with the main reservoir, one of said air lines leading to some of the retaining valves and the other air line or lines leading to other retaining valves, valve mechanism for controlling each additional air line as well as both additional air lines, and a release valve in connection with said additional air lines.

4. An air brake system including a train line running from and controlled in the cab of the engine, a plurality of brake cylinders, auxiliary reservoirs and triple valves connected with said train line, a retaining valve for closing the exhaust port of each triple valve, a plurality of additional air lines extending throughout the series and in communication with the main reservoir, one of said additional air lines being connected with every alternate retaining valve and the other air line with every other retaining valve, and valve mechanism for admitting air under pressure to both or either of said additional air lines.

5. An air brake system for a train of cars and a locomotive including a train line controlled by the engineer in the locomotive, a brake cylinder, auxiliary reservoir and triple valve on each car and connected with said train line, a retaining valve for closing the exhaust port of each triple valve, a plurality of additional air lines extending throughout the length of the train and in communication with the air reservoir in the locomotive, one of said additional air lines being connected with the retaining valve on every alternate car and the other additional air line being connected with the retaining valves on the other alternate cars, and valve mechanism in the locomotive for controlling said additional air lines.

[Claims 6 and 7 not printed in the Gazette.]

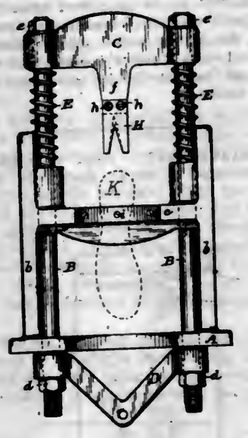
1,114,153. FOLDING AND RECLINING CHAIR. FRANK J. LASKOWSKI, Allentown, Pa., assignor of one-half to Frederick H. Fried, Allentown, Pa. Filed Sept. 22, 1913. Serial No. 791,175. (Cl. 155—30.)



1. A folding chair comprising crossed pivotally connected legs, a chair back pivotally connected to the upper ends of one pair of legs, standards pivotally connected near their upper ends to the upper ends of the other pair of legs, a chair seat carried by said chair back and said standards, chair arms pivotally connected at their rear ends to said chair back, said arms being slidably and adjustably connected at their forward ends to the upper ends of said standards, and means for holding said standards in a vertical position when the chair is in its set up position.

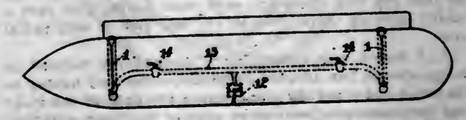
2. A folding chair comprising crossed pivotally connected legs, a chair back pivotally connected to the upper ends of one pair of legs, standards pivotally connected near their upper ends to the other pair of legs, means for normally holding said standards in an upright position, a chair seat carried by said standards and said chair back, offset plates connected to the upper ends of said standards above said chair seat, pins having their opposite ends connected in the spaced portions of said plates and in the standards, chair arms pivotally connected at their rear ends to the chair back, and rack bars connected to the under faces of the arms at their forward ends for engagement with said pins between the offset portions of the plates and the standards.

1,114,154. SHOE-HEEL-REDUCING DEVICE. CHARLES E. LEACH and ERNEST C. LEACH, West Peabody, Mass., assignors to Charles E. Leach & Co., Lynn, Mass., a Firm. Filed May 8, 1914. Serial No. 837,586. (Cl. 12—42.)



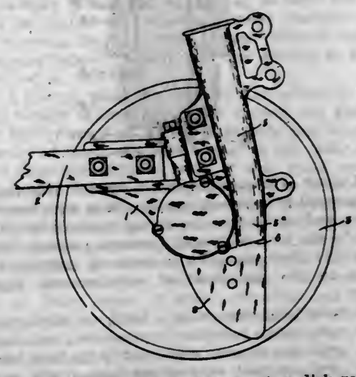
In a device of the character described, the combination of a fixed frame adapted to support a shoe heel, a frame slidable in said fixed frame, a chisel-like forked knife fixed to said slidable frame, helical springs adapted to support said slidable frame and to return it to its initial position after it has been forced downward, a foot lever and a member connecting said foot lever and said slidable frame, all constructed and operating substantially as described and for the purposes set forth.

1,114,155. APPARATUS FOR RAISING SUBMARINES AND SUBMERSIBLES. LUCIEN AUGUSTE JOSUÉ LEDUC, Tours, France. Filed Mar. 26, 1912. Serial No. 686,407. (Cl. 114—16.5.)



In apparatus for indicating the location of a sunken submarine, the combination with the hull of the submarine of an air-tight tubular guideway open at each end extending around and up along each side of the hull to points of the upper part thereof, a pair of buoys normally closing the respective open ends of said tubular guideway, a flexible tensile member passing through said tubular guideway, fastened at its respective ends to said buoys, and having a sufficient length of its portion adjacent to each of said buoys coiled on the said buoy, means for producing a vacuum in said tubular guideway, and means for enabling the crew to destroy said vacuum therein, whereby in case of the vessel sinking, the crew by destroying the vacuum in said tubular guideway, will enable the buoys to rise to the surface of the water by their natural buoyancy, as set forth.

1,114,156. SINGLE-DISK FURROW-OPENER. PEARL A. LEWIS and HENRY N. FAAS, Springfield, Ohio, assignors to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Mar. 30, 1914. Serial No. 828,267. (Cl. 111—11.)



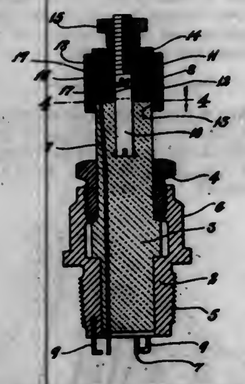
1. In a disk furrow opener, a support, a disk rotatably mounted upon said support, a boot secured to said support at the side of said disk, the lower end of said boot terminating at a point above the cutting edge of said disk and having the extreme lower end cut away at the rear and on the inner side, and a shield rigidly secured to the outer side of said boot and extending below the same and also extending rearwardly to a point substantially coincident with the rear wall of said boot, said shield having its forward and lower edges bent inwardly in close proximity to the side of said disk.

2. In a disk furrow opener, a support, a disk rotatably mounted upon said support, a boot secured to said support at the side of said disk, the lower end of said boot terminating at a point above the cutting edge of said disk and having the extreme lower end cut away at the rear and also on both sides, and a shield secured to the outer side of said boot so as to close the outer cut-away portion thereof, said shield being extended below said boot to a point in close priximity to the cutting edge of the disk and also being bent so as to cause its forward and lower edges to lie in close proximity to the side of said disk, the forward wall of said boot being extended and formed of a trough shape, substantially as and for the purpose specified.

3. In a disk furrow opener, a support, an angularly-arranged concavo-convex disk rotatably mounted upon said support, a boot secured to said support at the side of said disk, said boot being converged or narrowed toward the point of discharge with its lower end curving inwardly so as to lie in close proximity to the convex side of said disk, the lower end of said boot terminating at a point above the cutting edge of said disk and having the extreme lower end cut away at the rear and at both sides, a shield secured to the outer side of said boot so as to close the outer open side thereof, said shield being projected below said boot to a point in close proximity to the

cutting edge of said disk and having its lower and forward edges bent inwardly in close proximity to the convex side of said disk, the forward wall of said boot at the extreme lower end thereof being formed of a trough shape, substantially as and for the purpose specified.

1,114,157. SPARK-PLUG. GEORGE A. LONG, Hartford, Conn. Filed Jan. 2, 1914. Serial No. 809,908. (Cl. 123—169.)



1. A spark plug comprising a body, an insulating member supported in said body and provided with several conductors, and a movable insulating member directly supported by the first mentioned insulating member and provided with switch means for successively engaging the conductors on the movement of said movable insulating member.

2. A spark plug comprising a body, an insulating member in said body, provided with several conductors, a second insulating member supported by the first insulating member and provided with switch means, the two insulating members being connected for relative movement to cause the switch means to successively engage said conductors on said relative movement.

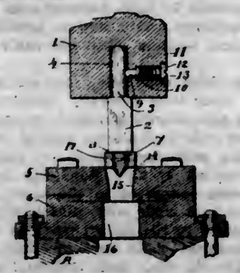
3. A spark-plug comprising a body, an insulating member in said body provided with a number of conductors, a rotary member on the insulating member, and switch means for successively engaging the conductors on the insulating body on the turning of said rotary member.

4. A spark-plug comprising a body, an insulating member in said body provided with a number of conductors, a rotary insulating part on said insulating body provided with switch-means for successively engaging the conductors on the body on the turning of said rotary part, and an electrical conducting device in constant electrical connection with said switch-means.

5. A spark-plug comprising a body, an insulating member in said body, provided with a number of conductors, an insulating member supported for rotation by said other insulating member and having switch-means to successively engage the conductors on the body on the turning of said rotary insulating member, a stud connected with and extending from the first mentioned insulating member, a sleeve surrounding the stud and incloscd by the rotary insulating member, said sleeve being of conducting material and having a flange overlying and constantly engaging said switch-means, and a nut threaded onto the stud, the nut being adapted to bind a lead wire against said flange.

1,114,158. PROCESS FOR THREADING NUTS. ALBERT K. LOVELL, New Haven, Conn. Filed Jan. 11, 1912. Serial No. 670,720. (Cl. 10—86.)

1. The herein described process of threading nuts consisting essentially of pressing the nut blank through a tapering matrix by pressure applied against the back or following face of the nut blank as distinguished from its front or leading side in its passage through the die or matrix and simultaneously carrying with it a screw threaded former within the blank, upon and around which the blank will be compressed and internally threaded, substantially as specified.



5. The herein described process of threading nuts consisting essentially of pressing the nut blank through a tapering passage in a die, by a forcing tool engaging the blank and having a screw threaded former projected within the blank, around and upon which the blank will be compressed and shaped, and thereby correspondingly internally threaded, substantially as specified.

3. The herein described process of threading nuts consisting essentially of compressing the blank into a tapering matrix by pressure applied upon the metal mass on the retreating side as distinguished from the advancing side, and simultaneously advancing a screw threaded former with the blank, within the perforation thereof, and around and upon which the metal will be compressed and shaped and the nut thereby internally threaded, substantially as specified.

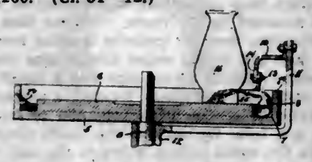
1,114,159. MATCH-SAFE. JOHN S. LUEDTKE, Wykoff, Minn. Filed Mar. 6, 1914. Serial No. 822,857. (Cl. 206—22.)

1. A match safe comprising a downwardly reduced or wedge-shaped box adapted to be suspended and having in its lower end a narrow slot between the ends of the front and rear walls, said lower edge of the front wall having two deep notches, a shaft journaled in the side walls of the box and extending along the slot and having at one end a crank, two half-moon shaped cams fixed on the shaft one in line with each notch in the front wall; said cams having each an arm arranged to swing in one of the notches and curved rearwardly intermediate its ends so as to almost reach the rear wall of the box without getting its free end into the notch, said cams having also each a match-carrying notch close by the rear side of each radial arm.

2. A match safe comprising a downwardly reduced or wedge-shaped box adapted to be suspended and having in its lower end a narrow slot between the ends of the front and the rear walls, said lower edge of the front wall having two deep notches, a shaft journaled in the side walls of the box and extending along the slot and having at one

end a crank, two half-moon shaped cams fixed on the shaft one in line with each notch in the front wall; said cams having each an arm arranged to swing in one of the notches and curved rearwardly intermediate its ends so as to almost reach the rear wall of the box without getting its free end into the notch, said cams having also each a match-carrying notch close by the rear side of each radial arm, said rear wall having clearings for the rear portions of the cams.

1,114,160. GLASS-GRINDING APPARATUS. GEORGE A. MACBETH, Pittsburgh, Pa. Filed Apr. 8, 1912. Serial No. 689,260. (Cl. 51—12.)



1. In glass grinding apparatus the combination with a rotary grinding table adapted to contain an abrasive mixture, a relatively stationary horn adapted to discharge a stream of abrasive onto the grinding surface of the table, and a supporting member for the horn adjustably mounted in such manner that the elevation and angular inclination of the horn may be varied.

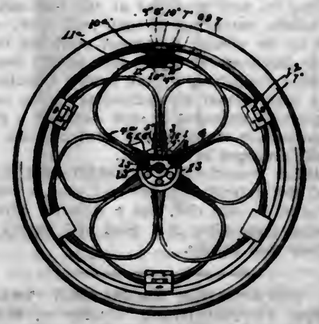
2. In glass grinding apparatus, the combination with a rotating receptacle adapted to contain abrasive material, a grinding member rotatable with the receptacle, and a stationary conduit having a portion thereof lying in position in the said receptacle to scoop up the abrasive and discharge it onto the grinding member when the receptacle is rotated.

3. In glass grinding apparatus, the combination of a rotary member comprising a grinding disk and a channel about its periphery adapted to contain an abrasive material, and a conduit one end of which lies in the channel in position to scoop up the abrasive when the said member is rotated, and the other end of which lies in position to discharge the abrasive scooped up onto the disk.

4. In combination, a rotary member comprising a grinding member and a receptacle surrounding the same, and a tapering horn having its large end lying in the receptacle and its small end in position to discharge onto the grinding member.

5. In combination, a rotary member comprising a grinding member and a receptacle surrounding the same, and a scoop having one part lying in the receptacle and another part in position to discharge onto the grinding table.

1,114,161. SPRING-WHEEL. WILLIAM L. MANN, St. Joseph, Mo. Filed June 29, 1914. Serial No. 847,920. (Cl. 152—50.)



1. In a spring wheel provided with a rim and a hub therefor; a pair of spring spokes each spoke being of practically semi-oval form and having their ends abutted against each other to form practically an oval; spoke flanges formed on the abutted ends of said spokes; a plurality of leaf springs for each one of the inner ends of said spokes; leaf flanges formed on the inner ends of said leaf springs; spoke securing means whereby said leaf springs and the inner ends of said spokes are detachably secured in said hub; a plurality of outer leaf springs for reinforcing the outer end portions of said spokes; leaf holding means formed on said leaf springs; rim securing means secured on said rim, said securing means being provided with leaf engaging means formed therein for engaging said leaf holding means; and flange holding means in said rim securing means whereby the flanged outer ends of said spokes are detachably held in place.

2. In a spring wheel, a hub having a sleeve aperture formed through the center thereof, said hub having a plurality of spoke channels formed therein, the adjacent ends of said channels uniting in one common opening through the annular surface of said hub while one side of said plurality of channels opens through the end face of said hub the entire length thereof; a holding channel for each one of said spoke channels, said holding channel being formed radially in said hub and having its inner end opening into the central portion of said spoke channel; a hub section covering the open sides of said channels and section securing means whereby said hub section is detachably secured on said hub.

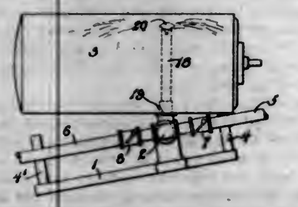
3. In a spring wheel, an annular hub having a sleeve aperture formed through the center thereof and also having flat faces formed on its two ends, said hub having an outer series of spoke channels formed in the outer one of said flat faces the adjacent ends of said spoke channels uniting in one common opening through the annular surface of said hub, said hub also having a holding channel formed in said outer face for each one of said spoke channels, said holding channel being formed radially in said hub and having its inner end opening into the central portion of its respective spoke channel, said hub also having an inner series of spoke channels and holding channels of similar form and arrangement formed in its inner end face; an outer hub section covering said outer spoke channels and their holding channels said section having a sleeve aperture formed therethrough; a cap sleeve formed on the outer surface of said outer hub section, said cap sleeve having a cap nut thereon; an inner hub section covering said inner series of spoke channels and their holding channels; a sleeve formed on said inner hub section said sleeve being inserted in the sleeve apertures of said hub and of said outer section; and securing means whereby said hub sections and said hub are detachably secured together.

4. In a spring wheel, provided with a rim and a hub therefor; a spring spoke; an outer flange on the outer end of said spoke; securing means whereby the inner end of said spoke is secured in said hub; another similarly formed and secured spoke having its outer and inner ends respectively abutted against said spoke; a clip body fitted to and secured on the inner surface of said rim said body having leaf engaging means formed in its upper surface; leaf springs reinforcing the outer ends of said spokes; leaf securing means formed on said leaf springs the same being in engagement with said leaf engaging means; a hook formed on said clip body said hook being projected over an end portion of said body; a clip yoke having a channel formed in a portion of its inner surface for receiving therein the flanged outer ends of said spokes; and yoke securing means whereby said yoke is secured on said clip body with the channeled end of said yoke engaged by said hook.

5. In a spring wheel, a hub having a spoke channel formed in the end face thereof, the ends of said channel opening through the annular surface of said hub, said end face also having a holding channel formed therein the inner end of which opens into the central portion of said spoke channel; a plurality of leaf springs the inner end portions of which are inserted in an end portion of said spoke channel the outer ends extending therefrom through said spoke channel opening; leaf flanges formed on the inner ends of said leaf springs one of said leaf flanges being engaged by one side of said holding channel while the

remainder of said leaf flanges are overlapped behind the inner end of the first mentioned leaf spring; a spring spoke having its inner end portion inserted in said channel portion; said spoke extending therefrom through said channel opening; a spoke flange formed on said inner spoke end, said spoke flange being overlapped behind the inner end of one of said leaf springs; a similarly arranged and formed spoke and plurality of leaf springs reversely placed in the remaining end portion of said spoke channel with the inner ends of said spokes abutted against each other; securing means whereby all of said spokes and leaf springs are secured in place; a rim for said wheel; and rim securing means whereby the outer ends of said two spokes are secured to said rim.

1,114,162. STEAM-TRAP. JOHN H. MANNING, New York, N. Y., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 10, 1911. Serial No. 613,599. (Cl. 137—101.)



1. A steam trap comprising in combination a frame, a hollow trunnion mounted on the frame, a tilting tank supported on the trunnion, a liquid return pipe and a liquid discharge pipe connected to one side of the trunnion, a live steam pipe and a cold water supply pipe connected to the other side of the trunnion, a check valve in the steam pipe, a valve in the cold water supply pipe, and operative connections for said valves whereby the tilting of the tank in one direction opens the steam valve and closes the cold water valve and in the other direction closes the steam valve and opens the cold water valve, the said trunnion opening into the tank from the liquid inlet and discharge side and having a hollow projection extending into the tank forming a passage for alternately conveying steam and cold water into the tank from the other side as the tank tilts.

2. A steam trap comprising in combination a frame, a hollow trunnion mounted on the frame, a tilting tank supported on the trunnion, a liquid return pipe and a liquid discharge pipe connected to one side of the trunnion, a live steam pipe and a cold water supply pipe connected to the other side of the trunnion, a check valve in the steam pipe, a valve in the cold water supply pipe, operative connections for said valves whereby the tilting of the tank in one direction opens the steam valve and closes the cold water valve and in the other direction closes the steam valve and opens the cold water valve, the said trunnion opening into the tank from the liquid inlet and discharge side and having a hollow projection extending into the tank forming a passage for alternately conveying steam and cold water into the tank from the other side as the tank tilts, a check valve in the liquid return pipe closing when the pressure in the tank becomes greater than the pressure in said pipe, and a check valve in the liquid discharge pipe closing when the cold water condenses the steam in the tank and creates a vacuum therein.

3. a steam trap comprising in combination a frame, a hollow trunnion mounted on the frame, a tilting tank supported on the trunnion, a liquid return pipe and a liquid discharge pipe connected to one side of the trunnion, a live steam pipe, and a cold water supply pipe connected to the other side of the trunnion, a check valve in the steam pipe, a valve in the cold water supply pipe, operative connections for said valves whereby the tilting of the tank in one direction opens the steam valve and closes the cold water valve and in the other direction closes the steam valve and opens the cold water valve, the said trunnion opening into the tank from the liquid inlet and discharge side and having a hollow projection extending into the tank forming a passage for alternately conveying steam and cold water into the tank from the other side as the tank tilts, a check valve in the liquid return pipe closing when the pressure in the tank becomes greater than the pressure in said pipe, a check valve in the liquid discharge pipe closing when the cold water condenses the steam in the tank and creates a vacuum therein, and a check valve in the cold water supply pipe closing when the pressure in the tank rises above that in said pipe.

4. A steam trap comprising in combination a frame, a trunnion mounted on the frame, a tilting tank supported on the trunnion, the said trunnion opening into the tank, a steam pipe and a cold water supply pipe connected to the trunnion, a liquid return pipe and a liquid discharge pipe, an outlet from the tank forming a passage for conveying water of condensation from the return pipe into the tank and from the tank to the liquid discharge pipe, a valve in the steam pipe, a valve in the cold water supply pipe, and operative connections for said valves whereby when the tank tilts in one direction the steam valve is opened and the water valve closed and when the tank tilts in the other direction the steam valve is closed and the cold water valve opened.

5. A steam trap comprising in combination a frame, a trunnion mounted on the frame, a tilting tank supported on the trunnion, the said trunnion opening into the tank, a steam pipe and a cold water supply pipe connected to the trunnion, a liquid return pipe communicating with the tank, a liquid discharge pipe communicating with the tank, a valve in the steam pipe, a valve in the cold water supply pipe, and operative connections for said valves whereby when the tank tilts in one direction the steam valve is opened and the water valve closed and when the tank tilts in the other direction the steam valve is closed and the cold water valve opened.

1,114,163. FLOOR-POLISHER. ELMER G. MANSFIELD, Buffalo, N. Y., assignor to Buffalo Specialty Company, Buffalo, N. Y., a Corporation of New York. Filed Mar. 26, 1913. Serial No. 756,842. (Cl. 15—13.)

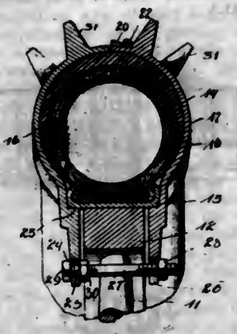
1. A polisher, comprising a head, a handle pivoted to said head to swing lengthwise thereof, and a covering of flexible material inclosing said head and consisting of a sack having its neck arranged at the rear end of the head, the handle extending through said neck, whereby the handle by its pivotal movement stretches the neck and prevents displacement of the sack on the head.

2. A polisher comprising a head having a suitable covering and a longitudinal slot extending to its rear end, a swinging handle arranged in said slot, and a pivot-pin passing transversely through said head and the portion of the handle arranged in said slot.

3. A polisher comprising a flat-sided head having a longitudinal slot extending to its rear edge, a handle reversibly pivoted in said slot, and a sack-like covering of flexible material inclosing said head and having a neck which receives said handle.

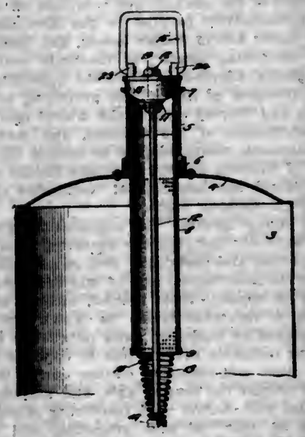
1,114,164. DETACHABLE EMERGENCY TRACTION-SHOE FOR AUTOMOBILES. ROBERT C. MCCREERY, Erick, Okla. Filed Nov. 15, 1913. Serial No. 801,230. (Cl. 152—14.)

1. A tractor shoe for vehicle wheels including hingedly connected body members adapted to encircle a tire and having ends adapted to extend inwardly beyond the rim of a wheel, one of said ends being apertured and the other slotted, a bolt passed through the apertured end and free to swing therein, a nut loosely threaded on the bolt to prevent disengagement of the bolt through the aperture, and a clamping nut threaded on the bolt to engage the outer face of the slotted end of the other body member whereby the free ends of the body members may be drawn toward each other.



2. A tractor shoe for vehicle wheels including a pair of hingedly connected metallic body members shaped to conform to the peripheral contour of a tire, the free ends of said body members being adapted to extend inwardly beyond the felly of the wheel and being slotted, the slot in the end of one of said body members opening through such end, while the slot in the end of the other body member is a closed slot having its upper and lower walls similarly inclined downwardly and inwardly, a bolt passed through said latter slot and free to swing therein because of such inclination of its walls, said bolt being adapted to swing at its free end to extend in the other slot, and a clamping nut on the bolt.

1,114,165. CAN-CLOSURE. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed Sept. 6, 1913. Serial No. 788,420. (Cl. 220—121.)



1. The combination of a can provided with a bushing secured in an opening in the can top and having a valve seat at its upper projecting end, a flame-proof tube projecting down from said bushing a considerable distance into the can, a cap closing the lower end of the tube and provided with a central opening, a valve rod in the tube projecting down through said cap opening, a coil spring on the rod below the cap fast to the lower end of the rod and having its upper end engaging the lower face of the cap to draw the rod downward, a globular valve hinge on the upper end portion of said rod and retracted to seat on the said valve seat by said spring and normally retained seated thereby, and a bail hinged to the top of the valve with its axis parallel with the axis of the valve.

2. The combination of a can provided with a bushing secured in an opening in the can top and having a valve seat at its upper projecting end, a flame-proof tube projecting down from said bushing a considerable distance into the can, a cap closing the lower end of the tube and provided with a central opening, a valve rod in the tube projecting down through said cap opening, a coil spring on the rod below the cap fast to the lower end of the rod and having its upper end engaging the lower face of the cap to draw the rod downward, a head hinged to the upper end of the rod and having a threaded stem projecting upward, a globular valve having a bore through which the threaded stem projects, a cap engaging the top of the globular valve and having an opening through which said threaded stem projects, a nut on the threaded stem confining the valve between the second-named cap and head, and a bail hinged to the top face of the valve cap.

3. The combination of a can provided with a bushing secured in an opening in the can top and having a valve seat at its upper projecting end, a flame-proof tube projecting down from said bushing into the can, a closure for the lower end of the tube, a valve rod in the tube, a spring connecting the rod with the lower end of the tube and arranged to draw the rod downward, a head hinged to the upper end of the rod and having a threaded stem projecting upward, a globular valve having a bore through which the threaded stem projects, a cap engaging the top of the globular valve and having an opening through which said threaded stem projects, a nut on the threaded stem confining the valve between the said cap and head, and a bail hinged to the top face of the valve cap.

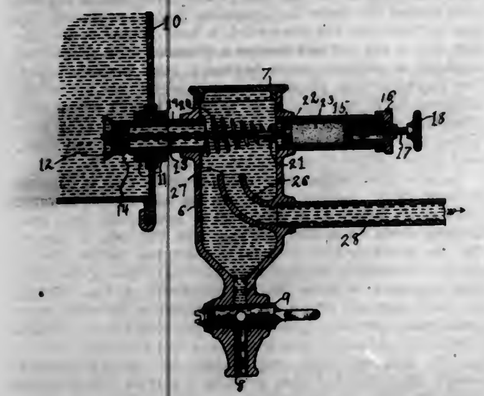
4. The combination of a can provided with a bushing secured in an opening in the can top and having a valve seat at its upper projecting end, a flame-proof tube projecting down from said bushing a considerable distance into the can, a cap closing the lower end of the tube and provided with a central opening, a valve rod in the tube projecting down through sid cap opening, a coil spring on the rod below the cap fast to said cap and having its upper end engaging the lower face of the cap to draw the rod downward, a head hinged to the upper end of the valve rod and having a threaded stem projecting upward, a globular valve having a bore through which the threaded stem projects, a cap engaging the top of the globular valve and having an opening through which said threaded stem projects, a nut on the threaded stem confining the valve between the second named cap and head, and a bail hinged to the top face of the valve cap with its axis parallel with the axis of the valve.

1,114,166. FUSIBLE TANK-CLOSURE AND STRAINER. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed Apr. 25, 1914. Serial No. 834,434. (Cl. 220—121.)

1. The combination of a casing, an inlet at one side of the casing, a valve arranged to close the inlet, a cylinder projecting from the casing opposite the said inlet, a plug of a non-metallic material of comparatively low melting point that is slidable in the cylinder, a plunger in the cylinder at the outer portion and provided with controlling means projecting from the cylinder at its outer end and arranged to advance the plug toward the inlet valve, a stem on said valve provided with a head, and a spring on said stem arranged to move the valve to closed position and to press the head against said plug, whereby when the plug and plunger are positioned to hold the valve in open position, the melting of the plug will permit the spring to advance the head and cause the valve to close the inlet.

2. The combination of a casing, an inlet at one side of the casing, a valve arranged to close the inlet, a cylinder projecting from the casing opposite the said inlet, a plug of non-metallic material of comparatively low melting

point that is slidable in the cylinder, a perforated plunger in the cylinder at the outer portion and provided with controlling means projecting from the cylinder at its outer end and arranged to advance the plug toward the inlet valve, a stem on said valve provided with a head, and a spring on said stem arranged to move the valve to closed position and to press the head against said plug, whereby when the plug and plunger are positioned to hold the valve in open position, the melting of the plug will permit the spring to advance the head and force the material of the plug through the perforated plunger, and also cause the valve to close the inlet.



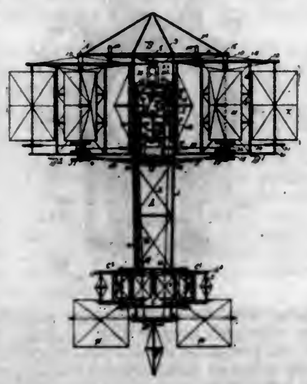
3. The combination of a casing, an inlet at one side of the casing, a valve arranged to close the inlet, a cylinder projecting from the casing opposite the said inlet, a plug of a material of comparatively low melting point that is slidable in the cylinder, a plunger in the cylinder at the outer portion and provided with controlling means projecting from the cylinder at its outer end and arranged to advance the plug toward the inlet valve, a stem on said valve provided with a head, and a spring on said stem arranged to move the valve to closed position and to press the head against said plug, whereby when the plug and plunger are positioned to hold the valve in open position, the melting of the plug will permit the spring to advance the head and cause the valve to close the inlet.

4. The combination of a casing, an inlet at one side of the casing, a valve arranged to close the inlet, a cylinder projecting from the casing opposite the inlet, a shell slidable in said cylinder, a plunger projecting into the outer closed end of the cylinder to engage said shell, a stem on said valve projecting into said shell and carrying a head slidable in the shell, said shell being filled with a non-metallic material of comparatively low melting point, the end of the shell engaged by said plunger being perforated, and a spring in the casing engaging said stem to advance it and the shell to engage said plunger, whereby when the plunger is advanced to shift the shell and stem to hold the valve in open position with said spring under tension, the melting of the material in the shell will result in the spring advancing the head to force the said material through the perforated end of the shell and close the inlet valve.

5. The combination of a casing, an inlet at one side of the casing, a valve arranged to close the inlet, a cylinder projecting from the casing opposite the inlet, a shell slidable in said cylinder, a cap closing the outer end of the cylinder and having a threaded bore, a threaded plunger operating in said bore and engaging one end of said shell, said shell end being apertured, a stem on said valve projecting into said shell and carrying a head slidable in the shell, said shell being filled with a non-metallic material of comparatively low melting point, and a spring in the casing engaging said stem to advance it and the shell to engage said plunger, whereby when the plunger is advanced to shift the shell and stem to hold the valve in open position with said spring under tension, the melting of the material in the shell will result in the spring advancing the head to force the said material through the apertured end of the shell and close the inlet valve.

[Claims 6 to 8 not printed in the Gazette.]

1,114,167. FLYING-MACHINE. JOHN E. MCWORTER, St. Louis, Mo. Filed May 9, 1913. Serial No. 766,632. (Cl. 244—11.)



1. In a flying machine the combination with combined propelling and sustaining devices arranged above the center of weight of the machine and rotatable on axles which extend approximately parallel to the direction of flight, and rotatable motor driven rudder means; of automatic means adapted to maintain, approximately vertical, the direction of lift of said propelling and sustaining means and thereby maintain the lateral equilibrium of the machine, and automatic means adapted to control the speed and direction of rotation of said rudder means and thereby maintain the longitudinal inclination or longitudinal equilibrium of the machine.

2. In a flying machine the combination with combined propelling and sustaining devices arranged above the center of weight of the machine and rotatable on axles which extend approximately parallel to the direction of flight, rotatable motor driven rudder means, and combined steering and controlling means; of manually controlled, automatic means adapted to maintain approximately vertical the direction of lift of said propelling and sustaining means and thereby control the lateral movement and lateral equilibrium of the machine, and manually controlled, automatic means adapted to control the speed and direction of rotation of said rotatable rudder means and thereby control the longitudinal inclination of the machine, and the speed of flight.

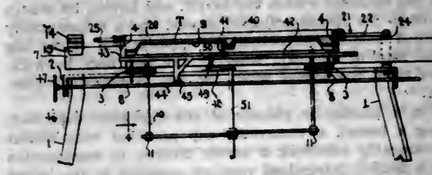
3. In a flying machine the combination with a body or frame-work for carrying the operator, a pair of combined propelling and sustaining devices rotatable on axles parallel to the longitudinal axis of said body and arranged above and on opposite sides thereof, each of said devices comprising a rotatable frame in which are pivotally mounted planes or blades on axles parallel to the central axle, means to rotate said devices in opposite directions, means to cause said blades to feather during their rotary movement around the central axle, and automatic means to so adjust and control said feathering means that the "direction of lift" of said propelling and sustaining means will be maintained approximately vertical however far the machine may tilt over in a lateral direction.

4. In a flying-machine the combination with a body or frame-work for carrying the operator, a pair of combined propelling and sustaining devices rotatable on axles parallel to the longitudinal axis of said body part, combined automatic and manual means to control the lateral movement and lateral equilibrium of the machine, a pair of rotatable rudder devices arranged above the rear end of the machine, means to rotate said rudder devices in opposite directions with respect to each other, and automatic means to vary the speed and direction of rotation of said rudder devices so that they will sufficiently lift or depress the rear end of the machine to maintain its longitudinal equilibrium.

5. In a flying-machine the combination with a body or frame-work for carrying the operator, a pair of combined propelling and sustaining devices rotatable on axles parallel to the longitudinal axis of said body part, each of said devices comprising a center portion and pivotally mounted planes or blades arranged outside of said center portion and extending longitudinally thereof, means for causing the blades to feather during the rotative movement of said device so that each device will exert downward pressure on the air; automatic, motor driven means to control said feathering means so that the "direction of lift" of said devices will be maintained in an approximately vertical direction; a pair of rotatable rudder means arranged above the rear end of said body, automatic, motor driven means to control the direction and speed of rotation of said rudder devices and thereby control the longitudinal inclination or the longitudinal equilibrium of the machine, and means to rotate the propelling and sustaining devices in opposite directions with respect to each other and means to rotate the rudder devices in opposite directions with respect to each other.

[Claims 6 to 13 not printed in the Gazette.]

1,114,168. MOLDING-MACHINE FOR ROOFING-TILES. WILLIAM MELDE, Marengo, Ill. Filed July 17, 1913. Serial No. 779,647. (Cl. 25—42.)



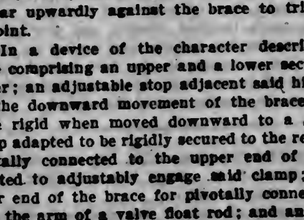
1. In a tile forming machine, the combination with a table, a frame carried thereby and a pallet movably mounted on the frame and of a design to form a tile having ribs on its under face; of means for lifting the pallet above the frame, means for piercing one of the ribs on the tile formed and additional means coöperating with the pallet lifting means and the last mentioned means for disposing the latter to its inoperative position upon the disposition of the former to its operative position.

2. In a tile forming machine, the combination with a table, a frame carried thereby and a pallet movably mounted on said frame and of a design to form a rib on the lower face of the tile; of a foot operating means for lifting the pallet above the frame, a movable needle for piercing the rib on the tile formed, manually operable means for disposing the needle to its operative position, and means coöperating with the foot actuated means and manually operated means whereby to actuate the latter upon the actuation of the former to dispose the needle to its inoperative position prior to the lifting of the pallet above the frame.

3. In a tile making machine, the combination with a table, a frame carried thereby, and a pallet removably mounted on the frame and of a configuration to form a tile having a rib along its lower side; of means for lifting the pallet off the frame, a treadle mechanism for actuating said means, a bar movably mounted within the frame, a needle carried thereby for piercing one of the ribs in the tile, a plate across the front of the table, connections between said plate and bar for actuating the latter to project the needle, and connections between said treadle mechanism and plate for retracting the needle in advance of the operation of the lifting means.

4. In a molding machine of the class described, the combination with a table having an opening in its top, rails extending longitudinally along the sides thereof and projecting beyond one end of the same, a frame within the opening of said top and a pallet and shaper arranged in connection therewith; of a pair of bearings mounted on the table top at one end thereof and just beyond said rails, a crank shaft having the ends thereof pivotally mounted in said bearings to extend transversely of the rails, a cutter carried by the crank shaft and a supply member movably mounted on said rails and adapted for movement under said crank shaft when the cutter member is raised to permit said supply member to be disposed over said frame.

1,114,169. ATTACHMENT FOR CLOSET-CISTERNS. TELESPHORE E. MENARD, Bozeman, Mont. Filed Apr. 18, 1914. Serial No. 832,766. (Cl. 137—104.)



1. An attachment for floats controlling inlet valves at the bottoms or reservoirs, comprising a brace adapted to be pivoted at its upper end to the reservoir at a point above the inlet valve, and at its lower end to the float arm to brace said arm against upward movement, said brace being provided with a joint intermediate its ends, and adapted to be moved upwardly at said intermediate joint when lateral upward pressure is applied to its underside, to permit the entire brace to swing upwardly, said brace being provided with a stop adjacent said intermediate joint to limit the dowaward movement of the brace; and an auxiliary float on the under side of said brace adapted to be engaged and forced upwardly by the water rising in the reservoir, to cause said auxiliary float to trip the intermediate joint of said brace to release the main float.

2. In a device of the character described, a jointed brace comprising an upper and a lower section, the upper end of the lower section being hinged on the under side of the upper section at a point between its ends, said brace having means at its lower end for pivotal connection with a valve float rod; and an auxiliary float at the under side of the brace and connected thereto.

3. In a device of the character described, a jointed brace comprising an upper and a lower section hinged together; a stop adjacent said hinge for arresting the downward movement of the brace and for rendering said brace rigid when moved downward to a given point; means at the upper end of the brace for pivotally and adjustably attaching the same to the reservoir and means at its lower end for pivotally and adjustably connecting said end to the arm of the valve float; and an auxiliary float at the under side of said brace adjustable up and down relatively thereto, and adapted when reached by the water to bear upwardly against the brace to trip the same at its joint.

4. In a device of the character described, a jointed brace comprising an upper and a lower section hinged together; an adjustable stop adjacent said hinge for arresting the downward movement of the brace to render the brace rigid when moved downward to a given point; a clamp adapted to be rigidly secured to the reservoir; means pivotally connected to the upper end of the brace and adapted to adjustably engage said clamp; means at the lower end of the brace for pivotally connecting the same with the arm of a valve float rod; and an auxiliary float at the under side of the brace, adapted when reached by the water, to bear upwardly against the brace to trip it at its joint.

1,114,170. MONKEY-WRENCH. JOSEPH MANAIK, Lyra, Tex. Filed Oct. 18, 1912. Serial No. 726,585. (Cl. 81—106.)

1. A wrench of the character described including a shank having a fixed jaw on one end, a member slidably mounted upon the shank, means for adjusting said member along the shank, a jaw member pivoted to the first named member and extending parallel to and behind the shank and having a jaw coacting with the first named jaw, a spring mounted upon the jaw member and resiliently resisting a pivotal movement of the pivoted jaw member outward and away from the shank, and means for limiting the pivotal movement of said jaw member, said means being movable into or out of operative position.

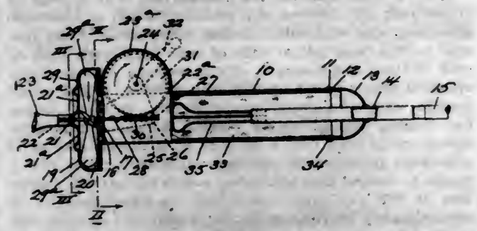
2. A wrench of the character described, including a shank having a fixed jaw on one end, a member slidably mounted upon the shank, means for adjusting said member upon the shank, a jaw member pivoted to the first named member and having a jaw co-acting to the first named jaw, a spring mounted upon the jaw member and extending into a recess on the first named member and a latch movable into and out of engagement with the spring to limit or permit a pivotal movement of the jaw member.

3. A wrench of the character described including a shank having a fixed jaw on one end, a member slidably mounted upon the shank, means for adjusting said member upon the shank, a jaw member pivoted to the sliding member and extending parallel to the shaft and having a jaw coacting with the first named jaw, a spring mounted upon the jaw member and extending parallel thereto, and a latch pivotally mounted upon the slide and movable into position to engage said spring and limit the pivotal movement of the jaw outward from the shank.

4. A monkey wrench of the character described including a shank formed with a head at one end having a serrated face, the inner face of the shank having ratchet teeth, a member slidably engaged with the shank, a pawl pivotally mounted in said member, a spring for forcing the pawl into engagement with the latch teeth, a jaw member pivotally mounted upon said first named member and extending over the first named head to form a movable head, the inner face of said head and jaw member having ratchet teeth inclined inward and downward, a spring attached to the jaw member and having an angular end projecting into a recess in the first named member and a latch pivoted in the said recess and adapted to be turned to engage the angular end of the spring.

1,114,171. PNEUMATIC CLEANER. HUBERT MEREDITH-JONES, New York, N. Y. Filed Nov. 15, 1912. Serial No. 731,547. (Cl. 83—47.)

1. In a pneumatic cleaner of the character described, having a barrel, a removable cap, a tube therethrough adapted to carry a nozzle and means for suctionally drawing the dust into the barrel, the combination of an interticed receiver disposed within the barrel and having one of its ends detachably mounted to the barrel adjacent to the cap, a bracket connected to the tube of the cap and fastened to the opposite end of the receiver so that said receiver may be withdrawn from the barrel when the cap is removed therefrom.

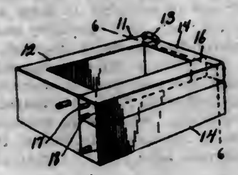


2. In a pneumatic cleaner of the character described, having a barrel, a removable cap provided with a tube adapted to carry a nozzle, means for suctionally drawing dust into the barrel, and spring actuated means within the barrel adjacent to said cap, the combination of a cloth bag disposed within the barrel, and having its mouth secured to the spring actuated means, and means connecting the opposite end of the bag to the tube of the cap, whereby the bag may be withdrawn from the barrel when the cap is removed therefrom.

3. In a pneumatic cleaner of the character described, having a barrel, a removable cap provided with a tube adapted to carry a nozzle, means for suctionally drawing dust into the barrel, and spring actuated means within the barrel adjacent to said cap, the combination of a cloth bag disposed within the barrel, and having its mouth secured to the spring actuated means, and a substantially U-shaped member connecting the opposite end of the bag to the tube of the cap, whereby the bag may be withdrawn from the barrel when the cap is removed therefrom.

4. In a pneumatic cleaner of the character described, having a barrel, a removable cap provided with means for removably retaining a nozzle thereto, in combination with a flexible interticed receiver mounted in the barrel so as to be adapted to be withdrawn therefrom, spring actuated means within the barrel, and removably holding one end of the receiver therein, and a plurality of substantially U-shaped members connected to the cap and to the other end of the receiver, whereby the receiver may be withdrawn from the barrel when the cap is removed therefrom.

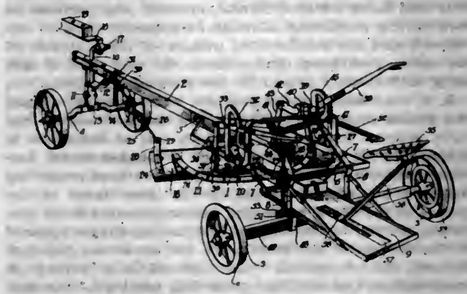
1,114,172. HEATING APPARATUS. CALVIN C. MILLER, Summithill, Pa. Filed Feb. 18, 1913. Serial No. 749,176. (Cl. 237—19.)



1. In a heating apparatus for attachment to a range, a casing consisting of hollow sections adapted to be fitted in the fire-box of the range and to communicate with radiators, one section being of angular formation and forming the back and one end of the casing, another section forming the other end and lower half of the front portion of the casing and communicating with the first-named section, and a third section forming the upper half of the front part of the casing and being adapted for connection with a water tank.

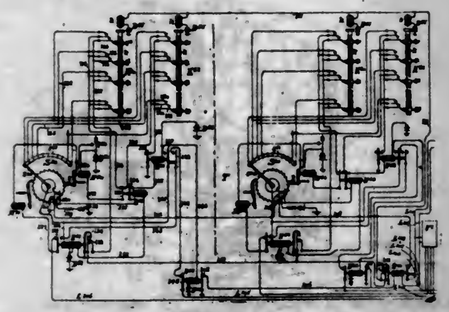
2. In a water heating attachment for a cooking range, two separable L-shaped water compartments and a third water compartment fitted together to form a quadrangular box of which the hollow walls inclose an open fuel receptacle, said L-shaped compartments being in communication with each other by means of pipes, and said third compartment being in non-communicating relation with the L-shaped compartments, and a tank with which said third compartment is in communication.

1,114,173. ROAD-GRADING MACHINE. JOHN G. MILLER, Chicago, Ill., assignor to The Baker Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 15, 1911. Serial No. 666,007. (Cl. 37—49.)



In a road grading machine, the combination of a supporting structure, a scraper suspended from said structure and shiftable in a horizontal plane, a segmental member carried by said scraper, means on said structure adapted to coact with said segmental member for adjusting the angular position of said scraper with respect to the direction of travel, levers located at opposite sides of said structure, and links attached to said lever and adapted to be separately connected to said segmental member at points directly below the corresponding levers whereby said scraper is adapted to be tilted in a vertical plane by the independent operation of one or the other of said levers.

1,114,174. CONTROLLING APPARATUS FOR TELEPHONE SWITCHING SYSTEMS. EDWARD C. MOLINA, East Orange, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Oct. 2, 1907. Serial No. 395,642. (Cl. 179—27.)



1. In a telephone exchange system, line selecting apparatus having a plurality of selective movements, primary controlling apparatus therefor having sections of mechanism, with a section corresponding to a plurality of different selective movements, and secondary controlling apparatus provided with a section of mechanism for each selective movement.

2. The combination with a central station and telephone lines extending thereto, of operators' cord circuits and mechanical switching apparatus for joining the lines, a plurality of controlling apparatus for the mechanical switching apparatus, means for uniting a cord circuit with an idle controlling apparatus, said means being operable when the cord circuit is employed to originate a connection, means adapted to be set by the operator to govern the action of any one of the controlling apparatus, and means for associating the governing means with a controlling apparatus upon the appropriation of said controlling apparatus by a cord circuit, substantially as and for the purpose described.

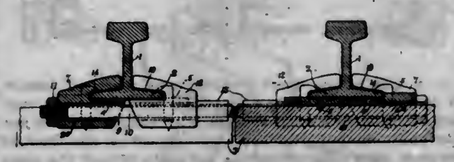
3. A controlling apparatus for electrical line selecting apparatus comprising manually operable registering devices, secondary mechanism temporarily associated with the manually operable devices for registering the conditions produced thereat, and transmitting means governed by the secondary mechanism and operable while the manually operable devices are dissociated from said secondary mechanism.

4. The combination with a starting switch, of key mechanism for determining the movement of the starting switch, a register switch provided with a plurality of motor mechanisms any one of which may be connected with the starting switch, and a sending switch governed by the register switch.

5. In a telephone exchange system, the combination with switching means comprising operators' connecting circuits and mechanical switching apparatus having a plurality of selective movements, of a primary controlling apparatus provided with a set of keys corresponding to each selective movement and also having a less number of transmitting mechanisms than there are sets of keys, and a secondary controlling apparatus provided with register mechanisms governed by the primary transmitting mechanisms and with a secondary transmitting mechanism for each selective movement of the switching apparatus.

[Claims 6 to 27 not printed in the Gazette.]

1,114,175. RAIL-BRACE. JOHN G. MUELLER, Dayton, Ohio. Filed Apr. 23, 1914. Serial No. 834,007. (Cl. 238—5.)



1. In a device of the character described, the combination, with a tie plate, and a clamping member secured to one of the lateral edges of said tie plate and arranged to engage one edge of a rail, of a second clamping member arranged adjacent to said edge of said tie plate to engage the other edge of the rail and movable relatively to said tie plate, and means to hold said clamping members in clamping engagement with said rail.

2. In a device of the character described, the combination, with a tie plate, and clamping members secured to the respective lateral edges of said tie plate near one end thereof and arranged to engage the edge of the rail, of other clamping members arranged adjacent to said edges of said tie plate to engage the other edge of said rail and movable relatively to said tie plate, and means to hold said clamping members in clamping engagement with the rail.

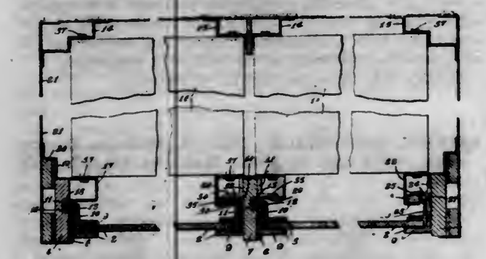
3. In a device of the character described, the combination, with a tie plate adapted to be interposed between a rail and a tie, a clamping member rigidly secured to said tie plate, projecting beyond the lateral edge thereof and adapted to engage the adjacent flange of said rail, said clamping member having an aperture arranged beneath said rail along the side of said tie, and a rod extending through said aperture, of a second clamping member mounted on said rod, and means to hold one of said clamping members against movement relatively to said rod and to exert pressure on the other clamping member to firmly clamp the rail between two members and secure the rail to said tie-plate.

4. A rail brace comprising two tie plates adapted to be secured to the opposite ends of the same tie and to support the two rails of a track, clamping members rigidly secured to the lateral edges of said tie plates and arranged to engage the outer flanges of the respective rails, other clamping members arranged adjacent to the respective tie plates to engage the inner edges of said rail, a connecting rod, and means carried by said rod to exert clamping pressure upon the several clamping members.

5. In a device of the character described, the combination, with two tie plates interposed between the two rails of a track and a tie, each tie plate having a clamping member rigidly secured thereto at one lateral edge thereof and adapted to engage the outer flanges of the respective rails, each of said clamping members having apertures therein beneath said rail and alongside of the tie on which the plate rests, and a rod adapted to extend through the apertures of both clamping members, of a second clamping member mounted on said rod adjacent to the edge of each tie plate to engage the inner flanges of the respective rails, a spacing member mounted on said rod and engaging the inner ends of said second clamping members, and means carried by said rod to exert pressure on the outer end of the first-mentioned clamping member.

[Claims 6 to 14 not printed in the Gazette.]

1,114,176. CASE. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to Oliver M. Edwards, Syracuse, N. Y. Filed Feb. 18, 1911. Serial No. 609,490. (Cl. 211—25.)



1. A case having doors provided with marginal frames, an intermediate upright support in the form of a comparatively narrow strip substantially oblong in cross section and arranged with one edge exposed on the front of the case, said strip projecting inwardly beyond the inner plane of the marginal frames of the doors, and a hollow shelf supporting, sheet metal post secured to the rearwardly projecting portion of the strip on the inner side of the doors and extending laterally on opposite sides thereof in the rear of the upright portions of the marginal door frames, substantially as and for the purpose described.

2. A case having doors provided with marginal frames, an intermediate upright support in the form of a comparatively narrow strip substantially oblong in cross section and arranged with one edge exposed on the front face of the case, said strip projecting inwardly beyond the inner plane of the marginal frames of the doors, a hollow shelf supporting, sheet metal post secured to the rearwardly projecting portion of the support on the inner side of the doors and extending laterally on opposite sides of the strip in the rear of the upright portions of the marginal door frames, and angle irons arranged within the post and having flanges thereof lying against opposite sides of the rearwardly projecting portion of the strip, and other flanges thereof extending laterally and opposed to the rear edges of the contiguous portions of the marginal door frames, substantially as and for the purpose specified.

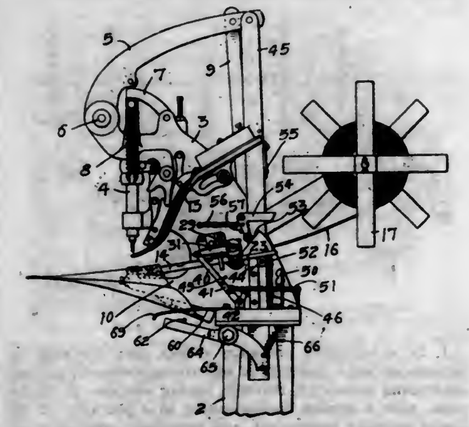
3. A case having doors provided with marginal frames, an intermediate upright support in the form of a comparatively narrow strip substantially oblong in cross section and arranged with one edge exposed on the front face of the case, said strip projecting inwardly beyond the inner planes of the marginal frames of the doors, and a hollow shelf supporting post substantially oblong in cross section and inclosing the rearwardly projecting portion of the strip and being secured thereto, opposite end portions of such oblong projecting laterally on opposite sides of the support, substantially as and for the purpose set forth.

4. A case having doors provided with marginal frames, an intermediate upright support in the form of a comparatively narrow strip substantially oblong in cross section and arranged with one edge exposed on the front face of the case, said strip projecting inwardly beyond the inner planes of the marginal frames of the doors, and a hollow shelf supporting post substantially oblong in cross section and inclosing the rearwardly projecting portion of the strip and being secured thereto, opposite end portions of such oblong projecting laterally on opposite sides of the support, and the intermediate portion of the rear side of the oblong post being contiguous to the rear edge of said strip, substantially as and for the purpose described.

5. A case having doors provided with marginal frames and panels supported by the frames, an intermediate upright support to one side of which one of the doors is hinged and the other side of which is engaged by the free edge of the other door when closed, said support projecting inwardly beyond the planes of the inner faces of the frames of the doors, angle iron members secured to the projecting portion of the support and having flanges opposed to the frames of the doors when the doors are closed, a hollow, shelf-supporting post, substantially oblong in cross-section, inclosing the projecting portion of the support, opposite end portions of such oblong projecting laterally on opposite sides of the support and in rear of the upright portions of said marginal frames and having flanges extending in front of said flanges of the angle iron members, one of said flanges of the post terminating short of the support, a strip interposed between such short flange and the opposing angle iron flange, the strip being spaced apart from the opposing face of the support forming a channel for receiving a portion of one of the door frames, and a yielding filler in the channel for engaging the frame of the door when the door is closed, substantially as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,114,177. DISK-FEEDING MACHINE. OSCAR J. OLM, Minneapolis, Minn., assignor of one-half to Gustav Monasch, Minneapolis, Minn. Filed July 6, 1912. Serial No. 708,073. (Cl. 218—15.)



1. The combination, with a horn having an anvil and a pin thereon over which the material to be reinforced is placed, of means for feeding a reinforcing tape having a perforated end to said pin, means for lowering the perforated end of the tape to engage the pin and allow it to enter a perforation, means for severing the tape in the rear of the perforation engaged by the pin, and means for inserting an eyelet through the material and the perforation in said reinforcing element.

2. The combination, with a horn having an anvil and pin thereon, of a tilting carrier, means for feeding a perforated tape through said carrier, means for tilting said carrier to lower the end of the tape to engage said pin and allow it to enter a perforation in said tape, means for severing the tape in the rear of the perforation engaged by the pin, and means for securing the severed section of the tape to material resting on said pin and anvil.

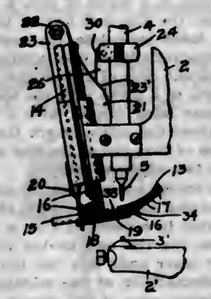
3. The combination, with a horn having an anvil and a pin thereon, of a pivoted carrier adapted to support a perforated tape, means for feeding said tape to said pin and anvil to engage said pin with a perforation therein, a stationary perforating pin, means for swinging said carrier to bring the tape therein into engagement with said perforating pin to perforate the tape, means for severing the tape in the rear of the perforation engaged by the pin, and means for securing the severed section to material to be reinforced.

4. The combination, with a horn having an anvil and a pin thereon, of a pivoted carrier having a severing knife at one end, means for feeding a perforated tape through said carrier to engage said pin with a perforation therein, means for perforating the tape at regular intervals, means for tilting said carrier to perforate the tape and sever it in the rear of the perforation engaged by the pin, and means for securing the severed section to the surface of material on said horn.

5. The combination, with a horn having an anvil and a pin thereon, of a carrier pivoted near one end and having a severing knife near said end, means for feeding a perforated tape through said carrier to engage said pin with a perforation therein, a punch arranged in the path of said carrier to punch the paper during the tilting movement of said carrier, said knife operating to sever the tape in the rear of the perforation engaged by the pin during said tilting movement, and a plunger coöperating with said pin to set an eyelet to secure the severed tape section to material on said horn.

[Claims 6 to 25 not printed in the Gazette.]

1,114,178. DISK-FEEDING DEVICE. OSCAR J. OLM, Minneapolis, Minn., assignor of one-half to Gustav Monasch, Minneapolis, Minn. Filed Feb. 5, 1912. Serial No. 675,674. Renewed Aug. 22, 1913. Serial No. 786,182. (Cl. 218—15.)



1. In a machine for fastening paper or other disks to suitable sheets, the combination, with a plunger and an eyelet feeding device for bringing an eyelet in alinement with the plunger, of an eyelet upsetting anvil in line therewith, a disk holder, a feed plate operating to project and support a disk in the path of said plunger, means actuated by the downward movement of said plunger to retract said feed plate and means actuated by the upward movement of said plunger for projecting a disk from said holder and supporting it beneath and in line with the plunger and anvil and the eyelet that is beneath the plunger, and means for reciprocating said plunger.

2. The combination, with a reciprocating plunger and means for feeding eyelets thereto, of a disk feeding device located near said plunger and including a disk receptacle, and means actuated by the up-stroke of said plunger for projecting a disk from said receptacle into the path of said plunger.

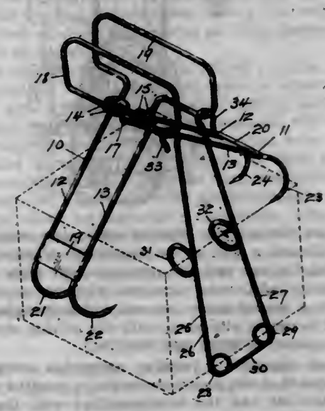
3. The combination, with a plunger and eyelet feeding means, of a disk receptacle, a feed plate having a depression therein adapted to receive a disk, said feed plate being normally projected to support a disk in the path of the plunger, and means connected with said feed plate and actuated by said plunger during the latter part of its down stroke to withdraw said feed plate when said disk has been engaged by said plunger, said means operating to project said feed plate on the upstroke of said plunger to feed a second disk into the path of said plunger and eyelet.

4. The combination, with a reciprocating plunger and means for feeding eyelets thereto, of a disk holder, a feed plate operating to project and support a disk in the path of said plunger, a pivoted cam plate connected with said feed plate, means carried by said plunger and adapted to engage said cam plate to retract said feed plate when said plunger on its down stroke has engaged the disk on said feed plate, and means connecting said cam plate with said plunger for advancing said feed plate and projecting another disk when said plunger has reached a predetermined point in its up stroke.

5. The combination, with a reciprocating plunger and means for operating the same and means for feeding eyelets into the path of the plunger, of a disk receptacle, a disk feeding device located near said plunger, a paper support beneath said plunger having an upwardly projecting pin, means carried by said plunger to retract the disk feeding device when the plunger is on its down stroke, and means connected with said plunger for projecting a disk when said plunger has reached a predetermined point in its upstroke.

[Claim 6 not printed in the Gazette.]

1,114,179. ICE-TONGS. RICHARD PATTISON, New York, N. Y. Filed Sept. 11, 1913. Serial No. 789,304. (Cl. 57—9.)

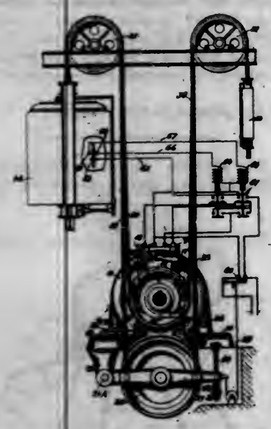


1. In a device of the character described, two companion jaws, each having two arms, the arms of each jaw being disposed on inclines in opposite directions, and the upper portions of all of said arms being hingedly movable upon a common pivot, two handles, one provided upon the upper ends of each pair of the arms above their pivots, and said handles being spaced apart, four spaced gripping members, one extending from the lower end of each of the arms, and all of said gripping members being disposed so that the free ends of each pair are in opposed relation to tightly engage an article when the handles are forced toward each other to guide the jaws in similar directions or to free the gripping members from engagement with the article when the handles are reversely directed to swing the jaws outwardly with relation to each other, and a substantially U-shaped supporting element detachably held to the handles, and suspended therefrom whereby the arti-

cle may be supported by one hand of a person while said handles are grasped by the other hand.

2. In a device of the character described, two companion jaws, each having two arms, the arms of each jaw being disposed on inclines in opposite directions, and the upper portions of all of said arms having registered eyes through which is passed a bolt for pivoting the arms thereon, two substantially rectangular handles, one provided upon the upper ends of each pair of the arms above their pivots and said handles being spaced apart, means connecting the lower parts of each pair of the arms, and four spaced prongs, one extending from the lower end of each of the arms, and all of said prongs being disposed so that the free ends of each pair are in opposed relation to tightly engage an article when the handles are forced toward each other to guide the jaws in similar directions or to free the prongs from engagement with the article when the handles are reversely directed to swing the jaws outwardly with relation to each other, and a substantially U-shaped supporting element detachably held to the handles, and suspended therefrom, and each arm having a ring provided thereon whereby the article may be supported by one hand of a person while said handles are grasped by the other hand.

1,114,180. ELEVATOR. CHARLES O. PEARSON, New York, N. Y. Filed Apr. 14, 1908. Serial No. 427,052. (Cl. 187—71.)



1. In an elevator, a hoisting apparatus comprising a driving sheave, a car, a counterweight, a hoisting rope connecting the car and the counterweight with the driving sheave, a safety rope connected with the car and counterweight, a second sheave around which the safety rope is arranged to run in alinement with the driving sheave, and a brake-member between said sheaves.

2. In an elevator, a hoisting apparatus comprising a driving sheave, a car, a counterweight, a hoisting rope connecting the car and the counterweight with the driving sheave, an idle safety-rope connected with the car and the counterweight, a second sheave around which the safety rope is arranged to run, a movable bearing for said sheave, and a brake-member between the driving sheave and the safety rope sheave; said second sheave and brake-member being so arranged that a tensional strain upon the safety rope may move the position of the safety rope sheave and brake-member to apply the brake-member to both of the sheaves.

3. In an elevator, a hoisting apparatus comprising a driving sheave, a stationary bearing therefor, a car, a counterweight, a hoisting rope connecting car and the counterweight with the driving sheave, an idle safety rope connected with the car and the counterweight and running with them, a second sheave around which the safety rope is arranged to run, a movable bearing for said second sheave, and a brake-member between the driving sheave and the second sheave, said second sheave and brake-member being so arranged that a tensional strain upon the safety rope may move the positions of the second sheave and the brake-member to apply the latter to both of the sheaves.

4. In an elevator, a hoisting apparatus comprising a driving sheave, a car, a counterweight, a hoisting rope connecting said car and counterweight with the driving sheave, and a safety rope arranged to suspend the car and counterweight and to brake the hoisting apparatus if the hoisting rope should fail.

5. In an elevator, a hoisting apparatus comprising a driving sheave, a brake therefor, a car, a counterweight, a hoisting rope connecting the car and counterweight with the driving sheave, and an idle safety rope arranged to suspend the car and counterweight and to apply said brake to the driving sheave if the hoisting rope should fail.

[Claims 6 to 20 not printed in the Gazette.]

1,114,181. BOTTLE-CAP. WALDO FRANK PERES, Key West, Fla. Filed Nov. 2, 1911. Serial No. 658,255. (Cl. 215—10.)

1. A bottle cap having a crown portion and a locking rim, and a tongue projecting laterally from the rim and having its under side in a plane substantially parallel to the plane of the crown portion, the said tongue being formed with a reinforcing rib extending throughout the entire length thereof and merging into the rim.

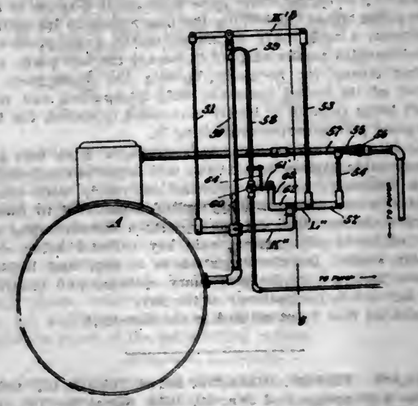
2. A bottle cap having a crown portion and a rim formed with an uninterrupted series of crimps, the formation of the crimps resulting in a series of ribs, a tongue projecting laterally from the rim and having its lateral edges merging at their inner ends into the lower edge of the rim at points substantially at the middles of the lower edges of the two adjacent ones of the crimps, the tongue being formed with a reinforcing rib extending longitudinally thereof and forming a continuation of the rim located between the said two adjacent crimps.

3. A bottle cap having a crown portion and a rim formed with an uninterrupted series of crimps, the formation of the crimps resulting in a series of ribs, a tongue projecting laterally from the rim and having its lateral edges merging at the inner ends into the lower edge of the rim at points substantially at the middles of the lower edges of two adjacent ones of the crimps, the under side of the tongue being in a plane with the lower edge of the rim and the tongue being formed with a reinforcing rib extending throughout the entire length thereof and forming a continuation of that one of the ribs which is located between the said two adjacent crimps.

4. A bottle cap having a crown portion and a rim formed with an uninterrupted series of crimps, the formation of the crimps resulting in a series of ribs, a tongue projecting laterally from the rim and having its lateral edges merging at their inner ends into the lower edge of the rim at points substantially at the middles of the lower edges of two adjacent ones of the crimps, the under side of the tongue being in a plane with the lower edge of the rim and the tongue being formed with a reinforcing rib extending throughout the entire length thereof and forming a continuation of that one of the ribs which is located between the said two adjacent crimps, the said rib upon the tongue decreasing in height and width from the inner end of the tongue to the outer end thereof.

1,114,182. BOILER ATTACHMENT. JOEL ELLIS PRIESTER, Harrisburg, Tex. Filed June 28, 1913. Serial No. 776,318. (Cl. 236—13.)

1. In a device of the character described, an upright expansion tube connected at its lower end with a boiler at a predetermined low-water level and having a closed upper end, a suitably supported lever adapted to be actuated by the expansion and contraction of the tube, a water supply pipe supported in proximity to the expansion tube and adapted to discharge thereon, and a valve on said water supply pipe adapted to be operated by the lever.



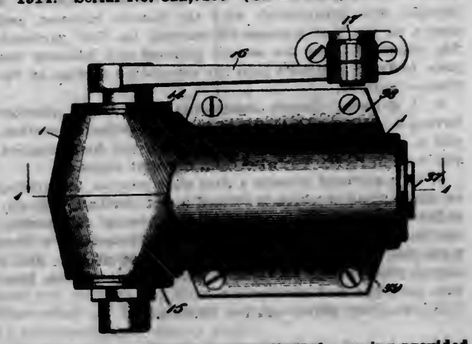
2. In a device of the character described, an upright expansion tube connected at its lower end with a boiler at a predetermined low-water level and having a closed upper end, a suitably supported lever adapted to be actuated by the expansion and contraction of the tube, a water supply pipe disposed in proximity to the expansion tube and adapted to discharge thereon, means operable by live steam for injecting water into the boiler, a pipe connecting said means with the steam space of the boiler, a valve on said steam pipe, a valve on the water pipe, and means connecting the arms of the lever with said valves to open and close the latter when the lever is actuated by the expansion and contraction of the expansion tube.

3. In a device of the class described, a boiler, an upright tubular member connected with said boiler at a predetermined low-water level and constituting an expansion tube, said tubular member being closed at its upper end, a water supply tube supported in proximity to the expansion tube and discharging thereon, a self-closing valve on the water supply tube, and means operable by the expansion of the expansion tube for opening the self-closing valve.

1,114,183. SUPPORTING-STAND FOR NEWSPAPERS, &c. STANISLAW PRZESPOLEWSKI, Carnegie, Pa. Filed May 22, 1914. Serial No. 840,207. (Cl. 45—60.)

In a newspaper supporting stand, a central block, supporting legs carried by the lower end of said block, said block having an elongated socket formed therein with alined apertures opening into the socket, an elongated bar received within the socket, a supporting bracket pivotally carried by the upper end of the bar, a shaft extending through the alined apertures and constituting an adjustable lower rest for said bar, a winding reel mounted on the extended end of said shaft, and a rope connection between the supporting bracket and reel whereby the angularity of the supporting bracket is controlled.

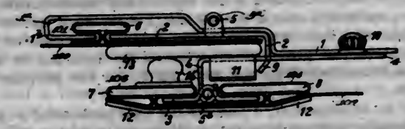
1,114,184. DOOR CLOSER AND CHECK. PERCY AUGUSTINE RICHMOND, Washington, D. C. Filed Feb. 28, 1914. Serial No. 821,719. (Cl. 16—88.)



1. In a door check the combination of a casing provided with a vertical and a horizontal bore; a crank member provided with a plurality of enlarged bearing surfaces and a plurality of successively reduced portions, said enlarged bearing surfaces snugly fitting said vertical bore; a piston fitting said horizontal bore; a valve in said piston; a spring mounted in said horizontal bore and coacting with said piston; a piston rod connecting said piston and crank member; and caps provided with shoulders snugly fitting said reduced portions and closing the ends of said vertical bore whereby the leakage of oil is prevented, substantially as described.

2. In a door check the combination of a casing provided with a vertical and a horizontal bore; a crank member provided with a plurality of enlarged bearing surfaces and a plurality of successively reduced portions, said enlarged bearing surfaces snugly fitting said vertical bore; a piston fitting said horizontal bore; a valve in said piston; a spring mounted in said horizontal bore and coacting with said piston; an adjustable valve for admitting air to said horizontal bore; an adjustable connection, lying wholly within said casing, between said piston and crank member whereby the tension of said spring may be controlled; and caps provided with shoulders snugly fitting said reduced portions and closing the ends of said vertical bore whereby the leakage of oil is prevented, substantially as described.

1,114,185. GARMENT-CLOSURE. ALFRED ROSENFELD, Berlin, Germany. Filed Dec. 24, 1910. Serial No. 599,083. (Cl. 24—207.)



1. A garment closure comprising a slide having a flat bottom plate that is slidably arranged below a fold located on the lower garment-flap, said slide being provided with longitudinal edges that engage the flap-bulges and are adapted to superimpose the two elements of a snap button or other flap closure.

2. A garment closure comprising a first member adapted to slidably engage a first garment-flap, a second member

carried by the first member and adapted to slidably engage a second garment-flap that extends below the first garment-flap, means on the second member for moving the garment-flaps facewise toward each other, and means on the first member for moving the first garment-flap laterally along the second garment-flap.

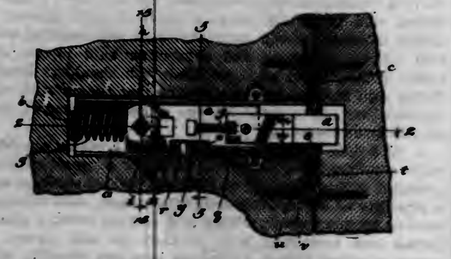
3. A garment closure comprising a first member adapted to slidably engage a first garment-flap having a female fastener provided with a contracted section, a second member carried by the first member and adapted to slidably engage a second garment flap that extends below the first garment flap and is provided with a male fastener, means on the second member for moving the garment-flaps facewise toward each other whereby the male fastener is brought into engagement with the female fastener, and means on the first member for moving the first garment-flap sidewise along the second garment-flap whereby the male fastener is drawn into the contracted section of the female fastener.

4. A garment closure comprising a first slide member having a slot provided with a laterally deflected section, and a second slide member carried by the first member, and bent to recede facewise from the first member.

5. In a garment closure a first slide member comprising an upper plate in which is formed a slot having a laterally deflected section and a second plate having an opening, combined with a second slide member comprising a first plate that is removably secured to the first member, and a second plate having an inclined section that recedes facewise from the first member.

[Claim 6 not printed in the Gazette.]

1,114,186. DOOR-LOCK. ANDREW J. ROSS, Oakland, Cal. Filed Jan. 13, 1914. Serial No. 811,806. (Cl. 70—46.)



1. A cylindrical lock casing inclosing a latch bolt and a bolt plate and provided with holes at opposite sides, a key-operated device for shifting the latch bolt entering one of said holes, a manually-operable device for shifting the latch bolt entering the other hole, a cylinder inclosing each of said devices and a pair of bolts clamping said cylinders against the opposite sides of the cylindrical lock casing.

2. In combination, a lock casing and face-plate, a latch bolt and a bolt plate and spindle devices for operating the bolt plate, said bolt plate being movably connected to the latch bolt, means for operating the latch bolt independently of the bolt plate, and a night latch means consisting of an endwisely movable rock shaft carrying a device for locking the bolt plate and extending to the face of the face-plate and provided with means for rotating as well as endwisely shifting the rock shaft, for the purpose set forth.

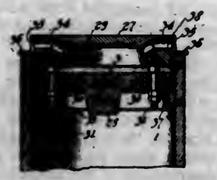
3. In combination, a lock casing and face-plate, a latch bolt and a bolt plate and spindle devices for operating the bolt plate, said bolt plate being movably connected to the latch bolt, means for operating the latch bolt independently of the bolt plate, and a night latch means comprising a finger-piece recessed into the face of the face-plate and having a lateral motion therein as well as a bodily movement into and out of the recess, and means connected to the finger-piece for locking the bolt plate against movement when the finger-piece is shifted laterally, and means for locking the finger-piece in either of its lateral positions in said recess.

4. In combination, a lock casing and face-plate, a latch bolt and a bolt plate and spindle devices for operating the bolt plate, said bolt plate being movably connected to the latch bolt, means for operating the latch bolt independently of the bolt plate, and a night latch means comprising a laterally swinging finger-piece mounted in a recess in the face-plate, means for locking the finger-piece in its shifted positions, a rock shaft connected to the finger-piece and provided with means adapted to engage the bolt plate, and spring means for normally holding the finger-piece in either of its locked positions, said finger-piece and rock shaft being capable of bodily movement to unlock the finger-piece preliminarily to shifting it.

5. In combination with a lock casing, a latch bolt and key-operable devices for shifting said latch bolt consisting of a stationary cylinder provided internally with annular beads and grooves, a key cylinder mounted to rotate therein and provided externally with a corresponding series of beads and grooves, said key cylinder being endwisely slotted for the insertion of a key, and locking means mounted in the stationary cylinder and entering the key-slot in the pathway of the key.

[Claims 6 to 8 not printed in the Gazette.]

1,114,187. PISTON. GEORGE J. SAYER, Chicago, Ill. Original application filed Jan. 10, 1913, Serial No. 741,148. Divided and this application filed May 27, 1913. Serial No. 770,190. (Cl. 138—10.)



1. In combination with a cylinder, of a piston movable therein, means for supplying pressure to said cylinder on one side of said piston, a cover plate for said cylinder, and a valve carried by the piston to release the pressure from within the cylinder when the cover plate is not in place upon the cylinder.

2. In combination with a cylinder, of a piston movable therein, means for supplying pressure to said cylinder on one side of said piston, a cover plate for said cylinder, and a valve carried by the piston controlled by the piston to release the pressure from within the cylinder when the cover plate is not in place upon the cylinder.

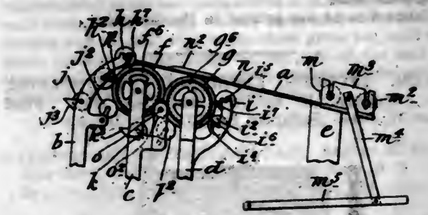
3. In combination with a cylinder, of a piston movable therein, means for supplying pressure to said cylinder on one side of said piston, a cover plate for said cylinder, a valve carried by the piston controlled by the piston to release the pressure from within the cylinder when the cover plate is not in place upon the cylinder, and a duct through said piston controlled by said valve.

4. In combination with a cylinder, of a piston movable therein, means for supplying pressure to said cylinder on one side of said piston, a cover plate for said cylinder, a valve carried by the piston controlled by the piston to release the pressure from within the cylinder when the cover plate is not in place upon the cylinder, and a duct through said piston controlled by said valve, said valve being held in place to close the outlet of said duct when the piston is entirely within the cylinder.

5. In combination with a cylinder, of a piston movable therein, means for supplying pressure to said cylinder on one side of said piston, a cover plate for said cylinder, and a valve carried by the piston to release the pressure from within the cylinder when the cover plate is not in place upon the cylinder, said valve being operable when said piston has partially left said cylinder.

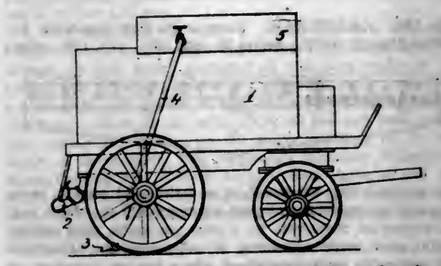
[Claim 6 not printed in the Gazette.]

1,114,188. INKING MECHANISM FOR PRINTING-PRESSES. JOHN H. SCHEU, New York, N. Y. Filed Aug. 5, 1913. Serial No. 783,032. (Cl. 101—79.)



A printing press having two main inking rollers each of which is provided with a plurality of spaced inking disks, an inking table in front of said rollers and provided with tracks or ways which extend backwardly thereover, a carriage movable over said table and over said tracks or ways and provided with two ink applying rollers adapted to operate in connection with the main inking rollers and to apply ink to said table, and means whereby when the carriage moves backwardly over the inking rollers, one of the ink applying rollers in said carriage will be raised above the front of the main inking rollers.

1,114,189. METHOD OF TREATING ROADS. WILLIAM H. SCHOONMAKER, Montclair, N. J., assignor to Sam E. Finley, Atlanta, Ga. Filed Feb. 23, 1912. Serial No. 679,529. (Cl. 94—1.)



1. The method of treating roads which consists in raising into the atmosphere finely divided matter from the surface thereof, applying to such matter when so raised, a spray of liquid and precipitating the mixture to the road surface.

2. The method of treating roads which consists in raising into the atmosphere the finely divided matter from the surface thereof, applying to such matter when so raised, a spray of oil and precipitating the mixture to the road surface.

1,114,190. METHOD OF TROUSERS-CUTTING. FARR L. SCOTT, Toledo, Ohio. Filed Mar. 6, 1912. Serial No. 682,056. (Cl. 33—17.)

1. The improvement in method of measuring for trousers and plotting the draft for the patterns thereof comprising taking the seat circumference at the seat and single and double-thigh circumferences at the crotch of the person for whom the trousers are being drafted, applying said seat dimension directly to the draft at the seat, and applying independently of the seat measure, the single thigh and double thigh measures directly to the draft at the crotch and respectively in opposite directions from a common point and independently of the seat measure.

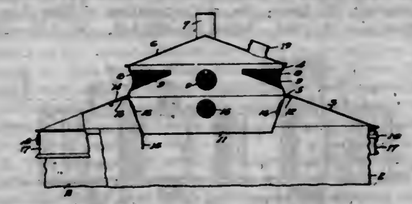
2. The method of plotting trouser drafts which comprises providing a draft construction line, providing a bottom line near one end of the draft line and bisected by said draft line, providing a waist line at the other end of the draft line and bisected by the draft line, laying off the crotch point on said draft line, and laying off respectively in opposite directions from said crotch point single and double thigh dimensions.

3. The method of determining back waist suppression in cutting trouser drafts employing longitudinal and transverse construction lines, embodying the determination of the back waist suppression angle as to a construction line, and the marking of the direction of the back waist suppression from said angle upon the draft.

4. The method of cutting trousers including the determination of leg position as to the trunk by double thigh measurement as the circumstance of the individual at the crotch below and independent of the seat measurement as the circumference of the individual at the seat and between the waist and crotch, and applying said dimensions as independent widths to the pattern draft at correspondingly spaced points.

5. The method of cutting trousers including the determination of the type of form as to back waist by single and double thigh measurements at the crotch and seat size at the seat, applying said thigh dimensions in opposite directions from a common point and the seat dimension from a second point, said dimensions being applied as independent widths to the pattern draft, and applying less inclination to the back part as these dimensions show a flat back and more as these dimensions show a prominent seat.

1,114,191. INSECT-TRAP ATTACHMENT FOR GARBAGE-CANS. ABRAHAM SHAPIRO, Minneapolis, Minn. Filed July 10, 1913. Serial No. 778,311. (Cl. 43—22.)



1. The combination with a can and a cover therefor provided with openings therein, and perforated cones open at each end fitting within said openings, and a receptacle having perforated walls supported by said cover beneath said cones.

2. The combination, with a can and a cover therefor, of an insect trap mounted therein, said trap comprising an upper portion extending above the cover and having a closed top and openings in its side walls, and perforate cones fitting said openings, said cones being open at each end, and a receptacle hinged on said cover beneath said cones and having perforate walls.

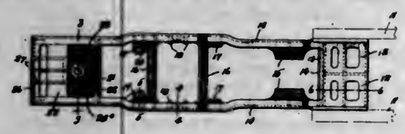
3. The combination, with a can and a cover therefor provided with an opening therein, of a pan suspended beneath said opening and a part raised above said cover and having openings therein through which insects may enter said pan.

4. The combination, with a can and a cover therefor provided with a central opening, of a pan hinged on one side beneath said opening, means for locking said pan in its raised position to close said opening, means sur-

mounting said pan and having openings therein through which insects may enter the pan, said pan being adapted to contain an insect poison.

5. The combination, with a garbage can and a cover therefor, of an insect trap mounted in said cover and comprising a receptacle supported by said cover and having openings communicating with said can to allow the passage of odors from said can to said receptacle, said openings being too small to allow the passage of insects into said can and a perforate cone leading from the outer air into said trap.

1,114,192. LOCOMOTIVE-FRAME. WILLIAM M. SHEEHAN, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,441. (Cl. 105—17.)



1. A rear frame for locomotives cast in a single piece and comprising a pair of side members, a series of transverse members, and there being a draw bar pocket formed in the rear end of said frame.

2. A rear frame for locomotives cast in a single piece and comprising side members, a series of transverse members, and equalizer fulcrums.

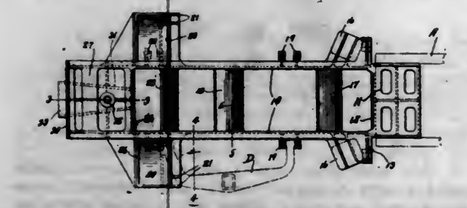
3. A rear frame for locomotives cast in a single piece and comprising side members, transverse members, and vertical disposed spring bearing ribs on the inner faces of said side members.

4. A rear frame for locomotives cast in a single piece and comprising side members, a series of transverse members, and trailer truck spring guides.

5. A rear frame for locomotives cast in a single piece and comprising side members, a series of transverse members, and trailer truck spring shackles seats.

[Claims 6 to 12 not printed in the Gazette.]

1,114,193. LOCOMOTIVE-FRAME. WILLIAM M. SHEEHAN, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,442. (Cl. 105—17.)



1. A rear frame for locomotives cast in a single piece and comprising a pair of side members and a series of transversely disposed members, certain of which are inclined.

2. A rear frame for locomotives cast in a single piece and comprising side members, and a series of transverse members, one of which forms a portion of the front wall of one of the ash pans associated with said frame.

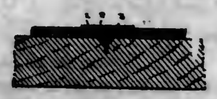
3. A rear frame for locomotives cast in a single piece and comprising side members, and a series of transverse members, which constitute parts of the front and rear walls of the ash pans associated with the frame.

4. A rear frame for locomotives cast in a single piece and comprising side members, a pair of transversely disposed inclined walls, and a transversely disposed arched plate, which inclined walls and arched plate constitute parts of the front and rear walls of the ash pans associated with the frame.

5. A rear frame for locomotives cast in a single piece and comprising side members, a series of transversely disposed members, and brackets which are adapted to receive spring yoke pins.

[Claims 6 to 14 not printed in the Gazette.]

1,114,194. SECURING APPLIANCE FOR LINOLEUM, &c. NICHOLAS R. SHULTS, Lake City, Mich. Filed June 17, 1914. Serial No. 845,701. (Cl. 16—3.)



1. A securing device consisting of a strip of metal, having a longitudinal rib adapted to fit between the abutted edges of the linoleum or like floor covering and having a plurality of anchoring points carried by the rib and adapted to be driven into the floor.

2. A securing device consisting of a strip of metal; a rib formed of folds of said strip of metal and a plurality of points struck up from the rib and the adjacent body portion of the strip, and located on the edge of the said rib, whereby the securing device is fastened to the floor.

3. A securing device having a body portion folded to form integrally a central rib, and sharp points struck up from the said body portion and adjacent part of the rib forming an extension thereof.

1,114,195. GRATE-BAR. THOMAS H. SLY, Dunmore, Pa. Filed Dec. 22, 1913. Serial No. 808,193. (Cl. 126—168.)

1. A grate bar composed of a main part having openings, and a supplemental part surmounting the main part and separated therefrom by a free air space, said supplemental part being composed of independently attachable and removable sections each of which has air openings extending therethrough and which is provided on its upper surface with channels extending lengthwise and crosswise thereof and arranged and adapted to distribute the air throughout and over substantially the entire fuel supporting surface thereof.

2. A grate bar consisting of a main bar having air openings extending therethrough, and a supplemental fuel supporting bar composed of a plurality of independent, independently removable sections surmounting and independently detachably connected to the main bar and separated therefrom by an intermediate air space, said sections being each provided with several air distributing openings extending from their lower to their upper faces and communicating with said air space and also having on their upper fuel supporting faces air distributing channels extending in different directions lengthwise and crosswise thereof from the different air distributing openings aforesaid.

3. A grate bar composed of a main part having numerous relatively small openings, and a supplemental part surmounting the main part and whose top is raised above and separated from the top of the main part by a free air space, said supplemental part being composed of independently attachable and removable sections each of which has air openings extending therethrough and is provided on its fuel supporting surface with intersecting air distributing channels arranged lengthwise and crosswise of the bar and communication with said openings.

4. A grate bar consisting of a main grate bar and a supplemental grate bar composed of a plurality of sections each having legs resting on the main grate bar and supporting and spacing it above the main grate bar, and independent connectors fastening the said sections to the main grate bar.

5. A grate bar consisting of a main grate bar and a supplemental grate bar composed of a plurality of sections each having legs resting on the main grate bar and supporting and spacing it above the main grate bar, said main grate bar having lugs engaging the legs of the said sections, and independent connectors fastening said sections independently to the main grate bar.

1,114,196. LOCOMOTIVE ASH-PAN. ALFRED H. SMITH, New York, and HARRY WANAMAKER, Albany, N. Y. Filed Jan. 14, 1913. Serial No. 741,995. (Cl. 110—169.)

1. The combination with a locomotive fire box, of a hopper connected to and depending from said fire box, flanges on the lower portions of the side walls of the hopper, an ash pan formed in two parts, each comprising a side wall and a pair of end walls, overhanging lips on the upper edges of the side walls of the ash pan, which lips engage the flanges on the lower portions of the side walls of the hopper, and diagonally disposed intersecting strengthening ribs formed on the inner faces of the side walls of the ash pan.

2. The combination with a locomotive fire box, of a hopper connected to and depending from said fire box, flanges on the lower portions of the side walls of the hopper, an ash pan formed in two parts, each comprising a side wall and a pair of end walls, overhanging lips on the upper edges of the side walls of the ash pan, which lips engage the flanges on the lower portions of the side walls of the hopper, and diagonally disposed intersecting strengthening ribs formed on the inner faces of the side walls of the ash pan, the upper surfaces of which strengthening ribs are inclined downward to permit the ashes to readily pass said ribs.

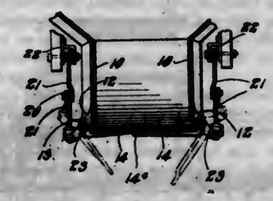
3. The combination with a locomotive fire box, of a hopper connected to and depending from said fire box, flanges on the lower portions of the side walls of the hopper, an ash pan formed in two parts, each comprising a side wall and a pair of end walls, overhanging lips on the upper edges of the side walls of the ash pan, which lips engage the flanges on the lower portions of the side walls of the hopper, diagonally disposed intersecting strengthening ribs formed on the inner faces of the side walls of the ash pan, and drop doors hinged to the lower portions of the side walls of the ash pan for closing the opening at the bottom thereof.

4. The combination with a locomotive fire box, of a hopper connected to and depending from said fire box, flanges on the lower portions of the side walls of the hopper, an ash pan formed in two parts, each comprising a side wall and a pair of end walls, overhanging lips on the upper edges of the side walls of the ash pan, which lips engage the flanges on the lower portions of the side walls of the hopper, diagonally disposed intersecting strengthening ribs formed on the inner faces of the side walls of the ash pan, the upper surfaces of which strengthening ribs are inclined downward to permit the ashes to readily pass said ribs, and drop doors hinged to the lower portions of the side walls of the ash pan for closing the opening at the bottom thereof.

5. As a new article of manufacture, a cast metal ash pan for locomotives provided with comparatively long narrow side walls, vertically disposed strengthening ribs on the external faces of said side walls and diagonally disposed intersecting strengthening ribs on the inner faces of said walls, the top surfaces of which diagonally disposed strengthening ribs are inclined downwardly to permit the ready passage of ashes over said ribs.

[Claims 6 to 14 not printed in the Gazette.]

1,114,197. LOCOMOTIVE ASH-PAN. ALFRED H. SMITH, New York, and HARRY WANAMAKER, Albany, N. Y. Original application filed Jan. 14, 1913, Serial No. 741,995. Divided and this application filed Apr. 21, 1914. Serial No. 833,437. (Cl. 110—167.)



1. The combination with a locomotive ash pan, of shafts journaled on opposite sides of the lower portion of the pan, doors carried by said shafts for closing the opening at the bottom of the pan, crank arms fixed to said shafts, a pair of toggle links arranged between each crank arm and a fixed part of the locomotive frame, the upper ends of the upper links being so connected to the fixed part of the frame as to permit said links to swing longitudinally and transversely with respect to the axis of the pan, the lower ends of the lower links being so connected to the crank arms as to permit said links to swing longitudinally and transversely with respect to the axis of the pan, a rock shaft arranged in suitable bearings adjacent to one end of the ash pan, and connections from said rock shaft to the joints between the toggle links for simultaneously actuating the latter to move the doors.

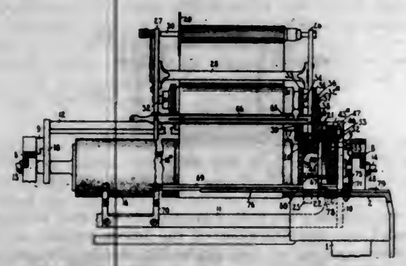
2. The combination with a locomotive ash pan, of a pair of drop doors hinged to said ash pan for closing the lower end thereof, a pair of toggle links arranged between the central portion of each door and a fixed part of the locomotive frame the upper ends of the upper links and the lower ends of the lower links being so pivotally connected to the doors and the locomotive frame as to permit said links to swing longitudinally and transversely with respect to the axis of the ash pan, and means connected to the joints between the toggle links for simultaneously actuating the same to move the doors.

3. The combination with a locomotive ash pan, of a pair of drop doors hinged to the lower portion of the pan for closing the opening in the bottom thereof, crank arms connected to the outer central portions of said doors, toggle links pivotally connected to said crank arms, and to fixed parts of the locomotive frame the upper ends of the upper links and the lower ends of the lower links being so connected to said crank arms and locomotive frame as to permit said links to swing longitudinally and transversely with respect to the axis of the ash pan, and means connected to the joints between said toggle links for actuating the same to move the doors.

4. The combination with a locomotive ash pan, of rock shafts arranged at the sides of the pan near its lower end, doors carried by said shaft for closing the opening at the bottom of the pan, crank arms fixed to said rock shafts near their central portions, toggle links arranged between each crank arm and a fixed part of the locomotive frame the upper ends of the upper links and the lower ends of the lower links being so connected to said crank arms and locomotive frame as to permit said links to swing longitudinally and transversely with respect to the axis of the ash pan, and means connected to each pair of toggle links for simultaneously actuating the same to move the doors.

5. The combination with a locomotive ash pan, of a pair of drop doors hinged to said pan for closing the opening at the lower end thereof, crank arms connected to said doors near their central outer portions, a pair of toggle links between each crank arm and a fixed part of the locomotive frame, the ends of which toggle links are flexibly connected to said crank arms and the fixed parts of the locomotive frame whereby said links can swing simultaneously lengthwise and transversely with respect to the axis of the ash pan, and means connected to the joints between said toggle links for simultaneously actuating the same to move the doors.

1,114,198. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Feb. 17, 1914. Serial No. 819,258. (Cl. 197—132.)



1. In a typewriting machine, the combination of a platen carriage, a divided platen mounted thereon and comprising a plurality of sections adapted to receive separate work sheets, sets of line spacing devices for advancing said work sheets, each set comprising a line spacing wheel, pawl members one for each line spacing wheel, a single means for actuating said pawl members, and means separate from one of said pawl members and effective on the other pawl member for preventing the operation of said other pawl member when said single means is actuated.

2. In a typewriting machine, the combination of a platen carriage, a divided platen mounted thereon and comprising a plurality of sections adapted to receive separate work sheets, sets of line spacing devices for advancing said work sheets, each set comprising a line spacing wheel, pawl members one for each line spacing wheel, a single means for actuating said pawl members, a device for preventing the operation of one of said pawl members, and mechanism brought into play during the traveling movements of said platen carriage to render said device effective and ineffective on its associate pawl member.

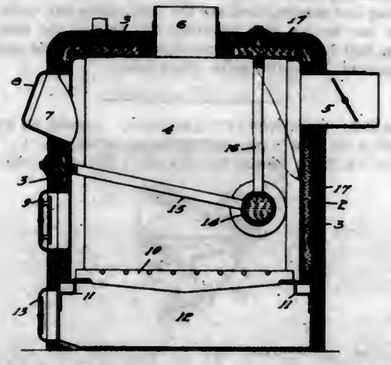
3. In a typewriting machine, the combination of a platen carriage, a platen mounted thereon and adapted to receive a plurality of work sheets, sets of line spacing devices for advancing said work sheets, each set comprising a line spacing wheel, engaging members one for each line spacing wheel, a single means for actuating said members, a device for preventing the operation of one of said members, and mechanism brought into play at predetermined points in the traveling movements of said platen carriage to render said device effective and ineffective on its associate member.

4. In a typewriting machine, the combination of a platen carriage, a divided platen mounted thereon and comprising a plurality of sections adapted to receive separate work sheets, sets of line spacing devices for advancing said work sheets, each set comprising a ratchet wheel, pawls one for each ratchet wheel, a single means for actuating said pawls, a device for preventing the operation of one of said pawls, and mechanism operating automatically during the travel of the carriage to control the operation of said preventive device.

5. In a typewriting machine, the combination of a platen carriage, a divided platen mounted thereon and comprising a plurality of sections adapted to receive separate work sheets, sets of line spacing devices for advancing said work sheets, each set comprising a line spacing wheel, pawl members one for each line spacing wheel, a single means for actuating said pawl members, a device for preventing the operation of one of said pawl members, and mechanism brought into play during the traveling movements of said platen carriage to render said device effective and ineffective on its associate pawl member, said mechanism operating at predetermined points in the travel of the carriage in one direction to throw said preventive device out of operation and at a predetermined point in the travel of the carriage in the opposite direction to permit said device to return to operative position.

[Claims 6 to 14 not printed in the Gazette.]

1,114,199. INCINERATOR. ELMER N. STACY, Minneapolis, Minn., assignor to Decarie Incinerator Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Sept. 27, 1913. Serial No. 792,117. (Cl. 122—2.)



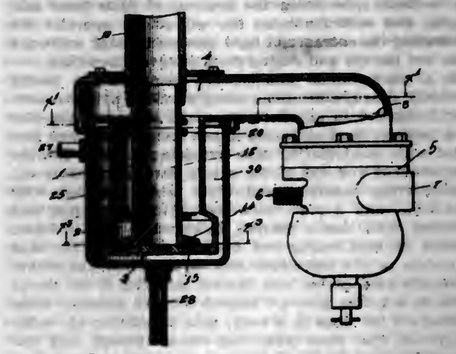
1. An incinerator comprising a combustion chamber having water circulating chambers in its walls and a fuel grate in the lower part of said chamber, a header arranged horizontally near the rear wall of said combustion chamber above said grate and communicating with said water circulating chamber, circulating tubes extending vertically from said header to the water circulating chamber in the top of said combustion chamber, and similar tubes extending forwardly and upwardly from said header to the front wall of said combustion chamber and also communicating with said water circulating chamber.

2. An incinerator comprising walls having water circulating chambers therein, and a combustion chamber provided with a fuel grate, a header extending transversely of said combustion chamber above said fuel grate and near the rear wall of said combustion chamber, and circulating tubes leading from said header and communicating with said water circulating chambers in the front wall of said combustion chamber, said tubes forming an inwardly and downwardly inclined drying grate, and the front wall of said combustion chamber having a filling opening above said drying grate.

3. An incinerator comprising a combustion chamber having water-circulating chambers in its walls and a fuel grate in the lower part of said chamber, a comparatively large header pipe extending transversely of said combustion chamber near the rear wall thereof and adjacent to said fuel grate and having its ends connected to said circulating chambers, a series of circulating pipes extending upwardly from said header pipe and communicating with said circulating chambers in the top of said incinerator, a series of circulating tubes extending upwardly from said header pipe to the circulating chamber in the top of said incinerator, a series of similar tubes extending from said header pipe upwardly and forwardly to the circulating chamber in the front wall of said incinerator, said incinerator having a filling opening above and near the outer portion of said last named tubes, and a fuel supply door beneath said tubes.

1,114,200. THROTTLE FOR CARBURETERS. ALFRED C. STEWART, Los Angeles, Cal. Filed Sept. 16, 1913. Serial No. 790,015. (Cl. 48—148.)

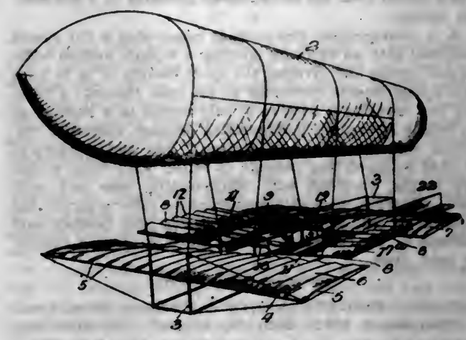
1. In a throttle for carbureters, a vertically extending tubular casing having a closed bottom, means for supplying mixture of oil and air to the upper part of said casing, said casing having an outlet at its top, and a tubular throttle member slidable vertically in the outlet of said casing, and extending down within and spaced from the said tubular casing to form a passage wherein the mixture may pass from the said mixture supplying means downwardly between said casing and throttle member and upwardly within said throttle member, and means on the bottom of said throttle member coöperating with the bottom of the casing to cause a tortuous passage of mixture from the casing to the interior of the throttle member.



2. In a throttle for carbureters, a vertically extending casing having closed bottom, means for supplying a mixture of oil and air to the upper part of said casing, and a throttle member movable vertically in said casing and coöperating with the bottom of the casing to control the passage of mixture from the casing, the coöperating parts of the throttle member and casing bottom having corresponding serrations, forming a tortuous passage when the throttle is opened.

3. In a throttle for carbureters, a vertically extending tubular casing having a closed bottom, means for supplying mixture of oil and air to the upper part of said casing, said casing having an outlet at its top, a tubular throttle member slidable vertically in the outlet of said casing, and extending down within and spaced from the said tubular casing to form a passage wherein the mixture may pass from the said mixture supplying means downwardly between said casing and throttle member and upwardly within said throttle member, said throttle member coöperating with the bottom of the casing to control the passage of mixture from the casing to the interior of the throttle member, a heating chamber surrounding said tubular casing, and means for supplying heating agent to said chamber.

1,114,201. FLYING-MACHINE. FRANK E. SUMMERS, Memphis, Mo. Filed Oct. 27, 1913. Serial No. 797,643. (Cl. 244—9.)



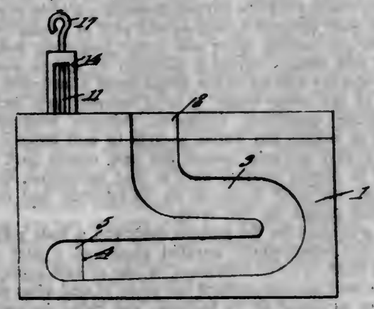
1. In a flying machine, a framework, forward and rear transversely extending fixed planes mounted on the framework, planes or wings hinged to the framework for movement in a vertical plane and disposed between said fixed planes, each of said movable planes including a rigid section forming the inner portion of each movable plane and a plurality of hinged sections opening upon an upward movement of the plane but closing upon a downward movement, and a gas bag operatively connected to the framework to partially support the framework and planes.

2. In a flying machine, oppositely disposed wings hingedly supported for vertical movement, and means for oscillating said wings, each wing being composed of a plurality of hinged sections, certain of the sections opening upon an upward movement of the wing but closing upon a downward movement thereof, certain other sections being hinged at their forward edges and opening partially upon a downward or upward movement of the wing to thereby provide a plurality of angularly disposed surfaces acting to propel the machine.

3. A flying machine including a framework, a gas field supporting said framework, and oppositely disposed wings each pivoted at its inner end to the framework and oscillatable in a vertical plane, portions of said wings opening downward upon an upward movement of the wing but closing upon a downward movement of the wing to provide a supporting surface, certain other portions of each wing opening partially upon a downward or upward movement of the wing to provide a plurality of rearwardly extending angularly disposed surfaces acting to propel the machine.

4. A flying machine including a longitudinally extending frame work, a gas field supporting said frame work, forward and rear transversely extending planes mounted upon said frame work and spaced from each other and oppositely disposed wing frames, each frame being pivoted at its inner end to the frame work and being oscillatable in a vertical plane, the inner portion of each of said wings comprising a relatively rigid section, certain other portions of each wing opening upon an upward movement of the wing and closing upon a downward movement thereof, certain other portions of each wing opening partially upon either a downward or upward movement of the wing to provide a plurality of rearwardly extending angularly disposed surfaces for propelling purposes, a support for the aviator disposed between the oscillatable wings, resilient means urging said oscillatable wings upward, means connected to the frame work of said wings, whereby the aviator may draw them downward and steering mechanism operable by said aviator.

1,114,202. POOL-TABLE ATTACHMENT. ORVILLE E. SWICK, Weston, W. Va. Filed Jan. 29, 1914. Serial No. 815,304. (Cl. 46—12.)



1. A pool table attachment, including a ball tray having an outlet, a shutter for controlling said outlet, a rod connected to the shutter for operating the same, a spring for closing the shutter, a plate having two upstanding and spaced lugs attached to the tray and through which the rod slides, and an abutment carried by the rod for coaction with one lug at a time for limiting the movement of the rod and for relieving the jar upon the shutter during the closing thereof.

2. A pool table attachment, including a ball tray having an outlet, said tray being provided with a slot disposed adjacent to the outlet, a shutter mounted for sliding movement in the slot and for controlling the outlet, a metal plate connected to the under side of the shutter, an apertured lug carried by the plate, a second plate connected to the tray and provided with two apertured and spaced lugs, the apertures of all of the lugs aliming, a rod disposed in

the apertures of all lugs, whereby the rod is guided in the two lugs of the last plate and is secured to the shutter through the remaining lug, a spring disposed upon the rod and abutting the lug of the first plate and one of the lugs of the second plate, said spring exerting a tension to close the shutter, and a projection carried by the rod between the two spaced lugs for limiting the movement of the rod during the opening and closing of the shutter.

1,114,203. SHADE-ROLLER BRACKET. JACOB TAIZ, Philadelphia, Pa. Filed Jan. 27, 1914. Serial No. 814,780. (Cl. 156—24.)

1. In a bracket for the purpose described, a body portion having a part adapted to engage one part of a supporting structure, a lever fulcrumed on the body portion and having a part movable toward the first named part and adapted to engage another part of said supporting structure when the lever is moved on its fulcrum, and roller supporting means on the lever.

2. In a bracket for the purpose described, a body portion having a part adapted to engage one part of a supporting structure and having a plurality of spaced sockets therein, a lever having a fulcrum portion adapted to engage in any of said sockets and having a part movable toward the first named part and adapted to engage another part of said supporting structure when the lever is moved on its fulcrum, and roller supporting means on the lever.

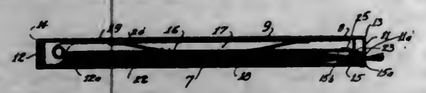
3. In a bracket for the purpose described, a body portion having a part adapted to engage one part of a supporting structure and having upper and lower projecting flanges, a lever between and fulcrumed on said flanges and having a part movable toward the first named part and adapted to engage another part of said supporting structure when the lever is moved on its fulcrum, and roller supporting means on the lever.

4. In a bracket for the purpose described, a body portion having a part adapted to engage one part of a supporting structure and having upper and lower projecting flanges, each of said flanges having a plurality of spaced sockets therein and the sockets of one flange being alined with the sockets of the other flange, a lever between said flanges and having oppositely extending fulcrum projections adapted to engage any alined sockets in said flanges and having a part movable toward the first named part and adapted to engage another part of said supporting structure when the lever is moved on its fulcrum, and roller supporting means on the lever.

5. In a bracket for the purpose described, a body portion having two substantially parallel arms and a part connecting them, a lever fulcrumed on one of said arms and having a part movable toward the other of said arms when said lever is moved on its fulcrum, and roller supporting means on the lever.

[Claims 6 to 8 not printed in the Gazette.]

1,114,204. PHOTOGRAPHIC-FILM PACKAGE. HERMANN B. TOBIAS, New York, N. Y. Filed Mar. 19, 1909. Serial No. 484,456. (Cl. 95—22.)



1. A photographic film-package, comprising a casing provided with an exposure opening, a septum disposed within said casing and dividing the space therein so as to form compartments, said septum being so shaped as to form a passage between said compartments, a plate connected with said casing for supporting said septum and for normally preventing the removal of films from said casing, and controllable at the will of the operator for preventing the entrance of light into said casing while the films are therein and during their removal therefrom.

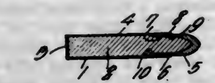
2. A photographic film-package, comprising a casing normally closed, said casing being provided with compartments disposed in parallel planes and connected together by a passage, films contained in one compartment and provided with manipulating tabs extending through another compartment and out of the casing through a lightproof manipulating passage; said films being provided with shoulders; and a plate connected with said casing and provided with elastic portion, coöperating with a folded portion of said casing and adapted to engage the said shoulders of the individual film in operation and retain it within said casing and further adapted to be thrust aside by a gentle pressure imparted by an operator when pulling all the films in a body, thus permitting the withdrawal of said films from said casing through said manipulating end.

3. The combination of a casing provided with an exposure opening, a septum disposed within said casing and having such form and size as to divide the space within said casing into two compartments connected by a passage, a supporting member connected with said casing and engaging said septum for the purpose of supporting the latter, said supporting member being provided with means for excluding light from said casing while forming a manipulating passage; and being further provided with flexible stop-tongues for normally checking the progress and preventing the extraction from said casing of an individual film during its manipulation and further capable to permit the extraction of all the films, or a number of the films from the predetermined portion of said casing through said manipulating passage, by a forced flexure of said stop-tongues.

4. A photographic film-package, comprising a casing having an exposure opening, a septum disposed within said casing and so formed and positioned as to divide the space within into compartments, said compartments communicating with each other at their ends, a plate mounted within said casing and provided with means for excluding the entrance of light thereinto while forming a film-tab manipulating passage; said plate being further provided with stop-tongues adapted to co-act with a portion of said casing in checking the movement of any individual film during its manipulation, and to also be subject to flexure by the movement of all or a number of the films in a body, when pulled from the casing by an operator or a mechanical device.

5. A photographic film-package comprising a flat casing provided with an exposure opening, a septum located within said casing and dividing the space therein so as to form two compartments connected at the ends thereof; a tucking flap covering a portion of said casing in a manner as to form a light-proof manipulating passage, otherwise rendering said casing normally closed; and means adjacent to said manipulating passage co-acting with films within the casing, provided with manipulating tabs and with guide markings upon said manipulating tabs to permit the removal of said films from said casing and through said passage by the concerted moving force of all or a number of said films.

1,114,205. BULLET. ANDREW J. WATKINS, Lyon, Mont. Filed Jan. 8, 1912. Serial No. 670,067. (Cl. 102—28.)



1. A bullet having a hard metal penetrating point, a mushrooming member attached to the body with its free edge toward the point, and means carried by the body and coöperating with the free edge of the mushrooming member to cause the free edge to be laterally extended when the point has penetrated an object beyond the free edge of the mushrooming member.

2. A bullet having a body composed of a hard metal penetrating point and a butt composed of a soft metal of greater specific gravity than the point, an expansible shell fitting upon the butt and extending beyond and exteriorly of the junction between the butt and point, and means carried by the body and coöperating with the forward edge of the shell to cause the forward edge of the shell upon penetration to expand laterally away from the body of the bullet to produce a mushroom.

3. A bullet having a two-part jacket, the parts of which overlap with an exterior expansible rim toward the penetrating point of the bullet and extend beyond the circumferential surface of the fore part, and means carried by the fore part to cause a laterally expansible mushrooming of the expansible rim upon penetration.

4. A bullet having a hard metal penetrating point and a mushrooming member anchored at its rear end to the body of the bullet with its free end toward the point and exteriorly beyond the body, and means coöperating with the free end to cause the free end to extend laterally when the point has penetrated an object beyond the free end of the mushrooming member.

5. A bullet having a hard metal penetrating point and a mushrooming member provided with anchoring means disposed to project into and engage the body of the bullet, such mushrooming member having its free edge disposed toward the point, and means to coöperate with the free edge to cause such free edge to be laterally extended when the point has penetrated an object beyond the free edge of the mushrooming member.

[Claims 6 to 13 not printed in the Gazette.]

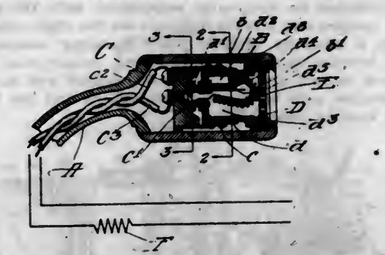
1,114,206. EARTH-AUGER. BENJAMIN G. WATKINS, Nebawka, Nebr., and TAYLOR WATKINS and WALTER P. WATKINS, Elizabethtown, Ky. Filed Aug. 3, 1912. Serial No. 713,159. (Cl. 255—66.)

1. A post hole auger, comprising a body of more than half a cylinder having a centrally positioned and two triangular edge cutting bits arranged in spaced relation each bit being dished outward beyond the circumference of said body, the cutting edge of said central bit being straight and extending obliquely to the axis of said body, a dished lifting blade positioned between one of said edge bits and said central cutting bit, and two smaller lifting blades between the remaining edge bit and central bit said lifting blades being of successively greater length, and a spanner head secured to the upper end of said body, as and for the purpose set forth.

2. A post hole auger comprising a body of more than half the cylinder having a centrally positioned and two triangular edge cutting bits arranged in spaced relation each bit being dished outward beyond the circumference of said body, and a dished lifting blade positioned adjacent said central cutting bit upon both sides, as and for the purpose set forth.

1,114,207. ELECTRIC CIGAR-LIGHTER. HARRY G. WEEKS, Chicago, Ill., assignor to New Era Mfg. Co., Chicago, Ill. Filed Aug. 5, 1912. Serial No. 713,329. (Cl. 219—32.)

1. An electric cigar lighter comprising a screw threaded socket and electrical connection therefor, a plug removably screwed into said socket, a heating unit contained in said plug, and a perforated plate for keeping the cigar out of contact with said heating unit, permitting the heated air to escape from the plug, said plug having an opening for the admission of air.



2. An electric cigar lighter comprising a screw threaded socket and electrical connection therefor, a plug removably screwed into said socket, a heating unit contained in said plug, a perforated plate for keeping the cigar out of contact with said heating unit, permitting the heated air to escape from the plug, the said plug having an opening for the admission of air, said heating unit consisting of a free coil of wire in the form of a loop, one terminal of said coil passing through the rear end of said plug, and the other terminal thereof passing through the said opening, and contacts on said plug for said terminal.

3. An electric cigar lighter comprising a screw threaded socket and electrical connection therefor, a plug removably screwed into said socket, a heating unit contained in said plug, a perforated plate for keeping the cigar out of contact with said heating unit, said heating unit consisting of a free coil of wire in the form of a loop, one terminal of said coil passing through the rear end of said plug, and the other terminal thereof passing through the side of said plug, contacts on said plug for said terminals, and a wall of insulation extending between the two sides of said loop.

4. An electric cigar lighter comprising a screw threaded socket and electrical connection therefor, a plug removably screwed into said socket, a heating unit contained in said plug, a perforated plate for keeping the cigar out of contact with said heating unit, said heating unit consisting of a free coil of wire in the form of a loop, one terminal of said coil passing through the rear end of said plug, and the other terminal thereof passing through the side of said plug, contacts on said plug for said terminal, the bend of said loop being disposed close to the back of said plate, and said plug having an opening for the admission of air at one terminal of said heating unit.

5. In a device of the character disclosed, an electrical socket, a plug for said socket, provided with a hollow body having air admission and outlet openings, said plug having an end contact and a threaded contact, and a resistance in circuit with the contacts of said socket, inclosed within the chamber of said body, said circuit passing through the walls of said plug.

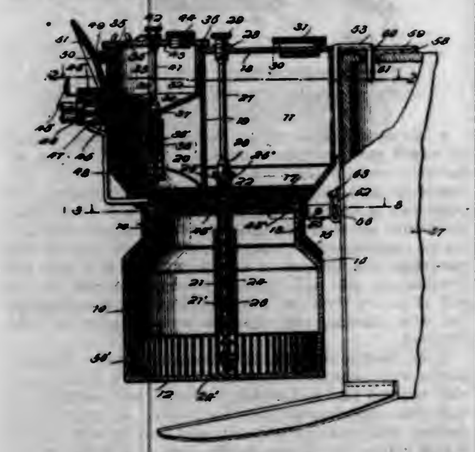
[Claim 6 not printed in the Gazette.]

1,114,208. MINER'S ACETYLENE-LAMP. JOSEPH A. WEBSTER, West Frankfort, Ill. Filed Mar. 24, 1913. Serial No. 756,538. (Cl. 48—33.)

1. A miner's acetylene lamp including a body having upper and lower sections, the lower section forming a main generating chamber and the upper section forming a main water reservoir for the said generating chamber and a supplemental generating chamber, a water reservoir detachably carried by the upper section and adapted to furnish water to the supplemental generating chamber, a burner carried by the upper section and in communication with the main generating chamber, and an adjacent burner in communication with the supplemental generating chamber.

2. A miner's acetylene lamp including a lower body member open at its upper end, an upper body member

closed at both ends and adapted for attachment to the lower body member, a partition wall dividing the upper body member into compartments, a manually operable valve arranged to provide communication between one of said compartments and the lower body member, a reservoir adapted for detachable engagement with the upper body member and forming a closure for the other compartment, a manually operable valve providing communication between said reservoir and its compartment, and burners carried by the upper body member and in communication with said latter compartment and the lower body member respectively.



3. A miner's acetylene lamp including a lower body member, an upper body member detachably secured to the lower body member and having a bottom forming a closure for the lower body member, a partition wall in the upper body member dividing the same into a water reservoir and a generating chamber, a valve controlling the flow of water from the reservoir to the lower body member, a water reservoir forming a closure for the generating chamber in the upper body member, a valve controlling the flow of water from said latter reservoir to the generating chamber of the upper body member, burners carried by the upper body member, communicating means between one of said burners and the generating chamber of the upper body member, and communicating means between the other of said burners and the generating chamber of the lower body member.

4. An acetylene lamp including a casing providing carbid chambers and water chambers, means for supplying water from the water chambers to the carbid chambers, a tubular casing open at its ends leading from one of the carbid chambers, a portion of the outer end of said casing being divided off by a partition, tubular connection between said divided off portion and the other carbid chamber, and burners fitted in the open outer ends of the tubular casing and its divided chamber.

5. An acetylene lamp including a casing provided with a plurality of water chambers and a plurality of carbid chambers, a plurality of burners arranged one immediately below the other, means for supplying gas from each generating chamber to one of the burners, and means for normally covering the discharge end of one of the burners.

[Claim 6 not printed in the Gazette.]

1,114,209. SEPARABLE BODY-BOLSTER. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 16, 1913. Serial No. 768,051. (Cl. 105—104.)

1. In car construction, the combination with center sills provided in their ends with slots, of a body bolster connected to said center sills, a portion of which body bolster occupies said slots, and a plate detachably applied to said body bolster beneath the center sills.

2. In car construction, the combination with center sills provided in their ends with slots, of a body bolster connected to said center sills, a portion of which body bolster occupies said slots, a plate detachably applied to said body bolster beneath the center sills, and a center bearing on said plate.

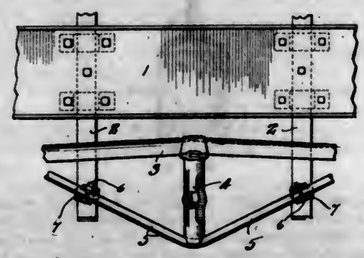
3. In car construction, the combination with center sills provided in their ends with slots, of a body bolster connected to said center sills, said body bolster having a top flange which occupies said slots, and a detachable center bearing plate applied to the bolster beneath the center sills.

4. In car construction, the combination with center sills provided in their ends with slots, of a body bolster having openings, a portion of which body bolster occupies the slots in the center sills, parts of which center sills project through the openings in the body bolster, and a plate detachably applied to the bolster beneath the center sills, and the openings in said body bolster.

5. In car construction, the combination with center sills provided in their ends with slots, of a body bolster having openings to accommodate parts of the center sills below the slots therein, and a separable center bearing plate attached to the body bolster below the openings therein.

[Claims 6 to 20 not printed in the Gazette.]

1,114,210. DUPLEX THIRD-POINT SUPPORT FOR BRAKE-BEAMS. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 18, 1914. Serial No. 825,584. (Cl. 188—70.)

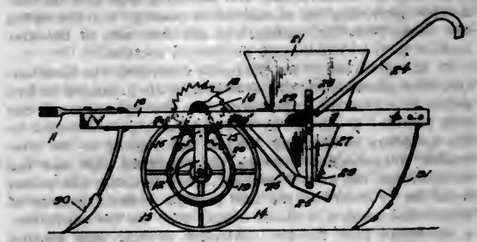


1. In combination with a truck having inclined duplex third point supporting members arranged on each side of its center, of a brake beam having removable wear surfaces or shoes to coöperate with said inclined supports.

2. A truss brake beam having a clip secured to its compression and tension members, one member of said clip having one or more wear surfaces or shoes.

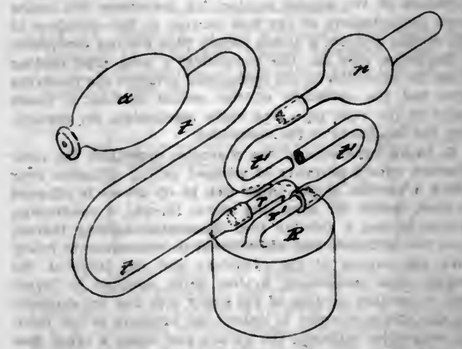
1,114,211. FERTILIZER-DISTRIBUTER. THOMAS P. WILLIAMS, Vineland, N. C. Filed Dec. 23, 1913. Serial No. 808,452. (Cl. 111—33.)

A fertilizer distributer comprising a frame, a furrow opener in the forward part of the frame, a wheel mounted in the frame and supporting the frame, a fertilizer hopper carried in the rear portion of the frame, a discharge chute disposed below the hopper and in position to receive fertilizer therefrom, an arm carried by the forward portion of the chute and extending upwardly and forwardly therefrom, means operated by the said wheel for intermittently knocking the said arms, pins carried by the rear portion of the frame and on opposite sides of the hopper, covering shoes carried by the frame in rear of the hopper,



and notched bars pivotally connected to the chute and detachably and adjustably engaged with the pins.

1,114,212. APPLIANCE FOR THE TREATMENT OF THE MUCOUS MEMBRANE. CLAY WILSON, New York, N. Y. Filed Jan. 19, 1914. Serial No. 812,913. (Cl. 128—13.)



1. A reservoir of the character designated formed with inlet and discharge ducts projecting from and opening into opposite sides thereof, and extending side by side transversely across the top thereof, said ducts being parallel to each other, or substantially so, for the purpose described.

2. A reservoir of the character designated formed with inlet and discharge ducts projecting from and opening into opposite sides thereof, and extending side by side transversely across the top thereof, said ducts being parallel to each other, or substantially so, and terminating within the circumference of the top of said reservoir for the purpose described.

3. A one piece glass reservoir of the character designated formed with inlet and discharge ducts projecting from and opening into opposite sides thereof, and extending side by side transversely across the top thereof, said ducts being parallel to each other, or substantially so for the purpose described.

4. A one piece glass reservoir of the character designated formed with inlet and discharge ducts projecting from and opening into opposite sides thereof, and extending side by side transversely across the top thereof, said ducts being parallel to each other, or substantially so, and terminating within the circumference of the top of said reservoir, for the purpose described.

5. A reservoir of the character designated formed with inlet and discharge ducts projecting from and opening into opposite sides thereof, and extending side by side transversely across the top thereof, said ducts being parallel to each other, or substantially so, and the inlet duct being formed with an extension projecting into the reservoir and extending approximately to near the bottom thereof for the purpose described.

[Claim 6 not printed in the Gazette.]

1,114,213. LIQUID-FEEDING GOVERNOR. HERBERT S. WILSON, Chicago, Ill., assignor of two-thirds to William R. Sinks, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,304. (Cl. 127—20.)

1. In a liquid feeding governor construction of the character described, the combination of a centrifugal liquid separator, an inlet valve controlling the flow of liquid to the separator, and a governor adapted to actuate said valve and open the same only upon a predetermined speed of the separator.

2. In a liquid feeding governor construction of the character described, the combination of a centrifugal liquid separator, an inlet valve controlling the flow of liquid to the separator, and means permitting the opening of said valve only upon a predetermined speed of the separator.

3. In a liquid feeding governor construction of the character described, the combination of a centrifugal liquid separator, a valve controlling the flow of liquid to the separator, a disk connected to said valve, a pair of driving rotatable disks adapted to separately frictionally contact with opposite sides of the disk to open or close the valve, and a speed governor adapted to shift said driving disks to cause the one or the other to engage said valve disk.

4. In a liquid feeding governor construction of the character described, the combination of a centrifugal liquid separator, a valve controlling the flow of liquid to the separator, a valve disk operatively connected to said valve, a driving disk adapted to frictionally contact with said valve disk to turn the latter and operate the valve, and a speed governor adapted to shift said disks relatively to one another.

5. In a liquid feeding governor construction of the character described, the combination of a centrifugal liquid separator, an inlet valve controlling the flow of liquid to said separator, a valve disk operatively connected to said valve, a driving disk adapted to frictionally contact with said valve disk to turn the latter and operate the valve, one of said disks having a flat side, and a speed governor adapted to shift said disks relatively to one another.

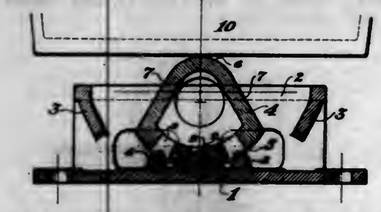
[Claims 6 to 9 not printed in the Gazette.]

1,114,214. SIDE BEARING FOR RAILWAY-CARS. WILLIAM E. WINE, Wilmington, N. C. Filed Nov. 5, 1912. Serial No. 729,694. (Cl. 64—65.)

1. In a side-bearing the combination with a bearing plate provided with side walls, of a roller engaging said bearing plate and provided with inclined flat surfaces, means for guiding the roller, comprising interengaging parts on the roller and the bearing plate, and means for stopping the roller in position with a flat surface parallel with the bearing plate.

2. In a side-bearing, the combination with a bearing plate, of a roller having an upper rolling surface and a lower rolling surface and inclined flat surfaces tangent to one of the rolling surfaces, and means for stopping the roller in position with an inclined surface parallel with

the bearing plate, comprising engaging parts on the roller and bearing plate.



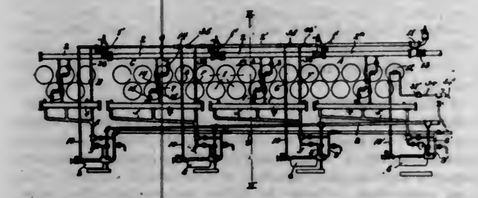
3. In a side-bearing, the combination with a bearing plate, of a roller having upper and lower rolling surfaces and inclined flat surfaces tangent to the rolling surface opposite said bearing plate, means for holding the roller in operative position on the bearing plate, and means for stopping the roller in position with an inclined surface parallel with the bearing plate, comprising engaging parts on the roller and bearing plate.

4. In a side-bearing, the combination with a housing provided with a bearing plate therein, of a roller engaging said bearing plate and provided with inclined surfaces, and means for guiding the roller, comprising interengaging parts on the roller and the bearing plate, the end walls of the housing being adapted to stop the roller with an inclined side parallel with said bearing plate.

5. In a side-bearing, the combination with an upper bearing member and a lower bearing member, of a roller engaging said bearing members and provided with inclined flat sides and means for guiding said roller, comprising interengaging parts on the roller and one of said bearing plates, one of said bearing members being provided with means for limiting the movement of the roller, comprising stops adapted to stop the roller in either of its extreme positions with a flat side parallel with one of said bearing members said roller having an unchanged rolling contact with one of said bearing members.

[Claims 6 to 8 not printed in the Gazette.]

1,114,215. DRYING-MACHINE. JOHN O. WOODSOMB, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 19, 1911. Serial No. 645,008. (Cl. 34—48.)



1. In an apparatus of the character described, the combination of a set of hollow drying rolls over which the paper stock first passes, a second set of hollow drying rolls over which the paper stock subsequently passes, means for supplying steam to the second set of rolls, and a tubular connection leading from the second set to the first set of rolls and directly communicating adjacent one end with the outlets of the second set and adjacent the other end with the inlets of the first set of rolls to supply the latter with steam, the first set of rolls constituting a condensing system adapted to cause a rapid flow of steam through the rolls of the second set by condensing the steam and reducing the pressure in the tubular connection, said flow being variable to accommodate the load of the apparatus.

2. In apparatus of the character described the combination of a plurality of drying cylinders arranged in two sections, a steam supply pipe connected to the cylinders of the first section, a controller, a receiving pipe connected to the cylinders of the first section and leading to the controller, a connection from the receiving pipe to the cylinders of the second section, and means for discharging the controller of condensation, the receiving pipe and its connection providing an unobstructed passage for conveying the steam from the cylinders of the inlet side of the first section to the cylinders of the second section.

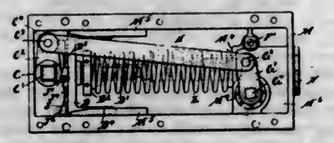
3. In apparatus of the character described, the combination of a plurality of hollow heating rolls arranged in two sections, a steam supply pipe for the cylinders of the first section, a controller, a receiving pipe connected to the cylinders of the first section and leading to the controller, a connection between the receiving pipe and the cylinders of the second section, for conveying the steam from the cylinders of the first section to the cylinders of the second section, a steam supply pipe for the controller, a discharge pipe for the controller, a vent pipe leading from the controller to the connection between the receiving pipe and the cylinders of the second section, and valve mechanism for governing discharge of the controller.

4. In apparatus of the character described, the combination of a plurality of hollow heating rolls arranged in two sections, a steam supply pipe for the cylinders of the first section, a controller, a receiving pipe connected to the cylinders of the first section and leading to the controller, a connection between the receiving pipe and the cylinders of the second section for conveying the steam from the cylinders of the first section to the cylinders of the second section, a steam supply pipe for the controller, a discharge pipe for the controller, a vent pipe leading from the controller to the connection between the receiving pipe and the cylinders of the second section, a check valve in the vent pipe, and valve mechanism for controlling the discharge of the controller.

5. In an apparatus of the character described, the combination with a plurality of grouped drying cylinders over which a portion of the paper web in its travel is adapted to pass, means for supplying steam thereto, a condensing system having a tubular feed connection leading thereto from the cylinders and constructed to communicate freely with the outlets of the cylinders and the inlet of the system, said condensing system being adapted to direct heat to another portion of the paper web and for condensing the steam whereby to reduce the pressure in the tubular connection adjacent the outlets and cause a rapid flow of used steam from the cylinders to the system, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,114,216. DOOR CLOSER AND CHECK. HARRY J. WRIGHT, Bloomfield, N. J., assignor to himself, and Edgar L. Scillitoe, Stapleton, N. Y. Filed Jan. 17, 1914. Serial No. 812,653. (Cl. 16—88.)



1. In a door-closer and check, a shaft adapted to be connected to the door, a spindle separated from and out of axial alinement with said shaft, means opposing the initial opening of such door, checking mechanism actuated by said spindle, and connections from said shaft to said spindle for imparting motion to the latter.

2. In a door-closer and check, a casing, a shaft mounted therein and adapted to be connected to the door, a spring in said casing acting upon said shaft and opposing the initial opening of such door, a spindle mounted in said casing, separated from and out of axial alinement with said shaft, checking mechanism actuated by the movements of said spindle, and connections from said shaft to said spindle for imparting motion to the latter.

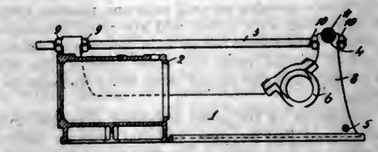
3. In a door-closer and check, a casing having a spring chamber and a liquid chamber therein, a shaft mounted in said spring chamber and adapted to be connected to the door, a spring in said spring chamber and connections from said spring to said shaft, a spindle in said liquid chamber, separated from and out of axial alinement with said shaft, checking mechanism in said liquid chamber actuated by said spindle, and connections from said shaft to said spindle for imparting motion to the latter.

4. In a door-closer and check, a casing having a spring chamber and a liquid chamber therein, a shaft mounted in said spring chamber at one end of said casing and adapted to be connected to the door, a spring in said spring chamber and connections from said spring to said shaft, a spindle in said liquid chamber, mounted at the opposite end of said casing, checking mechanism in said liquid chamber actuated by said spindle, an arm on said shaft and a pin carried thereby, a crank on said spindle and a pin thereon, and a link pivotally joined at the ends to said pins.

5. In a door-closer and check, a casing, a shaft mounted vertically therein and adapted to be connected to a door, a slide in said casing, an arm on said shaft arranged to move said slide, a spring in said casing acting upon said slide, a vertical spindle mounted in said casing and out of axial alinement with said shaft, checking mechanism actuated by said spindle, a crank on the latter, and a link connecting said arm and crank.

[Claims 6 to 17 not printed in the Gazette.]

1,114,217. ENGINE. LEON WYGODSKY, New York, N. Y., assignor to Wygodsky Engine Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 26, 1913. Serial No. 808,898. (Cl. 121—105.)



1. An engine frame of approximately U-form, the sides of the U integrally connected at the rear and provided with a distance rod connecting them at the front.

2. A combined engine frame and engine cylinder of general U-form provided at its rear end with an engine cylinder constituting an integral portion of the frame, the sides of the U being connected at the rear through such engine cylinder and being provided with a distance rod connecting their front ends.

3. An engine frame comprising a frame member of general U-form, the sides of the U integrally connected at one end and being connected by a distance rod at the other end, said sides provided at front and rear with projecting struts, and tension members connecting said struts.

4. An engine frame of approximately U-form, the sides of the U integrally connected at one end, and a screw rod extending through apertures of the sides at the other end and provided with a nut whereby said sides may be drawn into proper position.

5. An engine frame of approximately U-form, provided at one end with an engine cylinder constituting an integral portion of the frame, and a screw rod passing through apertures in said sides near the other end of the frame and provided with a screw nut whereby said sides may be drawn into proper position.

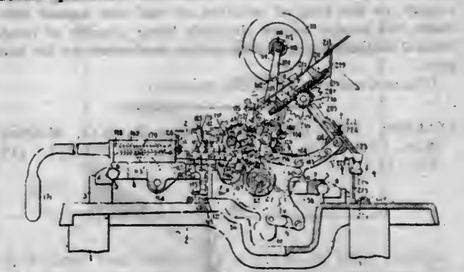
[Claims 6 to 12 not printed in the Gazette.]

1,114,218. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 18, 1913. Serial No. 762,114. (Cl. 197—132.)

1. In a typewriting machine, the combination of two connected platens, an independent platen intermediate said two platens, and a connection between said connected platens running through said independent platen.

2. In a typewriting machine, the combination of a platen, a support secured thereto, a second platen fixed to said support, and a third platen movable on said support.

3. In a typewriting machine, the combination of a platen, a support secured thereto, a second platen fixed to said support, and a third platen movable on said support, said third platen being intermediate said first and second platens.



4. In a typewriting machine, the combination of a rotary platen, a support mounted on and projecting from one end of said platen, and a plurality of additional platens on said support, one of said additional platens being fixed to said support and another of said additional platens being rotatable on said support.

5. In a typewriting machine, the combination of a rotary platen, a support carried by and projecting from one end of said platen, and a plurality of additional platens on said support, one of said additional platens being fixed to said support and another of said additional platens being rotatable on said support, said rotatable platen being arranged intermediate said fixed platen and said first recited platen.

[Claims 6 to 68 not printed in the Gazette.]

1,114,219. SPARK-PLUG. HUGO H. YOUNG, Loudonville, Ohio. Filed Nov. 25, 1912. Serial No. 733,490. (Cl. 123—169.)

1. A spark plug including electrodes formed with convex adjacent surfaces and being rotatable, one electrode being adjustable along a line intersecting a line coincident with the axis of rotation of the other electrode.

2. A spark plug including electrodes formed with rounded convex surfaces, a vertically disposed rotatably mounted support for one of the electrodes, a transversely arranged bar supporting the other electrode, said last named electrode being adjustable along a line intersecting a line coincident with the axis of rotation of the first named electrode.

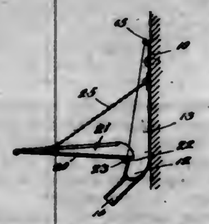
3. A spark plug including spherical electrodes, and a flexible bar supporting one of said electrodes, said electrode being arranged to move longitudinally of the bar, the bar being flexed at both sides of the electrode to hold the electrode against movement longitudinally of the bar.

4. A spark plug including electrodes formed with rounded surfaces, a vertically disposed rotatably mounted support for one of the electrodes, and a transversely arranged bar supporting the other electrode, said other electrode being rotatably mounted on said bar and disposed to move longitudinally thereof, the bar being flexed at each side of the electrode whereby said electrode may be supported against rotary and longitudinal movement.

5. A spark plug including electrodes formed with rounded adjacent surfaces, a vertically disposed rotatably mounted support for one of the electrodes, said electrode being mounted concentrically to the axis of such support, and a support for the other electrode extending transversely to the axis of rotation of the first named electrode, the second named electrode being capable of longitudinal adjustment and free rotary movement on its support.

[Claim 6 not printed in the Gazette.]

1,114,220. DISH-DRAINER. PETER ZABELLA, Medford, Mass. Filed Feb. 24, 1914. Serial No. 820,730. (Cl. 141—11.)



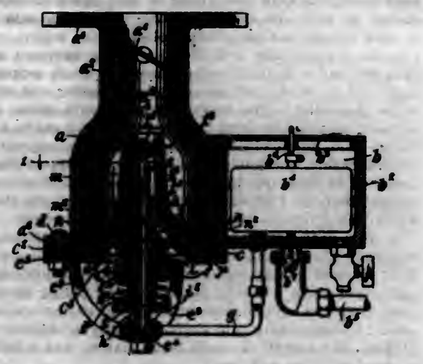
The dish-drainer herein described consisting of a support arranged to be secured to a wall having a trough at its lower end with closed ends and an exit intermediate its length, and a transversely corrugated shelf having upturned end-portions, said shelf being pivotally connected to the front edge of said trough and its inner edge extended over the front edge of the trough, said shelf being movable on its pivotal connections into a rearwardly inclined position to receive upon it the dishes and into a substantially vertical position to cover the trough and prevent access thereto when the device is not in use, and means such as chains for limiting the movement of the shelf in an outward direction.

1,114,221. KNIFE. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill. Filed Jan. 29, 1914. Serial No. 815,192. (Cl. 30—10.)

A knife comprising a handle having two parts spaced the width of two blades, a spring back therefor, a pivot at each end connecting said parts, a blade mounted on each pivot adjacent one part of said handle and spaced apart from the other, a shank on each blade so formed that said spring back will tend to open the blades, each shank having a lateral locking notch adjacent the open space between the parts of said handle, a leaf spring mounted on each pivot having a coacting projection adapted to engage the notch in the adjacent blade, and a stud connected with each leaf spring independent of and at one side of each pivot, each stud projecting through one of the parts of said handle and adapted to be presed to move said leaf spring toward the open space between the parts of said handle to release the blades.

1,114,222. CARBURETER. HENRY M. BRIGHAM, Brooklyn, N. Y. Filed Jan. 14, 1913. Serial No. 741,923. (Cl. 48—154.1.)

1. In a carbureter of the class described, a casing, a jet tube extending vertically into said casing, means for supplying liquid fuel to said tube, a sleeve vertically movable on said tube and provided at its upper end with a needle valve which extends downwardly into said tube, an air valve mounted on and adjustable on the sleeve and movable therewith, and a nozzle tube carried by the air valve and inclosing the sleeve, the jet tube and the needle valve.



2. In a carbureter of the class described, a casing provided with a base plate having air ports, a movable valve mounted on said base plate and provided with air ports of less dimensions than the ports in said plate and which register therewith, said air valve being provided with a nozzle tube, a jet tube extending vertically into said casing, means for supplying liquid fuel to said jet tube, a sleeve vertically movable on said tube and passing through said air valve, and with which said air valve is connected, and a needle valve supported by said sleeve and operating in the end of the jet tube, the inner ends of the sleeve, and the jet tube and the needle valve being inclosed by the nozzle tube.

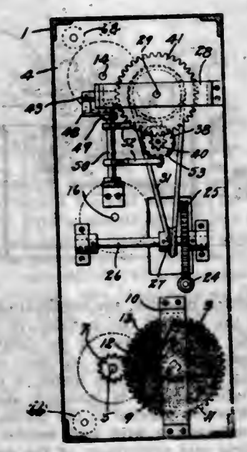
3. A carbureter of the class described provided with a stationary liquid fuel jet tube, a sleeve movable vertically on said tube and supporting a needle valve which operates in the end thereof, a spring for depressing said tube, a base plate through which said sleve is movable, a valve mounted on said base plate and provided with ports or passages which correspond with other ports or passages in said base plate, said sleeve and said valve having a screw threaded connection, and a nozzle tube connected with said valve and inclosing the inner ends of the sleeve, and the jet tube and the needle valve.

4. In a carbureter, a casing provided with a base plate having annularly arranged ports, a valve mounted on said base plate within said casing and provided with corresponding ports, a nozzle connected with said valve, a sleeve movable vertically through the base plate and extending into the nozzle and connected with said valve and provided at its upper end with a needle valve support, a jet tube support suspended beneath the base plate, a jet tube connected therewith and passing upwardly through said sleeve and on which said sleeve is vertically movable, and means for supplying liquid fuel to said jet tube.

5. In a carbureter, a casing provided with a base plate having air ports, a valve mounted on said base plate and provided with corresponding ports, a nozzle connected with said valve, a sleeve passing vertically through the base plate and through said valve and having a threaded connection therewith and provided at its upper end with a needle valve support, a jet tube support suspended beneath the base plate, a jet tube connected therewith and passing upwardly though said sleeve and on which said sleeve is vertically movable, means for supplying liquid fuel to the jet tube, and a tension device for holding said sleeve in a depressed position.

1,114,223. ADVERTISING APPARATUS. GARRETT BROWN, St. Louis, Mo., assignor to National Advertising & Demonstrating Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 19, 1912. Serial No. 737,688. (Cl. 40—31.)

1. In an advertising apparatus of the class described, a flexible member which is folded transversely to provide slots, advertising cards positioned on said flexible member with their upper and lower edges seated in the slots therein, and means for fastening the cards to the flexible member.

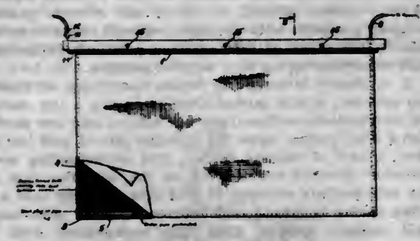


2. In an advertising apparatus of the class described, a pair of rollers, a flexible member arranged to wind from one roller onto the other, perforated tapes attached to the edges of said flexible member, means including toothed wheels which engage the perforated tapes for intermittently moving the same and the flexible member from one roller onto the other, automatically operating spring actuated means for rewinding the flexible member onto one of the rollers, and a centrifugal governor coöperating with said rewinding means for controlling the speed thereof during the rewinding operation.

3. In an advertising apparatus of the class described, a housing having an opening, a pair of rollers within the housing, a flexible member arranged to wind from one roller onto the other, which flexible member is adapted to carry detachable advertising cards, means including a pair of toothed wheels which directly engage the side edges of the flexible member at points between the rollers for intermittently moving the same a distance approximately equal to the width of one of the advertising cards carried by the flexible member so that said advertising cards are successively displayed through the opening in the housing, a spring coöperating with the roller from which the flexible member is unwound, which spring is wound up during the unwinding movement of said member, and means coöperating with said rollers for governing the rotation thereof during the time the spring is acting to rotate the roller and unwind the flexible member thereupon.

4. In an advertising apparatus of the class described, a housing having an opening, a pair of rollers within the housing, a flexible member arranged to wind from one roller onto the other, which flexible member is adapted to carry detachable advertising cards, means engaging the side edges of the flexible member for intermittently moving the same a distance approximately equal to the width of one of the advertising cards carried by the flexible member so that said advertising cards are successively displayed through the opening in the housing, a spring coöperating with one of the rollers for rewinding the flexible member thereunto after the flexible member has been intermittently wound onto the opposite roller, means for automatically releasing the rewinding spring when the flexible member has been unwound from the roller with which said spring is associated, and an automatic governor for controlling the speed of the spring driven roller during the rewinding of the flexible member thereupon.

1,114,224. FILTER-LEAF. NEWTON A. BURGESS, New York, N. Y., assignor to Butters Patent Vacuum Filter Company, Inc., a Corporation of Nevada. Filed Aug. 30, 1913. Serial No. 787,419. (Cl. 75—86.)



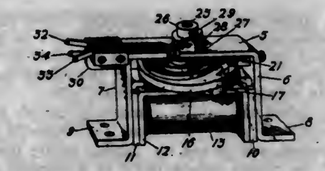
1. A filter leaf comprising a frame, a filter medium mounted thereon and a pipe having a substantially straight portion adjacent said medium and open at the bottom said pipe being arranged so that the opening therein is beneath the surface of a cake formed on said medium.

2. A filter leaf comprising a frame, a filter medium mounted thereon and a pipe mounted thereon having one straight side adjacent the filter medium and another side extending below the first and out of contact therewith whereby an opening is formed between the lower portions of said sides.

3. A filter leaf comprising a frame, a filter medium mounted thereon and a pipe also mounted thereon having a straight side adjacent the medium and said pipe increasing in cross-section from the bottom, and having an opening in the bottom thereof with an overhanging portion whereby foreign matter is prevented from entering said opening.

4. A filter leaf comprising a frame, a filter medium mounted thereon and a pipe mounted thereon having a straight side adjacent the filter medium, and a portion extending below the lower portion of said side but out of contact therewith whereby an opening between said portions is formed and foreign matter is prevented from entering said pipe.

1,114,225. INTERRUPTING DEVICE. CLARENCE N. CAHUSAC, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 19, 1913. Serial No. 768,638. (Cl. 175—321.)



1. A circuit interrupting device comprising in combination an electromagnet, a spring, an oscillating member under joint control of said electromagnet and said spring, contact springs controlling the circuit of said electromagnet and an auxiliary circuit, and means operated by said oscillating member for closing contact between said springs only in one direction of movement of said oscillating member.

2. A circuit interrupting device comprising an oscillating member having an intermediate and two extreme positions, a pair of contact springs, and a circuit closing member for said springs actuated by said oscillating member to make contact with one of said springs in the intermediate position of said oscillating member, with the other of said springs in one extreme position and moved to a neutral position in the other extreme position of said oscillating member.

3. A circuit interrupting device comprising an oscillating member having an intermediate and two extreme posi-

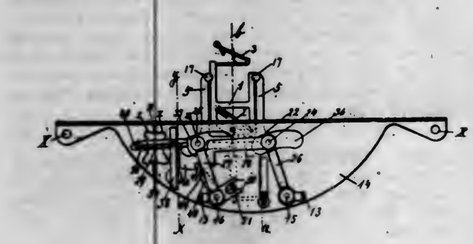
tions, a pair of contact springs, an actuating spring therefor and an operating member for said actuating spring carried by said oscillating member, said operating member engaging said actuating spring in the intermediate position of said oscillating member to close a circuit with one of said contact springs, in one of said extreme positions to close a circuit with the other of said contact springs, and in the other of said extreme positions to maintain said actuating spring in a neutral position.

4. A circuit interrupting device comprising an oscillating member, a cam carried thereby having a low surface, an intermediate surface upon one side of said low surface, and a high surface upon the opposite side of said low surface, a pair of contact springs and an actuating spring therefor operated successively by the low, the high and the intermediate surfaces of said cam, whereby said actuating spring is moved first into engagement with one of said contact springs, then into engagement with the other and finally into a neutral position with respect to said contact springs.

5. A circuit interrupting device comprising an electromagnet, a spring, an oscillating member having an intermediate and two extreme positions, said oscillating member being moved from its intermediate to one of its extreme positions by said electromagnet and back through its intermediate to its other extreme position, and again into its intermediae position by said spring, and contact springs closed by said oscillating member only in its intermediate and first extreme positions.

[Claims 6 to 10 not printed in the Gazette.]

1,114,226. TYPE-WRITING MACHINE. GEORGE W. CAMPBELL, New York, N. Y., assignor, by mesne assignments, to Victor Typewriter Company. Filed Nov. 16, 1906. Serial No. 343,725. (Cl. 197—157.)



1. A ribbon mechanism comprising means for receiving and discharging the ribbon longitudinally in a generally horizontal direction substantially parallel to the platen but leading the operative field of the ribbon bodily longitudinally substantially in a vertical plane.

2. A ribbon mechanism comprising means for leading the operative field of the ribbon longitudinally in a vertical direction, and means for moving bodily the operative field of the ribbon substantially in a vertical plane into striking position.

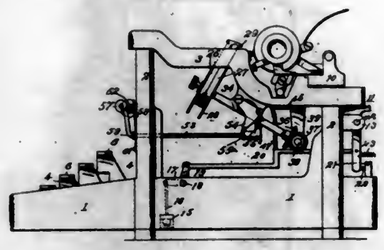
3. A ribbon mechanism comprising means for receiving and discharging the ribbon longitudinally in a general horizontal direction substantially parallel to the platen, but leading the operative field of the ribbon longitudinally in a vertical direction, and means for moving the operative field of the ribbon substantially in a vertical plane into striking position.

4. In a ribbon mechanism, the combination with means for holding the operative field of the ribbon longitudinally vertical; of means for moving the operative field of the ribbon substantially in a vertical plane into striking position.

5. A ribbon mechanism comprising a frisket adapted to hold the operative field of the ribbon longitudinally vertical, a guide frame adapted to admit movement of said frisket in a vertical direction, and means for causing movement of said frisket substantially in a vertical plane.

[Claims 6 to 100 not printed in the Gazette.]

1,114,227. TYPE-WRITING MACHINE. GEORGE W. CAMPBELL, New York, N. Y., assignor to Victor Typewriter Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1909. Serial No. 470,895. (Cl. 197—157.)



1. In a typewriting machine, the combination with the ribbon spools at the sides of the machine, of an oscillatory ribbon carrier for the ribbon at the printing point, angularly disposed guide members on said carrier for guiding the ribbon crosswise of the platen, a member on which said oscillatory carrier is mounted, said member adjustable in a direction parallel to the platen axis, and indexing means coöperating with said member and carrier for determining said adjustment of the member and carrier.

2. In a typewriting machine, the combination with ribbon spools and means for feeding the ribbon from spool to spool, of an oscillatory ribbon carrier for the operative field of the ribbon, ribbon deflecting guide members on said carriers leading the operative field of the ribbon transversely of the printing line and normally exposing said line, hand operated means for setting said carrier in different positions with respect to the printing point in a direction parallel with the printing line and means for oscillating said carrier at printing operations.

3. In a typewriting machine, the combination with ribbon spools mounted on stationary axes, said spools arranged to deliver the ribbon from one to the other in a direction generally longitudinal with the printing line, of an intermediate ribbon support adjacent the printing point, ribbon-deflecting guides arranged on said support to deflect the ribbon across the printing point in a direction transverse to and normally exposing said printing line, means for feeding the ribbon from spool to spool, manually operated means for adjustably shifting said ribbon support in the direction of the printing line and independently of the feed of the ribbon from spool to spool, indexing means for limiting said adjustment of the ribbon support and means to oscillate said ribbon support at printing operation to cover and uncover the printing point.

4. In a typewriting machine, the combination of an oscillatory ribbon carrier adjacent the printing point, guides on said carrier arranged to lead the ribbon across the printing point in the vertical direction of the type impressions, hand-operated means for adjusting said carrier to shift the ribbon widthwise of the printing point, selective indexing means for controlling said widthwise movement of the ribbon in accordance with selected widthwise portions of the ribbon and means for limiting the widthwise adjustment of the ribbon to the selected widthwise portions of the ribbon and means for oscillating said carrier to interpose the selected portion of the ribbon at printing operation between the type and the printing point.

5. In a typewriting machine, the combination of universal-bar mechanism having an arm, an oscillating ribbon support for a vertically disposed intermediate operative section of the ribbon comprising a carrier portion and an operating member in the path of the arm of the universal-bar mechanism, and hand operated means on which the support is pivotally mounted for moving said operating member lengthwise of the platen independently of said arm.

[Claims 6 to 24 not printed in the Gazette.]

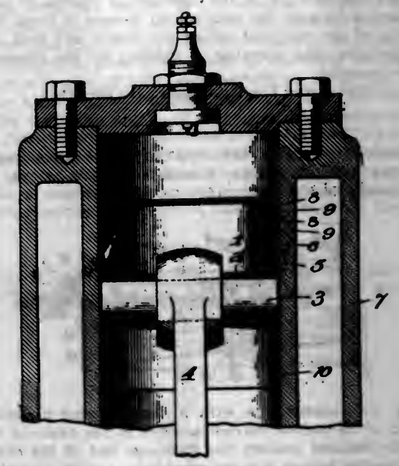
1,114,228. ALUMINIUM CARTRIDGE-CASE. BERNARD CASTENHOLZ, Cologne, Germany, assignor to Wiesbadener Staniol- & Metallkapsel-Fabrik A. Flach, Wiesbaden, Germany. Filed Jan. 11, 1913. Serial No. 741,526. (Cl. 102—16.)

1. Aluminium cartridge cases having the part which has to withstand the first shock of the explosion provided outwardly with a mantle of material stronger than aluminium and having, inside at the same part thereof, an elastic ring which acts as a brake to the first shock of the explosion; substantially as hereinbefore explained.

2. A cartridge case comprising an aluminium body, an elastic ring fitted within the body at the bottom thereof, and an outer shell surrounding the bottom of the body.

3. A cartridge case comprising an aluminium body, a split metal ring fitted within the body at the bottom thereof, and an exterior metal mantle surrounding the bottom of the aluminium body.

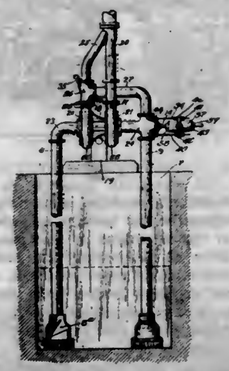
1,114,229. ENGINE TRUNK-PISTON. MILFORD G. CHANDLER, Chicago, Ill. Filed Apr. 30, 1914. Serial No. 835,426. (Cl. 121—104.)



A trunk-piston with diametrically-opposed bosses forming bearings for the piston-rod pin, the wall of the piston above said bosses and connected with the latter being single and integral with the closed end of the piston, packing-ring grooves in said wall, the portion of said wall between the lowermost of said grooves and said bosses being inset relative to the outer ends of said bosses and the groove-equipped portion of said wall and relatively thin and springy, with the outer ends of said bearings extending throughout their circumferences wholly beyond said inset portion of the wall, and the outer ends of said bosses merging into the circular piston wall.

1,114,230. PUMP. MATTHEW T. CHAPMAN and MARK C. CHAPMAN, Aurora, Ill., assignors to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Apr. 19, 1911. Serial No. 622,010. (Cl. 103—43.)

1. A pumping-apparatus, comprising a pair of pumping units having an axially-disposed shaft, runners mounted on said shaft, supply pipes communicating with opposite sides of said pumping units, respectively, discharge pipes connected with said units, respectively, an outlet pipe separately connected with each of said discharge pipes, a pipe connecting the discharge of one of said units with the supply of the other unit, a clapper-valve arranged to close either said connecting pipe or the discharge pipe of one of said units, and means adapted to hold said clapper-valve in either of its two operative positions.



2. A pumping-apparatus, comprising a pair of pumping units having an axially-disposed shaft, runners mounted on said shaft, supply pipes communicating with opposite sides of said pumping units, respectively, discharge pipes connected with said units, respectively, and separately communicating with a common outlet, a pipe connecting the discharge of one of said units with the supply of the other unit, a clapper-valve arranged to close either said connecting pipe or the discharge pipe of one of said units, and a weighted lever connected with said clapper-valve adapted to assist in holding said valve in either of its two operative positions.

3. A pumping-apparatus, comprising a plurality of rotary pumping units, supply pipes connected with said units, respectively, an outlet pipe separately connected with each of said units, means connecting the discharge of one of said units with the inlet of another unit, a valve for controlling the flow of water through said connecting means, and back-pressure valves in said supply pipes.

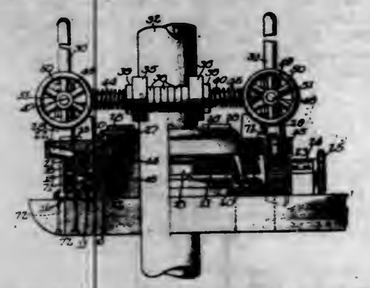
4. A pumping-apparatus, comprising a pair of pumping units having an axially-disposed shaft, runners mounted on said shaft, supply pipes communicating with opposite sides of said pumping units, discharge pipes connected with said units, respectively, an outlet pipe separately connected with each of said discharge pipes, a pipe connecting the discharge of one of said units with the supply of the other unit, a valve for controlling the flow of water through said connecting pipe, and back-pressure valves in said supply pipes.

5. A pumping-apparatus, comprising a pair of pumping units having an axially-disposed shaft, runners mounted on said shaft, supply pipes communicating with opposite sides of said pumping units, discharge pipes connected with said units, respectively, an outlet pipe separately connected with each of said discharge pipes, a pipe connecting the discharge of one of said units with the supply of the other unit, a valve for controlling the flow of water through said connecting pipe, and anti-friction bearings arranged to sustain said runners against end thrust in either direction.

1,114,231. WELL-SINKING APPARATUS. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Feb. 12, 1912. Serial No. 676,934. (Cl. 255—23.)

1. A well-sinking apparatus, comprising a turntable, gripping devices composed of separated disks adapted to en-

gage a round boring-tool for rotating the same, and means connecting said gripping devices with the turntable and acting to automatically move said disks toward the boring-tool, to increase the force of the grip when the boring-tool encounters extraordinary resistance.



2. A well-sinking apparatus, comprising a turntable having an opening for the passage of a boring-tool, gripping devices at opposite sides of said passage for engaging opposite sides of the boring-tool, each of said gripping devices consisting of separate disks, and means connecting the said gripping devices with the turntable and acting to move the opposite pairs of gripping disks closer to the boring-tool when the boring-tool encounters extraordinary resistance.

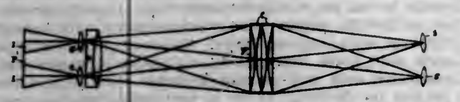
3. A well-sinking apparatus, comprising a turntable having an opening for the passage of a boring-tool, shafts at opposite sides of said opening, gripping devices mounted on said shafts and adapted to engage the boring-tool for rotating the same, and means carried by the turntable and acting to move said shafts closer together when the boring-tool encounters extraordinary resistance, said gripping devices being movable longitudinally upon their respective shafts.

4. A well-sinking apparatus, comprising a turntable having an opening for the passage of a boring-tool, shafts at opposite sides of said opening, gripping devices mounted on said shafts and adapted to engage the boring-tool for rotating the same, means carried by the turntable and acting to move said shafts closer together when the boring-tool encounters extraordinary resistance, said gripping devices being movable longitudinally upon their respective shafts, and springs for normally holding the gripping devices in position upon their respective shafts.

5. A well-sinking apparatus, comprising a turntable having an opening for the passage of a boring-tool, shafts at opposite sides of said opening, sleeves mounted on said shafts and movable longitudinally thereof, gripping devices mounted on said sleeves, and means connecting said shafts with the turntable.

[Claims 6 to 19 not printed in the Gazette.]

1,114,232. STEREOSCOPE. LOUIS CAMILLE DANIEL ANDRÉ CHÉROT, Paris, France. Filed Oct. 13, 1913. Serial No. 794,934. (Cl. 88—29.)



1. In a magnifying stereoscope, the combination of an optical device for projecting, magnifying and superposing the images of the two component pictures of a stereoscopic photograph; an optical device for causing the rays coming from the right-hand image to converge toward the right eye, and those coming from the left-hand image toward the left eye of the observer.

2. In a magnifying stereoscope, the combination of two object glasses for projecting and superposing the images of the two component pictures of a stereoscopic photograph placed in the joint focal plane of said glasses, the axis of each glass passing through the center of the corresponding picture; an achromatic lens of sufficient diameter to cover the two object glasses inserted adjacent the same; and an optical device for causing the rays coming from the right-hand image, to converge toward the right eye, and those coming from the left-hand image toward the left eye of the observer.

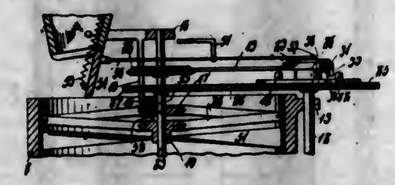
3. In a magnifying stereoscope, the combination of two object glasses for projecting and superposing the images of the two component pictures of a stereoscopic photograph arranged in the joint focal plane of said glasses, the axis of each glass passing through the center of the corresponding image, an achromatic lens of sufficient diameter to cover the two object glasses inserted in front thereof; and a single condenser arranged in the plane of projection of the images and constituted by plano-convex lenses arranged back to back and secured in a single mount.

4. In a magnifying stereoscope, the combination of an optical device for projecting, magnifying and superposing the images of the two component pictures of a stereoscopic photograph; an optical device for causing the rays coming from the right-hand image to converge toward the right eye, and those coming from the left-hand image toward the left eye of the observer; and a system of mirrors inserted between said optical devices to break up the path of the rays and reduce the length and the bulk of the apparatus.

5. In a magnifying stereoscope, the combination of an optical device for projecting, magnifying and superposing the images of the two component pictures of a stereoscopic photograph; an optical device for causing the rays coming from the right-hand image to converge toward the right eye, and those coming from the left-hand image toward the left eye of the observer; a system of mirrors inserted between the said optical devices to break up the path of the rays and reduce the length and bulk of the apparatus; and a system of lighting for the stereoscopic photographs.

[Claims 6 and 7 not printed in the Gazette.]

1,114,233. GRAIN-MEASURER. ALEXANDER COSFORD, Oak Lake, Manitoba, Canada. Filed Sept. 14, 1911. Serial No. 649,263. (Cl. 73—131.)

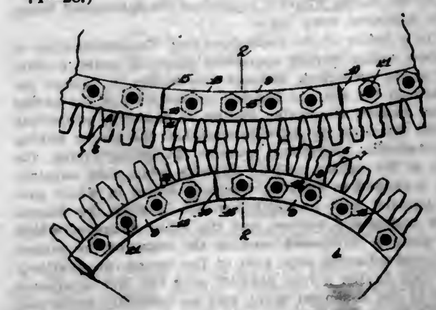


1. The combination with a chute having a discharge end, of an endless carrier movable in the chute, a receptacle disposed beneath the discharge end of the chute, a removable bottom for the receptacle, a float rotatable in the receptacle to ride on the top of the grain when rotated, connections between the carrier and the float for rotating the float as the carrier moves, and means operated by the rising of the float to a predetermined position for shutting off the flow of grain and temporarily removing the bottom of the receptacle to discharge the grain therefrom.

2. The combination with a chute having a discharge portion, of an endless carrier movable in the chute, a receptacle disposed below the discharge portion of the chute, a shaft around which the carrier passes, a bracket secured to the chute, a shaft depending from the bracket into the receptacle, connections between the carrier shaft and the depending shaft for driving the latter, a block secured on the shaft, a second block slidable on the shaft, jointed levers having their ends pivoted to the blocks to connect the same, a fan member secured to the sliding block and adapted to ride on the grain to raise said block when the parts are rotated, and mechanism connected to the shaft and actuated by the rising of the block for shutting off the flow of grain from the discharge portion of the chute and for causing the discharge of the grain from the receptacle.

3. An automatic grain measuring device, comprising a receptacle, means for discharging grain into the receptacle, mechanism disposed within the receptacle and raised by the discharge of the grain into the receptacle, a rotatable bottom for the receptacle, a rotating sprocket, and means actuated by the rising of the mechanism within the receptacle for connecting the sprocket to the bottom to cause the rotation of the bottom to discharge the grain from the receptacle.

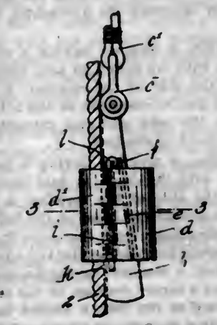
1,114,234. GEARING. CHARLES G. CURTIS, New York, N. Y. Filed May 12, 1910. Serial No. 560,872. (Cl. 74—28.)



1. In a gearing for transmitting heavy loads, the combination with two shafts, of a number of intermeshing tooth gears mounted on such shafts and transmitting motion from one shaft to the other, such gears having elastic teeth adapted to yield individually to distribute the load between a number of teeth, substantially as set forth.

2. In a gearing for transmitting heavy loads, the combination with two shafts, of a number of intermeshing tooth gears mounted on such shafts and transmitting motion from one shaft to the other, such gears having elastic teeth adapted to yield individually to distribute the load between a number of teeth, and means for equalizing the load between the several gears, substantially as set forth.

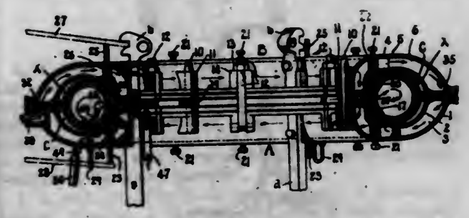
1,114,235. CABLE-GRIP. WILLIAM GEORGE SQUARES DE CARTERET, Beer, England. Filed May 3, 1913. Serial No. 765,278. (Cl. 24—136.)



1. A grip for cables and the like including a shell consisting of a fixed part having a groove therein and a part hinged to the fixed part to swing open therefrom, such hinged part having a groove therein adapted to form, with the first groove, an opening through the shell, and a wedge located within the shell and adapted to be drawn through the latter and extend from the groove in the fixed part across the hinge into the groove in the hinged part to obstruct the swinging open of the latter upon the hinge.

2. A grip for cables and the like including a wedge and a shell having an opening therethrough and being mounted upon the wedge, such shell consisting of a fixed part having a groove therein forming a portion of the opening through the shell and being formed with perforated lugs at opposite sides of the groove and wedge and spaced from each other longitudinally of the fixed part, a pin and slot connection between the fixed part and the wedge, a movable part having a groove therein adapted to communicate with the groove in the fixed part and complete the opening through the shell, such movable part having perforated lugs at opposite sides of the groove and wedge and spaced from each other longitudinally of the movable part, the lugs at the opposite sides of the groove of one part interdigitating with the lugs at the opposite sides of the groove of the other part and pins adapted to pass through the perforations in the lugs and hold the fixed and movable parts together.

1,114,236. TIRE-VULCANIZING MOLD. MARK A. DEES and NELSON W. MCLEOD, St. Louis, Mo., assignors to American Tire Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 5, 1912. Serial No. 688,607. (Cl. 18—17.)



1. In a tire vulcanizing mold, tire incasing mold sections, independently movable rings operable to compress the edges of the tire, said rings being confined within the mold sections, and means for adjusting said rings independently of each other.

2. In a tire vulcanizing mold, tire incasing mold sections, independently movable rings confined within said mold sections, said rings having no direct connection with each other, and means for operating said rings to compress the edges of the tire.

3. A mold for tires having separated edges, comprising mold cavity sections within which a tire may be confined, compressor rings within the mold cavity, an abutment between which and said compressor rings the edges of the tire may be clamped, and means extending through one of said mold sections for adjustment of said compressor rings toward said abutment.

4. In a tire vulcanizer, mold sections adapted to surround and completely inclose a tire having separated edges, a pair of tire edge comprising rings inclosed by said mold sections, and means for adjusting said rings independently of the mold sections.

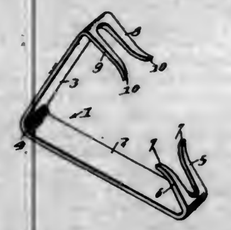
5. In a tire vulcanizer, mold sections adapted to surround and completely inclose a tire having separated edges, a pair of tire edge compressing rings inclosed by said mold sections, and means for adjusting said rings independently of the mold sections; said ring adjusting means being operable at the exterior of the mold.

[Claims 6 to 16 not printed in the Gazette.]

1,114,237. BELT-HOOK. JAMES K. DIAMOND, Grand Rapids, Mich., assignor to Clipper Belt Lacer Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Nov. 27, 1912. Serial No. 733,818. (Cl. 24—33.)

A belt hook having long and short arms with an intermediate curved bearing for engagement with a supporting hinge pin, said arms each terminating in prongs, said prongs being formed entirely within the bent portions of the arms beyond the bends thereof, the prongs of one arm extending substantially in a direction opposite to those of the other arm and toward the same, said prongs being

in pairs and the pairs of prongs being normally curved slightly away from each other transversely, and the prongs



of each pair having their terminals curved in opposite directions longitudinally.

1,114,238. ADJUSTABLE WEAR-RING. WILLIAM A. DOBLE, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Apr. 14, 1913. Serial No. 760,859. (Cl. 103—43.)

1. In a device of the class described, the combination with a casing provided with a fluid inlet and a fluid outlet, of a runner rotatably mounted therein, an annular wear ring carried by the runner and having a wall thereof interposed between the side of the casing and side of the runner, an annular wear ring for the casing and in coöperative relation with said first mentioned wear ring, and means for adjusting the wear surfaces of the said wear rings relative to each other comprising a threaded bolt projecting through a threaded opening in a wall of the casing and loosely engaging the outer face of the casing wear ring, and a bolt adjustable from without the casing loosely projecting through the wall of the casing and having an adjustable threaded connection with the wear ring.

2. In a device of the class described, the combination of a hollow casing having oppositely disposed walls, a rotatable shaft projecting through the casing, a runner positioned on the shaft, an inwardly projecting annular flange on one wall of the casing concentrically arranged relative to the said shaft, an outwardly projecting annular flange on the runner of greater diameter than the flange of the casing, and adapted to overlie said flange, the casing having an inwardly projecting annular flange on its opposite wall, and the runner having an auxiliary outwardly projecting annular flange of a greater diameter than the last mentioned flange of the casing, and overlying the same substantially throughout the width of the same, and an annular wear plate substantially L-shaped in cross section, one flange of which being coextensive with and projecting between the auxiliary flanges of the casing and runner, and the other flange of which extends parallel with the side wall of the casing and overlies the edge of the adjacent runner flange, and adjusting means engaging the last mentioned flange of the L-shaped ring.

3. In a device of the class described, the combination of a hollow casing having oppositely disposed walls, a rotatable shaft projecting through the casing, a runner positioned on the shaft, a bearing on one wall of the casing for said runner, the casing having an inwardly projecting annular flange on its opposite wall, and the runner having an auxiliary outwardly projecting annular flange overlying the flange of the casing, and an annular wear plate substantially L-shaped in cross section, one flange of which projects parallel with and is interposed between the auxiliary flanges of the casing and runner, and the other flange of which wear plate is interposed between the edges of the runner flange and adjacent side wall of the casing, a wear ring secured to the auxiliary flange of the runner and having a face extending parallel with the side wall of the casing whereby to engage the interposed flange of the L-shaped wear plate.

4. In a device of the class described, the combination of a hollow casing having oppositely disposed walls, a rotatable shaft projecting through the casing, a runner positioned on the shaft, a bearing on one wall of the casing for the runner, the casing having an inwardly projecting annular flange on its opposite wall, and the runner having an outwardly projecting annular flange overlying the flange of the casing, and an annular wear plate substantially L-shaped in cross section, one flange of which projects parallel with and is interposed between the flanges of the casing and runner, and the other flange of which wear plate is interposed between the edges of the runner flange and adjacent side wall of the casing, an auxiliary wear ring having a face parallel with the last mentioned flange of the L-shaped plate, and an inwardly projecting annular flange overlying the auxiliary flange of the runner and removably secured thereto, and adjustable and detachable connections between the parallel face of the L-shaped wear plate and casing, substantially as and for the purpose described.

1,114,239. BOLT CONNECTION. IRA S. DOWNING, Indianapolis, Ind. Filed May 26, 1914. Serial No. 840,989. (Cl. 85—1.)

1. In combination with a perforated member, a headed bolt extending through the member and having its head in contact with the side of the member, key retaining means adjacent the outer face of the head, a key extending across the outer face of the head and fitting the said means, and means on the key whereby its accidental withdrawal is prevented.

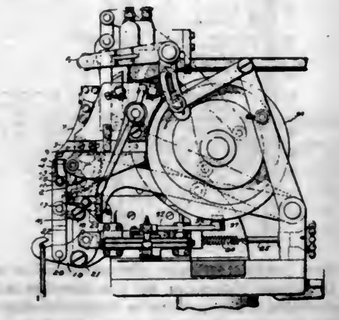
2. In combination, a member having a bolt opening, a headed bolt lying with its shank in said opening and with its head against the side of the member, a key retaining means including a slot at the head of the bolt, and a bendable key lying in the said slot and extending across the outer face of the head of the bolt.

3. In combination, a member having a bolt opening, a headed bolt lying with its shank in said opening and with its head against the side of the member, a key retaining means including a slot at the head of the bolt, a key lying in said slot and extending across the outer face of the head of the bolt, and means for holding the key against removal.

4. In combination, a member having an opening for the shank of a bolt and a larger opening at the end of the first opening for the head of the bolt, a headed bolt lying with its shank in the first opening and its head in the second opening, key retaining means carried by the member on the outer side of the bolt head, and a key fitting slidably between such means and the outer face of the head of the bolt.

5. In combination, a member having an opening for the shank of a bolt and a larger opening at the end of the first opening for the head of the bolt, a headed bolt lying with its shank in the first opening and its head in the second opening, key retaining means carried by the member on the outer side of the bolt head, and a key fitting slidably between such means and the outer face of the head of the bolt, such key being bendable so that its end may be bent to prevent the accidental removal of the key.

1,114,240. SEWING-MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Aug. 25, 1905, Serial No. 275,741. Divided and this application filed June 22, 1912. Serial No. 705,170. (Cl. 112—20.)



1. An outsole shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a presser foot, a work support arranged to coöperate with the presser foot to support the sole in the proper plane with relation to the stitch forming devices and mounted to move toward and from the presser foot about a center substantially coincident with the center of motion of the needle, and means for supporting the work support so that its work engaging surface is parallel to a fixed plane in all positions of the work support.

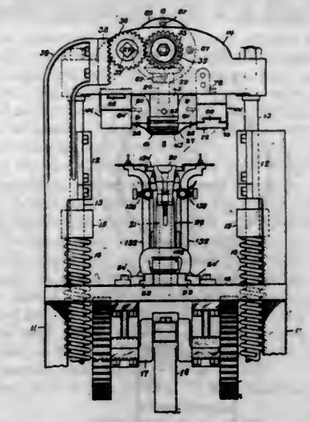
2. An outsole shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a presser foot, a work support arranged to coöperate with the presser foot to support the sole in the proper plane with relation to the stitch forming devices and mounted to move toward and from the presser foot about a center substantially coincident with the center of motion of the needle, and swinging connections for supporting the work support so that its work engaging surface is parallel to a fixed plane in all positios of the work support.

3. An outsole shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a presser foot, a work support mounted to move toward and from the presser foot about a center substantially coincident with the center of motion of the needle, and means for supporting the work support so as to maintain its work engaging surface parallel to the work engaging surface of the presser foot in all positions of the work support.

4. An outsole shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a presser foot, a work support mounted to move toward and from the presser foot about a center substantially coincident with the center of motion of the needle, and swinging connections for supporting the work support so as to maintain its work engaging surface parallel to the work engaging surface of the presser foot in all positions of the work support.

1,114,241. HEEL-ATTACHING MACHINE. EDWARD ERICKSON, Boston, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed July 24, 1907. Serial No. 385,297. (Cl. 1—35.)

1. In a heel attaching machine, a driving head, a carriage movable thereon, and means on said carriage for grasping a heel element, said means being movable relatively to the carriage to one position for receiving the work, and to another position for depositing the work, such relative movement being rotary and said means being capable of turning in the same direction when moving to work-depositing position as when moving to work-receiving position.



2. A heel attaching machine comprising a rotatable carriage, a support therefor, a shoe support, one of said supports being movable toward and from the other, and nail-driving means mounted on said carriage, said means being rotatable relatively to said carriage and adapted to abut against said carriage support when in operative position to be braced thereby.

3. A heel attaching machine comprising a carriage, a support therefor, a shoe support, one of said supports being movable toward and from the other, and a heel carrier mounted upon said carriage, said carrier being rotatable relatively to said carriage and adapted to engage said carriage support to be positioned thereby relatively to said carriage in consequence of movement of said carriage to heel-attaching position.

4. In a heel attaching machine, a carriage, a heel-blank carrier and a heel-lift carrier both mounted on said carriage, said carriers being movable relatively to the carriage and movable independently of each other to one position for receiving the work and to another position for depositing the work, such relative movement being rotary and said carriers being capable of turning in the same direction when moving to work-depositing position as when moving to work-receiving position.

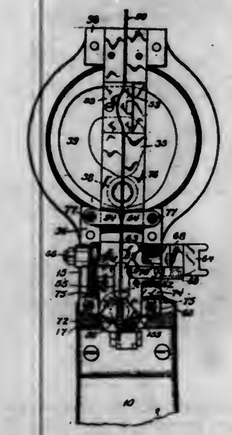
5. A heel attaching machine comprising a carriage, a support therefor, a shoe support, one of said supports being movable toward and from the other, and a plurality of carriers for heel elements mounted upon said carriage, said carriers being movable relatively to said carriage and adapted to engage successively a portion of said carriage support to be positioned thereby in consequence of movement of said carriage relatively to said carriage support.

[Claims 6 to 33 not printed in the Gazette.]

1,114,242. SHOE-SLUGGING MACHINE. EDWARD ERICKSON, Boston, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed June 25, 1906, Serial No. 323,200. Renewed Oct. 20, 1913. Serial No. 796,355. (Cl. 1—25.)

1. A machine of the character specified, comprising a laterally oscillatory fastener-driving mechanism, a laterally oscillatory fastener-severing mechanism, and means for oscillating said mechanisms as a unit, said mechanisms and means being timed so that first the driving mechanism drives the fastener into the work and the fastener feeds the work, and second, the severing mechanism severs the fastener after the completion of the feeding of the work.

2. A machine of the character specified, comprising a stationary work plate, a work support for holding the work against said plate, a fastener driver, means for impelling said driver to force a fastener into the work and to move the embedded fastener laterally to feed the work thereby, and means for severing the embedded fastener.



3. A machine of the character specified, comprising a work support, a fastener driver, means for reciprocating said driver to embed the end of a fastener strip into the work, means for moving said embedded fastener laterally to feed the work thereby relatively to the work support, and a cutter for severing the embedded end of the fastener at the completion of the work-feeding movement.

4. A machine of the character specified, comprising a movable fastener driver, means for reciprocating the driver toward and from the work, means for reciprocating the driver transversely to and independently of the said reciprocation toward and from the work to cause the embedded fastener to feed the work, and laterally stationary work-engaging means.

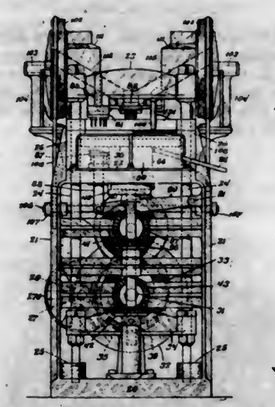
5. A machine of the character specified comprising a main shaft, fastener-driving mechanism supported and operated by said shaft for reciprocating a fastener driver to drive a continuous fastener strip into the work, means for holding the fastener driver against longitudinal movement, means for oscillating said fastener-driving mechanism about said shaft to feed the work, connected by the fastener to the driver, and means for severing the fasteners from said strip.

[Claims 6 to 42 not printed in the Gazette.]

1,114,243. HEEL-LOADING MACHINE. EDWARD ERICKSON, Boston, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed July 5, 1907, Serial No. 382,172. Renewed Nov. 7, 1913. Serial No. 799,813. (Cl. 1—33.)

1. In a heel loading machine, the combination of the following instrumentalities, to wit: a carrier, a plurality of nail holders, each having spaced nail apertures, means for moving said carrier, and mechanism for feeding groups of nails successively to said holders, comprising a plurality of nail conduits terminating in proximity to said carrier, means for supplying nails to said conduits, and means for obstructing said nail-supplying means and for discharging a group of nails simultaneously therefrom into said conduits.

2. In a heel loading machine, the combination of the following instrumentalities, to wit: a carrier, a nail driving mechanism, nail delivering means, a plurality of nail holders having spaced nail apertures on said carrier, means for feeding the carrier to cause each nail holder to move successively into registration with the nail delivering means and the nail driving mechanism, means for supplying nails to said nail delivery means, and means for intercepting the nails in the nail-delivering means and effecting the discharge of a complete group thereof through said delivering means.



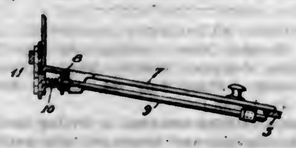
3. In a heel loading machine, the combination of the following instrumentalities, to wit: a movable nail receiver for carrying a group of nails to the driving mechanism, inclined raceways for the nails, fixed means for receiving a group of nails from said raceways, said means having nail passages through which the nails may gravitate, said fixed means coöperating with the lower ends of the raceways to support the nails by their heads in transit from the raceways to said nail passages, means for conducting the nails from said fixed means to said movable receiver, and a reciprocatory member adapted to move a group of nails from the raceways to said nail passages.

4. In a heel loading mechanism, the combination of the following instrumentalities, to wit: a plurality of raceways having their ends spaced and arranged in a curved line similar to the curved edge of a heel, said raceways being arranged in two groups, means for supplying said raceways with nails comprising an elevator for each group, a picker coöperating with the ends of the raceways to pick groups of nails therefrom, and a holder having nail apertures arranged similarly to the ends of the raceways for receiving nails therefrom.

5. In a heel loading mechanism, the combination of the following instrumentalities, to wit: a plurality of raceways having their ends spaced and arranged in a curved line similar to the curved edge of a heel, means for supplying said raceways with nails, a picker whose sides and end coöperate with the ends of the raceways to pick the nails therefrom, a holder having nail apertures arranged similarly to the ends of the raceways for receiving nails therefrom, a nail driving mechanism, and operative connections between said picker and said nail driving mechanism.

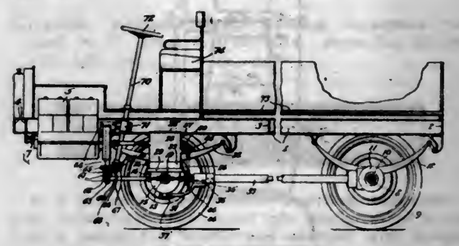
[Claims 6 to 27 not printed in the Gazette.]

1,114,244. LOCK FOR LOCKERS. WILLIS S. FARNSWORTH, San Francisco, Cal., assignor to Coin Controlled Lock Co., San Francisco, Cal., a Corporation of California. Filed Nov. 9, 1912. Serial No. 730,381. (Cl. 70—81.)



In an umbrella locker, the combination with an appropriate receptacle of a hinged cover therefor, a sliding bolt on the underside of the cover and adapted when moved in one direction to engage a detent to prevent the cover opening, a spring-pressed bolt mounted adjacent to the hinges of the cover and independent of the cover and in line with the bolt and operative to project the bolt into locking engagement with the detent, a locking bolt for the spring pressed bolt and means for releasing the last named locking bolt.

1,114,245. MOTOR-VEHICLE. JOHN H. FITCH, Ludington, Mich. Filed Feb. 2, 1914. Serial No. 816,103. (Cl. 21—90.)



1. In a motor vehicle, the combination with a frame, and a motor thereon, of front and rear axles provided with traction wheels, of differential mechanism and a casing therefor mounted upon said front axle, said casing having a cylindrical upper portion, a support wherein the cylindrical upper portion of said casing is vertically swiveled, supporting springs interposed between said rear axle and said frame and between said support and said frame, a short vertical shaft journaled in said support and extend into said casing in line with the axis thereof, a pinion on the lower end of said shaft for driving said differential mechanism, driving gearing mounted on said support and connected to the upper end of said vertical shaft, and a flexible shaft connecting said driving gearing to said motor, substantially as described.

2. In a motor vehicle, the combination of a frame, front and rear axles therefor, both provided with traction wheels, a motor mounted on said frame in advance of said front axle, a gear box mounted on said front axle and having a vertical swiveled connection therewith to permit the steering movement of said front axle, supporting springs interposed between said gear box and said frame, transmission gearing in said gear box, a flexible shaft connecting said transmission gearing to said motor and gears concentric with the vertical swiveled connection between said gear box and said front axle for connecting said transmission gearing to said axle, substantially as described.

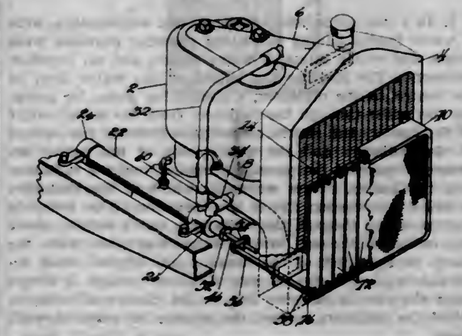
3. In a motor vehicle, the combination with a frame, front and rear axles both provided with traction wheels, of a motor mounted on said frame in advance of said front axle, differential mechanism and a casing therefor mounted on said front axle, said casing having a cylindrical upper portion, a gear box mounted on said casing and having a lower bearing portion wherein said casing is vertically swiveled, supporting springs interposed between said gear box and said frame and between said rear axle and said frame, transmission gearing in said gear box, a flexible shaft connecting said transmission gearing to said motor, a short vertical shaft journaled in the lower portion of said gear box and in the upper portion of said casing in line with the vertical axis of the latter and beveled gears for respectively connecting the ends of said vertical shaft to said transmission gearing and to said differential mechanism, substantially as described.

4. In a motor vehicle, the combination of a frame, front and rear axles provided with traction wheels, a motor on said frame in advance of said front axle, differential mechanism and a casing therefor mounted on said front axle, said casing having an upper cylindrical portion, a gear box mounted on said casing and having a lower cylindrical bearing wherein the upper portion of said casing is vertically swiveled, a ball bearing interposed between the upper portion of said casing and the lower portion of said gear box, a short vertical shaft extending through the lower portion of said gear box and the upper portion of said casing in line with the vertical axis of the latter, beveled gearing connecting the lower end of said shaft to said differential mechanism, transmission gearing in said box connected to the upper end of said shaft, a flexible shaft connecting said transmission gearing to said motor, arms laterally projecting from said gear box, and supporting springs interposed between the ends of said arms of said frame, substantially as described.

5. In a motor vehicle, the combination with a frame, of a motor thereon and front and rear axles provided with traction wheels, a support wherein said front axle is vertically swiveled, springs interposed between said support and the frame and between said rear axle and the frame, a reach secured to said rear axle and pivotally connected at its forward end to said front axle, a longitudinal, horizontal shaft for driving said rear axle journaled in said reach, a short vertical shaft journaled in said support for driving said front axle, a horizontal counter shaft journaled in the support, gearing connecting said counter shaft to said short vertical shaft and said longitudinal shaft, and a flexible shaft connecting said counter shaft to said motor, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,114,246. TEMPERATURE-CONTROLLING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. FREDERICK M. FURBER, Revere, Mass. Filed Mar. 31, 1914. Serial No. 828,583. (Cl. 123—170.)



1. In an automobile, the combination with an internal combustion engine and a water cooling system therefor including a radiator, of means controlled by the temperature of the cooling water for regulating the flow of air through the radiator.

2. In an automobile, the combination with an internal combustion engine and a water cooling system therefor including a radiator, of means adjustable to obstruct more or less the flow of air through the radiator and mechanism for adjusting said means automatically in accordance with the temperature of the water in said system.

3. In an automobile, the combination with an internal combustion engine and a water cooling system therefor including a radiator, of means for controlling the flow of air through the radiator and mechanism for operating said means automatically in accordance with changes in the temperature of the engine and in a manner tending to maintain the temperature of the engine between certain predetermined limits.

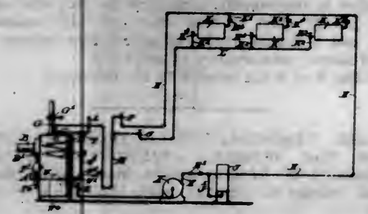
4. In an automobile, the combination with an internal combustion engine and a water cooling system therefor including a radiator, of means adjustable to obstruct more or less the flow of air through the radiator and a thermostat responsive to changes in the temperature of the engine for adjusting said means automatically to increase the flow of air through the radiator as the temperature of the engine rises above a predetermined point and to

decrease the flow of air through the radiator as the engine temperature falls below said point.

5. In an automobile, the combination with an internal combustion engine and a water cooling system therefor including a radiator, of means adjustable to obstruct more or less the flow of air through said radiator and a thermostat in said system and connected with said means to adjust it in a manner to cause the flow of air through the radiator to be reduced or increased as the temperature of the cooling water rises above or falls below a predetermined point.

[Claims 6 to 8 not printed in the Gazette.]

1,114,247. HOT-WATER HEATING SYSTEM. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business as Firm of Harrison Safety Boiler Works, Philadelphia, Pa. Filed Dec. 24, 1909. Serial No. 534,812. (Cl. 237—16.)

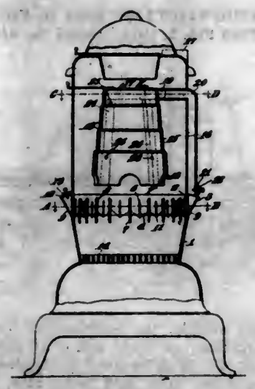


1. In a hot water heating system, the combination, with a water heater having a heating chamber provided with steam and water inlets, a water outlet, and an overflow connection for limiting the height of the water level in the heater, of the radiators, a circulating pump for pumping the water through the radiators from the water outlet of the heater, and return connections between the outlets of the radiators and the water inlet of the heater arranged to prevent the passage of water from the radiators into the heater, except when the water in the radiators is under the pressure due to the operation of the pump in forcing water through the radiators, and a bypass about the radiators through which water may pass from the pump to the inlet of the heater, said bypass being arranged to prevent the passage of water through it except upon the rise in pressure due to the closure of some or all of the radiators against the passage of water through them.

2. In a hot water heating system, the combination with a water heater having a heating chamber provided with steam and water inlets, a water outlet and an overflow connection for limiting the height of the water in the heater, of the radiators, a circulating pump for pumping water through the radiators from the water outlet of the heater, a pipe connecting the outlets of the radiators to the water inlet of the heater, a loaded valve in said pipe for preventing the passage of water from the radiators into the heater except under pressure due to the operation of the pump in forcing water through the radiators, a pipe forming a bypass about the radiators and said loaded valve, and a loaded valve in said bypass set to open only when the pressure back of it is higher than that at which the first mentioned loaded valve opens.

3. In a hot water heating system, the combination with a water heater having a heating chamber provided with steam and water inlets, a water outlet and an overflow connection for limiting the height of the water in the heater, of the radiators, a circulating pump for pumping water through the radiators from the water outlet of the heater, a pipe connecting the outlets of the radiators to the water inlet of the heater, including provisions for preventing the passage of water from the radiators into the heater except under pressure due to the operation of the pump in forcing water through the radiators, a pipe forming a by-pass about said radiators, and a loaded valve in said by-pass set to open only when the pressure back of it is higher than that in the radiators when the water is flowing therethrough in normal operation.

1,114,248. STOVE AND FURNACE. GEORGE G. GAREY, Indianapolis, Ind. Filed Feb. 24, 1913. Serial No. 750,378. (Cl. 126—77.)

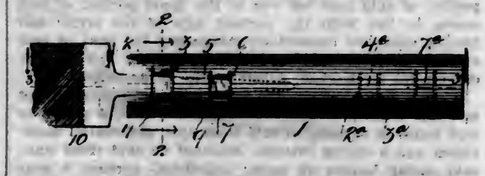


1. A magazine increasing in diameter toward its lower end, an annular flue at the upper end of the magazine and having a fresh air inlet communicating therewith, a flue extending along the magazine from the annular flue and down to the lower end of the magazine and having an outlet at its lower end, and a frangible web closing communication between the flue and the interior of the magazine.

2. A magazine having annular offset portions forming interior annular steps for increasing the diameter of the magazine toward its lower end, an annular flue at the upper end of the magazine, a fresh air inlet communicating therewith, a flue extending along the magazine from the annular flue downwardly to the lower end of the magazine and having an outlet at its lower end and a fresh air inlet at its upper end communicating with the annular flue, and a frangible web closing communication between the flue and the interior of the magazine.

3. In a device of the class described, a fire pot, a magazine supported thereabove, an annular flue surrounding the upper portion of the magazine and having a fresh air inlet, flues extending downwardly along the outer side of the magazine from the annular flue and opening at their lower ends in the fire pot, whereby the burning of fuel within the fire pot will set up a suction downwardly through the flues from the annular flue, there being a gas vent in the upper portion of the magazine and opening into one of the downwardly extending flues whereby gas generated within the magazine is sucked into said flue, and a frangible web closing communication between the interior of the magazine and one of the flues.

1,114,249. TOOL-HANDLE. DAVID I. GARRETSON, New York, N. Y. Filed Apr. 16, 1913. Serial No. 761,428. (Cl. 145—61.)



1. A device of the character described, comprising a tubular body forming a tool handle having slots therein forming intermediate straps, said straps being bent inwardly toward the middle of the tubular body, whereby the straps and wall of the body will coöperate to hold a tool in the body.

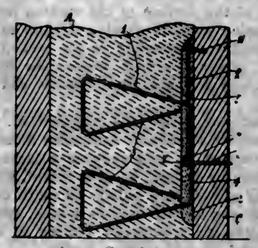
2. A device of the character described, comprising a tubular body forming a tool handle having slots extending crosswise of the body and forming a plurality of substantially parallel, integral straps extending crosswise of said body and connected therewith at both ends of the straps, said straps being bent inwardly, whereby a tool entered between the straps and body will be held thereby, with the end of the tool contained in said body.

1,114,250. TOOL-HANDLE. DAVID I. GARRETSON, New York, N. Y. Filed July 29, 1914. Serial No. 853,805. (Cl. 145—107.)

1. A device of the character described, comprising a body formed from sheet metal into tubular shape to provide a hollow tool handle and provided with integral straps formed by partially severing and bending portions of the metal inwardly in the tube to form oppositely arranged loops adapted to receive therethrough a tool shank.

2. A device of the character described, comprising a body formed from sheet metal into tubular shape to provide a hollow tool handle open at the ends, and provided with integral straps formed by partially severing and bending portions of the metal inwardly in the tube to form oppositely disposed loops adapted to receive therethrough a tool shank and to hold the same separated from the tubular body, said loops being arranged whereby the driving of the tool shank thereinto will serve to hold the edges of the tubular body abutting and thereby preventing the tubular body from opening or collapsing, and a tube inclosing the handle portion of said tubular body.

1,114,251. WALL-TIE. FRANCIS W. GARTRELL, Washington, D. C., assignor of two-fifths to Donald McLeran Wallace, Takoma Park, Md. Filed Sept. 2, 1913. Serial No. 787,780. (Cl. 72—103.)



1. A wall tie comprising a pair of members, each provided with an anchorage loop, one of the members having a shank which extends at a substantial right angle to its loop and the other member surrounding said shank and being movable lengthwise thereof.

2. A wall tie comprising a pair of members one of which is provided with an anchorage loop, and the other of which is provided with a pair of anchorage loops connected by a shank, the first named member surrounding said shank and being movable relatively thereto.

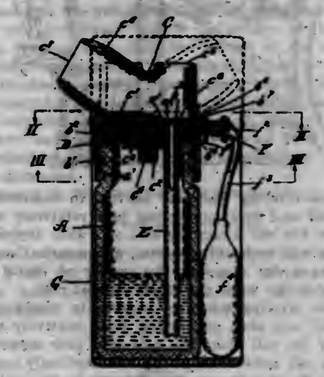
3. A wall tie comprising a pair of members one of which is provided with an anchorage loop, and the other of which is provided with a pair of anchorage loops connected by a shank, the first named member surrounding said shank and being movable lengthwise thereof.

4. A wall tie comprising a pair of members one of which is provided with an anchorage loop, and the other of which is provided with a pair of anchorage loops connected by a shank, the first named member surrounding said shank and being movable slidably and pivotally in the plane thereof.

5. A wall tie comprising a pair of members one of which is provided with an anchorage loop, and the other of which is provided with a pair of anchorage loops connected by a shank, the first named member surrounding said shank and being movable relatively thereto, and having a driving pin, disposed at an angle to its loop and adapted to originally stand out from said shank.

[Claims 6 to 25 not printed in the Gazette.]

1,114,252. SPRAYING DEVICE. ERNEST W. GAUBE, Cleveland, Ohio. Filed July 3, 1913. Serial No. 777,178. (Cl. 128—2.)



1. As a new article of manufacture, a spraying device of the character described comprising the combination of a member having an opening, a hollow member extending therethrough and having its one extremity flush with one side of said first mentioned member, said hollow member being furthermore provided adjacent such extremity with a surface sloping away from said first mentioned member, a blast duct having a discharge opening opposed to said surface, and a nozzle movably attached against said side and having a duct adapted to communicate with said hollow member, such communication being closed by the movement of said nozzle.

2. As a new article of manufacture, a spraying device of the character described comprising the combination of a member formed with siphon and blast ducts converging to a common outlet, and a nozzle movably carried by said member and having a duct in communication with said first mentioned ducts, the relative movement of said member and nozzle being adapted to close such communication.

3. As a new article of manufacture, a spraying nozzle of the character described comprising the combination of a siphon tube having its outlet end tapered and a blast duct having an outlet intersecting the surface of said tapered portion, said blast duct being inclined relative to the inclination of said tapered portion, and means for successively closing said outlets.

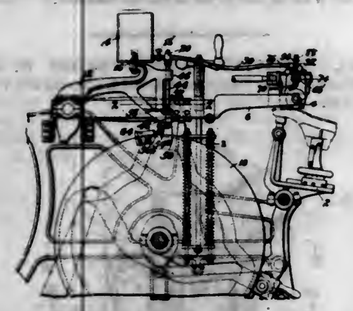
4. As a new article of manufacture, a spraying nozzle of the character described comprising the combination of a container, a cap therefor provided with an opening, a siphon tube projecting through said opening, said tube being tapered at its upper end, said cap itself formed with a duct intersecting said cap opening, a nozzle movably secured to said cap, said nozzle having an outlet in communication with said cap opening and means carried by said nozzle and adapted to close said cap opening.

5. As a new article of manufacture, a spraying nozzle of the character described comprising the combination of a cap having an opening, a duct extending obliquely through said cap and intersecting said opening, a nozzle

movable relatively to said cap and provided with an opening adapted to register with said cap opening and means for simultaneously closing said openings.

[Claims 6 to 12 not printed in the Gazette.]

1,114,253. SOLE-LEVELING MACHINE. JOSEPH GOULDBOURN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 4, 1914. Serial No. 836,185. (Cl. 12—34.)



1. A sole leveling machine, having, in combination, a leveling roll and shoe supporting jack relatively movable to transfer the roll along the sole of a shoe supported on the jack, a roll moistening device, and automatically controlled means for stopping the supply of liquid to the moistening device when the machine is at rest.

2. A sole leveling machine, having, in combination, a leveling roll and shoe supporting jack relatively movable to transfer the roll along the sole of a shoe supported on the jack, a roll moistening device, automatically controlled means for stopping the supply of liquid to the moistening device when the machine is at rest, and means for regulating the rate at which the liquid is delivered to the moistening device.

3. A sole leveling machine, having, in combination, a leveling roll and shoe supporting jack relatively movable to transfer the roll along the sole of a shoe supported on the jack, a roll moistening device, and means operating automatically to start and stop the supply of liquid to the moistening device during each leveling operation.

4. A sole leveling machine, having, in combination, a leveling roll and shoe supporting jack relatively movable to transfer the roll along the sole of a shoe supported on the jack, a roll moistening device, means operating automatically to start and stop the supply of liquid to the moistening device during each leveling operation, and means for regulating the rate at which the liquid is delivered to the moistening device.

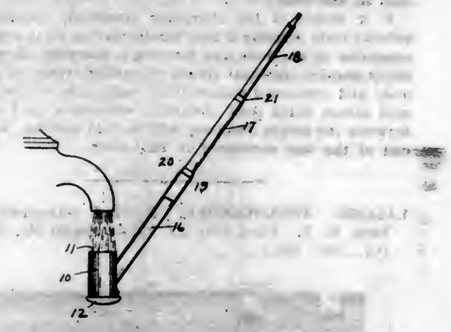
5. A sole leveling machine, having, in combination, a leveling roll and shoe supporting jack relatively movable to transfer the roll along the sole of a shoe supported on the jack, a roll moistening device, a valve for controlling the supply of liquid to the roll, and means operating automatically to open and close the valve at predetermined times during each leveling operation.

[Claims 6 to 8 not printed in the Gazette.]

1,114,254. DRINKING DEVICE. JAMES GREENE, Central Falls, and LEONARD A. ASQUITH, Pawtucket, R. I. Filed Oct. 5, 1912. Serial No. 724,146. (Cl. 137—75.)

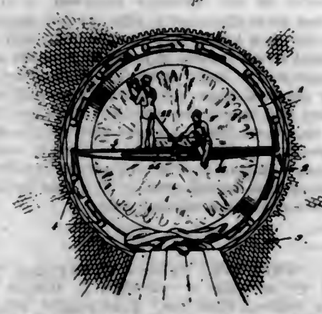
1. A drinking device comprising a cup having a depression in its wall to form lips, and an opening in said depressed portion, and a tube having a flange surrounding its end, either end of said flange being adapted to enter said recess whereby the cup is reversibly and detachably united to said tube.

2. A drinking device comprising a cup having a portion of its side wall depressed to form a flat surface with an overhanging lip at each side thereof, and an opening in said flat surface, and a tube having a flange surrounding its end, either end of said flange being adapted to enter



said recess whereby the cup is reversibly and detachably united to said stem.

1,114,255. EXCAVATING APPARATUS. IVAN A. GREENWOOD, Cleveland, Ohio. Filed Oct. 23, 1911. Serial No. 656,254. (Cl. 37—19.)



1. In a tunneling device, the combination, with a shield, of a pulley secured to said shield at a point substantially in the plane of the surface of the cutting defined thereby, a flexible tension member passing around said pulley, an earth dislodging tool attached to one end of said tension member and power operated mechanism for alternately pulling upon and releasing the opposite end of said tension member.

2. In a tunneling device, the combination, with a shield having a diametrical support extending from side to side, of a pulley carried by said support adjacent to the surface of the cutting defined by said shield, flexible tension means passing around said pulley, an earth dislodging tool secured to one end of said tension means, and power operated mechanism for alternately pulling in and releasing the opposite end of said tension means.

3. In a tunneling device, the combination, with a shield having a diametrical support extending from side to side thereof, of a pulley secured to said support at a point adjacent to the surface of the cutting defined by said shield, a fluid pressure cylinder secured to said support and having its axis substantially parallel with the axis of said shield, a flexible tension member passing around said pulley, an earth dislodging tool carried by one end of said member, means operatively connecting the opposite end of said member to the piston of said cylinder, and means causing the reciprocation of said piston so as alternately to retract and release said tension member.

4. In a tunneling device, the combination, with a shield having a substantially horizontal platform extending from side to side thereof, a fluid pressure operated cylinder carried by said platform and having a piston, means for governing the admission of fluid to said cylinder so as to cause the reciprocation of said piston, a flexible tension member operatively connected to said piston and an earth dislodging tool secured to said tension member and arranged to be drawn across the face of the cutting upon the movement of said piston in the appropriate direction.

5. In a device of the character described, the combination, with a cylindrical excavating member having its forward edges formed to cut the earth into which it is driven, and means for advancing the same in the direction parallel to its axis, of a fluid pressure cylinder carried by said cylindrical member in a position parallel to the axis thereof, and having a piston, a pulley supported by said cylindrical member in a plane adjacent to the surface of the cutting defined thereby, a flexible tension member passing around said pulley, an earth dislodging tool secured to one end of said tension member, means operatively connecting the other end of said tension member to said piston, and means for governing the admission of fluid to said cylinder so as to reciprocate said piston.

1,114,256. MACHINE FOR PACKAGING MATERIALS. GEORGE W. GWINN, New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed July 8, 1909. Serial No. 506,581. (Cl. 131—11.)

1. In a machine for packaging materials, the combination of a receptacle having an opening in the bottom thereof adjacent to one side; means suspended from said receptacle to hold a bag with the mouth thereof adjacent to the opening; means for compressing the charge in the receptacle; a plunger adapted to pass downwardly through the receptacle and to force the material therefrom and into the bag; and means for withdrawing the bag-holding means from the bag and charge while the plunger remains stationary.

2. In a machine for packaging materials, the combination of a receptacle having an opening therein; means for holding a bag with its mouth adjacent to said opening; means for compressing a charge of material within the receptacle and carrying the same over and into alinement with the opening and the mouth of the bag; a bag-form adapted to receive the bag and its contained charge and holder; a plunger serving to force the compressed charge from the receptacle into the bag and to hold the bag and the charge while the holder is being withdrawn; and means for actuating the plunger.

3. In a machine for packaging materials, the combination of a receptacle adapted to receive a charge of material to be packaged, said receptacle having a restricted opening adjacent to one side thereof; a bag-holder suspended from said receptacle; means for compressing a charge of material within the receptacle and carrying the same over into alinement with the opening and the mouth of the bag; a bag-form adapted to receive the bag and its contained charge; a plunger adapted to pass through the receptacle to force the charge therefrom and into the bag; and means for raising the receptacle and the holder while the plunger remains at rest, whereby the holder will be withdrawn from the bag and the charge will remain in the bag in a compressed condition.

4. In a machine for packaging materials, the combination of a turret carrying a series of receptacles, each adapted to receive a charge of material to be packaged; a compressor plate working in conjunction with each of said receptacles; means for moving said plates inwardly and outwardly; a bag-holder suspended beneath each of said receptacles in line with an opening formed in the bottom thereof; means for expanding said bag-holders and thus bringing the bags mounted thereon to a distended position; a second turret provided with a series of bag-forms; and a plunger adapted to successively remove the partially compressed charge from each receptacle and to compress the same within the bag when the bag is within one of the forms.

5. In a machine for packing material, the combination of a receptacle adapted to receive a charge of material to be packaged; means for partially compressing the charge within said receptacle; and a bag-holder located in line with an opening formed in the bottom of the receptacle, said holder comprising a fixed plate, a pivoted plate, an arm extending upwardly from said pivoted plate, means for normally holding said arm in its adjusted position, and a cam coöperating with the arm and adapted to throw the lower end thereof outwardly away from the fixed plate, whereby the bag which is slipped over said plate will be distended.

[Claims 6 to 20 not printed in the Gazette.]

1,114,257. COMBINED VALVE-CAP AND DUST-GUARD FOR PNEUMATIC-TIRE VALVES. WILLIAM P. HAMMOND, New York, N. Y. Filed Mar. 17, 1913. Serial No. 754,946. (Cl. 152—12.)

1. In a combined valve cap and dust guard for tire valve casings, the combination of a threaded cap adapted to be screwed upon the outer end of the tire valve casing, and a dust excluding sleeve carried by the cap so as to be removable therewith, the end of the dust excluding sleeve being adjustable upon the cap to admit of the said sleeve being brought into engagement with the rim nut after the cap has been screwed into position.

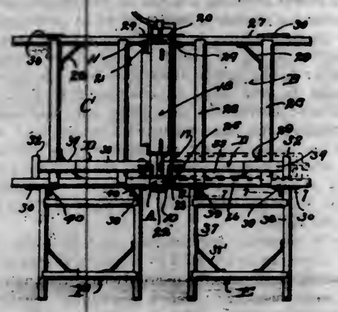
2. In a combined valve cap and dust guard for tire valve casings, the combination of a threaded cap adapted to be screwed upon the tire valve casing, said cap being formed with a flared mouth, and a dust excluding sleeve carried by the cap so as to be removable therewith, the end of the sleeve engaging the flared mouth of the cap and being movable in and out therein to admit of the sleeve being brought into engagement with the rim nut after the cap has been screwed into position.

3. The combination of a cap for tire valve casings, and a dust excluding sleeve carried by and having a threaded engagement with the said cap, the dust excluding sleeve being adapted to engage the rim nut.

4. The combination of a cap for tire valve casings, said cap being formed with a flared mouth, and a dust excluding sleeve having one end thereof threaded within the flared mouth of the valve cap while the opposite end thereof is adapted to engage the rim nut.

5. The combination of a cap for tire valve casings, said cap having a flared mouth and being provided with left hand threads, and a dust excluding sleeve carried by the valve cap and provided with left hand threads adapted to engage the left hand threads of the valve cap, the said dust excluding sleeve being adapted to be brought into engagement with the rim nut.

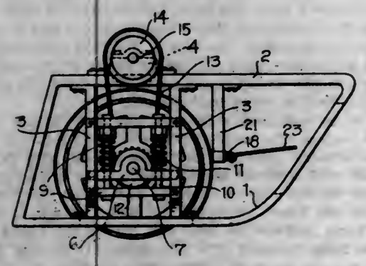
1,114,258. FOLDING WASHBENCH. ARTHUR F. HANISCH, Dayton, Ohio. Filed Nov. 6, 1912. Serial No. 729,803. (Cl. 68—35.)



1. A wash bench comprising a main frame, oppositely disposed receptacle supporting sections hingedly connected to the main frame and foldable upwardly against the latter, legs secured to the out-ends of said receptacle supporting sections and foldable against the under side of the latter and additional receptacle supporting sections hingedly connected to corresponding sides of said first named receptacle supporting sections for movement in a plane at right angles to the plane of movement of the first named receptacle supporting sections and foldable against the outer sides of the latter.

2. The combination with a folding wash bench including a frame and a plurality of foldable receptacle supporting sections hingedly associated with the frame, of a wringer swingingly supported by the frame and movable in a horizontal plane to a position between certain adjacent receptacle supporting sections, and a U-shaped member pivoted to the inner side of the wringer and embracing the outer side thereof, said member being movable into embracing relation with a part of a given receptacle supporting section to lock the wringer against pivotal movement.

1,114,259. SLEIGH ATTACHMENT FOR AUTOMOBILES. CLYDE D. HARRIS, Helena, Mo. Filed Nov. 7, 1913. Serial No. 799,781. (Cl. 21—47.)



1. In a sleigh attachment for vehicles, the combination with an axle; of a frame-like runner carried thereon, a pair of vertical spaced apart guide rails secured to the upper and lower portions of said runner and also forming supports therefor, an arm slidably mounted between said guide rails, a pair of transverse bars secured to said guide rails above and below said arm, guide rods loosely disposed through said movable arm and secured at their upper and lower ends to said upper and lower transverse bars, coil springs encircling said rods between the movable arm and the upper transverse bar to normally force said arm downwardly, means in connection with the upper transverse bar and said coil springs to adjust the tension of the latter, a drive wheel supported on said movable arm and adapted to normally project below the lower portion of said runner, means for rotating said drive wheel upon the rotation of the axle, and a drum-like shield secured to the runner and inclosing said drive wheel, guide rods and adjunctive parts.

2. In a sleigh attachment for vehicles, the combination with an axle; of a frame-like runner carried thereon, a pair of guide rails secured to the upper and lower portions of said runner in spaced relation to one another and forming supports therefor, said guide rails being offset intermediate of their ends to project in a plane outside of the vertical plane of said runner, an arm slidably mounted between said guide rails, a pair of transverse bars rigidly secured to said guide rails, respectively, above and below said arm, guide rods secured stationarily at their upper and lower ends to the transverse bars, externally threaded sleeve members carried by the upper transverse bar and receiving said guide rods therethrough, internally threaded cup-shaped members loosely applied on said guide rods and engaged with the externally threaded sleeves, coil springs encircling said guide rods between the slidable arm and said guide members to normally force the slidable arm downwardly, said sleeves and cup-shaped members affording a means for the adjustment of the tension of said springs, a drive wheel rotatably supported on said arm and adapted to normally project below the lower portion of said runner, means for rotating said drive wheel upon the rotation of the axle, and a drum-like shield secured to the runner inclosing said drive wheel, guide rods and adjunctive parts.

1,114,260. WINDOW. FREDERICK HAUSER, San Francisco, Cal. Filed Jan. 6, 1914. Serial No. 810,543. (Cl. 20—42.)

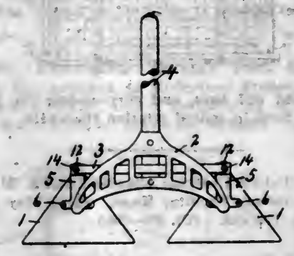
1. A reversible window having a longitudinally grooved side frame member, a sash having a longitudinally grooved part adjacent to the side frame member, a block pivoted thereto and slidable in the first-named groove, an arm pivoted at one end to said member, an element frictionally slidable in said second-named groove, and a link pivotally connected at its ends to said slidable element and arm respectively.

2. A reversible window having a longitudnally grooved side frame member, a sash, a block pivoted to said sash and slidable in said first-named groove, an arm pivoted at one end to said member, and a link pivoted to one of said elements, the sash and arm, and having a frictional slidable engagement with the other element.

3. A reversible window having longitudinally grooved side frame members, a sash having longitudinally grooved parts adjacent to the side frame members, blocks pivoted thereto and slidable in the first-named groove, arms each pivoted at one end to said members, elements frictionally slidable in said second-named grooves, and links pivotally connected at their ends to said slidable elements and arms respectively.

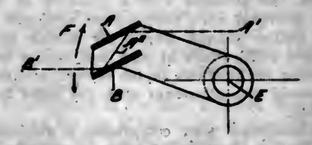
1,114,261. CLOTHES-WASHING MACHINE. MEAD HEDGLON, Syracuse, N. Y., assignor to Victoria A. Dreyfus, New York, N. Y. Filed Apr. 15, 1912. Serial No. 690,888. (Cl. 68—5.)

1. A clothes washing device comprising a pair of conical dashers, a yoke pivotally connected to the sides of the dashers at points between their bases and apexes, a link pivotally connected to the apex of the dashers, and an operating handle secured to the yoke perpendicular to a plane passing through the axes of movement of the dashers on the yoke.



2. A clothes washing device comprising a pair of dashers spaced apart side by side, a yoke having its ends pivotally connected to said dashers intermediate their ends and having its central portion arched upwardly, a vertical handle secured to the center of the yoke, and a link pivoted to the upper ends of the dashers.

1,114,262. DIVERTER FOR FLUID STREAMS. GEORGE JACKSON HENRY, Jr., San Francisco, Cal. Filed Aug. 22, 1912. Serial No. 716,434. (Cl. 138—18.)



1. In a deflector for fluid streams a primary surface for receiving a fluid jet and changing the direction of flow of the fluid while passing over said surface in combination with a secondary surface for receiving said fluid after its passage over the primary surface and partially or wholly returning the direction of flow to that of the fluid jet.

2. In a deflector for interposing in the path of a fluid stream or streams, a plurality of surfaces to receive the flowing fluid, the turning moments of the surfaces wholly or partially neutralizing to reduce the effort necessary to effect movement of the deflector.

3. In a fluid stream diverter a multiplicity of surfaces arranged so that the moments of the forces tending to displace them are wholly or in part neutralised.

4. In a fluid stream diverter a multiplicity of surfaces arranged so that the moments of the forces tending to displace them are wholly or in part neutralised, so that the force required to move said diverter into or out of the fluid jet, wholly or in part, is reduced.

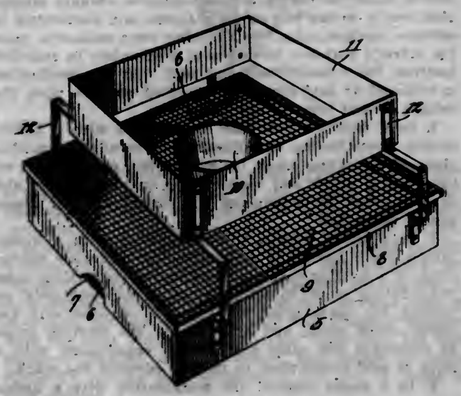
5. In a stream diverter in combination with a jet nozzle, curved surfaces for receiving all or any part of a fluid jet said surfaces being opposed to each other as to curvature to divert the jet from its original path.

[Claims 6 to 10 not printed in the Gazette.]

1,114,263. SHIP CONSTRUCTION. JAMES TROUP HORNE, Rock Ferry, England. Filed Mar. 15, 1913. Serial No. 754,490. (Cl. 114—65.)

In a ship, the combination of hatchways, decks with apertures in proximity to the hatchways, deck beams attached thereto, plate structures connected with the deck beams, plates with apertures attached to the structures with the apertures disposed beneath the apertures in the decks, hollow supporting pillars disposed in line with the said apertures and attached to the said decks and plates, ladders disposed within the hollow pillars for enabling a person to pass up and down the pillars and through the said apertures, and means for entering and passing out of the hollow pillars.

1,114,264. POULTRY-WATERING DEVICE. HOWARD ELWOOD HOYLE, Whittier, Iowa. Filed Dec. 29, 1913. Serial No. 809,388. (Cl. 119—1.)



1. A watering device comprising an open frame, a screen mounted over the top of the frame to support a water vessel, and an inclosing shield carried by the frame, said shield being spaced at the bottom from the top of the frame.

2. A watering device comprising an open frame, a screen removably mounted over the top of the frame to support a water vessel, an inclosing shield spaced at the bottom from the top of the frame, and supports for the shield carried by the frame, said shield supports being located on opposite sides of the frame and offset outward therefrom.

3. A watering device comprising an open frame, a catch-basin inside the frame, a support for a water vessel mounted over the top of the frame, and an inclosing shield carried by the frame, said shield being spaced at the bottom from the top of the frame.

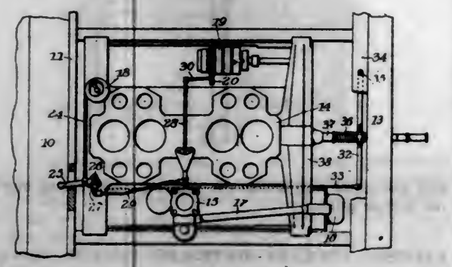
4. A watering device comprising an open frame, a catch-basin inside the frame, a support for a water vessel removably mounted over the top of the frame, an inclosing shield spaced at the bottom from the top of the frame, and supports for the shield carried by the frame, said shield supports being located on opposite sides of the frame and offset outward therefrom.

5. A watering device comprising an open frame, a catch-basin inside the frame, a screen removably mounted over the top of the frame to support a water vessel, an

inclosing shield spaced at the bottom from the top of the frame, and supports for the shield carried by the frame, said shield supports being located on opposite sides of the frame and offset outward therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,114,265. STARTING MECHANISM FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 6, 1911. Serial No. 612,705. (Cl. 123—186.)



1. In a motor vehicle, the combination with a hydrocarbon motor having an adjustable spark advance mechanism and a spring to yieldingly retain said mechanism in advance position, of a free swinging lever accessible from the driver's seat for moving said mechanism to retarded position, the connections being such that the mechanism is returned by said spring to advanced position upon the release of said lever by the driver.

2. In a motor vehicle, the combination with a hydrocarbon motor having an adjustable spark advance mechanism, of a starting crank for said motor, and a spring on the starting crank and connected to said mechanism and to said crank for advancing the former and for disengaging the latter.

3. In a motor vehicle, the combination with a hydrocarbon motor having an adjustable spark advance mechanism, of a starting crank for said motor, connections from the starting crank to said mechanism for positively retarding the spark when the crank is engaged with the motor crank shaft, and a spring on the starting crank to disengage the same and having engagement with a lever of said connections to thereby advance the spark.

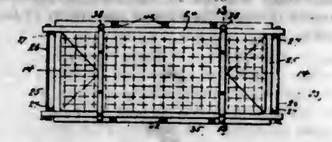
4. In a motor vehicle, the combination with a hydrocarbon motor having an adjustable spark advance mechanism, of a starting crank for said motor, connections from the starting crank to said mechanism for positively retarding the spark when the crank is engaged with the motor crank shaft, and permitting the retarding of the spark independently of the engagement of said starting crank, and a spring on the starting crank to disengage the same and having engagement with the lever of said connections to thereby advance the spark.

5. In a motor vehicle, the combination with a hydrocarbon motor having a spark control device, of a starting crank for said motor, and connections from said starting crank to said device whereby the initial movement of the starting crank toward engaging position fully retards said device and the continued movement of said crank to full engagement serves to retain said device in retarded position.

[Claim 6 not printed in the Gazette.]

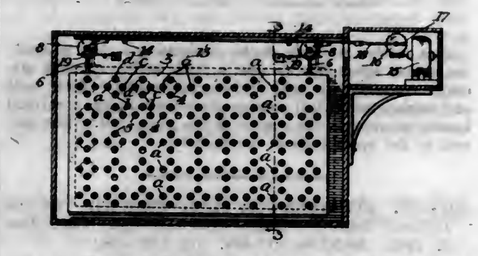
1,114,266. VAULT-MOLD. JOHN R. JEWETT, Wood River, Nebr. Filed Aug. 11, 1913. Serial No. 784,185. (Cl. 25—130.)

A mold for vault lids comprising a bottom composed of cross sills, and side and end bars mounted on top of said cross sills, an arched form resting on the cross sills and fitting between the side and end bars, the sides and ends of the form coinciding with the inner edges of the side and end bars, and side and end members mounted on the afore-



said side and end bars, and surrounding the sides and ends of the form in spaced relation therewith.

1,114,267. ILLUMINATED CHANGEABLE SIGN. LENORA H. JONES, Wichita, Kans. Filed May 27, 1913. Serial No. 770,165. (Cl. 40—28.)



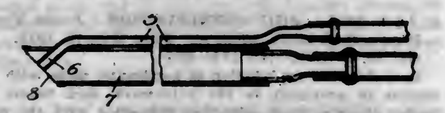
1. An illuminated sign comprising two relatively movable plates, one provided with a plurality of holes, and the other provided with perforations arranged in a plurality of similar groups, means for closing any one or more of said perforations at will, and means for causing corresponding perforations in the several groups to come simultaneously into alinement with the holes in the first named plate.

2. An illuminated sign comprising a stationary plate provided with a plurality of holes, a movable plate adjacent thereto and provided with perforations arranged in a plurality of similar groups, one group for each of the holes in the stationary plate, and means for giving said movable plate a revolving movement to bring said perforations successively into alinement with said holes.

3. An illuminated sign comprising a front plate provided with a plurality of holes equally spaced apart, a rear plate adjacent thereto and provided with a plurality of similar groups of perforations equally spaced apart in circles of the same diameter, and means for giving said rear plate a revolving motion in a circle of the same diameter as the groups.

4. An illuminated sign comprising a stationary plate provided with a plurality of holes, a movable plate arranged adjacent thereto and provided with perforations arranged in circles of the same diameter, and means for giving said movable plate an intermittent revolving motion, to bring said perforations successively into alinement with said holes, and to allow an interval of rest between every two positions of said plate.

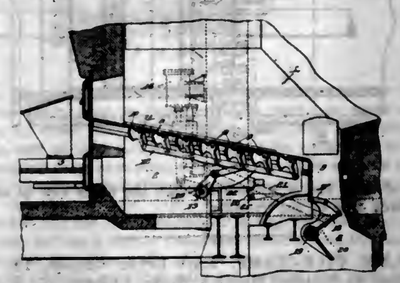
1,114,268. METHOD FOR SURGICALLY CLEANSING WOUNDS AND OTHER SURFACES. CHARLES EDMUND KELLS, New Orleans, La. Filed Oct. 14, 1913. Serial No. 795,059. (Cl. 128—9.)



The herein described improvement in the art of surgically washing wounds, which consists in discharging a cleansing fluid in limited volume and in close proximity to the wound to be cleansed to cause such cleansing fluid

to flow in a thin film over relatively larger areas of such wound, and immediately withdrawing said cleansing fluid with the suspended matter carried thereby by suction exerted adjacent its point of application, whereby the cleansing fluid covers successive areas of the wound, and the spread of dislodged matter from each area beyond the boundaries thereof as the same is washed is prevented.

1,114,269. FURNACE. WILLIAM JOHN KENNEY, Wilmette, Ill., assignor to Underfeed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 13, 1911. Serial No. 614,056. (Cl. 110—39.)



1. In combination, a furnace, a retort within the furnace, stationary desd plates arranged at the sides of the retort and with the latter dividing the furnace into an upper combustion chamber and a lower air chamber, dogs mounted on said dead plates and adapted to move upwardly and rearwardly, means for actuating said dogs, means for delivering fuel to the retort, and means for introducing air into the air chamber, there being passages from the air chamber to the combustion chamber at the sides of the retort.

2. In combination in a stoker, a retort, twyer blocks arranged around the top of the retort, stationary dead plates arranged about the retort outside of the twyer blocks near the top of the retort, means for feeding fuel into said retort, dogs mounted on said dead plates and adapted to move upwardly and rearwardly to carry the clinkers and ashes toward the rear of the retort, and means for actuating said dogs.

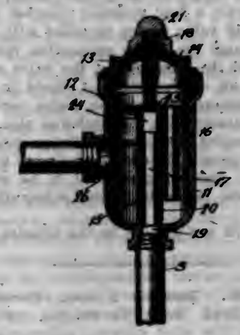
3. In combination, a furnace, a retort within the furnace, stationary dead plates arranged at the sides of the retort and coöperating therewith to divide the furnace into an upper combustion chamber and a lower air chamber, there being a discharge passage for clinkers and ashes at one end of the retort, dogs mounted on said dead plates and movable upwardly and longitudinally to carry the clinkers and ashes toward said passage, means for actuating said dogs, means for delivering fuel to the retort, and means for admitting air into said air chamber, there being passages leading from said air chamber to the combustion chamber at the sides of the retort.

4. In combination, a furnace, a retort within the furnace, means between the sides of the retort and the side walls of the furnace for moving clinkers and ashes toward one end of the furnace, there being a discharge passage for clinkers and ashes adjacent to the retort at said end of the furnace, said means forming with the retort a member dividing the furnace into an upper combustion chamber and a lower air chamber, there being passages leading from said air chamber to the combustion chamber at the sides of the retort, means for introducing air under pressure into said air chamber, and means located in said passage at a considerable distance below the top of the retort for periodically removing only the lowermost portion of the clinkers and ashes in said passage, the last mentioned means being perforated to permit air to flow up through the body of clinkers and ashes in said passage.

5. In combination, a furnace, a retort within the furnace, stationary dead plates arranged at the sides of the retort and coöperating therewith to divide the furnace into an upper combustion chamber and a lower air chamber, there being a discharge passage for clinkers and ashes in the furnace adjacent to one end of the retort, dogs mounted on said dead plates so as to be movable upwardly and longitudinally of the retort so as to move the clinkers and ashes toward said passage, a dumping plate extending across said passage, a common operating means for said dogs and said plate, means for delivering fuel to the retort, and means for delivering air into said chamber.

[Claim 6 not printed in the Gazette.]

1,114,270. HEATING SYSTEM. JOHN H. KINEALY, Boston, Mass., assignor, by mesne assignments, to Andrew G. Paul Company, a Corporation of Massachusetts. Original application filed Apr. 10, 1903, Serial No. 152,008. Divided and this application filed May 16, 1904. Serial No. 208,103. (Cl. 137—114.)



1. The combination in a heating system of a radiator, a supply pipe, a discharge pipe and a valve device in the discharge pipe, said valve device including a valve casing provided with a discharge port and an inlet port therefor, a movable valve member controlling said discharge port, a valve controlling piece operated by fluid pressure; the casing forming a fluid pressure chamber on one side of said controlling piece, said valve device provided with an equalizing passage connecting said fluid pressure chamber with the inlet and a second passage connecting the fluid pressure chamber with an outlet, and means for automatically varying the resistance to the flow of liquid in said passage.

2. The combination in a heating system of a heater or radiator, a supply pipe, a discharge pipe and a valve device in the discharge pipe comprising a valve casing provided with a discharge port and an inlet port for the water, a valve piece controlling the discharge port, a fluid pressure motor controlling the valve piece, the casing being provided with a fluid pressure chamber on one side of the motor, said valve device provided with an equalizing passage connecting the fluid pressure chamber and the inlet side of the valve adapted to permit the flow through it of air and steam and some water, an escape pipe, and a second passage connecting the fluid pressure chamber with said escape pipe, and adapted to be restricted in capacity when the motor is raised.

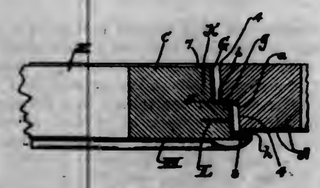
3. The combination in a heating system of a radiator, a supply pipe, a discharge pipe, and a valve device in the discharge pipe, said valve device including a valve casing provided with a discharge port and an inlet port, a movable valve member controlling said discharge port, a valve controlling piece operated by fluid pressure; the casing forming a fluid pressure chamber on one side of said controlling piece, said valve device provided with an equalizing passage connecting said fluid pressure chamber with the inlet and a second passage connecting the fluid pressure chamber with an outlet, and discharge means for automatically varying the resistance to the flow of liquid in said passage consisting of a screw threaded plug.

4. The combination in a heating system of a radiator, a supply pipe, a discharge pipe, and a valve device in the discharge pipe, said valve device comprising a valve casing provided with a discharge port and an inlet port, a valve piece controlling the discharge port, a fluid pressure motor controlling the valve piece, the casing forming a fluid pressure chamber on one side of the motor, said valve device provided with an equalising passage through the motor connecting the fluid pressure chamber and the inlet side of the valve and a second passage connecting the fluid pressure chamber with an escape pipe, means for automatically varying the resistance to the flow of liquid through said second passage, and an escape pipe, substantially as set forth.

5. The combination in a heating system of a heater or radiator, a supply pipe, a discharge pipe and a valve device in the discharge pipe, comprising a valve casing provided with a discharge port and an inlet port for the water, a valve piece controlling the discharge port, a fluid pressure motor controlling the valve piece, the casing being provided with a fluid pressure chamber on one side of the motor, said valve device provided with an equalising passage through the motor connecting the fluid pressure chamber and the inlet side of the valve and adapted to be sealed by an accumulation of liquid in the casing and a second passage through the motor connecting the fluid pressure chamber with the discharge pipe, the second passage being smaller than the equalising passage and of such a size as to permit the escape of air but to retard the escape of water, and being adapted to be restricted in capacity when the motor is raised, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

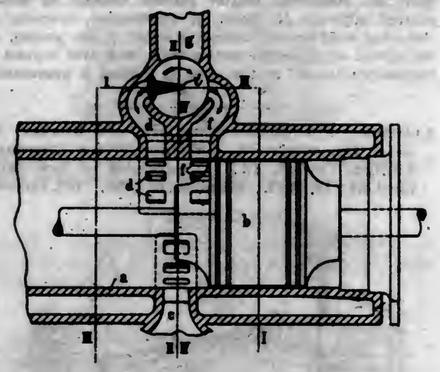
1,114,271. DOOR. THEODOR KUNDTZ, Cleveland, Ohio. Filed Apr. 22, 1912. Serial No. 692,354. (Cl. 21—125.)



The combination, with a vehicle-body having a doorway and stop-forming means arranged between the outer and inner sides of said body, of a door engaging said doorway in its closed position and comprising a wooden frame which comprises a lock-stile provided with a metal bar which is secured to the forward edge of and reinforces and protects said stile, which bar is provided between the outer and inner sides of said stile with stop-forming means adapted to engage the stop-forming means on the body in the aforesaid position of the door, said bar having a flange which is arranged at the outer side of said stile and projects forwardly of the forward edge of said stile, the door also comprising a metal plate which forms the outer side of the door and has a portion thereof flanged over the inner side of the aforesaid flange, said flanged portion of said metal plate extending opposite but being spaced from the outer side of said body.

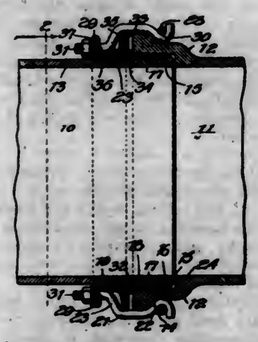
1,114,272. TWO-CYCLE ENGINE. KARL KUTZBACH, Dresden, Germany, assignor to Maschinenfabrik Augsburg-Nürnberg A. G., Nuremberg, Germany. Filed Nov. 12, 1913. Serial No. 800,477. (Cl. 123—61.)

In a double-acting two-cycle engine the combination with the engine cylinder provided with two rows of scavenging slots and exhaust slots, of a pipe adapted to supply compressed air to said rows of scavenging slots, and a valve arranged at the junction of said pipe and the passages leading to said two rows of scavenging slots so as to control the supply of compressed air to said slots in such timed relation to the movements of the piston that the scavenging of the cylinder is always begun through one



row of slots and continued through the other row of slots for each side of the cylinder.

1,114,273. PIPE-CLAMP. JOHN LEVEY, Chicago, Ill., assignor to National Machine Works, Chicago, Ill., a Corporation of Illinois. Filed Mar. 7, 1914. Serial No. 823,131. (Cl. 137—28.)



1. The combination with pipes connected together by a bell and spigot joint, of a member on said spigot-portion, packing between said bell-portion and said member, bars extending lengthwise of said joint, bands engaging said bars at opposite ends of the latter and clamping them about said bell and spigot portions, the band about the ends of said bars overlying the spigot portion, surrounding said member, and means engaging said bars and member for forcing said member toward said bell-portion and against said packing.

2. The combination with pipes connected together by a bell and spigot joint, of a member on said spigot-portion, packing between said bell-portion and said member, bars extending lengthwise of said joint, bands engaging said bars at opposite ends and clamping them about said bell and spigot portions, the band about the ends of said bars overlying the spigot portion, surrounding said member, the ends of said bars adjacent to said spigot being threaded, and nuts screwed upon the threaded ends of said bars and bearing against said member, for the purpose set forth.

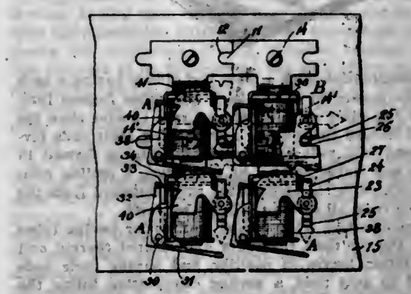
3. The combination with pipes connected together by a bell and spigot joint, a ring-member on said spigot-portion, packing interposed between said member and said bell-portion, bars having deflected threaded ends and hook-shaped ends lying adjacent, respectively, to said spigot and bell-portions, bands engaging said bars at their hook-portions and their other ends, respectively, for clamping said bars about said bell and spigot-portions, and nuts screwing upon the threaded ends of said bars and against the said member on said spigot-portion for forcing said last referred to member toward said bell-portion and against said packing.

1,114,274. PIPE. ROBERT L. LOFLIN, High Point, N. C. Filed Feb. 17, 1913. Serial No. 748,966. (Cl. 131—12.)

1. The combination with a smoker's pipe provided with an auxiliary bore in communication with the main aperture by cross passages, of a threaded plug engaging the open end of said auxiliary bore, a tube connected to and extending from said plug, said plug provided with an opening extending therethrough and in communication with the interior of said tube, said tube provided with an abraded end for the engagement of pipe cleaning material, a knob having a needle connected thereto and frictionally engaging the side walls of and housed by the said tube, the said needle provided with an abraded end, said needle being withdrawable from the said tube without opening the said auxiliary bore.

2. A smoker's pipe comprising a body portion provided with an auxiliary bore in communication with the main bore by cross passages, a plug engaging and closing the open end of said auxiliary bore, a tube carried by said plug, said plug provided with an opening extending therethrough and communicating with the interior of said tube, said tube provided with an abraded end for the engagement of pipe cleaning material, a knob having a needle connected thereto frictionally engaging the side walls of and housed by said tube, the needle provided with an abraded end, said needle being withdrawable from the said tube without opening the said auxiliary bore.

1,114,275. ANNUNCIATOR. ADAM LUNGEN, New York, N. Y., assignor to Edwards & Co., New York, N. Y., a Corporation of New York. Filed Dec. 19, 1911. Serial No. 666,695. (Cl. 177—329.)



1. In an annunciator, comprising in combination, a panel upon which said annunciator is supported, a keeper comprising a member projecting laterally from said panel, a member projecting rearwardly and upwardly from the aforesaid member and adapted to be secured to said panel, and wings projecting vertically and downwardly from said lateral member and engaging with said gravity drop to hold the latter in elevated position, said means adapted to limit the movement of the armature from the magnet.

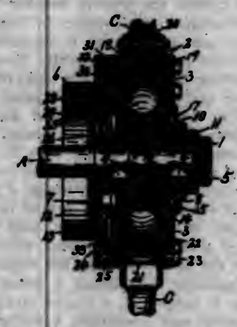
2. In an annunciator, comprising a panel upon which said annunciator is supported, a keeper comprising a member projecting laterally from said panel, a member projecting rearwardly and upwardly from the aforesaid member and secured to said panel, and wings extending at right angles to the panel and projecting vertically and downwardly from said lateral member, an electromagnet secured at one of its ends to and located below said lateral member and between the vertical wings, an armature pivoted to one of said wings, a gravity drop supported by the other wing, and means on said armature and engaging with said gravity drop to hold the latter in elevated position, said means adapted to limit the movement of the armature from the magnet.

3. In an annunciator, comprising a panel upon which said annunciator is supported, a keeper struck up from a single piece of metal and comprising a horizontal member projecting laterally from said panel, a member projecting rearwardly and upwardly from the lateral member and adapted to be secured to the panel, and wings projecting vertically and downwardly from the sides of said lateral member, in combination with an electromagnet secured at one of its ends in a vertical position centrally upon said lateral member and located between the vertical wings, an armature pivoted to one of said wings, a gravity drop supported by the other wing, and means on said armature and engaging with said gravity drop to hold the latter in elevated position, said means adapted to limit the movement of the armature from the magnet.

4. In an annunciator element, an electromagnet, a panel, a keeper for the electromagnet, means for supporting the keeper upon said panel, said support and keeper being struck up from one piece of sheet metal, and comprising a member projecting laterally from said panel, wings projecting downwardly from said lateral member, one of said wings adapted to support a gravity member and the other of said wings adapted to support an armature, said keeper projecting rearwardly and downwardly from said means whereby the support for another element may be located on the panel in front of the keeper and electromagnet of said first mentioned element, substantially as described.

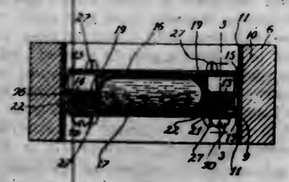
5. In an annunciator, comprising, in combination, a panel upon which said annunciator is supported, a keeper comprising a member projecting laterally from said panel, a member projecting rearwardly and upwardly from the aforesaid member and adapted to be secured to said panel, and wings extending substantially at right angles to the vertical plane of said panel and projecting vertically and downwardly from said lateral member, an electromagnet secured at one of its ends to and located below said lateral member and between the vertical wings, one of said wings provided with lugs projecting laterally therefrom, a pintle mounted in said lugs and located parallel to the plane of its supporting wing, an armature pivoted upon said pintle and provided with an upwardly projecting arm adapted to normally contact with the said wing whereby the movement of said armature is limited thereby in one direction, the other of said wings provided with lugs projecting laterally therefrom, a pintle supported by said lugs and arranged substantially parallel to the first mentioned pintle and also parallel to the plane of the last mentioned wing, a shouldered gravity drop fixed upon said pintle and adapted to oscillate about the same as a center, one of said lugs provided with means for limiting the movement of said drop in either direction, said upwardly projecting arm of the armature normally located in the path of movement of said shoulder and allowing free movement of said gravity member in the upward direction but adapted to engage said shoulder and lock the gravity member against movement in the downward direction, said gravity member adapted to be released when the magnet is excited to attract the armature, and resilient means for maintaining the armature away from the core of the magnet and the upwardly projecting arm normally in the path of the shoulder on the gravity drop.

1,114,276. RESILIENT WHEEL. JAMES B. LYNCH, Syracuse, N. Y. Filed Jan. 12, 1914. Serial No. 811,693. (Cl. 152—42.)



A vehicle wheel comprising a hub having the outer surface of its inner end angular in cross section, a rectangular driving plate fitted upon said angular portion of the hub to rotate therewith and provided with guide flanges on each of its four sides, guide blocks slidably interlocked with said flanges, a guide plate having radial guide ways for said blocks, yielding buffers between the outer ends of the blocks and guide plate, a spoke-supporting rim surrounding the hub and secured to said guide plate, and a pneumatic tube interposed between the hub and rim.

1,114,277. SPIRIT-LEVEL. JAMES F. LYONS, Somerville, Mass. Filed Jan. 16, 1913. Serial No. 742,493. (Cl. 33—213.)



1. In a device of the class described the combination of a stock provided with a hole extending laterally therethrough, a bushing formed in two cylindrical sections arranged in said hole, and a ring consisting of a pair of semicircular members arranged in said hole intermediate the adjacent ends of said bushing sections, a spirit glass, a casing for said spirit glass adapted to engage and to be angularly adjusted in said ring, and means adapted to secure said casing at a predetermined angle relatively to said stock.

2. In a device of the class described the combination of a stock provided with a hole extending laterally therethrough, a bushing arranged in said hole and formed in two sections each secured to said stock, a ring consisting of a pair of semicircular members interposed between the adjacent ends of said sections, means on said bushing adapted to engage said ring and lock the same against displacement, a spirit glass, a casing adapted to contain said glass, said casing having longitudinally arranged slots at opposite ends thereof adapted to receive opposite portions of said ring and permit said casing to be angularly adjusted therein, and means contained in said casing adapted to engage said ring and lock the same at a predetermined angle relatively to said stock.

3. In a device of the class described the combination of a stock provided with a hole extending laterally therethrough, a ring arranged in said hole and secured to said stock, a spirit glass, a tube arranged to be angularly adjusted within said stock and adapted to contain said spirit glass, said tube having longitudinally arranged slots at opposite ends thereof, adapted to receive said ring, and guide said tube during the angular adjustments thereof, nuts arranged in the ends of said tube adjacent said slots respectively adapted to substantially fit that portion of said tube, and screws having screw-threaded engagement with said nuts and adapted to engage said ring and lock said casing at a predetermined angle relatively to said stock.

1,114,278. TREATING ROSIN. FRANK E. MARINER, Gull Point, Fla., assignor to The Pensacola Tar & Turpentine Company, Gull Point, Fla., a Corporation of Florida. Filed Dec. 23, 1913. Serial No. 808,486. (Cl. 203—4.)

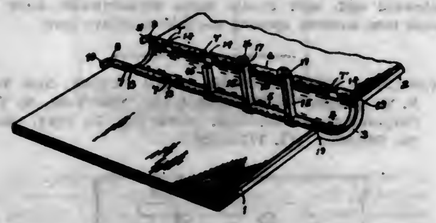
1. The process which consists in distilling over rosin, from which the turpentine has previously been separated, at a temperature below its boiling point at atmospheric pressure, condensing the distillate, and continuing the distillation until substantially all the rosin has been distilled over, whereby a grease-set high in abietic-acid content is produced.

2. The process which consists in distilling over, with superheated steam, rosin, from which the turpentine has previously been separated, condensing the distillate, and continuing the distillation until substantially all the rosin has been distilled over, whereby a grease-set high in abietic-acid content is produced.

3. The process which consists in distilling over, with superheated steam at a temperature of about 275° C., rosin, from which the turpentine has previously been separated, raising the temperature of the steam to complete the distillation of substantially all the rosin, and condensing the distillate, whereby a grease-set high in abietic-acid content is produced.

4. As a grease-set for lubricant greaser, the distillate of rosin having an abietic-acid content of over 65 per cent.

1,114,279. SEAL FOR RECORD-BOOKS. GEORGE MATTHEWS, Richmond, Ind. Filed May 11, 1914. Serial No. 837,636. (Cl. 129—24.)



1. In combination with a loose leaf binder having a back and a base connected to the back and tubes formed integral with the edges of the base and rods shorter than the tubes and located therein and arms having their ends pivoted around said rods and located in notches formed in the tubes and leaves carried by said arms, a sealing composition located in the ends of the tubes outward from the ends of the rods, all substantially as set forth.

2. In combination with a loose leaf binder having tubes and rods shorter than the tubes and located therein and arms to retain leaves in position and having their ends connected to said rods, a sealing composition filling the ends of the tubes outward from the ends of the rods to retain the rods permanently in the tubes.

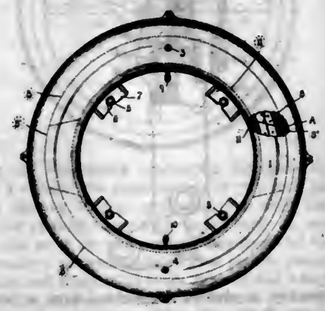
3. In combination with a loose leaf binder having tubes and rods shorter than the tubes located therein and arms adapted to be disposed through apertures in leaves the said rods being disposed through apertures in the end portions of the arms, a metallic sealing means filling the ends of the tubes outward from the ends of the rods and united to the interior of the tubes by heat.

4. In combination with a loose leaf binder having tubes and rods shorter than the tubes and located therein, arms through the end portions of which said rods are disposed, there being notches formed in the tubes to receive the end portions of said arms, fusible sealing means filling the

ends of the tubes outward from the ends of the rods and having identifying means impressed in the exposed surfaces thereof, substantially as set forth.

5. In combination with a loose leaf binder having tubes and rods shorter than the tubes located therein, there being notches formed in the tubes to expose said rods and arms having their ends located in said notches and attached to said rods, fusible sealing means located in the ends of the tubes outward from the ends of the rods and fused therewith and having identification means exposed on the surface thereof.

1,114,280. MOLD FOR PNEUMATIC TIRES. NELSON W. MCLEOD, St. Louis, Mo., and MARK A. DEES, Pascagoula, Miss., assignors to American Tire Company, St. Louis, Mo., a Corporation of Missouri. Filed May 8, 1911, Serial No. 625,784. Renewed Feb. 19, 1913. Serial No. 749,531. (Cl. 18—38.)



1. A tire mold comprising a sectional shell within which the tire having separable edges is housed and a hollow circular core within said shell, the said core comprising a plurality of curved hollow sections, the said core sections having open ends abutting against and in continuous communication with each other throughout the core, and means for conducting a fluid pressure heating medium into the core at its inner circle, the wall of the core being perforated and the core being imperforate at its inner circle aside from the fluid conducting means.

2. A tire mold comprising a sectional shell within which the tire having separable edges is housed and a hollow circular core within said shell, the said core comprising a plurality of curved hollow sections, the said core sections having open ends abutting against and in continuous communication with each other throughout the core, means for conducting a fluid pressure heating medium into the core at its inner circle, the wall of the core being perforated and the core being imperforate at its inner circle aside from the fluid conducting means, and said core being provided at its inner circle with a packing adapted to seat between the separable edges of the tire.

3. A tire mold comprising a sectional shell within which the tire having separable edges is housed and a hollow circular core within said shell, the said core comprising a plurality of curved hollow sections perforated at the periphery and sides of the core, the said core sections having open ends abutting against and in continuous communication with each other throughout the core, means for conducting a fluid pressure heating medium into the core at its inner circle, the core being imperforate at its inner circle aside from the fluid conducting means, and a packing ring connecting said core sections at the inner circle of the core.

4. A tire mold composed of a pair of hollow mold sections adapted to surround the tire, a packing ring adapted to be held between the inner edges of a tire confined by said mold sections, hollow core sections provided with perforations and arranged between said mold sections with their ends abutting against each other to produce a hollow circular core, means for connecting said hollow core sections to said packing ring, the ends of said core sections being open to allow fluid to pass from one section to another, and means for introducing a fluid pressure and heating medium into the hollow core formed by said hollow perforated sections.

5. A tire mold comprising a shell composed of a pair of hollow mold sections each having a concave inner wall adapted to engage the exterior of the tire, means for introducing a heating medium into each of said shell sections, a tread forming member removably mounted between said sections, a packing ring adapted to be held between the inner edges of a tire confined by said shell sections, a plurality of curved hollow sections provided with perforations and arranged between the shell sections with their ends abutting against each other to produce a hollow circular core, means for connecting the last mentioned sections to said packing ring, and means for introducing a fluid pressure and heating medium into said hollow circular core.

1,114,281. PACKET-MAKING MACHINE. WALTER EVERETT MOLINS, London, England. Filed Mar. 13, 1913. Serial No. 754,104. (Cl. 93—51.)

1. In a packet making machine, the combination with a plunger on which the packets are formed, and means for folding packet blanks over said plunger, of coöperating fixed and movable cutters for slitting each partly folded blank to form flaps for closing the mouth of the packet.

2. In a packet making machine, the combination with a plunger on which the packets are formed, and means for folding packet blanks over said plunger; of fixed cutters and coöperating swinging cutters operated by the plunger mechanism for slitting each partly folded blank to form flaps for closing the mouth of the packet.

3. In a packet making machine, the combination with a plunger on which the packets are formed, and means for folding packet blanks over said plunger, of fixed cutters and coöperating movable cutters mounted on said folding means for slitting each blank after the same has been partly folded to form flaps for closing the mouth of the packet.

4. In a packet making machine, the combination with a plunger on which the packets are formed, and a swinging means for folding packet blanks over said plunger, of fixed cutters, and coöperating movable cutters secured to said swinging folding means for slitting each blank after partly folding the same to form flaps for closing the mouth of the packet.

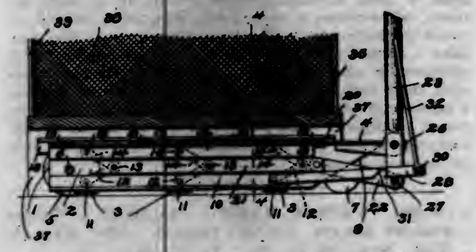
5. In a packet making machine, the combination of a frame, a plunger on which the packets are formed, and a swinging means operated coincident with the descent of the plunger for folding packet blanks over said plunger, of fixed cutters secured to the said frame, and movable cutters mounted on said swinging folding means to coöperate with the fixed cutters for slitting each blank after being partly folded to form flaps for closing the mouth of the packet.

[Claims 6 to 12 not printed in the Gazette.]

1,114,282. ELEVATING-TRUCK. JOHN A. MURPHY, Philadelphia, Pa. Filed Nov. 22, 1913. Serial No. 802,341. (Cl. 21—118.)

1. An elevating truck, comprising a frame consisting of parallel side bars connected by transverse bars, a plate

secured on top of the side bars at their forward ends, wheels supported in the rear ends of the side bars, caster wheels supported below the said plate, a table above the frame, flexible devices connecting the table and the plate, toggle levers connecting the table and the frame, and means for operating the toggle levers to raise and lower the table relative to the frame, substantially as described.



2. An elevating truck, comprising a frame consisting of parallel side bars connected by transverse bars, a plate secured on top of the side bars at their forward ends, wheels supported in the rear ends of the side bars, caster wheels supported below the said plate, a table above the frame, flexible devices connecting the table and the plate, toggle levers connecting the table and the frame, transverse rods constituting the pivots of the toggle-levers, bars connecting all of the rods, and means for moving the bars longitudinally to operate the toggle levers and raise and lower the table, substantially as described.

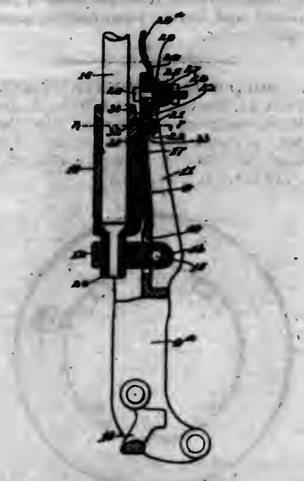
3. An elevating truck, comprising a frame consisting of parallel side bars connected by transverse bars, a plate secured on top of the side bars at their forward ends, wheels supported in the rear ends of the side bars, caster wheels supported below the said plate, a table above the frame, flexible devices connecting the table and the plate, toggle levers connecting the table and the frame, transverse rods constituting the pivots of the toggle levers, bars connecting all of the rods, means for moving the bars longitudinally to operate the toggle levers and raise and lower the table, a lever pivotally supported between its ends on the plate, links connecting the lower ends of the lever with the last-mentioned bars, and a pivoted locking frame connected to the frame and adapted to lock the lever when the latter is moved to a position to elevate the table, substantially as described.

4. An elevating truck, comprising a frame consisting of parallel side bars connected by transverse bars, a plate secured on top of the side bars at their forward ends, wheels supported in the rear ends of the side bars, caster wheels supported below the said plate, a table above the frame, flexible devices connecting the table and the plate, toggle levers connecting the table and the frame, transverse rods constituting the pivots of the toggle levers, bars connecting all of the rods, means for moving the bars longitudinally to operate the toggle levers and raise and lower the table, a lever pivotally supported between its ends on the plate, links connecting the lower ends of the lever with the last-mentioned bars, a pivoted locking frame connected to the frame and adapted to lock the lever when the latter is moved to a position to elevate the table, a spring-pressed rod supported on the handle and connected to said locking frame, said rod having a hand hold thereon at its free end, substantially as described.

1,114,283. TROLLEY. JACOB M. OLINGER, Springfield, Ohio. Filed May 14, 1913. Serial No. 767,568. (Cl. 191—64.)

1. In a trolley, a pivoted supporting arm, a pole, and devices for detachably connecting said pole to said arm, said devices comprising a projecting part on said pole adapted to be extended through an opening in said arm and so formed as to be caused to engage the opposite side thereof by a movement of said pole relatively to said arm, together with means for locking said part against displacement.

2. In a trolley, a pivoted supporting arm, a pole, and devices for detachably connecting said pole to said arm, said devices comprising a hook-shaped projection on one of said parts extended into an opening in the other of said parts and then caused to engage the opposite side thereof by a movement of one of said parts relatively to the other together with means for locking said hook-shaped projection in said opening.



3. In a trolley, a pivoted supporting arm, a pole, and devices for detachably connecting said pole to said arm, said devices comprising a hook-shaped projection on said pole extended into an opening in said arm and then caused to engage the opposite side of said arm by a movement of said pole relatively to said arm together with means for locking said hook-shaped projection in said opening.

4. In a trolley, a pivoted supporting arm, a pole, means on said arm for supporting the lower end of said pole, said arm having an opening therein, a hook-shaped projection on said pole adapted to be extended through said opening and then caused to engage the opposite side of said arm by a movement of said pole relatively to said arm, and a spring-pressed latch on said arm adapted to enter said opening above said projection to lock the same to said arm.

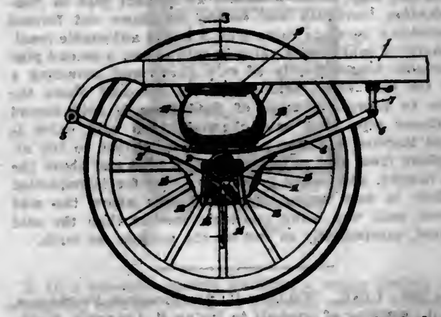
5. In a trolley, a pivoted supporting arm, a pole, a pivoted support for the lower end of said pole, said arm having an opening, a hook-shaped projection on said pole adapted to enter said opening, and a latch on said arm for locking said projection in said opening.

[Claims 6 to 10 not printed in the Gazette.]

1,114,284. VEHICLE SUSPENSION. SIGWARD OLSEN, New York, N. Y., assignor to Klenke Cushion Axle Company, a Corporation of New York. Filed Jan. 5, 1912. Serial No. 669,659. (Cl. 21—101.)

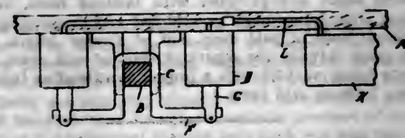
1. In the suspension connection between the body and axle of a vehicle the combination of two rods pivotally connected at one end to the body on opposite sides of the axle and at their other ends loosely encircling the axle and provided with projecting plates adapted to move toward and away from each other as the axle and body move toward or away from each other, and a cushioning device supported and compressible between the plates, and adapted to permit a slight longitudinal movement of the body and axle relative to each other, and a pneumatic bag supported by the axle and bearing weight of the body.

2. In the suspension connection between the body and axle of a vehicle the combination of two rods having interlocking sleeves loosely encircling the axle and being so connected at their other ends to the body on opposite sides of the axle as to permit vertical movement of the body and axle relative to each other, two plates projecting from said rods and adapted to move toward and away from each other as the axle and body move toward or away from each other, and a cushioning device supported and compressible between the plates, and adapted to permit a slight longitudinal movement of the body and axle relative to each other, whereby the body and axle, while free to move toward or away from each other, are prevented from lateral movement on each other and are prevented from excessive longitudinal movement on each other, and a pneumatic bag directly supported between the axle and the body.



3. In the suspension connection between the body and axle of a vehicle the combination of two rods having interlocking sleeves loosely encircling the axle and being so connected at their other ends to the body on opposite sides of the axle as to permit vertical movement of the body and axle relative to each other, two plates projecting from said rods and adapted to move toward and away from each other as the axle and body move toward or away from each other, and a cushioning device supported and compressible between the plates, and adapted to permit a slight longitudinal movement of the body and axle relative to each other, whereby the body and axle, while free to move toward or away from each other, are prevented from lateral movement on each other and are prevented from excessive longitudinal movement on each other, and collars on the axle to prevent lateral movement of the sleeves on the axle and a pneumatic bag directly supported between the axle and the body.

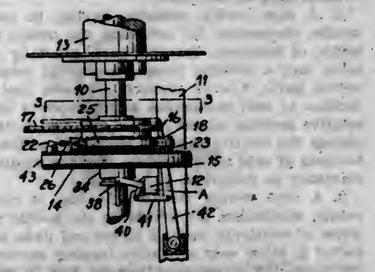
1,114,285. PNEUMATIC SPRING FOR VEHICLES. WILLIAM K. OMICK, Detroit, Mich. Filed May 18, 1912. Serial No. 698,183. (Cl. 21—50.)



1. A pneumatic suspension for vehicles, comprising a cylinder, a piston therein, a hollow piston rod constituting a cylinder of lesser clearance space than said first-mentioned cylinder, a plunger on said first-mentioned cylinder extending into said hollow piston rod, and means for controlling the transfer from said cylinders, whereby upon movement in one direction compression takes place in both cylinders and upon movement in the opposite direction one of said cylinders forms a dash pot.

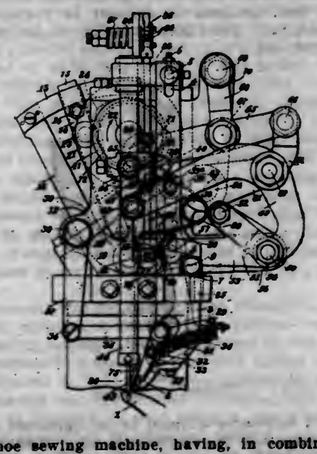
2. A pneumatic suspension for vehicles, comprising a cylinder, a piston therein, a hollow piston rod constituting a cylinder of lesser clearance space within the first-mentioned cylinder, a plunger on said first-mentioned cylinder extending into said hollow piston rod, a packing cooperating with said plunger to permit of the restricted flow from the cylinder to the hollow piston rod in the normal position of the parts, a substantially free flow from the hollow piston rod to the main cylinder upon movement in one direction and preventing free flow from the cylinder to the hollow piston rod in the opposite direction.

1,114,286. CLUTCH AND BRAKE CONTROL FOR SHAFTS. ARTHUR W. PURCHAS, Oilfields, Cal. Filed Jan. 24, 1913. Serial No. 744,049. (Cl. 74—46.)



The combination with a driven shaft, of a drum loosely mounted thereon, a second drum fixed on said shaft, a rocker shaft journaled on the second drum, a friction band extending contiguous with the periphery of the first named drum and having one end anchored to the second named drum, a crank arm on said rocker shaft, connections between the other end of said friction band and said crank arm, a second arm on said rocker shaft disposed on the opposite side of the second named drum from the first named crank arm, a collar slidable on the driven shaft, connections between the collar and the second named crank arm whereby the sliding of the collar will rotate said rocker shaft to move the friction band into and out of engagement with the periphery of the first named drum, an operating lever, connections between said lever and the collar whereby the oscillation of the former will slide the latter, a fixed element, a brake band extending contiguous with the periphery of the second named drum and having one end anchored to a fixed element and its other end connected to said lever for movement by the latter into and out of engagement with the second named drum simultaneously with and reversely to the movement of the friction band into and out of engagement with the periphery of the first named drum.

1,114,287. SHOE-SEWING MACHINE. EUGENE J. RAY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 2, 1911. Serial No. 630,870. (Cl. 112—20.)



1. A shoe sewing machine, having, in combination, a needle, mechanism for actuating the needle comprising a series of relatively movable parts pivotally connected to allow only a relative turning movement between the connected parts, a work support, a presser foot, and a connection to said mechanism acting upon a change in the

relative position of the presser foot and work support to change the angular relation of the paths of movement of the parts of said mechanism to vary the needle stroke, substantially as described.

2. A shoe sewing machine, having, in combination, a needle, mechanism for actuating the needle comprising a series of relatively movable parts pivotally connected to allow only a relative turning movement between the connected parts, a work support, a presser foot, and a connection to said mechanism acting, upon a change in the relative position of the presser foot and work support, to change the relative paths of movement of the pivotal connections of said mechanism to vary the needle stroke, substantially as described.

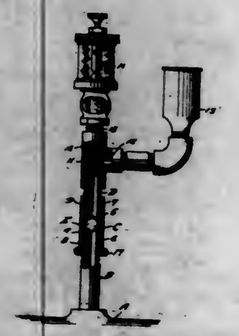
3. A shoe sewing machine, having, in combination, a needle, mechanism for actuating the needle comprising a series of relatively movable levers and links pivotally connected to allow only a relative turning movement between the connected elements, a presser foot, a work support, and a connection to said mechanism acting, upon a change in the relative position of the presser foot and work support, to swing one end of one of said links about a center relatively movable with relation to the pivot at the other end of the link but co-axial therewith at one limit of the needle stroke to vary the other limit of the needle stroke, substantially as described.

4. A shoe sewing machine, having, in combination, a needle, mechanism for actuating the needle comprising an oscillating arm, a lever pivotally mounted on said arm, a connection between one end of the lever and the needle, a link connected to the other end of the lever, a support to which the link is pivotally connected, a presser foot, a work support, and a connection to the link support acting upon a change in the relative position of the presser foot and work support to move the link support to vary the needle stroke, substantially as described.

5. A shoe sewing machine, having, in combination, a needle, mechanism for actuating the needle comprising an oscillating arm, a lever pivotally mounted on said arm, a connection between one end of the lever and the needle, means engaging the other end of the lever to swing the lever on its pivot during the oscillation of the arm, and a presser foot and suitable connections acting upon a change in the position of the presser foot to vary the oscillation of the lever and thereby vary the needle stroke, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

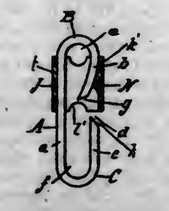
1,114,288. LUBRICATOR. CHARLES M. RININGER, Elkhart, Ind., assignor of one-half to Frank H. Glore, Elkhart, Ind. Filed May 13, 1913. Serial No. 767,353. (Cl. 184—76.)



1. In a lubricator adapted to be connected to a fluid pressure chamber, the combination of a chamber adapted to contain fluid under pressure, an upright pipe in communication therewith and having its upper end formed to provide a pervious valve seat, a sleeve adjustable longitudinally of said pipe, a valve in said sleeve, a second pipe adjustable longitudinally of said sleeve and providing a seat for said valve, said seat being disposed above the latter to prevent passage of fluid through said second mentioned pipe from said chamber when said valve is seated thereon, a means providing an exhaust to the atmosphere from said second mentioned pipe and above the seat thereof, and means providing a way for introduction of fluid to said second mentioned pipe above the seat thereof.

2. In a lubricator adapted to be connected to a fluid presure chamber, the combination of a chamber adapted to contain fluid under pressure, an upright pipe in communication therewith and having its upper end formed to provide a pervious valve seat, a sleeve adjustable longitudinally of said pipe, a valve in said sleeve, a second pipe adjustable longitudinally of said sleeve and providing a seat for said valve, said seat being disposed above the latter to prevent passage of fluid through said second mentioned pipe from said chamber when said valve is seated thereon, a means providing an exhaust to the atmosphere from said second mentioned pipe and above the seat thereof, and means providing a way for introduction of fluid to said second mentioned pipe above the seat thereof, said way being relatively smaller than the said exhaust, substantially as and for the purpose set forth.

1,114,289. LINK. WILLIAM R. RITTENHOUSE, Providence, R. I., assignor of one-half to Irving H. Cranston, Providence, R. I. Filed June 6, 1914. Serial No. 843,564. (Cl. 59—85.)



1. A lock link comprising a rod having loops at the ends and resilient oppositely-directed arms upon the loops, the ends thereof being spaced apart, and a slidable sleeve embracing the rod and adjacent ends of said arms and having a projection upon its inner face adapted to engage said arms.

2. In a lock link, a rod having loops upon its ends and resilient arms upon the loops having their adjacent ends spaced apart and provided with inclined faces, and a sleeve slidably mounted on said rod and overlapping the adjacent ends of said arms and of greater length than the space between the separated ends of said arms, said sleeve being provided with a projection extending into the space between said arms.

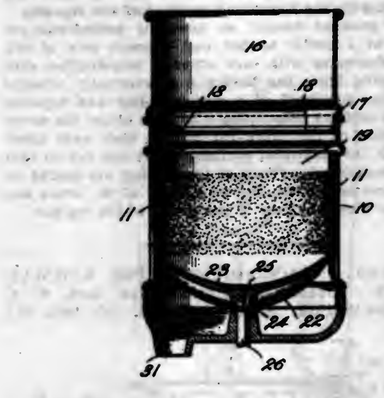
1,114,290. VEGETABLE-PARING MACHINE. HENRY ROBINSON, South Orange, N. J. Filed Mar. 19, 1914. Serial No. 825,762. (Cl. 146—14.)

1. A vegetable peeling machine comprising a container made in two parts, one of which has an abrading surface and slips within the other part; one of said parts being provided with ribs whereby a space is provided between the two parts, substantially as described.

2. A vegetable peeling machine having an outer container with inwardly projecting ribs and an inner lining adapted to slide down between said ribs, said lining having an abradant inner surface, substantially as described.

3. In a vegetable peeling machine, an outer container having inwardly projecting ribs and a removable abradant lining adapted to slide down and be confined between said ribs, said lining having openings with projecting sides fitting over said ribs to prevent the lining from turning, substantially as described.

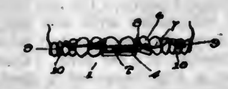
4. In a vegetable peeling machine, a rotary peeling and supporting member having a concave abradant surface formed to provide a median ridge with curved concave surfaces falling away from each side thereof, substantially as described.



5. In a vegetable peeling machine, a rotary peeling and supporting member having an abrading surface formed to provide a median ridge raised on both ends and sloping gradually outward to form a concave surface on each side of said ridge, substantially as described.

[Claim 6 not printed in the Gazette.]

1,114,291. ORTHODONTIC APPLIANCE. RAY D. ROBINSON, Los Angeles, Cal. Filed Apr. 9, 1914. Serial No. 830,752. (Cl. 32—19.)



1. In an orthodontic appliance, an arch band, an open angular sleeve between the anchored ends of the arch band, means for securing the sleeve to a tooth which is to be moved, means supporting the ends of the arch band, and a non revoluble block adjustable slidably in said sleeve and rigidly secured at an intermediate point to the arch band.

2. In an orthodontic appliance, block engaging means adapted to be secured to a tooth, an angular block removably secured in said block engaging means, an arch band, means supporting the ends of the arch band, said block being non-rotatably secured to an intermediate portion of the arch band whereby a rotative pressure of the arch band is transmitted through said block and said block engaging means to the tooth.

3. In an orthodontic appliance, an arch band, means supporting the ends of the arch band, an angular block secured to an intermediate portion of the arch band, an angular sleeve having an open front, and means securing said sleeve to a tooth, said sleeve having a recess with a flat surface and receiving said block.

4. In an orthodontic appliance between the anchored ends of the arch band, an angular sleeve having an open front side, means securing said sleeve to a tooth, a block rigidly fitted in said sleeve, said sleeve being provided with means engaging the outer face of the block to detachably retain the block in said sleeve, and means for holding said block in the desired angular position to cause the block to exert pressure through said sleeve and sleeve securing means to the tooth.

5. In an orthodontic appliance, a sleeve, means securing the sleeve to a tooth, a block adjustable slidably in said sleeve and secured to the arch band, the walls of said sleeve being bent over the sides of the block.

[Claim 6 not printed in the Gazette.]

1,114,292. AUTOMATIC STOP FOR PHONOGRAPHS. JUDSON Q. A. ROLLINS, New York, N. Y. Filed Oct. 31, 1913. Serial No. 798,894. (Cl. 74—46.)

1. An automatic stop for phonographs embodying therein an oscillatory lever, one end of which is adapted to project under a turn table, a friction pad or brake shoe supported by said end, means adapted to depress the other end of said lever whereby said pad or shoe is projected into frictional engagement with the turn table, a trip mechanism embodying therein means coöperating with and adapted to hold said last named means inoperative or release the same, and a contact member adapted to be engaged by a swiveling arm, and means acting upon said lever in opposition to said depressing means whereby movement of said lever in setting the brake shoe is retarded and said brake shoe will be held out of engagement with the turn table when said trip mechanism is set to make the said depressing means inoperative.

2. An automatic stop for phonographs embodying therein an oscillatory lever, one end of which is adapted to project under a turn table, a socket carried by said end, a friction pad or brake shoe seated in said socket, means adapted to depress the other end of said lever whereby said pad or shoe is projected into frictional engagement with the turn table, a trip mechanism embodying therein means coöperating with and adapted to hold said last named means inoperative or release the same, and a contact member adapted to be engaged by a swiveling arm, and means acting upon said lever in opposition to said depressing means whereby movement of said lever in setting the brake shoe is retarded and said brake shoe will be held out of engagement with the turn table when said trip mechanism is set to make the said depressing means inoperative.

3. An automatic stop for phonographs embodying therein an oscillatory lever, one end of which is depressed and adapted to project beneath the pendant rim of a turn table, an upwardly extended socket carried by said depressed end, a friction pad or brake shoe seated in said socket, means adapted to depress the other end of said lever whereby said pad or shoe is projected into frictional engagement with said turn table, a trip mechanism embodying therein means coöperating with and adapted to hold said last named means inoperative or release the same, and a contact member adapted to be engaged by a swiveling arm, and means acting upon said lever in opposition to said depressing means whereby movement of said lever in setting the brake shoe is retarded and said brake shoe will be held out of engagement with the turn table when said trip mechanism is set to make the said depressing means inoperative.

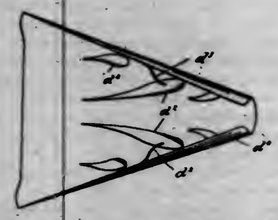
4. An automatic stop for phonographs, embodying therein a vertical cylinder, a reciprocatory plunger mounted therein, a spring having a normal tendency to force said plunger downwardly, a spring of relatively lighter tension than, and opposed to, said first named spring, an oscillatory lever having one end thereof projecting below and adapted to be engaged by said plunger, the other end thereof being adapted to be projected under a turn table, a friction pad or brake shoe carried by said lever and adapted to be forced thereby into engagement with said turn table, and a trip mechanism embodying therein an oscillatory lever, one end of which carries a latch adapted to coöperate with said plunger to hold said spring under compression, a spring acting upon said lever to nor-

mally force said latch member into the operative relation with said plunger, and an adjustable contact member carried by the other end of said lever and adapted to be engaged by a swiveling arm.

5. An automatic stop for phonographs, embodying therein a vertical cylinder, a reciprocatory plunger mounted therein, a spring having a normal tendency to force said plunger downwardly, an oscillatory lever having one end thereof projecting below and adapted to be engaged by said plunger, the other end thereof being adapted to be projected under a turn table, a friction pad or brake shoe carried by said lever and adapted to be forced thereby into engagement with said turn table, and a trip mechanism embodying therein an oscillatory lever, one end of which carries a latch adapted to coöperate with said plunger to hold said spring under compression, a spring acting upon said lever to normally force said latch member into the operative relation with said plunger, means adapted to retard the movement of said plunger under its spring, and an adjustable contact member carried by the other end of said lever and adapted to be engaged by a swiveling arm.

[Claims 6 and 7 not printed in the Gazette.]

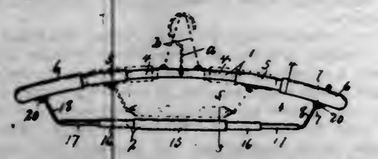
1,114,293. APPARATUS FOR OBTAINING COTTON-WASTE IN A ROPE-LIKE FORM. WILHELM ROTHE, Reichenbach, Germany. Filed May 27, 1913. Serial No. 770,188. (Cl. 19—13.)



1 An apparatus for transforming a fleece into a rope-like form, comprising a trumpet-shaped guide surface having its edges formed to turn the edges of the fleece inwardly, and a series of substantially longitudinal fins provided within said trumpet-shaped guide-surface to hold the fleece in spread relation on the bottom of the guide surface while the edges of the latter roll the edges of the fleece inwardly.

2. An apparatus for transforming a fleece into a rope-like form, comprising a trumpet-shaped guide surface, having in-turned edges for rolling the fleece, substantially longitudinal fins projecting upwardly from the bottom of said guide surface to hold the fleece in spread relation in the middle portion of the guide-surface and resilient members for supporting and directing the rolling of the edge portions of the fleece.

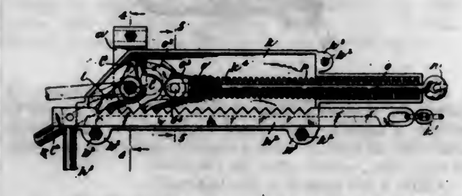
1,114,294. GARMENT-HANGER. JACOB ROUTSTONE, Weedsport, N. Y. Filed Oct. 12, 1912. Serial No. 725,454. (Cl. 211—13.)



1. In a garment hanger comprising a top bar composed of a center section and opposite sets of end sections progressively increasing in cross sectional size from the center outwardly and telescoping with each other in combination with a brace bar underlying the top bar and composed of a center section and opposite sets of end sections progressively diminishing in cross sectional size from the center outwardly and telescoping with each other, the smaller end sections of the brace bar being interlocked with the larger end sections of the top bar.

2. In a garment hanger, an upwardly arched top bar composed of a center section and opposite sets of end sections telescoping with each other in combination with an underlying brace bar having a substantially straight body portion composed of a center section and opposite sets of end sections telescoping with each other, the outermost sections of the brace bar having their ends interlocked with the outermost sections of the top bar so that when the outermost sections of the top bar are moved toward the center section, the main body of th brace section will be brought closer to the center of the top bar.

1,114,295. SLACK-ADJUSTER FOR RAILWAY-BRAKES. WILLIAM H. SAUVAGE, New York, N. Y. Filed June 10, 1913. Serial No. 772,793. (Cl. 188—50.)

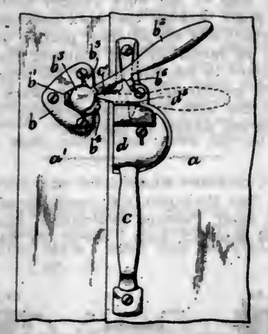


1. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever, an automatic take-up device mounted on the car body and including two relatively slidable members operatively connected respectively to the live lever and to the dead lever, a take-up spring and an independent release spring for the brakes interposed between the live lever and the take-up device and coöperating with said first named spring to release and move the brakes to full release position.

2. The combination of a car body, a truck, a brake system comprising a live lever and a dead lever and an automatic take-up device mounted on the car body and comprising a rack bar operatively connected to the dead lever, a take-up rod operatively connected to the live lever and slidable in one direction by excess travel of the pull rod, a dog in operative engagement with the rack bar to prevent movement thereof in the same direction and permit free movement thereof in the opposite direction, a spring to slide the take-up rod in the reverse direction, a spring-pressed pawl carried by the take-up rod and in engagement with the rack bar and operable upon said reverse travel of the take-up rod to connect the take-up rod with the rack bar whereby the fulcrum of the dead lever is moved a distance equal to the travel of the pull rod, and coöperating portions formed on the dog and pawl whereby upon manual release of the dog the pawl is moved to inoperative position.

3. The combination of a bar body, a casing secured to the car body, a truck, a brake system comprising a live lever and a dead lever and an automatic take-up device mounted within said casing and comprising a rack bar operatively connected to the dead lever, a take-up rod operatively connected to the live lever and slidable in one direction by excess travel of the pull rod, a dog in operative engagement with the rack bar to prevent movement thereof in the same direction and permit free movement thereof in the opposite direction, a spring to slide the take-up rod in the reverse direction, an adjustable coupling carried on the pull rod, a pawl pivotally mounted on the coupling the ends of the pivot pin projecting beyond the sides of the pawl, longitudinally disposed grooves formed on the inner face of the walls of the casing in which the ends of said pivot pin rest, the pawl being in engagement with the rack bar and operable upon said reverse travel of the take-up rod to connect the take-up rod with the rack bar whereby the fulcrum of the dead lever is moved a distance equal to the travel of the pull rod.

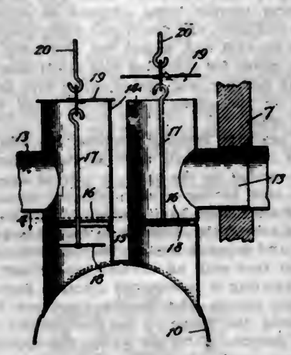
1,114,296. LOCKING DOOR-PULL. THOMAS O. SCHRADER, Allentown, Pa., assignor to The Dent Hardware Company, Fullerton, Pa., a Corporation of Pennsylvania. Filed July 3, 1914. Serial No. 848,761. (Cl. 70—49.)



1. A device of the character described, comprising a lever-handle having a projection and a hub with a cam as part of the same, a door-pull having a tongue and a lock, said projection adapted to enter said lock and said tongue adapted to engage said cam, substantially as and for the purposes described.

2. A device of the character described, comprising a lever-handle mounted in a bracket having a stop and a projection, a hub having an inclined cam and a back-stop and a door-pull with a tapered tongue and a lock, said projection adapted to enter said lock and said tongue adapted to engage said cam, substantially as and for the purposes described.

1,114,297. INCUBATOR. WILLIAM SCHWALGE, Elmhurst, Ill. Filed Apr. 1, 1914. Serial No. 828,763. (Cl. 237—14.)



A plurality of incubators, each provided with a section of hot-air conduit and coupled together at the conduit-sections to form a battery having a common hot-air conduit, an air-heater on one end of said conduit, a flue for each incubator branching from said conduit, pipes in the incubators branching from the flues and communicating with the outer air, and plates removably seated in the flues and having openings through which the supply of heated air from the conduit enters said pipes through the flues, the openings in the plates in the flues of successive incubators increasing progressively in size from the heater-end to the opposite end of the battery, for the purpose set forth.

1,114,298. STOCKING AND THE ART OF MAKING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Feb. 14, 1913. Serial No. 748,310. (Cl. 66—4.)

1. A stocking of knit fabric having a circularly knit foot portion provided with a toe seam consisting of a line of sewing stitches uniting integrally selvaged sections of the fabric of the foot portion.

2. A circular seamless stocking having seamless heel and toe pockets and a toe seam, comprising one or more courses of fabric having a selvage structure brought into abutting relation and united by sewed stitches.

3. In a stocking knit from toe to top, a foot portion comprising initial selvage courses and a reciprocally knit toe pocket knit in prolongation of substantially one half of the fabric of said courses.

4. A stocking having a toe pocket with selvage course extending around the edges of both the sole and instep portions of said toe pocket and having the stitches around the edge of the sole portion of the pocket united to those around the edge of the instep portion of the same.

5. A circular seamless stocking having a toe pocket and an instep portion with a common initial course engaging alternate wales only of said fabric and a common succeeding course engaging the remaining wales of said fabric, thereby forming a selvage structure at the beginning of the toe pocket and the toe end of the instep section for the engagement of a line of sewed stitches.

[Claims 6 and 7 not printed in the Gazette.]

1,114,299. ELECTRIC-LIGHT FIXTURE. LOUIS SEVERUS, Chicago, Ill. Filed May 27, 1912. Serial No. 699,884. (Cl. 240—52.)

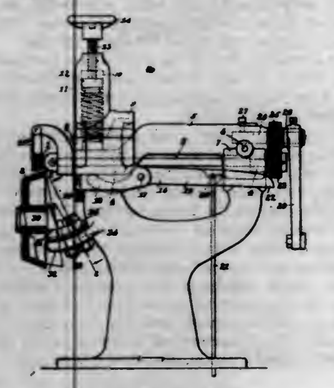
1. An electric light fixture, comprising a pipe-terminal, an incandescent lamp-socket, an extensible support between the socket and said pipe-terminal, and a jacket around said support, said support comprising a pair of bars at one side of the jacket slidably and adjustably connected to each other at one end and bent inwardly at the other, said inwardly bent ends being provided with a screw-thread for connection to the pipe-terminal and to the socket respectively.

2. An electric-light fixture comprising a pipe terminal, an incandescent lamp-socket, a pair of conductors leading from the terminal to the socket, a stud in said socket at the lower end thereof, an extensible support comprising a pair of bars each provided with a screw-thread for connection to the pipe-terminal and to the stud on the socket respectively, said bars being offset intermediate their points of connection to the pipe-terminal and to the

sockets respectively to permit the conductors from the terminal to aline with the socket and to be readily ad-

justed without interference by said support, and a jacket around said support.

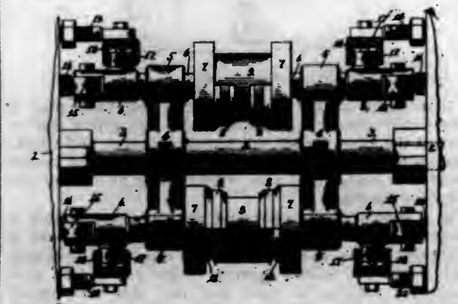
1,114,300. WELT-INDENTING MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 17, 1911. Serial No. 621,663. (Cl. 12—82.)



1. A welt indenting machine, having, in combination, a rotary indenting tool, a work support for engaging the tread surface of the sole of a shoe to hold the margin of the sole in contact with the tool having a work engaging surface formed to engage the sole in a straight line from the edge of the sole inwardly and provision for adjusting the work engaging face of the work support angularly in a plane substantially perpendicular to the line of feed about a center lying in the work engaging face of the work support whereby the angle between the work engaging surface of the work support and the adjacent portion of the indenting tool may be varied without varying the position of the work support in the direction of the axis of the indenting tool, and means for continuously forcing the indenting tool and the work support together with a yielding pressure to cause the tool to indent the margin of the sole.

2. A welt indenting machine, having, in combination, a rotary indenting tool, a work support for engaging the tread surface of the sole of a shoe to hold the margin of the sole in contact with the tool having a work engaging surface formed to engage the sole in a straight line in a direction from the edge of the sole inwardly and provision for adjusting the work engaging surface of the work support angularly in a plane substantially perpendicular to the line of feed about a center lying in the work engaging surface of the work support and located at the point in the inner edge of the work support nearest the tool whereby an angle between the work engaging surface of the work support and the adjacent portion of the indenting tool may be varied without changing the position of the work support in the direction of the axis of the tool, and means for continuously forcing the work support and the tool together with a yielding pressure to cause the tool to indent the margin of the sole.

1,114,301. CAN-BODY-FLANGING MACHINE. FRANK J. SMITH, San Francisco, Cal., assignor of one-half to California Fruit Canners Association, San Francisco, Cal. Filed Sept. 12, 1911.. Serial No. 648,848. (Cl. 153—21.)



1. In a can-body flanging machine, the combination of a pair of opposing flanging heads, each head having a portion of its inner side extended a substantial distance to form a segmental rest to receive and support the can-body, and each head having also in its inner face an annular groove with a tapering portion rigid with the head and projecting from the inner wall of said groove, said tapering portion being adapted to enter the open end of the can-body, and the groove being adapted to form the flange on said end, means for delivering the can to the heads, means for revolving said heads past the station of can-body delivery, and means called into action by the revolution of the heads for forcing them toward and from each other.

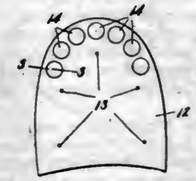
2. In a can-body flanging machine, the combination of a frame, a rotating main shaft mounted therein, a pair of spiders carried by the shaft, a pair of opposing flanging heads each having a stem slidably mounted in the spider, and each head having a portion of its inner side extended a substantial distance to form a segmental rest to receive and support the can-body, and further formed on its inner face with an annular groove and a tapering portion projecting a substantial distance from the inner wall of said groove, and beyond the inner face of the head, whereby the flange on the ends of the can-body is formed as described, and the means for oppositely reciprocating said heads consisting of the rollers carried by the stems of the heads, the fixed graded track carried by the frame and upon which one of said rollers travels, and the channeled cam track in which the other of said rollers travels.

3. A can-body flanging machine, including a revoluble shaft, spiders carried thereby, spindles slidable and nonturnable in said spider, and carrying channeled flanging heads, said heads having central projections and having a portion at one side of the projections extended beyond the inner face of the central projection, a chute to guide can-bodies into the path of the heads, segmental rests on the heads upon which the can-bodies are received and from which they subsequently drop to a central position by the revolution of the carrier, rollers upon the flange

head spindles, and fixed cams by which said rollers are actuated.

4. A can-body flanging machine, including a revoluble shaft, spiders carried thereby, spindles slidable and nonturnable in said spider, and carrying channeled flanging heads, said heads having central projections and having a portion at one side of the projections extended beyond the inner face of the central projection, a chute to guide can-bodies into the path of the heads, segmental rests on the heads upon which the can-bodies are received, and from which they subsequently drop to a central position by the revolution of the carrier, rollers upon the flange head spindles, fixed cams in which said rollers travel to reciprocate the heads, other rollers journaled transversely in the spindle ends, and thrust cams against which they travel.

1,114,302. CUSHION-HEEL. SAMUEL D. SMITH, East Dedham, Mass., assignor of one-half to John C. Kennedy, Boston, Mass. Filed May 29, 1914. Serial No. 841,699. (Cl. 36—59.)

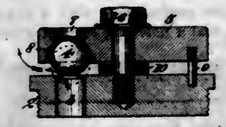


1. A cushion heel having holes extending upwardly from its tread surface and a plug secured in the lower end of each hole and having a length less than the depth of said holes to permit the heel to be compressed without lessening of the cushioning effect by the plugs.

2. A cushion heel having holes extending upwardly from its tread surface and a plug secured in the lower end of each hole and having a length less than the depth of said holes to permit the heel to be compressed without lessening of the cushioning effect by the plugs, the said plugs having solid heads at their lower ends and having flanges at their ends.

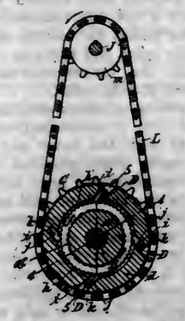
3. A cushion heel having holes extending upwardly from its tread surface and a plug secured in the lower end of each hole and having a length less than the depth of said holes to permit the heel to be compressed without lessening of the cushioning effect by the plugs, the said plugs having solid heads at their lower ends and having flanges at their ends, the flanges at the inner ends of the plugs being of less diameter than the flanges at the outer ends.

1,114,303. VALVE. ALBERT J. SNOW, ARCHIE M. KIDD, and JOHN H. WHALEY, Taft, Cal. Filed Apr. 2, 1913. Serial No. 758,368. (Cl. 103—66.)



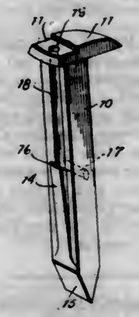
A pump valve consisting of a relatively thick lower member having a plurality of transverse openings flared at their upper ends to form valve seats, a ball valve in each seat, a relatively thick upper member having a plurality of transverse openings similar to the openings of the lower member flared at their lower ends so as to provide housings which extend up into the body of the upper member and aline with the openings of the lower member to enable the ball valves to be received within the housings, and a bolt passed through the upper member and having its lower end threaded into the lower member, said members being spaced at such distances that the upper portions of the balls project into the housings at all times.

1,114,304. CLUTCH DEVICE FOR STARTING EXPLOSIVE-ENGINES. JOHN O. STANLEY, Holyoke, Mass., assignor to B. F. Perkins & Son, Incorporated, Holyoke, Mass., a Corporation of Massachusetts. Filed Dec. 7, 1912. Serial No. 735,448. (Cl. 192—20.)



In a mechanism of the character described, in combination, an engine shaft having a circular frame affixed thereto which comprises a circular hub portion and a radially outwardly extending flange having an annular rib projecting parallel with its axis, such rib having pawl-guiding apertures therein inclined to the radius of the hub, a sprocket wheel having its inward face positioned alongside the face of said rib and provided with a hub portion loosely encircled by said rib, which hub portion has a series of V-shaped teeth, a ring detachably secured to the hub portion of the circular frame and confining the sprocket wheel against displacement from the latter, and a plurality of pawl bars one freely slidable in each said aperture and having a stud-and-slot engagement with the frame flange and adapted to have engagement with one of said hub teeth by its end and to have engagement with the next hub tooth by its side portion adjacent such end.

1,114,305. SPIKE. THOMAS STARBUCK, Bridgeport, Ohio. Filed Mar. 17, 1914. Serial No. 825,396. (Cl. 85—23.)



1. A spike provided with a head having one end portion reduced to form a seat, said spike being provided with a longitudinally-extending groove leading from an opening formed in the base of said seat and communicating with a transversely-extending opening formed in said spike, and a prong formed upon said spike beneath said groove and terminating in an inclined guiding face formed flush with the transversely-extending opening.

2. A spike, a head for said spike, the shank of said spike being provided with a longitudinally-extending groove leading from a cut out formed in the head of said

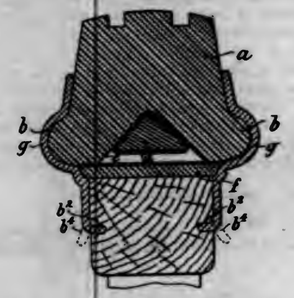
spike and communicating with a transversely-extending passage way formed in the shank of said spike, an auxiliary locking means for said spike formed upon the shank of the spike beneath the lower end of the groove formed therein and constituting means for guiding a securing member through the transversely-extending passage way formed in the shank of said spike.

3. A spike comprising a shank provided with a longitudinally-extending groove communicating with a transversely-extending passage way formed in said shank, a head provided with a cut out communicating with said groove, and common means for locking said spike in place and for guiding the inner end portions of a second locking means through the transversely-extending passage formed in the shank of said spike.

4. A spike comprising a shank provided with a longitudinal groove and with a transversely-extending passage way communicating with the lower end of said groove, the head of said spike being provided with a seat and with an opening communicating with said groove, a locking prong carried by the shank of said spike beneath said groove, and a securing pin passing through the opening of said head into said groove and guided by said prong into said passage way and having its head seated in said seat when said pin is in a locked position.

5. A spike provided with a transversely extending passageway, locking means carried by said spike, and a movable locking means for said spike, guided into said passageway by said first mentioned locking means.

1,114,306. TIRE FOR ROAD-VEHICLES. JAMES GEORGE STIDDER, Harrow, England. Filed Jan. 14, 1911. Serial No. 602,621. (Cl. 152—7.)

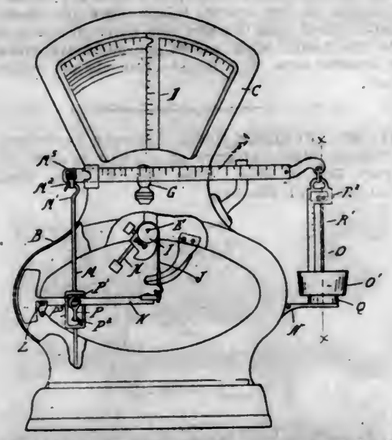


For road vehicles a tire of solid rubber or equivalent material having its base broadened out and formed with a groove of suitable section so as to be divided at the base, in combination with a wedging ring of smaller sectional area than the said groove and adapted to be floating or free therein between the tire and the rim until compression of the tire takes place, said plates on the felly having grooves or recesses formed therein for receiving the broadened out and divided parts of the tire base, and corresponding projections and lined recesses each as *q* and *s* formed in the tire and side plates for preventing jumping or creeping.

1,114,307. COMPUTING-SCALE. WALTER F. STIMPSON, Detroit, Mich., assignor to George W. Hurd, Dundee, Mich. Filed Nov. 5, 1910. Serial No. 590,867. (Cl. 73—29.)

1. The combination of a platform, a frame extending thereabove, an indicating section on said frame, an index for said section, a pendulum weight for said index, a tare beam, said pendulum weight and tare beam being both fulcrumed centrally of said frame the one above the other, an intermediate lever operatively connected with said pendulum weight, and a common steelyard rod connected to said intermediate lever and tare beam and operatively connected with the platform mechanism.

2. The combination of a platform, a frame extending thereabove having an indicating section at its upper end and a laterally enlarged portion below said section, a tare beam and an index having a pendulum weight both fulcrumed centrally of said frame and between said section and the laterally enlarged portion, an intermediate lever for operating said index and pendulum weight fulcrumed upon said laterally enlarged portion, and a steelyard rod connecting the platform mechanism with said intermediate lever and tare beam.



3. The combination of a platform, a frame extending upward from said platform having an indicating section at its upper end and a laterally enlarged portion below said section, a tare beam fulcrumed centrally of said frame intermediate said chart and laterally enlarged portion, an index fulcrumed below said tare beam and having a pendulum weight operatively associated therewith, an intermediate lever connected with said index and pendulum weight and fulcrumed at one side of said laterally enlarged portion of the frame, a steelyard rod for operating said intermediate lever and said tare beam operably connected to said platform, a counterpoise for said tare beam, and a guide for said counterpoise on the opposite side of said laterally enlarged portion.

4. The combination of a platform, a frame extending upward therefrom having an indicating section at its upper end, a laterally enlarged oval annular portion below said chart, a tare beam and an index for said section fulcrumed centrally of said frame intermedite the oval annular portion and the chart, a lever fulcrumed at one side of said enlarged annular portion and operatively connected at its opposite end to said index, a steelyard rod operatively connected to the platform, said lever and said tare beam, a counterpoise for said tare beam, and a guide for said counterpoise connected to the opposite side of said annular portion.

5. In a scale, the combination with a beam, of a counterpoise therefor, and a dash-pot located within said counterpoise.

[Claims 6 to 9 not printed in the Gazette.]

1,114,308. BUNSEN BURNER. LOUIS J. STRAUSS and OTTO SPAHR, Philadelphia, Pa., assignors to Strauss Gas Iron Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 3, 1914. Serial No. 810,229. (Cl. 158—118.)

1. A Bunsen burner comprising a nipple, a nozzle thereon, an air hood surrounding said nozzle and abutting against the end of said nipple and means for detachably securing said nipple and air hood together.

2. A Bunsen burner comprising a nipple, a nozzle detachably carried thereby, an air hood surrounding said nozzle abutting against the end of said nipple and a collar rotatably mounted on said nipple for detachably securing the air hood thereto.

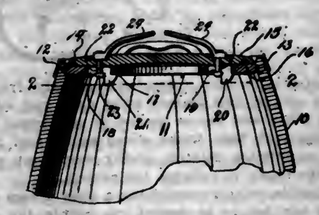
3. A Bunsen burner comprising a nipple, a nozzle detachably carried thereby, an air hood, a coupling ring swiveled on and normally extending beyond said nipple and adapted to connect the air hood thereto and coöperating means on said nipple and coupling ring respectively whereby the latter may be moved back on said nipple to expose said nozzle, whereby the latter may be freely detachable.

4. A Bunsen burner comprising a nipple, a flange on said nipple, a nozzle detachably secured to said nipple, an air hood surrounding said nozzle, a coupling ring normally extending beyond said nipple and adapted for connection with said air hood, an internally screw threaded flange on said coupling ring adapted to rotate on the flange of said nipple whereby said coupling ring is swiveled on the latter and screw threads on said nipple adapted to coöperate with said screw threaded internal flange whereby the coupling ring may be moved back on the nipple to expose said nozzle whereby the latter may be freely detached.

5. A Bunsen burner comprising a nipple, a flange on said nipple, a nozzle detachably secured to said nipple, a screw threaded air hood surrounding said nozzle, a coupling ring normally extending beyond said nipple provided with screw threads adapted to engage the screw threads of said air hood for connecting said air hood and nipple together, an internally screw threaded flange on said coupling ring rotatable on the flange of said nipple whereby said coupling ring is swiveled on the latter and screw threads on said nipple adapted to coöperate with said internally screw threaded flange whereby the coupling ring may be moved back on the nipple to expose said nozzle whereby the latter may be freely detached.

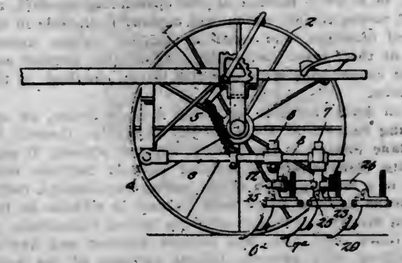
[Claims 6 to 10 not printed in the Gazette.]

1,114,309. BARREL HEAD AND RIM. MATHEW B. STRICKLAND, Perry, Fla. Filed Mar. 27, 1913, Serial No. 757,202. Renewed Sept. 14, 1914. Serial No. 861,681. (Cl. 217—87.)



A barrel head comprising an annular rim having opposite substantially semi-circular projections on the inner periphery, each projection being formed with a radial slot, the slots of both extensions being in alinement, each slot being formed on each side with a socket and with a lug on one side of each socket, said lugs projecting from the bottom face of said rim and being disposed to project from the edges of their respective sockets with one of said lugs disposed on the outer side of one of the sockets and the other disposed on the inner side of the other socket of each slot, a disk head, stems turnably mounted in said head and projecting through said slots, an operating lever on the outer end of each stem, and a bar on the inner end of each stem disposed at a right angle to the corresponding lever and of a size to pass through the related slot, said bar being adapted to seat in the related sockets and be limited in movement by said lugs upon rotation of said stem and serving to tightly clamp said head to said rim.

1,114,310. CULTIVATOR ATTACHMENT. JACKSON L. TERRELL, Stroud, Okla. Filed Apr. 20, 1914. Serial No. 833,298. (Cl. 97—35.)

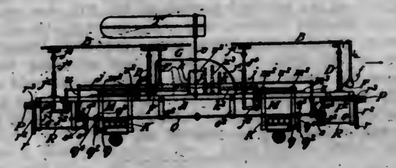


1. In a device of the class described, a yoke; links pivoted to the yoke; clamping means carried by the ends of the links; a cross arm, clamping means located at the ends of the cross arm; a support mounted in the yoke and in the cross arm; and a plow carried by the rear end of the support.

2. In a device of the class described, a yoke; links located at the ends of the yoke, the links being connected to the yoke by means of a pin and multi-hole connection; clamping means carried at the ends of the links; a cross arm; clamps, the clamps being connected with the ends of the cross arm by means of a pin and multi-hole connection; a support mounted in the yoke and in the cross arm; and a plow carried by the support.

3. In a device of the class described, a yoke including angularly disposed arms having openings; links lying in the openings; pivot elements connecting the links with the body portion of the yoke; standard engaging means carried at the ends of the links; a cross arm; standard engaging means adjustably mounted upon the ends of the cross arm for movement toward and away from the ends of the cross arm; a support extended through the yoke and the cross arm; movable abutments on the support and coöperating, respectively, with the forward and rear face of the yoke and the cross arm; and a plow mounted on the rear end of the support.

1,114,311. AERIAL MACHINE. LEWIS J. TETLOW, West Springfield, Mass. Filed Dec. 23, 1912. Serial No. 738,117. (Cl. 244—29.)



1. An aerial machine including a main frame, an upstanding support provided at the longitudinal median of such frame, an aeroplane jointed to an upright support whereby it may oscillate transversely, resilient mediums having anchored connections with the lower portion of the

upstanding support and having connections with opposite lateral portions of the aeroplane, and means for positioning the aeroplane in any fore-and-aft inclination.

2. An aerial machine including a main frame, an upstanding support provided at the longitudinal median thereof, an aeroplane jointed to the upper portion of the upright support whereby it may oscillate transversely, members connected with and depending below the lateral portion of the aeroplane, resilient mediums, having anchorages at the longitudinal median of the main frame, and having connections with portions of said depending members below the aeroplane, and means for placing and confining the aeroplane in any fore-and-aft inclination.

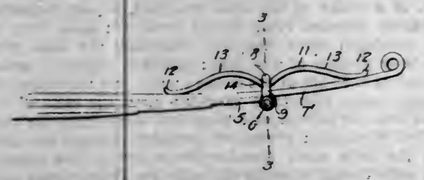
3. An aerial machine including a main frame, an upstanding support at the longitudinal median thereof, an aeroplane jointed to the upright support whereby it may oscillate transversely, a member slidably movable relatively to a lower portion of the upstanding support, resilient means against which said member is slidable in the upward direction, and resilient mediums having connections at their inner ends with said slidable member and having connections with opposite lateral portions of the aeroplane.

4. An aerial machine including a main frame, an upstanding support at the longitudinal median thereof, an aeroplane jointed to the upright support whereby it may oscillate transversely, a member slidably movable relatively to a lower portion of the upstanding support, resilient means against which said member is slidable in the upward direction, resilient mediums having connections at their inner ends with said slidable member and having connections with opposite lateral portions of the aeroplane, and means for placing the aeroplane in any fore-and-aft inclination.

5. An aerial machine including a main frame, an upstanding support at the longitudinal median of the frame, an aeroplane jointed to oscillate on the upstanding support for acquiring its fore-and-aft inclination and also adapted to rock transversely, means for varying the center of oscillation, and resilient means against the resistance of which the plane has its transverse rocking movements.

[Claims 6 to 19 not printed in the Gazette.]

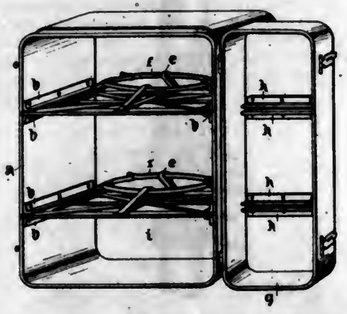
1,114,312. SPRING-CLIP. THOMAS I. A. TOMASINI, San Francisco, Cal. Filed Nov. 21, 1913. Serial No. 802,292. (Cl. 21—105.)



The combination with a leaf spring, of an inverted, substantially U-shaped clip connected at its ends to one of the leaves, and at its central portion overhanging a second leaf, said second portion being rounded, and a strip of spring material interposed between the second leaf and clip, said spring bearing at its ends against said second leaf, and being bowed inwardly at its central portion, said inwardly bowed portion being of a curvature equal to the curvature of the rounded portion of the clip, and engaging said rounded portion, said strip on each side of the inwardly bowed portion being bowed outwardly from the center of the strip to the second leaf engaging parts, whereby the strain on said strip is distributed, said outwardly bowed portions at their highest points being positioned at a greater distance relative to said second leaf than the overhanging portion of the clip.

1,114,313. HAT-BOX. FRIEDA TRIEPEL, Strassburg, Germany. Filed Oct. 29, 1913. Serial No. 798,126. (Cl. 206—8.)

1. In a hat box a plurality of supports for the hats, means for engaging a hat, means attached to the sides of said supports and secured to said hat engaging means, and means secured to the cover of the box and engaging the front edges of said supports for firmly holding them in their position within said box.

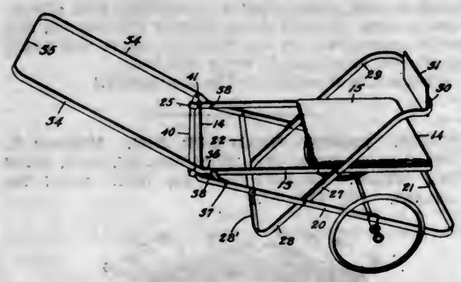


2. In a hat box, a plurality of superposed hat supporting frames, a hat engaging band, means attached to the sides of said frames engaging said band for holding the hat against displacement within said box and means secured to the inside of the box-cover engaging the front edges of said frames for holding the same in their position within said box.

3. In a hat box, a plurality of superposed supporting frames, a hat engaging band, loops attached to the sides of said frames and engaging said bands for holding the hat in its adjusted position, and means secured to the cover of the box adapted to engage the front edges of said frames for holding the same in their adjusted position within said box.

4. In a hat-box, a plurality of superposed supporting frames, a hat engaging band, loops attached to the sides of said frames and engaging said band for holding the hat in its adjusted position, and channeled angle pieces secured to the inside of the box-cover adapted to engage with their grooves the front edges of said frames for holding the same in their adjusted position within said box.

1,114,314. COLLAPSIBLE VEHICLE. ORA N. TURNER, Templeton, Mass., assignor to Bay State Metal Wheel Company, Templeton, Mass., a Corporation of Maine. Filed Dec. 26, 1913. Serial No. 808,672. (Cl. 21—83.)



1. A collapsible vehicle comprising a body frame, a wheel frame, one of said frames being open and adapted to admit the other, and means carried by said wheel frame for supporting said body frame above said wheel frame, said means permitting relative bodily movement of one frame into the other to collapse the vehicle.

2. A collapsible vehicle comprising a body frame and a wheel frame adapted to be nested one within the other, and means carried by said wheel frame for supporting said body frame above said wheel frame, said means permitting relative movement of said frames to nested relation to collapse the vehicle.

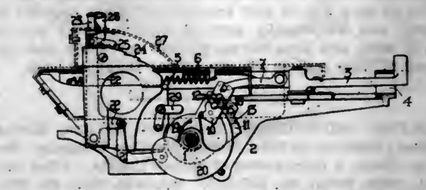
3. A collapsible vehicle comprising a body frame, a wheel frame, and two pairs of members carried by said wheel frame for supporting said body frame above said wheel frame, each of said members being pivotally attached to both frames and arranged to cause bodily movement of said body frame toward said wheel frame to collapse the vehicle.

4. A collapsible vehicle comprising a body frame, a wheel frame, and two pairs of members carried by said wheel frame for supporting said body frame above the wheel frame, each of said members being pivotally attached to both frames and the pivotal radii of the members of one pair being unequal to such radii of the others whereby said frames are caused to have relative angular movement and relative bodily movement toward each other when the vehicle is being collapsed.

5. A collapsible vehicle comprising a body frame, a wheel frame, and members carried by said wheel frame for movably supporting said body frame above the wheel frame, each of said members being pivotally attached to both frames and arranged to be inclined in opposite directions from the perpendicular when the vehicle is in operative position and to be substantially parallel to each other when the vehicle is collapsed.

[Claims 6 to 28 not printed in the Gazette.]

1,114,315. TYPE-WRITING MACHINE. RICHARD W. UHLIG, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 15, 1909. Serial No. 517,780. (Cl. 197—121.)



1. In a typewriting machine, the combination with a revolving platen, of a line-spacing mechanism for said platen, including a clutch, means for actuating such clutch, means for limiting the extent of the line-space movement of the platen, comprising a fixed stop and an adjustable stop, and means arranged in aliquant relation for determining the adjustment of the said adjustable stop.

2. In a typewriting machine, the combination with a rotatable platen, of a line-spacing mechanism for said platen, including a clutch, means for actuating said clutch, means for limiting the extent of the line-space movement of the platen, comprising a fixed stop and adjustable means for determining the magnitude of the spacing movement by said line-space mechanism, such adjusting means having a plurality of stopping projections, certain next succeeding ones of which projections are at predetermined distances aliquant with respect to each other.

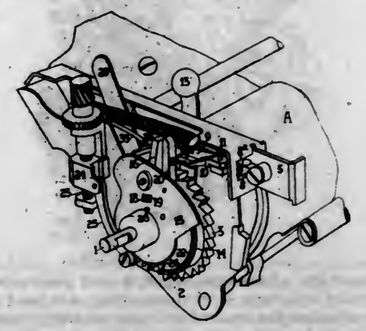
3. In a typewriting machine, the combination with a revoluble platen, and a line-space wheel connected therewith, of a line-spacing lever, an adjustable stop for limiting the line-spacing throw of the wheel and platen, a lever linked to the stop, and means for mechanically retaining the stop in different predetermined positions to regulate the extent of rotation of the platen, said retaining means including a series of stops or stations disposed at aliquant intervals.

4. In a typewriting machine, the combination with a rotatable platen, of a line spacing-mechanism for said platen, including a clutch, means for actuating said clutch, means for limiting the extent of the line-space movement of the platen, including notched means for varying the magnitude of the line-spacing movement by predetermined increments between the notches incommensurate with respect to each other.

5. In a typewriting machine, the combination with a platen and a frictional line-spacing mechanism therefor, of a shiftable stop controlling the line-spacing throw of the platen, a regulating lever connected with the stop for shifting the latter and a regulating plate associated with the lever and having an aliquant arrangement of stations to any one of which the lever may be thrown to effect a variation in the line-spacing rotation of the platen.

[Claims 6 to 17 not printed in the Gazette.]

1,114,316. TYPE-WRITING MACHINE. RICHARD W. UHLIG, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 18, 1909. Serial No. 518,428. (Cl. 197—114.)



1. In a typewriting machine, the combination with a platen, of means for line-spacing by intervals of a fixed minimum and multiples of said minimum, line-spacing means, minutely adjustable, a device shiftable into the train of either of said line-spacing means, means whereby said device may be shifted, and a lever adapted to move said device for effecting the actuation by said device of either of the means aforesaid.

2. In a typewriting machine, in combination, a platen, means for effecting line spacing by intervals of usual regular extent, including a shiftable device, means operable by said shiftable device for line spacing said platen by intervals variable by irregular extents, an actuating lever, and means to shift said shiftable device.

3. In a typewriting machine, the combination with a platen, of ratchet feeding and frictional feeding line spacing devices for line-spacing by unitarily or minuately variable line-spacing intervals, and a lever-operated line-spacing actuator adapted to operate either line-spacing mechanism.

4. In a line spacing mechanism, a platen, a line-spacing wheel on said platen, a pawl for said wheel, a clutch-member carried by said wheel, a second clutch-member adapted to coöperate with said first-mentioned clutch-member, and means for moving said pawl into position to engage said last-mentioned clutch-member.

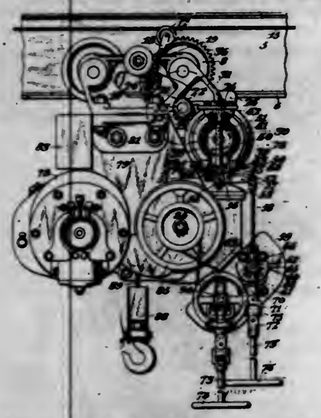
5. In a typewriting machine, the combination with a platen, of means for line-spacing said platen by intervals of usual regular extent, a minutely variable line-spacing means, a lever-operated actuator for effecting the operation of one or the other of the line-spacing means, a switch whereby the actuator may be made to operate either of the respective line-spacing means, and devices for adjusting the extent of all the line-spacing strokes effected by said actuator.

[Claims 6 to 43 not printed in the Gazette.]

1,114,317. BRAKE MECHANISM. HERBERT S. VALENTINE, Reading, Pa., assignor to Reading Crane and Hoist Works, Reading, Pa. Filed May 6, 1913. Serial No. 765,771. (Cl. 74—5.)

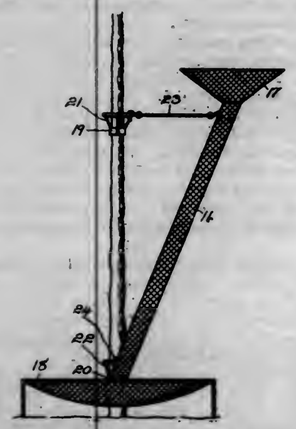
In a brake operating mechanism, a lever, means for actuating said lever comprising a yoke plate, a link connecting the free end of the lever with the yoke plate, a horizontal shaft passing through the yoke plate, a cam carried by said shaft and rotatable therewith, a pair of

rollers carried by the yoke plate and arranged to traverse the edge of the cam, and means for rotating said shaft including a miter gear on the shaft, a vertical shaft, a miter gear on the vertical shaft in mesh with the gear on the horizontal shaft, a head piece carried by the



vertical shaft, a hand-wheel shaft, a head piece carried by the hand-wheel shaft, a link connecting said head pieces, and a wheel on the hand-wheel shaft, whereby rotation of said wheel in either direction will actuate the brake mechanism.

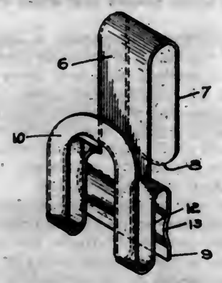
1,114,318. FRUIT-GATHERER. JOSEPH T. VASEY, Marshfield, Oreg. Filed Nov. 19, 1913. Serial No. 801,892. (Cl. 56—99.)



1. A fruit-gatherer of the type described, including a chute having a tubular body, annular members adapted for application to the trunk of a tree near the ground and at a point near the tree branches, respectively, said annular members having offset corresponding members, and inflexible connections between the latter members and the upper and lower ends of said tubular body, respectively.

2. A fruit-gatherer of the type described, including a chute having a tubular body, a dished receptacle applied to the trunk of a tree at the ground, said chute having its tubular body delivering into said dished receptacle, annular members applied to said tree-trunk, within said dished receptacle, and at a point contiguous to the tree-branches, respectively, said annular members having offset corresponding members and rod-connections between the latter members and said tubular body at its upper and lower ends, respectively.

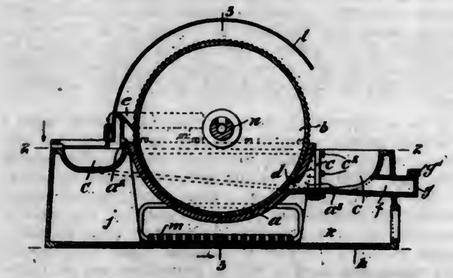
1,114,319. COMBINED BACK BUTTON AND TIE-HOLDER. FREDERIC T. WAGNER, Chicago, Ill. Filed Aug. 31, 1912. Serial No. 718,011. (Cl. 24—61.)



1. A device of the class described, comprising a body portion, a downwardly directed tie engaging hook formed integral therewith on one side thereof, a downwardly directed hook formed with said body portion on the other side thereof and adapted to be inserted through the button hole of a collar, and an upwardly directed hook forming a continuation of said collar engaging hook and adapted to be engaged beneath the neck band of a shirt.

2. A device of the class described, formed from a strip of metal, and comprising a body portion struck near one of its ends to afford an upwardly directed tongue which is bent to afford a downwardly directed hook, strips of metal on each side of said tongue bent in the opposite direction and downwardly parallel with the body portion of the strip and then outwardly and upwardly and connected at their ends to afford a looped U-shaped hook.

1,114,320. GRINDING-MILL. JOHN WALKER, Boston, Mass., assignor to John Walker Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 11, 1909, Serial No. 527,375. Renewed Mar. 26, 1914. Serial No. 827,486. (Cl. 83—14.)



1. A grinding mill, comprising a grinding cylinder arranged with its axis horizontal, a concave surrounding substantially the lower half of the cylinder, a conduit surrounding the open mouth of the concave, extending on a downward slant from the side at which the cylinder emerges from the concave to the side at which it enters, and an inlet leading into the concave from the lower side of the conduit, for effecting a gravity feed of material once ground back for regrinding.

2. A grinding mill, comprising a grinding cylinder arranged with its axis horizontal, a concave surrounding substantially the lower half of the cylinder, a conduit surrounding the open mouth of the concave, extending on a downward slant from the side at which the cylinder emerges from the concave to the side at which it enters, an outlet leading from the bottom of the conduit adjacent to said inlet, and means for closing or opening the outlet to draw off sufficiently ground material.

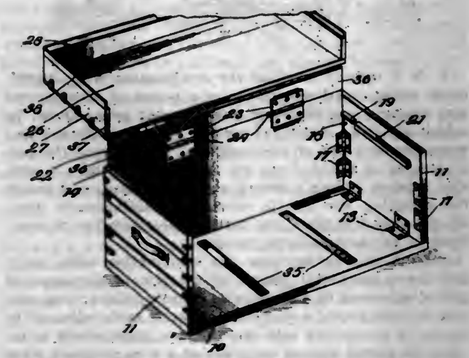
3. A grinding mill comprising a grinding cylinder, a concave embracing the bottom and ends of said cylinder, and a conduit of gradually increasing depth extending around said cylinder and concave, from one side thereof to the other.

4. A grinding mill comprising a grinding cylinder, a concave embracing the bottom and ends of said cylinder, a conduit of gradually increasing depth extending around said cylinder and concave from one side thereof to the other, and an inlet from the deepest part of said conduit to the interior of said concave.

5. A grinding mill comprising a grinding cylinder, a concave embracing the bottom and ends of said cylinder, a conduit of gradually increasing depth arranged to receive the ground material expelled from the concave, and extending around said cylinder and concave from one side thereof to the other, and an outlet from the deepest part of said conduit for discharge of the ground material.

[Claims 6 to 9 not printed in the Gazette.]

1,114,321. FOLDING TRUNK. ALFRED WARNE, Miami, Fla. Filed Mar. 31, 1913. Serial No. 758,078. (Cl. 190—21.)



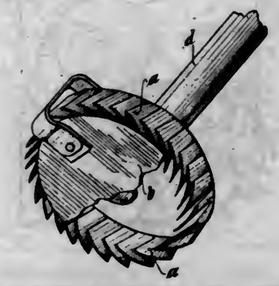
1. A trunk including a bottom, end sections hingedly connected to the bottom, side sections, a connection between the side and end sections, said connection comprising interlocking plates, the plates of one side section being disposed to interlock with the plates of the other side section when the sections are disassembled, a strip hingedly connected to one of the side sections, and a lid hingedly supported by the strip, said lid and strip forming a substantially rectangular receptacle when the sections are disassembled.

2. A truck including a bottom, end sections hingedly connected to the bottom, side sections, hinge plates carried by the side and end sections, said hinge plates being formed with pintle lugs, the pintle lugs of the hinge plates of the end sections interlocking with the pintle lugs of the hinge plates of the side sections, and a tray support consisting of a rod disposed to extend through the interlocking pintle lugs of the hinge plates and secure the side and end sections together, said rod being formed with a flattened terminal disposed at right angles to its body portion on which the tray of the trunk is adapted to rest.

3. A trunk including a bottom, end sections hingedly connected to the bottom, side sections, a connection between the side and end sections, said connection comprising interlocking plates, a member constituting a tray support disposed to maintain said plates in interlocking engagement, the plates of one side section being disposed to interlock with the plates of the other side section when the sections are disassembled.

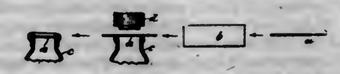
4. A trunk including a bottom, end sections hingedly connected to the bottom and disposed to fold thereon when the trunk is disassembled, side sections, the side and end sections each carrying plates formed with pintle lugs, the pintle lugs of the plates carried by the side members interlocking with the pintle lugs of the plates carried by the end members, means constituting a tray support for securing the interlocking pintle lugs together, a strip hingedly connected to one of the side sections, a lid hingedly connected to said strip, said lid being formed with side and end sections which coact with the strip to which the lid is hinged to form a rectangular receptacle for the side and end sections of the trunk, the bottom of the trunk constituting a lid for said receptacle.

1,114,322. SHAVING APPARATUS. HEINRICH WESTENDORP, Chemnitz, Germany. Filed Jan. 28, 1914. Serial No. 814,854. (Cl. 30—12.)



A shaving device comprising a stationary disk-shaped cutter having a very thin circular cutting edge, a hollow handle secured to said cutter, a bladed cutter in shearing contact with the cutting edge of said stationary cutter, a revoluble shaft journaled in said handle carrying said bladed cutter, and means for revolving said shaft.

1,114,323. PROCESS FOR MANUFACTURING AND APPLYING FIBROUS CAPS FOR BOTTLES AND OTHER CONTAINERS. ALBERT WESTLAKE, New York, N. Y. Filed Nov. 6, 1913. Serial No. 799,574. (Cl. 99—8.)



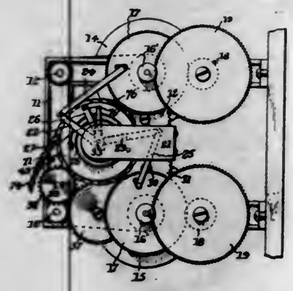
The process of manufacturing and applying fibrous caps for bottles and other containers, which consists first, in preparing a disk of suitable fibrous material; second, heating and sterilizing the same; third, bringing said disk while still heated, into juxtaposition with the container; fourth, applying said heated disk to said container in such manner as to form a central depression of said disk in intimate contact with the interior of said container and to mold the rest of said disk over and around a portion of the exterior of said container and molding the same into intimate and air-tight contact therewith; and lastly, cooling the cap thus formed to normal atmospheric temperature.

1,114,324. STREET-REGISTER FOR CARS. ROBERT Q. WILSON, Centerville, Iowa, assignor of one-half to William Ellis, Centerville, Iowa. Filed May 1, 1913. Serial No. 764,865. (Cl. 40—94.)

1. A machine of the character described comprising a frame, winding drums rotatably connected with said frame, a shifting plate pivotally connected with said frame, and provided with means for transmitting rotary movement to a selected one of said drums, shifting means for said plate carried by said frame, springs for operating said shifting means, a latch for holding said plate in an adjusted position, and means for placing said springs under a tension and releasing said latch to permit said springs to expand and to shift said plate.

2. A machine of the character described comprising a frame, winding drums rotatably connected with said frame, a shifting plate pivotally connected with said frame, operating means for said drums carried by said plate, a rod forming part of said frame, an arm slidably mounted upon said rod, springs carried by said rod and

engaging said arm, a latch for said plate, a rocker shaft connected with said frame and engaging said plate, operating means for said rocker shaft engaged by said springs, operating means for said latch positioned within the line of travel of said arm, and means for shifting said arm to place said springs under a tension, and actuate the operating means of said latch to release the latch and permit said springs to expand and shift said plate.

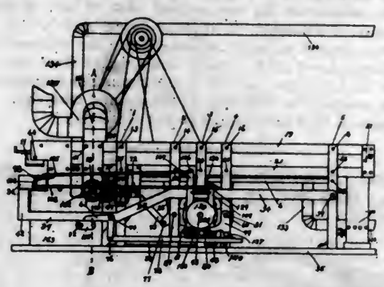


3. A machine of the character described comprising a frame, winding drums rotatably connected with said frame, a shifting plate pivotally connected with said frame and provided with means for transmitting rotary movement to a selected one of said drums, a latch carried by said frame and engaging said shifting plate to hold the same in an adjusted position, a rod forming part of said frame, a rocker shaft carried by said frame and engaging said shifting plate whereby said plate will move with said shaft, springs mounted upon said rod, operating means for said rocker shaft mounted upon said rod and engaged by said springs, a threaded shaft carried by said frame, an arm threaded upon said shaft and engaging said springs, a cam shaft carried by said frame for operating said latch, and a rod for actuating said cam shaft slidably connected with said frame and provided with abutments adapted to be engaged by said arm whereby the travel of said arm will press one of said springs and after said spring is pressed engage one of said abutments to shift said slidable rod and rotate said cam shaft to release said latch and permit said spring to expand and turn said rocker shaft to shift said shifting plate.

4. A machine of the character described comprising a frame, a shifting plate slidably connected with said frame and provided with means for transmitting rotary movement to a selected one of said drums, a rocker chaft carried by said frame and engaging said shifting plate, a latch carried by said shifting plate and engaging said frame for holding said shifting plate in an adjusted position, a cam shaft engaging said latch, a sliding rod carried by said frame and connected with said cam shaft, a rod forming part of said frame, an arm extending from said rod and engaging said rocker shaft to rotate the same, a threaded shaft carried by said frame, an arm threaded upon said threaded shaft and extending across said rod, a spring mounted upon said rod between said arms, means carried by the arm mounted upon said threaded shaft for engaging said sliding rod, whereby the movement of said last mentioned arm will move said sliding rod to rotate said cam shaft and release said latch to permit said spring to expand and rock said rocker shaft to shift said shifting plate.

1,114,325. CAPSULE-MACHINE. BENJAMIN THOMAS WINCHESTER, Windsor Hills, Md., assignor, by mesne assignments, to Sharp and Dohme, Baltimore, Md., a Corporation of New Jersey. Filed June 15, 1908. Serial No. 438,531. (Cl. 18—25.)

1. In a machine for forming capsules the combination with an upper horizontal track of a lower horizontal track; a series of separate and independent plates sustained on the upper track; a series of separate and independent plates sustained on the lower track; means at one end of the tracks for elevating the independent plates one at a time from the lower to the upper track; means at the other end of the tracks for lowering one plate at a time from the upper to the lower track; pegs carried by each separate and independent plate; means for coating the pegs on one plate at a time with gelatin and means between the opposite ends of the tracks for removing the gelatin coating from the pegs in the form of capsule parts.



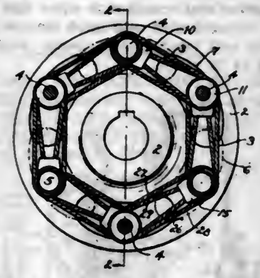
2. In a capsule machine the combination with spaced-apart upper and lower tracks of a series of disconnected and separate peg plates on both tracks; pegs carried by said peg plates; means for coating the pegs with gelatin; means at each end of the tracks for transferring the peg-plates one at a time from one track to the other; a portable receiver having a plurality of perforations and means for stripping the gelatin coatings simultaneously from all the pegs of a plate and forcing them into the perforations of the said portable receiver.

3. In a capsule machine the combination with upper and lower horizontal tracks, of a series of disconnected plates supported by and movable on said tracks; pegs carried by each plate; a vertically movable table adjacent to the lower tracks and said table having perforations to receive the coated pegs of one plate at a time; a pinch plate carried by said table to engage and strip the capsule coatings from the pegs; a transfer device at each end of the two sets of tracks to lower the plates from the upper to the lower track and to elevate the plates from the lower to the upper track and means for coating the pegs on one plate at a time.

4. In a capsule machine the combination with an upper horizontal track, of a lower horizontal track; a transfer device at each end of said upper and lower tracks; means for operating said transfer devices to intermittently cause them to register with said upper and then said lower tracks; plates movable on said upper and lower tracks between the two transfer devices and each of said plates having a plurality of pegs; a gelatin container; means for bringing the gelatin in the container and the pegs on one plate after another into contact to coat the pegs; means movable toward and from the lower track to engage the capsule coatings on all the pegs of the plates in succession and strip them from the pegs and a portable receiver to receive the stripped capsule coatings and hold them in a separated condition.

5. In a capsule machine the combination with an upper horizontal track, of a lower horizontal track; a transfer device at each end of said upper and lower tracks; means for operating said transfer devices to intermittently cause them to register with said upper and then said lower tracks; plates movable on said upper and lower tracks between the two transfer devices and each of said plates having a plurality of pegs; a gelatin container; means for bringing the gelatin in the container and the pegs on one plate after another into contact to coat the pegs; means movable toward and from the lower track to engage the capsule coatings on all the pegs of the plates in succession and strip them from the pegs; a portable receiver to receive the stripped capsules and hold them in a separated condition and means also adjacent to the lower track for cleaning the pegs of each plate after the capsules have been stripped therefrom.

1,114,326. FLEXIBLE COUPLING. HARRY L. ALLEN, Cleveland, Ohio. Filed Nov. 4, 1912. Serial No. 729,851. (Cl. 64—13.)



1. In a flexible coupling, the combination, with a driving member and a driven member, of a polygon of separate links connected alternately at its angles to the respective members, each link consisting of two heads, one connected with one member and the other with the other and a cable secured at its ends to one head and passing intermediately around the other head.

2. In a flexible coupling, the combination, with a driving and a driven member, of a link having two heads, one connected with one member and the other with the other and having a flexible cable secured at its ends to one head and passing intermediately around the other head and then looping around the head to which the ends are secured.

3. In a flexible coupling, the combination, with a driving and a driven member, of a link secured at one end to one member and at the other end to the other member, said link comprising a head having an opening for the passage of a securing bolt, a head at the other end of the link having an opening for the passage of a securing bolt, and a flexible cable having its ends secured in a recess in the head first mentioned and intermediately passing around the other head.

4. In a flexible coupling, a link consisting of a head with a boss on one side, a second head having a plurality of grooves side by side and a flexible cable having its ends secured within the boss on the first mentioned head and intermediately lying in reaches around the second head in the grooves thereof and then looping around the first mentioned head.

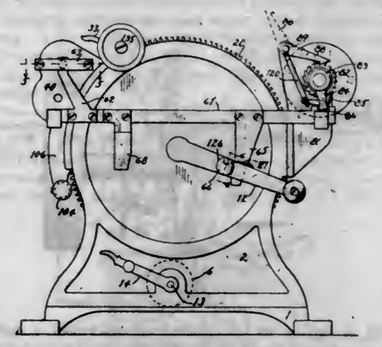
5. A link, for a flexible coupling consisting of a head having a securing opening and a projecting boss and at least one groove in the head on the opposite side from the boss, a second head having at least two grooves therein, and a flexible cable having its end secured within the boss on the first mentioned head and intermediately looping around the heads, the cable making as many loops as there are grooves in the second head.

[Claims 6 to 10 not printed in the Gazette.]

1,114,327. RIBBON-FEEDING MECHANISM. WILLIAM R. ALLEN, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1913. Serial No. 750,193. (Cl. 101—126.)

1. The combination, with a printing couple whose members print by rolling contact, of an inking fabric adapted to extend between the members of the couple, means for advancing the fabric for each cycle of movement of the couple a distance dependent on the length of the printing face, means for taking up the forward portion of the fabric, a spool carrying the rear portion of the fabric, and means including a clutch and gearing for connecting the same with the couple at a non-printing portion of the stroke of the latter.

2. The combination of a rotary printing couple, a pair of ribbon spools having a ribbon mounted thereon and passing between the members of the couple, the ribbon being adapted to be fed forward by the grip of the type and platen, means for taking up the slack caused by such forward feed, and a clutch and gearing adapted to connect the spool carrying the rear portion of the ribbon with the couple at a non-printing portion of the rotation thereof.



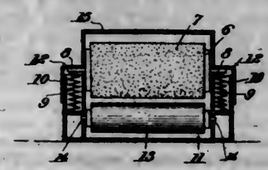
3. The combination of a printing couple which prints by rolling contact, of an inked fabric adapted to extend between the members of the couple, pay-out and receiving spools for said fabric, means for periodically and partially rotating said receiving spool to feed in the fabric, and means for taking up the slack independent of either spool.

4. The combination of a rotary printing couple, a fabric adapted to pass between them, a spool on which the forward end of the fabric may be wound, means for periodically and partially rotating said spool to feed the fabric by short steps, and means on the forward side of the line of printing contact for taking up the slack of the fabric caused by it being ripped and fed by the members of the couple.

5. The combination, with a printing couple, of a spool, means for periodically rotating it to wind in a fabric which may pass between the members of the couple, and a reel surrounding the spool on the same side of the line of printing contact for taking up the slack of the fabric.

[Claims 6 to 29 not printed in the Gazette.]

1,114,328. INK-PAD FOR RUBBER STAMPS. FREDERICK S. ARTER, Cleveland, Ohio. Filed June 2, 1914 Serial No. 842,359. (Cl. 101—75.)

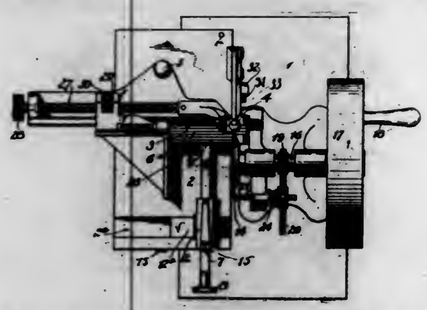


An inker for hand stamps, comprising a casing adapted to hold liquid ink and having slots in the ends thereof and housings outside of said slots, a lower roller in the casing adapted to run in the ink, an upper roller pad in the casing having trunnions extending through said slots and movable up and down in said housings, and springs mounted in the housings and pressing against said trunnions, and by which the roller pad is normally supported out of contact with the lower roller, said roller pad being adapted to be pressed down to contact with the lower roller when desired.

1,114,329. CUTTING-MACHINE FOR RULES AND SLUGS. JOHN C. BACKERT, Brooklyn, N. Y. Filed Oct. 15, 1913. Serial No. 795,209. (Cl. 90—60.)

1. In a device of the character described, a movable table, a cutter supported independently of said table and positioned adjacent the edge thereof, a back on said table

having a fixed pivot and adjustable thereabout, a gage cooperating with said back, means on said table for engaging and holding a rule or slug against said back with an end projecting therefrom in the direction of said cutter, said holding means being adjustable relatively to the table and to the back.



2. In a device of the character described, a movable table, a cutter supported independently of said table and positioned adjacent the edge thereof, a back on said table having a fixed pivot and adjustable thereabout, transversely of the said table edge, a gage coöperating with said back and adjustable longitudinally thereof, means on said table for engaging and holding a rule or slug against said back with an end projecting therefrom in the direction of said cutter, said holding means being adjustable relative to said back and table.

3. In a device of the character described, a table, a cutter supported independently of said table and positioned adjacent the edge thereof, a back mounted on said table having a fixed pivot and adjustable thereabout transversely of the table edge, a gage carried by and adjustable longitudinally of said back, means for holding a rule or slug against said back and gage with an end projecting from said back in the direction of said cutter, and means for effecting relative bodily movement between said table and cutter to bring said rule or slug into operative contact with said cutter.

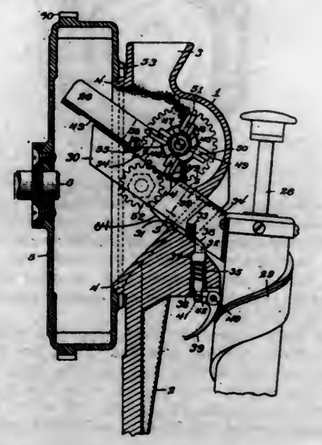
4. In a device of the character described, cutting means, a work-supporting table positioned adjacent thereto and provided with a back extending upwardly from the face thereof, and means for holding a rule or slug against said back with an end projecting therefrom in the direction of said cutting means, said holding means comprising a guide member slidably mounted on said table, a hand operated member extending through said guide and slidable toward and from said back, said member having a separate and resilient end portion for engaging said rule or slug, and means for holding said member at various positions in said guide.

1,114,330. LOADER FOR HAND-TACKERS. HARRIS A. BALLARD, Somerville, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 10, 1907. Serial No. 351,649. (Cl. 1—6.)

1. A tack-loader having a casing, a tack-lifting device, said casing having an aperture for receiving the end of a tack-raceway in position to receive tacks from the lifter, a hand tacker to which said raceway is connected, and displaceable means on said casing for engaging and retaining such raceway, said means being located so that it may be engaged by a finger of the hand grasping said hand tacker.

2. A tack-loader comprising a casing having an opening for receiving the end of a tack-raceway, a latch on said loader arranged to engage and retain such raceway when inserted in the loader, a hand tacker to which said raceway is connected; and a finger piece for retracting said latch lying beside said hand tacker when the raceway is in place in position to be operated by a finger of the hand grasping the tacker.

3. A tack-loader having an opening to receive the end of a tack-raceway; a latch; a spring to project said latch across said opening; a hand tacker of a form and size adapting it to be grasped by the hand; a raceway connected to said tacker and arranged to enter said loader; and a finger lever engaged with said latch for retracting it from said opening and located close beside said tacker when the raceway is in place.



4. A tack-loader comprising a casing having an opening to receive the end of a removable tack-raceway; a hand tacker having a raceway attached to it and projecting laterally from it, said raceway having a shoulder; a latch beveled at its end on the side opposite from said opening and arranged to be displaced by said raceway as the latter is inserted in the opening and to engage said shoulder on the raceway after insertion thereof; a spring to project the latch into locking position; and a trigger connected to retract the latch and located beside the body of said tacker so that it may be operated by a finger of the hand grasping the tacker.

5. A tack-loader comprising a stationary portion; a revoluble holder journaled on said stationary portion arranged to receive the tacks put into the latter, and to elevate and then drop them; the loader having provisions for receiving a removable raceway in the path of the tacks falling from the holder; and a rotatable clearer having arms and gravity-operated strikers mounted to slide loosely on said arms adjacent the raceway for removing tacks improperly placed thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,114,331. CAGE FOR ANTIFRICTION-BEARINGS. FRIEDRICH BALTZER, Berlin, Germany. Filed Nov. 12, 1908. Serial No. 462,293. (Cl. 64—59.)

1. A ball holding cage for ball bearings comprising, in combination, a supporting ring provided with confining lips, and ball holding members seated on the ring and confined thereon by said lips.

2. A ball holding cage for ball bearings comprising, in combination, a supporting ring provided on opposite edges with opposing confining lips, and a series of ball holding members seated on the ring and confined respectively by the opposing lips.

3. A cage for ball bearings composed of a ring insertible in a ball race, a plurality of resilient fingers having body portions bearing on said ring, balls disposed in said fingers, and clips engaging said fingers and securing them to said ring, said clips engaging opposite edges of the body portions of said fingers.

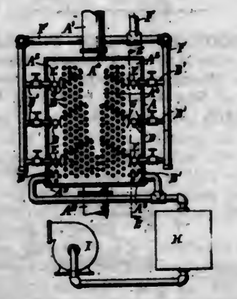
1,114,332. CAGE FOR ANTIFRICTION-BEARINGS. FRIEDRICH BALTZER, Berlin, Germany. Original application filed Nov. 12, 1908, Serial No. 462,293. Divided and this application filed Jan. 3, 1914. Serial No. 810,129. (Cl. 64—59.)

1. A spacing cage for antifriction bearings, comprising a ring or support and holding members for the rolling elements carried thereby, said members consisting each of a metal strip bent between its ends in the form of a loop to embrace the rolling element, and having its ends folded back on the sides of the loop and fastened to the support.

2. A spacing cage for antifriction bearings, comprising a ring or support, and holding members for the rolling elements carried thereby, said members consisting each of a single strip of metal having its central portion bent in the form of a loop to embrace the rolling element, and having its ends folded back on the sides of the loop and detachably interlocked with the support.

3. A spacing cage for antifriction bearings, comprising a ring or support provided at intervals with slots, and holding members for the rolling elements carried by the support, said members consisting each of a strip of metal bent between its ends in the form of a loop to embrace the rolling element, and having its ends folded back on the sides of the loop and passed through the slots in the support, and bent against the face of the same.

1,114,333. CONDENSING APPARATUS. PAUL A. BANCEL, New York, N. Y., assignor to himself, and George H. Gibson, Upper Montclair, N. J. Filed Nov. 29, 1912. Serial No. 734,049. (Cl. 257—28.)

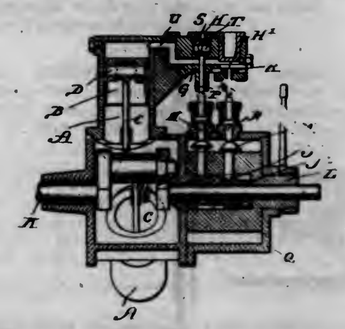


1. In condensing apparatus of the surface condenser type, the combination with the condensing chamber and its main steam inlet, and water, and air and vapor outlet provisions, of means for discharging jets of steam into said condensing chamber to thereby regulate the distribution therein of the steam entering through said main inlet, and the discharge of air and vapor.

2. In condensing apparatus of the surface condenser type, the combination with the condensing chamber and its main steam inlet, and water, and air and vapor outlet provisions of separately regulable jet devices for discharging jets of steam into said condensing chamber to thereby regulate the distribution therein of the steam entering through said main inlet, and the discharge of air and vapor.

3. In a surface condenser the combination with a condensing chamber having a steam inlet opening to, and a water of condensation outlet opening from the bottom of said chamber and an air and vapor outlet opening from the top of said chamber and having tubes for cooling water traversing said chamber, of means for discharging into said chamber jets of steam directed toward said air and vapor outlet.

1,114,334. MEANS FOR STARTING INTERNAL-COMBUSTION MOTORS OR ENGINES. FREDERICK JOHN TREVALLON BARNES, Brisbane, Queensland, Australia. Filed Jan. 10, 1914. Serial No. 811,412. (Cl. 230—37.)



1. In an engine convertible for use as a motor and pump, the combination of intake and exhaust valves, means for actuating said valves, means for disengaging said actuating means from said valves, and means carried by said actuating means for varying the throw of said valves, substantially as described.

2. In an engine convertible for use as a motor and pump, the combination of intake and exhaust valves, tappets for said valves, strikers provided with inclined heads for actuating said tappets, and means for moving said strikers to disengage said tappets and to vary the position of said heads with respect to said tappets so as to secure a variable throw of said valves, substantially as described.

3. In a convertible motor and pump, the combination of a plurality of radially disposed engines, a common crank shaft for said engines, intake and exhaust valves for each of said engines, a tappet for each of said valves, a sleeve mounted for independent revolution about said crank shaft, a plurality of pairs of strikers provided with conical heads mounted for reciprocation radially in said sleeve, a pair of cams mounted on said crank shaft for continuously actuating said strikers during running of the engines, and means for rotating said sleeve to move the strikers to disengage said tappets and to vary the position of said inclined heads with respect to the tappets to vary the throw of said valves, substantially as described.

4. In a convertible motor and pump, the combination of a multi-cylinder engine having no dead center, a sleeve carried on and capable of movement on the main shaft of said multi-cylinder engine, said sleeve carrying strikers which may, by the movement of said sleeve be moved into or out of contact with and to vary the lift of the tappets for operating the inlet and exhaust valves of the engine as and for the purposes herein set forth and as illustrated in the accompanying drawings.

5. In a convertible motor and pump, the combination of a multi-cylinder engine having no dead center, and provided with inlet and exhaust valves arranged and controlled so that when the engine is to run as an air motor said valves are mechanically operated by cams, a sleeve capable of movement on the main shafts and carrying strikers for operating the valves, and means for moving

the said sleeve and strikers so that when driven by the engine which it has started it becomes an air compressor, the action of the cams being cut off from the said valves by the movement of said sleeve and strikers, said valves being free to open and close by the suction and delivery of the air, into the receiver, as and for the purposes herein set forth and as illustrated in the accompanying drawings.

[Claim 6 not printed in the Gazette.]

1,114,335. PRESSURE-FLUID TOOL. LEWIS C. BAYLES, Johannesburg, Transvaal, and ALBERT H. TAYLOR, Easton, Pa., assignors to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed July 8, 1910. Serial No. 571,045. (Cl. 121—10.)

1. In a pressure fluid tool, the tool cylinder, its piston, a tool feeding cylinder, its piston, a valve chest located between the two cylinders, a plate interposed between the valve chest and tool cylinder forming a cover for the valve chest and bolts engaging the two cylinders valve chest and plate for securing the valve chest, plate and cylinders in assembled adjustment.

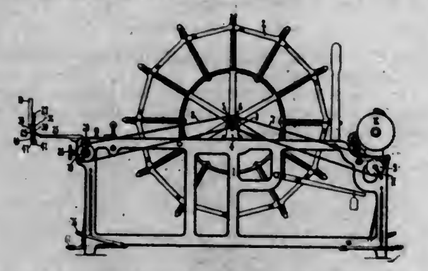
2. In a pressure fluid tool, the tool cylinder, its piston, a tool feeding cylinder, its piston, a valve chest located between the two cylinders, a plate interposed between the valve chest and tool cylinder forming a cover for the valve chest and bolts passing through the valve chest and plate and engaging the two cylinders for securing the valve chest, plate and cylinders in assembled adjustment.

1,114,336. CONNECTING-BLOCK FOR KNOCKDOWN STRUCTURES. LARS O. BLOMQVIST, Woodside, N. Y. Filed Apr. 30, 1914. Serial No. 835,395. (Cl. 20—83.)

A securing device for scaffolds or the like, consisting of a block having an angular opening extending therethrough from end to end, one end of said block being provided with an extension, said extension being provided with a plurality of downwardly directed pockets, and said extension being further provided with a plurality of upwardly directed pockets alining with the downwardly directed pockets.

1,114,337. WARPING-MACHINE. EDWARD E. BRADLEY, Stonington, Conn., assignor to The Atwood Machine Company, Stonington, Conn., a Corporation of New Jersey. Filed June 6, 1913. Serial No. 772,141. (Cl. 28—30.)

1. In a warping machine, reeds for separating the warp threads, a guide rod in coöperative relation to the reeds and over which the warp threads pass, vertically movable and swinging supports for the guide rod and means coöperating with the swinging supports for operating the supports and hence the guide rod to change the positions of the threads relative to the reeds.



2. In a warping machine, reeds for separating the warp threads, a guide rod in coöperative relation to the reeds and over which the warp threads pass after passing the reeds, vertically movable and swinging supports for the guide rod and cams in position to engage the supports and thereby shift the guide rod to change the position of the threads relative to the reeds.

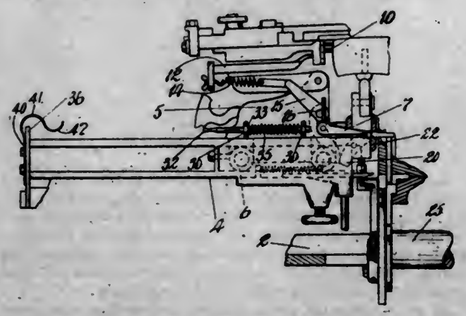
3. In a warping machine, reeds for separating the warp threads, a guide rod in coöperative relation to the reeds, vertically movable and swinging supports for the guide rod, ratchet toothed cams in position to engage the supports and a connection between the ratchet toothed cams for causing them to rock in unison.

4. In a warping machine, reeds for separating the warp threads, a guide rod in coöperative relation to the reeds and over which the warp threads pass, vertically movable supports for the guide rod, a rocking frame in which the supports are mounted, ratchet toothed cams, one for each support, a rock shaft connecting the two cams, said shaft forming a support for the rocking frame, and means for holding the rock shaft against retrograde movement.

5. In a warping machine, reeds for separating the warp threads, a guide rod in coöperative relation to the reeds and over which the warp threads pass, vertically movable supports for the guide rod, a rock shaft, ratchet toothed cams fixed to the rock shaft in position to receive thereon the said vertically movable supports, a rocking frame carrying the vertically movable supports and mounted on said rock shaft, and a pawl and ratchet for preventing a retrograde movement of the rock shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,114,338. REBOUND CONTROL FOR LASTING-CARRIAGES. LOUIS M. BROWN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 31, 1910. Serial No. 600,272. (Cl. 12—14.)



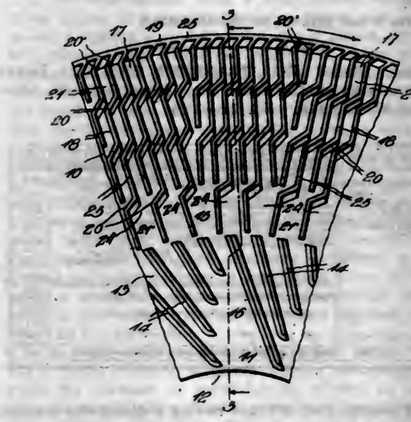
1. A lasting machine having, in combination, a heel lasting carriage, a track over which the carriage is moved away from lasting position, a rod yieldingly mounted in the carriage, and a bowed spring arranged for frictional engagement with the rod and constructed to be distorted by continued movement of the carriage and to re-act in the direction to effect return movement of the carriage.

2. A lasting machine having, in combination, a heel lasting carriage, a track over which the carriage is moved away from lasting position, the rod 30 yieldingly mounted by the spring 35 in the carriage, and the spring 40 having the portion 42 arranged to engage the rod frictionally and the neck 41 formed to be compressed by the backward movement of the rod and to coöperate with the spring 35 in moving the carriage forwardly again.

3. A lasting machine having, in combination, a heel lasting carriage, a track over which the carriage is moved away from lasting position, the rod 32 having a depressed face 31 and a relatively enlarged rear end, and the spring 40 arranged to ride over the rod end and engage in the depression and then be compressed, and thereafter to hang on to the rod end to retard rebound of the carriage.

4. A lasting machine having, in combination, a heel lasting carriage, a track over which the carriage is moved away from lasting position, and a spring having a straight portion 40 attached to an upright face of the track and extending upwardly and then forwardly at 41 and having a portion 42 bent downwardly and forwardly away from said straight portion and arranged for its lower face to be frictionally engaged by a portion of the carriage, the spring being free to yield backwardly while also acting as a drag on the carriage.

1,114,339. GRINDING-PLATE FOR MILLS. JAMES G. BRYANT, Port Huron, Mich. Filed Jan. 18, 1912. Serial No. 672,005. (Cl. 83—3.)



1. A grinding plate for mills, having a stock groove including a plurality of portions adapted for movement of stock therein toward the periphery, and alternate connecting groove portions between those first mentioned and disposed obliquely thereto, the connecting portions having sloping rear sides adapted to engage and lift stock thereon, for the purpose described.

2. A grinding plate having a peripheral skirt bar and other inner bars formed thereon to tortuous shape and spaced to form continuous channels for the flow of stock from the center to the skirt, the inner bars including leading parts and baffle portions extending obliquely thereto, the baffle portions having sloped sides to engage stock from an inner channel portion, for the purpose described.

3. A grinding plate having a skirt bar and inner bars, the majority of the bars each comprising a series of sections spaced laterally of each other in one direction and spaced from each other radially of the axis of rotation of the plate, and connecting portions having sloped sides disposed in the direction of rotation of the plate and channels extending continuously between all the bars from the skirt inwardly.

4. A grinding plate having bars each comprising a series of sections spaced laterally of each other in one direction and spaced from each other radially of the axis of rotation of the plate, and connecting bar portions having sloping sides in one direction and abrupt sides in the opposite direction forming cutting edges in combination with an opposed plate having similar bars, the connecting bar portions of which have oppositely arranged sloping sides and cutting edges.

5. A grinding plate having bars comprising in combination laterally and radially spaced cutter sections and diagonal parallel connecting bar portions connecting adjacent inner and outer ends of sections in laterally adjacent series, the sides of the connecting bar portions being sloped in the direction of rotation of the plate, said bars forming continuous channels for the flow of stock and partially interrupting lift portions for raising stock from the channels of which said bars form the sides.

[Claim 6 not printed in the Gazette.]

1,114,340. NON-RENEWABLE FUSE. ROBERT C. COLE, Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 17, 1913. Serial No. 754,922. (Cl. 175—273.)

1. An inclosed fuse having a fusible element, a casing inclosing said element and tool-resisting disks of the hardness of hardened steel permanently attached to and protecting the ends of the casing, whereby perforations cannot be easily cut from the exterior to the interior through said protecting disks to permit the insertion of a fusible element without substantial damage to the structure.

2. An inclosed fuse having a fusible element, a casing inclosing said element, and tool-resisting means of the hardness of hardened steel with vent openings permanently attached to and protecting the ends of the casing, whereby openings cannot be made from the exterior to the interior through said protecting means for the insertion of a fusible element without destroying the structure.

3. An inclosed fuse having a fusible element, a casing inclosing said element, and tool-resisting disks of the hardness of hardened steel permanently attached to the ends of the casing and protecting the ends of the fusible element whereby openings cannot be made from the exterior to the interior through said protecting disks for the insertion of a fusible element without destroying the structure.

4. An inclosed fuse having a fusible element, a casing inclosing said element, and hardened steel parts permanently attached to and protecting the ends of the casing so as to render it difficult to perforate the protected ends of the casing for the renewal of the fusible element.

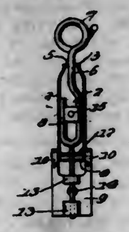
5. An inclosed fuse having a fusible element, a casing inclosing said element, and means closing the ends of the casing, said means having hardened steel parts permanently attached to and obstructing the openings into the ends of the casing, whereby openings cannot be made into the ends of the casing for the insertion of a fusible element without destroying the structure.

[Claims 6 to 9 not printed in the Gazette.]

1,114,341. THREAD-BOARD-GUIDE-WIRE HOLDER. FREDERICK SLOCUM CULVER, Taunton, Mass. Filed Oct. 8, 1913. Serial No. 794,180. (Cl. 118—16.)

1. In combination with the thread board rail, a tail member secured to the under face thereof, a pair of spaced perforated ears on the tail member projecting forwardly therefrom, a pair of spaced perforated depending lugs on

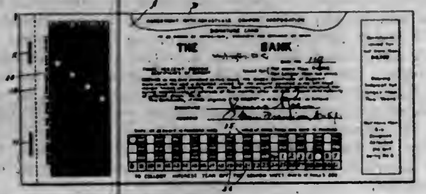
the tail member, a straight spring member engaged in the perforations of said lugs, a head formed of sheet metal blank having a front end formed with a concave seat, sides, and a rear wall which latter projects beyond the sides and is engaged at its free edge by the front end of the spring member, said sides at their rear ends being perforated and received in the space between the ears, a pin passed through the perforations of the ears and head sides, and a thread guide secured to the head and having the shank thereof engaged in said seat and having a U-shaped rear portion which engages the confronting faces of the sides of the head.



2. In combination with a tail member for securement to the thread board rail, a pair of perforated lugs depending from said tail member, a straight spring secured in the perforations of the lugs, a head pivoted to the tail member, an abutment on the rear end of the head on which the free end of the spring bears, a seat at the front end of the head, and a thread guide engaged in the seat.

3. In a device of the type set forth, a tail member, a head pivoted to the tail member and formed from a single piece of sheet metal shaped to provide sides, a front end formed with a seat, and an abutment at its rear end formed from a continuation of the body of the metal, a thread guide carried by the head having a part thereof engaged in said seat, and a spring carried by the tail member and engaged with said abutment.

1,114,342. INTEREST-BEARING INSTRUMENT OF OBLIGATION. CHARLES HALL DAVIS, Petersburg, Va. Filed May 1, 1909. Serial No. 493,436. (Cl. 11—13.)



An instrument of obligation comprising a plurality of superposed leaves, said leaves consisting, respectively, of a signature certificate, an agreement certificate, a deposit certificate, and a plurality of interest coupons, said signature, agreement and deposit certificates having their upper faces provided with deposit indicia at one end and deposit date indicia extending longitudinally thereof, the reverse faces of said certificates having interest indicia of like numerals of different denominations to that of said deposit indicia of the front faces and in register with same, said reverse faces of said certificates also having instrument life date indicia extending longitudinally thereof and in registry with said fixed date indicia of the upper faces, said interest coupons each having its upper face provided with interest indicia at one end and date indicia extending longitudinally thereof to designate the date of maturity of each coupon, the reverse face of each of said coupons having deposit indicia at one end thereof of like numerals of different denominations to that of said interest indicia, and in registry with same, said reverse faces of said coupons also having deposit date indicia in registry with the interest date indicia of said upper faces, said deposit and interest indicia being acted upon simultaneously by a single operation, said date indicia also being acted upon simultaneously by a single operation.

1,114,343. BRAKE-SHOE. MURRELL R. DE FRANCE, Pittsburgh, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 26, 1914. Serial No. 841,004. (Cl. 188—27.)

1. A brake shoe comprising a sheet metal casing and a filling of frictional material, said casing having the material in its side walls tapered.

2. A brake shoe comprising a sheet metal casing and a filling of frictional material, said casing being provided with ends and sides around said material and terminating flush with the bottom edge thereof, and the material forming said sides being tapered.

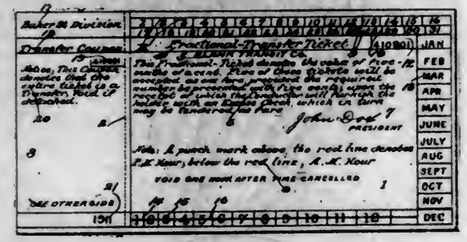
3. A brake shoe comprising a sheet metal casing and a filling of frictional material, said sides being corrugated and the material forming said sides being tapered.

4. A brake shoe comprising a sheet metal casing and a filling of frictional material, said casing being provided with ends and sides around said material and terminating flush with the bottom edge thereof, said sides being corrugated and the material forming said sides being tapered.

5. As a new article of manufacture, a sheet steel brake shoe casing having the material forming its side walls tapered.

[Claim 6 not printed in the Gazette.]

1,114,344. FARE AND TRANSFER TICKET. JAMES L. DONNELLY, Philadelphia, Pa. Filed Sept. 26, 1911. Serial No. 651,416. (Cl. 11—15.)

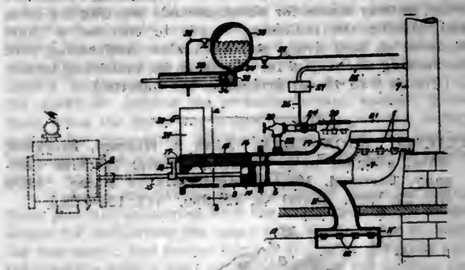


1. In combination, a ticket having a detachable portion, the ticket having thereon data indicating that when the said portion is detached the ticket will have a rebate value and that when the ticket is issued with the said portion attached the ticket will constitute a transfer, and an excess check having thereon data indicating that it is acceptacle as fare and has a value equal to the regular fare plus the rebate value of the first-mentioned ticket.

2. In combination, a ticket bearing data indicating that when issued without cancellation of a certain portion thereof the entire ticket will constitute a transfer and that when the ticket is issued with cancellation of said portion the remainder of the ticket will have a rebate value, and an excess check having a value in excess of the regular fare to be paid, the rebate ticket having a value equal to the value of the excess check in excess of the regular fare to be paid.

3. In combination, a rebate ticket having a value equal to a fraction of the regular cash fare and acceptable, in predetermined numbers as fare, and an excess check purchasable at the time of tendering a number of the rebate tickets, as fare, the said excess check having a value equal to the full cash fare.

1,114,345. STEAM-PUMP. KENNEDY DOUGAN, Minneapolis, Minn. Filed Jan. 16, 1909. Serial No. 472,667. (Cl. 103—67.)



1. A single acting direct acting steam pump, comprising a pump piston steam-actuated to effect its active or water-forcing stroke at maximum speed, means independent of the steam for returning the piston at diminished speed, and means for regulating the action of said returning means to vary the rate of return.

2. A single acting direct acting steam pump, comprising a pump cylinder, a piston therein steam-actuated to effect its outward or water-forcing stroke, an auxiliary cylinder and a piston therein operatively connected to the pump piston, a stand-pipe into which the water is pumped by both pistons, check valves preventing return of water through the pumping passages, and a separate water connection between the stand-pipe and the auxiliary cylinder at that side of the piston that will actuate said piston in the opposite direction to that of the steam stroke.

3. The combination, with a single acting direct acting steam pump, of a pump cylinder, a piston and rod therein, an auxiliary cylinder containing a piston, the rod of said piston being operatively connected to the pump piston rod; a stand-pipe into which the water is pumped; a water connection, having check valves therein, between the stand-pipe and the auxiliary cylinder, a bypass around said check-valves; and a regulating valve in said bypass.

4. The combination, with a single acting direct acting steam pump, of a pump cylinder, a piston and rod therein, an auxiliary cylinder containing a piston, the rod of said piston being operatively connected to the pump piston rod; a stand-pipe into which the water is pumped; a water connection, having check valves therein, between the stand-pipe and the auxiliary cylinder; a bypass around said check-valves; a regulating valve in said bypass, a pressure-responsive device operatively connected to said valve, and a water connection between said device and the stand-pipe.

5. A single acting direct acting steam pump, comprising a pump cylinder, a piston therein steam-actuated to effect its outward or water-forcing stroke, an auxiliary cylinder and a piston therein operatively connected to the pump piston, means for maintaining a fluid pressure upon said auxiliary piston sufficient to actuate the pump piston in the opposite direction to that of the steam stroke thereof at diminished speed, and means for regulating the action of said fluid to vary the rate of movement of the pistons in the direction opposite the steam strokes.

[Claims 6 to 8 not printed in the Gazette.]

1,114,346. FRAUD-PREVENTING SECURITY-BLANK. ERNEST HOWARD FARMER, Upper Holloway, London, England, assignor of one-half to Whitehead, Morris & Company, Limited, London, England. Filed Mar. 21, 1914. Serial No. 826,404. (Cl. 11—13.)

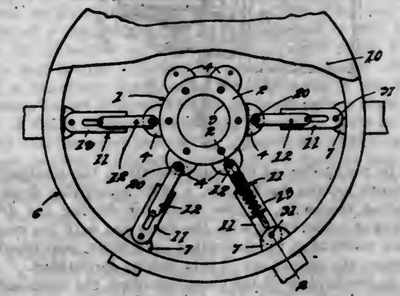
1. A security blank having upon it a number of elements, consisting of sharply defined, geometric shapes, which are as regards size, color, distance apart and relative configuration, not sufficiently large and far apart to enable the eye to clearly distinguish the shape, color and relative configuration of the individual elements, nor, sufficiently small and close together as to be visible as a tone or tint, but which are between these conditions and which produces the effect of a characteristic texture which will have the property of defeating reproduction, substantially as, and for the purpose described.

2. A security blank having a texture composed of elements which as regards size, color, distance apart and relative configuration are not sufficiently large and far apart to enable the eye to clearly distinguish the shape, color and relative configuration of the individual elements, nor sufficiently small and close together as to be visible as a tone or tint, but which are between these conditions in combination with a ground-work of suitable designs, the elements of which will be substantially opaque, relatively to the design matter to be printed on the security, and which produces the effect of a characteristic texture.

3. A security blank having a texture composed of elements not sufficiently large and far apart to enable the eye to clearly distinguish the shape, color, size and relative configuration of the individual elements nor sufficiently small and close together as to be visible as a tone or tint, but somewhere between these conditions, in combination with the elements of a groundwork substantially opaque relatively to the design matter printed on the security, said elements being in contrasted colors so chosen that the photographic effect of the three primary color sensations cannot all be suppressed or rendered ineffective simultaneously, substantially as, and for the purpose described.

4. A security blank the base of which has upon it a design or groundwork composed of a number of elements which as regards size, color, distance apart and relative configuration are not sufficiently large and far apart to enable the eye to clearly distinguish the shape, color and relative configuration of the elements, nor sufficiently small and close together as to be visible as a tone or tint, but between these conditions, over printed with a fine line work or other bank note design, substantially as described.

1,114,347. SPRING-HUB FOR AUTOS. CLARENCE E. FERGUSON, Rosendale, Mo. Filed Nov. 19, 1913. Serial No. 801,918. (Cl. 152—44.)

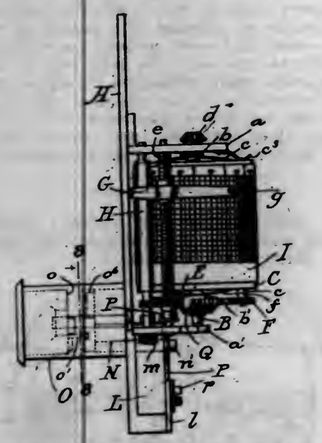


1. In a device of the character described, a pair of rings, a plurality of ears formed on said rings, a plurality of yieldable members secured to the ears, adapted to hold the same in spaced relation, each of said yieldable members comprising a pair of U-shaped members, the free ends of the arms of said U-shaped members being connected to the ears on the rings, a bolt extending through the bight portion of the U-shaped members and in longitudinal alinement with the arms thereof, a coiled spring interposed between the bight portions of the U-shaped members and surrounding the bolt and a second coiled spring interposed between the bight portion of one of the U-shaped members and the end of the bolt, said second mentioned coiled spring being adapted to coöperate with the first mentioned coiled spring to hold the members in engagement.

2. In combination with a pair of concentric spaced rings having ears formed thereon, yieldable members secured to said ears, said yieldable members comprising a pair of U-shaped members, one of said U-shaped mem-

bers having slots extending longitudinally through the arms thereof, and a centrally located aperture in the bight portion thereof, the other U-shaped member comprising a pair of arms, a plate having a pair of extensions formed thereon, the arms being provided with apertures near their free ends, said apertures being adapted to receive the extensions on the plate, said plate also having a centrally located aperture adapted to register with the aperture in the bight portion of the first mentioned U-shaped member, the free ends of the arms of each of said U-shaped members being provided with apertures by means of which the same may be pivotally secured to the ears on a ring, a compression coiled spring interposed between the bight portion of the first mentioned U-shaped member and the plate of the second mentioned U-shaped member, a bolt adapted to extend through the apertures in the plate and through the apertures of the bight portion of the U-shaped member, a second coiled spring superposed on the bight portion of the U-shaped members and a washer secured to the bolt and forming the upper abutment for the second mentioned spring.

1,114,348. COMBINED TIMED LOCK AND RECORDER. FRANCIS R. FLYNN, New York, N. Y. Filed Jan. 27, 1914. Serial No. 814,608. (Cl. 234—1.)



1. In mechanism of the class described, the combination of closure locking mechanism, a chart-supporting drum cooperating therewith, a time train for driving the drum, and means coöperating with the drum and with the closure locking mechanism for indicating on a chart, positioned on the drum, the operations of said locking mechanism.

2. In mechanism of the class described, the combination of closure locking mechanism, a chart-supporting drum cooperating therewith, a time train for rotating said drum at a constant speed, and means coöperating with the drum and with one of the movable parts of the locking mechanism for indicating on a chart, positioned on the drum, the operations of said closure locking mechanism.

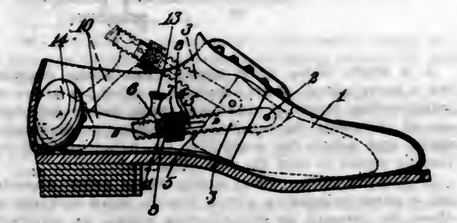
3. In mechanism of the class described, the combination of locking means, a chart-supporting drum coöperating therewith, a time train for rotating said drum at a constant speed, and means, also driven by the time train, cooperating with the drum and with the locking means and operable by the latter for indicating on a chart, positioned on the drum, the operations of said locking means.

4. In mechanism of the class described, the combination of locking means, a time train, a spindle driven by said time train, a drum loose on the spindle, a yielding connection between said drum and spindle whereby the movement of the spindle is imparted to the drum, and means cooperating with the drum and with the locking means for indicating on a chart, positioned on the drum, the operations of said locking means.

5. In mechanism of the class described, the combination of locking mechanism, a chart supporting drum coöperating therewith, indicating means coöperating with the drum, unitary means for simultaneously rotating the drum and causing the indicating means to traverse a chart mounted on said drum, and mechanism coöperating with the locking mechanism for actuating the indicating means.

[Claims 6 to 40 not printed in the Gazette.]

1,114,349. SHOE-TREE. JOHN S. HANSEN, Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed Oct. 29, 1909. Serial No. 525,360. (Cl. 12—128.)

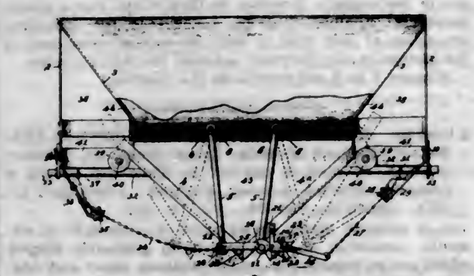


1. A shoe-tree having, in combination, a fore part, a heel part, a member connected with one of the said parts and provided with a rack, a member connected with the other of said parts, a slide pivoted to the last-named member and a rotatory device carried by said slide and constructed and arranged to engage the teeth of said rack, to effect longitudinal adjustments of the shoe-tree.

2. A shoe-tree comprising a fore part, a heel part, a toggle member pivotally connected with one of said parts and having its edges provided with teeth, a toggle member connected with the other of said parts, a slide pivoted to the last-named member and arranged for longitudinal movements relatively to the first-named member, and a nut encircling the slide and toothed member and rotatively mounted on said slide whereby it is adapted to coöperate with said teeth in effecting relative adjustments of the fore and heel parts.

3. A shoe-tree comprising a fore part, a heel part, a toggle member connected with one of said parts, said member having a slot and also having its edges provided with teeth, a toggle member connected with the other of said parts, a slide, means passing through the slot in the first-named toggle member and pivotally connecting said slide and last-named toggle member, and a rotatory device carried by said slide and adapted to coöperate with said teeth in effecting relative adjustments of the fore and heel parts.

1,114,350. DUMP-CAR. PATRICK J. HARRIGAN, McKeesport, Pa. Filed Dec. 18, 1913. Serial No. 807,467. (Cl. 105—185.)



1. A dump car having inclined doors, swinging supports for the lower portion of the doors, means for maintaining the supports in locked relation relative to the doors to cause the latter to resist any tendency to open from a weight imposed thereon, safety devices co-acting with the locking mechanism to prevent the latter from becoming accidentally unlocked and means for successively releasing the safety devices and the locking mechanism.

2. A dump car having doors suspended for swinging movement at their lower ends, means for converting the lateral movement into an upward movement whereby to cause the lower ends of the doors to travel in an approximately horizontal plane, interlocking devices carried by the doors for locking the swinging means against movement when the doors are in load-receiving position, safety means for preventing accidental release of the locking mechanism and means for successively releasing the safety means and the interlocking devices.

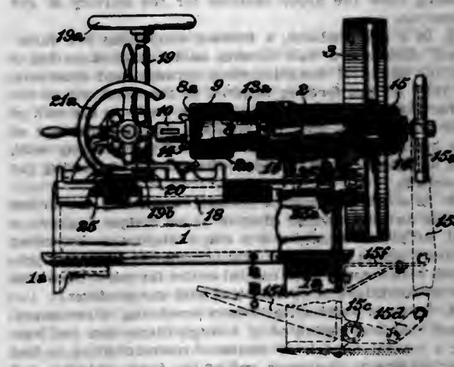
3. A dump car having double inclined doors, swinging links pivotally-connected with the lower ends of the doors, means for supporting the upper ends of the doors for sliding movement, and means carried by one of the links and interlocking with a part of the other link for locking the doors together.

4. A dump car having double inclined doors, swinging links pivotally-connected with the lower ends of the doors, means for supporting the upper ends of the doors for sliding movement, means carried by one of the links and interlocking with a part of the other link for locking the doors together, and a safety device for said locking means to prevent accidental unlocking.

5. A dump car having double inclined doors, swinging links pivotally-connected with the lower ends of the doors, means for supporting the upper ends of the doors for sliding movement, means carried by one of the links and interlocking with a part of the other link for locking the doors together, a safety device for said locking means, and means operating to first release the safety device and then the locking mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,114,351. PIPE EXPANDING AND BEADING MACHINE. CHARLES L. HEISLER, Schenectady, N. Y. Filed Jan. 30, 1914. Serial No. 815,340. (Cl. 81—82.)



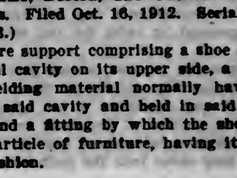
1. In a pipe expanding and beading machine, the combination of a rotatory tubular spindle, means for maintaining a pipe in axial alinement therewith, means for rotating the spindle, means for expanding a pipe, means for beading the pipe, a housing plug carrying said expanding and beading means and connected detachably to the spindle, and adjusting means located within the tubular spindle and bearing on the expanding means.

2. In a pipe expanding and beading machine, the combination of a bed having a spindle bearing and slideways extending transversely thereto, a rotatory spindle journaled in said bearing, pipe expanding means carried by said spindle, a cross slide adapted to traverse on the slideways of the bed, a vise mounted adjustably on said cross slide, and means for traversing the cross slide parallel with the axis of the spindle.

3. In a pipe expanding and beading machine, the combination of a bed plate, a spindle journaled thereon, means for clamping a pipe and moving it axially toward and away from said spindle, expanding means carried by said spindle, manually operable means to force said expanding means radially outward, means to retract the same, and a fixed beading tool carried by said spindle in the rear of said expanding means and adapted to spin and polish the end of the pipe to form a tight joint without further treatment.

4. In a machine of the class described, the combination with the bed plate, of two parallel spindles journaled thereon, a cross-slide mounted on said bed-plate, means to move it parallel to the axes of said spindles, a cutting-off tool carried by one of said spindles and pipe expanding and beading means carried by the other, a bearing carried by said cross-slide in which the spindle carrying the cutting-off tool is longitudinally movable, pipe-clamping means mounted on said cross-slide and means for moving tne same at right angles to the movement of the latter, and a common power means for rotating both said spindles.

1,114,352. BOOT AND SHOE. MEYER S. HESS, Baltimore, Md., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 27, 1908. Serial No. 464,542. (Cl. 36—76.)



1. A shank stiffener comprising a metallic plate of relatively thin material having a longitudinal stiffening rib struck up from the middle portion of the plate and extending at substantially a right angle to the plate, said rib having a relatively sharp edge for substantially its entire length adapting it to be driven into a shoe sole.

2. A shank stiffener comprising a metallic plate of relatively thin material having a longitudinal stiffening rib struck up from the middle portion of the plate and composed of a single thickness of the material of said plate, said rib extending at substantially a right angle to the plate and having a sharp shoulder at each end thereof and a relatively sharp edge for substantially its entire length whereby it is adapted to be driven into a shoe sole.

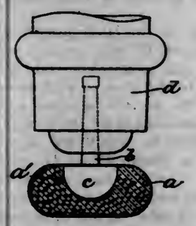
3. A shank stiffener comprising a metallic plate of relatively thin material having two longitudinal stiffening ribs struck up from the middle portion of the plate so that they lie substantially at right angles to the plate and provide a longitudinal aperture between them, each of said ribs having shoulders at its ends and having a relatively sharp edge for substantially its entire length whereby the ribs are adapted to be driven into a shoe sole.

4. A shank stiffener comprising a metallic plate of relatively thin material having two longitudinal stiffening ribs struck up from the middle portion of the plate so that they lie substantially at right angles to the plate and provide a longitudinal aperture between the ribs, said ribs being tapered in height from the heel end toward the forward end of the plate and converging toward the latter end and each rib having shoulders at its ends and a relatively sharp edge for substantially its entire length, whereby it is adapted to be driven into a shoe sole.

1,114,353. SLIDING SHOE FOR FURNITURE. WILLIAM T. HIGHT, Boston, and GEORGE W. HIGHT, Jr., Quincy, Mass. Filed Oct. 16, 1912. Serial No. 726,026. (Cl. 155—33.)

1. A furniture support comprising a shoe provided with a hemispherical cavity on its upper side, a hemispherical cushion of yielding material normally having a larger diameter than said cavity and held in said cavity under compression, and a fitting by which the shoe may be attached to an article of furniture, having its end secured within said cushion.

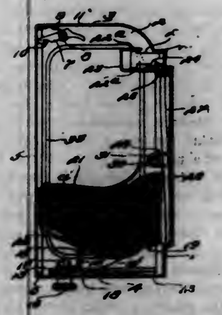
2. A furniture support comprising a shoe provided with a cavity in its upper side, a cushion of yielding material held wholly within said cavity, and a fitting by which the shoe may be attached to an article of furniture having a head embedded in said cushion.



3. A furniture support comprising a shoe, a fitting by which said shoe may be attached to an article of furniture, and a cushion of yielding material in which one end of said fitting is embedded, seated wholly within a cavity in said shoe.

4. A furniture support comprising a shoe formed with a cavity in its upper side, a cushion of yielding material seated entirely within said cavity, and a fitting embedded at one end in said cushion and adapted to be removably secured by its other end to an article of furniture.

1,114,354. TOILET-PAPER CABINET. JAMES L. HILDEBRAND, Boston, Mass. Filed Aug. 5, 1911. Serial No. 642,502. (Cl. 211—32.)

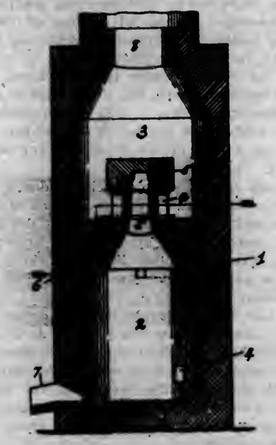


1. In a dispensing cabinet, a case having a restricted outlet, rests for a mass of sheet-units adjacent the said outlet, separated by an opening which permits an unsupported portion of the said mass between the rests to bulge through the opening so as to present a folded-back flap on the leading unit in the path of a starter, and a starter outside said rests slidable across said opening and the said bulging intermediate portion and operating to swing the said flap into position at the outlet to be grasped by hand for the withdrawal of the sheet-unit.

2. In a dispensing cabinet, a case having a restricted outlet, stack-supporting shelves at front and rear above the said outlet and separated by an opening through which an intermediate portion of the stack of sheet-units may bulge between said shelves so as to present a folded-back flap on the bottom unit in the path of a starter, and a starter adapted to be reciprocated below said opening to make contact with the bulging intermediate portion of the mass and to deflect such flap into the outlet into position to be grasped by hand for the withdrawal of the sheet-unit.

3. In a dispensing cabinet, a case having a restricted outlet, stack-supporting shelves at front and rear above the said outlet and separated by an opening permitting the intermediate portion of the stack to bulge downward and through which a folded-back flap on the bottom unit of said stack may enter into the path of a starter, and a starter adapted to be reciprocated below said opening and in such reciprocation engaging such flap and turning it into the outlet.

1,114,355. GAS-PRODUCER. JULES H. HIRT, Sewickley, Pa., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Nov. 30, 1908. Serial No. 465,424. (Cl. 48—74.)



1. In a gas producer, a furnace comprising two superposed chambers, a single diaphragm extending entirely across and between said chambers, said diaphragm having a constricted central means of communication between said chambers, a fuel inlet to the lower chamber directed at an oblique angle to the wall of said chamber, and an opening from the upper chamber for the delivery of gas therefrom.

2. In a gas producer, a furnace comprising two superposed chambers, a wall between said chambers having a central means of communication between said chambers, an inlet for gas forming material at the lower end of the lower chamber directed at an oblique angle to the wall of said chamber, an inlet for moisture at the upper end of the lower chamber and adjacent said intermediate wall, and an opening from the upper chamber for delivering gas therefrom.

3. In a gas producer, a furnace comprising a chamber having an inlet thereto directed at an oblique angle to a wall of said chamber, and a single diaphragm extending entirely across the upper end of said chamber and provided with a constricted central outlet for gases therefrom for all conditions of operation of said gas producer.

4. In a gas producer, a furnace consisting of two superposed chambers separated by a single diaphragm and having a central constricted means of communication, a fuel inlet leading to the lower end of the lower chamber and directed at an oblique angle to the wall of said chamber, and a gas offtake leading from the upper end of the upper chamber.

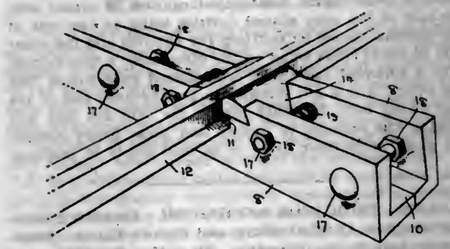
5. In a gas producer, a furnace comprising two superposed chambers having a central constricted means of communication, a fuel inlet leading to the lower end of the lower chamber, a moisture inlet leading to the upper end of said lower chamber, both said inlets being directed at an oblique angle to the wall of said chamber, and a gas offtake leading from the upper end of the upper chamber.

1,114,356. MUSHROOM-BULLET. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 24, 1914. Serial No. 820,622. (Cl. 102—28.)

1. A bullet comprising a core, a body cover and a separate tip cover, the tip cover being weakened by the formation therein of a plurality of cuts entirely through said cover but with the edges closed together, leaving the core substantially covered, so that upon impact the body portion of the bullet will telescope the forward end thereof and the tip cover will be ruptured and opened out like an umbrella.

2. A bullet comprising a core, a body cover and a separate tip cover, the tip cover being weakened by the formation therein of a plurality of longitudinal cuts entirely through said cover but with the edges closed together, leaving the core substantially covered, so that upon impact the body portion of the bullet will telescope the forward end thereof and the tip cover will be ruptured and opened out like an umbrella.

1,114,357. SAFETY METALLIC RAILROAD-TIE. CLAY L. HOFFMAN and WILLIAM E. STONER, Portsmouth, Ohio. Filed Dec. 30, 1913. Serial No. 809,530. (Cl. 238—5.)



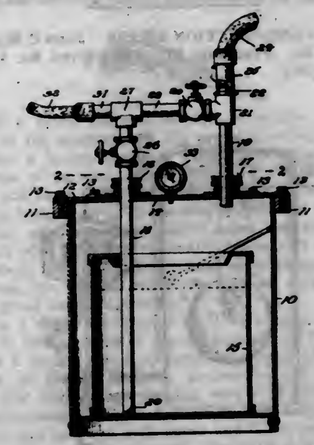
1. A railway tie comprising a pair of oppositely arranged angle bars having oppositely inclined inner walls, pairs of rail gripping members having wedged engagement between the inclined walls of said bars, and bolts extending through said bars for simultaneously securing the latter together and securing said rail clamping members in locked position between said bars.

2. A railway tie comprising a pair of oppositely arranged angle bars having oppositely inclined walls, a pair of rail gripping members at each end of said tie having wedged engagement between the oppositely inclined inner walls of said bars, the upper ends of the bars of the gripping members having suitable recesses, to receive the base and adjacent portion of a rail, bolts securing each pair of gripping members together and bolts extending through said bars for simultaneously securing the latter together and securing said rail clamping members in wedged position between said bars.

3. A railway tie comprising a pair of oppositely arranged angle bars having locked engagement, the upper faces of the bases of said bars being oppositely inclined, pairs of rail gripping members adapted to receive portions of the rails and contacting the upper face of the bases of said angle bars at their opposite corners and providing a space between said members and said bases at the medial portion of the latter, and means for securing said bars together and securing the rails of a track to said members.

1,114,358. COMPRESSION-TANK. JOSEPH L. HOOKER, Anderson, Ind. Filed Mar. 27, 1913. Serial No. 757,194. (Cl. 137—14.)

In a device of the character described a compressed air receiver having side and bottom walls, a removable cover for the receiver, an air inlet pipe carried by the cover, a discharge pipe carried by the cover, said pipes extending downwardly into the receiver when the cover is in assembled position, a check valve interposed in the air inlet pipe, a branch pipe communicant with both the air inlet pipe and the discharge pipe, one extremity of said branch pipe being connected with the air inlet pipe adjacent the check valve and intermediate said valve and the cover, a valve interposed in the branch pipe, a second valve arranged in the discharge pipe, and a removable liquid container disposed within the air receiver and supported by the bottom wall thereof, said container having side and bottom walls and being arranged to receive the inner extremity of the discharge pipe in the operative position of the cover upon the receiver, the terminal of said discharge pipe being disposed to bear against the bottom wall of the container.



1,114,359. VEHICLE-SPRING. THOMAS A. HOOVER, Fresno, Cal., assignor to Hoover Auxiliary Spring Company, San Francisco, Cal., a Corporation of California. Filed Nov. 6, 1911. Serial No. 658,778. (Cl. 21—105.)

1. A vehicle spring comprising a main spring; a recoil spring fastened thereto at its outer end and free at its inner end; an auxiliary spring; and a device which fastens the inner end of said recoil spring to said auxiliary spring and transmits the vibrations of one to the other thereof; said main spring being interposed between said recoil and auxiliary springs.

2. A vehicle spring comprising a main spring; a recoil spring fastened thereto at its outer end and free at its inner end; an auxiliary spring free at its outer end and fastened to said main spring near the center thereof; and a device which fastens the free ends of said recoil and auxiliary spring together and transmits the vibrations of one to the other thereof; said main spring being interposed between said recoil and auxiliary springs.

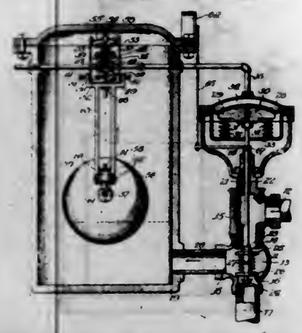
3. A vehicle spring having an auxiliary spring; a two-part recoil spring the inner opposed ends of the parts of which are connected with said auxiliary spring; and a main spring interposed between said springs.

4. A vehicle spring having an auxiliary spring; a two-part recoil spring the inner opposed ends of the parts of which are connected with said auxiliary spring; and a main spring interposed between said springs and connected with the outer ends of the parts of said recoil spring.

5. A vehicle spring comprising a main spring; a flat recoil spring fastened thereto at its outer end and extending lengthwise of said main spring and having its inner end free; and a flexible suspensory device which is connected to the free end of said recoil spring and is adapted to suspend the same from the vehicle frame.

[Claims 6 to 14 not printed in the Gazette.]

1,114,360. CONDENSATION-METER. JOHN C. HORNUNG, Chicago, Ill. Filed July 27, 1912. Serial No. 711,903. (Cl. 73—28.)



1. In a meter, the combination of a measure, a reverse flow main valve arranged to establish communication between the measure and the supply and waste alternatively and in its intermediate position to interrupt communication with both, and a float-operated actuating device to reverse the position of the main valve, the said actuating device having a snap operation, substantially as described.

2. In a meter, the combination of a measure, a reverse flow main valve arranged to establish communication between the measure and the supply and waste alternatively and in its intermediate position to interrupt communication with both, an actuating device to reverse the position of the main valve, and a float mechanism mounted within the measure to operate the actuating device, the said actuating device having a snap operation, substantially as described.

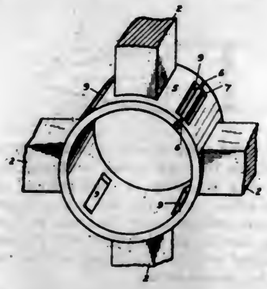
3. In a meter, the combination of a measure, a main valve arranged to establish communication between the measure and the supply and waste in alternation and in its intermediate position to interrupt communication with both, an actuating device, a float arranged within the measure and controlled by the amount of fluid therein, an operative snap connection between the float and the actuating device, and an operative connection between the actuating device and the main valve whereby to operate the latter, substantially as described.

4. In a meter, the combination of a measure, a main valve arranged to establish communication between the measure and the supply and waste in alternation and in its intermediate position to interrupt communication with both, a float controlled by the volume of fluid in the measure, and an operative snap-spring connection between the float and the main valve whereby to operate the latter, substantially as described.

5. In a meter, the combination of a measure, a main valve arranged to establish communication between the measure and the supply and waste in alternation and in its intermediate position to interrupt communication with both, a float controlled snap operated actuating valve controlled by the volume of fluid in the measure and an operative connection between the actuating valve and the main valve whereby to operate the latter, substantially as described.

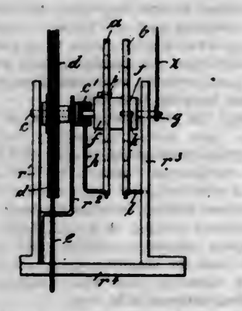
[Claims 6 to 19 not printed in the Gazette.]

1,114,361. ELECTRIC DYNAMO. WINTHROP K. HOWA, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 28, 1913. Serial No. 764,190. (Cl. 172—36.)



In a dynamo: a field magnet of magnetic material formed with polar projections; a form wound coil of insulated wire on each polar projection; a split annulus of magnetic material inserted between diametrically opposite polar projections for forming an armature space; said annulus formed with cone shaped cavities on either side, one-half of the cone shaped cavities being on one side of the division caused by splitting the annulus and the other half of the cavities being on the other side; a bolt formed with a threaded end and a cone shaped head fitting into one cavity, and a nut screwed on the threaded end of the bolt fitting into the other cavity, the said nut and bolt causing the annulus to expand and press firmly against the polar projections so as to be held firmly in position.

1,114,362. INDICATOR MECHANISM. FRIEDRICH HUTTENLOCHER, Charlottenburg, and RUDOLF LAUFER, Köpenick, near Berlin, Germany. Filed Mar. 18, 1913. Serial No. 755,181. (Cl. 116—49.)



1. In an indicator, a driven element, an index, a spring mechanism interposed between said element and index, a connection between said mechanism and element, a second connection between said mechanism and a fixed part, and a third connection between said mechanism and index intermediate said first-mentioned and second connections, whereby the movement imparted by said element through said mechanism to said index is less than the movement of said element.

2. In an indicator; a driven element, an index and a spring mechanism in two-parts and connected intermediate its parts to said index and having its parts connected to said element and to a fixed part respectively.

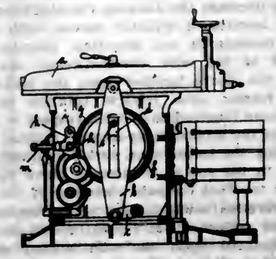
3. In an indicator; a driven element, a spring connected at one end thereto, an index, a connection between said index and said spring, and spring means for opposing the movement of said connection.

4. In an indicator, a driven element, an index, a spring in two parts and connected intermediate its parts to said index and connected at one end to said driven element and at its other end to a fixed part.

5. In an indicator, a driven element, an index, a spring connected at its ends to said driven element and to a fixed part respectively, and a connection from a point intermediate the ends of said spring to said index.

[Claims 6 to 16 not printed in the Gazette.]

1,114,363. SHAPING-MACHINE. KARL JUNG, Berlin, Germany, assignor to General Composing Company, Gesellschaft mit beschrankter Haftung, Berlin, Germany, a Corporation of Prussia. Filed Dec. 8, 1913. Serial No. 805,474. (Cl. 90—39.)



1. In a slide-moving device for machine tools more particularly for shaping machines in combination a driving spindle, a rotating machine element mounted on the end of the driving spindle, a pin carried by said machine element and transmitting the movement to the slide and an additional support for the said machine element provided in the plane of rotation of the pin and on that face of the said element which tends to resist the cutting stress.

2. In a slide-moving device for machine tools more particularly for shaping machines in combination a driving spindle, a rotating gear wheel mounted on the end of the driving spindle, a pin carried by said gear wheel and transmitting the movement to the slide and an additional support for the said gear wheel provided in the plane of rotation of the said pin and on that face of the said gear wheel, which tends to resist the cutting stress.

3. In a slide-moving device for machine tools more particularly for shaping machines in combination a driving spindle, a rotating machine element mounted on the end of the driving spindle, a pin carried by said machine element and transmitting the movement to the slide and an additional support for the said machine element provided in the plane of rotation of the pin and on that face of the said element which tends to resist the cutting stress and operative only at intervals.

4. In a slide-moving device for machine tools more particularly for shaping machines in combination a driving spindle, a rotating machine element mounted on the end of the driving spindle, a pin carried by said machine element and transmitting the movement to the slide and an additional support for the said machine element provided in the plane of rotation of the pin and on that face of the said element which tends to resist the cutting stress and operative only during the working stroke.

5. In a slide-moving device for the machine tools more particularly for shaping machines in combination a driving spindle, a rotating gear wheel mounted on the end of the driving spindle, a pin carried by said gear wheel and transmitting the movement to the slide and an additional support for the said gear wheel arranged in direct proximity to the pin, said gear wheel being provided with an annular projection engaging with the said additional support.

[Claims 6 to 8 not printed in the Gazette.]

1,114,364. FLYING-MACHINE. HUGO JUNKERS, Aachen, Germany. Filed Jan. 26, 1911. Serial No. 604,722. (Cl. 244—12.)

1. In a flying machine of the character described, a shell of a form adapted to assist in the buoyancy of the machine during flight, providing a space for the reception of persons, motors, accessories and freight, composed of upper and lower planes and having substantially whale-back shape with the wider end in front, hollow supporting wings for said buoyant shell, means for connecting said wings and said shell, so as to offer a smooth surface to the air, said shell inclosing the starting, landing propelling and steering means, substantially as described.

2. In a flying machine, a shell of a form adapted to assist in the buoyancy of the machine during flight and inclosing a hollow space of dimensions adapted for the reception of persons, motors, accessories and freight, an upper and lower plane forming said shell and presenting a whale-back form in cross-section with its broader end in front, said upper and lower plane converging into a rounded edge, tapering gradually rearwardly and ending in a sharp edge and being curved so as to make the line bi-secting the vertical distances between said upper and lower plane curved upwardly.

3. In a flying machine, a shell of a form, adapted to assist in the buoyancy of the machine during flight and inclosing a hollow space of dimensions adapted for the reception of persons, motors, accessories and freight, an upper and lower plane forming said shell and presenting a substantially whale-back form in cross-section with its broader end in front, said upper and lower plane converging briskly in front, tapering gradually rearwardly and ending in a sharp edge, and being curved so as to make the line bi-secting the vertical distances between said upper and lower planes curved upwardly, main supporting wings, and means for connecting the sides of said shell with said main supporting wings.

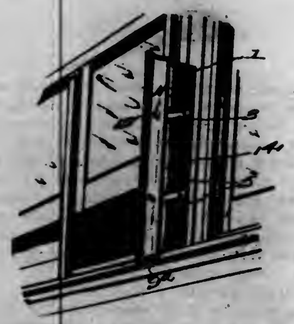
4. In a flying machine, a shell of a form adapted to assist in the buoyancy of the machine during flight and inclosing a hollow space of dimensions adapted for the reception of persons, motors, accessories and freight, an upper and lower plane, forming said shell and presenting a substantially whale-back form in cross-section with its broader end in front, the upper and lower plane converging briskly in front, tapering gradually rearwardly and ending in a sharp edge, said planes being curved so as to make the line bi-secting the vertical distances between said upper and lower plane curve upwardly, main supporting wings, and means for connecting the sides of said shell with said main supporting wings.

5. In a flying machine, a shell of a form adapted to assist in the buoyancy of the machine during flight and inclosing a hollow space of dimensions adapted for the reception of persons, motors, accessories and freight, an upper and lower plane forming said shell presenting in cross section a substantially whale-back form, with the broader end in front, said upper and lower plane converging briskly in front, tapering gradually rearwardly and ending in a sharp edge and being curved so as to make the line bi-secting the vertical distances between said upper and lower plane curved upwardly, hollow main supporting wings, means for connecting said shell to said main supporting wings and interior supporting and stiffening structures within said shell for producing a self supporting body.

1,114,365. GUARD FOR CAR-WINDOWS. CHARLES W. KENNON, Tampa, Fla., assignor to Kennon Cinder Guard Co., Incorporated, Tampa, Fla., a Corporation of Delaware. Filed Oct. 3, 1913. Serial No. 793,164. (Cl. 98—31.)

1. In a guard for car windows, the combination of a pair of members disposed in spaced and relatively angular relation providing an inlet and an outlet opening, and leaving open upper and lower ends formed by the upper and lower edges of the two members; a screen covering said outlet opening; and means for securing the guard to the car window, substantially as described.

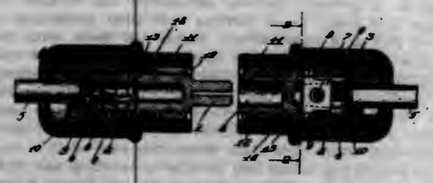
2. In a guard for car windows, the combination of a pair of curved plates of relatively different widths; members securing said plates together to provide a broad inlet opening and a relatively narrow outlet opening, and leaving open upper and lower ends formed by the upper and lower edges of the two members; a screen covering said outlet opening; and means on one of said plates for securing the guard to the car window, substantially as described.



3. The combination with a car window, of a guard therefor comprising a curved plate disposed vertically against the window and projecting outwardly therefrom; a second curved plate secured to the first-named curved plate and providing therewith a broad inlet opening and a relatively narrow outlet opening, and leaving open upper and lower ends between the plates formed by the upper and lower edges of said plate; and a screen covering said outlet opening, substantially as described

4. The combination with a car window, of a guard therefor comprising a curved plate disposed vertically against the window and projecting outwardly therefrom; a second curved plate of less width than the first curved plate; members securing said plates in spaced relation providing a broad inlet opening and a relatively narrow outlet opening, and leaving open upper and lower ends between the plates formed by the upper and lower edges of said plates, the edges of said plates adjacent said outlet opening being turned inwardly; and a screen strip secured to said turned-in edges and covering said outlet opening, substantially as described.

1,114,366. WIRE-TERMINAL. GEORGE C. KNAUFF, Chicago, Ill. Filed Feb. 21, 1913. Serial No. 749,793. (Cl. 173—324.)



1. A contact terminal for electric wires comprising a contact member having a threaded shank, a rotatable sleeve threadedly mounted thereon and an intermediary member interposed between the said contact member and the said sleeve and abutting against a portion of the latter, the said intermediary member having a perforation adapted to receive the end of a wire; the threaded connection between the sleeve and the contact member causing the sleeve to move longitudinally of the contact member when rotated with respect thereto, the wire-receiving portion of the intermediary member so shaped with respect to an adjacent portion of the contact member as to decrease the distance therebetween upon relative longitudinal motion thereon in one direction, thereby clamping the said end of the wire therebetween; the said abutting of the intermediary member against a portion of the sleeve causing the latter when longitudinally moved to move the intermediary member to effect the said clamping.

2. A wire terminal comprising a socket member having a threaded end equipped with a longitudinal slot, a sleeve member threadedly mounted upon the said slotted end of the socket member, and an intermediary member interposed between the socket and sleeve members and abutting against a portion of the latter, the intermediary member having an eye adapted to receive an end of a wire and having a portion slidably engaging the slotted portion of the socket member; the wire-receiving portion of the intermediary member and a portion of the socket member adjacent thereto being relatively so shaped and disposed as to decrease the distance therebetween when the intermediary member is slidably moved with respect to the contact member in one direction, thereby clamping the said end of the wire therebetween; the threaded mounting of the sleeve member upon the socket member causing the former upon relative rotation of the said members to move longitudinally with respect to the latter, the abutting of the intermediary member against the sleeve member causing the latter upon such longitudinal motion with respect to the socket member to move the intermediary member to effect the said clamping of the wire.

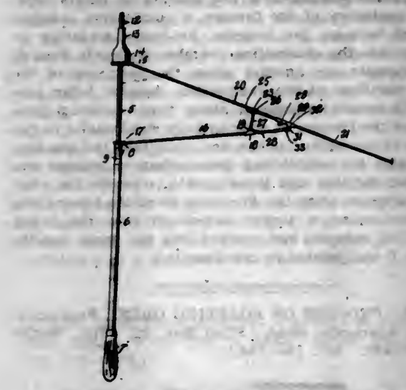
3. A wire terminal comprising a socket member having a threaded end equipped with a longitudinal slot, a sleeve threadedly mounted upon the said slotted end of the socket member, and an intermediary member interposed between the socket and sleeve members and slidably engaging the slotted portion of the former, the intermediary member having an eye adapted to receive the end of the wire and having a portion projecting through the said slot in the socket member and beyond the latter, the sleeve abutting against the said projecting portion of the intermediary member; the wire-receiving portion of the intermediary member and a portion of the socket member adjacent thereto being relatively so shaped and disposed as to decrease the distance therebetween when the intermediary member is slidably moved with respect to the contact member in one direction, thereby clamping the said end of the wire therebetween; the threaded mounting of the sleeve member upon the socket member causing the former upon relative rotation of said members to move longitudinally with respect to the latter, the abutting of the intermediary member against the sleeve member causing the latter upon such longitudinal motion with respect to the socket member to move the intermediary member to effect the said clamping of the wire.

4. In a wire terminal, a slotted socket member having a tapering bore, the portions of the said member at opposite sides of the slot therein being adapted to be flexed outwardly; an eye member slidingly mounted in the said slot of the socket member, the eye of the eye member adapted to receive the end of a wire; the said eye member adapted, when slid relative to the socket member, to draw the said wire toward the smaller end of the bore of the socket, the taper of the bore coacting with the said relative sliding motion to cause the wire to be clamped between the eye member and the socket member; and a clamping member rotatably mounted upon the socket member and engaging the eye member, the said clamping member adapted, when rotated, to slide the eye member to effect the said clamping of the wire; the taper of the bore coacting with the said eye member and the said wire to flex the said socket member portions outwardly when the eye member is slid to effect the said clamping of the wire.

5. A wire-fastening comprising a wire; a male member and a female member, the said male member equipped with a perforation housing a portion of said wire; and means rotatable relatively to the male member and having threaded connection with the female member, for forcing said male member to enter said female member; portions of the said wire at opposite ends of the said perforation being disposed between and contacting with the said male and female members, the said disposition thereof coacting with the said entry of the male member into the female member to clamp the said wire portions therebetween.

[Claims 6 and 7 not printed in the Gazette.]

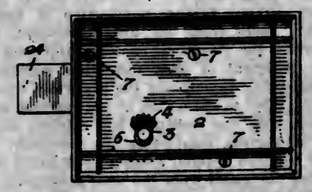
1,114,367. FOLDING UMBRELLA. MARCIN KOSLOWSKI and FRYNK GROHAL, Greensburg, Pa. Filed Mar. 28, 1914. Serial No. 827,968. (Cl. 135—25.)



1. An umbrella comprising a stick formed of two sections, one of which constitutes a handle section and is shiftable upon the other of said sections, a notch carried by the outer end of the handle section, a tip secured to the other stick section, a cap member secured to said tip and projecting inwardly therefrom and having its inner end provided with a notch, spreaders pivotally connected to the notch of the handle section, inner rib sections pivotally connected to the notch of the cap member, outer rib sections pivotally connected to said inner rib sections and to said spreaders, and brace members pivotally connected to the spreaders and said inner rib sections.

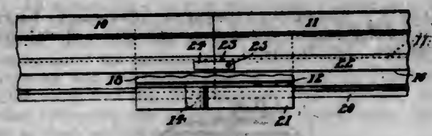
2. An umbrella comprising a stationary element having secured to one end thereof a cap member provided with a notch, a shiftable member provided with a notch capable of extending into said cap member, rib sections pivotally connected to the notch of the cap member, spreaders pivotally connected to the notch of said shiftable member and to said ribs, said ribs formed of two sections, and said spreaders pivoted to the outer of said rib sections, and brace members pivotally connected to the inner of the rib sections and to said spreaders.

1,114,368. DOOR-LOCK. FRANCISZEK KRAMARCZYK, New Haven, Conn. Filed Apr. 6, 1912, Serial No. 688,920. Renewed Aug. 3, 1914. Serial No. 854,651. (Cl. 70—14.)



In a door lock, a casing, equally spaced plates suspended and fixedly maintained within said casing, a guide rib of less length than and carried by one of the plates at one end thereof, a slotted locking bolt arranged between said plates and slidably supported upon said rib, said bolt having one edge thereof provided with a rack, said edge further provided with a lug spaced from the rack and associating with said rib for limiting the outward movement of the bolt, a pinion revolubly supported within said casing and meshing with said rack, a gear wheel revolubly supported within said casing and meshing with said pinion, and a key capable of being inserted in said casing and provided with a sector gear bit meshing with said gear wheel for actuating the latter thereby revolving the pinion to shift the bolt.

1,114,369. RAIL JOINT AND CHAIR. JOSEPH KUKLA, Buffalo, N. Y., assignor of one-half to John Gondek, Buffalo, N. Y. Filed July 3, 1914. Serial No. 848,789. (Cl. 239—6.)

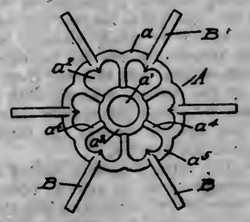


1. A device of the class described comprising rails having opposite longitudinal side ribs integral with the webs thereof, a rail chair provided with side flanges having inner faces formed complemental to the sides of the rail web, the upper faces of said ribs being inclined and forming V-shaped grooves with the adjacent sides of the rail web and an alining-bar seated in one of the said side ribs and engaging in a groove provided therefor in the corresponding rib of the adjacent rail, and means for rigidly securing said chair to the ties.

2. A device of the class described comprising rails having opposite longitudinal side ribs upon the webs thereof, a rail chair provided with side flanges having inner faces formed complemental to the sides of the rail web, the upper faces of said ribs being inclined and forming V-shaped grooves with the adjacent sides of the rail web and means for rigidly securing said chair to the ties, the ends of adjacent web ribs having slots in their outer faces, a strip secured in one of said grooves and adapted for slidably seating within the end groove of the adjacent rail web rib.

3. A device of the class described comprising rail ends adapted to abut each other, oppositely positioned longitudinal ribs upon the webs of said rails and having upper inwardly inclined faces, the outer faces of said ribs upon one side of the rails having alining grooves therein, a strip fitting within said grooves, a securing screw through one end of said strip and engaging the adjacent rib, a rail chair having spaced side flanges provided with inner longitudinal grooves complementally formed with respect to said ribs and said chair adapted for slidably mounting upon said rails and means for permanently retaining said chair in position upon the ties.

1,114,370. SETTING. LOUIS E. LADD, Providence, R. I., assignor to Potter & Buffinton Company, a Corporation of Rhode Island. Filed July 2, 1914. Serial No. 848,692. (Cl. 63—26.)



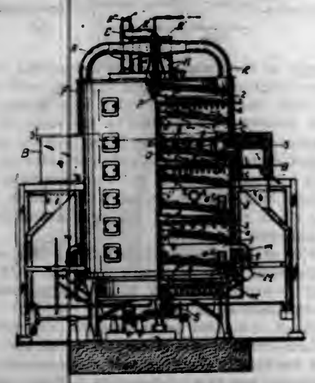
1. A setting consisting of a base member in a single integral element comprising a substantially circular body with openings, upwardly then inwardly and then downwardly inclined radial arms having a scalloped border between said arms, and a cup seated upon the arms and provided with prongs to support a gem.

2. In a setting, a base provided with a body and a central opening and with upwardly then inwardly and then downwardly inclined arms converging from the periphery of the body to the base around said opening and a cup seated upon said downwardly and inwardly inclined arms and having prongs.

3. In a setting, the combination of a base, a body upon the base, arms upon the body extending first upwardly,

then inwardly and then downwardly toward the center of the base, a cup seated upon the arms, and prongs upon the cup.

1,114,371. ROASTING-FURNACE. FREDERICK LAIST, Anaconda, Mont. Filed Oct. 15, 1913. Serial No. 795,321. (Cl. 75—143.)



1. In combination with a furnace having a series of superimposed intercommunicating hearths, means for subjecting the charge in the hearths to direct fire, a chamber interposed between two contiguous hearths and provided with radially disposed openings in the floor thereof for establishing communication with the lower hearth, the latter discharging the gases into the hearth above the chamber through the intercommunicating openings between the hearths.

2. In combination with a furnace having superimposed intercommunicating hearths, means for subjecting the charge in the hearths to direct fire, a chamber interposed between two contiguous hearths for immediately receiving the gases from the firing means, the bottom of the chamber being provided with radially disposed openings centered about the axis of the furnace for establishing communication between the chamber and lower hearth, suitable drop openings being disposed between the peripheral or outer portions of the hearths for conducting the gases from the hearth below the chamber to the hearth above said chamber.

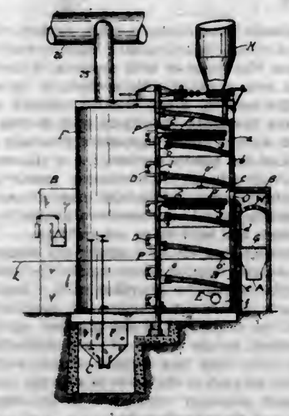
3. In combination with a furnace having superimposed intercommunicating hearths, a combustion chamber interposed between two contiguous hearths and communicating with the lower hearth at points disposed radially about the axis of the furnace, means for introducing burning combustion products into said chamber from points along the periphery of the furnace whereby said products circulate downward from said combustion chamber into the lower hearth, and upward through the intercommunicating means between the hearths.

4. In combination with a furnace having superimposed intercommunicating hearths, an annular combustion chamber interposed between two contiguous hearths, the roof of the lower hearth forming the floor of said combustion chamber, a roof for the combustion chamber, suitable posts or props interposed between the floor and roof of the combustion chamber for supporting said roof, means for introducing heated products of combustion through the peripheral wall of the furnace into said combustion chamber, means for conducting said products from the combustion chamber into the lower hearth at a multiple of points disposed about the axis of the furnace, means for conducting the gases from the lower to the upper hearth at points adjacent the periphery of the furnace, said last mentioned conducting means having no communication with the combustion chamber, whereby a circulation of the products is established from the periphery of the furnace toward the combustion chamber and the center of the lower hearth, and from said center toward the peripheries of the respective hearths.

5. In combination with a furnace having superimposed hearths communicating with one another at points adjacent the periphery of the furnace, a combustion chamber interposed between the hearths, fire-boxes operating to discharge into the combustion chamber at points diametrically opposite one another along the periphery of the furnace, the floor of the combustion chamber being provided with openings disposed along lines radiating from the axis of the furnace at substantially right angles to the direction of projection of the fire gases into the combustion chamber for establishing communication between the combustion chamber and lower hearth, whereby the combustion products from the fire-boxes circulate toward the combustion chamber, thence downward into the lower hearth, then outward and upward into the upper hearth.

[Claim 6 not printed in the Gazette.]

1,114,372. PROCESS OF ROASTING ORES. FREDERICK LAIST, Anaconda, Mont. Filed Nov. 22, 1913. Serial No. 802,480. (Cl. 75—143.)



1. In the treatment of ores and other material, the process of subjecting a charge of the ore while traversing a treatment chamber to the action of hot reaction-supporting gases, introducing said gases in a direction conforming to the general direction of movement of the ore in said chamber to prevent overheating of the charge, removing the resulting hot calcines from the influence of the said gases, completing the treatment of the calcines thus removed without further application of heat, and conducting the gases from the final treatment, to the charge traversing the treatment chamber aforesaid.

2. In the treatment of ores and other material, the process of subjecting a charge of the ore while traversing a treatment chamber to the action of hot reaction-supporting gases, removing the resulting hot calcines from the influence of said gases, completing the treatment of the calcines thus removed without further application of heat, and conducting the gases from the final treatment, to the charge traversing the treatment chamber aforesaid.

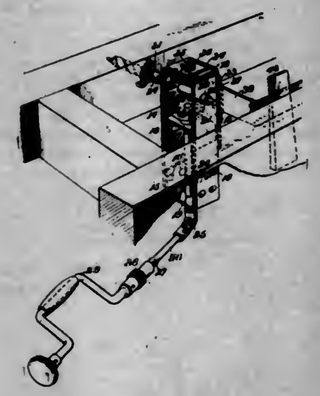
3. In the treatment of ores and other material, the process of subjecting a charge of the ore while traversing a treatment chamber to the action of hot reaction-supporting gases, removing the hot calcines from the influence of said gases, conducting said calcines into a heat-insulated chamber, completing the treatment of the calcines in said heat-insulated chamber without further application of heat, and conducting the gases from the final treatment, to the charge traversing the treatment chamber.

4. In the treatment of ores and other material, the process of subjecting the ore while traversing a treatment chamber to the direct fire of furnace gases within said chamber, moving said charge from a zone of high, to a region of comparatively low temperature, while in contact with said gases, removing the hot calcines from said region of low temperature to a heat-insulated chamber, completing the reaction within the mass, in said chamber without further application of heat, and conducting the hot gases of said reaction to the ore in the treatment chamber.

5. In the treatment of ores, the process of subjecting the ore while traversing a treatment chamber to the direct fire of furnace gases within said chamber, stirring said charge in the chamber and moving the same from a zone of high, to a region of comparatively low temperature while in contact with said gases, removing the hot calcines from said region of low temperature to a heat-insulated chamber, mixing with the calcines a quantity of salt and stirring the mixture in said insulated chamber in the presence of oxygen without further application of heat, and conducting the hot air and gases of the final reaction to the ore in the treatment chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,114,373. BORING-MACHINE. CHARLES M. LANE, Rosedale, Kans. Filed Dec. 4, 1913. Serial No. 804,737. (Cl. 144—105.)



1. A boring machine including a boring mechanism carrying frame, a hanger bracket carried by the frame and provided with a guide loop, and a guide having parallel spaced arms, one of which is mounted for sliding movement through the loop of the hanger bracket.

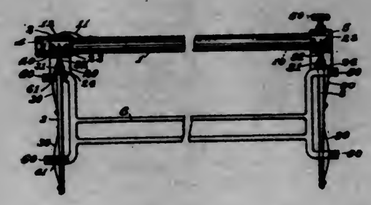
2. A boring machine including a boring mechanism carrying frame having parallel spaced side members, the free end of one side member being bifurcated and spread to provide diverging feet, a frame, and a hanger bracket carried by the frame and provided with a guide loop to receive the other side of the guide member.

3. A boring machine including a U-shaped frame formed from a single strip of metal, braces across the open end and intermediate portions of the frame and connecting the side members, the braces also being formed of strip metal, a sleeve journaled in the side members of the frame between one brace and the closed end of the frame, a shaft journaled in the braces, meshing beveled gears carried by the shaft and sleeve and locking both the shaft and sleeve against longitudinal movements in their bearings, a guide loop carried by the frame, and means engageable in the guide loop for supporting the frame.

1,114,374. AUTOMOBILE AXLE-GAGE. MANFRED W. LINK, Seattle, Wash. Filed July 2, 1913. Serial No. 777,126. (Cl. 33—193.)

1. An automobile axle gage comprising a frame bar extending from one wheel pivot to the other, gage fingers pivoted, one at each end, to swing in the plane of said frame bar and adapted to enter the wheel-pivot journals, one of said gage fingers having a limited swinging movement about the axis of said frame bar, and means for indicating the position of said fingers with relation to the correct position of the wheel pivots.

2. An automobile axle gage comprising a frame bar extending from one wheel pivot to the other, a gage finger mounted upon each end of said frame bar and adapted, each to enter its respective wheel-pivot journal, springs carried by said fingers and adapted to hold the fingers in contact with one side of said wheel pivot journals, and means indicating the position of said fingers with relation to their correct position.



3. An automobile axle gage comprising a frame bar adapted to extend from one wheel pivot to the other, a finger mounted upon each end of said frame bar and adapted to enter the wheel pivot journals, one of said gage fingers being adjustable lengthwise the frame bar and the other to rock about the axis of the frame bar, both fingers being pivoted to swing in the plane of said frame bar, and index fingers associated with each of said swinging movements.

4. An automobile axle gage comprising a frame bar of a length to extend from one wheel-pivot journal to the other, a sleeve carried by each end of said frame bar, one of said sleeves being held against movement lengthwise the frame bar but capable of limited rocking movement about the axis of said frame bar, the other sleeve being movable lengthwise the frame bar but held against rocking movement about its axis, gage fingers pivoted, one upon each of said sleeves to swing in the plane of said frame bar, and an indicating device associated with each of the swinging movements of said gage fingers.

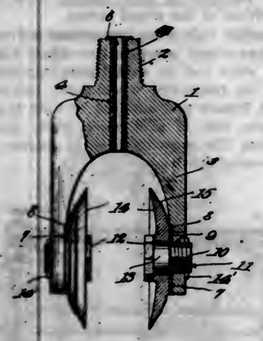
5. An automobile axle gage comprising a frame consisting of a pipe of a length to extend from one wheel-pivot journal to the other, a sleeve mounted to rock upon said pipe at one end, pivot jaws extending from said sleeve, a gage finger pivoted between said jaws to swing in the plane of the pipe, an index finger carried by the pivot of said gage finger and extending over one side of the sleeve, a scale secured to the side of said sleeve and coöperating with said index finger, an index finger secured to the pipe and extending over the side of said sleeve, a scale carried by said sleeve and coöperating with said index finger, stops limiting said sleeve against longitudinal movement on the pipe, a sleeve mounted upon the other end of said pipe, this end of the pipe having a slot in one side and the sleeve having a pin entering said slot to prevent rocking movement upon the pipe, a gage finger pivoted upon said sleeve to swing in the plane of the pipe, an index finger carried by said gage finger and a scale coöperating therewith carried by the sleeve, and means for clamping said sleeve in place upon the pipe.

1,114,375. ROTARY DRILL. THOMAS FRANK LITAKER, Fellows, Cal. Filed Jan. 24, 1914. Serial No. 814,179. (Cl. 255—71.)

1. A drill including a head having spaced legs, concavo-convex disks mounted for rotation relative to and connected to the legs, each of said disks having stepped annular reinforcing portions upon its convex face.

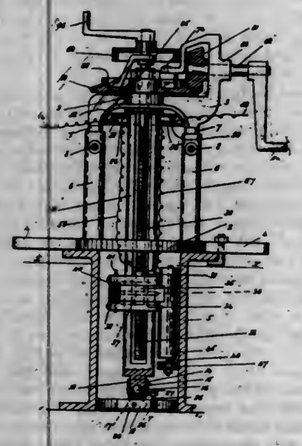
2. A drill including a head having spaced legs, a bearing pin detachably mounted within each leg, the two bearing pins alining and extending inwardly from the legs,

and a concavo-convex cutting disk mounted for rotation on the inwardly extending portion of each pin, said disks



being mounted for rotation in parallel planes and each disk having a stepped convex face.

1,114,376. CYLINDER-GRINDING MACHINE. MARTIN MILKOP, Long Island City, N. Y. Filed July 13, 1914. Serial No. 850,661. (Cl. 51—4.)



1. In a cylinder grinding machine, the combination, with a supporting frame, a hollow shaft journaled therein, and driving mechanism for revolving the hollow shaft; of a crosshead slidable longitudinally in the hollow shaft, an electric motor carried by the crosshead and provided with a grinding wheel arranged eccentric of the hollow shaft, a feed screw journaled concentric with the hollow shaft and engaging with the crosshead, and reversible controlling mechanism arranged between the said driving mechanism and the feed screw for revolving it automatically in each direction and for disengaging it from the driving mechanism.

2. In a cylinder grinding machine, the combination, with a supporting frame provided with means for securing it to one end portion of a cylinder, and a footstep provided with fastening devices for securing it to the other end portion of the cylinder; of a hollow shaft journaled in the said frame and footstep, a crosshead slidable longitudinally in the hollow shaft, an electric motor carried by the crosshead and provided with a grinding wheel arranged eccentric of the hollow shaft, driving devices for revolving the hollow shaft, and feed mechanism for moving the crosshead longitudinally.

3. In a cylinder grinding machine, the combination, with a supporting frame provided with means for securing it to one end portion of a cylinder, of a footstep provided with radial guides, clamping jaws which work in the said guides, means for sliding the jaws independently of each other to clamp the footstep in the other end portion of the cylinder, a hollow shaft journaled in the said frame and footstep, a ball bearing interposed between the lower end of the hollow shaft and the footstep, a crosshead slidable longitudinally in the hollow shaft, an electric motor carried by the crosshead and provided with a grinding wheel arranged eccentric of the hollow shaft, and feed mechanism for moving the crosshead longitudinally.

4. In a cylinder grinding machine, the combination, with a supporting frame, a non-slidable main shaft journaled therein, and driving mechanism for revolving the main shaft; of a crosshead slidable longitudinally on the main shaft and revolving with it, an electric motor provided with a grinding wheel and carried by the said crosshead, feed mechanism for sliding the crosshead back and forth, and reversible controlling mechanism arranged between the said driving mechanism and feed mechanism.

5. In a cylinder grinding machine, the combination, with a telescopic supporting frame one section of which is provided with means for securing it to one end portion of a cylinder, of a footstep provided with means for securing it to the other end portion of the cylinder, a hollow shaft journaled in the slidable section of the frame and in the said footstep, means for locking the sections of the frame together, a crosshead slidable longitudinally in the hollow shaft, an electric motor carried by the crosshead and provided with a grinding wheel arranged eccentric of the hollow shaft, driving devices for revolving the hollow shaft, and feed mechanism for moving the crosshead longitudinally.

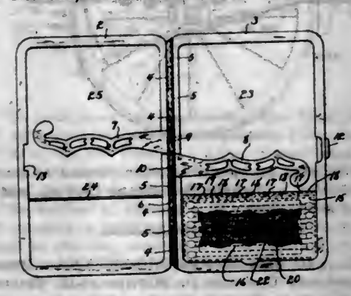
[Claim 6 not printed in the Gazette.]

1,114,377. WRENCH. HERMAN E. E. MOLKENTHIN, Coeur d'Alene, Idaho. Filed Mar. 21, 1914. Serial No. 826,330. (Cl. 81—88.)

1. A wrench comprising a handle, a head at one end of said handle provided with a longitudinally extending slot and having one face at an incline to form abutment shoulders, a hinge ear extending from the inclined face of said head, a movable jaw having its shank pivotally mounted in the slot of said head, a movable jaw slidably mounted upon the shank of said stationary jaw and having its lower forward portion reduced to form a hinge ear, and a link pivotally connected with the hinge ear of said movable jaw and with the hinge ear of said head, the link being positioned at all times substantially parallel to the shank of said stationary jaw.

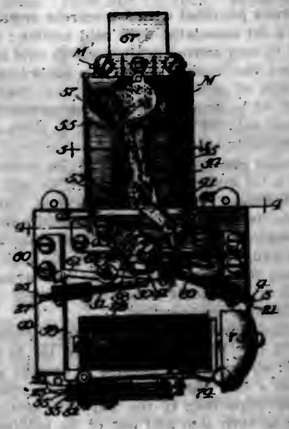
2. A wrench comprising a handle provided at one end with a head having one face cut at an incline to form abutment shoulders, a hinge ear extending from the inclined face of said handle, a stationary jaw having its shank pivotally connected with said handle, a movable jaw slidably mounted upon the shank of said stationary jaw and the link pivotally connected with said movable jaw and pivotally connected with the hinge ear of said handle whereby said link will at all times be positioned substantially parallel to the shank of said stationary jaw and engage the inclined face of said handle to limit the pivotal movement of said link in one direction.

1,114,378. COMBINED CIGARETTE-CASE AND MATCH-BOX. GEORGE D. MUNSON, Wallingford, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed May 25, 1914. Serial No. 840,843. (Cl. 206—48.)



A combined cigarette case and match box comprising two members connected together by a hinge pin, spring arms having tubular ends through which the pin extends, a spring within said tubular portion of the arms and surrounding the pin, one end of the spring bearing on one arm and the opposite end bearing on the other arm, a match box formed by a rectangular wall located in the lower end of one member beyond the face of which it projects, a cover hinged to said wall the central portion of the said cover cut away, a strip secured to the inner face of the cover and offset therefrom, thereby providing a pocket, and a partition wall located in the other member in line with the upper edge of the said match box.

1,114,379. PARTY-LINE EXCHANGE. NILS EMEL NORSTROM, Chicago, Ill., assignor to The Anderson Electric and Manufacturing Company, McPherson, Kans., a Corporation of Kansas. Filed May 29, 1909. Serial No. 499,250. (Cl. 179—82.)



1. The combination with a magnet, an armature lever moved thereby, and springs for normally holding said lever in a mid-position, of a ratchet wheel arranged to be advanced from normal position by a movement of said lever in one direction and to be released by a similar movement in the other direction, a spring for returning said wheel to normal position when so released, a catch arranged to be released by a blow delivered by said wheel as it arrives at its normal position, said catch when not in operation being normally held so as not to be touched by said wheel.

2. The combination with a magnet, an armature lever moved thereby, and springs for normally holding said lever in mid-position, of a ratchet arranged to be advanced when said lever is moved in one direction and to be released when moved in the other direction, a spring for returning said wheel to normal position when so released, a catch arranged to be struck by said wheel to release the same as the wheel is arriving at normal position, and an adjustable stop arresting said wheel at its normal position.

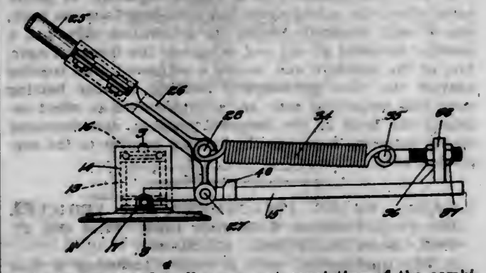
3. The combination with a ratchet wheel, means for advancing it, and a spring for returning it to normal position when released, of an armature, a spring actuated catch for holding said armature in an attracted position, a projection carried by said wheel and arranged to strike and release said catch when said wheel returns to normal position, and means by which said catch is held out of contact with said projection after said catch is released.

4. The combination with a ratchet wheel, means for advancing it, and a spring for returning it to normal position when released, of an arm arranged to operate electrical connections when moved from its normal position, a catch for holding it in such moved position, means for releasing said catch upon the return of said wheel to its normal position, and means by which said catch in its released position is held clear from the means used for releasing it.

5. The combination with a ratchet wheel, means for advancing it, and a spring for returning to and beyond normal position when released, of a series of contact devices, an arm arranged to actuate said devices when moved from its normal position, a catch for holding said arm in its normal position, means carried by said wheel for releasing said catch so that the arm held thereby may return to its normal position, and means by which said arm in its released position is held clear from the means for releasing it.

[Claims 6 to 23 not printed in the Gazette.]

1,114,380. TROLLEY-BASE. WILLIAM J. PAUL, Everett, Mass., assignor, by direct and mesne assignments, to Couch and Paul Trolley Base Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 19, 1912. Serial No. 721,225. (Cl. 191—70.)

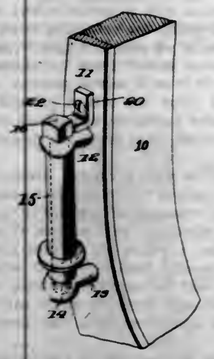


1. An improved trolley support consisting of the combination with a base having an upwardly projecting hollow spindle provided with lateral openings for the outward passage of a lubricant contained in the chamber of said spindle, of a cap fitting over said spindle and provided with a trolley stand extending horizontally from a point near the base of said cap and thus affording stability, a horizontal anti-friction bearing between said cap and the top of said spindle, a vertical anti-friction bearing between the sides of said cap and said spindle and lubricated from the chamber of the latter, means for retaining said cap on said spindle, a trolley cam pivoted to said trolley

stand at a point which is at a substantial distance from said cap and thus affording considerable leverage the strain of which is taken care of by said horizontal and vertical bearings, and springs connecting said trolley cam with said trolley stand.

2. An improved trolley support consisting of the combination with a base having an upwardly projecting spindle of a cap fitting over said spindle and provided with a trolley stand extending horizontally from a point near the base of said cap and thus affording stability, a horizontal anti-friction bearing between said cap and the top of said spindle, a vertical anti-friction bearing between the sides of said cap and said spindle, means for retaining said cap on said spindle, a trolley cam pivoted to said trolley stand at a point removed from said cap and thus affording considerable leverage the strain of which is taken care of by said horizontal and vertical bearings, and two sets of springs of different gage wire and unequal numbers of coils connecting said trolley cam with said trolley stand.

1,114,381. BOLT AND NUT LOCK. HARVEY A. PINEGAR, Wellington, Utah. Filed Oct. 14, 1913. Serial No. 795,051. (Cl. 151—44.)



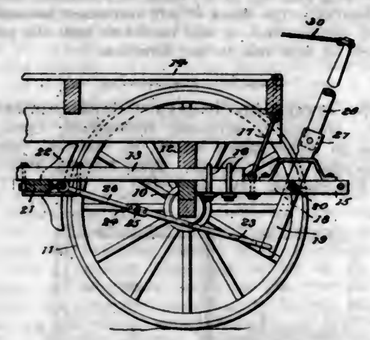
1. The combination with a supporting body, of a standard having a threaded aperture, a threaded member engaging said threaded aperture and provided with a head including a flat face, a holding member bearing upon the supporting body and formed with an offset engaging against the flat face of the head, and fastening means connecting the holding member to the supporting body.

2. The combination with a supporting body, of perforated standards spaced apart and extending from the body, one of said standards having its perforation threaded, a member threaded at one end to engage the threaded aperture of the standard and having a polygonal head bearing against the other standard, a holding member bearing upon said supporting body and provided with an offset engaging the head of the threaded member, and fastening means operating to secure the holding member to the supporting body.

1,114,382. BRAKE ATTACHMENT FOR VEHICLES. HARVEY A. PINEGAR, Wellington, Utah. Filed Oct. 27, 1913. Serial No. 797,561. (Cl. 21—8.)

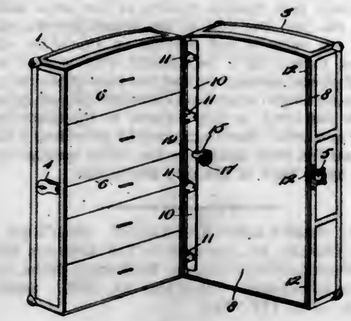
1. The combination with a vehicle including a rear axle and reach, the reach extending rearwardly of the axle, and brake mechanism, of a supporting member bearing at one end against the rear axle and at its upper side beneath the projecting portion of the reach, fastening devices connecting the supporting member to the reach, a lever pivoted to said supporting member, and a pull device connected to said supporting member and adapted to be coupled to the brake mechanism of the vehicle.

2. The combination with a vehicle including the body, the rear axle, reach, and a brake mechanism, said reach extending rearwardly of the axle, of a supporting member bearing at one end against the rear axle and at its upper side beneath the projecting portion of the reach, fastening devices connecting the supporting member to the reach, a suspension device connecting the supporting member to



the vehicle body, an operating lever pivoted to said supporting member, and connecting means between said lever and brake mechanism.

1,114,383. LID FOR WARDROBE-TRUNKS. HENRY L. PLUMMER and CHARLES D. WITHERSPOON, Petersburg, Va., assignors to Virginia Trunk and Bag Company, Petersburg, Va., a Corporation of Virginia. Filed Apr. 10, 1914. Serial No. 830,942. (Cl. 190—13.)

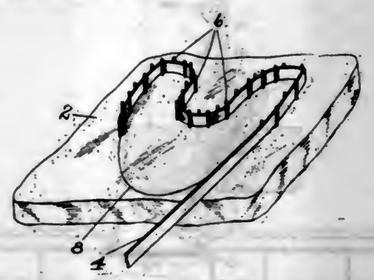


1. In a trunk provided with a wardrobe section the combination of a lid associated with said section; a body portion hinged to said section against which said lid is adapted to lie when the trunk is closed; an angle iron extending along one edge of said section adapted to coact with one edge of said lid to firmly hold the same when closed; and means to hold said lid and angle iron in their closed positions, substantially as described.

2. In a trunk provided with a wardrobe section the combination of a lid hingedly associated with said section; a body portion hinged to said section against which said lid is adapted to lie when said trunk is closed; an angle iron hingedly associated with and extending along one edge of said section and adapted to coact with one edge of said lid to firmly hold the same when closed; and means to firmly hold said lid to said angle iron when in their closed positions, substantially as described.

3. In a trunk provided with a wardrobe section the combination of a lid; hinges securing said lid to said wardrobe section; an angle iron adapted to contact with and to securely hold a free edge of said lid when closed; hinges securing said angle iron to the wardrobe section adapted to permit it to turn into and out of its holding position; and a securing means carried by said lid adapted to contact with said angle iron and firmly hold the latter to the free edge of said lid when closed, substantially as described.

1,114,384. METHOD OF MAKING ARTICLES OF METAL. DANIEL N. PRIME, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 24, 1908. Serial No. 464,226. (Cl. 29—148.)



1. The method of forming cutting dies from strip steel which consists in marking on a metallic plate the outline required in the die, bending a strip of steel step by step, while cold, to said outline and applying heat to the blank so formed for setting it in such shape.

2. The method of forming cutting dies from strip steel which consists in marking upon a fusible plate the outline required in the die, securing a strip of steel, while cold, to said plate in conformity with said outline and applying heat to the blank so formed and to said plate for setting the blank and melting the plate.

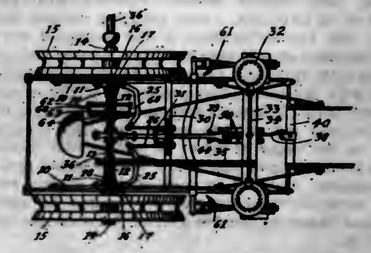
3. The method of forming articles of metal which consists in bending a blank to the desired shape during the bending operation, applying means for maintaining the blank accurately in such shape, and setting the blank so that it will of itself retain its shape.

4. The method of forming articles of metal which consists in bending a blank to the desired shape during the bending operation, applying means for maintaining the blank accurately in such shape, and applying heat for setting the blank so that it will of itself retain its shape.

5. The method of forming articles of metal which consists in bending a blank to the desired shape during the bending operation, applying means for maintaining the blank accurately in such shape, and applying heat for setting the blank so that it will of itself retain its shape, and removing the blank retaining means.

[Claims 6 to 11 not printed in the Gazette.]

1,114,385. CORN-PLANTER. HORACE N. RANDALL, Minneapolis, Minn. Filed Apr. 11, 1913. Serial No. 760,358. (Cl. 111—5.)



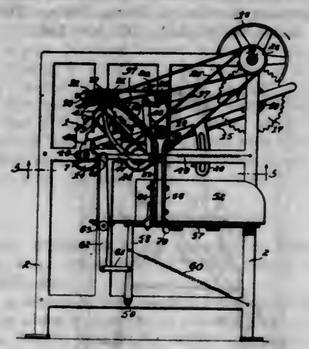
1. A corn planter comprising a shaft, traction wheels loose on said shaft and having clutch faces on the hubs thereof, clutch members splined to the shaft, springs surrounding the shaft and normally forcing said clutch members into engagement with the clutch faces on the hubs, a foot lever and connections to said clutch members whereby the same may be simultaneously moved against the force of the springs into inoperative position, a hand lever pivoted upon a fixed member, means fast on the shaft adapted to be engaged by the hand lever for the purpose of rotating said shaft independently of the wheels when said clutches are held inoperative, and cross-row mechanism, seed-dropper mechanism and indicator mechanism actuated from said shaft.

2. A corn planter comprising a shaft, traction wheels loose on said shaft and having clutch faces on the hubs thereof, clutch members splined to the shaft, springs surrounding the shaft and normally forcing said clutch members into engagement with the clutch faces on the hubs, a foot lever and connections to said clutch members whereby the same may be simultaneously moved against the force of the springs into inoperative position, a collar rotatably mounted upon a fixed member surrounding said shaft, a hand lever pivoted to said collar for oscillation in the plane of the shaft, a ring carried by said fixed member, a disk fast on the shaft having notches facing the lever of a size to receive the same, a spring on the lever engaging said disk and normally holding said lever out of said notches, and cross-row marker mechanism, seed-dropper mechanism and an indicator mechanism actuated from said shaft.

3. A corn planter comprising a shaft, traction wheels on said shaft for operating the same at will, cross row marker mechanism connected with said shaft, a spring-supported oscillating member, an indicator lever resting upon said member, an actuating lever for operating said indicator mechanism, and a series of members on the shaft for successively operating the actuating member.

4. A corn planter comprising a shaft, traction wheels on said shaft for operating the same at will, cross row marker mechanism, seed dropper mechanism, an indicator finger operative in the plane of the seed dropper mechanism, spring-controlled means normally holding said finger out of engagement with the ground, an oscillating lever connected with said spring controlled means, and a series of members on the shaft for successively engaging and oscillating said lever.

1,114,386. MACHINE FOR STITCHING PAMPHLETS. DANIEL REISER, Cleveland, Ohio, assignor to J. B. Savage, Cleveland, Ohio. Continuation of applications Serial No. 466,756, filed Dec. 10, 1908, and Serial No. 650,642, filed Sept. 21, 1911. This application filed Nov. 12, 1912. Serial No. 730,891. (Cl. 11—2.)



1. The combination, with an elongated support, said support being of substantially inverted V-shape, and means for feeding books therealong, of a discharging device cooperating with said support, said device comprising a pair of rollers, one of which is located at each side of said support, a roller located at one side of one of said rollers, a belt extending around the latter roller and the further of the former rollers and over the other of said former rollers, and means for projecting between said former rollers the backs of books carried along said support.

2. The combination, with an elongated support adapted to receive books in open condition, and means for transporting the books therealong with their backs parallel to a given line, of a discharging device coöperating with said support, said device comprising a pair of rollers whose

axes are parallel to said given line, a third roller located at one side of said first rollers, a belt extending over the latter roller and around the further of the first rollers and past the other of said first rollers, a blade beneath said support and means for reciprocating said blade so as to project between said first rollers the backs of books carried along said support.

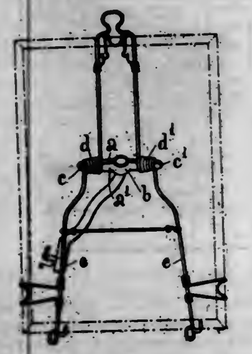
3. The combination, with an elongated support, said support being of substantially inverted V-shape and means for conveying books therealong with backs up, said support having an elongated slot in its ridge, of a pair of rollers mounted above said support, one at each side of said slot, a blade mounted beneath the ridge of said support and adapted to be projected upwardly through the slot therein, and means for projecting said blade through said slot to engage the backs of books thereon and insert the same between said rollers.

4. The combination, with an elongated support, and means for transporting books therealong in open condition with backs up, said support being of substantially inverted V-shape and having an elongated slot through and parallel with its ridge, of a roller journaled at each side of said slot, means for positively driving said rollers, a blade mounted beneath and in line with said slot, means for projecting said blades through said slot at stated intervals to insert between said rollers the backs of books conveyed along said support, and stop means associated with said support and adapted to retard the approach of books to said rollers.

5. The combination, with an elongated support of substantially V-shape and devices for feeding books longitudinally along said support, of lateral discharging mechanism coöperating with said support, and means for projecting books from said support into said mechanism, said projecting means comprising a blade, means for advancing said blade at fixed time intervals to engage the backs of books conveyed along said support, and means adapted to receive the backs of said books and press the same from the back to the forward edges thereof progressively, whereby they are folded and withdrawn from said support.

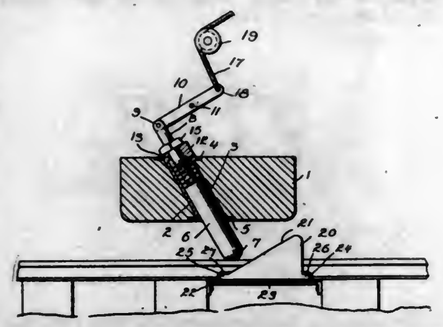
[Claims 6 to 9 not printed in the Gazette.]

1,114,387. SUPPORT OR EASEL FOR LOOKING-GLASSES, PHOTOGRAPHS, PICTURES, AND THE LIKE. FERNAND ROUCHAUD, Turin, Italy. Filed Jan. 26, 1914. Serial No. 814,516. (Cl. 40—146.)



A support for glasses, photographs, pictures and the like, comprising a metal frame, a supporting arm, a bipartite bar having a semi-circular recess in the middle of each of its parts said recesses being in alinement when the two parts of the bar are assembled, to provide a sleeve for the reception of the upper end of said arm and having tapering ends, elastic members forming part of said frame and forming with their upper ends wire coils surrounding the tapering ends of said bar for locking the two parts of the same in their adjusted position over the ends of said arm.

1,114,388. AUTOMATIC TRAIN-STOP. CHARLES A. SCHULER and PHILIP W. STAEBKLE, New York, N. Y. Filed Aug. 26, 1913. Serial No. 786,783. (Cl. 246—59.)



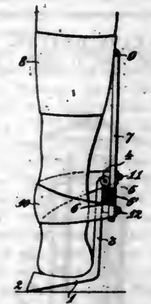
1. In a device of the character described the combination with a support adapted to be attached to a locomotive, of a shoe engaging member slidably mounted within said support and disposed angularly with relation to the vertical axis thereof, means for operating said shoe engaging member carried between the rails, said shoe engaging member operatively connected with the controlling mechanism of the locomotive, and means for holding said shoe engaging member in operative position comprising a washer having a straight face and a beveled face, a nut adapted for engagement with the straight face of said washer and a suitably stiff spring.

2. In a device of the character described the combination with a support adapted to be secured to a locomotive, of a shoe engaging member slidably mounted within said support and disposed angularly with relation to the vertical axis thereof, a rod connected with the upper terminal of said shoe engaging member and disposed above said support, a pivoted lever connected at one treminal with said rod, a flexible element connected with said pivoted lever, said flexible element adapted to be connected with the controlling mechanism of the locomotive, means for pushing said shoe engaging member upwardly carried between the rails, a nut carried on said first named rod in spaced relation to the upper terminal of said shoe engaging member, and a spring mounted upon said rod and engaging the upper terminal of said shoe engaging member and the nut.

3. In a device of the character described the combination with a support adapted to be secured to a locomotive and having an opening extending therethrough at an angle to the vertical, of a tubular member mounted within said opening, said tubular member provided with annular flanges at its terminals, a shoe engaging member mounted within said tubular member, a rod connected with the upper terminal of said shoe engaging member and extending upwardly from said support, said rod operatively connected with the controlling mechanism of the locomotive, a washer having a straight face and a beveled face mounted upon said rod so that its beveled face engages the flange on the upper terminal of said tubular member, a spring mounted upon said rod, a nut threaded upon said rod engaging the straight face of said washer and the upper terminal of said spring, and means for operating said shoe engaging member carried between the rails of the track.

1,114,389. APPARATUS FOR CORRECTING FOOT CROOKEDNESS. OSKAR SEMELEDER, Vienna, Austria-Hungary. Filed Apr. 8, 1912. Serial No. 689,353. (Cl. 128—52.)

1. An orthopedic appliance for correcting foot deformations comprising a base or tread, and a supporting member for the base connected therewith at one side and adapted to be secured to the leg, said member being capable of bending and folding in a direction away from the ankle and perpendicular to the direction of walking under the leverage exerted by the weight of the body causing the base to turn about an edge thereof to exert pressure on the ankle at right angles to the direction of walking.



2. An orthopedic appliance for correcting foot deformation comprising a base supported at one side, a member adapted to be secured to the leg, and forming with the base a toggle lever folding in a direction away from the ankle and at right angles to the direction of walking, and means to limit the folding of the toggle lever in the opposite direction, said toggle lever being actuated by the weight of the body around one of the edges of the base.

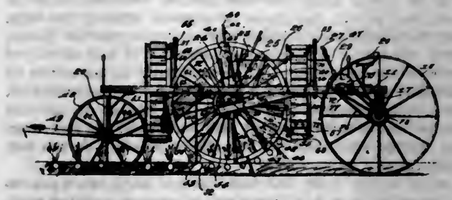
3. An orthopedic appliance for correcting foot deformations comprising a base supported at one side, a member adapted to be secured to the leg, and forming with the base a toggle lever, folding in a direction away from the ankle and perpendicular to the direction of walking, said toggle lever being actuated by the weight of the body around one of the edges of the base, and means permitting movement of the member secured to the leg in the walking direction.

4. An orthopedic appliance for correcting foot deformations comprising a base or tread normally contacting with the ground only at its edge adjacent one side of the foot, a bar or splint adapted to be secured to the leg, and connections between said tread and splint including two pivots extending substantially at right angles to each other, the pivot allowing movement perpendicularly to the walking direction being arranged higher than the pivot allowing movement in the walking direction.

5. An orthopedic appliance for correcting foot deformations of the character referred to, comprising a base or tread normally contacting with the ground only at its edge adjacent one side of the foot, a bar or splint adapted to be secured to the leg, and connections between said tread and splint including two pivots extending substantially at right angles to each other, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,114,390. BEET PULLING AND TOPPING MACHINE. JOSEPH BERNARD SERRES, Houltonville, La., assignor of one-half to Joseph Rotolo, Houltonville, La. Filed Jan. 21, 1913, Serial No. 743,385. Renewed Apr. 30, 1914. Serial No. 835,542. (Cl. 55—108.)



1. In a machine of the character described, a digger, a revolving gripping wheel provided with a split rim adapted to engage the tops of the beets, arcuate bands extending partially around the circumference of said wheel, supporting strips for holding said bands in position, clamps for holding said bands in engagement with the split rim of said wheel, means for separating the beet roots from the beet tops, and a chute separating the sections of the wheel rim to release the beet tops and being adapted to guide the released beet tops away from said wheel.

2. In a machine of the character described, a supporting frame, a digger carried by said frame, a rotatably mounted beet gripper wheel carried by said frame, said wheel being provided with a split rim, arcuate bands extending partially around the circumference of said wheel, supporting means for said bands connecting said bands with said frame, resilient brackets for yieldably holding said bands in engagement with the split rim of said wheel, and a chute for guiding the unconnected portions of said wheel rim to release the beet tops from said gripping wheel.

3. In a machine of the character described, a supporting frame, a digger carried by said frame, a rotatably mounted gripping wheel carried by said frame, said wheel being provided with a split rim, guiding bands extending partially around the circumference of said wheel, resilient means for yieldably holding said bands in engagement with the split rim of said wheel, and means for separating the unconnected portions of said wheel rim.

1,114,391. SASH-FASTENER. JOHN DAVIS SHIPMAN, San Angelo, Tex. Filed Dec. 3, 1913. Serial No. 804,473. (Cl. 16—18.)

1. In combination with a rack, a fastener adapted for coöperation therewith, said fastener comprising a bracket plate, a gravity dog pivoted to the bracket plate and having a lug projecting laterally therefrom, and a curved arm projecting downwardly and outwardly below said lug, a guide upon the bracket above the pivot of the dog, and a cord extending through said guide and connected with the body of the dog above the plane of the pivot.

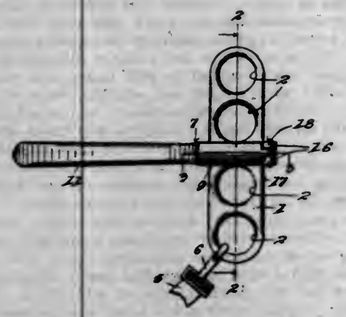
2. In a sash fastener, a rack, a bracket plate, a gravity dog comprising a weighted body having a lug projecting laterally therefrom and pivoted to the bracket and a curved arm projecting therefrom downwardly and outwardly below said lug, an operating element connected with the dog body, a guide upon the body above the pivot of the dog, and a cord extending through said guide and connected with the body of the dog above the plane of the pivot.

1,114,392. FIRE-ESCAPE. JOSEPH A. SHUART, Sacramento, Cal. Filed Dec. 13, 1913. Serial No. 806,591. (Cl. 227—29.)

1. In a device of the character described, the combination with a guide rope, of a plate having a plurality of openings therein to slidably receive the guide rope, a belt for supporting a person secured to said plate, and a brake member secured to said plate, a fixed bar or jaw centrally of the plate having a central depression therein, a pivoted bar or jaw extending in parallel relation to said fixed jaw and pivotally secured to the plate, said guide rope being disposed between the fixed and pivoted jaws, said pivoted jaw having a convex gripping face, parallel biting edges formed by the depression in the fixed jaw, and integral handles on the fixed and pivoted jaws extending outwardly at right angles to the plate upon one side thereof.

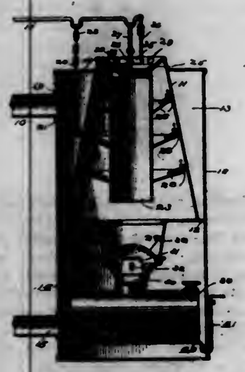
2. In a device of the character described, the combination with a guide rope, of a plate having a plurality of openings therein to slidably receive the guide rope, a handle extending outwardly at right angles to the plate, the central portion of the plate being hollowed out to

provide acute angle edges to a middle portion, a cylindrical bar pivoted to the plate and coöperating with the acute



angle edges to grip the rope and belt to support a person secured to the plate.

1,114,393. HEATING ELEMENT FOR INCUBATORS. JAMES LOVELL SHUTE, Seattle, Wash. Filed Oct. 17, 1912. Serial No. 726,322. (Cl. 236—7.)



1. In a heating device, a conical heating flue, an escape flue mounted within the conical flue, a valve closing the upper end of the escape flue, a burner mounted beneath the lower end of the escape flue, a housing embracing the burner and conical flue and producing a water jacket, a sleeve embracing the burner and vertically slidable relative thereto, a rock shaft journaled upon the top of the conical flue and extending beyond the lines of the housing, a rod connecting the rock shaft and sleeve, outflow and return pipes connected with the water jacket, a partition formed in the water jacket adjacent the outflow pipe and provided with an opening, a valve provided with a registering opening mounted to slide relative to the partition and means to simultaneously actuate the slide valve, the rock shaft and the flue closing valve.

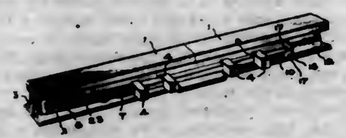
2. A heating device, comprising a central escape flue, a heating flue and an outer water jacket, said heating flue being substantially conical in form and inclosing said escape flue substantially cylindrical in form, a burner located beneath said escape flue, a damper located in the top of said escape flue, an outflow valve controlling the outflow from said water jacket, and means for simultaneously operating said damper and outflow valve.

3. A heating device comprising a central escape flue, a heating flue, and an outer water jacket, said heating flue being substantially conical in form and inclosing said escape flue substantially cylindrical in form, a burner located beneath said escape flue, a damper located in the top of said escape flue, an outflow valve controlling the outflow from said water jacket, a sleeve inclosing the burner tube and arranged to be raised and lowered, and means for simultaneously operating said sleeve, damper and valve.

1,114,394. WATER-TANK HEATER. JOSEPH M. SIEGER, Avoca, Wis. Filed Dec. 1, 1913. Serial No. 803,993. (Cl. 126—360.)

The combination with a tank, of a heater comprising a vertical tubular casing, a flue telescopically mounted in the casing and spaced from the interior wall thereof, a damper in said flue, a perforated ring encircling said flue and having its periphery engaging the casing, a burner mounted below the lower end of the flue, and means for securing the heater to the tank.

1,114,395. RAIL-JOINT. FELIKS SIWAK, Philadelphia, Pa., assignor of one-fourth to Sofa Siwak, one-eighth to Benedict Keller, one-eighth to Stanistow Hatajke, one-eighth to Piotr Hendrick, and one-eighth to Paul Hnatsan, Philadelphia, Pa. Filed Mar. 19, 1914. Serial No. 825,861. (Cl. 239—11.)



1. In a rail joint, the combination with two rails located end to end, fish plates at opposite sides of the rails, and bolts extending through the rails and the fish plates, of a wedge bar movable longitudinally of the rails and operatively engaging all of the said bolts, and a spring around one end of said bar exerting pressure on the bar, substantially as described.

2. In a rail joint, the combination with two rails located end to end, fish plates at opposite sides of the rails, and bolts extending through the rails and the fish plates, of a wedge bar movable longitudinally of the rails and operatively engaging all of the said bolts, an extension on said bar, and a spring around said extension, exerting pressure on the bar, substantially as described.

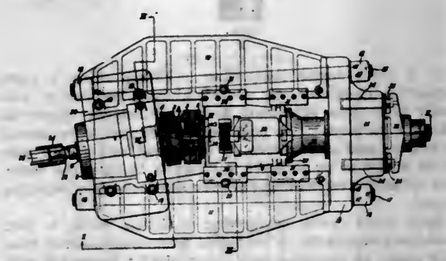
3. In a rail joint, the combination with two rails located end to end, fish plates at opposite sides of the rails, and bolts extending through the rails and the fish plates, of a wedge bar movable longitudinally of the rails and operatively engaging all of the said bolts, an extension on said bar, a plate adapted to be positioned on the extension, said plate engaging against one end of one of the fish plates, and a spring around said extension, one end bearing against said plate and exerting a pressure on the bar, substantially as described.

4. In a rail joint, the combination with two rails located end to end, fish plates at opposite sides of the rails, and bolts extending through the rails and the fish plates, of a wedge bar movable longitudinally of the rails and operatively engaging all of the said bolts, an extension on said bar, a plate adapted to be positioned on the extension, said plate engaging against one end of one of the fish plates, a washer on the extension, a pin, said pin adapted to limit the movement of said washer in one direction, and a spring around said extension, one end bearing against said plate, the other end against the washer, and said spring exerting pressure on the said bar, substantially as described.

5. In a rail joint, the combination with two rails located end to end, fish plates at opposite sides of the rails, and bolts extending through the rails and the fish plates, of a wedge bar movable longitudinally of the rails and operatively engaging all of the said bolts, an extension on said bar, a plate adapted to be positioned on the extension, said plate engaging against one end of one of the fish plates, a washer on the extension, a pin, said pin adapted to limit the movement of said washer in one direction, a spring around said extension, one end bearing against said plate, the other end against the washer, said spring exerting pressure on the said bar, a casing covering said spring, lugs on the said casing adapted to engage openings in said plate, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,114,396. APPARATUS FOR FORGING METAL. EDWIN E. SLICK, Pittsburgh, Pa. Filed Dec. 20, 1912. Serial No. 737,790. (Cl. 80—16.)



1. Forging apparatus comprising in combination rotary shafts having their axes extending at an angle to each other, forming die faces on the ends of said shafts, means for positively driving at least one of said shafts and forming dies, means for causing a relative approach of said die faces, and means forming a stop to limit the approaching movement of said die faces.

2. Forging apparatus comprising in combination rotary shafts having their axes extending at an angle to each other and having opposed forming die faces on the ends thereof, means for positively driving at least one of said shafts and forming dies, means for causing a relative approaching movement of the die faces, and means forming a stop to limit the approaching movement of said die faces, said stop being adjustable to vary the length of said approaching movement.

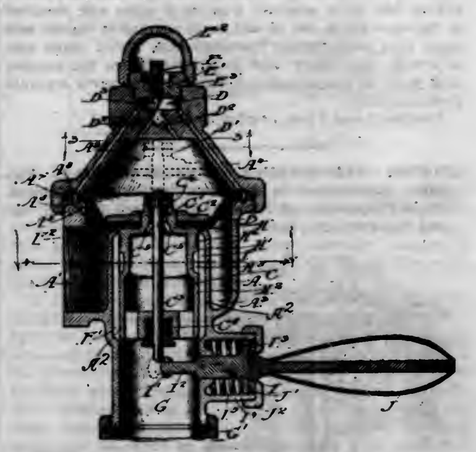
3. Forging apparatus comprising in combination rotary shafts having their axes extending at an oblique angle to each other, means for positively driving at least one of said shafts, means for causing a relative endwise approach of the shafts, and means forming a stop to limit said approaching movement.

4. Forging apparatus comprising in combination rotary shafts having their axes extending at an oblique angle to each other, means for positively driving at least one of said shafts, means for causing a relative endwise approach of said shafts, and means forming a stop to limit the approaching movement of the shafts, said stop being adjustable to vary the length of approaching movement.

5. Forging apparatus comprising in combination rotary shafts having their axes extending at an oblique angle to each other, means for positively driving at least one of said shafts, means for causing a relative endwise approach of the shafts in a path parallel to the axis of one of said shafts, and means forming a stop to limit the approaching movement of said shafts.

[Claims 6 to 19 not printed in the Gazette.]

1,114,397. FLUSH-VALVE. WILLIAM E. SLOAN, Chicago, Ill., assignor to Sloan Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 12, 1905. Serial No. 240,715. (Cl. 137—93.)



1. A valve device comprising a valve, an actuating mechanism having two parts separated from each other and mounted in the same guide, said parts having flattened ends which make contact with each other and an elastic device for keeping said parts in proper relation, both of said parts separate from said valve.

2. A valve device comprising a valve, an actuating mechanism having a guiding part separate from the valve and moving in a direction substantially at right angles thereto and provided with an enlarged end connected with the main body of the actuating part by a reduced portion, a guide in which said actuating part moves, a handle separate from the guiding part and provided with a part working in said guide, a spring in said guide normally pressing the actuating part and the handle part together.

3. A valve device comprising a casing divided into two chambers, one the controlling chamber and the other the operating chamber, means for connecting said chamber with a source of water supply, a valve for relieving the pressure in the controlling chamber, means for moving the parts so as to permit the water to flow from the operating chamber when said pressure is relieved, a projecting part associated with said valve, an actuating mechanism comprising an actuating part separate from the valve and moving in a direction substantially at right angles thereto and provided with an enlarged end adapted to engage said projecting part and connected with the body of the actuating part by a reduced portion, a guide in which said actuating part moves and means for moving said actuating part to its initial position when released.

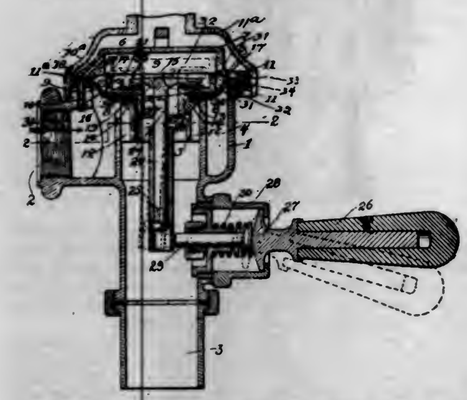
4. A valve device comprising a casing divided into two chambers, one the controlling chamber and the other the operating chamber, means for connecting said chambers with a source of water supply, a valve for relieving the pressure in the controlling chamber, means for moving the parts so as to permit the water to flow from the operating chamber when said pressure is relieved, a projecting part associated with said valve, an actuating mechanism comprising an actuating part separate from the valve and moving in a direction substantially at right angles thereto and provided with an enlarged end adapted to engage said projecting part and connected with the body of the actuating part by a reduced portion, a guide in which said actuating part moves, a handle provided with a part working in said guide and adapted to be tilted when the handle is moved so as to move said actuating part.

5. A valve device comprising a casing, a diaphragm extending across said casing and dividing it into two chambers, a connection between each of said chambers and a source of water supply, a cylinder in one chamber, a piston

connected with said diaphragm and working in said cylinder, an auxiliary valve mounted upon said piston and provided with a projecting stem which projects into said cylinder, an actuating mechanism for said auxiliary valve having two parts separate from each other and mounted in the same guide, one of said parts adapted to engage said stem, said parts having flattened ends which make contact with each other, and an elastic device for keeping said parts in proper relation, both of said parts separate from said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,114,398. FLUSH-VALVE. WILLIAM E. SLOAN, Chicago, Ill., assignor to Sloan Valve Company, Chicago, Ill., a Corporation of Illinois. Filed June 2, 1909. Serial No. 499,757. (Cl. 137—93.)



1. A valve device comprising two valves, one a main valve which controls the flow of water, the other an auxiliary valve for controlling said main valve, a stem for controlling said auxiliary valve comprising two parts connected together so as to be free to move with relation to each other, one of said parts projecting beyond the other, said projecting part movable with relation to said auxiliary valve, a controlling device for engaging said stem at one side thereof to move it laterally when the valves are in their closed position but disconnected from said stem, said projecting part adapted to engage said controlling device when the latter is held in its path as the main valve is returned to its closed position, so as to be moved thereby to permit the closing of said main valve.

2. A valve device comprising two valves, one a main valve which controls the flow of water, the other an auxiliary valve for controlling said main valve, a laterally movable stem for controlling said auxiliary valve, a controlling device for engaging said stem so as to move it laterally to open the auxiliary valve when the valves are in their closed position, and means for permitting both valves to return to their closed positions while the controlling device is in its operative position.

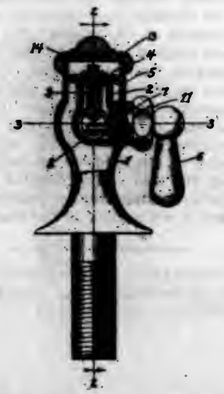
3. A valve device comprising two valves, one a main valve which controls the flow of water, the other an auxiliary valve for controlling said main valve, a laterally movable stem for controlling said auxiliary valve comprising two telescoping parts free to move one upon the other, a controlling device adapted to engage one of said telescoping parts when the valves are closed so as to move said stem laterally to open the auxiliary valve, means for moving said valves when the auxiliary valve is opened to move the stem out of the reach of said controlling device.

4. A valve device comprising a casing, a cylinder in said casing, a piston valve working in said cylinder, a diaphragm connected with said piston valve and with said casing, the portion of the diaphragm between the valve and the casing having a double curvature formed in the material itself.

5. A valve device comprising a casing, a diaphragm extending thereacross and dividing the casing into two chambers, a valve connected with said diaphragm, the portion of the diaphragm between the valve and the casing having a double curvature formed in the material itself.

[Claims 6 to 21 not printed in the Gazette.]

1,114,399. VALVE. WILLIAM E. SLOAN, Chicago, Ill. Filed Oct. 8, 1909. Serial No. 521,649. (Cl. 137—4.)



1. A valve device comprising a tilting valve, a stem connected therewith, an eccentric engaging device normally free from said stem and in alinement therewith when in its inoperative position but adapted to be moved to engage said stem above its lower end and at one side of its center so as to move it laterally to open the valve, and a removable holding part for said eccentric engaging device.

2. A valve device comprising a tilting valve, a stem connected therewith, a rotatable part disconnected from said stem, an engaging part eccentrically connected with said rotatable part and in alinement with said stem when in its inoperative position, said engaging part adapted to engage the stem of the valve at one side of its center when the rotatable part is rotated so as to move said stem laterally.

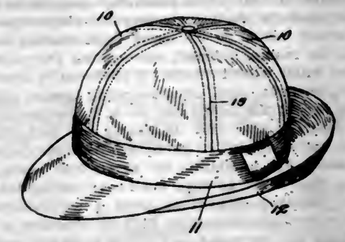
3. A valve device comprising a tilting valve, a stem connected therewith, a rotatable part disconnected from said stem, an engaging part eccentrically connected with said rotatable part disposed below said stem when the eccentric device is in its inoperative position but adapted to engage the stem of the valve at the side thereof when the rotatable part is rotated so as to move it laterally, a body portion within which said valve is located, a hollow holding part for said rotatable part screw-threaded into said body portion, and a controlling handle therefor.

4. A valve device comprising a tilting valve, a stem connected therewith, an eccentrically engaging device for moving said stem to turn the valve to open it and means for causing said eccentric engaging device to engage the stem on either side so as to tilt the valve in different directions at different times whereby the wear of the valve is reduced.

5. A valve device comprising a tilting valve, a stem connected therewith, an engaging device for said stem, a rotating part with which said engaging device is eccentrically connected and adapted to be rotated in either direction, said engaging device engaging the stem to open the valve and disengaging the stem to release the valve when the rotating part is rotated continuously in the same direction.

1,114,400. HAT. ABRAHAM SLOTOROFF, New York, N. Y. assignor to Sager & Slotoroff, New York, N. Y., a Copartnership composed of Abraham Slotoroff and Irving Sager. Filed Mar. 11, 1914. Serial No. 823,991. (Cl. 2—106.)

1. A head covering composed of fabric, an additional thickness of fabric extending over portions of its area, a plurality of crossed resilient arches interlaid between the thicknesses and completely covered thereby and having their bases substantially upon the periphery and means securing the arches together at their crossing point.



2. A head covering composed of sections of fabric set together by seams meeting at a central common point, tapes covering the seams and resilient arches interlaid between the tapes and seams and obscured thereby and crossing at the central common point.

1,114,401. FLYING-MACHINE. DAVID SMITH, Douglas, Wyo. Filed Apr. 11, 1913. Serial No. 760,512. (Cl. 244—13.)

A flying machine including sustaining planes arranged one in front of the other and spaced throughout the width of the machine, parallel controlling planes below the space between the sustaining planes and extending transversely of the machine, means for tilting the said controlling planes in unison about axes extending transversely of the machine, a transverse shaft journaled below the space between the controlling planes, a blade revoluble with said shaft and also revoluble about its individual axis, said axis being parallel with the shaft, a stationary cam, a crank arm movable with the blade and around the cam, and means coöperating with the cam for engaging the crank arm to swing the blade downwardly about its individual axis during the downward movement of said blade about the axis of the shaft, said blade operating to displace downwardly air flowing through the spaces between the sustaining planes and between the controlling planes.

1,114,402. BED-FABRIC-MAKING MACHINE. GABY B. SMITH, Chicago, Ill. Filed Oct. 31, 1912. Serial No. 728,915. (Cl. 140—7.)

1. In a device of the class described, tension mechanism including a frame; shafts journaled in the frame, one snaft being yieldably supported; means for operatively connecting the shafts; wire engaging rollers upon the shafts; and a projection outstanding from one roller and adapted to engage the other roller to space the rollers apart.

2. In a device of the class described, tension mechanism including a frame; rotatable wire engaging members journaled in the frame, one rotatable member being yieldably supported and one rotatable member having a projection adapted to engage the other rotatable member to space the rotatable members apart; and means for rotating the rotatable members.

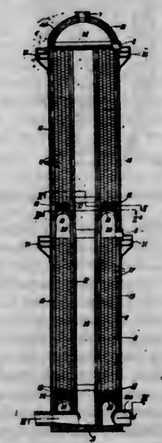
3. In a device of the class described, tension mechanism including a frame; a wire holder rigidly mounted with respect to the frame; coöperating rotatable wire engaging members journaled in the frame and constituting means for advancing a wire with respect to the wire holder, one rotatable member being yieldably supported and one rotatable member having a projection adapted to engage the other rotatable member to space the rotatable members apart and to afford an intermittent feed with respect to the wire holder.

4. In a device of the class described, means for advancing the material; means for bending the end of the material upon itself and into approximate parallelism with the line of advance of the material to form a loop; means for turning the bend of the loop into a hook; means for severing the loop; and means for turning the ends of the loop to form hooks.

5. In a device of the class described, a slidably mounted cross-head; means for reciprocating the cross-head; a grip movably mounted upon the cross-head; a member located in the path of the grip and coöperating with the grip to cause the same to engage the material when the cross-head is moved; mechanism for severing a section from the material; and mechanism for shaping the severed section.

[Claims 6 to 73 not printed in the Gazette.]

1,114,403. HOT-BLAST STOVE. GEORGE H. SMITH, deceased, Aspinwall, Pa., by Nellie E. Smith, administratrix, Aspinwall, Pa. Filed July 10, 1913. Serial No. 778,393. (Cl. 75—52.)



1. A hot-blast stove comprising a metal shell, a refractory lining in said shell, a refractory checkerwork within

the lining, said checkerwork being formed in horizontally separate and independently supported sections, and a vertical combustion chamber in the stove extending from the bottom to the top of said checkerwork and communicating therewith at the top of the stove.

2. A hot-blast stove comprising a metal shell, a refractory lining in said shell, a refractory checkerwork within the lining, said checkerwork being formed in at least two horizontally separate and independently supported sections, and a vertical combustion chamber in the stove extending from the bottom to the top of said checkerwork and communicating therewith at the top of the stove.

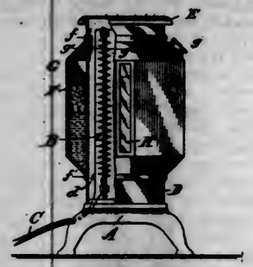
3. A hot-blast stove comprising a metal shell, a refractory lining in said shell, a refractory checkerwork within the lining, said checkerwork being formed in horizontally separate and independently supported sections, a vertical combustion chamber in the stove extending from the bottom to the top of said checkerwork and communicating therewith at the top of the stove, and a plurality of separate and independent arches supporting each section of the checkerwork.

4. A hot-blast stove comprising a metal shell, a refractory lining in said shell and checkerwork formed of refractory blocks within the lining, said checkerwork being formed in at least two horizontally separate and independently supported sections, a vertical combustion chamber in the stove extending from the bottom to the top of said checkerwork and communicating therewith at the top of the stove, and a plurality of separate and independent arches supporting each section of the checkerwork.

5. A hot-blast stove comprising a metal shell, a refractory lining in said shell and checkerwork formed of refractory blocks within the lining, said checkerwork being formed in horizontally separate and independently supported sections, a vertical combustion chamber in the stove extending from the bottom to the top of said checkerwork and comunicating therewith at the top of the stove, a series of rows of girder tiles supporting each section of said checkerwork, and a plurality of separate and independent arches supporting the tiles carrying each section of the checkerwork.

[Claims 6 and 7 not printed in the Gazette.]

1,114,404. ELECTRIC HEATER AND HUMIDIFIER. WILLIAM CLAY SMITH, Twin Falls, Idaho, assignor of one-half to Harry A. Brizee, Twin Falls, Idaho. Filed May 16, 1914. Serial No. 839,080. (Cl. 219—34.)



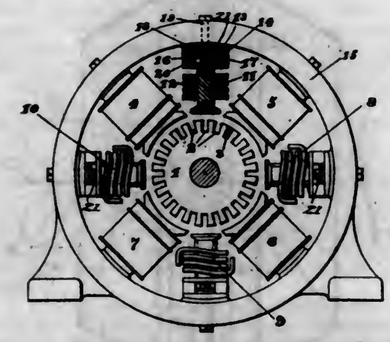
1. A combined electric heater and humidifier comprising a structure including heating elements, a casing mounted on the structure and surrounding the heating elements, said casing having means for permitting air to flow through the casing and be heated, and a water jacket surrounding the casing and having outlet means opening into the interior of the casing for delivering vapor to the heated air prior to the exit thereof from the casing.

2. A combined electric heater and humidifier comprising a structure including heating elements, a casing fitted to the structure and surrounding the heating elements, said casing having air admitting openings in its bottom and outlet means at its top, a jacket surrounding the casing and forming a water-containing chamber for generating vapor by heat from the element, and outlet means through which the chamber communicates with the upper part of the casing, whereby heated air passing through the latter draws the vapor from the said chamber and produces a humidifying of the heated air.

3. A combined heater and humidifier comprising a casing having cool air admitting means in its lower part and hot air outlet means at its upper part, electric heating means in the casing, a jacket surrounding the casing for containing water whereby vapor is produced by heat from the said elements, and communicating means between the upper part of the casing and the said chamber for permitting vapor to pass into the casing and mix with the heated air before the latter discharges from the casing.

4. A casing and humidifier for an electric heater, comprising an inner shell, an outer shell surrounding the inner shell and fastened thereto to form a water-containing chamber, a level gage connected with the chamber, a closed filling means for the upper part of the chamber, means of communication between the upper part of the chamber and the interior of the inner shell, and guards extending along the said last-mentioned means and arranged within the inner shell to prevent water from splashing out of the chamber and into the inner shell.

1,114,405. DYNAMO-ELECTRIC MACHINE PROVIDED WITH COMMUTATING POLE-PIECES. CHARLES HEAD SMOOT, Hollis, N. Y., assignor to Rateau Battu Smoot Company, New York, N. Y. Filed Sept. 5, 1911. Serial No. 647,744. (Cl. 171—228.)



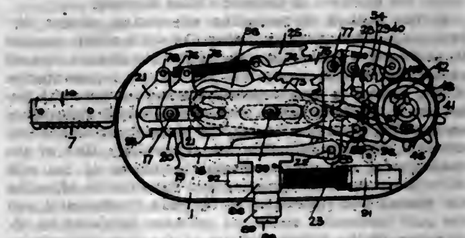
1. In a commutating dynamo electric machine, the combination with the armature and the magnetic yoke of the machine, of a commutating pole piece, a winding therefor through which substantially all of the current generated by the machine passes, and means for securing said pole piece to said yoke with an air gap between the pole piece and armature, and with an air gap between the pole piece and yoke, said last mentioned air gap being shaped and disposed to receive laminations of magnetic material whereby the effective length of said air gap may be adjusted.

2. In a commutating dynamo electric machine the combination with the magnetic yoke of the machine and its main polar projections of commutating polar portions interposed between said main polar portion and secured to said yoke, winding surrounding said commutating polar portions, and provisions whereby the magnetic reluctance of said commutating polar portions may be adjusted without disturbing the winding surrounding them.

3. In a commutating dynamo electric machine the combination with the magnetic yoke of the machine of a commutating pole piece attached to said yoke and formed with an air gap and comprising provisions for securing variable amounts of magnetic material in the said air gap whereby the reluctance of the said pole piece may be adjusted.

4. In a commutating dynamo electric machine the combination with the armature, magnetic yoke, and main poles secured to said yoke, of commutating pole pieces separated from said armature by air gaps, non-magnetic means for securing each commutating pole to said yoke with an air gap between the yoke and each commutating pole, means for detachably securing a variable number of plates of magnetic material in the air gaps between the commutating poles and yoke and windings surrounding said commutating poles.

1,114,406. COMPUTING MECHANISM. JESSE V. SOUDER, Jersey City, N. J. Filed May 28, 1912. Serial No. 700,146. (Cl. 235—137.)



1. In a computing device, a series of denominational members, a trip lever for each of said denominational members except the highest set in motion thereby, a transfer lever for each of said trip levers, adapted to be swung in either direction from a neutral position thereby, and a single actuating member released by each said trip levers for moving forwardly said transfer levers whereby said transfer levers will move the next higher denominational member.

2. In a computing mechanism, a series of denominational members, a pivotally mounted trip lever for each of said denominational members except the highest, the respective trip levers being operated by the respective denominational members, a driver for each of said trip levers, a transfer lever pivotally mounted on each of said drivers, means loosely connecting said transfer levers and said trip levers whereby the swinging movement of the transfer levers is controlled as the transfer levers move the next higher denominational member.

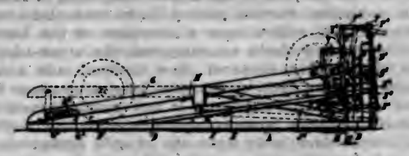
3. In a computing mechanism, a series of denominational members each of which is formed with a master tooth, a trip lever for each of said denimonational members, except the highest, a transfer lever for each of said denominational members, a guiding grid formed with a slot for each of said trip levers and for each of said transfer levers for guiding one end of said trip levers into the path of movement of said master teeth whereby they are actuated thereby and for guiding said transfer levers so that upon each actuation they will engage the next highest denominational member and move the same one step, means for moving said transfer levers forwardly, and a pin for conveying motion from said trip levers to said transfer levers whereby said transfer levers will have a lateral as well as a forward movement.

4. In a computing mechanism, a series of denominational members, a reciprocating driver for each of the denominational members except the lowest, a transfer lever pivoted to each of said drivers and movable therewith, a pivotally mounted trip lever actuated by said denominational members, and pins on the transfer lever connecting said trip levers and said transfer levers whereby the swinging movement of the transfer levers is controlled as the drivers move the transfer levers longitudinally.

5. In a computing mechanism, a series of denominational members, a plurality of trip levers, a locator for each trip lever, a plurality of drivers normally pressing against said trip levers, a plurality of transfer levers, and means for conveying motion from said trip levers to said transfer levers whereby the transfer levers are swung to one side when said trip levers have been tripped.

[Claims 6 to 36 not printed in the Gazette.]

1,114,407. APPARATUS FOR RELIEVING TIRES FROM THE WEIGHT OF AUTOMOBILES. THOMAS H. SPARKS, Wichita, Kans. Filed Apr. 8, 1914. Serial No. 830,403. (Cl. 57—15.)



1. An automobile rack for relieving the weight of the vehicle from the tires of the wheels, comprising inclined and hinged tracks, a rack, bearing members fastened thereto, laterally adjustable posts between which the sills of the rack are mounted, vertically adjustable means intermediate said posts for adjusting the height of the rack, slotted blocks intermediate said posts and wedges underneath the sloted blocks, the upper ends of said blocks being convexed and adapted to engage the bearing members upon the sills of the rack, bolts passing through the slots in said blocks and said posts, and autmoatically-operated means actuated by contact of the forward end of the car therewith for causing the hinged tracks to lower as the rack tilts, thereby throwing the weight of the vehicle upon said rack.

2. An automobile rack for relieving the weight of the vehicle from the tires of the wheels, comprising inclined and hinged tracks, a rack, bearing members fastened thereto, laterally adjustable posts between which the sills of the rack are mounted, vertically adjustable means intermediate said posts for adjusting the height of the rack, slotted blocks intermediate said posts and wedges underneath the slotted blocks, the upper ends of said blocks being convexed and adapted to engage the bearing members upon the sills of the rack, bolts passing through the slots in said blocks and said posts, a vertically adjustable angle bar against which the forward end of the sills of the rack are adapted to contact, and automatically-operated means actuated by contact of the forward end of the car therewith for causing the hinged tracks to lower as the rack tilts, thereby throwing the weight of the vehicle upon said rack.

3. An automobile rack for relieving the weight of the vehicle from the tires of the wheels, comprising a flooring with crosspieces thereon, slotted blocks with their lower edges inclined, wedges upon a crosspiece of the flooring upon which said blocks are supported, the upper edge of said blocks being convexed, fixed inclined and hinged tracks, a tilting rack having sills, bearing members fastened to the latter and adapted to rest upon said convexed ends of the blocks, laterally adjustable posts intermediate said blocks, fixed posts upon one of said crosspieces at the end of the flooring, laterally and vertically adjustable angle posts, an adjustable angle bar upon each of said angle posts, and automatically-operated means actuated by contact of the forward end of the car therewith for causing the hinged tracks to lower as the rack tilts, thereby throwing the weight of the vehicle upon said rack.

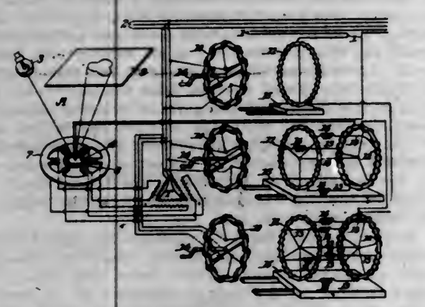
4. An automobile rack for relieving the weight of the vehicle from the tires of the wheels, comprising a flooring with crosspieces thereon, slotted blocks with their lower edges inclined, wedges upon a crosspiece of the flooring upon which said blocks are supported, the upper edge of said blocks being convexed, fixed inclined and hinged tracks, a tilting rack having sills, bearing members fastened to the latter and adapted to rest upon said convexed ends of the blocks, laterally adjustable posts intermediate said blocks, fixed posts upon one of said crosspieces at the end of the flooring, laterally and vertically adjustable angle posts, an adjustable angle bar upon each of said angle posts, a bar secured to the crosspiece at one end of the flooring, a pivotal bar against which the vehicle is adapted to contact as it moves up the track of the apparatus, a rock shaft and means for rocking the same as the car contacts with said pivotal bar, supporting bars

connected to said crank shaft, a rod connected to said supporting bars and engaging the forward ends of said hinged tracks.

5. An automobile rack for relieving the weight of the vehicle from the tires of the wheels, comprising a flooring with crosspieces thereon, slotted blocks with their lower edges inclined, wedges upon a crosspiece of the flooring upon which said blocks are supported, the upper edge of said blocks being convexed, fixed inclined and hinged tracks, a tilting rack having sills, bearing members fastened to the latter and adapted to rest upon said convexed ends of the blocks, laterally adjustable posts intermediate said blocks, fixed posts upon one of said crosspieces at the end of the flooring, laterally and vertically adjustable angle posts, an adjustable angle bar upon each of said angle posts, a fixed bar fastened to the crosspiece at one end of the flooring, upright bars pivotally connected to said fixed bar and having adjustable pivotal link connections, a forked bar pivoted to one of said upright bars, a rock shaft having a crank arm adapted to be engaged by said forked bar, cranks upon the rock shaft, supporting bars pivotally connected to the crank arms, and a rod connected to the supporting rods and to the forward ends of the hinged tracks.

[Claim 6 not printed in the Gazette.]

1,114,408. CORRECTING DISTURBANCES ON TELEPHONE AND OTHER LIKE WIRES. JAMES BUCKNER SPEED, New York, N. Y. Continuation of application Serial No. 728,336, filed Oct. 29, 1912. This application filed Mar. 3, 1914, Serial No. 822,128. Renewed Sept. 10, 1914. Serial No. 861,135. (Cl. 179—78.)



1. The method of correcting alternating current disturbances on telephone and other like wires which consists in producing an observable manifestation of the disturbance in the line; producing a second disturbance on said line synthetically out of alternating currents whose periodicities are those of the fundamental and of the harmonics of the disturbance note; and regulating and adjusting the several parts of said synthetically constructed disturbance by reference to the said observable manifestation until said disturbance is as nearly nullified as desired.

2. The method of correcting alternating current disturbances on telephone and other like wires which consists in producing an observable manifestation of the disturbance on the line; producing a second disturbance on said line, part by part, of alternating currents of the same periodicities as the fundamental and the harmonics of the said disturbances; and, one by one, regulating and adjusting the said parts individually in phase and intensity, until, part by part, the disturbance has been neutralized, all under the guidance of the said observable manifestation.

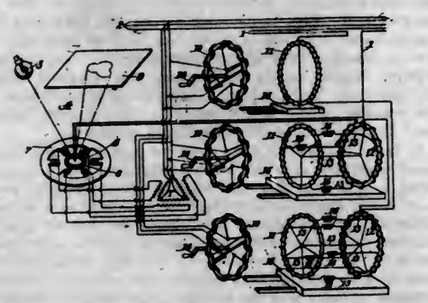
3. The method of correcting alternating current disturbances on telephone and other like wires which consists in producing a visible diagram of the disturbance on the line; producing a second disturbance on said line synthetically out of alternating currents whose periodicities are those of the fundamental and of the harmonics of the disturbance note; and regulating and adjusting the several parts of said synthetically constructed disturbance by reference to the said visible diagram, until said disturbance is as nearly nullified as desired.

4. The method of correcting alternating current disturbances on telephone and other like wires which consists in producing a visible diagram of the disturbance on the line; producing a second disturbance on said line, part by part, of alternating currents of the same periodicities as the fundamental and the harmonics of the said disturbance; and, one by one, regulating and adjusting the said parts individually in phase and intensity, until, part by part, the disturbance has been neutralized, all under the guidance of the said visible diagram.

5. The method of correcting alternating current disturbances on telephone and other like wires which consists in producing a visible diagram of the disturbance current on the line in such a way that the cyclical representation of the current is synchronous with the fundamental frequency of the disturbance, producing a second disturbance on said line synthetically out of a plurality of alternating currents whose periodicities are respectively that of the fundamental and of the several harmonics of the said disturbance; and so regulating and individually adjusting the phases and intensities of the said fundamental and the said harmonics, under the guidance furnished by observation of the visible diagram of the first disturbance, that the second disturbance shall be at every instant equal and opposite to the first disturbance.

[Claims 6 and 7 not printed in the Gazette.]

1,114,409. APPARATUS FOR CORRECTING DISTURBANCES ON TELEPHONE AND OTHER LIKE WIRES. JAMES BUCKNER SPEED, New York, N. Y. Continuation of application Serial No. 729,385, filed Nov. 4, 1912. This application filed Mar. 3, 1914, Serial No. 822,129. Renewed Sept. 10, 1914. Serial No. 861,136. (Cl. 179—78.)



1. An apparatus for the described purpose comprising means operated by the current in the power line, the proximity of which is the cause of the disturbance on the telephone line, for producing an observable manifestation which is indicative of the disturbance on said telephone line; means for producing a second disturbance on said telephone line, synthetically out of a plurality of alternating currents whose frequencies are respectively equal to the fundamental of the disturbance and its harmonics; and means for regulating and adjusting said alternating currents in their phases and intensities, to effect such alterations in said observable manifestation as will indicate a condition on the telephone line free from disturbance.

2. An apparatus for the described purpose comprising means operated by the current in the power line, the proximity of which is the cause of the disturbance on the telephone line, for producing a visible diagram which is indicative of the disturbance on said telephone line; means for producing a second disturbance on said telephone line, synthetically out of a plurality of alternating currents whose frequencies are respectively equal to the fundamental of the disturbance and its harmonics; and means for regulating and adjusting said alternating currents in their phases and intensities, to effect such alteration in said visible diagram as will indicate a condition on the telephone line free from disturbance.

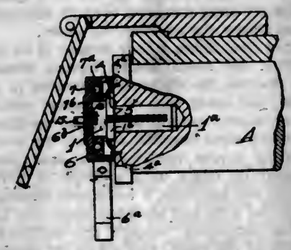
3. An apparatus for the described purpose comprising means operated by the current in the power line, the proximity of which is the cause of the disturbance on the telephone line, for projecting a beam of light upon a screen and causing it to traverse a path thereon and so produce a visible diagram indicative of the disturbance on said telephone line; means for producing a second disturbance on said telephone line; and means for regulating and adjusting said second disturbance to effect such alteration in the visible diagram as will indicate a condition on the telephone line free from disturbance.

4. An apparatus for the described purpose comprising means operated by the current in the power line, the proximity of which is the cause of the disturbance on the telephone line, for projecting a beam of light upon a screen and causing it to traverse a path thereon and so produce a visible diagram indicative of the disturbance on said telephone line; means for producing a second disturbance on said telephone line; and means capable of selective and several operations for regulating and adjusting said second disturbance to effect such alteration in the visible diagram as will indicate a condition on the telephone line free from disturbance.

5. An apparatus for the described purpose comprising means operated by the current in the power line, the proximity of which is the cause of the disturbance on the telephone line, for projecting a beam of light upon a screen and causing it to traverse and retraverse a closed path synchronous with the fundamental frequency of the disturbance on said telephone line whereby a visible diagram is produced indicative of said disturbance but not of the sound producing currents on said telephone line; means for producing a second disturbance on said telephone line; and means for regulating and adjusting said second disturbance to effect such alteration in the visible diagram as will indicate a condition on the telephone line free from disturbance.

[Claims 6 to 20 not printed in the Gazette.]

1,114,410. RAILWAY-ODOMETER. JOHN K. STEWART, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Aug. 16, 1913. Serial No. 785,058. (Cl. 235—96.)



1. A railway odometer comprising a frame, a counter train mounted therein, a cap rotatably connected with said frame, said cap and counter train having loosely cooperating features whereby the relative rotation of the cap and frame is communicated to said counter train, means for attaching the frame to the end of a car axle, and means for stopping the cap against rotation in the axle box.

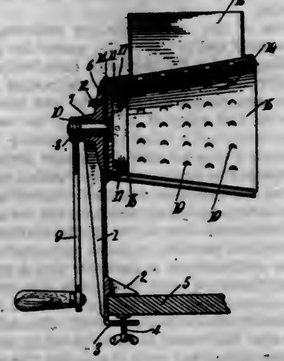
2. A railway odometer comprising a frame, a counter train mounted therein, having an initial rotary element, a cap mounted on the frame for rotation about the axis of said initial element of the counter train, said cap and initial element having loosely coöperating features whereby the relative rotation of the cap on the frame is communicated to said counter train, means for securing the frame to the end of a car axle, and means for stopping the cap against rotation in the axle box.

3. A railway odometer comprising a counter train, a frame in which said train is mounted, means adapted to be fixed to the end of a car axle, and means on the said frame adapted to coöperate therewith for attaching the frame to said axle, a cap rotatably carried on the frame and dimensioned to cover completely the attaching means on the end of the axle, said cap and the counter train having loosely coöperating features whereby the relative rotation of the cap and frame is communicated to said counter train, and means for stopping the cap against rotation in the axle box.

4. A railway odometer comprising a frame, a counter train having a series of co-axially mounted dial wheels, said counter train being carried in the aforesaid frame and that portion of the frame which carries the said dial wheels being formed to occupy a socket in the end of a car axle, the remainder of said frame extending beyond the end of such car axle, a cap rotatably mounted on said extending portion of said frame, said cap and the counter train having loosely coöperating features whereby the relative rotation of the cap and frame is communicated to said counter train, means for securing the frame against rotation on the axle, and means for stopping the cap against rotation in the axle box.

5. In combination with a car axle, a railway odometer secured to one end thereof, comprising a counter train having an initial rotary element, a frame in which said train is mounted, said frame being fixed to the car axle with said initial element of the counter train axially positioned with respect to said axle, a cap in which the said frame is mounted for rotation about the axis of said initial element of the counter train, and means for stopping said cap against rotation in the car axle box.

1,114,411. SHREDDING-MACHINE. STEPHEN T. STUVER, Tacoma, Wash. Filed Feb. 27, 1912. Serial No. 680,254. (Cl. 146—9.)

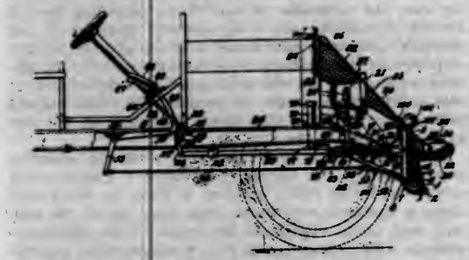


1. In a shredding machine, the combination of a conical casing having its smaller end closed, and a shredding element mounted in the casing, said element comprising a disk-like member having a frusto-conical flange and a centrally arranged shaft projecting therefrom, said flange being provided with external pins, and an open ended frusto-conical tubular body having peripheral blades and provided with L-shaped openings at its smaller end, the horizontal portions of the openings being adjacent the smaller end of the body and the longitudinal portions extending in the direction of the opposite larger end of said body, the smaller end of the body fitting upon the said flange with the pins thereof engaging its slots and its end closely adjacent the closed end of the casing.

2. In a shredding machine, the combination of a support, a frusto-conical casing having its smaller end closed and secured to the support, the closed end of the casing and support having registering openings, a disk-like member having a frusto-conical flange and a central shaft mounted in the openings of the support and casing, the

said flange being provided with pins on its periphery, and a frusto conical tubular body open at both ends and provided with peripheral blades and in its smaller end with L-shaped openings, the said smaller end of the body being closely adjacent said closed end of the casing and fitting on the said flange with the pins of the flange projecting into the openings of the body, whereby the body can be readily attached to or removed from the disk-like member and when attached and the parts are in position the body is securely held on the said member.

1,114,412. AUTOMOBILE-FENDER. WILSON E. SYMONS, Chicago, Ill. Filed May 15, 1911. Serial No. 627,255. (Cl. 105—130.)



1. A device of the class described including a fender slidable upwardly and downwardly, means for guiding the fender in its sliding movement, means for normally maintaining the fender in an elevated position, a buffer arranged in advance of the fender and slidable backwardly and forwardly and connected with and adapted to operate the said holding means for automatically tripping or releasing the fender, and operating mechanism connected with the said holding means to enable the fender to be lowered by an operator.

2. A device of the class described including a fender movable upwardly and downwardly, means for guiding the fender, holding means for normally maintaining the fender in an elievated position, a buffer arranged in advance of the fender and movable backwardly and forwardly and connected with and adapted to operate the said holding means for automatically tripping or releasing the fender, and mechanism connected with the fender for raising the same to reëngage the fender with the holding means.

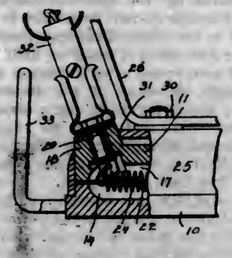
3. A device of the class described including a fender movable upwardly and downwardly, means for guiding the fender, holding means for normally maintaining the fender in an elevated position, a buffer arranged in advance of the fender and movable backwardly and forwardly and connected with and adapted to operate the said holding means for automatically tripping or releasing the fender, operating mechanism connected with the said holding means to enable the fender to be lowered by an operator, and mechanism connected with the fender for raising the same to reëngage the fender with the holding means.

4. A device of the class described including a main supporting bracket provided at opposite sides with upright guides and having rearwardly extending arms located at opposite sides of the bracket and provided with means for securing them to the front portions of the sides of the frame of an automobile, an upright fender located in advance of the automobile and slidable upwardly and downwardly in the guides of said bracket, and means for supporting and tripping the fender including a transversely disposed buffer located in advance of the fender and slidably supported by the main bracket.

5. A fender attachment comprising a supporting bracket, a fender attached to said bracket and vertically movable as an entirety in respect thereto, means for holding the fender in its raised position, and an automatic tripping device for releasing said fender including a buffer arranged in advance of and above the fender and slidably mounted on the said bracket.

[Claims 6 to 33 not printed in the Gazette.]

1,114,413. ELECTRIC SAD-IRON. EDMUND E. TABUSSEY, Los Angeles, Cal. Filed Aug. 21, 1913. Serial No. 786,018. (Cl. 219—25.)



1. A heating element comprising a sheet of insulating material formed with a single series of perforations, and a resistance member extended through said perforations and across the edge of the sheet, said resistance member only embracing that portion of the sheet lying between the perforations and the edge of the sheet.

2. A heating element comprising a sheet of mica having a series of perforations formed therein adjacent the edge thereof, and a resistance member formed of a spiral coil of wire, threaded through the perforations and extended across the edge of the sheet, said resistance member embracing only that portion of the mica sheet lying between the perforations and the edge of said sheet, whereby the remainder of the sheet may be engaged with a supporting member.

3. In a sad iron, a body formed of upper and lower sections, the opposed faces of said sections being formed with opposed channels, and a heating element comprising a sheet of non-conducting material positioned between said sections and extending partly across the channels, the sheet being formed with a series of perforations disposed within the channels, and a resistance member threaded through said perforations and across the edge of the sheet.

4. In a sad iron, a body formed of an upper and lower section with the opposed faces of said sections being formed adjacent their edge with opposed channels, a sheet of mica positioned between the sections and extending partly across the channels formed therein, the sheet being formed adjacent its edges with a series of perforations, and a resistance element formed of a spiral coil of wire, said element being threaded through the perforations and extending across the edges of the sheet.

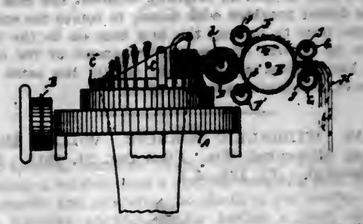
5. A sad iron comprising a body formed of an upper and a lower section, the lower section having formed in its upper face a channel, the channel conforming to the shape of the section, the lower face of the upper section being formed with a channel opposed to the first mentioned channel, an insulating sheet disposed between the sections and extending partly across the channels, said sheet being formed adjacent its edges with a series of perforations disposed within the channels, a resistance element formed of a spiral coil of wire and mounted upon said insulating sheet, the coil extending through the perforations and across the edge of the sheet, and a pair of terminal members carried by the upper section to which the ends of the coil are connected.

1,114,414. MECHANISM FOR KNITTING FLEECE-LINED FABRIC. JOHN C. TAUBER, Erie, Pa. Filed Nov. 13, 1913. Serial No. 800,787. (Cl. 66—12.)

1. In an apparatus of the class described, a continuous upwardly traveling brush having long flexible wires or bristles, mechanism adapted to distribute fiber onto said brush, a knitting machine, vertically slidable needles therein, down turned hooks on said needles adapted to engage said brush and comb fiber therefrom, and mechanism adapted to cause said needle hooks to travel continuously across said upwardly traveling brush, substantially as set forth.

2. In an apparatus of the character described, the combination of a carding drum and its associated mechanism,

a continuous upwardly traveling brush having flexible wires or bristles adapted to take fiber off of said carding drum, a knitting machine, vertically slidable needles therein, down turned hooks on said needles adapted to engage said brush and comb fiber therefrom, and mechanism adapted to cause said needle hooks to travel continuously across said upwardly traveling brush, substantially as set forth.



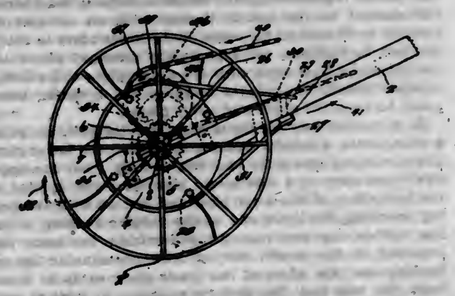
3. In an apparatus of the character described, the combination of a carding drum and its associated mechanism, a continuously upwardly traveling brush having flexible wires or bristles adapted to take fibers off of said drum, a knitting machine, needles therein supported in a vertical position adjacent to, and movable across said upwardly traveling brush, down turned hooks on the upper ends of said needles adapted to comb fibers out of said brush during their traverse thereacross, substantially as set forth.

1,114,415. MONKEY-WRENCH. BRADFORD A. THOMAS, San Francisco, Cal., assignor of fifty-five one-hundredths to Milton Auerbach and forty-five one-hundredths to Frank J. Silvey, San Francisco, Cal. Filed June 17, 1913. Serial No. 774,152. (Cl. 81—156.)

A wrench comprising a shank having a fixed jaw, a slidable jaw positioned upon said shank, said slidable jaw provided with inner arms, a yoke slidable upon said inner arms and adapted to move transversely across said shank, a worm screw engaging said yoke, said worm screw adapted to move said slidable jaw, a plurality of flanges formed upon said slidable yoke and engaging said inner arms of said flanges terminating at a spaced distance from the rear portion of said yoke, a flat spring fixed to the inner end of said slidable jaw, said spring extending to pass within said yoke at its rear portion, said flanges terminating to allow sufficient room for the passage of said spring whereby said yoke will be normally held in engagement with said worm screw but may be moved from engagement therewith by compressing said flat spring.

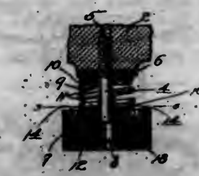
1,114,416. BEAN-GATHERING MACHINE. ALLEN J. TINGLEY, SAMUEL ROOSA, and GLENN GOULD, Owosso, Mich. Filed Jan. 25, 1913. Serial No. 744,135. (Cl. 56—61.)

The combination with a frame provided with bearings, of apertured disk-plates having hubs extending into the bearings and locked therein and provided upon their inner faces with cam grooves, a shaft rotatably mounted within the apertures of the disk-plates, traction wheels secured to the ends of the shaft to rotate the same, wheels arranged adjacent to the disk-plates and rigidly secured to the shaft and having openings near their peripheries,



rocker-rods loosely mounted within the openings of the second named wheels and provided at their ends with cranks which operate within the cam grooves, forks secured to the rocker-rods, stop-rods secured to second named wheels and adapted to support the forks, and stripping plates surrounding the second named wheels and receiving the forks therebetween.

1,114,417. SPRING-CUSHION TYPE-WRITER FOOT. CHARLES M. TURTON, Nashville, Tenn. Filed Dec. 11, 1911. Serial No. 664,983. (Cl. 155—33.)



1. A cushion foot for typewriters and the like, including a vertical post, a pair of relatively movable plates applied to the post, one of the said plates being rigid with the post, while the opposite plate is movable with respect to the post, tension means between the plates, a resilient nonsound conducting pad applied to one of the plates and a rubber cap fitting around and receiving the said resilient pad and provided with means for positively engaging the said plate to retain the pad in position.

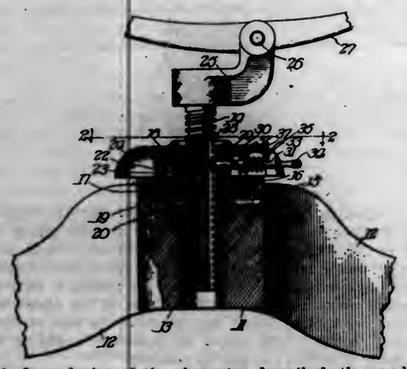
2. A cushion foot for typewriters and the like, including a post, a pair of relatively movable plates applied to the post, one of the plates being rigid with the post while the opposite plate is movable with respect thereto, a tubular bushing carried by the said opposite plate and projecting from one face thereof, said tubular bushing loosely receiving the post, a coil spring surrounding the post and interposed between the plates, a resilient pad applied to the movable plate and formed with an opening receiving the tubular bushing, and a rubber cap fitting around the resilient pad and constructed to positively engage the movable plate to retain the pad in position.

3. A cushion foot for typewriters and the like, including a vertical post, an upper plate rigid with the post and applied thereto at an intermediate point in the length thereof, the upper end of the post being adapted to engage the foot of a typewriter, a lower plate having an opposed relation to the upper plate, a tubular bushing carried by the lower plate and loosely receiving the lower end of the post, a pad arranged under the lower plate, a coil spring surrounding the post and interposed between the upper and lower plates, and means upon the said upper and lower plates for engaging the ends of the coil spring.

4. A cushion foot for typewriters and the like, including a lower plate, a tubular bushing applied to the lower plate and projecting upwardly and downwardly from the opposite faces thereof, a soft sound absorbing pad applied to the lower face of the said plate and formed with an opening receiving the lower end of the tubular bushing, a hollow rubber cap receiving the sound absorbing pad therein and formed at the mouth thereof with an annular lip adapted to fit around the edges of the lower plate to retain the pad in position, an upper plate arranged above the lower plate, a post rigid with the upper plate and slidably received within the tubular bushing, and a spring interposed between the upper and lower plates.

5. A cushion foot for typewriters and the like, including a lower plate, a tubular bushing applied to the lower plate and projecting upwardly and downwardly from the opposite faces thereof, a soft sound absorbing pad applied to the lower face of the lower plate and formed with an opening receiving the lower end of the tubular bushing, a hollow rubber cap receiving the pad within the same and provided at the mouth thereof with an annular lip extending over the edges of the lower plate so as to retain both the cap and the pad in position, a vertical post having the lower end thereof slidably received within the tubular bushing, the upper plate rigid with the vertical post at an intermediate point in the length thereof, the upper end of the post being adapted to engage the foot of a typewriter, and a coil spring surrounding the post and interposed between the upper and lower plates.

1,114,418. SWIVEL-CHAIR IRON. FRANK H. WESTLAKE and ALBERT HUCK, Milwaukee, Wis., and JOEL L. ISAACS, Chicago, Ill., assignors to Milwaukee Chair Company, Chicago, Ill., a Corporation of Wisconsin. Filed Nov. 20, 1912. Serial No. 732,407. (Cl. 155—41.)

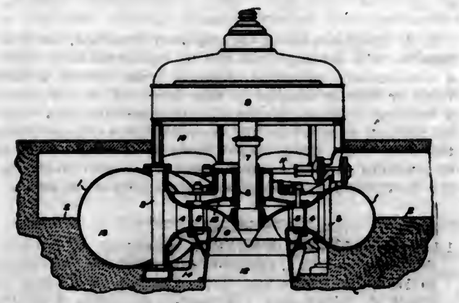


1. In a device of the character described, the combination of a chair hub, a longitudinally-grooved rotatable screw spindle carrying the chair, a hand-wheel rotatably mounted on the hub and internally screw threaded receiving said spindle, a detent slidingly and oscillatingly mounted within the plane of the hand wheel for radial and angular movement and adapted to lock the wheel and screw together by engagement with the groove of the latter, a spring pressing the detent inwardly toward locking position, and cam means between the detent and handwheel, whereby to convert angular movement of the detent into longitudinal movement to retract the detent from the groove, substantially as described.

2. In a device of the character described, the combination with a chair hub, and a longitudinally grooved rotatable screw spindle carrying the chair, of a hand wheel comprising a collar rotatably mounted on the hub, a spring locking detent radially mounted within the collar for angular and axial reciprocating movement, the collar provided with a cam face and the detent with a lateral projection coacting therewith, and means to rotate the detent to cause the same to be retracted by the engagement of its projection with the cam face, substantially as described.

3. In a device of the character described, the combination with a chair hub, and a longitudinally grooved rotatable screw spindle carrying the chair, of a hand wheel comprising a collar rotatably mounted on the hub, a locking detent mounted radially within the collar for axial and angular movement, a spring normally pressing the detent inwardly into engagement with the groove, the collar provided with a flange having a cam face, the detent having a nose projecting laterally adjacent the cam face, and the detent provided with means to rotate the same to cause the nose to ride up the cam face on to the flange whereby to convert the angular movement of the detent into a longitudinal movement to retract the same from the groove, substantially as described.

1,114,419. HYDRAULIC TURBINE. WILLIAM MONROE WHITE, Milwaukee, Wis. Filed Dec. 24, 1913. Serial No. 808,910. (Cl. 138—5.)



1. In a hydraulic machine, a casing for conducting a fluent medium, a foundation supporting said casing, means carried by said foundation and extending through said casing, and a dynamo electric machine carried by said means.

2. In a hydraulic machine, a casing for conducting a fluent medium, a foundation supporting said casing, struts carried by said foundation and extending through said casing, and a dynamo electric machine located above said casing and supported by said struts.

3. In a hydraulic machine, a casing for conducting a fluent medium, a foundation supporting said casing, a runner within said casing, a dynamo electric machine connected to said runner and located above said casing, and means passing through said casing for supporting said dynamo electric machine upon said foundation.

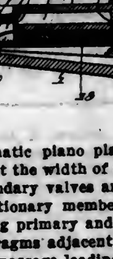
4. In a hydraulic machine, a casing, a foundation supporting said casing, a runner within said casing, means for directing fluent medium from the interior of said casing toward said runner, a dynamo electric machine connected to said runner and located above said casing, and means passing through said casing for supporting said dynamo electric machine upon said foundation, said supporting means being formed to direct fluent medium from within said casing toward said runner.

5. In a hydraulic machine, a casing, a foundation for supporting said casing, a runner within said casing, a dynamo electric machine direct connected to said runner and located above said casing, and means adapted to guide fluent medium from the interior of said casing toward said runner and supporting the weight of said dynamo electric machine upon said foundation, said means passing through said casing.

[Claim 6 not printed in the Gazette.]

1,114,420. KNITTING-MACHINE NEEDLE. LOUIS N. D. WILLIAMS, Ogonts, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Dec. 18, 1911. Serial No. 666,582. (Cl. 66—5.)

1. A knitting machine needle having a pivot member with a casting which engages and retains the shank of the needle, the latter projecting in both directions from the periphery of the casting.



2. A knitting machine needle having a pivot member comprising a washer, and a casting engaging said washer and engaging and retaining the shank of the needle.

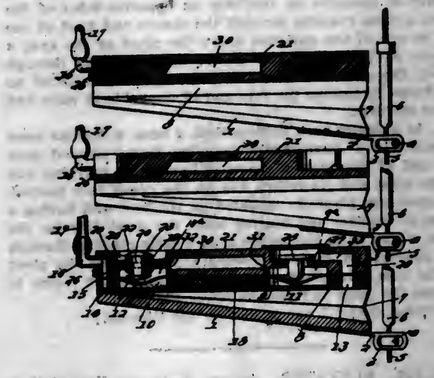
3. A knitting machine needle having a pivot member comprising a washer, and a casting which engages and retains the shank of the needle, occupies an opening in the washer, and laps a portion of said washer.

4. A knitting machine needle having a pivot member comprising a washer, and a casting which engages and retains the shank of the needle, occupies an opening in the washer and overlaps the latter on each side.

5. A knitting machine needle having a pivot member with a casting which envelops the shank of the needle, said shank projecting in both directions from the periphery of the casting.

[Claims 6 to 8 not printed in the Gazette.]

1,114,421. PNEUMATIC PIANO-PLAYER. FREDERICK W. WINTER, San Francisco, Cal. Filed Dec. 26, 1911. Serial No. 667,635. (Cl. 84—178.)



1. In an automatic piano player, a chest member extending throughout the width of a player, and carrying the primary and secondary valves and formed with a vacuum chamber, and stationary members of pneumatics secured thereto and having primary and secondary diaphragm recesses, and diaphragms adjacent said valves for actuating the latter, and a passage leading from the secondary diaphragm recess, said primary valve controlling said passage.

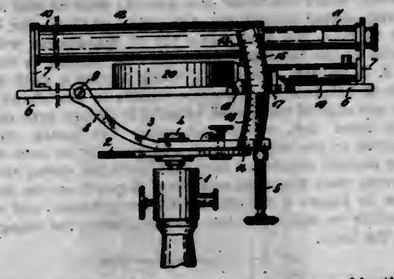
2. In an automatic piano player, a chest member extending throughout the width of a player and carrying the primary and secondary valves and formed with a vacuum chamber, and stationary members of pneumatics secured thereto and having primary and secondary diaphragm recesses, and diaphragms adjacent said valves for actuating the latter, and a passage leading from the secondary diaphragm recesses, said primary valve controlling said passage, said vacuum chamber extending throughout the width of said member and serving with all of said pneumatics.

3. A stationary member of a power pneumatic having primary and secondary diaphragm recesses having diaphragms therein, said recesses forming diaphragm chambers, diaphragms in said chambers for actuating the valves, a passage leading from the secondary diaphragm chamber and a vertical passage communicating therewith, a plate secured upon said stationary member and having a passage in communication with the vertical passage of said stationary member, and primary and secondary valves in said plate adjacent the diaphragm, said primary valve controlling the passage in said plate, said plate having a vacuum chamber extending throughout the width of a player.

4. A stationary member of a power pneumatic having primary and secondary diaphragm recesses having diaphragms therein, said recesses forming diaphragm chambers, diaphragms in said chambers for actuating the valves, a passage leading from the secondary diaphragm chamber and a vertical passage communicating therewith, a plate secured upon said stationary member and having a passage in communication with the vertical passage of said stationary member, and primary and secondary valves in said plate adjacent the diaphragm, said primary valve controlling the passage in said plate, said plate having a vacuum chamber extending throughout with said diaphragm chambers.

5. A stationary member of a power pneumatic having primary and secondary diaphragm recesses having diaphragms therein, said recesses forming diaphragm chambers, diaphragms in said chambers for actuating the valve, a passage leading from the secondary diaphragm chamber and a vertical passage communicating therewith, a plate secured upon said stationary member and having a passage in communication with the vertical passage of said stationary member, and primary and secondary valves in said plate adjacent the diaphragm, said primary valve controlling the passage in said plate, said plate having a vacuum chamber extending throughout the width of a player and communicating with said diaphragm chambers, and a vent from the primary diaphragm chamber.

1,114,422. GEODETICAL UNIVERSAL INSTRUMENT. HERMANN RITTER VON WINTERHALDER, Klosterneuburg, near Vienna, Austria-Hungary. Filed Apr. 1, 1914. Serial No. 828,733. (Cl. 33—67.)



1. In a geodetical universal instrument the combination of a horizontal circle, a vertical arc, an arm carrying said arc and adapted to turn around the axis of the horizontal circle, a diopter, means for detachably pivoting the diopter to said arm in the center of the vertical arc means for turning such diopter around its pivots and a telescope supported in said diopter.

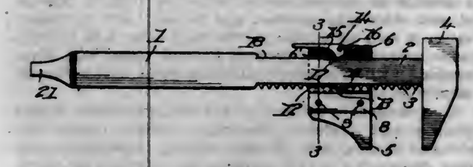
2. In a geodetical universal instrument the combination of a horizontal circle, a vertical arc, an arm carrying said arc and adapted to turn around the axis of the horizontal circle, a diopter, alined pointed screws in the said arm, located in the axis of the said vertical arc and engaging the diopter, an elevation screw screwed into the said arm and supporting the diopter and a telescope supported in the said diopter.

3. In a geodetical universal instrument the combination of a horizontal circle, a vertical arc, an arm carrying said

arc and adapted to turn around the axis of the horizontal circle a diopter, means for detachably pivoting the diopter to said arm in the center of the vertical arc at one side of the axis of the horizontal circle, means mounted on said arm on the opposite side of the axis of the horizontal circle for turning such diopter around its pivots and a telescope supported in the said diopter.

4. In a geodetical universal instrument the combination of a horizontal circle, a vertical arc, an arm carrying said arc and adapted to turn around the axis of the horizontal circle a diopter, means for detachably pivoting the diopter to the said arm in the center of the vertical arc, means for turning such diopter around its pivots and a telescope and a compass supported in the said diopter.

1,114,423. WRENCH. SAMUEL ZWICK, South Manchester, Conn. Filed June 12, 1914. Serial No. 844,766. (Cl. 81—141.)



1. A wrench, including a shank having a rigid jaw on one end thereof, an inner toothed jaw slidably mounted on said shank, teeth on said shank adapted to engage the teeth on the jaw, a cam member for facilitating the engagement of said teeth, and spring members supported on said slidable jaw in spring pressed relation with one of the edges of the said shank on each side of the toothed portion thereof, whereby to insure an even distribution of the pressure of the spring.

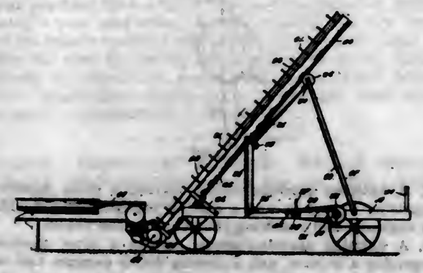
2. A wrench, including a shank having a rigid jaw on one end thereof, an inner toothed jaw slidably mounted on said shank, teeth on said shank adapted to engage the teeth on the jaw, a cam member pivotally mounted in said inner jaw and adapted to contact with one of the edges of the shank for causing engagement with the aforesaid teeth, springs on said inner jaw, said springs embracing the teeth of said shank and inner jaw, and the ends of said springs being pressed against one of the edges of the shank, whereby to force the said shank out of engagement with the teeth on the inner jaw when the cam member is released.

3. A wrench, including a shank having a rigid jaw on one end thereof, an inner jaw slidable on said shank, teeth on one edge of said shank adapted to engage with teeth on the inner jaw, means comprising flat spring elements carried by the movable jaw, and disposed on each side of the toothed portion of the shank, said flat spring elements having their free ends oppositely disposed on the movable jaw to insure a distribution of the pressure, and a cam member on said inner jaw for facilitating the engagement of the teeth.

1,114,424. ELEVATOR. ALONZO T. ADAMS, East Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Original application filed Mar. 25, 1909, Serial No. 485,640. Divided and this application filed Aug. 15, 1913. Serial No. 784,858. (Cl. 198—18.)

1. In a device such as described, a base, a tubular mast mounted in a downwardly swinging frame pivoted near one end of the base, a trolley-arm mounted near the other end of the base below the mast and bearing at its free end upon the underside of the mast to raise the same, means to swing the trolley-arm upon the base, and a conveyer having its carrying run in the mast and its return run on the upper side thereof.

2. In a device such as described, a base, a tubular mast mounted in a downwardly swinging frame pivoted near one end of the base and having an angular boot, a conveyer having its carrying run in the boot and mast and its return run on the upper face of the mast, a trolley-arm pivotally mounted near the other end of the base below the mast and having a roller at its free end bearing upon the underside of the mast to raise the same, and means to move the trolley-arm upon its pivot.



3. In a device such as described, a base, a tubular mast mounted in an upright downwardly swinging frame pivoted near one end of the base, a seat near the other end of the base and in alinement with the frame, a trolley-arm pivotally mounted on the base below the mast and between the frame and seat and extending beyond the latter at its free end, a roller in the free end of the trolley-arm bearing on the underside of the mast to raise it, means to swing the trolley-arm on its pivot, and a conveyer having its carrying run in the mast and its return run on the upper face thereof.

4. In a device such as described, a base, a tubular mast mounted in a downwardly swinging frame pivoted near one end of the base, a trolley-arm pivotally mounted near the other end of the base and bearing at its free end upon the mast to raise the same, a sheave on the trolley-arm, a pair of uprights on the base on opposite sides of the mast, a cable running through the sheave and fixed at one end to one of the uprights above the pivot of the arm, a sheave on the upper end of the other upright through which the cable runs, and a winding-drum mounted on the frame to receive the free end of the cable to raise and lower the arm.

5. In a device such as described, a base, a tubular mast mounted in a downwardly swinging frame pivoted near one end of the base, a conveyer having its carrying run in the mast and its return run on the upper face thereof, a trolley-arm pivotally mounted on the base and having a roller at its free end bearing upon the mast to raise the same, a sheave on the trolley-arm, a cable running through the sheave and drawing toward a point above the pivot of the arm, and winding-drum mounted on the frame to receive the cable to raise and lower the arm.

[Claims 6 and 7 not printed in the Gazette.]

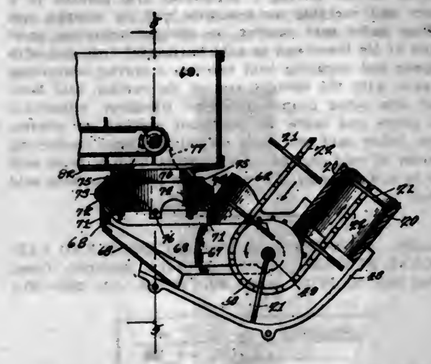
1,114,425. ELEVATOR. ALONZO T. ADAMS, East Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Original application filed Mar. 25, 1909, Serial No. 485,640. Divided and this application filed Aug. 16, 1913. Serial No. 785,069. (Cl. 198—14.)

1. In a device such as described, a base, an adjustable elevator pivotally mounted on the base and having an angular boot, an adjustable cover on the boot having an inlet in its top, and means to hold the cover in adjusted position.

2. In a device such as described, an adjustable elevator having a boot, an adjustable cover on the boot, the boot and cover having coöperating curved offsets, and means to hold the cover in adjusted position.

3. In a device such as described, an elevator pivotally mounted on a base and having an angular boot, an adjustable cover on the boot having an inlet in its top, means to hold the cover in adjusted position, and an apron between the boot and cover.

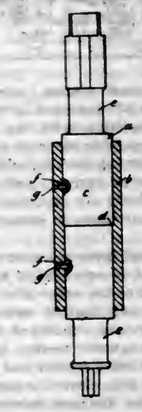
4. In a device such as described, a base, an adjustable elevator pivotally mounted on the base and having an angular boot, an adjustable cover on the boot, and a receiving-hopper coöperating with the cover of the boot.



5. In a device such as described, a base, an adjustable elevator pivotally mounted on the base and having an angular boot, an adjustable cover on the boot having an inlet in its top, means to hold the cover in adjusted position, and a receiving-hopper discharging into the inlet in the cover.

[Claims 6 to 20 not printed in the Gazette.]

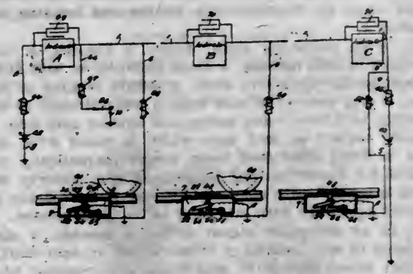
1,114,426. ROLLER FOR SUGAR-CANE MILLS. HUGH WALLACE AITKEN, Glasgow, Scotland. Filed July 29, 1913. Serial No. 781,730. (Cl. 100—47.)



1. A roller for crushing sugar cane, comprising a shaft having an enlargement integral therewith and of very tough material and great tensile strength, a sleeve of very hard material in frictional engagement with said enlargement and of greater length than its diameter so as to provide sufficient gripping surface and stiffness and through said enlargement prevent undue stresses and strains in the shaft and sleeve at the ends of the latter, and the diameter of said enlargement being not less than approximately 60% nor more than approximately 90% of the external diameter of said sleeve, whereby adequate strength is imparted to said shaft and sleeve.

2. A roller for crushing sugar cane, comprising a shaft having an enlargement integral therewith and of very tough material and great tensile strength, a sleeve of very hard material in frictional engagement with said enlargement and of greater length than its diameter so as to provide sufficient gripping surface and stiffness and through said enlargement prevent undue stresses and strains in the shaft and sleeve at the ends of the latter, and the diameter of said enlargement being not less than approximately 60% nor more than approximately 90% and the length being not less than approximately 150% of the external diameter of said sleeve, whereby adequate strength is imparted to said shaft and sleeve.

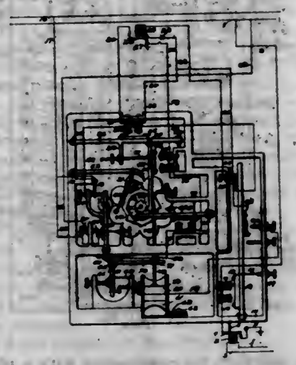
1,114,427. AUTOMATIC RAILWAY SIGNALING SYSTEM. CLINTON L. BOPP, Hawkeye, Iowa. Filed Dec. 16, 1909. Serial No. 533,404. (Cl. 246—21.)



1. In a signaling system, a closed main line circuit and return, equal but opposed sources of current connected to the line circuit, one at each end of the line, a plurality of switches connected across the line and return adapted to be closed by a passing train, an auxiliary switch connected across the line and return, and step by step indicators interposed in the line circuit.

2. In a signaling system, a positively charged line wire connected to the ground at each end, step by step indicators interposed in the line wire and adapted to be operated as current flows through said line wire, means associated with the line wire and track for causing current to flow through the line wire to operate the indicators as a train passes, and an auxiliary switch interposed between the line wire and ground.

1,114,428. AUTOMATIC RAILWAY-SIGNAL AND RELAY THEREFOR. CLINTON L. BOPP, Hawkeye, Iowa. Filed Oct. 24, 1910. Serial No. 588,854. (Cl. 177—378.)



1. In an automatic signaling device, a drum, means for rotating the drum in one direction, a weighted tape adapted to be wound around the drum as the latter rotates in said direction, means for holding the drum in any predetermined position, means for releasing the drum, a corrugated wheel, means for connecting the corrugated wheel and drum when the latter is released, and a contact adapted to be periodically closed as the corrugated wheel rotates.

2. In an automatic signaling device, a rotatably mounted drum, a contact, means for rotating the drum through

a predetermined angle in one direction, means for closing the contact as the drum rotates in said direction, means for returning the drum through the same angle, and means for opening the contact as the drum is returned through the predetermined angle.

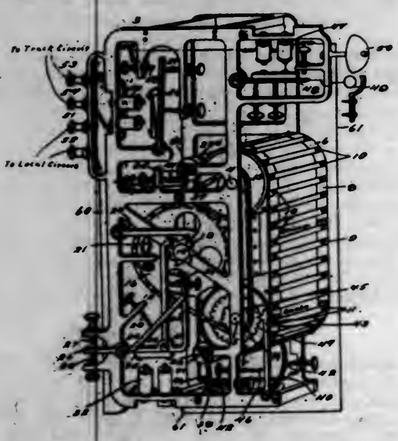
3. In an automatic signal device, a housing, a shaft mounted in said housing, a corrugated wheel mounted on said shaft, a drum mounted on said shaft, a tape wound upon said drum, a weight secured to said tape, electro-magnetic means for turning said drum to raise said weight, means for retaining said weight in its raised position, means for electro-magnetically releasing said weight, an electric contact, and means associated with said corrugated wheel for intermittently making and breaking said contact.

4. In an automatic signal device, a housing, a shaft mounted in said housing, a drum mounted on said shaft, a tape wound upon said drum, a weight secured to said tape, a stop secured to said tape, a lever pivoted to said housing, said lever being spring-held against said stop, an electric contact on said lever which is closed when said stop is lifted from said lever, means magnetically controlled for liberating said weight and stop whereby said drum is rotated, said stop engaging the lever to break the contact associated with said lever as the drum rotates.

5. In an automatic signal device, a housing, a shaft mounted in said housing, a drum carried on said shaft, a ratchet wheel rigid with said drum, a corrugated wheel loosely mounted on said shaft, a pawl mounted on said corrugated wheel and spring-held against said ratchet wheel, a pawl engaging said corrugated wheel, a weight suspended from said drum, electro-magnetic means for revolving said drum against the action of said weight, means for electro-magnetically releasing said weight, an electric contact, and means associated with said corrugated wheel for closing and opening said contact.

[Claim 6 not printed in the Gazette.]

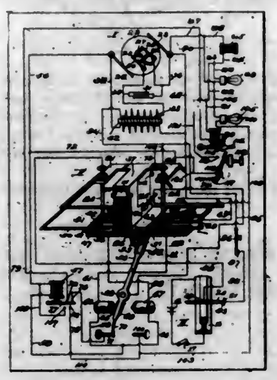
1,114,429. AUTOMATIC RAILWAY SIGNALING DEVICE. CLINTON L. BOPP, Hawkeye, Iowa. Filed Aug. 10, 1910. Serial No. 576,458. (Cl. 40—55.)



1. In an indicator, the combination with a plurality of drums, an endless web moving over said drums, a counter shaft connected with the drums, a ratchet fast on said shaft, and a retaining pawl engaging said ratchet; of an L-shaped carrier having a horizontal arm pivoted in a support and carrying an armature and an upright arm standing under said ratchet, an upright actuating pawl pivoted at its lower end to said horizontal arm and with its upper end engaging said ratchet, a spring connecting this pawl with the upright arm of the carrier, and an electro-magnet below said armature.

2. In an indicator, the combination with a plurality of drums, an endless web moving over said drums, a counter shaft connected with the drums, a ratchet fast on said shaft, and a retaining pawl engaging said ratchet; of an L-shaped carrier having a horizontal arm pivoted in a support and carrying an armature and an upright arm standing under said ratchet, an upright actuating pawl pivoted at its lower end to said horizontal arm and with its upper end engaging said ratchet, a spring connecting this pawl with the upright arm of the carrier, said horizontal arm being projected beyond its pivot, adjustable stops above and below its projected portion, an electro-magnet below said armature, an oblique brace connecting the arms of said carrier, and a spring leading from said brace to a fixed point for raising the armature from said magnet.

1,114,430. INDUCTION AUTOMATIC STOP AND CAB-SIGNAL SYSTEM. CLINTON L. BOPP, Waterloo, Iowa. Filed July 26, 1912. Serial No. 711,746. (Cl. 246—25.)



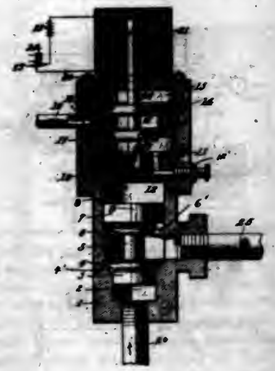
1. In a railway signal system, a variable air gap, a source of high potential connected across said air gap, a regulable air gap in multiple with the variable air gap, a fuse located in the regulable air gap, an electric device, a source of current, a closed circuit including the fuse electric device and source of current, and means for varying the length of the variable air gap, the length of the variable air gap adapted at times to exceed the length of the regulable air gap.

2. In a railway signal system, a source of high potential an electrode connected to one side of said source, a magnetic needle connected to the other side of said source and adapted to have one end thereof swing in proximity to said electrode, an air gap connected in multiple across said electrode and magnetic needle, a closed circuit, a portion of said circuit being fusible and located within the second mentioned air gap, electro magnetic means for deflecting the needle, the distance between the needle and electrode adapted at times to exceed the length of the second mentioned air gap.

3. A variable air gap, a regulable air gap, a source of high potential, means for connecting said gaps in multiple across the source of high potential, a closed signaling circuit, a portion of said circuit being fusible and located within the second air gap and means for varying the length of the variable air gap, the variable air gap adapted at times to exceed the length of the second air gap.

4. In an electric signaling system, an electric current conductor having magnetic properties, a magnetic needle, an electrode, a source of high potential connecting the electrode and needle, an air gap connected in multiple across the electrode and magnetic needle, a closed circuit, a portion of said circuit being fusible and located within the air gap, said magnetic needle being normally deflected by current passing in the conductor to have one end adjacent the electrode, said needle adapted to aline with the conductor when no current is flowing in the conductor the distance between the needle and the electrode under these conditions being greater than the length of the air gap.

1,114,431. PNEUMATICALLY-TIMED AIR-VALVE. CLINTON L. BOPP, Hawkeye, Iowa. Filed Oct. 26, 1912. Serial No. 727,956. (Cl. 137—4.)

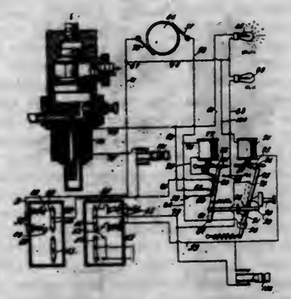


1. In a pneumatically timed air valve, the combination with an upright casing provided with an inlet and an outlet and having a transverse partition dividing it into two chambers connected by a restricted passage through the partition, the lower chamber comprising a large compartment at its upper end communicating with said passage and a small compartment at its lower end communicating with the inlet, two spaced valve seats between said compartments leaving a space between the seats communicating with the outlet, pistons slidably mounted in said compartments, a valve below the upper piston adapted to the upper seat, a valve above the lower piston adapted to the lower seat, a tubular stem connecting said pistons and valves and establishing constant communication between said compartments, and means for adjusting the size of said restricted passage; of an exhaust leading from the upper chamber, a puppet valve normally closing said exhaust, a solenoid mounted on the head of the casing and whereof the puppet valve stem constitutes the core, and means for energizing said solenoid.

2. In a pneumatically timed air valve, the combination with an upright casing provided with an inlet and an outlet and having a transverse partition dividing it into two chambers connected by a restricted passage through the partition, the lower chamber comprising a large compartment at its upper end communicating with said passage and a small compartment at its lower end communicating with the inlet, two spaced valve seats between said compartments leaving a space between the seats communicating with the outlet, pistons slidably mounted in said compartments, a valve below the upper piston adapted to the upper seat, a valve above the lower piston adapted to the lower seat, a tubular stem connecting said pistons and valves and establishing constant communication between said compartments, and means for adjusting the size of said restricted passage; of two valve seats in the upper chamber leaving a compartment between the seats communicating with an exhaust, a double puppet valve adapted to close upon said seats simultaneously, a stem passing through said seats and upon which said valves are fixed, said partition having an opening for the lower end of the stem and the upper end of the stem projecting above the head of the valve casing, and means for raising such projecting end at will.

3. In a pneumatically timed air valve, the combination with an upright casing forming a chamber having an inlet and an outlet, one end of the casing being provided with a restricted passage, the chamber at one end comprising a large compartment communicating with said restricted passage and at the other end comprising a smaller compartment communicating with the inlet, two spaced valve seats between said compartments, the intervening space between said valve seats communicating with the outlet, pistons slidably mounted in said compartments, valves rigid with the pistons and whereof one is adapted to close the large and the other the small compartment, and a tubular stem connecting said pistons and valves and affording constant communication between the compartments; of an exhaust communicating with said restricted passage, a normally closed valve between the passage and the exhaust, a solenoid rigid with the casing and having the stem of the last-named valve as a core, and means to energize the solenoid.

1,114,432. AUTOMATIC SIGNALING DEVICE. CLINTON L. BOPP, Waterloo, Iowa. Filed Jan. 6, 1913. Serial No. 740,528. (Cl. 246—25.)



1. In a cab signal, a pivoted magnetic needle, a contact carried by the needle, a signal circuit adapted to be closed by the contact as the needle deflects, means for deflecting the needle, and means interposed in the circuit for holding the needle in deflected position.

2. In a cab signal, a pivoted magnetic needle, means for deflecting the needle, a contact carried by the needle, a signal circuit adapted to be closed by the contact as the needle is deflected, and an electro-magnet interposed in the signal circuit and adjacent one end of the needle.

3. In a cab signal, a pivoted magnetic needle, means for deflecting the needle, a contact carried by the needle at each end thereof, a signal circuit adapted to be closed by the contact as the needle swings, and a pair of electro-magnets interposed in the circuit, one adjacent each end of the magnetic needle, the ends of the electro-magnets adjacent the needles being of opposite polarity.

4. In a cab signal, a plurality of magnetic needles arranged end to end with unlike poles adjacent one another, means for deflecting the needles, contacts carried by one or both ends of each of the needles, an electric circuit adapted to be closed by the contacts as the needles deflect and means interposed in the electric circuit for holding the deflected needles in deflected position.

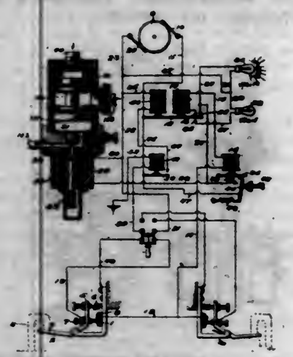
5. In a block signal, a source of current, a magnet in circuit with the source, a differential magnet one winding of which is in circuit with the aforesaid magnet, means for breaking the circuit through the other differential winding, and magnetic needles adapted to pass in proximity to the magnets.

[Claim 6 not printed in the Gazette.]

1,114,433. AUTOMATIC TRAIN-STOP AND CAB-SIGNAL. CLINTON L. BOPP, Waterloo, Iowa. Filed Feb. 24, 1913. Serial No. 750,427. (Cl. 246—58.)

1. In a locomotive cab signal, a source of current, an air valve requiring time to open the same, a "safety" signal, a "danger" signal, an electro-magnet, an armature adapted to be attracted by said electro-magnet, electro-magnetic means, adapted, when energized, to prevent the opening of said air valve, a contact adjacent said arma-

ture adapted to be connected with said armature when the latter is attracted, a circuit including said source, said electro-magnetic means, said "safety" signal, said contact and said armature adapted to be closed when the armature is attracted by the electro-magnet associated therewith, a second contact adjacent said armature adapted to be engaged thereby when the electro-magnet associated with said armature releases the latter, a circuit including said source, said "danger" signal, said second contact and said armature adapted to be closed when the armature is released, a switch, a circuit including said source, said switch, said electro-magnetic controlling means, said switch adapted to be closed when the armature has been released by the electro-magnet associated therewith to break connection with the first mentioned contact, and means to energize said electro-magnet associated with the armature.

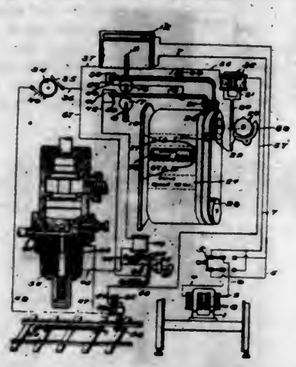


2. In a locomotive cab signal system, a source of current, an air valve requiring time to open the same, electro-magnetic means adapted, when energized, to prevent the opening of said air valve, a "safety" signal, a "danger" signal, an electro-magnet, an armature for said electro-magnet, a contact associated with said armature adapted to be connected with said armature when the latter is attracted by the electro-magnet, a circuit including said source, said electro-magnetic, means associated with the air valve, said "safety" signal, said armature and said contact associated with the armature, a second contact associated with said armature adapted to engage the latter when the same is released by the electro-magnet associated therewith, a circuit including said source, said "danger" signal, said second contact and said armature, means to energize and deënergize the electro-magnet associated with the armature, a switch, a circuit including said source, said switch and said electro-magnetic means controlling the air valve, and another circuit including said source, said switch, and said "safety" signal, said switch adapted to be closed when the armature is released, thereby causing the "safety" and "danger" signals to be actuated simultaneously.

1,114,434. AUTOMATIC SPEED CONTROL FOR RAILWAY-TRAINS. CLINTON L. BOPP, Hawkeye, Iowa. Filed May 16, 1913. Serial No. 768,139. (Cl. 246—59.)

1. In an automatic speed controlling device, a deflecting coil, a shaft passing therethrough, a magnetic needle rigid with the shaft, an air valve, a circuit controlling the air valve, a pivotally mounted spring interposed in said circuit and adapted to close said circuit at either one of two points, means for breaking the spring contact at one point under certain conditions, and means carried by the shaft for preventing said spring from making contact with the other of said points under other conditions, and means for energizing the deflecting coil.

2. In an automatic speed controlling device, a deflecting coil means whereby said coil is energized in proportion to the speed of the train, a shaft rotatably mounted passing through the coil and adapted to be turned in proportion to the energization of the deflecting coil, an air valve, a circuit controlling the air valve, a spring contact interposed in said circuit and adapted to close said circuit at either one of two points, means for breaking contact of said spring with one of said points under certain conditions and means carried by the shaft adapted to prevent said spring from closing contact on the other point when the shaft is in a predetermined position.



3. In an automatic speed controlling device, a deflecting coil means whereby said coil is energized in proportion to the speed of the train, a shaft passing through said coil and provided with means for turning said shaft in proportion to the energization of the deflecting coil, a plurality of spring contacts, an air valve, a circuit controlling said air valve including said spring contacts in series, means for moving said springs to break said circuit under certain conditions and interference members carried by the shaft in the path of the said springs, said interference members limiting the movement of the springs under certain conditions and being out of engaging position with respect to the springs under other conditions.

4. In an automatic speed controlling device, a shaft adapted to turn through an angular distance proportionate to the speed of the train, an electric air valve, a circuit controlling the air valve, a contact spring interposed in said circuit and adapted to close said circuit at either one of two points, means for moving said spring contact away from one of said points when traveling at a predetermined speed and a cam disk rigid with the shaft and adapted to engage the spring contact to prevent closure upon the other of said points when the shaft has moved through a predetermined angular distance.

5. In an automatic speed controlling device, a station indicating tape, a pivotally mounted contact member, stationary contacts adjacent one end of said pivotally mounted member, the pivotally mounted contact member adapted to contact with said stationary contacts one at a time and being normally in contact with one of said stationary contacts, means carried by the tape engaging the other end of the contact member adapted to break said contact, an electric circuit embracing said contact member and either of the stationary contacts and a spiral cam disk rotated through an angular distance proportionate to the velocity of the train, said disk adapted to engage the contact member.

[Claims 6 to 10 not printed in the Gazette.]

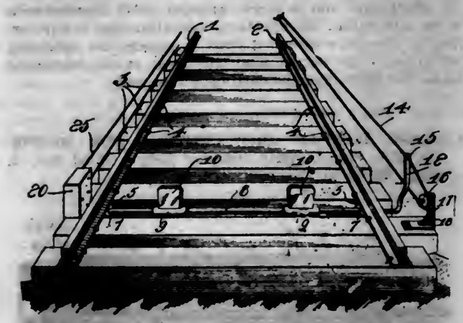
1,114,435. SHOE. ANNIE H. BATTEN, Philadelphia, Pa. Filed June 1, 1914. Serial No. 842,031. (Cl. 36—50.)

1. A shoe having in its rear a division in vertical direction adapting the walls thereof to be separated laterally, a tongue rising from the heel portion of the sole adapted to enter the body of the shoe and close said division, said walls being separated at their lower ends from the sole and adapted to back said tongue within said body, and means for securing said walls together at their rear ends.

2. A shoe having in its rear a division in vertical direction adapting the walls thereof to be separated laterally, a tongue adapted to be turned up from the heel of the shoe and enter the body thereof to close said division, and a sole, said tongue forming an integral extension of the heel portion of said sole, and said walls being separated at their lower ends from the sole of the shoe.

3. A shoe having in its rear a division in vertical direction adapting the walls thereof to be separated laterally, a tongue adapted to be turned up from the heel of the shoe and enter the body thereof to close said division, and a sole, said tongue forming an integral extension of the heel portion of said sole, and said walls being separated at their lower ends from the sole of the shoe, the walls of said division being adapted to back said tongue when the latter is in operative position in the body.

1,114,436. TRACK INSTRUMENT. CLARENCE E. BAUMER and JOHN CORREY, Troy, Ohio. Filed Feb. 26, 1914. Serial No. 821,284. (Cl. 246—59.)



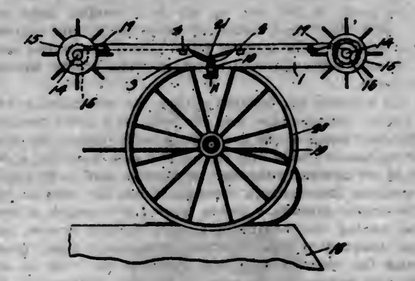
1. In a track instrument the combination with an operating shaft, tripping plates carried by said shaft, means for operating said shaft so as to swing said plates to a vertical position when desired, said shaft provided at one end with a vertical finger, and means engaging said finger for holding said shaft in a set position whereby said plates may be held against accidental movements when desired.

2. In a track instrument the combination with a shaft, said shaft adapted to be rotatably secured upon a track, a tripping plate secured to said shaft, means for swinging said shaft whereby the plates may be moved to a vertical position when desired, said shaft provided at one end with a vertical finger, a casing positioned about the vertical finger, a locking shoe pivotally secured in said casing, said locking shoe provided with a solid end, said locking shoe also provided with bifurcated ends, means for operating said locking shoe whereby said locking shoe may be swung within said casing so as to allow said vertical finger to pass between the bifurcated ends thereof, for holding the vertical finger in a set position thereby holding the operating shaft against accidental rotary movement when in use.

3. In a track instrument the combination with an operating shaft, said shaft adapted to be rotatably supported upon a track, tripping plates carried by said shaft, means for operating said shaft whereby said plates may be swung to a vertical position when desired, a casing carried adjacent one end portion of said operating shaft, said operating shaft provided with an integral vertically extending finger, a locking shoe pivotally secured within said casing, said locking shoe provided with a bifurcated end, said shoe also provided with a solid end, an operating cable passing within said casing, a bell-crank lever pivotally secured within said casing, a link attached to one portion of said bell-crank lever and to said solid end of said locking shoe, said operating cable also attached to said bell-crank lever for swinging the same within said casing, whereby said locking shoe may be swung within said casing for allowing said vertical finger to rest between said bifurcated end, whereby said operating shaft will be held in a set position, and means for automatically swinging said locking shoe from engagement with said vertical finger.

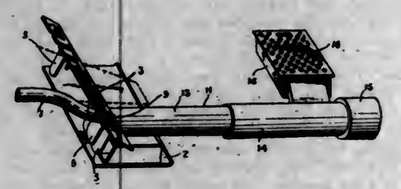
4. In a track instrument the combination with an operating shaft, said shaft adapted to be rotatably supported upon a track, tripping plates carried by said operating shaft, means for swinging said operating shaft, a casing positioned adjacent one end of said operating shaft, said operating shaft provided with a vertically extending finger, a locking shoe pivotally secured within said casing, said locking shoe provided with a bifurcated end, a bell-crank lever pivotally secured within said casing at a spaced distance above said vertical finger, a secondary bell-crank lever positioned within said casing at a spaced distance above said locking shoe, an endless cable positioned through said casing, said cable attached to each of said bell-crank levers, the free ends of said bell-crank levers provided with connecting means attached to the free end of said locking shoe whereby said locking shoe may be swung to engage said vertical finger when the plates are swung to a vertical position or may be swung from engagement therewith after allowing said operating shaft to be rotated, said locking plate adapted to be swung by said bell-crank levers which are adapted to be operated by said endless cable.

1,114,437. TIRE-SETTING DEVICE. MADISON K. BENNETT, Galena, Kans. Filed Sept. 23, 1912. Serial No. 721,927. (Cl. 157—6.)



A tire setting device comprising a pair of parallel side bars; braces connecting the side bars; rim clamp located between the braces, one end of the rim clamp being pivoted to one bar; means on the other bar for receiving the other end of the clamp detachably; and tightening devices carried by the ends of the bars; the braces being provided with wire receiving notches, the notches of the respective braces being spaced at equal distances from the respective side bars and both bars extending across the space between the braces thereby to avoid a lateral flexure of the frame and a displacement of the wire from the notches when the tightening devices are operated, both bars being provided with notches in their upper edges and between the braces to give access to the tire, and the braces serving to reinforce the side bars adjacent the notches, the clamp having shoulders which engage the inner faces of the side bars at the bases of the notches to prevent the bars from springing toward each other when the tightening devices are operated.

1,114,438. MOTOR-CAR-HEATING DEVICE. EDWARD H. BICKFORD, Toronto, Ontario, Canada. Filed Dec. 18, 1912. Serial No. 737,457. (Cl. 237—21.)



1. In a motor car heating device, the combination with the engine, exhaust pipe, and car body, of a grille arranged in the sloping foot board of the car body and having a downwardly projecting baffle member which extends around the engine exhaust pipe and close to the engine bed throttling the flow of air around the engine and exhaust pipe and directing the heated air upwardly through the grille.

2. In a motor car heating device, the combination with the engine, exhaust pipe, and car body, of a grille arranged in the foot board of the car body, a baffle extending downwardly from said grille and directing a current of air upwardly therethrough, said baffle having an opening through which the exhaust pipe of the engine extends, a sleeve encircling said exhaust pipe and extending rearwardly from said baffle and forming an air duct communicating with the opening through said baffle, a suitable register placed in the rear compartment of the car, and an air duct leading from said sleeve and directing a supply of warm air to said register.

3. In a motor car heating device, the combination with the engine, exhaust pipe, and car body, of a grille arranged in the foot board of the car body, a baffle closing the space between the car body and the engine bed and directing a current of air upwardly through said grille, said baffle having an opening therethrough through which the exhaust pipe of the engine extends, a sleeve encircling said exhaust pipe and extending rearwardly from said baffle and forming an air duct communicating with the opening through said baffle, a suitable register placed in the rear compartment of the car, an air duct leading from said sleeve and directing a supply of warm air to said register, and a damper plate adapted to be moved across the opening in said baffle plate to check the flow of air through said sleeve.

4. In a motor car heating device, the combination with the engine, exhaust pipe, and car body, of a grille arranged in the foot board of the car body, a baffle closing the space between the car body and engine bed and directing a current of air upwardly through said grille, said baffle having an opening therethrough through which the exhaust pipe of the engine extends, a sleeve formed of a length of sheet metal having the longitudinal edges formed reverse hook shape adapted to lock together, said sleeve being placed around the exhaust pipe and abutting the rear of said baffle and having an opening in the side adjacent to the rear end, an air duct leading from the opening in the side of said sleeve, and a register arranged in the floor of the car and communicating with said air duct.

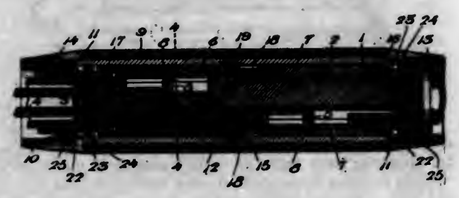
5. In a motor car heating device, the combination with the engine, exhaust pipe, car body and muffler, of a grille arranged in the foot board of the car body, a baffle closing the space between the car body and engine bed and directing a current of air upwardly through said grille, said baffle having an opening therethrough through which the exhaust pipe of the engine extends, a sleeve encircling the exhaust pipe and formed in two lengths the forward length having a beveled front end adapted to fit snugly against the back of the said baffle and the rear length telescoping over the front length and abutting the engine exhaust muffler, each of said lengths being formed with an open lock seam adapted to be sprung apart and slipped over the exhaust pipe and the seamed edges hooked together, a laterally extending air duct secured to the rear length of said sleeve, and a register arranged in the floor of the car and communicating with said air duct.

1,114,439. MINING-MACHINE. JAMES A. BRANTLEY, Atkins, Ark., assignor of one-third to John M. Maus, Atkins, Ark. Filed Mar. 15, 1913. Serial No. 754,442. (Cl. 125—14.)

1. An apparatus of the character described, the combination with an upstanding frame, of a horizontal frame, movable longitudinally toward and away from the upstanding frame and provided with spaced sets of apertured guide lugs, and an apertured operating lug arranged therebetween, an arm pivotally connected at one end with the upstanding frame and forked at its opposite end to provide guide fingers to operate within the apertured guide lugs and a screw-threaded shaft therebetween to operate within the apertured operating lug, a nut mounted upon the screw-threaded shaft to engage the operating lug, means to swing the arm, a wheel mounted on the upstanding frame, a wheel mounted upon the horizontal frame, and a cutting endless belt engaging the wheels.

2. In apparatus of the character described, a wheeled upstanding frame, a horizontal frame movable longitudinally toward and away from the wheeled frame and provided with spaced sets of apertured guide lugs and an apertured operating lug arranged therebetween, a cutting endless belt guided by the horizontal frame, an arm connected at one end with the wheeled frame and forked at its opposite end to provide guide fingers to operate within the guide lugs and a screw-threaded shaft therebetween to operate within the apertured operating lug, a nut carried by the screw-threaded shaft to engage the operating lug to effect the longitudinal movement of the horizontal frame for tightening the cutting endless belt.

1,114,440. HANDLE-GRIP CONTROL FOR MOTORCYCLES. PEDER BRIX, Omaha, Nebr. Filed Oct. 2, 1913. Serial No. 792,993. (Cl. 74—82.)



1. A handle-grip control for motorcycles, comprising a hand grip on each handle bar, two control rods mounted in each arm of the handle bar and extending within the hand grips, operating blocks upon the ends of each control rod adapted to slide in longitudinal slots provided in the arms of the handle bar, rotatable sleeves mounted upon the handle bar about each slot having helical grooves adapted to receive the ends of the operating blocks, and means for connecting and disconnecting the respective sleeves to the hand grips.

2. A handle-grip control for motorcycles, comprising a hand-grip, two control rods mounted in the handle bar and extending within the hand grip, a block upon the end of each control rod adapted to slide in a longitudinal slot provided in the handle bar, a rotatable sleeve mounted upon the handle bar about each slot having a helical groove adapted to receive the end of the operating block, means for connecting and disconnecting the respective sleeves to the hand grip, and means to lock the disconnected sleeve.

3. A handle-grip control for motorcycles, comprising a hand grip mounted to slide longitudinally upon the end of the handle bar, two control rods mounted in the handle bar and extending within the hand grip, a block upon the end of each control rod adapted to slide in a longitudinal slot provided in the handle bar, a sleeve rotatably mounted upon the handle bar about each slot having a helical groove adapted to receive the end of the operating block, the adjacent ends of the sleeves provided with a plurality of longitudinal grooves, and an operating ring secured upon the inner side of the hand grip having teeth adapted to engage and be entirely received within the slots upon one sleeve to rotate the sleeve so engaged.

4. A handle-grip control for motorcycles, comprising a hand grip mounted to slide longitudinally upon the end of the handle bar, two control rods mounted in the handle bar and extending within the hand grip, a block upon the end of each control rod adapted to slide in a longitudinal slot provided in the handle bar, a sleeve rotatably mounted upon the handle bar about each slot having a helical groove adapted to receive the end of the operating block, the adjacent ends of the sleeves provided with a plurality of longitudinal grooves, an operating ring secured upon the inner side of the hand grip having teeth adapted to engage and be entirely received within the slots upon one sleeve to rotate the sleeve so engaged, and means to lock the disconnected sleeve.

5. A handle-grip control for motorcycles, comprising a hand-grip mounted rotatably upon the end of each handle bar and having a limited longitudinal movement thereon, means for limiting the longitudinal movement, two operating rods mounted to reciprocate within each arm of the handle bar and extending within the respective grips, two spaced-apart operating sleeves rotatably mounted upon the handle bar within each hand grip, a connection between each sleeve and one operating rod adapted to reciprocate the operating rod upon rotation of the sleeve, the outer end of each sleeve provided with a plurality of teeth, a locking sleeve at each other end having a limited longitudinal movement and provided with teeth adapted to interlock with the teeth on the adjacent sleeve, means normally causing the teeth to engage and lock, means upon each locking sleeve adapted to be engaged by means upon each hand grip when moved in one direction to release that locking sleeve from the adjacent operating sleeve, and means upon each hand grip to engage and operate the freed locking sleeve.

1,114,441. HAND-GRIP CONTROL FOR MOTORCYCLES. PEDER BRIX, Omaha, Nebr. Filed Apr. 21, 1914. Serial No. 833,367. (Cl. 74—82.)

1. A hand grip control for motorcycles, comprising a hand grip on the handle bar, two rotatable control shafts mounted in each arm of the handle bar, and means for operatively connecting and disconnecting the hand grip to the respective shafts in its arm of the handle bar.

2. A hand grip control for motorcycles, comprising a hand grip on the handle bar, two rotatable control shafts mounted in each arm of the handle bar, and means for operatively connecting and disconnecting the hand grip to the respective shafts in its arm of the handle bar, and means for locking the disconnected control shaft.

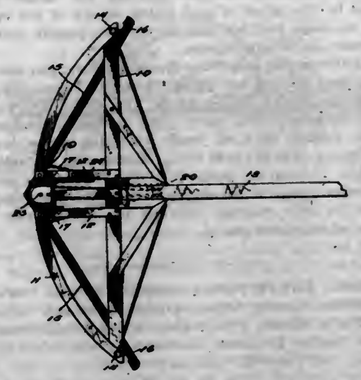
3. A hand grip control for motorcycles, comprising a rotatable hand grip on the handle bar, two rotatable control shafts mounted in the arm of the handle bar, gear wheels upon each shaft within the hand grip, and means to operatively connect one gear wheel with the hand grip.

4. A hand grip control for motorcycles, comprising a rotatable hand grip on the handle bar, two rotatable control shafts mounted in each arm of the handle bar, gear wheels upon each shaft within the hand grip, and means to operatively connect one gear wheel with the hand grip, and means to lock the other gear wheel.

5. A hand grip control for motorcycles, comprising a slidable and rotatable hand grip on the handle bar, two rotatable control shafts mounted on each handle bar extending within the hand grip, gear wheels upon the shafts within the hand grip, an internally toothed operating disk carried upon the hand grip adapted at one end of the travel of the hand grip to mesh with one shaft gear and at the other end of travel of the hand grip to mesh with the other shaft gear.

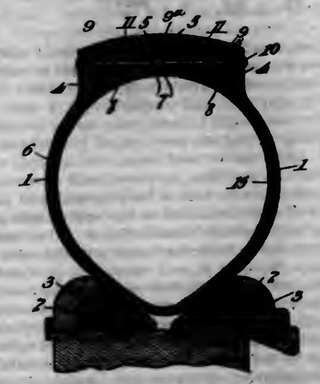
[Claims 6 to 10 not printed in the Gazette.]

1,114,442. SNOW-SCRAPER. CHARLES JAMES BRODIE, Waverly, Iowa. Filed Feb. 28, 1914. Serial No. 821,800. (Cl. 37—5.)



In a scraper, the combination with a framework comprising a straight cross beam and a curved beam in rear of and connected at its ends with said straight beam, the lower edges of the beams standing in a single horizontal plane, means for applying draft to said framework, and a roller and winding drum mounted on such framework; of pintles depending rigidly from opposite ends of the framework, two wings standing on edge beneath the framework, a bracket secured to the exterior of each wing at its front end and having eyes journaled on one of said pintles, the upper edge of the wing sliding beneath said beams, and a chain connected with the rear end of the wing and passing over said roller to the winding drum.

1,114,443. TIRE-CASING. WILLIAM BRYANT and JOHN JAMES MCCANN, Winnipeg, Manitoba, Canada. Filed Feb. 10, 1914. Serial No. 817,868. (Cl. 152—16.)



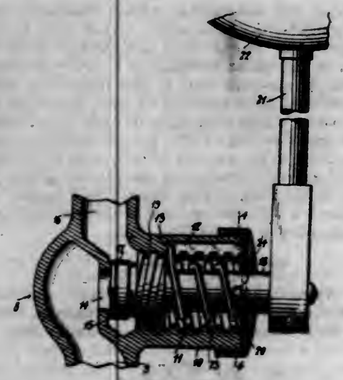
1. A tire casing including oppositely arranged side cover pieces, each provided at its outer edge with an outside

circumferential clamping flange and with a double-layered fabric lining, certain of said layers provided with an inside clamping flange disposed substantially at the circumferential center of the tread section, and other of said layers overlapping to completely protect the inner tube, and tread units clamped between said outside and inside flanges.

2. A tire casing including opposite side cover pieces, each having an outside clamping flange and an inner double-layered fabric lining, the outer layers thereof being formed with inside clamping flanges, and the inner layers of said inner fabric overlapping at their meeting edges, a plurality of tread units disposed edgewise and arranged between the outside and inside clamping flanges of each cover piece and bearing on the outer layer of fabric lining, and a tread unit clamped between the inside flanges formed by the outer of said lining layers of the opposite cover sections and bearing on the overlapped portion of the inner one of said layers.

3. A tire casing including oppositely arranged side cover pieces, each having an outside clamping flange and an inner double-layered fabric lining, the outer layer of said fabric lining of each cover piece having its outer edge portion formed with an inside clamping flange, and the inner layers of said inner fabric overlapping at their meeting edges to form an inside shielding flap, and a plurality of circular tread strips disposed edgewise and compacted in side by side relation between the outside and inside flanges of the cover pieces.

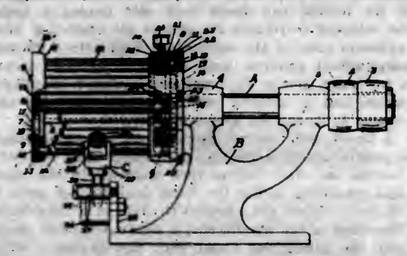
1,114,444. VALVE FOR FLUSHING-TANKS. WILLIAM E. BURKE, Lorain, Ohio, assignor of one-half to Charles F. Rosch, Lorain, Ohio; Mary Rosch administratrix of said Charles F. Rosch, deceased. Filed Jan. 21, 1913. Serial No. 743,406. (Cl. 137—104.)



1. The combination, with a valve casing having an internal valve seat and an interiorly-threaded bore leading to said seat and provided with a longitudinal slot; of a valve threaded in said bore and provided with a stem; an operating lever connected to said stem; and a normally compressed spring having one end engaged in said slot and the other end connected to said stem, and tending to rotate the latter in one direction, to unseat said valve.

2. The combination, with a flushing tank and its water-inlet pipe; of a bib attached to the end of said pipe and having its body portion constituting a valve casing, the inner wall of which is threaded and provided with a valve seat; a valve threaded in said casing and provided with a stem; a float-lever connected to said stem for rotating the same to seat and unseat said valve; and a spring encircling said stem and connected at one end thereto and engaged at the other end with said wall, said spring being compressed by the rotation of said stem incidental to the upward movement of said float-lever, whereby it will normally tend to automatically rotate said stem in the opposite direction and unseat said valve.

1,114,445. TOE-FORMING MACHINE. SIDNEY S. CAMERON, St. Paul, Minn. Filed Oct. 4, 1913. Serial No. 793,398. (Cl. 12—51.)



1. A toe forming machine, consisting of a revoluble spindle having a plurality of shaping rollers journaled freely therein, said rollers being arranged longitudinally parallel with the axis of said spinde and in a circle coaxial therewith, and means to produce revolution of each of said rollers in its journal interdependent with the revolution of said spindle.

2. A toe forming machine, comprising, in combination, a drive shaft, a spindle mounted upon said shaft and adapted to revolve therewith, and a stationary internal gear coaxial with said shaft, said spindle having a plurality of rollers longitudinally parallel with and arranged in a cluster co-axially about said shaft, said rollers having drive pinions, the teeth of which mesh with the teeth of said internal gear, whereby as said spindle is revolved, said rollers turn with said spindle and have imparted to them a surface speed producing rolling contact against the materiol being formed.

3. A machine for smoothing leather, comprising in combination, a main revoluble element, a plurality of subordinate elements carried by said main element, and means for imparting motion to said subordinate elements, whereby they have motion interdependent with the motion of said main element and friction upon the material being smoothed is reduced.

4. In a machine for smoothing leather, a main revoluble element, a plurality of rubbing rollers journaled freely and arranged in circumferential alinement and co-axial with said revoluble element, an internal gear about said series of rollers, and a pinion carried by each of said rollers with its teeth meshing with the teeth of said internal gear, whereby as said main revoluble element revolves, each of said rollers is revolved upon its own axis, and all of said rollers are moved around the axis of said main revoluble element.

5. A machine for smoothing leather, comprising, in combination, a main revoluble element, a plurality of rollers carried by said main element having drive pinions, and a stationary gear with the teeth of which the teeth of said pinion mesh to cause them to revolve, the pitch diameter of each of said pinions being the same diameter as that of the roller on which it is mounted, whereby a rolling contact is produced without rubbing between said rollers and the material being formed.

1,114,446. REFRACTORY MATERIAL. JAMES R. CAMPBELL, Scottdale, Pa. Filed Feb. 6, 1914. Serial No. 817,043. (Cl. 106—10.)

1. A refractory lining material consisting of a wet mixture of 85 per cent. calcined flint clay, 14.5 per cent. plastic clay and .5 per cent. asbestos fiber.

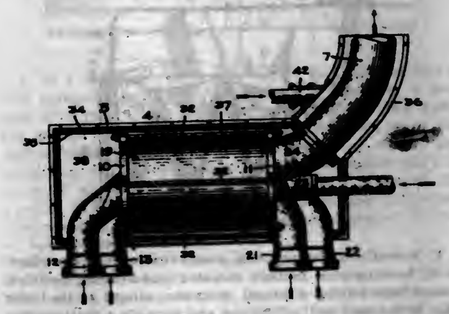
2. A refractory lining material containing at least 80 per cent. calcined flint clay, up to 15 per cent. plastic clay and .5 to 10 per cent. asbestos fiber.

1,114,447. COMBINED ICE PICK, SHAVER, AND CHIPPER. ALBERT S. CARTER, Elizabeth, N. J., assignor to National Manufacturing and Steel Supply Company, Newark, N. J. Filed May 21, 1914. Serial No. 839,974. (Cl. 83—62.)

1. A combined ice shaver and chipper consisting of a handle, a main blade having a transversely arranged set of chipping teeth and also having an opening disposed between said teeth and handle, and a shaving blade projecting at an angle from the edge of the opening nearest the teeth and disposed at an acute angle to the portion of the main blade between the opening and handle and at an obtuse angle to the portion of the main blade between the said opening and set of chipping teeth.

2. An implement of the class described comprising a handle, a chipper blade connected therewith, and a shaving blade formed integral with the chipper blade and lying within the borders thereof, said shaving blade being struck out from the chipper blade and set at an angle thereto and having its cutting edge extending toward the handle, the portion of the chipper blade that extends from the shaving blade in a direction away from the handle being disposed in approximately the same plane with the portion of the blade between the shaving blade and the handle, whereby the operative portion of the chipper blade serves as a guide by engaging a block of ice while the shaving blade is in use.

1,114,448. MUFFLER FOR INTERNAL-COMBUSTION ENGINES. HENRI G. CHATAIN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed May 13, 1912. Serial No. 696,827. (Cl. 123—194.)



1. As a new article of manufacture, a head for a muffler consisting of an integral casting comprising a disk provided with central and upper openings, a branched downwardly curved conduit leading from the central opening, and an upwardly curved conduit leading from the upper opening.

2. In a muffler, the combination of oppositely disposed heads, each of which is provided with a pair of conduits that receive exhaust gases and also form feet to support the muffler, means for baffling the gases located between the heads, and a conduit attached to one of the heads through which the exhaust gases escape.

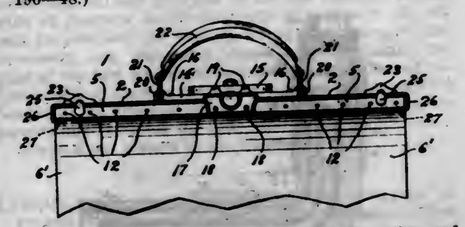
3. The combination with a muffler comprising concentric perforated tubes, a casing, heads having their peripheries cut away at intervals, and inlet and outlet pipes on said heads, of a jacket surrounding said muffler and resting on the peripheries of said heads, and a conduit communicating with the interior of said jacket through the openings formed by said cut away peripheries.

4. The combination with a muffler comprising concentric perforated tubes, a casing, heads having their peripheries cut away at intervals, inlet pipes on said heads, and an outlet pipe leading from one of said heads, of a jacket divided on a vertical longitudinal plane, inclosing said muffler and outlet pipe and resting on the peripheries of said heads, the portion of said jacket surrounding the outlet pipe communicating with the remainder thereof through the openings formed by said cut away peripheries.

5. In combination, an internal combustion engine, a muffler supported adjacent thereto, a pipe connecting the engine to the muffler, an outlet pipe for conveying the exhaust gases from the muffler, a jacket carried by and surrounding the muffler and spaced therefrom to form a surrouning chamber, and a conduit forming an extension of said jacket which surrounds the outlet pipe to form an ejector for removing heated gases from said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,114,449. BAG-FRAME. MORRIS COHEN, Brooklyn, N. Y. Filed Oct. 22, 1913. Serial No. 796,566. (Cl. 190—48.)



1. A bag-frame comprising an outer frame-member and an inner frame-member, the latter being adapted to telescope laterally into the former when said frame-members are closed together, tongues connected with the ends of said outer frame-member the same being bent downwardly and inwardly to provide supporting members adapted to engage and support the ends of said inner frame-members when said frame-members are closed together.

2. A bag-frame comprising an outer frame-member and an inner frame-member, the latter being adapted to telescope laterally into the former when said frame-members are closed together, tongues connected with the ends of said outer-frame-member the same being bent downwardly and inwardly to provide supporting-members, and means connected with the ends of said inner frame-member adapted to rest in supported engagement with said supporting-members when said frame-members are closed together.

3. A bag-frame comprising an outer frame-member and an inner frame-member, the latter being adapted to telescope laterally into the former when said frame-members are closed together, tongues connected with the ends of said outer frame-member the same being bent downwardly and inwardly to provide supporting members adapted to engage and support the ends of said inner frame-member when said frame-members are closed together, and means for maintaining said frame-members in their closed relation.

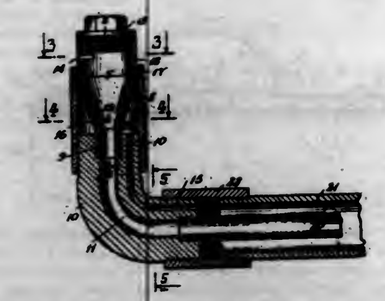
4. In a bag-frame an outer frame-member comprising a longitudinally extending horizontal body-portion and a vertical flange-portion extending downwardly from the outer edge of said body-portion, an inner frame-member comprising a longitudinally extending horizontal body-portion and a vertical flange-portion extending downwardly from the outer edge of said body portion, tongues connected with the ends of said body-portion of said outer frame-member the same being bent downwardly and inwardly to provide supporting-members lying parallel to and beneath said body-portion, and tongues connected with the ends of said body-portion of said inner frame-member, the same being bent downwardly to form an engaging portion adapted to rest in supported engagement with said supporting-members when said frame-members are closed together.

5. In a bag-frame an outer frame-member comprising a longitudinally extending horizontal body-portion and a vertical flange-portion extending downwardly from the outer edge of said body-portion, an inner frame-member comprising a longitudinally extending horizontal body-portion and a vertical flange-portion extending downwardly from the outer edge of said body-portion, tongues connected with the ends of said body-portion of said outer frame-

member, the same being bent downwardly and inwardly to provide supporting-members lying parallel to and beneath said body-portion, tongues connected with the ends of said body-portion of said inner frame-member, the same being bent downwardly to form an engaging portion adapted to rest in supported engagement with said supporting-members when said frame-members are closed together, and means for maintaining said frame-members in their closed relation.

[Claims 6 to 9 not printed in the Gazette.]

1,114,450. LIQUID-FUEL BURNER. GEORGE EDMOND DENMAN, Fruitvale, Cal. Filed Feb. 6, 1914. Serial No. 816,906. (Cl. 158—75.)



1. In a liquid fuel burner, a tip having funnel and cylindrically-shaped portions, said funnel portion having a liquid fuel inlet at the bottom thereof and a fluid inlet in the sides thereof, said cylindrical portion having an outlet for said fuel and fluid.

2. In a liquid fuel burner, a tip having a funnel portion provided with cylindrical extensions at its ends, one larger than the other, said tip having a liquid fuel inlet into the smaller cylindrical extension and a fluid inlet in the sides of said funnel portion, said tip having an outlet for said fuel and fluid in the lateral surface of the larger cylindrical portion.

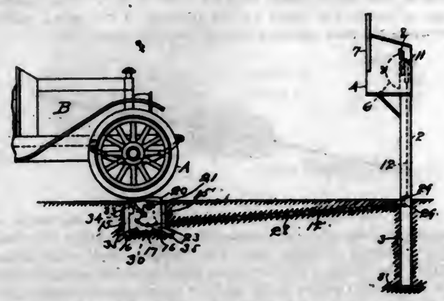
3. In a liquid fuel burner, a tip comprising a funnel portion having cylindrical extensions at the ends thereof, the extension at the smaller end of said funnel portion forming the fuel inlet for said tip, said funnel portion having apertures in the sides thereof adjacent the smaller end of the funnel forming the fluid inlet into said tip; a plug for the cylindrical extension at the other end of the funnel, said latter cylindrical extension having a slot in the lateral surface thereof adjacent the plug forming an outlet for the fuel and fluid from said tip.

4. In a liquid fuel burner, a member having a central liquid fuel passage and a fluid passage adjacent said fuel inlet; a tip associated with said member comprising a funnel portion having extensions at the ends thereof, the extension at the smaller end registering with the central passage and thereby forming the fuel inlet into said tip; a sleeve associated with said member adapted to surround the funnel portion of said tip and forming a fluid chamber thereabout, said funnel portion having means establishing communication between said chamber and tip.

1,114,451. DANGER-SIGNAL. ANTHONY DOMSER, Syracuse, N. Y. Filed July 31, 1913. Serial No. 782,379. (Cl. 116—1.)

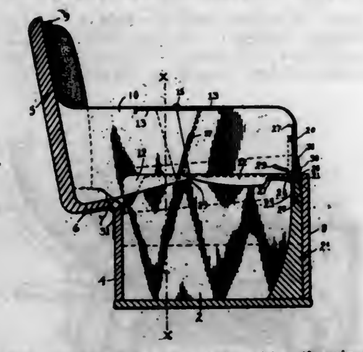
1. In a danger signal, a road-box sunk transversely in the surface of a roadway, a rocking cover for said box, said cover supported intermediate its ends by a series of partitions, a distant signal, a pull-wire for operating said signal, and a cam-lever positioned in one end of said box, said lever operatively connected to said cover and to said pull-wire, and adapted to be rocked to and fro corresponding to the movements of said cover when vehicles pass over said box for sounding said signal.

2. In a danger signal, a road-box, comprising an elongated hollow frame adapted to be sunk transversely in the surface of a roadway, a rocking cover for said box, said cover journaled in the ends of the box, and supported



intermediate its ends by a series of partitions, and a cam-lever supported by one of said partitions, said lever operatively connected to the said cover and adapted to be rocked to and fro corresponding to the movements of said cover when vehicles pass over said box.

1,114,452. SEAT. ARTHUR F. DRAPER, Detroit, Mich. Filed Oct. 8, 1910. Serial No. 585,977. (Cl. 21—43.)



1. A seat comprising a box, a seat cushion therein adapted to be supported in both elevated and lowered position, a seat back having a lateral extension hinged at its lower edge to the rear wall of the box and forming a continuation of one of the walls thereof and adapted to form with the seat back a cover for the box when lowered, the back and seat cushion being adapted when both are elevated to form a seat of greater width than the box, and side arms on the cover having hinged sections adapted to be folded on the side arms and to be connected to the box when extended.

2. A seat comprising a box, a seat cushion in elevated and lowered positions at intervals from the bottom of the box and a seat back having a lateral extension pivoted to the box and forming a complementary extension of one of the walls thereof, and adapted to form with the seat back a cover therefor when lowered, the back and seat cushion being adapted when both are elevated to form a seat of greater width than the box, and side arms having folding hinged sections adapted to connect the cover and box.

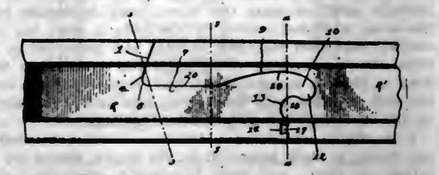
3. A seat comprising a box, a seat cushion in the box, means for supporting the cushion in elevated position and a seat back having a lateral extension hinged at its lower edge to the rear wall of the box and forming therewith a continuation of said wall, and adapted to form with the seat back a cover for the box when lowered, the back and seat cushion being adapted when both are elevated to form a seat of greater width than the box, and hinged side arms on the cover.

4. A seat comprising a box, a seat cushion in the box, means for supporting the cushion in elevated and lowered position at intervals from the bottom of the box, a seat back having a lateral extension pivoted to the rear wall of the box and adapted with the seat back to form a cover for the box when lowered, the back and seat cushion being adapted when both are elevated to form a seat of greater width than the box, and extensible arms on the back adapted to extend substantially the width of the seat formed by the cushion and back when the back is raised and to lie wholly within the box when the back is lowered.

5. A vehicle seat comprising a box having arm pockets at each end thereof, a seat cushion adapted to be supported in both raised and lowered positions at intervals from the floor of the box and between the pockets, and a seat back having an apron hinged to the box and adapted to form a cover therefor when lowered, the back and seat cushion together constituting when elevated a seat of greater width than the box and the back being provided with arms extending substantially the full width of the seat when the back is raised, and lying wholly within the pockets when the back is lowered.

[Claims 6 to 19 not printed in the Gazette.]

1,114,453. RAIL-JOINT. JESSE E. ETHERTON, Chicago, Ill. Filed Aug. 5, 1913. Serial No. 783,113. (Cl. 239—8.)



1. In a rail joint, two rails, one of said rails having a web extension having its top surface grooved for a portion of its length, said web being formed to provide a hook, the second rail having a projecting head and web, the web of the second mentioned rail being cut to receive the projecting end of the hook of the first mentioned rail and provided along its bottom surface with a V-shaped rib adapted to be received in the groove of the first mentioned web, and means for retaining the rail ends against lateral or longitudinal movement.

2. In a rail joint, two rails, one of said rails having a web extension, said extension formed to provide a hook and having its top surface grooved longitudinally, the said second rail having a projecting head and web, the web of the second mentioned rail being cut to receive the projecting end of the hook of the first mentioned rail and provided on its bottom surface with a longitudinally disposed V-shaped rib, said rib being adapted to be received in the groove of the first mentioned web, means for retaining the rail ends against lateral or longitudinal movement, and means extending through the head of the first mentioned rail and adapted to enter an aperture in the front face of the second web for permanently locking the rails together.

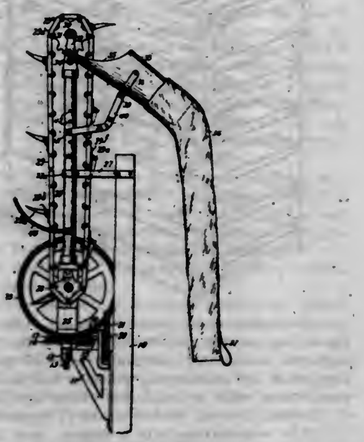
3. In a rail joint, two rails, one of said rails having a web extension which has its terminal formed to provide a hook, the second rail end having a projecting head and web, the web of the second mentioned rail being cut to receive the projecting end of the hook of the first mentioned rail, and means comprising interlocking tongues and grooves between the rail ends for retaining the joint against lateral or longitudinal movement, said last named means also including a knob or keystone configuration formed on the abutting surface of one rail and adapted to be seated in a depression having its walls shaped to conform with the configuration of the keystone formed in the other of said rails.

4. In a rail joint, two rails, one of said rails having a slotted head and a web extension which has its end formed to provide a hook, the second rail end having a projecting head, and a web extension, the web of the second rail being cut to receive the projecting end of the hook of the first mentioned rail and provided in its free terminal portion with an aperture, means integrally formed with the rail ends for retaining the joints against lateral or longitudinal movement, and means passing through the head of the first mentioned rail and extending beyond the front walls of its slot and adapted to enter an aperture formed in the terminal of the second mentioned web for permanently retaining the two rails interlocked.

5. In a rail joint, two rails, one of said rails having a slotted head portion and a web extension which has its end formed to provide a hook, the second rail end having a projecting head and web, the web of the second rail being cut to receive the projecting end of the hook of the first mentioned rail and provided in its free terminal portion with an aperture, means integrally formed with the rail ends for retaining the joint against lateral or longitudinal movement, and adjustable means passing through the head of the first mentioned rail and extending beyond the front walls of its slot and adapted to enter the aperture formed in the terminal of the second mentioned web for permanently retaining the rails interlocked.

[Claim 6 not printed in the Gazette.]

1,114,454. SHEAF HOIST AND CHUTE. WILLIAM G. FETROW and EDGAR EBERLY, Mechanicsburg, Pa. Filed Aug. 12, 1913. Serial No. 784,291. (Cl. 193—8.)



1. An apparatus of the character described, comprising a structure mounted to turn about a vertical axis, an elevating conveyer carried by the structure, a table comprising an open frame secured to the structure and on which the material is placed, the conveyer being provided with means for engaging the material on the table and carrying the same, and a chute pivoted at one end to the structure near the top thereof and adapted to receive the material from the conveyer.

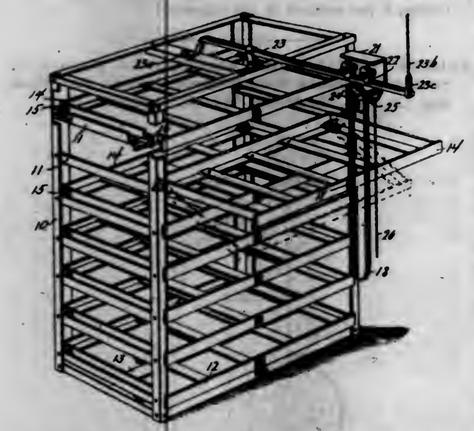
2. In an apparatus of the character described, a mast mounted to turn on a vertical axis, an endless elevating conveyer chain on the mast, driving means for said chain, said chain having prongs to engage sheaves, and actuating means for the chain drive, said actuating means including an element carried by the mast and an element adapted to turn on a relatively fixed support below the mast.

3. In an apparatus of the character described, a mast mounted to turn on a vertical axis, an endless elevating conveyer chain on the mast, said chain being provided with prongs to carry sheaves, a chute carried by the mast near the upper end and adapted to receive material from the conveyer, a table carried by the mast and presenting an opening through which the chain and its prongs pass in an upward direction, and actuating means for the conveyer, said means being arranged below the mast table.

4. In an apparatus of the character described, a structure adapted to turn on a vertical axis, an endless, elevating conveyer on said mast and adapted to turn therewith, means for driving the conveyer, a chute carried by the mast at the upper end and adapted to receive material from the conveyer, and a flexible tubular extension on the chute, said extension being provided at its lower end with a hand grasp whereby to turn the mast and its appurtenances.

5. In an apparatus of the character described, a structure mounted to turn on a vertical axis, an endless elevating conveyer on said structure and adapted to turn therewith, the said conveyer being provided with prongs for engaging and carrying sheaves, a chute pivoted to the structure near the upper end thereof and adapted to receive material from the conveyer, means for actuating the conveyer, and means for adjusting the chute to vary the angle thereof.

1,114,455. MATTRESS-DISPLAY RACK. ALFRED FISHER, Dallas, Tex. Filed Aug. 9, 1913. Serial No. 783,956. (Cl. 211—14.)



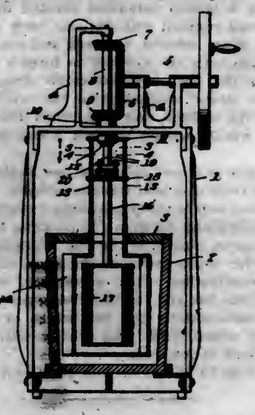
1. A display rack of the indicated character comprising a tray support, a tray slidable on the support to be projected to an outer position in front of the support and adapted to tilt downwardly when in the outer position, in combination with a suspension chain depending in front of the rack, the tray having means to engage said chain.

2. The combination with a display rack having sliding trays adapted to be moved outward to project beyond the rack, the trays being adapted to tilt, of a carriage, an overhead track on which the carriage may travel forward and backward, a depending suspension means on the carriage for supporting a tray, and means on the respective trays to engage said suspension means.

1,114,456. CHURN. ELLIS E. FLOYD, Celeste, Tex. Filed Feb. 4, 1914. Serial No. 816,572. (Cl. 31—43.)

1. A churn comprising a frame, a body mounted thereon and having a top, a sleeve journaled in the frame, a shaft journaled in the sleeve, means for rotating the sleeve and shaft in opposite directions, arms carried by the sleeve, spaced rods depending from the arms, a dasher carried by the said rods, another rod spaced from the first mentioned rods and operatively connected with the shaft and a dasher carried by the last mentioned rods.

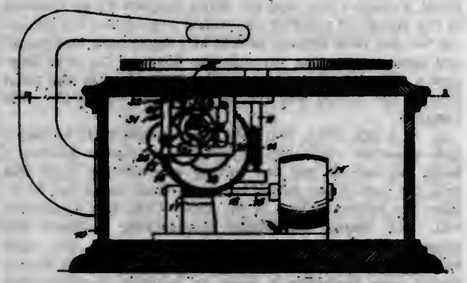
2. A churn comprising a frame, a sleeve journaled in the frame, a shaft journaled in the sleeve, means for rotating the sleeve and shaft in opposite directions, arms carried by the sleeve, rods depending from the arms, a dasher carried by the said rods, a cross bar connecting the rods together, another rod journaled in the said cross bar and having a head which rests upon the cross bar, a dasher carried by the last mentioned rod and means operatively connecting the last mentioned rod with the said shaft.



3. A churn comprising a frame, a sleeve journaled in the frame, a shaft journaled in the sleeve, means for rotating the sleeve and shaft in opposite directions, arms adjustably mounted upon the sleeve, rods depending from the arms, a dasher carried by the rods, a cross bar connecting said rods together, another rod journaled in the cross bar and carrying at its lower end a dasher, a head fixed to the last mentioned rod and resting upon the cross bar and provided with upstanding lugs and a pin carried by the shaft and engaging between the lugs.

4. A churn comprising a frame, a sleeve journaled in the frame, a shaft journaled in the sleeve, means for rotating the sleeve and shaft in opposite directions, arms adjustably mounted upon the sleeve below the top of the frame, rods depending from the end portions of the said arms, a dasher attached to the lower ends of the said rods, a cross bar connecting the rods together and located below the sleeve, another rod journaled in the cross bar and the first mentioned dasher, a dasher carried at the lower end of the last mentioned rod, a head mounted upon the last mentioned rod and resting upon the cross bar and having spaced lugs and a pin carried by the shaft and located between said lugs.

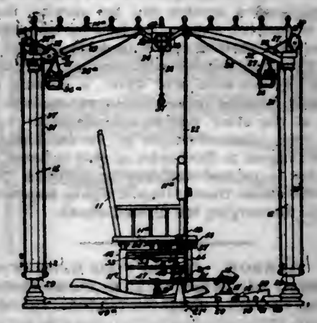
1,114,457. AUTOMATIC WINDER FOR SPRING-MOTORS. FRANCIS JENKINS CRADDOCK FREDERICK, Jersey City, N. J. Filed Apr. 14, 1914. Serial No. 831,775. (Cl. 185—40.)



1. The combination with a spring motor and an electric motor automatically winding the same, of a make and break device for the motor circuit, said make and break device including a semi-cylindrical member adapted to be rotated from the springs and a stationary contact lying in a circle coinciding with the circumference of said semi-cylindrical member, said semi-cylindrical member being adapted to directly engage the fixed contact while the spring motor is being wound up and being spaced from the contact while the motor is running down.

2. The herein described automatic winding device for a spring motor, the same comprising a battery, an electric motor in circuit with the battery, constant driving connections between the electric motor and the spring motor, a make and break device including a semi-cylindrical rotary member having constant connection with the shaft of the spring motor and also including a fixed contact member associated with the battery circuit, said fixed contact and rotary make and break device member being in direct wiping engagement while the spring motor is being wound up by the electric motor and being spaced when the spring motor is running down.

1,114,458. EXERCISER. EMIL A. FRIEDLI, Canton, Ohio. Filed Jan. 14, 1914. Serial No. 812,034. (Cl. 46—60.)



1. In an exerciser, a support, exercising means on the support at the front, exercising means on the support at the back, and a chair held on the support rockable back and forth between the respective exercising means, the exercising means being within the reach of a person seated in the chair.

2. In an exerciser, a support, vertically movable weights on the support at the front and at the rear, exercising elements at the front and rear, said elements being flexibly connected with the respective weights, and a rocking chair on the support below the exercising element and adapted to rock back and forth between the latter, the exercising elements being within the reach of a person seated in the chair.

3. In an exerciser, a support, a rockable seat mounted on the support, exercising pedals revolubly mounted in front of the seat, and operative connections between the said pedals and seat to cause the seat and pedals to be moved in unison.

4. In an exerciser, a support, a rockable seat mounted on the support, exercising pedals rockably mounted on the support in front of the seat, rockable means connected with the chair, to be operated with the latter, connections between the said rockable means and the exercising pedals, a register, and means common to both the pedals and rockable means and establishing a connection between the same and the register.

5. In an exerciser, a support, a register, exercising pedals, a rocking chair, means connecting the register with the pedals and chair, to be operated by either and connections between the pedals and chair to cause the same to move in unison.

[Claims 6 to 16 not printed in the Gazette.]

1,114,459. ELECTRIC-FAN SCREEN AND GUARD. BENJAMIN F. FRITTS, Chattanooga, Tenn. Filed Mar. 18, 1914. Serial No. 825,538. (Cl. 230—1.)

1. In an electric fan screen, a screen member for guarding the front of a fan, a screen member for guarding the rear of the fan and provided with a central opening for a fan shaft, a side screen member secured to one of the first two screen members for guarding the sides of the fan, and means for securing the first and second screen members relatively to each other.

2. In an electric fan screen, a screen member for guarding the front of a fan, a screen member for guarding the rear of the fan and provided with a central opening for a fan shaft, the second mentioned screen member having orifices for registering with threaded orifices in a motor casing, a side screen member secured to one of the first two screen members for guarding the sides of the fan, and means for securing the first and second mentioned screen members relatively to each other.

3. In an electric fan screen, a screen member for guarding the front of a fan and having a rearwardly extending portion for guarding the sides of the fan, a rear screen member in two sections which may be disposed at opposite sides of a fan shaft, and means for holding the sections together and to the rearwardly extending portion of the first screen member.

4. In an electric fan screen, a screen member for guarding the front of a fan and having rearwardly extending portions for guarding the sides of the fan, a rear screen member in two sections united together so that the rear screen member may be disposed around a fan shaft, and means for holding the sections together and to the rearwardly extending portions of the first screen member.

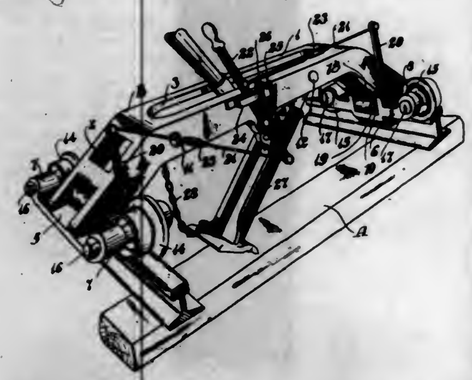
1,114,460. TRACK-LINING ARCH. NELSON FULCHER, Sault Ste. Marie, Ontario, Canada. Filed June 25, 1914. Serial No. 847,300. (Cl. 104—16.)

1. A device of the class described comprising an arch designed to be located over a railway track, brackets mounted on the ends of the said arch, such brackets being provided with bifurcated ends, wheels pivotally mounted in the said bifurcated ends, such wheels being designed to engage with the rails of the said track, means for securing the arch to the said railway track, and means for adjusting the alinement of the said track, as and for the purpose specified.

2. A device of the class described comprising an arch substantially U-shaped in cross section, such arch being designed to be located over a railway track, transversely extending brackets mounted on the ends of the said arch, such brackets being provided with bifurcated ends, wedge members adapted to engage with the rails of the said track, means for operating the said wedge members and means for adjusting the alinement of the said track, as and for the purpose specified.

3. A device of the class described comprising an arch designed to be located over a railway track, brackets mounted on the ends of the said arch, such brackets being

provided with bifurcated ends, wheels rotatably mounted in the said bifurcated ends, wedge members adapted to engage with the rails of the said track, means of operating the said wedge members comprising cranks, links, connecting rods, and a lever, means for adjusting the length of the said connecting rods and means for adjusting the alinement of the said railway track, as and for the purpose specified.

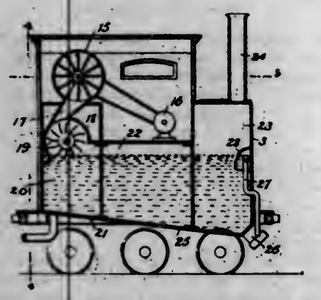


4. A device of the class described comprising an arch adapted to be located over a railway track, brackets mounted on the end of the said arch, such brackets being provided with bifurcated ends, wheels rotatably mounted in the said bifurcated ends, wedge members adapted to engage with the rails of the said track, means for simultaneously operating the said wedge members and a jack designed to engage with the said arch, as and for the purpose specified.

5. A device of the class described comprising an arch designed to be located over a railway track, wedge members adapted to engage with the rails of the said track, means for simultaneously operating the said wedge members, means for retaining the said wedge members in a locking position and means for adjusting the alinement of the said track, as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,114,461. SMOKE-FILTER AND SPARK-ELIMINATOR. ERNEST H. GAGNON, Billings, Mont. Filed May 23, 1914. Serial No. 840,499. (Cl. 110—144.)



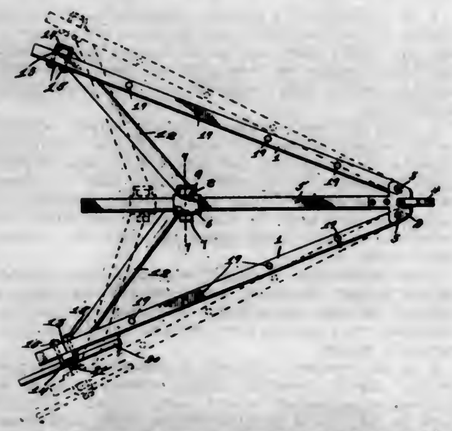
1. In a device for filtering smoke and eliminating sparks from locomotives, a fan for drawing smoke from said locomotive and discharging the same to a given point, a tank provided with a given quantity of water, an agitator arranged in said tank, means for guiding the smoke discharged from said fan to said agitator for operating the agitator and for mixing said smoke with the water in said tank, and means for directing the cleaned smoke to a discharge point.

2. In a device for filtering smoke from a locomotive, a blow fan for sucking the smoke from said locomotive, means for directing the smoke from said blow fan, a paddle wheel arranged in the path of movement of said smoke and rotated thereby as the same is directed from said fan, a tank provided with a given supply of water, said water partially submerging said paddle wheel, whereby the water and smoke are mixed, means forming a settling chamber for the smoke, said means merging into said tank, and means for directing the cleaned smoke to a discharge point.

3. In a device for filtering smoke from a locomotive, a tank adapted to contain a quantity of water, a rotating agitating member projecting into said water, and a fan for drawing smoke from said locomotive and discharging the same against said agitating member for causing the agitating member to rotate and mix the smoke and water, and means for directing the cleaned smoke to a discharge point.

4. In a device for filtering smoke and eliminating sparks from locomotives, a suction fan for sucking the smoke from said locomotive, a discharge tube for discharging the smoke from said suction fan, a tank adapted to contain water, an agitating member with some of the blades continually in contact with said water, a housing for said agitator, said housing being opened at one side to said tank, and at the other side to said discharge tube, said discharge tube being arranged so as to discharge the smoke at a tangent to the blades of said agitator whereby said agitator is rotated and thereby agitates the water and mixes the smoke therewith, and means associated with the tank for discharging the filtered smoke.

1,114,462. HARROW. DANIEL FINIS GATES, Fruit Hill, Ky., assignor of one-half to L. R. Davis, Crofton, Ky. Filed Aug. 20, 1913. Serial No. 785,765. (Cl. 55—125.)



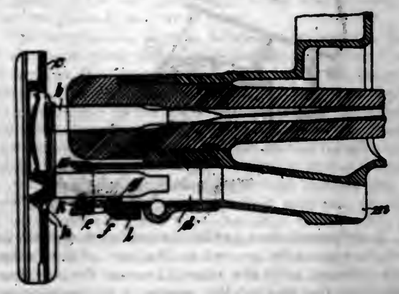
1. In a harrow the combination with a frame provided with a plurality of pivotally mounted side bars, of cutting blades pivotally secured thereto, a centrally located bar carried by said harrow, means for pivotally connecting said blades to said centrally located bar, and a scraper member carried by the rear end of one of said side bars.

2. In a harrow the combination with a frame provided with a plurality of pivot side bars, a centrally located bar, a sleeve adjustably mounted upon said centrally located bar, a depending rod carried by said sleeve and provided with a reduced portion, a depending rod carried by the rear end of each side bar, means for holding said last mentioned rod in engagement with said side bars, and cutting blades connected to said last mentioned rods and to said first mentioned rod.

3. In a harrow the combination with a frame provided with a plurality of side bars, a centrally located bar, depending rods carried by said side bars, a depending rod carried by said central bar, an adjustable sleeve carried by said central bar, depending rods carried by said side bars, cutting blades carried by said depending rods, and a scraper carried by one of said side bars.

4. In a harrow the combination with a frame, said frame provided with a plurality of side bars, a centrally located bar, a plurality of knives pivotally secured to said side bars and said centrally located bar, a depending rod carried by one of said side bars, and an adjustable scraper carried by said depending rod for piling the earth after the same has been scraped by means of said harrow.

1,114,463. AUTOMATIC GUN. PAUL GEBAUER, Berlin-Wilmersdorf, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Filed May 16, 1912. Serial No. 697,623. (Cl. 89—3.)

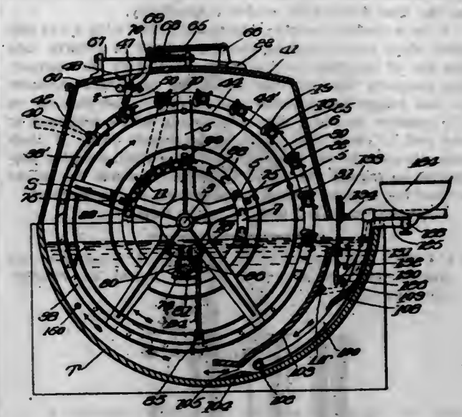


1. In an automatic gun, an ejector tube, means adapted to move a cartridge or cartridge case into the same, a pair of connected movable projections extending transversely into said tube for supporting said cartridge or cartridge case, means for moving said cartridge or cartridge case beyond the first projection and relatively to the second projection, and means for moving said first projection behind said cartridge or cartridge case and for actuating the second projection whereby said cartridge or cartridge case is impelled toward the exit end of said ejector tube.

2. In an automatic gun, an ejector tube, means adapted to move a cartridge or cartridge case into the same, a member pivotally mounted on said ejector tube, a nose on said member extending transversely into said tube and arranged to engage and be moved in one direction by said cartridge or cartridge case to swing said member on its pivot, a projection on said member at a distance from said nose extending into said tube and arranged to engage said cartridge or cartridge casing and to be actuated in the arc of a circle toward the inlet end of said tube as the said member is swung, means for moving said cartridge or cartridge case beyond said nose and relatively to said projection and means for moving said member to snap said nose behind said cartridge or cartridge case and to actuate said projection in the arc of a circle toward the exit end of said tube whereby said cartridge or cartridge case is impelled and tilted downwardly toward said exit end of the ejector tube.

3. In an automatic gun, an ejector tube, means adapted to move a cartridge or cartridge case into the same, a member pivotally mounted on said ejector tube, a nose at the free end of said member extending transversely into said tube approximately at the inlet end thereof and arranged to engage and be moved in one direction by said cartridge or cartridge case to swing said member on its pivot, a projection on said member adjacent to its pivot extending into said tube and arranged to engage said cartridge or cartridge case and to be actuated in the arc of a circle toward the inlet end of said tube as the said member is swung, a spring for moving said cartridge or cartridge case beyond said nose and relatively to said projection and a spring for moving said member to snap said nose behind said cartridge or cartridge case and to actuate said projection in the arc of a circle toward the exit end of said ejector tube whereby said cartridge or cartridge case is impelled and tilted downwardly toward said exit end of the ejector tube.

1,114,464. DYEING-MACHINE. JOHN H. GILES and DONALD M. GILES, Amsterdam, N. Y., assignors to John H. Giles Dyeing Machine Company, Portland, Me., a Corporation of Maine. Filed Dec. 29, 1913. Serial No. 809,177. (Cl. 8—19.)



1. In a dyeing machine the combination with a vat and yarn stick supporting members revolving into the vat, of means for changing the position of the yarn on the sticks comprising a stick bearing member journaled in the supporting members, a yarn supporting stick carried by said bearing member, a ratchet on the bearing member, a double detent escapement dog arranged whereby its detents alternately engage the ratchet teeth to prevent turning of the bearing in one direction and adapted to permit turning of the bearing in the other or advance direction and means to rotate the bearing member in the advance direction to change the position of the yarn on the stick.

2. In a dyeing machine, the combination with a vat and yarn stick supporting members revolving in the vat, of means for changing the position of the yarn on the sticks comprising a stick bearing member journaled in the supporting members, a yarn supporting stick carried by said bearing member, a ratchet on the bearing member, a rocking escapement dog suitably fulcrumed, detents at the opposite ends of the escapement dog adapted alternately to release the ratchet teeth when the bearing is turned in one direction and adapted to prevent turning of the ratchet in the opposite direction, said dog being weighted to effect full engagement of the detents, a star wheel mounted on the bearing member and a trip positioned to be engaged by said star wheel to effect turning of the bearing and changing of the position of the yarn on the stick.

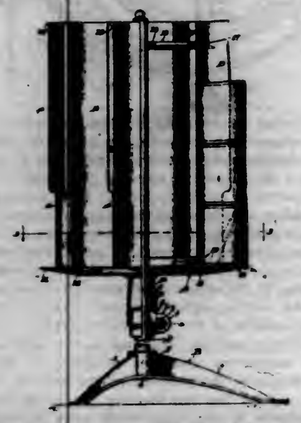
3. In a dyeing machine, the combination with a vat and yarn stick supporting members revolving in the vat, of means for changing the position of the yarn on the sticks comprising a stick bearing member journaled in the supporting members, a yarn supporting stick carried by said bearing member, a ratchet on the bearing member, a rocking escapement dog suitably fulcrumed, detents at the opposite ends of the escapement dog adapted alternately to release the ratchet teeth when the bearing is turned in one direction and adapted to prevent turning of the ratchet in the opposite direction, said dog being weighted to effect full engagement of the detents, a star wheel mounted on the bearing member, a securing pin for the star wheel of relatively soft metal, and a trip positioned to be engaged by said star wheel to effect turning of the bearing and changing of the position of the yarn on the stick.

4. In a dyeing machine, the combination with a vat and yarn stick supporting members revolving in the vat, of means for changing the position of the yarn on the sticks comprising a stick bearing member journaled in the supporting members, a ratchet on the bearing member to one side of the supporting member, a star wheel on the bearing member at the other side of the supporting member, means to engage the star wheel to rotate the bearing and means to engage the ratchet to prevent reverse movement of the bearing member, said bearing member being formed with sockets for the sticks on its opposite faces inclosed by the star wheel and ratchet respectively.

5. In a dyeing machine, the combination with a vat and yarn stick supporting members arranged to revolve into the vat of bearings for the sticks carried by the supporting members the bearings consisting of socket elements on one supporting member and an apertured element on the opposite member, yarn supporting sticks arranged at one end to enter the apertures to permit entry of their opposite ends in the sockets and a guard rail suitably supported to engage the stick spindles to retain the sticks within the sockets during the operation of the machine.

[Claims 6 to 11 not printed in the Gazette.]

1,114,465. DISPLAY-RACK. CHARLES H. GLASHAGEL, La Grange, Ill. Filed Oct. 21, 1912. Serial No. 726,936. (Cl. 211—20.)

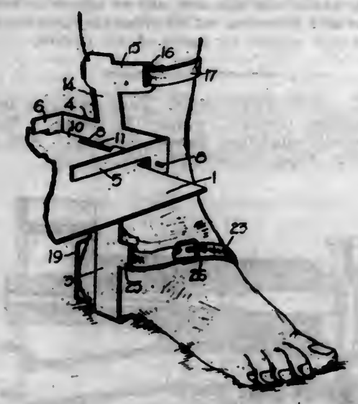


An apparatus for storing and displaying canned goods, comprising a central, vertical spindle, upper and lower supports rotatable upon the spindle, a plurality of vertically arranged stacks connected between the two supports, each stack comprising a sheet of metal bent in circular form to encompass somewhat more than half of the circumference of a can, the lower end of the sheet being cut away to encompass not more than half of the circumference of the can, and rib members integral with and extending upward from the lower support and conforming to the inner edges of the stacks, the said lower support having formed therein grooves extending around the inner edges of the said rib members and adapted to receive the lower edges of the said stacks substantially as and for the purpose set forth.

1,114,466. SWIMMER'S FOOT-PADDLE. JOHN W. GOODENBERGER, Akron, Ohio. Filed Dec. 23, 1913. Serial No. 808,481. (Cl. 9—21.)

1. A swimmer's foot paddle comprising a paddle, an L-shaped support adapted to be secured to the foot of the wearer, means for securing the support to the foot of the wearer, a U-shaped frame integral with the longer arm of the support, said paddle being hingedly secured to the U-shaped frame adjacent the inner end thereof beneath the arms of said frame, and spring means for normally holding the paddle in a divergent plane relative to the longer arm of the support.

2. A swimmer's foot paddle comprising a support adapted to be secured to the foot of the wearer, a U-shaped frame on said support, a rectangular paddle hingedly secured to said frame beneath the side arms thereof and a coil spring carried by said frame and having its terminals engaging the support and paddle respectively, for holding the paddle in a normal outwardly inclined plane relative to the support.



3. A swimmer's foot paddle comprising a support adapted to be removably secured to the foot of the wearer, a frame integral with the support, means for securing the support to the foot of the wearer, a rectangular paddle hingedly secured to said frame beneath said frame, said frame being disposed at right angles to the support and adapted to limit the movement of the paddle to a position of right angular extension and means for normally holding the paddle in an outwardly inclined plane relative to the support.

4. A swimmer's foot paddle comprising an L-shaped support adapted to be secured to the foot of the swimmer, a frame integral with the support and extending outwardly at right angles thereto, a rectangular paddle hingedly secured to and beneath said frame, said L-shaped support having its longer arm curved outwardly adjacent its upper terminal to conform to the contour of the swimmer's leg, a rectangular cross plate having longitudinal slots in each end formed integral with the upper end of the longer arm of the support, said plate being curved to conform to the contour of the swimmer's leg, a strap adapted to surround the swimmer's leg inserted through the slots in the cross plate, the shorter arm of said L-shaped support having a pair of heel plates formed integral therewith disposed at right angles thereto and to each other and a securing strap secured to one of said ears and to the longer arm of the support adapted to fit over the instep of the wearer's foot.

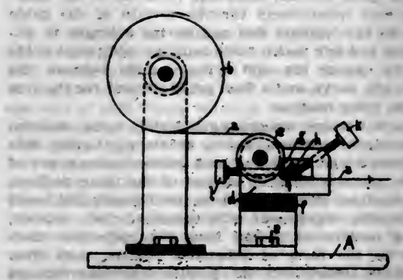
1,114,467. PUTTYLESS WINDOW. WALTER S. GOODLAND and GUSTAV BAHNEMANN, Racine, Wis. Filed Feb. 13, 1913. Serial No. 748,071. (Cl. 189—78.)

1. The combination with a window sash and its glass light, said sash having a groove in the plane of the glass bearing face around the glass opening, of a soft metal sealing strip T-shaped in cross section with one of its lateral flanges fitting within the groove and its other lateral flange seated against the glass bearing face of the sash to form a gasket between said face of the sash and the glass and the third flange being adapted to be bent over the edge of the glass for holding it in place.

2. The combination with a metal window sash and its glass light, said sash being provided with a projecting flange around its glass opening forming a bearing face for the glass and also provided with a groove around the glass opening in the same plane with the bearing face, of a soft metal strip T-shaped in cross section with one of its laterally extending flanges thicker than the others and fitting within said groove and its other lateral flange bearing against the bearing face of the projecting flange of the sash to form a gasket between the glass and the bearing face of the sash, said glass fitting within the glass opening of the sash with one face against the gasket forming flange of the soft metal strip and with its edge against the third flange of the soft metal strip and said third flange of the soft metal strip being bent around the edge of the glass to hold it in place.

3. The combination with a window sash and its glass light, said sash being rabbeted to provide a glass seat having a bearing face in a plane parallel with the plane of the glass light and having a groove with one wall thereof in the same plane as the glass bearing face of the sash to extend such glass bearing face to the depth of the groove, of a soft metal strip T-shape in cross section forming three diverging flanges, two of which extend in opposite directions and lie in the same plane, and bear against the extended glass bearing face of the sash, and one of them being of greater thickness than the other to fit within the groove of the sash, the third flange extending from the others in a plane approximately at right angles to the common plane of the others and fitting against the glass seat and adapted to be bent over the edge of the glass light after the glass light is in place with its edge bearing against the last mentioned flange and its face bearing against the thinner flange of the first mentioned flanges so that said bent flange bears against the opposite face of the glass light and lies in a plane approximately parallel with the common plane of the other two flanges.

1,114,468. METHOD FOR TREATING PAPER FOR SPIRAL MOUTHPIECES OF CIGARETTES. MAX CLEMENS GRAHL, Dresden-Löbtau, Germany, assignor to "Universelle" Cigaretten-Maschinen-Industrie System Otto Bergsträsser-Aktiengesellschaft, Dresden, Germany, a Corporation of Germany. Filed June 27, 1913. Serial No. 776,117. (Cl. 93—1.)



1. A process for rendering elastic the paper out of which the spiral mouthpieces for cigarettes are made, consisting of drawing the entire paper strips under continuous tension over a sharp edge, said entire paper strips being bent while being drawn over said sharp edge.

2. A process for rendering elastic the paper out of which spiral mouthpieces for cigarettes are made, which consists in drawing the entire paper strip from which the mouthpieces are cut, over a sharp edge, said entire paper strip being bent while being drawn over said sharp edge, said entire paper strip being so drawn over said sharp edge before the spirals of paper are rolled.

3. The process of rendering elastic the paper of which spiral mouthpieces for cigarettes are made, which consists in drawing said entire paper over a sharp edge, said paper being bent while being drawn over said sharp edge, said paper being prevented from curling until it is rolled into a spiral.

1,114,469. RETAINING DEVICE. EMIL C. GUNDELACH, New Rochelle, N. Y., assignor of one-half to Frank G. Riker, Mount Vernon, N. Y. Filed Aug. 18, 1913. Serial No. 785,231. (Cl. 137—28.)

1. A retaining device for slip on couplings for inlet valves of inflatable tires, comprising a band having lugs connected with each other by a bolt to permit it to be clamped in position, said band having oppositely arranged slots, and apertured spring jaws extending out through the slots of the band, said jaws overlapping one another and one of the said jaws being provided at each side edge with a lug engaging the other jaw.

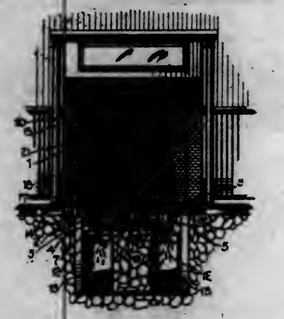
2. A retaining device for slip on couplings for inlet valves of inflatable tires, comprising a clamping band adapted to be secured to the coupling, and spring jaws, said jaws extending from opposite sides of the band and having upwardly extending arms terminating in inwardly extending and overlapping apertured ends, one of the jaws being provided at each side edge with a lug engaging its other jaw.

3. A retaining device for slip on couplings for inlet valves of inflatable vehicle tires, comprising a clamping band encircling the coupling and provided with top and bottom flanges engaging the coupling to hold the band against lengthwise movement on the coupling, and apertured jaws overlapping one the other and extending in opposite directions, the ends of the jaws terminating in side arms connected with each other by an apertured base member held in the said clamping band.

4. A retaining device for slip on couplings for inlet valves of inflatable vehicle tires, comprising a clamping band encircling the coupling and provided with top and bottom flanges engaging the coupling to hold the band against lengthwise movement on the coupling, and apertured jaws overlapping one the other and extending in opposite directions, the ends of the jaws terminating in side arms connected with each other by an apertured base member, the said clamping band being provided with slots for the passage of the said base member, the slots being adjacent the said top flange and the aperture of the said base member being central on the coupling.

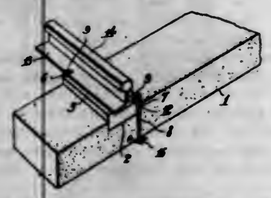
5. A retaining device for slip on couplings for inlet valves of inflatable vehicle tires, comprising a clamping band encircling the coupling and provided with top and bottom flanges engaging the coupling to hold the band against lengthwise movement on the coupling, and apertured jaws overlapping one the other and extending in opposite directions, the ends of the jaws terminating in side arms connected with each other by an apertured base member held in the said clamping band, one of the said jaws having guide lugs slidingly engaging the other jaw.

1,114,470. ASH-BOX. GEORGE J. HANKINS, Prairie, Miss. Filed Jan. 17, 1914. Serial No. 812,827. (Cl. 126—242.)



A device of the class described comprising the combination with a fireplace, of an ash box mounted in the floor of said fireplace and having a slotted cover through which ashes from the fireplace may pass into the box, said box having a discharge opening in each end thereof, a plunger rod disposed through one end of said box, a plunger connected to the inner end of said rod, said plunger being normally disposed centrally of the box, and means connected with the outer end of said plunger to reciprocate the same within said box whereby the ashes may be discharged from the box through the openings in the opposite ends thereof.

1,114,471. RAIL FASTENER AND PAD. HERMAN N. HANZLIK, Wonewoc, Wis. Filed Feb. 10, 1914. Serial No. 817,856. (Cl. 238—2.)

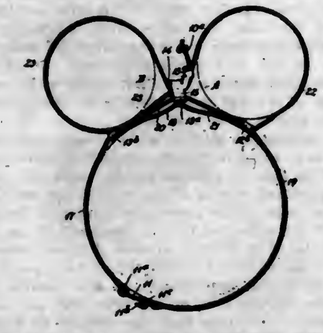


1. A tie having transverse depressions, a cushion block arranged within the depressions and projecting above the face of the tie, a rail supported upon the cushion block, anchor bolts having their heads to engage with the base flanges of the rails to the opposite sides of the rail, means for longitudinally adjusting the anchor bolts with relation to the rail and cushion block, a bottom plate having openings through which the ends of the anchor bolts pass, and adjustable securing elements arranged upon the said ends of the bolts and binding upon the bottom plate.

2. A tie having a cushion block thereon, said block having its upper face provided with an angular recess disposed diagonally with relation to its corners, a rail upon the block, vertically adjustable rail securing members disposed in contacting relation with the opposite faces of the ties and the diagonally opposite corners of the cushion block, means arranged within the recess of the block for longitudinally adjusting the said securing means and for retaining the said means in contact with the block and with the tie, a plate upon the underface of the tie, and means for securing the rail and block retaining means to the plate.

3. A tie, a rail supporting cushion block upon the tie, said block having an angular recess which enters from its upper face, a headed rod having a threaded end seated within the recess, headed anchor bolts having openings engaged by the rod, a nut upon the rod adapted to engage with one of the said bolts to force both of the bolts into frictional engagement with the opposite sides of the tie, a plate arranged upon the bottom of the tie, said plate having elongated openings through which the threaded ends of the anchor bolts extend, and another for the threaded ends adapted to frictionally engage with the plate to adjust the said bolts vertically to force the heads into engagement with the base flange of the rail to the opposite sides of the said rail.

1,114,472. PACK-HARNESS. HENRY H. HAUGHT, Payson, Ariz., assignor of one-half to William H. Hilligass, Payson, Ariz. Filed Dec. 10, 1913. Serial No. 805,835. (Cl. 54—37.)



1. A pack harness comprising a flexible tying medium formed with separable belly-band sections, a cinch formed of co-acting elements on the respective sections, and a saddle rig having side guides formed each with a pair of guide eyes, and intermediate guides each having a guide eye and a guide hook, the tying medium having permanent running engagement with the various guide eyes of all the guides and presenting a free end portion of a length to form right and left pack loops and adapted to detachably engage the guide hooks on the intermediate guides.

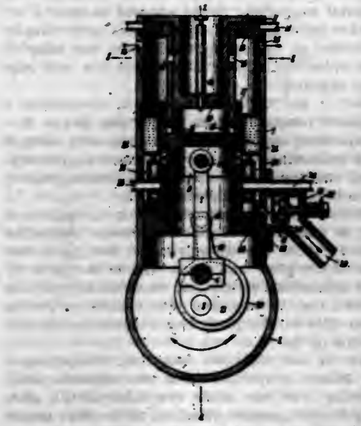
2. A pack harness, comprising a flexible tying medium in a single piece doubled on itself and formed into separable bellyband sections, one of which is a terminal of the tying medium, and the other of which is formed of the doubled portion presenting a bend, a cinch element on each of the bellyband sections, one of said elements having running engagement with the tying medium at the band, and a saddle rig comprising a plurality of guide elements with which the tying medium has running engagement, said tying medium extending from one of the bellyband sections transversely through certain of the guide elements to the opposite side and having a length to embrace right and left packs, there being an additional guide element to engage the said tying medium between the right and left packs, and a final guide element for the free end of the tying medium.

3. A pack harness, comprising a flexible tying medium, separable cinch members, and a saddle rig having side guide elements and front and back guide elements, one of the cinch members being on an end of the tying medium, the said medium being doubled on itself presenting bends having running engagement with the other cinch member, the tying medium extending from the respective cinch members in the form of bellyband sections, and from said sections transversely in opposite directions through guide elements of the saddle rig, the tying medium at one end presenting a free portion of a length to form right and left pack loops, and there being an additional guide member adapted to detachably engage the tying medium at an intermediate point between the pack loops and a further guide element for the terminal of the free portion.

4. A pack harness comprising a single piece of rope doubled on itself to present a bend and form one side section of a bellyband; a cinch element having running engagement with the rope at the bend; and a saddle rig having side guides and front and back guides, one stretch of the doubled rope extending permanently transversely through both side guides and an intermediate guide, and continued to form a second bellyband section, the latter having a cinch element adapted to detachably engage the cinch element at the bend of the rope; the second stretch of the doubled rope extending permanently transversely through both the said guides and an intermediate guide and presenting a free end portion of a length to form right and left pack loops, there being additional guide members on the front and back guides with which the said free end portion is adapted to have detachable engagement; the said rope having running engagement with the several guides.

5. A pack harness comprising a flexible tying medium formed with separable bellyband sections, a cinch formed of co-acting elements on the respective sections, and a saddle rig having side guides formed each with a pair of guide eyes, and intermediate guides each having a guide eye and a guide hook, the tying medium having permanent running engagement with the various guide eyes of all the guides presenting a free end portion of a length to form right and left pack loops and adapted to detachably engage the guide hooks on the intermediate guides, one of said intermediate guides having a fastening device for the terminal of the free end portion.

1,114,473. INTERNAL-COMBUSTION ENGINE. CHRISTOPHER P. HINDS, Calcite, Colo. Filed Feb. 28, 1912. Serial No. 680,379. (Cl. 123—69.)



1. In an internal combination engine, the combination of a casing inclosing a power chamber, a piston movable in said casing, a flange carried by said piston, said casing having ports through the wall thereof, to admit air to one side of said flange, whereby the movement of the piston will compress said air, means carried by the casing for conducting the gases of combustion from the power chamber, means also carried by the casing for admitting gaseous fuel to the power chamber, the piston having means for permitting the admission of compressed air to the power chamber after the beginning of the exhaust, and means for controlling the passage of gas to and from the power chamber, so as to admit gaseous fuel to the power chamber after the operation of exhausting and scavenging is finished.

2. In an internal combustion engine, the combination of a casing inclosing a power chamber, a piston movable in said casing, said piston having a flange thereon and said casing having openings admitting air into the same, on one side of said flange, to be compressed upon the movement of the piston, means carried by the casing for conducting away the gases of combustion from the power chamber, means also carried by the casing for conducting gaseous fuel to the power chamber, and means movable with respect to the casing for establishing communication between the power chamber and the means for conducting away the gases of combustion at the end of the power stroke of the piston, said piston permitting the admission of air compressed by the flange thereon into the power chamber after the operation of exhausting has begun to clean out the power chamber, said movable means serving to interrupt communication between the power chamber and the means for conducting the gases away from the same and to estab...sh communication between the power chamber and the means for supplying gaseous fuel thereto after the operation of exhausting and scavenging is finished.

3. In an internal combustion engine, the combination of a casing inclosing a power chamber, and having means for admitting air to a space above the power chamber, a piston movable in said casing, means for compressing a volume of air in the said space, an igniter carried by said casing and projecting into the power chamber thereof, said piston having means for admitting said compressed air to the power chamber at the end of its power stroke, at a plurality of points adjacent said igniter to clean the terminals thereof, and a sleeve valve in the casing and fitting snugly the piston, said valve controlling the outflow of the burnt gases and the inflow of the feed.

4. In an internal combustion engine, the combination of a casing having openings therein, a power chamber inclosed in the casing and spaced therefrom, an igniter projecting into said power chamber, a piston movable in said casing, means operated by said piston for compressing a volume of air in the said space by the piston, said piston having a plurality of ports therethrough, to admit air to said power chamber at the inner end of the igniter at the end of the power stroke to cleanse the terminal of said igniter, and a reciprocating sleeve valve in the casing and fitting snugly the piston, said valve controlling the outflow of the burnt gases and the inflow of the fuel.

5. An internal combustion engine comprising a casing, said casing having a plurality of apertures through its wall adjacent the head thereof, an internally-projecting boss carried by the head, a hollow piston mounted in said casing, having an open end receiving said boss, the end of said boss and the interior surface of the piston forming a power chamber, a flange carried by the piston, the outer surface of the body of the piston being spaced from the inner surface of the casing, to provide a space to contain air admitted through said apertures, said air being compressed by the flange upon the movement of the piston, means forming a water jacket located inside the casing and surrounding the piston, forming one end of said air compression space, said piston having a port in its wall, which overruns the end of the boss at the end of the power stroke of the piston, to permit air compressed by the flange to enter the power chamber at the end of the power stroke, and a sleeve valve between the water jacket and piston, said valve controlling the outflow of the burnt gases and the inflow of the fuel.

[Claims 6 to 18 not printed in the Gazette.]

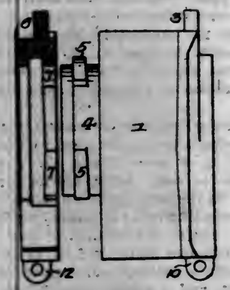
1,114,474. AXLE-BOX. WILLIAM S. HODGES, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 30, 1913. Serial No. 764,599. (Cl. 64—25.)

1. The combination of an axle box having a fixed flange at one end and a detachable flange at the opposite end, the box and the detachable flange having spaced interlocking lugs so that when the detachable flange is turned the lugs will be free or will interlock; and means for holding the flange in the locked position.

2. The combination in an axle box having a fixed flange at one end and a segmental extension at the opposite end, said extension having external lugs spaced apart; with a detachable flange arranged to turn on the segmental extension and having internal lugs spaced apart so that, when the flange is turned into position, the lugs of the flange will be back of the lugs on the extension of the box; and means for locking the flange in position.

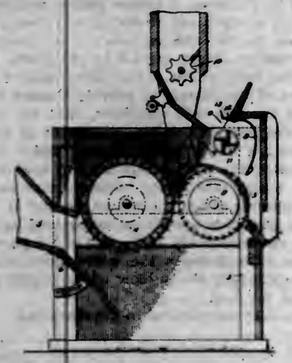
3. The combination of an axle box having a flange at one end and a segmental extension at the other end; external lugs on the extension; a detachable flange arranged to turn on the extension and having spaced lugs engaging the lugs on the box when the flange is turned into position;

with a cellar mounted in the box and locking the flange in position; and means for holding the cellar in the box.



4. The combination of an axle box having an opening for the axle and having a fixed flange at one end, said box having an opening at the bottom; a reduced portion; spaced internal lugs thereon; a detachable flange having internal spaced lugs and open at the bottom, the detachable flange being arranged to turn on the reduced portion, both sets of lugs being tapered; a cellar adapted to the openings in the box and in the detachable flange; perforated lugs on the box, on the flange, and on the cellar; and a bolt extending through the lugs and holding the several parts in position.

1,114,475. COTTON-SEED LINTER. FREDERICK AUGUSTUS HOEHNE, Columbia, S. C., assignor to Hugh E. Sessions, Columbia, S. C. Filed Aug. 29, 1912. Serial No. 717,801. (Cl. 13—8.)

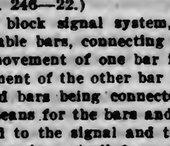


1. In a cotton seed linter, the combination with a gang of saws, of ribs between which they work, a casing having curved walls above said saw cylinder to retain a roll of seed above and in contact with said saws and ribs, the said walls being separated at the top to have an inlet opening and the front wall terminating at a higher level than the rear wall, a flat board extending rearward from the edge of the front wall substantially as far as the center line of said roll of seed and having an upwardly turned rear edge, and a central rotary agitator in said casing extending longitudinally of said roll to turn the same.

2. In a cotton seed linter, the combination with a gang of saws, of ribs between which they work, a casing having curved walls above said saw cylinder to retain a roll of seed above and in contact with said saws and ribs, the said walls being separated at the top to have an inlet opening and the front wall terminating in a horizontal portion at a higher level than the end of the rear wall, the said horizontal portion extending rearward substantially to the center line of said roll of seed and having an upwardly rounded edge, and a central rotary agitator in said casing extending longitudinally of said roll to turn the same.

3. In a cotton seed linter, the combination with a gang of saws, of ribs between which they work, a casing having curved walls above said saw cylinder to retain a roll of seed above and in contact with said saws and ribs, the said walls being separated at the top to have an inlet opening, the rear wall terminating at a point behind the center line of the roll and the front wall terminating in a horizontal board extending rearward as far as the center line of said roll, a space being left for the entrance of seed between the ends of said walls, and a central rotary agitator within said casing for turning said roll.

1,114,476. CHAIR, SOFA, AND SIMILAR FURNITURE. EDWIN A. HOFSTATTER, New York, N. Y. Filed Nov. 16, 1912. Serial No. 731,744. (Cl. 155—3.)



1. A bracket of the character described, comprising a plate having integral means for engaging one of the parts to be connected to secure the plate thereto, and formed with a horizontal supporting flange adapted to enter a recess in the other part, and with side flanges projecting in the same direction as the supporting flange and adapted to engage the sides of the part with which the said supporting flange engages.

2. A bracket of the character described, comprising a rectangular plate formed with a supporting flange projecting from one face, side flanges at two opposing sides of the plate and projecting from the same face as the supporting flange, and top, bottom, and side flanges projecting from the other face of the plate.

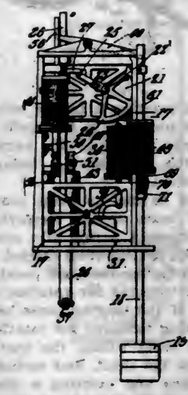
3. A bracket of the character described, comprising a plate having a horizontal supporting flange projecting from one face at about the center thereof, flanges at two opposite sides of the plate and projecting in the same direction as the supporting flange, and standing at right angles thereto and top, bottom, and side flanges projecting from the other face of the plate and adapted to embrace the end of a rail or the like.

4. A bracket of the character described, comprising a plate having flanges projecting from two opposite sides, flanges projecting from the other two sides of the plate and extending in the opposite direction to the first named flanges, flanges struck up from the second flanges and projecting in the same direction as the first flanges, and a horizontal flange struck up from the plate at about the center thereof and projecting in the same direction as the second flanges.

1,114,477. RAILWAY-SIGNAL. ROBERT F. HUDSON, Richmond, Va., assignor, by direct and mesne assignments, to Gravity Railway Signal Company, Incorporated, Richmond, Va. Filed Aug. 4, 1910. Serial No. 575,476. (Cl. 246—22.)

1. A railway block signal system, including a visual signal, two slidable bars, connecting mechanism for both bars, whereby movement of one bar in one direction will cause the movement of the other bar in an opposite direction, one of said bars being connected to the signal, an overbalancing means for the bars and signal connected to the bar attached to the signal and to normally hold the signal at safety, train controlled means at the entrance to the block for actuating the other bar to operate the signal bar in opposition to the overbalancing means and to display the signal at danger, a lock for holding the bars against the action of the overbalancing means, and train controlled means, actuated due to the exit of the train from the block, for releasing the bars and the signal whereby they are subject to the overbalancing means.

2. A railway block signal system, including a visual signal, two slidable bars, connecting mechanism for both bars, whereby movement of one bar in one direction will cause the movement of the other bar in an opposite direction, one of said bars being connected to the signal, a weight connected to the bar attached to the signal to normally hold the signal at safety, train controlled means at the entrance of the block for actuating the other bar for operating the signal bar in opposition to the weight and to display the signal at danger, a lock for holding the bars against the action of the weight, and train controlled means, actuated due to the exit of the train from the block, for releasing the bars and the signal whereby they are subject to the action of the weight.



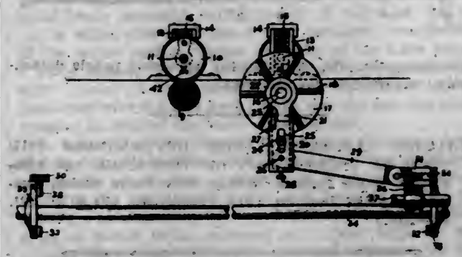
3. A railway block signal system, including a visual signal, two slidable bars, means connecting both bars, whereby movement of one bar in one direction will cause the movement of the other bar in an opposite direction, one of said bars being connected to the signal, an overbalancing means for the bars and signal connected to the bar attached to the signal to normally hold the signal in one position, train controlled means at the entrance of the block for actuating the other bar for operating the signal bar in opposition to the overbalancing means and to display the signal in the other position, a lock for holding the bars against the overbalancing means, and train controlled means, actuated due to the exit of the train from the block, for releasing the bars and the signal whereby they are subject to the overbalancing means.

4. A railway block signal system, including a visual signal, two slidable bars, means connecting both bars, whereby movement of one bar in one direction will cause movement of the other in an opposite direction, one of said bars being connected to the signal, a weight connected to the bar attached to the signal to normally hold the signal in one position, train controlled means at the entrance of the block for actuating the other bar for operating the signal bar in opposition to the weight and to display the signal in the other position, a lock for holding the bars against the action of the weight, and train controlled means, actuated due to the exit of the train from the block for releasing the bar and the signal whereby they are subject to the action of the weight.

5. In a railway block signal system for railways, a closed electrical circuit including a source of electrical energy, the traffic rails and a primary electric motor; a secondary circuit including a source of electrical energy and two switches; a visual signal; two slidable bars; connecting mechanism for both bars, whereby movement of one bar in one direction will cause the movement of the other bar in an opposite direction, one of said bars being connected to the signal; an overbalancing means for the bars and the signal connected to the bar attached to the signal to normally hold the signal at safety; means controlled by one of the bars for closing one of the switches of the secondary circuit when the bars are operated against the overbalancing means; an automatic lock for holding the bars against the overbalancing means when said switch is closed; an electrical control for the lock disposed in the secondary circuit; train controlled means at the entrance of the block for moving the members against the overbalancing means and into locked position with one switch closed, the short circuiting of the rails by the train causing the deënergization of the primary electric motor, while the passage of the train out of the block and the consequent energization of said primary electric motor closes the second switch of the secondary circuit to energize said circuit and electrically actuate the automatic lock to release the bars whereby they are moved by the overbalance and the first switch is simultaneously opened.

[Claim 6 not printed in the Gazette.]

1,114,478. STAMP-FEEDING MECHANISM. JOSÉ IBARRA, Habana, Cuba. Filed Apr. 28, 1914. Serial No. 834,952. (Cl. 101—42.)



1. A stamp-feeding mechanism, comprising a variable-speed feed embodying an elongated, tapered, driving member; a relatively short correspondingly-tapered free-running member driven by said driving member; a driving shaft; a transmission mechanism connecting said driven member and said driving shaft, said mechanism embodying a rocking lever; a cam member mounted on said driving shaft to rock said lever; and means connecting said lever and said elongated, tapered member, embodying a yielding engaging member and a wheel to be driven by said yielding engaging member when said engaging member is moving in one direction only.

2. A stamp-feeding mechanism, comprising a variable-speed feed embodying a feed roll having a plurality of elongated, mutually-converging, equally-tapered sections; a plurality of tapered wheels frictionally engaging said sections; a screw-threaded member uniting said wheels to move the same in unison; a driving shaft; and an intermediate transmission mechanism connecting said roll and said shaft.

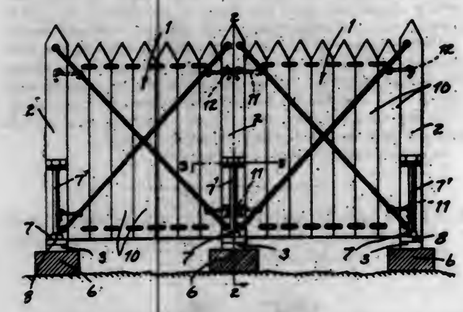
3. A stamp-feeding mechanism, comprising a feed roll having equally-tapered, centrally-converging, coaxial feeding sections; a plurality of relatively short, tapered coaxial wheels; and a double-ended, reversely-threaded, connecting member for said wheels, the manipulation whereof operates to draw together and move apart said wheels.

4. A stamp-feeding mechanism, comprising a feed roll having equally-tapered, centrally-converging, coaxial feeding sections; a plurality of relatively-short, tapered coaxial wheels; a double-ended, reversely-threaded, connecting member for said wheels, the manipulation whereof operates to draw together and move apart said wheels; and means for holding said connecting member co-central with said roll.

1,114,479. PORTABLE FENCE. HENRY IVEN, Chicago, Ill. Filed Jan. 14, 1914. Serial No. 812,090. (Cl. 256—24.)

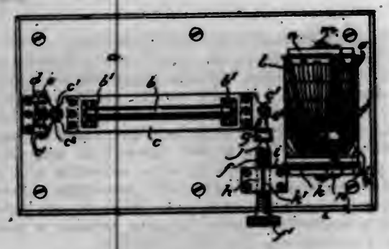
A fence of the class described comprising a plurality of sections, each section comprising an upright, a bar having openings formed therein, said bar being adapted to engage a supporting tie, said bar having one end pivotally connected to the lower end of the upright, a brace bar having its upper end pivotally connected to the uprights, and its lower end provided with an off-set having an opening formed therein for registry with one of the openings of the

bar, securing devices passed through the opening in the off-set and openings in said bar for attaching the bar to



the supporting tie, and hingedly connected panels detachably connected to the uprights.

1,114,480. APPARATUS FOR DETERMINING THE TRIM OR INCLINATION OF THE KEEL OF VESSELS. JOHN JENSEN, Sydney, New South Wales, Australia. Filed June 20, 1913. Serial No. 774,872. (Cl. 33—214.)



1. An apparatus of the class described comprising a pivotally supported spirit level, a revoluble indicator marked with scales denoting lengths and depths, and a screw connected to and simultaneously operating said level and indicator.

2. An apparatus of the class described comprising a pivotally supported spirit level, a screw swivelly connected to said spirit level, means for holding the screw with its axis in a fixed line, a revoluble indicator, and a flexible member connecting said screw to said indicator.

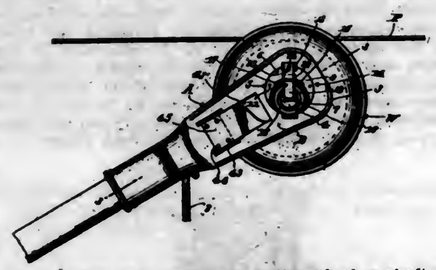
3. An apparatus of the class described comprising a pivotally mounted spirit level, a screw connected to said spirit level, means for holding the screw with its axis in a fixed line, a revolubly mounted drum, a flexible member connecting said screw and drum, a spring arranged in said drum, said drum having oppositely disposed scales, and a pointer for indicating on the scales movement of said drum.

4. In an apparatus of the class described, a screw, a flexible member attached thereto and wound in the thread thereof, and a revolubly mounted indicator, the opposite end of said flexible member being connected to and arranged to impart movement to said indicator upon rotation of said screw.

5. In an apparatus of the class described, a pivotally mounted spirit level, a screw having a swivel connection with said spirit level, means for holding the screw with its axis in a fixed line, a flexible member wound around and having one end affixed to said screw, a drum, a wheel connected thereto, the opposite end of the flexible member being secured to said wheel, and a spring fitting within and connected to said drum for operating the latter in one direction, whereby to maintain a constant pull upon the flexible member.

[Claims 6 and 7 not printed in the Gazette.]

1,114,481. WHEEL-MOUNT. ALFRED JOHNSON, Quincy, Ill. Filed July 25, 1913. Serial No. 781,259. (Cl. 64—70.)



1. A trolley harp carrying a trolley wheel, a shaft for the wheel, bearings provided in the trolley harp for the shaft, rotatable boxes carried by the harp and receiving the bearing, and the said bearings being arranged eccentrically of the boxes.

2. A trolley harp having its arms provided with rotatable boxes, said boxes having eccentric openings, rotatable bearings arranged within the openings, a shaft for the bearings and a trolley wheel carried by the shaft.

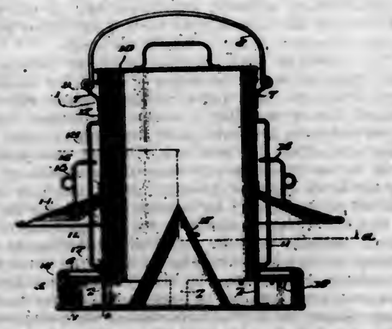
3. A trolley harp having its arms provided with openings, a bearing box mounted for rotation within each of the openings, each of the bearing boxes having an eccentric opening, a bearing mounted for rotation within each of the openings, a shaft within the bearings, a trolley wheel mounted upon the shaft, and spring members connected with the harp and exerting a tension upon the opposite sides of the trolley wheel.

4. A trolley harp, journal boxes carried by the arms of the harp, bearing members within the boxes, a shaft for the bearings, a trolley wheel carried by the shaft, means, including mechanism for limiting the rotary movement of the bearings within the boxes, and means including members attached to the boxes and coöperating within the shaft for limiting the longitudinal movement of the shaft with relation to the bearings.

5. A trolley harp having rotatable bearing boxes provided with eccentric openings, spherical bearings within the openings, a shaft arranged within the bearings, means, comprising a detachable member for sustaining the shaft within the bearings and for limiting the longitudinal movement of the shaft, means for sustaining the detachable members upon the boxings and in engagement with the shaft, means arranged between the bearings and harp for limiting the longitudinal movement of the boxings upon the harp in two directions, and a trolley wheel mounted upon the shaft.

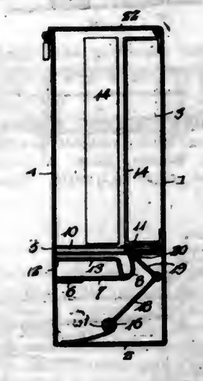
[Claims 6 to 15 not printed in the Gazette.]

1,114,482. POULTRY-FEEDER. ANDREW JOHNSON, Central City, Ky. Filed Apr. 1, 1914. Serial No. 828,822. (Cl. 119—52.)



A poultry feeder of the class described comprising a feed pan, a bottomless hopper arranged on the center of the feed pan and having openings at its lower side, a spreading cone in the center of the pan and at the bottom of the hopper and a cover for the pan carried by and vertically adjustable on the hopper, the said hopper being provided with supporting bars on its sides and having adjusting openings, and the said cover being provided with spring pins to engage the openings of said supporting bars.

1,114,483. SOAP-BOX. ARCHIE L. JONES, Portland, Oreg. Filed Dec. 2, 1913. Serial No. 804,135. (Cl. 146—7.)



1. A soap dispensing device comprising a casing, a drawer slidably mounted therein, soap supporting members carried by the drawer, means for actuating the drawer, and a knife movable with the drawer and arranged in a plane above the soap supporting members.

2. In a soap dispensing device, a casing, a drawer slidably mounted therein means for actuating the drawer, soap supporting members carried by the drawer, and a knife carried by the drawer and movable therewith, said knife being arranged in a plane above the soap supporting members and adapted to support the cake of soap when the supporting members are inactive.

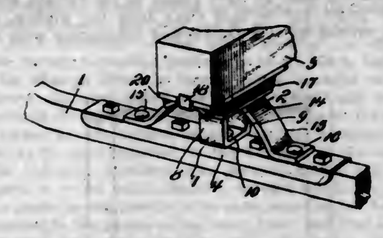
3. A soap dispensing device comprising a casing, a drawer slidably mounted in the casing, a cutting blade formed on an integral part of the drawer, and soap supporting members carried by the drawer and arranged below the blade.

4. A soap dispensing device comprising a casing, a drawer slidably mounted in the casing, said drawer having an upwardly and forwardly bent rear portion and a rearward extension on the upper edge of said portion, a cutting edge formed at the juncture of said portion and extension, and soap supporting devices carried by the drawer and arranged below the cutting edge.

5. A soap dispensing device comprising a casing, soap guiding strips spaced from the casing, a drawer slidably mounted in the casing, a knife carried by the drawer, soap supporting members carried by the drawer and arranged below the knife and projected inwardly beyond the vertical plane of the strips, a cutting blade carried by the drawer and arranged beneath one of the strips when the drawer is in retracted position, manually operated means for projecting the drawer, and a spring for retracting the drawer when the manually operated means is released.

1,114,484. SLED-KNEE. LAWRENCE F. JORDAN, Chattaroy, Wash. Filed Jan. 28, 1914. Serial No. 815,021. (Cl. 21—48.)

1. A knee for sled runners including a channeled base adapted to engage with the sides of the runner and rest upon the top of the same, a main brace arranged longitudinally of the base, a transverse brace arranged centrally of the base and main brace, a plate secured to the braces, and a bunk supporting the rocker plate loosely connected with the first mentioned plate.



2. A knee for sled runners including an elongated channeled base which is adapted to be arranged upon the runner to engage with the top and sides thereof, an arched main brace arranged longitudinally of the base, an inverted substantially U-shaped brace arranged transversely of the runner and positioned centrally of the main brace, a plate secured to the braces, said plate being substantially curved in cross section, a flat rocker plate loosely connected with the said round plate, and the said flat plate adapted to support the bunk upon the sled.

3. A knee for sled runners including a channeled base, a main brace comprising an arched member arranged longitudinally of the base, a transverse brace arranged centrally of the longitudinal brace, said transverse brace including a substantially U-shaped member, one of the side arms of which being arranged at a right angle to the runner, the second arm being arranged angularly of the runner, both of the arms having their ends outturned to provide ears, a rocker plate having a central straight portion and being rounded to its longitudinal edges from its said straight portion secured to the ears and to the arched longitudinal brace, and a bunk supporting rocker plate loosely connected with the first mentioned rocker plate.

4. A knee for sled runners including a channeled base, an arched main brace arranged longitudinally of the base, a transverse brace arranged centrally of the runner and of the main brace, an arched rocker plate secured to the braces, said plate having its transverse ends formed with bendable fingers, a flat bunk supporting rocker plate arranged upon the arched plate, said rocker plate having its ends notched, and the fingers of the first mentioned plate adapted to be bent to within the notches of the bunk supporting rocker plate.

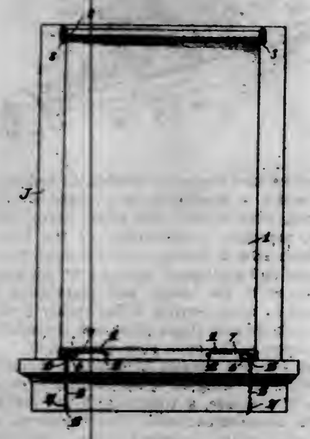
5. A knee for sled runners including a channeled base, a main brace arranged longitudinally of the base, a transverse plate arranged centrally of the base and main brace, an arched plate disposed transversely of the base and connected with the braces, said plate having a central elongated opening, said plate having its transverse edges provided with bendable fingers, a flat bunk supporting rocker plate, said plate being centrally provided with a stud which is adapted to be received within the slot of the first mentioned plate, said rocker plate having its transverse edges centrally notched, and the said notches adapted to receive the fingers of the first mentioned plate when the said fingers are bent over the rocker plate.

1,114,485. WINDOW-SHADE ATTACHMENT. EMIL KERN, Irvington, N. J. Filed Dec. 27, 1913. Serial No. 809,035. (Cl. 156—10.)

1. The combination with a window shade, of brackets secured to the lower edge of the shade adjacent to the ends thereof, a horizontal arm journaled in each bracket and capable of swinging movement, means holding said arms normally against the curtain, and means carried by the window jamb and adapted to be engaged by said arms and hold the same at right angles to the curtain whereby the latter will be held away from the window.

2. The combination with a window shade, of brackets secured to the lower edge of the shade adjacent to the ends thereof, a horizontal arm journaled in each bracket and capable of swinging movement, means holding said

arms normally against the curtain, means carried by the window jamb and adapted to be engaged by said arms and hold the same at right angles to the curtain whereby the latter will be held away from the window, and means carried by said curtain and coöperating with said arms.



3. The combination with a window shade, of brackets secured to the lower edge of the shade adjacent to the ends thereof, a horizontal arm journaled in each bracket and capable of swinging movement, means holding said arms normally against the curtain, means carried by the window jamb and adapted to be engaged by said arms and hold the same at right angles to the curtain whereby the latter will be held away from the window, and chains depending from the lower edge of said curtain, and hooks carried by the window jamb and adapted to be engaged by the free ends of said chains to hold the curtain against swinging movement.

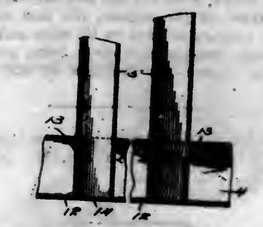
4. The combination with a window shade, of brackets secured to the lower edge of the shade adjacent to the ends thereof and each comprising a securing plate, a casing carried by said plate, a vertical pin journaled in said casing, arms secured to the upper end of said pin, a spring encircling said pin and acting to hold said arms normally against the curtain, hooks carried by the adjacent portions of the window jamb and adapted to be engaged by the outer ends of said arms to hold the latter at right angles to the curtain whereby the curtain will be held away from the window.

5. The combination with a window shade, of brackets secured to the lower edge of the shade adjacent to the ends thereof and each comprising a securing plate, a casing carried by said plate, a vertical pin journaled in said casing, arms secured to the upper end of said pin, a spring encircling said pin and acting to hold said arms normally against the curtain, hooks carried by the adjacent portions of the window jamb and adapted to be engaged by the outer ends of said arms to hold the latter at right angles to the curtain whereby the curtain will be held away from the window, and lugs extending upwardly from each plate in the path of movement of said arms and serving to limit the movement of the arms under the action of the springs.

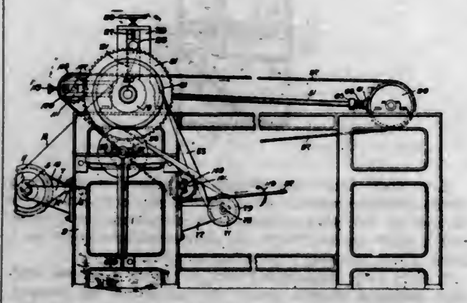
[Claim 6 not printed in the Gazette.]

1,114,486. BED CONSTRUCTION. RALPH R. KIMBALL, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,239. (Cl. 5—4.)

In a bed construction a hollow crossbar provided with an opening in one side, a filler bar passing through said opening and engaging the opposite side of the crossbar, the entire end of the filler bar engaging the crossbar and being formed complementarily with respect to said crossbar, and bulged portions formed upon the filler bar extending outwardly therefrom and engaging the interior face of the crossbar.



1,114,487. FABRIC-FEEDING MECHANISM. CARL J. LANDIN, Boston, Mass., assignor to Clifton Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed July 29, 1910. Serial No. 574,503. (Cl. 242—55.)



1. In a machine of the class described, the combination of take-up means for drawing material through the machine; introductory feeding means for leading the material to said take-up means; means to connect said material to said feeding means; and means automatically to transfer the lead of the material from said feeding means to said take-up means.

2. In a machine of the class described, the combination of take-up means for drawing material through the machine; introductory feeding means for conducting the material to said take-up means; leading means secured to said material having provision for connecting the same with said feeding means; and means coöperating with said take-up means automatically to disconnect said leading means from said material and connect the latter to said take-up means.

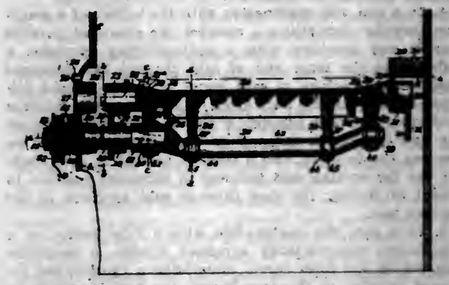
3. In a machine of the class described, the combination of take-up means for drawing material through the machine; a sprocket chain for leading the material to said take-up means; supplemental links on said chain; and a hook secured to said material to connect the same to one of said supplemental links.

4. In a machine of the class described, the combination of take-up means for drawing material through the machine; introductory feeding means for leading the material to said take-up means; a pad detachably secured to said material; side hooks on said pad for engagement with said feeding means; and means secured to said pad coöperating with said take-up means automatically to withdraw said hooks from engagement with said feeding means.

5. In a machine of the class described, the combination of take-up means for drawing material through the machine; introductory feeding means for leading the material to said take-up means; means secured to said material and having a hook thereon for detachable engagement with said feeding means; a second hook on said feeding means; and means coöperating with said take-up means automatically to disconnect said hook from said feeding means and connect said other hook to said take-up means whereby to transfer the feed from said feeding means to said take-up means.

[Claims 6 to 13 not printed in the Gazette.]

1,114,488. GRATE. HERMAN F. LANGENHOP, New York, N. Y. Filed Feb. 6, 1914. Serial No. 816,871. (Cl. 126—177.)



1. In a structure of the class described, a channel frame having depending guide lugs at its sides, supports for the channel frame, a carrier frame mounted on said supports, arranged below the channel frame and having grooves in its upper side engaged by the lugs of the channel frame, an outer grate having centrally arranged supports at its ends mounted in bearings in the carrier frame and also provided with vertical guides and with hangers, a crank shaft mounted in said hangers and an inner grate having pivots in its ends mounted for vertical movement in the guides of the outer grate, and also having depending rock arms engaged with the crank of said crank shaft.

2. In a structure of the class described, a channel frame having depending guide lugs at its sides, supports for the channel frame, a carrier frame slidably mounted on said supports, arranged below the channel frame and having grooves in its upper side engaged by the lugs of the channel frame, an outer grate having centrally arranged supports at its ends mounted in bearings in the carrier frame and also provided with vertical guides and with hangers, a crank shaft mounted in said hangers and an inner grate having pivots in its ends mounted for vertical movement in the guides of the outer grate, and also having depending rock arms engaged with the crank of said crank shaft.

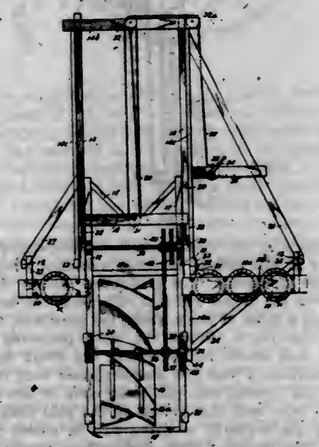
3. In a structure of the class described, a channel frame having depending guide lugs at its sides, supports for the channel frame, a carrier frame mounted on said supports, arranged below the channel frame and having grooves in its upper side engaged by the lugs of the channel frame, an outer grate having centrally arranged supports at its ends mounted in bearings in the carrier frame and also provided with vertical guides and with hangers, a crank shaft mounted in said hangers and an inner grate having pivots in its ends mounted for vertical movement in the guides of the outer grate, and also having depending rock arms engaged with the crank of said crank shaft, means to limit the extent of rocking movement of the outer grate and means to limit the extent of rocking movement of the inner grate.

4. In a structure of the class described, a channel frame having depending guide lugs at its sides, supports for the channel frame, a carrier frame mounted on said supports, arranged below the channel frame and having grooves in its upper side engaged by the lugs of the channel frame, an outer grate having centrally arranged supports at its ends mounted in the bearing in the carrier frame and also provided with vertical guides and with hangers, a crank shaft mounted in said hangers and an inner grate having pivots in its ends mounted for vertical movement in the guides of the outer grate, and also having depending rock arms engaged with the crank of said crank shaft, the front end of the crank shaft and the front outer grate support having shaker engaging means, and said carrier frame having an opening in its front side affording access to the front end of the crank shaft.

5. In a structure of the class described, a channel frame having depending guide lugs at its sides, supports for the channel frame, a carrier frame mounted on said supports, arranged below the channel frame and having grooves in its upper side engaged by the lugs of the channel frame, an outer grate having centrally arranged supports at its ends mounted in the bearings in the carrier frame and also provided with vertical guides and with hangers, a crank shaft mounted in said hangers and an inner grate having pivots in its ends mounted for vertical movement in the guides of the outer grate, and also having depending rock arms engaged with the crank of said crank shaft, the front end of the crank shaft and the front outer grate support having shaker engaging means, and said carrier frame having a bearing opening in its front side affording access to the front end of the crank shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,114,489. CURRENT-MOTOR. JOHN WALLACE LAURENT, Spokane, Wash., assignor of one-third to William Kellenger, Spokane, Wash. Filed July 22, 1913. Serial No. 780,456. (Cl. 170—131.)



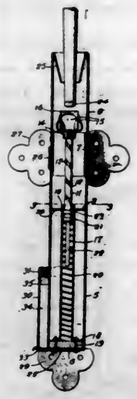
1. In a current motor, a float frame, a vertical sliding frame having guided movement on the float frame, a current motor carried by the sliding frame, means for raising and lowering the sliding frame, the float frame having the lower portion of the guide member at the down stream side of the motor hinged to be swung upward when the current motor is raised, and adapted to be lowered when the motor is to be lowered.

2. In a current motor, a float frame having front and rear vertical guide members thereon, a vertically sliding motor frame having guided movement on said guide members, a current motor carried by the sliding frame, and means for raising and lowering said sliding frame, the rear vertical guide member on the float frame having its lower portion hinged to swing from a position in line with the upper portion of the said guide member to a raised position, and a brace carried by said hinged portion of the guide member, and adapted when in the lowered position to be pressed against a relatively fixed portion of the float frame.

1,114,490. DEVICE FOR CHALKING CUES. HARRY HENRY LEECE, Portland, Oreg. Filed Feb. 28, 1914. Serial No. 821,839. (Cl. 46—8.)

1. A device of the class described, comprising a body tube, a block positioned at one end thereof for closing the

same, a partition positioned transversely of the tube, a spring tube of smaller diameter than the body tube positioned centrally and axially of said body tube, and extending between said partition and said block, a coil spring positioned within said spring tube, a thrust block supported by said coil spring, a bearing formed on said partition, a shaft extending through said bearing and provided with a plate positioned in the spring tube, and adapted to rest against said thrust block, said shaft provided with a spiral groove, said bearing provided with a lug extending into said groove, a chalk holder secured to the end of the shaft opposite the plate, a guide cap detachably secured to said body tube, said cap comprising a tube having a conical flange portion depending withing the tube from its upper end, said flange portion adapted to form a guide for projecting a billiard cue tip on to a lump of chalk supported by said chalk holder, and means for collecting the dust formed incident to the chalking process.



2. A device of the class described, comprising a body tube closed at one end, a partition arranged transversely of the tube, a spring tube positioned within the body tube between the closed end and said partition, means for maintaining a block of chalk above the partition, for automatically chalking a billiard cue when projected against the chalk, and means for collecting the chalk dust, said means comprising a dust pan hinged to said body tube near the lower end thereof, said pan being open on one side and adapted to have said side closed by the said body tube, a spring clip for normally securing pan in closed position, said body tube provided with perforations communicating with the said pan, said partition provided with an opening for allowing entrance of chalk dust into the lower end of the body tube.

1,114,491. SHOT-MAGAZINE FOR SPRING AIR-GUNS. CHARLES F. LEFEVER, Plymouth, Mich., assignor to Daisy Manufacturing Company, Plymouth, Mich., a Corporation of Michigan. Filed May 31, 1913. Serial No. 771,014. (Cl. 124—11.)

1. In a gun, the combination with the barrel, of a magazine therefor formed of a member having a U-shaped cross section, said member being arranged parallel to the barrel, and a deflector at the inner end of said member arranged opposite an aperture in the barrel.

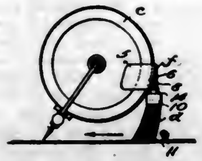
2. In a gun, the combination with a barrel, of a magazine therefor comprising a channel bar arranged parallel thereto, a spring-pressed follower within the channel, an actuating lug on said follower, projecting outward through a slot between the channel bar and the barrel and forming a means of compressing the spring, and a deflector at the inner end of said channel bar arranged opposite an aperture in the barrel.

3. In a gun, the combination with the barrel, of a magazine therefor, comprising a channel bar arranged parallel thereto, flanges upon opposite sides of said channel bar embracing the barrel and forming a means for attaching the channel bar to the barrel, a spring-pressed follower within said channel bar, a finger on said follower projecting outward through the slot between the channel bar and the barrel, and a notched bearing in said channel bar for engaging said finger to hold said spring in compressed position for loading the magazine.

4. In a gun, the combination with the barrel, of a magazine therefor comprising a channel bar arranged parallel thereto and provided with a shot-receiving aperture, a deflector at the inner end of said channel bar arranged opposite an aperture in said barrel, a spring-pressed follower in said channel bar, a lug or finger on said follower projecting outward through a slot between said channel bar and the barrel, forming an actuating means for retracting the follower, and a notched bearing in said channel bar for holding said follower in retracted position to permit of feeding the shot through said aperture to the channel bar.

5. In a gun, the combination with a false barrel, of a true barrel concentrically arranged therein, a magazine also within the false barrel comprising a channel-bar arranged parallel to the true barrel, the true barrel being provided with an aperture communicating with the interior of the channel-bar.

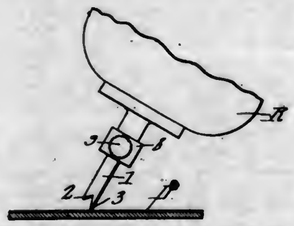
1,114,492. PHONOGRAPH ATTACHMENT. ALBERT H. LEISSING, New York, N. Y. Filed Nov. 29, 1913. Serial No. 803,762. (Cl. 181—15.)



1. In combination, a clip formed with a pair of resilient jaw members arranged in spaced relation, a pocket located between the jaws, a support located in the pocket, and a brush located in the pocket and slidingly fitted on the support.

2. In combination, a clip formed with a pair of resilient jaw members arranged in spaced relation, a pocket located between the jaws, a support located in the pocket, and a brush located in the pocket and slidingly fitted on the support, and yieldingly held against movement in one direction.

1,114,493. STYLUS. SAMUEL LEVIN, Highland Park, Ill. Filed June 30, 1913. Serial No. 776,672. (Cl. 181—11.)



1. The combination with a reproducer having a stylus receiving clamp provided with a triangular socket, of a stylus composed of a flat relatively thin strip of resilient material disposed against one wall of the socket of the clamp so that the body thereof is disposed at an acute angle to the path of the sound grooves of a record, and whereby the reproducer is resiliently supported by the stylus.

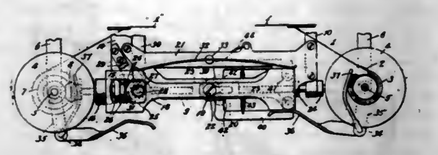
2. The combination with a reproducer having a stylus receiving clamp provided with a triangular socket, of a stylus composed of a flat relatively thin strip of resilient material disposed against one wall of the socket of the clamp so that the body thereof is disposed at an acute angle to the path of the sound grooves of the record, and whereby the reproducer is resiliently supported by the stylus, the opposite ends of said strip each being provided with a record engaging point.

3. The combination with a sound reproducer having a stylus receiving clamp provided with a triangular socket, of a stylus composed of a flat relatively thin strip of resilient material disposed within the socket of the clamp, whereby the body of the stylus is held co-extensive with one wall of the socket to be disposed at an acute angle to the path of the sound groove of the record and forms a resilient support for the reproducer.

4. The combination with a sound reproducer having a stylus receiving clamp provided with a triangular socket, of a stylus composed of a flat relatively thin strip of resilient material mounted within the socket of the clamp, whereby the body of the stylus is held co-extensive with one wall of the socket to be disposed at an acute angle to the path of the sound groove of the record and forms a resilient support for the reproducer, the opposite ends of said stylus, each being provided with a record groove engaging means.

5. The combination with a sound reproducer having a stylus receiving clamp provided with a triangular socket, of a stylus composed of a flat relatively thin strip of resilient material mounted within the socket of the clamp, whereby the body of the stylus is held co-extensive with one wall of the socket to be disposed at an acute angle to the path of the sound groove of a record and forms a resilient support for the reproducer, the opposite ends of the stylus, each being provided with a plurality of points for engagement one at a time with the sound groove of a record.

1,114,494. AUTOMATIC RIBBON-REVERSING MECHANISM. ROBERT C. LITTLE, Chicago, Ill. Filed Jan. 2, 1914. Serial No. 810,006. (Cl. 197—164.)



1. The combination with a ribbon drive mechanism having a member shiftable to reverse the same, of means for initially moving said member, a relatively shiftable cam connected to said member and a pair of spring actuated followers coöperating with said cam to complete the throw of said member.

2. The combination with a ribbon drive mechanism having a member shiftable to reverse the same, of means for initially moving said member, a cam shiftably mounted on said member, and a pair of spring actuated followers cooperating with said cam to complete the throw of said member.

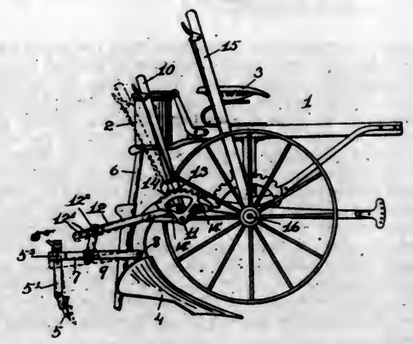
3. The combination with a ribbon drive mechanism having a member shiftable to reverse the same, of means for initially moving said member, and means for completing the throw of said member comprising a triangular cam pivotally mounted on said member, and a pair of spring actuated cam followers.

4. The combination with a ribbon drive mechanism having a member shiftable to reverse the same, of means for initially moving said member, and means for completing the throw of said member comprising a triangular cam, and a pair of spring actuated followers coöperating with said triangular cam, the latter having a truncated corner adapted to move past one of said followers.

5. The combination with a ribbon drive mechanism having a member shiftable to reverse the same, of means for initially moving said member, and means for completing the throw of said member comprising a shiftable cam, a pair of pivoted levers coöperating with said cam, and an actuating spring connecting said levers.

[Claims 6 to 24 not printed in the Gazette.]

1,114,495. ATTACHMENT FOR SEED-PLANTERS. ELI M. LUSK, Knox City, Tex. Filed Oct. 7, 1913. Serial No. 793,926. (Cl. 111—11.)



1. The combination with a seed planter having a seed box in rear of its seat and rearward extending pivotal arms carrying coverer plows, of an attachment comprising a rack bar secured in place close to the upper approximately horizontal portion of the plow beam, a lever pivoted to said rack bar and having a pawl connection therewith, a transverse bar having detachable connection with said pivotal arms and provided with an upward extending arm rigid therewith, and a connecting rod between said lever and the upper end of said upward extending arm.

2. The combination with a seed planter having a seed box in rear of its seat and rearward extending pivotal arms carrying coverer plows, of an attachment comprising a rack bar secured in place close to the upper approximately horizontal portion of the plow beam, a lever pivoted to said rack bar and having a pawl connection therewith, a transverse bar having detachable connection with said pivotal arms and provided with an upward extending arm rigid therewith, and a rod having connection with said lever near the pivot thereof and adjustable connection with the upper end of said upward extending arm.

3. An attachment for seed planters having a seed box in rear of the seat and rearward extending pivotal arms carrying coverer plows, comprising a rack bar having forward and rearward extending brace arms for connection with the upper horizontal portion of a plow beam, close thereto, a lever pivoted to said rack bar and having a pawl connection therewith to fix the adjustment, a transverse bar having downturned ends to embrace said pivotal arms, an upward extending arm rigidly secured to one of said ends, and a transverse bolt engaging perforations of said ends and of said pivotal arms, and a connecting rod between said lever and the upper end of said upward extending arm.

1,114,496. SOUND-INTENSIFIER. CHARLES DOWNEY LYON, St. Louis, Mo., assignor of one-half to Florence E. Wolf, St. Louis, Mo. Filed June 13, 1912. Serial No. 703,407. (Cl. 179—187.)

1. A sound intensifier comprising a hollow shell bearing spacing lugs on the edge thereof, said lugs being for engagement with the diaphragm of a sound transmitter mouth piece to space said edge from the diaphragm to provide passages that conduct sound waves to the diaphragm and having means for attaching said shell to said diaphragm.

2. In a telephone, the combination with the mouth-piece thereof having a perforated diaphragm of a sound intensifier comprising a hollow shell located within said mouth-piece and having a lug on the edge thereof resting against said diaphragm and a finger borne by said lug extending through a perforation in said diaphragm and being bent so as to secure said shell to said diaphragm.

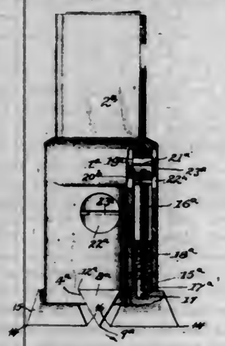
3. In a telephone, the combination with the mouth-piece thereof having a perforated diaphragm of a sound intensifier comprising a hollow shell having lugs on the edge thereof resting against one side of said diaphragm and fingers borne by some of said lugs extending through perforations in said diaphragm and being bent on the other side of said diaphragm to secure said shell to the latter.

4. In a telephone, the combination with the mouth-piece thereof having a perforated diaphragm of a sound intensifier comprising a hollow shell having lugs on the edge thereof resting against one side of said diaphragm and fingers borne by some of said lugs extending through perforations in said diaphragm and being bent on the other side of said diaphragm to secure said shell to the latter, there being a space between each two adjacent lugs to allow the sound waves to pass through the perforations in said diaphragm.

5. A sound intensifier composed of a hollow shell formed with spaced lugs on the edge thereof for engagement with the diaphragm of the mouth piece of a sound transmitter, and bendable fingers borne by some of said lugs for extension through perforations in said diaphragm and for engagement with the rear side thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,114,497. DRILL. JOSEPH D. MACDONALD, Butte, Mont. Filed Feb. 27, 1911. Serial No. 611,009. (Cl. 255—63.)



1. In a drill, the combination of a bit-stock or body provided with a plurality of undercut grooves in its outer end; a plurality of bits adapted to be mounted in said grooves, each of said bits being triangular in cross-section and adapted to make a relatively close fit with the walls of one of said grooves and to be held thereby; a bolt mounted in the bit-stock adjacent to each of said bits, the bolt when protruded being adapted to enter a recess formed in the side face of the bit; and positively-actuated means mounted in and carried by the bit-stock for forcing said bolts outwardly into operative relation with the bit.

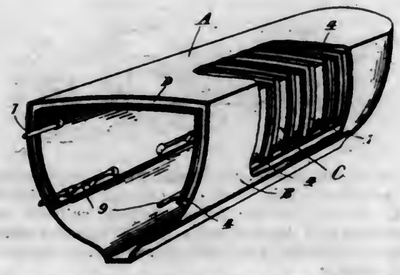
2. In a drill, the combination of a bit-stock or body provided with a plurality of undercut grooves in its outer end; a plurality of bits adapted to be mounted in said grooves, each of said bits being triangular in cross-section; a bolt mounted within the body in line with each of said bits, and adapted when moved outwardly to enter an opening formed in the adjacent side face of the bit; a spring operating upon each of the bolts to withdraw the same; and an eccentric working upon the inner end of each bolt and adapted to force the same outwardly into locking engagement with the bit.

3. In a drill, the combination of a bit-stock or body provided with a plurality of undercut grooves in its outer end; a plurality of bits adapted to be seated in said grooves, each of said bits being triangular in cross-section, each bit being adapted to make a relatively close fit with the walls of the groove in which it is mounted; a bolt mounted in the body adjacent to each of said bits and adapted to enter an opening formed in the adjacent side face of the bit; a spring tending to draw the bolt inwardly away from the bit; and a pair of rotatable members mounted in the bit-stock, one for each pair of bolts, each of said rotatable members being provided with a pair of eccentrics located in line with the respective bolts, whereby upon rotation of the eccentrics the bolts may be protruded or moved outwardly into locking engagement with the bits.

4. In a drill, the combination of a bit-stock or body provided with intersecting undercut grooves upon its outer end; a screw mounted in the outer end of said body at the point of intersection of said grooves and forming a fixed abutment for the bits, the outer end of the screw extending a relatively slight distance from the face of the body; a plurality of bits mounted in said grooves, each of said bits being triangular in cross-section; a bolt located in the body adjacent to each of said bits and adapted to enter a recess formed in the adjacent face of the bit; and means for actuating said bolts, whereby they may be protruded into the sockets in the bits.

5. A bit for drills, triangular in cross-section, the ends of the bit converging somewhat sharply toward each other in one direction, whereby two sharp points are formed at the ends of the cutting edge of the bit.

1,114,498. HEATING SHIPS AND THE LIKE. MALCOLM MACLEOD, Toronto, Ontario, Canada. Original application filed Nov. 1, 1913, Serial No. 798,769. Divided and this application filed Feb. 24, 1914. Serial No. 820,713. (Cl. 114—0.5.)

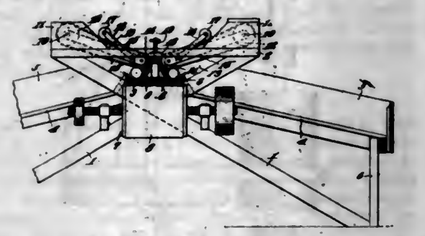


1. The combination with the outer hull of a ship, of an inner casing located partly below the water line and extending upwardly and across the deck, means of subdividing the said casing into compartments, and means of supplying heat to the said compartments, as and for the purpose specified.

2. The combination with the outer hull of a ship, of an inner casing located partly below the water line and extending upwardly and across the deck, ribs located between the outer hull and inner casing and adapted to subdivide said casing into compartments, such ribs having orifices therethrough, and means of supplying heat to the said compartments, as and for the purpose specified.

3. The combination with the outer hull of a ship, of an inner casing located partially below the water line and extending upwardly and across the deck, ribs located between the outer hull and the inner casing and adapted to subdivide the said casing into compartments, such ribs having orifices therethrough, an inlet pipe connected to such compartments through which steam and the like are designed to pass and an outlet pipe connected to the said compartment and through which the steam and the like is designed to be discharged, as and for the purpose specified.

1,114,499. FRUIT-SORTING MACHINE. JAMES L. MAULL, Crescent City, Fla. Filed Oct. 29, 1913. Serial No. 798,121. (Cl. 130—32.)



1. In a grading machine, a fruit feeder including a V-shaped trough, one side portion of the trough being inclined laterally at a relatively small angle and being movable longitudinally to carry the fruit therewith with the fruit leaning against the other side portion, the last mentioned side portion being inclined laterally at a relatively large angle, and gaging and ejecting means disposed above the first mentioned side portion of the trough and working away from the second mentioned portion.

2. In a fruit grading machine, a fruit feeder including a V-shaped trough, the sides of the trough being inclined laterally at relatively small and large angles, and a conveyer belt movable upon that side of the trough which is inclined at a relatively small angle, to carry the fruit therewith with the fruit leaning against the other side of the trough, and gaging and ejecting means disposed above the conveyer belt and working away from the last mentioned side of the trough.

3. In a grading machine, a fruit feeder including a V-shaped trough, and a conveyer belt movable upon one side portion of the trough, and having one edge projecting beyond the said side portion of the trough to yield as the fruit passes over the said edge, and yieldable gaging and ejecting means disposed above the conveyer belt and working away from the other side portion of the trough.

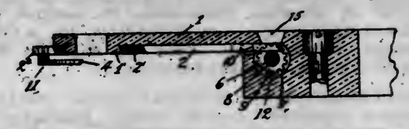
4. In a grading machine, a fruit feeder including a V-shaped trough, and a conveyer belt movable upon one side portion of the trough and having one edge projecting beyond said side portion of the trough to yield when the fruit is ejected from the trough over the said edge of the belt, and a gaging and ejecting means including a pulley disposed adjoining the other side portion of the trough, and a belt trained over the said pulley, the lower run of the last mentioned belt being disposed in coöperative relation above the conveyer belt and working away from the second mentioned side portion of the trough.

5. In a grading machine, a fruit feeder including a trough having a flat bottom and laterally inclined sides, a rail supported directly above the bottom of the trough and having inclined sides forming supplemental V-shaped troughs, with the sides of the first mentioned trough, and a belt passing along the first mentioned trough beneath the rail and having its side portions disposed upon the sides of the first mentioned trough, and gaging and ejecting devices disposed at the sides of the rail and having fruit engaging means movable away from the rail and coöperable with the side portions of the belt.

[Claims 6 and 7 not printed in the Gazette.]

1,114,500. REGULATOR FOR WATCHES. FREDERICK MCINTYRE, Kankakee, Ill., assignor, by mesne assignments, to Edward R. Hills, Chicago, Ill. Filed Mar. 29, 1909. Serial No. 486,451. (Cl. 58—112.)

1. In a regulator for watches, the combination with a balance cock formed with a depending bearing boss at one end, and a balance spring, of a regulator arm having a spring collar embracing said boss and carrying curb pins engaging said balance spring, said regulator arm being positioned wholly beneath and covered by said balance cock, and screw means located wholly below the upper surface of said balance cock adapted to engage the free end of said regulator arm and effect angular adjustment thereof, substantially as described.



2. In a regulator for watches, the combination with a balance cock formed with a transversely disposed chamber and a slot in its upper surface above and communicating with said chamber, of a balance spring, a regulator arm positioned wholly on the under side of said balance cock and covered thereby and carrying curb pins engaging said balance spring, a screw non-rotatably mounted in said chamber, and a nut on said screw engaging the free end of said regulator arm, said nut being accessible through said slot for turning the same on said screw, substantially as described.

3. In a regulator for watches, the combination with a balance cock formed with a transversely disposed chamber and a slot in the upper surface above and communicating with said chamber, of a balance spring, a regulator arm positioned wholly on the under side of said balance cock and covered thereby and carrying curb pins engaging said balance spring, said regulator arm having a spring fork at its free end, a screw non-rotatably mounted in said chamber, a nut on said screw having a radially enlarged portion embraced by the spring fork of said regulator arm and adapted to be engaged by an operating tool through said slot, substantially as described.

4. In a regulator for watches, the combination with a balance cock formed with a transversely disposed chamber and a slot in its upper surface above and communicating with said chamber, of a balance spring, a regulator arm mounted on and wholly beneath said balance cock and covered thereby and carrying curb pins engaging said balance spring, said regulator arm having a spring fork at its free end, a screw non-rotatably mounted in said chamber, a split nut elastically engaging said screw and having a radially enlarged portion embraced by the spring fork of said regulator arm and peripherally milled for engagement by an operating tool through said slot, substantially as described.

1,114,501. PROCESS FOR TREATING TEXTILE FABRICS. CHARLES MAITLAND MCLEOD, New York, N. Y. Filed Mar. 2, 1914. Serial No. 822,004. (Cl. 8—5.)

1. A process of treating textile fabrics by block printing the woolen fabric and subsequently napping the same.

2. A process of treating woolen fabrics by block printing said cloth with inks not affected by the woolen fiber, then napping said fabric.

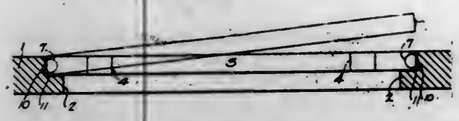
1,114,502. METHOD OF HEATING ORES IN TWO CHAMBERS OR RETORTS ARRANGED BEHIND EACH OTHER. ERNST MENNE, Creuzthal, Germany. Filed July 1, 1912. Serial No. 707,069. (Cl. 75—17.)

1. The method of heating ores, for the recovery of gaseous by-products therefrom, consisting in preliminarily heating the ore, at a moderate temperature, collecting the vapors and gases evolved, transferring the ore without access of air, and heating at a higher temperature, separately collecting the gases evolved at this higher temperature, the products of combustion being excluded from contact with the ore and from the gases evolved therefrom during both of the heating periods.

2. The method of heating manganese ores, for the recovery of oxygen and carbon dioxid therefrom, consisting in preliminarily heating the ore, at a moderate temperature, collecting the vapors and gases evolved, trans-

ferring the ore without access of air, and heating at a higher temperature, separately collecting the gases evolved at this higher temperature, the products of combustion being excluded from contact with the ore and from the gases evolved therefrom during both the heating periods.

1,114,503. FLOOR-BOARD-ANTIRATTLING DEVICE. ERNEST R. MITCHELL, Philadelphia, Pa., assignor to Mitchell Specialty Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 26, 1913. Serial No. 781,372. (Cl. 21—7.)



1. The combination of a floor for a motor vehicle having an opening and provided with supporting shoulders; and a removable section fitting said opening and resting on said shoulders, each end of said section and the adjacent edge of the opening constituting two parts, of which one is provided with a resilient roller and the other has an undercut recess formed with an inclined wall co-acting with said roller to hold the removable section in engagement with the shoulders.

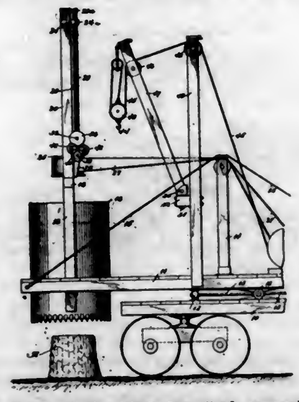
2. The combination of a floor for motor vehicles having an opening provided with supporting shoulders; resilient strips on said shoulders; a removable floor section mounted in the opening in position to rest on said strips; and an anti-rattling device at each end of said floor section, the same consisting of a resilient roller mounted in one of the parts comprised by the floor body and the removable section, the other of said parts having an undercut recess for the reception of said roller.

3. The combination of a floor for motor vehicle having an opening provided with supporting shoulders; a removable section fitting said opening and formed to rest upon said shoulders, there being recesses formed in the edges of the floor structure adjacent the shoulders and having walls inclined inwardly from the opening; a removable floor section fitting the opening; with a resilient roller in each end of said section formed to enter said recesses and remain in the upper portions thereof when the removable section occupies its normal position.

1,114,504. BURNER. GEORGE E. MOEN, Missoula, Mont. Filed June 30, 1914. Serial No. 848,244. (Cl. 158—76.)

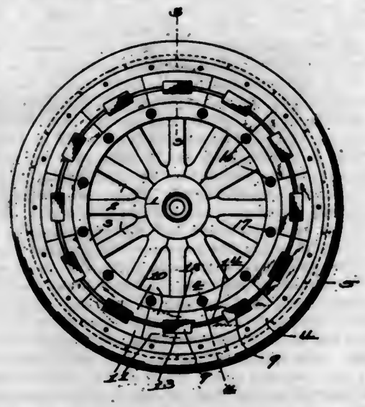
In a device of the class described, a casing having an interior cavity and provided with a web extended from one end of the cavity to the other and dividing the cavity into an air chamber and a fuel chamber, the casing having an external, concaved recess in one end, there being a pair of outlets in said end which communicate with the air chamber and converge toward the recess and open into the recess; said end of the casing having a fuel outlet forming a communication between the fuel chamber and the recess, the air outlets upon the one hand and the fuel outlet upon the other hand lying upon opposite sides of the web, and the casing having inlets communicating, respectively, with the air chamber and with the fuel chamber.

1,114,505. ROTARY STUMP EXTRACTOR AND LIFT. AMBROSE LARKIN MOORE, New Orleans, La. Filed May 28, 1913. Serial No. 770,355. (Cl. 143—83.)



In a machine of the kind described, a vertically disposed cutter-head, a vertical shaft carrying said cutter-head and mounted for vertical movement, means for turning said shaft, parallel feed screws at opposite sides of the shaft, means for guiding the lower end of the shaft, a cross head secured near the upper end of the shaft and having threaded engagement with the feed screws, guiding means for the last mentioned cross-head, beveled pinions on the feed screws, an intermediate shaft having beveled pinions in mesh with the pinions on the feed shaft, a second shaft having a pinion in mesh with one of the pinions of the feed screws, and means for giving a reverse movement to said last mentioned shaft.

1,114,506. VEHICLE-WHEEL. DANIEL MORIARTY, New Orleans, La. Filed Nov. 5, 1913. Serial No. 799,367. (Cl. 152—36.)

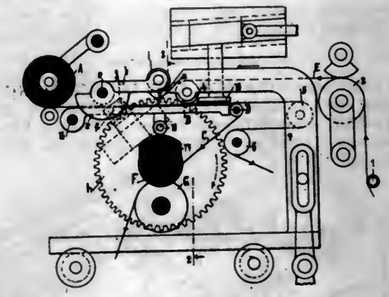


1. In a resilient wheel, the combination of inner and outer members spaced radially and provided with opposed recesses arranged in pairs to form pockets having substantially radial shoulders at their ends, and blocks of flexible material each contained in the pocket formed by the respective pair of recesses and abutting against said shoulders at the ends thereof, said blocks being co-extensive with the width of said members.

2. In a resilient wheel, the combination with inner and outer fellies, inner and outer segmental members interposed between said fellies and having pairs of complemental recesses having substantially right angular end walls between the ends of the respective members, a body of flexible or yieldable material filling the recesses of each pair and abutting against said end walls, and disks applied to opposite sides of said fellies and confining and protecting said flexible bodies.

3. In a resilient wheel, the combination of inner and outer fellies, inner and outer sets of segmental members interposed between said fellies and formed with pairs of complemental opposed recesses, bodies of flexible material contained one in each pair of recesses, said bodies being of the same width as said members a tire applied to the periphery of the outer felly, and disks fixed to opposite sides of the outer felly and to the tire engaging and retaining said members and bodies and overlapping and movably connected to the inner felly.

1,114,507. APPARATUS FOR COVERING THE TIP ENDS OF CIGARETTE-PAPER WITH GOLD-LEAF. JOHANN CARL MÜLLER, Dresden, Germany, assignor to "Universelle" Cigaretten-Maschinen-Industrie System Otto Bergsträsser Aktiengesellschaft, Dresden-Lobtau, Germany, a Corporation of Germany. Filed Oct. 14, 1911. Serial No. 654,750. (Cl. 131—39.)



1. An apparatus for covering the tip-ends of strips of cigarette-paper with gold-leaf, which comprises a supporting table, means for feeding the gold-leaf with its underlying layer over said table, means for feeding a strip of cigarette-paper, means for supplying an adhesive to the tip-end of said cigarette-paper, and an intermittently-oscillating and laterally-shiftable knife for imparting a draw-cut to the knife for severing the gold-leaf without injury to the underlying paper.

2. In an apparatus for covering the tip-ends of strips of cigarette-paper with gold-foil, the combination, of an intermittently-oscillating table, means for feeding the gold-leaf with its underlying layer of paper over the table, an oscillating knife-holder, having a cutting-knife at its outer end, means for laterally-shifting said knife-holder on its shaft for moving the knife by a draw-cut over the gold-leaf for severing it without injuring the underlying paper.

3. In an apparatus for covering the tip-ends of strips of cigarette-paper with gold-foil, the combination, of an oscillating knife-holder, a horizontal shaft for said holder, a knife attached to said holder, and means for shifting the knife-holder laterally on its shaft.

4. In an apparatus for covering the tip-ends of strips of cigarette-paper with gold-leaf, the combination of an intermittently-oscillating and laterally-shiftable knife holder, a knife atached to the same, a horizontal table, means for feeding a layer of gold-leaf with its underlying strip over said table, a roller at the outer end of the knife-carrying arm or holder, a reciprocating carriage moving over said table in a direction opposite to the gold-leaf, and provided with guide-rollers and an inclined inner end, means for feeding a strip of cigarette-paper over the rollers of said carriage, means for supplying an adhesive coating to the tip-end of the strip of cigarette-paper, and an intermittently-actuated pressure-plate for transferring the gold-foil to said strip of cigarette-paper.

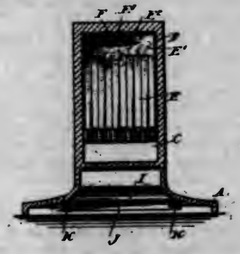
5. In an apparatus for covering the tip-ends of strips of cigarette-paper with gold-foil, the combination of a horizontal table, an intermittently-oscillating and laterally shiftable leaf-severing knife, means for feeding the gold-leaf with its underlying layer of paper over said table, a horizontally-reciprocating carriage extending over the table, guide-rollers on said carriage, means for moving a strip of cigarette-paper over said rollers, fixed guide-rollers for the cigarette-paper forming with the movable guide-rollers a bight in the cigarette-paper, and an intermittently-actuated pressure-plate for transferring the gold-foil severed by the knife to the non-movable bight of cigarette-paper.

[Claims 6 to 11 not printed in the Gazette.]

1,114,508. METAL CAN-BODY OR COMPOSITE BLANK THEREFOR. EDWIN NORTON, Hamilton, Bermuda. Filed May 9, 1912. Serial No. 696,180. (Cl. 220—81.)

A can body comprising a metal sheet having on the inner surface thereof a resisting coating, the outer side edge of said sheet overlapping the inner side edge thereof and connected thereto by solder, said inner side edge being projected beyond the connecting line of the side edges and folded back across said connecting line so as to protect the inner surface of said can body from discoloring when heat is applied for soldering the side edges.

1,114,509. MATCH-HOLDER. JOHN FRANCIS O'MALLEY, Avoca, Pa. Filed Nov. 21, 1913. Serial No. 802,234. (Cl. 206—20.)



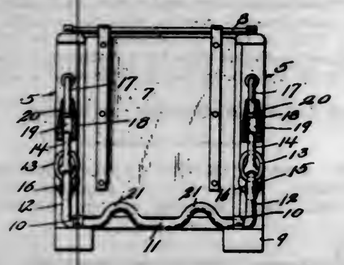
A match holder, comprising a stand provided with a transverse opening extending to within a short distance of its upper end, a pocket in its upper end above the opening and leading into the said opening, said pocket being of a depth approximately equal to the width of the stub of a bunch of matches, and a transverse hole extending through its upper end, and a pin in the hole of the stand and adapted to engage the stub of a bunch of matches to hold it in the said pocket with the matches extending permanently into the opening of the stand.

1,114,510. MINE-CAR-DOOR FASTENER. EMANUEL H. OWENS, Moosic, Pa. Filed Aug. 18, 1914. Serial No. 857,381. (Cl. 105—15.)

1. The combination with a vehicle body having a door hinged at one extremity, of a crank rod formed with angular ends carrying rings, pins loosely held on opposite sides of the door to engage said rings and also movable upwardly in vertical planes, and pendant devices secured on opposite sides of the door above the pins and provided with freely sliding weight catches having bores opening through the bottom thereof to receive the ends of the said pins.

2. The combination with a car body having an opening, of a door pivotally connected at its upper end and mounted to close the said opening, a rod having angular ends with rings therein mounted adjacent to the lower portion of the said opening, freely movable pins held by the body at opposite portions of the opening above the rod, and

gravitating weight catches having bores opening through the lower ends thereof to engage the free ends of the pins after the latter have been inserted through the rings in the ends of the rod.

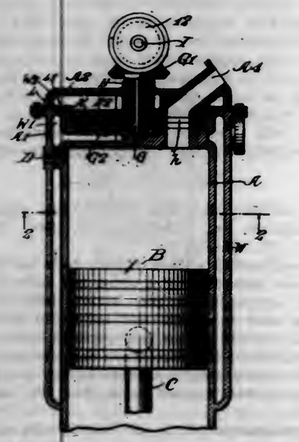


3. The combination with a vehicle body having a door hinged at one extremity, of fastening means coöperating with the free extremity of the door and including pins loosely held at opposite sides of the door and adapted to be turned up in vertical planes, and pendant devices secured on opposite sides of the door above the pins and provided with freely sliding weight catches having bores opening through the bottom thereof to receive the ends of the said pins.

4. The combination with a car body, of a door therefor pivotally connected at its upper end, pins loosely mounted adjacent to the lower extremity of the door and movable upwardly in vertical planes at opposite sides of the said door and pendant devices secured on opposite sides of the door above the pins and embodying freely sliding weight catches having bores opening through the bottom thereof to receive the upturned ends of the said pins.

5. The combination with a car body, of a door pivotally connected at its upper end thereto and having a free lower extremity, pins loosely mounted adjacent to the lower extremity of said door and movable upwardly in vertical planes, and pendant devices secured on opposite sides of the door above the pins and provided with freely sliding weight catches adapted to engage and hold the upturned ends of the pins against movement and thereby secure the door.

1,114,511. EXPLOSIVE-ENGINE. CARLEY H. PAULSEN, New York, N. Y. Filed Jan. 25, 1912. Serial No. 673,299. (Cl. 123—80.)



1. In an explosive engine, two circular plates having faces presented toward each other and both apertured in the form of segments of a circle at the same distance from the center, the one plate having one aperture and the other two apertures situated on a common diameter extending in the same direction from their non-adjacent radial edges, inclosing cylinder heads having passages, and means for revolving said plates in opposite directions and adapted by coincidence of said apertures and passages to control the induction and eduction.

2. In an explosive engine, two circular plates having faces presented toward each other and both apertured in the form of segments of a circle at the same distance from the center, the one plate having one aperture and the other two apertures situated on a common diameter extending in the same direction from their non-adjacent radial edges, inclosing cylinder heads having passages, means for revolving said plates in opposite directions and adapted by coincidence of said apertures and passages to control the induction and eduction, and anti-friction balls movable in circular grooves and constructed to resist both face pressure and lateral displacement.

3. In an explosive engine of the four-cycle type, ported disks, ported heads, said disks being revoluble in opposite directions between said heads, the ports being in a single circle, a shaft carrying one pair of disks, a sleeve inclosing said shaft and carrying the other disk and ball bearings between and upon opposite sides of said disk and embodying concentric grooves and adapted to relieve direct pressure facewise and aiding in carrying the lateral force.

1,114,512. MACHINE FOR USE IN THE MANUFACTURE OF PULLEY-STILES OF WINDOW-SASH FRAMES. GEORGE PORTER PIERCE, Melbourne, Victoria, Australia. Filed Jan. 16, 1912. Serial No. 671,518. (Cl. 144—19.)

1. A machine for use in the manufacture of pulley-stiles of window sash-frames, comprising a stand supporting a pair of rotating shafts, each furnished with mortising bits at one end, saws on said shafts for forming cuts in the stile-piece to enable the pocket-pieces to be broken out for inserting the sash-weights, means for laterally and vertically adjusting the relative position of the upper shaft toward the lower shaft, and a gage-device for holding the stile in proper position for cutting the same.

2. In a machine for use in the manufacture of pulley-stiles of window sash-frames, the combination of a stand, a pair of rotating shafts supported thereon, each shaft being furnished with mortising bits at the ends thereof for forming or cutting the mortises, saws on said shaft for forming cuts in the stile-piece to enable the pocket-pieces to be broken out for inserting the sash-weights in combination with a fence or carrier for holding the stile-piece on edge against the said bits, substantially as described.

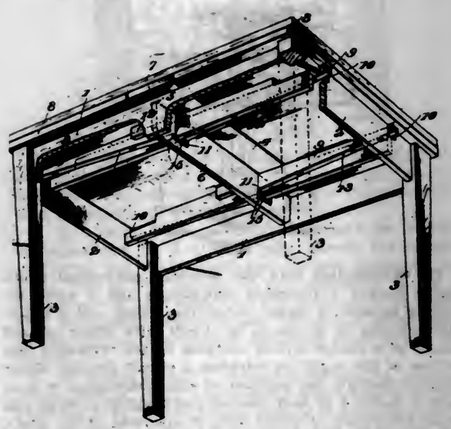
3. In a machine for use in the manufacture of pulley-stiles of window sash-frames, the combination of a stand, a pair of rotating shafts supported thereon, each shaft being provided with mortising bits at the ends, saws on said shafts for forming saw-cuts in the stile, a fence or carrier secured to guide-bars working on guide-pins or the like, stops on said fence, a sliding table adjustably supported on the carrier, a clamp for holding the stile-piece on edge against the carrier, means for moving the said table laterally across the said mortising bits, and means for moving the said carrier longitudinally up against the said mortising bits, substantially as described.

4. In a machine for use in the manufacture of pulley-stiles of window sash-frames, the combination of a stand, a pair of rotating shafts supported thereon, each shaft being furnished with mortising bits, and means for forming cuts in the stile-piece to enable pocket-pieces to be broken therefrom comprising two spaced saws mounted upon the upper rotating shaft in conjunction with a saw mounted upon the lower rotating shaft slightly offset from one of the saws on the upper shaft, an additional saw adapted to make an oblique cut set in line with the saw upon the lower shaft, a carrier for holding the stile-piece flatwise while the said saws are adapted to cut into the top and bottom faces of the same, and means for supporting and clamping the work opposite the above-mentioned mortising bits and feeding it toward or transversely of the bits.

5. In a machine for use in the manufacture of pulley-stiles of window sash-frames, the combination of a stand, two rotating shafts supported on said stand and provided with mortising bits at one end, two saws mounted upon the upper rotating shaft, a saw mounted upon the lower rotating shaft, an additional saw adapted to make an oblique cut set in line with the saw upon the lower shaft, a carrier for holding the stile-piece flatwise while the said saws are adapted to cut into the top and bottom faces of the same, and an additional saw upon the lower rotating shaft for squaring off the end of the stile-piece.

[Claims 6 and 7 not printed in the Gazette.]

1,114,513. EXTENSION-TABLE. JOSEPH POHNDORF, Butte, Mont., assignor of one-third to M. J. English, Butte, Mont. Filed Aug. 5, 1912. Serial No. 713,362. (Cl. 45—113.)

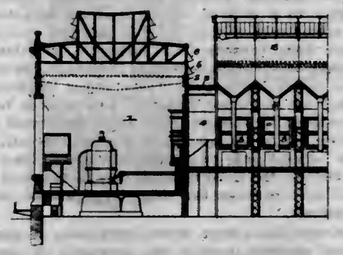


1. An extension table comprising a suitable frame, a main top portion detachable in respect thereof, a transverse strip secured centrally of the frame and having a slot, end extension leaves and their complemental rails, and a bar depending from said top portion and passing through said slot and provided with openings in which the rails are received in pairs.

2. An extension table comprising a suitable frame having slotted end members and a slotted transverse strip or brace, a removable main top portion having a depending bar which extends through the brace and is provided with slots alined with those of the end members, end extension leaves, rails carrying said leaves and movable in the end slots and in the slots of the depending bar and provided with corresponding offsets which bear, respectively, against the end members and transverse strip whereby the leaves are held rigid and in alinement with the top, when extended, and cleats secured to said strip contiguous the slots of the bar and serving to guide the rails into said slots.

1,114,514. POWER-HOUSE CONSTRUCTION. CLARKE P. POND, Philadelphia, Pa. Filed June 1, 1912. Serial No. 701,086. (Cl. 20—1.1.)

1. The combination of a building; a line of bunker structures therein; a relatively low roof adjacent the side walls of said bunker structures; a stack; a duct leading to the stack and carried on said roof outside of the building; and boilers under said lower roof receiving fuel from said bunker structures and connected to discharge their products of combustion into said duct, the firing alleys of the boilers being under the bunker structures.



2. The combination of a building, a plurality of lines of bunker structures therein; a relatively low roof between the side walls of said bunker structures forming a passage; a stack; a duct leading to the stack and carried on said roof in the passage outside of the building; with boilers under said low roof structure receiving fuel from said bunker structures and connected to discharge their products of combustion into said duct.

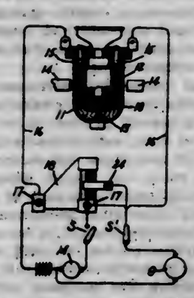
3. The combination of a building; a plurality of lines of bunker structures therein; a relatively low roof structure between the adjacent side walls of said bunker structures forming a passage; windows in the said side walls of bunker structures immediately above the roof opening into the spaces under the bunker structures; a stack; a duct leading to the stack and carried outside the building; with a series of boilers having said spaces under the bunker structures as their firing alleys and connected to discharge their products of combustion into the duct.

4. The combination in a building having two monitors; bunkers in said monitors; a relatively low roof between the monitors; an elongated duct mounted on said roof; a stack connected to said duct; and a series of boilers in the building directly connected to said duct.

5. The combination in a building having monitors; of two bunker structures in the monitors; a depressed roof between the monitors; a stack extending upwardly from said roof; a duct extending above the roof and connected to said stack; and a series of boilers having their firing alleys under the bunker structures and connected to discharge their products of combustion directly into said duct, with windows opening from the space between monitors into the upper parts of the firing alleys.

[Claim 6 not printed in the Gazette.]

1,114,515. ELECTRIC-CURRENT SHUNT. WILLIAM H. PRATT, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 3, 1913. Serial No. 746,004. (Cl. 171—95.)



1. An electric current shunt comprising a member of resistance material having two terminals for connection to a derived circuit, an auxiliary member of resistance

material electrically connected to said first mentioned member, a third terminal operatively related to said auxiliary member and arranged for connection to a supply circuit, and means whereby the position of the third terminal on the auxiliary member may be adjusted.

2. An electric current shunt comprising a member of resistance material having two terminals designed for connection to a derived circuit, and an adjustable terminal operatively related to said member whereby the potential drop between two said first mentioned terminals may be varied by adjusting the adjustable terminal.

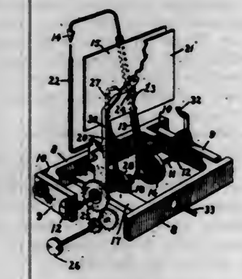
3. An electric current shunt comprising three terminals connected by resistance material, two of said terminals being designed for connection to a derived circuit and the third terminal for connection to a supply circuit, the resistance between said two terminals being constant, and means whereby the third terminal may be adjusted to vary the resistance between the third terminal and the other two terminals.

4. An electric current shunt comprising a member of resistance material having two terminals for supplying current to a derived circuit, a third terminal operatively related to said member and adapted for connection to a supply circuit, and means whereby said third terminal may be adjusted to vary the relative potential drop between said two first mentioned terminals.

5. A current shunt for an electrical measuring instrument comprising an integral member of resistance material, two terminals on said member arranged for connection to the terminals of the instrument, and a third terminal on said member arranged to form a triangle with said other two terminals.

[Claims 6 to 12 not printed in the Gazette.]

1,114,516. ELECTRICAL MEASURING INSTRUMENT. DAVID R. PAICE, Brant Rock, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1913. Serial No. 747,386. (Cl. 171—95.)



1. An electrical measuring instrument comprising two movable elements arranged in electrostatic relation to each other, said elements having substantially coincident paths of movement and each element being movable with respect to the other element and with respect to a fixed part of the instrument, a control spring operatively secured to one of said elements and tending to maintain said element in an initial position, and means for manually moving the other element.

2. An electrical measuring instrument comprising a pivoted vane, means tending to return said vane to an initial position, a second pivoted vane electrostatically related to said first vane, said vanes having substantially coincident paths of movement, means for manually moving said second vane, and means whereby an electrostatic charge may be imparted to each of said vanes.

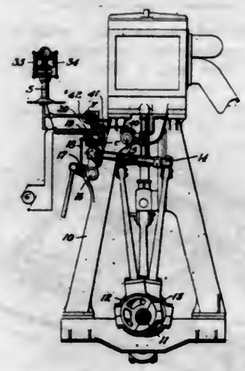
3. An electrical measuring instrument comprising a spring-controlled movable element, a second movable element electrostatically related to said spring-controlled element, means for manually moving said second element, means for determining the minimum and maximum distances between said elements, and means whereby an electrostatic charge may be imparted to each of said elements.

4. An electrical measuring instrument comprising a spring-controlled movable element, and a second movable element electrostatically related to said first element, the electrostatic relation between said elements being such that a movement of said second element will produce a corresponding movement of said first element as long as the electrostatic attraction between said elements exceeds the torque tending to return the spring-controlled element to its zero position.

5. An electrical measuring instrument comprising two movable elements arranged in electrostatic relation to each other, means for exerting on one of said elements a torque tending to oppose its movement in a forward direction, and means whereby both of said elements may be correspondingly moved in said forward direction as long as the electrostatic attraction between the elements exceeds said opposing torque.

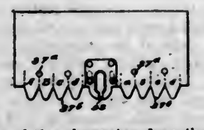
[Claims 6 to 13 not printed in the Gazette.]

1,114,517. INDICATOR. JOHN B. PURVIS, Detroit, Mich. Filed Dec. 31, 1910. Serial No. 600,230. (Cl. 177—339.)



The combination with the reversing mechanism of an engine having a reversible link-motion and a valve actuating member, a signal embodying lamps, and a generator adapted to be placed in circuit with either of said lamps, of a change switch operated by the reversible link motion of the engine to establish a circuit through either lamp to indicate the position of said link-motion, a flash switch operated by said member and adapted to make and break the circuit of either lamp independent of the other, said switches comprising contacts for each circuit, oscillatory contact members adapted to engage said contacts with one of said members normally stationary upon two contacts while the other member shifts relatively to three contacts to complete circuits through said lamps.

1,114,518. CARD FOR CARD-INDEXES. JOSEPH E. RALPH, Newark, N. J. Filed Oct. 12, 1908. Serial No. 457,317. (Cl. 129—16.)



1. In a device of the character described, a card formed with a locking rod aperture, rest portions formed by notching out the lower corners of the card and serrated projections rigid with the card extending below the rest portions, the edge of the card having the projections being provided with orifices.

2. In a device of the character described, a card provided with a rod aperture, projections extending from the lower edge of the card on each side of the aperture, the lower edges of the projections being serrated, and rests formed on the lower edge of the card adjacent the outer projections, the card being provided with orifices on the edge provided with the projections.

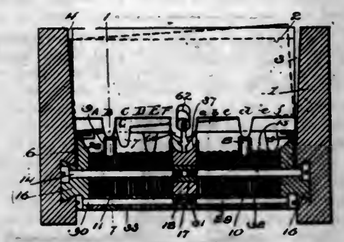
3. In a device of the character described, a card formed with a locking rod aperture, a notched-out portion formed at each end on the lower edge, a notched-out central portion, and a rounded projection extending into said central notched-out portion.

4. A card for card indexes having a centrally located arcuate positioning member formed on one edge thereof, and a projection extending from said edge on each side of the positioning member.

5. A card for card indexes comprising a body, an arcuate member formed on one edge of the card for supporting said card as the latter rotates, and projections extending from the body of the card.

[Claims 6 and 7 not printed in the Gazette.]

1,114,519. CARD-INDEX CONTAINER. JOSEPH E. RALPH, Newark, N. J. Filed Nov. 11, 1908. Serial No. 462,143. (Cl. 129—16.)



1. In a card index, a container formed with grooved means in the bottom thereof for supporting rotatably mounted cards having a portion formed complementarily with respect to the grooved member.

2. In a card index, a container formed for receiving cards movable on a pivotal point, means for pivotally supporting the cards positioned in said container, centrally and at the bottom of the container, means for moving any of said cards that are designed to be brought to a distinctive position around its pivotal point, and a locking rod passing through the cards positioned in said container.

3. In a card index, a container adapted to receive a complement of cards, a positioning member for said cards arranged in the bottom and centrally of the container for governing the position of said card, and means for moving said cards to a distinctive position.

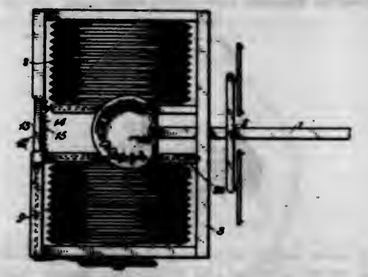
4. In a card index, a container adapted to receive a complement of cards, a trough shaped positioning member arranged in the bottom of said container for governing the position of said complement of cards, and means for moving said cards to distinctive positions, said trough-shaped positioning member adapted to receive projections extending from the bottoms of the cards.

5. In a card index, a container, a trough shaped positioning member arranged in the center of the bottom of the container for regulating the position of the cards positioned in the container, means for moving any of said cards to a selected position, and a locking rod passing through all of said cards for preventing the removal of the same, said trough-shaped positioning member adapted to receive projections extending from the bottoms of the cards.

[Claims 6 to 33 not printed in the Gazette.]

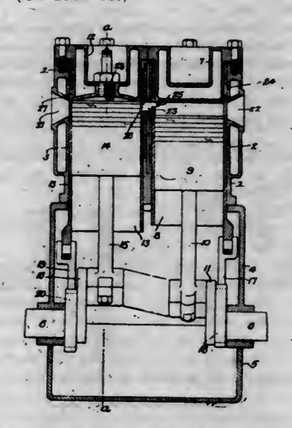
1,114,520. CULTIVATOR. ANDREW RASMUSSEN, Edgemont, S. D. Filed Feb. 3, 1914. Serial No. 816,198. (Cl. 55—21.)

In a cultivator of the class described, a frame, a pair of spaced cylindrical traction rollers carried by said frame, each of said rollers being provided with a grooved periphery, said grooves being arranged in planes normal to the axis of the rollers, an adjustable cutter arranged in line with the space between said rollers, and means



for connecting the cutter with one of said rollers, whereby power may be transmitted to the cutter for causing the cutter to operate as the rollers rotate.

1,114,521. INTERNAL-COMBUSTION ENGINE. HARVEY L. REESE, Philadelphia, and HAVILAND H. PLATT, Wallingford, Pa. Filed May 25, 1912. Serial No. 699,644. (Cl. 123—68.)

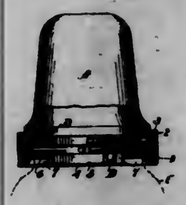


1. The combination in an internal combustion engine, of a plurality of cylinders having a transfer port between them; there being an inlet port for one cylinder and an exhaust port for the other; cylindrical sleeves respectively operative in the cylinders and each having ports of which one is capable of registering with the port between the cylinders and the other is capable of registering with the second port of its cylinder; a crank shaft; a piston in each cylinder connected to said shaft; and eccentrics on the crank shaft respectively connected to the two sleeves.

2. The combination in an internal combustion engine, of a supporting structure; a crank shaft having two cranks; two cylinders adjacent each other; a piston in each cylinder connected to the crank shaft; means in one of the cylinders for igniting successive charges; there being a transfer port directly connecting the cylinders below their upper ends, an inlet port for one cylinder, and an exhaust port for the other; two cylindrical valves respectively incasing the pistons of the two cylinders and provided with ports coöperating with said other ports; eccentrics on the shaft; and a rod connecting each eccentric directly to one of the cylindrical valves.

3. The combination in an internal combustion engine, of a plurality of cylinders having a transfer port between them; cylindrical sleeves respectively operative in the cylinders and each having a port capable of registering with the port between the cylinders; a crank shaft; and a piston in each cylinder connected to said shaft.

1,114,522. SHADE-HOLDER. FREDERICK REUTTER, Waterbury, Conn., assignor, by mesne assignments, to Henry Goodfriend, Chicago, Ill. Filed Apr. 25, 1914. Serial No. 834,350. (Cl. 240—115.)



1. A shade holder consisting of relatively movable parts having shade-engaging and supporting means, and yielding means arranged to engage the shade and coöperate with the first-mentioned means for firmly gripping the shade, in combination with a shade having a rim externally engaged by both of said means.

2. A shade holder comprising a body having shade-gripping and supporting means, and a plurality of yielding devices arranged within the body for gripping and firmly holding the shade against vibration, in combination with a shade having a rim externally engaged by said means and devices.

3. A shade holder comprising a body into which the rim portion of a shade enters, said holder consisting of relatively movable parts having rim-engaging lips, and a plurality of spaced spring gripping elements arranged to engage the rim of the shade, in combination with a shade having a rim engaged by the said lips and the gripping elements.

4. A shade holder comprising a body having a shade-engaging lip, a ring rotatably mounted on the body and having a shade-engaging lip, and a plurality of elements fixed within the body and having yielding portions engaging at a plurality of points the portion of the shade engaged by the lips.

5. A shade holder comprising a body having an open end into which the rim of a shade enters, an internal bead in the said body, a plurality of yielding gripping devices having portions shaped to fit the bead, means fixedly anchoring the devices on the body, and devices carried by the body for engaging and supporting the shade.

[Claims 6 to 10 not printed in the Gazette.]

1,114,523. GAME APPARATUS. ALEXANDER H. REVELL, Chicago, Ill. Filed Mar. 21, 1914. Serial No. 826,153. (Cl. 46—59.)

1. A game comprising a plurality of cards and a receptacle to which the cards are to be projected from a distance, the cards being variously perforated whereby their direction of travel toward the receptacle will be effected by the air.

2. A game comprising a plurality of cards and a receptacle to which the cards are to be projected from a distance, different cards having perforations differing as to number and shape.

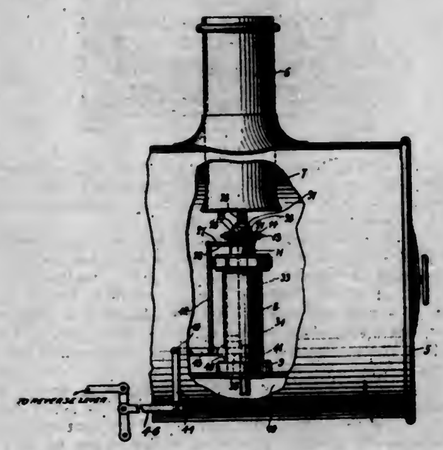
3. A game comprising a plurality of cards and a receptacle to which the cards are projected from a distance, the cards being provided with different means for effecting the travel thereof through the air.

4. A receiver forming part of a game to receive cards projected thereto, said receiver being formed by bending a sheet of flexible material into substantially cylindrical form, the lower edge of the sheet being straight and the upper edge being convex whereby when said sheet is bent to form the receiver the entrance edge of the receiver will be in an inclined plane and fastening members on said sheet along one end and companion fastening members along the other end, said means being adapted for detachable engagement to secure the ends of the sheet together after bending thereof into cylindrical form.

5. A receiver forming part of a game to receive cards projected thereto, said receiver being formed by bending a sheet of flexible material into substantially cylindrical form, the lower edge of the sheet being straight and the upper edge being convex whereby when said sheet is bent to form the receiver entrance edge of the receiver will be in an inclined plane, and means for detachably securing the ends of the sheet together to maintain such cylindrical form, the upper or entrance edge of the receiver being of different color to distinctly outline the entrance opening.

[Claim 6 not printed in the Gazette.]

1,114,524. EXHAUST-NOZZLE FOR LOCOMOTIVES. SAMUEL A. RIDE, Chester, Va. Filed Mar. 20, 1913. Serial No. 755,709. (Cl. 110—152.)



1. An exhaust nozzle for steam engines comprising a casing having a steam outlet, means for modifying the size of said outlet, a spreader located in operative adjacency to said outlet, and mechanism for operating said modifying means and spreader.

2. An exhaust nozzle for steam engines comprising a casing having a steam outlet provided with means for modifying the size thereof, a spreader located in operative adjacency to and movable into said outlet, and mechanism for operating the spreader and the means for modifying the size of the outlet.

3. An exhaust nozzle for steam engines comprising a casing having a steam outlet, means for modifying the size of said outlet, a spreader located adjacent to and movable in said outlet and adjustable to vary the position thereof relatively to the outlet, and mechanism for operating the said modifying means and spreader.

4. An exhaust nozzle for steam engines having a steam outlet, an expansible and contractible attachment coöperating with the outlet to modify the size of the latter, a spreader movable axially with relation to the outlet, and mechanism for relatively and simultaneously operating the said attachment and spreader.

5. A nozzle for the purpose specified having an outlet provided with an attachment for modifying the size thereof and also an axially movable spreader, and mechanism for simultaneously operating the spreader and attachment for modifying the draft of the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,114,525. COTTER-PIN. SAMUEL S. RIDER, Brookland, D. C., assignor of one-half to Richard E. Miller, Washington, D. C. Filed Dec. 30, 1913. Serial No. 809,492. (Cl. 74—8.)

1. A cotter pin comprising a loop terminating in a pair of legs adapted for insertion through an opening, said legs being oppositely wedge-shaped or tapered longitudinally to bind the legs against one another and against the walls of the opening upon the relative movement of the legs whereby to wedge the pin in the opening throughout the entire length thereof.

2. A cotter pin comprising a pair of legs, and a laterally offset loop joining the inner ends of the legs and providing a head on one leg whereby said leg may be driven relatively to the opposite leg and a shoulder on said opposite leg adapted to hold the same from movement with the first leg, said legs being oppositely wedge-shaped or tapered throughout the entire length of the opening whereby upon the relative movement of the legs to bind the latter in the opening throughout its entire length, the free end of the driven leg being adapted to be turned over to retain the cotter pin in the opening.

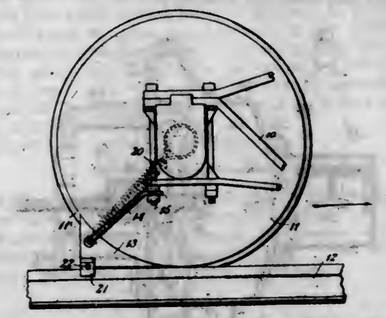
3. A cotter pin comprising a loop terminating in a pair of legs adapted for insertion in an opening and being oppositely wedge-shaped or tapered longitudinally whereby to bind the legs against the walls of the opening when the legs are moved relatively to one another, and projections on the outer ends of the legs having their abutting faces inclined to the plane of the abutting faces of the legs whereby to provide a shoulder on one of the projections, the opposite projection having a notch in its abutting face providing a shoulder for engagement against said shoulder of the first projection, whereby to spread said projections and secure the pin in place.

4. A cotter pin having a pair of legs for insertion through an opening and being oppositely wedge-shaped or tapered longitudinally whereby to bind the legs against the opposite walls of the opening, and projections on the outer ends of the legs provided with abutting faces inclined to the plane of the abutting faces of the legs whereby to provide a shoulder upon one of the projections, the opposite projection having a notch in its abutting face providing a shoulder therein below the shoulder of the first projection, said legs being adapted to be moved relatively to one another whereby said shoulders are adapted to engage and spread the projections to lock the pin in place.

1,114,526. TRACK-CLAMP. THOMAS NELSON ROBINSON, Mechanicsville, N. Y. Filed Jan. 24, 1914. Serial No. 814,087. (Cl. 188—65.)

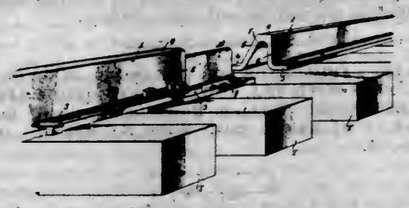
1. The combination with a railway rail and a wheel rolling thereon, of a clamping block conforming to the periphery of the wheel, means to support the block between the wheel and the rail, said supporting means providing for the swinging of the block laterally around a vertical axis, means normally resisting said swinging movement, and means carried by the outer side of the block to limit the inward movement of the block under the force of said resisting means.

2. The combination with a railway rail and a wheel rolling thereon, of a clamping block conforming to the periphery of the wheel, said block having a hole extending laterally therethrough, a supporting arm having connection with the block through said hole, and a spring connected to the inner end of the arm serving to hold the block in normal operative position.



3. The combination with a rail, a wheel rolling thereon, and an axle, of a gripping block operating between the periphery of the wheel and the rail, an arm pivoted at its upper end on a vertical pivot on one side of the wheel, and having an elbow extending laterally adjacent the block, and a resilient member on the side of the wheel opposite from the arm connected at one end to one end of said elbow and detachably connected at its other end to said axle and serving to insure automatic action of the gripping block.

1,114,527. RAIL. KEN E. ROCHEL, Galveston, Tex. Filed Nov. 29, 1913. Serial No. 803,781. (Cl. 239—14.)



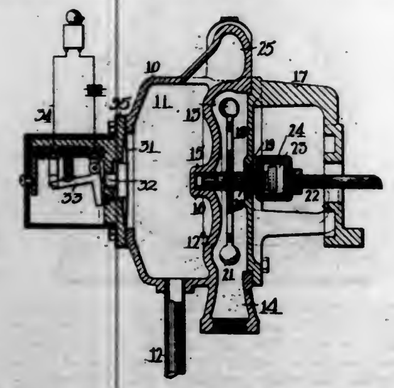
In combination, a pair of rails, each comprising a vertically straight side having its lower edge provided with a horizontally straight outwardly disposed flange, the said side terminating in a horizontally straight head, the outer wall of each rail being inclined outwardly and downwardly and terminating in an angular flange which is horizontally straight and which is disposed in the same plane of that of the first mentioned flange, a hollow joint member having its contour shaped to correspond with the inner contour of the rails and provided with outturned feet which are adapted to underlie the flanges of the rails, the flanges and feet being provided with registering openings, and securing elements passing through the openings for preventing relative movements of said rails and hollow joint member.

1,114,528. CASING FOR ALARM DEVICES. GEORGE I. ROCKWOOD, Worcester, Mass. Filed Dec. 31, 1913. Serial No. 809,745. (Cl. 177—311.)

1. As an article of manufacture, a casing for the purpose described comprising a main chamber for receiving water from a pipe or the like, said chamber having a tangent offset beyond one end thereof, a nozzle in said offset, a wheel rotatably supported by said casing concentric with said chamber and beyond its end in position for receiving the discharge of water from said nozzle, and a diaphragm in said chamber parallel with the plane of the wheel for operating an electric alarm.

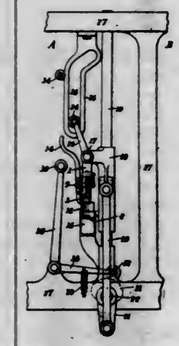
2. As an article of manufacture, a device for the purpose described comprising a casting having an upright partition therethrough, a complete chamber on one side of

the partition within the casting, a chamber on the other side of the partition, an offset from the first named chamber in alinement with the second chamber, a wheel rotatably supported in the second chamber, and a nozzle supported in said offset in position to direct its discharge against said wheel for rotating it.



3. In a device of the character described, the combination of a main casting having two chambers therein separated from each other, a rotary wheel in one of said chambers, means connected with the other of said chambers for directing a jet of water against said wheel for rotating it, an electric alarm device supported on the side of said casing at the end of said other chamber, and means controlled by the pressure of water therein for operating said electric alarm device, said jet directing means constituting the vent for said other chamber.

1,114,529. APPARATUS FOR FILLING BAGS OR CONTAINERS WITH TEA, TOBACCO, AND OTHER LIKE SUBSTANCES. WILLIAM ROSE, Gainsborough, England. Filed May 5, 1914. Serial No. 836,507. (Cl. 100—57.)



1. In apparatus for filling containers, a plunger adapted to rest upon the charged material in the container, gripping means for engaging and lifting the container and means controlled by the position of the plunger for rendering the said gripping means inoperative.

2. In apparatus for filling containers, a plunger adapted to rest upon the charged material in the container, gripping means having coöperating parts which register in gripping position to engage and lift the container, and means for holding said parts out of register when the plunger is in predetermined position on the charged material.

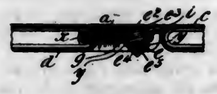
3. In apparatus for filling containers, a plunger adapted to rest upon the charged material in the container, gripping means having coöperating parts normally in register to grip and lift the container, and means for relatively displacing said parts out of register when the said plunger rests upon a full charge in the container.

4. In apparatus for filling containers, a plunger adapted to rest upon the charged material in the container, gripping means for engaging and lifting the container, said means comprising a gripper jaw and a coöperating abutment with which said jaw is normally in register, and means for relatively displacing out of register said jaw and abutment when the said plunger rests upon a full charge in the container.

5. In apparatus for filling containers, a plunger adapted to rest upon the charged material in the container, gripping means having coöperating parts which register in gripping position to engage and lift the container, a displaceable support for one of said parts and means for automatically displacing said support when the plunger is in predetermined position on the charge in the container.

[Claims 6 to 12 not printed in the Gazette.]

1,114,530. FASTENER OR COUPLING. KEVITT ROTHERHAM, Coventry, England. Filed July 13, 1912. Serial No. 709,292. (Cl. 24—211.)



1. In a fastener, the combination of a member provided with a rigid lug having opposite, under-cut seatings; and a second member provided with a space for the reception of said lug and with a fixed bolt and a spring-controlled movable bolt extending across said space for engagement in said seatings, said members having portions thereof abutting against each other to prevent endwise movement of said members toward each other when said bolts are thus engaged.

2. In a fastener, the combination of a member provided with a rigid, longitudinal projection formed with a lug having opposite, under-cut seatings and oppositely-inclined faces leading into said seatings; and a second member provided with a space for the reception of said projection and its lug, and with a fixed bolt and a spring-controlled movable bolt extending across said space for engagement with said seatings, said projection abutting at its free end against the inner end wall of said space, to prevent endwise movement of said members toward each other when said bolts are thus engaged.

3. In a fastener, the combination of a member provided with a rigid lug having opposite, under-cut seatings and oppositely-inclined faces leading thereinto; a second member provided with a space for the reception of said lug and with chambers at opposite sides of such space; fixed and movable bolts mounted on the second member and extending across said space and into said chambers for engagement in said seatings; and springs arranged in said chambers and bearing against the movable bolt to hold the same in such engagement, said members having portions thereof abutting against each other to prevent endwise movement of said members toward each other when said bolts are thus engaged.

4. In a fastener, the combination, with a pair of hollow bars arranged in spaced, parallel relation, and a member to which said bars are connected at one end thereof; of a second member provided with a head having opposite under-cut seatings, said head being adapted for reception in the space between said bars; fixed and movable bolts connecting said bars and extending across said space for engagement in said seatings; springs arranged in said bars and bearing against said movable bolt to hold the same in such engagement; and coöperating means provided upon said members for holding them against relative endwise movement in one direction when said bolts are thus engaged.

5. In a fastener, the combination, with a pair of hollow bars arranged in spaced, parallel relation, and a member to which said bars are connected at one end thereof; of a second member provided with a rigid, longitudinal projection having a head formed on its inner face, and provided with opposite, under-cut seatings, said projection and its head being adapted for reception in the space between said bars; fixed and movable bolts connecting said bars and extending across said space for engagement in said seatings; and springs arranged in said bars and bearing against said movable bolt to hold the same in such engagement, said projection having its free end abutting against the adjacent end of the first-named member to prevent relative movement of said members when said bolts are thus engaged.

1,114,531. BORING-MACHINE. ARNOLD O. RUTZ and JULIUS F. RUTZ, Milwaukee, Wis. Filed Mar. 12, 1914. Serial No. 824,111. (Cl. 77—32.)

1. A portable tool comprising a stock having companion journal boxes, one of which is exteriorly threaded, a second journal box spaced from the companion journal-boxes, a shaft mounted in said companion journal-boxes, a spindle mounted in the second journal-box in connection with the shaft, a feed mechanism for the spindle in gear connection with said shaft, a fixed vise-jaw extending from the stock, a slidable chucking-block mounted upon the threaded journal-box opposite the vise-jaw, and an adjustable nut for the chucking-block engageable with the box-threads.

2. A boring machine comprising a stock having a drive-shaft mounted therein, an internally threaded bushing revolubly mounted in the stock, means for selectively locking the bushing against rotation, a tool-holding spindle in threaded engagement with said bushing, a toothed gear-wheel carried by the bushing, and a toothed gear-wheel carried by the spindle, each of said gear-wheels being of equal diameter but having different numbers of teeth therein, a toothed gear-wheel carried by the shaft adapted to engage both the spindle gear-wheel and bushing gear-wheel, and means for releasing the shaft gear-wheel from engagement with one of the first mentioned gear-wheels.

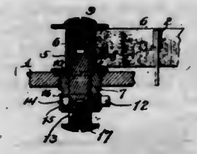
3. A stock having an independent revoluble bushing and spindle in screw-threaded engagement, toothed gear-wheels of the same diameter secured to the bushing and spindle, one of said toothed gear-wheels being provided with a greater number of teeth than its companion gear-wheel, a slidable drive gear-wheel adapted to mesh with one or both of the driven gear-wheels aforesaid, and means for locking that gear-wheel which is freed from engagement with the drive gear-wheel.

4. A boring machine comprising a stock having an independent revoluble bushing and spindle in threaded union with each other, toothed gear-wheels of the same diameter secured to the bushing and spindle, the bushing gear-wheel having one tooth in excess of the spindle gear-wheel, a toothed driving-wheel adapted to mesh simultaneously with each of the aforesaid gear-wheels, means for slidably releasing the drive gear-wheel from its meshed engagement with the bushing gear-wheel, and means for automatically locking the bushing against rotation following a release of its meshed engagement with the drive-wheel.

5. A boring machine comprising a stock having a longitudinally shiftable drive-shaft mounted therein, a revoluble bushing mounted in the stock having an internal thread, a tool-carrying spindle revolubly mounted within the bushings and in threaded engagement therewith, a tothed gear-wheel secured to one end of the bushes, a toothed gear-wheel corresponding in diameter to the bushing gear-wheel in spline engagement with the spindle, a spring-controlled locking plunger for engagement with the bushing gear-wheel, and a drive gear-wheel secured to the shaft in mesh with the bushing and spindle gear-wheels, one face of the drive-wheel being adpted to control movement of the locking plunger.

[Claim 6 not printed in the Gazette.]

1,114,532. INK-RIBBON GUIDE FOR TYPE-WRITING MACHINES. MARSHALL BIDWELL SARGENT and ARVID EMANUEL KARLBERG, Indianapolis, Ind., assignors to The Stenotype Company, Indianapolis, Ind. Filed July 2, 1914. Serial No. 848,619. (Cl. 197—170.)



1. A guide spool mounting comprising a fixed sleeve, a post having a part movable longitudinally through said sleeve, means for preventing rotation of said post, and spring-actuated locking means for holding said post in different positions of longitudinal adjustment.

2. A guide spool mounting comprising a fixed sleeve, a post having a part movable longitudinally through said sleeve, means for preventing rotation of said post, said post having a plurality of recesses and said sleeve having a hole in its wall, a ball mounted in said hole, and a spring pressing said ball toward the post and into one of the recesses therein.

3. The combination with the frame of a typewriting machine, of a sleeve passing through and fixed to said frame, a post movable longitudinally through said sleeve, an idler spool mounted to rotate freely on said post, means for preventing rotation of the post, said post having a plurality of notches and the sleeve having a hole in its wall, a ball mounted in said hole and adapted to engage in one or another of said notches, and a spring embracing said sleeve and pressing said ball inwardly.

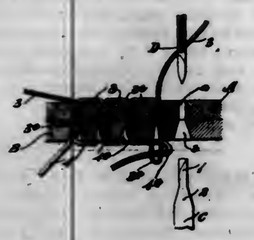
4. The combination with the frame plate of a typewriting machine, of a sleeve passing through and fixed to said frame-plate, a post having a part vertically movable through said sleeve, a spool freely rotatable on said post, said post having a key-way and a plurality of recesses, and the sleeve having a hole in its wall, a ball mounted in said hole and adapted to enter one or another of said recesses, a screw passing through the wall of the sleeve and entering the key-way in the post, and a spring secured at one end by said screw and having its free end portion in position to engage said ball.

1,114,533. SEAM FOR SEWED ARTICLES. GEORGE S. SAVIGNAC and CHARLES E. MYERS, St. Louis, Mo., assignors, by mesne assignments, to Simplex Shoe Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed May 29, 1911. Serial No. 630,227. (Cl. 112—34.)

1. Layers of leather or like material sewed together by looplocked stitches, the punctures therefor extending entirely through the work from top to bottom and flaring toward the lock side of the work, the successive flared portions being spaced apart, and the loop-locked portions of the thread being held squeezed in the flared portions of the punctures.

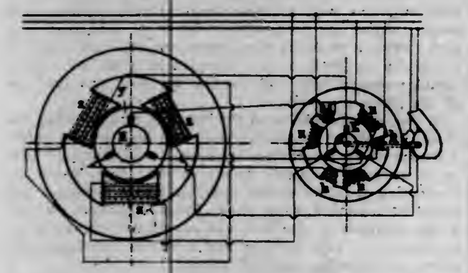
2. Layers of leather or like material sewed together by a continuous thread, looped successively through the work,

the punctures therefor extending through the work from top to bottom, the flared portions being spaced apart, and lock-loops of thread inserted through the loops of said first mentioned thread, the interlocked portions of the threads being held squeezed in the enlargements of the respective punctures.



3. Layers of leather or like material sewed together by a continuous thread, looped successively through the work, the punctures therefor extending through the work from top to bottom, the flared portions being spaced apart, and lock-loops of heavier thread inserted through the loops of said first mentioned thread, the interlocked portions of the threads being held squeezed in the enlargements of the respective punctures.

1,114,534. EXCITATION OF DYNAMO-ELECTRIC COMMUTATOR-MACHINES. ARTHUR SCHERBIUS, Baden, Switzerland, assignor to General Electric Company, a Corporation of New York. Filed May 29, 1908. Serial No. 435,637. (Cl. 171—241.)



1. In combination, a main alternating current commutator machine, and an alternating current commutator exciter in connection therewith, each machine being provided with exciting windings, electrical connections from the brushes of said exciter to the exciting windings of said first-named machine, and electrical connections from the brushes of said first-named machine to the exciting windings of the exciter.

2. In combination a polyphase commutator machine and a polyphase commutator exciter therefor, compounding field exciting windings in connection with said exciter and leads joining the terminals of said main commutator machine to said compounding windings; as set forth.

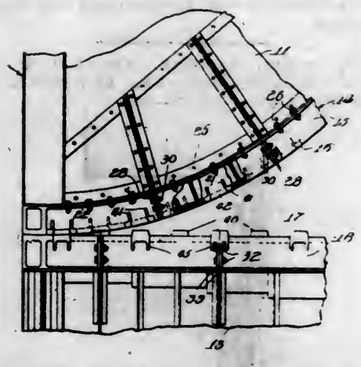
3. In combination, a polyphase commutator machine and a polyphase commutator exciter, means for determining the excitation of the first-named machine by the exciter, and means for exciting the latter machine from the brushes of said first-named machine.

4. In combination, a polyphase commutator machine and a polyphase commutator exciter, means for determining the excitation of the first-named machine by the exciter, and means for exciting the latter machine with a current proportional to the brush current of the first-named machine.

5. In combination, a polyphase commutator machine, a polyphase commutator exciter, and polyphase mains, means for determining the excitation of the first-named machine by the exciter, and means for exciting the latter partly from the mains and partly with a current proportional to the brush current of the first named machine.

[Claims 6 and 7 not printed in the Gazette.]

1,114,535. BASCULE-BRIDGE. ALBERT H. SCHERZER, Chicago, Ill. Filed Mar. 3, 1913. Serial No. 751,733. (Cl. 14—39.)



1. A rolling lift bridge comprising a leaf adapted to rest and roll on a support, and a tread comprising tread sections attached to the leaf and having laterally fixed interlocking engagement with each other.

2. A rolling lift bridge comprising a leaf adapted to rest and roll on a support, and a tread comprising tread sections removably attached to the leaf and overlapping means connecting the adjoining ends of said tread sections and extending longitudinally thereof to constitute a continuous tread and laterally interlocked to hold the tread sections laterally fixed with respect to each other.

3. A rolling lift bridge comprising a leaf adapted to rest and roll on a support, and a tread therefor comprising a plurality of removably applied tread sections provided at their ends with tongue and notch connections, for the purpose set forth.

4. A rolling lift bridge comprising a leaf adapted to rest and roll on a support and a tread comprising tread sections having means to removably attach them to said leaf, said means to attach said sections to said leaf comprising laterally extending flanges on said tread sections, like flanges on the leaf and means extending through said flanges to fasten said tread sections to said leaf.

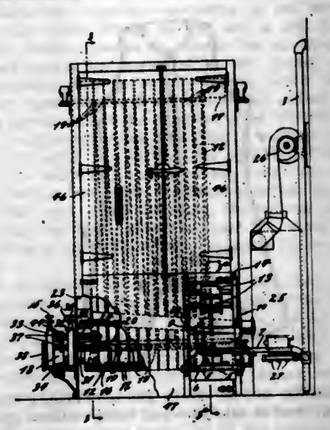
5. A rolling lift bridge comprising, in combination with a leaf and a two-web segment through the medium of which the leaf is supported, of tread sections having bearing faces for contact with a support and side walls in line with the webs of said segment and having means to removably attach the same to said segment.

[Claims 6 to 12 not printed in the Gazette.]

1,114,536. FEATHERBONE-MAKING APPARATUS. JOSEPH W. SCHLOSS, New York, N. Y. Filed Apr. 7, 1914. Serial No. 830,130. (Cl. 223—4.)

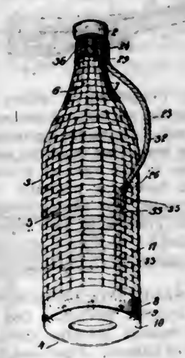
1. Featherbone making apparatus comprising a drying box provided with a source of heat, a plurality of drums rotatively mounted therein and arranged to receive and convey a continuous strip of sized material passed successively around them, a rolling device disposed within the drying box and arranged to receive the dried strip as it comes from the drums, and means for driving one of the said drums and the rolling device at the same rate.

2. Featherbone making apparatus comprising a drying box provided with a source of heat, a plurality of drums rotatively mounted therein and arranged to receive and convey a continuous strip of sized material passed successively around them, guide members adapted to properly guide the strip over the drums, a rolling device disposed within the drying box and arranged to receive the dried



strip as it comes from the drums, and driving means for the rolling device arranged outside the drying box.

1,114,537. RECEPTACLE-JACKET. WILLIAM H. SCHORLING, Old Bridge, N. J. Filed Nov. 8, 1912. Serial No. 730,280. (Cl. 215—3.)



1. In a receptacle jacket, the combination of integrally woven body and neck portions woven substantially to the shape of the receptacle to be used therein and out of strips of material interwoven with stiff longitudinal strands to form a seamless body portion, the neck portion being permanently constricted and provided with a slit to permit the withdrawal of the crown of the receptacle, said slit having marginal binding, an anchor member to which the lower ends of the vertical strands are secured, a bottom member removably secured to the anchor member, and means for binding the slit neck portion closely about the receptacle neck below the crown or mouth enlargement.

2. In a receptacle jacket, the combination of a bottom comprising a ring with a detachably secured bottom member, means for detachably securing the bottom member to the ring, woven body and neck portions secured to the ring, the said neck portion being restricted and having a longitudinal slit therein to permit the withdrawal of the crown of the receptacle.

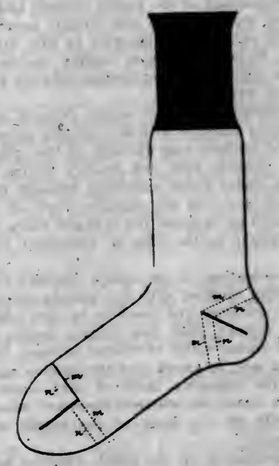
3. In a receptacle jacket, the combination of a bottom comprising a ring with a detachably secured disk, woven body and neck portions comprising longitudinal strands secured to the ring with fibrous strands woven in and out thereon so as to conform to the shape of the receptacle, the neck portion having a slit therein to permit the withdrawal of the crown of the receptacle when the detachable disk is removed, and means for drawing said neck portion together around the neck of the receptacle.

4. In a receptacle jacket, the combination of a bottom comprising a ring with a detachably secured bottom member, means for detachably securing the bottom member to the ring, woven body and neck portions secured to the ring, and a handle having its lower end detachably connected with said ring and its upper end secured to the neck of the receptacle.

5. In a receptacle jacket, the combination of a bottom, integrally woven body and restricted neck portions secured thereto, and a handle comprising a grip portion secured at its upper end to the neck of the receptacle with a part detachably secured to the lower end and extending through the woven body portion and fastened to the bottom.

[Claims 6 to 10 not printed in the Gazette.]

1,114,538. HOSIERY. ROBERT W. SCOTT, Leeds Point, N. J., assignor, by direct and mesne assignments, to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 16, 1908. Serial No. 443,905. (Cl. 66—4.)



1. An article of hosiery having a seamless heel or toe composed of narrowed and widened webs interknitted at their ends, the webs in the body of the heel or toe being uniformly and progressively narrowed and widened wale after wale, but said body of the heel being proceeded and followed by webs in whose courses the successive narrowings and widenings are interrupted.

2. An article of hosiery having a seamless heel or toe composed of narrowed and widened webs united at their ends, the narrowed web having at intervals at the selvage a widening course between narrowing courses, and the widened web having at intervals at the selvage a narrowing course between widening courses.

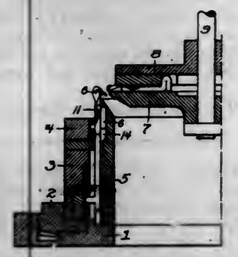
3. An article of hosiery having a seamless heel or toe composed of narrowed and widened webs united at their ends and provided at the top and front with a tapering zone in which the narrowed web has, at intervals at the selvage, a widening course between the narrowing courses and the widened web has, at intervals at the selvage, a narrowing course between widening courses.

4. An article of hosiery having a seamless heel or toe composed of tapered and united knitted webs, and provided at the top and front with a tapering zone in which the line of union between the webs is at a lesser angle than in the remaining portion.

5. An article of hosiery having a seamless heel or toe composed of tapered and united knitted webs, and presenting, between successive united courses of said webs, eyelet holes crossed by sinker wales.

[Claims 6 to 8 not printed in the Gazette.]

1,114,539. RIB-KNITTING MACHINE. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Philadelphia, Pa., a Corporation of New Jersey. Filed Dec. 21, 1911. Serial No. 667,224. (Cl. 66—26.)



1. The combination of the needle carriers and needles of a rib knitting machine with web holders mounted in one of the needle carriers and movable in line with the needles carried thereby, said web holders having horns for engaging the sinker wales extending between the stitches of the knitted web.

2. The combination of the needle carriers and needles of a rib knitting machine with web holders mounted in one of the needle carriers and movable in line with the needles carried thereby, said web holders having horns for engaging the sinker wales extending between the stitches of the knitted web, and the engaging faces of said horns being so formed as to draw the engaged wales in a direction at an angle to the line of movement of the web holder.

3. The combination of the needle carriers and needles of a rib knitting machine with web holders mounted in one of the needle carriers and movable in line with the needles carried thereby, said web holders having horns for engaging the sinker wales extending between the stitches of the knitted web, to knock over the stitches upon one set of needles, the engaging faces of said horns being so formed as to draw the stitches that are being knocked over outwardly on the hook of the needle as well as across the same.

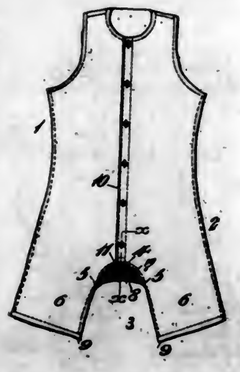
4. The combination of the needle carriers and needles of a rib knitting machine with web holders flanking the needles of one of the carriers, each web holder being mounted in a groove in the needle carrier which opens into the needle groove at the knitting edge of the needle carrier.

5. The combination of the needle carriers and needles of a rib knitting machine with web holders disposed one on each side of each of the needles of one of the needle carriers, said web holders being mounted in a groove in the needle carrier which opens into the needle groove at the knitting edge of said needle carrier.

[Claims 6 to 11 not printed in the Gazette.]

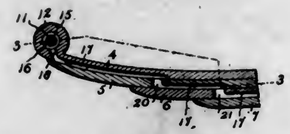
1,114,540. UNDERGARMENT. KEEVA SEGAL, Philadelphia, Pa. Filed Dec. 17, 1912. Serial No. 737,162. (Cl. 2—144.)

A garment embodying drawers having the crotch thereof and adjacent portions of the legs thereof separated and cut-away, the edges of the separations being of the form of an arch, a gore of the character stated having a fold at the bottom, and its top and sides of the form of an arch, the side and top edges of the gore being stitched to the edges of said separations of the drawers, a band on the front of the garment, the same being extended downwardly to said crotch and overlapping the crown of the front wall of said gore and being stitched thereto, and a hem on the rear of the garment, the same being extend-



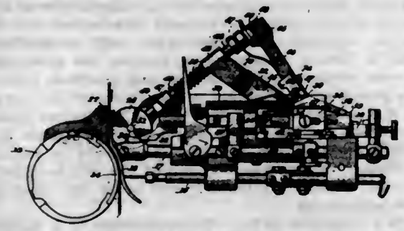
ed downwardly to said crotch and overlapping the crown of the rear wall of said gore and being stitched thereto.

1,114,541. SPRING-OILING DEVICE. ROSSITER B. SEMMELROTH, Buffalo, N. Y. Filed Feb. 20, 1914. Serial No. 820,057. (Cl. 21—103.)



A vehicle spring comprising a series of contiguous bowed leaves, the bottom surfaces of the leaves being provided at each end with longitudinal grooves and a series of secondary grooves branching from the said longitudinal grooves, the grooves in the various leaves being intercommunicating, and bolts for pivotally connecting the spring to a vehicle, said bolts having central bores communicating with the grooves in the uppermost leaf for the purpose set forth.

1,114,542. CHAIN-SEVERING DEVICE FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1906. Serial No. 294,257. (Cl. 112—33.)



1. In mechanism of the class described, the combination with a sliding severing knife, shiftable from set position to perform its cut, of means acting to move it from its set position, means for holding said knife in its set position against the action of the holding means, and a trip operating on the holding means to release said knife and to permit it to be shifted by the moving means, said trip being held normally inoperative by the article to be severed, but operating when the article has passed.

2. In mechanism of the character described, the combination with sliding severing mechanism movable from a set position to perform its cut, of a spring acting to draw the severing mechanism from its set position, means for holding the severing mechanism in its set position against the action of the spring, and a trip for acting upon the holding means to release the severing mechanism and permit its movement by the spring, said trip being normally held inoperative by the article to be severed, but operating when the article has passed.

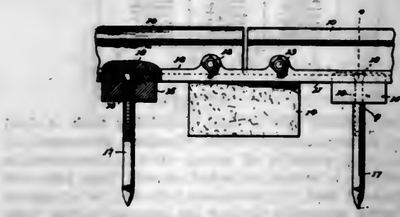
3. In mechanism of the class described, the combination with a reciprocatory blade having a cutting edge and mounted to move to and from set position, of means for holding the blade in its set position, means for automatically returning the blade to its set position after a cutting stroke, and a trip engaging the holding means for disengaging the blade therefrom, said trip being held out of engagement with the holding means by the article to be severed.

4. In mechanism of the character described, the combination with a cutting member movable from and to a set position, of means for holding it in its set position, means for moving it from the set position when released from the holding means, means for returning it to its set position after its movement from the set position, an article controlled trip for releasing the cutting member from the holding device to permit its movement from its set position, and means controlled by the movement of the cutting member from its set position to throw the returning means into operation.

5. In mechanism of the class described, the combination with a cutting member movable to and from a set position, of means for moving it from its set position, means for returning it to its set position, including an active driving member and a normally inactive driven member, and a controlling device for the latter mechanism operated by the cutting member on the movement of the cutting member from its set position to operate the normally inactive member from the active driving member.

[Claims 6 to 32 not printed in the Gazette.]

1,114,543. RAILWAY RAIL-SUPPORT AND RAIL-FASTENER. LUCY A. SHRADER, Elmira, N. Y. Filed Oct. 6, 1913. Serial No. 793,696. (Cl. 238—5.)

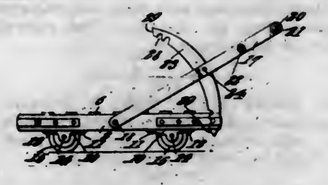


1. Railway rail supports spaced apart and abutting end to end, tie members extending beneath said supports, members having internally threaded sockets and disposed beneath said tie members, and threaded members engaging said sockets and having heads seated in said rail supports.

2. Railway rail supports spaced apart and abutting end to end, tie members extending beneath said supports, members having internally threaded sockets and disposed beneath said tie members, and threaded members engaging said sockets and having heads seated in said rail supports, the upper ends of said heads extending above the rail supports and adapted to engage railway rails when the same are disposed upon said supports.

1,114,544. TRACK-BARROW. WILLIAM G. SHULTS, Oakdale, Tenn. Filed June 3, 1914. Serial No. 842,730. (Cl. 105—233.)

1. A track barrow comprising a wheel mounted frame; a handle pivoted to the frame intermediate the ends of the frame; a double ended latch secured intermediate its ends to the handle; and means carried by the frame adjacent the ends of the frame for interlocking, respectively, with the ends of the latch at different times, thereby to permit the handle to project toward one end of the frame or the other.



2. A track barrow comprising a wheel mounted frame; a handle pivoted to the frame intermediate the ends of the frame; a double ended latch secured intermediate its ends to the handle; and movable keepers carried by the frame adjacent the ends of the frame and adapted to interlock, respectively with the ends of the latch at different times, thereby to permit the handle to project toward one end of the frame or the other.

3. In a track barrow, a wheel mounted frame; a keeper mounted to move transversely in one end of the frame; a guide mounted on the outer face of the frame and coöperating with the keeper to limit the longitudinal movement of the keeper in the frame; a handle pivoted to the frame; and a latch secured to the handle, the latch being adapted to coöperate with the keeper, and the guide constituting the means for directing the latch onto the keeper.

4. In a track barrow, a wheel mounted frame having openings; a bar mounted to slide transversely in the openings; a spring support through which the bar passes, one end of the spring support being received slidably in the frame; a spring surrounding the spring support and exerting a pressure against the spring support and against the frame; guides secured to the outer faces of the frame and overlapping the ends of the bar; a handle pivoted to the frame; and a latch attached to the handle, the latch being adapted to interlock with the end of the bar, and the guide constituting means for directing the latch into engagement with the bar.

5. In a track barrow, a wheel mounted frame; spaced handle bars pivoted to the frame; and a grip bar mounted to slide in the direction of its length in the handle bars, the grip bar being of greater length than the space between the handle bars.

[Claims 6 to 9 not printed in the Gazette.]

1,114,545. SIGNALING DEVICE. BERRY B. SIMONS, New York, N. Y., assignor to Auto Signalite Company, a Corporation of New York. Filed June 30, 1913. Serial No. 776,649. (Cl. 4—132.)

1. A signal drum of transparent material having a display side, a background formed on said side, signal characters sunk below the outer surface of the background and ridges surrounding the characters, and a coating covering the background and setting off the characters, said ridges serving as a protection for the characters.

2. A signal drum of transparent material having a display side, signal characters formed on said side, a background surrounding said characters, ridges surrounding the characters and separating the same from the background, the characters being adapted to transmit light therethrough, and a dark coating on the background for setting off the characters, the said ridges serving as a

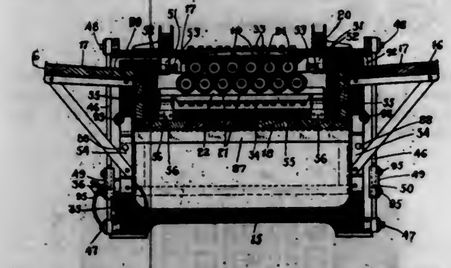
protection for the signal characters and also increasing the distinctiveness of the characters.

3. A signal device comprising a transparent member having a display surface, a background sunk below said surface, signal characters sunk below said background, and ridges surrounding the characters and separating the same from the background.

1,114,546. RECEPTACLE. HARRY M. SINCLAIR, Toledo, Ohio, assignor to The Sinclair Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 4, 1913. Serial No. 804,722. (Cl. 229—5.)

A receptacle having an inclosing wall formed of paper, covered, saturated with, and having its pores filled with paraffin and oil of tar and having its ends formed of lacquered metal and crimped so as to turn the edges of the ends into the inclosing wall and roll inward.

1,114,547. MACHINE FOR BRUSHING, JACKING, AND SIZING HATS. JOHN H. STARR and JAMES F. DORAN, Danbury, Conn., assignors to E. A. Mallory and Sons, Incorporated, Danbury, Conn., a Corporation of Connecticut. Filed Mar. 11, 1914. Serial No. 823,877. (Cl. 26—4.)



1. A machine of the character described comprising, in combination, upper and lower sets of rolls, means for rotating said rolls, and means for imparting reciprocatory movement to both of said sets of rolls, said last named means being adjustable to vary the amount of movement imparted to each of said sets independently of the other.

2. A machine of the character described comprising, in combination, upper and lower sets of rolls, means for rotating said rolls, and means for imparting reciprocatory movement to both of said sets of rolls, said last named means being adjustable to vary the amount of movement imparted to both of said sets of rolls, and being also adjustable to vary the amount of movement imparted to each of said sets of rolls independently of the other.

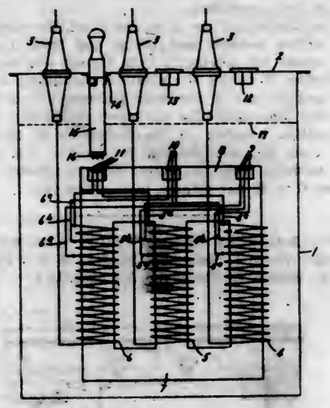
3. A machine of the character described comprising, in combination, upper and lower roll frames, upper and lower sets of rolls carried by said frames, means for rotating said rolls, links pivoted to said frames respectively, a rock shaft provided with oppositely extending arms, means for adjustably connecting said links with said arms respectively, and means for oscillating said rock shaft.

4. A machine of the character described comprising, in combination, upper and lower roll frames, upper and lower sets of rolls carried by said frame, means for rotating said rolls, links pivoted to said frame respectively, a rock shaft provided with oppositely extending arms each having a series of openings arranged in an arc of a circle concentric with the pivot connecting one of said frames with the corresponding link, and removable pins passing through said links and engaging said openings.

5. A machine of the character described comprising a main frame, a tank, an auxiliary frame supported by said main frame and depending within said tank, raceways supported by said auxiliary frame within said tank, rollers in said raceways, a roll frame provided with bearing members resting upon said rollers, and a set of rolls carried by said roll frame.

[Claims 6 to 37 not printed in the Gazette.]

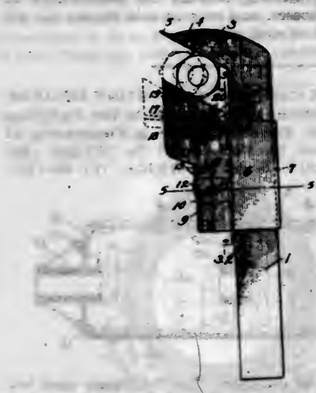
1,114,548. TRANSFORMER. GEORGE STERN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Aug. 22, 1913. Serial No. 786,090. (Cl. 171—253.)



The combination with a fluid containing tank, a fluid contained therein and electrical windings submerged in said fluid, of a plurality of groups of taps connected to said windings, terminals attached to said taps and submerged in said fluid, the terminals attached to one group of taps being accessible through an opening in the tank, the terminals attached to another group of taps being similarly located relatively to each other as the terminals of the first mentioned group of taps, and also being accessible through an opening in said tank, and a member adapted to be inserted into the tank through the proper opening, the member and each group of terminals partaking of the nature of a plug switch, the member being provided with means for connecting together the terminals of any one of said groups.

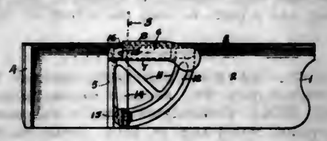
1,114,549. WRENCH. JOHN STOMBERG, Rockford, Ill. Filed July 8, 1912. Serial No. 708,317. (Cl. 81—179.)

1. In a wrench, the combination with a handle having a jaw, of a block adjustable longitudinally of the handle and having a shoulder, a jaw slidingly engaging the shoulder in position for coöperating with the first mentioned jaw and adapted to be moved to a position in contact with the handle and outwardly therefrom, the block being formed with a bore, and a spring mounted in the bore and engaging the movable jaw and exerting tension thereon tending to move the jaw into contact with the handle, recesses being formed in the movable jaw and block in position for registering when the movable jaw is in contact with the handle for enabling access to the spring.



2. In a wrench, the combination with a handle having a jaw, of a block adjustable longitudinally of the handle and having a shoulder, a jaw slidingly engaging the shoulder in position for coöperating with the first mentioned jaw and adapted to be moved to a position in contact with the handle and outwardly therefrom, the block being formed with a bore, and a spring mounted in the bore and engaging the movable jaw and exerting tension thereon tending to move the jaw into contact with the handle, a recess being formed in the block and opening from the bore along the handle toward the jaw, the jaw being formed with a coöperating recess at its innermost portion adapted to register with the first-mentioned recess when the jaw is in contact with the handle for enabling access to the spring.

1,114,550. COMPOSING-STICK. CHARLES L. STUART, Omaha, Nebr. Filed Nov. 20, 1913. Serial No. 802,122. (Cl. 101—26.)

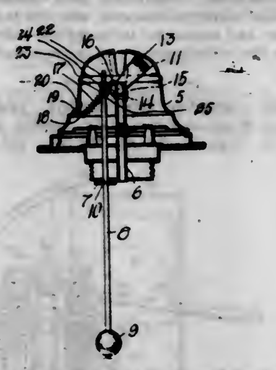


1. The combination, with a composing stick having a side wall formed with a rack, of a knee coöperating with the stick and movable along the side wall, means for clamping the knee to the side wall, a gear having a journaled connection with the knee and meshing with the rack and adapted to walk along the same for shifting the knee while in engagement with the side wall, a lever for actuating the gear, a slotted web connecting the members of the knee, and means extending through the slot and engaging the lever for locking the same in any of its positions.

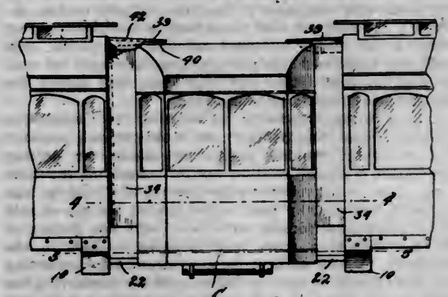
2. The combination, with a composing stick having a side wall, of a knee coöperating therewith and adapted to be shifted along the side wall, means for clamping the knee to the side wall, the knee having a web connecting its angular parts and formed with an arcuate slot, a lever pivoted to the knee, and extending to a point adjacent the web, a set screw extending through the web and engaging the lever and disposed for clamping the lever to the web, and a gear outstanding from the pivoted end of the lever, the side wall of the stick being formed with a longitudinal rack meshing with said gear.

1,114,551. LAMP-EXTINGUISHER. MICHAEL SZTANKOVITS, College Point, N. Y. Filed May 6, 1914. Serial No. 836,827. (Cl. 67—78.)

A lamp extinguisher comprising the combination with a burner, of a counterbalanced holding rod pivotally connected to and extending up into said burner, a spring controlled extinguisher member pivotally connected within said burner and provided with an angle-shaped arm having a depending portion formed with a pocket adapted for the reception of said rod for holding the member in an inoperative position against the action of its spring, said member being formed with an arc-shaped slot, and a stop pin connected to said burner and extending in said slot being adapted for limiting the movement of said member.



1,114,552. ARTICULATED PASSENGER-CAR. ALPHONSO TAURMAN, Richmond, Va. Filed May 27, 1913. Serial No. 770,192. (Cl. 105—19.)



1. In an articulated car, the combination with a pair of end sections, of an intermediate compartment flexibly suspended between and supported by the adjacent ends of the end sections, the floor portions of the end sections and the intermediate compartment all lying in substantially the same horizontal plane.

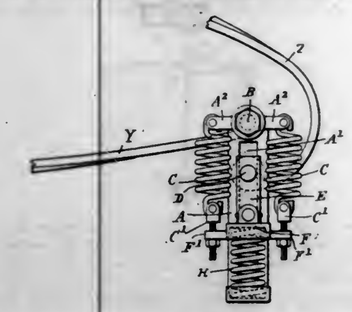
2. In an articulated car, the combination with a pair of end sections, of an intermediate compartment suspended from and flexibly connected with the adjacent ends of the end sections, said intermediate compartment having closed side walls, the end sections of the car having door-ways for passengers at their ends distant from the intermediate compartment, the floors of the end sections and the intermediate compartment all lying in substantially the same horizontal plane.

3. The combination with a pair of end sections, of an intermediate compartment suspended from and flexibly connected with the adjacent ends of the end sections, and having closed side walls, said end sections having door-ways therein for the admission and exit of passengers.

4. The combination with a pair of end sections, of an intermediate compartment suspended from and supported by the end sections, and capable of vertical and lateral movement relative to the end sections, a continuous aisle being formed through all of said sections with the floor portions of said aisle lying in substantially the same horizontal plane.

5. The combination with a pair of end sections, of an intermediate compartment flexibly suspended between and supported by the end sections, a continuous passage-way being formed through the end sections and the intermediate compartment, a platform plate carried by each end section and movably connected with the intermediate compartment, and means for inclosing the side and top spaces between the compartment and the end sections.

1,114,553. SPRING SUSPENSION FOR VEHICLES. ALFRED WILLIAM TORKINGTON, London, England. Filed Nov. 23, 1912. Serial No. 733,102. (Cl. 21—50.)

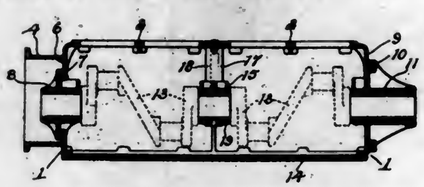


1. In a spring suspension for vehicles, the combination of a frame provided with vertical guideways and connected to one of two relatively movable elements of a vehicle, lugs projecting from the upper portion of said frame, a cross-head mounted to slide in the guideways in said frame and connected to the other of said vehicle elements, a cap-plate on said cross head, a bed-plate on said frame, a coil spring arranged between said plates, lugs projecting from said cap plate, springs arranged between the lugs on said frame and cap plate, and means for regulating the tension of said springs.

2. In a spring suspension for vehicles, the combination of a main frame comprising a pair of side frames provided with vertically running guideways, means for uniting said frames in spaced relation and for connecting the same to one of two relatively-movable elements of a vehicle, lugs projecting horizontally from either side of the top of said frame, a bed-plate formed on each of said side frames at the base thereof, a cross head mounted to slide in the guideways in each of said frames, means for connecting said cross heads to move in unison and for connecting the same to the other of said vehicle elements, a cap-plate on each of said cross heads in vertical alinement with the bed-plates on said frames, coil springs arranged between said plates, lugs projecting horizontally from either side of said cap-plates in vertical alinement with the lugs on said frames, tension springs arranged between said vertically-alining pairs of lugs, and means associated with the lower pairs of lugs for adjusting the tension of said springs.

3. The combination of a vehicle axle spring and a chassis spring, of a spring suspension comprising a pair of side frames provided with vertically alining guideways, perforated bosses formed at the upper ends of said frames, a bolt passing through the alined perforations in said bosses for connecting said side frames together in spaced relation and adapted to be mounted on the free end of said axle spring, pairs of lugs projecting horizontally from said bosses, a cross-head mounted to slide in the guideways in each of said frames, a bolt for connecting said cross heads at their lower ends to move in unison, a bolt arranged between said cross heads at their upper ends and adapted to be connected to said chassis spring, a bed plate projecting horizontally from the lower end of each of said side frames, a cap plate projecting from each of said cross heads in vertical alinement with said bed plates, coil springs arranged between said plates, a pair of perforated lugs projecting horizontally from each of said cap plates and in vertical alinement with the respective lugs on said bosses, tension springs secured at their upper ends in said first-named lugs, couplings carried by the lower ends of said tension springs and provided with threaded shanks projecting through the perforations in the second-named bosses, and nuts on said shanks for adjusting the tension of said springs.

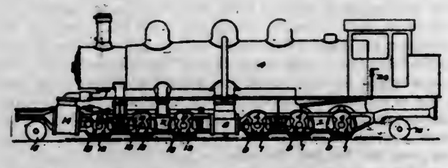
1,114,554. CRANK-CASE FOR COMBUSTION-ENGINES. JOHN G. UTZ, Detroit, Mich., assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 18, 1910, Serial No. 567,569. Renewed Jan. 14, 1914. Serial No. 812,154. (Cl. 64—10.)



1. A crank case of the barrel type having an open bottom throughout its length and an opening in each end wall, a bearing for a crank shaft, the upper half of which is formed integral with the crank case intermediate its ends, a detachable lower half for said bearing, means for detachably securing said lower half to the upper half, detachable end plates fitting within the said openings in the ends of the crank case and secured thereto and provided with bearings in alinement with said intermediate bearing, and means for closing the bottom of the crank case.

2. A crank case of the barrel type having an open bottom throughout its length and an opening in each end wall, a center bearing, the upper half of which is formed integral with the upper part of the crank case intermediate its ends, a lower half for the center bearing, bolts extending through openings in the lower half of the center bearing and through openings in said upper half of the center bearing to secure the lower half to the upper half, removable end plates formed to fit within the openings in the end walls of the crank case and secured therein and provided with bearings in alinement with the center bearing, and a plate to close the bottom of the crank case.

1,114,555. RACK-LOCOMOTIVE. SAMUEL M. VAUCLAIN, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 18, 1914. Serial No. 857,346. (Cl. 105—228.)



1. The combination in a locomotive, of two frames pivotally connected; three sets of axles mounted in each frame; traction wheels loose on each axle; cranks on each axle; rack wheels on all of the axles; and clutch mechanism on two of the axles of each frame arranged to engage the traction wheels so that when the clutches are moved into engagement with the said wheels, the wheels will turn with the axles.

2. The combination in a compound locomotive of the "Mallett" type, of two frames pivotally connected; a boiler on one frame and overhanging the other frame; high pressure cylinders on the forward frame; three axles on each frame; traction wheels loose on all of the axles; a crank on each axle; means for connecting the cranks with the pistons of their respective cylinders; rack wheels secured to all of said axles; clutch sleeves on two of the axles of each frame; and means for shifting the clutch sleeves so as to throw them into and out of engagement with the traction wheels mounted on said axles so that when the rack wheels are in engagement with the rack, all of the traction wheels are loose on the axles, but when the locomotive is to be driven by traction, then the two axles of each frame are clutched to their traction wheels.

1,114,556. TIRE-SLEEVE. FRANK VITALI, Healdsburg, Cal. Filed May 8, 1914. Serial No. 837,249. (Cl. 152—24.)

1. In a device of the class described, a jacket; a connection uniting opposed portions of the jacket; and a strut projecting from the jacket and engaging the connection intermediate the ends of the connection, the connection being provided with an angle in which the strut is received.

2. In a device of the class described, a jacket; a connection uniting opposed portions of the jacket; and a resilient strut projecting from the jacket and engaging the connection intermediate the ends of the connection, the connection having an angle in which the strut is received.

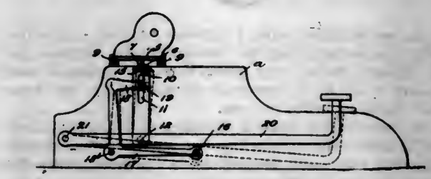
3. In a device of the class described, a jacket; strips applied to the jacket, each strip being folded upon itself to form a suspension member, there being a strut projecting from the strip and engaging the suspension member; and connecting means assembled with the suspension members.

4. In a device of the class described, a jacket; strips applied to the jacket, each strip being folded upon itself to form an outstanding strut, there being a suspension member projecting from the strip and engaged by the strut; and connecting means assembled with the suspension members.

5. In a device of the class described, a jacket; strips applied to the jacket, each strip being folded upon its outer edge to form a suspension member and being folded upon its inner edge to form an outstanding strut engaging the suspension member; and connecting means assembled with the suspension members.

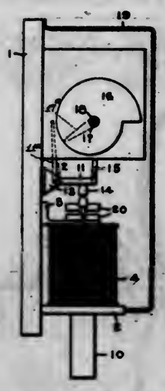
[Claim 6 not printed in the Gazette.]

1,114,557. TYPE-WRITER. JAMES G. WALLACE, New York, N. Y. Filed June 3, 1913. Serial No. 771,512. (Cl. 197—88.)



In a typewriter a frame, a carriage movably mounted thereon and having a rack bar, a key pivoted to the frame, a bell crank lever pivoted to the frame, a bar carried by the lower arm of the bell crank lever and lying under the key, a single piece yoke pivoted to the frame and having pawls mounted directly thereon and carried thereby, said pawls being engageable with the rack bar, said bell crank lever having at its upper arm a forward extension, and a pin and slot connection between the said extension and the yoke, the parts being so arranged that upon depression of the key the pawls are pulled transversely across the rack bar.

1,114,558. PROTECTIVE DEVICE. EDMUND B. WEDMORE, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Aug. 19, 1909. Serial No. 513,637. (Cl. 175—270.)



1. An inverse time limit overload relay comprising normally separated coöperating contacts movable into engagement to close the tripping circuit, time actuated mechanism for moving said contacts toward each other at a definite and uniform rate when set in operation and means responsive to overload for instantaneously moving said contacts toward each other a distance dependent upon the extent of overload and for simultaneously rendering said time actuated mechanism operative to move said contacts with a time lag over the remainder of the distance and thereby bring them into engagement.

2. An inverse time limit overload relay for controlling a tripping circuit comprising coöperating contacts normally out of tripping relation, normally inoperative time actuated mechanism for moving said contacts from any position into tripping relation and means responsive to current in the circuit to be protected for instantaneously setting said contacts in such position that the extent to which they are out of circuit closing relation is dependent upon the amount of current and simultaneously rendering said time actuated mechanism operative to move said contacts from said position into tripping relation.

3. An inverse time limit overload relay comprising contacts normally separated to leave a gap in the tripping circuit, a time limit actuating mechanism for closing the gap between said contacts at a substantially constant rate, and means responsive to overload for instantly rendering the gap between said contacts inversely proportional to the amount of overload and simultaneously starting said time limit mechanism to close said gap at a predetermined rate which is independent of the amount of overload.

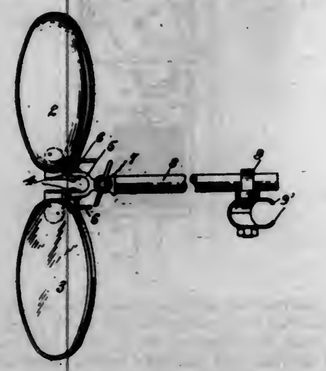
4. A time limit circuit controller comprising two relatively movable coöperating contact members normally out of tripping relation, a current responsive device operatively related to one of said movable contact members for instantly moving it to render the extent to which said contact members are out of tripping relation inversely proportional to the extent to which the current in said device exceeds a predetermined amount, time limit actuating means for slowly moving said second contact member at a definite rate to bring said contact members into tripping relation, and means whereby said current responsive device in moving said first contact member simul-

taneously renders said actuating means operative to move said second contact member toward the first mentioned contact member.

5. An inverse time limit relay comprising relatively movable coöperating contacts, means for yieldingly holding said contacts separated, time limit actuating mechanism for bringing said contacts into engagement at a definite and uniform rate, and means responsive to overload for instantly moving said contacts toward each other to an extent dependent upon the amount of overload and simultaneously rendering said time limit actuating mechanism operative to complete the closing movement of said contacts.

[Claims 6 to 14 not printed in the Gazette.]

1,114,559. MIRROR ATTACHMENT FOR AUTOMOBILES. CHESTER A. WEED, Brooklyn, N. Y. Filed June 26, 1914. Serial No. 847,393. (Cl. 88—67.)



1. A reflecting mirror attachment for automobiles, comprising a true mirror and a reducing mirror, and means for supporting it.

2. A reflecting mirror attachment for automobiles, comprising a true mirror and a reducing mirror one above the other, and means for supporting it.

3. A reflecting mirror attachment for automobiles, comprising a true mirror and a reducing mirror of different sizes, and means for supporting it.

4. A reflecting mirror attachment for automobiles, comprising a true mirror and a reducing mirror of different sizes and one above the other, and means for supporting it.

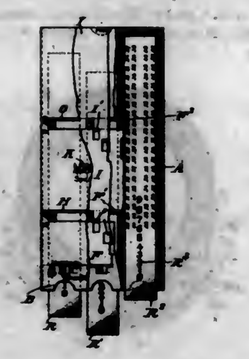
5. A reflecting mirror attachment for automobiles, comprising a true mirror and a reducing mirror one above the other, and means for supporting it, said supporting means including adjustable means whereby the said mirrors may be adjusted relatively to each other and relatively to said supporting means.

[Claims 6 to 21 not printed in the Gazette.]

1,114,560. INTEREST-COMPUTER. CHARLES C. WILD, Dubuque, Iowa. Filed Jan. 26, 1914. Serial No. 814,490. (Cl. 235—85.)

1. A device for computing interest comprising a jacket having series of sight apertures near one end through which the amount of principal may be disclosed and other slots for the disclosure of the rates of interest in the face of the jacket, a card having diagonally disposed series of slots therein and bearing upon its face different rates of interest to be disclosed at sight apertures in said jacket, a series of cards movable within the jacket and bearing numerals designating the interest at different per cent. and adapted to be disclosed through the diagonally disposed series of said slots, as set forth.

2. A device for computing interest comprising a jacket having series of sight apertures near one end through which the amount of principal may be disclosed and other slots for the disclosure of the rates of interest in the face of the jacket, a card having diagonally disposed series of slots therein and bearing upon its face different rates of interest to be disclosed at sight apertures in said jacket, a portion of the jacket being folded upon itself and provided with transverse sight apertures, a series of cards bearing numerals designating the interest at different per cents. and which are adapted to be disclosed through said transverse slots, diagonally disposed slots and the slots in the jacket.



3. A device for computing interest comprising a jacket having series of sight apertures near one end through which the amount of principal may be disclosed and other slots for the disclosure of the rates of interest in the face of the jacket, a card having diagonally disposed series of slots therein and bearing upon its face different rates of interest to be disclosed at sight apertures in said jacket, pockets formed within the jacket, cards, having printed thereon numerals designating interest at different per cents., and movable within said pockets and designed to disclose numerals through said diagonally disposed slots and slots in the jacket.

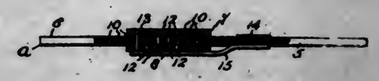
1,114,561. SYRINGE. ARTHUR E. WILDE, New York, N. Y. Filed May 24, 1913. Serial No. 769,749. (Cl. 128—25.)

1. In combination with a syringe; of an expansible douche cup surrounding the nozzle of said syringe the walls of said douche cup being normally collapsed and arranged so as to be projected outwardly by the pressure of liquid entering the cup.

2. In combination with a syringe; of a normally collapsed douche cup surrounding the nozzle of the syringe and having side walls adapted to be expanded under the pressure of fluid entering the cup.

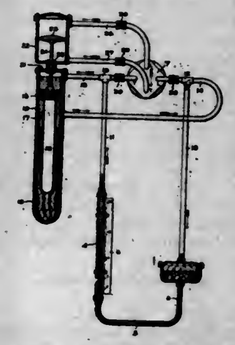
3. In a syringe, the combination with a nozzle; of a normally collapsed douche cup connected with the nozzle adapted upon the introduction of fluid thereinto to increase in volume substantially in proportion to the amount of fluid so introduced.

1,114,562. MONKEY-WRENCH. ARTHUR E. WILDE, New York, N. Y. Filed June 30, 1914. Serial No. 848,279. (Cl. 81—129.)



A wrench comprising a shank having an angularly disposed jaw at one end thereof and provided with a series of spaced perforations arranged longitudinally on the shank and located adjacent to one edge thereof, a movable jaw mounted on the shank and provided with a series of transverse perforations adapted to be alined with the perforations of the shank, and a resilient locking member having a pin adapted to be inserted in the alining perforations and having a clip for straddling the edge of the shank substantially as described.

1,114,563. FLOW-METER. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 14, 1914. Serial No. 811,946. (Cl. 73—167.)



1. In a flow meter for condensable vapors, the combination of a U-tube manometer containing a body of heavy liquid, an agent for creating a pressure difference which bears a definite relation to the rate of flow of the fluid being metered, pipes connecting the manometer and agent, said pipes normally being filled with liquid due to condensation and forming a pressure transmitting system between said agent and manometer, the pressure difference set up by said agent acting to displace liquid from one part of said system, and means for positively forcing liquid into the system when a change in the rate of flow occurs to replace the liquid displaced from the system due to such change.

2. In a flow meter for condensable vapors, a U-tube manometer, an agent for creating a pressure difference which bears a definite relation to the rate of flow of the fluid being metered, pipes connecting the manometer and agent, said pipes being filled with liquid due to condensation, and means controlled by the pressure difference set up by the agent for maintaining the pipes at all times filled with such liquid.

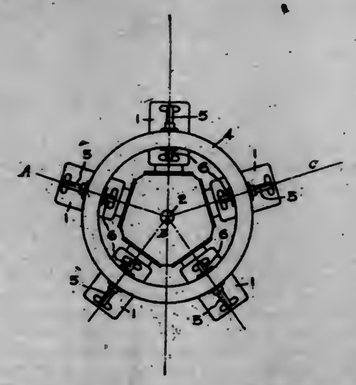
3. In a flow meter for condensable vapors, a U-tube manometer, an agent for creating a pressure difference which bears a definite relation to the rate of flow of the fluid being metered, pipes connecting the manometer and agent, said pipes being filled with liquid due to condensation, a reservoir containing liquid due to condensation connected to said pipes, and means for positively feeding liquid from the reservoir to the pipes to keep the same at all times filled.

4. In a steam flow meter, the combination of a U-tube manometer, an agent for creating a pressure difference which bears a definite relation to the rate of flow of the fluid being metered, pipes connecting the manometer and agent, said pipes being filled with water, a reservoir containing water connected to said pipes, and means controlled by the pressure difference set up by said agent for feeding water from said reservoir to the pipes to keep the same at all times filled.

5. In a steam flow meter, the combination of a U-tube manometer, an agent for creating a pressure difference which bears a definite relation to the rate of flow of the fluid being metered, pipes connecting the manometer and agent, said pipes being filled with water, a reservoir containing water, a piston in said reservoir, pipes connecting the first named pipes to said reservoir upon opposite sides of said piston, and means for moving said piston.

[Claim 6 not printed in the Gazette.]

1,114,564. COOLING DEVICE FOR REVOLVING MOTORS. OTTO WINKLER, Cöpenik, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 31, 1912. Serial No. 674,511. (Cl. 123—173.)



1. A revolving multicylinder internal combustion engine provided with a water jacket for each cylinder, a radiator, and means connecting the radiator and jackets for effecting a thermo-siphon circulation of the water therethrough by centrifugal force when said engine is running.

2. A revolving multicylinder internal combustion engine provided with a water jacket for each cylinder, a radiator, and means for enabling the colder heavier water in the radiator to be thrown to the outer ends of the water jackets by centrifugal force, to displace and force inwardly through said jackets the lighter heated water therein.

3. A revolving multicylinder internal combustion engine provided with a water jacket for each cylinder, and a radiator to which are connected the outer and inner ends of each jacket.

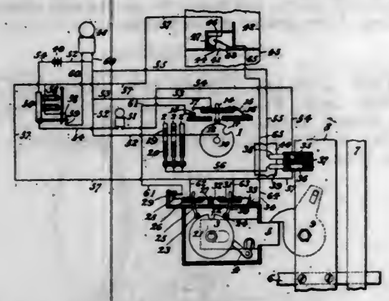
4. A revolving multicylinder internal combustion engine provided with a water jacket for each cylinder, an annular radiator adjacent to said cylinders, and pipes connecting said radiator with the inner and outer ends of each jacket.

5. A revolving multicylinder internal combustion engine provided with a water jacket for each cylinder, an annular radiator adjacent to said cylinders and near the inner ends thereof, and pipes connecting said radiator with the inner and outer ends of each jacket.

1,114,565. ELECTRIC BURGLAR-ALARM SYSTEM. JOHN PRITCHARD WILLIAMS, New York, N. Y., assignor to Electric Bank Protection Company, a Corporation of Delaware. Filed June 1, 1910. Serial No. 564,399. (Cl. 177—314.)

1. In an alarm system, an electric protective alarm circuit, a structure protected thereby, access means to said structure, locking means governing said access means and

in electrical connection with said circuit, said connection comprising means whereby unauthorized tampering with the locking means will cause the actuation of the alarm, and manually-operatable means in electrical connection with said circuit, said last named connection comprising means whereby unauthorized tampering with said manually-operatable means will cause actuation of the alarm and means whereby authorized operation of said manually-operatable means will disconnect said locking means from its circuit connections to enable operation of the locking means without actuating the alarm.



2. In an alarm system, an electric protective alarm circuit, a structure protected thereby, access means to said structure, locking means governing said access means and in electrical connection with said circuit, said connection comprising means whereby unauthorized tampering with the locking means will cause the actuation of the alarm, and supplementary means manually-operatable to cause actuation of the alarm and to control the circuit connections of said locking means so that authorized operation of the latter can be effected without actuating the alarm.

3. In an alarm system, an electric protective alarm circuit, a structure protected thereby, access means to said structure, locking means governing said access means and in electrical connection with said circuit, said connection comprising means whereby unauthorized tampering with the locking means will cause the actuation of the alarm, and supplementary means in connection with said alarm circuit and in connection with the circuit connections of said locking means with said alarm circuit said supplementary means being manually-operatable to cause actuation of the alarm and control the electrical connections of said locking means so that authorized operation of the latter can be effected without actuating the alarm.

4. In an alarm system, an electric protective alarm circuit, a structure protected thereby, access means to said structure, locking means governing said access means and in electrical connection with said circuit, said connection comprising means whereby unauthorized tampering with the locking means will cause the actuation of the alarm, supplementary manually-operatable means in connection with said alarm circuit, said last named connection comprising means whereby unauthorized tampering with said manually-operable means will cause the actuation of the alarm, electrical circuit connections between said supplementary means and said locking means, and means for disconnecting said supplementary means from its circuit connections and to permit operation of the locking means without actuating the alarm.

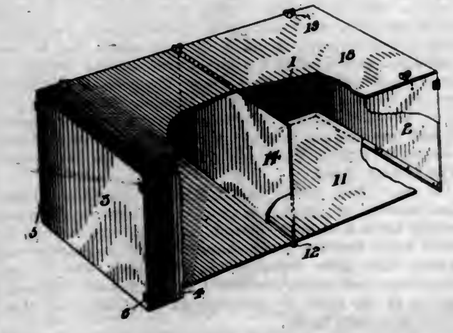
5. In an alarm system, an electric protective alarm circuit, a structure protected thereby, access means to said structure, a combination-lock mechanism governing said access means and in connection with said circuit, said connection comprising means whereby unauthorized tampering with said combination-lock mechanism will cause the actuation of the alarm, a supplementary combination mechanism in connection with said alarm circuit, said last named connection comprising means whereby unauthorized tampering with said supplementary combination mechanism will cause the actuation of the alarm, and electrical connections between said supplementary combination mechanism and said combination-lock mechanism, said last named connections comprising means whereby authorized actuation thereof will enable operation of the combination-lock mechanism without actuating the alarm.

[Claims 6 to 17 not printed in the Gazette.]

1,114,566. ATTACHMENT FOR FASTENING WATCH-DIALS. JOSEPH A. F. WOLF, Sidney, Nebr. Filed Oct. 22, 1912. Serial No. 727,260. (Cl. 58—127.)

The combination with a watch movement plate with an upper ledge, said watch movement plate provided with slots extending transversely therethrough and with their outer surfaces tangential to the outer surface of the lower portion of said ledge, a dial with wide thin projections rigidly secured thereto equal in thickness to the width of said slots, said plate-like projections fitting snugly within the said slots and with their outer surfaces tangential to the surface of the lower portion of said ledge, said projections provided with apertures extending transversely therethrough and the watch movement plate provided with threaded apertures extending radially in and co-axial with the projection apertures, screws counter sunk in the said projections extending through the said projection apertures and threadedly engaging the apertures of the watch movement plate and with their heads lying flush with the surface of the said projections and tangential with the lower portion of the said ledge, and an annular watch member receiving the restricted portion of the watch movement plate therein contacting with the said projections and with the screw heads, preventing the movement thereof.

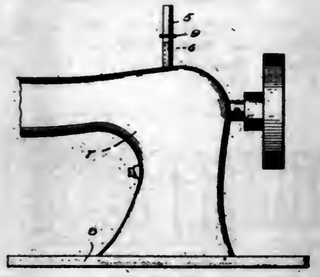
1,114,567. FOLDING BOX. GEORGE E. WOODS, Pittsburgh, Pa., assignor of one-half to Herman Samuel Jacobson, Pittsburgh, Pa. Filed May 21, 1912, Serial No. 698,781. Renewed Mar. 10, 1914. Serial No. 823,793. (Cl. 220—17.)



1. A folding crate comprising a collapsible body portion including side and end walls hinged together, means carried by each of said walls in proximity to its lower edge to provide sockets within said body portion, a bottom plate, depending pins carried by the plate and engaging in said sockets, and a lid adapted to be connected to said body portion.

2. A folding crate comprising a rectangular collapsible body portion including side and end walls hinged together, inwardly projecting semi-circular strips, one of said strips having its flat face positioned against the inner face of a wall in proximity to the lower edge of the latter, means for securing the strips to said walls, said strips provided with vertically disposed sockets, a rectangular bottom plate mounted upon said strips, pins secured to said bottom plate and detachably engaging in said sockets, and a cover secured to said body.

1,114,568. SPOOL-HOLDER. EDWARD ZIMMERMAN and CORA B. BRITT, Kansas City, Mo. Filed Oct. 11, 1912. Serial No. 725,292. (Cl. 242—139.)



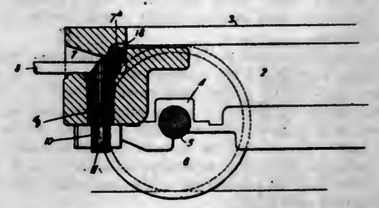
As an article of manufacture a spool carrying member comprising a tube having a length exceeding the combined length of two spools, and an annulus secured to said tube to provide a support for the upper spool.

1,114,569. LAMINATED FABRIC FOR GARMENTS. NICKOLAS ZUCK and FRANK G. PFISTNER, Rochester, N. Y. Filed Sept. 19, 1913. Serial No. 790,702. (Cl. 154—46.)

1. A laminated fabric for a garment stiffener, comprising a layer of haircloth, said haircloth embodying a series of hairs arranged in spaced relation to each other, a layer of protective material, and a cementitious attaching medium between the haircloth and protective material.

2. A laminated fabric for a garment stiffener, comprising a layer of haircloth, said haircloth embodying a series of hairs arranged in spaced relation to each other, a layer of protective material on each side of the haircloth, and a cementitious attaching medium between the haircloth and protective material.

1,114,570. CAR-COUPLING AND COUPLING-OPERATING MECHANISM. WILLIAM AHLEN, Duquesne, Pa. Filed July 18, 1912. Serial No. 710,122. (Cl. 213—50.)



1. A car coupler comprising in combination a car having a recessed end, said recess having an enlarged inner end, a coupling pin vertically movable within said recess and arranged to engage and detachably secure a coupling link within said recess, and a lengthwise horizontal cylindrical roller inclosed within said recess and having end portions projecting into the enlarged end of said recess and arranged to engage the entering end of the coupling links, said roller being arranged to yieldingly support said links in causing the links to project in the desired direction from said recess.

2. A car coupler comprising in combination a car having a recessed end, said recess having an enlarged inner end, a coupling pin vertically movable within said recess and arranged to engage and detachably secure a coupling link within said recess, a lengthwise horizontal cylindrical roller inclosed within said recess and having end portions projecting into the enlarged end of said recess and arranged to engage the entering end of the coupling links, said roller being arranged to yieldingly support said links in causing the links to project in the desired direction from said recess, and means for manually moving the coupling pin into link releasing position.

1,114,571. SAFETY APPLIANCE FOR SCREWLESS HOLDERS. LAURITZ W. ASMUSSEN, Waterbury, Conn., assignor to The Plume & Atwood Mfg. Co., Waterbury, Conn., a Corporation of Connecticut. Filed June 3, 1914. Serial No. 842,753. (Cl. 240—115.)

1. A device of the kind described comprising a shell adapted to receive a socket, means connected thereto for engaging the interior of a shade, means carried by said shell for holding said shade engaging means in contact with the shade together with means attachable to the shell and adapted to lock said interior means in position and also engage the exterior of the shade.

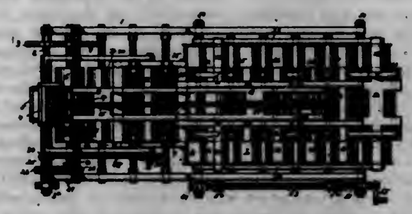
2. A device of the kind described comprising a shell and means connected thereto for engaging the interior of a shade, means attachable to said shell and adapted to engage the exterior of the shade, together with means carried by said shell for holding the interior shade engaging means independent of the exterior means.

3. A device of the kind described comprising a shell, wings attached to the end of said shell and a catch attached to said shell and adapted to engage said wings, and an outer shell attachable to the inner shell.

4. A device of the kind described comprising an inner shell, wings hinged thereto, a spring catch attached to said shell and adapted to engage said wings, and an outer shell attachable to said inner shell.

5. A device of the kind described comprising an inner shell, wings hinged to said shell, a spring plate attached to said shell, and provided with lugs adapted to engage apertures in said wings, and an outer shell attachable to said inner shell as set forth.

1,114,572. LOAF-FORMING MACHINE. WILLIAM B. BARCUS, Newark, N. J. Filed Oct. 13, 1913. Serial No. 794,755. (Cl. 107—9.)



1. In a loaf forming machine, the combination with a pair of feed rollers rotating in opposite directions, of a tier of upper and a tier of lower rollers, some of which rollers of the upper and the lower tier are constructed to

be shortened or lengthened, said extensible rollers being located in the rear part of the machine and means for rotating said rollers, substantially as set forth.

2. In a loaf forming machine, the combination with a pair of feed rollers rotating in opposite directions, of a tier of upper and a tier of lower rollers, some of which rollers of the upper and the lower tier are constructed to be shortened or lengthened and means for rotating said rollers and means for shortening or lengthening all the extensible rollers at the same time, said extensible rollers being mounted in the rear part of the machine, substantially as set forth.

3. In a loaf forming machine, the combination with a pair of feed rollers, an upper and lower tier of rollers for molding the dough passing between them, a group of these rollers of the upper and the lower tier being extensible, said extensible rollers being mounted in the rear part of the machine, a movable frame carrying a series of rollers of the upper tier between the upper feed roller and the first extensible roller of the upper tier, substantially as set forth.

4. In a loaf forming machine, the combination with a tier of upper rollers and a tier of lower rollers, of a pair of feed rollers, one of which pertains to the upper tier and the other to the lower tier, means for rotating all the rollers of the upper tier except the upper feed roller at less speed than the speed of the rollers of the lower tier, substantially as set forth.

5. In a loaf forming machine, the combination with an upper and a lower tier of rollers between which the dough to be molded into a loaf is to be passed, a pair of feed rollers, a series of extensible rollers in each tier, the extensible rollers being located in the rear part of the machine, a frame in which the three rollers in the upper tier between the upper feed roller and the first extensible roller are mounted, a driven shaft on which the intermediate one of said three rollers is mounted, said frame being mounted to rock on the shaft of the said intermediate roller of said three rollers, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

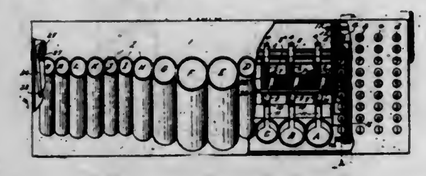
1,114,573. AMALGAMATOR. GUSTAV R. BAUER, Oceanpark, Cal. Filed May 14, 1913. Serial No. 767,589. (Cl. 83—68.)

1. An amalgamating apparatus, comprising a sluice-way having a flat amalgamating plate on the bottom thereof, a cylindrical amalgam carrying screen revolubly mounted in the sluice-way and extending transversely thereof with the lower point of the periphery thereof spaced a short distance from the flat amalgamating plate, and means controlled by the flow of liquid through the sluice-way for rotating said screen.

2. In an amalgamator, an inclined sluice-way having a flat bottom and vertical side walls, a flat amalgamating plate on the bottom of said sluice-way, a paddle wheel revolubly and removably mounted in the side walls of the sluice-way and extending transversely of the latter, said paddle-wheel adapted to be rotated by the flow of liquid through the sluice-way, an amalgam carrying screened cylinder removably mounted on said paddle wheel with the periphery thereof spaced a short distance from the flat amalgamating plate, and means at the lower end of the sluice-way for regulating the flow of liquid therethrough and thereby regulate the rotation of the paddle wheel.

3. In an amalgamator, an inclined sluice-way having a flat bottom and vertical side walls, a flat amalgamating plate on the bottom of said sluice-way, a paddle wheel revolubly and removably mounted in the side walls of the sluice-way and extending transversely of the latter, said paddle wheel adapted to be rotated by the flow of liquid through the sluice-way, an amalgam carrying screened cylinder removably mounted on said paddle wheel with its periphery spaced a short distance from the flat amalgamating plate, and means at the lower end of the sluice-way for regulating the flow of liquid therethrough and thereby regulate the rotation of the paddle-wheel, said sluice-way formed with an opening in its bottom adjacent its upper end to permit the passage of heavy materials therethrough to prevent said materials being carried over the amalgamating plate and against the cylindrical screened cylinder.

1,114,574. COIN-DELIVERING MACHINE. THOMAS BILYEU, Portland, Oreg. Filed Sept. 24, 1909, Serial No. 519,489. Renewed Jan. 30, 1912. Serial No. 674,378. (Cl. 133—4.)



1. In a coin delivery machine, the combination of a series of coin holders, ejector mechanism for each coin holder comprising a longitudinally movable ejector slide, an ejector bar pivotally connected at one end to said slide and having its other end normally out of alinement with the slide, a slidable actuating member spaced from but in alinement with the slide, key operated devices for bringing the selected ejector bars into alinement with the actuating members and associated slides, and means for simultaneously operating all of the actuating members and thereby moving said selected ejector mechanisms.

2. In a coin delivery machine, the combination of a series of coin holders, an ejector mechanism controlling the delivery of coins from the bottom portions of said holders, each ejector mechanism including a longitudinally movable slide, an ejector bar pivoted at one end to said slide, a rack spaced from but in alinement with the slide, an actuator arm having teeth meshing with those of the rack, key operated selectors for setting the ejector mechanism for operation by moving selected ejector bars into alinement with the racks and slide, and an actuator common to all of said slides to actuate the latter and impart corresponding movement to the ejector means.

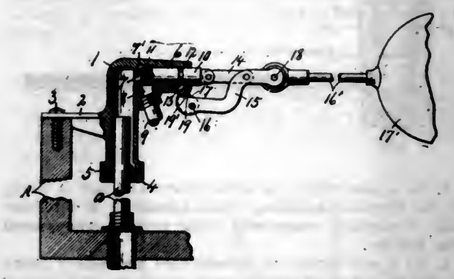
3. In a coin delivery machine, the combination of a series of coin receptacles, delivery mechanism for each receptacle comprising an ejector slide, an ejector bar connected to said slide and movable into and out of an operative position, key operated selectors for moving the ejector bars into operative position, means for positively operating said ejector bars and slides in both directions, means to lock the ejector bars in operative position with respect to said slides while moving in one direction, and means to release said locking means when moving in the other direction.

4. Ejector mechanism for coin delivery machines including a slide, an ejector bar connected at one end to said slide and having its other end normally out of alinement therewith, an actuator comprising a member spaced from and in alinement with the slide and with which the ejector bar is adapted to be brought into alinement, and means mounted upon said actuating member to lock said ejector bar when brought into alinement with the slide and actuating member.

5. Ejector mechanism for coin delivery machines comprising an ejector slide, an ejector bar connected thereto at one end and normally free at its other end and out of alinement with said slide, an actuating member spaced from and in alinement with said slide and with which said ejector bar is adapted to be brought into alinement, and a catch pivoted upon the actuating member and arranged to interlock with the normally free end of the ejector bar when said bar is brought into alinement with the slide and actuating member for delivery operation.

[Claims 6 to 46 not printed in the Gazette.]

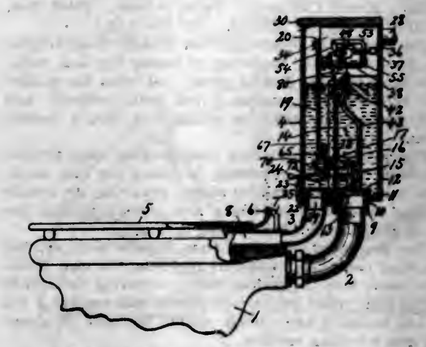
1,114,575. BALL-COCK FOR FLUSH-TANKS OF WATER-CLOSETS. KIRK S. BLANCHARD, Brooklyn, N. Y. Filed Oct. 5, 1912. Serial No. 724,167. (Cl. 137—104.)



1. A ball cock comprising a valve case having an inlet port and separate outlet ports at different distances from the inlet port, a plunger valve coaxial with the inlet port for opening and closing the same and movable across the outlet ports, said valve having an annular channel registering with the outlet port farthest from the inlet port, a float lever pivoted to the valve case at a point some distance below the valve and beyond the farthest outlet and extended across the produced axis of the valve some distance beyond the outer end thereof, and a link pivotally connected to the valve and to the lever approximately in said axis, the distance between the pivots of the link being considerably less than the distance between the lever pivot and its pivotal connection with the link.

2. A ball cock comprising a valve case having an inlet port and an outlet port, a plunger valve coaxial with the inlet port for opening and closing the same and movable across the outlet port, a float lever pivoted to the valve case at a point some distance below the valve and extended some distance beyond the valve and across the produced axis thereof, means for limiting the downward movement of the lever, and a link pivotally connected to said lever and to the outer end of the valve in approximately the horizontal plane of said axis, the distance between the pivotal connections of the link with the valve and lever being considerably less than the distance between the pivotal connection of the link with the lever and the pivotal support of the lever, while the distance between the pivotal connection of the valve with the link and the inlet port is a considerably greater distance than the distance between a vertical plane through the pivot of the lever and said inlet port.

1,114,576. FLUSH-TANK. KIRK S. BLANCHARD, Brooklyn, N. Y. Filed Feb. 18, 1913. Serial No. 749,104. (Cl. 4—21.)



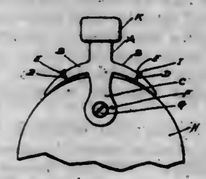
1. A flush tank for water closets having an interior partition running horizontally along the bottom and vertically along one end and united to said bottom and end to form a ventilating chamber separate from the remaining interior space, a vent pipe leading from the ventilating chamber, a fan in said chamber, and driving means for the fan.

2. A flush tank for water closets having an interior partition running horizontally along the bottom and vertically along one end and united to said bottom and end to form a ventilating chamber separate from the remaining interior space, a vent pipe leading from the ventilating chamber, a fan in said chamber, a shaft for the fan extending through the upright portion of the partition, a water-motor secured to the inner end of the shaft, a flush pipe and a water supply pipe both leading from the interior of the tank separate from the ventilating chamber, a flush valve for the flush pipe, a ball cock for the supply pipe discharging into the tank and provided with a separate outlet leading to the motor, a valve for the separate outlet, and means for operating said valve.

3. In combination with a water-closet bowl having an air vent leading from its interior, a flush tank having a partition extending along and near its bottom and one end and united thereto to form a ventilating chamber separate from the remaining space in the tank, a vent pipe connecting the bowl-vent with said chamber, a delivery pipe leading from the chamber, a fan in said chamber, a water motor for the fan, a flush pipe and a water supply pipe both leading from the interior of the tank separate from the ventilating chamber, the flush pipe being connected to the bowl, a valve for the flush pipe discharging into the tank and provided with a separate outlet leading to the motor, a valve for said outlet, and means having portions thereof extending through the ventilating chamber for operating said valve.

4. In combination with a bowl of a water closet, a low-down tank at the rear and just above the top of the bowl, a flush pipe leading from the rear end of the bowl into the bottom of the tank, and a vent pipe leading from the bowl directly above the adjacent end of the flush pipe and entering the bottom of the tank directly in front of the flush pipe, said tank having a ventilating chamber therein separate from the remaining water space and communicating with the vent pipe.

1,114,577. FRAMELESS EYEGLASS AND SPECTACLE MOUNTING. JAMES HOYT BROWN, Denver, Colo. Filed Mar. 2, 1911. Serial No. 611,945. (Cl. 88—47.)



1. A clip fastener for eye glasses having apertured ears, a screw carried thereby and engaging a lens, lens straps upon the shank portion of said fastener, and a set screw carried by one of said straps and adapted to bear against the edge of the lens, as set forth.

2. An eye glass mounting having a lens strap provided with an adjustable screw adapted to bear against the edge of the lens.

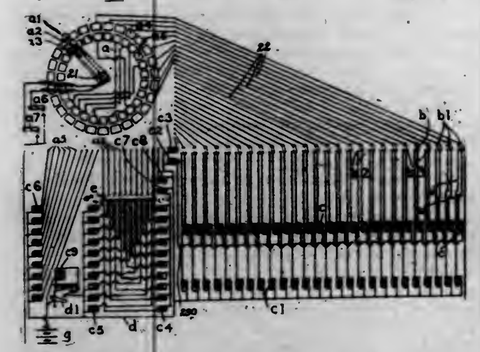
3. An eye glass mounting having oppositely extending lens straps, each provided with an adjustable screw adapted to bear against the edge of the lens.

4. An eye glass mounting having a lens strap provided with a reversible adjustable screw adapted to bear against the edge of the lens.

5. An eye glass mounting including a lens strap, ears projecting from the frame, a lens mounted between said ears, a member extending through said ears and said lens, and a screw adjustably extending through said strap and bearing against the edge of the lens to hold the same rigid.

[Claim 6 not printed in the Gazette.]

1,114,578. STOCK-QUOTATION INDICATOR. RALPH W. BUMSTEAD, Boston, Mass. Filed June 22, 1905. Serial No. 266,437. (Cl. 177—337.)



1. In a device of the class described, a plurality of quotation indicators, one for each of several stocks or commodities, selective mechanism having means for adjusting said quotation indicators at will in accordance with any desired sequence of quotations of the several stocks or commodities and in accordance with any desired sequence of values for the quotations of any individual stock or commodity, and an intelligence-transmitting instrumentality operatively connected by said selective mechanism with said quotation indicators.

2. In a device of the class described, a set of quotation indicators for each of several stocks or commodities, each set comprising a market, maximum and a minimum quotation indicator, selective mechanism provided with means for selecting at will the set of quotation indicators for any stock or commodity and selectively operating the market quotation indicators of the selected set to display any desired sequence of quotations of a stock or commodity, means for actuating the maximum and minimum indicators only when the market quotations exceed previous limitations of quotation, and an intelligence-transmitting instrumentality operatively connectible by said selective mechanism with said quotation indicators.

3. In a stock market indicator, a plurality of price indicators, one for each of several stocks or commodities, a plurality of initial selector units each adapted to select a group of said price indicators, a plurality of complementary selector units each adapted to select a single one out of said group of price indicators, and means to operate said selected indicator to display any desired quotation.

4. In a device of the class described, a plurality of market quotation indicators selectably operative to display quotations in accordance with any desired succession of said quotations, and means common to all the indicators to communicate said quotations theerto from a central station.

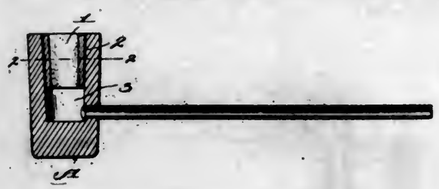
5. In a device of the class described, market-quotation indicators selectable at will, minimum-quotation indicators, and maximum-quotation indicators, both operated from the market-quotation indicators and electro-responsive indicator-actuating mechanism capable of setting said indicators to display in classified form a succession of quotations transmitted from a common source for any desired sequence of stocks or commodities.

[Claims 6 to 64 not printed in the Gazette.]

1,114,579. LINING FOR TOBACCO-PIPES. HARRY L. CANFIELD, Homer, Minn. Filed Sept. 25, 1913. Serial No. 791,810. (Cl. 131—12.)

1. As a new article of manufacture and sale a lining for the stummels of tobacco pipes consisting of a tubular body of strongly compressed cured tobacco.

2. As a new article of manufacture and sale a lining for the stummels of tobacco pipes consisting of a tubular body of strongly compressed cured tobacco impregnated with a palatable binding agent.



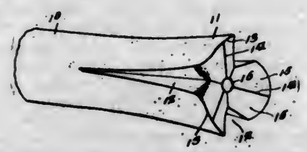
3. As a new article of manufacture and sale a lining for the stummels of tobacco pipes consisting of a tubular body of strongly compressed cured tobacco impregnated with licorice.

4. As a new article of manufacture and sale a lining for the stummels of tobacco pipes consisting of a tubular body of strongly compressed cured tobacco externally coated with a palatable cementing agent.

5. As a new article of manufacture and sale a lining for the stummels of tobacco pipes consisting of a tubular body of strongly compressed cured tobacco externally coated with licorice.

[Claims 6 to 9 not printed in the Gazette.]

1,114,580. DRILL. DONATO CEDRONE, New York, N. Y. Filed Oct. 25, 1913. Serial No. 797,332. (Cl. 255—63.)



The herein described bit comprising a shank enlarged toward its cutting end and provided with three V-shaped longitudinal grooves in its sides growing deeper toward said end and there producing interposed claws, the forward corner of each claw being struck on a single arc in both side elevation and end view and sharpened to a cutting edge, and the front end of each claw having a sharpened rib extending straight from the axis of the bit to said arc midway between two of said grooves with receding faces on opposite sides of the rib which flare from said axis and the bottom of one of said grooves outward to said arc, the shank having an axial passage opening through the point of juncture of said ribs.

1,114,581. PROCESS OF MAKING ARTICLES FROM SLAG. MARCO CHIAPPONI, Paris, France. Filed Nov. 6, 1913. Serial No. 799,573. (Cl. 75—145.)

1. The process of obtaining from furnace slag, articles of the kind described, consisting in fusing the slag, molding the same into the desired shape, and when the molded article solidifies and reaches a red heat, suddenly and quickly cooling the same by plunging it into a cooling medium.

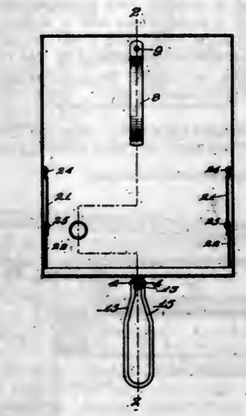
2. The process of obtaining from furnace slag, articles of the kind described, consisting in fusing the slag, molding the same into the desired shape, removing the article from the mold, and suddenly and quickly cooling the same by plunging it into a cooling medium.

3. The process of obtaining from furnace slag, articles of the kind described, consisting in fusing the slag, molding the same into the desired shape, removing the article from the mold when the same solidifies and reaches a red heat, and suddenly and quickly cooling the same by plunging it into a cooling medium.

4. The process of obtaining from furnace slag, articles of the kind described, consisting in fusing the slag, adding thereto basic mineral matter, molding the slag into the desired shape, and suddenly and quickly cooling the same by plunging it into a cooling medium.

5. The process of obtaining from furnace slag, articles of the kind described, consisting in fusing the slag, pouring the slag into a heated mold, and suddenly and quickly cooling the molded slag by plunging it into a cooling medium.

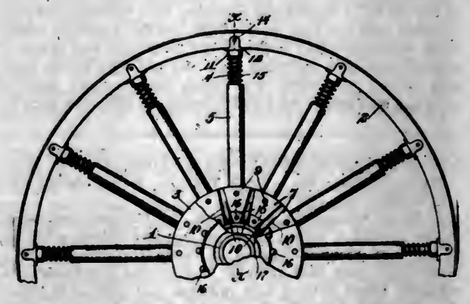
1,114,582. PHOTOGRAPHIC FLASH-LIGHT APPARATUS. WILLIAM B. CLINE, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed June 21, 1910. Serial No. 568,144. (Cl. 67—28.)



1. A flashlight holder comprising a base, a backing longer than the base hinged thereto, and a flash sheet holding clip on the front face of the backing comprising a pivoted spring arm, the free end of which is engaged and held in place by the edge of the base when the base and backing are folded flat against each other.

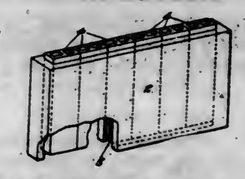
2. In a flash light holder, the combination with a base and a backing hinged thereto and longer than the base, both of said parts being provided with shallow flanged rails and the base being adapted to fold into a parallel position against the backing with its flanges telescoped within those of the backing, of a flash sheet holding clip on the front face of the backing comprising a spring arm of fist material having a bowed portion of less height than the flanged rail of the backing and a relatively depressed contacting portion at its free end so arranged as to be engaged by the edge of the flanged rail at the end of the base when the latter is folded against the backing.

1,114,583. SPRING-WHEEL. MELVIN H. CONKLIN and DANIEL J. KIRTLAND, Antonito, Colo. Filed May 21, 1913. Serial No. 769,049. (Cl. 152—47.)



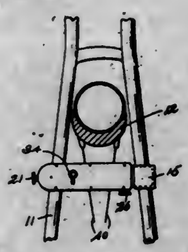
A spring wheel comprising a sectional hub, each of the hub sections having an outer flange at its inner end, a rim, telescoping spokes between the rim and hub, each of such spokes comprising an inner tubular member and an outer member telescoping within the tubular member and provided at its outer end with a threaded socket, a clip pivotally connected to the rim and having a threaded projection fitted to said socket, wedge shaped heads arranged between the flanges of the hub sections with V shaped spaces between the opposing edges of adjacent heads, U shaped springs in the spaces between the wedge shaped heads, fastenings connecting the flanges of the hub sections and the wedge shaped heads, the latter having threaded projections to receive the tubular spoke members, helical springs located within the tubular spoke members and interposed between the outer spoke members and the wedge shaped heads, and other helical springs surrounding the outer spoke members and interposed between the sockets thereof and the outer ends of the tubular spoke members.

1,114,584. WALL CONSTRUCTION. JOHN E. CONZELMAN, Webster Groves, Mo., assignor to Unit Construction Company, St. Louis, Mo., a Corporation of Delaware. Original application filed Nov. 9, 1911, Serial No. 659,298. Divided and this application filed Aug. 7, 1912. Serial No. 713,900. (Cl. 72—41.)



In concrete slab construction, a series of superimposed slabs, each slab consisting of a concrete body of rectangular cross section having a series of transverse similar hollow tiles embedded therein, each tile being of rectangular cross-section and having their sides arranged in contacting engagement throughout, one of the ends of each of the tiles extending beyond one side of the body to form a single tongue of rectangular cross section having straight uninterrupted sides and a straight uninterrupted top face, the opposite ends of the tiles being disposed in spaced relation to the opposite side of the body whereby to provide a single opening at said opposite end of the body, which opening has substantially the same rectangular cross-section as that of the tongue and has a straight uninterrupted bottom face formed by said opposite ends of the tiles, whereby when the tongue of a slab projects into the opening of an adjacent slab the top face of the tongue will directly seat on the adjacent ends of the tiles in an adjacent slab, and whereby the openings of the tiles will register.

1,114,585. WHEEL-LOCK. JOHN E. CRAVER, Stockton, Cal. Filed May 28, 1914. Serial No. 841,507. (Cl. 70—90.)



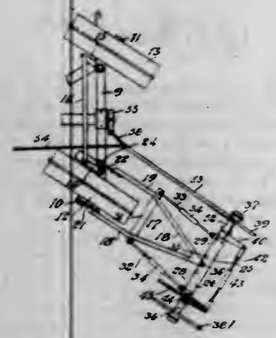
1. In combination, a pair of forks, a wheel rotatably mounted between said forks, a U-shaped member receiving one of said forks, a bolt having threads on one end and having the opposite end concaved and engaged against

said fork between the free ends of said U-shaped member, a pin positioned through the ends of said U-shaped member and through said bolt, an annular member positioned over said bolt and the free ends of said U-shaped member, a keeper, a threaded sleeve on said keeper receiving the threaded end of said bolt, means for securing said keeper against rotation on said bolt, and a lock rotatably secured to the other fork including a bolt adapted to be seated within said keeper to prevent the rotation of said wheel.

2. In combination, a pair of forks, a wheel rotatably mounted between said forks, a U-shaped strap secured to one of said forks, a bolt secured between the free ends of said U-shaped strap, a lock rotatably mounted on said bolt, means for securing said lock against rotation on said bolt, a keeper secured to the other fork, and a slidable bolt in said lock adapted to be seated within said keeper when said lock is moved into position between the spokes of said wheel.

3. A lock comprising a casing having an open end and a slot in one side wall adjacent said open end, a bolt slidable in said open end and having its inner end recessed to provide a pair of parallel extensions, a handle carried by one of said extensions projecting through said slot, teeth on the under face of the upper extension, and a key controlled member in said casing coöperating with said teeth to prevent inward movement of said bolt.

1,114,586. STEERING DEVICE FOR TRACTION-ENGINES. THOMAS HUGHES CUDDY, Winnipeg, Manitoba, Canada. Filed Feb. 8, 1913. Serial No. 747,043. (Cl. 97—81.)

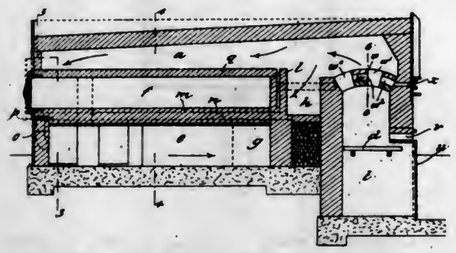


1. The combination with a traction engine having the front end thereof mounted on pivoted carriage wheels and provided with means connecting the carriage wheels and causing the same to turn together and in the same direction, and a steering device located in advance of one of the wheels and connected to the same rearwardly and having the forward end thereof mounted on pivoted carriage wheels, the said carriage wheels being connected to operate together, of steering means operated from the engine controlling one of the carriage wheels, and means coöperating with said steering means limiting the angle to which said steering device can be turned, as and for the purpose specified.

2. The combination with a traction engine having the front end thereof mounted on pivoted carriage wheels and provided with means connecting the carriage wheels and causing the same to turn together and in the same direction, and a steering device located in advance of one of the wheels and connected to the same rearwardly and having the forward end thereof mounted on pivoted carriage wheels, the said carriage wheels being connected to operate together, of a lever secured to the axle of one of the carriage wheels, a bar secured to the lever and extending rearwardly toward the traction engine, means for advancing or receding the bar, said means being controlled from the traction engine and a rod pivotally secured to the rear end of the bar and to the engine, as and for the purpose specified.

3. The combination with a traction engine having the front end thereof mounted on pivoted carriage wheels and provided with means connecting the carriage wheels and causing the same to turn together and in the same direction and a steering device located in advance of one of the wheels and connected to the same rearwardly and having the forward end thereof mounted on pivoted carriage wheels, the said carriage wheels being connected to operate together, of a lever secured to the axle of one of the carriage wheels, a bar secured to the lever and extending rearwardly toward the traction engine a link connected to the rear end of the bar, a short shaft rotatably mounted on the engine and provided with a crank and a partial worm wheel, said crank being connected to the link aforesaid, a steering post mounted on the engine and provided with a hand wheel and a worm, said worm meshing with the worm wheel and a rod pivotally secured to the rear end of the latter bar and to the front end of the traction engine, as and for the purpose specified.

1,114,587. MUFFLE-FURNACE. EDWARD CURRAN, Cardiff, Wales. Filed Mar. 21, 1914. Serial No. 826,342. (Cl. 75—40.)



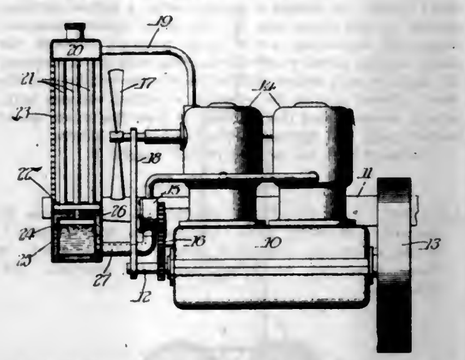
1. A muffle furnace having top, side and bottom flues for heating the furnace, downtakes connecting the top and bottom flues, separate downtakes connecting the side and bottom flues, and controlling dampers in said downtakes whereby the heating gases can be simultaneously distributed through all the flues and alternatively can be confined to the top and bottom flues or to the side and bottom flues only.

2. A muffle furnace having a combustion space, a top flue for conducting gases from the combustion space above the muffle roof, separate side flues for conducting gases from the combustion space along the side walls of the muffle, a flue formed in the floor of the muffle, longitudinal flues to receive gases from the flues before mentioned and conduct such gases beneath the muffle and thence to a chimney, and controlling dampers in each of the top, side and floor flues whereby the gases can be simultaneously distributed through them or confined to either one or more of them.

3. A muffle furnace having a combustion chamber in rear of its rear wall, heating flues leading from said chamber and arranged on the top and sides and below the bottom of the muffle, a transverse partition wall between the said chamber and the rear wall of the muffle, a second transverse wall extending between the side flues and disposed between the said partition wall and the rear muffle wall, said second transverse wall being substantially parallel with the rear muffle wall and forming an air space with it.

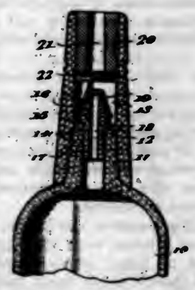
1,114,588. NON-FREEZING RADIATOR. JOHN W. DALMAN, Chicago, Ill. Filed Feb. 3, 1911. Serial No. 606,369. (Cl. 123—170.)

1. In an automobile, a radiator, an internal combustion engine having a water jacket in communication with the upper part of said radiator, a reservoir supported at a lower level than said radiator and having communication with the lower part of said radiator and with said jacket thus forming a continuously open circuit for the cooling liquid, said reservoir having walls formed of a heat insulating construction, a pump in the circuit formed by said jacket, radiator and reservoir for forcing cooling liquid from said reservoir through said jacket and into the upper part of said radiator, whereby said liquid passes by gravity through said radiator when said pump is operated and whereby said radiator is drained into said reservoir by gravity when said pump is at rest.



2. In an automobile, a radiator, an internal combustion engine having a water jacket in communication with the upper part of said radiator, a reservoir supported at a lower level than said radiator and jacket and having communication with the lower part of said radiator and with said jacket thereby forming a continuously open circuit from which all of the cooling liquid tends to drain by gravity into said reservoir, said reservoir having walls formed of a heat insulating construction, a pump in said circuit for forcing cooling liquid from said reservoir through said jacket and into the upper part of said radiator.

1,114,589. NON-REFILLABLE BOTTLE. THOMAS J. DALY, Middletown, Conn. Filed June 6, 1913. Serial No. 772,181. (Cl. 215—65.)



In combination with a neck of a bottle, a tubular frusto-conical valve seat supported on the neck and having a reduced tubular portion extending into the neck, an auxiliary neck encircling the first mentioned neck and supported on the upper portion of the bottle, with the said auxiliary neck forming a valve chamber into which the frusto-conical portion of the valve seat extends, a valve supported on the frusto-conical portion of the valve seat and movable thereon to be advanced or retreated in the valve chamber, said valve normally closing the tubular portion of the said valve seat, and a cork carried in the auxiliary neck and provided with a longitudinal passage and a transverse passage extending entirely across the under side of the cork and communicating at its medial portion with the longitudinal passage in the cork, said cork constituting a stop member to limit the movement of the frusto-conical valve in the valve chamber when the bottle is tilted without interfering with the flow of fluid from the bottle into the said transverse passage in the cork and thence into the longitudinal passage therein.

1,114,590. COMPOSITION OF MATTER AND METHOD OF PRODUCING THE SAME. SAMUEL M. DARLING, Chicago, Ill. Filed Sept. 30, 1912. Serial No. 723,017. (Cl. 149—6.)

1. The method of producing leather preservative, which consists in distilling to dryness the oil or tar procured in the destructive distillation of lignite, then distilling the fraction which comes over above 350° Fah., to a point at which the residue has a waxy consistency, substantially as described.

2. The method of producing leather preservative, which consists in distilling to dryness the oil or tar procured in the destructive distillation of lignite, then distilling the fraction which comes over above 350° Fah., to a point at which the residue has a waxy consistency, and blowing a quantity of oxygen through the boiling mass during redistillation, substantially as described.

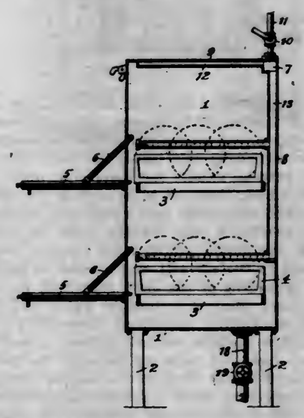
3. The method of producing leather preservative, which consists in distilling to dryness the oil or tar produced in the destructive distillation of lignite, then distilling the fraction which comes over above 350° Fah., to a point at which the residue has a waxy consistency, and blowing a quantity of oxygen through the boiling mass during redistillation and then adding an oxidizing oil, substantially as described.

4. A new composition of matter composed of the oil or tar of lignite distilled and redistilled to a waxy consistency, and a preservative, substantially as described.

5. A new composition of matter composed of the oil or tar of lignite distilled and redistilled to a waxy consistency, and an oxidizing oil, substantially as described.

[Claim 6 not printed in the Gazette.]

1,114,591. DISH-WASHING MACHINE. NELLIE G. DE LANEY, Portersville, Cal. Filed Jan. 31, 1913. Serial No. 745,399. (Cl. 141—9.)



1. In a dish washing machine, the combination with a casing, and rack shelves therein, of perforated channels secured to the inner faces of the top, back and sides of the casing and coöperating with the same to form ducts communicating with each other, a valved water inlet for supplying water to said ducts, and a valved outlet communicating with the bottom of the casing.

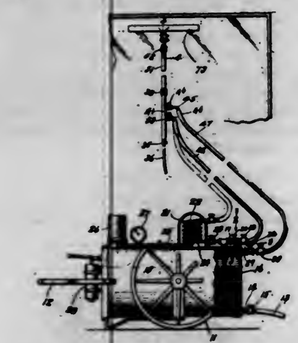
2. In a dish washing machine, the combination with a sheet metal casing and means therein for supporting dishes, of a plurality of perforated sheet metal channels secured to the inner faces of the top, back and sides of the casing and coöperating with the same to form communicating ducts, a valved water inlet communicating with one of said ducts, and a valved water outlet communicating with the bottom of the casing.

3. In a dish washing machine, the combination with a casing and rack shelves therein, of vertical perforated channels secured to the inner face of the back of the casing and coöperating therewith to form ducts, hori-

zontal perforated pipes, each communicating at one end with one of said vertical ducts and closed at the free end, said perforated pipes being disposed over the rack shelves so as to forcibly discharge water directly against the dishes held in racks on said shelves, means for supplying water to said ducts and means for discharging water from the casing.

4. In a dish washing machine, the combination of a sheet metal casing provided with door openings, a plurality of perforated channels secured to the walls of the casing and coöperating therewith to form ducts communicating with each other, means for supplying water to said ducts, dish supporting means within the casing in line with each of the door openings, perforated pipes over said supporting means and communicating with certain of said ducts, and means for controlling the discharge of water from the casing.

1,114,592. HYDROPNEUMATIC WINDOW-CLEANING APPARATUS. CLINTON C. DE WITT, Shrewsbury Park, Mo. Filed Feb. 26, 1914. Serial No. 821,279. (Cl. 15—53.)



1. In an apparatus of the class described, the combination with a tank adapted to receive water and compressed air, of a cleaning tool comprising a tubular handle, a hollow squilgee carried by said handle, a water tube passing through the tubular handle for delivering water through the squilgee, an air tube for withdrawing the water from the squilgee and delivering said water into the lower portion of the handle, a tube leading from the handle for carrying off the waste water, and tubular connections from the tank to the air and water tubes in said handle.

2. In an apparatus of the class described, the combination with a tank adapted to contain water and air under pressure, of a cleaning implement comprising a tubular handle, a hollow squilgee carried thereby, means for conveying water from the tank up through the handle and discharging said water through the hollow squilgee, and a tubular connection from the air compartment within the tank to the tubular handle whereby the waste water after passing through the squilgee is caused to pass downward through the handle of the cleaning implement.

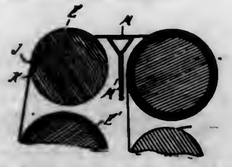
3. In an apparatus of the class described, a cleaning implement comprising a sectional tubular handle, a hollow squilgee carried by the upper end of said handle, a water pipe leading through the tubular handle, a jet pipe located within the squilgee and connected to said water pipe, an air pipe extending through the tubular handle, a jet nozzle connected to said air pipe and arranged to produce suction through the upper end of the tubular handle and the hollow squilgee for drawing the waste water from the squilgee and delivering same into the lower portion of the tubular handle, and means whereby water and air under pressure are delivered to the water and air pipes within the hollow handle.

4. In an apparatus of the class described, a cleaning implement, comprising a tubular handle, a short tubular member located on one end of said handle, in which short member is formed a flexible joint, a hollow squilgee carried by the upper end of said short tubular member, and means for delivering water under pressure through the short tubular member and discharging said water through the squilgee.

5. In an apparatus of the class described, a cleaning implement, comprising a tubular handle, a short tubular member located on one end of said handle, in which short member is formed a flexible joint, a hollow squilgee carried by the upper end of said short tubular member, means for delivering water under pressure through the short tubular member and discharging said water through the squilgee, and means within the tubular handle and the short tubular member for creating a partial vacuum within said member, and the squilgee to draw the waste water therethrough and deliver it into the tubular handle.

[Claims 6 to 8 not printed in the Gazette.]

1,114,593. CALCULATING-MACHINE. ADOLPHUS S. DENNIS, Lakewood, Ohio, assignor to The James J. Hinde Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 31, 1910. Serial No. 590,013. (Cl. 235—86.)



1. In a computing machine, the combination with a chart having a parallel series of computations thereon, of a roll on which said chart is wound, flanges on said roll forming guides for the edges of said charts, and an index bearing a series of numerals upon which said computations are based and with which they are registrable, said index being freely movable to compensate for varying diameters of said roll and being held in constant registration with the series of computations thereon.

2. In a computing machine, the combination with a chart having parallel series of computations thereon, of an index bearing numerals upon which said computations are based and with which they are registrable, and means for supporting said index and holding the same in constant registration with said series of computations while permitting free movement toward and from the axis of said roll to compensate for varying diameters.

3. In a computing machine, the combination with a plurality of charts, of adjacent rolls upon which said charts are wound and which are separately adjustable, and an index intermediate said rolls automatically adjustable to the varying diameters thereof.

4. In a computing machine, the combination with a plurality of charts, of adjacent rolls on which said charts are separately wound, an index between said rolls, and overlapping segments thereof being freely movable toward and from the axis of said rolls to compensate for varying diameters, and guides at the ends of said indexes to hold the same in registration with said charts.

5. In a computing machine, the combination with a case having a transparent face, a plurality of rolls exposed beneath said transparent face, charts separately wound upon said rolls and independently adjustable, and index strips intermediate said rolls resting in contact with the charts thereon and freely adjustable to compensate for varying diameters.

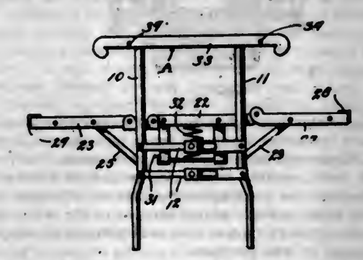
[Claims 6 to 8 not printed in the Gazette.]

1,114,594. FUSE-SUPPORT. GEORGE M. DOERSCH, Antigo, Wis., assignor of one-fourth to John C. Lewis, Antigo, Wis. Filed Aug. 21, 1913. Serial No. 785,854. (Cl. 24—85.)

1. A fuse holder for supporting the fuses in the ends of dynamite cartridges comprising a clip formed of a single piece of material, one end of which is turned at right angles with the main body of the clip and formed pointed and adapted to be inserted in the side of the cartridge, and the other end of which is turned at right angles with said main body and substantially parallel with said point and formed with a part adapted to embrace and support the fuse, substantially as set forth.

2. A fuse holder for supporting the fuses in the ends of dynamite cartridges, which consists of a single piece of wire with one end bent at right angles to its main portion and adapted to be inserted in the side of the cartridge, and its other end bent at right angles to the main portion to extend across the top of the cartridge and formed with a loop adapted to embrace and support the fuse, substantially as set forth.

1,114,595. FOLDING FURNITURE. CLYDE DUROSSETTE and JOHN G. WILLIAMS, Walsenburg, Colo. Filed Oct. 14, 1913. Serial No. 795,115. (Cl. 5—16.)



In a folding article of furniture, a rigid frame, plates secured to the respective ends of the rigid frame, arms secured to said plates and having their free ends supported by the rigid frame, frames pivotally connected to said plates and to the free ends of said arms respectively, an interlaced wire spring supported by the arms and by said pivoted frames, and means for securing the pivoted frames in either horizontal or vertical positions.

1,114,596. LOOSE-LEAF HOLDER. FREDERICK WM. DUSTAN, Clarkston, Wash. Filed Apr. 2, 1913. Serial No. 758,445. (Cl. 129—20.)

1. A loose sheet holder comprising a plurality of leaves, pocket forming members secured to the leaves, and tabs carried by the leaves and projecting beyond the pocket forming members.

2. A loose sheet holder comprising a plurality of leaves each having its upper and lower edges cut away at its outer end, and a pocket forming member carried by said leaf with its ends passing through said cut-away portions to permit it to expand on either side of the leaf.

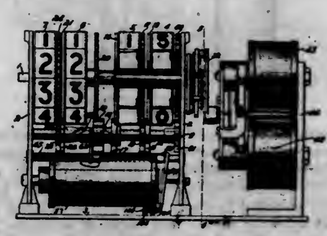
3. A loose sheet holder comprising a plurality of leaves, one-half of each of two adjacent leaves being formed of one piece, and pockets formed integral with said piece, one on each of said leaves, for the reception of loose sheets.

4. A loose sheet binder comprising a plurality of leaves, one half of each of two adjacent leaves being formed of the same strip of material, an inbent portion of the strip lying between adjacent leaves, and pocket defining portions, one on each of said leaves, integral with the said strip.

5. A leaf for loose sheet holders formed of a pair of strips of material secured together, each strip being provided with an inbent portion, one of said inbent portions being located on each side of the leaf, and means for connecting adjacent ends of the portions to form a double pocket for the reception of loose sheets.

[Claims 6 to 11 not printed in the Gazette.]

1,114,597. SIGNALING SYSTEM. FRANK A. EMERY, Ashmont, and ARTHUR A. ADAMS, Brookline, Mass., assignors, by mesne assignments, to Atlantic National Bank, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 13, 1909. Serial No. 483,155. (Cl. 177—338.)



1. In a range signaling system, the combination with a range indicator comprising indicating members, bearing each a plurality of symbols, moving mechanism to cause the movement of a member expressing a value of higher order to follow a plurality of movements of a member expressing a value of lower order, means to control said movements from a distance, and resetting means to cause both members to move equally whereby the indicator may be reset to indicate a given value by movements of the member of lower value.

2. In a signaling system, an indicator having a train of indicating wheels, gearing connections to cause a following wheel to move once only for a plurality of movements of the preceding wheel, means to impart a step-by-step movement to the preceding wheel, and means for connecting a following wheel to move with its preceding wheel.

3. In a signaling system, the combination with a step-by step indicator of electromagnetic devices for moving said indicator one step at a time in either direction, the said indicator comprising a primary indicating member and a secondary member, the latter connected to be moved once only for a plurality of movements of the primary member, means for controlling said electromagnetic devices from a sending station, and means also controllable at the sending station to couple said secondary indicating member to be moved with each movement of the primary indicating member.

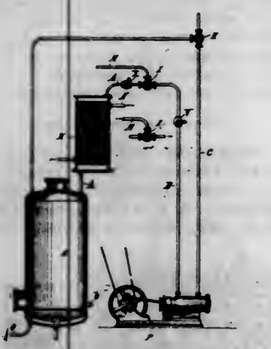
4. In a signaling system, the combination with a step-by-step indicator, with means at a distance for actuating the same either incrementally or decrementally, said indicator comprising a train of indicating members and a re-

setting device for said indicating members, also controllable at a distance.

5. In a signaling system, the combination with a transmitting station, of a receiver, a repeater, means for effecting a normal indication change at the receiver, a quick-acting resetting device for the receiver controllable from the transmitting station, and a quick acting resetting device for the repeater controlled by the resetting device at the receiver, said resetting devices serving to effect an indication change at the receiver and repeater respectively, with greater rapidity than the normal indication change thereat can be effected.

[Claims 6 to 11 not printed in the Gazette.]

1,114,598. PROCESS FOR THE EXTRACTION OF FAT FROM BONES, MATERIALS SUITABLE FOR GLUE MANUFACTURE, AND LIKE SUBSTANCES. ERNST FISCHER, Charlottenburg, Germany. Filed Jan. 16, 1912. Serial No. 671,451. (Cl. 87—6.)



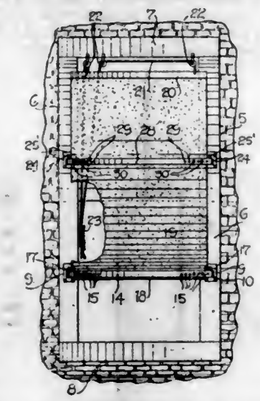
1. The process of recovering fat from materials containing the same which consists in treating the material with a liquid solvent, and subjecting such material to reduced pressure to vaporize the solvent and open the pores in the material to expel the air; and then admitting solvent vapors and working under less reduced pressure to condense the vapors for dissolving the fat.

2. The process of recovering fat from materials containing the same which consists in treating the material with liquid benzin and subjecting the saturated material to reduced pressure to vaporize the solvent, and open the pores in the material to expel the air; and then admitting benzin vapors free from air to penetrate the open pores, and working under less reduced pressure to condense such vapors for dissolving the fat.

1,114,599. AWNING. BEECHER FRANK, Chicago, Ill., assignor to The Simplex Awning Company, Chicago, Ill., a Corporation. Filed July 5, 1913, Serial No. 777,554. Renewed July 22, 1914. Serial No. 852,476. (Cl. 156—15.)

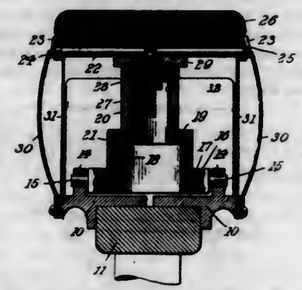
1. A device of the character described comprising frames swingingly mounted one above the other in spaced relation and provided with means for limiting their movement in an upward direction, a strip windingly connected to the lower frame and being adapted to pass through the upper frame, the movement of the upper frame in a downward direction when the strip is extended therethrough being limited by the contact of such member with the strip, and means coacting with the strip whereby the same may be adjusted.

2. A device of the character described comprising frames swingingly mounted one above the other and provided with offset extensions adjacent their pivotal points for limiting their movement in an upward direction, a strip windingly connected to the lower frame and being adapted to pass through the upper frame, the movement of the upper frame in a downward direction when the strip is extended therethrough being limited by the contact of



such member with the strip, and means coacting with the strip whereby the same may be adjusted.

1,114,600. RESILIENT TIRE. JOSEPH GAYNOR, New York, N. Y. Filed Oct. 3, 1913. Serial No. 793,100. (Cl. 152—8.)

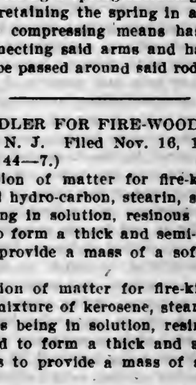


1. A tire comprising a tread, a continuous apertured resilient band extending along the inner face thereof, a plurality of transverse strips interposed between the tread and band, bolts secured to the strips and extending inwardly through the band-apertures, flanged plungers carried by the bolts, annular plates pivoted to the wheel rim, and flanged cylinders tapped into said plates and adapted to be engaged by the plungers.

2. A tire comprising a tread, a continuous apertured resilient band extending along the inner face of the tread, a plurality of transverse strips interposed between tread and band, a plurality of bolts secured to the strips and extending inwardly through the band-apertures, a plurality of flanged plungers carried by the bolts, a plurality of annular plates pivoted to the wheel rim, and a plurality of flanged cylinders tapped into the annular plates and adapted to be engaged by the plungers.

1,114,601. SPRING-COMPRESSING MECHANISM. LOUIS GERDÈRS, Philadelphia, Pa. Filed Apr. 23, 1914. Serial No. 834,004. (Cl. 29—87.1.)

1. The combination in spring inserting mechanism of a threaded rod having a handle; a plate for engagement with one end of the spring and having notches formed therein; a member on the rod for engaging the opposite end of the spring; a nut on the threaded portion of said rod in engagement with said plate for compressing the spring when it and the handle are turned to cause them to approach each other; and retaining arms having portions extending within the notches of the plate and in engagement with the spring respectively to retain the latter in a compressed condition after the nut has been removed.



2. The combination in spring inserting mechanism of a threaded rod; members for engagement with the ends of the spring, each having a hole for the passage of said rod and one of them having notches; a nut for said rod for engagement with one of the members for compressing the spring when it and the handle are turned to cause them to approach each other; and a plurality of retaining arms, having portions extending within said notches of one of the members into engagement with the spring and with the other of said members respectively to retain said spring in a compressed condition after the nut has been removed from the rod.

3. The combination in spring inserting mechanism of a threaded rod having a portion designed to extend through said spring; means on said portion for compressing the spring; a plurality of arms for retaining the spring in a compressed condition after said means has been removed; and a split ring encircling said bar for connecting said arms.

4. The combination in spring inserting mechanism of members for engagement with the ends of a spring and each having a hole; a threaded rod provided with a handle and passing through the holes in said members, said rod having a portion of varying diameter placed to enter the hole in one of said members for limiting longitudinal movement thereof in one direction; and a nut on said rod operable against the other member to compress the spring when it and the handle are turned in opposite directions.

5. The combination in spring inserting mechanism of means for compressing a spring including a rod; a plurality of arms for retaining the spring in a compressed condition after the compressing means has been removed; with means connecting said arms and having an opening whereby it may be passed around said rod.

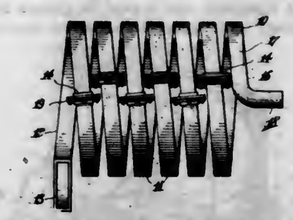
1,114,602. KINDLER FOR FIRE-WOOD. JOSEPH GESSNER, Newark, N. J. Filed Nov. 16, 1910. Serial No. 592,649. (Cl. 44—7.)

1. A composition of matter for fire-kindling purposes containing liquid hydro-carbon, stearin, soluble glass, said soluble glass being in solution, resinous matter, and potash all heated to form a thick and semi-plastic mass and cooled so as to provide a mass of a soft and waxy consistency.

2. A composition of matter for fire-kindling purposes, consisting of a mixture of kerosene, stearin, soluble glass, said soluble glass being in solution, resinous matter, and potash all heated to form a thick and semi-plastic mass and cooled so as to provide a mass of a soft and waxy consistency.

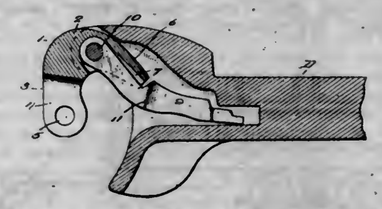
3. A composition of matter for fire-kindling purposes, consisting of a mixture of kerosene, 6 pounds, stearin, 4.5 ounces, soluble glass, 3.5 ounces, said soluble glass being in solution, resinous matter, 4.5 ounces, and potash, 3.5 ounces.

1,114,603. HYDRAULIC SCREW. AUGUST GIGER, Portland, Oreg. Filed Mar. 4, 1914. Serial No. 822,481. (Cl. 103—43.)



In a hydraulic screw, the combination with a series of similar tubular members, of flanges on the tubular members for relatively connecting adjacent the tubular members end to end, an inlet tubular section having connection with one of the tubular members and an outlet tubular section having connection with another of the tubular members, said outlet section terminating in a diametrically extending portion having its end bent to lie in the plane of the circumferential center of the said tubular members.

1,114,604. EMERGENCY-KNUCKLE FOR CAR-COUPLINGS. GEORGE H. GILMAN, St. Paul, Minn., and JAMES H. BROWN, East San Diego, Cal. Filed June 15, 1914. Serial No. 845,254. (Cl. 213—65.)



1. An emergency knuckle for car couplings, the same comprising a body portion consisting of a head and a channeled tail projecting rearwardly at an acute angle therefrom and having an upright hole for the pivot pin, which hole intersects said channel; and an arm whose forward end is of a size to enter said channel and is pierced with an upright eye adapted to be mounted loosely on said pivot pin, the body of the arm being bent at a point opposite the rear end of said tail so that the latter has a slight lost motion between the arm and the side of the draw head.

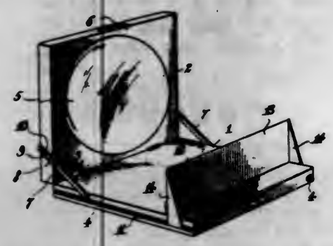
2. An emergency knuckle for car couplings, the same comprising a body portion consisting of a head and a channeled tail projecting rearwardly therefrom and having an upright hole for the pivot pin, which hole intersects said channel; and an arm whose body is bent at about its mid length and notched in one edge and whose forward end is of a size to enter said channel and is pierced with an upright eye adapted to be mounted loosely on said pivot pin.

1,114,605. REFLECTOSCOPE. MILTON D. GOOD, Albany, Oreg. Filed Nov. 26, 1913. Serial No. 803,249. (Cl. 88—1.)

1. A device of the character described comprising a bottom section, a top section hinged to the bottom section and provided upon the inner side thereof with a magnifying reflector, means for holding the top section at a desired angle to the bottom section, means for holding said sections in folded or collapsed condition, and a card or picture holder adjustably mounted upon the bottom section and reversible to lie in contact with the upper face of the bottom section between said section and the collapsed top section when the device is closed.

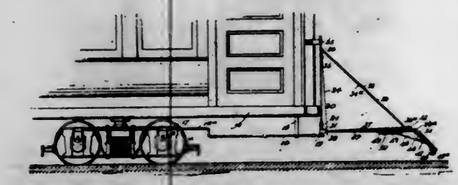
2. A device of the character described comprising a bottom section having guide grooves in its side edges, a top

section hinged to the bottom section and provided upon the inner side thereof with a magnifying reflector, means for holding the top section at a desired angle to the bottom section, means for holding said sections in folded or collapsed condition, and a card or picture holder comprising a front wall having an upturned card supporting



flange at its lower edge and provided with rearwardly bent side walls adapted to depend along the side edges of the bottom section and provided with inwardly extending flanges to slidably engage the grooves therein, said holder being reversible to lie in contact with the upper face of the base section and between said section and the collapsed top section when the device is closed.

1,114,606. CAR-FENDER. ALBERT TREFETHEN GOOKIN, Cambridge, Mass. Filed Dec. 4, 1913. Serial No. 804,615. (Cl. 105—128.)



1. A car fender, comprising supporting members, a platform thereon, a front section on the platform pivoted to rock downwardly and rearwardly, deflector elements in front of said section and mounted for forward or backward movement relatively to the said section, means to hold the deflector elements in rearward position against the front section, latch means to lock the front section in the rearward position, and means operative by a rearward movement of the front section to release the holding means of the deflector elements.

2. A car fender, comprising a platform pivoted at the rear end to swing in a vertical plane, longitudinally ranging supporting members carrying the platform and mounted to swing in a vertical plane, and a pivoted front section on said platform movable to a position at a downward inclination to the platform, or into approximate alinement therewith, said pivoted section having pivotal connection also with the said supporting members.

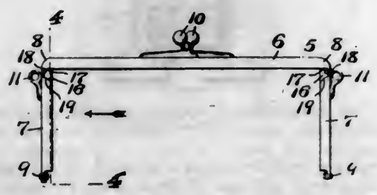
3. A car fender having a deflector attachment at the front end provided with pivotally mounted elements presenting opposed ends having an articulated connection adapted to move to a projected position, means to restrain the deflector elements against forward movement and in approximately flat form with the articulated members in alinement, and means operable by impact against the fender, to release said deflector elements.

4. A car fender, having a deflector at the front thereof, comprising pivotally mounted transverse members articulated at points between their ends to break in a forward direction from an approximately alined flat position, and pivotally mounted at outer portions thereof, means to restrain the transverse elements against forward movement, and means to release said restraining means by impact with an obstruction.

5. A car fender, having a deflector at the front thereof comprising pivotally mounted cross bars formed of telescoping members, springs normally tending to separate said members, the cross bars being articulated to break in a forward direction and pivotally mounted at outer portions thereof, means to restrain the cross bars against forward movement, and means to release said restraining means on impact of the fender with an obstruction.

[Claims 6 to 10 not printed in the Gazette.]

1,114,607. BAG AND BAG-FRAME THEREFOR. OSCAR GREENBAUM, Philadelphia, Pa., assignor to Langfeld Bros. & Co., Philadelphia, Pa., a Firm comprised of Abraham M. Langfeld and Morris F. Langfeld. Filed Oct. 4, 1913. Serial No. 793,340. (Cl. 150—29.)



1. A bag-frame consisting of hinged frame-sections, each frame-section comprising an upper or top-member and a pair of side or leg-members, said side or leg-members being formed with slots or cut-away portions, combined with the bag-body and gussets of a bag, said bag-body and gussets being respectively attached to the upper or top-members and to the side or leg-members of the frame-sections, and the upper corner-portions of the bag-body being arranged in said slots or cut-away parts and extending outwardly therefrom, substatially as and for the purposes set forth.

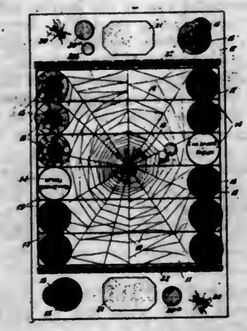
2. A bag-frame consisting of hinged frame-sections, each frame-section comprising an upper or top-member and a pair of side or leg-members, said side or leg-members being formed with slots or cut-away portions, said slots or cut-away portions being bounded by straight edge-portions and a convexly curved edge-portion, combined with the bag-body and gussets of a bag, said bag-body and gussets being respectively attached to the upper or top-members and to the side or leg-members of the frame-sections, and the upper corner-portions of the bag-body being arranged in said slots or cut-away parts and extending outwardly therefrom, substantially as and for the purposes set forth.

3. A bag-frame consisting of hinged frame-sections, each frame-section comprising an upper or top-member and a pair of side or leg-members, said upper or top-member and said side or leg-members having sides forming U-shaped chambers, and each side or leg-member being formed in one of its said sides with slots or cut-away portions, combined with the bag-body and gussets of a bag, said bag-body having its marginal edges surrounding its mouth arranged and secured in the U-shaped chambers of said upper or top-members, the gussets having marginal edge-portions arranged and secured in the U-shaped chambers of said side or leg-members, and the upper corner-portions of the bag-body being arranged in the slots or cut-away parts of said side or leg-members and extending outwardly therefrom, substantially as and for the purposes set forth.

4. A bag-frame consisting of hinged frame-sections, each frame-section comprising an upper or top-member and a pair of side or leg-members, said upper or top-member and said side or leg-members having sides forming U-shaped chambers, and each side or leg-member being formed in one of its said sides with slots or cut-away portions, said slots or cut-away portions being bounded by straight edge-portions and a convexly curved edge-portion, combined with the bag-body and gussets of a bag, said bag-body having its marginal edges surrounding its mouth arranged and secured in the U-shaped chambers of said upper or top-members, the gussets having marginal edge-portions arranged and secured in the U-shaped chambers of said side

or leg-members, and the upper corner-portions of the bag-body being arranged in the slots or cut-away parts of said side or leg-members and extending outwardly therefrom, substantially as and for the purposes set forth.

1,114,608. GAME APPARATUS. JOHN WILLIAM HANLEY, New York, N. Y. Filed Jan. 20, 1914. Serial No. 813,202. (Cl. 46—41.)



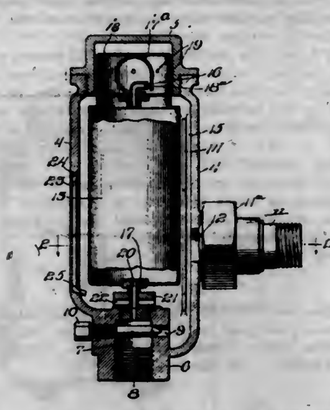
1. The herein described game apparatus comprising a board having represented thereon a field, a larger spider web covering said field, a gridiron including a series of parallel bars traversing said field and forming the field into a plurality of rectangular panels, a plurality of sets of disks arranged in pairs, said several pairs of disks being located at the ends of said panels, and one or more pairs of snapping disks, substantially as and for the purposes set forth.

2. The herein described game apparatus comprising a board having a home station at each end and a strip of felt thereon, the main portion of the board constituting a field having represented thereon a huge spider web and spider and also a series of transverse bars subdividing said field into transverse panels, a plurality of sets of variously colored disks representing small spider webs located at the ends of said panels and removable therefrom, a plurality of series of smaller disks representing different species of spiders and variously colored to correspond with the several previously mentioned disks and located upon and removable from said disks while the game progresses, and means adapted to be despatched from the player's station into said field, said means representing a fly able to destroy the spider's web, substantially as and for the purposes set forth.

1,114,609. VALVE FOR STEAM-HEATING SYSTEMS. ORVILLE CROMWELL HATCH, Seattle, Wash. Filed June 14, 1912. Serial No. 703,705. (Cl. 236—18.)

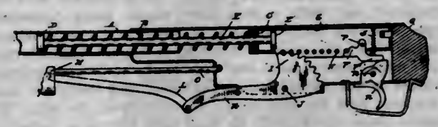
1. In a valve of the class described the combination of a casing having an inlet passage and an outlet passage therein, a float within the casing arranged to permit passage of air therethrough, a tubular member arranged on the top of the float for the induction of air into the float, a hollow valve plug at the bottom of the float for controlling the outlet passage and for establishing communication between the interior of the float and the outlet passage, a thermostatic member adapted to control the outer open end of said top tubular member, and a housing for said thermostatic member carried by and movable with the float and acting in conjunction with the inner wall of the upper portion of the casing as a guiding means for the upper end of the float, substantially as described.

2. In a valve of the class described the combination of a casing having an inlet passage and an outlet passage therein, a float within the casing for governing the outlet passage, means for conducting air through the float to the outlet passage, a thermostatic member for controlling the passage of air through the float, and a housing for said thermostatic member carried by the float and acting in conjunction with the inner wall of the upper end of the casing as a guiding means for the upper end of the float, substantially as described.



3. In a valve of the class described the combination of a casing having an inlet passage and an outlet passage therein, a hollow float within the casing for governing the outlet passage, an elbow shaped tubular member at the top of the float forming the air eduction member to the interior of the float, a tubular member at the lower end of the float forming the air induction member and serving as a valve for controlling the outlet passage, a bowed thermostatic member having one end secured adjacent said elbowed tubular member and extending over the top of said tubular member to position its free end in operative relation to the open outer end of said tubular member and a housing for said thermostatic member carried by the float and serving in conjunction with the inner wall of the upper portion of the casing as a guiding means for the upper end of the float, substantially as described.

1,114,610. SPRING-GUN. WILLIAM E. HAWTHORNE, Plymouth, Mich., assignor to Daisy Manufacturing Company, Plymouth, Mich., a Corporation of Michigan. Filed May 31, 1913. Serial No. 771,033. (Cl. 124—10.)



1. In a gun, the combination of a power storage spring, a trigger, an abutment movable to compress said spring and returnable to its initial position for firing, a sear for engaging the trigger carried by said abutment and in operative relation to be released by the trigger only when the abutment is in said initial position.

2. In a gun, the combination of a power storage spring, an abutment, mechanism for moving said abutment forward to compress said spring and for then returning said abutment to normal position, a trigger for releasing said spring, and a sear controlling the release of said spring, separable from said trigger during the forward movement of said abutment and restored to operative relation with said trigger upon the return of said abutment.

3. In a gun, the combination of a power storage spring, an abutment therefor, mechanism for moving said abutment forward to compress said spring and to then return the abutment to its normal position, a trigger for releasing said spring, and a sear movable with said abutment out of operative relation with said trigger and restored into operative relation upon the return of said abutment.

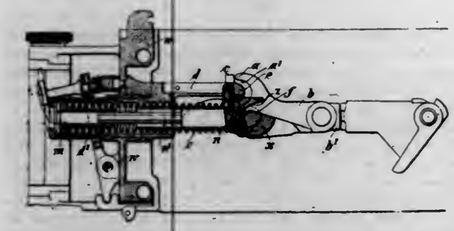
4. In a gun, the combination with a barrel, of a power storage spring therein, an abutment movable forward in said barrel to compress said spring and then returnable

with said spring to its initial position, an actuating member slidable parallel to the axis of said barrel, and connections between said actuating member and abutment for transmitting reciprocatory movement from the former to the latter in reverse directions.

5. In a gun, the combination with the barrel, of a power storage spring, a slidable abutment for said spring within said barrel movable forward to compress the spring, a sear carried by said movable abutment for retaining said spring in compressed condition, an actuating member slidable parallel to the axis of said barrel, connections between said actuating member and said abutment for imparting reverse reciprocatory movement from one to the other, and a trigger from which said sear is withdrawn in the forward movement of said abutment and to which it is returned by the reverse movement.

[Claim 6 not printed in the Gazette.]

1,114,611. AUTOMATIC GUN. KARL HEINEMANN, Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Filed Feb. 8, 1912. Serial No. 676,283. (Cl. 89—3.)



1. In an automatic gun, a lock crank, a reciprocating slide carrying said crank, means operated by the recoil of the gun to impart reciprocating movement to said slide and its crank, a finger formed on said crank and having a cam face, stops located one in the path of the end of said finger and one in the path of said cam face and adapted in combination with said finger and cam face to impart rocking movement to said crank, and means for returning said crank, after being rocked, to its initial position.

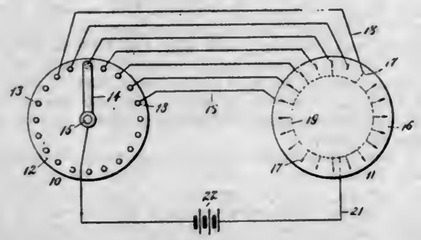
2. In an automatic gun, a lock crank formed with an abutment and with a cam face, toggle links connected with said lock crank, a slide carrying said crank, means controlled by the recoil of the gun to impart reciprocating movement to said slide and its crank, stops respectively located in the paths of said abutment and cam face, said abutment and its stop being so located as to open the toggle links, and said cam face and its stop being so located and shaped as to continue the opening movement of the toggle links and to impart an accelerated movement to the crank upon the movement of said slide by the recoil, and means for returning said cam, after being rocked, to its initial position.

3. In an automatic gun, a lock crank formed with an abutment and with a cam face, toggle links connected with said lock crank, a slide carrying said crank, means controlled by the recoil of the gun to impart reciprocating movement to said slide and its crank, stops respectively located in the paths of said abutment and cam face, said abutment and its stop being so located as to open the toggle links, and said cam face and its stop being so located and shaped as to continue the opening movement of the toggle links and to impart an accelerated movement to the crank upon the movement of said slide by the recoil, a rebounding member connected with said crank, and a stop cooperating with said rebounding member and adapted to return said crank into initial position.

4. In an automatic gun of the Maxim type having a slidable breech block, the combination of the recoil spring, the handle crank shaft, the handle thereon, the reciprocating toggle link device consisting of two toggle links one mounted on the handle crank shaft the other pivotally connected with the slidable breech block, a stop device placed inside the breech casing and adapted to begin the bending of the toggle links, a cam device likewise arranged inside the breech casing and adapted to complete the bending of the said toggle links under the recoil of the gun against the action of the recoil spring, said recoil spring acting against the cam device of the toggle links in order to straighten the latter in coöperation with the handle of the crank shaft.

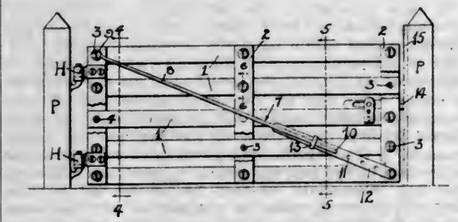
5. In an automatic gun of the Maxim type, the combination of the reciprocating toggle link device, the handle crank shaft, a stop device inside the breech casing and consisting of a curved projection attached to the toggle link device, a stop and a curved stop both rigidly attached to the breech casing and adapted to coöperate with the projection in order to cause the beginning of the bending of the toggle link device on the recoil of the gun, a cam attached to the toggle link device, a counter cam coöperating with the said first named cam in order to complete the bending of the toggle link device, a sliding carrier for supporting said counter cam, a recoil spring acting upon the said carrier and a weighted handle on the crank shaft.

1,114,612. ELECTRICAL RECORDER. ANGUS S. HIBBARD, New York, N. Y. Filed Feb. 14, 1912. Serial No. 677,580. (Cl. 234—1.5.)



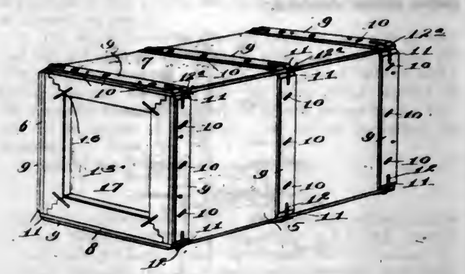
Electrical transmitting and recording apparatus comprising a transmitter having a series of fixed terminals and a brush for successively contacting therewith, a recording instrument having a series of stationary marking elements, a stationary tally sheet in contact with said element, individual circuit-wires connecting said terminals and elements, and a return circuit-wire connecting said elements with the brush and provided with a source of low-voltage current.

1,114,613. VERTICALLY-ADJUSTABLE GATE. JOHN B. HOAG, Kirksville, Mo. Filed Mar. 26, 1914. Serial No. 827,402. (Cl. 39—18.)



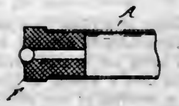
The combination with a gate comprising a number of upright and transverse bars pivoted for parallelogrammatic movement, of a sectional brace bar including a flat metal bar having longitudinally spaced openings and pivoted to one of the corners of the gate and a rod pivoted to the diagonally opposite corner of the gate and having a lateral stud for engagement with said openings and a clip embracing said bar and rod for preventing the removal of the stud.

1,114,614. SHOOK. ULYSSES G. HOLLEY, Sikeston, Mo. Filed Nov. 8, 1911. Serial No. 659,219. (Cl. 217—12.)



In a device of the class specified, the combination of a plurality of side members constructed of thin material with flat inner surfaces clear of projections from end to end, the outer surfaces of the side members having battens extending transversely thereover at the opposite ends and at intermediate points, the battens terminating coincidently with the side edges of the members and permanently secured to the latter, the ends of the battens being reversely beveled, pliable wire staple fastenings secured to the pairs of contiguous ends of the battens and to the adjacent portions of the side members and having their inner ends upset against the inner surfaces of the side members, each wire staple fastening terminating a short distance from the contiguous edges of the side members connected thereby to provide bendable hinges for the side members, the fastenings at the ends of the series of side members having one end of each free to provide readily separable bendable securing extremities to hold the edges of the end side members in close engagement, and head ends of square contour having smooth edges of a length equal to the width of each side member and around which the said side members are folded and secured by withdrawable fastenings, the head ends being primarily structurally completed and independent of the side members.

1,114,615. COMBINED PEA-SHOOTING AND POP GUN. EDWARD C. HOUGH, Plymouth, Mich., assignor to Daisy Manufacturing Company, Plymouth, Mich., a Corporation of Michigan. Filed July 18, 1913. Serial No. 779,724. (Cl. 124—8.)

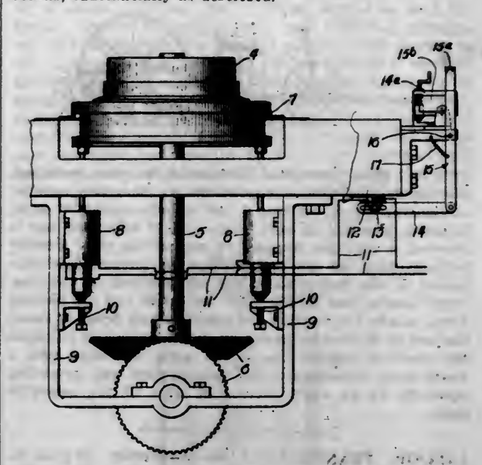


1. The combination with an air gun barrel, of a bushing detachably engageable with the muzzle of the barrel and provided with a compressible resilient seat for a projectile, there being a bore leading from said seat through said bushing, and the latter when in engagement with the muzzle being stationary in relation thereto.

2. The combination with an air pop gun and a cork detachably insertable in the muzzle of the barrel, of a bushing for alternative engagement with the muzzle of said barrel, said bushing being formed of a resilient compressible material and provided with an expansible seat for receiving a projectile, there being a bore leading from said seat through said bushing, and the latter when in engagement with the muzzle being stationary in relation thereto.

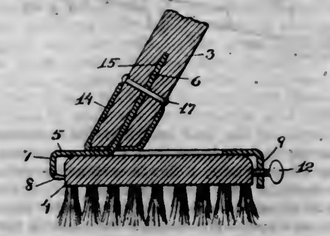
1,114,616. WIRE-DRAWING APPLIANCE. HORACE F. HUMPHREY, Joliet, Ill. Filed Oct. 15, 1913. Serial No. 795,305. (Cl. 205—16.)

1. In a wire drawing appliance, the combination of a wire drawing block, means for rotating said block, means actuated by an electrical current for controlling the rotation of said block, means for making and breaking the flow of current to said controlling means, a die stand, shiftable means extending beyond the die stand and constituting a safety device, and a connection between said shiftable means and said current making and breaking means, substantially as described.



2. In a wire drawing appliance, the combination of a wire drawing block, means for rotating said block, clutch mechanism for controlling the rotation of said block, solenoids for controlling said clutch, means for governing the energization of said solenoids, a die stand, shiftable means extending beyond the die stand and constituting a safety appliance, and a connection between said energy governing means and said shiftable means, substantially as described.

1,114,617. SCRUBBING-BRUSH HOLDER. EDWARD JABANT, St. Albans, Vt. Filed Aug. 22, 1913. Serial No. 786,120. (Cl. 15—54.)



A holder attachment for scrubbing brushes, comprising a flat-top brush-head clamp having an integral upturned and perforated oblique tang, a cleft and perforated handle embracing said tang, an oblique ferrule upon the handle having a horizontal flat bottom provided with a central slot engaging the tang, said bottom bearing against the flat top of the clamp, and a securing bolt connecting the handle and the tang, whereby the flat bottom of the ferrule is braced and secured in bearing position against the flat top of the clamp.

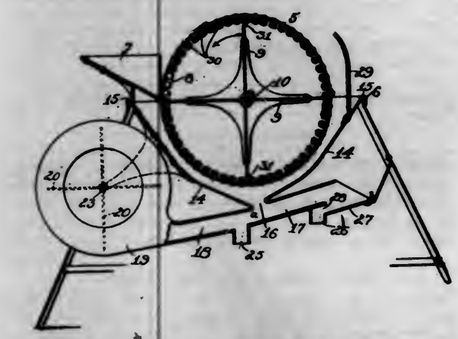
1,114,618. GRASS-DESTROYING MACHINE. PETER R. JACOBSON, Lake Park, Minn. Filed Feb. 24, 1914. Serial No. 820,532. (Cl. 55—51.)

1. In a grass destroying machine of the class described, the combination with a wheeled frame, of a plow member carried thereby for cutting a turf of soil, a toothed drum rotatably mounted on said frame against which the soil is directed, a conveyer disposed in rear of the plow member for conveying the soil to the drum, an impact plate supported by the frame above the rear portion of the conveyer

member and intermediate the latter and the toothed drum, and means for rotating the conveyer and drum to cause the soil to be thrown upwardly by the latter as it leaves the conveyer against the impact plate aforesaid.

2. In a grass destroying machine of the class described, the combination with a wheeled frame, of a plow member carried thereby for cutting a turf of soil, a toothed drum rotatably mounted on said frame against which the soil is directed, a conveyer disposed in rear of the plow member for conveying the soil to the drum, an impact plate supported by the frame above the rear portion of the conveyer member and intermediate the latter and the toothed drum, means for rotating the conveyer and drum to cause the soil to be thrown upwardly by the latter as it leaves the conveyer against the impact plate aforesaid, and a guard plate connected to the impact plate and extending upwardly at an angle thereto in front of the rotatable drum.

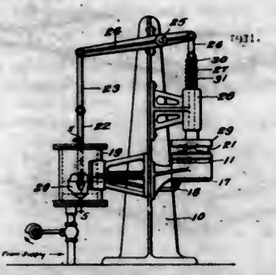
1,114,619. PEANUT-SHELLING MACHINE. WILLIE E. JAMES, Elberon, Va. Filed Aug. 5, 1911. Serial No. 642,501. (Cl. 130—30.)



In a device of the kind described the combination of a chute having oppositely-inclined walls, a husking cylinder revolving in said chute, a blower casing disposed alongside of said chute, a blast nozzle opening out of said blower casing and extending under said chute, said chute connecting with said nozzle intermediate the ends of the latter, a downwardly-extending discharge pipe connected to said nozzle laterally of said chute and contiguous to said blower casing, a fan blower in said casing, said nozzle inclining upwardly with said blower casing as a base, an inclined platform formed under the outermost end of said nozzle, having the same inclination as said nozzle but being spaced below the bottom thereof, and a downwardly-extending discharge pipe connecting the bottom of said nozzle and said platform, and disposed directly under the outermost end of the bottom of said nozzle.

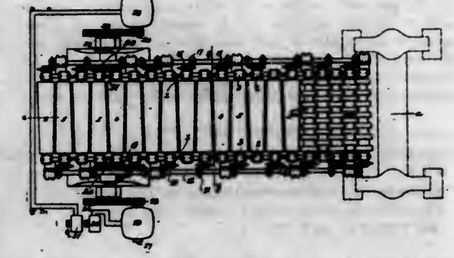
1,114,620. EMBOSSING-MACHINE. JOHN MCLAURIN, Brookfield, Mass., assignor to Ideal Coated Paper Co., Brookfield, Mass., a Corporation of New Jersey. Filed Jan. 7, 1913. Serial No. 740,699. (Cl. 101—13.)

1. In an embossing machine, a movable die member, a base, said base receiving a compression and delivering the same against said die member, a cylinder to receive a compression and having communication with said base, a piston in said cylinder to control the movement of said die member, and said cylinder having a variable opening through the wall thereof which opening leads to said base and said opening being exposed upon movement of said piston in one direction.



2. In an embossing machine, a base, a movable die member for engagement with said base, a support for said base and movable die member, an amplifying lever carried by said support, a fluid actuated piston connected with said die member through said amplifying lever, a cylinder for said actuated piston, connection from said cylinder to said base, said piston serving as a valve for the admission of fluid pressure to said base and means whereby the fluid pressure admitted to said base impresses an article to be treated against the said die member.

1,114,621. ROLLER-TABLE FOR ROLLING-MILLS. HARRY A. LEWIS, Norristown, Pa. Filed Mar. 25, 1914. Serial No. 827,163. (Cl. 80—44.)



1. The combination of a table, two sets of rollers thereon; means for independently driving each set, the upper surface of one set being out of line with the upper surface of the other set so that a bloom, or plate, resting on the rollers will have a bearing at one side on one set of rollers and on the opposite side on the other set of rollers and can be moved longitudinally in either direction or turned.

2. The combination of a table; two sets of rollers thereon, one set of rollers alternating with the other set and one set being higher at one side of the center line of the table than at the other and the alternate set being higher at the opposite side of the center line than the other so that when an article is supported on the table it will rest upon the high portions of the rollers; and means for independently driving the rollers so that when both sets of rollers are driven at the same speed and in the same direction, the article will travel in a straight line, but when the mechanism of one set of rollers is reversed, the article will be turned.

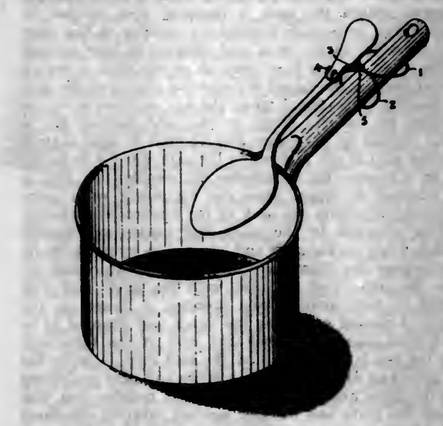
3. The combination in a roller table of a roller mill, of two series of rollers, the rollers of one series being increased in diameter at one side of the center of the table and the other series being increased in diameter at the opposite side of the table; and means for independently driving the rollers so that they can be driven in one direction in unison to feed a plate forward and can be reversed to turn a plate.

4. The combination in a roller table, of two sets of rollers; and means for independently driving each set, one set of rollers being tapered in one direction and the other set being tapered in the other direction so that an article supported by the rollers can be fed either straight ahead or turned, as desired.

5. The combination in a roller table of two sets of rollers, one set alternating with the other set; and means for independently driving each set, one set of rollers being tapered in one direction and the other being tapered in the opposite direction so that an article placed on the rollers can be moved in a straight line or can be turned, as desired.

[Claim 6 not printed in the Gazette.]

1,114,622. SPOON-HOLDER. EDWARD CHRISTOPHER LUDFORD, Toronto, Ontario, Canada, assignor of one-fourth to William Henry Lawson and one-fourth to Ray Lelles, Toronto, Ontario, Canada. Filed Dec. 20, 1913. Serial No. 807,929. (Cl. 65—65.)



1. A spoon holder, comprising, a member adapted to adjustably engage the handle of the utensil, and having a portion adapted to receive and hold the handle of the spoon.

2. A spoon holder, comprising, a member adapted to adjustably engage the handle of the utensil having an upwardly extending stem formed with a forked extremity adapted to receive the spoon handle.

3. A spoon holder, comprising, a spring loop member adapted to engage the handle of a utensil and having a stem extending therefrom, said stem having a forked extremity arranged transversely of said stem and adapted to receive the handle of the spoon.

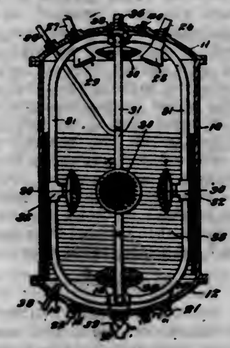
4. A spoon holder, comprising, a stem having a transversely arranged forked end to receive the handle of the spoon and at the other end formed with a pair of transversely arranged loops adapted to receive and engage the handle of the utensil.

5. A spoon holder, comprising, a stem having a transversely arranged forked end to receive the handle of the spoon and at the other end formed with a pair of transversely arranged loops, said loops being set in angular relation the one to the other and adapted to encircle the handle of the utensil and to grip the same.

[Claim 6 not printed in the Gazette.]

1,114,623. APPARATUS FOR TREATING OILS AND THE LIKE. LEO MANDELSTAM, New York, N. Y. Filed Apr. 30, 1912, Serial No. 694,073. Renewed Mar. 13, 1913. Serial No. 754,126. (Cl. 87—12.)

1. In a device of the character described, a container to receive the liquid to be treated, tubing communicating with the top and bottom of said container valves in said tubing to permit passage therethrough in the proper direction, force pumps connected to said tubing spray heads secured to the tubing passing through the upper head of said cylinder, a steam coil within said cylinder adjacent the wall thereof, the ends of said steam coil passing through the openings in the upper and lower head of said cylinder, a hydrogen or other gas supply pipe communicating with said cylinder through the upper head thereof, a plurality of pipes radiating from a fitting secured to said hydrogen or other gas supply pipes, said radiating pipes being bent to substantially parallel position with respect to the walls of said cylinder and further bent to a common fitting adjacent the bottom of said container, a plurality of spray heads secured to said pipes and fitting respectively, said spray heads delivering the gas forced into said container into the sprayed liquid in the upper end of the said container and into the liquid in the bottom of said container, so as to agitate said liquid and means connected to the bottom of said container for withdrawing the contents therefrom.



2. In a device of the character described, a container, a steam coil therein to a predetermined height, spraying means formed therein comprising tubing having its ends communicating with said container through the top and bottom, force pumps coöperating with said tubing and spray heads on said tubing passing through the top, a gas delivery into said container, said delivery comprising a fitting, a spray head secured thereto, radiating pipes therefrom, said radiating pipes being curved to proximity with the walls of said container, spray heads secured to said radiating pipes, said radiating pipes meeting at the bottom, a fitting secured to the meeting ends and a spray head carried by said fitting, said spray head discharging in all directions to avoid the accumulation of a catalyzer in the bottom of said container.

3. In an apparatus for hydrogenizing fatty materials, such as oils, in the presence of a catalyser of greater specific gravity than the material to be hydrogenized, the combination with a containing vessel for said material, having its bottom closed against the rapid exit of large portions of the material but constructed with means permitting the withdrawal of relatively small quantities from the lower portion of the body of material in the vessel; of means for circulating said withdrawn material and re-introducing it into the upper portion of the vessel; a source of hydrogen gas under pressure; and means connected to said gas supply, located near the bottom of the vessel in the body of mixture of material and catalyser, and constructed to direct the gas toward the closed bottom of the vessel, to agitate the mixture and raise the catalyser away from said closed bottom.

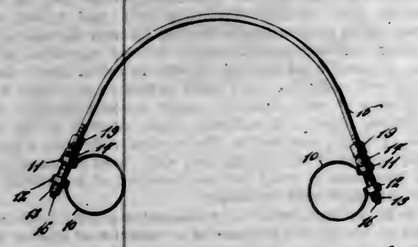
4. In an apparatus for hydrogenizing fatty material, such as oils, in the presence of a catalyzer of greater specific gravity than the material to be hydrogenized, the combination with a containing vessel for said material, having its bottom closed against the rapid exit of large portions of the material but constructed with means permitting the withdrawal of relatively small quantities from the lower portion of the body of material in the vessel; of means for circulating said withdrawn material and re-introducing it into the upper portion of the vessel; a source of hydrogen gas under pressure; and means con-

nected to said gas supply, located near the bottom of the vessel in the body of mixture of material and catalyzer, and constructed with outlets directed both downwardly and upwardly, whereby parts of the catalyzer sinking to the closed portion of the bottom are agitated and raised therefrom into an upper part of the body of mixture by the downwardly-flowing gas, and then raised further into the body of the mixture by the upwardly-flowing gas.

5. In an apparatus for hydrogenizing fatty materials, such as oils, in the presence of a catalyzer of greater specific gravity than the material to be hydrogenized, the combination with a containing vessel for said material, having its bottom closed against the rapid exit of large portions of the material but constructed with means permitting the withdrawal of relatively small quantities from the lower portion of the body of material in the vessel; of means for circulating said withdrawn material and reintroducing it into the upper portion of the vessel; a source of hydrogen gas under pressure; and means connected to said gas-supply, located near the bottom of the vessel in the body of mixture of material and catalyzer, and constructed with outlets directed both downwardly and upwardly, whereby parts of the catalyzer sinking to the closed portion of the bottom are agitated and raised therefrom into an upper part of the body of mixture by the downwardly-flowing gas, and then raised further into the body of the mixture by the upwardly-flowing gas; and means, also connected to said gas-supply, located along the inner wall of the vessel, above said first-named means, and constructed and arranged to direct the gas through the liquid mixture toward the center of the vessel.

[Claims 6 and 7 not printed in the Gazette.]

1,114,624. TOOTH-STRAIGHTENING APPLIANCE. ADOLPHUS G. MEIER, St. Louis, Mo., assignor to The Meier Dental Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed July 1, 1914. Serial No. 848,367. (Cl. 32—19.)



1. A tooth straightening appliance comprising an anchor band having an anchor tube, an arch in said anchor tube, a nut on said arch, and means engaging said nut and said anchor tube adapted to lock the arch to said anchor tube.

2. A tooth straightening appliance comprising an anchor band having an anchor tube, an arch in said anchor tube, an arch nut on said arch, and a clamping nut threaded on the mesial end of said anchor tube and adapted to clamp said arch nut thereto.

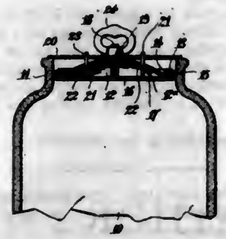
3. A tooth straightening appliance comprising an anchor band having an anchor tube, an arch in said anchor tube, an arch nut on said arch adapted to bear against the end of sid anchor tube, and a clamping nut passing over said arch nut and threaded on the end of said anchor tube adapted to clamp said arch nut thereto.

4. An anchor band for tooth straightening appliances having an anchor tube, and a nut threaded on said anchor tube adapted to lock an arch nut thereto.

5. An anchor band for tooth straightening appliances having a hollow clamping bolt constructed to form an anchor tube, and means on said bolt adapted to lock an arch nut thereto.

[Claim 6 not printed in the Gazette.]

1,114,625. BOTTLE OR JAR STOPPER. EDWIN METCALF, Norristown, Pa. Filed Mar. 31, 1914. Serial No. 828,573. (Cl. 215—19.)

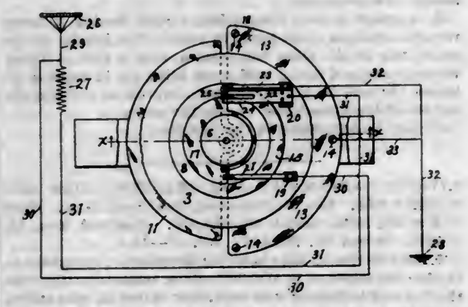


1. In combination with a receptacle including a neck, a disk adapted to repose upon the neck, a plate adapted to depend within the neck, a threaded stem carried by the plate and projecting through an opening in the disk, a key threaded on the stem and adapted to bear against the disk when the key is screwed up on the stem, a curved resilient member interposed between the plate and the disk and adapted to be flexed when the key is screwed up on the stem, an annular flange on the said member and a washer carried by the flange and adapted to bear against the inner wall of the neck when the said member is flexed.

2. In a stopper for receptacles the combination with a disk adapted to repose upon the receptacle, of a plate adapted to lie within the neck of the receptacle, a threaded stem attached to the plate and projecting through the disk, a key on the stem and adapted to screw up thereon to engage the disk, a resilient member interposed between the plate and the disk with the plate and disk adapted to bear against said member, a flange on the member, a washer encircling the flange and adapted to be moved into engagement with the wall of the receptacle when the key is screwed up on the said stem to move the said plate and disk toward each other and pins projecting from the plate and passing through the member and disk to hold the plate and member against rotation relatively to the disk.

3. In a closure for receptacles, the combination with a plate, of a resilient member on the plate, a disk, pins projecting from the plate to pass through the resilient member and the disk, a washer carried by the member and means for moving the plate and disk toward each other to act upon the resilient member whereby the said washer will be expanded into engagement with the wall of the receptacle having the closures applied thereto.

1,114,626. SERIES-MULTIPLE SWITCH AND CONDENSER FOR WIRELESS-TELEGRAPH SYSTEMS. THOMAS B. MILLER, Seattle, Wash., assignor of one-half to Smith Cannery Machines Company, Seattle, Wash., a Corporation of Washington. Filed Apr. 23, 1913. Serial No. 763,083. (Cl. 250—40.)

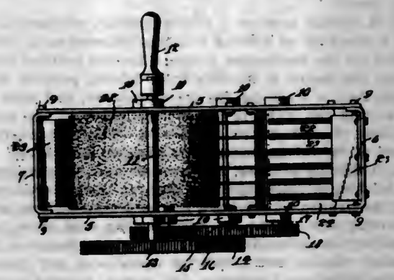


1. In a structure of the class described, the combination with suitably supported stationary condenser plates disposed to be spaced apart and electrically connected together, of a plurality of movable condenser plates associated with said stationary condenser plates and adapted by suitable mechanism to form an adjustable condenser, a series-multiple switch associated with said mechanical means and with said movable condenser plates whereby said mechanical means may operate said switch and move said movable condenser plates.

2. In a system of electrical circuits which circuits are interposed between the antenna and the earth connections of a wireless telegraph station, the combination with an inductance coil, of an electrical condenser that is adapted to be adjustable with respect to the amount of its capacity and a series-multiple switch that is mechanically and electrically associated with said condenser by means adapted to be operated manually to vary the degree of capacity of said condenser and to switch said condenser to be connected in said circuits in parallel or in series with said inductance as may be desired.

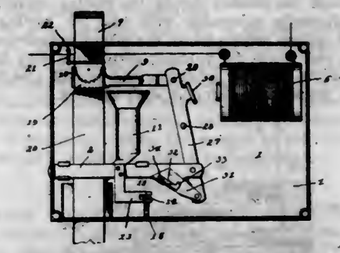
3. In a structure of the class described, the combination with a plurality of fixed metal electrical condenser plates that are metallically connected together and so disposed that their planes are parallel each with the others, and that there shall be a space between their adjacent surfaces, of a shaft mounted to be rotatable in suitable supported bearings adjacent to the edges of said fixed condenser plate, a plurality of other metal electrical condenser plates mounted securely upon said shaft to rotate therewith and so disposed thereon with a space between adjacent ones of said plates that each of said plates on said shaft may be projected within a corresponding one of the spaces between adjacent ones of said fixed plates in response to a rotating movement of said shaft, two metalic commutator plates mounted securely on said shaft to revolve therewith one of said commutator plates being electrically insulated from said shaft while the other one is electrically connected thereto, and suitably supported and fixed electrical contact springs associated with each of said commutator plates and disposed to engage therewith when said shaft is rotated, said fixed plates and each of said contact springs being adapted for connecting wires of a system of electric circuits.

1,114,627. COTTON-GIN. PORTER MORRISON, Athens, Tex. Filed Dec. 30, 1913. Serial No. 809,553. (Cl. 13—9.)



A miniature cotton gin for saving seeds for propagation, the same comprising a rectangular casing having side members and end members formed of sheet metal, said end members being provided wtih flanges abutting on the side members and bolted thereon, the front end member having a downwardly and rearwardly extending deflector, an inclined slotted breast plate positioned in rear of the deflector and having upwardly and downwardly extending portions bolted upon the side members, cast metal boxes riveted on the sheet metal side members and affording bearings for a saw carrying shaft and a brush carrying shaft, gearing for transmitting motion between said shafts and for driving and properly speeding the same, and a comb fixed on the rear end wall of the casing and extending in the direction of the rotary brush which it engages.

1,114,628. ELECTRICALLY-OPERATED LOCK. JOSEPH C. MOSLEY, St. Louis, Mo. Filed Sept. 12, 1913. Serial No. 789,490. (Cl. 194—6.)



1. In a lock, a locking bolt, electro responsive means for moving said bolt to locking position, a key for moving said bolt, means movable with said bolt to lock the key against removal when the bolt is inactive, a normally open electric circuit including said electro responsive means and adapted to be bridged by a coin, and means movable with said bolt to move the coin out of circuit closing position.

2. In a lock, a bolt, an electro responsive device for moving said bolt to locking position, an electric circuit for said device, contacts in said circuit and adapted to be bridged to close the same, and means movable with said bolt to open the circuit at said contacts as the bolt moves to locking position, a key for retracting said bolt, and means movable rearwardly with said bolt to lock said key against removal.

3. In a coin controlled lock, a bolt, an electro responsive device for moving said bolt to locking position, an electric circuit for said electro responsive device, contacts in said circuit and adapted to be bridged by a coin to close the circuit, and means movable with said bolt to open the circuit at said contacts as the bolt moves to locking position.

4. In a coin controlled lock, a bolt, an electro responsive device for moving said bolt to locking position, an electric circuit for said electro responsive device, contacts in said circuit and adapted to be bridged by a coin to close the circuit, means movable with said bolt to open the circuit at said contacts as the bolt moves to locking position, and a key for retracting said bolt.

5. In a coin controlled lock, a bolt, an electro responsive device for moving said bolt to locking position, an electric circuit for said electro responsive device, contacts in said circuit and adapted to be bridged by a coin to close the circuit, means movable with said bolt to open the circuit at said contacts as the bolt moves to locking position, a key for retracting said bolt, and means movable rearwardly with said bolt to lock said key against removal.

[Claims 6 to 15 not printed in the Gadette.]

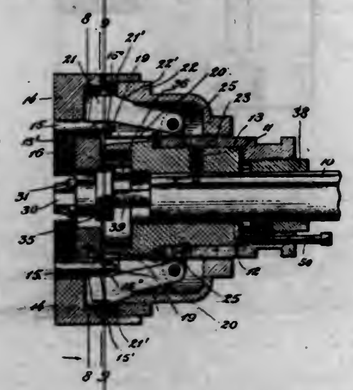
1,114,629. DEVICE FOR CUTTING SCREW-THREADS. WILLIAM MURCHEY, Detroit, Mich., assignor to Walter H. Jennings and Cornelius K. Chapin, Detroit, Mich. Filed Aug. 26, 1912. Serial No. 716,954. (Cl. 10—95.)

1. The combination with a head, slides movable radially thereon, and chasers carried by said slides, of a series of levers each having an outer inclined face and pivoted on the head for controlling the outward movement of said slides, and a device engaging all of said inclined faces for variably positioning said levers to adapt the chasers for work of different diameters.

2. The combination with a head, slides movable radially thereon, and chasers carried by said slides, of a series of levers pivotally mounted on said head and engaging said slides to control the outward movement thereof, and a beveled ring movable relatively to and engaging said levers for varying the normal position thereof to adapt the chasers for work of different diameters.

3. The combination with a head, chasers radially movable thereon, and a tapered member carried by each chaser,

of a series of devices engaging said tapered members for controlling the outward movement of the chasers at a certain ratio relative to the advance movement of the work through the chasers during the cutting operation, a member pivotally connected with and for moving said devices in unison with and by the advance movement of the work, and means for variably petitioning said devices radially of the head for adjusting the normal opening between the chasers for different sizes of work.

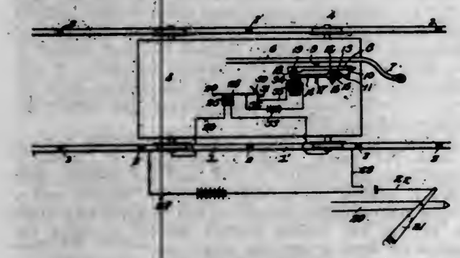


4. The combination with a head, chasers radially movable thereon, and a tapered member carried by each chaser, of a series of levers engaging said tapered members extraneously thereof for controlling the outward movement of the chasers at a certain ratio relative to the advance movement of the work through the chasers during the cutting operation, a member pivotally connected with and for moving said levers over the working faces of said tapered members, and a member slidable longitudinally of the head and levers for variably positioning the latter to different openings between the chasers, whereby the latter may be positioned for work of different diameters.

6. The combination with a head, a series of slides guided for radial movement thereon, chasers carried by said slides respectively, and a member on each slide having an inclined face corresponding to the taper of the thread to be cut, of a series of levers and in engagement with the inclined faces of said tapered members, a member carrying said levers for radially swinging movement and for moving said levers longitudinally of the head and along said inclined faces, and means for positioning said levers radially to vary the position of said slides and the chasers carried thereby, to adapt the latter for different sizes of work.

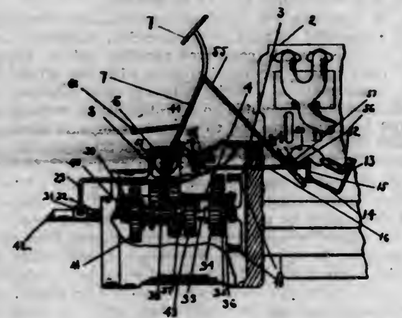
[Claims 6 to 14 not printed in the Gazette.]

1,114,630. ELECTROPNEUMATIC TRAIN CONTROL. MARTIN V. MURPHY, Baltimore, and SAMUEL E. BAKER, Baltimore county, Md. Filed Aug. 9, 1912. Serial No. 714,303. (Cl. 246—58.)



An electro-pneumatic train control, embodying a main pipe section, an angle cock at one end of said section, a valved outlet at the opposite end of said section, a second pipe section arranged in approximate parallelism with the main pipe section, the valved outlet from the main pipe section leading into the second pipe section adjacent one end of the latter, a piston chamber arranged at one end of and open to the second pipe section, a piston in said chamber, a connection between the piston and angle cock, electrically operated means for controlling said valved outlet, and a single pipe connection between the train line and the main pipe section, said connection leading into the main section intermediate the valved outlet and angle cock.

1,114,631. MECHANISM FOR SHIFTING GEARS. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Sept. 5, 1913. Serial No. 788,338. (Cl. 74—58.)



1. In a motor vehicle, speed changing driving mechanism, a rotary member connected thereto, a brake for the rotary member, a lever, and connecting means attached to the lever to control the mechanism and brake, said lever operable positively through the means to control the driving mechanism and apply the brake to the member.

2. A driving device, a driven member actuable thereby, control means for said device embodying a lever pivotally mounted to travel in a single plane and reciprocable to control the driving device, and a brake for the driven member actuable by said lever in its driving device control direction travel.

3. A driving member, a driven member, mechanism having a plurality of driving relations therebetween, control means for the mechanism having a neutral position toward which the means is movable from driving position of the mechanism, a brake for the driven member, and means for connecting the brake to the control means at the neutral position of said means for brake control by continued travel of the driving means beyond neutral position.

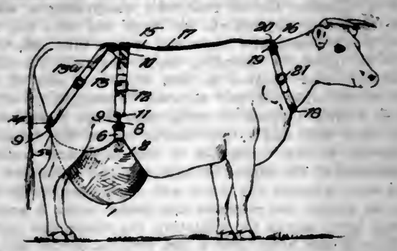
4. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, said mechanism embodying a pair of reciprocable members, actuating disk means for reciprocating said members by positively disconnecting said reciprocable members from driving relation, and a selector operable at any time for determining any actuating disk means connection to a reciprocable member.

5. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, said mechanism embodying reciprocable members, an actuator disk for one of said members effectively to move said member in two directions positively to disconnecting position from different driving relations, a selector operable at any time for determining any connection of said actuator, and a pedal for moving the actuator.

[Claims 6 to 20 not printed in the Gazette.]

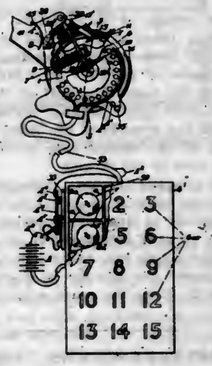
1,114,632. SANITARY MILK-PROTECTOR. CHARLES EDWARD NARY, Georgetown, Ind. Filed Dec. 11, 1913. Serial No. 805,947. (Cl. 119—146.)

In a device of the character specified, a sack adapted to be arranged beneath the udder of a cow, and a harness for holding the sack in position, and comprising a strap adapted to extend longitudinally of the back of the cow from the neck to approximately the hip bones, a collar for encircling the neck of a cow and permanently connected to the front end of the first-named strap at one end of the collar and detachably connected at the other end, a cross strap connected intermediate its ends to the rear end of



the first-named strap, a pair of straps connected with the last-named strap on opposite sides of the connection of the first-named strap and adapted to cross each other over the hip bones of the cow, the ends of the cross strap and the free ends of the last-named straps having snap hooks, and the sack having means for engagement by the snap hooks to support the sack.

1,114,633. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1912. Serial No. 735,642. (Cl. 197—189.)



1. In a typewriting machine, in combination, a platen, a plurality of electrical circuits, means controlled by the sheet for closing a given circuit when the end of the sheet attains one distance from the printing point and closing another given circuit when the end of the sheet attains another distance from the printing point, and a plurality of glow-lamps for said circuits each having a distinguishable position relatively to the others.

2. In a typewriting machine, in combination, a platen, an operative member, means for giving said member a constant starting position, means for giving said member movement with the platen at a predetermined line position, one or more electrical circuits under the control of said member, and a glow-lamp in one or more of the said circuits.

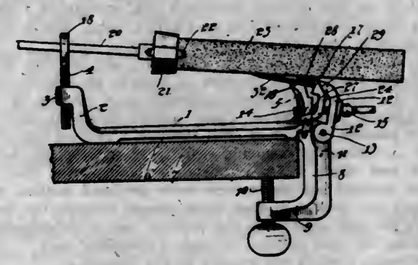
3. In a typewriting machine, in combination, a platen, a paper-feeler, an operative member actuated from the platen under the control of said paper-feeler, one or more electrical circuits under the control of said operative member, one or more indices, and an electrical device in each of one or more of the said circuits adapted to bring a given index into indicating prominence.

4. In a typewriting machine, in combination, a platen and its arbor, a paper-feeler, an operative member actuated to move with the platen under the control of said paper-feeler, indicating means called into operation through said member, and a part on the platen-arbor connected to retract said paper-feeler from the paper-path when actuated backwardly.

5. In a typewriting machine, in combination, a platen and its arbor, an operative member, indicating means called into operation through said member, a paper-feeler, a part on the platen arbor connected to actuate said paper-feeler toward the paper-path, and means for giving said operative member movement coördinated with that of the platen under the control of said paper-feeler.

[Claims 6 to 20 not printed in the Gazette.]

1,114,634. KNIFE AND SCISSORS GRINDER. OSCAR L. NEISLER, Chicago, Ill. Filed Mar. 7, 1913. Serial No. 752,559. (Cl. 51—7.)



1. In a grinding tool, a vise for engaging an object to maintain the surface thereof to be ground in a predetermined plane, said vise comprising a pair of relatively movable jaws, manually operable means for moving the said jaws toward each other, and an auxiliary member interposed between the said jaws and equipped with a flange overhanging one of the said jaws, the said manually operable means coacting with the said relatively movable jaws and the said auxiliary member to clamp the said object between the said flange and the jaw overhung thereby.

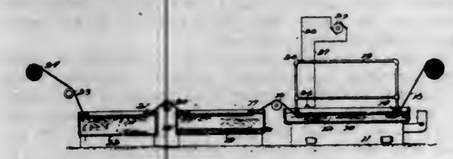
2. In a grinding tool, a vise for engaging an object to maintain the surface thereof to be ground in a predetermined plane, said vise comprising a pair of relatively movable jaws, manually operable means for moving the said jaws toward each other, and an auxiliary member interposed between the said jaws and equipped with a flange overhanging one of the said jaws, the said manually operable means coacting with the said relatively movable jaws and the said auxiliary member to clamp the said object between the said flange and the jaw overhung thereby; the said auxiliary member equipped with bifurcated ends underhanging the ends of the said last-named jaw, the said disposition of the ends of the auxiliary member and the last-named jaw affording a substantially pivotal mounting for the said auxiliary member.

3. In a grinding tool, a vise for engaging an object to maintain the surface thereof to be ground in a predetermined plane, said vise having a rigid jaw and a movable jaw and said rigid jaw provided with surfaces disposed angularly relatively to each and against either of which the object to be ground is adapted to be clamped to determine its position, one of said surfaces opposing the movable jaw, and a member adapted to be removably disposed between said jaws and having a part opposing and adapted to be moved to approach the other of said surfaces to clamp the object upon the same.

1,114,635. METHOD FOR CLEANING METALS. ARON A. NELSON, Chicago, Ill., assignor to Acme Steel Goods Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1914. Serial No. 820,988. (Cl. 204—19.)

1. A method of removing scale, rust and the like from iron and steel, which consists in passing an electric current to the iron or steel connected as a cathode in an

alkaline electrolyte, and in then submerging the iron or steel in a bath of water.



2. A method of removing scale, rust and the like from iron and steel, which consists in passing an electric current to the iron or steel connected as a cathode in a bath of a fused alkaline metal salt and in then submerging the iron or steel in a bath of water.

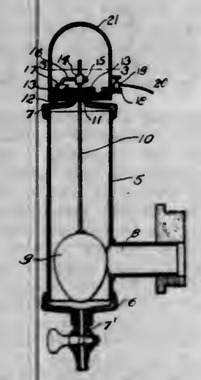
3. A method of removing scale, rust and the like from iron and steel, which consists in passing an electric current to the iron or steel connected as a cathode, in a bath of a fused hydroxid salt of an alkaline metal, and in then submerging the iron or steel in a bath of water.

4. A method of removing scale, rust and the like from iron and steel, which consists in passing an electric current to the iron or steel connected as a cathode in an electrolyte consisting of fused sodium hydroxid, and in then passing the iron or steel through a bath of water.

5. A method of removing scale, rust and the like from iron and steel, which consists in passing the iron or steel through an electrolytic bath of fused sodium hydroxid, an electric current being passed through the bath with the iron or steel as the cathode, and in subsequently passing the iron or steel through a cleansing bath.

[Claims 6 to 14 not printed in the Gazette.]

1,114,636. INDICATOR OR DETECTOR FOR LUBRICATING SYSTEMS. ARTHUR A. NELSON, Iowa City, Iowa. Filed July 9, 1913. Serial No. 778,140. (Cl. 177—317.)

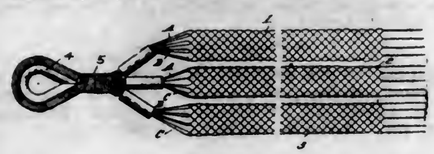


1. A detector for oil reservoirs comprising a vertical tube connected adjacent to its lower end with the reservoir, a cap closing the upper end of said tube and formed with an upwardly extending nipple centrally thereof, an insulating disk secured to said nipple, a pair of rings carried by said disk and disposed concentrically of each other, a strip adapted to bridge said rings, a float within said tube and under the control of the oil within the reservoir, and a stem connected to said float and projecting outwardly of the nipple on said cap and connected with said strip whereby the latter will engage said rings when the oil within the reservoir has fallen below a predetermined level.

2. A detector for oil reservoirs comprising a vertical tube connected adjacent to its lower end with the reservoir, a cap closing the upper end of said tube and formed with an upwardly extending nipple centrally thereof, an insulating disk secured to said nipple, a pair of rings carried by said disk and disposed concentrically of each other, a strip adapted to bridge said rings, a float within said tube and under the control of the oil within the reservoir, a stem connected to said float and projecting outwardly of the nipple on said cap and connected with said strip whereby the latter will engage said rings when the oil within the reservoir has fallen below a predetermined level, and means for adjusting the connection between said strip and stem.

3. A detector for oil reservoirs comprising a vertical tube connected adjacent to its lower end with the reservoir, a cap closing the upper end of said tube and formed with an upwardly extending nipple centrally thereof, an insulating disk secured to said nipple, a pair of rings carried by said disk and disposed concentrically of each other, a strip adapted to bridge said rings, a float within said tube and under the control of the oil within the reservoir, a stem connected to said float and projecting outwardly of the nipple on said cap and connected with said strip whereby the latter will engage said rings when the oil within the reservoir has fallen below a predetermined level, means for adjusting the connection between said strip and stem, and a cap secured to the marginal dges of said disk and inclosing said rings and bridging strip.

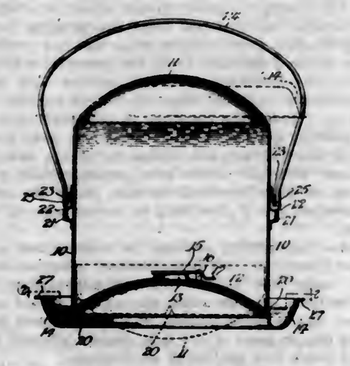
1,114,637. CABLE-GRIP. HENRY NOLAN, Brooklyn, N. Y. Filed July 30, 1913. Serial No. 782,152. (Cl. 24—123.)



1. As a new article of manufacture, a cable gripping device comprising three grips formed of strands of wire woven into spiral form and intersecting each other, one-half of the strands of the first grip forming one-half of the second grip, the remaining half of the strands of the strands of the first grip forming one-half of the third grip, one-half of the strands of the third grip forming the remaining half of the second grip, a loop formed intermediate of the ends of the strands.

2. A cable gripping device comprising three grips formed of strands of wire woven into spiral form, one-half of the strands of one grip forming one-half of another grip, the strands intermediate of their lengths being formed into a single eye, and sleeves encircling groups of strands adjacent the eye for preventing abrasion between the strands when the outer grips move toward the middle grip.

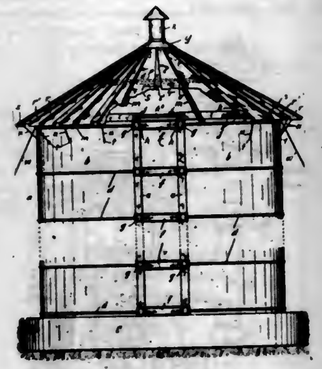
1,114,638. POULTRY-FOUNTAIN. CARL A. P. NORDQUIST, Chicago, Ill. Filed Mar. 9, 1911. Serial No. 613,449. (Cl. 119—77.)



1. In a device of the class described, the combination of a reservoir, a concave base member bent to form a bottom and a trough, said bottom having a filling aperture therein and said reservoir having an aperture communicating with said trough, a gravity operated trap for automatically closing the aperture in said bottom when the fountain is in operative position, and means for limiting the extent to which said trap may open when the fountain is in filling position, substantially as described.

2. In a device of the class described, the combination of a reservoir having integrally formed therewith a bottom an da trough, said bottom having a filling aperture therein, buttons mounted on the sides of said reservoir, and a handle having its ends held by said buttons, said buttons having grooves therein whereby said handle may be retained in upright position when the fountain is in operative position, and said trough having notches therein whereby said handle may be retained when said fountain is turned into its reverse or filling position, substantially as described.

1,114,639. SILO. FREDOLIEN J. OBERER, Portland, Oreg., assignor of one-half to Henry North, Portland, Oreg. Filed Jan. 8, 1914. Serial No. 811,112. (Cl. 20—1.4.)



1. In a silo of the character described, a roof consisting of segmental sections overlapping each other to permit the roof to be expanded and contracted by moving the sections together or apart; radially arranged adjustable supporting means for the roof, said supporting means being connected to the top of the walls of the silo body and holding such wall portions from displacement out of circular alinement; and said supporting means also operating to restrain the movement of said top wall portions to circular alinement while the top of the silo body is expanding or contracting.

2. In a silo of the character described, a roof consisting of segmental sections overlapping each other to permit the roof to be expanded and contracted by moving the sections together or apart; radially arranged adjustable supporting means for the roof, and connections between said supporting means and the top of the silo body, also between the individual members of the supporting means, thereby restraining the latter to similar movements in vertical planes, radiating from the vertical axis of the silo body.

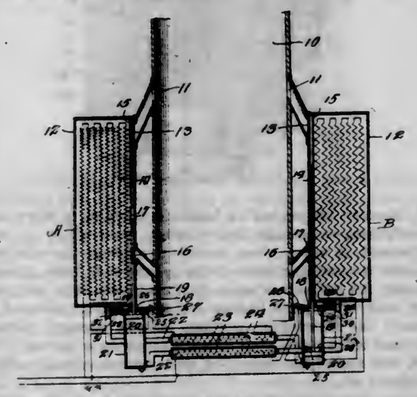
3. In a silo having a body built of staves and means for binding the latter together, an expansible roof comprising a plurality of segmental sections overlapping one the other at their abutting sides; supporting means for the roof comprising radially disposed rafters fastened together at their upper ends; shoes fastened to the bottom ends of said rafters, said shoes resting on the top edge of the silo body, the shoes including means preventing the outward longitudinal movement of the rafters on the top of the silo body; adjustable connections between the rafters; and the fastenings between the rafters being adapted to permit a variation of the inclination of the rafters.

4. In a silo having a body built of staves and means for binding the latter together, band-like bearing cap sections on the upper edges of the silo body, means for adjustably fastening the ends of the bearing caps together; an expansible roof comprising a plurality of segmental sections overlapping one the other at their abutting sides; supporting means for the roof comprising radially disposed rafters fastened together at their upper ends; shoes fastened to the bottom ends of said rafters, and also fastened to their related bearing cap sections, said shoes resting on said bearing caps; the shoes including means preventing the outward longitudinal movement of the rafters on said bearing caps; adjustable connections between the rafters; and the fastenings between the rafters being adapted to permit a variation of the inclination of the rafters.

5. In a silo having a body built of staves and means for binding the latter together, an expansible roof comprising a plurality of segmental sections overlapping one the other at their abutting sides; supporting means for the roof comprising a collar; radially disposed rafters fastened together to said collar; shoes fastened to the bottom ends of said rafters, said shoes resting on the top edge of the silo body; the shoes including means preventing the outward longitudinal movement of the rafters on the top of the silo body; and adjustable connections between the rafters.

[Claims 6 and 7 not printed in the Gazette.]

1,114,640. AIR-PROPULSION DEVICE. THOMAS O'BRIEN, Brooklyn, N. Y. Filed Feb. 18, 1914. Serial No. 819,502. (Cl. 98—25.)



1. In a device of the class described, in combination with a shaft, chambers to receive a volume of air, a valve for confining said volume of air therein, a heating element for said volume of air, and means for automatically actuating said valve.

2. In a device of the class described, in combination with a stack, chambers to receive and confine a volume of air therein, means for raising the temperature of said volume of air to a predetermined degree, and automatic mechanism for releasing said volume of air through a directed course.

3. In a device of the class described, in combination with a shaft, chambers to receive a volume of air, a valve for confining said volume of air in said chamber, a heating element for affecting the temperature of said volume of air, and a common means for controlling the movement of said valve and said heating element.

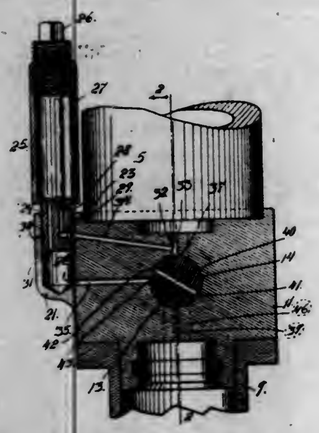
4. In a device of the class described, in combination with a shaft, chambers to receive and confine a volume of air, a heating element for affecting the temperature of said volume of air, a valve for admitting and liberating said volume of air to or from said chambers, a piston for actuating said valve, means for actuating said pistons for the chambers of other units, and a pressure con-

trol for effecting the release of the volume of air from said chambers, for releasing said valves, and for controlling the effect of said heating element.

5. In a device of the class described, chambers to receive volumes of air valves for controlling access to, and exit from said chambers, pistons for controlling the action of said valves, said chambers and pistons forming separate units, the chamber of one unit effecting the action of the piston of another unit, and a pressure control for each unit to effect the action of the piston and a heating element.

[Claim 6 not printed in the Gazette.]

1,114,641. APPARATUS FOR LUBRICATING PNEUMATIC DRILLS. VINCENT J. O'BRIEN and GEORGE A. OLIVER, Denver, Colo., assignors to The Standard Rock Drill Company, Denver, Colo., a Corporation of Colorado. Filed Oct. 19, 1912. Serial No. 726,587. (Cl. 121—10.)



1. In combination with a head-block having a valve seat therein and a passage therethrough intercepted by said valve seat, a valve piece having a passage therethrough adapted to join the intercepted portions of said passage through the head-block when the valve piece is in one position, said valve piece having a second passage adapted to connect the intercepted portions of said passage through the head-block when said valve piece is in a second position, and means for supplying said second passage with a charge of oil.

2. In apparatus of the class described, an air supply pipe, a hollow closed element, a head block mounted adjacent said element, said head-block containing a valve seat, a rotatable valve piece mounted in said seat and having a chamber arranged to be normally in communication with the air supply pipe, an oil cup mounted upon said head-block, the latter having two passages connecting the oil cup and valve seat, said valve piece having two ducts, one of which connects one of said passages with the chamber when the valve piece is in one position and the other of which passes entirely through the valve piece and is in communication with the other of said passages when the valve piece is in the same position, a passage in the head-block connecting the valve seat and hollow element, a duct in said valve piece connecting the last named passage with the said chamber when the valve piece is in a position at a slight angle to the first named position, said block having a passage therethrough connecting the hollow element with the opposite side of the block and intercepted by the valve seat said duct passing entirely through the valve piece being adapted to be brought into line with the last named passage in the head-block.

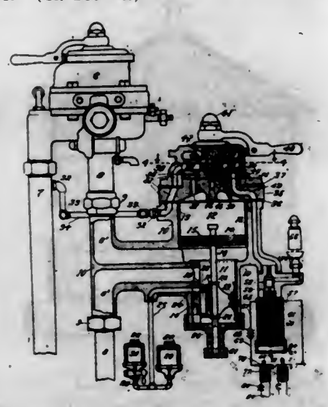
3. In combination, a head block, a throttle valve mounted therein and arranged to control the passage of air from said valve in opposite directions through said block and means adapted to be controlled by the operation of said valve for forcing oil through said block in both of the aforesaid directions.

4. In combination, a head block, a throttle valve mounted therein and arranged to control the passage of air from said valve in opposite directions through said block and means adapted to be controlled by the operation of said valve for forcing oil through said block first in one of the aforesaid directions and then in the other.

5. In combination with a block, a throttle valve mounted therein and arranged to control the passage of air from said valve in opposite directions through said block, an oil cup mounted upon the block, said valve being adapted to control admission of air to said cup and the passage of oil from said cup through said block to said valve and thence through said block in the aforesaid opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

1,114,642. APPARATUS FOR ELECTRICALLY CONTROLLING AIR-BRAKES. EDWARD L. ORCUTT, Somerville, Mass.; Fred A. Maddox, Medford, Mass., and Elmer N. Hutchins, Somerville, Mass., executors of said Orcutt, deceased. Filed July 12, 1909. Serial No. 507,278. (Cl. 188—4.)



1. In combination, a valve to stop the flow of air in a brake pipe and to control the exhaust of air from a brake pipe, a movable abutment connected to the valve to control the flow of air in the brake-pipe, an exhaust port, an electrically-operated valve, and a regulating valve controlling ports by which, respectively, an equilibrium of pressure is established and a different pressure is effected on opposite sides of the abutment.

2. In combination, a movable abutment fitted to work in a chamber communicating with a brake-pipe connection on one side of the abutment, a valve connected to said abutment and controlling the flow of the air in a brake-pipe and controlling a discharge-pipe leading from brake-pipe on one side of valve in the brake-pipe to the atmosphere, a supply-port for increasing the pressure in the chamber on one side of the abutment, an electrically-controlled exhaust port for controlling the pressure in the chamber on one side of the abutment opposite that which is in communication with the brake-pipe connection, and a regulating valve controlling said supply port.

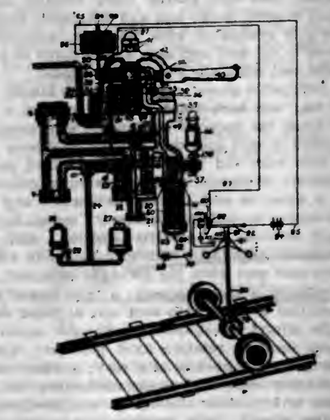
3. In combination, a movable abutment fitted to work in a chamber communicating with a brake-pipe connection on one side of the abutment, a valve connected to said abutment and controlling the flow of air in a brake pipe and controlling a discharge pipe on one side of the valve in the brake pipe to the atmosphere, a supply port for increasing the pressure in the chamber on one side of the abutment, an electrically-controlled exhaust port for relieving pressure in the chamber on the side of the abutment opposite that which is in connection with the brake-pipe connection, and a regulating valve controlling said supply port.

4. In combination, a movable abutment fitted to work in a chamber communicating with a brake-pipe connection on one side of the abutment, a valve connected to said abutment and controlling the flow of air in a brake-pipe and controlling a discharge-port-pipe in the brake-pipe at one side of the valve in the brake-pipe through a pressure-retaining valve to the atmosphere, a supply port for increasing the pressure in the chamber on one side of the abutment, an electrically-controlled exhaust port for reducing pressure in the chamber on the side of the abutment opposite that which is in communication with the brake-pipe connection and a regulating valve controlling said supply port.

5. In combination, a movable abutment fitted to work in a chamber communicating with a brake-pipe connection on one side of the abutment, a valve connected to said abutment and controlling the flow of air in a brake-pipe and controlling a discharge-port pipe in the brake pipe at one side of the valve in the brake-pipe through one of a plurality of pressure-retaining valves to the atmosphere, a supply port for increasing the pressure in the chamber on one side of the abutment, an electrically-controlled exhaust port for reducing pressure in the chamber on the side of the abutment opposite that which is in communication with the brake-pipe connection, and a regulating valve controlling said supply port.

[Claim 6 not printed in the Gazette.]

1,114,643. APPARATUS FOR ELECTRICALLY CONTROLLING AIR-BRAKES. EDWARD L. ORCUTT, Somerville, Mass.; Fred A. Maddox, Medford, Mass., and Elmer N. Hutchins, Somerville, Mass., executors of said Orcutt, deceased. Filed Mar. 15, 1913. Serial No. 754,440. (Cl. 188—72.)



1. The combination in an air-brake system, of means for setting the brakes, means for releasing the brakes, a speed-controlled device for locking said brake-releasing means in non-releasing position and means for maintaining said device in locking position.

2. The combination in an air-brake system, of means for setting the brakes, means for releasing the brakes, a speed-controlled device for locking said brake-releasing means in non-releasing position, means for maintaining said device in locking position, and means for releasing said device from its locking position.

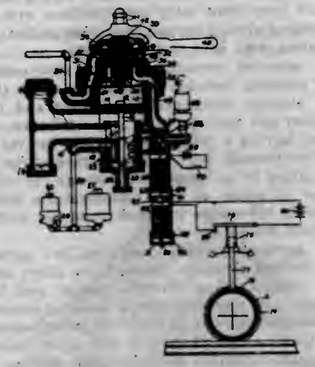
3. The combination in an air-brake system, of means for setting the brakes, means for releasing the brakes, a speed-controlled device for locking said brake-releasing means in non-releasing position, means for maintaining said device in locking position, and speed-controlled means for releasing said device from its locking position.

4. The combination in an air-brake system, of means for setting the brakes, means for releasing the brakes, a device for locking the brake-releasing means in non-releasing position, an electromagnet for controlling said device, a speed-controlled switch for the circuit of said electromagnet, means for holding said switch in circuit-closing position, and speed-controlled means for releasing said switch.

5. The combination in an air-brake system of a rotary valve, a locking device arranged to lock said valve in brake-setting position, and speed-controlled means for controlling said device.

[Claim 6 not printed in the Gazette.]

1,114,644. SPEED-REGULATING MECHANISM. EDWARD L. ORCUTT, Somerville, Mass.; Fred A. Maddox, Medford, Mass., and Elmer N. Hutchins, Somerville, Mass., executors of said Orcutt, deceased. Filed July 12, 1909, Serial No. 507,279. Renewed May 15, 1914. Serial No. 838,898. (Cl. 188—72.)



1. In combination, a movable abutment and a connected blanking and discharge-valve in the brake-pipe, said abutment being adapted to close the brake-pipe and open the exhaust port to the air by a disturbance of equilibrium of pressure on its opposite sides, and to open the brake-pipe and maintain the closure of the discharge-port by the restoration of such equilibrium, and means for preventing the operation of the said abutment when the train is moving at a predetermined speed.

2. In combination, a movable abutment and a connected blanking and discharge-valve in the brake-pipe, said abutment being adapted to close the brake-pipe and open the exhaust port to the air by a disturbance of equilibrium of pressure on its opposite sides, and to open the brake-pipe and maintain the closure of the discharge-port by the restoration of such equilibrium, and a centrifugal device operated directly from a moving part of the train for preventing the operation of said abutment when the train is moving at a predetermined speed.

3. In combination, a valve to stop the flow of air in a brake-pipe and to control the exhaust of air therefrom, a movable abutment connected to the valve to control the flow of air in said brake-pipe, an exhaust port, an electrically-operated valve, a regulating valve controlling ports by which, respectively, an equilibrium of pressure is established and a different pressure is effected on opposite sides of the abutment, and means for opening the circuit of said electrically-operated valve when the train is moving at a predetermined speed.

4. In combination, a valve to stop the flow of air in a brake-pipe and to control the exhaust of air therefrom, a movable abutment connected to the valve to control the flow of air in said brake-pipe, an exhaust port, an electrically-operated valve, a regulating valve controlling ports by which, respectively, an equilibrium of pressure is established and a different pressure is effected on opposite sides of the abutment, means for opening the circuit of said

electrically-operated valve when the train is moving at a predetermined speed, and a centrifugal device operated directly from a moving part of the train for controlling said means.

1,114,645. GARMENT-PRESSING MACHINE. THEODORE D. PALMER, Syracuse, N. Y., assignor to T. D. Palmer Company, Syracuse, N. Y., a Corporation. Filed Aug. 10, 1908. Serial No. 447,776. (Cl. 68—9.)

1. A steam clothes press comprising a buck and a press-head having a steam chamber provided with a foraminous bottom, said press-head being also provided with a steam conduit running around its marginal edge and cut off from communication with said steam chamber.

2. In a garment pressing machine, two permanently associated pressing elements disposed one above the other, the upper element being movable toward and from the lower element and provided with separate steam compartments, each having a foraminous bottom for the passage of steam therethrough to the upper surface of the garment while the latter is under pressure, means for controlling the passage of steam to said compartments and means for preventing the escape of steam from the perforations of one of said compartments.

3. In a garment pressing machine, two permanently associated presser elements disposed one above the other, the upper element being movable toward and from the lower element and provided with a steam chamber having a foraminous bottom, and an auxiliary imperforate presser plate detachably interlocked with the upper element and extending partially across the foraminous bottom.

4. In a garment pressing machine, a supporting bed for the garment having a steam chamber, and an imperforate top, a superposed presser head permanently associated with and movable toward and from the bed and also provided with a steam chamber having a foraminous bottom whereby steam may be applied to the upper surface of the garment, and an imperforate presser plate secured to the presser head and extending across the under side of the steam pervious bottom.

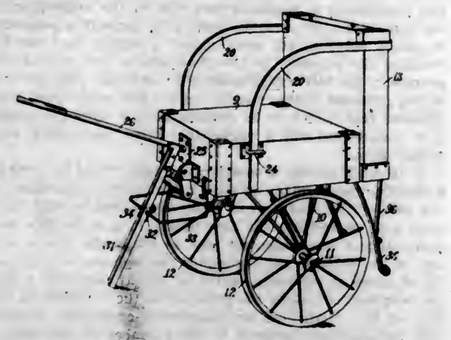
5. In a garment pressing machine, two permanently associated pressing elements disposed one above the other, the upper element being movable toward and from the lower element and provided with a steam chamber having a steam pervious bottom whereby steam is applied to the upper surface of the garment while the latter is under pressure, said head being provided with a steam conduit separate from the steam chamber, and steam pipes leading to said chamber and to the conduit.

[Claims 6 to 10 not printed in the Gazette.]

1,114,646. TOOTH-BRUSH. LAJOS PAP, Arad, Austria-Hungary. Filed Dec. 26, 1912. Serial No. 738,776. (Cl. 15—52.)

In a tooth brush, the combination with a hollow handle provided with a discharge nozzle leading to the bristles, of a paste tube located in said handle provided with an outlet in alinement with said discharge nozzle, means for feeding the contents of said tube through said outlet into said discharge nozzle, and means for fixing the position of said tube in said handle and thereby maintaining said outlet in registering position with said discharge nozzle.

1,114,647. COLLAPSIBLE GO-CART. CLYDE AMBERT PIPPIN, Weldon, Ill., assignor of one-half to Lewis Porter Moore, Weldon, Ill. Filed Sept. 23, 1913. Serial No. 791,296. (Cl. 21—83.)



1. In a collapsible gocart, a seat; a back; hinges connecting the said seat to the back, said seat and back forming a closed receptacle; side guards conecting the back and seat and pivotally secured to the back and foldable thereinto; wheels secured to the seat and collapsible thereinto; and a sectional pole associated with the seat and adapted to be stored in said seat when the gocart is collapsed.

2. In a collapsible gocart, a seat; a back; a double hinge connecting said seat with the back, said seat and back being adapted to form a closed receptacle when the gocart is collapsed; side guards connecting the seat and the back for maintaining the same in fixed relative position to each other, said side guards being foldable into the back; wheels secured to the seat and collapsible thereinto; a sectional pole associated with the base; and rear supports secured to the seat and back and adapted to collapse into the said seat when the gocart is collapsed.

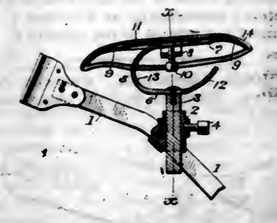
3. In a collapsible gocart, a seat; a back hinged to the seat, said seat and back being adapted to form a closed receptacle when the gocart is collapsed; side guards pivotally mounted in said back and whereby said back is connected to said seat and maintained in a fixed predetermined position; V-shaped brackets pivotally mounted in said seat; a wheel on each bracket, said wheel and brackets being adapted to fold into said seat; means for maintaining said bracets in operative position; and means forming supports associated with said back and seat and foldable into said seat when the gocart is collapsed.

4. In a collapsible gocart, a seat; a back hinged to said seat and adapted to form with said seat a closed receptacle when the gocart is collapsed; means for maintaining the seat and back in relative fixed position; V-shaped brackets pivotally mounted in said seat; a wheel on each bracket; pivotally connected means connecting the brackets with the seat; locking means for said pivotally connected means whereby said brackets are maintained in operative position; and means pivotally connected to the seat and back forming supports and adapted to be folded into said seat when the gocart is collapsed.

5. In a collapsible gocart, a seat; a back; a double hinge connecting said seat to the back, said seat and back forming a closed receptacle when the gocart is collapsed; side guards pivotally mounted in said back; means on the seat for attaching said side guards thereto whereby said seat and back are maintained in a relatively fixed position; V-shaped brackets pivotally mounted in said seat; links having a knuckle joint connecting each of the brackets to the seat; means associated with the links to prevent their movement at the knuckle joint, whereby said brackets are maintained in operative position; a wheel for each bracket; a rear support pivotally attached to the seat; a member pivotally secured to said support and to the back, said support being adapted to be received in said seat when the gocart is collapsed; a sectional pole associated with the seat for manipulating the gocart; a front support pivotally mounted on said pole; and means for maintaining said front support in operative position, said means being foldable into said seat when the gocart is collapsed.

[Claim 6 not printed in the Gazette.]

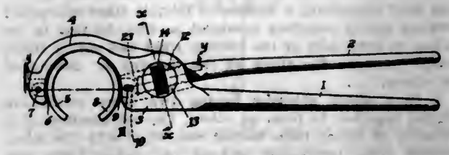
1,114,648. SEAT FOR VELOCIPEDES AND OTHER VEHICLES. WILLIAM T. PURSGLOVE, Philadelphia, Pa., assignor to The A. Mecky Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 17, 1914. Serial No. 825,235. (Cl. 208—15.)



1. In a vehicle, a seat having therein on its underside a channel the upturned walls of which are integral with the adjacent portions of the seat, a resilient member connectible with the frame of the vehicle having a limb adapted to occupy said channel, and means on the seat adapted to engage said limb for retaining the latter firmly in said channel.

2. A seat for a vehicle of the character stated having in its under side a channel, and a transversely-extending keeper thereunder, a looped shaped resilient member having its limbs comparatively horizontal, the upper limb thereof being adapted to be adjustably fitted in said channel and engaged tightly by said keeper, and the lower limb adapted to be connected with a member of the frame of the vehicle, said lower limb being extended rearward of its place of connection with said frame and formed salient toward the seat.

1,114,649. PIPE-WRENCH. ANDREW K. REED, Philadelphia, Pa. Filed May 19, 1914. Serial No. 839,491. (Cl. 81—87.)



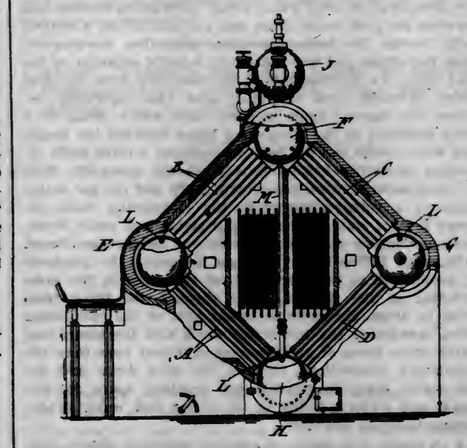
1. In a wrench, a main handle, an operating handle pivoted thereto on a fulcrum having a fixed axial position on the main handle and having on its end a cam face, a pair of jaws carried by said main handle and arranged in opposed relation said jaws being relatively movable toward and from each other and with respect to said main handle and one of said jaws being slidably mounted, the cam face of said operating handle engaging said slidable jaw to move it, and means for adjusting the length of the operating handle between the slidably mounted jaw and the fulcrum to change the leverage of said operating handle.

2. In a wrench, a main handle, a pair of jaws carried by said main handle and one of which is adjustably movable to and from the other, an oscillatory fulcrum bushing journaled in the main handle to provide a fixed fulcrum axis, an operating handle extending through the bushing transversely to its axis and having at one end a cam portion engaging the adjustably movable jaw, and adjustable means for adjusting the operating handle upon the bushing to vary the leverage between the axis thereof and the cam portion of the handle.

3. In a wrench, a pair of handle members pivoted together, one of said members having a bifurcated portion, a pair of jaws pivoted to said bifurcated portion in opposed relation, one of said jaws being mounted to move longitudinally of said handle, the other handle interfitting with said bifurcated portion and having a threaded end adapted to engage said movable jaw member, and means carried by said bifurcated handle for engaging said threaded portion to move one handle with respect to the other to shift said movable jaw to exert a clamping action.

4. In a wrench, a pair of handle members pivoted together, one of said members having a bifurcated portion, a pair of jaws pivoted to said bifurcated portion in opposed relation, one of said jaws being mounted to move longitudinally of said handle, the other handle interfitting with said bifurcated portion and having a threaded end adapted to engage said movable jaw member, means carried by said bifurcated handle for engaging said threaded portion to move one handle with respect to the other to shift said movable jaw to exert a clamping action, and a supplemental jaw adapted to be removably secured to either of said jaw members.

1,114,650. WATER-TUBE BOILER. ARTHUR ROSS, London, England. Filed Sept. 12, 1913. Serial No. 789,470. (Cl. 122—275.)



1. A water tube boiler of general polygonal shape, comprising a mud drum, a steam and water drum, a feed water drum at one side and intermediate of the steam and water drum and the mud drum, a hot water drum at the other side and intermediate of the steam and water drum and mud drum, circulating tubes connecting the mud drum and the hot water drum, circulating tubes connecting the hot water drum and the steam and water drum, circulating connections between the steam and water drum and the feed water drum, circulating connections between the feed water drum and the mud drum, and a combustion chamber adjacent to the boiler structure, there being serial passages for the gases arranged to pass the gases over the circulating tubes, the circulating tubes between the hot water drum and the steam and water drum being of greater cross sectional area than the circulating tubes between the mud drum and the hot water drum, substantially as described.

2. A water tube boiler of general polygonal shape, comprising a mud drum, a steam and water drum, a feed water drum at one side and intermediate of the steam and water drum and the mud drum, a hot water drum at the other side and intermediate of the steam and water drum and mud drum, circulating tubes connecting the mud drum and the hot water drum, circulating tubes connecting the hot water drum and the steam and water drum, circulating connections between the steam and water

drum and the feed water drum, circulating connections between the feed water drum and the mud drum, a central baffle within the boiler structure extending downwardly from the steam and water drum to a point adjacent to the mud drum, an intermediate baffle extending from the mud drum upwardly and outwardly and then upwardly between the central baffle and the feed water drum to a point adjacent to the circulating tubes between the steam and water drum and the feed water drum, a third baffle extending upwardly and outwardly, thence upwardly from the mud drum between the central baffle and the hot water drum to a point adjacent to the circulating tubes between the hot water drum and the steam and water drum, and a combustion chamber at the side of the last mentioned baffle, said baffles being arranged to cause the products of combustion to pass serially over the tubes in the same direction as the flow of water through the tubes from drum to drum; substantially as described.

3. A water tube boiler of general polygonal shape, comprising a mud drum, a steam and water drum, a feed water drum at one side and intermediate of the steam and water drum and the mud drum, a hot water drum at the other side and intermediate of the steam and water drum and the mud drum, circulating tubes connecting the mud drum and the hot water drum, circulating tubes connecting the hot water drum and the steam and water drum, circulating connections between the steam and water drum and the feed water drum, circulating connections between the feed water drum and the mud drum, a central baffle within the boiler structure extending downwardly from the steam and water drum to a point adjacent to the mud drum, an intermediate baffle extending from the mud drum upwardly and outwardly and then upwardly between the central baffle and the feed water drum to a point adjacent to the circulating tubes between the steam and water drum and the feed water drum, a third baffle extending upwardly and outwardly, thence upwardly from the mud drum between the central baffle and the hot water drum to a point adjacent to the circulating tubes between the hot water drum and the steam and water drum, and a combustion chamber at the side of the last mentioned baffle, said baffles being arranged to cause the products of combustion to pass serially over the tubes in the same direction as the flow of water through the tubes from drum to drum, the cross sectional area of the circulating tubes connecting the hot water drum and the steam and water drum being of greater cross sectional area than the circulating connections between the mud drum and the hot water drum to provide the required space for the steam and water passing to the steam and water drum; substantially as described.

4. A water tube boiler of general polygonal shape, comprising a mud drum, a steam and water drum above said mud drum, a feed water drum at the side of said drums and intermediate thereof, a hot water drum at the other side and intermediate of the steam and water drum and the mud drum, circulating tubes connecting the mud drum and the hot water drum, circulating tubes connecting the hot water drum and the steam and water drum, circulating tubes connecting the steam and water drum and the feed water drum, circulating tubes connecting the feed water drum and the mud drum, a combustion chamber at the side of the structure adjacent to the circulating tubes between the mud drum and the hot water drum, there being three baffles within said structure and arranged to form four serial passes for the products of combustion so that the products of combustion will first pass over the circulating tubes between the mud drum and the hot water drum, then over the circulating tubes connecting the hot water drum and the steam and water drum, then over the circulating tubes connecting the steam and water drum and the feed water drum, and then to the stack over the tubes connecting the feed water drum and the mud drum; substantially as described.

5. A water tube boiler of general polygonal shape, comprising a mud drum, a steam and water drum above said mud drum, a feed water drum at one side and between said drums, a hot water drum at the other side and between the steam and water drum and the mud drum, circulating tubes between the mud drum and the hot water drum, circulating tubes between the hot water drum and the steam and water drum, circulating tubes between the steam and water drum and the feed water drum, circulating tubes between the feed water drum and the mud drum, said circulating tubes being arranged so that there will be a closed circuit from the mud drum to the hot water drum, then to the steam and water drum, then to the feed water drum, then to the mud drum, a furnace at the side of the circulating tubes between the mud drum and the hot water drum, and baffling within the boiler structure arranged to form serial passes for the products of combustion so that the products of combustion will pass over the circulating tubes in the direction of the flow of the water therein; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,114,651. SHOCK-ABSORBER. FRIDOLIN SCHIMMEL, Faribault, Minn. Filed Jan. 9, 1914. Serial No. 811,206. (Cl. 21—105.)

1. In a shock absorber of the class described, a friction joint comprising a number of rings of frictional material interposed between radially expanding concentric rings arranged so that friction is obtained on both sides of the friction rings and spring rings.

2. In a shock absorber of the class described a friction joint comprising a number of friction rings interposed between spring rings coaxially housed so that frictional contact is had on both sides between the friction rings and spring rings.

3. In a shock absorber of the class described a friction joint comprising a number of friction rings interposed between spring rings arranged so that friction is obtained on both sides of the friction rings and spring rings, means to move the rings co-axially in opposite directions.

4. In a shock absorber of the class described having two arms which are jointed together to form an elbow, a friction joint comprising a number of friction rings interposed between spring members arranged so that friction is obtained on both sides of the friction rings and spring rings, means to move the rings by the opening or closing of the elbow.

5. In a shock absorber having two arms which are jointed together to form an elbow, the combination of a plurality of spring rings housed concentric with the joint, friction rings interposed between the spring rings and means to increase the expansion of the spring rings to coact with the friction rings on both sides.

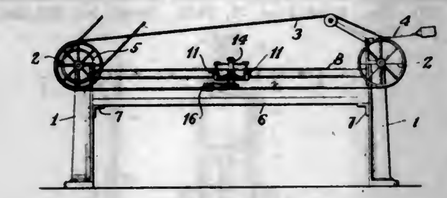
[Claims 6 to 8 not printed in the Gazette.]

1,114,652. BELT SANDING-MACHINE. FRIDOLIN SCHIMMEL, Faribault, Minn. Filed Dec. 11, 1912, Serial No. 736,069. Renewed Sept. 9, 1914. Serial No. 860,953. (Cl. 51—13.)

1. In an abrading machine the combination of an abrading belt, means for moving said belt, a stationary channel guideway provided with a reciprocally movable carriage, a frame pivotedly mounted to the carriage, a presser foot pivotedly mounted to said frame and means to manually press said presser foot to the abrading belt.

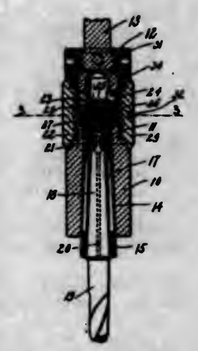
2. In an abrading machine the combination with an endless abrading belt, means for driving said belt, a vertically movable presser foot frame pivotedly mounted to a reciprocally movable carriage, the said carriage mounted on two horizontal stationary channels, suitable leverage to manually reciprocally move the said carriage and press the said presser foot on the endless abrading belt.

3. In an abrading machine the combination with the endless abrading belt, means for guiding said belt, a reciprocally movable carriage, a pair of stationary channels adapted to receive rollers mounted on the reciprocally movable carriage, a frame pivotedly mounted to the carriage, a pivotedly mounted presser foot on the frame.



4. In an abrading machine the combination with the endless abrading belt; means for driving said belt, a stationary channel frame; a reciprocally movable carriage provided with rollers adapted to engage, and be supported by, the channel frame; a frame pivotedly mounted to the carriage, a presser foot pivotedly mounted to said frame, a movable counterbalance weight attached to said frame to hold the presser foot away from the endless belt, and a suitable leverage to manually press said presser foot on said belt and reciprocally move the said carriage.

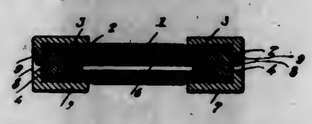
1,114,653. DRILL-CHUCK. FRANK STARIN, Springfield, Mass. Filed May 6, 1914. Serial No. 836,701. (Cl. 29—114.)



1. In a chuck, the combination with a chuck-body having a central conical bore, the upper end of said body being reduced in diameter and provided in diametrically opposite portions thereof with longitudinal slots, of a conical longitudinally slit jaw-body slidably disposed in said bore, said jaw-body being provided with a bore for receiving the head of the shank of the tool, the upper end of said jaw-body having a transverse aperture in alinement with the longitudinal slots in said chuck-body, a connecting member seated in said aperture and extending into the slots in said chuck-body, the ends of said member having screw threads, a nut drawn over the reduced portion of said chuck-body in mesh with the threads of said member, and means for holding said nut against longitudinal movement upon said chuck-body.

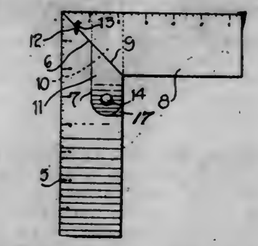
2. In a chuck, the combination with a chuck-body having a central conical bore, of a jaw body slidably disposed in said bore, said jaw body comprising a conical longitudinally slit member provided with a bore for receiving the head of the shank of the tool, means carried by said jaw body in engagement with said chuck body for preventing a relative rotary motion of said two bodies, but permitting said jaw body to move longitudinally inward or outward upon said chuck body, and means in engagement with said first named means for effectuating the longitudinal movement of said jaw body.

1,114,654. FUSE-CARTRIDGE. JOSEPH W. STEELMAN, Philadelphia, Pa. Filed May 16, 1913. Serial No. 768,100. (Cl. 175—273.)



A fuse cartridge comprising a tubular body of insulating material having the inner surfaces of the ends thereof flared outwardly and the exterior surfaces screw threaded, a pair of wedge-shaped blocks mounted within each end of said body and having flat confronting faces, a fusible strip disposed longitudinally of said body and having the opposite ends thereof arranged between the confronting faces of said blocks, and cup-shaped caps having the side walls thereof threadedly engaging the ends of said body and the end walls thereof apertured to receive the free ends of said strip beyond said blocks, the apertures in said caps having beveled walls substantially as, and for the purpose, described.

1,114,655. FOLDING SQUARE. ALFRED H. STERNER, Philadelphia, Pa. Filed Jan. 17, 1914. Serial No. 812,808. (Cl. 33—117.)

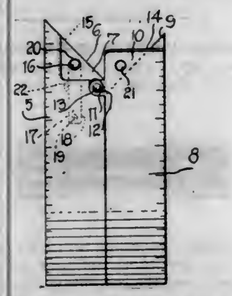


The herein described folding square including a blade and an arm, the corresponding ends of said blade and arm being obliquely cut on an angle of 45° for abutting engagement with each other, said blade being provided in one face with an elongated longitudinally extending recess opening upon the shorter longitudinal edge of said blade and upon the obliquely inclined end thereof, said arm being provided with a transversely extending opening, a laterally projecting plate having a reduced portion disposed within said opening, the thicker outer end portion of said plate being pivotally mounted in the recess in said blade and disposed flush with the face of said blade and the corresponding face of said arm, said outer end portion of the plate when the arm is disposed at right angles to the blade being located wholly within the recess in the blade, a hook on said blade, and an eye on the arm to receive said hook whereby the arm is held in its open position.

1,114,656. FOLDING SQUARE. ALFRED H. STERNER, Philadelphia, Pa. Filed Feb. 7, 1914. Serial No. 817,284. (Cl. 33—116.)

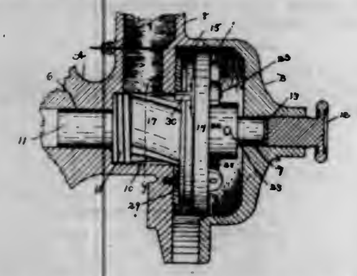
A folding square comprising a blade one end of which terminates in an angle and provided in one face with a shallow angular recess the base of which is provided with a second recess that extends to the edge of said blade, an arm, one end of which terminates in an angle adapted to engage the angular end of said blade when in an extended position, a plate carried by said arm adapted to fit flush

in said angular recess, a perforated ear formed on the inner edge of said plate and arranged for pivotal move-



ment within said second recess, and means for locking the arm in position.

1,114,657. GRINDING-MILL. ERNEST TWIGG, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation. Filed Dec. 18, 1913. Serial No. 807,450. (Cl. 83—8.)

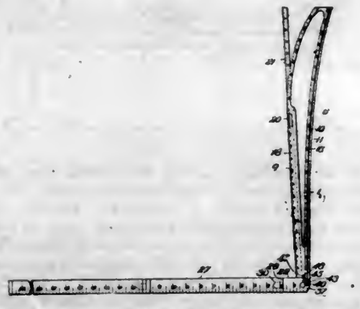


1. In a grinding mill, the combination of a case, a driving shaft in the said case, a fixed disk on the said case, a moving disk carried by the said shaft, a feed worm mounted on the said shaft separately from the said moving disk, the said moving disk having a tubular hub by which it is mounted on the said shaft, the said shaft having an enlargement forming a shoulder, the said feed worm having a bore that at one end fits over the said hub and at the other end fits over the said enlargement and having an internal annular flange intermediate the said ends and which is engaged on one side by the end of the said tubular hub, and a spring housed between the said feed worm and the said shaft and having the ends engaged with the said shoulder and flange.

2. In a grinding mill, a case having a vertical feed passage and a relatively enlarged feed chamber at the lower end thereof and having a bearing at one end of the said chamber, a shaft in the said bearing and extending through the said chamber, and a feed worm mounted on the said shaft, the said feed worm extending across the lower end of the said feed passage, and the said feed worm comprising a relatively coarse portion for the main portion that serves as the feed device proper and a portion adjacent the said bearing having a thread that is relatively fine and of small pitch suitable for engaging with relatively small sized particles and guiding the same away from the said bearing.

3. In a grinding mill having a case provided with a vertical feed passage and a feed chamber at the lower end thereof, and having a bearing at one end of the said chamber, a shaft in the said bearing and extending through the said chamber, a feed worm mounted on the said shaft and housed in the said chamber, the said feed worm comprising at the end remote from the said bearing a relatively coarse portion and at the end adjacent the said bearing a second portion having a relatively fine thread, and the said case having a recess adjacent the said bearing in which is housed an appreciable portion of the said second portion, and the walls of the said recess being a fit for the periphery of the said portion of the worm that is housed therein.

1,114,658. SKIRT-RULE. EDWARD C. WATTERS, Kansas City, Mo. Filed June 23, 1913. Serial No. 775,364. (Cl. 33—11.)



1. A skirt rule comprising a body member having markers arranged at intervals along its longitudinal edge, and a guard member on the edge of said body having a rib projecting laterally therefrom, and back of the markers.

2. In a skirt rule, a body member comprising a spine having sockets along one longitudinal edge, and markers slidably mounted in said sockets and adapted for lateral projection from the edge of the spine, and a guard on said body member having a rib lying back of said markers.

3. In a skirt rule, a body member comprising a spine having spaced arms projecting laterally from one edge, and having keeper heads on their outer ends, markers located within the sockets formed by said arms and having heads adapted for engagement with the keeper heads, and plates covering opposite faces of the spine and inclosing the sockets.

4. In a skirt rule, a body member comprising a spine having sockets along one longitudinal edge, and having keeper heads at the ends of the sockets, face plates on opposite sides of the body member, and markers arranged in said sockets in frictional contact with the face plates, and having heads adapted for engagement with the keeper heads.

5. In a skirt rule, a body member comprising a spine having sockets along one longitudinal edge, face plates inclosing opposite sides of the spine, a guard fixed on said face plates and provided with an edge face having apertures in line with the spine sockets, and markers slidably mounted in said sockets and apertures.

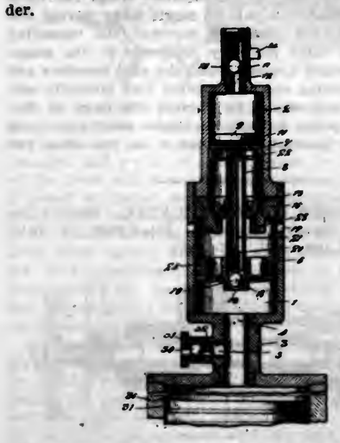
[Claims 6 to 9 not printed in the Gazette.]

1,114,659. FLUID-PRESSURE-DRIVEN PUMP. CARLEY GOULD WELD, North Chatham, Mass. Filed Apr. 25, 1911. Serial No. 623,181. (Cl. 230—27.)

1. A pump, comprising the combination with a power chamber, a compression chamber of less diameter, power and compression pistons in the respective chambers, connected with each other, a passage leading from the power chamber to the compression chamber below the piston therein, and a check valve in said passage, seating against pressure from the power chamber, said smaller chamber piston being adapted to permit air to pass from below the piston to the space above it during its down stroke.

2. A pump comprising a pair of cylinders of different diameters connected end to end, pistons in said cylinders, a partition wall between the pistons, a tubular piston rod extending through the partition wall and connected with the pistons, said wall having packing bearing upon said rod, and said rod affording communication between the spaces below the respective pistons, a valve arranged

to permit delivery from below the larger piston to the space below the smaller piston, said cylinder being provided with a valve outlet at its upper end, and said larger cylinder having a tubular inlet at its lower end adapted to be connected with a source of pressure supply, and means for permitting fluid to pass the smaller piston during its movement in the direction of the larger cylinder.



3. In combination with a prime mover provided with a compression chamber, of an air pump, communicating with and connected thereto, said pump having two connected cylinders, a differential piston in said cylinders, a valve-controlled communicating passage-way between said cylinders; said piston being operated by the pressure and suction created within the prime mover and means for preventing any vacuum that may be caused by suction during the suction operation of the prime mover, by admitting air to the same to secure an atmospheric pressure therein preparatory to its compression operation.

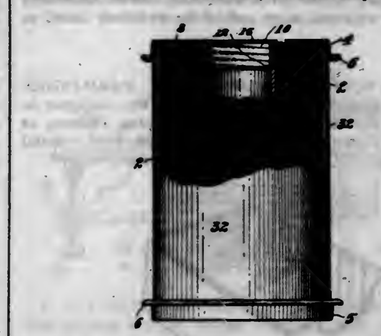
4. In combination with a prime mover provided with a compression chamber and a piston therein, of a detachable air pump having a plurality of connected cylinders of relatively different diameters, a floating differential piston in said pump, said piston comprising a connecting rod provided with a valved passage-way therethrough, piston heads in each cylinder at the ends of the connecting rod; said floating piston being operated by the pressure and suction created during the operation of the prime mover, and means for admitting air to the compression chamber of the prime mover upon the suction stroke of the piston to secure an atmospheric pressure therein preparatory to each working impulse of the pistons.

5. In combination with a prime mover provided with a compression chamber and a piston therein, of a detachable air pump having a plurality of compression cylinders of different diameters, a floating differential piston mounted therein, comprising a plurality of piston heads mounted to work in unison, a valved communicating passage-way leading from one cylinder to the other; said floating piston being operated by the pressure and suction created by the operation of the piston of the prime mover and means comprising a valved passage-way for admitting to the compression chamber of the prime mover air to prevent a vacuum and secure therein atmospheric pressure preparatory to the compression stroke of the piston in the chamber of the prime mover.

[Claims 6 to 26 not printed in the Gazette.]

1,114,660. PROTECTOR FOR TUBE-THREAD. JOHN W. WEAT, Braintree, Mass. Filed Sept. 28, 1911. Serial No. 651,712. (Cl. 242—161.)

1. A protector for tube thread, consisting of a sheet of yielding material adapted to cover the entire end of the mass of thread, a ring of packing arranged so that said sheet will conform to the end of the mass of thread, and means for holding said material under pressure against the entire surface of said end, substantially as described.



2. A protector for tube thread, having a sheet metal head adapted to engage an end of a mass of thread, a boss on the inside of the head adapted to enter the tube on which the thread is wound having projections to engage said tube, and a rounded peripheral flange of sheet metal on said head for deflecting the thread as it is drawn from the end of the mass, substantially as described.

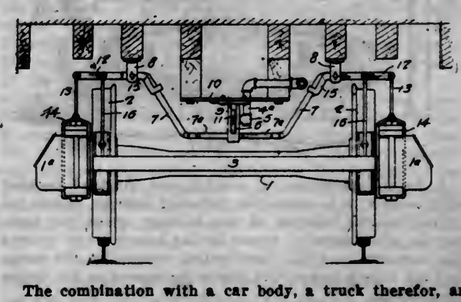
3. A protector for tube thread, consisting of a sheet metal thread having a peripheral flange and a hole for receiving a spindle, and a sheet metal boss secured to the inside of said head, the inner end of said boss being provided with a spindle hole of the same diameter as and located in alinement with the said hole in the head, substantially as described.

4. A protector for tube thread, comprising a sheet metal head having a peripheral flange and a hole for receiving a spindle, a sheet metal boss secured to the inside of said head, the inner end of said boss being provided with a spindle hole of the same diameter as and located in alinement with the hole in said head, said boss being adapted to enter said tube and having projections to engage said tube, substantially as described.

5. A protector for tube thread, consisting of a pair of heads, a ring of yielding material on each head adapted to entirely cover the end of the mass of thread on the tube, a packing ring located between said first mentioned ring and the head to enable the flexible material to conform to the irregular surfaces of the ends of the mass and be held in intimate contact with the entire surface of said ends, and means on said heads for engaging the tube, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

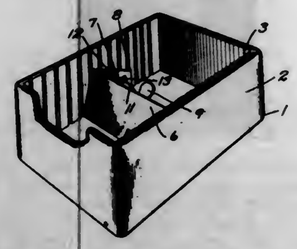
1,114,661. SAFETY APPLIANCE FOR RAILWAY-CAR TRUCKS. FREDERICK G. WILLERS, Cadillac, Mich. Filed Feb. 21, 1914. Serial No. 820,195. (Cl. 188—2.)



The combination with a car body, a truck therefor, an air braking apparatus connected with the car, and a pivoted shift lever operatively connected with the brake apparatus, of a pivoted auxiliary lever connected with and

adapted to act on the first-named lever, a stirrup applied to the axle box of the truck axle, and means connecting said stirrup with the outer end of the auxiliary lever, as described.

1,114,662. FOLLOWER-BLOCK FOR CARD-INDEX TRAYS. JOEL WITMER, Kansas City, Mo., assignor to Elizabeth Witmer, Kansas City, Mo., doing business as Witmer Record Company. Filed Apr. 26, 1913. Serial No. 763,733. (Cl. 129—28.)



1. A follower block comprising a body member having resilient side wings provided with outturned end flanges.

2. A follower block comprising a body member having integral resilient end wings provided with laterally turned keeper flanges.

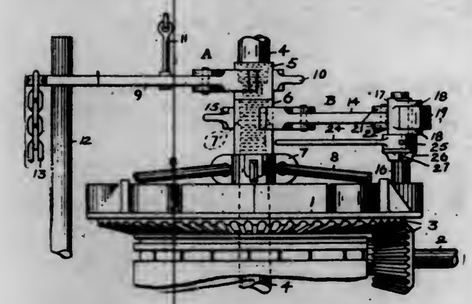
3. A follower block comprising a backwardly and upwardly inclined body member having downwardly tapered end wings provided with laterally turned keeper flanges.

4. A follower block comprising a body member and resilient end wings, a lever mounted on the body member, and connections between said lever and said end wings, for the purpose set forth.

5. A follower block comprising a body member having resilient end wings, a lever pivotally mounted on the body member, and rods pivotally connecting the lever with said resilient end wings, for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,114,663. BREAKING-OUT TONGS. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 7, 1913. Serial No. 799,710. (Cl. 255—35.)

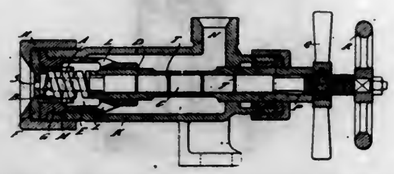


1. In an apparatus for turning one threaded member with respect to a companion threaded member, means for preventing the turning of one member, tongs for turning the other member, means having rotary travel around the members, a toggle mechanism connecting the tongs and the rotary means, and means for operating the toggle mechanism.

2. In an apparatus for turning one threaded member with respect to a companion threaded member, means for preventing the turning of one member, tongs having an operating lever for turning the other member, a device having rotary travel around the members, a driving post on the rotary device, toggle links connected between the lever and the post, and means for operating the links.

3. In an apparatus for turning one threaded member with respect to a companion threaded member, means for preventing the turning of one member, tongs for turning the other member, a pair of toggle links having one end of each pivotally connected together, the remaining end of one link being pivotally connected to the tongs, means having rotary travel around the said members and having the remaining end of the other link pivotally connected thereto, and means for moving the links so that the connecting pivot between the links shall come into the dead center position with respect to the other two pivots.

1,114,664. BURNER FOR LIQUID FUEL. HAROLD EDGAR YARROW, Glasgow, Scotland. Filed Sept. 27, 1913. Serial No. 792,196. (Cl. 137—86.)



1. In a liquid fuel burner, the combination of a fuel outlet, a whirl chamber behind said outlet, a regulating spindle projecting into said whirl chamber and a helical spring encircling said regulating spindle and forming a spiral duct through which the fuel is led to the whirl chamber.

2. In a liquid fuel burner, the combination of a fuel outlet, a whirl chamber behind said outlet, a regulating spindle projecting into said whirl chamber, a helical spring encircling said regulating spindle and forming a spiral duct through which the fuel is led to the whirl chamber and means for compressing said helical spring to vary the cross sectional area of the spaces between its several volutes.

3. In a liquid fuel burner, the combination of a fuel outlet, a whirl chamber behind said outlet, a regulating spindle projecting into said whirl chamber, a helical spring encircling said regulating spindle and forming a spiral duct through which the fuel is led to the whirl chamber and means operated by the regulating spindle to vary the cross sectional area of the spaces between the several volutes of said helical spring.

4. In a liquid fuel burner, the combination of a fuel outlet, a whirl chamber behind said outlet, a regulating spindle projecting into said whirl chamber, a helical spring encircling said regulating spindle and forming a spiral duct through which the fuel is led to the whirl chamber and means for compressing said helical spring to vary the cross sectional area of the spaces between its several volutes comprising a collar upon the regulating spindle.

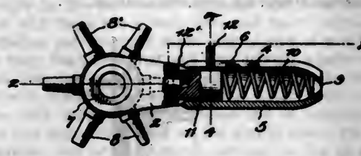
1,114,665. MANUFACTURE OF ELECTRICAL CONDUCTORS. THOMAS B. ALLEN and LEONARD B. COULTER, Niagara Falls, N. Y., assignors to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Nov. 21, 1911. Serial No. 661,584. (Cl. 219—76.)

1. In the manufacture of electrical conductors, the steps consisting of impregnating a porous article with a colloidal solution of graphite and heating said article.

2. In the manufacture of electrical conductors, the step consisting of impregnating a silicon carbid article with a colloidal solution of an electrical conductor.

3. In the manufacture of electrical conductors, the step consisting of impregnating a silicon carbid article with a colloidal solution of graphite.

1,114,666. PUNCH. JOHN A. ANDERSON, Bridgeport, Conn. Filed June 8, 1914. Serial No. 843,718. (Cl. 164—124.)



1. In a hand punch, a body formed of a sheet metal blank which is shaped and folded into a hollow handle having a slot and a contracted free end which latter is rounded, and a pair of opposite arms at the opposite end of the blank which arms are provided with openings and disposed in spaced relation, a multi-punch carrying hub having its ends disposed in said openings, a coil spring in the handle abutting the contracted free end thereof, a latch block against which the spring bears, and a pin on the block extending through the slot of the handle, said block having an opening to receive any of the punches and the contracted end of the handle forming an anvil face for hammering thereon.

2. In a tool, a hollow handle having a contracted end portion to form an anvil face at one end thereof and an interior seat, a slidable spring pressed latch in the handle the spring of which engages in said seat, and a rotatable work engaging means at the opposite end of the handle for engagement with the latch.

3. In a tool, a hollow body having apertured arms at one end and having its opposite end contracted to form an outer anvil face and an interior seat, a rotatable work-engaging element arranged in the apertures of the arms, and spring pressed locking means for the element arranged on the interior of the body and having the spring thereof engaged at one end with said interior seat.

1,114,667. PROCESS OF MAKING ELECTRODES FOR SECONDARY BATTERIES. JOSEPH APOZNANSKI, Moscow, Russia, assignor to The Firm of Stanislaw & Georgij Gaszynski Bros., Apoznanski & Co., Moscow, Russia. Filed Dec. 14, 1910. Serial No. 597,375. (Cl. 204—29.)

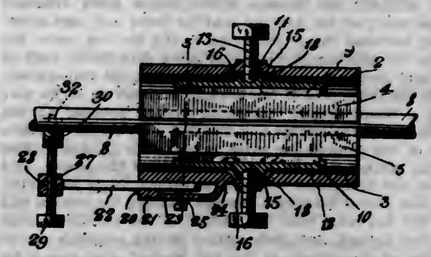
1. That step in the herein described process of making electrodes for secondary batteries, which consists in very rapidly drying the paste filled in the grids, and impeding the exit of the gases within the grids during such drying.

2. The process herein described of making electrodes for secondary batteries, which consists in drying the paste filled in the grids, and preventing the gases from free exit from the grids during such drying, such drying being carried out very rapidly and at a temperature higher than that of the paste.

3. The process herein described of making electrodes for secondary batteries, which consists in filling the grids with a pasty mass, and thereafter drying them very rapidly while between plates, whereby the gases formed by the drying are prevented from free exit.

4. The process herein described of making electrodes for secondary batteries, which consists in filling the grids with a pasty mass, covering the exposed surfaces of the paste filled in the grids, and drying the paste in the grids while so covered, whereby the gases formed during drying are prevented from free exit at the parts so covered.

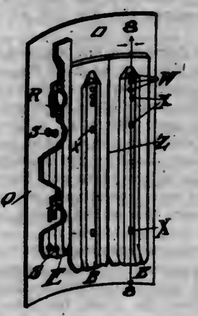
1,114,668. ADJUSTABLE BEARING. HERBERT S. ASH and EMET H. HAYES, Knoxville, Tenn. Filed Mar. 12, 1914. Serial No. 824,834. (Cl. 64—55.)



1. In a bearing for rotary shafts, a bearing supporting shell having bearing blocks slidably seated in said bore, means for securely holding said bearing blocks against movement within said shell, and a vertically and horizontally adjustable auxiliary bearing shoe supported by said shell at one end thereof.

2. In a bearing for rotary shafts, a bearing supporting shell having a rectangular bore, bearing blocks slidably seated in said bore and having bearing surfaces formed in their meeting faces, means for binding engagement with said bearing blocks for holding them against movement within said shell, and a vertically and horizontally adjustable bearing shoe supported by said shell at one end thereof.

1,114,669. HOT-AIR FURNACE. ROBERT WILLIAM BAILY, Oskaloosa, Iowa, assignor to Interstate Manufacturing Company, Oskaloosa, Iowa, a Corporation of Iowa. Filed Apr. 24, 1914. Serial No. 834,124. (Cl. 126—146.)



1. In a hot air furnace, a fire box, a grate arranged transversely of the fire box near its lower end, and a metallic sectional lining connected to the fire box above the grate, the sections of the lining being detachable, each of the said sections consisting of a plate curved transversely to fit the inner face of the fire box, and having in its rear face a longitudinally extending groove opening at the lower end of the section and forming a rib on the opposite face of the section, said lower end being bent inward to extend above the grate, the said groove forming a passage between the section and the fire box wall from the bottom of the section to near the top thereof, and each section having openings in the bottom of the groove at the top thereof, and means for detachably connecting the sections to the fire box wall, said means comprising a bracket secured to the section at the bottom of the groove and near the top thereof and having its intermediate portion offset outwardly away from the section and provided with a longitudinally extending key hole slot, a bracket secured to each section near the lower end and in the groove, each of the said last-named brackets having its lower end offset outwardly and provided with a longitudinally extending slot or recess,

and bolts detachably connected with the fire box for engagement by the brackets, each bolt having a frusto-conical head for engaging a notch or a slot.

2. In a hot air furnace, a fire box, a grate arranged transversely of the fire box near its lower end, and a metallic sectional lining connected to the fire box above the grate, the sections of the lining being detachable, each of the said sections consisting of a plate curved transversely to fit the inner face of the fire box, and having in its rear face a longitudinally extending groove opening at the lower end of the section and forming a rib on the opposite face of the section, the outer or rear face of each section fitting against the fire box at each side of the groove, said lower end being bent outward to extend above the grate, the said groove forming a passage between the section and the fire box wall from the bottom of the section to near the top thereof, and each section having openings in the bottom of the groove at the top thereof, and means for detachably connecting the sections to the fire box wall.

3. In a hot air furnace, a fire box, a grate arranged transversely of the fire box near its lower end, and a metallic sectional lining connected to the fire box above the grate, the sections of the lining being detachable, each of the said sections consisting of a plate curved transversely to fit the inner face of the fire box, and having in its rear face a longitudinally extending groove opening at the lower end of the section and forming a rib on the opposite face of the section, the outer or rear face of each section fitting against the fire box at each side of the groove, said lower end being bent outward to extend above the grate.

4. In a hot air furnace, a fire box, a grate arranged transversely of the fire box near its lower end, and a metallic sectional lining connected to the fire box above the grate, the sections of the lining being detachable, each of the said sections consisting of a plate curved transversely to fit the inner face of the fire box, and having in its rear face a longitudinally extending groove opening at the lower end of the section, the outer or rear face of each section fitting against the fire box at each side of the groove.

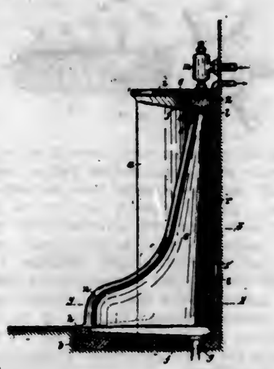
5. In a hot air furnace, a fire box, and a sectional lining of metal for the fire box, each of the said sections consisting of a plate curved transversely to fit the inner face of the fire box, the plates being arranged vertically alongside each other, and with their adjacent edges spaced apart slightly from each other, each plate having in its convex face a longitudinal groove extending from near the top to the bottom of the plate and forming a rib on the concave face, the rear face of each section fitting against the fire box at each side of the groove, means for detachably connecting each section to the fire box, each of the said sections having an opening at its top for placing the groove in communication with the interior of the fire box, the lower end of each of the said sections being bent outwardly to lie above the grate, the detachable connection comprising bolts connected with the fire box near the ends of each of the sections, each of the sections having brackets provided with offset portions having openings for engagement by the heads of the bolts, the said heads being frusto-conical and the openings of the brackets being of greatest width at their lower ends.

[Claims 6 to 9 not printed in the Gazette.]

1,114,670. URINAL. STEPHEN D. BAKER, New York, N. Y. Filed Mar. 25, 1913. Serial No. 756,635. (Cl. 4—12.)

1. A urinal having a urinal chamber provided with a front wall and a bottom, said wall having a vertically elongated opening of limited width relatively to the inside width of the urinal chamber and extending downwardly in said wall short of said bottom and also having a narrow vertical slit extending from said opening downwardly to said bottom.

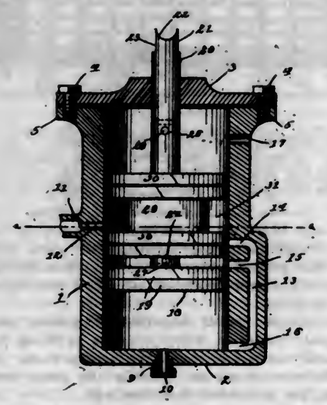
2. A urinal formed of ceramic material and consisting of two upright walls joined with each other and arranged angularly and a vertically elongated apertured front wall arranged in the angle between and joined from top to bottom at its lateral portions with said first-named walls and forming with the parts of the latter relatively back of it the urinal chamber, the remaining parts of said first-named walls forming forwardly projecting wings.



3. A urinal formed of ceramic material and consisting of two upright walls joined with each other and arranged angularly and a vertically elongated apertured front wall having an upwardly tapering form in front elevation and arranged in the angle between and joined from top to bottom at its lateral portions with said first-named walls and forming with the parts of the latter relatively back of it the urinal chamber, the remaining parts of said first-named walls forming projecting wings.

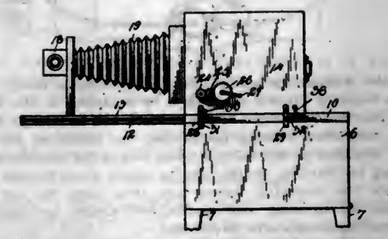
4. A urinal formed of ceramic material and consisting of two upright walls joined with each other and arranged angularly, a vertically elongated apertured front wall arranged in the angle between and joined from top to bottom at its lateral portions with said first-named walls and forming with the parts of the latter relatively back of it the urinal chamber, the remaining parts of said first-named walls forming projecting wings, and a hollow ledge projecting forwardly from said first-named walls over the front wall and having a restricted outlet discharging from its interior downwardly into said urinal chamber.

1,114,671. BELL-RINGER. CHARLES A. BATES, Marshalltown, Iowa. Filed Aug. 27, 1913. Serial No. 786,919. (Cl. 121—2.)



In apparatus of the class described, a cylinder having a medially located intake port on one side, an exhaust port near the upper end and a passage in one wall communicating with the lower end of the cylinder and having an inlet port near the center of the cylinder and a second port below and spaced from the inlet port, in combination with a piston in the cylinder having a rod extending through the upper head thereof, a tubular valve fitted and movable in the bore of the cylinder and also movable toward and from the piston rod, said valve having a bore extending therethrough from end to end of greater diameter than the piston rod and also having a pair of spaced heads forming an annular chamber around the said valve and with which the intake port of the cylinder communicates, and tappets on the piston rod to successively engage and move the valve as the piston nears the limit of its stroke, one of said tappets serving on the up stroke of piston to cause the lower head of the valve to close the inlet port and open the second port.

1,114,672. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed Sept. 10, 1909. Serial No. 517,083. (Cl. 95—13.)



1. In a photographing and developing apparatus, the combination with means for storing and exposing a strip of sensitized material, of means for feeding the strip from the storing and exposing means, a developing fluid receptacle arranged below said feeding means, a fixing fluid receptacle adjacent the developing fluid receptacle, means for mounting the storing and exposing means to permit its movement with relation to the receptacles whereby the strip held by the means for feeding the strip may be carried from one receptacle to the other, and means for cutting off sections of the sensitized material.

2. In a photographing and developing apparatus, fluid containers, means for feeding a strip of sensitized material into one of the fluid containers and supporting said strip, and means for mounting the means for feeding the sensitized material whereby it may be moved to draw the sensitized material from said container.

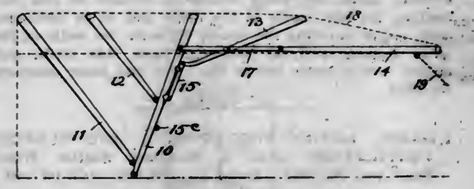
3. In a photographing and developing apparatus, a casing, receptacles therein for containing fluids, a film container having means for feeding film to one receptacle and supporting it, and means for moving the film container and for carrying the film from said receptacle to another.

4. In a photographing and developing apparatus, a casing adapted to contain a roll of sensitized material and having a chamber for exposing portions of said material, feeding means for drawing a strip of sensitized material through said chamber, a fluid receptacle disposed adjacent to said feeding means and adapted to receive the sensitized material directly therefrom, a fluid receptacle adjacent the first mentioned receptacle, and means for mounting the first mentioned chamber whereby it is capable of translatory movement with relation to the receptacles whereby the film is moved from one receptacle to another.

5. In a photographing and developing apparatus, a casing adapted to contain a roll of light sensitive material and having a chamber for exposing sections of the material, a pair of feeding rollers adapted to draw said material through the exposing chamber, a cut-off device arranged adjacent the feeding rollers, a fluid receptacle arranged adjacent to said feed rollers and into which the material may be fed, means for mounting the casing to permit translatory movement of the casing with relation to the fluid receptacle, and a stationary cut-off device with relation to which the first mentioned cut-off device is carried by the casing.

[Claims 6 to 15 not printed in the Gazette.]

1,114,673. VEHICLE TOP CONSTRUCTION. THOMAS J. BLACK, Cleveland, Ohio, assignor to The Cleveland Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 19, 1913. Serial No. 779,925. (Cl. 21—62.)



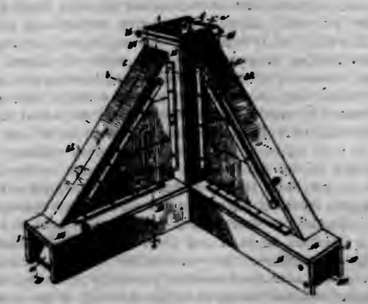
1. In combination in a vehicle top construction, a main bow, an extension bow, a link connecting the latter to the main bow and being at an angle to the extension bow and substantially parallel to the main bow when the top is extended, means whereby the end of the extension bow is braced by the main bow against movement relative thereto when the top is extended, a second extension bow, and means connecting the latter to the first named extension bow and to the main bow.

2. In combination in a vehicle top construction, a main bow, an extension bow, a link connecting the extension bow to the main bow, said link being alongside and substantially parallel to the main bow when the top is extended or collapsed and the outer portion of the link having a bracing connection with the main bow when the top is extended, a second extension bow, and means connecting the same to the first named extension bow and to the main bow.

3. In combination in a vehicle top construction, a main bow, an extension bow, a link connecting the extension bow to the main bow, said link being alongside and substantially parallel to the main bow and having a part adjacent the extension bow engaging the main bow when the top is extended, a second extension bow, and means connecting the latter to the main bow said means being connected between its ends to the first named extension bow.

4. In combination in a vehicle top construction, a main bow, an extension bow, a link connecting the latter to the main bow and being alongside and substantially parallel to the main bow when the top is extended, means whereby the outer portion of the link and the end portion of the extension bow are braced by the main bow against movement relative thereto, a second extension bow, and a link connected to the latter and to the first named extension bow and main bow.

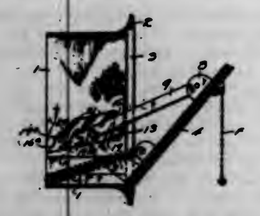
1,114,674. CORNER-POST MOLD. VICTOR E. BLISS, Davis, Ill. Filed May 25, 1912. Serial No. 699,734. (Cl. 25—118.)



The herein described corner post mold comprising an outer member and an inner member, said outer member having a pair of angularly related side walls, said inner member being arranged in the angle between the side walls of the outer member and comprising a pair of vertical angularly related base walls, covers on the base walls, a pair

of angularly related post forming walls in the angle between and at right angles to the walls of the outer member and also extending upwardly from the inner ends of the base walls, removable side walls detachably fitted to the post forming walls and covers and arranged in the angles between them, end walls detachably secured to and connecting the side walls of the inner and outer members, edge boards covering the spaces between the walls of the outer member and the said removable side walls, and means to detachably secure the outer and inner members together.

1,114,675. DEVICE FOR OPENING AND CLOSING VENTILATORS. CARL A. BLOMBERG, Seattle, Wash. Filed Aug. 26, 1913. Serial No. 786,739. (Cl. 98—49.)



1. In a ventilator, the combination of a casing, a spring retracted shutter mounted therein, and a latching device including a latch member, and a holding member operated by the shutter, said holding member having a plurality of locking positions on the latch member and releasable from any one thereof by forward movement of the shutter for direct return to starting position without traversing or entering any of the other locking positions.

2. A latching device for ventilators comprising a spring retracted movable object having a single pull connection therewith, a latch member pivotally supported and provided with a succession of keeper elements and guideways leading to and from said keeper elements, a holding element connected with said movable object and carrying a locking lug adapted to be guided into any one of the keeper notches, by the movement of the shutter, and by other movement of the shutter adapted to be guided into another notch or returned to starting position.

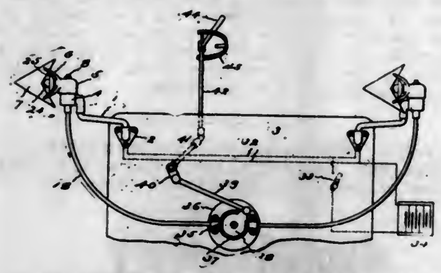
3. In a ventilator, the combination of a casing, a spring retracted shutter pivotally mounted therein, an arm carrying a locking lug loosely pivoted to said shutter, and a latching device having a plurality of locking notches and guideways leading to and other guideways leading from said notches, the said arm carrying the locking lug adapted to be directed into any of said notches and released therefrom for returning to starting position, or for engagement with other notches by the movement of the shutter.

4. In a ventilator, the combination of a casing, a spring retracted movable element mounted therein, and a latch member pivotally supported by said casing and provided with a series of independent spaced apart locking projections having keeper notches, a series of spaced apart guiding elements arranged above said locking projections and terminating short of said keeper sockets, and a holding element connected with said spring retracted movable element and carrying a locking lug adapted in one movement to ride successively from one guiding element to the other and to be guided downward by the latter into a keeper notch, and in its other movement adapted to be disengaged from said keeper notch and guided beneath said guide element for engagement with other keeper notches or to a position beneath and clear of the latch member.

5. In a ventilator, the combination of a ventilator casing, a spring retracted shutter pivotally mounted therein, a shoulder formed integral with one wall of the said ventilator casing, a latch member pivoted to said frame and normally resting upon said shoulder, said latch member having a series of keeper notches and a separate series of forwardly inclined convex guide flanges arranged above and terminating short of said retaining sockets, and a holding arm pivotally connected to the said ventilator shutter and movable therewith carrying a laterally projecting locking lug adapted to be guided into said receiving sockets by the said inclined guide flanges.

[Claim 6 not printed in the Gazette.]

1,114,676. DIRECTION-INDICATING APPARATUS FOR AUTOMOBILES. CHARLES H. BORDEN, Hartford, Conn. Filed Feb. 6, 1913. Serial No. 746,582. (Cl. 116—31.)



1. An automobile attachment comprising arrows, supports for said arrows adapted to be attached to the sides near the front of a car so the arrows will be visible from front and rear, locking mechanism for retaining the arrows in either of several positions, means for releasing the locking mechanism, flexible shafts which when turned first operate the releasing means and then turn the arrows, gearing for rotating said shafts, and means for rotating the gearing in opposite directions.

2. An automobile attachment comprising arrows, supports for said arrows adapted to be attached to the sides near the front of a car so the arrows will be visible from front and rear, locking mechanism for retaining the arrows pointing forward, means for releasing the locking mechanism, flexible shafts which when turned first operate the releasing means and then turn the arrows, gearing for rotating said shafts, and means for rotating the gearing in opposite directions.

3. An automobile attachment comprising arrows, supports for said arrows adapted to be attached to the sides near the front of a car so the arrows will be visible from front and rear, locking mechanism for retaining the arrows in either of several positions, means for releasing the locking mechanism, flexible shafts which when turned first operate the releasing means and then turn the arrows, gearing arranged to rotate the shafts simultaneously so as to turn the arrows together, and means for rotating the gearing in opposite directions.

4. An automobile attachment comprising arrows, supports for said arrows adapted to be attached to the sides near the front of a car so the arrows will be visible from front and rear, locking mechanism for retaining the arrows in either of several positions, means for releasing the locking mechanism, flexible shafts which when turned first operate the releasing means and then turn the arrows, gearing for rotating said shafts, and means adjcent to the steering wheel for rotating the gearing in opposite directions.

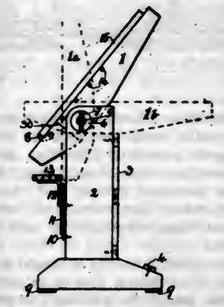
5. An automobile attachment comprising horizontally movable arrows, supports for said arrows adapted to be attached to the sides near the front of a car so the arrows will be visible from both front and rear, locking mechanism for retaining the arrows in either of several positions, means for releasing the locking mechanism, flexible shafts which when turned first operate the releasing means and then turn the arrows horizontally, gearing for rotating said shafts, and means for rotating the gearing in opposite directions.

[Claim 6 not printed in the Gazette.]

1,114,677. DRAWING-STAND. WILLIAM JOHN BROOKS, Letchworth, England. Filed May 1, 1913. Serial No. 764,762. (Cl. 45—109.)

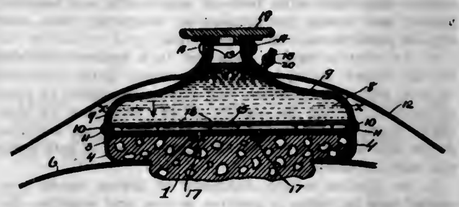
In a drawing stand the combination of two rigid and substantial upright standards, braced together, with two

inclinable arms, one arm being hinged to each standard by means of a bolt provided with a clamping nut or the like, the arm and standard being in contact over a broad annular area to prevent slipping, the surfaces of contact being roughened, to enhance the gripping action, the arms



being fashioned to provide for the retention of suitable catches at a number of points along the length of the said arms, the drawing board resting on the upper edges of the arms and capable of being slid thereon and the catches serving to prevent the drawing board from slipping down when the arms are inclined; all substantially as set forth.

1,114,678. SPONGE-RETAINING AND WATER-SUPPLYING DEVICE. CHARLES BUDAI, Chicago, Ill. Filed Dec. 6, 1913. Serial No. 805,162. (Cl. 54—80.)



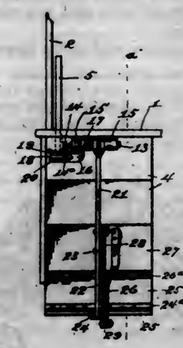
1. A protector adapted for attachment to a horse's head, comprising a water receptacle, a sponge holder arranged below said receptacle and having a bottom opening through which a sponge is arranged to protrude to rest upon the horse's head, and means within said receptacle for feeding water to the sponge consisting of a perforated tube provided with outlets projecting into the sponge receptacle.

2. A protector for animals comprising a water receptacle having an air inlet and a normally-closed filling neck, a perforated tube within said receptacle having discharge outlets, a sponge holder arranged below said receptacle and having a bottom opening through which a sponge is arranged to protrude to rest on the animal's head, a canopy provided with an opening to receive the neck of the water receptacle, and means for securing the canopy to said neck.

3. The combination with a water receptacle provided with an upwardly extending central filling neck and a screw cap closure for said neck, of a sponge-holder depending below said receptacle and provided with a sponge and having a bottom opening through which the sponge is arranged to protrude, means within the receptacle for supplying water to the sponge-holder, a canopy having an opening to receive said neck, and means for securing said canopy upon the neck.

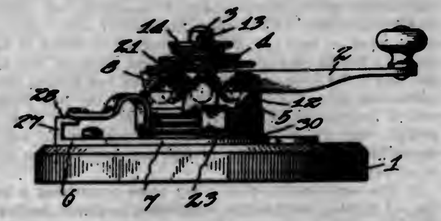
1,114,679. TRAP-DOOR-OPERATED CAR-STEP. JOHN PHILLIPP DEIMLING, Clarion, Pa. Filed Feb. 7, 1914. Serial No. 817,270. (Cl. 105—84.)

1. The combination with a hinged trap door, a hinged step, and a platform shaft, of a shaft having fixed relation with the door and extending under the platform, a slotted lever secured to the platform shaft, a crank operated in the lever slot by the door shaft, and step-operating mechanism connected with the platform shaft.



2. In mechanism operated by the trap door of railway cars for operating extensible steps, a shaft fixed to the trap door and extending under the car platform, a crank projecting from the platform end of said shaft, a shaft journaled under the platform perpendicular to the door shaft, a lever secured to and projecting from the platform shaft for connecting this shaft with the door shaft, and step operating mechanism connected with the platform shaft.

1,114,680. ELECTRIC SWITCH. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1911. Serial No. 657,814. (Cl. 175—290.)



1. In an electric switch, in combination, a movable contact member, an operating member therefor, a connection between the same permitting a partial movement of said operating member independently of said contact member, and means including a stationary cam member for accelerating the movement of said operating member prior to operation of said movable contact member.

2. In an electric switch, in combination, a stationary member, a movable member, said members having cam parts resiliently held in engagement to accelerate said movable member upon operation thereof, a movable contact member, and a connection between said contact member and said movable member for imparting movement from the latter to the former but only after acceleration of said latter member.

3. In an electric switch, in combination, a stationary member, a movable contact member, and an operating member having cam parts resiliently held in engagement with coöperative parts on said stationary member and said contact member.

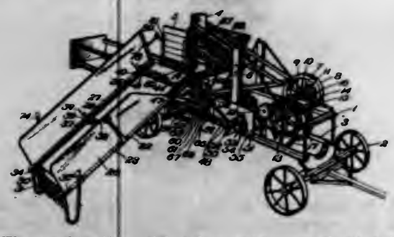
4. In an electric switch, in combination, a stationary member, a movable contact member, an operating member, said stationary member and said operating member having engaging cam surfaces and said contact member and said operating member also having engaging cam surfaces, and means resiliently holding said operating member in engagement with both of said other members.

5. In an electric switch, in combination, a rotary contact member, a rotary operating member, coöperating cam

faces on said members, a non-rotary member, coöperating cam faces on said non-rotary member and said operating member, and resilient means for holding said operating member in engagement with said non-rotary member and said contact member.

[Claims 6 to 15 not printed in the Gazette.]

1,114,681. FEEDER. CLAUDE J. DUNCAN and ORVIL F. DUNCAN, Gridley, Kans. Filed Oct. 30, 1913 Serial No. 798,165. (Cl. 100—25.)



1. The combination with a hay press comprising a hopper, of a conveyer, clutch mechanism controlling the actuation of the conveyer, a header pan, a shipper lever for controlling the clutch, a revoluble rod having crank connection with the shipper lever, a header pan, a lever mounted on the revoluble rod and adapted for pivotal movement in one direction and means connecting said lever with the header pan whereby the rod is rotated by lateral movement of the lever and the pan actuated by pivotal movement thereon.

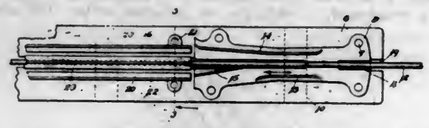
2. The combination with a hay press comprising a hopper, and a pivotally mounted header pan, of a conveyer, a shaft for driving the conveyer, clutch mechanism for controlling the conveyer shaft, a revoluble rod having crank connection with a loose member of said clutch, a clamp fixed on said rod, a lever pivotally mounted in said clamp, a header pan pivotally mounted adjacent the hopper, and a rod connected with said lever and having crank connection with the header pan whereby the first named rod is rotated under lateral movement of the lever to actuate the clutch member, and the last named rod is moved longitudinally under pivotal movement of the lever to actuate the header pan.

3. The combination with a hay press comprising a hopper, of driving mechanism comprising a clutch having a slide member, a conveyer having a shaft operable from said clutch, a shipper lever for the clutch, a rotatable rod having crank connection with the shipper lever, a clamp fixed on said rod, a keeper member having a longitudinal and a communicating transverse slot, a lever pivotally mounted in said clamp and adapted for travel in the slot in said keeper member, a header pan, and a rod connected with said lever and having crank connection with the header pan.

4. The combination with a hay press comprising a hopper, of a conveyer frame spaced vertically from the press adjacent the hopper, a shaft revolubly mounted on said frame and provided with sprocket wheels, means for driving said shaft, paired belts adapted for travel over said sprocket wheels, paired journal links in said belts having keeper slots, rake bars journaled in said links, rake teeth on said bars, teeth on said bars projected through the link slots, and means for yieldingly retaining said rake bars in functional position.

5. The combination with a hay press comprising a hopper, of a conveyer frame spaced vertically from the press adjacent the hopper, a shaft revolubly mounted on said frame and provided with sprocket wheels, means for driving said shaft, paired belts adapted for travel over said sprocket wheels, paired journal links in said belts having keeper slots, rake bars journaled in said links, rake teeth on said bars, teeth on said bars projected through the link slots, and springs engaging said links and the keeper teeth and yieldingly retaining said rake bars in functional position.

1,114,682. ELECTRIC SWITCH. FRANK L. EAGER, Waterbury, Conn. Filed June 16, 1911. Serial No. 633,490. (Cl. 246—55.)



1. An electric switch having a plural number of distinct and separate paths each arranged to receive a trolley wheel traveling in a certain direction, means for guiding the trolley wheel into each of said paths to close an electric circuit, an actuated device, and the electric circuit including an electrical connection with both of said paths, said circuit also connecting each of said paths with said actuated device.

2. An electric switch having a plural number of paths each arranged to receive a trolley wheel traveling in a certain direction, means for guiding the trolley wheel into each of said paths, an actuated device, an electric circuit including a connection with both of said paths and with branches extending to said actuated device, said actuated device being adapted to be operated by the flow of electric fluid through said branches, said flow being caused by the travel of a trolley wheel through said paths.

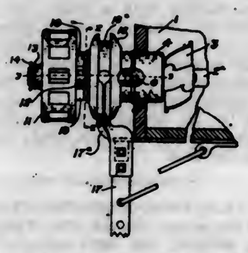
3. An electric switch having two paths each to receive a trolley wheel traveling in a direction opposite to that in which it travels in the other path, means for guiding the trolley wheel into each path, an electric circuit broken in each of said paths and arranged to be completed by the bridging of a trolley wheel, said circuit including an electrical connection with both of said paths, an actuated device, and means for conducting electricity from each of said paths to said actuated device.

4. An electric switch connected to a trolley wire and having means to guide a trolley wheel, paths arranged on said switch into which said trolley is guided to close an electric circuit, an electric circuit including an electrical connection with both of said paths, an actuated device and branches extending between each of said paths and said actuated device.

5. An electric switch composed of plates rigidly connected and including a positive section and negative sections, separate paths for guiding a trolley wheel in opposite directions along said switch, one path lying between the positive section and one negative section and the other between the positive section and the other negative section, an electrical connection between said positive path and a source of electric energy, an actuated device connected with said source, and an electrical connection between said actuated device and each negative section.

[Claims 6 to 9 not printed in the Gazette.]

1,114,683. CLUTCH. HENRY N. FAAS, Springfield, Ohio, assignor to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Feb. 27, 1914. Serial No. 821,395. (Cl. 192—9.)



1. In a clutch, a shaft, a driving member rotatably mounted on said shaft, a driven member rotatably connected with said shaft and held from longitudinal movement relative thereto, a shiftable clutch member slidably mounted on said driven member and rotatably connected therewith, and engaging parts on said driving member and shiftable member adapted to form a driving connection between the same.

2. In a clutch, a shaft, a driving member rotatably mounted thereon, said driving member having an extended hub, a driven member rotatably connected with said shaft and having an enlarged portion projecting over said hub extension, a shiftable clutch member slidably mounted on the enlarged portion of said driven member, and engaging parts on said driving member and shiftable member to form a driving connection between the same.

3. In a clutch, a shaft, a driving member rotatably mounted on said shaft, said driving member having a hub extension, a driven member rotatably connected with said shaft and having an enlarged portion projecting over said hub extension, said enlarged portion having open-ended recesses, a shiftable clutch member slidably mounted on said enlarged portion, projections on said shiftable member extending into said recesses to form a driving connection between said shiftable and driven members, and projections extending from said driving member adapted to engage the projections of said shiftable member to form a driving connection between the same.

4. In a clutch, a shaft, a driving member rotatably mounted on said shaft, a driven member having a squared aperture fitted to a squared portion of said shaft, said driven member having an enlarged portion on one end thereof so as to form an interior shoulder, a hub extension projecting from said driving member into said enlarged portion in proximity to said shoulder, a shiftable clutch member slidably mounted on said enlarged portion, interior projections on said shiftable member and open-ended recesses in said enlarged portion to receive said projections, and projections on said driving member about said hub extension adapted to engage the projections of said shiftable member.

1,114,684. SEMAPHORE-ARM. JOHN W. FENTON, Millersburg, Ohio, assignor to Sam'l F. Spencer, Dresden, Ohio. Filed Feb. 17, 1913. Serial No. 748,903. (Cl. 246—15.)

1. A semaphore arm comprising a stationary frame, a housing fixed to one end thereof, reflectors extending throughout the length of said frame and diverging from the housing to the other end of the frame, and means within said housing for casting rays of light against said reflectors.

2. A semaphore arm comprising a frame, a housing at one end thereof, reflectors extending throughout the length of said frame and diverging from the housing to the other end of the frame, transparent plates arranged in said frame at the outer sides of said reflectors, and means within said housing for casting rays of light against said reflectors.

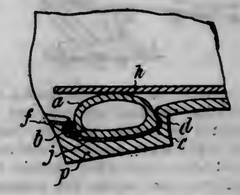
3. A semaphore arm comprising a frame, a housing at one end thereof, reflectors extending throughout the length of said frame and having end engagement adjacent said housing, transparent plates arranged in said frame at the outer sides of said reflectors, and means within said housing for casting rays of light against said reflectors, said means including a lens, a reflector, and an incandescent lamp interposed between said lens and said reflector.

4. A semaphore arm comprising a frame, a housing carried by one end thereof, longitudinal corrugated reflectors arranged throughout the length of said frame and having end engagement adjacent said housing, transparent plates carried by said frame at the outer sides of said reflectors, and means within said housing for casting rays of light between said transparent plates and said reflectors.

5. A semaphore arm comprising a frame, a housing at one end thereof, a detachable end plate closing the other end of said frame, longitudinal ribs carried by the confronting sides of said frame and diverging from the housing to the other end of the frame, removable diverging reflectors arranged against said ribs and having end engagement adjacent the said housing, transparent plates carried by said frame at the outer sides of said reflectors, a lens within said housing, an incandescent lamp within said housing for projecting rays of light through said lens and along the outer sides of said reflectors, and means whereby easy access can be had to the interior of said housing.

[Claims 6 to 9 not printed in the Gazette.]

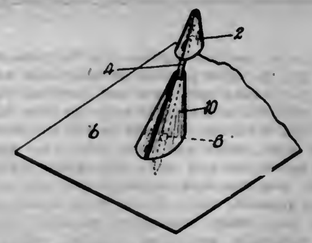
1,114,685. PNEUMATIC HEEL FOR BOOTS AND SHOES. GEORGE TERRY TRIST FREEMAN, Southsea, England. Filed Apr. 13, 1914. Serial No. 831,455. (Cl. 36—37.)



1. A boot or shoe heel provided with an interior cavity, in combination with a case conformably fitting in said cavity and having recesses in its opposite ends, and a pneumatic cushion fitting in said case and having projections at its opposite ends which fit in said recesses to maintain said cushion in position.

2. A boot or shoe heel provided with an interior cavity, in combination with a metallic case conformably fitting in said cavity and having recesses in its opposite ends, and a sealed, inflated cushion fitting in said case and provided at opposite ends with projections of thick rubber which fit in said recesses to maintain said cushion in position.

1,114,686. MEANS FOR SECURING ROOFING-SLATES. LORENZO GIANNELLI, Charlestown, Mass. Filed Mar. 6, 1914. Serial No. 823,007. (Cl. 108—9.)



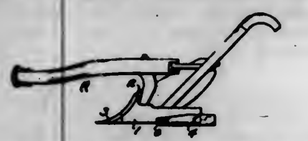
1. The combination with a roof comprising overlapping slates, of a plate having a nail hole opposite the nail space between the slates and overlapping the adjacent sides of two slates of the same row of slates, a hollow member surrounding said hole and projecting upwardly from said plate and forming a stop for the slate which overlaps the said adjacent slate sides, and a nail extending through the hollow member and through a slate in the next lower row of slates, said nail having a cap for closing the upper end of said member.

2. In a roof, the combination of a plurality of slates, a nail having a conical head and a cavity between the head and the upper end of the shank of the nail, and a cap plate adapted to overlap the adjacent sides of two

slates in the same row and to extend beneath a slate in the next higher row, said plate having an ungulous member the upper end of which fits closely into said cavity of the nail to produce a tight joint after the nail has been driven into place.

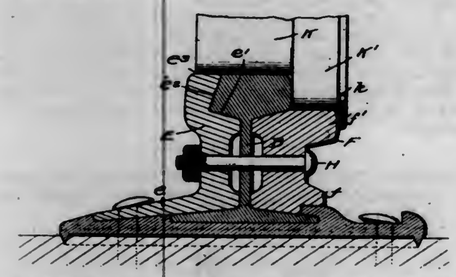
3. A fastening for slates comprising a flat plate adapted to overlap the adjacent sides of two slates in the same row and extending beneath a slate in the next higher row, said plate having a hollow ungulous projection, and a nail adapted to be driven through said projection and said plate, and through the slate in the next lower row, said nail having a head for covering the opening in the upper end of the hollow ungulous member.

1,114,687. LANDSIDE-PROTECTOR FOR PLOWS. JOHN P. GILLIS, Ashland, Okla., assignor of one-tenth to Harry G. Rowley, Stuart, Okla. Filed Apr. 14, 1914. Serial No. 831,774. (Cl. 99—17.)



A land side protector for plows including a shoe formed with a slot opening through the top and forward end thereof and adapted to receive the heel end of the land side, a series of seats being provided within the slot for enabling the land side to be fitted within the slot in a number of positions, and means for clamping the shoe in position upon the land side.

1,114,688. RAIL-JOINT. WILLIAM M. GLOTFELTY, Ohiopyle, Pa. Filed June 23, 1914. Serial No. 846,788. (Cl. 239—3.)



In a rail joint, the combination with the connected ends of rails having the outer portions of their heads cut away, of tie plates forming rail seats and between which the rail ends terminate, said tie plates having outer shoulders and inner lips, the latter of which overlie the inner edges of the rail bases, inner and outer joint bars seated between the rail heads and bases and locked between the webs of the rails and said shoulders and lips of the tie plates upon opposite sides of the rails, said inner and outer joint bars being respectively provided with laterally and vertically projecting tractive surfaces, the former of which extends along the lower inner sides of the rail heads, and the latter of which projects into the outer cut out portions of the rail ends to a point flush with the surfaces thereof, and bolts connecting the said joint bars between their upper and lower ends and extending through the webs of the rails, all substantially as and for the purpose set forth.

1,114,689. PUMP. THOMAS J. HAYES, Cleveland, Ohio, assignor to William A. Horgan, Boston, Mass. Filed Jan. 5, 1912. Serial No. 669,598. (Cl. 230—27.)

1. A pump adapted for operation by connection to the cylinder of an explosion engine comprising a casing, presenting a discharge passageway from one end, means for permitting only discharge through said passageway, means for connecting the opposite end of the casing to the engine cylinder, a sleeve fitting the interior of said casing and having a limited longitudinal movement therein, means for preventing relative rotary movement of said sleeve and casing, ports in said sleeve and casing near the upper ends thereof which aline when the sleeve is at the engine end of the casing and which pass out of alinement upon the movement of the sleeve toward the discharge end, and a piston snugly fitting the interior of said sleeve, the friction between the piston and the sleeve securing the movement of the sleeve upon the movement of the piston.

2. In a device of the character described a casing, a sleeve fitting the interior of said casing and having a limited longitudinal movement therein, means for preventing relative rotary movement of said sleeve and casing, ports in said sleeve and casing near the upper ends thereof which aline when the sleeve is at the engine end of the casing and which pass out of alinement upon the movement of the sleeve toward the discharge end, and a piston snugly fitting the interior of said sleeve, the friction between the piston and the sleeve securing the movement of the sleeve upon the movement of the piston.

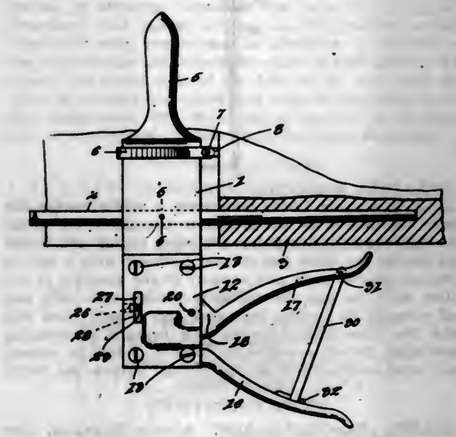
3. A pump adapted for operation by connection to the cylinder of an explosion engine comprising a casing, presenting a discharge passageway from one end, means for permitting only discharge through said passageway, means for connecting the opposite end of the casing to the engine cylinder, a sleeve fitting the interior of said casing and having a limited longitudinal movement, ports in said sleeve and casing near the upper ends thereof which aline when the sleeve is at the engine end of the casing and which pass out of alinement upon the movement of the sleeve toward the discharge end, means for preventing relative rotary movement of said sleeve and casing, and a piston snugly fitting the interior of said sleeve, the friction between the piston and the sleeve securing the movement of the sleeve upon the movement of the piston.

4. In a device of the character described a casing, a sleeve fitting the interior of said casing and having a limited longitudinal movement therein, means for preventing relative rotary movement of said sleeve and casing, ports in said sleeve and casing near the upper ends thereof which aline when the sleeve is at the engine end of the casing and which pass out of alinement upon the movement of the sleeve toward the discharge end, and a piston snugly fitting the interior of said sleeve, the friction between the piston and the sleeve securing the movement of the sleeve upon the movement of the piston.

5. A pump adapted for operation by connection to the cylinder of an explosion engine comprising a casing, a head detachably mounted at one end thereof and provided with a discharge passage way, means for permitting only discharge through said passage way, a head detachably connected to the opposite end of the casing, adapted for connection to the engine cylinder, a sleeve fitting the interior of said casing and having a limited movement therein, a longitudinal slot in the lower end of said sleeve, a pin secured to the casing and extending into said longitudinal slot whereby relative rotary movement between the sleeve and the casing is prevented, ports in said sleeve and casing, near the upper ends thereof which aline when the sleeve is at the engine end of the casing and which pass out of alinement upon movement of the sleeve toward the discharge end, and a piston snugly fitting the interior of said sleeve, the friction between the piston and the sleeve securing the movement of the sleeve upon the movement of the piston.

[Claim 6 not printed in the Gazette.]

1,114,690. MAIL-BAG CATCHER. EVERETT E. HAYWORTH, High Point, N. C. Filed Dec. 13, 1913. Serial No. 806,626. (Cl. 258—16.)



1. In a device of the character described, the combination with a swingingly mounted body portion adapted to be secured to a car, of a fixed catching arm on said body portion, a pivoted catching arm mounted on the body portion, spring means for holding the arm in clamping relation to a mail bag, a trigger rod secured to one of said arms and releasingly engaging the other of said arms for holding the arms in open position, said body portion having an opening therein, a mail bag hook adapted to be mounted within the opening, and a rod pivoted to said pivoted arm and adapted to support the mail bag hook and mail bag when the pivoted arm is in open position and to release the mail bag upon the disengagement of the trigger arm with one of the catcher arms.

2. In a device of the character described, the combination with a swingingly mounted body portion, of a fixed catcher arm on the outer end of said body portion, a pivoted catcher arm adapted for clamping coöperation with a fixed arm mounted upon the body portion, spring means for moving the pivoted arm in clamping coöperation with the fixed arm, a trigger rod pivoted to said pivoted arm adjacent the outer end thereof and adapted to releasably engage the fixed arm adjacent the outer end thereof, and for engagement with a mail bag, means for releasably securing the free end of the trigger arm to the fixed arm, and means carried by said pivoted arm for releasingly supporting a mail bag and releasing the mail bag upon the springing of the trigger arm.

3. In a device of the character described, the combination with a swingingly supported body portion adapted to extend into and out of a railway car when in operative position of a fixed catcher arm secured to the outer end of the body portion, a second catcher arm pivoted on the body portion, a trigger interposed between the arms intermediate the ends thereof and adapted for engagement with a mail bag, spring means for moving the pivoted arm into coöperative clamping position relative to the fixed arm upon the action of the trigger, said body portion having an opening therethrough, means adapted to be mounted within the opening for supporting a mail bag to be delivered, and a rod pivoted to said pivoted arm, slidable through the opening in the body portion and adapted to support the mail bag supporting means and to release the supporting means upon the clamping action of the catcher arms.

1,114,691. SHOCK-ABSORBER. ADOLF HERZ, Vienna, Austria-Hungary. Filed Feb. 20, 1909. Serial No. 479,062. (Cl. 21—105.)

1. The hereindescribed method of checking or absorbing momentum and shocks consisting in causing relative movement between a braking member and a non-fluid mass held against bodily movement with said member and of such character that the momentum is checked by the natural high internal resistance of said material acting upon the braking member in contradistinction to employing means controlling movement of material under the action of the braking member.

2. In a shock absorber, the combination with a relatively movable casing and spindle, of a braking member within the casing and connected with the spindle, said member being separated at all points from the adjacent walls of the casing by relatively wide spaces, and a non-fluid mass filling the casing and held from bodily movement therein, whereby relative movement of the spindle and casing will be checked by the natural internal resistance of said mass acting on the braking member.

3. In a shock absorber, the combination with a relatively movable casing and spindle, the latter extending into a segmentally shaped chamber within the casing, of a wing-like braking member projecting radially from the spindle within the casing, said parts being so proportioned that an unobstructed space is provided between the casing and the braking member and spindle except at the bearings of the latter in the casing, and a body of non-fluid material filling the casing and adapted to check relative movement of the casing and spindle by the action of its natural internal resistance on the wing-like member.

4. In a shock absorber for resisting relative movement between two members of a vehicle, the combination of a casing adapted to be connected to one of said members, a mass of non-fluid, dough-like material, within the casing, and held from bodily movement therein, and a braking member embedded in said mass and adapted to be connected with the other of said vehicle member, substantially as and for the purpose described.

5. In a shock absorber, the combination of a casing, a wing-like member therein, said parts being relatively movable, and a body of yielding material filling the spaces between the walls of the casing and said wing, a portion of the latter being wedge-shape in cross section, whereby the device is adapted to exert a greater momentum-checking effect when the movable member thereof is moving in one direction than when moving in the opposite direction.

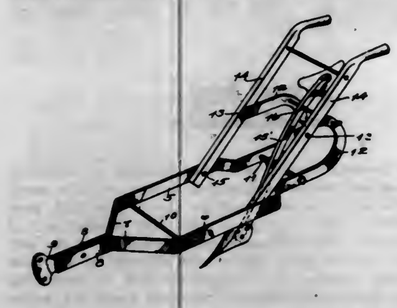
[Claim 6 not printed in the Gazette.]

1,114,692. REVERSIBLE PLOW. JAMES W. P. HILL, Nebo, N. C. Filed Feb. 18, 1914. Serial No. 819,501. (Cl. 97—10.)

1. In a plow of the character described, a supporting frame comprising a pair of side members lying in a substantially horizontal plane the rear ends of said side members being bent to bow formation, a pair of handles the lower ends of which are secured to said side members intermediate the ends of the latter, the terminal ends of said side members being secured to said handles intermediate the terminal ends of the latter.

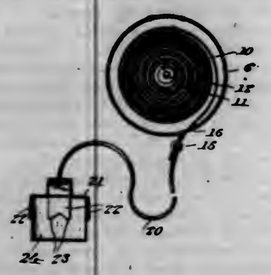
2. In a plow of the character described, a supporting frame comprising a pair of side members lying in a sub-

stantially horizontal plane the rear ends of said side members being bent to bow formation, a pair of handles the lower ends of which are secured to said side members intermediate the ends of the latter, the terminal ends of said side members being secured to said handles intermediate the terminal ends of the latter, a transverse pivot rod, a reversible standard mounted upon said pivot rod, and surface and subsoil plow shares mounted upon said standard substantially as shown and described.



3. In a plow of the character described, a supporting frame comprising a pair of side members lying in a substantially horizontal plane the rear ends of said side members being bent to bow formation, a pair of handles the lower ends of which are secured to said side members intermediate the ends of the latter, the terminal ends of said side members being secured to said handles intermediate the terminal ends of the latter, a transverse pivot rod, a reversible standard mounted upon said pivot rod, and surface and subsoil plow shares mounted upon said standard substantially as shown and described and a pin traversing the upturned portions of said side members and said standard to hold said standard in its adjusted position.

1,114,693. CHALK-HOLDER. HARRY R. HIRST and DANIEL UNGARO, Trenton, N. J. Filed June 13, 1913. Serial No. 773,570. (Cl. 242—98.)



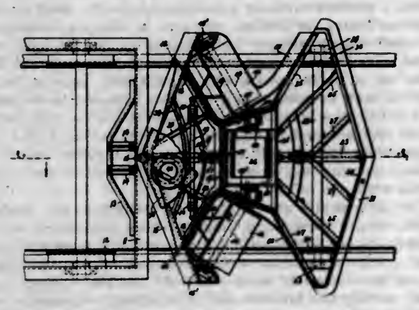
A chalk holder comprising a casing formed in two sections, the said sections being of substantially cup-shape, one being adapted to telescope over the other, a bolt member passing centrally through the sections connecting the same together, a sleeve within the casing and fixed to the bolt member, a coiled retractile spring surrounding the sleeve and having one end fixed thereto and its opposite end projected exteriorly of the casing through the periphery thereof, and a cube holder having a flexible cord connected to the outer end of the spring.

1,114,694. REPAIR-TOOL. HARRY R. HIRST and DANIEL UNGARO, Trenton, N. J. Filed Nov. 4, 1913. Serial No. 799,168. (Cl. 152—27.)

1. A tire repair device comprising a needle having the lower end thereof slotted to receive one end of an elastic band, a support connected to the other end of said needle and having a portion thereof bent at right angles to itself to form a rest, a retainer pivoted upon said support at the junction of the bent portions thereof and normally seating upon said rest and adapted to receive the other end of said band and hold the same under tension and capable of swinging movement out of engagement with said rest to release said band substantially as and for the purpose set forth.

2. A tire repair device comprising a needle having the lower end thereof slotted to receive one end of an elastic band, a support connected to the other end of said needle and having the other end thereof equipped with a rest, a retainer pivoted upon said support at the junction of the latter with the rest and normally seating upon said rest and adapted to receive the other end of said band and hold the same under tension and capable of swinging movement out of engagement with said rest to release said band substantially as and for the purpose set forth.

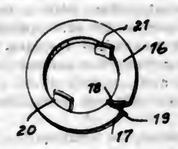
1,114,695. TRACK-CLEANER. SÁNDOR HORVÁTH, New York, N. Y., assignor of one-half to Sándor Zsembery, New York, N. Y. Filed June 17, 1914. Serial No. 845,595. (Cl. 104—65.)



1. In a track cleaner, the combination with a car, of a horizontally extending frame pivotally attached theerto, supporting wheels for said frame, a plow share attached to the front of said frame, rotary brushes carried by said frame, a motor also mounted upon said frame, a power transmitting apparatus between said motor and said brushes, and means for raising and lowering, at will, said brushes.

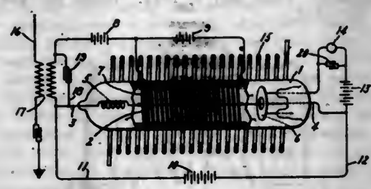
2. In a track cleaner, the combination with a car, of a horizontally extending frame pivotally attached thereto, supporting wheels for said frame, a plow share attached to the front of said frame, rotary brushes carried by said frame, a motor also mounted upon said frame, a power transmitting apparatus between said motor and said brushes, means for raising and lowering, at will, said brushes, and a sand-box upon said frame in rear of said brushes, said sand-box being provided with nozzles disposed above the rails of the track.

1,114,696. NUT-LOCK. HUGH T. HUGHES, Youngstown, Ohio, assignor of one-half to Joseph Porembski and one-third to Shelley M. Strain, Youngstown, Ohio. Filed Nov. 10, 1913. Serial No. 800,148. (Cl. 151—19.)



In a nut lock, a bolt having a threaded portion, a nut engaged on said threaded portion and having the inner end of its bore flared and smooth, a washer encircling the bolt inwardly of the nut, said washer being split and having its resulting terminals bent laterally in opposite directions, and lateral tongues on the washer inclined outwardly with respect to the direction of rotation of the nut whereby the outermost edges of said tongues will engage the flared wall of the bore of the nut when the latter is screwed home, and said tongues also being forced into engagement with the shank of the bolt by the flared wall of the bore of the nut when the latter is applied.

1,114,697. ELECTRON-DISCHARGE APPARATUS. ALBERT W. HULL, Worcester, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 29, 1913. Serial No. 809,249. (Cl. 179—171.)



1. An apparatus operating with a substantially pure electron discharge, comprising an evacuated container, an electron-emitting cathode, an anode, magnetic means for confining the electron discharge from said cathode into a beam of definite radius, means external to said cathode and said discharge for establishing a positive electric field to reduce the current-limiting effect of space charge.

2. An apparatus operating with a substantially pure electron discharge, comprising an envelop inclosing a space exhausted to a pressure below the valve at which substantial gas ionization can occur, an electron-emitting cathode, an anode, means for establishing a positive static field around said cathode and a magnetic means external thereto for setting up a magnetic field parallel to a line joining the anode and the cathode.

3. The combination of a highly evacuated envelop, an electron-emitting cathode axially disposed therein, a conductor surrounding said cathode, means for charging said conductor positively with respect to said cathode, a discharge-receiving anode located at one end of said envelop, and means for establishing a magnetic field parallel to said cathode.

4. An electron discharge apparatus comprising the combination of an envelop, inclosing an evacuated space, an electron-emitting cathode and a gas-free anode therein, means for establishing a positive electric field having a component parallel to a line joining the cathode and the anode and also a component radial about said line, and means for establishing a magnetic field parallel to a line joining the cathode and anode.

5. The method of controlling an electron discharge which consists in subjecting the discharge to a magnetic field and a static electric field, having a component parallel to the magnetic field and another component radial about said field, and varying one of said fields to vary the electron discharge.

[Claims 6 and 7 not printed in the Gazette.]

1,114,698. BAIT-HOLDER. CHARLES W. LANE, Madrid, N. Y. Filed Jan. 29, 1914. Serial No. 815,160. (Cl. 43—30.)

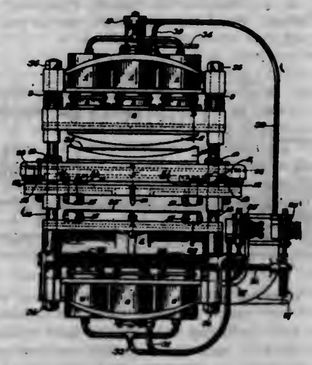
1. A holder for live bait comprising a bar having near its front end a loop for receiving the nose of the minnow, a pin adapted for insertion through the lips of the minnow, the same being attached to both loop and bar, and the bar having at its rear end spring arms which curve inward to embrace and press upon the body of the minnow, as described.

2. The combination with a holder for a live minnow, of an improved hook attachment, the same being detachably connected with said holder, and a snood for the hook which connects the latter with the line and is adapted to slide thereon when the hook is detached from the minnow-holder, as described.

3. The combination with a fishing line, a minnow holder having a bar provided with means for securing the body of a minnow, of a hook having a spring clasp embracing the rear pendent portion of said bar and adapted to be detached therefrom when traction is applied to the hook, and means connecting the hook with the line, and slidable theron, as described.

4. The combination with a fishing line, a minnow-holder including a bar having its rear portion provided with a pendent catch, of an impaling hook attachment comprising two hooks arranged opposite each other and diverging laterally, the shanks of the same being permanently connected and crimped to cause them to embrace and clasp the said catch, the arrangement of the hooks being as described, whereby they extend rearward and project on both sides of the tail of a minnow, as described.

1,114,699. SPRING-BENDING PRESS. ALBERT A. LONGAKER, Chambersburg, and WYLLIS H. MARKLAND, Altoona, Pa., assignors to Chambersburg Engineering Company, Chambersburg, Pa., a Corporation of Pennsylvania. Filed Feb. 11, 1914. Serial No. 818,128. (Cl. 153—45.)



1. A hydraulic press of the character set forth, comprising, in combination, a fixed cap and a fixed base, a housing connecting said cap and base, hydraulic cylinders carried by said cap and base, plungers carried by said cylinders, die carrying tables carried by said plungers adapted to be guided in their movements by the housing of the machine, and a fixed die carrying table, carried by said housing, between the tables carried by said plungers.

2. A hydraulic press of the character set forth, comprising, in combination, a fixed cap and a fixed base, hydraulic cylinders carried by said cap and base, plungers carried by said cylinders and operating toward the

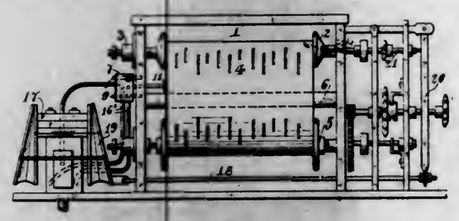
center of the press, movable die carrying tables secured to said plungers, means for guiding said tables in their movements, and a fixed die carrying table located approximately midway between said cap and base.

3. A hydraulic press of the character set forth and comprising, in combination, a fixed cap and a fixed base, columns forming distance pieces and guides securing said cap and base, hydraulic cylinders carried by said cap and base, plungers carried by said cylinders and operating toward the center of the press, a movable die carrying table secured to the upper set of plungers, a movable die carrying table secured to the lower set of plungers said tables being guided in their movements by the columns securing said base and cap, a fixed die carrying table secured to said columns approximately midway between said cap and base, and dies carried by said table adapted to operate in connection with dies carried by the upper and lower movable tables.

4. In a hydraulic press of the character set forth, in combination, a base and a cap, a lower set of hydraulic rams carried by said base and an upper set of hydraulic rams carried by said cap, columns forming tension members and distance pieces for securing said cap and base, a substantially central fixed table carried by said columns, a movable table operated by said lower set of rams and a movable table operated by said upper set of rams, a die one member of which is carried by the table actuated by the upper set of rams and the lower member of which is carried by the fixed table, a punch table beneath said fixed table, hydraulic rams carried by said fixed table and operating under constant pressure against which said punch table abuts, die members carried by said lower movable table and said punch table, and means for controlling the admission and exhaust of liquid to said lower and upper set of rams.

5. In a hydraulic press as set forth, in combination, an upper stationary die member and means for carrying the same, a movable die member, a movable table for carrying said latter member, hydraulically operated means for actuating said table, threaded columns upon which said table is guided, and nuts carried by said columns for limiting the upward movement of said table.

1,114,700. TRACKING DEVICE. FRANK G. LYNDE, Newark, N. J., assignor to Lauter Company, Newark, N. J., a Firm. Filed Nov. 8, 1913. Serial No. 799,833. (Cl. 84—161.)



1. In a tracking device for player pianos, a control having a hollow space inclosed from the atmosphere, a diaphragm wall outlining one end of said space, means adapted to connect said space to the vacuum system of the piano whereby to maintain said wall in a collapsed position, a piston bearing against said wall and actuated by the wanderings of the music sheet from the normal position of the same on the tracker bar and means controlled by the actuation of the piston for re-setting the sheet in operative position relative to the tracker bar.

2. In a player piano having a tracker bar, the combination with a traveling music sheet, of mechanism actuated by the lateral wanderings of the sheet to maintain the same in operative position relative to the tracker bar, said mechanism including pneumatics for shifting the sheet relative to the tracker bar, a valve, a valve casing therefor, a sheet controlled piston having a portion within said casing and controlling said pneumatics and means for maintaining said valve in inoperative position relative to said pneumatics, including a diaphragm controlled by a vacuum system.

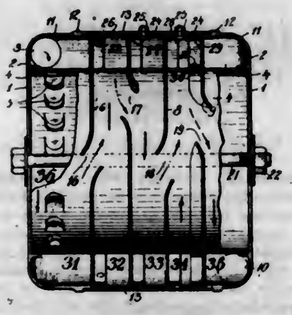
3. In a player piano having a music sheet shifting mechanism, the combination with a member having an inclosed space, a portion of said space being defined by a flexible wall, of means for insuring a tension within said space differing from the pressure on the outside of said flexible wall, and a music sheet controlled member bearing against said wall and controlling the sheet shifting mechanism.

4. In a player piano, the combination with a spool box, of a pin projecting laterally from the outside of said box, a valve casing slidably mounted on said pin, a music sheet controlled piston projecting from said casing through said spool box parallel to said pin and means for locking said casing in adjusted position.

5. In a tracking device for player pianos, a valve casing having an air conduit therethrough opened at one end to the atmosphere and connected to sheet shifting mechanism, a sheet actuated valve for controlling said conduit, and a muffler incompletely closing said open end of the conduit to minimize noises caused by the air passing through said conduit.

[Claims 6 and 7 not printed in the Gazette.]

1,114,701. SILENCER FOR GAS-ENGINES, &c. HIRAM PERCY MAXIM, Hartford, Conn., assignor to The Maxim Silencer Company, Hartford, Conn., a Corporation of Connecticut. Filed May 6, 1914. Serial No. 836,600. (Cl. 121—116.)



1. In silencers adapted for use with gas engines or the like, a casing comprising end members having substantially tangential inlet and outlet openings and formed with end partitions and connecting flanges, a relatively adjustable casing body mounted on said flanges, an internal shell mounted on said end members to form an inner substantially cylindrical equalizing chamber within said casing and a substantially axial fastening bolt releasably holding said casing members together, annular intermediate partitions providing whirl chambers each having a discharge opening and mounted on said shell and casing respectively to be adjustable in connection therewith relatively to said end members to adjust the relative angular position of said openings to promote interference suppression of sound waves in the series of annular whirl chambers between said partitions, an initial whirl chamber with which said inlet opening communicates being provided on its inner side with an annular series of accelerating discharge apertures to effect the passage of the initial gas impulses into said equalizing chamber and each of said whirl chambers being provided with retarding discharge openings to promote the dissipation of the kinetic energy of the gases before the discharge thereof.

2. In silencers adapted for use with gas engines or the like, a casing comprising end members having inlet and outlet openings, a relatively adjustable casing body, an internal shell mounted on said end members to form an inner substantially cylindrical equalising chamber within said casing and a substantially axial fastening bolt releasably holding said casing members together, annular intermediate partitions providing whirl chambers each having a discharge opening and mounted on said shell and casing respectively to be adjustable in connection therewith relatively to said end members to adjust the relative angular position of said openings to promote interference suppression of sound waves in the series of annular whirl chambers between said partitions, an initial whirl chamber with which said inlet opening communicates being provided with a series of accelerating discharge apertures to effect the passage of the initial gas impulses into said equalizing chamber.

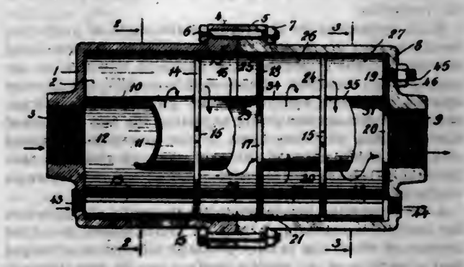
3. In silencers adapted for use with gas engines or the like, a casing comprising end members having inlet and outlet openings, a relatively adjustable casing body, an internal shell mounted on said end members to form an inner substantially cylindrical equalizing chamber within said casing and a substantially axial fastening bolt releasably holding said casing members together, annular intermediate partitions providing whirl chambers each having a discharge opening and mounted to be adjustable relatively to said end members to adjust the relative angular position of said openings to promote interference suppression of sound waves in the series of annular whirl chambers between said partitions, an initial whirl chamber with which said inlet opening communicates being provided with a series of discharge apertures to effect the passage of the initial gas impulses into said equalizing chamber.

4. In silencers adapted for use with gas engines or the like, a casing comprising end members having inlet and outlet openings and a relatively adjustable casing body, adjustable intermediate partitions providing whirl chambers each having a discharge opening and mounted in said casing to adjust the relative angular position of said openings to promote interference suppression of sound waves in the series of whirl chambers between said partitions and, each of said whirl chambers being provided with retarding discharge openings to promote the dissipation of the kinetic energy of the gases before the discharge thereof.

5. In silencers adapted for use with gas engines or the like, a casing comprising end members having inlet and outlet openings and a relatively adjustable casing body, intermediate partitions providing whirl chambers each having a discharge opening and mounted in said casing to promote interference suppression of sound waves in the series of whirl chambers between said partitions and some of said whirl chambers being provided with retarding discharge openings to promote the dissipation of the kinetic energy of the gases before the discharge thereof.

[Claims 6 to 32 not printed in the Gazette.]

1,114,702. SILENCER FOR GAS-ENGINES, &c. HIRAM PERCY MAXIM, Hartford, Conn., assignor to The Maxim Silencer Company, Hartford, Conn., a Corporation of Connecticut. Filed May 6, 1914. Serial No. 836,740. (Cl. 121—116.)



1. The silencer adapted for use with gas engines and the like, comprising a bolted sectional cast iron casing, each section having a substantially cylindrical casing body and an integral end diaphragm provided with a substantially central fluid aperture, a series of interchangeable cast iron diaphragms having integral cylindro-spiral guides extending in the same direction therefrom and fitted in series within said casing to form a series of silencing chambers of greater capacity adjacent the inlet end of the casing, said spiral guides each extending substantially around the casing axis and terminating a considerable distance inside said casing to provide whirl chambers outside said guides, the alternate intermediate diaphragms being provided with alternating central and narrow peripheral apertures next to the casing to form liquid throttling apertures for the exhaust gases, there being alining lugs on said diaphragms in which the peripheral apertures are provided and interlocking slots and projections on said diaphragms and guides to maintain angular alinement between them.

2. The silencer adapted for use with gas engines and the like, comprising a sectional cast iron casing, each section having a substantially cylindrical casing body and an integral end diaphragm provided with a substantially central fluid aperture, a series of interchangeable cast iron diaphragms having integral cylindro-spiral guides extending in the same direction therefrom and fitted in series within said casing to form a series of silencing chambers of greater capacity adjacent the inlet end of the casing, said spiral guides terminating a considerable distance inside said casing to provide whirl chambers outside said guides, the alternate diaphragms being provided with alternating central and narrow peripheral apertures next to the casing to form liquid throttling apertures for the exhaust gases, there being alining lugs on said diaphragms in which the peripheral apertures are provided.

3. The silencer adapted for use with gas engines and the like, comprising a sectional cast iron casing, each section having a substantially cylindrical casing body and an integral end diaphragm, a series of interchangeable cast iron diaphragms having integral cylindro-spiral guides fitted in series within said casing to form a series of silencing chambers of greater capacity adjacent the inlet end of the casing, said spiral guides terminating a considerable distance inside said casing to provide whirl chambers outside said guides, the alternate diaphragms being provided with alternating central and narrow peripheral apertures next to the casing to form liquid throttling apertures for the exhaust gases.

4. The silencer adapted for use with gas engines and the like, comprising a sectional cylindrical cast iron casing, a series of interchangeable cast iron diaphragms having integral cylindro-spiral guides extending in the same direction therefrom and fitted in series within said casing to form a series of silencing chambers of greater capacity adjacent the inlet end of the casing, said spiral guides each extending at least substantially around the casing axis and terminating a considerable distance inside said casing to provide whirl chambers outside said guides, the alternate diaphragms being provided with alternating central and narrow peripheral apertures next to the casing to form liquid throttling apertures for the exhaust gases, there being alining lugs on said diaphragms in which the peripheral apertures are provided and interlocking slots and projections on said diaphragms and guides to maintain angular alinement between them.

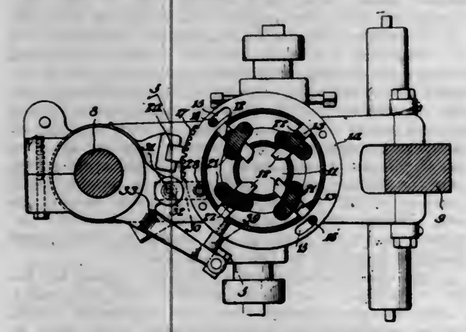
5. The silencer adapted for use with gas engines and the like, comprising a sectional cylindrical cast iron casing, a series of interchangeable cast iron diaphragms having spiral guides and fitted in series within said casing to form a series of silencing chambers of greater capacity adjacent the inlet end of the casing, said spiral guides each extending at least substantially around the casing axis and terminating a considerable distance inside said casing to provide whirl chambers outside said guides, the alternate diaphragms being provided with alternating central and narrow peripheral apertures next to the casing to form liquid throttling apertures for the exhaust gases, and interlocking slots and projections on said diaphragms and guides to maintain angular alinement between them.

[Claims 6 to 16 not printed in the Gazette.]

1,114,703. JAR-CLOSURE. CHARLES G. OVERMYER, Hartford City, Ind. Filed Nov. 15, 1913. Serial No. 801,237. (Cl. 215—87.)

A device of the class described comprising a band, a plurality of jaws connected thereto, lips carried by said jaws for holding a cover of the jar in engagement with the body portion of the jar, each jaw provided with a plurality of depending ears being spaced from each other for producing a centrally located slot, each ear provided with a notched portion upon its side edge, and said band bent around said ears and fitting in said notched portions thereof for constituuting an efficient securing means for said jaw to said band.

1,114,704. BOLT-THREADING MACHINE. ROBERT F. SCOTT and ARTHUR M. HARRINGTON, Philadelphia, Pa. Filed July 3, 1913. Serial No. 777,358. (Cl. 10—96.)



1. In a bolt threading machine, the combination with a head having a thread chaser, means for locking said chaser in operative position, and means for automatically retracting said chaser, of means for releasing said chaser and means comprising a former limiting the movement of said retracting means.

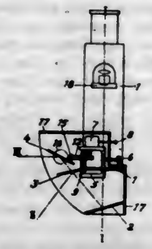
2. In a bolt threading machine, a head having a thread chaser, means for holding said thread chaser in the normal cutting position, and means for automatically moving said thread chaser, in combination with means for releasing said chaser and means comprising a stationary former for regulating the movement of said chaser and varying the character of the thread.

3. In a bolt threading machine, a vertically reciprocating head provided with thread chasers, means comprising a ring provided with cams for reciprocating said chasers, means comprising a locking pin engaging said ring for holding said chasers in their normal cutting position, means for disengaging said pin from said ring, means comprising a spring and rack for turning said ring to move said chasers, a fixed cam, and means fixed in relation to said ring for engaging said cam and regulating the turning movement of said ring when released by said pin.

4. In a bolt threading machine, a frame provided with guides, a bracket, and a block having a guiding surface fixed to said bracket, in combination with a head movable along said guide, chasers movable in said head, a device provided with cams connected to said head so as to turn and reciprocate said chasers, means for automatically turning said device, and means comprising a projection connected with said device and adapted for engaging said surface to regulate the turning movement of said device.

5. In a bolt threading machine, a frame provided with guides, a bracket connected in adjustable relation to one of said guides, a block having guiding surfaces connected in adjustable relation to said bracket, a head movable along said guides, cutters movable in said head, mechanisms for reciprocating said cutters in said head, means for automatically turning said mechanism, and a stud on said mechanism for engaging a surface of said block and regulating the turning movement of said mechanism.

1,114,705. APPARATUS FOR DETERMINING THE ANGLE OF PROJECTION FOR PROJECTILES FROM AERIAL VESSELS. HANS BOYKOW, Kiel, Germany. Filed Sept. 27, 1913. Serial No. 792,197. (Cl. 88—2.7.)



1. In apparatus for determining the angle of projection for projectiles discharged from an aerial vessel, adjustable means for sighting the target, means for viewing a portion of the earth's surface through a definite angle of vision, and means for automatically adjusting said sighting means, during the time taken by the apparent movement of a fixed object through the said angle of vision so that the said sighting means are then set at the correct angle to the line of projection of the projectile.

2. In apparatus for determining the angle of projection for projectiles discharged from an aerial vessel, adjustable means for sighting the target, two fixed mirrors of which one is only partially silvered, so arranged that a portion of the earth's surface may be viewed through a definite angle of vision and means for automatically adjusting said sighting means during the time taken by the apparent movement of a fixed object through the said angle of vision so that the said sighting means are then set at the correct angle to the line of projection of the projectile.

3. In apparatus for determining the angle of projection for projectiles discharged from an aerial vessel, a fixed mirror, an adjustable mirror, and means for automatically adjusting the last mentioned mirror during the time taken by the apparent movement of a fixed object through a definite angle of vision so that the said adjustable mirror is then set at the correct angle to the line of projection of the projectile.

4. In apparatus for determining the angle of projection for projectiles discharged from an aerial vessel, two fixed mirrors of which one is only partially silvered, so arranged that a portion of the earth's surface can be seen through a definite angle of vision, an adjustable mirror, and means for automatically adjusting the last mentioned mirror during the time taken by the apparent movement of a fixed object through the said angle of vision so that the said adjustable mirror is then set at the correct angle to the line of projection of the projectile.

5. In apparatus for determining the angle of projection for projectiles discharged from an aerial vessel, two fixed mirrors of which one is only partially silvered so arranged that a portion of the earth's surface can be seen through an angle of vision of thirty degrees, an adjustable mirror, and means for automatically adjusting the last mentioned mirror during the time taken by the apparent movement of a fixed object through the said angle of vision so that the said adjustable mirror is then set at the correct angle to the line of projection of the projectile.

[Claims 6 to 8 not printed in the Gazette.]

1,114,706. TORCH. HARRY BROUSSEAU, New York, N. Y., assignor, by direct and mesne assignments, to The Standard Welding & Equipment Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1912. Serial No. 669,577. (Cl. 158—13.5.)

1. A device of the character described, comprising a head, a substantially cylindrical member connected thereto, a tube supported by said member, means for supplying oxygen to said tube, means whereby acetylene gas may be caused to pass about the tube, a nozzle having a chamber portion connected to said cylindrical member, and a valve supported to move freely on said tube and adapted to shut off the supply of acetylene gas.

2. A device of the character described, comprising a head, a member connected thereto, a tube passing through said member, means for supplying oxygen to said tube, means whereby acetylene gas may be caused to pass about the tube, a nozzle connected to said member, and a valve supported to move freely on said tube and adapted to shut off the supply of acetylene gas.

3. A device of the character described, comprising a head, a substantially cylindrical member connected to said head and having a valve seat, a tube, means for supplying oxygen to said tube, means whereby acetylene gas may be caused to pass about the tube, a nozzle having a chamber portion connected to said cylindrical member, and a valve supported to move freely on said tube and having a valve portion adapted to engage said seat and shut off the supply of acetylene gas.

4. A device of the character described, comprising a head, a member connected thereto, a tube extending beyond said member, means for supplying oxygen to said tube, a source of acetylene gas supply, a nozzle having a chamber portion connected to said member, and a valve movable in said chamber portion and supported to move freely on said tube and adapted to shut off the supply of acetylene gas.

5. In a device of the character described, a head, a cylindrical member having a chamber and a valve seat, means for supplying acetylene gas to said chamber, a tube for supplying oxygen supported by said member and having one end projecting beyond said member, a nozzle supported on the head and having a channel therethrough and a chamber adjacent to the cylindrical member, said chamber having a cylindrical part and a tapered portion, said tube having its end projecting slightly into the channel portion of the nozzle, and a valve having a body provided with means to support the same within the chamber of the nozzle and having a tapered portion at one end to assist in mixing the acetylene gas with the oxygen gas, and a valve portion adapted to engage the seat on the cylindrical member.

[Claims 6 to 11 not printed in the Gazette.]

1,114,707. CARLINE FOR CAR-ROOFS. JOSEPH A. COSTELLO, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed July 9, 1914. Serial No. 849,918. (Cl. 105—5.)

1. A carline for a car-roof-frame, which carline comprises a body which is U-shaped in cross-section and adapted to extend between the two laterally spaced side plates of said frame and has its sides extending endwise of the carline beyond the bottom member of the body, said carline being provided at the top of said body and externally with a continuous flange which surrounds the body and is adapted to be seated on the aforesaid side plates and has downwardly projecting members adapted to overlap the outer sides of said side plates, the aforesaid bottom member of said body terminating at the ends of the body in downwardly projecting members which are arranged to overlap the inner sides of said side plates, and those portions of the sides of the body which extend endwise of the carline beyond the ends of the aforesaid bottom member of the body sloping at their bottom upwardly toward the adjacent end of the carline and being adapted to be seated on the inner top portions of the side plates.

2. A carline for a car-roof-frame, which carline comprises a body which is U-shaped in cross-section and adapted to extend between the two laterally spaced side plates of said frame, said body having its sides extending endwise of the carline beyond the bottom member of the body and being flanged externally of its top, said carline having downwardly projecting members adapted to overlap the outer sides of said side plates, those portions of the sides of the body which extend endwise of the carline beyond the ends of the aforesaid bottom member of the body sloping at their bottom upwardly toward the adjacent end of the carline and being adapted to be seated on the inner top portions of the side plates, and the aforesaid bottom member of said body terminating at the ends of the body in downwardly projecting members which are arranged to overlap the inner sides of the side plates and formed by portions struck downwardly from the said ends of the body.

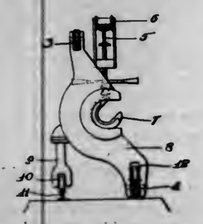
3. A carline for a car-roof-frame, which carline comprises a body which is U-shaped in cross-section and adapted to extend between the two laterally spaced side plates of said frame and has the sides thereof extending endwise of the carline beyond the bottom member of the body, said carline being provided at the top and externally with a flange which extends along the sides and ends of the body and is adapted to be seated on and secured to the aforesaid side plates, the aforesaid bottom member of said body terminating at the ends of the body in downwardly projecting members which are arranged to overlap the inner sides of the side plates and formed by portions struck downwardly from the said ends of the body, and those portions of the aforesaid sides of the body which extend endwise of the carline beyond the ends of the aforesaid bottom member of the body sloping at their bottom upwardly toward the adjacent end of the carline and being provided with inwardly projecting flanges which extend from said bottom member of the body upwardly and in the direction of the adjacent end of the carline and form seat-members adapted to rest on the inner top portions of the side plates.

4. The combination, with the two laterally spaced wooden side plates of a car-roof-frame, of a carline comprising a body which is U-shaped in cross-section and extends between the side plates, said body having its sides extending endwise of the carline beyond the ends of the

bottom member of the body and being provided at the top and externally with a flange extending along the sides and ends of the body, which flange is seated on the side plates and has downwardly projecting members overlapping the outer sides of the side plates, the aforesaid bottom member of said body terminating at the ends of the body in downwardly projecting members which overlap the inner sides of the side plates, and those portions of the aforesaid sides of the body which extend endwise of the carline beyond the ends of the aforesaid bottom member of the body sloping at their bottom upwardly toward the adjacent end of the carline and being seated on the inner top portions of the side plates.

5. The combination, with the two laterally spaced wooden side plates of a car-roof-frame, of a carline comprising a body which is U-shaped in cross-section and extends between said side plates, said body having its sides extending endwise of the carline beyond the ends of the bottom member of the body and being provided at the top and externally with a flange extending along the sides and ends of the body, which flange is seated on the side plates and has downwardly projecting members overlapping the outer sides of the side plates, those portions of the sides of the body which extend endwise of the carline beyond the ends of the aforesaid bottom member of the body being provided with inwardly projecting flanges which extend from the aforesaid bottom member of the body of the carline upwardly and in the direction of the adjacent end of the carline and form seat-members resting on the inner top portions of the side plates, said bottom member of said body terminating at each end of the body in a downwardly projecting member overlapping the inner side of the adjacent side plate and arranged between the lower ends of the adjacent inwardly projecting flanges of the sides of the body.

1,114,708. CONVERTIBLE PRESS. ALBERT A. LONGAKER, Chambersburg, Pa., assignor to Chambersburg Engineering Company, Chambersburg, Pa., a Corporation of Pennsylvania. Filed Nov. 17, 1913. Serial No. 801,339. (Cl. 29—86.)



1. In a wheel press, in combination, a fixed cylinder beam, a fixed end supporting beam, and a movable resistance beam all so rearwardly inclined that their upper ends are to the rear of and their lower ends in front of a vertical plane passing through the longitudinal center of the press, a tie-bar permanently secured to the upper ends of said cylinder and end beams, a tie-bar permanently secured to the forward lower ends of said beams, said tie-bars movably supporting said resistance beam, and a light removable beam carried by the upper ends of said cylinder and end beams in a vertical plane passing through the longitudinal center of the press.

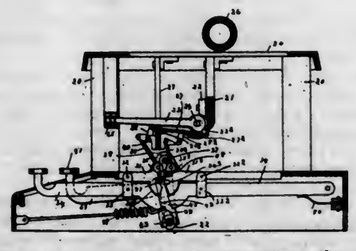
2. In a wheel press, in combination, a fixed cylinder beam, a fixed end supporting beam, both so rearwardly inclined that their upper ends are to the rear of and their lower ends to the front of a vertical plane passing through the longitudinal center of the press, tie-bars permanently secured to the upper ends and to the forward lower ends of said cylinder and end beams, a movable resistance beam inclined similarly to said cylinder and end beams carried by said tie bars and furnished with an extension to the rear, a roller carried by said extension, a track upon which said roller runs, means for locking said movable beam to said tie-bars, and a light removable trolley carrying beam carried by the upper ends of said cylinder and end beams in a vertical plane passing through the longitudinal center of the press.

1,114,709. CYLINDER-LOCK. CARL AUGUST MÜLLER, Witzenhausen, Germany. Filed Aug. 9, 1912. Serial No. 714,236. (Cl. 70—47.)

1. In a tumbler lock, a cylindrical casing, a cylinder rotatable within said casing, intermediate key-operated parts extending in recesses in the cylinder, and tumblers in said casing having throughout their length a larger diameter than the intermediate parts, and shoulders in the recesses of the cylinders adapted to be engaged by said tumblers.

2. In a tumbler lock, a cylindrical casing, a cylinder rotatable within said casing, intermediate key-operated parts extending in recesses in the cylinder and a plurality of rows of balls in said casing of larger diameter than the intermediate parts, and shoulders in the recesses of the cylinders adapted to be engaged by said rows of balls.

1,114,710. TYPE-WRITER. AUGUSTUS G. SNYDER, Utica, N. Y., assignor of one-half to Robert T. Thomas, Utica, N. Y. Filed Dec. 27, 1909. Serial No. 535,138. (Cl. 197—77.)



1. In an action mechanism for typewriters, the combination of two type bars, a single key lever, separate connections from said key lever to each of said type bars, each of said connections including one of two adjacent oppositely disposed members, and two shiftable means interposed between said oppositely disposed members and adapted to simultaneously move in opposite directions, one of said means adapted to lock either one of said oppositely disposed members to movement with the key lever and the other adapted to lock the other member from movement with the said key lever.

2. In an action mechanism for typewriters, the combination of two type bars, a single key lever, separate connections from said key lever to each of the said type bars, each of said conections including one of two adjacent oppsitely dispsed members, two shiftable means interposed between said oppositely disposed members and adapted to simultaneously move in opposite directions, one of said means adapted to lock either one of said oppositely disposed members to movement with the key lever and the other adapted to lock the other member from movement with said key lever and a key shifting lever operating said two means.

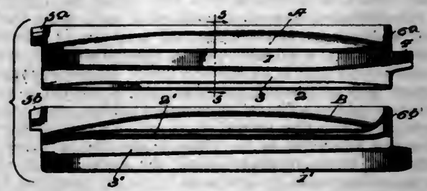
3. In a typewriter the combination of a set of type bars, a set of key levers, separate connections from each key lever to two of said type bars, each of said connections including a wing pivotally mounted on the key lever and shiftable means for unlocking one wing from the key lever and for simultaneously locking the other wing to the key lever, substantially as set forth.

4. In a typewriter the combination of a set of type bars, a set of key levers, separate connections from each key lever to two of said type bars, each of said connections including a wing pivotally mounted on the key lever, shiftable means for unlocking one wing from the key lever and for simultaneously locking the other wing to the key lever, and a key shifting lever for operating said means, substantially as set forth.

5. In a typewriter the combination of a set of type bars, a set of key levers, separate connections from each key lever to two of said type bars, each of said connections including a wing pivotally mounted on the key lever and shiftable means for locking one wing from motion with the key lever, and for simultaneously locking the other wing to the key lever, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,114,711. CAR-REPLACER. ROBERT E. ALEXANDER, Endicott, N. Y., assignor of forty-nine one-hundredths to Frank R. Waldron, Binghamton, N. Y. Filed Nov. 22, 1912. Serial No. 732,977. (Cl. 104—163.)



1. A reversible car replacer having a tread, guide-flange and intermediate groove on each face thereof, the guide-flange on one face and the tread on the other forming a strengthening rib approximately in the center of the replacer.

2. A reversible car replpacer having a tread, guide-flange and intermediate groove on each face thereof, the guide-flange on one side and the tread on the other forming a strengthening rib approximately in the center of the replacer, the central rib thus forming being thicker throughout the center where the greatest strain or weight is applied, and diminishing toward the opposite ends of the replacer.

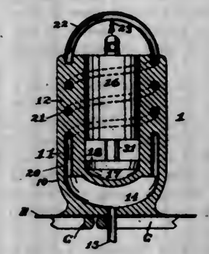
3. A reversible car replacer having a tread, guide-flange and groove on each face, and the opposite sides of the replacer concave, one concavity being adjacent to the guide-flange and the other to the tread, said concavities being provided to receive the rail to afford lateral bearing of the replacer thereagainst.

4. A reversible car replpacer having a tread, guide-flange and groove on each face, and the opposite sides of the replacer concave, one concavity being adjacent to the guide-flange and the other to the tread, said concavities being provided to receive the rail to afford lateral bearing of the replacer thereagainst, and a book at each end of the replacer to embrace the opposite side of the rail-tread.

5. A reversible car replacer, the opposite faces of which are longitudinally convex from end to end and comprise a tread, guide-flange and groove, recessed or concaved on opposite sides to receive and bear laterally against the rail upon which the car is to be replaced, the concavity of the sides serving to receive the rail and the convexity of the upper and lower faces to bridge over the rail-tread on the one side while affording a larger and more extended bearing upon the roadbed of the other side.

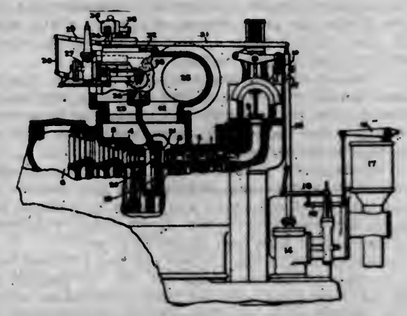
1,114,712. OIL-BURNER. RICHARD H. COPLEY, Seattle, Wash. Filed Nov. 28, 1913. Serial No. 803,637. (Cl. 158—53.)

1. An oil burner for stoves comprising an integral casting having a base section containing therein a primary fuel receiving chamber and having a marginal upper flange forming a priming cup, said casting having an upper tubular section which is joined to the base by posts which are integral with each section and maintain said upper and lower sections somewhat separated, said upper section having oil flow channels in its wall each extending through its respective post to communication with the primary fuel receiving chamber of the base and at its upper end with the upper end face of the said upper section, and a tube conecting said channel ends and extending across the central chamber of the upper tubular section and having an axially placed hole discharging downward.



2. An oil burner for stoves comprising a base section having a primary oil receiving chamber and ears at opposite sides each provided with air conducting channels extending between its under and its upper surfaces, and other like channels adapted to form sockets for air conveying pipes, a tubular upper section integrally connected with and supported above the base by posts, said tubular upper section and the posts containing channels extending from the primary oil receiving chamber to the upper end surface of the said tubular upper section, a tube connecting the upper ends of said channels and extending across the central opening of said upper section and provided with an opening discharging downwardly into said central opening, the base section having an upper marginal flange forming a priming cup, and air conveying pipes fitting in the sockets of the base and extending upward to discharge adjacent the upper end of the opening in said upper tubular section.

1,114,713. REGULATING MECHANISM FOR STEAM-TURBINES. EDGAR D. DICKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 7, 1912. Serial No. 724,267. (Cl. 121—118.)



1. In combination, a turbine, regulating valves therefor, a motor for moving one of the valves, a regulator for the motor, a speed governor which acts on the valves to simultaneously open or close the same, a pressure responsive device, and connections from the governor and device to the regulator which are capable of independently moving it.

2. The combination with a turbine from which steam is drawn for industrial purposes, of a by-pass for conveying a portion of said steam to a lower stage of the turbine, a valve in said by-pass, high pressure valves, a speed governor for opening and closing the same, means controlled

by the speed governor for opening and closing said by-pass valve simultaneously with the high pressure valves and a device responsive to the pressure in the extraction stage for controlling the by-pass valve independently of the governor controlled means.

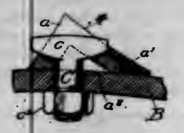
3. In combination, a turbine, a conduit connected to a region of intermediate pressure of said turbine, a valve controlling the admission of high pressure fluid to the turbine, a valve controlling the flow of fluid at the point of intermediate pressure, a speed governor which acts on both said valves to simultaneously open or close the same, and a device responsive to the pressure of the fluid flowing in said conduit which acts to regulate the second named valve only.

4. In combination, a turbine, a valve controlling the admission of fluid thereto, a second valve controlling the passage of fluid through an intermediate part of the turbine, a motor for actuating it, a regulator therefor, a speed governor which acts on the admission valve and regulator to simultaneously open or close the valves, and a pressure responsive device which acts on the regulator to cause the motor to move its valve independently of the speed governor.

5. In combination, a turbine, a valve controlling the admission of high pressure fluid thereto, a valve controlling the passage of fluid therethrough, a speed governor which acts on both said valves to simultaneously open or close the same, and a pressure responsive device which acts to open and close the second named valve independently of the speed governor.

[Claims 6 to 11 not printed in the Gazette.]

1,114,714. LUG FOR TRACTION-WHEELS. JOHN F. STEWARD, Chicago, Ill. Substitute for application Serial No. 684,501, filed Apr. 23, 1912. This application filed Nov. 8, 1913. Serial No. 799,982. (Cl. 21—215.)



1. A variable-in-height traction wheel lug, of substantially right angular form, in section, adapted to transverse alinement across the rim of the wheel, two or more of its faces adapted to lie against the rim of the wheel and the lug there suitably secured.

2. A variable-in-height substantially triangular lug for traction wheels, the sides thereof of unequal width, each of said sides adapted to lie against the rim of the wheel, and the lug there suitably secured.

3. A substantially triangular lug for traction wheels, the sides thereof of unequal widths, each side adapted to lie upon the rim of the wheel, and means for transverse securement of the lug thereto, whichever of the sides of the lug may have been chosen as a base.

4. A substantially triangular lug for traction wheels, the sides thereof of unequal widths, each side adapted to lie upon the rim of the wheel, and means in common for transverse securement to the rim of the wheel, whichever side of the lug may have been chosen as a base.

5. In combination, a lug, a wheel rim and a T-head bolt for securement of the lug to the rim, the lug adapted to receive the T-head bolt with its lateral extensions transverse to the said lug or longitudinally relatively thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,114,715. FUEL BLOCK OR BRIQUET. ADRIAAN FLORIS VAN HALL, FRITZ BASENAU, and RICHARD CORNELUS JOHANNUS VAN HAAGEN, Amsterdam, Netherlands, assignors to The Firm of Naamlooze Vennootschap Briquet Company (Briket Maatschappy), Amsterdam, Netherlands. Filed Aug. 5, 1910. Serial No. 575,738. (Cl. 44—1.)

1. The process of making fuel briquets which consists in subjecting the mixture of a solid carbonaceous combustible fuel and a liquid hydrocarbonaceous combustible fuel to such intense mechanical working at ordinary temperatures, of such a character as to reduce in size the particles of solid fuel under treatment, and in continuing such mechanical working until the hydrocarbonaceous liquid is thoroughly incorporated in coarse, relatively dry, granular particles of crushed carbonaceous fuel so as to produce in said particles a plastic state in which they are capable of conversion into a briquet by the application of pressure merely.

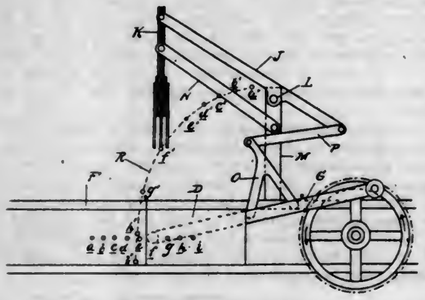
2. The process of making fuel briquets which consists in mixing a solid carbonaceous combustible fuel with a liquid hydrocarbonaceous combustible fuel incapable of itself of acting as a binder for the solid fuel and subjecting the mixture to an intense mechanical kneading and crushing process at ordinary temperatures, of such a character as to reduce in size the particles of solid fuel under treatment and continuing said process until the hydrocarbonaceous liquid is thoroughly incorporated in coarse, relatively dry granular particles of the crushed carbonaceous fuel so as to produce in said particles a plastic state, and then compressing the mass into briquets.

3. In the briqueting art the process which consists in converting a solid carbonaceous fuel having the property of non-coherence with other particles of itself and a liquid hydrocarbonaceous fuel having the property of existing under ordinary conditions only in liquid form and being incapable of acting as an effective binder for the solid component, into permanently cohering binding relation by subjecting a mixture thereof to repeated intense mechanica working or kneading operations at ordinary temperatures of such a character as to reduce in size the particles of solid fuel under treatment until the hydrocarbonaceous liquid is thoroughly incorporated in coarse, relatively dry granular particles of the crushed carbonaceous fuel so as to produce in said particles a plastic and coheringly shapable condition.

4. A fuel briquet comprising as its essential ingredient a solid carbonaceous combustible fuel and a liquid hydrocarbonaceous combustible fuel, the same being present in the form of a compressed intensely kneaded and crushed mass of the said two fuels, the hydrocarbonaceous liquid fuel being thoroughly incorporated in and carried by the crushed carbonaceous fuel.

REISSUES.

13,810. BALING-PRESS. HANS J. HANSON, Ann Arbor, Mich., assignor to Ann Arbor Machine Company, Ann Arbor, Mich., a Corporation of Michigan. Filed Aug. 31, 1914. Serial No. 859,557. Original No. 971,606, dated Oct. 4, 1910, Serial No. 502,898. (Cl. 100—24.)



1. In a baling press, the combination with a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, and means connecting said feeder with the pitman rod for raising the feeder with a progressively retarding speed, comprising a walking beam connected to said feeder, a bracket arm projecting laterally from said pitman rod, and a link connecting said bracket arm with said walking beam.

2. In a baling press, the combination with a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, and means operated from said pitman rod by the movement thereof transverse to the direction of movement of said plunger, for raising said feeder with a progressively retarding speed, the speed being greatest while the feeder is clearing the path of the plunger.

3. In a baling press, the combination with a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, and means connecting the feeder with the pitman rod for raising said feeder with a progressively retarding speed, comprising a walking beam connected to said feeder, a substantially parallel pivotal link also connected to said feeder, a bracket arm projecting laterally from said pitman rod and a link connecting said bracket arm with said walking beam.

4. In a baling press, the combination with a frame, of a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, and means connecting said feeder with the pitman rod for raising said feeder with a progressively retarding speed, comprising a walking beam connected to said feeder, a link connecting said walking beam and said pitman rod, and a support carried by said frame to which the walking beam is pivoted.

5. In a baling press, the combination with a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, a walking beam connected to said feeder, and means connecting said walking beam and pitman rod for raising said feeder with a progressively retarding speed, the speed being slowest adjacent to the limit of upward movement of the feeder.

6. In a baling press, the combination with a frame, a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, a walking beam connected to said feeder, a support carried by said frame to which said walking beam is pivoted, an inverted Y-shaped arm projecting laterally from said pitman rod, and a link connecting said walking beam and said laterally projecting arm.

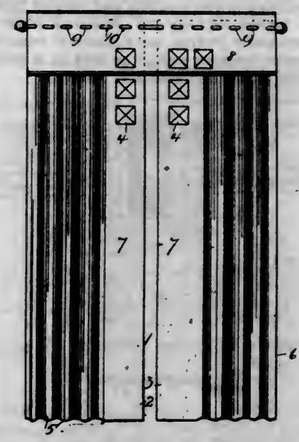
7. In a baling press, the combination with a reciprocatory plunger and a transversely reciprocating feeder, of a pitman rod for actuating said plunger, and means operated from said pitman rod for raising said feeder with a progressively retarding speed and for depressing said feeder at a speed less than the upward speed while clearing the plunger.

13,811. CURTAIN. GEORGE E. LACKEY, New York, N. Y., assignor to International Lace Company, New York, N. Y., a Corporation of New York. Filed Feb. 4, 1914. Serial No. 816,634. Original No. 1,050,841, dated Jan. 21, 1913, Serial No. 710,225. (Cl. 156—10.)

1. A device of the character described, comprising a curtain and a valance therefor, said valance having a plurality of apertures across the same, and said curtain having a plurality of apertures across the same at least a plurality of said latter apertures being spaced a greater distance apart than corresponding apertures in said valance, for the purpose set forth.

2. A device of the character described, comprising a curtain and a valance therefor, said valance having a plurality of rows of apertures across the same near one edge, the apertures in said rows being arranged in vertical alinement, and said curtain having a plurality of apertures across the top thereof, at least a plurality of said latter apertures being spaced a greater distance apart than corresponding apertures in said valance, for the purpose set forth.

3. A device of the character described, comprising a curtan composed of separate halves, and a valance for the curtain, said valance having apertures across the same, spaced apart equal distances, and said curtain halves each having a row of apertures across the same, part of which are spaced apart equal distances to the apertures in said valance, and others spaced apart greater distances than said valance apertures, for the purpose set forth.



4. A device of the character described, comprising a curtain and a valince, said valance having a row of equally spaced apertures, said curtain having a row of apertures, at least a plurality of which are spaced apart a greater distance than said valance apertures, and a supporting member passing alternately through said valance apertures and alternately through said curtain apertures corresponding with its passages through said valance apertures, whereby said curtain will be caused to hang in folds or curves.

5. A device of the character described, comprising a curtain and a valance, said valance having its upper edge turned down upon the valance, rows of stitches securing the turned down portion to the valance, said turned down portion having apertures arranged between said rows of stitches, said curtain having a row of apertures, at least a plurality of which are spaced greater distances apart than the apertures in said valance, and means passing through said apertures for supporting the curtain and valance.

6. A device of the character described, comprising a fabric adapted for the purpose set forth, having apertures near the top thereof through which a pole or other support may be passed to shir the fabric thereon, said fabric having a heading turned down and secured thereto and covering said apertures.

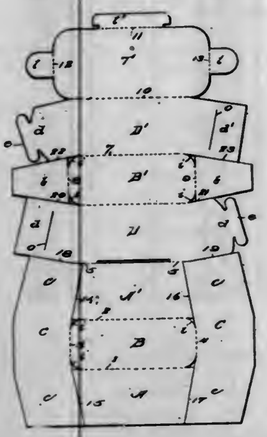
7. A device of the character described, comprising a fabric adapted for the purpose set forth, having apertures near the top thereof through which a pole or other support may be passed to shir the fabric thereon, said fabric having a heading turned down and covering said apertures and secured to the fabric above and below said apertures.

13,812. RECEPTACLE AND BLANK THEREFOR. JAMES B. MILLER, Rochester, N. Y. Filed June 24, 1914. Serial No. 847,120. Original No. 926,758, dated July 6, 1909, Serial No. 459,845. (Cl. 229—16.)

1. An integrally formed blank for the purpose described, comprising two bottom members each having connected therewith a series of side wall members, such bottom members adapted to be super-imposed one upon the other, one series of side members adapted to nest within the other and one series operating to hold the other in place, and a cover member connected to a side member of one series and having thereon flaps adapted to engage between the inner and outer series of members and also a flap adapted to enter into locking engagement with and between the inner and outer side walls.

2. An integrally formed blank for the purpose described, comprising two bottom members each having connected therewith a series of side members, one bottom and its

corresponding series of side members adapted to nest within the other and a cover member adapted to occupy either an open or closed position and having flaps thereon adapted to engage between the outer and inner series of side members and a locking flap adapted to enter into locking engagement between and to be held by a fold between the outer and inner series of side members.



3. An integrally formed blank for the purpose described comprising two bottom members and two corresponding series of side members, one bottom member and its series of side members adapted to nest within the other with the bottom members super-imposed one upon the other, one series of side members having flaps adapted to make locking engagement with each other and operating to hold the other series in place and a cover member connected to a side member of one series.

4. A receptacle formed from an integral blank, comprising two bottom members each having connected therewith a series of side wall members, such bottom members super-imposed one upon the other and one series of such side members nested within the other and one series operating to hold the other in place and a cover member connected to a side member of one series and having thereon flaps adapted to engage between the inner and outer series of side members and also a flap adapted to enter into locking engagement with and between the inner and outer side walls.

5. A receptacle formed up from an integral blank, comprising two bottom members each having connected therewith a series of side members; one such bottom and its corresponding series of side members nested within the other and a cover member adapted to occupy either an open or closed position and having flaps thereon adapted to engage between the outer and inner series of side members and a locking flap adapted to enter into locking engagement between and to be held by a fold between the outer and inner series of side members.

6. A receptacle formed from an integral blank, comprising two bottom members and two corresponding series of side members, one bottom member and its series of side members nesting within the other, with the bottom members super-imposed one upon the other, the outer series of side members having flaps making a locking engagement with each other and operating to hold the other series in place.

7. A receptacle formed from an integral blank, comprising two bottom members and two corresponding series of side members, one bottom member and its series of side members nesting within the other, with the bottom members super-imposed one upon the other, the outer series of side members having flaps making a locking engagement with each other and operating to hold the other series in place, and all of the side members of the upper bottom member being located within the side members of the lower bottom member.

8. A receptacle formed from an integral blank, comprising two bottom members and two corresponding series of side members, one bottom member and its series of side members nested within the other with the bottom members super-imposed one upon the other, one series of side members having flaps making a locking engagement with each other and operating to hold the other series in place and a cover member connected to a side member of one series.

9. An integrally formed blank for the purpose described comprising two bottom members each having connected therewith a series of side members, such bottom members adapted to be super-imposed one upon the other, one series of side members adapted to nest within the other and one series operating to hold the other in place, and a cover member connected to a side member of one series.

10. A receptacle formed from an integral blank, comprising two bottom members each having connected therewith a series of side wall members, such bottom members super-imposed one upon the other and one series of such side members nested within the other and one series operating to hold the other in place and a cover member connected to a side member of one series.

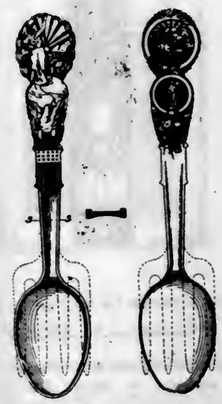
11. A receptacle formed from an integral blank, comprising two bottom members each having connected therewith a series of side wall members, such bottom members super-imposed one upon the other and one series of such side members nested within the other and one series operating to hold the other in place and a cover member connected to a side member of one series and a locking means for holding the outer series of side members in place.

DESIGNS.

46,555. LAMP-GLOBE. CHARLES AUTH and NEWTON L. SCHLOSS, New York, N. Y. Filed Aug. 17, 1914. Serial No. 857,273. Term of patent 7 years.

The ornamental design for a lamp globe as shown.

46,556. SPOON, FORK, OR SIMILAR ARTICLE. HOWARD A. BAXTER, Melrose Highlands, Mass., assignor to Panama-Pacific International Exposition Co., San Francisco, Cal., a Corporation of California. Filed July 20, 1914. Serial No. 852,124. Term of patent 3½ years.

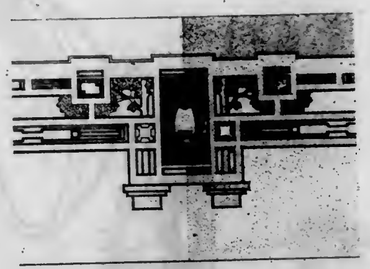


The ornamental design for spoon, fork or similar article, as shown.

46,557. SHADE FOR LIGHTING-FIXTURES. GEORGE M. BEARDSLEE and IRA L. FRENCH, Chicago, Ill., assignors to Beardslee Chandelier Manufacturing Company, Chicago, Ill., a Corporation of Delaware. Filed Apr. 6, 1914. Serial No. 830,073. Term of patent 7 years.

The ornamental design for a shade for lighting fixtures substantially as shown.

46,558. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,949. Term of patent 3½ years.



The ornamental design for wall paper as shown.

46,559. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,950. Term of patent 3½ years.

The ornamental design for wall paper as shown.

46,560. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,951. Term of patent 3½ years.

The ornamental design for wall paper as shown.

46,561. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,952. Term of patent 3½ years.

The ornamental design for wall paper as shown.

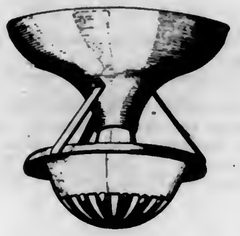
46,562. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,953. Term of patent 3½ years.

The ornamental design for wall paper as shown.

46,563. WALL-PAPER. LUDWIG L. BLAKE, South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Filed July 29, 1914. Serial No. 853,954. Term of patent 3½ years.

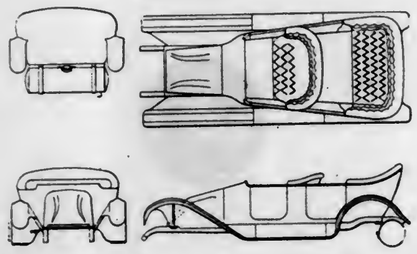
The ornamental design for wall paper as shown.

46,564. LIGHTING-FIXTURE. JOSEPH CHASSAING, Chicago, Ill., assignor to Shiras Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 21, 1914. Serial No. 833,578. Term of patent 14 years.



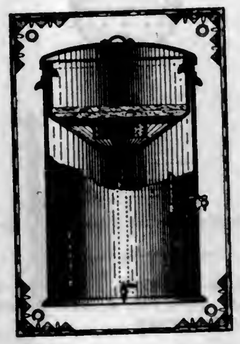
The ornamental design for a lighting fixture, as shown.

46,565. CAR-BODY. JOHN F. DODGE and HORACE E. DODGE, Detroit, Mich., assignors to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Aug. 11, 1914. Serial No. 856,311. Term of patent 7 years.



The ornamental design for a car body, substantially as shown in the accompanying drawing.

46,566. NAME-PLATE. ARTHUR J. DORITHY, Springfield, Ill. Filed May 9, 1914. Serial No. 837,587. Term of patent 7 years.

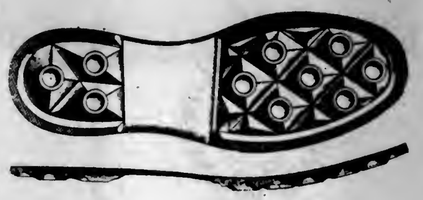


The ornamental design for a name plate as shown and described.

46,567. BUTTON. CLARA FEUDNER HANCOCK, Oceanpark, Cal. Filed Nov. 29, 1913. Serial No. 803,787. Term of patent 7 years.

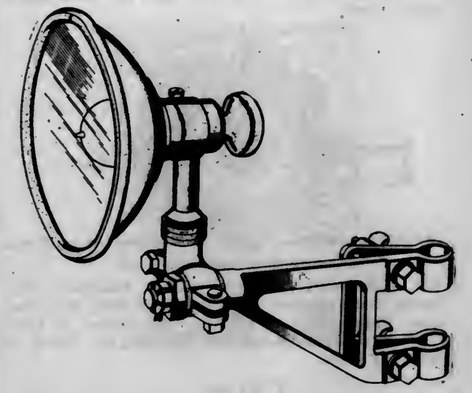
The ornamental design for a button, as shown.

46,568. SOLE FOR FOOTWEAR. WILLIAM B. HOPWOOD, Beacon Falls, Conn., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn., a Corporation of Connecticut. Filed June 26, 1914. Serial No. 847,539. Term of patent 14 years.



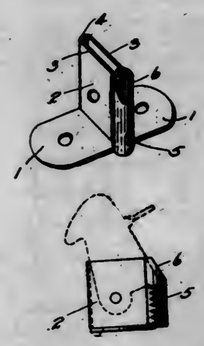
The ornamental design for a sole for footwear as shown.

46,569. ELECTRIC BRACKET-LAMP. CHARLES KAUFMAN, Santa Ana, Cal. Filed Aug. 10, 1914. Serial No. 856,151. Term of patent 3½ years.



The ornamental design for an electric bracket lamp, as shown.

46,570. BASE FOR SPRING-LATCH DEVICES. CHARLES W. LANDAUER, Grand Rapids, Mich. Filed Apr. 27, 1914. Serial No. 834,846. Term of patent 14 years.

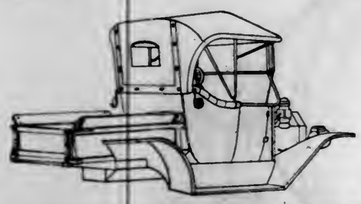


The ornamental design for a base for spring latch devices comprised of a central member having spaced apart sides and inclosing ends, one end being rounded and enlarged to form a partial cylindrical member, and attaching ears extending to either side of the central member, as shown and described.

46,571. PENDANT. HENRY D. MIX, Providence, R. I., assignor to Wightman & Hough Co., Providence, R. I., a Corporation of Rhode Island. Filed June 29, 1914. Serial No. 848,091. Term of patent 14 years.

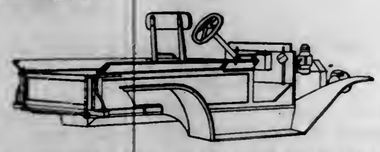
The ornamental design for a pendant as shown.

46,572. AUTOMOBILE-BODY. JAMES MORRISON, Cincinnati, Ohio, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio, a Corporation of Ohio. Filed July 28, 1914. Serial No. 853,714. Term of patent 3½ years.



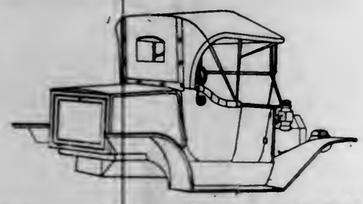
The ornamental design for an automobile body as shown.

46,573. AUTOMOBILE-BODY. JAMES MORRISON, Cincinnati, Ohio, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio, a Corporation of Ohio. Filed July 28, 1914. Serial No. 853,715. Term of patent 3½ years.



The ornamental design for an automobile body as shown.

46,574. AUTOMOBILE-BODY. JAMES MORRISON, Cincinnati, Ohio, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio, a Corporation of Ohio. Filed July 28, 1914. Serial No. 853,716. Term of patent 3½ years.



The ornamental design for an automobile body as shown.

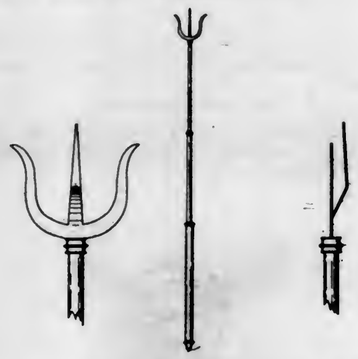
46,575. ARTIFICIAL-LIGHT INCLOSURE. CHARLES B. OTT, Woodlawn, W. Va. Filed Sept. 4, 1914. Serial No. 860,294. Term of patent 3½ years.

The ornamental design for an artificial light inclosure, as shown.

46,576. SOAP-SAVER. STANLEY PARKER, New Britain, Conn. Filed July 25, 1914. Serial No. 853,174. Term of patent 14 years.

The ornamental design for a soap saver, as shown.

46,577. BREAD-TOASTER. STANLEY PARKER, New Britain, Conn. Filed July 6, 1914. Serial No. 849,294. Term of patent 14 years.

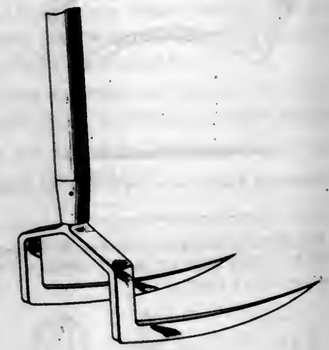


The ornamental design for a bread toaster, as shown.

46,578. SOUVENIR CLOCK-CASE. CHARLES PETERS and ABRAHAM JACOBSON, Los Angeles, Cal. Filed May 25, 1914. Serial No. 840,956. Term of patent 3½ years.

The ornamental design for a souvenir clock case as shown.

46,579. MANURE-HOOK. FRANK W. PETERSON, Harcourt, Iowa. Filed Aug. 31, 1914. Serial No. 860,121. Term of patent 14 years.

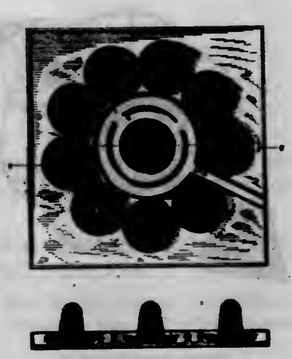


The ornamental design for a manure hook, as shown.

46,580. BRICK OR SIMILAR ARTICLE. DANIEL E. REAGAN, Columbus, Ohio, assignor to Hocking Valley Products Company, Columbus, Ohio, a Corporation of West Virginia. Filed May 22, 1914. Serial No. 840,389. Term of patent 14 years.

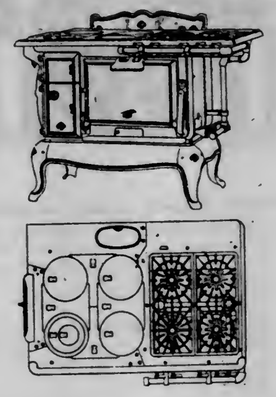
The ornamental design for a brick, or similar article, as shown and described.

46,581. GAME-BOARD. ALICE A. REES, Spring City, Pa. Filed July 15, 1914. Serial No. 851,183. Term of patent 7 years.



The ornamental design for a game board, as shown.

46,582. STOVE. WALTER F. ROGERS, Oak Park, Ill. Filed July 10, 1914. Serial No. 850,267. Term of patent 7 years.



The ornamental design for a stove, as shown.

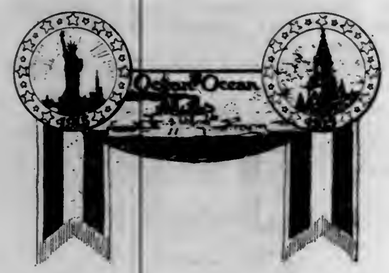
46,583. KNIFE-HANDLE. CARL W. TILLMANNS, Utica, N. Y. Filed June 13, 1914. Serial No. 845,032. Term of patent 7 years.

The ornamental design for a knife handle as shown.

46,584. SIGN. GEORGE TOMKA and SÁNDOR VARGA, South Bethlehem, Pa. Filed Apr. 21, 1914. Serial No. 833,573. Term of patent 7 years.

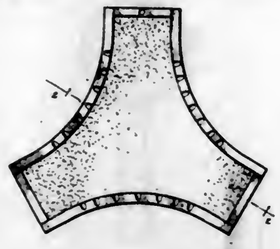
The ornamental design for a sign, as shown.

46,585. BADGE. PHILIP TRASK, Yonkers, N. Y. Filed July 22, 1914. Serial No. 852,486. Term of patent 3½ years.



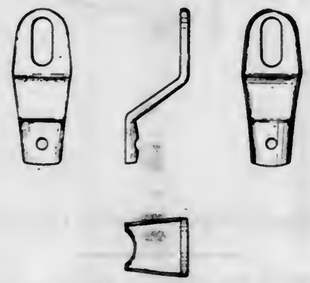
The ornamental design for a badge, as shown.

46,586. STOVE-MAT. NELLIE MILES TUCKER, Sacramento, Cal. Filed Aug. 4, 1914. Serial No. 855,070. Term of patent 14 years.



The ornamental design for a stove mat, as shown.

46,587. FURNITURE-BRACE. EDWIN P. WANNER, New York, N. Y. Filed Aug. 24, 1914. Serial No. 858,331. Term of patent 14 years.



The ornamental design for a furniture brace, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 20, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 49,634. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARL HAEFNER, Washington, Pa. Filed May 10, 1910.

Particular description of goods.—A Remedy for the Treatment of Chronic, Specific, and Gonorrheal Rheumatism, Blood-Poison, Scrofulous Diseases, Glandular Tubercles, Ophthalmia, Ozena Lupus, Fistulous and Carious Ulcers, Diseases of the Nervous System, Glandular Enlargements, Morbid Growths, Leucorrhea, Ovarian Tumors, Goiter, and Chronic Pleurisy.
Claims use since Feb. 2, 1910.

Ser. No. 59,259. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Oct. 21, 1911.

Particular description of goods.—Oil Distillates of Coal-Tar of a Disinfecting and Preservative Character and Lacking Lubricating, Illuminating, and Edible Qualities.
Claims use since on or about Jan. 1, 1889.

Ser. No. 63,462. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Boston, Mass. Filed May 10, 1912.

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes.
Claims use since October, 1910.

Ser. No. 65,680. (CLASS 39. CLOTHING.) BIELEFELD & SPAHN, New York, N. Y. Filed Sept. 11, 1912.

The word "Firmstep" being disclaimed.
Particular description of goods.—Leather and Canvas Shoes.
Claims use since Aug. 29, 1912.

Ser. No. 66,575. (CLASS 39. CLOTHING.) THE W. B. MANUFACTURING CO., Providence, R. I. Filed Oct. 28, 1912.

No claim is made to the words "Men's Pants" and "Corduroy." No claim is made to the words "Trade Mark."

Particular description of goods.—Corduroy Trousers.

Claims use since Oct. 1, 1912.

Ser. No. 66,766. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ENRIQUE ALDABÓ, Habana, Cuba. Filed Nov. 8, 1912.

No claim being made to the exclusive right to the words "Crema Cubana."

Particular description of goods.—A Mixed Drink Composed of Alcohol, Water, Sugar, and Fruit Extract.

Claims use since Dec. 1, 1903.

Ser. No. 69,812. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TREMONT & SUFFOLK MILLS, Lowell, Mass. Filed Apr. 15, 1913. Under ten-year proviso.

Particular description of goods.—Cotton Piece Goods.

Claims use since about 1865.

Ser. No. 70,438. (CLASS 39. CLOTHING.) A. V. VICTORIUS CO., INC., New York, N. Y. Filed May 15, 1913.

The words "Wear Like Iron" and the representation of the socks are hereby expressly disclaimed.

Particular description of goods.—Hosiery.

Claims use since 1902.

Ser. No. 70,761. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) VICT. E. MERTZ, New York, N. Y. Filed May 27, 1913.

AEROPHOR

Particular description of goods.—Air-Circulating Apparatus.

Claims use since Feb. 1, 1913.

Ser. No. 70,832. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHRISTOPHER COLUMBUS SELF, Barham, La. Filed June 2, 1913.

Particular description of goods.—A Preparation for Venereal Diseases.

Claims use since about May, 1902.

Ser. No. 70,987. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH S. SIMONDS, Detroit, Mich. Filed June 9, 1913.

No claim being made to the proper name "Simonds" nor the descriptive word "Hydro" nor to the words "I am the inventor, beware of adulteration, trade mark registered."

Particular description of goods.—Razor-Strop Dressing.

Claims use since June 6, 1913.

Ser. No. 71,217. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PILLSBURY FLOUR MILLS COMPANY, Minneapolis, Minn. Filed June 20, 1913.

Particular description of goods.—Wheat-Flour.

Claims use since on or about May 13, 1913.

Ser. No. 71,338. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) INTERSTATE MANUFACTURING COMPANY, Oskaloosa, Iowa. Filed June 24, 1913.

MARVEL

Particular description of goods.—Hot-Air Furnaces.

Claims use since Oct. 28, 1906.

Ser. No. 71,870. (CLASS 39. CLOTHING.) DUNN-SALMON COMPANY, Syracuse, N. Y. Filed July 21, 1913. Under ten-year proviso.

VASSAR

The letters shown as of red color.

Particular description of goods.—Leather, Canvas, and Cloth Shoes.

Claims use since prior to Feb. 20, 1895.

Ser. No. 72,027. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT CRANDALL, Middletown, N. Y. Filed July 29, 1913.

The words "Crandall's Spider Ointment" are disclaimed herein.

Particular description of goods.—An Ointment for Inflammation of Udders, Caked Udders, and Spider-Teat of Cows.

Claims use since July 1, 1913.

Ser. No. 72,043. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HAYWARD COMPANY, New York, N. Y. Filed July 30, 1913.

HAYCO

Particular description of goods.—Orange-Peel Buckets (Standard and Dwarf) and Parts Thereof, Clam-Shell Buckets and Parts Thereof, Tooth-Plates for Clam-Shell Buckets, Counterweight-Drums and Parts Thereof, Dredge and Excavator Fittings, and Spud-Fittings.

Claims use since about June 1, 1913.

Ser. No. 72,055. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES F. BARTENFELD, Lorain, Ohio. Filed July 31, 1913.

GOLDEN AGE

Particular description of goods.—Laundry and Toilet Soap.

Claims use since the 23d day of June, 1913.

Ser. No. 72,273 (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. C. TRUAX & COMPANY, Toledo, Ohio, assignor to United Grocers Company, Toledo, Ohio, a Corporation of Delaware. Filed Aug. 9, 1913.

UN-GRO-CO

Particular description of goods.—Porous Plasters.

Claims use since June 1, 1913.

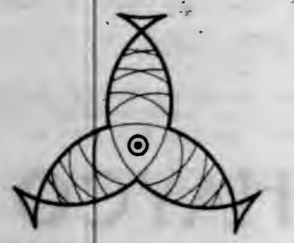
Ser. No. 72,501. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Aug. 23, 1913.

I.H.C.

Particular description of goods.—Binders, Reapers, Headers, Header-Binders, Mowers, Rakes, Sweep-Rakes,

Side-Delivery Rakes, Tedders, Hay-Loaders, Hay-Presses, Stackers, Combined Sweep Rakes and Stackers, Corn-Binders, Corn-Pickers, Corn-Shellers, Cornstalk Rakes, Huskers, and Shredders. Ensilage-Cutters, Fodder-Cutters, Stalk-Cutters, Corn-Grinders, Disk Harrows, Spring-Tooth Harrows, Peg-Tooth Harrows, Combination-Harrows, Feed-Grinders, Grain-Drills, Seeders, Cultivators, Lime-Sowers, Fertilizer-Distributers, Binder-Hitches, Knife-Grinders, Land-Rollers, Land-Packers, Planters, and Separate Parts for Each of said Machines.
Claims use since 1904.

Ser. No. 72,642. (CLASS 15. OILS AND GREASES.) TOZABURO SUZUKI, Sunamura, Japan. Filed Sept. 2, 1913.



Particular description of goods.—Petroleum, Vegetable Oil, Fish-Oil, Mineral Wax, Candles, and Fats for Illuminating Purposes.
Claims use since Mar. 22, 1912.

Ser. No. 72,679. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOUTH TEXAS DRUG COMPANY, San Antonio, Tex. Filed Sept. 4, 1913.

SOTECO

Particular description of goods.—Hair-Oil, Arnica Salve, Carbolic Salve, Witch-Hazel, and Toothache-Drops.
Claims use since the 23d day of June, 1913.

Ser. No. 72,832. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE CINCINNATI PUMP COMPANY, Cincinnati, Ohio. Filed Sept. 13, 1913.

SKATE-•-MOBILE

Particular description of goods.—Toy Vehicles.
Claims use since Aug. 15, 1913.

Ser. No. 72,839. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KELLAR-THOMASON COMPANY, Los Angeles, Cal. Filed Sept. 13, 1913.

KT

Particular description of goods.—Irrigating-Gates, Slide-Gates, Ditch-Gates, Head-Gates, Measuring-Gates, Flume-Gates, Distributing-Gates, Irrigating-Stand-Pipe Valves, Portable Irrigating-Hydrants, Orchard Stand-Pipes, Concrete Irrigating-Pipes, and other Irrigating Appliances.
Claims use since Jan. 1, 1904.

Ser. No. 72,860. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MARTIN FRANKLIN MEEK, Williamson, W. Va. Filed Sept. 15, 1913.

M
MFM
M

Particular description of goods.—Pop, Ginger-Ale, and other Like Non-Alcoholic Beverages.
Claims use since the 16th day of June, 1913.

Ser. No. 72,925. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SOCIETE "ING. P. PESTALOZZA & C.", Turin, Italy. Filed Sept. 17, 1913.

FLIRT

ING. P. PESTALOZZA & C.—TORINO
AUTOMOBILI

The words "Ing. Pestalozza & C. Torino, Automobili," being disclaimed.
Particular description of goods.—Automobiles.
Claims use since the 10th day of June, 1913.

Ser. No. 73,135. (CLASS 43. THREAD AND YARN.) J. THIRIEZ PERE ET FILS, Lille, France. Filed Sept. 30, 1913.

Particular description of goods.—Cotton and Linen Threads.
Claims use since the 28th of February, 1913.

Ser. No. 73,222. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIMON, BÜHLER & BAUMANN, Frankfort-on-the-Main, Germany. Filed Oct. 4, 1913.

STEELY ENDS BOIL THEM IN THE COOKER

Particular description of goods.—Malt-Grinding Mills.
Claims use since Dec. 30, 1912.

Ser. No. 73,726. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Oct. 31, 1913.

Auspice

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since July 10, 1913.

Ser. No. 73,727. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AKTIESELSKABET CARLS NUTRANOL-FABRIK, Copenhagen, Denmark. Filed Nov. 1, 1913.

Carls Nutranol

No claim is made to the words "Carls."
Particular description of goods.—Medicinal Tonics and Flesh-Builders.
Claims use since Jan. 14, 1911.

Ser. No. 74,850. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY HEIDE, New York, N. Y. Filed Dec. 26, 1913.

DIAMOND BRAND

No claim being made to the exclusive use of the word "Brand."
Particular description of goods.—Candies of All Kinds and Cocoa and Chocolate.
Claims use since June 15, 1874.

Ser. No. 74,856. (CLASS 5. ADHESIVES.) EFFINGHAM NICHOLS DONNELLY, New York, N. Y. Filed Dec. 27, 1913.

E. N. D.

Particular description of goods.—Cement for General Use.
Claims use since June 1, 1913.

Ser. No. 75,392. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACHILLE SCLAVO, Siena, Italy. Filed Jan. 23, 1914.

IODOGELATINA

Particular description of goods.—A Blood-Depurating Tonic.
Claims use since Dec. 27, 1910.

Ser. No. 76,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST BISCUIT COMPANY, Spokane, Wash. Filed Feb. 25, 1914.

Loveleigh's

Particular description of goods.—Chocolate Creams, Chocolate Caramels, Any Fondants, Nuts, or Fruit Dipped in Chocolate, Creams, Bonbons, Marshmallows, Fudge, Caramels, Chewing-Candies, Peanut and Cocoanut Candies, Salted Nuts of All Kinds, Hard-Boiled Candies, Mixed Stick, Drops, Squares, and Cuts; Sugar-Sand, Jellies, and Gum-Drops, and Any and All other Candies Manufactured by It.
Claims use since the 29th day of September, 1913.

Ser. No. 76,219. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) M. L. MOONEY, Shamrock, Tex. Filed Feb. 27, 1914.

Mo-Moo-Lini

Particular description of goods.—Liniments.
Claims use since the 1st day of May, 1913.

Ser. No. 76,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANISH BUTTER COLOUR CO., BLAUENFELDT & TVEDE, Copenhagen, Denmark. Filed Mar. 7, 1914.

Particular description of goods.—Butter-Coloring Materials, Arnotto Liquids, and Cheese Rennets.
Claims use since Jan. 1, 1896.

Ser. No. 76,533. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA STAR MILLING CO., Columbia, Ill. Filed Mar. 11, 1914.

The word "Schoening's" being disclaimed, the figure "2" and the star on either side thereof being shaded in red and appearing on a background of blue.

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since January, 1912.

Ser. No. 76,535. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA STAR MILLING CO., Columbia, Ill. Filed Mar. 11, 1914.

No claim being made to the word "Schoening's," the star being colored yellow and appearing on a background of red.

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since January, 1913.

Ser. No. 76,581. (CLASS 47. WINES.) SANCHEZ LEAL HERMANOS, Puerto de Santa Maria, Spain. Filed Mar. 12, 1914.

ESTRELLAS

Sanchez Leal Hnos

Particular description of goods.—Sherry-Wines.

Claims use since Dec. 15, 1912.

Ser. No. 76,685. (CLASS 39. CLOTHING.) JOE JOSEPH, New York, N. Y. Filed Mar. 16, 1914.

Particular description of goods.—Children's and Infants' Wearing-Apparel—Namely, Hats, Coats, Dresses, Underwear, Hosiery, and Shoes.

Claims use since Oct. 1, 1912.

Ser. No. 77,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMMER PRODUCTS COMPANY, Worland, Wyo. Filed Apr. 2, 1914.

The words "Emmer Products Company" are hereby disclaimed, as they form no part of the present trade-mark.

Particular description of goods.—Emmer Breakfast Food, Emmer Graham Flour, and Emmer-Stock and Poultry Food.

Claims use since on or about Apr. 26, 1913.

Ser. No. 77,157. (CLASS 38. PRINTS AND PUBLICATIONS.) THE PRESS PUBLISHING COMPANY, (THE NEW YORK WORLD,) New York, N. Y. Filed Apr. 2, 1914.

FANNING and PANNING

Particular description of goods.—Newspaper Articles.

Claims use since Mar. 14, 1914.

Ser. No. 77,165. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) TAHARA COMPANY OF AMERICA, Philadelphia, Pa. Filed Apr. 2, 1914.

TAHARA

Particular description of goods.—Silver-Burnishing and Silver-Cleaning Machines.

Claims use since Oct. 21, 1913.

Ser. No. 77,311. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LYRIC PUBLISHING CO., Philadelphia, Pa. Filed Apr. 8, 1914.

No claim being made to the representation of the piano or for the word "Piano."

Particular description of goods.—Piano-Polish.

Claims use since Mar. 31, 1914.

Ser. No. 77,589. (CLASS 39. CLOTHING.) KANTLEEK RAINCOAT COMPANY, Chicago, Ill. Filed Apr. 20, 1914.

HYLDABRAND

Particular description of goods.—Clothing — Namely, Rain-Coats, Hats, Caps, Bonnets, Sweaters, Negligée Shirts, Uniforms, Gloves, and Hat-Protectors.

Claims use since Feb. 8, 1914.

Ser. No. 77,674. (CLASS 37. PAPER AND STATIONERY.) CARLISLE NORWOOD GREIG, New York, N. Y. Filed Apr. 23, 1914.

U&Us

Particular description of goods.—Profit-Sharing, Rebate, and other Checks, Drafts, Notes, Money-Orders, Tags, Blank Labels, Blank Books, Certificates, Blank Cards, Letter-Heads, Bill-Heads, Envelops, Blotters.

Claims use since Apr. 3, 1914.

Ser. No. 77,715. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) T. E. WAREHEIM & BRO., Baltimore, Md. Filed Apr. 23, 1914.

LIBERTY

Particular description of goods.—Butter.

Claims use since July 1, 1907.

Ser. No. 77,863. (CLASS 39. CLOTHING.) HERMAN MORITZ & EXCELSIOR SHRINKING CO., INC., New York, N. Y. Filed Apr. 9, 1914.

Knorain

Particular description of goods.—Rain-Coats.

Claims use since Aug. 15, 1913.

Ser. No. 77,943. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN H. WOOD COMPANY, Philadelphia, Pa. Filed May 1, 1914.

Florasweet

Particular description of goods.—Sage-Quinin Hair-Tonic, Perfumery, and Toilet Water, Face-Powder, Deodorant, Toilet Cream, Almond Cream, Cold-Cream, and Massage-Cream.

Claims use since Dec. 1, 1913.

Ser. No. 78,055. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID W. BALDWIN, Seattle, Wash. Filed May 7, 1914.

LUCKY-X-LAX

Particular description of goods.—Laxative Remedies.

Claims use since May 1, 1914.

Ser. No. 78,152. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DE ERVE H. DE JONG, Wormerveer, near Amsterdam, and Tribuswinkel, near Weenen, Netherlands. Filed May 9, 1914.

All words except "Small Shott" being disclaimed.

Particular description of goods.—Chocolate.

Claims use since the 1st day of April, 1913.

Ser. No. 78,174. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROHE & BROTHER, New York, N. Y. Filed May 9, 1914.

No claim being made to the exclusive use of the words "Manteca," "Pura," "De Chicharron," "Rohe & Bro.," "New York," and "U. S. Inspected and Passed Under the Act of Congress of June 30, 1906, Est. No. 80."
Particular description of goods.—Lard.
Claims use since March, 1914.

Ser. No. 78,216. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) F. F. CHRESTIEN & COMPANY LIMITED, London, England. Filed May 12, 1914.

Particular description of goods.—Mica.
Claims use since Nov. 5, 1913.

Ser. No. 78,239. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FORD MEDICINE COMPANY, Dothan, Ala. Filed May 12, 1914.

Particular description of goods.—Liver-Pills, Croup and Pneumonia Salve, Eczema and Chill and Fever Tonic.
Claims use since Sept. 1, 1912.

Ser. No. 78,263. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHIEFFELIN & COMPANY, New York, N. Y. Filed May 13, 1914.

OYSTERO

Particular description of goods.—A Nutritive Powder, Paste, or Compressed Tablet for Flavoring and Seasoning and for Making Broth and Beverages.
Claims use since Apr. 1, 1914.

Ser. No. 78,267. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WILLIAM JAY SCHIEFFELIN, New York, N. Y. Filed May 13, 1914.

RADIOREX

Particular description of goods.—A Medical Appliance Containing Radioactive Material for the Production of Radioactive Medicinal Water.
Claims use since Apr. 1, 1914.

Ser. No. 78,303. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. C. GRANT CHEMICAL COMPANY, East St. Louis, Ill. Filed May 15, 1914. Under ten-year proviso.

YALE

Particular description of goods.—Baking-Powder.
Claims use since Jan. 15, 1895.

Ser. No. 78,331. (CLASS 43. THREAD AND YARN.) MONOMAC SPINNING COMPANY, Lawrence and Boston, Mass. Filed May 16, 1914.

Particular description of goods.—French Spun Worsted and Merino Yarns.
Claims use since Aug. 1, 1913.

Ser. No. 78,340. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SWIFT AND COMPANY, Chicago, Ill. Filed May 16, 1914.

Exclusive use of the words "Swift's Quick Naphtha" is hereby disclaimed.
Particular description of goods.—A Cold-Water Soap.
Claims use since May 4, 1914.

Ser. No. 78,352. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACOB M. ESHLEMAN, Lancaster, Pa. Filed May 18, 1914.

No claim is made to the word "Brand."
Particular description of goods.—Vinegar.
Claims use since about Feb. 1, 1914.

Ser. No. 78,442. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NATIONAL SUGAR REFINING COMPANY OF NEW JERSEY, Jersey City, N. J., and New York, N. Y. Filed May 21, 1914.

Trade-mark consists of the selected words "Jack Frost" and a picture of a small boy representing Jack Frost, holding a tablet of sugar, surrounded by snow crystals; but no claim is made to the use of the words "Tablet Sugar," which also appear on said drawing.
Particular description of goods.—Hard Sugar and Cane Table-Syrup.
Claims use since on or about Dec. 11, 1913.

Ser. No. 78,461. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOLEDO BREAD COMPANY, Toledo, Ohio. Filed May 21, 1914.

Pansy

Particular description of goods.—Bread.
Claims use since April, 1910.

Ser. No. 78,469. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARY ELIZABETH'S, New York, N. Y. Filed May 22, 1914.

Mary Elizabeth's

Particular description of goods.—Candies, Chocolates, Jellies, Marmalades, Preserves, Cakes, Pies, Frostings, and Similar and Cognate Articles.
Claims use since about October, 1899.

Ser. No. 78,470. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BASIL D'EMO, Chicago, Ill. Filed May 22, 1914.

EASO
Laxative

No claim is made to the word "Laxative."
Particular description of goods.—Laxatives.
Claims use since Dec. 21, 1913.

Ser. No. 78,556. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEDGES ICE CREAM CO., Houston, Tex. Filed May 26, 1914.

B·B·

Particular description of goods.—A Lactic Fluid for Beverages, Non-Alcoholic.
Claims use since Jan. 23, 1914.

Ser. No. 78,660. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ROGERS PEET COMPANY, New York, N. Y. Filed May 29, 1914.

"Gymkhana"

Comprising the word "Gymkhana."
Particular description of goods.—Base-Ball, Basket-Ball, Tennis, Lacrosse, Bowling, Hockey, Golf, Shinny, Foot-Ball, Squash-Rackets, and Polo Outfits, Fishing-Tackle Exclusive of Hooks, and Gymnasium Supplies—viz., Dumb-Bells, Indian Clubs, and Exercisers.
Claims use since Jan. 19, 1914.

Ser. No. 78,699. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) INTERNATIONAL SIGNAL COMPANY, Chicago, Ill. Filed June 1, 1914.

The word "Products" forms no part of the trade-mark.
Particular description of goods.—Electric Signal-Lamps.
Claims use since Feb. 16, 1914.

Ser. No. 78,757. (CLASS 37. PAPER AND STATIONERY.) WEST VIRGINIA PULP PRODUCTS CO., New York, N. Y. Filed June 2, 1914.

SUPERKRAFT

Particular description of goods.—Pulp-Board.
Claims use since on or about Jan. 1, 1912.

Ser. No. 78,774. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NAPANOCH KNIFE COMPANY, Napanoch, N. Y. Filed June 3, 1914.

KOMPAK

Particular description of goods.—Screw-Drivers, Files, Pocket-Knives, Knife-Blades, Saws, Gimlets, Punches, Can-Openers, and Bottle-Top Lifters.
Claims use since June 3, 1913.

Ser. No. 78,849. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE C. B. WOODWORTH SONS CO., Rochester, N. Y. Filed June 5, 1914.

DENTOLIO

Comprising the word "Dentolio."
Particular description of goods.—A Tooth-Powder and Tooth-Wash and Tooth-Paste.
Claims use since 1898.

Ser. No. 78,912. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. MILTON WADE, Oklahoma, Okla. Filed June 8, 1914.

"Quit-It"

Particular description of goods.—A Cure of the Tobacco Habit.
Claims use since August, 1913.

Ser. No. 78,942. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SEVERIN R. DROESCHER, New York, N. Y. Filed June 10, 1914.

SRD

Particular description of goods.—Razors, Shears, Scissors, and Pocket-Knives.
Claims use since the year 1891.

Ser. No. 78,961. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARL RODENHAUSEN, Chicago, Ill. Filed June 10, 1914.

PLUMPASTE

Particular description of goods.—A Paste for Use in the Art of Plumbing in the Making of Joints.
Claims use since about May 2, 1914.

Ser. No. 79,097. (CLASS 20. LINOLEUM AND OILED CLOTH.) THE GEO. W. BLABON CO., Philadelphia, Pa. Filed June 15, 1914.

1851 BLABON'S LINOLEUM

No claim being made herein to the exclusive use of the words "Blabon's Linoleum."
Particular description of goods.—Linoleum.
Claims use since about the 22d day of May, 1914.

Ser. No. 79,176. (CLASS 39. CLOTHING.) F. A. PATRICK & Co., Duluth, Minn. Filed June 17, 1914.

Bigger-Than-Weather

Particular description of goods.—Aprons, Bath-Robes, Bibs, Blouses, Booties, Boots, Caps, Chemises, Coats, Corset-Covers, Diapers, Drawers, Dresses, Gowns, Hats, Hoods, Hosiery, Insoles, Jackets, Jumpers, Kimonos, Leggings, Moccasins, Mufflers, Muffs, Ear-Muffs, Nightgowns, Overalls, Oxfords, Pajamas, Pantaloons, Petticoats, Rain-Coats, Robes, Rubbers, Overshoes, Sacks, Dress-Shirts, Negligée Shirts, Work-Shirts, Shoes, Outer Skirts, Underskirts, Sweaters, Slippers, Sandals, Toques, Ulsters, Undershirts, Vests, Dress-Waists, Shirt-Waists, Underwaists, Waistcoats, Waterproof Jackets, Waterproof Trousers, Waterproof Hats, Waterproof Caps, Waterproof Overcoats, Oiled Jackets, Oiled Trousers, Oiled Hats, Oiled Caps, Oiled Overcoats, Bustles, Collars, Cuffs, Cloaks, Dickeys, Gloves, Overcoats, Knitted Underwear, Outer Suits, Undersuits, Children's Rompers, Suits, Fur Jackets, Fur Capes, Fur-Lined Ulsters, Fur Ulsters, Fur Boas, and Fur Muffs.
Claims use since Dec. 25, 1913.

Ser. No. 79,179. (CLASS 39. CLOTHING.) F. A. PATRICK & Co., Duluth, Minn. Filed June 17, 1914.

Duchess

Particular description of goods.—Knitted Underwear.
Claims use since the 1st day of May, 1913.

Ser. No. 79,202. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AEROTHRUST ENGINE COMPANY, Chicago, Ill. Filed June 18, 1914.

Aerothrust

The word "Chicago" being disclaimed.
Particular description of goods.—Internal-Combustion Engines; Power Devices Consisting of Internal-Combustion Engines Provided with Belt-Wheels and Adapted for Driving Sewing-Machines, Washing-Machines, Power-Tables, and Machinery; and Internal-Combustion Engines Adapted to be Attached to Bicycles, Vehicles, and Water-Craft for Propelling the Same.
Claims use since Aug. 1, 1913.

Ser. No. 79,214. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOL GOLDSTEIN, Chicago, Ill. Filed June 19, 1914.

WISCONSIN FARM PRODUCTS CO. Lancaster Wis. My Country Cousin CHICAGO

I hereby disclaim all words appearing upon the original drawing filed with my original statement on June 19, 1914, except the words "My Country Cousin."
Particular description of goods.—Butter and Eggs.
Claims use since June 19, 1914.

Ser. No. 79,360. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed June 25, 1914.

L. F. & C

Particular description of goods.—Pocket-Knives, Scissors, Shears, Carving-Knives, Table-Knives, Orange-Knives, Fruit-Knives, Butter-Knives, Hunting-Knives, Fish-Knives, Scraping-Knives, Grape-Fruit Knives, Slicing-Knives, Oyster-Knives, Factory-Knives, Pill-Knives, Banana-Knives, Sloyd-Knives, One-Arm-Man Knives, Pie-Knives, Butcher-Knives, Cheese-Knives, Oil-Cloth Knives, Bread-Knives, Skinning-Knives, Cigar-Knives, Hacking-Knives, Broom-Corn Knives, Paper-Hangers' Knives, Pruning-Knives, Lemon-Knives, Paring-Knives, Boning-Knives, Beet-Knives, Rubber-Knives, Children's Knives, Steak-Knives, Tobacco-Knives, Clam-Knives, Ribbing-Knives, Cotton-Sampling Knives, Splitting-Knives, Cake-Knives, Cooks' Knives, Pallet-Knives, Hop-Knives, Pork-Knives, Bread-and-Butter Knives, Putty-Knives, Shoe-Knives, Gilding-Knives, Medium Knives, and Dessert-Knives Having Steel Blades.
Claims use since 1898.

Ser. No. 79,443. (CLASS 15. OILS AND GREASES.) ALEXANDER WARRELL, Worcester, Mass. Filed June 29, 1914.

AXOLENE

My trade-mark consists of the word "Axolene."
Particular description of goods.—Lubricants.
Claims use since Jan. 1, 1913.

Ser. No. 79,444. (CLASS 15. OILS AND GREASES.) ALEXANDER WARRELL, Worcester, Mass. Filed June 29, 1914.

ASBESTOLENE

My trade-mark consists of the word "Asbestolene."
Particular description of goods.—Lubricants.
Claims use since Jan. 1, 1913.

Ser. No. 79,445. (CLASS 15. OILS AND GREASES.) ALEXANDER WARRELL, Worcester, Mass. Filed June 29, 1914.

JOURNOLENE

My trade-mark consists of the word "Journolene."
Particular description of goods.—Lubricants.
Claims use since Jan. 1, 1914.

Ser. No. 79,458. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY P. HINSON, New York, N. Y. Filed June 30, 1914.

Chafeno

Particular description of goods.—A Salve for Preventing Irritation of the Skin Resulting from Acid Colon Excretions of Infants, with Bowel Troubles and All Forms of Chafing.
Claims use since June 5, 1914.

Ser. No. 79,576. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LATSCH & SULLIVAN, Memphis, Tenn. Filed July 6, 1914.

Graport

Particular description of goods.—A Carbonated Non-Alcoholic Soda-Fountain Drink, Bottled Drink-Flavoring Syrup, and Bottled Non-Alcoholic Still Drinks.
Claims use since about Jan. 15, 1914.

Ser. No. 79,624. (CLASS 37. PAPER AND STATIONERY.) THE BENEFICIAL DEALING CO., Philadelphia, Pa. Filed July 8, 1914.

Harmony Always Working

Particular description of goods.—Writing-Tablets.
Claims use since Apr. 1, 1914.

Ser. No. 79,695. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WALTHER RASTER, Chicago, Ill. Filed July 10, 1914.

QUARTERBACK

Particular description of goods.—Parlor Game Apparatus.
Claims use since June 17, 1914.

Ser. No. 79,703. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ANTOINE DURIEZ, Etampes, France. Filed July 10, 1914.

KINODUR

Particular description of goods.—Prepared or Treated Felts.
Claims use since Dec. 24, 1910.

Ser. No. 79,704. (CLASS 39. CLOTHING.) FRANCO CORSET COMPANY, INC., New York, N. Y. Filed July 10, 1914.

Franco

Particular description of goods.—Corsets.
Claims use since October, 1913.

Ser. No. 79,730. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILKINSON, HEYWOOD & CLARK, LIMITED, Cubitt Town, London, England. Filed July 11, 1914. Under ten-year proviso.

Particular description of goods.—Varnish; Enamels; Distempers; and Dry, Paste, and Ready-Mixed Paints.
Claims use since Feb. 19, 1887.

Ser. No. 79,790. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNGEMACH, A. G. ELS. CONSERVEN-FABRIK & IMPORT-GESELLSCHAFT, Strassburg, Germany. Filed July 14, 1914.

PASTILLES A la VIOLETTE

No claim being made to the words "Pastilles a la Violette."
Particular description of goods.—Pastilles.
Claims use since the 15th of September, 1913.

Ser. No. 79,847. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HIGGINSVILLE MILLING CO., Higginsville, Mo. Filed July 16, 1914.

"U-BAK-A"

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 21, 1914.

Ser. No. 79,924. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALTER H. HICKEY, Los Angeles, Cal. Filed July 18, 1914.

Whip-o

Particular description of goods.—Preparation for Making Desserts, Filling for Cakes, &c., and a Substitute for Whipped Cream.
Claims use since Feb. 1, 1914.

Ser. No. 79,957. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HARLEY B. BURDICK, Saginaw, Mich. Filed July 21, 1914.

Velvet

Particular description of goods.—Lawn-Seed.
Claims use since July 1, 1911.

Ser. No. 79,992. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) REGENTS MERCANTILE CORPORATION, St. Louis, Mo. Filed July 22, 1914.

"HYCEIA"

Particular description of goods.—Medicinal and Toilet Soaps.
Claims use since Oct. 1, 1911.

Ser. No. 79,999. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) J. D. FLÜGGER, Hamburg, Germany. Filed July 23, 1914.

Consisting in the representation of a dragon-fly inclosed by a circle.
Particular description of goods.—Dry, Paste, and Ready-Mixed Paints and Varnishes.
Claims use since June 19, 1889.

Ser. No. 80,009. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUMAN HAIR GOODS INDUSTRY, New York, N. Y. Filed July 23, 1914.

CERTIFINE

Particular description of goods.—Human Hair.
Claims use since May 21, 1914.

Ser. No. 80,013. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED L. NORTON & WEST CORPORATION, Binghamton, N. Y. Filed July 23, 1914.

NORWESCO

Particular description of goods.—Spices, Rice, Tea, Catsup, Olive-Oil, Salad-Oil Made from Cotton-Seeds, Peanut-Butter, Mustard, Horse-Radish, Coffee, Salad-Dressing.
Claims use since May 7, 1913.

Ser. No. 80,015. (CLASS 5. ADHESIVES.) PROTECTAIR MANUFACTURING COMPANY, Wilmington, Del., and Philadelphia, Pa. Filed July 23, 1914.

PROTECTAIR

I hereby disclaim the use of the phrase "Seals Punctures Instantly" and the representation of the wheel and pneumatic tire on the mark.
Particular description of goods.—A Liquid for the Sealing of Punctures in Pneumatic Tubes.
Claims use since Jan. 1, 1914.

Ser. No. 80,040. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE RAHNA COMPANY, Spokane, Wash. Filed July 24, 1914.

RAHNA

Particular description of goods.—Beverages, Non-Alcoholic, Carbonated.
Claims use since Mar. 1, 1914.

Ser. No. 80,045. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) TUCSON SEED COMPANY, Tucson, Ariz. Filed July 24, 1914.

DRY-CLIMATE

Particular description of goods.—Seeds.
Claims use since the 15th day of April, 1914.

Ser. No. 80,047. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) Yozo Co., Chattanooga, Tenn. Filed July 24, 1914.

YOKO

Particular description of goods.—Soap and Shaving-Soap.
Claims use since May 22, 1914.

Ser. No. 80,085. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD E. BURRIS, Madison, Nebr. Filed July 27, 1914.

Mentho-Pine

Particular description of goods.—Concentrated Cough-Syrup.
Claims use since Mar. 11, 1913.

Ser. No. 80,119. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DOMBALAGIAN & NOURKHAJIAN, Lynn, Mass. Filed July 27, 1914.

DOMBAL.

Particular description of goods.—A Remedy for Rheumatism.
Claims use since June 1, 1912.

Ser. No. 80,125. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK K. HANDY, Bay City, Mich. Filed July 28, 1914.

KERNOLA

Particular description of goods.—An Imitation Coffee.
Claims use since April, 1914.

Ser. No. 80,139. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SUSSFELD, LORSCH & Co., New York, N. Y. Filed July 28, 1914.

GUARDIAN

Particular description of goods.—Eye-Protectors, Goggles, and Spectacles.
Claims use since May 21, 1914.

Ser. No. 80,200. (CLASS 17. TOBACCO PRODUCTS.) CADO CO., INC., New York, N. Y. Filed July 31, 1914.

Particular description of goods.—Cigarettes.
Claims use since July 1, 1914.

Ser. No. 80,207. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NILES TOOL WORKS COMPANY, New York, N. Y. Filed July 31, 1914. Under ten-year proviso.

Everything appearing in connection with the mark, other than the word "Niles," is hereby disclaimed.
Particular description of goods.—Tool-Making Machinery.
Claims use since Jan. 1, 1895.

Ser. No. 80,224. (CLASS 17. TOBACCO PRODUCTS.) LEOPOLD EDELMAN, Cleveland, Ohio. Filed Aug. 1, 1914.

Particular description of goods.—Cigars.
Claims use since Apr. 1, 1914.

Ser. No. 80,233. (CLASS 39. CLOTHING.) LUNN & SWEET SHOE COMPANY, Auburn, Me. Filed Aug. 1, 1914.

Sweet Sally Lunn

Particular description of goods.—Leather Shoes.
Claims use since March, 1914.

Ser. No. 80,239. (CLASS 39. CLOTHING.) NOVELTY KNITTING MILLS, Philadelphia, Pa. Filed Aug. 1, 1914.

TANGO

Particular description of goods.—Ladies' Knitted Vests, (Outer Garments.)
Claims use since February, 1914.

Ser. No. 80,247. (CLASS 43. THREAD AND YARN.) PAUL SCHULZE & CO. LTD., Manchester, England. Filed Aug. 1, 1914. Under ten-year proviso.

CRYSTAL

Particular description of goods.—Woolen, Worsted, Cotton, and Silk-Wool Yarns.
Claims use since Dec. 1, 1882.

Ser. No. 80,271. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JOHN HOWARD MCELROY, Chicago, Ill. Filed Aug. 3, 1914.

HYGEIA

Particular description of goods.—Shower-Bath Apparatus.
Claims use since Apr. 20, 1914.

Ser. No. 80,272. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MERRY CLEANSER COMPANY, Almota, Wash. Filed Aug. 3, 1914.

Particular description of goods.—Washing-Powder for Kettles, Pots, Fabric, Earthenware Vessels, and the Like.
Claims use since May 21, 1914.

Ser. No. 80,292. (CLASS 39. CLOTHING.) DAVIS HOSIERY MILLS, Chattanooga, Tenn. Filed Aug. 4, 1914.

DARN-LESS

Particular description of goods.—Hosiery.
Claims use since June 8, 1911.

Ser. No. 80,311. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HORACE WILCOX, Wakefield, R. I. Filed Aug. 4, 1914.

Fenogen

Particular description of goods.—Shaving-Cream and Toilet Soap.
Claims use since Sept. 9, 1912.

Ser. No. 80,313. (CLASS 37. PAPER AND STATIONERY.) AMERICAN LEAD PENCIL COMPANY, New York, N. Y. Filed Aug. 5, 1914.

Velvet

Particular description of goods.—Rubber Erasers.
Claims use since the 21st day of July, 1914.

Ser. No. 80,366. (CLASS 39. CLOTHING.) MILLWALL RUBBER COMPANY LIMITED, London, England. Filed Aug. 6, 1914.

PAX

Particular description of goods.—Rubber Heels and Rubber Soles.
Claims use since about January, 1910.

Ser. No. 80,394. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE EGRY REGISTER COMPANY, Dayton, Ohio. Filed Aug. 8, 1914.

EGRY MULTIPLEX

The word "Egry" being disclaimed.
Particular description of goods.—Type-Writing-Machine Attachment for Manifold Writings.
Claims use since June, 1914.

Ser. No. 80,408. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAENGER BROTHERS, Shreveport, La. Filed Aug. 8, 1914.

Jaenger Bros.

The portrait shown being that of J. H. and A. D. Saenger, and the signature is a facsimile of the signature of the firm as written by J. H. Saenger.
Particular description of goods.—A Remedy for the Liver and Kidneys.
Claims use since about fifteen years.

Ser. No. 80,446. (CLASS 39. CLOTHING.) SALANT & SALANT, New York, N. Y. Filed Aug. 10, 1914.

USX

Particular description of goods.—Outer Shirts.
Claims use since Jan. 1, 1900.

Ser. No. 80,447. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS HARLEY SNYDER, Cincinnati, Ohio. Filed Aug. 10, 1914.

SULFOAM

Particular description of goods.—A Shampooing Preparation.
Claims use since Apr. 20, 1914.

Ser. No. 80,476. (CLASS 38. PRINTS AND PUBLICATIONS.) BARSE & HOPKINS, New York, N. Y. Filed Aug. 12, 1914.

GEMS of THOUGHT CALENDAR

Particular description of goods.—A Calendar and Collection of Mottoes.
Claims use since Jan. 1, 1914.

Ser. No. 80,477. (CLASS 38. PRINTS AND PUBLICATIONS.) BARSE & HOPKINS, New York, N. Y. Filed Aug. 12, 1914.

A CALENDAR from One Friend to Another

Particular description of goods.—A Calendar and Collection of Mottoes.
Claims use since Jan. 1, 1914.

Ser. No. 80,528. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIAMOND CHEMICAL CO., Brooklyn, N. Y. Filed Aug. 13, 1914.

DIAMULSIA

Particular description of goods.—An Emulsifier.
Claims use since December, 1910.

Ser. No. 80,548. (CLASS 39. CLOTHING.) PLYMOUTH RUBBER COMPANY, Canton, Mass. Filed Aug. 13, 1914.

SLIPKNOT

Particular description of goods.—Rubber Heels for Boots and Shoes.
Claims use since June 8, 1914.

Ser. No. 80,570. (CLASS 38. PRINTS AND PUBLICATIONS.) WILLIAM SCHOTTEN COFFEE COMPANY, St. Louis, Mo. Filed Aug. 14, 1914.

COF-E-LOG

Particular description of goods.—A Monthly Publication.
Claims use since about July 15, 1914.

Ser. No. 80,587. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY J. KOHL, Collingdale, Pa. Filed Aug. 15, 1914.

MIONE

Particular description of goods.—Soap.
Claims use since in or about the month of July, 1907.

Ser. No. 80,638. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CONDENSED BLUING COMPANY, Chicago, Ill. Filed Aug. 18, 1914.

Little Boy Blue

Particular description of goods.—A Bluing Compound.
Claims use since July 22, 1914.

Ser. No. 80,640. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CURITITE COMPANY, INC., West Hoboken, N. J. Filed Aug. 18, 1914.

CURITITE SALVE

The word "Salve" being disclaimed.
Particular description of goods.—A Salve for Medicinal Purposes.
Claims use since Mar. 1, 1914.

Ser. No. 80,644. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAYNES DRUG CO., Boston, Mass. Filed Aug. 18, 1914.

SPRING-TABS

Particular description of goods.—Preparations for Purifying the Blood, Clearing the Complexion, Skin Eruptions, Boils, and Pimples, Chronic Rheumatism, Gouty Condition, Piles, and to Cleanse the Intestinal Canal and Promote the Removal of Impurities from the System.
Claims use since about March, 1912.

Ser. No. 80,674. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ALTENDERFER LEATHER COMPANY, Philadelphia, Pa. Filed Aug. 19, 1914.

ALCO

Which consists of the word "Alco."
Particular description of goods.—Patent-Leather.
Claims use since about July 1, 1909.

Ser. No. 80,680. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE INTRAVENOUS PRODUCTS COMPANY, Denver, Colo. Filed Aug. 19, 1914.

VENARSEN

Particular description of goods.—Preparation for the Intravenous Treatment of Syphilis, Pellagra, and Malaria.
Claims use since May 9, 1914.

Ser. No. 80,718. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BLACK DIAMOND PRODUCTS COMPANY, Fairmont and Watson, W. Va. Filed Aug. 21, 1914.

B/D

Particular description of goods.—Ginger-Ale, Pop, and Carbonated Waters.
Claims use since July 1, 1914.

Ser. No. 80,724. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TOM E. DUSANIC, Milwaukee, Wis. Filed Aug. 21, 1914.

MILKATOM

Particular description of goods.—A Medicinal Compound for Use Internally by Persons as a Liquid Nerve and Blood Tonic, for the Avoidance of Constipation, and for the Promotion of Physical Health.
Claims use since July 1, 1914.

Ser. No. 80,743. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARIE LAWLOR, New York, N. Y. Filed Aug. 22, 1914.

REDNAEL

Particular description of goods.—Hair-Tonics, Dandruff-Lotions, Pomade, and Hair-Dressings.
Claims use since the 1st day of March, 1914.

Ser. No. 80,752. (CLASS 39. CLOTHING.) FIELD BROS. AND GROSS COMPANY, Boston, Mass. Filed Aug. 22, 1914.

Safety First

Particular description of goods.—Leather and Canvas Boots and Shoes.
Claims use since on or about June 15, 1914.

Ser. No. 80,782. (CLASS 39. CLOTHING.) CARSON GLOVE CO., San Francisco, Cal. Filed Aug. 25, 1914. Under ten-year proviso.

CARSON

Particular description of goods.—Gloves.
Claims use since Jan. 2, 1891.

Ser. No. 80,783. (CLASS 39. CLOTHING.) CARSON GLOVE CO., San Francisco, Cal. Filed Aug. 25, 1914.

KAN-GRU

Particular description of goods.—Gloves.
Claims use since Mar. 25, 1914.

Ser. No. 80,784. (CLASS 39. CLOTHING.) CARSON GLOVE CO., San Francisco, Cal. Filed Aug. 25, 1914.

SHE-WA-WA

Particular description of goods.—Gloves.
Claims use since May 12, 1914.

Ser. No. 80,785. (CLASS 39. CLOTHING.) CARSON GLOVE CO., San Francisco, Cal. Filed Aug. 25, 1914.

PIC-A-REE

Particular description of goods.—Gloves.
Claims use since June 3, 1914.

Ser. No. 80,787. (CLASS 37. PAPER AND STATIONERY.) EAGLE PENCIL COMPANY, New York, N. Y. Filed Aug. 25, 1914.

GEISHA

Particular description of goods.—Writing and Drawing Pencils of All Kinds.
Claims use since July, 1911.

Ser. No. 80,803. (CLASS 48. MALT EXTRACTS AND LIQUORS.) SEATTLE BREWING AND MALTING CO., Seattle, Wash. Filed Aug. 25, 1914.

Particular description of goods.—Beer.
Claims use since Jan. 10, 1893.

Ser. No. 80,810. (CLASS 39. CLOTHING.) J. BAKER & SONS, Evansville, Ind. Filed Aug. 26, 1914.

Particular description of goods.—Men's Overalls, Jackets, Trousers, and Work-Shirts.
Claims use since Aug. 11, 1914.

Ser. No. 80,850. (CLASS 17. TOBACCO PRODUCTS.) SWAAB, SAN & MARCUSEE, Philadelphia, Pa. Filed Aug. 27, 1914.

JAX

Particular description of goods.—Cigars, Cigarettes, Cheroots, and Manufactured Tobacco.
Claims use since about the 18th of August, 1914.

Ser. No. 80,854. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES MONROE FOSTER, Bellingham, Wash. Filed Aug. 28, 1914.

Fluffy-Fluff

The bust picture in the drawing represents an imaginary person.
Particular description of goods.—Dry-Shampoo Preparations.
Claims use since Apr. 1, 1914.

Ser. No. 80,857. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOWAN-LENNING-BROWN CO., Duluth, Minn. Filed Aug. 28, 1914.

HONOR

Particular description of goods.—Laundry Blue, Cream of Tartar, Baking-Powder, Gloss Starch, and Baking and Washing Soda.
Claims use since January, 1912.

Ser. No. 80,868. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Aug. 28, 1914.

CLIMAX

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since May 14, 1904.

Ser. No. 80,877. (CLASS 17. TOBACCO PRODUCTS.) PITTSBURGH STOGIE AND CIGAR COMPANY, Pittsburgh, Pa. Filed Aug. 29, 1914.

SLOGAN

Particular description of goods.—Stogies.
Claims use since Feb. 14, 1912.

Ser. No. 80,879. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ACORN MFG. CO., New York, N. Y. Filed Aug. 29, 1914.

THE MASTER BUILDER

Particular description of goods.—Toy Building Constituents.
Claims use since July 15, 1914.

Ser. No. 80,915. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HENRY SIEBEN, Kansas City, Mo. Filed Aug. 31, 1914.

Peter Rabbit

Particular description of goods.—Games.
Claims use since Aug. 27, 1914.

Ser. No. 80,930. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. L. WOOLDRIDGE, Richmond, Va. Filed Sept. 1, 1914.

JO JON

Particular description of goods.—Rheumatism, Neuralgia, Sprains, Stiff Joints, Lame Back, and External Diseases of the Skin.
Claims use since on or about Aug. 10, 1914.

Ser. No. 80,931. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Sept. 1, 1914.

NAPOLEON

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since June 1, 1909.

Ser. No. 80,932. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Sept. 1, 1914.

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since Feb. 27, 1914.

Ser. No. 80,942. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Sept. 2, 1914.

Bluebelle

Particular description of goods.—Wood-Stoves, Coal-Stoves, Gas-Stoves, and Vapor-Stoves.
Claims use since July 15, 1914.

Ser. No. 80,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERTHA UBERALL, Philadelphia, Pa. Filed Sept. 2, 1914.

Bertha Uberall

Consisting of a facsimile of my signature.
Particular description of goods.—Hair-Tonic.
Claims use since Aug. 1, 1912.

Ser. No. 80,959. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Sept. 3, 1914.

WALBLA

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since Mar. 30, 1914.

Ser. No. 80,960. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Sept. 3, 1914.

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since Feb. 27, 1914.

Ser. No. 80,976. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BARKER, MOORE & MEIN MEDICINE COMPANY, Philadelphia, Pa. Filed Sept. 4, 1914. Under ten-year proviso.

BARKER'S

Particular description of goods.—Condition-Powder and Medicines for Man and Beast for the Treatment of Rheumatism, Sprains, Bruises, Chilblains, Stiff and Weak Joints, Corks, Chafes, Galls, Cuts, Wounds, Spavins, Scratches, Swelled Limbs, Frost-Bites, Cracks, Shoe-Boil, Lameness, Corns, Burns, Caked Breasts, Mange, Whitlows, Cramps of the Muscles, Thorough-Pins, Cracked Heels, and Ring-Bone.
Claims use since 1882.

Ser. No. 81,026. (CLASS 39. CLOTHING.) J. F. BUDD SHOE COMPANY, Burlington, N. J. Filed Sept. 8, 1914.

The word "Budd" being written in the handwriting of Mr. J. F. Budd.
Particular description of goods.—Infants' and Children's Leather Shoes.
Claims use since 1884.

Ser. No. 81,028. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. BLACK, New York, N. Y. Filed Sept. 8, 1914.

VERATONE

Particular description of goods.—A Remedy for Diseases of Females, General Tonic, Eczema, and Hair-Tonic.
Claims use since Apr. 6, 1914.

Ser. No. 81,032. (CLASS 39. CLOTHING.) THOMAS CORT, INC., Newark, N. J. Filed Sept. 8, 1914.

Particular description of goods.—Ladies' and Men's Leather Shoes.
Claims use since June 1, 1914.

Ser. No. 81,033. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COUGHLIN BROS., Syracuse, N. Y. Filed Sept. 8, 1914.

Particular description of goods.—Menthol Cough-Drops.
Claims use since Aug. 1, 1909.

Ser. No. 81,044. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDBERG, BOWEN & Co., San Francisco, Cal. Filed Sept. 8, 1914. Under ten-year proviso.

OLD MELLOW

Particular description of goods.—A Blend of Rye Whisky.
Claims use since about Mar. 1, 1884.

Ser. No. 81,080. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RALPH H. PLUMB, Des Moines, Iowa. Filed Sept. 8, 1914.

JEWEL
SCINTILLA
WATER

The words "Jewel Water" being hereby disclaimed.
Particular description of goods.—A Jewel-Water for Cleaning Gold, Platinum, and other Jewelry.
Claims use since Aug. 18, 1914.

Ser. No. 81,114. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Sept. 8, 1914.

KING

Particular description of goods.—Golf-Balls.
Claims use since Feb. 10, 1911.

Ser. No. 81,115. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Sept. 8, 1914.

QUEEN BEE

Particular description of goods.—Golf-Balls.
Claims use since Jan. 8, 1912.

Ser. No. 81,116. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Sept 8, 1914.

"A"

Particular description of goods.—Golf-Balls.
Claims use since June 3, 1912.

Ser. No. 81,117. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Sept 8, 1914.

RING

Particular description of goods.—Golf-Balls.
Claims use since Mar. 14, 1913.

Ser. No. 81,118. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed Sept 8, 1914.

JACK

Particular description of goods.—Golf-Balls.
Claims use since Feb. 7, 1914.

Ser. No. 81,162. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOWAN LENNING BROWN CO., Duluth, Minn. Filed Sept. 10, 1914.

A·B·C·

Particular description of goods.—Baking-Powder.
Claims use since Sept. 1, 1914.

Ser. No. 81,185. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GERSTENDORFER BROS., New York, N. Y. Filed Sept. 11, 1914.

CELOLITE
GERSTENDORFER BROS., NEW YORK, U.S.A.

No claim being made to the exclusive use of the words "Gerstendorfer Bros." and "New York, U. S. A."
Particular description of goods.—Enamels, Enamel Paints, Stains, Japans, Lacquers, Gold Paints, Aluminum Paints, Silver and Bronze Paints, Graining Compounds, Driers, and Oils, Paint-Remover, Floor-Dressings, Mineral Paints, Coal-Tar Paints, Waterproofing-Paints, Oil-Paints, Cold-Water Paints, Artists' Paints, Ready-Mixed Paints, Dry-Paints, Varnishes, Colors, Fillers, and Surfacers.
Claims use since July 20, 1914.

Ser. No. 81,203. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH SCHLYEN, New York, N. Y. Filed Sept. 11, 1914.

MARMALAX

Particular description of goods.—A Laxative Candy.
Claims use since the 16th day of February, 1914.

Ser. No. 81,222. (CLASS 17. TOBACCO PRODUCTS.) GOWAN-LENNING-BROWN CO., Duluth, Minn. Filed Sept. 12, 1914.

HONOR

Particular description of goods.—Cigars.
Claims use since January, 1912.

Ser. No. 81,242. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Sept. 14, 1914.

J-M

Particular description of goods.—Electrical Automobile-Horns.
Claims use since Aug. 24, 1914.

Ser. No. 81,266. (CLASS 17. TOBACCO PRODUCTS.) 50/50 MANUFACTURING CO., INC., New York, N. Y. Filed Sept. 15, 1914.

50/50

Particular description of goods.—Cigarettes.
Claims use since Sept. 5, 1914.

Ser. No. 81,288. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MOISE NAZARIAN, Cleveland, Ohio. Filed Sept. 16, 1914.

Consisting of my portrait.
Particular description of goods.—Liniments.
Claims use since June 15, 1913.

Ser. No. 81,342. (CLASS 17. TOBACCO PRODUCTS.) JAYNES DRUG CO., Boston, Mass. Filed Sept. 19, 1914.

SAHIB

Particular description of goods.—Cigars, Cigarettes, Cheroots, and Cut Tobacco.
Claims use since June 9, 1914.

Ser. No. 81,354. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARY R. THOMAS, Boston, Mass. Filed Sept. 19, 1914.

Particular description of goods.—Character-Dolls.
Claims use since Aug. 20, 1914.

Ser. No. 81,373. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THEODORE HOFFMANN, Ardmore, Okla. Filed Sept. 21, 1914.

Particular description of goods.—A Soda-Water Syrup.
Claims use since Aug. 1, 1914.

Ser. No. 81,383. (CLASS 39. CLOTHING.) J. K. ORR SHOE CO., Atlanta, Ga. Filed Sept. 21, 1914.

Particular description of goods.—Leather Shoes.
Claims use since Jan. 1, 1914.

Ser. No. 81,402. (CLASS 37. PAPER AND STATIONERY.) MORRIS BROWN, Philadelphia, Pa. Filed Sept. 22, 1914.

Particular description of goods.—Tablets and Copy-Books.
Claims use since July 10, 1914.

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TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 20, 1914.

100,232. CERTAIN FERTILIZER MATERIAL CONTAINING NITROGEN AND PHOSPHORIC ACID AS ITS CONSTITUENT FERTILIZING ELEMENTS. AMERICAN CYANAMID COMPANY, Nashville, Tenn.; Niagara Falls, Ontario, Canada; Buffalo and New York, N. Y., and Atlanta, Ga.
Filed June 22, 1914. Serial No. 79,252. PUBLISHED AUGUST 11, 1914.

100,233. PLAIN COTTON FLANNELS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed July 3, 1913. Serial No. 71,495. PUBLISHED AUGUST 11, 1914.

100,234. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,309. PUBLISHED AUGUST 11, 1914.

100,235. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,310. PUBLISHED AUGUST 11, 1914.

100,236. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,311. PUBLISHED AUGUST 11, 1914.

100,237. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,312. PUBLISHED AUGUST 11, 1914.

100,238. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,313. PUBLISHED AUGUST 4, 1914.

100,239. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,314. PUBLISHED AUGUST 4, 1914.

100,240. COTTON PIECE AND COTTON DRESS GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed June 24, 1914. Serial No. 79,316. PUBLISHED AUGUST 4, 1914.

100,241. HAIR-NETS. MRS. ELISE ARMBRUSTER, LATE MISS HAIBLE, Landau, Germany.
Filed May 20, 1914. Serial No. 78,412. PUBLISHED JULY 21, 1914.

100,242. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,046. PUBLISHED AUGUST 11, 1914.

100,243. PRINTED BOOKS. AUTOMOBILE BLUE BOOK COMPANY, New York, N. Y.
Filed May 15, 1914. Serial No. 78,293. PUBLISHED AUGUST 4, 1914.

100,244. UNGUENTS. BAER & SNYDER, Philadelphia, Pa.
Filed July 6, 1914. Serial No. 79,593. PUBLISHED AUGUST 11, 1914.

100,245. BRANDY. J. BALLUTEAUD, Blanzac-Cognac, France.
Filed February 6, 1914. Serial No. 75,724. PUBLISHED AUGUST 11, 1914.

100,246. PREPARED ROOFINGS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed April 24, 1914. Serial No. 77,717. PUBLISHED JULY 14, 1914.

100,247. PREPARED ROOFINGS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed June 20, 1914. Serial No. 79,236. PUBLISHED JULY 21, 1914.

100,248. PREPARED ROOFINGS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed June 20, 1914. Serial No. 79,238. PUBLISHED JULY 28, 1914.

100,249. COTTON GOODS IN THE PIECE. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,675. PUBLISHED JULY 21, 1914.

100,250. FERTILIZERS. BEATEY'S UNADULTERATED AGRICULTURAL PHOSPHATE COMPANY OF NEW ENGLAND, Boston, Mass.
Filed June 2, 1914. Serial No. 78,735. PUBLISHED JULY 28, 1914.

100,251. OVERALLS. ALEXANDER BENNIE & CO., Nashville, Tenn.
Filed July 10, 1914. Serial No. 79,701. PUBLISHED AUGUST 11, 1914.

100,252. BOYS' AND GIRLS' SHOES MADE OF LEATHER. MILES L. BLEECKER, New York, N. Y.
Filed May 19, 1914. Serial No. 78,382. PUBLISHED JULY 28, 1914.

100,253. BUTTONS. B. BLUMENTHAL & CO., New York, N. Y.
Filed June 27, 1914. Serial No. 79,413. PUBLISHED AUGUST 11, 1914.

100,254. MILITARY HAIR-BRUSHES. GEO. BORGFELDT & CO., New York, N. Y.
Filed May 26, 1914. Serial No. 78,550. PUBLISHED JULY 28, 1914.

100,255. DOLLS. GEORGE BORGFELDT & CO., New York, N. Y.
Filed June 1, 1914. Serial No. 78,670. PUBLISHED AUGUST 11, 1914.

100,256. HAIR, TOOTH, AND NAIL BRUSHES. GEO. BORGFELDT & CO., New York, N. Y.
Filed June 2, 1914. Serial No. 78,731. PUBLISHED JULY 28, 1914.

100,257. CERTAIN NAMED FURNISHINGS, NOTIONS, AND FANCY GOODS. GEORGE BORGFELDT & CO., New York, N. Y.
Filed June 5, 1914. Serial No. 78,824. PUBLISHED AUGUST 11, 1914.

100,258. ALCOHOLIC FRUIT-JUICE MADE FROM CURRANTS, WITH THE ADDITION OF SUGAR. PAUL BOUCHÉ, New York, N. Y.
Filed June 30, 1914. Serial No. 79,456. PUBLISHED AUGUST 18, 1914.

100,259. PLATE, SOLDER, AND SOLDER-FLUX. EVELYN R. S. BREWSTER, Chicago, Ill.
Filed June 5, 1914. Serial No. 78,823. PUBLISHED AUGUST 4, 1914.

100,269. ANTISEPTICS, DISINFECTANTS, AND DEODORANTS. BRISTOL-MYERS COMPANY, New York, N. Y.
Filed July 2, 1914. Serial No. 79,509. PUBLISHED AUGUST 11, 1914.

100,261. CORSETS. FANNIE WEISSMAN BROWN, Milwaukee, Wis.
Filed May 28, 1914. Serial No. 78,598. PUBLISHED JULY 28, 1914.

100,262. LEATHER SHOES. BROWN SHOE COMPANY, INC., St. Louis, Mo.
Filed June 6, 1914. Serial No. 78,855. PUBLISHED AUGUST 4, 1914.

100,263. LEATHER BOOTS AND SHOES. E. W. BURT & COMPANY, INCORPORATED, Boston, Mass.
Filed May 23, 1914. Serial No. 78,487. PUBLISHED JULY 14, 1914.

100,264. HORSE-NAILS. THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn.
Filed April 18, 1914. Serial No. 77,555. PUBLISHED AUGUST 11, 1914.

100,265. GINGHAMS. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed June 9, 1914. Serial No. 78,917. PUBLISHED JULY 14, 1914.

100,266. STOMACH, LIVER, AND BOWEL MEDICINE. ANTONIO CARTABILLOTTA, Swissvale, Pa.
Filed July 7, 1914. Serial No. 79,597. PUBLISHED AUGUST 11, 1914.

100,267. COTTON PIECE GOODS. CATLIN & CO., New York, N. Y.
Filed June 15, 1914. Serial No. 79,101. PUBLISHED AUGUST 11, 1914.

100,268. COMPOSITION OR ARTIFICIAL STONE BURIAL-CASKETS AND BURIAL-VAULTS. CEMENT CASKET MFG. CO., Battle Creek and Albion, Mich.
Filed June 15, 1914. Serial No. 79,098. PUBLISHED AUGUST 11, 1914.

100,269. KEGS, AND ESPECIALLY POWDER-KEGS. CENTRAL TRADING CORPORATION, Philipsburg, Pa.
Filed March 2, 1914. Serial No. 76,268. PUBLISHED AUGUST 4, 1914.

100,270. BRICKS, TILE PIPE, FLUE-LINING, WALL-COPINGS, AND SEWER-PIPES. CHICAGO FIRE BRICK CO., Chicago, Ill.
Filed May 9, 1914. Serial No. 78,150. PUBLISHED JULY 28, 1914.

100,271. CIGARETTES. THEODOSE CHRISTOFIDY, New York, N. Y.
Filed May 23, 1914. Serial No. 78,490. PUBLISHED AUGUST 11, 1914.

100,272. BLACKBOARD-CRAYONS AND BLACKBOARD-ERASERS. CLANTON & WEBB COMPANY, Atlanta, Ga.
Filed April 24, 1914. Serial No. 77,720. PUBLISHED AUGUST 11, 1914.

100,273. CONCRETE SOCKETS AND INSERTS. CLIP-BAR MANUFACTURING COMPANY, Philadelphia, Pa.
Filed May 29, 1914. Serial No. 78,644. PUBLISHED AUGUST 11, 1914.

100,274. CARPETS. COCHRANE MANUFACTURING CO., Dedham, and East Dedham, Mass.
Filed June 20, 1913. Serial No. 71,206. PUBLISHED JULY 14, 1914.

100,275. CARPETS. COCHRANE MANUFACTURING CO., Dedham, and East Dedham, Mass.
Filed June 20, 1913. Serial No. 71,210. PUBLISHED JULY 14, 1914.

100,276. [WITHDRAWN.]

100,277. ARTIFICIAL TEETH AND TEETH-FACINGS. THE COLUMBUS DENTAL MANUFACTURING CO., Columbus, Ohio.
Filed June 11, 1914. Serial No. 78,995. PUBLISHED AUGUST 4, 1914.

100,278. MASSAGE INSTRUMENTS. COMMONWEALTH ELECTRIC & MANUFACTURING COMPANY, St. Louis, Mo.
Filed June 15, 1914. Serial No. 79,100. PUBLISHED JULY 21, 1914.

100,279. CERTAIN NAMED BRUSHES AND BROOMS. A. F. CONERY COMPANY, Newark, N. J.
Filed April 2, 1914. Serial No. 77,146. PUBLISHED JULY 21, 1914.

100,280. MEDICATED STOCK FOOD. CO-OPERATIVE DRUG MANUFACTURING COMPANY (now by change of name American Drug Mfg. Co.), Jackson, Tenn.
Filed June 7, 1913. Serial No. 70,935. PUBLISHED AUGUST 11, 1914.

100,281. SHAVING-LOTIONS, GLOVE-CLEANER. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.), Jackson, Tenn.
Filed July 7, 1913. Serial No. 71,555. PUBLISHED AUGUST 11, 1914.

100,282. STARCH FOR LAUNDRY AND MANUFACTURING PURPOSES. CORN PRODUCTS REFINING CO., New York, N. Y.
Filed July 1, 1914. Serial No. 79,479. PUBLISHED AUGUST 11, 1914.

100,283. VEHICLES EQUIPPED WITH PNEUMATIC SPRINGS SUPPORTING THE BODY ON THE RUNNING-GEAR. COWLES-MACDOWELL PNEUMOBILE CO., Chicago, Ill.
Filed June 13, 1914. Serial No. 79,054. PUBLISHED AUGUST 11, 1914.

100,284. CERTAIN NAMED POULTRY AND STOCK FEEDS. CHAS. M. COX CO., Boston, Mass.
Filed June 13, 1914. Serial No. 79,053. PUBLISHED AUGUST 11, 1914.

100,285. HANGING BAGS. SAMUEL H. CRAGG, New York, N. Y.
Filed May 11, 1914. Serial No. 78,194. PUBLISHED AUGUST 4, 1914.

100,286. CERTAIN NAMED ARTICLES USED IN DENTISTRY. CRESCENT DENTAL MFG. CO., Chicago, Ill.
Filed June 17, 1914. Serial No. 79,169. PUBLISHED AUGUST 11, 1914.

100,287. BITUMINOUS SIDEWALKS AND PAVEMENTS. WILLIAM T. S. CRICHFIELD, Jersey City, N. J., and New York, N. Y.
Filed May 1, 1914. Serial No. 77,911. PUBLISHED AUGUST 4, 1914.

100,288. SILOS. DE LAVAL DAIRY SUPPLY COMPANY, Jersey City, N. J., and San Francisco, Cal.
Filed July 7, 1914. Serial No. 79,598. PUBLISHED AUGUST 11, 1914.

100,289. OINTMENTS TO BE APPLIED EXTERNALLY FOR HUMAN MEDICAL USE. HENRY J. DENGES, Baltimore, Md.
Filed April 16, 1914. Serial No. 77,505. PUBLISHED AUGUST 11, 1914.

100,290. ARTIFICIAL TEETH. THE DENTISTS' SUPPLY COMPANY, New York, N. Y.
Filed June 24, 1914. Serial No. 79,324. PUBLISHED AUGUST 11, 1914.

100,291. METAL WINDOW-SASH, METAL DOORS, METAL PARTITIONS, AND METAL DOOR AND WINDOW FRAMES. DETROIT STEEL PRODUCTS CO., Detroit, Mich.
Filed June 1, 1914. Serial No. 78,687. PUBLISHED AUGUST 4, 1914.

100,292. LADIES' TUB-DRESSES, HOUSE-DRESSES, NURSES' AND WAITRESSES' UNIFORMS. HENRY A. DIX & SONS COMPANY, Millville, N. J., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,686. PUBLISHED JULY 21, 1914.

100,293. MATTRESSES. DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill.
Filed July 6, 1914. Serial No. 79,592. PUBLISHED AUGUST 4, 1914.

100,294. PUZZLES. FRED W. DOLL, Allentown, Pa., assignor of one-half to A. H. Balliet, Allentown, Pa.
Filed May 20, 1914. Serial No. 78,414. PUBLISHED JULY 21, 1914.

100,295. RUGS MADE OF ALL-WOOL FABRIC. DONEGAL MOTOR RUG CO., New York, N. Y.
Filed May 25, 1914. Serial No. 78,517. PUBLISHED AUGUST 11, 1914.

100,296. CANNED SHRIMP. DUNBARS, LOPEZ & DUKATE CO., New Orleans, La.
Filed June 23, 1914. Serial No. 79,291. PUBLISHED AUGUST 11, 1914.

100,297. SELF-RISING WHEAT-FLOUR. THE DUNLOP MILLING CO., Clarksville, Tenn.
Filed July 3, 1914. Serial No. 79,528. PUBLISHED AUGUST 11, 1914.

100,298. FOUNTAIN-PENS. WILLIAM F. DURYEA, New York, N. Y.
Filed April 24, 1914. Serial No. 77,721. PUBLISHED AUGUST 11, 1914.

100,299. TOILET-PINS AND NEEDLES FOR HAND-SEWING. J. ENGLISH & SON LIMITED, Redditch, England.
Filed February 21, 1914. Serial No. 76,073. PUBLISHED AUGUST 4, 1914.

100,300. NEEDLES FOR HAND-SEWING. J. ENGLISH & SON LIMITED, Redditch, England.
Filed February 21, 1914. Serial No. 76,074. PUBLISHED AUGUST 4, 1914.

100,301. NEEDLES FOR HAND-SEWING AND KNITTING-PINS. J. ENGLISH & SON LIMITED, Redditch, England.
Filed February 21, 1914. Serial No. 76,075. PUBLISHED AUGUST 4, 1914.

100,302. CERTAIN PENCILS, RUBBER-ERASERS, AND PENHOLDERS. A. W. FABER, Stein, near Nuremberg, Germany.
Filed February 21, 1914. Serial No. 76,077. PUBLISHED AUGUST 11, 1914.

100,303. SATIN RIBBON. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,786. PUBLISHED JULY 21, 1914.

100,304. CLOTHES-WRINGER. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,797. PUBLISHED AUGUST 4, 1914.

100,305. NECKTIES. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,804. PUBLISHED JULY 21, 1914.

100,306. NECKTIES. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,805. PUBLISHED JULY 21, 1914.

100,307. CLOTHES-WRINGER. THE FAIR, Chicago, Ill.
Filed June 4, 1914. Serial No. 78,810. PUBLISHED AUGUST 4, 1914.

100,308. BUILDING BRICKS AND BLOCKS. THE FAR WEST CLAY CO., Tacoma, Wash.
Filed June 16, 1914. Serial No. 79,138. PUBLISHED JULY 21, 1914.

100,309. COTTON PIECE GOODS. FEARING, WHITON & CO., INC., Boston, Mass.
Filed June 17, 1914. Serial No. 79,171. PUBLISHED AUGUST 4, 1914.

100,310. INITIALS AND EMBROIDERY DESIGNS. FELT EMBROIDERY FORM COMPANY, Marengo, Ill.
Filed June 24, 1914. Serial No. 79,326. PUBLISHED AUGUST 11, 1914.

100,311. BROOMS, BRUSHES, AND DUSTERS. D. D. FELTON BRUSH CO., Atlanta, Ga.
Filed May 23, 1914. Serial No. 78,493. PUBLISHED AUGUST 4, 1914.

100,312. CERTAIN NAMED CLOTHING. FERGUSON WATERPROOF CO., St. Louis, Mo.
Filed June 1, 1914. Serial No. 78,696. PUBLISHED JULY 21, 1914.

100,313. LEATHER AND CANVAS BOOTS AND SHOES. FIELD BROS. & GROSS COMPANY, Boston, Mass.
Filed June 24, 1914. Serial No. 79,327. PUBLISHED JULY 21, 1914.

100,314. WASHING COMPOUND AND WASHING DETERGENT FOR LAUNDRY PURPOSES. FITZPATRICK BROS., Chicago, Ill.
Filed February 28, 1914. Serial No. 76,237. PUBLISHED AUGUST 11, 1914.

100,315. POWER WASHING-MACHINES (LAUNDRY) AND PARTS THEREOF. FLINT AND WALLING MANUFACTURING CO., Kendallville, Ind.
Filed May 22, 1914. Serial No. 78,471. PUBLISHED JULY 21, 1914.

100,316. TOOTH-BRUSHES. FLORENCE MANUFACTURING COMPANY, Northampton, Mass.
Filed October 9, 1912. Serial No. 66,205. PUBLISHED AUGUST 4, 1914.

100,317. SHIRT-WAISTS. BERNARD N. FRANK, New York, N. Y.
Filed April 1, 1914. Serial No. 77,124. PUBLISHED JULY 28, 1914.

100,318. METAL-POLISH. JOSEPH HENRY FRIED, Montgomery, Ala.
Filed November 28, 1913. Serial No. 74,232. PUBLISHED AUGUST 11, 1914.

100,319. RAZOR-STROPS. THE GIBFORD-WEIFFENBACH COMPANY, Adrian, Mich.
Filed April 24, 1914. Serial No. 77,724. PUBLISHED AUGUST 11, 1914.

100,320. MEN'S WORK AND NEGLIGÉE SHIRTS. GOODMAN, COHEN & CO., New York, N. Y.
Filed July 1, 1914. Serial No. 79,487. PUBLISHED AUGUST 11, 1914.

100,321. RUBBER HOT-WATER BOTTLES AND FOUNTAIN-SYRINGE BAGS. THE B. F. GOODRICH COMPANY, New York, N. Y.
Filed May 25, 1914. Serial No. 78,519. PUBLISHED JULY 21, 1914.

100,322. HEADACHE-BANDAGES. WILFORD HALL LABORATORIES, Port Chester, N. Y.
Filed March 31, 1914. Serial No. 77,112. PUBLISHED JULY 28, 1914.

100,323. WRITING, PRINTING AND COVER PAPER. HAMPDEN GLAZED PAPER AND CARD COMPANY, Holyoke, Mass.
Filed May 8, 1914. Serial No. 78,126. PUBLISHED AUGUST 11, 1914.

100,324. NICKEL SALTS. THE HANSON & VAN WINKLE COMPANY, Newark, N. J.
Filed June 9, 1914. Serial No. 78,926. PUBLISHED AUGUST 11, 1914.

100,325. TRUNKS, SUITCASES, AND BAGS. THE HARTMANN TRUNK CO., Racine, Wis.
Filed May 11, 1914. Serial No. 78,200. PUBLISHED AUGUST 4, 1914.

100,326. SHOES MADE OF CERTAIN MATERIALS AND COMBINATIONS OF SAME. HECHT & CO., Washington, D. C.
Filed March 5, 1914. Serial No. 76,361. PUBLISHED AUGUST 11, 1914.

100,327. HAIR-BRUSHES, TOOTH-BRUSHES, NAIL-BRUSHES, AND EYEBROW-BRUSHES. HANS HEIDNER, Tacoma, Wash.
Filed June 15, 1914. Serial No. 79,104. PUBLISHED AUGUST 11, 1914.

100,328. LEATHER SHOES. PHIL HERBOLD COMPANY, San Jose, Cal.
Filed February 3, 1914. Serial No. 75,654. PUBLISHED AUGUST 11, 1914.

100,329. BICYCLES, DOUBLE AND SWINGLE TREES, NECK-YOKES, TOY WAGONS, HAND-TRUCKS, AND WHEELBARROWS. HIBBARD, SPENCER, BARTLETT & Co., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,834. PUBLISHED AUGUST 4, 1914.

100,330. SINGLE-BARREL AND DOUBLE-BARREL SHOTGUNS, CANVAS AMMUNITION-BAGS AND RIFLE-SHEATHS. HIBBARD, SPENCER, BARTLETT & Co., Chicago, Ill.
Filed May 28, 1914. Serial No. 78,615. PUBLISHED AUGUST 4, 1914.

100,331. HOSE-SUPPORTERS. CHRISTINA J. HIGLEY, New York, N. Y.
Filed May 26, 1914. Serial No. 78,558. PUBLISHED AUGUST 4, 1914.

100,332. CAR-WHEELS. HOCKENSMITH WHEEL & MINE CAR COMPANY, Penn Station, Pa.
Filed June 2, 1914. Serial No. 78,746. PUBLISHED AUGUST 11, 1914.

100,333. GOLF-GAME APPARATUS, APPARATUS FOR PRACTISING GOLF-STROKES, AND APPARATUS FOR PLAYING INDOOR GOLF. JAMES F. HUGHES, New York, N. Y.
Filed June 3, 1914. Serial No. 78,770. PUBLISHED JULY 21, 1914.

100,334. UMBRELLAS. HULSE BROTHERS & DANIEL Co., New York, N. Y.
Filed July 7, 1914. Serial No. 79,490. PUBLISHED AUGUST 4, 1914.

100,335. BEER. IHLERS & BELL, LIMITED, Liverpool, England.
Filed June 13, 1914. Serial No. 79,074. PUBLISHED AUGUST 18, 1914.

100,336. CERTAIN NAMED BAGGAGE AND HORSE EQUIPMENTS. INTERNATIONAL BUCKLE COMPANY, New Britain, Conn.
Filed July 16, 1914. Serial No. 79,863. PUBLISHED AUGUST 11, 1914.

100,337. HOSIERY. INTERWOVEN STOCKING COMPANY, New Brunswick, N. J.
Filed June 13, 1914. Serial No. 79,075. PUBLISHED JULY 21, 1914.

100,338. WINDOW-SHADES. T. M. JAMES & Co., New York, N. Y.
Filed May 14, 1914. Serial No. 78,278. PUBLISHED JULY 28, 1914.

100,339. SKATES. NESTOR JOHNSON, Chicago, Ill.
Filed April 24, 1912. Serial No. 63,107. PUBLISHED AUGUST 4, 1914.

100,340. SHOCK-ABSORBERS OR AUXILIARY SPRINGS FOR USE ON VEHICLES, ESPECIALLY MOTOR-VEHICLES. THE K-W IGNITION COMPANY, Cleveland, Ohio.
Filed June 24, 1914. Serial No. 79,333. PUBLISHED AUGUST 4, 1914.

100,341. WRITING-PAPER AND ENVELOPS. KANSAS CITY PAPER HOUSE, Kansas City, Mo.
Filed June 11, 1914. Serial No. 79,003. PUBLISHED AUGUST 11, 1914.

100,342. COATS, TROUSERS, VESTS, AND OVERCOATS FOR MEN AND BOYS. K. KATZ & SONS, Baltimore, Md.
Filed June 10, 1914. Serial No. 78,948. PUBLISHED JULY 21, 1914.

100,343. GLUE. KANTOROWICZ & Co., Breslau, Germany.
Filed June 1, 1914. Serial No. 78,701. PUBLISHED JULY 21, 1914.

100,344. NON-METALLIC FLOORING. DAVID E. KENNEDY, INC., New York, N. Y.
Filed June 13, 1914. Serial No. 79,077. PUBLISHED AUGUST 11, 1914.

100,345. CERTAIN NAMED INSULATING MATERIAL. KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa.
Filed June 19, 1914. Serial No. 79,223. PUBLISHED JULY 21, 1914.

100,346. INSULATING MATERIAL CONSISTING OF SHEETS OF STRONG KRAFT PAPER WITH CURED EEL-GRASS QUILTED BETWEEN THEM. KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa.
Filed June 19, 1914. Serial No. 79,225. PUBLISHED JULY 21, 1914.

100,347. INSULATING MATERIAL CONSISTING OF SHEETS OF PAPER OR CLOTH WITH HAIR FELT BETWEEN THEM. KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa.
Filed June 19, 1914. Serial No. 79,226. PUBLISHED JULY 21, 1914.

100,348. INSULATING MATERIAL CONSISTING OF SHEETS OF STRONG HEAVY BUILDING-PAPER WITH CURLED EEL-GRASS QUILTED BETWEEN THEM. KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa.
Filed June 19, 1914. Serial No. 79,228. PUBLISHED JULY 21, 1914.

100,349. LIVER-REGULATOR. JOE A. KINCHELOE, Milan, Tenn.
Filed June 2, 1914. Serial No. 78,748. PUBLISHED AUGUST 11, 1914.

100,350. HAIR-NETS. ADOLPH KLAR, New York, N. Y.
Filed May 13, 1913. Serial No. 70,404. PUBLISHED AUGUST 4, 1914.

100,351. DRESS AND GARMENT SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed July 1, 1914. Serial No. 79,491. PUBLISHED AUGUST 4, 1914.

100,352. BLEACHING, WATER-SOFTENING, PURIFYING, AND DISINFECTING PREPARATION. H. KOHNSTAMM & Co., New York, N. Y.
Filed July 14, 1914. Serial No. 79,777. PUBLISHED AUGUST 11, 1914.

100,353. CERTAIN NAMED FURNITURE. KOKEN BARBERS' SUPPLY Co., St. Louis, Mo.
Filed May 28, 1914. Serial No. 78,618. PUBLISHED AUGUST 11, 1914.

100,354. HAIR-TONIC. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed July 13, 1914. Serial No. 79,760. PUBLISHED AUGUST 11, 1914.

100,355. ANTISEPTIC SOLUTION AND GERMICIDAL DISINFECTANT. THE KOLYNOS Co., New Haven, Conn.
Filed July 13, 1914. Serial No. 79,759. PUBLISHED AUGUST 11, 1914.

100,356. MATCHES. F. KREUGER AND COMPANY, LIMITED, London, England.
Filed June 8, 1914. Serial No. 78,908. PUBLISHED AUGUST 4, 1914.

100,357. COTTON AND SILK CRAPE PIECE GOODS. M. KURZMANS SONS, New York, N. Y.
Filed May 18, 1914. Serial No. 78,354. PUBLISHED JULY 28, 1914.

100,358. CONVEYING AND TRANSMISSION APPARATUS. THE LAMSON COMPANY, Boston, Mass.
Filed May 27, 1914. Serial No. 78,583. PUBLISHED AUGUST 11, 1914.

100,359. STORE FURNITURE. THE LAMSON COMPANY, Boston, Mass.
Filed June 10, 1914. Serial No. 78,950. PUBLISHED JULY 28, 1914.

100,360. VACUUM-BOTTLES, ALCOHOL-FLAGONS, LUNCH-BOXES, BOTTLE-HOLDERS, AND TEA-CADDIES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed May 28, 1914. Serial No. 78,619. PUBLISHED AUGUST 4, 1914.

100,361. SALVE. MARIE A. LEIBLINGER, Cleveland, Ohio.
Filed July 6, 1914. Serial No. 79,577. PUBLISHED AUGUST 11, 1914.

100,362. CERTAIN NAMED TEXTILE FABRICS KNOWN AS PIECE GOODS. LES FILS DE L. JARROSSON, Lyon, France.
Filed September 13, 1913. Serial No. 72,841. PUBLISHED AUGUST 4, 1914.

100,363. LOCAL ANESTHETICS. THE ELI LILLY AND COMPANY, Indianapolis, Ind.
Filed July 8, 1914. Serial No. 79,637. PUBLISHED AUGUST 11, 1914.

100,364. AUTOMOBILES. LOZIER MOTOR COMPANY, Detroit, Mich.
Filed May 1, 1912. Serial No. 63,245. PUBLISHED JULY 14, 1914.

100,365. PERFUMERY. GEORGE LUEDERS & Co., New York, N. Y.
Filed July 8, 1914. Serial No. 79,639. PUBLISHED AUGUST 11, 1914.

100,366. SURGICAL SUTURES. C. DE WITT LUKENS SURGICAL MANUFACTURING Co., St. Louis, Mo.
Filed May 4, 1914. Serial No. 77,980. PUBLISHED JULY 21, 1914.

100,367. WOOLEN PIECE GOODS. JNO. E. MAGERL & Co., Camden, N. J., and Philadelphia, Pa.
Filed March 30, 1914. Serial No. 77,066. PUBLISHED JULY 28, 1914.

100,368. MATCHES. MANUFACTURERS AND RETAILERS COMPANY, Chicago, Ill.
Filed May 31, 1913. Serial No. 70,791. PUBLISHED JULY 21, 1914.

100,369. RUBBER COATS. MARYLAND RUBBER COMPANY, Baltimore, Md.
Filed July 10, 1914. Serial No. 79,714. PUBLISHED AUGUST 11, 1914.

100,370. DOORS OF TAXICABS AND HORSE-DRAWN AND MOTOR-PROPELLED VEHICLES. MASON-SEAMAN TRANSPORTATION COMPANY, New York, N. Y.
Filed October 7, 1913. Serial No. 73,257. PUBLISHED JULY 21, 1914.

100,371. PERFUMES, TOILET POWDERS AND CREAMS. MELBA MANUFACTURING COMPANY, Chicago, Ill.
Filed June 15, 1914. Serial No. 79,118. PUBLISHED AUGUST 11, 1914.

100,372. LEATHER SHOES. FRANK MELVILLE, Jr., New York, N. Y.
Filed April 17, 1914. Serial No. 77,538. PUBLISHED AUGUST 11, 1914.

100,373. MOPS AND PARTS THEREOF. ABRAHAM MENDELSOHN, Chicago, Ill., assignor to David T. Punch as trustee for Mrs. Ricka Punch, Chicago, Ill.
Filed June 1, 1914. Serial No. 78,707. PUBLISHED JULY 28, 1914.

100,374. PREPARATION IN POWDERED FORM FOR MAKING HOT DRINKS. J. S. MERRELL DRUG Co., St. Louis, Mo.
Filed June 15, 1914. Serial No. 79,117. PUBLISHED AUGUST 11, 1914.

100,375. CLOAKINGS MADE OF WOOLEN AND MIXTURES OF COTTON AND WOOL. THE MIANUS MFG. Co., Coscob, Conn.
Filed April 14, 1914. Serial No. 77,477. PUBLISHED JULY 21, 1914.

100,376. CANTALOUPS. MILLER-CUMMINGS COMPANY, INC., New York, N. Y.
Filed June 25, 1914. Serial No. 79,363. PUBLISHED AUGUST 11, 1914.

100,377. CHAIRS. MILWAUKEE CHAIR COMPANY, Milwaukee, Wis., and Chicago, Ill.
Filed April 21, 1913. Serial No. 69,964. PUBLISHED AUGUST 4, 1914.

100,378. DEVICE FOR OFFSET FURRING. MITCHELL-TAPPEN COMPANY, New York, N. Y.
Filed April 30, 1914. Serial No. 77,890. PUBLISHED AUGUST 4, 1914.

100,379. MATCH-RECEPTACLES OF METAL. MODEL KITCHEN EQUIPMENT COMPANY, Chicago, Ill.
Filed April 17, 1912. Serial No. 62,952. PUBLISHED JULY 14, 1914.

100,380. AUTOMOBILES. MONARCH MOTOR CAR COMPANY, Detroit, Mich.
Filed June 22, 1914. Serial No. 79,264. PUBLISHED AUGUST 4, 1914.

100,381. CANDY. WALLACE R. MONTAGUE, La Crosse, Wis.
Filed June 6, 1914. Serial No. 78,877. PUBLISHED AUGUST 11, 1914.

100,382. CHILD'S TOY-WATCH BRACELET. MOORE & GIBSON CORPORATION OF NEW YORK, New York, N. Y.
Filed May 9, 1914. Serial No. 78,173. PUBLISHED JULY 21, 1914.

100,383. ENEMA TO RELIEVE CONSTIPATION. J. M. MUNYON, Philadelphia, Pa.
Filed May 28, 1914. Serial No. 78,620. PUBLISHED AUGUST 11, 1914.

100,384. BED-SPRINGS. NATIONAL BED SPRING Co., Chicago, Ill.
Filed February 19, 1914. Serial No. 76,038. PUBLISHED AUGUST 4, 1914.

100,385. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed October 6, 1913. Serial No. 73,235. PUBLISHED JULY 21, 1914.

100,386. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,804. PUBLISHED AUGUST 4, 1914.

100,387. MATCHES. NITEDALS TÆNDSTIKFABRIK, Grönvold, near Christiania, Norway.
Filed May 28, 1914. Serial No. 78,625. PUBLISHED AUGUST 4, 1914.

100,388. RIBBONS. THE NONOTUCK SILK COMPANY, Northampton, Mass.
Filed June 22, 1914. Serial No. 79,268. PUBLISHED AUGUST 11, 1914.

100,389. HAIR-TONICS AND HAIR-DYES. ORINOKA PHARMACAL COMPANY, INC., New York, N. Y.
Filed July 10, 1914. Serial No. 79,696. PUBLISHED AUGUST 11, 1914.

100,390. WASHING COMPOUNDS. OZENE COMPANY, INC., New York, N. Y.
Filed May 2, 1914. Serial No. 77,959. PUBLISHED AUGUST 11, 1914.

100,391. MOTOR-VEHICLES. PALMER & SINGER MANUFACTURING COMPANY, New York, N. Y.
Filed December 24, 1913. Serial No. 74,827. PUBLISHED AUGUST 4, 1914.

100,392. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed March 7, 1914. Serial No. 76,446. PUBLISHED JULY 14, 1914.

100,393. MENTHOL-INHALER. PARDRIDGE MFG. Co., Detroit, Mich.
Filed May 18, 1914. Serial No. 78,366. PUBLISHED JULY 28, 1914.

100,394. MENTHOL-INHALER. PARDRIDGE MFG. Co., Detroit, Mich.
Filed June 9, 1914. Serial No. 78,930. PUBLISHED JULY 28, 1914.

100,395. LACE CURTAINS. PATCHOGUE MFG. Co., New York, N. Y.
Filed June 27, 1914. Serial No. 79,397. PUBLISHED AUGUST 4, 1914.

100,396. CERTAIN NAMED EMBROIDERY, KNITTING, AND CROCHET MATERIALS AND SEWING-SILKS. F. A. PATRICK & Co., Duluth, Minn.
Filed June 17, 1914. Serial No. 79,177. PUBLISHED JULY 21, 1914.

100,397. EMERGENCY-DRESSINGS. PHEREDORN G. PAUGH, St. Louis, Mo.
Filed May 13, 1914. Serial No. 78,250. PUBLISHED JULY 21, 1914.

100,398. BOOTS, SHOES, AND SLIPPERS MADE WHOLLY OR IN PART OF LEATHER AND CLOTH. PAUL BROTHERS INC., Philadelphia, Pa.
Filed June 16, 1914. Serial No. 79,139. PUBLISHED AUGUST 4, 1914.

100,399. SUGAR WAFERS, CAKES, CRACKERS, AND FANCY BISCUITS. PEERLESS BISCUIT COMPANY, Pittsburgh, Pa.
Filed June 25, 1914. Serial No. 79,371. PUBLISHED AUGUST 11, 1914.

100,400. CELLULOID-COVERED EYELETS AND LACING-HOOKS FOR SHOES. THE PEERLESS MACHINERY COMPANY, Boston, Mass.
Filed June 17, 1914. Serial No. 79,180. PUBLISHED JULY 14, 1914.

100,401. FOUR-IN-HAND TIES. CHARLES H. PEIRCE, La Fayette, Ind.
Filed June 3, 1914. Serial No. 78,778. PUBLISHED AUGUST 4, 1914.

100,402. SOFT DRINK. PENRITH-AKERS MFG. CO., Minneapolis, Minn.
Filed March 23, 1914. Serial No. 76,872. PUBLISHED AUGUST 11, 1914.

100,403. SOAPS. THE PHOENIX OIL CO., Cleveland, Ohio.
Filed April 29, 1914. Serial No. 77,867. PUBLISHED AUGUST 11, 1914.

100,404. TOILET-PAPERS. PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y.
Filed May 13, 1914. Serial No. 78,253. PUBLISHED AUGUST 11, 1914.

100,405. TOILET-PAPERS. PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y.
Filed May 13, 1914. Serial No. 78,254. PUBLISHED AUGUST 11, 1914.

100,406. IMPREGNATED SAFETY-MATCHES. ALBERT PICK & COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed October 6, 1913. Serial No. 73,237. PUBLISHED JULY 14, 1914.

100,407. PORCELAIN, EARTHENWARE, AND CROCKERY. PORZELLANFABRIK SCHÖNWALD A.-G., Schönwald, Germany.
Filed March 2, 1914. Serial No. 76,288. PUBLISHED AUGUST 4, 1914.

100,408. TANNING GREASES AND OILS. L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany.
Filed February 6, 1914. Serial No. 75,732. PUBLISHED AUGUST 11, 1914.

100,409. CERTAIN NAMED SURGICAL APPLIANCES AND VETERINARY INSTRUMENTS. THE RANDALL-FAICHNEY CO., Boston, Mass.
Filed April 17, 1914. Serial No. 77,543. PUBLISHED JULY 21, 1914.

100,410. WHITE AND FANCY SHIRTS, NEGLIGÉE AND DRESS SHIRTS, NIGHT-SHIRTS, AND PAJAMAS. C. W. REYNOLDS CO., Petersburg, N. Y.
Filed April 18, 1914. Serial No. 77,570. PUBLISHED JULY 28, 1914.

100,411. POLISH FOR GLASS AND METALS. THE REYNOLDS CORPORATION, Bristol, Tenn.
Filed April 27, 1914. Serial No. 77,810. PUBLISHED AUGUST 11, 1914.

100,412. CARPET-WARP. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed December 16, 1912. Serial No. 67,421. PUBLISHED AUGUST 4, 1914.

100,413. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed March 30, 1914. Serial No. 77,076. PUBLISHED JULY 21, 1914.

100,414. BOX-SHOOKS. O. S. RICHARDS, INC., Brooklyn, N. Y.
Filed June 23, 1914. Serial No. 79,304. PUBLISHED AUGUST 4, 1914.

100,415. VACUUM-CLEANERS. RICHMOND RADIATOR COMPANY, New York, N. Y.
Filed June 22, 1914. Serial No. 79,273. PUBLISHED AUGUST 11, 1914.

100,416. VACUUM-CLEANERS. RICHMOND RADIATOR COMPANY, New York, N. Y.
Filed June 22, 1914. Serial No. 79,274. PUBLISHED AUGUST 11, 1914.

100,417. HEATING AND COOKING STOVES AND RANGES. ROCK ISLAND STOVE COMPANY, Rock Island, Ill.
Filed September 16, 1913. Serial No. 72,897. PUBLISHED AUGUST 4, 1914.

100,418. RUBBER PUTTY FOR REPAIRING VARIOUS ARTICLES COMPOSED OF RUBBER. WILLIAM A. ROCKROHR, Chicago, Ill.
Filed June 10, 1914. Serial No. 78,963. PUBLISHED JULY 21, 1914.

100,419. CERTAIN NAMED TEXTILE FABRICS. F. ROSENSTERN & Co., New York, N. Y.
Filed March 4, 1914. Serial No. 76,326. PUBLISHED JULY 14, 1914.

100,420. CIGARETTE-PAPER. FRANCISCO ROVIRA ROVIRA, Barcelona, Spain.
Filed May 10, 1913. Serial No. 70,357. PUBLISHED JULY 28, 1914.

100,421. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,446. PUBLISHED AUGUST 4, 1914.

100,422. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,453. PUBLISHED JULY 21, 1914.

100,423. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed June 2, 1914. Serial No. 78,754. PUBLISHED AUGUST 11, 1914.

100,424. ANALGESIC. SALBENOL CO., Philadelphia, Pa.
Filed July 7, 1914. Serial No. 79,610. PUBLISHED AUGUST 11, 1914.

100,425. METAL WHEELS FOR MOTOR-VEHICLES AND STAMPINGS IN METAL FOR MOTOR-VEHICLES OR OTHER VEHICLE PARTS. JOSEPH SANKEY & SONS, LIMITED, Bilston, England.
Filed September 15, 1913. Serial No. 72,865. PUBLISHED AUGUST 4, 1914.

100,426. TOWELS, WASH-CLOTHS, BATH-MITTS, AND KNITTED QUILTS, SHEETS, AND BLANKETS. SAN-KNIT-ARY TEXTILE MILLS INCORPORATED, Philadelphia, Pa.
Filed April 18, 1912. Serial No. 62,963. PUBLISHED JULY 28, 1914.

100,427. RUBBER BALLS AND GUTTA-PERCHA BALLS. THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa.
Filed March 4, 1914. Serial No. 76,329. PUBLISHED AUGUST 4, 1914.

100,428. RUBBER BALLS AND GUTTA-PERCHA BALLS. THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa.
Filed March 6, 1914. Serial No. 76,414. PUBLISHED AUGUST 4, 1914.

100,429. AUTOMOBILES. SAXON MOTOR COMPANY, Detroit, Mich.
Filed May 29, 1914. Serial No. 78,660. PUBLISHED JULY 14, 1914.

100,430. WRITING AND PRINTING PAPER. E. W. SCARBOROUGH CO., New York, N. Y.
Filed July 9, 1914. Serial No. 79,681. PUBLISHED AUGUST 11, 1914.

100,431. WRITING AND PRINTING PAPER. E. W. SCARBOROUGH CO., New York, N. Y.
Filed July 9, 1914. Serial No. 79,682. PUBLISHED AUGUST 11, 1914.

100,432. HOUSEHOLD RECEPTACLES FOR BREAD AND CAKE. THE SCHAFFER TINWARE MANUFACTURING COMPANY, Brooklyn, N. Y.
Filed June 24, 1914. Serial No. 79,338. PUBLISHED AUGUST 4, 1914.

100,433. CASES FOR TOILET ARTICLES. NEWTON L. SCHLOSS, New York, N. Y., assignor to Ovanite Company, New York, N. Y., a Corporation of New York.
Filed July 9, 1914. Serial No. 79,683. PUBLISHED AUGUST 11, 1914.

100,434. RUBBER ICE-BAGS. JULIUS SCHMID, INC., Astoria, N. Y.
Filed June 17, 1914. Serial No. 79,183. PUBLISHED JULY 21, 1914.

100,435. GLOVES, OVERALLS, AND HOSIERY. SEGAL & PRANSKY, Philadelphia, Pa.
Filed May 25, 1914. Serial No. 78,537. PUBLISHED JULY 14, 1914.

100,436. INSECTICIDES AND FUNGICIDES. THE SHERWIN-WILLIAMS COMPANY, Cleveland, Ohio.
Filed July 9, 1914. Serial No. 79,680. PUBLISHED AUGUST 11, 1914.

100,437. SANITARY NAPKINS OR SURGICAL BANDAGES. SOL. H. SHONINGER, Chicago, Ill.
Filed October 15, 1913. Serial No. 73,405. PUBLISHED JULY 21, 1914.

100,438. PLIERS. SMITH & HEMENWAY CO., INC., New York, N. Y.
Filed June 26, 1914. Serial No. 79,392. PUBLISHED AUGUST 11, 1914.

100,439. CORDIALS. SOCIÉTÉ ANONYME DE LA DISTILLERIE DE LA LIQUEUR DE MANDARINE DE BOUGIE, Algiers, Algeria.
Filed January 20, 1914. Serial No. 75,819. PUBLISHED AUGUST 11, 1914.

100,440. WOVEN COTTON FABRICS. GEORGE ALBERT STAFFORD, New York, N. Y.
Filed May 6, 1914. Serial No. 78,035. PUBLISHED JULY 21, 1914.

100,441. WOVEN COTTON FABRICS. GEORGE ALBERT STAFFORD, New York, N. Y.
Filed May 6, 1914. Serial No. 78,036. PUBLISHED JULY 21, 1914.

100,442. PORTLAND CEMENT. STANDARD PORTLAND CEMENT COMPANY, Charleston, S. C.
Filed January 22, 1913. Serial No. 68,065. PUBLISHED AUGUST 4, 1914.

100,443. PERFUMES, FACE-POWDERS, AND TOILET WATERS. FREDERICK STEARNS & Co., Detroit, Mich.
Filed July 6, 1914. Serial No. 79,586. PUBLISHED AUGUST 11, 1914.

100,444. CHEWING-GUM. THE STERN & SAALBERG COMPANY, New York, N. Y.
Filed June 25, 1914. Serial No. 79,375. PUBLISHED AUGUST 11, 1914.

100,445. BAKING-POWDERS. TAZIYOMON TANAKA, Chicago, Ill.
Filed February 18, 1914. Serial No. 76,019. PUBLISHED AUGUST 11, 1914.

100,446. COMPOSITION FELT ROOFING. THE TEXAS COMPANY, Port Arthur, Tex., and New York, N. Y.
Filed May 18, 1914. Serial No. 78,372. PUBLISHED AUGUST 4, 1914.

100,447. ASPHALT AND HARD, PLASTIC, OR LIQUID ASPHALT RESIDUUM PRODUCTS. THE TOLTEC MEXICAN OIL CO., New York, N. Y.
Filed February 21, 1913. Serial No. 68,664. PUBLISHED AUGUST 11, 1914.

100,448. DENTAL CEMENT. EMMANUEL DE TREY, Zurich, Switzerland.
Filed July 2, 1913. Serial No. 71,477. PUBLISHED JULY 28, 1914.

100,449. VEGETABLE SELF-SUSTAINING HEAT-INSULATING MATERIAL IN SHEET FORM. UNION FIBRE COMPANY, Winona, Minn.
Filed February 5, 1913. Serial No. 68,335. PUBLISHED JULY 14, 1914.

100,450. BEER. UNIONSBRAUEREI SCHÜLEIN & Co. A. G., Munich, Germany.
Filed May 28, 1914. Serial No. 78,628. PUBLISHED AUGUST 18, 1914.

100,451. ASPHALT AND HARD, PLASTIC, OR LIQUID ASPHALTIC RESIDUUM PRODUCTS. THE UNITED STATES ASPHALT REFINING COMPANY, New York, N. Y.
Filed January 15, 1912. Serial No. 60,827. PUBLISHED AUGUST 4, 1914.

100,452. CERTAIN MEDICINES AND PREPARATIONS FOR TREATING CERTAIN DISEASES. UNITED STATES MEDICINE CO., Montclair, N. J., and New York, N. Y.
Filed April 22, 1914. Serial No. 77,667. PUBLISHED AUGUST 11, 1914.

100,453. POCKETS OR CONTAINERS ADAPTED TO HOLD TOBACCO OR OTHER MATERIAL. THE UNITED STATES TOBACCO COMPANY, Richmond, Va.
Filed March 7, 1913. Serial No. 68,906. PUBLISHED AUGUST 11, 1914.

100,454. GELATIN-GLUE. VEREINIGTE LEDERLEIMFABRIKEN VORM. J. E. JENSS AKTIEN GESELLSCHAFT, Uetersen, near Hamburg, Germany.
Filed May 15, 1914. Serial No. 78,404. PUBLISHED AUGUST 4, 1914.

100,455. MEDICINAL SALVE USED EXTERNALLY AS REMEDY FOR CERTAIN DISEASES, AND INTERNAL VAPORS. THE VICK CHEMICAL CO., Greensboro, N. C.
Filed May 4, 1912. Serial No. 63,318. PUBLISHED JUNE 16, 1913.

100,456. STEEL BRIDGES, GIRDERS, AND STRUCTURAL STEELWORK. VIRGINIA BRIDGE AND IRON COMPANY, Roanoke, Va.
Filed May 1, 1914. Serial No. 77,940. PUBLISHED AUGUST 4, 1914.

100,457. FIREWORKS. EDWARD H. WAGNER, New York, N. Y.
Filed June 5, 1913. Serial No. 70,886. PUBLISHED JULY 14, 1914.

100,458. GRASS RUGS. WAITE GRASS CARPET CO., Oshkosh, Wis.
Filed May 8, 1914. Serial No. 78,143. PUBLISHED JULY 14, 1914.

100,459. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,805. PUBLISHED AUGUST 11, 1914.

100,460. SHOCK-ABSORBERS. WALKER-MOORE MANUFACTURING CO., Racine, Wis.
Filed June 19, 1914. Serial No. 79,220. PUBLISHED AUGUST 4, 1914.

100,461. CERTAIN NAMED CLOTHING. J. H. WAY & SONS CO., Philadelphia, Pa.
Filed May 20, 1914. Serial No. 78,480. PUBLISHED AUGUST 11, 1914.

100,462. CERTAIN NAMED KNITTED GARMENTS FOR MEN, WOMEN, AND CHILDREN. MAX WEINROTH, Philadelphia, Pa.
Filed February 6, 1914. Serial No. 75,743. PUBLISHED JULY 21, 1914.

100,463. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. E. WERTHEIMER ET CIE., Paris, France.
Filed January 8, 1914. Serial No. 75,041. PUBLISHED AUGUST 11, 1914.

100,464. FABRIC-CLEANER. GEORGE ERNEST WIGHTMAN, Portland Oreg.
Filed May 9, 1914. Serial No. 78,178. PUBLISHED AUGUST 11, 1914.

100,465. GINGER-BEER EXTRACT. J. F. WHELIHAN, Cedar Rapids, Iowa.
Filed July 23, 1914. Serial No. 80,021. PUBLISHED AUGUST 18, 1914.

100,466. WASHING FLUID. GRACE LILLIAN WILDE, East Quogue, N. Y.
Filed February 28, 1914. Serial No. 76,261. PUBLISHED AUGUST 11, 1914.

100,467. REMEDY FOR INDIGESTION, SOUR STOMACH, GASTRITIS, AND HEARTBURN, IN CAPSULE OR POWDERED FORM. GUY W. WILLIAMS, St. Louis, Mo.
Filed June 6, 1914. Serial No. 78,900. PUBLISHED AUGUST 11, 1914.

100,468. BICYCLES. THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y.
Filed June 2, 1914. Serial No. 78,756. PUBLISHED JULY 14, 1914.

100,469. CERTAIN DETERGENT PREPARATION. CHARLES A. WINTER, Rahway, N. J.
Filed February 28, 1912. Serial No. 61,788. PUBLISHED AUGUST 11, 1914.

100,470. IRONING-WAX. WIZARD PRODUCTS COMPANY, Chicago, Ill.
Filed July 10, 1914. Serial No. 79,726. PUBLISHED AUGUST 11, 1914.

100,471. NECKSCARFS. ISADORE DAVID WOLFSON, New York, N. Y.
Filed April 21, 1913. Serial No. 69,983. PUBLISHED JULY 28, 1914.

100,472. WORKMEN'S APRONS. ABBOT JACKET MANUFACTURING COMPANY, St. Louis, Mo.
Filed May 1, 1914. Serial No. 77,908. PUBLISHED JULY 21, 1914.

100,473. DRESS, NEGLIGÉE, AND WORK SHIRTS. ABRAMS & MARCUS, New York, N. Y.
Filed June 23, 1914. Serial No. 79,289. PUBLISHED JULY 21, 1914.

100,474. WHEAT-FLOUR. M. AINSA & SONS, INC., El Paso, Tex.
Filed June 25, 1914. Serial No. 79,349. PUBLISHED AUGUST 11, 1914.

100,475. CANES, PARASOLS, AND UMBRELLAS. ALLISON & LAMSON, New York, N. Y.
Filed June 30, 1914. Serial No. 79,469. PUBLISHED AUGUST 18, 1914.

100,476. FERTILIZERS. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed March 16, 1914. Serial No. 76,691. PUBLISHED AUGUST 18, 1914.

100,477. RUBBER BOOTS AND SHOES. AMERICAN RUBBER COMPANY, Boston, Mass.
Filed June 19, 1913. Serial No. 71,189. PUBLISHED AUGUST 18, 1914.

100,478. COMPOUNDS FOR THE PREVENTION OF MOISTURE ON GLASS SURFACES. ANTI-VAPOR CO., New York, N. Y.
Filed June 17, 1914. Serial No. 79,164. PUBLISHED AUGUST 18, 1914.

100,479. SARDINES. ARMOUR & COMPANY, Chicago, Ill.
Filed June 27, 1914. Serial No. 79,399. PUBLISHED AUGUST 11, 1914.

100,480. PERFUME, TOILET-WATER, TALCUM POWDER, COMPLEXION-POWDER, AND COLD-CREAM. THE ARTHUR CHEMICAL CO., New Haven, Conn.
Filed July 16, 1914. Serial No. 79,840. PUBLISHED AUGUST 18, 1914.

100,481. PORTLAND CEMENT. THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS (1900), LIMITED, London, England.
Filed July 14, 1914. Serial No. 79,772. PUBLISHED AUGUST 18, 1914.

100,482. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. A. & L. AUGUST, Fort Worth, Tex.
Filed February 10, 1913. Serial No. 68,417. PUBLISHED AUGUST 4, 1914.

100,483. PETTICOATS. MAX AUSPITZ, Chicago, Ill.
Filed July 17, 1914. Serial No. 79,864. PUBLISHED AUGUST 18, 1914.

100,484. CLOTHING AND CERTAIN NAMED ARTICLES OF MERCHANDISE ACCESSORY THERETO. GAYLORD A. BARCLEY, Newark, N. J.
Filed May 8, 1914. Serial No. 78,120. PUBLISHED AUGUST 18, 1914.

100,485. COLLARS. WILLIAM BARKER COMPANY, Watervliet, N. Y.
Filed June 9, 1914. Serial No. 78,913. PUBLISHED AUGUST 18, 1914.

100,486. STEAMER-RUGS. BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y.
Filed June 1, 1914. Serial No. 78,677. PUBLISHED JULY 28, 1914.

100,487. PERFUMERY, COSMETIC PREPARATIONS FOR THE HAIR, MOUTH, AND TEETH. P. BEIERSDORF & CO., Hamburg, Germany.
Filed July 7, 1914. Serial No. 79,595. PUBLISHED AUGUST 18, 1914.

100,488. CERTAIN NAMED KNIVES, SCISSORS, SHEARS, RAZORS, GARDENING-SAWS, AND PRUNING-SHEARS. HENRI BÉLIGNÉ, Langres, France.
Filed November 24, 1913. Serial No. 74,150. PUBLISHED AUGUST 11, 1914.

100,489. GRAPE-JUICE. DU BELLE GRAPE JUICE CO., Irondequoit, N. Y.
Filed July 9, 1914. Serial No. 79,659. PUBLISHED AUGUST 11, 1914.

100,490. MEN'S AND BOYS' OVERALLS, SHIRTS, AND BLOUSES. BERNE MANUFACTURING COMPANY, Berne, Ind.
Filed June 2, 1914. Serial No. 78,736. PUBLISHED AUGUST 18, 1914.

100,491. SURGICAL RUBBER GOODS, RUBBER TEATS AND NIPPLES, AND RUBBER SPONGES. LUDWIG BERTRAM, Hanover, Germany.
Filed August 30, 1913. Serial No. 72,590. PUBLISHED FEBRUARY 24, 1914.

100,492. RAIN-COATS. B. BIRNBAUM & SON, LIMITED, London, England.
Filed May 2, 1914. Serial No. 77,947. PUBLISHED AUGUST 18, 1914.

100,493. TRUCK-CHAINS. THE BROCKETT-GORHAM COMPANY, Marion, Ohio.
Filed May 19, 1914. Serial No. 78,381. PUBLISHED AUGUST 18, 1914.

100,494. LADIES', GENTLEMEN'S, AND CHILDREN'S HOSIERY. WILLIAM BROWN COMPANY, Philadelphia, Pa.
Filed July 22, 1914. Serial No. 79,980. PUBLISHED AUGUST 18, 1914.

100,495. LADIES', GENTLEMEN'S, AND CHILDREN'S HOSIERY. WILLIAM BROWN COMPANY, Philadelphia, Pa.
Filed July 22, 1914. Serial No. 79,981. PUBLISHED AUGUST 18, 1914.

100,496. LIQUID TONIC FOR POULTRY. DR. JAMES H. BURDICK, Sandwich, Ill.
Filed June 4, 1914. Serial No. 78,782. PUBLISHED AUGUST 18, 1914.

100,497. TALCUM POWDER. FRANK GAIUS BURKE, New York, N. Y.
Filed June 1, 1914. Serial No. 78,673. PUBLISHED AUGUST 18, 1914.

100,498. CERTAIN SPORTING GOODS AND GYMNASIUM APPARATUS. THE WILLIAM R. BURKHARD CO., St. Paul, Minn.
Filed April 21, 1914. Serial No. 77,614. PUBLISHED AUGUST 18, 1914.

100,499. ALE. BURKHARDT BREWING COMPANY, Boston, Mass.
Filed December 5, 1912. Serial No. 67,236. PUBLISHED AUGUST 11, 1914.

100,500. SHIRTS. BURNHAM-MUNGER-ROOT DRY GOODS CO., Kansas City, Mo.
Filed June 16, 1913. Serial No. 71,118. PUBLISHED AUGUST 18, 1914.

100,501. HOSIERY. JAMES WILLIAM CANNON, Concord, N. C.; and New York, N. Y.
Filed July 9, 1914. Serial No. 79,661. PUBLISHED AUGUST 11, 1914.

100,502. PREPARATION FOR THE TREATMENT OF CANCERS. JAMES N. CARRIGAN, Washington, D. C.
Filed April 29, 1914. Serial No. 77,856. PUBLISHED AUGUST 18, 1914.

100,503. CHIROPODISTS' KNIVES. CHALLENGE CUTLERY CORPORATION, Bridgeport, Conn.
Filed July 17, 1914. Serial No. 79,865. PUBLISHED AUGUST 18, 1914.

100,504. GEOMETRICAL INSETS, METAL AND WOODEN COUNTERS, COLOR-SPOOLS. THE HOUSE OF CHILDHOOD (INC.), New York, N. Y.
Filed January 20, 1913. Serial No. 68,011. PUBLISHED AUGUST 18, 1914.

100,505. METAL-POLISH. THE CINCINNATI OIL WORKS CO., Cincinnati, Ohio.
Filed May 28, 1914. Serial No. 78,600. PUBLISHED AUGUST 18, 1914.

100,506. TABLES AND STANDS. THE CLEVELAND METAL PRODUCTS COMPANY, Cleveland, Ohio.
Filed March 13, 1914. Serial No. 76,600. PUBLISHED AUGUST 18, 1914.

100,507. SHOCK-ABSORBERS. COBURN, JASON AND KLINE, San Francisco, Cal.
Filed March 30, 1914. Serial No. 77,052. PUBLISHED AUGUST 11, 1914.

100,508. PREPARATION FOR DESTROYING INSECTS. COCHRANE CO., Brooklyn, N. Y.
Filed April 11, 1914. Serial No. 77,407. PUBLISHED AUGUST 18, 1914.

100,509. COMBINATION FERTILIZER AND WORM AND WEED KILLER. THE COE-MORTIMER COMPANY, New York, N. Y.
Filed July 16, 1914. Serial No. 79,846. PUBLISHED AUGUST 18, 1914.

100,510. COMPOUND DIGESTIVE POWDER. ANDREW J. COLTON, Stapleton, N. Y.
Filed June 19, 1914. Serial No. 79,211. PUBLISHED AUGUST 18, 1914.

100,511. CERTAIN NAMED MEDICINES AND PREPARATIONS FOR TREATING CERTAIN DISEASES. THE CONSOLIDATED DRUG CO. INC., Washington, D. C.
Filed April 27, 1914. Serial No. 77,765. PUBLISHED AUGUST 18, 1914.

100,512. TOOTH-WASH AND ANTISEPTIC SOLUTION, EYE REMEDY. THE CONSOLIDATED DRUG CO. INC., Washington, D. C.
Filed April 27, 1914. Serial No. 77,767. PUBLISHED AUGUST 18, 1914.

100,513. REMEDY FOR COUGHS AND ALL AFFECTIONS OF THE THROAT. THE CONVENT CO., Morristown, N. J.
Filed May 7, 1914. Serial No. 78,058. PUBLISHED AUGUST 18, 1914.

100,514. LIQUID CLOTHES-CLEANER. CO-OPERATIVE DRUG MANUFACTURING COMPANY, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn.
Filed July 7, 1913. Serial No. 71,556. PUBLISHED AUGUST 18, 1914.

100,515. HOSIERY. THOMAS B. COPPENING, St. Louis, Mo.
Filed July 13, 1914. Serial No. 79,750. PUBLISHED AUGUST 18, 1914.

100,516. CERTAIN NAMED POULTRY FEEDS. CHAS. M. COX CO., Boston, Mass.
Filed March 20, 1913. Serial No. 69,198. PUBLISHED AUGUST 11, 1914.

100,517. WHEAT-FLOUR. THE CRESCENT MILL & ELEVATOR CO., Denver, Colo.
Filed June 6, 1914. Serial No. 78,902. PUBLISHED AUGUST 11, 1914.

100,518. WHEAT-FLOUR. CUSTER MILLING COMPANY, Custer, Okla.
Filed June 6, 1914. Serial No. 78,858. PUBLISHED AUGUST 11, 1914.

100,519. CEMENT. "DALMATIA" PORTLAND CEMENT WORKS COMPANY LTD., Trieste, Austria-Hungary.
Filed January 31, 1914. Serial No. 75,564. PUBLISHED AUGUST 18, 1914.

100,520. METAL-POLISH. DAVIS & FRENCH, Portland, Oreg.
Filed May 19, 1914. Serial No. 78,383. PUBLISHED AUGUST 18, 1914.

100,521. MUCILAGE, GLUE, SEALING-WAX, AND ADHESIVE PASTE. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Filed March 4, 1914. Serial No. 76,315. PUBLISHED AUGUST 18, 1914.

100,522. INSECTICIDES. DIAMOND STAR INSECTICIDE CO., Philadelphia, Pa.
Filed July 1, 1914. Serial No. 79,481. PUBLISHED AUGUST 18, 1914.

100,523. MALT EXTRACT. DIASTATIC MALT EXTRACT CO., Chicago, Ill.
Filed July 1, 1914. Serial No. 79,482. PUBLISHED AUGUST 11, 1914.

100,524. WATCHES, CLOCKS, WATCH CASES, SPRINGS, BELLS, HAMMERS, WORKS, HANDS, KEYS, AND DIALS. DIDISHEIM, GOLDSCHMIDT FILS ET CIE., FABRIQUE JUVENIA, La Chaux-de-Fonds, Switzerland.
Filed February 10, 1913. Serial No. 68,426. PUBLISHED AUGUST 18, 1914.

100,525. BRAIDS AND PASSEMENTERIE. DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhausen, Germany.
Filed October 2, 1913. Serial No. 73,180. PUBLISHED AUGUST 18, 1914.

100,526. BRAIDS AND PASSEMENTERIE. DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhausen, Germany.
Filed October 2, 1913. Serial No. 73,181. PUBLISHED AUGUST 18, 1914.

100,527. EXTRACT OF MALT AND HOPS. THE EBLING BREWING COMPANY, New York, N. Y.
Filed June 12, 1914. Serial No. 79,030. PUBLISHED JULY 14, 1914.

100,528. CHEWING-GUM. GEORGE ELMENDORF, Elmira, N. Y.
Filed June 5, 1914. Serial No. 78,831. PUBLISHED AUGUST 11, 1914.

100,529. TOILET-PINS AND NEEDLES FOR HAND-SEWING. J. ENGLISH & SON LIMITED, Redditch, England.
Filed July 13, 1914. Serial No. 79,752. PUBLISHED AUGUST 18, 1914.

100,530. STEEL PENS OF ALL KINDS. THE ESTERBROOK STEEL PEN MFG. CO., Camden, N. J.
Filed June 15, 1914. Serial No. 79,102. PUBLISHED AUGUST 18, 1914.

100,531. BELT-DRESSINGS. LEWIS S. EVANS, Pittsburgh, Pa.
Filed April 13, 1914. Serial No. 77,439. PUBLISHED AUGUST 18, 1914.

100,532. CERTAIN NAMED PENCILS, CHALK CRAYONS, PEN AND PENCIL HOLDERS AND CLIPS, AND RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed June 2, 1914. Serial No. 78,739. PUBLISHED AUGUST 18, 1914.

100,533. BRICK. FARR BRICK COMPANY, Cleveland, Ohio.
Filed July 13, 1914. Serial No. 79,753. PUBLISHED AUGUST 18, 1914.

100,534. SALT. JOHN FELDWISCH, St. Louis, Mo.
Filed April 9, 1914. Serial No. 77,343. PUBLISHED AUGUST 18, 1914.

100,535. PORT-WINE. DIEDERICH MATTHIAS FEUERHEERD, JUNIOR & COMPANHIA, Oporto, Portugal.
Filed May 29, 1914. Serial No. 78,651. PUBLISHED AUGUST 11, 1914.

100,536. LEATHER BOOTS AND SHOES. FITZGERALD, PHELPS & FARGO SHOE CO., Milwaukee, Wis.
Filed November 29, 1912. Serial No. 67,171. PUBLISHED AUGUST 18, 1914.

100,537. FRESH APPLES AND PEACHES. FRUITLAND ORCHARDS, INC., Staunton, Va.
Filed July 30, 1913. Serial No. 72,042. PUBLISHED AUGUST 11, 1914.

100,538. LEATHER, CANVAS, CLOTH, BUCKSKIN, AND RUBBER SHOES. ALBERT R. GARROD, New York, N. Y.
Filed May 8, 1914. Serial No. 78,123. PUBLISHED JULY 21, 1914.

100,539. MEN'S TROUSERS. GILLESPIE, SHIELDS & Co., Knoxville, Tenn.
Filed September 20, 1913. Serial No. 72,970. PUBLISHED FEBRUARY 3, 1914.

100,540. OIL-CLOTHES—NAMELY, TROUSERS, JACKETS, AND COATS. HARRY GOLDBERG, New York, N. Y.
Filed April 3, 1914. Serial No. 77,180. PUBLISHED JULY 28, 1914.

100,541. MEN'S WORK AND NEGLIGÉE SHIRTS. GOODMAN, COHEN & Co., New York, N. Y.
Filed July 1, 1914. Serial No. 79,486. PUBLISHED AUGUST 11, 1914.

100,542. LADIES', MISSES', AND CHILDREN'S SHOES MADE OF LEATHER OR LEATHER AND RUBBER OR RUBBER. C. GOTZIAN & COMPANY, St. Paul, Minn.
Filed June 12, 1914. Serial No. 79,032. PUBLISHED JULY 28, 1914.

100,543. STOVE-POLISH. ANNA V. GREGORY, Davenport, Cal.
Filed June 25, 1914. Serial No. 79,357. PUBLISHED AUGUST 18, 1914.

100,544. CERTAIN NAMED WOMEN'S GARMENTS. THE L. N. GROSS COMPANY, Cleveland, Ohio.
Filed July 23, 1914. Serial No. 80,000. PUBLISHED AUGUST 18, 1914.

100,545. COMPOUND USED TO BIND JOINTS IN PLUMBING AND ALL KINDS OF PIPE-FITTING. HALLY & SULLIVAN, Denver, Colo.
Filed June 12, 1914. Serial No. 79,034. PUBLISHED AUGUST 18, 1914.

100,546. HAMES AND PARTS THEREOF. U. S. HAME COMPANY, Buffalo, N. Y.
Filed July 22, 1914. Serial No. 79,995. PUBLISHED AUGUST 18, 1914.

100,547. WOVEN AND KNITTED UNDERWEAR, COMBINATION-GARMENTS, UNION SUITS, UNDERSHIRTS, DRAWERS, VESTS, AND BLOOMERS. NATHAN HATCH, Albany and Cohoes, N. Y.
Filed July 9, 1914. Serial No. 79,667. PUBLISHED AUGUST 18, 1914.

100,548. MEDICINE USED IN TREATING CERTAIN NAMED DISEASES. THE HENSEL CHEMICAL WORKS, Sioux City, Iowa.
Filed June 2, 1914. Serial No. 78,747. PUBLISHED AUGUST 18, 1914.

100,549. HANDKERCHIEFS. HERRMANN, AUKAM & Co., New York, N. Y.
Filed July 11, 1914. Serial No. 79,732. PUBLISHED AUGUST 18, 1914.

100,550. SURGICAL BANDAGES. GUILLAUME HOFFMANN, Brussels, Belgium.
Filed January 15, 1914. Serial No. 75,195. PUBLISHED AUGUST 18, 1914.

100,551. COMPOUND OF ENZYMS OR FERMENTS FOR THE CONVERSION OF FOOD-ASSIMILABLE PRODUCTS. E. S. HOLT COMPANY—MANUFACTURING PHARMACISTS, INCORPORATED, Cedar Rapids, Iowa.
Filed July 18, 1914. Serial No. 79,909. PUBLISHED AUGUST 18, 1914.

100,552. NAIL-POLISH. RICHARD HUDNUT, New York, N. Y.
Filed July 16, 1914. Serial No. 79,851. PUBLISHED AUGUST 18, 1914.

100,553. NAIL-POLISH. RICHARD HUDNUT, New York, N. Y.
Filed July 17, 1914. Serial No. 79,874. PUBLISHED AUGUST 18, 1914.

100,554. BATH-TUBS AND WASHSTANDS, BOWLS, CLOSETS, PIPES, AND FITTINGS. IMPROVED SANITARY FIXTURE COMPANY, Los Angeles, Cal.
Filed September 4, 1913. Serial No. 72,681. PUBLISHED AUGUST 11, 1914.

100,555. COMPOUND FOR REMOVING CARBON. ANDERS G. JOHNSON, Chicago, Ill.
Filed March 28, 1913. Serial No. 69,387. PUBLISHED AUGUST 18, 1914.

100,556. FRICTION-TAPE FOR WHEEL-TIRES AND VULCANIZING-CEMENT. THE JOHNSTOWN AUTOMOBILE CO., Johnstown, Pa.
Filed July 9, 1914. Serial No. 79,669. PUBLISHED AUGUST 18, 1914.

100,557. TRUNKS, SUITCASES, AND TRAVELING-BAGS. THE KAMLEE COMPANY, Milwaukee, Wis.
Filed June 4, 1914. Serial No. 78,814. PUBLISHED AUGUST 18, 1914.

100,558. PINS OF THE TYPE USUALLY DESIGNATED AS TOILET-PINS. JAMES KELLEY, Winsted, Conn.
Filed June 22, 1912. Serial No. 64,325. PUBLISHED AUGUST 18, 1914.

100,559. SHOCK-ABSORBERS. KEYSTONE SHOCK ABSORBER CO., Pittsburgh, Pa.
Filed November 22, 1913. Serial No. 74,139. PUBLISHED JULY 21, 1914.

100,560. HOSIERY. WM. B. KOHLMAN, New Orleans, La.
Filed January 27, 1913. Serial No. 68,143. PUBLISHED AUGUST 18, 1914.

100,561. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. KOKEN BARBERS' SUPPLY CO., St. Louis, Mo.
Filed February 10, 1914. Serial No. 75,822. PUBLISHED AUGUST 18, 1914.

100,562. CERTAIN NAMED FUR GARMENTS. KRUSKAL & KRUSKAL, New York, N. Y.
Filed July 10, 1914. Serial No. 79,711. PUBLISHED AUGUST 18, 1914.

100,563. SILK PIECE GOODS. M. KUREMANS SONS, New York, N. Y.
Filed May 18, 1914. Serial No. 78,355. PUBLISHED AUGUST 18, 1914.

100,564. TIRE-PUNCTURE COMPOUND. LACKLAND BROTHERS, Fort Worth, Tex.
Filed June 10, 1914. Serial No. 78,949. PUBLISHED AUGUST 18, 1914.

100,565. SARSAPARILLA. LANMAN & KEMP, New York, N. Y.
Filed June 18, 1914. Serial No. 79,205. PUBLISHED AUGUST 18, 1914.

100,566. GATHERING-TANKS. THE LEADER EVAPORATOR COMPANY, Burlington, Vt.
Filed January 16, 1914. Serial No. 75,232. PUBLISHED AUGUST 18, 1914.

100,567. COATS, TROUSERS, FANCY AND DRESS WAISTCOATS, AND OVERCOATS. J. F. LENIGAN Co., New York, N. Y.
Filed June 29, 1914. Serial No. 79,433. PUBLISHED AUGUST 11, 1914.

100,568. CERTAIN NAMED MATERIALS USED IN MANUFACTURING LADIES' GARMENTS IN PIECE FORM. LEVOR & IGSTAEDTER, New York, N. Y.
Filed May 16, 1914. Serial No. 78,330. PUBLISHED AUGUST 18, 1914.

100,569. ICE-CREAM, BUTTER, MILK, AND CREAM. THE LICKING CREAMERY COMPANY, Newark, Ohio.
Filed January 6, 1911. Serial No. 53,704. PUBLISHED DECEMBER 24, 1912.

100,570. BREAD, COOKIES, CAKES, PIES, ROLLS, BISCUITS, AND BUNS. LIMLE & COMPANY, Geneseo, Ill.
Filed April 6, 1914. Serial No. 77,244. PUBLISHED AUGUST 11, 1914.

100,571. BOOTS AND SHOES OF LEATHER AND OF LEATHER AND CLOTH. A. E. LITTLE & COMPANY, Lynn, Mass.
Filed July 21, 1914. Serial No. 79,963. PUBLISHED AUGUST 18, 1914.

100,572. BRICKS AND TILES FOR FURNACE-ARCHES. LOCOMOTIVE ARCH BRICK COMPANY, Chicago, Ill.
Filed February 4, 1914. Serial No. 75,680. PUBLISHED AUGUST 18, 1914.

100,573. PULP-BOARD. MACANDREWS & FORBES COMPANY, Camden, N. J., and New York, N. Y.
Filed June 26, 1913. Serial No. 71,385. PUBLISHED AUGUST 18, 1914.

100,574. SMOKING-PIPES. MAIER PIPE COMPANY, Wilmington, Del.
Filed May 26, 1914. Serial No. 78,560. PUBLISHED AUGUST 18, 1914.

100,575. DRESS, NEGLIGÉE, AND WORK SHIRTS. ABRAMS & MARCUS, New York, N. Y.
Filed June 23, 1914. Serial No. 79,288. PUBLISHED JULY 21, 1914.

100,576. WINE APPETIZER. MARIANI AND COMPANY, New York, N. Y., and Paris, France.
Filed July 1, 1914. Serial No. 79,494. PUBLISHED AUGUST 11, 1914.

100,577. HAIR-NETS. MARLOWE MANUFACTURING COMPANY, New York, N. Y.
Filed June 25, 1914. Serial No. 79,364. PUBLISHED AUGUST 18, 1914.

100,578. CORSETS. JORDAN MARSH COMPANY, Boston, Mass.
Filed July 2, 1914. Serial No. 79,518. PUBLISHED AUGUST 11, 1914.

100,579. CANDY. MASKEY'S, INC., San Francisco, Cal.
Filed June 6, 1914. Serial No. 78,874. PUBLISHED AUGUST 11, 1914.

100,580. MEDICINAL LINIMENT. HARRY W. MCCHESNEY, St. Louis, Mo.
Filed July 1, 1914. Serial No. 79,495. PUBLISHED AUGUST 18, 1914.

100,581. WRITING-PAPER. MCCLELLAN PAPER COMPANY, Minneapolis, Minn.
Filed June 15, 1914. Serial No. 79,111. PUBLISHED AUGUST 18, 1914.

100,582. SALAD-DRESSINGS. MAE ALICE MEIER, St. Louis, Mo.
Filed July 1, 1914. Serial No. 79,496. PUBLISHED AUGUST 11, 1914.

100,583. DRESS, NEGLIGÉE, AND UNDER SHIRTS, PAJAMAS, DRAWERS, LADIES' WAISTS, BATHROBES, KIMONOS, COLLARS, AND OPERA-COATS. MENDELSON BROS., INC., San Francisco, Cal.
Filed August 20, 1913. Serial No. 72,444. PUBLISHED AUGUST 4, 1914.

100,584. SALVES USED EXTERNALLY FOR CERTAIN NAMED AILMENTS. THE MEN-THO-MAGIC CO., Mechanicsville, N. Y.
Filed July 7, 1914. Serial No. 79,606. PUBLISHED AUGUST 18, 1914.

100,585. SUITS AND OVERCOATS FOR MEN AND BOYS. MISSOULA MERCANTILE COMPANY, Missoula, Mont.
Filed May 21, 1913. Serial No. 70,528. PUBLISHED NOVEMBER 4, 1913.

100,586. CANNED CORN. THE MOLLEN, THOMPSON & JAMES COMPANY, Cleveland, Ohio.
Filed November 13, 1913. Serial No. 73,950. PUBLISHED AUGUST 11, 1914.

100,587. EYE-WATER. T. V. MOREAU COMPANY, Minneapolis, Minn.
Filed December 5, 1913. Serial No. 74,404. PUBLISHED AUGUST 11, 1914.

100,588. MEDICINAL PREPARATION USED IN TREATING DISEASES OF THE TEETH AND MOUTH. RICHARD J. MORO, New York, N. Y.
Filed June 10, 1914. Serial No. 78,952. PUBLISHED AUGUST 18, 1914.

100,589. METAL-POLISH. BERNARD MORGAN, Newport, R. I.
Filed June 13, 1914. Serial No. 79,079. PUBLISHED AUGUST 18, 1914.

100,590. METAL-POLISH. BERNARD MORGAN, Newport, R. I.
Filed June 15, 1914. Serial No. 79,115. PUBLISHED AUGUST 18, 1914.

100,591. TEMPERING COMPOUND. BESSIE LEE MOSSO, Chicago, Ill.
Filed July 17, 1914. Serial No. 79,887. PUBLISHED AUGUST 18, 1914.

100,592. REMEDY FOR PILES. LEVI B. MYERS, Altoona, Pa.
Filed June 23, 1914. Serial No. 79,301. PUBLISHED AUGUST 18, 1914.

100,593. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed April 28, 1914. Serial No. 77,842. PUBLISHED AUGUST 11, 1914.

100,594. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,803. PUBLISHED AUGUST 18, 1914.

100,595. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,790. PUBLISHED AUGUST 18, 1914.

100,596. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,791. PUBLISHED AUGUST 18, 1914.

100,597. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,792. PUBLISHED AUGUST 18, 1914.

100,598. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,793. PUBLISHED AUGUST 18, 1914.

100,599. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,801. PUBLISHED AUGUST 18, 1914.

100,600. LEATHER, CANVAS, AND CLOTH SHOES. A. E. NETTLETON COMPANY, Syracuse, N. Y.
Filed July 31, 1913. Serial No. 72,081. PUBLISHED AUGUST 18, 1914.

100,601. FRESH APPLES. OAKGLEN APPLE GROWERS' ASSOCIATION, Oakglen, Cal.
Filed June 10, 1914. Serial No. 78,957. PUBLISHED AUGUST 11, 1914.

100,602. JUNIPER BRANDY. THE OHIO BRANDY DISTILLING COMPANY, Cleveland, Ohio.
Filed June 15, 1914. Serial No. 79,120. PUBLISHED AUGUST 11, 1914.

100,603. DRESS AND NEGLIGÉE SHIRTS, NIGHTSHIRTS, AND PAJAMAS. OSHINSKY & VALENTINE, New York, N. Y.
Filed June 12, 1914. Serial No. 79,039. PUBLISHED JULY 28, 1914.

100,604. MEN'S, WOMEN'S, AND CHILDREN'S COATS, SUITS, DRESSES, WAISTS, SKIRTS, KIMONOS, AND DRESSING-SACKS. THE PANARD COMPANY, New York, N. Y.
Filed June 23, 1914. Serial No. 79,303. PUBLISHED AUGUST 4, 1914.

100,605. KNITTED CAPS, HOODS, SWEATERS, SKIRTS, GLOVES, MITTENS, TIGHTS, DRAWERS, SOCKS, STOCKINGS, AND LEGGINGS. F. A. PATRICK & Co., Duluth, Minn.
Filed June 17, 1914. Serial No. 79,178. PUBLISHED JULY 21, 1914.

100,606. CERTAIN NAMED TEXTILE FABRICS. F. A. PATRICK & Co., Duluth, Minn.
Filed July 8, 1914. Serial No. 79,644. PUBLISHED AUGUST 18, 1914.

100,607. TOILET POWDER. H. C. PAULSEN & SON, Baton Rouge, La.
Filed May 1, 1914. Serial No. 77,933. PUBLISHED AUGUST 18, 1914.

100,608. MEDICINAL TABLETS TO BE USED AS A MILD CATHARTIC. LORENZO DOW PERRY, Buffalo, N. Y., assignor to Park Manufacturing Company, Incorporated, Buffalo, N. Y., a Corporation of New York.
Filed January 17, 1914. Serial No. 75,265. PUBLISHED AUGUST 18, 1914.

100,609. SELF-RISING FLOUR. PHOENIX FLOUR MILL, Evansville, Ind.
Filed June 6, 1914. Serial No. 78,882. PUBLISHED AUGUST 11, 1914.

100,610. SILK RIBBON AND SILK PIECE GOODS. PHOENIX SILK MFG. CO., New York, N. Y., and Paterson, N. J.
Filed September 16, 1913. Serial No. 72,893. PUBLISHED DECEMBER 16, 1913.

100,611. LIQUID CHOCOLATE PREPARATIONS. P. G. PICKMAN & BROS. INC., New York, N. Y.
Filed March 16, 1914. Serial No. 76,705. PUBLISHED AUGUST 11, 1914.

100,612. ROOFING-FELT AND ROOFING-PAPER. PIERCE HARDWARE COMPANY, Taunton, Mass.
Filed January 5, 1914. Serial No. 74,978. PUBLISHED AUGUST 18, 1914.

100,613. PREPARATION FOR CLEANING ENAMELED AND PORCELAIN WARE. PORCELA-RADAX COMPANY, Pittsburgh, Pa.
Filed June 9, 1914. Serial No. 78,931. PUBLISHED AUGUST 18, 1914.

100,614. DOG-SOAP. POTTER & WRIGHTINGTON, Boston, Mass.
Filed May 27, 1914. Serial No. 78,588. PUBLISHED AUGUST 18, 1914.

100,615. TANNING GREASES AND OILS. L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany.
Filed February 6, 1914. Serial No. 75,734. PUBLISHED AUGUST 18, 1914.

100,616. SOAP FOR LAUNDRY PURPOSES. THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio.
Filed April 28, 1914. Serial No. 77,845. PUBLISHED AUGUST 18, 1914.

100,617. HOSIERY. PROTEX HOSIERY COMPANY, Boston, Mass.
Filed November 4, 1913. Serial No. 73,794. PUBLISHED DECEMBER 16, 1913.

100,618. VACUUM-CLEANERS. RICHMOND RADIATOR COMPANY, New York, N. Y.
Filed June 22, 1914. Serial No. 79,275. PUBLISHED AUGUST 11, 1914.

100,619. CARRIAGES AND BUGGIES. RELIANCE BUGGY CO., St. Louis, Mo.
Filed May 21, 1914. Serial No. 78,458. PUBLISHED AUGUST 18, 1914.

100,620. BAKING-POWDER AND BAKING-SODA. RELIANCE MFG. CO., Rock Stream, N. Y.
Filed June 24, 1914. Serial No. 79,337. PUBLISHED AUGUST 18, 1914.

100,621. BREAD. REUSSOW & TROY, Mohawk, N. Y.
Filed July 1, 1914. Serial No. 79,500. PUBLISHED AUGUST 11, 1914.

100,622. HANDKERCHIEFS AND SERVIETTES. ALEXANDER G. RITCHIE, New York, N. Y.
Filed July 6, 1914. Serial No. 79,584. PUBLISHED AUGUST 18, 1914.

100,623. EMBROIDERY. HERMANN RICHTER, Denver, Colo.
Filed July 17, 1914. Serial No. 79,891. PUBLISHED AUGUST 18, 1914.

100,624. SOLID LINIMENT IN COLLAPSIBLE TUBES. RHEUMEOLUM CHEM. CO., Seattle, Wash.
Filed June 20, 1914. Serial No. 79,308. PUBLISHED AUGUST 18, 1914.

100,625. COMPOUND OF BUCHU AND GIN. ROTHSCHILD BROS., Philadelphia, Pa.
Filed July 16, 1914. Serial No. 79,852. PUBLISHED AUGUST 18, 1914.

100,626. MEN'S COATS, VESTS, AND TROUSERS. THE ROYAL TAILORS, Chicago, Ill.
Filed June 6, 1914. Serial No. 78,884. PUBLISHED JULY 14, 1914.

100,627. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 21, 1914. Serial No. 78,450. PUBLISHED AUGUST 18, 1914.

100,628. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed June 30, 1914. Serial No. 79,466. PUBLISHED AUGUST 11, 1914.

100,629. RIFLES, PISTOLS, AND CARTRIDGES. SAVAGE ARMS COMPANY, Frankfort, N. Y.
Filed April 25, 1913. Serial No. 70,070. PUBLISHED AUGUST 18, 1914.

100,630. CASES FOR TOILET ARTICLES. NEWTON L. SCHLOSS, New York, N. Y., assignor to Ovanite Company, New York, N. Y., a Corporation of New York.
Filed July 9, 1914. Serial No. 79,684. PUBLISHED AUGUST 18, 1914.

100,631. PAPER WALL-COVERING. THE SCHMITZ-HORNING CO., Cleveland, Ohio.
Filed June 8, 1914. Serial No. 78,909. PUBLISHED AUGUST 18, 1914.

100,632. PIANOS AND PIANO-PLAYERS. THE SCHUBERT PIANO CO., New York, N. Y.
Filed June 6, 1914. Serial No. 78,890. PUBLISHED AUGUST 18, 1914.

100,633. LAGER-BEER. THE GOTTLIEB BAUERNSCHMIDT STRAUS BREWING COMPANY, Baltimore, Md.
Filed July 24, 1913. Serial No. 71,945. PUBLISHED AUGUST 18, 1914.

100,634. LADIES', MISSES', JUNIORS', AND CHILDREN'S DRESSES. SHAPIRO BROS., New York, N. Y.
Filed June 24, 1913. Serial No. 71,344. PUBLISHED AUGUST 11, 1914.

100,635. WAISTS AND BLOUSES. SHAPIRO BROS., New York, N. Y.
Filed June 24, 1913. Serial No. 71,345. PUBLISHED AUGUST 11, 1914.

100,636. EVAPORATED MILK. THE SHEBOYGAN EVAPORATED MILK CO., Sheboygan and Jefferson, Wis.
Filed June 2, 1914. Serial No. 78,755. PUBLISHED AUGUST 11, 1914.

100,637. TEA. SHEPPARD-STRASSHEIM CO., Chicago, Ill.
Filed June 11, 1914. Serial No. 70,012. PUBLISHED AUGUST 11, 1914.

100,638. LAXATIVE. SMITH, KLINE & FRENCH CO., Philadelphia, Pa.
Filed July 11, 1914. Serial No. 79,743. PUBLISHED AUGUST 18, 1914.

100,639. SANITARY SHIELDS. SPRAGUE SANITARY SHIELD CO. INC., Minneapolis, Minn.
Filed June 1, 1914. Serial No. 78,715. PUBLISHED AUGUST 4, 1914.

100,640. SALAD-OIL MADE FROM COTTON-SEED, TOMATO CATSUP, WHITE VINEGAR, AND CIDER VINEGAR. SPITALNIK & BUSHEL, New York, N. Y.
Filed March 27, 1914. Serial No. 77,004. PUBLISHED AUGUST 11, 1914.

100,641. DRESS-SKIRTS AND UNDERSKIRTS FOR WOMEN. STEINBERG BROS., INC., New York, N. Y.
Filed June 6, 1914. Serial No. 78,888. PUBLISHED JULY 21, 1914.

100,642. COTTON PIECE GOODS. L. & E. STIRN, New York, N. Y.
Filed July 6, 1914. Serial No. 79,587. PUBLISHED AUGUST 18, 1914.

100,643. LIQUID COCOA, CHOCOLATE, PUDDING-POWDERS, JELLY-POWDERS, AND WHIPPED CREAM. HENRY VICTOR STOLLWERCK, New York, N. Y.
Filed June 30, 1914. Serial No. 79,467. PUBLISHED AUGUST 11, 1914.

100,644. WOMEN'S AND CHILDREN'S BLOUSES AND DRESSES. CARL STRAUSS, Paris, France.
Filed June 26, 1914. Serial No. 79,393. PUBLISHED AUGUST 4, 1914.

100,645. BRAIDS. STRAUSS BROS. & CO., New York, N. Y.
Filed July 27, 1914. Serial No. 80,107. PUBLISHED AUGUST 18, 1914.

100,646. SHOE-DRESSING FOR WHITE SHOES. JAMES F. SULLIVAN, Camden, N. J.
Filed July 18, 1914. Serial No. 79,921. PUBLISHED AUGUST 18, 1914.

100,647. SALTED PEANUTS. SUPERIOR PEANUT COMPANY, Cleveland, Ohio.
Filed August 21, 1909. Serial No. 44,278. PUBLISHED AUGUST 11, 1914.

100,648. OVERALLS, TROUSERS, NEGLIGÉE AND WORK SHIRTS. SWEET, ORR & CO. INC., New York, N. Y.
Filed June 13, 1914. Serial No. 79,091. PUBLISHED AUGUST 18, 1914.

100,649. PETTICOATS. LILLIAN L. TAFT, Boston, Mass.
Filed June 18, 1914. Serial No. 79,233. PUBLISHED AUGUST 18, 1914.

100,650. GUMS. CHAS. S. TANNER COMPANY, Providence, R. I.
Filed May 18, 1914. Serial No. 78,374. PUBLISHED AUGUST 18, 1914.

100,651. CERTAIN NAMED CHEMICAL AND PHARMACEUTICAL PREPARATIONS. C. C. TRUAX & COMPANY, Toledo, Ohio.
Filed August 9, 1913. Serial No. 72,267. PUBLISHED AUGUST 11, 1914.

100,652. CERTAIN NAMED MATERIALS USED IN CONSTRUCTION AND MAINTENANCE OF PAVEMENTS AND ROADS. UNIONITE CO., Philadelphia, Pa.
Filed July 10, 1914. Serial No. 79,725. PUBLISHED AUGUST 18, 1914.

100,653. SALT. THE UNION SALT COMPANY, Cleveland, Ohio.
Filed June 11, 1914. Serial No. 79,016. PUBLISHED AUGUST 18, 1914.

100,654. SALT. THE UNION SALT COMPANY, Cleveland, Ohio.
Filed June 11, 1914. Serial No. 79,019. PUBLISHED AUGUST 18, 1914.

100,655. SALT. THE UNION SALT COMPANY, Cleveland, Ohio.
Filed June 11, 1914. Serial No. 79,020. PUBLISHED AUGUST 18, 1914.

100,656. HUNTING COATS AND VESTS. VES TONG MANUFACTURING CO., Wenona, Ill.
Filed May 13, 1910. Serial No. 49,706. PUBLISHED AUGUST 11, 1914.

100,657. CABINETS FOR HOLDING OR STORING TALKING-MACHINE RECORDS. VICTOR TALKING MACHINE COMPANY, Camden, N. J.
Filed July 1, 1914. Serial No. 79,501. PUBLISHED AUGUST 18, 1914.

100,658. MEN'S, WOMEN'S, AND CHILDREN'S HATS. VOGUE HAT COMPANY, New York, N. Y.
Filed March 4, 1914. Serial No. 76,334. PUBLISHED JULY 21, 1914.

100,659. CANNED VEGETABLES, CANNED FRUITS, AND CANNED FISH. HENRY VON GLAHN & SON, Brooklyn, N. Y.
Filed July 6, 1912. Serial No. 64,600. PUBLISHED AUGUST 11, 1914.

100,660. THREADS AND YARNS OF LINEN, SILK, COTTON, WOOL, JUTE, AND RAMIE. PH. VRAU & CIE., Lille, France.
Filed September 30, 1913. Serial No. 73,138. PUBLISHED AUGUST 18, 1914.

100,661. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed February 17, 1913. Serial No. 68,596. PUBLISHED APRIL 22, 1913.

100,662. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed July 21, 1914. Serial No. 79,977. PUBLISHED AUGUST 18, 1914.

100,663. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed July 21, 1914. Serial No. 79,978. PUBLISHED AUGUST 18, 1914.

100,664. SOAP. WM. WALTKE & Co., St. Louis, Mo.
Filed June 22, 1914. Serial No. 79,286. PUBLISHED AUGUST 18, 1914.

100,665. BITUMINOUS CEMENT. WARREN BROTHERS COMPANY, Boston, Mass.
Filed January 18, 1912. Serial No. 60,886. PUBLISHED AUGUST 18, 1914.

100,666. WINDOW-WASHING PREPARATION. WATERLESS WINDOW WASHER MANUFACTURING COMPANY, Winchester, Ky.
Filed June 17, 1914. Serial No. 79,186. PUBLISHED AUGUST 18, 1914.

100,667. SEEDS, BULBS, PLANTS, AND ROOTS, BRANCHES, SLIPS, AND LIKE PARTS THEREOF. GT. VAN WAVEREN & KRUIJFF, Philadelphia, Pa.
Filed October 24, 1913. Serial No. 73,592. PUBLISHED AUGUST 11, 1914.

100,668. CERTAIN NAMED LINEN ARTICLES AND LINEN PIECE GOODS. WEBB & COMPANY, Newtownards, Ireland.
Filed December 13, 1913. Serial No. 74,604. PUBLISHED AUGUST 18, 1914.

100,669. PERFUMERY, TOILET WATERS, AND FACE-TINTS. E. WERTHEIMER ET CIE., Paris, France.
Filed May 24, 1912. Serial No. 63,762. PUBLISHED AUGUST 11, 1914.

100,670. PERFUMERY AND FACE-TINTS. E. WERTHEIMER ET CIE., Paris, France.
Filed May 24, 1912. Serial No. 63,764. PUBLISHED AUGUST 18, 1914.

100,671. BEER. THE WETTERER BREWING COMPANY, Cincinnati, Ohio.
Filed July 7, 1914. Serial No. 79,620. PUBLISHED AUGUST 11, 1914.

100,672. BEER. THE WETTERER BREWING COMPANY, Cincinnati, Ohio.
Filed July 16, 1914. Serial No. 79,845. PUBLISHED AUGUST 11, 1914.

100,673. REMEDY EXTERNALLY AS A LINIMENT AND INTERNALLY AS A STIMULANT, ANTISEPTIC, ANTISPASMODIC, AND CARMINATIVE. WHITMAN CHEMICAL CO., INC., Boston, Mass.
Filed July 15, 1914. Serial No. 79,828. PUBLISHED AUGUST 18, 1914.

100,674. REMEDY FOR CERTAIN NAMED DISEASES AND AILMENTS. THE H. C. WHITMER COMPANY, Columbus, Ind.
Filed February 17, 1914. Serial No. 75,975. PUBLISHED AUGUST 18, 1914.

100,675. ANTISEPTIC LOTION. HORACE WILCOX, Wakefield, R. I.
Filed July 28, 1914. Serial No. 80,143. PUBLISHED AUGUST 18, 1914.

100,676. EVAPORATED MILK. SOMETIMES CALLED CONDENSED MILK. THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio.
Filed April 10, 1914. Serial No. 77,399. PUBLISHED AUGUST 11, 1914.

100,677. GAMES. WILEY-SPENCER COMPANY, Los Angeles, Cal.
Filed May 25, 1914. Serial No. 78,542. PUBLISHED AUGUST 18, 1914.

100,678. CLOTHS AND STUFFS OF WOOL, WORSTED, OR HAIR. JOHN WILSON (GILDERSOME) LTD., Gildersome, England.
Filed March 18, 1914. Serial No. 76,758. PUBLISHED AUGUST 18, 1914.

100,679. CHILDREN'S, MISSES', AND WOMEN'S OUTER GARMENTS — VIZ., COATS AND CAPES. WING PATENT GARMENT CO., New York, N. Y.
Filed June 24, 1914. Serial No. 79,347. PUBLISHED JULY 21, 1914.

100,680. LEATHER BOOTS AND SHOES. GEO. D. WITT SHOE CO., Lynchburg, Va.
Filed June 23, 1914. Serial No. 79,307. PUBLISHED AUGUST 11, 1914.

100,681. MOPS. WIZARD PRODUCTS COMPANY, Chicago, Ill.
Filed October 16, 1913. Serial No. 73,432. PUBLISHED FEBRUARY 3, 1914.

100,682. MOPS. WIZARD PRODUCTS COMPANY, Chicago, Ill.
Filed November 3, 1913. Serial No. 73,761. PUBLISHED FEBRUARY 3, 1914.

100,683. COTTON PIECE GOODS AND COTTON AND SILK PIECE GOODS. GEORGE H. WOLF, New York, N. Y.
Filed July 2, 1914. Serial No. 79,526. PUBLISHED AUGUST 18, 1914.

100,684. SALT FOR BATH AND BATHING PURPOSES. WORCESTER SALT CO., Silver Springs and New York, N. Y.
Filed July 9, 1914. Serial No. 79,689. PUBLISHED AUGUST 18, 1914.

100,685. GOLF-BALLS. WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass.
Filed May 11, 1914. Serial No. 78,213. PUBLISHED JULY 21, 1914.

100,686. PREPARATION FOR THE TREATMENT OF THE SKIN. CHAUNCEY F. YORK, Detroit, Mich.
Filed July 14, 1914. Serial No. 79,793. PUBLISHED AUGUST 11, 1914.

100,687. PAPER BOXES. YORK-BRADFORD CO., San Francisco, Cal.
Filed May 20, 1914. Serial No. 78,431. PUBLISHED AUGUST 18, 1914.

100,688. LENSES FOR SCIENTIFIC USE, PRISMS, &c. CARL ZEISS, Jena, Germany.
Filed May 28, 1914. Serial No. 78,633. PUBLISHED AUGUST 11, 1914.

100,689. LENSES FOR SCIENTIFIC USE, PRISMS, &c. CARL ZEISS, Jena, Germany.
Filed May 28, 1914. Serial No. 78,634. PUBLISHED AUGUST 11, 1914.

100,690. SHOE-EYELETS, HOOKS, BUTTONS, BUCKLES, LACE-LOOPS, SNAP-FASTENERS, AND BASE-METAL OR COMPOSITION BUTTONS. ROBERT ZINN & CO., GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Barmen-Rittershausen, Germany.
Filed April 10, 1914. Serial No. 77,401. PUBLISHED JULY 14, 1914.

100,691. TABLE-SYRUP. ALABAMA-GEORGIA SYRUP CO., Montgomery, Ala.
Filed May 19, 1914. Serial No. 78,376. PUBLISHED AUGUST 11, 1914.

100,692. CANDY, SALTED PEANUTS, PEANUT-BUTTER. ALLEN & SMITH COMPANY, INC., Richmond, Va.
Filed April 27, 1914. Serial No. 77,762. PUBLISHED AUGUST 11, 1914.

100,693. SILOS. THE CANTON CULVERT COMPANY, Canton, Ohio.
Filed December 16, 1913. Serial No. 74,630. PUBLISHED JULY 21, 1914.

100,694. IMITATION PLASTER, SOLID WOOD, AND COMMERCIAL VENEER. THE PHILIP CAREY MANUFACTURING CO., Lockland, Ohio.
Filed January 7, 1914. Serial No. 75,012. PUBLISHED JULY 14, 1914.

100,695. AEROPLANES, MOTOR-BOATS, (OTHER THAN ELECTRIC,) AUTOMOBILE VEHICLES, AND BICYCLES, AND THEIR PARTS. CYKLON MASCHINENFABRIK M. B. H., Berlin, Germany.
Filed March 10, 1914. Serial No. 76,490. PUBLISHED AUGUST 11, 1914.

100,696. DENTAL CEMENT-TUBES. HENRY L. CRUTTENDEN, Northfield, Minn.
Filed January 8, 1914. Serial No. 75,024. PUBLISHED JULY 28, 1914.

100,697. STATUARY AND IMAGES. DAPRATO STATUARY COMPANY, Chicago, Ill.
Filed April 20, 1914. Serial No. 77,581. PUBLISHED AUGUST 11, 1914.

100,698. WHEAT-FLOUR. DOUD MILLING COMPANY, Manning and Denison, Iowa.
Filed July 20, 1912. Serial No. 64,834. PUBLISHED AUGUST 19, 1913.

100,699. FERTILIZERS. EMPIRE COTTON OIL CO., Atlanta, Ga.
Filed April 17, 1914. Serial No. 77,525. PUBLISHED JULY 21, 1914.

100,700. TABLE-SYRUPS, SORGHUM, AND MAPLE-SYRUP MOLASSES. FARRELL & CO., Omaha, Nebr.
Filed April 22, 1914. Serial No. 77,648. PUBLISHED AUGUST 11, 1914.

100,701. FARINACEOUS COMPOUND WITH FRUIT FLAVORINGS. THE FRUIT PUDDINE CO., Baltimore, Md.
Filed April 1, 1914. Serial No. 77,126. PUBLISHED AUGUST 11, 1914.

100,702. CANDIED POPCORN. VINCENT J. GORLY, St. Louis, Mo.
Filed March 30, 1914. Serial No. 77,057. PUBLISHED AUGUST 11, 1914.

100,703. INNER AND OUTER TUBES FOR PNEUMATIC TIRES. GREENSBURG TIRE & RUBBER CO., Greensburg, Pa.
Filed February 25, 1914. Serial No. 76,133. PUBLISHED AUGUST 4, 1914.

100,704. INNER TUBES FOR PNEUMATIC TIRES. GREENSBURG TIRE & RUBBER CO., Greensburg, Pa.
Filed February 25, 1914. Serial No. 76,134. PUBLISHED AUGUST 4, 1914.

100,705. SHOES, SLIPPERS, AND BOOTS MADE WHOLLY OR IN PART OF LEATHER OR CANVAS. OTTO H. HASSEL, Chicago, Ill.
Filed May 20, 1912. Serial No. 63,668. PUBLISHED JUNE 24, 1913.

100,706. NITRATING LIQUIDS. ARTHUR HOUGH, Cholsy, Quebec, Canada.
Filed March 27, 1914. Serial No. 76,992. PUBLISHED AUGUST 11, 1914.

100,707. WORK-SHIRTS AND OVERALLS. JOHN E. HURST & COMPANY, Baltimore, Md.
Filed May 7, 1914. Serial No. 78,078. PUBLISHED JUNE 30, 1914.

100,708. CIGARS. JOHN H. JOHNSON, Boston, Mass.
Filed May 4, 1914. Serial No. 77,978. PUBLISHED AUGUST 11, 1914.

100,709. CORN IN THE FORM OF CEREAL FOODS. EDWARD L. KASTLER, Racine, Wis.
Filed May 13, 1914. Serial No. 78,246. PUBLISHED AUGUST 11, 1914.

100,710. WHEAT-FLOUR. THE KELIM FARMERS' MILL AND ELEVATOR COMPANY, Loveland, Colo.
Filed May 25, 1914. Serial No. 78,525. PUBLISHED AUGUST 11, 1914.

100,711. AUTOMOBILES. L-P-C MOTOR COMPANY, Racine, Wis.
Filed January 8, 1914. Serial No. 75,034. PUBLISHED JULY 28, 1914.

100,712. WIRE ROPE. A. LESCHEN & SONS ROPE COMPANY, St. Louis, Mo.
Filed April 10, 1914. Serial No. 77,384. PUBLISHED JULY 14, 1914.

100,713. CANNED FRUITS, CANNED VEGETABLES, CANNED FISH, AND CANNED OYSTERS AND SHRIMPS. THE H. LESINSKY COMPANY, El Paso, Tex.
Filed August 11, 1911. Serial No. 58,143. PUBLISHED AUGUST 11, 1914.

100,714. OIL-BURNING COOK STOVES AND RANGES, HEATERS, AND ACCESSORIES THEREFOR. A. J. LINDEMANN & HOVERSON CO., Milwaukee, Wis.
Filed April 21, 1914. Serial No. 77,632. PUBLISHED AUGUST 4, 1914.

100,715. STOGIES. M. MARSH & SON, INC., Wheeling, W. Va.
Filed April 20, 1914. Serial No. 77,593. PUBLISHED AUGUST 11, 1914.

100,716. BUTTER AND EGGS. MARSH & MARSH, Omaha, Nebr.
Filed May 5, 1911. Serial No. 56,201. PUBLISHED AUGUST 11, 1914.

100,717. FLEXIBLE SURGICAL PADS, SURGICAL BANDAGES, AND SURGICAL BELTS. MATHIS AND FERGUSSON, Salt Lake City, Utah.
Filed February 4, 1914. Serial No. 75,681. PUBLISHED JULY 14, 1914.

100,718. LEATHER SHOES. FRANK MELVILLE, Jr., New York, N. Y.
Filed April 17, 1914. Serial No. 77,539. PUBLISHED AUGUST 11, 1914.

100,719. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed April 28, 1914. Serial No. 77,840. PUBLISHED AUGUST 11, 1914.

100,720. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed April 20, 1914. Serial No. 77,891. PUBLISHED AUGUST 11, 1914.

100,721. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed May 2, 1914. Serial No. 77,963. PUBLISHED AUGUST 11, 1914.

100,722. WARM-LINED SLIPPERS AND SHOES FOR INDOOR USE, MADE PRINCIPALLY OF FELT. OUTING SHOE CO., Boston, Mass.
Filed April 18, 1914. Serial No. 77,565. PUBLISHED AUGUST 11, 1914.

100,723. PECAN-NUTS. PAPER SHELL PECAN GROWERS ASSOCIATION, Chicago, Ill.
Filed February 13, 1914. Serial No. 75,892. PUBLISHED AUGUST 11, 1914.

100,724. PLUGS FOR FIXING SCREWS IN PLASTER, BRICK, MARBLE, SLATE, &c. RAWLINGS BROS., LTD., London, England.
Filed March 23, 1914. Serial No. 76,877. PUBLISHED JULY 14, 1914.

100,725. RUBBER BALLS AND GUTTA-PERCHA BALLS. THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa.
Filed March 6, 1914. Serial No. 76,413. PUBLISHED AUGUST 4, 1914.

100,726. STITCHED AND WOVEN BELTING. E. M. SMITH, Los Angeles, Cal.
Filed April 3, 1914. Serial No. 77,189. PUBLISHED AUGUST 4, 1914.

100,727. NAME-PLATES FOR BURIAL-CASKETS. THE SPRINGFIELD METALLIC CASKET COMPANY, Springfield, Ohio.
Filed April 27, 1914. Serial No. 77,811. PUBLISHED JULY 14, 1914.

100,728. MEN'S AND YOUNG MEN'S OUTER CLOTHING. QUALITY TAILORING CO. OF N. Y., INC., New York, N. Y.
Filed May 19, 1914. Serial No. 78,395. PUBLISHED JULY 14, 1914.

100,729. MALT EXTRACT. THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill.
Filed May 25, 1914. Serial No. 78,533. PUBLISHED AUGUST 18, 1914.

100,730. LEATHER SHOES. TURNER FLEXIBLE INNERSOLE CO., Portland, Me.
Filed December 3, 1913. Serial No. 74,348. PUBLISHED JULY 14, 1914.

100,731. CORSETS. VAN ORDEN CORSET COMPANY, Newark, N. J.
Filed July 5, 1912. Serial No. 64,595. PUBLISHED AUGUST 4, 1914.

100,732. DESIGNATED CITRUS FRUITS—NAMELY, GRAPE-FRUIT, TANGERINES, AND ORANGES. WILLIAM WALLACE, Jr., Helena, Mont., and Washington, D. C.
Filed May 19, 1914. Serial No. 78,408. PUBLISHED AUGUST 11, 1914.

100,733. FISH-TONGS. JOSEPH WIESENFELD, Baltimore, Md.
Filed May 4, 1914. Serial No. 77,994. PUBLISHED JULY 28, 1914.

100,734. EVAPORATED MILK, SOMETIMES CALLED CONDENSED MILK. THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio.
Filed April 10, 1914. Serial No. 77,397. PUBLISHED AUGUST 11, 1914.

100,735. EVAPORATED MILK, SOMETIMES CALLED CONDENSED MILK. THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio.
Filed April 10, 1914. Serial No. 77,398. PUBLISHED AUGUST 11, 1914.

100,736. EVAPORATED MILK, SOMETIMES CALLED CONDENSED MILK. THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio.
Filed April 10, 1914. Serial No. 77,400. PUBLISHED AUGUST 11, 1914.

100,737. WHEAT-BREAD. WORCESTER BAKING CO., Worcester, Mass.
Filed April 8, 1914. Serial No. 77,326. PUBLISHED AUGUST 11, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,596. COD-LIVER OIL. ALLEN & HANBURYS, London, England. (The Allen & Hanburys Co., Limited, assignee.)
Registered November 4, 1884. Renewed November 4, 1914.

11,597. CERTAIN PHARMACEUTICAL PREPARATIONS. ALLEN & HANBURYS, London, England, (The Allen & Hanburys Co., Limited, assignee.)
Registered November 4, 1884. Renewed November 4, 1914.

11,598. CASTOR-OIL. ALLEN & HANBURYS, London, England, (The Allen & Hanburys Co., Limited, assignee.)
Registered November 4, 1884. Renewed November 4, 1914.

11,723. AN EMBROCATION. WILLIAM EDWARDS & SON, London, England.
Registered December 2, 1884. Renewed December 2, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

FOURTH INTERNATIONAL CONGRESS OF AMERICAN STATES.

Convention Relating to Patents, Designs, and Industrial Models.

Signed at Buenos Aires August 20, 1910; ratification advised by the Senate February 8, 1911; ratified by the President March 21, 1911; ratification of the United States deposited with the Government of the Argentine Republic May 1, 1911; proclaimed July 29, 1914.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.
A PROCLAMATION.

Whereas a Convention between the United States of America and the Argentine Republic, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Salvador, Uruguay, and Venezuela for the protection of inventions, patents, designs, and industrial models, was concluded and signed by their respective plenipotentiaries at Buenos Aires on the twentieth day of August, one thousand nine hundred and ten, the original of which Convention, being in the Spanish, English, Portuguese, and French languages is word for word as follows:

FOURTH INTERNATIONAL AMERICAN CONFERENCE.

CONVENTION.

Inventions, Patents, Designs and Industrial Models.

Their Excellencies the Presidents of the United States of America, the Argentine Republic, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Salvador, Uruguay and Venezuela:

Being desirous that their respective countries may be represented at the Fourth International American Conference, have sent thereto the following delegates, duly authorized to approve the recommendations, resolutions, conventions and treaties which they might deem advantageous to the interests of America.

United States of America: Henry White, Enoch H. Crowder, Lewis Nixon, John Bassett Moore, Bernard Moses, Lamar C. Quintero, Paul Samuel Reinsch, David Kinley.

Argentine Republic: Antonio Bermejo, Eduardo L. Bidau, Manuel A. Montes de Oca, Epifanio Portela, Carlos Rodrigues Larreta, Carlos Salas, José A. Terry, Estanislao S. Zeballos.

United States of Brazil: Joaquim Murtinho, Domicio da Gama, José L. Almeida Nogueira, Olavo Bilac, Gastão da Cunha, Herculano de Freitas.

Republic of Chile: Miguel Cruchaga Tocornal, Emilio Bello Codecido, Aníbal Cruz Díaz, Beltrán Mathieu.

Republic of Colombia: Roberto Ancizar.

Republic of Costa Rica: Alfredo Volio.

Republic of Cuba: Carlos García Vélez, Rafael Montoro y Valdés, Gonzalo de Quesada y Aróstegui, Antonio Gonzalo Pérez, José M. Carbonell.

Dominican Republic: Américo Lugo.

Republic of Ecuador: Alejandro Cárdenas.

Republic of Guatemala: Luis Toledo Herrarte, Manuel Arroyo, Mario Estrada.

Republic of Haiti: Constantin Fouchard.

Republic of Honduras: Luis Lazo Arriaga.

Mexican United States: Victoriano Salado Alvarez, Luis Pérez Verdía, Antonio Ramos Pedrueza, Roberto A. Esteva Ruiz.

Republic of Nicaragua: Manuel Pérez Alonso.

Republic of Panama: Belisario Porras.

Republic of Paraguay: Teodosio González, José P. Montero.

Republic of Peru: Eugenio Larrabure y Unánue, Carlos Alvarez Calderón, José Antonio de Lavalle y Pardo.

Republic of Salvador: Federico Mejía, Francisco Martínez Suárez.

Republic of Uruguay: Gonzalo Ramírez, Carlos M. de Pena, Antonio M. Rodríguez, Juan José Amézaga.

United States of Venezuela: Manuel Díaz Rodríguez, César Zumeta.

Who, after having presented their credentials, and the same having been found in due and proper form, have agreed upon the following Convention on Inventions, Patents, Designs and Industrial Models:

ARTICLE I. The subscribing nations enter into this convention for the protection of patents of invention, designs and industrial models.

ART. II. Any person who shall obtain a patent of invention in any of the signatory States, shall enjoy in each of the other States all the advantages which the laws relative to patents of invention, designs and industrial models concede. Consequently, they shall have the right to the same protection and identical legal remedies against any attack upon their rights, provided they comply with the laws of each State.

ART. III. Any person who shall have regularly deposited an application for a patent of invention or design or industrial model in one of the contracting States shall enjoy, for the purposes of making the deposit in the other States, and under the reserve of the rights of third parties, a right of priority during a period of twelve months for patents of invention, and of four months for designs or industrial models.

In consequence the deposit subsequently made in any other of the signatory States before the expiration of these periods, cannot be invalidated by acts performed in the interval, especially by other deposits, by the publication of the invention or its working, or by the sale of copies of the design or of the model.

ART. IV. When, within the terms fixed, a person shall have filed applications in several States for the patent of the same invention, the rights resulting from patents thus applied for shall be independent of each other.

They shall also be independent of the rights arising under patents obtained for the same invention in countries not parties to this Convention.

ART. V. Questions which may arise regarding the priority of patents of invention, shall be decided with regard to the date of the application for the respective patents in the countries in which they are granted.

ART. VI. The following shall be considered as inventions: a new manner of manufacturing industrial products; a new machine or mechanical or manual apparatus which serves for the manufacture of said products; the discovery of a new industrial product; the application of known methods for the purpose of securing better results; and every new, original and ornamental design or model for an article of manufacture.

The foregoing shall be understood without prejudice to the laws of each State.

ART. VII. Any of the signatory States may refuse to recognize patents for any of the following causes:

(a) Because the inventions or discoveries may have been published in any country prior to the date of the invention by the applicant;

(b) Because the inventions have been registered, published, or described in any country more than one year prior to the date of the application in the country in which the patent is sought;

(c) Because the inventions have been in public use, or have been on sale in the country in which the patent has been applied for, one year prior to the date of said application;

(d) Because the inventions or discoveries are in some manner contrary to morals or laws.

ART. VIII. The ownership of a patent of invention comprises the right to enjoy the benefits thereof, and the right to assign or transfer it in accordance with the laws of the country.

ART. IX. Persons who incur civil or criminal liabilities, because of injuries or damage to the rights of inventors,

shall be prosecuted and punished, in accordance with the laws of the countries wherein the offense has been committed or the damage occasioned.

ART. X. Copies of patents certified in the country of origin, according to the national law thereof, shall be given full faith and credit as evidence of the right of priority, except as stated in Article VII.

ART. XI. The treaties relating to patents of invention, designs or industrial models, previously entered into between the countries subscribing to the present Convention, shall be superseded by the same from the time of its ratification in so far as the relations between the signatory States are concerned.

ART. XII. The adhesion of the American nations to the present Convention shall be communicated to the Government of the Argentine Republic in order that it may communicate them to the other States. These communications shall have the effect of an exchange of ratifications.

ART. XIII. A signatory nation that sees fit to retire from the present Convention, shall notify the Government of the Argentine Republic, and one year after the receipt of the communication the force of this Convention shall cease, in so far as the nation which shall have withdrawn its adherence is concerned.

In witness whereof, the plenipotentiaries have signed the present treaty and affixed thereto the seal of the Fourth International American Conference.

Made and signed in the city of Buenos Aires on the twentieth day of August in the year one thousand nine hundred and ten, in Spanish, English, Portuguese, and French, and deposited in the Ministry of Foreign Affairs of the Argentine Republic, in order that certified copies be made for transmission to each of the signatory nations through the appropriate diplomatic channels.

For the United States of America: Henry White, Enoch H. Crowder, Lewis Nixon, John Bassett Moore, Bernard Moses, Lamar C. Quintero, Paul S. Reinsch, David Kinley. For the Argentine Republic: Antonio Bermejo, Eduardo L. Bidau, Manuel A. Montes de Oca, Epifanio Portela, Carlos Salas, José A. Terry, Estanislao S. Zeballos. For the United States of Brazil: Joaquim Murtinho, Domicio da Gama, José L. Almeida Nogueira, Olavo Bilac, Gastão da Cunha, Herculano de Freitas. For the Republic of Chile: Miguel Cruchaga Tocornal, Emilio Bello Codecido, Aníbal Cruz Díaz, Beltrán Mathieu. For the Republic of Colombia: Roberto Ancízar. For the Republic of Costa Rica: Alfredo Volio. For the Republic of Cuba: Carlos García Velez, Rafael Montoro y Valdés, Gonzalo de Quesada y Aróstegui, Antonio Gonzalo Pérez, José M. Carbonell. For the Dominican Republic: Américo Lugo. For the Republic of Ecuador: Alejandro Cárdenas. For the Republic of Guatemala: Luis Toledo Herrarte, Manuel Arroyo, Mario Estrada. For the Republic of Haiti: Constantin Fouchard. For the Republic of Honduras: Luis Lazo Arriaga. For the Mexican United States: Victoriano Salado Alvarez, Luis Pérez Verdía, Antonio Ramos Pedrueza, Roberto A. Esteva Ruiz. For the Republic of Nicaragua: Manuel Pérez Alonso. For the Republic of Panama: Belisario Porras. For the Republic of Paraguay: Teodosio González, José P. Montero. For the Republic of Peru: Eugenio Larrabure y Unánue, Carlos Alvarez Calderón, José Antonio de Lavalle y Pardo. For the Republic of Salvador: Federico Mejía, Francisco Martínez Suárez. For the Republic of Uruguay: Gonzalo Ramírez, Carlos M. de Pena, Antonio M. Rodríguez, Juan José Amézaga. For the United States of Venezuela: Manuel Díaz Rodríguez, César Zumeta.

And whereas, the said Convention has been ratified by the Government of the United States of America, by and with the advice and consent of the Senate thereof, and by the Governments of the Dominican Republic, Guatemala, Cuba, Honduras, Panama, Nicaragua and Ecuador and the ratifications of the said Governments have been deposited by their respective plenipotentiaries with the Government of the Argentine Republic;

Now, therefore, be it known that I, WOODROW WILSON, President of the United States of America, have caused the said Convention to be made public, to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this twenty-ninth day of July, in the year of our Lord one thousand nine hundred and fourteen and of the Independence of the United States of America the one hundred and thirty-ninth.

[SEAL.] WOODROW WILSON.

By the President:
W. J. BRYAN,
Secretary of State.

Foreign Patents, Trade-Marks, Etc.—Taxes, Fees, Etc.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 20, 1914.

This Office has received the following notices relating to the payment of taxes, fees, etc., on patents, trade-marks, etc., in certain foreign countries, as follows:

[2436]

Privy Council.

CANADA.

AT THE GOVERNMENT HOUSE AT OTTAWA,
Friday, the 2nd day of October, 1914.

Present: His Royal Highness the Governor General in Council.

The Governor General in Council, under and in virtue of the authority conferred by "The War Measures Act, 1914," is pleased to order as follows:—

The following Orders and Regulations respecting patents of invention are hereby made and established:—

1. "Commissioner" means the Commissioner of Patents and includes the Deputy Commissioner of Patents.

2. The Commissioner may, on the application of any person, and subject to such terms and conditions, if any, as he may think fit, order the avoidance or suspension, in whole or in part, of any patent or license, the person entitled to the benefit of which is the subject of any State at war with His Majesty, and the Commissioner, before granting any such application, may require to be satisfied on the following heads:—

(a) That the person entitled to the benefit of such patent or license is the subject of a State at war with His Majesty;

(b) That the person applying intends to manufacture or cause to be manufactured, the patented article, or to carry on, or cause to be carried on, the patented process, within the Dominion of Canada;

(c) That it is in the general interests of the country, or of a section of the community, or of a trade, that such article should be manufactured or such process carried on as aforesaid.

The fee payable on such application shall be ten dollars.

The Commissioner may at any time, in his absolute discretion, revoke any avoidance or suspension of any patent or license ordered by him.

Provided always that the Commissioner may at any time, if in his absolute discretion he deems it expedient in the public interest, order the avoidance or suspension in whole or in part of any such patent or license upon such terms and conditions, if any, as he may think fit.

3. In any case in which the Commissioner makes an order by virtue of the powers vested in him under these Rules and Regulations or any of them, avoiding or suspending in whole or in part a patent, he may, in his discretion, grant in favor of persons other than the subject of any State at war with His Majesty, licenses to make, use, exercise or vend the patented invention so avoided or suspended, upon such terms and conditions and either for the whole term of the patent or for such less period as the Commissioner may think fit.

4. The Commissioner may, at any time during the continuance of these Orders and Regulations, avoid or suspend any proceedings on any application made under the Patent Act by a subject of any State at war with His Majesty.

5. The Commissioner may also, at any time, during the continuance of these Orders and Regulations, extend the time prescribed by the Patent Act or any rules made thereunder, for doing any act or filing any document, upon such terms and subject to such conditions as he may think fit in the following cases, namely:—

(a) Where it is shown to his satisfaction that the applicant, patentee, or proprietor, as the case may be, was prevented from doing the said act, or filing the said document, by reason of active service or enforced absence from this country, or any other circumstances arising from the present state of war, which, in the opinion of the Commissioner, would justify such extension;

(b) Where the doing of any act would, by reason of the circumstances arising from the present state of war, be prejudicial or injurious to the rights or interests of any applicant, patentee or proprietor as aforesaid.

Such extension of any prescribed time, if granted after its expiration, shall have the same effect as if granted prior thereto, provided such expiration occurred on or after the fourth day of August, 1914.

6. The Commissioner may refuse to register the assignment of any patent made by a subject of any State at war with His Majesty and filed in the Patent Office on or after the fourth day of August, 1914, unless satisfied that such assignment was made in good faith and not for the purpose of evading any of the provisions of the foregoing Orders and Regulations.

7. The term "person" used in these Orders and Regulations shall, in addition to the meaning given thereto by par. 20 of section 34 of "The Interpretation Act," include any Government department.

8. These Orders and Regulations shall come into operation as and from the fourth day of August, 1914.

9. The Orders and Regulations respecting patents of invention made under "The War Measures Act, 1914," and dated the 11th September, 1914, are hereby rescinded and repealed.

RODOLPHE BOUDREAU,
Clerk of the Privy Council.

SWITZERLAND.

Decree of the Federal Council concerning the Extension of Certain Terms with Regard to Patents and Industrial Designs and Models. (Of September 4, 1914.)

The Swiss Federal Council, in view of the Federal decree of August 3, 1914, relative to the proper measures to insure the safety of the country and the maintenance of its neutrality (see *Recueil Officiel*, Vol. XXX, p. 347), and upon the recommendation of its Department of Justice and Police, decrees:

I. For the payment of the filing fee and of the first annual tax upon patents filed between August 1, 1914, and December 31, 1914, an extension is granted until December 31, 1914, incl. The filing date of applications for patents filed during said period shall be the date on which the application for a patent is presented at the Bureau Fédéral de la Propriété Intellectuelle and on which the requirements are complied with which are laid down in the first "chapter" of the first paragraph of article 6 of the rules for carrying into effect the Federal law of June 21, 1907, on patents of invention. (See *Recueil Officiel*, Vol. XXIII, p. 650. This refers to the documents which must accompany the application.—EDITOR.)

II. For the payment of taxes (1) for the second year of the patent or any subsequent year, (2) for the second or third period of protection of industrial designs or models on file, a special extension is granted until December 31, 1914, incl., in cases where the legal term for payment expires in the course of the period from August 1, 1914, to December 31, 1914.

III. Evidence in support of priorities relative to patents and industrial designs or models registered prior to November 10, 1914, and the filing date of which is subsequent to April 30, 1913, may be presented until December 31, 1914, incl.

Berne, September 4, 1914.

In the name of the Swiss Federal Council:
The President of the Federation,
HOFFMANN.
The Chancellor of the Federation,
SCHATZMANN.

We should be obliged to you if you would kindly acknowledge the receipt of this circular.

Receive, gentlemen, the assurance of our high esteem.

BUREAU INTERNATIONAL DE L'UNION
DE LA PROPRIÉTÉ INDUSTRIELLE,
COMTESSE,
Director.

THOMAS EWING,
Commissioner.

ADJUDICATED PATENTS.

(U. S. D. C.) The Williams patent, No. 533,403, for a tie for binding crossing fence-wires, claim 1 *Held* void for lack of invention, also not infringed. *Adrian Wire Fence Co.* v. *Milwaukee Wire Fence Co.*, 215 F., 727.

(U. S. C. C. A.) The Peters patent, No. 621,974, for a carton for containing biscuit, crackers, and like articles, and the method of making the same, is void for lack of patentable novelty in view of the prior art. *Peters* v. *Chicago Biscuit Co.*, 215 F., 724.

(U. S. C. C. A.) The Weeks patent, No. 665,648, for a machine for coating paper with carbon, construed and *Held* not infringed by a machine in which the rolls are heated. *General Manifold & Printing Co.* v. *Carbonized Paper Co.*, 215 F., 718.

(U. S. D. C.) The Norris patent, No. 722,613, for a hoisting apparatus, *Held* void for lack of patentable invention. *Mead Morrison Mfg. Co.* v. *Exeter Mach. Works*, 215 F., 731.

(U. S. D. C.) The Tiffany patent, No. 755,187, for a die for forming a knot or tie for binding crossing fence-wires, *Held* void for lack of invention in view of the prior art. *Adrian Wire Fence Co.* v. *Milwaukee Wire Fence Co.*, 215 F., 727.

(U. S. D. C.) The Baldwin reissue patent, No. 13,542, (original No. 821,580,) for a miner's acetylene-lamp, claim 4 *Held* valid and infringed. *Baldwin* v. *Grier Bros. Co.*, 215 F., 735.

(U. S. C. C. A.) The Deiller patent, No 985,984, for a tobacco stripping and booking machine, claim 11 *Held* valid and infringed. *Universal Tobacco Mach. Co.* v. *Borgfeldt Stripping Mach. Co.*, 215 F., 715.

(U. S. D. C.) The Springer patent, No. 1,102,468, for an ironing-board, *Held* valid and infringed. *Oregon Woodenware Mfg. Co.* v. *Murray*, 215 F., 744.

Adverse Decisions in Interference.

PATENT No. 874,060.

On September 18, 1914, a decision was rendered that Harvey L. Fisher was not the first inventor of the subject-matter covered by claims 13 and 16 of his Patent No. 874,060, subject, "Adding attachment for typewriters," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,087,977.

On September 12, 1914, a decision was rendered that Fredolf J. Peterson was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 6, 7, and 8 of his Patent No. 1,087,977, subject, "Leaf-controlling means for credit-registers," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 6, 1914.

Lexington Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Uncle Sam Cleanser and Manufacturing Co., 361 South First West street, Salt Lake City, Utah, for registration of a trade-mark and trade-mark registered April 24, 1906, No. 51,902, to the Lexington Manufacturing Co., 2009 Eutaw Place, Baltimore, Md., and a notice of such declaration sent by registered mail to said Lexington Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lexington Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1914.

Baum & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Berry Brothers (Inc.), corner Leib and Wight streets, Detroit, Mich., for registration of a trade-mark and trade-mark registered July 16, 1889, No. 17,815, to Baum & Co., Howard street, Spokane Falls, Wash., and a notice of such declaration sent by registered mail to said Baum & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Baum & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

[Vol. 207. No. 3.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 207—No. 4. TUESDAY, OCTOBER 27, 1914. Price—$5 per year.

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CONTENTS.

ISSUE OF OCTOBER 27, 1914.

Patents	760—No.	1,114,716 to No. 1,115,475, inclusive.
Designs	29—No.	46,588 to No. 46,616, inclusive.
Trade-Marks	204—No.	100,738 to No. 100,941, inclusive.
Labels	None.	
Prints	None.	
Reissues	8—No.	13,813 to No. 13,820, inclusive.
Total	1001	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	4	.....
Arizona	.....	.....	North Dakota	1	.....
Arkansas	3	.....	Ohio	57	12
California	30	4	Oklahoma	8	.....
Colorado	8	.....	Oregon	5	1
Connecticut	14	5	Pennsylvania	67	13
Delaware	1	8	Rhode Island	4	.....
Florida	2	1	South Carolina	.....	.....
Georgia	6	2	South Dakota	3	2
Idaho	1	.....	Tennessee	7	5
Illinois	68	14	Texas	15	5
Indiana	15	1	Utah	1	1
Iowa	14	3	Vermont	.....	.....
Kansas	12	1	Virginia	2	2
Kentucky	4	.....	Washington	9	3
Louisiana	2	.....	West Virginia	6	2
Maine	3	2	Wisconsin	20	6
Maryland	9	1	Wyoming	.....	.....
Massachusetts	56	14			
Michigan	28	2	Alaska, District of	1	.....
Minnesota	13	2	Canal Zone	.....	.....
Mississippi	3	3	District of Columbia	9	1
Missouri	29	5	Hawaii Territory	.....	.....
Montana	5	.....	Philippine Islands	1	.....
Nebraska	4	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	32	17			
New Mexico	.....	.....	Total to residents of the United States	716	186
New York	130	47			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	1	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	2	.....
Brazil	.....	.....	Norway	1	1
British West Indies	.....	.....	Portugal	.....	.....
Canada	11	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	1
Costa Rica	.....	.....	Scotland	.....	1
Cuba	.....	.....	South Australia	.....	.....
Denmark	1	.....	Spain	.....	.....
England	18	6	Sweden	3	.....
Finland	.....	.....	Switzerland	1	1
France	12	.....	Transvaal, South Africa	.....	.....
Germany	21	6	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	1	1			
Italy	1	.....	Total to residents of foreign countries	73	17
Luxemburg	.....	.....			
Mexico	.....	.....			

Notice Relating to Drawings.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 6, 1914.

Attention is called to paragraphs 7 and 9 of Rule 52 of the Rules of Practice of the Patent Office, and inventors and attorneys are directed to omit from the space outside of the marginal line of the drawings any marks of identification, inasmuch as the space referred to is reserved for the use of the Patent Office. Such identifying-marks should be placed upon the back of the drawings.

THOMAS EWING,
Commissioner of Patents.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 26, 1914.

Baum & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Berry Brothers (Inc.), corner Leib and Wight streets, Detroit, Mich., for registration of a trade-mark and trade-mark registered July 16, 1889, No. 17,815, to Baum & Co., Howard street, Spokane Falls, Wash., and a notice of such declaration sent by registered mail to said Baum & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Baum & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

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Maine	3	2	Wisconsin	20	6
Maryland	9	1	Wyoming	.....	.....
Massachusetts	56	14			
Michigan	28	2	Alaska, District of	1	.....
Minnesota	13	2	Canal Zone	.....	.....
Mississippi	3	3	District of Columbia	9	1
Missouri	29	5	Hawaii Territory	.....	.....
Montana	5	.....	Philippine Islands	1	.....
Nebraska	4	1	Porto Rico	.....	.....
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Mexico	.....	.....			

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APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 24, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 20	Aug. 5	591
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	May 26	Sept. 4	732
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 28	Oct. 12	91
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 4	Sept. 21	167
167	5 Bookbinding; Harvesters; Jewelry; Music.	June 2	Sept. 5	443
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 20	Sept. 9	627
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 25	Sept. 8	586
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture, Supports.	Mar. 11	Oct. 5	1186
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 30	July 29	717
235	10. Carriages and Wagons	May 16	Sept. 17	997
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 31	Oct. 5	208
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	June 1	Aug. 17	1051
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 10	Sept. 26	417
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 24	Sept. 25	451
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 20	Sept. 12	880
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 5	Sept. 5	730
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	July 7	Oct. 2	209
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 24	Sept. 23	253
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	July 23	Sept. 15	280
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 14	Aug. 21	301

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 12	Sept. 1	468
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 1	Sept. 22	219
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 16	Sept. 18	432
144	24. Apparel; Apparel Apparatus; Sewing Machines.	May 4	Aug. 26	556
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 30	Sept. 28	171
106	26. Electricity, Generation; Motive Power.	Jan. 8	July 24	849
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 3	Sept. 15	436
65	28. Internal-Combustion Engines	July 16	Sept. 8	409
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 10	Sept. 22	460
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 13	Oct. 16	323
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 3	Sept. 24	358
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Apr. 1	Sept. 25	728
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 3	Sept. 14	384
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock, Railway Ties and Fasteners.	Sept. 1	Sept. 26	296
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 27	Sept. 28	600
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Aug. 20	Sept. 2	703
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 18	Sept. 15	858
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 4	Sept. 16	799
321	39. Water Distribution	Apr. 23	July 28	524
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 1	Sept. 26	1130
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 11	Oct. 3	310
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	July 2	Sept. 11	358
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 26	Sept. 25	271

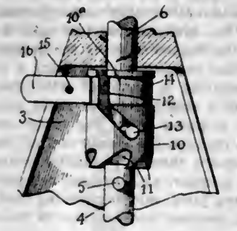
Oldest new case, Jan. 8: oldest amended, July 24.
Total number of applications awaiting action..... 23,309

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Aug. 3	Oct. 26	970
	Designs	Sept. 8	Oct. 3	303
	Labels and Prints	Oct. 1	Oct. 1	64

PATENTS

GRANTED OCTOBER 27, 1914.

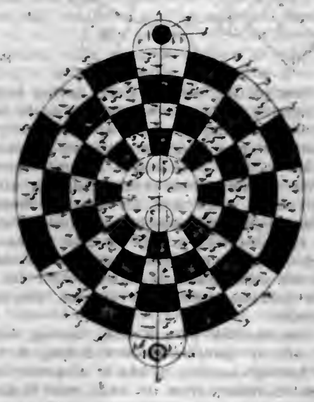
1,114,716. AUTOMATIC CLUTCH. WARREN W. ANNABLE, Grand Rapids, Mich., assignor of one-tenth to Daniel W. Tower, Grand Rapids, Mich. Filed Aug. 22, 1913. Serial No. 786,105. (Cl. 192—9.)



1. An automatic clutch, comprising a driven clutch member, a driving shaft, a driving clutch member surrounding said driving shaft and movable thereon and having a spiral slot terminating in a longitudinal end, a pin projecting from said driving shaft into said slot and adapted to traverse the same to move the driving clutch member longitudinally on the shaft and to engage the longitudinal end of the slot to rotate the said member, and a friction brake engaging the driving clutch member.

2. An automatic clutch, comprising a driven clutch member, a driving shaft, a driving clutch surrounding said driving shaft and movable thereon and having a spiral slot, a pin projecting from said driving shaft into said slot and adapted to traverse the same to move the driving clutch member longitudinally and to engage one end of the slot to rotate the clutch member, and a friction brake comprising a brake band surrounding the clutch member and a lateral arm to hold the band from rotating.

1,114,717. GAME APPARATUS. PERRY PETER AU BUCHON, St. Louis, Mo. Filed May 15, 1914. Serial No. 838,843. (Cl. 46—64.)



1. In a game apparatus, a game board having a central space marked thereon, a series of successive annular zones surrounding and concentric with the said space, each zone being divided by lines, radial to the said space, into alternate dark and light colored checker spaces, and the checker spaces of each zone alternating with those of the succeeding zone, a space exterior to the outer zone and intersected by the center line of the board, the last named space being connected with the dark colored checker space adjoining the medial light colored checker space of the outer zone on each side of the said line, and a space within the said central space intersected by the said line and connecting with the dark colored medial checker space of the inner zone.

2. In a game apparatus, a game board having a central space marked thereon, a series of successive annular zones surrounding and concentric with the said space, each zone being divided by lines, radial to the said space, into alternate dark and light colored checker spaces, and the checker spaces of each zone alternating with those of the succeeding zone, a space exterior to the outer zone and intersected by the center line of the board, the last named space being connected with the dark colored checker space adjoining the medial light colored checker space of the outer zone on each side of the said line, and a space within the said central space intersected by the said line and connecting with the medial dark colored checker space of the inner zone intersected by the said line, and adapted to form the goal of the said device.

3. In a game apparatus, a game board having a central space marked thereon, a series of successive annular zones surrounding and concentric with the said space, each zone being divided by lines, radial to the said space, into alternate dark and light colored checker spaces, and the checker spaces of each zone alternating with those of the succeeding zone, a space exterior to the outer zone and intersected by the center line of the board, the last named space being connected with the dark colored checker space adjoining the medial light colored checker space of the outer zone on each side of the said line, and adapted to form the starting place for a device movable therefrom on to either of the said adjoining dark colored checker spaces, a space within the said central space, connecting with the medial dark colored checker space of the inner zone intersected by the said line, and adapted to form the goal of the said device, and a plurality of movable pieces placed severally on the medial and adjacent dark colored checker spaces and coöperating with the said device in the operation of the same.

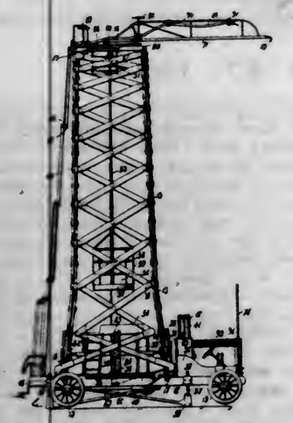
1,114,718. FIRE APPARATUS. ALFRED AUDET, Salem, Mass. Filed Apr. 4, 1914. Serial No. 820,496. (Cl. 228—28.)

1. In an apparatus of the character described, in combination, a frame, a hollow extensible tower composed of a plurality of sets of lazy-tongs, the corresponding members of the lazy-tongs of adjacent sets being pivotally connected at the corners of said tower, and means for supporting said tower from said frame connected to the corners of said tower and to said frame at fixed points.

2. In an apparatus of the character described, in combination, a vertically extensible tower laterally contracting in all directions, and supporting means for said tower having a base of fixed area and connected at its upper end to said tower for contraction therewith.

3. In an apparatus of the character described, in combination, a frame, a hollow vertically extensible and laterally contracting tower composed of a plurality of sets of lazy-tongs, the corresponding members of the lazy-

tongs of adjacent sets being pivotally connected at the corners of said tower, and combined supporting and operating members for said lazy-tongs connected with the corners of said tower and with said frame at fixed points to provide a base of fixed area for said tower.

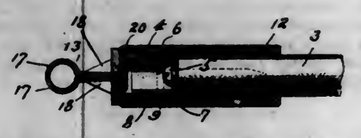


4. In an apparatus of the character described, in combination, a frame, a hollow extensible tower composed of a plurality of sets of lazy-tongs, the corresponding members of the lazy-tongs of adjacent sets being pivotally connected at the corners of said tower, and combined supporting and operating members connected at their upper ends to said lazy-tongs and pivoted at their lower ends to fixed points on said frame, the axes of the pivots being inclined to the horizontal.

5. In an apparatus of the character described, in combination, a frame, a set of vertically arranged lazy-tongs, and a pair of intersecting operating levers for said lazy-tongs, said levers being pivoted to the lowermost members of said lazy-tongs and at their lower ends at fixed points on said frame.

[Claims 6 to 14 not printed in the Gazette.]

1,114,719. TERMINAL CONNECTOR. CHARLES W. BECK, Rockville Center, N. Y., assignor, by mesne assignments, to Michigan Motor Specialties Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 19, 1911. Serial No. 655,451. (Cl. 173—269.)



1. A terminal connector comprising a tubular socket closed at its outer end and open at its inner end, a plug adapted to snap into the open inner end of said socket, means for connecting said plug to a terminal wire, an insulating and protecting sleeve carried by the socket and inclosing the same and extending over the connected plug and the adjoining portion of the terminal wire, and a spark plug post terminal receiving means connected to the closed end of the socket and adapted to be locked to the post terminal with the axis of the sleeve at right angles to the axis of the post, whereby the socket will be held against a longitudinal strain tending to disconnect the plug and its terminal wire from the socket.

2. A terminal connector comprising a tubular terminal member adapted to be connected to a terminal wire and a sheet metal post terminal clip rigidly secured to said terminal member and bent to form two opposed gripping jaws adapted to receive a post terminal between them and forming a longitudinally split resilient sleeve, said terminal clip being rigidly secured to the terminal member on the inner side thereof.

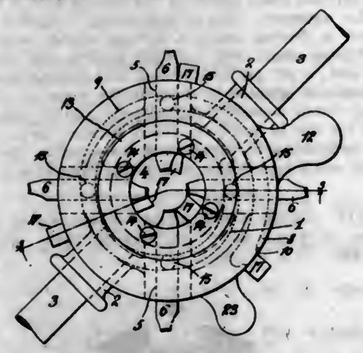
3. A terminal connector comprising a tubular terminal member having a closed outer end, means for detachably and electrically connecting a terminal wire thereto, a terminal clip of sheet metal bent to form two integral opposed gripping jaws adapted to receive the post terminal between them, the connected ends of said jaws being passed through the closed end of the terminal member and expanded within the said member to rigidly secure said jaws to said member.

4. A terminal connector comprising a terminal member, means for detachably and electrically securing a terminal wire thereto, a terminal clip formed of a single piece of sheet metal bent to form two opposed gripping jaws, the inner ends of said jaws being passed through the closed end of the terminal member and expanded therein to rigidly connect the gripping jaws to said member, and integral reinforcing lugs carried by the gripping jaws.

5. A terminal connector comprising a terminal member, means for securing a terminal wire thereto, a terminal clip formed of a single piece of sheet metal bent to form two opposed gripping jaws, the inner ends of said jaws being passed through the closed end of the terminal member and expanded therein to rigidly connect the gripping jaws to said member, and integral reinforcing lugs carried by the gripping jaws, said reinforcing lugs bearing against the terminal member and serving as braces for the gripping jaws.

[Claim 6 not printed in the Gazette.]

1,114,720. ADJUSTABLE THREAD-CUTTING TOOL. PAUL ERDMAN BECKER, Bridgeport, Conn., assignor to The Connecticut Tool Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 19, 1911. Serial No. 621,901. (Cl. 10—122.)

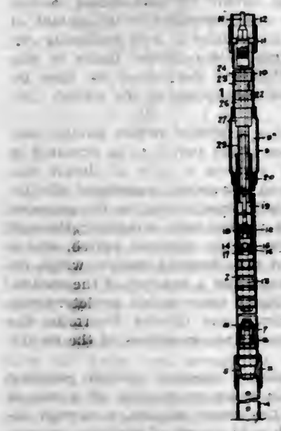


1. The combination with a body having radial guide ways, of radially movable chasers sliding in said guide ways and having engaging means at respectively different and unequal distances from the ends, said chasers having cutting teeth at both ends, and a rotatable plate having a scroll slot of uniform curvature engaging said chasers in predetermined order and for moving them radially when rotated, said slot coöperating with said chasers for operating them radially within certain limits of diameters for one position and predetermined order thereof, and within certain other limits of diameters for the other position and predetermined order thereof, relatively to a common center.

2. The combination with a body having radial guide ways, of radially movable chasers sliding in said guide ways and having engaging means at respectively different and unequal distances from the ends, said chasers having cutting teeth at both ends, and a rotatable plate having a scroll slot of uniform curvature engaging said chasers in predetermined order and for moving them radially when rotated, said slot having an intermediate radial insertion opening and coöperating with said chasers for operating them radially within certain limits of diameters for one position and predetermined order thereof, and within certain other limits of diameters for the other position and predetermined order thereof, relatively to a common center.

3. The combination in an adjustable thread cutting tool with a body having a central opening and transverse radial guideways, of radial chasers sliding in said guideways, and a plate having a continuous scroll slot of uniform curvature, said engaging means being disposed on said chasers to bring the inner ends of said chasers when arranged in predetermined order centrally within said central opening, said slot having a transverse opening from the exterior of the body for inserting or withdrawing said chasers disposed at a point intermediate the ends of said slot.

1,114,721. PUMP FOR OIL AND LIKE WELLS. CHARLES W. BELL, Bartlesville, Okla. Filed Nov. 15, 1913. Serial No. 801,301. (Cl. 103—80.)



1. In oil well or like pumps, the combination with a suitable casing, of a plunger working in said casing, an automatically operated valve controlling the supply of fluid to said casing, a valve controlling the passage of fluid to a point above said plunger, an upwardly extending tube connected to said plunger, a retaining member above said plunger, a tube connected to said retaining member, extending downwardly therefrom, a piston-rod connected to said plunger, passing up through said last named tube and retaining member, and a gas chamber intermediate said retaining member and said plunger.

2. In oil well or like pumps, the combination with a suitable casing, of a plunger working in said casing, an automatically operated valve controlling the supply of fluid to said casing, a valve controlling the passage of fluid to a point above said plunger, an upwardly extending tube connected to said plunger, a self-retaining member above said plunger, a tube connected to said retaining member extending downwardly therefrom, a piston-rod connected to said plunger, and a gas-chamber intermediate said retaining member and said plunger.

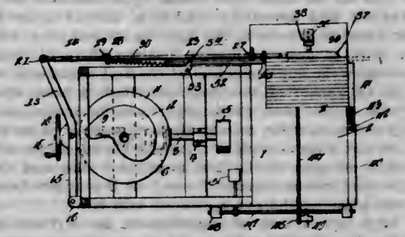
3. In oil well or like pumps, the combination with a suitable casing, of a plunger working in said casing, an automatically operated valve controlling the supply of fluid to said casing, a valve controlling the passage of fluid to a point above said plunger, an upwardly extending tube connected to said plunger, a retaining member above said plunger, a tube connected to said retaining member extending downwardly therefrom and telescoping with said upwardly extending tube, a piston-rod connected to said plunger, and an enlargement on said casing, forming a gas chamber intermediate said retaining member and said plunger.

4. In oil well or like pumps, the combination with a suitable casing, of a plunger working in said casing, an automatically operated valve controlling the supply of fluid to said casing, a valve controlling the passage of fluid to a point above said plunger, an upwardly extending tube connected to said plunger, a retaining member above said plunger, a tube connected to said retaining member, extending downwardly therefrom and telescoping with said upwardly extending tube, a piston rod connected to said chamber, whereby the fluid will not rise from the top of said upwardly extending tube on the down-stroke of the pump, a piston-rod connected to said plunger, and a gas chamber intermediate said retaining member and said plunger.

5. An oil well or like pumps, the combination with a suitable casing, of a plunger working in said casing, an automatically operated valve controlling the supply of fluid to said casing, the valve controlling the passage of fluid to a point above said plunger, an upwardly extending tube connected to said plunger, a retaining member above said plunger, an expansion ring engaging said retaining member and said casing, a tube connected to said retaining member extending downwardly therefrom, a piston-rod connected to said plunger, and a gas chamber intermediate said retaining member and said plunger.

[Claim 6 not printed in the Gazette.]

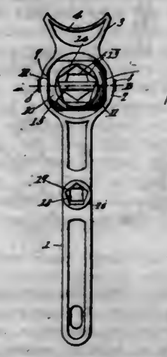
1,114,722. FEEDING MECHANISM, CHARLES F. BENDSHADLER, Elgin, Oreg. Filed Sept. 5, 1912. Serial No. 718,759. (Cl. 144—245.)



1. A reciprocating feed mechanism comprising a reciprocating member, an article-engaging member longitudinally adjustable, mounted off center and turnable on said reciprocating member to different degrees of projection on the feed side for engaging articles of different thickness.

2. A feed mechanism comprising a feed member movable relative to articles to be fed, an article-engaging member longitudinally adjustable, mounted off center and turnable on said reciprocating member to different degrees of projection on the feed side for engaging articles of different thickness, and means to fasten the article-engaging member to the feed member.

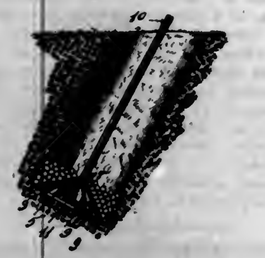
1,114,723. HYDRANT-WRENCH. CHARLES E. BERRY, Somerville, Mass. Filed May 25, 1914. Serial No. 840,877. (Cl. 81—121.)



A wrench including a ring, a handle extending therefrom, said ring having its wall thickened at diametrically

opposed points, bearing elements screwed into said thickened portion and projecting into the ring, and a ball mounted for rotation on the projecting ends of said elements and having a plurality of radial sockets, there being a reinforcing bar within the ball and alining with the bearing elements, said bar constituting a stop.

1,114,724. EARTH-ANCHOR. JASPER BLACKBURN, Kirkwood, Mo. Filed Mar. 3, 1913. Serial No. 751,818. (Cl. 189—90.)

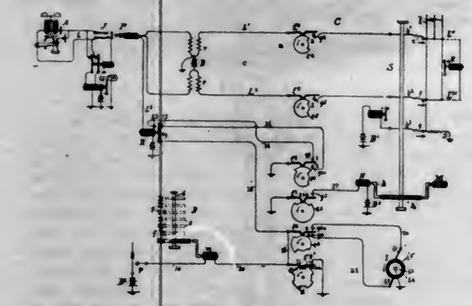


1. In an anchor of the class described, a base, spaced apart ribs on its upper face whose upper margins incline downwardly and outwardly, and ribs, on the upper face of the base intermediate the first mentioned ribs, whose upper margins have at least a portion thereof lying in planes above the upper margins of the first mentioned ribs.

2. In an anchor of the class described, a base, spaced apart ribs on the base whose upper margins incline downwardly and outwardly, intermediate ribs whose upper margins have at least a portion thereof lying in planes above the upper margins of the first mentioned ribs, and there being a continuous channel formed in the upper face of the base adjacent the outer ends of said ribs.

3. As a new article of manufacture, an earth anchor, comprising a disk-shaped base, a sleeve formed integral with the base, a plurality of outwardly and downwardly inclined ribs extended from said sleeve to a point adjacent the margin of the base, a plurality of ribs arranged between the first mentioned ribs, the said last mentioned ribs having at least a portion of their upper margins lying in planes above the margins of the first mentioned ribs, and there being an annular channel in the base adjacent its outer margin.

1,114,725. MEANS FOR DETERMINING TIME INTERVALS IN TELEPHONE SYSTEMS. WILLIAM G. BLAUVELT, New York, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York.



Filed May 4, 1911. Serial No. 624,971. (Cl. 179—27.)

1. In a telephone system, the combination with switching mechanism adapted to assume a plurality of circuit controlling positions, of a motor magnet for the switching mechanism, a source of electrical energy, and a time mechanism for determining the time interval between advances of the switching mechanism from one circuit controlling position to another, said time mechanism controlling the supply of current to the motor magnet through contacts of the switching mechanism and consisting of a rotatable interrupter driven at a predetermined speed.

2. In a telephone system, the combination with switching mechanism adapted to assume a plurality of circuit controlling positions, of motor mechanism for the switching mechanism, a source of electrical energy, and means operable independently of the switching mechanism for connecting said source in circuit with the motor mechanism to operate the switching mechanism from one circuit controlling position to another within a definite time interval, said circuit extending through contacts of the switching mechanism which latter governs at said contacts the reception of energy by its motor mechanism through the connecting means.

3. The combination of a sequence switch having contacts adapted by operation of the switch to be actuated in definite order or cycle, a motor mechanism for operating the switch, an actuating circuit for said motor mechanism extending through and controlled by a contact of the switch, and a time mechanism in said actuating circuit acting at times within predetermined limits to also control said circuit and thereby determine the time interval between successive operations of the switch contacts.

4. The combination of a sequence switch having contacts adapted by operation of the switch to be actuated in definite order to thereby perform a cycle of circuit controlling operations in fixed succession, associated electromechanisms including a motor-mechanism for the sequence switch, circuits for said mechanisms extending through and controlled by contacts of the sequence switch, and a time mechanism in one of the aforesaid circuits which includes the motor mechanism and a contact of the switch, said time mechanism acting at times within predetermined limits to control said circuit and thereby determine the time interval between successive operations of the switch contacts.

5. The combination with a sequence switch provided with contact devices and a motor magnet, of a source of electrical energy for the motor magnet, a current interrupter associated with said source of electrical energy and acting to determine a time interval between movements of the sequence switch from one switching position to another, and circuits of the motor magnet, source of electrical energy and interrupter completed through different contacts of the sequence switch.

[Claims 6 to 12 not printed in the Gazette.]

1,114,726. CHEMICAL CONCENTRATION OF METALS. CHARLES S. BRADLEY, New York, N. Y. Filed Feb. 27, 1913. Serial No. 751,057. (Cl. 75—18.)

1. The chemical method of extracting metals of variable valency from ore and the like, which comprises subjecting the ore or the like to the combined action of calcium chlorid and sulfurous oxid in water solution, whereby the lower chlorid of the values is obtained in solution.

2. The chemical method of extracting metals of variable valency from ores and the like, which comprises subjecting the ores or the like to the combined action of sulfurous oxid and a water solution of calcium chlorid in sufficient excess to maintain the resultant lower chlorid of the values in solution.

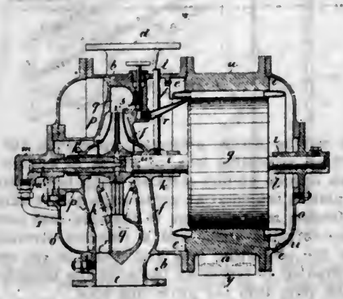
3. The chemical method of extracting copper from ores and the like which comprises subjecting the ore or the like which contains cupric oxid to the combined action of calcium chlorid and sulfurous oxid in water solution, whereby cuprous chlorid is obtained in solution.

4. The chemical method of extracting copper from ores and the like which comprises subjecting the ore containing cupric oxid to the combined action of calcium chlorid and sulfurous oxid in water solution in sufficient excess to obtain and maintain suprous chlorid in solution.

5. The chemical method of extracting copper from ores and the like which comprises subjecting the ore and the like, which contains cupric oxid to the combined action of calcium chlorid and sulfurous oxid in water solution, whereby cuprous chlorid is obtained in solution and separating the solution from the gangue material.

[Claim 6 not printed in the Gazette.]

1,114,727. ELECTRIC MOTOR AND PUMP CONNECTED THERETO. JOHN FREDERICK BREEZE, Hammersmith, England, assignor to Gwynnes Limited, London, England. Filed July 28, 1911. Serial No. 641,129. (Cl. 172—36.)



1. The combination of a closed casing, an electric motor inclosed within said casing, means for delivering water from an external source onto the motor within said casing and means for reducing the pressure in said casing below atmospheric pressure and withdrawing water from the lower part of said casing, to thereby avoid flooding of the casing and to insure the motor running in a partial vacuum.

2. The combination of a closed casing provided with an inlet for water and means for supplying water under pressure from an external source, an electric motor inclosed within said casing and directly exposed to the incoming water and a centrifugal pump arranged to withdraw air and water from the lower part of said casing, the capacity of the withdrawing means being greater than the capacity of the supply means to thereby prevent flooding of the motor.

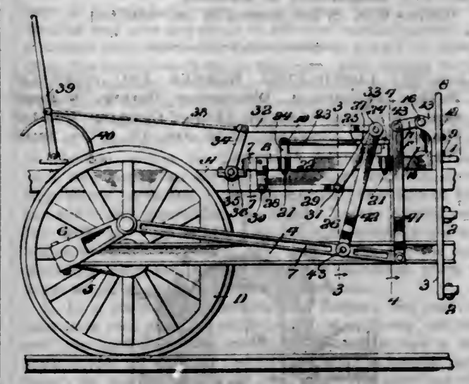
3. The combination of an electric motor, a centrifugal pump, a chambered casing inclosing the motor and pump in separate chambers thereof, bearings in said casing, a shaft mounted in said bearings carrying the rotor of the motor and the impeller of the pump, means whereby cooling water is discharged into the motor chamber, and means whereby the pump is adapted to withdraw water from the lower part of the motor chamber, the capacity of the withdrawing means being greater than the capacity of the supply means to thereby prevent flooding of the motor.

4. The combination of an electric motor, a centrifugal pump, a chambered casing inclosing the motor and pump in separate chambers thereof, end covers to said casing, closed-in bearings in said end covers, a shaft mounted in said bearings carrying the rotor of the motor and the impeller of the pump, means whereby cooling water from the pump chamber is discharged into the motor chamber, and means whereby the pump is adapted to withdraw water from the lower part of the motor chamber, the capacity of the withdrawing means being greater than the capacity of the supply means to thereby prevent flooding of the motor.

5. The combination of an electric motor, a centrifugal pump, an inclosing casing common to said motor and pump, and means whereby said pump is adapted to discharge cooling water into the motor and to withdraw water from the lower part thereof, substantially as described, the capacity of the withdrawing means being greater than the capacity of the supply means to thereby prevent flooding of the motor.

[Claims 6 to 9 not printed in the Gazette.]

1,114,728. LOCOMOTIVE VALVE-GEAR. WILLIAM SHERMAN BROWN, Knoxville, Tenn. Filed June 19, 1914. Serial No. 846,128. (Cl. 121—98.)



1. In a locomotive valve gear, a reversing mechanism comprising means forming a horizontal slideway, a rocking member slidably supported between its ends on said slideway and being in operative relation with the reversing lever, means for guiding the lower end of said rocking member for substantially upright movement, and valve actuating means in operative relation with the upper portion of said rocking member, substantially as described.

2. In a locomotive valve gear, the combination of means forming a horizontal slideway, a rocking member slidably supported between its ends on said slideway and being in operative relation with the reversing lever, means for guiding the lower end of said rocking member for substantially upright movement, an approximately upright link, having its upper end coupled to the upper end of said rocking member, an auxiliary rod coupled to said link and in operative relation with the distributing valve, and means for actuating the auxiliary rod, substantially as described.

3. In a locomotive valve gear, the combination of means forming a horizontal slideway, a rocking member slidably supported between its ends upon said slideway and being in operative relation with the reversing lever, means for guiding the lower end of said rocking member for substantially upright movement, a drive wheel, an auxiliary crank on said drive wheel, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to the auxiliary rod and one having its upper end coupled to the upper end of said rocking member and the other having its upper end in operative relation with the distributing valve, substantially as described.

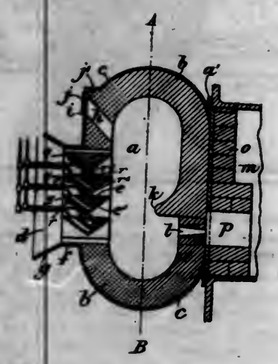
4. In a locomotive valve gear, the combination of a bell-crank in operative relation with the distributing valve, means forming a horizontal slideway, a rocking member slidably supported between its ends upon said slideway and being in operative relation with the reversing lever, means for guiding the lower end of said rocking member for substantially upright movement, a drive wheel, an auxiliary crank on said drive wheel, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to the auxiliary rod and one having its upper end coupled to the upper end of said rocking member and the other having its upper end in operative relation with said bell-crank, substantially as described.

5. In a locomotive valve gear, the combination of a bridge, a rocking member slidably supported between its ends upon said bridge and being in operative relation with the reversing lever, means for guiding the lower end of said rocking member for substantially upright movement, a drive wheel, an auxiliary crank on said drive wheel, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to

the auxiliary rod and one having its upper end coupled to the upper end of said rocking member and the other having its upper end in operative relation with the distributing valve, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,114,729. LIQUID-FUEL BURNER AND FURNACE. ERNEST BUCHHOLTZ, Wealdstone, Harrow, England, assignor to The Oil-Flame Furnace Company, Limited, High Holborn, England. Filed Apr. 10, 1913. Serial No. 760,158. (Cl. 158—4.)



1. A liquid fuel burner arrangement comprising a chamber having an opening in its front wall and delivery nozzles in its rear wall, an open fuel container arranged in the opening of the front wall and a nose or bridge upon the said rear wall said nose projecting above said delivery nozzles and toward said container, substantially as set forth.

2. A liquid fuel burner comprising a chamber the height of which is greater than the distance between the front and rear walls and having an opening in the front wall and delivery nozzles in the rear wall, open liquid fuel containers arranged in the opening in the front wall, and a nose or bridge on said rear wall, said nose or bridge having a flat lower surface and a concaved upper surface substantially as set forth.

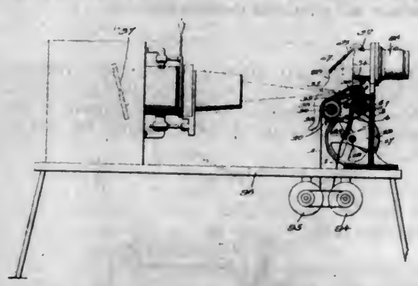
3. A liquid fuel burner arrangement comprising a chamber, the height of which is greater than the distance from the front to the rear wall and having an opening in the front wall, and delivery nozzles in the rear wall, said front and rear walls being joined by a curved roof and curved floor, open fuel containing vessels superposedly arranged in the opening in the front wall, and a nose or bridge on the rear wall immediately above said delivery nozzles, said nose or bridge having a concaved upper surface substantially as set forth.

4. A liquid fuel burner arrangement comprising a chamber the front and rear walls of which are separated by a smaller distance than that which separates the roof and floor and having an air intake opening in its front wall and delivery nozzles in its rear wall, open liquid fuel containers arranged in the said air intake opening, a deflecting surface on the rear wall opposite said containers, and a baffling surface on said rear wall immediately above said nozzles substantially as set forth.

5. A liquid fuel burner arrangement comprising a swirling chamber having an air intake opening in its front wall and delivery nozzles in its rear wall, superposed open liquid fuel containers in said intake opening, a deflecting surface on the rear wall of said chamber, and a baffling surface on the said rear wall immediately above said delivery nozzles and at a slightly higher level than the level of liquid in the lowermost container substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,114,730. MOVING-PICTURE APPARATUS. JOSEPH BUTCHER, Brooklyn, N. Y. Filed Oct. 16, 1911. Serial No. 655,059. (Cl. 88—17.)



1. In a moving-picture projection apparatus, the combination with a projecting lens, of means to sustain a portion of an opaque picture-carrying strip below said lens and in a plane situated at an acute angle to the axis thereof, strip-feeding means, means to illumine said portion of the picture-carrying strip, and a reflector pivotally connected to the projecting lens and when in its operative position situated to reflect an image of the illumined portion of the strip into the projecting lens.

2. In a moving-picture projection apparatus, the combination with a projecting lens, of means to sustain a portion of an opaque picture-carrying strip in a plane situated out of line with the axis of said projecting lens and at an acute angle thereto, strip-feeding means, means to illumine said portion of the strip, and a reflector mounted on the projecting lens and situated to reflect an image of the illumined portion of the strip into said lens.

3. In a moving-picture projection apparatus, the combination with a projecting lens, of means to sustain a portion of an opaque picture-carrying strip in a plane situated out of line with the axis of said projecting lens, strip-feeding means, means to illumine said portion of the strip, and a reflector pivotally connected to the projecting lens and when in operative position situated to reflect an image of the illumined portion of the strip into the projecting lens.

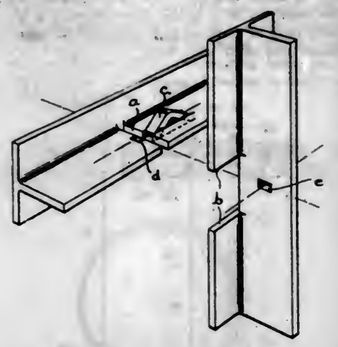
4. In a moving-picture projection apparatus, the combination with a frame, of a projecting lens sustained thereby, a strip support sustained by the frame beneath the projecting lens and situated to maintain the portion of the picture-carrying strip supported thereby at an angle to but out of line with the axis of said projecting lens, strip-feeding means, means to illumine the portion of the strip sustained on said strip support, and a reflector pivotally connected to the projecting lens and when in operative position situated to reflect an image of the illumined portion of the strip into said lens.

5. In a device of the class described, the combination with a stand, of a projecting lens carried thereby, a bracket secured to the stand beneath said lens, a strip support sustained by the bracket and situated at one side of and out of line with the axis of the projecting lens, a picture-carrying strip sustained by said support, a hood having a bottom which overlies said support and is provided with an opening therein of a size to expose one section of said strip, means to illumine said exposed portion of the strip carried by the hand, and a reflector to reflect an image of the illumined portion of the strip into the projecting lens.

[Claim 6 not printed in the Gazette.]

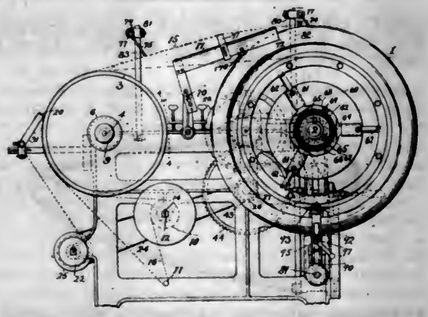
1,114,731. METAL-SASH-BAR JOINT. JULIAN J. CHEVIRON, Detroit, Mich. Filed Dec. 26, 1913. Serial No. 808,085. (Cl. 189—36.)

1. A joint, having in combination, a metal bar provided with a slot passing partly cross-wise of the bar, a portion of the metal that would ordinarily be removed for such slot being preserved as the end of a tongue, the said tongue comprising such portion and the metal included between two cuts running angularly away from said cross slot, and a second metal bar adapted to fit into the said cross slot and provided with a hole adapted to register with the end of the tongue, the said tongue being driven into the hole of the second metal bar and through the same.



2. A joint, having in combination, a metal bar provided with a slot passing partly cross-wise of the bar, a portion of the metal at one side of the slot being cut out to form a recess, and the cut-out portion being preserved together with a portion of the metal that would be removed for the making of such slot, these two portions of metal being preserved as the end of a tongue, the said tongue comprising such portions and the metal included between two cuts running angularly away from said cross slot on the opposite side, a second metal bar adapted to fit into the said cross slot and provided with a hole adapted to register with the end of the tongue, the said tongue being driven completely through the hole of the second metal bar and into the recess formed on the opposite side.

1,114,732. MACHINE FOR MAKING TIRE-CASINGS. FRANCIS B. CONVERSE and FREDERICK A. KRESS, Akron, Ohio, assignors, by mesne assignments, to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed July 26, 1911. Serial No. 640,585. (Cl. 154—10.)



1. In a tire-making machine, the combination of a rotatable core shaft, a core thereon having a rounded cross-section for making an open-sided tire carcass, a stretcher-drum having a shaft, and positive reduction gearing connecting said shafts and causing the stretcher drum to rotate at a lower peripheral speed than that of the core, so as to impart a predetermined amount of stretch to the middle of the fabric as it passes onto said core.

2. In a tire-making machine, the combination of a core-shaft, a tire-making core of rounded cross-section removably mounted thereon, a stretcher drum having a shaft, and a positive gear-train connecting said shafts for rotating the drum at a slower peripheral speed than that of the core, said gear train including a gear replaceable by one of a different diameter, and means for adjusting the mating gear to said replaceable gear.

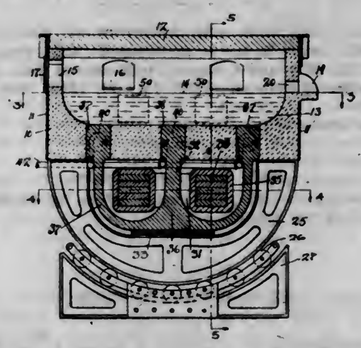
3. In a machine for making tire casings, the combination of a rotatable core, a stretcher drum, means for turning said core and drum at different surface speeds, and a former over which the fabric strip is drawn in passing from the stretcher drum to the core, said former having two longitudinally-separated, transversely-arched surfaces with which said fabric strip successively engages.

4. In a machine for making tire casings, the combination of a core shaft, a tire-forming core removably mounted thereon, means for leading a fabric strip onto said core, and means for driving said core at different speeds, said means including a driving member, two sets of gearing and clutch mechanism for connecting the driving member with the core shaft, and an automatically-releasing clutch included in one of said sets of gearing for automatically disconnecting the core-shaft therefrom when the other set of gearing is thrown into action.

5. In a machine for making tire casings, the combination of a core shaft, a stretcher drum, a freely rotatable reel for holding a time-making fabric strip and a liner strip, a reel for winding up the liner strip, slippable mechanism for turning said liner reel, and guide members over which the liner strip passes, so disposed that said liner strip is separated from the fabric strip and then carried again into contact with a part of the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,114,733. ELECTRIC FURNACE. WALTER N. CRAFTS, Oberlin, Ohio. Filed Nov. 28, 1911. Serial No. 662,822. (Cl. 204—64.)



1. In an electric furnace, the combination, with a basin, of an induction coil having an incompletely annular solid secondary portion exterior of and below the basin cooperating with a bottom portion of the bath in the basin to make a completely annular secondary.

2. In an electric furnace, the combination, with a basin, of an induction coil having an unfused incomplete secondary exterior of the basin and terminating at the bottom of the basin and adapted to be completed by fused material within the basin.

3. In an electric furnace, the combination, with a basin, of a magnetic core, a primary winding, and an unfused incomplete secondary having terminals at the bottom of the basin and adapted to be completed by means of a portion of the bath within the basin.

4. In an electric furnace, the combination, with a basin, of a magnetic core outside of the basin, a primary winding, and an incomplete secondary having terminals at the bottom of the basin and adapted to be completed by means of a portion of the bath within the basin, said secondary exterior of the basin being of material of relatively high conductivity and hence remaining unfused in the operation of the furnace.

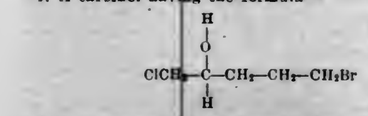
5. In an electric furnace, the combination, with the basin, of a primary, an incompletely annular solid sec-

ondary terminating at its upper end in the bottom of the basin and adapted to be completed by molten metal within the basin.

[Claims 6 to 22 not printed in the Gazette.]

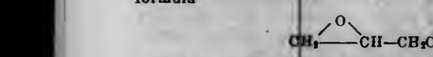
1,114,734. CHLOR-METHYL-OMEGA-BROM-PROPYL-CARBINOL AND PROCESS OF PRODUCING SAME. ALEX B. DAVIS, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 14, 1913. Serial No. 778,883. (Cl. 23—24.)

1. A carbinol having the formula—



2. The process of producing a carbinol by condensing brom-ethyl-magnesium bromid with epichlorhydrin.

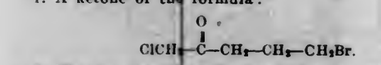
3. The process of producing a carbinol by condensing brom-ethyl magnesium bromid of the following formula $BrCH_2—CH_2—MgBr$ with epichlorhydrin of the following formula



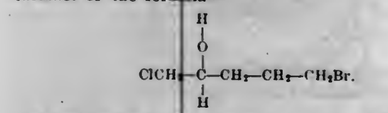
4. The process of producing chlor-methyl-omega-brom-propyl-carbinol which consists in dissolving one molecular proportion of magnesium in an absolute etheral solution of ethylene bromid, and adding one molecular proportion of epichlorhydrin and then decomposing the derivative by an acid suitable for liberating the carbinol.

1,114,735. KETONE AND PROCESS OF PRODUCING SAME. ALEX B. DAVIS, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 14, 1913. Serial No. 778,884. (Cl. 23—24.)

1. A ketone of the formula:



2. The process of producing a ketone by oxidizing a carbinol of the formula—



3. The process of producing a ketone by condensing bromethyl magnesium bromid and epichlorhydrin and subjecting the resulting carbinol to oxidation.

4. The process of producing a ketone which consists in condensing bromethyl-magnesium-bromid and epichlorhydrin, adding sufficient potassium dichromate to burn off two atoms of hydrogen and then adding sufficient sulfuric acid to combine with all the potassium.

5. The process of producing a ketone consisting in adding potassium dichromate to chlor-methyl-brom-propyl-carbinol and then adding an acid capable of combining with the potassium.

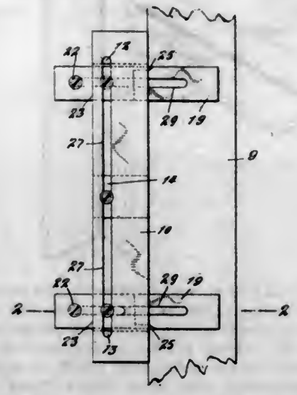
[Claims 6 and 7 not printed in the Gazette.]

1,114,736. CARPENTER'S GAGE. JAMES DICK, Flushing, N. Y. Filed Aug. 8, 1913. Serial No. 783,676. (Cl. 33—197.)

1. A gage for marking doors and jambs comprising a frame and two pairs of cutters adjustable in said frame and adapted to mark the door and jamb simultaneously to indicate the position of a hinge thereon and the exact length thereof.

2. A gage for marking doors and jambs comprising a frame having a longitudinal slot therein constituting a track, two pairs of cutters in said track, fastening means passing through the slot in the frame and through the cutters for adjustably holding the latter spaced from each other, said cutters being adapted to mark the door and jamb simultaneously to indicate the position of the hinge.

3. A gage for marking doors and jambs comprising a frame and two pairs of cutters adjustable in said frame and adapted to mark the door and jamb simultaneously to indicate the position of a hinge thereon, and a blade held between each pair of cutters and adapted to pass into the space between the door and jamb.

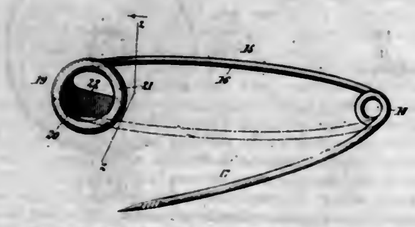


4. A gage for marking doors and jambs comprising a frame and two pairs of cutters adjustable in said frame and adapted to mark the door and jamb simultaneously to indicate the position of a hinge thereon, and a blade adjustably held between each pair of cutters and adapted to pass into the space between the door and jamb.

5. In a device of the character described, a frame comprising two side strips, two pairs of cutters adjustably held to the frame between the strips, each cutter comprising a shank having a shoulder engaging the edge of the adjacent side strip, a reduced portion passing through between the side strips, and a cutter portion extending therefrom, said cutters being adapted to mark the door and jamb simultaneously to indicate the position of the hinge.

[Claims 6 and 7 not printed in the Gazette.]

1,114,737. LOCKING SAFETY-PIN. KARL G. DIETERICH, New York, N. Y. Filed June 26, 1907. Serial No. 380,847. (Cl. 24—156.)



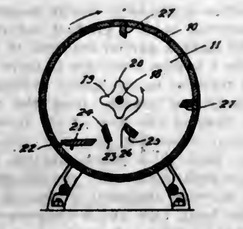
1. A locking safety pin comprising a body portion, a cap secured thereto provided at its inner end with a tapering recess, and a pin extending from said body portion having smooth upper and lower surfaces, and forwardly inclined grooves arranged in the under side of the pin intermediate its smooth surfaces, adapted for engagement with the recess in said cap, substantially as specified.

2. A locking safety pin comprising a body portion, a cap secured thereto consisting of a plate having an annular rim, a downwardly and forwardly inclined recess in the rear edge of said cap at the junction of said plate and rim, and a pin extending from said body portion provided in its upper side with a smooth unbroken longitudinal surface, and in its under side with a relatively narrow

smooth, unbroken longitudinal surface, and provided at its opposite lower sides with downwardly, inwardly and forwardly inclined grooves adapted for engagement with the recess in said cap, substantially as specified.

3. A locking safety pin comprising a body portion, a cap secured thereto consisting of a plate having an annular rim, a downwardly and forwardly inclined V-shaped recess in the rear edge of said cap, and a cut out portion in said plate merging with said V-shaped recess, and a pin provided in its under side to each side of its longitudinal center with inclined, converging recesses adapted for engagement with the V-shaped recess in said cap, substantially as specified.

1,114,738. CHURN AND BUTTER-WORKER. LEVI A. DISBROW, Owatonna, Minn. Filed June 9, 1913. Serial No. 772,582. (Cl. 31—25.)



1. A combined churn and butter worker comprising a horizontal rotary drum, a roller centrally positioned within the drum, a shelf positioned adjacent a wall of the drum, the upper surface of said shelf falling in a plane materially removed at its nearest point from the axis of said roller, and a fixed slicer bar extending longitudinally of said drum and across the plane of said shelf and having the edge thereof nearest the axis of the roller operatively positioned between the plane of the shelf and the axis of the roller.

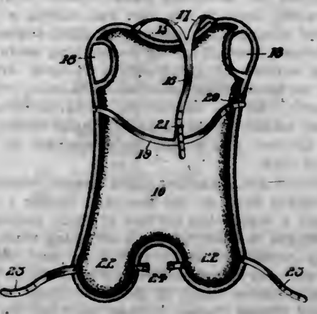
2. A combined churn and butter worker comprising a horizontal rotary drum, a roller centrally positioned within the drum, a shelf positioned adjacent a wall of the drum, the upper surface of said shelf falling in a plane materially removed at its nearest point from the axis of said roller, and a fixed slicer bar extending longitudinally of said drum and across the plane of said shelf and having the edge thereof nearest the axis of the roller operatively positioned between the plane of the shelf and the axis of the roller, said edge being beveled toward the shelf, and said beveled edge and the side of the bar away from the shelf falling in planes on the same side of the axis of the roller as the shelf.

3. A combined churn and butter worker comprising a horizontal rotary drum, a roller centrally positioned within the drum, a shelf positioned adjacent a wall of the drum, the upper surface of said shelf falling in a plane materially removed at its nearest point from the axis of said roller, a plurality of fixed slicer bars extending longitudinally of said drum and having the edges thereof nearest the axis of the roller operatively positioned between the plane of the shelf and the axis of the roller, each of said bars having the edge nearest the roller beveled on the side toward the shelf and the intersecting planes of the beveled and non-beveled surfaces of each of said slicer bars falling outside of the axis of said roller and between said axis and the shelf.

4. A combined churn and butter worker comprising a horizontal rotary drum, a roller centrally positioned within the drum, a shelf positioned adjacent a wall of the drum, the upper surface of said shelf falling in a plane materially removed at its nearest point from the axis of said roller, and a fixed slicer bar extending longitudinally of said drum and across the plane of said shelf and having the edge thereof nearest the axis of the roller operatively positioned between the plane of the shelf and the axis of the roller, said edge being located approximately in a line with and midway between the inner edge of the shelf and the operative periphery of the roller.

5. A combined churn and butter worker comprising a horizontal rotary drum, a roller centrally positioned within the drum, a shelf positioned adjacent a wall of the drum, the upper surface of said shelf falling in a plane materially removed at its nearest point from the axis of said roller, a fixed slicer bar extending longitudinally of said drum and across the plane of said shelf and having the edge thereof nearest the axis of the roller operatively positioned between the plane of the shelf and the axis of the roller, and a series of butter-turning bars projecting inwardly from the wall of the drum at points separated from the shelf and slicer bars.

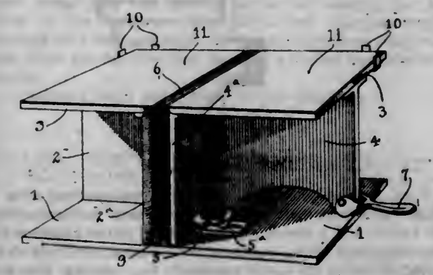
1,114,739. LIFE-PRESERVER. MIKE DOBINCH, Nanty Glo, Pa. Filed June 13, 1914. Serial No. 844,972. (Cl. 9—17.)



1. An inflatable float provided with arm-hole openings adjacent the top thereof and with leg extension portions at the bottom thereof, a back strap provided with a buckle secured to the float, a neck strap having bifurcated ends secured to the top of the float and with a free end engageable with said buckle, and encircling straps carried by said leg portions.

2. A life preserver comprising an inflatable float member having arm-hole openings at one end thereof and leg extensions at the other end thereof, a peripheral integral rim formed entirely around said float and being indented at the top thereof, neck encircling straps, a body strap and two leg-engaging straps carried by the said rim and adapted for removable attachment to the body of the wearer.

1,114,740. DEVICE FOR ATTACHING BOOK-COVERS. THEODORE S. ETHERIDGE, Grand Rapids, Mich. Filed June 4, 1913. Serial No. 771,746. (Cl. 11—2.)



1. A device for attaching book covers, comprising a base, a bracket fixed on the base having a vertical clamping surface and a horizontal supporting surface, a bracket adjustable on the base having a vertical clamping surface opposite the vertical surface of the first bracket and a horizontal surface in the same plane of the horizontal surface of the first bracket, and means for forcing the adjustable bracket toward the fixed bracket.

2. A device for attaching book covers, comprising a base, a bracket fixed on the base having a clamping sur-

face and a supporting surface at right angles thereto, a hinged bracket having a clamping surface and a supporting surface, said clamping surfaces being parallel and spaced apart and the supporting surfaces being in the same plane, and means for forcing said hinged bracket toward the fixed bracket.

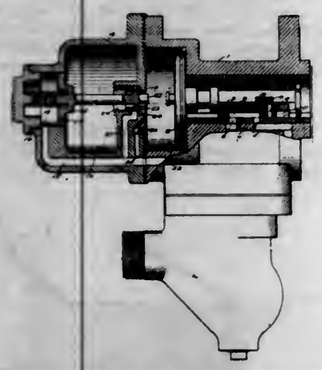
3. A device for attaching book covers, comprising a base, a bracket fixed on the base and having a clamping surface, a bracket hinged to the base and having a clamping surface, said clamping surfaces being parallel and spaced apart, means for varying the space between said clamping surfaces, detachable supporting plates one on each bracket, said plates being in the same plane with each other and at right angles to the clamping surfaces, and means for forcing the hinged bracket toward the fixed bracket.

4. A device for attaching book covers, comprising a base, a bracket fixed on the base and having a clamping surface and a supporting surface at right angles to each other, a hinged bracket having a clamping surface and a supporting surface at right angles to each other, said clamping surfaces being parallel with each other and spaced apart, and the supporting surfaces being in the same plane, means for forcing said hinged bracket toward the fixed bracket, and a stop to be engaged by the rear edge of the book.

5. A device for attaching book covers, comprising a base, a bracket fixed on the base and having a clamping surface and a supporting surface at right angles to each other, a hinged bracket having a clamping surface and a supporting surface at right angles to each other, said clamping surfaces being parellel and spaced apart and the supporting surfaces being in the same plane, means for forcing said hinged bracket toward the fixed bracket, and a removable support for the lower edge of the book.

[Claim 6 not printed in the Gazette.]

1,114,741. TRIPLE-VALVE DEVICE. FRED B. FARMER, St. Paul, Minn., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 6, 1909. Serial No. 404,392. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a triple valve device comprising valve means for controlling the brakes and a piston contained in a piston chamber for actuating said valve means, of a restricted port communicating directly with said chamber for limiting the flow of air from said piston chamber to the train pipe to prevent sudden movement of said piston upon a gradual reduction in train pipe pressure.

2. In a fluid pressure brake, the combination with a triple valve device comprising valve means for controlling the brakes and a piston contained in a piston chamber for actuating said valve means upon a gradual reduction in train pipe pressure to effect a partial traverse and upon a sudden reduction in train pipe pressure to effect a full traverse, of a restricted port leading directly into said chamber for restricting the flow of air from said piston chamber to the train pipe when a gradual reduction in train pipe pressure is made, to thereby prevent full traverse of said piston.

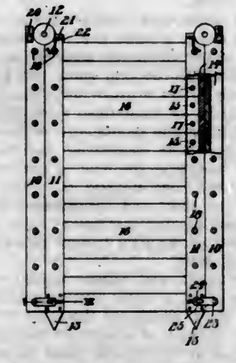
3. In a fluid pressure brake, the combination with a triple valve device comprising valve means for controlling the brakes and a piston contained in a piston chamber for actuating said valve means upon a gradual reduction in train pipe pressure to effect a partial traverse and upon a sudden reduction in train pipe pressure to effect a full traverse, of a restricted port connecting the piston chamber with the usual triple valve cap chamber for limiting the rate of flow of air from said piston chamber to the train pipe when a gradual reduction in train pipe pressure is made to prevent full traverse of said piston and means operating upon a sudden reduction in train pipe pressure to open a communication for permitting free flow of air from said piston chamber.

4. A quick action triple valve device comprising a valve and piston operating upon a gradual reduction in train pipe pressure to make a partial traverse in service applications and upon a sudden reduction in train pipe pressure to make a full traverse in emergency applications, a constantly open restricted passage from the piston to the train pipe for limiting the flow of air from said piston during a gradual reduction in train pipe pressure, a second passage forming a communication between said piston and train pipe, a valve for controlling said second passage and a movable abutment subject to the opposing pressures of the train pipe and a chamber for maintaining said second passage closed during a gradual reduction in train pipe pressure, said abutment being operated upon a sudden reduction in train pipe pressure for opening said valve.

5. A quick action triple valve device comprising a valve and piston operating upon a gradual reduction in train pipe pressure to make a partial traverse in service applications and upon a sudden reduction in train pipe pressure to make a full traverse in emergency applications, a valve for controlling communication from said piston to the train pipe, a movable abutment, subject to the opposing pressures of the train pipe and a chamber having a restricted communication with the train pipe, for controlling said valve.

[Claims 6 to 10 not printed in the Gazette.]

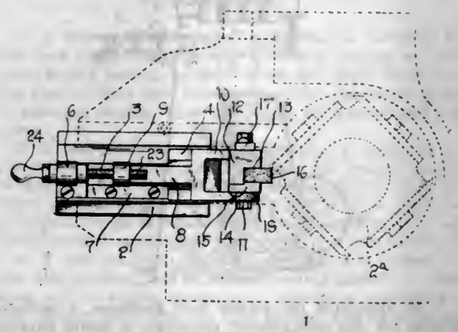
1,114,742. COMBINATION LADDER AND IRONING-BOARD. STANISLAW FEDORCIO, Blue Jay, W. Va., assignor of one-half to Anastazy Tytianchuk, Blue Jay, W. Va. Filed July 30, 1914. Serial No. 854,131. (Cl. 228—32.)



1. A device of the class described comprising upper and lower side rail sections centrally hinged together and provided with inwardly positioned opposite grooves when said sections are in their unfolded positions, steps slidably mounted within the grooves of said sections, and locking pins carried by said rail sections and engageable with said steps.

2. A device of the class described comprising side rails formed of upper and lower sections, arranged in pairs and having inwardly opening side grooves, spring pressed latches carried by said sections and normally projecting within the said grooves, a plurality of steps each having reduced ends slidably positioned within said grooves and provided with sockets adapted for seating said pins therein, hinged members between said upper and lower sections and the steps of all of said sections adapted for positioning between said lower sections and in contact with each other with the device in its folded position and retaining latch members carried by the free ends of said sections.

1,114,743. JOINTING-HEAD FOR WOODWORKING-MACHINES. JESSE W. FOSTERLING, Missoula, Mont. Filed Feb. 16, 1914. Serial No. 819,033. (Cl. 144—114.)



1. In a jointer for wood working machines, a base member, an additional member adjustable longitudinally thereof, a swinging member carried on the last mentioned member and adapted to carry a grinding means, and means for retaining said swinging member in various positions with respect to the member carrying the same.

2. In a jointer, a base member, an additional member adjustable longitudinally thereof and adapted to project beyond one end of said base member, a member pivotally carried on the projecting end of the last mentioned member and designed to receive a grinding attachment, and means to retain said member in various positions with respect to the longitudinal adjustable member.

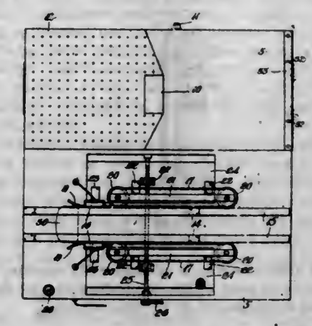
3. In a jointer for wood working machines, a base member adapted to be adjustably secured on a stationary object, a member adjustable longitudinally thereon and adapted to project beyond one end of said base member, a block pivotally carried on the projecting end of said last mentioned member and designed to receive a grinding means, means for retaining said pivotal member in various adjusted positions with respect to the longitudinal adjustable member, and means for manually adjusting the longitudinal adjustable member on the base member.

4. In a jointer for wood working machines, a base member adapted to be adjustably secured to a stationary object, a member longitudinally adjustable on the base member and provided with a yoke-like outer end, projecting beyond one end of the base member, a block pivotally held between the ends of the yoke-like portion of said last mentioned member, said block being designed to receive a grinding means thereon, means to retain said block in various adjusted positions in the yoke-like portion of the longitudinal adjustable member, and means for manually adjusting said longitudinal adjustable member in the base member.

5. In a jointer for wood working machines, a base member adapted to be adjustably secured to a stationary object, said base member being provided with a longitudinal channel terminating in an enlarged recess in one end thereof, a bar longitudinally movable in said channel and having a yoke-like outer end received in the enlarged recess of said base member, a block pivotally carried in the yoke-like portion of said bar and designed to receive a grinding means therein, means to retain said block in various adjusted positions with respect to the member carrying the same, and means for manually adjusting said bar in the base member.

[Claim 6 not printed in the Gazette.]

1,114,744. APPARATUS FOR SEALING WAXED PAPERS. ROBERT FRIEND, Lowell, Mass. Filed Oct. 1, 1913. Serial No. 792,903. (Cl. 93—2.)



1. An apparatus for sealing waxed or paraffin wrappers having a plurality of folds at the ends, comprising a wrapping table having means for heating the end folds of the wrapper while the same are in a folded position and engaging means moving with the wrappers for exerting pressure upon said end folds to maintain them in a folded position until cooled.

2. An apparatus for sealing waxed or paraffin wrappers having a plurality of folds at the ends, comprising plates for heating the end folds of the wrappers and means in which there is no relative motion between the wrappers and said end pressing means for exerting pressure upon said end folds until they have cooled.

3. An apparatus for sealing waxed or paraffin wrappers having a plurality of folds at each end, comprising means for heating the end portions of the wrappers to be sealed and means coming in contact with said wrappers and moving therewith for exerting a continuous pressure upon said end folds until they are cooled.

4. An apparatus for sealing waxed or paraffin wrappers comprising means for heating the end folds of the wrappers under pressure and perforated cooling means moving with said wrappers for maintaining a continuous pressure upon said end folds until the same have cooled.

5. An apparatus for sealing waxed or paraffin wrappers comprising two heated plates for heating the end folds of the wrappers, and perforated engaging means moving with the wrappers for exerting pressure upon said end folds for maintaining them in a folded position until cooled.

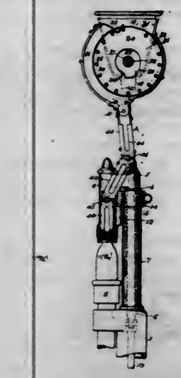
[Claims 6 to 11 not printed in the Gazette.]

1,114,745. BOTTLE-CAPPING MACHINE. LAURITZ C. GARMAN, Baltimore, Md., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Dec. 20, 1910. Serial No. 598,416. (Cl. 113—114.)

1. In a bottle capping machine, the combination with a bottle support and a capping head, of a cap supplying hopper embodying a rotary cage provided with selecting openings, a spring tappet mounted outside the cage and arranged to enter said openings for positively removing from said openings any caps which may have been caught therein, and a chute for conveying the caps from the hopper to the head.

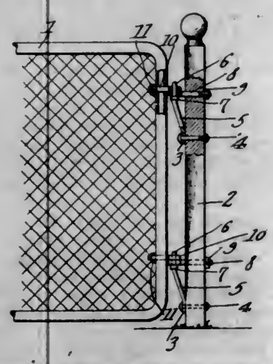
2. In a capping machine, a cap supplying hopper embodying a rotary selecting cage having a rear wall, said wall being provided with a centrally disposed delivery orifice which is enlarged at one side to prevent choking.

3. In a capping machine, a cap supplying hopper embodying a rotary selecting cage having a rear wall, said wall being provided with a centrally disposed delivery



orifice, said orifice having a substantially circular contour for a considerable part of its circumference and an irregularly formed enlargement to prevent choking.

1,114,746. HINGE. JOHN GORMAN, Wentworth, Mo. Filed Apr. 2, 1914. Serial No. 829,092. (Cl. 16—112.)

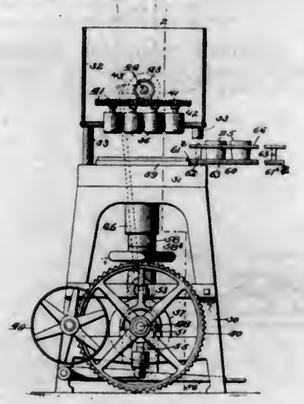


In combination, a supporting member, a gate, and upper and lower hinges connecting the supporting member and the gate, one hinge comprising a member secured to the supporting member and having a flexible inclined arm, the upper end of the said arm being disposed in the plane of the gate, a member secured to the gate and having an eye whose axis lies in the plane of the gate, the said eye being journaled over the upper end of the said arm, and an adjustable stay bolt connecting the upper end portion of the said arm and the supporting member for flexing the said arm toward the post to adjust the gate in its plane.

1,114,747. SEALING FOOD PACKAGES. FRANK GRAEBER, Norristown, Pa., assignor to Herman Howard Harting, Philadelphia, Pa. Filed Apr. 26, 1913. Serial No. 763,815. (Cl. 99—8.)

1. In apparatus for applying paraffin coating to packages of food products, means for supplying liquid paraffin in predetermined quantity to the food product container, a carrier for the container, and mechanism for providing relative movements between the carrier and said means, said relative movements successively providing for the formation of a layer on the contents of the container, then bringing the means in contact with the layer, and finally placing pressure on the layer to displace it laterally at its periphery to form a flange.

2. In apparatus for applying paraffin coating to packages of food products, means for supplying liquid paraffin in predetermined quantity to the food product container, a carrier for the container, and mechanism for providing relative movements between the carrier and said means, said relative movements successively providing for the formation of a layer on the contents of the container, then bringing the means in contact with the layer, and finally placing pressure on the layer to displace it laterally at its periphery to form a flange, said means including an element combining with the container to form spaced apart mold walls for the flange.



3. In apparatus for sealing food packages, a movable carrier for the food-product container, a liquid paraffin supply including an element adapted to deliver the paraffin in predetermined quantity, said element being located within the path of movement of the container, said element and the container being relatively sized to form opposing mold walls with an annular space therebetween to receive paraffin displaced by the element contacting with the layer during movements of the carrier.

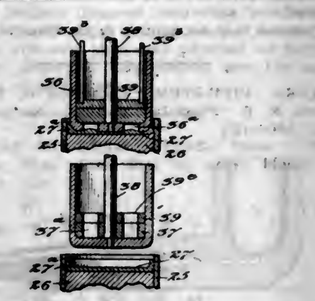
4. In apparatus for sealing food packages, a movable carrier for the food-product container, a liquid paraffin supply including an element adapted to deliver the paraffin in predetermined quantity, said element being located within the path of movement of the container, said element and the container being relatively sized to form opposing mold walls with an annular space therebetween to receive paraffin displaced by the element contacting with the layer during movements of the carrier, said element including a valve structure adapted to segregate and deliver the paraffin to the container.

5. In apparatus for sealing food packages, a movable carrier for the food-product container, a liquid paraffin supply including an element adapted to deliver the paraffin in predetermined quantity, said element being located within the path of movement of the container, said element and the container being relatively sized to form opposing mold walls with an annular space therebetween to receive paraffin displaced by the element contacting with the layer during movements of the carrier, said element including a valve structure adapted to segregate and deliver the paraffin to the container, said movements of the valve structure being operative prior to the displacing contact of the element and layer.

[Claims 6 to 16 not printed in the Gazette.]

1,114,748. PACKAGED ARTICLE AND METHOD FOR PRODUCING THE SAME. FRANK GRAEBER, Philadelphia, Pa., assignor to Herman Howard Harting, Philadelphia, Pa. Original application filed Apr. 26, 1913, Serial No. 763,815. Divided and this application filed Oct. 14, 1913. Serial No. 795,104. (Cl. 99—8.)

1. In a food-products package, a container for the food product, and a sealing coating for the food product, said coating being formed in place from molten sealing material and in the form of a layer dish-shaped in cross section with an upturned peripheral flange adhering to the wall of said container.



2. A food-products package comprising a container for the food product, and a sealing coating formed in place from molten sealing material above the upper surface of the food product and with an upturned peripheral flange in adhering sealing engagement with the wall of said container.

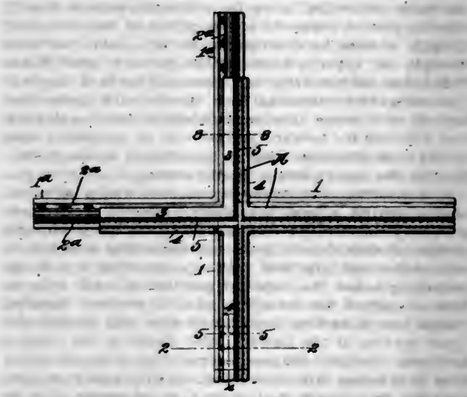
3. A food-products package comprising a container for the food product, and a substantially flat sealing coating formed in place from molten sealing material upon the upper surface of the food product and with an upturned peripheral flange of substantially uniform thickness in adhering sealing engagement with the wall of said container.

4. A food-products package comprising a container for the food product, and a sealing coating formed in place from molten sealing material to provide a substantially flat uniform layer over the food product and an upturned peripheral flange substantially the thickness of said layer in adhering sealing engagement with the wall of said container.

5. A food-products package comprising a sealing coating formed in place from molten sealing material and with a substantially flat covering portion and an upturned peripheral flange.

[Claims 6 and 7 not printed in the Gazette.]

1,114,749. RAILWAY-CROSSING. CHARLES J. GRIFFITH, St. Louis, Mo. Filed Aug. 16, 1912. Serial No. 715,429. (Cl. 104—40.)



1. The herein described railway crossing comprising crossing rails formed integral with each other, each of which crossing rails comprises a base plate, a pair of inclined webs integral with the base plate and a ball integral with the upper ends of said webs the base plate and webs of each crossing rail being extended at the ends thereof to receive and serve as points of attachment for track rails.

2. The hereindescribed railway crossing comprising crossing rails formed integral with each other, each of which crossing rails comprises a base plate, a pair of inclined webs integral with the base plate, a ball integral with the upper ends of said webs, and a flange-guard integral with said ball the base plate and webs of each crossing rail being extended at the ends thereof to receive and serve as points of attachment for track rails.

3. A railway crossing comprising integral crossing rails that are hollow and of triangular shape in cross section, and hollow triangular extensions on the ends of said rails adapted to receive the ends of adjacent track rails.

4. The hereindescribed railway crossing comprising crossing rails that are formed integral with each other, each of said rails comprising a base plate, a pair of inclined webs, a ball on top of said webs, and hollow triangular extensions at the ends of the crossing rails, which extensions are adapted to receive the end portions of adjacent track rails.

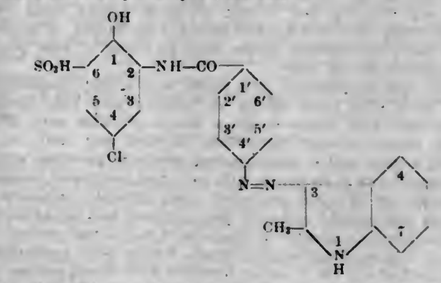
5. A railway crossing composed of intersecting crossing rails, the bodies of which are hollow and of triangular shape in cross section, balls integral with the tops of said hollow body portions and hollow triangular extensions at the ends of said rails, which extensions are adapted to receive the end portions of adjacent track rails.

[Claim 6 not printed in the Gazette.]

1,114,750. YELLOW AZO DYE. KARL HAGEMANN, Leverkusen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 21, 1914. Serial No. 833,469. (Cl. 8—1.)

1. The herein described new azo dyestuffs being derived from an aminoacidyl compound of an ortho-aminophenol sulfonic acid and a methylketol compound, which are after being dried and pulverized in the shape of their alkaline salts reddish-brown to yellowish powders soluble in water, caustic soda lye and concentrated sulfuric acid generally with a yellowish coloration; yielding upon reduction with acetic acid and zinc powder an aminoacidyl compound of an ortho-aminophenol sulfonic acid and a 3-aminomethylketol compound furnishing on the fiber yellowish to pure yellow chrome lakes fast to light and to milling, substantially as described.

2. The herein described new azo dyestuff having in a free state most probably the formula:

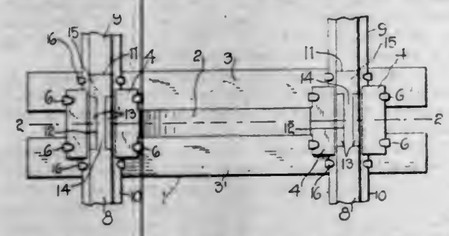


which is after being dried and pulverized in in the shape of its sodium salt a canary-yellow powder soluble in water and in concentrated sulfuric acid with a yellowish coloration and yielding upon reduction with zinc powder and acetic acid para-aminobenzoyl-2-amino-4-chloro-1-phenol-6-sulfonic acid and 3-aminomethylketol and furnishing when printed on the fiber together with acetate of chromium pure yellow shades fast to light and to milling, substantially as described.

1,114,751. RAIL TIE AND JOINT. DAVID HALL, Higden, Ark. Filed Apr. 4, 1914. Serial No. 829,615. (Cl. 238—5.)

A railway tie including spaced parallel side sections, a central section arranged therebetween and having its ends disposed short of the ends of the side sections, transverse enlarged portions formed at the ends of the central

sections, said transverse members having their opposed faces inclined inwardly, said transverse members extending beyond the sides of the central section and adapt-



ed to rest upon the upper faces of the side sections, and means engaging the side sections and the outer edges of the transverse members to retain said sections in position with respect to each other.

1,114,752. TRUCK. WALTER LOOMIS HAMILTON, Holyoke, Mass. Filed Feb. 16, 1912. Serial No. 678,020. (Cl. 21—65.)

1. The framework of a truck comprising a body having side flanges and provided with wedge-blocks, and a superimposed platform having side flanges and provided with wedge-blocks to coöperate with said first-mentioned wedge-blocks, the top and bottom platform flanges being respectively above the top and bottom body flanges.

2. The combination, in a truck, with a body having side flanges and provided with wedge-blocks, and a superimposed platform having side flanges and provided with wedge-blocks to coöperate with said first-mentioned wedge-blocks, the top and bottom platform flanges being respectively above the top and bottom body flanges, of means to move horizontally either said platform or said body relatively to the other.

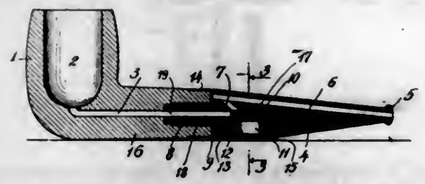
3. The combination, in a truck, with a body consisting in part of a prow having an upright, said body being provided with wedge-blocks, a tongue provided with lifting means, pivotal connections between said body, and said tongue and a superimposed platform provided with wedge-blocks to coöperate with said first-mentioned wedge-blocks, of pivotally-connected links pivotally connected with said upright and with said platform and one of such links having a member in the path of said lifting means.

4. The combination, in a truck, with a body consisting in part of a prow, a tongue provided with lifting means, a superimposed platform, pivotal connections between said prow and said tongue, and means to cause said platform to rise and fall when moved longitudinally on said body or when the latter is moved longitudinally beneath the former, of links pivotally connected with each other and with said prow and platform, one of such links having a part in the path of said lifting means, and one of such links being provided with a knock-off arm, and a knock-off movably mounted between said arm and said tongue.

5. The combination, in a truck, with a body consisting in part of a prow having an upright, said body being provided with wedge-blocks, a tongue provided with lifting means, pivotal connections between said body and said tongue, a suitably mounted movable knock-off arranged in the path of said tongue, and a superimposed platform provided with wedge-blocks to coöperate with said first-mentioned wedge-blocks, of links pivotally connected with each other and with said upright and said platform, one of such links being provided with a member in the path of said lifting means, and one of such links being provided with a member in the path of said knock-off.

[Claims 6 to 9 not printed in the Gazette.]

1,114,753. PIPE-STEM. LAURENCE G. HANMER, New York, N. Y. Filed Jan. 6, 1914. Serial No. 810,547. (Cl. 131—12.)



1. A smoking pipe comprising a bowl and a stem extension thereon having a bowl bore formed therein, a stem having a plug removably connecting said stem substantially in line with the stem extension on said bowl, a flexible stem washer on said plug and normally covering the joint flange of said stem, a threaded recess formed in the lower forward portion of said stem, a drain cup removably screwed into said recess and provided with a supporting cup flange projecting laterally beyond and below the adjacent portions of said stem to form a support for the pipe when resting on a flat surface, a cup washer beneath said cup flange, an inclined stem bore extending through said stem substantially parallel to its upper surface and extending through the joint flange of the stem beneath said stem washer, an upwardly and forwardly inclined diagonal connecting bore extending from the forward upper portion of said recess into communication with said stem bore adjacent its forward portion and an admission bore in said stem communicating with said bore bowl and leading into the upper forward portion of said recess.

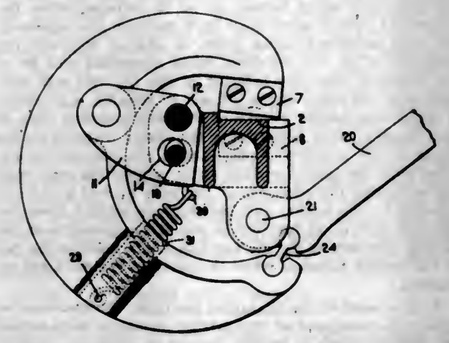
2. A smoking pipe comprising a bowl and a stem extension having a bowl formed therein, a stem removably connected substantially in line with the stem extension on said bowl, a flexible stem washer normally covering the joint flange of said stem, a recess formed in the lower forward portion of said stem, a drain cup removably mounted in said recess and provided with a supporting cup flange projecting below the adjacent portions of said stem to form a support for the pipe and hold its bowl upright, a stem bore extending through said stem and through the upper portion of the forward joint flange of the stem, an upwardly and forwardly inclined diagonal connecting bore extending from the forward upper portion of said recess into communication with said stem bore adjacent its forward portion and an admission bore in said stem communicating with said bowl bore and leading into the upper portion of said recess.

3. A smoking pipe comprising a bowl and a stem extension having a bowl bore formed therein, a stem removably connected, a recess formed in the lower forward portion of said stem, a drain cup removably mounted in said recess and provided with a supporting cup flange projecting below the adjacent portions of said stem to form a support for the pipe and hold its bowl upright, a stem bore extending through said stem and through the upper portion of the forward joint flange of the stem, a forwardly inclined diagonal connecting bore extending from said recess into communication with said stem bore adjacent its forward portion and an admission bore in said stem communicating with said bowl bore and leading into the upper portion of said recess.

4. A stem for a smoking pipe having a plug to removably connect said stem with a pipe bowl, a threaded recess formed in the lower forward portion of said stem, a drain cup screwed into said recess and provided with a supporting cup flange projecting laterally beyond and below the adjacent portions of said stem to form a support

when resting on a flat surface, an inclined stem bore extending through the upper portion of said stem and extending through the joint flange of the stem, an upwardly and forwardly inclined diagonal connecting bore extending from the forward upper portion of said recess into communication with said stem bore adjacent its forward portion and an admission bore leading into the upper forward portion of said recess.

1,114,754. RULE AND LEAD CUTTER. HANS C. HANSEN, Newton, Mass. Filed Feb. 20, 1914. Serial No. 820,058. (Cl. 164—10.5.)



1. A cutter comprising a material support, a shearing blade connected thereto, a coöperating shearing blade, a pivoted arm carrying said coöperating shearing blade and means to vary the relative position of the material support and the pivot of said arm whereby the angle between the cutting edges of the shearing blades may be varied.

2. A cutter comprising a lower fixed shearing blade, a support extending transversely to and at one side of said shearing blade and presenting a guideway, an adjustable auxiliary support, an upper blade, a lever carrying said upper blade and pivoted to said auxiliary support whereby the angle between the shearing blades may be varied by adjusting the auxiliary support, and means to operate said lever to sever the material.

3. A cutter comprising a base presenting a material support, an adjustable support pivoted thereto, an arm pivoted to said adjustable support, coöperating shearing blades secured to the base and pivoted arm respectively, eccentric means for adjusting said adjustable support and holding it in adjusted position whereby the position of the pivot of said arm may be varied relative to the material support to thereby vary the angle between the cutting edges of said blades and means to operate the pivoted arm.

4. A cutter comprising a lower fixed blade, a main support extending transversely to and at one side of said blade, an auxiliary support pivotally connected to said support and adjustable relatively thereto, an upper movable blade, an arm carrying said upper blade pivotally connected to said auxiliary support and extending beneath the main support, an operating lever pivoted to the main support, and a connection between said arm and operating lever consisting of a compression link having rounded ends fitting into sockets in the arm and lever, respectively.

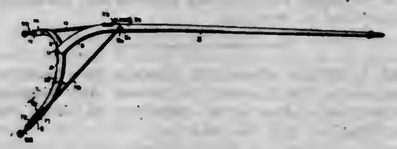
5. A cutter comprising a lower fixed blade, a material support extending transversely to and at one side of said blade, an upper movable blade, a C-shaped arm carrying said upper blade and pivotally connected to and extending beneath the support, an operating lever pivoted to the support and a connection between said arm and operating lever beneath the material support consisting of a compression link having rounded ends fitting into sockets in the arm and lever, respectively.

[Claims 6 to 14 not printed in the Gazette.]

1,114,755. STACK-COVER. MADS HANSEN, Bancroft, Nebr. Filed Mar. 24, 1914. Serial No. 826,921. (Cl. 108—3.)

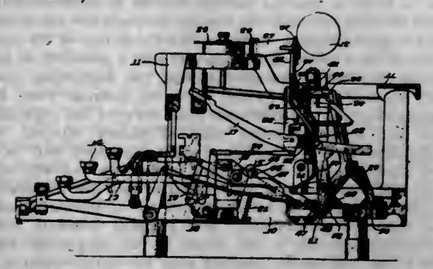
A stack cover comprising side sections, each consisting of a plurality of plates, the continuous longitudinal edges of which are overlapped, a plurality of chains arranged transversely of the side sections and fastened to each of the plates, the ends of the chains extending beyond the longitudinal edges of the side sections, weights attached to the lower ends thereof and adapted to be suspended upon opposite sides of the stack and normally hold the side sections in position thereon, the other ends of said chains extending upwardly to the top of the stack, means for detachably connecting the upper ends of said chains, an arcuate crown section arranged over the apex of the stack, the longitudinal edges of which overlap the adjacent plates of the side sections, a plurality of relatively short chains fastened to the longitudinal edges of the crown and having their other ends detachably connected to the side sections to retain said crown in position over the top of the stack.

1,114,756. BUGGY-POLE. BENNIE P. HANSON and LONE GRENARD, Eagle Grove, Iowa. Filed Nov. 13, 1913. Serial No. 800,821. (Cl. 21—36.)



A vehicle pole comprising a spring tube having a longitudinal slot of increasing proportions and with an aperture in the rear end with bolt holes leading thereto, a circle-bar inserted in said aperture, registering clip-holes in said circle-bar and said tube, a clip inserted in said clip-holes to lock said circle-bar and tube from play, and a locking bolt inserted through the bolt-holes, the circle-bar and the clip to lock said devices into assembled position.

1,114,757. TYPE-WRITER. DE WITT C. HARRIS, Fond du Lac, Wis., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Original application filed Apr. 15, 1912, Serial No. 690,756. Divided and this application filed May 2, 1913. Serial No. 764,998. (Cl. 197—159.)



1. In a front-strike typewriting machine, the combination of a ribbon-guide arranged to reciprocate vertically in

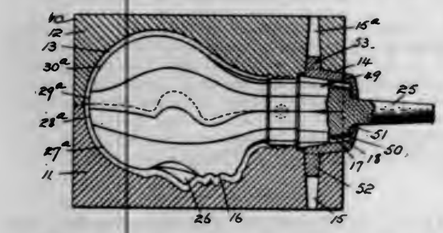
front of the platen, a lever pivoted in the lower portion of the machine, a link connecting said lever to said ribbon-guide, said lever having a cam slot therein, a series of key levers, a universal bar positioned to be engaged by said key levers, and an arm projecting rigidly from said bar and having a stud lying in said cam-slot.

2. In a typewriter, in combination, a series of key levers, a universal bar positioned so as to be engaged by said key levers, a bell-crank mounted in the lower portion of the machine and having a horizontal arm and a vertical arm having a cam-slot therein, an arm rigid with said universal bar having a projection lying in said cam-slot, a reciprocatory ribbon-guide, and a connection between said horizontal arm and said guide.

3. In a typewriter, in combination, a series of key levers, a universal bar positioned so as to be engaged by said key levers, a bell-crank lever mounted in the lower portion of the machine, and having a horizontal arm and a vertical arm, the latter having a cam-slot therein, an arm rigid with said unicersal bar and having a projection lying in said cam-slot, a link connected at its lower end to said horizontal arm of the bell crank and extending upwardly, and a vertically reciprocating ribbon-guide attached to the upper end of said link.

4. In a typewriter, in combination, a framework, a series of key levers pivoted therein, a pair of arms pivoted concentrically with said key levers, a universal bar carried by the free ends of said arms and arranged to be engaged by said key levers, an arm projecting rearwardly from and rigid with said universal bar, a bell-crank lever pivoted in the lower portion of the framework and having a horizontal and a vertical arm, the latter being provided with a cam-slot arranged to engage a projection on said rearwardly projecting arm, a link attached to and extending upwardly from the horizontal arm of said bell crank, and a vertically reciprocating ribbon-guide connected to the upper end of said link.

1,114,758. MOLD. SAMUEL I. HASKELL, New York, N. Y., assignor to The Fraenkell & Haskell Art Company, a Corporation of New York. Filed Oct. 31, 1913. Serial No. 798,471. (Cl. 18—45.)



1. In a mold of the character described, the combination with a die composed of two mating members, each having the opposed surface thereof cut-out to provide a hollow interior to conform in shape to the article to be molded, and each of said members having a corresponding end cut-out to form an opening through the die in communication with its interior when the mating members are assembled, of a supporting post having a handle on one of its ends, and having a recess in its opposite end, a plurality of segments detachably arranged around the supporting post, said segments being formed so as to collapse when the supporting post is withdrawn from between the segments, and said segments being made of shapes whereby the periphery of all the segments when assembled will be of less diameter than the interior of the die and will conform with the shape of the interior of said die, a plurality of gripping elements, one formed on one of the corresponding ends of each segment, said gripping elements being removably inserted in the recess of the supporting post, and a cap detachably disposed over the handle portion of the supporting post, said cap encircling the segments at the ends thereof which are opposite to the gripping elements, and means provided upon the cap for detachably holding the cap to the mating members of the die when the parts of the mold are assembled.

2. In a mold of the character described, the combination with a die composed of two mating members, each having the opposed surface thereof cut-out to provide a hollow interior to conform in shape to the article to be molded, and each of said members having a corresponding end cut-out to form an opening through the die in communication with its interior when the mating members are assembled, and each of said mating members also having a transverse passage which communicates with said opening of the die, of a supporting post having a handle on one of its ends, and having a recess in its opposite end, a plurality of segments detachably arranged around the supporting post, said segments being formed so as to collapse when the supporting post is withdrawn from between the segments, and said segments being made of shapes whereby the periphery of all the segments when assembled will be of less diameter than the interior of the die and will conform with the shape of the interior of said die, a plurality of hooks, one formed on one of the corresponding ends of each segment, said hooks being removably inserted in the recess of the supporting post, and a cap detachably disposed over the handle portion of the supporting post, said cap encircling the segments at the ends thereof which are opposite to the hooks, and two lugs projecting from the cap and each being inserted in one of the passages of the mating members of the die for detachably holding the cap to the mating members when the parts of the mold are assembled.

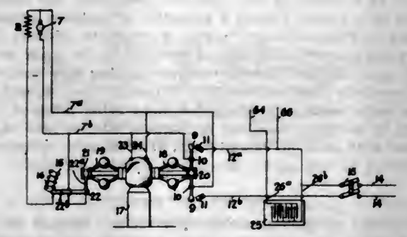
3. In a mold of the character described, the combination with a die composed of two mating members, each having the opposed surface thereof cut-out to provide a hollow interior to conform in shape to the article to be molded, and each of said members having a corresponding end cut-out to form an opening through the die in combination with its interior when the mating members are assembled, of a tapered supporting post having a handle on one of its ends, and having a recess in its opposite end, a stem extending from the recessed end of the tapered post, a plurality of segments detachably arranged around the supporting post, said segments being formed so as to collapse when the supporting post is withdrawn from between the segments, and said segments being made of shapes whereby the periphery of all the segments when assembled will be of less diameter than the interior of the die, a plurality of hooks, one formed on one of the corresponding ends of each segment, said hooks being removably inserted in the recess of the supporting post, and a cap detachably disposed over the handle portion of the supporting post, said cap encircling the segments at the ends thereof which are opposite to the hooks, and means provided upon the cap for detachably holding the cap to the mating members of the die when the parts of the mold are assembled.

4. In a mold of the character described, the combination with a die composed of two mating members, each having the opposed surface thereof cut-out to provide a hollow interior to conform in shape to the article to be molded, and each of said membera having a corresponding end cut-out to form an opening through the die in communication with its interior when the mating members are assembled, and a plurality of segments arranged circumferentially within the interior of the mating members, said segments being formed to provide a passage centrally therebetween so as to be adapted to collapse interiorly of the die, and said segments being made of shapes whereby the periphery of all the segments when assembled will be of less diameter than the interior of the die, of a supporting post removably disposed through the opening of the die and removably disposed in the passage between the segments, said post having a handle on one of its ends, and having a recess in its opposite end, a plurality of gripping elements, one formed on one of the corresponding ends of each segment, said gripping elements being removably inserted in the recess of the supporting post, and a cap detachably disposed over the handle portion of the supporting post, said cap encircling the segments at the ends thereof which are opposite to the gripping elements, and means provided upon the cap for detachably holding the cap to the mating members of the die when the parts of the mold are assembled.

5. In a mold of the character described, the combination with a die composed of two mating members, each having the opposed surface thereof cut-out to provide a hollow interior to conform in shape to the article to be molded, and each of said members having a corresponding end cut out to form an opening through the die in communication with its interior when the mating members are assembled, and a plurality of segments arranged circumferentially within the interior of the mating members, said segments being formed to provide a passage centrally therebetween so as to be adapted to collapse interiorly of the die, and said segments being made of shapes whereby the periphery of all the segments when assembled will be of less diameter than the interior of the die, of a supporting post removably disposed through the opening of the die and removably disposed in the passage between the segments, said post having a handle on one of its ends, and having a recess in its opposite end, a plurality of hooks, one formed on one of the corresponding ends of each segment, said hooks being removably inserted in the recess of the supporting post, and a cap detachably disposed over the handle portion of the supporting post, said cap encircling the segments at the ends thereof which are opposite to the gripping elements, and means provided upon the cap for detachably holding the cap to the mating members of the die when the parts of the mold are assembled.

[Claim 6 not printed in the Gazette.]

1,114,759. WINDMILL-POWER PLANT. ALBERT H. HEYROTH, Great Falls, Mont. Filed Dec. 17, 1912. Serial No. 737,202. (Cl. 171—313.)

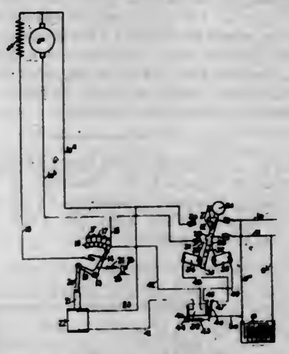


1. In a windmill power plant, the combination of a generator and a storage battery adapted to be operated in multiple, a motor actuated by the generator, a plurality of centrifugal devices actuated by the motor, a rheostat forming part of the generator field circuit, one of the centrifugal devices actuating the arm of the said rheostat, and a switch between the battery and the generator for disconnecting them when the voltage falls below a predetermined amount, the said switch being operatively associated with the other centrifugal device.

2. In a windmill power plant, the combination with a generator having a shunt field circuit, a storage battery, a pair of contacts, a pair of movable switch arms, each of said arms being arranged to engage one of said contacts, connections between the generator terminals and each of said arms, a motor having its terminals connected to the terminals of the generator, a centrifugal device carried by the motor on one side thereof for bringing said arms into engagement with their respective contacts at a predetermined speed of the motor, a variable resistance in the shunt field circuit of the generator, a pivoted arm for operating said variable resistance, and a centrifugal device disposed on the opposite side of the motor from the first named centrifugal device for shifting the position of said last named arm.

1,114,760. SYSTEM OF ELECTRICAL SUPPLY. ALBERT H. HEYROTH, Great Falls, Mont. Filed Jan. 3, 1913. Serial No. 740,004. (Cl. 171—313.)

1. In a system of electrical supply, the combination of a generator and a storage battery adapted to be operated in multiple, a rheostat in circuit with the field coils of the generator, a solenoid for operating said rheostat bridged across the armature of the generator, a switch disposed between the generator and the storage battery for cutting off the generator from the battery, a pair of magnets for controlling said switch, means disposed in series with said solenoid for controlling the circuits through said magnets, said last named means comprising a relay having an armature, a pair of contacts arranged to be engaged by the armature, one of said contacts having electrical connection with one of said magnets and the other contact having electrical connection with the other magnet, electrical connections between said armature and one terminal of said storage battery, and means carried by said switch for completing the electrical connection between the storage battery and either of said magnets.



2. In a system of electrical supply, the combination of a generator and a storage battery adapted to be operated in multiple, a rheostat in circuit with the field coils of the generator, a solenoid for operating said rheostat bridged across the armature of the generator, a switch disposed between the generator and the storage battery for cutting off the generator from the battery, a pair of magnets for controlling said switch, means disposed in series with said solenoid for controlling the circuits through said magnets, said last named means comprising a relay having an armature, a pair of contacts arranged to be engaged by the armature, one of said contacts having electrical connection with one of said magnets and the other contact having electrical connection with the other magnet, electrical connections between said armature and one terminal of said storage battery, means carried by said switch for completing the electrical connection between the storage battery and either of said magnets, said last named means comprising a conducting plate carried by said switch and having electrical connection with said storage battery, and a stationary contact arranged on each side of said switch and arranged to be engaged by said conducting plate during the movement of the switch, each of said last named stationary contacts being connected with one of said magnets.

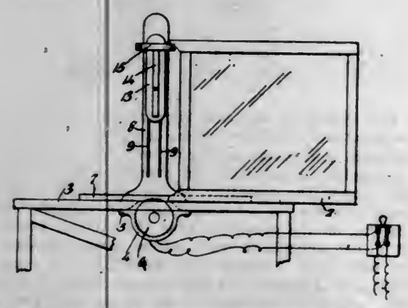
3. In a system of electrical supply, the combination of a generator and a storage battery adapted to be operated in multiple, a rheostat in circuit with the field coils of the generator, electro-magnetic means for operating said rheostat, the actuation of said electro-magnetic means being responsive to the generator voltage, a relay in series with said rheostat operating means, a weighted switch disposed between said storage battery and said generator, and a pair of magnets for operating said switch, said magnets being controlled by the action of said relay.

4. In a system such as described, the combination of a generator and a storage battery adapted to be operated in multiple, a resistance in the field circuit of the generator, a magneto-electric device actuated by the armature of the generator for varying the portion of the said resistance included in the field circuit, a relay in series with the said magneto-electric device, a switch between the storage battery and the generator, and electro-magnetic

devices for bringing the switch to different positions, the armature of the relay being included in the circuits actuating the said electro-magnetic devices controlling the switch, the said circuit being actuated by the storage battery.

5. In a system such as described, the combination of a generator and a storage battery operating in multiple, a switch for removing the generator from the system when the voltage thereof falls below that of the storage battery, a plurality of electro-magnets for moving the switch from open to closed position, and vice versa, a relay adapted to be excited by the said generator, the relay armature being connected to one side of the storage battery, one side of each of the electro-magnets being adapted to be connected to the other side of the storage battery, a plurality of contacts connected to the other sides of the electro-magnets, the armature of the said relay engaging one or the other of the said contacts, whereby when the voltage of the generator reaches a determined amount the armature will engage one of the contacts, thereby closing the switch, the armature engaging the other contact when the voltage of the generator falls below a determined amount, whereby the switch is opened.

1,114,761. WINDOW-SASH-GROOVING MACHINE. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Sept. 26, 1913. Serial No. 791,946. (Cl. 144—136.)

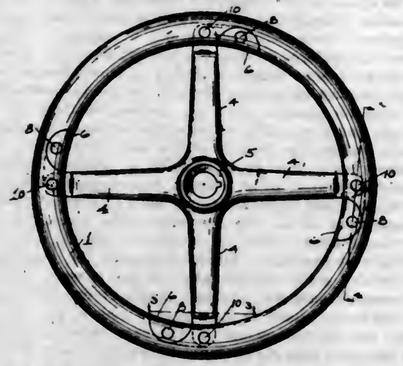


1. A groove cutting machine for window sashes, a saw to be mounted under a slotted table and a guiding device adapted to be mounted on the table over the saw slot therein, comprising a lateral guide mounted on the table on one side of the saw, a resilient guide on the other, and a vertical guide mounted on said table having a head adjustable to engage the window sash rail opposite the one to be grooved.

2. A groove cutting machine for window sashes, a saw to be mounted under a slotted table and a guiding device adapted to be mounted on the table over the saw slot therein, comprising a lateral guide mounted on the table on one side of the saw, a resilient guide on the other, and a vertical guide mounted on said table having a head adjustable to engage the window sash rail opposite the one to be grooved, said head having a laterally extending portion rounded to insure the sash rail against catching when being slid onto the guide, for the purpose described.

1,114,762. STEERING-WHEEL. KARL HODGE, Onaway, Mich. Filed Aug. 29, 1913. Serial No. 787,361. (Cl. 74—33.)

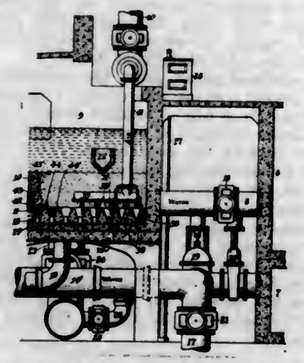
1. In a device of the character described, the combination of an annular wooden member having an undercut groove on its inner periphery and an open semi-circular or other suitably shaped recess adjoining such groove, an arm adapted to be laid in such recess and moved into such groove, said arm being then entirely clear of such recess, a pin adapted to maintain said arm in such groove, a semi-circular or other suitably shaped plug adapted to be snugly and permanently fitted into such recess, the plug and sides of the recess being in contact thereby providing adequate gluing surface.



2. In a device of the character described, the combination of an annular wooden wheel having a plurality of undercut grooves spaced at intervals around its inner periphery, and an equal number of open semi-circular recesses disposed adjacent to such grooves, a spider having a plurality of radial arms adapted to be laid in such open recesses and moved into such grooves, a plurality of semi-circular wooden plugs adapted to be snugly fitted into such recesses, the plugs and the sides of the recesses being in contact, thereby providing adequate gluing surface, and pins adapted to further insure the maintenance of said plugs in such recesses.

3. In a wheel of the character described, the combination of a spider having a plurality of radially extending arms; an annular rim having a plurality of slots lying in the plane of said rim and opening on its inner periphery, said rim also having recesses opening into such slots, respectively, and intersecting a lateral face of said rim, the outer ends of such spider arms being adapted to be laid in such recesses and thereupon rotated into engagement with such slots; and plugs fitted to such recesses and adapted to lock such arm-ends in such engagement.

1,114,763. FILTER CONSTRUCTION. GEORGE F. HODGKINSON, Philadelphia, Pa., assignor of one-half to American Water Softener Company, Philadelphia, Pa., a Corporation of New Jersey. Continuation in part of application Serial No. 682,974, filed Mar. 11, 1912. This application filed July 16, 1912. Serial No. 709,679. (Cl. 210—8.)



1. In a device of the character stated, a gravel channel, gravel in the channel arranged in graded layers in contact with each other, the finer gravel being at the top, a screen covering the channel and in substantial contact with the gravel, sand over the gravel and screen, means for withdrawing water filtered through the sand and gravel and means for forcing water into the channel and separate means for releasing air under pressure within the gravel at a point near the bottom of the channel.

2. In a device of the character stated, a gravel channel having sides converging toward the bottom, gravel filling the channel and extending above the level of the channel walls, a screen cover for the channel, bowed to confine the gravel and to engage with the top of the channel walls, sand above the screen, means for admitting and withdrawing water to and from the bottom of the channel and means for admitting air at a point near the bottom of the channel.

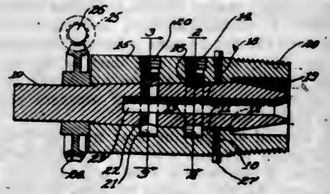
3. In a filter, a channel, graded gravel filling the channel, one size of gravel resting upon another, a lateral air pipe within the channel adapted to release air within the gravel, means for supplying air under pressure to the air pipe and means for maintaining the gravel in graded positon against disturbance by the air supply.

4. In a filter, a relatively fine filtering material, a coarser material below the same, a screen between the two materials and means for releasing air within the gravel and water beneath the screen.

5. In a filter, materials of different size therein, one being gravel of different sizes, arranged in layers according to the size, a screen separating the two materials and making contact with the gravel and means for releasing air within the gravel and water beneath the screen.

[Claims 6 to 18 not printed in the Gazette.]

1,114,764. FLUID-FUEL FEEDER. EZRA F. HOPKINS, Chicago, Ill. Filed Feb. 12, 1912. Serial No. 677,145. (Cl. 123—138.)



1. A fluid fuel feeder comprising a casing, a rotary member in said casing, said casing having an inlet port therethrough, said casing having a chamber therein, said rotary member having a groove therein, said groove, as the member rotates, registering alternately with said port and with said chamber, said member having a second groove therein, said feeder having a mixing chamber at one end thereof, said second groove in said rotary member opening into said mixing chamber, said second groove, as the member rotates, registering with said first mentioned chamber, and means for rotating said member.

2. A rotary fuel feeder comprising a casing and a rotary member mounted in said casing, said casing having a fuel inlet port and an air inlet port therethrough, said casing having a fuel chamber therein, said rotary member having a groove therein, said groove, as the member rotates, registering alternately with said fuel inlet port and said chamber, said rotary member having a second groove therein, said feeder having a mixing chamber at one end thereof, said second groove opening into said mixing chamber, and said second groove, as the member rotates, registering with said fuel chamber, said rotary member having a passageway connecting said mixing chamber with said air inlet port, and means for rotating said member.

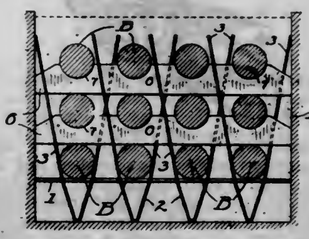
3. A fluid fuel feeder comprising a casing and a rotary member in said casing, said casing having a fuel inlet port, said casing having a chamber therein, said rotary member having a groove therein, said groove, as the member rotates, registering alternately with said inlet port and said chamber, said rotary member having a second groove therein, said feeder having a mixing chamber at one end thereof, said second groove opening into said mixing chamber, and said second groove, as the member rotates, registering with said first mentioned chamber, said rotary member having an air inlet port and having a passageway connecting said air inlet port with said mixing chamber, said feeder adapted to be used with an engine, and means depending upon the speed of the engine for varying the capacity of said first mentioned chamber.

4. A fluid fuel feeder comprising a casing and a member rotatably mounted in said casing, said casing having a fuel inlet port, said member having an annular groove registering with said port, said casing having an outlet port, said casing having a series of chambers in the inner side of its walls, said member having a series of longitudinal grooves opening into the annular groove in said member, and registering, as the member rotates, with said chambers, said member having a second series of longitudinal grooves opening at all times into said outlet port and registering as the member rotates with said chambers and means for rotating said member.

5. A fluid fuel feeder comprising a stationary member with a vertical downwardly tapering opening, a rotary member with a tapering periphery mounted in said opening, means for rotating said rotary member, means for conveying fuel between said tapering surfaces from a fuel supply to a combustion chamber, and automatic means for compensating for the wear of said tapering surfaces, whereby said conveying means are not varied by said wear.

[Claims 6 to 11 not printed in the Gazette.]

1,114,765. REINFORCED CONCRETE CONSTRUCTION. WILLIAM B. HOUGH, Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me., a Corporation of Maine. Filed Dec. 30, 1911. Serial No. 668,615. (Cl. 72—122.)



1. Reinforced concrete construction comprising a base plate having a plurality of slots therein, a series of gage members supporting said base plate and each having a plurality of arms extending through said slots, a horizontal row of reinforcing bars resting on said base plate, each bar lying between and being held from lateral displacement by two of said arms, a cross-piece resting upon said bars and held by said arms against displacement longitudinally of the bars, said arms lying at opposite sides of said cross-piece, and a horizontal row of reinforcing bars supported by said cross-piece.

2. Reinforced-concrete construction comprising a horizontal base, gage members supporting said base, a plurality of pairs of arms extending upwardly from said base, a horizontal row of reinforcing bars resting on said base and spaced apart by said arms, a transverse plate resting on said row of bars and disposed edgewise, the respective arms of said pairs lying closely along opposite sides of said plate and serving to hold the plate in edgewise position and to prevent displacement of the plate longitudinally of the reinforcing bars, and a second horizontal row of reinforcing bars supported by said transverse plate.

3. Reinforced concrete construction comprising a base plate, a plurality of gage members supporting said plate, a plurality of pairs of arms extending upwardly from said plate, a horizontal row of reinforcing bars resting on said plate, and each positioned between two of said arms, a cross-piece extending transversely of said reinforcing

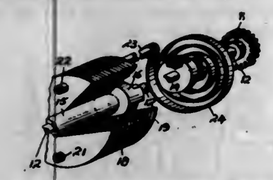
bars and standing edgewise between pairs of said arms, said cross-piece resting upon said row of reinforcing bars, and having notches in its upper edge, and a second row of reinforcing bars resting in said notches.

4. Reinforced concrete construction comprising a base plate having a plurality of pairs of staggered slots therein, a series of cage members supporting said base plate and each having a pair of staggered arms projecting upwardly through one of said pairs of slots, a plurality of horizontal rows of reinforcing bars, said bars lying between pairs of said arms, the lower row of said bars resting on said base plate, and means for supporting and spacing the upper rows of said bars.

5. Reinforced concrete construction comprising a base plate having a plurality of pairs of staggered slots therein, a series of cage members supporting said base plate, and each having a pair of staggered arms projecting upwardly through one of said pairs of slots, a plurality of horizontal rows of reinforcing bars, said bars lying between pairs of said arms, the lower row of said bars resting on said base plate, and a plurality of cross-pieces extending transversely to said bars and disposed edgewise between the pairs of said staggered arms, each of said cross-pieces resting upon the row of bars next below and having a series of notches in its upper edge adapted to receive another row of bars.

[Claims 6 and 7 not printed in the Gazette.]

1,114,766. INHERENT-POWER RETURN SIGNAL MECHANISM. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Feb. 16, 1911. Serial No. 609,001. (Cl. 246—30.)



1. In a semaphore actuating mechanism, a semaphore, a shaft, connections between the semaphore and the shaft, a stop rigid with the shaft, an armature revolubly mounted on the shaft, a stop rigid with said armature limited in rotation relative to the shaft by said first mentioned stop, an arm rigid with said armature, a spiral spring coiled about said shaft and having one end connected to said arm and the other end connected to said shaft, a stator including coils displaced in space, a source of alternating current, connections from said source of current to said coils, a phase splitting device in said connections, the continuity of the connections to one of said coils from the source of current being permanent.

2. In a semaphore actuating mechanism, a semaphore having an operated position and a normally biased position, and means to move said semaphore to the operated position and to return it to the normal biased position, said means including a stator member having two stator coils, both of which are in operation during the movement to the operated position and but one of said stator coils acting during said return movement.

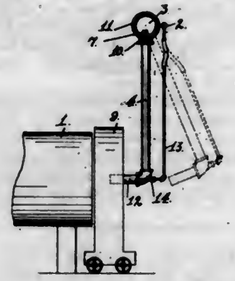
3. In a semaphore actuating mechanism, a semaphore having an operated position and a normally biased position, a polyphase induction motor and connections to move said semaphore from the normal biased position to the operated position, a mechanical motor to start said semaphore from the operated position, and means for causing said induction motor to act as a single phase induction motor to continue the movement of said semaphore to the normally biased position.

4. In a semaphore actuating mechanism, a semaphore having an operated position and a normally biased position, a source of current, a polyphase induction motor connected thereto to move said semaphore to the operated position, means to cause said induction motor to act as a single phase motor and to move said semaphore to the normally biased position.

5. In a semaphore actuating mechanism, a semaphore having an operated position and a normally biased position, a polyphase induction motor to move said semaphore to the operated position, means to dispense with one of the phases of said polyphase motor and means to start the motor in the opposite direction when one of the phases is dispensed with to move the semaphore to the normal biased position.

[Claims 6 to 10 not printed in the Gazette.]

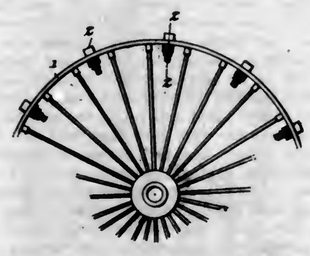
1,114,767. METHOD OF OPERATING GAS AND OIL FURNACES. ANDREW MURRAY HUNT and JAMES BUCKNER SPEED, Berkeley, Cal. Filed Mar. 8, 1913. Serial No. 752,974. (Cl. 158—117.5.)



1. The method of applying heat to a burden or charge in a combustion chamber which comprises introducing to said chamber a combustible fluid, igniting said fluid, and mingling with the hot gaseous products of combustion incombustible dust, whereby said dust is heated, and the heat distributed over the burden or charge in the combustion chamber, said dust being separate and distinct from the burden or charge.

2. The method of applying heat to a burden or charge in a combustion chamber which comprises introducing to said chamber a combustible fluid, igniting said fluid, and mingling with the hot gaseous products of combustion incombustible dust, said dust being separate and distinct from the burden or charge, causing the heat of such gaseous products to be absorbed by such dust and to be radiated therefrom to the burden or charge.

1,114,768. DETACHABLE TREAD-CLEAT FOR TRACTORS. CHARLES A. HYDE, Clear Spring, Md. Filed Jan. 24, 1914. Serial No. 814,103. (Cl. 21—215.)

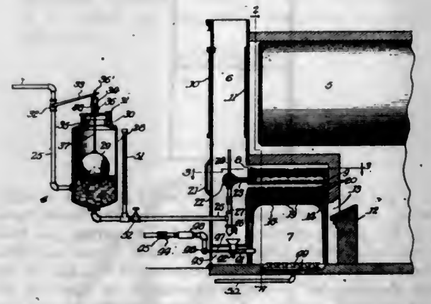


1. A tractor wheel having a rim provided with an opening therein, a gripping member upon the rim, a slotted bolt engaging the gripping member and extending through the opening in the rim, a notched wedge seat piece engaging the inner end of the bolt and extending through the slot therein, a wedge inserted through the slot in the bolt and engaging said seat piece, and a wedge-shaped locking key for coöperation with the wedge.

2. A traction wheel having a rim provided with an opening therein, a gripping member upon the rim, a slotted bolt engaging the gripping member and extending through the opening in the rim, a notched wedge seat piece engaging the inner end of the bolt and extending through the slot therein, a wedge extending through the slot in the bolt and engaging the seat piece, a key engaging the wedge, and a coiled spring surrounding the bolt between the rim and wedge.

3. A traction wheel having an opening therein, a cleat having a slot and an opening communicating with the slot, a slotted bolt formed of a double strip of material passing through the openings in the cleat and rim, a removable head secured to the bolt, said head conforming to the shape of and filling the slot in the cleat, and fastening means engaging the slotted bolt to clamp the cleat in position.

1,114,769. LIQUID-FUEL FURNACE. AMANDA T. JONES, New York, N. Y. Filed July 17, 1911. Serial No. 638,902. (Cl. 158—4.)



1. In an oil burning furnace, the combination of a leveler, a plurality of distributers connected therewith, a combustion chamber located beneath said distributers, a pipe for supplying fuel to said leveler, means for controlling the supply of fuel to the leveler, and means including a plurality of nipples for conveying the oil from the distributers to the combustion chamber.

2. In an oil burning furnace, the combination of a combustion chamber, a leveler, means for supplying liquid fuel thereto, a plurality of distributers above said combustion chamber connected with said leveler and arranged to distribute the fuel throughout the area of the combustion chamber, a vent connected with the top of said leveler to permit the liquid to rise therein, and a valve disposed in said supply pipe whereby the leveler and distributers may be drained.

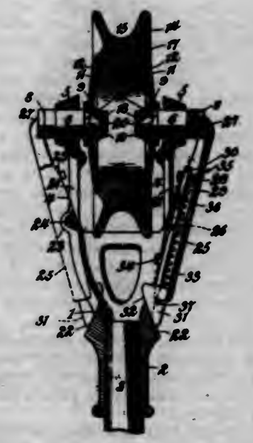
3. In an oil burning furnace, the combination of a combustion chamber, a closed leveler, a vent located in the top thereof, whereby to permit liquid to rise in said leveler, a plurality of open-topped distributers arranged above said combustion chamber and connected with said leveler, a partition dividing each of said distributers into two compartments, and means for maintaining a level of liquid in said leveler sufficient to cause a steady but restricted overflow from said distributers.

4. In an oil burning furnace, the combination of a combustion chamber, a flue arranged in the front wall of said furnace and having a lateral chamber extending over the combustion chamber, a series of open-topped distributers disposed in said lateral chamber, longitudinal partitions dividing each of said distributers into a plurality of compartments, a leveler arranged in said flue and connected with each of said distributers, means for maintaining a predetermined level of fuel oil in said leveler and distributers, and a series of twyers communicating with said flue beneath the leveler and with said combustion space.

5. In an oil burning furnace, the combination of a combustion chamber, an open-topped flue, a lateral chamber extending from said flue over the combustion chamber, a plurality of distributers arranged in said lateral chamber, and one or more perforated slabs disposed between said combustion chamber and said lateral chamber, the perforations in said slabs being arranged in vertical alinement with the sides of said distributers to conduct the liquid fuel from said distributers to the combustion chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,114,770. TROLLEY-WHEEL MOUNT. GEORGE G. JONES, Cleveland, Ohio, assignor of one-half to Robert H. Riffe, Cleveland, Ohio. Continuation of application Serial No. 735,591, filed Dec. 9, 1912. This application filed Aug. 6, 1913. Serial No. 783,432. (Cl. 64—67.)



1. The combination with a rotatable member, of slidable journal members therefor, relatively fixed supports for the slidable journal members, and means having a constant tendency to move the journal members one toward the other.

2. The combination with a rotatable member, of elongated alined journal bearings therefor, supports in which the journal bearings are slidable in the direction of their length, and impellers for the slidable journal bearings having a constant tendency to move said bearings one toward the other and provided with means preventing retrograde movement of the journal bearings.

3. The combination with a wheel, of journal pins therefor on opposite sides thereof, relatively fixed supports for the journal pins in which they are longitudinally movable in alinement one with the other, and impelling means for the journal pins constructed to constantly act thereon to move the pins one toward the other, said impelling means being provided with means for preventing movement of the pins in the reverse direction.

4. The combination with a wheel having a hub portion with oppositely disposed seats in the axis of rotation of the wheel, elongated alined journal pins each having one end adapted to a respective seat, a relatively fixed support for each journal pin in which it is slidable longitudinally, said supports being adapted to hold the pins in alinement with their adjacent ends in the seats in the wheel hub portion, and impellers for the journal pins each provided with means having a constant tendency to move the pins one toward the other and also provided with means for preventing movement of the pins in the other direction.

5. The combination with a wheel provided with an internal chamber and with a hub portion having exterior axial seats communicating with the internal chamber, journal pins each having one end adapted to a respective axial seat, a relatively fixed support for each journal pin in which it is mounted for movement longitudinally of the pin, and an impeller for each journal pin in engagement

with the outer end thereof, said impeller being provided with means constantly active to move the journal pin toward its seat in the wheel, and means for holding the pin against movement away from its seat in the wheel.

[Claims 6 to 26 not printed in the Gazette.]

1,114,771. MONOAZO DYESTUFFS. HEINRICH JORDAN and WILHELM NEELMEIER, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Apr. 16, 1913. Serial No. 761,476. (Cl. 23—24.)

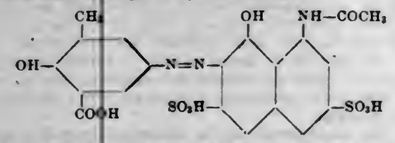
1. The herein described new monoazo dyestuffs having as components the radicals of para-aminosalicylic acid compounds (4-amino-1-oxy-2-carboxylic acid) and acidyl-aminonaphthol compounds, which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a red to bluish-red coloration and in concentrated sulfuric acid with a red to violet coloration; yielding upon reduction with acetic acid and zinc powder a para-aminosalicylic acid compound and an acidyldiaminonaphthol compound; and furnishing on the fiber from Bordeaux to violet to blue chrome lakes fast to chlorin and to soap, substantially as described.

2. The herein described new monoazo dyestuffs having as components the radicals of substituted para-aminosalicylic acid compounds (4-amino-1-oxy-2-carboxylic acid) and acidylaminonaphthol compounds, which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a red to bluish-red coloration and in concentrated sulfuric acid with a red to violet coloration; yielding upon reduction with acetic acid and zinc powder a substituted para-aminosalicylic acid compound and an acidyl-diamononaphthol compound; and furnishing on the fiber from Bordeaux to violet to blue chrome lakes fast to chlorin and to soap, substantially as described.

3. The herein described new monoazo dyestuffs having as components the radicals of para-aminosalicylic acid compounds (4-amino-1-oxy-1-carboxylic acid) and acidylaminonaphthol sulfonic acids, which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a fed to bluish-red coloration and in concentrated sulfuric acid with a red to violet coloration; yielding upon reduction with acetic acid and zinc powder a para-aminosalicylic acid compound and an acidyldiaminonaphthol sulfonic acid; and furnishing on the fiber from Bordeaux to violet to blue chrome lakes fast to chlorin and to soap, substantially as described.

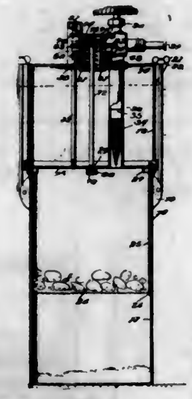
4. The herein described new monoazo dyestuffs having as components the radicals of para-aminosalicylic acid compounds (4-amino-1-oxy-2-carboxylic acid) and acidyl-aminonaphthol disulfonic acids, which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a red to bluish-red coloration and in concentrated sulfuric acid with a red to violet coloration; yielding upon reduction with acetic acid and zinc powder a para-aminosalicylic acid compound and an acidyl-diaminonaphthol disulfonic acid; and furnishing on the fiber from Bordeaux to violet to blue chrome lakes fast to chlorin and to soap, substantially as described.

5. The herein described new monoazo dyestuff having in a free state most probably the formula:



which is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a red-violet coloration and in concentrated sulfuric acid with a red-blue coloration; yielding upon reduction with zinc powder and acetic acid para-amino-ortho-cresotinic acid and 1-acetylamino-7-amino-8-oxynaphthalin-3.6-disulfonic acid; furnishing when printed on the fiber with acetate of chromium violet shades fast to chlorin and to soap, substantially as described.

1,114,772. AUTOMATIC ACETYLENE-GENERATOR. JOHN H. KLENCK, Warren, Pa. Filed Jan. 7, 1913. Serial No. 740,632. (Cl. 48—37.)



1. A gas generator including a carbid chamber, a liquid chamber, means for supplying liquid from the liquid chamber to the carbid chamber, means for supplying gas from the carbid chamber to the liquid chamber, means including a diaphragm operable by the pressure of the gas in the liquid chamber for governing the supply of liquid to the carbid chamber, and a safety valve operable by the diaphragm to permit the escape of gas from the liquid chamber if the pressure in the latter becomes abnormal.

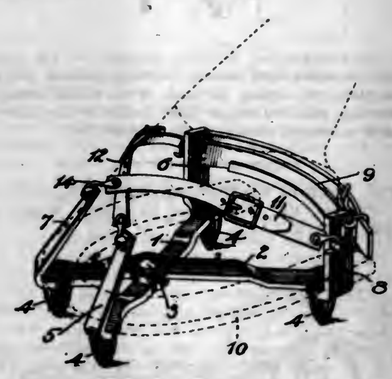
2. A gas generator including a carbid chamber open at its upper end, a closed liquid chamber imposed upon the carbid chamber and forming a closure thereof, and bottom of said liquid chamber being provided with an opening, a diaphragm secured to the top of the liquid chamber, a sleeve secured to the diaphragm, a valve stem yieldably supported by the sleeve and carrying a valve adapted to close the opening in the bottom, means for exerting downward pressure upon the diaphragm, and means for drawing said sleeve upwardly.

3. A gas generator including a carbid chamber open at its upper end, a closed liquid chamber imposed upon the carbid chamber and closing the same, the bottom of the liquid chamber being provided with an opening, a diaphragm secured to the top of the liquid chamber, a sleeve carried by the diaphragm and movable therewith, a valve stem yieldably supported by the sleeve and carrying a valve for closing the opening in the bottom of the liquid chamber, said valve stem being free for limited movement independent of the sleeve, means for exerting downward pressure upon the diaphragm, and means operable to force the diaphragm and sleeve upwardly against said pressure to close the valve, said means being operable to further force the sleeve upwardly, the valve remaining closed.

4. A gas generator including a carbid chamber, a closed liquid chamber imposed upon the carbid chamber, means for supplying gas from the carbid to the liquid chamber, means for supplying liquid from the liquid chamber to the carbid chamber, said means including a valve stem provided at each end with a valve, one end of said stem extending through the top of the liquid chamber and the other end of said stem extending near the bottom thereof, a sleeve closed at its upper end to provide a valve seat for the adjacent valve, said sleeve being supported by the valve stem, but free for slight independent movement, a diaphragm secured to the top of the liquid chamber and to the sleeve, and means for adjustably exerting downward pressure upon the diaphragm to hold the sleeve and valves in lowered position.

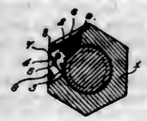
5. A gas generator including a carbid chamber, a liquid chamber mounted upon the carbid chamber and having a top and bottom provided with openings, a threaded collar surrounding the opening in the top, a diaphragm secured to the top and extending over the opening therein, a sleeve partially closed at its lower end carried by the diaphragm and extending through the top, a valve stem provided at each end with a valve, one of said valves co-acting with the opening in the bottom, a cap threaded upon the upper end of the sleeve and co-acting with the valve at the other end of the stem, said cap being provided with an outlet port, a second cap engaging loosely about the sleeve and having threaded engagements with the collar, a coiled spring positioned between the second cap and diaphragm, a locking collar threaded upon the sleeve, a nut adjustably threaded upon the upper portion of the valve stem, and a coiled spring bearing between said nut, and the partially closed lower end of the sleeve.

1,114,773. ANTISLIPPING OVERSHOE AND PAD FOR HORSES' HOOFS. JOSEPH B. KOPF, Rockville Center, N. Y. Filed Apr. 17, 1914. Serial No. 832,419. (Cl. 168—30.)



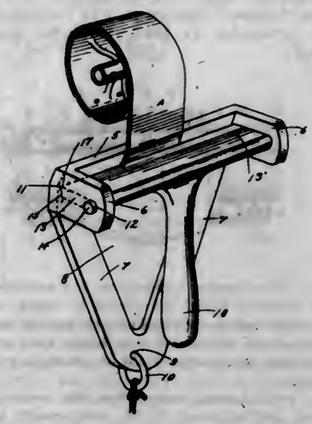
In a removable overshoe of the character described, a pair of cross-bars each having respectively a toe clamp and a heel clamp, said cross-bars being pivotally connected intermediate their length, an adjustable strap member connecting the heel clamps at the rear, and adjustable toe straps arranged to extend obliquely over the front part of the hoof, each toe strap leading respectively from the toe clamp to the heel clamp of one member, and from the toe clamp to the heel clamp of the other member, said straps crossing each other obliquely.

1,114,774. NUT-LOCK. JOSEPH LACHANCE, Beauceville, Quebec, Canada, assignor of one-half to Joseph A. Bilodeau, Montreal, Canada. Filed Jan. 24, 1913. Serial No. 743,934. (Cl. 151—25.)



In a device of the character described; a nut provided with a cut extending from its periphery through the bolt passage; a toothed dog pivotally mounted in said cut and adapted to be projected into the bolt passage, said dog being operative in an arc of 45°, and having a rectangular shoulder, and a notch adjacent thereto; limiting lugs struck up from each face of the cut, opposite the dog; and a leaf spring secured in said cut and provided with a curved end adapted to press on the outer face of the rectangular shoulder of the dog, at a single point beyond the pivotal point thereof to hold the dog in operative position, the said curved end of the spring being adapted to fit around the corner and into the notch of the dog to hold it in inoperative position, and to coöperate with the aforementioned lugs to prevent projection of the dog beyond the side of the nut.

1,114,775. GRIP FOR PULLEY-COVERINGS. OSKAR LARSON, Osakis, Minn. Filed Apr. 19, 1910. Serial No. 556,333. (Cl. 24—248.)



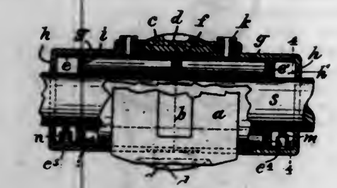
A grip for pulley coverings comprising a V-shaped frame, a transverse member connecting the upper ends of the V-shaped frame, perforated ears extending rearwardly at right angles from either end of the transversely extending member, said transverse member having a lower vertically extending portion, lying in the same plane as the arms of the frame, and an upper portion inclining rearwardly in the direction of the said ears, a blade disposed between the ears and journaled therein, the free end face of said blade inclining toward the inclined portion of the transverse member, a biting rib on one of the longitudinal free edges of the blade, the perforations in said ears being disposed with their centers opposite the angle between the lower and upper portions of the transverse member, and a handle on the pivotal portion of the blade for swinging the same, said blade being so mounted that the rib is disposed in such relation to the inclined portion of the transverse member that as said blade is swung upwardly said rib will approach closest to the said inclined portion, thus securely holding the pulley covering between said rib and inclined portion.

1,114,776. WELL-BUCKET. HENRY L. LEILICH, Delphos, Ohio, assignor to The Delphos Manufacturing Company, Delphos, Ohio, a Corporation of Ohio. Filed Aug. 25, 1913. Serial No. 786,487. (Cl. 103—35.)

A well bucket comprising a body of cylindrical form and tapered end portions secured to the opposite ends of

the body, said end portions telescoping over the body ends and having their telescoping portions externally beaded in annular concavo-convex form with the opposite edges of both of said beads in bearing contact with the body and with the protuberant portions of the beads forming protuberant bearing surfaces which are spaced from the body.

1,114,777. ROLLER-BEARING HANGER-BOX. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 24, 1914. Serial No. 814,016. (Cl. 64—39.)



1. In a roller-bearing hanger-box, the combination, with a saddle suitably bored to receive a casing, of a sheet-metal casing made in two shells each having an oil-retaining flange at its outer end and being open at its inner end, and such inner ends fitted in contiguity within the said saddle.

2. In a roller-bearing hanger-box, the combination, with a one-piece saddle having in its ends smooth bores to receive casing-sections and having a screw-thread in its middle portion, of a sheet-metal casing made in two shells, each open at its inner end and having a screw-thread upon such end for securing the shells in contiguity within the saddle.

3. In a roller-bearing hanger-box, the combination, with a saddle having in its ends smooth bores to receive casing-sections and having a screw threaded in its middle portion, of a sheet-metal casing made in two shells, each having an integral oil-retaining flange at its outer end having a screw-thread upon its inner end, and each shell having an oil-wiper within its outer end fitted to bear against the rotating shaft.

4. In a roller-bearing hanger-box, the combination, with a saddle suitably bored to receive a casing, of a sheet-metal casing made in two shells each having an oil-retaining flange at its outer end and being open at its inner end, and such inner ends fitted in contiguity within said saddle, a collar *e* carrying an oil-wiper forced into each shell adjacent to the oil-retaining flange, and each collar having a flat flange adapted to guide the cages of the rolls within the bearing.

5. In a roller-bearing hanger-box, the combination, with a one-piece saddle suitably bored to receive a casing, of a sheet-metal casing made in two shells each having an oil-retaining flange at its outer end and being open at its inner end, and such inner ends fitted in contiguity within the said saddle, and oil-hole bushings inserted through the wall of the saddle into the said shells to retain the shells in said bore.

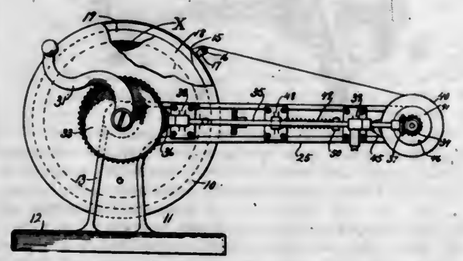
1,114,778. WATER-GAGE SHIELD. JAMES W. LONEY and THEODORE C. STEGER, Fort Wayne, Ind. Filed Feb. 4, 1914. Serial No. 816,636. (Cl. 73—54.)

1. In a device of the class described, the combination of a semicylindrical metal shield member having a discharge pipe opening out of its lower portion and having rubber gaskets disposed in grooved longitudinal edges of the said shield member, a corresponding glass shield member, gasket lined adjustable bands fastening the shield members together, opposite lamp bracket members attached to the aforesaid adjustable bands and having horizontally-disposed perforated flange portions, and means connecting the aforesaid flange portions for holding a lamp.

2. In a water gage shield, the combination of a semicylindrical metal shield member having a discharge pipe opening out of it, and provided with gaskets on its longitudinal edges, a corresponding semicylindrical glass shield member, adjustable bands securing the shield members to-

gether, lamp-supporting brackets mounted in the aforesaid band members, and means, including gaskets and adjustable disks, for closing the ends of the shield members and effecting gasketed water tight joints at the ends of the shield members, substantially as described.

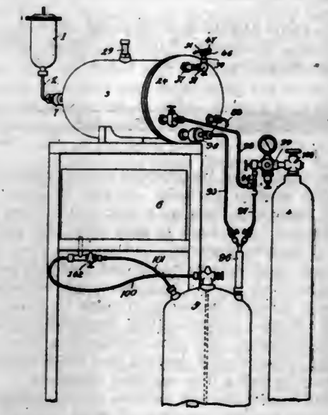
1,114,779. RIBBON-WINDING MACHINE. WALTER LYTTON, Chicago, Ill. Filed Jan. 16, 1914. Serial No. 812,380. (Cl. 33—136.)



1. In combination, a drum having an open side and a slotted opening in its rim, a mandrel extending axially through the drum and adapted to rotatably receive a roll of typewriter ribbon material applied thereto through the open side of the drum and housed by the drum when so applied, means acting to resist the turning of the roll within the drum, a rotatable mandrel constructed to removably receive a typewriter spool, means for turning the said rotatable mandrel to wind the typewriter ribbon material on the spool from the said roll, the ribbon material passing through the said slotted opening in the rim of the drum, and means operated by the said rotating mandrel to indicate when the said rotatable mandrel has been so turned as to wind a predetermined length of ribbon on the spool.

2. In combination, a source of supply of typewriter ribbon material, a rotatable mandrel constructed to removably receive a typewriter spool, means for turning the mandrel to fill the spool with material received from the said source of supply, a notched disk turned by the mandrel, and a spring advanced plunger normally bearing upon the disk in the path of its notch, said plunger being adapted to elastically yield laterally in the direction of travel of that part of the disk with which it is engaged and means limiting the lateral yielding movement of the plunger in the said direction.

1,114,780. CARBONATOR. PETER E. MALMSTROM, New York, N. Y., assignor to United Centadrink Manufacturing Company, a Corporation of New York. Filed June 10, 1909. Serial No. 501,237. (Cl. 209—1.)



1. In an apparatus for carbonating liquids, a carbonator and a receiving tank, a liquid supply pipe for the carbonator, a pressure supplying pipe for the carbonator, a pressure supplying pipe for the receiving tank and a liquid conveying pipe connecting the carbonator and tank, a pressure outlet pipe for the carbonator, valves for the pressure outlet pipe and for the pressure conveying pipe of the carbonator, rotary cam disks for temporarily opening said valves and a float for oscillating the cam disks to open these valves at predetermined heights of liquids.

2. In an apparatus for carbonating liquids, a carbonator and a receiving tank, a liquid tube common to the carbonator and receiving tank for conveying liquid from the carbonator to the receiving tank, a gas supply tube made to communicate with said carbonator, a liquid supply pipe made to communicate with said carbonator, a pressure relief tube for the carbonator, valves for the pressure relief tube and for the gas supply tube respectively, a float in the carbonator and cams actuated by the float for actuating the valves.

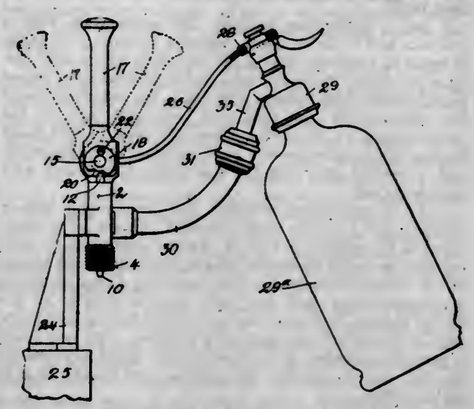
3. In an apparatus for carbonating liquids, a carbonator, a water supply pipe connected with said carbonator, a vent for said carbonator which will open when the pressure in said carbonator gets below a certain predetermined amount and a pair of valves in said carbonator, one of said valves being adapted to be connected with a source of gas supply and the other of said valves being connected with a second vent, a float in said carbonator and means connecting said float and valves whereby the movement of said float will control said valves.

4. In an apparatus for carbonating liquids, a carbonator and a vent composed of a casting with a perforated partition, a spindle passing loosely through said perforation and carrying a packing that is adapted to fit snug against said partition whereby a gastight and watertight joint is formed when the pressure in the carbonator exceeds a certain predetermined amount and a lever resting on said spindle.

1,114,781. SIPHON-BOTTLE-CHARGING DEVICE. PETER E. MALMSTROM, New York, N. Y., assignor, by direct and mesne assignments, to Aaron M. Sloss, New York, N. Y. Filed Jan. 22, 1910. Serial No. 539,558. (Cl. 226—23.)

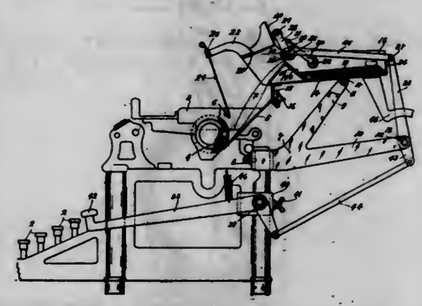
1. In a device of the class described, a casing, valves within said casing, a shaft and cams connected thereto for actuating the valves, a rigid arm mounted on said shaft provided with an opening in its end adapted to encircle the neck of a siphon bottle and hold the nozzle of the same in a pipe extending from the valves and situated below said rigid arm.

2. In a device of the class described, a valve casing having parallel tubes and a supply pipe connected with said casing between said tubes, spring actuated valves in said tubes, an oscillatory shaft mounted above said tubes,



a handle for oscillating the shaft, cams on said shaft for actuating said valves, and a rigid arm carried by said shaft, with an opening in its outer end for encircling the head of a bottle, and adapted to hold the nozzle of said bottle in a supply pipe with a gas tight fit.

1,114,782. TYPE-WRITER ATTACHMENT. FREDRICK G. MALONEY, Wabasha, Minn. Filed Oct. 22, 1913. Serial No. 796,611. (Cl. 197—130.)



1. In a typewriting machine, the combination of a carriage and a platen roller mounted thereon, of a table, adapted to support a pile of blanks, connected to said carriage to travel therewith, means for feeding said blanks to the platen comprising a feed head, key actuated means for reciprocating said feed head over said table or the blanks thereon, and a cam for lifting said feed head out of engagement with the blank being fed at the limit of its forward movement.

2. In a typewriting machine, the combination with a carriage and a platen roller mounted thereon, of a table, adapted to support a pile of blanks, connected to said carriage to travel therewith, means for feeding said blanks to the platen comprising a feed head, key actuated means for reciprocating said feed head over said table or the blanks thereon, a cam for lifting said feed head out of engagement with the blank being fed, at the limit of its forward movement, and means for carrying said head out of contact with the blanks on said table, during its return movement.

3. In a typewriting machine, the combination with a carriage and a platen roller mounted thereon, of a table, adapted to support a pile of blanks, connected to said carriage to travel therewith, means for feeding said blanks

to the platen comprising a feed head, key actuated means for reciprocating said feed head over said table or the blanks thereon, and a connection from said table to said blank feeding means to cause said head to travel with said table.

4. In a typewriting machine, the combination with a carriage and a platen roller mounted thereon, of a table, adapted to support a pile of blanks, connected to said carriage to travel therewith, means for feeding said blanks to the platen comprising a feed head, key actuated means for reciprocating said feed head over said table or the blanks thereon, a connection from said table to said blank feeding means to cause said head to travel with said table, and a beveled abutment on said table over which said blanks are fed.

5. In a typewriting machine, the combination with a carriage and a platen roller mounted thereon, of a table, adapted to support a pile of blanks, connected to said carriage to travel therewith, means for feeding said blanks to the platen comprising a feed head, key actuated means for reciprocating said feed head over said table or the blanks thereon, a connection from said table to said blank feeding means to cause said head to travel with said table, a beveled abutment on said table over which said blanks are fed, and a deflector for guiding said blanks to said platen roller.

[Claims 6 to 12 not printed in the Gazette.]

1,114,783. SHOE. AMOS J. MATHEWS, Montreal, Quebec, Canada. Filed Mar. 12, 1914. Serial No. 824,098. (Cl. 36—16.)

1. A shoe of the character described comprising an upper, an insole, and an outsole, the upper being turned in at the toe and shank and turned out at the ball, the insole, upper, and outsole, being secured together throughout the shank portion and toe portion; and the outsole and upper being secured together at the ball.

2. A shoe of the character described comprising an insole, an outsole, an upper, and a welt strip; the insole, upper, and outsole being connected through and through at the toe and shank; the outsole, upper and welt being connected through and through at the ball, leaving the insole free and unconnected at the ball.

3. A shoe of the character described comprising an insole, an outsole, an upper, and a welt strip; the insole, upper, and outsole being connected through and through at the toe and shank; the outsole, upper and welt being connected through and through at the ball, leaving the insole free and unconnected at the ball; and the outsole and welt being connected through and through from toe line around to toe line, and from heel to ball at both sides of the shank.

4. A shoe of the character described comprising an upper, an insole, an outsole, and a welt, the upper being turned in at the toe and shank and turned out at the ball, the welt extending along the top outer edge of the outsole at toe and shank and overlying the out turned portions of the upper at the ball; the insole, upper, and outsole being secured together throughout the shank portion and the toe portion; and the outsole, upper, and welt being secured together at the ball.

1,114,784. COLLAPSIBLE CLEARER-STICK. FREDERICK HUGH MCDEVITT, Winthrop, Mass. Filed Jan. 19, 1914. Serial No. 812,928. (Cl. 118—26.)

1. A clearer stick for the purpose stated, comprising an integral body member normally circular in cross section and slitted lengthwise from near each end to past its center with the slits at an angle to each other, the ends being solid and of reduced diameter, and bearing pins fitted in said solid ends, said body having a fiber catching periphery.

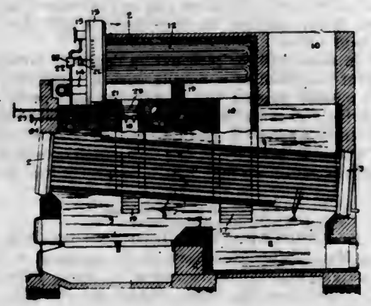
2. A clearer stick for the purpose stated, comprising an integral body member normally circular in cross section and having its main portion slitted lengthwise so as to be capable of collapsing, the slits terminating short of the ends leaving the ends solid, journal pins fitted in said ends, and said body having a fiber catching periphery.

3. A clearer stick for the purpose stated, comprising a one piece body member normally circular in cross section and cylindrical through its main intermediate portion, with tapering ends, there being slots extending lengthwise from near said ends to a point past the center, the slots from the two ends being at right angles to each other, and the ends being left solid, and bearings fitted in said solid ends, said body having a fiber catching periphery.

4. A clearer stick for the purpose stated, comprising a one piece body normally circular in cross section and cylindrical throughout its main intermediate portion with tapering ends, there being slots extending from near said ends lengthwise to a point past the center, said slots being substantially diametrical of the stick at their inner portions, and deviating toward one side at their outer portions, the ends of the body being left solid, and said body having a fiber catching periphery.

5. A clearer stick for the purpose stated, comprising a body normally circular in cross section and cylindrical through its main intermediate portion, with reduced ends, the intermediate portion of the body being slotted lengthwise to points short of said ends, and said body having a fiber catching periphery.

1,114,785. SUPERHEATER FOR BOILERS. EDWARD D. MEIER, Ridgefield, Conn. Filed Aug. 31, 1912. Serial No. 718,003. (Cl. 122—480.)



1. The combination with a steam-boiler furnace, of a superheater chamber above the same having a hot gas inlet flue in the rear of the furnace leading hot gases upwardly and discharging them into such chamber, and a forwardly located return flue leading downward from such chamber and discharging into the combustion space of the furnace at a point which is in advance of the intake end of said inlet flue with relation to the path of the main body of combustion gases.

2. The combination with a water-tube boiler furnace having its tubes located in the path of the hot gases from the furnace, of a horizontally disposed superheater chamber with steam-conducting elements therein located above the boiler, a hot gas inlet flue leading upward from the furnace and discharging into the rear of said superheater chamber, and an outlet flue leading downward from the superheater chamber and discharging the gases therefrom into the combustion space of the furnace at a point which is in advance of the intake end of said inlet flue with relation to the path of the main body of combustion gases, and means for moving the hot gases through such flues.

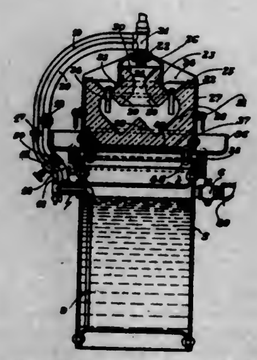
3. The combination with a water-tube boiler and furnace having a suitable setting, of a superheater chamber with steam-conducting elements therein located at one side of and above the water level of the boiler, a side flue incorporated in the wall of the setting for leading hot gases into the superheater chamber, and a return flue from the said chamber leading downward through the setting wall and discharging back into the furnace at a point materially below the superheater chamber and in advance of the intake end of the inlet flue with reference to the path of the main body of combustion gases, and steam-actuated means for inducing a draft current through the superheater chamber.

4. The combination with a steam-boiler furnace having a fire-bridge, of a superheater chamber and inlet and return flues communicating each at one end with said chamber and at the other end with the furnace, the furnace ends of said flues being at approximately the same level and at opposite sides of the fire-bridge, and jet aspirating means for creating draft through the chamber.

5. The combination with a steam-boiler furnace, of a superheater chamber, both incorporated in the same masonry setting, an inlet flue leading upward from the furnace through the setting and discharging into the chamber, an outlet flue leading through the setting from the chamber and delivering into the lower part of the furnace at a point which is in advance of the intake end of the inlet flue with relation to the path of the main body of furnace gases, and steam-jet draft-inducing means in said outlet flue.

[Claims 6 to 13 not printed in the Gazette.]

1,114,786. OIL OR GAS FIRED REVOLVING HEATING-FURNACE. WILLIAM MELAS, Ridley Park, Pa., assignor of one-half to David Townsend, Philadelphia, Pa. Filed Aug. 12, 1913. Serial No. 784,388. (Cl. 75—40.)

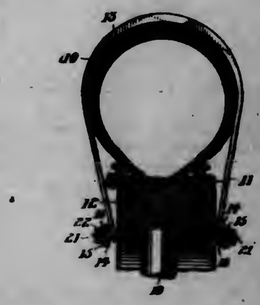


1. In a rivet heating furnace for the use of liquid or gaseous fuel the combination of a cylindrical furnace casing, open at the upper end and closed at the lower end by a circular pan; in said casing a refractory furnace lining with a bowl-shaped cavity, open at the top and with a conical upper surface slanting toward the axis; a baffle cone on the bottom of said lining; a hollow spider supported on the furnace casing by a number of arms extending from the spider body; a refractory spider lining with a flaring central hole and a protruding conical rim on the lower part, slanting from the axis; said linings forming an endless circular slot of equal width; a burner in axial alinement with said slot, having the discharge end in the central hole on top of the spider body.

2. In a rivet heating furnace for the use of liquid or gaseous fuel the combination of a furnace casing, open at the upper end and having a double bottom; a refractory lining in said casing, having a slanting upper surface; a hollow spider in axial alinement with and supported by said casing; a refractory spider lining having a central hole and a protruding rim slanting toward the furnace lining; said linings forming an uninterrupted slot of equal width; said combination being rotatably and detachably connected to a base; a stationary burner in axial alinement with the axis of rotation of the combination aforementioned, said burner having the discharge end in the central hole on top of the spider body.

3. In a rivet heating furnace for the use of liquid or gaseous fuel the combination of a furnace casing, open at the upper end and having a pan-shaped bottom at the lower end; a refractory furnace lining contained within said casing and in axial alinement therewith, said furnace lining being open at the upper end; a refractory furnace roof spaced in axial alinement with and suspended by suitable means within the top opening of furnace lining, thus forming an endless slot of equal width between the smallest inner circumference of furnace lining and the largest outer circumference of furnace roof, said furnace roof having an axially located opening for the introduction of a flame from a burner; the combination aforementioned being rotatably and detachably connected to a base, a stationary burner in axial alinement with and above opening in furnace roof, said burner being rigidly, but detachably connected to the base.

1,114,787. TIRE-ARMOR. GEORGE MELNIK, New York, N. Y. Filed July 27, 1914. Serial No. 853,440. (Cl. 152—17.)

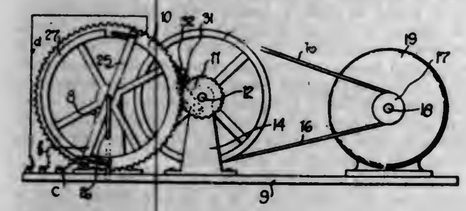


A tire armor comprising chains oppositely positioned and having tubular pivot connections between the links of said chains, arched-shaped resilient metallic links equal in number to the pivots of each chain, outwardly projecting threaded pins upon the opposite ends of each link and positioned within the opposite one of said pivots, locknuts upon the threaded portions of said pins, and perforated terminal links at the opposite ends of each of said chains, and a locking bolt positioned transversely of the chains and secured through the perforations of all of said terminal links.

1,114,788. AUTOMATIC DRAFT-REGULATOR. RALPH P. MERCER, Burlington, Iowa. Filed Mar. 14, 1914. Serial No. 824,698. (Cl. 236—4.)

In combination with a movable member, a device comprising a motor, a source of electrical energy, connections between such source and the motor, a thermostatic closer interposed in the connections, a mechanical closer

interposed therein including a shaft, a flexible connection between the shaft and movable element whereby the same may be automatically adjusted, a gear wheel mounted on the shaft, a second shaft provided with a gear in mesh with the first mentioned gear, an operative connection between the second named shaft and the motor, a slotted bracket positioned adjacent the point of engagement between the first named gears, a pin having one extremity slidably engaged within the slot of the bracket and adapted to engage the teeth of the first named gear for

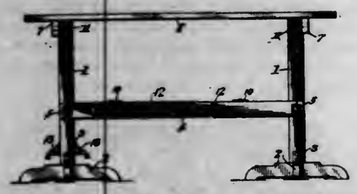


holding said wheel against rotation in one direction, an arcuate flange carried by a side of the first named gear in excess of a semicircle, a supporting bar positioned adjacent one side of the wheel and in spaced relation thereto, circuit closers carried by the bar and diametrically opposed relative to the wheel, each of said closers comprising a pair of normally spaced spring contacts, one of said contacts being of a length in excess of the second contact and adapted to be engaged by the flange of the gear.

1,114,789. FOLDING BOX. RICHARD E. MEYER, Detroit, Mich. Filed Jan. 18, 1912. Serial No. 671,842. (Cl. 220—8.)

A folding box comprising a bottom, side and end walls connected therewith, corner folds foldable into parallelism with the end walls of the box and each comprising two plies, the one confronting the end wall being of less height than the inner ply whereby the upper edge of the inner ply can be bent onto the upper edge of the outer ply and against the end wall, the upper edge of the inner ply being at a point below the upper edge of the end wall, whereby said end wall can be folded down over the upper edge of the inner ply to engage the bent portion thereof in the same plane as said inner ply.

1,114,790. STAND FOR IRONING-BOARDS AND THE LIKE. CHARLES FRANKLIN MILLER, Sheffield, Ala. Filed June 5, 1914. Serial No. 843,222. (Cl. 68—10.)



1. A stand for ironing boards and the like, comprising end standards, a cross-bar pivotally connecting the same, whereby said standards and cross-bar may be folded in alined relation, means to hold the standards and cross-bar in alined relation, and a base structure associated with at least one of said standards adapted to support the alined standards and cross-bar in vertical upright position.

2. A stand for ironing boards and the like, comprising end standards, means at the upper ends thereof for supporting an ironing board or the like, a cross-bar pivotally connecting the standards, whereby the standards and cross-bar may be folded in alined position, said cross-bar provided with recesses and said first-named means provided with projections adapted to engage in said recesses when the stand is in folded position, and a base structure associated with at least one of said standards adapted to support the folded stand in vertical upright position.

3. A stand for ironing boards and the like, comprising end standards, a cross-bar pivotally connecting the same whereby said standards and cross-bar may be folded in alined relation, a base structure associated with at least one of said standards adapted to support the folded stand in vertical upright position, and means associated with said stand to render the same when in its folded position serviceable as a costumer.

4. A stand for ironing boards and the like, comprising end standards, cross pieces secured to the upper ends thereof for supporting an ironing board or the like, a cross-bar pivotally connecting the standards, whereby the standards and cross-bar may be folded in alined relation, a base structure associated with at least one of said standards adapted to support the alined standards and cross-bar in vertical upright position, and pins on said cross pieces, the cross-bar having recesses in which said pins are adapted to engage when the stand is in its folded position.

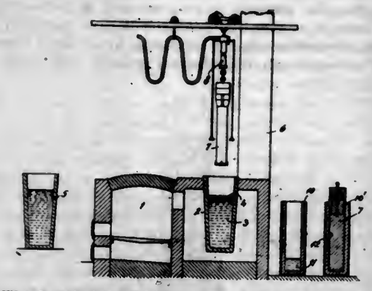
1,114,791. METAL CLIP FOR BINDING ROPE ENDS AND FOR USE IN ROPE-SPLICING. JOHN J. A. MILLER, Denver, Colo. Filed Nov. 17, 1913. Serial No. 801,515. (Cl. 24—123.)

1. A clip for the purpose specified, comprising a metal strip, the opposite edges of which are cut off at an inclination to form with the straight edge a pointed prong, one of said prongs having a tranverse indentation, and a pointed prong extending at right angles from said strip, said strip being adapted to be bent to encircle a rope, its pointed ends passing each other and bent at an angle and embedded in the said rope, and the right angled prong extending through the rope, its pointed end being bent and resting in the said indentation.

2. The combination with a rope, of a strand binding clip therefor, comprising a pliable metal strip, the opposite edges of which are cut off at an inclination to form pointed prongs, said strip being bent to encircle the rope, its inclined edges adjoining and its pointed ends passing each other, and being bent at an angle and embedded in the rope, and a pointed prong extending at right angles to the strip, said prong being passed through the rope, its pointed end being bent to overlap one of the prongs of the strip.

1,114,792. METHOD OF MAKING CLAD METALS. JOHN F. MONNOT, Paris, France, assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Original application filed Oct. 6, 1905, Serial No. 281,680. Divided and this application filed Apr. 2, 1910. Serial No. 553,048. (Cl. 91—70.3.)

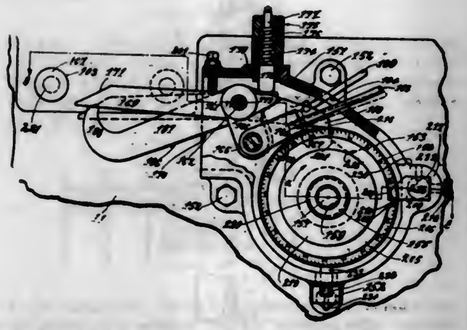
1. The hereindescribed process of plating iron, steel and other metal with any desired metal or alloy, which consists in first cleaning the metal to be coated, coating with a covering of suitable alkali solution, coating the same with a metal or alloy of a lower fusing point, and then applying in molten form a metal that will unite with the last named metal.



2. The hereindescribed process of plating iron, steel and other metal with any desired metal or alloy, which consists in first cleaning the metal to be coated, coating with a suitable solution of alkali and coating the same with a metal or alloy of lower fusing point, applying a second metallic coating, and then applying in molten form, a metal that will unite with the last named metal.

3. The hereindescribed process of plating iron, steel and other metal with any desired metal or alloy, which consists in first cleaning the metal to be coated, coating with a covering of suitable alkali solution, coating the same with a metal or alloy of a lower fusing point by contacting the same with said lower fusing metal in a highly heated molten condition, and then applying in molten form a metal that will unite with the last named metal.

1,114,793. CONTROLLING MECHANISM. ARISTIDES B. MURRAY, Cincinnati, Ohio, assignor to the Cincinnati Gear Cutting Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 19, 1914. Serial No. 812,988. (Cl. 90—57.)



1. In mechanism of the character mentioned, the combination of a controlled member, a controlling member therefor, said controlled member and controlling member having coacting parts between them, means for axially and rotatively adjusting the operative relations between said coacting parts, and means causing intermittent axial and rotative movements between said coacting parts for causing coacting relation between said coacting parts.

2. In mechanism of the character mentioned, the combination of a controlled member, a controlling member therefor, said controlled member and controlling member having coacting parts between them, and means for adjusting the relation axially and the angular distance between said coacting parts.

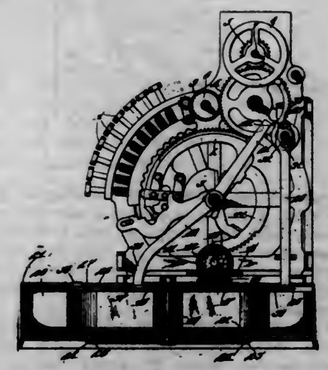
3. In mechanism of the character mentioned, the combination of a controlled member, a controlling member therefor, said controlled member and controlling member having coacting parts between them, means for adjusting the relation axially and the angular distance between said coacting parts, and a brake acting on said controlling member.

4. In mechanism of the character mentioned, the combination of a controlled member, a controlling member therefor, said controlled member and controlling member having coacting parts between them, means for adjusting the angular distance between said coacting parts for given units of adjustment and for adjusting the distance axially between said coacting parts for multiples of said given units of adjustment, and means for causing intermittent rotative and axial movements between said coacting parts.

5. In mechanism of the character mentioned, the combination of a controlled member, a rotary controlling element therefor, a rotary actuating element for said rotary controlling element, a rotary gage-member for the latter, means for adjustably positioning said gage-member with relation to said actuating element, and actuating means for said actuating element.

[Claims 6 to 21 not printed in the Gazette.]

1,114,794. CASH-REGISTER. WILLIAM H. MUZZY, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 21, 1907. Serial No. 398,513. (Cl. 235—22.)



1. In a cash register, the combination with a main operating mechanism, of manipulative devices, mechanism constructed to be differentially adjusted by said operating mechanism and to be connected and disconnected from the operating mechanism by said manipulative devices, a movable cash receptacle having a series of compartments, and permanent connections from said differentially adjusted mechanism to said cash receptacle.

2. In a cash register, the combination with an operating mechanism having an invariable movement, of manipulative devices, and a differentially movable device having connections to be driven by said operating mechanism and to be disconnected therefrom at different points by said manipulative devices, a cash receptacle divided into a plurality of compartments, a casing for said receptacle having an opening, and permanent connections from said receptacle to said differentially movable devices.

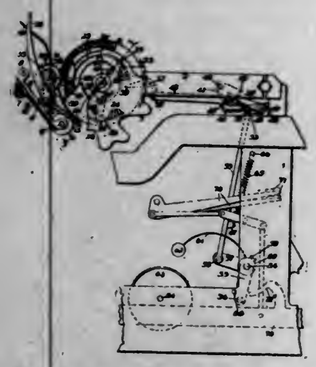
3. In a cash register, the combination with an operating mechanism, of a rotary cash receptacle divided into a plurality of compartments, a casing for said receptacle provided with an opening, a lid for said opening, a latch normally locking the lid and means controlled by the operating mechanism for rotating the receptacle differentially so as to bring any desired compartment beneath the opening and then releasing the lid to expose the positioned compartment.

4. In a cash register, the combination with an operating mechanism, of a rotary cash receptacle divided into a plurality of compartments, a casing for said receptacle provided with an opening, a lid for said opening, means controlled by the operating mechanism for rotating the receptacle differentially so as to bring any desired compartment beneath the opening and then releasing the lid to expose the positioned compartment, and means controlled by the lid for locking the operating mechanism.

5. In a cash register, the combination with an operating mechanism including key controlled elements, registering mechanism and indicating devices, of a rotatable circular receptacle and a vertical shaft upon which the said receptacle is mounted and thus is adapted to revolve in a horizontal plane, and connections from said key controlled elements for actuating the same, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,114,795. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Madison, Wis., assignor to Neidig Typewriter Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1912. Serial No. 735,643. (Cl. 197—189.)



1. In a typewriting machine, in combination, a feed-roll-release lever, a platen, a revoluble member operated by the platen under the control of said feed-roll-release lever, means under the control of said feed-roll-release lever for giving said member a constant starting position, and indicating means called into operation through said revoluble member.

2. In a typewriting machine, in combination, an operative member, indicating means called into operation through said member, means for giving said member, a constant starting position, paper-gages and the operating devices therefor, a platen, and means under the control of said paper-gage-operating devices for giving said operative member movement coördinate with that of the platen from the said starting position.

3. In a typewriting machine, in combination, an index-carrier and indices, means for giving said carrier a constant starting position, paper-gages and the operating devices therefor, a platen, and means under the control of said paper-gage-operating devices for giving said index-carrier movement coördinate with that of the platen from the said starting position.

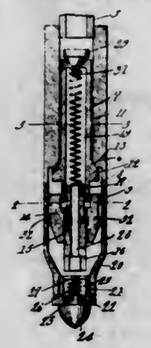
4. In a typewriting machine, in combination, an operative member, an audible signaling means called into operation through said member, means for giving said member a constant starting position, devices for positioning the leading end of the sheet, a platen, and means for giving said operative member movement coördinate with that of the platen from the said starting position, under the control of said sheet-positioning devices.

5. In combination, an operative member, a visual signaling means called into operation through said member, means for giving said member a constant starting position, typewriter-mechanism including a platen, and means under the control of a typewriter-mechanism part for giving said member movement simultaneous with that of the platen from the said starting position.

[Claims 6 to 23 not printed in the Gazette.]

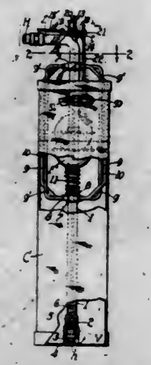
1,114,796. SAFETY-VALVE. THOMAS B. NICKEL, McCracken, Kans. Filed Jan. 23, 1914. Serial No. 813,959. (Cl. 152—12.)

A valve comprising a casing, a hollow plunger disposed therein and forming a closure for the casing, the plunger being movable in one direction to open the casing, a valve carried by said plunger and movable in an opposite direction to open the plunger, a plug secured in the upper extremity of said casing and provided with a threaded bore extending therethrough, an adjusting nut with a bore extending therethrough threadedly engaging said plug, said



adjusting nut extending within the hollow plunger and guiding and constraining the same to rectilinear motion, a compression spring disposed within said plunger, contacting with the bottom wall thereof and with the said adjusting nut, said plug provided with an enlarged bore receiving the upper extremity of the plunger therein and providing an abutment therefor.

1,114,797. ICE-CAN FILLER. WALTER E. NUTTER and GEORGE P. ZELLER, St. Louis, Mo.; said Nutter assignor to said Zeller. Filed Jan. 17, 1914. Serial No. 812,799. (Cl. 226—13.)



1. A filler for liquid containers comprising a hollow staff having intake and discharge means for the liquid, a bottom discharge-control valve in the staff, a casing for the valve, a spring in the casing actuating the valve in one direction, a valve-stem leading from the valve through and beyond the staff, a stuffing-box for the upper end of the stem, a cross-head terminating the upper end of the valve-stem beyond the stuffing-box, a valve-lever pivoted adjacent the intake and provided with downwardly inclined fork members, parallel links depending from the cross-head and coupling to the fork-members at a point below the upper end of the stuffing-box, an oscillating latch coöperating with the cross-head, a float riding on the hollow-staff and responding to the buoyant action of the liquid, and intermediate connections between the float and latch for disengaging the later with a predetermined discharge of liquid.

2. A filler for liquid containers comprising a hollow staff having intake and discharge means for the liquid, a bottom discharge-control valve in the staff, a valve-stem leading from the valve centrally through and beyond the staff, a stuffing-box for the upper portion of the stem, a cross-head at the free upper end of the stem, a laterally projecting nose on the cross-head, a forked bent valve-lever pivoted adjacent the intake, links depending in vertical planes from the cross-head and coupling to the fork members of the lever, a bell-crank oscillating in a vertical plane pivoted at a point between the stuffing-box and the axis of oscillation of the valve-lever, said bell-crank comprising a weighted horizontal yoke-arm or ring enveloping the stuffing box and a vertical post or latch terminating in a supporting ledge adapted to shoulder against the nose of the cross-head, an adjustable tripping arm or lever mounted on the weighted arm of the bell-crank, and extending downward, a float riding along the staff for engaging and tripping said arm, and a spring in the staff for seating the discharge-control valve with a release of the post from the nose of the cross-head.

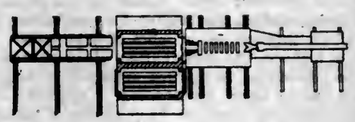
1,114,798. DRUM. CARL F. OBERMAIER, York, Pa. Filed June 26, 1911. Serial No. 635,473. (Cl. 18—6.)

1. In a device for vulcanizing cables, wires and the like composed of or covered with rubber or rubber compounds, a cylindrical drum, and a coating of bakelite for the cylindrical portion of the drum, having a helical groove therein to receive the cables, wires and the like.

2. In a device for vulcanizing cables, wires, and the like composed of or covered with rubber or rubber compounds, a cylindrical drum, and a coating of bakelite on the cylindrical portion of the drum having a helical groove formed therein and hardened while on said drum, said groove adapted to receive the cables, wires, and the like.

3. In a device for vulcanizing cables, wires, and the like, composed of or covered with rubber or rubber compound, a drum, and a coat of material having a helical groove therein and hardened on said drum by heating so as to be thereafter unaffected by the vulcanizing temperature, said groove adapted to receive the cables, wires, and the like.

1,114,799. APPARATUS FOR THE MANUFACTURE OF TUBING. PETER PATTERSON, Pittsburgh, Pa.; Safe Deposit & Trust Co. of Pgh. executor of said Patterson, deceased. Filed Sept. 15, 1911. Serial No. 649,461. (Cl. 78—83.)

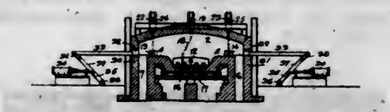


1. In apparatus for the manufacture of tubing, the combination of a welding furnace, welding rolls coöperating therewith, a sizing machine adapted to receive the tube from the welding rolls, a trough leading therefrom and a plurality of cross roll finishing machines set in tandem relation and adapted to receive the tube from said trough and operate successively thereon.

2. In apparatus for the manufacture of tubing, the combination of a welding furnace, welding rolls coöperating therewith, and multiple sets of cross roll finishing machines said machines of each set being arranged in tandem relation, and feeding connections from the welding rolls to said finishing machines adapted to feed to tubes to said sets successively.

3. In apparatus for the manufacture of tubing, the combination of a welding furnace, welding rolls coöperating therewith, a trough at the side of the welding rolls, a sizing machine and a receiving trough beyond it, feeding troughs on each side of said receiving trough adapted to receive the welded tubes therefrom alternately, and two sets of cross roll finishing machines the machines of each set being arranged in tandem relation and in line with each of said feeding troughs.

1,114,800. MANUFACTURE OF LAP-WELDED TUBING. PETER PATTERSON, Pittsburgh, Pa.; Safe Deposit & Trust Co. of Pgh. executor of said Patterson, deceased. Filed Sept. 15, 1911. Serial No. 649,464. (Cl. 75—40.)

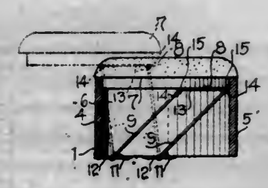


1. A tube welding furnace having a hearth, a shelf extending longitudinally at the side of and at a higher level than said hearth, a feeding port in the front wall in line with the shelf whereby the skelp may be fed along said shelf parallel with said hearth and with the direction of feed through the furnace, ports in the side wall adjacent said shelf, and means operating through said ports to feed the skelp laterally from said shelf to said hearth and means whereby the skelp may be fed longitudinally along said hearth and discharged at the opposite end of the furnace.

2. In a tube welding furnace, the combination with a depressed hearth, a discharge port in line therewith, a horizontal shelf at the side of the hearth extending parallel with and at a higher level than said hearth, an inclined run-way extending from said shelf to the hearth, a charging port in the end wall of the furnace in line with the shelf whereby the skelp may be fed longitudinally thereof to a position parallel with one side of the hearth and may rest there, a charging trough in line with the charging port, ports in the side wall adjacent said shelf, and pushers operating through the ports in the side wall to shift the skelp from said shelf and down said run-way to welding position on said hearth and means whereby the skelp may be fed longitudinally along said hearth and discharged at the opposite end of the furnace.

3. In a tube welding furnace, the combination with a hearth, a discharge port in the end wall in line with the hearth, a horizontal skelp receiving shelf extending along one side of the hearth, and at a higher level than the same, an inclined run-way leading from said shelf to said hearth, a charging port in the end wall in line with the shelf, a charging trough in line with the charging port and a mechanical charger operating along said trough for feeding the skelp through said port longitudinally of said shelf, said hearth having one or more welding grooves, ports in the side wall adjacent said shelf and pusher arms entering through said side wall ports and operating across the shelf to feed the skelp from said shelf down said incline to the welding grooves of said hearth and means whereby the skelp may be fed longitudinally along said hearth and discharged at the opposite end of the furnace.

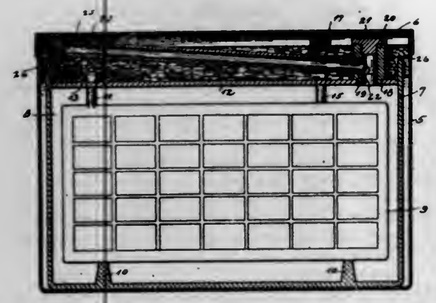
1,114,801. SEAT FOR VEHICLES. WILLIS PETERSON, Frankfort, Mich. Filed Mar. 11, 1914. Serial No. 823,997. (Cl. 21—42.)



A device of the character described comprising a seat frame, spaced seat sections fixedly secured to the opposite extremities of the seat frame, transverse brace members for the seat frame adjacent the inner ends of the seat sections, an intermediate seat adapted to be supported by the seat frame and the brace members, a plate secured to the under portion of the middle seat at the rear thereof, U-shaped brackets having their bases pivotally engaged with the opposite end portions of the plate, and

means for pivotally connecting the free extremities of the stems of the brackets with the under surface of the braces of the seat frame adjacent the front thereof.

1,114,802. STORAGE BATTERY. WILLIAM E. POOLE, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,875. (Cl. 204—53.)



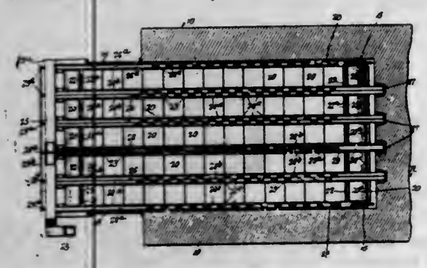
1. In a storage battery, an electrolyte containing receptacle, a cover therefor, a filler plug extending from said cover, and a straight vent tube communicating with said plug and extending slantingly upwardly therefrom and having a vent outlet adjacent its highest end.

2. In a storage battery, an electrolyte receptacle having a cover, a hollow filler plug extending from said cover and having detachable connection therewith, a detachable closure cap for said filler plug, and a vent duct having detachable engagement with said plug and communicating with the interior thereof, said duct extending slantingly upwardly and having a vent outlet at its high end.

3. In a storage battery, the combination of a jar subdivided into cells containing electrolyte, a cover for each cell, a hollow filling plug having detachable engagement with each cover and having a detachable closure cap for its outer end, a vent duct having detachable connection with each plug and communicating with the interior thereof, said ducts being parallel and extending slantingly away from the covers and each terminating in a vent outlet.

4. In a storage battery an electrolyte containing receptacle, a cover therefor, a filler plug extending from said cover, a straight vent tube communicating with and extending from the side of said plug and slantingly upwardly therefrom and having a vent outlet at its high end, and sealing material over said cover and substantially inclosing said filler plug and vent tube but leaving the vent outlet exposed.

1,114,803. FURNACE. HERMAN A. POPPENHUSEN, Evanston, Ill. Filed Oct. 24, 1910. Serial No. 588,588. (Cl. 110—40.)



1. In a furnace, the combination of an endless traveling grate embracing flat plates arranged in longitudinal rows spaced apart transversely, a longitudinally extending hollow conduit having a bottom wall, side walls and a top wall, said conduit being located between said rows of plates with its bottom wall located below the level of all portions of said plates and its side wall spaced laterally from and out of contact with the lateral edges of said plates; the top wall of said conduit being above the level of said plates and provided with at least one port or aperture, means for supporting said conduit in fixed relation to the traveling plates, and means for supplying a blast of air to said conduit.

2. In a furnace, the combination of an endless traveling grate embracing flat plates arranged in longitudinal rows spaced apart transversely, a plurality of longitudinally extending conduits, each having a bottom wall, side walls and a gabled top wall comprising inclined sections, said conduits being located between said rows of flat plates with their bottom walls located below the level of all portions of said plates and the side walls thereof laterally spaced from and out of contact with the lateral edges of adjacent plates; the inclined sections of the top wall of each conduit projecting above the level of said plates and being provided with ports, said conduits being closed at their rear ends and connected at their forward ends with a transversely extending conduit, the latter being connected with a source of air blast for supplying a blast of air to the conduits located between said rows of plates, and means for supporting said conduits in fixed relation with reference to said traveling grate.

3. In a furnace, in combination, an endless traveling chain grate embracing longitudinal rows of plates spaced apart transversely, a plurality of longitudinally extending boxes located between said longitudinal rows of plates, said boxes having side and bottom walls, and a gabled top wall comprising inclined sections, said inclined sections of the top wall having ports, said boxes being closed at their rear ends and being connected at their forward ends to a transversely extending box, said transversely extending box being closed at one end and being connected at its other end to a source of air blast, means for supporting said boxes in fixed relation with reference to said traveling grate, and means for controlling said port openings embracing a piston member adapted to be reciprocated in said boxes, and means for reciprocating said pistons.

4. In a furnace, the combination of an endless traveling grate embracing longitudinal rows of plates spaced apart transversely, a longitudinally extending hollow conduit, having bottom, side and top walls, said conduit being located between said rows of plates, the top wall of said conduit being provided with a plurality of ports or apertures, means for supporting said conduits in fixed relation to said traveling grate, means for supplying an air blast to said conduit, and means for controlling the discharge of air through one or more of said ports.

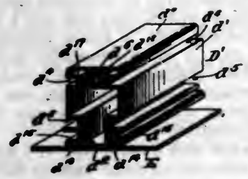
5 In a furnace, the combination of an endless traveling grate embodying flat plates arranged in longitudinal rows and spaced apart transversely, a plurality of longitudinally extending conduits, each having a bottom wall, side walls and a gabled top wall and provided with a plurality of ports in said top wall, said conduits being located between said rows of plates, and connected at their forward ends with a transversely extending conduit, the latter being connected with a source of air blast for supplying air to said conduits, means for supporting said conduits in fixed relation with reference to said traveling grate, and means for controlling the discharge of air through one or more of said ports.

1,114,804. CAR-BODY. JOHN W. RAPP, Flushing, N. Y. Filed Nov. 25, 1912. Serial No. 733,234. (Cl. 105—201.)

1. A car body embodying therein an outside sheathing, post members having body-portions that form part of the interior frame, a post-cover connected to the car sheathing, and means for interlocking the body-portion and cover to attach the sheathing to the interior frame.

2. A car body embodying therein an outside sheathing, post members having body portions that form part of the interior frame, a post-cover welded to the inner surface of the car sheathing and interlocking flanges on said body-portion and post-cover for keying the post parts together to secure the sheathing to the frame.

3. A car body embodying therein an outside sheathing, post members having a body portion formed of sheet metal bent intermediate its longitudinal edges to provide a hollow post and spaced marginal flanges, and a post-cover also formed of sheet metal bent to provide marginal flanges adapted to interlock with the flanges of the body portion, said post-cover having the double function of reinforcing the post and securing the sheathing thereto without exposed rivets.

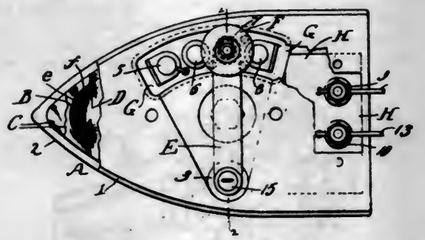


4. A car body embodying a sheathing and post members, each composed of two parts, one part having outwardly projecting flanges, the other part having inwardly extending flanges adapted to interlock with the outwardly extending flanges of the first mentioned part and one of such parts having a welded connection to the inner surface of the outside sheathing.

5. A car body embodying suitable side sills; an outside sheathing, post members having a welded connection with the inner surface of said sheathing, a row of horizontally alined rivets connecting the side sill and sheathing and a rivet concealing horizontal molding attached to the sheathing over said horizontally alined rivets.

[Claim 6 not printed in the Gazette.]

1,114,805. ELECTRICAL PRESSING-IRON. ALFRED E. REIMERS, New York, N. Y. Filed Nov. 2, 1911. Serial No. 658,225. (Cl. 219—25.)

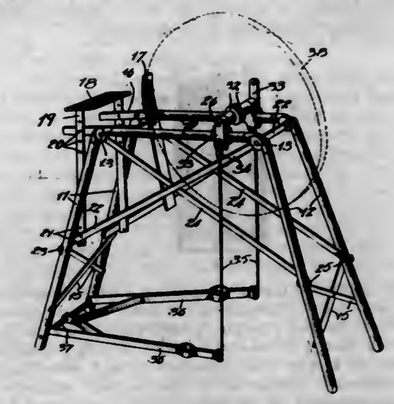


1. In an electric heating device, the combination, with a metal casing comprising two sections; of a heating element located between said sections and consisting of a high resistance conductor comprising a plurality of coils wound one upon the other, in a single plane, said coils having extended leads, said leads formed integral with said coils, and contact posts connected to the free ends of said leads, and a switch-lever adapted to successively electrically engage said contact posts to regulate the heat supply, substantially as shown and described.

2. An electric heating element comprising a plurality of coils wound in a single plane, insulating material separating the turns of the coils, insulating plates bearing upon opposing surfaces of all of the coils and maintaining said coils in the same plane, and contact posts wholly beyond the coils to which the coil terminals are connected, the respective terminals of any one coil being connected to adjacent independent posts, whereby the coils are arranged in series through all of the posts.

1,114,806. FRAME FOR GRINDSTONES. GEORGE HAROLD RICHARDS, Aurora, Ill., assignor to Aurora Door Hanger and Specialty Company, Aurora, Ill., a Corporation of Illinois. Filed Oct. 6, 1913. Serial No. 793,555. (Cl. 51—7.)

1. In a collapsible grindstone frame, the combination with a pair of side frames, each having a horizontal central portion and two legs pivoted on the ends thereof, of braces for the pairs of legs to prevent their separating laterally, detachable braces on the side frames to hold the legs rigid relative thereto, a seat secured at one end of the frame, bearings adjustably mounted on the central portions of the side frames, so that they can be moved to and from the seat, and a shaft for the stone journaled in said bearings.



2. In a collapsible grindstone frame, the combination with a pair of side frames, each having a horizontal central portion and two legs pivoted on the ends thereof, of braces for the pairs of legs to prevent their separating laterally, detachable braces on the side frames to hold the legs rigid relative thereto, bearings adjustably mounted on the central portions of the side frames, so that they can be moved to and from the splashboard, a shaft for the stone journaled in said bearings, a piece uniting said side frames, and a splash board secured to said piece.

3. In a grindstone frame, the combination with a pair of side frames, each having a horizontal central portion and two legs pivoted on the ends thereof, of braces for the pairs of legs to prevent their separating laterally, braces on the side frames to hold the legs rigid relative thereto, having their upper ends also pivoted concentrically with the legs and their lower ends detachably secured thereto, bearings mounted on the central portions of the side frames, a shaft for the stone journaled in said bearings, a seat-frame supported from the main-frame, and means for adjusting the distance between the seat and the bearings.

4. In a grindstone frame, the combination with a pair of side frames, each having a horizontal central portion and two legs on the ends thereof, of braces for the pairs of legs to prevent their separating laterally, braces on the side frames to hold the legs rigid relative thereto, bearings adjustably mounted on the central portions of the side frames, a shaft for the stone journaled in said bearings, a U-shaped piece pivoted to the angles formed by the central portions and one pair of legs, a splash board secured on the closed end thereof, and a U-shaped seat-frame secured near the seat end thereof to the first mentioned U-shaped frame and at the lower end thereof connected to the adjacent braces.

5. In a collapsible grindstone frame, the combination with a pair of side frames, each made up of a tubular horizontal central portion and tubular legs pivoted thereto, braces for the pairs of legs to prevent their separating laterally, braces pivoted at their upper ends on the centering portion of the side frames, and having their lower ends detachably secured to the legs to hold them rigid relative to the frames, bearings adjustably mounted on the central portions of the side frames, and a shaft for the stone journaled in said bearings.

1,114,807. CONDIMENT-HOLDER. CLYDE RITTER, Bridgeton, N. J. Filed Nov. 12, 1913. Serial No. 800,472. (Cl. 65—57.)

1. A condiment holder, comprising a body having an open end, and an external annular groove adjacent its

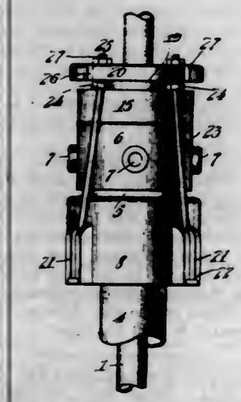
open end, a member mounted to turn on the body and engaging in the groove, said member having an angular opening located centrally over the end of the body, an agitator in the body, a journal on one end of said agitator having an angular portion and a cylindrical portion, said angular portion fitting the opening in the movable member, and means at the end of the body having a circular opening constituting a bearing for the cylindrical portion of the journal, substantially as described.

2. A condiment holder comprising a body, a perforated cover removably connected to the body, an agitator within the body having a journal projecting through the cover, said body having an annular groove, a rotary member in said groove, and an arm connected to said rotary member and removably connected to the journal, whereby the turning movement of the rotary member imparts a rotary movement to the agitator, substantially as described.

3. A condiment holder comprising a body, a perforated cover removably connected to the body, an agitator within the body having a journal projecting through the cover, said body having an annular groove, a ring mounted to turn in the groove, an arm connected to the ring, said journal at its end projecting above the cover made angular in cross section, and said arm having an angular opening to receive the angular end of the journal, substantially as described.

4. A condiment holder comprising a body, a perforated cover removably connected to the body, an agitator within the body having a journal projecting through the cover, said body having an annular groove, a ring mounted to turn in the groove and having outwardly projecting finger holds at opposite sides thereof, a sleeve fixed to the ring, an arm mounted to turn in the sleeve, said arm at its free end having an angular opening, and said journal having a conical end and an angular portion below the conical end to enter the angular opening in said arm, substantially as described.

1,114,808. GAS PACKING-HEAD. LAWRENCE E. ROBINSON, Coffeyville, Kans. Filed Dec. 20, 1913. Serial No. 807,873. (Cl. 166—14.)



1. The combination with a drive pipe, of a head slidably mounted thereon provided with a sleeve portion, a collar slidably mounted upon said sleeve portion, gripping members arranged within said collar, packing rings arranged upon said gripping members, and means for adjusting said collar in respect to said head for moving said gripping members into contact with said driving pipe.

2. The combination with a drive pipe and casing, of a head slidably mounted thereon, means for locking said head in adjusted position upon said drive pipe, a neck member and cap member carried by said head surrounding said casing, and a connection between said means and cap.

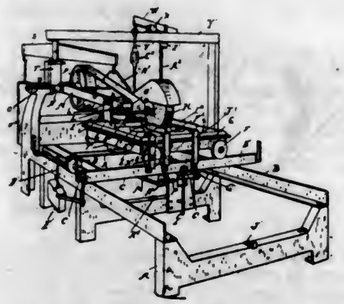
3. The combination with a drive pipe and a casing, of a head member provided with a sleeve slidably mounted upon said drive pipe, a collar adjustably mounted upon said sleeve portion, gripping members arranged within said collar for engaging said drive pipe, and means for adjusting said collar upon said sleeve and holding the same in adjusted position.

4. The combination with a drive pipe, of a head slidably mounted on said drive pipe, a collar slidably mounted upon said head having a frusto-conical bore portion, a segmental frusto-conical ring arranged within the frusto-conical bore portion of said collar, said segmental ring being provided with serrated gripping faces, packing arranged between the head and said segmental ring, and means for adjusting said collar upon said head for compressing said segmental ring into engagement with said drive pipe.

5. The combination with a drive pipe, of a head slidably mounted upon said pipe, a segmental ring surrounding said drive pipe having an inner gripping face, a collar slidably mounted upon said head, means for adjusting said collar in respect to said head, for compressing said segmental ring against said drive pipe.

[Claims 6 to 21 not printed in the Gazette.]

1,114,809. GRINDING OR POLISHING MACHINE. WILLIAM V. ROBINSON, Detroit, Mich. Filed May 31, 1913. Serial No. 770,969. (Cl. 51—12.)



1. In a grinder or polisher, the combination with a frame, of a carriage mounted thereon for reciprocation, a support arranged upon said carriage, means tending to move the support in one direction, a rack and dog for producing a step-by-step movement of the support in said direction, means for producing a relative movement between said dog and rack, arranged upon said carriage, and a trip for said means positioned to engage the latter slightly in advance of the limit of reciprocation of said carriage.

2. In a grinder or polisher, the combination with a frame, of a carriage arranged thereon for reciprocation, a support mounted on said carriage, means tending to move said support in one direction, means for effecting a step-by-step movement of the support in said direction, an operating member for said means arranged upon said carriage, and trips acting upon said operating member at the opposite limits of reciprocation of said carriage.

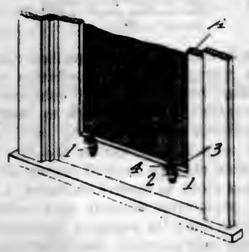
3. In a grinder or polisher, the combination with a support, an operating member positioned in operative relation to the support, a lever, a connection between said lever and said frame, and means coöperating with said member to limit the movement of the member toward the support.

4. In a grinder or polisher, the combination with a work-support, an operating member positioned in operative relation to the support, and means independent of the work support positioned in proximity to said operating member for preventing accidental movement of the work relative thereto.

5. In a grinder or polisher, the combination with a work-support, an operating member positioned in operative relation to the support, and means extending over the support and positioned in proximity to the operating member for preventing accidental movement of the work relative to said member.

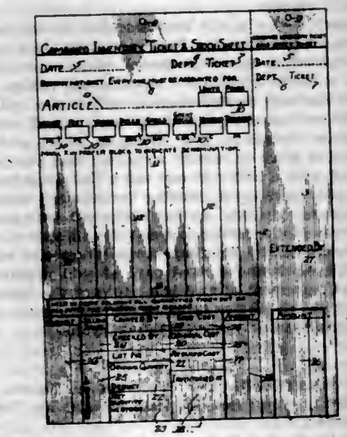
[Claims 6 to 19 not printed in the Gazette.]

1,114,810. COMBINED HANGER AND LIFT. BYRD C. ROCKWELL, Camden, Ark. Filed Mar. 20, 1913. Serial No. 755,735. (Cl. 16—53.)



A lift including a rigid base for attachment to a screen or the like, and a curved finger engaging portion having a longitudinal slot extending throughout the length thereof whereby said portion can be conveniently flexed into alinement with the base to form a hanger, the edges of the slots constituting means for engaging and preventing slipping of the finger engaging the lift, said finger having its free end spaced from the base to permit movement of a finger upwardly into engagement with the curved finger.

1,114,811. COMBINED INVENTORY-TICKET AND STOCK-SHEET. CLINTON F. RUDOLF, Chicago, Ill. Filed Feb. 12, 1912. Serial No. 677,185. (Cl. 11—19.)



1. A combined inventory ticket and stock sheet comprising a record portion provided with spaces and headings therefor for receiving information relating to the article being inventoried, spaces and headings therefor for receiving the number of units of the article on hand when the count is made and the total number of units of the article disposed of after said count is made and before the inventory is completed, a space and heading therefor for receiving the number of units on hand when the inventory is completed, a space and heading therefor for receiving the unitary value at which the article is inventoried, and a space and heading therefor for receiving the summation value of the units of the article in stock when the inventory is completed.

2. A combined inventory ticket and stock sheet comprising a record portion provided with spaces and headings therefor for receiving information relating to the article being inventoried, spaces and headings therefor for receiving the unit in which the said article is inventoried, a space and heading therefor for receiving the number of units of the article on hand when the count is made and the total number of the article disposed of after said count is made and before the inventory is completed, a column and means designating the same for receiving the number of units disposed of after the said count is made and before the inventory is completed, a space and heading therefor for receiving the number of units on hand when the inventory is completed, a space and heading therefor for receiving the unitary value at which the article is inventoried, and a detachable stub, both said stub and said main portion being provided with identifying means and with a space and a heading therefor for receiving the summation value of the number of units of the article in stock when the inventory is completed.

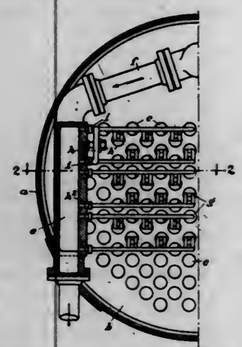
3. A combined inventory ticket and stock sheet comprising a record portion provided with spaces and headings therefor for receiving information relating to the article being inventoried, a series of spaces and headings therefor disposed across the sheet for indicating the unit in which the said article is inventoried, a series of columns and means designating the same for receiving the number of units of the article disposed of after the count has been made and before the inventory is completed, a space and heading therefor for receiving the number of units of the article on hand when the said count is made, and a series of spaces and headings therefor disposed in alinement adjacent the bottom of the said sheet, said spaces and headings comprising a space and a heading therefor for receiving the number of units of the articles on hand when the inventory is completed, a space and a heading therefor for receiving the unit value at which the article is inventoried, and a space and heading therefor for receiving the summation value of the number of units in stock when the inventory is completed.

4. A combined inventory ticket and stock sheet comprising a main record portion and a detachable stub, said main record portion being provided with spaces and headings therefor for receiving information relating to the article being inventoried, spaces and headings therefor for receiving a mark indicating the unit in which the article is inventoried, and a series of spaces and headings therefor disposed in alinement adjacent the bottom of the said record portion, said series comprising a space and a heading therefor for receiving the number of units of the article on hand when the inventory is completed, a space and heading therefor for receiving the unit value at which the said article is inventoried, and a space and heading therefor for receiving the summation value of the articles in stock when the inventory is completed, and a space and heading therefor upon the said detachable stub for receiving the summation value of the number of units in stock when the inventory is completed, said space upon the stub being disposed in alinement with said series of spaces upon the said main portion.

5. A combined inventory ticket and stock sheet comprising a record portion provided with spaces designated for the entry of information relating to the article being inventoried, a series of spaces disposed across the sheet and each designated by a unit in which various articles are sold and inventoried and adapted to be checked to disclose the unit in which the particular article is inventoried, a column and means designating the same for receiving the number of units disposed of after the count of the article

has been made and before the inventory is completed, a space designated for the entry of units of the articles on hand when the count is made and for entry of the number of articles disposed of between the taking of the count and the completion of the inventory, one entry above the other, and a series of spaces arranged in alinement adjacent the bottom of the sheet and designated, one for receiving the number of units on hand at the completion of the inventory located directly beneath the space provided for the reception of the number of articles on hand when the count is made, a second designated for the entry of the unit value at which the article is inventoried and the third designated for the entry of the summation value of the number of units of the article in stock when the inventory is completed.

1,114,812. SUPERHEATER FOR LOCOMOTIVE-BOILERS. WILHELM SCHMIDT and PETER THOMSEN, Cassel-Wilhelmshöhe, Germany, assignors to Schmidt'sche Heissdamfp-Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed Apr. 28, 1910. Serial No. 558,112. (Cl. 122—462.)



1. In combination with a locomotive boiler provided with smoke tubes, a superheater comprising a plurality of units constituted of loops arranged in said tubes all the ends of said units belonging to a plurality of smoke tube rows being bent into a common plane and, in said plane, the saturated steam ends and the superheated steam ends being arranged in two separate groups.

2. In combination with a locomotive boiler provided with smoke tubes, a superheater comprising a plurality of units each constituted of a plurality of loops arranged in said tubes all the ends of said units belonging to a plurality of smoke tube rows being bent into a common plane, and, in said plane, the saturated steam ends and the superheated steam ends being arranged in two separate groups.

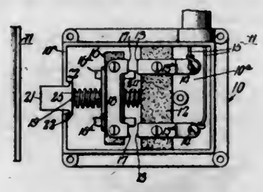
3. In combination with a locomotive boiler provided with smoke tubes, a superheater comprising units each constituted of single U-shaped loops arranged, one loop to a tube, in said tubes all the ends of said units belonging to a plurality of smoke tube rows being bent into a common plane and, in said plane, the saturated steam ends and the superheated steam ends being arranged in two separate groups.

4. In combination with a locomotive boiler provided with a plurality of grouped rows of smoke tubes, a superheater comprising units constituted of loops arranged in said tubes, the ends of said units belonging to each different group of smoke tube rows being bent into a common plane in which plane the saturated steam ends and the superheated steam ends are arranged in two separate groups said planes being, further, alternately remote from and closely adjacent to one another.

5. In combination with a locomotive boiler provided with a plurality of smoke tubes, a superheater comprising units constituted of loops arranged in said tubes, all the ends of said units belonging to a plurality of smoke tube rows being bent into a pair of common planes substantially parallel to the planes of said smoke tube rows of which one plane contains all the saturated steam ends and the other plane all the superheated steam ends.

[Claims 6 to 8 not printed in the Gazette.]

1,114,813. SAFETY-SWITCH. HARRY B. SHEEVE, Chicago, Ill., assignor to Chicago Safety Appliance Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1913. Serial No. 741,412. (Cl. 177—10.)



1. A switch device of the kind described comprising the combination of a casing, of a fixed insulation block secured within said casing, laterally spaced contacts carried by said block, a movable insulation block in said casing, laterally spaced contacts carried thereby each in line with and adapted for contact with one of the first named contacts, a reciprocable plunger in said casing on which said movable insulation block is loosely mounted, a buffer fixed on said plunger projecting without said casing and provided with stops to limit its outward movement, a spring interposed between said movable insulation block and said fixed insulation block, and a more rigid spring interposed between said buffer block and said movable insulation block.

2. A switch device of the kind described comprising the combination of a casing, of a fixed insulation block secured within said casing, laterally spaced contacts carried by said block, a movable insulation block in said casing, laterally spaced contacts carried thereby each in line with and adapted for contact with one of the first named contacts, a reciprocable plunger in said casing on which said movable insulation block is loosely mounted, said plunger being provided with a buffer at one end which projects without said casing, means for limiting the outward movement of said plunger, and yielding means acting to resist movement of the movable insulation block in either direction on said plunger.

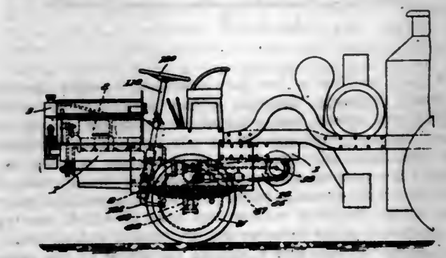
3. A switch device of the kind described comprising the combination of a casing, of a fixed insulation block secured within said casing, laterally spaced contacts carried by said block, a movable insulation block in said casing, laterally spaced contacts carried thereby each in line with and adapted for contact with one of the first named contacts, a reciprocable plunger in said casing on which said movable insulation block is loosely mounted, said plunger being provided with a buffer at one end which projects without said casing, means for limiting the outward movement of said plunger, yielding means interposed between said two insulation blocks acting to resist the movement of one toward the other, and yielding means interposed between said movable block and a fixed part of said plunger acting to resist movement of said block toward the buffer end of said plunger, the latter being capable of greater resisting force than the first named yielding means.

1,114,814. SNATCH-BLOCK. FRANCIS M. SMITH, Raymond, Wash. Filed Oct. 13, 1913. Serial No. 794,976. (Cl. 57—34.)

A snatch block, comprising two plates, one of which carries a journaling pintle while the other of which is provided with an aperture having oppositely extending recessed portions, the head of the journaling pintle being shaped to fit therethrough, whereby when the apertured plate is placed at varying positions, the plate is locked in place or can be removed from the pintle, a pivoted bail attached to one end of one plate, the other plate being provided with a reinforced end having a transversed slot to receive the free end of the bail as such plate is swung upon the pintle, said recessed plate being provided with a T-shaped recess opening to the inner wall thereof, and a

T-shaped head opening to the inner face of the other plate for sliding engagement with the T-shaped recess to lock the plate against outward displacement.

1,114,815. FRONT-DRIVE-AUTOMOBILE CONSTRUCTION. GEORGE A. SODEN, East Orange, and JOHN W. POWELSON, Newark, N. J. Filed Jan. 29, 1914. Serial No. 815,164. (Cl. 21—114.)



1. A traction wheel arrangement of the character described having a pivotal supporting member, a rotary member journaled thereon, a hub flange on the rotary member having its inner end formed with annular oil collecting grooves, a gear carried by the rotary member, a stationary wheel member supported on the pivotal member, a pinion journaled in the stationary member in driving engagement with the gear, a flange on the stationary member surrounding the gear, and annular beads on the stationary member arranged freely to enter the annular grooves of the hub flange.

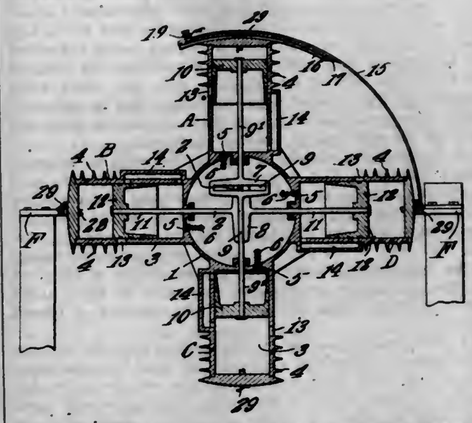
2. A traction wheel arrangement of the character described having a pivotal supporting member provided with a spindle portion, a rotary wheel member journaled on the spindle, a hub flange on the rotary member having its inner end provided with annular oil collecting grooves, an internal gear carried by the rotary member, a stationary wheel member supported on the pivotal member, a pinion journaled in the stationary member in driving engagement with the gear, a flange on the stationary member surrounding the gear, and provided with annular beads at its edge, said rotary member being formed with annular grooves freely to receive the beads of the stationary member and annular beads on the stationary member arranged freely to enter the grooves of the hub flange.

3. A traction wheel arrangement of the character described comprising a supporting axle having its end suitably apertured for the reception of a pivot pin, a pivot pin fitted to the aperture, a stationary wheel member journaled on the pivot pin to be capable of movement about said pin in a horizontal plane and a rotatable wheel member journaled on the stationary member, said stationary member having a portion thereof arranged to overlie the pivotal pin to prevent its withdrawal.

4. A traction wheel arrangement of the character described comprising a supporting axle having a forked end suitably apertured, a vertically arranged pivot pin fitted to the apertures to rest upon the axle a wheel axle member journaled on the pin to swing in a horizontal plane, a spindle on the axle member, a rotatable wheel member journaled on the spindle, a gear carried by the rotatable member, a stationary wheel member, a bearing flange on the stationary member and a pinion journaled in said flange in driving engagement with the gear, said bearing flange being arranged to overlie the pivot pin thereby to prevent withdrawal of the pin.

5. A traction wheel arrangement of the character described comprising a supporting axle having a forked end suitably apertured to provide shoulders therein, a vertically arranged pivot pin fitted to the apertures and formed to seat upon the shoulders and with a threaded lower end, a retaining nut on the lower end, a wheel axle member journaled on the pin to swing in a horizontal plane, a spindle on the axle member, a rotatable wheel member journaled on the spindle, a gear carried by the rotatable member, a stationary wheel member, a bearing flange on the stationary member and a pinion journaled in said flange in driving engagement with the gear, said bearing flange being arranged to overlie the pivot pin thereby to prevent withdrawal of the pin.

1,114,816. ROTARY HYDROCARBON-ENGINE. SIMEON G. STAPP, Phillipsburg, Kans. Filed Jan. 19, 1911. Serial No. 603,557. (Cl. 123—167.)

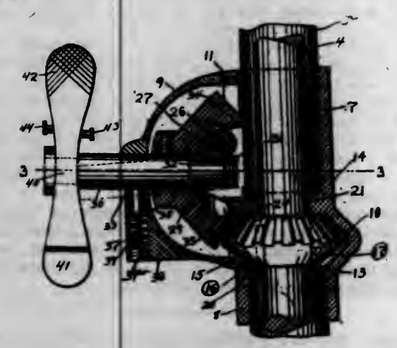


In a rotary hydrocarbon engine, a supporting frame, a stationary crank shaft carried thereby, a case mounted for rotation on the shaft within the frame and having a plurality of radial cylinders, pistons in the cylinders and operatively connected to the crank shaft, ignition means carried by the outer end of each cylinder and including a yieldable terminal, an arcuate strip attached at one end to the said frame and disposed directly outside the path of the heads of the cylinders, an insulated arcuate contact strip secured to the inner side of the aforesaid strip at its free end and arranged to be successively engaged by the contacts, the contacts wiping along the said strips, a commutator disposed at one side of the case and rotatable therewith, the commutator including a series of segments electrically connected to the case, an insulated radial arm carried by the crank shaft and mounted for oscillatory adjustments, a yieldable brush carried by the said arm and coöperating with the commutator to be engaged successively by the segments, and electrical conductors connected to the contact strip and brush for connection with a spark coil.

1,114,817. STEERING DEVICE FOR MOTOR-VEHICLES. BARNETTE T. STEINER and HARRY B. WHITE, Canton, Ohio, assignors to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed May 31, 1913. Serial No. 770,845. (Cl. 74—81.)

1. For a motor vehicle, in combination with the steering post thereof, including a steering shaft and casing,

pedally operable, steering shaft actuating means connected to said casing and adapted to move into operative connection with said shaft when the foot of the operator is on said means and to automatically move out of such connection when the foot of the operator is removed therefrom.



2. For a motor vehicle, in combination with the steering post thereof, including a steering shaft and casing, a steering wheel mounted upon the upper end of said shaft, and pedally operable, steering shaft actuating means connected to said casing intermediate the ends thereof and adapted to move into operative connection with said shaft when the foot of the operator is on said means and to automatically move said means out of such connection when the foot of the operator is removed therefrom.

3. For a motor vehicle, in combination with the steering shaft thereof, a foot lever adjustably connected to said shaft and adapted to be moved downwardly into operative connection with said shaft and upwardly, out of operative connection with said shaft, and automatic means for raising said lever to its upper position, said automatic means being adapted to be overcome by the weight of the foot of the operator to permit said foot lever to move to its lower position when the foot of the operator is placed thereon.

4. For a motor vehicle, in combination with the steering post thereof, comprising a steering shaft and casing therefor, a foot lever shaft having its inner end pivotally connected to said casing, a first gear fixedly mounted upon said steering shaft, a second gear fixedly mounted upon said foot lever shaft and movable into and out of mesh with said first gear as said foot lever shaft is pivotally moved and a foot lever fixedly connected to said foot lever shaft.

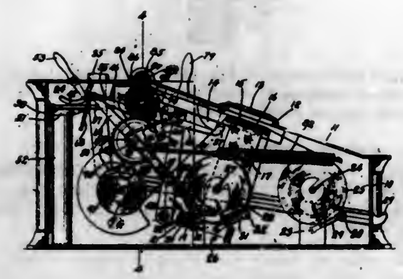
5. For a motor vehicle, in combination with the steering post thereof, comprising a steering shaft and a casing therefor, steering-shaft-operating means connected to said casing and movable into and out of operable connection with said steering shaft and adapted to be operated by the foot of the operator.

[Claims 6 to 11 not printed in the Gazette.]

1,114,818. VENDING-MACHINE. WELCOME F. SWEET, St. Louis, Mo., assignor to W. D. Mahaney, St. Louis, Mo. Filed Feb. 13, 1913. Serial No. 748,129. (Cl. 211—33.)

1. In a machine of the class described, a casing having an opening, a shelf below said opening, which shelf forms a support for webs of paper from rolls contained within the machine, a closure for the opening, a quadrant plate carried by said closure, which quadrant plate is positioned within the casing, a lever within the casing, and a lug on the end of said lever, which lug engages the front edge of the quadrant plate to hold the closure in closed position.

2. In a machine of the class described, a housing provided with an opening, a shelf beneath said opening over which shelf webs of paper are adapted to pass, there being a second opening formed in the housing through which one of the webs of paper is adapted to discharge, a pair of rollers mounted within the housing adjacent to the discharge opening for effecting a discharge of the end of the webs of paper through said opening, meshing pinions at the ends of said rollers, whereby the same are simultaneously driven, a driving pinion meshing with the pinions on the lower roller, a sprocket wheel, a ratchet and pawl connection between said sprocket wheel and the driving pinion, a chain operating on the sprocket wheel, a retractile coil spring fixed to one end of the sprocket chain, and a hand lever connected to the other end of said sprocket chain.



3. In a machine of the class described, a casing, having a paper discharge opening, a pair of rollers arranged within the casing and adapted to discharge a web of paper through said opening, means whereby said rollers are simultaneously driven, a semi-circular housing arranged for rocking movement immediately to one side of the discharge opening, which housing incloses the upper one of the discharge rollers, one edge of which housing is sharpened so as to sever the discharged web of paper, and means for effecting a rocking movement of the housing to bring the sharp edge thereof into engagement with the web of paper.

4. In a machine of the class described, a casing having a paper discharge opening, a pair of rollers arranged within the casing and adapted to discharge a web of paper through said opening, means whereby said rollers are simultaneously driven, a semi-circular housing arranged for locking movement immediately to one side of the discharge opening, which housing incloses the upper one of the discharge rollers, one edge of which housing is sharpened so as to sever the discharged web of paper, an arm fixed to one end of said housing, which arm projects downwardly into the machine housing, and means within the machine housing for engaging the lower end of said arm to effect a rocking movement of the semi-circular housing and bring the sharp edge thereof into contact with the paper at the discharge opening.

5. In a machine of the class described, a casing having a paper discharge opening, a pair of rollers arranged within the casing and adapted to discharge a web of paper through said opening, means whereby said rollers are simultaneously driven, a semi-circular housing arranged for rocking movement immediately to one side of the discharge opening, which housing incloses the upper one of the discharge rollers, one edge of which housing is sharpened so as to sever the discharged web of paper, a plate below the discharge opening, which plate is normally engaged by the sharpened edge of the semi-circular housing, thereby closing said discharge opening, means within the machine housing for rocking the semi-circular housing so as to withdraw the sharpened edge thereof from the plate to permit the dischage of paper between said plate and the sharpened edge of said semi-circular housing, and which last mentioned means also effects a rocking movement of the housing to bring the sharpened edge thereof into engagement with the plate to sever the section of paper which has passed through the discharge opening.

[Claim 6 not printed in the Gazette.]

1,114,819. SHOE-BOTTOM FILLER AND METHOD OF MAKING. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Mar. 7, 1907. Serial No. 361,171. (Cl. 106—3.)

1. The method of making a filler compound, consisting of combining a vegetable gum of the character of the so-called rubber-like and pseudo-rubber gums having the general properties herein set forth with a sticky, pasty, fluxing agent through the agency, at least partially, of friction milling under pressure.

2. The method of making the herein described filler compound, consisting of fluxing together mineral oil and resin to make a sticky, pasty fluxing agent, and combining a vegetable gum having the general properties of being rubber-like, and capable of developing a stretchable quality through the agency, at least partially, of friction milling under pressure.

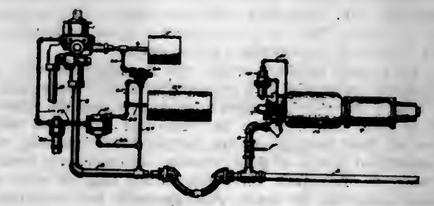
3. The method of making the herein described filler compound, consisting of fluxing together oil and resin, and then combining therewith, by friction milling, at least in part, a gummy base having a rubber-like character until said base is wholly disintegrated and the whole is reduced to a rubber-like mass.

4. The method of making the herein described filler compound, consisting of fluxing together oil and resin, and then combining therewith, by friction milling, at least in part, a gummy base having a rubber-like character until said base is wholly disintegrated and the whole is reduced to a rubber-like mass, and then thoroughly intermixing with said mass a preponderating amount of comminuted filler material.

5. The method of making the herein described filler compound, consisting of disintegrating a base containing a resinous vegetable gum, by the agency, at least in part, of heat in the presence of mineral oil, and subjecting the compound to friction milling until thoroughly mixed.

[Claims 6 to 16 not printed in the Gazette.]

1,114,820. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to the Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 5, 1907. Serial No. 366,465. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a main control valve with a train pipe feed port, of means operated by said main valve for controlling said train pipe feed port.

2. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a main valve with a train pipe feed port, of a supplemental valve operated by said main valve for controlling said train pipe feed port.

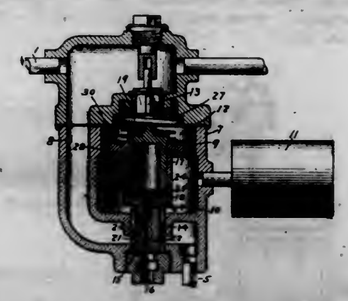
3. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a main valve for controlling the supply of air to two train pipe feed ports, of a supplemental valve operated by said main valve in moving from a brake applied position for opening one port and closing the other.

4. In a fluid pressure brake, the combination with a train pipe and a manually operated main valve for supplying air to two train pipe feed ports, of a supplemental valve operated by the movement of said main valve in one direction to open one feed port and in the opposite direction to open the other.

5. In a fluid pressure brake, the combination with a train pipe and a manually operated main valve for supplying air to a train pipe feed port, of a supplemental valve operated by said main valve and adapted to open said port on movement of the main valve from brake applied positions.

[Claims 6 to 24 not printed in the Gazette.]

1,114,821. TRAIN-PIPE VENT-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 9, 1910. Serial No. 560,235. (Cl. 188—14.)



1. In a fluid pressure brake, the combination with a train pipe, of a movable abutment subject on one side to train pipe pressure and on the opposite side to the pressure of a chamber normally charged to train pipe pressure, a valve operated by said abutment upon a sudden reduction in train pipe pressure for opening a train pipe vent port, and means for closing communication from the train pipe to said abutment upon a predetermined reduction in train pipe pressure.

2. In a fluid pressure brake, the combination with a train pipe, of a movable abutment subject on one side to train pipe pressure and on the opposite side to the pressure of a chamber normally charged to train pipe pressure, a valve operated by said abutment upon a sudden reduction in train pipe pressure for opening a train pipe vent port, and means subject to the opposing pressures of the train pipe and said chamber and operating upon a predetermined reduction in train pipe pressure by flow to the vent port for closing communication from the train pipe to said abutment.

3. In a fluid pressure brake, the combination with a train pipe, of a movable abutment subject on one side to train pipe pressure and on the opposite side to the pressure of a chamber normally charged to train pipe pressure, a valve operated by said abutment upon a sudden reduction in train pipe pressure for opening a train pipe vent port, and a piston device subject on one side to the pressure of fluid flowing from the train pipe to the vent port and to the pressure of said chamber and on the opposite side to train pipe pressure and operating upon a predetermined reduction in train pipe pressure by flow to the vent port to close communication from the train pipe to said abutment.

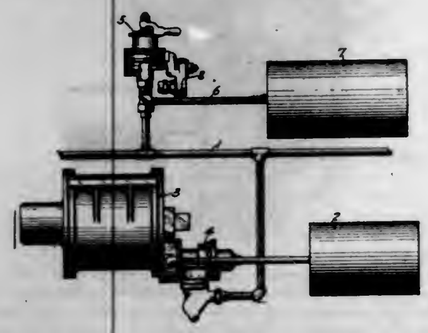
4. In a fluid pressure brake, the combination with a train pipe, of a movable abutment subject on one side to train pipe pressure and on the opposite side to the pressure of a chamber normally charged to train pipe pressure, a valve operated by said abutment upon a sudden reduction in train pipe pressure for opening a train pipe vent port, and a piston device subject on one side on a portion of its area to the pressure of fluid flowing from the train pipe through the vent port and on another portion of its area to the pressure in said chamber, and on the opposite side to train pipe pressure, for controlling communication from the train pipe to said abutment, said piston device being operated by the chamber pressure acting on one side to close said communication upon

a predetermined reduction in train pipe pressure by flow through the vent port.

5. In a fluid pressure brake, the combination with a train pipe, of a vent valve mechanism comprising a valve and movable abutment operating upon a sudden reduction in train pipe pressure for locally venting the train pipe and means for closing communication from the train pipe to said abuement upon a predetermined reduction in train pipe pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,114,822. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 2, 1910. Serial No. 564,577. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a train pipe, of a feed valve device operated by a reduction in fluid pressure for maintaining a predetermined degree of pressure in the train pipe, of an auxiliary manually operated device for also reducing the fluid pressure on said feed valve device to supply fluid to the train pipe at a higher degree of pressure.

2. In a fluid pressure brake, the combination with a train pipe, of a feed valve device having an adjustable regulating mechanism for normally controlling the maximum degree of pressure of fluid admitted to the train pipe, of an auxiliary manually operated valve for venting fluid from said feed valve device to operate the same to supply fluid to the train pipe at a higher maximum degree of pressure.

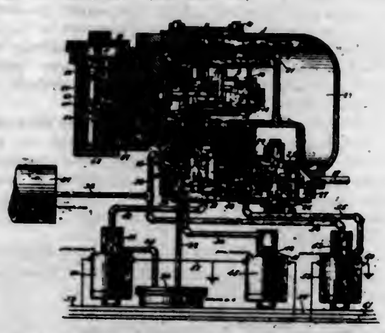
3. In a fluid pressure brake, the combination with a source of fluid under pressure, a train pipe, of a feed valve device adapted to supply fluid from said source to the train pipe at a maximum pressure less than the pressure of said source, a brake valve having a position for connecting the feed valve device to the train pipe, said feed valve device being provided with an auxiliary manually operated valve for venting fluid from said feed valve device to operate the same to supply fluid to the train pipe at the maximum pressure of said source.

4. In a fluid pressure brake, the combination with a source of fluid under pressure and a train pipe, of a feed valve device having a single regulating portion governed by train pipe pressure for normally supplying fluid from said source to the train pipe and an auxiliary manually operated means for also controlling said feed valve device to supply fluid to the train pipe.

5. In a fluid pressure brake, the combination with a source of fluid under pressure and a train pipe, of a brake valve, a feed valve device having means operated by a reduction in fluid pressure for normally supplying fluid to the train pipe at a predetermined degree of pressure less than the maximum pressure of said source in the running position of the brake valve, and an auxiliary manually operated device for also reducing the pressure on said means to supply fluid to the train pipe at the full pressure of said source.

[Claims 6 to 9 not printed in the Gazette.]

1,114,823. ELECTROPNEUMATIC CONTROL-VALVE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 3, 1911. Serial No. 624,869. (Cl. 188—4.)



1. In a fluid pressure brake, the combination with a train pipe and an emergency valve mechanism operating upon a sudden reduction in train pipe pressure to effect an emergency application of the brakes, of electrically controlled means for also varying the pressure on said emergency valve mechanism independently of the train pipe pressure to effect a gradual application of the brakes.

2. In a fluid pressure brake, the combination with a train pipe and valve means operating upon a gradual reduction in train pipe pressure for effecting a service application of the brakes, of an emergency valve mechanism adapted upon a sudden reduction in train pipe pressure to effect an emergency application of the brakes and electrically controlled means for varying the pressure on said emergency valve mechanism independently of the train pipe pressure to effect a service application of the brakes.

3. In a fluid pressure brake, the combination with a train pipe, brake cylinder, and a valve device adapted upon a gradual reduction in train pipe pressure to supply fluid to said brake cylinder, of an emergency brake cylinder, an emergency valve mechanism adapted upon a sudden reduction in train pipe pressure to supply fluid to the emergency brake cylinder, and electrically controlled means for also operating said emergency valve mechanism to supply fluid to the emergency brake cylinder to effect a service application of the brakes.

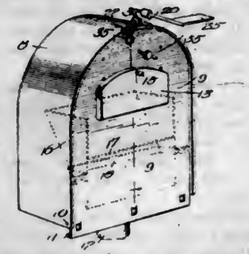
4. In a fluid pressure brake, the combination with a train pipe, a source of fluid pressure, a service brake cylinder, and a valve device operating upon a gradual reduction in train pipe pressure for supplying fluid from said source of fluid pressure to the service brake cylinder, of an additional source of fluid pressure, an emergency brake cylinder, an emergency valve mechanism adapted upon a sudden reduction in train pipe pressure for supplying fluid from said additional source of fluid pressure to the emergency brake cylinder, and electrically controlled means for also operating said emergency valve mechanism to supply fluid from said additional source of fluid pressure to the emergency brake cylinder.

5. In a fluid pressure brake, the combination with a train pipe, a service brake cylinder, an emergency brake cylinder, and valve means adapted upon a gradual reduction in train pipe pressure to supply fluid to the service brake cylinder and upon a sudden reduction in train pipe pressure to supply fluid to the emergency brake cylinder, of a magnet valve device for also controlling said valve means independently of the train pipe pressure to effect the supply of fluid to said emergency brake cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,114,824. LOCK FOR MAIL-BOXES. CLAUDE F. UTTERBACK, Mooresville, Ind. Filed Dec. 24, 1912. Serial No. 738,446. (Cl. 70—14.)

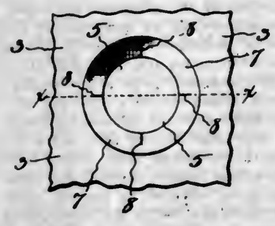
1. The combination of a bolt, manually operated mechanism for actuating said bolt, means for maintaining said manually operated mechanism in a predetermined relative position, a slidably mounted member, means carried by the same for throwing said manually operated mechanism into and out of action, a handle, connections from said handle to said slidably mounted member for enabling movements of said handle to shift the position of said slidably mounted member, and a combination lock for preventing movement of said handle.



2. A device of the character described comprising a casing, a door therefor, a keeper mounted upon said casing, a bolt carried by said door and movable relatively to said keeper, manually operated mechanism normally connected with the said bolt for actuating the same, a cleat carried by said door for temporarily locking said manually operated mechanism against movement, a second bolt provided with means for disengaging said manually operated mechanism from said cleat, and a lock for temporarily holding said second mentioned bolt against movement.

3. A device of the character described comprising a casing, a door therefor, a keeper mounted upon said casing, a bolt carried by said door and movable relatively to said keeper, a manually operated key for shifting said bolt lengthwise, when said bolt is otherwise free, manually operated mechanism independent of said key and normally connected with said bolt for actuating the same, a cleat carried by said door, for engaging said manually operated mechanism and temporarily locking the same against movement, a second bolt movable in the general direction of its own length and provided with means for disengaging said manually operated mechanism from said cleat, and means controllable at the will of the operator for temporarily locking said second mentioned bolt against movement.

1,114,825. EGG-CARRIER. LANSING VAN AUKEN, Watervliet, N. Y. Filed Sept. 24, 1913. Serial No. 791,540. (Cl. 217—28.)



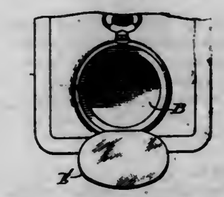
1. In an egg carrier, a filler having holes and lateral slits extending from the edges of said holes, flexible pockets mounted in said holes, closed at one end and open at the other and having lateral slits registering with the slits in the edges of the holes of the filler, thereby providing means for compensating for eggs of varying sizes, substantially as described.

2. In an egg carrier, a filler formed of a plate, holes in said plate having lateral slits extending from their edges, for the purpose of allowing said holes in the fillers to be enlarged beyond their normal circumference, flexible pockets separate from said filler and having flanges secured around said holes and lateral slits in the inner portions of said flanges, substantially as described.

3. In an egg carrier, a filler formed of a plate having holes, in substantially the same horizontal plane as the plate, lateral slits extending outward from the edges of said holes, flexible expansible pockets having flanges secured around said holes in the filler plate and lateral slits in the inner portions of said flanges of said pockets, substantially as described.

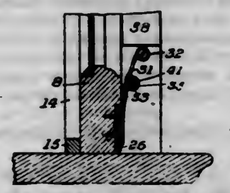
4. In an egg carrier, a filler having holes and lateral slits extending from the edges of the holes, and flexible pockets mounted in said holes and surrounded by the slitted edges thereof, substantially as described.

1,114,826. COIN-HOLDER. SCHUYLER VAN NESS, Framingham, Mass., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 3, 1914. Serial No. 810,134. (Cl. 229—69.)



As a new article of manufacture, a gift coin-holder comprising body portion having a single circular coin holding opening, a non-integral filler having substantially the form of an annulus and adapted to be inserted and removed from the said coin holding opening of said body without mutilation of said body or filler, the periphery of said filler following a salient element of the design whereby the continuity of the design is uninterrupted by the line of cleavage, a hinged closure having its upper face provided with a design and overlying said filler and opening, and a hinged outer cover overlying said closure and said body portion.

1,114,827. SASH-HOLDER. STEPHEN VIRAGH, Swissvale, Pa. Filed Sept. 27, 1911. Serial No. 651,537. (Cl. 16—19.)

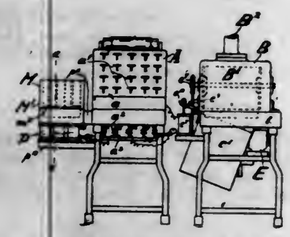


In a window comprising a frame having runways and a sash slidable therein, means for forcing the sash horizontally into contact with the frame to thereby produce an air tight joint around the sash, comprising a leaf spring having one end bent to form a loop, a securing member adapted to be passed through said loop and into the frame, an L-shaped keeper member, a securing member adapted to be passed through one ear of said keeper member and into the frame on one side of said spring and in such position that the free end of the spring normally projects into the path of movement of the sash, said second named securing member forming a fulcrum for the spring, and the other ear of said keeper member lying on the opposite side of said spring and arranged to retain it in operative position.

1,114,828. WAGE-PAYING MACHINE OR THE LIKE. ARTHUR VON BARTH, New York, N. Y. Filed Mar. 10, 1911. Serial No. 613,638. (Cl. 133—5.)

1. A machine of the kind described embodying therein a series of containers each adapted to receive a pile of bills,

and selectively operative means common to all said containers whereby the bills may be removed one at a time from any container and a conveying mechanism imparting movement to said means whereby each bill as removed from a container will be conveyed therefrom and delivered to the operator.



2. A machine of the kind described embodying therein a series of containers each adapted to receive a pile of bills, and selectively operative pneumatic means common to all said containers whereby the bills may be removed one at a time from any container, and a delivery mechanism acting in conjunction with said pneumatic means whereby each bill as removed from its container is delivered to the operator

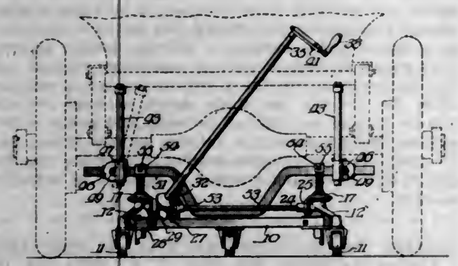
3. A machine of the kind described, embodying therein a series of containers, each adapted to receive a pile of bills, pneumatic means whereby one bill at a time may be removed from its container, selectively operative means common to all said containers whereby said means may be rendered operative as to any container, and a delivery mechanism operative in conjunction with said pneumatic means whereby each bill removed from its container is delivered to the operator.

4. A machine of the kind described embodying therein a series of independently movable containers each adapted to receive a pile of bills, means adapted to remove one bill at a time from any container, a delivery mechanism acting in conjunction with said means whereby each bill removed is delivered to the operator, and selectively operative means whereby any container may be moved into the operative relation to said first named means.

5. A machine of the kind described embodying therein a series of independently movable containers each adapted to receive a pile of bills, pneumatic means adapted to remove one bill at a time from any container, a delivery mechanism acting in conjunction with said means whereby each bill removed is delivered to the operator, and selectively operative means whereby any container may be moved into the operative relation to said first named means.

[Claims 6 to 16 not printed in the Gazette.]

1,114,829. JACK. IRA A. WEAVER, Springfield, Ill., assignor to The Weaver Mfg. Co., Springfield, Ill., a Corporation of Illinois. Filed Apr. 5, 1912. Serial No. 688,743. (Cl. 57—44.)



1. In a device of the class described, the combination of a triangular frame having swiveling caster supports at three points, jacks mounted at two of the corners of said triangular frame, the caster supports contiguous to said jacks being extended outwardly beyond said frame, and a single operating means for both said jacks, said operating means being located at a point close to one of said jacks, substantially as described.

2. In a device of the class described, the combination of a movable frame having a plurality of jacks mounted thereon, gearing whereby both said jacks may be operated simultaneously, said gearing being located at a point close to one of said jacks, and an operating shaft for said gearing, said shaft being angularly mounted and extending to a point substantially midway between the two jacks, substantially as described.

3. In a device of the class described, the combination of a movable frame having a plurality of jacks mounted thereon, gearing whereby both said jacks may be operated simultaneously, said gearing being located at a point close to one of said jacks, and an operating shaft for said gearing, said shaft being angularly mounted and movable in the arc of a circle about a pivot at the point of connection to the gearing, substantially as described.

4. In a device of the class described, the combination of a triangular frame, jacks mounted on said frame, means for operating said jacks from a single point, an operating shaft mounted at an angle and adapted to be swung about a pivot close to one of said jacks, whereby said operating shaft may be swung into line with one of the members of said frame, substantially as described.

5. In a device of the class described, the combination of a frame, a plurality of jacks mounted on said frame, means for actuating said jacks, said actuating means including a longitudinally movable stem, an operating crank and a plurality of gears, the parts being arranged whereby the speed of operation of said jacks may be changed relative to the speed of the actuating means by the shifting of said stem, substantially as described.

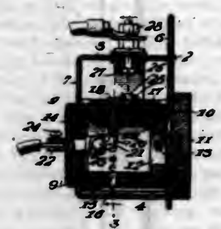
[Claims 6 and 7 not printed in the Gazette.]

1,114,830. EYEGLASSES. JOEL C. WELLS, Southbridge, Mass. Filed Mar. 20, 1912. Serial No. 685,002. (Cl. 88—50.)

In a mounting of the character described, the combination with a support, of an arm carried thereby and terminating in a perforated upwardly projecting tang, a guard member having an arm extended laterally therefrom, said arm also terminating in a perforated tang, and an angular sleeve closed except at the top and bottom, said sleeve being fitted over the perforated tangs of the guard and of the arm, and holding said parts in close engagement one with the other, said sleeve having a pair of alined perforations formed through the sides thereof, said perforations being adapted to register with the perforations in the two tangs, one of the perforations of the sleeve and the perforations of the two tangs being plain, and the other perforation of the sleeve being slightly smaller and tapped, and a screw fastening device passing loosely through the aforesaid three plain apertures and being engaged in the fourth tapped aperture for securing the parts together, substantially as described.

1,114,831. ELECTRIC SWITCH. CLAYTON G. WHITE, Detroit, Mich. Filed Feb. 2, 1914. Serial No. 816,018. (Cl. 175—282.)

1. An electric switch comprising a casing, a plurality of hollow cylindrical drums revolubly mounted therein, a contact point on the periphery of each of said drums, a rigidly held binding post projecting into the bore of each of said drums, a swiveled connection between said binding posts and said contact points, contact arms bearing yieldingly upon the peripheries of said drums and external means for rotating said drums and for determining the position of said contact points in respect to said contact arms.



2. An electric switch comprising a casing, a plurality of hollow cylindrical drums revolubly mounted therein, each of said drums having a transverse groove in its periphery, a contact plate in each of said grooves, a rigidly held binding post projecting into the bore of each drum at the center thereof, an arm projecting radially inward from each contact plate and having a revoluble connection with the binding post within the drum in which it projects, contact arms frictionally engaged with the peripheries of said drums, and external means for determining the positioning of said contact plates in respect to said contact arms.

3. An electric switch comprising a casing, a plurality of hollow cylindrical drums revolubly mounted therein and provided with transverse grooves in their peripheries and with openings extending from said grooves into their bores, a contact plate removably seated in one of the grooves of each of said drums, rigidly held binding posts projecting into the bores of said drums and each carrying a bearing journal revolubly connected to its inner end, screws passing through said contact plates and said openings and into said bearing journals, contact arms supported by said casing and bearing yieldingly upon the peripheries of said drums and external means for rotating said drums and for determining the positioning of said contact plates in respect to said contact arms.

4. An electric switch comprising a casing, a plurality of hollow cylindrical drums revolubly mounted therein, rigidly held binding posts projecting into the bores of said drums and each carrying a bearing journal revolubly connected to its inner end, contact screws passing through the walls of said drums and threaded into said bearing journals, contact arms carried by said casing and in frictional contact with the peripheries of said drums and external means for rotating said drums and for determining the positioning of said contact screws in respect to said contact arms.

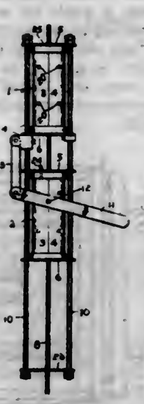
5. An electrical switch comprising a casing, a hollow cylindrical drum revolubly mounted therein, a contact point on the periphery of said drum, a rigidly held binding post projecting into the bore of said drum, a swiveled connection between said binding post and said contact point, a contact arm bearing yieldingly upon the periphery of said drum and external means for determining the position of said contact point in respect to said contact arm.

[Claim 6 not printed in the Gazette.]

1,114,832. HOISTING-MACHINE. EGBERT WHITNEY, Omaha, Nebr. Filed Nov. 22, 1913. Serial No. 802,418. (Cl. 57—15.)

1. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip alternatively a suspending cable, means for raising and lowering the clutches independently on the cable, and a suspended frame, upheld by the clutches alternatively and provided with means for holding both clutches in vertical alinement.

2. A hoisting machine of the specified class, comprising two automatic clutches adapted to engage a suspending cable, means for holding the clutches constantly in vertical alinement and for carrying a load suspended therefrom, means for moving the clutches toward and from each other in such alinement, and means for releasing the clutches severally.



3. A hoisting machine of the specified class comprising two automatic clutches, means for holding the clutches in vertical alinement and for carrying a suspended load, means for moving the clutches toward and from each other in such alinement, and means for releasing the clutches severally; each clutch having two co-acting, spring-mounted, vertical wedge jaws between anti-friction rollers, and being adapted to grip automatically a suspending cable and to be released from that cable.

4. A hoisting machine of the specified class, comprising two clutches adapted to grip a cable automatically, two clutch boxes holding the clutches respectively, two vertical rods having a rigid connection with one of the clutch boxes and a sliding engagement with the other, and holding the clutch boxes and contained clutches constantly in vertical alinement at a changeable distance apart, a cross connection between the rods for the support of the load, means for sliding one of the clutch boxes toward and from the other on the vertical rods, and means for releasing the clutches severally.

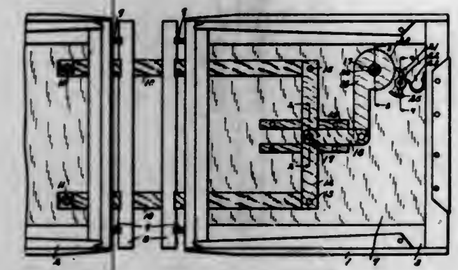
5. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip a suspending cable, means for holding the clutches constantly in vertical alinement and for carrying the load suspended therefrom, means for releasing the clutches severally, and a link and lever connection between the clutches for moving them toward and from each other.

[Claim 6 not printed in the Gazette.]

1,114,833. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Original application filed Sept. 22, 1913, Serial No. 791,180. Divided and this application filed Jan. 23, 1914. Serial No. 813,866. (Cl. 129—41.)

1. The combination with the covers, one of said covers comprising a frame with outer and inner walls providing a chamber therein, binding strips extending between said covers, an adjustable member to which said binding strips are connected, arranged in said cover chamber, the other ends of said binding strips being connected to the other cover, guide pieces secured to the inner wall of the chambered cover, a guide roller on said adjustable member coacting therewith, a pivoted lever journaled on the inner and outer walls of said cover, said lever being provided with a curved ratchet, a link connecting said lever to said adjustable member, a pawl pivotally mounted on the inner wall of the chamber to coact with said curved ratchet on said lever, and a spring adapted to hold said pawl yieldingly in engagement with said rack or in its disengaged position, said pawl being provided with a finger piece projecting through a slot in the inner wall.

2. The combination with the covers, one of said covers having a chamber therein, binding strips extending between said covers, an adjustable member to which said binding strips are connected, arranged in said cover chamber, the other ends of said binding strips being connected to the other cover, a guide for said adjustable member, a pivoted lever having a ratchet thereon, a link connecting said lever to said ratchet, the pivot of said lever being adapted to receive a key, a pawl coacting with said ratchet on said lever, and means for holding said pawl yieldingly in engagement with said ratchet or out of engagement therewith.



3. The combination with the covers, one of said covers having a chamber therein, binding strips extending between said covers, an adjustable member to which said binding strips are connected, arranged in said cover chamber, the other ends of said binding strips being connected to the other cover, a pivoted lever operatively connected to said adjustable member and having a ratchet thereon, a pawl coacting with said ratchet on said lever, means for holding said pawl yieldingly in engagement with said ratchet or out of engagement therewith.

4. The combination with the covers, one of said covers having a chamber therein, binding strips extending between said covers, an adjustable member to which said binding strips are connected, arranged in said cover chamber, the other ends of said binding strips being connected to the other cover, a pivoted lever operatively connected to said adjustable member and having a ratchet thereon, a pawl coacting with said ratchet on said lever, said pawl being disengageable to release said lever.

5. The combination with the covers, one of said covers comprising a frame with outer and inner walls providing a chamber therein, binding strips extending between said covers, an adjustable member to which said binding strips are connected, arranged in said cover chamber, the other ends of said binding strips being connected to the other cover, a pivoted actuating lever operatively connected to said adjustable member, a pawl pivotally mounted on the inner wall of the chamber to coact with said curved ratchet on said lever, and a spring adapted to hold said pawl yieldingly in engagement with said rack or in its disengaged position, said pawl being provided with a finger piece projecting through a slot in the inner wall.

[Claims 6 to 15 not printed in the Gazette.]

1,114,834. STREET-MARKER. THOMAS WIGHT, Kansas City, Mo. Filed Apr. 18, 1913. Serial No. 761,987. (Cl. 40—133.)

1. In a street marker, a box comprising a body member having resilient sides provided with outturned edge flanges, a stencil plate having edge sockets adapted for receiving the box flanges, and means on said box for carrying a lamp.

2. In a street marker, a box comprising a U-shaped body having resilient sides provided with outturned edge flanges, a stencil plate having back turned edges forming sockets for receiving the box flanges, a translucent plate removably mounted within the box and overlying the inner face of said stencil plate, and shoes on said box frictionally engaging the translucent plate, for the purpose set forth.

3. The combination with a post having an opening therein, of a box removably located within the post back of the opening, a character member removably mounted in the front of said box and covering the opening, and a lamp contained within the box.

4. The combination with a post having a recess therein, of a box having a body portion adapted for projection into the recesses and comprising a front plate having characters cut thereon, latch for removably anchoring said box in the post.

5. The combination with a post having a recess therein and having a slot at the upper edge of said recess, of a street marker comprising a box adapted for projection into the recess, and a plate having characters cut therein and having a lip on its upper edge for projection into said slot, and a latch on the lower edge of said plate adapted for locking engagement with the lower edge of the recessed portion of the post.

[Claim 6 not printed in the Gazette.]

1,114,835. SWIVEL. CHARLES E. WILCOX, Bakersfield, and WILLIAM G. KNAPP, Alhambra, Cal., assignors of one-third to Oil Well Supply Company, Pittsburgh, Pa. Filed Feb. 25, 1913. Serial No. 750,590. (Cl. 255—25.)

1. A swivel of the character stated, comprising a swivel stem, a carrier within which the stem is rotatably mounted; there being a bearing device between the stem and the carrier, the carrier being provided with a chamber within which the bearing device is installed, a lateral water inlet through the carrier above the stem, and a packing between the stem and the carrier and beneath the water inlet and above said chamber.

2. A swivel of the character stated, comprising a swivel stem, a carrier within which the stem is rotatably mounted, there being a bearing device between the stem and the carrier, the carrier being provided with a chamber within which the bearing device is installed, a lateral water inlet through the carrier above the stem, and a packing between the stem and the carrier and beneath the water inlet and above said chamber; there being an opening in the carrier leading to the packing.

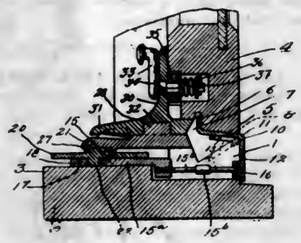
3. A swivel of the character stated, comprising a swivel stem, a carrier within which the stem is rotatably mounted; there being a bearing device between the stem and the carrier; the carrier being provided with a chamber within which the bearing device is installed, a lateral water inlet through the carrier above the stem, and a packing between the stem and the carrier and beneath the water inlet and above said chamber; there being a downwardly inclined opening in the carrier leading from the packing.

4. A swivel of the character stated, comprising a swivel stem, a carrier within which the stem is rotatably mounted; there being a bearing device between the stem and the carrier, the carrier being provided with a chamber within which the bearing device is installed, a water inlet through the carrier above the stem, and a packing between the stem and the carrier and beneath the water inlet and above said chamber; said packing comprising a packing member and a spring acting upon the same, and means for varying the efficiency of the spring exteriorly of the carrier.

5. A swivel of the character stated, comprising a swivel stem, a carrier within which the stem is rotatably mounted; there being a bearing device between the stem and the carrier, the carrier being provided with a chamber within which the bearing device is installed, a water inlet through the carrier above the stem, and a packing between the stem and the carrier and beneath the water inlet and above said chamber; said packing comprising two spaced packing members, and a spring interposed between the same, and means for varying the efficiency of the spring.

[Claims 6 to 13 not printed in the Gazette.]

1,114,836. SWINGING-SASH WINDOW. HARRY L. WILLIAMS, Lakewood, Ohio, assignor to The Williams Pivot Sash Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 6, 1912. Serial No. 735,291. (Cl. 20—53.)

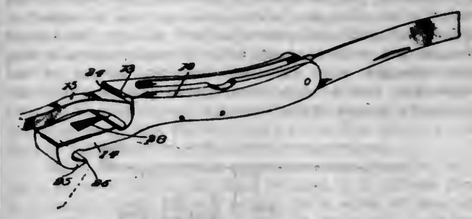


A window including a vertically-pivoted swinging-sash, a sill-stool with a sill-bar on the outer side thereof, a Z-shaped closure bar having one angle pivotally secured on the outer edge of the sill-bar and the adjacent flange swinging in open and closed relation on the outer side thereof, and operating means for rocking the closure bar upon its pivoted angle.

1,114,837. NAIL-EXTRACTOR. FRANK G. WILSON, Crawfordsville, Ark., assignor to Charles C. Bird, Marion, Ark. Filed June 20, 1912. Serial No. 704,894. (Cl. 145—44.)

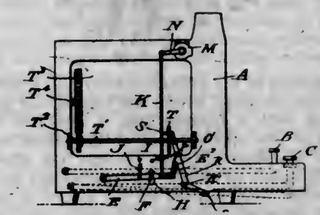
1. A nail extractor including a body terminating in a head having a projecting finger, the free end of which is curved outwardly and rearwardly to form a claw, the body of said finger being provided with a triangular slot forming a supplemental claw oppositely disposed to the first.

2. A nail extractor including a body terminating in a head having spaced fingers, one of which is longitudinally bowed to serve as a fulcrum during the use of the other and the other of which is shorter than the first and has its free terminal bent outwardly and rearwardly to form a claw and its intermediate portion slotted to form a supplemental claw, the back face of said claw forming finger being grooved transversely adjacent the active end of the



supplemental claw forming slot to form a nail receiving seat.

1,114,838. METER FOR TYPE-WRITERS. WARREN B. WINTERS, Stephenville, Tex. Filed Sept. 15, 1913. Serial No. 789,860. (Cl. 235—102.)



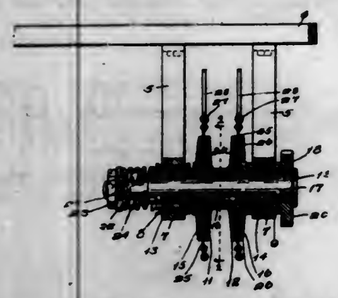
1. A word meter for typewriters comprising, in combination with the frame of a typewriter having key spacing levers, a meter and spring-pressed lever mounted upon the frame of the typewriter and having pivotal connection with the meter, said lever having its free end angled and upturned, a spring-actuated angle lever pivotally mounted upon the frame of the machine and having an angled arm which extends underneath the spacing lever and its other arm provided with a hook, a spring connected at one end to the frame and the other end to said hook carrying arm, the hook coöperating with the upwardly turned end of said meter operating lever, said angled lever having a portion extending above said hook and angled at its end, a star wheel engaged by said angled end, and a gear wheel and connections between the same and the star wheel, as set forth.

2. A meter for typewriters comprising, in combination with the frame of a typewriter having series of key levers and spacing member mounted thereon, a meter, a spring-pressed lever pivotally mounted on the machine and having pivotal rod connections with the meter, the free end of said lever being upwardly turned and having a flat top and a lateral projection which is inclined upon its edge, an angle lever pivotally mounted upon the frame and having an angle lever extending underneath the spacing member, and a hook projecting from one edge which is adapted to engage the flat part of the upturned portion of said spring-actuated lever, while the inclined edge with the lateral projection engages the edge of the hook carrying arm of said lever, the upper end of the arm of the lever extending laterally, a star wheel adapted to be engaged by said angled end of the lever, gear mechanism and connections between the same and the star wheel, as set forth.

1,114,839. ROTATABLE HOE OR CUTTER. PAUL B. WOHLRAB, Racine, Wis. Filed Jan. 20, 1914. Serial No. 813,168. (Cl. 97—62.)

1. In apparatus of the character described, a relatively stationary bearing, a sleeve rotatably mounted therein and held thereby against perceptible longitudinal movement, an outwardly extending flange carried by the inner end of the sleeve, driving means for the sleeve carried by the outer end thereof, a stub-shaft extending through the sleeve and having an enlarged head engaging the driving means and provided at its opposite end with a screw-

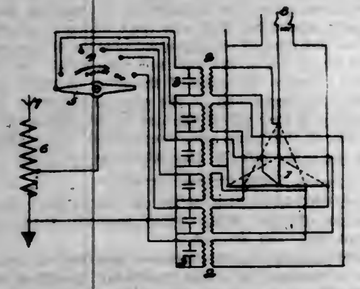
threaded portion, a second sleeve mounted upon the stub-shaft and provided with an outwardly extending flange arranged in coöperative relation with the first named flange, means to spline said sleeves upon the stub-shaft, a spring mounted upon the stub-shaft to urge the sleeves toward each other, an adjusting nut engaging the spring and arranged upon the screw-threaded portion of the stub-shaft, and a blade carrying element arranged between the flanges of the sleeves.



2. In apparatus of the character described, a bearing, a sleeve rotatably mounted within the bearing and provided near one end with a friction disk, a rotatable element connected with the opposite end of the sleeve to drive the same, a stub-shaft passing through the sleeve and provided with means to prevent its longitudinal movement in one direction with relation to the sleeve, a co-acting friction disk arranged upon the stub-shaft near the first named friction disk, a spring to urge the second named friction disk toward the first named friction disk, and a blade-carrying disk arranged between the co-acting friction disks, rotatably mounted upon the stub-shaft and driven by the friction disks.

3. In apparatus of the character described, a bearing, a sleeve rotatably mounted within the bearing and held thereby against perceptible longitudinal movement and provided near one end with a frictional disk, a stub-shaft passing through the sleeve and provided with an enlarged head to engage with one end of the sleeve, a second sleeve mounted upon the stub-shaft and provided with a friction disk to coöperate with the first named friction disk, means to spline the sleeves to the stub-shaft, a coil spring surrounding the stub-shaft and serving to urge one friction disk toward the other, and a blade-carrying disk rotatably mounted upon the stub-shaft and arranged between the friction disks to be driven thereby.

1,114,840. WIRELESS TELEGRAPHY. WILLIAM C. WOODLAND, Warren, Ohio, assignor to Packard Electric Company, Warren, Ohio, a Corporation of Ohio. Filed Oct. 24, 1912. Serial No. 727,598. (Cl. 250—37.)



1. In a sender for wireless telegraphy, a multi-phase alternating current producer, and a plurality of energy-consuming devices energized by said producer in a multi-phase relation to each other, and comprising each a transformer, a condenser, and a sparking terminal, in combination with a helix common to all said devices, and a rotary element coöperating with said sparking terminals for effecting the successive discharge of said condensers through the helix.

2. In a sender for wireless telegraphy, a multi-phase alternating current producer, and a plurality of energy-consuming devices energized by said producer in a multi-phase relation to each other, and comprising each a transformer, a condenser, and a sparking terminal, in combination with a helix common to all said devices, and a rotary element coöperating with said sparking terminals to effect the successive discharge of each condenser through the helix at the instant of its maximum potential.

1,114,841. COMPOSITION FOR AND PROCESS OF REVIVIFYING AND PRESERVING RUBBER. ALICE A. WRIGHT, Oakland, Cal., assignor to The Resilia Corporation, San Francisco, Cal., a Corporation of California. Filed Apr. 15, 1914. Serial No. 832,092. (Cl. 134—1.)

1. The process of revivifying rubber surfaces which comprises subjecting said surfaces to the action of an alcoholic solution of camphor and a powdered abradant.

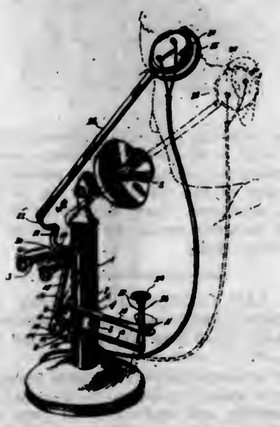
2. The process of revivifying rubber surfaces which comprises subjecting said surfaces to the action of a volatile solution of a camphor-like material admixed with a pulverulent mineral material.

3. A compound adapted to restore the resiliency and frictional adherence of rubber surfaces when applied thereto, comprising alcohol containing in solution camphor admixed with a powdered abradant.

4. A compound for application to rubber surfaces to restore its resiliency and pliant character and for producing a frictional contact surface comprising substantially twelve ounces of camphor gum dissolved in a gallon of alcohol to which is added four ounces of pulverized pumice.

5. A compound for application to rubber surfaces to restore its resiliency and pliant character and for producing a frictional contact surface comprising a solution of a camphor dissolved in a volatile solvent admixed with a pulverulent mineral substance.

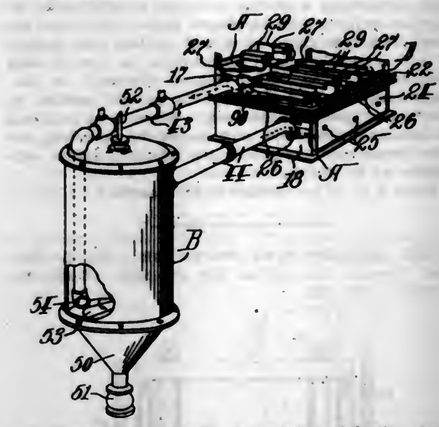
1,114,842. ATTACHMENT FOR TELEPHONE-STANDS. LANE E. WRIGHT, Fairgrange, Ill. Filed Dec. 19, 1913. Serial No. 807,736. (Cl. 179—149.)



1. In combination with a telephone stand of an attachment comprising a clamp for engaging the stand, an angle lever pivotally supported by the clamp, one arm of said lever terminating at its upper end in a hook for normally engaging the receiver hook to hold the same depressed, said hook terminating in an arm, a receiver pivotally supported by the upper end of the last named arm, and means for rocking the angle lever to move the hook from engagement with the receiver hook, thereby shifting the receiver, means to lock the hook in said position and means to automatically return said hook when said last mentioned means is released.

2. In combination with a telephone stand, of an attachment comprising clamping jaws adapted to engage the stand, channel members carried by the clamping jaws, a plate clampingly engaged between the channel members, a horizontally disposed arm carried by the plate and having a slot formed in one end thereof, an angle lever having its horizontal arm pivotally supported by the plate and its vertical arm terminating in a hook for engaging the receiver hook to hold the same depressed, said hook terminating in an arm, a receiver pivotally supported by the upper end of said arm, a bar operable in the slot and having its lower end pivotally connected to one end of said horizontal lever arm, a shoulder carried by the bar and coöperating with the slot to hold the hook from engagement with the receiver hook when said bar is depressed, and means connecting the plate and vertical arm of the angle lever to swing the hook into engagement with the receiver hook when the bar is released.

1,114,843. AMMONIA-STILL. WILLIAM H. WRIGHT, Duluth, Minn. Filed Aug. 29, 1910. Serial No. 579,405. (Cl. 203—1.)



1. In an ammonia still, a plurality of heater sections substantially rectangular in shape, a series of superimposed weirs in the upper of said sections, a series of connected canals in the lower of said sections adapted to receive liquor from said series of weirs, elongated longitudinal vapor risers separating said canals, vapor riser seal bonnets on said vapor risers, having saddle shaped end seals adapting said bonnets to be slid from said risers by a longitudinal movement, removable overflow ducts in the floors of said canal sections adapted to pass liquor at a certain level from one series of canals to another on a lower level, and hand holes in the walls of said sections, for the purposes set forth.

2. An ammonia distilling apparatus, comprising, in combination, a series of superimposed segments having weirs adapted to heat ammonia liquor by passing the liquor through heated gases rising therethrough, a lower series of segments having connected liquor canals receiving liquor from said weirs, vapor risers in the walls of said canals, seal bonnets on said vapor risers adapted to pass heated vapors through the liquor in said canals to intensely heat the same, a lime box adapted to treat ammonia liquor with lime, connected to a canal intermediate in said series of canals, and return the liquor to a canal lower in the series, and means for supplying steam to the lowest of said series of segments, whereby said ammonia liquor may be gradually brought to an intense heat to free it from its volatile ammonia, treated with lime and subjected to a further heating.

3. In an ammonia still, a rectangular heater section having a reversed horizontal canal adapted to a uniform flow of ammonia liquor therein formed by a series of internal walls alternately projecting inward from two opposite outside walls of said section, and lying parallel with the adjacent outside walls, said canal being of substantially uniform cross section throughout its entire length and said internal walls being passaged up and down and forming vapor risers above the normal level of liquid maintained in said canal, seal bonnets placed over said risers adapted to pass vapors through the liquid in said canal in the successive laps thereof and an overflow duct in the floor of said section for the liquid in said canal.

4. In an ammonia still, a rectangular heater section having a reversed horizontal canal adapted to a uniform flow of ammonia liquor therein formed by a series of internal walls alternately projecting inward from two opposite outside walls of said section and lying parallel with the adjacent outside walls, said canal being of substantially uniform cross section throughout its entire length and said internal walls being passaged up and down and forming vapor risers above the normal head of liquid maintained in said canal, seal bonnets over said risers adapted to pass vapor through the liquid in said canal in successive laps thereof, an overflow duct in the floor of said section for the liquid in said canal, a preliminary heater part associated with said heater section having weirs adapted to pass streamlets of liquid in contact with heated gases and having an overflow connection leading into said canal, a lime chamber with which said overflow duct in said heater section connects, and a dry lime feed in said lime chamber.

5. In an ammonia still column, a plurality of heater sections substantially rectangular in shape, a series of parallel connected canals in each of said sections formed by dams arising alternately from opposite ends of said section and spaced apart at substantially equal intervals laterally, vapor risers in said dams, and saddle shaped seal bonnets upon said vapor risers adapted to slide longitudinally from said risers, the walls of said sections having hand openings adapted to the removal of said seal bonnets.

[Claims 6 to 15 not printed in the Gazette.]

1,114,844. AZO DYES. ARTHUR ZART, Opladen, and HUGO SCHWEITZER, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 3, 1913. Serial No. 804,407. (Cl. 8—1.)

1. The new azo dyestuffs which are after being dried and pulverized in the shape of their alkaline salts yellowish powders soluble in water, yielding upon reduction with stannous chlorid and hydrochloric acid an aromatic diaminosulfonic acid substituted by an aminoaryl-acidyl radical and an aminopyrazolone compound substituted by an aromatic thiazole radical; dyeing cotton in yellowish shades which can be converted by diazotation and by development with beta-naphthol into reddish-yellow shades fast to washing, substantially as described.

2. The new azo dyestuffs which are after being dried and pulverized in the shape of their alkaline salts yellowish powders soluble in water, yielding upon reduction with stannous chlorid and hydrochloric acid a phenylenediamin sulfonic acid substituted by an aminoarylacidyl radical and an aminopyrazolone compound substituted by an aromatic thiazole radical; dyeing cotton in yellowish shades which can be converted by diazotation and by development with beta-naphthol into reddish-yellow shades fast to washing, substantially as described.

3. The new azo dyestuffs which are after being dried and pulverized in the shape of their alkaline salts yellowish powders soluble in water, yielding upon reduction with stannous chlorid and hydrochloric acid a para-phenylenediamin sulfonic acid substituted by an aminoarylacidyl radical and an aminopyrazolone compound substituted by an aromatic thiazole radical; dyeing cotton in yellowish shades which can be converted by diazotation and by development with beta-naphthol into reddish-yellow shades fast to washing, substantially as described.

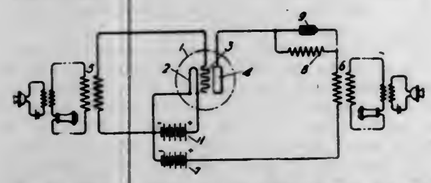
4. The new azo dyestuffs which are after being dried and pulverized in the shape of their alkaline salts yellowish powders soluble in water, yielding upon reduction with

stannous chlorid and hydrochloric acid an aromatic diamino sulfonic acid substituted by an aminobenzoyl radical and an aminopyrazolone compound substituted by an aromatic thiazole radical; dyeing cotton in yellowish shades which can be converted by diazotation and by development with beta-naphthol into reddish-yellow shades fast to washing, substantially as described.

5. The new azo dyestuffs which are after being dried and pulverized in the shape of their alkaline salts yellowish powders soluble in water, yielding upon reduction with stannous chlorid and hydrochloric acid a phenylenediamin sulfonic acid substituted by an aminobenzoyl radical and an aminopyrazolone compound substituted by an aromatic thiazole radical; dyeing cotton in yellowish shades which can be converted by diazotation and by development with beta-naphthol into reddish-yellow shades fast to washing, substantially as described.

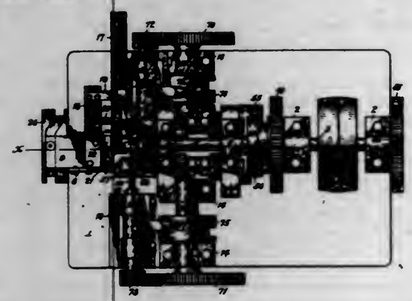
[Claims 6 to 12 not printed in the Gazette.]

1,114,845. ELECTRIC RELAY. HAROLD DE FOREST ARNOLD, East Orange, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 16, 1914. Serial No. 839,056. (Cl. 179—171.)



In an electric relay, the combination with an audion having an input and an output circuit, said output circuit including a source of direct current, of a balancing resistance in the output circuit in series with said source of direct current and a condenser in shunt of said resistance, said balancing resistance being of such high value that the increase of current which normally takes place when a blue haze exists in the bulb of the audion, results in such an increase in fall of potential across said resistance as to prevent the maintenance of said blue haze.

1,114,846. MACHINE FOR FORMING LOOPS ON COILED SPRINGS. CHARLES R. BARRETT and EMIL A. SAMUEL, Chicago, Ill.; said Samuel assignor to said Barrett. Filed Feb. 13, 1914. Serial No. 818,598. (Cl. 140—103.)



1. A mechanism for forming loops on sections of coiled springs, comprising a feeding chute, a longitudinally reciprocating carrier, an anvil disposed to the rear of said carrier and provided with a lateral abutment, a rotary looper head arranged above said anvil, and means for operating the carrier and looper head in unison, substantially as set forth.

2. A mechanism for forming loops on sections of coiled springs, comprising a feeding chute, a longitudinally reciprocating carrier, a spring finger and a stop finger associated with said chute in spaced relation and moving with said carrier, an anvil disposed to the rear of said carrier and provided with a lateral abutment, a looper head arranged above said anvil, and means for operating the carrier and looper head in unison, substantially as set forth.

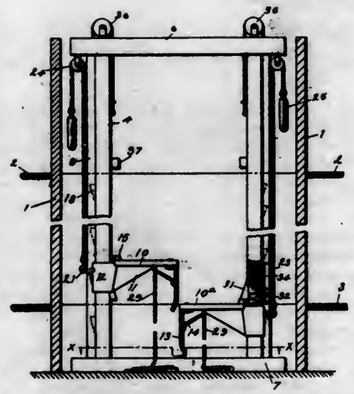
3. A mechanism for forming loops on sections of coiled springs, comprising a feeding chute, a longitudinally reciprocating carrier, an anvil disposed to the rear of said carrier and provided with a lateral abutment, a positioning means adapted to impart partial rotation to the section of spring operated on, a looper head arranged above the anvil aforesaid, and means for operating the carrier, looper head and positioning means in unison, substantially as set forth.

4. A mechanism for forming loops on sections of coiled springs, comprising a feeding chute, a longitudinally reciprocating carrier, an anvil disposed to the rear of said carrier and provided with a lateral abutment, a laterally disposed positioning means adapted for operative engagement with an end of the section of spring operated on and adapted to impart partial rotation thereto, a looper head arranged above the anvil aforesaid, and means for operating the carrier, looper head and positioning means in unison, substantially as set forth.

5. A mechanism for forming loops on sections of coiled springs, comprising a feeding chute, a longitudinally reciprocating carrier, a spring finger and a stop finger associated with said chute in spaced relation and moving with said carrier, an anvil disposed to the rear of said carrier and provided with a lateral abutment, a positioning means adapted to impart a partial rotation to the section of spring operated on, a looper head arranged above the anvil aforesaid, and means for operating the carrier, looper head and positioning means in unison, substantially as set forth.

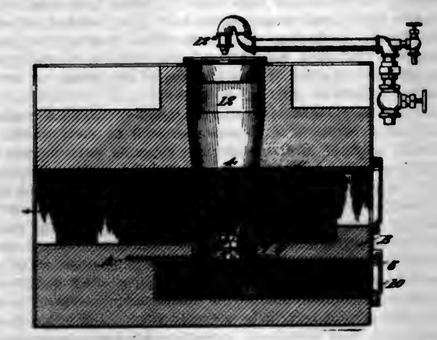
[Claims 6 to 40 not printed in the Gazette.]

1,114,847. STEP-BY-STEP ELEVATOR. ELI B. BARRETT, Trenton, Tex. Filed Feb. 20, 1914. Serial No. 819,950. (Cl. 187—1.)



In a device of the character described, the combination with vertically elongated guide members, forming two opposite groups, each including a central and two outside members, of a series of teeth formed upon each outside guide member and extended from the lower to the upper portion thereof, a step correlated with each group of guide members, said steps being adapted to travel vertically and adjacently, a pair of brackets secured to each step and slidably engaging the correlated outside guide members, a pair of brackets carried by each step serving to support the same in its various positions, and themselves supported in said positions by the teeth of the correlated outside guide members, and a weight having connection with each step counter-balancing the same.

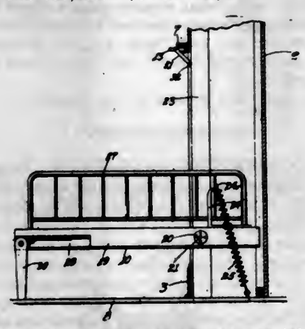
1,114,848. ADJUSTABLE SUPPORT FOR BURNER-PLATES. JULIUS H. BECKER, San Francisco, Cal., assignor to American Heat & Power Co., San Francisco, Cal., a Corporation of California. Filed Feb. 24, 1913. Serial No. 750,211. (Cl. 158—4.)



1. An adjustable support for burner plates comprising in combination, a base plate, a hollow socket member having a central opening, formed on said plate, an adjustable support mounted on the socket member, and a burner plate carried by said support.

2. An adjustable support for burner plates comprising in combination, a base plate, a hollow socket member having a central opening formed on said plate, a second socket member having a series of radially extending arms upon which is secured an open bracket plate and mounted on said first-named socket member, and a burner plate carried by said open bracket plate.

1,114,849. FOLDING BED. ERNEST L. BLACKMAN and ROBERT J. MILLER, Oakland, Cal. Filed Mar. 20, 1913. Serial No. 755,687. (Cl. 5—18.)

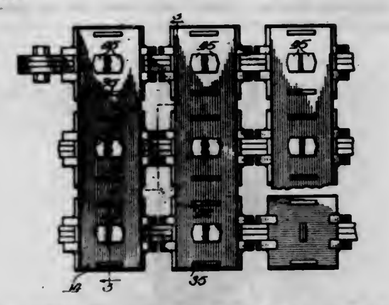


1. The combination of a bed frame, pivotal supports on the bed frame, an arm attached to said frame and extending at an angle thereto, a spring attached to said arm adapted to partially counterbalance the weight of said frame, a head rest and also a foot rest pivotally connected to said frame, and legs loosely pivoted to said frame near two corners thereof.

2. The combination of a bed frame, pivotal supports for said frame, a projecting arm rigid with said frame extending outwardly from the plane thereof, the outer end of said arm being bent substantially at right angles and a spring attached to the outer end of said arm at one end and to an exterior support at the other end whereby the weight of said frame is partially counterbalanced.

1,114,850. METALLIC POWER-BELT. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to James E. Cagney, Jr., Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,190. (Cl. 74—65.)

1. A power belt comprising a plurality of elements forming parallel side bars, a plurality of elements forming parallel links, said links being pivotally secured to said side bars, frames connected to parallelly arranged elements, and a plurality of members disposed transversely of the belt and each secured to a plurality of the said frames.



2. A power belt comprising a plurality of side bars arranged in pairs, links alternating with said pairs and pivotally secured thereto, frames connected to said pairs of side bars, and flat members disposed transversely of the belt and secured to a plurality of the frames embracing the side bars.

3. A power belt comprising side bars arranged in pairs, links alternating with and pivotally secured to said side bars, frames surrounding a plurality of pairs of side bars, a flat member disposed transversely of the belt and secured to a plurality of said frames, and means disposed between the side bars and through the said frames and flat member for securing the parts in position.

4. A power belt comprising side bars arranged in pairs, links alternating with and pivotally connected to said pairs of side bars, a frame surrounding a pair of side bars comprising a spacing member resting on said side bars, a V-shaped member disposed beneath the said side bars and having the ends thereof disposed through the spacing member, and means disposed through the said spacing member and the bottom of the V-shaped member for securing the parts in position.

5. A power belt comprising side bars arranged in pairs, links alternating with said pairs of side bars and pivotally secured thereto, a frame surrounding a pair of side bars comprising a top spacing member, a V-shaped member having its ends disposed through and extending above said spacing member, and a flat top member disposed transversely of the belt provided with recesses adapted to receive and retain the upwardly extending ends of the V-shaped members forming a plurality of frames.

[Claim 6 not printed in the Gazette.]

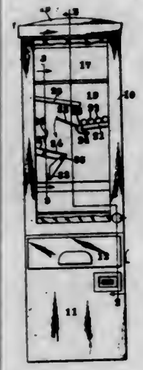
1,114,851. AUTOMATIC FARE-REGISTER. ADOLPHUS D. BRANHAM, St. Louis, Mo., assignor to Automatic Register Company, Dover, Del., a Corporation of Delaware. Filed June 14, 1913. Serial No. 773,684. (Cl. 235—32.)

1. In a fare register, the combination with a registering mechanism, of a movable member in the path of the coin and controlling said registering mechanism, an upwardly inclined chute, a pivoted member forming a downwardly extending continuation of said chute, said member having a tail-piece forming a coin detent.

2. In a fare register, the combination with a registering mechanism, of a movable member in the path of the coin and controlling the registering mechanism, a downwardly inclined coin chute, a pivoted member forming an upwardly extending continuation of said chute, said member having a tail-piece forming a coin detent, said member being weighted to normally hold said tail-piece out of operative position.

3. In a fare register, the combination with registering mechanism, of a contact device controlling said registering mechanism, a second contact device also controlling said registering mechanism, and means for preventing coins of a predetermined thickness actuating said second contact device.

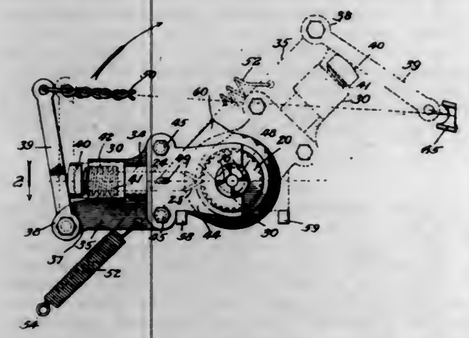
4. In a fare register, the combination with a registering mechanism, of a movable member in the path of the coin and controlling the registering mechanism, a second movable member also controlling the registering mechanism, and means for preventing coins of a predetermined thickness from coming in contact with said second movable member.



5. In a fare register, the combination with an electrically operated registering mechanism, of a movable member in the path of the coin, a second movable member also located in the path of the coin, means for preventing coins of a predetermined thickness from making contact with said second movable member, a switch in circuit with said registering mechanism and controlled by said first named movabe member, and a second switch also in circuit with said registering mechanism and controlled by said second movable member.

[Claims 6 and 7 not printed in the Gazette.]

1,114,852. ENGINE-STARTER. CHARLES E. BRIDGES, Chicago, Ill. Filed Nov. 16, 1912. Serial No. 731,689. (Cl. 123—185.)



1. In a starting device, the combination with an engine shaft, of a wheel fixed thereto, a movable member and a relatively movable part adapted to engage such wheel and apply a rotative effort thereto in an operative direction, and to slip upon such wheel with an excess of resistance of such wheel against rotation in such direction, a chain arranged to impart movement to such movable member, and means operating through the tension of such chain to bring such relatively movable part into engagement with such wheel, such means including an intermediate member between the chain and such movable member adapted to multiply the pressure exerted by the tension of the chain on such relatively movable part.

2. In a starting device, the combination with an engine shaft, of a notched wheel fixed thereto, a movable member and a relatively movable part adapted to engage the notches of such wheel and apply pressure thereto in a direction inclined to the planes of their faces, and to slip past such notches with an excess pressure between such faces and such part, a chain arranged to impart movement to such movable member, and means operating through the tension of such chain to bring such relatively movable part into engagement with the notched wheel, such means including an intermediate member between the chain and such movable member adapted to multiply the pressure exerted by the tension of the chain on such relatively movable part.

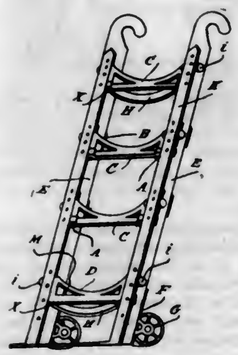
3. In a starting device, the combination with an engine shaft, of a wheel fixed thereto, a notch in such wheel, a rotative member and a relatively movable part having a surface adapted to engage the surface of such notch and apply pressure thereto, one of such engaging surfaces being inclined with respect to the radius of such wheel, whereby such engaging surfaces are adapted to slip upon each other with an excess pressure between them, a second relatively movable part carried by such rotative member, and a chain attached to such second relatively movable part and arranged to rotate such rotative member, such second relatively movable part being adapted to bring such first relatively movable part into engagement with the notched wheel.

4. In a starting device, the combination with an engine shaft, of a wheel on such shaft having teeth with inclined faces, a rotative member and a relatively movable part adapted to engage with the inclined faces of such teeth, a chain arranged to rotate such rotative member, and means operating through the tension of such chain to bring such relatively movable part into engagement with the inclined faces of such teeth, such means including an intermediate member between the chain and such rotative member adapted to multiply the pressure exerted by the tension of the chain on such relatively movable part.

5. The combination with an engine shaft of a notched wheel fixed thereto, a radial member mounted on such shaft, a sliding member having a wedge-shaped end adapted to yieldingly engage with such notched wheel, a movable part carried by such radial member, and a chain attached to such movable part and arranged to rotate such radial member, such movable part being adapted to press upon said sliding member and bring it into engagement with the notched wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,114,853. CONVERTIBLE HAND-TRUCK. CHARLES W. BROWN, Cleveland, and ALFRED H. BOWLZER, Jr., Lakewood, Ohio. Filed Nov. 21, 1913. Serial No. 802,245. (Cl. 21—65.)



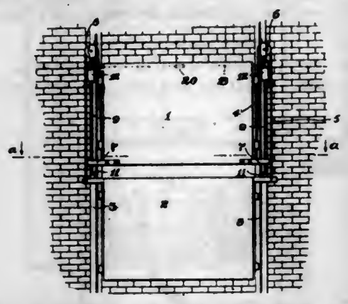
1. A convertible truck having side bars, pivoted cross bars therebetween, said cross bars being pivoted at their ends to the side bars and having a flat side and a concave edge and adapted to be swung to present either said side or said edge for use, and stops on the side bars, adapted to support the cross bars in either position.

2. A convertible truck having side bars with bearings therein, cross bars having a flat side and a concave edge, and provided with trunnions fitting in said bearings, whereby they may be turned to present either of said side or said edge to position for use, and stops projecting from said side bars, to support the cross bars in either position, the trunnions being located at the ends of said concave edge, whereby the cross bars will hang down between the side bars when said concave edges are presented for use.

3. A convertible truck having side bars, fixed cross bars therebetween, and pivoted cross bars between the side bars, said pivoted cross bars having both flat and concave sides and adapted to be swung between the side bars to present either of said sides to position for use, and arranged to rest on said fixed cross bare when swung to present the flat sides.

4. A convertible truck having side bars, bearings in said bars, cross bars having differently shaped surfaces between said side bars, and provided with trunnions fitting in said bearings, whereby they may be swiung to different positions to present either of said surfaces for use, said trunnions having heads at the outer ends adapted to prevent spreading of the side bars and means to support the cross bars in either position.

1,114,854. AUTOMATIC DOOR-CLOSING DEVICE. WALTER E. BROWN, New York, N. Y., assignor to The Peelle Company, New York, N. Y., a Corporation of New York. Filed May 21, 1913. Serial No. 768,948. (Cl. 189—48.)



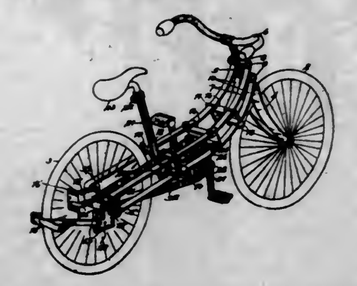
1. The combination with vertical guide rails for an elevator shaft door, of brackets secured to one of said guide rails, a vertical guide rod secured on said brackets parallel with and adjacent to the guide rail, a sliding weight on said guide rod, a latch for holding said weight raised, a fusible plug controlling said latch and a projection on the door extending laterally beyond the door to be in the path of said weight substantially as set forth.

2. The combination with an elevator shaft door and vertical guide rails for the same, of brackets secured on one of said guide rails, a guide rod attached to said brackets, a weight mounted to slide vertically on said guide rod, a hook projecting upward from said weight, a latch for engagement with said hook, a fusible means for holding said latch in position and a laterally projecting part on the door extending into the path of said weight, substantially as set forth.

3. The combination with a vertically movable elevator shaft door, of vertical guide rails for the same, a vertically sliding weight adjacent one of said guide rails, means for guiding said weight in its vertical movement, a projecting plate on said weight, a projecting part extending from the door laterally into the path of said projecting plate on the weight and beneath said plate and means for holding said weight in raised position and a fusible means for releasing said weight, substantially as set forth.

4. The combination with a vertically movable elevator shaft door, of vertical guide rails for the same, brackets secured to one of said guide rails on its face fartherest from the side edge of the door, a vertical guide rod secured to said brackets, a weight mounted to slide vertically on said guide rod, a plate projecting from the top of said weight and projecting beyond the edge of the guide rail and an arm on the door extending beyond the edge of the guide rail and into the path of said plate on the weight, a latch for holding the weight in raised position and a fusible device for holding the latch in place, substantially as set forth.

1,114,855. BICYCLE-FRAME. GEORGE G. BUCKLAND, San Francisco, Cal. Filed Aug. 2, 1913. Serial No. 782,746. (Cl. 208—94.)



1. The combination in a bicycle, of two wheels disposed in tandem, connecting means between the front and rear wheels, said means consisting of two pairs of parallel springs pivotally connected to opposite sides of the front steering head, and plates to which the rear ends of the springs are pivotally connected, said plates carrying the rear axle.

2. In a bicycle having a front wheel steering post turnable in a steering head sleeve, springs in pairs pivoted one above the other on opposite sides of the sleeve, and extending in parallel lines, rear plates to which the rear of the springs are pivotally connected, a rear axle adjustably supported by said plates, and means intermediate of the ends rigidly connecting the springs to act as a unit in their elastic movements.

3. A bicycle having a front wheel steering post turnable in a steering head sleeve, parallel springs disposed in pairs and pivotally connected to opposite sides of the steering head, and plates to which the rear ends of the springs are pivoted and in which a rear axle is journaled, said springs having a downward curvature from the head to an approximate level with the rear axle support, and connections to insure a unitary elastic movement.

4. In a bicycle of the character described, downwardly curved parallel springs pivoted upon each side of the steering head and to a rear axle bearing plate, and means interposed between the front and rear of the springs to unite them in a single unitary elastic structure, and a seat post supported thereby and prevented from side rolling movement.

5. In a bicycle of the character described, downwardly curved parallel springs pivoted in pairs upon each side of the steering head and rigidly united at intervals between the front and rear to have a unitary elastic movement, and plates to which the rear ends of the springs are pivoted, said plates being formed to receive supplemental attachments and slotted to adjustably carry a rear wheel axle.

[Claims 6 to 8 not printed in the Gazette.]

1,114,856. EGG-BOX. ALLAN C. BUSSEY, Minneapolis, Minn. Filed Nov. 22, 1912. Serial No. 732,929. (Cl. 217—31.)

1. An egg filler comprising blanks having transverse score lines therein at intervals to form a series of panels and also having a series of transverse slits extending partially across the blanks intermediate to said score lines for interlocking the blanks one with another to form a series of egg pockets, said panels having slits therein extending diagonally from points near said score lines and

terminating near the upper and lower edges respectively of said panels midway, substantially, between said score lines and in line with said slits, and plates, V-shaped in cross section, slidable endwise in said diagonal slits and bridging said pockets, said plates closing the tops and bottoms of said pockets and forming bearings for the ends of the eggs in said pockets.

2. An egg filler comprising blanks scored transversely at intervals to form a series of panels, the corresponding panels of said blanks interlocking with one another at points intermediate to said score lines, said panels having slits therein extending diagonally from points near said score lines and terminating near the upper and lower edges respectively, of said panels, midway, substantially between said score lines, plate, V-shaped in cross section, slidable endwise in said diagonal slits, the edges of said panels registering substantially with one another and the corresponding slits in said panels coinciding with one another when said blanks are folded on said score lines, said plates having notched ends for locking them and said panels together when the opposite slits are drawn together by the separation of said panels.

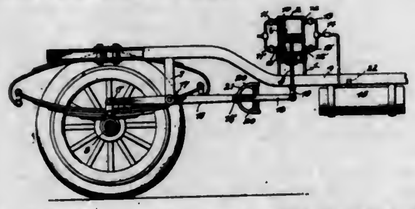
3. An egg filler comprising two blanks arranged in parallel relation and face to face and having transverse score lines at intervals therein to form a series of panels, the opposite panels being interlocked with one another intermediate to their score lines to form, when folded along said score lines, a series of egg pockets, said panels having slits therein extending inwardly from points near said score lines and plates slidable endwise in said slits transversely of said pockets and closing the tops and bottoms of said pockets and forming bearings for the ends of the eggs in said pockets.

4. An egg filler comprising blanks having transverse score lines at intervals therein to form a series of panels the opposite panels being interlocked intermediate to their score lines to form a series of egg pockets, said panels having slits therein extending from points near said score lines and terminating near the upper and lower edges of said panels midway, substantially, between said score lines, the edges of said panels registering substantially with one another and the corresponding slits in said panels coinciding with one another when said blanks are folded on said score lines, and plates fitting endwise into the slits in said panels and bridging the middle portions of the pockets formed by said panels and closing the tops and bottoms of said pockets.

5. An egg filler comprising blanks scored transversely at intervals to form a series of panels, the corresponding panels of said blanks interlocking with one another at points intermediate to said score lines to form a series of pockets, rectangular in cross section, said panels having slits extending diagonally therein from points near the outer corners of said pockets to the inner corners of said pockets, and plates, V-shaped in cross section, slidable endwise in said slits and forming the top and bottom of said pockets.

1,114,857. AIR-COMPRESSING SHOCK-ABSORBER. JOHN J. CAMPODONICO, Stockton, Cal. Filed June 2, 1913. Serial No. 771,142. (Cl. 21—105.)

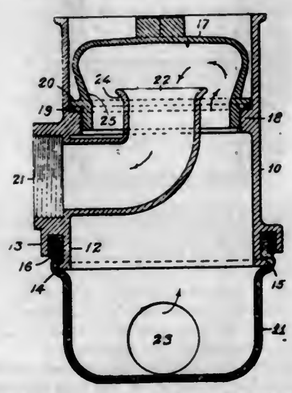
1. In an air compressor of the character described, a cylinder having a piston and a piston rod, and rockable connections with the vehicle frame and the axle, a fulcrumed lever interposed between the axle and the piston rod, said lever having a jointed extension and springs normally retaining the extension in line, and allowing it to yield under excess of pressure.



2. In an air compressor of the type set forth, a cylinder on the vehicle body having a piston and rod therefor, a lever pivotally connected intermediate its ends to the body and being also pivotally connected at its rear end to the axle, a yoke on the front end of the lever, an arm pivotally connected to the front end of said lever and to the piston rod, and a pair of springs interposed between the respective arms of the yoke and the upper and lower faces of said arm at points intermediate the ends of said arm.

3. In an air compressor of the type set forth, air compressing means mounted on the vehicle body, a reservoir in communication with said means, a jointed lever mechanism pivoted to the vehicle body and to the axle and connected to the air compressing means, and means for normally preventing breaking of the joint of said lever mechanism and for allowing breaking thereof upon the air in the reservoir reaching a predetermined pressure.

1,114,858. TRAP. JOHN H. CARR, Chelsea, Mass. Filed Apr. 5, 1911. Serial No. 619,025. (Cl. 137—29.)

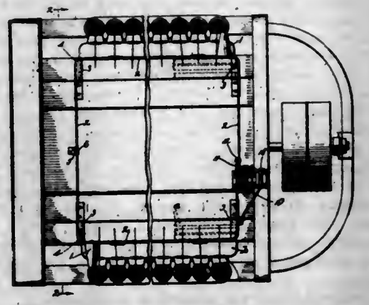


1. In combination, a tubular member of relatively soft pliable material having a reduced cylindric end portion and an internal annular shoulder defining the same, a tubular member of relatively hard material extending into said soft member through said reduced end portion and having a peripheral shoulder disposed behind said internal shoulder whereby said members are held connected, an annular body of packing material surrounding and embracing said reduced end portion, and annular means composed of relatively hard material surrounding and embracing said packing material, said annular means and said packing material being arranged to coact with said peripheral shoulder of said hard tubular member to lock said reduced portion of said soft tubular member upon said hard tubular member.

2. In combination, a tubular member of relatively soft pliable material and a tubular member of relatively hard material, one end portion of said soft member inclosing the opposite end portion of said hard member, said members having, respectively, an internal annular shoulder and an external annular shoulder, said shoulders being disposed one behind the other to hold said members connected, said soft member having a reduced cylindric extension inclosing said hard member behind said external shoulder of the latter, said hard member having a skirt portion surrounding said reduced extension, and an annular body of packing material inclosing said reduced extension and inclosed by said skirt portion, said skirt portion and said packing material being arranged to coact with said external shoulder to lock said reduced extension of said soft tubular member upon said hard tubular member.

3. In combination, a tubular member of relatively hard material having an external bead, a tubular member of relatively soft material fitting closely upon said hard member behind said bead and extending over and beyond said bead, a ring of packing material surrounding and fitting closely upon said closely fitting portion of said soft member behind said bead, and annular means of hard material surrounding and fitting closely upon said packing material behind said bead, whereby said packing material and said closely fitting portion of said soft member are locked against expanding.

1,114,859. THREAD-BOARD-CLEANING APPARATUS. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business at Rockford, Ill., as Barber-Colman Company. Filed Dec. 18, 1911. Serial No. 666,493. (Cl. 118—26.)



1. In thread-board cleaning apparatus, a cleaning device, a cable for moving said device, a sheave engaging said cable, a toothed wheel connected to drive said sheave, an oscillatory arm adjacent to said wheel, means for oscillating said arm, a double pawl pivoted on said arm, an oscillatory member arranged to swing opposite portions of said pawl alternately into engagement with said toothed wheel, and a traveling member arranged to periodically engage and swing said oscillatory member to reverse said pawl.

2. In thread-board cleaning apparatus, a cleaning device, a cable for moving said device, a sheave engaging said cable, a toothed wheel for rotating said sheave, a pawl comprising two oppositely extending fingers each adapted to engage said toothed wheel, means for rocking said pawl to move said fingers into and out of operative relation with the toothed wheel, said rocking means comprising a three arm member, two arms of which member are arranged to operate said pawl, and means actuated in the movement of said sheave for operating the other arm of said reversing member.

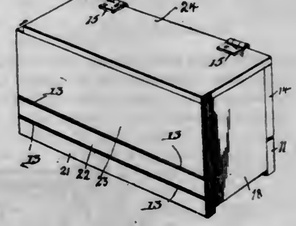
3. In thread-board cleaning apparatus, a cleaning device, a cable for moving said device, a wheel engaging said cable, a toothed wheel for rotating said other wheel, the pawl fingers each adapted to engage said toothed wheel, means for actuating said fingers and means for moving said fingers into and out of operative relation to said toothed wheel comprising a member arranged to control said fingers, said member having an arm, and a pin revolving with said cable-engaging wheel and arranged to move said arm.

4. In thread-board cleaning apparatus, a cleaning device, a cable for moving said device, a sheave engaging said cable, a toothed wheel for rotating said sheave, a pivoted arm, means for oscillating said arm, a double pawl pivoted on said arm arranged to engage said toothed wheel, a spring adapted to rock said pawl in either direction upon its pivot, and pawl-shifting means comprising a pivoted member having two arms each adapted to obstruct the movement of said pawl whereby continued movement of said arm causes said pawl to move into position where said spring can shift the pawl with relation to the toothed wheel.

5. In thread-board cleaning apparatus, a cleaning device, a cable for moving said device, a sheave engaging said cable, a toothed wheel for rotating said sheave, a pivoted arm, means for oscillating said arm, a double pawl pivoted on said arm arranged to engage said toothed wheel, a spring adapted to rock said pawl in either direction upon its pivot, pawl shifting means comprising a pivoted member having two arms each adapted to obstruct the movement of said pawl whereby continued movement of said arm causes said pawl to move into position where said spring can shift the pawl with relation to the toothed wheel, a central finger on said double pawl to which finger one end of said spring is attached, and automatically-actuated means for shifting said pawl comprising a member having two arms each adapted to lie in the path of said central finger whereby continued movement of said arm causes the pawl pivot to move from one side to the other of a straight line joining the points of attachment of said spring whereby the latter is enabled to shift the pawl.

[Claims 6 to 11 not printed in the Gazette.]

1,114,860. FOLDABLE BOX. ANNETTA COLOMBOT, Madison, Conn. Filed July 21, 1913. Serial No. 780,250. (Cl. 217—15.)

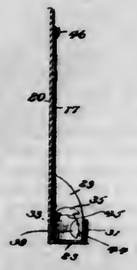


1. A foldable box comprising a bottom, an end hingedly united to the bottom at one end thereof, another end formed of a lower portion rigidly connected to the bottom at the other end and an upper portion hingedly united to the lower end portion, a back formed of a stationary lower portion connected to the bottom at its rear edge and an upper portion hingedly united to the lower stationary back portion, a front formed of a plurality of portions hingedly united longitudinally to each other and one of the front portions hingedly united to the bottom, and a top hingedly united to the upper front portion, the first-mentioned end being foldable upon the bottom, the top foldable upon the front portion to which it is hingedly united and foldable together therewith upon the folded end, the upper portion of the last-mentioned end foldable upon the upper folded front portion, and the upper back portion foldable upon the last-mentioned end portion.

2. A foldable box comprising a bottom, a lower back portion rigidly connected to the bottom at the rear, an upper back portion hingedly united to the lower back portion, a lower end portion rigidly connected to the bottom at one end, an upper end portion engaging the lower rigid end portion, an end portion engaging the bottom at the end opposite to the rigid end portion, a front formed of a plurality of sections engaging edge to edge, one of the sections being hingedly united to the

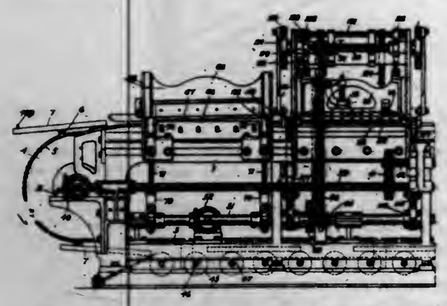
bottom, a top portion engaging the upper portion of the front, overlapping eyes engaging in the confronting edges of the end portions and the front and both of the rear portions, and pintle rods extending through the eyes.

1,114,861. FLY-PAPER HOLDER. ANNETTA COLOMBOT, Madison, Conn. Filed Jan. 12, 1914. Serial No. 811,650. (Cl. 43—22.)



In a device of the class described a body adapted to support an insect attracting and trapping element with a portion folded to form the bottom and front of a receptacle, the portion forming the bottom having relatively long barbed projections and the portion forming the front having relatively short barbed projections, ends for the receptacle projecting from the body and having clefts at right angles to each other to receive the barbs of the projections, the shorter projections of the front portion of the body adapted to be folded against the folded ends and to engage by their barbs in one set of said clefts and the longer projections of the bottom portion adapted to fold over the folded shorter projections and against the ends of the body and engage by their barbs in the other set of clefts and thus hold or support the shorter projections in place.

1,114,862. MACHINE FOR FORMING LOCKS ON METALLIC PLATES. CARLTON W. CONNER, Toronto, Ontario, Canada. Filed Sept. 26, 1912. Serial No. 722,481. (Cl. 113—1.)



1. In a machine for forming locks on metallic sheets the combination of an endless traveling bed; a plurality of lock-forming mechanisms arranged in series adjacent thereto; means for alternately actuating the lock-forming mechanisms and for moving said bed to cause each sheet to be moved from one lock-forming mechanism to the next in the series while said mechanisms are non-operative; means for clamping said sheets to the bed while the lock-forming mechanisms are operating comprising a pair of bars longitudinal of the machine, and means for applying a yielding pressure to said bars when the lock-forming mechanisms are operating and for relieving the spring pressure while the traveling bed is in motion.

2. In a machine for forming locks on metallic sheets the combination of an endless traveling bed; a plurality of lock-forming mechanisms arranged in series adjacent thereto; means for alternately actuating the lock-forming mechanisms and for moving said bed to cause each sheet to be moved from one lock-forming mechanism to the next in the series while said mechanisms are non-operative; means for clamping said sheets to the bed while the lock-forming mechanisms are operating, comprising a pair of bars longitudinal of the machine; means for applying a yielding pressure to said bars when the lock-forming mechanisms are operating; and means for applying a constant yielding pressure to the bars at the ends from which the bed is traveling.

3. In a machine for forming locks on metallic sheets the combination of an endless traveling bed; a plurality of lock-forming mechanisms arranged in series adjacent thereto; means for alternately actuating the lock-forming mechanisms and for moving said bed to cause each sheet to be moved from one lock-forming mechanism to the next in the series while said mechanisms are non-operative; a friction brake adapted to check the momentum of the traveling bed; means for applying said brake just previous to the time the lock-forming mechanisms operate and for releasing it after the bed has stopped; and positive stop mechanism adapted to lock the bed after each movement thereof and to release it after each action of the lock-forming mechanisms.

4. In a machine for forming locks on metallic sheets the combination of bed-carrying drums geared together for simultaneous operation; an endless bed carried thereby; a plurality of lock-forming mechanisms arranged in series adjacent the bed; driving means therefor; a constantly driven shaft; a clutch whereby the driving means for the lock-forming mechanisms may be put in gear with the constantly driven shaft; means whereby said shaft actuates said clutch; and means whereby said shaft imparts a step-wise movement to the bed-carrying drums.

5. In a machine for forming locks on metallic sheets the combination of bed-carrying drums geared together for simultaneous operation; an endless bed carried thereby; a plurality of lock-forming mechanisms arranged in series adjacent the bed; rotatable means journaled longitudinally of the machine; driving connections between said rotatable means and the lock-forming mechanisms; a constantly driven shaft geared to the said rotatable means, said gearing including a clutch; means whereby said shaft actuates said clutch and means whereby said shaft imparts a stepwise movement to the bed-carrying drums.

[Claims 6 to 20 not printed in the Gazette.]

1,114,863. ERASER. RICHARD A. COSTELLO, Chicago Heights, Ill. Filed July 13, 1914. Serial No. 850,564. (Cl. 15—65.)

1. In an eraser, the combination with a back piece, of a plurality of rubbing strips having beveled faces adjacent to their upper edges, and means securing said beveled faces to the underside of said back piece.

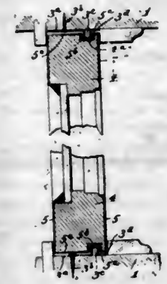
2. In an eraser, the combination with a back piece, of a plurality of rubbing strips having beveled faces adjacent to their upper edges adapted to contact with the under face of the back piece, and stitching passing through the toes of said rubbing strips to secure them to the back piece.

3. In an eraser, the combination with a back piece, of a plurality of rubbing strips having beveled faces adjacent to their upper edges adapted to contact with the under face of the back piece, a row of stitching passing through the toe of each rubbing strip, and a second row of stitching passing through the heel of each rubbing strip to secure them to the back piece.

4. In an eraser, the combination with a back piece, of a plurality of rubbing strips having beveled faces adjacent to their upper edges adapted to contact with the under face of the back piece, the said strips being arranged in pairs with their feathered edges projecting outwardly, and rows of stitching passing through the upper part of the strips to attach them to the back piece.

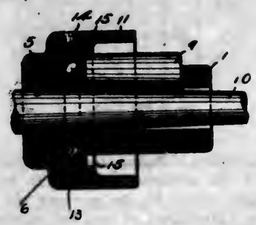
5. In an eraser, the combination with a back piece, of a plurality of rubbing strips having beveled faces adjacent to their upper edges adapted to contact with the under face of the back piece, the said strips being arranged in pairs with their feathered edges projecting outwardly, the feathered edges of the two outside strips forming beads under the outside edges of the back piece, and rows of stitching passing through the upper parts of the strips to attach them to the back piece.

1,114,864. WEATHER-STRIP. THOMAS B. COUGHLAN, Detroit, Mich., assignor to [redacted]berlain Metal Weather Strip Company, Detroit, a corporation of Michigan. Filed Nov. 16, 1911. Serial No. 660,642. (Cl. 20—69.)



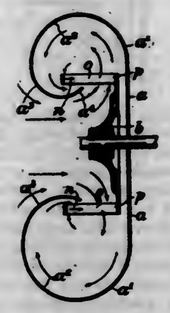
The combination with a window frame and a sash, one of the parts being provided with a vertical groove substantially rectangular shape in cross section and of uniform cross sectional area, of a weather strip including two flat metallic strips fitted against and secured to the window frame and the sash respectively so as to slide on each other in the raising and lowering of the sash, one of the strips being bent intermediate of its side edges to form a longitudinal groove, the bent portion fitting in the said groove and being approximately rectangular shape in cross section to line the same and tapered longitudinally so as to diverge from the walls of the said first mentioned groove and thereby allow for a yielding of the lining thereof, and the other strip being bent intermediate of its side edges to provide a hollow longitudinal rib substantially rectangular in cross section and slidable in and guided by the groove of the first mentioned strip and tapered longitudinally to wedge therein when the sash is at the limit of its movement in one direction, said strips being attached to the sash and to the window frame at one side of the said bent portions and being free at the opposite sides to permit a yielding of the rib and groove of the said strips.

1,114,865. FLUE-EXPANDER. ELMER E. CULLISON, Altoona, Pa. Filed Mar. 26, 1913. Serial No. 757,028. (Cl. 153—82.)



A flue expanding tool comprising a cylindrical main frame having a longitudinal bore therethrough and a plurality of elongated radial openings, said frame also being provided with a shouldered collar portion at one end, a flanged flue sheet bearing member having a ball-bearing interlocked swivel connection with the collared end of the frame and provided with an interior shouldered portion, tapering expanding rollers received in said radial openings of the main frame and having one end thereof engaging said interior shouldered portion of the flue sheet bearing member, and a tapered expanding mandrel.

1,114,866. CENTRIFUGAL FAN OR PUMP. SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed Nov. 17, 1913. Serial No. 801,447. (Cl. 230—11.)



1. A centrifugal fan having a wheel with blades wherein the axial length is greater than the radial depth, a peripheral casing therefor which is turned so as to pass around the inlet end of said wheel and inside of the same being spaced therefrom and the edge of which at the intake end is curved toward said wheel so far as to isolate the positive end of the blades from the recirculating current and to isolate the negative end of the blades from the incoming fresh air.

2. A centrifugal fan having a wheel with blades wherein the axial length is greater than the radial depth, a peripheral casing therefor, an eye connected to said casing and providing therewith a recirculating air space around the periphery and intake end of the wheel and then turned outwardly toward the inner edge of said blades whereby the recirculating air current is effectually isolated from the incoming fresh air and delivered on to the intake ends of the blades without being previously permitted to mix with the incoming fresh air.

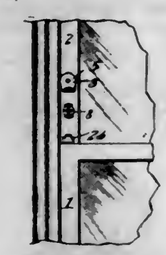
3. A centrifugal fan having a wheel with blades wherein the axial length is greater than the radial depth, a peripheral casing therefor which extends around the intake ends of said blades and the end of which is turned inside of said wheel and is then curved outwardly toward said blades so that its terminal edge expands adjacent to but not beyond the neutral part of said blades, said casing spaced apart from the periphery intake end and inside of said blades whereby the positive ends of said blades are isolated from the current of air recirculated around the negative ends thereof and the negative ends of said blades are isolated from the incoming fresh air.

1,114,867. WINDOW-LOCK. EDWIN POWELL DAVIS, Bridgeport, Conn. Filed May 27, 1913. Serial No. 770,163. (Cl. 16—58.)

1. In a window-lock, the combination of a series of base-plates applied to the stile of a sash at intervals and a locking part adapted to engage any of the base-plates and a catch secured to the other sash.

2. In a window-lock, the combination of a base-plate adapted to be secured to a window sash and having wings which as thus secured are sligtly elevated above the sash, and a locking part comprising a casing with projecting parts adapted to enter beneath the wings of the base-plate to secure the lock in working position.

3. In a window-lock, a base-plate having a central opening and wings with a portion slightly elevated, in combination with a lock-casing having a central post to enter the opening in the base-plate and projections to take beneath the wings so that the lock-casing may be secured in position on the base-plate and may be removed by turning and then lifting.

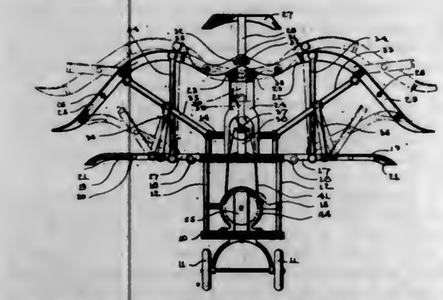


4. In a window-lock, the combination of a base-plate with portions of its rim cut away, the remaining portions forming wings which are slightly elevated above the part of the window to which the base-plate is secured in combination with a casing having a wall cut in substantial correspondence with the base-plate so that a part of the casing may be fitted over the base-plate and then turned to catch beneath the wings of the base-plate.

5. In a window-lock, a locking part having a two part casing adapted to be attached to the stile of the window, one part having a projecting flange to prevent access through the space between the rails of the sashes, the other part covering and protecting the working parts of the lock.

[Claims 6 to 8 not printed in the Gazette.]

1,114,868. FLYING-MACHINE. HENRY DENNIS, St. Louis, Mo. Filed Sept. 9, 1913. Serial No. 788,944. (Cl. 244—11.)



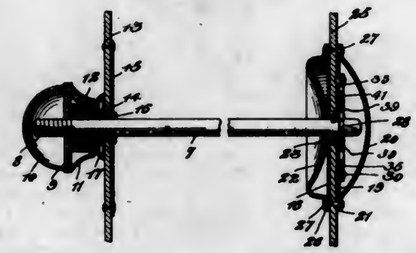
1. A flying machine comprising a frame, lower wings pivotally connected with said frame, standards carried by said frame, upper wings pivotally connected with said standards, planes pivotally mounted in said upper and lower wings, rods pivotally connected with said frame and with the planes of said upper wings, links pivotally connecting said rods with the planes of said lower wings, rods connecting said upper wings with said lower wings for causing said lower wings to be moved simultaneously with said upper wings, and means for rocking said upper wings.

2. A flying machine comprising a frame having upper wings, lower wings, pivotally mounted upper wings, planes pivotally mounted in said wings, rods connecting the planes of said upper wings with said frame, links connecting the rods with the planes of said lower wings, rods connecting said upper and lower wings, and operating means for moving said upper wings.

3. A flying machine comprising a frame, upper wings pivotally secured to said frame, lower wings pivotally secured to said frame, means secured to said wings for swinging the same simultaneously, planes carried by said wings, and means extending from said frame and engaging said planes whereby said planes will be automatically swung as said wings are moved.

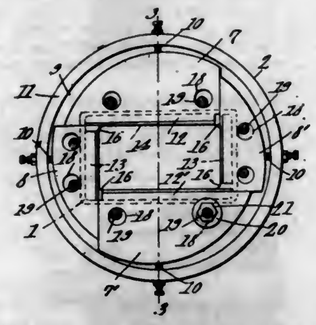
4. A flying machine comprising a frame, upper wings pivotally secured to said frame, lower wings pivotally secured to said frame, a rod connecting said wings together, means for moving said upper wings whereby said lower wings will be moved simultaneously, planes carried by said wings, a rod extending from each side of said frame and engaging the plane of each upper wing, links connected to the central portions of said rods and engaging the rear portions of the planes of the lower wings whereby when said wings are shifted said rods and links will automatically shift said planes for allowing the passage of air currents therethrough or will swing said planes to a closed position as the wings move downwardly.

1,114,869. SAFETY HAT-PIN. JAMES MACON DONALDSON, Dodd City, Tex. Filed Nov. 29, 1912. Serial No. 734,161. (Cl. 132—25.)



A device for retaining hat pins, comprising a casing, an apertured plate within the casing, a disk having an aperture therein larger in diameter than the diameter of the pin adapted to register with the aperture in the plate, a spring bearing against the disk and holding it in engagement with the pin to prevent withdrawal of the pin from the casing, an approximately C shaped guide for the disk, said guide having a recess therein forming a seat, a lever having an end fulcrumed in the recess of the guide, said lever bearing against the disk and projecting through the casing for pressing said disk against the action of the spring.

1,114,870. ADJUSTABLE BRICK OR TILE DIE. HARRY C. EHRICK, Bucyrus, Ohio. Filed Nov. 17, 1913. Serial No. 801,479. (Cl. 25—17.)



1. A die, including a casing, having a plate at one end, a plurality of die sections mounted in the casing, cooperative means carried by the sections and the plate for permitting the adjustment of and the locking of the sections relatively to the casing, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

2. A die, including a casing, having a flanged plate at one end, a plurality of die sections mounted within the casing, each section being provided with a plate adapted to be placed co-extensive with the flanged plate of the casing, coöperative means carried by the plate of the sections and the flanged plate for permitting the adjustment of and the locking of the die sections relatively to the casing, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

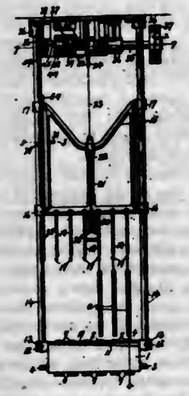
3. A die, including a casing having a flanged plate at one end, a plurality of die sections, each of which is provided with a segmental plate at right angles to the die forming portion of the section and for seating against the flanged plate within the recess thereof, means carried by the flange of the flanged plate for engaging the segmental plate of each section and for holding the section against outward displacement, and coöperative means connected to the segmental plate and the flanged plate for locking the section against longitudinal movement.

4. A die, including a casing having a flanged plate at one end, a plurality of die sections, each of which is provided with a segmental plate at right angles to the die forming portion of the section and for seating against the flanged plate within the recess thereof, means carried by the flange of the flanged plate for engaging the segmental plate of each section for holding the sections against outward displacement, coöperative means connected to the segmental plate and the flanged plate for locking the sections against longitudinal movement, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

5. A die, including a casing having a plate at one end, a plurality of die sections mounted in the casing, cooperative means carried by the sections and the plate for permitting the adjustment of and the locking of the sections relatively to the casing, a liner plate detachably connected to the inner face of each section, and a corner forming liner detachably connected to each section.

[Claim 6 not printed in the Gazette.]

1,114,871. MACHINE FOR FINISHING CANDLES. EVALD J. ENOMAN, Syracuse, N. Y., assignor to The Will & Baumer Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,193. (Cl. 18—12.)



1. In a machine for finishing candles, a tubular finishing die, means for drawing a candle through the die comprising a reciprocatory element and actuating means therefor including a clutch and means actuated by said element for releasing the clutch after the candle has been drawn through the die.

2. In a machine for finishing candles, a plurality of upright tubular dies, means for drawing candles through the dies comprising a vertically movable carriage having means for attaching candles thereto, a continuously rotating shaft, a clutch driven thereby, connections between the shaft and carriage, and means actuated by the carriage for releasing the clutch after the candles have been drawn through the dies.

3. In a machine for finishing candles, tubular finishing dies having passages therethrough tapering in the same direction, a carriage movable toward and from the dies and provided with means for attaching candles thereto for drawing them through the dies as the carriage is moved therefrom, means for moving the carriage away from the dies and additonal means for automatically stopping the movement of the carriage from the dies after the candles have been withdrawn therefrom.

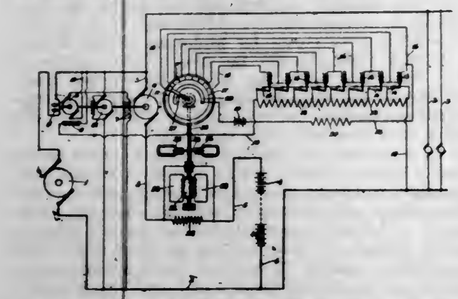
4. In a machine for finishing candles, a hollow casing having a heating chamber and an inlet for a heating fluid, a plurality of upright dies passing through said chamber and provided with upwardly tapering passages therethrough, a vertically movable carriage having plungers movable through the passages and provided with means for attaching candles thereto for drawing said candles from the bottom upward through said passages, means for locking the carriage in its extreme down position to permit the candles to be attached to the plungers while the carriage is at rest, said locking means being voluntarily unlocked, automatic means for starting the carriage on its upward movement, a continuously rotating shaft, and means actuated by said starting means for connecting the starting means to the shaft for continuing the lifting movement of the carriage and thereby drawing the candles through said passages, and additional means actuated by the carriage for disconnecting the starting means from the driving shaft after the candles have been withdrawn from the dies.

5. In a machine for finishing candles, a tubular finishing die, a carriage movable toward and from the die, a plunger on the carriage movable through the die and provided with means for attaching a candle thereto, a continuously rotating driving shaft, a clutch section secured to the shaft, a sleeve loose on the shaft, a wheel secured to the sleeve, a clutch section feathered on the sleeve and movable into and out of engagement with the first-named clutch section, a cable on the wheel having one end connected to the carriage and its other end provided with a counter-weight to assist in raising the cariage, means including a catch for locking the carriage in its extreme down position, said catch being tripped voluntarily to permit the counter-weight to start the carriage in its upward movement and thereby actuate the wheel and sleeve, means actuated by such movement of the wheel and sleeve for throwing the sliding clutch section into engagement with the first-named clutch section to connect the shaft to the sleeve, and additional means actuated by the carriage for disengaging the clutch sections after the carriage has been moved upwardly a sufficient distance to withdraw the candles from the dies.

1,114,872. ELECTRICAL SYSTEM OF DISTRIBUTION. SAMUEL H. EVERETT, Jr., Brooklyn, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed July 9, 1909. Serial No. 506,736. (Cl. 171—310.)

1. In an electrical system of distribution, the combination of a main generator, a work circuit and storage battery fed thereby, means including a coil serially connected between the generator on one side and the battery and work circuit on the other side for controlling the charge and discharge of the battery responsive to variations in the total generator current output and means for adjusting said controlling means responsive to current changes in the battery circuit, said adjusting means including an armature energized by current responsive to changes in the battery current.

2. In an electrical system of distribution, the combination of a source of electrical energy, a work circuit and storage battery supplied thereby, means including a coil serially connected betwen the generator on one side and the battery and work circuit on the other side for controlling the division of load between the source and battery responsive to departures from an average load on the source, and means for varying the action of said controlling means to vary the average load which will fall upon the source, said means including an armature energized by current proportional to the battery current.



3. In an electrical system of distribution, the combination of a source of electrical energy, a work circuit and storage battery supplied thereby, means for controlling the division of load between the source and battery responsive to departures from an average load on the system, and means for varying the action of said controlling means to vary the average load which will fall upon the source, said means including a plurality of switches operated electromagnetically, and a device the movement of which is proportional to the current in the battery circuit and the length of time it flows.

4. In an electrical system of distribution, the combination of a source of electrical energy, a work circuit and storage battery supplied thereby, means for controlling the division of load betwen the source and battery responsive to departures from an average load on the system, and means for varying the action of said controlling means to vary the average load which will fall upon the source, said means including a plurality of switches operated electromagnetically and a device the movement of which is proportional to the current in the battery circuit.

5. In an electrical system of distribution, the combination of a source of electrical energy, a work circuit and storage battery supplied thereby, means for controlling the division of load between the source and battery responsive to departures from an average load on the system, and means for varying the action of said controlling means to vary the average load which will fall upon the source, said means including an armature energized by current proportional to the battery current and a magnetic damping device for said armature.

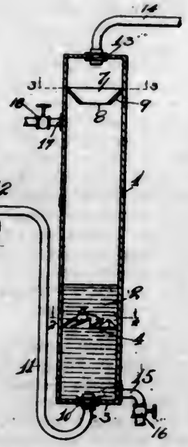
[Claims 6 to 13 not printed in the Gazette.]

1,114,873. PAPER SPOON. LUKE W. FARMER, Somerville, Mass. Filed Sept. 5, 1914. Serial No. 860,478. (Cl. 30—22.)

1. As a new article of manufacture, a paper spoon composed of two or more plies of paper secured together, and having a stiff reinforcing wire interposed between two of the plies, which is extended throughout the entire length of the spoon, and is arranged in the longitudinal axis thereof, and is bent to conform to the varying curvatures of the bowl and handle of the spoon, thereby to stiffen and strengthen the spoon from the tip of the bowl to the extremity of the handle, substantially as described.

2. As a new article of manufacture, a paper spoon composed of two or more plies of paper secured together, and having a stiff reinforcing wire interposed between two of the plies, which is extended throughout the entire length of the spoon, and is arranged in the longitudinal axis thereof, and is bent to conform to the varying curvatures of the bowl and handle of the spoon, said reinforcing wire being entirely sunken into a groove in one of the plies, substantially as described.

1,114,874. DEVICE FOR TREATING LIQUIDS. ARTHUR O. FOX and RUSSELL R. BATES, Madison, Wis., assignors to General Purification Company, Madison, Wis., a Corporation of Arizona. Filed July 9, 1913. Serial No. 778,111. (Cl. 99—2.)



1. A device for treating liquids comprising a receptacle adapted to contain the liquid, means for forcing gas under pressure into said receptacle, a stationary device in said receptacle extending transversely across the receptacle at a distance from the bottom thereof, said device consisting of a single piece of material having a series of slits extending from the outer edge toward the center thereof, the pieces between the slits bent into inclined positions for dividing the gas and changing its direction.

2. A device for treating liquids comprising a receptacle adapted to contain the liquid, means for forcing gas under pressure into said receptacle, a stationary device in said receptacle above the bottom thereof and below the surface of the liquid, said stationary device consisting of a single piece of material provided with a series of inclined faces radiating from the central portion thereof and separated at their edges to provide openings through which gas and liquid may pass.

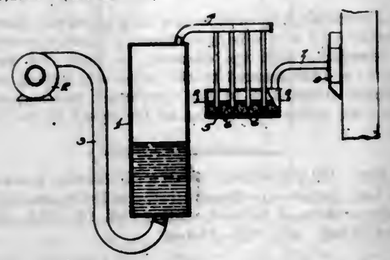
3. A device for treating liquids comprising a receptacle adapted to contain the liquid, means for forcing gas under pressure into said receptacle, a stationary device in said receptacle above the bottom thereof and below the surface of the liquid, said stationary device provided with a series of inclined faces separated at their edges to provide openings through which gas and liquid may pass, the portions of the device containing the inclined faces being connected together at the center of the device, said inclined faces positioned to direct the liquid under the pressure exerted by the gas, toward the inner face of the receptacle.

4. A device for treating liquids comprising a receptacle adapted to contain the liquid, means for forcing air under pressure into said receptacle, a stationary device in said receptacle above the bottom thereof and below the surface of the liquid, said stationary device provided with a series of inclined faces separated at their edges to provide openings through which gas and liquid may pass, the portions of the device containing the inclined faces being connected together at the center of the device, said inclined faces positioned to direct the liquid under the pressure exerted by the gas, toward the inner face of the receptacle, and an obstructing device near the top of said receptacle for obstructing passage of the liquid.

5. A device for treating liquids comprising a receptacle adapted to contain the liquid, means for forcing gas under pressure into said receptacle, a stationary device in said receptacle at a distance from the bottom thereof for dividing the gas and changing its direction, and an obstructing device near the top of said receptacle for obstructing the passage of the liquid, said obstructing device having an inclined face projecting from the inner face of the receptacle inwardly and downwardly and provided with a central opening.

[Claims 6 to 10 not printed in the Gazette.]

1,114,875. PROCESS OF TREATING LIQUIDS. ARTHUR O. FOX and RUSSELL R. BATES, Madison, Wis., assignors to General Purification Company, Madison, Wis., a Corporation of Arizona. Filed July 9, 1913. Serial No. 778,112. (Cl. 99—1.)



1. The process of treating milk, cream, butter fats, etc., which consists in passing air through a solution of an unstable salt of hypochlorous acid and then passing the resultant gaseous product under pressure through the milk, cream or butter fats.

2. The process of treating milk, cream or butter fats, etc., which consists in providing a solution of a combination of unstable salts of hypochlorous acid in water, then diluting the solution and passing air through it, then passing this air with the gaseous additions received thereto through the material to be treated.

3. The process of treating milk, cream, butter fats, etc., which consists in bringing the particles thereof into intimate contact with the gaseous product derived by forcing air through a solution of unstable salts of hypochlorous acid.

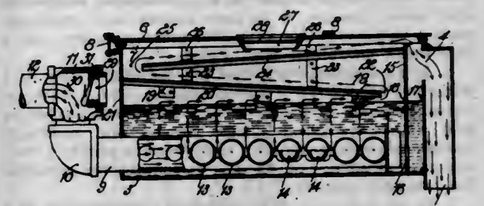
4. The process of treating milk, cream, butter-fats, etc. which consists in forcing therethrough a diluted hypochlorous acid gas.

5. The process of treating milk, cream or butter fats, etc., which consists in producing a mixture of air and hypochlorous acid, then bringing such mixture into intimate contact with the particles of milk, cream or butter fats.

1,114,876. CHEMICAL-TANK. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 17, 1912. Serial No. 678,322. (Cl. 110—183.)

1. In combination with an internal combustion engine, a chemical tank comprising a casing, a pipe to convey the exhaust gases from the engine to said casing below the level of liquid therein, a side port in said pipe above the level of the liquid, and an inwardly-opening suction-operated valve controlling said side port and arranged to respond to a reverse flow of the exhaust gases.

2. In combination with an internal combustion engine, a chemical tank comprising a casing, a pipe to convey the exhaust gases from the engine to said casing below the level of liquid therein, a side port in said pipe above the level of the liquid, and a normally-closed inwardly-opening suction-operated valve controlling said side port and arranged to respond to a reverse flow of the exhaust gases.

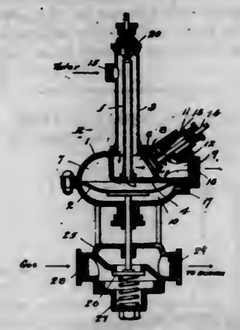


3. In combination with an internal combustion engine, a chemical tank comprising a casing, a system of perforated pipes in the bottom of said casing below the level of liquid therein and an outlet at one end thereof, a pipe to convey the exhaust gases from the engine to the perforated pipes in the chemical tank, an inwardly-opening valve in said pipe and a solution in said chamical tank through which the exhaust gases pass before they escape to the atmosphere.

4. A chemical tank comprising a casing, an inlet pipe to carry gases to be treated to the tank entering at the bottom of said casing, a system of perforated pipes in the bottom of said casing below the level of liquid therein, and connected to the inlet pipe, and a valve in said inlet pipe adapted to admit air to said pipe if the pressure in said pipe should drop below atmospheric pressure.

5. A chemical tank comprising a casing, an inlet pipe entering from the outside of said casing at the bottom thereof, a suction-operated valve for the admission of air in said inlet pipe, a system of perforated pipes in the bottom of the casing below the level of liquid therein and connected with said pipe, baffle plates at the top of the casing, and an outlet for said casing.

1,114,877. CONTROLLER FOR WATER-HEATERS, &c. NELSON G. GOREAU, New Orleans, La. Filed Mar. 31, 1911. Serial No. 618,199. (Cl. 126—351.)



1. In an automatic water heater, the combination of a gas burner, a gas valve, a pressure motor for operating said valve, said motor being provided with an exhaust port, a passageway between the hot water supply and said motor, a thermostat for governing said passageway and a resistance member situated in the hot water supply on the discharge side of said motor, said thermostat varying the flow of water to said motor and thereby varying the pressure therein.

2. In an automatic water heater, the combination of a gas burner, a gas valve, a pressure motor for operating said valve, a discharge passage leading to a service line, a resistance member in the hot water line on the discharge side of the motor, a passageway around said resistance

member connecting the hot water supply with the discharge passage and communicating with the pressure motor, and a thermostat controlling said passageway.

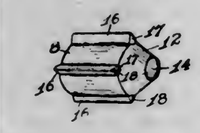
3. In an automatic water heater, the combination of a water service passage, a burner, a gas valve, a pressure motor operating said gas valve, a resistance member in said water passage, a by-pass around said resistance member communicating with said pressure motor, and a thermostat controlling said by-pass.

4. In an automatic water heater, the combination of a water-service passage, a burner, a gas valve, a pressure motor operating said gas valve, a resistance member in said water passage, a by-pass around said resistance member communicating with said pressure motor, a thermostat controlling said by-pass, and means for adjusting the resistance member.

5. In an automatic water heater, the combination of a water-service passage, a burner, a gas valve, a pressure motor operating said gas valve, a resistance member in said passage, a by-pass around said resistance member communicating with said pressure motor, and means for adjusting the thermostat to vary the temperature regulation.

[Claims 6 to 8 not printed in the Gazette.]

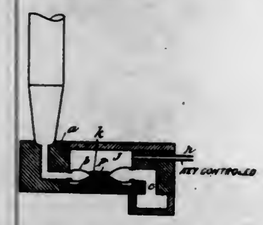
1,114,878. BULLET. CONRAD A. GROTE, St. Louis, Mo. Filed Feb. 24, 1914. Serial No. 820,443. (Cl. 102—26.)



1. A bullet for shot-gun shells comprising a hollow body portion, a central tapered bore, the forward portion of said body portion being tapered, a plurality of ridges formed integral with the body portion extending longitudinally therewith, the front ends of said ridges being sharpened and on an angle approximately on a line with the tapered end of the body portion, substantially as specified.

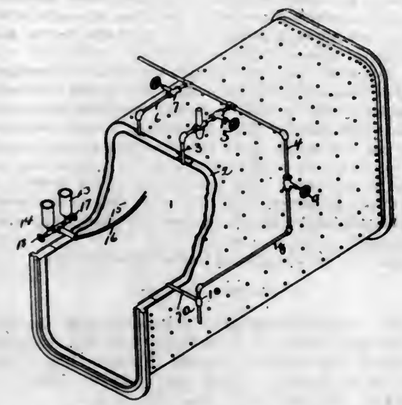
2. A bullet for shot guns comprising an elongated body portion, a front blunt tapered nose, a central tapered bore formed in the body its largest diameter being at the base; four integral ribs formed on the periphery of the body portion, the front ends being sharpened and terminating on a line with the tapered nose, substantially as specified.

1,114,879. PNEUMATIC ORGAN-ACTION. OTTO HAASE, Brand-Erbisdorf, Germany. Filed Mar. 25, 1913. Serial No. 756,790. (Cl. 84—20.)



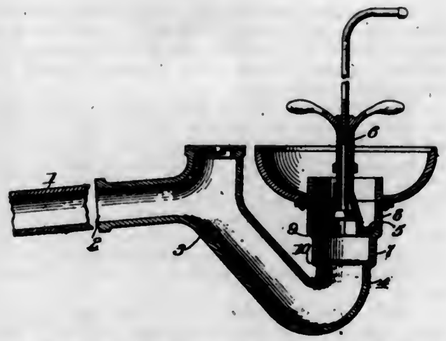
In an organ action, the combination with an air chamber which is normally in communication with a wind chest and which can be set into communication with the atmosphere by the depression of a key, and with a flexible pipe arranged in a horizontal position in said chamber and forming part of an air duct leading to the organ pipe, of a weight carried on the flexible pipe, said weight being adapted to flatten the pipe and keep the air flow throttled except when the air chamber is in communication with the atmosphere.

1,114,880. STERILIZER. GEORGE F. HALL, Erie, Pa. Filed Nov. 30, 1908. Serial No. 465,057. (Cl. 167—3.)



In a sterilizer, the combination of a sterilizer chamber; a receptacle for a sterilizing medium; a conduit connecting said receptacle with the chamber; a cover for the receptacle; a filter secured to the cover and having an air connection through it to the receptacle; and means for creating an excess of pressure on the liquid in the receptacle.

1,114,881. DRAIN-PIPE. JOSEPH G. HAYES, Indianapolis, Ind., assignor to Hayes Brothers, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 12, 1912. Serial No. 676,958. (Cl. 182—12.)

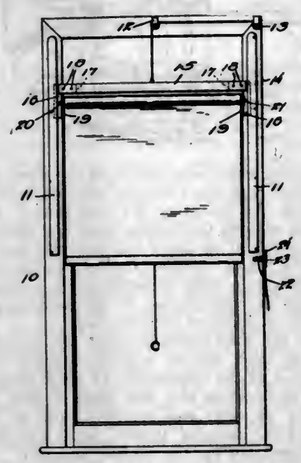


1. A drain pipe having a trap provided with a vertical intake section with an open end accessible from above the floor or pavement under which it is laid, said intake section having an upper portion terminating at its lower end in an interior shoulder and having another portion of smaller diameter below said first portion and terminating in an interior shoulder, both of said shoulders being intermediate the open intake end and the lower end of said intake portion, said portions of the intake section being adapted to receive and coöperate with an expansible pipe closing member for sealing the outer end of said pipe for testing purposes, substantially as described.

2. A drain pipe having a trap provided with a recessed seat for a cover and with a vertical intake section open at its upper end and accessible at said end from above the floor or pavement in which the trap is laid, said trap communicating at the end opposite to the intake end with a suitable soil pipe, said vertical intake section composed of two adjoining vertical cylindrical sections both above the seal portion of the trap and below the cover seat and of different diameters, the section of smaller diameter being

below the other, each having an interior shoulder at the lower end thereof against which an expansible plug is adapted to be forced for the purpose of closing the trap and its communicating pipe at the intake end to permit testing, substantially as described.

1,114,882. ADJUSTABLE WINDOW-SHADE HANGER. WILLIAM H. HUGGINS and JOHN F. WADDELL, Morristown, Tenn. Filed Oct. 18, 1913. Serial No. 795,881. (Cl. 156—27.)



1. A curtain shade hanger comprising two guide members constructed and adapted to be attached to a window frame, a transverse bar, sheet metal guide pieces having inwardly extending arms engaged with the bar, and having outer rectilinear edges extending a considerable distance in a vertical direction from the arms and engaged slidably with the guide members, extensions formed on the inner parts of the guide pieces shaped and arranged for engagement with shade roller trunnions, and flexible hoisting means engaged with the bar and operable from one side of a window.

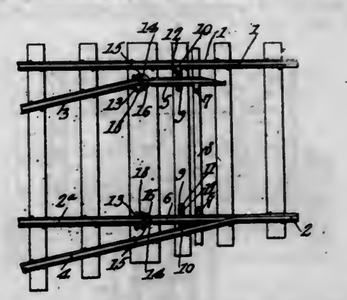
2. As an improved article of manufacture, a guide piece and corner piece for a carrier of the class described formed integrally from sheet metal and comprising a vertical body portion, a horizontal broad arm projected from the inner edge thereof, and an extension spaced beneath the arm having a portion formed to support a shade roller trunnion intermediately of the height of the body when turned laterally, the extension being spaced from the bottom a distance corresponding to the width of the outer end of the extension, and being shorter than the arm by the width of the vertical portion, whereby the pieces may be produced with a minimum waste.

1,114,883. SWITCH FOR INDUSTRIAL-RAILWAY TRACKS. HOWARD HUGHES, ARTHUR FERGUSON, and HARRY L. LOWE, Clinton, Ind. Filed Jan. 5, 1914. Serial No. 810,450. (Cl. 104—115.)

1. In a device of the character described, a bearing and a switch piece, the bearing and switch piece having portions adapted to be interlocked by a longitudinal movement, and the bearing being applicable to the end of a rail whereby the switch piece will abut thereagainst and will be retained in engagement with the bearing.

2. In a device of the character described, a bearing and a switch piece, the butt end of the switch piece and the bearing having portions adapted to be interlocked by a longitudinal movement, the bearing having means for receiving the end of a rail whereby the butt end of the switch piece will abut thereagainst and whereby the switch piece and bearing will be held in engagement.

3. In a device of the character described, a bearing plate having a curved seat, and a switch piece having a curved portion at its butt end engageable with the said seat, the said portion and seat being interengageable by a longitudinal movement, and the bearing plate being applicable to the end of a rail to bring the butt end of the switch piece against the end of the rail and to hold the said curved portion engaged to the said seat.

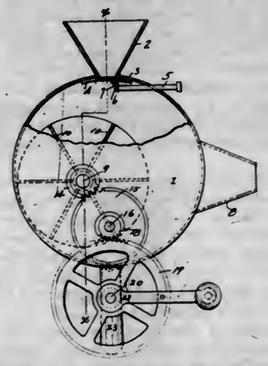


4. In a device of the character described, a bearing plate having an arcuate seat, and a switch piece having a curved portion engageable with the said seat by a longitudinal movement, the bearing plate having means extending from the said seat for receiving the end of a rail whereby the end of the rail will hold the curved portion of the switch piece engaged to the said seat.

5. In a device of the character described, a bearing plate having an arcuate seat, the seat having an inturned lip, and a switch piece having a stub to engage the said lip, the stub having a flange to engage the said seat under the said lip.

[Claims 6 to 9 not printed in the Gazette.]

1,114,884. SANDING-MACHINE. OLAF JACOBSEN, Seattle, Wash. Filed Mar. 15, 1913. Serial No. 754,492. (Cl. 91—67.)

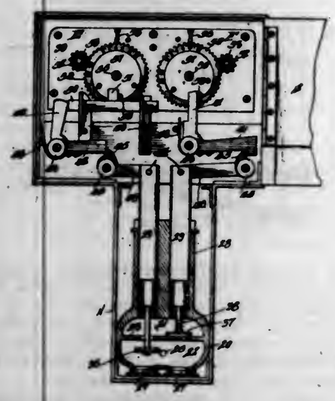


In a sanding machine, the combination with a sand reservoir and means for regulating the outlet of sand therefrom, of a hollow cylinder into which the sand flows from the said reservoir, rotatable vanes within the said cylinder, and which are in the path of the sand as it flows from the said outlet, the axis of the said vanes being eccentric with respect to the said cylinder, a crank upon one end of the said cylinder and gear mechanism connecting said crank with the said vanes, whereby the speed of the latter is multiplied with respect to the speed of the former.

1,114,885. TIME-CONTROLLING APPARATUS. HENRY R. JAEKEL, New York, N. Y. Filed May 14, 1912. Serial 697,254. (Cl. 161—7.)

1. In a time controlling apparatus having two communicating chambers, a plurality of ports leading from one chamber to the other, valves, one for each port, separate

time controlled means for each of said valves, means for operating each valve independently coöperating with said controlled means, said valves thereby being independently controlled at all times during actuation, one of said chambers having an inlet port and the other of said chambers having an outlet port, said construction rendering either valve capable of actuation after actuation or operation of the other valve.



2. In a time controlling apparatus, a casing, a partition in said casing providing chambers, one on each side thereof, inlet means to one of said chambers, outlet means from the other of said chambers, said partition having valve openings therein, valves for said openings, means to operate said valves separately and independently, and means to stop operation of said latter means.

3. In a time controlling apparatus, the combination of a casing provided with a partition to form a plurality of chambers, one chamber on each of the sides thereof, one of said chambers having an inlet port and the other of said chambers having an outlet port, said partition having valve openings therein, valves for said openings, one valve being in each chamber, motors, one motor for each valve, a separate mechanism to control the operation of each valve from its motor, each mechanism having parts operable to permit shifting of the valve, said mechanisms being operable independently whereby the valves are operable independently and one valve may shift after shifting of the other valve.

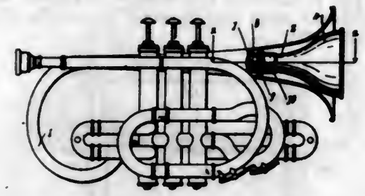
4. In a time controlling apparatus, the combination of a pair of motors, a valve casing, valves mounted within said casing, means connecting said motors with said valves, a partition dividing said valve casing into compartments, said compartments communicating, the said valves adapted to close said compartments, and means for independently operating the said valves one from each motor, substantially as described.

5. In a device of the class described, the combination of a time controlling means, a valve casing, a pair of valves mounted within said casing, a partition for dividing said casing into compartments, said partition having apertures formed therein, the said valves adapted to operate on the inner and outer faces of said partition, and means for operating the said valves independently substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,114,886. MUTE FOR TRUMPETS, CORNETS, AND LIKE WIND INSTRUMENTS. HARRY B. JAY, Aurora, Ill. Filed May 12, 1913. Serial No. 767,075. (Cl. 84—125.)

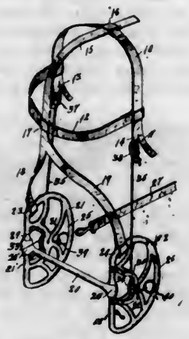
1. A mute for wind instruments of the class described, comprising a tubular inner member having a gasket on its inner end adapted to fit the throat of the instrument, whereby the mute is supported therein and the throat is closed, the outer end of the inner member being longitudinally slotted, tapered and threaded; a tubular outer member adapted to telescope into said inner member and having a bell at its outer end provided with an end wall having a central opening therein; a clamping nut for said inner member whereby the members are secured in their adjusted relation; and a slide tube arranged in said opening in the outer end of said outer member to telescope into the same.



2. A mute for wind instruments of the class described, comprising a tubular inner member adapted to be inserted into and close the throat of the instrument; a tubular outer member adapted to telescope with said inner member and having a bell at its outer end provided with an end wall having a central opening therein; means for securing said members in their adjusted relation; and a slide tube arranged in said opening in the outer end of said outer member to telescope into the same.

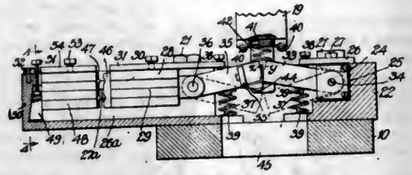
3. A mute for wind instruments of the class described comprising an inner tubular member adapted to fit and close the throat of the instrument, an outer tubular member adapted to telescope into said inner member and having a bell at its outer end provided with an end wall having a central opening therein, said members being adjustably associated for the purpose specified.

1,114,887. BRIDLE. FRANK L. KOEPKE, Whitehall, Wis. Filed Feb. 9, 1909. Serial No. 476,979. (Cl. 54—6.)



In a bridle, the combination with a bit having its ends formed to constitute vertical bearings, of a pair of cheek plates each having a straight vertically disposed front bar loosely mounted in the adjacent vertical bearing of the bit, whereby said plates are free to swing relative to the bit, said cheek plates extending rearwardly from the ends of the bit, a bracket secured to the outer face of each cheek plate in spaced relation thereto, a pulley journaled between each bracket and cheek plate, an overdraw member comprising a strap having a horizontal portion and a vertical portion, the latter terminating in two diverging portions secured at their free ends to the upper portion of the cheek plates, a brow strap slidably connected to the upper portion of the overdraw member and having arms extending rearward thereof, a U-shaped crown member slidably connected to the horizontal portion of the overdraw member, and lines connected to the ends of the crown strap and passing around the pulleys at the cheek plates and having rein attaching means at the free ends thereof.

1,114,888. FORMING-MACHINE. PETER Z. KOHLHAAS, Chicago, Ill. Filed Dec. 18, 1911. Serial No. 666,509. (Cl. 76—93.)



1. In a forming machine, a pair of die members pivotally mounted upon parallel axes and extending toward each other, the adjacent ends thereof forming die faces, a reciprocating head operating in a plane normal to the axes of the die members and substantially midway therebetween for applying force to said members, a compression spring interposed between said reciprocating head and said die members, and a compression spring bearing against each of said die members tending to move it toward said reciprocating head and against the action of said first mentioned spring, said reciprocating head when moved toward said die members first compressing the spring interposed between said reciprocating head and the die members and then positively engaging said die members and operating them against the action of their individual compression springs, substantially as described.

2. In a forming machine, a pair of die members pivotally mounted upon parallel axes and extending toward each other, the adjacent ends thereof forming die faces, a reciprocating head operating in a plane normal to the axes of the die members and substantially midway therebetween for applying force to said members, a compression spring interposed betwen said reciprocating head and said die members; a compression spring bearing against each of said die members tending to move it toward said reciprocating head and against the action of said first-mentioned spring, said reciprocating head when moved toward said die members first compressing the spring interposed between said reciprocating head and the die members and then positively engaging said die members and operating them against the action of their individual compression springs, and a bracket carried by said reciprocating head extending below said die members, and being there provided with a portion extending under the same, said bracket having positive engagement with said die members when said reciprocating head is in its extreme retracted position.

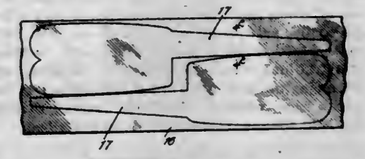
3. In a forming machine, a pair of die members pivotally mounted upon parallel axes and extending toward each other, the adjacent ends forming die faces, a positioning device secured to one of said die members, a reciprocating head for applying force to said die members, normal to the plane of the axes and substantially midway therebetween, resilient elements on opposite sides of said die members, and a bracket carried by said head and extending underneath said die members, and having positive engagement with said die members when said head is in its uppermost position.

4. In a forming machine, a pillow block, a pair of die members pivotally mounted in said pillow block upon parallel axes and extending toward each other, adjacent ends forming die faces, a reciprocating head associated with said die members, a spring interposed between said die members and said head and a ledge carried by one of said die members adapted to support a blank between the die faces when the die members are in normal position, said reciprocating head when moved toward said die members first compressing said spring and then positively engaging said die members and operating them, the blank initially supported by said ledge dropping from between the die faces when said die members have passed the line through their pivotal points, substantially as described.

5. In a machine for sharpening knives, a unitary pillow block, a pair of pivoted die members mounted on said block, and extending toward each other, said pillow block having an aperture to allow the pivoted die members to swing on both sides of their pivots, stops carried by said pillow block for limiting the upward movement of said die members, springs interposed between said pillow block and said die members for normally retaining the dies against the stops.

[Claim 6 not printed in the Gazette.]

1,114,889. PROCESS OF MAKING KNIVES. PETER ZIRBES KOHLHAAS, Chicago, Ill. Filed Oct. 4, 1913. Serial No. 793,302. (Cl. 76—104.)



1. The process of making a knife which consists in stamping from sheet metal an integral blank comprising a blade portion and a handle portion of greater width, sharpening one edge of the blade portion by pressure and folding the handle portion to produce a knife handle of greater thickness than the thickness of the sheet from which the blank was stamped.

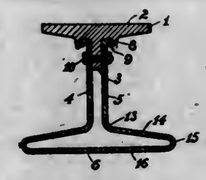
2. The process of making a knife which consists in stamping from sheet metal an integral metal blank comprising a blade portion and a body portion, and sharpening one edge of the blade portion by pressure.

3. The process of making a knife which consists in stamping a blank from sheet metal, sharpening one edge of the blank by pressure alone, and tempering the blank.

4. The process of making a knife which consists in stamping a blank from sheet metal of substantially uniform thickness, and then sharpening one edge of the blank by pressing it gradually and increasingly from side to side.

5. The process of making a knife which consists in stamping a blank from a sheet of metal of substantially uniform thickness, sharpening an edge of the blank by pressing it gradually and increasingly from side to side and then tempering the sharpened blank.

1,114,890. METALLIC TIE FOR RAILWAYS. HENRY KOHLMYER, Lorain, Ohio. Filed Jan. 24, 1914. Serial No. 814,098. (Cl. 238—5.)



1. In a metallic tie the combination of a head, and a base member supporting the head, the base member consisting of resilient plate material bent to form a pair of spaced vertical sides and a hollow base, substantially as described.

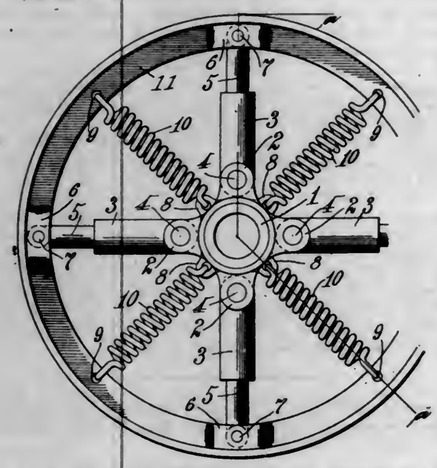
2. In a metallic tie, the combination of a head, and a base member supporting the head, the base member consisting of resilient plate material bent to form a pair of spaced vertical sides, said sides being bent outwardly and inclined downwardly forming top plates, and the top plates having their outer longitudinal edges turned under to form a base plate, substantially as described.

3. In a metallic tie the combination of a head, the head having a depending longitudinal tongue, and a base member for supporting the head, the base member consisting of resilient plate material bent to form a pair of spaced sides and a hollow base, said head resting on the upper edges of the sides, and said tongue being interposed between said sides, substantially as described.

4. In a metallic tie the combination of a head, the head having a depending longitudinal tongue, and a base member for supporting the head, the base member consisting of resilient plate material bent to form a pair of spaced sides and a hollow base, the upper edges of said sides being bent outwardly, said head being seated on said outwardly bent edges, said tongue being interposed between said sides, and means integral with the head for engaging said outwardly bent edges, substantially as described.

5. In a metallic tie the combination of a head, the head having a depending longitudinal tongue, and a base member for supporting the head, the base member consisting of a resilient plate material bent to form a pair of spaced sides and a hollow base, the upper edges of said sides being bent outwardly, said head being seated on said outwardly bent edges, said tongue being interposed between said sides, longitudinal cleat strips formed integral with the head for engaging said outwardly bent edges to lock the head to the base member, and bolts passing through said sides and said tongue, substantially as described.

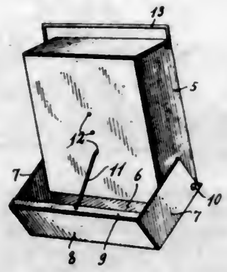
1,114,891. RESILIENT WHEEL. WILLIAM F. KOPKE, Dayton, Ohio. Filed Oct. 9, 1911. Serial No. 653,702. (Cl. 152—52.)



A wheel of the character specified, comprising a rim having an inwardly projected annular flange, said flange having uniformly positioned bisected portions, a hub having alined apertured ears projecting therefrom and lying substantial distances apart, a series of telescopic spokes, the tubular members of said spokes having each a wide base which is pivotally connected between the apertured ears of the hub, the outer members of said telescopic spokes being pivotally mounted between the bisected portions of the rim flange in alinement with the transverse axis of the hub, and a series of helical springs arranged at uniform distances between the spokes and in alinement therewith and with the transverse axis of the hub, said springs having their inner ends connected to apertured ears on the hub midway between the ears to which the tubular member of the spokes are connected and the outer ends of said springs being connected with the rim flange, substantially as specified.

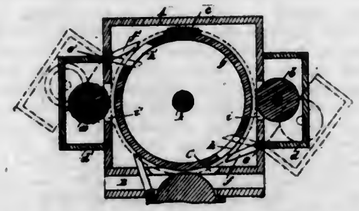
1,114,892. POULTRY-FEEDER. MICHAEL WILLIAM LAWLOR, Needham Heights, Mass., assignor of one-half to Ideal Can Company, Incorporated, Boston, Mass. Filed Aug. 20, 1913. Serial No. 785,719. (Cl. 119—53.)

1. A feed device comprising a receptacle having an open bottom, and a trough pivoted to the receptacle, the width of the trough being greater than that of the receptacle, the bottom of the trough being located beneath the open bottom of the receptacle, and means for holding the trough with its bottom against the open bottom of the receptacle to form a closure for the latter.



2. A feed device comprising a receptacle having an open bottom, and a trough pivoted to the receptacle and having its bottom located beneath the open bottom of the receptacle, said trough being adjustable to extend at an inclination beneath the bottom of the receptacle with the trough bottom spaced from the receptacle bottom, and also adjustable to place its bottom against the receptacle bottom and form a closure therefor.

1,114,893. APPARATUS FOR PRINTING PREPAID POSTAGE. JULIUS LERCHE, Steglitz, near Berlin, Germany, assignor to Deutsche Post- und Eisenbahn-Verkehrswesen Aktiengesellschaft (Dapag-Efubag), Staaken, near Spandau, Germany. Filed Jan. 24, 1912. Serial No. 673,244. (Cl. 101—81.)



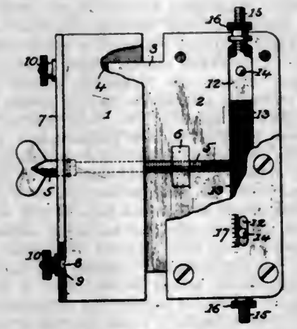
1. An apparatus for printing prepaid postage stamps on packages comprising a closed casing having a passageway on one side for the package to be stamped, a revoluble cylinder having a slot in its periphery and carrying a printing block, mounted within said casing, a housing hinged on said casing to swing away from the same, and a swinging arm adapted to enter said slot in the printing cylinder when the latter is in a predetermined position and lock the cylinder against rotation, the housing being free at said time to swing, said arm holding the housing immovable against said casing when said slot is in other than said predetermined position.

2. An apparatus for printing prepaid postage stamps on packages comprising a closed casing having a passageway on one side for the package to be stamped, a revoluble printing cylinder within said casing, a housing hinged on said casing to swing away from the same and an arm projecting from the pivot of said housing toward said cylinder to interlock with the same and prevent rotation of the cylinder when the housing is free to swing and to lock said housing closed when the cylinder is free to rotate.

3. An apparatus for printing prepaid postage stamps on packages comprising a closed casing having a passageway at one side for the package to be stamped and a small opening on another side, a revoluble printing cylinder within said casing provided with a peripheral printing block, a rotating member mounted in a housing hinged on the exterior of said casing to close over said small opening and project the member through the same into position to contact with said printing block as it rotates, and means carried by said housing to interlock with said cylinder and prevent rotation thereof when the housing is free to swing and to lock said housing closed when the cylinder is free to rotate.

4. An apparatus for printing prepaid postage stamps on packages comprising a closed casing having a passageway on one side for the package to be stamped and openings through two other sides, a revoluble printing cylinder within said casing provided with a peripheral printing block, an inking roller pivotally mounted in a housing hinged on the exterior of said casing to close over one of said openings and project the roller through the same into position to contact with said printing block as it rotates, a cleaning brush also contained within a housing similarly hinged over the opposite side opening, a counter-pressure roller protected by a housing projecting into the passageway through which the postal packages are fed, and interlocking means between the several housings and the printing cylinder to prevent rotation thereof when either of said housings is free to swing and to lock said housings closed when the cylinder is free to rotate.

1,114,894. LOCK-GAGE. GEORGE LEEWORTH, Chicago, Ill. Filed May 19, 1914. Serial No. 839,527. (Cl. 33—197.)



1. In a lock gage, the combination of a pair of members slidingly connected together, means for adjusting said members in relation to each other, a gage plate secured to the front of one member and overlapping the same, and a pair of adjustable prick pins carried by the other member, substantially as set forth.

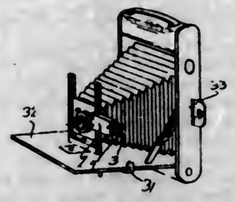
2. In a lock gage, the combination of a pair of members slidingly connected together, a screw-shaft associated with said members and adapted to effect an adjustment between said members, a gage plate secured to the front of one member and overlapping the same, and a pair of adjustable prick pins carried by the other member, substantially as set forth.

3. In a lock gage, the combination of a pair of members slidingly connected together, means for adjusting said members in relation to each other a transversely adjustable gage plate secured to the front of one member and overlapping the same, and a pair of adjustable prick pins carried by the other member, substantially as set forth.

4. In a lock gage, the combination of a pair of members slidingly connected together, means for adjusting said members in relation to each other, a gage plate secured to the front of one member and overlapping the same, a pair of heads slidingly mounted in the other member of the gage and carrying prick pins on their opposing sides, and means for effecting vertical adjustments of said heads, substantially as set forth.

5. In a lock gage, the combination of a pair of members slidingly connected together, means for adjusting said members in relation to each other, a gage plate secured to the front of one member and overlapping the same, a pair of heads slidingly mounted in the other member of the gage and provided with prick pins on their opposite sides and with screw-threaded shanks, and thumb nuts journaled in said other member and having operative engagement with said screw-threaded shanks, substantially as set forth.

1,114,895. VIEW-FINDER. JOHN LINDER, Spokane, Wash. Filed May 11, 1914. Serial No. 837,897. (Cl. 88—1.5.)



1. In a folding camera, folding camera portions, one foldable within the other, and one of said portions including a view finding device movably mounted thereon, and means normally acting to project said device into an operative position when the parts are in an unfolded position, substantially as described.

2. In a folding camera, folding camera portions, a view finding device movably mounted on one portion for engagement by another folding portion to hold said device in a retracted position when the camera is folded, and means acting automatically to project said device into an operative position when the latter is released by unfolding movement of the camera portion, substantially as described.

3. In a folding camera, a view finding device and a peep hole device, folding camera portions supporting and engaging said devices to hold the latter in retracted position when the camera is folded and release said devices on movement of the said camera portion into an unfolded position, and mechanism for projecting said devices into operative position when the latter are released by said camera portions, substantially as described.

4. In a folding camera, a slidable view finding device and a hinged peep-hole device, folding camera portions supporting and engaging said devices to hold the latter in retracted positions when the camera is folded and release said devices on movement of said camera portions into an unfolded position, and mechanism for projecting said devices into operative position when they are released by said folding portions, substantially as described.

5. In a folding camera, interiorly and exteriorly folding camera portions, a view finding device movably mounted on said interiorly folding portion for interior engagement against said exterior portion to hold said device in a retracted position when the camera is folded, and means for projecting said device into an operative position when the camera is unfolded, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,114,896. ADJUSTABLE SUPPORT FOR CHAIRS, STOOLS, &c. MUNGO L. MACRAE, Schenectady, N. Y., assignor of one-third to George C. Reilley and one-third to Louis G. Banker, Schenectady, N. Y. Filed July 5, 1913. Serial No. 777,507. (Cl. 155—39.)

1. In a device of the character described, the combination of a suitably supported standard, a spindle that extends vertically through the standard and is provided with

a longitudinal slot and transverse notches, a sliding pawl-releasing device located in the slot and guided on both sides and in the rear, said device having teeth of the same pitch distance as the notches, a pawl carried by the standard and arranged to normally occupy the notches and the slots between said teeth, a seat mounted on the spindle, and means for moving the pawl-releasing device longitudinally to cause its teeth to force the pawl out of the notches and at the same time to register with the notches to prevent the pawl from entering until said device is released by said means.

2. In a device of the character described, the combination of a suitably supported standard, a plate mounted thereon and containing an opening, a spindle that enters the opening and is provided with notches, a pawl carried by the plate and arranged to enter any one of the notches in the spindle, a sliding actuator located in the spindle and guided thereby, said actuator having teeth whose pitch distance is the same as the notches, one side of each tooth being beveled to form a cam, a socket on the spindle, a seat carried thereby, and a lever pivotally supported on the socket and so arranged when moved as to strike the top of the actuator and move it longitudinally to cause one of its teeth to force the pawl out of its coöperating notch and hold it while the spindle and seat are moved bodily up or down.

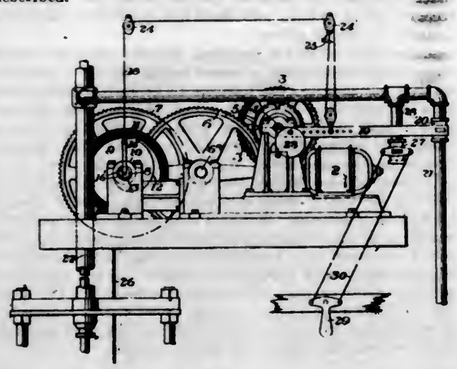
3. In a device of the character described, the combination of a standard, a seat supporting spindle provided with notches, an actuator with cam-shaped teeth, a pawl on the standard adapted to enter the spindle notches to support and lock the spindle and actuator in a supporting position, and means for moving the teeth of the actuator into register with the notches of the spindle to release the pawl and allow for the adjustment of both the spindle and actuator as a unit.

4. In a device of the character described, the combination of a standard, a seat supporting spindle provided with notches, an actuator with cam-shaped teeth, a slidable and spring controlled pawl on the standard adapted to enter the spindle notches to support and lock the spindle and actuator in a supporting position, means for limiting the movement of the actuator with respect to the spindle, and manual means for moving the teeth of the actuator into register with the notches of the spindle to release the pawl and allow for the adjustment of both the spindle and actuator as a unit.

5. In a device of the character described, the combination of a standard, a seat supporting spindle provided with notches, an actuator with cam-shaped teeth, a spring controlled pawl on the standard adapted to enter the spindle notches to support and lock the spindle and actuator in a supporting position, means for limiting the movement of the actuator with respect to the spindle, means for moving the teeth of the actuator into register with the notches of the spindle to release the pawl and allow for the adjustment of both the spindle and actuator as a unit, a seat support mounted to turn but secured to the spindle, and a spring mounted in the spindle in engagement with the actuator for returning it to a locking position upon the release of the actuator moving means.

1,114,897. GLASS-DRAWING APPARATUS. OLIVER E. MAYNARD, Alexandria, Ind., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 30, 1911. Serial No. 636,309. (Cl. 49—17.1.)

1. In apparatus for the manufacture of drawn glass cylinders, the combination with a blow pipe or bait, of actuating mechanism therefor, said pipe having a control valve, and connections between the actuating mechanism and the control valve for automatically moving the valve, said connections comprising means which effect a relatively slight opening of the valve during the formation of the neck portion of the cylinder, a rapid opening of the valve during the cap-forming period, and a gradual opening thereof during the formation of the cylinder proper, said actuating mechanism having means for controlling the drawing speed of the blow pipe or bait in timed relation to changes in the position of said valve; substantially as described.



2. In apparatus for the manufacture of drawn glass cylinders, the combination with a blow pipe or bait, of actuating mechanism therefor, said pipe having a control valve, and connections between the actuating mechanism and the control valve for automatically moving the valve, said connections comprising means which effect a relatively slight opening of the valve during the formation of the neck portion of the cylinder, a rapid opening of the valve during the cap-forming period, and a gradual opening thereof during the formation of the cylinder proper, said actuating mechanism having means for controlling the drawing speed of the blow pipe or bait to give an increase in speed thereof proportional to the increased opening of the air control valve during the formation of the cylinder proper; substantially as described.

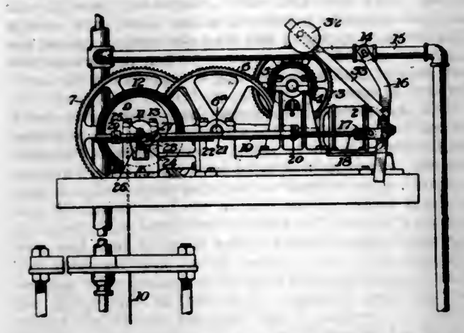
3. In apparatus for the manufacture of drawn glass cylinders, the combination with a blow pipe or bait, of actuating mechanism therefor, said pipe having a control valve, and connections between the actuating mechanism and the control valve for automatically moving the valve, said connections comprising means which effect a relatively slight opening of the valve during the formation of the neck portion of the cylinder, a rapid opening of the valve during the cap-forming period, and a gradual opening thereof during the formation of the cylinder proper, said actuating mechanism having means for controlling the drawing speed of the blow pipe or bait in timed relation to changes in the position of said valve, together with a supply connection for said blow pipe or bait, said connection having a relief port and a relief valve controlling said port, said valve having means for permitting the escape of less air during the cap-forming period than during the formation of the cylinder proper; substantially as described.

4. In apparatus for drawing glass cylinders, a blow pipe or bait, and an air supply connection therefor, said connection having a relief valve, and said valve having two definite operating positions, one of said positions, which gives a relatively small relief opening, being for use while drawing the cap portion of a cylinder, and the other position, which gives a relatively large relief opening, being for use while drawing the body portion of the cylinder; substantially as described.

5. In apparatus for drawing glass cylinders, the combination with a blow pipe or bait, of actuating mechanism therefor, an air supply leading to said pipe, a control valve for the air, and connections between the actuating mechanism and the control valve for automatically moving said valve, said connections comprising mechanism effecting a relatively slight opening of the valve during the formation of the neck portion of the cylinder and an automatic rapid opening of the valve during the cap-forming period, said actuating mechanism having means for controlling the drawing speed of the blow pipe or bait in timed relation to changes in the position of said valve, substantially as described.

[Claim 6 not printed in the Gazette.]

1,114,898. GLASS-DRAWING APPARATUS. OLIVER E. MAYNARD, Arnold, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 7, 1912. Serial No. 702,234. (Cl. 49—17.1.)



1. Glass-drawing apparatus having means for separating the bait and glass receptacle during the drawing operation, an air supply having a controlling valve, and connections between the separating means and the said valve, said connections comprising a rigid movable member, and means for rapidly increasing the speed of movement of said rigid member for a fixed predetermined period and for thereafter more slowly moving said rigid member; substantially as described.

2. In glass-drawing apparatus, an air valve, a rigid member connected to the valve, gearing for actuating said member, and supplemental mechanism arranged to increase the speed of movement of the rigid member through a predetermined period; substantially as described.

3. Glass-drawing apparatus, comprising lifting mechanism for the bait, an air supply, an air valve controlling said supply, a rigid rod or bar member connected to the valve and movable to open and close the same, connections from the lifting mechanism for effecting the movement of said rod or bar, and other mechanism operated through said connections arranged to act upon said connections to rapidly increase the speed of movement of the rod or bar through a predetermined period; substantially as described.

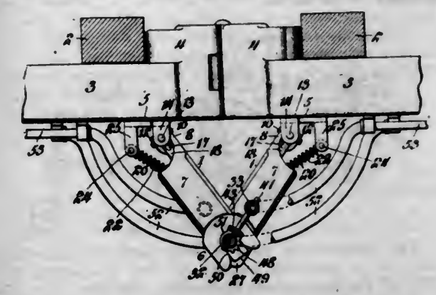
4. In glass-drawing apparatus, an air valve, a bar connected with the valve having a rack, gearing connected with the main hoisting drum and arranged to actuate the rack, and mechanism for disengaging the rack and gearing and moving the rack more rapidly through a predetermined period; substantially as described.

5. In glass-drawing apparatus, a lifting mechanism having a hoisting drum, an air supply, a valve controlling said supply, a rack connected to the valve, gearing for the hoisting drum engaging the rack, a connection between the rack and the valve, and an arm actuated by the said gearing and arranged to disengage the rack and gear through a predetermined period and then allow them to reëngage each other, said arm also having an actuating connection with the rack; substantially as described.

[Claim 6 not printed in the Gazette.]

1,114,899. TRAIN-PIPE COUPLING. WILLIAM R. MCDANIEL, Englewood, Tenn., assignor of one-half to Edward H. Sholar, Chattanooga, Tenn. Filed Apr. 5, 1913. Serial No. 759,065. (Cl. 188—13.)

1. A device of the class described, including a train pipe coupling or connector having a rigid shank pivotally connected at its inner or rear end with a relatively fixed support and arranged to swing upwardly and downwardly, and means for yieldably supporting the train pipe coupling or connector in a projecting position, said means comprising a rod capable of oscillatory movement and connected with the train pipe coupling or connector at a point spaced from the pivotal point thereof and having a slidable connection at one end, and a coiled spring mounted on the said rod and arranged to be compressed by the said slidable connection thereof and adapted to urge the train pipe coupling or connector upwardly or outwardly.



2. A device of the class described including a train pipe coupling or connector having a rigid hollow shank pivotally connected at its inner or rear end with a relatively fixed suport and arranged to swing upwardly and downwardly, and means for yieldably supporting the train pipe coupling or connector in a projecting position, said means comprising a rod pivoted eccentrically with relation to the pivot of the said shank and having a slidable connection with the same, and a spring disposed on the rod and arranged to urge the train pipe coupling or connector upwardly or outwardly.

3. A device of the class described, including a train pipe coupling or connector having a shank pivotally connected at its inner or rear end with a relatively fixed support and arranged to swing upwardly and downwardly, and separate means for yieldably supporting the train pipe coupling or connector in a projecting position, said means comprising a rod supported in rear of the train pipe coupling or connector and extending to the same and connected therewith at a point spaced from the pivot thereof, said rod having a slidable connection at one end, and a coiled spring disposed on the rod and arranged to be compressed by the said slidable connection and adapted to urge the train pipe coupling or connector upwardly or outwardly.

4. A device of the class described including a train pipe coupling or connector having a rigid hollow shank pivotally connected at its inner or rear end with a relatively fixed support, means for yieldably supporting the coupling or connector comprising a rod pivotally mounted at a point below and in rear of the hollow shank and extending into the same and having a slidable connection with the coupling or connector, and a spring disposed on the rod and arranged to urge the coupling or connector upwardly or outwardly.

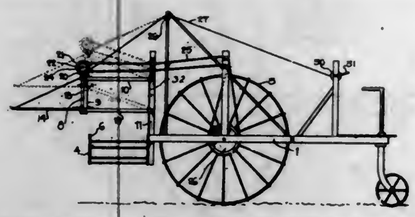
5. A device of the class described including a pivotally mounted train pipe coupling or connector having a hollow shank, means for yieldably supporting the coupling or connector comprising a member extending into the shank of the coupling or connector and having a guide, a rod pivoted eccentrically with relation to the coupling or connector and slidably connected with the member, and a coiled spring disposed on the rod and arranged to engage and be compressed by the member in the pivotal movement of the coupling or connector.

[Claims 6 to 17 not printed in the Gazette.]

1,114,900. HARVESTER. SAMUEL E. MCPHERSON, Cherokee, Okla., assignor of one-half to Hanby L. Young, Cherokee, Okla. Filed Sept. 13, 1913. Serial No. 789,666. (Cl. 56—131.)

1. The combination with a body and its supporting wheels, of a platform carried by and projecting forwardly of the body, posts projecting upwardly from the body in close proximity to the rear of the platform, a frame adjustably supported by the posts positioned above and extended across the platform, knives fixed to the forward

portion of the frame, reels rotatably supported by such frame in close proximity to the knives, guiding means carried by the frame and coacting with the knives, means for rotating the reels, and means for imparting adjusting movement to the frame.



2. The combination with a body and its supporting wheels, of a platform carried by and projecting forwardly of the body, posts projecting upwardly from the body in close proximity to the rear of the platform, a frame adjustably supported by the posts positioned above and extended across the platform, knives fixed to the forward portion of the frame, reels rotatably supported by such frame in close proximity to the knives, guiding means carried by the frame and coacting with the knives, means for rotating the reels, means for imparting adjusting movement to the frame, and a screen operatively connected to the uprights above the platform.

3. The combination with a body and its supporting wheels, of a platform carried by and projecting forwardly of the body, posts projecting upwardly from the body in close proximity to the rear of the platform, a frame adjustably supported by the posts positioned above and extended across the platform, knives fixed to the forward portion of the frame, reels rotatably supported by such frame in close proximity to the knives, operative connections between the supporting wheels of the body and the cutters for rotating the same, and guiding means for certain of such connections carried by one of the posts.

1,114,901. LAST. FREDERICK W. MILLAY, Haverhill, and JOHN M. MADIGAN, Lawrence, Mass. Filed Sept. 30, 1913. Serial No. 793,070. (Cl. 12—135.)

1. A transversely divided last comprising a fore part having a groove and a heel part, a slotted plate secured to one part and extending into said groove in the other part; guide pins in said other part extending through the slots in said plate and limiting the relative movement of said parts in one direction; and a helical spring interposed between said parts for retaining them yieldingly in normal extended position but permitting movement of the heel part outwardly and toward the bottom of the fore part so that its bottom will extend beyond the bottom of the fore part to shorten the last.

2. A transversely divided last consisting of a fore part having a groove and a heel part divided on a line inclined downwardly toward the toe, a plate secured to the heel part and extending into said groove in the fore part, said plate being provided with two alined slots in the extended portion and a long slot parallel therewith; pins in said fore part normally positioned in the lower ends of said alined slots; a spring in said long slot bearing against the upper end thereof; and a member fixed in the fore part forming a support for the lower end of said spring, said spring retaining the parts yieldingly in extended position.

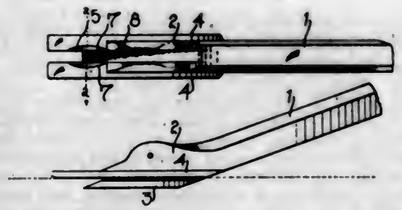
3. A transversely divided last consisting of a fore part having a groove and a heel part divided on a line inclined downwardly toward the toe; a plate secured to the heel part and extending into said groove in the fore part, said plate being provided with two alined slots in the extended portion and a long slot parallel therewith; pins in said fore part normally positioned in the lower ends of said alined slots; a spring in said long slot bearing against the upper end thereof; and a member fixed in the fore part on each side of said plate forming a support for the lower end of said spring.

4. A last divided transversely into a fore part and a heel part on a straight line extending from top to bottom and inclined forwardly from a point between the comb and heel, one of said parts being provided with a groove; a slotted plate secured to the other part and projecting into said groove; guide pins in the first mentioned part extending through the slots in said plate and always retaining in contact the abutting faces of said fore part and heel part; and yielding means coacting with said plate for retaining said parts in normal extended position but permitting movement of the heel part outwardly and toward the bottom of the fore part so that its bottom will extend beyond the bottom of the fore part to shorten the last.

1,114,902. TELEPHONE RECEIVING INSTRUMENT. THOMAS BURTON MILLER, Seattle, Wash., assignor of one-half to Smith Cannery Machines Company, Seattle, Wash., a Corporation of Washington. Filed Sept. 25, 1912. Serial No. 722,167. (Cl. 179—119.)

In a receiving telephone, the combination with a diaphragm, of an electro-magnet core that is constricted in a portion of its length, one end of which electro-magnet core is disposed adjacent to the central portion of said diaphragm, magnetic means associated with the other end of said electro-magnet core whereby such electro-magnet core may be supplied with magnetic lines of force of constant polarity, and two helices of magnet wire disposed each to surround a different one of the portions of said electro-magnet core between which portions said electro-magnet core is constricted, said two helices being electrically connected with each other to adapt them to be connected to a receiving circuit in parallel with each other so that a portion of an electric current flowing in such receiving circuit would flow around one portion of said electro-magnet core in one direction while the other portion of such electric current would flow in an opposite direction around the other portion of said electro-magnet core.

1,114,903. REEFING-IRON. DAVID F. MOORE, Bremerton, Wash. Filed July 29, 1914. Serial No. 853,927. (Cl. 114—224.)

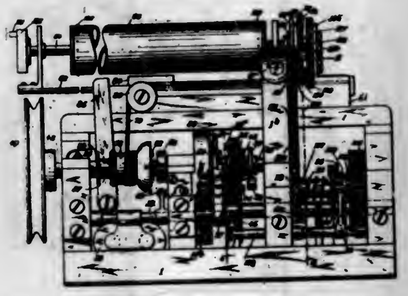


1. A reefing tool comprising a handle with an integral head laterally extended and bifurcated at the extremity, and with a vertical blade adapted to enter and to be guided by a seam substantially as and for the purpose set forth.

2. In a reefing tool such as described, comprising a handle; a head with lateral projections and bifurcated at the forward extremity; a throat in the upper surface of the bifurcated portions to receive and guide away the mateiral removed from the seam, substantially as shown and described.

3. In a reefing tool such as described comprising a handle a head with lateral projections bifurcated at the forward end, and a vertically projected blade adapted to enter a seam an independent blade located within the bifurcation of the lateral projections and removably secured within a longitudinal recess in the head, substantially as and for the purpose set forth.

1,114,904. PRINTER FOR PRINTING-TELEGRAPH SYSTEMS. DONALD MURRAY, London, England, assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 16, 1913. Serial No. 761,464. (Cl. 178—27.)



1. In a printer, the combination with printing devices and selecting devices; a main shaft; a cam shaft driven from the main shaft and having connections for operating the printing devices; a carriage and blank carrier; an operative connection between the main shaft and carriage including a coupling to effect the carriage return; and a lever having a movable projection operable by the selecting devices to bring said lever into operative connection with the cam shaft and thereby cause the coupling to close.

2. In a printer, the combination with a carriage and blank carrier; of a rotating shaft; an operative connection between the shaft and carriage including a coupling tending to close to effect the carriage return; a detent to hold the coupling open; a tripping device to release the detent; and a lever in operative engagement with the coupling and arranged to be moved by the carriage on its return to open the coupling and restore it to the control of the detent.

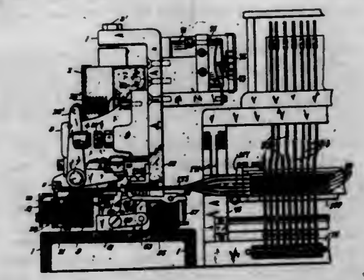
3. In a printer, the combination with a carriage and blank carrier; of a continuously rotating shaft; a drum; a cord attached at one end to the drum and at its other end to the carriage; means for operatively connecting said drum and shaft to wind up the cord and effect the carriage return, said means including a coupling tending to close to connect the drum and shaft, a detent to hold the coupling open, and a tripping device to release the detent; and a lever in operative engagement with the coupling and arranged to be moved by the carriage on its return to open the coupling and restore it to the control of the detent.

4. In a printer, the combination with printing devices, selecting devices, a striker bar and a carriage and blank carrier; of a continuously rotating shaft; an operative connection between the shaft and carriage including a coupling tending to close; a detent to hold the coupling open; and a tripping device to release the detent, comprising a lever having a movable projection operable by the selecting devices to bring said lever into operative connection with the striker bar.

5. In a printer, the combination with printing devices and a striker bar therefor, selecting devices and a carriage and blank carrier; of line feed mechanism mounted on and traveling with the carriage for actuating the blank carrier; a rotating shaft; an operative connection between the shaft and said line feed mechanism; and a lever controlled by the selecting devices and actuated by the striker bar for operatively connecting said shaft and line feed mechanism to operate the line feed mechanism and the carriage return.

[Claims 6 to 35 not printed in the Gazette.]

1,114,905. PRINTING-TELEGRAPH SYSTEM. DONALD MURRAY, London, England, assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 16, 1913. Serial No. 761,465. (Cl. 178—27.)



1. The combination with recording devices adapted to be actuated singly and in combination and an actuator therefor; of normally stationary selectors adapted to move from one fixed position to another fixed position to select the particular recording device or devices to be actuated and temporarily retain such selection; means for so moving the selectors; means for retaining the selectors in set position, and means for restoring the selectors to normal position.

2. The combination with recording devices adapted to be actuated singly and in combination and an actuator therefor; of selectors adapted to be set to select the particular recording device or devices to be actuated and temporarily retain such selection; setting means for the selectors; means separate from said setting means and disconnected from the recording devices for retaining the selectors in set position; and means for restoring the selectors to normal position.

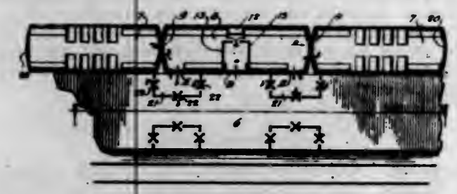
3. The combination with recording devices adapted to be actuated singly and in combination and an actuator therefor; of selectors adapted to be set to select the particular recording device or devices to be actuated and temporarily retain such selection; means for setting the selectors; and means operated by the actuator for restoring the selectors to normal position.

4. The combination with recording devices adapted to be actuated singly and in combination and an actuator therefor; of selectors adapted to be set to select the particular recording device or devices to be actuated and temporarily retain such selection, said selectors being adapted to be moved into and out of interposition between the recording devices and the actuator; setting means for the selctors; means separate from said setting means for retaining the selectors in set position; and means for restoring the selectors to normal position.

5. The combination with recording devices and an actuator therefor; of selectors adapted to be set to select the particular recording device or devices to be actuated; selecting magnets to move the selectors to one position; springs to move the selectors to their other position; pawls to retain the selctors in the position to which they have been moved by their magnets; and means to release the pawls.

[Claims 6 to 32 not printed in the Gazette.]

1,114,906. TRAIN OF PASSENGER-CARS. LOUIS NEWMAN, Chicago, Ill. Filed Sept. 15, 1913. Serial No. 789,800. (Cl. 105—205.)



1. A passenger train composed of one or more units, each of said units comprising three connected cars communicating with each other, one of said cars being provided with an entrance and exits for all of said cars forming the unit.

2. A passenger train composed of one or more units, each of said units comprising a plurality of connected cars communicating with each other, one of said cars having a single entrance and a plurality of exits for all of the cars.

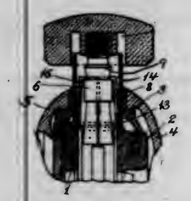
3. A passenger train composed of one or more units, each of said units comprising three or more connected cars communicating with each other, one of said cars being provided with an entrance for all of the cars forming said unit.

4. A passenger train composed of one or more units, each of said units comprising three connected cars communicating with each other, the center one of which is provided with an entrance, and a plurality of exits for all of the cars.

5. A passenger train composed of one or more units, each of said units comprising three connected cars communicating with each other, the center car being provided at its center with an entrance for all of the cars and an exit at each end for the end car at that end of the train and for the adjacent end of the center car.

[Claims 6 to 14 not printed in the Gazette.]

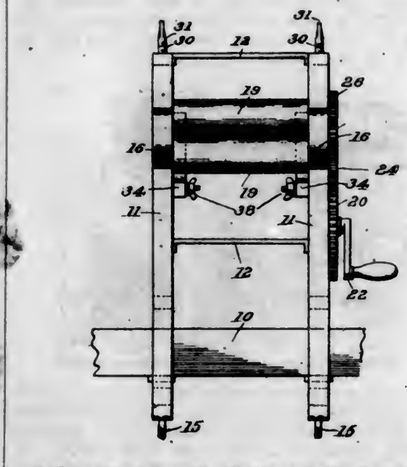
1,114,907. SETTING-STEM FOR WATCHES. OLOF OHLSON, West Newton, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Apr. 1, 1912. Serial No. 687,682. (Cl. 58—67.)



1. In a watch the combination of a case having an annular center, a sleeve passing radially through said case center and secured immovably thereto, a movement fitting in said case center, a winding and setting bar passing through said sleeve into connection with the movement and having a shoulder with inclined faces, and a retainer for said bar having a base flange gripped between the inner end of the sleeve and the movement, and having spring jaws within the sleeve embracing said bar and arranged to engage the shoulder thereof, the outer limits of said jaws being substantially in the outer circumference of the case center.

2. In a watch the combination of a case having an annular center, a sleeve passing radially through said case center and secured immovably thereto, a movement fitting in said case center, a winding and setting bar passing through said sleeve into connection with the movement and having a shoulder with inclined faces, and a retainer for said bar consisting of a sleeve located within the first-named sleeve and surrounding the bar, having an outturned flange on its inner end underlying the inner end of the first sleeve and gripped between the latter and the movement, and having an inturned flange and being longitudinally cut on its outer end to provide spring jaws adapted to engage the shoulder of the bar, the length of said retainer being approximately equal to the radial distance between the inner and outer circumferences of the case-center.

1,114,908. RAZOR-STROPPING DEVICE. JOHN PACZIGAR, Beaver Falls, Pa. Filed Feb. 16, 1914. Serial No. 818,919. (Cl. 51—16.)



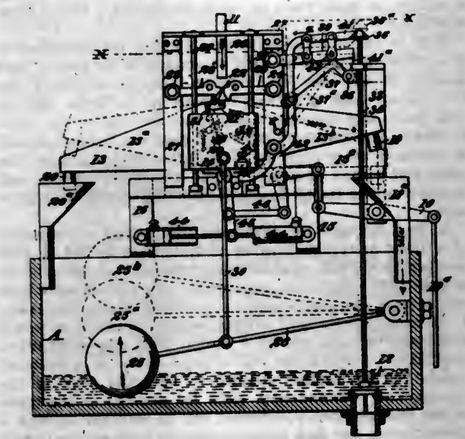
1. In a razor-stropping device, a pair of parallel frame members, each provided near its upper end with a vertical slot, and below said slot with a U-shaped off-set to provide two pairs of parallel arms, in combination with a pair of stropping rollers, the lower one of which is supported in bearings formed in the lower pair of said parallel arms, blocks supporting within said slots, adjusting screws extending through the upper ends of said frame members and connected to said blocks, parallel blade-holding brackets, each comprising a horizontal arm adjustably secured to the frame members, and a vertical arm having a pair of oppositely-inclined gripping jaws between which a razor blade is adapted to be held in position to present its edge between said rollers.

2. In a razor-stropping device, a pair of frame members provided with U-shaped off-sets forming two pairs of parallel arms, in combination with stropping rollers mounted between the frame members, and blade-supporting brackets provided with gripping jaws for supporting the cutting edge of the blade in position to project between said rollers, and means for revolving said rollers in opposite directions comprising a driving gear mounted upon a revoluble shaft mounted in bearings between said frame members, a train of gear wheels mounted upon one of said pairs of arms, a gear wheel fixed to the upper one of said rollers, and in gear with said train, and a gear wheel fixed to the lower roller and meshing with said driving gear.

1,114,909. PHOTOGRAPH-WASHING MACHINE. MYRON S. PELTON, Folsom, Cal. Filed Apr. 16, 1914. Serial No. 832,197. (Cl. 95—98.)

1. A photograph washing machine, comprising in combination a supply tank, a plurality of washing tanks connected with said tank, a float in the supply tank, and a valve connected with said pipe and controlled by the float for intermittently supplying the washing tanks with water.

2. A photograph washing machine, comprising in combination a supply tank, a water supply pipe, a rocking tank interposed between the supply pipe and the supply tank, said tank being centrally divided, means for temporarily locking said tank to prevent it from rocking from one side to the other, a float in the supply tank, means controlled by said float for releasing the locking means on the rocking tank, a discharge valve in the tank, and means controlled by the rocking tank for opening and closing said discharge valve.



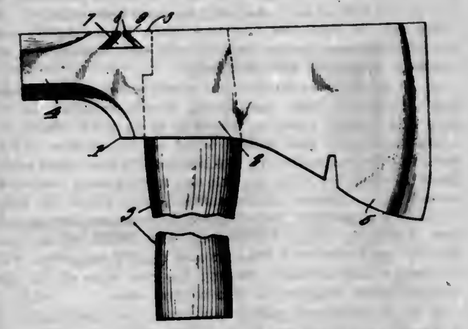
3. A photograph washing machine, comprising in combination a supply tank, a water supply pipe, a rocking tank interposed between the supply pipe and the supply tank, said tank being centrally divided, means for temporarily locking said tank to prevent it from rocking from one side to the other, a float in the supply tank, means controlled by said float for releasing the locking means on the rocking tank, a discharge valve in the tank, means controlled by the rocking tank for opening and closing said discharge valve, a plurality of connected washing tanks, and a pipe connecting one of said tanks with the valve in the supply tank.

4. A photograph washing machine, comprising in combination a supply tank, a water supply pipe, a rocking tank interposed between the supply pipe and the supply tank, said tank being centrally divided, means for temporarily locking said tank to prevent it from rocking from one side to the other, a float in the supply tank, means controlled by said float for releasing the locking means on the rocking tank, a discharge valve in the tank, means controlled by the rocking tank for opening and closing said discharge valve, a plurality of connected washing tanks, a pipe connecting one of said tanks with the valve in the supply tank, a valve in each washing tank, and means controlled by the rocking tank for intermittently closing and opening said valves.

5. A photograph washing machine, comprising in combination a supply tank, a water supply pipe, a rocking tank interposed between the supply pipe and the supply tank, said tank being centrally divided, a lug on said tank, a pair of latches engageable with said lug to hold the tank in one tilted position or the other, a float in the supply tank, means connected with said float for lifting first one and then the other of said latches to permit the rocking tank to rock from one side to the other, a discharge valve in the bottom of the supply tank, and means controlled by the rocking tank for opening and closing said valve.

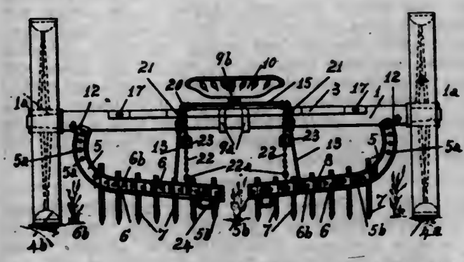
[Claims 6 to 11 not printed in the Gazette.]

1,114,910. NAIL-EXTRACTING HATCHET. ELMER B. REED, McDonald, Pa. Filed Feb. 13, 1914. Serial No. 818,557. (Cl. 145—44.)



A hatchet, the outer edge of the head being straight and having a transverse dove-tailed nail-engaging slot adjoining the butt end of the striking portion, the said slot extending completely between the sides of the head, and being tapered from one side of the head to the other.

1,114,911. DOUBLE-ROW CULTIVATOR. EMMA K. REIHER, Carlinville, Ill. Filed July 7, 1911. Serial No. 637,285. (Cl. 97—35.)



1. In a cultivator, the combination of an axle; wheels rotative on the axle and spaced to straddle three rows; outer eyes on said axle adjacent to the wheels respectively; intermediate eyes on the axle between said outer eyes; two upwardly curved and rearwardly converged beams having a series of holes near the upper end of each beam; two clevises respectively engaging in said outer eyes on the axle and adapted to engage in any hole of the series of holes in said beams respectively; upwardly inclined brace plates rigidly connected with the beams respectively and having a series of holes near the upper end of each brace-plate; and two clevises respectively engaging in said intermediate eyes on said axle and adapted to engage in any hole of the series of holes in said brace plates respectively.

2. The combination of a straight axle extending across the central row and two outside rows which are to be cultivated; wheels rotative on the axle and spaced apart to run on the outside of the outside rows respectively; two upwardly inclined and rearwardly converged beams having their forward ends flexibly and adjustably connected with the axle, the forward ends of said beams being adjacent to the wheels respectively; inclined brace-plates having their lower ends rigidly connected with the beams and their upper ends adjustably connected with the axle; tilling devices connected with one beam and adapted to till the space between the central row and one outside row; and tilling devices connected with the other beam and adapted to till the space between the central row and the other outside row.

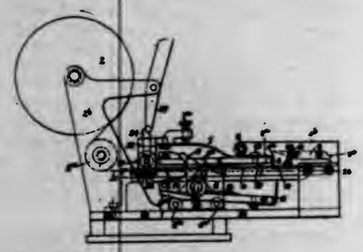
3. In a riding cultivator, the combination of a straight axle; supporting wheels rotative on the axle and spaced apart to straddle three rows which are being cultivated;

two rearwardly converged beams, having their front ends flexibly and adjustably connected with the axle adjacent to the wheels respectively and their rear ends adjacent to the central row which is being cultivated, one beam being on one side of said row and the other beam being on the other side of said row and two brace plates rigidly connected with said beams respectively and flexibly and adjustably connected with said axle.

4. In a riding cultivator, the combination of a straight axle; relatively high supporting wheels rotative on the axle and spaced apart to straddle three rows which are being cultivated, said wheels being on the outside of two outside rows respectively; two rearwardly converged beams flexibly connected with the axle and having their outer ends respectively adjacent to the outside rows which are being cultivated and their inner ends adjacent to the central row which is being cultivated; and draft connections flexibly connected with the axle and rigidly connected with the beams and normally keeping the rear ends of the converged beams adjacent to said central row.

5. In a double-row riding cultivator, the combination of a straight axle; supporting wheels rotative on the axle and spaced apart to straddle three rows which are being cultivated, one wheel being on the outside of one outside row and the other wheel being on the outside of the other outside row; two rearwardly converged beams having their front ends flexibly connected with the axle adjacent to said supporting wheels and their rear ends adjacent to the central row which is being cultivated; inclined brace plates having their lower ends rigidly connected with the beams and their upper ends flexibly connected with the axle, said brace-plates being effective to normally keep the rear ends of the beams adjacent to the central row which is being cultivated; a forked tongue rigidly connected with the axle and having rearwardly extending prongs, one prong being on one side of said central row and the other prong being on the other side of said central row; sheaves mounted on the prongs of the tongue; chains connected with the beams near the rear ends of the beams and supported on said sheaves; and stirrups at the free ends of said chains.

1,114,912. MACHINE FOR DELIVERING POSTAGE-STAMPS, TICKETS, AND THE LIKE. GEORGE LIVINGSTON RICHARDS, London, England, assignor to International Stamp and Ticket Machine Company, Kittery, Me. Filed Aug. 25, 1913. Serial No. 786,560. (Cl. 211—33.)



1. In a strip feeding and cutting machine, the combination with a fixed table over which the strip to be cut travels, of a strip feeding member on one side of said table adapted to swing toward and from the same to engage the strip and to move longitudinally of the table to advance said strip thereover, a swinging cutting member on the opposite side of the table adapted to move longitudinally in unison with the feeding member, and means for causing said members to swing toward each other and coact at the end of the feeding movement to detach a portion from said strip.

2. In a strip feeding and cutting machine, the combination with a fixed table over which the strip to be cut travels, of a strip feeding member on one side of said table adapted to swing toward and from the same to engage said strip and to move it longitudinally of the table a definite distance, projecting teeth on said member to positively engage said strip, a swinging cutting member on the opposite side of said table adapted to move longitudinally in unison with the feeding member, and means for causing said feeding and cutting members to swing toward each other and coact at the end of the feeding movement to detach a portion from said strip.

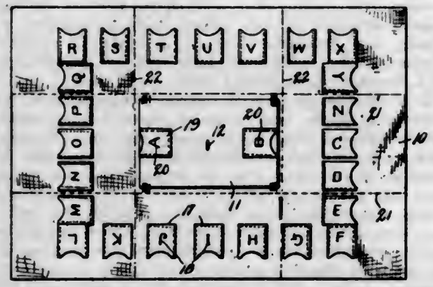
3. In a machine for delivering stamps, the combination of a support to receive a strip of stamps to be fed, a pivoted reciprocatory member on one side of said support having a plurality of teeth at its forward edge to engage and feed said strip along said support, a pivoted reciprocatory cutting member on the other side of said support, and means for rocking said feeding member and said cutting member toward each other at the end of the feeding movement to cause them to coact and detach a stamp from said strip.

4. In a machine for delivering stamps, the combination of a table to receive a strip of stamps to be fed, a feed member at one side of said table adapted to convey the strip along same, a cutting member at the other side of said table, said members coacting at the end of the table to detach a stamp from the strip, resilient means adapted to normally exert pressure to hold the stamps against the table and means operated by the movement of the feed member during its feeding movement to release said pressure.

5. In a machine for delivering stamps, the combination of a table to receive a strip of stamps to be fed, a feed member at one side of said table, teeth at the outer end of said member adapted to engage and feed the stamps along said table, a cutting member at the other side of said table, a blade carried by said cutting member adapted to coact with said teeth to detach a stamp from the strip when said members reach one end of said table, an adjustable pivoted spring member adapted to normally bear on the stamps, and provided with slots for passage of the teeth of the feed member, a deflected tail to said spring, and a projection on the feed member adapted to engage said tail to relieve the pressure of the spring on the stamps.

[Claim 6 not printed in the Gazette.]

1,114,913. MAIL-POUCH. EDWARD RILES, Isola, Miss., assignor of three-fourths to C. A. Conley, H. B. Broon, Eliga Chambers, and E. L. Chambers, Isola, Miss. Filed Nov. 25, 1913. Serial No. 802,973. (Cl. 150—14.)



1. The combination of a mail pouch and a tie therefor, including a blank of flexible material, mail receiving pockets thereon, a blank of stiffening material arranged centrally off said blank, a plurality of straps, and a single rivet passed through and securing said stiffening material said flexible material and said straps together at a common point, said flexible material being foldable over said stiffening material, said straps being then foldable around the folded flexible material to encompass the same and maintain the same in a small compact bundle.

2. The combination of a mail pouch, the same being foldable into a small compact oblong bundle, straps secured on said mail pouch and being adapted to be passed around the bundle and to terminally overlap opposite from the secured portion, said terminal portions being provided with registering loops, and other straps secured to said pouch and passing around said pouch at right angles to the first named straps and being carried through both of said loops in opposite directions and then carried around said bundle to said common point and there secured removably together.

3. In a device of the kind described, a rectangular blank comprising a central stiffened portion, side and end portions defined from the central portion by fold lines, said side and end portions being rectangular in form, and corner portions located between the side and end portions and defined therefrom by fold lines, said blanks being provided with pockets on all of said portions, and the side, end and corner portions being foldable onto the stiffened central portion.

1,114,914. ADDING AND LISTING MACHINE. FRANK C. RINSCHE, St. Louis, Mo., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 7, 1909. Serial No. 521,589. (Cl. 235—60.)

1. In a machine of the character described, the combination of two sets of adding wheels and transfer or carrying mechanisms, and means for accumulating successive amounts on both sets of wheels simultaneously, with provisions for taking totals from either independently of the other, for eliminating items from either, and for transferring accumulations from one to the other.

2. In a machine of the character described, the combination of two sets of adding wheels and transfer or carrying mechanisms, and means for accumulating successive amounts on both sets of wheels simultaneously, with provisions for accumulating on one to the exclusion of the other, for taking totals from either independently of the other, and for transferring accumulations from one to the other.

3. In a machine of the character described, the combination of two sets of adding wheels and transfer or carrying mechanisms, means for accumulating successive amounts on one set of wheels, and means for simultaneously accumulating any one or more of the items at will on the other set of wheels.

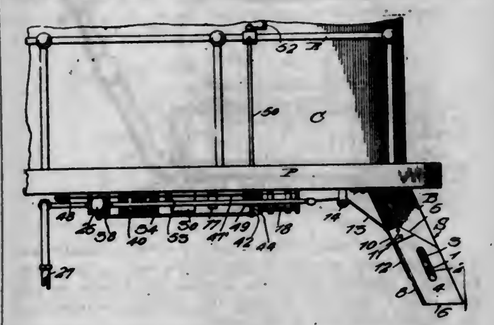
4. In a machine of the character described, the combination of two sets of adding wheels, setting up and actuating means therefor and controlling devices causing said sets of adding wheels to automatically alternate in receiving items set up.

5. In a machine of the character described, the combination of two sets of adding wheels, setting up and actuating means therefor, printing mechanism, a shiftable paper carriage, means for shifting the latter first one way and then the other automatically, and means causing the said sets of adding wheels to automatically alternate in receiving items set up.

[Claims 6 to 63 not printed in the Gazette.]

1,114,915. COACH-STEP AND OPERATING MECHANISM. WILLIAM BRYSON ROGERS, Lucas, Kans. Filed Apr. 23, 1914. Serial No. 833,960. (Cl. 105—87.)

1. The combination with a platform and a flight of steps depending therefrom, of a supplemental step mounted to rise and fall beneath said flight, an operating plunger slidable toward and away from said flight, a connection between said plunger and said supplemental step for raising the latter when the plunger is retracted, means for retracting said plunger and a releasable catch for retaining the same in retracted position.



2. The combination with a platform and a flight of steps depending therefrom, of a supplemental step mounted to rise and fall beneath said flight, an operating plunger slidable toward and away from said flight, a connection between said plunger and said supplemental step for raising the latter when the plunger is retracted, a fluid operated plunger for retracting said operating plunger, and a releasable catch for retaining the same in retracted position.

3. The combination with a platform and a flight of steps depending therefrom, of a supplemental step mounted to rise and fall beneath said flight, an operating plunger slidable toward and away from said flight, a connection between said plunger and said supplemental step for raising the latter when the plunger is retracted, a lateral projection on said operating plunger, a fluid pressure cylinder at the outward limit of movement of said projection, a plunger slidable within said cylinder and projecting through the end thereof adjacent the projection, a valved pressure inlet into said cylinder behind the plunger, and a releasable catch for retaining said operating plunger in retracted position.

4. The combination with a platform and a flight of steps depending therefrom, of a supplemental step mounted to rise and fall beneath said flight, an operating plunger slidable toward and away from said flight, a connection between said plunger and said supplemental step for raising the latter when the plunger is retracted, means for retracting said plunger, and a spring pressed fluid operated catch for retaining said plunger in retracted position.

5. The combination with a platform and a flight of steps depending therefrom, of a supplemental step mounted to rise and fall beneath said flight, an operating plunger slidable toward and away from said flight, a connection between said plunger and said supplemental step for raising the latter when the plunger is retracted, means for retracting the plunger, a shoulder on said plunger, a pivoted spring pressed catch adapted to abut said shoulder when the plunger is retracted, and a fluid pressure operated plunger for tripping said catch to release the operating plunger.

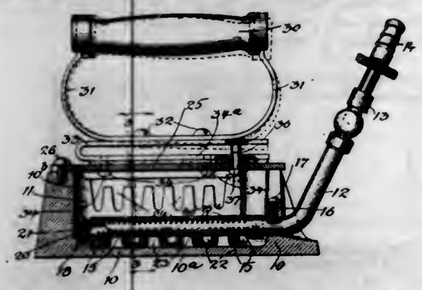
[Claims 6 to 9 not printed in the Gazette.]

1,114,916. SAD-IRON. FRANK W. ROSENGREN, Chicago, Ill., assignor to Enterprise Tool and Metal Works, Chicago, Ill., a Corporation of Illinois. Filed June 29, 1912. Serial No. 706,603. (Cl. 68—27.)

1. A sad-iron comprising a body, a cover, a handle, and a resilient strip one part of which is secured to the handle and the other part to the cover, forming a yielding connection between the handle and the iron.

2. A sad-iron comprising a body, a cover, a handle and a U-shaped resilient strip having a member secured to the

handle, a parallel member secured to the cover, forming a yielding connection between the handle and the iron.



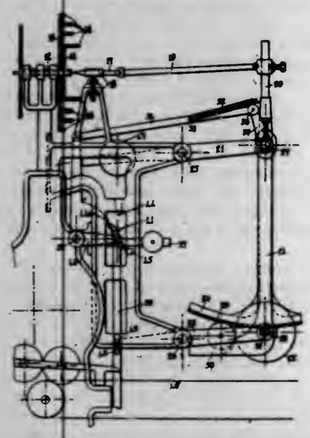
3. A sad-iron comprising a body, a cover, a handle, and a resilient strip secured to the handle and to the cover, forming a yielding connection between the handle and the iron, and a stop for limiting the vertical movement of the handle relatively to the cover.

4. A sad-iron comprising a body, a cover, a handle, a U-shaped strip secured to the handle and to the cover, forming a yielding connection between the handle and the iron, and a stop-screw on one member of said strip and extending through the other member and the cover to limit the movement of one member relatively to the other.

5. A sad iron comprising a body, a handle, and resilient means secured to the handle and to the body, forming a yielding connection between the handle and the body to permit the iron to be yieldingly pressed into contact with the material being ironed or pressed.

[Claim 6 not printed in the Gazette.]

1,114,917. MACHINE FOR MEASURING THE SUPERFICIAL AREA OF LEATHER AND LIKE MATERIALS. GUSTAV ADOLF SCHETTLER, Leicester, England. Filed Feb. 10, 1911. Serial No. 607,744. (Cl. 234—1.)



1. In a machine of the class described, in combination, a device rotatable by the surface measured, a marking mechanism provided with a plurality of characters indicative of surface areas, means coöperating with said marking mechanism and with said movable device to present to the surface measured by the machine a character of the marking mechanism corresponding to the area measured by the machine, a second rotatable device concentric with the first-mentioned rotatable device and responsive to the difference in thickness of the surface being measured independently of the first-mentioned device, a marking mechanism provided with a plurality of characters indicative of thickness, means coöperating with said thickness marking mechanism and with the device responsive to the thickness of the material to present to the surface measured by the machine a character of the thickness marking mechanism corresponding to the thickness of the material.

2. In a machine of the class described, in combination, a marking mechanism to mark the surface being measured, a rotatable cam disk having a plurality of steps of different length, means movable toward and from said cam disk and coöperating therewith and with said marking mechanism to position the marking mechanism according to the position of the cam disk, and means to rotate said cam disk, substantially as described.

3. In an area-measuring machine, a series of type or marking wheels movable into and out of contact with the material being measured, means to automatically set said type wheels to the correct marking position, manually operated means to put said setting into operation, and a plurality of cam disks movable in company with the measurement indicating means to arrest the action of the aforesaid setting means when the type wheels have been moved to the position which corresponds to the indication of the indicating means substantially as and for the purpose described.

4. In an area-measuring machine stamping or marking indicating devices provided with pointers, mechanism consisting of disks rotated by the pointers of the indicating devices, a series of graduated steps on said disks, a series of rotatable type wheels, an inking roller for the type wheels, a series of swinging segments to actuate the type wheels, rock levers to carry said type wheels, arms to carry said segments, means to move said rock levers and arms to bring the type wheels into and out of contact with the material, a series of plungers connected to and actuated by the swinging segments said plungers being adapted to make contact with the steps on the rotary disks, and means for actuating the segments consisting of a rocking rod adapted to move said segments to the normal position, springs to move said segments to cause a rotation of the type wheels when the rod is released, a rock lever to actuate said rocking rod and bring it into and out of contact with the segments, and means to actuate said rock lever substantially as and for the purpose described.

5. In a machine of the class described, in combination, a marking mechanism to mark the surface being measured, a movable device having a plurality of steps of different length, means actuated by the surface being marked for moving said device, and means movable toward and from said stepped device and coöperating therewith and with said marking mechanism to arrest the marking mechanism according to the position of the stepped device, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,114,918. LIFTING-JACK. CHRISTOPHER F. SCHLEMMA, Preston, Iowa. Filed Aug. 5, 1913. Serial No. 783,130. (Cl. 57—129.)

1. In a device of the character described, a frame, a shaft in the lower part of the frame having a gear wheel mounted thereon, a drum mounted on said shaft, a pulley pivoted in the upper part of the frame, a cable provided with a hook at one end and attached to the drum at the other end and adapted to travel over the pulley, means engaging the gear wheel on the shaft for winding the cable on the drum and raising the pipe from the well, and means including a guard secured to the frame for holding the pipe in an upright position when the pipe is partly drawn from the well or lowered into the well.

2. In a device of the character described, a frame, a shaft journaled in the lower end of the frame, a gear wheel mounted upon the shaft, a drum on the shaft, a second shaft loosely journaled in the frame and adapted to be moved endwise in the frame, a gear mounted on said shaft, means for bringing said gear into and out of engagement with the gear wheel on the first shaft, a pulley mounted in the frame near the top, a single cable secured to the drum and arranged to be wound on the drum in one direction and to travel over said pulley, a second pulley mounted in the frame near the top, a cord attached to the drum and arranged to be wound on the drum in the opposite direction from that of the cable, means for rotating the drum to wind the cable and cord in opposite directions on the drum, and means for grasping the load to be raised.

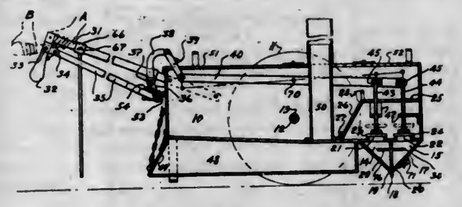
3. In a device of the character described, a frame, a shaft journaled near the bottom of the frame and carrying a gear wheel, a drum mounted on said shaft, a second shaft loosely journaled in the frame at a short distance above the first shaft and carrying a gear adapted to engage the gear wheel on the first shaft, a sprocket wheel mounted on said second shaft, a shaft journaled near the top of the frame, a sprocket wheel mounted on said upper shaft, a sprocket chain traveling around the two sprocket wheels, a pulley mounted in the top of the frame, and a cable secured to one side of the drum and adapted to travel over the pulley and engage the load to be lifted.

4. In a device of the character described, a frame, a shaft journaled in the frame near the bottom and carrying a gear wheel and a drum, a second shaft loosely journaled in said frame and carrying a gear wheel adapted to mesh in with the gear wheel on the first shaft, a sprocket wheel on said second shaft, means for bringing the gear wheels on the two shafts into and out of engagement with each other, a shaft journaled in the upper part of the frame and carrying a sprocket wheel, a sprocket chain arranged to travel around both sprocket wheels, a pulley journaled near the top of the frame, and a cable secured to the drum and arranged to travel over the pulley and provided with means for grasping the load.

5. In a device of the character described, a frame, a shaft journaled near the bottom of the frame on which is mounted a gear wheel and a drum, a second shaft loosely journaled in the frame and carrying a gear wheel adapted to engage the gear wheel on the first shaft, a sprocket wheel on said second shaft outside of the frame, means for bringing the gear wheels on both of the shafts into and out of engagement with each other, a shaft journaled in the upper end of the frame and carrying a sprocket wheel, a sprocket chain arranged to travel around both sprocket wheels, a pulley pivoted in the upper end of the frame, a cable attached to and wound around the drum in one direction and arranged to travel over the pulley, a second pulley in the frame, a cord secured to and wound upon said drum in the opposite direction from that of the cable and arranged to travel around the second pulley, whereby the cable can be lowered without movement of the two sprocket wheels.

1,114,919. LIQUID-HYDROCARBON DISTRIBUTER FOR ROADS. DAVID SCHOENTAG, Glasco, and ELMER J. LATUS, Albany, N. Y. Filed Oct. 10, 1911. Serial No. 653,937. (Cl. 137—63.)

1. In a device of the character described, the combination of a wheeled tank having a discharge, valve means for controlling the discharge, handles in front for pulling the tank, said handles being pivotally connected with the tank, and connections between the handles and the valve means, whereby the relation between the handles and tank resulting when the latter is pulled by the handles which are free to pivot, causes the opening of the valve means.



2. In a device of the character described, the combination of a wheeled tank having a discharge, valve means for controlling the discharge, handles in front for pulling the tank, said handles being movably connected with the tank, and means operated by said handles for opening said valve means.

3. In a device of the character described, the combination of a wheeled tank having a discharge, valve means for controlling the discharge, handles in front of the tank for pulling the same with the valves closed, a second set of handles in front of the tank for pulling the same with the valves open, these handles being movably connected with the tank and being positioned so that the operator may readily shift his grasp from one set of handles to the other so as to pull the tank by means of either, and connections between the second set of handles and the valve means whereby the latter are opened by the change in relative position between these handles and the tank when the tank is pulled thereby.

4. In a device of the character described, the combination of a wheeled tank having a discharge, valve means for controlling the discharge, shafts extending in front of the tank and affording handles for pulling the same with the valves closed, a second pair of handles pivoted to said shafts, these handles being so constructed and arranged that the operator may shift his grasp from one set of handles to the other to pull the tank by either, and connections between the second set of handles and the valve means for opening the latter.

5. In a device of the character described, the combination of a tank supported on two wheels and having a discharge, valve means for controlling the discharge, handles in front for pulling the tank, said handles being pivotally connected with the tank, and connections between the handles and the valve means, whereby the relation between the handles and tank resulting when the latter is pulled by the handles which are free to pivot, causes the opening of the valve means, said tank being overbalanced at one side of its wheels so as to hold the valve means open.

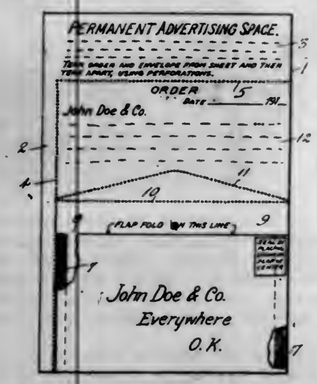
[Claims 6 to 11 not printed in the Gazette.]

1,114,920. LEAF OR INSERT FOR BOOKS AND THE LIKE. HENRY SEELIGSON, Dallas, Tex. Filed Feb. 8, 1913, Serial No. 746,998. Renewed Aug. 11, 1914. Serial No. 856,286. (Cl. 11—19.)

1. A leaf for books and the like comprising a sheet having a binding portion extending along one edge, a permanent portion bearing advertising matter and a portion adapted to be detached from the sheet, said detachable portion including an order blank bearing memorandum peculiar to the advertisement of the permanent portion, and also a part prepared for mailing with the order blank and bearing an address relating to the advertisement of the permanent portion.

2. A leaf for books and the like comprising a sheet having a binding portion extending along one side edge thereof, a permanent portion bearing advertising matter, and a portion adapted to be detached from the sheet, said por-

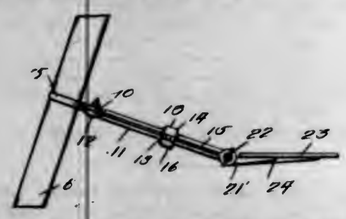
tion of the sheet being divided into two parts by a weakened line, one of said parts constituting an order blank and bearing memorandum peculiar to the advertisement of the permanent portion, and the other of said parts being folded upon itself and the folded portions being secured together to form an envelop.



3. A book leaf or insert comprising a single sheet having a binding portion along one side and provided with a weakened line parallel to the binding portion and having a weakened line extending from the first weakened line across the sheet, said weakened lines defining a portion of the sheet, the said defined portion of the sheet being divided into two sections by a third weakened line and one of said sections of the sheet having an envelop constructed thereon and also provided with a portion forming a flap for the envelop.

4. A book leaf comprising a sheet having a binding portion along one side and provided with converging weakened lines at an angle to each other and each extending to a different edge of the sheet, a portion of the sheet being defined from the remainder of the sheet by said weakened lines and made detachable thereby, said defined portion of the sheet being provided with a weakened line dividing it into two sections one of which has a completed envelop formed therein and the other section being arranged as an order blank.

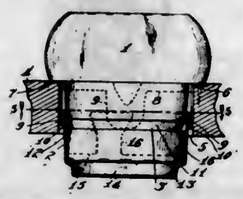
1,114,921. ADJUSTABLE SHELF-BRACKET. INGVALD E. SELSTAD, Kingsville, Tex. Filed May 26, 1914. Serial No. 841,056. (Cl. 248—19.)



1. A device of the character described comprising a substantially U-shaped plate adapted to be clamped upon a support, a horizontally adjustable swinging arm connected therewith, a cylindrical extension on the free end of said arm, a member surrounding said cylindrical extension and revolubly adjustably clamped thereon, an arm extending from said last named member, an arm pivotally connected with the free end of said last named arm, a clamping screw for securing said ends together, and a platform secured upon said last named arm, said last named arm being vertically adjustable.

2. A device of the character described, comprising a U-shaped member, a clamping screw extending through one arm thereof and adapted to engage a support, an arm pivoted upon said member by a clamping screw, the contacting faces of said member and said arm being provided with grooves, said arm being laterally adjustable, a cylindrical extension formed on the free end of said arm and provided with longitudinal grooves, a member surrounding said cylindrical extension and provided internally with longitudinal grooves coacting with the grooves in said cylindrical extension, said last named member being formed of a rigid section and a hinged section releasably clamped thereon, an arm extending from said stationary section, an arm pivotally connected with the free end of said last named arm, the ends of said last named arms having their contacting faces provided with grooves, a clamping screw extending through said ends, and a platform secured upon the outer end of said last named arm.

1,114,922. INK-WELL HOLDER. GUSTAV J. SENGBUSCH, Milwaukee, Wis. Filed Dec. 26, 1911. Serial No. 667,865. (Cl. 120—58.)



1. The combination with a desk, having an aperture in its top, of a socket member secured in said aperture and having a plurality of radially disposed spring tongues, inturned locking lips at the ends of said tongues, a well having a reduced annular extension adapted to be seated in said holder, and provided with an annular locking groove for receiving said locking lips and a removable key member having an annular base portion adapted to fit over the lower end of the well and provided with a plurality of up-standing tongues for forcing said locking lips out of said groove to release the well.

2. The combination with a desk having an aperture in its top, of a holder secured within said aperture and having a plurality of radially disposed tongues provided at their lower ends with locking lips, an inkwell having a reduced lower end adapted to fit within said holder and provided with an annular grove with which said locking lips engage and a removable key mechanism for forcing said lips out of said groove to release the well.

3. The combination with a desk having an aperture in the top thereof, of an inkwell having a reduced extension ntting within said aperture, said extension being provided with an annular locking groove, a holder secured within said aperture, spring locking tongues carried by said holder and adapted to have locking engagement with said groove and a removable key member for forcing said tongues out of their groove to release the well.

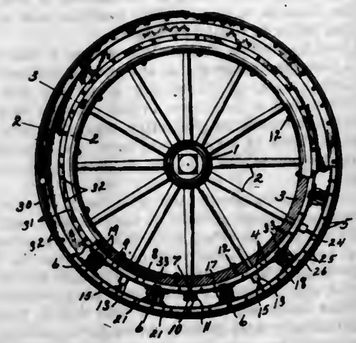
4. The combination with a desk having an aperture in its top, of a well seated within said aperture and having an annular locking groove, spring tongues secured within said aperture and adapted to have locking engagement with said groove and a removable annular key member having fingers for forcing said tongues out of said groove to release the well.

5. The combination with an inkwell having an annular locking groove, of a holder for receiving said well, spring locking tongues carried by said holder and adapted to automatically snap into the locking groove when the well is inserted within the holder and a removable key member for forcing the tongues out of said groove to release the well.

[Claims 6 to 9 not printed in the Gazette.]

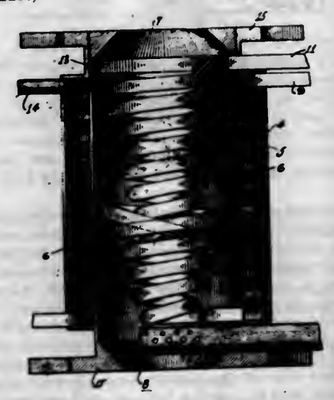
1,114,923. VEHICLE-WHEEL. CYRUS R. SHUMWAY, Hayt Corners, N. Y., assignor of one-half to Orville W. Brown, Hayt Corners, N. Y. Filed June 13, 1913. Serial No. 773,440. (Cl. 152—32.)

1. A tire comprising inner and outer concentric rings, plates secured to the inner ring and each provided with a pair of spaced sockets, the outer ring provided with longitudinally elongated openings, plates resting loosely against said outer ring and having lugs positioned in said openings to move circumferentially of said ring, said plates each provided with a pair of spaced studs projecting toward the inner ring and slidably positioned in the sockets in the plates secured to the inner ring, and a spring positioned between said plates intermediate the coacting sockets and studs.



2. A tire comprising inner and outer concentric rings, plates secured to the inner ring and each provided with a pair of spaced sockets, the outer ring provided with longitudinally elongated openings, plates resting loosely against said outer ring and having lugs positioned in said openings to move circumferentially of said ring, said plates each provided with a pair of spaced studs projecting toward the inner ring and slidably positioned in the sockets in the plates secured to the inner ring, a spring positioned between said plates intermediate the coacting sockets and studs, and additional sockets formed in the inner of said rings and elongated circumferentially of said ring, and studs extending inwardly from the outer ring and seated in said sockets and movable therein circumferentially of said ring.

1,114,924. FUEL-HEATER. JOHN C. SKINNER, Stockton, Cal. Filed Dec. 18, 1913. Serial No. 807,446. (Cl. 257—229.)

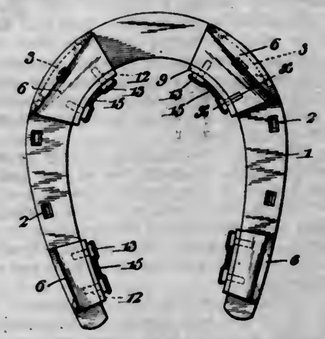


1. A fuel heater comprising a casing, a tubular member spaced within said casing forming an intermediate chamber, said tubular member having an opening at each end, a pipe leading into and through said tubular member and then communicating with said chamber, a pipe leading into and through said chamber and leading thence from said chamber, and means admitting a heating medium to said first named pipe, as described.

2. A fuel heater comprising a casing, a tubular member spaced within said casing and forming an intermediate chamber, a pipe leading into said tubular member and being formed into coils therein and then communicating with said chamber, a pipe leading into such chamber and being formed into coils therein and leading thence from said chamber, and means admitting a heating medium to said first named pipe, as described.

3. A fuel heater comprising a casing, a tubular member spaced within said casing forming an intermediate chamber, a pipe projecting into said tubular member and being formed in a plurality of conical coils therein and thence communicating with said chamber, another pipe projecting into said chamber and being formed into coils therein and leading thence from said chamber and means admitting a heating medium to said first named pipe, as described.

1,114,925. CALK FOR HORSESHOES. FRANK SNYDER, Indiana, Pa. Filed May 31, 1913. Serial No. 770,928. (Cl. 168—34.)

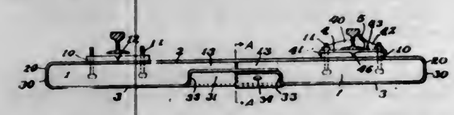


1. A horse shoe provided at intervals in its upper face adjacent its inner and outer edges with inwardly extending recesses, the said recesses adjacent the outer edge being extended downwardly in the periphery to the under face of the said shoe, the side and inner walls of said recesses being disposed at right angles to the upper face of the shoe, calks, said calks being provided with inner and outer faces, said outer faces being provided with upwardly and inwardly extending hook members adapted to engage within the said recesses upon the outer and upper portion of said shoe, the inner face of said calks terminating short of the inner edge of the said shoe, a plate of uniform thickness provided at one end with a hook portion adapted to engage within said inner recess of said shoe, said plate being of such thickness as to engage the inner face of said calk when in position upon the shoe, the sides and ends of the portions of said calks and plates fitting within said recesses being disposed at right angles to the body portions thereof to snugly engage the walls of said recesses, and screws for holding said plate in position upon said calk, substantially as described.

2. A horse shoe provided upon its periphery and outer portion of the upper face thereof with notches, the inner edge of the said upper face being also provided with oppositely disposed notches, vertical walls in the said upper face of the said shoe of the same curvature thereof and spaced inwardly from the opposite edges to limit the inward extent of the said notched portions, the said notched portions being limited in their longitudinal extent by vertical inwardly converging end walls, calks, said calks being provided with inner and outer faces, said outer face being provided with an upwardly and inwardly extending hook member, the upwardly extending portion of said hook member being of the same dimension as and adapted to engage within the said notch in the periphery of said shoe, while the inwardly extending hook portion is provided with a curved outer edge and outwardly converging sides to fit snugly within the notched portion in

the upper face of said shoe, the inner face of said calk terminating short of the inner edge of said shoe, a plate of uniform thickness provided at one end with a hook portion having a concaved outer face and diverging end walls adapted to engage in the said notch in the inner upper face of said shoe, said plate being of such thickness as to engage the inner face of said calk when in position upon the shoe, and screws for holding said plate in position upon said calk, substantially as described.

1,114,926. RAILROAD-TIE. THOMAS SPOONER, Maple Valley, Wash. Filed May 27, 1914. Serial No. 841,395. (Cl. 238—5.)



1. A railroad tie having a concrete body transversely divided in the middle of its length to form two like parts, a metal cover plate extending over both said body sections and having holes and the concrete sections having raised tables extending upward through said holes to a lever above the upper level of the plate, said raised tables being of a size and so located as to receive the rails and the securing means therefor.

2. A tie having a concrete body divided transversely centrally of its length, the inner ends of each half of said body having a short section beveled beneath to present a corner downwardly, each half of the tie having an upwardly raised table adapted for the reception of the rail holding means, and a metal cover plate having engagement with the two halves of the tie body to prevent relative displacement.

3. A tie having a concrete body transversely divided centrally of its length into two parts, the inner end of each part having a section with under surfaces inclined to the horizontal, a metal tie-plate extending lengthwise the tie and having engagement with the outer end surfaces of both parts of the concrete body to prevent their separation, and two bottom plates extending, each under its half of the tie body and overlapping at the center, the inner ends of said plates being bent to fit the inclined under surfaces of the tie bodies, and a locking engagement between these plates permitting a small longitudinal movement between them.

1,114,927. RAIL CHAIR AND BRACE. THOMAS SPOONER, Maple Valley, Wash. Filed May 27, 1914. Serial No. 841,396. (Cl. 238—2.)

1. A rail chair comprising a plate having at one end upturned side flanges with projecting ends adapted to engage the upper surface of a rail base and at the other end having upturned side flanges which do not overhang the rail base, said latter flanges having key receiving holes, a rail brace fitting between said latter flanges and having holes registering with the holes in the flanges when in rail holding position, and a locking key passing through said brace and the flanges of the chair.

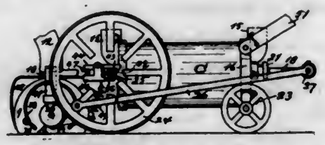
2. A rail chair comprising a plate having downwardly projecting tie-engaging ribs and upwardly projecting side flanges at each end, said flanges at one end having overhangs adapted to engage the upper surface of the rail base and the face of the rail web, the flanges at the other end lying entirely outward from the rail and having holes for the reception of a locking pin, a rail brace or clamp having holes for the reception of said locking pin and engaging the rail to brace and hold it down when said holes register with those in the chair flanges, and a locking pin adapted to enter said holes.

3. A rail chair comprising a plate having transverse tie-engaging ribs, one of which is located centrally of the length of the plate, and upwardly projecting side flanges at each end, said flanges at one end having overhangs adapted to engage the rail base and web, the flanges at the other end having holes for the reception of a locking key or pin, a rail brace fitting between said latter flanges and having downwardly projecting lugs, the chair having holes for the reception of said lugs, and the brace having holes registering with those in its associated side flanges when the chair is in rail holding position, and a locking pin fitting holes in chair and brace.

4. A rail holding mechanism comprising a chair consisting of a plate having means at one end for holding engagement with a rail, and upwardly projecting side flanges at the other end, a rail brace fitting between said flanges and having downwardly projecting lugs, the chair having holes in position to receive said lugs, and a locking pin engaging the chair and brace to hold the brace in locked position.

5. A rail holding mechanism comprising a plate having downward projections adapted to have holding engagement with the tie and provided with rail holding members at one end and at the other end having upwardly projecting side flanges and perforations through its base just inward of said flanges, a rail brace fitting between said flanges and consisting of a plate bent into a trough-like cross section, the sides or flanges of said brace being cut to form edges fitting respectively against the upper surface of the chair, the top of the rail base and the face of the rail web, the curved connecting part of said plate extending at an angle of approximately 45° with the horizontal, the lower edge of the brace having projecting lugs and the chair having holes for said lugs and the upper end of the brace fitting under the rail head, the sides of the brace and the flanges of the chair having registering holes and a locking pin passing through said holes to hold the brace in position.

1,114,928. SUCTION-SWEEPER. FREDERICK STEINKOENIG, Cincinnati, Ohio. Filed Oct. 10, 1913. Serial No. 794,498. (Cl. 15—60.)



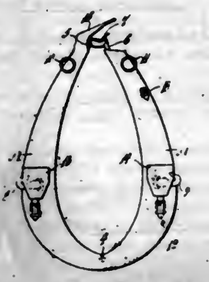
1. A portable suction-sweeper, comprising a vacuum-chamber, a pump adapted to withdraw the air therefrom, axle-bearings provided on opposite ends of the pump, a suction-head in open communication with the vacuum-chamber and a spring-actuated latch-bar provided with hook-shaped catches and co-acting propections fitted to engage between them the axle-bearings at one end of the pump whereby the suction-head is detachably held in position.

2. A suction-sweeper comprising a vacuum-chamber, a pump adapted to withdraw the air therefrom and a suction-head in open communication with the vacuum-chamber and provided with a suction-mouth, attaching means comprising a bar whereby the suction-head is connected in position, spring-rods extending from this bar over the suction-head and connected at their downwardly curved ends to one side of the same, and coil-springs connected at one of their ends to said bar and at their other ends to the other side of the suction-head whereby this latter is yieldingly held in position between said spring-rods and said coil-springs and in a manner to maintain the suction-mouth in contact with the surface over which it passes.

3. In a suction-sweeper, a suction-head the bottom of which consists of two pockets which are spaced to form a suction-mouth between them, a rotary brush supported above this mouth, journals at each end of these pockets whereby they are supported in a manner to permit tilting, an arm provided on one journal of each pocket, a bowed

spring connected to each of these arms and a slide connected to the spring for the purpose of manipulating it to adjust the position of the pockets.

1,114,929. COMBINED HAMES AND COLLAR. RAMSAY ROBERT STEWART, Waiboia, New Zealand. Filed Jan. 22, 1913. Serial No. 743,429. (Cl. 54—18.)



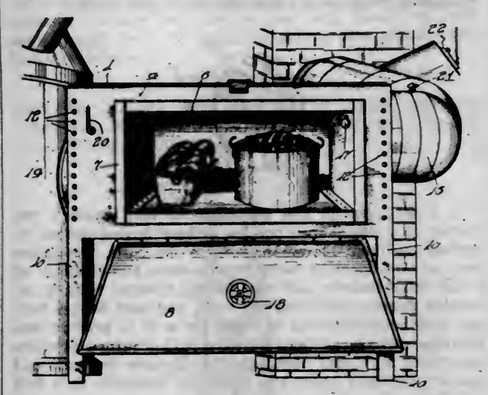
A horse-collar, including a stuffed frame, hames with their respective members hinged together at their lower ends, said hames-members being embedded within said stuffed frame and having integral tug or pull bars, also integral terret-members, said pull bars and terret-members extending beyond said stuffed frame, a leather cover secured to the back-leather of the collar, and tightly drawn over said stuffed frame and hames, said pull-bars and terret-members extending through openings provided in said leather-cover, said leather-cover being provided with flaps overlying said pull-bars and the openings in said leather cover through which said pull-bars extend, and fastening means between the upper free ends of said hames-members, the upper end of one side of the cover having an integral extension adapted to be connected to the upper end of the opposite side of said cover and overlying the fastening means between the upper ends of the hames.

1,114,930. SPRING-WHEEL. FREDERICK STITZEL, Louisville, Ky. Filed Mar. 21, 1913. Serial No. 756,009. (Cl. 152—32.)

1. A spring wheel, having an inner member and an outer member, connections between these members, including a series of housings on one of the members and a co-acting series of hangers on the other member, the housings having tubular portions, springs arranged transversely therein, conical bearing pieces, mounted in and supported by the springs, bolts passing through and connecting said housings, hangers and springs transversely, and grooved disks to match said conical bearing pieces mounted on and carried by said bolts.

2. A spring wheel, having an inner member and an outer member, and means to connect these members at intervals, comprising housings, springs arranged transversely therein and provided with conical tubular bearing pieces, complementary grooved disks matched to said conical bearing pieces, hangers overlapping the housings and closing the ends of their tubular portions, and transverse bolts connecting the hangers and housings and on which the grooved disks are fixed.

1,114,931. OVEN. CHARLES H. STOLP, Aurora, Ill. Filed Mar. 25, 1914. Serial No. 827,027. (Cl. 126—100.)



1. An oven adapted to be inserted in the smoke conduit of a heater between the combustion chamber and the damper and check draft and comprising an outer and an inner casing, the bottom, top, back and end walls of which are spaced apart to provide a suitable flue-way, said inner casing being removably inserted within said outer casing and a door hinged to said outer casing and adapted to cover the juncture of said inner and outer casings and close the compartment of said inner casing.

2. An oven adapted to be inserted in the smoke conduit of a heater between the combustion chamber and the chimney and comprising an outer and an inner casing, the front edges of which coincide and the other walls of which are spaced to form flue ways, the ends of said outer casing having means for connection with the smoke conduit and being removable and reversible and one of said ends being provided with an inlet opening and a closure for controlling said opening.

3. An oven adapted to be interposed in the smoke conduit of a heater and comprising an outer and an inner casing, the top, bottom, back and ends of which are spaced to provide flue-ways between said casings, and an entrance and an exit from said flue-ways for the gases of combustion, said inner casing having an opening and a closure therefor opposite to the exit for the gases of combustion.

4. An oven adapted to be interposed in the smoke conduit of a heater and comprising an outer and an inner casing, the walls of which are spaced to provide flue-ways between said casings, and an entrance and an exit from said flue-ways for the gases of combustion, said inner casing having an opening and a closure therefor opposite to the exit for the gases of combustion.

5. An oven adapted to be interposed in the smoke conduit of a heater and comprising an inner and an outer casing, the top, bottom, back and ends of which are spaced to provide flue-ways for the products of combustion, said inner casing being provided with an opening opposite the exit point from the flue-ways, and a door for access to said inner casing, said door having a draft opening and a closure for said draft opening.

[Claims 6 and 7 not printed in the Gazette.]

1,114,932. BALL-RETAINER. JACKSON L. STRAUB, Lancaster, Pa., assignor to The Star Ball Retainer Company, Lancaster, Pa., a Corporation of New Jersey. Filed Nov. 22, 1911. Serial No. 661,792. (Cl. 64—59.)

1. A ball retainer and separator for ball bearings consisting of a ring-shaped portion or base having spaced openings therein elliptical in form with their major axes extending transversely thereof, and integral radially extending flanges inclined toward each other and having their edges inturned at intervals so as to present opposed convex portions alternating with opposed concave portions coincident with said openings and separated a dis-

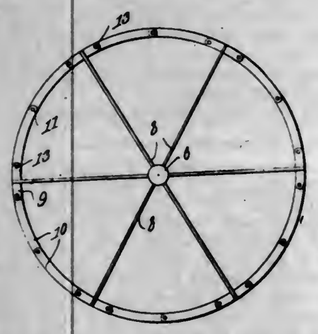
tance less than the diameter of a ball fitted therebetween, whereby pockets are formed for retaining balls protruding through said openings above and below said flanges.

2. A ball retainer and separator for ball bearings consisting of a ring-shaped portion or base having spaced elliptical openings therein to receive the balls, the minor axes of said openings being shorter than the diameter of a ball fitted therein, said base having integral radially extending flanges embracing the balls, and said flanges having their edges inturned at intervals so as to provide confronting concave portions between said inturned portions coincident with said openings, the distance between said concave portions being less than the diameter of a ball and increasing downwardly to the base of said flanges, whereby pockets are formed for retaining the balls in said openings with a minimum of contact points.

3. A ball retainer and separator consisting of a ring-shaped portion or base having spaced elliptical openings therein, the major axes of said openings extending transversely of the ring and their minor axes being shorter than the diameter of a ball to be retained, said base having integral radially extending marginal flanges, and said flanges having undulating edges providing confronting concave portions coincident with said openings, the distance between said concave portions being less than the diameter of a ball while the distance between the bases of said flanges is greater than the diameter of a ball, whereby pockets are formed for retaining balls between said concave portions and protruding above and below said flanges with points of contact at opposite sides of said openings and at the outer margins of said flanges only.

4. A radial thrust bearing comprising an annular ball retaining device having spaced elliptical openings therein and integral radially extending marginal flanges, and balls fitted between and protruding above and below said flanges, the major axes of said openings extending in the direction of the axis of the annulus and their minor axes being shorter than the diameter of a ball, the edges of said flanges being undulating in form and presenting concave confronting portions coincident with said openings embracing the balls, the latter adapted to contact with the outer margins only of the flanges and with the metal surrounding said openings at diametrically opposite points only.

1,114,933. CANOPY. JOSEPH STRICKLEN, Bicknell, Ind. Filed Sept. 25, 1913. Serial No. 791,759. (Cl. 5—14.)



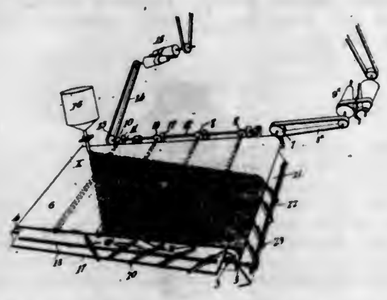
A canopy support comprising a foldable frame consisting of a top center piece, ribs pivoted to said center piece and extending downward therefrom, ground-engaging base pieces rigid on the lower ends of the ribs for supporting the frame in set-up position, said base pieces projecting from opposite sides of the ribs, and links connected pivotally to the ends of the base pieces, said links connecting the base pieces in a continuous annular series, there being a pair of pivotally connected, inwardly foldable links between each base piece.

1,114,934. BAG-CLOSURE. OLLIE L. STUART, Tampa, Fla. Filed Oct. 10, 1910. Serial No. 586,376. (Cl. 150—3.)

1. A bag closure comprising a pipe extending around the neck of a bag, a separate body located in the pipe and forming a bead or protuberance, and a rope or string encircling the bag between the bead or protuberance and the body of the bag.

2. A bag closure comprising a bag having the outer edge of the mouth thereof turned inward and secured to the inner face of the bag, a rope or the like covered by such inturned edge forming a bead, and a tie rope or string encircling the bag between the bead and the body of the bag.

1,114,935. PROCESS AND APPARATUS FOR SIZING OR CLASSIFYING COMMINUTED MATERIALS. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Filed Jan. 22, 1914. Serial No. 813,716. (Cl. 83—54.)



1. The process of sizing a mass of pulverulent material, consisting in feeding the material dry upon a continuously moving transversely inclined roughened supporting surface, imparting to said mass an accelerated movement in the direction of its travel by gravity, causing the components of said mass to deviate from the line of normal movement contiguously at angles proportionate to their sizes, and separately collecting the sized particles.

2. The process of sizing a mass of comminuted material, consisting in feeding the material dry upon a continuously moving transversely inclined roughened supporting surface, imparting to said material an accelerated movement at an angle to the continuous movement thereof, causing the components of the mass to deviate from the line of normal movement at angles proportionate to their sizes, and separately collecting the thus sized particles.

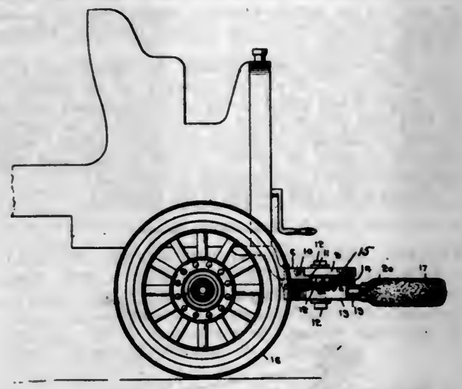
3. The process of sizing material, which consists in feeding unsized comminuted material to a continuously moving conveying surface, subjecting said material to the force of gravity at an angle to the continuous movement of said surface, subjecting said material to a series of vibrations from below, said vibrations increasing in intensity from the point of feed transversely across the conveying surface, to cause an accelerated movement of the particles thereon in lines deviating according to sizes of the particles from the line of normal movement, and separately collecting the thus sized particles.

4. The process of sizing, consisting in supporting and continuously moving unsized comminuted material upon a surface having a progressively increasing resistance, subjecting said material to the force of gravity and to an undulatory vibration to cause the particles to travel in lines deviating according to sizes of the particles from the lines of normal movement, and separately collecting the thus sized particles.

5. The process of sizing material, consisting in feeding unsized comminuted material upon a continuously moving roughened surface, subjecting said material to the force of gravity and to an undulatory movement to cause the particles to travel according to their volumetric dimensions at different rates of speed in lines deviating from the line of normal movement of said material, and separately collecting the thus sized particles.

[Claims 6 to 45 not printed in the Gazette.]

1,114,936. FENDER. AARON SYLVESTER, Indianapolis, Ind. Filed Apr. 16, 1914. Serial No. 832,278. (Cl. 105—128.)



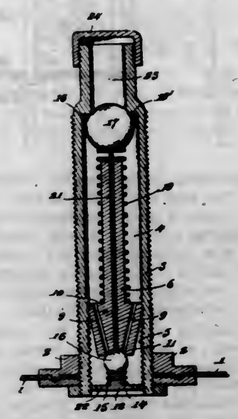
1. The combination with a vehicle having a bracket secured thereto, of a segmental fender having pivotal movement, both horizontal and vertical, about said bracket, cushioning means secured to the front edge of said fender and wheel contacting rollers located adjacent the front rim of said fender.

2. The combination with a vehicle having a bracket secured thereto of a bearing plate pivoted to said bracket on a horizontal axis, a segmental fender pivotally mounted on said bearing plate on a vertical axis, cushioning means secured to the forward edge of said fender and wheel contacting members located adjacent the ends of said forward edge.

3. The combination with a vehicle having a bracket secured thereto, of a bearing plate pivoted to said bracket on a horizontal axis, a segmental fender pivotally mounted on said bearing plate on a vertical axis, cushioning means secured to the forward edge of said fender, wheel contacting members located adjacent the ends of said forward edge and resilient means normally holding said fender away from the wheels.

4. The combination with a vehicle having a support secured thereto, of a bearing plate hingedly connected to said support on a horizontal axis, a raised boss formed in the center of said bearing plate, a segmental fender vertically pivoted to said bearing plate at the center of said boss, anti-friction rollers secured to said fender and adapted to operate on said boss, cushioning means positioned along the outer edge of said fender, wheel contacting rollers carried by said fender and resilient means interposed between said support and said fender on both sides of said pivot for normally holding said fender away from the wheels.

1,114,937. VALVE FOR PNEUMATIC TIRES. EDWARD TESSNER, Milwaukee, Wis. Filed May 13, 1913. Serial No. 767,363. (Cl. 152—12.)



1. A valve including a valve casing having a valve seat formed therein, a valve stem having a valve seat formed therein, and a pair of valve members disposed for yieldable engagement with the said seats, the said members adapted to be actuated simultaneously, as and for the purpose set forth.

2. A pneumatic valve including a valve casing having a valve seat formed therein, a vertically adjustable valve stem, a valve seat formed within the said stem, a yieldably supported ball-valve disposed for engagement with the said first mentioned valve seat, a yieldably supported ball-valve disposed for engagement with the said second mentioned valve seat, and means engaging the said two ball-valves for simultaneously actuating the same, as and for the purpose set forth.

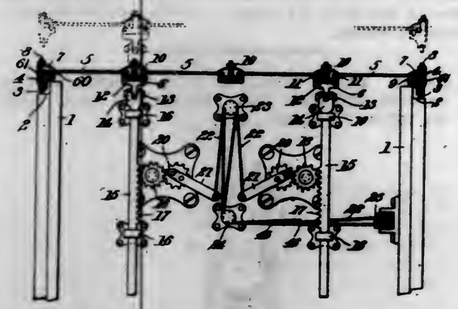
3. A valve including an outer casing, an adjustable valve stem arranged therein, and a pair of spring pressed ball-valves disposed within the said casing, one of said valves engaging a valve seat formed within the said stem, the other engaging a valve seat formed within the said casing.

4. A valve including an outer casing, having a vertically extending bore, the lower extremity of which is interiorly threaded, a vertically adjustable valve stem arranged within the said casing, the said stem being threaded within the said bore, a head formed integrally with the said stem, the said head having air passage ways formed therein, and a pair of spring pressed ball-valves disposed within the said casing, one of the said valves engaging a valve seat formed within the said stem for closihg said passage ways and the other ball-valve engaging a valve seat formed within said casing.

5. An inflation valve including an outer casing, a vertically adjustable valve stem arranged within the said casing, a head formed integrally with the said stem, the said head being exteriorly threaded to engage the interior threaded portion of the said casing and having air passage ways extending therethrough, an adjustable perforated plate member arranged adjacent the said head, and a pair of ball-valves arranged within the said casing, one of the said valves engaging a valve seat formed within the said head for closing the air passages and the other valve engaging a valve seat formed within the said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,114,938. VENTILATING DEVICE. MARY E. THOMPSON, Newark, N. J. Filed Sept. 10, 1913. Serial No. 789,089. (Cl. 98—4.)

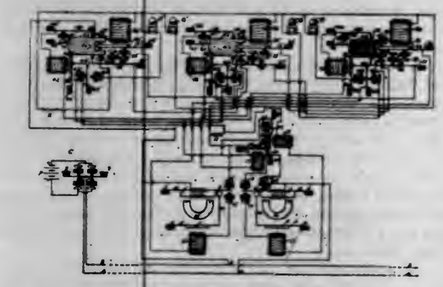


1. In a ventilating apparatus the combination of a cover; a seat for said cover; a plurality of supporting racks for said cover; a pinion engaging each rack; a second pinion engaging each first named pinion; a lever associated with each second pinion for moving said racks and cover up and down; and means comprising a flexible connection for controlling said levers, racks and pinions at a single point, substantially as described.

2. In a ventilating apparatus, the combination of a transparent cover; a seat for said cover; a plurality of racks for supporting said cover; a pinion for engaging each rack; a lever provided with a second pinion for engaging each first named pinion; a flexible connection associated with each lever; pulleys for guiding said flexible connection and guides for said racks causing the same to move said cover in a vertical direction, whereby a free circulation of air may be had, substantially as described.

3. In a ventilating apparatus the combination of a combined ventilator and skylight comprising a transparent cover; a seat for said cover; a plurality of racks for supporting said cover; a pinion for engaging each rack; a lever carrying a second pinion for engaging each rack engaging pinion; a flexible connection associated with each lever provided with two members slidable with relation to each other and adapted to receive a fusible member; and pulleys for guiding said flexible connection, substantially as described.

1,114,939. SELECTIVE SIGNAL SYSTEM. WESLEY RANDOLPH TOMLIN, Fort Collins, Colo. Filed Feb. 27, 1914. Serial No. 821,425. (Cl. 177—344.)



1. In a signal system a series of electric signal stations connected in parallel on a main two-wire line, each station having a controlling unit and a series of electric signals and a series of cut-out units corresponding with said series of signals, each of said cut-out units adapted when operated to cut out of circuit a corresponding signal, said controlling unit adapted when operated by one direction electric current through said main line to make an electric circuit through one of said signals, and said controlling unit adapted when operated by an opposite direction current through said main line to make an electric circuit to operate one of said cut-out units, substantially as described.

2. In a signal system the combination at a signal station of an electrically operated controlling unit, a series of electric signals, a series of electrically operated cut-out units corresponding to said series of signals, said controlling unit adapted when operated by a one direction electric current to make a circuit through one of said signals, and said controlling unit adapted when operated by an opposite direction electric current to make an electric circuit to operate one of said cut-out units, substantially as described.

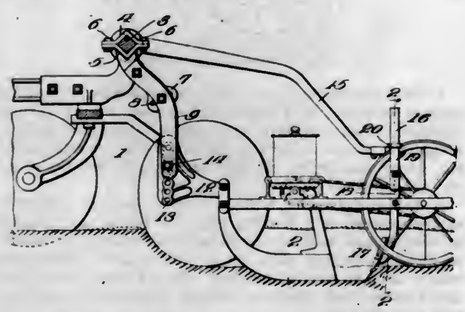
3. In an electric signal system the combination of a series of electric signals, a corresponding series of cut-out means, each of said cut-out means having a switch in the circuit of the corresponding signal, an electromagnet adapted to operate said switch, controlling means having polarized electromagnet switches adapted when operated by one direction current to make an electric circuit through one of said signals and when operated by the opposite direction current to make an electric circuit through one of said cut-out operating electromagnets, substantially as described.

4. In a device of the character described the combination of an electric signal and a cut-out switch having electromagnet operating means and a polarized controlling unit in electric circuit, said controlling unit adapted to make the circuit through said signal when an electric current passes through said circuit in one direction and adapted to make the circuit through the operating means of said cut-out switch when an electric current passes through said circuit in the opposite direction, substantially as described.

5. In an electric signal system the combination at a signal station of an electric signal, a cut-out switch in the circuit of said signal having an electromagnet adapted to open said cut-out switch when excited by an electric current, a polarized electromagnet switch adapted when operated to make an electric circuit through said first said electromagnet, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,114,940. AGRICULTURAL IMPLEMENT. WILLIAM C. TROMPETER, Edgemont, S. D. Filed Oct. 6, 1913. Serial No. 793,670. (Cl. 111—6.)



1. The combination with a planter, and a cultivator, of a hanger rigidly secured to and depending from the cultivator, links secured to and depending from said hanger and angularly adjustable thereon and a draft device secured to the front end of the planter and to the lower ends of the said links.

2. The combination with a planter, and a cultivator, of a hanger rigidly secured to and depending from the cultivator, a link secured to and depending from the hanger, and a draft device secured to the front end of the planter and adjustably secured to the lower end of said link.

3. The combination with a planter, and a cultivator, of a connection between the front end of the planter and the cultivator, and a standard secured to the planter frame and carrying an eye at its upper end adapted to rest upon the cultivator frame and vertically slidable thereon.

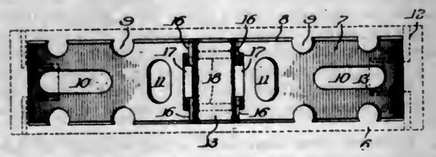
4. The combination with a planter, a cultivator frame having a rearwardly extending beam, and a standard mounted in the rear end of said beam, of a standard secured to the planter frame and carrying at its upper end an eye loosely fitting over said standard in the cultivator frame and adapted to rest upon said frame.

5. The combination with a planter, a cultivator frame having rearwardly extending beams, and standards fitted vertically in the rear ends of said beams, of members secured rigidly to and rising from the planter frame, and angularly disposed members adjustably secured to said rigidly secured members and provided at their upper outer extremities with eyes adapted to rest upon the cultivator beams and slidably engage the standards fitted in said beams.

1,114,941. BRAKE-SHOE. CHARLES H. TRUE, Phoenixville, Pa., assignor to The Railway Materials Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1912. Serial No. 718,868. (Cl. 188—82.)

A brake shoe comprising a reinforcing back provided with a pair of transversely extending centrally disposed slots at each side, an attaching lug secured to said back consisting of a strip of suitable material bent transversely of the back at each side of the center of said strip and cut away between the ends and the bends to provide a flat top, a pair of downwardly extending legs, said legs being disposed through the slots in the back, the portions of the said legs in the slots being cut away to provide shoulders engaging the upper face of the reinforcing back and the extremities of said legs being bent up in contact with the under face of said back, and a body cast on said back.

1,114,942. BRAKE-SHOE. CHARLES H. TRUE, Phoenixville, Pa., assignor to The Railway Materials Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 3, 1912. Serial No. 723,780. (Cl. 188—82.)



1. A brake shoe comprising a reinforcing member provided with a recess, an attaching lug having portions thereof extending through the recess and engaged beneath said member, the metal of said member being bent upwardly at the side of the recess, and a body cast on said member.

2. A brake shoe comprising a reinforcing member provided with a recess, an attaching lug having end portions projecting through said recess and engaged beneath said member, the metal of said member being bent upwardly between the said end portions of the lug adjacent the recess, and a body cast on said member.

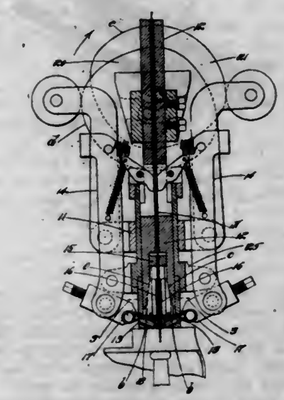
3. A brake shoe comprising a reinforcing member, an attaching lug having ends projecting through said member and engaged beneath the same, the portion of the lug above said member being provided with alined keyway openings and the metal of the member at each side of the keyway openings being bent upwardly beneath the top of the lug, and a body cast on said member.

4. A brake shoe comprising a reinforcing member, an attaching lug anchored thereto, said lug being provided with alined keyway openings, the metal of the reinforcing member being upturned at each side of said alined keyway openings to engage with and strengthen said lug, and a body cast on said member.

5. A brake shoe comprising a reinforcing member, an attaching lug having the ends of its legs anchored beneath said member, the metal of the member being bent up within the body of the lug and between the legs thereof to strengthen and reinforce the lug, and a body cast on said member.

[Claims 6 to 12 not printed in the Gazette.]

1,114,943. SLUGGING-MACHINE. FELIX E. VALOIS, Haverhill, Mass., assignor to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Oct. 21, 1912. Serial No. 726,906. (Cl. 1—25.)



1. In a slugging machine, the combination of a pair of wire grippers each having a serrated face for engagement with the wire and an inclined exterior face extending nearly the entire length of the gripper, a pusher having a reciprocating movement parallel with the wire and having corresponding inclined faces substantially parallel with the faces on the grippers and contacting therewith throughout the length of the inclined surfaces on the grippers and means for positively actuating said reciprocating pusher to cause it to contact with said grippers and actuate them positively to grip the wire and feed it into the work.

2. In a slugging machine, the combination with wire grippers having inclined surfaces, of a reciprocating member having inclined surfaces coöperating with the inclined surfaces of the grippers, said reciprocating member causing said grippers to grip and feed the wire during one movement of its reciprocation, and a spring acting on each gripper to move it back with said member during the opposite movement of said reciprocation.

3. In a slugging machine, the combination of serrated grippers each having an inclined exterior surface, a reciprocating pusher having inclined surfaces coöperating with the inclined surfaces of the grippers, the movement of said pusher in one direction causing said grippers to grip the wire and move with it in said direction, and a spring acting on each gripper and moving it with said pusher in the opposite direction.

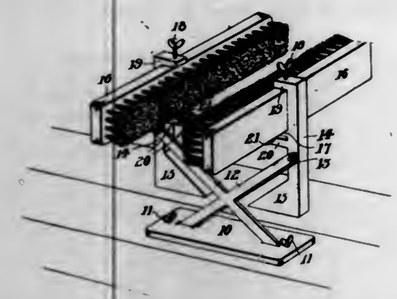
4. In a slugging machine, the combination with a feed tube of uniform cross-section throughout substantially its entire length, of grippers slidable in slots in the said feed tube, a vertically reciprocating pusher actuating the grippers in one direction and springs acting directly on the grippers to actuate them in the other direction.

5. In a slugging machine, the combination of a pusher reciprocating parallel with the wire to be fed and having

inclined faces for engagement with grippers, a slotted feed tube having a bore of uniform cross section throughout nearly its entire length, a pair of grippers each having a serrated face engaging the wire to be fed through the slots in the feed tube and having an inclined face for engagement with the pusher, the only differences in cross section throughout the length of each gripper being those due to the serrations and to the said inclined face, and means for positively reciprocating said pusher to cause it to contact with the grippers and actuate them positively to grip the wire and feed it into the work.

[Claims 6 and 7 not printed in the Gazette.]

1,114,944. SHOE-CLEANING DEVICE. CHARLES VAROA, Etna, Pa. Filed June 1, 1914. Serial No. 842,269. (Cl. 15—2.)



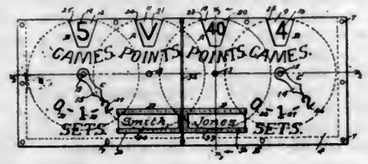
1. In a shoe cleaning device, a base plate, supporting arms carried thereby, a brush arm pivotally mounted to the outer end of each of the supporting arms, said brush arms provided with enlargements at their lower ends to provide weights, each arm provided with an inwardly directed support at a point adjacent its pivot, the outer ends of said arms provided with inwardly directed extensions, a pair of opposed inwardly directed lugs carried by each arm, and a link having a slotted connection with each pair of lugs connecting the arms.

2. In a shoe cleaning device, a pair of opposed upright arms pivoted thereto, counterbalancing weights carried by the lower ends of said arms, a pair of inwardly directed lugs carried by each arm, brushes secured in said lugs, a link pivotally connected at each end to the arms above the pivot points and adapted to move the brushes in an inward direction when pressed downwardly.

3. In a device of the class described a pair of crossed supporting arms, upright brush supporting arms pivoted intermediate their ends to the outer ends of said supporting arms, brushes removably secured in the outer ends of said arms, counterbalancing weights carried by the lower end of said arms, and disposed inwardly to cause the said arms to normally assume a vertical position, and a link connected to said brush arms above the pivot points to cause the brushes to move in an inward direction when pressed downwardly.

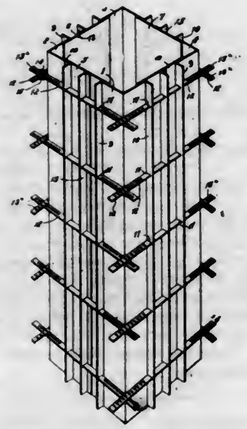
1,114,945. GAME-INDICATOR. ROBERT H. F. VARIEL, Jr., Los Angeles, Cal. Filed June 12, 1912. Serial No. 703,237. (Cl. 235—114.)

A game counter of the character described including spaced plates having corresponding finger and display notches in the edges thereof, one of said plates being provided with symbols upon its outer face, shafts extending through the plates and journaled therein, disks loose upon the shafts and having the edge portions thereof projecting into the respective finger and display notches so as to be readily engaged by the finger for rotating the same, said disks being provided with marginal series of characters adapted to be successively displayed through the finger and display notches as the disks are rotated, pointers rigid with the shafts on one end thereof, and means upon the opopsite ends of the shafts for turning



the same so that they will coöperate with the before mentioned symbols upon one of the plates.

1,114,946. COLUMN-FORM. WILLIAM MAYO VENABLE, Pittsburgh, Pa., assignor to Blaw Collapsible Steel Centering Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 17, 1912. Serial No. 678,214. (Cl. 25—121.)



1. A column form comprising corner members of sheet metal angular in cross section and having outwardly turned perforated stiffening flanges extending longitudinally of the members; sheet metal form members intermediate the corner members also provided with outwardly turned perforated stiffening flanges extending longitudinally of the form members; securing bars extending slidably through the perforations in all of said flanges; and releasable means for securing the ends of the bars together.

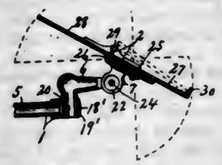
2. A column form comprising corner members of sheet metal angular in cross section and having their edges outturned forming stiffening flanges and provided with perforations; sheet metal form members intermediate the corner members having outwardly turned perforated stiffening flanges; securing bars extending slidably through the perforations, and means for securing the ends of the bars together.

1,114,947. WATCHCASE-CROWN. LOUIS F. VERBERCKMOES, Anaconda, Mont. Filed Feb. 17, 1912. Serial No. 678,417. (Cl. 58—95.)

The combination with a winding stem having a threaded upper portion and a shoulder, and a watch crown provided in its underside with a recess, of an interchangeable crown post consisting of a tubular portion provided with an interiorly threaded socket for receiving the threaded portion of the winding stem and abutting against the said shoulder, said crown post being also provided at its upper end with an attaching head adapted to fit the upper wall of the recess in the crown and be secured to the same, said crown post having a socket of a diameter

and threads corresponding to those of the threaded end of the winding stem.

1,114,948. SWINGING SHELF. WILLARD R. WALKER, Syracuse, N. Y. Filed Dec. 10, 1912. Serial No. 735,908. (Cl. 45—24.)



1. A swinging shelf comprising an articulated bracket having its sections hinged to each other to swing horizontally, one of the end sections having means for clamping it to a suitable support, a shelf-supporting head hinged to the other end section to swing vertically, and a folding shelf composed of sections hinged together edge to edge to swing vertically about an axis parallel with that of the vertically swinging head, said head being rigidly secured to one of the shelf sections and extended under the other shelf section to form a rest therefor when unfolded.

2. A swinging shelf comprising a horizontally swinging bracket, a shelf supporting head pivoted to the bracket to swing vertically, a folding shelf composed of sections hinged to each other edge to edge to permit one of the sections to be folded over and upon the other section on an axis parallel with that of the head, the other section being secured to the head, said head extending to opposite sides of the meeting edges of the shelf sections to form a rest for the folding section.

1,114,949. ROCK-DRILL. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Apr. 20, 1914. Serial No. 833,116. (Cl. 121—10.)

1. In apparatus of the character set forth, the combination with a cylinder member having a front piston chamber of relatively large diameter, a rear piston chamber of smaller diameter communicating with the front chamber and an enlarged constant pressure chamber in rear

of the rear piston chamber of greater diameter than the same and communicating therewith, of a piston comprising a front head operating in the front piston chamber, a rear head operating in the rear chamber and a reduced neck portion connecting the pistons, means for supplying motive fluid to the enlarged constant pressure chamber and thereby maintaining a constant pressure therein and against the rear end of the smaller piston head, and ports leading from the enlarged constant pressure chamber and controlled by the piston of smaller diameter for delivering motive fluid from the enlarged pressure chamber to the front piston chamber on opposite sides of the enlarged piston head therein.

2. In apparatus of the character set forth, the combination with a cylinder member having a front piston chamber of relatively large diameter, a rear piston chamber of smaller diameter communicating with the front chamber and an enlarged constant pressure chamber in rear of the rear piston chamber of greater diameter than the same and communicating therewith, of a piston comprising a front head operating in the front piston chamber, a rear head operating in the rear chamber and a reduced neck portion connecting the pistons, means for supplying motive fluid to the enlarged constant pressure chamber and thereby maintaining a constant pressure therein and against the rear end of the smaller piston head, and ports leading from the enlarged constant pressure chamber and controlled by the piston of smaller diameter for delivering motive fluid from the enlarged pressure chamber to the front piston chamber on opposite sides of the enlarged piston head therein, the rear end of said smaller piston entering the enlarged constant pressure chamber in spaced relation to the walls thereof and to the inlet ends of certain of said ports.

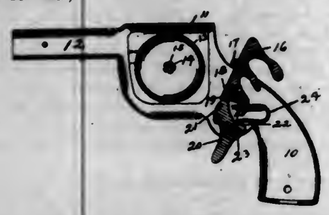
3. In apparatus of the character set forth, a valveless motor, comprising in combination, a cylinder member having a rear piston chamber of relatively small diameter and a front piston chamber of greater diameter, a piston in the cylinder member having portions of different diameters operating respectively in the different chambers, a motive fluid reservoir in rear of the smaller piston chamber of greater diameter than the same and having constant communication with the rear end thereof, means for supplying motive fluid to the reservoir and thereby maintaining constant pressure against the rear end of the piston, and means controlled by the portion of the piston operating in the smaller piston chamber for distributing motive fluid from the reservoir to the larger piston chamber on opposite sides of the portion of the piston operating therein.

4. In apparatus of the character set forth, a valveless motor, comprising in combination, a cylinder member having a body provided with a plurality of piston chambers of different diameters and a rear head block mounted on the body and having an enlarged reservoir in constant communication with the rear piston chamber, a piston in the cylinder member having portions of different diameters operating respectively in the different chambers, one of said portions being movable into and out of the reservoir, means for supplying motive fluid to the reservoir, and means controlled by the movements of the piston for distributing the motive fluid to cause the operation of said piston.

5. In apparatus of the character set forth, a valveless motor, comprising in combination a cylinder body having an enlarged front piston chamber, a plug detachably fitted in the rear end of the body and having a smaller piston chamber, and a head block secured to the rear end of the cylinder body and having a motive fluid reservoir communicating with the rear end of the smaller piston chamber, a piston operating in the cylinder and having portions of different diameters located respectively in the piston chambers, means for supplying motive fluid to the cylinder member, and distributing ports controlled by the portion of the piston operating in the smaller piston chamber for distributing the motive fluid from the reservoir to the larger piston chamber on opposite sides of the portion of the piston therein.

[Claims 6 to 12 not printed in the Gazette.]

1,114,950. BELL-GUN. FRANK C. WEGENER, Des Moines, Iowa, assignor to Wegener, Johnson Bell Gun Company, a Corporation. Filed Feb. 2, 1914. Serial No. 817,087. (Cl. 46—46.)

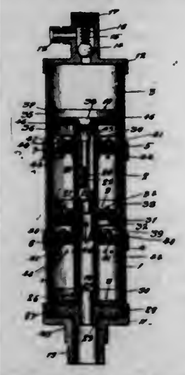


1. In a bell gun, a barrel, a cylinder chamber and a stock, a gong bell within said chamber, having a hole in its middle, and a rivet for securing said bell to the wall of the cylinder chamber.

2. In a bell gun, a barrel, a cylinder chamber and a stock, a bell in the cylinder chamber, a trigger, a hammer arranged to coact with the trigger and provided with a lug for striking the bell, and a spring, said parts being arranged and constructed to permit the hammer to stand normally in position spaced slightly away from the bell, and to hold it when raised to cocked position, and when released by the trigger to strike the bell and then move back to normal position.

3. A bell gun, having a cylinder chamber, a gong bell within said cylinder chamber, a hammer pivotally mounted, said hammer having a lug designed in one position of its movement to strike said bell and having a notch in its lower surface in front of the vertical line through the pivotal point of the hammer and a downwardly extending lug in front of said notch, a trigger, pivotally mounted, having a lug projecting forwardly and upwardly, designed to coact with said notch for holding the hammer cocked when it is drawn back, said trigger having also a rearwardly and upwardly extending lug, and a notch between said last lug and the vertical line through the pivotal point of the trigger, and a substantially U shaped spring having one arm bearing against the lower surface of the hammer and normally engaging the second lug thereon, and a downwardly curved portion on the other arm, resting on the last lug on the hammer and extending into the notch therein.

1,114,951. POWER FLUID-ACTUATED IMPULSE-PUMP. CARLEY GOULD WELD, North Chatham, Mass. Filed Oct. 23, 1912. Serial No. 727,280. (Cl. 230—27.)



1. An impulse pump adapted to be operated by the compression of an internal combustion engine, comprising a plurality of cylinders of equal diameter, one of which is adapted to be brought into screw-threaded engagement with one cylinder of said engine, pistons reciprocally mounted within said cylinders and means for admitting to the under side of each piston, fluid pressure that has previously been compressed in the cylinder of said engine to which said pump is attached.

2. An impulse pump adapted to be operated by fluid pressure comprising a plurality of cylinders of equal diameter arranged in tandem, connected pistons therein, means for admitting to the underside of each piston fluid under pressure to operate them on their working stroke, and means for permitting the air in one of said cylinders to pass the piston on the suction stroke to enable the piston to compress it upon its succeeding working stroke.

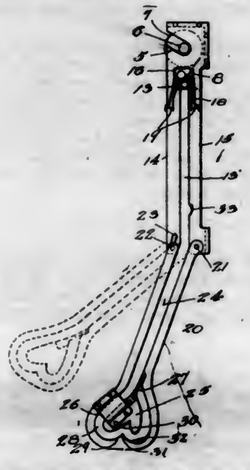
3. An impulse pump adapted to coöperate with the cylinder of an internal combustion engine, comprising a plurality of cylinders of equal diameter arranged in tandem, a reciprocating piston in each cylinder, a hollow connecting piston-rod connecting the respective pistons, said rod being provided with ducts or passages communicating with the underside of two of said pistons, and a check-valve controlling the passage through the hollow piston connecting rod, substantially as described.

4. A pump of the character described, comprising a plurality of power cylinders adapted to receive compressed fluid from a source of supply, actuating pistons in said power cylinders operated by said compressed fluid, a pressure cylinder, means of communication between said power cylinders, a valve-controlled means of communication between said power cylinders and said compression cylinder, a piston in said compression cylinder, said piston being connected and operated simultaneously with the pistons in the power cylinders, substantially as described.

5. A spark plug pump of the character described, the combination of a plurality of power and compressing cylinders of the same relative diameter, simultaneously operated pistons in said cylinders, means for affording communication between said cylinders for the operating fluid to the underside of said pistons to cause them to move on their working stroke so that the piston in the compression cylinder will perform its compression operation, and means for trapping the compressed fluid below the piston in the compression cylinder so that upon the down stroke of said piston, said fluid will be caused to flow into the compression chamber above said piston and be compressed by its succeeding stroke.

[Claims 6 and 7 not printed in the Gazette.]

1,114,952. AWNING. HANS WERWATH, Chicago, Ill. Filed Mar. 4, 1914. Serial No. 822,344. (Cl. 156—44.)



1. The combination with a pair of stationary brackets, and a rolling awning supported and guided therein, of movable bracket sections connected thereto and adapted to extend, support and retain a portion of the awning when lowered, and means for releasing the awning preparatory to being raised.

2. The combination with a pair of stationary brackets and a rolling awning supported and guided therein, of a pair of movable bracket sections adapted to support and hold the awning when lowered, and means for automatically releasing the awning so that it may be raised.

3. The combination with a pair of slotted stationary brackets and a rolling awning journaled therein and guided by said brackets, of movable bracket sections having complementary slots and a loop portion to said slots whereby the awning may be held in lowered position, or automatically released for raising as described.

4. The combination in an awning structure of a pair of pivoted slotted sections adapted to guide a moving awning and means for moving said sections in unison, said slotted sections having a loop portion whereby the awning may be held in lowered position, or automatically released for raising as described.

5. The combination in an awning structure of a pair of pivoted slotted sections adapted to guide a moving awning, said slotted sections having a loop portion and a contact point for actuating means to swing said sections and the awning, and automatic means for releasing the actuating means for raising the lowered awning.

[Claims 6 to 13 not printed in the Gazette.]

1,114,953. ARC-LIGHT ELECTRODE. ARTHUR V. WILKER, Berea, Ohio, assignor to National Carbon Co., Cleveland, Ohio, a Corporation of New Jersey. Filed Jan. 22, 1912. Serial No. 672,619. (Cl. 176—134.)

1. An electric light electrode containing a silicid of the rare earth group.

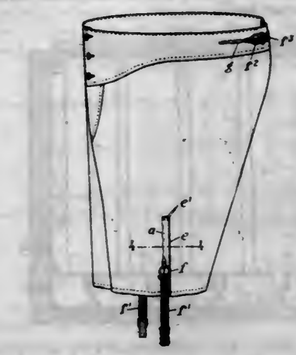
2. An electric light electrode containing cerium silicid.

1,114,954. DRESS. DAVID ZAVODNIK, New York, N. Y. Filed Aug. 26, 1913. Serial No. 786,648. (Cl. 2—145.)

1. An open front dress, comprising a back and a pair of front portions, an inner band having its ends attached to the inside of one of the said front portions while the central portion of the band is free, a series of fastening means attached to the lose portion of the said inner band and a corresponding series of engaging fastening means attached to the outside of the second front portion, the said sets of fastening means being arranged so that the overlap of one front portion over the other may be varied without exposing the said fastening means.

2. An open front dress, adapted to have its front portions so that one overlaps the other, an inner band having its ends attached to the inside of one of the said front portions while the central portion of the band is free, a series of fastening means attached to the loose portion of the said inner band and a corresponding series of engaging fastening means attached to the outside of the second front portion, an outer belt encircling the dress at the waist line and being attached at the ends of the two front portions, another fastener attached to the inside of the overlapping front portion at its extreme end, the said fastening means being arranged so that the overlap of one front portion over the other may be varied without exposing the said fastening means, while a corresponding fastener for the outer belt is found for every variation in the size of the waist.

1,114,955. GARMENT. EMIL ALTMAN, Brooklyn, N. Y. Filed Apr. 6, 1911. Serial No. 619,224. (Cl. 2—122.)

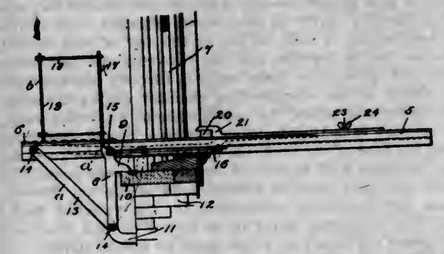


1. A garment comprising means for detachably receiving the fastening device, said means consisting of laterally compressible material of limited length permanently attached to the said garment at one of its unseamed parts whereby a projection is formed above the normal surface of the garment, adapted to be wedged or compressed within a narrow slotted fastening means and to hold the same along the line of tension exercised by said fastening means.

2. In a garment, a projecting fold of material, means adapted to render the free edge of said fold alternately thick and thin, said thin portions being adapted to be wedged into an attaching device, and said thick portions serving to prevent disconnection of the fastening device in one direction.

3. In an undergarment, a flap having its one edge secured thereto and its opposite edge free from said garment, a tubular projection extending lengthwise of the free edge of said flaps and a filler located in said tubular projection.

1,114,956. FOLDING SCAFFOLD. FRANK ANDERSON, New York, N. Y. Filed Apr. 8, 1913. Serial No. 759,691. (Cl. 20—87.)

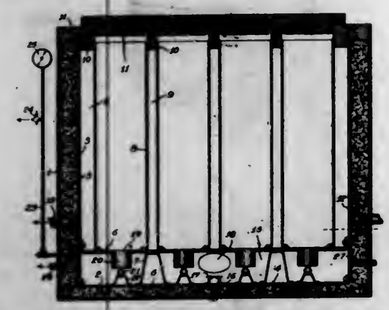


A window scaffold comprising side bars, brackets pivotally and slidably mounted thereon, said brackets being provided with wall engaging elements, posts provided upon the brackets at the opposite sides of said pivots, from the wall engaging elements, railings detachably engaging the posts and other posts with which the said railings are pivotally connected, the last mentioned posts being detachably engageable with the said side bars.

1,114,957. FREEZING-TANK. JOHN FREDRICK BENDER, Hamilton, Ohio. Filed Aug. 15, 1913. Serial No. 784,856. (Cl. 62—157.)

1. A freezing-tank comprising, a can to hold water to be frozen, a tank surrounding the can to hold a frigorific mixture around the can, a closed space below the floor of the can, means for confining insulating air in said space

while the water in the can is freezing, and means for venting said air and supplying thaw-water to said space when the forming of the ice in the can is completed, combined substantially as set forth.



2. In freezing tanks, the combination of a refrigerating chamber, a can therein having its bottom substantially upon the floor of said chamber, the can being provided with a nipple extending below the floor of the chamber, a second chamber below the floor of the refrigerating chamber, means for supplying refrigerant in the refrigerating chamber, means for supplying thawing medium to the second chamber, means for supplying water to said second chamber for filling the can, an air pipe and an air jet thereon within the second chamber and below and directed upwardly into said nipple.

3. In freezing tanks, the combination of a refrigerating chamber, a plurality of cans arranged in rows therein, a second chamber below the floor of said refrigerating chamber, and cams being provided with nipples extending downward into said second chamber, air pipes lying below the bottoms of said nipples and provided with air jets below and directed upwardly into the nipples, means for supplying refrigerant to the refrigerating chamber, means for supplying water to be frozen to the second chamber, and means for supplying thawing medium to the second chamber.

4. In freezing tanks, the combination of a refrigerating chamber, another chamber below the floor thereof, one or more cans in the refrigerating chamber, said cans communicating with said second chamber, means for supplying water to said second chamber and the cans, means for supplying thawing water to said second chamber, and means for maintaining a body of air at the top of said second chamber during freezing and for removing the said body of air and causing the thaw water to directly contact with the bottom of the refrigerating chamber during thawing.

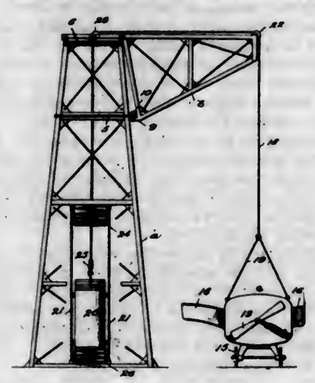
5. In freezing tanks, the combination of a freezing tank, one or more cans therein, each having a nipple extending below the floor of the tank, the chamber below the freezing tank inclosing said nipples, a closable air vent communicating with said chamber substantially at the top thereof, means for supplying refrigerant to the freezing tank, means for supplying water to be frozen to said chamber, and means for supplying thaw water to said chamber.

[Claim 6 not printed in the Gazette.]

1,114,958. AMUSEMENT DEVICE. ROBERT A. BISBEE, Central Park, N. Y. Filed Feb. 28, 1913. Serial No. 751,308. (Cl. 46—27.)

1. An amusement apparatus comprising a tower, a weight centrally located in the tower and guided for vertical movement therein, a boom mounted for turning movement about the vertical axis of the tower, pulleys carried by the boom and located one at the outer portion of the boom and another at the central vertical axis of the tower, a cable trained over said pulleys and connected at one end with the weight, and a self propelled body connected with the other end of the cable.

2. An amusement apparatus comprising a tower, a weight centrally located in the tower and guided for vertical movement therein, buffers located beyond the opposite ends of the weight and in the path of movement thereof, a boom mounted for turning movement about the vertical axis of the tower, pulleys carried by the boom and located one at the outer portion of the boom and another at



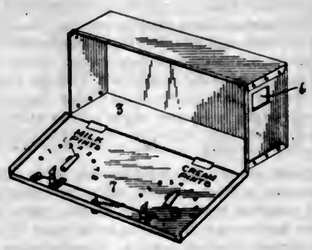
the vertical center of the tower, a cable trained over said pulleys and connected at one end with the weight and a self propelled body connected with the other end of the cable.

1,114,959. FUEL-SAVING DEVICE. WILLIAM C. BLASKE, Chicago, Ill., assignor, by mesne assignments, to Heat Saver Company, Chicago, Ill., a Corporation. Filed Nov. 22, 1913. Serial No. 802,387. (Cl. 110—58.)

1. In a fuel saving device comprising a casing, an air pre-heating chamber suspended therein, the outer diameter of the air pre-heating chamber being considerably less than the interior diameter of the casing thereby forming a passage way around the chamber, a plurality of tubes forming inlet pipes for the air to said pre-heating chamber and adapted to support said chamber within the casing, an inverted conical shaped bottom secured to said pre-heating chamber and provided with a plurality of outlet openings, an inwardly tapering section connected at one end to said casing and adapted to be connected at its opposite end to the flue leading to the furnace, for the purpose set forth.

2. In a fuel saving device comprising a flue having two sections of the same diameter throughout, a casing of larger diameter than the flue sections, a circular plate connecting one section of the flue with the casing, an inverted conical section connecting the casing with the other section of the flue, an air pre-heating chamber suspended within the casing, the casing having a plurality of openings formed therein, an arcuate tube leading from each opening and communicating with openings formed within one end of the air pre-heating chamber, the tubes providing means for rigidly suspending the air pre-heating chamber in spaced relation within the casing, upwardly and inwardly projecting baffle plates mounted upon the inner walls of the air pre-heating chamber in front of the openings formed therein, an inverted conical shaped bottom secured to said pre-heating chamber and provided with a plurality of outlet openings and the inverted conical shaped bottom of the air pre-heating chamber resting within and in spaced relation with the conical section of the casing for the purpose set forth.

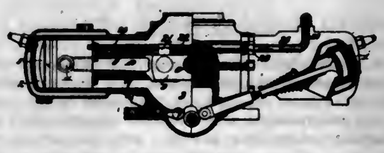
1,114,960. FASTENER FOR RECEPTACLES. CHRISTIAN BOUILLON, Payne, and PHILLIP BOUILLON, Bellevue, Ohio. Filed Apr. 14, 1911. Serial No. 621,089. (Cl. 70—82.)



1. In a receptacle of the class described, a wall provided with an opening through which the hand may be inserted, a hinged door, a latch on said door, a keeper, said latch provided with a notch to engage said bail and with an inclined face to engage said bail to guide the latch into position so that its notch will engage the bail, an actuating lever accessible through said opening pivoted to said latch, and a return spring for said lever and a stop preventing movement of said lever through said opening, substantially as described.

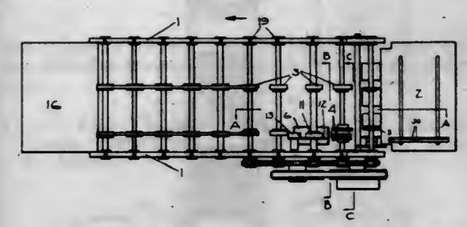
2. In a receptacle of the class described having a door and an opening in one of its walls, a plurality of latches pivoted on the door, keepers in said receptacle for engagement by said latches, an actuating lever pivotally connected with said latches and having an operating end accessible through said opening, and a stop engaging the opposite end of said lever for guiding and limiting movement thereof and located to prevent movement of said lever throuh said opening, substantially as described.

1,114,961. INTERNAL-COMBUSTION ENGINE. ROBERT BURN, Petone, New Zealand. Filed Apr. 25, 1913. Serial No. 763,512. (Cl. 123—176.)



In an internal combustion engine comprising cylinders disposed in alinement with one another end for end and arranged on an engine bed framing, the combination therewith of two piston heads arranged end for end and provided with water cavities, tubular rods connected to the piston heads, a T-shaped projection connected to and moving with one of the aforesaid tubular rods and having inlet and outlet passages, two telescoping pipes extending in opposite directions outside the engine bed framing, two fixed pipes with stuffing glands within which pipes the said telescoping pipes reciprocate by one entering as the other is withdrawn, and non-return valves in the aforesaid fixed pipes whereby the flow of the cooling water is effected automatically while any leakage through the stuffing glands drips clear of the crank case.

1,114,962. MACHINE FOR APPLYING FLY-LEAVES OR THE LIKE TO SIGNATURES OF BOOKS. ALFRED CAHEN, Cleveland, Ohio, assignor to The Cahen Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 29, 1910. Serial No. 584,491. (Cl. 11—2.)



1. In a machine of the class described, the combination of means for conveying a plurality of sheets of flexible material forwardly together; means adjacent the path of such sheets for bending the marginal portion of one of such sheets at a right angle along the edge of the other sheet or sheets; and means for folding such marginal portion over the other sheet or sheets.

2. In a machine of the class described, the combination of means for conveying a plurality of sheets of flexible material forwardly together; means adjacent the path of such sheets for bending the marginal portion of one of such sheets at a right angle along the edge of the other sheet or sheets; and means in advance of the bending means for folding said marginal portion over the other sheet or sheets.

3. In a machine of the class described, the combination of means for conveying a plurality of sheets of flexible material; a rotatable disk below the path of such sheets; a rotatable disk above the path of such sheets, said disks being positioned to contact with the upper and lower of such sheets, respectively and being axially spaced apart with their circumferences intersecting, whereby the marginal portion of one of such sheets will be bent at a right angle along the edge of the other sheet or sheets; and means in advance of said disks for folding such marginal portion over the other sheet or sheets.

4. In a machine of the class described, the combination of means for conveying a plurality of sheets of material; a rotatable disk below the path of said sheets; a rotatable disk above the path of said sheets, said disks being positioned to contact with the upper and lower of said sheets respectively and being axially spaced apart with their circumferences intersecting, whereby the marginal portion of one of said sheets will be bent at a right angle along the edge of the other sheet or sheets; and a member in advance of said disks provided with a slot lying in the plane and path of movement of said sheets, the rear part of one wall of said slot being bent from the slot and positioned to engage said marginal portion, whereby said portion will be folded over the other sheet or sheets.

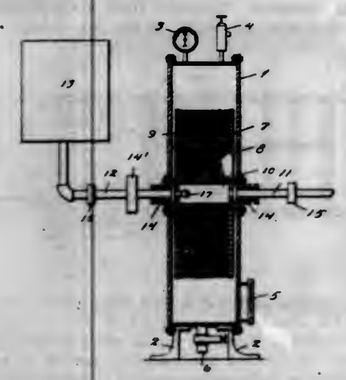
5. In a machine of the class described, the combination of means for conveying a plurality of sheets of material; means adjacent the path of said sheets for causing the marginal portion of one of said sheets along the edge of the other sheet or sheets; means in advance of the creasing means for bending said marginal portion at a right angle along said crease; and means in advance of the bending means for folding said marginal portion over the other sheet or sheets.

[Claims 6 to 11 not printed in the Gazette.]

1,114,963. PROCESS OF MAKING LARD SUBSTITUTE. JESSE C. CHISHOLM, Dallas, Tex., assignor to The Chisholm Process Oil Refining Company, Dallas, Tex., a Corporation of Texas. Filed Oct. 8, 1912. Serial No. 724,634. (Cl. 87—12.)

1. The herein described process of producing a lard substitute from oils, which consists in causing the oil to travel in engagement with a wire surface catalytic agent,

in the presence of hydrogen, so that the wire surface catalytic agent offers frictional resistance to the oil.



2. The herein described process of producing a lard substitute from oils, which consists in causing the oil to travel spirally outwardly in engagement with a spirally wound wire structure having its outer surface in the form of a catalytic agent, in the presence of hydrogen, so that the catalytic agent offers frictional resistance to the oil.

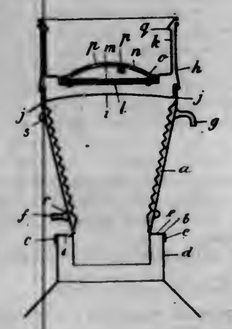
3. The herein described process of hydrogenating fatty material, which consists in causing the fatty material to travel by centrifugal force outwardly through curved passages having catalytic agent walls, in the presence of hydrogen so that the catalytic agent offers frictional resistance to the fatty material for a protracted period.

4. The herein described process of hydrogenating fatty material, which consists in causing the fatty material to travel in a film by centrifugal force over a spiral catalytic element, in the presence of hydrogen so that the spiral catalytic element offers frictional resistance to the fatty material.

5. The herein described process of hydrogenating fatty material, which consists in causing the fatty material to travel spirally by centrifugal force in engagement with a catalytic agent, in the presence of hydrogen.

[Claims 6 to 8 not printed in the Gazette.]

1,114,964. COMBINED MILK COOLER AND STRAINER. CARL CHRISTENSEN, Charlottenlund, near Copenhagen, Denmark. Filed Jan. 28, 1914. Serial No. 814,905. (Cl. 31—90.)



1. In a milk cooler the combination with a conical double walled cooling jacket adapted to fit upon the top of a transport receptacle, means for supplying cooling fluid to the space between said walls, a strainer carried by the top of said conical cooling jacket and having perforations located in position for spraying milk against the inner of the said walls, and means located above said closed bottom for straining milk.

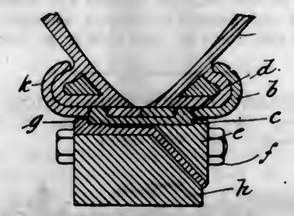
2. A device of the character specified, the combination with a double walled conical structure, means for supplying a cooling fluid to the space between said walls, the inner of said walls being corrugated, a distributer for distributing the milk to said corrugated inner wall, and a strainer located above said distributer and adapted for removal therefrom.

3. A milk cooler comprising a strainer, a distributer and a cooling device, the cooling device being adapted for resting upon the top of a transport receptacle and flaring outwardly from the bottom and means for cooling the walls thereof, the distributer being separable from the cooling device and having a closed bottom arched upwardly in the center and provided with openings for spraying the milk against said cooling walls, the strainer being separable from and adapted to be supported by the distributing device and having a perforated bottom, straining material located on such perforated bottom and a heavy upwardly arched plate having its edges constructed and adapted for resting upon the edges of the straining material and provided with openings adjacent said edges for the passage of the milk.

4. In a milk cooler, the combination with a cooling device having an interior conical milk receiving surface, a distributer adapted to detachably fit the upper portion of said cooling device and direct the milk upon the said milk receiving surface thereof, and a strainer adapted to be detachably carried by the distributer.

5. In a device of the character specified, the combination with a straining vessel having at its bottom a rabbeted depression, a perforated plate resting upon a rabbet of such bottom, a disk of straining material located above the said plate and disposed in another of said rabbets, and an upwardly arched heavy plate having its edges resting upon the edges of the straining material and being provided with holes inwardly of said edges for the passage of the milk.

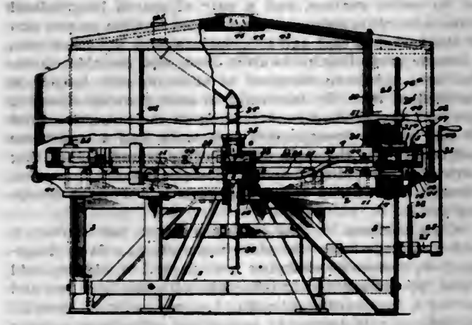
1,114,965. DEMOUNTABLE RIM. JOHN CLARENCE COLD, Chicopee Falls, Mass., assignor to Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Delaware. Filed May 10, 1912. Serial No. 696,311. (Cl. 152—21.)



1. A demountable tire-carrying rim composed of two annular members brought together in a plane perpendicular to the axis of the rim, each member being provided with a circumferential series of slots together with a self-contracting locking ring provided with projections to enter the slots of both of said members, a latch in said ring which, when open, permits the ring to contract and, when closed, prevents such contraction whereby the projections can be held in position in the slots or removed therefrom as desired.

2. A demountable tire-carrying rim, composed of two annular members brought together in a plane perpendicularly to the axis of the rim, each member being provided with a circumferential series of slots, together with a self-contracting locking ring provided with circumferentially disposed projections thereon adapted when said ring is expanded to enter said slots and bind said annular members together, and a latch on said locking ring to hold said ring in expanded position whereby the annular members and locking ring are held in assembled condition and may be placed on or removed from the wheel as a unit.

1,114,966. APPARATUS FOR DRYING AND SHAPING HOSIERY AND THE LIKE. GEORGE COLLIS, Dubuque, Iowa, assignor, by mesne assignments, to Paramount Metal Form Drying Company, Beaver Dam, Wis., a Corporation of Wisconsin. Filed June 27, 1911. Serial No. 635,686. (Cl. 223—17.)



1. An apparatus for drying and shaping textile hosiery articles including in combination, a base, a support mounted thereon, one or more hollow article-holding and shaping members mounted on said support and each being narrow in cross-section relatively to its width and having its opposite sides converging at their margins to form edges substantially sharpened to effect the formation of a crease in and shaping of the article, and means for maintaining a heating medium in the interior of said hollow member or members to heat the member or members from within and thereby effect evaporation of moisture from the article sustained by said member.

2. An apparatus for drying and shaping moistened hosiery articles including in combination, a support, a channeled article-holding and shaping member mounted on said support and being narrow in cross-section relatively to its width and having sides converging into an edge substantially sharpened to effect the formation of a crease in and a shaping of the article, and means for maintaining a heating medium in the channel of said holding and shaping member to heat the same from within and effect evaporation of moisture from the article sustained by said member.

3. An apparatus for simultaneously drying and shaping hosiery including in combination, a base, a supporting-instrumentality mounted thereon, a combined drying and shaping device mounted on said instrumentality and comprising a plurality of narrowly-spaced sides connected at their edges to form a heat-containing member and converging into sharpened edges to produce a crease in said hosiery, and means for maintaining a heating medium within the interior of the device.

4. An apparatus for simultaneously drying and shaping hosiery including in combination, a base, a support mounted thereon, a hollow, combined drying and shaping member formed thin in cross-section and having its sides converging and substantially reduced to form sharpened edges for effecting the formation of a crease in the hosiery, and means for supplying a heating medium to said hollow member to heat the interior thereof.

5. The combination, in hosiery drying and shaping apparatus, of a support, a metallic heating and shaping form thereon relatively thin in cross-section and having oppositely-disposed sides converging at their margins to form crease-producing edges and provided with channels for the passage of a heated fluid, and means for supplying heated fluid to the interior of said form, whereby the article mounted thereon may simultaneously be dried and creased.

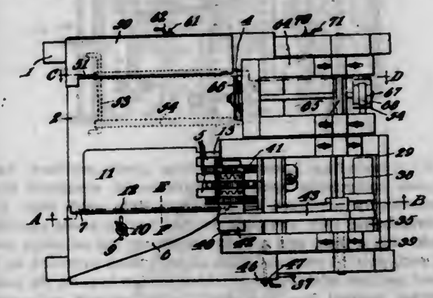
[Claims 6 to 45 not printed in the Gazette.]

1,114,967. IRRIGATION-PIPE. JOE R. COOKE and JOHN T. COOPER, Alvarado, Tex. Filed Sept. 5, 1911. Serial No. 647,480. (Cl. 137—65.)

A one piece irrigation pipe having a relatively wide flat upper face and having straight side faces merging into a rounded bottom, the pipe being provided with a longitudinally-extending conducting bore and with outlet open-

ings formed in the side of the curved bottom of said pipe and extending parallel to the straight side faces of said pipe.

1,114,968. WOODWORKING-MACHINE. WILLIAM CRAINE, Brookfield, N. Y. Filed Apr. 3, 1914. Serial No. 829,363. (Cl. 144—204.)



1. A wood working machine including a slotted table, a feed slide having fingers movable between the slots, an adjustable stop in the path of the fingers for limiting the sliding movement of the fingers, and a series of cutting elements shiftable into and out of the slots in the table for engaging the stock supported by the fingers.

2. A wood working machine including a slotted table, a stock supporting slide having fingers movable between the slots, frames above and below the table and mounted to swing upwardly and downwardly relative thereto, said frames being independently adjustable, a series of cutting elements carried by each frame, and means for actuating said elements, the said elements being adapted to engage the stock between and within the slots respectively.

3. A wood working machine including a slotted table, a stock supporting slide having fingers movable between the slots, an adjustable stop for limiting the movement of the slide and stock, a frame mounted to swing below the table, a series of revoluble cutting elements carried thereby, means for driving said cutting elements, and means for swinging the frame to move the cutting elements into and out of the slots.

4. A wood working machine including a slotted table, a stock supporting slide having fingers movable between the slots, adjustable means for limiting the movement of the slide, a pivotally supported frame mounted to swing toward and from the table, a series of revoluble cutting elements carried by the frame, means for actuating said elements, and means for shifting the frame toward and from the stock carried by the slide.

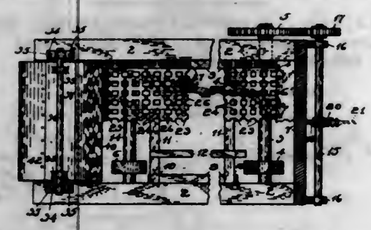
5. In a wood working machine the combination with a table, said table having slots therein, and a stock supporting slide on the table and having fingers movable between the slots, of a bracket adjustably mounted on the table, a bottom plate adjustably connected to the bracket, said bottom plate being inclined and having fingers extending between the slots and in the path of the fingers of the slide, a stop adjustably mounted on said bottom plate and in the path of the fingers on the slide, and cutting elements insertible into the slots for engaging stock mounted on the slide.

[Claims 6 and 7 not printed in the Gazette.]

1,114,969. FURNACE. DAVID A. CRAMER and JOHN M. HOBEN, Galesburg, Ill. Filed Jan. 15, 1912. Serial No. 671,164. (Cl. 110—40.)

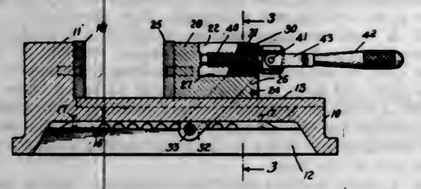
1. A furnace comprising longitudinally arranged U-shaped base-bars, an idler shaft seated in bearings in the

vertical webs thereof, idlers on said shaft, a driving shaft seated in other bearings in said vertical webs, sprocket wheels fixed thereon, oscillatory means for imparting rotatory movements to said driving shaft, an endless grate embracing said idlers and sprocket wheels and actuated by the latter, removable track-rails supporting the upper flight of the grate, removabe transverse bars supporting said rails, plates secured to the base-bars and removably supporting said transverse bars, and a swinging hood pivoted to the rear portions of said base-bars and in rear of said grate, its upper end being in close relation thereof.



2. A traveling grate comprising grate sections, each section comprising spaced longitudinally arranged bars, transversely arranged bars intermediate said bars, and providing an arch and each section having studs provided each with a boss, and a link connecting the adjacent ends of each pair of sections, each of said links provided at its inner portion with recesses which extend beyond its longitudinal central line and which communicate with apertures extending through the link, each link provided also with an aperture which communicates with a recess and an aperture above recited, each of said studs adapted to enter one of the first recited apertures and each of said bosses adapted to enter one of said recesses and to be turned into one of the second recited apertures to lock the link on the grate section.

1,114,970. CLAMP. MATTHEW S. CUMNER, New York, N. Y. Filed Mar. 20, 1914. Serial No. 826,059. (Cl. 144—303.)



1. In a clamp, a base having a plane top surface, spaced slots therein, a clamping jaw, projecting at right angles to said surface, and a series of stops adjacent to said slots on the bottom surface thereof, a movable clamping jaw, adapted to coöperate with the jaw projection, mounted to slide on said plane top surface and having a backwardly extending tongue, a stirrup mounted to slide on said tongue and having shackles extending through said spaced slots and adapted to be held in a predetermined position by the base stops, and a clamping screw extending through the body of the stirrup substantially parallel to the plane surface of the base and arranged to adjust the movable jaw on the base.

2. In a clamp, a base having a pair of spaced longitudinal slots, a recessed bottom surface, and a series of stops adjacent to said slots on the recessed bottom surface, a plane top surface having guideways into which said slots open, and an integral jaw projection extending upwardly at right angles to said plane surface; a movable clamping jaw mounted to slide on the surface of the base and having ribs to coöperate with said guideways, a pair of spaced slots in alinement with the slots in the base providing a tongue between them, a stirrup mounted to slide on said tongue and having shackle arms extending through said slots and through the base slots, a transverse pin engaging the ends of said shackles and adapted to coöperate with said base stops, and a screw extending through said stirrup and acting to force said movable clamping jaw toward said jaw projection.

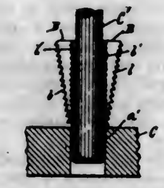
3. In a clamp, an L-shaped base having a series of stops on its under surface, and a pair of spaced longitudinal slots, a movable clamping jaw adapted to slide on one arm of the L-shaped base and to coöperate with the other arm, a tongue projecting backwardly from said movable clamping jaw, a stirrup mounted to slide on said tongue in parallelism with the movement of said movable clamping jaw and having shackles extending on the respective sides of said tongue through said base slots, and a transverse rod connecting the ends of the stirrups and coöperating with the base stops; and a clamping screw extending through said stirrup and acting upon said movable clamping jaw.

4. In a clamp, a base having a plane top surface, a series of stops below the plane top surface, a fixed clamping jaw, a movable clamping jaw adapted to slide on said plane top surface and to coöperate with the fixed jaw and having a backwardly extending tongue, a stirrup mounted to slide on said tongue in parallelism with the movement of said movable clamping jaw and having shackles straddling said tongue and a portion of said base, and adapted to be held in a predetermined position by said base stops and a clamping screw extending through the stirrup and acting upon the back of the movable clamping jaw.

5. In a clamp, a base having a plane top surface, a series of stops below the plane top surface, a fixed clamping jaw, a movable clamping jaw adapted to slide on said plane top surface and to coöperate with the fixed jaw and having a backwardly extending tongue, a stirrup mounted to slide on said tongue in parallelism with the movement of said movable clamping jaw and having shackles straddling said tongue and a portion of said base, and adapted to be held in a predetermined position by said base stops, and clamping means acting in parallelism with said plane top surface, upon the back of the movable clamping jaw.

[Claims 6 to 9 not printed in the Gazette.]

1,114,971. PROCESS OF FORMING SEAMLESS EXPANSION-SHIELDS FOR LAG-BOLTS FROM SHEET METAL. EDWARD G. DIEFENDORF, Erie, Pa. Filed Jan. 26, 1914. Serial No. 814,307. (Cl. 113—116.)



The process of forming expansion shields for lag-bolts, consisting of cutting a disk from sheet metal with radial arms extending from the periphery thereof, forming thread engaging means in the metal composing said arms, bending the metal of said arms longitudinally, and giving said disk and arms a cylindrical form with the edges of said arms outward, substantially as described.

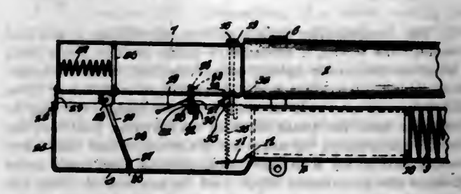
1,114,972. PROCESS FOR PREVENTING THE SPOILAGE OF CANNED FOODS. EDWARD W. DUCKWALL, Aspinwall, Pa. Filed Mar. 29, 1913. Serial No. 757,722. (Cl. 99—8.)

1. A process for preventing the spoilage of previously processed solid or semi-solid foods packed in hermetically sealed containers which consists in subjecting representative sample containers to an incubating heat to develop such bacteria as may be present in the food, then examining the food to ascertain the existence or non-existence of developed living bacteria therein, whereby, if any bacteria are found, it will be disclosed that undeveloped bacteria exist in the remaining containers, from which the samples were taken, and finally subjecting the remaining containers to one single re-cook at a temperature approximating that of approximately boiling water for a sufficient time to convey a temperature of 180 degrees Fahrenheit to the center of the containers whereby the bacteria are killed.

2. A process for preventing the spoilage of previously processed solid or semi-solid foods packed in hermetically sealed containers which consists in subjecting representative sample containers to an incubating heat for a period of time varying inversely with the fluidity of the food in the container from three days to two weeks to develop any living bacteria in the food, then removing a portion of the food from the approximate center of the container and examining the same to definitely ascertain the presence of living bacteria, and should such bacteria be found thus disclosing that undeveloped bacteria of a similar character exist in the remaining bulk of containers, then subjecting the remaining containers to a temperature approximating that of boiling water for a sufficient time necessary to convey a temperature of approximately 180° Fahrenheit to the center of the containers.

3. A process for preventing the spoilage of solid or semi-solid foods packed in hermetically sealed containers which consists in subjecting sample containers taken from freshly packed goods to an incubation for a predetermined length of time to develop any bacteria present therein, then opening the sample containers, taking a sample from the center thereof, and examining the same to definitely determine the presence of living bacteria and, if living bacteria are found thus disclosing that like bacteria exist, in a less developed form, in the remaining containers from which the samples were taken, then subjecting said remaining containers to a boiling water bath or its equivalent for a sufficient time to convey a temperature of approximately 180° Fahrenheit to the center of the containers.

1,114,973. ATTACHMENT FOR GUNS. JOHN E. ERIKSON, Edgerton, Alberta, Canada. Filed Feb. 13, 1913. Serial No. 748,226. (Cl. 42—6.)



1. In combination with a gun having a barrel and a stock breakable relatively to the barrel, a deliverer, a cartridge magazine, means to feed cartridges to said deliverer from said magazine, means to project said deliverer into alinement with said barrel in the space exposed by the stock subsequently to breaking of the stock, and means to discharge cartridges from said deliverer into said barrel.

2. In combination with a gun having a barrel and a stock breakable relatively to the barrel, a deliverer, means to project said deliverer into the space exposed by the stock and retract said deliverer subsequently to breaking of the stock and prior to closing of the stock.

3. In combination with a gun having a barrel and a stock breakable relatively to the barrel, a deliverer, means to move said deliverer intermediate the stock and barrel when in broken relation to position alining with said barrel, and means to discharge a cartridge from said deliverer to said barrel prior to firing.

4. In combination with a gun having a barrel and a stock breakable relatively to the barrel, a deliverer to hold cartridges against lateral displacement, and means to move said deliverer into alinement with the barrel through breaking movement of the stock for discharge of the cartridge through movement longitudinally of the deliverer.

5. In combination with a gun having a barrel and a stock breakable relatively thereto, a cartridge deliverer, a casing for said deliverer offset from the gun and means to project said deliverer from the casing into the space exposed by the stock in alinement with the barrel connected to and operable through movement of the stock.

[Claims 6 to 21 not printed in the Gazette.]

1,114,974. AERATING CLOTHES-WASHER. ALPHEUS FAY, Louisville, Ky., assignor to J. Henry Buddeke. Filed Oct. 26, 1912. Serial No. 728,003. (Cl. 68—5.)

1. An aerating clothes washer comprising a conical vacuum chamber, a horizontal diaphragm therein, a series of rectangular concentric walls below the diaphragm, an inner one of said walls being inscribed in a circle around which an adjacent outer one is circumscribed, said conical chamber having an open mouth in which said walls present their lower edges, said walls having perforations, and said diaphragm having its portions inside the walls imperforate having straight sides leaving segmental openings past the walls inside the inner wall of the conical chamber, and the portion in the conical chamber above the diaphragm having openings to the exterior of the chamber, for the purposes described.

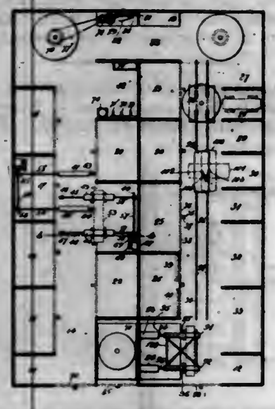
2. An aerating clothes washer comprising a vacuum chamber with curved walls, a diaphragm therein with a straight edge leaving an opening between it and the adjacent curved wall of the chamber, said diaphragm being imperforate, interiorly and said opening leading from below to above said diaphragm in said chamber, and a series of inclosing and inclosed compartment-forming walls below said diaphragm, said walls having perforations forming communication between the compartments formed by the walls, and from them to the opening past the diaphragm.

3. An aerating clothes washer comprising a conical vacuum chamber, a horizontal diaphragm therein rigidly secured to the inner sides of the conical vacuum chamber at separate intervals therearound, and a series of rectangular inclosing and inclosed compartment-forming walls below the diaphragm, with their upper edges rigidly secured to the diaphragm and thereby reinforcing said diaphragm, the outer walls of the series joining the diaphragm in the infervals along its edges between the intervals where the diaphragm is secured to the inner sides of the vacuum chamber, and having the parts adjacent to the corners of the walls cut away and fitted to and rigidly secured to said inner sides of the conical vacuum chamber, whereby these outer walls of the series reinforce the structure of the vacuum chamber in addition to reinforcing the diaphragm.

1,114,975. STORAGE AND CARE OF WHEELED VEHICLES. REGINALD A. FESSENDEN, Brookline, Mass. Filed July 10, 1911. Serial No. 637,672. (Cl. 104—48.)

1. An apparatus for storing wheeled vehicles comprising a plurality of vehicle-receiving cells opening upon an alley-way and a vehicle-conveyer for each cell, each con-

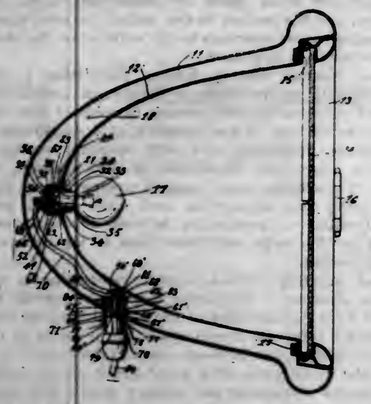
veyer being arranged at right angles to the direction of said alley-way.



2. An apparatus for storing wheeled vehicles comprising a plurality of vehicle-receiving cells opening upon an alley-way and a vehicle-conveyer for each cell, each conveyer being arranged at right angles to the direction of said alley-way and comprising a carrier, an endless chain for operating said carrier, operating means for said endless chain and means operable from the vehicle seat for controlling said operating means.

3. An apparatus for storing wheeled vehicles comprising a plurality of vehicle-receiving cells opening upon an alley-way, a vehicle-conveyer for each cell, and means operable from the vehicle seat for controlling said vehicle-conveyer.

1,114,976. ELECTRIC LAMP. CHARLES H. FISCHER, Cincinnati, Ohio. Filed July 17, 1914. Serial No. 851,582. (Cl. 240—44.)



1. In a lamp, the combination with a reflector, of a lamp-member and a socket-member having helical guide-connection therebetween about the line of the principal axis of said reflector, and spring-pressed positioning means acting operatively between said members removably received about said members.

2. In a lamp, the combination with a reflector, of a lamp-member and a socket-member having helical guide-connection therebetween about the line of the principal axis of said reflector, and a spring-pressed positioning means at said guide-connection.

3. In a lamp, the combination of a casing, a reflector in said casing having a rear central aperture, said reflector provided with a flange about said aperture, a socket-tube in said flange, a light-bulb secured to the forward end of said socket-tube, said flange and socket-tube having a helical guide-connection therebetween for guiding said socket-tube in a helical path for focusing said light-bulb in said reflector, and a spring-pressed holding means removably received about said flange and acting operatively between said flange and socket-tube for automatically holding said socket-tube in adjusted position.

4. In a lamp, the combination of a reflector having a central rear aperture and a longitudinally extending flange about said aperture, a socket-member removably received in said flange, a light-bulb secured to the forward end of said socket-member, said flange and socket-member provided with a helical guide connection for helically guiding said socket-member in said flange for focusing said light-bulb in said reflector, and automatically acting spring positioning means acting on said socket-member removably received about said flange.

5. In a lamp, the combination of a reflector having a rear central aperture, a socket-member received in said aperture arranged to receive a light-bulb at its forward end, a hard fiber washer in said socket-member, a longitudinally movable spring-pressed terminal post in said hard fiber washer, and a laterally extending electric conductor at the rear end of said post, said reflector and socket-member having a helical guide-connection for helically guiding said socket-member for focusing said light-bulb in said reflector, and said socket-member rotatable about said terminal post for permitting said electric conductor to maintain its lateral position during said helical guiding of said socket-member.

[Claims 6 to 11 not printed in the Gazette.]

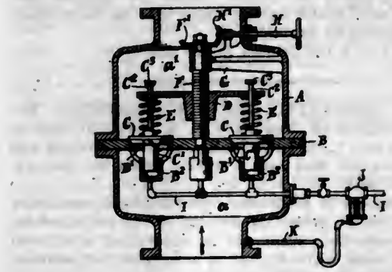
1,114,977. RAILWAY SAFETY AND SIGNAL DEVICE. EDWARD FREED, Seattle, Wash., assignor, by direct and mesne assignments, to Railway Safety Appliance Company, Inc., Seattle, Wash., a Corporation of Washington. Filed Dec. 2, 1912. Serial No. 734,489. (Cl. 246—47.)

1. The combination with a section of railway track and a semaphore tower, a semaphore blade on the tower, and a lever on the tower operatively connected with the semaphore blade, of a plate lever disposed at a distance from said tower at one side of said track, a spring tending to yieldingly hold the plate lever in its elevated position, operative connections between the plate lever and the tower lever, a means on a car for encountering said plate lever whereby the semaphore blade and its associated lever are caused to be moved into operative positions, appliances carried by the car and engageable with the tower lever whereby an alarm is actuated on the car when the latter passes the tower while the lever thereof is in operative position, a spring-actuated lever pawl for retaining said plate lever in position to maintain the tower lever in operative position, and a second plate lever operatively connected with said lever pawl for disengaging the latter from the aforesaid plate lever when the second named plate lever is influenced by said means.

2. The combination with a section of railway track and a semaphore tower at each end thereof, a semaphore blade on each tower, and a lever on each of the towers and operatively connected with the respective semaphore blades, of a plate lever disposed at a distance from said towers and at one side of said track, a spring tending to yieldingly hold the plate lever in its elevated position, operative connections between the plate lever and the tower levers, a means provided on the car for encountering said plate lever whereby the semaphore blades and the associated levers are caused to be moved into operative positions, appliances carried by the car and engageable with the tower levers whereby an alarm is actuated on the car when the latter passes either of the towers while the levers thereof are in operative positions, a lever pawl for retaining the plate lever in position to maintain the tower levers in operative positions, and a second plate lever operatively connected with said pawl for disengaging the latter from the aforesaid plate lever when the second named plate lever is influenced by said means.

3. The combination with a railway track divided into block sections, locomotives, whistle actuating devices connected to the locomotive cabs, and a bar carried by each locomotive and protruding from the sides thereof, of a semaphore tower at each end of a section, a lever pivotally connected to each of said towers, a spring-actuated plate lever having an inclined upper edge provided at the side of the track and engageable by the bar of a locomotive whereby the respective levers of a track section are moved into position to be engaged by the whistle actuating means of the other locomotive to render such means operative should the last named locomotive enter a section previously occupied by another locomotive, and devices engageable by said whistle actuating means for rendering the latter operative where a locomotive is in the adjacent section.

1,114,978. VALVE. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., as Firm of Harrison Safety Boiler Works, Philadelphia, Pa. Filed Mar. 19, 1912. Serial No. 684,786. (Cl. 137—53.)



1. In a valve, the combination of a valve casing comprising a diaphragm separating the interior of the casing into inlet and outlet chambers and formed with a plurality of valve seated ports connecting said chambers, an individual valve for and controlling each of said ports, a separate fluid operating device for each of said port controlling valves each device comprising coöperating piston and cylinder members secured one to the corresponding valve and the other to said diaphragm and projecting into one of said chambers, and means including a common controlling device located outside of said casing for supplying pressure fluid to the various valve actuating devices.

2. In a valve, the combination of a valve casing formed with a plurality of valve seated ports, an individual valve for each port, a separate fluid pressure operating device located within the valve casing for each of said valves, and means for supplying pressure fluid to the various devices comprising a supply pipe, a valve controlling said pipe, and fluid pressure operating mechanism for the last mentioned valve responsive to the pressure in the valve casing at one side of said ports.

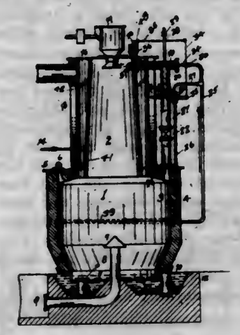
3. In a valve, the combination of a casing divided into sections, a ported valve supporting member interposed between said sections and externally exposed at its outer edge, valves controlling the ports in said member, fluid pressure operating means for said valves mounted on said member within the casing, and a pressure fluid supply connection to said devices including an external pipe connected to said member and leading away from the exposed external edge thereof.

4. In a valve, the combination of a casing divided into sections, a valve supporting member interposed between said sections and externally exposed at its outer edge and formed with a plurality of ports, valves controlling the ports in said member and operating means therefor including a threaded operating member journaled in said valve supporting member and extending transversely thereto, and a second operating member journaled in said valve supporting member and geared to said threaded operating member and projecting externally of the valve casing from the exposed edge of said supporting member.

5. In a valve, the combination of a casing divided into sections, a ported valve supporting member interposed between said sections and externally exposed at its outer edge, valves controlling the ports in said member, spring loading mechanism for the valves, and an adjusting device therefor mounted in said member and projecting externally of the valve casing from the exposed outer edge of said member.

[Claim 6 not printed in the Gazette.]

1,114,979. GAS-PRODUCER. CLAUDE M. GARLAND, Chicago, Ill. Filed Dec. 15, 1913. Serial No. 806,736. (Cl. 48—82.)



1. In a gas producer, a lower gas generating chamber, an upper distillation chamber, means for causing a mixture of air with an endothermic reagent to pass upward through the said gas generating chamber, means for causing non-oxidizing gases to pass downward through the said distillation chamber, thermostatic means for maintaining the temperature of the said non-oxidizing gases constant, and a gas exit for the gas and volatile matter generated.

2. In a gas producer, a lower gas generating chamber, an upper distillation chamber, means for causing a mixture of air with an endothermic reagent to pass upward through the said lower gas generating chamber, whereby a combustible gas is generated, means for causing steam to pass downward through the said upper distillation chamber, whereby the volatile matter is distilled off, means for controlling the temperature of the said steam, and a gas off-take for the said volatile matter and the said combustible gas.

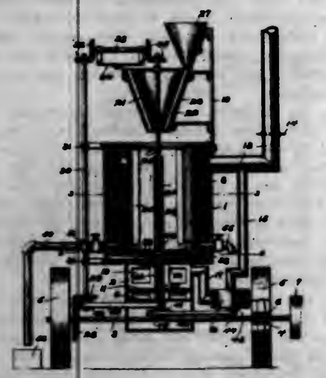
3. In a gas producer, a lower gas generating chamber, an upper distillation chamber, a communicating means communicating with the gas space in the upper portion of the said lower gas generating chamber and with the interior of the upper part of the said upper distillation chamber, means for causing a mixture of air with an endothermic reagent to pass upward through the said lower gas generating chamber whereby a combustible gas is generated, means for causing a portion of the said combustible gas to pass through the said communicating means and down through the said upper distillation chamber, whereby the volatile matter is distilled off, means for maintaining the temperature of the said portion of the said combustible gas entering the said upper distillation chamber constant, and a gas exit for the said combustible gas and the said volatile matter.

4. In a gas producer, a lower chamber, a double walled upper chamber, the said upper chamber having a free opening into the said lower chamber, a steam generating space formed in the outer wall, and an annular gas passage formed between the inner and outer walls of the said upper chamber, a gas exit communicating with the

said annular gas passage, a pipe communicating with the upper portion of the said lower chamber and the upper portion of the said upper chamber, a steam nozzle in the said pipe, a superheating coil in the lining of the said producer, a three-way valve, a pipe communicating with the said steam generating space and the said three-way valve, a pipe communicating with the said three-way valve and the said superheating coil, a pipe communicating with the said three-way valve and the said steam nozzle and a pipe communicating with the said steam nozzle and the said superheating coils.

5. In a gas producer, a lower chamber, a double walled upper chamber, the said upper chamber having a free opening into the said lower chamber, a steam generating space formed in the outer wall of the said upper chamber, an annular gas passage formed between the inner and the outer walls of the said upper chamber, a gas exit communicating with the said gas passage, a pipe communicating with the upper part of the said lower chamber, and with the upper part of the said upper chamber, a steam nozzle in the said pipe, a three-way valve, a pipe communicating with the said steam generating space and the said three-way valve, a pipe communicating with the said three-way valve and the said steam nozzle, a superheating coil in the lining of the said lower chamber, a pipe communicating with the said three-way valve and the said super-heating coil, a pipe communicating with the said superheating coil and the said steam nozzle, a thermostat located in the top of the said upper chamber, operating connections between the said thermostat and the said three-way valve, whereby the said thermostat operates the said three-way valve to maintain a constant temperature of the gases delivered to the said upper chamber, a twyer at the bottom of the said lower chamber, and a fuel charging device at the top of the said upper chamber, substantially as described.

1,114,980. APPARATUS FOR MAKING BRIQUETS. SAMUEL B. GOTT, Camden, N. J. Filed Sept. 11, 1913. Serial No. 789,234. (Cl. 94—6.)



1. In an apparatus of the character described, the combination with a cylinder, a tank in the cylinder and smaller than the cylinder, a fire box below the cylinder and communicating therewith, a soot catcher located between the bottom of the tank and the bottom of the cylinder, a chimney communicating with the cylinder, and means for returning the smoke from the chimney to the fire box, substantially as described.

2. In an apparatus of the character described, the combination with an axle, wheels supporting the axle, a fire box supported on the axle, a tank supported on the fire box, and around which the smoke and gases from the fire box are directed, a soot catcher located below the tank and above the fire box, an agitator in the tank, means for transmitting motion from the axle to the agitator, and a valved outlet communicating with said tank, substantially as described.

3. In an apparatus of the character described, the combination with an axle, wheels supporting the axle, a fire box supported on the axle, a tank supported on the fire box, and around which the smoke and gases from the fire box are directed, an agitator in the tank means for transmitting motion from the axle to the agitator, a rotary soot catcher located between the lower end of the tank and the fire box, and means for turning said soot catcher, substantially as described.

4. In an apparatus of the character described, the combination with an axle, wheels supporting the axle, a fire box supported on the axle, a tank supported on the fire box, and around which the smoke and gases from the the fire box are directed, an agitator in the tank, means transmitting motion from the axle to the agitator, a tube projecting through the fire box, a shaft in said tube, a soot catcher on the upper end of said shaft comprising a plurality of blades, and means for turning said shaft, substantially as described.

5. In an apparatus of the character described, the combination with an axle, wheels supporting the axle, a fire box supported on the axle, a tank supported on the fire box, and around which the smoke and gases from the fire box are directed, an agitator in the tank, means for transmitting motion from the axle to the agitator, a tube projecting through the fire box, a shaft in said tube, a soot catcher on the upper end of said shaft comprising a plurality of blades, means for turning said shaft, and said blades having angle bars on their lower faces, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,114,981. INDURATED KERATIN COMPOUND. BYRON B. GOLDSMITH, New York, N. Y. Original application filed Oct. 7, 1907, Serial No. 396,189. Divided and this application filed Jan. 4, 1912. Serial No. 669,512. (Cl. 106—46.)

1. The process of producing a thermoplastic compound which consists in subjecting keratin to the combined action of a converting agent and an indurating agent, and mixing the mass while heated to a suitable temperature, substantially as described.

2. The process of producing a thermoplastic compound which consists in subjecting keratin to the combined action of a normally solid, non-volatile converting agent and an indurating agent and heating and pressing the mass, substantially as described.

3. The process of producing a thermoplastic compound which consists in subjecting keratin to the combined action of betanaphthol and formaldehyde and heating and pressing the mass, substantially as described.

4. The process of producing a thermoplastic compound which consists in intimately mixing with keratin a solid converting agent and an indurating agent, and subjecting the mixture to heat and pressure, substantially as described.

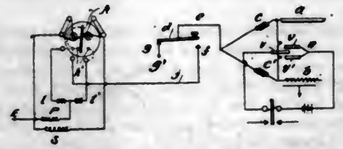
5. The process of producing a thermoplastic compound which consists in subjecting keratin to the modifying action of a solid converting agent and of an indurating agent, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,114,982. WORKING SUBMARINE CABLES. JOHN GOTT, Hove, Brighton, England, assignor to Commercial Cable Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 18, 1912, Serial No. 684,572. Divided and this application filed July 31, 1912. Serial No. 712,509. (Cl. 178—63.)

1. A system of cable working comprising a cable, a sending key, a polarized relay, a transformer, and means whereby upon the opening of the key the relay will be operated by the induced current in the transformer to reverse the connections of the battery to the line.

2. A system of cable working comprising a cable, a sending key for transmitting signal impulses of current, a polarized relay, a transformer, means whereby upon the opening of the key the relay will be operated by the induced current in the transformer to change the polarity of the current to the line, and means at the receiving or terminal end of the line for receiving said signal impulses irrespective of their polarity.



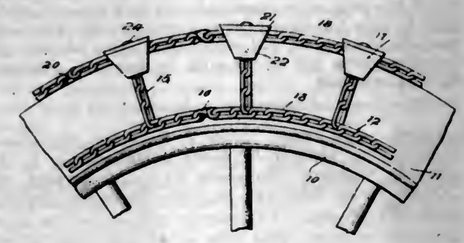
3. A system of cable working comprising a cable, a sending key, a polarized relay, a transformer, a split battery grounded through the primary coil of said transformer, the secondary coil thereof being connected to the relay, whereby upon the opening of the key the connections of the battery to the line will be reversed.

4. A system of cable working comprising a cable, a sending key, a polarized relay, and means whereby when the key is closed the relay tongue will be held against its contact to complete the circuit to the cable and when the key is opened said means will cause the relay to reverse the polarity of the current to the line for the next key operation.

5. A system of cable working comprising a cable, a sending key, a polarized relay, and means whereby the cable charging current will induce a current through the relay to hold the relay tongue against its contact when the sending key is closed and when the key is opened said means will cause the relay to reverse the polarity of the current to the line for the next key operation.

[Claims 6 to 10 not printed in the Gazette.]

1,114,983. TRACTION DEVICE FOR WHEELS. FRANK W. GRISINGHER, Guadalupe, Cal. Filed Mar. 18, 1913. Serial No. 755,179. (Cl. 152—14.)



1. A device of the character described including a tire chain having side chains and cross chains connecting the side chains, and tractor bars each secured to one of the cross chains, each tractor bar including a plate, and blocks secured to the ends of the plate and having their inner ends cut-away to engage about the cross chains and to bear flatly against the tire, said blocks being secured to the inner face of the plate.

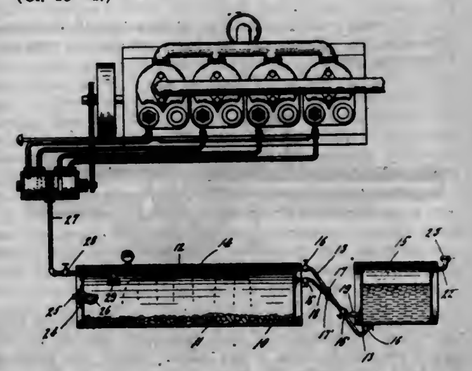
2. A device of the character described including a tire chain having side chains and cross chains connecting the side chains, tractor bars each secured to one of the cross chains, each tractor bar including a plate, and blocks secured to the ends of the plate and having their inner ends cut-away to engage about the cross chains and to bear flatly against the tire, said blocks being secured to the inner face of the plate, the outer faces of the blocks adjacent their outer ends being grooved, and peripherally extending chains passed through the grooves of the corresponding end blocks of the bars and held in place between said blocks and the plates by suitable fasteners.

3. In a device of the character described, a tire chain including side chains and spaced cross chains, tractor bars secured to the cross chains, a strip of canvas secured to the end portions of the tractor bars upon one side of the cross chains and a strip of canvas secured to the ends of the tractor bars upon the other side of the cross chains.

4. A device of the character described including a tire chain having side chains and cross chains connecting the side chains and tractor bars secured each to one of the cross chains, each tractor bar including a plate and blocks secured to the ends of the plate and having their inner ends cut-away to engage about the cross chains and to bear flatly against the tire, said blocks being secured to the inner faces of the plates, peripherally extending chains connecting the corresponding end blocks of the bars and holding the tractor bars against swinging movement, and peripherally extending strips of canvas secured to the inner faces of the corresponding blocks.

5. In a device of the character described, a tire chain including side chains and spaced cross chains, the side chains being adapted to bear against the side of the tire adjacent its locking beads while the cross chains engage transversely about the periphery of the tire, tractor bars secured to the cross chains and extending at their ends beyond the sides of the tire, and chains connecting corresponding ends of the tractor bars.

1,114,984. GAS-GENERATOR. HARRY W. HAMILTON, Indianapolis, Ind., assignor to The Ham-Meix Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Dec. 11, 1911. Serial No. 664,982. (Cl. 48—4.)



1. A gas generator comprising a generating chamber arranged to contain one gas forming material, a second chamber arranged to contain another gas forming material, two passages forming independent and non-gravity communications between the two chambers; a check valve mounted in one of said passages to prevent flow from the generating chamber to the second chamber and to offer a predetermined resistance to flow from the second chamber to the generating chamber, and a check valve mounted in the other passage and preventing flow through said passage from the second chamber to the generating chamber.

2. An acetylene gas generator comprising a generating chamber and a water chamber, a passage leading from the bottom of the water chamber to the upper part of the generating chamber without possibility of gravity flow from the water chamber to the generating chamber and provided at its generator-chamber end with a distributing head, a check valve arranged in said passage to prevent flow therethrough from the generating chamber to the water chamber and to offer a predetermined resistance to flow from the water chamber to the generating chamber, a second passage forming a communication between the generating chamber and water chamber and opening into the generating chamber below the water level therein, and a check valve arranged in said second passage for preventing flow from the water chamber to the generating chamber.

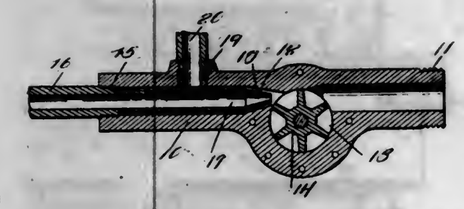
3. An acetylene gas generator comprising a generating chamber and a water chamber, a passage leading from the

bottom of the water chamber to the upper part of the generating chamber without possibility of gravity flow from the water chamber to the generating chamber and provided at its generator-chamber end with a distributing head, a check valve arranged in said passage to prevent flow therethrough from the generating chamber to the water chamber and to offer a predetermined resistance to flow from the water chamber to the generating chamber, a second passage forming a communication between the generating chamber and water chamber, and a check valve arranged in said second passage for preventing flow from the water chamber to the generating chamber.

4. A gas generator comprising a generating chamber arranged to contain one gas-forming material, a second chamber arranged to contain another gas-forming material, the two passages forming independent and non-gravity communications between the two chambers, and check valves arranged in said two passages and preventing flow in opposite directions respectively.

5. An acetylene gas generator comprising a generating chamber and a water chamber, two passages connecting said two chambers and each opening into the water chamber below the water level therein, and a check valve arranged in each of said passages, one of said check valves preventing flow through it from the water chamber to the generating chamber and the other preventing flow through it from the generator chamber to the water chamber.

1,114,985. OIL-BURNER. CHRISTIAN M. HEINSEN, Fresno, Cal. Filed May 28, 1913. Serial No. 770,496. (Cl. 158—77.)

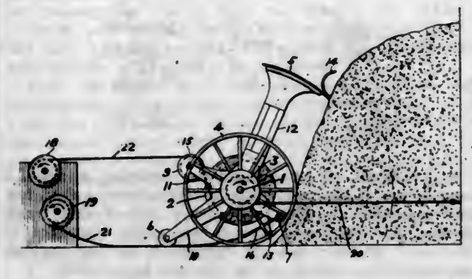


An oil burner comprising a tubular body having its bore contracted intermediately and said body having an enlarged portion forming a fan wheel casing, the interior of which interrupts the bore of the body at the contracted portion thereof, a fan wheel rotatably mounted in said casing with its axis of rotation at right angles to the axis of the body and its blades completely obstructing the bore of the body, a steam supply pipe engaged in one end of the bore of said body and terminating in a nozzle disposed within the bore of the body and of less diameter than said bore, means for delivering oil into the bore of the body between the ends of said nozzle, and means at the other end of said body for the attachment of a burner tip.

1,114,986. CEMENT-SCRAPER. ARNOLD HOCHSTRASSER, Cementon, Pa., assignor to Whitehall Cement Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 7, 1914. Serial No. 817,134. (Cl. 37—11.)

1. A cement scraper comprising the combination of a wheeled carriage having differential drums and their cables for drawing the device into working position, a scraper frame turnably mounted on the carriage and provided with a scraper plate and a scraper guide and an operating cable and a cable guide radially spaced in respect to each other, and reversely operating windlass drums for said operating cables, substantially as described.

2. A cement scraper comprising the combination of a wheeled carriage having drums and their cables for drawing the device into working position, a scraper frame turnably mounted on the carriage and provided with a scraper plate and a scraper guide and an operating cable and a cable guide radially spaced in respect to each other, and reversely operating windlass drums for said operating cables, substantially as described.



3. In a cement scraper the combination of a shaft having differential winding drums, anchor cables coöperating with the smaller drums, an operating cable coöperating with the larger drum, and wheels on the shaft, substantially as described.

4. In a cement scraper the combination of a wheeled shaft having drums, anchor cables coöperating with some of the drums, an operating cable coöperating with another of the drums, a scraper frame on the shaft provided with a floor guide and a guide coöperating with said operating cable, a second operating cable coöperating with the frame, and means for playing out one of said cables as the other is wound up, substantially as described.

5. A cement scraper comprising the combination of a wheeled shaft provided with drums, anchor cables coöperating with some of said drums, a scraper frame provided with a scraper plate and having a radial arm and a floor guide and a cable guide, an operating cable coöperating with the cable guide and with one of said drums to turn the scraper plate up and draw the scraper in, a second operating cable connected with said arm and operating to turn the scraper plate down onto the floor and draw the scraper out, and means for playing one of said operating cables out as the other is drawn in, substantially as described.

1,114,987. CAR-ROOF. JOHN J. HOFFMAN, New Kensington, Pa., assignor, by mesne assignments, to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1913. Serial No. 748,824. (Cl. 108—5.)

1. A car roof comprising movably mounted metal sheets bent intermediate their ends and connected by loose waterproof seams, said roof sheets being partly over and partly under their fellows, the under parts having upstanding flanges along the margins thereof and doubled up folds in said sheets parallel with and reflexed toward said flanges forming overhanging lips spaced therefrom, the tops of said lips being lower than the tops of said upstanding flanges, and the uppper parts lapping over said under parts and consisting of inverted channels with outwardly projecting flanges along the lower edges of their side walls, said channels straddling over said upstanding flanges and having their side walls spaced therefrom, the outwardly projecting flanges of said channels underlying the overhanging lips of said sheets, the clear width within said inverted channels between their side walls and the upstanding flanges of the under parts of said sheets upon which said side walls respectively rest being greater than the width of the respective portions of the projecting flanges underlying the overhanging lips of said sheets, whereby intermediate sheets can be assembled and removed singly from the roof by vertical and sidewise movements.

2. A car roof comprising movably mounted metal sheets bent intermediate their ends and connected by loose waterproof seams, said roof sheets being partly over and partly under their fellows, the under parts having upstanding flanges along the margins thereof and doubled up folds in said sheets parallel with and flexed toward said flanges forming overhanging lips spaced therefrom, and the upper parts lapping over said under parts and consisting of inverted channels with outwardly projecting flanges along the lower edges of their side walls, said channels straddling over said upstanding flanges and having their side walls spaced therefrom, the outwardly projecting flanges of said channels underlying the overhanging lips of said sheets, the clear width within said inverted channels between their side walls and the upstanding flanges of the under parts of said sheets upon which said side walls respectively rest being greater than the width of the respective portions of the projecting flanges underlying the overhanging lips of said sheets, whereby intermediate sheets can be assembled and removed singly from the roof by vertical and sidewise movements.

3. A car roof comprising movably mounted metal sheets connected by loose waterproof seams, said roof sheets being partly over and partly under their fellows, the under parts having upstanding flanges along the margins thereof and doubled up folds in said sheets parallel with and reflexed toward said flanges forming overhanging lips spaced therefrom, and the upper parts lapping over said under parts and consisting of inverted channels with outwardly projecting flanges along the lower edges of their side walls, said channels straddling over said upstanding flanges and having their side walls spaced therefrom, the outwardly projecting flanges of said channels underlying the overhanging lips of said sheets, the clear width within said inverted channels between their side walls and the upstanding flanges of the under parts of said sheets upon which said side walls respectively rest being greater than the width of the respective portions of the projecting flanges underlying the overhanging lips of said sheets, whereby intermediate sheets can be assembled and removed from the roof without removing the sheets adjacent thereto.

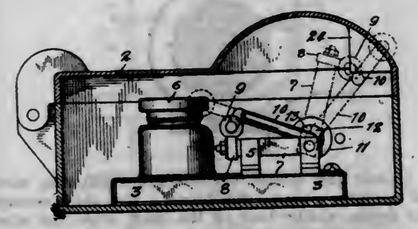
4. A car roof comprising metal sheets movably mounted on the substructure, said sheets being turned down over the eaves and connected by loose waterproof seams, said seams comprising an upstanding flange at the margin of a sheet, an overhanging lip formed by reflexing said sheet inward from said flange, said reflex portions extending over the eaves but said flange terminating short of the eaves, the reflex portions having openings therein in the region of the eaves, a relatively wide hollow upstanding rib on the adjoining sheet adjacent to the margin thereof overhanging said marginal flange of said first mentioned sheet, said flange being located adjacent to the inner side wall of said rib, a marginal lip on said second mentioned sheet outside of said rib and underlying the overhanging lip portion of said first mentioned sheet.

5. A car roof comprising movably mounted metal sheets connected by loose waterproof seams, said seams comprising an upstanding flange at the margin of a sheet, an overhanging lip formed by a reflexed fold of said sheet spaced inward from said flange, a relatively wide hollow upstanding rib on the adjoining sheet adjacent to the margin thereof, and a marginal lip on said second mentioned sheet outside of said rib, the margin of said second sheet lapping over said first sheet with said hollow rib straddling said marginal flange of said first mentioned sheet, and said marginal lip underlying said overhanging lip portion on said first mentioned sheet, the clear width of said rib between the luner side wall and said marginal flange being greater than the width of the portion of said marginal lip underlying said overhanging lip.

[Claims 6 to 8 not printed in the Gazette.]

1,114,988. ELECTRICAL SWITCH. BAYSON D. HORTON, Detroit, Mich. Filed Apr. 5, 1913. Serial No. 759,005. (Cl. 175—282.)

1. A switch of the character described, including a casing provided with a cover, a switch mechanism therein,



said switch mechanism including stationary and movable contacts and a crank for operating the switch, said cover being provided with a cavity for permitting a partial movement of the crank to open the switch without opening the cover, means carried by the cover adapted to be brought into engagement with the crank after the latter has been moved to its full opened position when the cover is open said means engaging the crank when in this position upon the closing of the cover.

2. A switch of the character described, including a casing having a cover, a switch mechanism therein, said switch mechanism including stationary and movable contacts and a crank for operating the movable contacts, said cover being provided with a cavity for permitting a partial movement of the crank to open the switch without opening the cover, an abutment carried by the cover and projecting into the cavity, and adapted to be brought into engagement with the crank after the latter has been moved to its full open position when the cover is open said abutment engaging the crank when in this position upon the closing of the cover.

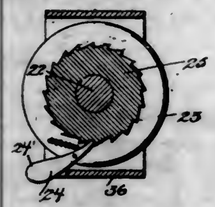
3. A switch of the character described, including a casing having a cover, a switch mechanism therein, said switch mechanism including stationary and movable contacts and a crank for operating the movable contacts, said cover being provided with a cavity for permitting a partial movement of the crank to open the switch without opening the cover, means carried by the cover adapted to be brought into engagement with the crank after the latter has been moved to its full open position when the cover is open said means coöperating with the crank when in this position and when the cover is closed, and means for locking the cover closed.

4. A switch of the character described, including a casing provided with a hinged cover, a switch mechanism therein, said switch mechanism including stationary and movable contacts, a crank operating member operably associated with the movable contacts, said cover being provided with a cavity to permit of the opening of the switch without opening the cover, means carried by the cover and projecting into the cavity for engaging the switch mechanism in open position for holding the same in this position when the cover is closed, and independently operated means for locking the cover in closed position to lock the switch mechanism in open position.

5. In a switch of the character described including a casing provided with a hinged cover, a switch mechanism within said casing, including stationary and movable contacts, an operating handle mounted in the body of the casing and operably connected with the movable contacts and adapted to move them to make or break an electrical circuit, a lug formed integral with the cover of the casing adapted to engage the switch handle positively to hold the switch open after the same has been thrown to its extreme limit of its circuit breaking movement when the cover is open, said lug engaging the handle when the cover is thereafter closed for retaining the switch mechanism in its full open position and means for positively locking the cover closed to prevent the establishment of an electrical circuit through the contacts.

[Claims 6 and 7 not printed in the Gazette.]

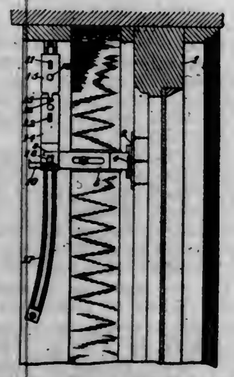
1,114,989. LIQUID MEASURE AND REGISTER. WILLIAM J. HUGHES, Baltimore, Md. Filed Sept. 24, 1910. Serial No. 583,640. (Cl. 235—91.)



1. A pawl and ratchet device for a registering mechanism including a supporting frame, a rock shaft mounted in the frame, a disk fixed on the shaft, a ratchet wheel loosely mounted on the shaft adjacent the disk, a spring pressed pawl pivotally carried by the disk and engaging the ratchet wheel, said pawl having a weighted end, and means on the frame for engagement by the said weighted end to rock the pawl out of engagement with the ratchet wheel after the pawl has moved the ratchet wheel the required distance.

2. A registering mechanism including a support, a shaft, a disk fixed on the shaft, a spring pressed pawl pivotally carried on the disk, said pawl having a depending weighted enlargement, the lower portion of the support being slotted to receive the depending weighted portion, said depending portion being adapted to engage the end wall of the slotted portion, during a part of the movement of said disk, a ratchet wheel loosely carried by the shaft and engaged by said pawl, said pawl being released from contacting with said ratchet wheel when the weighted enlargement engages with the end wall of the slot.

1,114,990. WINDOW-SHADE FIXTURE. CHARLES W. HUTCHINSON, New Rochelle, N. Y., assignor of forty-nine one-hundredths to Charles W. Nisbett, Flushing, New York, N. Y. Filed May 14, 1913. Serial No. 767,549. (Cl. 156—24.)



1. In combination with a slidable window sash and a frame therefor, a window shade carrying member, a supporting member for the window shade carrying member carried by the sash, and releasing and holding means for the window shade carrying member carried by the window frame and adapted to release the window shade carrying member from the supporting member as the sash moves in one direction and to hold the window shade carrying member in position to be picked up by the supporting member as the sash moves in the opposite direction.

2. Window shade fixtures comprising supporting brackets adapted to be carried by the window sash and open at their upper sides, a shade-carrying plate adapted to be carried by each supporting bracket, and releasing and holding means for the shade-carrying plates adapted to be secured to the window frame and to catch the shade-carrying plates as the sash descends and hold the plates in position to be picked up by the brackets as the sash ascends.

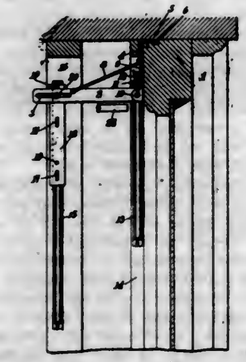
3. Window shade fixtures comprising two supporting brackets adapted to be secured to opposite sides of the window sash and each having a short overhanging arm, two shade-carrying plates arranged to receive and hold the respective shade spindles, each plate having a guide stud adapted to be supported underneath the overhanging arm of the respective supporting bracket, and releasing and holding means for the shade-carrying plates comprising two guide members adapted to be secured to opposite sides of the window frame in position to be engaged by the respective guide lugs and to guide the studs from beneath the overhanging arms as the sash descends and thereby release the shade-carrying plates from the brackets and to hold the shade-carrying plates in position to be picked up by the brackets as the sash descends.

4. Window shade fixtures comprising two supporting brackets adapted to be secured to opposite sides of the window sash and each having a short overhanging arm, two shade-carrying plates arranged to receive and hold the respective shade spindles, each plate having a guide stud provided with a guide head and adapted to be supported underneath the overhanging arm of the respective supporting bracket, and two guide members having guide grooves shaped transversely to correspond to the guide heads, the guide members being adapted to be secured to opposite sides of the window frame in such position that the flaring ends of the guide studs engage in the grooves of the respective guide members, the grooves being so shaped longitudinally that as the sash descends they guide the stud from beneath the overhanging arms and thereby release the shade-carrying plates from the brackets and hold the shade-carrying plates with the studs in the ends of the respective grooves.

5. Window shade fixtures comprising two supporting brackets adapted to be secured to opposite sides of the window sash, two guide members adapted to be secured to opposite sides of the window frame and each having an angularly extending portion, and two pairs of shade-carrying plates, one pair being adapted to engage and be guided by each guide member and to be supported on the respective supporting bracket, the two plates of each pair being coupled together to permit independent angular movement and each being arranged to receive and hold a shade spindle.

[Claims 6 to 9 not printed in the Gazette.]

1,114,991. WINDOW-SHADE FIXTURE. CHARLES W. HUTCHINSON, New York, N. Y. Filed Aug. 12, 1913. Serial No. 784,357. (Cl. 156—24.)



1. Window shade fixtures comprising a shade-supporting bracket including an attaching portion adapted to engage a window sash, abutment means adapted to be arranged on a window sash, and a yieldable locking member on the bracket adapted to resiliently engage the abutment means and lock the attaching portion to the sash and adapted to yield under pressure and release the attaching portion from the sash.

2. Window shade fixtures comprising a shade-supporting bracket including an attaching portion adapted to hook over the top of a window sash, an abutment member adapted to be arranged on the sash and having a cam face on its under side, and a yieldable locking member on the bracket adapted to engage underneath the abutment member and having a cam face on its upper side, the locking member being adapted to yield under upward pressure on the bracket and escape past the abutment member and release the bracket.

3. Window shade fixtures comprising a shade-supporting bracket including an attaching portion adapted to hook over the top of a window sash, an abutment member adapted to be arranged on the sash and having a cam face on its under side, a yieldable locking member on the bracket adapted to engage underneath the abutment member and having a cam face on its upper side, the locking member being adapted to yield under upward pressure on the bracket and escape past the abutment member and release the bracket, and a stop adapted to be secured to the window frame in position to limit the downward movement of the bracket with the sash.

4. Window shade fixtures comprising a shade-supporting bracket including an attaching portion adapted to engage a window sash, an abutment member adapted to be arranged on the sash and having a cam face on its under side, a yieldable locking member on the bracket adapted to engage underneath the abutment member and having a cam face on its upper side, the locking member being adapted to yield under upward pressure on the bracket and escape past the abutment member, a guide member adapted to be secured to the window frame and provided with a stop at its lower end, and a guide engaging member carried by the bracket adapted to engage the guide and to engage the stop at the lower end of the guide and release the bracket from the sash as the sash is lowered.

5. Window shade fixtures comprising a shade-supporting bracket including an attaching portion adapted to engage a window sash, and an abutment member adapted to be arranged on the sash and having a cam face on its under side, a yieldable locking member on the bracket adapted to engage underneath the abutment member and having a cam face on its upper side, the locking member being adapted to yield under upward pressure on the bracket and escape past the abutment member, a retaining guide member adapted to be secured upon the window frame and provided with an undercut groove closed at its lower end, and a guide stud carried by the bracket arranged to engage and fit in the groove of the guide member.

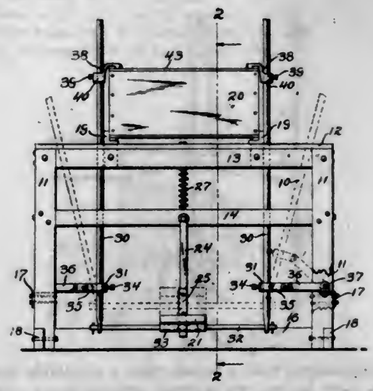
[Claims 6 to 11 not printed in the Gazette.]

1,114,992. PRESS. CHARLES W. KALAHER, Zillah, Wash. Filed Nov. 29, 1913. Serial No. 803,821. (Cl. 100—57.)

1. A press of the character described comprising a supporting frame, a treadle carried by said frame, rods pivotally connected with said treadle, article engaging means mounted upon said rods, and guiding means for said rods carried by said supporting frame and adjustably connected with said rods.

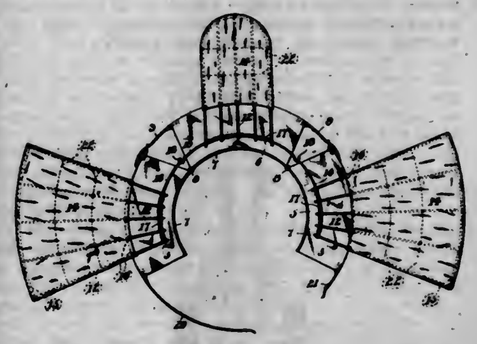
2. A press of the character described comprising a support, a treadle carried by said support, a pivot pin rotatably connected to said treadle, rods pivotally connected with said pin and extending above said support, article engaging means carried by said rods, guides adjustably connected with said rods, and links pivotally connected with said guides and with said support.

3. A press of the character described comprising a support, a treadle carried by said support and provided with a slot, a rack bar carried by said support and extending through said slot, a latch plate carried by said treadle and extending partially across said slot for engaging said rack bar, means for yieldably holding said treadle in a normal position, article-engaging means connected with said treadle, and guiding means carried by said support and adjustably connected with said article-engaging means.



4. A press of the character described comprising a supporting frame, rods extending vertically through said frame, article-engaging means carried by said rods, collars slidably mounted upon said rods, means for releasably holding said collars in an adjusted position, links pivotally connected with said collars, and operating means for said rods.

1,114,993. PARACHUTE. IGNACY KUKOSZ, Carnegie, Pa. Filed June 24, 1914. Serial No. 847,096. (Cl. 244—21.)

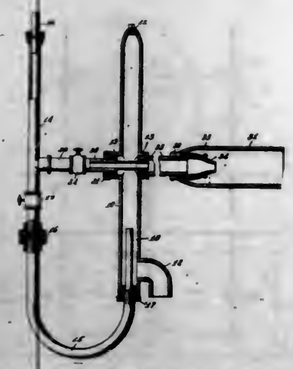


1. A parachute comprising side plates and an intermediate plate, each substantially segmental in form, the side plates being hinged at the inner circumferences thereof to the intermediate plate at the inner circumference of the latter, each of said plates having an upstanding flange around the inner circumference, adjustable connections between the side plates and the intermediate plates at the periphery of said plates, and an outwardly-extending wing carried by each plate.

2. A parachute comprising segmental side plates and a segmental intermediate plate to which the side plates are hinged, a plurality of pairs of lugs carried by each plate on the upper face thereof adjacent the periphery of the plate, ribs pivotally-mounted in said pairs of lugs, and a covering over said ribs.

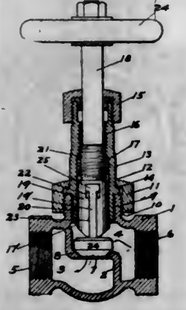
3. A parachute comprising a pair of segmental side plates and an intermediate plate to which the side plates are hingedly-connected, adjustable connections between the side plates and the intermediate plate at the peripheries of the said plates, and an outwardly-extending wing carried by each plate.

1,114,994. OIL-BURNER. JOSEPH LEO LANDRY, Napoleonville, La. Filed July 21, 1913. Serial No. 780,270. (Cl. 158—74.)



In combination with a burner tube, a relatively large induction tube having an integral reduced inner end constituting a sleeve portion engaging in threaded relation upon the end of said burner tube whereby to support the induction tube, the induction tube being further provided with a plurality of lateral openings forwardly of said sleeve portion, and a reduced nozzle in the induction tube having an integral enlarged inner end adapted for threaded engagement upon the burner tube and to be jammed against said sleeve portion whereby to lock said sleeve portion upon the end of the burner tube, said nozzle being adapted to inject a relatively fine jet of fuel from the burner tube into said induction tube.

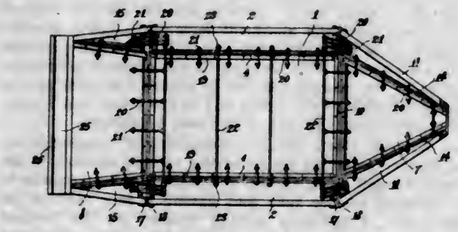
1,114,995. GLOBE-VALVE. JAMES T. LANGLEY, Portland, and EDWIN THOMAS, La Grande, Oreg. Filed July 24, 1913. Serial No. 780,924. (Cl. 137—4.)



1. A valve, comprising a shell provided with a diaphragm forming two compartments respectively communicating with the inlet and outlet of the valve, said diaphragm having a centrally disposed horizontal portion provided with an opening with a valve seat surrounding it on the upper side of the diaphragm, a vertical shell neck above the valve seat, a gland securable on the shell neck internally threaded near its upper end and having a continuous vertical cylindrical passage below the threaded part also a downwardly facing valve seat in its lower end, a valve spindle within the gland composed of an upper vertical member threaded near its central part, its lower part being cylindrical with a vertical slot extending through the sides of the same and with the female part of a T-joint in the upper end of said slot, also a lower member comprising a flat central part which extends through the slot and the edges of which are flush with the cylindrical part of said spindle, a valve on the lower end of said central part formed to adapt it to be received in the aforesaid upper and lower valve seats, also the male part of a T-joint in the upper end of said central part of lesser vertical dimension than the aforesaid female part, and means to operate the spindle, substantially as described.

2. A valve, comprising a shell provided with a diaphragm forming two compartments respectively communicating with the inlet and outlet of the valve, said diaphragm having a centrally disposed horizontal portion provided with an opening with a valve seat surrounding it on the upper side of the diaphragm, a vertical shell neck above the valve seat, a gland securable on the shell neck internally threaded near its upper end and having a continuous vertical cylindrical passage below the threaded part, a valve spindle within the gland composed of an upper vertical member threaded near its central part, its lower part being cylindrical with a vertical slot extending through the sides of the same and with the female part of a T-joint in the upper end of said slot, also a lower member comprising a flat central part which extends through the slot and the edges of which are flush with the cylindrical part of said spindle, a valve on the lower end of said central part formed to adapt it to be received in the aforesaid valve seat, also the male part of a T-joint in the upper end of said central part of lesser vertical dimension than the aforesaid female part, and means to operate the spindle, substantially as described.

1,114,996. COLLAPSIBLE BOAT. NEAL LAWSON, Los Angeles, Cal. Filed Mar. 14, 1914. Serial No. 824,702. (Cl. 9—2.)



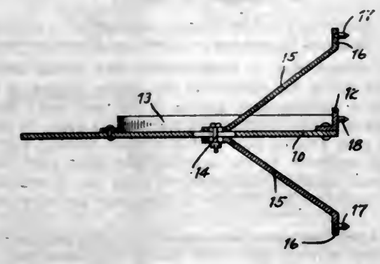
1. A collapsible and folding boat comprising a main central section forming the boat bottom, a bow breast section, a countersection and opposite side sections all attached to said main central section by flexible water tight hinge strips; opposite bow side sections hinged to the breast section by flexible water tight strips; opposite stern side sections and a transom section hinged to said countersection by flexible water tight strips; and fastening means for holding all of said sections in fixed relation when in set up condition.

2. A collapsible and folding boat comprising a main central section forming the boat bottom, a bow breast section, a countersection and opposite side sections all attached to said main central section by flexible water tight hinge strips; opposite bow side sections hinged to the breast section by flexible water tight strips; opposite stern side sections and a transom section hinged to said countersection by flexible water tight strips; fastening means for holding all of said sections in fixed relation when in set up condition, and stay rods serving to tie the opposite side sections together and also serving as seat supports.

3. A collapsible and folding boat comprising a main central section forming the boat bottom, a bow breast section, a countersection and opposite side sections all attached to said main central section by flexible water tight hinge strips; opposite bow side sections hinged to the breast section by flexible water tight strips; opposite stern side sections and a transom section hinged to said countersection by flexible water tight strips; and fastening means for holding all of said sections in fixed relation when in set up condition, all of said sections being flat and adapted when the structure is collapsed to lie in a common plane.

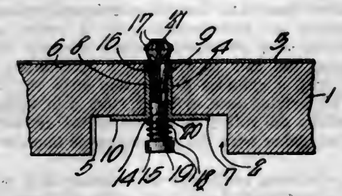
4. A collapsible and folding boat comprising a main central section forming the boat bottom, a bow breast section, a countersection and opposite side sections all attached to said main central section by flexible water tight hinge strips; opposite bow side sections hinged to the breast section by flexible water tight strips; opposite stern side sections and a transom section hinged to said countersection by flexible water tight strips; fastening means for holding all of said sections in fixed relation when in set up condition; and rubber joint strips attached to and extending along the separable meeting edges of said sections.

1,114,997. BRACKET. JOHN M. LIEB, Atkins, Iowa. Filed May 19, 1914. Serial No. 839,630. (Cl. 248—18.)



A bracket comprising a horizontal arm, an angle member secured to the rear end of said arm, a depending leg also secured to the rear end of said arm, and formed with a sharpened element, an inclined brace connecting the leg and arm, and laterally and rearwardly directed steadying arms detachably secured at their forward ends to the first named arm and having their rear ends formed of laterally directed portions having non-slippable elements thereon.

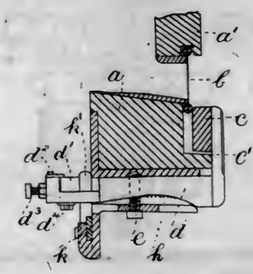
1,114,998. TRAY. HARRY T. LOVE, La Grande, Oreg. Filed Jan. 4, 1912. Serial No. 669,393. (Cl. 211—28.)



In a device of the class described, a tray having a recess in its bottom and provided with a reduced passage opening into the recess; a tube upwardly insertible into the recess and provided at its lower end with an outstanding flange engaging the upper wall of the recess; a plunger slidable in the tube and provided at its lower end with a head located in the recess; a compression spring located in the recess and engaging the flange and the head; and spring fingers secured to the upper end of the plunger and engaging the upper end of the tube, the fingers diverging continuously from a common point on the top of the plunger and the bore of the tube being flared at its upper end to permit the fingers to expand, the bore of the tube being of a fixed diameter below the flared portion to permit the plunger and the fingers to be pushed upwardly into the tube.

1,114,999. LOOM-REED-LOCKING MOTION. GEORGE ERNEST MALLOTT, CHRISTOPHER JOHNSON, and JOHN WILLIAM MOORBY, Preston, England. Filed Jan. 20, 1914. Serial No. 813,303. (Cl. 139—77.)

1. In a loose reed motion for looms, a clamp for the reed comprising clamp connections which are constantly locked while the loom is working properly, but are movable transversely of the lower part of the loom slay, for release of the reed, should the shuttle stop in the shed, in combination with locking means for retaining the clamp connections in the said locked position, and means for automatically unlocking the same when the shuttle stops as aforesaid, substantially as herein set forth.



2. In a loose reed motion for looms, a clamp for the reed comprising clamp connections which are constantly locked while the loom is working properly, but are movable transversely of the lower part of the loom slay, for release of the reed, should the shuttle stop in the shed, in combination with locking members for retaining the clamp connections in said locked position, laterally and automatically movable means for unlocking said clamp connections when the shuttle stops as aforesaid, and means for so moving said locking members out of action, substantially as herein set forth.

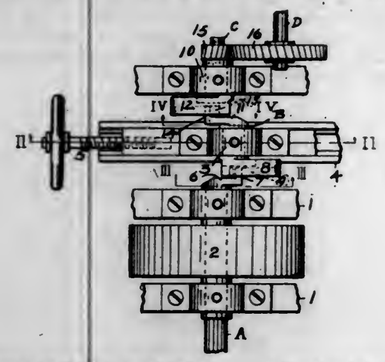
3. In a loose reed motion for looms, a clamp for the reed comprising clamp connections which are movable transversely of the lower part of the loom slay, for release of the reed, in combination with locking members for retaining said clamp connections in the locked position while the loom is working properly, a connection to said locking members laterally and automatically movable for unlocking said clamp connections when the shuttle fails to enter the shuttle box, a pivoted finger piece adjacent to said connection, movable in two planes, in the one plane for operating said locking member connection, and in the other during the normal working of the loom, and means for moving said finger piece in the two planes aforesaid, substantially as herein set forth.

4. In a loose reed motion for looms, a clamp for the reed comprising hollowed out clamp connections which are movable transversely of the lower part of the loom slay, for release of the reed, locking members capable of passing between the slay and parts of the clamp connections, a cross bar to which said locking members are attached, and laterally and automatically movable for unlocking said clamp connections, a pivoted finger piece adjacent to the end of said cross bar in connection with the swell of a shuttle box, for movement thereby, a pivoted lever upon which the said finger piece is pivotally mounted for lateral movement, a deflector or shoe connected to a part of the loom, and for so laterally moving said finger piece, when the shuttle fails to enter the shuttle box, substantially as herein set forth.

1,115,000. VARIABLE-SPEED DEVICE. RALPH W. MARTIN, Bellevue borough, Pa. Filed Oct. 23, 1913. Serial No. 796,755. (Cl. 74—5.)

In a variable speed device, a power-driven shaft adapted to rotate at constant speed; a second shaft in alinement with said power-driven shaft but spaced therefrom; an intermediate shaft parallel with but out of alinement with said above mentioned shafts; a variable speed crank connection between said power-driven shaft and said intermediate shaft; a variable speed crank connection between said intermediate shaft and said second shaft; and means

for shifting said intermediate shaft laterally in parallelism with said first mentioned shafts whereby the range



of speed variation imparted to said second shaft may be adjusted as desired.

1,115,001. DEVICE FOR CUTTING FRUIT. CHESTER S. MERRILL, Boston, Mass. Filed July 19, 1913. Serial No. 779,982. (Cl. 146—7.)

1. A fruit cutter comprising a pair of blades, and means located near the upper edges of said blades, and toward the rear thereof for holding said blades parallel and spaced apart, the space between the blades being substantially unobstructed, in combination with a blade arranged transversely to such parallel blades and coöperating therewith.

2. A fruit cutter comprising a pair of blades mounted in parallel with their faces slightly spaced apart, in combination with a pair of blades arranged transversely to such parallel blades and coöperating therewith.

3. A fruit cutter comprising a pair of blades mounted in parallel and suitably spaced apart, in combination with blades connected, respectively, to such parallel blades and extending outwardly in substantially opposite directions therefrom.

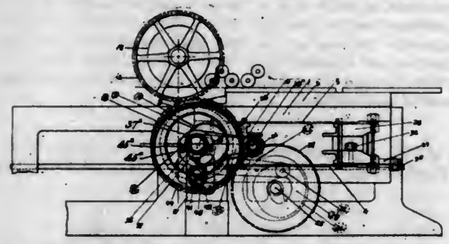
4. A fruit cutter comprising a pair of blades mounted in parallel and suitably spaced apart, in combination with cutting wings integral with such parallel blades and extending outwardly in substantially opposite directions therefrom.

5. A fruit cutter comprising the combination with a pair of cutting blades and means engaging said blades near one pair only of their adjacent ends and above the longitudinal axis of said blades for maintaining the blades in spaced parallel arrangement, the space between the blades being substantially unobstructed, of a blade arranged to operate near a pair of the adjacent ends of the parallel blades and transversely thereto.

[Claims 6 to 17 not printed in the Gazette.]

1,115,002. RECIPROCATING-BED-DRIVING MECHANISM. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Sept. 12, 1912. Serial No. 719,965. (Cl. 101—158.)

1. In combination, a main driving gear, an intermediate internal driving gear beside and eccentric to the main driving gear, connections between said gears causing them to rotate together, said intermediate gear having a variable speed compared with the speed of the main driving gear; and means for adjusting the relative eccentricities of said gears; with a reciprocating bed, a bed driving gear, and means for operating said bed driving gear from said intermediate gear, whereby the power applied to the bed is correspondingly varied during each of its strokes.



2. In combination, a reciprocatory bed, a bed driving gear, and means for converting the rotary motion of said gear into a reciprocatory motion of the said bed; with a pinion fixed to the shaft of the bed driving gear, an intermediate gear driving said pinion, a main driving gear beside and eccentric to the intermediate gear, and lateral connections between said gears causing the intermediate gear to rotate with the main driving gear but at variable speed.

3. In a printing press, the combination of a reciprocatory bed, a bed driving gear, and means for converting the rotary motion of said gear into reciprocatory motion of the said bed; with a pinion fixed to the shaft of the bed driving gear, an intermediate gear driving said pinion; a main driving gear beside and eccentric to the intermediate gear, means for varying the relative eccentric displacement of said gears, and lateral connections between said gears causing the intermediate gear to rotate with the main driving gear but at variable speed.

4. In a printing press, the combination of a reciprocatory bed, a bed driving gear, means for converting the rotary motion of said gear into reciprocatory motion of the said bed, and an intermediate gear driving said bed driving gear; a main driving gear beside and eccentric to the intermediate gear, and lateral connections between said gears causing the intermediate gear to rotate with the main driving gear at variable speed, whereby the speed of the press bed may be alternately accelerated and decreased; with a cylinder coöperating with the bed, and gearing for driving said cylinder from said intermediate gear, whereby the rotary movement of the cylinder is varied in accordance with the variable speed imparted to the bed.

5. In a printing press, the combination of a reciprocatory bed, a bed driving gear, and means for converting the rotary motion of said gear into reciprocatory motion of the said bed; a pinion fixed to the shaft of the bed driving gear, an intermediate gear driving said pinion; a main driving gear beside and eccentric to the intermediate gear; lateral connections between said gears causing the intermediate gear to rotate with the main driving gear at variable speed; and means for varying the relative eccentric displacement of said gear whereby the speed of the press bed may be accelerated during the one part of its stroke and decreased during another part of its stroke; with a cylinder coöperating with the bed, and gearing for driving said cylinder from said intermediate gear whereby a variable rotary speed is imparted to the cylinder in accordance with the variable speed imparted to the bed.

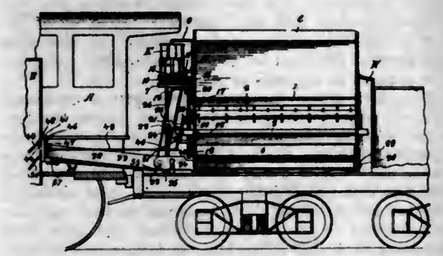
[Claims 6 to 19 not printed in the Gazette.]

1,115,003. PROCESS OF PRODUCING AMMONIA AND ALUMINA FROM ALUMINIUM NITRID. EMIL MILDE, Goldschmieden, Germany, assignor to Aluminium Industrie Aktiengesellschaft, Neuhausen, Switzerland, a Corporation of Switzerland. Filed June 10, 1913. Serial No. 772,769. (Cl. 23—21.)

1. A process of producing ammonia and pure alumina from aluminium nitrid, comprising boiling aluminium nitrid with the hydroxid of an alkaline earth metal, thereby producing ammonia and an aluminate of the alkaline earth metal; decomposing the aluminate thus formed, by boiling the same with a highly-concentrated solution of alkali-metal carbonate, into a highly-concentrated solution of alkali-metal aluminate and alkaline-earth-metal carbonate; and obtaining pure alumina from the alkali-metal aluminate.

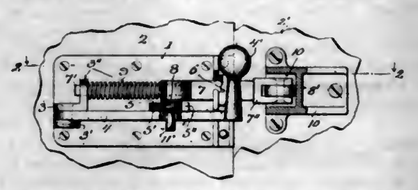
2. A process of producing ammonia and pure alumina from aluminium nitrid, comprising boiling simultaneously the aluminium nitrid and the hydroxid of an alkaline-earth metal in a highly-concentrated solution of an alkali-metal carbonate, thereby producing ammonia and a concentrated solution of an alkali-metal aluminate; and then obtaining pure alumina from the alkali-metal aluminate.

1,115,004. STOKING MECHANISM. GILBERT MORRISON, Jr., Elberton, Ga. Filed Sept. 17, 1912. Serial No. 720,841. (Cl. 110—101.)



In combination, a locomotive fire box having a fuel feed opening therein, a tender, a fuel conveyer frame pivotally supported at one end upon said tender and inclined upwardly from the tender, an abutment wall on the other end of said frame engaging the marginal walls of the fuel feed opening under pressure, a door pivoted upon the fire box end of said frame, said door being adapted to close said opening, means for opening said door, and a distributer carried by the last-mentioned end of said frame and disposed within the fuel feed opening of said fire box.

1,115,005. DOOR-LATCH. JAMES T. MORTENSON, Kenosha, Wis., assignor to Peter B. Nelson, Kenosha, Wis. Filed May 4, 1914. Serial No. 836,321. (Cl. 70—42.)

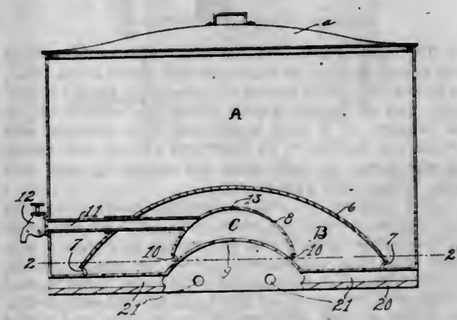


1. A lock comprising a spring-controlled reciprocative bolt, a socket-bracket for engagement therewith, a tappet carried by the bolt, a pivoted actuating lever associated with said bolt having a handle offset from the bolt in one direction, the said actuating lever being oscillatorily moved in a plane common to movement of the bolt, a retracting cam carried by the lever for engagement with the bolt tappet, and an independent slidable stem offset from the lever in the opposite direction from its handle having means engageable with the lever.

2. A locking comprising a plate, a spring-controlled reciprocative bolt in slidable union with the plate, a head in connection with the bolt having an anti-friction roller, a socket-bracket for engagement with the anti-friction roller, the socket being provided with an inclined face that is merged into an oppositely inclined striking plate, a tappet roller extending from the bolt intermediate of its ends, a lever in pivotal union with the latch-plate, a cam having an inclined working face engageable with the tappet-roller, and means offset from the lever in opposite directions for actuating the same from the inside or outside of the door.

3. A lock comprising a plate, a spring-controlled reciprocative bolt in slidable union with the plate, a head in connection with the bolt having an anti-friction roller, a socket-bracket for engagement with the anti-friction roller, the socket being provided with an inclined face that is merged into an oppositely inclined striking plate, a tappet roller extending from the bolt intermediate of its ends, a lever in pivotal union with the latch-plate, a cam having an inclined working face engageable with the tappet-roller, and a slidable latch-stem positioned at a right angle to the lever engageable with the same.

1,115,006. WATER-HEATER. JOHN NEILAN, Cleveland, Ohio. Filed Jan. 16, 1914. Serial No. 812,512. (Cl. 126—344.)



1. A water heater comprising a vessel having an upper cold water reservoir, a lower warm water chamber and a passage connecting the reservoir and the bottom of the chamber, and a hot water chamber located adjacent to the warm water chamber and having a passage communicating with the latter, and means to draw water from the hot water chamber.

2. A water heater comprising a vessel having an upper chamber A for cold water, and a lower warm water chamber B, a partition between said chambers, having an opening therethrough near the bottom of said lower chamber, a heat dome in the bottom plate of the vessel, a partition above said dome over the hot water chamber C, said partition having an opening 10 near the bottom of said chamber C, and means to draw water from said chamber C.

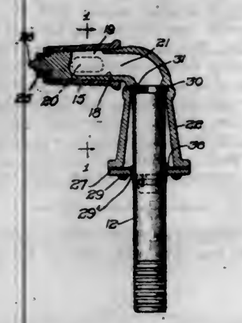
3. A water heater comprising a vessel having an upper reservoir A for cold water, a partition therein over a lower warm water chamber B, with an opening in said partition near the bottom of said chamber, a heat dome in the bottom plate of the vessel, a partition above said dome over the hot water chamber C, said partition having an opening 10 near the bottom of said chamber C, and a vent 13 at the top of said chamber C, and means to draw water from said chamber C.

4. A water heater comprising a vessel having an upper reservoir for cold water, and a lower chamber for warm water, and a passage connecting the reservoir and the lower part of the said chamber, a heat dome in the bottom of said vessel, and tubes extending from said dome through said chamber to the sides of the vessel.

1,115,007. COMBINED QUICK-DETACHABLE COUPLING AND VALVE. HENRY J. NEUMEISTER, Chicago, Ill. Filed Apr. 17, 1913. Serial No. 761,715. (Cl. 137—69.)

1. The combination with the hollow outlet member of a valve with a plate extending across and fixed to the outer end of said member, and provided with an opening to receive a hose nipple, and an interior gasket within the inner end of said member, of a hose nipple extending through the opening in said plate and bearing at its

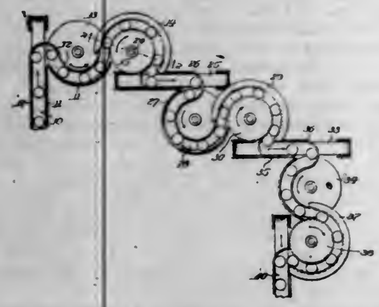
inner end against said gasket, means to force said nipple against said gasket, and a second gasket confined between said plate and said member and closely fitted upon said nipple.



2. The combination with the outlet member of a valve made flaring toward its outer end and closed at its outer, larger end by a plate having an opening to receive a hose nipple, and an interior gasket within the smaller end of said member, of a hose nipple extending through said opening and bearing at its inner end against said gasket and cam means on said plate and nipple to press said nipple against said gasket.

3. The combination with the outlet member of a valve made flaring toward its outer end closed at its outer, larger end by a plate having an opening to receive a hose nipple, and an interior gasket within the smaller end of said member, of a hose nipple extending through said opening and bearing at its inner end against said gasket, cam means on said plate and nipple to press said nipple against said gasket, and a second gasket at the outer end of said member and closely fitted upon the nipple.

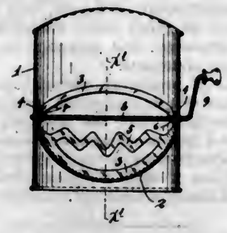
1,115,008. CAN-SEAMING MACHINE. JESSE W. NICHOLS, Chicago, Ill. Filed Mar. 21, 1912. Serial No. 685,333. (Cl. 113—17.)



1. In a can seaming machine, the combination of a plurality of pairs of relatively movable seaming members, each of said pairs of members adapted to bend a can cap into a predetermined position, and means for successively conveying a can from one to another of said pairs of seaming members, substantially as described.

2. In a can seaming machine, the combination of a series of seaming devices, each device comprising a rotary seaming disk and a stationary seaming die parallel to the periphery of said disk, a disk conveyer associated with each of said seaming devices, whereby a succession of cans will be automatically moved from said conveyer disks to said seaming devices, and means for conveying said cans from each of said seaming devices, whereby by passing through the series of seaming devices the caps of said cans are gradually bent into predetermined positions, substantially as described.

1,115,009. FLOUR-SIFTER. HERMAN J. OSTDIEK and JOHN A. EKELUND, Minneapolis, Minn. Filed Nov. 17, 1913. Serial No. 801,331. (Cl. 83—60.)

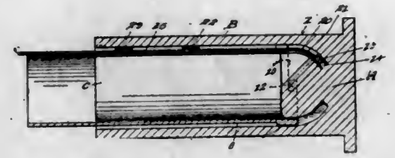


1. In a flour sifter, the combination with a receptacle having an approximately semi-spherical screen bottom, of a reel working within said receptacle and having main and auxiliary blades, the said main blades working over the said sieve surface, and said auxiliary blades being attached to said main blades at their ends, and extending in the general direction of the chords thereof, approximately parallel to the axis of said reel.

2. In a flour sifter, the combination with a receptacle having an approximately semi-spherical screen bottom, of a reel working within said receptacle and having main and auxiliary blades, the said main blades working over the said sieve surface, and said auxiliary blades being attached to said main blades at their ends, and extending in the general direction of the chords thereof, approximately parallel to the axis of said reel, the said main blades being formed integral, and the former having backwardly turned flanges that work directly over the said screen bottom.

3. In a flour sifter, the combination with a receptacle having an approximately semi-spherical screen bottom, of a reel working within said receptacle and having main and auxiliary blades, the said main blades working over the said sieve surface, and said auxiliary blades being attached to said main blades at their ends, and extending on zigzag lines in the general direction of the chords thereof.

1,115,010. DEVICE IN CORING-TOOLS FOR CUTTING CYLINDERS. WILLIAM PATROSIO, Elizabeth, N. J., assignor of one-half to Frank Schimpfle, Elizabeth, N. J. Filed Dec. 23, 1913. Serial No. 808,480. (Cl. 77—58.)



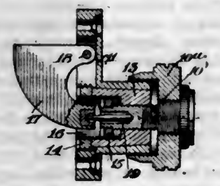
1. In a device of the character described, a tubular body, a cutter bearing elements pivotally secured to one end of said tubular body and adapted to swing across the end in a transverse plane, and a cutter carried by the pivoted element to cover the inner end of the core from the spot from which the same is being cut.

2. In a device of the character described, a tubular body portion, a semicircular member pivotally secured to the body portion at diametrically opposite points and adapted to swing inwardly and extend transversely thereof, a cutter carried by the semicircular member intermediate its ends and adapted to sever a core from the stock from which it is being cut and means to control the operation of the cutter.

3. In a device of the character described, a cylinder cutter comprising a tubular body portion, a semicircular member pivotally secured to the cylindrical body portion at diametrically opposite points and adapted to swing outwardly therefrom, a cutter secured to the semicircular member intermediate its ends, a flat chain secured to the semicircular member on the side opposite the cutter and means to control the operation of the chain to force the cutter outwardly and into engagement with the stock from which the cylinder is being cut.

4. In a device of the character described, a tubular body portion having a longitudinal groove extending throughout its entire length, a semicircular member pivoted to the body portion at one end and at diametrically opposite points, a cutter carried by the semicircular member intermediate its ends, a chain pivotally secured to the semicircular member immediately in the rear of the cutter, a strip slidable in the groove and connected to the chain whereby the operation of the cutter may be controlled and a pair of spaced straps secured to the body portion and bridging the groove to hold the strip in place.

1,115,011. MICROSCOPE. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 10, 1914. Serial No. 830,846. (Cl. 88—39.)



1. In a microscope, the combination with a standard having ways, and a slide movable on the ways, and carrying a lens tube, of a bracket removably attached to the standard, and an adjusting means carried by the bracket and coöperating with the slide.

2. In a microscope, the combination with a standard having ways and a slide movable on the ways and carrying a lens tube, of a bracket removably attached to the standard, an adjusting screw carried by the bracket, and an intermediate member also carried by the bracket and interposed between the screw and slide for the purpose of transmitting motion from the former to the latter.

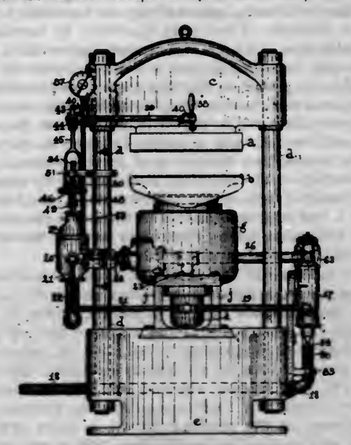
3. In a microscope, the combination with a standard having ways, and a slide movable on the ways and carrying a lens tube, of a bracket removably attached to the standard, an adjusting screw carried by the bracket, and an angle lever pivoted to the bracket and interposed between the screw and slide for the purpose of transmitting motion of the former to the latter.

4. In a microscope, the combination with a standard having ways, and a slide movable on the ways and carrying a lens tube, of a bracket removably attached to the standard, an adjusting screw carried by the bracket, an intermediate member also carried by the bracket, and a connecting member between the slide and intermediate member whereby a relative lateral motion of the two latter is allowed, at the points where the connecting member engages them.

5. In a microscope, the combination with a standard having ways and a recess in rear of the ways, a slide movable on the ways and carrying a lens tube and a projection on the slide extending into said recess, of a bracket removably attached to one side of the standard, a lever pivoted to the bracket, and an adjusting screw arranged in the bracket at an angle to the direction of travel of the slide, pins on opposite sides of the lever interposed respectively between it and said projection and the screw, and a spring engaging the projection and normally operating to move the slide in one direction and retain the pins in their operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,115,012. PRESS. FRANKLIN J. PERKINS, Woburn, Mass., assignor to Holder-Perkins Company, Woburn, Mass., a Corporation of Massachusetts. Filed Jan. 4, 1911. Serial No. 600,808. (Cl. 138—17.)



1. In a machine of the class described, in combination, a movable platen, a platen coöperating therewith, a piston to move said movable platen, a main cylinder in which said piston is located, a starting piston coöperating with said first-mentioned piston, a cylinder in which said starting piston is located, a normally open fluid circulating system including a source of fluid supply, a pump, pipe connections between said pump and fluid supply to enable the pump to take fluid therefrom and return it thereto, means for connecting the cylinder of the starting piston with said circulating system, a starting valve controlling the circulation of fluid, a second valve included in said circulating system and automatically operated when the pressure in the starting cylinder reaches a predetermined point to admit fluid pressure into the said main cylinder, means independent of the circulating system for connecting the main cylinder with the source of fluid to draw fluid into the main cylinder, and means to shut off the main cylinder from said source of supply when fluid under pressure is admitted into said main cylinder, substantially as described.

2. In a machine of the class described, in combination, a movable platen, a platen coöperating therewith, a piston to move said movable platen toward its coöperating platen, a cylinder in which said piston is located, a normally open fluid circulating system with which said cylinder communicates, means for circulating fluid through said system without effecting movement of said piston, a valve casing included in said system, a valve in said casing for interrupting the circulation of fluid in said system and cause the fluid pressure to act on said piston, said valve having a port or opening, a valve rod or stem for said valve coöperating with said port, and means to operatively connect said valve rod with said valve to move the latter and to permit the valve rod to be moved independently of the valve to open said port and substantially balance said valve, for the purpose specified.

3. In a machine of the class described, in combination, a movable platen, a platen coöperating therewith, a piston to move said movable platen toward its coöperating platen, a cylinder in which said piston is located, a normally open fluid circulating system with which said cylinder communicates, means for circulating fluid in said system without operating the movable platen, a valve casing in said system on the exhaust side of the said cylinder, and a valve in said casing for controlling the flow of fluid from the pressure side to the exhaust side of said system, said valve comprising a main valve having a port, and an auxiliary valve coperating with said port, said main valve being constructed to remain seated until positively lifted by the auxiliary valve, manually operated

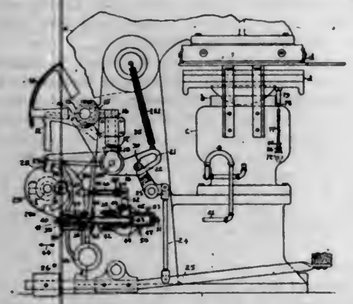
means for operating said auxiliary valve whereby the said piston may be relieved from pressure substantially in an instant or may be subjected to a selected pressure less than the maximum capacity of the apparatus for any desired length of time, substantially as described.

4. In a machine of the class described, in combination, a movable platen, a platen coöperating therewith, a piston to move said movable platen, a main cylinder in which said piston is located, a starting piston coöperating with said first-mentioned piston, a cylinder in which said starting piston is located, a normally open fluid circulating system with which said starting cylinder is connected, means for circulating fluid in said system without effecting movement of the starting piston, a valve casing included in said system on the exhaust side of said starting cylinder, a valve in said casing to interrupt the fluid circulation and cause fluid pressure to act on the starting piston, substantially as described.

5. In a machine of the class described, in combination, a movable platen, a platen coöperating therewith, a piston to move said movable platen, a main cylinder in which said piston is located, a starting piston coöperating with said first-mentioned piston, a cylinder in which said starting piston is located, a normally open fluid circulating system with which said starting cylinder is connected, means for circulating fluid in said system without effecting movement of the starting piston, a valve casing included in said system on the exhaust side of said starting cylinder, a valve in said casing to interrupt the fluid circulation and cause fluid pressure to act on the starting piston, a valve casing included in said system on the inlet side of said cylinder, means for connecting said second casing with the main cylinder, and a valve in said second casing normally cutting off the main cylinder from the said casing and automatically opened when the pressure within its casing reaches a predetermined point, substantially as described.

[Claim 6 not printed in the Gazette.]

1,115,013. PRESS. FRANKLIN J. PERKINS, deceased, by SYVILLA J. PERKINS SMITH, administratrix, Peabody, Mass., assignor to Holder-Perkins Company, Woburn, Mass., a Corporation of Massachusetts. Filed Mar. 3, 1913. Serial No. 751,687. (Cl. 138—10.)



1. In a machine of the class described, in combination, a cylinder, a piston therein movable by fluid pressure admitted into said cylinder, a platen carried by said piston, a valve for automatically controlling the pressure of the fluid in said cylinder, a lever, means for connecting said valve with said lever to permit the valve to be moved by said lever and to permit the valve to be moved independently of said lever, a second platen coöperating with the first mentioned platen, a lever carrying said second platen, a rotatable shaft, means for connecting said shaft with the lever carrying the second platen, and a device on said shaft coöperating with the lever connected with said valve, substantially as described.

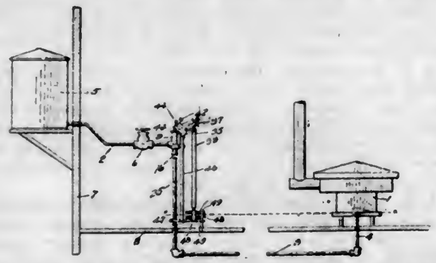
2. In a machine of the class described, in combination, a platen, a lever carrying said platen, a crank shaft, mechanism connecting said crank shaft with said lever, a stop mechanism for said crank shaft, a treadle connected with said stop mechanism, a driving shaft, means for connecting said driving shaft with said crank shaft, a clutch member controlling rotation of said driving shaft, a rotatable shaft to which said clutch member is connected and gearing connecting said rotatable shaft with said stop mechanism to be operated thereby when the latter is operated by said treadle, substantially as described.

3. In a machine of the class described, in combination, a platen, a lever carrying said platen, a rotatable shaft, mechanism connecting said rotatable shaft with said lever, a notched disk on said shaft, a lever having a finger on one arm to enter the notch in said disk and provided with a slot in the other arm, a pin extended into said slot, a treadle, and means for connecting said pin with said treadle, substantially as described.

4. In a machine of the class described, in combination, a platen, a lever carrying said platen, a rotatable shaft, mechanism connecting said rotatable shaft with said lever, a notched disk on said shaft, a lever having a finger on one arm to enter the notch in said disk and provided with a slot in the other arm, a pin extended into said slot, a treadle, and means for connecting said pin with said treadle, said slot having a narrow portion in which the pin is entered when the said finger engages the notch in said disk, for the purpose specified.

5. In a machine of the class described, in combination, a cylinder, a piston therein movable by fluid pressure admitted into said cylinder, a platen carried by said piston, a valve fitting connected with said cylinder and having a valve controlling the flow of fluid through said fitting, a lever connected with said valve to move the latter and to permit the valve to be moved independently of the said lever, said lever having a chamber, a spring located in said chamber and acting on said valve, and an adjusting device for said spring accessible from outside of said chamber, means to move said lever in one direction to close the valve, and means to move the said lever in the opposite direction to open said valve, substantially as described.

1,115,014. AUTOMATIC LIQUID-FUEL CONTROL FOR BURNERS. WILLIS J. PERKINS, Grand Rapids, Mich. Filed Sept. 5, 1913. Serial No. 788,217. (Cl. 236—6.)



1. In a mechanism of the character described, a burner, a source of liquid fuel supply, a liquid fuel control device interposed between the burner and fuel supply, said control device including means to manually regulate the supply of fuel passing to the burner and means to automatically control and regulate additional fuel supply through temperature changes, and connections joining the source of fuel supply, fuel control device and burner, said connections including a conduit between the fuel control device and burner, a section adjacent the fuel control device being located above the burner and normally unfilled with liquid fuel.

2. In a mechanism of the character described, a burner, a source of liquid fuel supply, a dual liquid fuel control device receiving fuel from the source of fuel supply through pressure, connections leading from the source of fuel supply to the fuel control device and therefrom to the burner for conducting the fuel, said connections between the dual fuel control device and burner including a section normally filled with fuel and a second section through which the fuel drops freely from the fuel control device through gravity, and means included in the fuel control device for regulating the supply of fuel to the burner through dual control means.

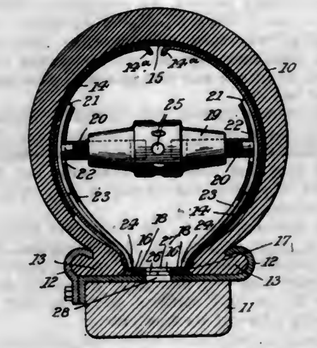
3. In a mechanism of the character described, a burner, a source of liquid fuel supply, a liquid fuel control device, connections between the fuel supply and burner for supplying fuel to the burner, said connections including the fuel control device, means whereby between the fuel control device and burner a portion of said connections shall remain normally unfilled with the liquid fuel, and means permitting visual inspection of the liquid fuel passing through said unfilled section.

4. In a mechanism of the character described, a burner, a source of liquid fuel supply, a liquid fuel control device, connections leading from the source of fuel supply to the burner and including the fuel control device therein, means whereby a portion of said connection between the fuel control device and burner is maintained in unfilled condition and permits fuel to drop freely therethrough, and a transparent section formed in said unfilled section permitting visual inspection of the falling fuel therethrough.

5. In a mechanism of the character described, a burner, a source of liquid fuel supply, a liquid fuel control device, connections between the fuel supply and fuel control device and between the fuel control device and burner for conducting liquid fuel to the burner through the fuel control device, said connections between the fuel control device and burner including a section above the burner and a section below the burner, said first section being unfilled with fuel and through which it drops by gravity, and said second section being normally filled with fuel for supplying immediately to the burner, means included in the fuel control device for obstructing the free flow of fuel therethrough, and means for regulating the degree of obstruction to the flow, said regulating means acting automatically with variations in temperature.

[Claims 6 to 11 not printed in the Gazette.]

1,115,015. TIRE. WILLIAM J. PETERSON, Brooklyn, N. Y. Filed Aug. 11, 1913. Serial No. 784,037. (Cl. 152—8.)



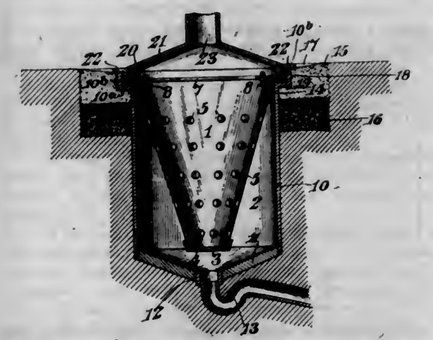
1. A tire comprising a hollow shoe, a pair of opposed resilient load-sustaining members of substantially semi-tubular cross section fitted into said shoe, a turnbuckle, a pair of screw stems engaged thereby, and plates on said stems that frictionally engage the resilient members.

2. A tire comprising a hollow shoe, a pair of opposed resilient load-sustaining members of substantially semi-tubular cross section fitted into said shoe, a spreader composed of a turnbuckle, a pair of screw stems engaged thereby, and plates on said stems that frictionally engage the resilient members, and means for holding said spreader in position.

3. A tire comprising a hollow shoe, a pair of opposed resilient load-sustaining members of substantially semi-tubular cross section fitted into said shoe, a turnbuckle, a pair of screw stems engaged thereby, plates on said stems that frictionally engage the resilient members, and a pair of guards secured to said members and being provided with apertures for accommodating the screw stems.

4. A tire comprising a hollowing shoe, a pair of opposed resilient load-sustaining members of substantially semi-tubular cross section fitted into said shoe, mutually abutting slotted flanges formed along the inner circumference of said members, a slotted hoop surrounding the flanges and secured thereto, a plurality of turnbuckles having spanner holes, screw stems engaged by the turnbuckles, and plates on said stems that frictionally engage the resilient members, the slots formed in the flanges and hoop permitting the introduction of a tool into the spanner holes of the turnbuckles.

1,115,016. GARBAGE HOLDER AND STRAINER. JOHN WEBSTER PHEILS, Toledo, Ohio. Original application filed July 31, 1911, Serial No. 641,464. Divided and this application filed May 27, 1912. Serial No. 699,950. (Cl. 220—118.)



1. A device of the class described comprising a supporting platform designed to be embedded in the ground and arranged substantially flush with the surface of the ground and having an opening and provided at the upper portion thereof with a recess forming a supporting shoulder located below the plane of the upper face of the platform, said upper face being sloped and extending downwardly and inwardly to the opening, a well including walls provided at their upper edges with portions extending into the recess of the platform and resting upon the said shoulder, whereby the said walls are suspended from the platform, supporting means for the platform arranged around the well and extending below the frost line to prevent the contents of the well from freezing, a garbage receptacle also provided with a portion extending into the said recess and supported by the shoulder of the platform in spaced relation with the bottom of the well, and a cover for the opening fitting in the said recess and retained in place by the same.

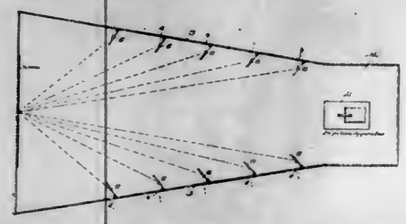
2. A device of the class described comprising a platform of plastic material designed to be embedded in and arranged substantially flush with the surface of the ground and provided with an opening, a well including walls having their upper edges fitted within the opening of the platform, a removable receptacle arranged within the said well, and a bed of material surrounding the upper portion of the well and located beneath and supporting the platform, said material extending below the frost line and adapted to prevent the contents of the receptacle from freezing.

3. A device of the class described, comprising a well including vertical walls provided at the top with an outwardly extending horizontal supporting flange and having a vertical flange extending upwardly at the outer edge of the supporting flange, a removable receptacle provided

at the upper edge with an outwardly extending flange resting upon the said supporting flange and suspending the removable receptacle within the well, a bail connected with the receptacle and extending over and supported by the flange thereof out of contact with the contents of the receptacle, and a cover for the well provided with a depending flange fitted within the vertical flange of the well and engaging the outwardly extending flange of receptacle, said cover being also provided with an outwardly extending flange projecting over the upper edge of the vertical flange of the well.

4. A device of the class described comprising a supporting platform having an opening and provided with a recess surrounding the same and forming a supporting shoulder, a well including side walls fitting in the opening of the platform and provided with an outwardly extending flange resting upon the said supporting shoulder, and a substantially conical bottom fitting within the said side walls and arranged to be supported upon the ground and provided with a central opening, and a garbage receptacle provided at its upper edges with an outwardly projecting flange extending into the recess of the platform, which supports the garbage receptacle in spaced relation with the bottom of the well.

1,115,017. AMUSEMENT APPARATUS. FRANK W. PIERCE, Rochester, N. Y. Filed June 24, 1913. Serial No. 775,575. (Cl. 46—70.)



1. In combination with an upright object to be viewed, an inclosure for said object having two upright walls which diverge toward said object and each of which has a plurality of view openings arranged at different distances from said object, and reflectors, one for each view opening, arranged at an angle to said wall and adapted to establish optical relation between one of the view openings and the object to be viewed.

2. In combination with an upright object to be viewed, an inclosure for said object having two upright walls which diverge toward said object and each of which has a plurality of view openings arranged at different distances from said object, and reflectors, one for each view opening, arranged at an angle to said wall and adapted to establish optical relation between one of the view openings and the object to be viewed, said reflectors each being pivoted to the inner faces of one of said walls so as to be adjusted relatively to the other reflectors for obtaining the proper optical relation with the object to be viewed.

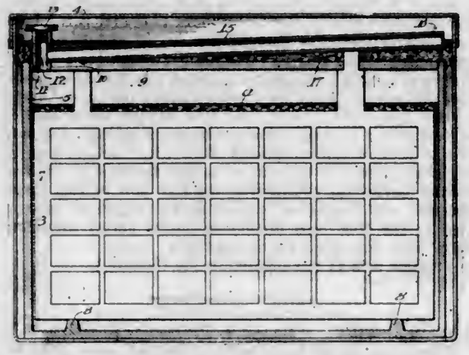
3. In combination with an upright object to be viewed, an inclosure for said object having two upright walls which diverge toward said object and each of which has a plurality of view openings arranged at different distances from said object, and reflectors, one for each view opening arranged at an angle to said wall and adapted to establish optical relation between one of the view openings and the object to be viewed, shutters for said openings, means for controlling the shutters from one end of each wall, and means for controlling the shutters from a point adjacent to each view opening.

4. In combination with an upright screen, an inclosing casing for said screen having two upright walls which diverge toward the screen and each of which has a plurality of view openings arranged at different distances from the screen, reflectors, one for each view opening, arranged at an angle to one of said walls and adapted to establish optical relation between one of said openings and the screen, and a projection apparatus arranged at a point between the diverging walls to project images on the screen.

5. In combination with an upright screen, an inclosure for said screen having two upright walls which diverge toward the screen and each of which has a plurality of view openings arranged at different distances from the screen, reflectors, one for each view opening, arranged at an angle to one of said walls and adapted to establish optical relation between one of said openings and the screen, a projection apparatus arranged at a point between the diverging walls to project images on the screen, shutters, one for each view opening, means for controlling the shutters from a point adjacent the projection apparatus, and means for individually controlling the shutters from a point adjacent each view opening.

[Claims 6 to 12 not printed in the Gazette.]

1,115,018. STORAGE BATTERY. WILLIAM E. POOLE, Chicago, Ill., assignor to Rex Battery Company, Chicago, Ill., a Corporation of Illinois. Filed May 23, 1914. Serial No. 840,438. (Cl. 204—29.)



1. In a storage battery, an electrolyte containing receptacle, a cover therefor, a plug extending from said cover and a vent tube communicating with said plug extending slantingly upward therefrom and diagonally across said receptacle and having a vent opening adjacent its highest end.

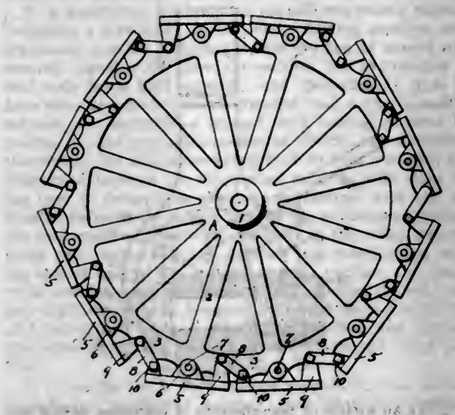
2. In a storage battery, an electrolyte containing receptacle, a cover therefor, a plug extending from said cover near one end, and a vent tube in communication with said plug and extending upwardly and diagonally across said receptacle and having a vent opening adjacent its highest end.

3. In a storage battery, an electrolyte containing receptacle, a cover therefor, a plug extending from said cover at one side thereof, and a vent tube communicating with said plug and extending diagonally across said receptacle to the side opposite said plug and having a vent opening adjacent its free end.

1,115,019. TRACTION-WHEEL. JAMES PORTEOUS, Fresno, Cal. Filed Mar. 18, 1913. Serial No. 755,068. (Cl. 21—150.)

1. In a wheel, the combination of a plurality of plates, each of which is rockingly pivoted at its approximately lateral center to the rim of such wheel, members connecting the adjacent ends of contiguous plates adapted to draw such connected plates on the under side of such wheel, as the wheel rolls either backward or forward, to a common plane.

2. In a wheel the combination of a plurality of bumpers equidistant apart on the periphery thereof, a plurality of plates equal to the number of such bumpers rockingly pivoted at the approximate lateral center thereof to the rim of the wheel midway between contiguous bumpers, upward projections at each end of each plate, members pivotally connecting such upward projections on adjacent ends of contiguous plates, such plates being adapted and arranged so the connected ends of connected plates can rest on the bumper between such connected plates, and such pivotally connecting members being adapted to force a reciprocating movement between such connected shoes, as such wheel rotates in either direction, all substantially as described.



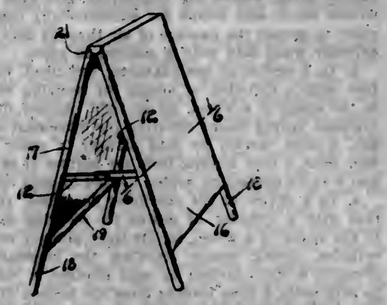
3. In a wheel the combination of a plurality of bumpers equidistant apart on the rim thereof, an endless series of plates, each of such plates having projections on the upper side thereof at each end and in the middle, each of such plates being pivoted at the middle projection to the rim of the wheel midway between contiguous bumpers, and arranged so the adjacent ends of contiguous plates can rest on the bumper between such plates, links connecting the projections on the adjacent ends of contiguous shoes at a point nearer the base on the one projection than on the other, and adapted to force a pivotal movement at the middle of such plate as such wheel rolls, all substantially as described.

1,115,020. SHADE-ROLLER BRACKET. EMMET PROBST, Paterson, N. J. Filed May 5, 1914. Serial No. 836,438. (Cl. 156—24.)

In combination, an elongated supporting member adapted to be secured horizontally to the wood-work, and a bracket proper having an elastic inverted U-shaped clip straddling the supporting member and having on one of the U-shape forming extremities thereof a locking lug engaging the under side of said member, substantially as described.

1,115,021. ADVERTISING DEVICE. LEONIDAS H. PUMMILL, Hartwell, Ohio. Filed Dec. 11, 1912. Serial No. 736,189. (Cl. 40—125.)

1. A sign of the character described, comprising a single sheet of metal bent to form oppositely disposed display portions and having integrally formed flanges and integrally formed tongues for covering adjacent ends of the flanges, said display portions being movable from an open to a collapsed position around transversely extending creases formed on each side of said tongues.



2. A sign of the character described, comprising, a single sheet of metal, bent to form oppositely disposed display portions and lateral flanges, tongues formed integrally with the sheet and located between adjacent lateral flanges, and legs mounted on the ends of the sheet in alinement with the flanges, said display portions being movable from relatively inclined positions to closed parallel positions around transversely extending creases formed on either side of said tongues.

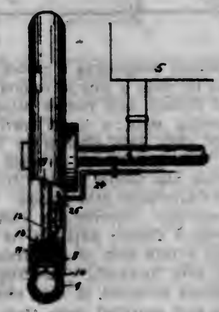
3. A sign of the character described, comprising a single sheet of metal bent to form oppositely disposed display portions having lateral flanges and supporting legs integrally formed therewith.

4. A sign of the character described, comprising, a single sheet of metal bent to form lateral flanges and legs located at one end of the sheet and integral with the flanges.

5. A sign of the character described, comprising a single sheet of metal bent on parallel creases to form oppositely disposed display portions and having integral flanges and supporting legs formed thereon, and oppositely disposed metal tongles cut therefrom, located between the creases and bent downwardly to cover the upper ends of the flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,115,022. DEFLATED-TIRE DETECTOR. HARRY C. QUICK, Oakland, Cal., assignor to Harry S. Stewart, San Francisco, Cal. Filed Mar. 21, 1914. Serial No. 826,399. (Cl. 177—311.)



1. In a device of the character described, the combination with a vehicle and its pneumatic tires, of a cylinder, an air tight plunger fitted in said cylinder, means for connecting said cylinder to the inflation valve stem of the tire, a stem connected to said plunger, spring means resisting the movement of said plunger, a push button disposed in the path of movement of said plunger, an electric circuit controlled by said push button, and a signal in said circuit.

2. In a device of the character described, the combination with a cylinder, an air-tight plunger fitted therein,

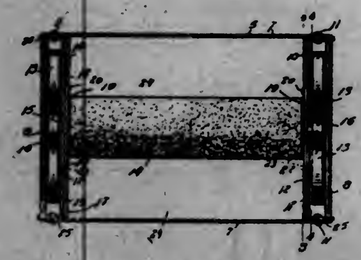
spring means resisting the movement of said plunger, means for securing said cylinder to the spoke of a wheel, a conducting pipe leading from said cylinder to the inflation valve, means for connecting said pipe to said inflation valve, and means for automatically depressing the valve to permit the passage of air through said tube to the cylinder when said tube is secured in place.

3. In a device of the character described, the combination with a cylinder, of means for securing said cylinder to the spoke of a wheel, an air-tight plunger fitted in said cylinder, spring means resisting the movement of the plunger, a stem carried by said plunger, a roller carried by said stem, a tube leading from the bottom of said cylinder, and a valve depressing spider carried by said tube.

4. In a device of the character described, the combination with a cylinder, of means for securing said cylinder to the spoke of a wheel, an air-tight plunger fitted in said cylinder, spring means resisting the movement of said plunger, a stem carried by said plunger, a roller carried by said stem, a tube leading from the bottom of said cylinder, a valve depressing spider carried by said tube, and a laterally movable push button disposed within the path of said roller.

5. In a device of the character described, the combination with a cylinder, of means for securing said cylinder to the spoke of the wheel, an air-tight plunger fitted in said cylinder, spring means resisting the movement of said plunger, a stem carried by said plunger, a roller carried by said stem, a tube leading from the bottom of said cylinder, a valve depressing spider carried by said tube, a wire receiving pipe, and a laterally movable push button disposed within the mouth of said pipe and supported thereby, said push button being disposed in the path of movement of said roller, radial movement of said roller imparting lateral movement to said push button.

1,115,023. TABLE-SWEEPER. PAUL J. REES, Meadville, Pa. Filed June 1, 1914. Serial No. 842,260. (Cl. 15—60.)

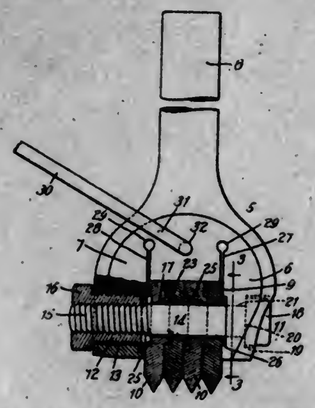


1. A table sweeper comprising a casing, frames secured therein adjacent its ends, a pair of rollers journaled within each of said frames, said frames being provided with upwardly extending slots, a brush having its journals mounted in said slots, bars pivoted on said frames and provided upon their edges with recesses for engagement with said journals, and means for detachably securing the free ends of said bars upon said frames.

2. A table sweeper comprising a casing, rectangular open frames secured therein adjacent its ends, a pair of rollers journaled within each of said frames, said frames being provided with upwardly extending slots, a brush having its journals mounted in said slots, bars pivoted on said frames and provided upon their edges with recesses for engagement with said journals, and projections on said bars adapted to engage within openings formed in said frames.

1,115,024. BUSH-HAMMER. WALTER F. RICE, Quincy, Mass. Filed July 11, 1912. Serial No. 708,861. (Cl. 125—19.)

1. As an article of manufacture, a clamping device having, in combination, two members movable toward and away from each other, each adapted to receive a bolt, a bolt connecting said members provided with a shoulder adapted to limit the longitudinal motion thereof, the end of said bolt opposite said shoulder being screw-threaded, means on one of said members to prevent rotation of said bolt, a sleeve having threads on the interior thereof adapted to engage the threads on said bolt, and threads on the exterior of said sleeve of less pitch than the threads on the interior of said sleeve and screw-threads on the other of said members adapted to engage the threads on the exterior of said sleeve.



2. As an article of manufacture, a clamping device having, in combination, two members movable toward and away from each other, each adapted to receive a bolt, means to prevent relative rotation of said members, a bolt connecting said members provided with a shoulder adapted to limit the longitudinal motion thereof, the end of said bolt opposite said shoulder being screw-threaded, means on one of said members to prevent rotation of said bolt, a sleeve having threads on the interior thereof adapted to engage the threads on said bolt, and threads on the exterior of said sleeve of a less pitch than the threads on the interior of said sleeve and screw-threads on the other of said members adapted to engage the threads on the exterior of said sleeve.

3. As an article of manufacture, a clamping device having, in combination, two members movable toward and away from each other, each adapted to receive a bolt, a bolt connecting said members provided with a head having different transverse diameters adapted to limit the longitudinal motion and prevent rotation thereof, the end of said bolt opposite said head being screw-threaded, one of said members being provided with a recess adapted to receive the head of said bolt, a sleeve having threads on the interior thereof adapted to engage the threads on said bolt, and threads on the exterior of said sleeve of a less pitch than the threads on the interior of said sleeve and screw-threads on the other of said members adapted to engage the threads on the exterior of said sleeve.

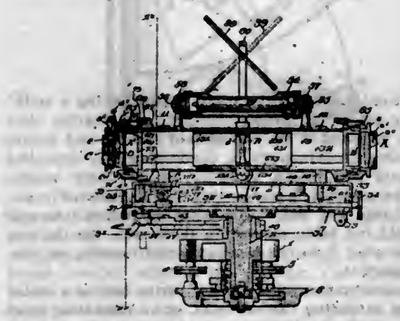
1,115,025. BLADE-SHARPENER. OSCAR A. ROHRER and BRUCK REINBACH, Waverly, Ill. Filed Dec. 20, 1913. Serial No. 807,980. (Cl. 76—82.)

1. A snap handle for a polygonal shaped sharpening member comprising a stationary member including a pair of connected spaced rods, the extremities of said rods being out of the plane of said rods and with the ends being bent sharply in a return direction, a locking member including a front and rear portion with a bar-like member extending laterally thereof at the point of division between the front and rear portion of said locking member, said bar-like member contacting with and pivoting upon the spaced rods of the stationary member, the rear portion of said locking member including legs adapted to resiliently entwine with the spaced rods of the stationary member, the front portion of said locking member adapted to contact with the said sharpening member and to force the same into interlocking relation with the sharply bent portion of the said stationary member.

2. A handle for a triangular shaped sharpening member including a stationary portion and a locking member, said stationary portion including a body portion of spaced rods secured together at their extremities, the extremities of said rods being bent laterally, and then sharply in a return direction for a limited distance, and a bar extending between the extremities thereof, said locking member including an end bar, sides connected thereto and extending therefrom, the said sides being bent to conform with the triangular faces of the sharpening member, said sides being bent to form cross members contacting with and extending between the spaced bars of the stationary member, the said cross or transverse members of the rocky member being bent rearwardly and forming legs interlocking with the spaced bars of the stationary body portion, the transverse members and interlocking legs holding the said end bars and interlocking members in forced contact with the said triangular-shaped sharpening member and holding the same rigidly in position in the stationary body portion.

3. A handle for a sharpener of polygonal cross section including a stationary member, said stationary member including a front portion and a rear portion, the front portion being offset at an angle with respect to the rear portion, the said rear portion forming a finger engaging portion and the front portion adapted to bear against the sharpener, a locking member including a front portion adapted to bear against the sharpener to hold the same in rigid contact with the front portion of the stationary member, said locking member further including a portion detachably and rotatably engaging the portion between the front and rear portions of the stationary member, and the said locking member further including means resiliently engaging the rear portion of the stationary member and holding the front portion thereof into forced contact with the said sharpener.

1,115,026. SURVEYOR'S LEVEL. GEORGE N. SAEGMULLER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 27, 1911. Serial No. 611,248. (Cl. 88—32.)



1. In an optical instrument, the combination with a tube, similar objective lenses at opposite ends of the tube and an ocular adapted to be placed at either end of the tube, and when so placed at one end of the tube to form an optical combination with the objective lens at the other end of the tube, of two sets of cross-hairs arranged in the tube, a revoluble and independently adjustable mounting for each set of cross-hairs journaled in the tube for positioning both sets of cross-hairs in like positions vertically and horizontally in the tube, said mountings also comprising means for further adjusting the cross-hairs with their respective points of intersection in the line of collimation of the instrument.

2. In a leveling instrument, the combination with a telescope provided with two objective lenses at its opposite ends and an ocular applicable to either end of the telescope, of a horizontally revoluble base supporting said telescope and a relatively stationary locking device adapted to coöperate with the base at points located at opposite sides of the axis of rotation to first secure the telescope in initial position with the ocular and one objective forming an optical combination and pointing in one direction, and secondly to secure it when rotated to point said optical combination of lenses in the opposite direction.

3. In an optical instrument, the combination with a tube mounted for horizontal observation in opposite directions and provided with two similar objective lenses at its opposite ends and an ocular coöperating with both objectives, of two sets of cross hairs and means for independently adjusting said sets relatively to each other and to the line of collimation of the lenses.

1,115,027. ELECTRODE. RALPH L. SEABURY, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 2, 1911. Serial No. 641,919. (Cl. 204—64.)

1. An electrode for electric furnaces comprising a tubular body portion of substantially uniform cross sectional area and another body of carbon occupying the interior of the tubular carbon body.

2. The process of making electrodes for use in electric furnaces which consists in forcing a tubular carbon body and a second carbon body of a diameter to fit within the tubular body, then inserting the second body within the tubular body and baking the combined bodies.

3. The process of making electrodes for use in electric furnaces, which consists in forcing a tubular carbon body, placing carbonaceous material to substantially fill the tubular carbon body, then baking the combined bodies.

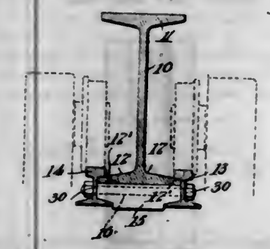
1,115,028. LIFE-BUOY. LEON ADAMS SEARL, New York, N. Y. Filed Mar. 12. 1914. Serial No. 824,084. (Cl. 9—8.)

1. In a life buoy, a cylindrical body portion provided with a ventilating opening in the top, a lattice work surrounding said body portion comprising a plurality of vertical members converging at their upper ends at a point over said opening and a spray hood located over said opening and secured to said vertical members, substantially as described.

2. In a life buoy, a body, a means to prevent the entrance of water and permit the entrance of air therein comprising an opening and valve therein, a spring normally holding the valve in open position, a cup mounted

on the valve and so disposed as to be filled by water entering the buoy, and a drain for said cup arranged to deliver the accumulated water outside of the buoy, all for the purpose described.

1,115,029. ELEVATED TRACKWAY. JAMES A. SHEPARD, Montour Falls, N. Y. Filed Feb. 7, 1914. Serial No. 817,342. (Cl. 104—181.)



1. In an elevated trackway, the combination of a beam having a flange, a rail having a head, the under side of the head being supported by said flange, and means for clamping the rail to the beam.

2. In an elevated trackway, the combination of a headed rail, means for supporting the same comprising a beam having a flange engaging the under side of the head of the rail, and clamping means for holding the beam and rail in operative relation.

3. In an elevated trackway, the combination of a beam having a lateral flange, a rail having an overhanging head, said flange supporting the rail at the under side of the head thereon, and clamping means exterior to the beam for securing the rail and beam together.

4. In an elevated trackway, the combination of a beam having a flange, a rail resting on the flange, and means extending transversely of and beneath said beam for clamping the rail to the beam.

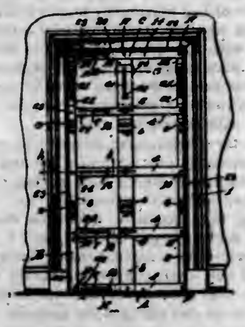
5. In an elevated trackway, the combination of a beam having lateral flanges, headed rails supported by each of said flanges, each rail being supported at the under side of the head thereon, and means for clamping the rails to the beam.

[Claims 6 to 11 not printed in the Gazette.]

1,115,030. PATTERN DEVICE. WESLEY SMITH, East Sparta, Ohio. Filed Dec. 12, 1912. Serial No. 736,372. (Cl. 33—194.)

1. A measuring device of the character described comprising a center rail, side rails, adjustable cross bars connecting said side rails with said center rail, and an end bar adjustably connected with said side rails and center rail.

2. A measuring device comprising a center rail, side rails, said rails being formed of a plurality of sections hingedly secured together, cross bars connecting said side rails with said center rail an end bar at one end of said

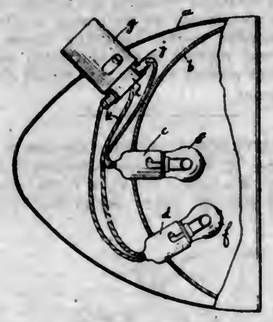


measuring device, and means for adjustably connecting said end bar with said center and side rails.

1,115,031. PROCESS FOR TREATING RUBBER. GRAY STAUNTON, Muskegon, Mich. Filed July 29, 1912. Serial No. 711,994. (Cl. 18—53.)

The process of treating rubber gum to change its physical condition, which consists in mixing gum with a light solvent to present a stiff solution, submitting the plastic mass in confinement to the effect of a rarefied atmosphere to render it cellular and spongy; admitting a vulcanizing agent thereto to infiltrate the mass, and thereafter passing a neutralizing agent for the vulcanizing agent through the spongy mass.

1,115,032. ELECTRIC-LAMP FITTING. JASON C. STEARNS, Worcester, Mass. Filed Mar. 18, 1914. Serial No. 825,711. (Cl. 240—41.)



1. The combination with a metal casing having a metallic bushing extending therethrough, of an insulating block removably mounted in the end of said bushing and having a perforation therethrough, a conducting rod extending through said perforation, a spring for yieldingly holding said rod in position, a contacting ferrule located transversely of said rod, and a conductor extending into said ferrule, said rod being secured in the ferrule for the purpose of securing it to the conductor and forming an electrical connection.

2. The combination with a metal casing having a metallic bushing extending therethrough, of an insulating block in the inner end of said bushing and having a perforation therethrough, a conducting rod extending through said perforation, a spring inside said bushing engaging said rod for holding said rod in its outermost position, a contacting ferrule located transversely of said rod, a conductor extending into said ferrule, said ferrule being movable with the rod, and a contacting plug having an insulating body adapted to fit within said bushing and provided with a metal-lined socket in the end for engaging the

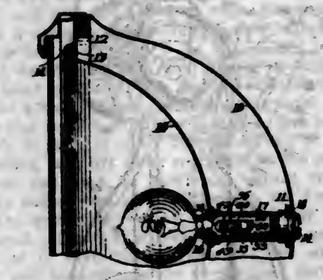
head of said stud and forming an electrical contact therewith.

3. The combination with a thin metal casing having a metallic bushing extending therethrough and integrally united therewith, said bushing and casing having a continuous surface coating fixed thereto by heat treatment, of an insulating block removably mounted in the end of said bushing and having a perforation therethrough, a conducting rod extending through said perforation, a spring for yieldingly holding said rod in position, a contacting ferrule located transversely of said rod, and a conductor extending into said ferrule, said rod being screw-threaded into the ferrule for the purpose of securing it to the conductor and forming an electrical connection.

4. The combination with a thin metal casing having a metallic bushing extending therethrough and integrally united therewith, said bushing and casing having a continuous surface coating fixed thereto by heat treatment, of an insulating block screwed into the inner end of said bushing and having a perforation therethrough, a conducting rod extending through said perforation, a spring inside said bushing engaging said rod for holding said rod in its outermost position, a contacting ferrule located transversely of said rod inside the casing, a conductor extending into said ferrule, said rod being screw-threaded into the ferrule for the purpose of securing it to the conductor and forming an electrical connection, said ferrule being movable with the rod, and a contacting plug having an insulating body adapted to fit within said bushing and provided with a metal-lined socket in the end for engaging the head of said stud and forming an electrical contact therewith.

5. The combination with a metallic bushing, of an insulating block removably mounted in the end of said bushing and having a perforation therethrough, a conducting rod extending through said perforation, a spring for yieldingly holding said rod in position, a contacting ferrule located transversely of said rod, and a conductor extending into said ferrule, said rod being screw-threaded into the ferrule.

1,115,033. ELECTRIC LAMP. JASON C. STEARNS, Worcester, Mass. Filed Apr. 9, 1914. Serial No. 830,783. (Cl. 240—44.)



1. The combination with a lamp casing and a reflector therein, said casing having a flange extending inwardly at the edge thereof and the outer end of said reflector extending over the front of said flange, of a connecting frame located between the reflector and casing secured to the rear side of the reflector at one end, a lock nut centrally located at the rear of the outside of the casing for securing the frame to the casing and thus securing the reflector and casing together, a longitudinally adjustable lamp socket projecting from the inner end of said frame into the interior of the reflector, a slotted head concentric with said lock nut on the rear of the casing, means connected with and operated by said slotted head for adjusting said lamp socket, a spring-pressed terminal extending into and forming the bottom of said socket, and a conductor connected with said terminal and extending through the side of said frame into the space between the reflector and casing.

2. The combination with a lamp casing and a reflector therein, said casing having a flange extending inwardly at the edge thereof and the outer edge of said reflector extending over the front of said flange, of a connecting frame secured to the rear of the reflector, means on the rear of the casing for securing said frame in position thereon, a longitudinally adjustable lamp socket projecting from the inner end of said frame into the interior of the reflector for holding a lamp, a pair of ratchet members at the outer end of said frame, and means connected with one of said ratchet members and accessible from the rear of the casing for turning one ratchet member on the other to adjust said lamp socket back and forth.

3. The combination with a lamp casing and a reflector therein, of a connecting frame secured to the rear of the reflector, means for securing said frame in position on the casing, a longitudinally adjustable lamp socket projecting from the inner end of said frame into the interior of the reflector for holding a lamp, a pair of ratchet members at the outer end of said frame, means connected with one of said ratchet members and accessible from the rear of the casing for turning one ratchet member on the other to adjust said lamp socket back and forth, and yielding means within said frame for holding the ratchet members together and exerting a pressure on said lamp socket.

4. The combination with a lamp casing and reflector inside the same, of a frame connecting the reflector and casing, means outside the casing for securing the frame in position, a lamp socket in the inner end of said frame, means accessible from the rear of the casing for adjusting said lamp socket back and forth, said means comprising a pair of ratchet members, a terminal member in said frame having a terminal therein projecting into the socket and adapted to engage the end of a lamp base fitting in said socket, and a spring in said frame bearing at one end on one of the ratchet members to hold it against the other ratchet member and bearing at the other end on said terminal member to hold the terminal against the lamp with a yielding pressure.

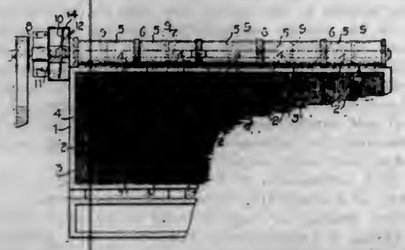
5. The combination with a lamp casing and a reflector, of a frame connecting the reflector and casing, a lamp socket in the inner end of said frame, a pair of ratchet members, a terminal member in said frame having a terminal therein projecting into the socket and adapted to engage the end of a lamp base in said socket, and a spring in said frame bearing at one end on one of the ratchet members to hold it against the other ratchet member and bearing at the other end on said terminal member to hold the terminal against the lamp with a yielding pressure.

[Claims 6 to 10 not printed in the Gazette.]

1,115,034. BUST SUPPORTER AND REDUCER. ANNA STENSLAND, Brooklyn, N. Y. Filed Apr. 3, 1914. Serial No. 829,161. (Cl. 2—73.)

A bust supporter and reducer, adapted to be worn in connection with a corset and the side portions of which are provided centrally of the inner sides thereof with hooks for engaging the top edge of the corset and arranged so that the supporter and reducer will extend above and below said top edge of the corset when in use.

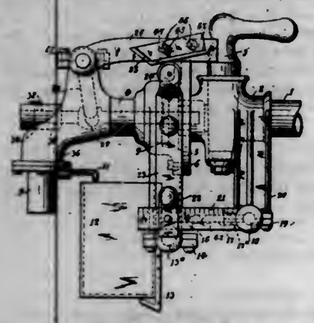
1,115,035. PAPER AND PULP SCREEN. ZENFORD TERRIAN and JAMES LENNON, Jr., Fort Edward, N. Y.; said James Lennon, Jr., assignor to James Lennon, Sr., Fort Edward, N. Y. Filed Jan. 10, 1914. Serial No. 811,421. (Cl. 92—31.)



1. The combination with a vat provided with a plurality of chambers, and screen plates for covering such chambers; of a cylinder common to adjacent chambers and in communication therewith through suitable ports produced in the adjacent wall of the vat, a rod capable of endwise reciprocal movement within such cylinder, a disk within the cylinder fixed to such rod at a point intermediate the points of communication between the cylinder and the adjacent chambers, and means for imparting reciprocal movement to the rod.

2. The combination with a vat provided with a plurality of chambers, and screen plates for covering such chambers, such chambers being arranged in a series of two; of a cylinder common to each series of chambers and in communication therewith through suitable ports produced in the adjacent wall of the vat, a rod common to all the cylinders and directed therethrough and capable of reciprocal movement, a disk fixed to such rod within each of the cylinders intermediate the points of communication of such cylinder with the adjacent series of chambers, and means for imparting reciprocal movement to the rod.

1,115,036. LIQUID MEASURING AND DISPENSING DEVICE. ERNEST C. THORSCHMIDT, New York, N. Y. Filed Jan. 14, 1913. Serial No. 741,966. (Cl. 73—151.)



1. A liquid measuring and dispensing device comprising a casing, a valve within the casing, a nozzle at the mouth of the casing, a by-pass extending laterally from the nozzle, a movably mounted receptacle into which the liquid flowing from the by-pass may empty, means connected with the receptacle for holding the valve open, and means for holding the first mentioned means in position until a predetermined amount of liquid has passed into the receptacle.

2. A liquid measuring and dispensing device comprising a casing, a valve within the casing, a nozzle at the mouth of the casing, a by-pass extending laterally from the nozzle, a movably mounted receptacle into which the liquid flowing from the by-pass may empty, means connected with the receptacle for holding the valve open, and a weight lever engaging a projection extending from the receptacle to hold the latter in position until a predetermined amount of liquid has passed therein.

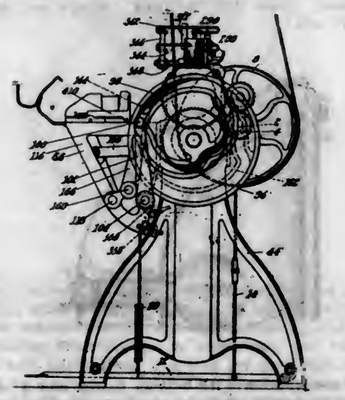
3. A liquid measuring and dispensing device comprising a casing, a valve within the casing, a nozzle at the mouth of the casing, a by-pass extending laterally from the nozzle; a pivoted member comprising a receptacle disposed adjacent to said nozzle and extending under the mouth of the by-pass, and an arm; a lever engaging the valve and held by said arm to maintain the valve open, and a movable weighted member engaging said pivoted member to maintain it upright until a predetermined amount of liquid has passed into the receptacle.

4. A liquid measuring and dispensing device comprising a casing, a valve within the casing, a nozzle at the mouth of the casing, a by-pass extending laterally from the nozzle; a pivoted member comprising a receptacle disposed adjacent to said nozzle and extending under the mouth of the by-pass, and an arm; a lever engaging the valve, a cam plate adjustably mounted upon the lever engaged by said arm to hold the valve open, and a weighted member engaging said pivoted member to maintain it upright until a predetermined amount of liquid has passed into the receptacle.

5. A liquid measuring and dispensing device comprising a casing having a nozzle extending therefrom, a by-pass formed adjacent to said nozzle, a valve for controlling the flow of liquid through said nozzle and by-pass; a pivoted member comprising a receptacle extending under the mouth of the by-pass, and an arm provided with a lug; a lever engaging the valve and held by said arm to maintain the valve open, a weighted member having a projection engaging said lug, said projection being provided with a hinged tip allowing the lug to freely pass the same in one direction but holding it from movement in the other direction.

[Claims 6 to 9 not printed in the Gazette.]

1,115,037. MACHINE FOR SHAPING RANDS. ELIPHALET A. TRIPP, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1908. Serial No. 460,727. (Cl. 12—67.1.)



1. A machine of the class described having, in combination, means for bending the edges of a rand strip together in the plane of the strip and mechanism independent of the said means for removing the bent rand and pressing out the corrugations formed upon its inner edge.

2. A machine of the class described, having in combination, rotary rand-molding means and rand-bending means independent of said molding means arranged to supply automatically a bent rand thereto.

3. A machine of the class described, having in combination, rand-molding means arranged to be continuously operated, and rand-bending means arranged to deliver a bent rand in timed relation to said molding means.

4. A machine of the class described, having in combination, rand-molding means arranged to be continuously operated and means for delivering a bent rand in timed relation to said molding means.

5. A machine of the class described, having in combination, rand-molding means arranged to advance a bent rand and constructed to progressively smooth out the corrugations upon the inner edge of the rand as it advances, and means for automatically delivering a bent rand to said molding means.

[Claims 6 to 63 not printed in the Gazette.]

1,115,038. BOOT AND SHOE. CHARLES TWEEDIE, Jefferson City, Mo. Filed Aug. 27, 1913. Serial No. 786,847. (Cl. 36—31.)

1. A heel for boots and shoes comprising a plurality of lifts secured together, the bottom lift being shorter than the others at its inner end, said inner end being beveled on its outer face.

2. A shoe comprising a short sole of sole leather having its shank end beveled on the grain side, and a heel secured to said short sole and having a heel seat portion forming an extension of said short sole, said heel seat portion being shorter than said heel and having its inner end beveled on the outer side to lap the beveled end of said short sole.

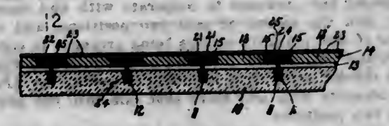
3. A shoe having a sole comprising a front portion of sole leather or other suitable sole material with its shank end skived to a bevel on the grain or wearing surface of said sole, and a heel having a bottom lift or layer of either inferior leather or a substitute for leather, said lift being shorter than the adjoining lift or layer and with its short end toward the breast or straight end of said heel, said short end of said heel lift being skived to a bevel, the extension thus left between the beveled end of said short lift or layer and the breast line of said heel forming a suitable and substantial lap and union of both the forepart of said sole and said heel when attached to the bottom of a shoe by the heeling machine process, substantially as described.

4. In combination in a shoe, a built up bottom comprising a front portion of sole leather or other suitable sole material with its shank end skived to a bevel on the grain or wearing surface of said sole, and a heel having a bottom lift or layer of either inferior leather or a substitute for leather, said lift being shorter than the adjoining lift or layer and with its short end toward the breast or straight end of said heel, said bottom lift forming a heel seat, the bottom or concave surface thereof being skived to a bevel, whereby said heel seat and heel are adjustable relatively to said front portion and are adapted to be lapped and secured together by the heel nailing substantially as described.

5. As a new article of manufacture, a heel for a shoe comprising a short sole of sole leather having its shank end beveled, said heel having a heel seat portion secured thereto and forming a part thereof, said heel seat portion being adapted to form an extension of said short sole and having its inner end beveled to lap the beveled end of said short sole.

1,115,039. PARQUET FLOORING. SALAMON UNGER, New York, N. Y. Filed Jan. 21, 1914. Serial No. 813,469. (Cl. 20—6.)

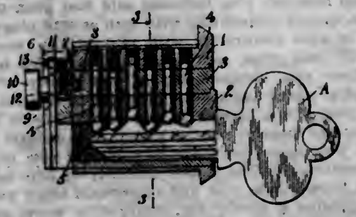
1. The combination with a cement substratum, of furring strips placed thereon, flooring boards provided with longitudinal grooves in their upper faces placed side by side upon said furring strips in parallel relation and close to each other, the upper faces of said flooring boards being covered by wooden tesseræ, locking strips T-shaped in cross section attached to said cement substratum and fitting the grooves in said flooring boards, and wooden strips secured to the upper faces of said locking strips, the outer surfaces of said wooden strips being flush with those of said tesseræ.



2. The combination with a cement substratum having holes therein, of plugs driven into said holes, furring strips placed upon said substratum, flooring boards provided with longitudinal grooves in their upper faces placed side by side upon said furring strips in parallel relation and close to each other, the upper faces of said flooring boards being covered by wooden tesseræ, locking strips T-shaped in cross section fitting the grooves in said flooring boards, fastening devices driven through said locking strips into said plugs, and wooden strips secured to the upper faces of said locking strips covering said fastening devices, the outer surfaces of said wooden strips being flush with those of said tesseræ.

3. The combination with a cement substratum, of furring strips placed thereon, flooring boards provided with longitudinal grooves in their upper faces placed side by side upon said furring strips in parallel relation and close to each other, each flooring board being composed of two longitudinally rabbeted strips and of a plurality of transverse blocks having tongues in engagement with said rabbets, the upper faces of said flooring boards being covered by wooden tesseræ, locking strips T-shaped in cross section attached to said cement substratum and fitting the grooves in said flooring boards, and wooden strips secured to the upper faces of said locking strips, the outer surfaces of said wooden strips being flush with those of said tesseræ.

1,115,040. CYLINDER-LOCK CONSTRUCTION. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed June 9, 1914. Serial No. 843,924. (Cl. 70—98.)



1. In a cylinder lock, a casing, two rotatable members therein controlled and rotatable through a plurality of keys, one of said members being arranged for rotation both independently of and jointly with the second of said members, a roll back or cam carried by and rotating with the first of said members, said cam being movable relative to said member and having at least two relative positions, means normally tending to hold said cam in one of said two positions, means limiting the rotation of said first member relative to and independently of the second, certain of said keys being arranged to coöperate with and rotate said first mentioned member only, and including a special key arranged to coöperate with and move said cam into the second of said two positions.

2. In a cylinder lock, a casing, two rotatable members therein controlled and rotatable through a plurality of keys, one of said members being arranged for rotation both independently of and jointly with the second of said members, a roll back or cam carried by and rotating with the first of said members, said cam being movable rela-

tive to said member and having at least two relative positions, means normally tending to hold said cam in one of said two positions, means limiting the rotation of said first member relative to and independently of the second, certain of said keys being arranged to coöperate with and rotate said first mentioned member only and including a special key arranged to coöperate with and move said cam into the second of said two positions, and certain other of said plurality of keys being arranged to coöperate with and rotate said first and second members together, said certain other keys including a special key arranged to coöperate with and move said cam into the second of said two positions.

3. In a cylinder lock, a casing, a rotatable member therein, a second rotatable member within said casing inclosing said first member, said members being controlled by and rotatable through a plurality of keys, said first member being arranged for rotation independently of and jointly with said second member, with means for limiting the rotation of said first member independently of the second, a cam carried by and rotatable with said first member and movable relative thereto, said cam having at least two relative positions, with means normally holding said cam in one position, certain of said plurality of keys being arranged to coöperate with and rotate said first member only and including a special key arranged to move said cam into the second of said two positions.

4. In a cylinder lock, a casing, a rotatable member therein, a second rotatable member within said casing inclosing said first member, said members being controlled by and rotatable through a plurality of keys, said first member being arranged for rotation independently of and jointly with said second member, with means for limiting the rotation of said first member independently of the second, a cam carried by and rotatable with said first member and movable relative thereto, said cam having at least two relative positions, with means normally holding said cam in one position, certain of said plurality of keys being arranged to coöperate with and rotate said first member only and including a special key arranged to move said cam into the second of said two positions, and certain other of said plurality of keys being arranged to coöperate with and rotate said first and second members together, said certain other keys including a special key arranged to coöperate with and move said cam into the second of said two positions.

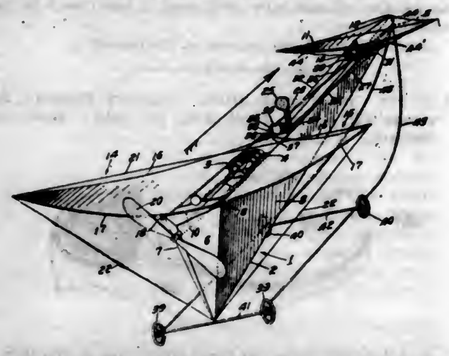
5. In a cylinder lock, a casing, a rotatable plug therein, a second rotatable plug inclosing said first plug, pin tumbler mechanism coöperating with both of said plugs, a plurality of keys coöperating with said tumbler mechanism and with said plugs, said keys being arranged to rotate said inner plug independently of and jointly with said outer plug, means limiting the independent rotation of said inner plug, a cam carried by and rotatable with said inner plug and movable relative thereto into at least two positions with means normally holding said cam in one of said positions, certain of said plurality of keys being arranged to coöperate with and rotate said inner plug only and including a special key arranged to move said cam into the second of said two positions.

[Claims 6 to 10 not printed in the Gazette.]

1,115,041. FLYING-MACHINE. ELMER WACHTEL, Los Angeles, Cal. Filed Jan. 17, 1911. Serial No. 603,187. (Cl. 244—12.)

1. A flying machine comprising a prone pyramidal body, a propeller mounted at the upper portion of the larger end of said body, a triangularly formed rudder wing mounted on the upper side of the body at the front thereof, and a second triangularly formed wing mounted on the top of said body at the rear thereof and adjacent said propeller, said wings having apices pointing toward the small end of said pyramidal body and sides deflected in an upward direction from said pyramidal body toward the tips of the wings substantially as and for the purpose set forth.

2. In a flying machine, the combination with a prone pyramidal body, of a triangularly-formed rudder wing mounted on the upper side of said body at the front thereof, and a second triangularly-formed wing mounted on the upper side of said body at the rear thereof, said wings having apices pointing toward the small end of said pyramidal body and sides deflected in an upward direction from said pyramidal body toward the tips of the wings substantially as and for the purpose set forth.



3. In a flying machine having a pyramidal body, the combination of a triangular rudder wing mounted at the top of said body to rock and tilt, a steering shaft adapted to tilt, a steering wheel fixed on said shaft, flexible members connecting said steering wheel to the lateral tips of said wing to rock said wing when said wheel is rotated, and second flexible members connecting said steering shaft to the front tip of said wing to tilt said wing when said shaft is tilted.

4. In a flying machine comprising a pyramidal body, a triangular-formed rudder wing mounted on the upper side of the top of said body and bowed upward from the body toward its lateral tips, a larger triangular-formed wing pivoted at the upper side of the stern of said body and bowed upward from the body toward its lateral tips, and a guide mounted near the seat of the driver, said larger wing having its front tip slidably mounted in said guide and adapted to be secured at different points in said guide.

5. In a flying machine, the combination with a pyramidal body, of a triangularly-formed wing pivoted at its rear end to the upper side of the stern of said body and bowed upward from the body toward its lateral tips, and a guide mounted near the seat of the driver, said wing having its front tip slidably mounted in said guide and adapted to be secured at different points in said guide.

[Claim 6 not printed in the Gazette.]

1,115,042. FELT HAT. ARTHUR B. WARING, New York, N. Y. Filed Nov. 19, 1912. Serial No. 732,203. (Cl. 2—108.)

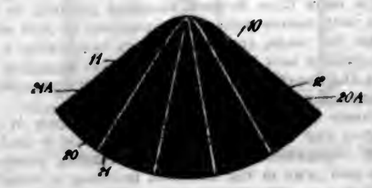
1. A felt hat made of a fabric having non-felting fibers intermingled with the felting fibers under the surface thereof with the felting fiber surface removed from one or more broad hat surfaces to disclose the non-felting fibers and to contrast with other surfaces of the hat.

2. A felt hat made of a fabric having non-felting fibers unlike in appearance but mingled with the felting fibers beneath the surface thereof with the felting fiber surface removed from one or more broad hat surfaces to disclose the non-felting fibers and to contrast with other surfaces of the hat.

3. A felt hat made of a fabric having vegetable fibers intermingled with animal fibers beneath the surface thereof with the animal fiber surface removed from one or more broad hat surfaces to disclose the vegetable fibers and to contrast with other surfaces of the hat, said animal and vegetable fibers being unlike in appearance.

4. A felt hat having a crown surface, an upper rim surface, and an under rim surface, and made of a fabric having non-felting fibers intermingled with animal fibers beneath the surfaces of the fabric, said animal fibers and non-felting fibers being of unlike colors, with the animal fiber surface of the fabric removed from one or more broad hat surfaces to contrast with other surfaces or surface of the hat.

1,115,043. METHOD OF DECORATING FELT HATS. ARTHUR B. WARING, New York, N. Y. Filed Dec. 6, 1912. Serial No. 735,184. (Cl. 2—108.)



1. The method of decorating felt hats which comprises symmetrically folding a hat body and reproducing upon its outer surfaces between said folds, a symmetrical design of which the folded lines form a part.

2. The method of decorating felt hats which comprises symmetrically folding a hat body and impressing upon its outer surfaces between said folds, a design of which the folded lines form a part.

3. The method of decorating felt hats which comprises folding a conical hat body along diametrically opposed lines into a flat form, and reproducing such a design upon each of its two outer surfaces between said folds, that a single symmetrical design, of which the folded lines form a part is produced on the hat.

4. The method of decorating felt hats which comprises folding a conical hat body along diametrically opposed lines into a flat form, and printing upon its outer surfaces a design repeated between substantially radial lines two of which are on the lines of the folds.

1,115,044. PROCESS OF MAKING AMMONIUM PHOSPHATE. FRANK S. WASHBURN, Nashville, Tenn. Filed June 9, 1914. Serial No. 844,017. (Cl. 23—21.)

1. The process of producing ammonium phosphate from crude phosphoric acid and gas house liquor which consists in adding said liquor to said crude phosphoric acid while passing steam through said acid, substantially as described.

2. The process of producing ammonium phosphate from crude phosphoric acid and gas house liquor, which consists in heating said acid substantially to its boiling point, and adding said liquor to said acid while causing steam to bubble through the mass of said acid, substantially as described.

3. The process of producing ammonium phosphate from crude phosphoric acid and concentrated gas house liquor which consists in heating said crude phosphoric acid to the boiling point; adding said liquor to the boiling hot acid; and bubbling steam through said acid during the addition of said liquor and for a few minutes after said addition has ceased, substantially as described.

4. The process of producing ammonium phosphatic compounds suitable for fertilizer purposes which consists in adding concentrated gas house liquor to hot crude phosphoric acid while passing steam through the mass until the latter takes on a light color, substantially as described.

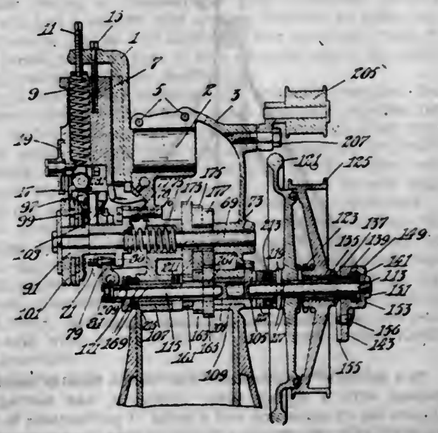
5. The process of producing ammonium phosphatic compounds which consists in adding gas house liquor to boiling hot crude phosphoric acid and bubbling steam through the mass until substantially all the volatile impurities have been removed, substantially as described.

[Claim 6 not printed in the Gazette.]

1,115,045. TOE-CAP FOR BOOTS AND SHOES. ROBERT C. WERKHEISER, Wilkes-Barre, Pa. Filed Aug. 29, 1912. Serial No. 717,782. (Cl. 36—77.)

A tip shield for the toes of boots or shoes comprising a sheet metal cap arranged to fit the toe of a shoe, the lower edge of said cap being arranged flush with the sole of the boot or shoe and the body of said cap being arranged to extend upwardly and cover the toe of the upper, and pointed tongues at the opposite side edges of the body, said tongues having upper curved edges and lower straight edges arranged to be snugly fitted between said sole and said upper, said cap being arranged to be fastened to said upper.

1,115,046. CHANNELING-MACHINE. HENRY W. WINTER, Methuen, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 24, 1910. Serial No. 599,194. (Cl. 12—27.)



1. A machine of the class described having a knife and means for advancing a piece of stock thereto in combination with a substantially vertical holder provided at its lower end with a pair of jaws, means for moving one of said jaws toward the other, a knife block by which said knife is held, said block being adapted to be inserted between said jaws from below, and means for holding said knife in adjusted angular position with respect to said block.

2. A machine of the class described having a knife and means for advancing a piece of stock thereto in combination with a substantially vertical holder provided with a substantially horizontal guideway open at its under side, said guideway being formed with a movable wall whereby the width of said guideway may be varied, means for moving said wall, a knife block adapted to be inserted in and removed from said guideway when said wall is in open position and to be held clamped in said guideway when said wall is in closed position, and means for adjustably fastening said knife to said knife block.

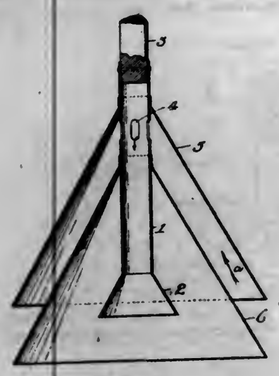
3. A machine of the class described having a knife and means including a presser foot for advancing a piece of stock to said knife in combination with a holder provided with an open sided guideway, a block in which said knife is angularly adjustable, said block being removable from the open side of said guideway and slidable in said guideway toward and from said presser foot, and means for clamping said block in adjusted position in said guideway.

4. A machine of the class described having, in combination, a channeling knife, means under the control of the operator for raising said knife, means for feeding a piece of stock to said knife, a presser foot for holding the stock in engagement with said feeding means, and yielding means for urging said foot toward said feeding means whereby, when said knife is raised, it is caused to cut through the surface of said stock.

5. A machine of the class described having, in combination, a channeling knife, means under the control of the operator for raising said knife, means for feeding a piece of stock to said knife, a presser foot continuously in engagement with said stock to press it against said feeding means, and yielding means for urging said foot toward said feeding means.

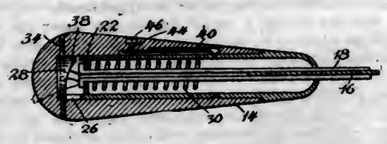
[Claims 6 to 10 not printed in the Gazette.]

1,115,047. SUCTION WASHING DEVICE. FRED A. WOLF, Reading, Pa., assignor of one-half to John M. Wenzel, Reading, Pa. Filed May 23, 1914. Serial No. 840,407. (Cl. 68—5.)



In a device of the character described, a tubular member formed with a flaring lower extremity, and having a closure for its upper end and a series of perforations in its vertical wall; an inverted funnel shaped member whose contracted end is attached to said tubular member at a point above the perforations and having its flaring end above the plane of that of the lower end of the flared tube; a second funnel shaped member whose contracted end is attached to said tube at a point below the perforations, and having its flaring end depending below the flaring end of the central tube, whereby a circulation of liquid may be maintained through said tube and between said funnels when said device is moved vertically.

1,115,048. BLADE-HOLDER. LEWIS J. BAZZONI, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 7, 1909. Serial No. 494,579. (Cl. 145—84.)



1. A blade holder comprising a handle, a pair of jaws rotatable therein and provided with cam surfaces constructed and arranged to coöperate with a part of the handle for moving the jaws toward each other to clamp a blade, a spring acting upon said jaws and tending constantly to move them to blade clamping position, in combination with means acting in opposition to said spring to release the blade, the latter means comprising a cam member fixed in said handle and a member rotatable with the jaws and co-acting with the cam member to release the jaws from the pressure of the spring.

2. A blade holder comprising a handle, a pair of jaws constructed and arranged to clamp and hold a blade by frictional engagement only, a spring tending constantly to move said jaws in the direction to clamp a blade and means acting in opposition to the spring to unclamp or release the blade and comprising a cam member and a relatively rotatable member co-acting therewith, said cam member being fixed in the handle and provided with a stop at the end of the cam surface constructed and arranged to limit the relative movement of said members to less than a complete rotation.

3. A blade holder comprising a handle, a pair of clamping jaws means for moving them toward each other to clamp a blade and means constructed and arranged to release the jaws comprising a cam member fixed in the handle and a rotatable member co-acting therewith but also movable out of contact with the cam member as the blade is clamped.

4. A blade holder comprising a handle, a pair of blade clamping jaws provided with cam surfaces, a sleeve within the handle extending for the greater part of the length of the handle and being constructed and arranged to rotate therein while secured against longitudinal movement, the said sleeve being provided with a surface to co-act with the cam surfaces of the jaws, and means for moving the jaws longitudinally of the sleeve including a spring and two coöperating cam members, one fixed in the handle and the other rotatable with the sleeve.

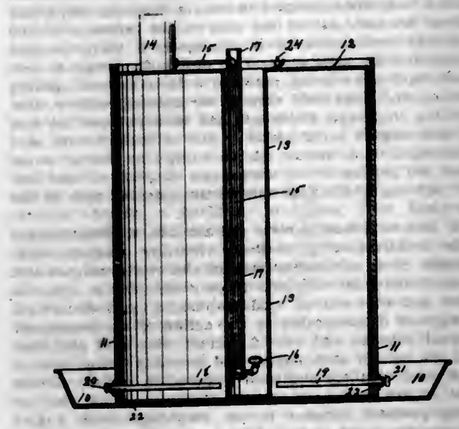
5. A blade holder comprising a handle, a pair of clamping jaws, means for moving the jaws to clamp a blade, a sleeve rotatable within the handle and jaw releasing means acting in opposition to the clamping means including a member fixed in the handle near its rear end and a coöperating member connected with the sleeve to rotate therewith but capable of longitudinal movement relatively thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,115,049. STOCK-FOUNTAIN. DAVID BENSON, Lamoille, Ill. Filed Dec. 13, 1912. Serial No. 736,636. (Cl. 119—73.)

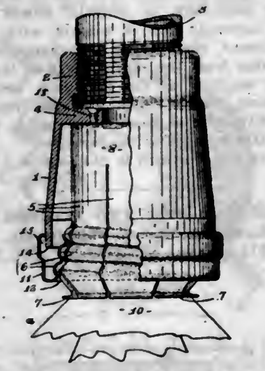
A drinking fountain and heater therefor, comprising a water tank having drinking cups extending laterally therefrom, and also having sealable conduits leading from the lower portion of the tank to said cups, a sealing bell being loosely mounted in the tank and movable vertically therein, which bell is formed with downwardly opening slots receiving said conduits, a well or chamber being mounted in and depending from the top of the bell nearly to the bottom of the tank, said well being open at its top and closed at its bottom, and a heating device removably and replaceably mounted in the well, said heating device being

provided with a burner near to the bottom of the well and an air flue leading from a plane above the top of the



well to said burner, said air flue being removable with said burner.

1,115,050. LAMP-SHADE HOLDER. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed May 29, 1913. Serial No. 770,569. (Cl. 240—114.)



1. A lamp shade holder comprising resilient spring jaws for engaging the lamp shade, the jaws having conically curved threaded surfaces, and a clamping nut having complemental conical threaded surfaces for coacting with the threaded surfaces of the jaws, substantially as and for the purpose described.

2. A lamp shade holder comprising a circular series of spring jaws for engaging the lamp shade, the series of jaws having a conoidal threaded surface, and a clamping nut having a complemental internally threaded conoidal surface for engaging the threaded surface of said series of jaws, substantially as and for the purpose specified.

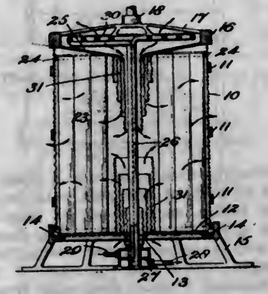
3. A lamp shade holder comprising a circular series of spring jaws for engaging the lamp shade, the series of jaws having an externally threaded conoidal surface having its portion of greatest diameter located nearer the free ends of the jaws than its portion of less diameter, and a clamping nut threading on the series of jaws, substantially as and for the purpose set forth.

4. A lamp shade holder comprising a circular series of spring jaws for engaging the lamp shade, the series of jaws having an externally threaded conoidal surface having its portion of greatest diameter located nearer the free end of the jaws than its portion of less diameter, and a clamping nut threading on the series of jaws, and having an internally threaded conoidal surface complemental to the threaded surface of the series of jaws, substantially as and for the purpose described.

5. The combination of an electric lamp socket, and a shade holder comprising a series of spring jaws encircling the lamp socket and having a conoidal threaded surface, and a clamping nut turning on the threaded surface of said jaws, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,115,051. DRIER. SEYMOUR W. BONSALL, New York, N. Y., assignor to Innovation Trunk Company, a Corporation of New York. Filed Nov. 17, 1911. Serial No. 660,819. (Cl. 34—28.)



1. A wood drier comprising a revoluble container for timber having a substantially axial admission opening for air, and a suitable exit opening therefor, and heating means located near the axis of the container in the path of the entering air, substantially as described.

2. A wood drier comprising a revoluble container for timber having a substantially axial admission opening, and a suitable exit opening therefor, and an axial steam pipe in said container in the path of the entering air, substantially as described.

3. A wood drier comprising a revoluble container for timber having a substantially axial admission opening for air, and a suitable exit opening therefor, an axial two-part steam pipe in said container, and means for conducting steam into one part of said pipe and out of the other part, substantially as described.

4. A wood drier comprising a revoluble container for timber having substantially axial admission opening for air, and a suitable exit opening therefor, an axial two-part steam pipe in said container having an extension leading from one part of said pipe to the other, and means for conducting steam into one part of said pipe and out of the other part, substantially as described.

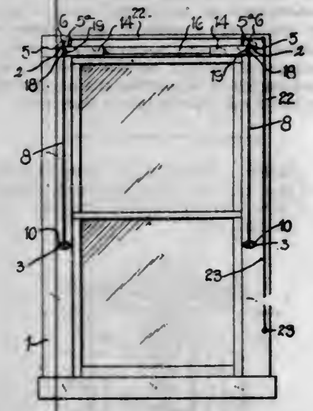
5. A wood drier comprising a revoluble container for timber having substantially axial admission opening for air, and a suitable exit opening therefor, an axial two-part steam pipe in said container having a spirally disposed extension leading from one part of said pipe to the other, and means for conducting steam into one part of said pipe and out of the other part, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,115,052. SHADE-FIXTURE. BURDETTE T. BURLINGHAM, McGraw, N. Y. Filed May 8, 1914. Serial No. 837,272. (Cl. 156—27.)

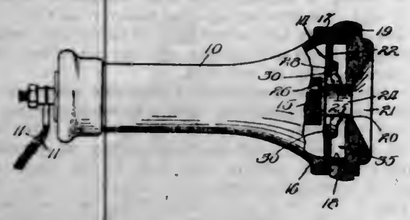
1. In combination with guide rods, a shade fixture slidably engaged on each of said rods, said fixture comprising elongated bodies, each having its longitudinal margins provided with inwardly disposed L-shape flanges to afford a run-way, a connecting bar having its extremities slidably engaged within the run-ways of the fixtures, and rearwardly disposed tongues projecting from the outer end of each of the bodies and overlying the run-

ways, the free extremities thereof being formed into sleeves positioned rearwardly of the body and through which the guide rods are directed.



2. In combination with guide rods, a shade fixture slidably engaged on each of said rods, said fixture comprising elongated bodies, each having its longitudinal margins provided with inwardly disposed L-shape flanges to afford a run-way, a connecting bar having its extremities slidably engaged within the run-ways of the fixtures, rearwardly disposed tongues projecting from the outer end of each of the bodies and overlying the run-ways, the free extremities thereof being formed into sleeves positioned rearwardly of the body and through which the guide rods are directed, and flexible means operatively engaged with the upper flange of each of the fixtures for imparting movement thereto longitudinally of the guide rods.

1,115,053. TELEPHONE-RECEIVER. WALTER H. COTTON, Chicago, Ill. Filed Oct. 25, 1912. Serial No. 727,673. (Cl. 179—115.)



1. In a telephone receiver and the like, the combination with a vibratory magnetic diaphragm having means to confine it at its margin, of a combined permanent and electro-magnet and a fixed abutment disposed respectively on the opposite sides and centrally of said diaphragm with the pole of the permanent magnet opposing the center of the said diaphragm, said diaphragm being held in suspension by the action of the magnet between and out of contact with said abutment and the pole of said magnet and bowed toward said pole, and said abutment being disposed in a plane within that of the confined margin of the diaphragm.

2. A telephone receiver comprising, in combination with a body and a magnet therein, a magnetic diaphragm across the open end of the body in the influence of and centrally bowed toward but normally out of contact with the pole of said magnet, and a plate between which and the body the margin of the diaphragm is confined, said plate being provided with a central opening and on its inner side around said opening with a non-yielding raised portion disposed in a plane within the plane of the margin of said diaphragm, and normally out of contact with said diaphragm.

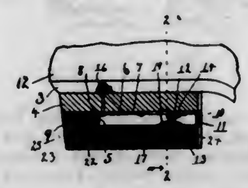
3. A telephone receiver comprising, in combination with a body and a magnet therein, a magnetic diaphragm across the open end of the body in the influence of and centrally bowed toward said magnet, a plate between which and the body the margin of the diaphragm is confined, said plate being provided with a central opening and on its inner side around the opening with a non-yielding diaphragm abutment, said abutment and the core of said magnet being normally out of contact with said diaphragm, and means for diverting the sound waves from the portion of the diaphragm exterior to said central opening of the disk outside the listening zone of the ear piece.

4. In a telephone receiver and the like, the combination with a permanently confined vibratory magnetic diaphragm, of a combined permanent and electro-magnet and a fixed abutment disposed respectively on the opposite sides and centrally of said diaphragm, said diaphragm being held in suspension by the action of the permanent magnet between and out of contact with said abutment and the pole of said magnet and normally bowed toward said pole, with the abutment disposed in a plane within that of the periphery of the diaphragm, said receiver being provided exterior to the diaphragm with a free passage for sound waves which emanate from the central portion of the diaphragm and means for trapping the vibrations which emanate from the diaphragm radially exterior to said passageway.

5. In a telephone receiver and the like, the combination with the vibratory magnetic diaphragm, of a permanent magnet and a fixed abutment disposed respectively on the opposite sides of the said diaphragm, with the pole of the said magnet presented centrally to said diaphragm whereby the diaphragm is centrally bowed toward the magnet but normally out of contact with the magnet and the abutment, there being a circumscribed free passageway leading from the central part of the diaphragm to a contral aperture of the ear piece, and means for directing sound waves which emanate from the diaphragm radially exterior to said passage to a point outside of the listening zone of the ear piece.

[Claims 6 to 8 not printed in the Gazette.]

1,115,054. DETACHABLE AND INTERCHANGEABLE HEEL. HARRY W. CRANE, Philadelphia, Pa. Filed Jan. 27, 1914. Serial No. 814,822. (Cl. 36—36.)

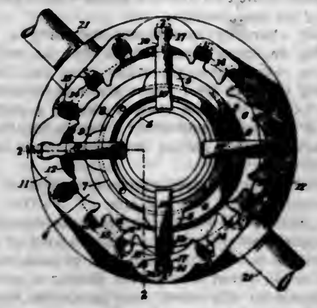


1. In combination with a fixed heel, a clamp comprising a cupped up body, a flange projecting from the side walls of the body, an extension projecting from the front end of the roof of the body, said extension having an opening therein, a partition projecting from the roof into the interior of the body, arms formed from said partition, a guide and rest formed from the partition intermediate the arms and inclined toward the front edge of the roof, a detachable and interchangeable heel provided with a cavity open at the front end and having a recess radiating therefrom, said recess arranged to receive the flange of the clamp and means situated within the cavity of the detachable heel for locking the latter upon the fixed heel.

2. In combination with a fixed heel, a clamp comprising a cupped up body, a flange projecting from the side walls of the body, an extension projecting from the front end of the roof of the body, said extension having an opening therein, a partition projecting from the roof into the interior of the body, arms formed from said partition, a guide and rest formed from the partition intermediate the arms and inclined toward the front edge of the roof, a detachable and interchangeable heel provided with a cavity open at the front end and having a recess radiating from the base of said cavity, said recess arranged to register with the flange of the clamp when the detachable heel is drawn forward, and a locking plate situated within the cavity and projecting into the recess provided with means for engagement with the arms of the clamp to hold the detachable heel in position.

3. In combination with a fixed heel, a clamp comprising a cupped up body, a flange projecting from the side walls of the body, an extension projecting from the front end of the roof of the body, said extension having an opening therein, a partition projecting from the roof into the interior of the body, arms formed from said partition, a guide and rest formed from the partition intermediate the arms and inclined toward the front edge of the roof, a detachable heel provided with a cavity open at the front end and having a recess radiating from the base of said cavity, said recess arranged to register with the flange of the clamp when the detachable heel is drawn forward, and a locking plate carried by the detachable heel situated within the cavity and projecting into the recess, said locking plate comprising a body, a pair of parallel arms, a bowed spring tongue having slots therein and prongs, said slots in the bowed spring tongue adapted to register with the arms of the clamp for locking the detachable heel upon the fixed heel.

1,115,055. TAPER-THREAD-CUTTING MACHINE. LEWIS B. CURTIS and CHESTER E. JOSSELYN, Bridgeport, Conn., assignors to The Curtis & Curtis Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 17, 1913. Serial No. 807,204. (Cl. 10—121.)



1. A taper threading machine comprising a work holder, a die carrier movable longitudinally thereof, a die guide having internal longitudinally extending inclined sockets provided with oppositely disposed inclined ribs, and a die seated on and transversely movable of the carrier and provided with means for interlocking with the sockets and the ribs to prevent transverse movement of the die relative to the sockets and permit longitudinal movements of the die relatively to the sockets.

2. In a taper threading machine, the combination with a work holder, of a die carrier movable longitudinally thereof, a die guide rotatably fastened to the holder and provided with internal die sockets that are inclined and provided with ribs, and dies having heads provided with inclined ends that are slidable longitudinally of said sockets and having side grooves that interlock with the ribs.

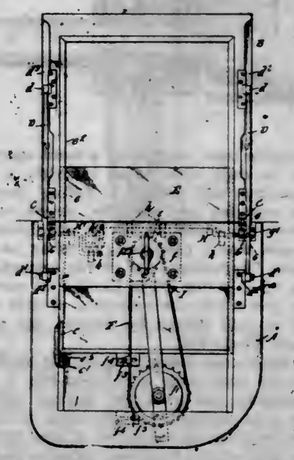
3. A taper threading machine comprising a work holder, a die carrier carried thereby, a guide rotatably mounted on the holder and provided with a plurality of internal, longitudinally extending die sockets arranged in radial relation, said sockets being longitudinally inclined and having contracted open sides provided with oppositely disposed ribs, and dies having heads shaped to interlock with the sockets and provided with side grooves to interlock with the ribs.

4. A taper threading machine comprising a work holder, a die carrier movable longitudinally thereof, a plurality of dies carried by and slidable transversely of the carrier, means for preventing the dies moving lengthwise of the carrier, said dies having heads provided with inclined side grooves, and a die guide having a plurality of inclined sockets and inclined ribs with which said head and grooves interlock.

5. A taper threading machine including a die carrier, a guide rotatable relative to the carrier and provided with internal sockets that are longitudinally inclined and provided with flat inclined rear walls and having a contracted open side provided with inclined ribs that are parallel to said rear wall, and dies having heads shaped to snugly but slidably fit in the sockets and provided with side grooves with which the ribs interlock.

[Claims 6 to 9 not printed in the Gazette.]

1,115,056. WINDOW CONSTRUCTION. HERBERT M. DAWLEY, Buffalo, N. Y., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Filed Mar. 27, 1913. Serial No. 757,074. (Cl. 21—125.)



1. The combination of a window frame comprising a relatively stationary part, and a folding part which is hinged to said stationary part to swing from an upright operative position to a folded position, means for securing said folding frame part in its upright position, a window sash which is slidable vertically in said stationary and folding frame parts when the latter is in its upright position, and means which lock said sash from movement except when said hinged frame part is secured in its upright position.

2. The combination of a casing, a folding window frame which is hinged to said casing to swing from an upright operative position to a folded position, a window sash which is slidable vertically in said casing and frame when the latter is in upright position, means mounted on said casing for operating said sliding sash, and means for locking said sash from movement except when said hinged frame has been moved fully to the upright operative position, substantially as set forth.

3. The combination of a casing, a folding window frame which is hinged to said casing to swing from an upright operative position to a folded position, a window sash which is slidable vertically in said casing and frame when the latter is in upright position, means for securing said hinged frame in the upright position, and means coöperating with said securing means which prevent the operation of said sash except when said securing means are in securing position, substantially as set forth.

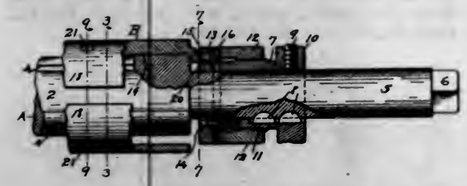
4. The combination of a casing, a folding window frame which is hinged to said casing to swing from an upright operative position to a folded position, a window sash which is slidable vertically in said casing and frame when

the latter is in upright position, means for securing said hinged frame in the upright position, and means controlled by said securing means for locking said sash from movement except when said hinged frame is secured in upright position, substantially as set forth.

5. The combination of a window frame comprising a relatively stationary part and a part which is movable to and from operative relation to said stationary part, a window sash which is slidable in said frame, means for securing said movable frame part in the operative position, operating means for said sliding sash, and locking means for said operating means which are released by securing said movable frame part in operative position, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,115,057. EXPANSIBLE CORE. LAWRENCE F. DELANEY, Watertown, N. Y. Filed Dec. 5, 1913. Serial No. 804,945. (Cl. 242—72.)



1. A collapsible core, comprising a main shaft provided intermediate its ends with radial cam-ribs, a segmental drum surrounding said cam-ribs, having corresponding cam-surfaces engaging said cam-ribs, sleeves mounted on said shaft near the opposite ends of said drum, a clutch carried by each sleeve, comprising a collar having openings to receive projecting ends of the segments of said drum and a ring having teeth capable of entering said openings for preventing the collapsing of said drum, and nuts carried by said sleeves for holding the said collars and said rings interlocked.

2. A collapsible core, comprising a main shaft provided intermediate its ends with radial cam-ribs a segmental drum surrounding said cam-ribs, having corresponding cam-surfaces engaging said cam-ribs, stops carried by said segments for limiting the expansion of said drum, sleeves mounted on said shaft near the opposite ends of said drum, a clutch carried by each sleeve, comprising a collar having openings to receive projecting ends of the segments of said drum and a ring having teeth capable of entering said openings for preventing the collapsing of said drum, and nuts carried by said sleeves for holding the said collars and said rings interlocked.

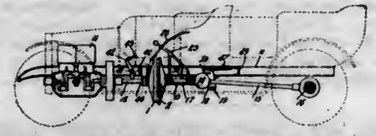
3. The combination with a central shaft provided with a plurality of cam-ribs disposed intermediate its ends, of a split drum surrounding the intermediate portion of said shaft, each segment of said drum having cam-surfaces engaging said cam-ribs and having tongues projecting beyond their opposite ends, sleeves mounted on the said shaft adjacent the ends of said cam-ribs, clutch collars secured to said sleeves having openings to receive said tongues, gland-nuts carried by said sleeves, and clutch rings journaled on said sleeves between said nuts and said clutch collars, said clutch-rings having a plurality of teeth adapted to enter the openings in said clutch alongside of said tongues for holding said segments expanded.

4. In a collapsible core, a central shaft having longitudinal cam-ribs disposed equidistantly around its body intermediate its ends, sleeves mounted on the opposite ends of said shaft adjacent the ends of said cam-ribs and provided with external threads, collar-like clutch members secured to the sleeves and facing said cam-ribs, said members having transverse openings coinciding with said cam-ribs, a split drum comprising a plurality of segments surrounding said shaft, each of said segments having internal longitudinal cam-ledges engaged by said cam-ribs, and each cam-ledge projecting beyond said segments and having reduced ends which are disposed in the openings of said clutch members, and clutch-rings journaled on said sleeves having teeth adapted to enter the openings in said members.

5. In a collapsible core, a central shaft having longitudinal ribs disposed equidistantly around its body intermediate its ends, sleeves rigidly mounted on the opposite ends of said shaft and provided with external threads, collar-like clutch members secured to the sleeves and facing the ends of said cam-ribs, said members having openings coinciding with said cam-ribs, a split drum comprising a plurality of segments surrounding said shaft, each of said segments having internal longitudinal cam-ledges engaged by said ribs, and each cam-ledge projecting beyond said ribs and having reduced ends which are disposed in the openings of said clutch members, clutch-rings mounted on said sleeves having teeth adapted to enter the openings in said members, and gland-nuts carried by said sleeves adapted to hold said clutch-rings in the engaged position.

[Claims 6 and 7 not printed in the Gazette.]

1,115,058. SPEED-CHANGING MECHANISM. JAMES C. DORR, Dansville, N. Y. Filed May 2, 1913. Serial No. 764,984. (Cl. 74—26.)



1. A speed changing mechanism including a pair of rotors having engaging lateral faces, one of said rotors being movable relatively to the other rotor, and means for moving said movable rotor about one center during a part of its movement and about another center during the other part of its movement.

2. A speed changing mechanism including a pair of rotors having engaging lateral faces, one of said rotors being movable relatively to the other rotor, and means for swinging said movable rotor about a center located at one side of the axis of rotation thereof during a part of the movement of said rotor, and about a center located at the opposite side of the axis during the other part of the movement of said rotor.

3. A speed changing mechanism including a pair of rotors rotatable about axes capable of relative angular adjustment, said rotors having lateral faces engaging only along a common radial element when the axes of rotation of the rotors are out of alinement, one of said axes being adapted to swing about one center during a part of its angular adjustment and about another center during another part of its angular adjustment.

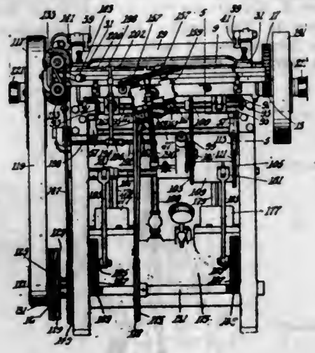
4. A speed changing mechanism including a pair of rotors having engaging lateral faces, one rotor having an annular concave face which has a central prominence, and means for swinging the other rotor about a point concentric with an element of said concave face extending radially of the rotor, into a plurality of positions in each of which said faces are in engagement.

5. A speed changing mechanism including a pair of rotors rotatable about axes capable of relative angular adjustment, said rotors having engaging lateral faces one of which is provided with an annular depression surrounding a central prominence, the face of the other rotor having an annular convex bearing surface fitting in said depression and means for swinging said rotor having the convex face about a point concentric with an element of said annular depression extending radially of the rotor.

[Claims 6 to 17 not printed in the Gazette.]

1,115,059. SPLITTING-MACHINE. ARTHUR W. EATON, Wenham, and CHARLES PEASE, Salem, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 18, 1909. Serial No. 472,968. (Cl. 69—10.)

1. In a skiving machine having a knife for acting upon stock, a feed roll comprising a driving member, a yieldably supported sectional member, said members being provided with means for positively driving one from the other, and means for limiting the yielding movement of the sectional member to a direction transverse to the edge of the knife.



2. A feed roll comprising a driving shaft having a stationary axis, a rigid work-engaging member loosely mounted thereon, said shaft and member being provided with means for positively driving one from the other, yielding means for supporting said work-engaging member, and means for guiding the yielding movement of said member so that it takes place in one direction only.

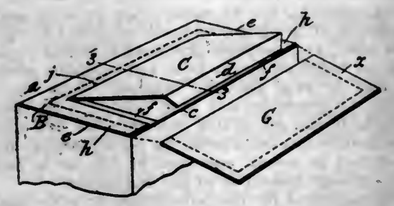
3. A feed roll comprising a driving shaft and a plurality of cylinders, said shaft and cylinders being provided with interengaging driving parts constructed and arranged to permit lost motion, a guide to limit the motion of the cylinders transverse to their axes, and spring-pressed rollers to support said cylinders whereby the cylinders are individually yieldable.

4. A feed roll comprising a driving shaft and a plurality of cylinders mounted thereon, said shaft and cylinders being provided with interengaging driving parts constructed and arranged to permit lost motion, a guide embracing the cylinders and limiting the transverse movement thereof and yielding means for supporting said cylinders.

5. A machine of the class described having, in combination, a knife acting to split stock, and means for feeding stock to be split, said feeding means comprising a rotary shaft, a plurality of cylinders mounted thereon, said shaft and cylinders being provided with interengaging driving parts constructed and arranged to permit lost motion, a guide limiting the transverse movement of said cylinders, yielding means for individually supporting each cylinder, and yielding means for supporting the cylinders as a whole.

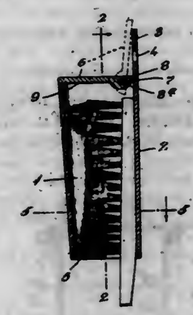
[Claims 6 to 20 not printed in the Gazette.]

1,115,060. PACKAGING-RECEPTACLE. BENJAMIN M. EATON, Winthrop, Mass. Filed Feb. 8, 1913. Serial No. 747,076. (Cl. 229—7.)



A packaging box consisting of inclosing side and end walls, one of the end walls being formed with a material delivery opening through which the contents of the box may be delivered, said opening extending from one of the side walls to a point spaced from the opposing side wall, said end wall being provided with a closure flap hinged thereto and adapted to cover said opening, said closure flap being formed with an angular edge portion adapted to be inserted in the delivery opening to hold the closure flap in place and to seal said opening, flaps located under said closure flap and adapted to be engaged by the side edge portions thereof, and a sealing flap hinged to the side wall adjacent the angular edge portion and normally sealed to said end wall with the delivery opening, but not sealed to the closure flap, and adapted to be opened away from said closure flap, said closure flap being readily liftable to uncover the delivery opening after the sealing flap has been lifted from its normal sealing position.

1,115,061. TOOTH-BRUSH HOLDER. JOHN B. FOSTER, Newark, N. J. Filed May 13, 1914. Serial No. 838,251. (Cl. 132—11.)



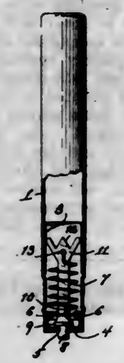
1. A receptacle for tooth-brushes comprising: a casing constructed to snugly inclose the brush end of a tooth-brush, a bottom provided at the lower end of the casing and having an opening therein through which the handle of the brush extends, means for closing the upper end of the casing, a pivot connection between said closing means and said casing and forward of the rear portion of the casing so as to obstruct the opening in the upper end of the casing whereby the bristles of the brush must be deflected from their normal position to draw the brush from the casing.

2. A receptacle for tooth-brushes comprising: a body member constructed to snugly inclose the brush end of a tooth-brush and having a back portion against which the back of said brush will rest, a bottom member for the lower end of the body member to provide a rest for the bristles of the brush and having an opening through which the handle of the brush will extend, a closure for the upper end of the body member having a portion hinged thereto forward of said back portion, a lug extending from the closure and adapted to lie in the path of the back of the brush, so that an upward movement of the tooth-brush will tend to close the closure.

1,115,062. POWDER CONTAINER AND DISPENSER. FRANK A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 8, 1913. Serial No. 793,999. (Cl. 221—62.)

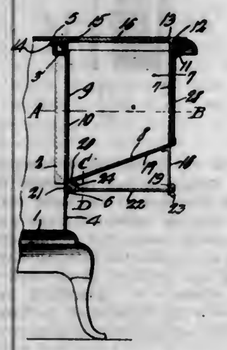
A container for powder, comprising a tube closed at one end and provided at its other end with a lid or cover, said lid or cover comprising an open ended tubular extension, an apertured hollow cap provided with oppositely arranged spring securing lugs secured in one end of said extension, a spring pressed closure located within said lid or cover, one end of which passes through the apertured cap, a powder breaker secured to the other end of said closure

and a closing spring located in said cover, one end of which is secured to the oppositely arranged lugs of the



hollow cap and the other end of which is secured to the powder breaker.

1,115,063. WATER-RESERVOIR ATTACHMENT FOR STOVES AND RANGES. GEORGE G. GAREY, Indianapolis, Ind. Filed June 25, 1913. Serial No. 775,822. (Cl. 126—31.)



1. The combination with a stove having a corrugated surface, of a reservoir having corrugations extended along straight lines upon one face and parallel with the corrugations of the stove, a housing in which the reservoir is mounted, a depending projection upon the housing, and means adjustably supported by the housing and detachably engaging the stove for coöperating with said projection to hold the reservoir either clamped against the corrugated portion of the stove or spaced from said portion.

2. The combination with a stove having a corrugated wall, of a housing detachably and tiltably connected at its upper end to the stove, a reservoir seated in the housing and having an exposed wall formed with corrugations straight from end to end, and coöperating means upon the bottom of the housing and upon the stove for binding the corrugated surface of the reservoir upon the corrugated portion of the stove and for holding the reservoir tilted away from said corrugated portion of the stove.

3. The combination with a housing a stove having a corrugated surface, and means for connecting the housing to the stove, of a reservoir within the housing and having an exposed corrugated surface, the corrugations being extended along straight lines and parallel with the corrugations on the stove, a slotted arm depending from the housing, a bracket upon the stove, a rod detachably engaging the arm and bracket and mounted for rotation, and coöperating means upon the rod and housing for binding the corrugated surface of the reservoir against the corrugated portion of the stove and for holding said reservoir out of contact with the corrugated portion of the stove.

1,115,064. TRIPLICATE ORDER OR SALES BOOK. ORLANDO S. GAUCH and SIDNEY D. INACHO, Shelby, Ohio, assignors to The Shelby Printing Company, Shelby, Ohio, a Corporation of Ohio. Filed Jan. 31, 1913. Serial No. 745,344. (Cl. 11—23.)

1. In a manifold book, a cover, a tissue book, clamping means to secure the tissue book to the cover, said clamping means having a projecting portion, a pad of original and duplicate leaves, and means to movably connect the pad to the cover so that the inner end of the pad may be moved under and from under said projecting portion of the clamp.

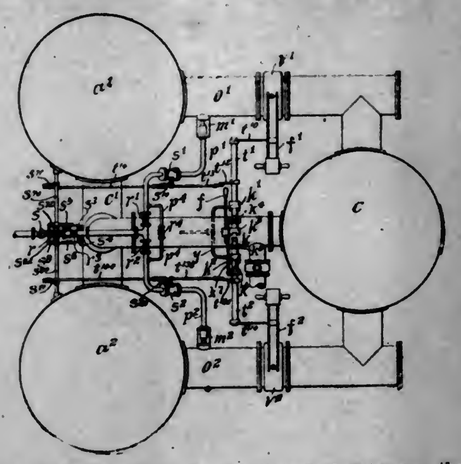
2. In combination with a two-part cover, the parts of which are hingedly connected, a tissue book, means to connect the tissue book to the inner end of one of said parts of the cover, a pad of original and duplicate leaves, means to connect the pad to the opposite end of said part of the cover, and means in connection with said connecting means of the tissue book to engage the inner end of the duplicating pad to hold the latter in normal position.

3. In combination with a two-part cover the parts of which are hingedly connected, a tissue book, means to connect the tissue book to the inner end of one of said parts of the cover, a pad or original and duplicate leaves, knuckles on the upper face and at the outer end of said part of the cover, bearings on the under face of the duplicating pad, and a bail having ends secured to the knuckles of the said cover part and the knuckles of the said duplicating pad, said knuckles of the duplicating pad having parts which extend beyond the sides of the duplicating pad and formed to provide finger grips.

1,115,065. APPARATUS FOR THE MANUFACTURE OF WATER-GAS. ARTHUR G. GLASGOW, Richmond, Va., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 11, 1911. Serial No. 659,751. (Cl. 48—83.)

1. In apparatus for the manufacture of water gas, the combination of two generators each connected at one end to the other, and operating provisions including regulable means for withdrawing gas from, and supplying steam to, each end of each generator whereby, while the flow through the generators may be in parallel in the blasting operation, in the gas making operation, the flow through the generators may be in series for the economical utilization of fuel in normal operation, or may be in parallel when a greater generation of gas is required.

2. In apparatus for the manufacture of water gas, the combination of two generators each connected at one end to the other, and operating provisions including regulable means for withdrawing gas from, and supplying steam to, each end of each generator whereby, while the flow through the generators may be parallel in the blasting operation, in the gas making operation the flow through each generator may be in either direction and may either be in series through the two generators for the economical utilization of fuel in normal operation, or be in parallel when a greater generation of gas in required.



3. In apparatus for the manufacture of water gas, the combination of two generators each connected at one end to the other and operating provisions including regulable means for withdrawing gas from, and supplying steam to, each end of each generator whereby, while the flow through the generators may be in parallel in the blasting operation, in the gas making operation, the flow through the generators may be in series and may be supplemented by steam supplied to the generator through which the gas flows last for the economical utilization of fuel in normal operation, or may be in parallel when a greater generation of gas is required.

4. Apparatus for the manufacture of water gas comprising in combination two generators each connected at one end to the other and having an individual valve gas outlet from, and an individual valved steam supply connection to its opposite end, said generators also having a valved gas outlet from, and a valved steam supply connection to their connected ends.

5. Apparatus for the manufacture of water gas comprising in combination two generators each connected at one end to the other and having an individual gas outlet from and an individual valved steam supply connection to its opposite end, said generators also having a gas outlet from, and a valved steam supply connection to their connected ends, valves controlling said gas outlets, provisions, adapted to be brought into and out of operation at will, for connecting said valves so that the gas outlet at the connected ends of the generators will close and open as the other gas outlets open and close.

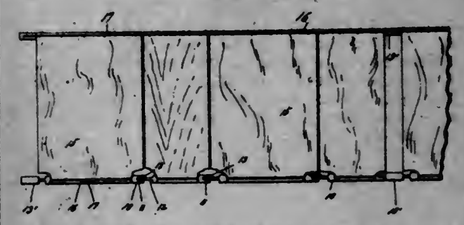
[Claims 6 to 25 not printed in the Gazette.]

1,115,066. BOX-BLANK AND CLEAT THEREFOR. JASON H. GREENSTREET, Indianapolis, Ind. Filed Apr. 17, 1911. Serial No. 621,630. (Cl. 217—12.)

1. As an article of manufacture, a cleat for box blanks having its ends formed to co-act with other cleats when such blank is in folded condition and carrying at one end a detachable integral spacing portion normally preventing folding up of the blank.

2. As an article of manufacture, a cleat for box blanks having its ends formed to co-act with other cleats when such blank is in folded condition and carrying at one end a detachable spacing portion normally preventing folding up of the blank.

3. As an article of manufacture, a box blank comprising sheets and cleats with the sheets connected to the cleats and two or more such cleats arranged end to end to form sections and the sections connected by flexible members, the said cleats having adjacent ends abutting and formed for co-action when the sections are folded into box form and said cleats also carrying detachable integral spacing members normally preventing folding up of the blank.

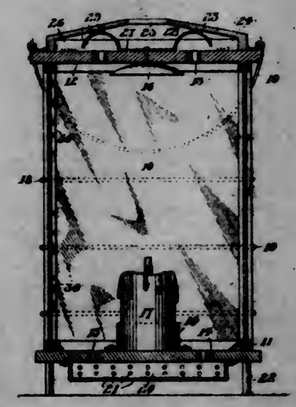


4. As an article of manufacture, a box blank comprising sheets and cleats with the sheets connected to the cleats and two or more such cleats arranged end to end to form sections and the sections connected by flexible members, the said cleats having adjacent ends abutting and formed for co-action when the sections are folded into box form and said cleats also carrying detachable spacing members normally preventing folding up of the blank.

5. As an article of manufacture, a cleat for box blanks having its ends formed for ultimate lateral overlapping engagement with similar cleats, and carrying at one end an integral spacing portion required to be removed before overlapping of adjacent cleats in a folded box blank can be accomplished.

[Claims 6 to 9 not printed in the Gazette.]

1,115,067. LANTERN. JOHN GWCZDZIEWICZ and MAJK BIZON, Bretz, W. Va. Filed July 24, 1914. Serial No. 852,891. (Cl. 240—13.)

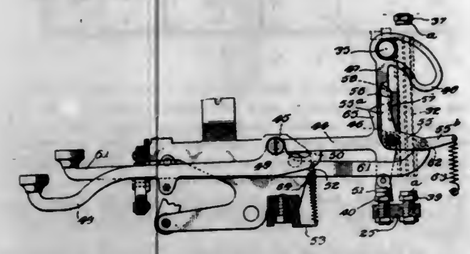


1. A device of the class described comprising a combination with a lantern having a candle mounted therein, and with a perforated top and bottom, of a smoke bell centrally positioned on the under surface of said top, a hinged hollow cover upon said top and having a central outlet opening, a baffle plate within said cover, having perforated curved flanges extending over the perforations of said top, and having their side edges spaced from said top, the said plate being attached to the top, at a point between said perforations and beneath the cover opening.

2. A device of the class described comprising a lantern top and bottom having perforations therethrough, a box-shaped casing having perforated bottom and walls, and secured beneath the lantern bottom and the perforations

thereof, a dome-shaped cover hinged to the lantern top, and forming a chamber therein, and having a central outlet for the products of combustion, a baffle plate within said chamber secured to the lantern top beneath said cover opening, and having side curved perforated flanges terminating in spaced relations with respect to said top, and positioned above the perforations of said top.

1,115,068. TYPE-WRITER. DE WITT C. HARRIS, Fond du Lac, Wis., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Original application filed Apr. 15, 1912, Serial No. 690,756. Divided and this application filed Mar. 20, 1913. Serial No. 755,582. (Cl. 197—72.)



1. In a typewriting machine, the combination with a platen and printing instrumentalities, of case shift mechanism for effecting a relative shifting movement between said platen and said printing instrumentalities to any one of three positions, said case shift mechanism including a movable device operating to shift the movable element to one position, and means connecting said device to said movable element, said means being movable with the movable element to the mentioned shift position and being operable with relation to said movable element for shifting the latter to another position.

2. In a typewriting machine, the combination with platen and printing instrumentalities, of case shift mechanism for effecting a relative shifting movement between said platen and said printing instrumentalities to any one of three positions, said case shift mechanism including two shift keys, and means operatively connecting one of said keys to the movable element for shifting the latter to one position, said means including a device arranged to shift with the movable element to the mentioned shift position and being operable by the other key with relation to the movable element for shifting said movable element to another position.

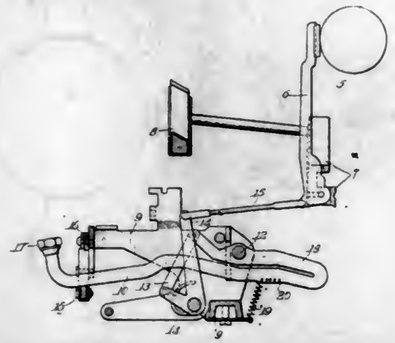
3. In a typewriting machine, the combination of printing instrumentalities and a platen, one of which is shiftable relatively to the other to any one of three positions, means for shifting said shiftable element including a pivoted arm, and a cam member forming a connection between said arm and said shiftable element, said cam member being bodily shiftable with said arm in one shifting movement and being movable with relation to said arm in another shifting movement.

4. In a typewriting machine, the combination of printing instrumentalities and a platen, one of which elements is shiftable relatively to the other to any one of three positions, of means for shifting said shiftable element including a pivoted arm, and a connection between said shiftable element and said arm at a point spaced from the pivot of the latter, whereby swinging of said arm will bodily reciprocate said connection and shift said shiftable element to one position, said connection including a cam arranged to be operated to shift said shiftable element to another position.

5. In a typewriting machine, the combination with a platen and printing instrumentalities, one of which elements is shiftable with relation to the other to any one of three positions, of a cam member operatively associated with the shiftable element, means for bodily moving said cam member to place said shiftable element in one of its shift positions, and means for rocking said cam member to place said shiftable element in another of its shift positions.

[Claims 6 to 30 not printed in the Gazette.]

1,115,069. TYPE-WRITER. DE WITT C. HARRIS, Fond du Lac, Wis., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Original application filed Apr. 15, 1912, Serial No. 690,756. Divided and this application filed Mar. 20, 1913. Serial No. 755,583. (Cl. 197—106.)



1. In a typewriter, a key lever having two portions yieldable with relation to each other, one of said portions being pivotally mounted, and the other portion extending underneath the pivot point and carrying a key.

2. In a typewriter, a key lever comprising two portions lying side by side and integrally connected at one end, one of said portions being pivotally mounted, and the other portion extending from the point of connection of the two portions toward and past the pivot point and carrying a key on its free end.

3. In a typewriter, a key lever having two portions integrally connected together, one of said portions being fulcrumed, and the other portion lying alongside of and extending in opposite directions from the fulcrum point and being arranged to yield with relation to the first mentioned portion.

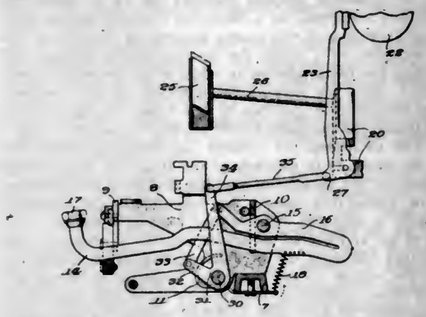
4. In a typewriter, a key lever comprising a body, and an arm lying alongside each other and integrally connected at one end, a shaft upon which said arm is pivoted, said body extending beneath said shaft, and a key carried by the body whereby the body will yield away from said arm and said shaft when said key is struck.

5. In a typewriter, a key lever having a portion bent back upon itself to provide resiliency between the body of the key lever and said portion and a fulcrum engaging the lever at a point forward of the bend therein.

[Claims 6 to 11 not printed in the Gazette.]

1,115,070. TYPE-WRITER. DE WITT C. HARRIS, Fond du Lac, Wis., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Original application filed Apr. 15, 1912, Serial No. 690,756. Divided and this application filed May 2, 1913. Serial No. 764,999. (Cl. 197—27.)

1. In a typewriter, in combination, a series of type bars pivoted to strike upwardly and rearwardly, a series of key levers, a series of vertically disposed bell-crank levers pivoted at their angles below the series of key levers, each of said bell-crank levers comprising an upwardly extending arm and a forwardly extending arm, a series of links connected to and extending rearwardly from the upper ends of said upwardly extending arms, the rear ends of said links being attached to said type bars near their pivot points, and a series of thrust links extending upwardly from the ends of said forwardly extending bell-crank arms and connecting the latter to the series of key levers.



2. In a typewriter, in combination, a framework, a series of type bars pivoted at their rear ends to strike upwardly and rearwardly, a horizontal series of swinging key levers, a series of vertically disposed bell-crank levers pivoted at their angles in the framework beneath and between the ends of said series of key levers and forwardly of the pivots for the type bars, each bell-crank comprising a forwardly extending arm connected to a key lever, and an arm extending upwardly past the key lever, and pull links extending rearwardly from the last mentioned arms to the type bars.

3. In a type writer, in combination, a series of pivoted type-bars mounted to strike upwardly and rearwardly, a series of bell-crank levers, the arms of which increase in length from the center of the series toward the sides thereof, links connecting the upwardly extending arms of said bell-cranks to the type-bars, a series of key-levers each comprising two relatively yieldable sections disposed edgewise one above the other, and links extending substantially at right angles to and connecting the laterally extending arms of the bell-cranks to one of said key-lever sections, the angles between the arms of the bell-cranks and the angle of the mentioned key-lever sections being varied throughout the series to maintain the right angular relation of the last mentioned links to the bell-crank arms and the mentioned key-lever sections.

4. In a typewriter, the combination with a series of type bars pivoted to strike upwardly and rearwardly, and a horizontal series of pivoted key levers, of a series of vertically disposed bell-crank levers pivoted at their angles beneath the series of key levers, each bell-crank comprising an upwardly extending arm and a laterally extending arm, a series of links connecting the first mentioned arms to said type bars and a series of approximately vertical thrust links connecting the laterally extending arms to said key levers, each set composed of a key lever, a bell-crank lever, and a thrust link, being so arranged that a line connecting the bell-crank pivot with the point of connection with its thrust link is substantially parallel to a line connecting the key lever pivot with the point of connection of the key lever and the thrust link.

5. A key-lever action for typewriters comprising a pivoted type-bar, a key-lever consisting of two relatively yieldable sections disposed edgewise one above the other, a key mounted upon one of said lever sections, a bell-crank pivoted at its angle beneath the key-lever and having a laterally extending arm connected to the other key-lever section, said bell-crank also having an upwardly extending arm extending past the key-lever, and a link extending rearwardly from the latter arm and connected to said type-bar.

[Claims 6 to 9 not printed in the Gazette.]

1,115,071. VALVE-DRESSING TOOL. NORMAN B. HEALY, Fredonia, N. Y. Filed July 21, 1913. Serial No. 780,237. (Cl. 82—1.)

1. The combination with a cutter head for dressing valves, of a holder for the valve stem extending rearwardly from the cutter head and comprising a yielding bushing which forms a bearing for the valve stem, and means for adjusting said bushing to the valve stem.

2. The combination with a cutter head for dressing valves, of a holder for the valve stem extending rearwardly from the cutter head and comprising a yielding bushing which forms a bearing for the valve stem, and a sleeve which is adjustable toward and from the cutter head and by means of which said bushing is contracted.

3. In a valve dressing tool, the combination with a cutter head having a rearwardly projecting central boss, of a sleeve which is lengthwise adjustable on said boss, and a yielding bushing forming a bearing for the valve stem and arranged with its front portion within said boss and with its rear portion within said sleeve.

4. In a valve dressing tool, the combination with a cutter head, of a holder for the valve stem comprising a bushing having yielding end portions provided with beveled faces, and beveled faces in the holder and cutter head, one of which faces is lengthwise adjustable with reference to the other.

5. The combination with a cutter head for dressing valves, of a holder for the valve stem comprising a sleeve having slitted end portions, and means cooperating with said cutter head for contracting said end portions.

[Claims 6 to 8 not printed in the Gazette.]

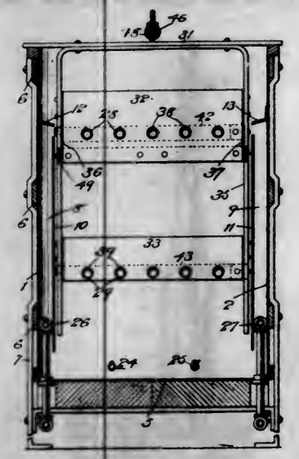
1,115,072. DYEING OR WASHING MACHINE. HENRY HENNIG, Paterson, N. J. Filed Aug. 10, 1911. Serial No. 643,306. (Cl. 8—19.)

1. In a machine for washing and dyeing, a tank for the liquid, two oppositely arranged vertical flues spaced from the top and bottom and secured to said tank along its side walls, an independent air pipe located near the bottom of each flue to direct jets of air upwardly through the liquid in the flues, and inclined deflecting plates secured to the side walls above the tops of the flues for directing the liquid and air laterally and downwardly into the center of the tank.

2. In a machine for washing and dyeing, a tank for the liquid, two oppositely arranged vertical flues spaced from the top and bottom and secured to said tank along its side walls, independent air pipes located near the bottom of each flue and in the body of the tank for directing independent jets of air through the liquid in the flues and through the liquid in the body portion of the tank, and inclined deflecting plates secured to the side walls above the tops of the flues for directing the air and liquid laterally and downwardly into the center of the tank.

3. In a machine for washing and dyeing, a tank for the liquid and a yarn frame comprising yarn sticks, a

pair of cross plates having holes for receiving the ends of the sticks and keepers carried by the cross plates for



preventing unintentional removal of the sticks, one of said keepers being movable to release the sticks.

1,115,073. AEROPLANE. ALEXANDER ALBERT HOLLE, Oist, Netherlands. Filed Feb. 10, 1913. Serial No. 747,370. (Cl. 244—12.)

1. An articulated structure for the support of the wing planes of aeroplanes comprising three members, the first or inner one of which consists of a single member which is attached to the frame or body of the machine by a universal joint, the second of which is coupled to the outer end of the first or inner member by a vertically arranged joint, and the third or outer member of which is coupled to the outer end of the second member by a link joint; an intermediate piece in said link joint operating between the adjacent ends of the second and third members; an auxiliary member located in front of the second member; and means for coupling said auxiliary member to the first and third members so that in any position said members can assume in relation to one another any torsional stresses set up in the third or outer member are transmitted to the first or inner member in the form of compressional stresses, as set forth.

2. An articulated structure for the support of the wing planes of aeroplanes comprising a plurality of members, the first or inner of which is coupled or attached to the frame or body of the machine by a universal joint, the second of which is pivoted to the ends of the first or inner member by a joint the axis of which lies in a vertical plane in relation to the supporting surfaces of the plane, the third of which is coupled to the outer end of the second member by a link joint having an intermediate piece by means of which the inner end of the third member moves around the outer end of the second member at a predetermined distance from same; an auxiliary second member arranged in approximately parallel relation to and in front of the first member, said auxiliary second member being pivoted to the intermediate piece at one end and connected both to the outer end of the first or inner member and to the inner end of the second member by link work which while allowing relative movement between the first and second members about the joint by which they are coupled together will cause the auxiliary member at all times to take an abutment against the first member, as set forth.

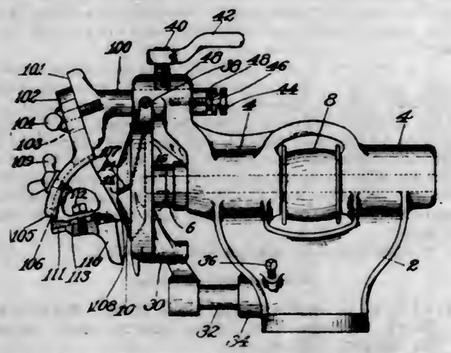
3. In an articulated structure for the support of the wing planes of aeroplanes, the combination with a plurality of members pivoted together so as to form the articulated structure, of a cable for controlling the folding and extension of the second member in relation to the first member, of a cable for automatically folding and extending the third member in relation to the second member, of a cable for varying the positions of the members of the structure in relation to the frame of the body of the machine for the purpose of varying the angle of direction, and of means for rocking the structure about the joint by which it is coupled to the frame or body of the machine for the purpose of varying the angle of incidence.

4. In supporting planes for aeroplanes, the combination with a plurality of members pivoted together so as to form an articulated structure capable of carrying the supporting elements, of a cable running from a position above the center of the universal coupling by which the first or inner member is attached to the frame or body of the machine to and over a drum carried by the inner end of the second member and from thence to and around a drum on the outer end of the second member where it crosses over and passes around a drum carried by the inner end of the third member and over a guide pin mounted on said third member as near to the center line of said member and to the center of the drum carried by said member as possible, from whence it runs to the end of the third member where it is made fast and from whence it returns to and around the drums carried by the third and second members but in the reverse direction to that which it takes on its outward run, from whence it runs through suitable guys or guides direct to a point below the center of the universal coupling by which the first or inner member is coupled to the frame or body of the machine.

5. In supporting planes for aeroplanes, the combination with a plurality of members pivoted together so as to form an articulated structure for carrying the supporting elements, of a cable running from a position above the center of the universal joint by which the first member is attached to the frame or body of the machine to and around a drum fixed on the inner end of the second member, thence over a drum carried by the intermediate piece between the ends of the second and third members, thence around a pin carried by the inner end of the third member to which it is made fast, thence to the end of said third member, from whence it runs back through the several joints in an opposite manner and direction to a point below the center of the universal coupling.

[Claims 6 to 9 not printed in the Gazette.]

1,115,074. FEATHER-EDGING MACHINE. ARTHUR EARNEST JERRAM, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 27, 1910. Serial No. 599,508. (Cl. 12—88.)



1. A feather edging machine having a cutter and means for actuating said cutter, in combination with work controlling devices comprising an edge gage provided with an operative portion terminating in an apex adjacent the cutter, said gage being adjustable about an axis passing through said apex.

2. A feather edging machine having a cutter and means for actuating said cutter, in combination with work controlling devices comprising an edge gage provided with an operative portion terminating in an apex adjacent the cutter, said gage being adjustable about an axis passing through said apex, and means for adjusting said apex toward and from the cutter.

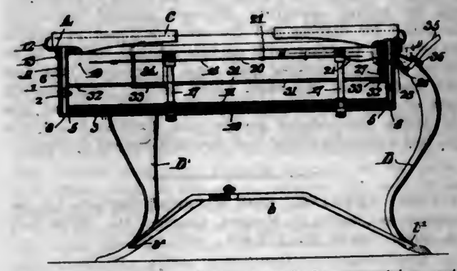
3. A feather edging machine having a cutter and means for actuating said cutter, in combination with work controlling devices comprising an edge gage provided with an operative portion terminating in an apex adjacent the cutter, said gage being adjustable about an axis passing through said apex, and means for adjusting said apex in a direction parallel to the edges of the blades of the cutter as they come into operative position.

4. A feather edging machine having a cutter and means for actuating said cutter, in combination with work controlling devices comprising an edge gage provided with an operative portion terminating in an apex adjacent the cutter, said gage being adjustable about an axis passing through said apex, means for adjusting said apex toward and from the cutter and means for adjusting said apex in a direction parallel to the adjacent surface of the cutter.

5. A feather edging machine having a cutter and means for actuating said cutter in combination with work controlling devices comprising a face guide, an edge gage by which said guide is carried, and means for adjusting the face guide in different angular positions with respect to the cutter while maintaining in all positions of said guide the operative relation of said gage to said cutter.

[Claims 6 to 10 not printed in the Gazette.]

1,115,075. ELECTRIC COOKER. MARTIN L. KEAGY, Canton, Ohio. Filed Apr. 11, 1913. Serial No. 760,380. (Cl. 219—19.)



1. In an electric cook stove, a body comprising outer and inner side walls spaced apart and a double walled bottom, said body being open at the top, a support resting upon the upper edge of said side walls, a sheet of nonconducting material supported within said body intermediate the top and bottom thereof, a conductor secured to said sheet and adapted to be heated to incandescence, and means for connecting said conductor to a source of electric supply, substantially as described.

2. In an electric cook stove, a body comprising a bottom and cylindrical side walls and open at the top, a sheet of nonconducting material supported within said body intermediate the top and bottom and spaced from said side walls, said sheet being provided with a single central aperture and a conductor secured to said sheet, the major portion resting on the upper face thereof and a minor portion on the under face, substantially as described.

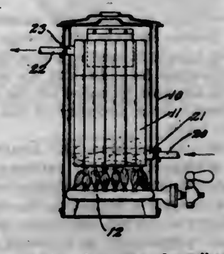
3. In an electric cook stove, a body comprising a bottom and side walls, a sheet of nonconducting material supported within said body intermediate the top and bottom thereof, there being an air passage between the outer edge of said sheet and said side walls and said sheet being provided with a central aperture, and a conductor arranged upon said sheet, substantially as described.

4. In an electric cook stove, a body comprising double spaced side walls and a double walled bottom, posts fixed to said bottom and extending upwardly therefrom, a disk of nonconducting material supported by said posts, a conductor arranged upon said disk and a second disk of larger diameter than the first said disk and supported in said body intermediate the first said disk and said bottom, substantially as described.

5. In a device of the class described, a body comprising inner and outer walls, spaced apart, a spacing member for said walls formed of corrugated metal faced with asbestos and a conductor supported within said body adapted to be heated to incandescence, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,115,076. WATER-CHAMBER FOR WATER-HEATING APPARATUS. GEORGE W. LAKE, Rumford, R. I., assignor to Metacomet Corporation, Rumford, R. I., a Corporation of Rhode Island. Filed Feb. 4, 1914. Serial No. 816,852. (Cl. 122—260.)



1. In a device of the character described, the combination with a water chamber formed of a single piece of sheet metal having one of its walls corrugated longitudinally, the lower portion of the corrugated wall being folded over and back substantially upon itself forming a series of water retaining tubes, means for uniting the meeting edges of the folded portions said double walls being bent into a series of transverse folds, an inlet pipe connected to one end at the bottom and an outlet pipe connected to the opposite end at the top and a burner beneath the lower edge of the chamber.

2. In a water heater, a water chamber comprising a body formed of sheet metal having one of its walls corrugated, both the upper and lower portions of said wall being folded over and back substantially upon itself, means for uniting the meeting edges of said folded portions, said double walls being bent into a series of transverse folds, and said plate being provided with inlet and outlet openings.

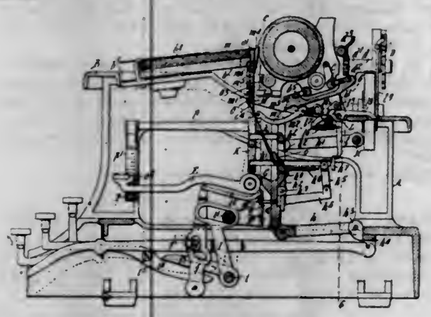
3. In a water heater, a water chamber comprising a body formed of sheet metal having one of its walls corrugated, both the upper and lower portions of said wall being folded over and back substantially upon itself, the edge of the upper portion being bent upward and the edge of the lower fold being bent downward forming interlocking lips united by solder, said double walls being bent into a series of transverse folds and said plate being provided with inlet and outlet openings.

4. In a water heater, a water chamber comprising a body formed of a single piece of sheet metal having one of its walls corrugated, the lower portion of said wall being folded over and back substantially upon itself, means for uniting the meeting edges of the folded portions, means for tying together the opposite adjacent walls of said body at intervals, said double walls being bent into a series of transverse folds, and said plate being provided with inlet and outlet openings.

1,115,077. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y. Filed Feb. 15, 1911. Serial No. 608,657. (Cl. 197—74.)

1. In a typewriting machine, the combination with a main frame, a platen carriage, a carriage escapement, a

series of pivoted type-bars, and a supporting segment for the type-bars, of means for actuating the escapement comprising an actuator supported by the segment and actuated by a plurality of the type-bars, substantially as set forth.



2. In a typewriting machine, the combination with a main frame, a platen carriage, a carriage escapement, a series of pivoted type-bars, and a supporting segment for the type-bars, of means for actuating the escapement comprising a curved actuator mounted on the segment in position to be actuated by a plurality of the type-bars, substantially as set forth.

3. In a typewriting machine, the combination with a main frame, a platen carriage, a carriage escapement, a series of pivoted type-bars, and a supporting segment for the type-bars, of means for actuating the escapement comprising a plurality of curved actuators mounted on the segment and each adapted to be actuated by a plurality of the type-bars, substantially as set forth.

4. In a typewriting machine, the combination with a main frame, a platen carriage, a carriage escapement, a series of pivoted type-bars, and a supporting segment for the type-bars, of means for actuating the escapement comprising a curved actuator arranged to be actuated by a plurality of the type-bars, and a pair of swinging supports for the actuator arranged one in rear of the other and both in rear of the actuator, substantially as set forth.

5. In a typewriting machine, the combination with a main frame, a platen carriage, a carriage escapement, a series of pivoted type-bars, and a supporting segment for the type-bars, of means for actuating the escapement comprising a curved actuator arranged to be actuated by a plurality of the type-bars, and a pair of swinging supports for the actuator pivoted one in rear of the other on the segment, substantially as set forth.

[Claims 6 to 42 not printed in the Gazette.]

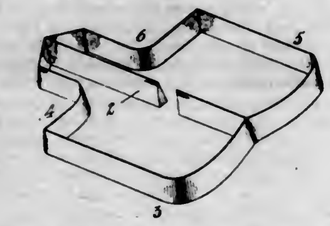
1,115,078. FLYING DART. HARRY E. LE ROY, Columbia, Pa. Filed Apr. 16, 1914. Serial No. 832,317. (Cl. 244—12.)

1. A flying dart, comprising a longitudinal member slightly tapered in cross section from its forward end toward the rear end, a tapered tail member formed upon the reduced end of the longitudinal member, a guiding plane attached to the upper surface adjacent the butt or enlarged end of the longitudinal member, and a wing member attached to the under side intermediate of the ends of the longitudinal member.

2. A flying dart, comprising a longitudinal member, rectangular in cross section and having a blunt nose, said member being tapered toward the tail end with a blade member formed integral with the tail member and projecting above and below the longitudinal member, a semi-circular guiding plane attached to the upper surface of the longitudinal member adjacent the nose end thereof, and a wing member attached to the under side intermediate of the ends of the longitudinal member.

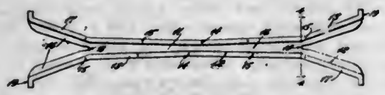
3. A flying dart, comprising a longitudinal member, rectangular in cross section and having a blunt nose, said member being tapered toward the tail end with a blade member formed integral with the tail member and projecting above and below the longitudinal member, a semi-circular guiding plane attached to the upper surface of the longitudinal member adjacent the nose end thereof, a wing member, and a metal strip attached to the under side of the longitudinal member and intermediate of the ends of the wing member for securing the wing member to the longitudinal member.

1,115,079. DIES FOR CLICKING-PRESSES. JOHN M. LYNCH, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 24, 1908. Serial No. 469,140. (Cl. 164—29.)



A loose die adapted to be freely positioned in a clicking press for cutting a pair of reversely-shaped shoe upper blanks at a single operation, comprising a continuous frame having an outwardly extending reduced portion at one side bounded, in part, by walls of concave curvature, said die having oppositely disposed parallel edges one sharpened for cutting and the other flattened to receive the pressure, together with an intermediate cutting blade having a single cutting edge and a pressure receiving edge disposed in the same plane as the corresponding edges of the outer frame, said blade terminating at one end within the reduced portion and dividing the frame into two non-symmetrical and reversely-shaped portions.

1,115,080. CARLINE. FRED MATHEWS, Chicago, Ill., assignor to Clinton C. Murphy, Chicago, Ill. Filed July 5, 1913. Serial No. 777,408. (Cl. 108—5.)



1. A carline comprising a rolled-metal channel-shape intermediate portion having its bottom split to form bifurcated ends, said ends having transversely arranged extremities formed by twisting the split bottom of the channel at its ends into the plane of its side walls and bending sidewise the ends of the side walls and twisted bottom portions of the channel.

2. A carline consisting of a single piece of rolled metal of channel form, upwardly arched at its middle, the bottom of the channel being split in from the ends and spread apart to constitute end bifurcations, the side walls of said bifurcations being bent laterally at their extremities into vertical planes transverse to the ends of the carline, and the bottom flanges thereof being twisted down and bent laterally at their extremities into the planes of the extremities of the side walls, the extremities of said bifurcations being adapted to be secured to the side plates of a car.

3. A carline having a web split at the ends and the split portions spread apart, and a bead lining the crotch between said split portions, formed by flanging the portions of the web adjacent to the inner ends of the split.

4. A carline having a web split at the ends and the split portions spread apart, said splits terminating in holes in the web at their inner ends, said holes having flanged edges.

5. A carline having a web increasing in width from the middle of the carline toward its ends, the ends of said web being split lengthwise, and flanged holes in said web at the inner ends of the splits, said holes forming crotches when said split ends are separated, whereby said carline is strengthened laterally and prevented from splitting lengthwise.

1,115,081. BOX AND COVER THEREFOR. TILLO C. METZGER and OSCAR G. METZGER, Rochester, N. Y. Filed Mar. 17, 1913. Serial No. 755,002. (Cl. 220—9.)

1. A box consisting of a top portion and a body portion, the body portion having protuberances on the vertical side thereof a substantial distance below the top edge, said protuberances being arranged at points approximately diametrically opposite to each other, the space between said protuberances on one side of the diametrical line connecting them being free from protuberances.

2. A box consisting of a top portion and a body portion, the body portion having protuberances on the vertical side thereof a substantial distance below the top edge, said protuberances being arranged at points approximately diametrically opposite to each other, the space between said protuberances on one side of the diametrical line connecting them being free from protuberances, the top portion being adapted to maintain a horizontal position on said prootuberances or to rock to an inclined or tilted position thereon.

3. A box containing a top portion and a body portion, the body portion having a semicircular flange on the vertical side thereof a substantial distance below the top edge, the space between the ends of said flange being a smooth half cylinder, the lower edge of the top portion being seated on said flange normally parallel to the bottom portion and being adapted to rock on the ends of said flange and in the space between the ends of said flange to a position inclined to said bottom.

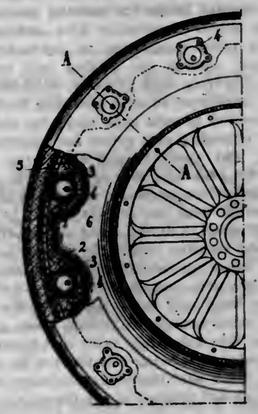
4. A box consisting of a top portion and a body portion, the body portion having protuberances on the vertical side thereof at points approximately diametrically opposite to each other, said body portion having, also, a short isolated projection in the space between said prtuberances on one side of the diametrical line connecting the protuberances.

5. A box consisting of a top portion and a body portion, the body portion having protuberances on the vertical side thereof at points approximately diametrically opposite to each other, the space between said protuberances on one side of the diametrical line connecting them being interrupted by a short isolated projection upon which a portion of the cover seats and over which the cover snaps in opening.

[Claims 6 and 7 not printed in the Gazette.]

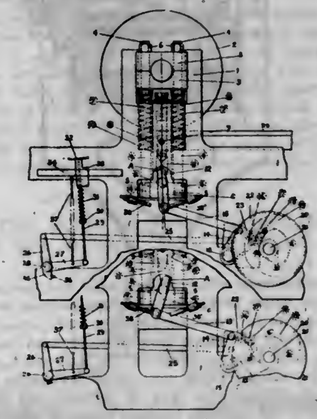
1,115,082. CUSHIONED PNEUMATIC TIRE. JULES ALEXANDER MEUNIER, Paris, France. Filed Jan. 18, 1912. Serial No. 672,012. (Cl. 152—10.)

A pneumatic tire for vehicle wheels comprising in combination an elastic and separate tread band of suitable material, internal armoring therefor comprising a plurality of flexible chains, metal sleeves to which said chains are connected, said chains being covered by windings of canvas or the like and embedded in the rubber so as to constitute a homogeneous mass, metal flanges on the wheel, an inner air tube arranged between said metal



flanges and between the said tread band and the wheel rim, and means extending through said flanges and engaging the said sleeves in the tread band for preventing its rotation.

1,115,083. TRIPPING MECHANISM FOR CYLINDER PRINTING-MACHINES. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed July 26, 1911. Serial No. 640,681. (Cl. 101—111.)



1. In a printing-press, in combination, an impression cylinder, means to raise and lower said cylinder, said lowering means comprising a member having a grooved cam and a member adapted to coöperate with the groove of said cam, and means to withdraw said member from said groove and to destroy their coöperative relation, said groove being so shaped that said member is free from pressure during such withdrawal.

2. A printing press comprising in combination, an impression cylinder, means for raising and lowering said cylinder including a cam, a rock shaft, a stud movably mounted in said rock shaft and carrying a roller cooperating with said cam, a cam for moving said stud to withdraw the roller from contact with said cam, and means for actuating said withdrawing cam.

3. A printing press comprising in combination, an impression cylinder, springs for raising said cylinder, and mechanism for lowering said cylinder including co-acting devices, a link connected to said co-acting devices, a stud

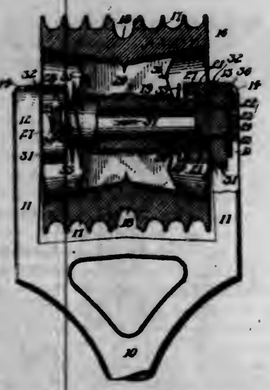
and roller connected to said link, a cam engaging said roller for operating said co-acting devices, and means for withdrawing said roller from contact with said cam, said cam having a circular flange for limiting the movement of the roller when out of engagement with said cam.

4. A printing press comprising in combination, an impression cylinder, springs for raising said cylinder, and mechanism for lowering said cylinder, including co-acting devices, a link connected to said co-acting devices, a stud and roller connected to said link, stops for said co-acting devices, a cam engaging said roller for operating said co-acting devices, and means for withdrawing said roller from contact with said cam, said cam being so shaped that said roller is free from pressure when said co-acting devices are in contact with one of said stops.

5. A printing press comprising in combination, an impression cylinder, yielding means for raising said cylinder, mechanism for lowering said cylinder including co-acting devices, a cam, a roller connected to said co-acting devices and coöperating with said cam, and means for withdrawing said roller from contact with said cam, a manually-operated device for actuating said withdrawing means, said withdrawing means being constructed so as to be ineffective except when said impression cylinder is raised.

[Claims 6 to 21 not printed in the Gazette.]

1,115,084. TROLLEY-WHEEL MOUNT. BRONISLAW MILEWSKI, Kent, Ohio. Filed May 14, 1914. Serial No. 838,508. (Cl. 191—75.)

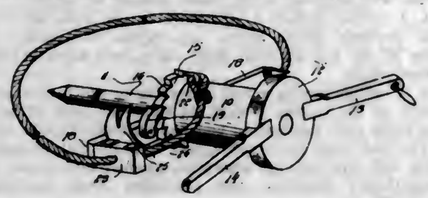


The combination with a trolley-head and the hollow hub of a trolley wheel, of tubular members secured one on each end of the hub to revolve therewith, and having its outer face plane and its inner face formed with an annular groove, a hub bearing disks on the hub-bearing between said tubular members and the ends of the trolley-head, coil springs surrounding the ends of the hub and adapted to extend into the grooves of said tubular members, said springs being secured at one end to the trolley wheel and at the opposite end to said tubular members.

1,115,085. SHOCK-COMPRESSOR. ROMAN L. MILLER, Mechanicsville, Iowa. Filed May 26, 1914. Serial No. 841,086. (Cl. 100—31.)

1. A shock compressor comprising a shock penetrating member, a rotatable drum mounted thereon, a compressing cable having one end secured to the drum and adapted to be wound thereon, a member mounted on the shock penetrating member and provided with radial arms, a guide carried by one of the arms and receiving the cable therethrough, a ratchet flange carried by the drum, a pawl carried by the arm and engaging the ratchet, means carried by the drum for rotation thereof, a pair of spaced fingers carried by the other arm for guidance of the outer end of the compressor cable, and drum carried means for holding said last named end of the cable.

2. A shock compressor comprising a shock penetrating member, a compressor rope carrying drum mounted on the penetrating member, a compressor rope secured at one end

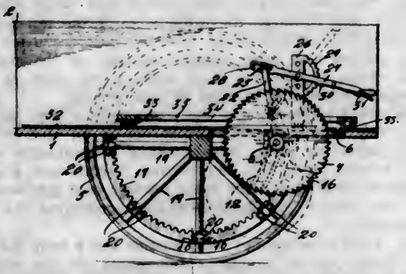


to and wound on the drum, means for rotating the drum, and a pivoted clamp carried by the drum for holding the other end of the said rope whereby when the drum is rotated both ends of the rope will be drawn equally.

1,115,086. LOOPER FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1911. Serial No. 663,643. (Cl. 112—5.)

A looper carrier having a plurality of loopers mounted thereon, the loopers in rear of the forward looper being set successively with their points in advance of the looper in front thereof, each of said rearward loopers having a thread groove formed in part on the rear face thereof at the section of the looper passed by the next adjacent needle on the needle avoiding movement of the looper when said needle is entering the thread triangle of its coöperating looper.

1,115,087. ICE-SAW. WALTER F. MOORE, Fayetteville, Tenn. Filed May 29, 1914. Serial No. 841,917. (Cl. 125—18.)



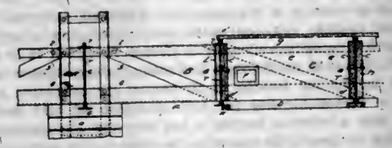
1. In a device of the class described the combination with a supporting body, supporting wheels positioned upon said body, a saw carried by said body and extending upwardly through its lower portion, a shaft keyed to said saw, said shaft provided upon its outer end with a pinion, an internal gear wheel fixedly secured to one of said supporting wheels, said internal gear wheel adapted to rotate said pinion whereby the shaft will rotate said saw for cutting the material within the body, and means for shifting said saw to an inoperative position when desired.

2. In a device of the class described the combination with a supporting body, said body provided with a longitudinal slot in its lower portion, a saw carried by said body and extending through said slot, a shaft keyed to said saw, said shaft provided with a pinion upon its outer end, an internal gear wheel fixedly secured upon one of said supporting wheels, said internal gear wheel adapted to rotate said pinion whereby rotary motion will be imparted to said saw for cutting material within the body, a sleeve positioned upon the outer portion of said shaft whereupon said shaft is journaled, and means for shifting said sleeve to move said saw to an inoperative position.

3. In a device of the class described the combination with a supporting body, a plurality of supporting wheels positioned upon said body, said body provided with a slot in its lower portion, a saw passing upwardly through said slot, a shaft keyed to said saw, said shaft provided with a pinion upon its outer end, an internal gear wheel fixedly secured to one of said supporting wheels, said internal gear wheel adapted to engage said pinion whereby rotary motion will be imparted to said saw as said internal gear wheel rotates, a sleeve positioned upon said shaft and provided with collars upon its ends, a plurality of curved yokes fixedly secured to the lower portion of said body, said sleeve and said shaft passing through said yokes, said collars engaging the outer faces of said yokes for holding said sleeve in a central position relative to said yokes, and means for shifting said sleeve and shaft to the lower portion or upper portion of said yokes whereby the saw may be moved to an operable or inoperable position when desired.

4. In a device of the class described the combination with a supporting body, supporting wheels positioned upon said body, a circular saw passing through the lower portion of said body, a shaft keyed to said saw, said shaft provided with a pinion upon its outer end, an internal gear wheel fixedly secured to one of said supporting wheels, said internal gear wheel adapted to impart rotary movement to said pinion whereby said saw will be rotated, a sleeve positioned upon said shaft, a plurality of curved yokes fixed upon the lower portion of said body, said sleeve and shaft passing through said curved yokes, means carried upon the ends of said sleeve and engaging the outer faces of said yokes for holding said sleeve and shaft against longitudinal movement, an arm connected to said sleeve, a lever connected to said arm, said lever being pivotally secured to the inner portion of said body, means for holding said lever in a set position, said lever adapted to allow said sleeve and shaft to be lowered whereby the sleeve and shaft will travel within the curved yokes so as to cause the pinion and gear wheel to become disengaged when the saw is in an inoperative position.

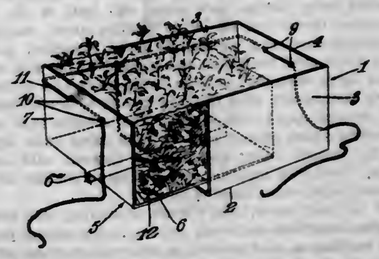
1,115,088. BUILDING CONSTRUCTION. WILLIAM MORTENSEN, Montreal, Quebec, Canada. Filed Nov. 8, 1913. Serial No. 799,909. (Cl. 72—15.)



1. In building construction, columns of structural steel and grout, main girders of structural steel, secured to said columns, and grout and light trusses formed of upper angle bars of structural steel secured to said main girder, steel having the upright sections back to back and spaced and lower sections similarly arranged below, joined by lattice bars and inclosed by longitudinally arranged slabs secured by spacing bolts and forming a chamber and grout in said chamber, floor slabs having reduced ends resting on the horizontal sections of said upper angles, and ceiling slabs having reduced ends resting on the horisontal sections of said lower angles.

2. In building construction, columns of structural steel angles, lightly latticed, and concrete; main girders of structural steel angles, latticed by flat bars or angles, and concrete, and secured to said columns; and light trusses secured to said girder, having upper and lower chords of structural steel angles placed back to back and inner flanges turned upright, joined by lattice bars or angles and inclosed by longitudinally arranged slabs secured by bolts and forming a chamber, and grout in said chamber; floor slabs having reduced ends resting on the horizontal flanges of said upper chord angles, and ceiling slabs having reduced ends resting on the horizontal flanges of the said lower chord angles.

1,115,089. TRANSPLANTING-BOX. FRANK C. MOSIER, Pittston, Pa. Filed June 20, 1914. Serial No. 846,343. (Cl. 47—34.)

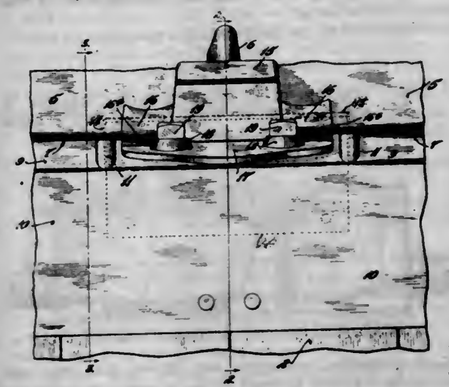


1. A transplanting device including a box having one side open, a removable scoop disposed over the bottom of the box and normally closing the said open side, and a binding element embracing and threaded through certain portions of the box and scoop.

2. A transplanting device including a box having one side open, a removable scoop including a bottom disposed over the bottom of the box and fitting snugly within the sides thereof and an end piece upstanding from one end of the scoop bottom and normally closing the open side of the box, and a binding element embracing the box and scoop, and threaded through the said end piece of the scoop and the opposite side of the box.

3. A transplanting device including a box having one side open, and a removable scoop disposed over the bottom of the box and fitting snugly within the sides, and including an end piece upstanding from one end of the scoop bottom and normally fitting within and closing the said open side of the box, the scoop bottom having a central longitudinal depending flange for spacing it above the bottom of the box and upon which the scoop is tiltable when the end piece thereof is withdrawn from the box.

1,115,090. CAR-ROOF. WALTER P. MURPHY, Chicago, Ill. Filed July 31, 1912. Serial No. 712,423. (Cl. 108—5.)



1. A car roof comprising movably secured metal roofing sheets mounted on the substructure and whose ends terminate short of the eaves, flashing strips mounted on the substructure in the region of the eaves and whose inner marginal portions coöperate with the end portions of the roofing sheets proper to make a weatherproof joint, es-

curing clips having base portions resting on said flashing strips and located entirely within the side lines of the car but spaced from the ends of the roofing sheets and having extensions overhanging and retaining said roofing sheets, and fastening means secured in the roof substructure and clamping the base portions of said securing clips on said flashing strips.

2. A car roof comprising a substructure, a metal roof sheet resting on said substructure and terminating short of the eaves, the end portion of said roof sheet adjacent to the eaves being turned back under the body of the sheet and spaced therefrom, an eaves flashing sheet resting on the substructure and having its outer marginal portion turned down over the eaves and secured to the side of the car, its inner marginal portion being loose and extending upward underneath said roof sheet, and a second flashing sheet secured along one edge on the substructure under the roofing sheet proper and with its other edge lapping over the turned under end portion thereof, said second flashing sheet also lapping over the inner portion of said first-mentioned eaves flashing sheet.

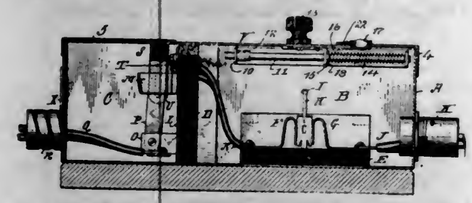
3. A car roof comprising wooden sheathing, said sheathing being rabbeted adjacent to the eaves, metal roofing sheets resting on said sheathing, the end portions of said roofing sheets being turned back under the body and spaced therefrom and overhanging the rabbeted portion of the wooden sheathing, flashing sheets resting on said rabbeted portion of the sheathing, the outer marginal portions of the flashing sheets being turned down over the eaves and secured to the side of the car and the inner marginal portions being flanged upward, and a flashing strip secured flatwise on the roof sheathing adjacent to the rabbeted portion thereof and overhanging the same, and loosely engaging the turned under end portions of the roofing sheets proper whereby the latter are movably secured upon the roof independently of said flashing sheets.

4. An outside metal car roof comprising adjoining roofing sheets proper whose ends terminate short of the eaves, eaves flashing sheets resting on top of the roof substructure and underlying and slidably engaging the end portions of said roofing sheets proper, and joint flashing sheets underlying the adjoining end portions of said eaves flashing sheets and the end portions of said roofing sheets proper.

5. An outside metal car roof comprising adjoining roofing sheets proper whose ends terminate short of the eaves, flashing sheets resting on top of the roof substructure adjacent to the eaves and turned down over the eaves and secured to the side of the car, the inner portions of said flashing sheets underlying and slidably engaging the end portions of said roofing sheets proper, and joint flashing sheets underlying the adjacent end portions of said first mentioned flashing sheets and the end portions of said roofing sheets proper.

[Claims 6 to 11 not printed in the Gazette.]

1,115,091. PROTECTIVE SWITCH-BOX. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 21, 1913. Serial No. 796,423. (Cl. 175—292.)

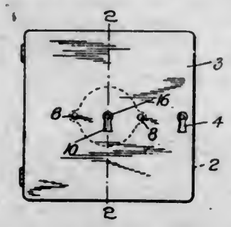


1. A protective connection box divided into two compartments, a switch inclosed in one of said compartments, a sliding cover for opening and closing the other compartment, a retracting spring for said cover, a latch for holding said cover in closed position, and means actuated by said cover for operating said switch.

2. A protective connection box divided into two compartments, two fixed covers separated from one another and disposed at opposite ends of said box, a sliding cover between said fixed covers and the walls of said box, closing the opening between said fixed covers and retractable into one of said compartments, circuit connections extending through said compartments, and a switch interposed in said connections, located in the compartment receiving the retracted cover, connected to said cover and moved by said cover to open circuit upon the retraction of said cover.

3. A protective connection box divided into two compartments, two fixed covers separated from one another and disposed at opposite ends of said box, a sliding cover between said fixed covers and the walls of said box, closing the opening between said fixed covers and retractable into one of said compartments, circuit connections extending through said compartments, a retracting spring for said cover, a latch on said cover engaging in an opening in one of said fixed covers, and a switch interposed in said connections, located in the compartment receiving the retracted cover, connected to said cover and moved by said cover to open circuit upon the retraction of said cover.

1,115,092. ELECTRIC LOCK-SWITCH. WILL C. NEAHR, Denver, Colo., assignor to The Protective Signal Manufacturing Company, a Corporation of Colorado. Filed June 4, 1913. Serial No. 771,738. (Cl. 175—282.)



1. In apparatus of the character described, a circuit controlling switch, key-controlled mechanism for operating the switch to open and close a circuit in which it is connected, the said mechanism including a rotary member, means for locking said member in one of its operative positions, and means for locking the same in another one of its operative positions, and a key adapted to unlock said member by operation of the first-mentioned means and to rotate the same until it is locked by the action of the other means, the last mentioned locking means being capable of releasing the mechanism independent of any action of said key.

2. In apparatus of the character described, a circuit controlling switch, key controlled mechanism for operating the switch to open and close a circuit in which it is connected, the said mechanism including independently operatable means for locking it in one of its operative positions, a removable key for the operation of said mechanism, and a housing having a key-hole for the passage of said key to place it in operative relation to the mechanism, the latter having means for preventing the return movement of the key for its withdrawal through the said key-hole, when locked in its said position.

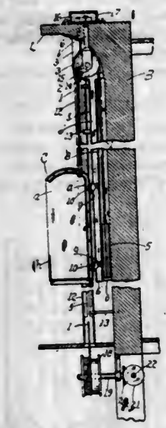
3. In apparatus of the character described, a circuit controlling switch, key controlled mechanism for operating the switch to open and close a circuit in which it is connected, the said mechanism including a rotary member, and independently operatable means for locking the latter in one of its operative positions, a key for the operation of said member, and a housing having a key-hole for the passage of said key to place it in operative relation to the said member, the said member being adapted to prevent the independent return movement of the key for its withdrawal through the said key-hole, when locked in its said position.

4. In apparatus of the character described, a circuit controlling switch, key controlled mechanism for operating the switch to open and close a circuit in which it is connected, the said mechanism including a rotary member and independently operatable means for locking the latter in one of its operative positions, a key for the operation of said member, and a housing having a key-hole for the passage of said key to place it in operative relation to the said member, the said member having two pins projecting at opposite sides of the key to limit an independent rotary motion of the key in either direction.

5. In apparatus of the character described, a circuit controlling switch, key controlled mechanism for operating the switch to open and close a circuit in which it is connected, the said mechanism including means for locking it in one of its operative positions, a key for the operation of said mechanism, a housing having a key-hole for the passage of the key to place it in operative relation to the said mechanism, the latter having means for preventing the return movement of the key for its withdrawal through the said key-hole, when locked in its said position, and the said means being adapted to be independently operated for the unlocking of the said mechanism from without the housing.

[Claims 6 to 13 not printed in the Gazette.]

1,115,093. FIRE-ESCAPE. FRANK NÉMETH, St. Louis, Mo. Filed June 6, 1914. Serial No. 843,521. (Cl. 227—12.)



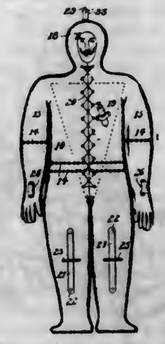
In combination with a building wall, vertically disposed pairs of contiguous conduits located along one of the walls of the building, a car or cage, a sheave at the upper end of one of the conduits of each pair, a counter or balance weight traversing said conduit, a cable leading from the car over each sheave and secured to the weight, a vertical slot being formed in the wall of the adjacent conduit of each pair, tongues leading from the car through said slots, rollers on the tongues traversing said slotted conduit, hoisting cables for the car, rollers over which said cables pass, a vertically slotted conduit contiguous to each side of the car for the housing of the hoisting cable, a tongue traversing said slot and secured to one end of the cable, a drum, and means for causing the opposite end of the cable to pass over the drum, and wind on, and unwind therefrom, whereby the car is raised or lowered.

1,115,094. LIFE-PRESERVER. MARYJAN NOWACKI, Camden, N. J. Filed Aug. 14, 1914. Serial No. 856,819. (Cl. 9—20.)

1. The combination with an inflated life-saving suit, of resilient straps carried by the bendable portions of the suit and adapted to return the suit to its normally straight position.

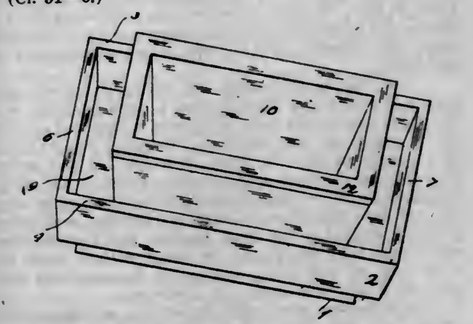
2. A life-saving suit comprising an inner and outer section, means for inflating the suit, and resilient straps contions, connecting straps having enlarged ends embedded within the sections, and means for deflating the suit.

3. A life-saving suit comprising an inner and outer section, means for inflating the suit, and resilient straps connected to the suit at the elbow and knee portions thereof to cause the arms and legs to assume a normally straight position.



4. The combination with an inflatable life-saving suit, having means for deflating the same, of resilient straps connected thereto at the elbow and knee portions.

1,115,095. POLISH-RECEPTACLE. GEORG OBAD, Belleville, Ill. Filed July 27, 1914. Serial No. 853,455. (Cl. 51—6.)



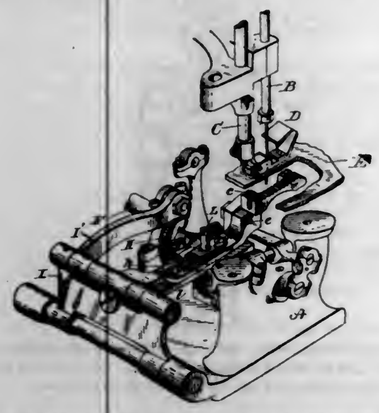
A polish receptacle comprising a rectangular frame constituting a base, a collecting trough mounted thereon and including outer side and end walls and inner side and end walls and a bottom forming thereby a collecting chamber, a tank extending in said frame and provided with lateral flanges mounted upon the top edges of said inner side and end walls of said collecting trough thereby suspending the said tank, said inner side and end walls of said collecting trough being of greater height than the outer side and end walls of said collecting trough.

1,115,096. FEEDING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1904. Serial No. 211,066. (Cl. 112—8.)

1. A feeding mechanism for sewing machines comprising a feed bar, a feed dog pivoted thereto on an axis transverse to the direction of feed, means for adjusting said feed dog on said axis to vary the angle of inclination at which said dog engages the goods, and means for positively adjusting the feed bar vertically to vary the amount of feeding surface with which the goods are engaged, substantially as described.

2. The combination with a supporting bar, and upper feeding bar, a feed dog pivoted to the upper feed bar with means for adjusting the angle of inclination at which it engages the goods, of means for positively adjusting the same vertically, comprising a screw secured to the supporting bar, and passing through the upper feeding bar with

connections between said screw and the upper feeding bar to cause the same to be moved vertically as the screw is turned, substantially as described.



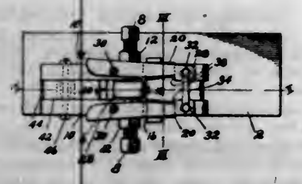
3. In a feeding mechanism for sewing machines, comprising two feed bars pivoted upon a common frame, the upper one resting upon the lower, a feed dog pivoted to the upper bar and means for swinging the feed dog on its pivot to vary its angle of inclination and means for adjusting the upper feed bar with respect to the lower, and means for operating said common frame substantially as described.

4. In a feeding mechanism for sewing machines, comprising two feed bars pivoted upon a common frame, and the upper one resting upon the lower, a feed dog pivoted to the upper bar and means for swinging the feed dog on its pivot to vary its angle of inclination and means for adjusting the upper feed bar with respect to the lower, comprising a screw stud passing through the upper feed bar and into the lower, a plate surrounding said screw stud and secured to the upper feed bar and a collar upon said screw stud bearing at its upper surface upon the under side of said plate, and means for operating said common frame substantially as described.

5. In a feeding mechanism for sewing machines, comprising two feed bars, a feed dog pivoted to the upper bar, and means for swinging the feed dog on its pivot to vary its angle of inclination, and means for adjusting the upper feed bar with respect to the lower; means for supporting and operating the feed bars substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,115,097. WIRE-CUTTING DEVICE. JOHN T. OPIE, Kansas City, Mo. Filed Apr. 6, 1914. Serial No. 829,745. (Cl. 59—71.)



1. In a device for cutting and bending wire, the combination of a wire-shearing means, and means for holding and positioning the wire including a positioning member having an edge for positioning the wire at the rear of the portion to be sheared and an edge at an angle to said first edge and adapted to permit slight lateral deflection of the sheared portion of the wire.

2. In a device for cutting and bending wire, the combination of a wire-shearing means, and means for holding and positioning the wire including a positioning member provided with a notch in the path of the shearing means, one side of said notch forming a stop for the end of the wire, and the other side of said notch extending at an angle permitting slight lateral deflection of the sheared portion of the wire.

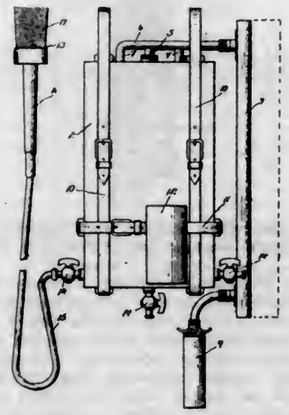
3. A device for pointing staples, comprising a stationary cutting means having a pair of non-parallel cutting edges, means for positioning a staple with its legs overlying said cutting edges, and a movable cutting member having a pair of cutting edges adapted to coöperate respectively with said non-parallel edges to shear the ends of said staple legs.

4. In a wire-cutting device, the combination of a pivoted cutting member having a pair of cutting edges converging in the direction of the axis of said member, and a stationary cutting means having a pair of non-parallel cutting edges located in the path of said movable cutting edges and adapted to coöperate therewith.

5. In a device for pointing staples, the combination of a pivoted cutting member having a pair of cutting edges converging in the direction of the axis of said member, a stationary cutting means having a pair of non-parallel cutting edges located in the path of said converging edges and adapted to coöperate therewith, and means for holding a staple with its legs overlying said stationary cutting edges and the axes of said legs extending at oblique angles to said stationary cutting edges.

[Claims 6 to 10 not printed in the Gazette.]

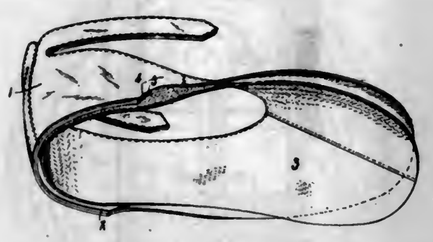
1,115,098. PAINTING APPARATUS. CARLOS C. PATNODE and ALEXANDER BURNELL, Schroon Lake, N. Y.: said Patnode assignor to said Burnell. Filed Dec. 21, 1912. Serial No. 737,997. (Cl. 91—39.)



An apparatus of the type described including a paint-containing receptacle, an air-inflating member having tubular connection therewith, said paint-containing receptacle being equipped with a brush having a tubular handle, said brush having centrally arranged and slidable therein a flexible bulb-like hollow member provided with paint-feeding apertures, said hollow bulb-like member being carried by a tubular member slidable within said tubular handle, and a flexible tubular connection between said paint-containing receptacle and said bulb-like member carrying tubular member.

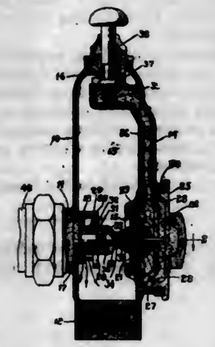
1,115,099. METHOD OF MAKING SHOES. WARREN D. PATTERSON, Rochester, N. Y., assignor, by mesne assignments, to Louise T. Galloway, Rochester, N. Y. Filed May 28, 1914. Serial No. 841,644. (Cl. 12—142.)

1. The method of making shoes comprising first stitching a sock lining or inner sole to the marginal edge of an upper around the fore part of the shoe from one end of the heel seat to the other end thereof and afterward inserting a last in the shoe, applying a shank piece to the heel seat and turning the marginal edges of the heel portion of the upper and counter over the shank piece and attaching the same thereto, then stitching a welt to the shoe and applying and securing an outer sole in the usual manner.



2. The method of making a shoe consisting in first stitching the marginal edges of a sock lining or insole to the marginal edge of an upper forwardly of the heel seat, said upper having cut away or notched portions at said heel seat, afterward inserting a last in the shoe, applying a shank piece to the heel seat with an arch supporter which is secured to the shank piece extending forward and having its forward end positioned underneath the ball of the insole and applying a cushion filler over the forward end of the arch support and within the space intermediate the stitching of the upper and insole, folding over the marginal edges of the counter and heel portion of the upper against the outer face of the shank piece and nailing the same thereto, then stitching a welt to the fore part marginal edges of the upper and sock lining from one end of the heel seat to the other and afterward stitching an outer sole to the welt.

1,115,100. FLUSHING-VALVE. WILBUR G. PEET and CHARLES E. PEET, Bridgeport, Conn., assignors of one-fourth to James F. Torrance, Derby, Conn. Filed Mar. 6, 1914. Serial No. 822,841. (Cl. 137—93.)



1. A structure of the character described, comprising a chamber, a passage adapted to communicate therewith, means to control the flow of water from the passage to the chamber, a movable service valve controlling the entrance of service water to the chamber and having a stem provided with a recess and hole leading from the recess into the passage, a diaphragm connected with the stem and disposed between the chamber and passage, and a plug arranged in the recess and movable therein and having a rod passing through said hole and extending into the passage for a suitable distance to engage the wall of the passage to automatically shift the plug with relation to the stem when the service valve is moved to the open position.

2. A structure of the character described comprising a chamber, a passage adapted to communicate therewith, means to control the flow of water from the passage to the chamber, an inwardly opening service valve controlling the entrance of service water into the chamber and having a tubular stem, a diaphragm connected with the stem and secured between the chamber and the passage, a valve in the stem having a rod extending through the stem and adapted to engage the wall of the passage when the service valve is opened and permitting movement of the stem independently of the rod, and adjustable means to regulate the extent of movement of the valve in the stem with relation thereto.

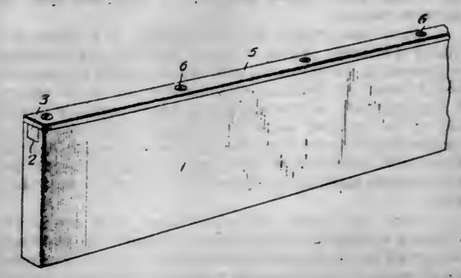
3. A structure of the character described comprising a chamber, a passage opening into said chamber, a valve controlling the flow of water from the passage to the chamber, a service valve controlling the entrance of service water to the chamber, a stem for said service valve having a recess and a hole leading from said recess into the passage, a diaphragm connected to the stem and secured intermediate the chamber and the passage, a plug in the recess having an incline and an adjusting screw engaging said incline for regulating the flow of water through the stem to the passage.

4. A structure of the character described comprising a chamber, a passage opening into said chamber, a valve controlling the flow of water from the passage to the chamber, a service valve controlling the entrance of service water to the chamber, a stem for said service valve having a recess and a hole leading from said recess into the passage, a diaphragm connected to the stem and secured intermediate the chamber and the passage, a plug in said recess having a rod extending through the hole and adapted to engage a fixed portion of the structure, on the opening movement of the valve, and means for adjusting the plug to control the flow of water through the hole.

5. In a structure of the character described, a chamber, a passage adapted to communicate therewith, means to control the passage of water from the passage into the chamber, a movable service valve to control the passage of service water into the chamber and having a tubular stem communicating with the passage, a valve movably mounted within the tubular stem to control the passage of water from the chamber into the passage and having an incline, an adjustable element carried by the tubular stem and arranged to engage the incline, pressure operated means to move the service valve to its closed position, and means to open the second-named valve when the service valve is moved to the open position.

[Claims 6 to 9 not printed in the Gazette.]

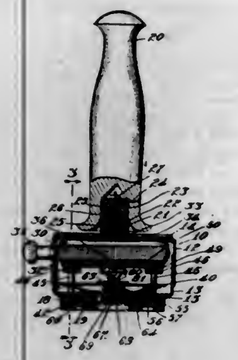
1,115,101. STRAIGHT-EDGE. GEORGE WILLIAM PENN, Dallas, Tex. Filed Oct. 13, 1913. Serial No. 794,877. (Cl. 33—107.)



A straight edge comprising a flat bar of wood having in one of its longitudinal edges a groove, the side walls of the groove being approximately parallel, a bar of metal fitting the groove, a strip of metal arranged along the grooved edge of said flat bar, the longitudinal edges of the strip being flush with the side faces of the first-named bar, said strip and the metal bar and the wooden bar

having registering openings, and screws passing through the openings to hold the metal bar and the metal strip in place, the openings for the screws in the strip being reamed to receive the heads of the screws.

1,115,102. TIME-STAMP. GEORGE ELLIOT PERRY, Chicago, Ill. Filed May 12, 1913. Serial No. 767,019. (Cl. 234—54.)



1. In a time stamp, the combination of a vertically unyielding frame providing on one face a striking surface, time impression means located normally above the printing plane, guidedly and yieldingly supported in the frame for movement toward the printing plane under the influence of impact of the frame against the surface to be printed, and a motor arranged to drive said time impression means.

2. In a time stamp, the combination of a vertically unyielding frame providing on one face a striking surface, time impression means normally located above the printing plane and guidedly and yieldingly supported in the frame for movement toward the printing plane under the influence of impact of the frame against the surface to be printed, a motor positioned by the frame, and driving connections between said motor and said impression means arranged to permit relative displacement of said motor and said impression means.

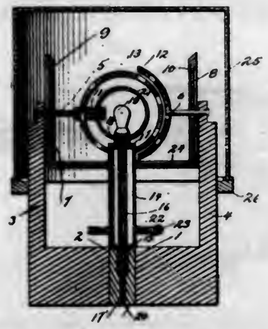
3. In a time stamp, the combination of a vertically unyielding frame having a striking surface, a plate guided by the frame, springs between said plate and the striking surface of the frame, time impression means carried by the plate normally located above the striking surface of the frame, and a motor arranged to drive said time impression means.

4. In a time stamp, the combination of a frame providing a striking surface, a motor guidedly and yieldingly supported in the frame for movement toward the printing plane under the influence of impact of the frame against a resisting body, a time impression means normally located out of the printing plane and driven by the motor, and connections between said time impression means and the motor for movement of said time impression means into the printing plane by movement of the motor in that direction.

5. In a time stamp, the combination of a frame providing a striking surface, a motor guidedly and yieldingly supported in the frame for movement toward the printing plane under the influence of impact of the frame against a resisting body, a time impression means normally located out of the printing plane, axially shiftable connections for rotation between the time impression means and a motor part, and resilient connections between the time impression means and the motor for movement of said time impression means into the printing plane by movement of the motor in that direction.

[Claims 6 to 16 not printed in the Gazette.]

1,115,103. ADVERTISING APPARATUS. CHARLES R. PIERCE, Washington, D. C. Filed Mar. 28, 1913. Serial No. 757,389. (Cl. 240—10.)



1. A device such as described embodying a plurality of translucent members arranged to be rotated at right angles to each other, a source of light surrounded by said members, and mirrors arranged to reflect the rays of light staggered through said members.

2. A device of the kind described comprising a plurality of translucent mottled members, means for rotating one of said members in a horizontal plane, means for causing said other members to move around said last named member, and a source of light arranged to emit rays upon said members.

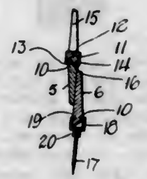
3. In a device such as described, a plurality of translucent mottled members, means for rotating one of said members in a horizontal plane, means for moving the others of said members around the first named member, a source of light for transmitting rays from said members, and mirrors for reflecting the rays of light transmitted thereto.

4. In combination a standard, a lamp mounted upon said standard, a mottled member revolving around said lamp, mottled members revolving around said first named member at right angles thereto, means for actuating said members, and means for reflecting the rays of light penetrating said members.

5. In combination a standard, oppositely arranged mirrors mounted on said standard, a translucent mottled member mounted on said standard between said mirrors, translucent mottled members arranged to revolve around said first-named members between said mirrors, and means disposed between said mirrors whereby rays of light may fall upon said members.

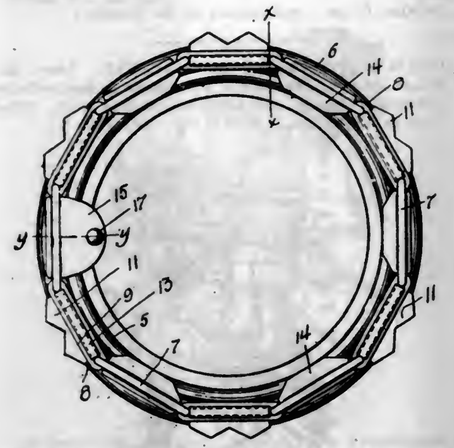
[Claims 6 to 9 not printed in the Gazette.]

1,115,104. ATTACHMENT FOR SCISSORS. JOE PRIKLA, Superior, Wis. Filed June 10, 1914. Serial No. 844,289. (Cl. 30—13.)



The combination with a pair of scissors having one of its blades formed with longitudinal grooves in the sides thereof near the blunt edge, of a toilet implement including a body portion provided with a pair of opposed flanges adapted to seat in said grooves whereby the implement is detachably connected to the blade.

1,115,105. ANTISKIDDING DEVICE FOR TIRES. LAJOS RAKAI, Broughton, Pa. Filed May 6, 1914. Serial No. 836,830. (Cl. 152—2.)



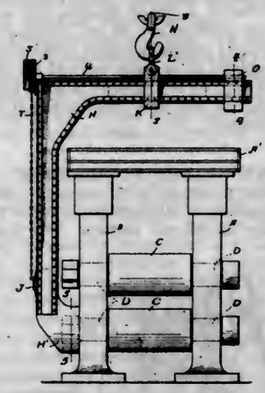
1. An anti-skidding device comprising a pair of chains adapted to be positioned at the sides of a tire, each of said chains consisting of two sets of links, the links of one set being alternately disposed with respect to the links of the other set, and the openings formed by the links of one set being disposed vertically of the openings formed by the links of the other set, anti-skidding members adapted to be mounted upon the tread of the tire and having extensions connected to those links having the openings disposed at right angles thereto, and retaining members adapted to be positioned at the sides of the tire and connected to those links having the openings thereof disposed vertically.

2. An anti-skidding device comprising a pair of chains adapted to be positioned at the sides of a tire, each of said chains consisting of two sets of links, the links of one set being alternately disposed with respect to the links of the other set and the openings formed by the links of one set being disposed vertically of the openings formed by the links of the other set, anti-skidding members adapted to be mounted upon the tread of the tire and having extensions connected to those links having the openings disposed at right angles thereto, retaining members adapted to be positioned at the sides of the tire and connected to those links having the openings thereof disposed vertically, a pair of said retaining members being of greater width than the other of said retaining members, and means for connecting the said pair of retaining members of greater width together.

3. An anti-skidding device comprising a pair of chains adapted to be positioned at the sides of a tire and each formed of elongated links, the links of one chain arranged parallel to the links of the other chain, anti-skidding members connected to certain of the links of said chains and adapted to extend transversely of a tire, retaining members connected to the other links of the chains and adapted to be positioned at the sides of the tire, said anti-skidding members alternately disposed with respect to said retaining members, and means for connecting a pair of said retaining members together.

1,115,106. APPARATUS FOR REMOVING ROLLS FROM FRAMES OF ROLLER-MILLS. WILLIAM H. RAMAGE, Youngstown, Ohio. Filed Jan. 3, 1914. Serial No. 810,261. (Cl. 57—9.)

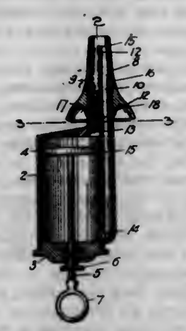
1. An apparatus for removing rolls from rolling mills comprising a carrier adapted to engage the neck at one end of a roll, an adjustable member in which a laterally extending portion of said carrier is adapted to be adjustably held, a counterbalance weight upon the carrier and having a threaded aperture therein, and a screw engaging the threaded aperture in said counterbalance weight and in said carrier supporting member, as set forth.



2. An apparatus for removing rolls from rolling mills comprising a carrier adapted to engage the neck at one end of a roll, an adjustable member in which a laterally extending portion of said carrier is adapted to be adjustably held, a counterbalance weight upon the carrier and having a threaded aperture therein, a screw engaging the threaded aperture in said counterbalance weight and in said carrier supporting member, a pulley fixed to said screw, and a chain passing about the pulley, as set forth.

3. An apparatus for removing rolls from rolling mills comprising a carrier having at its lower end a socket portion adapted to receive the end of the neck of a roll, a supporting member mounted on a horizontally disposed portion of the carrier, a counterbalance weight upon the carrier, said counterbalance weight and supporting member having registering threaded apertures, a screw engaging said apertures, a pulley fixed to the screw, and an endless chain passing about said pulley, as set forth.

1,115,107. VAGINAL SYRINGE. CHARLES O. RICE, Denver, Colo. Filed Apr. 21, 1914. Serial No. 833,409. (Cl. 128—25.)



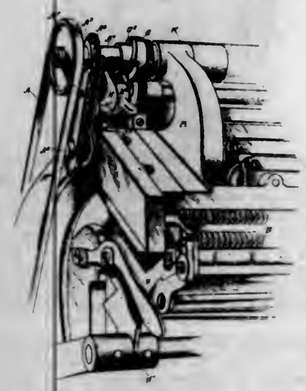
1. A vaginal syringe of the character described comprising a piston-chamber, a piston therein, and a nozzle projecting from the forward end of the chamber and including two cylindrical conduits which communicate respectively with openings at opposite ends of the chamber and which are connected by a passage at a point between their extremities.

2. A vaginal syringe of the character described comprising a piston-chamber, a piston therein, and a nozzle projecting from the forward end of the chamber and including two cylindrical conduits which communicate respec-

tively with openings at opposite ends of the chamber and which are connected by passages at points between their extremities.

3. A vaginal syringe of the character described comprising a piston-chamber, a piston therein, and a nozzle projecting from the forward end of the chamber and including two cylindrical conduits which communicate respectively with openings at opposite ends of the chamber and which are connected by passages at a point adjacent their forward extremities, and at a point adjacent the forward end of the chamber.

1,115,108. TYPOGRAPHICAL MACHINE. JOHN RAPHAEL ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 22, 1911. Serial No. 640,009. (Cl. 199—7.)



1. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of magazine entrances supported independently of the magazines, and distributer stop mechanism, the said mechanism comprising the controlling arm J, and the movable frame J^6 connected thereto and to all the magazine entrances.

2. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of magazine entrances supported independently of the magazines, and distributer stop mechanism, the said mechanism comprising the stop arm H, the arm J to engage directly with and hold said stop arm in inactive position, and the movable frame J^6 connected to the arm J and to all of the magazine entrances.

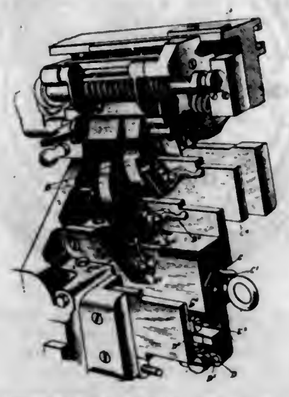
3. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of magazine entrances supported independently of the magazines, and distributer stop mechanism, the said mechanism comprising the pivoted stop arm H tending to fall by gravity into active position, the trip arm J to hold said stop arm in inactive position, and the movable frame J^6 connected thereto and to all of the magazine entrances.

4. In a typographical machine, the combination of a plurality of magazines, separate entrances therefor, a supporting frame for said entrances mounted to move the entrances out of operative relation to the magazines, distributing mechanism, stop mechanism, and operating connections leading from all the magazine entrances thereto, the said connections being mounted in the said supporting frame; whereby the operative connection is broken and restored according to the movement of the supporting frame.

5. In a typographical machine, the combination of a plurality of magazines, separate entrances therefor, a movable supporting frame for said entrances to carry them out of operative relation to the magazines, a corresponding plurality of distributers, a movable supporting frame for said distributers, stop mechanism mounted in part upon the distributer supporting frame, and operating connections from the individual entrances to said stop mechanism, the said connections being mounted upon the entrance supporting frame; whereby the operative connection is broken when the supporting frames are moved from normal position and is restored when they are returned thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,115,109. TYPOGRAPHICAL MACHINE. JOHN RAPHAEL ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 24, 1911. Serial No. 640,081. (Cl. 199—7.)



1. In a typographical machine, the combination of a plurality of distributers, a font separator, and a plurality of chutes leading from the font separator to the several distributers, the said chutes being detachably mounted in the framework so as to be freely removable at will and so located as to permit such removal without disturbing the other parts.

2. In a typographical machine, the combination of a plurality of distributers, a font separator, and a plurality of chutes leading from the font separator to the several distributers, the said chutes being each detachably mounted in the framework so as to be freely removable independently of one another and so located as to permit such removal without disturbing the other parts.

3. In a typographical machine comprising distributing mechanism, the combination of the matrix conveying tube B provided with the flange B^3, and the framework formed with the cut C^{10} and provided with the locking device B^4 to engage the flange B^3.

4. In a typographical machine, the combination of the frame work formed with the cut C^{10}, and the distributing tube B located in said cut and removable laterally therefrom, together with locking means, releasable at will to hold said tube in position in said cut.

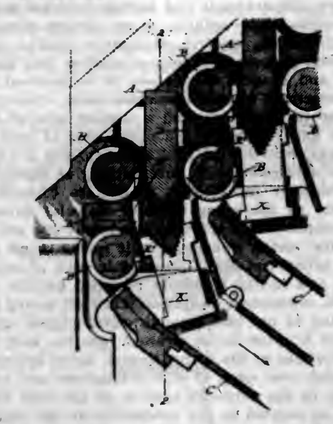
5. In a typographical machine comprising distributing mechanism, a distributer box provided with a deflecting corner detachably secured thereto.

[Claims 6 to 17 not printed in the Gazette.]

1,115,110. TYPOGRAPHICAL MACHINE. JOHN RAPHAEL ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Aug. 23, 1911. Serial No. 645,498. (Cl. 199—7.)

1. In a typographical machine, the combination of matrix distributing mechanism, channels to receive the matrices therefrom and intermediate extended guides between which the matrices pass, the said guides being arranged so as to engage the matrices before they enter the said channels; whereby the matrices are prevented from falling over flatwise or sidewise in their passage to the channels.

2. In a typographical machine, the combination of matrix distributing mechanism, channels to receive the matrices therefrom, and intermediate vertical guides to engage the sides of the matrices in their passage from the distributing mechanism to the channels, the said guides being arranged to engage the matrices before they enter the channels and of an extent sufficient to maintain their engagement with the matrices until they have passed well within the channels.



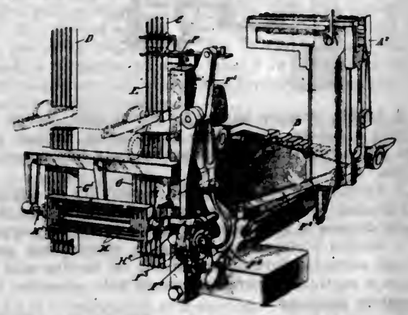
3. In a typographical machine, the combination of matrix distributing mechanism, channels to receive the matrices therefrom, and vertically extended guides to engage laterally the upper portions of the matrices, the said guides being arranged so as to engage the matrices before the latter enter the said channels; whereby the matrices are delivered to the channels in an erect position.

4. In a typographical machine, the combination of matrix distributing mechanism, channels to receive the matrices therefrom, and a comb plate D provided with the vertically elongated recesses D^1 whose opposite extended walls engage the upper ears of the matrices before the latter pass into their receiving channels.

5. In a typographical machine comprising distributing mechanism, the combination of the distributer rail and a conveying screw, with supplemental guiding means located in proximity to the rail and projecting over the screw, whereby the matrix is guided laterally in its descent and also moved edgewise to clear the screw.

[Claims 6 and 7 not printed in the Gazette.]

1,115,111. TYPOGRAPHICAL MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 15, 1914. Serial No. 812,180. (Cl. 199—7.)



1. In a typographical machine, the combination of two escapement actuating devices, connecting means therebetween whereby the operation of one will effect the operation of the other, and periodically and automatically operated means for alternately rendering said means active and inactive.

2. In a typographical machine, the combination of a plurality of escapement actuating devices, a second corresponding plurality of actuating devices, connecting means between the devices of the two pluralities whereby the operation of those of one plurality will effect the conjoint operation of those of the other plurality, and periodically and automatically operated means for alternately making and breaking the connections.

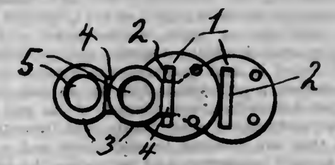
3. In a typographical machine, the combination of a periodically and automatically operated part, two escapement actuating devices, and means operated by the movement of said part for alternately connecting and disconnecting said devices to and from each other whereby the operation of one will effect the conjoint operation of the other.

4. In a typographical machine, the combination of a movable assembler, a plurality of escapement actuating devices, a second corresponding plurality of actuating devices, and means operated by the movement of the assembler for alternately connecting and disconnecting the devices of the said pluralities to and from each other whereby they will be operated conjointly or independently according to whether they are connected or disconnected.

5. In a typographical machine, the combination of two escapements, two actuating devices therefor, and automatic means for alternately connecting and disconnecting the two devices, and for simultaneously moving one of them out of and into operative relation to its corresponding escapement.

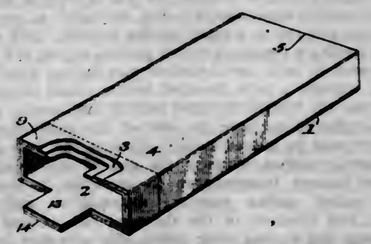
[Claims 6 to 12 not printed in the Gazette.]

1,115,112. HOOK AND EYE. GEORGE D. ROLLINS, Philadelphia, Pa. Filed May 7, 1912. Serial No. 695,643. (Cl. 24—226.)



In a device of the character stated, a fastener adapted to be used either as a hook or as an eye in making up two part fasteners comprising a body having a transverse slot and provided with perforations, a head provided with an opening, said head lying in a different parallel plane to the body and being of less width than the length of said slot, and a neck standing at an angle for connecting the body and head, whereby, in one position of the fastener, said body is adapted to be sewed to a fabric through said slot and perforations and said hook and neck are adapted to engage through the eye of a complementary fastener, while in the reverse position of the fastener, said hook is adapted to be sewed to a fabric through said opening and around said neck and said body is spaced from the fabric and serves as a slotted eye member adapted to be engaged by the tongue-shaped hook of a complementary fastener.

1,115,113. TOBACCO-PACKAGE. THOMAS M. ROYAL, Bryn Mawr, Pa. Filed July 7, 1914. Serial No. 849,392. (Cl. 229—87.)



1. A tobacco package, comprising an inner lining, a sheet of foil of substantially the same length as said

lining, and a label of less length than the length of said lining and foil, said lining, foil and label at one end thereof terminating at substantially the same place, whereby when the end portions are folded the flaps formed thereby bring a portion of the lining against the label, and means to secure the said flaps in position to close one end of the package.

2. A tobacco package, comprising an inner lining, a foil covering said lining, and a label covering said foil except at one end thereof, the foil and lining at one end being inwardly folded and sealed by the internal revenue stamp, the lining, foil and label at the opposite end being inwardly folded to form flaps covering such end of the package, and means carried by the lining portion of a flap to secure the same with respect to the label portion of another flap.

1,115,114. CONNECTOR FOR ELECTRIC CONDUCTORS. HENRY HARDING RUSSELL, Chicago, Ill., assignor to Electric Specialties Company, Chicago, Ill. Filed Mar. 21, 1913. Serial No. 755,947. (Cl. 173—324.)

1. A connector for electrical conductors comprising in combination, an insulating block of heat resisting material divided into one or more compartments and having threaded apertures leading thereto, split metallic spring sleeves disposed in said compartments, electric conductors leading thereto, spiral springs disposed on said conductors but insulated therefrom and adapted at one end to be received in the threaded apertures in said insulating block whereby they are retained in said block, and a member secured to said conductors and embracing the other ends of said spiral spring means, whereby the said spiral springs are secured in place on said conductors, substantially as described.

2. A connector for electric conductors comprising in combination, an insulating block of heat resisting material having one or more compartments therein threaded at one end to receive a spiral spring member, a split spring sleeve of substantially cylindrical shape disposed in each of said compartments and having a female threaded portion at one end thereof, conductors leading to said split spring sleeves and carrying at one end male threaded nipples attached thereto and adapted to be screwed into the said female threaded portions of the spring sleeves, spiral spring members disposed over each of said conductors and retained at one end in the threaded portion of the said block of heat resisting material and secured to the conductors at the other end, and insulation interposed between said spiral spring members and the said conductors, substantially as described.

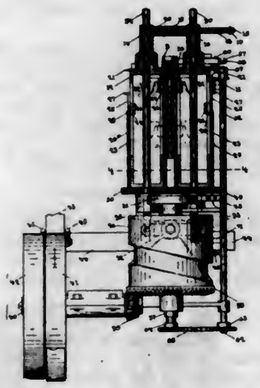
3. A connector for electric conductors comprising in combination, an insulating block of heat resisting material having compartments therein for the reception of conductors, said compartments being threaded at one end to receive and retain a spiral spring member, split spring sleeves having a female threaded portion at one end thereof disposed in said compartments and having conductors leading thereto, a male threaded hollow nipple adapted to screw into the female threaded portion and having a wall portion adapted to have the end of the conductor bent thereover and be approximately adjacent the wall of the said female portion whereby the end of said conductor will be pinched therebetween in screwing in the said nipple, spiral spring members disposed on said conductors and retained in the threaded end of said compartments and having their other ends attached to said conductors, insulation interposed between said conductor and the spiral spring member, and insulation interposed between the said spiral spring member and said split spring sleeves, substantially as described.

4. A connector for electrical conductors comprising in combination, an insulating block of material divided into one or more compartments and having threaded apertures leading thereto, split metallic spring sleeves disposed in said compartments, electric conductors leading thereto, spiral springs disposed on said conductors but insulated therefrom and adapted at one end to be received in the threaded apertures in said insulating block whereby they are retained in said block, and a member secured to said conductors and embracing the other ends of said spiral spring means, whereby the said spiral springs are secured in place on said conductors, substantially as described.

5. A connector for electric conductors comprising in combination, an insulating block of material having one or more compartments therein threaded at one end to receive a spiral spring member, a split spring sleeve of substantially cylindrical shape disposed in each of said compartments and having a female threaded portion at one end thereof, conductors leading to said split spring sleeves and carrying at one end male threaded nipples attached thereto and adapted to be screwed into the said female threaded portions of the spring sleeves, spiral spring members disposed over each of said conductors and retained at one end in the threaded portion of the said block of material and secured to the conductors at the other end, and insulation interposed between said spiral spring members and the said conductors, substantially as described.

[Claim 6 not printed in the Gazette.]

1,115,115. BOBBIN-STRIPPER. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 12, 1913. Serial No. 806,317. (Cl. 118—26.)



1. A bobbin stripper having in combination, means for suporting a bobbin, a plurality of stripping devices, and means for moving said devices successively into operative position.

2. A bobbin stripper comprising a plurality of gripping and stripping devices, and means for intermittently moving said devices in successive pairs into operative position.

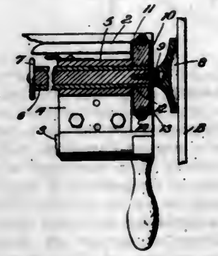
3. A bobbin stripper comprising in combination, gripping and stripping devices, and means for moving said devices in a continuous path alternately into operative and inoperative positions.

4. A bobbin stripper, having in combination, bobbin supporting means, a plurality of pairs of stripping devices successively presented in operative position and movable longitudinally of the bobbins to strip the same, and means to return the stripping devices to their former longitudinal position while they are out of operative position.

5. A bobbin stripper having in combination, bobbin supporting means, stripping devices mounted to slide axially in rotatable barrels, mechanism for intermittently partially rotating said barrels and for alternately locking them against rotation, means for positively moving said stripping devices longitudinally of the barrels to strip the bobbins while the barrels are locked with the stripping devices in operative position, and means for returning the stripping devices to their former longitudinal position while they are out of operative position.

[Claims 6 to 22 not printed in the Gazette.]

1,115,116. GARMENT-HANGER. JOHN A. SHEA, Wilkes-Barre, Pa. Original application filed July 10, 1912, Serial No. 708,716. Divided and this application filed Dec. 28, 1912. Serial No. 739,131. (Cl. 211—16.)



1. In a device of the class described, the combination with a case having a movable door, and an extensible support mounted within the case, of a bracket mounted upon the support, a hanger rod slidably mounted in the bracket, and means, carried by the hanger rod and coöperating with the door for retracting the said hanger rod when the door is moved to open position, said means comprising a suction cup carried by the rod and arranged to coöperate with the face of the door.

2. In a device of the class described, the combination with a case having a door, and a hanger rod mounted within the case and relatively fixed, of a hanger rod slidably mounted upon the first mentioned rod, and means carried by the last mentioned hanger rod and arranged to coöperate with the door to slide the said last mentioned rod forwardly when the door is moved to open position, the said means being free from permanent and fixed connection with the door.

3. In a device of the class described, the combination with a case having a door, and a relatively fixed hanger rod mounted within the case, of a bracket mounted upon the hanger rod, an auxiliary hanger rod slidably mounted in the bracket, an adjustable abutment upon the auxiliary hanger rod arranged to coöperate with the bracket to limit the inward sliding movement of the rod, and suction means at the forward end of the auxiliary rod arranged to coöperate with the inner face of the door whereby the auxiliary rod will be slid forwardly when the door is moved to open position.

4. In a device of the class described, the combination with a relatively fixed support, of a bracket mounted thereon, a hanger rod slidably mounted in the bracket, the said rod at one end being threaded, a head adjustably threaded upon the said end of the rod and constituting an abutment for coöperating with the said bracket to limit the inward sliding movement of the rod, and a suction cup arranged at the forward end of the said rod.

1,115,117. VEHICLE-ELEVATOR. HARVEY E. SHUMWAY and WALTER T. SCHOLZ, Frankfort, Kans. Filed Aug. 19, 1913. Serial No. 785,586. (Cl. 57—15.)

1. A vehicle elevating device including a bed frame, an elevating platform, supporting brackets carried by said platform, rocking elevating levers pivotally secured to the bed frame, swinging means connecting the rocking elevating levers with said supporting brackets, and auxiliary means for elevating and retaining the vehicle platform in an elevated position.

2. A vehicle elevating device including a bed frame, an elevating platform having depending bracket portions, rocking elevating levers pivotally secured to the bed frame, swinging means connecting the said rocking elevating levers with the depending portions of the elevating platform, bumper means carried by said platform and adapted to be engaged by a moving vehicle to impart motion to the rocking elevating levers, and auxiliary means for elevating and retaining the vehicle platform in an elevated position.

3. A vehicle elevating device including a bed frame, an elevating platform, supporting brackets rigid with said platform, longitudinally paired rocking elevating levers having arm extensions eccentrically pivoted to said bed frame, swinging links connecting with the upper ends of said longitudinally paired rocking levers and with the lower ends of said brackets, means connecting the longitudinally paired rocking levers, said means adapted to be engaged by the platform in its forward movement, and auxiliary means for elevating and retaining the vehicle platform in an elevated position.

4. A vehicle elevating device including a stationary bed frame, rocking supporting levers pivoted to said bed-frame, a vehicle supporting platform pivotally hung on said rocking levers, means for connecting certain of said rocking levers having a portion adapted to be engaged by the platform in its forward movement, and auxiliary means for elevating and automatically retaining the vehicle supporting platform in an elevated position.

5. A vehicle elevating device including a stationary bed frame, rocking supporting levers pivoted to said bed frame and arranged in longitudinal pairs on each side thereof, a vehicle supporting platform pivotally hung on said rocking levers, bars for connecting the longitudinally paired levers, means carried by said bars adapted to be engaged by the said platform when the same moves forward, and means for elevating and retaining the vehicle supporting platform in an elevated position.

[Claims 6 and 7 not printed in the Gazette.]

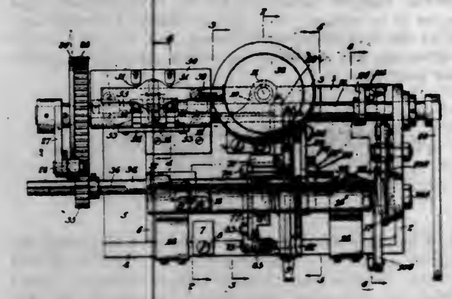
1,115,118. BUCKLE. CLARA B. SITZ, Washington, D. C. Filed Nov. 17, 1913. Serial No. 801,491. (Cl. 24—262.)

A clamp for supporting socks, etc., comprising two plates associated together, each provided with jaws, one of which jaws has a series of triangular recesses and the other a similar series of reversely arranged recesses forming triangular projections intermediate the same which interlock with one another, the end walls of the recesses of the two jaws being beveled and adapted to have wedging action with one another.

1,115,119. CIGAR CUTTING AND BANDING MACHINE. JAMES H. SKITT, Philadelphia, Pa., assignor to Robert P. Smith and George E. Drum, Philadelphia, Pa., Copartners trading under the firm-name of Smith, Drum & Company. Filed June 8, 1912. Serial No. 702,406. (Cl. 131—61.)

1. In a machine of the type set forth, a cigar band container, means for wrapping the band around a cigar, stationary band-receiving means independent of and adja-

cent the wrapping means, moistening means adapted to carry the band from the container to the receiving means, and means for lowering the moistening means to rest on the container and band-receiving means to grip the band during a preliminary stage in the wrapping operation.



2. In a machine of the type set forth, a cigar band container, means for wrapping the band around a cigar, pivoted band moistening means, means for raising the moistening means and for turning the same on its pivot to transfer the band from the container to the wrapping means.

3. In a machine of the type set forth, a cigar holder, a cigar band container, means for wrapping the band around a cigar, stationary band-receiving means independent of and adjacent the wrapping means, pivoted band moistening means normally resting on a band in the container, means for raising the moistening means and for turning the same to transfer the band from the container to the band-receiving means to a position across the cigar holder and for lowering the moistening means upon the band-receiving means to grip the band while a cigar is being placed in the holder.

4. In a machine of the type set forth, a cigar band container, band wrapping means, band-receiving means adjacent the latter, a moistening member pivoted on a supporting member, one of said members having a pin and the other two off-set cut-out portions adapted to alternately receive the pin, means for raising the moistening member to remove the pin from one of said cut-out portions and for swinging the moistening member and for then lowering said moistening member to place the pin in the other of said cut-out portions, the movement of the moistening member effecting a transfer of the band from the container to the band-receiving means, the moistening means when the pin is in either of said cut-out portions exerting pressure upon the band while it is respectively on the container and receiving means.

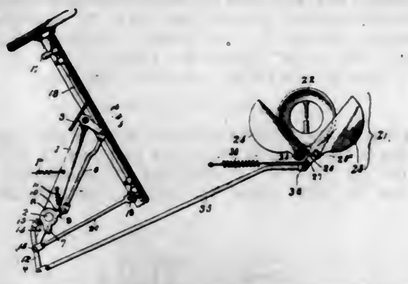
5. In a machine of the type set forth, a cigar band container, band wrapping means, pivoted moistening means capable of sliding movement on its pivot, and an operating member adapted to swing and slide the moistening means on its pivot to effect transfer of the band from the container to the wrapping means.

[Claims 6 to 24 not printed in the Gazette.]

1,115,120. CONTROLLING SYSTEM FOR MOTOR-VEHICLES. DEMPSTER M. SMITH, Washington, D. C. Original application filed Apr. 24, 1905, Serial No. 257,216. Divided and this application filed Dec. 11, 1906, Serial No. 347,364. Renewed Mar. 12, 1910. Serial No. 549,006. (Cl. 123—98.)

1. Controlling mechanism for motor vehicles, comprising a motor-speed controlling element, a hand regulating device, a foot regulating device, and differential mechanism connecting said devices with said element and serving to maintain the element under all operative conditions in a position dependent upon the relative positions of the devices.

2. Controlling mechanism for motor vehicles, comprising a motor-speed controlling element, a hand regulating device, a foot regulating device, and mechanism intermediate said devices and said element for varying its position by movement of either of said devices while the other remains stationary in any of its operative positions.



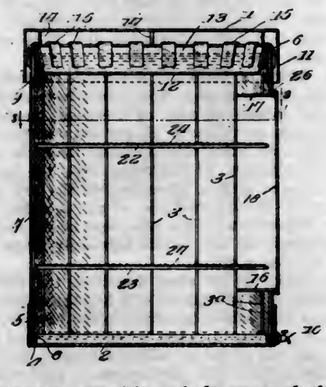
3. Controlling mechanism for motor vehicles, comprising a motor-speed controlling element, a hand regulating device, a foot regulating device, and differential mechanism positively connecting said device with said element serving to give an immediate and definite movement to said element upon movement of either of said devices irrespective of the position of the other device.

4. The combination of a movable motor-controlling element, a hand-regulating device, a foot-regulating device, and a differential member so connected to said element that the position of the element is dependent under all conditions upon the relative positions of said devices.

5. Controlling mechanism for motor vehicles, comprising a motor-speed controlling element, a hand regulating device, a foot regulating device, and mechanism intermediate said devices and said element for varying its position by movement of either of said devices while the other remains stationary in any of its positions.

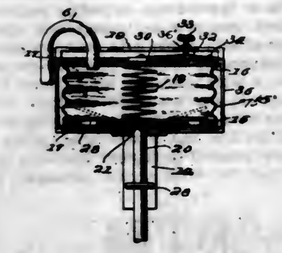
[Claims 6 to 22 not printed in the Gazette.]

1,115,121. REFRIGERATOR. EDWARD FRANKLIN SODERBORG, Salt Lake City, Utah. Filed July 2, 1913. Serial No. 777,011. (Cl. 62—10.)



A refrigerator comprising a body composed of vertically spaced open annular frames, rods connecting the frames and spaced apart from each other, a covering of fabric material fitting outside of the body and having its ends turned inwardly over the frames, a lower cap in which the lower end of the body is seated, a tank for containing water fitting within the upper frame and supported thereby, an upper cap fitting over and inclosing the tank, a series of strips of absorbent material arranged on the edge of the tank and extending to near the bottom of the tank on the inside thereof and to the covering of the frame at the outside thereof, the upper frame having upwardly extending arms engaging the upper cap and supporting the same in spaced relation above the upper edge of the tank.

1,115,122. TIRE-INFLATING DEVICE. HERMAN STAHL, Erie, Pa. Filed Mar. 6, 1913. Serial No. 752,526. (Cl. 152—11.)



1. A tire inflating device comprising a casing supported by the spoke of a pneumatic tired wheel, a plurality of diaphragms arranged in said casing, one of the diaphragms being secured to the top of the casing, a coiled spring interposed between the diaphragms and normally maintaining the other diaphragm adjacent the base of the casing, a plunger connected to said other diaphragm and projecting through the casing, a longitudinally curved plate supported by the plunger and disposed to extend transversely of the tire, a flexible hollow member having its ends secured to the diaphragms, and a connection between the chamber formed by the diaphragms and said flexible member and the valve of the tire.

2. A tire inflating device for pneumatic tired wheels including a casing carried by the wheel, a fixed diaphragm, and a movable diaphragm, both arranged in the casing, a flexible envelop connecting the diaphragms and forming an air chamber therebetween, valves controlling the inlet and outlet of air into the air chamber, and a rod carried by the movable diaphragm and mounted for reciprocation through the wall of the casing, said rod extending radially beyond the rim of the wheel, and means for conducting air from the air chamber to the tire of the wheel.

3. The combination with a wheel having a pneumatic tire, of a tire inflating device including a casing attached to the wheel, a fixed diaphragm, and a movable diaphragm, both arranged within the casing, a flexible envelop connecting the diaphragms and forming an air chamber therebetween, a rod mounted for reciprocation through the wall of the casing and connected to the movable diaphragm, said rod extending beyond the periphery of the wheel, whereby it will engage the road once during each revolution of the wheel for periodically reciprocating the movable diaphragm, and valves controlling the inlet and outlet of air into the air chamber.

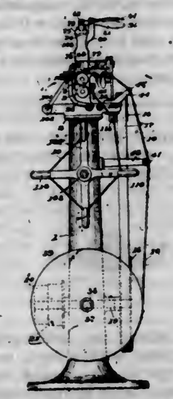
1,115,123. WELT-CUTTING MACHINE. CHARLES P. STANBON, Lynn, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 31, 1906. Serial No. 309,109. (Cl. 12—67.)

1. A welt cutting machine, comprising a welt guide, a grooving tool, means to feed the welt continuously to said tool to cause the grooving tool to produce a longitudinal groove in the welt in its passage through said guide, a welt slitting tool, and means to cause said slitting tool to act upon and slit the portion of the welt engaged by the feeding means as the latter draws the welt through the machine.

2. A welt cutting machine comprising a grooving tool, a slitting tool and a welt support having stationary and moving portions, said tools being arranged to groove and slit the surface of a welt adjacent its opposite edges while supported on and as it passes over said stationary and movable portions of the welt support.

3. A welt cutting machine comprising a skiving tool, a slitting tool, a moving welt support, and means for feeding a welt strip over said moving support, said tools being arranged to skive and slit said welt as it passes over said support.

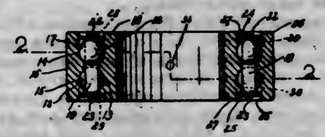
4. In a machine for making welts, the combination of a welt support provided with a welt guide, a feathering tool projecting into said welt guide, a grooving tool, a slitting tool, means to reciprocate said slitting tool, and means to feed the welt continuously past said tools, said grooving tool being arranged to act upon the welt and groove it as it passes through said guide, and said slitting tool arranged to slit said welt when engaged by said feeding means.



5. A welt cutting machine comprising a grooving tool, a skiving tool, means for the independent adjustment of each, and means for simultaneous elevation or depression thereof and for locking said tools in elevated position or dropping them into operative position.

[Claims 6 to 22 not printed in the Gazette.]

1,115,124. BALL-BEARING. FRANK STARIN, Springfield, Mass. Filed Jan. 16, 1914. Serial No. 812,469. (Cl. 64—59.)



1. In a ball bearing, the combination with an inner and an outer bearing ring, each being provided with two raceways, thereby forming two independent races for balls, of a plurality of balls running in each raceway, a supporting ring, and retainers attached to said supporting ring, each retainer comprising a plate having a ring-shaped portion provided with a concave inner face encircling a ball in one of said raceways and furthermore wings having outer concave faces, the juxtaposed wings of two adjacent retainers encircling a ball in the other one of said raceways.

2. In a ball bearing, the combination with an inner and an outer bearing ring, each being provided with two raceways, thereby forming two independent races for balls, of a plurality of balls running in each raceway, supporting rings disposed outside of said raceways, and retainers attached to said supporting rings, each retainer comprising a plate having a ring-shaped portion provided with a concave inner face encircling a ball in one of said raceways and furthermore wings having outer concave faces, the juxtaposed wings of two adjacent retainers embracing a ball in the other one of said raceways.

3. In a ball bearing, the combination with an inner and an outer bearing ring, each being provided with two raceways, thereby forming two independent races for balls, of a plurality of balls running in each raceway, supporting rings disposed outside of said raceways and covering completely the annular space between said bear-

ing rings, and retainers attached to said supporting rings, each retainer comprising a plate having a ring-shaped portion provided with a concave inner face encircling a ball in one of said raceways and furthermore wings having outer concave faces, the juxtaposed wings of two adjacent retainers embracing a ball in the other one of said raceways.

4. A cage for ball bearings comprising a ring-shaped supporting member, and retaining members attached thereto, each retaining member comprising a plate having a ring-shaped portion provided with a concave inner face encircling a ball and furthermore wings having outer concave faces, the juxtaposed wings of two adjacent retainers embracing a ball.

1,115,125. SEPARABLE BUTTON. FRANCIS STASHKO, New York, N. Y. Filed May 11, 1914. Serial No. 837,810. (Cl. 24—109.)

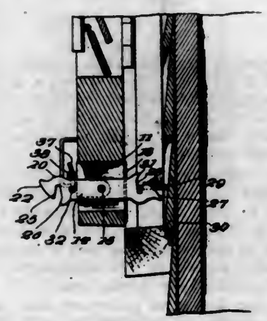
1. In a separable button, the combination with a head having a shank provided with a bore and a groove extending throughout the length of said bore, recesses being formed in said bore merging into said groove, whereby a row of ratchet teeth-like projections is provided, the inner end of said shank projecting into said head and having an incline, of a back having a stud adapted to be inserted into said bore, a lug upon the upper end of said stud fitting said groove, said stud being adapted to be turned when its lug registers with any one of said recesses or when it is fully inserted into said bore, whereby in the latter case its lug travels up on said incline, a pin adapted to be disposed in said groove to prevent relative rotation of the parts when in coupled positions, and a spring carried by said stud suited to prevent accidental relative rotation of the parts when said lug has reached the top of said incline.

2. In a separable button, the combination with a head having a shank provided with a bore and a groove extending throughout the length of said bore, recesses being formed in said bore merging into said groove, whereby a row of ratchet teeth-like projections is provided, the inner end of said shank projecting into said head and having an incline, of a back having a stud adapted to be inserted into said bore, a lug upon the upper end of said stud fitting said groove, said stud being adapted to be turned when its lug registers with any one of said recesses or when it is fully inserted into said bore, whereby in the latter case its lug travels up on said incline, a stop for limiting the upward travel of said lug on said incline, a pin adapted to be disposed in said groove to prevent relative rotation of the parts when in coupled positions, and a spring carried by said stud suited to prevent accidental relative rotation of the parts when said lug has reached the top of said incline.

1,115,126. BLIND-FASTENER. PASCAL H. STEDMAN, Newport, R. I. Filed Aug. 27, 1913. Serial No. 786,901. (Cl. 16—128.)

1. In a blind fastener, the combination with a blind having a vertically formed slot, of a latch bar pivoted intermediate its length in the slot, said latch bar being provided at its ends with heads, one of the heads being provided with a downwardly extending slot and an upwardly inclined cam face for engagement with a staple and the other of said heads with an upwardly extending slot and a downwardly inclined cam face for engagement with a staple, a latch operating lever passed through the latch bar adjacent one head and pivotally connected at one end to the blind, and a guide staple limiting the swinging movement of the free end of said lever.

2. In a blind fastener, the combination with a blind having a vertically formed slot, of a latch bar pivoted intermediate its length in the slot, said latch bar being provided at its ends with heads, one of the heads being provided with a downwardly extending slot and an upwardly inclined cam face for engagement with a staple and the other of said heads with an upwardly extending slot and a downwardly inclined cam face for engagement with a staple, a latch operating lever passed through the latch bar adjacent one head and pivotally connected at one end to the blind, a guide staple limiting the swinging movement of the free end of said lever, and a stop adjacent the staple adapted to support the lever in one position and to lock the same against movement in another position.



3. In a blind fastener the combination with a blind having a vertically disposed slot, of a slotted plate secured to one face of the blind with its slot in alinement with the slot thereof, supporting plates secured one upon either side of the slot upon the other side of the blind and having arms extending into the slot, a latch bar pivotally mounted between the arms of said plates and provided at its ends with oppositely formed staple-engaging heads, said latch bar being provided adjacent one head with an opening, a lever formed of resilient material extending loosely through the opening and pivoted by one end to the blind, a vertically disposed guide staple carried by the blind and through which the free end of the lever extends, and a stud carried by the blind in slightly spaced relation below the lower arm of the guide staple and with its outer end terminating short of the bight portion of said staple.

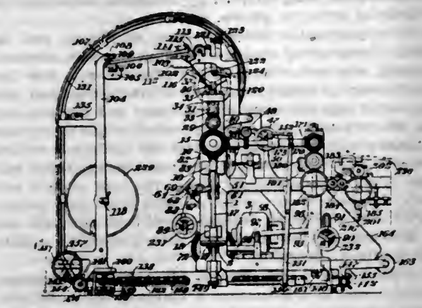
4. In a blind fastener, a latch bar adapted to be pivotally mounted intermediate its length and provided at its ends with heads, one of the heads being provided with a downwardly extending V-shaped slot and the other of said heads with an upwardly extending V-shaped slot, said slots, at their inner ends, being narrower than the keepers they are to seat.

1,115,127. WEB INTAGLIO-PRINTING PRESS. BENJAMIN R. STICKNEY, Ticonderoga, N. Y. Filed Aug. 7, 1913. Serial No. 783,583. (Cl. 101—104.)

1. In a web intaglio printing press, a printing or plate cylinder having a continuous periphery provided with spaced apart gripper openings, and adapted to receive an intaglio printing plate, shafts arranged longitudinally within the cylinder and extending the length thereof and grippers fixed directly to said shaft and arranged within said cylinder and adapted to project through the openings to engage the plate and hold it in printing position on the cylinder.

2. In a web intaglio printing press, a printing cylinder having a continuous periphery provided with spaced apart gripper openings, and adapted to receive intaglio printing plates, having undercut notches in their ends, shafts mounted longitudinally in said cylinder, grippers on said shafts having their plate-engaging points projecting through said openings to engage the said notches, and means to hold the grippers in engaging relation.

3. In a web intaglio printing press, a printing cylinder adapted to receive an intaglio printing plate, combined with an impression cylinder, comprising a shaft, end collars fixed thereon, and a contact surface made as a shell, the end collars and the shell having means to movably suspend said shell between said collars so that said shell shall be out of contact with the shaft between said collars, said collars constituting the sole support for said shell.

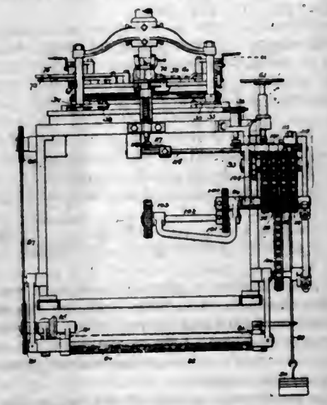


4. An impression cylinder for printing presses, comprising a shaft, collars fixed thereon, and a cylindrical shell movably suspended about the shaft between said collars and wholly out of direct or other contact with said shaft excepting through said collars, said collars constituting the sole support for said shell.

5. An impression cylinder for plate printing machines, comprising a shaft, collars fixed on said shaft and having lugs projecting toward one another, and a contact surface made as a cylindrical shell arranged between said collars and having notches to engage said lugs, so that said shell may yield uniformly throughout its length to conform to the printing cylinder, said collars constituting the sole support for said shell.

[Claims 6 to 23 not printed in the Gazette.]

1,115,128. KNITTING-MACHINE. HARRY SWINGLEHURST, Philadelphia, Pa., assignor, by mesne assignments, to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 26, 1910. Serial No. 573,990. (Cl. 66—22.)



1. The combination, in a knitting machine, of a yarn changer, a stitch cam adjustable to change the length of stitch, pattern mechanism, and intervening devices whereby both the character of the yarn and the length of stitch are controlled by said pattern mechanism, said devices being so disposed that the change of stitch precedes one yarn change and follows another.

2. The combination, in a knitting machine, of a plurality of yarn changing devices, a plurality of stitch cams each adjustable to change the length of stitch, pattern mechanism, intervening devices whereby, under the control of the pattern mechanism, all of the yarn changes are simultaneously actuated, and devices also under control of the pattern mechanism whereby all of the stitch-changing devices are simultaneously actuated, said intervening devices being so disposed that the change of stitch precedes one yarn change and follows another.

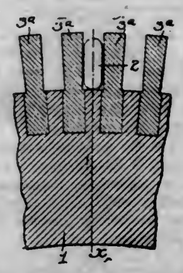
3. A knitting machine having at each of a plurality of feeding points means for feeding a plurality of yarns, and means operative during a series of complete courses for introducing and removing one of the yarns at intervals so as to produce horizontal stripes of different thickness, the last-said means causing the change of yarn at the different feeders to occur at substantially different points in the width of the fabric, in combination with a plurality of needle-actuating stitch-cams adjustable to draw longer or shorter yarn-loops, and means for automatically actuating the several stitch cams conjointly with the change in the yarn feed to cause the length of stitch to correspond with the thickness of the fabric.

4. In a knitting machine, the combination of means for feeding a plurality of yarns at each of a number of feeding points, means operative during a series of complete courses for introducing and removing one of the yarns at intervals and adapted to produce the change of yarn at the several feeders at substantially different points in the width of the fabric, mechanism actuated coincidently with the last-said means, for drawing longer yarn loops in the thicker fabric and shorter loops in the thinner fabric, a fabric take-up, and means for automatically adding tension to said take-up when the thicker fabric is being knitted and relieving such tension in the thinner fabric.

5. In a circular knitting machine, the combination of a plurality of needle-actuating stitch-cams located at different knitting points and adjustable to draw longer or shorter yarn-loops, a plurality of yarn-changers adapted to feed yarns simultaneously at the several knitting points around the fabric and to change from one yarn to another, means for simultaneously actuating the several yarn-changers to change the yarn at all of the knitting points at the same time, and means for automatically and conjointly actuating the several stitch-cams to cause the length of stitch to correspond with the kind of yarn which is being knitted.

[Claim 6 not printed in the Gazette.]

1,115,129. KNITTING-MACHINE CYLINDER. HARRY SWINGLEHURST, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Mar. 27, 1912. Serial No. 686,583. (Cl. 66—21.)

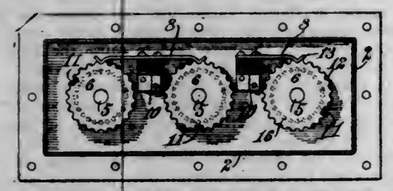


1. The combination of a knitting machine cylinder having parallel-sided grooves therein with inserted walls projecting beyond the periphery of the cylinder so as to form needle guiding grooves between them, the base portion of each of these walls being parallel-sided and fitting snugly in the corresponding parallel-sided groove of the cylinder, but the projecting portion of the wall being of least width where it joins the base but increasing in width as it extends outwardly from said base, and being

of such conformation from end to end of its needle guiding portion, whereby the intervening needle grooves are parallel-sided throughout the needle receiving portions of the same.

2. An inserted wall for a knitting machine cylinder, said wall having a parallel-sided base and a needle guiding portion beyond the base which is of least width where it joins the base and gradually increases in width from the base toward the outer end, the projecting portion of the wall being of such conformation throughout the entire needle guiding portion of the same.

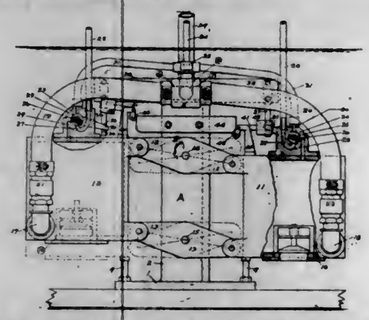
1,115,130. PERMUTATION SWITCH-LOCK. ELMER E. THEIS, Dayton, Ohio. Filed Feb. 9, 1914. Serial No. 817,389. (Cl. 175—282.)



1. In an electric switch, a series of metallic drums each having a series of concentric apertures, an insulating member mounted in the periphery of each of said drums, brushes arranged to engage the drums and the insulating members thereon, pins adapted to be set in the concentric apertures of said drums to limit the rotation thereof, and stops arranged in the paths of said pins to arrest the movement imparted to said drums.

2. In an electric switch lock, the combination with the face plate of the lock casing, having a series of laterally extended apertured bosses, of a series of drums mounted on shafts extending through said apertured bosses, each of said drums having its periphery serrated and concentric openings in the sides thereof, a setting pin adapted to be inserted in said openings, an insulated block set in the periphery of each drum, brushes arranged to engage the periphery of each drum, and stops arranged in the path of each setting pin to arrest the rotation of the drums in the operation of said drums.

1,115,131. PNEUMATIC WATER-ELEVATOR. EDWIN E. THOMAS, Portland, Oreg., assignor of one-half to Harry O. Tenney, Portland, Oreg. Filed Jan. 20, 1913. Serial No. 743,092. (Cl. 103—8.)

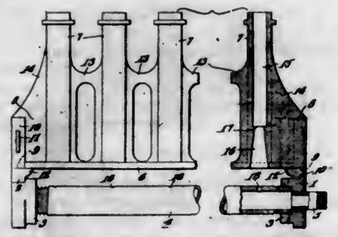


1. A submerged pneumatic water elevator of the character described, comprising in combination, a source of air under pressure, a supporting standard submerged, two vertically spaced rocker arms pivotally mounted upon said standard, two water containers pivotally connected near their tops and bottoms to the opposite ends of said rocker arms, whereby they can move alternately in opposite directions vertically, stops for limiting the downward movement thereof, valve-controlled inlets and outlets for water near the bottom of said containers, water pipes from said outlets, inlet and exhaust ports near the tops of said containers for compressed air, supply pipes from said source of compressed air to said inlet ports, and exhaust pipes from said exhaust ports, valve members controlling said inlet and exhaust ports and operable by the vertical movement of said containers, means for retarding the initial upward movement of each container, and the whole of said mechanism being adapted for complete submersion in said body of water as shown.

2. In a pneumatic water elevator as shown and described, a supporting standard having pivotally mounted thereupon, one above the other, two rocker arms, two water containers pivotally connected at their tops and bottoms, to the opposite ends of said upper and lower rocker arms, whereby said containers can move vertically without any tipping movement, valve-controlled inlets and outlets for water in the bottoms of said containers, valve controlled inlets and outlets for air in the tops of said containers, a source of air under pressure with pipe connections to said air inlets, exhaust pipes from said air outlets, and water pipes connected with the water outlets, substantially as described.

3. A pneumatic water elevator adapted to be submerged and comprising in combination, a source of air under pressure, a supporting standard submerged, two water containers pivotally connected near their tops and bottoms to the opposite ends of two vertically spaced rocker arms which are pivotally connected at their middles to said supporting standard, whereby said containers can move in opposite directions vertically and without tilting movement, valve-controlled inlets and outlets in the bottoms of said containers, delivery pipes connected with said outlets, a three-way valve casing mounted directly upon each of said containers and communicating therewith, pipe connections from said casings to said source of air under pressure, exhaust pipes from said valve casings, valve members in said three-way valve casings for controlling the communication between said ways, means operating said valve members with the vertical bodily movement of said containers, and means capable of regulation for retarding the movement vertically of said submerged containers, said means comprising an adjustable weight upon a lever, substantially as shown and described.

1,115,132. HYDROCARBON-BURNER. CHARLES H. TOPP, Huntington, W. Va. Filed Jan. 31, 1914. Serial No. 815,742. (Cl. 158—106.)



1. In a gas burner, a pair of carriers, a gas chamber having its terminals threadedly engaging the carriers, a body including a series of mixing tubes, the said chamber having outlet apertures coöperating with the tubes, and means for detachably securing the terminal portions of the body and carriers together.

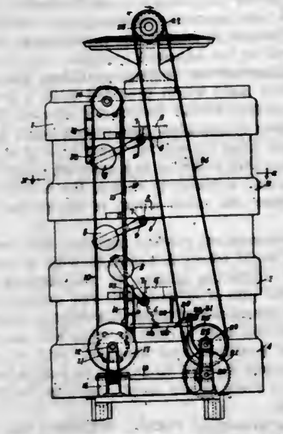
2. In a gas burner, a pair of carriers, a gas chamber having its terminals threadedly engaging the cariers, and a body including a series of mixing tubes and terminal tongues, the said carriers having slots receiving the said tongues, and the said chamber having outlet apertures cooperating with the said tubes.

3. In a gas burner, a pair of carriers, having slotted extensions, a gas pipe having its terminals in threaded engagement with the carriers, and a body including a series of mixing tubes having its terminals engaging within the slots of the said extensions, the said pipe having outlet apertures coöperating with the said tubes.

4. In a gas burner, a pair of end castings having taps and standards provided with slots and ledges, a gas pipe having its terminals threadedly received by the said taps, and a body casting including an elongated base having upstanding mixing tubes, webs connecting the companion tubes, and terminal tongues, the terminal tongues of the body casting engaging the slots of the said standards, and the terminals of the said base seating upon the said ledges.

5. In a gas burner, a pair of carriers, having open slots, a gas chamber having its terminals in threaded engagement with the carriers, a body having terminal portions fitting within the said slots and including a series of mixing tubes, the said chamber having outlet apertures coöperating with the said tubes, and means carried by the carriers for engaging the terminal portions of the body to retain the same in place.

1,115,133. GATE-CONTROLLING DEVICE FOR COOKERS. RUSSELL A. TRACE, Dayton, Ohio, assignor to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 13, 1914. Serial No. 831,448. (Cl. 87—6.)



1. In a cooker, the combination, with a plurality of receptacles, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and actuating devices for imparting movement to said gates, of a controlling device comprising a vertically movable member, and a part carried by said member to successively engage the actuating device for each of said gates to quickly open that gate and to remain in operative engagement with said actuating device to retain the gate in its open position for a period of time.

2. In a cooker, the combination, with a plurality of receptacles, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and actuating devices for imparting movement to said gates, of a controlling device comprising a vertically movable member, and a tripping block adapted to successively engage the actuating device for each of said gates.

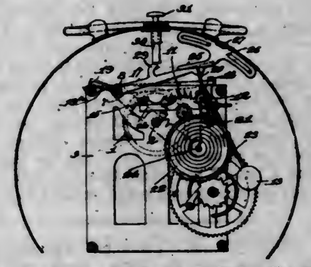
3. In a cooker, the combination, with a plurality of receptacles, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and actuating devices for imparting movement to said gates, of a controlling device comprising a flexible member supported adjacent to said cooker, means for imparting lengthwise movement to said flexible member, and a tripping block carried by said flexible member.

4. In a cooker, the combination, with a plurality of receptacles, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and actuating devices for imparting movement to said gates, of a controlling device comprising a flexible member supported adjacent to said cooker, means for imparting lengthwise movement to said flexible member and comprising a series of sections arranged in alinement lengthwise of said flexible member and presenting a continuous surface to said actuating devices.

5. In a cooker, the combination, with a plurality of receptacles, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and actuating devices for imparting movement to said gates, of a controlling device comprising an endless belt mounted adjacent to said cooker for vertical movement, and a flexible tripping block carried by said endless belt and arranged to successively engage each of said actuating devices for said gates.

[Claims 6 to 21 not printed in the Gazette.]

1,115,134. ALARM MECHANISM FOR CLOCKS. HOWARD J. TREGANZA, New York, N. Y., assignor to Ansonia Clock Company, New York, N. Y., a Corporation of Connecticut. Filed Mar. 19, 1914. Serial No. 825,864. (Cl. 58—16.)



1. In an alarm mechanism for clocks, the combination with the alarm mechanism, of mechanism for automatically stopping the alarm, said mechanism employing a plane spiral cam operated by the alarm mechanism; and a finger engaging said cam and moved thereby, substantially as set forth.

2. In an alarm mechanism for clocks, the combination with the alarm mechanism, of mechanism for automatically stopping the alarm, said mechanism employing a plane spiral cam operated by the alarm mechanism; and a finger engaging said cam and moved thereby, and a determining device for adjusting the point at which said finger may engage the cam to thereby regulate the sounding period of the alarm, substantially as set forth.

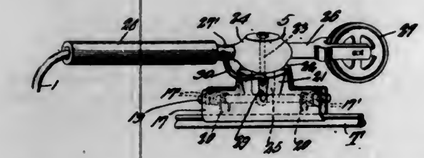
3. In an alarm mechanism for clocks, the combination with the alarm mechanism employing an oscillating pallet of an arm adapted to be moved so as to stop the pallet, a finger carried by said arm, and a plane spiral cam operated by the alarm mechanism and with which said finger coöperates so as to thereby move the arm into position to stop the pallet, substantially as set forth.

4. In an alarm mechanism for clocks, the combination with the alarm mechanism employing an oscillating pallet, of a pivoted arm carrying a locking finger normally out of vertical and horizontal alinement with the pallet, a plane spiral cam rotated by the alarm mechanism and formed with a central opening, and a finger coöperating with said cam and carried by said arm whereby the rotation of the cam will move said finger to carry the locking finger into horizontal alinement with the pallet, and the engagement of said finger with said opening will permit the locking finger to be moved into vertical alinement with the pallet to thereby automatically lock the alarm mechanism, substantially as set forth.

5. In an alarm mechanism for clocks the combination with the alarm mechanism employing an oscillating pallet, of a pivoted arm carrying a locking finger normally out

of vertical and horizontal alinement with the pallet, a plane spiral cam rotated by the alarm mechanism and formed with a central opening, and a finger coöperating with said cam and carried by said arm whereby the rotation of the snail will move said finger to carry the locking finger into horizontal alinement with the pallet, and the engagement of said finger with said opening will permit the locking finger to be moved into vertical alinement with the pallet to thereby automatically lock the alarm mechanism, and means for determining the point at which said finger shall engage the cam to thereby regulate the alarm period, substantially as set forth.

1,115,135. ELECTRIC TERMINAL CONNECTOR. FREDRICK WAGNER, Natrona, Pa. Filed Jan. 2, 1913. Serial No. 739,919. (Cl. 173—273.)



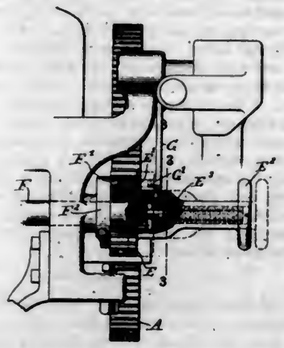
A terminal connector, comprising two substantially T-shaped members, the legs of each of which is recessed upon its inner face, two apertured lugs upon the inner face of the head of each member, a rod fitted through all of the lugs and forming a hinge for the members, springs mounted upon the rod and exerting pressure upon the members to separate the jaws formed by the hinge of the members, an elliptical cam fitted in the recesses between the legs of the members to be oscillated to spread the legs to close the jaws, and a handle for oscillating the cam connected to the cam for movement in a plane parallel to the rod.

1,115,136. COIN-PURSE. CHARLES WALLERSTEDT, St. Louis, Mo. Filed Dec. 30, 1913. Serial No. 809,527. (Cl. 224—28.)

A wrist purse comprising a strap having a widened portion, a pocket having a bottom which is held against said strap, the marginal edges of said bottom and the widened portion of the strap being flush, the outer face of the pocket having a curved outlet opening therein at one side of its transverse center, said bottom having oppositely disposed winged portions forming the bottoms of other pockets, and straps forming the faces of said pockets upon the wings and provided with openings intermediate the transverse central parts of the pockets and the adjacent marginal edges thereof, the closed portion of the front wall of one pocket upon one wing adapted to close the curved opening in the central pocket when folded, means for holding the pocket on the opposite wing against the outer face of the pocket which closes the opening in the central pocket, and means for fastening the pockets folded.

1,115,137. TYPOGRAPHICAL MACHINE. BURTON L. WHITE and CHARLES W. CURLE, San Francisco, Cal., assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Sept. 21, 1912. Serial No. 721,541. (Cl. 199—13.)

1. In a typographical casting machine, the combination of an adjustable mold carrier provided with a plurality of molds, means to adjust the mold carrier to bring any selected mold into operative position, and relatively fixed supplemental means to engage said adjusting means so as to register the mold carrier in its adjusted position.



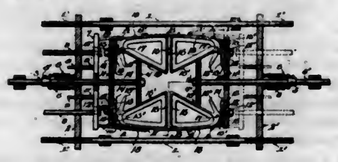
2. In a typographical casting machine, the combination of a rotary mold wheel provided with a plurality of molds, a pinion for adjusting the mold wheel to bring any selected mold into operative positon, and relatively fixed supplemental means to engage the pinion so as to register the mold wheel in its adjusted position.

3. In a typographical casting machine, the combination of a rotary mold wheel provided with a plurality of molds, an actuating pinion therefor, a driving shaft upon which the pinion is mounted, said pinion being adapted to be disconnected from its driving shaft at will so as to adjust the mold wheel to bring any selected mold into operative position, and a device to engage the actuating pinion so as to register the mold wheel in its proper adjusted position.

4. In a typographical casting machine, the combination of the rotary mold wheel A provided with a plurality of molds B, its actuating pinion E, the driving shaft F upon which the pinion is mounted, the said pinion being adapted to be disconnected from the driving shaft at will so as to adjust the mold carrier to bring any selected mold into operative position, and provided with a recess E^2, and the stationary stop G^2 to engage in said recess of the pinion so as to register the mold wheel in its proper adjusted position.

5. In a typographical casting machine, the combination of the mold wheel A, its laterally movable actuating pinion E formed with the recess E^2, the actuating pin F^2 adapted to engage said recess in one position of the pinion, and the stationary registering pin G^2 adapted to engage said recess in another position of the pinion.

1,115,138. STAVE-TAPPING-OUT APPARATUS. FRANK A. WILKES, Milwaukee, Wis., assignor to Wisconsin Barrel & Cooperage Co., Milwaukee, Wis. Filed July 1, 1914. Serial No. 848,357. (Cl. 147—1.)



1. A stave tapping out apparatus comprising a pair of alined spaced heads having annular stave-receiving seats, a series of pivoted radially disposed expansion blocks mounted upon each head adapted to enter the ends of an assemblage of barrel staves, and a yieldable reciprocative expander head engageable with each series of blocks whereby they are forced against said assemblage of staves.

2. A stave tapping out apparatus comprising a pair of slidable plunger-rods, followers connected to the plunger-rods, spindles in threaded union with the followers, heads in slidable union with the plunger rods having annular stave-receiving seats, a series of expansion blocks in pivotal union with each head, and chucking disks carried by said plunger-rods for engagement with the expansion blocks.

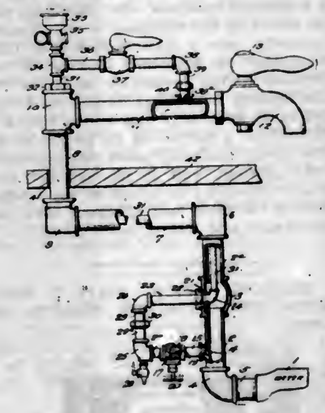
3. A stave tapping out apparatus comprising a pair of slidable plunger-rods, followers yieldably connected to the plunger-rods, spindles in threaded union with the followers, heads in slidable union with the plunger rods having annular stave-receiving seats, a series of expansion blocks in pivotal union with each head, and chucking disks carried by said plunger-rods for engagement with the expansion blocks.

4. A stave tapping out apparatus comprising a pair of alined spaced heads having adjustable annular stave-receiving seats, a series of radially disposed shiftable expansion blocks mounted upon each head adapted to enter the ends of an assemblage of barrel staves, and a reciprocative expander head engageable with each series of blocks whereby they are forced against said assemblage of staves.

5. A stave tapping out apparatus comprising a pair of axially alined spaced heads having annular stave-receiving seats, a series of radially disposed expansion blocks pivoted to each head, the expansion blocks being provided with obliquely disposed cam faces and tappet fingers, and reciprocative chucking disks arranged to engage the cam faces and tappet fingers whereby the blocks are expanded and contracted.

[Claims 6 and 7 not printed in the Gazette.]

1,115,139. WATER SYSTEM. THOMAS C. WILKES and SELDEN E. PHILLIPS, Jackson, Mich. Filed June 2, 1914. Serial No. 842,404. (Cl. 137—79.)



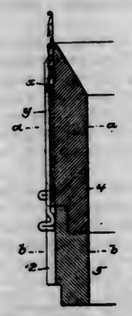
1. In combination with the service pipe connected to the meter at one end and having a discharge valve at the opposite end, of a pipe of less diameter arranged partly within the service pipe, the service pipe having vertical portions adjacent to the discharge valve and adjacent to the meter, the upper end of the small pipe extending through the upper end of the vertical portion adjacent to the discharge valve and having a lateral branch above the said vertical portion and a receptacle above the branch, a valve for controlling the communication between the receptacle and the small pipe, a pipe leading from the lateral branch and opening into the discharge pipe near the discharge valve, a valve interposed in the said last-named pipe for closing the communication through the same, said small pipe extending laterally through the wall of the service pipe at the vertical portion adjacent to the meter, a downwardly extending discharge pipe connected with the lateral extension and provided with a discharge valve at its lower end and with a lateral outlet above the discharge valve, a pipe leading from the lateral outlet and communicating with the vertical portion of the service pipe adjacent to the meter, and a valve interposed in the said pipe.

2. In combination with the service pipe connected to the meter at one end and having a discharge valve at the opposite end, of a pipe of less diameter arranged partly within the service pipe, said small pipe extending beyond the service pipe at its upper end and having a lateral branch communicating with the service pipe near the discharge valve, a valve for controlling the lateral branch, a receptacle connected with the upper end of the small pipe above the lateral branch, a valve between the receptacle and the small pipe, the small pipe extending outside of the service pipe near the meter and then extending into the service pipe near the meter, and having a discharge valve at its lowest portion, and a valve interposed between the last-named discharge valve and the service pipe.

3. In combination with the service pipe connected to the meter at one end and having a discharge valve at the opposite end, of a pipe of less diameter arranged partly within the service pipe, said small pipe extending beyond the service pipe at its upper end and having a lateral branch communicating with the service pipe near the discharge valve, a receptacle connected with the upper end of the small pipe above the lateral branch, the small pipe extending outside of the service pipe near the meter and then extending into the service pipe near the meter and having a discharge valve at its lowest portion, and a valve interposed between the last-named discharge valve and the service pipe.

4. In combination with the service pipe connected to the meter at one end and having a discharge valve at the opposite end, of a pipe of less diameter leading from the service pipe near the meter and opening into the service near the discharge valve and having a portion intermediate its ends arranged within the discharge pipe, a valve in the said pipe between each end and the portion within the service pipe, and means between the end of the said pipe adjacent to the discharge valve and the portion within the service pipe for admitting liquid to the said pipe.

1,115,140. NEEDLE-CARRIER FOR KNITTING-MACHINES. LOUIS N. D. WILLIAMS, Ogontz, Pa., assignor to General Knit Fabric Company, Utica, N. Y., a Corporation of New York. Filed Nov. 16, 1909. Serial No. 528,308. (Cl. 66—21.)



1. A knitting machine needle carrier having therein needle guiding grooves whose bases, in those portions corresponding to the latch-carrying and butt-carrying portions of the needle stems guided thereby, are in the same longitudinal plane, and whose bases in those portions corresponding to the intermediate portions of the needle stems guided thereby are in a different and higher longitudinal plane.

2. A knitting machine needle carrier having needle guiding grooves therein, the bases of the grooves corresponding with the latch-carrying and butt-carrying portions of the needle stems being in the same longitudinal

plane and the bases of the guide grooves for the intermediate portions of the needle stems being in a different and higher longitudinal plane, whereby said needle carrier is adapted for use with needles having their latch-carrying and butt-carrying portions in a different plane from the intermediate portions.

3. A knitting machine needle carrier having alternate deep and shallow grooves whereby it is adapted for use with a needle having its butt-carrying portion guided in and bearing upon the base of the deep groove and its main stem guided in and bearing upon the base of the shallow groove.

1,115,141. TYPOGRAPHICAL MACHINE. FERGUS F. WILSON, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 11, 1912. Serial No. 725,115. (Cl. 199—13.)

1. A slotted mold formed in its front surface with transverse cavities communicating with the mold slot and extending therefrom substantially in a perpendicular plane, so as to produce a slug with overhanging character bearing portions on its edge adapted to overhang an adjacent member, which portions are cast in said cavities.

2. A slotted mold provided with a removable section formed with transverse cavities communicating with the mold slot and extending therefrom substantially in a perpendicular plane, so as to produce a slug with overhanging character bearing portions adapted to overhang an adjacent member, which portions are cast in said cavities.

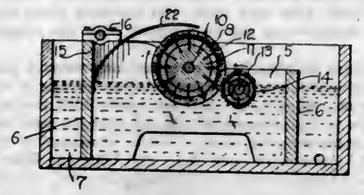
3. A slotted mold formed with transverse cavities located in and below its front surface and communicating with the mold slot and extending therefrom substantially in a perpendicular plane, so as to produce a slug with reinforced overhanging character bearing portions adapted to overhang an adjacent member, which portions are cast in said cavities.

4. A slotted mold formed with transverse cavities formed in its front surface and communicating with the mold slot and extending therefrom substantially in a perpendicular plane, in combination with a matrix formed with cavities registering with those on the mold; whereby a slug is produced with overhanging character bearing portions which are formed partly in the mold and partly in the matrix.

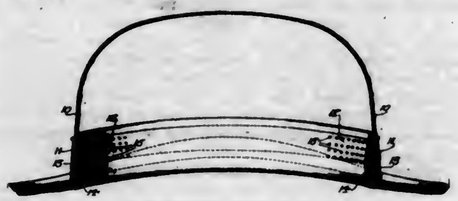
5. A slotted mold formed with a transverse cavity in its front surface and communicating with the mold slot and extending therefrom substantially in a perpendicular plane, in combination with a matrix having a depression registering with said cavity; whereby a slug is produced with a reinforced overhanging character bearing portion.

1,115,142. VEGETABLE-WASHING MACHINE. JOSEPH C. WIRTZ, New Castle, Pa. Filed Feb. 2, 1914. Serial No. 816,063. (Cl. 146—14.)

The combination with a water containing trough, of a vegetable washing machine including a frame adapted to be arranged in said trough, a pair of parallel rotary brushes mounted in said frame, said brushes being of relatively different diameters and the smaller brush disposed wholly below the rotative axis of the other brush and adapted to support and direct the vegetables against the bristles of the latter brush, the lower portion of the larger brush extending below the water level and the major portion of said smaller brush extending below the water level, and means for rotating said brushes in opposite directions to copiously supply the water to the vegetables.



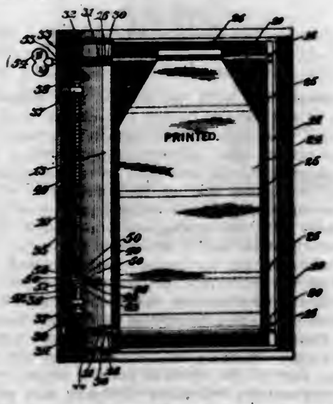
1,115,143. SWEAT-BAND. EDWIN M. WOOD, Detroit, Mich. Filed Apr. 13, 1914. Serial No. 831,485. (Cl. 2—32.)



1. An auxiliary sweat band for a hat consisting of a strip of flexible waterproof material of a length and width such that it may be readily inserted between the usual inner sweat band and the adjacent wall of the hat and of a variable thickness, the lower edge having a thickness in excess of the thickness of the remainder of the strip, whereby only a limited portion of the usual band bears against the head and thus leaves more of the head exposed to the circulation of air in the hat.

2. The combination with a hat having an inner sweat band secured at its lower edge and having a zone of perforations throughout a portion of its length, of an auxiliary flexible sweat band interposed between said inner band and the adjacent wall of the hat and having a lower edge of a thickness in excess of the thickness of the remainder of the band, said thickened lower edge being positioned below said zone of perforations.

1,115,144. READING DEVICE. FRANK D. WOODLOCK, St. Louis, Mo. Filed Oct. 8, 1912. Serial No. 724,679. (Cl. 40—93.)



1. A reading device comprising a casing, a cover hinged on said casing, a lens mounted in said cover, a pair of rolls adapted to receive a printed sheet, said rolls being

mounted in said casings for movement toward and from said cover, springs for sustaining said rolls, constructed to permit said rolls to automatically adjust themselves with respect to said lens as the sheet rolls from one roll to the other, and a series of guide rods extending across said casing in the space between the rolls and arranged directly underneath said lens and underneath the sheet, adapted to constantly maintain the sheet between the rolls in a predetermined position underneath said lens, to cause said lens to expose and magnify the printed matter on the sheet, said rolls and sheet being maintained in position by said cover when closed, and being removable when said cover is open.

2. A reading device comprising a casing, a lens mounted on said casing, a pair of rolls in said casing adapted to receive a printed sheet together with means for automatically maintaining said rolls and the sheet between said rolls in a position with respect to said lens to cause said lens to expose and magnify the printed matter on the sheet, and operating means having a flexible connection with one of said rolls.

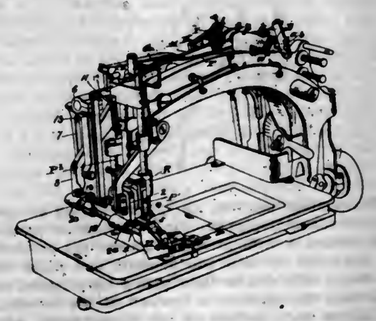
3. A reading device comprising a casing, a lens mounted on said casing, a pair of rolls in said casing adapted to receive a printed sheet together with means for automatically maintaining said rolls and the sheet between said rolls in a position with respect to said lens to cause said lens to expose and magnify the printed matter on the sheet, including means for adjustably supporting one of said rolls in said casing, and operating means on said casing having an automatically adjustable connection with said roll.

4. A reading device comprising a casing, a lens mounted on said casing, a pair of rolls in said casing adapted to receive a printed sheet together with means for automatically maintaining said rolls and the sheet between said rolls in a position with respect to said lens to cause said lens to expose and magnify the printed matter on the sheet, and driving means having flexible driving connections with said rolls.

5. A reading device comprising a casing, a lens mounted on said casing, a pair of rolls in said casing adapted to receive a printed sheet together with means for automatically maintaining said rolls and the sheet between said rolls in a position with respect to said lens to cause said lens to expose and magnify the printed matter on the sheet, including means for removably and adjustably supporting one of said rolls in said casing, and driving means having a removable and flexible driving connection with one of said rolls.

[Claim 6 not printed in the Gazette.]

1,115,145. SEWING AND RUFFLING MACHINE. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 14, 1903. Serial No. 165,491. (Cl. 112—16.)



1. In a sewing machine, a presser foot, a ruffling mechanism with means for operating the same, and means for successively raising the presser foot and throwing the ruffler into operation and for successively raising said presser foot and throwing the ruffler out of operation; substantially as described.

2. In a sewing and ruffling machine, a presser foot, means for successively raising the presser foot and throwing the ruffler out of action, means for lowering the presser foot, and means for successively raising the presser foot and throwing the ruffler into action; substantially as described.

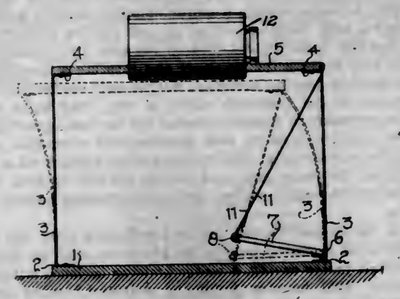
3. In a sewing and ruffling machine, means for operating the ruffler, a presser foot, means under the control of the operator for successively raising the presser foot and throwing the ruffler out of operation, and for successively raising the presser foot, and throwing the ruffler into operation; substantially as described.

4. In a sewing and ruffling machine a supporting frame, a ruffling mechanism attached to a support pivoted on the frame, a lever for operating said support, a presser foot, a lever for operating the same, and means for successively operating said levers; substantially as described.

5. In a sewing and ruffling machine a supporting frame, a ruffling mechanism attached to a support pivoted to the frame, a lever for operating said support, a presser foot, a lever for operating the same, and a shaft provided with a series of cams successively operating upon said levers; substantially as described.

[Claims 6 to 37 not printed in the Gazette.]

1,115,146. CHURN. SAMUEL B. YODER, Lindsay, Cal. Filed Feb. 26, 1914. Serial No. 821,300. (Cl. 31—18.)

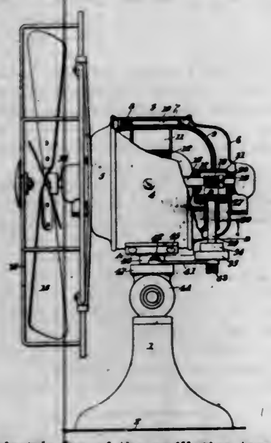


A device of the character comprising an elongated base, spaced resilient members projecting upwardly from the base, a top board connected to the upper extremities of the resilient members and disposed horizontally, said top board being provided with means to engage a receptacle, a treadle pivotally connected with the base board adjacent one end and disposed inwardly thereof, a cross bar carried by the inner end of the treadle and projecting beyond opposite sides thereof, flexible members connected to the projected portions of the cross bar and to the adjacent end of the top board, said flexible connections under the influence of the resilient members serving to hold the free end portion of the treadle elevated above the base board and serving to impart a downward and forward movement to the top board when the treadle is depressed and permitting a vibratory return of the top board when pressure on the treadle is removed.

1,115,147. ELECTRIC FAN. HENRY L. ZABRISKIE, Westfield, and FREDERICK DIEHL, Elisabeth, N. J., assignors to Diehl Manufacturing Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Feb. 27, 1913. Serial No. 751,182. (Cl. 230—1.)

1. In an electric fan of the oscillating type, the combination of a motor having an armature and an armature shaft, a motor casing, a motor housing inclosed within the casing, said housing having an end portion provided with a box-like enlargement located between the armature and the rear bearing for its shaft and forming a compartment, oscillating gearing arranged within said compartment and geared to the armature shaft, a normally disposed rotary shaft extending outside of the compartment and casing

and operatively connected with the gearing in the compartment, a crank-disk applied to said outside shaft, and means to convert the rotary motion of the outside shaft into an oscillating motion of the fan.



2. In an electric fan of the oscillating type, the combination of a motor having an armature and an armature shaft, a motor casing, a motor housing inclosed within the casing, said housing having an end portion provided with a box-like enlargement located between the armature and the rear bearing for its shaft and forming a compartment, oscillating gearing arranged within said compartment and geared to the armature shaft, a cap fitted tight to said compartment to thereby conceal the inclosed gearing, a rotary shaft driven by said gearing and extending outside of the compartment and casing and provided with a crank-disk at its outer end, and means applied to said disk to convert its rotary motion into an oscillating motion of the fan.

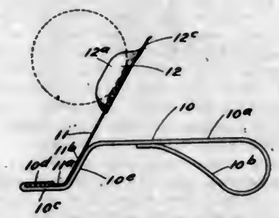
3. In an electric fan of the oscillating type, the combination of a motor having an armature and an armature shaft, a motor casing, a motor housing inclosed within said casing, said housing having a gear-box located between the armature and the rear bearing of the armature shaft, reducing gearing arranged in said gear-box and operatively connected with the armature shaft, a normal shaft operatively connected with the gearing in the gear-box and extending thence outwardly through said gear-box and casing, a crank-disk on the outer end of said shaft, a base on which the described mechanism is mounted so as to be capable of turning thereon axially, and means reactively connecting said crank-disk and the base to effect the oscillation of the fan.

4. In an electric fan, an oscillating mechanism actuated by the fan motor, and including a link, a crank disk, and a crank carrier to which the link is eccentrically pinned and mounted in said crank disk and adapted to be turned in one direction only to vary the radius of the link with respect to the crank disk, combined with an automatically operating safety device interposed between the crank disk and its operating mechanism and itself operative in a direction of rotation opposite to that in which the crank carrier is turned for adjustment.

5. In an electric fan, a base, an oscillating mechanism actuated by the fan motor and including a link pivoted at one end to the base, a rotary crank disk, and a crank-carrier eccentrically mounted in the crank disk and to which the other end of the link is eccentrically pinned, said crank-carrier adapted to be turned in one direction only to vary the radius of the link with respect to the crank disk, combined with an automatically operating safety device interposed between the crank disk and its rotating mechanism and itself operative in a direction of rotation opposite to that in which the crank-carrier is turned for adjustment.

[Claim 6 not printed in the Gazette.]

1,115,148. TOY. JOHN W. ZIMMERMAN, Chicago, Ill.; Fred L. Manton administrator of said Zimmerman, deceased. Filed Aug. 9, 1913. Serial No. 783,895. (Cl. 124—1.)

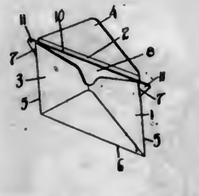


1. In a device of the class described, a member having a handle portion and an inclined portion, a spring strip carried by said member and contacting with said inclined portion, said strip having a portion projecting beyond said inclined portion to a point adjacent to said handle portion, said projecting portion of said strip being adapted to be bent down, a disk holder carried by said strip and adapted to project a disk therefrom when released after bending down of said strip.

2. In a device of the class described, a member having an inclined portion, said member being looped adjacent one extremity and offset adjacent its other extremity, the inclined portion connecting the offset and main portions, a spring strip secured to said member, said strip having a portion contacting with said inclined portion of said member, and a portion projecting beyond said inclined portion and adapted to be bent down toward said member, and means carried by said strip to hold a disk for projection therefrom when said strip is released after being bent down.

3. In a device of the class described, a member having a looped portion adjacent one extremity, an offset portion adjacent its other extremity, an inclined portion extending between the offset portion and the main portion of said member, a spring strip having a portion lying along the offset extremity of said member, the extremity of said offset portion being bent over to engage and secure said extremity of said spring strip, the latter having a portion in contact with the inclined portion of said member and extending upwardly therefrom, said upwardly extending portion being provided with means to hold a disk and adapted to be bent downwardly toward said member and to project a disk therefrom when released after such bending.

1,115,149. ENVELOP. EDWIN ADAM, Newark, N. J. Filed July 9, 1913. Serial No. 778,024. (Cl. 229—85.)



1. The combination with an envelop having an opening in one end edge adjacent the flap, of an opener comprising a sheet having a straight edge adjacent the envelop flap longer than the envelop and opposite end edges one of which forms with said straight edge a tab adapted to project through the opening in the end of the envelop, the width of the body portion of the opener being substantially equal to the width of the envelop, whereby the said straight edge of the opener extends the entire length of the base of the flap and forms therewith a slit to receive a letter or the like and guide the same into the envelop.

2. The combination with an envelop having opposite openings in its end edges adjacent the flap, of an opener comprising a sheet having a straight edge adjacent the envelop flap and two converging edges intersecting said first-mentioned edge at acute angles a distance apart on said edge greater than the length of the envelop, said edge and the cutting edges forming tabs projecting through said openings in the envelop and the width of the opener being substantially equal to the width of the envelop, whereby said opener is held by said tabs with its said straight edge of the opener extending the entire length of the base of the flap and forming therewith a slit to receive a letter or the like and guide the same into the envelop.

1,115,150. ART OF CONDITIONING PRINTED PAPER. PETER AITCHISON, New Rochelle, N. Y., assignor to American Bank Note Company, New York, N. Y., a Corporation of New York. Filed Feb. 7, 1913. Serial No. 746,844. (Cl. 101—112.)

1. An art of conditioning printed paper including therein the bringing of an insert sheet of material coated with a substance having no affinity for the oily or greasy vehicle of the ink, and rendering said material impenetrable to atmosphere and substantially non-absorbent, in contact with the printed surface of a sheet of dampened paper upon delivery from the press and allowing said sheet and said insert to stand until required for another run of the press whereby the ink on said paper is prevented from off-setting upon said insert sheets and the moisture is retained in said paper and is diffused throughout same.

2. An art of conditioning printed paper including therein the piling of freshly printed, dampened sheets of paper with insert sheets contacting with the printed surface of each sheet, said insert sheets being coated with a substance having no affinity for the oily or greasy vehicle of the ink and rendering them impenetrable to atmosphere and substantially non-absorbent and allowing said sheet and said insert to stand until required for another run of the press whereby the ink on said paper is prevented from offsetting upon said insert sheets and the moisture is retained in said paper and is diffused throughout same.

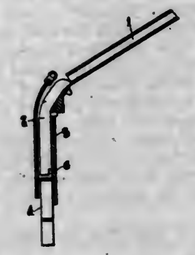
3. An art of conditioning printed paper including therein the piling of freshly printed, dampened sheets of paper alternated with insert sheets coated with a substance having no affinity for the oily or greasy vehicle of the ink and rendering them impenetrable to atmosphere and substantially non-absorbent and allowing said sheet and said insert to stand until required for another run of the press whereby the ink on said paper is prevented from off-setting upon said insert sheets and the moisture is retained in said paper and is diffused throughout same.

4. An art of conditioning printed paper including therein the piling of freshly printed, dampened sheets of paper with insert sheets contacting with the printed surface of each sheet, said insert sheets being coated with a substance having no affinity for the oily or greasy vehicle of the ink and rendering them impenetrable to atmosphere and substantially non-absorbent, each said insert sheet being dampened before being used and allowing said sheet and said insert to stand until required for another run of the press whereby the ink on said paper is prevented from off-setting upon said insert sheets and the moisture is retained in said paper and is diffused throughout same.

5. An art of conditioning printed paper including therein the bringing of an insert sheet of material coated with a substance having no affinity for the oily or greasy vehicle of the ink, and rendering said material impenetrable to atmosphere and substantially non-absorbent, in contact with the printed surface of a sheet of dampened paper upon delivery from the press after all runs excepting the last, piling such printed sheets after the final run with alternate sheets of presser board coated with a substance having no affinity for the oily or greasy vehicle of the ink, and rendering them impenetrable to atmosphere and substantially non-absorbent, and subjecting the pile to continued pressure, whereby the surface of all printed sheets therein is finished.

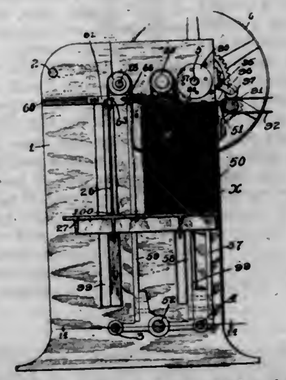
[Claim 6 not printed in the Gazette.]

1,115,151. TYPOGRAPHICAL COMPOSING-MACHINE. CHRISTIAN AUGUSTUS ALBRECHT, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 8, 1914. Serial No 843,704. (Cl. 199—7.)



In a typographical composing machine, the combination with an assembler plate intermediate a magazine and an assembler belt, of guide blades or partitions on the assembler plate, having recesses in their lower ends to avoid contacting with the side walls of the formative cavities of the matrices passing out of the channels between the guide blades.

1,115,152. SHEET-FEEDING MECHANISM. NELS ANDERSON, Chicago, Ill., assignor, by mesne assignments, to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed May 13, 1912, Serial No. 696,920. Renewed Mar. 23, 1914. Serial No. 826,749. (Cl. 101—39.)



1. In a device of the class described a frame, a sheet supporting table movable thereon, mechanism for elevating said table in said frame, adjustable pawl and ratchet means for gaging the upward movement of said table, and a ratchet segment pivoted adjacent said pawl and ratchet mechanism adapted to be engaged by said pawl and lift the pawl over said first mentioned ratchet when the table is elevated beyond a predetermined point.

2. In a device of the class described sheet feeding mechanism comprising a rotatable disk, a plurality of spring actuated friction members mounted radially in said disk, adapted to contact successively an upper sheet to be fed thereby, a friction element mounted on said disk adapted to contact and eject said upper sheet, and means coöperating with said rotatable disk to maintain the uppermost of said sheets in stepped relation.

3. In a device of the class described means for elevating and supporting a stack of sheets, a plurality of rotatable disks mounted thereabove, spring actuated presser elements mounted in said disks adapted to contact the upper sheet of said stack successively to break the vacuum thereunder, a friction element mounted on said disks adapted to contact said uppermost sheet immediately after said

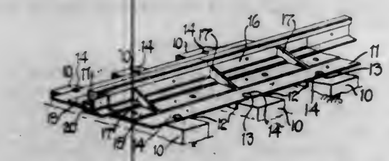
pressure elements to eject the sheets, and resilient means for maintaining the uppermost sheets of said stack in stepped relation.

4. Sheet feeding mechanism comprising a rotatable element, spring thrust means therein adapted to contact an uppermost sheet successively to break the vacuum thereunder, a friction element mounted on said rotatable element to eject said sheet, and parallel resilient fingers rigidly secured at their ends and inclined to maintain the uppermost sheets of a stack in stepped relation.

5. In a machine of the class described rotative adjustable disks, resilient spring thrust pressers therein adapted to successively contact the same sheet and break the vacuum therebeneath before removal thereof, an ejecting element also mounted upon each of said adjustable disks, and means coöperating with said pressing and ejecting elements to maintain the uppermost sheet in stepped relation.

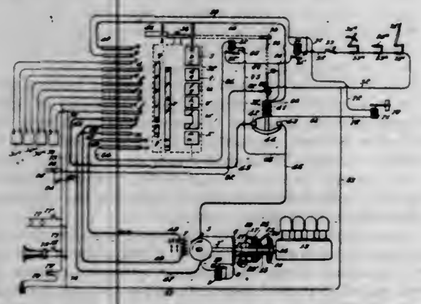
[Claims 6 to 10 not printed in the Gazette.]

1,115,153. RAIL JOINT AND CHAIR. OSCAR ANDERSON, Fort William, Ontario, Canada. Filed June 1, 1914. Serial No. 842,297. (Cl. 239—6.)



A boltless rail chair comprising a foundation plate, a side-support, a guide and a slide, said plate, support and guide forming a rigid construction; said side-support and said slide each having a thin upright member impinging against the head and shank of the rail and transverse flanges reinforcing the upright member; said slide being provided with a horizontally wedge-shaped base portion, one side of which engages the foot of the rail and the other side impinging against and having the same inclination as the inner side of said guide; the guide having an overlapping member engaging the upper side of said base portion and transversely running reinforcing flanges; a pair of diagonally intersecting webs on the under side of said foundation plate between each two ties, said webs forming distance pieces for the ties; an interlocking member engaging in suitable holes in said overlapping member, said wedge-shaped base-portion and said foundation plate respectively.

1,115,154. ELECTRICAL DISTRIBUTION SYSTEM FOR AUTOMOBILE CONTROL. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 12, 1911. Serial No. 654,354. (Cl. 171—315.)



1. In a system of the character described, the combination of an engine, a dynamo, storage batteries, means to connect the dynamo to drive or to be driven by the engine, means to connect the storage batteries in series with the dynamo to drive the latter as a motor, and automatic means to disrupt the series connection and to connect said batteries in parallel with the dynamo, to receive current therefrom as a generator.

2. In a system of the character described, an engine, a dynamo arranged for connection to the engine to drive or to be driven by the latter, means to connect the storage batteries in series with the dynamo to drive the latter as a motor, and means automatically operable in response to current value in the battery-motor circuit to connect the storage batteries in parallel with the dynamo to receive current therefrom as a generator.

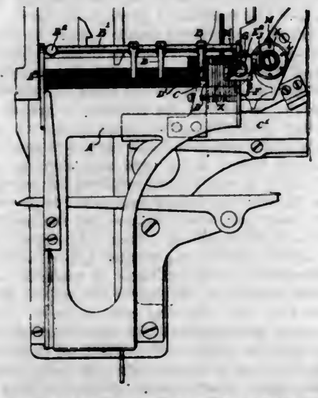
3. In a system of the character described, the combination with a storage batery, of a dynamo electric machine, an engine arranged to drive or be driven by said dynamo electric machine, a controller for connecting said battery and dynamo electric machine for operation either as a motor or a generator, means normally tending to move said controller from motor to generator position, means to hold said controller at the motor position and automatic means to release the said holding means.

4. In a system of the character described, the combination with storage batteries, of a dynamo electric machine, an engine arranged to drive or be driven by said dynamo electric machine, a controller connecting said batteries and dynamo electric machine for operation either as a motor or a generator, means normally tending to move said controller from motor to generator position, means to hold said controller at the motor position and magnetic means responsive to low current value to release said holding means.

5. In a system of the character described, the combination with storage batteries, of a dynamo electric machine, an engine arranged to drive or be driven by said dynamo electric machine, means comprising a circuit for connecting said batteries and dynamo electric machine for operation as a motor, means responsive to current flow in said circuit automatically to rupture said circuit at a predetermined low current value and automatic means to connect the batteries in parallel with the dynamo electric machine upon rupture of said circuit.

[Claims 6 to 22 not printed in the Gazette.]

1,115,155. TYPOGRAPHICAL MACHINE. ALFRED ARCHER, Auburndale, Mass., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 31, 1913. Serial No. 782,186. (Cl. 199—9.)



1. In a typographical machine, the combination with means for assembling matrices in line in groups, of a device for measuring shortages in the successive groups, and an indicator permanently connected to the measuring device.

2. In a typographical machine, the combination with means for assembling matrices in line in groups, and a movable member advanced progressively by the matrices in course of assemblage, of a device for measuring shortages in the successive groups, and an indicator operated by the measuring device, said indicator and measuring device being mounted independently of the before-mentioned movable member.

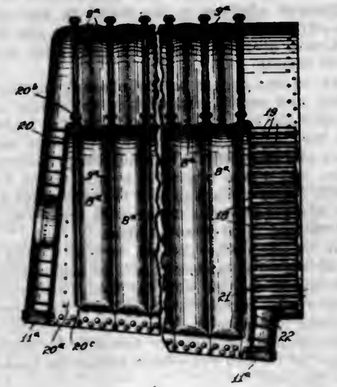
3. In a typographical machine, the combination with means for assembling matrices in line in groups, of a device for measuring shortages in the successive groups, and an indicator operated by the measuring device, the said parts being formed as a unitary structure, so that they may be applied to and removed from the machine as a whole.

4. In a typographical machine, the combination with the assembler wherein the matrices are composed in line in groups, of a device for measuring shortages in the successive groups, and an indicator operated by the measuring device, said parts being mounted upon the assembler.

5. In a typographical machine, the combination with the assembler wherein the matrices are composed in line in groups, of a device mounted upon the assembler for measuring shortages in the successive groups as they are composed.

[Claims 6 to 14 not printed in the Gazette.]

1,115,156. BOILER. ARCHIE M. BAIRD, Topeka, Kans., assignor of one-half to Henry W. Jacobs, Topeka, Kans. Filed Aug. 18, 1913. Serial No. 785,241. (Cl. 122—58.)



1. A boiler provided with a sectional fire-box, the door-sheet and flue-sheet whereof are secured to the adjacent sections of the fire-box and independent of the outer boiler-shell, said sheets being composed of sheet metal formed so as to provide off-set flanges extending substantially parallel with the main or body portions thereof whereby the sheets are secured to the flanges of the fire-box sections so as to permit expansion and contraction in the fire-box without transmitting the stresses to adjacent portions of the boiler and to the flues of the boiler.

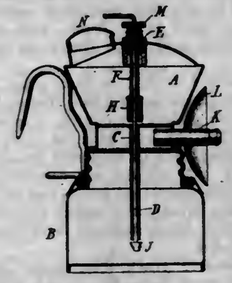
2. In a boiler provided with a sectional fire-box, a flue-sheet secured independently of the outer boiler-shell, composed of sheet metal having three edges thereof off-set so as to provide flanges extending substantially parallel to the main or body portion thereof and to the flanges of the fire-box section to which the flanges are adapted to be secured so as to permit expansion and contraction in the fire-box without transmitting the stresses to the flues of the boiler.

3. In a boiler provided with a sectional fire-box, a door-sheet secured independently of the outer boiler-shell, formed of sheet metal with three edges thereof off-set so as to provide flanges extending substantially parallel to the main or body portion thereof and to the flanges of the fire-box section to which the flanges are adapted to be secured so as to permit expansion and contraction in the fire-box without transmitting the stresses to the adjacent portions of the boiler.

4. In a boiler of the class described provided with a fire-box composed of chamber sections having flanges extending outwardly, the flue and door-sheets whereof are formed so as to provide substantially right angularly extending portions about three edges thereof, with the one or outer portion extending substantially parallel with and beyond the plane of the main or body portion of the sheets and parallel with the flanges of the adjacent fire-box sections to which the sheets are secured, while the other or intermediate portion extends substantially at right angles to the main or body portions of the sheets and is adapted at the lower edges thereof to overlap and be secured to the mud-ring of the boiler.

5. In a boiler of the class described, provided with a sectional fire-box, a door-sheet having its top and side edges off-set so as to provide portions extending substantially parallel with the main portion of the sheet, with the intermediate part of the off-set portion increasing in width toward the bottom of the sheet.

1,115,157. ACETYLENE-GAS LAMP. FREDERIC E. BALDWIN, New York, N. Y. Filed Mar. 30, 1910. Serial No. 552,365. (Cl. 48—4.)



1. In an acetylene gas lamp, the combination with a carbid chamber, of a superposed water chamber, a water tube leading from the water chamber into the carbid chamber, an elastic plug for controlling the flow of water through the tube, a raking wire extending freely through the plug and through the tube, and means independent of the raking wire for positively controlling the position of the plug from the outside of the lamp, said wire having a plug on its lower end exposed to the carbid and increasing the even distribution of the water to the carbid.

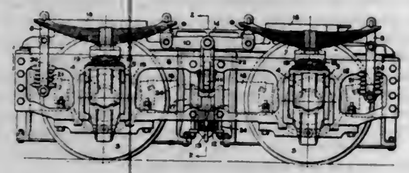
2. In an acetylene gas lamp, the combination with a carbid chamber, of a superposed water chamber, a water tube leading from the water chamber to the carbid chamber, a tube in the water chamber accessible from the outside of the lamp, a threaded connection between the tube and the top of the lamp, an elastic plug carried by the tube and serving to control the flow of water through the water tube, and a raking wire extending through both tubes, said wire having a plug on its lower end exposed to the carbid and increasing the even distribution of the water to the carbid.

3. In an acetylene lamp, the combination with a carbid chamber, of a superimposed water chamber, a water tube leading from the water chamber into the lower portion of the carbid chamber so as to be exposed to the slaked carbid therein, a movable wire extending through said water chamber and said water tube, and provided with a plug on its lower end within the carbid chamber, diminishing the danger of throttling the action of the water, and increasing the even distribution of water to the carbid.

4. In an acetylene lamp, the combination with a carbid chamber, of a superimposed water chamber, a water tube leading from the water chamber into the lower portion of the carbid chamber so as to be exposed to the slaked carbid therein, a movable wire extending through said

water chamber and said water tube, and provided with an enlargement on its lower end within the carbid chamber, said enlargement diminishing the danger of throttling the action of the water, and increasing the even distribution of water to the carbid.

1,115,158. LOCOMOTIVE-TRUCK. ASA F. BATCHELDER, Glenville, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 24, 1914. Serial No. 852,925. (Cl. 105—259.)



1. In a locomotive truck, two wheel axles, journal boxes therefor, a truck frame having side frames in which said journal boxes are slidably mounted, a spring arranged above each journal box and mounted thereon, links and a lever for hanging each of said side frames on the two springs on each side jointly, an equalizing lever supported by said first mentioned levers and extending crosswise of said truck frame, and means for resiliently supporting said truck frame on said equalizing lever.

2. In a locomotive truck, two wheel axles, journal boxes therefor, a truck frame having side frames in which said journal boxes are slidably mounted, a spring arranged above each journal box and mounted thereon, links and a lever for hanging each of said side frames on the two springs on each side jointly, an equalizing lever supported by said first mentioned levers and extending crosswise of said truck frame, and means for resiliently supporting said truck frame between said wheel axles on said equalizing lever.

3. In a locomotive truck, two wheel axles, journal boxes therefor, a truck frame having side frames in which said journal boxes are slidably mounted, a spring arranged above each journal box and mounted thereon, links and a lever for hanging each of said side frames on the two springs on each side jointly, an equalizing lever supported by said first mentioned levers, a leaf spring extending crosswise of said truck frame and beneath the same, and means for supporting said leaf spring from said equalizing lever.

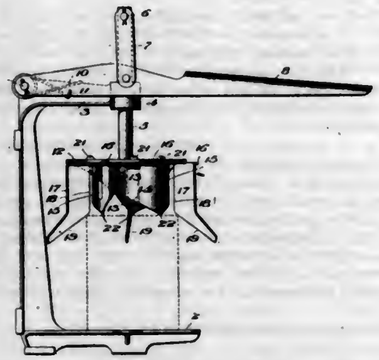
4. In a locomotive truck, two wheel axles, journal boxes therefor, a truck frame having side frames in which said journal boxes are slidably mounted, a spring arranged above each journal box and mounted thereon, links and a lever for hanging each of said side frames on the two springs on each side jointly, an equalizing lever supported by said first mentioned levers, a leaf spring extending crosswise of said truck frame, beneath the same and between said wheel axles, and means for supporting said leaf spring from said equalizing lever.

5. In a locomotive truck, two wheel axles, journal boxes therefor, a truck frame having side frames in which said journal boxes are slidably mounted, a spring arranged above each journal box and mounted thereon, links and a lever for hanging each of said side frames on the two springs on each side jointly, an equalizing lever supported by said first mentioned levers, a leaf spring fastened crosswise of said truck frame, and links for supporting said leaf spring from said equalizing lever.

[Claims 6 to 11 not printed in the Gazette.]

1,115,159. CAN-OPENER. LAWRENCE E. BAUER, Baltimore, Md., assignor of three-fourths to John W. Bauer, Havre de Grace, Md. Filed Sept. 18, 1914. Serial No. 862,282. (Cl. 30—3.)

1. In a device of the character described, the combination with cutting agencies, and means for reciprocating the same toward and from the container to be opened, of means connected to said agencies adapted to contact with said container and thereby adjust the cutting agencies relatively to the diameter of the said container.



2. An opener for containers, said opener provided with a group of cutting blades adapted to remove the top from the container, said opener having, also, a blade-setting mechanism connected to the blades and adapted to engage the container in advance of the blades to thereby automatically adjust the blades with respect to the diameter of the container operated upon and the diameter of the cut to be made therein.

3. A can or like opener having pivotally mounted cutting blades, and means connected to the blades and engageable with the can and adapted to set the blades with respect to the diameter of the can to be operated upon.

4. A can or like opener having adjustably mounted cutting blades, and means connected to said blades and contacting with the can in advance of the blades and adapted to automatically adjust the blades with respect to the diameter of the can to be operated upon.

5. A can or like opener having vertical cutting blades mounted for swinging movement in a horizontal plane, and vertical members movable with the blades and projecting in advance of the cutting edges thereof, and having inclined bottoms to engage the upper edge of the can whereby the said members are spread laterally in response to the diameter of the can to radially adjust the blades with respect to the can.

[Claims 6 to 9 not printed in the Gazette.]

1,115,160. SWINGING WINDOW-SASH. WILLIAM BAYLEY, Springfield, Ohio. Filed Dec. 22, 1913. Serial No. 808,071. (Cl. 20—53.)

1. A swinging sash, supporting struts therefor extending through the sash at points coincident with the axis of oscillation, and pivotal connections between the sash and the struts.

2. A swinging sash having openings therein coincident with the axis of oscillation, supports therefor projecting through said openings and pivotal trunnions connecting the sash and supports.

3. A window sash swinging on a medial axis of oscillation and a plurality of separated pivotal trunnions therefor arranged in spaced relation intermediate the ends of the sash and coincident with the axis of oscillation, and a strut extending through the sash and supporting the said trunnions.

4. A swinging sash having medially disposed trunnions at its opposite ends, a strut passing through the sash intermediate its ends and an intermediate trunnion carried by the strut, separated from, but alined with the end trunnions.

5. In a window construction as described, means for supporting a swinging sash intermediate its ends com-

prising a plurality of offset struts having their transverse connections projected through the sash and pivotal con-

nections between such transverse portions of the struts and the sash.

[Claims 6 to 14 not printed in the Gazette.]

1,115,161. PIANO OR ORGAN BENCH. WILLIAM C. F. BEALE, Detroit, Mich. Filed June 13, 1913. Serial No. 773,443. (Cl. 155—22.)

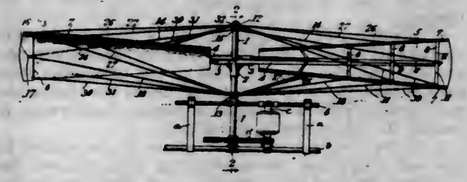
1. In a bench such as described, a pair of sliding members arranged one upon the other, said members having confronting grooves formed in the adjacent sides thereof, a ball retainer disposed in one of said grooves and movable therein, a series of balls engaged by said ball retainer and located in the grooves of said sliding members, a finger projecting from one edge of the sliding ball retainer, means for preventing the displacement of said sliding members, said means being arranged in the path of the finger for limiting the movement of said ball retainer.

2. In a bench such as described, a pair of sliding members arranged one upon the other, said sliding members being provided with confronting grooves formed in the adjacent sides thereof, said grooves opening through the ends of said members, a ball retainer disposed in the groove of one of said members and movable between said members, a series of ball bearings mounted loosely in said ball retainer and located in the confronting grooves, a series of plates attached to one of said sliding members and engaging the other of the sliding members for preventing displacement of said members, and a finger formed upon one edge of the ball retainer and projecting between said sliding members and beyond the adjacent sides thereof in the path of said plates whereby the movement of said ball retainer between said sliding members will be limited.

1,115,162. AEROMOBILE. EMILE BERLINER, Washington, D. C. Filed Aug. 11, 1908. Serial No. 447,951. (Cl. 170—169.)

1. In a flying machine, a propeller having blades each formed of sheet material and concaved transversely, a supporting arm extending longitudinally of the blade, and secured to the central portion of its rear face, and a plurality of arched cross strips secured to the edge portions of the blade and extending over and secured to said arm.

2. In a flying machine, a propeller having blades formed of sheet material, a carrying arm extending along the longitudinal center of the blade and secured to the rear face thereof, reinforcing battens secured to the edge portions of the rear face of the blade, and cross strips extending transversely of the blade and arched over the carrying arm, said strips being secured to the battens and the arm.



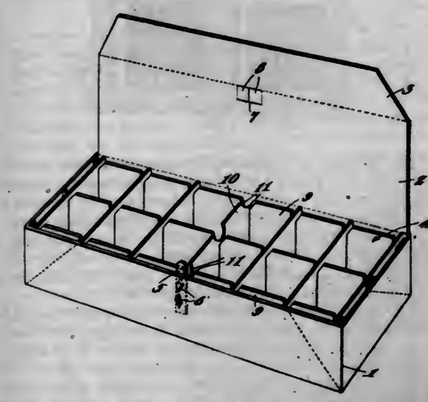
3. In a flying machine, a propeller having blades, each blade being formed of sheet material transversely concaved, a carrying arm for each blade, the carrying arm being secured to the rear face of the blade, reinforcing battens at the opposite edges of the blade, cross strips arched across the arm, and secured to the battens and the arm, and spacing blocks arranged between the cross strips and the blade, at points between the battens and arm, said blocks being secured to the blade and strips.

4. In a flying machine, a propeller having blades, each blade being formed of sheet material, a tension member extending transversely across the active face of the blade, at a point near the outer end thereof, and serving to arch the blade transversely, a carrying arm secured to the rear face of the blade, and rigid bracing members extending across and secured to the arm and to the marginal portions of the blade.

5. In a machine of the class described, a revoluble shaft, blade carrying arms extending therefrom, a transversely concaved blades secured to said arms, cross arms carried by the shaft at points above and below the blade arms, said cross arms being disposed at an angle with respect to the length of the blade arms, tension members extending from the cross arms to the forward edges of the blades, and auxiliary members extending from said bars to the rear edges of the mating blade to permit distribution of the strain from blade to blade.

[Claims 6 to 8 not printed in the Gazette.]

1,115,163. PAPER BOX. CHARLES T. BLOOMER, Newark, N. Y. Filed Apr. 24, 1914. Serial No. 834,171. (Cl. 229—47.)



1. A box having a cover, a bendable tongue carried by one wall of the box, the cover having a tab adjacent the said wall forming an opening through which the tongue is adapted to be bent to hold the cover closed, the tab being flexible to permit of the passage of the tongue through the said opening and to then close the said opening to impede the unbending of the tongue.

2. A box having a cover, a bendable tongue carried by one wall of the box, the cover having a pair of opposed

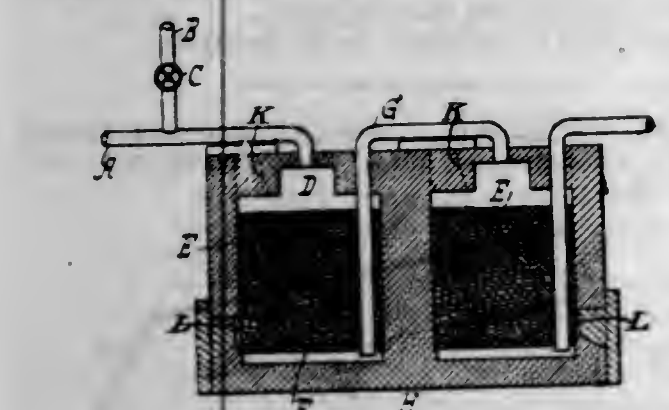
tabs adjacent the said wall forming an opening through which the tongue is adapted to be bent between the tabs to hold the cover closed, the tabs being flexible to permit of the passage of the tongue therebetween and to then close the said opening to impede the unbending of the tongue.

3. A box having a cover, a bendable tongue secured to one wall of the box, the cover having an opening adjacent the said wall through which the tongue is adapted to be bent to hold the cover closed, and means for closing the said opening after the tongue is passed therethrough to impede the unbending of the tongue.

4. A box having a cover, a bendable tongue carried by one wall of the box, the cover having a tab adjacent the said wall forming an opening through which the tongue is adapted to be bent to hold the cover closed, the tab being flexible to permit of the passage of the tongue through the said opening and to close the said opening to impede the unbending of the tongue, and means within the box for limiting the movement of the said tab and for assisting in returning the same to normal position for closing the said opening.

5. A box having a cover, a bendable tongue carried by one wall of the box, the cover having a tab adjacent the said wall forming an opening through which the tongue is adapted to be bent to hold the cover closed, the tab being flexible to permit of the passage of the tongue through the said opening and to close the said opening to impede the unbending of the tongue, and a filler within the box having a cut away portion for receiving the said tab to limit the movement of the said tab and to assist in returning the tab to normal position for closing the said opening.

1,115,164. PRODUCTION OF COMMERCIALLY-PURE NITRATES. Carl Bosch and Wilhelm Wild, Ludwigshafen-on-the-Rhine, Germany, assignors, by mesne assignments, to Norsk Hydroelektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed June 22, 1909. Serial No. 503,[illegible]38. (Cl. 23—13.)

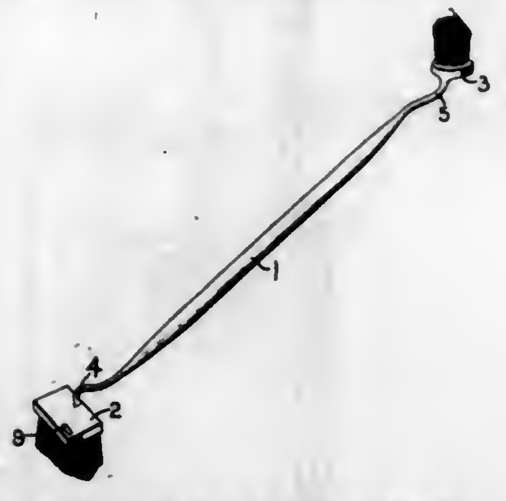


1. The process of producing commercially pure nitrate from gases containing oxids of nitrogen which consists in adding limited quantities of water to the gases and then bringing them into contact with an oxygen compound of the alkaline earth series while maintaining a temperature about 280° C. to about 300° C. that the water set free during the absorption remains in the gaseous state substantially as hereinbefore described.

2. The process of producing commercially pure calcium nitrate from gases containing oxids of nitrogen which consists in adding limited quantities of water to the gases and then bringing them into contact with lime while maintaining a temperature about 280° C. to about 300° C. that the water set free during the absorption remains in the gaseous state substantially as hereinbefore described.

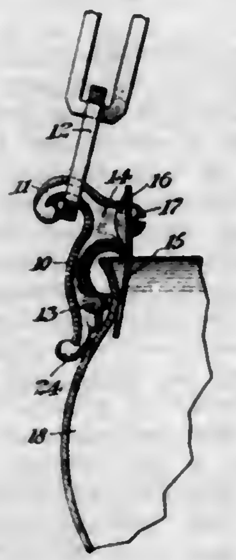
1,115,165. BRUSH. Edgar A. Briggs, Hopkinton, Mass. Filed Feb. 13, 1914. Serial No. 818,597. (Cl. 15—39.)

1. A brush comprising a back provided with apertures extending therethrough in pairs connected by a groove on the upper face of the back, a set of bristles in each pair of apertures having the middle portion in said groove and the ends projecting through said apertures from the lower face of the back, a locking plug wedged into and filling said groove and apertures above the bristles and finished off flush with the upper surface of the back.



2. A brush comprising a solid metal back provided with apertures extending therethrough in pairs connected by a groove on the upper face of the back, a set of bristles in each pair of apertures having the middle portion in said groove and the ends projecting through said apertures from the lower face of the back, a staple shaped metal locking plug wedged into and filling said groove and apertures above the bristles and finished off flush with the upper surface of the back.

1,115,166. HANGER FOR LIGHTING-FIXTURES. Frank M. Brooks, New York, N. Y. Filed Apr. 10, 1914. Serial No. 830,877. (Cl. 248—20.)



1. A hanger comprising a shank, means at one end thereof by which the same may be suspended, lugs adjacent the other end thereof, and a resilient member connected thereto and between which and the said lugs a device to be supported may be received and yieldingly held in position.

2. A hanger for the bowls of lighting fixtures, comprising a shank, a hook at one end thereof by which the same may be suspended, lugs adjacent the other end thereof, and a resilient member between which and the said lugs the rim of the bowl of the lighting fixture may be received and yieldingly secured in position.

3. A hanger for the bowl of lighting fixtures, comprising a shank, a hook at one end thereof and by which the same may be suspended, lugs adjacent the opposite end thereof adapted to engage the outer surface of the rim of a bowl, and a resilient member adapted to engage the inner surface of the rim of the bowl to yieldingly maintain the same in position in the hanger.

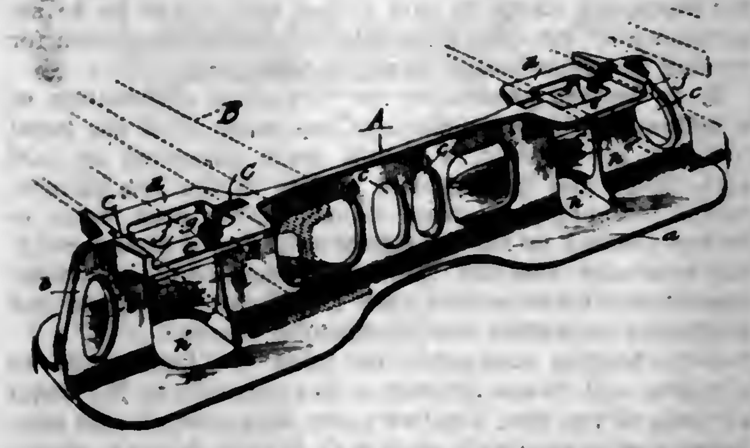
4. A hanger for the bowl of lighting fixtures, comprising a shank, a hook at one end thereof and by which the

same may be suspended, lugs adjacent the opposite end thereof adapted to engage the outer surface of the rim of a bowl, a resilient member adapted to contact with the inner surface of the rim of a bowl, and means for securing the said resilient member in position on the said hanger.

5. A hanger for bowls of lighting fixtures, comprising a shank, a hook at one end thereof by which the same may be suspended, lugs adjacent the opposite end thereof, adapted to contact with the outer surface of the rim of a bowl, a boss adjacent the hook end of the hanger, a resilient member, and means for securing the same to the said boss so that it will engage the inner surface of the rim of the bowl to yieldingly maintain the same in position in the hanger.

[Claim 6 not printed in the Gazette.]

1,115,167. METALLIC RAILWAY-TIE AND FASTENING. Augustus Freeborn Brown, Havre de Grace, Md., assignor to Gorrell Steel Spike Lock Railroad Tie Corporation, Havre de Grace, Md., a Corporation of Maryland. Filed Aug. 14, 1914. Serial No. 856,794. (Cl. 238—5.)



1. A metallic railway tie having a vertical flange extending longitudinally thereof, said flange being formed integrally with rail seats and interior spike receiving boxes, said boxes being disposed at the sides of said seats and extending toward the base of the flange and having opposed interior walls of sinuous form adapted to distort normally substantially straight spikes when the latter are forcibly driven into the boxes while in engagement with said walls.

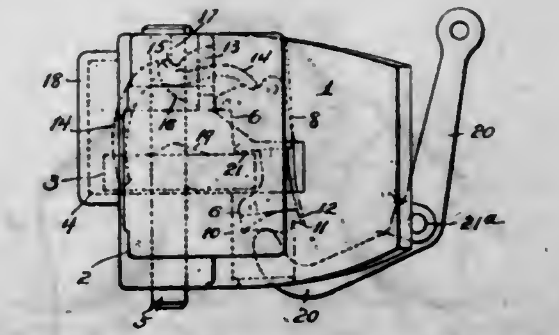
2. A metallic railway tie having a horizontal base flange and a flange at right angles thereto, and extending longitudinally along the same, said vertical flange having its upper edge, near the ends, formed with horizontal oppositely projecting flanges constituting widened rail seats, said right-angled flange being formed interiorly with integral spike receiving boxes, each having opposed sinuous walls adapted to distort a spike simultaneously with the driving of the same into the box, whereby the spike is made to conform substantially to the wavy outline of said walls.

3. A metallic railway tie having a vertical flange formed with rail seats and interior integral spike receiving boxes, said boxes being vertically disposed at opposite sides of the rail seats and each having opposed sinuous inner walls, adapted to distort a spike forcibly driven into said boxes, whereby the spike is made to substantially conform to said walls.

4. In combination, a metallic railway tie having a vertical flange extending longitudinally thereof, said flange being formed with interior spike receiving boxes whose walls are integral with the flange, said walls being sinuous and adapted to distort a spike driven forcibly past them, a spike, and a metal shim introduced between the spike and one of the sinuous walls of a box and adapted to be distorted by and in unison with the distortion of the spike.

5. A railway tie having a flange standing on edge and the interior of the flange near the ends being formed with spike receiving boxes, the walls of the boxes being integral with the flange and certain of said walls being formed in the flange and being sinuous and adapted to distort a spike driven forcibly into the box in contact with said sinuous walls.

1,115,168. CAR-COUPLING. Samuel P. Bush, Columbus, Ohio. Filed Nov. 10, 1911, Serial No. 659,605. Renewed Aug. 8, 1914. Serial No. 855,904. (Cl. 213—10.)



1. In a car coupling the combination with a draw head, the inner face of a side wall of said head being provided with a seat for supporting the locking block in its lock set position, of a locking block having a shoulder to engage said seat and a shoulder on its side adjacent the knuckle, and a knuckle the tail of which is provided on its upper side at a point removed from the front end of the tail with an upward projection adapted to engage the underside of the shoulder on the block adjacent the knuckle for lifting the locking block from its seat during the opening movement of the knuckle without shifting it from the vertical plane of its seat, and for shifting it away from the vertical plane of its seat during the closing movement of the knuckle, the said knuckle tail being of a size sufficient to rest under the shoulder on the locking block at all times when the knuckle is wholly or partly open so that in the event the locking block should be dislodged from its seat it will rest on the knuckle tail.

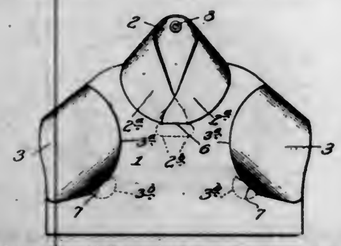
2. In a car coupling, the combination with a coupling head having an internal, slotted partition and a housing, of a knuckle pivoted to said head, a locking block in the housing, and a knuckle throwing lever passing through the slot in said partition and removably and pivotally mounted in bearings carried by said partition, the said knuckle throwing lever having one member adapted to be engaged by the locking block, and another member adapted to engage the tail of the knuckle.

3. In a car coupling the combination with a draw head, a locking block therein, the inner face of a side wall of said head being provided with a seat for supporting the locking block in its lock set position, of a locking block located wholly within the coupling head and having a shoulder to engage said seat, and a shoulder on the side adjacent the knuckle, and a knuckle the tail of which is provided on its upper side at a point removed from the front end of the tail with an upward projection adapted to engage the under side of the shoulder on the block adjacent the knuckle for lifting the locking block from its seat during the opening movement of the knuckle, without shifting it laterally from the plane of its seat, and for shifting it laterally away from its seat during the closing movement of the knuckle, the said knuckle tail being of a length sufficient to rest under the locking block at all times when the knuckle is wholly or partly open so that in the event the block should be dislodged from its seat it will rest on the knuckle tail.

4. In a car coupling, the combination with a draw head having a side wall provided with a seat for supporting the locking block in its lock-set position, of a locking block one side of its under surface being adapted to engage said seat, and a knuckle provided on its upper side at a point removed from the front end of the tail with an upward projection adapted to engage the locking block and lift it from its lock-set seat during the opening movement of the knuckle without shifting it from the vertical plane of its seat, and for moving the locking block and shifting it away from the vertical plane of its seat during

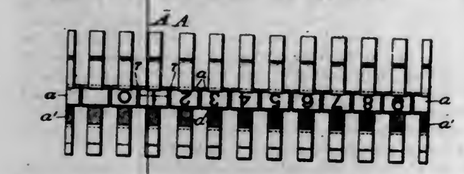
the closing movement of the knuckle, the knuckle tail being constructed to prevent the descent of the locking block at all times when the knuckle is wholly or partly open so that in the event the locking block should be dislodged from its seat it will rest on the knuckle tail.

1,115,169. COMBINATION FORM AND HANGER FOR COATS, &c. SIDNEY B. CAHN, Chicago, Ill. Filed May 5, 1913. Serial No. 765,555. (Cl. 211—13.)



A coat-form comprising a body-portion equipped with a neck-forming part and shoulder-forming parts separated by recesses, the neck-forming part having wings equipped with locking-tongues, and the shoulder-forming parts having their outer upper corners equipped with locking-tongues, the body portion being provided at some distance below the neck-portion with a transverse slot and being provided near the lower corners with oblique slots, the locking-tongues of the collar-wings being interlocked with said first-named slot, and the locking-tongues of the shoulder-forming wings being interlocked with said oblique slots.

1,115,170. TYPE OR MATRICES. ANDREW J. CAMPBELL, Washington, D. C., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 23, 1913. Serial No. 780,621. (Cl. 199—12.)



1. A type or matrix section constructed for circulation in a typographical machine and adapted to be set in line therein with other sections and provided with a laterally extending member adapted to overlap and seat against the front face of an adjoining section.

2. The combination of a plurality of type or matrix sections adapted to be set side by side in a composed line, and each provided with a laterally extending member overlapping and seated against the front face of the adjacent section.

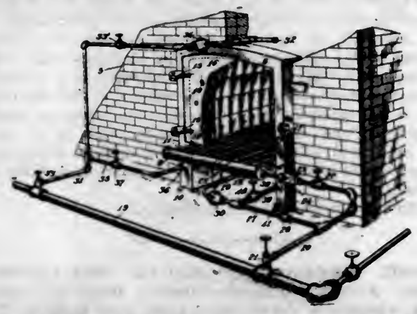
3. A composite type or matrix comprising a plurality of sections adapted to be set side by side in a composed line and provided with laterally extending members overlapping and seated against the front faces of adjacent sections.

4. A type or matrix section constructed for circulation in a typographical machine and adapted to be set in line therein with other sections and provided with a character bearing member projecting laterally from its front face and adapted to seat in a recess in the front face of an adjoining section.

5. A type or matrix constructed for circulation in a typographical machine and adapted to be set in line therein with other type or matrices and comprising a plurality of sections, one provided with a recess in its front face, and the adjoining one provided with a character bearing member projecting laterally from its front face and seated in said recess.

[Claims 6 to 14 not printed in the Gazette.]

1,115,171. HEATING MECHANISM FOR KILNS. THOMAS CAREY and LEN SCHABLOSKE, Chicago, Ill. Filed Feb. 19, 1913. Serial No. 749,500. (Cl. 25—151.)



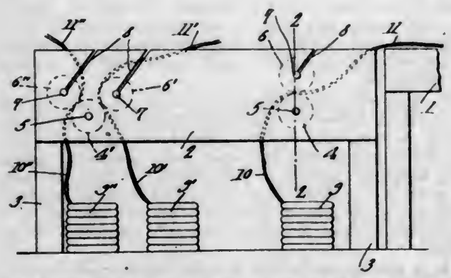
1. In heating mechanism for kilns, the combination of a hollow arch frame applied at the entrance of the usual archway in the kiln, a hollow grate supported on said arch frame and having blast outlets in the fire thereon, means for supplying steam to said hollow arch frame to be superheated by the heat from said fire, and a connection for leading the superheated steam to said grate.

2. In heating mechanism for kilns, the combination of a hollow arch frame applied at the entrance of the usual archway in the kiln, a hollow grate supported on said arch frame and having blast outlets in the fire thereon, means for supplying steam to said hollow arch frame to be superheated by the heat from said fire, a nozzle pointing into said archway below the grate and controllable connections between said arch frame and said grate and nozzle for conveying the superheated steam.

3. In heating mechanism for kilns, the combination of a hollow arch frame applied at the entrance of the usual archway in the kiln, a hollow grate supported on said arch frame and having blast outlets in the fire thereon, means for supplying steam to said hollow arch frame to be superheated by the heat from said fire, a connection for leading the superheated steam to said grate, and an air inspirator included in said connection to admit air to the steam.

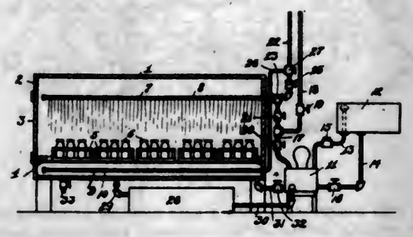
4. In heating mechanism for kilns, the combination of a hollow arch frame applied at the entrance of the usual archway in the kiln, a hollow grate supported on said arch frame and having blast outlets in the fire thereon, means for supplying steam to said hollow arch frame to be superheated by the heat from said fire, a nozzle pointing into said archway below the grate and controllable connections between said arch frame and said grate and nozzle for conveying the superheated steam, and air inspirators included in said connections to admit air to the superheated steam.

1,115,172. CLOTH-CUTTER'S HOLDER. ALBERT CASH, Lewiston, Me. Filed Nov. 21, 1913. Serial No. 802,273. (Cl. 211—31.)



A holding device for cutting tables, embodying a frame, one end of which is adapted to be disposed adjoining the end of a cutting table, and including elongated sides, and legs attached to the ends thereof, a roller having terminal trunnions journaled to the sides, the sides having upwardly opening slots inclined toward the said end of the frame, and a roller having terminal trunnions engaging the said slots, the last mentioned roller being adapted to move downwardly against the first mentioned roller, and the rollers being adapted to receive therebetween, the slack portion of a stack of fabric placed below the side to permit the slack portion to pass onto the cutting table.

1,115,173. PASTEURIZING APPARATUS. ROBERT M. CAUFFMAN, Three Rivers, Mich. Filed Feb. 16, 1914 Serial No. 818,987. (Cl. 126—272.)



1. A pasteurizing apparatus including a tank, a spray pipe arranged in the upper portion thereof, means for circulating water taken from bottom of tank up through the spray pipe, a heating pipe in the lower portion of the tank adapted to be submerged by a head of water therein, and a steam supply in communication with the spray pipe and the heating pipe, whereby both the ingoing and outgoing water is heated during its circulatory movement.

2. A pasteurizing apparatus including a main tank, a hot water storage tank, a cold water storage tank, a pump, independent means of circulation between the pump and main tank, independent means of circulation between the pump and hot water storage tank, and a communication between the pump and main tank through the cold water storage tank.

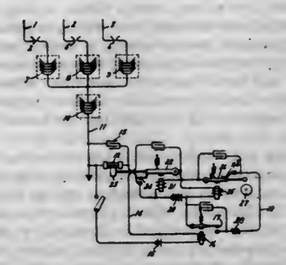
3. A pasteurizing apparatus including a tank, a spray pipe arranged in the upper portion thereof, means for circulating water taken from the bottom of tank up through said spray pipe, a heating pipe in the lower portion of the tank adapted to be submerged by a head of water therein, and a steam supply having independently controlled communication with the spray and heating pipes, whereby either or both the ingoing and outgoing water may be heated during its circulatory movement.

4. A pasteurizing apparatus including a main tank, a spray pipe arranged in the upper portion thereof, a heating pipe arranged in the lower portion thereof, a pump, a pipe leading from the pump to the spray pipe, a second pipe leading from the pump to the main tank, a water supply pipe leading to the pipe between the pump and spray pipe, a steam pipe, a nozzle forming the terminal thereof, and opening into and in line with the spray pipe, and a pipe leading from the steam pipe to and in open communication with the heating pipe.

5. A pasteurizing apparatus including a main tank, rack supporting brackets arranged therein, a spray pipe extending longitudinally of the tank above the brackets, a heating pipe extending longitudinally of the tank below the brackets, a pump having circulatory communication with the tank through the spray pipe, means for delivering the fluid to the spray pipe, means for delivering a heating medium to the spray and heating pipe, a hot water storage tank having circulatory communication with the pump, and a cold water storage tank in series circulatory communication with the main tank and pump.

[Claim 6 not printed in the Gazette.]

1,115,174. COHERER DISCHARGE-INDICATOR. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1912. Serial No. 696,550. (Cl. 177—311.)



1. A discharge indicator comprising a detector operated in response to a discharge, means for recording the operation of said detector, means for restoring said detector to normal condition after it has operated, and means for preventing said restoring means from operating until said recording means has operated.

2. A discharge indicator comprising a coherer, a decoherer, means for recording the coherence of said coherer, and means for preventing the decoherence of said coherer until said recording means has operated.

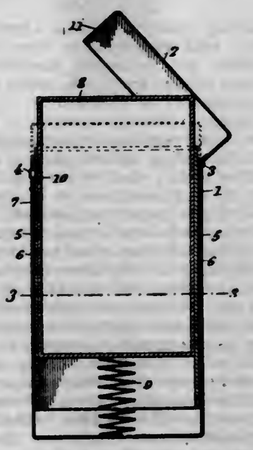
3. A discharge indicator comprising a coherer, a decoherer, a device for indicating the coherence of said coherer, and means for preventing said decoherer from operating until said indicating device has operated.

4. The combination with a coherer, of an electroresponsive device controlled by said coherer, a coherence indicator responsive to the energization of said electroresponsive device, and a decoherer controlled by said indicator to operate therewith in a definite sequence.

5. A discharge indicator comprising a coherer, a decoherer, and a control circuit for said decoherer closed by the coherence of said coherer comprising an indicating device for indicating when said coherence occurs, and means for rendering said decoherer inoperative until said indicating device operates.

[Claims 6 to 9 not printed in the Gazette.]

1,115,175. MATCH-BOX. ELMER B. CROCKETT, Rockland, Me. Filed Nov. 18, 1913. Serial No. 801,760. (Cl. 206—31.)



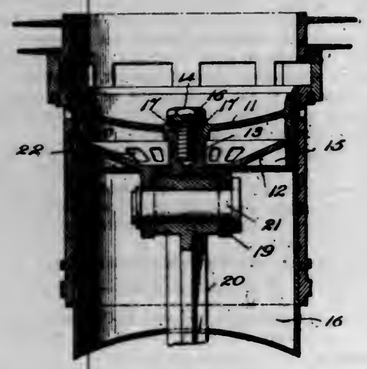
1. A holder for safety match boxes having match carriers slidably mounted in containers, comprising a casing, a lid hinged onto the casing, means to normally lift said

lid, means to hold the lid in closed position, means to project the match carrier through the container when the lid is released, and means actuated in the operation of releasing the lid to hold the container against movement of the carrier.

2. A holder for safety match boxes having match carriers and containers therefor comprising a casing, a spring actuated lid hinged to the casing, a spring catch for normally holding the lid in closed position, means acting to project the carrier through the container when the lid is released, and means actuated in the operation of the catch to release the lid for holding the container against movement in the casing.

3. A holder for safety match boxes having match carriers and containers therefor comprising a casing, a spring actuated lid hinged to the casing, a spring catch for normally holding the lid in closed position, means acting to project the carrier through the container when the lid is released, and a penetrating projection carried by the catch and adapted to be engaged with the container to prevent movement of the same when the catch is depressed to release the lid.

1,115,176. PISTON FOR GAS-ENGINES. PAUL DANIEL, Jamaica, N. Y., assignor to Moses Ely, New York, N. Y., and Charles Fuller, Port Washington, N. Y. Original application filed June 11, 1912, Serial No. 702,963. Divided and this application filed Jan. 29, 1913. Serial No. 744,826. (Cl. 121—104.)



1. In an internal combustion engine, a trunk piston having a compound head comprising an inner plate of heat resisting material, and an arched reinforcing bridge of superior strength secured within the trunk piston behind said plate, substantially as described.

2. In an internal combustion engine, a trunk piston comprising the usual cylindrical portion and having a compound head comprising an inner plate of heat resisting material, and an arched steel reinforcing bridge behind said plate secured at its periphery to the cylindrical portion of the piston, substantially as described.

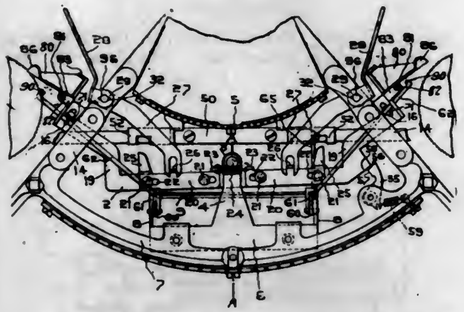
3. In an internal combustion engine, a trunk piston having the usual cylindrical portion and provided with a compound head comprising an inner plate of the same material as the cylindrical portion, and an arched reinforcing steel bridge behind said plate, secured at its periphery to said cylindrical portion, substantially as described.

4. In an internal combustion engine, a trunk piston comprising the usual cylindrical portion and having a compound head, having a thin inner plate, and an arched reinforcing bridge screwed into the cylindrical portion and making contact with said inner plate near its center, substantially as described.

5. In an internal combustion engine, a piston having a compound head comprising an inner plate, and an attached cylindrical portion, in combination with an arched reinforcing bridge connected at its periphery with said cylindrical portion and making contact with said inner plate near its center, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,115,177. RIBBON MECHANISM FOR TYPE-WRITERS. GEORGE WILLIAM DAVIS, Westmount, Quebec, Canada. Filed Dec. 29, 1911. Serial No. 668,432. (Cl. 197—165.)



1. The combination with a part movable in unison with each writing action of the machine, and ribbon feeding devices of means for reversing the action of the latter comprising a pair of members located at opposite sides of the printing point and acted upon by the ribbon when it nears the ends of its travel in either direction, independently operating individual mechanisms operatively connected to the respective members, such mechanism being normally stationary relatively to the part first mentioned, and means actuated through the medium of either of the said mechanisms and in operative relation with the feed devices, for the purpose of reversing the same.

2. In a typewriting machine the combination with writing mechanism, a part movable in unison with each writing action of the machine, ribbon feeding and take-up spools, pawls for actuating the spools, means for vibrating the pawls, and a pair of movable ribbon guides located at opposite sides of the machine, of a movable member supporting the pawls with one pawl engaging one of the spools and the other pawl out of engagement with the other spool, relatively movable devices displaceably mounted upon the said member and adapted when in one position to be engaged by the first mentioned part to move the member and displace the pawls and when in another position to clear the said part, and independent operative connections between the respective devices and guides.

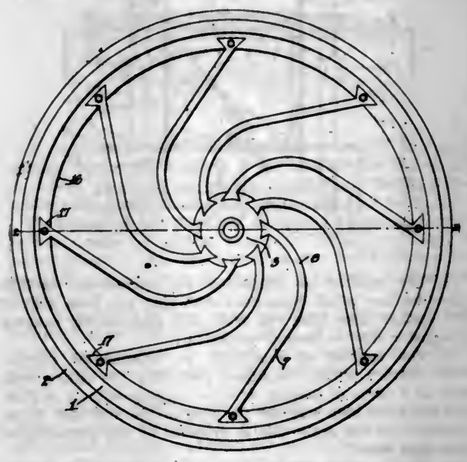
3. In a typewriting machine the combination with writing mechanism, a part movable in unison with each writing action of the machine, ribbon feeding and take-up spools, displaceable actuating pawls for engagement with the spools, means for vibrating the pawls, and a pair of movable ribbon guides located at opposite sides of the machine, of a pivoted member supporting the pawls with one pawl in engagement with one of the spools and the other pawl out of engagement with the other spool, and means operatively connected to the said ribbon guides and whereby the said first mentioned part operates the said pivoted member for the purpose of displacing the pawls and changing their operative relation to the spools.

4. In a typewriting machine the combination with ribbon feed and take-up spools, and means including pawls for actuating the said spools individually, of a pair of ribbon actuated devices, a horizontally rocking bar having devices at its ends guiding the pawls, means operatively connecting the ribbon actuated devices to the bar, and means operated by the writing mechanism for operating the said bar through the medium of the said ribbon actuated devices for the purpose of shifting one of the pawls into engagement with one of the spools and the other pawl out of engagement with the other spool.

5. In a typewriting machine the combination with ribbon feed and take-up spools, and means including pawls for actuating the said spools individually, of a pair of ribbon actuated devices, a horizontally rocking bar having devices at its ends guiding the pawls, independently operating mechanisms operatively connecting the respective ribbon actuated devices to the bar, and means operated by the writing mechanism for operating the said bar through the medium of the said ribbon actuated mechanisms for the purpose of shifting one of the pawls into engagement with one of the spools and the other pawl out of engagement with the other spool.

[Claims 6 to 24 not printed in the Gazette.]

1,115,178. SPRING VEHICLE-WHEEL. JAMES JEFFREY DAVIS, Sr., St. Marys, Mo. Filed Sept. 23, 1913. Serial No. 791,366. (Cl. 152—50.)



A wheel comprising a felly having a plurality of sockets on both side faces thereof, a hub having a plurality of sockets on both side faces thereof, spring spokes having their ends positioned in the sockets of said felly and said hub, means passing through said felly and the ends of said spokes in said felly for retaining the same therein and plates threaded on both side faces of said hub for retaining said ends of said spokes positioned therein.

1,115,179. FUEL-PUMP. CHARLES DAY and GEORGE E. WINDELER, Stockport, England, assignors to General Electric Company, a Corporation of New York. Filed June 13, 1912. Serial No. 703,395. (Cl. 103—94.)

1. In a fuel pump, the combination of a plurality of cylinders, plungers therefor, a suction and a discharge valve for each cylinder, tappets for normally controlling the suction valves, a pivoted support common to all the tappets, a means for turning the support to bring the tappets into engagement with the suction valves, a lifter for each suction valve, said lifters being normally idle, and means for moving them to raise the suction valves from their seats.

2. In a fuel pump, the combination of a plurality of cylinders, plungers therefor, suction and discharge valves for the cylinders, tappets for normally controlling the suction valves, a support for the tappets, lifters for the suction valves loosely mounted on the support, a plurality of means for actuating the lifters, and a device for moving all of said means simultaneously.

3. In a fuel pump, the combination of a casing having a fuel supply chamber in the bottom, a cylinder in the casing, a plunger in the cylinder, a suction and a discharge valve for the cylinder, a spindle journaled in the walls of the chamber, a tappet fixed to the spindle for lifting the suction valve from its seat when the spindle is turned, a lifter arm for the suction valve loosely journaled on said spindle, a member pivoted in the casing, and means carried by said member for turning the lifter arm to lift the suction valve from its seat.

4. In a fuel pump, the combination of a casing having a fuel supply chamber in the bottom, a plurality of cylinders in the casing, plungers therefor, a suction and a discharge valve for each cylinder, a shaft journaled in the casing, tappets fixed to the shaft for normally controlling the suction valves, lifters for the suction valves loosely pivoted on said shaft, a second shaft parallel to the first named shaft, and means carried by the said shaft for simultaneously lifting all said lifters.

1,115,180. FUEL-PUMP. CHARLES DAY and GEORGE EDWARD WINDELER, Stockport, England, assignors to General Electric Company, a Corporation of New York. Original application filed June 13, 1912, Serial No. 703,395. Divided and this application filed July 21, 1913. Serial No. 780,106. (Cl. 103—61.)

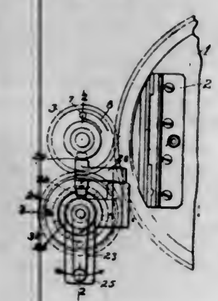
1. The combination with a frame, of a body firmly secured thereto and containing a plurality of separately spaced pump cylinders, with their axes in the same plane, and countersunk at their upper ends, a liner for each cylinder closely fitted therein, and all of said liners being finished to exactly the same size, a stuffing box in the countersunk upper end of each cylinder holding the liner in place, a plunger fitting each liner and passing through the stuffing box, a cylindrical enlargement at the upper end of each plunger having screwthreads at its lower end and terminating in a head having a flat under side, a nut engaging said screwthreads, a hardened and ground washer above said nut, a crosshead having a plurality of holes to receive said enlargements with a clearance all around them, the upper and lower surfaces of the crosshead being parallel and finished to afford a nice sliding fit for the terminal head and the washer respectively, guides on the frame for said crosshead, and means for reciprocating said crosshead.

2. The combination with a plurality of pump cylinders, of plungers therein, a crosshead engaging said plungers,

two flange pieces on the crosshead, a removable pin passing through said flange pieces, a latch for holding said pin in place, a driving shaft operatively connected to said pin, and a stationary fulcrum for a lever adjacent to said pin.

3. The combination with a plurality of pump cylinders, of a plunger for each cylinder having a cylindrical enlargement of greater diameter than the plunger or its shank, and a reciprocating crosshead having a plurality of cylindrical holes in line with said cylinders and enough larger than said enlargements to afford a good clearance all around them, whereby the plungers can be passed through the holes in the crosshead to enter their cylinders, and the enlargements thereon will be received in said holes, and means for preventing axial play of said enlargements in said holes without preventing lateral play therein.

1,115,181. TYPOGRAPHICAL MACHINE. HEINRICH DEGENER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Original application filed Oct. 6, 1911, Serial No. 653,128. Divided and this application filed Nov. 26, 1912. Serial No. 733,581. (Cl. 199—13.)



1. In a type bar casting machine, the combination with a mold carrier adapted to be equipped with a plurality of molds, its driving pinion, the driving mechanism of the machine, and a clutch between the said pinion and mechanism, of a hand crank and means by which the continued movement of said crank in the same direction firstly, opens the said clutch and secondly, by turning the said pinion, effects a change of mold.

2. In a type bar castipg machine, the combination with a mold carrier adapted to be equipped with a plurality of molds, its driving pinion, and driving mechanism of the machine, and a clutch between the said pinion and mechanism, of a hand crank and means by which one revolution of the said crank, firstly, opens the said clutch and secondly, turns the said pinion through one revolution thereby effecting a change of mold.

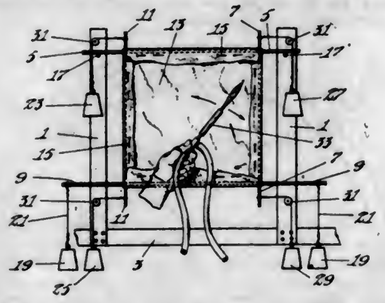
3. In a type bar casting machine, the combination with a mold carrier adapted to be equipped with a plurality of molds, its driving pinion, the driving mechanism of the machine, and a clutch between the said pinion and mechanism, of a hand crank, a shaft upon which the crank is mounted, a gear wheel loose upon the shaft thereof and in direct mesh with the said driving pinion, means by which the first portion of the movement of the crank and its shaft opens the said clutch and means by which the gear wheel on the shaft of the hand crank is held to it.

4. In a type bar casting machine, the combination with a mold carrier adapted to be equipped with a plurality of molds, its driving pinion, the driving mechanism of the machine, and a clutch between the said pinion and mechanism, of a hand crank, a shaft upon which said crank is mounted, a wheel loose on the shaft thereof in gear with the said driving pinion and carrying a definite quantity of teeth more than the latter, a clutch operative between the said shaft and loose wheel, and means for closing the said clutch as soon as the crank has been turned through an arc equal to the said quantity of teeth.

5. In a typographical machine, the combination of a movable mold carrier, driving means for moving the carrier in the ordinary operation of the machine, actuating mechanism connected thereto, and manual devices, normally disconnected from the driving means, and operable first to break said actuating connection and thereafter to operate the driving means to adjust the carrier to a different position.

[Claims 6 to 19 not printed in the Gazette.]

1,115,182. METHOD OF PRODUCING AN ORNAMENTAL SURFACE UPON LEATHER. HERBERT E. ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 3, 1913. Serial No. 787,943. (Cl. 69—21.)



1. The method of producing an ornamental surface upon leather which comprises shrinking the flesh side of the leather more than the grain side and thereby causing the grain side to become wrinkled.

2. The method of producing an ornamental surface upon leather which comprises shrinking the entire flesh side of a piece of leather without correspondingly shrinking the grain side whereby the area of the flesh side is decreased and the grain side is wrinkled by the shrinking of the flesh side.

3. The method of producing an ornamental surface upon leather which comprises contracting the flesh side of a piece of leather throughout its entire extent and thereby wrinkling the grain side.

4. The method of producing an ornamental surface upon leather which comprises puckering the grain side of a piece of leather while maintaining the flesh side smooth.

5. The method of producing an ornamental surface upon leather which comprises holding a piece of leather yieldingly so as to permit it to shrink, and then shrinking the flesh side more than the grain side whereby the flesh side remains smooth and the grain side is wrinkled.

[Claims 6 to 11 not printed in the Gazette.]

1,115,183. ORNAMENTED LEATHER. HERBERT E. ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 4, 1913. Serial No. 793,494. (Cl. 69—21.)

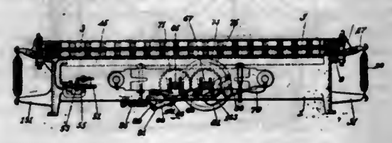
1. An article of manufacture which consists of a piece of leather, one side of which is smooth and shrunken and the other side of which bears upon it in wrinkles or puckers, an ornamental pattern.

2. An article of manufacture which consists of a piece of leather, fibers of one side of which are compact and shrunken and the fibers of the other side of which are approximately in their normal condition, the shrunken side being smooth and the other side being wrinkled.

3. An article of manufacture which consists of a piece of leather having a shrunken, compact flesh side, the surface of which is smooth and a less shrunken, less compact grain side, the surface of which is wrinkled.

4. An article of manufacture which consists of a piece of leather one side of which is smooth and shrunken and the other side of which bears upon it ornamental wrinkles having different radii of curvature.

1,115,184. MACHINE FOR ORNAMENTING LEATHER. HERBERT E. ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 17, 1913. Serial No. 807,292. (Cl. 69—21.)



1. A machine of the class described having, in combination, means for holding a piece of leather yieldingly so as to permit it to shrink, and means for applying a shrinking agent to one side of the piece so held.

2. A machine of the class described having, in combination, means for holding a piece of leather yieldingly so as to permit it to shrink, and means for applying momentarily to one side of the piece so held a shrinking agent.

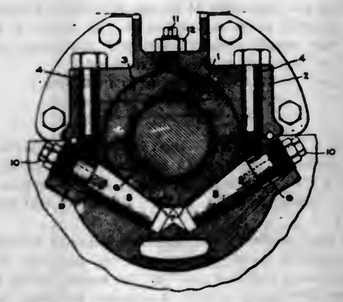
3. A machine of the class described having, in combination, means for holding a piece of leather yieldingly so as to permit it to shrink, and means for applying progressively to one side of the piece so held a shrinking agent.

4. A machine of the class described, having, in combination, means for holding a piece of leather extended, said means having provision for permitting said piece to move with respect to it, and means for shrinking one side of the piece so held.

5. A machine of the class described having, in combination, means for yieldingly holding a piece of leather taut, said means being constructed and arranged to oppose with approximately uniform force shrinking by said piece in all directions parallel to its surface, and means for applying to one side of said piece a shrinking agent.

[Claims 6 to 21 not printed in the Gazette.]

1,115,185. SHAFT-BEARING. SAMUEL S. FORSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 28, 1913. Serial No. 776,400. (Cl. 64—52.)



1. In combination, a shaft, a bearing therefor comprising a housing and a sleeve, the external dimensions of said sleeve being slightly less than the internal dimensions of said housing whereby said sleeve may be moved within said housing, the exterior surface of said sleeve having flattened portions on the under side thereof, cylindrical members having flattened wedge surfaces engaging said flattened portions of the surface of said sleeve, said sleeve being supported substantially at its center on said cylindrical members, said cylindrical members having cylindrical seats in said housing.

2. In combination, a shaft, a bearing therefor comprising a housing and a sleeve, the external dimensions of said sleeve being slightly less than the internal dimensions of said housing whereby said sleeve may be moved within said housing, the exterior surface of said sleeve having flattened portions on the under side thereof, cylindrical members having flattened wedge surfaces engaging said flattened portions of the surface of said sleeve, said sleeve being supported substantially at its center upon said cylindrical members, said cylindrical members having cylindrical seats in said housing, and means for changing the positions of said cylindrical members so as to move said sleeve relatively to said housing.

3. In combination, a shaft, a bearing therefor comprising a housing and a sleeve, the external dimensions of said sleeve being slightly less than the internal dimensions of said housing whereby said sleeve may be moved within said housing, the exterior surface of said sleeve having flattened portions on the under side thereof, cylindrical members having flattened wedge surfaces engaging said flattened portions of the surface of said sleeve, said sleeve being supported substantially at its center on said cylindrical members, said cylindrical members having cylindrical seats in said housing, studs screwed into said housing, and means for moving said cylindrical members into engagement with said studs.

4. In combination, a shaft, a bearing therefor comprising a housing and a sleeve, the external dimensions of said sleeve being slightly less than the internal dimensions of said housing whereby said sleeve may be moved within said housing, the exterior surface of said sleeve having flattened portions on the under side thereof, cylindrical members having flattened wedge surfaces engaging said flattened portions of the surface of said sleeve, said sleeve being supported substantially at its center on said cylindrical members, said cylindrical members having cylindrical seats in said housing, and adjustable studs engaging said cylindrical members whereby said sleeve may be moved relatively to said housing.

5. In combination, a shaft, a bearing therefor comprising a housing and a sleeve, the external dimensions of said sleeve being slightly less than the internal dimensions of said housing whereby said sleeve may be moved within said housing, the exterior surface of said sleeve having flattened portions on the under side thereof, cylindrical members having flattened wedge surfaces engaging said flattened portions or the surface of said sleeve, said sleeve being supported substantially at its center on said cylindrical members, said cylindrical members having cylindrical seats in said housing, studs screwed into said housing, and means engaging said cylindrical members for moving said cylindrical members into engagement with said studs.

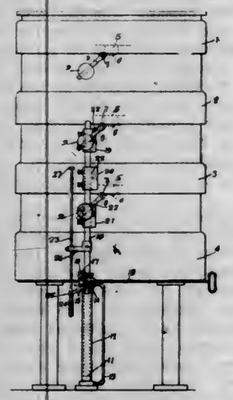
[Claim 6 not printed in the Gazette.]

1,115,186. GATE-CONTROLLING DEVICE FOR COOKERS. CHARLES H. FULSON, Atlanta, Ga., assignor to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 13, 1914. Serial No. 831,447. (Cl. 87—6.)

1. In a cooker, the combination, with a series of receptacles arranged one above the other, each upper receptacle having a discharge opening leading to the next lower receptacle, and gates to control the respective discharge openings, of a controlling device mounted adjacent to said receptacles, capable of vertical movement and having means to cause said gates to be successively opened to be retained in their fully open positions for periods of time, and means to close said gates.

2. In a cooker, the combination, with a series of receptacles arranged one above the other, each upper receptacle having a discharge opening leading to the next

lower receptacle, gates to control the respective discharge openings, means to hold said gates normally in their closed positions, and an actuating member connected with each of said gates, of a vertically movable controlling device mounted adjacent to said receptacles and having means to successively engage the actuating members of the several gates to cause said gates to be opened in a pre-arranged order and to be retained in their fully open positions for periods of time.



3. In a cooker, the combination, with a series of receptacles arranged one above the other, each upper receptacle having a discharge opening leading to the next lower receptacle, gates to control the respective discharge openings, and an actuating member connected with each of said gates, of a vertically movable controlling device mounted adjacent to said receptacles and having means to successively engage the actuating members of the several gates to cause said gates to be opened in a prearranged order, said means being constructed and arranged to quickly open said gates and to remain in engagement with said actuating members during the continued movement of said controlling device to retain each gate in its open position for a period of time.

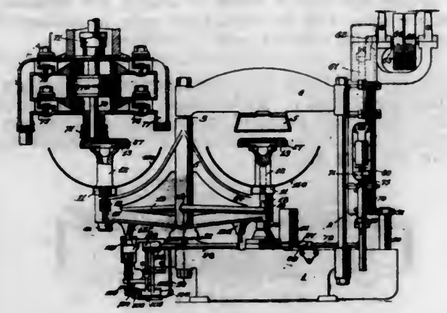
4. In a cooker, the combination, with a series of receptacles arranged one above the other, each upper receptacle having a discharge opening leading to the next lower receptacle, and gates to control the respective discharge openings, of a vertically movable controlling device mounted adjacent to said receptacles and having means to cause said gates to be successively opened and closed, power-operated mechanism for actuating said controlling device, and means controlled by the vertical movement of said controlling device for interrupting the application of power to said power operated mechanism.

5. In a cooker, the combination, with a series of receptacles arranged one above the other, each upper receptacle having a discharge opening leading to the next lower receptacle, and gates to control the respective discharge openings, of a vertically movable controlling device mounted adjacent to said receptacles and having means to cause said gates to be successively opened and closed, a fluid cylinder, a piston mounted in said cylinder and connected with said controlling device, a valve to control the admission of fluid to said cylinder, and means controlled by the movement of said actuating device to actuate said valve.

[Claims 6 to 20 not printed in the Gazette.]

1,115,187. IRONING-MACHINE. ARTHUR T. HAGEN and DANIEL M. COOPER, Rochester, N. Y., assignors, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 15, 1905. Serial No. 278,624. (Cl. 68—9.)

1. In an ironing machine, the combination with a main frame, a platen thereon, a pressing cylinder and piston and a hollow work support adapted to be inserted between the platen and piston, of a liquid pump cylinder and passages between it and the pressing cylinder, an air pump cylinder and passages between it and the interior of the work support and the connected pistons operating in the liquid and air pump cylinders.



2. In an ironing machine, the combination with a platen and a lifting device beneath it, of a carrier pivoted on a vertical center and having an air chamber therein, a plurality of independently vertically movable hollow work supports thereon each communicating with said chamber and adapted to be moved successively beneath the platen, said work supports having air outlet perforations in their upper faces and means for supplying air under pressure to the carrier chamber in all positions of rotary adjustment.

3. In an ironing machine, the combination with the main frame, having an annular air chamber thereon, of a rotary carrier pivoted on the frame having an air chamber coöperating with that on the frame, a plurality of hollow work supports provided with perforated faces and air passages connecting the interior of the supports with the chamber in the carrier and means for supplying air under pressure to the chamber in the frame.

4. In an ironing machine, the combination with the main frame having an air chamber and the platen on the frame, of the carrier rotatably mounted on the frame and having a central air chamber communicating with that of the frame, a plurality of independently movable hollow work supports on the carrier having their faces provided with air outlet perforations, flexible air pipes between the supports and the central air chamber of the carrier and a pump supplying air under pressure to the chamber in the frame.

5. In an ironing machine, the combination with a platen, a work support and mechanism for moving them relatively toward and from each other, of a controlling means for said mechanism embodying an oscillatory shaft and means for operating it in one direction, a toggle comprising jointed arms connected to the shaft, a stop for holding the toggle straightened and operating parts for flexing the toggle in opposite directions.

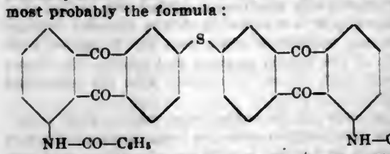
[Claims 6 to 20 not printed in the Gazette.]

1,115,188. VAT DYE. ALEXANDER HAMBURGER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 26, 1911. Srial No. 667,630. (Cl. 8—1.)

1. As new products, the dianthraquinonyl sulfids of the general formula R—S—R, wherein "R" and "R" stand for anthraquinonyl residues and "S" for sulfur, being powders which are difficultly soluble in organic solvents, insoluble in dilute alkalis and dilute acids, and yielding, when treated with concentrated sulfuric acid, solutions of a characteristic color.

2. The herein described new vat dye being the 5.5'-

dibenzoylamino - 2.2' - dianthraquinonylthioether having most probably the formula:



which is after being dried and pulverized a yellow powder crystallizing from nitrobenzene in the shape of yellow needles which are soluble in concentrated sulfuric acid with a greenish-blue coloration; and dyeing cotton from an alkaline hydrosulfite vat yellow fast shades, substantially as described.

3. As new products the 6-6-dianthraquinonyl sulfids of the general formula R—S—R, wherein "R" and "R" stand for the anthraquinonyl residues and "S" for sulfur, being powders which are difficultly soluble in organic solvents, insoluble in dilute alkalis and dilute acids, and yielding, when treated with concentrated sulfuric acid, solutions of a characteristic color.

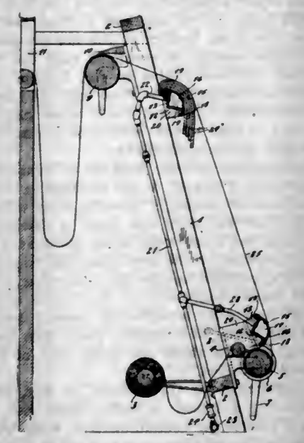
4. As a new process, the manufacture of the dianthraquinonyl sulfids of the general formula R—S—R, wherein "R" and "R" stand for anthraquinonyl residues and "S" for sulfur, by treating about two moluecules of halogenanthraquinon with about one molecule of alkali metal sulfid.

1,115,189. VAT DYE. ALEXANDER HAMBURGER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 25, 1912. Serial No. 711,562. (Cl. 8—1.)

1. As a new process, the manufacture of beta-beta-dianthraquinonyl sulfid by treating about two molecules of beta-halogenanthraquinone with about one molecule of alkali metal sulfid.

2. As a new product, beta-beta-dianthraquinonyl sulfid, being a yellow powder, insoluble in dilute alkalis and dilute acids, difficultly soluble in organic solvents, soluble with a violet-red color in concentrated sulfuric acid, and yielding, when treated with alkaline reducing agents, an orange-red vat which dyes, particularly wool, intense yellow tints of great fastness.

1,115,190. BATTING-FRAME. ALBERT EDWARD HARRIS and JOHN WILLIAM DRIVER, Bradford, England, assignors to The Salt's Textile Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 21, 1914. Serial No. 833,354. (Cl. 26—12.)



1. A batting frame having an elastic or resilient bearing surface thereon, and means for stretching the goods over said surface.

2. A batting frame having elastic or resilient bearing surfaces at the lower and upper parts thereof, and means for stretching the goods over said surfaces.

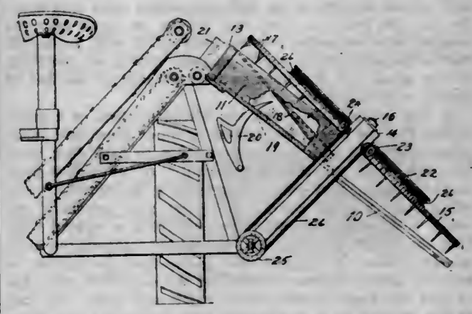
3. A batting frame having a bearing surface with a flexible or resilient side over which the goods are stretched.

4. A batting frame having a pneumatic bearing surface secured thereto, and means for stretching the goods over said surface.

5. A batting frame having a hollow device with a yielding or flexible part, means for introducing a fluid under pressure to the interior thereof, and means for stretching the goods over said device in contact with the flexible part thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,115,191. ATTACHMENT FOR SELF-BINDERS. MATTHEW HAUBEL, Columbus township, Anoka county, Minn. Filed June 13, 1913. Serial No. 773,466. (Cl. 56—50.)



1. The combination with the discharge deck of a grain binder and the means for cutting grain or grass and delivering the same in a continuous sheet to said deck with the butt ends all turned forwardly and in the same plane, of an attachment mounted upon said deck comprising a frame, a circular disk rotatably mounted upon said frame above said deck, a plurality of pins projecting from the under side of said disk and arranged radially with respect thereto to act upon said sheet to turn the grain or grass and deliver the same on the ground in a continuous row having all the butts of the grass in substantially a line parallel to the line of travel of the machine, means mounted on the upper portion of said frame to prevent the rotating disk from interfering with the downward movement of the grass, and means connecting the disk with the driving mechanism of the binder to rotate the same.

2. The combination with the discharge deck of a grain binder and the means for cutting grain or grass and delivering the same in a continuous sheet to said deck with the butt ends all turned forwardly and in the same plane, of an attachment mounted upon said deck comprising a base member and a frame, a circular disk rotatably mounted upon said frame at an angle which causes the disk to travel closer to the lower part of the base member, a plurality of pins projecting from the under side of said disk and arranged radially with respect thereto to act upon said sheet to turn the grain or grass and deliver the same on the ground in a continuous row having all the butts of the grass in substantially a line parallel to the line of travel of the machine, means mounted on the upper portion of said frame to prevent the rotating disk from interfering with the downward movement of the grass, and means connecting the disk with the driving mechanism of the binder to rotate the same.

3. The combination with the discharge deck of a grain binder and the means for cutting grain or grass and delivering the same in a continuous sheet to said deck with the butt ends all turned forwardly and in the same plane, of an attachment mounted upon said deck, said attachment comprising a frame including side members and a base member having a plane floor with its lower rear quadrant cut away, a circular disk rotatably mounted

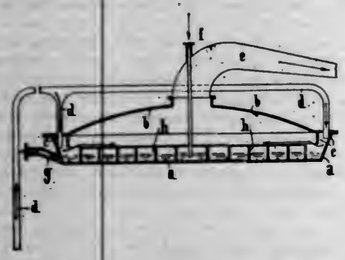
upon said frame, a plurality of pins projecting from the under side of said disk and arranged radially with respect thereto and operating to move the grain in a semicircle to the edge of said cut-away portion of the base member from which said grain falls to the ground in a continuous row having all the butts substantially in a line parallel to the line of travel of the machine, an apron mounted on said side members at their upper end and extending half way beneath the disk to prevent the rotating disk from interfering with the downward movement of the grain, and means connecting the disk with the driving mechanism of the binder to rotate the same.

4. The combination with the discharge deck of a grain binder and the means for cutting grain or grass and delivering the same in a continuous sheet to said deck with the butt ends all turned forwardly, of an attachment mounted upon said deck, comprising a substantially circular floor member having the lower rear quadrant cut away, a circular disk rotatably supported in spaced relation above said floor member, means for rotating the disk, and means carried by the disk and acting upon said sheet to turn the grain or grass and deliver the same over the edge of said cut away portion from which said grain will fall to the ground in a continuous row having all the butts of the grass in a line substantially parallel to the line of travel of the machine.

5. The combination with the discharge deck of a grain binder and the means for cutting grain or grass and delivering the same in a continuous sheet to said deck with the butt ends all turned forwardly, of an attachment mounted upon said deck, comprising a substantially circular floor member having the lower rear quadrant cut away, a circular disk rotatably supported in spaced relation above said floor member, means for rotating the disk, means carried by the disk and acting upon said sheet to turn the grain or grass and deliver the same over the edge of said cut away portion from which said grain will fall to the ground in a continuous row having all the butts of the grass in a line substantially parallel to the line of travel of the machine, and means above the upper portion of said floor member to prevent the rotating disk and means carried thereby from interfering with the movement of the grass over the floor member.

[Claim 6 not printed in the Gazette.]

1,115,192. PROCESS OF CONCENTRATING NITRIC ACID. FRITZ HAUSMANN, Mannheim, Germany, assignor to The Firm of Verein chemischer Fabriken in Mannheim, Mannheim, Germany. Filed Sept. 9, 1913. Serial No. 788,890. (Cl. 23—1.)

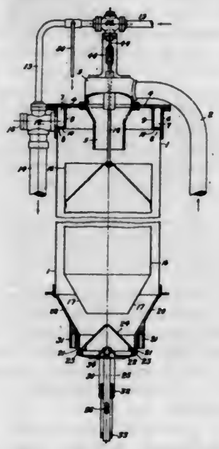


1. The process of manufacturing very highly concentrated nitric acid up to monohydrate and free from nitrous acid and lower oxids of nitrogen which consists in heating a mixture of sulfuric acid and nitric acid in one thin layer in a distillation apparatus, moving the heated mixture horizontally in a continuous stream forward through the distillation apparatus while cold gases not decomposing nitric acid are passed over the surface of the heated mixture, and leading the fumes of nitric acid with the gases out of contact with the remaining sulfuric acid.

2. The process of manufacturing very highly concentrated nitric acid up to monohydrate and free from nitrous acid and lower oxids of nitrogen which consists in heating a mixture of sulfuric acid and nitric acid in one thin layer in a distillation apparatus, moving the heated mixture horizontally in a continuous stream forward through the distillation apparatus while cold air is passed over the surface of the heated mixture and leading the fumes of nitric acid with air out of contact with the remaining sulfuric acid.

3. The process of manufacturing nitric acid monohydrate free from nitrous acid and lower oxids of nitrogen which consists in heating a mixture of sulfuric acid and nitric acid in one thin layer in a distillation apparatus, moving the heated mixture horizontally in a continuous stream forward through the distillation apparatus while cold air previously dried is passed over the surface of the heated mixture and leading the fumes of nitric acid with air out of contact with the remaining sulfuric acid.

1,115,193. APPARATUS FOR REMOVING FLUE DUST OR DIRT AND THE LIKE. WILLIAM GEORGE HAY, Prestwich, England. Filed Apr. 14, 1914. Serial No. 831,869. (Cl. 193—10.)

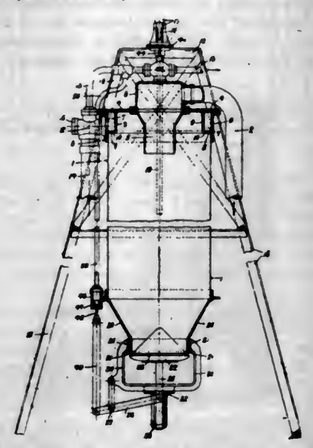


1. An apparatus for the removal of flue dust, dirt and the like comprising a vessel, an ejector in communication with the said vessel, means for controlling the supply of steam or motor fluid to the ejector, said means comprising a movable vessel arranged to receive the dust or dirt, the said vessel open at its top and bottom and having its lower end above the bottom of the main vessel, the movable and main vessels so arranged that the first portion of the dust received passes to the bottom of the main vessel, and subsequently the dust and the like collects in the movable vessel, the said vessel when charged moving into the dirt or dust in the bottom of the main vessel due to the weight of the said charge.

2. An apparatus for the removal of dust, dirt and the like comprising a vessel, a jet exhausting apparatus in communication therewith, a movable float within the vessel and having its lower end open, a discharge door in the bottom of the vessel and below the float, a steam supply valve operated by the said float and connected to the exhausting apparatus, means for operating the discharge door, said means controlled by the steam supply valves, and an air and dust introducing conduit located at the center of the vessel and dipping down into the same and discharging directly above the upper part of the float for the purpose described.

3. An apparatus for the removal of dirt, dust and the like comprising a vessel, a hollow open end float therewithin, an ejector in communication with the vessel, a door in the bottom of the vessel and below the float, means for operating the said door, a steam supply valve operated by the float, the said supply valve connected to and providing means for operating the ejector and the door operating means, and a dust and air introducing conduit discharging into the upper end of the float, the parts arranged as and for the purpose described.

1,115,194. APPARATUS FOR REMOVING FLUE DUST OR DIRT AND THE LIKE. WILLIAM GEORGE HAY, Prestwich, England. Filed July 25, 1914. Serial No. 853,179. (Cl. 193—10.)



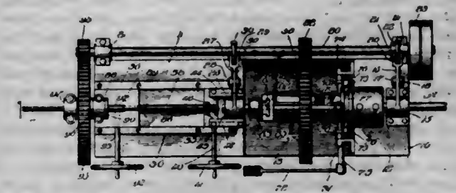
1. An apparatus for the removal of dust, dirt or the like comprising the combination with a vertically movable vessel adapted to collect and hold the material to be removed, means for holding the vessel in its uppermost position when the vessel is empty, said means allowing the vessel to fall as it becomes charged, a steam exhausting apparatus connected with the vessel, steam operated means for discharging the contents of the vessel, of a valve located on the steam supply for controlling the supply of steam to the exhausting apparatus and to the discharging means, said valve opened and closed by the upward and downward movement of the vessel, the parts arranged as and for the purpose described.

2. An apparatus for the removal of dust, dirt or the like comprising a vertically movable vessel adapted to collect and hold the material to be removed, means for holding the vessel in its uppermost position when empty, steam operated means for opening and closing the vessel for discharging and collecting the material to be removed, said means closing the vessel when it is at the limit of its upward movement, a steam exhausting apparatus connected with the vessel, a valve in the steam supply for simultaneously controlling the steam supply exhausting apparatus and discharging and collecting means, the parts arranged as and for the purpose described.

3. An apparatus for the removal of dust, dirt or the like, comprising a vertically movable vessel adapted to collect and hold the material to be removed, means for holding the vessel in its uppermost position when the said vessel is empty, steam operated means for opening and closing the vessel for discharging and collecting the material to be removed, said means normally closing the vessel when it is in its uppermost position, a steam exhausting apparatus connected with the vessel, a valve in the steam supply for controlling the steam supplied to the exhausting apparatus, and to the discharging and collecting means, the said valve operated by the upward and downward movement of the vessel, whereby it automatically allows the steam exhausting apparatus to operate and the discharging means to be closed when the vessel is in its uppermost position and shutting off the steam exhausting apparatus and opening the discharging means when the vessel has reached a limit of its downward movement.

4. An apparatus for the removal of dust, dirt or the like comprising a vertically movable vessel adapted to collect and hold the material to be removed, means for holding the vessel in its uppermost position when it is empty, a steam supply pipe, an exhausting mechanism in communication with the steam supply and also with the vertically movable vessel, steam operated means for opening and closing the vessel for discharging and collecting the material to be removed, said means communicating with the steam supply, a valve in the steam supply pipe for cutting off steam pressure to the exhausting apparatus and discharging means when it is closed, the said valve operated by the upward and downward movement of the vessel, the said valve adapted to be open when the vessel is at the limit of its upward movement and closed when the vessel is at the limit of its downward movement, the weight of the material in the vessel providing means for raising and lowering it against the means for normally holding it at the limit of its upward movement, the parts arranged as and for the purpose described.

1,115,195. WELDING-MACHINE. EDWARD T. HENDEE, Chicago, Ill. Filed May 4, 1914. Serial No. 836,082. (Cl. 219—4.)



1. A flue-welding machine, comprising means to hold two flue sections in end to end contact during the application of the welding heat, and simultaneously operated external and internal smoothing means to smooth down the metal at the interior and exterior of the welded joint.

2. A welding machine for welding tubular articles comprising means to support and press together, during the welding heat, said articles and rolling means to simultaneously engage both inner and outer walls of the article at the joint to roll or press the displaced metal thereat to produce a smooth joint at the inner and outer sides of the tube.

3. A welding machine for welding tubular articles comprising means to hold in endwise contact the articles to be welded, forming means to engage both the inner and outer sides of the articles at the joint to roll down or press the displaced metal thereat, the external forming means being movable radially toward the work, and the internal forming means being movable axially toward and from the work, and coöperating means for the forming means.

4. A tube welding machine comprising combined supporting devices and electrodes of opposite polarity, and inner and outer joint smoothing means for the welded joint comprising unitary parts of the machine and adapted to act upon the heated joint while supported in said machine.

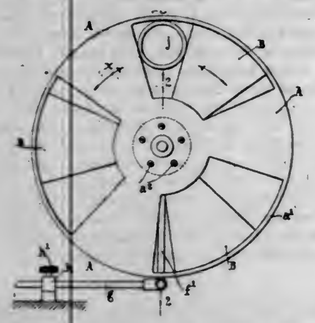
5. A welding machine comprising means for holding pressed in endwise contact the articles to be welded and finishing elements for smoothing down the heated displaced metal at the joint to produce a smooth welded joint, said finishing elements being revoluble about and movable radially toward the joint.

[Claims 6 to 15 not printed in the Gazette.]

1,115,196. SHUTTER MECHANISM FOR KINETOSCOPES OR KINEMATOGRAPHIC APPARATUS. LUCIEN HERMAND, Rouen, France. Filed Apr. 8, 1914. Serial No. 830,520. (Cl. 88—19.3.)

1. In kinetoscope apparatus or the like, a shutter mechanism comprising a pair of oppositely rotating shutter disks mounted on a common axis, bevel gears operatively

connected to said shutters, a bevel pinion meshing therewith and driving said gears in opposite directions, together with means for rotating said pinion around the common axis of said bevel gears to adjust the relative rotary positions of said shutters, for the purpose described.



2. In kinetoscope apparatus or the like, a shutter mechanism comprising a pair of oppositely rotating shutter disks mounted on a common axis, bevel gears operatively connected to said shutters, a bevel pinion meshing therewith and driving said gears in opposite directions, together with means operative during the actuation of said shutters for rotating said pinion around the common axis of said bevel gears to adjust the relative rotary positions of said shutters, for the purpose described.

3. In kinetoscope apparatus or the like, a shutter mechanism comprising a pair of oppositely rotating shutter disks mounted on a common axis, bevel gears operatively connected to said shutters, a bevel pinion meshing therewith and driving said gears in opposite directions, a sleeve mounted on said common axis and carrying said pinion, together with a lever for turning said sleeve on its axis to adjust the relative rotary positions of said shutters, for the purpose described.

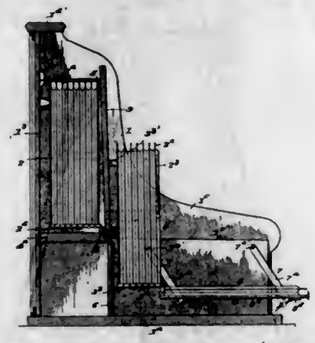
4. In kinetoscope apparatus or the like, a shutter mechanism comprising a pair of oppositely rotating shutter disks mounted on a common axis, bevel gears operatively connected to said shutters, a bevel pinion meshing therewith and driving said gears in opposite directions, a sleeve mounted on said common axis, a lever rigid with said sleeve and forming the axis for said pinion, whereby upon the operation of said lever, said pinion may be rotated on the common axis of said bevel gears and the relative rotary position of said shutters adjusted, substantially as described.

1,115,197. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Original application filed June 26, 1911, Serial No. 635,354. Divided and this application filed Feb. 14, 1913. Serial No. 748,401. (Cl. 45—2.)

1. In a filing appliance, the combination of a casing, a plurality of sets of holders mounted therein, one set being normally arranged in vertical position and the other set being normally arranged in horizontal position, and a member operatively related to said sets of holders pivotally supported in said casing, the said member serving to support the free ends of either set of holders when they are operated.

2. In a filing appliance, the combination of a casing, a plurality of sets of holders mounted therein one of said sets of holders having connections between the holders thereof permitting them to swing relative to each other, means interposed between the last mentioned set of holders and the casing for supporting the said set of holders therein and permitting the opposite end holders thereof to move relative to each other as any of the holders between them are swung about their respective pivots, and a member operatively related to said sets of holders pivoted in said casing and serving to support the free ends of the holders of either set when they are operated and permitting the movement of the end holders of that set of holders which move relative to each other.

3. In a filing appliance, the combination of a casing, a plurality of sets of holders mounted therein, one of said sets of holders having connections between the holders thereof permitting them to swing relative to each other, and a member operatively related to said sets of holders pivoted in said casing and serving to support the free ends of the holders of either set when they are operated, the end holder of the last mentioned set of holders adjacent to said frame having sliding engagement therewith as any of the holders of said set are operated.

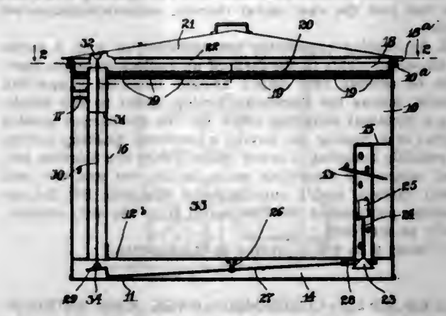


4. In a filing appliance the combination with a casing, of a pair of supporting members mounted in said casing, one of said members being arranged horizontally and the other of said members arranged in vertical plane along the front edge of the other member, a set of holders normally arranged in vertical position and resting on the horizontal supporting member, a separate set of holders normally arranged in horizontal position and arranged to engage the vertical supporting member, and a swingable member hinged on an axis substantially co-incident with the adjacent edges of the supporting member and arranged to be supported by the adjacent end holder of either set of holders, whereby it operates as a support for the free end of those holders of the other set which are operated.

5. In a filing appliance the combination with a casing, of a vertical member transversely arranged in said casing, a transversely arranged supporting member extending rearwardly from the upper edge of said vertical member in a horizontal plane, a set of holders mounted on said horizontal supporting member and arranged to swing from a vertical position to a horizontal position, a separate set of holders normally arranged in a horizontal position and having connections between them permitting said holders to swing relatively to each other, means for supporting the last mentioned set of holders, the said means operating to normally maintain the holders in engagement with the vertical supporting member and permitting relative movement of the opposite end holders of said set of holders, a member arranged between said sets of holders, and means for supporting said member substantially coincident with the adjacent edges of said supporting members, whereby said member may be arranged in engagement with either set of holders and operate as a support for those holders of the other set which are operated, the said member coöperating with the vertical supporting member to permit relative movement between the end holders of said separate set of holders.

1,115,198. BOILER. LEOPOLD R. HIRSCH, Brooklyn, N. Y. Filed Jan. 5, 1914. Serial No. 810,326. (Cl. 68—30.)

1. A boiler, embodying therein a boiler body provided with a water space, oppositely disposed pipes for maintaining water circulation in said boiler, a cover for the latter, and means operating automatically to prevent overflow from the boiler when said cover is raised.

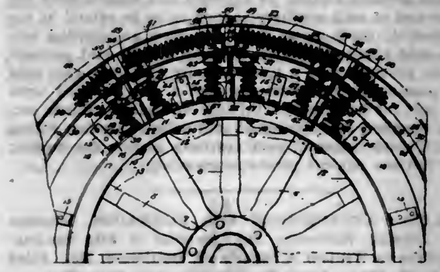


2. A boiler, embodying therein a boiler body provided with a water space in its base, a perforated filtering tray suspended from the upper part of said body opposite said water space, and oppositely disposed pipes for maintaining water circulation, one of said pipes being longer than the other and opening into said water space and said filtering tray.

3. A boiler, embodying therein a boiler body provided with a water space in its base, a perforated filtering tray suspended in said body from the upper edge of said boiler, a perforated pipe closed at one end and having its opposite end opening into said water space, an imperforate pipe open at both ends and communicating with both the water space and the filtering tray, and automatically operating means to prevent overflow of water when the boiler cover is raised.

4. A boiler, embodying therein a boiler body provided with a water space in its base, filtering means depending within the boiler near the upper edge thereof, a perforated pipe near one end of the boiler said perforated pipe having one end in open communication with said water space and its other end closed, and an imperforate pipe opposite said perforated pipe, said imperforate pipe being open at both ends and communicating, respectively, with said water space and said filtering means.

1,115,199. VEHICLE-WHEEL. LAWRENCE HOSKINS, Plainville, Ill. Filed Jan. 10, 1913. Serial No. 741,190. (Cl. 152—38.)



1. In a vehicle-wheel, the combination of a hub-section, a rim-section guidedly confined thereon, telescopic means mounted in one section and loosely mounted in the other to permit circumferential movement, radially-disposed springs located between said rim-section and hub-section, members engaging said springs at opposite ends of the latter, and means connecting those of said members which are positioned at the other ends of said springs, with said hub-section and said members at the inner ends of said springs with said rim-section.

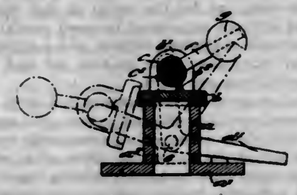
2. In a vehicle-wheel, the combination of a hub-section, a rim-section guidedly confined thereon, telescopic means mounted in one section and loosely mounted in the other to permit circumferential movement, radially-disposed springs located between said rim-section and hub-section, members engaging said springs at opposite ends of the latter, confined between, and overlapping parts of, said sections, and means connecting those of said members which are positioned at the outer ends of said springs with one of said sections, and said members at the inner ends of said springs with the other of said sections.

3. In a vehicle-wheel, the combination of a hub-section, a rim-section guidedly confined thereon, a telescopic member mounted in the hub-section and having its other end loosely mounted in the rim section adapted to permit circumferential movement, radially-disposed springs located between said rim-section and hub-section, members engaging said springs at opposite ends of the latter, and confined between, and overlapping parts of said sections, and interlocking yoke-shaped bars connecting those of said members which are positioned at the outer ends of said springs with one of said sections, and said members at the inner ends of said springs with the other of said sections.

4. In a vehicle-wheel, the combination of a hub-section, a rim-section guidedly confined thereon, a series of members confined on one of said sections but having movement circumferentially thereof, radially-disposed springs located between said members and the other of said sections, members engaging said springs at opposite ends of the latter and bearing against said first-named members and said last-referred to wheel-section, and means connecting those of said members which are positioned at an end of said springs with said first-named members, and those of said members, which are positioned at the other end of said springs with said last-referred to wheel-section.

5. In a vehicle-wheel, the combination of a hub-section, a rim-section guidedly confined thereon, a series of members confined on said rim-section but having movement circumferentially thereof, radially-disposed springs located between said members and said hub-section, members engaging said springs at opposite ends of the latter and bearing against said first-named members and said hub-section, and means connecting those of said last-named members which are positioned at the outer ends of said springs, with said hub-section and said members at the inner ends of said springs with said first-named members.

1,115,200. POKING-HOLE FOR SUCTION GAS-PRODUCERS. PERCIVAL TURNER HOUSTON, London, England. Filed July 2, 1914. Serial No. 848,660. (Cl. 48—87.)



1. A self-contained fitting for poking holes of gas producers and the like, comprising in combination a body part or stand attached at one end to the producer, a cover for closing the other end or mouth of the stand, means mounted on the cover for raising and lowering the cover with respect to the mouth of the stand, members pivotally mounted on the stand and connected with said raising and lowering means, and means for rocking said members about their pivots whereby the cover is shifted from or returned to a raised position above the mouth of the stand.

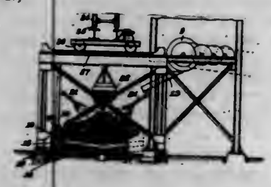
2. A self-contained fitting for poking holes of gas producers and the like, comprising in combination a body part or stand attached at one end to the producer, a flanged cover adapted to fit over and thereby close the other end of the stand, means mounted on the cover

for raising and lowering the cover with respect to the mouth of the stand, members pivotally mounted on the stand and connected with said raising and lowering means, and means for rocking said members about their pivots whereby the cover is shifted from or returned to a raised position about the mouth of the stand.

3. In a self-contained fitting for poking holes of gas producers and the like, comprising a tubular body part or stand attached at one end to the producer and a cover for closing the other end of said stand, a pin eccentrically journaled in bearings on the cover, links pivotally connected at one end with the extremities of the pin and at the other end with bosses or studs projecting laterally from the stand, means for turning the pin on its bearings whereby the cover is raised or lowered relatively to the mouth of the stand, and means for rocking the links and cover about said studs whereby the cover may be moved to and from a raised position above the said mouth.

4. In a self-contained fitting for poking holes of gas producers and the like, comprising a tubular body part or stand attached at one end to the producer and a cover for closing the other end of said stand, a pin eccentrically journaled in bearings on the cover, links pivotally connected at one end with the extremities of the pin and at the other end with bosses or studs projecting laterally from the stand, means for turning the pin on its bearings whereby the cover is raised or lowered relatively to the mouth of the stand, and means for rocking the links and cover about studs whereby the cover may be moved to and from a raised position above the said mouth, said latter means comprising a handle member mounted on said pin.

1,115,201. CASTING MECHANISM. WILLIS T. HURST, Pittsburgh, Pa. Filed Nov. 19, 1913. Serial No. 801,818. (Cl. 22—64.)



1. In casting apparatus, the combination with a series of elevated traveling molds adapted to turn over and empty molded pigs at a given point, of a permanently stationary receiving vat for the metal at and below such point provided with an uppermost recessed receiving layer of suitable material, a filtering bottom, and a water outlet, and means for supplying water to said vat and its contents, substantially as set forth.

2. In casting apparatus, the combination with a series of elevated traveling molds adapted to turn over and empty molded pigs at a given point, of a permanently stationary receiving vat for the metal at and below such point provided with an uppermost recessed receiving layer of suitable material, a filtering bottom, and a water outlet, means for supplying water to said vat and its contents, and means for removing molded pigs upwardly from the vat, substantially as set forth.

3. In casting apparatus, the combination with a series of traveling molds adapted to turn over and empty molded pigs at a given point, of a receiving vat for the metal at such point provided with a filtering bottom, means for supplying water to the vat for cooling the cast metal therein, and a superimposed magnetic lift for removing the cast metal from the mold, substantially as set forth.

4. In casting apparatus, the combination with a series of traveling molds in the form of an endless conveyer, means for supplying molten metal to the molds, and a terminal receiving chute adapted to receive the molded metal as the molds discharge it; of a cooling vat having a concaved filtering bottom of suitable material adapted to receive the metal from the chute, a sewer outlet below the filtering bottom, and means for supplying water to the vat and the cast metal therein, substantially as set forth.

5. In casting apparatus, the combination with a series of traveling molds in the form of an endless conveyer operable to reverse and empty around terminal supporting wheels, means for supplying molten metal to the molds, and a terminal receiving chute for the discharged molded units; of a cooling vat having a concaved filtering bottom of suitable material, a sewer outlet below the filtering bottom, means for supplying water to the vat and the cast metal therein, and a superimposed magnetic lift for extracting portions of the cast metal from the vat, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

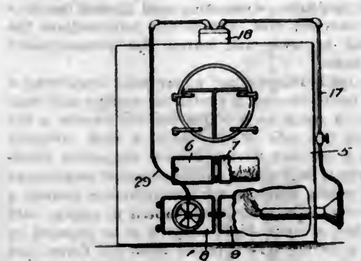
1,115,202. CLAPBOARD-GAGE AND SHINGLE-HOLDER. JAMES INGLES, Ossining, N. Y. Filed June 2, 1913. Serial No. 771,256. (Cl. 33—187.)

A clapboard or shingle gage comprising a primary and an auxiliary section, each formed from a single sheet of material, said primary section comprising a body having a base bent at right angles thereto, said base having spurs bent at its outer edge, said body having flanges bent on its longitudinal edges, said flanges extending at right-angles to said body, the auxiliary section slidably mounted on said primary section, an enlarged foot formed upon the upper end of said auxiliary section so as to extend at approximately right angles thereto to form an abutting portion, said auxiliary section carrying a bolt, said primary section provided with a longitudinally extending slot, said bolt passing through said slot and a nut threaded upon said bolt for holding said primary and said auxiliary sections together, said flanges of said primary section fitting upon the side edges of said auxiliary section for holding said sections against pivotal movement.

1,115,203. ATTACHMENT FOR FURNACES. GEORGE R. JARMAN, Baltimore, Md., assignor of fifty one-hundredths to William A. Matthews, Baltimore, Md. Filed Feb. 16, 1914. Serial No. 819,006. (Cl. 110—69.)

1. In an attachment for furnaces, a pipe adapted to feed air to a furnace, a steam conductor having a portion thereof coiled within the pipe and an extremity of said conductor extending longitudinally of the pipe within the coiled portion of the conductor, a head on the outer end of the straight portion of the conductor, said head having jets formed therein for the escape of steam, said jets discharging longitudinally of the said pipe.

2. In an attachment for furnaces, a pipe adapted to feed air to a furnace, means for controlling the outer end thereof, a steam conductor having a coiled portion extending longitudinally of the pipe, and a straight portion extending through the coil, said straight portion terminating near the outer end of the pipe, a head on the outer end of the conductor, said head having jets therein, and a perforated plate in the head through which steam passes to the jets.



3. In an attachment for furnaces, a pipe adapted to feed air to a furnace, means for controlling the outer end thereof, a steam conductor having a coiled portion extending longitudinally of the pipe, a straight portion extending through the said coil, said straight portion terminating near the outer end of the pipe, a head on the outer end of the conductor, said head having jets therein, a perforated plate in the head through which steam passes to the jets, and a drain pipe in the head.

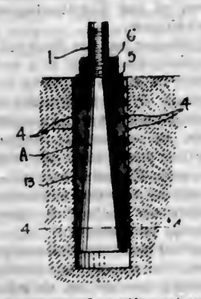
1,115,204. SHOE-LACE TIP. CLYDE R. JEFFORDS, New York, N. Y. Filed July 24, 1913. Serial No. 780,925. (Cl. 24—143.)

1. A lacing provided with a hollow metallic device forming a tip and attaching device, said device being provided with a double bend intermediate its ends to clamp the device to the lacing and to form a base and a bill connected by a shoulder, said bill and base extending in opposite directions from the shoulder.

2. A lacing provided with a combined tip and attaching device consisting of a plate folded around the lacing and offset intermediate its ends to form a shoulder, and a bill extending in one direction from the shoulder, and a base extending in the opposite direction.

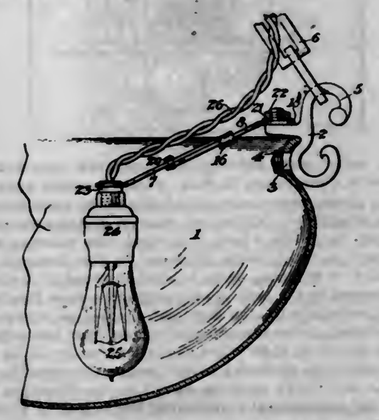
3. A lacing provided with a combined tip and attaching device, said device consisting of a plate having its edges lapped over the lacing and centrally doubled longitudinally with the lacing and offset intermediate its length to form a shoulder, and a bill and base extending in opposite directions from the shoulder.

1,115,205. EXPANSIBLE BOLT. OTTO JOHNSON and EDWARD JOHNSON, Duluth, Minn. Filed Feb. 28, 1914. Serial No. 821,770. (Cl. 85—2.4.)



A bolt having a tapered portion at one end thereof, the threads of said bolt extending from its opposite end to the tapered portion thereof, a sleeve slidably arranged upon the bolt, the bore of said sleeve being tapered to substantially the same degree as the tapered portion of the bolt, projections formed on said sleeve, and said sleeve being provided with a longitudinal slit therein extending from end to end of the sleeve.

1,115,206. SUPPORT FOR INCANDESCENT-ELECTRIC-LAMP SOCKETS. WALTER R. KAHNS, Chicago, Ill., assignor to J. H. White Mfg. Co., Brooklyn, N. Y., a Corporation of New York. Filed May 5, 1914. Serial No. 836,420. (Cl. 240—52.)

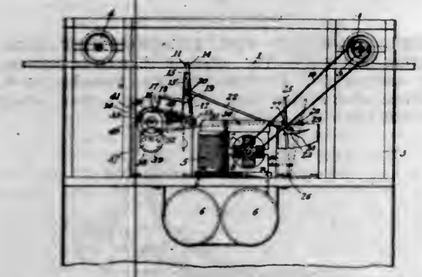


1. A support for an electric lamp socket, comprising two members each cut out of a flat strip of metal, one of said members having oppositely disposed right angled projections at one end bent over toward each other forming a guide clip, said member being provided with a central longitudinal slot enlarged at one end, a stud secured to the other end of said member for attachment of a lamp socket, the other member having a reduced portion at one end, with a screw-threaded hole therein, a headed screw secured within said hole and adapted to be passed through the enlargement at the end of the longitudinal slot in said first member and passed along in said slot whereby the two members are held by means of said screw-head and said clip in slidable contact, the free end of said second member being provided with an opening for connection with a hanger.

2. In an electric lighting fixture, the combination of a globe or bowl, a hanger for suspending the same, a support for an electric lamp socket comprising two members each cut out of a flat strip of metal, one of said members having oppositely disposed right angled projections at one end bent over toward each other forming a guide clip, said member being provided with a central longitudinal slot enlarged at one end, a stud secured to the other end of said member for attachment of a lamp socket, the other member having a reduced portion at one end with a screw-threaded hole therein, a headed screw secured within said hole and adapted to be passed through the enlargement at the end of the longitudinal slot in said first member and passed along in said slot whereby the two members are held by means of said screw-head and said clip in slidable contact, the free end of said second member being provided with an opening for connection with said hanger.

3. A support for an electric lamp socket, comprising two members, one of said members being provided with a guide-clip and longitudinal slot having an enlargement at one end, a stud secured to one end of said member for the attachment of a lamp socket, the other member having a reduced portion at one end provided with a screw-threaded hole and passed through said guide-clip on the first member, a set screw passing through said slot in said first member and screwed into said screw-threaded hole in the second member with its end upset to prevent its withdrawal, the other end of said second member being provided with an opening for connection with a hanger.

1,115,207. MOTOR-DRIVEN RURAL MAIL-CAR. AARON THOMAS KELSEY, St. Charles, Minn. Filed June 23, 1914. Serial No. 846,857. (Cl. 104—146.)



1. A motor mail delivery car apparatus comprising a track with a projection thereon, wheels mounted upon the track, a motor, gear connections between the same and one of said wheels for driving the same, a spring-pressed escapement controller wheel, a notched disk rotating with the latter, a crank shaft journaled in the frame of the apparatus, a swinging rack, a lever fastened to the rack and disposed in the path of said projection upon the track, a pawl movable with the rack and adapted to engage the notched disk, a cam bar actuated by the lever and adapted to rock the crank shaft when the latter returns to its normal position, an electrical switch, means for operating the same as said crank shaft is rocked in one direction, and means for automatically returning the switch to a closed position.

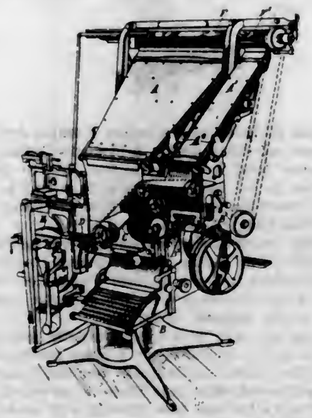
2. A motor mail delivery car apparatus comprising a track with a projection thereon, wheels mounted upon the track, a motor, gear connections between the same and one of said wheels for driving the same, a spring-pressed escapement controller wheel, a notched disk rotating with the latter, a crank shaft journaled in the frame of the apparatus, a swinging rack, a lever fastened to the rack and disposed in the path of said projection upon the track, a pawl movable with the rack and adapted to engage the notched disk, a cam bar actuated by the lever and adapted to rock the crank shaft when the latter returns to its normal position, an electrical switch, a second lever, pivotal connections between the same and the switch and positioned in the path of one of the cranks of the crank shaft, designed to be actuated as the crank shaft rocks, and means for automatically returning the switch to a closed position.

3. A motor mail delivery car apparatus comprising a track with a projection thereon, wheels mounted upon the track, a motor, gear connections between the same and one of said wheels for driving the same, a spring-pressed escapement controller wheel, a notched disk rotating with the latter, a crank shaft journaled in the frame of the apparatus, a swinging rack, a lever fastened to the rack and disposed in the path of said projection upon the track, a pawl movable with the rack and adapted to engage the notched disk, a cam bar actuated by the lever and adapted to rock the crank shaft when the latter returns to its normal position, an electrical switch, a second lever, pivotal connections between the same and the switch and positioned in the path of one of the cranks of the crank shaft, designed to be actuated as the crank shaft rocks, means for automatically returning the switch to a closed position, and a rod pivotally connecting said second referred to lever and switch.

4. A motor mail delivery car apparatus, comprising a car, a dynamo motor thereon, a switch for starting and stopping the motor, a track upon which the car travels, a pin projecting from the side of the track, a rack pivotally mounted upon a car and having a lever projecting therefrom in the path of said pin, a spring-actuated escapement regulated disk with a notch in the circumference thereof, a pawl movable with said lever and adapted to engage said notch, a cam bar, a crank shaft adapted to be engaged by said cam bar, a second lever pivoted upon the frame and positioned in contact with the crank shaft, a rod having a hooked end adapted to engage said second referred to lever, a pitman connecting said hooked bar to a pin upon the notched disk, and means intermediate the second referred to lever and switch for automatically throwing the same.

5. A motor mail delivery car apparatus, comprising a car, a dynamo motor thereon, a switch for staring and stopping the motor, a track upon which the car travels, a pin projecting from the side of the track, a rack pivotally mounted upon a car and having a lever projecting therefrom in the path of said pin, a spring-actuated escapement regulated disk with a notch in the circumference thereof, a pawl movable with said lever and adapted to engage said notch, a cam bar, a crank shaft adapted to be engaged by said cam bar, a second lever pivoted upon the frame and positioned in contact with the crank shaft, a rod having a hooked end adapted to engage said second referred to lever, a pitman connecting said hooked bar to a pin upon the notched disk, a rod pivotally connecting said second referred to lever and switch.

1,115,208. LINE-CASTING MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 6, 1911. Serial No. 625,616. (Cl. 199—7.)



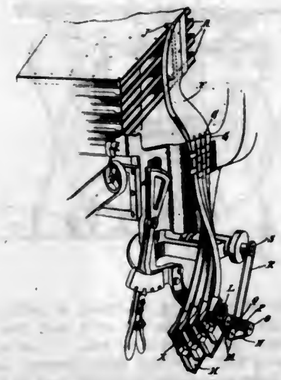
1. Distributing mechanism for typographical machines comprising sections formed with character-distributing combinations, one of said sections being replaceable at will by a section of dissimilar character to effect an alteration in or rearrangement of the distributing combinations of the distributing mechanism.

2. A toothed distributer bar for linotype machines comprising a section replaceable at will by a section of dissimilar character to effect an alteration in or rearrangement of the tooth combinations of the distributer bar.

3. In a typographical machine, the combination of a plurality of magazines, one removable independently of another, and distributing mechanism comprising a plurality of sections, one for each magazine, one of said sections being replaceable at will by a section of dissimilar character; whereby the distributing mechanism may be altered to correspond to different magazines.

4. In a typographical machine, the combination of a plurality of magazines, one removable at will from the machine, and distributing mechanism therefor comprising a toothed distributer bar formed in sections, one for each magazine, the section corresponding to the removable magazine being replaceable at will by a section corresponding to a substituted magazine.

1,115,209. TYPOGRAPHICAL COMPOSING-MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 3, 1913. Serial No. 765,196. (Cl. 199—7.)



1. In a typographical composing machine, the combination of a plurality of superposed flat magazines for the type or matrices, capable of independent use, and a corresponding plurality of sorts receiving devices, the parts being constructed in such manner that the sorts type or matrices are delivered laterally to the receiving devices through openings in the edges of the magazines.

2. In a typographical composing machine, the combination of a flat magazine for the type or matrices supported with its bottom face in close proximity to and obstructed by some other part of the machine, and a sorts receiving device, the magazine being formed with an opening in its side edge through which the sorts type or matrices pass sidewise into the receiving device.

3. In a typographical composing machine, the combination of the flat magazine A having the sorts channel A′ and supported with its bottom face in close proximity to and obstructed by some other part of the machine, with a sorts receiving device, the magazine being formed with the opening E at the side of the channel A′ and provided with the block D to deflect the sorts type or matrices sidewise through the opening into the receiving device.

4. In a typographical composing machine, the combination of a plurality of magazines for the type or matrices, and a corresponding plurality of sorts receiving devices coöperating therewith, a portion of the sorts receiving devices being detachably mounted to permit the convenient removal of the magazines.

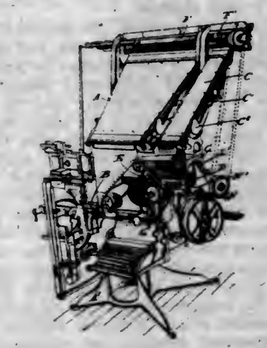
5. In a typographical composing machine, the combination of a plurality of magazines for the type or matrices, the said magazines being of greater width at their rear than at the front, with a corresponding series of sorts receiving devices coöperating therewith, a portion of the sorts receiving devices being detachably mounted to permit the convenient forward removal of the magazines.

[Claims 6 to 8 not printed in the Gazette.]

1,115,210. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 21, 1913. Serial No. 780,171. (Cl. 199—7.)

1. In a typographical machine, the combination of a magazine formed with grooved channels for the type or matrices, a bank of escapements therefor one for each channel, and means to permit the operation of all the escapements or prevent the operation of alternate escapements, to adapt the mechanism for the delivery of type or matrices from all of the channels, or of thicker type or matrices from alternate channels, at will.

2. In a typographical machine, the combination of a plurality of escapement actuating devices divided into sets, those of one set being alternated with those of another set, finger keys for operating said devices, and means for preventing the manipulation of the keys of one of said sets when desired.



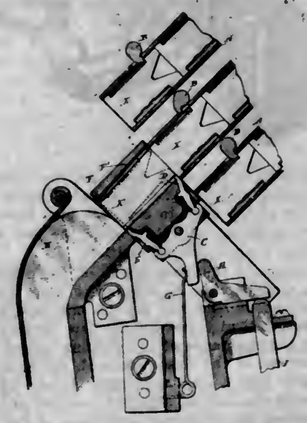
3. In a typographical machine, the combination of a plurality of escapement actuating devices divided into sets, those of one set being alternated with those of another set, finger keys for operating said devices, and a movable shield to cover the keys of one of said sets.

4. In a typographical machine, the combination of a plurality of escapement actuating devices divided into sets, those of one set being alternated with those of another set, finger keys for operating said devices, and means for permitting or preventing the conjoint operation of the finger keys of both sets, as required.

5. In a typographical machine, the combination of a bank of escapements divided into sets, those of one set being alternated with those of another set, and means for permitting or preventing the conjoint actuation of said sets, as required.

[Claims 6 to 12 not printed in the Gazette.]

1,115,211. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 25, 1914. Serial No. 840,793. (Cl. 199—7.)



1. In a typographical machine, the combination of a column of type or matrices, and an escapement to control their release, the said escapement comprising two pawls which are projected alternately into the path of movement of the type or matrices, and one of which pawls shifts the matrices edgewise in effecting their release.

2. In a typographical machine, the combination of a column of type or matrices, and an escapement to control their release, the said escapement comprising two pawls which are projected alternately into the path of movement

of the type or matrices, the upper one of said pawls standing normally in engagement with the lowermost matrix in the column and acting to shift it edgewise in its subsequent return to normal position.

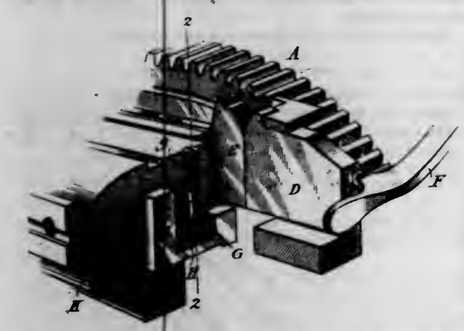
3. In a typographical machine, the combination of a magazine to contain the type or matrices, and an escapement mounted externally of the magazine to control their release therefrom, the said escapement comprising two pawls which are projected alternately into the path of movement of the type or matrices, the upper one of said pawls standing normally in engagement with the lowermost matrix in the magazine and acing to shift it edgewise in its subsequent return to normal position.

4. In a typographical machine, the combination of a magazine for the type or matrices, an exterior throat to receive them therefrom, and an escapement comprising two pawls acting in the throat to control the passage of the type or matrices therethrough, the upper one of said pawls standing normally in engagement with the lowermost matrix in the magazine and acting to shift it edgewise in its subsequent return to normal position.

5. In a typographical machine, the combination of a magazine for the type or matrices, an exterior throat to receive them therefrom, and an escapement comprising two pawls acting in the throat to control the passage of the type or matrices therethrough, one of said pawls adapted to shift them edgewise in their passage, and the said throat being cut away at its farther side to permit such edgewise shifting of the type or matrices.

[Claims 6 and 7 not printed in the Gazette.]

1,115,212. LINE-CASTING MACHINE. LUTHER L. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 7, 1910. Serial No. 591,076. (Cl. 199—7.)



1. In a machine of the class described, the combination of a slotted mold, and the jaw E movable freely at will across the face of the mold to close the slot thereof, and the spring-actuated detent G to engage the jaw when so moved and hold it yieldingly in position.

2. In a machine of the class described, the combination of the mold, a sliding jaw E, adapted to cover the mold, a yielding detent to hold the jaw in said position, and means for automatically moving the jaw backward notwithstanding the resistance of the yielding detent.

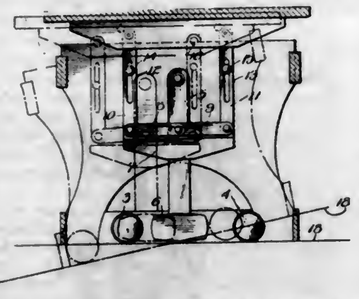
3. In a machine of the class described, the combination of the movable jaw E and a yielding detent which engages and holds the jaw in adjusted position and is disengaged therefrom by the return movement of the jaw.

4. In a machine of the class described, and in combination with the sliding jaw E, a spring actuated detaining pin arranged to engage the jaw in one position and to be disengaged by the removal of the jaw therefrom.

5. In a machine of the class described, the combination of the pressure lever F, jaw D, the opposing jaw E, and a yielding detent adapted to hold the jaws E and D in their extreme right hand positions against the pressure of the lever F.

[Claim 6 not printed in the Gazette.]

1,115,213. NON-SPILLABLE SHIP-TABLE. PERRY W. KEYMER, New York, and GEORGE I. BROWN, Florida, N. Y. Filed July 16, 1913. Serial No. 779,363. (Cl. 114—195.)



1. In a table of the class described, a body, a top, a pair of links pivotally connected with said top, each of said links being formed with a slot, a pin extending through said slot and into said body whereby said links are guided in their movement, a second pair of links connected with the outer end of said first mentioned pair of links, a pendulum connected with said body, means for pivotally connecting the inner ends of said second mentioned links with said pendulum, a cross bar rigidly secured to said pendulum immediately below said second mentioned links, and a weight arranged on the lower end of said pendulum.

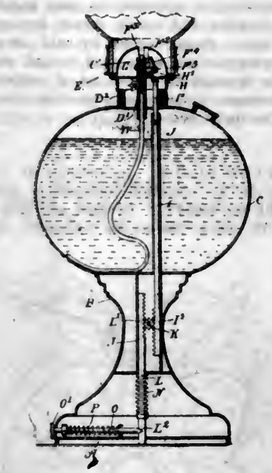
2. In a table of the class described, a fixed body, a top, a pair of links connected with said body, a pendulum, means for pivotally connecting said links with said pendulum, a weight arranged on said pendulum for normally holding the same vertical, and weights acting on said first mentioned weights for assisting the same in holding the pendulum vertical.

3. In a table of the class described, a body adapted to be fixed, a top, a pair of pivotally mounted links arranged near each end of said top, means for guiding said links in their movement, a second pair of links pivotally connected to the lower end of each pair of said first mentioned links, a pendulum pivotally mounted on each end of said body, means for pivotally connecting said last mentioned links to said pendulum, a cross bar rigidly secured to said pendulum below said last mentioned links for limiting the downward movement of said last mentioned links, a weight arranged on the end of said pendulum, and means for assisting said weight in maintaining said pendulum in a vertical position.

1,115,214. SAFETY-EXTINGUISHER FOR LAMPS. FRANK KRICH, New York, N. Y. Filed June 10, 1914. Serial No. 844,173. (Cl. 67—78.)

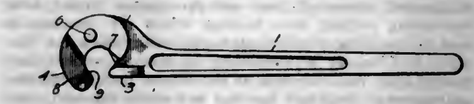
1. In combination with a lamp of the type described, a U-shaped spring-pressed extinguishing member pivoted on the wick tube of the lamp and adapted to swing over the top of the wick tube, a rod connected with the middle portion of said extinguishing member and provided with a rack at its lower end, a spring-pressed operating rod adapted to extend below the bottom of the base of the lamp and provided with a rack at its upper end, and a pinion mounted to turn and in mesh on opposite sides with the said racks.

2. In combination with a lamp of the type described, a U-shaped spring-pressed extinguishing member pivoted on the wick tube of the lamp and adapted to swing over the top of the wick tube, a rod connected with the said extinguishing member and provided with a rack at its lower end, a spring-pressed operating rod adapted to extend below the bottom of the base of the lamp and provided with a rack at upper end and with a notch at its lower end, a pinion mounted to turn and in mesh on opposite sides with the said racks, and a manually controlled spring-pressed locking rod adapted to engage the notch of the said operating rod to lock the latter in inactive position.



3. The combination with a lamp, of a U-shaped extinguishing member having segmental slots in its arms, pivots on the wick tube and engaging the slots of the arms of the said member, springs secured to the wick tube and to the arms of the extinguishing member, a rod having its upper end connected with the middle portion of the said member and provided with a rack at its lower end, a sliding and spring pressed operating rod adapted to extend below the bottom of the base of the lamp and provided with a rack at its upper end, a pinion between the rods and in mesh with the racks thereof, and a manually controlled locking device for the operating rod.

1,115,215. TONGS. JAMES H. KUHNS, Tulsa, Okla., assignor of one-half to J. E. Washington, Jr., Tulsa, Okla. Filed Oct. 10, 1913. Serial No. 794,395. (Cl. 81—98.)

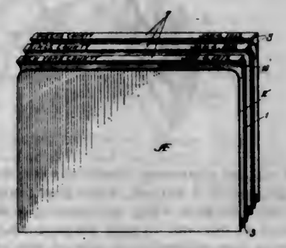


1. Tongs of the character specified, and comprising a lever provided at one end with a laterally extended lug, the edge of the lug and the end of the lever adjacent thereto being concave and the junction between the said end of the lever and the face remote from the lug constituting a fixed gripping jaw, an arc-shaped movable gripping jaw longitudinally slotted at one end to form spaced lugs, said lugs being received on opposite sides of the lug of the lever, a pivot pin passing through the lugs intermediate the ends of the movable jaw for pivotally connecting the movable jaw to the lever, said movable jaw being arranged with its concave edge inwardly, the outer end of the lug of the lever rounded to permit a limited rocking movement of the movable jaw, said movable jaw having near its free end and on its inner edge a transverse recess and a block of hard material seated in the recess and having one of its edges extending beyond the edge of the jaw.

2. Tongs of the character specified, and comprising a lever provided at one end with a laterally extended lug, the edge of the lug and the end of the lever adjacent thereto being concave and the junction between the said end of the lever and the face remote from the lug constituting a fixed gripping jaw, an arc-shaped movable gripping jaw longitudinally slotted at one end to form spaced lugs, said lugs being received on opposite sides of the lug of the lever, and a pivot pin passing through the lugs intermediate the ends of the movable jaw for pivotally connecting the movable jaw to the lever, said movable jaw being arranged with its concave edge inwardly, the outer end of the lug of the lever being rounded to permit a limited rocking movement of the movable jaw.

3. Tongs of the character specified, and comprising a lever having one of its ends concave and having in extension at the said end, said extension being lateral and longitudinal with respect to the lever, a movable jaw of arc-shape arranged with its concave edge toward the concave end of the lever and pivoted to the extension intermediate the ends of the movable jaw, the outer end of the extension being rounded to permit a limited rocking movement of the movable jaw, and said movable jaw having a transverse rib of hard material on its concave edge and near the free end of the jaw.

1,115,216. VISIBLE-TITLE-PLATE FILE-FOLDER. ALBERT J. LAVIOLETTE, New York, N. Y. Filed Nov. 15, 1913. Serial No. 801,144. (Cl. 129—16.)



1. As a new article of manufacture a name or title plate file folder, comprising a front member and a back member, a title plate member integral with said back member and at an angle thereto, a brace member at an angle to said title plate member and to said back member and a member extending from said brace member along the front of and parallel to said back member and adapted to be secured thereto, thereby producing a rigid prismatic structure adapted to project above the edge of said front member.

2. As a new article of manufacture a name or title plate file folder, comprising a front member and a back member, a title plate member integral with said back member and at an angle thereto, a reinforcing strip secured to the back of the last named member, a brace member at an angle to said title plate member and to said back member and a member continuous with and extending from said brace member along the front of and parallel to said back member and adapted to be secured thereto, thereby producing a rigid prismatic structure adapted to extend above the top edge of said front member.

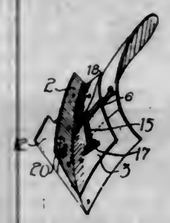
3. As a new article of manufacture a file folder comprising a front and back member united at the bottom to form a pocket the back member of which is provided with an integral extension along the upper edge thereof, the material of said extension being creased along three parallel lines so that it may be folded to form a hollow prism, the upper face of which is adapted to carry the name or title of the folder contents, the end of the material beyond said creases being adapted to be secured to the back member of said folder.

4. As a new article of manufacture a file folder comprising a front and back member united at the bottom to form a pocket the back member of which is provided with an integral extension along the upper edge thereof, the material being creased along three parallel lines so that it may be folded to form a hollow prism, the upper face of which is adapted to carry the name or title of the folder contents, the end of the material beyond said creases being adapted to be secured to the back member of said folder, and a reinforcing strip secured, between the creases, on that part of said extension forming the name or title face of said prism for stiffening the same.

5. As a new article of manufacture a name or title plate file folder, comprising a front member and a back member the latter being provided with a creased extension adapted to be folded along the creases so that the material extends forward at an angle to said back member then back to the back member and finally downward parallel to said back member, said last named portion being adapted to be secured to said back member, thereby producing a rigid hollow prism projecting in front of and below the upper edge of said back member and over the top edge of said front member.

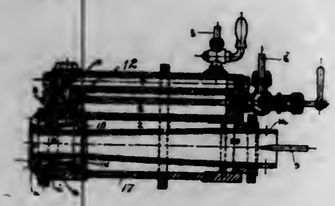
[Claim 6 not printed in the Gazette.]

1,115,217. PLOW. MALCOLM N. LENNING, Eskbank, Saskatchewan, Canada. Filed Dec. 30, 1913. Serial No. 809,581. (Cl. 97—18.)



In a plow of the character described, the combination with a frog formed of a pair of converging plates, each of said plates being formed with an opening, a mold-board, an arm secured at one end to said mold-board and at the opposite end to the underside of one of the plates, said arm being formed with an eye, a share comprising a cutting blade and a landside, a U-shaped lug formed upon the inner side of the cutting blade and adapted to extend through one of the openings in the frog, a T-bolt passing through said lug and eye, a nut threaded upon the end of the bolt, and a lug carried by the landside for reception within the other opening formed in the frog.

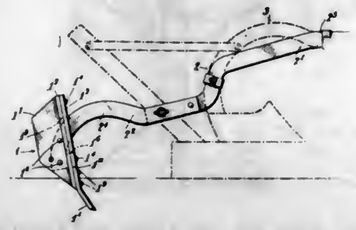
1,115,218. LIQUID-FUEL BURNER. ITALO LUSTOSA, Genoa, Italy. Filed July 21, 1913. Serial No. 780,252. (Cl. 158—74.)



1. An apparatus for burning liquid fuel, comprising a fuel chamber, means for supplying the fuel to the chamber, an outlet valve for said chamber, an ejector arranged adjacent to the outlet valve, means for supplying heated fluid to the ejector, a chamber into which the ejector forces the fuel, said chamber being provided with an annularly arranged series of outlet passages, a second annularly arranged series of passages, with which said first named passages respectively communicate, means for supplying steam to said last named passages, and means arranged centrally with respect to said passages for supplying air to the area of combustion.

2. An apparatus for burning liquid fuel, comprising a fuel supply chamber, having an outlet at one end thereof, a valve for controlling said outlet, a chamber for heated fluid at one side of said supply chamber, an ejector leading from said last named chamber and arranged at right angles to the fuel outlet, a second cylindrical chamber for heated fluid, arranged on the opposite side of the fuel chamber, a nozzle at one end of said second chamber having an annular series of diverging, truncated, conical, discharge passages, a rotatable air tube passing through said second chamber and nozzle, means for supplying air to said air tube, a flange carried by said air tube having passages communicating with said second chamber and adapted to be brought into and out of register with the discharge passages, and means connecting the flange passages with the fuel ejector.

1,115,219. PLOW-BLADE. DEMETRIUS D. LITTLEJOHN, Statesville, N. C. Original application filed Nov. 24, 1913, Serial No. 802,775. Divided and this application filed Mar. 17, 1914. Serial No. 825,300. (Cl. 97—11.)

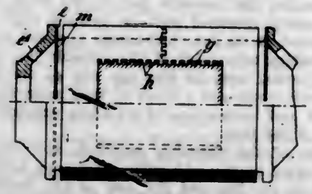


1. The combination, with a support; of a blade carrier embodying a plate formed with a vertical slot through which the rear end of said support projects, and with a rearwardly-extending, vertical web located at one side of said slot and against which said support end is directly fastened; and a blade connected to the lower portion of said carrier.

2. The combination, with a supporting bar having a downwardly-curved rear end; of a blade carrier embodying a plate formed with a vertical slot through which the curved end of said bar projects, and with a rearwardly-extending, vertical web located at one side of said slot, said bar end extending downwardly along and being secured directly against said web; and a blade connected to the lower portion of said carrier.

3. The combination, with a supporting bar having a downwardly-curved rear end; of a blade carrier embodying juxtaposed, connected, base and face plates formed with registering vertical slots through which the rear end of said bar projects, the base plate projecting below the face plate and having a rearwardly-extending, vertical web formed upon its outer face at one side of the slot therein, against which web said bar end is directly fastened; and a point having its upper portion fastened to the projecting lower portion of said base plate, with its upper edge flush against the lower edge of said face plate.

1,115,220. ROTARY FIELD-MAGNET WITH TWO POLES. FREDRIK LJUNGSTRÖM, Finspång, Sweden, assignor to Aktiebolaget Ljungströms Angturbin, Finspång, Sweden. Filed Jan. 24, 1914. Serial No. 814,142. (Cl. 171—209.)

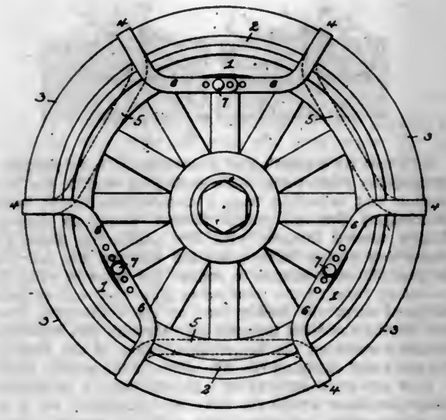


1. A winding consisting of U-shaped frame parts connected electrically end to end in a helical series, in combination with a magnet core having dovetailed engagement directly with said frame parts.

2. A winding consisting of U-shaped frame parts connected by dovetails end to end in a helical series, in combination with a magnet core having dovetailed engagement directly with said frame parts.

3. In a rotary magnet with two poles, a winding composed of separate frame parts in combination with the pole pieces and core, the latter engaging said frame parts at their inner edges by recesses and integral projections, a space at least as great as the thickness of a frame part being left between each pole piece and said engaging devices, to facilitate the insertion and removal of the said frame parts.

1,115,221. NON-SKIDDING ATTACHMENT FOR WHEEL-TIRES. GEORGE ALBERT LYON, Philadelphia, Pa. Filed Dec. 9, 1910. Serial No. 596,521. (Cl. 152—14.)



1. A non-skidding wheel tire attachment comprising a plurality of sections, each section having a plurality of tread members and a side member rigidly connecting the same on one side of the wheel, and means disposed on the opposite side of the wheel for directly but detachably connecting said sections together to form a relatively rigid attachment.

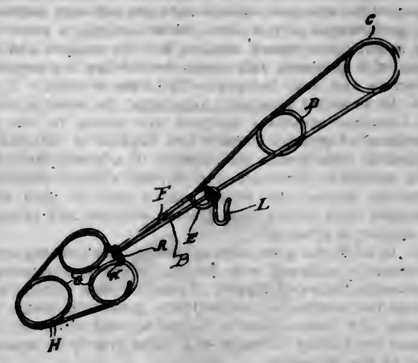
2. A non-skidding attachment for wheel tires comprising three sections, each presenting a plurality of tread members rigidly disposed in relation to each other, and means for attaching the ends of adjoining sections together, said points of connection bearing the relation to each other of the apices of an equilateral triangle, whereby rigidity of the attachment is insured.

3. A non-skidding attachment for wheel tires comprising three sections, each presenting a plurality of tread members, an intermedial side member forming a relatively rigid continuation of said tread members at one side of the wheel and oppositely projecting side members at the other side of the wheel, and means for attaching the said side members of adjoining sections together, said points of connection bearing the relation to each other of the apices of an equilateral triangle whereby rigidity of the attachment is insured.

4. A non-skidding attachment for wheel tires comprising sections, each presenting a plurality of tread members of oblong cross section, intermedial side members forming a relatively rigid continuation of said tread members on one side of the wheel, and side members oppositely projecting from the tread members on the other side of the wheel, the side members at the ends of adjoining sections overlapping and being secured together to form relatively rigid continuations of the tread members, and said overlapping side members and said intermedial side members being of oblong cross section and presenting their longer axes in a radial line whereby they can bend upon their broader surfaces when applied to the wheel under tension.

5. A non-skidding attachment for wheel tires comprising side members and tread members, the side members on the inner side of the wheel being farther from the center of the wheel than the outer side members.

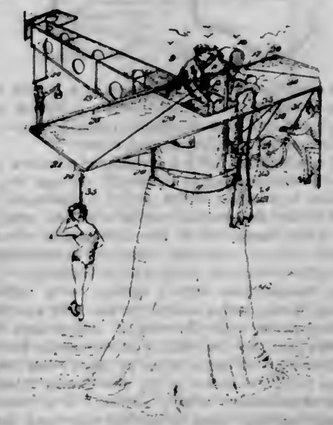
1,115,222. CLEANING UTENSIL. JULIAN MAGRUDER, Falls City, Oreg. Filed Apr. 6, 1914. Serial No. 829,840. (Cl. 141—10.)



1. The cleaning implement herein described, made from a single piece of wire and consisting of a handle or grasping portion having an end ring and a series of intermediate bracing rings, and a head adapted to receive and hold the mop or cleaning material and consisting of a series of double strand clamping rings.

2. The cleaning implement herein described, consisting of a handle or grasping portion provided with an end ring and a series of connecting and bracing rings, a head of triangular form comprising a series of clamping rings for securing the cleaning material, said rings being disposed to form a forward single ring and an uper pair of rings, and a terminal hook for securing the rings to the handle.

1,115,223. GYMNASTIC APPARATUS. ALBERT GEORGE MARRIOTT and MERNERD JOHN MARRIOTT, Guelph, Ontario, Canada. Filed Mar. 31, 1914. Serial No. 828,483. (Cl. 46—27.)



1. Apparatus of the character described, embodying a support, an aeroplane structure mounted for rotation thereon and equipped with means for the performance of gymnastic feats including a rotor adapted for the support and carriage of a gymnast, means for rotating the aeroplane structure, and independent driving means for the rotor.

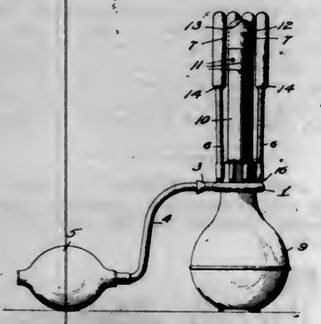
2. Apparatus of the character stated, embodying a support and an aeroplane structure mounted for rotation thereon and equipped with aerial suspension apparatus and with a laterally projecting rotor capable of rotation in a direction at substantially a right angle to the axis of rotation of the aeroplane, said rotor consisting of radial open frames equipped with holding devices.

3. Apparatus of the character stated, embodying an elevated support having a roller path, an aeroplane structure mounted for rotation thereon and equipped with means for the performance of gymnastic feats including a rotor having radial open frames adapted for the support and carriage of a gymnast, and means for driving the aeroplane structure and rotor independently of one another.

4. In an aerial gymnastic apparatus, the combination of an aeroplane structure equipped with means for the performance of gymnastic feats and capable of rotation on a vertical axis, means for rotating it, a motor carried by said aeroplane structure and having a shaft projecting laterally beyond the latter, and a hub on said shaft equipped with radial open frames adapted and arranged to support a gymnast.

5. In an aerial gymnastic apparatus, the combination of a structure equipped with means for the performance of gymnastic feats and capable of rotation on a vertical axis, means for rotating it, an auxiliary gymnastic device consisting of a balanced rotor carried by said structure, and means for driving the rotor at a speed greatly in excess of that of the structure.

1,115,224. SYRINGE. CALVIN D. MCALLUM, De Kalb, Miss. Filed Mar. 30, 1914. Serial No. 828,314. (Cl. 128—45.)



1. The combination with a syringe, of a hollow ring having tubes in communication therewith, a hollow neck contained in said ring and inflatable tubes connected at the upper portions of the first-named tubes.

2. The combination with a syringe, of a hollow ring having tubes in communication therewith through the medium of apertures in the face of the ring, a hollow neck arranged at one side and in communication with the ring, and inflatable tubes connected to the first-named tubes at the upper ends thereof, whereby when air is introduced into the neck of the ring the tubes will be inflated.

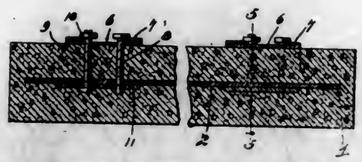
3. The combination with a syringe, of a hollow apertured ring having tubes seated in the said apertures and in communication with the ring, a hollow neck arranged in one side wall of the ring, and inflatable tubes of increased diameter at their upper portions; the said inflatable tubes being connected to the first-named tubes.

4. The combination with a syringe, of a hollow apertured ring receiving tubes in its said apertured portions, a hollow neck arranged in one side of the ring in communication through a hose with an air bulb, inflatable tubes the upper portions of which are of increased diameter; the said tubes being in communication at their lower ends with the ring whereby air may be supplied to the inflatable tubes, and the upper portion of the said tubes being fixedly connected to and surrounding the nozzle of a syringe.

5. The combination in a syringe, of a nozzle provided with a cap at its upper end, and having outlets in its face below the cap; the said cap being provided with an outlet, a bulb having a hollow neck capable of receiving and holding the lower portion of the nozzle in fixed relation to the bulb, a hollow ring provided with openings in its face receiving the lower ends of tubes, inflatable tubes in communication with the upper portions of the first-named tubes and the upper portions of the inflatable tubes surrounding and fixedly connected to the cap of the nozzle.

[Claims 6 to 10 not printed in the Gazette.]

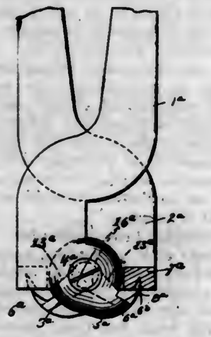
1,115,225. RAIL-TIE. EDGAR MCKENZIE, Fremont, Mich. Filed June 22, 1914. Serial No. 846,673. (Cl. 238—5.)



1. A rail tie consisting of a rectangular body portion, a rectangular reinforcing plate embedded within the body portion and extending from a distance equivalent to approximately the full length thereof, angularly disposed flanges formed integral with the reinforcing plate, rail supporting plates, bolts extending through the rail supporting plates, arranged to engage the bases of rails and extending through the reinforcing plate and washer plates mounted upon the under face of the reinforcing plate and having the bolts inserted therethrough and depending flanges formed on the longitudinal edges of the reinforcing plate and engaging the side edges of the washer plates.

2. A rail tie consisting of a plastic body, a reinforcing plate embedded within the body, and extending for a distance equivalent to approximately the full length thereof, rail supporting plates mounted upon said body, washer plates mounted beneath and engaging the under face of said reinforcing plate, a washer plate being disposed adjacent to each end of the tie, depending flanges formed on said reinforcing plate and engaging certain opposed edges of the washer plates, and bolts extending through the reinforcing washer and rail supporting plates.

1,115,226. METAL-WORKING TOOL. KING D. MCQUEEN, Arlington, N. J. Filed July 2, 1914. Serial No. 848,667. (Cl. 164—121.)



1. A device of the class described comprising crossed members having semi-spherical heads formed at their forward ends with enlarged portions inwardly of said heads, a pivot member engaged through said heads, said enlarged portions having recesses formed therein, an arm carried by each head with a material penetrating member projecting therefrom and adapted for engagement in the recess of the opposite head.

2. A device of the class described comprising crossed members having heads formed at their outer ends for engagement through an opening in a sheet of material, a pivot member engaged through said head, said crossed members having enlarged portions to opposite sides of the heads with recesses formed therein, and material penetrating members carried by said heads outwardly of the pivot point and to the opposite sides thereof and adapted for engagement in the recesses formed in the enlarged portions of said members.

1,115,227. RAILROAD-TIE. OLIVER P. MEGAHAN, Westerville, Ohio. Filed May 5, 1914. Serial No. 836,389. (Cl. 238—5.)

1. In a railroad tie, the combination of a metallic bar provided with reverting ends and with means for supporting the rails upon said ends, and a tie rod secured to said tie and extending upon opposite sides of the proximate middle thereof.

2. In a tie, the combination of a metallic body portion provided with reverting ends and further provided with a web, and a tie rod extending across said web and secured with its ends upon opposite sides of said web.

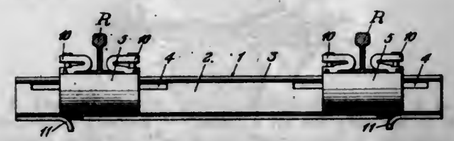
3. In a railroad tie, the combination of a body portion provided with reverting ends and further provided with a web, a tie rod extending obliquely across said web, said body portion being provided with spurs integral therewith for preventing longitudinal travel of said tie.

4. In a railroad tie, the combination of a metallic body member provided with reverting ends, means for supporting the rail upon said reverting ends, and resilient metal pillows consisting of a straight lower portion and curved upper end, said resilient pillows connected with the body portion and extending therefrom into engagement with said reverting ends for the purpose of cushioning said reverting ends relatively to said body member.

5. In a railroad tie, the combination of a metallic body member provided with reverting ends, said body member being provided with a base, and said ends being provided with flanges which are continuations of said base, and pillows mounted upon said body member and provided with portions loosely engaging the flanges of said reverting ends.

[Claims 6 to 9 not printed in the Gazette.]

1,115,228. RAILROAD-TIE. OLIVER P. MEGAHAN, Westerville, Ohio. Filed July 13, 1914. Serial No. 850,702. (Cl. 238—5.)



1. A railroad tie comprising an I-beam having openings in the web thereof adjacent the top flange, and reinforcing cushioning means secured to said beam adjacent said openings.

2. A railroad tie comprising an I-beam having longitudinally spaced openings in the web thereof adjacent the upper flange, and reinforcing cushioning elements extending over said openings and secured to said beam.

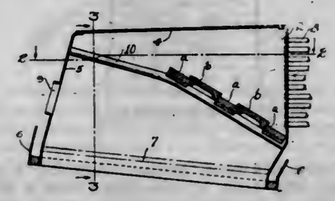
3. A railroad tie comprising an I-beam having openings in the web thereof adjacent its upper flange, and substantially cylindrical cushioning elements disposed over said openings and having one wall thereof longitudinally slit, with the walls of said opening engaged with the opposite faces of the web of said beam.

4. A railroad tie comprising an I-beam having openings in the web thereof adjacent its upper flange, and substantially cylindrical cushioning elements disposed over said openings and having one wall thereof longitudinally slit, with the walls of said opening engaged with the opposite faces of the web of said beam, the side of said member opposite the slit therein being flattened to form a flange engaging portion, and having registering apertures therein and in the upper flange of said beam, and fasteners adapted to engage said apertures for locking said cushion to said tie.

1,115,229. DUPLEX ENVELOP. ALEXANDER MILLER, Albemarle, N. C. Filed Mar. 10, 1914. Serial No. 823,697. (Cl. 229—72.)

The improved duplex envelop comprising two receptacles arranged end to end and connected by narrow portions, at their upper and lower edges, the intervening central portion being provided with a transverse open slot and with flaps formed in cutting said slots, the flaps being gummed and folded in opposite directions and lapped upon the adjacent edges of the envelop bodies, as described.

1,115,230. LOCOMOTIVE-BOILER FURNACE. CHARLES B. MOORE, Evanston, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1911. Serial No. 666,338. (Cl. 110—87.)



1. A locomotive boiler firebox having a plurality of arch tubes, in combination with a refractory arch body resting on said tubes, said body comprising a plurality of longitudinally spaced transverse rows of relatively heavy supporting bricks having tube receiving grooves in their ends, which bricks extend between and rest upon said tubes, and relatively light or cover bricks which rest on said supporting bricks and close the spaces between the rows thereof, said cover bricks being provided on their under surfaces with gas-mixing pockets or cavities, substantially as described.

2. A locomotive boiler firebox containing arch supporting tubes, in combination with a plurality of spaced apart transverse rows of refractory bricks resting upon and depending between said arch tubes, said bricks having tube receiving grooves at their ends and a plurality of thin walled arch cover bricks resting on said transverse rows of bricks closing the spaces between them and spacing them apart, and each of said cover bricks being provided with a gas-mixing pocket or cavity on its under side, substantially as described.

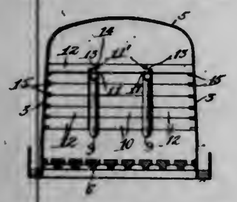
3. A locomotive boiler firebox having a plurality of arch tubes, in combination with a plurality of transverse rows of relatively heavy solid span bricks, said bricks having tube receiving grooves or sockets at their ends and said bricks being supported by and depending from and between said arch tubes, and a plurality of cover bricks in turn supported by said span bricks and closing the openings between the rows thereof from side to side of the firebox, said cover bricks each being provided with a depending portion adapted to engage the span bricks and hold them in spaced relation, longitudinally in the firebox, said depending portion having a downwardly opening gas-mixing cavity of relatively large area, substantially as described.

4. A locomotive boiler firebox containing a plurality of inclined, substantially parallel arch tubes, in combination with two or more transverse rows of relatively heavy refractory bricks longitudinally spaced apart upon said tubes and abutting the sides of the firebox, each brick of said rows depending below the upper surface of said tubes and being held thereby against movement transversely in the firebox and a plurality of relatively light cover bricks closing the spaces between said rows, each of said cover bricks being supported by two said rows and each having a gas-mixing cavity of relatively large area in its lower side, substantially as described.

5. A locomotive boiler firebox containing a plurality of inclined arch tubes, in combination with two or more transverse rows of refractory bricks supported by said tubes and abutting the side sheets of the firebox and spaced apart at different heights on said tubes, each said row comprising bricks having tube fitting and engaging grooves at their ends and a plurality of relatively light refractory cavitied bricks supported at their ends by adjacent transverse rows of refractory bricks and closing the spaces between said rows from side sheet to side sheet of the firebox, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,115,231. LOCOMOTIVE-BOILER FURNACE. CHARLES B. MOORE, Evanston, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1911. Serial No. 666,340. (Cl. 110—87.)



1. A locomotive boiler furnace containing a plurality of parallel arch tubes, in combination with a refractory arch therein, comprising a plurality of slab-like bricks arranged substantially in a single plane, said arch being compressible transversely of the firebox to accommodate itself to variations in width of the firebox due to changes of temperature and comprising a plurality of transverse rows of slab-like bricks supported by said tubes and by arch supporting device carried by the side sheets, each of said transverse rows comprising a middle brick and two end bricks aggregating in total length greater than the width of the firebox and having overlapping end portions of substantially half the thickness of the bricks whereby the bricks are adapted to lie in a single plane, the end bricks being movable from and toward the side sheets and when positioned in contact with the side sheets providing grooves in the upper surface of the arch between their inner ends and the body of the center brick, and non-fusible material filling said grooves and permitting the side bricks to be forced inwardly toward the center bricks at times when the firebox contracts in width.

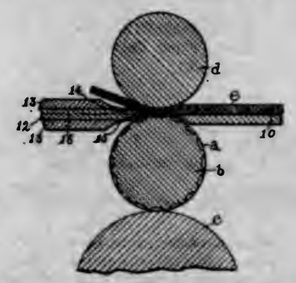
2. A locomotive firebox containing a plurality of arch tubes, in combination with a refractory arch supported by said tubes and extending from side sheet to side sheet, said arch comprising a plurality of flat refractory members lying substantially in a single plane and arranged longitudinally in the firebox, and consisting of a center portion and two side portions each thereof being flat and the three being arranged in a single plane, the inner edges of the side portions overlapping the lateral edges of the middle portion and said overlapping edges being cut away on their adjacent faces whereby the arch is of substantially the same thickness at these overlapped portions as in other parts, arch supporting lugs carried by the side sheets arranged to support the outer edges of said outer portions of the arch, said outer portions of the arch being movable from and toward the center portion in the plane of the arch and when placed in contact with the side sheets of the firebox forming longitudinal grooves in the upper surface of the arch between the inner ends of the said portions and the body of the middle portion, and compressible non-fusible material in said grooves which permits the side portions to be forced toward the middle portion at times when the firebox contracts in width.

3. A transverse refractory arch for locomotive boilers comprising a plurality of transverse rows of several refractory bricks each of which extends from side sheet to side sheet, the bricks of the arch lying substantially in a single plane, the adjacent ends of the bricks in each row overlapping each other and the effective length of the row being less than the width of the firebox, thereby permitting the bricks to be placed in position in their normal plane and then spread apart transversely of the firebox to fit snugly between the side sheets, and non-fusible material between the adjacent ends of the bricks yieldingly maintaining the end bricks in contact with the side sheets.

4. In a refractory arch for locomotive boilers, a transverse row of several slab-like bricks arranged in a single plane their ends overlapping, and said row extending from side sheet to side sheet, the overlapped ends being formed to permit the longitudinal adjustment of the bricks to the dimensions of the firebox, means for supporting said bricks in said position, and means for yieldingly maintaining the end bricks against the side sheets.

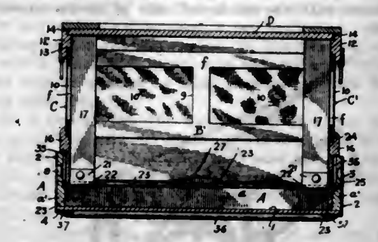
5. In a locomotive boiler firebox a refractory arch supported therein and extending from side sheet to side sheet, said arch being provided with a plurality of overlapping adjustable joints whereby the width of the arch can be made to correspond with the width of the firebox, and whereby the necessary adjustment can be divided between the several joints, and means for maintaining the parts of the arch in their adjusted positions.

1,115,232. EMBOSSED LAYER OF FELT. FREDERICK W. MOORE, Newark, N. J., assignor to Luxemoor Company, Boston, Mass., a Corporation of Massachusetts. Filed July 13, 1910, Serial No. 571,780. Renewed Feb. 19, 1913. Serial No. 749,535. (Cl. 38—7.)



As an improved article of manufacture, a flexible sheet or layer of felt having portions of an outer surface cut away to form a design in said surface, the fibers of the cut portion being more compact and smoother than the fibers of the uncut portion of said surface to impart to the portion in design a finish whereby said design is sharply defined and brought out in detail, substantially as described.

1,115,233. COLLAPSIBLE SHIPPING-CRATE. GEORGE MORGAN, Binghamton, N. Y. Filed Apr. 24, 1913. Serial No. 763,423. (Cl. 217—15.)

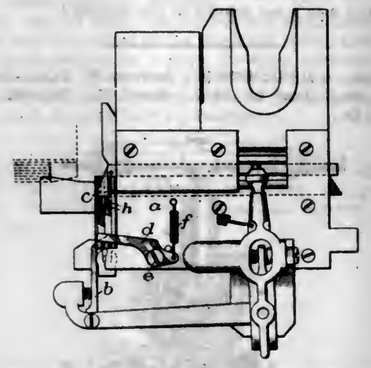


1. A wall element for a crate comprising a frame, bars disposed above and below the frame, and U-shaped reinforcing and connecting elements applied to the ends of the frame and ends of the bars, the lower end of each connecting element being formed into a hinge eye.

2. A wall element for a crate comprising a frame, bars disposed above and below the frame, and U-shaped reinforcing and connecting elements applied to the ends of the frame and ends of the bars, the lower end of each connecting element being formed into a hinge eye projecting below the bottom edge of the lower bar, said lower bar having its bottom edge recessed at a point between the hinge eyes.

3. A crate comprising a bottom, horizontally disposed pivot rods mounted therein, and swinging walls connected by the said rods to the bottom, each wall comprising upper and lower bars spaced apart, a frame fitted to the said bars, and U-shaped reinforcing and connecting elements embracing the ends of the bars and frame, and said elements having their lower ends formed into eyes for engagement with the pivot rods.

1,115,234. TYPOGRAPHICAL MACHINE. CARL MUEHLEISEN and AUGUST WALTER, Berlin, Germany, assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 31, 1914. Serial No. 828,450. (Cl. 199—7.)



1. The combination with a distributer box, of a reciprocating lifter, a lever having its end arranged at a distance from the lifter substantially equal to the thickness of the thinnest matrix, so as to permit the passage of such a matrix only therebetween, and a spring to hold the lever yieldingly in position.

2. The combination of a distributer box, a reciprocating lifter, a lever to override the lower ears of the matrices and whose nose can rock upwardly parallelly with the said lifter but at a definite minimum distance from it, and a spring to return the said lever after it has been raised by anything raised by the lifter.

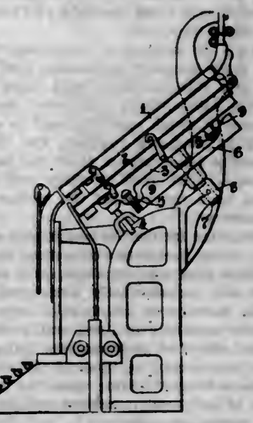
3. In a mechanism of the class described, the combination of a reciprocating finger to detach matrices individually from the line, and two members to prevent the detachment of more than one matrix at a time, one member being fixed and coöperating with matrices of a given thickness and the other member with matrices of less thickness.

4. In a mechanism of the class described, the combination of a reciprocating finger to detach matrices individually from the line, and two members to prevent the detachment of more than one matrix at a time, one member coöperating with matrices of a given thickness, and the other member with matrices of less thickness, and the second member being movably arranged so as to be displaced by the passage of the thicker matrices controlled by the first member.

5. In a typographical machine, the combination of a line of matrices, a reciprocating finger to detach the leading matrix from the line, and movable means for restoring the following matrix to its proper place in the line in event of its being displaced therefrom by the detachment of the leading matrix.

[Claim 6 not printed in the Gazette.]

1,115,235. TYPOGRAPHICAL COMPOSING-MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 18, 1914. Serial No. 839,249. (Cl. 199—7.)



1. In a typographical composing machine the combination with a plurality of superposed magazines movable as a whole for bringing the different magazines successively into operative position, and a magazine frame supporting the said magazines, of a cam disk beneath the magazine frame and rotatable about an axis intersecting said frame, and rollers on the said frame, bearing on the cam disk.

2. In a typographical composing machine, the combination with a plurality of superposed magazines movable as a whole for bringing the different magazines successively into operative position, and a magazine frame supporting the said magazine, of a cam disk beneath the magazine frame, rollers on the said frame, bearing on the cam disk, and stepped projections on the cam one for each roller on the magazine frame.

3. In a typographical machine, the combination of a plurality of magazines, and a circular cam-shaped disk for shifting the magazines to bring one or another into operative position, said disk being rotatable about an axis intersecting the magazines.

4. In a typographical machine, the combination of a plurality of magazines and a rotary cam for shifting the magazines to bring one or another into operative position, the said cam being rotatable about an axis intersecting the magazines.

5. In a typographical machine, the combination of a plurality of magazines, and a circular cam-shaped disk, rotatable about an axis intersecting the magazines, for shift-

ing them to different vertical positions to bring one or another into use, the said disk being formed with steps to support the magazines in one or another of their different vertical positions.

1,115,236. EGG-TRAY FOR INCUBATORS. HOMER H. NICHOLS, Carmel, N. Y. Filed May 31, 1913. Serial No. 770,919. (Cl. 119—43.)

1. An egg tray for incubators comprising a frame composed of border members and intermediate supporting members, the bottoms of said border members being higher than the central portions of said supporting members, and a foraminous bottom supported by said frame.

2. An egg tray for incubators comprising a frame composed of side members, end members and cross members connecting said end members intermediate said side members, said cross members being formed with substantially horizontal central portions and the bottoms of said end members being higher than the bottoms of the central portions of said cross members, and upwardly inclined end portions, and a foraminous bottom supported by the inclined portions of said cross members and provided with a substantially central opening.

3. An egg tray for incubators comprising side members, end members, cross members connecting said end members intermediate said side members, said cross members being formed with substantially horizontal central portions upon the bottoms of which said tray may be supported and with upwardly inclined end portions, and the bottoms of said end members being higher than the bottoms of the central portions of said cross members, and a foraminous bottom resting upon the tops of the inclined portions of said cross members.

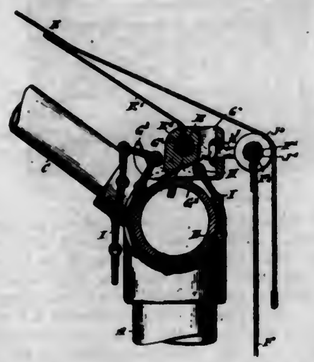
4. An egg tray for incubators comprising side members, end members, cross members connecting said end members intermediate said side members, said cross members being formed with substantially horizontal central portions upon the bottoms of which said tray may be supported and with upwardly inclined end portions, and the bottoms of said side and end members being higher than the bottoms of the central portions of said cross members, and a foraminous bottom resting upon the tops of the inclined portion of said cross members and provided with a substantially central opening.

5. An egg tray for incubators comprising side members, end members, cross members connecting said end members intermediate said side members, said cross members being formed with substantially horizontal central portions upon the bottoms of which said tray may be supported and with upwardly inclined end portions, and the bottoms of said side and end members being higher than the bottoms of the central portions of said cross members, a foraminous bottom resting upon the top of the inclined portions of said cross members and provided with a substantially central opening, and a removable closure for said opening also resting upon the tops of said supporting members.

1,115,237. FASTENING. ANTHONY F. NUGENT, New York, N. Y. Filed Apr. 20, 1914. Serial No. 833,191. (Cl. 156—15.)

1. A fastening for the fabric covering of awnings, tents and the like, comprising a carrier having a retaining groove for slidingly engaging the thickened edge of the fabric covering for the awning, tent or the like, a hook on the said carrier, and a chain attached at one end to the said carrier and adapted to engage the said hook.

2. A fastening for the fabric covering of awnings, tents and the like, comprising a carrier having a retaining groove for slidable engagement with the thickened edge of one member of the fabric covering, a hook on the carrier, a chain attached at one end to the said carrier and adapted to engage the said hook, a socket on the said carrier, and a key adapted to engage the said socket and having a head provided with a retaining groove for slidable engagement with the thickened edge of another covering member.



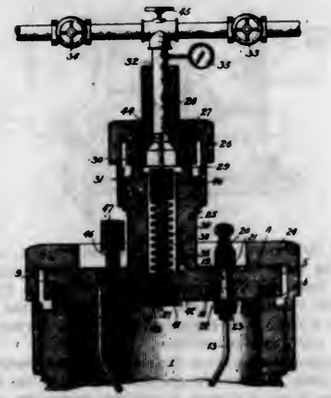
3. In combination, an awning frame, a fabric awning roof having its side edge thickened, a fabric awning side having its upper edge thickened, a carrier slidably engaging the said side edge of the awning roof, means for removably fastening the carrier to the awning frame, and means slidingly engaging the said upper edge of an awning side and removably engaging the said carrier.

4. A fastening for the fabric covering of an awning and the like, comprising a carrier having a slot for engagement with the enlarged edge of one part of the awning, and a key removably engaging the said carrier and having a slot for engagement with the enlarged edge of another part of the awning.

5. A fastening for the fabric covering of an awning and the like, comprising a carrier having a slot for engagement with the enlarged edge of one part of the awning, a key removably engaging the said carrier and having a slot for engagement with the enlarged edge of another part of the awning, and means for detachably fastening the said carrier to the support of the awning.

[Claims 6 to 9 not printed in the Gazette.]

1,115,238. CALORIMETER. SAMUEL W. PARR, Urbana, Ill. Filed June 24, 1912. Serial No. 705,386. (Cl. 73—184.)



1. In a bomb calorimeter, a calorimeter cup of non-corrosive alloy threaded on its exterior and having a projecting bearing rim flat on top and formed with a square corner at its inner edge, an organic gasket on said flat top, a cover closely overlapping said square shoulder on the inside of the cup to protect said gasket, and a collar threaded to said cup and directly engaging said cover.

2. In a bomb calorimeter, the combination of a threaded cup having a bearing rim flat on top and formed with a square corner at its inner edge, a cap having an extension depending within the cup beyond the bearing face of said rim, with a close fit between said rim and said extension and an organic packing in tight engagement with the top face of said rim.

3. In a calorimeter, the combination of a cup, having a rim at its top, said rim having a flat bearing face, and a cover having a gasket broader than said rim and contacting with the flat face thereof, said cover projecting down and beyond said flat face to shield said gasket from destructive agencies within the calorimeter.

4. In a calorimeter, a cover, a pair of current supply wires suspended from said cover, clips slidable over said wires, and an ignition wire removably gripped by said clips.

5. In a calorimeter, a pair of parallel conductors, a crucible supported by one of said conductors, a heating wire supported in proximity to said crucible and a yielding clip for each end of said heating wire, said clips being movable along said parallel wires to bring the heating wire in advantageous position with respect to the charge in the crucible.

[Claims 6 to 14 not printed in the Gazette.]

1,115,239. ALLOY. SAMUEL W. PARR, Urbana, Ill. Filed Feb. 27, 1914. Serial No. 821,593. (Cl. 75—1.)

1. A non-oxidizing alloy having a composition of about 63 parts nickel, 5 parts copper, 20 parts chromium, 5 parts molybdenum, and 2 parts tungsten.

2. A non-oxidizing alloy consisting of approximately 63 parts nickel, 5 parts copper, 20 parts chromium, 5 parts molybdenum, 2 parts tungsten, and a small percentage of deoxidizing material substantially as described.

3. A non-oxidizing alloy having a composition of about 63 parts nickel, 5 parts copper and 27 parts metal of the chromium group, with a small percentage of deoxidizing metal, substantially as described.

4. An alloy having a composition of about 63% nickel, 5% copper, 20% chromium, 5% molybdenum, 2% tungsten and less than 2% each of aluminum, manganese and boron, substantially as described.

5. An alloy of about the composition 63% nickel, 5% copper, and 27% metal of the chromium group, said alloy being characterized by a high electrical resistance, by high resistance to corrosion, and by a tensile strength for unworked metal in the neighborhood of 60,000 pounds per square inch, substantially as described.

1,115,240.. METHOD OF MANUFACTURING RESILIENT ARTICLES. LUDVIG T. PETERSEN, Youngstown, Ohio. Filed May 25, 1914. Serial No. 840,929. (Cl. 154—19.)

1. The method of manufacturing resilient articles from material possessing latent contractility, involving the following method steps, namely, forming the article into the desired shape, and stimulating the latent contractile qualities of the material.

2. The method of manufacturing resilient articles from material possessing latent contractility, involving the following method steps, namely, forming the article into the desired shape, and stimulating the latent contractile qualities of the material by the action of heat.

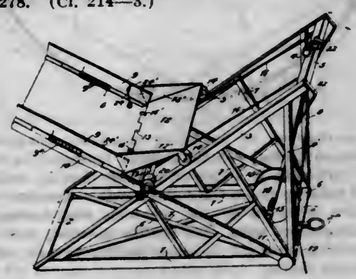
3. The method of manufacturing resilient articles from material possessing latent contractility, involving the following method steps, namely, impregnating the material with particles of cured rubber, forming the article into the desired shape, and stimulating the contractile qualities of the material.

4. The method of manufacturing resilient articles from material possessing contractile qualities, involving the following method steps, namely, impregnating the material with particles of cured rubber, rendering latent said contractile qualities, forming the article into the desired shape, and stimulating the contractile qualities of the material.

5. The method of manufacturing resilient articles from gum possessing contractile qualities, involving the following method steps, namely, impregnating the gum with particles of cured rubber, stretching the gum to render latent the contractile qualities, forming the article into the desired shape, and stimulating the contractile qualities of the gum.

[Claims 6 to 14 not printed in the Gazette.]

1,115,241. LOADING APPARATUS. LARS C. PETERSON, Osage City, Kans. Filed Dec. 17, 1913. Serial No. 807,278. (Cl. 214—3.)



1. In loading apparatus, the combination of a framework comprising inclined rails, a platform adapted to receive a load thereon and to travel up the rails, arms mounted on the framework and connected with the platform, means for raising the arms and thereby elevating the platform, movably mounted members at opposite edges of the platform adapted to form skids or inclines when the platform is in charging position, means connecting the edge members with the said raising means whereby the edge members are caused to project upward from the platform to prevent displacement of the material on the latter during the operation of elevating the same, and spring means for restoring the said edge members on return of the platform to its normal charging position.

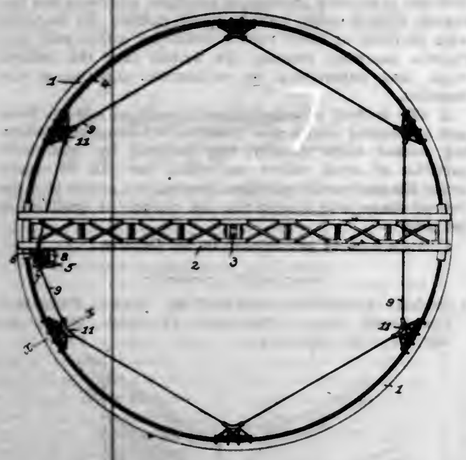
2. In loading apparatus, a framework, a platform adapted to assume a position on the ground adjacent to the framework, members pivoted to opposite edges of the platform and normally inclining downward therefrom, hoisting cables connected with the platform to raise the same on the framework, and means intermediate the cables and the said edge members to raise the latter so that they project upward from the platform during the raising movement of the said platform, and consisting of connections attached to the cables and leading through the platform and connected with said edge members.

1,115,242. OPERATING MECHANISM FOR TURNTABLES. JAMES LOWE PILLING, Athol, Mass. Filed Aug. 22, 1914. Serial No. 858,114. (Cl. 104—214.)

1. A mechanism for operating turntables comprising, a turntable, a flexible member in operative relation to said turntable, a series of carriers having outwardly disposed holding grooves for said flexible member, a pulling sheave mounted on the turntable and having operative engagement with said flexible member, and means for imparting rotation to said pull-sheave, substantially as set forth.

2. A mechanism for operating turntables comprising, a turntable, a flexible member in operative relation to said turntable, a series of carriers having outwardly disposed

holding grooves for said flexible member, a pulling sheave and companion leader blocks mounted on the turntable and having operative engagement with said flexible member, and means for imparting rotation to said pulling sheave, substantially as set forth.



3. A mechanism for operating turntables comprising, a turntable, an endless flexible member in operative relation to said turntable, a series of carriers having outwardly disposed holding grooves for said flexible member, a pulling sheave mounted on the turntable and having operative engagement with said flexible member, and means for imparting rotation to said pulling sheave, substantially as set forth.

4. A mechanism for operating turntables comprising, a turntable, an endless flexible member in operative relation to said turntable, a series of carriers having outwardly disposed holding grooves for said flexible member, a pulling sheave and companion leader blocks mounted on the turntable and having operative engagement with said flexible member, and means for imparting rotation to said pulling sheave, substantially as set forth.

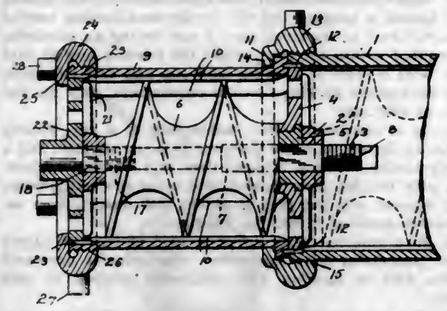
5. A mechanism for operating turntables comprising, a turntable, a flexible member in operative relation to said turntable, a series of carriers having outwardly disposed holding grooves for said flexible member, opposed gripping jaws pivoted in the grooves of said carriers, a pulling sheave mounted on the turntable and having operative engagement with said flexible member, and means for imparting rotation to said pulling sheave, substantially as set forth.

[Claim 6 not printed in the Gazette.]

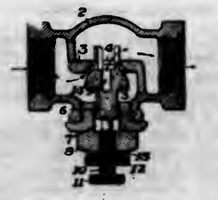
1,115,243. MEAT-GRINDER ATTACHMENT. REMER R. REID, Atlanta, Ga., assignor to Shannen Refrigerator and Butcher Supply Co., a Firm composed of George T. Warren and Virgil P. Warren, Atlanta, Ga. Filed Dec. 23, 1913. Serial No. 808,304. (Cl. 17—20.)

1. In combination, a grinder having recesses formed in the inner surface of the tubular casing thereof at its open end, a shell having an outwardly directed apertured flange, an apertured disk positioned in the discharge end of said grinder and having peripheral recesses, and pins seated in the apertures in said flange and received partly within the recesses in said grinder and partly in the recesses in said disk.

2. In combination, a meat grinder including a discharge tube, an attachment therefor comprising a shell, a feed screw in said shell, an elongated stud extending into said discharge tube, a cutter and a perforated disk mounted on said stud, said shell having an annular flange, pins projecting outwardly from said flange and seated between said discharge tube and said perforated disk, a threaded ring fitted to the outer end of said discharge tube for holding said shell in place, a cutter and perforated disk at the discharge end of said shell, and a threaded ring for holding said cutter and disk in position.



1,115,244. SAFETY GAS-REGULATOR. JOHN C. REYNOLDS, Rixford, Pa. Filed Jan. 18, 1010. Serial No. 538,741. (Cl. 67—119.)



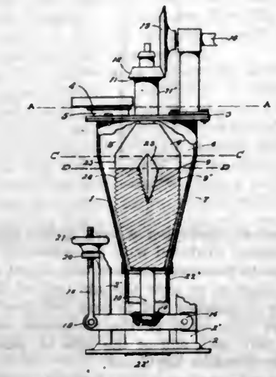
An automatic gas valve having a casing, said casing having a horizontally disposed inlet at one end and a horizontally disposed outlet at the other end, a partition having a horizontal portion between the inlet and outlet, there being a vertical opening through said partition, a valve seat on the under side thereof, there being a threaded opening through the bottom wall of the casing in line with the opening through the partition, a screw plug seated therein, there being a recess in the screw plug, a check valve having a downwardly extending member seated in the recess in the screw plug and guided therein, said check valve being arranged to be moved upwardly to engage the seat surrounding the opening through the partition when an excess pressure of gas passes through the valve, an adjusting screw for limiting the downward movement of the valve extending through the screw plug, and means for securing said screw plug in its adjusted position, substantially as described.

1,115,245. CEREAL GRINDING AND GRANULATING MILL. ELIAS L. ROMICK, Niles, Ohio. Filed Feb. 8, 1913. Serial No. 747,009. (Cl. 83—13.)

1. In a device of the character described the combination with a grinder shell which is conoidal at its lower end, of a grinder core reversely conoidal at its opposite ends, said core being vertically fluted about its point of greatest diameter and having spiral corrugations arranged in groups about its lower conoidal end, said corrugations communicating with said flutings at their upper ends.

2. In a device of the character described the combination with a grinder shell which is conoidal at its lower end, of a grinder core reversely conoidal at its opposite ends, said core having a plurality of vertical flutings spaced about its point of greatest diameter and being spirally corrugated in such manner as to form a plurality of cutting ribs and said corrugations and ribs being arranged in groups, said corrugations communicating with the said flutings at their upper ends, said ribs being beveled inwardly on their under sides and presenting horizontal faces on the upper sides thereof.

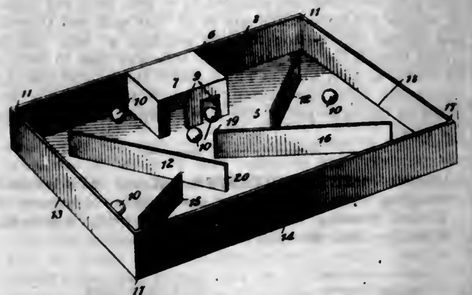
3. In a device of the character described, the combination with a grinder shell of a shaft vertically disposed therein, a grinder core carried by said shaft, the opposite ends of said grinder core being formed as reverse cones, the lower portion of said grinder core having a plurality of spiral corrugations formed thereabout, and vertical flutings formed in the part of largest diameter of said grinder core, said flutings lying partly in the upper conoidal portion of said core, and partly in the lower conoidal portion thereof.



4. In a device of the character described the combination with a grinder shell of a conoidal grinder core, said grinder core being vertically fluted at its point of greatest diameter, and a plurality of groups of spiral corrugations about said core, which corrugations communicate with the said flutings at their upper ends.

5. In a device of the character described the combination of a grinder shell, of a grinder core reversely conoidal at its opposite ends, said core having a plurality of vertical flutings disposed about its point of greatest diameter and being provided with a plurality of groups of spirally arranged corrugations which form cutting ribs between them.

1,115,246. GAME APPARATUS. JOHANNA L. RYAN, Rochester, N. Y. Filed June 1, 1914. Serial No. 842,049. (Cl. 46—41.)



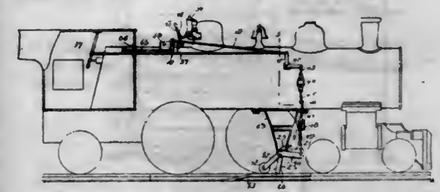
1. In a game apparatus, a board, a side wall around the board, an inclosure at one side of the board provided with an opening, and four strips spaced from the corners of the board and extending inwardly and obliquely therefrom and with the inner ends of the strips extending from opposite corners disposed side by side.

2. In a game apparatus, a board, a side wall around the board, an inclosure at one side of the board provided with an opening, strips spaced from the corners of the board and extending inwardly and obliquely therefrom, the strip at one end of the said side of the board and the strip at the other end of the other side of the board, having their inner ends spaced from each other and extending out in front of the inclosure.

3. In a game apparatus, a board, a side wall around the board, an inclosure at one side of the board and provided with an opening and four strips spaced from the corners of the board and from each other and extending inwardly and obliquely relatively to the side wall of the board with one of the strips disposed in front of the opening.

4. In a game apparatus, a board, a side wall around the board, an inclosure at one side of the board and provided with an opening, strips spaced from the corners of the board and extending inwardly and obliquely therefrom, one of the strips extending from an end at one side of the board being disposed in front of the opening and terminating substantially at this point, another of the strips extending from the other end at the other side of the board and being disposed in front of the inclosure and spaced from the last mentioned strip.

1,115,247. AUTOMATIC TRAIN-STOP MECHANISM. ARTHUR W. SCHAUER, Hartford, Wis. Filed Mar. 28, 1913. Serial No. 757,454. (Cl. 246—59.)



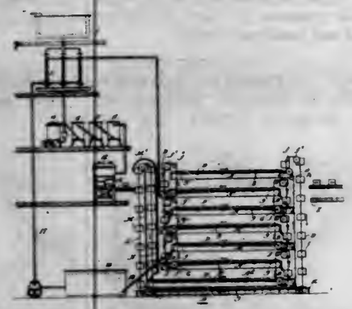
1. In a train stop mechanism, the combination with a locomotive, of a horizontal pivot rod, a pair of bell crank levers arranged on said pivot arm, a rod connected to one arm of each of the bell crank levers, to actuate stop mechanism when moved longitudinally, a connection depending from the other arm of each of the bell crank levers, a cross bar to the extremities of which each of said connections is secured, and an oscillating element to engage an obstacle and a connection between said oscillating element and the center of the cross bar, said connection including a tension device, and means for locking one of said first mentioned rods against movement in one direction.

2. In a train stop mechanism, the combination with a locomotive, of a horizontal pivot member secured thereunder, an arm secured at one end to said pivot member and adapted to swing in a vertical plane, a pivot rod extending laterally from the locomotive above said arm, a pair of bell crank levers mounted upon said pivot rod and having their arms disposed in vertical and horizontal planes respectively, a connection between the horizontal arms of the bell crank levers and the extremity of the first mentioned arms, said connection including a tension device, a longitudinally movable rod connected to the vertical arm of each bell crank lever and adapted to operate a portion of the stop mechanism, and means for swinging said first mentioned arm downwardly whereby the bell crank levers will be vertically rotated to move said last mentioned rods longitudinally, the connection permitting one or both of the bell crank levers to be returned to their normal positions when said first mentioned arm is in its lowered position.

1,115,248. PASTEURIZING APPARATUS FOR LIQUIDS IN BOTTLES. OSCAR B. SCHIER, Baltimore, Md. Filed May 22, 1914. Serial No. 840,260. (Cl. 126—272.)

1. In a pasteurizing apparatus, the combination with a series of superposed pasteurizing tanks, of a series of independent carrying frames for the goods to be pasteurized, cooperating ways and supporting rollers on the carrying tanks and frames, respectively, transfer mechanism for transferring the carrying frames from one tank to another tank at a different level, separable coöperating devices on the transfer mechanism and carrying frames, whereby the carrying frames are detached from the transfer mechanism when deposited in a tank, and means for advancing the carrying frames through the tanks in immediate proximity to each other, substantially as described.

2. In a pasteurizing apparatus, the combination with a series of superposed pasteurizing tanks, each having ways extending longitudinally thereof, a series of independent carrying frames for the goods to be pasteurized having supports thereon cooperating with said ways, and means for advancing the carrying frames longitudinally of the tanks in close proximity to each other and with an intermittent movement, of transfer mechanism for transferring the carrying frames from one tank to another at a different level, and spaced engaging members on the transfer mechanism, whereby, during the transfer stage the carrying frames will be spaced from each other, substantially as described.



3. In a pasteurizing apparatus, the combination with a series of superposed pasteurizing tanks arranged to extend alternately beyond each other at opposite ends, carrying frames for the goods to be pasteurized and means for guiding said carrying frames longitudinally of the tanks, of means for transferring the carrying frames from one tank to another at a different level, said transfer mechanism operating vertically with relation to the projecting ends of the tanks, and means for advancing the carrying frames longitudinally of the tanks with an intermittent movement.

4. In a pasteurizing apparatus, the combination with a series of superposed pasteurizing tanks arranged with their ends projecting alternately in opposite directions, and a series of carrying frames for the goods to be pasteurized, of means for guiding the carrying frames longitudinally of the tanks and for advancing the carrying frames while in the tanks, and transfer mechanism embodying conveyers movable vertically from the projecting ends of the tanks upon and over the end of the next higher tank, whereby carrying frames lifted from the end of one tank may be deposited in the end of the next adjacent tank at a different level.

5. In a pasteurizing apparatus, the combination with a series of superposed pasteurizing tanks having ways extending longitudinally thereof, a series of independent carrying frames for the goods to be pasteurized having supports traveling on said ways, means for advancing the carrying frames longitudinally of the tanks, and means for transferring the carrying frames from each tank to the next succeeding tank at a different level, of conveyers extending vertically at the ends of the series of tanks and adapted to transfer the carrying frames to and from the bottom and top tanks of the series, to and from the points where the goods are deposited and removed from the carrying frame.

[Claims 6 to 12 not printed in the Gazette.]

1,115,249. MEANS FOR THE PRODUCTION OF LONG CONTINUOUS ELECTRIC ARCS. OTTO SCHÖNHERR, Christiania, and JOHANNES HESSBERGER, Christiansand, Norway, assignors, by mesne assignments, to Norsk Hydroelektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed May 18, 1910. Serial No. 562,097. (Cl. 204—31.)

1. The process of producing a long stable electric arc in a tube or passage provided with an insulated electrode by causing a gas to pass through the arc tube in different directions lengthwise of the said tube at one and the same time.

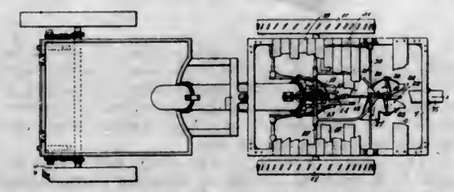
2. The process of producing a long stable electric arc in a tube or passage provided with an insulated electrode by causing a gas to pass into the arc tube about at one or more than one place at or near the mid part of the length of the said tube or passage and to pass out from the said tube or passage near each of the electrodes which are situated at or near each end of the tube or passage substantially as hereinbefore explained.

3. The process of producing a long stable electric arc in a tube or passage provided with an insulated electrode by causing a gas to pass into the tube or passage at each of the two ends thereof and then to pass along the wall toward the mid part and then to reverse this course so as to pass back along the arc toward each of the two ends of the tube or passage again substantially as hereinbefore explained.

4. The process of producing a long stable electric arc in a tube or passage provided with an insulated electrode by causing a gas to pass into the tube at each of the two ends thereof and then to pass along the wall toward the mid part and then to reverse this course so as to pass back along the arc toward each of the two ends of the tube again and causing the air to leave the tube through the electrode while cooling the said electrode or outlet, substantially as hereinbefore explained.

5. An apparatus of the kind described comprising a tube with a hollow electrode situated at or near each end thereof, means for introducing gas at or near each end thereof, and means for causing the gas entering at each end to travel toward the mid part of the tube and then to reverse its course so that the gas which enters the tube at one end leaves the tube substantially through the electrode situated at the same end of the tube at which the gas enters the tube.

1,115,250. BEET-HARVESTER. HARRY B. SCHRADER, Sterling, Colo., assignor of one-half to Clarence D. Krakel, Sterling, Colo. Filed July 9, 1913. Serial No. 778,073. (Cl. 55—107.)

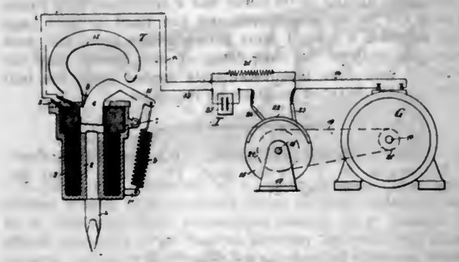


1. In a beet harvester, a revoluble cutter; a support for said cutter on which the same is adapted to revolve and which support constitutes a guide for beet leaves to and from said cutter; means pivotally suspending said support from the frame of the harvester; means for raising and lowering said support in a substantially vertical position, whereby said support is adjusted vertically with reference to said frame; an arm from the axle to the cutter, said arm being hinged on the axle and having a hinged portion adjacent the cutter whereby said cutter is free to move with said support when the same is moved vertically with reference to the frame; and means for transmitting the rotary movement of the axle to the cutter.

2. In a beet harvester, a top-cutting mechanism comprising a revoluble cutter; a support carrying said cutter, said support having a V-shaped cut-out at the front thereof for guiding the beet leaves to said cutter, said support having side walls forming a trough for directing the leaves cut by the cutter to the side of said support; and means for raising and lowering said support.

3. In a beet harvester, a top-cutting mechanism comprising a support having a projection, a cutter mounted on said support, said cutter having a recess engaging the projection whereby said cutter is prevented from lateral displacement on said support, said support having a V-shaped cut-out at the front thereof for guiding the beet leaves to the cutter, and side walls forming a trough to guide the leaves from the cutter to the side of said support; means for raising and lowering said support; and means for rotating said cutter when the harvester is propelled.

1,115,251. METHOD OF OPERATING ELECTROMAGNETIC STRIKING-TOOLS BY MEANS OF ALTERNATING CURRENT. LEO SCHÜLER, Berlin-Lichterfelde-West, Germany. Filed Aug. 30, 1912. Serial No. 717,873. (Cl. 172—126.)



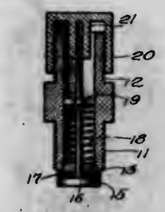
1. The method of operating an electromagnetic striking tool by means of alternating current, which consists in intermittently supplying current to the magnet coil during time-intervals approximately equal to one cycle, each time-interval being symmetrically situated to one zero-value of the E. M. F. wave, so that the magnetic field for attracting the armature is not only formed, but also permitted to disappear within said time-interval.

2. The method of operating an electromagnetic striking tool by means of alternating current, which consists in connecting the tool to the supply circuit at the instant when the E. M. F. of said supply is approximately zero, maintaining the connection during a time-interval approximately equal to one cycle and interrupting the circuit during a time-interval at least equal to one cycle.

3. The method of operating an electromagnetic striking tool by means of alternating current, which consists in supplying to the magnet coil an alternating current the tension curve of which shows groups of one positive and one negative wave and intervals between these groups in which the tension is approximately equal to zero, so as to obtain strong impulses for the working stroke of the armature, weak impulses of the opposite sense for canceling the residual magnetism and pauses without current for the return of the armature.

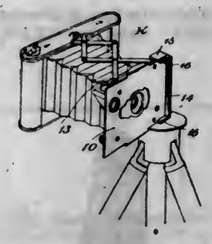
1,115,252. TIRE-VALVE. ALBERT J. SEAMAN, Boston, Mass., assignor to Albert J. Greene, Boston, Mass. Filed Apr. 10, 1913. Serial No. 760,174. (Cl. 152—12.)

A tire valve of the nature described comprising a casing having at one end a valve seat furnished with a central guide and air passages, a valve stem slidable in said guide and having an exterior integral valve and a screw threaded inner end, a spider fixed to said valve stem, a spring located within said casing and acting against said spider to close said valve, and a cap having a wall to embrace



said casing and an axial screw threaded socket engaged with said valve stem whereby said valve stem can be drawn in a direction to positively hold said valve in the closed position.

1,115,253. KODAK-SUPPORT. LEON FRANK SMITH, New York, N. Y. Filed Dec. 13, 1913. Serial No. 806,444. (Cl. 248—43.)



1. The combination with a tripod having an attachment stud, and a kodak having a face plate, of attachment means to secure the kodak to the tripod, said attachment means comprising a plate having an opening for coöperation with said stud, and spaced members at each end of said attachment plate, the said members being adapted to receive between them the edges of said face plate.

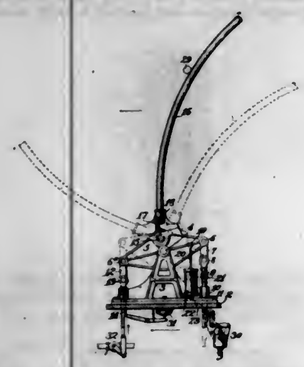
2. The combination with a tripod having an attachment stud and a kodak having a face plate, of attachment means to secure the kodak to the tripod, said attachment means including a base plate adapted to abut against one end of the face plate aforesaid, a pair of jaws secured to each end of the base plate and extending therefrom at a right angle and in spaced relation to each other, the edges of the face plate being embraced by said pairs of jaws, and means provided in said base plate and one of said jaws whereby the kodak may be secured to the tripod in either a vertical or transverse position.

1,115,254. AUTOMATIC TRAIN CONTROL AND ALARM. FRANKLIN STEELE, Jr., Washington, D. C. Filed Dec. 31, 1913. Serial No. 809,781. (Cl. 246—59.)

1. In an automatic train control and alarm, the combination of a standard mounted on a car, a rocker journaled in said standard, an upstanding and self-righting arm carried by said rocker, a rigid pole or bar mounted in the path of said upstanding arm, shock-reducing means associated with said rocker, and alarm means connected with said rocker and adapted to be put in action when movement given to the upstanding arm by contact with said rigid pole or bar is communicated by said arm to said rocker, substantially as set forth.

2. In an automatic train control and alarm, the combination of a standard mounted on a car, a rocker journaled in said standard, an upstanding and self-righting arm carried by said rocker, a rigid pole or bar mounted in the path of said upstanding arm, shock-reducing means associated with said rocker, and control and alarm means

connected with said rocker and adapted to be put in action when movement given to the upstanding arm by contact



with said rigid pole or bar is communicated by said arm to said rocker, substantially as set forth.

1,115,255. BROOM. HERMAN J. STRUVE, Deshler, Nebr. Filed Apr. 1, 1914. Serial No. 828,765. (Cl. 15—22.)

A broom, having a core, a filler of short fibers secured at their upper ends to the core at the interior of the broom and terminating a short distance beyond the lower end of said core, and brushing fibers covering said filler and meeting below the filler, the fibers and the filler defining an interior space of decreasing width below the core, the brushing fibers furthermore comprising inner bunched fibers extending to the lower end of the broom, and separate springy layers, the springy layers being of decreasing length from the innermost to the outermost layer, and the fibers of any given layer terminating in approximately the same line, the several layers defining distinct zones of increasing thickness from the bottom upwardly.

1,115,256. GLOBE-VALVE. JAMES R. TORBERT, Woodward, Ala. Filed Feb. 19, 1914. Serial No. 819,793. (Cl. 137—4.)

A globe valve comprising a casing having a horizontal web provided with an opening therethrough and having a cylindrical neck above said web, a head forming a closure for said neck and having its lower portion bell-shaped to provide an internal clearance aliining with said neck and having an internal shoulder circumscribing said clearance, a valve stem threaded through said head, a ball valve member controlling the opening in said web and a supporting cage for said valve member comprising a cylindrical body arranged within the neck of the casing and having a reduced lower portion against which the ball valve member rests in an elevated position of said cage, a head carrying said cylindrical body and having a concentric depending flange of reduced diameter upon which the cylindrical body is threaded, said body at its upper end abutting the marginal portion of said last named head and the said marginal portion in the uppermost position of said head engaging against the internal shoulder of said first-named head, said last-named head also having at its upper side an internally threaded circular concentric flange of less diameter than the clearance

of said first-named head, and a nut secured within said last-named flange and surrounding said valve stem, the valve stem having at its lower end a circumscribing flange which fits between said nut and the head of said cage and provides a swivel joint between said stem and said cage, the body of the cage being of such length that the head of said cage is substantially spaced from the ball valve in an elevated position of the cage.

1,115,257. SHADE-HANGER. WALTER TROJANOSKI, Patchogue, N. Y. Filed Sept. 25, 1913. Serial No. 791,778. (Cl. 156—27.)

1. In a shade hanger, two guide bars spaced apart, brackets on the guide bars with recesses for receiving the ends of a shaft of a shade roller, there being slots in the brackets extending to the recesses for receiving flanges on the ends of the shaft to prevent the longitudinal movement of the shaft relatively to the brackets, and means for moving the brackets on the guide bars.

2. In a shade hanger, a guide bar, a guide member mounted on the guide bar and having an opening in the rear of the guide bar, and means for moving the guide member on the guide bar, the said means extending down in the opening.

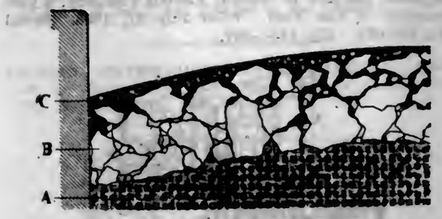
3. In a shade hanger, a shade roller having a shaft, two brackets spaced apart and provided with recesses for receiving the ends of the shaft of the shade roller, there being slots in the brackets extending to the recesses for receiving flanges on the ends of the shaft to prevent the longitudinal movement of the shaft relatively to the brackets, the shaft having ends disposed in the recesses, and flanges on the ends disposed in the slots.

1,115,258. DEVICE FOR ATTACHING COLLARS TO SHIRTS. ISAAC A. ULLMANN, Brooklyn, N. Y. Filed Jan. 16, 1912. Serial No. 671,452. (Cl. 24—101.)

A device adapted to be inserted in the rear collar button-hole of a two fold shirt band, comprising a laterally extending relatively narrow body portion, a flat collar attaching tongue projecting downwardly from the lower edge of the body portion, and a laterally enlarged head joined to the lower end of said tongue to prevent the button becoming accidentally disengaged from the button-hole, the lower edge of the body portion extending laterally in both directions from the base of the tongue to provide shoulders on which the device may be turned in

the shirt band pocket in the process of insertion, and the upper edge of said body portion being perpendicular to the longitudinal axis of the button so as to present an elongated supporting edge, which is adapted to lie adjacent the fold in the shirt band, whereby tilting of the button in the button-hole is prevented, and said body portion, tongue and head all forming a substantially flat button.

1,115,259. COMPOSITE PAVEMENT. EDWIN C. WALLACE, East Auburn, Cal. Filed Nov. 23, 1910. Serial No. 593,860. (Cl. 94—1.)



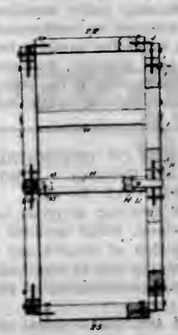
A pavement consisting of a lower primary layer comprising loosely laid relatively large mineral bodies united by a relatively hard bituminous cement in a manner to afford relatively large fissures between the relatively large mineral bodies, which extend a substantial distance below the uppermost stratum of the primary layer, and an upper secondary layer comprising a homogeneous mass formed of a relatively soft bituminous cement material mixed with finely divided mineral bodies, the homogeneous mass being applied upon the upper surface of the primary layer, and having integral depending anchor arms thereof compressed into the fissures between the loosely laid relatively large mineral bodies of the primary layer, to extend a substantial distance below the uppermost stratum of the lower layer whereby the homogeneous mass is securely anchored with and upon the primary layer to positively prevent creeping of the homogeneous mass.

1,115,260. DETACHABLE CONNECTION FOR BUILDING-BLOCKS. DOUGLAS M. WARD, Gary, Ind. Filed June 3, 1913. Serial No. 771,882. (Cl. 20—2.)

1. A detachable structure comprising a pair of beam structures, means for connecting said beam structures together end for end, said means including a connecting plate formed with an aperture therein, a bracing beam associated with said beam structures, and a tying catch member formed with a hooked end extending through said aperture in said plate, and into said bracing beam, and a pin extending through part of said bracing beam and through said tying catch member.

2. A detachable structure comprising a pair of beam structures formed with slots in their adjacent ends and apertures arranged adjacent said slots, a plate fitting into said adjacent ends, said plate being formed with apertures, a pin for each of the apertures in said beam structures, said pins extending through said plate whereby the plate and the beam structures are locked together, said plate being formed with a substantially central aperture,

a bracing beam associated with said beam structures, and a tying catch member formed with a hook and extending through said centrally arranged aperture in said plate



and into said bracing beam, and a pin extending through part of said bracing beam and through said tying catch member.

1,115,261. PUMP. JOSEPH E. WEAVER, Twin Falls, Idaho. Filed Sept. 23, 1913. Serial No. 791,800. (Cl. 103—54.)

1. In a pump, the combination of a receptacle; a plunger having a valve-controlled inlet; a valve-controlled outlet from the plunger to the receptacle; swinging pump members associated with the plunger and adapted to reciprocate when the plunger is reciprocated and thereby pump a liquid into the receptacle through said plunger.

2. In a pump, the combination of a receptacle having a valve-controlled inlet; a valve-controlled outlet from the plunger to the receptacle; swinging pump members associated with the plunger engaging the same intermediate its inlet and outlet, said swinging pump members adapted to reciprocate when the plunger is reciprocated whereby they pump a liquid through said plunger into the receptacle.

3. In a pump, the combination of a receptacle; a hollow plunger having a valve-controlled inlet, a valve-controlled outlet from said plunger to said receptacle; oppositely disposed swinging pump members engaging said hollow plunger intermediate its inlet and outlet and adapted to reciprocate to deliver liquid into said hollow plunger when said hollow plunger is reciprocated whereby liquid is pumped by said swinging pump members through said hollow plunger.

4. In a pump, the combination of an outlet pipe; means for pumping liquid through said outlet pipe comprising oppositely disposed pump members mounted to swing; a reciprocating plunger intermediate said swinging pump member and, associated therewith, said swinging pump members being adapted to reciprocate when said plunger is reciprocated, whereby liquid is pumped by said swinging plunger into said outlet pipe.

5. In a pump, the combination of a receptacle, a plunger having a valve-controlled inlet thereto; a valve-controlled outlet from the plunger to the receptacle; oppositely disposed swinging pump members associated with the plunger and adapted to reciprocate to deliver liquid into said plunger when the same is reciprocated; means for reciprocating said plunger; and means balancing the weight of the moving parts of the pump.

[Claims 6 to 16 not printed in the Gazette.]

1,115,262. PROCESS OF DETINNING. JOSEF WEBER, Essen-on-the-Ruhr, Germany. Filed Jan. 31, 1912. Serial No. 674,501. (Cl. 75—55.)

1. A process of treating material containing tin and iron in a closed vessel, which consists in subjecting said material to the action of chlorin gas at a temperature above that at which the iron is attacked, and continuously effecting a thorough commingling of the particles of gas in the vessel.

2. A process of treating material containing tin and iron in a closed vessel, which consists in subjecting said material to the action of chlorin gas at a temperature above that at which the iron is attacked, and simultaneously dissipating a large portion of the heat generated in the vessel by the reaction.

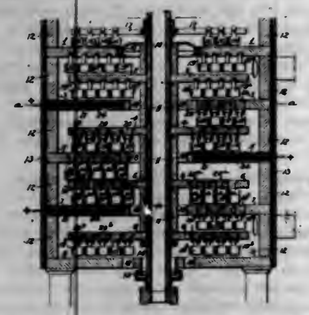
3. A process of treating material containing tin and iron in a closed vessel, which consists in subjecting said material to the action of chlorin gas at a temperature above that at which the iron is attacked, and continuously circulating said gas in contact with a heat-absorbing medium to dissipate a large portion of the heat generated in the vessel by the reaction.

4. The process of detinning bundles of compressed tin scrap in a closed vessel, which consists in subjecting said bundles to the action of chlorin gas at a temperature above that at which the iron of the scrap is attacked, and simultaneously dissipating a large portion of the heat generated in the vessel by the reaction.

5. A process of treating material containing tin and iron in a closed vessel, which consists in subjecting said material to the action of chlorin gas at a temperature above that at which the iron is attacked, and simultaneously equalizing the temperature substantially throughout the reaction vessel and dissipating a large percentage of the heat generated in the vessel by the reaction.

[Claims 6 to 11 not printed in the Gazette.]

1,115,263. METALLURGICAL FURNACE. UTLEY WEDGE, Ardmore, Pa. Filed Feb. 25, 1913. Serial No. 750,596. (Cl. 75—143.)



1. A metallurgical furnace having a central shaft and an outer casing, one rotatable in respect to the other, overlapping hearths carried respectively by said central shaft and outer casing, and rabbles depending from said hearths and serving to move the material over the same.

2. A metallurgical furnace having a central shaft and an outer casing, one rotatable in respect to the other, hearths mounted alternately upon said central shaft and outer casing, and rings of refractory material surrounding said shaft and interposed between the hearths carried thereby so as to protect the shaft from heat and also aid in the support of the hearths.

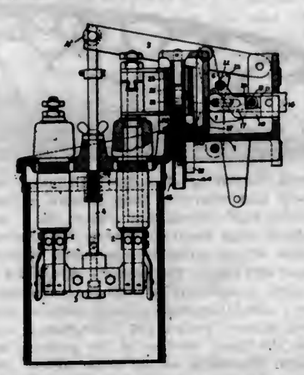
3. A metallurgical furnace having alternating fixed and rotating hearths, a central rotatable shaft on which said rotating hearths are mounted, and rings of refractory material surrounding said shaft and interposed between the rotating hearths.

4. A metallurgical furnace provided with an outer casing and a central shaft, one rotatable in respect to the other, hearths projecting inwardly from said outer casing, and hearths carried by and projecting outwardly from said central shaft and alternating with the other hearths, said outer casing being composed of rings of refractory material interposed between the hearths of said outer casing and serving to separate and support said hearths.

5. The combination, in a metallurgical furnace, of a series of superposed hearths some of which are rotatable in respect to the others, and rabbles depending from said hearths and separably coupled thereto, that portion of the rabble which enters the coupling being less in vertical dimensions than the distance between the bottom of the rabble and the hearth beneath.

[Claims 6 and 7 not printed in the Gazette.]

1,115,264. OIL-SWITCH. EDMUND B. WEDMORE, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed July 11, 1908. Serial No. 443,075. (Cl. 175—267.)



1. In an electric switch, the combination with an actuating mechanism comprising a movable member, an operating member for moving said movable member, a normally positive collapsible connection between said members comprising two links connected to said members respectively and in pivotal engagement with each other near the middle of one of said links, and restraining means mounted on a common pivot with one of said links to engage the free end of the other of said links and normally hold said links in substantial alinement and thereby enable said connection to transmit the thrust of one member to the other.

2. In an electric switch, the combination with a pivoted member and an operating member for moving said pivoted member, of a locking toggle between said members comprising a link pivoted to one of said members and provided with a notch near the middle thereof, a second link pivoted to the other member and in pivotal engagement with said notch in said first member, and latching means mounted in pivotal relation with one of said members to engage the free end of said first link and thereby normally prevent the collapse of said locking toggle.

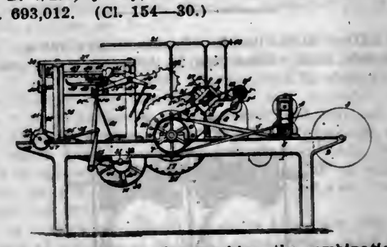
3. In an electric switch, the combination with a movable switch actuating member and an operating member for moving said switch actuating member, of a locking toggle between said members comprising a link pivotally mounted on said operating member and provided near the middle with a notch, a second link pivotally connected to said switch actuating member and provided at the free end with a roller fitting into said notch in said first link, and a latch mounted on the pivot of said second link to normally engage the free end of said first link and thereby prevent collapse of said toggle by the thrust transmitted through said toggle from the said operating member to said switch actuating member.

4. In an electric switch, the combination with a movable switch actuating member and an operating member for moving said switch actuating member, of a normally positive collapsible connection between said members comprising a locking toggle normally under set and bodily movable with said members, a latch mounted in pivotal relation with said locking toggle to normally prevent collapse of said connection, said latch being provided with an extension in the direction of bodily movement of said toggle, and a tripping member loosely mounted on said extension and suspended therefrom in a position to bias said latch to latching position.

5. In an oil switch the combination with coöperating contacts, an operating mechanism for actuating said contacts, a normally positive collapsible connection between said mechanism and said contacts, and automatic tripping means for controlling said connection, of an indicator movably mounted on said operating mechanism, and means mechanically actuated by the collapse of said connection to move said indicator and show the automatic opening of said switch.

[Claims 6 and 7 not printed in the Gazette.]

1,115,265. PAPER-CORRUGATING MACHINE. ALWIN W. D. WEIS, Quincy, Ill. Filed Apr. 24, 1912. Serial No. 693,012. (Cl. 154—30.)



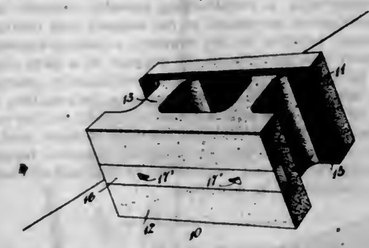
1. In a paper corrugating machine, the combination of fluted rolls, the toothed roll being circumferentially grooved, encircling wires partially inclosing the other roll, and lying within said grooves, and elastic means for holding said wires snugly in such roll-inclosing position.

2. In a paper corrugating machine, the combination of a pair of corrugating rolls, one of them circumferentially grooved as described, retaining wires lying in the groove between said rolls, and connecting at their initial ends to a cross-bar or rod, a deflecting plate adapted to feed the entering material between said rolls, and oppositely disposed inclined fingers attached to the cross-rod and lying in the open spaces in said grooves for stripping the finished material from the retaining roll.

3. In a machine for corrugating packing paper, a pair of rolls fluted in regular groups of a plurality of uniform channels and engaging ribs, and single, wider intermediate channels and ribs, a shear adapted to sever the corrugated paper through the wider flutes, means for actuating said shear and rolls, and feed mechanism adapted to feed forward the corrugated sheet a predetermined distance, so as to be severed in the middle of the wide flutes.

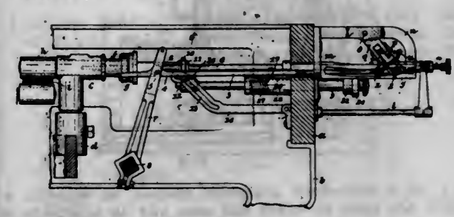
1,115,266. WATERPROOF CONCRETE BUILDING-BLOCK. ARTHUR D. WILTSE, Patchogue, N. Y. Filed Dec. 24, 1913. Serial No. 808,602. (Cl. 72—41.)

1. The herein described composite building block, the same comprising front and rear walls, a pair of vertical webs connecting said walls and maintaining them in spaced relation forming vertical air spaces, a reinforcing and stiffening rib extending longitudinally along and embedded in the structure of the rear wall, and a metal reinforcement extending along the front wall and thence rearwardly through the webs, the outer wall and said rib.



2. The herein described composite building block comprising in a unitary structure a main body, a layer of waterproof material parallel to the front face of the block, a stiffening rib extending along the rear face of the block, and a binding and reinforcing strip of metal extending along the front portion of the block and thence through said rib, the outer ends of said binding and reinforcing strip being clenched into said rib.

1,115,267. QUILLING-MACHINE. GEORGE ADSIT, Paterson, N. J., assignor to Benjamin Eastwood Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Aug. 24, 1910, Serial No. 578,676. Divided and this application filed Aug. 4, 1911. Serial No. 642,276. (Cl. 242—30.)



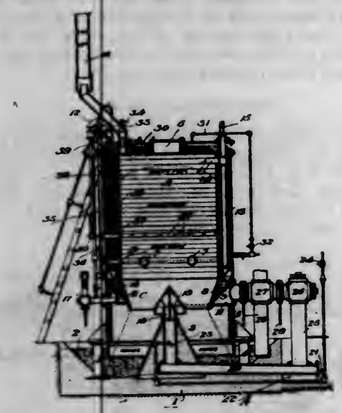
1. In combination, with a support and the winding mechanism including a rotary spindle having a fixed bearing in the support, mechanism for controlling the winding mechanism including a rotary trip member having movement in the support longitudinally of its axis of rotation and substantially parallel with the spindle, means normally urging said member longitudinally in one direction, said member being normally held against movement in said direction by the support and being rotatable into released relation to the support, and an eccentric revoluble on said member eccentrically thereof and engageable by the package being wound, substantially as described.

2. In combination, a supporting means, a wound-package-forming mechanism to be controlled arranged in said supporting means, a controlling member for said mechanism pivotally movable in a plane into and out of controlling engagement with said mechanism, and a package-controlled member for actuating the first member movable rectilineally in a plane parallel with the first plane and against the first member to move the latter, one of said members having a cam-surface engaged by the other and extending across the line of movement of the actuating member, substantially as described.

3. In combination, with a supporting means, a wound-package-forming mechanism, and means for controlling said mechanism from the package being wound comprising a package-controlled actuating member rectilineally movable in the support, and a motion-transmitting member also movable in the support in a plane and in a path crossing the path of movement of the actuating member, one of said members having a cam-surface engageable by the other and displaced obliquely to the path of movement of the actuating member, substantially as described.

4. In combination, with a support, a wound-package-forming mechanism including a rotary spindle, and means for controlling said mechanism from the package being wound comprising a rectilineally movable member normally held against movement in the support and rotatable into released relation to the support, a motion-transmitting member also movable in the support in a path crossing the path of movement of the rectilineally movable member, one of said members having a cam-surface engageable by the other and disposed obliquely to the path of movement of the rectilineally movable member, and an eccentric revoluble on the rectilineally movable member eccentrically thereof and engageable by the package being wound, substantially as described.

1,115,268. GAS-GENERATOR. GUSTAF AKEALUND, Atlanta, Ga., assignor to Standard Gas Power Company, Atlanta, Ga., a Corporation of Georgia. Filed Feb. 2, 1912. Serial No. 675,003. (Cl. 48—207.)



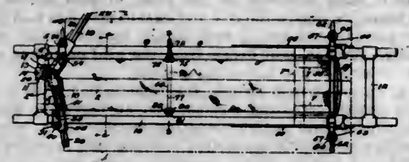
1. In a down-draft generator adapted to maintain a lower ash zone, an upper fuel zone and an intermediate fire zone, means positioned and adapted for delivering a draft directly into the heated body of the fuel in the fire zone at a plurality of points of the outer part of said fire zone, in combination with a gas off-take arranged so that it will receive the gas substantially centrally of the ash zone, whereby the downward draft is caused to uniformly traverse all parts of said fire zone in a direction toward the receiving portion of the gas off-take.

2. In a down-draft generator adapted to maintain a lower ash zone, an upper fuel zone and an intermediate fire zone, means positioned and adapted for delivering a draft directly into the heated body of the fuel in the fire zone at a plurality of points of the outer part of said fire zone, in combination with a gas off-take arranged so that it will receive the gas substantially centrally of the ash zone, whereby the downward draft is caused to uniformly traverse all parts of said fire zone in a direction toward the receiving portion of the gas off-take, and means for admitting an independent primary draft into the upper part of the generator in the region of the fuel zone.

1,115,269. STRETCHING MECHANISM. JULIAN ALEXANDER, Philadelphia, Pa. Filed Apr. 29, 1914. Serial No. 835,246. (Cl. 149—21.)

1. The combination in a stretching device of a supporting structure; a plurality of angularly adjustable jaw clamps thereon; means for pivotally connecting the jaws of each clamp; and a single device for simultaneously actuating the jaws and causing them to be rigidly held to the supporting structure.

2. The combination of a supporting structure; a plurality of pivotally connected sets of clamping jaws; means slidable on said structure and formed to constitute a sliding bearing for the clamping jaws; with mechanism for securing said jaw bearing to the supporting structure.



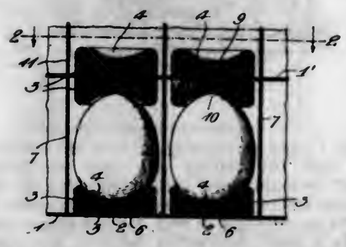
3. The combination in a stretching device of a supporting structure having guideways; a plurality of clamps; means pivotally connecting the clamps and adjustably securing them to certain of said guideways; and bearings for said clamps adjustably secured to the other of said guideways.

4. The combination in a stretching device of a supporting structure having guideways; a plurality of clamps; means for pivotally connecting the clamps and adjustably securing them to certain of said guideways; and bearings adjustably mounted on others of said guideways; the clamps having jaws slidable in said bearings.

5. The combination in a stretching device of a clamp having a threaded opening and a tube communicating therewith; a second clamp; a member having a portion slidable within said tube and secured to said second clamp; with a threaded rod entering said threaded opening and contacting with said member to move the clamps apart.

[Claims 6 to 14 not printed in the Gazette.]

1,115,270. EGG-CRATE. CLARIS HENRY ARNOLD, Eaton Rapids, Mich. Filed Nov. 26, 1913. Serial No. 803,162. (Cl. 217—27.)



1. A device of the character described comprising a supporting member, offset tongues carried thereby, and a plurality of resilient egg retainers, each of the latter having therein an L-shaped passage to receive one of said tongues whereby said retainers have a detachable engagement therewith.

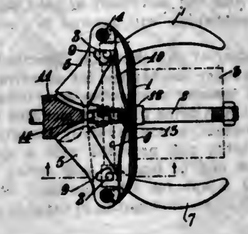
2. A device of the character described comprising a supporting member, offset tongues carried thereby, said tongues having contracted inner portions, and a plurality of egg retainers of resilient material each having therein an L-shaped passage to receive one of said tongues whereby the retainers have a detachable engagement with said tongues.

3. A device of the character described comprising a metal supporting plate, a series of tongues struck out of said plate and extended vertically and horizontally therefrom and a plurality of egg-retainers, each of the latter having therein a passage extending vertically inward from their base and communicating with a horizontally disposed passage, whereby to receive one of said tongues and detachably connect the retainers to said support.

4. A device of the character described comprising a metal plate formed at intervals with substantially S-shaped slits to form pairs of oppositely projecting tongues, the tongues of each pair being offset in opposite directions from said plate and a plurality of resilient egg retainers

disposed opposite each other on opposite sides of the plate each having therein an L-shaped passage of less width than said tongues, whereby when one of the latter is engaged therewith the passage will be expanded and the retainer bindingly secured thereto.

1,115,271. LATCH MECHANISM FOR DOORS AND GATES. GUSTAF AXEL EMIL ARONSON, Kisa, Sweden, assignor of one-half to Sture Richard Detlow Westrell, Stockholm, Sweden. Filed Dec. 15, 1913. Serial No. 806,731. (Cl. 70—28.)



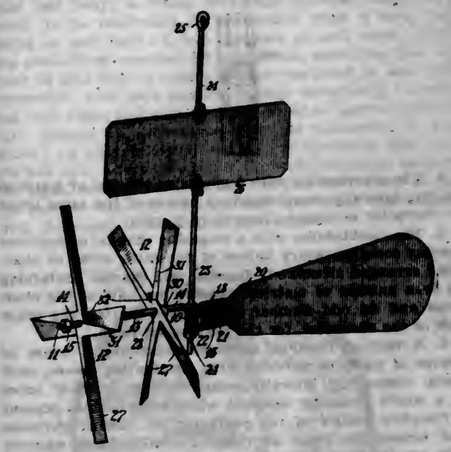
1. In a latch mechanism for doors and gates, the combination of a casing of U-shaped cross-section, latch members pivoted in said casing and arranged to swing in an approximately horizontal direction, a shaft supported by said casing, means for bringing said shaft to engage with the latch members, and a handle secured to said shaft on each side of the latch mechanism and adapted to swing in an approximately vertical direction, substantially as and for the purpose set forth.

2. In a latch mechanism for doors and gates, the combination of a casing of U-shaped cross-section, latch members pivoted in said casing and arranged to swing in an approximately horizontal direction and provided with slots, a shaft supported by said casing and provided with studs adapted to engage with the slots in the latch members, and a handle secured to said shaft on each side of the latch mechanism and adapted to swing in an approximately vertical direction, substantially as and for the purpose set forth.

3. In a latch mechanism for doors and gates, the combination of a casing of U-shaped cross-section, latch members pivoted in said casing and arranged to swing in an approximately horizontal direction, a shaft supported by said casing, means for bringing said shaft to engage with the latch members, means for locking said latch members, and a handle secured to said shaft on each side of the latch mechanism and adapted to swing in an approximately vertical direction, substantially as and for the purpose set forth.

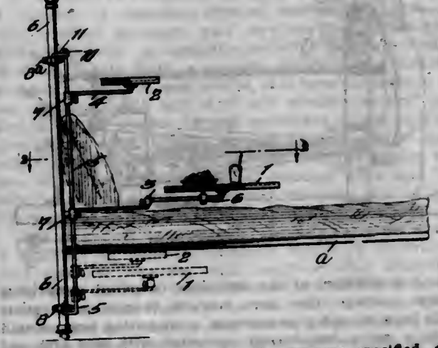
1,115,272. TOY. HENRY CLINTON BALDWIN, Lakemont, N. Y., assignor of one-half to Ned E. Baldwin, Lakemont, N. Y. Filed Aug. 19, 1913. Serial No. 785,549. (Cl. 46—14.)

1. A toy of the character described, comprising wind wheels, a rod forming at one end an axle on which the wheels are mounted to turn, said rod at one end of the axle being formed into a spiral, vertical coil constituting a bearing, a hanger rod passing loosely through said coil, a member on the rod supporting the coil, the said rod at the end of the coil opposite to the axle being extended outwardly in the form of an arm diametrically opposed to the axle, the rod furthermore having three successive bends at right angles to form with the said arm four sides of a rectangular frame, the last mentioned bend presenting a member parallel with the coil, and adjacent to the latter, a vane disposed at the end of the frame opposite to the coil and axle, and a strap securing the vane to the frame, said strap being returned on itself, presenting separate side members, the ends of the members overlapping and being secured to opposite sides of the vane, and extending therefrom at the sides of the rectangular frame and being bent around that member of the said frame adjacent to the coil, between the said coil and said adjacent frame member.



2. A toy windmill comprising a frame having a wheel mounted to turn and provided with a vane, a hanger on which said frame is adapted to turn in a horizontal plane, the hanger being formed in separate sections, and a panel interposed between and connecting the hanger sections.

1,115,273. TRAY-HOLDING ATTACHMENT FOR BEDSTEADS. SIMON ALFRED BEECHIE, San Marcos, Tex. Filed Oct. 14, 1913. Serial No. 795,066. (Cl. 45—82.)



A bedstead attachment for the purpose specified, comprising clamps adapted to be secured to a bed-post, a support for trays consisting of a rod having its lower end upturned to engage one of said clamps, and a hinge secured detachably to the upper end of said rod and having a downturned pintle for engaging the upper clamp, as described.

1,115,274. LINOTYPE-MATRIX. JEROME B. BELL, Wilmington, Del., assignor to Mergenthaler Linotype Company, New York, N. Y., a Corporation of New York. Filed May 6, 1911. Serial No. 625,549. (Cl. 199—7.)

1. A plurality of linotype matrices provided respectively with complementary portions of the same letter or character adapted to be assembled together to produce the complete letter or character and having the same distributing combinations, whereby they are directed to the same magazine channel.

2. The combination with a magazine channel of matrices bearing complementary parts of the same letter or character adapted to be assembled together to produce the com-

plete letter or character and arranged in said channel in the order of composition.

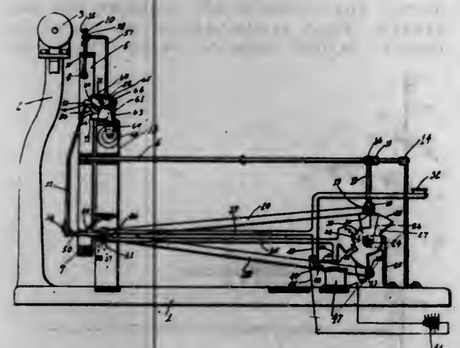
3. The combination with a magazine channel of matrices bearing laterally complementary halves of the same letter or character arranged alternately therein.

4. The combination with a magazine channel of matrices bearing complementary halves of the same letter or character arranged alternately therein, said channel containing an even number of matrices bearing one-half of the character and an odd number of matrices bearing the other half of the character, for the purpose set forth.

5. A font of linotype matrices embodying a series of groups of matrices provided with distributing means, each group comprising laterally complementary vertical zones of a single character adapted when assembled to present a complete matrix of the character for casting purposes and having the same distributing combinations whereby they are distributed into a common channel.

[Claims 6 to 12 not printed in the Gazette.]

1,115,275. TYPE-WRITING MACHINE. ORIN BENNETT, Placerville, Cal. Filed Mar. 26, 1914. Serial No. 827,279. (Cl. 197—23.)



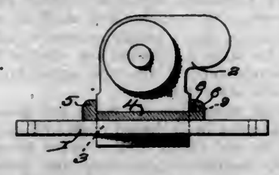
1. A mechanism of the character described comprising a type carriage, type bars movable therein, a turnable shaft fixed to said type carriage, a projecting arm on said shaft, a rod, a link flexibly connected with said arm and said rod, a key mechanism, and means operatively connected between said key mechanism and said rod, whereby with the operation of said key mechanism said rod will be lifted to cause said link to operate said arm to turn said shaft, as described.

2. A device of the character described comprising the combination of a type carriage carrying type bars, a hammer mechanism for operating individual type bars, means for operating said carriage to bring said individual type bars into alinement with said operating mechanism, said last named means comprising a shaft fixed to said carriage, a projecting arm on said shaft, a rod, a link flexibly connected with said arm and with said rod, another shaft, a plurality of curved cams on said shaft engageable with said rod, a key mechanism, and means operatively connected between said key mechanism and said last named shaft whereby with the operation of said key mechanism said last named shaft will be turned to bring said cams into engagement with said rod, as described.

3. A device of the character described comprising the combination of a type carriage carrying type bars, a hammer mechanism for operating individual type bars, means for operating said carriage to bring said individual type bars into alinement with said operating mechanism, said last named means comprising a shaft fixed to said carriage, a projecting arm on said shaft, a rod, a link flexibly connected with said arm and with said rod, another shaft, a plurality of curved cams on said shaft engageable with said rod, a key mechanism, means operatively connected between said key mechanism and said last named shaft whereby with the operation of said key mechanism said last named shaft will be turned to bring said cams into engagement with said rod, and means operable between said key mechanism and said type bar operating mechanism whereby with the movement of said key mechanism said type bar mechanism will likewise be operated, as described.

4. A mechanism of the character described comprising type bars, a hammer mechanism for operating individual type bars, such hammer mechanism comprising a hammer pivotally mounted, a catch pivotally mounted in the lower end of said hammer, a dog pivotally mounted independently of said catch and provided with a spring, means for moving said dog to tension said spring and engage said catch, and means for releasing said moving means from said dog to allow said spring to expand, as described.

1,115,276. CROSS-HEAD CONNECTION. GEORGE C. BLONDO, Fairbanks, Alaska. Filed Feb. 5, 1914. Serial No. 816,688. (Cl. 121—106.)



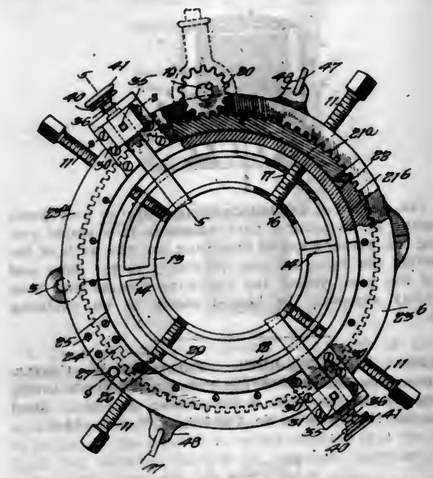
1. In combination with a sliding cross head, a pitman receiving arm fitting upon said cross head, a plate fitting between the cross head and arm and having a flat hook at one end and a recessed hook at its other end, and a wedge strip fitting in the recessed hook and bearing against one face of said arm and having a hook at each end to retain said wedge in position.

2. In combination with a sliding cross head, a pitman receiving arm fitting upon said cross head, a plate fitting between the cross head and arm and having a flat hook at one end and a recessed hook at its other end, a wedge strip fitting in the recessed hook and bearing against one face of said arm and having a hook at each end to engage said plate to retain the wedge strip in position, and means arranged between said wedge strip and recess of said hooked arm to take up wear upon said strips.

1,115,277. PIPE-CUTTER. JESSE T. BODKIN, Chattanooga, Tenn., assignor of one-half to William E. Beavers, Chattanooga, Tenn. Filed Mar. 10, 1914. Serial No. 823,827. (Cl. 81—100.)

1. In a pipe cutting mechanism, a yoke comprising a pair of hinged semi-cylindrical members, means for securing the ends of said hinged members together, a bushing comprising a pair of semi-cylindrical members disposed concentrically of said yoke and within the latter, and a plurality of radially extending set screws carried by said yoke and arranged to extend through said bushing members, portions of said bushing members being threaded to receive said screw bolts.

2. In a pipe cutting machine, a yoke comprising a pair of hinged sections, means for locking the sections together, said yoke having an annular bearing surface, an annular tool holder arranged to rotate on the annular bearing surface of the yoke, a tool carried by said tool holder, means carried by the tool holder for feeding the tool toward the pipe, a bushing comprising a pair of semi-cylindrical members disposed concentrically of said yoke and within the latter, said bushing being provided with alined openings for the passage of the tool, and common means for securing said bushing to said yoke, and for clamping the bushing to the pipe.



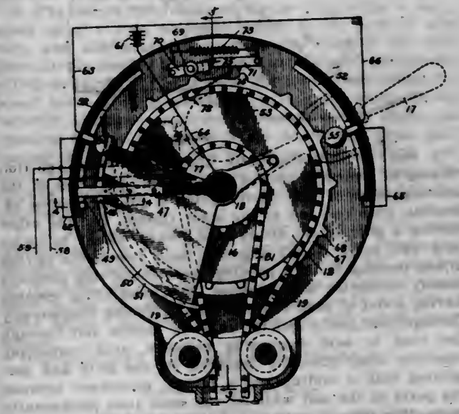
3. In a pipe cutting machine, a yoke comprising a pair of hinged sections, means for locking the sections together, said yoke having an annular bearing surface, an annular tool holder arranged to rotate on the annular bearing surface of the yoke, a tool carried by said tool holder, means carried by the tool holder for feeding the tool toward the pipe, a bushing comprising a pair of semi-cylindrical members disposed concentrically of said yoke and within the latter, said bushing being provided with alined openings for the passage of the tool, and common means for holding the bushing in spaced relation with the yoke, for centering the bushing and for clamping the bushing to a pipe.

4. In a pipe cutting machine, a yoke comprising a pair of hinged sections, means for locking the sections together, said yoke having an annular bearing surface, an annular tool holder arranged to rotate on the annular bearing surface of the yoke, a tool carried by said tool holder, means carried by the tool holder for feeding the tool toward the pipe, a bushing comprising a pair of semi-cylindrical members disposed concentrically of said yoke and within the latter, said bushing being provided with alined openings for the passage of the tool, and common means for holding the bushing in spaced relation with the yoke, for centering the bushing and for clamping the bushing to a pipe, said means comprising set screws carried by said yoke, and arranged to pass freely through the outer semi-cylindrical member of the bushing, the ends of the said screw being threaded in the inner semi-cylindrical member of the bushing for movement with respect to the bushing.

1,115,278. SHIP'S ENGINE-ROOM SIGNAL. OLE K. BOGSTRAND, New York, N. Y. Filed May 2, 1913. Serial No. 765,023. (Cl. 177—339.)

1. A signal apparatus having a box body with order indications thereon; a handle rotatively mounted in said box body; a wheel rotatively mounted adjacent a shaft to be controlled in conformity with signals indicated on said body; a trip mounted on said shaft; yielding projections mounted on said wheel, extending into the path of said trip; a rotary member mounted in said box body concentric with said handle; means operatively connecting said wheel and said rotary member, to operate said rotary member in accordance with the movement of said wheel; and an electric signal system incorporating said handle and said rotary member to show disagreement between the signal set and the movement of said shaft.

2. A signal apparatus having a box body provided with order indications thereon; a handle rotatively mounted in said box body; a wheel rotatively mounted adjacent a shaft to be controlled in conformity with signals indicated on said body; a trip mounted on said shaft; yielding projections mounted on said wheel, extending into the path of said trip; a rotary member mounted in said body concentric with said handle; means operatively connecting said wheel and said rotary member to operate said rotary member in accordance with the movement of said wheel; an electric signal system incorporating said handle and said rotary member to show disagreement between the signal set and the movement of said shaft; and means for moving said trip to and from said shaft conformable with the speed of rotation of said shaft.



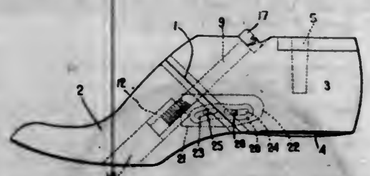
3. A signal as characterized, comprising a rotary shaft; a plurality of oppositely-disposed stationary electric-circuit terminal members, said members being concentric with said shaft; a manually-operative handle pivotally mounted on said shaft; a movable electric-circuit terminal member mounted on said handle, said terminal member being concentric with said shaft and movable parallel with and in spaced relation to said stationary circuit terminal members; a circuit-closure member fixedly mounted upon said shaft for engaging said movable terminal member and one of said stationary terminal members when said terminal members are in juxtaposed relation; and an auxiliary signal embodying all of said terminal members.

4. A signal as characterized, comprising a rotary shaft; a plurality of oppositely-disposed stationary electric-circuit terminal members, said members being concentric with said shaft; a manually-operative handle pivotally mounted on said shaft; a movable electric-circuit terminal member mounted on said handle, said terminal member being concentric with said shaft and movable parallel with and in spaced relation to said stationary circuit terminal members; a circuit-closure member fixedly mounted upon said shaft for engaging said movable terminal member and one of said stationary terminal members when said terminal members are in juxtaposed relation; and an auxiliary electrical signal system, embodying a sounding bell operable when said closure member engages said movable terminal member and one or other of said stationary terminal members.

5. A signal as characterized, comprising a rotary shaft; a plurality of oppositely- disposed stationary electric-circuit terminal members, said members being concentric with said shaft; a manually-operative handle pivotally mounted on said shaft; a movable electric-circuit terminal member mounted on said handle, said terminal member being concentric with said shaft and movable parallel with and in spaced relation to said stationary circuit terminal members; a circuit-closure member fixedly mounted upon said shaft for engaging said movable terminal member and one of said stationary terminal members when said terminal members are in juxtaposed relation; a plu-

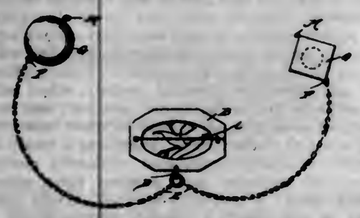
rality of electric circuits, each circuit incorporating said movable terminal member and one of said stationary terminal members; and a plurality of electric lamps, one mounted on each of said circuits for illumination when said closure member engages one or other of said stationary terminal members and said movable terminal member, said lamps being selectively distinguished for indicating purposes.

1,115,279. LAST. PHILIP A. BOWEN, Lynn, Mass., assignor to Lillian A. Little, Lynn, Mass. Filed May 31, 1913. Serial No. 770,910. (Cl. 12—135.)



A last divided diagonally across the instep portion thereof to present a heel part and a fore part, one of the meeting faces of said parts having a guiding groove extending from one end to the other thereof, and the other having a guiding rib fitting said groove, means to clamp said two parts rigidly together, said two parts having alined recesses in their meeting faces, connecting members loosely occupying said recesses, each connecting member having a slot at each end, and pins extending transversely through said parts and the recesses therein and through the slots in said connecting members, said connecting members being pivotally mounted on the slots and permitting both a sliding and a pivotal movement between the parts of the last while at the same time permanently connecting them together.

1,115,280. PIN-GUARD AND ORNAMENT. MARY BUSCH, McArthur, N. D. Filed May 2, 1913. Serial No. 765,114. (Cl. 24—155.)



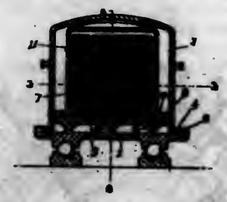
A device of the character described, consisting of a brooch having securing means adapted to be fastened to a hat, a pair of chains secured to said brooch, a part secured to the end of each chain and adapted to act as a pin point protector, an interlocking connection secured to said parts, whereby said parts may be connected and the device as a whole be used as an ornament.

1,115,281. METHOD OF OXIDIZING STEEL OR IRON SHEETS. JOHN E. CARNAHAN and ARTHUR J. MASKREY, Canton, Ohio. Filed June 11, 1913. Serial No. 773,001. (Cl. 148—41.)

1. The method of oxidizing annealed steel or iron sheets consisting in inclosing the sheets in a sealed protecting box within a sealed annealing box during the annealing process and then separately exposing the heated sheets to an oxidizing agent.

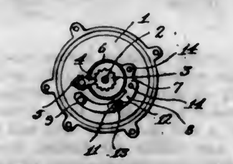
2. The method of oxidizing annealed steel or iron sheets consisting in inclosing the sheets in a sand sealed protecting box within a sand sealed annealing box during the annealing process and then separately exposing the heated sheets to an oxidizing agent.

3. The method of oxidizing annealed steel or iron sheets consisting in inclosing the sheets within a sealed annealing box during the annealing process and then separately exposing the heated sheets to an oxidizing agent.



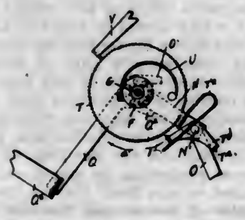
4. The method of oxidizing annealed steel or iron sheets consisting in inclosing a pack of sheets in a sealed protecting box within a sealed annealing box, the walls of the protecting box being in close proximity to the sides and top of the pack during the annealing process and then separately exposing the heated sheets to an oxidizing agent.

1,115,282. FISHING-REEL. FREDERICK W. CASTLE, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a Corporation of Ohio. Filed June 29, 1912. Serial No. 706,705. (Cl. 242—84.6.)



In a fishing reel, a base adapted to be fastened to the reel plate, a drag spring formed integral with said base, and a ring-like click spring also formed integral with said base and bent at an angle to said base.

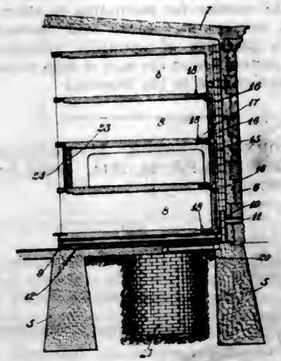
1,115,283. ELECTRIC CLOCK. LESTER CERF, New York, N. Y. Filed Mar. 11, 1914. Serial No. 823,916. (Cl. 58—41.)



1. In an electric clock having an actuating ratchet wheel with its pawl and a solenoid, a shaft on which the ratchet wheel is mounted, contacts for the solenoid, one of which is in the form of a contact arm fulcrumed at one end on the said shaft with the ratchet wheel and provided with spaced lugs projecting from its said end adjacent its fulcrum, and a pawl carrying arm also fulcrumed to move on the said shaft, having connection with the core of the solenoid and engageable adjacent the limits of its movement with the lugs of the said contact arm to move the latter into and out of engagement with the other solenoid contact.

2. In an electric clock having an actuating ratchet wheel and a solenoid, a pawl for moving the ratchet wheel having an angular extension, a core movable in the solenoid and a link having connection with the core of the solenoid and upon which said pawl is pivotally mounted, engageable with the pawl extension during its movement to shift the pawl away from the ratchet wheel, substantially as and for the purpose set forth.

1,115,284. MAUSOLEUM. JONATHAN P. COLLETT, Greenville, Ohio. Filed Jan. 26, 1914. Serial No. 814,276. (Cl. 72—7.)



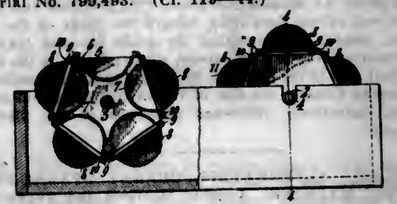
1. In a mausoleum containing a plurality of distinct crypts or catacombs, the combination of a carrying-off pipe, a branch from said pipe to one of the crypts, and a frangible sealing closure within the crypt for one end of said branch pipe projecting into the crypt in position to be broken by the blow of an object inserted into the crypt from the exterior thereof to establish communication between the crypt and the carrying off pipe.

2. In a mausoleum containing a plurality of distinct crypts or catacombs, the combination of a carrying-off pipe, a branch from said pipe leading into each of several of the crypts, and a closure for the ends of said branch pipes consisting of a frangible material projecting into the crypt in position to be broken by contact therewith of the inserted casket whereby communication is established between the crypt and carrying-off pipe.

3. In a mausoleum containing a plurality of distinct crypts or catacombs, the combination of a carrying-off pipe, a disinfecting well into which said pipe discharges, a branch from said pipe leading into each of the several crypts, a closure for the ends of said branch pipes consisting of a hermetically sealed frangible material projecting into the crypt, a pipe leading from said well to carry off surplus gases from said well and a disinfecting chamber into which said last named pipe discharges.

4. In a mausoleum containing a plurality of distinct crypts or catacombs, the combination of a carrying-off pipe, a branch from said pipe leading into each of several of the crypts at the floor and a frangible closure for the end of each of said branch pipes to project above the floor, said closure having its wall of annularly reduced thickness at a line below the plane of the main floor of the crypt.

1,115,285. REVOLVING EGG-SUPPORT FOR INCUBATORS. JAMES HIRAM COPASS and ROBERT BRACKENRIDGE PERKINS, Altus, Okla. Filed Nov. 6, 1913. Serial No. 799,493. (Cl. 119—44.)



1. The herein described egg turner comprising a drum made up of a core, polygonal heads at the ends of said core, and shafts projecting from the ends of the core through the heads; and a series of two-part foraminous cylinders carried by said core.

2. The herein described egg turner comprising a drum made up of a core, polygonal heads at the ends of said core, and shafts projecting from the ends of the core through the heads, one end of said shafts being squared; a series of two-part foraminous cylinders carried by said core; and a drawer having notches in the upper edges of its ends for receiving said shafts therein.

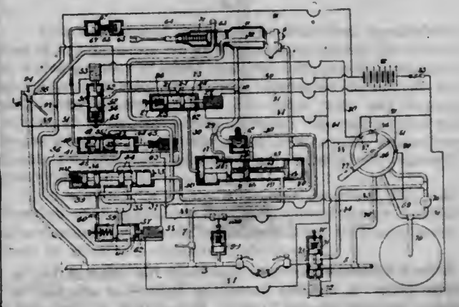
3. The herein described egg turner comprising a drum made up of a core, polygonal heads at the ends of said core, and shafts projecting from the ends of the core through the heads; and a series of two-part foraminous cylinders carried by said core, the inner part of each cylinder being disposed between the heads and having grooved guides along its edges, and the outer part having its ends closed and tongues along its edges slidably mounted within said guides.

4. The herein described egg turner comprising a drum made up of a core, polygonal heads at the ends of said core, and shafts projecting from the ends of the core through the heads; and a series of two-part foraminous cylinders carried by said core, the inner part being disposed between said heads and having its edges turned outward, U-shaped guide strips secured to said edges and standing beyond the edges of the heads, the outer part having its ends closed and its edges bent outward, and sheet-metal tongues soldered to said outturned edges and slidably mounted within said grooved guides, for the purpose set forth.

5. In a revolving egg support for incubators, the combination with a core, heads carried by the extremities thereof, and means for supporting the core for rotation on its axis; of a series of foraminous cylinders whose inner halves are secured between said heads and whose outer halves are movably connected with their inner halves.

[Claims 6 and 7 not printed in the Gazette.]

1,115,286. ELECTROPNEUMATIC AIR-BRAKE SYSTEM. JOHN PATRICK COSTELLOE, Medicine Hat, Alberta, Canada. Filed Apr. 1, 1914. Serial No. 828,750. (Cl. 188—4.)



1. In an electro-pneumatic brake system, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an electrically-controlled system, including means for connecting the auxiliary reservoir directly to the train pipe and controlling the brakes through the triple valve placed in emergency position.

2. In an electro-pneumatic brake system, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an electrically-controlled system comprising, a valve, electro-magnetically controlled, for placing the triple valve into emergency position and connecting the auxiliary reservoir directly to the train pipe; and an application valve, electro-magnetically controlled, between the triple valve and the brake cylinder.

3. In an electro-pneumatic brake system, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder of an electrically-controlled system comprising, a valve, electro-magnetically controlled, for placing the triple valve into emergency position and con-

necting the auxiliary reservoir directly to the train pipe; an application valve, electro-magnetically controlled between the triple valve and the brake cylinder; and means associated with said valves whereby said application valve is brought into operative position when the other valve places the triple valve into emergency position.

4. In an electro-pneumatic brake system, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an electrically-controlled system comprising a valve, electro-magnetically controlled, for placing the triple valve into emergency position and connecting the auxiliary reservoir to the train pipe; and an application valve, electro-magnetically controlled, operating the brake through the triple valve when the same is placed in the emergency position by said first mentioned valve.

5. In an electro-pneumatic brake system, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an electrically-controlled system comprising an application valve, electro-magnetically controlled, intermediate the triple valve and the brake cylinder; a valve, electro-magnetically controlled, for placing the triple valve into emergency position and connecting the auxiliary reservoir to the train pipe; and a release valve associated with the brake cylinder and electro-magnetically controlled.

[Claims 6 to 22 not printed in the Gazette.]

1,115,287. EGG-BEATER. JOSEPH D. COUGHLIN, Dorchester, Mass., assignor, by mesne assignments, to Progressive Manufacturing Company, Boston, Mass., a Corporation. Filed Oct. 6, 1913. Serial No. 793,752. (Cl. 107—39.)

1. In a device of the class described, the combination of a base plate; a member extending therefrom adapted to revolve relative thereto; means for revolving said member; and a conical spiral member secured to said member and provided with a plurality of substantially vertical projections.

2. In a device of the class described, the combination of a perforted base plate; a member extending therefrom adapted to revolve relative thereto; means for revolving said member; and a flat conical spiral member secured to said member and provided with a plurality of substantially vertical projections.

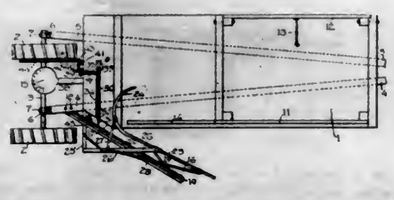
3. In a device of the class described, the combination of a base plate; a member extending therefrom adapted to revolve relative thereto; means for revolving said member; and a perforated flat conical spiral member secured to said member and provided with a plurality of projections extending from the flat face thereof at the edges of said perforations.

4. In a device of the class described, the combination of a base plate; a revoluble member extending therefrom; means on said member for oscillating it about its axis; and a flat spiral member secured to said oscillating member having a plurality of upwardly extending projections.

5. In a device of the class described, the combination of a base plate; a revoluble member extending therefrom; means on said member for oscillating it about its axis; a flat spiral member secured to said oscillating member having a plurality of upwardly extending projections; and a perforation at the base of each projection.

[Claim 6 not printed in the Gazette.]

1,115,288. CORN-HARVESTER. ALFRED DAVIDSON, New Florence, Mo. Filed Feb. 24, 1914. Serial No. 820,582. (Cl. 56—103.)



1. A corn harvester comprising a platform having ground wheels thereon, cutter blades carried by the platform extending outwardly therefrom obliquely to the line of travel of the harvester, said platform having a transvers slot therein opening on one side adjacent the cutter blades, a chain mounted within the slot and hook members carried upon the chain adapted to engage the stalks and remove them from the cutter blades.

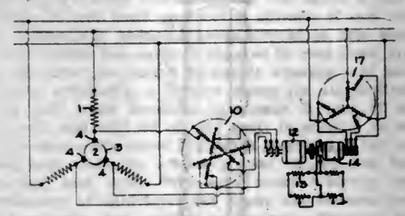
2. A corn harvester comprising a platform having ground wheels thereon, an angularly disposed cutter blade secured to said platform and extending outwardly obliquely to the line of travel of the harvester from one side thereof, said platform having an inclined edge, the inner portion of said cutter blade being disposed adjacent to and having its cutting edge parallel with said inclined edge in spaced relation thereto, and a second cutting blade arranged at right angles to the first blade and disposed at the inner end of the first blade.

3. A corn harvester comprising a wheeled platform, a cutter blade carried by said platform and disposed outwardly therefrom obliquely to the line of travel of the harvester, said platform having a transverse recess therein opening at one end adjacent the cutter blade, a pair of sprocket wheels rotatably journaled within the recess and having their upper terminals disposed approximately flush with the upper surface of the platform, a chain rotatably mounted upon the sprocket wheels, a plurality of hook members fixed on the chain and adapted to be disposed above the upper surface of the platform and means for operatively connecting one of the sprocket wheels with one of the platform wheels.

4. A corn harvester comprising a wheeled platform, a cutter blade secured to said platform and extending outwardly from one edge thereof obliquely to the line of travel of the harvester, a guide bar disposed forwardly of and in superposed relation to the cutter blade, the inner end of said guide bar being disposed above the platform and thereover and curved forwardly toward the front of the platform, means for supporting the guide bar and traveling means operating in a transverse plane relative to the longitudinal axis of the platform for engaging the cut stalks and disposing them to one side of the cutter blade, said means being operatively connected with one of the platform wheels.

1,115,289. ALTERNATING-CURRENT DYNAMO-ELECTRIC MACHINE. LUDWIG DREYFUS and FRANZ HILLEBRAND, Niederschönhausen, Germany, assignors to General Electric Company, a Corporation of New York. Filed Sept. 4, 1912. Serial No. 718,504. (Cl. 172—280.)

1. In a polyphase alternating current dynamo electric machine, an armature provided with a commutator and brushes, a polyphase compensating winding connected to said brushes, a synchronous motor connected in shunt to said brushes, and means for driving said synchronous motor at synchronous speed.



2. In a polyphase alternating current dynamo electric machine, an armature provided with a commutator and brushes, a polyphase compensating winding connected to said brushes, a synchronous motor connected in shunt to said brushes, and a second synchronous motor for driving said first mentioned synchronous motor at synchronous speed.

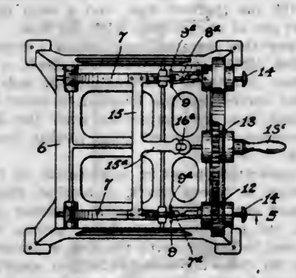
3. In a polyphase alternating current dynamo electric machine, an armature provided with a commutator and brushes, a polyphase compensating winding connected to said brushes, a synchronous motor connected in shunt to said brushes, a second synchronous motor for driving said first mentioned synchronous motor at synchronous speed, and means for relatively changing the phase relation of the voltages of said synchronous motors.

4. In a polyphase alternating current dynamo electric machine, an armature provided with a commutator and brushes, a polyphase compensating winding connected to said brushes, a synchronous motor connected in shunt to said brushes, means for varying the field excitation of said synchronous motor, and means for driving said synchronous motor at synchronous speed.

5. In a polyphase alternating current dynamo electric machine, an armature provided with a commutator and brushes, a polyphase compensating winding connected to said brushes, a synchronous motor connected in shunt to said brushes, means for varying the field excitation of said synchronous motor, and a second synchronous motor for driving said first mentioned synchronous motor at synchronous speed.

[Claim 6 not printed in the Gazette.]

1,115,290. BALING-MACHINE. CHARLES M. EBERLING, Cleveland, Ohio. Filed Dec. 19, 1913. Serial No. 807,668. (Cl. 100—31.)



1. In a bundling machine, in combination, a stand having an upright thereon, an arm pivoted to the stand and adapted to compress a bundle thereon against said upright, said arm having a wire guide at its free end, a twister located beside the upright in position to receive the end of a wire in said guide, when the arm is swung to compress the bundle, and means to operate the twister.

2. In a bundling machine, in combination, a stand adapted to support a bundle, an arm pivoted at one end to the stand, to swing over upon the bundle, a pressure device engageable with the free end of said arm, to compress the bundle thereunder, and means to apply a tie to the bundle so compressed.

3. In a bundling machine, in combination, a stand, adapted to support a bundle, an arm pivoted at one end to the stand, to swing over upon the bundle, a pressure device engageable with the free end of said arm, to compress the bundle thereunder, said device comprising a lever and a rod connected thereto, the rod having a hooked end engageable with the arm, and means to apply a tie to the bundle so compressed.

4. In a bundling machine, in combination, a stand, adapted to support a bundle, an arm pivoted at one end to the stand, to swing over upon the bundle, a pressure device engageable with the free end of said arm, to compress the bundle thereunder, said device comprising a rod movable vertically in the stand and having a projection at its upper end engageable with the arm to depress the same, and a treadle connected to the lower end of the rod, and means to apply a tie to the bundle so compressed.

5. In a bundling machine, in combination, a stand adapted to support a bundle, an arm pivoted at one end to the stand and arranged to swing over upon the bundle, a tie guide at the free end of the arm, a twister having a slot located in position to receive the end of a tie in the guide, when the arm is swung down upon the bundle, and means to operate the twister.

[Claims 6 to 12 not printed in the Gazette.]

1,115,291. CURVING RIB FOR THE SUPPORTING SURFACES OF AEROPLANES. PAUL CARLTON ELLIOTT, Lawrence, Kans. Filed Feb. 3, 1914. Serial No. 816,187. (Cl. 244—31.)

1. In a structure of the character described, the combination of a supporting rib and supporting beams, the former of which consists of upper and lower strips and a plurality of connecting members rigidly connected to one of the strips and loosely engaging the other strip and through certain of which connecting members the said supporting beams are fixed, and connections between the supporting beams for causing their rotation in relatively opposite directions.

2. In a structure of the character described, the combination of a flexing rib, and supporting beams fixed at spaced points to the rib and constrained to rotary movement in relatively opposite directions.

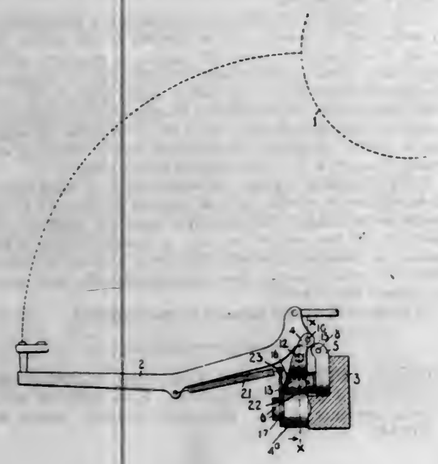
3. In a structure of the character described the combination of a supporting rib, consisting of upper and lower flexing strips, and connections between the said strips to permit flexing movement thereof, and supporting beams non-rotatably extended through certain of said connections and constrained to rotary movement in relatively opposite directions, for the purpose described.

4. In a structure of the character described, the combination of a supporting rib consisting of upper and lower strips, and a plurality of connections between the strips to permit of their flexing movement, certain of said connections having squared apertures, and squared supporting beams extending through the squared apertures of the said connecting members, and constrained to rotary movement in relatively opposite directions.

5. In a structure of the character described, the combination of a supporting rib consisting of upper and lower flexing strips, and a plurality of connections between the strips to permit of their flexing movement, certain of said connections having squared apertures, squared supporting beams extended through the squared apertures and provided with crank arms projecting in relatively opposite

directions, and a connecting rod extending between the ends of the crank arms whereby to constrain the supporting beams to rotary movement in relatively opposite directions, all for the purpose described.

1,115,292. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed July 6, 1912. Serial No. 707,963. (Cl. 197—41.)



1. In a typewriting machine, the combination of a hanger, a type bar pivoted to said hanger, means for supporting said hanger, and a tie-plate attached to the hanger at one place and at another place clamped between the hanger and its support.

2. In a typewriting machine, the combination of a hanger, a type bar pivotally mounted in said hanger, and a stiffening device attached to said hanger near the pivotal end thereof and anchored at the securing end thereof.

3. In a typewriting machine, the combination of a support, a hanger applied edgewise to said support, and a tie-plate or stiffener applied flatwise upon the hanger and secured thereto so as in effect to constitute a part of said hanger even when said hanger is removed from its support, and said tie-plate or stiffener being separately secured to said support.

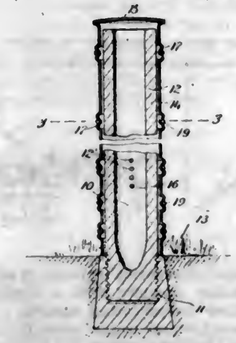
4. In a typewriting machine, the combination of a support, a bifurcated hanger secured edgewise upon said support, a tie-plate secured thereto with its width at one point lying across the edges of said hanger and at another point lying between the arms of said hanger, and a type bar pivotally mounted on said hanger.

5. In a typewriting machine, the combination of a bifurcated hanger, a support to which said hanger is applied edgewise, a restraining plate arranged substantially parallel with the plate of said support and attached to the hanger at one place and anchored against the hanger at another place, and a type bar pivotally mounted in said hanger.

[Claims 6 to 10 not printed in the Gazette.]

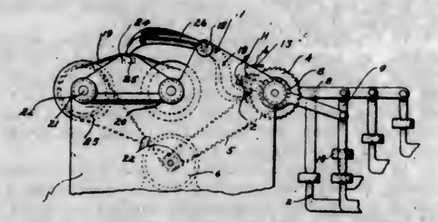
1,115,293. TELESCOPIC FENCE-POST. JOHN M. FELLOWS, Burlington, Ind. Filed Nov. 12, 1913. Serial No. 800,513. (Cl. 189—26.)

In a fence post, the combination of a pedestal comprising a base and an upwardly extending integral shank, a sleeve loosely fitted to said shank and having a closed upper end, the open lower end of the sleeve being adapted



to rest upon the pedestal base, and means to lock said pedestal and sleeve in position.

1,115,294. AUTOMATIC TYPE-WRITER-OPERATING MECHANISM. WILHELM S. FERNE, Pittsfield, Mass. Filed Feb. 27, 1914. Serial No. 821,490. (Cl. 197—20.)



1. In a device of the character described, a horizontal driven shaft, a plurality of toothed disks rigidly secured to said shaft, a plurality of hammers journaled intermediate their ends on the shaft, a pivoted pawl carried by each of said hammers, and means for drawing the pawl into and from locking engagement with the disks.

2. In an operating mechanism of the character described, a horizontal driven shaft, a ratchet disk rigidly secured to said shaft, a hammer journaled intermediate its ends on the shaft, a spring pressed pawl carried by the hammer, means for throwing said pawl into locking engagement with the toothed disk, and a stop for swinging said pawl out of engagement with the disk.

3. In a typewriter operating mechanism, a driven shaft, a toothed disk rigidly secured to said shaft, a key engaging hammer journaled intermediate its ends on said shaft, a pawl carried by the hammer, a lever to swing said pawl into locking engagement with the disk, and means for releasing said pawl from locking engagement with the disk.

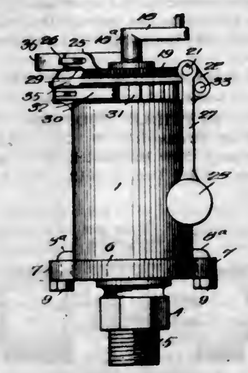
4. In a typewriter operating mechanism of the character described, a driven shaft, a toothed disk rigidly secured to said shaft, a key engaging hammer journaled intermediate its ends to said shaft, means for locking the hammer to revolve with the disk, a pivoted spring pressed lever for throwing said means into operative position, a perforated strip to actuate said lever, and means for rendering said first mentioned means inoperative.

1,115,295. AUTOMOBILE AUTOMATIC LIFTING-JACK. FRANK A. FITZLOFF, Spencer, Iowa. Filed May 14, 1913. Serial No. 767,653. (Cl. 57—15.)

1. In an automobile jack mechanism, the combination with parallel track members, of rear jacks pivoted to said track members and adapted to support the rear axle of an automobile, front jacks pivoted to said track members and adapted to support the front axle of an automobile, links connecting said front jacks with said rear jacks, a pair of standards on said track members in advance of said front jacks, horizontally swinging hooks pivoted on said standards and having cam surfaces engaged by said front jacks when the latter are moved forwardly whereby said hooks are moved outwardly, a tension means for automatically moving said hooks inwardly to engage in rear of said front jacks and hold all of said jacks in position to support the automobile above said track members, a bar connecting said standards, a lever pivoted on said bar, links connecting said lever with said hooks whereby upon manipulation of said lever the hooks are released from said standards, and curved horizontally disposed stop members fixed to said standards at the pivots of said hooks and adapted to embrace and form abutments for the front sides of said front jacks when said hooks are engaging the rear sides of said front jacks whereby said jacks are positively held against lateral displacement.

2. In an automobile jack mechanism, the combination with parallel track members, of rear jacks pivoted to said track members and adapted to support the rear axle of an automobile, front jacks pivoted to said track members and adapted to support the front axle of an automobile, links connecting said front jacks with said rear jacks, said jacks being elevated by the momentum of an automobile driven against the forward jacks, and means for holding said jacks in their elevated positions, said means comprising a pair of standards secured on said track members adjacent said front jacks, rigid stops secured on said standards, and movable latch members pivoted on said standards and adapted to coöperate with said stops for embracing said standards, said latch members being provided upon their front faces with cam surfaces engageable by said standards for moving said members and a coil spring for holding said latch members normally in the path of movement of said forward jacks.

1,115,296. OILER. FRANK W. FLAVIN, Naples, S. D. Filed Apr. 13, 1914. Serial No. 831,470. (Cl. 184—37.)



1. An oiler for connection with the revolving element of a bearing, and comprising a container consisting of a cylindrical body or barrel, a head detachably connected with one end of the body or barrel and having a central nipple externally threaded for engaging an opening in the revolving element, a head closing the other end of the body or barrel, a plunger rod journaled at the center of the last-named head and having the portion within the barrel threaded, a plunger in the barrel having a threaded engagement with the rod, a ratchet wheel keyed to the rod outside of the head, a spring pressed pawl engaging the ratchet wheel, a pawl carrier pivoted to the head intermediate its ends, the pawl being pivoted to one end of the carrier, a cam plate at the other end, a worm wheel journaled on the shaft adjacent to the ratchet wheel, a worm shaft journaled transversely of the head and engaging the worm wheel, a pendulum extending radially from the shaft for rotating the shaft when the container is in motion, a radial arm on the worm wheel for engaging the cam plate at each complete revolution of the worm wheel to swing the pawl carrier to cause the pawl to advance the ratchet wheel, and a crank connected with the plunger rod adjacent to the worm wheel for rotating the rod.

2. An oiler for connection with the revolving element of a bearing, and comprising a container consisting of a cylindrical body or barrel, a head detachably connected with one end of the body or barrel, and having a central nipple externally threaded for engaging an opening in the revolving element, a head closing the other end of the body or barrel, a plunger rod journaled at the center of the last-named head and having the portion within the barrel threaded, a plunger in the barrel having a threaded engagement with the rod, a ratchet wheel keyed to the rod outside of the head, a spring pressed pawl engaging the ratchet wheel, a pawl carrier pivoted to the head intermediate its ends, the pawl being pivoted to one end of the carrier, a cam plate at the other end, a worm wheel journaled on the shaft adjacent to the ratchet wheel, a worm shaft journaled transversely of the head and engaging the worm wheel, a pendulum extending radially from the shaft for rotating the shaft when the container is in motion, and a radial arm on the worm wheel for engaging the cam plate at each complete revolution of the worm wheel to swing the pawl carrier to cause the pawl to advance the ratchet wheel.

3. An oiler for connection with the revolving element of a bearing and comprising a container of approximately cylindrical form and provided at one end with a threaded nipple for engaging an opening in the revolving element to permit the container to supply lubricant to the bearing, a plunger in the casing, a plunger rod journaled longitudinally of the casing and having a threaded engagement with the plunger for moving the plunger when the rod is rotated, a ratchet wheel keyed to the rod outside of the container, a spring pressed pawl engaging the ratchet wheel, a pawl carrier pivoted to the container intermediate its ends and having at one end a cam plate, the other end of the carrier being pivoted to the pawl for moving the ratchet wheel when the carrier is swung, a worm wheel journaled on the rod and provided with a radial arm for engaging the cam plate to swing the carrier once during each complete rotation of the worm wheel, a worm shaft journaled on the container and engaging the worm wheel to rotate the same when the shaft is rotated, and a weighted arm extending radially from the shaft for rotating the shaft when the container is revolved, said worm shaft being mounted to swing into and out of engagement with the worm wheel, and means for fixing the shaft in engaging position.

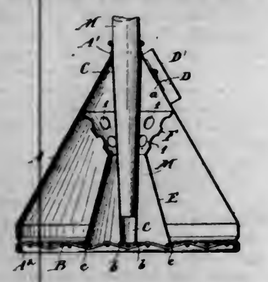
4. An oiler for connection with the revolving element of a bearing and comprising a container of approximately cylindrical form and provided at one end with a threaded nipple for engaging an opening in the revolving element to permit the container to supply lubricant to the bearing, a plunger in the casing, a plunger rod journaled longitudinally of the casing and having a threaded engagement with the plunger for moving the plunger when the rod is rotated, a ratchet wheel keyed to the rod outside of the container, a spring pressed pawl engaging the ratchet wheel, a pawl carrier pivoted to the container intermediate its ends and having at one end a cam plate, the other end of the carrier being pivoted to the pawl for moving the

ratchet wheel when the carrier is swung, a worm wheel journaled on the rod and provided with a radial arm for engaging the cam plate to swing the carrier once during each complete rotation of the worm wheel, a worm shaft journaled on the container and engaging the worm wheel to rotate the same when the shaft is rotated, and a weighted arm extending radially from the shaft for rotating the shaft when the container is revolved.

5. An oiler for connection with the revolving element of a bearing and comprising a container of approximately cylindrical form and provided at one end with a threaded nipple for engaging an opening in the revolving element to permit the container to supply lubricant to the bearing, a plunger in the casing, a plunger rod journaled longitudinally of the casing and having a threaded engagement with the plunger for moving the plunger when the rod is rotated, a ratchet wheel keyed to the rod outside of the container, a spring pressed pawl engaging the ratchet wheel, a pawl carrier pivoted to the container intermediate its ends and having at one end a cam plate, the other end of the carrier being pivoted to the pawl for moving the ratchet wheel when the carrier is swung, and a worm wheel journaled on the rod and provided with a radial arm for engaging the cam plate to swing the carrier once during each complete rotation of the worm wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,115,297. CLOTHES-WASHER. CHARLES F. FOGG, New York, N. Y., assignor to Fogg Specialty Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 22, 1913. Serial No. 762,800. (Cl. 68—5.)

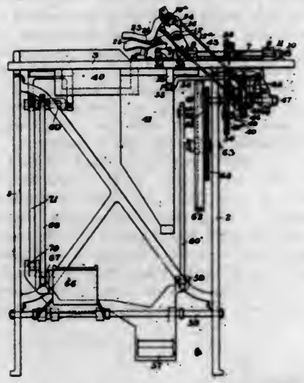


1. A device of the character set forth, comprising a conical shell, a double conical member therein, the upper portion of which is provided with openings, a socket member extending axially through said double conical member and secured at the apex of said conical shell, and an openwork disk secured within the base of said shell and bearing against and secured to the lower ends of said socket member and double conical member.

2. In a device of the character set forth, a conical shell, an openwork disk covering the open mouth of said shell and fastened to the latter, a socket extending axially of said shell and secured to the apex thereof and to said disk, said shell having an aperture near such apex, a tubular brace inclosing said socket and secured to the interior of said shell and to said disk and having openings in its upper portion, and an outwardly opening valve on said shell controlling said aperture.

1,115,298. PENCIL-SHARPENING MACHINE. SAMUEL FORRESTER, Pittsburgh, Pa.; Ernest G. Forrester administrator of said Samuel Forrester, deceased. Filed July 23, 1908. Serial No. 444,919. (Cl. 120—75.)

1. In a pencil sharpener, a rotary cutter, a chuck carrier, a rotary chuck comprising a pulley having a hollow shaft mounted in the chuck carrier, means for preventing endwise movement of said pulley, a hollow gripping device for the pencil rotatably secured to the hollow shaft, wedge members on said gripping device, a reciprocating spring pressed sleeve within the hollow shaft of the pulley and surrounding the gripping device and arranged to engage the wedge members on the gripping device to close said device on the pencil, and mechanism for moving the sleeve against the action of the spring, substantially as described.



2. In a pencil sharpening machine, the combination of a rotary grinding or sharpening wheel, of a pivoted swinging chuck carrier, a chuck journaled obliquely in said carrier, the chuck carrier being arranged to be swung on its pivotal connection, means for actuating the chuck to grip and release the pencil, driving means for rotating the sharpening wheel, means for rotating the chuck, and means for throwing the chuck driving means into and out of operation by the movement of the carrier; substantially as described.

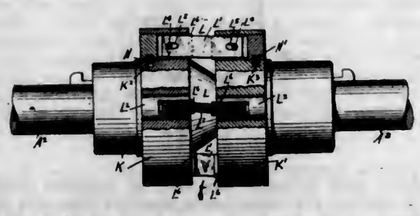
3. In a pencil-sharpening machine, the combination with a pivoted swinging chuck carrier having a pencil-holding chuck therein, of a driving shaft, driving connections between said shaft and the chuck, said connections including a clutch, and means controlled by the movement of said carrier for throwing said clutch into and out of operation, substantially as described.

4. In a pencil-sharpening machine, the combination with a pivoted swinging chuck carrier and a pencil-holding chuck carried thereby, of driving means for rotating the chuck, said means including a clutch having a yielding element, and means controlled by the movement of the carrier for shifting the clutch, substantially as described.

5. In a pencil sharpening machine, a grinding wheel, a pencil-receiving receptacle adjacent to the grinding wheel, a pivoted chuck carrier mounted between the wheel and the receptacle, a pencil-retaining chuck mounted in said carrier, means for swinging the chuck into alinement with the receptacle, and means for opening the chuck to permit the pencil to fall into the receptacle; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,115,299. FLEXIBLE COUPLING. WILLIAM J. FRANCKE, New Brunswick, N. J., assignor to The Francke Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Dec. 4, 1912. Serial No. 734,850. (Cl. 64—13.)



1. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, and flexible connecting members connecting the said coupling members wth each other, each flexible connecting member having a plurality of superimposed flat springs, keepers on the ends of the said superimposed flat springs, the keepers engaging the said coupling members, and wearing plates held in each of the said keepers and overlying the outermost flat springs, the said wearing plates projecting beyond the ends of the said keepers.

2. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, and flexible connecting members connecting the said coupling members with each other, each flexible connecting member having a plurality of superimposed flat springs, keepers on the ends of the said superimposed flat springs, the keepers engaging the said coupling members, and wearing plates held in each of the said keepers and overlying the outermost flat springs, the said wearing plates projecting beyond the ends of the said keepers, the said wearing plates being held against lengthwise movement in the said keepers and the ends of the said flat springs having lengthwise movement in the said keepers.

3. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, and flexible connecting members connecting the said coupling members with each other, each flexible connecting member having a plurality of superimposed flat springs provided with elongated slots at the ends, keepers on the ends of the said flat springs, pins on the said keepers and extending through the said slots in the flat springs, the said keepers engaging the said coupling members, and wearing plates held in each keeper and overlying the outermost flat springs, the said wearing plates projecting beyond the inner ends of the said keepers and the said wearing plates being engaged by the said pins and held by the pins against movement in the keepers.

4. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, flexible connecting members connecting the said coupling members with each other, each flexible connecting member having a plurality of superimposed flat springs, keepers on the ends of the said superimposed flat springs, the keepers engaging the said coupling members, and wearing plates held in each of the said keepers and overlying the outermost flat springs, the said wearing plates projecting beyond the ends of the said keepers, and means on the coupling members and engaging the said keepers of each flexible connecting member to hold the latter against turning.

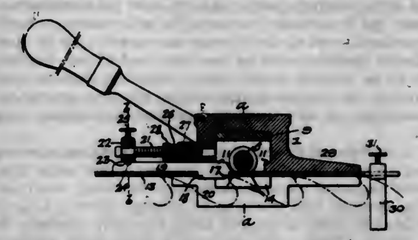
5. In a coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, flexible connecting members extending lengthwise in the direction of the axis of the coupling and connecting the said coupling members with each other, each flexible connecting member having superimposed flat springs and keepers on the ends of the said flat springs, the keepers engaging the said coupling members, split rings for securing the said keepers in the said members, and double ball and socket joints connecting the said coupling members with each other, one of the joints limiting the movement of the coupling members toward each and the other joint limiting the movement of the coupling members from each other and relieving the said split rings of undue strain.

[Claim 6 not printed in the Gazette.]

1,115,300. SWAGE-SHAPER FOR SAW-TEETH. SAMUEL T. FREAS, Trenton, N. J., assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,182. (Cl. 76—49.)

1. The combination of a body portion having a transverse opening therein; two blocks mounted in the opening and prevented from turning therein, said blocks having threaded openings; a screw having a right and a left hand thread, the two threaded portions being spaced apart, the screw extending through the openings in the blocks; a longitudinal guideway in the body portion; and a gage bar mounted in the longitudinal guideway and adapted to engage the saw teeth and extending into the space between the threaded portions of the screw, whereby the screw is retained in the central position.

2. The combination of a body portion having a transverse opening and a longitudinal guideway intersecting the transverse opening; two blocks slidably mounted in the transverse opening; an anvil carried by each block, each block having a threaded opening; a screw having a right and a left hand thread adapted to the openings in the blocks, the threads being spaced apart; flanges on the screw; and a gage bar mounted in the longitudinal guideway and extending between the flanges of the screw forming a gage for the saw and a lock for the screw.

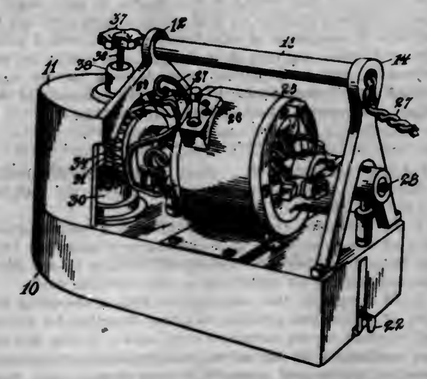


3. The combination of a body portion having a transverse opening; a plate extending through the opening; two blocks also mounted in the opening and arranged to slide on the plate; an anvil carried by each block; a screw having a right hand and a left hand thread extending through the threaded openings in the blocks; and means for turning the screw to move the anvils toward and from each other.

4. The combination of a body portion having a transverse opening therein and a longitudinal guideway intersecting the opening; two guide blocks in the transverse opening; an anvil carried by each guide block; a screw having a right hand and a left hand thread extending through openings in the guide blocks; means for turning the screw; a slotted gage bar mounted in the guideway; a stop extending through the guide plate and forming a rib thereon; a screw; a head attached to the screw, stop and guide bar; and a nut confined to the body portion and arranged to turn on the screw so as to move the gage bar longitudinally.

5. The combination of a body portion having a transverse opening therein and having a longitudinal slot intersecting said transverse opening; two blocks mounted in the transverse opening; an anvil carried by each block; a screw for actuating the blocks; a gage bar mounted in the slot; and an adjustable jaw mounted on the gage bar.

1,115,301. ELECTRICAL MEAT-BLOCK CLEANER. ALRICK W. A. FRIBERG, Jamestown, N. Y. Filed Feb. 20, 1914. Serial No. 819,866. (Cl. 144—119.)



1. A machine of the class described comprising a casing having a handle extending over the same and an opening on its under side, a motor mounted under said handle on said casing, a horizontal shaft in said motor to be rotated

thereby and a bevel gear on said shaft, a vertical shaft revolubly mounted in said casing and a bevel gear on said vertical shaft meshing in said first bevel gear to turn said vertical shaft, said casing having a receptacle with a mouth alongside said opening in the under side, and a device on the lower end of said vertical shaft to be rotated thereby in said opening in the under side of said casing.

2. A machine of the class described comprising a casing having a handle thereto and an opening on its under side, a motor mounted on said casing, a horizontal shaft in said motor to be rotated thereby, a bevel gear on said shaft, a vertical shaft revolubly mounted in said casing, a bevel gear on said vertical shaft meshing in said gear on said horizontal shaft, a brush on the lower end of said vertical shaft to be rotated thereby and extending through said opening in the bottom of said casing, and a receptacle for the cleanings of said brush in said casing alongside said brush.

3. A machine of the class described comprising a casing having a handle thereto and an opening on its under side, a motor mounted on said casing, a horizontal shaft extending through said motor to be rotated thereby, a bevel gear on said shaft, a vertical shaft revolubly mounted in said casing, a bevel gear on said vertical shaft meshing in said gear on said horizontal shaft, a brush on the lower end of said vertical shaft extending through said opening in the bottom of said casing, a receptacle for the cuttings or scrapings of said brush in said casing alongside said brush, and means for the endwise adjustment of said vertical shaft and brush in said casing.

4. A machine of the class described comprising a casing having a handle thereto and an opening on its under side, ball casters on the under side of said casing, a motor mounted on said casing, a horizontal shaft extending through said motor to be rotated thereby, a bevel gear on one end of said shaft, a vertical shaft revolubly mounted in said casing, a bevel gear on said vertical shaft meshing in said bevel gear on said horizontal shaft, a spring tooth brush on the lower end of said vertical shaft to be rotated thereby and extending through said opening in the bottom of said casing, a coil spring on said shaft to give a resilient pressure to said brush, and a receptacle for the cuttings or scrapings of said brush in said casing alongside said brush.

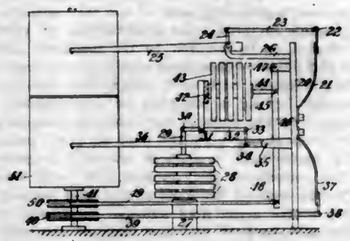
5. A machine of the class described comprising a casing having a handle thereto and an opening on its under side, three ball casters on the under side of said casing, a motor mounted on said casing, a horizontal shaft extending through said motor to be rotated thereby, a bevel gear on one end of said shaft, a vertical shaft revolubly mounted in said casing, a bevel gear slidably mounted on said vertical shaft to mesh in said gear on said horizontal shaft, a spring tooth cutting or scraping brush on the lower end of said vertical shaft extending through said opening in the bottom of said casing, a coil spring on said shaft to give a resilient pressure on said brush, a receptacle for the cuttings or scrapings of said brush in said casing alongside said brush, a spring latch door on said casing for said receptacle, and an adjusting screw bearing on the upper end of said vertical shaft to adjust the pressure of said brush, said vertical shaft having ball bearings.

1,115,302. RECORDER. PAUL FUESS, Berlin-Steglitz, Germany. Filed June 16, 1914. Serial No. 845,345. (Cl. 234—1.)

1. In recorders, the combination with a recording surface, of means actuable by a continuously operative varying force of nature for driving said surface in one direction only during all variations in the operative force.

2. In recorders, the combination with a recording surface, of mechanism actuable in either direction for driving said surface in one direction only, and a device movable in accordance with variations in a continuously operative force of nature and operatively connected to said mechanism to actuate the same during all variations of the operative force.

3. In recorders, the combination with a recording surface, and means for registering on said surface values in accordance with variations in a force of nature, of means actuable by a continuously operative force of nature for driving said surface in one direction only during all variations in the operative force.

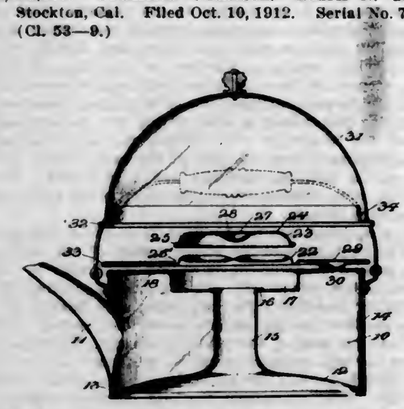


4. In recorders, the combination with a recording surface, and means for registering on said surface values in accordance with variations in a continuously operative varying force of nature, of means actuable by the same force of nature for driving said surface in one direction only during all variations in the operative force.

5. In recorders, the combination with a recording surface, of means actuable by a plurality of continuously operative varying forces of nature for driving said surface in one direction only during all variations of the operative forces.

[Claims 6 to 8 not printed in the Gazette.]

1,115,303. COOKING UTENSIL. RALPH N. GEFFROY, Stockton, Cal. Filed Oct. 10, 1912. Serial No. 725,085. (Cl. 53—9.)

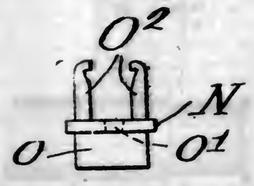


1. A cooking utensil comprising a receptacle, said receptacle being formed with a concave base, a flue supported by said base, a tray supported by said flue, a flange at the upper edge of said receptacle, said flange being more extensive adjacent one side of the receptacle and forming a support for the tray, a plate disposed to rest upon said flange, said plate being formed with a grill, a closure for said grill, and a steam dome, said dome being formed with a flange disposed to embrace the edge of the receptacle and maintain said plate in contact therewith, said dome being formed interiorly with a flange, the condensation being received by the space between said flange and the dome.

2. A cooking utensil comprising a receptacle, said receptacle being formed with a concave base, a flue extending vertically within the receptacle and forming a continuation of the base, a tray formed with an opening through which the flue projects, the receptacle being provided with a flange surrounding said tray and secured thereto, a plate, the edge portion of which rests upon the flange of the receptacle, and the central portion of which constitutes a grill which rests upon the tray, and a dome disposed to embrace the edges of the plate and the receptacle.

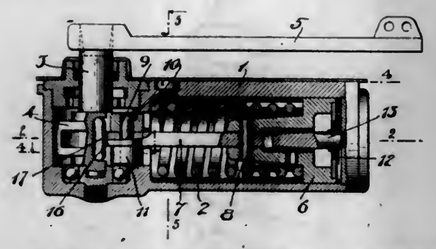
3. A cooking utensil comprising a receptacle formed with a flue, a tray supported by said flue and disposed within the receptacle, the edges of said tray being connected to the edges of the receptacle, a plate arranged upon the upper edge of the receptacle, said plate being formed with a grill disposed above the tray, and a closure for the receptacle disposed to embrace the edge of said plate and hold the same in contact with the receptacle.

1,115,304. BOOT AND SHOE SOLE PROTECTOR. FÉLIX GENECAND, Geneva, Switzerland. Filed Aug. 5, 1913. Serial No. 782,753. (Cl. 36—74.)



A boot and shoe sole protector compriaing a member of rectangular cross section forming at its extremity a tread surface, claws extending from the said member and having beveled end portions and oppositely disposed hooks at their respective extremities so as to be moved from their normal positions when forced into the sole of a boot or shoe to engage the same and secure the protector in position, and a plate positively secured to and extending at right angles from the said member and adapted to contact with the sole of a boot or shoe in order to distribute the strain on the said member of rectangular cross section.

1,115,305. DOOR-CONTROLLING MEANS. JOHN GERARD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 29, 1914. Serial No. 859,147. (Cl. 16—88.)



1. In a door controlling means, a frame, a rotatable spindle, a spring and a radially movable crank pin carried by said spindle and coöperating between said spindle and said spring.

2. In a door controlling mechanism, a frame, a spindle rotatably mounted therein, a closer spring mounted therein, a radially movable crank pin carried by said spindle and held in operative relation thereto by said frame, a notch in said frame to permit said crank pin to move radially to a limited extent outwardly from the axis of the spindle and means for operatively connecting a spring with said crank pin.

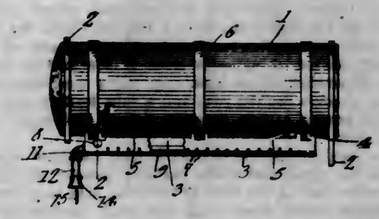
3. In a door controlling means, a frame, a spindle rotatably mounted therein, a closer spring mounted therein, a crank pin carried by said spindle and capable of limited radial movement relatively to said spindle with means for controlling said limited radial movement, means for operatively connecting said spring with said crank pin whereby said spring will impart rotary movement to said spindle through said crank pin.

4. In a door controlling means, a frame, a spindle rotatably mounted therein, a closer spring mounted therein, a crank pin carried by said spindle and capable of limited radial movement relatively to said spindle with means for controlling said limited radial movement, means for operatively connecting said spring with said crank pin whereby said spring will impart rotary movement to said spindle through said crank pin, said means including a checking piston and link.

5. In a door controlling means, a frame, a spindle rotatably mounted therein, a closer spring mounted therein, a crank pin carried by said spindle and capable of limited radial movement relatively to said spindle with means for controlling said limited radial movement, means for operatively connecting said spring with said crank pin whereby said spring will impart rotary movement to said spindle through said crank pin, said means including a checking piston and link with means for positively forcing said crank pin radially in a direction away from the axis of the spindle when said spindle stands in one angular position.

[Claims 6 to 9 not printed in the Gazette.]

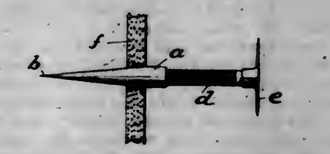
1,115,306. WATER-HEATER. THOMAS GORE, Philadelphia, Pa. Filed Mar. 28, 1914. Serial No. 827,909. (Cl. 126—350.)



1. In a device of the class described, a trough-shaped shield provided along its upper edges with spacing lugs; straps having their ends secured to the spacing lugs; a burner pipe resting on the bottom of the trough-shaped shield and extending longitudinally thereof; a mixing pipe communicating with one end of the burner pipe and provided with an air inlet; and a source of fuel supply discharging into the air inlet; the shield being provided with ventilating openings in one of its side walls, and being equipped in one of its side walls with a lighting hole, the burner pipe being provided with a plurality of combustion orifices disposed longitudinally of the burner pipe.

2. In a device of the class described, a trough shaped shield provided along its longitudinal edges with boiler engaging lugs serving to space the shield from the boiler wherewith the shield is assembled and to define flame outlets, the walls of the shield being inclined to direct the flame toward the outlets; a burner pipe located within the shield; and boiler engaging means carried by the shield.

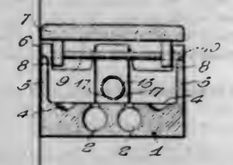
1,115,307. COMBINED POINT AND BOLT FOR BELTS. JOHN A. GUFFEE, Fort Worth, Tex., assignor to Main Belting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1914. Serial No. 827,290. (Cl. 85—1.)



A combined point and bolt for use in connection with belts composed of a bolt having a threaded shank and adapted to extend through a hole in the belt and an enlarged head adapted to engage the face of the belt, and a point whose body throughout the greater part of its length

is solid and tapered to a point while the remainder is non-tapered and provided with a screw threaded socket whose internal diameter is uniform and corresponds to the diameter of the solid conical portion of the piece at a part thereof substantially nearer its non-tapered portion than its point, whereby after the bolt is removably connected to the point and both passed through the belt the bolt will remain firmly confined in the hole in the belt.

1,115,308. GAS-HEATING SAD-IRON. CHARLES GUNN, Jr., Mount Royal, N. J. Filed Mar. 25, 1913. Serial No. 756,657. (Cl. 158—23.1.)



1. An iron comprising a base having passages extending through the same between the upper and lower surfaces thereof, said base having slots which extend down from the upper surface of the base into the passages, said passages extending from end to end of the base and located at opposite sides of the median longitudinal dimension of the base, edge walls ascending from the base, a cover for the base and a tube leading into the base and having orifices directed toward the upper ends of said slots.

2. An iron comprising a base having passages located between the upper and lower surfaces thereof, and opening at their ends at the ends of the base, said base having slots which extend down from the upper surface of the base into the passages, the passages being of greater transverse sectional area than the slots, edge walls rising from the base, a tube located above the base and having orifices disposed toward the upper edges of the slots and a cover for the base.

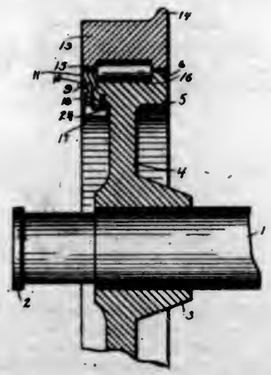
3. An iron comprising a base having passages located between its upper and lower surfaces and having slots leading from the upper surface into the passages, walls rising from the edges of the base, said base having between the slots and the walls, pockets, a tube located above the base and having orifices directed toward the slots, and a cover for the base.

4. An iron comprising a base having passages located between its upper and lower surfaces, and open at their ends at the ends of the base, said passages being located at the opposite sides of the median longitudinal dimension of the base, walls rising from the base, said base having pockets located between the walls and the slots, a tube located over the median longitudinal dimension of the base and spaced from the base, said tube having at its lower portion orifices directed toward the upper edges of the slots, and a cover for the base.

1,115,309. FRICTIONLESS CAR-WHEEL. BERTA B. GUNNOE, Beckley, W. Va. Filed Mar. 4, 1914. Serial No. 822,449. (Cl. 105—164.)

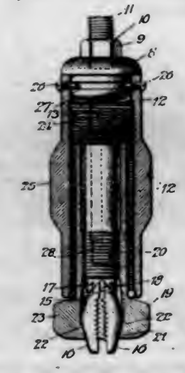
1. In a device of the character described, the combination with a car wheel comprising a hub, a web, a rim, and a flange formed on said rim, said rim also having a recess in the side opposite the flange, of a tread portion said tread portion being provided with an annular groove, a plurality of rollers within the groove and adapted to engage the rim and roll thereon, means to hold the rollers in place, said means being seated in the annular recess in the rim, and means to lock the retaining means and hold the same to prevent it from becoming displaced.

2. The combination with a car wheel comprising a hub, web, a rim, and a flange formed on said rim, said flange extending outwardly therefrom and surrounding the entire rim, the rim also being provided with a threaded recess on the side opposite the flange, of a tread portion, said tread portion being provided with a centrally located annular groove on its inner side, the flange formed on the tread portion, said flange being adapted to engage the railroad rail, a series of rollers adapted to seat in the groove in the tread portion, and to roll on the surface of the rim, a roller retaining element threaded on the



screw threaded portions formed by the recesses in the rim, a locking member extending through the rim and into the roller retaining element, said locking member being adapted to hold the roller retaining element against rotation, and means to prevent the locking member from becoming unlocked.

1,115,310. CHUCK. GUSTAV HALVORSEN-PANDE, Chicago, Ill., assignor of one-half to Francis J. Cushing, Chicago, Ill. Filed Feb. 24, 1914. Serial No. 820,658. (Cl. 77—32.)



1. A drill chuck comprising a jaw-carrier, a driving member adapted to be attached to the spindle of a drill, said driving member and jaw-carrier adapted and arranged for rotation together and for axial movement relative to each other, and a sleeve journaled with respect to one of said elements and having a threaded engagement with the other, the thread being so pitched that by holding the sleeve stationary the jaw-carrier will be fed downward.

2. In a chuck, a driving member, a jaw-carrier, connections between the same whereby they rotate together but are movable axially with relation to each other, the jaw-carrying member having a threaded portion and a member provided with a thread engaging the threaded portion of the jaw-carrier and adapted to revolve with the jaw-carrier or to be held stationary while the latter revolves.

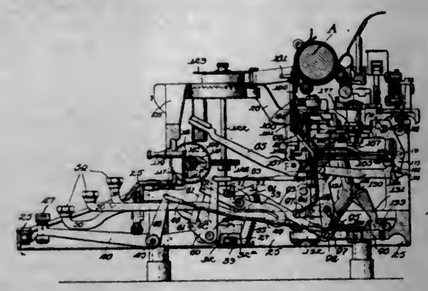
3. In a chuck, a driving member, a jaw-carrier having telescopic connections therewith, said jaw-carrying member having also a threaded portion, an internally threaded member engaging the threaded portion of the jaw-carrier and adapted to revolve therewith or to be held stationary while the jaw-carrier revolves.

4. In a chuck, a driving member having a shank, a jaw-carrier having a bore to receive the shank and adapted to be revolved by the latter but to have axial movement relative thereto, said jaw-carrier having also an exteriorly threaded portion, a member having an internally threaded portion engaging the exteriorly threaded portion of the jaw-carrying member and adapted to revolve with the latter or to be revolved relatively thereto.

5. In a chuck, a driving member having a squared shank, a jaw-carrying member having an axial cavity squared in cross-section to receive said shank and an exteriorly threaded portion, an interiorly threaded sleeve engaging the threaded portion of the jaw-carrier, and connections between said sleeve and the driving member whereby rotary movement between the parts is permitted but axial movement prevented.

[Claims 6 to 15 not printed in the Gazette.]

1,115,311. TYPE-WRITER. DE WITT C. HARRIS, Fond du Lac, Wis., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Filed Apr. 15, 1912. Serial No. 690,756. (Cl. 197—186.)



1. In a typewriter, in combination, a main framework, and a unitary structure constituting the lower action of the typewriter, said structure comprising a frame consisting of a pair of end plates, a shaft mounted in said end plates, a forward and a rear guide comb secured to said end plates at opposite ends thereof, a series of key levers pivoted between their ends on said shaft, said key levers being guided at two points by said guide combs, and mean for mounting the unit frame in said main framework.

2. In a typewriter, in combination, a main framework, and a structure constituting the lower action of the typewriter and comprising a frame having end plates, a shaft mounted in said end plates, a forward and a rear guide comb having their end portions fixed to said end plates, the rear one of said guide combs being positioned adjacent to said shaft and the forward guide comb being positioned at some distance from said shaft, and a series of key levers pivoted on said shaft and guided in two places by said guide combs.

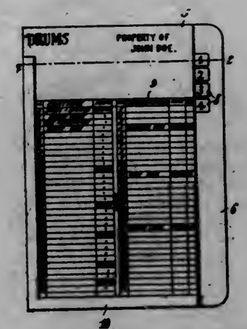
3. In a typewriter, in combination, a main framework, a lower action unit removably mounted therein and comprising a frame, a series of key levers, a guide comb for said key levers, a series of bell-crank levers connected to said key levers and adapted to be connected to a set of type bars, and a guide comb for said bell-crank levers, said key levers, bell-crank levers, and guide combs being mounted in the unit frame; and means for securing said unit frame in the main framework.

4. In a typewriter, in combination, a main framework having inwardly extending lugs, a lower action unit adapted to be inserted through the lower end of said framework, said unit comprising a frame having projections arranged to stop against said lugs, means for securing said projections and said lugs together, and a series of key levers and a guiding comb therefor mounted in said frame.

5. In a typewriter, in combination, a main framework; a unitary structure removably mounted in said framework and comprising a frame including a pair of end plates and a forward and rear guide comb extending between and secured to said end plates, a shaft mounted in said end plates, a series of key levers pivoted on said shaft and guided by said guide combs, a second shaft mounted in said end plates, a series of bell-crank levers pivoted on the second shaft and connected to said key levers, an arcuate guide comb fixed in said frame and arranged to guide said bell-crank levers; and means for securing said frame in the main framework.

[Claims 6 to 16 not printed in the Gazette.]

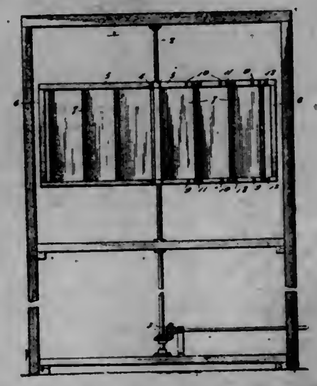
1,115,312. SHEET-MUSIC CONTAINER. EDWARD J. HAWKINS, Solvay, N. Y. Filed Nov. 29, 1913. Serial No. 803,769. (Cl. 11—7.)



1. A container comprising an envelop having indicia on one face thereof indicative of the contents therein, and a flange formed at one longer edge and one short edge of the envelop for holding a sheet of music over one face thereof.

2. A container comprising an envelop having indicia on one face thereof indicative of the contents therein, a flange formed at one longer edge and one short edge of the envelop for holding a sheet of music over one face thereof, and tabs adapted to be mounted on the respective inclosures within the envelop and having indicia corresponding to certain indicia on one face of the said envelop.

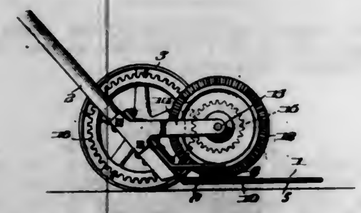
1,115,313. WINDMILL. THOMAS W. HENNING, San Angelo, Tex. Filed June 28, 1913. Serial No. 776,280. (Cl. 170—26.)



In a windmill having a rotor provided with parallel arms having at their side edges sockets, vanes pivoted be-

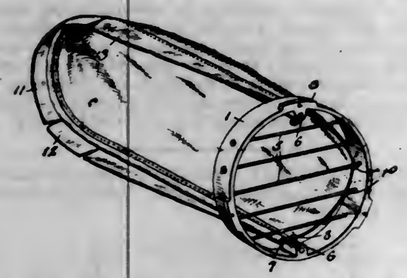
tween the arms and adapted to overlap each other at their edge portions, plates attached to the arms adjacent the sockets and having end portions standing out at right angles to the arms and adapted to receive between them the free edge portions of the vanes, and pins carried by the vanes and adapted to engage the outstanding end portions of the plates when the vanes are in one position and adapted to enter the sockets when the vanes are in another position, whereby the swinging movement of the vanes is limited approximately to one quarter of a circle.

1,115,314. GRASS-CUTTER. ALBERT HOUGEN, Manitowoc, Wis. Filed Jan. 18, 1913. Serial No. 742,825. (Cl. 56—19.)



A grass trimmer adapted to be moved over the surface of the ground and including a blade member providing a shearing edge and a guard adjacent thereto, a pinion formed with a diametric channel in its lower surface, shaft pin on which the pinion is rotatably mounted, said pin extending through the blade member adjacent the shearing edge, a blade mounted in the channel of the pinion and secured to the shaft pin, a ground wheel, and a geared connection between said pinion and ground wheel to drive the pinion in the movement of the trimmer over the surface being operated upon.

1,115,315. WIND-SCOOP. HAYDEN A. HUNT, McPherson, Kans. Filed Jan. 27, 1914. Serial No. 814,776. (Cl. 98—22.)



1. In a wind scoop, a ring, transverse bars upon the rail, lugs upon the ring, a bow-shaped member having its arms connected with the bow-shaped member and eyes upon the flexible scoop which engage the transverse bar of the ring.

2. In a wind scoop, a frame, a U-shaped member centrally secured to the frame and projecting outwardly therefrom, a flexible wind scoop having its longitudinal edges connected with the U-shaped member, and the said scoop being also slidably connected with the frame.

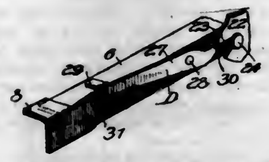
3. In a wind scoop, a U-shaped non-flexible member, a scoop of textile material having its edges loosely secured to the said U-shaped member, whereby the same may be passed through the U-shaped member and arranged to either side of the said U-shaped member.

4. In a wind scoop, a substantially U-shaped supporting member and a textile scoop having its edges secured to the said U-shaped member to provide a hinged connection between the said member and the said scoop.

5. In a wind scoop, a substantially U-shaped supporting member, a flexible scoop having its longitudinal edges hingedly connected with the U-shaped member, the said scoop at its connection with the U-shaped member being formed with a directing lip and said loop being made up of a plurality of sections.

[Claim 6 not printed in the Gazette.]

1,115,316. COMBINATION FOLDING BED. SOLOMON KARPEN, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed Jan. 27, 1914. Serial No. 814,622. (Cl. 5—55.)



1. The combination with a supporting frame, of a folding-bed adapted to be housed in folded condition in said frame, said bed comprising a plurality of main-sections and a plurality of spacing-sections connecting said main-sections, means for locking the outer main-sections in folded relation, and an anti-folding device adapted to be moved to the inoperative position in the operation of bringing said locking means into locking engagement.

2. In a structure of the character set forth, the combination with supporting means, of a folding-bed comprising an inner main-section, an intermediate main-section, an outer main-section, and spacing sections connecting the intermediate section to the other sections, means for locking the outer main-section in folded relation upon the intermediate main-section, and an anti-folding device adapted to be thrown to the inoperative position in the operation of bringing said locking means into locking position.

3. In a structure of the character set forth, the combination with supporting means, of a folding-bed structure comprising a plurality of foldably-related bed-sections, locking means for securing one section in folded relation to another section, and an anti-folding device operative to prevent complete folding of the structure and adapted to be thrown to the inoperative position in the operation of bringing said locking means into locking engagement.

4. In a structure of the character set forth, the combination with supporting means, of a folding-bed structure comprising a head-section, an intermediate section, a foot-section, and spacing sections connecting the same, of locking means adapted to secure the foot-section in folded relation on the intermediate section, and an anti-folding device mounted on the intermediate section and serving to prevent premature completion of the folding operation, said anti-folding device adapted to be thrown to the inoperative position in the operation of bringing said locking means into locking engagement.

5. In a structure of the character set forth, the combination with supporting means, of a folding-bed structure comprising a head-section, an intermediate-section, a foot-section, and spacing sections connecting same, of locking means adapted to secure the foot-section in folded relation to the intermediate-section, and an anti-folding lever mounted on the intermediate-section and adapted to prevent premature completion of the folding operation, said lever adapted to be thrown to the inoperative position in the operation of bringing said locking means into locking engagement.

[Claims 6 to 11 not printed in the Gazette.]

1,115,317. PREPARING ELECTRODES FOR ELECTRIC WELDING OR SOLDERING. OSCAR KJELLBERG, Gottenborg, Sweden. Filed Jan. 29, 1912. Serial No. 674,167. (Cl. 219—12.)

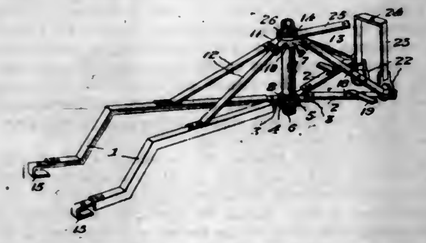
1. The herein described method of manufacturing electrodes for welding or soldering metals electrically, which consists in mixing together in a finely powdered state carbonates, carbon, oxids and silicates with a liquor and a carbonic acid developing material to a thin paste, dipping therein an iron rod until the same is coated with the paste, and leaving the coated rod to dry while standing in an inclined position thereby developing carbonic acid from the rod cover.

2. The herein described method of manufacturing electrodes for welding or soldering metals, which consists in mixing together in a finely powdered state $CaCO_3$, K_2CO_3, ZrO_2, MgO, C, $KNaSiO_3$, B_2O_3 and $HAl\,SiO_4$ with a liquor to a paste, dipping therein an iron rod until it is coated with the paste and leaving the coated rod to dry.

3. The herein described method of manufacturing electrodes for welding or soldering metals electrically, which consists in mixing together in a finely powdered state carbonates, carbon, oxids and silicates with a liquor and a dual combination of silicates with earth metals substantially as set forth to a paste, dipping therein an iron rod until it is coated with the paste, and bringing about drying of the coated rod.

4. The herein described method of manufacturing electrodes for welding or soldering metals electrically, which consists in mixing together in a finely powdered state carbonates, carbon, oxids and silicates with a liquor, a carbonic acid developing material and substances which form ingredients of the metal to be treated, to a paste, dipping therein an iron rod until the same is coated with the paste, and bringing about drying of the coated rod.

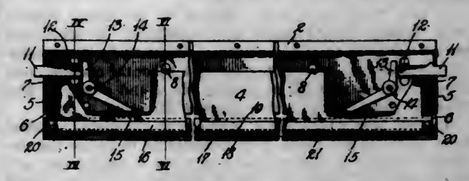
1,115,318. SELF-TURNING HARROW-CART. CARL KNUTSON, Hudson, S. D. Filed Oct. 6, 1913. Serial No. 793,645. (Cl. 55—91.)



A self-turning harrow cart having a frame composed of front and rear sections, each having converging lower members arranged in substantially the same plane, an upright pivot-connector to which the members of both sections converge from opposite sides of said pivot-connector and by which they are pivotally connected together, sets of upper braces respectively connected at their lower ends to the members of the front and rear sections and converging upwardly and connected to the pivot-connector above the point of connection of the lower members of the front and rear sections to said pivot-connector, said sections, braces, and pivot-connector constituting a truss of which the pivot-connector is the strut, an arch whose legs are connected to the rear ends of divergent members of the rear sections, a brace connecting the crown of the arch to the pivot-connector, a seat supported by the brace, and a wheel for supporting the arch.

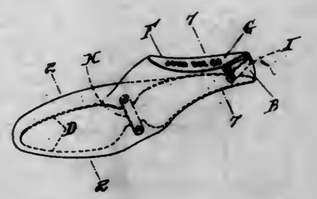
1,115,319. WEATHER-STRIP. STANLEY LERCH, Detroit, Mich. Filed Nov. 4, 1913. Serial No. 799,096. (Cl. 20—68.)

The combination with a door casing, jamb and door, of a weather strip consisting of a sheet metal tongue having the upper edge thereof cut away, a hollow casing secured against the face of the door and housing said strip, a ledge projecting from the lower margin of the casing, means in the ends of said casing for movably supporting the tongue, striker members on the door jamb, latches projecting from the casing to contact with the striker members when the door is closed, levers in the cut away upper edge of the tongue operated by the latches to depress the tongue, and a shoe pivotally connected to the



tongue with the end portions thereof loosely held for downward projection by said levers.

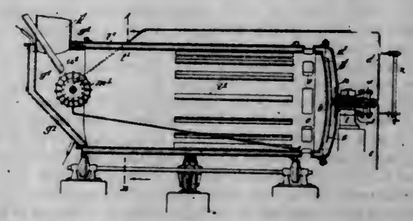
1,115,320. SHOE-FORM. ALFRED G. LEGGE, Brockton, Mass. Filed Oct. 9, 1912. Serial No. 724,706. (Cl. 12—128.)



1. A hollow shoe form made from a single piece of sheet material suitably shaped so as to comprise a forward toe or body portion with inturned lower edges, and a rear or heel portion with top inturned abutting parts stitched together on a central line and forming a completely closed top at the ankle part, the depending walls of the said heel portion extending downward from said closed top to the bulge of the heel only, combined with an outer finishing strip covering the joint between the said abutting parts of said closed top.

2. A hollow shoe form made from a single piece of sheet material suitably shaped so as to comprise a forward toe or body portion with inturned lower edges, and a rear or heel portion with top inturned abutting parts stitched together on a central line and forming a completely closed top at the angle part, the depending walls of the said heel portion extending downward from said closed top to the bulge of the heel only, combined with a brace or reinforce connecting said inturned lower edges at the forward or body part of the form, the second brace or reinforce at the extreme heel portion of the form, and a finishing strip covering the joint between the said abutting parts of said closed top.

1,115,321. METHOD OF PRODUCING CEMENT FROM MOLTEN BLAST-FURNACE SLAG. WILHELM LESSING, Menzenberg, near Honnef, Germany, assignor to Mittelrheinische Cement-Industrie G. M. B. H., Cologne, Germany, a Firm. Filed Aug. 9, 1913. Serial No. 783,922. (Cl. 83—91.)



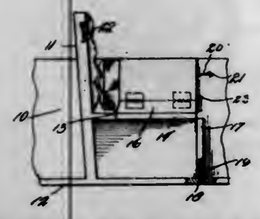
1. The herein described method of producing cement from molten blast-furnace slag consisting in projecting the molten slag in a disintegrated condition by a mechanical

agitator into an approximately horizontal conduit, and simultaneously causing a current of air to flow through the conduit in the opposite direction.

2. The herein described method of producing cement from molten blast-furnace slag consisting in projecting the molten slag in a disintegrated condition by a mechanical agitator into an approximately horizontal conduit, and simultaneously causing a current of air and steam to flow through the conduit in the opposite direction.

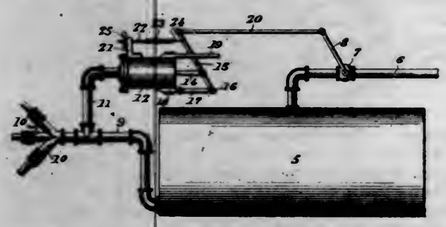
3. The herein described method of producing cement from molten blast-furnace slag consisting in projecting the molten slag in a disintegrated state by a mechanical agitator into an approximately horizontal rotatory cooled tube, and in simultaneously forcing a current of air through the tube in the opposite direction.

1,115,322. VEHICLE-SEAT. JOHN REUBEN LOSEE, Northwood, Iowa. Filed Mar. 5, 1914. Serial No. 822,717. (Cl. 21—43.)



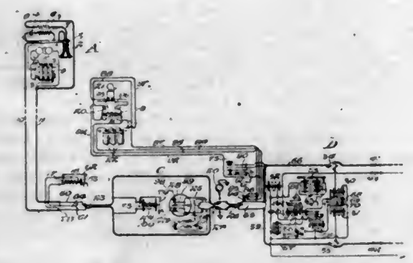
The combination with the sides and back of an automobile body, of a seat member movably connected to the back, a depending supporting member movably connected to the forward edge of the seat member, side members movably connected to the end portions of the seat member, and movable into position against the said automobile sides, detachably connected means carried by the side members and the automobile sides for holding the side members in vertical position against the automobile sides, means for holding the depending support in vertical position, and means for holding the seat member in folded position against the said back.

1,115,323. FLUID-PRESSURE REGULATOR. LEWIS S. MANSPERGER, Troy, Kans. Filed Dec. 2, 1913. Serial No. 804,294. (Cl. 50—38.)



The combination with a fluid pressure distributing pipe, and a fluid pressure drum communicating therewith, of a delivery pipe leading from the drum, a controller comprising a cylinder communicating with the delivery pipe and arranged in alinement with the distributing pipe, a valve located in the distributing pipe, an arm for operating the said valve, a piston reciprocatingly movable within the cylinder, a bracket fixed to the under side of the cylinder, a link pivotally connected to the bracket, a lever pivoted to the link and also pivoted to the stem of the piston, a connecting rod pivoted to the said lever and arm, a bearing mounted at the upper side of the cylinder, an adjusting screw mounted in the said bearing, a coiled retractile spring connected with the said screw and said lever, and means on the cylinder for guiding the lever in its movements and preventing lateral displacement thereof.

1,115,324. TELEPHONE RELEASE-INSURING MEANS. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1908. Serial No. 442,212. (Cl. 179—27.)



1. In a telephone system, an automatic switch for extending connection in the direction of the called subscriber, means including a plug and jack by which a manual switchboard operator extends connection to said switch to control the same, a signal at said switchboard, automatic means for operating said signal if the plug is withdrawn from the jack and the automatic switch is not released, and means for releasing the switch in response to the said signal.

2. In a telephone system, an automatic trunking switch for extending connection in the direction of the called subscriber, means including a plug and jack for extending connection to said switch to control the same, means controlled by the manual switchboard operator for extending connection from said switch to the called subscriber's line, means by which the operator releases the said automatic switch and the means for extending connection therefrom, a signal at said switchboard, and automatic means for operating said signal if the plug is withdrawn from the jack without releasing.

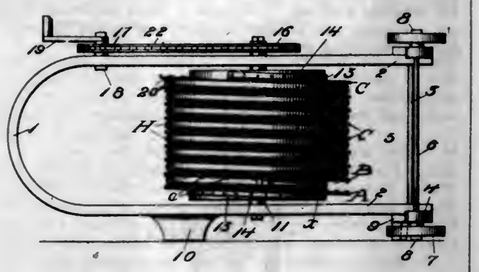
3. In a telephone system, the combination of an automatic switch, a plug and jack by which a manual switchboard operator extends connection to said switch to control the same, a relay, means for closing an energizing circuit through said relay by the insertion of the plug in the jack, an operator's key-switch for releasing said automatic switch, a locking circuit for said relay controlled and opened by the actuation of said key-switch, a signal having a circuit closed at one point by the energizing of said relay and closed at another point therein by the withdrawal of the plug from the jack, whereby the said signal is operated if the operator withdraws the plug from the jack without releasing the automatic switch.

4. In a telephone system having manual switchboards, the combination of an automatic switch, a trunk-line leading thereto, means for connecting a calling subscriber with said trunk-line, means by which a manual switchboard operator controls said automatic switch to extend the connection in the direction of the called subscriber, means by which the said operator may release the said automatic switch, a signal at said switchboard, and automatic means for operating said signal whenever the connection to the automatic switch is taken down or broken without releasing said switch.

5. In a telephone system, a calling and a called subscriber's line, means for establishing a connection between said lines, said means including a manual switchboard provided with an alarm signal, an automatic switch, means at said manual switchboard for controlling said automatic switch to extend connection in the direction of the called subscriber, means at said manual switchboard for releasing said switch after the subscribers are through talking, and automatic means at said manual switchboard for operating said signal whenever the operator disconnects the two subscribers without releasing said switch.

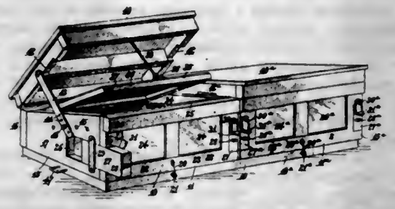
[Claims 6 to 11 not printed in the Gazette.]

1,115,325. DRAINING HOSE-REEL. CLARENCE M. MCCALL, Marion, N. C. Filed Nov. 2, 1911. Serial No. 658,166. (Cl. 242—87.)



The combination in a device of the character set forth, of a U-shaped bent wood frame, a cross bar within the ends of said frame, two runners secured transversely to said bar ends, a shaft secured near its ends to said runners, wheels upon said shaft, nuts upon said shaft to secure said wheels, a hose reel secured between said frame, a shoe mounted upon the side of one of said runners, and a shoe secured to said frame upon the side having said runner shoe, said two shoes and the nut upon the end of the shaft being adapted to support the hose reel so that its axis is in a vertical position, as and for the purpose set forth.

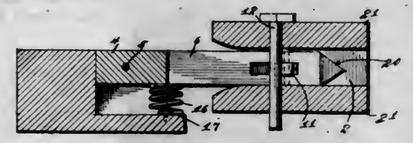
1,115,326. BROODER. PETER MCCOLLUM, Fayette, Mo. Filed Sept. 19, 1911. Serial No. 650,077. (Cl. 119—21.)



1. In a brooder, the combination with a base, of a frame carried by the base, strip-like brackets on the inner side of the walls of the frame and spaced from the upper edges thereof, a screen roof loosely supported on the brackets and adapted to normally lie flush with the upper edges of the frame, said screen roof being removable from the said brackets and not hinged thereto or to the said frame but being adapted to swing on its rear edge when the front edge of the screen roof is raised or lowered relatively to the said brackets, a main roof mounted to swing on the frame and form a cover therefor, means carried by the main roof and adapted for adjustable connection with the frame for supporting the main roof in various open positions relatively to the frame, and means for connecting the main roof and screen roof to support the screen roof in raised position relative to the adjusted position of the main roof.

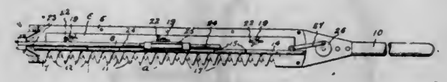
2. In a brooder, the combination with a base, of a frame carried thereby, a screen roof loosely supported on the frame, but not having hinged connection therewith, a main roof mounted to swing on the frame, an adjusting bar mounted to swing on the main roof on an exterior face thereof and provided with a series of apertures, a pin adapted to pass transversely through one of the apertures of the adjusting bar and extend into the frame to adjustably support the main roof in various open positions relatively to the frame, and a member swingingly connecting the main roof with the screen roof for securing the main roof in an open position relative to the adjusted position of the main roof.

1,115,327. CAR-COUPLING. RICHARD J. MILLER, Ottumwa, Iowa. Filed Sept. 25, 1913. Serial No. 791,816. (Cl. 213—35.)



A car coupling comprising a primary and auxiliary section, a locking member pivotally mounted within said primary section and capable of having a vertical swinging movement whereby said locking member may be thrown out of engagement with foreign objects when it is not desired that said member be used, said primary section provided with a socket at one end, a coil spring carried within said socket and engaging the under face of said locking member for normally holding the same in a yieldable horizontal position to facilitate the compression of said locking member downwardly while the coupling is being coupled, a locking pin carried by said auxiliary member, and means carried by said locking member for engaging said locking pin and holding said primary and auxiliary sections together.

1,115,328. HEDGE-TRIMMER. ROBERT C. MURRAN, Brooklyn, N. Y. Filed Feb. 17, 1914. Serial No. 819,248. (Cl. 56—16.)



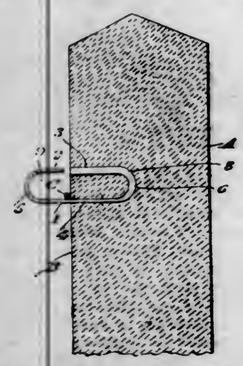
1. A bush trimmer comprising a flexible base provided with a handle, and also provided with laterally extending teeth at one edge thereof, a flexible guard secured on one side of the base and in spaced relation therewith and provided with laterally extending teeth conforming in shape and position to the teeth of the base, a flexible cutter slidingly secured to the base and provided with cutting teeth adapted to reciprocatingly operate between the guard and the base, means carried by the base for reciprocating the cutter, and means carried by the base for flexing the base, the guard and the cutter substantially as described.

2. A bush trimmer comprising a flexible base provided with a handle and also provided at one edge with laterally disposed teeth, a flexible guard plate secured to the surface of the base in spaced relation therewith and provided with laterally disposed teeth conforming in shape and position with the teeth of the base, a fillet securing the ends of the teeth of the base and the guard and providing pockets between the guard and base, a flexible cutter slidingly and detachably secured to the base and provided with cutting teeth fitted in the said pockets and adapted to reciprocate therein, means carried by the base for reciprocating the said cutter, and means for flexing the base, the guard and the cutter, said means consisting of an upright located at each end of the base, screw-threaded rods pivotally carried by the uprights, and a sleeve connecting the rods and adapted to adjust the rods in relation to each other substantially as described.

1,115,329. WIRE-FASTENER. ANTON NELSON, Sauk Center, Minn. Filed Nov. 19, 1913. Serial No. 801,956. (Cl. 256—50.)

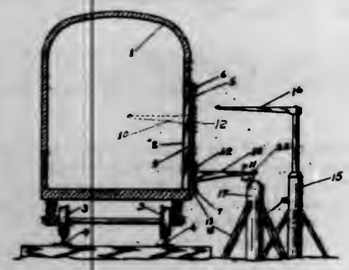
A wire fastener for cement posts comprising an integral member bent in substantially oval form having a socket portion, said member being embedded in the post for the greater portion of its length and disposing the open end of the socket portion thereof flush with one of the faces of the post, the said fastener having a confining portion extending longitudinally from the socket portion and pro-

jecting beyond the adjacent face of the post, and a terminal formed on the confining portion and disposed in



longitudinal alinement with said socket and adapted to be driven thereinto.

1,115,330. MAIL-CATCHER. DILLARD M. NEWMAN, Galena, Ohio, assignor of one-half to Ancyl Beardslee, Columbus, Ohio. Filed Feb. 12, 1914. Serial No. 818,180. (Cl. 258—23.)



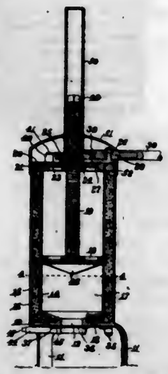
1. A mail catcher for railroads comprising a vertical rod carried by a car at its door opening, a key on said rod at some distance above the floor level of the car, a bracket slidable and rotatable on said rod and having a key-way therein to fit said key, a cam face on the lower end of said bracket, and a bearing for the lower end of said vertical rod and formed to form a seat to coincide with said cam face when said bracket is swung to its outermost position.

2. A mail catcher for railroads comprising a vertical rod carried by a car at its door opening, brackets slidable and rotatable on said rod and having a key-way therein, a cam face on the lower end of said bracket, a bearing for the lower end of said vertical rod and formed to form a seat to coincide with said cam face when said bracket is swung to its lowermost and outermost position, and a key on said vertical rod terminating at a point to clear the upper face of said bracket when it is in its lowermost position and having its cam face disposed at ninety degrees to the complemental seat formed in said bearing.

1,115,331. BUTTER-CUTTER. CHARLES P. NUTTER, Malden, Mass. Filed Dec. 31, 1913. Serial No. 810,509. (Cl. 31—65.)

1. In a machine of the class described, the combination of a receptacle having a discharge opening in one end; a plunger therein provided with a centrally extending threaded member; a pivoted knife normally closing said discharge opening; a nut for said threaded member; and means for moving said knife horizontally about its pivot out of alinement with said discharge opening, then operating said nut to move said plunger a given distance, and then returning said knife to its normal position.

2. In a machine of the class described, the combination of a receptacle having a discharge opening in one end; a plunger in said receptacle provided with a threaded spindle; a revoluble nut thereon immovable endwise; means for rotating said nut; a diametral blade extending from the operating face of said plunger; and means for rotating said threaded spindle in said nut.



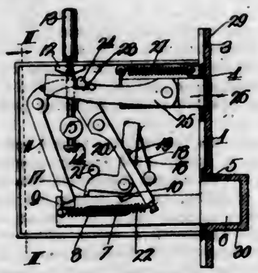
3. In a machine of the class described, the combination of a receptacle having a discharge opening in one end; a reciprocating plunger therein; a pivoted knife normally closing said discharge opening; means for moving said knife horizontally about its pivot; and stationary means for moistening the cutting edge of said knife during each oscillation of said knife.

4. In a machine of the class described, the combination of a receptacle having a discharge opening in one end; a reciprocating plunger therein; a pivoted knife normally closing said discharge opening; means for moving said knife in a horizontal plane about its pivot; and a hollow member normally in contact with the edge of said knife and adapted to contain liquid and through the walls of which the liquid is adapted to percolate and moisten said knife.

5. In a machine of the class described, the combination of a receptacle having a discharge opening in one end; a reciprocating plunger therein; a pivoted knife normally closing said discharge opening; means for moving said knife about its pivot; and a hollow member normally held in yielding contact with the edge of said knife and adapted to contain liquid and through the walls of which the liquid is adapted to percolate and moisten said knife.

[Claims 6 to 17 not printed in the Gazette.]

1,115,332. DOOR-LOCK. EDMUND HALE O'BRIEN, Kansas City, Mo. Filed Feb. 17, 1913. Serial No. 748,868. (Cl. 70—64.)



1. A door lock, comprising a casing, a bolt, means to hold the bolt in unlocked or inoperative position, a spring to throw the bolt to operative position, and means to successively tension the spring and trip said bolt-holding means.

2. A door lock, comprising a casing, a bolt, means to hold the bolt in unlocked or inoperative position, a spring to throw the bolt to operative position, and a slidable tripping device to effect the tensioning of the spring and the tripping of said bolt-holding means.

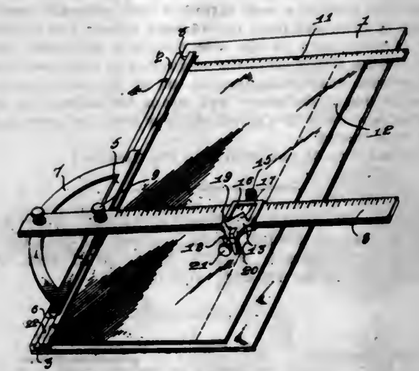
3. A door lock, comprising a casing, a bolt, means to hold the bolt in unlocked or inoperative position, a spring to throw the bolt to operative position, means to successively tension the spring and trip said bolt-holding means, and manually-operable means to effect the relaxing of the spring.

4. A door lock, comprising a casing, a bolt, means to hold the bolt in unlocked or inoperative position, a spring to throw the bolt to operative position, means to successively tension the spring and trip said bolt-holding means, manually operable means to effect the relaxing of the spring, and means actuated by the manually operable means for restoring the bolt to inoperative position.

5. A door lock, comprising a casing, a bolt, means to hold the bolt in unlocked or inoperative position, a spring to throw the bolt to operative position, means to successively tension the spring and trip said bolt-holding means, manually operable means to effect the relaxing of the spring, means actuated by the manually operable means for restoring the bolt to inoperative position, and means whereby the tripping device is restored to its original position when the bolt is thrown to inoperative position.

[Claims 6 to 13 not printed in the Gazette.]

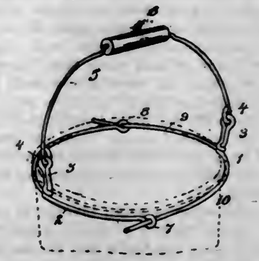
1,115,333. GLASS-CUTTING TOOL. HARRY O. PEASE, Wapello, Iowa. Filed Feb. 1, 1913. Serial No. 745,692. (Cl. 33—27.)



A device of the class described comprising a base, said base provided with a longitudinally extending dove-tailed groove, a head slidably mounted within said groove, said head provided with an arc-web formed thereon, a graduated scale pivotally secured to said head, means passing through said head for binding said dove-tailed tongue in engagement with said dove-tailed groove, said web provided with an aperture formed intermediate its ends at a point one-half the distance between said ends, and a removable pin carried by said graduated gage, said pin adapted to fit in said aperture formed in said web for holding said gage at right angles to said head.

1,115,334. REMOVABLE HANDLE. STEPHEN H. PENICK, Martin, Tenn. Filed Jan. 22, 1913. Serial No. 743,637. (Cl. 220—24.)

In a device for the purpose set forth, a pair of oppositely arranged U-shaped loops of substantially equal length and constructed of resilient but bendable material and adapted to embrace a receptacle, each of the loops being centrally provided with upstanding ears, a bail connected with the ears, the terminals of the arms of one of the loops being formed with eyes arranged at an angle to the arms, the terminal portions of the arms of the second loop adapted to pass through the eyes and to exert a tension against the inner circumference of said eyes,



and the same arms of the second loop being provided at and adjacent to their terminals with spaced notches for adjustably engaging with the inner circumference of the eyes, the said spaced notches being formed by the crimping of the terminal portions of the second loop.

1,115,335. CIGAR-PUNCTURING DEVICE. CHARLES H. POTTER, Haverhill, Mass. Filed Nov. 29, 1913. Serial No. 803,798. (Cl. 131—20.)

1. A cigar puncturing device comprising a tube flared throughout its length, the tube having its walls rolled to form a channel at one end of the tube which opens in the direction of the other end of the tube, a head closing the opposite end of the tube and provided with a plurality of puncturing elements of varying lengths and yieldable guiding and centering means carried by the head and having free portions extending into the channel.

2. A cigar puncturing device comprising a tube open at one end, a head closing the opposite end of the tube, the said tube having its walls rolled to form a channel in its upper end opening in the direction of the closed end of the tube, puncturing elements carried by the head, and bowed springs carried by the head and having their free ends located within the channel, said springs forming centraling means for the articles to be punctured.

1,115,336. BRACELET-CLASP. CHARLES L. RHODES, Providence, R. I., assignor to Bugbee & Niles Co., Providence, R. I., a Corporation of Rhode Island. Filed Apr. 30, 1914. Serial No. 835,552. (Cl. 24—230.)

1. In a bracelet clasp, a catch consisting of a member pivoted at one end to one end of the bracelet and having a slotted portion and an opening which extends from the slot

through one side of the member to form a hook and a catch proper, said catch proper having a finger projecting outwardly from its free end and also having a serrated projection located in the rear of the finger and being formed with a cutaway part between the finger and projection, a pin on the opposite end of the bracelet to engage the hook, and a pair of plates secured on opposite sides of the last named end of the bracelet, one of said plates being longer than the other, and the outer of said plate being formed with an opening through which the finger of the catch projects, the longer of said plates engaging the inner side of the catch member to prevent the pin from passing through the opening of the catch member except when the pin and therewith the long plate, is turned in the arc of a circle to allow the pin to register with the said opening and be passed through the latter.

2. In a bracelet clasp, a catch pivoted to one end of a bracelet, said catch having a catch proper and a hook spaced from the catch proper, a pin on the other end of the bracelet engageable with the hook, and means on said last named end of the bracelet whereby the pin cannot be disengaged from the hook until said last named end of the bracelet is moved at an angle to the other end thereof to cause the pin to first register with and then be passed through said space between the hook and catch proper, said means having a part thereof which receives the catch proper to lock the bracelet.

3. In a bracelet clasp, a catch pivoted to one end of a bracelet, said catch having a catch proper and a hook spaced therefrom, a pin on the other end of the bracelet engageable with the hook, and a pair of plates on the last named end of the bracelet one of which is formed to receive the catch proper and the other of which engages the inner side of the catch and which prevents the pin from being disengaged from the hook until the end of the bracelet which carries the pin is moved at an angle to the other end of the bracelet to cause the pin to first register with and then be passed through said space between the hook and catch proper.

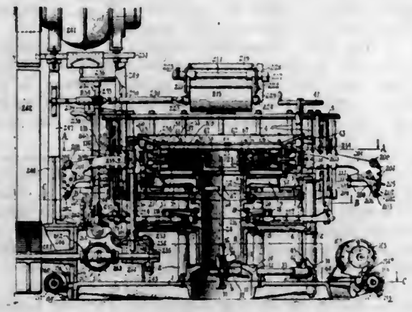
1,115,337. MANICURING DEVICE. CHARLES F. ROSSETTER, Kansas City, Kans., assignor of one-half to La Force Day, Kansas City, Kans. Filed Feb. 27, 1913. Serial No. 751,041. (Cl. 30—23.)

1. A device of the character described, consisting of a flexible shaft adapted to be coupled at one end to a motor, a rotary abrasive tool mounted at the opposite end of said shaft, a guide in close proximity to the side of the rotary abrasive tool, said guide having its side remote from the rotary tool beveled and intersecting the edge adjacent said abrasive tool forming an edge at the periphery of the guide, a handle integral with said guide, and a flexible tube inclosing the shaft and carrying said handle at one end.

2. In a device of the character described, a rotary abrasive tool, a handle carrying said tool, and an annular guide integral with said handle and having a peripheral edge in close proximity to and extending slightly beyond the periphery of said abrasive tool, said edge being formed by beveling the side of the guide remote from the rotary tool to intersect the edge of the opposite side of said guide.

1,115,338. CIRCULAR LOOM. VERNON ROYLE, Paterson, N. J. Filed Dec. 15, 1911. Serial No. 665,991. (Cl. 139—7.)

1. In a circular loom, the combination with means for manipulating the warp threads, a core about which the weaving takes place and means for directing a weft thread into operative relation to the warp threads at the periphery of the core, of a traveling wedge in position to force the weft thread against a previously laid weft thread.



2. In a circular loom, the combination with means for manipulating the warp threads, of means for simultaneously laying a weft thread and forcing it toward a previously laid weft thread.

3. In a circular loom, the combination with means for manipulating the warp threads, of an inclined plane for simultaneously laying a weft thread and forcing it toward a previously laid weft thread.

4. In a circular loom, the combination with means for manipulating the warp threads, of a lay provided with a spiral groove for guiding the weft thread and screwing it toward a previously laid weft thread.

5. In a circular loom, the combination with means for manipulating the warp threads of a lay provided with a groove for guiding a weft thread, a wall gradually diminishing in thickness from the advance toward the trailing end of the groove on the side toward a previously laid weft thread, a wall gradually increasing in thickness from the advance toward the trailing end of the groove on the opposite side of the groove and means for holding the lay against movement in a direction away from the previously laid weft thread.

[Claims 6 to 61 not printed in the Gazette.]

1,115,339. ELECTRIC MESSAGE-CARRIER. BENJIMAN P. SCHNEIDER, Norfolk, Nebr., assignor of one-half to John B. Fitzgerald, Norfolk, Nebr. Filed Sept. 16, 1913. Serial No. 790,092. (Cl. 186—7.)

In a store service system, a pair of conductors spaced apart in parallelism and adapted to be connected up with a source of current, blocks at the opposite ends of said conductors, a horn depending from each block, a stop lug at the lower end of said horn upon one side thereof, an abutment lug upon the other side of said horn, a carriage mounted upon said conductors and adapted to travel along the same, an electric motor on said carriage and receiving current from said conductors, a reverser and circuit breaker on the carriage connected in circuit with said motor, a rod carr[illegible] of sliding movement and having the opposite ends [illegible] dapted to engage said abutment lugs when the [illegible] reaches the limit of its path of movement in one [illegible]ion or the other, a connection between said rod and reverser and circuit breaker whereby the flow of current to the motor will be cut off upon the carriage reaching the limit of its path of movement, and means on said carriage adapted to be engaged by said stop lug to hold the carriage against movement succeeding the cutting off of the current.

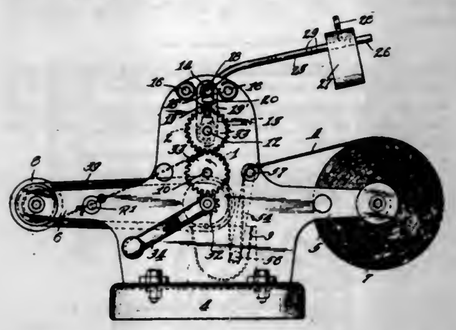
1,115,340. CANOPY INSULATION. GEORGE J. SCHOLL, Brooklyn, N. Y., assignor to Kelting Electric Company, New York, N. Y., a Corporation of New York. Filed Oct. 4, 1913. Serial No. 793,329. (Cl. 240—87.)

1. A canopy and a split ring of resilient insulating material covering the rear edge of the canopy and having portions engaging the inner and outer surfaces of the canopy, the ring being held in place on the canopy by its inherent resiliency.

2. A canopy and a resilient split ring of insulating material U-shaped in cross section covering the edge of the canopy and engaging the inner and outer surfaces of the canopy, the ring being held in place on the canopy by its inherent resiliency.

3. A canopy and a split ring of insulating material covering the edge of the canopy and engaging the inner and outer surfaces of the canopy, such ring being held in place on the canopy by its inherent resiliency and having a distinct distance or spacing portion.

1,115,341. RIBBON-INKING MACHINE. JOSEPH M. SCHUTZ, Chicago, Ill., assignor, by mesne assignments, to Standard Ribbon Machine Company, Chicago, Ill., a Corporation of Arizona. Filed Mar. 17, 1913. Serial No. 754,898. (Cl. 91—31.)



1. In a ribbon inking machine a pair of parallel pressure rolls between which the ribbon passes after it has been inked, a shaft arranged parallel with the pressure rolls having an eccentric at each end, a central journal at each end of one of said rolls, a connecting rod, connecting each said journal with a respective eccentric on said shaft, a lever projecting from said shaft, a movable weight on said lever adapted to force said rolls together to produce pressure on the ribbon, said weight being adjustable, from and toward the shaft to vary the pressure.

2. In a ribbon inking machine a pair of pressure rolls geared together for rotation, and arranged one above the other, a power shaft located below the lower roll and carrying a gear for driving the rolls, means for moving the upper roll up and down comprising a shaft arranged above the upper roll, alined eccentric pins on the ends of the upper shaft, movable bearings in which the upper roll rotates, adjustable connecting rods connecting the eccentric pins with respective movable bearings, a lever carried by said upper shaft and a weight on said lever, said lever being movable from a horizontal position in which the weight operates to press the rolls together to a substantially vertical position, whereby the upper roll is separated from the lower roll.

1,115,342. PROCESS OF MAKING ARTICLES OF VEGETABLE SHELL. CLEMENT SCHWINGER, Manila, Philippine Islands. Filed July 22, 1913. Serial No. 780,606. (Cl. 79—1.)

1. The process of making articles out of vegetable shell which consists in first producing a blank by removing the husk and soft tissue from the shell, then forming the article out of the blank, then subjecting the formed article to a temperature of about one hundred degrees Fahrenheit, then immersing the article in a liquid dye, then drying the article, and then finishing by tumbling the article in a mixture of fibrous material and a powdered stearic compound.

2. The process of making articles out of cocoanut shell which consists in first producing a blank by removing the husk and soft tissue from the shell, then forming the article out of the blank, then subjecting the formed article to a temperature of about one hundred degrees Fahrenheit, then immersing the article in a liquid dye, then drying the article, and then finishing by tumbling the article in a mixture of fibrous material and powdered stearin.

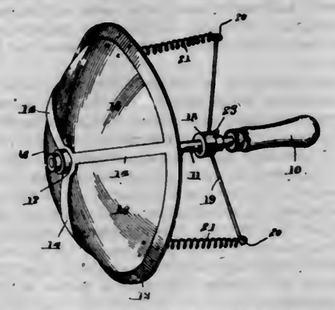
3. The process of making articles out of cocoanut shell which consists in first producing a blank by removing the husk and soft tissue from the shell, then forming the article out of the blank then subjecting the formed article to a temperature of about one hundred degrees Fahrenheit, then immersing the article in a liquid dye, then drying the article, and then finishing by tumbling the article in a mixture of cocoanut shavings and a powdered stearic compound.

4. The process of making articles out of cocoanut shell which consists in first producing a blank by removing the husk and soft tissue from the shell, then forming the article out of the blank, then subjecting the formed article to a temperature of about one hundred degrees Fahrenheit, then immersing the article in a liquid dye, then drying the article, and then finishing by tumbling the article in a mixture of cocoanut shavings and powdered stearin.

5. In the art of making articles out of vegetable shell, the process of finishing which consists in tumbling the article in a mixture of fibrous material and a powdered stearic compound.

[Claims 6 to 9 not printed in the Gazette.]

1,115,343. SWIMMING-PADDLE. CLIVE A. SPRADLING, Battle Creek, Mich. Filed June 5, 1914. Serial No. 843,320. (Cl. 9—21.)



1. In a paddle, the combination with a handle, of a bar thereon, a frame on the bar, paddle members mounted to swing on the frame, a collar slidable on the bar, means for securing the collar in an adjusted position, a spider supported by the collar, and springs having connection with the spider and with the said paddle members, the adjustment of the collar on the bar being adapted to increase or decrease the tension of the said springs.

2. In a paddle, the combination with a handle, of a bar thereon, a concave frame on the free end of the bar, segmental shaped paddle members mounted to swing on the frame and closing openings therein, a spider adjustable on the bar, and springs connecting with the spider and

the paddle members, whereby the swinging action of the paddle members can be increased or decreased by the adjustment of the spider on the bar.

3. In a paddle, the combination with a bar, of a frame thereon, paddle members mounted to swing on the frame to close openings therein, and means adjustable on the bar and connecting with the paddle members whereby the swinging of the paddle members on the said frame can be increased or decreased.

1,115,344. REINFORCED-CONCRETE FLOOR CONSTRUCTION. FREDERICK SQUIRES, Plainfield, N. J. Filed Dec. 18, 1913. Serial No. 807,392. (Cl. 72—66.)

1. A concrete floor formed with a top slab of concrete and provided beneath said top slab with multiple sets of continuous parallel cavities, said cavities intersecting each other and permitting the interior of the floor to be traversed in multiple directions, the floor being further provided with isolated cavities in the concrete between said continuous intersecting cavities, and reinforce elements embedded in the concrete near the bottom of said continuous cavities and extending in multiple directions parallel therewith.

2. A concrete floor formed with a top slab and continuous hollow intersecting ribs beneath and integral with said top slab, hollow forms embedded and extending continuously in said ribs and intersecting each other at the crossings, said forms affording continuous passages traversable in multiple directions across the interior of the floor, and reinforce elements embedded in the concrete at the lower portions of said ribs and extending both ways across the floor.

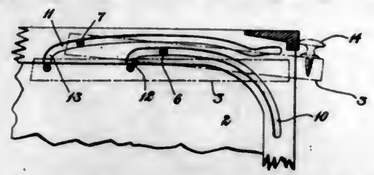
3. A floor composed of isolated forms disposed in intersecting rows and forms disposed in continuous intersecting lines, the isolated forms being interposed between the continuous forms, concrete filling the spaces between the isolated and continuous forms and also forming a top slab, and reinforce elements embedded in the concrete near the bottom of the floor and extending in two directions parallel with said continuous forms, said continuous forms having openings extending continuously therethrough enabling the interior of the floor to be traversed in multiple directions.

4. A floor composed of hollow block forms disposed in intersecting rows with spaces between the blocks both ways across the floor, and hollow forms disposed in continuous intersecting lines in the spaces between the other forms and affording continuous passages through the interior of the floor in both directions, the two kinds of forms being spaced from each other so as to afford intersecting channels, in combination with reinforce elements disposed near the bottoms of said channels and extending both ways across the floor, and concrete filling said channels, surrounding said reinforce elements and covering the forms so as to form intersecting beams with a continuous top slab.

5. A floor composed of hollow block forms disposed in intersecting rows, said forms having wide bases and including or diminishing in cross-section from all sides toward the top, and hollow forms disposed in continuous lines in the spaces between the other forms and diminishing in width toward the bottom, the interiors of said continuous forms affording continuous traversable passages both ways across the interior of the floor, concrete filling the spaces between the forms and forming a top slab covering the same, and reinforce elements extending in both directions within the lower portion of the floor parallel with the continuous forms.

[Claims 6 and 7 not printed in the Gazette.]

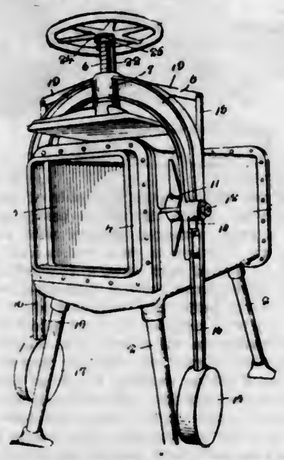
1,115,345. SWINGING-STRUCTURE MOUNT. HUGO V. STEUERNAGEL, Hartford, Conn. Filed Mar. 9, 1914. Serial No. 823,878. (Cl. 45—78.)



1. The combination of a swinging member and a support therefor, the swinging member initially fitting within the support and having projecting studs arranged in pairs, the studs of the respective pairs being opposite each other and the support having grooves arranged in duplicate pairs to slidingly receive the respective pairs of studs, the forward ends of two of the duplicate grooves having bearings for two opposite studs and the forward portions of the other two grooves being shaped to positively prevent transverse and to permit solely swinging motion of the swinging member when the same leaves its initial position and passes substantially out of said support and the several grooves being shaped to jointly swing and move the swinging member transversely on thrust applied thereto when said swinging member leaves said support.

2. The combination of a swinging member and a support therefor, the swinging member having projecting studs and the support having grooves to slidingly receive said studs and shaped to jointly impart a camming and guiding action to said swinging member, the rear ends of said grooves being open to permit dismounting of the swinging member, and an operating member on the swinging member for engaging the support when the swinging member is wide open, said operating member being removably mounted.

1,115,346. COUNTERBALANCED DOOR OR COVER FOR RETORTS OR SIMILAR VESSELS. ROBERT G. STILES, Parkersburg, W. Va. Filed June 17, 1913, Serial No. 774,159. Renewed Sept. 3, 1914. Serial No. 860,097. (Cl. 220—124.)



1. In a retort, a retort body having a door-way, a swinging support movable into and out of register with the door-way, a door adjustable on the support to opening and closing positions, counter-balancing means adjustable with the door to vary the counter-balancing leverage, and means for simultaneously adjusting the door and counter-balancing means.

2. In a retort, a retort body having a door-way, a yoke pivoted to the sides of the body to swing into and out of

alinement with the door-way, a door adjustably mounted on the yoke for movement to open and closed positions, an operating element for adjusting the door, adjustable counter-weights carried by the yoke, and connections between said counterweights and the operating element for simultaneously adjusting the counterweights with the door.

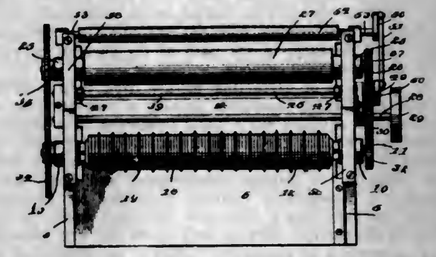
3. In a retort, a swinging support movable into and out of register with the door-way, a door adjustable on the support to opening and closing positions, counterbalancing means adjustable on the swinging support, a manually operable element carried by the swinging support for adjusting the door, and means simultaneously acting in the adjustments of the door through the action of said element for adjusting the counterbalancing means.

4. In a retort, the combination of a retort body having a doorway, a yoke pivotally mounted upon the body for movement into and out of the plane of the doorway, a door movable upon the yoke to open and closed positions, a screw shaft for adjusting the door, counterbalancing weights adjustably mounted upon the yoke, and lever mechanism operated by the screw shaft for adjusting the counter weights.

5. In a retort, the combination of a retort body having a doorway, a yoke pivotally mounted upon the retort body for movement into and out of the plane of the doorway, a door adjustable on the yoke for movement to open and closed positions, a screw shaft for adjusting the door, counterbalancing weights adjustably mounted on the yoke, a slide operated by the screw shaft, and lever mechanism actuated by the slide for adjusting said counterbalancing weights.

[Claims 6 and 7 not printed in the Gazette.]

1,115,347. SHEET-METAL-CUTTING MACHINE. THEOPHILUS W. SUGGS, Arba, N. C., assignor of one-half to Herman F. Hardy, Jason, N. C. Filed Feb. 27, 1914. Serial No. 821,504. (Cl. 164—49.)

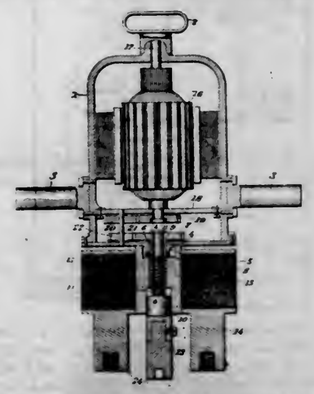


1. In a sheet metal cutting machine, means for cutting the metal into longitudinal strips, means for subsequently cutting said strips transversely, means for forming said strips succeeding the last cutting operation, feeding means for feeding the strips to said forming means, and means for operating said first cutting means and feeding means simultaneously and then operating said second cutting means and forming means and rendering said first cutting means and feeding means inactive.

2. In a sheet metal cutting machine, means for cutting the metal into longitudinal strips, a reciprocatory knife for subsequently cutting said strips transversely, rods supporting said knife, springs encircling said rods and acting to hold the knife normally in inactive position, cams adapted to actuate said rods to move the knife to active position against the action of said springs, and means for actuating said first means and said cams.

3. In a sheet metal cutting machine, means for cutting the metal into longitudinal strips, a reciprocatory knife for subsequently cutting said strips transversely, rods supporting said knife, springs encircling said rods and acting to hold the knife normally in inactive position, cams adapted to actuate said rods to move the knife to active position against the action of said springs, means for forming said strips succeeding the last cutting operation, feeding means for feeding the strips to said forming means, and means for operating said first cutting means and feeding means simultaneously and then operating said cams and forming means and rendering said first cutting means and feeding means inactive.

1,115,348. RIVET-HEAD-CUTTING MACHINE. WALLACE M. TAYLOR, Cleveland, Ohio, assignor of forty-nine one-hundredths to Joseph Hlatky, Cleveland, Ohio. Filed Feb. 20, 1914. Serial No. 820,005. (Cl. 90—12.)



1. In a rivet cutting machine, a casing, a motor within said casing, a bearing connected to one end of said casing coaxial with the shaft of said motor, a hub sleeve rotatably mounted within said bearing, a gear wheel fixed upon the inner end of said sleeve, gear connections between said first gear and motor, a spindle splined within said sleeve, a tool socket on the outer end of said spindle, an expansion spring surrounding said spindle and having one end abutting said tool socket and the opposite end in engagement with the adjacent extremity of said hub and acting to hold the tool socket projected toward the work, and means for holding said machine to the work.

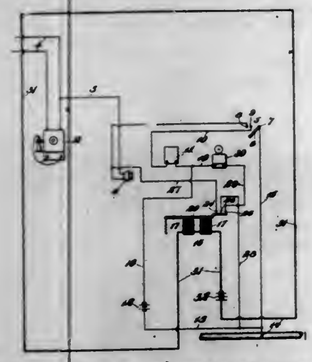
2. In a rivet cutting machine, a casing, a motor within said casing, a bearing connected to one end of said casing coaxial with the shaft of said motor, a hub sleeve rotatably mounted within said bearing, a gear wheel fixed upon the inner end of said sleeve, gear connections between said first gear and motor, a spindle splined within said sleeve, a tool socket on the outer end of said spindle, an expansion spring surrounding said spindle and having one end abutting said tool socket and the opposite end in engagement with the adjacent extremity of said hub and acting to hold the tool socket projected toward the work, means for holding said machine to the work, and means holding said hub sleeve against sliding movement within the bearing.

3. In a rivet cutting machine, a casing, a motor within said casing, a bearing connected to one end of said casing coaxial with the shaft of said motor, a hub sleeve rotatably mounted within said bearing, a gear wheel fixed upon the inner end of said sleeve, gear connections between said first gear and motor, a spindle splined within said sleeve, a tool socket on the outer end of said spindle, an expansion spring surrounding said spindle and having one end abutting said tool socket and the opposite end in engagement with the adjacent extremity of said hub and acting to hold the tool socket projected toward the work, means for holding said machine to the work, and a collar fixed to the outer end of said hub sleeve and engaging the adjacent extremity of said bearing to prevent sliding movement of the sleeve.

1,115,349. SIGNAL SYSTEM. SIDNEY C. VENNERS, New York, N. Y. Filed Apr. 17, 1914. Serial No. 832,585. (Cl. 179—5.)

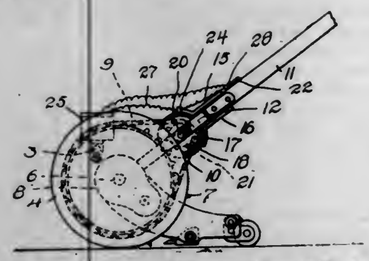
In a signal system, the combination with a telephone transmission line, of an auxiliary transmitter having one terminal connected to one side of said line, a three point

switch comprising two contacts and a switch blade movable into and out of engagement with said contacts simultaneously, a connection between the remaining terminal of said transmitter and one contact of said switch, a connection between the switch blade of said switch and the ground whereby when the blade is in closed position the circuit through the transmitter will be completed, an audi-



ble signal having one terminal connected to the remaining contact of said switch, a source of energy having one side connected with the remaining terminal of said signal and the opposite side connected to the connection between said switch blade and the ground whereby when the blade is in closed position the circuit through said audible signal will be closed and the audible signal sounded to send the sound waves over said telephone transmission line by way of said auxiliary transmitter.

1,115,350. LAWN-MOWER. TIMOTHY D. VINCENT, Pittsburgh, Pa. Filed Aug. 28, 1913. Serial No. 787,227. (Cl. 56—19.)

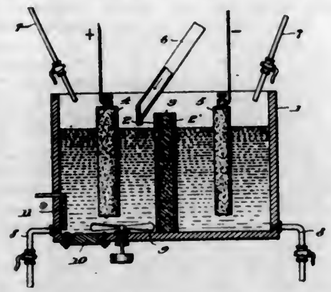


1. In a lawn mower, the combination with a mower frame, a handle bar, brackets for connecting the bar with a motor body, brackets connecting the handle bar with the mower frame, an electric motor connected to the inner end of said handle bar and having a shaft journaled at one end in one of said brackets and extending through the other of said handle bar brackets, a source of electrical energy carried by the motor frame, and a circuit between said motor and said source of electrical energy, a switch in said circuit for opening and closing the circuit, and a driving connection between said motor shaft and one of the wheels of the mower.

2. In a lawn mower, the combination with a mower frame, a handle bar and one of the wheels of the mower, of a source of electrical energy carried by said frame, an electric motor connected to the handle, a driving connection between the motor shaft and said wheel, and circuit forming connections between said source of electrical energy and the motor, said connections including a switch for opening and closing the circuit.

3. In a lawn mower, an electric motor secured to the inner end of the handle bar and having its shaft extended, a source of electrical energy carried by the mower frame, a driving connection between one of the wheels of the mower and said shaft, circuit forming connections between the source of electrical energy and said motor, and a switch carried by the handle bar for opening and closing the circuit.

1,115,351. PROCESS OF SEPARATING METALS FROM ORES. HERMAN A. WAGNER, East Orange, N. J. Filed Jan. 27, 1914. Serial No. 814,767. (Cl. 204—15.)



1. A process of extracting metals from their ores by electrolysis, which comprises passing a current from an anode to a cathode, both being immersed in a suitable electrolyte, holding the ore in the anode compartment, the liquid in the anode compartment being kept separate from the liquid in the cathode compartment, and while maintaining a depolarizing material including an oxidizing agent, in the path of the current, between said anode and said cathode.

2. A process of extracting metals from their ores by electrolysis, which comprises passing a current from an anode to a cathode, both being immersed in a suitable electrolyte, holding the ore in the anode compartment, the liquid in the anode compartment being kept separate from the liquid in the cathode compartment, and while maintaining a depolarizing material including an oxidizing agent and mercury, in the path of the current, between said anode and said cathode.

3. A process of extracting metals from their ores by electrolysis, which comprises passing a current from an anode to a cathode, both being immersed in a suitable electrolyte, holding the ore in the anode compartment, the liquid in the anode compartment being kept separate from the liquid in the cathode compartment, and while maintaining a depolarizing material including an oxidizing agent, mercury and a hydrogen absorbing agent, in the path of the current, between said anode and said cathode.

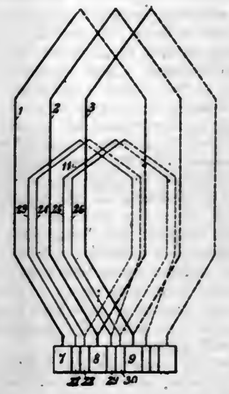
4. A process of extracting metals from their ores by electrolysis, which comprises passing a current from an anode to a cathode, both being immersed in a suitable electrolyte, holding the ore in the anode compartment, the liquid in the anode compartment being kept separate from the liquid in the cathode compartment, and while maintaining a depolarizing material including a manganese dioxid, mercury, and palladium black, in the path of the current, between said anode and said cathode.

5. A process of extracting copper, zinc and the like, from sulfid ores containing the same, which comprises suspending said ores, in the anode compartment of an electrolytic cell containing a solution of common salt, and depolarizing the cell by oxidizing any hydrogen absorbed by the cathode liquid, before said hydrogen comes into contact with the anode liquid.

[Claims 6 and 7 not printed in the Gazette.]

1,115,352. DYNAMO-ELECTRIC MACHINE. MILES WALKER, Old Trafford, England, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 6, 1907. Serial No. 405,437. (Cl. 171—206.)

1. An armature for a commutator type dynamo-electric machine comprising a slotted core, main conductors located in the core slots and connected to the commutator bars which are separated by one or more intervening bars, and auxiliary conductors disposed in the main core slots for substantially one-half the lengths of said slots and having points of suitable potential connected to said intervening bars to reduce the potential difference between adjacent commutator bars.



2. An armature for commutator type dynamo-electric machines comprising a slotted core, main conductors located in the core slots and connected to commutator bars which are separated by intervening bars and auxiliary conductors disposed in the main core slots for substantially one-half of the lengths of said slots and having their respective ends connected to the main winding conductors and to the intervening commutator bars.

3. An armature for commutator type dynamo-electric machines having a main winding connected to commutator bars which are separated by intervening bars, and an auxiliary winding which is subjected to only a portion of the magnetic flux acting upon the main winding and is connected to the intervening bars.

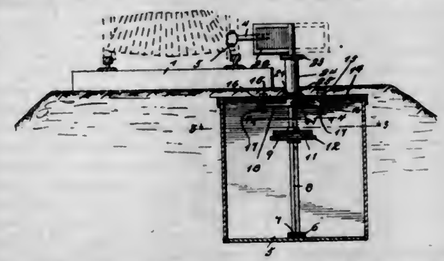
4. An armature for commutator type dynamo-electric machine having a main winding connected to commutator bars which are separated by intervening bars and an auxiliary winding the conductors of which extend over only one-half the length of the armature core, each alternate conductor of said auxiliary winding being connected to an intervening commutator bar, and the remaining conductors of said winding being connected to conductors of the main winding.

5. An armature for commutator type dynamo-electric machines comprising a core, main coils connected to commutator bars which are separated by intervening bars, and auxiliary coils disposed in proximity to the main coils but having correspondingly located parts only one-half their lengths, each of said auxiliary coils having one end connected to a conductor of the main winding and its other end connected to an intervening commutator bar.

1,115,353. AUTOMATIC TRIP. ULRICH W. WALTON, Paton, Iowa. Filed Feb. 26, 1914. Serial No. 821,250. (Cl. 246—59.)

1. A device of the class described comprising a casing, a shaft carried within said casing, a stop blade carried by said shaft, said shaft provided with an integral collar, a sleeve carried by said casing, said collar engaging the upper end of said sleeve and limiting the downward movement of said shaft upon said sleeve, stop lugs carried by said casing, a stop arm detachably secured to said shaft and adapted to engage said stop lugs for limiting the swing of said stop arm, and means for rotating said shaft.

2. A device of the class described comprising a casing, a shaft carried thereby, a stop blade secured to said shaft, stop lugs carried by said casing, a stop arm carried by said shaft and adapted to engage said stop lugs for limiting the swing of said stop arm, an operating sprocket wheel carried by said shaft and provided with a projecting flange upon the lower face thereof, and a chain passing around



said sprocket wheel and resting upon said flange whereby said chain will be held from falling from said sprocket wheel.

1,115,354. METHOD OF MAKING FELT HATS. ARTHUR B. WARING, New York, N. Y. Filed Nov. 19, 1912. Serial No. 732,202. (Cl. 2—108.)

1. The process of producing a designed fabric consisting in making the fabric with the inner portion thereof containing a material unlike that on its surface, embossing a design on the surface and abrading the embossed portions to disclose the inner unlike material.

2. The process of treating felt containing a percentage of non-felting material that consists in abrading the felt surface in predetermined portions to disclose the non-felting material in the form of a design.

3. The process of producing a designed fabric that consists in felting a mixture containing a large percentage of animal fiber and a small percentage of vegetable fiber, treating the fabric with a dye which acts more upon the animal fiber than upon the vegetable fiber, and locally abrading the surface of the fabric to disclose the vegetable fiber in the form of a design.

4. The process of making felt which comprises mixing a large percentage of animal fiber and a small percentage of vegetable fiber of a predetermined appearance, shrinking the mixture to cause the animal fiber to cover the vegetable fiber, dyeing the animal fiber, and in locally abrading the surface of the felt thus formed to disclose the vegetable fiber in the form of a design.

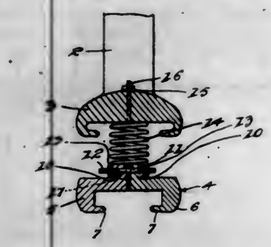
5. The process of producing hats comprising making a hat body of intermingled fibers or unlike materials, felting said body thereby covering the fibers of one of the materials, and in locally abrading portions of the surface of the body to uncover in the abraded portions the covered fibers.

[Claims 6 to 11 not printed in the Gazette.]

1,115,355. VEHICLE-WHEEL ATTACHMENT. JESSE W. WHITE, Edmond, Okla. Filed Apr. 18, 1914. Serial No. 832,824. (Cl. 152—32.)

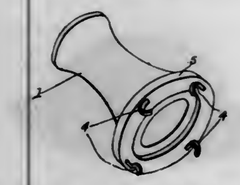
The combination with a vehicle wheel of an attachment therefor including a rim consisting of two circular sections having flat inner faces and engaging one another on said flat faces, a plurality of segmental flanges carried on the inner faces of the sections and engaging one another, a plurality of springs interposed between the sections and rim of the vehicle wheel, certain ends of the springs being positioned between the sections, screw

threaded rods inserted through the flanges and effecting a clamping thereof upon said spring terminals also holding the sections to one another and the other ends of the



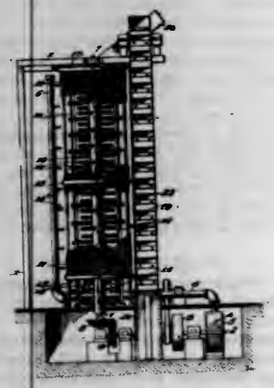
springs being screw threaded and turned through the wheel rim, and nuts on the extended ends of said screw threaded portions.

1,115,356. ATTACHMENT FOR AUTOMOBILES. SAMUEL B. WHITE, Georgetown, Ohio. Filed Dec. 30, 1912. Serial No. 739,173. (Cl. 242—95.)



In a device of the character described, a drum having a central recess in one end thereof and fastening devices rigidly secured to said end of said drum at intervals about said recess and comprising short hook-shaped members projecting beyond said end of said drum and adapted to extend between the spokes of a wheel, said hook-shaped members being so constructed and arranged that the rotation of said drum about its longitudinal axis in one direction will cause said hook-shaped members to operatively engage the respective spokes of said wheel and retain the end of said drum into engagement with said wheel.

1,115,357. SACK-CLEANER. WARREN H. WILDRICK, Phillipsburg, N. J. Filed Feb. 24, 1914. Serial No. 820,773. (Cl. 15—8.)



1. A sack cleaner comprising an upright foraminous cylinder, a brush revolubly mounted in said cylinder, means arranged opposite said cylinder for discharging air under pressure thereinto, and means for rotating said brush.

2. A sack cleaner comprising a foraminous cylinder, a revolubly mounted spiral brush disposed in said cylinder, means for revolving said brush, means for discharging the article to be cleaned into the top of said cylinder, and an air discharge pipe extending longitudinally outside said cylinder and provided with a plurality of discharge nozzles opening onto the cylinder.

3. A sack cleaner comprising a foraminous cylinder, a spiral brush mounted in said cylinder, scrubbing elements positioned in said cylinder for coaction with said spiral brush, means for feeding the articles to be cleaned into the top of said cylinder, a pipe arranged longitudinally of said cylinder on the outside thereof and provided with a plurality of nozzles discharging onto said cylinder and means for supplying compressed air to said pipe.

4. A sack cleaner comprising a supporting structure, a horizontally disposed driving shaft mounted therein, an upright shaft disposed at right angles to said driving shaft, coöperating elements on said shafts whereby said upright shaft is driven by said driving shaft, a brush mounted on said upright shaft, a cylinder encircling said brush and comprising a reticulated bottom and an open top, a plurality of bars connecting said top and bottom, a foraminous cover secured to the outer faces of said bars, a bracing element encircling said bars intermediately of the length thereof, and means for discharging air under pressure onto said cylinder.

5. A sack cleaner comprising a supporting structure, an upright spiral brush mounted therein, means for revolving said brush, a foraminous cylinder encircling said brush and including a reticulated bottom and an annular top, spaced bars connecting said top and bottom and having their inner faces constructed to form a scrubbing board, a foraminous covering encircling said bars, and a discharge spout at the lower end of said cylinder.

[Claim 6 not printed in the Gazette.]

1,115,358. SPACE-BAND FOR LINOTYPE-MACHINES. GEORGE T. WILLIAMS, Denver, Colo. Filed Aug. 22, 1913. Serial No. 786,163. (Cl. 199—4.)

1. A space band composed of a body part and two coöperating members slidably mounted and independently adjustable thereon.

2. A space band composed of a body part of uniform thickness and two coöperating members movably mounted and independently adjustable thereon and arranged on opposite sides thereof.

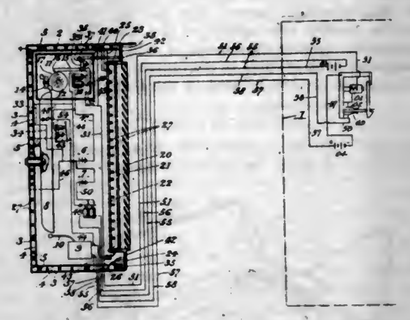
3. A space band composed of a body part and two coöperating members slidably mounted and independently adjustable thereon and arranged on opposite sides thereof, one of the said members being wedge shaped.

4. A space band composed of a body part and two distinct coöperating members independently adjustable thereon and arranged on opposite sides thereof, one of said members being wedge-shaped, the body part being provided with a wedge-shaped stationary part coöperating with the movable wedge-shaped member, substantially as described.

5. A space band composed of a body part, and two members movably mounted and independently adjustable thereon and arranged on opposite sides thereof, one member being wedge-shaped and the other member of uniform thickness.

[Claims 6 to 10 not printed in the Gazette.]

1,115,359. ELECTRIC BURGLAR-ALARM SYSTEM. JOHN P. WILLIAMS, New York, N. Y., assignor to Electric Bank Protection Company, a Corporation of Delaware. Filed Apr. 27, 1910. Serial No. 558,035. (Cl. 177—314.)



1. In a burglar-alarm system, a structure to be guarded, an alarm housing, an alarm mechanism arranged within said housing, an electrical protective system comprising a main protective circuit extending between said structure to be guarded and said alarm mechanism, and a supplementary electrical protective system entirely comprised within said alarm housing and constituting a protective system without dependence upon said main protective system, said supplementary system being operatively independent of said circuit connections between said structure to be guarded and said alarm mechanism, whereby the alarm housing is in itself entirely protected without any dependency upon any part of the main protective system external thereof.

2. In a burglar-alarm system, a structure to be guarded, an alarm housing, an alarm mechanism arranged within said housing, an electrical protective system comprising a main protective circuit extending between said structure to be guarded and said alarm mechanism, said alarm mechanism comprising mechanically-operating means contained within said alarm housing for actuating the alarm, and a circuit protecting said alarm housing and having its source of energy arranged therein and actuating said mechanically-operating means, said circuit for said housing being supplementary to the electrical protection of said structure to be guarded and constituting a protective system without dependence upon said external main protective circuit and operatively independent of any other part of the system, whereby the alarm housing is in itself protected through said mechanically-operating means without dependency upon any part of the main protective system.

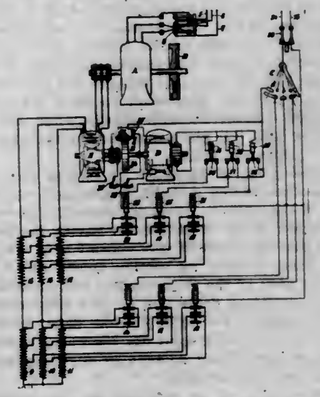
3. In a burglar-alarm system, a structure to be guarded, an alarm housing, an alarm mechanism arranged within said housing, an electrical protective system comprising a main protective circuit extending between said structure to be guarded and said alarm mechanism, said alarm mechanism comprising mechanically-operating and electrically-operating means contained within said alarm housing for actuating the alarm, and a circuit protecting said alarm housing and having its source of energy arranged therein and actuating said mechanically-operating and electrically-operating means, said circuit for said housing being supplementary to the electrical protection of said structure to be guarded and constituting a protective system without dependence upon said external main protective circuit and operatively independent of any other part of the system, whereby the alarm housing is in itself entirely protected through said mechanically-operating and electrically-operating means without dependency upon any part of the main protective system.

4. In a burglar-alarm system, a structure to be guarded, an alarm housing, an alarm mechanism arranged within said housing, an electrical protective system in connection with said alarm mechanism for protecting the structure to be guarded, and a supplemental electrical protective system in connection with said alarm mechanism for independently protecting said alarm housing, said supplemental system constituting a protective system without dependence upon said main protective system and operatively independent of any circuit connections with the structure to be guarded, whereby the alarm housing is in itself entirely protected without dependency upon any part of the main protective system external thereof.

5. In a burglar-alarm system, an electrically-protected structure to be guarded, an alarm mechanism in connection with the electrical protection for said structure to be guarded, and a housing for said alarm mechanism electrically protected in connection with said alarm mechanism, the electrical protection of the alarm housing constituting a protective system without dependence upon the electrical protection of the structure to be guarded and operatively independent of any other part of the system, whereby the alarm housing is in itself entirely protected without dependency upon any part of the main protective system external thereof.

[Claims 6 to 21 not printed in the Gazette.]

1,115,360. AUTOMATIC CONTROL OF MOTORS. ROBERT B. WILLIAMSON, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Nov. 3, 1906. Serial No. 341,909. (Cl. 171—312.)



1. In combination, an electric motor, a resistance in the armature-circuit thereof, a generator, means governed by said generator for controlling said resistance, and means for causing said generator to run at a speed which varies inversely as that of the motor.

2. In combination, an electric motor, a generator, means for causing the speed of said generator to vary inversely as the speed of the motor, a resistance in the armature circuit of the motor, and means for varying said resistance in the same sense as the speed of the generator varies.

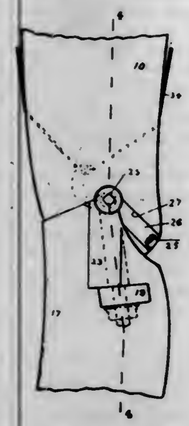
3. In combination, an electric motor, a resistance in the armature circuit thereof, means including a generator for controlling said resistance, and means for causing said generator to have a voltage which varies inversely as the speed of the motor.

4. In combination, an electric motor, a generator, means for causing the voltage of said generator to vary inversely as the speed of the motor, a resistance in the armature circuit of the motor, and means for varying said resistance in the same sense as the voltage of the generator varies.

5. In combination, an electric motor, a generator, means fro causing the voltage of said generator to depend on the speed of the motor, a controlling ohmic resistance for the motor, and means for varying said resistance in approximate direct proportion to the voltage of the generator.

[Claims 6 to 24 not printed in the Gazette.]

1,115,361. KNEE-JOINT FOR ARTIFICIAL LEGS. CHESTER B. WINN, Buffalo, N. Y. Filed Aug. 10, 1914. Serial No. 856,015. (Cl. 3—3.)



1. In a knee joint of an artificial leg the combination of a thigh section having a centrally disposed vertical slot in the rear of the knee, a T-bolt permanently journaled in the knee portion of the thigh section having its tail piece in said slot and the ends of the journal piece projecting beyond the knee, a lower leg section apertured at its top to receive the knee of the thigh section and provided with an upwardly extending projection on each side forming an open-topped support for said journal ends and means for supporting said tail piece upon and detachably securing it to the lower leg section.

2. In a knee joint of an artificial leg the combination of a thigh section having a centrally disposed vertical slot in the rear of the knee, a T-bolt permanently journaled in the knee portion of the thigh section having its tail piece in said slot and the ends of the journal piece projecting beyond the knee, a lower leg section apertured at its top to receive the knee of the thigh section and provided with an upwardly extending projection on each side forming an open-topped support for said journal ends, means for supporting said tail piece upon the lower leg section and screw-threaded means for detachably securing said tail piece to the lower leg section.

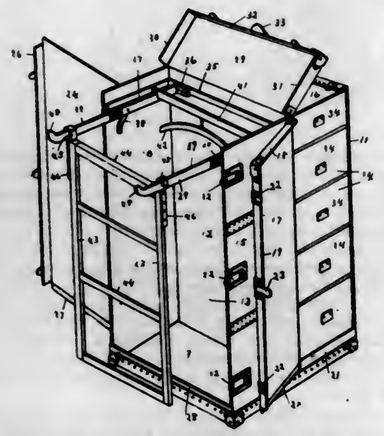
3. In a knee joint of an artificial leg the combination of a thigh section having a centrally disposed vertical slot in the rear of the knee, a T-bolt permanently journaled in the knee portion of the thigh section having its tail piece in said slot and the ends of the journal piece projecting beyond the knee, a lower leg section apertured at its top to receive the knee of the thigh section and provided with an upwardly extending projection on each side forming an open-topped support for said journal ends, a bridge in the lower leg section adapted to support the lower end of the tail piece of said bolt and means detachably securing said tail piece to said bridge.

4. In a knee joint of an artificial leg the combination of a thigh section having a centrally disposed vertical slot in the rear of the knee, a T-bolt permanently journaled in the knee portion of the thigh section having its tail piece in said slot and the ends of the journal piece projecting beyond the knee, a lower leg section apertured at its top to receive the knee of the thigh section and provided with an upwardly extending projection on each side forming an open-topped support for said journal ends, a bridge in the lower leg section adapted to support the lower end of the tail piece of said bolt and screw-threaded means detachably securing said tail piece to said bridge.

5. In a knee joint of an artificial leg the combination of a thigh section having a centrally disposed vertical slot in the rear of the knee, a T-bolt permanently journaled in the knee portion of the thigh section having its tail piece in said slot and the ends of the journal piece projecting beyond the knee, a lower leg section apertured at its top to receive the knee of the thigh section and provided with an upwardly extending projection on each side forming an open-topped support for said journal ends, means for supporting said tail piece upon and detachably securing it to the lower leg section and enlarged heads upon the projecting journal ends having their inner surface bear against the outside of the thigh portion above said journal whereby movement of said thigh section longitudinal of said journal is prevented.

[Claims 6 to 10 not printed in the Gazette.]

1,115,362. TRUNK. ALBERT W. WINSHIP, Utica, N. Y. Filed Oct. 26, 1911. Serial No. 656,883. (Cl. 190—13.)



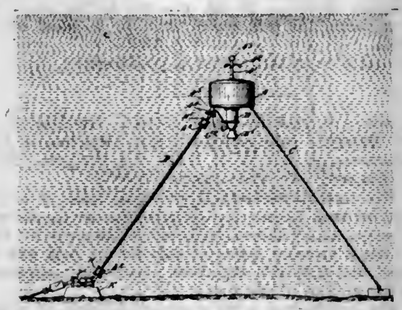
1. A trunk adapted to stand on end when opened consisting of a bottom, two adjacent sides, a perpendicular partition parallel to one of said sides and secured to the other side and dividing said trunk into wardrobe and chiffonier compartments, a top for said chiffonier compartment leaving one narrow side open, a narrow side for the wardrobe compartment leaving the outer broad side and the top of said compartment open, a closure for said broad side of the wardrobe compartment and closures hinged along the edge of the said central partition for said top opening of the wardrobe compartment and for the side opening of the chiffonier compartment, said closure for said chiffonier compartment being adapted when opened to fold back flat against the narrow side of the wardrobe compartment.

2. A trunk adapted to stand on end when opened consisting of a bottom, two adjacent sides, a perpendicular partition parallel to one of said sides and secured to the other side and dividing said trunk into wardrobe and chiffonier compartments, a top for said chiffonier compartment leaving one narrow side of said compartment open, a narrow side for the wardrobe compartment leaving the outer broad side and the top of said compartment open, a closure for said broad side of the wardrobe compartment, closures hinged along the edge of said central partition for said top opening of the wardrobe compartment and for the side opening of the chiffonier compartment, said closure for said chiffonier compartment being adapted when opened to fold back flat against the narrow side of the wardrobe compartment, garment-hanger supports upon the permanent walls of said wardrobe compartment near the top thereof and garment hangers removable through the top opening of said wardrobe compartment when said top closure is open.

3. A trunk adapted to stand on end when opened consisting of a bottom, two adjacent sides, a perpendicular partition parallel to one of said sides and secured to the other side and dividing said trunk into wardrobe and chiffonier compartments, a top for said chiffonier compartment leaving one narrow side of said compartment open, a narrow side for the wardrobe compartment leaving the outer broad side and the top of said compartment open, a laterally hinged closure for the opening of the wide side of said wardrobe compartment, a closure for the top opening of the wardrobe compartment hinged along the top of said central partition and having a valance strip overlapping the top edge of the aforesaid side closure and a closure for the narrow side opening of said chiffonier compartment hinged along the edge of the said central partition, said closure for said chiffonier compartment being adapted when open to fold back flat against the narrow side of the wardrobe compartment.

4. A trunk adapted to stand on end when opened consisting of a bottom, two adjacent sides, a perpendicular partition parallel to one of said sides and secured to the other side and dividing the said trunk into wardrobe and chiffonier compartments, a top for said chiffonier compartment leaving one narrow side of said compartment open, a narrow side for the wardrobe compartment leaving the outer broad side and the top of said compartment open, a laterally hinged closure for the opening of the wide side of said wardrobe compartment having valance strips overlapping adjacent parts at both sides and the bottom, a closure for said top opening of the wardrobe compartment hinged along the top of said central partition and having valance strips overlapping both stationary sides and the top edge of the aforesaid side closure and a closure for said narrow side opening of the chiffonier hinged along the edge of the said central partition and having valance strips on its other sides overlapping adjacent parts, said closure for said chiffonier compartment being adapted when opened to fold back flat against the narrow side of the wardrobe compartment.

1,115,363. MOORING FOR BUOYS. EDWARD C. WOOD, Somerville, Mass., assignor to Submarine Signal Company, Waterville, Me., a Corporation of Maine. Filed Nov. 16, 1910. Serial No. 592,599. (Cl. 9—8.)



1. A submerged buoy having a plurality of mooring cables, one of which comprises electric conductors, and means for connecting the cable carrying said conductors to said buoy comprising a clamp box attached to said buoy and having means adapted to clamp said conductor-carrying cable therein whereby said conductor-carrying cable will be prevented from endwise movement in either direction, and jointed means connecting said clamp box with said buoy.

2. A submerged buoy having a plurality of mooring cables, one of which comprises electric conductors, an anchorage and jointed means comprising a clamp box pivotally connected to said buoy and containing means adapted to restrain the conductor-carrying cable from endwise movement in either direction for connecting the cable carrying said conductors with said anchorage.

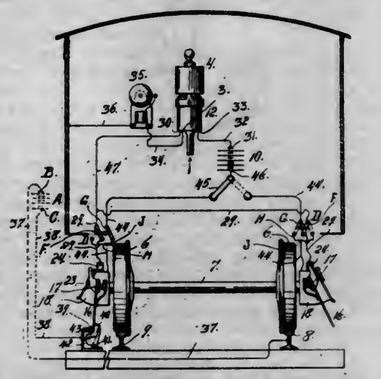
3. A submerged buoy having a plurality of mooring cables, one of which comprises electric conductors, and means for connecting said conductors to said buoy comprising a universal joint, one member of which is attached to said buoy, and a clamp box comprising means adapted to restrain the conductor-carrying cable from endwise movement.

4. A submerged buoy having a plurality of mooring cables, one of which comprises electric conductors, in combination with an anchorage, two clamp boxes each adapted to receive said conductor-carrying cable and restrain it from endwise movement, and two universal joints one connecting one of said clamp boxes with said buoy and the other connecting the other clamp box with said anchorage.

5. A submerged buoy having a plurality of mooring cables, one of which comprises electric conductors, in combination with an anchorage, and means for connecting said conductors to said anchorage comprising a universal joint and means for restraining said conductor-carrying cable from endwise movement in either direction.

[Claims 6 to 14 not printed in the Gazette.]

1,115,364. AUTOMATIC TRAIN CONTROL FOR CAB-SIGNALS. BENJAMIN F. WOODING, Denver, Colo. Filed July 15, 1912. Serial No. 709,327. (Cl. 246—25.)



1. Railway signaling apparatus including a source of current carried by the train, signal devices also carried by the train and supplied by the said source, a rigid U-shaped device whose arms are pivotally connected with the opposite sides of an axle journal box of the train, one arm of which is constantly electrically connected with one pole of said source and the other arm normally electrically connected with the other pole, the device being mounted to oscillate whereby its connection with the last named pole is broken.

2. In railway signaling apparatus, the combination with a train circuit, of a rigid U-shaped device whose arms are pivotally connected with the opposite sides of an axle journal box of the train, one arm of said device being constantly in electrical communication with one pole of said circuit, while the other pole is arranged to be intermittently engaged by the other arm of said device.

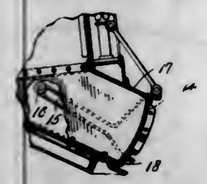
3. Railway signaling apparatus including a train circuit and a U-shaped device, the arms of the latter being pivotally connected with the opposite sides of an axle journal box of the train, one of said arms being constantly in electrical communication with one pole of said circuit, the said device being held normally in such position that the other arm is in communication with the other pole, the said device being movable whereby said last-named connection is broken.

4. Railway signaling apparatus including a train circuit, a U-shaped device whose arms are pivotally connected with the opposite sides of an axle journal box of the train,

a stationary contact also carried by the train, a contact member connected with one arm of said U-shaped device, the U-shaped device being spring held to hold said contact member in engagement with said stationary contact, a circuit with one pole of which the stationary contact is electrically connected, the opposite arm of the U-shaped device being constantly in electrical communication with the other pole of the circuit, the U-shaped device being movable to disengage its contact member from the said stationary contact for the purpose set forth.

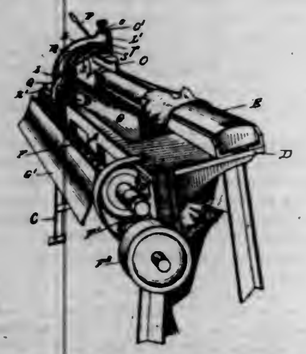
5. Railway signaling apparatus including a U-shaped device carried by the train and pivotally mounted on opposite sides of an axle journal box, springs acting on said U-shaped device to hold it in a predetermined position, adjustable means for limiting the movement of the U-shaped device in response to said spring, one arm of the U-shaped device being equipped with a contact member and a circuit carried by the train with one pole of which the said contact member is normally in electrical communication, while the opposite arm of the U-shaped device is constantly in communication with the other pole.

1,115,365. DUMP-CAR. SAMSON D. WRIGHT, Cleveland, Ohio. Original application filed Feb. 9, 1910, Serial No. 542,932. Divided and this application filed Dec. 6, 1912. Serial No. 735,188. (Cl. 105—186.)



In a dump car, in combination, suitable trucks, a frame, a car body having a discharge opening on one side, an inclined floor for such body having a ledge along the edge of the floor at the discharge opening and lower than the same, thereby forming a shoulder, a door for closing said discharge opening and arranged to swing above said ledge and engage said shoulder, and a wear strip along the inner lower corner and coöperating with the shoulder and the ledge.

1,115,366. GARMENT-PRESSING MACHINE. EDWIN H. ZACHARIAS, Reading, Pa. Filed May 7, 1914. Serial No. 837,076. (Cl. 68—9.)



1. In a garment pressing machine, the combination with the frame having a longitudinal way thereon and the pressing board extending parallel with said way but spaced therefrom, of a carriage mounted to reciprocate on said way, a driving mechanism for reciprocating the carriage, an arm pivotally mounted on said carriage to swing in a horizontal plane over and away from the pressing board, an iron mounted in the arm, and vertically movable independently thereof, and a lever handle for controlling the depression of the iron.

2. In a garment pressing machine, the combination with the frame having a longitudinal way thereon, a pressing board extending parallel with but spaced from said frame, and a carriage mounted to reciprocate on said way, of driving mechanism for reciprocating the carriage, an iron carrying arm pivotally mounted on the carriage to swing horizontally over the pressing board, an iron mounted in said arm and vertically movable independently thereof, a handle for controlling the depression of the iron, and connections intermediate said handle and driving mechanism for controlling the movements of the carriage by means of said handle.

3. In a garment pressing machine, the combination with the frame having a longitudinal way thereon, a carriage mounted to reciprocate on said way and a pressing board rigidly supported at one end on the frame and extending parallel with but spaced from said way, of an iron supporting arm mounted on the carriage and extending over the pressing board, a vertically movable iron mounted in said arm, a handle controlling the depression of the iron, a driving mechanism for reciprocating the carriage, a clutch for connecting the carriage with said driving mechanism, and clutch controlling connections intermediate the handle and clutch whereby the movement of the iron and coupling of the driving mechanism with the carriage are controlled simultaneously.

4. In a garment pressing machine, the combination with the frame having a longitudinal way thereon, a carriage mounted to reciprocate on said way and a pressing board extending parallel with but spaced from the way, of an iron carrying arm mounted on the carriage and extending over the pressing board, a vertically movable iron mounted in said arm for coöperation with garments spread on the pressing board, driving mechanism for reciprocating the carriage, a clutch for coupling the carriage with said driving mechanism and a handle movable longitudinally with the carriage for controlling said clutch.

5. In a garment pressing machine, the combination with the frame having a longitudinal way thereon, a carriage mounted to reciprocate on said way, a pressing board extending parallel with the way, and an iron carrying arm mounted on the carriage and extending over the pressing board, of a driving mechanism embodying a shaft having a right and left hand screw thread thereon, nuts mounted in the carriage and coöperating with said screw threads, a clutch for coupling either of said nuts with the carriage for moving the latter in one direction or the other, and a lever controlling said clutch pivotally mounted on the carriage.

[Claims 6 to 16 not printed in the Gazette.]

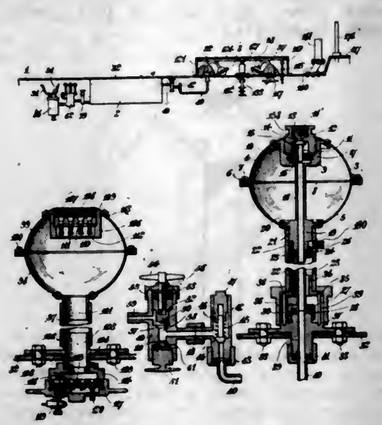
1,115,367. PRESSURE-REGULATING AIR-CIRCULATING SYSTEM FOR SUBMARINES. THEODORUS J. P. AANSTOOTS, Passaic, N. J. Filed Feb. 27, 1914. Serial No. 821,561. (Cl. 114—16.)

1. The combination with a submarine boat, of a compressed air tank located therein, a flexible air supply leading thereto, an air distributer to which the air is led from said tank, a pressure regulator between the tank and distributer, and a flexible air outlet pipe leading outwardly from the interior of the boat.

2. The combination with a submarine boat, of a compressed air tank located therein, a flexible air supply leading thereto, a check valve controlling said pipe, an air distributer to which the air is led from said tank, a pressure regulator between the tank and distributer, and a flexible air outlet pipe leading outwardly from the interior of the boat.

3. The combination with a submarine boat, of a compressed air tank located therein, a flexible air supply leading thereto, an air distributer to which the air is led from said tank, a pressure regulator between the tank and distributer, a flexible air outlet pipe leading outwardly from the interior of the boat, and a check valve controlling said pipe.

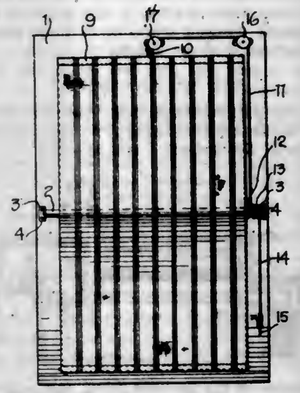
4. The combination with a submarine boat, of a compressed air tank located therein, a flexible air supply leading thereto, an air distributer to which the air is led from said tank, a pressure regulator between the tank and distributer embodying a spring seated valve, and a flexible air outlet pipe leading outwardly from the interior of the boat.



5. The combination with a submarine boat, of a compressed air tank located therein, a flexible air supply leading thereto, an air distributer to which the air is led from said tank, a pressure regulator between the tank and distributer, embodying a spring seated valve, means for varying the resistance of said valve away from its seat, and a flexible air outlet pipe leading outwardly from the interior of the boat.

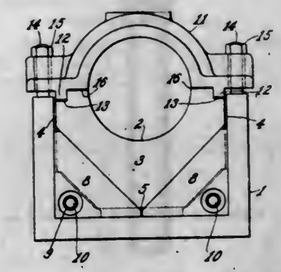
[Claims 6 to 20 not printed in the Gazette.]

1,115,368. AWNING. JEAN M. AHRANO, Tampa, Fla., assignor of one-half to James P. Davidson, Palmetto, Fla. Filed Nov. 10, 1913. Serial No. 800,221. (Cl. 156—44.)



A device of the class described including a roller having having spaced spool portions formed at one end, an awning having its central portion secured to the roller and adapted to be wound thereon, a pivoted frame secured to the lower end of the awning, a stay rod mounted in the upper end of the awning, a cord having its upper end connected with the stay rod and its lower end mounted on one of said spool portions, an operating cord having its upper end mounted on the other of said spool portions, whereby to raise the lower end of the awning and lower the upper end, the weight of the pivoted frame member being adapted to lower the lower end of the awning and raise the upper end thereof, and a rope engaging member adapted for engagement by the lower end of the operating cord, as and for the purpose set forth.

1,115,369. JOURNAL-BEARING. GEORGE W. ALLEN, Hyde Parke, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 26, 1907. Serial No. 408,178. (Cl. 64—55.)



1. A journal bearing comprising a housing, a pillow block fitting loosely within the housing, and having four plane surfaces angularly disposed each to the other, wedges coöperating with said surfaces on the pillow block, and means for moving the wedges to adjust the pillow block, substantially as described.

2. A journal bearing comprising a housing having a base, a pillow block fitting loosely within the housing and adapted to be adjusted transversely of the axis of said bearing in both a vertical and a horizontal direction, and having a plurality of plane surfaces inclined to each other and to both the vertical and horizontal transverse axes of said bearing, and wedges between the pillow block and the base of the housing to adjust the pillow block in the housing, substantially as described.

3. A journal bearing comprising a housing having a base and sides at right angles to said base, a pillow block fitting loosely within the housing and adapted to be adjusted toward and from said base and toward and from said sides, and having a plurality of plane surfaces inclined to each other and to both the base and the sides of the housing, movable wedges engaging the base and sides of the housing and coöperating with said inclined surfaces for adjusting the pillow block, a cap, and means for clamping the cap to the housing to hold the pillow block in adjusted position in the housing, substantially as described.

4. A journal bearing comprising a housing, a pillow block fitting loosely within the housing and having its four bottom corners beveled, wedges for engaging the beveled corners, and means for moving the wedges to adjust the pillow block, substantially as described.

5. A journal bearing comprising a rectangular housing, a pillow block fitting loosely within the housing and having its bottom corners beveled, wedges for engaging the beveled corners of the pillow block, means for moving each of a pair of wedges simultaneously toward or from each other, a cap held in fixed position relative to the pillow block, and means for securing the cap to the housing having provision for vertical and transverse adjustment of the cap, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,115,370. FOUNTAIN-BRUSH. SAMUEL R. ALLEN and JAMES W. BAUGHMAN, Dewey, Okla., said Baughman assignor to said Allen. Filed Feb. 10, 1914. Serial No. 817,872. (Cl. 15—49.)

1. In a liquid dispensing and applying device, a container, a stopper seated on the container and having a central aperture, a tube fitted in the aperture and projecting beyond the stopper, an abutment formed in the tube, a plunger slidably mounted in the tube and having a valve at one end arranged to close the aperture, an absorbent

member connected to the opposite end of the plunger, a spiral spring arranged between the absorbent member and the abutment and means to hold the stopper on the container.

2. A dispensing and applying device comprising a container, a stopper arranged on the container and having an aperture, a plunger operating within the stopper and carrying an absorbent applying device, a valve for closing the aperture which is released upon movement of the applying device toward the stopper and apertured means removably mounted on the container for holding the stopper.

1,115,371. READILY-CHANGEABLE TYPE-FORM. WILLIAM R. ALLEN, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 7, 1913. Serial No. 759,556. (Cl. 101—169.)

1. The combination of a holding device having a type carrying portion for short grooved type and an adjacent deeper pocket, yielding means for engaging the end of line spacers in said pocket enabling printing lines of slightly shorter length between the spacers to be removed without removing the spacers, and a clamp adapted to press laterally on the printing lines and the spacers.

2. The combination of a type holder for short grooved type having a deep pocket, yielding means engaging an end of line spacers of said type holder, a clamp carrying said yielding means and having a portion adapted to abut the ends of the type and having projections extending beyond the sides of the pocket whereby it may be secured to the type holder.

3. The combination of a type holder having a pocket adapted to receive type matter, line spacers extending beyond the ends of the lines of type, a yielding means engaging the ends of said line spacers, and a U-shaped clamp carrying said yielding means having one side overhanging the other to abut the ends of the lines of type.

4. The combination of a type holder having a pocket, means for laterally clamping type matter in said pocket, and a clamp carrying a yielding device engaging the ends of the spacers between the type matter and having an overhanging portion engaging the outer face of the spacers and abutting the ends of the lines of type matter shorter than the spacers.

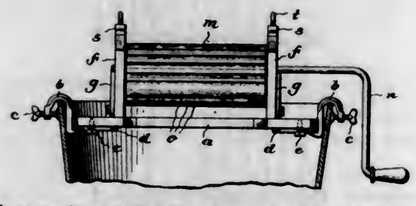
5. The combination of a holder having a series of parallel rails for holding short type and beside such series a pocket, means for tightly clamping in the pocket line spacers and interposed type lines by side pressure, and means for yieldingly engaging the ends of the line spacers to hold them in place when the type are removed.

[Claims 6 to 11 not printed in the Gazette.]

1,115,372. WRENCH. FRANK ANDRUSZKIEWICZ, Easthampton, Mass. Filed Mar. 30, 1914. Serial No. 828,293. Cl. 81—134.)

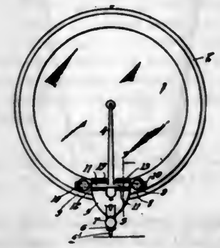
A wrench of the class described comprising a shank, a fixed jaw formed at one end thereof, a relatively movable jaw mounted on said shank, said shank being provided with rack teeth along one side edge thereof, a dog pivotally carried on the movable jaw and designed for engagement with said rack teeth, the pivot pin of said dog projecting slightly beyond the side faces of said movable jaw, a spring member disposed completely through said dog and bent to permit the arms thereof to project upwardly along the side faces of the dog and said movable jaw, and means for securing the ends of the arms of said spring to said movable jaw whereby to normally dispose said dog in its effective engaging position, the projecting portions of said pivot pin being arranged just outside of the plane of the arms of said spring and intermediate the ends thereof for engagement with said arms when the dog is moved to its ineffective and disengaged position whereby to limit the outward swinging movement of the latter.

1,115,373. WASHING-MACHINE. LOUIS S. ANSELL and CORNELIUS SPEER, Huntington, W. Va. Filed Dec. 4, 1913. Serial No. 804,647. (Cl. 68—23.)



In a machine of the type set forth, the combination of a base board and means for supporting it in a tub, pedestals or uprights mounted thereon, each of which is vertically slotted, a series of bed rollers, a main roller mounted upon the bed rollers and having its shaft extended through said slots, a cap plate mounted over each of said slots, one end of this cap plate being pivotally connected to its pedestal, so as to be capable of swinging to one side to uncover the upper end of the slot, rods carried by these cap plates, each rod carrying a bearing block adapted to bear upon the shaft of the main roller, a spring surrounding each rod between its bearing block and its cap plate, means being provided at the upper end of each rod for holding the spring under compression, and means for detachably fastening the free end of each cap plate to the pedestal, for the purposes set forth.

1,115,374. SOUND-BOX. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West, Orange, N. J., a Corporation of New Jersey. Filed Apr. 20, 1911. Serial No. 622,412. (Cl. 181—11.)



1. In a sound box, the combination of vibratory means, a support therefor, a stylus arm connected with said vibratory means, said arm having a plurality of movably connected sections, yielding means interposed between said sections, and means for reguating the pressure of said sections on said yielding means, substantially as described.

2. In a sound box, the combination of vibratory means, a support therefor, a stylus arm pivoted to said support and connected with said vibratory means, said arm having a plurality of pivotally connected sections, yielding means interposed between said sections, and means for regulating the pressure of said sections on said yielding means substantially as described.

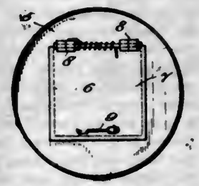
3. In a sound box, the combination of vibratory means, means for supporting the same and a stylus arm connected with said vibratory means, the said arm having a plurality of sections provided with means for connecting the same, the said last named means comprising a pivot, a socket therefor provided with a bushing of yieldable material, and means for regulating the pressure between said socket, bushing and pivot, substantially as described.

4. In a sound box, the combination of vibratory means, a support therefor, and a stylus arm pivoted to said support and connected with said vibratory means, said arm having a plurality of sections provided with means for connecting the same, the said last named means comprising a pivot, a socket therefor provided with a bushing of yieldable material and means for regulating the pressure between said socket, bushing and pivot, substantially as described.

5. A stylus arm having a plurality of sections provided with means for connecting the same, the said means comprising a pivot, a socket therefor having a bushing of yieldable material and means for regulating the pressure between said socket, bushing and pivot, substantially as described.

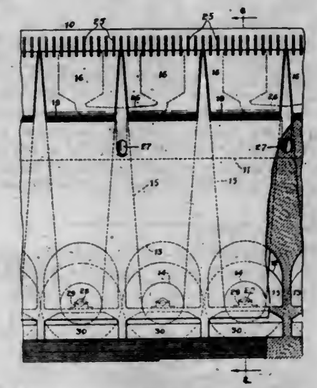
[Claims 6 to 10 not printed in the Gazette.]

1,115,375. SANITARY GARBAGE-CAN. HARRY BACHOWSKI and REUBEN COHEN, New York, N. Y. Filed Aug. 16, 1912. Serial No. 715,488. (Cl. 220—115.)



A can comprising a body having a synclinal bottom located between its ends, said bottom having a central opening, guides secured directly to the converging portions of said bottom and located below the opening thereof and between the ends of the body, a door slidably mounted in the guides, the lower portion of the body being cut away leaving at its side an opening leading from the lower edge of the body to a line above the plane of the door, a handle fixed to the door and disposed toward the opening in the side of the body, the parts being so arranged that when the door is in a closed position across the opening in the bottom the outer end of the handle lies within the periphery of the body.

1,115,376. DAM AND HYDRAULIC-POWER CONVERTER. WILLIAM H. BAKER, Bridgeport, Conn. Filed Oct. 11, 1912. Serial No. 725,218. (Cl. 61—34.)



1. A structure of the character described comprising a dam having a chamber, a water wheel in said chamber, a passage leading from the water wheel to the face of the dam, a penstock leading from the face of the dam below the crest to the water wheel, a swinging gate in front of the penstock, an arm extending therefrom and means operating through said arm to swing the gate and regulate the volume of water that can enter the penstock.

2. A structure of the character described comprising a dam having a chamber, a water wheel in said chamber, a passage leading from the water wheel to the face of the dam, a penstock leading from the face of the dam to the water wheel, a ledge having gear teeth, a gate having a rounded head provided with corresponding gear teeth and converging faces forming a cutwater, and means for swinging the gate, substantially as described, for the purpose specified.

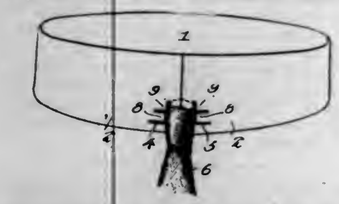
3. A structure of the character described comprising a dam having a chamber, a water wheel in said chamber, a passage leading from the water wheel to the face of the dam and a penstock leading from the face of the dam to the water wheel, the lower end of said penstock being circular in cross section, the front and back converging and the sides diverging, substantially as described, for the purpose specified.

4. A structure of the character described comprising a dam having a chamber, a water wheel in said chamber, a passage leading from the water wheel to the face of the dam, a penstock leading from the face of the dam to the water wheel, the lower end of said penstock being circular in cross section, the front and back converging and the sides diverging, and a swinging gate corresponding in elevation with the upper end of the penstock.

5. A structure of the character described comprising a dam having a chamber, a water wheel in said chamber, a passage leading from the water wheel to the face of the dam, a penstock leading from the face of the dam to the water wheel, a swinging gate for controlling the volume of water to the penstock and guards secured in the face of the dam at the crest and forming stops to limit the outward movement of the gate.

[Claims 6 and 7 not printed in the Gazette.]

1,115,377. COLLAR. ARTHUR ANTON BAMFORD, Chicago, Ill. Filed May 23, 1911. Serial No. 628,916. (Cl. 2—71.)



A turn over collar having its front portion adjacent its meeting edges provided with vertical slits and spaced rearwardly extending parallel slits leading from said vertical slits and forming tie the retaining tongues of substantially rectangular formation which have their free edges extending toward each other and terminate adjacent the said meeting edges of the collar, the said vertical slits receiving the tie between the end wall thereof and said free edges of the tongues whereby the latter are forced to assume an angular position outwardly of the collar and have their free edges impinged against the major portion of the opposite sides of the knot of the tie for the purpose specified.

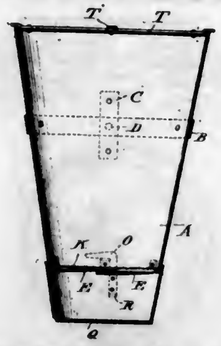
1,115,378. WASHBOILER ATTACHMENT. GEORGE N. BEASLEY, West Tulsa, Okla. Filed Jan. 17, 1914. Serial No. 812,803. (Cl. 68—30.)

An attachment for wash boilers, the same comprising a hollow base, a stand pipe and a distributing head, such distributing head comprising upper and lower parts having depending rims, which have portions in contact and intermediate portions spaced apart to provide outlets, one of the rims being provided with studs and the rim of the outer part having bayonet slots to receive such studs to form connecting means between the two parts and maintaining the same properly spaced.

1,115,379. APPARATUS FOR SEPARATING TURPENTINE FROM DROSS. JAMES T. BESSENT, Warwick, Ga. Filed June 19, 1914. Serial No. 846,163. (Cl. 210—16.)

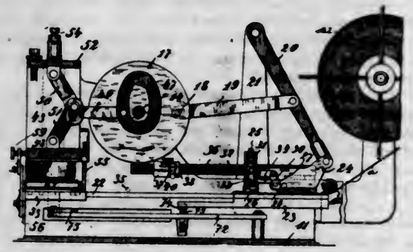
1. An apparatus for separating dross from rosin consisting of a tapering receptacle having its lower end open, cross-pieces projecting across said open end, a screen resting upon said crosspieces, a cup telescoping over the bottom of the receptacle, angled bars upon said cup, and lugs projecting from the receptacle and engaged by said bars.

2. An apparatus for separating dross from rosin consisting of a tapering receptacle with an open bottom, a band surrounding the receptacle, straps secured to the latter and engaging said band, stub shafts projecting from said band and passing through said straps, designed to form supports for the receptacle, crosspieces intersecting the exit end of the receptacle, a screen supported upon the crosspieces, a cup telescoping over the lower end of



the receptacle, angled bars fastened to the cup and engaging projecting ends of said screen supporting bars, and a closure for the receptacle.

1,115,380. MACHINE FOR PRINTING PRICE-CARDS, LABELS, TICKETS, TAGS, AND THE LIKE. GUSTAV BEUTLER, Berlin, Germany, assignor to Berliner Special-Maschinen-Industrie Victor Sternberg, Berlin, Germany. Filed Nov. 22, 1913. Serial No. 802,532. (Cl. 101—21.)



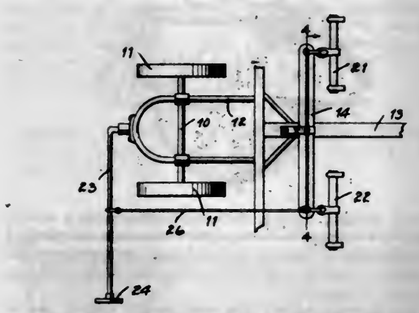
1. Machine for printing price cards, labels, tickets, tags and the like from a paper strip corresponding in width to the width of the printing, comprising a frame, a slide horizontally reciprocable on the frame, a bridge secured on the slide, a driving member for said slide, a rocking lever hinged at one end to said frame and at the other end to said bridge, a connecting rod between said member and said lever, a gripping member movably mounted on said bridge, and resting on the slide, means for holding said gripping member in raised position, means for releasing said holding means thereby letting down the gripping member to engage the paper strip, and means for raising the gripping member at the end of the stroke.

2. Machine for printing price cards, labels, tickets, tags and the like from a paper strip corresponding in width to the width of the printing, comprising an adjustable paper feed gear and a printing gear, said feed and printing gears having a common drive, a cutting off gear operated by the printing gear and an inking gear operated by the feed gear, the said feed gear consisting of a slide provided with a cam groove and traveling under the paper web and a gripper above the paper, which is released at the moment of the feed and is automatically withdrawn at the end of the feed, the inking gear arranged in a frame movable transversely to the direction of travel of the slide, said frame coupled by levers to said cam groove in the slide, said cam groove having such a shape, that the inking gear frame is moved when the slide travels in the direction of the feed, and the inking gear remains stationary during the return of the said slide.

3. Machine for printing price cards, labels, tickets, tags and the like from a paper strip corresponding in width

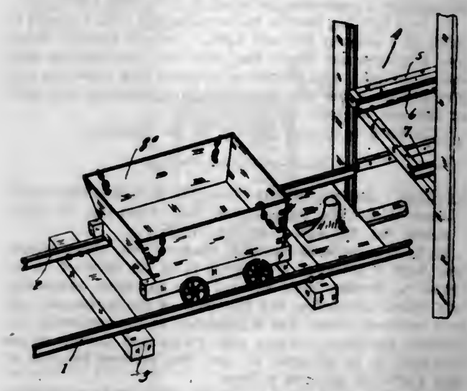
to the width of the printing, comprising an adjustable paper feed gear and a printing gear, said feed and printing gears having a common drive, a cutting off gear operated by the printing gear and an inking gear operated by the feed gear, the said feed gear consisting of a slide provided with a cam groove and traveling under the paper web and a gripper above the paper, which is released at the moment of the feed and is automatically withdrawn at the end of the feed, the inking gear arranged in a frame movable transversely to the direction of travel of the slide, said frame coupled by levers to said cam groove in the slide, said cam groove having such a shape, that the inking gear frame is moved when the slide travels in the direction of the feed, and the inking gear remains stationary during the return of the said slide, a revoluble inking disk arranged beneath inking rollers adapted to be intermittently turned by a resilient tongue rocking in the inking gear frame.

1,115,381. MARKER. JOHN P. BEVER, Allerton, Ill. Filed July 11, 1913. Serial No. 778,601. (Cl. 111—24.)



In a marker, the combination of a wheeled frame, a draft tongue supported by said frame at the front of the latter, a double tree pivoted on said tongue, clevises at the terminals of said double tree, a vertical arch member having its terminals engaged through openings in the clevises and through passages in the double tree and constituting a pivotal connection for securing the clevises to the double tree, a marker arm pivoted on the frame, a link connecting the double tree and marker arm and extending parallel to the line of travel, and a marker wheel journaled in the free end of said arm.

1,115,382. TRIP MECHANISM FOR PIT-CARS. HERMAN BOLTENDAHL, Uniontown, Pa. Filed Aug. 21, 1914. Serial No. 857,980. (Cl. 104—49.)

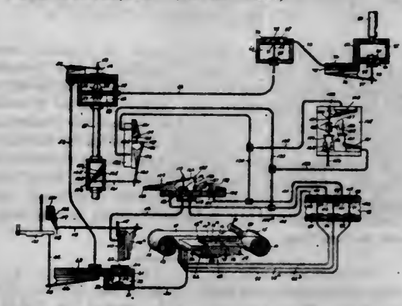


1. A trip mechanism for the purpose set forth comprising a shaft, a triangular shaped member projecting forward therefrom, a vertically disposed stop carried at the forward end of said member, an arm projecting forward from the forward end of the member, an extension hinged to said arm, and a coil spring connected to said member and normally maintaining said stop projected in the path of a car.

2. A trip mechanism for the purpose set forth comprising a shaft, a triangular shaped member projecting forward therefrom, a vertically disposed stop carried at the forward end of said member, an arm projecting forward from the forward end of the member, an extension hinged to said arm, and a coil spring connected to said member and normally maintaining said stop projected in the path of a car, and a pair of springs having one end stationary and the other end fixed to the shaft.

3. A trip mechanism for the purpose set forth comprising a spring controlled rock shaft, a spring controlled triangular shaped member projecting forward therefrom, a vertically disposed stop arm carried by said member, an arm projecting forward from the forward end of said member, and an extension hinged to the forward end of said arm.

1,115,383. AUTOMATIC MUSICAL INSTRUMENT. ERNST BÖCKER, New York, N. Y. Filed Apr. 14, 1910. Serial No. 555,534. (Cl. 84—198.)



1. In an automatic musical instrument, the combination of a main musical instrument, a secondary musical instrument, separate independent driving means for operating each instrument and means controlling the operation of the sounding devices of both instruments and operated by the driving means in one instrument and adapted to also control the operation of the driving means in the other instrument.

2. In automatic musical instruments, the combination of a main musical instrument, a secondary musical instrument, separate independent motors for independently operating each instrument, and means operated by the motor in said main instrument for starting and stopping the motor of the secondary instrument whereby the starting and stopping of the latter is controlled.

3. In automatic musical instruments, the combination of a main musical instrument, a secondary musical instrument, a note sheet controlling the operation of the sounding devices of both instruments, driving means in the main instrument for operating said note sheet, separate driving means for the secondary instrument and devices on said note sheet for controlling the operation of the driving means of said secondary instrument.

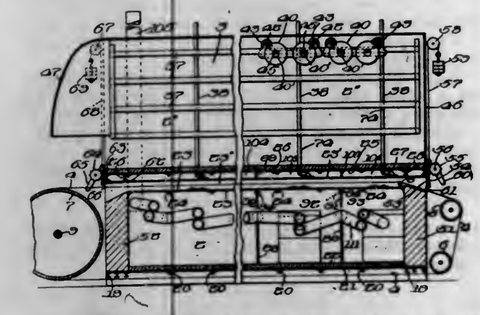
4. In automatic musical instruments, the combination of a main musical instrument provided with sounding devices, a secondary musical instrument provided with sounding devices and located at a distance from the main instrument, separate means for actuating said sounding devices in each instrument, means located in one instrument for controlling the operation of the sounding devices in both instruments and means for rendering the sounding devices in one instrument inoperative and for simultaneously rendering the sounding devices in the other instrument operative.

5. In automatic musical instruments, the combination of a main musical instrument, a secondary musical instrument located at a distance therefrom, means for operating

said instruments, means for throwing one of said instruments out of operation, a valve controlling the other instrument and means for bringing about the operation of said means and said valve simultaneously.

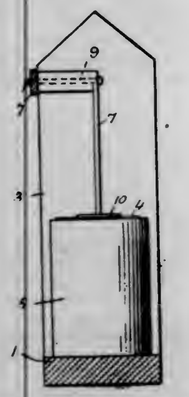
[Claims 6 and 7 not printed in the Gazette.]

1,115,384. BAKING MACHINERY. SWAN G. BONAPARTE, Chicago, Ill. Filed Nov. 20, 1911. Serial No. 661,367. (Cl. 107—57.)



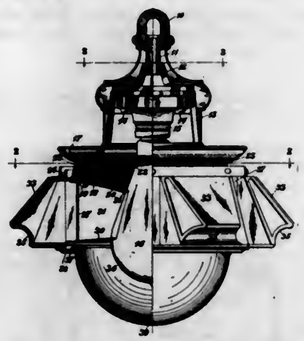
The combination with a baking oven, of a casing open at both ends, an endless apron having a run passing through said casing, a fire pot chamber and a series of individual fire-pots underneath said casing, a series of vertical partitions dividing said chamber, means for admitting heat from one partition to another, an inclosure having a series of partitions above said casing, damper-controlled passages for admitting heat to or withholding heat from the spaces between the last mentioned partitions, and valve-controlled ventilating passages leading to the outer air from said casing.

1,115,385. SEALING-PRESS. LEONA S. BRADY, Norwood, Ohio. Filed June 21, 1913. Serial No. 775,112. (Cl. 113—100.)



A sealing press comprising an elongated base block, vertical standards secured to the ends of the base block and disposed in opposite relation to each other, an operating lever pivoted at one end upon one of said standards to one side edge thereof and adjacent to the upper terminal and having its other end extended beyond the other standard and cut away upon opposite sides to form a handle portion, a latch having a plurality of angularly disposed teeth pivoted upon the outer face of the standard adjacent to the free end of the lever and arranged to engage the lever in spaced relation to the end thereof to hold said lever in adjusted position, a pressure rod, an annular head member carried upon the lower terminal of said pressure rod, a right angular extension formed on the upper end of the pressure rod, a bolt inserted through the extension and central portion of that portion of the lever arranged between the standards, said pressure rod and head member being arranged centrally of and in superposed relation to the side edges of the base plate, said extension being cylindrical and apertured to receive said bolt.

1,115,386. LIGHTING-FIXTURE. PAUL A. BREDSVOLD, St. Louis, Mo. Filed Jan. 2, 1914. Serial No. 809,832. (Cl. 240—91.)



1. In a lighting fixture, the combination with a source of light, of a support for said light, and a reflector divided into a plurality of compartments, said compartments being arranged side by side in the direction of the circumference of the fixture.

2. In a lighting fixture, the combination with a source of light, of a support for said light, a reflector divided into a plurality of compartments, said compartments being arranged side by side in the direction of the circumference of the fixture, and a plurality of translucent shades coöperating with said reflector.

3. In a lighting fixture, the combination with a source of light, of a support for said light, a reflector divided into a plurality of compartments, said compartments being arranged side by side in the direction of the circumference of the fixture, and a plurality of hollow translucent shades coöperating with said reflector.

4. In a lighting fixture, the combination with a source of light, of a support for said light, a reflector divided into a plurality of compartments, said compartments being arranged side by side in the direction of the circumference of the fixture, and a plurality of hollow protruding shades of translucent material coöperating with said reflectors.

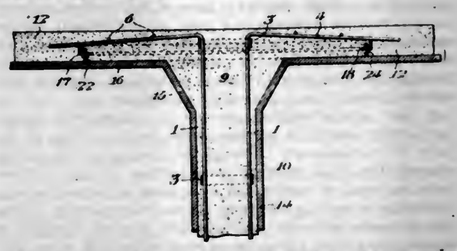
5. In a lighting fixture, the combination with a source of light, of a support for said light, a pair of annular reflectors arranged one above the other and surrounding said source of light, and partitions between said reflectors and dividing the same into compartments deflecting the light at different angles.

[Claims 6 to 15 not printed in the Gazette.]

1,115,387. REINFORCED CONCRETE CONSTRUCTION. JOHN G. BROWN, Philadelphia, Pa. Filed Oct. 16, 1913. Serial No. 795,416. (Cl. 72—15.)

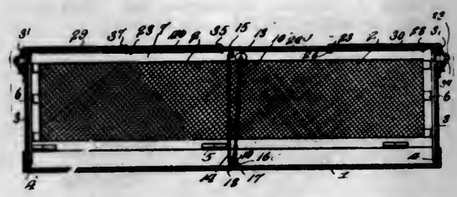
1. In a reinforced concrete construction, the combination with a plurality of elbow-rods in the form of an inverted L, having their vertical legs extended outwardly, of a frame supporting the free ends of the horizontal legs in a common plane, and a plurality of independently adjustable members carrying said frame and having means arranged to be adjusted to vary the vertical position of said frame at selected regions.

2. In reinforced concrete construction, the combination with a plurality of reinforcing rods forming a cantaliver structure, of a frame for supporting the free ends of said rods and comprising a vertical web upon which said rods rest, a horizontal web, and standards carrying said frame and having adjustable means engaged with said horizontal web to vary the position of said frame.



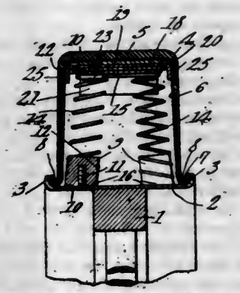
3. In reinforced concrete construction, the combination with reinforcing rods forming a cantaliver structure, of a frame for supporting the free ends of said rods, and comprising supporting bars connected in adjustable relation with a plurality of connecting members, means for adjustably engaging said bars with said connecting means, and adjustable standards for said members, having means for varying the position of said frame.

1,115,388. FOLDING CHICKEN-CRATE. WILLIS E. BROWN, Lorraine, Kans. Filed Feb. 14, 1914. Serial No. 818,816. (Cl. 220—132.)



A crate comprising a bottom member, swinging side walls, swinging end walls, closure sections carried by said side walls and hinged thereto and having portions extending over said end walls, means on the end walls having detachable connection with said extending portions, and a flexible brace normally extending between the bottom member and said side walls and adapted to be extended over said side walls when the crate is in a folded condition, and means on said bottom member for receiving the free terminals of said brace.

1,115,389. TIRE. JOHN W. BURGESS and GEORGE F. BURGESS, Brookfield, Mo. Filed Sept. 2, 1913. Serial No. 787,772. (Cl. 152—8.)

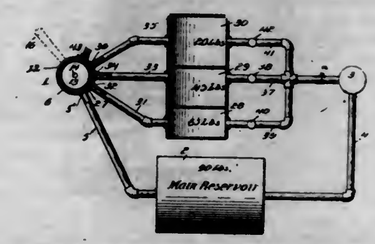


In a device of the class described, a rim; a tread; studs carried by the tread; and a pair of helical springs secured at their inner ends to the rim, the springs being disposed in alinement transversely of the rim, the springs being wound in the same direction and the outer convolutions of the springs being united by an integral connection extended diagonally of a plane passing through the centers of the springs, the connection bearing against opposite faces of the respective studs circumferentially of the tread.

1,115,390. IMPLEMENT DESIGNED FOR MARKING CIRCLES. EGBERT S. CADY, Cedarville, Mich. Filed Dec. 27, 1913. Serial No. 809,071. (Cl. 33—27.)

A compass crayon clamp constructed of a single piece of material, comprising four arms projected in oppositely disposed pairs, one pair of arms being bent to form a crayon receiving casing and projected beyond the casing on divergent lines, the remaining arms being projected in the opposite direction to form a member for engaging an element of the compass, said arms being projected beyond the said member, and means for fastening the arms in position to cause the member to frictionally engage the element.

1,115,391. ECONOMY AIR-BRAKE APPARATUS. WILLIAM G. CANION, El Paso, Tex. Filed Dec. 2, 1913. Serial No. 804,248. (Cl. 188—1.)



1. In brake apparatus of the class described, the combination of a main reservoir, a supply pump therefor, a plurality of economy reservoirs, and a valve to establish communication between the main reservoir and the train line, or between the train line and any one of the economy reservoirs at will.

2. In air brake apparatus of the class described the combination of a main reservoir, a supply pump therefor, and a plurality of economy reservoirs of varying capacity, and a valve to establish communication between the main reservoir and the train line or between the train line and any one of the economy reservoirs at will.

3. In air brake apparatus of the class described the combination of a main reservoir, a supply pump therefor, a plurality of economy reservoirs, and a valve to establish communication between the main reservoir and the train line, or between the train line and any one of the economy reservoirs or between the train line and the outer air at will.

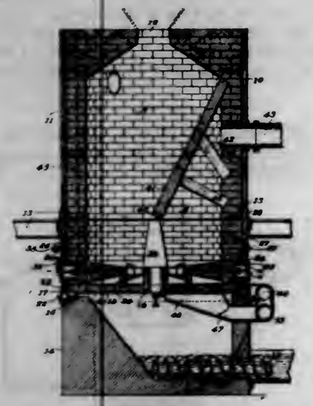
4. In air brake apparatus of the class described a valve to establish communication between the main reservoir and the train line or between the train line and the econ-

ony reservoir at will, said valve having pressure reducing means, and comprising a casing connected directly to the train line and having a port connected to the main reservoir and a bypass dust leading from said port, said valve casing also having a port connected to the economy reservoir, and a movable hollow valve plug in the casing, having a port in constant communication with the train line, a port movable into communication either with the main reservoir port or the economy reservoir port at will, and also having a valved port movable into and out of registry with the said bypass duct.

5. In air brake apparatus of the class described a valve to establish communication between the main reservoir and the train line or between the train line and the economy reservoir at will, said valve having pressure reducing means, and comprising a casing connected directly to the train line and having a port connected to the main reservoir and a bypass duct leading from said port, said valve casing also having a port connected to the economy reservoir, and a movable hollow valve plug in the casing, having a port in constant communication with the train line, a port movable into communication either with the main reservoir port or the economy reservoir port at will, and also having a valved port movable into and out of registry with the said bypass duct, and a spring to close the valve in said valved port at predetermined pressure.

[Claim 6 not printed in the Gazette.]

1,115,392. PROCESS OF MAKING GAS. JOHN O. CARREY, St. Louis, Mo. Filed July 26, 1913. Serial No. 781,398. (Cl. 48—203.)

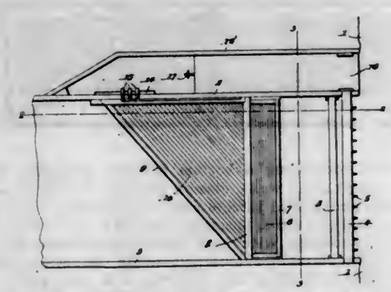


1. The hereindescribed process of making gas which consists in blasting a portion of the lower portion of the body of carbonaceous material by forcing air upwardly through the same whereby that portion of the carbonaceous material is maintained at a state of incandescence, continuously moving the body of the lower portion of the carbonaceous material whereby the burning portion is shifted away from the point of combustion and other portions brought thereto, simultaneously distilling the volatile elements from the upper portion of the carbonaceous material by radiated heat, withdrawing from the upper portion of the distillation zone the volatile elements, conveying said volatile elements to a point beneath the incandescent bed of material, and forcing said volatile elements upwardly through the entire body of incandescent material to convert said volatile elements into a fixed or permanent gas.

2. The hereindescribed process of making gas which consists in blasting a portion of the lower portion of the body of carbonaceous material by forcing air upwardly through the same whereby that portion of the carbonaceous material is maintained at a state of incandescence, continuously moving the body of the lower portion of the carbonaceous material whereby the burning portion is shifted away from the point of combustion and other portions brought thereto, simultaneously distilling the volatile elements from the upper portion of the carbonaceous material by radiated heat, withdrawing the volatile elements from a point above the zone of distillation, conveying said volatile elements to a point wholly beneath the incandescent bed of carbonaceous material and discharging said volatile elements at separated points upwardly through the incandescent bed of material to convert said volatile elements into a fixed or permanent gas.

3. The hereindescribed process of making gas which consists in blasting a portion of the lower portion of the body of carbonaceous material by forcing air upwardly through the same whereby that portion of the carbonaceous material is maintained at a state of incandescence, continuously moving the body of the lower portion of the carbonaceous material whereby the burning portion is shifted away from the point of combustion and other portions brought thereto, simultaneously distilling the volatile elements from the upper portion of the carbonaceous material by radiated heat, withdrawing the volatile elements from a point above the zone of distillation, conveying the volatile elements to a point wholly beneath the body of incandescent carbonaceous material, and discharging said volatile elements upwardly into the incandescent body of material at points between the points of discharge of air into said incandescent body, whereby said volatile elements are converted into a fixed or permanent gas.

1,115,393. FISH SCREEN OR SAVER OR TRAP. ANDREW A. CASWELL, Los Angeles, Cal. Filed Oct. 9, 1913. Serial No. 794,246. (Cl. 61—5.)



1. A device for water ways including a transverse angularly disposed screen, guide screens for directing the fish within said water way against said first mentioned screen, a trough, said trough being communicant with said water way by means of an opening disposed adjacent the far end of the said first mentioned screen, and means forming a barrier positioned over said opening to prevent passage of fish from said trough to said water way, as and for the purpose set forth.

2. A device of the character described including an inclined transversely extending screen, a second screen member extending transversely of the water-way and parallel with the sides thereof, a second inclined screen extending transversely of the water-way, a supplemental trough disposed adjacent the said water-way, the said trough having an opening formed therein through which fish are adapted to pass from the said water-way into the said trough, uniformly spaced apart parallel strips depending over the said opening to form a closure therefor against the repassage of fish from the said trough to the said water-way, an inclined lift-gate adapted to be raised and lowered to open and close the said opening, a lift-gate pivoted within the said trough, the free end being supported by the water therein, and a member pendent from the said gate, as and for the purpose set forth.

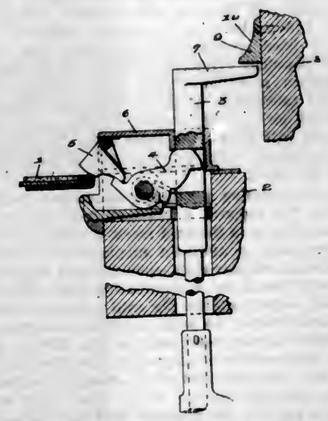
3. In a device for water ways, a trough at one side of said water way, said trough being communicant with said water by means of an opening formed in one side thereof, a screen member positioned within the said water way to direct the fish therein through the said opening, and a barrier positioned over the said opening to permit passage of fish from within the said water way to the said trough and preventing a repassage of the fish within the said trough to the said water way, as and for the purpose set forth.

4. In a device for water ways, a trough communicant therewith, means for directing the fish within said water way into said trough, means preventing the repassage of fish from said trough into said water way, and means including a lift-gate pivoted within said trough, the free end of said gate being supported by the water therein, as and for the purpose set forth.

5. In a device for water ways, a trough communicant therewith, means including a screen for directing the fish within said water way into said trough, means including a plurality of pendent strips adapted to prevent the repassage of the fish from the said trough to the said water way, and a lift-gate pivoted within said trough, the free end of the said gate being supported by the water within the trough, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,115,394. SHIELD FOR RAILWAY-CAR VESTIBULE-TRAP-DOOR LOCKS. EDWARD F. CHAFFEE, Syracuse, N. Y., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,091. (Cl. 105—84.)



1. A railway car vestibule trap door lock comprising a movable operating member carried by a portion of the car and including a projecting portion located above the platform surface, and a stationary shield covering an edge portion of the operating member to prevent passengers' clothes from catching on the operating member, substantially as and for the purpose described.

2. A railway car vestibule trap door lock comprising an operating member carried by a portion of the car and including a vertical shank and a laterally extending head at its upper end terminating near a vertical wall of the vestibule, the side and end surfaces of the head near the shank of the operating member being flush with the shank, substantially as and for the purpose specified.

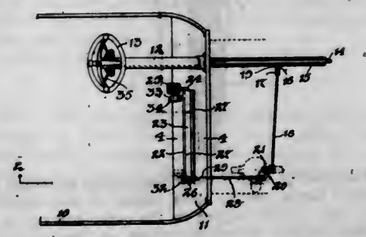
3. A railway car vestibule trap door lock comprising an operating member carried by the platform, and having a laterally extending head, and a stationary shield covering the outer end of said head to prevent passengers' clothes from fouling on the head, substantially as and for the purpose set forth.

4. A railway car vestibule trap door lock comprising a depressible operating member on the platform end sill, said member including a vertically movable shank and a laterally extending head at the upper end of the shank, the head extending laterally on one side of the shank and terminating near a side wall of the vestibule, and a shield carried by the side wall in position to cover the outer end of said arm, substantially as and for the purpose described.

5. A railway car vestibule trap door lock comprising an operating member carried by a portion of the car and including a vertical shank and a laterally extending head at its upper end terminating near a vertical wall of the vestibule, the side and end surfaces of the head near the shank of the operating member being flush with the shank, and a shield carried by said wall of the car in position to cover the outer end of said arm, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,115,395. THROTTLE CONTROL FOR MOTOR-VEHICLES. JONATHAN M. CHENEY, Ashland, N. H. Filed Dec. 4, 1913. Serial No. 804,681. (Cl. 21—90.



1. In a motor vehicle the combination of the engine throttle-valve having a yoke piece on its stem, a hand-controlled spindle having a hand lever and an arm, a foot-controlled rock-shaft having a pedal and an arm, and two rods, one connected with the spindle and the other with the rock-shaft arm, and both having direct connections with the valve-stem yoke piece, one of said rods having a lost motion engagement with the spindle arm, providing for a movement of the rod in one direction without corresponding movement of or resistance by the spindle.

2. In a motor vehicle the combination of the engine throttle-valve having a two-armed yoke piece on its stem, a hand controlled spindle having a hand lever and an arm, a foot-controlled rock-shaft having a pedal and an arm, a pull-rod having a lost motion engagement with the spindle arm, providing for a movement of the rod in one direction without corresponding movement of or resistance by the spindle, said pull-rod being connected with one of the yoke-piece arms, and a push-rod connected with the rock-shaft arm and with the other yoke-piece arm.

3. In a motor vehicle the combination of the engine throttle-valve, a hand-controlled spindle having a hand lever and an arm, a foot-controlled rock-shaft having a pedal and an arm, two rods, one connected with the spindle arm, and the other with the rock-shaft arm, and both having direct connections with the throttle-valve stem to transmit motion thereto, one of said rods having a lost motion engagement with the spindle arm, providing for a movement of the rod in one direction without corresponding movement of or resistance by the spindle, and a spring which yieldingly holds the spindle, the rock-shaft, the rods, and the valve-stem, in their initial positions.

4. In a motor vehicle the combination of the engine throttle-valve having an arm on its stem, the hand-controlled spindle also having an arm, a two-part connection between the arms of the spindle and valve-stem, a rock-shaft having a pedal and an arm, and a rod connecting the rock-shaft arm with the valve-stem arm, one of the parts of the said two-part connection being movable in one rirection independently of the other, and the said parts being provided with complemental abutments which cause their movement in unison in the opposite direction.

5. In a motor vehicle the combination of the engine throttle-valve having an arm on its stem, the hand-controlled spindle also having an arm, a two-part con-

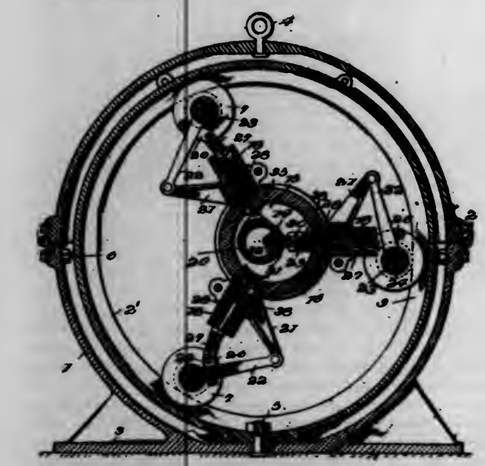
nection between the arms of the spindle and valve-stem, the parts of said connection having complemental abutments, causing them to move in unison in one direction, and one of said parts being independently movable in the opposite direction, a rock-shaft having a pedal and an arm, a rod connecting the rock-shaft with the valve- stem arm, and a spring which yieldingly holds the spindle, the rock-shaft, and the valve-stem in their initial positions, said spring normally holding the said abutments in yielding contact with each other.

[Claim 6 not printed in the Gazette.]

1,115,396. ALARM ATTACHMENT FOR CLOCKS. HAWLEY W. CHRISTENSEN, Monmouth, Ill. Filed June 14, 1911. Serial No. 633,103. (Cl. 161—3.)

The combination with a clock mechanism including hour and minute hands, and a clock casing of non-conducting material, and a dial secured to the outer surface of said casing and having concentric circles of openings, of an alarm secured to said casing, a metallic annulus of a diameter equal to that of said dial and arranged in contacting engagement with the opposite face of said casing and provided with concentric circles of openings registering with the openings of said dial, a plurality of metallic tubes extended through said registering openings, a long and short plug for insertion in the different circles of openings and over which slides the said minute and hour hands respectively for sounding an alarm, a battery within said casing, and an electric circuit including said clock mechanism, hands, plugs, and metallic annulus in series as described.

1,115,397. ROTARY AIR-MOTOR. LEROY CLAWSON, Hall, Mont. Filed June 23, 1913. Serial No. 775,451. (Cl. 121—63.)



1. A motor comprising a stationary cam, a rotary pressure chamber entirely surrounding the cam in eccentric relation thereto, actuating elements carried externally by the pressure chamber, devices connected to said elements and extending into the chamber to ride on the cam, and means for admitting fluid pressure to the chamber to act on said last named devices.

2. A motor comprising a stationary vertically disposed track, a rotary pressure chamber, a cam arranged eccentrically within the pressure chamber, track-engaging members carried by the rotary pressure chamber, and members connected with the track engaging members and extending radially into the pressure chamber to bear upon the cam, the upper portion of the track being concentric with the cam and the lower portion of the track being elongated relative to the upper portion thereof, that part of the lower portion of the track upon which the track engaging members ride downwardly being eccentric to the pressure chamber and the remaining part thereof being concentric to said chamber.

3. A motor comprising an endless track, a rotary pressure chamber arranged eccentrically to said track, means for admitting pressure fluid to said chamber, a stationary cam disposed eccentrically within the pressure chamber and having a recess in its outer surface, radial cylinders carried by said pressure chamber, pistons slidably mounted in said cylinders, shoes carried by the inner ends of said pistons and adapted to bear upon the said cam to exclude pressure from their under sides and ride over the circumferential recess therein whereby pressure may be admitted to their under sides, and centrifugal rollers connected with the outer ends of the pistons and traveling upon the track.

4. A motor comprising an endless track, a rotary pressure chamber arranged eccentrically to said track, a pressure fluid supply pipe entering said chamber through one side thereof and constituting its axis of rotation, a cylindrical body fixed eccentrically upon said pipe within the pressure chamber, cylinders radiating from the said chamber, pistons mounted within the cylinders, shoes pivoted at the inner ends of the pistons and adapted to ride on said cylindrical body, means whereby the pressure in the chamber will release the shoes from the said body, and rollers controlled with the outer ends of the piston to travel upon the track.

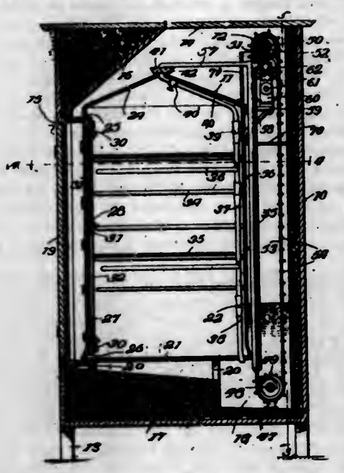
5. A motor comprising a support, an endless track arranged within the support, a pressure fluid supply pipe disposed eccentrically to the said track, a cylindrical body secured eccentrically to the said supply pipe, a pressure chamber mounted concentrically upon the said supply pipe to rotate about the same and inclosing said cylindrical body, cylinders radiating from the said pressure chamber, pistons mounted within the said cylinders, track-engaging members carried by the outer ends of the pistons, shoes having inner concaved faces adapted to bear upon the said cylindrical body and provided with outwardly extending angular stems slidably pivoted to the inner ends of the pistons, means whereby the pressure fluid may release the shoes from the cylindrical body, and yieldable devices mounted in the pistons and bearing upon the said angular stems to hold the shoes toward the said cylindrical body.

1,115,398. REFRIGERATOR. THOMAS FOREST COBLER, Leavenworth, Kans. Filed Oct. 28, 1912. Serial No. 728,220. (Cl. 62—100.)

1. A refrigerator including a casing, a food chest positioned within the casing, a reservoir receiving the bottom portion of the chest and adapted to contain a supply of water, a cooling pipe leading through the chest at the top and bottom thereof and arranged to discharge into the reservoir, and means for supplying the water to the upper end of the pipe from the reservoir.

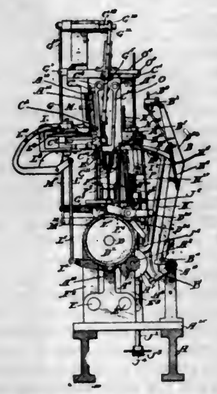
2. A refrigerator including a casing, a food chest mounted within the casing, a plurality of cooling coils positioned within the chest, means for adjusting the position of said coils both with respect to the chest and each other, and means for maintaining a constant circulation of cooling fluid through said coils.

3. A refrigerator including a casing, a food chest positioned in spaced relation within the casing, the space surrounding the lower portion of the chest forming a water reservoir, a plurality of communicating cooling coils mounted within the chest, the end of one coil extending through the bottom thereof, and means for constantly supplying water from the reservoir to the opposite end of the coils, said means including a receipacle carried by the upper end of the coil and communicating therewith, and a pump arranged to raise the water from the reservoir and discharge the same into the receptacle.



4. A refrigerator including a casing, a food chest mounted within the casing, a pipe extending through the top of the casing, a pipe extending through the bottom of the casing, a plurality of horizontally disposed cooling coils within the casing, and telescopic pipes connecting the coils to each other and to the first pipes, and means for supplying a cooling fluid to the said pipes and coils.

1,115,399. MACHINE FOR PREPARING WARPS FOR WEAVING. HOWARD D. COLMAN, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Continuation of application Serial No. 122,381, filed Sept. 6, 1902, and continuation in part of application Serial No. 526,856, filed Oct. 24, 1894. This application filed May 18, 1906. Serial No. 317,547. (Cl. 139—94.)



1. In a textile machine, in combination, means for supporting a warp; means for taking a thread from said warp; and a sensitively controlled feeding means for moving the warp with relation to said thread-taking means.

2. A machine for drawing warp threads having drawing mechanism, a movable warp support, means for causing relative traversing movement between the mechanism and the warp support, and means for controlling said moving means to correct for variations in the spacing of the warp threads.

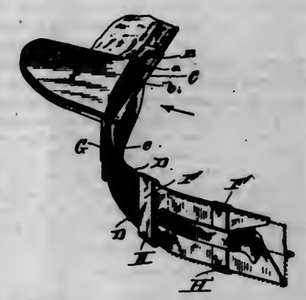
3. In a textile machine, in combination, means for supporting a warp; means for feeding said warp; and means adapted to be acted upon by a warp thread for suspending the feeding action of said feeding means.

4. In a textile machine, in combination, means for supporting a warp; means for taking a thread from said warp; means for producing a relative feed movement between said warp and the thread-taking means; and means adapted to be acted upon by a warp thread for suspending the feeding action of said feeding means.

5. In a textile machine, in combination, means for supporting a warp; means for taking a thread from said warp; a pawl and ratchet feeding mechanism for producing a relative feed movement between the thread-taking means and the warp; and means adapted to be acted upon by a warp thread for limiting the effective engagement between said pawl and said ratchet.

[Claims 6 to 107 not printed in the Gazette.]

1,115,400. FOLDING DEVICE FOR SEWING-MACHINES. CHARLES L. CONE, Portsmouth, Va., assignor to The Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 7, 1905. Serial No. 248,818. (Cl. 112—1.)



1. A folding device comprising a body portion having along its length a channel-forming rib, the latter projecting from the back of the said body-portion and in a direction opposite that of the folding portion of said device, said rib having a channel formed therein for receiving the rib or selvage of the work.

2. A folding device comprising a body-portion having hem-turning devices at its opposite edges and between said devices, a channel for guiding the body of the work, and said body-portion also having between said devices a longitudinally extending channel-forming rib for receiving the rib or selvage of the work.

3. A folding device having a portion provided with hem-turning devices at its opposite edges, and adjacent each of said devices with a passage for guiding the body-part of a piece of binding, and said portion being also provided remote from said turing-devices with means for guiding the rib or selvage of said piece of binding, said means being arranged at the junction of said body-part-guiding passages, and a plate for supporting another piece of work, said plate extending between the said hem-turning devices, substantially parallel to the said rib-guiding means and with its supporting surface at the lower edge of said means, whereby the edge of one piece of the work may be led between the hemmed edges of the other piece of the work and close to said rib or selvage.

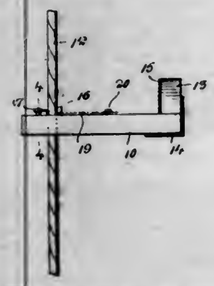
4. A folding device the body-portion of which has a channel-forming rib extending from end to end thereof for receiving and guiding the selvage of the work, and said body-portion also having means on opposite sides of said

rib for folding one portion of the work upon another and also for hemming the edges of both portions of the work.

5. A folding device for sewing machines including guiding walls forming a guiding recess for the body of the binding strip or band, said guiding walls being shaped at their outer edges to provide folding recesses for folding the edges of the strip or band, the outer wall between its edges having a recess therein to receive and guide a tip or rib projecting from the outer face of said strip or band intermediate its edges.

[Claims 6 to 15 not printed in the Gazette.]

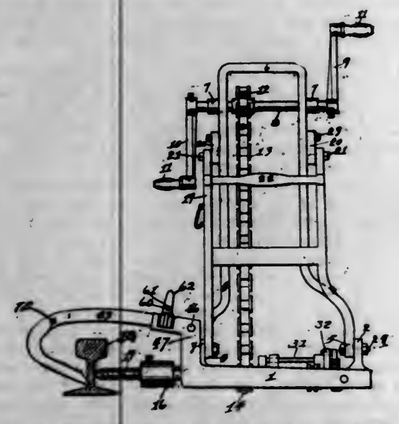
1,115,401. ROPE-CLIMBING DEVICE. LINN FENIMORE COOPER, Albany, N. Y. Filed Oct. 8, 1913. Serial No. 794,140. (Cl. 227—8.)



1. In a rope climbing device, the combination with a body terminating at one end in a central longitudinally arranged slot adapted to have the rope pass therethrough, of a locking member mounted to swing on the body and adapted to bridge the slot to hold the rope therein, means for securing the locking member in bridging position, and a lateral foot rest projecting from one end of the body.

2. In a rope climbing device, the combination with a body provided with a longitudinal slot formed at one end thereof, said slot being adapted to receive the rope therethrough, of a locking member on the body and adapted to bridge the slot to hold the rope therein, a pin for securing the locking member in bridging position, and a foot rest projecting from the other end of the said body.

1,115,402. PORTABLE RAIL-DRILL. CHARLES J. COULTER, Hammond, Ind. Filed Feb. 19, 1912. Serial No. 678,466. (Cl. 77—9.)



1. The combination with a portable drill, of a frame having two upward and downwardly extending arms, clamping means secured to said arms, said clamping means comprising two rail engaging members pivotally attached to the upwardly extending part of the side arms, a transverse bar pivoted to the end of one of said members, the end of said bar being beveled, an upwardly extending hasp secured to the other member and having a hole therethrough adapted to engage the beveled end of the transverse bar, whereby the said engaging members are held rigid with the frame.

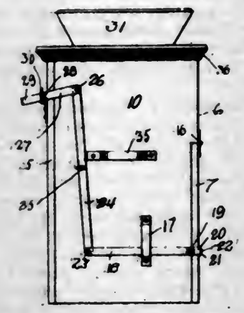
2. A portable drill comprising the combination of an inverted Y-shaped frame, a rectangular frame to which the lower ends of the legs of the inverted Y-shaped frame are pivotally secured, a rotatable sleeve mounted in said rectangular frame, a sprocket on said sleeve, a sprocket mounted in the part of said inverted Y-shaped frame, means to rotate said sprocket, a chain running on said sprockets, a cam formed on the said sleeve, a shaft suitably journaled in the rectangular frame, a lever fixedly attached to one end thereof, a roller on said lever which engages the said cam, a lever at the other end of said shaft, a pawl depending therefrom, a ratchet wheel having an outwardly extending hub journaled in the rectangular frame, a feed screw on which said ratchet wheel is threaded, the teeth of said ratchet wheel being engaged by the said pawl.

3. A portable drill comprising the combination of an inverted Y-shaped frame, a rectangular frame to which the lower ends of the legs of the inverted Y-shaped frame are pivotally secured, a rotatable sleeve mounted in said rectangular frame and sprockets on said sleeve, a sprocket mounted in the upper part of the inverted Y-shaped frame; means to rotate said sprockets, a chain running on said sprockets, a cam formed on said sleeve, a shaft suitably journaled in the rectangular frame, a lever fixedly attached to one end thereof, a roller on said lever, which engages said cam, a lever at the other end of the said shaft, a pawl depending therefrom, a ratchet wheel having an outwardly extended hub journaled in the rectangular frame, a feed screw mounted in the said ratchet wheel, the teeth of said ratchet wheel being engaged by the said pawl, a wheel mounted upon the sleeve and having a beveled face, a pin attached to said pawl adapted to engage said bevel face, means to shift the said wheel whereby its bevel face engages the pin to throw the pawl out of engagement with the teeth of the said ratchet wheel.

4. The combination with a portable drilling mechanism of a chuck in which the drill is mounted, a rotatable sleeve mounted upon said chuck, said chuck being provided with a reduced end, a feed screw rotatably mounted upon said reduced end, means to prevent its longitudinal movement thereon, a ball thrust bearing intermediate the chuck and the said feed screw, a clutch wheel splined upon said rotatable sleeve, said wheel having a bevel face on one side thereof, a pin contacting with said bevel surface, a ratchet wheel having internal threads fitted to the feed screw, a pawl for said ratchet wheel operatively connected to the said pin, said ratchet wheel being provided with recesses for engaging corresponding projections on said clutch wheel whereby the rotation of the clutch wheel operates to advance or retract the feed screw.

5. The combination with a portable drilling mechanism of a chuck in which the drill is mounted, a rotatable sleeve mounted upon said chuck, said chuck being provided with a reduced end, a feed screw rotatably mounted upon said reduced end, means to prevent its longitudinal movement thereon, a ball thrust bearing intermediate the chuck and the said feed screw, a clutch wheel splined upon said rotatable sleeve, said wheel having a bevel face on one side thereof, a pin contacting with said bevel surface, a ratchet wheel having internal threads fitted to the feed screw, said ratchet wheel being provided with recesses for engaging corresponding projections on said clutch wheel whereby the rotation of the clutch wheel operates to advance or retract the feed screw, a cam on said sleeve, a lever operated by said cam, a shaft on which said lever is mounted, a lever at the end of said shaft, a pawl depending from said lever and adapted to engage the teeth of said ratchet wheel and cause its rotation through the medium of the cam, said cam being operatively connected to said pin, and means to shift said clutch wheel on the sleeve.

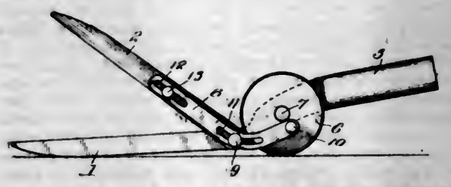
1,115,403. DUMPING-RECEPTACLE FOR DIRT, RUBBISH, AND OTHER REFUSE. ANDRAS CSEH, South Norwalk, Conn. Filed May 6, 1914. Serial No. 836,743. (Cl. 220—115.)



1. A device for the purpose set forth comprising a receptacle having a hinged front wall section, a removable bottom section connected to said front wall section, an inclined plate connected to the said front wall and bottom sections, a stationary bottom section, an inclined plate secured to the rear wall of the receptacle and to said stationary section and disposed oppositely with respect to the first mentioned inclined plate, and means for projecting said front wall section forwardly to open the bottom of the receptacle to allow of the discharge of the contents thereof.

2. A device for the purpose set forth comprising a receptacle having a hinged front wall section, a removable bottom section connected to said front wall section, an inclined plate connected to the said front wall and bottom sections, a stationary bottom section, an inclined plate secured to the rear wall of the receptacle and to said stationary section and disposed oppositely with respect to the first mentioned inclined plate, means for projecting said front wall section forwardly to open the bottom of the receptacle to allow of the discharge of the contents thereof, and latches engaging with said means for maintaining said front wall section and removable bottom section in closed position.

1,115,404. SHEARS. GEORGE H. CUNARD, Iron River, Mich. Filed Apr. 24, 1914. Serial No. 834,193. (Cl. 164—76.)



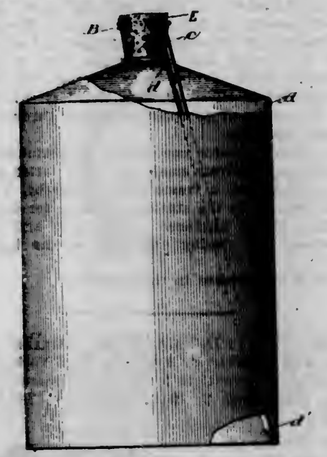
1. Shears comprising a relatively fixed blade having a handle in connection therewith, a movable blade pivotally connected with the fixed blade, a rotary tractor and a lever mounted in line with the pivot connection between the blades and having one end connected with the rotary tractor and its opposite end connected with the movable blade.

2. Shears comprising fixed and movable blades pivotally connected, a handle having connection with the fixed blade, a rotary tractor, a lever mounted in line with the pivot connection between the two blades and having an oscillatory and a sliding movement, means for connecting one end of the lever with the rotary tractor and other means connecting the opposite end of such lever with the pivoted blade.

3. Shears comprising fixed and movable blades pivotally connected, a handle having connection with the fixed blade and offset therefrom in a vertical direction, a rotary tractor, a lever mounted in line with the pivot connection between the two blades and adapted to receive a combined oscillatory and longitudinal movement, such lever having its rear portion curved upwardly, a wrist pin connection between the rear end of the lever and the rotary tractor and a pin and slot connection between the front end of the lever and the pivoted blade.

4. Shears comprising relatively fixed and pivoted blades, a hollow screw pivotally connecting the blades and having one end projecting and formed with a shoulder to engage the pivoted blade, a handle having connection with the fixed blade and offset therefrom in a vertical direction, a rotary tractor, a lever having its rear portion curved upwardly and formed at the bend with a longitudinal slot to receive the projecting end of the beforementioned hollow screw, said lever having a longitudinal slot in its front end, a wrist pin connection between the rear end of the lever and the rotary tractor, a fastening connecting the forward slotted end of the lever with the pivoted blade, and a screw let into the said hollow screw and retaining the lever in place thereon.

1,115,405. RECEPTACLE FOR LIQUIDS. BENJAMIN W. DAVIS, Chicago, Ill. Filed Sept. 12, 1911. Serial No. 648,883. (Cl. 221—1.)



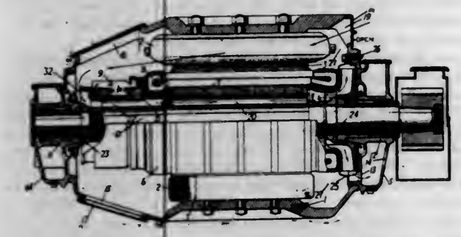
The combination with a portable receptacle for containing liquids, of an outwardly flaring mouth through which the liquid contents are poured, and an air inlet tube terminating at one end in said flaring mouth and at its other end adjacent the bottom of the receptacle at one side thereof, said tube extending through and secured in alining holes in the wall of said flaring mouth and the top of said receptacle adjacent the base of the mouth, whereby the tube may be readily inserted through said holes and supported in the desired inclined position relatively to the receptacle.

1,115,406. DYNAMO-ELECTRIC MACHINE. JOSEPH LE CONTE DAVIS, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 14, 1912. Serial No. 703,632. (Cl. 171—252.)

1. A motor comprising a stationary member, a rotatable member, a substantially closed casing, means for creating a circulation of air as the motor operates, and adjustable means for directing the circulation of air either in a closed circuit within the frame or in an open circuit including passages in the stationary and rotatable parts of the motor and an opening to the outside atmosphere.

2. A dynamo-electric machine comprising a stator, an inclosing casing, a rotor, means for creating a circulation of air as the motor operates, and adjustable means for

directing the circulation of air either in a closed circuit within the frame or in an open circuit including passages in the stator and rotor of the machine and an opening to the outside atmosphere.



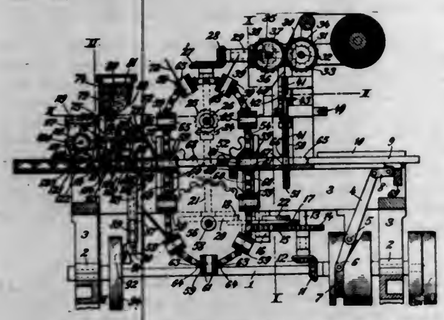
3. A dynamo-electric machine comprising a stator, an inclosing casing, a rotor, means forming a part of the rotatable member for creating a circulation of air, and adjustable means for directing the circulation of air either in a closed circuit within the frame or in an open circuit including passages in the stator and rotor of the machine, and an opening to the outside atmosphere.

4. An electric motor comprising a substantially closed frame having relatively small inlet and outlet openings, a rotatable member, a fan carried by said member, a deflector secured to the stationary frame and an adjustable damper for closing and opening the inlet in the frame, the deflector being adapted to be reversed and the damper to be adjusted to effect either a closed circulation of air within the casing or an open circulation through the inlet and outlet openings.

5. An electric motor comprising a substantially closed frame having relatively small inlet and outlet openings, a rotatable armature, a frame carried thereby, a reversible deflector secured to the stationary frame for directing the circulation of air produced by the fan, and an adjustable damper for closing and opening the inlet in the frame.

[Claim 6 not printed in the Gazette.]

1,115,407. WRAPPING-MACHINE. HILARIO DE ESCOBALES and FRANCIS P. AMPUDIA, New York, N. Y., assignors of one-twentieth to Harry G. Glesow, Fall River, Mass. Filed Aug. 9, 1913. Serial No. 783,921. (Cl. 93—4.)



1. A wrapping machine comprising intermittently moving chains carrying a series of receptacles adapted to receive partially wrapped articles, a receiving channel in range with one of said receptacles during the time said chains remain stationary, said receiving channel having a stationary folder; a plunger adapted for reciprocating movement through said receptacle in range with said receiving channel; means whereby paste is applied to a wrapper flap of a partially wrapped article in another one of said receptacles; a stationary folder adapted during the movement of said chains to take against said wrapper flap, whereby the wrapper flap is folded and caused to rest between said stationary folder of the receiving channel and said receptacle in range therewith, forward movement of said plunger through said receptacle causing the partially wrapped article therein to be forced out and into said receiving channel, said wrapper flap during said movement of the partially wrapped article taking against said stationary folder of the receiving channel, whereby the wrapper flap is folded upon the wrapped article, said paste applied to said wrapper flap serving to hold the wrapper in place.

2. A wrapping machine comprising intermittently moving endless chains carrying a series of receptacles adapted to receive partially wrapped articles; a two-part plunger, one part thereof adapted for reciprocating movement in range with one of said receptacles and the second part of said plunger adapted for reciprocating movement through another one of said receptacles during the time said chains remain stationary, a receiving channel in range with the last named receptacle, said receiving channel having a stationary folder, means whereby paste is applied to a wrapper flap of a partially wrapped article in one of said receptacles; a stationary folder adapted during the movement of said chains to take against said wrapper flap whereby said wrapper flap is folded and caused to rest between said stationary folder of the receiving channel and the receptacle in range therewith, means whereby a partially wrapped article is forced by the first part of said plunger in said receptacle in range therewith, said second part of said plunger simultaneously moving through said receptacle in range therewith, whereby the partially wrapped article therein is forced out and into said receiving channel, said wrapper flap during movement of the partially wrapped article taking against said stationary folder of the receiving channel, whereby said wrapper flap is folded upon the wrapped article, said paste applied to said wrapper flap serving to hold the wrapper in place.

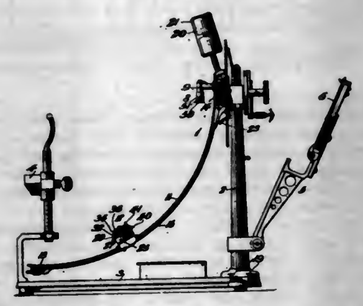
3. A wrapping machine comprising intermittently moving chains carrying a series of receptacles adapted to receive partially wrapped articles; a two-part plunger, one part thereof adapted for reciprocating movement in range with one of said receptacles, and the second part of said plunger adapted for reciprocating movement through another one of said receptacles during the time said chains remain stationary; a receiving channel in range with the last named receptacle, said receiving channel having a stationary folder; means whereby paste is applied to a wrapper flap of a partially wrapped article in one of said receptacles; a stationary folder adapted during the movement of said chains to take against said wrapper flap whereby the wrapper flap is folded and caused to rest between said stationary folder of the receiving channel and the receptacle in range therewith; stationary folders between the first named receptacle and the first part of said plunger, means whereby an article and wrapper are forced by the first part of said plunger between said stationary folders, thereby causing the wrapper to be partially folded upon the article, said plunger also causing the partially wrapped article to be forced into said receptacle in range therewith, said second part of said plunger simultaneously moving through said receptacle in range therewith, whereby the partially wrapped article therein is forced out and into said receiving channel, said wrapper flap during said movement of the partially wrapped article taking against said stationary folder of the receiving channel, whereby said wrapper flap is folded upon the wrapped article, said paste applied to said wrapper flap serving to hold the wrapper in place.

4. A wrapping machine comprising endless chains carrying a series of receptacles adapted to receive partially wrapped articles, an intermittently moving mechanism for causing intermittent movements of said chains; a two-part plunger, one part thereof adapted for reciprocating movement in range with one of said receptacles and the second part of said plunger adapted for reciprocating movement through another one of said receptacles during the time said chains remain stationary; a receiving channel in range with the last named receptacle, said receiving channel having a stationary folder; a stationary folder adapted during the movement of said chains to take against a wrapper flap of a partially wrapped article in one of said receptacles, whereby said wrapper flap is partially folded upon the article, means whereby a partially wrapped article is forced by the first part of said plunger into said receptacle in range therewith, said second part of said plunger simultaneously moving through said receptacle in range therewith, whereby the partially wrapped article therein is forced out and into said receiving channel, said stationary folder of the receiving channel during said movement of the partially wrapped article, taking against said partially folded wrapper flap, whereby said wrapper flap is folded upon the partially wrapped article; a wrapper folding mechanism operating during return movement of said plunger and adapted to fold certain wrapper flaps of said partially wrapped article in said receiving channel, and a second wrapper folding mechanism, having intermittent movements for causing certain other wrapper flaps of said partially wrapped article in said receiving channel to be folded, said second wrapper folding mechanism being actuated by said intermittently moving mechanism for causing intermittent movements of said chain.

5. A wrapping machine comprising intermittently moving chains carrying a series of receptacles adapted to receive partially wrapped articles, a receiving channel in range with one of said receptacles during the time said chains remain stationary, said receiving channel having a stationary folder; a plunger adapted for reciprocating movement through said receptacle in range with said receiving channel; a stationary folder adapted during the movement of said chains to take against a wrapper flap of a partially wrapped article in another one of said receptacles, whereby said wrapper flap is folded and caused to rest between said stationary folder of the receiving channel and said receptacle in range therewith, forward movement of said plunger through said receptacle causing the partially wrapped article therein to be forced out and into said receiving channel, said wrapper flap during said movement of the partially wrapped article taking against said stationary folder of the receiving channel, whereby the wrapper flap is folded upon the partially wrapped article; and vertically reciprocating folders operating during return movement of said plunger and adapted to fold wrapper flaps of said partially wrapped article in said receiving channel, said folders consisting of spring pressed pivoted curved plates which serve to maintain pressure against the fold of said wrapper flap on said article, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,115,408. OPTICAL INSTRUMENT. HENRY L. DE ZENG, Maple Shade, N. J. Filed July 28, 1913. Serial No. 781,497. (Cl. 88—20.)



1. In an optical instrument, a suitable support, a point of fixation carried thereby, a test object carrier movably supported with respect to said point of fixation, and means for interchanging on said carrier means for reflecting or transmitting light therefrom.

2. In a perimeter, a suitable support, a point of fixation carried thereby, a test object, and means carried by said test object for either reflecting or transmitting light therefrom.

3. In a perimeter, a suitable support, a point of fixation carried thereby, a test object, a source of light carried by said test object, and means carried by said test object for either reflecting or transmitting light in different colors.

4. In a perimeter, a suitable support, a point of fixation carried thereby, a test object movably supported with respect to said point of fixation, an electric lamp carried by said test object, and means carried by said test object for either reflecting or transmitting light in different colors.

5. In a perimeter, a suitable support, a point of fixation carried thereby, a test object movably supported with respect to said point of fixation, an electric lamp carried by said test object, a disk movably mounted on said test object, color transmitting media mounted on said disk and adapted to be moved to operative position, a second disk movably mounted on said test object, and color reflecting media mounted on said disk and adapted to be moved to operative position.

[Claims 6 to 12 not printed in the Gazette.]

1,115,409. METHOD OF CONSTRUCTING PNEUMATIC TIRES. FREDERICK S. DICKINSON, New York, N. Y. Filed Oct. 11, 1912. Serial No. 725,246. (Cl. 154—14.)

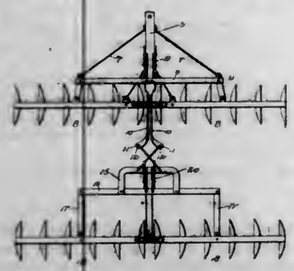
1. The method of constructing the internal textile body fabric or carcass for the shoe or casing of pneumatic tires, which consists in weaving the body of said carcass initially in the contour of an endless annular and segmental cross-section ring conforming to the contour of the elastic body of the shoe or casing within which it is to be embedded, with all its threads or strands initially in normal relationship to said body contour, and then impregnating said textile body unit while in its initial normal contour and with all its threads or strands in normal relationship thereto with a caoutchouc filler without distortion of any part of its initial woven body contour and without stretching or distortion of any of its threads or strands.

2. The method of constructing a shoe or casing for pneumatic tires, which consists in weaving the textile body fabric or carcass initially in the normal contour of an endless annular and segmental cross-section ring conforming to the contour of the elastic body of the shoe or casing within which it is to be embedded, with all its threads or strands initially in normal relationship to said body contour, and as a homogeneous textile unit in normal condition for placement in association with the elastic body of the shoe or casing, and uniting said textile body unit with the elastic body of the shoe or casing structure without distortion of any part of its initial woven normal body contour and without stretching or distortion of any of its threads or strands.

3. The method of constructing a shoe or casing for pneumatic tires, which consists in weaving the textile body fabric or carcass initially in the contour of an endless annular and segmental cross-section ring conforming to the contour of the elastic body of the shoe or casing within which it is to be embedded, with all its threads or strands initially in normal relationship to said body contour, then applying to said textile body unit while in

its initial normal contour and with all its threads or strands in normal relationship thereto a caoutchouc filler, and then uniting said homogeneous textile and caoutchouc body carcass with the elastic body of the shoe or casing structure without distortion of any part of its initial woven contour and without stretching or distortion of any of its threads or strands.

1,115,410. DOUBLE-CUT HARROW. HARRY S. DICKINSON, Moline, Ill., assignor to Moline Plow Company, Moline, Ill., a Corporation of Illinois. Filed Apr. 9, 1914. Serial No. 830,608. (Cl. 55—83.)



1. In combination with front and rear harrow units employing disks, a compensating connection in form to automatically angle the units to a degree commensurate with changes in the direction of advance of the implement.

2. In combination with front and rear harrow units employing disks, compensating connecting bars pivoted to the front and rear units respectively in a manner to automatically angle the units to a degree commensurate with the changes in the direction of advance of the implement.

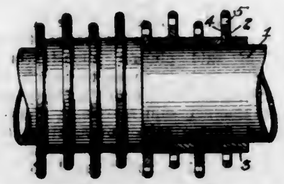
3. In combination with front and rear harrow units employing disks, compensating connecting bars crossing one another and pivoted to the front and rear units respectively in a manner to automatically angle the units to a degree commensurate with the changes in the direction of advance of the implement.

4. In combination with front and rear harrow units comprising each a frame and disk furrow openers carried thereby, a compensating connection consisting of crossed bars pivoted at their front ends to the front unit and at their rear ends to the rear unit and adapted to automatically angle the front and rear units to a degree commensurate with changes in the direction of the advance of the implement.

5. In combination with front and rear harrow units, the front unit comprising a tongue and frame and disks carried thereby, and the rear unit comprising a frame and disks carried thereby, the front unit having an extension projecting rearwardly from the tongue and provided at its rear end with spaced socket holes, a portion of the rear frame being provided with similarly spaced socket holes and crossed compensating connecting bars having their front and rear ends pivoted respectively in the front and rear socket holes and adapted to automatically angle the front and rear units to a degree commensurate with changes in the direction of the advance of the implement.

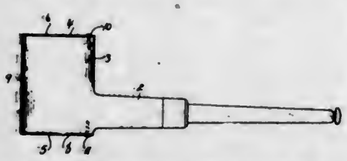
1,115,411. HEATING APPLIANCE. ROBERT M. DIXON, East Orange, N. J., assignor, by mesne assignments, to Standard Heat and Ventilation Company, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 8, 1912. Serial No. 676,168. (Cl. 257—262.)

1. A heating appliance comprising a wrought-iron tube, and a plurality of collars having eccentric radiating flanges, the collars being arranged on the tube side by side so as to space the flanges apart, and being secured to the tube while the latter is cooled below its working temperature and the said collars are heated above their working temperature, the eccentric flanges being alternately arranged with respect to each other.



2. A heating appliance comprising a tube and a plurality of radiating flanges in place on the exterior of said tube, said radiating flanges being eccentric in respect to the tube and alternatingly arranged in respect to each other.

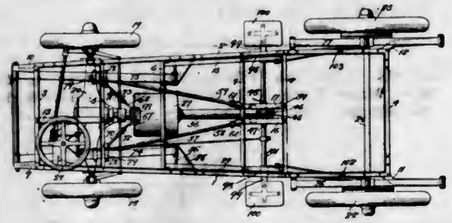
1,115,412. TOBACCO-PIPE. JOHN DONNELLY, Branford, Conn. Filed June 8, 1914. Serial No. 843,712. (Cl. 131—12.)



1. In a tobacco pipe, the combination with the bowl thereof, of a cover pivotally connected with the upper end of the bowl, a strap extending downward and beneath the bowl and pivotally connected thereo.

2. In a tobacco pipe, the combination with the bowl thereof, of a cover pivotally connected with the upper end of the bowl, a strap extending downward and beneath the bowl and pivotally connected thereto, a portion of the cover formed with a roughened surface.

1,115,413. MOTOR-VEHICLE CHASSIS. WILLIAM H. DOUGLAS, Belleville, N. J., assignor to Healey & Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1911. Serial No. 654,996. (Cl. 21—90.)



1. In a motor vehicle, a chassis frame diverging from front to rear having an elevated front portion and a depressed rear portion, converging upwardly directed front springs located below the elevated front portion of the frame and downwardly directed rear springs located above the depressed rear portion of the frame.

2. In a motor vehicle, a chassis frame diverging from front to rear having an elevated front portion and a depressed rear portion, converging upwardly directed front semi-elliptic springs located below the elevated front portion of the frame and downwardly directed rear semi-elliptic springs located above the depressed rear portion of the frame.

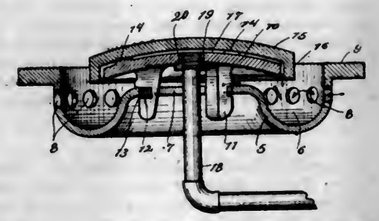
3. In a motor vehicle, a chassis frame diverging from front to rear having an elevated front portion and a depressed rear portion, a front axle housing, a rear axle, converging upwardly directed front springs located below the elevated portion of the frame and connecting it to the front axle housing and downwardly directed rear springs located above the depressed rear portion of the frame and connecting it to the rear axle.

4. In a motor vehicle, a chassis frame diverging from front to rear having an elevated front portion and a depressed rear portion, a front axle housing, a rear axle, converging upwardly directed front semi-elliptic springs located below the elevated portion of the frame and connecting it to the front axle housing and downwardly directed semi-elliptic rear springs located above the depressed rear portion of the frame and connecting it to the rear axle.

5. In a motor vehicle, a chassis frame having an elevated front portion and a depressed rear portion, front springs located below and within the sides of the elevated front portion of the frame and rear springs located above and exterior to the sides of the depressed rear portion of the frame.

[Claims 6 to 11 not printed in the Gazette.]

1,115,414. OIL-BURNER. HARRY V. DRESBACH and WILLIAM O. DRESBACH, Joplin, Mo. Filed July 10, 1914. Serial No. 850,187. (Cl. 158—53.)



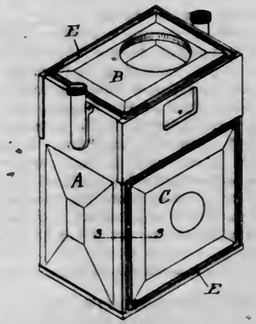
1. A burner of the character described, comprising a main shell having an approximately annular combustion chamber having its outer and inner walls provided with oppositely arranged air inlet openings, a heating plate arranged wthin the approximately annular combustion chamber and provided with supporting means engaging the inner wall of the main shell to maintain the same spaced therefrom, and a cap arranged upon and spaced from the heating plate to form therewith a vaporizing chamber discharging toward the combustion chamber.

2. A burner of the character described, comprising a main shell having an approximately annular combustion chamber provided upon its inner and outer walls with oppositely arranged air inlet openings, a heating plate arranged within the approximately annular combustion chamber and having its upper surface inclined toward the outer edge thereof, means for supporting the heating plate in spaced relation from the inner wall of the main shell, a cap arranged upon and spaced from the heating plate to form therewith a vaporising chamber discharging toward the combustion chamber, and means to supply a liquid fuel to the upper inclined surface of the heating plate at a point near the center thereof.

3. A burner of the character described, comprising a main shell having an approximately annular combustion chamber provided upon its inner and outer walls with oppositely arranged air inlet openings, a heating plate arranged within the approximately annular combustion chamber and having its upper surface inclined toward its outer edge and provided with an approximately centrally arranged aperture, means for feeding a liquid fuel upwardly through the approximately centrally arranged aperture to supply the same to the upper inclined surface of the heating plate, and a cap arranged upon and spaced from the heating plate to form therewith a vaporizing chamber and provided at its periphery with a depending flange to deflect the vaporized liquid fuel downwardly into the combustion chamber between and in proximity to the oppositely traveling incoming streams of air.

4. A burner of the character described, comprising a main shell having an approximately annular combustion chamber provided upon its inner wall with an air inlet opening having its wall provided with a plurality of notches and upon its outer wall with a plurality of air outlet openings oppositely arranged with respect to the air inlet opening of the inner wall, a heating plate arranged within the approximately annular combustion chamber and carrying depending legs provided upon their outer sides with notches to coöperate with the first named notches, spacing lugs formed upon the upper surface of the heating plate, a cap arranged upon the spacing lugs and forming with the heating plate a vaporizing chamber, and means to supply the liquid fuel to the vaporizing chamber.

1,115,415. CLOSURE FOR METALLIC RECEPTACLES. WILLIAM T. DREW, Mount Vernon, N. Y., assignor to New York Improved Meter Company, New York, N. Y., a Corporation of New York. Filed Aug. 22, 1910. Serial No. 578,395. (Cl. 73—1.)



1. A case or receptacle provided with an opening, the edge of the opening being bent outwardly to form a retaining flange, and a cover for said opening, having a bead along its edge adapted to fit over and contact with the top of the retaining flange so as to form a joint therewith, but leaving a space between the outer wall of the flange and the inner wall of the bead and a flat securing flange on said cover extending outwardly from said bead, said securing flange being permanently sealed to the body portion of the casing, a portion of the sealing material also entering the space between the bead and the retaining flange, which flange prevents the sealing material from entering the casing.

2. A case or receptacle provided with an opening, the edge of the opening being bent outwardly from the body of the casing to form a retaining flange, and a cover for said opening, the edge of the cover being provided with a bead or groove wider than the thickness of the retaining flange and fitting over and contacting with said flange so as to form a tight joint therewith, the outer wall of said bead being bent outwardly to form a flat securing flange, the adjacent surfaces of the flange and casing being parallel, the head or groove being of sufficient depth to permit the securing flange to lie substantially flat upon the body portion of the casing outside of the retaining flange, and permanent sealing material applied to the seam between the securing flange and the body portion of the casing and also between the inside of the outer wall of the bead and the retaining flange, said retaining flange preventing the sealing material from passing into the inside of the casing.

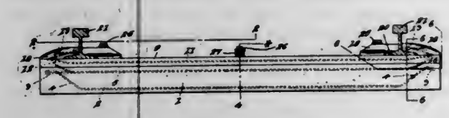
3. A case or receptacle provided with an opening, the edge of the opening being bent outwardly from the body portion of the casing to form a retaining flange of single thickness, and a cover for said opening, the edge of the cover being bent first outwardly and then inwardly upon itself outside of the first bend to form a bead or groove, and then bent at substantially right angles to the outer wall of the bead to form a flat securing flange, said bead or groove being wider than the width of the retaining

flange and adapted to fit over and contact with the same so as to form a joint therewith and being of sufficient depth to permit the securing flange to lie substantially flat upon the body portion of the casing adjacent and outside of the retaining flange, said securing flange being permanently sealed to the body portion of the receptacle, a portion of the sealing material also entering the space between the outer wall of the bead and the retaining flange, which flange prevents the sealing material from entering the casing.

4. A meter having an opening therein, upright flanges surrounding said opening, flat surfaced walls extending appreciably from said flanges, a covering fitting over said opening so as to rest against the outer edges of the flanges and approach closely their walls and the flat surfaced walls aforesaid, and provided with flanges substantially parallel to the meter flanges, and other exterior flanges projecting from the first, substantially at right angles to the said first cover flanges, together with a solder fastening between and held to the two flanges of the cover and the flat surfaced walls and the upright flanges of the meter, all substantially as set forth.

5. A meter case or receptacle having an opening therein, substantially upright flanges adjacent said opening, flat surfaced walls extending appreciably from said flanges, a cover fitting over said opening so as to rest against the outer edges of the flanges, said cover being provided with walls adapted to lie adjacent the upright flanges and with outwardly extending flanges projecting from said walls substantially at right angles thereto and adapted to lie adjacent the flat surfaced walls of the meter, together with a solder fastening between and held to the flanges of the cover and the flat surfaced walls of the meter and the walls of the cover and the upright flanges of the meter.

1,115,416. CONCRETE RAIL-TIE. ARTHUR S. DUNKLE, Baltimore, Md., and GEORGE E. HARNER, Holtwood, Pa. Filed Mar. 14, 1914. Serial No. 824,797. (Cl. 238—3.)



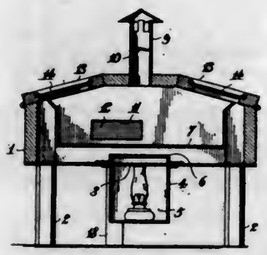
1. A concrete rail tie comprising two members one of which is provided with a flaring recess, and the other with a tapering rib to fit said recess, reinforcing rods extending lengthwise and crosswise of the tie.

2. A concrete rail tie comprising two members one of which is provided with a tapering recess extending longitudinal thereof, and the other member being provided with a rib to fit said recess, a wooden core loosely placed in the bottom of said recess, and reinforcing rods extending longitudinally of the two members of the tie, said reinforcing rods having inclined and converging ends provided with hooks to engage the inwardly extending members of the other reinforcing rod, and said two members of the tie being connected together by expansion bolts.

3. A concrete rail tie comprising two members having an intermediate wooden core, and reinforcing rods extending lengthwise of said tie, an integral engaging element for the base flange of a rail, and a metal lug for engaging the opposite flange of the rail, said lug being secured to the tie by an expansion bolt.

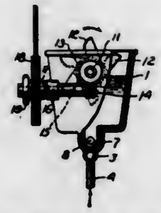
4. A concrete tie comprising two longitudinal sections, one of which is provided with a flaring recess and the other with a rib to fit said recess, an intermediate wooden core adapted to absorb the noises of the rolling stock, and to serve as a base for said tie, reinforcing rods extending through both sections of the tie, said rods having terminal hooks and inwardly bent ends, interlocked in the concrete, lugs at the ends of the tie for engaging the base flanges of the rail, metal engaging elements for the inner flanges of the rails, expansion bolts for holding said elements in place, and a centrally disposed expansion bolt extending through both members of the tie and through the wooden core.

1,115,417. BROODER. JOHN K. EASH, Jet, Okla. Filed Oct. 1, 1913. Serial No. 792,839. (Cl. 119—32.)



A brooder comprising a body provided at its bottom with an opening, hinged doors attached to the top of the body, a flue mounted at the top of the body between the doors, a lamp compartment located at the bottom of the body below the opening therein, a partition located in the body over said opening, and a pan supported in the body in spaced relation to the bottom thereof and said partition, said pan having edges which extend to two sides of the body, and another set of edges which are spaced from the other sides of the body and spaced from the doors.

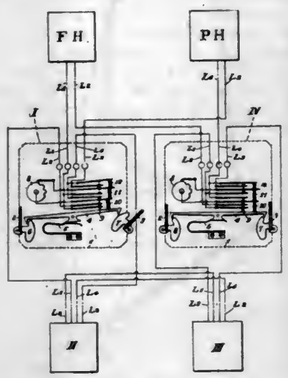
1,115,418. METHOD OF WAXING THREAD. CLARENCE L. EATON, Boston, Mass., assignor to Thomas Gustave Plant, Boston, Mass. Original application filed Oct. 29, 1909, Serial No. 525,297. Divided and this application filed May 9, 1910. Serial No. 560,174. (Cl. 91—70.)



1. The process or method of waxing sewing thread which consists in subjecting the waxing composition to heat to maintain the same in liquid state, removing portions of the liquid composition from the mass from time to time during the application of heat thereto and returning such portions after they have been sufficiently cooled to prevent separation of the ingredients of the composition in the body of the liquid by overheating, and simultaneously commingling and stirring the main body of the mixture and passing a thread through the said main body of the composition at a point where the desired temperature and mixture of the composition is maintained.

2. The process or method of waxing sewing thread as it is delivered to the sewing devices which consists in subjecting the waxing composition to the continued action of heat to maintain the said composition in easily flowing liquid form, cooling portions of said liquid waxing composition at intervals during the application of heat to the body of the said composition and causing the said cooled portions to intermingle with the lower body portions of the composition to prevent overheating of such lower body portions and consequent separation of the ingredients at such point, and simultaneously drawing a thread through the said lower body portion of the composition where the desired temperature and character of composition is maintained.

1,115,419. FIRE-TELEGRAPH SYSTEM AND APPARATUS THEREFOR. ERNEST A. FALLER, New York, N. Y., assignor to Industrial Realization Company, New York, N. Y., a Corporation of New York. Filed Dec. 30, 1912. Serial No. 739,222. (Cl. 177—368.)



1. The combination with a signal box having doors and containing signal sending means, of a plurality of line circuits entering said box, and means operated by said doors and adapted to place said signal sending means in operative relation to either of said circuits at a time.

2. The combination with a signal box having doors, of a plurality of normally closed electric circuits entering said box, means common to all of said circuits for sending coded signals, and means controlled by said doors for connecting said signal sending means to either of said circuits at a time.

3. The combination with a signal box having doors, of a plurality of electric circuits entering said box, means common to and normally disconnected from all of said circuits for sending coded signals, and means controlled by said doors for connecting said signal sending means to either of said circuits at a time.

4. The combination with a signal box having doors, of a plurality of normally closed electric circuits entering said box, means common to and normally disconnected from all of said circuits for sending coded signals, and means controlled by said doors for connecting said signal sending means to either of said circuits at a time.

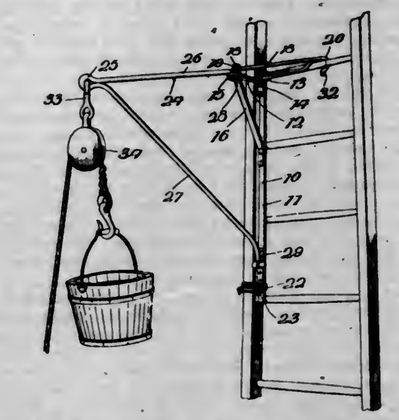
5. The combination with a signal box having doors, of a plurality of electric circuits entering said box, means common to all of said circuits for sending coded signals, and means controlled by said doors for placing said signal sending means into inoperative relation to all of said circuits except one.

[Claims 6 to 14 not printed in the Gazette.]

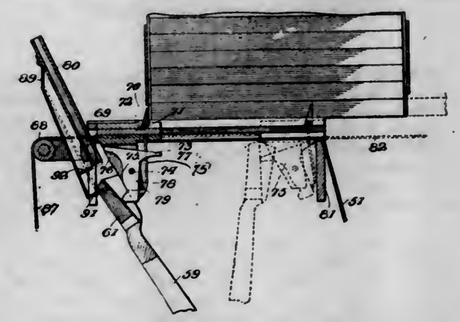
1,115,420. LADDER ATTACHMENT. JEREMIAH N. FARNHAM, Rockland, Me. Filed Sept. 9, 1913. Serial No. 788,916. (Cl. 20—84.)

1. A ladder attachment including a body member provided at one end with a hook, an arm extending laterally from the body member and braced thereto, a bearing bracket secured to the free end of the body member and including a horizontally disposed U-shaped intermediate portion, the upper part of which is provided with a perforation, a crane-arm mounted to swing in the free end of the laterally directed arm and having a diagonally extending brace member, the free end of which is passed through the perforation of the upper part of the U-shaped portion of the bearing bracket to engage against the lower part thereof, a pin passed through that part of said free end portion within the bearing bracket, and means for attaching the body member to a support.

2. A ladder attachment including an L-shaped body member, a ladder rung engaging hook carried by one arm of the body member adjacent its juncture with the other arm, a bearing bracket carried by the same arm carrying the hook, a crane arm swingingly mounted at one end in the free end of the other arm of the body member to swing in a plane parallel thereto, a diagonal brace extending from the free end of the crane arm and journaled in said bearing, the bearing taking up the thrust of the brace, and a second frame swingingly secured to that arm of the body member carrying the crane arm and terminating in a hook adapted to engage the same rung engaged by the first mentioned hook, the throat of said latter hook being directed at right angles to the throat of the former hook.



1,115,421. VENDING-MACHINE. PHIL FERGUSSON and ROBERT FERGUSSON, Davenport, Iowa. Filed Oct. 22, 1912. Serial No. 727,270. (Cl. 211—8.)



1. A vending machine including a goods container, a sliding carriage, a pivoted article engaging member supported by said carriage, a plate forming a part of the carriage and disposed to travel in advance of the article engaging member, said plate being interposed between the goods container and the opening through which the goods are delivered while the ejector mechanism is on its active stroke.

2. A vending machine including a goods container, an ejection mechanism, resilient means for resetting said mechanism, an actuating lever therefor an arm supported by said lever, guides disposed on both sides of the lever, teeth formed on one of said guides, an arm carried by the lever and disposed to engage said teeth when the lever is on its active stroke, the toothed guide being formed with an inclined surface the highest point of which extends beyond the teeth, the arm contacting with said inclined surface and being thereby released from contact with the teeth when the lever is at the limit of its active stroke.

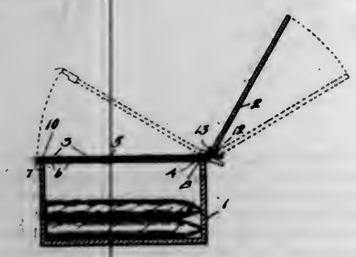
3. A vending machine including a goods container, an ejection mechanism, resilient means for resetting said mechanism, a lever for actuating said mechanism, guides disposed on both sides of the lever, teeth formed on one of said guides, an arm resiliently supported on the lever and disposed to engage said teeth when the lever is on its active stroke, the toothed guide being formed with an inclined surface the highest point of which extends beyond the teeth, the arm contacting with said inclined surface and thereby released from contact with the teeth when the lever is at the limit of its active stroke.

4. A vending machine including a goods container, an ejection mechanism, resilient means for resetting said mechanism, a lever for actuating said mechanism, curved guides disposed on both sides of the lever, teeth formed on one of said guides, an arm resiliently carried on the lever and disposed to engage said teeth when the lever is on its active stroke, the toothed guide being formed with an inclined surface the highest point of which extends beyond the teeth, the arm contacting with said inclined surface and thereby released from contact with the teeth when the lever is at the limit of its active stroke.

5. A vending machine including a goods container, an ejection mechanism, resilient means for resetting said mechanism, an actuating lever therefor, an arm pivotally supported by said lever, said arm being formed with an offset terminal disposed to project through an opening in the lever, curved guides arranged on both sides of the lever, one of said guides being formed with teeth with which the projection of the arm contacts when the lever is on its active stroke, resilient means normally maintaining the projection in contact with said teeth, the toothed guide being formed with an inclined surface with which the projection contacts, a dog receiving the terminal of said arm remote from the projection when the same is in contact with said inclined surface thereby allowing the lever to be reset without the projection contacting with the teeth, and means contacting with said dog when the lever has assumed its normal position, said means moving the dog to release the arm and reset the offset terminal of said arm for engagement with the toothed guide when the lever again participates in its active stroke.

[Claims 6 to 9 not printed in the Gazette.]

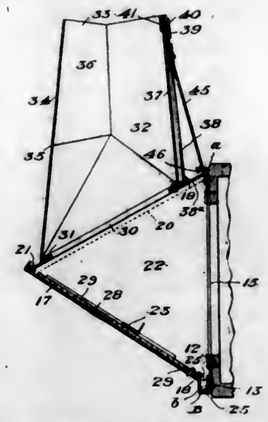
1,115,422. BOX DISPLAY-COVER. FRANCIS W. GIBSON, West Roxbury, and CLARENCE S. MARDEN, Cambridge, Mass., assignors to The H. D. Beach Company, a Corporation of New Jersey. Filed Apr. 21, 1913. Serial No. 762,490. (Cl. 217—58.)



1. A display cover for a container having a hinged lid said display cover comprising a frame having a transparently covered display opening and a slot formed in its rear edge to receive said hinged lid and bearing flanges struck up from the edges of said slot to support said container lid in substantially erect position.

2. A display cover for a container having a hinged lid, said display cover comprising a frame having a transparently covered display opening and a slot formed near one edge to receive said hinged lid, and a bearing formed adjacent the slot to support said hinged lid in substantially erect position.

1,115,423. FOCUSING-HOOD FOR CAMERAS. HARRISON GINDELE, Cincinnati, Ohio. Filed Sept. 27, 1913. Serial No. 792,156. (Cl. 95—47.)



1. A focusing attachment for cameras comprising a collapsible frame adapted to be rotatably moved to various positions on a camera, a hood and a reflecting device carried by the frame.

2. A focusing attachment for camera comprising a collapsible frame adapted to be rotatably moved to various positions on a camera, a collapsible hood, and means to support the hood in its opened position.

3. A focusing attachment for camera comprising a frame adapted to be moved to various positions on a camera, a collapsible hood having a hood plate secured to one wall thereof, and means engaging said hood plate and frame to retain the hood in its opened positions.

4. A focusing attachment for camera comprising a collapsible frame, a carrier plate pivoted to the frame, a hood, a hood plate, and a transverse plate secured to one wall of the hood to prevent buckling of the hood material during the opening and closing operations.

5. A focusing attachment for cameras comprising a collapsible frame, a carrier plate pivoted to the frame, a hood, a hood plate, a transverse plate secured to the hood and movably mounted on the hood plate, and means to lock the hood in its opened position.

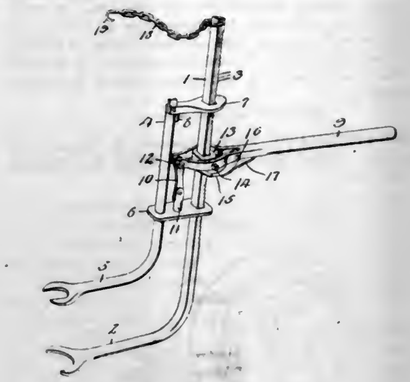
[Claims 6 to 14 not printed in the Gazette.]

1,115,424. VALVE-LIFTER. OSCAR T. GLASSCOCK and WILLIAM F. PHILLIPS, Shamrock, Tex. Filed June 6, 1914. Serial No. 843,470. (Cl. 29—87.1.)

1. In a device of the character specified, the combination of two standards, the one relatively fixed and the other movable upon the fixed standard, a dog pivotally connected with the movable standard and adapted to engage the fixed standard to hold the movable standard in the adjusted position, a slide mounted upon the fixed standard and an operating lever mounted upon such slide and having connection with the movable standard, and a rod pivoted to the operating lever and adapted to engage the fixed standard to support the operating lever when actuated to elevate the movable standard.

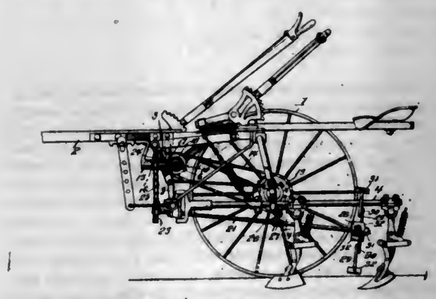
2. In a device of the character set forth, the combination of fixed and movable standards, a dog pivoted to the movable standard and adapted to engage the fixed standard to hold the movable standard in adjusted position, a stop upon the movable standard to engage the said dog to cause the same to move upward with the movable standard, a slide mounted upon the fixed standard and adapted to intermittently grip the same, an operating lever pivoted to such slide and having connection with the movable standard, and a dog pivoted to the operating lever and adapted to intermittently grip the fixed standard.

3. A device of the character set forth, the same comprising a toothed standard having an off-standing arm, a movable standard provided with an off-standing arm and slidable upon the toothed standard, a dog pivoted to the movable standard and slidable upon the toothed standard and adapted to engage the teeth thereof to hold the movable standard in adjusted position, a stop upon the movable standard to engage the said dog, a slide mounted upon the toothed standard and adapted to intermittently engage the teeth thereof, an operating lever mounted upon such slide and having connection with the movable standard, and a dog pivoted to the operating lever and slidable upon the toothed standard and adapted to engage the teeth thereof.



4. A device of the character set forth comprising a toothed standard having an off-standing arm, a movable standard having an off-standing arm and provided with a stop, a bracket extending from the movable standard and slidable upon the toothed standard, a dog pivoted to the movable standard and slidable upon the toothed standard and adapted to be engaged by the said stop, a slide mounted upon the toothed standard intermediate the said bracket and dog, a lever having a bifurcated end embracing the toothed standard and slide and pivoted to the latter, a link connection between the inner end of the operating lever and the movable standard, a dog pivoted to the operating lever and slidable upon the toothed standard and adapted to engage the teeth thereof, and a spring for normally holding the dog of the operating lever in engagement with the toothed portion of the fixed standard.

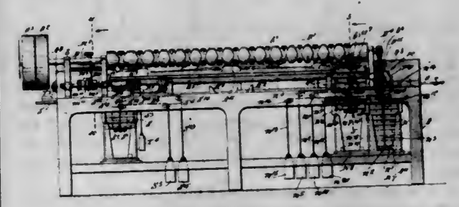
1,115,425. COTTON-CHOPPER ATTACHMENT FOR CULTIVATORS. JOHN GOODRUM, Gore, Ga. Filed Feb. 4, 1914. Serial No. 816,447. (Cl. 97—46.)



1. In combination with a wheel mounted frame having swinging members a cotton chopper comprising a shaft journaled upon the frame, means for rotating the shaft from one of the supporting wheels of the frame, a stub shaft journaled upon the frame and operatively connected with the first mentioned shaft, a shaft journaled for rotation below the frame, means for rotating the last mentioned shaft from the stub shaft, chopping elements carried by the last mentioned shaft, and arms adapted to be pivotally connected with the swinging members of the frame and having bearings which receive the intermediate portion of the last mentioned shaft.

2. In combination with a wheel mounted frame, having beams pivotally connected thereto, a shaft journaled transversely of the frame, a clutch member fixed to the shaft, a spring clutch member slidably mounted upon the shaft and adapted to engage the first mentioned clutch member, means for rotating the last mentioned clutch member from one of the supporting wheels of the frame, a stub shaft journaled upon the frame, means operatively connecting the stub shaft with the first mentioned shaft, a globular bearing supported upon the frame, a shaft passing through said bearing and having a ball which is received in the said bearing, means for operating the last mentioned shaft from the stub shaft, chopping elements carried by the last mentioned shaft, arms adapted to be pivotally connected with the beams of the frame and bearings carried by the said arms and receiving the intermediate portion of the last mentioned shaft.

1,115,426. COATING-MACHINE. CHARLES M. GREEN, Marblehead, Mass., assignor to The Walter M. Lowney Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 15, 1911. Serial No. 621,365. (Cl. 91—4.)



1. A coating machine comprising a carriage having individual center grippers, means for presenting centers to said grippers, means for causing said grippers to grip said centers, means for giving said carriage a vertical movement toward and from said center-presenting means, a tank, and means for moving said carriage horizontally to said tank and means for giving said carriage a vertical movement to dip said centers in the contents of said tank.

2. A coating machine comprising a carriage having individual center-grippers, means for presenting centers to said grippers, means for causing said grippers to grip said centers, means for giving said carriage a vertical movement toward and from said center-presenting means, a tank, and means for moving said carriage horizontally to said tank, means for giving said carriage a vertical movement to lower said centers into said tank and withdraw them therefrom, and means for causing said grippers to release said centers.

3. A coating machine comprising a carriage having individual center grippers, means for presenting centers to said grippers, means for causing said grippers to grip said centers, means for giving said carriage a vertical movement toward and from said center-presenting means, a tank, and means for moving said carriage horizontally to said tank, means for giving said carriage a vertical movement to lower said centers into said tank, means for turning said centers while in said tank and for withdrawing them therefrom, and means for causing said grippers to release said centers.

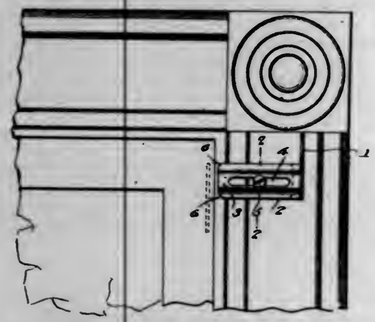
4. A coating machine comprising a carriage having individual center grippers, means for presenting centers to said grippers, means for causing said grippers to grip said centers, means for giving said carriage a vertical

movement toward and from said center-presenting means, a tank, and means for moving said carriage thereto, and means for dipping said centers in said tank.

5. A coating machine comprising a carriage having individual center-grippers, means for presenting centers to said grippers, means for causing said grippers to grip the centers, a tank, means for moving said carriage thereto, means for causing said grippers to dip the centers therein, means for causing said grippers to release the centers, and means for applying a finish to the coated centers, and means for applying a finish to the coated centers operable after they have been released.

[Claims 6 to 34 not printed in the Gazette.]

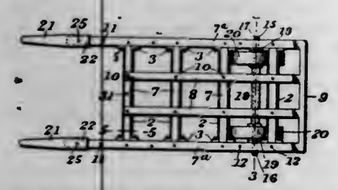
1,115,427. SHADE-BRACKET. THEODORE GRESS and BENNIE MOLINE, Council Bluffs, Iowa. Filed Dec. 3, 1913. Serial No. 804,549. (Cl. 156—24.)



1. A shade bracket comprising a body of resilient material having a raised longitudinal rib pressed therein, said rib being slotted, a fastening device passing through the slot and arranged to flatten said rib and expend the sides of the body whereby the body will be held in adjusted position upon a support and a bracket arm on the body.

2. A shade bracket consisting of integral right angularly positioned members, one member being slotted to receive the shade, the other member having a raised longitudinal rib and widely diverging flanges upon opposite sides of the rib, a fastening device passing through the rib and arranged to flatten said rib and to aline the flanges upon opposite sides thereof, the inherent resiliency of the flanges and ribs coacting with the fastening device to hold the flanges in position upon the support, said bracket being reversibly mounted in said fastening device.

1,115,428. HAND-TRUCK. ABNER HARDENBERGH, Dunkirk, N. Y. Filed Apr. 21, 1913. Serial No. 762,549. (Cl. 21—65.)

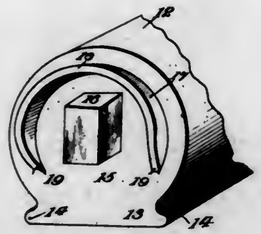


In a truck structure, a wheeled frame having side bars and connecting channeled braces extending between said side bars, each of said braces being of substantially U-form in transverse section and open at both ends and at its top and provided at each end with a pair of flat alined attaching lugs, means securing said lugs to the adjacent side bars of the frame, filler blocks mounted in the channels of the braces and co-extensive therewith and having their ends lying flush with the said alined ears and resting directly against the inner surfaces of the side bars of the frame and a scooping frame having a foot piece beyond one end of the wheeled frame and having parallel outer branches overlying the side bars, and intermediate branches extending transverse of the braces and crossing all of the fillers and devices extending through the intermediate branches and through the fillers and through the braces thereof.

1,115,429. FIRE-BRICK. CARVER HIDECKER, San Anselmo, Cal., assignor to Ione Fire Brick Company, San Francisco, Cal., a Corporation of California. Filed June 3, 1913. Serial No. 771,537. (Cl. 106—10.)

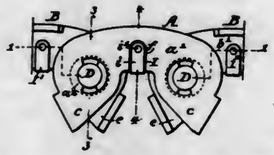
A fire brick comprising substantially seventy-five per cent. of silicious material fusing only at a temperature of twenty-eight hundred degrees F., ten per cent. of argillaceous material fusing at a temperature of twenty-five hundred degrees F., ten per cent. of shale fusing at twenty-two hundred fifty degrees F., and five per cent. of material which cannot be fused at a temperature below four thousand degrees F.

1,115,430. PNEUMATIC TIRE. ODILLON K. HOPPES, Tamaqua, Pa. Filed Mar. 5, 1913. Serial No. 752,143. (Cl. 152—22.)



A tire formed of a plurality of sections, each section at one end being provided with a projection substantially rectangular in cross section, and a substantially semi-circular rib partially embracing said projection, said rib tapering in height from its central portion to its terminals, the other end of each section being formed with a central recess and a semi-circular groove partially embracing said recess, said groove tapering in depth from its center to its terminals.

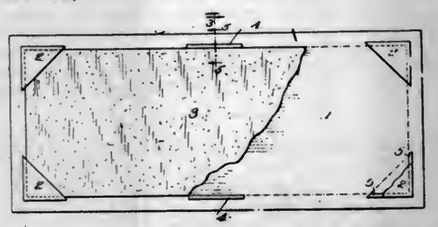
1,115,431. CHAIN. HENRY HOWSON, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 28, 1912. Serial No. 686,805. (Cl. 74—32.)



1. The combination of a series of sets of toothed plates, each set forming the link of a chain; each plate having two openings spaced apart; pivot pins mounted in the openings and coupling the links together; the pivot pins being reduced at each end to form shoulders; the outside plates of each link having openings less in diameter than those at the center of the links so as to fit the reduced portions of the pivot pins; the outside plates of each alternate link being recessed; and clips extending through the space between the teeth of said link and having portions extending into the recesses, whereby the plates are held together and the outer surface of the clip is flush with the outer surface of the outside plates.

2. The combination of a series of sets of plates, each set forming a link of a chain; each plate having two openings; pivot pins extending through the openings and connecting one set of plates to another; the outside plates of alternate links being recessed; and clips extending across the links and having end sections, each entire end section being located in the recess in one of the end plates so that the outer surface of the end section will be flush with the outer surface of the outside plate.

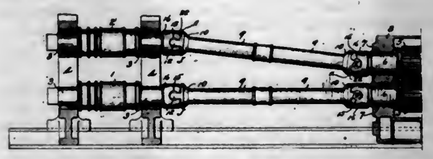
1,115,432. COMBINED BLOTTER-HOLDER AND HAND-REST. ALEXANDER EDWIN HUBBELL, Milford, Mich. Filed Oct. 18, 1913. Serial No. 795,882. (Cl. 120—24.)



1. A combined hand-rest and blotter-holder consisting of a thin elastic plate having its underside provided with corner pockets for receiving a blotter and with lengthwise ribs arranged intermediately of the pockets and adjacent to the side edges of the plate, the inner sides of such ribs being provided with grooves for engaging the edges of a blotter, as described.

2. A combined hand-rest and blotter-holder consisting of a thin elastic plate having its underside provided with corner pockets formed of ribs arranged at right angles to each other and a thin cap or sheet secured upon said ribs, and a second set of ribs arranged intermediately of the pockets and adjacent to the side edges of the plate to serve as side guards for a blotter, as described.

1,115,433. ROLLING-MILL SPINDLE-COUPLING. CLINTON H. HUNT, Youngstown, Ohio, assignor to The William Tod Company, a Corporation of Ohio. Filed May 23, 1914. Serial No. 840,402. (Cl. 74—19.)

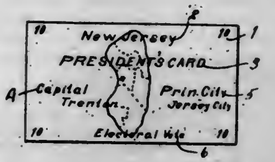


1. A spindle coupling of the class described, including in combination, the journal element of the roll or pinion provided with a coupling member having an oblate convexed end bearing surface, and the spindle element having a coupling member slidably jointed to said other coupling member and provided with a flat end bearing surface opposing said convex surface.

2. A spindle coupling of the class described, including in combination, a journal element provided with a bifurcated coupling member having an oblate convexed end bearing surface, and a spindle element having a coupling member provided with knuckle projections slidably interlocked with said bifurcated coupling member, and provided with a flat end bearing surface opposing said convex surface.

3. A spindle coupling of the class described, including in combination, a journal element provided with a coupling member having an oblate spheroidal end bearing surface, and a spindle element having a coupling member universally jointed with said other coupling member and provided with a flat end bearing surface lying in a plane at right angles to the axis of the spindle element and opposing said spheroidal bearing surface.

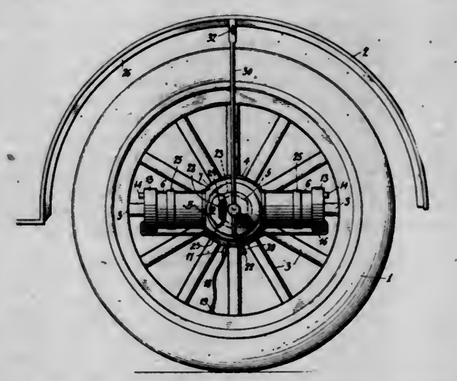
1,115,434. GAME DEVICE. SIEGMUND JAFFA, New York, N. Y. Filed July 29, 1914. Serial No. 853,938. (Cl. 46—25.)



1. A game device comprising a pack of cards, each card representing the name of a State and the electoral vote of said State, together with other information, and one of said cards being designated as the President's card, and giving the State from which the President was elected, and as accessories to the game a number of checkers or blocks, each representing a State.

2. A game device consisting of a series of cards, each card representing a State and having displayed thereon a map of the State, the words "Electors' card", the capital city of the State, the principal city of the State, and the number of electoral votes of said State, and a President's card giving the name of the State from which the President was elected, a map of the State, the capital of the State, and other information in relation to the State, and the number of electoral votes thereon, and a series of checkers or blocks each having displayed thereon the name of a State.

1,115,435. TIRE-INFLATING PUMP. WILLARD S. JOBES, San Antonio, Tex., assignor to Joseph A. Graham, San Antonio, Tex. Filed Mar. 28, 1914. Serial No. 828,042. (Cl. 152—11.)



1. In an air pump of the character described, the combination with a casing having cylinders and pistons operative therein, and a crank shaft for operating the pistons, of means for connecting the pump casing to revolve with the wheel of a vehicle, and means adapted to be connected to the body of a vehicle and having a sliding connection with said shaft for preventing rotation of the crank shaft.

2. The combination with an air pump having reciprocatory pistons and a shaft for operating the same, of a coupling adapted to fit upon and form a driving connection with the hub cap of a wheel to cause rotation of the pump therewith, and means for preventing rotation of the crank shaft.

3. The combination of an air pump having reciprocatory pistons and a shaft for operating them, of means for connecting the pump to revolve with the wheel of a vehicle, the shaft of the pump being co-axial with said wheel, and a rod adapted to be connected to the body of the vehicle and having a sliding connection with said shaft for pre-

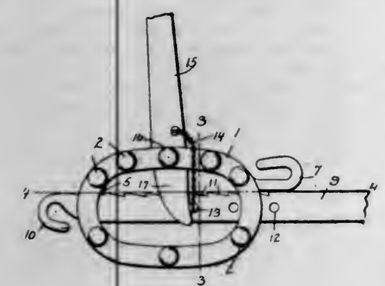
venting rotation of the pump shaft and permitting vibratory movement thereof.

4. The combination with a vehicle wheel having an angular projection turnable therewith an air pump having reciprocatory pistons and a shaft for operating the same, of a socket secured to the pump and shaped to fit upon said angular projection and thereby form a driving connection with the wheel, and means for preventing rotation of the shaft.

5. The combination with a vehicle wheel having a hub cap of angular form thereon, a pump having pistons, and a shaft for actuating the same, an angular socket adapted to fit said angular hub cap and thereby connect one part of the pump to revolve with the wheel, and means for preventing rotation of the other part of the pump.

[Claim 6 not printed in the Gazette.]

1,115,436. WIRE-STRETCHER. WILLIAM C. JONES and ALBERT J. JONES, Magee, Miss. Filed June 13, 1914. Serial No. 844,992. (Cl. 39—127.)

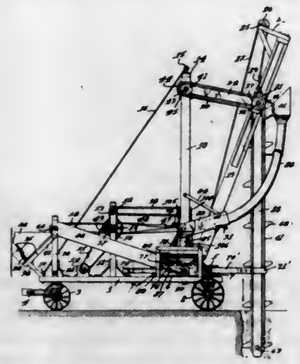


1. A device of the class described comprising a frame having a stationary pawl and opposite guide slots, said pawl being positioned adjacent one of said guide slots, a hook carried by said frame to connect the latter with a stationary member, a draw bar slidably engaged through the guide slots of the frame and having teeth formed along one edge, said draw bar having a hook formed upon one end for engagement with a member to be stretched, a pin removably engaged through said draw bar, said pawl being engaged with said teeth, and means for engagement with the pin to force the draw bar in one direction through said frame, said pawl being adapted to prevent movement of the draw bar in the reverse direction.

2. A device of the class described comprising a frame including a pair of elliptical frame members, a spacing member positioned between said elliptical frame members, a stationary pawl positioned between said elliptical frame members, a securing hook positioned between said frame members, a draw bar slidably engaged between the frame members, means for connecting the frame members and securing in position the spacing and guide members, said last mentioned means also serving to secure in position the stationary pawl and the hook, said draw bar being provided with a hook on one end and teeth along one face, said stationary pawl being engaged with said teeth to prevent movement of said draw bar in one direction, a pin removably engaged through said draw bar, a bifurcated rocking lever secured in said frame between the hook and the stationary pawl carried by said frame and adapted for engagement with the removable pin to force the draw bar in a reverse direction.

3. A device of the class described comprising a frame including spaced members, means for securing together said spaced members, a pawl positioned between said spaced members, and means for securing together the spaced members and the pawl; in combination with a draw bar slidably engaged between the spaced members, a pin removably engaged through said draw bar, said draw bar having teeth formed along one edge, said pawl being engaged with said teeth to prevent forward movement of the draw bar, and a rock lever pivoted between said spaced members and having a bifurcated end for engagement upon opposite sides of the draw bar and engagement against the pin to force the draw bar rearwardly upon operation of said rock lever.

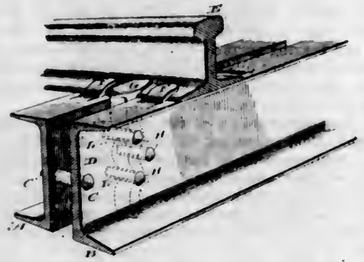
1,115,437. EXCAVATOR. WILLIAM P. KING, San Francisco, Cal. Filed Apr. 15, 1913. Serial No. 761,405. (Cl. 37—24.)



1. In an excavator, a truck, a turn table thereon, a mast and a pivoted boom on said turn table, links connecting the boom and mast for the support of said boom, an endless chain excavator supported by the boom, a vertical shaft axial with the turn table, a pulley at the end of said shaft, and means at the upper end of said shaft and extending along said links to deliver power to the endless chain excavator, substantially as described.

2. In an excavator, a truck, a turn table thereon, a mast and a slotted boom pivotally supported upon said turn table, links connecting the upper portions of the mast and boom, journal boxes slidable in the slotted boom, a shaft passing through said journal boxes, means extending along said links to drive said shaft, an endless chain excavator supported upon said shaft, and a cable passing over the top of said boom for raising and lowering the links and endless excavator and changing the position of the boom.

1,115,438. SPIKE-FASTENING MEANS. LAURENCE HUSTON KIRK, Havre de Grace, Md., assignor to Gorrell Steel Spike Lock Railroad Tie Corporation, Havre de Grace, Md., a Corporation of Maryland. Filed Aug. 31, 1914. Serial No. 859,513. (Cl. 238—4.)

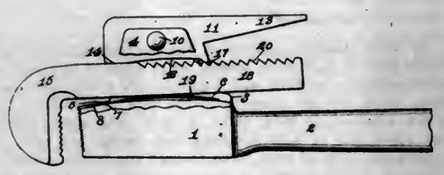


1. A support formed of parallel spaced members, having a group of rivets extending transversely therethrough, and arranged in staggered relation to form a tortuous passage through which a driven member may be forced and simultaneously distorted and given substantially a sinuous form.

2. A support formed of parallel spaced members, having a group of rivets extending transversely therethrough and arranged in staggered relation to form a tortuous passage through which a driven member may be forced and simultaneously distorted and given substantially a sinuous form, and spacing sleeves loosely mounted on said rivets and directly engaged by said driven member.

3. A support formed of parallel spaced members having a group of rivets extending transversely therethrough and arranged in staggered relation to form a tortuous passage through which a driven member may be forced and simultaneously distorted and given substantially a sinuous form, said members having bosses on their inner opposed surfaces, arranged in alternating relation and adapted to distort the driven member transversely during the driving thereof, and form projections which engage the inner surfaces of the members and thereby prevent lateral vibration of the driven member.

1,115,439. PIPE-WRENCH. ALBERT KLEIN, Emsworth, Pa. Filed June 11, 1913. Serial No. 772,993. (Cl. 81—100.)



1. A wrench comprising a main member having a stationary jaw and ears, a pawl pivoted to said ears and having an integral bearing on the surface thereof, a curved surface on said main member opposite said pawl, a movable jaw member having a rack on the same, and means located over said curved surface on said main member to hold its rack in engagement with said pawl.

2. A wrench comprising a main member having a stationary jaw and ears, a pawl pivoted to said ears and having an integral bearing on the surface thereof, a curved surface on said main member opposite said pawl, a movable jaw member having a rack on the same, and a flat spring extending over said curved surface on said main member for engaging with said movable member to hold its rack in engagement with said pawl.

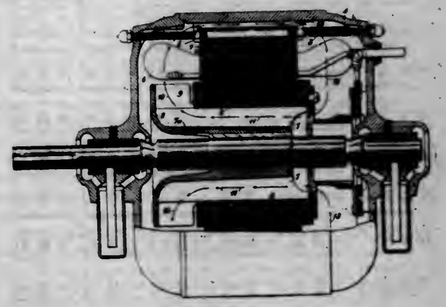
3. A wrench comprising a main member having a stationary jaw and ears, a pawl pivoted to said ears and having an integral bearing on the surface thereof, a curved surface on said main member opposite said pawl, a movable jaw member having a rack on the same adapted to engage with a tooth on said pawl, and means on said main member for engaging with said movable member to hold its rack in engagement with said pawl.

4. A wrench comprising a main member having a stationary jaw and ears, a pawl pivoted to said ears and having an integral bearing on the surface thereof, a curved surface on said main member opposite said pawl, a movable jaw member having a rack on the same adapted to engage with a tooth on said pawl, and means located over said curved surface on said main member for engaging with said movable member to hold its rack in engagement with said pawl.

5. A wrench comprising a main member having a stationary jaw and ears, a pawl pivoted to said ears and having an integral bearing on the surface thereof, a curved surface on said main member opposite said pawl, a movable jaw member having a rack on the same adapted to engage with a tooth on said pawl, and a flat spring extending over said curved surface on said main member for engaging with said movable member to hold its rack in engagement with said pawl.

[Claims 6 to 8 not printed in the Gazette.]

1,115,440. DYNAMO-ELECTRIC MACHINE. FRED R. KUNKEL, Edgewood Park, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 6, 1908. Serial No. 442,176. (Cl. 171—252.)



1. A rotatable member for dynamo-electric machines comprising a core and a one-piece supporting structure having, as integral parts thereof, a sleeve, radially projecting longitudinal ribs that constitute supports for the core laminæ and an outwardly projecting annular flange constituting a continuation of the body of the sleeve beyond the corresponding end of the core to deflect the air currents radially outward.

2. A rotatable member for dynamo-electric machines comprising a core and a one-piece supporting structure having, as integral parts thereof, a sleeve, longitudinal ribs, an outwardly projecting annular flange constituting a continuation of the body portion of the sleeve at one end and radial vanes disposed between the flange and the end of the core member.

3. A dynamo-electric machine comprising stationary and rotatable members having laminated cores, an inclosing casing therefor, and a longitudinally ribbed sleeve support for the rotatable core member having an annular deflector at one end constituting a continuation of the body portion of the sleeve support, whereby currents of air are caused to flow through the rotatable member longitudinally from one end thereof in contact with its core and radially outward at the other end and between and in contact with the stationary core and the casing in the opposite direction.

4. In a dynamo-electric machine, the combination with a stationary member comprising a casing, a core and coils and having ventilating passages between the casing and the core, of a rotatable member having passages extending longitudinally therethrough and an annular deflector at one end of the passages and constituting a continuation of the inner walls thereof to deflect the air currents between the stationary coils.

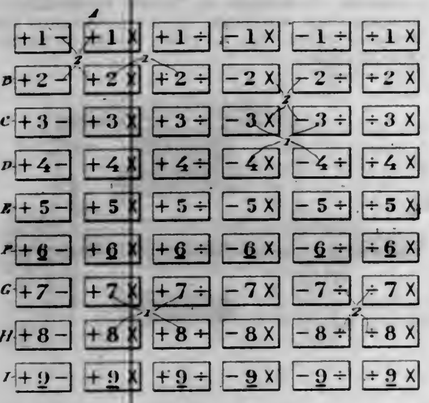
5. In a dynamo-electric machine, the combination with a stationary member comprising a casing, a core and coils and having ventilating passages between the casing and the core, of a rotatable member having passages extending longitudinally therethrough and an annular deflector at one end of the passages and constituting a continuation of the inner walls thereof to deflect the air currents through the stationary coil spaces to the ventilating passages in the stationary member, and means for causing a circulation through and between the said passages.

[Claim 6 not printed in the Gazette.]

1,115,441. GAME APPARATUS. WARNER G. LAKE, Plaza, Wash. Filed Nov. 29, 1913. Serial No. 803,763. (Cl. 46—25.)

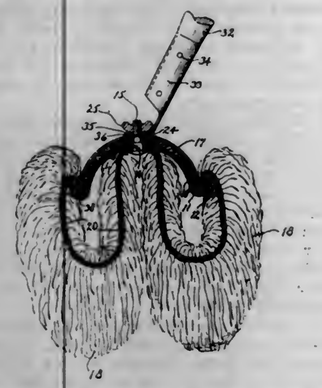
1. A game apparatus comprising playing pieces having mating arithmetical symbols thereon, and numbers, and a starting piece provided with arithmetical symbols.

2. A game apparatus comprising playing pieces having mating arithmetical symbols thereon, and numbers, and a



starting device provided with arithmetical symbols disposed transversely and adjacent the corner portions thereof.

1,115,442. DUST-MOP. JAMES B. LAMB, Cleveland, Ohio, assignor to The Ohio Varnish Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 29, 1913. Serial No. 792,351. (Cl. 15—13.)



1. In a mop, the combination of an under member having an annular trough at its edge, an upper member having an edge opposite said trough, a mop fabric, and means for holding the two members in proximity with the mop fabric clamped between them.

2. In a mop, the combination of a mop fabric, a clamping member having an upwardly turned flange, a second clamping member above the first mentioned member, and means for drawing the two members together to clamp the fabric between them.

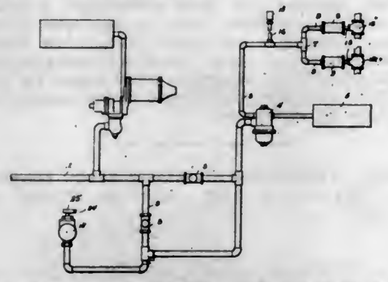
3. In a mop, the combination of an under member having an upwardly facing annular trough and a central portion which rises above the trough, an upper member, means for clamping the two members together and a handle for the device.

4. In a mop, the combination of a concave member having an upwardly turned flange, a layer of fabric secured beneath and folded over the top of said concave member, a second concave member above the first concave member, and means for pressing the two concave members together onto the fabric.

5. In a mop, the combination of a concave member, a layer of fabric secured beneath said member and folded over the top thereof, a second concave member above the first mentioned concave member, means for pressing these two members together to clamp the fabric between them, a flange turned outwardly and upwardly on the first mentioned member, said flange having openings therethrough to allow the passage of oil to the fabric beneath.

[Claims 6 to 9 not printed in the Gazette.]

1,115,443. AUTOMATIC TRAIN-STOP. FREDERICK I. LEACH, Lynn, Mass. Filed Sept. 26, 1913. Serial No. 792,036. (Cl. 246—59.)



In train stopping apparatus, the combination with the brake pipe, of a pressure release valve adapted to establish communcation between said pipe and the atmosphere and open under the air pressure in the pipe, a standard disposed adjacent to said valve, a lever fulcrumed within the upper end of said standard and having one end engaging the stem of said valve to hold the latter normally closed, a guide secured to said standard, pivot ears upstanding from said guide, a bell crank lever pivoted between said ears and having a horizontal limb engaging the adjacent end of said lever to hold the latter against movement under the action of the valve and a vertical limb, a plunger slidably mounted within said guide and engaging the vertical limb of said bell crank lever, a spring holding said plunger normally in engagement with the lever, and means for actuating said plunger to release said lever whereby the valve will be opened.

1,115,444. ATTACHMENT FOR BOTTLES OR JARS. GEORGE E. LE CLAIR, Flint, Mich. Filed Nov. 26, 1913. Serial No. 803,276. (Cl. 215—34.)

In a device for bottles, the combination with a body having an integral reduced portion adapted to fit within the neck of the bottle, of an annular rib on the body, a washer encircling the reduced portion and abutting against the rib, with the said washer adapted to engage the neck of the bottle and lie in a depression formed therein, opposed gripping members carried by the body and adapted to engage the exterior of the neck of the bottle to hold the body thereon, and a closure mounted to swing on the body and normally closing the opening of the said bottle.

1,115,445. HIGH FORM FOR SHOES. ALFRED G. LEGGE, Brockton, Mass. Filed Mar. 13, 1914. Serial No. 824,529. (Cl. 12—128.)

1. A hollow shoe form having a fore part and a high ankle portion composed of two portions of sheet material

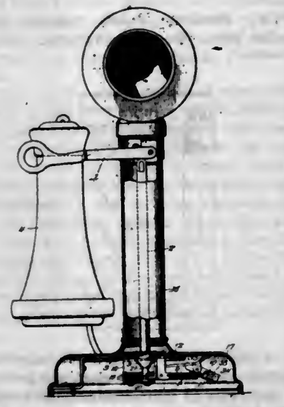
forming opposite sides of the shoe form and secured together at their front and rear edges and shaped to the shoe last, the said sheet material being characterized by the quality of receiving the shape of the last when the sheet is tempered and drawn tight over the last and of retaining said shape when set.

2. A hollow shoe form having a fore part and a high ankle portion composed of two portions of leather board forming opposite sides of the shoe form and secured together at their front and rear edges and shaped to the shoe last, the said leather board being characterized by the quality of being capable of receiving the shape of the shoe last when the leather board is tempered and drawn tightly over the last and of retaining said shape when set.

3. A hollow bottomless shoe form having a fore part and a high ankle portion composed of two portions of leather board forming opposite sides of the form and secured together at their front and rear edges, and permanently shaped to the ankle and fore part of the shoe last.

4. A hollow shoe form having a fore part and a high ankle portion composed of two portions of sheet material, each forming one-half of the fore part and ankle portion, said two portions being united together at their front and rear edges, forming a median front vertical joint and a median rear vertical joint, the said form being permanently shaped to the ankle and fore part of the last of the shoe which it is intended to fit.

1,115,446. CIRCUIT-CONTROLLING DEVICE. OSCAR M. LEICH, Genoa, Ill., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Filed Feb. 20, 1913. Serial No. 749,618. (Cl. 179—164.)



1. In a device of the character described the combination with a pair of springs electrically connected together, and having bent diverging ends, additional springs one adapted for association with each of the springs aforesaid, an element adapted for interposition between the diverging ends of the aforesaid springs adapted to move one or the other of said springs, a lever for moving said elements, and resilient means interposed between said lever and said elements.

2. In a device of the character described the combination with a pair of springs electrically connected together, and having bent diverging ends, additional springs one adapted for association with each of the springs aforesaid, an element adapted for interposition between the diverging ends of the aforesaid springs adapted to move one or the other of said springs, a lever for moving said element, and a spring interposed between said lever and said element.

3. In a device of the character described the combination with a pair of springs electrically connected together, and having bent diverging ends, additional springs one adapted for association with each of the springs aforesaid, a trigger adapted for interposition between the diverging ends of the aforesaid springs adapted to move one or the other of said springs, a lever for moving said trigger, and a spring interposed between said lever and said trigger.

4. In a device of the character described the combination with a pair of springs electrically connected together, and having bent diverging ends, additional springs one adapted for association with each of the springs aforesaid, a trigger adapted for interposition between the diverging ends of the aforesaid springs adapted to move one or the other of said springs, a lever for moving said trigger, and a spring interposed between said lever and said trigger, said trigger having means forming angularly disposed surfaces adapted to engage the lever to define the limits of the movement of said trigger.

5. In a device of the character described the combination with a switch spring, a second switch spring adapted for periodic engagement therewith, and means for controlling the periodic engagement of said springs, said means including a lever, a trigger thereon, and yielding means interposed between said trigger and lever.

[Claim 6 not printed in the Gazette.]

1,115,447. POTHEAD OR END BELL. HORACE P. LIVERSIDGE, Philadelphia, Pa., assignor to The Fairmont Electric and Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1910. Serial No. 553,757. (Cl. 247—12.)

1. In a device of the character stated, a cable having an inclosing sheath and an inclosed insulation, a pair of interfitting sheath-clamping members, one of which engages the interior of the sheath and has its interior outwardly flared about its circumference gradually away from the insulation, an insulating material surrounding the belled end of the inner clamping member, and side and top structure coöperating with said members.

2. In a device of the character stated, outer and inner members threaded for engagement with each other and having coöperating cable-sheath-clamping surfaces facing each other and extending at an angle to the direction of the length of the cable, one being belled gradually to relieve the cable insulation of injury due to electrostatic discharges, an insulating material surrounding the belled end of the inner clamping member, an outer insulating casing adapted to surround the cable between the clamping members and the end of the cable and a top for the casing.

3. In a device of the character stated, an outer clamping member internally threaded, an externally threaded inner clamping member belled at its opposite end from the clamp, the belled portion extending axially beyond the threaded part of the outer member, an outer insulating casing threaded to engage with one of the clamp members,

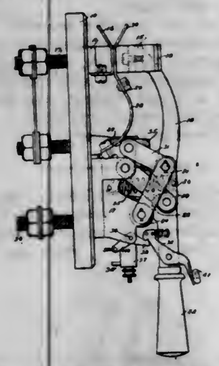
an insulating material surrounding the belled end of the inner clamping member, and a cap for said casing.

4. In a device of the character stated, an outer clamping member internally threaded, an inner clamping member externally threaded to engage therewith, a cylindrical casing threaded into the outer clamping member, and insulating compound coöperating with the casing to lock the clamp members together.

5. In a device of the character stated, an outer clamping member ribbed at its lower end and internally threaded at its upper end, an inner clamping member having a different clamping curvature from that of the outer clamping member, outwardly threaded at its lower end and ribbed at its upper end to engage the outer clamping member the ribbed end extending axially beyond the threaded portion of the outer member and a casing threaded into the outer member.

[Claims 6 to 12 not printed in the Gazette.]

1,115,448. CIRCUIT-BREAKER. ALEXANDER J. LOGUIN, West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 12, 1910. Serial No. 596,897. (Cl. 175—282.)



1. In a switch, the combination of a support, an arm mounted on said support by means of two crossed links, a contact carried by said arm, and another contact coöperating with the first.

2. In a switch, the combination of a stationary contact, a support, two crossed links pivoted at different centers on such support, an arm to which the free ends of such links are pivoted at different points, and a contact carried by said arm and coöperating with said fixed contact.

3. In a switch, the combination of a fixed contact, a support, an arm, two links pivoted both to the support and to the arm at different centers on each, the two links crossing each other, and a contact carried by said arm and cooperating with said fixed contact.

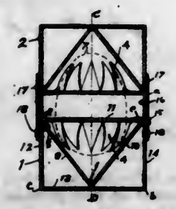
4. In a switch, the combination of a support, an arm, a pair of crossed links connecting said ar mto said support, a cam mounted on the arm and coöperating with said support, and a pair of relatively movable contacts one of which is carried by said arm.

5. In a switch, the combination of a group of laminated contacts, a contact plate coöperating therewith and movable relatively to the engaging surfaces of the laminæ, such movement being oblique both to the plane and to the edges of the laminæ, and operating means comprising crossed links for effecting said movement.

[Claims 6 to 11 not printed in the Gazette.]

1,115,449. FOLDING EGG-CONTAINER. JOHN HENRY MORGAN, Alameda, Cal., assignor of one-half to William I. Finch, Berkeley, Cal. Filed Aug. 8, 1913. Serial No. 783,714. (Cl. 229—29.)

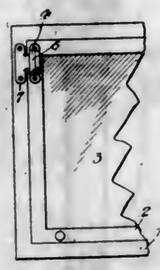
1. An egg-box consisting of two complementary sections, each section composed of a single sheet of suitable material, cut, scored and bent to form a rectangular chamber extending the entire length of the box and a triangular chamber within the walls of the rectangular chamber, the inside wall of the rectangular chamber forming the base of the triangular chamber and having egg-receiving pockets formed therein, the inside wall of one section being spaced from the inside wall of the opposed section, and said sheets being also cut, scored and bent to form end inclosing members.



2. An egg-box consisting of two complementary sections, each section composed of a single sheet of suitable material, cut, scored and bent to form a rectangular chamber extending the entire length of the box, and a triangular chamber within the walls of the rectangular chamber, the inside wall of the rectangular chamber forming the base of the triangular chamber and having egg-receiving resilient walled pockets formed therein, and one of the side walls of each section extending beyond the inside wall of its section to form a spacing member between said sections, said sheets also cut, scored and bent to form end-closing members.

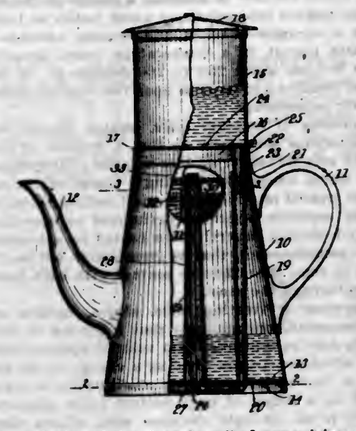
3. An egg-box consisting of two complementary sections, each section composed of a single sheet of suitable material cut, scored and bent to form a rectangular chamber extending the entire length of the box and a triangular chamber within the walls of the rectangular chamber, the inside wall of the rectangular chamber forming the base of the triangular chamber and having egg-receiving pockets therein, the inside walls of said sections being spaced apart, and means for closing the joint between said sections and reinforcing the walls at said joints.

1,115,450. HINGE. FRANK PARIZEK, Chicago, Ill. Filed Feb. 20, 1913. Serial No. 749,621. (Cl. 16—142.)



A device of the character described comprising two relatively rotatable elements, said elements having surfaces inclined to their axis at their engaging peripheries, means for resiliently holding said elements in engagement, means interposed between said elements to hold them in any one of a plurality of given predetermined positions, said means including a plurality of spring pressed elements having rounded engaging surfaces mounted upon one of said elements, a plurality of recesses to receive said rounded elements provided upon the other relatively rotatable element, said last aforesaid springs opposing the action of said resilient means aforesaid, and a cover plate for engaging said springs to exert pressure against said spring pressed elements.

1,115,451. PERCOLATOR. PAUL PONS and CHARLES ARCHAMBAULT, Sylvan Lake, Alberta, Canada. Filed Aug. 1, 1913. Serial No. 782,447. (Cl. 53—3.)



1. A device of the class described comprising an infusion vessel, a reservoir, a tube within said vessel, said reservoir having a valve-controlled outlet discharging into said tube, a heating element at the outside of said vessel and communicating with said tube, a second tube extending upwardly into said vessel, a perforated container for the substance, removably associated with said second tube, and a plurality of pipes communicating with and forming a part of said heating element and extending within said second tube to discharge at said container.

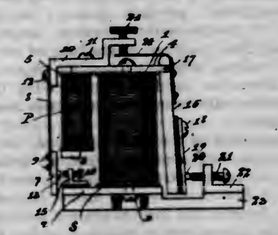
2. A device of the class described comprising an infusion vessel, a tube arranged within said vessel, a reservoir associated with said vessel and having a valve-controlled discharge outlet communicating with said tube, an annular heating member under said vessel at the outside thereof, communicating with said tube, a second tube extending upwardly within said vessel, said vessel having an opening in the bottom thereof registering with said second tube, a plurality of pipes having radially disposed ends communicating with said annular member and extending upwardly into said second tube, and a perforated container for the substance, having an inwardly disposed tubular part by means of which it can be removably mounted upon said second tube.

3. A device of the class described comprising,—an infusion vessel; a reservoir; a tube within said vessel having a valve controlled outlet engaging said tube and adapted to discharge thereinto; a heating element at the outside or and adjacent to the bottom of the vessel, said heating element communicating with said tube and through which the liquid is supplied to said heating elements through said reservoir; an insulating member separating the bottom of the vessel from said heating element; a tube in said vessel extending from the bottom thereof; a perforated container at the opposite end of said second mentioned tube; and a plurality of small tubes positioned in said second tube and forming the outlet from said heating element to the said container.

1,115,452. VARIABLE-SPEED DIRECT-CURRENT GENERATOR. ALFRED RICHTER, Chicago, Ill. Filed Oct. 22, 1913. Serial No. 796,597. (Cl. 171—313.)

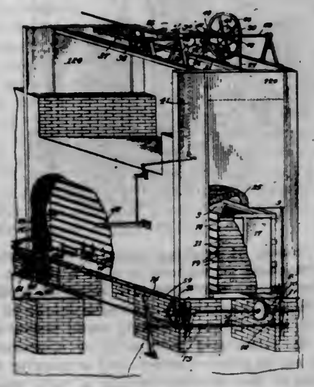
1. In a battery-charging system, the combination of a storage battery, a direct-current generator provided with a shunt field winding, and a series field winding operating to reduce the field of the generator when current passes through it in a direction to charge the battery, contacts normally short-circuiting said series winding, and means for opening said contacts controlled by the charging current, the shunt winding of the generator being connected electrically between the battery and the short-circuiting contacts.

2. In a battery-charging system, the combination of a storage battery, a direct-current generator provided with a series field winding operating to reduce the field of the generator when current passes through it in a direction to charge the battery, contacts normally short-circuiting said winding, means for opening said contacts controlled by the charging current, a shunt field winding connected electrically between the battery and the short-circuiting contacts, contacts effecting closure of the battery circuit, and a shunt relay connected across said shunt field winding controlling said battery contacts.



3. In a battery-charging system, the combination with a storage battery, of a direct-current generator provided with a series field winding operating to reduce the field of the generator when current passes through it in a direction to charge the battery, contacts normally short-circuiting said winding, means for opening said contacts controlled by the charging current, a shunt field winding connected electrically between the battery and the short-circuiting contacts, a shunt relay connected across said shunt field, contacts controlled by said shunt relay for effecting closure of the battery circuit, and means for opening said contacts controlled by the discharge current.

1,115,453. APPARATUS FOR TREATING COALS AND OTHER HYDROCARBONACEOUS SUBSTANCES. JOHN D. SCOTT, New York, N. Y. Filed Aug. 26, 1910. Serial No. 579,019. (Cl. 196—19.)



1. In an apparatus for treating coals and other hydrocarbonaceous substances, spaced and perforated or open mesh trays for holding the substance to be treated inclosed in a chamber which is in communication on the one hand with a heat flue and on the other hand with an exhaust pipe, and means for inducing currents of heat to pass through the trays and drawing such currents of heat and the vapors extracted from the substance into the exhaust pipe.

2. In an apparatus for treating coals and other hydrocarbonaceous substances, spaced and perforated or open mesh trays for holding the substance to be treated inclosed in a chamber in communication with heat creating means within said chamber and also in communication with an

exhaust pipe, and means for inducing heated currents to pass through the trays and extract the vapors from the substance and through the exhaust pipe.

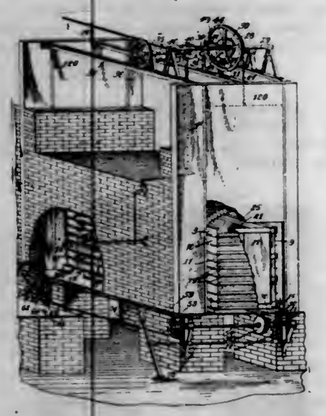
3. In an apparatus of the class described, the combination of a substantially air-tight chamber having an exhaust leading therefrom, a charge-carrying chamber within said first chamber and spaced apart therefrom at its sides, means located between said chambers for creating heat to extract the vapors from the charge, and means for forcing or drawing the vapors from the chamber through the exhaust.

4. In an apparatus of the class described, the combination of a substantially air-tight chamber having an exhaust outlet, a charge-carrier chamber therein spaced apart from said first chamber, means located between said chambers for creating heat to extract the vapors from the charge, and means for forcing or exhausting the vapors from the chamber, said heat creating means comprising a series of gas jets.

5. In an apparatus of the class described, the combination of a substantially air-tight chamber having an exhaust outlet, a charge-carrier chamber therein spaced apart from said first chamber, and means located between said chambers for creating heat to extract the vapors from the charge, said charge-carrier chamber having a series of tray supporting means.

[Claims 6 to 41 not printed in the Gazette.]

1,115,454. PROCESS OF TREATING COALS AND OTHER HYDROCARBONACEOUS SUBSTANCES. JOHN D. SCOTT, New York, N. Y. Filed Aug. 26, 1910. Serial No. 579,020. (Cl. 196—21.)



1. The process of treating coals, shales, lignites and other carbonaceous substances so that a portion of their constituents may be converted into volatile hydrocarbonaceous oils, which consists in dividing a charge of the substance to be treated into relatively small bodies or layers supported in superposed perforated or open-mesh trays confined in an air-tight chamber, and subjecting the same to the action of free moving currents of high temperature inert gases forced or exhausted through the same and all the bodies or layers substantially uniformly treated, substantially as described.

2. The process of treating coals, shales, lignites and other carbonaceous substances so that a portion of their constituents may be converted into volatile hydrocarbonaceous oils, which consists in dividing a charge of the substance to be treated into relatively small isolated bodies confined in an air-tight chamber, subjecting the same to the combined action of free moving currents of high temperature inert gases and contiguous heat, and causing said gases to flow downwardly through each of such bodies, whereby all of such bodies are substantially uniformly treated.

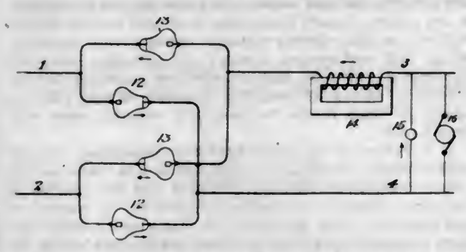
3. The process of treating coals, shales, lignites and other carbonaceous substances so that a portion of their constituents may be converted into volatile hydrocarbonaceous oils, which consists in dividing a charge of the substance to be treated into relatively small bodies or layers confined in a air-tight chamber and causing currents of neutral gases heated to a temperature below incandescence, that is from about 250 to 700 degrees F., to pass through the chamber and impinge upon the separate bodies, substantially as described.

4. The process of treating coals, shales, lignites and other carbonaceous substances so that a portion of their constituents may be converted into volatile hydrocarbonaceous oils, which consists in dividing a charge of the substance to be treated into relatively small bodies, depositing the same in separate layers on perforated or open-mesh surfaces, and causing neutral gases heated to a temperature below incandescence, that is from about 250 to 700 degrees F., to come into effective contact with such layers and to pass through the same.

5. The process of treating coals, shales, lignites and other carbonaceous substances so that a portion of their constituents may be converted into volatile hydrocarbonaceous oils, which consists in dividing a charge of the substances to be treated into relatively small bodies or layers and spread on a series of open bottom trays supported horizontally in an air-tight chamber with spaces therebetween, and causing rapidly moving currents of inert gases from a contiguous fire but always out of contact with such bodies to come into effective contact with the layers thereby to sweep the vapors as they develop away from the material from which they are extracted, and the heat engendered by the treatment thereof, and carry them directly to a condenser, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

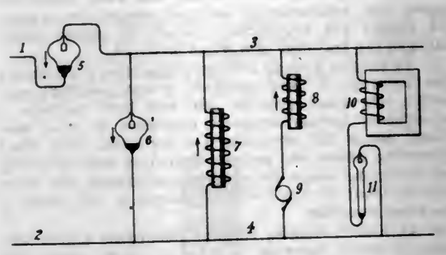
1,115,455. ELECTRICAL DISTRIBUTION SYSTEM. PERCY H. THOMAS, Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 5, 1903. Serial No. 146,282. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with a single phase source and a direct current work circuit, of a plurality of circuits connecting said source to said work circuit, separate means in each of said circuits for rectifying current, including vapor rectifiers having exhausted containers and anodes and cathodes therein, said circuits operating in succession to pass current in the same direction through the work circuit, means for linking together and steadying in the work circuit the current flow from the said plurality of connecting circuits, said means including a serially connected energy storing and restoring device and means for permitting said energy restoring device to discharge through the work circuit and the rectifiers in shunt to the supply circuit.

2. In a system of electrical distribution, the combination with a single phase supply and a direct current work circuit, of two vapor rectifiers each comprising an exhausted container, suitable electrodes therein, one rectifier passing the positive waves of the source to the work circuit the other rectifier passing the negative waves through the work circuit in the same direction and an inductance device in said work circuit, said device provided with a discharge path in shunt to the source whereby the energy stored in the inductance is economically utilized in equalizing and steadying the current flows derived from the two rectifiers.

1,115,456. ELECTRICAL DISTRIBUTION SYSTEM. PERCY H. THOMAS, Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 5, 1903, Serial No. 146,282. Divided and this application filed May 6, 1903. Serial No. 155,927. (Cl. 171—253.)



1. The combination with an electric receiving circuit traversed by a pulsating current, of means located in said circuit for storing energy magnetically at periods of increasing current, a shunt connection across said circuit adapted to carry the discharge of energy only at periods of decreasing current, the said shunt connection containing a vapor converter which permits a flow of current in one direction only.

2. The combination with a suitable alternating supply, means for producing direct current from said supply, and receiving mains therefor, of a translating device, a shunt connection across said direct current mains around said translating device, the circuit of said translating device containing an inductance and the said shunt connection containing a device which permits a flow of current in one direction only, whereby the inductance of the circuit containing the translating device causes a discharge of accumulated energy mainly through the shunt connection.

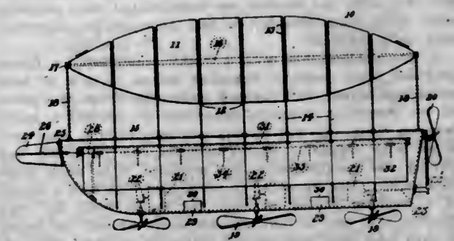
3. In a system of electrical distribution, an alternating supply circuit, a receiving circuit, and a rectifier between said circuits, and a circuit across said receiving circuit, a vapor device having the characteristic of permitting a flow of current in one direction only in said cross circuit, and means for storing and discharging energy in the receiving circuit during the normal operation of the system, whereby energy stored in said mains is discharged mainly through said cross circuit and through at least a part of the receiving circuit.

4. In a system of electrical distribution, a supply circuit, a receiving circuit, means for storing and discharging energy in the receiving circuit during the normal operation of the system, and a shunt connection containing a single vapor rectifier, said rectifier including an exhausted container and electrodes, one of which is vaporizable, therein, whereby energy stored in said storing means will, upon a fall of potential in the supply circuit, be discharged through a portion of said receiving circuit.

5. In a system of electrical distribution, the combination with an alternating supply and direct current mains, of a vapor rectifier comprising an exhausted container, and electrodes therein, one of which is a vaporizable re-constructing cathode, said rectifier being traversed by the current between said supply and said mains, in combination with a plurality of receiving devices, an inductance in series with each receiving device, and a connection across said receiving mains having the property of permitting the flow of current in one direction only.

[Claims 6 and 7 not printed in the Gazette.]

1,115,457. DIRIGIBLE AIRSHIP. ELIS TÖRÖK, New York, N. Y. Filed June 4, 1914. Serial No. 842,934. (Cl. 244—6.)



1. In a dirigible air ship, a gas tank formed of a plurality of independent sections made gas tight and joined together, an annular groove at each joint, sheaves revolubly mounted in the grooves, cables passing over said sheaves, a car suspended by the cables and propellers carried by the car.

2. In a dirigible air ship, a gas tank, a car suspended therefrom, propellers carried by the car, a wing pivoted to each side of the car and extending substantially the entire length thereof, and means for operating said wings, comprising pivotally-supported arms, a rock shaft, and a lever for turning said shaft, said lever extending within the car.

3. In a dirigible air ship, a gas tank formed of thin metal and divided into a plurality of independent gas compartments, formed with annular grooves at the joints of the sections, and means within said grooves for effecting the rotation of the tank.

1,115,458. DRY CELL. WALTER G. WAITT, Fremont, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Mar. 24, 1913. Serial No. 756,369. (Cl. 204—38.)

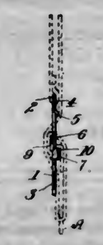
1. The process of coating a dry cell part with a dry powder which consists in applying thereto a coating of a material that wets the surface and adding the said powder to the coating.

2. The process of coating an electrode of dry cells with dry powdery material which consists in applying a layer of oil thereto and then adding to this layer the desired amount of said material.

3. The process of coating one electrode of a dry cell with flour which consists in applying a layer of oil thereto and then adding to the layer the desired quantity of flour.

4. The process of coating the inside of zinc cans of dry cells with powdery material which consists in filling the can with a material that wets the surface and pouring it out and then adding a quantity of said powdery material to the wetted surface of the can.

1,115,459. BUCKLE. ALKOURY A. ABIZAID, Washington, D. C. Filed Mar. 4, 1912. Serial No. 681,505. (Cl. 24—186.)

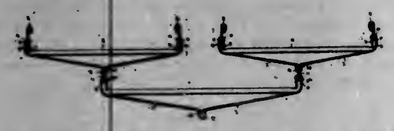


1. As a new article of manufacture, a buckle comprising a frame, a pair of bars extending across and pressed

outwardly from the plane of the frame in opposite directions to provide a space between them, one bar having one longitudinal edge provided with regularly spaced notches and the other bar having one longitudinal edge provided with teeth complemental to, and arranged in alinement with said notches.

2. The combination with a buckle, comprising a frame provided with webbing engaging means, a pair of bars extending across and pressed outwardly from the plane of the frame in opposite directions to provide a space between them, one bar having one longitudinal edge provided with regularly spaced notches and the other bar having one longitudinal edge provided with teeth complemental to and arranged in alinement with said notches, of a webbing passed through the frame from the rear between said pair of bars, thence passed around the upper of said bars and through the frame to the back thereof, thence folded upon itself to form a depending loop, thence passed through the frame from the back between the lower part of the frame and the lowermost of said pair of bars, and finally passed through the frame from the front between the uppermost of said pair of bars and the upper part of the frame, where said web is engaged by the webbing engaging means carried by the upper part of the frame.

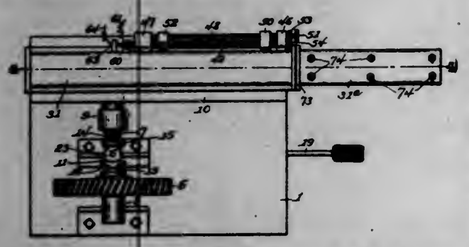
1,115,460. DRAFT-EQUALIZER. WILLIAM M. ADAIR, Algansee, Mich. Filed June 17, 1914. Serial No. 845,644. (Cl. 21—76.)



1. The combination with a brace member having its ends bent and flattened and a groove formed in the outer side of the bent portion, of a draft-rod having an eye formed in its central portion, its ends bent to form eyes thereon and shaped to fit the bent end of the brace and provided with securing means for fastening the ends of the said draft-rod and brace together and a ring surrounding the draft-rod at its center portion whereby the spreading of the eye is prevented.

2. The combination with a draft rod the ends of which extend obliquely to each other and the extreme ends bent back to engage the ends of a brace, a brace having its ends flattened and bent and a groove formed in the outer side of the bent portion to receive the bent end of the draft-rod; a rivet uniting the ends of these two members.

1,115,461. ELECTRIC WELDING-MACHINE. WILLIAM E. ANDREWS, Bellaire, Ohio, assignor of one-half to W. A. Stellers, Bellaire, Ohio. Filed July 6, 1914. Serial No. 849,026. (Cl. 219—6.)



1. An electric welding machine comprising a horn electrode, a wheel electrode mounted to travel along said horn electrode, a transformer having terminals connected to said electrodes, means for producing reciprocating movement of said wheel electrode, and means actuated by said movement producing means for closing and opening the transformer circuit at predetermined points in the travel of said wheel electrode.

2. An electric welding machine comprising a horn electrode, a wheel electrode mounted to travel along said horn electrode, a transformer having terminals connected to said electrodes, rocking means for advancing and retracting said wheel electrode, and means actuated by the first-mentioned means for opening and closing the transformer circuit at predetermined points in the advance movement of said wheel electrode.

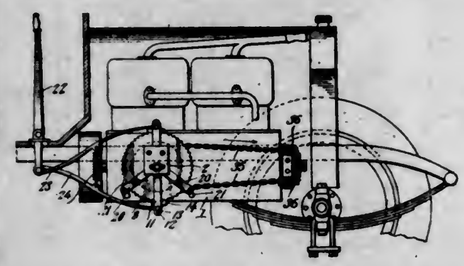
3 An electric welding machine comprising a stationary horn electrode, a wheel electrode, means yieldingly supporting said wheel electrode over said horn electrode, a transformer having terminals connected to said electrodes, means for advancing and retracting said wheel supporting means, and automatically actuated means for opening and closing the transformer circuit at predetermined points in the travel of said wheel electrode.

4. An electric welding machine comprising a stationary horn electrode, a wheel electrode, means yieldingly supporting said wheel electrode over said horn electrode, a transformer having terminals connected to said electrodes, means for advancing and retracting said wheel supporting means, and means actuated by said advancing and retracting means for opening and closing the transformer circuit at predetermined points in the travel of the wheel electrode.

5. An electric welding machine comprising a horn electrode, a wheel electrode mounted to travel along said horn electrode, a transformer having terminals connected to said electrodes, a pivoted rocker-arm, means for rocking said arm back and forth, means interposed between said arm and said wheel electrode whereby reciprocating movement is imparted to the latter, and means actuated by the last mentioned means whereby the transformer circuit is closed and opened at predetermined points in the travel of said wheel electrode.

[Claims 6 to 11 not printed in the Gazette.]

1,115,462. ENGINE-STARTER. ELMER ELLSWORTH DUTTON, Port Huron, Mich. Filed Jan. 10, 1913. Serial No. 741,303. (Cl. 123—185.



1. An engine starter including a driving member comprising a ratchet wheel, a sprocket wheel, and an intermediate clutch member, an operating lever, arms projecting therefrom, connections intermediate the arms and ratchet wheel to continuously rotate the ratchet in the reciprocation of the arm, a driven member connected to the engine shaft and including a head fixed to the shaft, a combined ratchet and sprocket wheel loosely encircling the head, and dogs carried by the head to engage the ratchet and a sprocket chain uniting said sprocket wheels, and means for adjusting the driving member as an entirety with relation to the driven member to tension the sprocket chain.

2. An engine starter including a driving member, a driven member, and a sprocket chain uniting said members, said driving member including a ratchet wheel, a sprocket wheel, an intermediate clutch member, arms rotatably mounted upon the axis of the ratchet wheel and extending diametrically of said wheel, operating bars movably connected to the terminals of the arms, dogs connected to the bars and engaging the ratchet wheel, and means to simultaneously actuate the bars in the same direction.

3. An engine starter including a driving member, a driven member, and a sprocket chain uniting said members, said driving member including a ratchet wheel, a sprocket wheel, an intermediate clutch member, arms rotatably mounted upon the axis of the ratchet wheel and extending diametrically of said wheel, operating bars movably connected to the terminals of the arms, dogs connected to the bars and engaging the ratchet wheel, a spring uniting the bars to maintain the dogs normally in contact with the teeth of the ratchet wheel, and means to simultaneously actuate the bars in the same direction.

1,115,463. ELECTRODE ELEMENT. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed June 17, 1910. Serial No. 567,371. (Cl. 204—29.)

1. As a new article of manufacture, an electrode element comprising a tubular perforated inclosing pocket of conductive material and alternate layers of finely divided active material and conductive material contained under pressure therein, the pressure being greater adjacent to all the walls of the pocket than in the center thereof and said pocket being non-deformable under normal working conditions, substantially as described.

2. As a new article of manufacture, an electrode element comprising a tubular perforated inclosing pocket of conductive material and alternate curved layers of active material and conductive material contained under pressure therein, substantially as described.

3. As a new article of manufacture, an electrode element comprising a tubular perforated inclosing pocket of conductive material and alternate practically uniform layers of active material and conductive material contained under pressure therein and bent adjacent to the walls of the tube into firm contact therewith, substantially as described.

4. As a new article of manufacture, an electrode element comprising a tubular perforated inclosing pocket of conductive material and alternate layers of practically uniform cross section, comprising nickel hydroxid and electrolytically active metallic nickel compressed therein and bent upwardly adjacent to the walls of the tube into contact therewith, substantially as described.

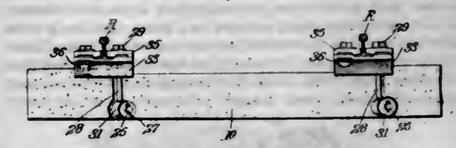
5. As a new article of manufacture, an electrode element comprising a tubular perforated inclosing pocket of conductive material and alternate layers of finely divided active material and conductive material contained under pressure therein, said pocket being non-deformable under normal working conditions, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,115,464. RAILROAD-TIE. EMANUEL FOUREMAN, Arcanum, Ohio. Filed June 20, 1914. Serial No. 846,297. (Cl. 238—4.)

1. In a railway tie, the combination of a concrete body having tubes embedded therein and extending diagonally under said body, and means for securing the rails to the tie, said means comprising parts which extend through said tubes.

2. A concrete railway tie having tubes embedded therein and extending transversely thereof, means for securing the rails to the tie, said tubes extending diagonally underneath the rails, said means comprising members which extend through the tubes, and devices connected to said members for clamping the rails.



3. A railway tie having shoulders and tubes extending transversely thereof, means for securing the rails in place on the tie comprising rods extending through said tubes, tieplates on which the rails rest, said shoulders limiting the movement of the tieplates, members for securing the tieplates to said rods, and devices for clamping the rails to the tieplates and held in place by said members.

4. Rails supporting and securing means comprising a concrete supporting body, a tube embedded therein and extending transversely thereof, a plate resting on the supporting body, means on the plate for clamping the rail, a rod extending through said tube, devices connected to the ends of said rod, and means coöperating with said devices to hold said clamping means and plate in place.

1,115,465. SHELF-SUPPORT. EDGAR ALFRED GODDIN, London, England. Filed Mar. 11, 1912. Serial No. 682,921. (Cl. 211—27.)

1. A shelf support comprising a series of fittings each having one or more ledges and one or more slots, said ledges or some of them being adapted to support one end of a shelf after passing through slots in the fitting above which it also supports, substantially as described.

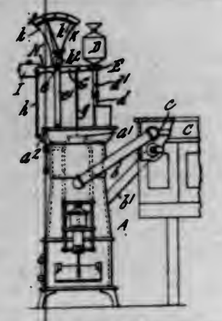
2. An adjustable shelf support comprising a series of fittings each having one or more ledges and one or more slots vertically beneath such ledges, said ledges or some of them being adapted to support one end of a shelf after passing through slots in the fitting above which it also supports, substantially as described.

3. An adjustable shelf support comprising a series of fittings each having one or more ledges in combination with a vertical series of slots beneath each ledge, one of the slots of each series being adapted to engage the ledges of a lower similar fitting by which it is supported, such supported fitting in turn supporting the next shelf at a desired distance above the one next beneath it, vertical corrugations in each fitting to strengthen them and a transverse offset in each such fitting to accommodate the upper portion of the fitting next beneath it, substantially as described.

1,115,466. REGULATOR FOR WATER-HEATERS. WILLIAM HORROCKS, Herkimer, N. Y.; Francher L. Yonker, Dolgeville, N. Y., and William C. Prescott, Herkimer, N. Y., executors of said Horrocks, deceased. Filed Mar. 20, 1912. Serial No. 685,032. (Cl. 236—1.)

1. The combination with a water heater having a water circulating system, a draft damper, a check damper, and

a damper controlling the smoke passage of said heater, of a beam, a rock shaft to which said beam is fixed, an expansion tank movably supported by said beam and connected with said circulating system, two arms extending from said rock shaft in one direction and connected respectively to said draft and smoke passage dampers, and a third arm extending from said shaft in the opposite direction and connected to said check damper, substantially as set forth.



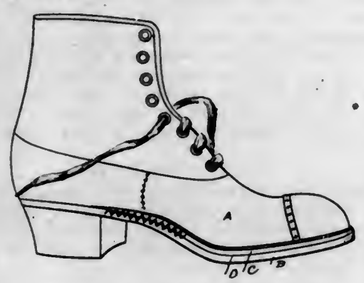
2. The combination with a water heater having a water circulating system and a central smoke passage, a draft damper, a check damper, and a lid for closing the top of said smoke passage, of a frame mounted on top of said heater, a rock shaft journaled in said frame, a beam fixed to said rock shaft having a counterweight on one end thereof and an expansion tank on the other end thereof, said expansion tank being connected with said circulating system, an arm fixed to one end of said rock shaft and connected with one of said dampers, a lever fixed to the other end of said rock shaft, the arms of said lever projecting on opposite sides of said rock shaft, the outwardly projecting arm of said lever being connected to the second of said dampers and the inwardly projecting arm of said lever being connected to the lid for said smoke passage.

3. The combination with a water heater having a water circulating system, a central vertical smoke passage, a pivoted draft damper adapted to close by gravity located at one side of the body of the heater, a pivoted check damper adapted to close by gravity located at one side of the body of the heater and disposed at an angle to the draft damper, and a lid for closing the upper end of said smoke passage, of a frame mounted upon and projecting upwardly from the top of said heater, a rock shaft journaled in said frame, a beam fixed to said rock shaft, a counterweight on one end of said beam, an expansion tank on the other end of said beam, connections including a flexible pipe between said circulating system and said expansion tank, a lever fixed to said rock shaft and having an arm projecting over the lid for closing said smoke passage, a connection between said arm and said lid, said lever having a second arm projecting beyond the edge of the top of the heater, a connection from said arm to one of said dampers, an end of said rock shaft projecting over the side of said heater to which the second of said dampers is pivoted, an arm secured to said projecting end of the rock shaft, and a connection from said arm to the second of said dampers.

1,115,467. SHOE. IRVING HORTON, East Bridgewater, Mass., assignor of sixty one-hundredths to John C. Schelter, Rochester, N. Y. Filed Apr. 9, 1913. Serial No. 759,870. (Cl. 36—17.)

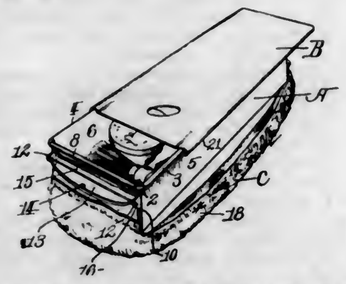
1. The combination with a shoe having the bottom formed of a plurality of flexible parts, of a fastener consisting of a thin narrow strip of corrugated material inserted edgewise in the edge of the shoe along the line of separation between two parts, the corrugations extending transversely across the line of separation to lock the parts together.

2. The combination with a shoe having the bottom formed of a plurality of parts at the shank, of a fastener consisting of a thin narrow strip of corrugated material inserted edgewise in the edge of the shoe along the line of separation between two parts, the corrugations extending transversely across the line of separation to lock the parts together.



3. The combination with a shoe having the bottom formed of a plurality of parts at the shank, of a fastener consisting of a thin narrow strip of corrugated material inserted edgewise in the edge of the shoe along the line of separation between two parts, the corrugations extending transversely across the line of separation to lock the parts together, the fastener being provided with barbs formed thereon to prevent the fastener from accidentally working out of place.

1,115,468. SHOE-BUFFER. WILLIAM R. LANDY, Minneapolis, Minn. Filed May 31, 1913. Serial No. 770,904. (Cl. 15—16.)



1. A shoe buffer, comprising in combination, a handle having a quadrilateral frame, a transverse plate having ends secured to the sides of said frame and forming side walls and a floor of a receptacle, a longitudinal plate secured by its ends to the ends of said frame and having end portions forming end walls of said receptacle and a body portion bowed down below said floor from said end walls and forming a resilient support, buckles mounted upon said end walls, a flexible strip stretched over the outer surface of said longitudinal plate and secured in adjusted position by said buckles, and a strip of polishing material secured over the surface of said flexible strip.

2. A shoe buffer, comprising in combination, a handle having a quadrilateral frame, a transverse plate having ends secured to the sides of said frame and forming side walls and a floor of a receptacle, a longitudinal plate secured by its ends to the ends of said frame and having end portions forming end walls of said receptacle and a body portion bowed down below said floor from said end walls and forming a resilient support, a flexible strip stretched over the outer surface of said longitudinal plate and having side edges projecting up and inwardly over the side edges of said plate, means for securing the ends of said strip to the end walls of said receptacle and a strip of polishing material mounted upon the outer surface of said flexible strip.

3. A shoe buffer, comprising in combination, a handle having a quadrilateral frame, a transverse plate having its ends secured to the sides of said frame and forming the sides and floor of a receptacle, a longitudinal plate secured by its ends to the ends of said frame and having end portions forming end walls of said receptacle and a body portion bowed down from said end walls below said floor and forming a resilient support, a flexible strip stretched over the outer surface of said longitudinal plate and resiliently supported thereby, means for securing the ends of said strip to the end walls of said receptacle and a strip of polishing material secured over the outer surface of said flexible strip.

1,115,469. NEEDLE. WILLARD C. LIPE, Syracuse, N. Y. Filed Sept. 26, 1902. Serial No. 125,002. (Cl. 112—11.)

1. A needle for sewing brooms and similar articles, the same being substantially triangular in general outline in cross-section and provided with an eye opening through two adjacent sides of the needle and extending inwardly and forwardly forming a rearwardly extending barb, the eye at the portion thereof nearest the point of the needle opening through one of said adjacent faces near the edge formed by the last-mentioned face and a third face of the needle, and the point of the barb being located between one of said adjacent faces and the third face of the needle, substantially as and for the purpose described.

2. The combination with a needle for sewing brooms and similar articles, the same being substantially triangular in general outline in cross-section and provided with an eye opening through two adjacent sides and extending inwardly and forwardly, and thereby forming a rearwardly extending barb; of a latch mounted on the needle and movable along one of said adjacent sides into and out of engagement with the point of the barb, substantially as and for the purpose specified.

3. A needle for sewing brooms and similar articles, said needle being substantially wedge-shaped in cross-section, opposite faces of the needle meeting and forming the edge of the wedge, the needle being formed with an eye extending inwardly and forwardly, and opening through one of said faces near the edge of the wedge and through the third face located at the side of the needle directly opposite the edge of the wedge and thereby forming a rearwardly extending barb, substantially as and for the purpose set forth.

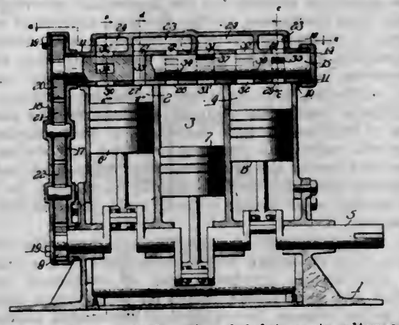
4. A needle for sewing brooms, the needle being substantially wedge-shaped in cross-section and having a substantially flat face and a curved face, said faces meeting each other at an angle and forming the edge of the wedge, and the needle being also formed with an eye opening through the curved face near the edge of the wedge and also through the third face located at the side of the needle directly opposite to the edge of the wedge, the eye thus forming a rearwardly extending barb having its point located between said curved face and said flat face which meet to form the edge of the wedge, substantially as and for the purpose described.

5. A needle for sewing brooms and similar articles, said needle being substantially wedge-shaped in cross-section and having a substantially flat face and a curved face at opposite sides of the needle, said faces meeting each other at an angle and forming the edge of the wedge, the needle being formed with an eye extending inwardly and forwardly, and opening through the curved face and through the third face located at the side of the needle directly opposite the edge of the wedge, and thereby forming a rearwardly extending barb between the two first-mentioned faces, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,115,470. AIR-MOTOR. CARL E. L. LIPMAN, Beloit, Wis. Filed July 5, 1912. Serial No. 707,898. (Cl. 136—7.)

In a motor, the combination of a series of power cylinders arranged in alinement, a valve casing extending over the upper ends of said alined cylinders, communication being established between said casing and each of said cylinders through an intake and exhaust port in the top of each cylinder, said ports being arranged throughout the length of the casing so that the inlet ports of adjacent cylinders are disposed in proximate relation and the exhaust ports of adjacent cylinders are also disposed in

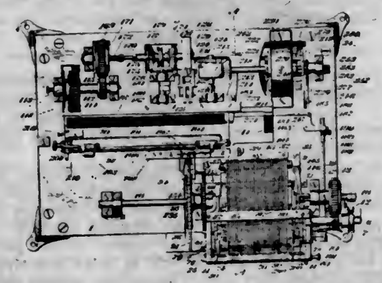


proximate relation, each pair of inlet ports alternating in position with a pair of exhaust ports, a partition dividing said valve casing into an inlet chamber including all of said inlet ports and an exhaust chamber including all of said exhaust ports, and a valve rotatably mounted in said casing for opening and closing said ports in predetermined relation.

1,115,471. MANUFACTURE OF FERROPHOSPHORUS. DAVID I. MILLER, Birmingham, Ala. Filed May 6, 1914. Serial No. 836,637. (Cl. 75—45.)

The process of producing ferrophosphorus, which consists in charging a blast furnace with a mixture of iron bearing material, a phosphorus-bearing material, and a basic material in proper proportion to liberate the percentage of phosphorus required to combine with the iron, and smelting said mixture.

1,115,472. AUTOMATIC TYPOGRAPHIC APPARATUS. CHARLES T. MOORE, Washington, D. C., assignor, by mesne assignments, to James G. Coffin, trustee. Filed Sept. 27, 1901, Serial No. 76,783. Renewed Mar. 21, 1911. Serial No. 616,023. (Cl. 197—20.)



1. An apparatus of the character described comprising a type carrier, selecting mechanism therefor, a justification mechanism, and a controlling device for the apparatus, said controlling device comprising two separate controllers, one of said controllers coöperating with the selecting means to select type characters and word spaces of a composition, and the other controller coöperating with the justification mechanism to vary the word spaces and justify the lines of the composition.

2. An apparatus of the character described comprising a justification mechanism and a separate independent controller coöperating with said justification mechanism to vary the normal word spacing.

3. An apparatus of the character described comprising a type carrier provided with a plurality of sets of faces

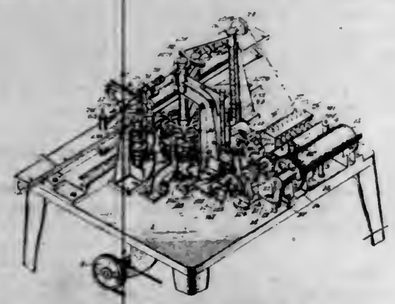
of type, character selecting devices controlling the movement of the type carrier, a shift selecting device corresponding to the sets or faces of type, said shift selecting device modifying the movement of the type carrier as controlled by the character selecting devices to change the characters selected from one case or face to another.

4. An automatic typographic apparatus comprising a type carrier, a carriage for the impression receiving material, feed mechanism for the carriage, impression mechanism, a controlling device for the apparatus having a composition represented thereon, said controlling device comprising two separate controllers, one of said controllers controlling the operation of the type carrier, the impression mechanism and the carriage feeding mechanism to impress the type characters of said composition upon the impression receiving material and divide the same into words, the other controller controlling and cooperating with the carriage feeding mechanism to vary the normal word spaces to justify the lines of the impressions.

5. In an automatic typographic apparatus, the combination of a composing device independent of the apparatus and bearing representations of characters to be printed and word spaces, means for feeding said composing device through the apparatus, mechanism controlled by the composing device, means for indenting a line, and means for varying the word spaces without varying the indentation of the line, substantially as described.

[Claims 6 to 171 not printed in the Gazette.]

1,115,473. AUTOMATIC TYPOGRAPHIC APPARATUS. GEORGE R. CORNWALL, Rye, N. Y., assignor, by mesne assignments, to James G. Coffin, trustee. Filed Apr. 2, 1902, Serial No. 101,020. Renewed Sept. 28, 1914. Serial No. 863,798. (Cl. 197—48.)



1. A typographic machine including in combination a controller, means for receiving and feeding said controller, fluid pressure means for causing the controller to print the characters of words and to proportion the interval spaces whereby the lines are justified.

2. An automatic typographic apparatus adapted to operate under the control of a controller having character and indenting perforations arranged in transverse lines, said apparatus comprising fluid pressure operated selective means operating under the control of the perforations on a single transverse line to print selectively a plurality of characters and to indent the printed matter.

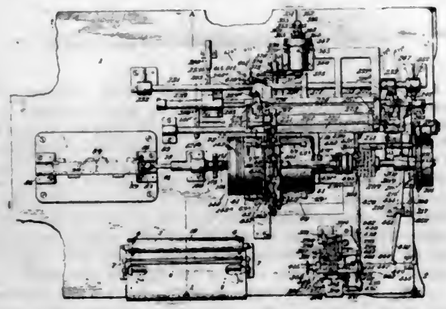
3. An automatic typographic apparatus adapted to operate under the control of a controller, said apparatus comprising a plurality of type carriers, each carrier carrying a separate case or style, means for selecting any of said carriers, means or selecting a character on the selected carrier, both of said selective means controlled by the controller.

4. An automatic typographic apparatus comprising a plurality of type carriers each carrier bearing a set or face of type of different design from the type of the other carriers, means for selecting type from any one of said carriers, and means for automatically changing the selection from one of said carriers to another.

5. An automatic typographic apparatus having a plurality of type carriers and adapted to operate under the control of a controller, said controller having shifting and character perforations arranged in transverse lines thereof, said apparatus comprising means operating under the control of the perforations on a single transverse line of the controller to select one of the type carriers and bring the same into operative position, and to select characters in each carrier.

[Claims 6 to 63 not printed in the Gazette.]

1,115,474. AUTOMATIC TYPOGRAPHIC APPARATUS. CHARLES T. MOONE, Washington, D. C., assignor, by mesne assignments, to James G. Coffin, trustee. Filed May 12, 1904, Serial No. 207,668. Renewed Mar. 13, 1912. Serial No. 683,606. (Cl. 197—20.)



1. In a machine of the character described, a main driving shaft, a type carrier and two shafts, each having clutch driving connection with the driving shaft, a feed mechanism for a controller operatively connected with one of the shafts, and impression mechanism operatively connected with the other of said shafts and means controlled by the type-carrier in its several positions for operating said clutch driving connections.

2. In a machine of the character described, a main driving shaft, a type carrier and two shafts each having clutch driving connection with said driving shaft, feed-mechanism for a controller operatively connected with one of said shafts, and impression mechanism operatively connected with the other of said shafts, means controlled by the type-carrier when in non-printing position for operating the clutch connection of one of said shafts, and means controlled by the type carrier when in printing positions for operating the clutch connection of one of said shafts, and means controlled by the type carrier when in printing positions for operating the clutch connection of the other of said shafts.

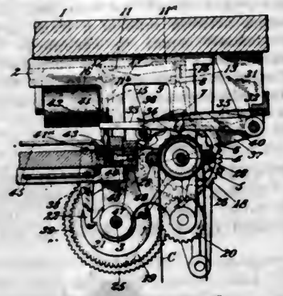
3. In a machine of the character described, a main driving shaft, a type-carrier, and two shafts each having clutch driving connection with said driving shaft, a feed mechanism for a controller operatively connected with one of said shafts, impression mechanism operatively connected with the other of said shafts, an electro-magnetic device for operating the clutch-driving connection of each of said shafts, a circuit controlling means for each of said electro-magnetic devices said circuit controlling means operated by the type-carrier.

4. In a machine of the character described, a main driving shaft, a type-carrier, and two shafts each having clutch-driving connection with the driving shaft, a feed mechanism for a controller operatively connected with one of said shafts and impression mechanism operatively connected with the other of said shafts, an electro-magnetic device for the clutch driving connection of each of said shafts, circuit closing means connected with the type-carrier and operating to close the circuit of the clutch-controlling device of the first named shaft when the type-carrier is in normal position, and to break the circuit of said clutch-controlling device and close the circuit of the clutch-controlling device of the second named shaft when the type-carrier is in operative position.

5. In a machine of the character described a feeding mechanism for a controller, a type carrier and an impression mechanism, electrically controlled means for operating said feed mechanism and electrically controlled means for operating the impression mechanism, the circuits of said electrically controlled means controlled by the type-carrier.

[Claims 6 to 82 not printed in the Gazette.]

1,115,475. CONTROLLER MECHANISM FOR AUTOMATIC TYPOGRAPHIC APPARATUS. AUGUSTE L. SALTZMAN, East Orange, N. J., assignor, by mesne assignments, to James G. Coffin, trustee. Filed Oct. 6, 1904, Serial No. 227,455. Renewed May 14, 1914. Serial No. 838,619. (Cl. 197—20.)



1. A typographic machine adapted to be controlled by a controller, including in combination a type carrier, means for moving said type carrier, positioning means for said type carrier, a series of valves corresponding to typographic characters, and automatic means selectively operated by the controller for actuating said valves in accordance with a typographic composition to cause said positioning means to position said type carrier.

2. A typographic machine, adapted to be controlled by a controller, including in combination a traveling type carrier having a plurality of characters thereon, a series of valves corresponding to the typographic characters on said type carrier, arresting means for said type carrier, and automatic means controlled by said controller for actuating said valves to actuate said arresting means.

3. In a machine of the character described a series of valves corresponding to typographic characters and to word spaces and other functions, and automatic means connected mechanically to said valves, said means being selectively operated to actuate said valves in accordance with a typographic composition.

4. A typographic machine, adapted to be controlled by a controller, including in combination a series of valves corresponding to typographic characters and to word spaces and other functions, and automatic means mechanically connected to said valves for actuating said valves, said means being controlled by the controller.

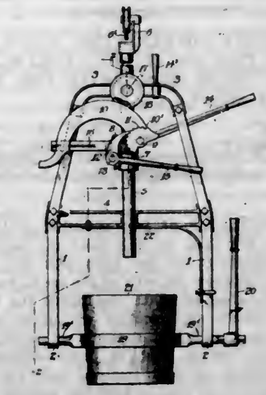
5. In a machine of the character described, a traveling type carrier, a plurality of positioning means therefor, fluid-pressure means for actuating said positioning means, a series of valves for controlling said fluid-pressure means, and means selectively operated by said controller for operating said valves.

[Claims 6 to 41 printed in the Gazette.]

REISSUES.

13,813. PORTABLE CONTAINER. HENRY ARIENS, Brillion, Wis., assignor to Brillion Iron Works, Brillion, Wis. Filed Aug. 26, 1914. Serial No. 858,758. Original No. 1,078,981, dated Nov. 18, 1913, Serial No. 776,958. (Cl. 214—14.)

1. A portable track-supported container comprising a hanger-rod, a frame in slidable engagement therewith, a supporting head-block for the frame carried by the hanger-rod, cam-actuated connecting means between the frame and head-block whereby said frame is raised and lowered relative to the hanger-rod, means for locking the cam-actuating means, and a tiltable vessel supported by the frame.



2. A portable track-supported container comprising a hanger-rod, a head-block carried thereby, a revoluble and slidable frame mounted upon the hanger-rod and supported by the head-block, an oscillatory cam-member carried by the head-block, means extending from the frame for engagement with the cam, means carried by said head-block for locking the cam in a selected position, and a vessel support having trunnions mounted in the frame.

3. A portable track-supported container comprising a hanger-rod, a head-block secured thereto, an oscillatory cam-member having a ratchet-toothed hub mounted upon the head-block, an actuating lever extending from the cam member, a dog carried by the head-block for engagement with the ratchet-toothed hub of the cam-member whereby the latter is locked in selected positions, means extending from the frame for engagement with said cam-member, and a tiltable vessel supported by the frame.

4. A portable track-supported container comprising a hanger-rod, a collar adjustably secured to the hanger-rod, a head-block loosely mounted upon the hanger-rod and engageable with the collar, an oscillatory cam carried by the head-block, the cam being provided with a ratchet-toothed hub, a dog for engagement with the hub teeth, means for actuating the cam, a frame having upper and lower apertures engageable with said hanger-rod, trunnion supports extending from the lower end of the frame, a vessel support having trunnions adapted to be fitted in the frame trunnion supports, and a roller extending from the frame engageable with the cam-member.

5. In an apparatus of the class set forth, a movable support, a hanger-rod depending therefrom, a bale-frame slidably and rotatably carried on said rod, a container rotatably mounted in the lower end of said bale-frame, means for raising and lowering said bale-frame and means for locking the same in adjusted positions.

6. In an apparatus of the class set forth, a movable support, a hanger-rod depending therefrom, a bale-frame slidably and rotatably carried on said rod, a container rotatably mounted in the lower end of said bale-frame, means supported on said rod for raising and lowering said bale-frame and for locking the same in adjusted positions.

7. In an apparatus of the class set forth, a movable support, a hanger-rod depending therefrom, a bale-frame slidably and rotatably carried on said rod, a container rotatably mounted in the lower end of said bale-frame, means for raising and lowering said bale-frame and means for locking the same in adjusted positions, said raising and lowering means being rotatable with said frame and being connected thereto so as to rotate therewith.

8. In an apparatus of the class set forth, a movable support, a hanger-rod depending therefrom, a bale-frame, having vertically spaced bearings adapted for slidable and

rotatable engagement with said hanger-rod and means supported on said hanger-rod between said bale-frame bearings for raising and lowering said bale-frame and for securing the same in adjusted positions.

13,814. CROSS-TIE FOR RAILWAYS. JOHN A. ATWOOD, Beaver, Pa. Filed Aug. 19, 1914. Serial No. 857,616. Original No. 909,359, dated Jan. 12, 1909, Serial No. 435,227. (Cl. 238—3.)

1. In the combination of two metallic sections, each having a length less than one-half the total length of the tie, but approximately not less than half the standard gage or distance between the rails of the track, and having a width approximately equal to one-fourth the length of the sections, whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material molded into the metallic sections, and thereby serving to hold the metallic sections connected by such insulating section from movement relative to each other.

2. In the combination of two metallic sections, each having a length less than one-half of the total length of the tie, but approximately not less than half the standard gage or distance between the rails of a track, and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support and foundation for the rail secured thereto, an intermediate section formed of insulating material molded into the sections and adapted to hold such sections from longitudinal movement relative to each other, and means for securing the rails to the metallic supporting sections.

3. The combination of two metallic U-shaped sections, each having a length less than half the total length of the tie, but approximately not less than half the standard gage or distance between the rails of a track and having a width approximately equal to one-fourth its length whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto and an intermediate section formed of insulating material having its ends molded into and firmly engaging the metallic sections and holding such sections from longitudinal movement relative to each other.

4. The combination of two metallic U-shaped sections, each having a length less than one-half the total length of the tie, but approximately not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support or foundation to the rails secured thereto, and a body of concrete molded into and extending through the metallic sections.

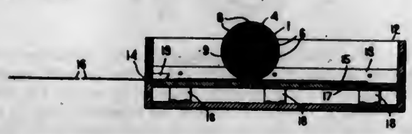
5. In the combination of two metallic sections, each having a length not less than half the standard gage or distance between the rails of the track and having a width approximately equal to one-fourth of the length of the sections, whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material molded into the metallic sections, and thereby serving to hold the metallic sections connected by such insulating section from movement relative to each other.

6. The combination of two metallic sections, each having a length not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support and foundation for the rail secured thereto, an intermediate section formed of insulating material molded into the sections and adapted to hold such sections from longitudinal movement relative to each other, and means for securing the rails to the metallic supporting sections.

7. The combination of two metallic U-shaped sections, each having a length not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material having its ends molded into and firmly engaging the metallic sections and holding such sections from longitudinal movement relative to each other.

8. The combination of two metallic U-shaped sections, each having a length of not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support of foundation to the rails secured thereto, and a body of concrete molded into and extending through the metallic sections.

13,815. APPARATUS FOR DEVELOPING PHOTOGRAPHS. RANDOLPH CROMPTON, Chatham, Mass. Filed June 28, 1913. Serial No. 776,451. Original No. 1,057,712, dated Apr. 1, 1913, Serial No. 721,577. (Cl. 95—89.)



1. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable, cylindrical carrier having a surface-covering of absorbent material adapted to be charged with a liquid medium, and means on the holder to support the carrier with its absorbent covering in substantially tangential engagement with the plate, said means guiding and directing the carrier when it is rolled lengthwise of the plate, to impose upon the surface thereof a film of the liquid medium.

2. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable perforated cylindrical carrier adapted to be filled with a liquid medium and having an absorbent covering pervious to such medium, and means on the holder to support and guide the carrier and maintain the covering thereof in substantially tangential contact with the surface of the plate when said carrier is revolved and thereby moved endwise of the plate.

3. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable cylindrical carrier having a foraminate wall provided with a covering of textile material pervious to liquids, a removable perforated end for the carrier, whereby it may be filled with a liquid, the perforations in the end permitting the air to cause the contained liquid to exude through the covering, and means on the holder to support the carrier and permit it to be revolved to traverse the surface of the plate in tangential contact therewith.

4. In apparatus for developing photographs, a holder, a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, means to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and a guide on the holder to support said means and maintain a fixed relationship between it and the plate during the film-applying movement.

5. In apparatus for developing photographs, a holder, a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, means to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and guide members on the holder at opposite sides of and extended lengthwise of the plate, to support said liquid containing means and permit rotative movement thereof to apply a thin sheet or film of the liquid upon the surface of the plate.

6. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate, cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier, to the sustained by and roll upon the upper faces of said guides, and means to support the plate to be developed with its sensitized surface in a plane substantially in tangential contact with the covering of the carrier.

7. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier to be sustained by and roll upon the upper faces of said guides, a flat plate-support within the holder and under said guides, and means to maintain said support yieldingly in operative position against the lower faces of the guides.

8. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate, cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier, to be sustained by and roll upon the upper faces of said guides, and yieldingly sustained means to support the plate to be developed with its sensitized surface between the guides, and in a plane substantially tangent to the covering of the rotatable carrier.

9. In apparatus for developing photographs, a tiltable holder having a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, and a freely revoluble cylindrical, foraminate carrier to contain a liquid medium and provided with a covering pervious thereto, to apply the liquid medium with a rolling action upon the surface of the plate progressively from end to end thereof, said holder having means to control the movement of the carrier when the holder is tilted.

10. In apparatus for developing photographs, a box-like holder having a slit in one end, means to support a film-strip with its sensitized surface uppermost, the end of the strip extending through the slit, lugs to maintain the strip seated and positioned within the holder, a rotatable, cylindrical carrier having perforated walls and adapted to contain a liquid medium, an absorbent textile covering for the carrier, permitting the medium to exude therefrom, and guides on the holder to support and direct the carrier and permit it to be rolled lengthwise of the holder with its absorbent covering in tangential contact with the sensitized surface of the film-strip.

11. In apparatus for developing photographs, a tiltable box-like holder having an opening in one end, means to support a film-strip with its sensitized surface uppermost, the non-sensitized end of the strip extending through the opening, lugs to maintain the strip seated with its entire sensitized surface exposed from end to end, a rotatable, cylindrical carrier freely revoluble within the holder above the film-strip, having perforated walls and adapted to contain a liquid medium, and an absorbent covering for the carrier pervious to and permitting the liquid medium to exude therethrough, the revoluble movement of the carrier causing its absorbent covering to roll in tangential contact with the sensitized surface of the film-strip from one to its other end.

12 In apparatus for developing photographs, a tiltable box-like holder, means therein to support a film-strip with its sensitized surface uppermost, lugs to maintain the strip seated with the ends of the sensitized surface thereof at a predetermined distance from the adjacent ends of the holder, a rotatable, cylindrical carrier freely revoluble within the holder above the film-strip, having perforated walls and adapted to contain a liquid medium, and an absorbent covering for the carrier pervious to and permitting the liquid medium to exude therethrough, the revoluble movement of the carrier causing its absorbent covering to contact tangentially with the sensitized surface of the film-strip and roll thereupon continuously from one to the other end of such surface.

13. In apparatus for developing photographs, a tiltable holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, combined with a carrier freely revoluble in and lengthwise of the holder when the latter is tilted, said carrier having a cylindrical wall provided with irregularly arranged perforations and adapted to contain a liquid medium, and an absorbent covering for the perforated wall of the carrier, the medium therein being transferred by the covering when said carrier is caused to roll thereover, one end of the carrier being apertured to permit entrance of air thereinto to thereby cause the liquid medium to exude through the covering.

14. In apparatus for developing photographs, a tiltable holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, a rotatable carrier having a rigid, foraminate cylindrical wall adapted to be filled with a liquid medium, an absorbent covering for the carrier, pervious to such medium, and means on the holder to guide the carrier when it is rolled lengthwise of the holder by tilting thereof, with the absorbent covering in substantially tangential contact with the surface of the plate, thereby to impose upon the said surface a film of the liquid medium.

15. In apparatus for developing photographs, a holder, a support therein to sustain in operative position the plate to be developed with its sensitized surface uppermost, a device to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and means on the holder coöperating with and guiding the said device during the film-applying movement thereof.

16. In apparatus for developing photographs, a holder, means therein to support the plate to be developed with its sensitized surface uppermost, devices mounted on the supporting means to position the plate and maintain it seated, a rotatable, cylindrical carrier having foraminate walls and adapted to contain a liquid medium, an absorbent covering for the carrier and pervious to the medium, permitting the latter to exude therefrom, and guides on the holder to support and direct the carrier and permit the same to be rolled lengthwise of the holder with the absorbent covering in tangential contact with the sensitized surface of the plate.

17. In apparatus for developing photographs, a holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, and means to support and guide a revoluble carrier, combined with the carrier having a cylindrical wall provided with irregularly arranged perforations and adapted to contain a liquid medium, and an absorbent covering for the perforated wall of the carrier, the medium therein being transferred by the covering to the plate when said carrier is revolved upon the supporting and guiding means.

18. In apparatus for developing photographs, a box-like holder having a slit in one end, means to support a film strip with its sensitized surface uppermost, the end of the strip extending through the slit, lugs to maintain the strip seated and positioned within the holder, and means to contain a liquid medium and apply the same with a rolling action upon the surface of the film strip progressively from end to end thereof, said means having a cylindrical surface covering pervious to the medium, said covering contacting substantially tangentially with the sensitized surface of the film-strip.

19. A device for developing photographs comprising a hollow, rotatable, cylindrical carrier having a foraminate wall provided with a covering of material pervious to liquids, said carrier being provided with air-admitting but

rotatable engagement with said hanger-rod and means supported on said hanger-rod between said bale-frame bearings for raising and lowering said bale-frame and for securing the same in adjusted positions.

13,814. CROSS-TIE FOR RAILWAYS. JOHN A. ATWOOD, Beaver, Pa. Filed Aug. 19, 1914. Serial No. 857,616. Original No. 909,350, dated Jan. 12, 1909, Serial No. 435,227. (Cl. 238—3.)

1. In the combination of two metallic sections, each having a length less than one-half the total length of the tie, but approximately not less than half the standard gage or distance between the rails of the track, and having a width approximately equal to one-fourth the length of the sections, whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material molded into the metallic sections, and thereby serving to hold the metallic sections connected by such insulating section from movement relative to each other.

2. In the combination of two metallic sections, each having a length less than one-half of the total length of the tie, but approximately not less than half the standard gage or distance between the rails of a track, and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support and foundation for the rail secured thereto, an intermediate section formed of insulating material molded into the sections and adapted to hold such sections from longitudinal movement relative to each other, and means for securing the rails to the metallic supporting sections.

3. The combination of two metallic U-shaped sections, each having a length less than half the total length of the tie, but approximately not less than half the standard gage or distance between the rails of a track and having a width approximately equal to one-fourth its length whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto and an intermediate section formed of insulating material having its ends molded into and firmly engaging the metallic sections and holding such sections from longitudinal movement relative to each other.

4. The combination of two metallic U-shaped sections, each having a length less than one-half the total length of the tie, but approximately not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support or foundation to the rails secured thereto, and a body of concrete molded into and extending through the metallic sections.

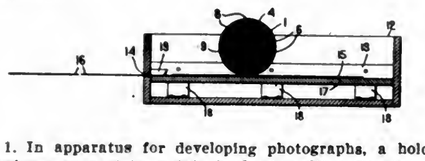
5. In the combination of two metallic sections, each having a length not less than half the standard gage or distance between the rails of the track and having a width approximately equal to one-fourth of the length of the sections, whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material molded into the metallic sections, and thereby serving to hold the metallic sections connected by such insulating section from movement relative to each other.

6. The combination of two metallic sections, each having a length not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support and foundation for the rail secured thereto, an intermediate section formed of insulating material molded into the sections and adapted to hold such sections from longitudinal movement relative to each other, and means for securing the rails to the metallic supporting sections.

7. The combination of two metallic U-shaped sections, each having a length not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length whereby each section will form when embedded in ballast a sufficient support or foundation for the rail secured thereto, and an intermediate section formed of insulating material having its ends molded into and firmly engaging the metallic sections and holding such sections from longitudinal movement relative to each other.

8. The combination of two metallic U-shaped sections, each having a length of not less than half the standard gage or distance between rails of a track and having a width approximately equal to one-fourth its length, whereby each section will form when embedded in ballast a sufficient support of foundation to the rails secured thereto, and a body of concrete molded into and extending through the metallic sections.

13,815. APPARATUS FOR DEVELOPING PHOTOGRAPHS. RANDOLPH CROMPTON, Chatham, Mass. Filed June 28, 1913. Serial No. 776,451. Original No. 1,057,712, dated Apr. 1, 1913, Serial No. 721,577. (Cl. 95—89.)



1. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable, cylindrical carrier having a surface-covering of absorbent material adapted to be charged with a liquid medium, and means on the holder to support the carrier with its absorbent covering in substantially tangential engagement with the plate, said means guiding and directing the carrier when it is rolled lengthwise of the plate, to impose upon the surface thereof a film of the liquid medium.

2. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable perforated cylindrical carrier adapted to be filled with a liquid medium and having an absorbent covering pervious to such medium, and means on the holder to support and guide the carrier and maintain the covering thereof in substantially tangential contact with the surface of the plate when said carrier is revolved and thereby moved endwise of the plate.

3. In apparatus for developing photographs, a holder having a support to sustain in fixed position the plate to be developed with its sensitized surface uppermost, a rotatable cylindrical carrier having a foraminate wall provided with a covering of textile material pervious to liquids, a removable perforated end for the carrier, whereby it may be filled with a liquid, the perforations in the end permitting the air to cause the contained liquid to exude through the covering, and means on the holder to support the carrier and permit it to be revolved to traverse the surface of the plate in tangential contact therewith.

4. In apparatus for developing photographs, a holder, a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, means to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and a guide on the holder to support said means and maintain a fixed relationship between it and the plate during the film-applying movement.

5. In apparatus for developing photographs, a holder, a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, means

to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and guide members on the holder at opposite sides of and extended lengthwise of the plate, to support said liquid containing means and permit rotative movement thereof to apply a thin sheet or film of the liquid upon the surface of the plate.

6. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate, cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier, to the sustained by and roll upon the upper faces of said guides, and means to support the plate to be developed with its sensitized surface in a plane substantially in tangential contact with the covering of the carrier.

7. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier to be sustained by and roll upon the upper faces of said guides, a flat plate-support within the holder and under said guides, and means to maintain said support yieldingly in operative position against the lower faces of the guides.

8. In apparatus for developing photographs, a box-like holder, guides fixed upon the opposite sides thereof, a foraminate, cylindrical carrier adapted to contain a liquid medium and provided with a covering pervious to such medium, the ends of the carrier fitting between the guides, journals projecting from the ends of the carrier, to be sustained by and roll upon the upper faces of said guides, and yieldingly sustained means to support the plate to be developed with its sensitized surface between the guides, and in a plane substantially tangent to the covering of the rotatable carrier.

9. In apparatus for developing photographs, a tiltable holder having a support therein to sustain in fixed position the plate to be developed with its sensitized surface uppermost, and a freely revoluble cylindrical, foraminate carrier to contain a liquid medium and provided with a covering pervious thereto, to apply the liquid medium with a rolling action upon the surface of the plate progressively from end to end thereof, said holder having means to control the movement of the carrier when the holder is tilted.

10. In apparatus for developing photographs, a box-like holder having a slit in one end, means to support a film-strip with its sensitized surface uppermost, the end of the strip extending through the slit, lugs to maintain the strip seated and positioned within the holder, a rotatable, cylindrical carrier having perforated walls and adapted to contain a liquid medium, an absorbent textile covering for the carrier, permitting the medium to exude therefrom, and guides on the holder to support and direct the carrier and permit it to be rolled lengthwise of the holder with its absorbent covering in tangential contact with the sensitized surface of the film-strip.

11. In apparatus for developing photographs, a tiltable box-like holder having an opening in one end, means to support a film-strip with its sensitized surface uppermost, the non-sensitized end of the strip extending through the opening, lugs to maintain the strip seated with its entire sensitized surface exposed from end to end, a rotatable, cylindrical carrier freely revoluble within the holder above the film-strip, having perforated walls and adapted to contain a liquid medium, and an absorbent covering for the carrier pervious to and permitting the liquid medium to exude therethrough, the revoluble movement of the carrier causing its absorbent covering to roll in tangential contact with the sensitized surface of the film-strip from one to its other end.

12 In apparatus for developing photographs, a tiltable box-like holder, means therein to support a film-strip with its sensitized surface uppermost, lugs to maintain the strip seated with the ends of the sensitized surface thereof at a predetermined distance from the adjacent ends of the holder, a rotatable, cylindrical carrier freely revoluble within the holder above the film-strip, having perforated walls and adapted to contain a liquid medium, and an absorbent covering for the carrier pervious to and permitting the liquid medium to exude therethrough, the revoluble movement of the carrier causing its absorbent covering to contact tangentially with the sensitized surface of the film-strip and roll thereupon continuously from one to the other end of such surface.

13. In apparatus for developing photographs, a tiltable holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, combined with a carrier freely revoluble in and lengthwise of the holder when the latter is tilted, said carrier having a cylindrical wall provided with irregularly arranged perforations and adapted to contain a liquid medium, and an absorbent covering for the perforated wall of the carrier, the medium therein being transferred by the covering when said carrier is caused to roll thereover, one end of the carrier being apertured to permit entrance of air thereinto to thereby cause the liquid medium to exude through the covering.

14. In apparatus for developing photographs, a tiltable holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, a rotatable carrier having a rigid, foraminate cylindrical wall adapted to be filled with a liquid medium, an absorbent covering for the carrier, pervious to such medium, and means on the holder to guide the carrier when it is rolled lengthwise of the holder by tilting thereof, with the absorbent covering in substantially tangential contact with the surface of the plate, thereby to impose upon the said surface a film of the liquid medium.

15. In apparatus for developing photographs, a holder, a support therein to sustain in operative position the plate to be developed with its sensitized surface uppermost, a device to contain a liquid medium and to apply a film thereof with a rolling motion upon the sensitized surface of the plate, and means on the holder coöperating with and guiding the said device during the film-applying movement thereof.

16. In apparatus for developing photographs, a holder, means therein to support the plate to be developed with its sensitized surface uppermost, devices mounted on the supporting means to position the plate and maintain it seated, a rotatable, cylindrical carrier having foraminate walls and adapted to contain a liquid medium, an absorbent covering for the carrier and pervious to the medium, permitting the latter to exude therefrom, and guides on the holder to support and direct the carrier and permit the same to be rolled lengthwise of the holder with the absorbent covering in tangential contact with the sensitized surface of the plate.

17. In apparatus for developing photographs, a holder having a support to sustain in operative position the plate to be developed with its sensitized surface uppermost, and means to support and guide a revoluble carrier, combined with the carrier having a cylindrical wall provided with irregularly arranged perforations and adapted to contain a liquid medium, and an absorbent covering for the perforated wall of the carrier, the medium therein being transferred by the covering to the plate when said carrier is revolved upon the supporting and guiding means.

18. In apparatus for developing photographs, a box-like holder having a slit in one end, means to support a film strip with its sensitized surface uppermost, the end of the strip extending through the slit, lugs to maintain the strip seated and positioned within the holder, and means to contain a liquid medium and apply the same with a rolling action upon the surface of the film strip progressively from end to end thereof, said means having a cylindrical surface covering pervious to the medium, said covering contacting substantially tangentially with the sensitized surface of the film-strip.

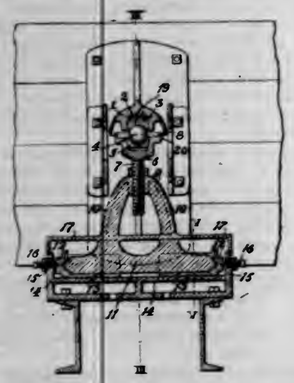
19. A device for developing photographs comprising a hollow, rotatable, cylindrical carrier having a foraminate wall provided with a covering of material pervious to liquids, said carrier being provided with air-admitting but

liquid-excluding means which is operative at all times to admit air to the interior of said carrier thereby to allow the liquid therein to seep through the foraminate wall in sufficient quantities to maintain the cover saturated, while preventing the escape of the liquid from the carrier except through said foraminate wall.

20. A device for developing photographs comprising a hollow, rotatable, cylindrical carrier having a foraminate wall provided with a covering of material pervious to liquids, the end of said carrier being perforated, and continuously-operative air-admitting but liquid-excluding means within said carrier adjacent said perforated end which is adapted to admit air continuously to the interior of said carrier thereby to allow the liquid therein to seep continuously through the foraminate wall in sufficient quantities to maintain the covering saturated while preventing said liquid from being discharged through said perforated end.

21. A device for developing photographs comprising a hollow, rotatable carrier having a foraminate wall provided with a covering of material pervious to liquids the end of said carrier being perforated and a sieve-like member 11 extending across the interior of said carrier adjacent said perforated end, said sieve-like member preventing the escape of the liquid in the carrier through the perforated end while admitting air to the interior thereof.

13,816. SUPPORT FOR CONCENTRATING APPARATUS. WILLIAM F. DEISTER, Fort Wayne, Ind., assignor to Deister Machine Company, Fort Wayne, Ind., a Corporation of Indiana. Filed Sept. 9, 1914. Serial No. 860,929. Original No. 1,098,023, dated May 26, 1914, Serial No. 782,083. (Cl. 64—50.)



1. A supporting standard having in combination two parts or members having recesses in their adjacent faces, one of said members being adapted to be attached to the article to be supported, blocks having circular seats removably arranged in said recesses, a ball arranged in the circular seats in the blocks, a cylinder carrying the other part or member, and bearings for the cylinder adapted to permit of its oscillation around its axis.

2. A supporting standard having in combination two parts or members having circular recesses in their adjacent faces, the upper part or member having a downwardly extending curtain and the under part or member provided with a peripheral rim projecting up within the curtain, a ball arranged in the recesses in said parts or members, a cylinder, an extensible connection between the cylinder and the lower part or member, and bearings for the cylinder adapted to permit of its oscillation around its axis.

3. A supporting standard, having in combination a cylinder, shoes provided with bearings for the ends of the cylinder, a trough for holding the shoes in proper relation to the cylinder, and an arm extending radially from the cylinder and adapted to be attached to the article to be supported.

4. A supporting standard, having in combination a cylinder provided with conical ends, shoes having conical recesses for the reception of the ends of the cylinder, a trough for holding the shoes in proper relation to the cylinder, and an arm extending radially from the cylinder and adapted to be connected to the article to be supported.

5. A supporting standard, having in combination a cylinder, shoes provided with bearings for the cylinder, a trough for holding the shoes in proper relation to the cylinder, an arm extending radially from the cylinder, and adapted to be attached to the article to be supported, and a box carried by the cylinder and inclosing the upper portion of the trough.

6. A supporting standard having in combination, an arm adapted to be attached to the article to be supported, journals carried by said arm, independent shoes for the reception of said journals, and a base adapted to receive the shoes and journals and hold them in operative relation.

7. A supporting standard having in combination, an arm adapted to be attached to the article to be supported, journals carried by said arm, shoes for the reception of said journals, a base for the reception of the shoes and journals and constructed to contain a lubricant for the moving parts, and curtain walls carried by the arm and extending down outside the lubricant containing portions.

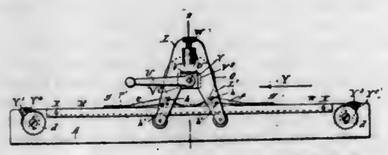
8. In a rocking end support for concentrating tables, the combination of a trough, a shaft arranged longitudinally of the trough and provided with an upwardly projecting arm, bearings for the ends of the shaft so arranged in the trough as to be lubricated by the oil in the trough and a hood carried by the arm and extending laterally and downwardly to prevent the entrance of dust, etc., into the trough.

9. In a rocking end support for concentrating tables, the combination of a trough, an arm provided at its lower end with oppositely disposed journals, a hood secured to the arm above the journals, and bearings for the journals arranged within the trough, the hood being adapted to move with the arm independent of the trough, and in all positions to prevent the entrance of dirt into the trough.

10. In a rocking end support for concentrating tables, the combination of an arm provided at its lower end with oppositely disposed journals, a hood formed integral with the arm, and bearings for the journals, the hood being adapted to protect the journals and bearings in all positions of the arm.

11. In a rocking end support for concentrating tables, the combination of a trough, bearings inclosed by the trough, a shaft having its end portions journaled in the bearings, an arm extending from the shaft, a suitable distance above the trough, and a hood movable with the arm and extending laterally beyond the open part of the trough through which the arm projects.

13,817. DUPLICATING PRINTING-MACHINE. BENJAMIN O. FANSLOW, Williamsport, Pa., assignor, by direct and mesne assignments, to Polygraph Duplicating Typewriter Company, a Corporation of New York. Filed May 15, 1909. Serial No. 496,293. Original No. 873,261, dated Dec. 10, 1907, Serial No. 357,219. (Cl. 101—11.)



1. In combination, a frame for supporting the composition to be reproduced; a carriage and an impression-roller mounted to travel on said frame and combined by means enabling the roller to rotate relatively to the carriage; means carried by the roller whereby the said roller may be rotated and the said carriage moved along the said frame; and an inking ribbon supported to operate between the composition and the impression-roller.

2. In combination, a frame for supporting the composition to be reproduced; a carriage for traveling on said frame; an impression-roller combined with the carriage by means enabling it to rotate relatively thereto; means carried by the roller whereby the carriage may be moved along the frame and said roller simultaneously rotated; means for varying the pressure of the roller on the said composition; and an inking ribbon supported to operate between the composition and the impression-roller.

3. In combination, a frame for supporting the composition to be reproduced; a carriage for traveling on said frame having opposite guide-bearings open at the bottom; journal-blocks working in said guide-bearings; an impression roller journaled in said blocks; means carried by the roller whereby the latter may be rotated and the carriage moved along the frame; means for adjusting said blocks in the carriage to vary the pressure of the roller on the said composition; and an inking ribbon supported to operate between the composition and the impression-roller.

4. In combination, a frame for supporting the composition to be reproduced; a carriage for traveling on said frame having an impression-roller combined therewith by means enabling it to have rotation relatively thereto; means for retaining the carriage on the frame and maintaining the said roller in coöperation with the said composition; and means carried by either the frame or roller for producing a yielding frictional action between the said roller and frame.

5. In combination, a frame for supporting the composition to be reproduced; a carriage for traveling on the said frame having an impression-roller combined therewith by means maintaining it in coöperation with the composition and enabling it to rotate relatively thereto; and means carried by either the frame or roller for producing a variable yielding action between the said roller and frame.

6. In combination, a type-holding frame; a carriage; an impression-roller mounted to rotate relatively to said carriage; yielding friction means between the roller and frame for maintaining the two yieldingly in coöperation; and means whereby the carriage may be traversed bodily along the frame, thus causing the rotation of the roller through the medium of the yielding friction means.

7. In combination, a type-holding frame; a carriage mounted to travel on said frame; an impression-roller combined with the carriage by means such that said roller may rotate relatively to said carriage; and means carried by either the frame or roller for holding the said roller yieldingly and frictionally in engagement with the frame.

8. In combination, a type-holding frame; a carriage mounted to travel on said frame, and an impression-roller journaled to rotate relatively to said carriage while traveling on said frame, means carried by either the roller or frame to produce a yielding frictional connection between the frame and roller.

9. In combination, a type-holding frame; a carriage mounted to travel relatively to said frame; an impression-roller mounted to rotate relatively to said carriage and frame, and having means engaging said frame whereby the coöperative relation of said carriage, roller and frame is maintained; and means carried by the roller whereby when the carriage is moved along the frame said roller will be rotated.

10. In combination, a type-holding frame having parallel traction surfaces above parallel grooves; a carriage and an impression-roller combined by means such that the roller is free to rotate relatively to the carriage; means on the carriage coöperating with the said grooves and surfaces of the frame whereby the carriage and roller are maintained in operative relation to the frame; and means carried by the roller whereby the carriage may be moved along the frame and the roller rotated.

11. In combination, a type-holding frame; a carriage having an impression-roller journaled thereon, said carriage being mounted on the frame and combined therewith by means such that the roller is free to rotate relatively to the carriage and the latter to move on the frame-ribbon-reels mounted at opposite ends of the frame; means whereby the carriage may be moved along the frame and the roller rotated; and means whereby as the carriage reaches the end of its travel in both directions on the frame the ribbon may be moved a predetermined amount relatively to the latter.

12. In combination, a type-holding frame; a carriage and an impression-roller mounted on the frame and combined by means such that the roller is free to rotate relatively to the carriage; ribbon-reels mounted at opposite ends of the frame; means whereby the carriage may be moved along the frame and the roller rotated; and means for actuating the ribbon-reels so as to feed the ribbon alternately different degrees in opposite directions.

13. In combination, a type-holding frame; a carriage; an impression-roller mounted to rotate relatively to said carriage; ribbon-reels mounted at opposite ends of the frame; coöperating means between the ends of the ribbon-reels and the carriage for actuating the ribbon-reels; and stop-devices for limiting the movement of the carriage on the frame in opposite directions.

14. In combination, a type-holding frame; a carriage; an impression-roller mounted on the carriage to rotate relatively to said carriage; ribbon-reels mounted on opposite ends of the frame; means for actuating the ribbon-reels; means for actuating the frame and carriage relatively; and means for producing friction upon the ribbon-reels to prevent too rapid rotation thereof.

15. In combination, a type-holding frame; a carriage carrying an impression-roller mounted on the frame and combined by means such that the roller may rotate relatively to the carriage; means for moving the carriage and frame relatively; ribbon-reels mounted at opposite ends of the frame; and means whereby the rotation of the ribbon-reels may be varied at will to give to the ribbon a feed movement of predetermined extent.

16. In combination, a type-holding frame; a carriage; an impression-roller mounted to rotate relatively to the carriage; means for moving the carriage and the frame relatively; ribbon-reels mounted one at each end of the frame; and detachable, interchangeable and variably actuated means for actuating the ribbon-reels mounted on the carriage, whereby to vary the rotation of the ribbon-reels.

17. In combination, a type-holding frame; a carriage and an impression-roller mounted on the frame and combined by a yielding means such that the roller may rotate relatively to the carriage and have a yielding engagement with the form; the carriage consisting of a frame providing a bridge with depending end-portions; means between the frame and the end-portions of said carriage for maintaining an operative connection between the latter and the frame; and means mounted on the carriage whereby the carriage and frame may be moved relatively and the impression-roller simultaneously rotated.

18. In combination, a type-holding frame; a carriage and an impression-roller mounted on the frame and combined by means such that the roller may rotate relatively to the carriage and have a yielding engagement with the form; the carriage consisting of a frame providing a bridge with depending, bifurcated, end-portions; anti-friction means between the frame and said end-portions of the carriage for maintaining an operative connection between the latter and the frame; and means mounted on the carriage whereby the carriage and frame may be moved relatively and the impression-roller simultaneously rotated.

19. In combination, a type-holding frame; a carriage mounted to travel on said frame; an impression-roller combined with the carriage by means such that said roller may rotate relatively to said carriage; means on the carriage for causing the roller to rotate and the carriage to travel; and means for holding said roller to its work comprising a resilient device carried by each end of said roller.

20. In combination, a type-holding frame; a carriage mounted to travel on said frame; an impression-roller combined with the carriage by means such that said roller may rotate relatively to said carriage; means on the carriage for causing the roller to rotate and the carriage to travel; said carriage having anti-friction means coöperating with

the frame, and said roller carrying elastic means on its ends coöperating with said frame, the said anti-friction and elastic means being combined so as to maintain the carriage in operative relation to the frame and produce a relative yielding action between said frame and roller.

21. In combination, a frame for supporting the composition to be reproduced; a carriage and an impression-roller combined by means such that the latter may rotate relatively to the former; ribbon-reels mounted to rotate at opposite ends of said frame; means whereby the carriage and frame may be moved relatively and the roller simultaneously rotated; and means carried by one of said elements and said reels, whereby at the end of each relative movement of said frame and carriage, the ribbon may be fed a predetermined distance over the composition.

22. In combination, a type-holding frame; a carriage having slide-bearings; an impression-roller having journal-blocks fitted to said bearings and having heads located between the carriage and roller; means adjacent the heads coöperating with the frame, and means on the carriage coöperating with the frame, said two means being combined to hold the roller and carriage yieldingly in coöperative relation; and means for moving the carriage and frame relatively and simultaneously rotating said roller.

23. In combination with a frame for holding composition, a carriage having an impression-roller journaled therein; means between the frame and carriage for maintaining the two and the impression-roller in coöperative relation; means between the roller and the frame enabling the one to actuate the other; means carried by the carriage for driving the impression-roller and, through the medium of the other means recited, move the carriage and frame relatively; a ribbon mounted upon reels so as to coöperate with the composition and move relatively thereto and to the carriage; and means carried by the reels and by the carriage for intermittently actuating the ribbon.

13,818. NECKWEAR. WILLIAM A. KEYS, New York, N. Y., assignor to Slip Scarf Company, a Corporation of New York. Filed Mar. 27, 1914. Serial No. 827,756. Original No. 923,534, dated June 1, 1909, Serial No. 471,086. (Cl. 2—11.)

1. In a neck tie, the combination of a neckband and two tying ends, a portion of the inner band only of the neck tie cut away and a strip of anti-friction fabric substituted therefor.

2. In a neck tie, the combination of a neckband and two tying ends, a portion of the inner face only of the neckband being made of substantially anti-friction fabric, said portion of the neckband being made substantially solid by cementing the several plies together.

3. In a neck tie, the combination of a neckband and two tying ends, a portion of the inner face of the neckband being made of substantially anti-friction fabric, said portion of the neckband being made substantially solid by cementing by waterproof cement the several plies of the neckband.

4. In a neck tie, the combination of a neckband and two tying ends, a portion of the inner face of the neckband being cut away and a strip of relatively anti-friction fabric substituted therefor, and a portion of said neckband being made substantially solid by cementing the several plies together.

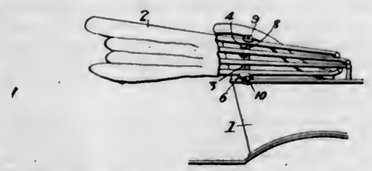
5. In a neck tie, the combination of a neckband and two tying ends formed of an interlining thinner in an intermediate portion than in the tying ends and a cover fabric folded thereon, a strip of anti-friction fabric on the inner face only of the neckband substantially the width of the neckband, and rows of stitching fixedly securing said strip of material to all the plies of the said cover fabric in the neckband.

6. In a neck tie, the combination of a neckband and two tying ends, a portion of the inner face only of the neckband formed of a strip of substantially anti-friction fabric independent interlinings in the tying ends, and rows of stitching fixedly securing said anti-friction fabric to the neckband, said stitching also engaging the inner adjacent ends of said interlining.

7. In a neck tie, the combination of two tying ends and a neckband, a portion of the inner side only of the neckband being cut away and a relatively anti-friction fabric substituted therefor an interlining in said necktie substantially thinner in a portion of the neckband than in the tying ends, and rows of stitching fixedly securing said anti-friction fabric to all the plies of the neckband, said stitching also engaging the inner adjacent ends of the portions of the interlining of the tying ends.

8. In a necktie, the combination of a neckband and two tying ends, a portion, of the inner face only, of the tie formed of a strip of relatively smooth ribbon, and stitching securing said strip to all the plies of the neckband of the tie.

13,819. BOW REST AND CLAMPING DEVICE. HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed May 23, 1914. Serial No. 840,642. Original No. 1,046,356, dated Dec. 3, 1912, Serial No. 692,369. (Cl. 21—61.)



1. In a device of the character described, the combination of a supporting member, having a rest arranged to support the bows of a vehicle top, a rod movably mounted on said member and provided with a clamp arranged to coöperate with the rest to support the bows, a collar carried by said rod and arranged above said member, a clamping device mounted on said rod below said member and arranged to coöperate with the collar when tightened to draw the rod downwardly and rigidly secure it to said member, ball ratchet mechanism between the said member and clamping device for locking the latter against turning, and a yieldable device interposed between the collar and member tending to normally elevate the rod.

2. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle and provided with a horizontal arm, a rest movable toward and from the vehicle on said arm, means for securing the rest to said arm, the said rest including a pair of brackets extending rearwardly therefrom and arranged at one side of said support, the brackets being formed with alined openings, a rod slidably mounted in said openings and provided with an arm at its upper end, a clamp mounted on the last mentioned arm and arranged to coöperate with the rest to support a set of vehicle top bows in folded position, a pair of nuts screw-threaded on said rod and arranged above and below said brackets and coöperating with each other to secure the rod thereto in operative position, a ball ratchet mechanism interposed between one of said nuts and the adjacent bracket for locking said nut against turning movement, and a yieldable member arranged between the other nut and the adjacent bracket tending to normally elevate the said rod.

3. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle and having a rest movable toward and from the vehicle thereon, means for securing the rest to said support, the said rest being provided with a pair of spaced brackets extending rearwardly therefrom and arranged at one side of said support, the brackets being formed with alined openings, a rod slidably and rotatably mounted in said openings and provided with an arm at its upper end, a plate mounted on the last mentioned arm and arranged to coöperate with the rest to support a set of

top bows in folded position, a pair of nuts screw-threaded on said rod and arranged above and below said brackets and coöperating with each other to secure the rod thereto in operative position, a ball ratchet mechanism interposed between the lower bracket and the adjacent nut for locking the latter against turning movement, and a spring interposed between the other nut and the adjacent bracket arranged to be put under tension when the first mentioned nut is operated.

4. In a device of the character described, the combination of supporting means adapted to be arranged at one side of a vehicle and including a plate on which the bows of the vehicle top rest, said supporting means being formed with alined openings, a rod extending through and adjustably mounted in said openings, the said rod being provided with a clamping plate coöperating with the rest plate to support the bows in folded position, and provided with screw threads at its lower end, a nut engaging with the screw threaded end of the rod for securing it to said supporting means, a ball ratchet mechanism between the supporting means and the nut for locking the latter against turning, and means tending to elevate said rod and arranged to be compressed when said nut is tightened.

5. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle for supporting a set of top bows, a device for clamping the bows on said support comprising a vertically adjustable member having an arm and a clamp mounted thereon and a spring member carried by said clamp and connected to said arm intermediate its ends for securing the clamp thereto and permitting it to move angularly and laterally thereon against the tension of said spring member, and means for operating said clamp device.

6. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle for supporting a set of top bows, a device for clamping the bows on said support comprising a vertically adjustable member having an arm formed with an annular groove, a clamp mounted thereon and formed with a recess, and a spring member mounted in said recess and having its opposite ends secured to said clamp, the said spring member being arranged within the groove of the arm intermediate its ends, whereby the clamp is secured to said arm but permitted to move angularly and laterally thereon against the tension of said spring member, and means for operating said clamping devisc.

7. In a device of the character described, the combination of a support on which the bows of a vehicle top are adapted to rest, a member movable vertically relative to said support and provided with an arm, a clamp mounted on said arm and arranged to engage the uppermost bow of the set of bows to clamp said bows on the support, the said clamp being formed with a recess and a spring arranged within said recess secured at its opposite ends to said clamp and yieldingly engaging said arm intermediate its ends, the said recess being wider than the width of said spring and the arm being formed with an annular groove to receive the spring for connecting it to said arm, whereby the said clamp when moved into engagement with the adjacent bow, may adjust itself thereto by angular and lateral movement on said arm against the tension of the spring, and means for drawing said vertically movable member downwardly to clamp the bows.

8. In a device of the character described, a pair of relatively movable bow engaging and clamping members for clamping a set of bows in folded position therebetween, supporting and spacing means for said bow engaging and clamping members, one of said bow engaging and clamping members being mounted on said supporting and spacing means to swing thereupon and automatically adjust itself angularly to the inclination of an adjacent bow by engagement therewith and being bodily movable laterally to and fro on and relative to said supporting and spacing means for causing the said member to frictionally engage said supporting and spacing means.

9. In a device of the character described, a pair of relatively movable bow engaging and clamping members for clamping a set of bows in folded position therebetween, supporting and spacing means for said bow engaging and clamping members, one of said bow engaging and clamping members being mounted on said supporting and spacing means to swing therenpon and to move bodily laterally relative thereto, and a yielding device interposed between said supporting and spacing means and said movable bow engaging and clamping member serving to oppose the bodily movement and swinging movement of said bow engaging and clamping member upon the supporting and spacing means.

10. In a device of the character described, the combination of a support adapted to be fixed to the body, a rest plate carried by said support, a rod slidably and rotatably supported by said support, the upper end of said rod having a laterally extending arm, a plate rotatably mounted on said arm and arranged to clamp the uppermost bow of a set of vehicle top bows, a resilient device carried by said plate and arranged to engage said arm and frictionally oppose the rotation of said plate relatively thereto but permitting the plate to adjust itself to the inclination of the adjacent bow when drawn downwardly into clamping engagement therewith, and means for drawing the rod downwardly.

11. The combination of a normally stationary rest adapted to be fixed to the side of a vehicle and arranged to support the bows of a vehicle top, a clamping member for engaging the bows of the top and coöperating with the rest to rigidly hold the bows in folded position, supporting means for the clamping member permitting it to move vertically toward and from said rest and also to swing horizontally, and a friction device interposed between the clamping member and its supporting means permitting the clamping member to automatically move the bodily laterally on said supporting means and to adjust itself to the inclination of the adjacent bow when being clamped in engagement therewith.

12. In a device of the character described the combination of a support adapted to be arranged at one side of a vehicle for supporting a set of top bows, a device for clamping the bows on said support comprising a vertically adjustable member having an arm formed with an annular groove, a clamp mounted thereon and formed with a recess, and a spring member mounted centrally in said recess and connected on opposite sides of said arm to said clamp, the said spring member being arranged within the groove of the arm intermediate its ends, whereby the clamp is secured to said arm but permitted to move angularly and laterally thereon against the tension of said spring member, the side walls of said recess operating to limit the lateral movement of the clamp on said arm, and means for operating said clamping device.

13. In a device of the character described, the combination with a support adapted to be arranged at one side of a vehicle, of a plate mounted on said support and having lips arranged along its opposite longitudinal sides, the said lips extending toward each other, the inner walls of the lips being cut away intermediate their ends to form recesses, the end walls of which form shoulders, and a pad mounted on said plate and having its opposite sides extended into said recesses, whereby said shoulders operate to prevent endwise movement of the pad relatively to the plate.

14. In a device of the character described, the combination with a support adapted to be arranged at one side of a vehicle, of a channeled plate mounted on said support and having flanges extending along its opposite longitudinal side edges, the said flanges being spaced to receive the opposite edges of a pad and also cut away to form shoulders near their opposite ends, and a pad mounted on said plate and having members projecting laterally from its opposite longitudinal sides, the said projecting members extending into said recesses and the opposite end walls thereof engaging said shoulders to secure the pad to said plate.

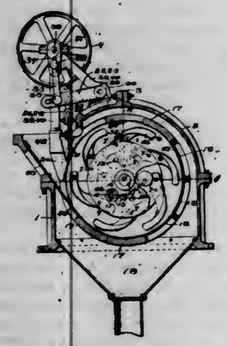
15. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle, the said support including a rest on which a set of vehicle top bows may be supported, a device for clamping the bows on said rest, the said device comprising a movable member having an arm formed with an annular

groove, a clamp mounted on and bodily movable laterally and angularly relative to said arm and a spring carried by said clamp and arranged within the groove of said arm and engaging the walls thereof to oppose angular and lateral movement of said clamp on the arm, and means for securing said clamping devices to said support.

16. The combination of a stationary rest for the bows of a vehicle top, a clamping member arranged to coöperate with the rest for clamping the bows in folded position, supporting means for said clamping member including an arm on which it is rotatably mounted, the said clamping member being formed with a recess, and a resilient member overlying said arm and bent intermediate its ends to permit its opposite ends to engage the walls of said recess on opposite sides of said arm for frictionally securing the clamping member thereto and permitting the adjustment of said clamping member to the inclination of the bows.

17. A folding vehicle top holder comprising a lower member having means to receive the lower side of a folding vehicle top and also having attaching means and a vertical guide opening; an upper member to engage over the upper side of a folded vehicle top, a connecting rod attached to the upper member and slidable in the vertical opening of the lower member, means to secure said rod at any desired adjustment to said lower member, the said rod being revolubie in the opening of the lower member, and the upper member being pivotally connected to the upper end of the said rod.

13,820. GRINDING AND DISINTEGRATING MACHINE. FREDRICK L. KINSEY, Buffalo, N. Y., assignor, by mesne assignments, to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 4, 1912. Serial No. 729,507. Original No. 978,034, dated Dec. 6, 1910, Serial No. 554,485. (Cl. 83—11.)



1. An apparatus for grinding and disintegrating materials, consisting of a sectional casing having two parallel walls and an annular recess on the inner side of each said walls, a shaft transverse to said walls, within said casing and situated centrally to each of said annular recesses, means for driving said shaft, an internal sectional cylindrical partition, concentric with said shaft, said partition being composed of two kinds of adjoining sections having their curved sides adapted to be mounted within the said annular recesses, one kind of said sections being adapted to grinding, one kind of said sections being adapted to pass therethrough particles of the disintegrated product, grinding shoes fulcrumed on supporting means concentric with and mounted upon said shaft within said partition, means within the said supporting means adapted to engage the inner ends of the grinding shoes to limit the outward movement of said shoes with reference to the inner surface of said partition and adapted to be adjustably fixed upon the said supporting means, an inlet hopper leading within the said partition, and means adjoining said partition adapted adjustably to withdraw part of the insufficiently disintegrated material from within the said partition and a collecting hopper connected with the said casing and adapted to collect the disintegrated product which has passed through the said partition, all combined and operated as set forth.

2. In a disintegrating machine, a casing having parallel walls, a shaft passing through said walls, means for rotating said shaft, an internal cylindrical partition composed of two kinds of sections resting within annular grooves in said walls and concentric with said shaft, one kind of said sections having each a fluted concave solid grinding surface, assembled with another kind of said sections having each a semi-grinding sieve-like concave surface, a series of parallel disks within said casing, and positioned upon said shaft, a plurality of individual fluted edged grinding surfaces integral with arms and symmetrically fulcrumed in groups upon said disks and adapted to coöperate with said grinding and semi-grinding sections to disintegrate material fed therebetween, said individual grindng surfaces being curved and divergent to said sections, means upon said disks contacting the otherwise free inner ends of said arms for adjustably governing the outward movement of said individual surfaces, and means for feeding to the device the material to be disintegrated, means for governing the discharge of the insufficiently disintegrated material from within the said partition.

3. In a disintegrating machine, a casing having parallel walls, a shaft passing through said walls, means for rotating said shaft, an intenal cylindrical partition composed of sections resting within annular grooves in said walls and concentric with said shaft, one kind of said sections having each a fluted edged concave grinding surface assembled with another kind of said sections having each a semi-grinding sieve-like concave surface, a series of parallel disks within said casing positioned upon said shaft, a plurality of individual fluted edged grinding surfaces integral with arms and symmetrically fulcrumed in groups upon said disks and adapted to adjustably coöperate with said grinding and semi-grinding sections to disintegrate material fed therebetween, said individual grinding surfaces being curved and divergent to said sections, means upon said disks contacting the inner ends of said arms for adjustably governing the outward movement of said individual surfaces, and means for feeding to the device the material to be disintegrated, means for governing the discharge of the insufficiently disintegrated material from within the said partition.

4. In a disintegrating machine, the combination with a casing, of a rotating element therein, a cylindrical partition within said casing concentric with said rotating element, abrasive means upon the concave surface of said partition, longitudinal rows of fulcrumed arms pivoted upon said rotating element, integral abrasive means having surface extension upon the outer ends of said arms, said last named means being curved divergent to said partition, and means upon the said rotating element in free contact with the inner ends of said fulcrumed arms and adapted to adjustably position the said abrasive means, integral with said arms, relative to the abrasive surface of said partition.

5. In a disintegrating machine, a casing, a curved partition upon and within said casing, a shaft journaled for rotation therein, disks adjustably fixed upon said shaft within said casing, said disks being provided with two series of holes, a set of rods fastened within each series of said holes, a series of sets of devices fulcrumed upon one set of said rods, said devices having their outer ends formed into an abrasive curved surface divergent to said curved partition, cams keyed upon the other set of said rods and between said disks, adapted to contact the otherwise free inner ends of said devices, to limit the outward movement of said devices, means for fixing the angular position of said cams upon the said last mentioned rods upon the said disk.

6. A disintegrating machine, provided with an internal abrasive cylindrical partition, a rotating element therein, a plurality of curved sharp fluted devices adjustably positioned upon said rotating element, and having the curved fluted surface divergent to said partition, adapting the sharp fluted surfaces of said devices to coöperate with said abrasive surface of said partition at a fixed distance.

7. In a disintegrating machine, two or more casings adjoining one another, each of said casings having parallel walls, inclosing a disintegrating chamber, a shaft passing through said walls and journaled for rotation within said casings, means within each of said casings upon said shaft coöperating respectively with means within each of said casings for disintegrating materials, a conveyer connecting two adjoining disintegrating chambers, an adjustably positioned oscillating valve adjoining the space between the last two named means and adapted to limit the discharge of material from said space into said conveyer.

8. In a disintegrating machine, a casing, a cylindrical partition within said casing, having parts of its concave face adapted for grinding and the other parts of the same adapted as a sieve, abrasive means supported upon said rotating element adapted to coöperate with the grinding face of said partition, cams keyed to a feathered shaft upon said rotating means adapted to freely contact the inner ends of said abrasive means and to limit the outward movement of said abrasive means when acted upon by centrifugal action, a cam-setting device keyed to said feathered shaft and adapted to engage a recess in said rotating element, in a manner to adjustably secure the said cams against any angular movement upon said feathered shaft.

9. In a disintegrating machine, a casing having parallel walls, a shaft passing through said walls, means for rotating said shaft, an internal cylindrical partition composed of two kinds of sections resting within annular grooves in said walls and concentric with said shaft, one kind of said sections having each a fluted concave solid grinding surface, assembled with another kind of said sections having each a sieve-like concave surface, a series of parallel disks within said casing and positioned upon said shaft, a plurality of individual fluted edge grinding surfaces integral with arms and symmetrically fulcrumed in groups upon said disks and adapted to coöperate with said grinding sections to disintegrate material fed therebetween, said individual grinding surfaces being curved and divergent to said sections, means upon said disks contacting the otherwise free inner ends of said arms for adjustably governing the outward movement of said individual surfaces, means for feeding material to the device, means for governing the discharge of the disintegrated product.

10. A disintegrating machine, provided with an internal abrasive cylindrical partition, a rotating element therein, a plurality of individual devices fulcrumed upon said rotating element, said devices having their outer ends each formed into an abrasive surface curved divergent to said partition, means upon said rotating element adapted to contact the otherwise free inner ends of said devices, to limit the outward movement of said devices.

11. In a machine of the class described, a grinding chamber having a concave abrasive face, a revoluble element operating therein, and a grinding member pivotally mounted on said revoluble member and adapted to coöperate with the abrasive face of the grinding chamber; said grinding member having an abrasive face diverging from its pivotal mounting toward the abrasive face of the grinding chamber and provided with flutings transverse of its line of operative movement.

12. In a grinding machine the combination of a grinding chamber having a concave abrasive face, a revoluble member, a grinding shoe pivotally mounted on the revoluble member and having a rearwardly curved broad grinding face adapted to coöperate with the abrasive face of the chamber, and means for varying the limit of movement of said shoe toward the said abrasive face of the chamber.

13. In a grinding machine, in combination, a receptacle having a concave abrasive inner face, a revoluble member, a grinding shoe pivotally mounted on the revoluble member and having a rearwardly curved grinding face adapted to coöperate with the abrasive face of the receptacle, and a stop variably adjustable to vary the limit of outward movement of the grinding shoe.

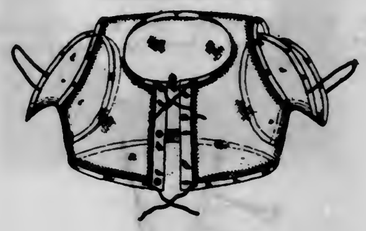
14. In a grinding machine, in combination, a cylindrical receptacle having a concave abrasive inner face, a rotatable member, a grinding shoe pivotally mounted on the rotatable member and having a rearwardly curved grinding face adapted to coöperate with the abrasive face of the receptacle, and a selectively adjustable stop whereby outward movement of the grinding shoe is adjustably limited.

DESIGNS.

46,588. TIP FOR PENHOLDERS. CLAES WILIOM BOMAN, Brooklyn, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed July 20, 1914. Serial No. 852,123. Term of patent 14 years.

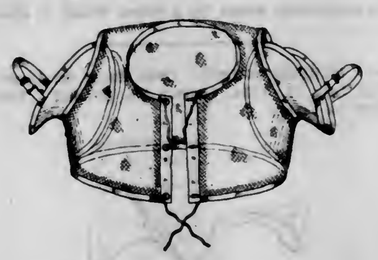
The ornamental design for a penholder tip, as shown and described.

46,589. GARMENT. JESSIE GERLDINE CAMPBELL and CLARA NINA WOOLNER, Oakland, Cal. Filed Apr. 7, 1914. Serial No. 830,306. Term of patent 3½ years.



The ornamental design for a garment, as shown.

46,590. GARMENT. JESSIE GERLDINE CAMPBELL and CLARA NINA WOOLNER, Oakland, Cal. Filed Apr. 7, 1914. Serial No. 830,307. Term of patent 3½ years.

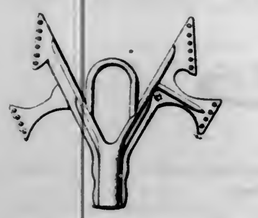


The ornamental design for a garment, as shown.

46,591. SCALLOPED AND FRINGED LACE BAND FOR CURTAINS. SAMUEL DORFELD, Brooklyn, N. Y. Filed July 6, 1914. Serial No. 849,291. Term of patent 7 years.

The ornamental design for a scalloped and fringed lace band for curtains, as shown.

46,592. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed July 31, 1914. Serial No. 854,410. Term of patent 14 years.

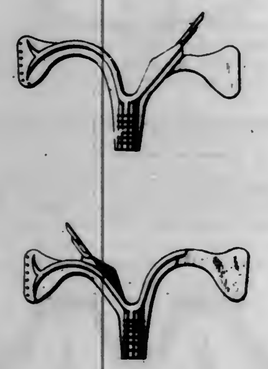


The ornamental design for a rubber brush, as shown

46,593. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed July 31, 1914. Serial No. 854,411. Term of patent 14 years.

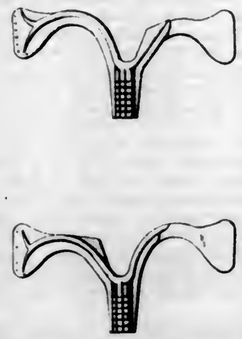
The ornamental design for a rubber brush, as shown.

46,594. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed July 31, 1914. Serial No. 854,412. Term of patent 14 years.



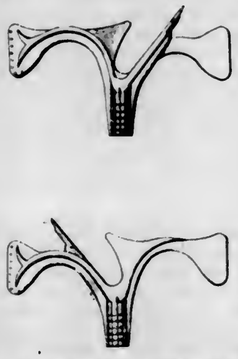
The ornamental design for a rubber brush, as shown.

46,595. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed July 31, 1914. Serial No. 854,413. Term of patent 14 years.



The ornamental design for a rubber brush, as shown.

46,596. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed July 31, 1914. Serial No. 854,414. Term of patent 14 years.

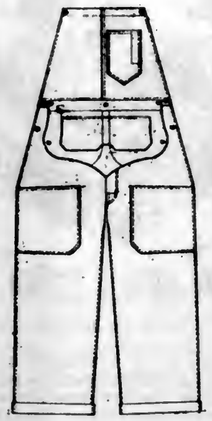


The ornamental design for a rubber brush, as shown.

46,597. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,759. Term of patent 3½ years.

The ornamental design for a textile fabric, as shown.

46,598. OVERALLS. CHARLES M. HAWORTH, Los Angeles, Cal., assignor to Cohn, Goldwater & Co., Los Angeles, Cal., a Copartnership. Filed July 6, 1914. Serial No. 849,290. Term of patent 14 years.

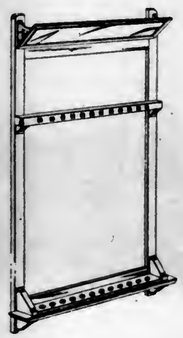


The ornamental design for overalls, as shown.

46,599. RING, PIN, BUTTON, OR SIMILAR ARTICLE OF JEWELRY. LOUIS LYONS, Providence, R. I. Filed Sept. 3, 1914. Serial No. 860,117. Term of patent 3½ years.

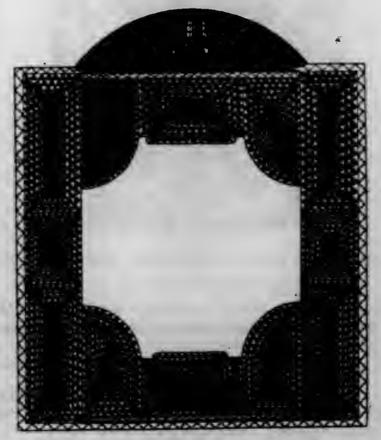
The ornamental design for a ring, pin, button or similar article of jewelry, as shown.

46,600. BILLIARD-CUE RACK. ROSS F. MAHER, St. Paul, Minn. Filed Aug. 13, 1914. Serial No. 856,693. Term of patent 7 years.



The ornamental design for billiard cue racks, as shown.

46,601. PICTURE-FRAME. STEFAN MICUCH, Hyde Park, Pa. Filed July 27, 1914. Serial 853,545. Term of patent 7 years.



The ornamental design for picture frames, as shown.

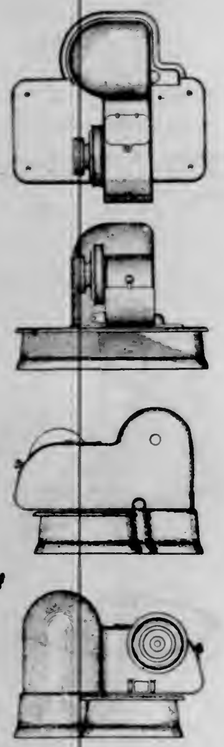
46,602. OVERGAITER. RAYMOND P. MORSE, New York, N. Y. Filed Apr. 28, 1914. Serial No. 835,042. Term of patent 7 years.

The ornamental design for an overgaiter, as shown.

46,603. RUBBER BATHING-CAP. JAMES A. MURRAY, New Haven, Conn., assignor to The Seamless Rubber Co., New Haven, Conn., a Corporation. Filed Mar. 16, 1914. Serial No. 825,183. Term of patent 7 years.

The ornamental design for a rubber bathing cap, as shown.

46,604. CASING FOR CHECK-PROTECTORS. CHARLES H. SAMPSON, Rochester, N. Y. Filed Mar. 18, 1914. Serial No. 824,557. Term of patent 14 years.

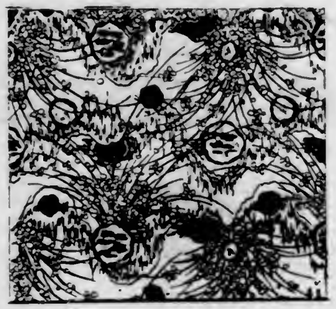


The ornamental design for casing for check protectors, as shown.

46,605. TEXTILE FABRIC. PAUL SCHEIDECKER, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,760. Term of patent 3½ years.

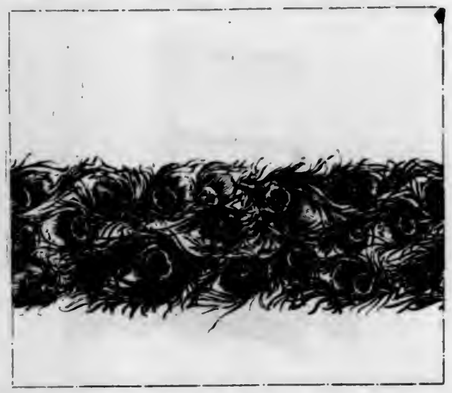
The ornamental design for a textile fabric, as shown.

46,606. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,761. Term of patent 3½ years.



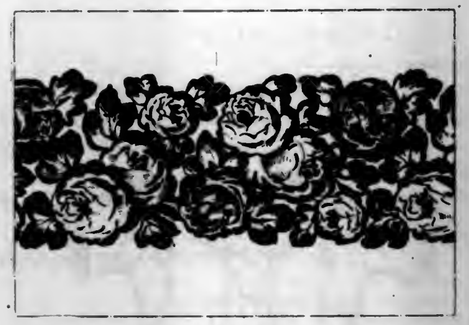
The ornamental design for a textile fabric, as shown.

46,607. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,762. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

46,608. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,763. Term of patent 3½ years.

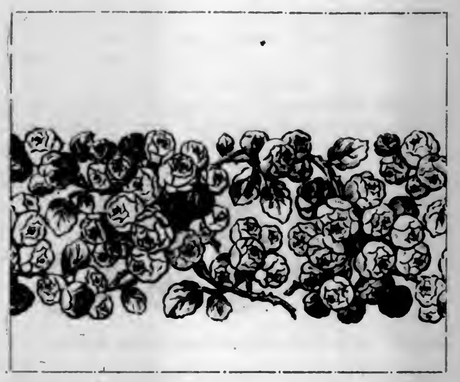


The ornamental design for a textile fabric, as shown.

46,609. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,764. Term of patent 3½ years.

The ornamental design for a textile fabric, as shown.

46,610. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,765. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

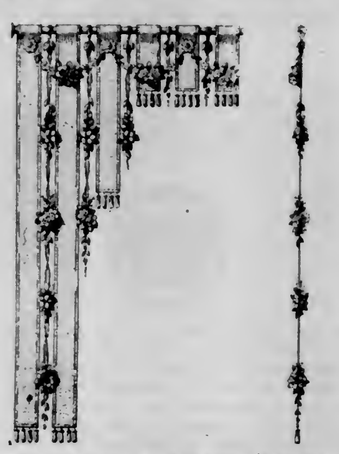
46,611. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,766. Term of patent 3½ years.

The ornamental design for a textile fabric, as shown.

46,612. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,767. Term of patent 3½ years.

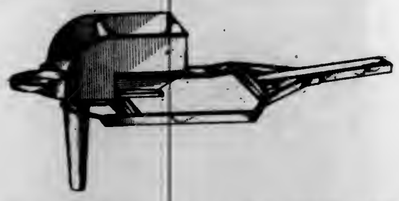
The ornamental design for a textile fabric, as shown.

46,613. DRAPERY. CARL WEILERT, Chicago, Ill. Filed July 9, 1914. Serial No. 850,019. Term of patent 7 years.



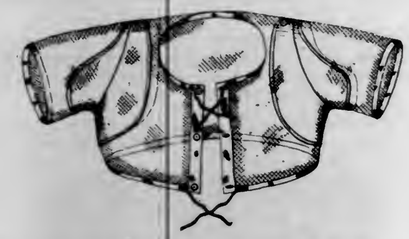
The ornamental design for a drapery as shown and described.

46,614. POTATO-PLANTER FRAME. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed July 17, 1914. Serial No. 851,649. Term of patent 14 years.



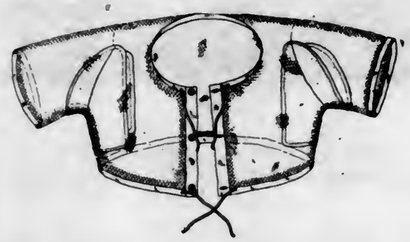
The ornamental design for a potato planter frame substantially as shown.

46,615. GARMENT. CLARA NINA WOOLNER and JESSIE GERLDINE CAMPBELL, Oakland, Cal. Filed Apr. 7, 1914. Serial No. 830,308. Term of patent 3½ years.



The ornamental design for a garment, as shown.

46,616. GARMENT. CLARA NINA WOOLNER and JESSIE GERLDINE CAMPBELL, Oakland, Cal. Filed Apr. 7, 1914. Serial No. 830,309. Term of patent 3½ years.



The ornamental design for a garment, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 27, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 66,228. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) N. V. LAK-, VERF- & VERNISFABRIEK "IVORMICA," Schiedam, Netherlands. Filed Oct. 10, 1912.

No claim is made to the exclusive right to use the words "Schiedam-Holland."

Particular description of goods.—Paints, Lacquers, Varnishes, Gobelintincture, Paint and Varnish Remover, Named Salvose.

Claims use since Oct. 10, 1911.

Ser. No. 66,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JULIETTE H. J. COLMAN, Boston, Mass. Filed Nov. 11, 1912.

Fruit-o-Jell

Particular description of goods.—Uncombined Ingredients Which When Combined Produce Flavored Gelatin.

Claims use since Feb. 7, 1912.

Ser. No. 71,322. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE JAKE TENNENBAUM CO., Cincinnati, Ohio. Filed June 23, 1913.

Jake TENNENBAUM

No exclusive rights are claimed in the word "Tennenbaum."

Particular description of goods.—Bed-Room Sets, Blacking-Stands, Bookcases, Buffets, Center-Tables, Chairs, Chiffonnier, China-Closets, Cots, Costumers, Couches, Cradles, Cribs, Davenports, Desks, Dressers, Dressing-Tables, Extension-Tables, Folding Beds, Hall-Racks, High Chairs, Kitchen-Cabinets, Kitchen-Safes, Kitchen-Tables, Library Sets, Library-Tables, Mantel-Cabinets, Medicine-Cabinets, Morris Chairs, Music-Cabinets, Parlor Sets, Pedestals, Princess-Dressers, Sideboards, Telephone-Stands, Wardrobes, Washstands, and Wood Beds.

Claims use since Feb. 1, 1911.

Ser. No. 71,335. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE FALLS RUBBER CO., Cuyahoga Falls, Ohio. Filed June 24, 1913.

No claim being made to the words "Falls Tires," "Solid Merit," "Long Life," "Stand the Run," or to the representation of a tire.

Particular description of goods.—Inner Tubes for Tires and Tire-Casings.

Claims use since May 1, 1910.

Ser. No. 72,412. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) EHRICH & GRAETZ, Berlin, Germany. Filed Aug. 19, 1913.

Particular description of goods.—Oil, Gas, and Benzin Lamps and Lanterns, Gas-Burners, Metal Reflectors, Metal Shades, Lamp-Galleries, Supports for Incandescent Mantles, Supports for Reflectors, Smoke-Bells, Lamp and Lantern Guards, Lamp-Counterweights, Lamp-Pendants, Lamp-Brackets, Coronas, Candelabra, Gas-Chandeliers, Gas-Standards, and Gas-Lighters, Non-Electric, All the Goods Being Wholly or Principally of Ordinary Metal.

Claims use since the 8th day of March, 1886.

Ser. No. 72,431. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BRAENDER RUBBER & TIRE CO., Rutherford, N. J. Filed Aug. 20, 1913.

The trade-mark consists in the representation of the head of a bulldog in face view, clenching between its jaws a shield which bears the word "Braender" for display. This trade-mark is generally arranged, as shown in the accompanying facsimile, with the representation of a pneumatic tire encircling the same. However, no claim is made to the representation of the tire.

Particular description of goods.—Inner Tubes.

Claims use since Nov. 1, 1912.

Ser. No. 72,711. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED LABORATORIES COMPANY, Chicago, Ill. Filed Sept. 6, 1913.

ABONITA

Particular description of goods.—Face-Powders, Face-Creams, Face Liquids, Rouge, Toilet Waters, Hair-Dressings, Hair-Tonics, Tooth-Pastes, Tooth-Powders, Nail-Polish, Nail-Enamel, Nail-Bleach, Smelling-Salts, Bath-Salts, Ammonia, and Bath Powders.

Claims use since June 8, 1913.

Ser. No. 72,750. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STEINFELD BROS., New York, N. Y. Filed Sept. 9, 1913.

Particular description of goods.—Dolls.

Claims use since about Feb. 1, 1913.

Ser. No. 73,160. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN VARGA, Linden, N. J. Filed Oct. 1, 1913.

Comprising a portrait of myself.

Particular description of goods.—A Preparation for the Treatment of Tuberculosis.

Claims use since Sept. 15, 1913.

Ser. No. 73,201. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ALBERGER PUMP AND CONDENSER COMPANY, New York, N. Y. Filed Oct. 4, 1913.

SPIROFLO

Particular description of goods.—Steam-Condensers.

Claims use since May 1, 1912.

Ser. No. 74,188. (CLASS 32. FURNITURE AND UPHOLSTERY.) JOP-PA MATTRESS CO., Little Rock, Ark. Filed Nov. 25, 1913.

JOP-PA

Particular description of goods.—Mattresses.

Claims use since Dec. 1, 1908.

Ser. No. 74,674. (CLASS 33. GLASSWARE.) GILLINDER & SONS, INC., Philadelphia, Pa. Filed Dec. 18, 1913.

NEBULITE

Particular description of goods.—Glass Lamp Globes, Shades, Reflectors, Bodies, and Chimneys.

Claims use since about July 1, 1911.

Ser. No. 74,909. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BLACKMAN & GRIFFIN CO., Ogden, Utah. Filed Dec. 31, 1913.

No claim being made to the words "Yellow as Gold," the same being shown on a yellow background.

Particular description of goods.—Seeds.

Claims use since on or about the 1st day of November, 1913.

Ser. No. 75,180. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) RUSSELL T. JOY, New York and Brooklyn, N. Y. Filed Jan. 14, 1914.

MONKEYSHINE

Particular description of goods.—Furniture-Polish, Cleaner, Polisher, and Finisher for Hardwood Surfaces, Polish and Dressing for All Woodware.

Claims use since Dec. 22, 1913.

Ser. No. 75,639. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ANDREWS WIRE AND IRON WORKS, Rockford, Ill. Filed Feb. 2, 1914.

Androck

Consists of the word "Androck."

Particular description of goods.—Flue-Stops, Tin or other Base-Metal Spoons, Dishpan-Stands, Plate-Scrapers, Tea and Coffee Strainers, Bowl-Strainers, Bread-Toasters, and Cake-Turners.

Claims use since March, 1908.

Ser. No. 75,990. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Feb. 18, 1914.

KLINGTITE

Particular description of goods.—Rubber Belting.

Claims use since June 1, 1913.

Ser. No. 76,458. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM B. ANDERSON FOUNDRY COMPANY, Chicago, Ill. Filed Mar. 9, 1914.

The words "Nickel Alloyed" and "Trade Mark" do not form a part of our trade-mark proper.

Particular description of goods.—Metal Castings, More Especially Those Castings Formed of An Alloy of Nickel, Copper, Tin, Zinc, and the Like and Alloys of Such Metals with Iron and the Like.

Claims use since June 1, 1912.

Ser. No. 76,851. (CLASS 12. CONSTRUCTION MATERIALS.) GRAND RAPIDS REFRIGERATOR COMPANY, Grand Rapids, Mich. Filed Mar. 23, 1914.

POLAR FELT

The word "Felt" is not herein claimed as a part of this mark.

Particular description of goods.—Heat-Insulating Material for Refrigerators.

Claims use since January, 1910.

Ser. No. 76,857. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOME CREAMERY MANUFACTURING COMPANY, Owatonna, Minn. Filed Mar. 23, 1914.

MINNETONNA

Being the word "Minnetonna."

Particular description of goods.—Butter.

Claims use since Feb. 6, 1914.

Ser. No. 77,241. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LAKESIDE BISCUIT COMPANY, Toledo, Ohio. Filed Apr. 6, 1914.

Lakeside

Particular description of goods.—Butterettes, a Thin Biscuit Made from Country Butter, Malted Milk, and Winter-Wheat.

Claims use since Oct. 12, 1912.

Ser. No. 77,361. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE VITASLIDE COMPANY, San Francisco, Cal. Filed Apr. 9, 1914.

VITASLIDE

Particular description of goods.—Lantern-Slides.

Claims use since Mar. 17, 1914.

Ser. No. 78,465. (CLASS 15. OILS AND GREASES.) HARRY COOLEY, Madison, Wis. Filed May 22, 1914.

Particular description of goods.—Oils, Greases, and Lubricants, But More Particularly Auto-Oils, Castor Machine-Oil, Separator-Oils, Gun-Oils, Graphite Harvester-Oil, Harvester-Oil, Coach-Oil, Cylinder-Oil, Gas-Engine Oil, Turbine-Oil, Dynamo-Machine Oil, Type-Writer Oil, Axle-Greases, Transmission-Greases, and Sponge-Greases.

Claims use since Apr. 12, 1914.

Ser. No. 78,467. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN C. DETTRA & CO., INC., Oaks, Pa. Filed May 22, 1914.

DETTRA'S
OAK BRAND
TOYS

The words "Brand" and "Toys" being disclaimed.
Particular description of goods.—Toys.
Claims use since Feb. 15, 1914.

Ser. No. 78,623. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE J. M. SELZER C. & B. W. MFG. CO., St. Louis, Mo. Filed May 28, 1914.

GOOD GOODS
JMS

No claim being made to the exclusive right to the use of the words "Good Goods."
Particular description of goods.—Carriages, Buggies, and Wagons.
Claims use since June 10, 1912.

Ser. No. 78,632. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WESTF. GASGLÜHLICHTFABRIK F. W. & DR. C. KILLING, Hagen-Delstern, Germany. Filed May 28, 1914.

Mundus-Licht

"Mundus-Licht."
Particular description of goods.—Gas-Burner Nozzles, Incandescent Gas-Mantles, Lamp-Accessories, Coronas, Brackets, Suspensions, Lyre-Shaped Brackets, Burners, Hoods, Reflectors other Than Glass, Carriers and Holders Therefor, Metallic Springs, Non-Electric Lanterns, Chimneys, Shades, and Globes of other Material Than Glass.
Claims use since Jan. 24, 1914.

Ser. No. 78,688. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIAMOND CHEMICAL CO., Brooklyn, N. Y. Filed June 1, 1914.

VITA-LAX

Particular description of goods.—A Laxative.
Claims use since Apr. 15, 1914.

Ser. No. 78,841. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) IRVING MCEWEN, Omaha, Nebr. Filed June 5, 1914.

LUXALL

Particular description of goods.—Concentrated "Pure Fruit" Flavor, Lemon, Ginger-Ale, Root-Beer, Orangeade, and Grape-Juice.
Claims use since Apr. 10, 1914.

Ser. No. 78,842. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MARATHON TIRE & RUBBER CO., Cuyahoga Falls, Ohio. Filed June 5, 1914.

MARATHON

Particular description of goods.—Rubber Tires, Casings, and Tubes.
Claims use since about Dec. 28, 1912.

Ser. No. 78,966. (CLASS 12. CONSTRUCTION MATERIALS.) SHAFFER ROOFING CO., Columbus, Ohio. Filed June 10, 1914. Under ten-year proviso.

Particular description of goods.—Prepared Roofing in Sheet and Liquid Form.
Claims use since about the year 1884.

Ser. No. 79,055. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) DETROIT REFRIGERATOR GRIP CO., Detroit, Mich. Filed June 13, 1914.

DETROIT
Refrigerator Grip

The words "Detroit Refrigerator Grip" appearing on the drawing are disclaimed.
Particular description of goods.—Satchels, Hand-Bags, Suitcases, Trunks, and Portmanteaus.
Claims use since Apr. 1, 1914.

Ser. No. 79,123. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROSENFIELD BROS. & CO., Chicago, Ill. Filed June 15, 1914. Under ten-year proviso.

Old McBrayer

Particular description of goods.—Whisky.
Claims use since the year 1892.

Ser. No. 79,210. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BONNEY-VEHSLAGE TOOL CO., Newark, N. J., and New York, N. Y. Filed June 19, 1914.

B-V.

Particular description of goods.—Conductor and Ticket Punches.
Claims use since Jan. 1, 1908.

Ser. No. 79,212. (CLASS 12. CONSTRUCTION MATERIALS.) THE FLEXSTONE PRODUCTS CO., Columbus, Ohio. Filed June 19, 1914.

ARMORITE

Particular description of goods.—A Cement-Like Compound for Constructing Flooring, Waterproof Walls and Ceilings.
Claims use since Oct. 1, 1913.

Ser. No. 79,213. (CLASS 12. CONSTRUCTION MATERIALS.) THE FLEXSTONE PRODUCTS CO., Columbus, Ohio. Filed June 19, 1914.

LETHERSTONE

Particular description of goods.—A Cement-Like Compound for Constructing Walls, Floors, Wainscoting, and the Like.
Claims use since about Oct. 1, 1913.

Ser. No. 79,292. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GILBERT & CO., Owensboro, Ky. Filed June 22, 1914.

PRAN-O-TANS

No claim being made to the words "Trade-Mark."
Particular description of goods.—A Preparation for the Treatment of Constipation, Stomach Trouble, Indigestion, Intestinal Trouble, and Gas and Fullness of Stomach.
Claims use since Aug. 1, 1913.

Ser. No. 79,295. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JAMES E. KENNEDY, Washington, D. C. Filed June 23, 1914.

UZIT

Particular description of goods.—Stove-Burners and Gas-Stoves.
Claims use since July 10, 1913.

Ser. No. 79,336. (CLASS 12. CONSTRUCTION MATERIALS.) FRANKLYN R. MULLER, Waukegan, Ill. Filed June 24, 1914.

SAN-A-BESTOS

Particular description of goods.—Sanitary Cement Flooring and Magnesite Stucco.
Claims use since about Apr. 15, 1914.

Ser. No. 79,368. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) NATIONAL MOTOR VEHICLE CO., Indianapolis, Ind. Filed June 25, 1914.

National

Particular description of goods.—Automobiles, Motor-Trucks, Chassis, and Parts Thereof.
Claims use since November, 1905.

Ser. No. 79,510. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUSTA CARLSON, Buffalo, N. Y. Filed July 2, 1914.

Mrs. Augusta Carlson's

The portrait shown being that of the applicant.
Particular description of goods.—A Remedy for Dyspepsia, Indigestion, Kidney Diseases, Diseases of the Liver and the Bladder, Dropsy, Jaundice, Bright's Disease, a Blood-Purifier, a Tonic for the Nerves and the Stomach, as Well as a Relief for Rheumatism, Catarrh, Nervous Headache, and Chronic Constipation and other Stomach Ailments.
Claims use since June 13, 1914.

Ser. No. 79,554. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOWERS BROS., INC., Richmond, Va. Filed July 6, 1914.

TROPHY

Particular description of goods.—Coffee.
Claims use since Mar. 1, 1914.

Ser. No. 79,555. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOWERS BROS., INC., Richmond, Va. Filed July 6, 1914.

RED EYE

The words and representation being in red.
Particular description of goods.—A Compound of Coffee and Chicory.
Claims use since Mar. 1, 1914.

Ser. No. 79,633. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALLE COLOR & CHEMICAL CO., INC., New York, N. Y. Filed July 8, 1914.

PUROLINE

The trade-mark consists of the arbitrary or fanciful word "Puroline."
Particular description of goods.—A Preparation to be Used in the Textile Industry for Clearing Dyeings and Prints.
Claims use since Mar. 15, 1914.

Ser. No. 79,648. (CLASS 12. CONSTRUCTION MATERIALS.) STANDARD OIL COMPANY, Richmond, Cal. Filed July 8, 1914.

CALOL

Particular description of goods.—An Asphaltum Product of Crude Oil Adapted for Use for Paving and Roofing; Also Used in the Manufacture of Roofing Materials, Street and Highway Constructions; Also in the Manufacture of Insulators.
Claims use since the 9th of June, 1914.

Ser. No. 79,748. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE J. CHANDLER, Detroit, Mich. Filed July 13, 1914.

The trade-mark has the general appearance of a seal and consists of the coined word "Yesterlaid," in conjunction with the facsimile signature of applicant within a circle on a substantially circular background, the words, facsimile signature, and circle and the background appearing in contrasting colors or shades of color. The exclusive right to the use of the word "Eggs" is hereby disclaimed.
Particular description of goods.—Eggs.
Claims use since about May 1, 1914.

Ser. No. 79,749. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE J. CHANDLER, Detroit, Mich. Filed July 13, 1914.

Chandler's Yesterlaid Eggs

The exclusive right to the use of the words "Chandler's," "Eggs," and "Trade Mark Registered" is hereby disclaimed.
Particular description of goods.—Eggs.
Claims use since about May 1, 1914.

Ser. No. 79,801. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DERMA VIVA COMPANY, Chicago, Ill. Filed July 15, 1914.

DERMA VIVA

Particular description of goods.—Hair-Tonic, Depilatories, Cold-Cream, and Face-Powders.
Claims use since May 15, 1891.

Ser. No. 79,802. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK B. DENNIE, Minneapolis, Minn. Filed July 15, 1914.

SECURITY

Particular description of goods.—Calf-Food Compound.
Claims use since about June 1, 1902.

Ser. No. 79,826. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE VARNI-SHEEN MANUFACTURING CO., Cleveland, Ohio. Filed July 15, 1914.

Particular description of goods.—Furniture-Polish.
Claims use since Jan. 1, 1914.

Ser. No. 79,904. (CLASS 12. CONSTRUCTION MATERIALS.) THE GENERAL FIREPROOFING CO., Youngstown, Ohio. Filed July 18, 1914.

GF

Particular description of goods.—Metal Lathing, Metal Used for Reinforcing Concrete and Cement, Wall-Ties, Waterproofing Compounds, Waterproof Roofing, and Waterproofing Solutions.
Claims use since June 1, 1914.

Ser. No. 80,042. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JACOB S. SHERMAN, Staunton, Ill. Filed July 24, 1914.

AUTO LITE

Particular description of goods.—Miner's Lamps.
Claims use since May 1, 1913.

Ser. No. 80,053. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE W. G. BROWNE MFG. CO., Kingston, N. Y. Filed July 25, 1914.

KEENO

Particular description of goods.—Ice-Picks, Ice-Chisels, Kitchen-Spatulas, Kitchen-Knives, Cleavers, and Saws.
Claims use since on or about July 9, 1909.

Ser. No. 80,061. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

P. S. A. BLACK

No claim being made to the word "Black," and, furthermore, specifically disclaims the word "Black" as any part of its trade-mark.
Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.
Claims use since June 1, 1914.

Ser. No. 80,063. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

CONGO MAID

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.
Claims use since June 1, 1914.

Ser. No. 80,064. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

SNODRIFT WHITE

No claim being made to the word "White," and, furthermore, specifically disclaims the word "White" as any part of its trade-mark.
Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.
Claims use since June 1, 1914.

Ser. No. 80,065. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

BOVEEN

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.
Claims use since June 1, 1914.

Ser. No. 80,067. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

MOTOR BLACK

No claim being made to the word "Black," and, furthermore, specifically disclaims the word "Black" as any part of its trade-mark.

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.

Claims use since June 1, 1914.

Ser. No. 80,068. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

EBONY MAID

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.

Claims use since June 1, 1914.

Ser. No. 80,069. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

AUTO GREY

No claim being made to the word "Grey," and, furthermore, specifically disclaims the word "Grey" as any part of its trade-mark.

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.

Claims use since June 1, 1914.

Ser. No. 80,070. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY, New York, N. Y. Filed July 25, 1914.

CORDOBAH

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.

Claims use since June 1, 1914.

Ser. No. 80,071. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SULZBERGER & SONS COMPANY. New York, N. Y. Filed July 25, 1914.

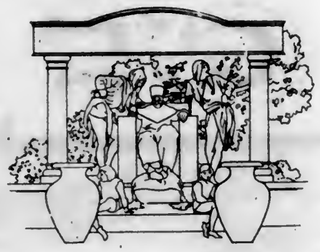
I. K. BLACK

No claim being made to the word "Black," and, furthermore, specifically disclaim the word "Black" as any part of their trade-mark.

Particular description of goods.—Animal Hair, Curled Animal Hair, and a Mixture of Animal Hair or Curled Animal Hair and Vegetable Fiber to be Used for Upholstering Purposes.

Claims use since June 1, 1914.

Ser. No. 80,137. (CLASS 17. TOBACCO PRODUCTS.) JAMES B. REGAN, New York, N. Y. Filed July 28, 1914.



Particular description of goods.—Cigars.

Claims use since June 30, 1914.

Ser. No. 80,140. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SUSSFELD, LORSCH & CO., New York, N. Y. Filed July 28, 1914.

Particular description of goods.—Eye-Protectors, Goggles, and Spectacles.

Claims use since May 21, 1914.

Ser. No. 80,165. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SILVERBERG IMPORT CO., New York, N. Y. Filed July 29, 1914.

Particular description of goods.—Hair-Nets.

Claims use since May 15, 1914.

Ser. No. 80,173. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS O. BASS, Muskogee, Okla. Filed July 30, 1914.

The portrait being that of Dr. William P. Powell.

Particular description of goods.—Remedies for Colds and Coughs.

Claims use since the 28th day of May, 1914.

Ser. No. 80,174. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS O. BASS, Muskogee, Okla. Filed July 30, 1914.

WHOOP-NO-MO

Particular description of goods.—Remedies for Colds and Coughs.

Claims use since the 28th day of May, 1914.

Ser. No. 80,188. (CLASS 17. TOBACCO PRODUCTS.) JAMES B. REGAN, New York, N. Y. Filed July 30, 1914.

KING COLE

Consisting of the words "King Cole."

Particular description of goods.—Cigars.

Claims use since March, 1881.

Ser. No. 80,210. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) REVERE RUBBER COMPANY, Providence, R. I., and Chelsea, Mass. Filed July 31, 1914.

SPRING-STEP

Particular description of goods.—Rubber Horseshoes.

Claims use since July 3, 1914.

Ser. No. 80,229. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HUDSON & THURBER CO., Minneapolis, Minn. Filed Aug. 1, 1914.

MODOC

Particular description of goods.—Rubber Belting, Rubber Hose, Leather Belting, and Cotton-Fabric Packing.

Claims use since January, 1906.

Ser. No. 80,283. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & COMPANY, New York, N. Y. Filed Aug. 3, 1914.

BIG INJUN

Particular description of goods.—Cotton Piece Goods.

Claims use since July, 1904.

Ser. No. 80,299. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PAWCATUCK WOOLEN MILLS, Westerly, R. I. Filed Aug. 4, 1914.

Glengarry ZEPHYRGALS

Comprising the words "Glengarry Zephyrgals," the exclusive independent use of the word "Glengarry" is not being claimed.

Particular description of goods.—Woolen Piece Goods.

Claims use since July 28, 1914.

Ser. No. 80,333. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NEW YORK COIL CO., New York, N. Y. Filed Aug. 5, 1914.

Uni-Coil

Particular description of goods.—Ignition Apparatus for Internal-Combustion Engines.

Claims use since May 20, 1914.

Ser. No. 80,336. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SIDNEY TOOL COMPANY, Sidney, Ohio. Filed Aug. 5, 1914.

FAMOUS

Particular description of goods.—Band-Saws, Band-Saw Guards, Band-Saw Guides, Band-Saw Blades, Resawing Attachments for Band-Saws, Band-Saw Ripping-Gages, Band-Saw Filing and Setting Clamps, Band-Saw-Brazing Tongs and Clamps, Variety-Saws, Combination-Saws, Saw-Tables, Universal Saws, Circular-Saw Guards, Saw-Arbors, Bevel Ripping-Gages, Ceiling-Guards, Circular-Saw-Filing

Vises, Swing-Saws, Hand-Jointers, Jointer-Guards, Feed Planing Attachments, Planers, Shapers, Shaper-Fences, Dovetail Attachments, Shaper-Guards, Hollow-Chisel Mortisers and Borers, Combined Mortisers and Tenoners, Post-Borers, Wood-Turning Lathes, Pattern-Makers' Lathes, Universal Woodworkers, Universal-Woodworker Attachments, Portable Woodworkers, Combination Jointers and Saw-Tables, Hollow Chisels, Dado Heads or Groovers, Triple Bits, Router-Bits, Circular-Saw Blades, and Miter or Combination Saws.

Claims use since June 1, 1911.

Ser. No. 80,378. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALTS' TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn. Filed Aug. 6, 1914.

PERSIATEX

Particular description of goods.—Velvets and Plushes in the Piece.

Claims use since about July 10, 1914.

Ser. No. 80,389. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed Aug. 7, 1914.

Cherry Sunburst

Particular description of goods.—Plain and Carbonated Non-Alcoholic Beverages.

Claims use since June 1, 1911.

Ser. No. 80,403. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LESHER, WHITMAN & CO., INC., Rye and New York, N. Y. Filed Aug. 8, 1914.

GRANITE

Particular description of goods.—Worsted Linings.

Claims use since on or about July 28, 1914.

Ser. No. 80,409. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SAMSON ELECTRIC COMPANY, Canton, Mass. Filed Aug. 8, 1914.

SAMSON

Particular description of goods.—Open-Circuit Electric Batteries.

Claims use since October, 1887.

Ser. No. 80,419. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ANSTED & BURK CO., Springfield, Ohio. Filed Aug. 10, 1914.

JUBA

The picture being fanciful.

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since Mar. 30, 1914.

Ser. No. 80,422. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKIN-ERSKINE MILLING COMPANY, Evansville, Ind. Filed Aug. 10, 1914.

Particular description of goods.—Wheat-Shorts.

Claims use since Apr. 17, 1914.

Ser. No. 80,425. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CANDY BROS. MFG. CO., St. Louis, Mo. Filed Aug. 10, 1914.

JEWEL

Particular description of goods.—Fruit Tablets.

Claims use since Dec. 1, 1913.

Ser. No. 80,426. (CLASS 12. CONSTRUCTION MATERIALS.) CENTRAL OHIO PAPER CO., Columbus, Ohio. Filed Aug. 10, 1914.

TRYOID

Particular description of goods.—Building and Roofing Paper.

Claims use since Oct. 1, 1908.

Ser. No. 80,433. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HABICHT, BRAUN & CO., New York, N. Y. Filed Aug. 10, 1914.

BEAVER

Particular description of goods.—Nuts, Nut-Meats, Honey, Gelatin, Maple-Sugar, Figs, Poppy-Seeds, Caraway-Seeds, Egg-Albumen, Cocoanut, Prune Jam, Peanut-Butter, and Dried Peas and Beans.

Claims use since July 24, 1914.

Ser. No. 80,444. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Aug. 10, 1914.

FALCON

Particular description of goods.—Bed-Blankets.

Claims use since Apr. 25, 1914.

Ser. No. 80,445. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Aug. 10, 1914.

SWANS-DOWN

Particular description of goods.—Bed-Blankets.

Claims use since Apr. 30, 1914.

Ser. No. 80,448. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRIUMPH MILLS, Tampa, Fla. Filed Aug. 10, 1914.

TAMPA QUEEN

Particular description of goods.—Coffee and Chicory.

Claims use since about 1909.

Ser. No. 80,449. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRIUMPH MILLS, Tampa, Fla. Filed Aug. 10, 1914.

Particular description of goods.—Coffee.

Claims use since about March, 1913.

Ser. No. 80,450. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRIUMPH MILLS, Tampa, Fla. Filed Aug. 10, 1914.

LIBERTY

Particular description of goods.—Coffee.

Claims use since about March, 1898.

Ser. No. 80,453. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ANNIN & CO., New York, N. Y. Filed Aug. 11, 1914.

DEFIANCE

Comprising the word "Defiance."

Particular description of goods.—Bunting.

Claims use since Mar. 21, 1914.

Ser. No. 80,481. (CLASS 12. CONSTRUCTION MATERIALS.) CARPENTER-MORTON COMPANY, Boston, Mass. Filed Aug. 12, 1914.

CEALCOTE
CONTINUOUS CLEAT
READY ROOFING
C-C-C

No claim being made to the words "Continuous cleat ready roofing."

Particular description of goods.—Ready Roofing Consisting of a Fibrous Material Treated with a Non-Inflammable Weather-Resisting Composition.

Claims use since July 27, 1914.

Ser. No. 80,517. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LEWIS G. REYNOLDS, Richmond, Ind. Filed Aug. 12, 1914.

LUNA-LITE

Particular description of goods.—Projection-Screens for Motion-Picture Theaters.

Claims use since on or about the 15th day of November, 1913.

Ser. No. 80,529. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & Co., New York, N. Y. Filed Aug. 13, 1914.

Particular description of goods.—Cotton Piece Goods.
Claims use since February, 1904.

Ser. No. 80,536. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA CANNERIES CO., San Francisco, Cal. Filed Aug. 13, 1914.

ONO

Particular description of goods.—Canned Fruits.
Claims use since July, 1912.

Ser. No. 80,551. (CLASS 12. CONSTRUCTION MATERIALS.) UNITED STATES GYPSUM COMPANY, Chicago, Ill. Filed Aug. 13, 1914.

PYROBAR

Particular description of goods.—Gypsum Tile.
Claims use since June 7, 1910.

Ser. No. 80,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Aug. 14, 1914.

SILVER QUEEN

Particular description of goods.—Cakes.
Claims use since May 1, 1914.

Ser. No. 80,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Aug. 14, 1914.

SUNKIST GOLD

Particular description of goods.—Cakes.
Claims use since May 1, 1914.

Ser. No. 80,574. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Aug. 14, 1914.

DEVIL'S DREAM

Particular description of goods.—Cakes.
Claims use since May 1, 1914.

Ser. No. 80,576. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Aug. 14, 1914.

ESPANITO

Particular description of goods.—Cakes.
Claims use since May 1, 1914.

Ser. No. 80,584. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FISHEL & LEVY, Hartford, Conn., and New York, N. Y. Filed Aug. 15, 1914.

GOLDEN JUBILEE

Particular description of goods.—Whisky.
Claims use since about July 29, 1914.

Ser. No. 80,596. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed Aug. 15, 1914.

TRIPLEMINT

Particular description of goods.—Chewing-Gum.
Claims use since Aug. 11, 1914.

Ser. No. 80,636. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE BELBER TRUNK & BAG COMPANY, Philadelphia, Pa. Filed Aug. 18, 1914.

MIR-O WARDROBE

No claim is made for the word "Wardrobe."
Particular description of goods.—Trunks.
Claims use since Aug. 8, 1914.

Ser. No. 80,671. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Aug. 18, 1914.

GOLDEN NUGGET

Particular description of goods.—Cakes.
Claims use since May 1, 1914.

Ser. No. 80,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. MORGAN CO., INC., Norfolk, Va. Filed Aug. 19, 1914.

Particular description of goods.—Butter.
Claims use since Aug. 12, 1914.

Ser. No. 80,697. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BETZ-PIERCE COMPANY, Cleveland, Ohio. Filed Aug. 20, 1914.

Particular description of goods.—Punches, Dies, Twist-Drills, Button Sets, Reamers, Milling-Cutters, Hammers, Screw-Drivers, Razors, Machine-Knives, and Steel Pocket-Knives.
Claims use since August, 1911.

Ser. No. 80,699. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM C. DE ARMOND, Philadelphia, Pa. Filed Aug. 20, 1914.

Particular description of goods.—Liquid and Paste Paints, Colors, Enamels, White Lead, Fillers, Varnishes, Driers, Wood-Stains, Primers, Floor-Wax, Floor-Polish, Furniture-Polish, Carriage-Top Paints, Bronze Powder, Bronze Liquid, Gold-Leaf, Oils for Painters' Use, and Reducers.
Claims use since January, 1901.

Ser. No. 80,700. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM C. DE ARMOND, Philadelphia, Pa. Filed Aug. 20, 1914.

Protectus

Particular description of goods.—Liquid and Paste Paints, Colors, Enamels, White Lead, Fillers, Varnishes, Driers, Wood-Stains, Primers, Floor-Wax, Floor-Polish, Furniture-Polish, Carriage-Top Paints, Bronze Powder, Bronze Liquid, Gold-Leaf, Oils for Painters' Use, and Reducers.
Claims use since January, 1901.

Ser. No. 80,734. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed Aug. 21, 1914.

PEPS

Particular description of goods.—Lozenges.
Claims use since Aug. 11, 1914.

Ser. No. 80,737. (CLASS 39. CLOTHING.) THE B & R RUBBER COMPANY, Brookfield and North Brookfield, Mass. Filed Aug. 22, 1914.

FIBROX

Particular description of goods.—Rubber Soles and Heels.
Claims use since July 1, 1914.

Ser. No. 80,739. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUST GUSTAV LUEBERT, Philadelphia, Pa. Filed Aug. 22, 1914.

AK-NO-MOR

Particular description of goods.—A Remedy to Relieve Headache, Neuralgia, Toothache, Grippe, Rheumatic Pains, Gout, Lumbago, and Nerve Aches.
Claims use since Jan. 1, 1908.

Ser. No. 80,749. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y. Filed Aug. 22, 1914.

Aquanon

Particular description of goods.—Membrane Waterproofing and Roofing-Felts and Treated Fabric for Construction Purposes.
Claims use since on or about Aug. 10, 1914.

Ser. No. 80,758. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914.

WONDER

Particular description of goods.—Roasted Coffee.
Claims use since Mar. 1, 1914.

Ser. No. 80,760. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914.

MORNING BRAGER

Particular description of goods.—Coffee.
Claims use since Sept. 1, 1908.

Ser. No. 80,761. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914.

MAXWELL HOUSE

Particular description of goods.—Blended Coffee and Blended Tea.
Claims use since Sept. 1, 1897.

Ser. No. 80,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914.

SUNNY SOUTH

Particular description of goods.—Blended Coffee.
Claims use since Sept. 1, 1908.

Ser. No. 80,763. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914. Under ten-year proviso.

CUMBERLAND

Particular description of goods.—Roasted Coffee.
Claims use since Feb. 20, 1895.

Ser. No. 80,765. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 24, 1914.

VOLUNTEER

The picture being fanciful.
Particular description of goods.—Blended Coffee.
Claims use since Sept. 1, 1910.

Ser. No. 80,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH CANDY CO., Duluth, Minn. Filed Aug. 25, 1914.

Alameda

Particular description of goods.—Candy.
Claims use since about April, 1901.

Ser. No. 80,788. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. JEVNE COMPANY, Los Angeles, Cal. Filed Aug. 25, 1914.

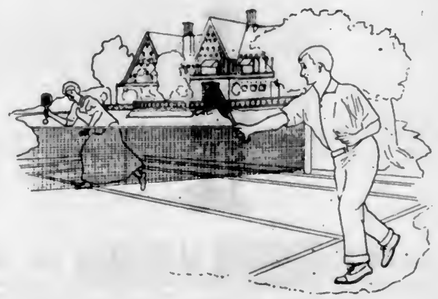
Particular description of goods.—Chocolate Candy.
Claims use since July 27, 1914.

Ser. No. 80,789. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. JEVNE COMPANY, Los Angeles, Cal. Filed Aug. 25, 1914.

POLO

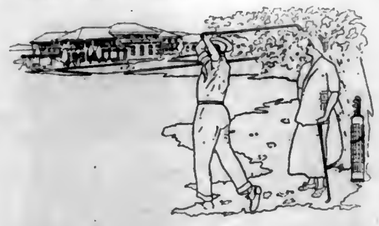
Particular description of goods.—Chocolate Candy.
Claims use since July 27, 1914.

Ser. No. 80,790. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. JEVNE COMPANY, Los Angeles, Cal. Filed Aug. 25, 1914.



Particular description of goods.—Chocolate Candy.
Claims use since July 27, 1914.

Ser. No. 80,791. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. JEVNE COMPANY, Los Angeles, Cal. Filed Aug. 25, 1914.



Particular description of goods.—Chocolate Candy.
Claims use since July 27, 1914.

Ser. No. 80,792. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. JEVNE COMPANY, Los Angeles, Cal. Filed Aug. 25, 1914.

TENNIS

Particular description of goods.—Chocolate Candy.
Claims use since July 27, 1914.

Ser. No. 80,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN-CROSBY CO., Minneapolis, Minn. Filed Aug. 25, 1914.

ORONO

Particular description of goods.—Wheat-Flour.
Claims use since July 1, 1914.

Ser. No. 80,826. (CLASS 39. CLOTHING.) RYFF & CO. A. G. STRICKWARENFABRIK BERN, Berne, Switzerland. Filed Aug. 26, 1914.

The exclusive use of the word "Brand" is expressly disclaimed.
Particular description of goods.—Knitted Underwear.
Claims use since Apr. 30, 1914.

Ser. No. 80,836. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CALIFORNIA COTTON MILLS CO., Oakland, Cal. Filed Aug. 27, 1914.

Caut-on

Comprising the words "Caut-On."
Particular description of goods.—Cotton and Linen Fabrics, Crashes, Damasks, and Table-Covers in the Piece and Batts and Comforters of Silkoline and Sateen, Cotton and Linen Towels.
Claims use since the 1st day of December, 1912.

Ser. No. 80,845. (CLASS 39. CLOTHING.) I. B. KLEINERT RUBBER COMPANY, New York, N. Y. Filed Aug. 27, 1914.

KEWPIE

Particular description of goods.—Baby-Pants.
Claims use since the 13th day of August, 1914.

Ser. No. 80,870. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) YORKSHIRE WORSTED MILLS, Lenni Mills, Pa., and New York, N. Y. Filed Aug. 28, 1914.

Particular description of goods.—Woolen Worsted Goods in the Piece.
Claims use since about the 15th of April, 1914.

Ser. No. 80,892. (CLASS 39. CLOTHING.) GOODWIN SHOE CO., INC., Rochester, N. Y. Filed Aug. 31, 1914.

A right to the exclusive use of the representation of a shoe is disclaimed.
Particular description of goods.—Children's Leather Shoes.
Claims use since Aug. 11, 1914.

Ser. No. 80,893. (CLASS 39. CLOTHING.) GIMBEL BROTHERS INCORPORATED, Philadelphia, Pa. Filed Aug. 31, 1914.

Mayfair

Particular description of goods.—Ladies' Suits and Cloaks.
Claims use since July 16, 1914.

Ser. No. 80,003. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES F. HAWK, Akron, Ohio. Filed Aug. 31, 1914.

Econoline ECONOMY

Particular description of goods.—A Fluid Fuel-Improver Which Promotes Combustion and Assists in Removing Carbon.
Claims use since June 27, 1914.

Ser. No. 80,029. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD L. WOODLEY, Shamrock, Tex. Filed Sept. 1, 1914.

El Maté

The words "Trade Mark" shown in the drawings are hereby disclaimed as forming no part of the trade-mark.
Particular description of goods.—Carbonated Non-Alcoholic Beverages.
Claims use since June 5, 1914.

Ser. No. 80,034. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHIROSABURO CHIBA, Seattle, Wash. Filed Sept. 2, 1914.

Particular description of goods.—A Remedy for Diseases of Females.
Claims use since July 16, 1914.

Ser. No. 80,036. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DOYLE-KIDD DRY GOODS CO., Little Rock, Ark. Filed Sept. 2, 1914.


RIOLE

Particular description of goods.—Cotton Piece Goods.
Claims use since July 1, 1914.

Ser. No. 80,947. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN T. UMPLEBY, West Philadelphia, Pa. Filed Sept. 2, 1914.

EN-GAR-DO

Particular description of goods.—A Chemical Gelatinous Preparation for Removing Iron-Rust and Various other Stains.
Claims use since January, 1905.

Ser. No. 80,966. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE J. GEER, New York, N. Y. Filed Sept. 3, 1914.

"SILVER BEACH"

Particular description of goods.—Woolen, Worsted, Silk, Mohair, and Cotton Piece Goods and Piece Goods Made of a Combination of Two or More of Those Fibers.
Claims use since May 25, 1914.

Ser. No. 80,968. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE J. GEER, New York, N. Y. Filed Sept. 3, 1914.

"TRICOTINE"

Particular description of goods.—Woolen, Worsted, Silk, Mohair, and Cotton Piece Goods and Piece Goods Made of a Combination of Two or More of Those Fibers.
Claims use since Feb. 2, 1914.

Ser. No. 80,969. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE J. GEER, New York, N. Y. Filed Sept. 3, 1914.

"SUN RESISTA"

Particular description of goods.—Woolen, Worsted, Silk, Mohair, and Cotton Piece Goods and Piece Goods Made of a Combination of Two or More of Those Fibers.
Claims use since May 25, 1914.

Ser. No. 80,994. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y. Filed Sept. 4, 1914.

SAFEGUARD

Particular description of goods.—Ready Roofing.
Claims use since on or about Oct. 3, 1908.

Ser. No. 80,995. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, Mass. Filed Sept. 5, 1914.

UTILITY

Particular description of goods.—Cotton-Piece and Cotton Dress Goods.
Claims use since the 29th day of October, 1907.

Ser. No. 81,062. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SAMUEL LEWIS, New York, N. Y. Filed Sept. 8, 1914. Under ten-year proviso.


COTTON-PICKING.

Particular description of goods.—A Cloth Used for Scrub Purposes.
Claims use since 1894.

Ser. No. 81,063. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LORRAINE MANUFACTURING COMPANY, Pawtucket, R. I., and New York, N. Y. Filed Sept. 8, 1914. Under ten-year proviso.

LORRAINE TRADE MARK

Manufacturing Co.

Particular description of goods.—Bengaline, Chiffon, Crashes, Serges, Bedford Cords, Poplins, Batistes, Mohairs, Cashmeres, Panamas, Covert-Cloth, Worsteds, Cotton-Warp Fabrics, and Cotton Goods in the Piece.
Claims use since June, 1882.

Ser. No. 81,068. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. C. MIGEL & COMPANY, New York, N. Y. Filed Sept. 8, 1914.

Quality 1830

The picture being fanciful.
Particular description of goods.—Silk Piece Goods and Printed Silks.
Claims use since October, 1913.

Ser. No. 81,070. (CLASS 39. CLOTHING.) NORTHERN SHOE COMPANY, Duluth, Minn. Filed Sept. 8, 1914.

ROBUST

Particular description of goods.—Leather, Rubber, and Canvas Shoes.
Claims use since Sept. 1, 1914.

Ser. No. 81,190. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HARTFORD MACHINE SCREW COMPANY, Hartford, Conn. Filed Sept. 11, 1914.

MASTER

Particular description of goods.—Pumps.
Claims use since July 1, 1914.

Ser. No. 81,191. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HOEVEL SAND-BLAST MACHINE CO., New York, N. Y. Filed Sept. 11, 1914.

DHK

Particular description of goods.—Sand-Blast Machines.
Claims use since Aug. 25, 1914.

Ser. No. 81,194. (CLASS 39. CLOTHING.) WILLIAM J. MACFARLAND, Rochester, N. Y. Filed Sept. 11, 1914.

MAC MAK SHOES

No claim being made to the word "Shoes."
Particular description of goods.—Boots, Shoes, and Slippers Made of Leather, of Leather with Cloth Tops, or of Canvas with Leather Soles.
Claims use since Aug. 1, 1914.

Ser. No. 81,198. (CLASS 38. PRINTS AND PUBLICATIONS.) JOHN J. RYAN, Albany, N. Y. Filed Sept. 11, 1914.

Who's Who Among Contractors

Particular description of goods.—Title of Certain Biographical Sketches for Publications.
Claims use since Sept. 1, 1914.

Ser. No. 81,199. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Sept. 11, 1914.

SERVITEX

Particular description of goods.—Velvets and Plushes in the Piece.
Claims use since about July 15, 1914.

Ser. No. 81,200. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Sept. 11, 1914.

FURETTE

Particular description of goods.—Velvets and Plushes in the Piece.
Claims use since about July 15, 1914.

Ser. No. 81,252. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Sept. 15, 1914.

RIVAL

Particular description of goods.—Ophthalmic Mountings and Parts.
Claims use since July 22, 1914.

Ser. No. 81,273. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PRATT & WHITNEY CO., Hartford, Conn. Filed Sept. 15, 1914.

CONECCENTRIC

Particular description of goods.—Taps.
Claims use since Aug. 14, 1914.

Ser. No. 81,289. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. R. PORTA, Tampa, Fla. Filed Sept. 16, 1914.

PANAL-PO-OR-T.

Particular description of goods.—Purgatives.
Claims use since Dec. 1, 1913.

Ser. No. 81,318. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Sept. 18, 1914.

HANDY ANDY.

"Handy Andy."
Particular description of goods.—Cultivators and Harrows and Parts Thereof.
Claims use since May 1, 1912.

Ser. No. 81,319. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Sept. 18, 1914.

KEYSTONE

"Keystone."
Particular description of goods.—Mowers, Rakes, Stackers, Hay-Loaders, Combined Rakes and Stackers, Corn-Shellers, Feed Mills and Grinders, Huskers and Shredders, Seeders, Harrows, and Separate Parts for Each of Said Machines.
Claims use since 1870.

Ser. No. 81,340. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE IRWIN AUGER BIT COMPANY, Wilmington, Ohio. Filed Sept. 19, 1914.

The IRWIN Bit
Reg. U.S.Pat.Off.

The words within the rectangle are not claimed as a part of the present trade-mark, the word "Irwin" having been heretofore registered.
Particular description of goods.—Auger-Bits.
Claims use since June 22, 1907.

Ser. No. 81,365. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TIMOTHY A. DUGGAN, New Orleans, La. Filed Sept. 21, 1914.

HODIE

Particular description of goods.—Stomach-Tablets and Intestinal Eliminants.
Claims use since Sept. 3, 1913.

Ser. No. 81,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROGER S. ALLAN, Louisville, Ky. Filed Sept. 22, 1914.

CREMOL

Particular description of goods.—Tooth-Paste, Talcum Powder, and Toilet Water.
Claims use since June 1, 1905.

Ser. No. 81,413. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 22, 1914.

PROTECTOL

The trade-mark consists of the word "Protectol."
Particular description of goods.—A Waterproofing Composition for Fabrics.
Claims use since Jan. 1, 1914.

Ser. No. 81,415. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WALWORTH MANUFACTURING CO., Boston, Mass. Filed Sept. 22, 1914.

WALCO HEX

Comprising a hexagon within a circumscribed diamond and the words "Walco Hex" printed within the hexagon.
Particular description of goods.—Wrenches.
Claims use since Mar. 28, 1914.

Ser. No. 81,433. (CLASS 12. CONSTRUCTION MATERIALS.) PITTSBURGH CRUSHED STEEL CO., Pittsburgh, Pa. Filed Sept. 23, 1914.

"RESISTO"

Particular description of goods.—A Concrete-Hardener Made of Pulverized Iron or Steel Mixed with Sand, Oil, Asphaltum, &c.; a Waterproofing Compound for Concrete.
Claims use since May 1, 1914.

Ser. No. 81,444. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE EARLE GEAR & MACHINE CO., Philadelphia, Pa. Filed Sept. 24, 1914.

LEA SIMPLEX

Particular description of goods.—Saws.
Claims use since about Jan. 1, 1908.

Ser. No. 81,466. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE KITTANNING BREWING CO., Kittanning, Pa. Filed Sept. 25, 1914.

K·B·C·

Particular description of goods.—Beer, Porter, Ale.
Claims use since Mar. 1, 1905.

Ser. No. 81,474. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) STRAUSS & JACOB, New York, N. Y. Filed Sept. 25, 1914.

PARADISE

Comprising the word "Paradise."
Particular description of goods.—Silk Piece Goods.
Claims use since Aug. 17, 1914.

Ser. No. 81,485. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CACTOLA REMEDY CO., Emerson, Nebr. Filed Sept. 26, 1914.

Cactola

Particular description of goods.—Remedies for Whooping-Cough, Croup, Coughs, and Colds.
Claims use since May 1, 1914.

Ser. No. 81,494. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 26, 1914.

The trade-mark consists of the geometrical figure shown in the accompanying drawing.
Particular description of goods.—A Compound for Fireproofing Fabrics.
Claims use since June 1, 1907.

Ser. No. 81,495. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 26, 1914.

REPELITE

The trade-mark consists of the word "Repelite."
Particular description of goods.—A Composition for Waterproofing Fabrics.
Claims use since Feb. 1, 1911.

Ser. No. 81,496. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 26, 1914.

OPACITE

The trade-mark consists of the word "Opacite."
Particular description of goods.—A Waterproofing Composition for Fabrics.
Claims use since June 1, 1909.

Ser. No. 81,497. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 26, 1914.

EMLA

The trade-mark consists of the word "Emla."

Particular description of goods.—A Waterproofing Composition for Fabrics.

Claims use since Jan. 1, 1909.

Ser. No. 81,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM B. PRICE, Poughkeepsie, N. Y. Filed Sept. 26, 1914.

DENSOL

Consists of the word "Densol."

Particular description of goods.—A Waterproofing Composition for Fabrics.

Claims use since Jan. 1, 1909.

Ser. No. 81,505. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed Sept. 28, 1914.

TWIN STAR

Particular description of goods.—Shears and Scissors.

Claims use since Nov. 16, 1911.

Ser. No. 81,524. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOREY MERCANTILE COMPANY, Denver, Colo. Filed Sept. 28, 1914.

SOLITAIRE

Particular description of goods.—Bluing, Ammonia, and Starch.

Claims use since Aug. 7, 1914.

Ser. No. 81,526. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) NATIONAL STEEL & COPPER PLATE COMPANY, Chicago, Ill. Filed Sept. 28, 1914.

NATSCO

Particular description of goods.—A Substitute for Potassium, Iodid and Iodin Resublimed.

Claims use since Sept. 16, 1914.

Ser. No. 81,536. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) TAYLOR INSTRUMENT COMPANIES, Rochester, N. Y. Filed Sept. 28, 1914.

MERCOLOR

Particular description of goods.—Thermometers.

Claims use since Aug. 27, 1914.

Ser. No. 81,562. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WOOD-DUNNELLS CO., Haverhill, Mass. Filed Sept. 29, 1914.

PENTUCKET

Particular description of goods.—Non-Alcoholic Carbonated Beverages.

Claims use since June 1, 1914.

Ser. No. 81,573. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SIGMUND J. LANG, St. Louis, Mo. Filed Sept. 30, 1914.

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Particular description of goods.—Whisky, and Particularly Blended Whisky.

Claims use since April, 1910.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 27, 1914.

100,738. SILK CURTAINS AND SILK GOODS TO BE SOLD IN THE PIECE OR BY THE YARD. A. THEODORE ABBOTT & COMPANY, Philadelphia, Pa.
Filed August 28, 1913. Serial No. 72,567. PUBLISHED AUGUST 25, 1914.

100,739. CANNED OLIVE-OIL, FRUITS, AND VEGETABLES. MICHELE AJELLO, Brooklyn, N. Y.
Filed July 2, 1914. Serial No. 79,502. PUBLISHED AUGUST 25, 1914.

100,740. CAKE MIXTURES. ALLMADE BAKERIES, INC., Detroit, Mich.
Filed March 21, 1914. Serial No. 76,807. PUBLISHED AUGUST 18, 1914.

100,741. ALUMINUM CASTINGS. THE ALUMINUM CASTINGS COMPANY, Cleveland, Ohio.
Filed June 27, 1914. Serial No. 79,407. PUBLISHED AUGUST 18, 1914.

100,742. BLOCK COAL. ANCHOR COAL COMPANY, Charleston, W. Va.
Filed May 19, 1914. Serial No. 78,409. PUBLISHED AUGUST 18, 1914.

100,743. CHEMICAL COMPOSITION FOR PREVENTING ACCUMULATION OR CONDENSATION OF WATER UPON GLASS AND OTHER POLISHED SURFACES. ANTI-FOG COMPANY, Portland, Oreg.
Filed July 21, 1914. Serial No. 79,954. PUBLISHED AUGUST 25, 1914.

100,744. TEA AND COFFEE. ARAGON COFFEE CO., INC., South Richmond, Va.
Filed July 10, 1914. Serial No. 79,699. PUBLISHED AUGUST 18, 1914.

100,745. REMEDY FOR ASTHMA, BRONCHITIS, HAY-FEVER, CATARRH, AND BLOOD-PURIFIER. HARRY ARMSTRONG, Atlanta, Ga.
Filed July 7, 1914. Serial No. 79,594. PUBLISHED AUGUST 25, 1914.

100,746. VISCOUS CEMENT. ATSCO, INCORPORATED, New York, N. Y.
Filed June 29, 1914. Serial No. 79,419. PUBLISHED AUGUST 25, 1914.

100,747. CANDY. D. AUERBACH & SONS, New York, N. Y.
Filed June 2, 1914. Serial No. 78,724. PUBLISHED JULY 21, 1914.

100,748. CANNED CORN, SUCCOTASH, AND LIMA BEANS. AUGUSTA CANNING CO., Brunswick, Me.
Filed April 11, 1914. Serial No. 77,402. PUBLISHED AUGUST 25, 1914.

100,749. GAS-MANTLE WITH ATTACHMENTS. GLÜHSTRUMPFFABRIK BASEL, Basel, Switzerland.
Filed July 7, 1913. Serial No. 71,565. PUBLISHED AUGUST 18, 1914.

100,750. WHEAT-FLOUR AND CORNMEAL. BEAVER VALLEY MILLING COMPANY, Des Moines, Iowa.
Filed October 3, 1912. Serial No. 66,125. PUBLISHED AUGUST 18, 1914.

100,751. BLOOD REMEDY. BEGGS MANUFACTURING CO., Chicago, Ill.
Filed July 22, 1914. Serial No. 79,983. PUBLISHED AUGUST 25, 1914.

100,752. MEN'S AND YOUNG MEN'S OUTER CLOTHING. ALFRED BENJAMIN-WASHINGTON CO., New York, N. Y.
Filed May 19, 1914. Serial No. 78,377. PUBLISHED AUGUST 25, 1914.

100,753. LUBRICATING-OIL. WILLIAM E. BENSON, St. Paul, Minn.
Filed November 9, 1912. Serial No. 66,790. PUBLISHED APRIL 7, 1914.

100,754. MEDICAL PREPARATIONS FOR USE AS A SPRAY IN NOSE OR THROAT AFFECTIONS. BERLIN LABORATORY, LTD., INC., New York, N. Y.
Filed June 25, 1914. Serial No. 79,353. PUBLISHED AUGUST 25, 1914.

100,755. MEDICAL PREPARATIONS FOR GASTRO-INTESTINAL DISTURBANCES. BERLIN LABORATORY, LTD., INC., New York, N. Y.
Filed June 25, 1914. Serial No. 79,354. PUBLISHED AUGUST 25, 1914.

100,756. PAINT FOR WATERPROOFING CANVAS DUCK. HERBERT C. BIGHAM, Peoria, Ill.
Filed June 30, 1913. Serial No. 71,434. PUBLISHED AUGUST 18, 1914.

100,757. OUTER WAISTS FOR WOMEN AND GIRLS. BLOOM & MILLMAN, New York, N. Y.
Filed July 23, 1914. Serial No. 80,002. PUBLISHED AUGUST 25, 1914.

100,758. DOLLS. GEORGE BORGFELDT & CO., New York, N. Y.
Filed May 15, 1914. Serial No. 78,301. PUBLISHED JULY 21, 1914.

100,759. PREPARED PAINTS, STAINS, VARNISHES, WOOD-FILLERS, AND WOOD-FINISHING FLUIDS. THE BRIDGEPORT WOOD FINISHING COMPANY, New Milford, Conn.
Filed March 20, 1908. Serial No. 33,498. PUBLISHED AUGUST 18, 1914.

100,760. PREPARED PAINTS, STAINS, VARNISHES, WOOD-FILLERS, AND WOOD-FINISHING FLUIDS. THE BRIDGEPORT WOOD FINISHING COMPANY, New Milford, Conn.
Filed March 20, 1908. Serial No. 33,499. PUBLISHED JULY 21, 1914.

100,761. WIRE-ROPE LUBRICANTS AND PRESERVATIVES. BRODERICK & BASCOM ROPE COMPANY, St. Louis, Mo.
Filed July 13, 1914. Serial No. 79,747. PUBLISHED AUGUST 25, 1914.

100,762. CAKES. BROWN CRACKER & CANDY CO., Dallas, Tex.
Filed July 16, 1914. Serial No. 79,835. PUBLISHED AUGUST 25, 1914.

100,763. LEMONS AND ORANGES. JOSEPH BRUCATO, New York, N. Y.
Filed May 21, 1914. Serial No. 78,432. PUBLISHED AUGUST 18, 1914.

100,764. BEER. BUFFALO BREWING CO., Sacramento, Cal.
Filed July 24, 1914. Serial No. 80,025. PUBLISHED AUGUST 25, 1914.

100,765. CIGARS, CIGARETTES, AND MANUFACTURED TOBACCO. P. CANNIZZARO & CO., New York, N. Y.
Filed November 20, 1913. Serial No. 74,092. PUBLISHED AUGUST 18, 1914.

100,766. CRACKERS AND BISCUITS. THE CANTON BISCUIT CO., Canton, Ohio.
Filed July 20, 1914. Serial No. 79,930. PUBLISHED AUGUST 25, 1914.

100,767. BATHING-SUITS. OSCAR CARRABINE, New York, N. Y.
Filed July 3, 1914. Serial No. 79,527. PUBLISHED AUGUST 25, 1914.

100,768. ALUMINUM CASTINGS. THE CLEVELAND ELECTRO METALS COMPANY, Cleveland, Ohio.
Filed March 28, 1914. Serial No. 77,017. PUBLISHED AUGUST 25, 1914.

100,769. ELECTRICAL AND GALVANIC CARBONS. C. CONRADTY, Nuremberg, Germany.
Filed May 18, 1914. Serial No. 78,345. PUBLISHED AUGUST 18, 1914.

100,770. BUTTER. CONSOLIDATED GROCERY COMPANY, Tampa, Jacksonville, and Pensacola, Fla.
Filed July 18, 1914. Serial No. 79,901. PUBLISHED AUGUST 25, 1914.

100,771. GAS-ENGINES. CONTINENTAL MOTOR MFG. CO., Detroit and Muskegon, Mich.
Filed April 27, 1914. Serial No. 77,770. PUBLISHED AUGUST 18, 1914.

100,772. RUBBER TIRES, CASINGS, AND INNER TUBES. CONVERSE RUBBER SHOE CO., Malden, Mass.
Filed June 3, 1914. Serial No. 78,763. PUBLISHED AUGUST 18, 1914.

100,773. REMEDIES FOR RHEUMATISM. J. H. CROCKER, San Pedro and Los Angeles, Cal.
Filed July 27, 1914. Serial No. 80,091. PUBLISHED AUGUST 25, 1914.

100,774. TROUSERS AND OVERALLS. THE CROWN OVERALL MANUFACTURING CO., Cincinnati, Ohio.
Filed June 30, 1914. Serial No. 79,457. PUBLISHED AUGUST 25, 1914.

100,775. FOOT-POWDER COMPOSITION. FRANK DEDEK, Chicago, Ill.
Filed June 24, 1914. Serial No. 79,325. PUBLISHED AUGUST 25, 1914.

100,776. BREAD COMPOSED OF PURE HONEY AND RYE-FLOUR. CHRISTIAN J. DIERCKX, New York, N. Y.
Filed July 6, 1914. Serial No. 79,566. PUBLISHED AUGUST 18, 1914.

100,777. ELECTRIC LAMPS AND STANDS. JAMES W. DUNHAM, New York, N. Y.
Filed July 17, 1914. Serial No. 79,870. PUBLISHED AUGUST 18, 1914.

100,778. CERTAIN NAMED METAL CASTINGS AND FORGINGS. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed July 11, 1913. Serial No. 71,650. PUBLISHED AUGUST 25, 1914.

100,779. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed July 11, 1913. Serial No. 71,651. PUBLISHED AUGUST 25, 1914.

100,780. SPRAYING APPARATUS FOR TREES, PLANTS, AND BUSHES. THE DEMING COMPANY, Salem, Ohio.
Filed December 23, 1912. Serial No. 67,558. PUBLISHED AUGUST 18, 1914.

100,781. CRACKERS, BISCUITS, COOKIES, AND CAKES. DUBUQUE BISCUIT COMPANY, Dubuque, Iowa.
Filed April 20, 1914. Serial No. 77,582. PUBLISHED AUGUST 18, 1914.

100,782. WHEAT-FLOUR. THE DUNLOP MILLING CO., Clarksville, Tenn.
Filed July 3, 1914. Serial No. 79,529. PUBLISHED AUGUST 25, 1914.

100,783. CLUTCHES AND DRILL-CHUCKS. ECLIPSE MACHINE COMPANY, Elmira, N. Y.
Filed July 15, 1914. Serial No. 79,804. PUBLISHED AUGUST 18, 1914.

100,784. MEDICINE FOR USE IN TREATING WHOOPING-COUGH. EDGEMONT CHEMICAL MFG. CO., Edgemont, S. D.
Filed July 20, 1914. Serial No. 79,946. PUBLISHED AUGUST 25, 1914.

100,785. COLD-CREAM. WILLIAM A. FAHRENWALD, New York, N. Y.
Filed July 2, 1914. Serial No. 79,514. PUBLISHED AUGUST 25, 1914.

100,786. PUBLICATIONS. FARMERS NATIONAL LIFE INSURANCE COMPANY OF AMERICA, East Chicago, Ind., and Chicago, Ill.
Filed March 10, 1914. Serial No. 76,495. PUBLISHED AUGUST 18, 1914.

100,787. CHEMICAL COMPOSITION FOR TREATING NEW AND RESTORING OLD FLOOR OIL-CLOTH AND LINOLEUM. FARR AND BAILEY MANUFACTURING COMPANY, Camden, N. J.
Filed April 8, 1914. Serial No. 77,304. PUBLISHED AUGUST 25, 1914.

100,788. WATER-CLOSETS, LAVATORIES. FEDERAL-HUBER CO., Chicago, Ill.
Filed May 23, 1913. Serial No. 70,582. PUBLISHED AUGUST 18, 1914.

100,789. FEEDS MADE FROM WHEAT, CORN, AND OATS. FEDERAL MILLING COMPANY, Lockport, N. Y.
Filed October 23, 1913. Serial No. 73,575. PUBLISHED MAY 5, 1914.

100,790. ELECTRICAL HORNS. THE FITZGERALD MFG. CO., Torrington, Conn.
Filed July 28, 1914. Serial No. 80,122. PUBLISHED AUGUST 25, 1914.

100,791. ELECTRICAL HORNS. THE FITZGERALD MFG. CO., Torrington, Conn.
Filed July 28, 1914. Serial No. 80,123. PUBLISHED AUGUST 25, 1914.

100,792. ARTIFICIAL BOARD. FLINTKOTE MANUFACTURING CO., Boston, Mass.
Filed May 7, 1912. Serial No. 63,309. PUBLISHED AUGUST 25, 1914.

100,793. MACARONI, ELBOW-MACARONI, SPAGHETTI, AND NOODLES. THE C. S. FOULDS-BRIGGS COMPANY, Cincinnati, Ohio.
Filed June 11, 1914. Serial No. 78,999. PUBLISHED AUGUST 18, 1914.

100,794. ELECTRICAL RECTIFIERS. MARSHALL P. FOX, Chicago, Ill.
Filed March 23, 1914. Serial No. 76,848. PUBLISHED AUGUST 18, 1914.

100,795. SAUSAGE. L. FRANK & SON COMPANY, Milwaukee, Wis.
Filed June 20, 1914. Serial No. 79,240. PUBLISHED AUGUST 18, 1914.

100,796. CREPE PIECE GOODS. FRANKEN & FRANK, New York, N. Y.
Filed June 12, 1914. Serial No. 79,031. PUBLISHED AUGUST 25, 1914.

100,797. MALT EXTRACTS. GEHE & CO., AKTIENGESELLSCHAFT, Dresden, Germany.
Filed January 10, 1913. Serial No. 67,818. PUBLISHED AUGUST 25, 1914.

100,798. RUBBER INNER AND OUTER TUBES FOR PNEUMATIC TIRES. GIANT TIRE & RUBBER COMPANY, Omaha, Nebr.
Filed June 5, 1914. Serial No. 78,834. PUBLISHED AUGUST 18, 1914.

100,799. GLASS LAMP GLOBES, SHADES, REFLECTORS, BODIES, AND CHIMNEYS. GILLINDER & SONS, INC., Philadelphia, Pa.
Filed May 28, 1914. Serial No. 78,608. PUBLISHED AUGUST 18, 1914.

100,800. STOCK-TONICS. GOLD MEDAL STOCK FOOD CO., Perrysville, Ohio.
Filed June 29, 1914. Serial No. 79,430. PUBLISHED AUGUST 25, 1914.

100,801. LADIES', MISSES', AND CHILDREN'S DRESS-WAISTS, SHIRT-WAISTS, AND DRESSES. GOLDSTEIN BROS., Philadelphia, Pa.
Filed November 10, 1913. Serial No. 73,885. PUBLISHED JANUARY 6, 1914.

100,802. CORN-PLASTERS, FOOT-POWDERS, BUNION-PLASTERS, AND PREPARATIONS FOR TREATING SORE AND CALLOUS FEET. JOSEPH GOODMAN, New York, N. Y.
Filed January 7, 1914. Serial No. 75,004. PUBLISHED AUGUST 25, 1914.

100,803. REFLECTORS. ROBERT D. GRAY, Ridgewood, N. J.
Filed March 21, 1914. Serial No. 76,814. PUBLISHED AUGUST 18, 1914.

100,804. BICYCLES. GREAT WESTERN MFG' CO., Laporte, Ind.
Filed June 17, 1914. Serial No. 79,173. PUBLISHED AUGUST 4, 1914.

100,805. STOCK FEED. GULFPORT GROCERY CO., Gulfport, Miss.
Filed June 6, 1914. Serial No. 78,863. PUBLISHED AUGUST 25, 1914.

100,806. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,156. PUBLISHED AUGUST 25, 1914.

100,807. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,157. PUBLISHED AUGUST 25, 1914.

100,808. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,158. PUBLISHED AUGUST 25, 1914.

100,809. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,159. PUBLISHED AUGUST 25, 1914.

100,810. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,160. PUBLISHED AUGUST 25, 1914.

100,811. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,161. PUBLISHED AUGUST 25, 1914.

100,812. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,162. PUBLISHED AUGUST 25, 1914.

100,813. CANDY. GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md.
Filed May 9, 1914. Serial No. 78,163. PUBLISHED AUGUST 25, 1914.

100,814. VINEGAR, SAUER-KRAUT, PICKLES, MUSTARD, JELLIES, AND PRESERVES. B. A. HANCOCK, Atlanta, Ga.
Filed June 12, 1913. Serial No. 71,067. PUBLISHED AUGUST 18, 1914.

100,815. CERTAIN NAMED OILS AND GREASES. THE HAWKEYE OIL COMPANY, Waterloo, S. D.
Filed June 18, 1914. Serial No. 79,192. PUBLISHED AUGUST 18, 1914.

100,816. HANDKERCHIEFS. HERRMANN AUKAM & CO., New York, N. Y.
Filed May 5, 1914. Serial No. 78,006. PUBLISHED AUGUST 25, 1914.

100,817. WHEAT-FLOUR. HEZEL MILLING COMPANY, East St. Louis, Ill.
Filed May 28, 1914. Serial No. 78,609. PUBLISHED AUGUST 18, 1914.

100,818. CERTAIN NAMED FOODS. HAWKS, INCORPORATED, Bloomington, Ill.
Filed May 28, 1914. Serial No. 78,617. PUBLISHED AUGUST 18, 1914.

100,819. FLAVORING EXTRACTS FOR FOODS. B. HELLER & CO., Chicago, Ill.
Filed July 15, 1914. Serial No. 79,808. PUBLISHED AUGUST 25, 1914.

100,820. ENAMEL PAINT. HEMINGWAY & COMPANY, INC., Boundbrook, N. J.
Filed July 18, 1914. Serial No. 79,908. PUBLISHED AUGUST 18, 1914.

100,821. LINIMENT, AMMONIA, COUGH-SYRUP, AND DISINFECTANTS. THE R. M. HOLLINGSHEAD CO., Camden, N. J.
Filed April 25, 1914. Serial No. 77,747. PUBLISHED AUGUST 25, 1914.

100,822. BREAD. HOLMES & SON, Washington, D. C.
Filed July 20, 1914. Serial No. 79,938. PUBLISHED AUGUST 25, 1914.

100,823. SOLE-LEATHER. J. W. & A. P. HOWARD & CO., LTD., Corry, Pa.
Filed May 15, 1914. Serial No. 78,306. PUBLISHED AUGUST 18, 1914.

100,824. HUMAN HAIR. HUMAN HAIR GOODS INDUSTRY, New York, N. Y.
Filed May 25, 1914. Serial No. 78,522. PUBLISHED AUGUST 18, 1914.

100,825. CERTAIN NAMED HOSE, BELTING, GASKETS, VALVES, AND MACHINERY PACKING AND AUTOMOBILE-TIRES. IMPERIAL RUBBER CO., New York, N. Y.
Filed June 16, 1914. Serial No. 79,152. PUBLISHED AUGUST 18, 1914.

100,826. CERTAIN NAMED OILS AND GREASES. INDIAN REFINING COMPANY, INC., Augusta, Me., and New York, N. Y.
Filed June 15, 1912. Serial No. 64,217. PUBLISHED AUGUST 25, 1914

100,827. GAS FOR MATURING AND BLEACHING FLOUR. INDUSTRIAL APPLIANCE COMPANY, Chicago, Ill.
Filed July 27, 1914. Serial No. 80,099. PUBLISHED AUGUST 25, 1914.

100,828. AIR-FEED HAMMER-DRILLS WITH AUTOMATIC STEEL-ROTATING MECHANISM. INGERSOLL-RAND COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 8, 1914. Serial No. 79,632. PUBLISHED AUGUST 18, 1914.

100,829. VENTILATORS. WILLIAM H. JARDINE, Philadelphia, Pa.
Filed July 7, 1914. Serial No. 79,603. PUBLISHED AUGUST 18, 1914.

100,830. INNER TUBES, BLOW-OUT PATCHES, TIRE-BOOTS AND RELINERS FOR RUBBER TIRES, AND VULCANIZING-RUBBER. THE JOHNSTOWN AUTOMOBILE CO., Johnstown, Pa.
Filed July 9, 1914. Serial No. 79,670. PUBLISHED AUGUST 18, 1914.

100,831. POULTRY FEED. JOSEY-MILLER CO., Beaumont, Tex.
Filed July 6, 1914. Serial No. 79,570. PUBLISHED AUGUST 18, 1914.

100,832. HORSE AND CATTLE FEED. JOSEY-MILLER CO., Beaumont, Tex.
Filed July 6, 1914. Serial No. 79,571. PUBLISHED AUGUST 18, 1914.

100,833. HORSE AND CATTLE FEED. JOSEY-MILLER CO., Beaumont, Tex.
Filed July 6, 1914. Serial No. 79,572. PUBLISHED AUGUST 18, 1914.

100,834. KNITTING-NEEDLES, CROCHET-HOOKS, SHUTTLES, SPOOL-HOLDERS, AND NEEDLE-PROTECTORS. ARTHUR J. KAHN, New York, N. Y.
Filed April 9, 1914. Serial No. 77,347. PUBLISHED AUGUST 25, 1914.

100,835. LADIES' SHIRT-WAISTS. ISIDOR KAITZ, New York, N. Y.
Filed June 6, 1914. Serial No. 78,873. PUBLISHED AUGUST 25, 1914.

100,836. CANNED VEGETABLES, FRUITS, SALMON, AND CANNED JAM. HENRY F. C. KILIAN, New York, N. Y.
Filed July 16, 1914. Serial No. 79,837. PUBLISHED AUGUST 25, 1914.

100,837. LAUNDRY STARCH. H. KOHNSTAMM & CO., New York N. Y.
Filed July 14, 1914. Serial No. 79,778. PUBLISHED AUGUST 25, 1914.

100,838. KEROSENE, GASOLENE, NEUTRAL OILS, STEAM-CYLINDER STOCKS, AND LUBRICATING-GREASE. KENDALL REFINING COMPANY, Bradford, Pa.
Filed July 17, 1914. Serial No. 79,878. PUBLISHED AUGUST 25, 1914.

100,839. LARD. KINGAN & CO., (LIMITED), Belfast, Ireland; Indianapolis, Ind., and Baltimore, Md.
Filed May 15, 1914. Serial No. 78,308. PUBLISHED AUGUST 11, 1914.

100,840. LOAM, MOLDING-SAND, AND MOLDING-CLAY. EISENBERGER KLEBSAND-WERKE, G. M. B. H., Eisenberg, Germany.
Filed July 19, 1913. Serial No. 71,855. PUBLISHED AUGUST 18, 1914.

100,841. CERTAIN ESSENCES, OILS, AND FLAVORS USED IN EXTRACTS, AND FLAVORING EXTRACTS FOR FOODS. H. KOHNSTAMM & CO., New York, N. Y.
Filed June 10, 1914. Serial No. 78,947. PUBLISHED AUGUST 25, 1914.

100,842. LAUNDRY STARCH. H. KOHNSTAMM & CO., New York, N. Y.
Filed July 14, 1914. Serial No. 79,776. PUBLISHED AUGUST 25, 1914.

100,843. CANNED SARDINES. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed July 18, 1914. Serial No. 79,911. PUBLISHED AUGUST 25, 1914.

100,844. CANNED SARDINES. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed July 18, 1914. Serial No. 79,912. PUBLISHED AUGUST 25, 1914.

100,845. CANNED SARDINES. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed July 18, 1914. Serial No. 79,913. PUBLISHED AUGUST 25, 1914.

100,846. CANNED SARDINES. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed July 18, 1914. Serial No. 79,914. PUBLISHED AUGUST 25, 1914.

100,847. CANNED SARDINES. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed July 18, 1914. Serial No. 79,915. PUBLISHED AUGUST 25, 1914.

100,848. CANNED SARDINES AND OLIVE-OIL. LA MANNA, AZEMA & FARNAN, New York, N. Y.
Filed May 22, 1914. Serial No. 78,478. PUBLISHED AUGUST 18, 1914.

100,849. MOUNTAIN-HERBS, AN INTERNAL REMEDY FOR PURIFYING THE BLOOD AND FOR LAXATIVE PURPOSES. BERNHARD LAUER, Berlin, Germany.
Filed May 19, 1913. Serial No. 70,494. PUBLISHED AUGUST 25, 1914.

100,850. WHEAT-FLOUR. THE LEAVENWORTH MILLING CO., Leavenworth, Kans.
Filed July 23, 1914. Serial No. 80,011. PUBLISHED AUGUST 25, 1914.

100,851. GASOLENE, NAPHTHA, BENZIN, KEROSENE, LUBRICATING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed July 1, 1914. Serial No. 79,480. PUBLISHED AUGUST 18, 1914.

100,852. BISCUIT. LOOSE-WILES BISCUIT COMPANY, Boston, Mass.
Filed January 28, 1914. Serial No. 75,500. PUBLISHED AUGUST 18, 1914.

100,853. CAKES. LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo.
Filed July 16, 1914. Serial No. 79,859. PUBLISHED AUGUST 25, 1914.

100,854. CANDIES. THE WALTER M. LOWNEY COMPANY, Boston, Mass.
Filed July 9, 1914. Serial No. 79,674. PUBLISHED AUGUST 18, 1914.

100,855. TEA. ROBERT MELROSE AND COMPANY, LIMITED, Edinburgh, Scotland.
Filed July 17, 1914. Serial No. 79,916. PUBLISHED AUGUST 25, 1914.

100,856. WHEAT-FLOUR. MILLVILLE FLOUR AND GRAIN COMPANY, Millville, N. J.
Filed April 16, 1914. Serial No. 77,511. PUBLISHED AUGUST 25, 1914.

100,857. LARD AND SMOKED MEATS. MISSISSIPPI PACKING COMPANY INCORPORATED, Natchez, Miss.
Filed July 16, 1914. Serial No. 79,858. PUBLISHED AUGUST 25, 1914.

100,858. PICKLED, SALTED, DRIED, AND PRESERVED FISH. CHARLES F. MATTLAGE & SONS, New York, N. Y.
Filed July 15, 1914. Serial No. 79,816. PUBLISHED AUGUST 18, 1914.

100,859. LINIMENTS. SAMUEL S. METZLER, Chicago, Ill.
Filed July 30, 1914. Serial No. 80,182. PUBLISHED AUGUST 25, 1914.

100,860. SPAGHETTI. MINNESOTA MACARONI CO., St. Paul, Minn.
Filed June 13, 1914. Serial No. 79,081. PUBLISHED AUGUST 18, 1914.

100,861. BENCH-HOOKS, BENCH-CLAMPS, WRENCHES. HARRY R. MITCHELL, Seattle, Wash.
Filed July 5, 1912. Serial No. 64,590. PUBLISHED AUGUST 18, 1914.

100,862. METALLIC ROD-PACKINGS. MORRIS METALLIC PACKING COMPANY, Philadelphia, Pa.
Filed February 13, 1914. Serial No. 75,889. PUBLISHED AUGUST 18, 1914.

100,863. WASHERS OTHER THAN METAL FOR COUPLINGS. H. MUELLER MANUFACTURING CO., Decatur, Ill.
Filed May 1, 1914. Serial No. 77,931. PUBLISHED AUGUST 18, 1914.

100,864. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed April 28, 1914. Serial No. 77,841. PUBLISHED AUGUST 25, 1914.

100,865. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed April 28, 1914. Serial No. 77,843. PUBLISHED AUGUST 18, 1914.

100,866. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 14, 1914. Serial No. 79,782. PUBLISHED AUGUST 18, 1914.

100,867. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 14, 1914. Serial No. 79,784. PUBLISHED AUGUST 18, 1914.

100,868. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 14, 1914. Serial No. 79,785. PUBLISHED AUGUST 18, 1914.

100,869. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 14, 1914. Serial No. 79,786. PUBLISHED AUGUST 18, 1914.

100,870. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 14, 1914. Serial No. 79,787. PUBLISHED AUGUST 18, 1914.

100,871. ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed July 17, 1914. Serial No. 79,888. PUBLISHED AUGUST 18, 1914.

100,872. LUBRICATING-OILS FOR GAS ENGINES AND MOTORS. NEW YORK & NEW JERSEY LUBRICANT CO., New York, N. Y.
Filed July 6, 1914. Serial No. 79,579. PUBLISHED AUGUST 25, 1914.

100,873. LINEN HOSE. CHARLES NIEDNER'S SONS CO., Malden, Mass.
Filed May 29, 1914. Serial No. 78,643. PUBLISHED AUGUST 18, 1914.

100,874. [WITHDRAWN.]

100,875. FERTILIZER. NORSK HYDRO-ELEKTRISK KVAELSTOFAKTIESELSKAB, Christiania and Notodden, Norway.
Filed July 8, 1914. Serial No. 79,643. PUBLISHED AUGUST 25, 1914.

100,876. RICE. NORTH AMERICAN MERCANTILE CO., San Francisco, Cal.
Filed July 20, 1914. Serial No. 79,932. PUBLISHED AUGUST 25, 1914.

100,877. REFRACTORY BRICKS OR BLOCKS. NORTON COMPANY, Worcester, Mass.
Filed July 24, 1914. Serial No. 80,032. PUBLISHED AUGUST 25, 1914.

100,878. REFRACTORY BRICKS OR BLOCKS. NORTON COMPANY, Worcester, Mass.
Filed July 24, 1914. Serial No. 80,034. PUBLISHED AUGUST 25, 1914.

100,879. BISCUITS. PEEK, FREAN AND COMPANY, LIMITED, London, England.
Filed December 5, 1913. Serial No. 74,392. PUBLISHED AUGUST 18, 1914.

100,880. PNEUMATIC TIRES AND INNER TUBES THEREFOR. THE PHARIS TIRE & RUBBER CO., Newark, Ohio.
Filed July 20, 1914. Serial No. 79,927. PUBLISHED AUGUST 18, 1914.

100,881. TOILET-COMBS. PHILO HAT SPECIALTIES CO., Newark, N. J.
Filed July 1, 1914. Serial No. 79,499. PUBLISHED AUGUST 25, 1914.

100,882. LUBRICATING-OILS, AUTOMOBILE LUBRICATING-OIL, AND TRANSMISSION-GREASE. PIERCE OIL CORPORATION, Richmond, Va., and St. Louis, Mo.
Filed July 24, 1914. Serial No. 80,038. PUBLISHED AUGUST 25, 1914.

100,883. RUBBER TIRES. POLACK TYRE & RUBBER CO., New York, N. Y.
Filed May 25, 1914. Serial No. 78,532. PUBLISHED AUGUST 18, 1914.

100,884. SMALL AMMONIA-COMPRESSORS. THE PORTSMOUTH ENGINE CO., Portsmouth, Ohio.
Filed April 23, 1914. Serial No. 77,685. PUBLISHED AUGUST 25, 1914.

100,885. CANNED ALBICORE. PREMIER PACKING CO., Chicago, Ill.
Filed July 20, 1914. Serial No. 79,936. PUBLISHED AUGUST 25, 1914.

100,886. SAUCES AND CANNED FRUITS AND VEGETABLES. J. F. PYLE & SON, San Jose, Cal.
Filed July 21, 1914. Serial No. 79,967. PUBLISHED AUGUST 25, 1914.

100,887. CARRIAGES AND BUGGIES. RELIANCE BUGGY COMPANY, St. Louis, Mo.
Filed May 21, 1914. Serial No. 78,459. PUBLISHED AUGUST 25, 1914.

100,888. GAS-MANTLES. RELIANCE GAS MANTLE COMPANY, New York, N. Y.
Filed June 11, 1914. Serial No. 79,010. PUBLISHED AUGUST 18, 1914.

100,889. SPECIFIC IN RHEUMATISM AND A MEDICINAL TONIC. RIIU-LUM-GOU CO., New York, N. Y.
Filed July 18, 1914. Serial No. 79,920. PUBLISHED AUGUST 25, 1914.

100,890. COFFEE. H. RIPPEN, Perth Amboy, N. J.
Filed July 21, 1914. Serial No. 79,972. PUBLISHED AUGUST 25, 1914.

100,891. SOLID RUBBER AND PNEUMATIC TIRES FOR VEHICLES. RUSSIAN-FRENCH INDIA RUBBER GUTTAPERCHA AND TELEGRAPH WORKS "PROWODNIK RIGA," Riga, Russia.
Filed April 21, 1914. Serial No. 77,635. PUBLISHED AUGUST 18, 1914.

100,892. CANDY. SALVO & BERDON CANDY CO., Natchez, Miss.
Filed March 14, 1914. Serial No. 76,658. PUBLISHED AUGUST 18, 1914.

100,893. GRAIN, RICE, AND CORN CRADLES. THE J. A. SCHWOB CO., Moundsville, W. Va.
Filed July 10, 1914. Serial No. 79,723. PUBLISHED AUGUST 18, 1914.

100,894. KEY-CHAINS. THE SHEPARD MANUFACTURING COMPANY, Melrose, Mass.
Filed May 25, 1912. Serial No. 63,794. PUBLISHED AUGUST 18, 1914.

100,895. CANDIED POPCORN IN CAKES. FRANK W. SHERMAN, Memphis, Tenn.
Filed April 30, 1914. Serial No. 77,896. PUBLISHED AUGUST 18, 1914.

100,896. CERTAIN NAMED CLOTHING FOR WOMEN, MISSES, AND CHILDREN. DAVID E. SICHER, late of New York, N. Y., by Dudley D. Sicher and Samuel A. Sicher, New York, N. Y., executors.
Filed June 27, 1914. Serial No. 79,406. PUBLISHED AUGUST 25, 1914.

100,897. SAWS. SIMONDS MANUFACTURING COMPANY, Fitchburg, Mass.
Filed July 7, 1914. Serial No. 79,613. PUBLISHED AUGUST 18, 1914.

100,898. SUBSTITUTE FOR COFFEE. SINCOF COMPANY, South Westville, N. J.
Filed March 19, 1914. Serial No. 76,780. PUBLISHED AUGUST 18, 1914.

100,899. MASSAGE AND SKIN CREAM AND ANTISEPTIC OINTMENT. HOWARD GEORGE SCHAUERMANN, Philadelphia, Pa.
Filed July 8, 1914. Serial No. 79,647. PUBLISHED AUGUST 25, 1914.

100,900. GREEN, DRIED, AND EVAPORATED APPLES. SEGGERMAN BROS., INC., New York, N. Y.
Filed July 21, 1914. Serial No. 79,975. PUBLISHED AUGUST 25, 1914.

100,901. SELF-RISING WHEAT-FLOUR. J. ALLEN SMITH & COMPANY, Knoxville, Tenn.
Filed February 24, 1914. Serial No. 76,123. PUBLISHED AUGUST 18, 1914.

100,902. CHEMICAL COMPOUND USED FOR THE TREATMENT OF TEXTILE FIBERS TO SOFTEN THE SAME. L. SONNEBORN SONS, INC., New York, N. Y.
Filed July 13, 1914. Serial No. 79,760. PUBLISHED AUGUST 25, 1914.

100,903. FOOT-TABLET FOR RELIEF OF FOOT AFFECTIONS. SPERO CHEMICAL CO., Cleveland, Ohio.
Filed July 11, 1914. Serial No. 79,741. PUBLISHED AUGUST 25, 1914.

100,904. KNITTED VESTS AND UNDERSHIRTS. STANDARD KNITTING MILLS COMPANY, New York, N. Y.
Filed June 24, 1914. Serial No. 79,340. PUBLISHED AUGUST 25, 1914.

100,905. SCALES, WEIGHING MACHINERY, WEIGHTS, AND PARTS THEREOF. THE STANDARD SCALE & SUPPLY COMPANY, Pittsburgh, Pa.
Filed May 23, 1913. Serial No. 70,591. PUBLISHED AUGUST 18, 1914.

100,906. SALVES, OINTMENTS, LINIMENTS, AND TOOTH-SOAP. CHARLES M. STEIN, New York, N. Y.
Filed June 23, 1914. Serial No. 79,305. PUBLISHED AUGUST 25, 1914.

100,907. COATS. THE STEIN-BLOCH CO., Rochester, N. Y.
Filed June 22, 1914. Serial No. 79,280. PUBLISHED AUGUST 25, 1914.

100,908. STEAM-BOILERS AND PARTS THEREOF. JOHN A. STEVENS, Lowell, Mass.
Filed June 15, 1914. Serial No. 79,125. PUBLISHED AUGUST 18, 1914.

100,909. LAGER-BEER. THE GOTTLIEB BAUERNSCHMIDT STRAUS BREWING COMPANY, Baltimore, Md.
Filed July 24, 1913. Serial No. 71,946. PUBLISHED AUGUST 25, 1914.

100,910. MONTHLY PUBLICATION. T. AND C. PUBLISHING CORPORATION, New York, N. Y.
Filed February 2, 1914. Serial No. 75,634. PUBLISHED AUGUST 18, 1914.

100,911. MOLDING MACHINERY USED IN CASTING METALS. THE TABOR MANUFACTURING COMPANY, Philadelphia, Pa.
Filed June 12, 1914. Serial No. 79,043. PUBLISHED AUGUST 25, 1914.

100,912. DRY, PASTE, AND READY-MIXED PAINT. TEXAS FIRE AND WATER PROOF PAINT COMPANY, Houston, Tex.
Filed January 27, 1913. Serial No. 68,158. PUBLISHED AUGUST 25, 1914.

100,913. UNWROUGHT AND PARTLY-WROUGHT METALS USED IN MANUFACTURE. TURTON BROS. & MATTHEWS, LTD., Sheffield, England.
Filed June 6, 1914. Serial No. 78,891. PUBLISHED AUGUST 18, 1914.

100,914. STEEL AND IRON. TURTON BROS. & MATTHEWS, LTD., Sheffield, England.
Filed June 6, 1914. Serial No. 78,892. PUBLISHED AUGUST 18, 1914.

100,915. STEEL AND IRON BARS, SHEETS, PLATES, HOOPS, AND WIRE, UNWROUGHT AND PARTLY WROUGHT. TURTON BROS. & MATTHEWS, LTD., Sheffield, England.
Filed June 6, 1914. Serial No. 78,893. PUBLISHED AUGUST 18, 1914.

100,916. LUBRICATING-OILS. E. A. TYGERT CO., INC., Camden, N. J., and Philadelphia, Pa.
Filed July 27, 1914. Serial No. 80,111. PUBLISHED AUGUST 25, 1914.

100,917. BOOKS OF PLANS FOR HOUSES AND BUNGALOWS. UNITED HOME BUILDERS COMPANY, Salt Lake City, Utah.
Filed April 17, 1914. Serial No. 77,551. PUBLISHED AUGUST 18, 1914.

100,918. FROZEN CONFECTION MADE OF SWEET CREAM AND MARSHMALLOW. F. K. UNDERWOOD, Oskaloosa, Iowa.
Filed March 25, 1914. Serial No. 76,950. PUBLISHED AUGUST 18, 1914.

100,919. ENAMELS, UNDERCOATINGS, AND DRY AND READY-MIXED PAINTS. VALENTINE & COMPANY, New York, N. Y.
Filed June 15, 1914. Serial No. 79,129. PUBLISHED AUGUST 18, 1914.

100,920. AUTOMATIC SWITCHES TO BE USED IN CONNECTION WITH AN X-RAY APPARATUS. VICTOR ELECTRIC COMPANY, Chicago, Ill.
Filed June 29, 1914. Serial No. 79,439. PUBLISHED AUGUST 18, 1914.

100,921. WRENCHES. WALDEN MANUFACTURING COMPANY, Worcester, Mass.
Filed July 15, 1914. Serial No. 79,833. PUBLISHED AUGUST 18, 1914.

100,922. MEDICINAL COMPOUNDS OF SELENIUM. CHARLES H. WALKER, New York, N. Y.
Filed July 29, 1914. Serial No. 80,167. PUBLISHED AUGUST 25, 1914.

100,923. LEATHER AND SKINS. WILLIAM WALKER & SONS LIMITED, Bolton, England.
Filed March 21, 1914. Serial No. 76,887. PUBLISHED AUGUST 18, 1914.

100,924. LEATHER AND SKINS. WILLIAM WALKER & SONS LIMITED, Bolton, England.
Filed March 21, 1914. Serial No. 76,888. PUBLISHED AUGUST 18, 1914.

100,925. FOOD DRINK. DR. A. WANDER A.-G., Berne, Switzerland.
Filed March 12, 1913. Serial No. 68,982. PUBLISHED DECEMBER 23, 1913.

100,926. POWDERED PREPARATION MADE FROM FRUITS AND FLOWERS TO BE USED AS A FOOD-FLAVORING. G. WASHINGTON COFFEE REFINING COMPANY, New York, N. Y.
Filed July 18, 1914. Serial No. 79,923. PUBLISHED AUGUST 25, 1914.

100,927. LANTERN-SLIDES AND APPARATUS FOR DISPLAY BY OPTICAL PROJECTION. WATSON BROTHERS, Boston, Mass., assignors to Micagraphic Slide Company, Boston, Mass., a Corporation of Massachusetts.
Filed June 24, 1914. Serial No. 79,345. PUBLISHED AUGUST 18, 1914.

100,928. CERTAIN COMPOUND FOR REMOVING SCALE, RUST, AND OIL FROM IRON AND STEEL PRODUCTS BEFORE FINISHING. R. J. WATTERS CO., Buffalo, N. Y.
Filed July 14, 1914. Serial No. 79,792. PUBLISHED AUGUST 25, 1914.

100,929. READY-MIXED AND LIQUID PAINTS. WAYNE PAINT CO., Waynesboro, Pa.
Filed July 15, 1914. Serial No. 79,834. PUBLISHED AUGUST 25, 1914.

100,930. COFFEE. THE WEIDEMAN COMPANY, Cleveland, Ohio.
Filed July 23, 1914. Serial No. 80,022. PUBLISHED AUGUST 25, 1914.

100,931. FRESH AND GREEN FRUITS. WENATCHEE NORTH CENTRAL FRUIT DISTRIBUTORS, Wenatchee, Wash.
Filed October 13, 1913. Serial No. 73,352. PUBLISHED FEBRUARY 24, 1914.

100,932. DETERGENT COMPOUND FOR CLEANING AND RENOVATING VARNISHED SURFACES. WERNER-SERVICE MFG. CO., Jersey City, N. J.
Filed March 15, 1913. Serial No. 69,069. PUBLISHED AUGUST 18, 1914.

100,933. REFINED PETROLEUM FOR ILLUMINATING, HEATING, AND POWER PURPOSES. WEST INDIA OIL COMPANY, Bayonne, N. J.
Filed July 25, 1914. Serial No. 80,077. PUBLISHED AUGUST 25, 1914.

100,934. BLEACHED AND UNBLEACHED SHEETINGS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed July 15, 1914. Serial No. 79,830. PUBLISHED AUGUST 25, 1914.

100,935. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed July 15, 1914. Serial No. 79,831. PUBLISHED AUGUST 25, 1914.

100,936. LUBRICATING OILS AND GREASES. THE WHITE & BAGLEY CO., Worcester, Mass.
Filed February 12, 1914. Serial No. 75,880. PUBLISHED AUGUST 25, 1914.

100,937. FOLDING RULES. WIEBUSCH & HILGER, LIMITED, New York, N. Y.
Filed June 29, 1914. Serial No. 79,440. PUBLISHED AUGUST 18, 1914.

100,938. STEEL LETTERS AND FIGURES FOR STAMPING. WIEBUSCH & HILGER, LIMITED, New York, N. Y.
Filed June 29, 1914. Serial No. 79,441. PUBLISHED AUGUST 18, 1914.

100,939. SCREENING DEVICES AND SEPARATORS. THE WILLIAMS & DALY COMPANY, Boston, Mass.
Filed July 9, 1914. Serial No. 79,688. PUBLISHED AUGUST 18, 1914.

100,940. FIRST QUALITY OF FRESH DECIDUOUS FRUITS, APPLES, PEARS, PEACHES, AND PRUNES. YAKIMA COUNTY HORTICULTURAL UNION, North Yakima, Wash.
Filed February 26, 1914. Serial No. 76,203. PUBLISHED MAY 5, 1914.

100,941. AUTOMATIC BOLT-OPERATING MACHINES, PULLEY-BLOCKS, AND HOISTS. THE YALE & TOWNE MANUFACTURING CO., Stamford, Conn., and New York, N. Y.
Filed October 8, 1913. Serial No. 73,285. PUBLISHED AUGUST 18, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Eighth Circuit.

CENTURY ELECTRIC CO. *v.* WESTINGHOUSE ELECTRIC & MFG. CO.

Decided November 3, 1911.

191 FED REP., 350.

[Syllabus by the court.]

1. PATENTS—ANTICIPATION—APPLICATIONS PENDING TOGETHER.

Where each of several applications which subsequently ripen into patents to the same inventor describes the same machine and process and the inventions claimed in all the applications, but no one of the applications claims any invention claimed in any of the others, and they are all pending at the same time, the respective dates of the applications and of the patents and the respective dates when the applications were filed are immaterial, and the applications and patents cannot be used to anticipate or avoid each other.

2. SAME — SAME — PRIOR PATENTS — IDENTITY OF INVENTION.

While an earlier patent avoids a later patent to the same patentee for the invention claimed and secured by the former, it does not invalidate a later patent to him for a distinct different invention not claimed and secured by the earlier patent, whether that invention is general or specific, as of a process or of a machine or of both, and whether it is of an original machine or process or of an improvement thereon.

3. SAME—INVENTION—NUMBER OF PATENTS PROCURABLE.

One who makes several patentable inventions that produce a new and useful process or machine, or both, pertaining to the same subject-matter, has the option to take one patent therefor or as many separate patents therefor as he makes patentable inventions.

4. SAME — CONSTRUCTION — NATURE OF PATENT — "CONTRACT."

A patent is a contract, and it must be interpreted by the same rules of construction as other contracts.

5. SAME — SAME — SPECIFICATIONS AND CLAIMS — CONSTRUCTION AS A WHOLE.

The intention of the parties should be deduced from the entire contract, not from any part of it or without any part of it. The specification which is a part of the same application and specification as are the claims must be read and interpreted with them, not for the purpose of contracting or of expanding the latter, but to ascertain from the entire agreement the actual intention of the parties, and that intention, when ascertained, should prevail.

6. SAME—INVENTION—PROCESS AND APPARATUS.

Separate patents for a new and useful process and for a new and useful apparatus to practise it may be sustained, although no other apparatus to practise it is known.

7. SAME—ANTICIPATION—PARTICULAR PATENTS.

Patent No. 555,190, to Tesla, for a combination or apparatus to practise the process secured to Tesla by Patent No. 511,915, is not anticipated or avoided by the latter. Patents Nos. 555,190 and 511,915 are not for the same invention as Patent No. 445,207, to Tesla, and neither of them is anticipated or avoided thereby.

8. SAME — INFRINGEMENT—PRESUMPTIONS—DECISION OF PATENT OFFICE.

It is a general rule that there is a legal presumption that a process or apparatus of a later patent does not infringe upon that of an earlier patent relating to the same subject. It is a general rule that a process or apparatus of a later patent does not infringe the process or apparatus of an earlier patent where the Commissioner has decided there was no interference between them. There is an exception to this rule to the effect that where a patentee has made a primary invention of a new or useful process or apparatus which accomplishes a result never before produced by such a process or machine the presumption that a process or apparatus of a later patent on the same subject is for a subordinate improvement or modification of the primary invention and hence subject to an infringement of the patent which secures it, is at least as strong as the presumption of the general rules, because there are many more patents for subordinate improvements and modifications of primary inventions than there are for such inventions, and hence more probability that a given process or apparatus is of the former than that it is of the latter class.

9. SAME—SAME—DEFENSES.

It is no defense to a charge of infringement of a process, an apparatus, or a combination clearly described and claimed in the patent that it or some part of it was misnamed therein by the patentee or that the infringer has called it by a different name. Patents protect processes, apparatus, and combinations, whatever their names.

10. SAME—SAME—PARTICULAR PATENTS.

Claim 1 of Patent No. 511,559, claim 1 of Patent No. 511,915, and claims 1, 2, and 6 of Patent No. 555,190, to Nikola Tesla, regarding electrical transmission of power, are valid, and the defendant's device, which it claims follows the combinations secured by Patent No. 399,801, to Thomson and Wightman, and Patent No. 428,650, to Thomson, is an infringement thereof.

APPEAL from the Circu't Court of the United States for the Eastern District of Missouri.

In Equity. Bill by the Westinghouse Electric & Manufacturing Company, against the Century Electric Company. From a decree for complainant, defendant appeals. Affirmed.

Mr. Thomas F. Sheridan (*Mr. Roy M. Eilers* on the brief) for the appellant.

Mr. Parker W. Page and *Mr. Thomas B. Kerr* (*Mr. Paul Bakewell* on the brief) for the appellee.

Before SANBORN and VAN DEVANTER, Circuit Judges, and REED, District Judge.

SANBORN, *Cir. J.*:

This is an appeal from a decree for an injunction against the infringement by the Century Electric

Company, a corporation, the defendant below, of claim 1 of Letters Patent No. 511,559 to Nikola Tesla, issued December 26, 1893, on an application filed December 8, 1888, claim 1 of Letters Patent No. 511,915 to Nikola Tesla issued January 2, 1894, on an application filed December 3, 1888, on a division of an application filed May 15, 1888, and claims 1, 2, and 6 of Letters Patent No. 555,190 to Nikola Tesla issued February 25, 1896, on an application filed May 15, 1888. The contentions on which counsel for the defendant below rely for a reversal of this decree are (1) that Patents Nos. 511,915 and 555,190 are void because they secure the same inventions as Patent No. 445,207, issued to Nikola Tesla January 27, 1891, on an application filed May 20, 1889, (2) that Patent No. 555,190 is void because it is for the same invention as Patent No. 511,915, and (3) that the defendant did not infringe any of the claims specified in the decree.

(1, 7) 1. Where each of several applications which subsequently ripen into patents to the same inventor describes the same machine and process and the inventions claimed in all the applications, but no one of the applications claims any invention claimed in any of the others and they are all pending at the same time, the respective dates of the applications and of the patents and the respective dates when the applications were filed are immaterial, and the applications and patents cannot be used to anticipate or avoid each other. (*Ide* v. *Trorlicht, Duncker & Renard Carpet Co.*, 115 Fed., 137, 145; 53 C. C. A., 341, 349; Walk. on Pats., sec. 180; *Suffolk Mfg. Co.* v. *Hayden*, 3 Wall., 315, 318; 18 L. Ed., 76; *Westinghouse Elec. & Mfg. Co.* v. *Dayton Fan & Motor Co.*, C. C., 106 Fed., 724, 726; *Graham* v. *McCormick*, C. C., 11 Fed., 859; *Graham* v. *Manufacturing Co.*, C. C., 11 Fed., 138, 141.) The applications for Patents Nos. 511,915 and 555,190 were filed more than a year before the application for Patent No. 445,207 was filed. They were pending during all the time that application was pending, but on account of delays from interference did not ripen into patents until long after the patent upon that application had issued. This fact, however, in no way countervails the validity of these patents unless Tesla in his application for Patent No. 445,207 claimed the same invention which he claimed in his applications for Patents Nos. 511,915 and 555,190.

An inventor, it is true, may not sustain a subsequent patent for an invention actually claimed and secured in a former patent. (*Miller* v. *Eagle Co.*, 151 U. S., 186, 197; 14 Sup. Ct., 310; 38 L. Ed., 121; *Mosler Safe Co.* v. *Mosler*, 127 U. S., 355, 361, 362; 8 Sup. Ct., 1148; 32 L. Ed., 182; *Otis Elevator Co.* v. *Portland Co.*, 127 Fed., 557, 561, 562; 62 C. C. A., 339, 343, 344; *Western Electric Co.* v. *Williams-Abbott Elec. Co.*, 108 Fed., 952, 955; 48 C. C. A., 159, 162; *Thomson-Houston Elec. Co.* v. *Hoosick Ry. Co.*, 82 Fed., 461, 467, 468; 27 C. C. A., 419, 425, 426.) Nor may he sustain a subsequent patent for an essential element of an invention secured by a former patent without which that invention would not have been patentable. (*Palmer Pneumatic Tire Co.* v. *Lozier*, 90 Fed., 732, 740, 742, 744, 745; 33 C. C. A., 255, 263, 265, 267; *Industrial Mfg. Co.* v. *Wilcox & Gibbs Sewing Machine Co.*, 112 Fed., 535, 537; 50 C. C. A., 387, 389.)

(3) But one who makes several patentable inventions that result in a new and useful machine or process, or both, may have as many separate valid patents as he makes patentable inventions. His is the option to secure all these inventions by a single patent, or by many patents, and the fact that he describes all of them in his application or specification for an earlier patent to secure one or more of them, does not invalidate a subsequent patent to him for those inventions there described but not claimed. (Rob. on Pats., sec 465; *Expanded Metal Co.* v. *Bradford*, 214 U. S., 366, 383, 385; 29 Sup. Ct., 652; 53 L. Ed., 1034; *Badische Anilin & Soda Fabrik* v. *A. Klipstein & Co.*, C. C., 125 Fed., 543, 544; *Westinghouse Elec. Co.* v. *Dayton Fan & Motor Co.*, C. C., 106 Fed., 724, 726; *Westinghouse Elec. & Mfg. Co.* v. *Electric Appliance Co.*, C. C., 142 Fed., 545, 551.)

(2) And a patent for an invention does not avoid a later patent for an improvement thereon nor does a patent for an improvement avoid a later patent for the invention on which the improvement is made. (*Thomson-Houston Elec. Co.* v. *Ohio Brass Co.*, 80 Fed., 712, 724, 725, 726; 26 C. C. A., 107, 119, 120, 121.) The sum of the whole matter is that while an earlier patent avoids a later patent to the same patentee for the invention claimed and secured by the former it does not invalidate a later patent to him for a distinct, different and separable invention whether generic or specific, whether an original machine or process, or both, or an improvement thereon which is not actually claimed or secured by the earlier patent. (*Thomson-Houston Elec. Co.* v. *Elmira & H. Ry. Co.*, 71 Fed., 396, 405; 18 C. C. A., 145, 154; *Electrical Accumulator Co.* v. *Brush Electric Co.*, 52 Fed., 130, 138, 139; 2 C. C. A., 682, 690, 691.)

The first question in this case therefore is, did Tesla in his application for Patent No. 445,207, which was filed after his applications for Patents Nos. 511,915 and 555,190 were filed, and which ripened into a patent while they were pending, claim the same invention which he claimed in those applications and secured by the patents thereon? Claim 1 of Patent No. 511,915 reads:

> The method of operating electro-magnetic motors having independent energizing circuits, as herein described, which consists in passing an alternating current through one of the energizing circuits and inducing by such current the current in the other energizing circuit of the motor, as set forth.

Claims 1, 2, and 6 of Patent No. 555,190 read in this way:

> 1. In an electro-magnetic motor, the combination of independent energizing circuits, one adapted to be connected with a source of alternating current, the other arranged in inductive relation to the said first circuit whereby the motor will be operated by the resultant action of the two circuits, as set forth.
>
> 2. The combination in an electro-magnetic motor, with an alternating coil or conductor and a closed-circuit conductor in inductive relation thereto, of an armature mounted so as to be within the field produced by the coil and closed conductor, as set forth.
>
> 6. In an electro-magnetic motor the combination of independent energizing-circuits, one for connection with a source of alternating currents, the other in inductive relation to the first, whereby a rotary movement or projection of the field-poles will be produced by the conjoint action of the two and an armature mounted within the influence of the field produced by the energizing circuits and containing closed coils or circuits, as set forth.

Claims 1, 2, and 3 of Patent No. 445,207 read thus:

> 1. The combination, in a motor, of a primary energizing-circuit adapted to be connected with the circuit of a generator and a secondary energizing-circuit in inductive relation thereto, the two circuits being of different electrical character or resistance, as set forth.
>
> 2. The combination, in a motor, of a primary energizing-circuit adapted to be connected with the circuit of a generator and a secondary energizing-circuit in inductive relation thereto, the two circuits being of different self-induction, as herein set forth.
>
> 3. The combination, in a motor, of primary energizing-coils adapted to be connected to a source of current and secondary energizing-coils in a circuit in inductive relation thereto, one set of said coils being formed by conductors of small size and few turns, the other by conductors of larger size, as set forth.

(4) A patent is a contract made by the acceptance by the Government of the offer which the patentee by his application makes to disclose his invention, in consideration that the United States will secure to him the exclusive use and sale of it for seventeen years. The offer embodied in the application becomes the specification of his patent, if his offer is accepted, and with his claims evidences the terms of the agreement. Such an agreement is interpreted by the same rules that determine the construction of other contracts. The court should, as far as possible, place itself in the situation of the parties when they made their agreement and then seek to ascertain from the terms of their contract, in the light of the circumstances then surrounding them, what their intention was.

(5) This intention should be deduced from the entire contract and not from any part of it or without any part of it, because they did not agree to it, or to any part of it, without every other part of it. The specification which forms a part of the same application as the claims must be read and interpreted with them, not for the purpose of limiting, or of contracting, or of expanding, the latter, but for the purpose of ascertaining from the entire agreement, of which each is a part, the actual intention of the parties and that intention when ascertained should prevail over the dry words and inapt expressions of the contract evidenced by the patent, its specification and claims. (*Seymour* v. *Osborne*, 11 Wall., 516, 547; 20 L. Ed., 33; *National Hollow Brake-Beam Co.* v. *Interchangeable Brake-Beam Co.*, 106 Fed., 693, 701; 45 C. C. A., 544, 552; *O. H. Jewell Filter Co.* v. *Jackson*, 140 Fed., 340, 344; 72 C. C. A., 304, 308; *Louden Machinery Co.* v. *Jamesville Hay Tool Co.*, 148 Fed., 686, 690; 78 C. C. A., 548, 552; *Electric Machine Co.* v. *Morris*, C. C., 156 Fed., 972, 974; *Lewis Blind Stitch Machine Co.* v. *Premium Mfg. Co.*, 163 Fed., 950, 955; 90 C. C. A., 310, 315; *Fullerton Walnut Growers' Ass'n* v. *Anderson-Barngrover Mfg. Co.*, 166 Fed., 443, 461; 92 C. C. A., 295.) Let us apply these rules to the interpretation of the applications for these patents. When, on May 15, 1888, the applications for Patents Nos. 511,915 and 555,190 were filed, Tesla had discovered and secured by earlier patents a system and apparatus for the transmission of electrical power by the use of alternating currents of electricity. Familiar with the fact that an alternating current flowing in one direction gradually waxes in strength from zero to its maximum, then wanes to zero, waxes to its maximum in the opposite direction, wanes to zero and repeats this course of action, and that the rapidity of these changes is such that when such a current is transmitted to a motor its effect is to give the armature alternate impulses, first in one direction and then in another, in such rapid succession that it will not start, he had discovered and secured by patents a system and means of starting such motors by transmitting to them through two or more independent energizing-circuits from a generator having corresponding current-generating, or induced circuits, alternating currents which differed in phase, that is to say, in the times when they reached their respective maxima strengths in either direction, for example, two currents, one of which would reach its maximum in one direction when the other lagged ninety degrees, was at zero and just commencing to flow in the same direction while the former was commencing to wane. It was, however, indispensable to the operation of this system, that there should be provided for each alternating current a separate current-generating or induced circuit developing a current differing in phase from every other current generated thereby and that each of these currents should be carried to the motor over separate conductors. These separate generating or induced circuits and conductors were expensive and the object of the inventions described and claimed in Patents Nos. 511,915 and 555,190 was to provide a method and apparatus for starting and rotating the armature of a motor by the use of a single alternating current conducted from the generator to the motor over a single circuit from a single original source. In his applications for these patents Tesla recited that in former patents granted to him, notably in Patents Nos. 381,968 and 382,280, he had shown and described the system of transmitting power by means of alternating currents which has been mentioned, that his new inventions pertained to this system and that their novel feature was a process and mechanical means of practising the process of generating in two motor-circuits the alternating currents necessary to operate the motor by directly generating an alternating current in but one of those circuits and inducing the necessary current differing in phase in the other. He called attention to the fact that when two independent currents were produced in the magneto-machine a corresponding number of line or transmitting circuits would of necessity extend the entire distance from the generator to the motor, but that by the use of his new process and apparatus all line or transmitting circuits but one could be dispensed with because that circuit could be brought into inductive relation with the other in the motor itself. He then described a means of securing this result in these words:

> I employ as a motor, for example, a subdivided annular field magnet within which is mounted a suitable armature, as a cylinder or disk, wound with two coils at right angles, each of which forms a closed circuit. On the opposite sides of the annular field magnet I wind two coils of insulated wire of a size adapted to carry the current

from the generator. Over these coils or close to them, in any of the well-understood ways, I wind secondary coils. I also wind on the annular field magnet midway between the first-mentioned coils a pair of coils which I connect up in circuit with the secondary coils. The last pair of coils I make of finer wire than the main or line and secondary coils and with a greater number of convolutions, that they may have a greater relative magnetizing effect than either of the others. By connecting up the main coils in circuit with a generator of alternating currents, the armature of the motor will be rotated. I have assumed that this action is explained by the following theory: A current impulse on the line passing through the main coils establishes the magnetic poles of the annular field magnet at points midway between said coils; but this impulse produces in the secondary coils a current differing in phase from the first which circulating through the second pair of energizing coils tends to establish the poles at ninety degrees removed from their first position, with the result of producing a movement or shifting of the poles in obedience to the combined magnetizing effect of the two sets of coils. This shifting continued by each successive current impulse establishes, what may be termed, a rotary effort and operates to maintain the armature in rotation.

He then describes in detail, by reference to diagrams which form part of each of his applications, his method and means of producing the result he sought, shows how a stronger and better rotary effect may be obtained from a single line circuit by increasing the number of circuits in which currents are induced, declares in his application for Patent No. 555,190 his belief, which has proved to be well founded, that he was the first to produce—

any kind of a motor adapted to be operated by alternating currents and characterized by any arrangement of independent circuits brought into inductive relation so as to produce a rotary effect or effect due to the conjoint action of alternating currents from a source of supply in one of the motor circuits and alternating currents induced by the first-named currents in the other circuit, and this without reference to the specific character or arrangement of the said two circuits in the motor,

gives notice that the application of the principle of his invention there claimed is not limited to the specific forms of motors shown therein, that his invention is not limited to the specific means shown therein for inducing in one energizing-circuit of the motor the currents necessary for coöperating with the primary current of the generator to produce the progressive shifting of the poles or points of maximum effect and then makes his claims for the apparatus he invented, the first of which has been already recited.

In his application for Patent No. 511,915, after describing his former method of driving a motor by transmitting through it alternating currents differing in phase by means of separate transmitting-circuits, his new inventions and the object he sought to attain thereby in substantially the same way and by the use of the same diagrams as in his application for Patent No. 555,190, he declares that the application of the principle of the invention he claims is not limited to the special form of motors he has shown, that his method of producing the currents in the independent energizing-circuits of the motor may be carried out in various ways, and that it is not material to the invention, broadly considered, what devices are employed in effecting the result, viz., the induction from or by the current from the generator or source, of the current or currents which coöperate therewith in producing the rotation of the motor. Then he makes his claims for the process, the first of which is here in suit and has been set forth above. This review of these two applications discloses the fact that they were the applications of a pioneer in the art who had discovered a new process and a new apparatus for rotating a motor by the use of a primary alternating current conducted from the generator or source to the motor over a single line-circuit and by the induction in the motor from or by that current of the necessary currents differing from it in phase to cause the rotation, for two patents, one for his process and one for the mechanical device by which he attained the object he sought.

These two applications took effect from May 15, 1888, for they sprung by division from an original application filed on that day. By them Tesla had offered the novel process and apparatus which has been described and had applied for patents for them and the United States was considering whether or not it would accept these offers when, on May 20, 1889, Tesla filed his application for Patent No. 445,207. He opens that application with the statement that he has invented and described in other applications the apparatus which is described in the applications for Patents Nos. 511,915 and 555,190 whereby a motor may be operated by an alternating current conducted from its source to the motor over a single line-circuit and by an alternating current or currents induced in the motor by or from the primary current. He follows this statement with the declaration that the object of his present invention is to render this form of motor more efficient and to improve its action or mode of operation, and closes the part of it which precedes the claims, with these words:

I do not claim broadly herein the method of operating motors by inducing in one circuit currents by means of those in another, nor the other features herein not specifically pointed out in the claims, having personally filed applications for such features.

In the body of the specification he states that the operation of these motors is dependent upon a certain difference in phase between the primary and secondary currents, and that the specific object of the improvement he describes is to obtain a difference of phase or lag that is suited to working conditions. After an explanation of the principle of his improvement that it is unnecessary to quote here, he writes:

To secure a proper difference in phase between the primary and secondary currents themselves, I increase the resistance of the circuit of the secondary and reduce as much as possible its self-induction. I do this by using for the secondary circuit, particularly in the coils E, wire of comparatively small diameter and having but few turns around the core; or I use some conductor of higher specific resistance, such as German silver, or I may introduce at some points in the secondary circuit an artificial resistance T. Thus the self-induction of the secondary is kept down and its resistance increased with the result of decreasing the lag between the electro-motive force and the current in the primary coils and increasing the difference of phase between the primary and secondary circuits.

Another method of increasing this difference of phase, which he suggests, is the introduction in the circuit that includes the secondary coils, of a self-induction coil and the insertion of a dead resistance in the primary circuit from the generator. In the course of his statement in detail of the devices he had discovered to increase this difference in phase and of the operation of those devices, he described the apparatus and the process he had previously described and claimed in his applications for Patents Nos. 511,915 and 555,190, but he distinctly stated that the subject of this, his later application, was

the improvement of that process and apparatus and the only improvements he set forth were the phase-regulating devices that have been described.

A primary alternating current produced by a generator and a secondary alternating current induced from or by the former ordinarily differ in phase. The difference that is most effective in the production of rotary motion in the armature of a motor is a difference of ninety degrees. The two currents do not always differ to that extent, and the evident purpose of the inventions Tesla described in his application for Patent No. 445,207 was to improve the process and the means for operating a motor by the conjoint use of the primary alternating current and the alternating current induced thereby in the motor by so regulating the difference in their phases that it should be as near as possible to ninety degrees and hence as efficient as possible. Counsel, however, contend that the application for No. 445,207 describes the process and the apparatus described and claimed in Nos. 511,915 and 555,190 and that its claims were broad enough to cover them, and upon these contentions they base their argument that Patent No. 445,207 secured them and rendered the later patents void. Conceding their premises, the conclusion they deduce does not follow. Their argument fails to give due weight to the rules that an inventor has the option to take a single patent or separate patents to his separate inventions, that he may sustain a patent to an original or primary invention and another patent to an improvement thereof, that he may describe in an application an invention which he does not claim therein without waiving his right to claim and secure a subsequent patent for it, that patents are contracts and their interpretation is governed by the rules for the construction of agreements, and that the dominant rule for such construction is to ascertain from the entire patents, not from the specifications or claims alone, the intention of the parties when they were made and to give that intention effect. When Tesla filed his application for Patent No. 445,207, his applications for his patents for his process and his apparatus for operating a motor by a primary alternating current from a generator and a secondary alternating current induced from or by the primary current, had been on file for more than a year. These are the main inventions for our consideration. Tesla declared in his later application for No. 445,207 that it was to secure a patent for improvements on these inventions. The only improvements that application disclosed were the specific devices for regulating the difference in phase of the primary and secondary currents in order to make that difference more nearly ninety degrees. Those devices were not essential to the inventions of the process and the mechanical device for operating motors by induced alternating currents, and they were not claimed in the applications for the patents for those inventions. In the later application Tesla expressly disclaimed seeking thereby to secure that process and apparatus and stated his reason to be that he had previously filed applications for them. Conceding that the claims of Patent No. 445,207 issued on that application were broad enough if they stood alone to cover the main inventions, they did not stand alone, but were conditioned by the specification which accompanied them. They were for combinations and in the light of that specification the new phase regulating devices specified therein constituted an essential element of each of the combinations there claimed, and did not constitute an indispensable element of the process or of the apparatus described and claimed in the earlier applications. Those new devices were improvements on the main inventions, and Patent No. 445,207 was for these improvements in combination with the main inventions, while the earlier applications were for the inventions without these improvements. And the conclusion is irresistible that the parties to these patents never intended that Patent No. 445,207 should secure, and that it never did secure, the same invention as either Patent No. 511,915 or No. 555,190, and that it did not render the latter patents void. (*Westinghouse Electric Co.* v. *Dayton Fan & Motor Co.*, C. C., 106 Fed., 724, 726; *Tesla Electric Co.* v. *Scott*, C. C., 97 Fed., 588, 598.)

(6) 2. The second contention of counsel for the defendant is that Patents No. 511,915 for the process and No. 555,190 for the apparatus are for the same invention and therefore the latter is void. The rules and principles which have already been stated and applied in the consideration of the validity of these patents in the face of No. 445,207 condition the decision of the question which this contention presents. The claims for these two patents were first made in a single application filed May 15, 1888. At that time there was a clause in Rule 41 of the Rules and Practice of the Commissioner of Patents that—

claims for a machine and the process, in performance of which the machine is used, must be presented in separate applications,

a clause which was held to be unauthorized and void in 1904 in *Steinmetz* v. *Allen*, (192 U. S., 543, 563; 24 Sup. Ct., 416; 48 L. Ed., 555.) Under that clause the Commissioner required Tesla to divide his application, to present his claims for his process and his claims for his apparatus in separate applications. He complied with this requirement and these patents issued on the separate applications. There can be no doubt, therefore, that at the time the contracts, evidenced by those patents, were made the parties to them believed that they were for distinct and separate inventions and intended that patents for them as such should issue. But counsel argue that notwithstanding this fact the patented process cannot be used without the patented apparatus, nor the patented apparatus without the patented process, and from this fact they deduce the conclusion that they are for the same invention. The deduction does not seem to be warranted. Section 4886, Revised Statutes, (U. S. Comp. St., 1901, p. 3382,) declares that any person who—

has invented or discovered any new or useful art, machine, manufacture or composition of matter—

may have a patent therefor. If one discovers an art or process, and invents a machine to practise it,

does he deprive himself of his right to a patent for his process by securing a patent for his machine? The statute answers this question in the negative. It provides that any person who has invented a new and useful machine may obtain a patent for it and it does not except one who has also patented a process in the practice of which his machine will be useful. As Congress made no such exception, the courts may not do so. (*Armour Packing Co.* v. *United States*, 82 C. C. A., 135, 152, 155; 153 Fed., 1, 18, 21; 14 L. R. A., N. S., 400.)

Moreover, it is as probable that an apparatus will be invented which is not the mechanical equivalent of that patented, by means of which the patented process may be practised as it was before the event that the patented process would be discovered and the patented machine invented. And the patentee is entitled to the protection of his process against its use by such a subsequently-invented machine, and also to protection of his apparatus against its infringement by its mechanical equivalents. Hence the patents for the process and for the machine by which it may be practised are not for the same invention and neither was rendered void by the other.

(10) 3. Does the process or apparatus of the defendant infringe the claims in suit? Tesla discovered and claimed a process and invented and claimed an apparatus by means of which a motor could be started and rotated by the conjoint use of a single-phase alternating current conducted from the generator or source to the motor over a single-line circuit and of an alternating current induced in a closed circuit of the motor by the primary current and differing from it in phase. He called both these currents independent energizing-currents, and the circuits in which they were produced independent energizing circuits, but the specifications clearly showed, and the fact was, that the induced current was caused by the primary current, and the circuit in which it was produced was induced to produce it by the current in the primary circuit, so that, considered in their causative relation to each other, these circuits were not independent, but the secondary current and circuit were dependent upon the primary current and circuit. Considered in their relations between themselves exclusively, the primary circuit and current alone were energizing, and the secondary current and circuit were energized therefrom or thereby, but when considered in their relation to the motor they were both energizing circuits and currents, because the secondary circuit and its current differing in phase from the primary current and circuit were as indispensable as the latter to the starting and rotation of the motor. They were independent only in the sense that they differed in phase and that this essential difference of phase inhered in and was preserved by them. They were energizing only in the sense that each was essential to start and drive the motor, and not in the sense that the secondary was not energized by or from the primary. And these facts appeared clearly and without doubt upon the face of the applications for the patents and the specifications thereof.

In his specifications for Patents Nos. 511,915 and 555,190, and in the diagrams which formed a part of them, Tesla described two forms of motors, one in which an armature is mounted within the annular field-magnet upon which the requisite coils of wire are properly wound, as heretofore described, and one in which the internal face of the annular field-magnet is provided with three pairs of polar projections, upon the first set of which the main energizing-coils, and over them induced coils, are wound, upon the second set of which the second energizing-coils, which are connected in circuit with the first induced coils, and over them the second induced coils, are wound and upon the third set of which the tertiary energizing-coils in circuit with the second induced coils are wound. He shows within this annular field-magnet a cylindrical-disk armature-core with three sets of projections on its periphery wound with coils forming closed circuits. He explains in his specifications that the alternating current conducted from its source to the first set of energizing-coils will magnetize the first pair of pole-pieces on the field-magnet, will induce an energizing-current in the second set of energizing-coils, and that this second set will induce an energizing-current in the third set of energizing-coils, but that these three currents will differ in phase, will cause the progressive shifting of the poles or points of maximum effect, will start and rotate the armature, and that his invention is not limited to this or any form of motor nor to the specific means he shows for inducing in any energizing-circuit of a motor the currents necessary to coöperate with the primary current to produce the starting and rotation of the armature. Bearing these facts in mind let us turn to the motor of the defendant. It is a ceiling-fan motor consisting of an internal stationary field and an external revolving armature to which fan-blades may be attached. It is operated by a one-line circuit which conducts an alternating current from the generator or source of electric energy to the field-maguet which is a ring of laminated iron slotted in its outer periphery parallel to the axis of the motor so as to form seventy-eight similar, equally-spaced radiating teeth on the outer periphery of the stationary field. The winding which forms a part of the primary energizing-circuit through which the alternating current is sent from the electric source to the field-magnet is carried around every third tooth thereof and is connected with another winding which has a greater number of turns in wave form, partially concentric to it, which spans three teeth instead of one. These two sets of coils constitute the main or primary winding which when energized by an alternating current from a generator or other suitable source produces twenty-six magnetic poles on the outer periphery of the field. Just outside of this main winding, but in inductive relation to it, are two separate windings in wave form around alternate sets of three teeth throughout the entire periphery of the field, but this winding is displaced circumferentially from the second part of the main winding by one slot. Each of these two secondary windings is short-

circuited upon itself and they act together electrically and magnetically as a single circuit and constitute the induced or secondary circuit in the defendant's motor. The magnetic circuit of the armature is formed by a ring of soft iron surrounding the field-magnet. The internal face of this ring is slotted in the general direction of the axis of the motor, but at a slight angle with respect to the plane of this axis and in each of these slots, which are seventy-eight in number, is inserted a copper bar which extends outward from either side of the iron ring a short distance, so that these bars may be electrically connected together at each side of the ring. These bars form the electric conductors for the armature-circuit and with their interconnections the winding of the armature which is directly within the influence of the magnetic poles of the stationary field separated from the latter by a slight air-gap only. An alternating current from the generator or electric source sent through the circuit in which the main winding is situated starts and rotates the armature.

All agree that this rotation of the armature is caused by the difference in phase between the primary and secondary currents, but the defendant insists that this difference is produced by retarding a portion of the primary current, and not by the energizing force of the induced current, and hence that the defendant does not infringe the process or the apparatus of Tesla. On the other hand the complainant contends, and the court below found, that this difference in phase is caused by the direct effect of the induced current in the secondary winding and that the defendant infringes its patented process and machine. The testimony of the witnesses upon this issue is conflicting and under a familiar rule the finding of the chancellor must prevail unless the defendant has succeeded in showing from the record that he has made a mistake in his deduction of this fact from the evidence. (*Kimberly* v. *Arms*, 129 U. S., 512, 9 Sup. Ct., 355; 32 L. Ed., 764; *Tilghman* v. *Proctor*, 125 U. S., 136; 8 Sup. Ct., 894; 31 L. Ed., 664; *Furrer* v. *Ferris*, 145 U. S., 132, 134; 12 Sup. Ct., 821; 36 L. Ed., 649; *Coder* v. *Arts*, 82 C. C. A., 91, 94; 152 Fed., 943, 946; 15 L. R. A., N. S., 372; *State of Iowa* v. *Carr*, 191 Fed., 257; 111 C. C. A., —.)

Counsel for the defendant contend that such a mistake is shown because, as they claim, the defendant's apparatus is constructed in accordance with the specifications of Patent No. 399,801 issued to Thomson and Wightman on March 19, 1889, upon an application filed August 8, 1888, and of Patent No. 428,650, issued to Elihu Thomson on May 27, 1890, on an application filed August 8, 1888, and because there is a legal presumption that the device or process of a later patent does not infringe that of an earlier one; (2) because after an interference had been declared between Patent No. 399,801 to Thomson and Wightman and Patent No. 555,190 to Tesla, the application for which was filed more than three months earlier than that for No. 399,801, the Commissioner of Patents decided that they did not interfere, and, as counsel claim, this decision raises the legal presumption that the defendant's device does not infringe the complainant's patents; and (3) because independent energizing-circuits are not produced in the operation of defendant's device, and its motor is not the mechanical equivalent of that described and claimed by Tesla.

(8) The presumptions which counsel invoke are not conclusive, nor are they more persuasive than that which supports the finding of the court below. (*Brammer* v. *Schroeder*, 106 Fed., 918, 928; 46 C. C. A., 41, 51; *Anderson* v. *Collins*, 122 Fed., 451, 455; 58 C. C. A., 609, 673.)

It is, indeed, a general rule that there is a presumption that a process or apparatus of a later patent does not infringe the process or apparatus of an earlier patent relating to the same subject. There is also a general rule that there is a presumption that a process or apparatus of a later patent does not infringe the process or apparatus of an earlier patent between which the Commissioner of Patents has decided that there was no interference. But there is an exception to this rule that where the patentee has made a primary invention of a new and useful process or apparatus which accomplishes a result never before produced by such a process or machine, the presumption that a process or apparatus of a later patent on the same subject is for a subordinate improvement or modification of the primary invention and hence subject to an infringement of the earlier patent which secures it, is at least as strong as the presumptions of the general rules, because there are many more patents for subordinate improvements and modifications of primary inventions than there are for such inventions, and hence more probability that a given process or apparatus is of the former than that it is of the latter class. (*Ries* v. *Barth Mfg. Co.*, 136 Fed., 850, 853; 69 C. C. A., 528, 531; *Boyd* v. *Janesville Hay & Tool Co.*, 158 U. S., 260, 261; 14 Sup. Ct., 837; 39 L. Ed., 973; *Consolidated Valve Co.* v. *Crosby Valve Co.*, 113 U. S., 157, 178, 179; 5 Sup. Ct., 513; 28 L. Ed., 939; *Morley Sewing Machine Co.* v. *Lancaster*, 129 U. S., 263, 273; 9 Sup. Ct., 299; 32 L. Ed., 715; *National Hollow Brake Beam Co.* v. *Interchangeable Brake Beam Co.*, 106 Fed., 693, 710; 45 C. C. A., 544, 561; *Crown Cork & Seal Co.* v. *Aluminum Stopper Co.*, 108 Fed., 845, 861; 48 C. C. A., 72, 88.)

The presumptions to which counsel has challenged our attention, therefore, are not determinative of the issue of infringement in this case, and its decision is conditioned by the entire evidence in the record. That evidence establishes beyond doubt that Tesla was the first to discover the process and to invent an apparatus whereby a motor could be started and rotated by the conjoint use of an alternating current conducted from a generator or other suitable electric source through a single primary circuit and an alternating current induced in a secondary circuit in the motor in inductive relation with the primary circuit. He stated in his specifications for his patents that the difference in phase between the primary current and the induced current was the cause of this result. This difference in

phase is an attribute of the induction. An induced current lags; it is later in phase than the primary current which induces it.

The motor of the defendant differs much from that patented to Wightman and Thomson, but conceding that it is the mechanical equivalent of the latter, did not Wightman and Thomson and the defendant operate their motors by the same process as Tesla and by mechanical means equivalent to those which he described and claimed? Tesla connected his induced coil in a closed circuit with coils on the projections of his field magnet or on the annular magnet itself. The defendant placed its induced coils on the projections of its field-magnet in inductive relation with its primary circuit. Winding the primary and induced coils in wave form alternately about sets of three projections instead of around single projections, as did Tesla, so that the sets in the secondary circuit shall be circumferentially separated by one slot from those in the primary circuit, produces magnetic poles and effects corresponding to the sets instead of to the projections, but it is the mechanical and electrical equivalent of the construction shown by Tesla, for by the same process, by the operation of the same principle and by the use of well-known mechanical substitutes for the devices shown by Tesla it produces the same result, the requisite difference of phase and shifting of the poles. And a rotating armature around a stationary field-magnet is a patent equivalent of a rotating armature within a stationary field-magnet.

Wightman and Thomson wrote in their specification that the object of their invention was—

> to produce from a single alternating current circuit source or coil an alternating magnetic or electric field of inductive action having adjoining portions displaced or differing from one another by a part of a phase of alternation,

an object which Tesla had shown them how to attain by his applications for Patents Nos. 511,915 and 555,190, which he had filed more than three months before they filed their application for their patent. They wrote that their invention consisted of—

> the combination, with an alternating inductor (the primary circuit of Tesla) of a locally applied modifier or retarder (the secondary or induced circuit of Tesla) of the inductive action applied directly or indirectly to a part of the field of inductive action directly or indirectly set up by said inductor, whereby a lagging of the alternations of inductive action produced by such part behind those of an adjoining part will be produced, thus giving the effect of two or more adjoining sets of alternations of induction differing or displaced, more or less, in phase,

that—

> the modifier or retarder * * * may consist of a conductor of any desired shape or form adapted to be the seat of electrically or magnetically induced currents produced by the inductor or a portion of the exciting circuit or field of magnetism thereof,

that—

> the conductor acts to retard or cause a lagging in the development of field or extension of field of the inductor at each alternation;

so does the induced circuit and current of Tesla and every induced current in a like situation; that they attribute this effect to—

> the fact that it becomes the seat of induced currents, which by their self-induction, tend to continue flowing even after the phase of alternation which would be due solely to induction from the inductor current has become opposite or reversed, though they do not wish to be understood as limiting themselves to any particular theory of action,

and the conductor which produces the requisite dephased current is shown by their specification and drawings to be nothing but a coil of insulated wire wound in a closed circuit on or near the field-magnet in inductive relation with the main energizing-circuit which carries an alternating current from the generator or source. Here, then, as in Tesla's process and apparatus, there was in the patented combination of Wightman and Thomson and in the motor of the defendant the conjoint use to start and rotate a motor of an alternating current conducted to the motor from a generator or other suitable electric source through a single primary circuit and of an alternating current induced in a secondary circuit in the motor in inductive relation with the primary circuit. Here, as in Tesla's patented inventions, was the production by induction of the same causal difference of phase between the primary current and the induced current and here, as in Tesla's invention, that difference in phase accomplished the object of the invention, the starting and rotating of the armature of the motor. The principle of Tesla's patented inventions in suit is the use in a motor of alternating currents differing in phase to energize a motor. The principle of the process and apparatus secured to him by the claims in suit is the use to start and drive a motor of an alternating current conducted to it by a primary single-line circuit and an induced current produced by or from the primary circuit in a closed circuit in inductive relation with the primary circuit. Wightman and Thomson and the defendant adopted these principles and their motors operate upon them. They use the process patented to Tesla, the process of operating motors by passing an alternating current through the primary circuit and inducing an alternating current in the secondary circuit in inductive relation with the primary circuit. They use mechanical means equivalent to those described and claimed by Tesla, the combination of two circuits, one the primary adapted to be connected with a source of alternating current, the other the secondary in inductive relation to the first, and by this process and these means they accomplish the same result which Tesla obtained, they start and rotate the motor, and as the defendant used the principles of operation, the process, and, with immaterial mechanical variations, the combination and machine patented to Tesla, he cannot escape the charge of infringement.

(9) The truth is that the difference between the process and apparatus patented to Tesla and the combination patented to Wightman and Thomson and that used by the defendant is a difference of name, not of principle, process, means, or result. Wightman and Thomson and the defendant call the induced circuit a modifier or retarder, while Tesla calls it an independent energizing-circuit. There is, however, no substantial difference in the circuits themselves, in their purpose, their operation, or their effect, except that possibly Thomson and Wightman's may be simpler or less expensive than Tesla's and perhaps patentable as an improvement on his inventions. Tesla's patents, however, rested on the earlier applications and are senior in effect. They secure inventions primary in character and the use by Wightman and Thomson or the defendant of their substantial improvements constitutes no defense to the charge of infringement of Tesla's senior rights. (*Tesla Electric Company* v. *Scott & Janney*, C. C., 97 Fed., 583, 599–602.)

Much time and labor have been expended in the trial and argument of this case upon the question whether or not the induced circuit in the motors of the defendant is an "energizing circuit." In our opinion the weight of the evidence sustains the conclusion of the court below that it is such a circuit within the patent meaning in which that term was used and defined in Tesla's specification which has been stated more at length in an earlier part of this opinion.

Moreover, whatever the true name of this circuit, it is in electrical and legal effect the same circuit produced in the same way, operated on the same principle by substantially the same means and producing the same result as Tesla's induced circuit. It is substantially the same thing electrically and mechanically. And it is no defense to a charge of infringement of a process, a machine or a combination clearly described and claimed in a patent that it, or some part of it, was misnamed therein, or that the infringer has called it by a name different from that applied to it by the patentee. Patents protect new and useful processes, machines and combinations, whatever their names, when they are clearly described and claimed in the specification. And the conclusion is that the defendant infringes the claims in suit because its motor operates upon the same principles, by the use of the same process and of mechanically equivalent means and produces the same result clearly described in the specifications and secured by the claims. The decree below must accordingly be affirmed, and it is so ordered.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Fowler patent, No. 609,800, for a radiator, construed and *Held* valid and infringed as to claims 1 and 2, but void for lack of invention as to claims 3 and 4. *Fowler & Wolfe Mfg. Co.* v. *McCrum-Howell Co.*, 215 Fed. Rep., 905.

(U. S. D. C.) The Stauf patent, No. 666,711, for a process of desiccating blood, milk, and the like. *Held* valid and infringed. *Merrell-Soule Co.* v. *Powdered Milk Co. of America*, 215 Fed. Rep., 922.

(U. S. C. C. A.) The Parsons patent, No. 723,299, claim 6 for non-skid chains for automobiles, *Held* valid and infringed. *Perry* v. *Weed Chain Tire Grip Co.*, 215 Fed. Rep., 921.

(U. S. C. C. A.) The Clapp patents, No. 839,363, for a process of wood-graining, and No. 909,847, for a graining compound, *Held* void for lack of invention. *Ohio Varnish Co.* v. *Glidden Varnish Co.*, 215 Fed. Rep., 902.

(U. S. C. C. A.) The Wallerstein patents, Nos. 995,820 and 995,824, for beer and a process of preparing and treating the same, *Held* valid and infringed. *Wallerstein* v. *S. Liebmann's Sons Brewing Co.*, 215 Fed. Rep., 915.

(U. S. C. C. A.) The Wallerstein patents, Nos. 995,820 and 995,824, for beer and methods of preparing same, *Held* valid and infringed on motion for preliminary injunction. *Wallerstein* v. *Christian Feigenspan*, 215 Fed. Rep., 919.

Adverse Decisions in Interference.

PATENT No. 1,045,251.

On September 28, 1914, a decision was rendered that Theodore F. Bourne was not the first inventor of the subject-matter covered by claims 1 and 10 of his Patent No. 1,045,251, subject, "Carbureters," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1914.

Aram Hamparzum, a Firm, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of The Smyrna Fig Packers, Ltd., Smyrna, Turkey, and The Hills Brothers Company, 375 Washington street, New York, N. Y., for registrations of trade-marks and trade-mark registered August 18, 1903, No. 40,942, to Aram Hamparzum, a Firm, of 31 West Eighth street, New York, N. Y., and a notice of such declaration sent by registered mail to said Aram Hamparzum, a Firm, at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Aram Hamparzum, a Firm, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 20, 1914.

Farmers Fertilizer Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the registration of Farmers Fertilizer Company, Syracuse, N. Y., registered April 2, 1889, No. 16,429, and the application of R. A. Woolridge Company, 908 Fidelity Building, Charles and Lexington streets, Baltimore, Md., and a notice of such declaration sent by registered mail to said Farmers Fertilizer Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Farmers Fertilizer Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 6, 1914.

Lexington Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Uncle Sam Cleanser and Manufacturing Co., 361 South First West street, Salt Lake City, Utah, for registration of a trade-mark and trade-mark registered April 24, 1906, No. 51,902, to the Lexington Manufacturing Co., 2009 Eutaw Place, Baltimore, Md., and a notice of such declaration sent by registered mail to said Lexington Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Lexington Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

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ABANDONMENT OF INVENTION.

See Priority of Invention.

SECTION 4897 CONSTRUED.

"It is believed to be certain that any state of facts which would constitute an 'abandonment' such as would bar an inventor seeking a patent under section 4886 would also constitute such an abandonment as would bar an inventor seeking a patent under section 4897." ¶Barber v. Wood, 299.

AGREEMENT.

See Construction of Specifications and Patents.

ANTICIPATION.

See Particular Patents, 2.

APPLICATIONS PENDING TOGETHER.

Where each of several applications which subsequently ripen into patents to the same inventor describes the same machine and process and the inventions claimed in all the applications, but no one of the applications claims any invention claimed in any of the others, and they are all pending at the same time, the respective dates of the applications and of the patents and the respective dates when the applications were filed are immaterial, and the applications and patents cannot be used to anticipate or avoid each other.

[d Century Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

APPLICATIONS.

See Anticipation; Construction of Claims.

ASSIGNEE.

See Interference.

BAR TO PATENT.

See Abandonment of Invention.

COMBINATION.

See Construction of Claims; Infringement, 2; Particular Patents, 2, 3.

CLAIMS.

Anticipation; Construction of Claims; Construction of Specification and Patents.

CONSTRUCTION OF CLAIMS.

IMPLIED TERMS.

Elements in claims should be read with reference both to the structure and the function given in the description of the invention and interpreted to include such connections and relations of the several means of the combination which are named as are implied therewith to make them operative.

[d Jones v. Evans, 609.

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

See Particular Patents, 1, 3.

1. NATURE OF PATENT—"CONTRACT."

A patent is a contract, and it must be interpreted by the same rules of construction as other contracts.

[d Century Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

2. SPECIFICATIONS AND CLAIMS—CONSTRUCTION AS A WHOLE.

The intention of the parties should be deduced from the entire contract, not from any part of it or without any part of it. The specification which is a part of the same application as are the claims must be read and interpreted with them, not for the purpose of contracting or of expanding the latter, but to ascertain from the entire agreement the actual intention of the parties, and that intention, when ascertained, should prevail. [d Id.

CONSTRUCTION OF STATUTES.

See Abandonment of Invention; Priority of Invention.

CONTRACTS.

See Construction of Specifications and Patents.

DATE OF FILING APPLICATIONS.

See Anticipation.

DECLARATION OF INTERFERENCE.

See Interference.

DEFENSE.

See Infringement, 2.

EARLIER AND LATER PATENTS.

See Infringement, 1.

PRIOR PATENTS—IDENTITY OF INVENTION.

While an earlier patent avoids a later patent to the same patentee for the invention claimed and secured by the former, it does not invalidate a later patent to him for a distinct different invention not claimed and secured by the earlier patent, whether that invention is general or specific, as of a process or of a machine or of both, and whether it is of an original machine or process or of an improvement thereon.

[dCentury Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

ELEMENTS.

See Construction of Claims.

FIRST AND ORIGINAL INVENTOR.

See Interference.

FORFEITED APPLICATIONS.

See Priority of Invention.

FUNCTION.

See Construction of Claims.

INFRINGEMENT.

See Particular Patents, 1, 3.

1. PRESUMPTIONS—DECISION OF PATENT OFFICE.
It is a general rule that there is a legal presumption that a process or apparatus of a later patent does not infringe upon that of an earlier patent relating to the same subject. It is a general rule that a process or apparatus of a later patent does not infringe the process or apparatus of an earlier patent where the Commissioner has decided there was no interference between them. There is an exception to this rule to the effect that where a patentee has made a primary invention of a new or useful process or apparatus which accomplishes a result never before produced by such a process or machine the presumption that a process or apparatus of a later patent on the same subject is for a subordinate improvement or modification of the primary invention and hence subject to an infringement of the patent which secures it, is at least as strong as the presumption of the general rules, because there are many more patents for subordinate improvements and modifications of primary inventions than there are for such inventions, and hence more probability that a given process or apparatus is of the former than that it is of the latter class.
[4Century Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

DEFENSES.
It is no defense to a charge of infringement of a process, an apparatus, or a combination clearly described and claimed in the patent that it or some part of it was misnamed therein by the patentee or that the infringer has called it by a different name. Patents protect processes, apparatus, and combinations, whatever their names. [4Id.

INTERFERENCE.

See Priority of Invention.

DECLARATION—APPLICATIONS OWNED BY THE SAME ASSIGNEE.
Where the applications of P. and L. are assigned to the same assignee and an interference is declared between the applications of P. and F., and thereafter L. copies the claims of the issue and the assignee requests that L. be added to the interference and files a statement that as between P. and L. the latter is the first inventor, *Held* that the party L. may be added to the interference.
[Perkins v. Fortescue, 609.

INVENTION.

See Anticipation; Earlier and Later Patents; Infringement.

1. NUMBER OF PATENTS PROCURABLE.
One who makes several patentable inventions that produce a new and useful process or machine, or both, pertaining to the same subject-matter has the option to take one patent therefor or as many separate patents therefor as he makes patentable inventions.
[4Century Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

2. PROCESS AND APPARATUS.
Separate patents for a new and useful process and for a new and useful apparatus to practise it may be sustained, although no other apparatus to practise it is known. [4Id.

LIMIT OF TIME.

See Priority of Invention.

MACHINE AND PROCESS.

See Anticipation; Earlier and Later Patents; Invention, 1.

OPERATIVE DEVICE.

See Construction of Claims.

PARTICULAR PATENTS.

1. EVANS—No. 815,914—WINDOW-LIFTER—VALIDITY AND INFRINGEMENT.
The Evans patent, No. 815,914, for a window-lifter, construed and *Held* sufficiently specific to cover a structure erected in the particular manner shown in the drawings; also *Held* valid and infringed. [4Jones v. Evans, 609.

2. TESLA—NOS. 445,207, 511,915, AND 555,190—ANTICIPATION.
Patent No. 555,190, to Tesla, for a combination or apparatus to practise the process secured to Tesla by Patent No. 511,915, is not anticipated or avoided by the latter. Patents Nos. 555,190 and 511,915 are not for the same invention as Patent No. 445,207, to Tesla, and neither of them is anticipated or avoided thereby.
[4Century Electric Co. v. Westinghouse Electric & Mfg. Co., 1249.

3. TESLA, NOS. 511,559, 511,915, AND 555,190—THOMSON ET AL., No. 399,801—THOMSON, No. 428,650—INFRINGEMENT.
Claim 1 of Patent No. 511,559, claim 1 of Patent No. 511,915, and claims 1, 2, and 6 of Patent No. 555,190, to Nikola Tesla, regarding electrical transmission of power, are valid, and the defendant's device, which it claims follows the combinations secured by Patent No. 399,801, to Thomson and Wightman, and Patent No. 428,650, to Thomson, is an infringement thereof.
[4Id.

PENDING APPLICATIONS.

See Anticipation.

PRESUMPTION.

See Infringement, 1.

PRIORITY OF INVENTION.

FORFEITED APPLICATION—ABANDONMENT.
Where Wood, with knowledge that Barber was in the field, deliberately withheld his invention from the market and neglected to renew his forfeited application or to reassert his claims for a patent until practically the end of the period allowed by the statute, *Held* that such conduct on the part of Wood amounts to an abandonment of the invention within the meaning of that term as used in section 4897, and priority of invention is awarded to Barber. [¶Barber v. Wood, 299.

PROCESS AND APPARATUS.

See Infringement; Invention; Particular Patents, 2.

SPECIFICATIONS.

See Construction of Specifications and Patents.

TERMINOLOGY.

See Abandonment of Invention; Construction of Specifications and Patents, 1; Priority of Invention.

VALID PATENTS.

See Earlier and Later Patents; Particular Patents, 1, 3.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1914.

[Abbreviations: "Gaz."—Official Gazette.]

A. Mecky Company, The. (See Pursglove, William T., assignor.)
Aanstoots, Theodorus J. P., Passaic, N. J. Pressure-regulating air-circulating system for submarines. No. 1,115,367; Oct. 27; Gaz. vol. 207; p. 1170.
Abbate, Nicholas G., Baltimore, Md. Life-preserver and trunk. No. 1,112,881; Oct. 6; Gaz. vol. 207; p. 164.
Abbath, Charles A., Quincy, Ill. Cabinet. No. 1,112,585; Oct. 6; Gaz. vol. 207; p. 63.
Abbott, Essex S., Malden, Mass. Rubber heel. No. 1,112,749; Oct. 6; Gaz. vol. 207; p. 120.
Abbott, Linn B., Bridgeport, Conn. Insulator. No. 1,113,399; Oct. 13; Gaz. vol. 207; p. 388.
Abizaid, Alkoury A., Washington, D. C. Buckle. No. 1,115,459; Oct. 27; Gaz. vol. 207; p. 1201.
Ackley, John A. (See Stratford and Ackley.)
Acme Steel Goods Company. (See Nelson, Aron A., assignor.)
Adair, William M., Algansee, Mich. Draft-equalizer. No. 1,115,460; Oct. 27; Gaz. vol. 207; p. 1202.
Adam, Edwin, Newark, N. J. Envelop. No. 1,115,149; Oct. 27; Gaz. vol. 207; p. 1096.
Adams, Alonzo T., assignor to Marseilles Company, East Moline, Ill. Elevator. No. 1,114,424; Oct. 20; Gaz. vol. 207; p. 788.
Adams, Alonzo T., assignor to Marseilles Company, East Moline, Ill. Elevator. No. 1,114,425; Oct. 20; Gaz. vol. 207; p. 788.
Adams, Arthur A. (See Emery and Adams.)
Adams, Susan S. (See Adams, William H. and S. S.)
Adams, William H. and S. S., Lawrence, Mass. Apparatus for striping surfaces. No. 1,112,960; Oct. 6; Gaz. vol. 207; p. 191.
Adder Machine Company, The. (See Bickford, Frank H., assignor.)
Adland, Victor E., Chicago, Ill. Alarm-clock. No. 1,113,279; Oct. 13; Gaz. vol. 207; p. 345.
Adolph, John U., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Percussive tool. No. 1,113,729; Oct. 13; Gaz. vol. 207; p. 502.
Adolph, Robert, Brooklyn, N. Y. Car-coupling. No. 1,113,730; Oct. 13; Gaz. vol. 207; p. 503.
Adsit, George, assignor to Benjamin Eastwood Company, Paterson, N. J. Quilling-machine. No. 1,115,267; Oct. 27; Gaz. vol. 207; p. 1137.
Ahlen, William, Duquesne, Pa. Car-coupling and coupling-operating mechanism. No. 1,114,570; Oct. 20; Gaz. vol. 207; p. 839.
Ahnert, Henry A., New York, N. Y. Shock-absorber. No. 1,112,961; Oct. 6; Gaz. vol. 207; p. 191.
Ahrano, Jean M., Tampa, assignor of one-half to J. P. Davidson, Palmetto, Fla. Awning. No. 1,115,368; Oct. 27; Gaz. vol. 207; p. 1171.
Aitchison, Peter, New Rochelle, assignor to American Bank Note Company, New York, N. Y. Conditioning printed paper. No. 1,115,150; Oct. 27; Gaz. vol. 207; p. 1097.
Aitken, Hugh W., Glasgow, Scotland. Roller for sugar-cane mills. No. 1,114,426; Oct. 20; Gaz. vol. 207; p. 789.
Akerlund, Gustaf, assignor to Standard Gas Power Company, Atlanta, Ga. Gas-generator. No. 1,115,268; Oct. 27; Gaz. vol. 207; p. 1138.
Akers, Harry G., Toronto, Ontario, Canada. Producing barium and strontium oxids. No. 1,113,178; Oct. 13; Gaz. vol. 207; p. 307.
Aktiebolaget Enkopings Verkstader. (See Johansson, Johan P., assignor.)
Aktiebolaget Ljungströms Angturbin. (See Ljungström, Fredrik, assignor.)
Aktiebolaget Wigellus Motorer. (See Wigellus, Sven, assignor.)
Albrecht, Christian A., Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,115,151; Oct. 27; Gaz. vol. 207; p. 1097.
Alcorn, Francis W., Darlington, Pa. Seeder and planter. No. 1,112,962; Oct. 6; Gaz. vol. 207; p. 192.
Aldrich, Josephine A. (See Archibald, Cora H., assignor.)
Alexander, Eugene E., Wolfe City, Tex. Cotton-sack carriage. No. 1,112,963; Oct. 6; Gaz. vol. 207; p. 192.
Alexander, Julian, Philadelphia, Pa. Stretching mechanism. No. 1,115,269; Oct. 27; Gaz. vol. 207; p. 1138.
Alexander, Robert E., Endicott, assignor of forty-nine one-hundredths to F. R. Waldron, Binghamton, N. Y. Car-replacer. No. 1,114,711; Oct. 20; Gaz. vol. 207; p. 887.
Allen, George W., Hyde Park, assignor to B. F. Sturtevant Company, Boston, Mass. Journal-bearing. No. 1,115,369; Oct. 27; Gaz. vol. 207; p. 1171.
Allen, Harry L., Cleveland, Ohio. Flexible coupling. No. 1,114,326; Oct. 20; Gaz. vol. 207; p. 753.
Allen, John M., Anaconda, Mont. Mail-bag receiver. No. 1,113,939; Oct. 20; Gaz. vol. 207; p. 615.
Allen, Samuel R., and J. W. Baughman, Dewey, Okla.; said Baughman assignor to said Allen. Fountain-brush. No. 1,115,370; Oct. 27; Gaz. vol. 207; p. 1171.
Allen, Thomas B., and L. B. Coulter, assignors to The Carborundum Company, Niagara Falls, N. Y. Manufacture of electrical conductors. No. 1,114,665; Oct. 20; Gaz. vol. 207; p. 870.
Allen, William P., Chicago, Ill. Power-transmission and speed-controlling device. No. 1,112,586; Oct. 6; Gaz. vol. 207; p. 63.
Allen, William R., assignor to The American Multigraph Company, Cleveland, Ohio. Ribbon-feeding mechanism. No. 1,114,327; Oct. 20; Gaz. vol. 207; p. 753.
Allen, William R., assignor to The American Multigraph Company, Cleveland, Ohio. Readily-changeable type-form. No. 1,115,371; Oct. 27; Gaz. vol. 207; p. 1172.
Allis-Chalmers Manufacturing Company. (See Bogen, Louis E., assignor.)
Allis-Chalmers Manufacturing Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Manufacturing Company. (See Hirt, Jules H., assignor.)
Allis-Chalmers Manufacturing Company. (See Loguin, Alexander J., assignor.)
Allis-Chalmers Manufacturing Company. (See Osmer, John E., assignor.)
Allis-Chalmers Manufacturing Company. (See Patitz, Johann F. M., assignor.)
Allis-Chalmers Manufacturing Company. (See Williamson, Robert B., assignor.)
Allison, John, Dravosburg, assignor, by mesne assignments, to Pittsburgh Equipment Company, Pittsburgh, Pa. Car-underframe. No. 1,112,587; Oct. 6; Gaz. vol. 207; p. 64.
Alma Manufacturing Company of Baltimore City. (See Greenebaum, Abraham H., assignor.)
Alma Manufacturing Company of Baltimore City. (See Hartmann, Emil, assignor.)
Altman, Elmer F., Minneapolis, Minn. Sprocket-chain housing. No. 1,113,148; Oct. 6; Gaz. vol. 207; p. 254.
Altman, Emil, Brooklyn, N. Y. Garment. No. 1,114,955; Oct. 27; Gaz. vol. 207; p. 1027.
Aluminium Industrie Aktiengesellschaft. (See Milde, Emil, assignor.)
Ambler, George B., assignor to F. A. Whitney Carriage Co., Leominster, Mass. Vehicle. No. 1,113,280; Oct. 13; Gaz. vol. 207; p. 345.
Ambrose, Lycurgus E., Mena, Ark. Oil-burner. No. 1,113,281; Oct. 13; Gaz. vol. 207; p. 346.
American Arch Company. (See Moore, Charles B., assignor.)
American Bank Note Company. (See Aitchison, Peter, assignor.)
American Car Sprinkler Co. (See Perry, Edward C. and F. D., assignors.)
American Dairy Supply Company. (See Compton, Harry L., assignor.)
American Graphophone Company. (See Emerson, Victor H., assignor.)
American Graphophone Company. (See Macdonald, Thomas H., assignor.)
American Hardware Corporation, The. (See Gérard, John, assignor.)
American Hardware Corporation, The. (See Stone, Elmer B., assignor.)
American Hardware Corporation, The. (See Voight, Henry G., assignor.)

American Heat & Power Co. (See Becker, Julius H., assignor.)
American Laundry Machinery Company. (See Hagen and Cooper, assignors.)
American Machine & Foundry Company. (See Smith, Elberon D., assignor.)
American Multigraph Company, The. (See Allen, William R., assignor.)
American Multigraph Company, The. (See Bates, Albert H., assignor.)
American Optical Company. (See Carson, Oswald B., assignor.)
American Pad & Textile Company, The. (See McClain, Arthur E., assignor.)
American Piston Ring Company. (See Wenzel, Albert W., assignor.)
American Sales Book Company. (See Bottle, Edward K., assignor.)
American Seeding Machine Company, The. (See Faas, Henry N., assignor.)
American Seeding Machine Company, The. (See Lewis and Faas, assignors.)
American Stove Company. (See Ruppel, Henry, assignor.)
American Telephone and Telegraph Company. (See Blauvelt, William [illegible], assignor.)
American Telephone and Telegraph Company. (See Molina, Edward C., assignor.)
American Tire Company. (See Dees and McLeod, assignors.)
American Tire Company. (See McLeod and Dees, assignors.)
American Water Softener Company. (See Hodkinson, George F., assignor.)
American Well Works. (See Chapman, Matthew T., assignor.)
American Well Works, The. (See Chapman, Matthew T. and M. C., assignors.)
American Wood Working Machinery Co. (See Clement, Frank H., assignor.)
Ames, Alden T., Niles, Cal. Tubular propeller-pump. No. 1,114,092; Oct. 20; Gaz. vol. 207; p. 669.
Ames, Herman, St. Paul, Minn. Card or label holder. No. 1,113,860; Oct. 13; Gaz. vol. 207; p. 550.
Ames, Joseph H., Chicago, Ill. Electric locomotive or the like. No. 1,113,923; Oct. 13; Gaz. vol. 207; p. 570.
Ampudia, Francis P. (See De Escobales and Ampudia.)
Andersen, Lauritz W., assignor to The Plume & Atwood Mfg. Co., Waterbury, Conn. Safety appliance for screwless holders. No. 1,114,571; Oct. 20; Gaz. vol. 207; p. 839.
Andersen, Victor, Detroit, Minn. Spring and shock-absorber. No. 1,113,941; Oct. 20; Gaz. vol. 207; p. 616.
Anderson, Andrew W., Chicago, Ill. Locomotive-superheater. No. 1,113,731; Oct. 13; Gaz. vol. 207; p. 503.
Anderson, David W., Richmond, Va. Combined invisible window-screen and ventilator for buildings. No. 1,113,179; Oct. 13; Gaz. vol. 207; p. 307.
Anderson, Edward V., Monesson, assignor of one-half to C. E. Golden, Crafton, Pa. Emergency check-valve. No. 1,113,282; Oct. 13; Gaz. vol. 207; p. 346.
Anderson Electric and Manufacturing Company, The. (See Norstrom, Nils E., assignor.)
Anderson, Frank, New York, N. Y. Folding scaffold. No. 1,114,956; Oct. 27; Gaz. vol. 207; p. 1027.
Anderson, Frank J., Box Elder, Mont. Napkin-holder. No. 1,112,964; Oct. 6; Gaz. vol. 207; p. 192.
Anderson, George W., assignor of one-half to D. P. Hayes, Hamilton, Ohio. Switch. No. 1,112,965; Oct. 6; Gaz. vol. 207; p. 193.
Anderson, Henry C., Chicago, Ill. Safety device. No. 1,113,283; Oct. 13; Gaz. vol. 207; p. 346.
Anderson, John A., Bridgeport, Conn. Punch. No. 1,114,066; Oct. 20; Gaz. vol. 207; p. 671.
Anderson, Lou B., executrix. (See Anderson, Ulin S.)
Anderson, Nels, Chicago, Ill., assignor, by mesne assignments, to The Harris Automatic Press Company, Niles, Ohio. Sheet-feeding mechanism. No. 1,115,152; Oct. 27; Gaz. vol. 207; p. 1097.
Anderson, Oscar, Newark, N. J. Milking-machine. No. 1,113,942; Oct. 20; Gaz. vol. 207; p. 616.
Anderson, Oscar, Kearney, N. J. Mechanical milking. No. 1,113,943; Oct. 20; Gaz. vol. 207; p. 617.
Anderson, Oscar, Fort William, Ontario, Canada. Rail joint and chair. No. 1,115,153; Oct. 27; Gaz. vol. 207; p. 1098.
Anderson, Ulin S., deceased; L. B. Anderson, administratrix, Dallas, Tex. Fuse-block. No. 1,113,528; Oct. 13; Gaz. vol. 207; p. 434.
Anderson, Wilber G., and F. F. Coslett, Dennison, Ill. Railway-signal. No. 1,112,966; Oct. 6; Gaz. vol. 207; p. 193.
Andrew G. Paul Company. (See Kinealy, John H., assignor.)
Andrews, Collin C., Auburn, Ind. Apparatus for destroying vermin. No. 1,113,180; Oct. 13; Gaz. vol. 207; p. 307.
Andrews, William A. (See Hines, Curry, Miskelly, and Marshall, assignors.)
Andrews, William E., assignor of one-half to W. A. Stellers, Bellaire, Ohio. Electric welding-machine. No. 1,115,401; Oct. 27; Gaz. vol. 207; p. 1202.
Andruszkiewicz, Frank, Easthampton, Mass. Wrench. No. 1,115,372; Oct. 27; Gaz. vol. 207; p. 1172.
Angel, Albert. (See Burrell, Lory W., assignor.)
Angell, John E., St. Louis, Mo. Boiler. No. 1,114,093; Oct. 20; Gaz. vol. 207; p. 670.
Angle, Edward H., New London, Conn., and A. H. Ketcham, Denver, Colo. Annealing and tempering apparatus. No. 1,112,750; Oct. 6; Gaz. vol. 207; p. 120.
Ann Arbor Machine Company. (See Hanson, Hans J., assignor.) (Reissue.)
Annable, Warren W., assignor of one-tenth to D. W. Tower, Grand Rapids, Mich. Automatic clutch. No. 1,114,716; Oct. 27; Gaz. vol. 207; p. 941.
Annis, John H., Hillsboro, N. H., assignor of one-half to C. F. Tresca, Jacksonville, Fla. Railway-spike. No. 1,112,588; Oct. 6; Gaz. vol. 207; p. 64.
Ansell, Louis S., and C. Speer, Huntington, W. Va. Washing-machine. No. 1,115,373; Oct. 27; Gaz. vol. 207; p. 1172.
Ansonia Clock Company. (See Treganza, Howard J., assignor.)
Apoznanski, Joseph, assignor to Stanislaw & Georgij Gaszynski Bros., Apoznanski & Co., Moscow, Russia. Making electrodes for secondary batteries. No. 1,114,067; Oct. 20; Gaz. vol. 207; p. 871.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Oliver C., Urbana, Ohio. Stock-rack. No. 1,114,094; Oct. 20; Gaz. vol. 207; p. 670.
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Electrical distribution system for automobile control. No. 1,115,154; Oct. 27; Gaz. vol. 207; p. 1098.
Appleby, William H., Chicago, Ill. Lock for vehicle-doors. No. 1,113,520; Oct. 13; Gaz. vol. 207; p. 434.
Archambault, Charles. (See Pons and Archambault.)
Archer, Alfred, Auburndale, Mass., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,115,155; Oct. 27; Gaz. vol. 207; p. 1098.
Archibald, Cora H., East Las Vegas, assignor of one-half to J. A. Aldrich, Gallup, N. Mex. Facial supporter. No. 1,113,732; Oct. 13; Gaz. vol. 207; p. 503.
Ardito, Giovanni, assignor of one-half to J. Figallo, Hoboken, N. J. Adjustable shade-support. No. 1,113,181; Oct. 13; Gaz. vol. 207; p. 308.
Arendell, Mitchell B., McAlester, Okla. Pessary. No. 1,113,083; Oct. 6; Gaz. vol. 207; p. 231.
Argast, Fred J., Moffit, N. D. Rake. No. 1,113,084; Oct. 6; Gaz. vol. 207; p. 231.
Ariens, Henry, assignor to Brillion Iron Works, Brillion, Wis. Portable container. (Reissue.) No. 13,813; Oct. 27; Gaz. vol. 207; p. 1207.
Armat, Thomas, Washington, D. C. Motion-picture apparatus. No. 1,112,751; Oct. 6; Gaz. vol. 207; p. 121.
Armstrong, Edwin H., Yonkers, N. Y. Wireless receiving system. No. 1,113,149; Oct. 6; Gaz. vol. 207; p. 254.
Arnold, Claris H., Eaton Rapids, Mich. Egg-crate. No. 1,115,270; Oct. 27; Gaz. vol. 207; p. 1138.
Arnold, Harold D., East Orange, N. J., assignor to Western Electric Company, New York, N. Y. Electric relay. No. 1,114,845; Oct. 27; Gaz. vol. 207; p. 988.
Aronson, Gustaf A. E., Klsa, assignor of one-half to S. R. D. Westrell, Stockholm, Sweden. Latch mechanism for doors and gates. No. 1,115,271; Oct. 27; Gaz. vol. 207; p. 1139.
Arter, Frederick S., Cleveland, Ohio. Ink-pad for rubber stamps. No. 1,114,328; Oct. 20; Gaz. vol. 207; p. 753.
Arthur, Eugenia C., executrix. (See Arthur, George P.)
Arthur, George P., deceased; E. C. Arthur, executrix, Midland, Tex. Cotton-chopper. No. 1,113,940; Oct. 20; Gaz. vol. 207; p. 616.
Ash, Herbert S., and E. H. Hayes, Knoxville, Tenn. Adjustable bearing. No. 1,114,668; Oct. 20; Gaz. vol. 207; p. 871.
Ashley, Frank M., New York, N. Y. Inkstand. No. 1,113,284; Oct. 13; Gaz. vol. 207; p. 347.
Ashley, Frank M., New York, N. Y. Inkstand. No. 1,113,285; Oct. 13; Gaz. vol. 207; p. 347.
Ashmusen, Henry W., Kings Park, N. Y. Internal-combustion engine. No. 1,112,589; Oct. 6; Gaz. vol. 207; p. 64.
Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-machine. No. 1,113,085; Oct. 6; Gaz. vol. 207; p. 232.
Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,113,086; Oct. 6; Gaz. vol. 207; p. 232.
Asquith, Leonard A. (See Greene and Asquith.)
Atkinson, Joseph M., assignor to Oppenheim, Oberndorf & Co., Baltimore, Md. Shirt and drawers. No. 1,113,024; Oct. 13; Gaz. vol. 207; p. 570.
Atlantic National Bank. (See Emery and Adams, assignors.)
Atlas Stiff Mfg. Co. (See Waterhouse, Addison G., assignor.)
Atwood, Albert A. (See Myers, Hubert A., assignor.)
Atwood, John A., Beaver, Pa. Cross-tie for railways. (Reissue.) No. 13,814; Oct. 27; Gaz. vol. 207; p. 1208.
Atwood Machine Company, The. (See Bradley, Edward E., assignor.)
Au Buchon, Perry P., St. Louis, Mo. Game apparatus. No. 1,114,717; Oct. 27; Gaz. vol. 207; p. 941.
Auble, James L., assignor of one-half to H. A. Barrett, Cincinnati, Ohio. Cutter for mowers, reapers, harvesters, and the like. No. 1,113,944; Oct. 20; Gaz. vol. 207; p. 617.

Audet, Alfred, Salem, Mass. Fire apparatus. No. 1,114,718; Oct. 27; Gaz. vol. 207; p. 941.
Audley, Francis H., New York, N. Y. Gun-bolster. No. 1,113,530; Oct. 13; Gaz. vol. 207; p. 435.
Auerbach, Milton, *et al.* (See Thomas, Bradford A., assignor.)
Aurora Door Hanger and Specialty Company. (See Richards, George H., assignor.)
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Key mechanism for organs. No. 1,113,861; Oct. 13; Gaz. vol. 207; p. 550.
Austin Organ Company. (See Austin, John T., assignor.)
Auto Signalite Company. (See Simon, Berry B., assignor.)
Auto Utilities Manufacturing Company. (See Breidert, George C., assignor.)
Automatic Book-Keeping Register Company. (See White, George, assignor.)
Automatic Electric Company. (See Erickson, John, assignor.)
Automatic Electric Company. (See Keith, Alexander E., assignor.)
Automatic Electric Company. (See Keller, Leo, assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Mellinger, Edward A., assignor.)
Automatic Packing & Labeling Company. (See Gwinn, George W., assignor.)
Automatic Register Company. (See Branham, Adolphus D., assignor.)
Avellanal, José R., Tampa, Fla. Cigar box or wrapping. No. 1,112,752; Oct. 6; Gaz. vol. 207; p. 121.
Avery, Amariah, Manchester, N. H. Yarn-spinning apparatus. No. 1,113,286; Oct. 13; Gaz. vol. 207; p. 347.
Avery, Frederick C., Chicago, Ill. Envelop-file. No. 1,113,182; Oct. 13; Gaz. vol. 207; p. 308.
Axe, Roy T., assignor to O. M. Edwards, Syracuse, N. Y. Hinge mechanism for railway-car trap-doors. No. 1,113,935; Oct. 13; Gaz. vol. 207; p. 574.
Axe, Roy T., assignor to O. M. Edwards, Syracuse, N. Y. Window-sash and similar structure. No. 1,113,938; Oct. 20; Gaz. vol. 207; p. 615.
Aylsworth, Jonas W., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Sound-box. No. 1,115,374; Oct. 27; Gaz. vol. 207; p. 1173.
B. F. Goodrich Company, The. (See Converse and Kress, assignors.)
B. F. Goodrich Company, The. (See Spence and Russell, assignors.)
B. F. Perkins & Son. (See Stanley, John O., assignor.)
B. F. Sturtevant Company. (See Allen, George W., assignor.)
B. V. D. Company, The. (See Heyn, Edmund C., assignor.)
Baade, Andrew N., Spokane, Wash. Rotary pump. No. 1,112,515; Oct. 6; Gaz. vol. 207; p. 36.
Bachowski, Harry, and R. Cohen, New York, N. Y. Sanitary garbage-can. No. 1,115,375; Oct. 27; Gaz. vol. 207; p. 1173.
Backert, John C., Brooklyn, N. Y. Cutting-machine for rules and slugs. No. 1,114,329; Oct. 20; Gaz. vol. 207; p. 753.
Backstrom, Henning, Chicago, Ill. Window-screen. No. 1,112,590; Oct. 6; Gaz. vol. 207; p. 65.
Badische Anilin & Soda Fabrik. (See Bosch and Wild, assignors.)
Baehn, Frederick, New York, N. Y. Shelving. No. 1,113,183; Oct. 13; Gaz. vol. 207; p. 308.
Bahnemann, Gustav. (See Goodland and Bahnemann.)
Bahnson, Frederic F. (See Lawrence and Bahnson.)
Bailey, John A., Brice, Tex. Dirigible automobile lamp-support. No. 1,112,666; Oct. 6; Gaz. vol. 207; p. 91.
Baily, Robert W., assignor to Interstate Manufacturing Company, Oskaloosa, Iowa. Hot-air furnace. No. 1,114,669; Oct. 20; Gaz. vol. 207; p. 871.
Bain, Benjamin F., Pittsburgh, Pa. Mechanical toy. No. 1,113,945; Oct. 20; Gaz. vol. 207; p. 617.
Baird, Archie M., assignor of one-half to H. W. Jacobs, Topeka, Kans. Boiler. No. 1,115,156; Oct. 27; Gaz. vol. 207; p. 1099.
Baird, Fred J. (See Hickey and Baird.)
Baker, Frank E., *et al.* (See Wingo, Richard T., assignor.)
Baker, George J., *et al.* (See Wingo, Richard T., assignor.)
Baker Iron Works. (See Irvin, Leslie A., assignor.)
Baker, John T., Baltimore, Md. Gas-fixture. No. 1,113,862; Oct. 13; Gaz. vol. 207; p. 550.
Baker Manufacturing Company, The. (See Miller, John G., assignor.)
Baker, Nelson J. (See Brocker and Baker.)
Baker, Robert D., Detroit, Mich. Armored pavement-joint. No. 1,113,733; Oct. 13; Gaz. vol. 207; p. 504.
Baker, Samuel E. (See Murphy and Baker.)
Baker, Stephen D., New York, N. Y. Urinal. No. 1,114,670; Oct. 20; Gaz. vol. 207; p. 872.
Baker, William H., Bridgeport, Conn. Dam and hydraulic-power converter. No. 1,115,376; Oct. 27; Gaz. vol. 207; p. 1173.
Balajthy, Andrew, Phoenixville, Pa. Horseshoe. No. 1,113,734; Oct. 13; Gaz. vol. 207; p. 504.
Baldwin, Frederic E., New York, N. Y. Acetylene-gas lamp. No. 1,115,157; Oct. 27; Gaz. vol. 207; p. 1099.
Baldwin, Henry C., assignor of one-half to N. E. Baldwin, Lakemont, N. Y. Toy. No. 1,115,272; Oct. 27; Gaz. vol. 207; p. 1139.
Baldwin Locomotive Works, The. (See Hodges, William S., assignor.)
Baldwin Locomotive Works, The. (See Vauclain, Samuel M., assignor.)
Baldwin, Red E. (See Baldwin, Henry C., assignor.)
Ball, Albert and F. A., Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Quarrying-machine. No. 1,113,531; Oct. 13; Gaz. vol. 207; p. 435.
Ball, Frank A. (See Ball, Albert and F. A.)
Ball, Henry P., New York, N. Y., assignor to General Electric Company. Oil-switch. No. 1,113,087; Oct. 6; Gaz. vol. 207; p. 232.
Ballard, Harrie A., Somerville, assignor to The Boylston Manufacturing Company, Boston, Mass. Loader for hand-tackers. No. 1,114,330; Oct. 20; Gaz. vol. 207; p. 754.
Ballet, A. H. (See Doll, Fred W., assignor.)
Balogh, Joseph, and A. Thomas, Canaanville, Ohio. Lifeboat. No. 1,112,667; Oct. 6; Gaz. vol. 207; p. 92.
Baltzer, Friedrich, Berlin, Germany. Cage for anti-friction-bearings. No. 1,114,331; Oct. 20; Gaz. vol. 207; p. 754.
Baltzer, Friedrich, Berlin, Germany. Cage for anti-friction-bearings. No. 1,114,332; Oct. 20; Gaz. vol. 207; p. 755.
Bamford, Arthur A., Chicago, Ill. Collar. No. 1,115,377; Oct. 27; Gaz. vol. 207; p. 1174.
Bancel, Paul A., New York, N. Y., assignor to himself, and G. H. Gibson, Upper Montclair, N. J. Condensing apparatus. No. 1,114,333; Oct. 20; Gaz. vol. 207; p. 755.
Banker, Louis G., *et al.* (See MacRae, Mungo L., assignor.)
Banks, Alfred J., Montour, Iowa. Clamp. No. 1,113,864; Oct. 13; Gaz. vol. 207; p. 551.
Bar-Lock Typewriter Company Limited. (See Etheridge, Herbert, assignor.)
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet-assembling machine. No. 1,113,735; Oct. 13; Gaz. vol. 207; p. 504.
Barcus, William B., Newark, N. J. Loaf-forming machine. No. 1,114,572; Oct. 20; Gaz. vol. 207; p. 839.
Bardsley, Henry, Providence, R. I., assignor to Crompton & Knowles Loom Works. Let-off mechanism for looms. No. 1,112,668; Oct. 6; Gaz. vol. 207; p. 92.
Bardsley, Henry, Providence, R. I., assignor to Crompton & Knowles Loom Works. Pattern mechanism for looms. No. 1,112,753; Oct. 6; Gaz. vol. 207; p. 122.
Barfield, Francis M., Summerland, Miss. Stump-burner. No. 1,112,967; Oct. 6; Gaz. vol. 207; p. 194.
Barker-Colman Company. (See Colman, Howard D., assignor.)
Barnes, Burr F., Williamsport, Ohio. Bag-holder. No. 1,113,287; Oct. 13; Gaz. vol. 207; p. 348.
Barnes, Frederick J. T., Brisbane, Queensland, Australia. Means for starting internal-combustion motors or engines. No. 1,114,334; Oct. 20; Gaz. vol. 207; p. 755.
Barnes, Frederick W., and F. W. Lovejoy, assignors to Eastman Kodak Company, Rochester, N. Y. Loading device for cut-film holders. No. 1,113,288; Oct. 13; Gaz. vol. 207; p. 348.
Barnett, Israel, Milwaukee, Wis. Machine for treating cloth. No. 1,113,532; Oct. 13; Gaz. vol. 207; p. 436.
Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,113,289; Oct. 13; Gaz. vol. 207; p. 348.
Barnwell, Abraham L., and P. Tormey, San Francisco, Cal. Lemon-squeezer. No. 1,113,594; Oct. 13; Gaz. vol. 207; p. 456.
Barr, Frederic, New York, N. Y. Electric switch. No. 1,112,882; Oct. 6; Gaz. vol. 207; p. 165.
Barr, Frederic, New York, N. Y. Electric switch. No. 1,112,883; Oct. 6; Gaz. vol. 207; p. 165.
Barrer, Henry M., Chicago, Ill. Motor for electric shears. No. 1,112,884; Oct. 6; Gaz. vol. 207; p. 165.
Barrett, Charles R., and E. A. Samuel, Chicago, Ill.; said Samuel assignor to said Barrett. Machine for forming loops on coiled springs. No. 1,114,846; Oct. 27; Gaz. vol. 207; p. 988.
Barrett, Eli B., Trenton, Tex. Step-by-step elevator. No. 1,114,847; Oct. 27; Gaz. vol. 207; p. 988.
Barrett, H. A. (See Auble, James L., assignor.)
Barrett, Richard L., Chicago, Ill. Carbureter. No. 1,113,533; Oct. 13; Gaz. vol. 207; p. 436.
Barrois, Frank L., New Orleans, La. Mail-bag catching and delivering apparatus. No. 1,113,595; Oct. 13; Gaz. vol. 207; p. 456.
Bartels, Carl. (See Mosler and Bartels.)
Barton, Thomas F., Washington, D. C. Fastening device for screens. No. 1,113,046; Oct. 20; Gaz. vol. 207; p. 618.
Basenau, Fritz. (See Van Hall, Basenau, and Van Haagen.)
Baskerville, Charles, New York, N. Y. Bleaching oils and fats. No. 1,114,095; Oct. 20; Gaz. vol. 207; p. 670.
Baskin, Samuel A., Temple, Ga. Bridle-bit. No. 1,113,863; Oct. 13; Gaz. vol. 207; p. 551.
Batchelder, Asa F., Glenville, N. Y., assignor to General Electric Company. Locomotive-truck. No. 1,115,158; Oct. 27; Gaz. vol. 207; p. 1100.

Ellis, Carleton, White Plains, assignor to Chadeloid Chemical Company, New York, N. Y. Paint or varnish remover and the preparation thereof. No. 1,113,970; Oct. 20; Gaz. vol. 207; p. 626.

Ellis, Carleton, Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Paint or varnish remover. No. 1,113,971; Oct. 20; Gaz. vol. 207; p. 626.

Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company. Paint or varnish remover. No. 1,113,972; Oct. 20; Gaz. vol. 207; p. 626.

Ellis, William. (See Wilson, Robert Q., assignor.)

Elvin, Albert G. (See Martin, Frederick W., assignor.)

Elwell, George H., Boston, assignor to F. B. Hopewell, trustee, Newton, Mass. Hypodermic case. No. 1,113,890; Oct. 13; Gaz. vol. 207; p. 559.

Ely, Moses *et al.* (See Daniel, Paul, assignor.)

Emanuel, Joseph. (See Olbrantz and Emanuel.)

Emerson, Victor H., New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn. Disk sound-record. No. 1,113,973; Oct. 20; Gaz. vol. 207; p. 626.

Emery, Frank A., Ashmont, and A. A. Adams, Brookline, Mass., assignors, by mesne assignments, to Atlantic National Bank, Providence, R. I. Signaling system. No. 1,114,597; Oct. 20; Gaz. vol. 207; p. 847.

Emil Grossman M'f'g. Co. Inc. (See Heineman, Charles J., assignor.)

Endter, Waldemar A. (See Jones and Endter.)

Engler, Harry C., assignor to Defiance Lantern and Stamping Company, Rochester, N. Y. Lantern. No. 1,113,763; Oct. 13; Gaz. vol. 207; p. 515.

Engineering Development Company. (See Poole, Cecil P., assignor.)

English, M. J. (See Pohndorf, Joseph, assignor.)

Engman, Evald J., assignor to The Will & Baumer Company, Syracuse, N. Y. Machine for finishing candles. No. 1,114,871; Oct. 27; Gaz. vol. 207; p. 907.

Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Producing an ornamental surface upon leather. No. 1,115,182; Oct. 27; Gaz. vol. 207; p. 1108.

Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Ornamented leather. No. 1,115,183; Oct. 27; Gaz. vol. 207; p. 1108.

Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for ornamenting leather. No. 1,115,184; Oct. 27; Gaz. vol. 207; p. 1109.

Enterprise Manufacturing Company, The. (See Castle, Frederick W., assignor.)

Enterprise Tool and Metal Works. (See Rosengren, Frank W., assignor.)

Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stitch-down-lasting machine. No. 1,113,930; Oct. 13; Gaz. vol. 207; p. 575.

Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,114,240; Oct. 20; Gaz. vol. 207; p. 723.

Erickson, Edward, assignor to The Boylston Manufacturing Company, Boston, Mass. Heel-attaching machine. No. 1,114,241; Oct. 20; Gaz. vol. 207; p. 723.

Erickson, Edward, assignor to The Boylston Manufacturing Company, Boston, Mass. Shoe-slugging machine. No. 1,114,242; Oct. 20; Gaz. vol. 207; p. 723.

Erickson, Edward, assignor to The Boylston Manufacturing Company, Boston, Mass. Heel-loading machine. No. 1,114,243; Oct. 20; Gaz. vol. 207; p. 724.

Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Speed-indicator for calling devices. No. 1,112,904; Oct. 6; Gaz. vol. 207; p. 202.

Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Line protective device. No. 1,113,319; Oct. 13; Gaz. vol. 207; p. 359.

Erlez Stove & Manufacturing Company. (See Skoog, John F., assignor.)

Erikson, John E., Edgerton, Alberta, Canada. Attachment for guns. No. 1,114,073; Oct. 27; Gaz. vol. 207; p. 1033.

Espy, William P., Springfield, Ohio. Fluid-motor. No. 1,113,135; Oct. 6; Gaz. vol. 207; p. 256.

Etheridge, Herbert, Wimbledon Park, assignor to The Bar-Lock Typewriter Company Limited, London, England. Roller-bearing and separator for the rollers. No. 1,112,900; Oct. 6; Gaz. vol. 207; p. 170.

Etheridge, Theodore S., Grand Rapids, Mich. Device for attaching book-covers. No. 1,114,740; Oct. 27; Gaz. vol. 207; p. 949.

Etherton, Jesse E., Chicago, Ill. Rail-joint. No. 1,114,453; Oct. 20; Gaz. vol. 207; p. 799.

Evanovitch, Gusser, London, England. Wheel-guard or obstruction-remover for motor road-vehicles. No. 1,113,421; Oct. 13; Gaz. vol. 207; p. 396.

Evans, Alfred M., Amherst Junction, Wis. Building-wall. No. 1,112,995; Oct. 6; Gaz. vol. 207; p. 202.

Evans, Ernest W., Robinson, Ill. Water-heater. No. 1,112,529; Oct. 6; Gaz. vol. 207; p. 41.

Everett, Samuel H., Jr., Brooklyn, N. Y., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 1,114,872; Oct. 27; Gaz. vol. 207; p. 907.

Everett, Sylvester W. (See Wilson and Everett.)

Evers, Bernard J., St. Elizabeth, Mo. Neck-yoke and cap for draft-poles. No. 1,113,891; Oct. 13; Gaz. vol. 207; p. 560.

Ewers, Alexander L., Durmid, Va., assignor to United Cigarette Machine Co., Ltd., London, England. Tobacco-feed for cigarette-machines. No. 1,114,127; Oct. 20; Gaz. vol. 207; p. 682.

Excelsior Seat Company, The. (See Hershey, William B. C., assignor.)

F. A. Nelder Company, The. (See Nelder, Fred A., assignor.)

F. A. Whitney Carriage Co. (See Ambler, George B., assignor.)

F. & F. Specialty Co. (See Field, George W., assignor.)

Faas, Henry N. (See Lewis and Faas.)

Faas, Henry N., assignor to The American Seeding Machine Company, Springfield, Ohio. Clutch. No. 1,114,683; Oct. 20; Gaz. vol. 207; p. 876.

Faber & Co., M. (See Matitsch, August, assignor.)

Fairmont Electric and Manufacturing Company, The. (See Liversidge, Horace P., assignor.)

Failer, Ernest A., assignor to Industrial Realization Company, New York, N. Y. Fire-telegraph system and apparatus therefor. No. 1,115,419; Oct. 27; Gaz. vol. 207; p. 1189.

Fanslow, Benjamin O., Williamsport, Pa., assignor to Polygraph Duplicating Typewriter Company. Duplicating printing-machine. (Reissue.) No. 13,817; Oct. 27; Gaz. vol. 207; p. 1210.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Ditmar, Rudolf, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Flachslaender, Joseph, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Gottlob, Kurt, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Hamburger, Alexander, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Hofmann and Coutelle, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Jonas, August, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Jordan and Neelmeier, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Traub and Fickewirth, assignors.)

Farigoule, Jean, Paris, France. Lace-machine. No. 1,112,996; Oct. 6; Gaz. vol. 207; p. 203.

Farmer, Ernest H., Upper Holloway, assignor of one-half to Whitehead, Morris & Company, Limited, London, England. Fraud-preventing security-blank. No. 1,114,340; Oct. 20; Gaz. vol. 207; p. 759.

Farmer, Fred B., St. Paul, Minn., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Triple-valve device. No. 1,114,741; Oct. 27; Gaz. vol. 207; p. 950.

Farmer, Luke W., Somerville, Mass. Paper spoon. No. 1,114,873; Oct. 27; Gaz. vol. 207; p. 908.

Farnham, Jeremiah N., Rockland, Me. Ladder attachment. No. 1,115,420; Oct. 27; Gaz. vol. 207; p. 1189.

Farnsworth, Willis S., assignor to Coin Controlled Lock Co., San Francisco, Cal. Lock for lockers. No. 1,114,244; Oct. 20; Gaz. vol. 207; p. 724.

Fassett, Francis K., Dayton, Ohio. Worm-gear. No. 1,113,172; Oct. 6; Gaz. vol. 207; p. 263.

Fausse, Joseph, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rebound control for lasting-machines. No. 1,113,764; Oct. 13; Gaz. vol. 207; p. 515.

Fay, Alpheus, Louisville, Ky., assignor to J. H. Buddeke. Aerating clothes-washer. No. 1,114,074; Oct. 27; Gaz. vol. 207; p. 1033.

Fay, Thomas J., Brooklyn, N. Y., assignor to The Goby Engine Company. Internal-combustion engine. No. 1,112,530; Oct. 6; Gaz. vol. 207; p. 41.

Fay, Thomas J., Brooklyn, N. Y., assignor to The Goby Engine Company. Internal-combustion engine. No. 1,112,531; Oct. 6; Gaz. vol. 207; p. 42.

Feagan, Leslie, Malta Bend, Mo. Engine-hood fastener. No. 1,113,320; Oct. 13; Gaz. vol. 207; p. 359.

Fearon, James J., assignor of one-half to C. J. Fox, Philadelphia, Pa. Dyeing. No. 1,113,765; Oct. 13; Gaz. vol. 207; p. 516.

Fedorcio, Stanislaw, assignor of one-half to A. Tytlanchuk, Blue Jay, W. Va. Combination ladder and ironing-board. No. 1,114,742; Oct. 27; Gaz. vol. 207; p. 950.

Fedrick, Samuel B., Ruby, Tex. Rail-joint. No. 1,112,776; Oct. 6; Gaz. vol. 207; p. 128.

Felbel, Jacob, New York, assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y. Typewriting machine. No. 1,115,202; Oct. 27; Gaz. vol. 207; p. 1146.

Feldkamp, Frederick A., Newark, N. J., assignor to Electrolytic Products Co. Radiator. No. 1,113,422; Oct. 13; Gaz. vol. 207; p. 396.

Feller, Adolph F., Berkeley, Cal. Carbureter. No. 1,113,892; Oct. 13; Gaz. vol. 207; p. 560.

Fellows, John M., Burlington, Ind. Telescopic fence-post. No. 1,115,293; Oct. 27; Gaz. vol. 207; p. 1146.

Felmlee, John H., assignor to The Progressive Manufacturing Company, Wheeling, W. Va. Wrapping-machine. No. 1,113,423; Oct. 13; Gaz. vol. 207; p. 396.

Fensterbusch, Alvin E. (See Crance and Fensterbusch.)

Fenton, John W., Millersburg, assignor to S. F. Spencer, Dresden, Ohio. Semaphore-arm. No. 1,114,684; Oct. 20; Gaz. vol. 207; p. 877.

Ferguson, Arthur. (See Hughes, Ferguson, and Lowe.)

Ferguson, Clarence E., Rosendale, Mo. Spring-hub for autos. No. 1,114,347; Oct. 20; Gaz. vol. 207; p. 759.

Fergusson, Phil and R., Davenport, Iowa. Vending-machine. No. 1,115,421; Oct. 27; Gaz. vol. 207; p. 1189.

Fergusson, Robert. (See Fergusson, Phil and R.)

Ferne, Wilhelm S., Pittsfield, Mass. Automatic typewriter-operating mechanism. No. 1,115,294; Oct. 27; Gaz. vol. 207; p. 1146.

Ferranti, Sebastian Z. de, Grindleford, England. Gyrostat. No. 1,112,907; Oct. 6; Gaz. vol. 207; p. 203.

Ferrell, Fredrick C. (See Kerner and Ferrell.)

Ferris, William D. (See O'Brien and Ferris.)

Fesler, Milton A., assignor to Fess System Co., San Francisco, Cal. Centrifugal oil-burner. No. 1,113,108; Oct. 6; Gaz. vol. 207; p. 240.

Fess System Co. (See Fesler, Milton A., assignor.)

Fessenden, Reginald A., Brant Rock, Mass. System of storing power. No. 1,112,441; Oct. 6; Gaz. vol. 207; p. 9.

Fessenden, Reginald A., Brookline, Mass. Storage and care of wheeled vehicles. No. 1,114,075; Oct. 27; Gaz. vol. 207; p. 1033.

Fetrow, William G., and E. Eberly, Mechanicsburg, Pa. Sheaf hoist and chute. No. 1,114,454; Oct. 20; Gaz. vol. 207; p. 799.

Fickewirth, Georg. (See Taub and Fickewirth.)

Field, George W., East Milton, assignor to F. & F. Specialty Co., Boston, Mass. Clothes-pin. No. 1,113,109; Oct. 6; Gaz. vol. 207; p. 240.

Fields Company, The. (See Fields, George R., assignor.)

Fields, George R., Terre Haute, Ind., assignor to The Fields Company. Cooking catsup and like products. No. 1,113,110; Oct. 6; Gaz. vol. 207; p. 240.

Figallo, Joseph. (See Ardito, Giovanni, assignor.)

Filer & Stowell Company, The. (See Pelton, George M., assignor.)

Fillettaz, Edmond, Neuilly-sur-Seine, France. Starting mechanism for explosion-motors. No. 1,113,424; Oct. 13; Gaz. vol. 207; p. 397.

Finch, William I. (See Morgan, John H., assignor.)

Finkenbiner, George E., assignor of one-half to A. J. Berkey, Goshen, Ind. Pocket-knife. No. 1,113,893; Oct. 13; Gaz. vol. 207; p. 560.

Finley, Sam E. (See Schoonmaker, William H., assignor.)

Firestone Tire & Rubber Company, The. (See Stevens, William C., assignor.)

Fischer, Charles H., Cincinnati, Ohio. Electric lamp. No. 1,114,976; Oct. 27; Gaz. vol. 207; p. 1034.

Fischer, Ernst, Charlottenburg, Germany. Extraction of fat from bones, materials suitable for glue manufacture, and like substances. No. 1,114,598; Oct. 20; Gaz. vol. 207; p. 848.

Fischer, John M., De Soto, Mo. Whiffletree-hook. No. 1,112,777; Oct. 6; Gaz. vol. 207; p. 129.

Fischer, Martin, Zurich, Switzerland, assignor to Fischer Motor Corporation. Making engine-cylinders. No. 1,113,548; Oct. 13; Gaz. vol. 207; p. 441.

Fischer Motor Corporation. (See Fischer, Martin, assignor.)

Fisher, Alfred, Dallas, Tex. Mattress-display rack. No. 1,114,455; Oct. 20; Gaz. vol. 207; p. 800.

Fisher, Dudley T., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Cable-reel for haulage mechanism. No. 1,113,974; Oct. 20; Gaz. vol. 207; p. 627.

Fisher, Dudley T., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Cable-winding mechanism for locomotives. No. 1,113,975; Oct. 20; Gaz. vol. 207; p. 627.

Fisher, Emanuel, Providence, assignor of one-half to F. S. Peck, Barrington, R. I. Valve. No. 1,113,976; Oct. 20; Gaz. vol. 207; p. 628.

Fisher, Frank E., Detroit, Mich. Engine-starter. No. 1,113,156; Oct. 6; Gaz. vol. 207; p. 257.

Fisher, George H., Leavenworth, Kans. Apparatus for producing crystal ice from raw water. No. 1,113,111; Oct. 6; Gaz. vol. 207; p. 241.

Fisk Rubber Company. (See Cole, John C., assignor.)

Fitch, John H., Ludington, Mich. Motor-vehicle. No. 1,114,245; Oct. 20; Gaz. vol. 207; p. 725.

Fitzgerald, John B. (See Schneider, Benjamin P., assignor.)

Fitzloff, Frank A., Spencer, Iowa. Automobile automatic lifting-jack. No. 1,115,295; Oct. 27; Gaz. vol. 207; p. 1146.

Fitzpatrick, Michael J., Plattsburg, N. Y. Oil-burner. No. 1,113,894; Oct. 13; Gaz. vol. 207; p. 561.

Flachslaender, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Green sulfur dye. No. 1,113,766; Oct. 13; Gaz. vol. 207; p. 516.

Flack, Herbert A., Cherokee, Iowa. Folding box. No. 1,112,442; Oct. 6; Gaz. vol. 207; p. 9.

Flagg, Arthur B., and W. H. Livermore, Worcester, assignors to Livermore Pay Station Company, Boston, Mass. Coin-controlled pay-station for telephones. No. 1,113,321; Oct. 13; Gaz. vol. 207; p. 360.

Flaherty, Edward, Moren Colliery, and C. Warrilow, Hazleton Heights, Pa. Nut-lock for bearings. No. 1,113,209; Oct. 13; Gaz. vol. 207; p. 319.

Flanagan, Raymond W., Berwick, Pa. Vegetable-cutter. No. 1,113,895; Oct. 13; Gaz. vol. 207; p. 561.

Flashslaender, Joseph. (See Grillert, Buff, and Flashslaender.)

Flavin, Frank W., Naples, S. D. Oiler. No. 1,115,296; Oct. 27; Gaz. vol. 207; p. 1147.

Fleshelm, Sylvester W., assignor to The Master Builders Company, Cleveland, Ohio. Hardening concrete structures. No. 1,113,112; Oct. 6; Gaz. vol. 207; p. 241.

Fletcher, Albert T., Boston, Mass. Silver-polish. No. 1,113,322; Oct. 13; Gaz. vol. 207; p. 360.

Flinder, William S., Chambersburg, Pa. Match-box. No. 1,113,425; Oct. 13; Gaz. vol. 207; p. 398.

Floeter, Frederick S., assignor to Wickes Brothers, Saginaw, Mich. Clutch attachment for punching and riveting machines. No. 1,112,443; Oct. 6; Gaz. vol. 207; p. 10.

Floyd, Ellis E., Celeste, Tex. Churn. No. 1,114,456; Oct. 20; Gaz. vol. 207; p. 800.

Flynn, Francis R., New York, N. Y. Combined timed lock and recorder. No. 1,114,348; Oct. 20; Gaz. vol. 207; p. 760.

Fogg, Charles F., assignor to Fogg Specialty Company, Inc., New York, N. Y. Clothes-washer. No. 1,115,207; Oct. 27; Gaz. vol. 207; p. 1148.

Fogg Specialty Company. (See Fogg, Charles F., assignor.)

Folding-Stand Company. (See Stone, Harry A., assignor.)

Forrester, Ernest G., administrator. (See Forrester, Samuel.)

Forrester, Samuel, deceased, Pittsburgh, Pa.; E. G. Forrester, administrator. Pencil-sharpening machine. No. 1,115,208; Oct. 27; Gaz. vol. 207; p. 1148.

Forster, Samuel S., Schenectady, N. Y., assignor to General Electric Company. Shaft-bearing. No. 1,115,185; Oct. 27; Gaz. vol. 207; p. 1109.

Forsyth Brothers Company. (See Forsyth, George H., assignor.)

Forsyth Brothers Company. (See Forsyth and Sisson, assignors.)

Forsyth Brothers Company. (See Sisson, Albert H., assignor.)

Forsyth, George H., Chicago, Ill. Metal window construction. No. 1,113,157; Oct. 6; Gaz. vol. 207; p. 257.

Forsyth, George H., assignor to Forsyth Brothers Company, Chicago, Ill. Method and apparatus for forming metallic sheets and the like. No. 1,112,779; Oct. 6; Gaz. vol. 207; p. 129.

Forsyth, George H., Chicago, and A. H. Sisson, Evanston, assignors to Forsyth Brothers Company, Chicago, Ill. Car-body. No. 1,112,778; Oct. 6; Gaz. vol. 207; p. 129.

Fortune, John R., Detroit, Mich. Furnace. No. 1,113,113; Oct. 6; Gaz. vol. 207; p. 241.

Foster, John B., Newark, N. J. Tooth-brush holder. No. 1,115,061; Oct. 27; Gaz. vol. 207; p. 1065.

Fosterling, Jesse W., Missoula, Mont. Jointing-head for woodworking-machines. No. 1,114,743; Oct. 27; Gaz. vol. 207; p. 951.

Fourcman, Emanuel, Arcanum, Ohio. Railway-tie. No. 1,115,464; Oct. 27; Gaz. vol. 207; p. 1203.

Fox, Arthur O., and R. R. Bates, assignors to General Purification Company, Madison, Wis. Device for treating liquids. No. 1,114,874; Oct. 27; Gaz. vol. 207; p. 908.

Fox, Arthur O., and R. R. Bates, assignors to General Purification Company, Madison, Wis. Treating liquids. No. 1,114,875; Oct. 27; Gaz. vol. 207; p. 909.

Fox, Charles J. (See Fearon, James J., assignor.)

Foye, John, H. E. Moore, and R. Boyle, assignors to Refractory Ores, Limited, Johannesburg, Transvaal, South Africa. Treatment of refractory ores. No. 1,113,323; Oct. 13; Gaz. vol. 207; p. 360.

Fraenkell & Haskell Art Company, The. (See Haskell, Samuel L., assignor.)

Francke Company, The. (See Francke, William J., assignor.)

Francke, William J., assignor to The Francke Company, New Brunswick, N. J. Flexible coupling. No. 1,115,209; Oct. 27; Gaz. vol. 207; p. 1148.

Frank, Beecher, assignor to The Simplex Awning Company, Chicago, Ill. Awning. No. 1,114,599; Oct. 20; Gaz. vol. 207; p. 848.

Franke, Emil, New York, N. Y. Easel for printing-frames and photographic enlargements. No. 1,113,549; Oct. 13; Gaz. vol. 207; p. 441.

Frankovich, George, Anaconda, Mont. Railway-rail sleeper and fastener. No. 1,113,767; Oct. 13; Gaz. vol. 207; p. 516.

Franks, Charles H. (See Roesel and Franks.)

Franks, Orrin G., assignor to W. J. Rouse, Williamsport, Pa. Folding sheet-metal box. No. 1,113,608; Oct. 13; Gaz. vol. 207; p. 480.

Franzen, John E., Chicago, Ill. Marble-shooter. No. 1,112,780; Oct. 6; Gaz. vol. 207; p. 129.

Fraser, Ethelbert M., Yonkers, N. Y., assignor, by mesne assignments, to General Elevator Company, Jersey City, N. J. Electric elevator system. (Reissue.) No. 13,806; Oct. 13; Gaz. vol. 207; p. 576.

Fraser, Russell, East Hampton, N. Y. Spool-holder. No. 1,112,692; Oct. 6; Gaz. vol. 207; p. 101.

Frazee, Ralph C., East Hampton, N. Y. Clamp. No. 1,112,781; Oct. 6; Gaz. vol. 207; p. 130.

Freas, Samuel T., Trenton, N. J., assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa. Swage-shaper for saw-teeth. No. 1,115,300; Oct. 27; Gaz. vol. 207; p. 1149.

Frederick, Francis J. C., Jersey City, N. J. Automatic winder for spring-motors. No. 1,114,457; Oct. 20; Gaz. vol. 207; p. 800.

Gould Storage Battery Company. (See Hubbard, Albert S., assignor.)
Gould Storage Battery Company. (See Snyder, Almond H., assignor.)
Gouldbourn, Joseph, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Sole-leveling machine. No. 1,114,253; Oct. 20; Gaz. vol. 207; p. 728.
Grucek, Steven, Elizabeth, Pa. Horseshoe. No. 1,113,117; Oct. 6; Gaz. vol. 207; p. 243.
Graeber, Frank, Norristown, assignor to H. H. Harting, Philadelphia, Pa. Sealing food packages. No. 1,114,747; Oct. 27; Gaz. vol. 207; p. 952.
Graeber, Frank, assignor to H. H. Harting, Philadelphia, Pa. Packaged article and producing the same. No. 1,114,748; Oct. 27; Gaz. vol. 207; p. 952.
Graham, Charles L., Ashley, N. D. Wire-stretcher. No. 1,113,002; Oct. 6; Gaz. vol. 207; p. 205.
Graham, Joseph A. (See Jobes, Willard S., assignor.)
Grahl, Max C., Dresden-Löbtau, assignor to "Universelle" Cigaretten-Maschinen-Industrie System Otto Bergsträsser-Aktiengesellschaft, Dresden, Germany. Treating paper for spiral mouthpieces of cigarettes. No. 1,114,468; Oct. 20; Gaz. vol. 207; p. 805.
Grillert, Karl P., M. Buff, and J. Flashslaender, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Sulfur dyes. No. 1,112,445; Oct. 6; Gaz. vol. 207; p. 10.
Grand Rapids Show Case Company. (See Vanderveld, Anthony, assignor.)
Grand Rapids Textile Machinery Company. (See Pease, Harry C., assignor.)
Granlund, Adolf, Escanaba, Mich. Stump-extractor. No. 1,112,998; Oct. 6; Gaz. vol. 207; p. 204.
Grant, Charles E. (See Dulz, Herman, assignor.)
Gravity Railway Signal Company. (See Hudson, Robert F., assignor.)
Gray, Edwin T., New York, and J. J. Dauler, Brooklyn, N. Y. Display apparatus. No. 1,112,901; Oct. 6; Gaz. vol. 207; p. 170.
Gray, James H., New York, N. Y. Electric furnace. No. 1,113,778; Oct. 13; Gaz. vol. 207; p. 520.
Graybill, Henry S., Reading, Pa. Flush-tank. No. 1,112,789; Oct. 6; Gaz. vol. 207; p. 133.
Greden, Paul P., Quincy, Ill. Grate. No. 1,112,999; Oct. 6; Gaz. vol. 207; p. 204.
Green, Charles M., Marblehead, assignor to The Walter M. Lowney Company, Boston, Mass. Coating-machine. No. 1,115,426; Oct. 27; Gaz. vol. 207; p. 1191.
Green, George G., Battelle, Ala. Hand-power hay-baler. No. 1,113,000; Oct. 6; Gaz. vol. 207; p. 204.
Greenawalt, Frank H., Pittsburgh, Pa. Hot-air-register attachment. No. 1,113,430; Oct. 13; Gaz. vol. 207; p. 400.
Greenbaum, Oscar, assignor to Langfeld Bros. & Co., Philadelphia, Pa. Bag and bag-frame therefor. No. 1,114,601; Oct. 20; Gaz. vol. 207; p. 850.
Greene, Albert J. (See Seaman, Albert J., assignor.)
Greene, James, Central Falls, and L. A. Asquith, Pawtucket, R. I. Drinking device. No. 1,114,254; Oct. 20; Gaz. vol. 207; p. 728.
Greene, Robert E., Memphis, Tenn. Parcel-delivery-vehicle body. No. 1,113,985; Oct. 20; Gaz. vol. 207; p. 630.
Greenebaum, Abraham H., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md. Snap-fastener top. No. 1,113,211; Oct. 13; Gaz. vol. 207; p. 320.
Greenleaf, William B., Nashville, Tenn. Machine for making coiled wire springs. No. 1,113,779; Oct. 13; Gaz. vol. 207; p. 520.
Greenstreet, Jason H., Indianapolis, Ind. Box-machine. No. 1,113,329; Oct. 13; Gaz. vol. 207; p. 302.
Greenstreet, Jason H., Indianapolis, Ind. Box blank and cleat therefor. No. 1,115,066; Oct. 27; Gaz. vol. 207; p. 1067.
Greenway, Robert B., San Bernardino, Cal. Stand-pipe. No. 1,113,330; Oct. 13; Gaz. vol. 207; p. 363.
Greenwood, Ivan A., Cleveland, Ohio. Excavating apparatus. No. 1,114,255; Oct. 20; Gaz. vol. 207; p. 728.
Greer, William B., Wheeling, W. Va. Orchard-heater. No. 1,112,902; Oct. 6; Gaz. vol. 207; p. 171.
Gregson, Thomas L., and J. I. Payette, Chicago, Ill. Wire-stripper. No. 1,113,986; Oct. 20; Gaz. vol. 207; p. 631.
Grenard, Lone. (See Hanson and Grenard.)
Grenlinger, Irvin G., Vandergrift, Pa. Scale. No. 1,113,615; Oct. 13; Gaz. vol. 207; p. 462.
Gress, Theodore, and B. Moline, Council Bluffs, Iowa. Shade-bracket. No. 1,115,427; Oct. 27; Gaz. vol. 207; p. 1192.
Gressle, Charles W., assignor, by mesne assignments, to The Standard Welding Company, Cleveland, Ohio. Vehicle wheel-rim. No. 1,112,603; Oct. 6; Gaz. vol. 207; p. 69.
Greuter, Charles R., Saugus, Mass. Carbureter. No. 1,113,531; Oct. 13; Gaz. vol. 207; p. 442.
Grey, Charles M., East Orange, N. J. Making castings. No. 1,112,694; Oct. 6; Gaz. vol. 207; p. 102.
Griesche, Gustav, and A. Beck, Oakland, Cal. Granite and stone saw. No. 1,113,780; Oct. 13; Gaz. vol. 207; p. 521.
Grieves, Albert, Springfield, Ohio, assignor to International Harvester Company of New Jersey. Mowing-machine. No. 1,113,552; Oct. 13; Gaz. vol. 207; p. 442.
Grieves, Albert, Springfield, Ohio, assignor to International Harvester Company of New Jersey. Mowing-machine. No. 1,113,553; Oct. 13; Gaz. vol. 207; p. 443.
Griffin, Fredrick W., Jacksonville, Fla. Pipe-vise holder. No. 1,113,781; Oct. 13; Gaz. vol. 207; p. 521.
Griffin, James C., assignor to Griffin Manufacturing Company, Erie, Pa. Casement and door lock. No. 1,113,331; Oct. 13; Gaz. vol. 207; p. 363.
Griffin Manufacturing Company. (See Griffin, James C., assignor.)
Griffin, Thomas, Fulton, N. Y. Water-heater. No. 1,113,003; Oct. 6; Gaz. vol. 207; p. 205.
Griffith, Charles J., St. Louis, Mo. Railway-crossing. No. 1,114,749; Oct. 27; Gaz. vol. 207; p. 953.
Griffiths, William U., Philadelphia, Pa. Compound-lever ball-cock for water-closets. No. 1,112,533; Oct. 6; Gaz. vol. 207; p. 43.
Grim, George G., Rochester, N. Y. Pie trimming and crimping machine. No. 1,113,616; Oct. 13; Gaz. vol. 207; p. 462.
Grimes, Alvah E., Norwich, Conn. Firearm. No. 1,113,212; Oct. 13; Gaz. vol. 207; p. 320.
Grimes, James W., Springfield, Ohio, assignor of one-half to C. D. Rawson, Des Moines, Iowa. Fireproof and wood-preserving paint. No. 1,113,782; Oct. 13; Gaz. vol. 207; p. 521.
Grisingher, Frank W., Guadalupe, Cal. Traction device for wheels. No. 1,114,983; Oct. 27; Gaz. vol. 207; p. 1037.
Groehn, Otto J., assignor to Briscoe Manufacturing Company, Detroit, Mich. Multiple-tube-forming mechanism. No. 1,112,695; Oct. 6; Gaz. vol. 207; p. 102.
Groehn, Otto J., assignor to Briscoe Manufacturing Company, Detroit, Mich. Machine for flanging sheet metal. No. 1,112,696; Oct. 6; Gaz. vol. 207; p. 102.
Groene, William F. (See Le Blond and Groene.)
Groh, Robert C., St. Paul, assignor of one-half to R. Steinmetz, Minneapolis, Minn. Moving-picture machine. No. 1,113,617; Oct. 13; Gaz. vol. 207; p. 463.
Grohal, Frynk. (See Kozlowski and Grohal.)
Groll, William E. (See Shimmelfennig, Joseph, assignor.)
Grote, Conrad A., St. Louis, Mo. Bullet. No. 1,114,878; Oct. 27; Gaz. vol. 207; p. 1000.
Groupe, Charles G. G., Jersey Shore, Pa. Agricultural apparatus. No. 1,113,431; Oct. 13; Gaz. vol. 207; p. 400.
Guffee, John A., Fort Worth, Tex., assignor to Main Belting Company, Philadelphia, Pa. Combined point and bolt for belts. No. 1,115,307; Oct. 27; Gaz. vol. 207; p. 1151.
Guiberson, Samuel A., Jr., San Francisco, Cal. Pipe and casing tongs. No. 1,112,604; Oct. 6; Gaz. vol. 207; p. 69.
Guiberson, Samuel A., Jr., San Francisco, Cal. Casing-elevator. No. 1,112,605; Oct. 6; Gaz. vol. 207; p. 70.
Guibord, Leonard L. (See Powers and Guibord.)
Gump, Leonard B. (See Murphy, Edward J., assignor.)
Gumpel, Martin. (See Kothe, Gustav J. P., assignor.)
Gundelach, Emil C., New Rochelle, assignor of one-half to F. G. Riker, Mount Vernon, N. Y. Retaining device. No. 1,114,469; Oct. 20; Gaz. vol. 207; p. 805.
Gunn, Charles, Jr., Mount Royal, N. J. Gas-heating sad-iron. No. 1,115,308; Oct. 27; Gaz. vol. 207; p. 1152.
Gunn, Charles H., Modesto, Cal. Scraper. No. 1,112,606; Oct. 6; Gaz. vol. 207; p. 70.
Gunnoe, Berta B., Beckley, W. Va. Frictionless car-wheel. No. 1,115,309; Oct. 27; Gaz. vol. 207; p. 1152.
Gustafson, Axel R., Chicago, Ill. Ironing-machine. No. 1,113,554; Oct. 13; Gaz. vol. 207; p. 443.
Gustafson, Axel W., St. Joseph, Mich. Measuring implement. No. 1,114,134; Oct. 20; Gaz. vol. 207; p. 684.
Gustafson, Frank O., Bessemer township, Gogebic county, Mich. Overhead-railway construction. No. 1,112,446; Oct. 6; Gaz. vol. 207; p. 11.
Gwinn, George W., New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C. Machine for packaging materials. No. 1,114,256; Oct. 20; Gaz. vol. 207; p. 729.
Gwozdziewicz, John, and M. Bizon, Bretz, W. Va. Lantern. No. 1,115,067; Oct. 27; Gaz. vol. 207; p. 1067.
Gwynnes Limited. (See Breeze, John F., assignor.)
Gyro Motor Company. (See Heath, Spencer, assignor.)
H. B. Glover Company. (See Bissell and Karberg, assignors.)
H. D. Beach Company, The. (See Gibson and Marden, assignors.)
H. T. Paiste Company. (See Webb, Wilmer M., assignor.)
Haase, Otto, Brand-Erbisdorf, Germany. Pneumatic organ-action. No. 1,114,879; Oct. 27; Gaz. vol. 207; p. 1000.
Hackett, James N. (See Howe, George E., assignor.)
Haeussner, Edward, St. Louis, Mo. Spike. No. 1,113,004; Oct. 6; Gaz. vol. 207; p. 206.
Hafertep, Theodor B., Chicago, Ill. Fastening sheet material. No. 1,114,135; Oct. 20; Gaz. vol. 207; p. 684.
Hagemann, Karl, Leverkusen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Yellow azodye. No. 1,114,750; Oct. 27; Gaz. vol. 207; p. 953.
Hagen, Arthur T., and D. M. Cooper, Rochester, N. Y., assignors, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio. Ironing-machine. No. 1,115,187; Oct. 27; Gaz. vol. 207; p. 1110.
Hahl, Hans J. (See Taub and Hahl.)
Hainer Book-Keeping Machine Company. (See Hainer, Whitfield J., assignor.)

Hainer, Whitfield J., assignor to Hainer Book-Keeping Machine Company, Providence, R. I. Autographic register. No. 1,112,607; Oct. 6; Gaz. vol. 207; p. 70.
Haldeman, Edward C., Philadelphia, Pa. Conical-sanitary-cup holder. No. 1,113,618; Oct. 13; Gaz. vol. 207; p. 463.
Haldeman, Frank M., assignor to The Master Builders Company, Cleveland, Ohio. Aggregate for concrete. No. 1,113,555; Oct. 13; Gaz. vol. 207; p. 443.
Hale, William H., assignor of one-tenth to P. Winfrey, one-tenth to W. B. Shorter, one-tenth to B. J. Jetter, one-tenth to L. Williams, and one-tenth to W. Thomas, Pittsburgh, Pa. Fire-escape. No. 1,113,158; Oct. 6; Gaz. vol. 207; p. 258.
Hall, Charles B., assignor to Oscillating Light Co., Inc., Oakland, Cal. Steering attachment for automobile-lamps. No. 1,114,136; Oct. 20; Gaz. vol. 207; p. 684.
Hall, Clarence A., Mount Airy, assignor to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa. Recovery of values from the leach-water of copper extraction. No. 1,112,608; Oct. 6; Gaz. vol. 207; p. 71.
Hall, David, Higden, Ark. Rail tie and joint. No. 1,114,751; Oct. 27; Gaz. vol. 207; p. 953.
Hall, Ernest J. (See Waterman, Frank R., assignor.)
Hall, F. H., *et al.* (See Watkins, William F., assignor.)
Hall, George F., Erie, Pa. Sterilizer. No. 1,114,880; Oct. 27; Gaz. vol. 207; p. 1000.
Hall, John H. (See Campbell, Hall, and Howe.)
Hall Printing Press Company. (See White, Joseph, assignor.)
Hall Switch & Signal Company. (See Coleman, Clyde J., assignor.)
Hall Switch & Signal Company. (See Kleinschmidt, Edward E., assignor.)
Hall Switch & Signal Company. (See Lee, Thomas L., assignor.)
Hall Switch & Signal Company. (See Rugh, Harry O., assignor.)
Halvorsen-Pande, Gustav, assignor of one-half to F. J. Cushing, Chicago, Ill. Chuck. No. 1,115,310; Oct. 27; Gaz. vol. 207; p. 1152.
Ham, Henry H., Shrewsbury, Mass. Electrical installation. No. 1,112,903; Oct. 6; Gaz. vol. 207; p. 171.
Ham-Meix Manufacturing Company, The. (See Hamilton, Harry W., assignor.)
Hamburger, Alexander, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 1,115,188; Oct. 27; Gaz. vol. 207; p. 1110.
Hamburger, Alexander, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 1,115,189; Oct. 27; Gaz. vol. 207; p. 1111.
Hamel Shoe Machinery Co. Inc. (See Beaudry, Zotique, assignor.)
Hamel Shoe Machinery Company. (See Holbrook, Frank, assignor.)
Hamel Shoe Machinery Company. (See Valois, Felix E., assignor.)
Hamilton, Harry W., assignor to The Ham-Meix Manufacturing Company, Indianapolis, Ind. Gas-generator. No. 1,114,984; Oct. 27; Gaz. vol. 207; p. 1037.
Hamilton, Jacob S., Plattsburg, Mo. Post-hole auger. No. 1,113,332; Oct. 13; Gaz. vol. 207; p. 363.
Hamilton, Walter L., Holyoke, Mass. Truck. No. 1,114,752; Oct. 27; Gaz. vol. 207; p. 954.
Hammersmith, Charles H., Brookfield, Ill. Shock-absorber. No. 1,113,619; Oct. 13; Gaz. vol. 207; p. 463.
Hammond, William P., New York, N. Y. Combined valve-cap and dust-guard for pneumatic-tire valves. No. 1,114,257; Oct. 20; Gaz. vol. 207; p. 729.
Hamon, Louis. (See Morin, Hamon, and Hess.)
Hancock, George, *et al.* (See Beem, Carleton E., assignor.)
Hanisch, Arthur F., Dayton, Ohio. Folding washbench. No. 1,114,258; Oct. 20; Gaz. vol. 207; p. 730.
Hankins, George J., Prairie, Miss. Ash-box. No. 1,114,470; Oct. 20; Gaz. vol. 207; p. 806.
Hanley, John W., New York, N. Y. Game apparatus. No. 1,114,608; Oct. 20; Gaz. vol. 207; p. 851.
Hanmer, Laurence G., New York, N. Y. Pipe-stem. No. 1,114,753; Oct. 27; Gaz. vol. 207; p. 954.
Hannover, Charles H. (See Durant and Hannover.)
Hansen, Abel, Perth Amboy, N. J. Washtub. No. 1,112,790; Oct. 6; Gaz. vol. 207; p. 133.
Hansen, Charles C., Easton, Pa., assignor to Ingersoll Rand Company, New York, N. Y. Drill. No. 1,113,620; Oct. 13; Gaz. vol. 207; p. 464.
Hansen, Christian F., Norfolk, Nebr. Metal-casting device. No. 1,113,333; Oct. 13; Gaz. vol. 207; p. 364.
Hansen, Hans C., Newton, Mass. Rule and lead cutter. No. 1,114,754; Oct. 27; Gaz. vol. 207; p. 955.
Hansen, John S., Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Shoe-tree. No. 1,114,349; Oct. 20; Gaz. vol. 207; p. 760.
Hansen, Mads, Bancroft, Nebr. Stack-cover. No. 1,114,755; Oct. 27; Gaz. vol. 207; p. 955.
Hansen, Niels A., Seattle, Wash. Knockdown cabinet. No. 1,113,432; Oct. 13; Gaz. vol. 207; p. 400.
Hansen and Zimmers. (See Keller, Jeremiah, assignor.)
Hanson, Bennie P., and L. Grenard, Eagle Grove, Iowa. Buggy-pole. No. 1,114,756; Oct. 27; Gaz. vol. 207; p. 955.
Hanson, Hans J., assignor to Ann Arbor Machine Company, Ann Arbor, Mich. Baling-press. (Reissue.) No. 13,810; Oct. 20; Gaz. vol. 207; p. 888.
Hanzlik, Herman N., Wonewoc, Wis. Rail fastener and pad. No. 1,114,471; Oct. 20; Gaz. vol. 207; p. 806.
Harbaugh, Howard E., Kenosha, Wis. Sash or shutter operating and fastening device. No. 1,113,334; Oct. 13; Gaz. vol. 207; p. 364.
Hardenbergh, Abner, Dunkirk, N. Y. Hand-truck. No. 1,115,428; Oct. 27; Gaz. vol. 207; p. 1192.
Hardie, James G., Canton, N. Y. Sheet-feeding machine. No. 1,112,791; Oct. 6; Gaz. vol. 207; p. 133.
Hardy, Herman F. (See Suggs, Theophilus W., assignor.)
Harkness, Charles, Providence, assignor to H. C. Dexter, Central Falls, R. I. Hook and eye. No. 1,112,904; Oct. 6; Gaz. vol. 207; p. 172.
Harner, George E. (See Dunkle and Harner.)
Harrigan, Patrick J., McKeesport, Pa. Dump-car. No. 1,114,350; Oct. 20; Gaz. vol. 207; p. 760.
Harrington, Arthur M. (See Scott and Harrington.)
Harris, Albert E., and J. W. Driver, Bradford, England, assignors to The Salt's Textile Manufacturing Company, Bridgeport, Conn. Batting-frame. No. 1,115,190; Oct. 27; Gaz. vol. 207; p. 1111.
Harris, Alfred F., administrator. (See Harris, Charles G.)
Harris Automatic Press Company, The. See Anderson, Nels, assignor.)
Harris Automatic Press Company, The. (See Harris, Charles G., assignor.)
Harris Automatic Press Company, The. (See Pritchard, Carl G., assignor.)
Harris, Charles G., deceased, Niles, Ohio; A. F. Harris, administrator, assignor to The Harris Automatic Press Company. Sheet feed or separator. No. 1,112,000; Oct. 6; Gaz. vol. 207; p. 71.
Harris, Charles W., and H. Buchholz, Beaver Falls, Pa. Gas-heated sad-iron. No. 1,112,610; Oct. 6; Gaz. vol. 207; p. 72.
Harris, Clyde D., Helena, Mo. Sleigh attachment for automobiles. No. 1,114,259; Oct. 20; Gaz. vol. 207; p. 730.
Harris, De Witt C., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis. Type-writer. No. 1,114,757; Oct. 27; Gaz. vol. 207; p. 955.
Harris, De Witt C., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis. Type-writer. No. 1,115,068; Oct. 27; Gaz. vol. 207; p. 1068.
Harris, De Witt C., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis. Type-writer. No. 1,115,069; Oct. 27; Gaz. vol. 207; p. 1068.
Harris, De Witt C., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis. Type-writer. No. 1,115,070; Oct. 27; Gaz. vol 207; p. 1068.
Harris, De Witt C., assignor, by mesne assignments, to Harris Typewriter Manufacturing Company, Fond du Lac, Wis. Type-writer. No. 1,115,311; Oct. 27; Gaz. vol. 207; p. 1153.
Harris, Ford W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-breaker. No. 1,113,335; Oct. 13; Gaz. vol. 207; p. 365.
Harris, Ford W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,113,433; Oct. 13; Gaz. vol. 207; p. 400.
Harris, John, Cleveland, Ohio. Acetylene-generator. No. 1,113,336; Oct. 13; Gaz. vol. 207; p. 365.
Harris Typewriter Manufacturing Company. (See Harris De Witt C., assignor.)
Harrison Safety Boiler Works. (See Gamble, Joseph W., assignor.)
Harrison, Walter, Dewmaine, Ill. Miner's acetylene-gas lamp. No. 1,113,621; Oct. 13; Gaz. vol. 207; p. 464.
Hart, Lester C., assignor to O. R. Jones, Youngstown, Ohio. Safety limit-stop. No. 1,113,337; Oct. 13; Gaz. vol. 207; p. 366.
Hart, Thomas H., Everett, Mass. Device for straightening cans. No. 1,112,792; Oct. 6; Gaz. vol. 207; p. 134.
Harter Company, The. (See Harter, Noah S., assignor.)
Harter, Noah S., assignor to The Harter Company, Waukegan, Ill. Culinary utensil. No. 1,112,447; Oct. 6; Gaz. vol. 207; p. 11.
Harting, Herman H. (See Graeber, Frank, assignor.)
Hartley, William, assignor of one-half to T. F. Johnson, Leicester, England. Spinning-machine. No. 1,113,434; Oct. 13; Gaz. vol. 207; p. 401.
Hartman, Frank, *et al.* (See Pugh, Milton E., assignor.)
Hartman, George W., McKeesport, Pa. Confetti cartridge and gun. No. 1,113,338; Oct. 13; Gaz. vol. 207; p. 366.
Hartmann, Emil, assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md. Combined buckle and strap-end attachment. No. 1,113,435; Oct. 13; Gaz. vol. 207; p. 401.
Hartmann, William C., assignor of one-half to J. M. Preisinger, Milwaukee, Wis. Cream-separator. No. 1,113,005; Oct. 6; Gaz. vol. 207; p. 206.
Hartzler, Aaron, Goshen, Ind. Ladder. No. 1,113,436; Oct. 13; Gaz. vol. 207; p. 402.
Harvey, Edward J., assignor to Harvey Spring & Forging Company, Racine, Wis. Spring-manufacturing machine. No. 1,113,087; Oct. 20; Gaz. vol. 207; p. 631.
Harvey, James M. and J. A., Ogden, Kans. Hay and grain stacker. No. 1,113,088; Oct. 20; Gaz. vol. 207; p. 631.
Harvey, John A. (See Harvey, James M. and J. A.)

Harvey Spring & Forging Company. (See Harvey, Edward J., assignor.)
Harvey, William J., Flint, Mich. Hacksaw-frame. No. 1,113,118; Oct. 6; Gaz. vol. 207; p. 243.
Harveycutter, Austin, *et al.* (See Lake, Wilmot, assignor.)
Haskell, Samuel I., New York, N. Y., assignor to The Fraenkell & Haskell Art Company. Mold. No. 1,114,758; Oct. 27; Gaz. vol. 207; p. 956.
Haskin, William J., *et al.* (See Tripp, Benjamin D., assignor.
Hatajke, Stanislow, *et al.* (See Siwak, Feliks, assignor.)
Hatch, Orville C., Seattle, Wash. Thermostatic member and supporting-post therefor. No. 1,112,448; Oct. 6; Gaz. vol. 207; p. 11.
Hatch, Orville C., Seattle, Wash. Valve for steam-heating systems. No. 1,114,609; Oct. 20; Gaz. vol. 207; p. 851.
Haubel, Matthew, Columbus township, Anoka county, Minn. Attachment for self-binders. No. 1,115,191; Oct. 27; Gaz. vol. 207; p. 1111.
Hauerwas, John, Jr., Milwaukee, Wis. Non-skid device for motor-cycles. No. 1,113,006; Oct. 6; Gaz. vol. 207; p. 207.
Hauge, Severin M., Fort Dodge, Iowa. Toilet-paper holder. No. 1,113,007; Oct. 6; Gaz. vol. 207; p. 207.
Haught, Henry H., assignor of one-half to W. H. Hilligass, Payson, Ariz. Pack-harness. No. 1,114,472; Oct. 20; Gaz. vol. 207; p. 806.
Hauptmann, Peter, and A. Rohde, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Azo dyes for wool. No. 1,113,622; Oct. 13; Gaz. vol. 207; p. 464.
Hauser, Frederick, San Francisco, Cal. Window. No. 1,114,260; Oct. 20; Gaz. vol. 207; p. 730.
Hauser, Leopold, assignor of one-half to S. Weil, New York, N. Y. Folding necktie-holder. No. 1,112,611; Oct. 6; Gaz. vol. 207; p. 72.
Hausmann, Fritz, assignor to Verein Chemischer Fabriken in Mannheim, Mannheim, Germany. Concentrating nitric acid. No. 1,115,192; Oct, 27; Gaz. vol. 207; p. 1112.
Hawes, Herbert E., New York, N. Y. Balancing mechanism for aeroplanes. No. 1,113,623; Oct. 13; Gaz. vol. 207; p. 465.
Hawkins, Edward J., Solvay, N. Y. Sheet-music container. No. 1,115,312; Oct. 27; Gaz. vol. 207; p. 1153.
Hawkins, John K., Mohawk, Tenn. Acetylene-gas generator. No. 1,113,989; Oct. 20; Gaz. vol. 207; p. 632.
Hawks, William, assignor to Hugo Manufacturing Company, Duluth, Minn. Gas-burner. No. 1,113,330; Oct. 13; Gaz. vol. 207; p. 366.
Hawthorne, William E., assignor to Daisy Manufacturing Company, Plymouth, Mich. Spring-gun. No. 1,114,610; Oct. 20; Gaz. vol. 207; p. 851.
Hay, William G., Prestwich, England. Apparatus for removing flue dust or dirt and the like. No. 1,115,193; Oct. 27; Gaz. vol. 207; p. 1112.
Hay, William G., Prestwich, England. Apparatus for removing flue dust or dirt and the like. No. 1,115,194; Oct. 27; Gaz. vol. 207; p. 1113.
Hayduk, John, Brooklyn, N. Y. Collapsible field-chair. No. 1,113,340; Oct. 13; Gaz. vol. 207; p. 367.
Hayes Brothers. (See Hayes, Joseph G., assignor.)
Hayes, Daniel P. (See Anderson, George W., assignor.)
Hayes, Ernet H. (See Ash and Hayes.)
Hayes, Joseph G., assignor to Hayes Brothers, Indianapolis, Ind. Drain-pipe. No. 1,114,881; Oct. 27; Gaz. vol. 207; p. 1000.
Hayes, Neenlan. (See Burks and Hayes.)
Hayes, Thomas J., Cleveland, Ohio, assignor to W. A. Horgan, Boston, Mass. Pump. No. 1,114,689; Oct. 20; Gaz. vol. 207; p. 878.
Hayford, Walter C., Lake, Ind. Clutch mechanism. No. 1,113,624; Oct. 13; Gaz. vol. 207; p. 465.
Haynes, John I., St. Louis, Mo. Calculating-machine. No. 1,112,612; Oct. 6; Gaz. vol. 207; p. 72.
Hays, Louis H., assignor to The Kaynee Company, Cleveland, Ohio, Garment. No. 1,113,008; Oct. 6; Gaz. vol. 207; p. 207.
Hayworth, Everett E., High Point, N. C. Mail-bag catcher. No. 1,14,690; Oct. 20; Gaz. vol. 207; p. 879.
Healey & Company. (See Douglas, William H., assignor.)
Healy, Norman B., Fredonia, N. Y. Valve-dressing tool. No. 1,115,071; Oct. 27; Gaz. vol. 207; p. 1069.
Heat Saver Company. (See Blaske, William C., assignor.)
Heath, Spencer, assignor to Gyro Motor Company, Washington, D. C. Rotary gas-engine. No. 1,112,905; Oct. 6; Gaz. vol. 207; p. 172.
Heberer, Athelbert H. (See Thomas and Heberer, assignors.)
Heberer, Conrad. (See Thomas and Heberer.)
Heddon, Charles, Dowagiac, Mich. Fish bait or lure. No. 1,114,137; Oct. 20; Gaz. vol. 207; p. 685.
Hedglon, Mead, Syracuse, assignor to V. A. Dreyfus, New York, N. Y. Clothes-washing machine. No. 1,114,261; Oct. 20; Gaz. vol. 207; p. 730.
Heim, Charles B., Marco, Ind. Paper-press. No. 1,113,625; Oct. 13; Gaz. vol. 207; p. 466.
Heineman, Charles J., Chicago, Ill., assignor to Emil Grossman M'f'g. Co. Inc., Brooklyn, N. Y. Wind-shield cleaner. No. 1,112,793; Oct. 6; Gaz. vol. 207; p. 134.
Heinemann, Karl, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Automatic gun. No. 1,114,611; Oct. 20; Gaz. vol. 207; p. 852.
Heinsen, Christian M., Fresno, Cal. Oil-burner. No. 1,114,985; Oct. 27; Gaz. vol. 207; p. 1038.
Heisler, Charles L., Schenectady, N. Y. Wheel for vehicles. No. 1,113,213; Oct. 13; Gaz. vol. 207; p. 320.
Heisler, Charles L., Schenectady, N. Y. Pipe expanding and beading machine. No. 1,114,351; Oct. 20; Gaz. vol. 207; p. 761.
Helfrich, M. D. (See Henn, William A., assignor.)
Heller, Adam, Baltimore, Md. Molding-machine. No. 1,113,626; Oct. 13; Gaz. vol. 207; p. 466.
Hellstrom, Frank O., Grove, N. D. Rail-support. No. 1,112,613; Oct. 6; Gaz. vol. 207; p. 73.
Helmsen, Charles J., *et al.* (See O'Donnell, John G., assignor.)
Helmsen, Edward A., *et al.* (See O'Donnell, John G., assignor.)
Hendee, Edward T., Chicago, Ill. Welding-machine. No. 1,115,195; Oct. 27; Gaz. vol. 207; p. 1113.
Henderson, Emma E., Denver, Colo. Nut-bowl. No. 1,113,990; Oct. 20; Gaz. vol. 207; p. 632.
Henderson, Frank B., Chicago, Ill. Table for instruments and the like. No. 1,113,991; Oct. 20; Gaz. vol. 207; p. 633.
Hendrick, Piotr, *et al.* (See Siwak, Feliks, assignor.)
Henkel, August, Newark, N. J. Combined nail-file and cuticle-knife. No. 1,113,168; Oct. 6; Gaz. vol. 207; p. 261.
Henn, William A., Evansville, assignor to M. D. Helfrich, Vanderburgh county, Ind. Integral overflow and waste-valve therefor. No. 1,113,627; Oct. 13; Gaz. vol. 207; p. 466.
Hennig, Henry, Paterson, N. J. Dyeing or washing machine. No. 1,115,072; Oct. 27; Gaz. vol. 207; p. 1069.
Henning, Thomas W., San Angelo, Tex. Windmill. No. 1,115,313; Oct. 27; Gaz. vol. 207; p. 1153.
Henry Disston & Sons. (See Freas, Samuel T., assignor.)
Henry, Edward W., Cortez, Colo. Automatically-operated flood-water-releasing flume. No. 1,113,341; Oct. 13; Gaz. vol. 207; p. 367.
Henry, George J., Jr., San Francisco, Cal. Diverter for fluid streams. No. 1,114,262; Oct. 20; Gaz. vol. 207; p. 731.
Henry R. Worthington. (See Brown, John J., assignor.)
Hensel Aero Stabilizer Company, The. (See Hensel, William F., assignor.)
Hensel, William F., assignor to The Hensel Aero Stabilizer Company, Chicago, Ill. Stabilizer for aeronautical vehicles. No. 1,112,794; Oct. 6; Gaz. vol. 207; p. 134.
Hermand, Lucien, Rouen, France. Shutter mechanism for kinetoscopes or kinematographic apparatus. No. 1,115,196; Oct. 27; Gaz. vol. 207; p. 1113.
Hermann, Charles A., Milwaukee, Wis. Package-receptacle. No. 1,112,449; Oct. 6; Gaz. vol. 207; p. 12.
Herreshoff, John B. F., assignor to General Chemical Company, New York, N. Y. Separating moisture from burner-gases. No. 1,113,437; Oct. 13; Gaz. vol. 207; p. 402.
Herrick, Albert B., New York, N. Y., assignor to M. C. Messler, Pawtucket, R. I. Igniter. No. 1,112,795; Oct. 6; Gaz. vol. 207; p. 135.
Herrick, James A., Newark, N. J. Gas-producer apparatus. No. 1,112,534; Oct. 6; Gaz. vol. 207; p. 43.
Hershey, William B. C., assignor to The Excelsior Seat Company, Columbus, Ohio. Vehicle-door. No. 1,113,214; Oct. 13; Gaz. vol. 207; p. 321.
Herz, Adolf, Vienna, Austria-Hungary. Shock-absorber. No. 1,114,601; Oct. 20; Gaz. vol. 207; p. 879.
Hess, Ernest. (See Morin, Hamon, and Hess.)
Hess, Henry, Wawa, Pa. Driving-belt. No. 1,113,438; Oct. 13; Gaz. vol. 207; p. 402.
Hess, Henry H., and J. F. Parker, assignors to P. P. Lockling Improved Automatic Passenger Fare Registering Company, Mobile, Ala. Apparatus for printing and delivering transfer-slips. No. 1,113,783; Oct. 13; Gaz. vol. 207; p. 521.
Hess, Ludwig, New York, N. Y. Producing printed music-sheets. No. 1,112,450; Oct. 6; Gaz. vol. 207; p. 12.
Hess, Meyer S., Baltimore, Md., assignor to United Shoe Machinery Company, Paterson, N. J. Boot and shoe. No. 1,114,352; Oct. 20; Gaz. vol. 207; p. 761.
Hessberger, Johannes. (See Schönherr and Hessberger.)
Hewett, John E., Wilmington, N. C. Broom. No. 1,112,906; Oct. 6; Gaz. vol. 207; p. 173.
Heyde, Friedrich, Tegel, near Berlin, Germany. Artificial teeth. No. 1,112,607; Oct. 6; Gaz. vol. 207; p. 103.
Heyn, Edmund C., Catonsville, Md., assignor to The B. V. D. Company, New York, N. Y. Garment. No. 1,113,992; Oct. 20; Gaz. vol. 207; p. 633.
Heyroth, Albert H., Great Falls, Mont. Windmill-power plant. No. 1,114,759; Oct. 27; Gaz. vol. 207; p. 957.
Heyroth, Albert H., Great Falls, Mont. System of electrical supply. No. 1,114,760; Oct. 27; Gaz. vol. 207; p. 957.
Hibbard, Angus S., New York, N. Y. Electrical recorder. No. 1,114,612; Oct. 20; Gaz. vol. 207; p. 852.
Hick, Harry J., assignor, by mesne assignments, to The MacCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Filing appliance. No. 1,115,197; Oct. 27; Gaz. vol. 207; p. 1114.
Hickey, James G., and F. J. Baird, Jacksonville, Fla. Box or crate. No. 1,112,698; Oct. 6; Gaz. vol. 207; p. 103.
Hidecker, Carver, San Anselmo, assignor to Ione Fire Brick Company, San Francisco, Cal. Fire-brick. No. 1,115,429; Oct. 27; Gaz. vol. 207; p. 1192.

Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Window-sash-grooving machine. No. 1,114,761; Oct. 27; Gaz. vol. 207; p. 958.
Higgin Manufacturing Company, The. (See Higgin, Henry, assignor.)
Higgins, Fred T., Klamath Falls, Oreg. Lamp-burner attachment. No. 1,112,451; Oct. 6; Gaz. vol. 207; p. 13.
Higgins, Harold H., assignor of one-half to L. E. Kean, Waltham, Mass. Lifter for utensils. No. 1,113,215; Oct. 13; Gaz. vol. 207; p. 321.
Higgins, William H. C., Jr., assignor to M. Rumely Company, Laporte, Ind. Plow-lift. No. 1,112,706; Oct. 6; Gaz. vol. 207; p. 135.
Hight, George W., Jr. (See Hight, William T. and G. W., Jr.)
Hight, William T., Boston, and G. W. Hight, Jr., Quincy, Mass. Sliding shoe for furniture. No. 1,114,353; Oct. 20; Gaz. vol. 207; p. 761.
Hightower, James C., assignor of one-half to P. F. Bauknight, Atlanta, Ga. Broom. No. 1,112,614; Oct. 6; Gaz. vol. 207; p. 73.
Higman, Gertrude, Los Angeles, Cal. Gutter-section. No. 1,113,784; Oct. 13; Gaz. vol. 207; p. 522.
Hild, Frederic W., Portland, Oreg. Cyclometer attachment for wheels of rail-cars. No. 1,113,785; Oct. 13; Gaz. vol. 207; p. 522.
Hildebrand, James L., Boston, Mass. Toilet-paper cabinet. No. 1,114,354; Oct. 20; Gaz. vol. 207; p. 762.
Hildreth, Charles H., and C. C. Daubenspeck, Oilfield, Ill. Rotary gas-engine. No. 1,113,993; Oct. 20; Gaz. vol. 207; p. 633.
Hill, George S., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Bender-actuating mechanism for blindstitch sewing-machines. No. 1,113,628; Oct. 13; Gaz. vol. 207; p. 467.
Hill, Henry, Hoxton, London, England. Joint for brewers' and like pipes. No. 1,113,994; Oct. 20; Gaz. vol. 207; p. 634.
Hill, James W. P., Nebo, N. C. Reversible plow. No. 1,114,692; Oct. 20; Gaz. vol. 207; p. 879.
Hill, Paul C., Taft, Cal. Coupling. No. 1,113,556; Oct. 13; Gaz. vol. 207; p. 443.
Hillebrand, Franz. (See Dreyfus and Hillebrand.)
Hilligass, William H. (See Haught, Henry H., assignor.)
Hillis, Edward R. (See McIntyre, Frederick, assignor.)
Hills, Henry A., Grand Rapids, Mich. Filtering device. No. 1,113,342; Oct. 13; Gaz. vol. 207; p. 368.
Hinds, Christopher P., Calcite, Colo. Internal-combustion engine. No. 1,114,473; Oct. 20; Gaz. vol. 207; p. 807.
Hines, John H. (See Menges, Albert C., assignor.)
Hines, William A., W. J. Curry, J. D. Miskelly, and S. A. Marshall, New Cumberland, W. Va.; said Marshall assignor to W. A. Andrews, East Liverpool, Ohio. Gas and oil burner. No. 1,112,797; Oct. 6; Gaz. vol. 207; p. 136.
Hirsch, Leopold R., Brooklyn, N. Y. Boiler. No. 1,115,198; Oct. 27; Gaz. vol. 207; p. 1114.
Hirst, Harry R., and D. Ungaro, Trenton, N. J. Chalk-holder. No. 1,114,693; Oct. 20; Gaz. vol. 207; p. 880.
Hirst, Harry R., and D. Ungaro, Trenton, N. J., Repair-tool. No. 1,114,694; Oct. 20; Gaz. vol. 207; p. 880.
Hirt, Jules H., Sewickley, Pa., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Gas-producer. No. 1,114,355; Oct. 20; Gaz. vol. 207; p. 762.
Hitchner, Chester W., Philadelphia, Pa. Sandwich-cake machine. No. 1,114,138; Oct. 20; Gaz. vol. 207; p. 685.
Hlatky, Joseph. (See Taylor, Wallace M., assignor.)
Hnatsan, Paul, *et al.* (See Siwak, Feliks, assignor.)
Hoag, John B., Kirksville, Mo. Vertically-adjustable gate. No. 1,114,613; Oct. 20; Gaz. vol. 207; p. 852.
Hoag, Norman J., Skaneateles, N. Y. Spring-contracting device. No. 1,113,343; Oct. 13; Gaz. vol. 207; p. 368.
Hoagland, Frank O., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Mushroom-bullet. No. 1,114,356; Oct. 20; Gaz. vol. 207; p. 762.
Hobbs, Willis F., assignor to The Bridgeport Hardware Manufacturing Corporation, Bridgeport, Conn. Handle-fastening. No. 1,112,798; Oct. 6; Gaz. vol. 207; p. 136.
Hoben, John M. (See Cramer and Hoben.)
Hochstrasser, Arnold, Cementon, assignor to Whitehall Cement Manufacturing Company, Philadelphia, Pa. Cement-scraper. No. 1,114,986; Oct. 27; Gaz. vol. 207; p. 1038.
Hodge, Karl, Onaway, Mich. Steering-wheel. No. 1,114,762; Oct. 27; Gaz. vol. 207; p. 958.
Hodges, Ezra J., Algona, Iowa. Nut-lock. No. 1,113,344; Oct. 13; Gaz. vol. 207; p. 368.
Hodges, William S., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Axle-box. No. 1,114,474; Oct. 20; Gaz. vol. 207; p. 807.
Hodkinson, George F., assignor of one-half to American Water Softener Company, Philadelphia, Pa. Filter construction. No. 1,114,763; Oct. 27; Gaz. vol. 207; p. 958.
Hoefer, Fred W., Lyndhurst, assignor to R. Meyer, Hoboken, N. J. Bottle-closure device. No. 1,113,119; Oct. 6; Gaz. vol. 207; p. 243.
Hoefer, Frederick A., assignor to H. E. Sessions, Columbia, S. C. Cotton-seed linter. No. 1,114,475; Oct. 20; Gaz. vol. 207; p. 808.
Hoffman, Clay L., and W. E. Stoner, Portsmouth, Ohio. Safety metallic railway-tie. No. 1,114,357; Oct. 20; Gaz. vol. 207; p. 763.
Hoffman Heater Company, The. (See Oehlke, Frederick H., assignor.)
Hoffman, John J., New Kensington, assignor, by mesne assignments, to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,114,987; Oct. 27; Gaz. vol. 207; p. 1038.
Hoffman, Josef, Cleveland, Ohio. Variable-speed gearing. No. 1,113,629; Oct. 13; Gaz. vol. 207; p. 467.
Hoffman, Joseph C., New York, N. Y. Spool. No. 1,113,345; Oct. 13; Gaz. vol. 207; p. 368.
Hoffmann, Frances A. J., San Francisco, Cal. Educational game. No. 1,114,139; Oct. 20; Gaz. vol. 207; p. 685.
Hofmann, Fritz, and C. Coutelle, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Production of caoutchouc substances. No. 1,113,630; Oct. 13; Gaz. vol. 207; p. 468.
Hofmann, Fritz, and C. Coutelle, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Production of caoutchouc substances. No. 1,113,631; Oct. 13; Gaz. vol. 207; p. 468.
Hofstatter, Edwin A., New York, N. Y. Chair, sofa, and similar furniture. No. 1,114,476; Oct. 20; Gaz. vol. 207; p. 808.
Holbrook, Frank, assignor to Hamel Shoe Machinery Company, Lynn, Mass. Burnishing-machine. No. 1,113,216; Oct. 13; Gaz. vol. 207; p. 321.
Holbrook, Robert A., Chicago Heights, assignor to Victor Chemical Works, Chicago, Ill. Baking preparation. No. 1,113,632; Oct. 13; Gaz. vol. 207; p. 468.
Holder-Perkins Company. (See Perkins, Franklin J., assignor.)
Holdsworth, Willie, assignor of one-half to H. Smith, Northboro, Mass. Disk cam for gill-drawing frames. No. 1,113,346; Oct. 13; Gaz. vol. 207; p. 369.
Holland Sprinkler Company. (See Bennet, Gerard D.)
Holle, Alexander A., Olst, Netherlands. Aeroplane. No. 1,115,073; Oct. 27; Gaz. vol. 207; p. 1070.
Holley, Ulysses G., Sikeston, Mo. Shook. No. 1,114,614; Oct. 20; Gaz. vol. 207; p. 853.
Hollidge, Frederick D., Washington, D. C. Air-craft. No. 1,112,615; Oct. 6; Gaz. vol. 207; p. 74.
Holmberg, August W. (See Dean and Holmberg.)
Holt, Theodore P. (See Dern and Holt.)
Holzwarth, Hans, Mannheim, assignor of one-half to E. Junghans, Schramberg, Germany. Gas-turbine. No. 1,113,347; Oct. 13; Gaz. vol. 207; p. 369.
Honiss, William H. (See Sturtevant and Honiss.)
Hoock, Theodore, East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company. Winding for induction-motors. No. 1,112,452; Oct. 6; Gaz. vol. 207; p. 13.
Hood Rubber Company. (See Roper, Charles H., assignor.)
Hooker, Joseph L., Anderson, Ind. Compression-tank. No. 1,114,358; Oct. 20; Gaz. vol. 207; p. 763.
Hoover, Archie B., Paola, Kans. Means for rewinding the films of motion-picture machines. No. 1,113,633; Oct. 13; Gaz. vol. 207; p. 468.
Hoover Auxiliary Spring Company. (See Hoover, Thomas A., assignor.)
Hoover, Thomas A., Fresno, assignor to Hoover Auxiliary Spring Company, San Francisco, Cal. Vehicle-spring. No. 1,114,359; Oct. 20; Gaz. vol. 207; p. 763.
Hope-Jones, Robert, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Stop-operating device for musical instruments. No. 1,113,439; Oct. 13; Gaz. vol. 207; p. 403.
Hopewell, Frank B., trustee. (See Elwell, George H., assignor.)
Hopkins, Ezra F., Chicago, Ill. Fluid-fuel feeder. No. 1,114,764; Oct. 27; Gaz. vol. 207; p. 959.
Hopkinson, Harry, *et al.* (See Bechler, Edward W., assignor.)
Hoppes, Odilion K., Tamaqua, Pa. Pneumatic tire. No. 1,115,430; Oct. 27; Gaz. vol. 207; p. 1192.
Hopwood, James O., Primos, Pa. Hand-mimeograph. No. 1,113,634; Oct. 13; Gaz. vol. 207; p. 468.
Horgan, William A. (See Hayes, Thomas J., assignor.)
Horn, Aaron C., New York, N. Y. Hardening cementitious materials. No. 1,114,140; Oct. 20; Gaz. vol. 207; p. 686.
Horne, James T., Rock Ferry, England. Ship construction. No. 1,114,263; Oct. 20; Gaz. vol. 207; p. 731.
Hornung, John C., Chicago, Ill. Condensation-meter. No. 1,114,360; Oct. 20; Gaz. vol. 207; p. 764.
Horrocks, William, deceased, Herkimer; F. L. Yonker, Dolgeville, and W. C. Prescott, Herkimer, N. Y., executors. Regulator for water-heaters. No. 1,115,466; Oct. 27; Gaz. vol. 207; p. 1203.
Horstmann, Edward F., Aurora, Ill. Third-rail cleaner. No. 1,112,616; Oct. 6; Gaz. vol. 207; p. 74.
Horton, Bryson D., Detroit, Mich. Electrical switch. No. 1,114,988; Oct. 27; Gaz. vol. 207; p. 1039.
Horton, Irving, East Bridgewater, Mass., assignor of sixty one-hundredths to J. C. Schelter, Rochester, N. Y. Shoe. No. 1,115,467; Oct. 27; Gaz. vol. 207; p. 1204.
Horváth, Sándor, assignor of one-half to S. Zsembery, New York, N. Y. Track-cleaner. No. 1,114,695; Oct. 20; Gaz. vol. 207; p. 880.
Hoscelt, William J., Topeka, Kans., assignor to National Dump Car Company, Chicago, Ill. Dump-door-operating mechanism. No. 1,112,617; Oct. 6; Gaz. vol. 207; p. 74.
Hoskins, Lawrence, Plainville, Ill. Vehicle-wheel. No. 1,115,199; Oct. 27; Gaz. vol. 207; p. 1115.

Kundtz, Theodor, Cleveland, Ohio. Door. No. 1,114,271; Oct. 20; Gaz. vol. 207; p. 734.
Kunkel, Fred E., Edgewood Park, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Dynamo-electric machine. No. 1,115,440; Oct. 27; Gaz. vol. 207; p. 1195.
Kutzbach, Karl, Dresden, assignor to Maschinenfabrik Augsburg-Nürnberg A. G., Nuremberg, Germany. Two-cycle engine. No. 1,114,272; Oct. 20; Gaz. vol. 207; p. 734.
Kuxmann, Heinrich, and G. Schneider, Bielefeld, Germany. Automatic cattle-feeding apparatus. No. 1,112,918; Oct. 6; Gaz. vol. 207; p. 176.
Kwintkowski, Alexander, Middletown, Conn. Fire-escape. No. 1,113,651; Oct. 13; Gaz. vol. 207; p. 474.
Kyllo, Olaf, Portland, Oreg. Clothes-drier. No. 1,113,109; Oct. 6; Gaz. vol. 207; p. 262.
L. G. McKnight & Son Co. (See McKnight, Levi G., assignor.)
La Crosse Plow Co. (See Bozard, Harrison B., assignor.)
La Hatte, Albert S., Galveston, Tex. Tire-protector. No. 1,113,448; Oct. 13; Gaz. vol. 207; p. 405.
La Pearl, James H., Los Angeles, Cal. Changeable prismatic sign. No. 1,112,921; Oct. 6; Gaz. vol. 207; p. 177.
Labombarde, Elie W., Nashua, N. H. Combination feed for sheet material. No. 1,112,811; Oct. 6; Gaz. vol. 207; p. 140.
Labombarde, Elie W., Nashua, N. H. Gluer for tray-box machines. No. 1,112,812; Oct. 6; Gaz. vol. 207; p. 141.
Lacene Manufacturing Company. (See Nichols, Elmer P., assignor.)
Lacey, J. E., *et al.* (See Samuels, John, assignor.)
Lachance, Joseph, Beauceville, Quebec, assignor of one-half to J. A. Bilodeau, Montreal, Canada. Nut-lock. No. 1,114,774; Oct. 27; Gaz. vol. 207; p. 963.
Lackey, George E., assignor to International Lace Company, New York, N. Y. Curtain. (Reissue.) No. 13,811; Oct. 20; Gaz. vol. 207; p. 889.
Ladd, Louis E., Providence, R. I., assignor to Potter & Buffington Company. Setting. No. 1,114,370; Oct. 20; Gaz. vol. 207; p. 767.
Ladoff, Isador, Cleveland, Ohio, assignor, by mesne assignments, of thirty one-hundredths to W. D. Edmonds, Booneville, N. Y. Arc-light electrode. No. 1,112,458; Oct. 6; Gaz. vol. 207; p. 15.
Laine, Walter R., assignor of one-third to A. R. Merriman, Los Angeles, Cal. Rotary negative-developing machine for photographers. No. 1,113,564; Oct. 13; Gaz. vol. 207; p. 446.
Laist, Frederick, Anaconda, Mont. Roasting-furnace. No. 1,114,371; Oct. 20; Gaz. vol. 207; p. 768.
Laist, Frederick, Anaconda, Mont. Roasting ores. No. 1,114,372; Oct. 20; Gaz. vol. 207; p. 768.
Lake, George W., assignor to Metacomet Corporation, Rumford, R. I. Water-chamber for water-heating apparatus. No. 1,115,076; Oct. 27; Gaz. vol. 207; p. 1071.
Lake, Warner G., Plaza, Wash. Game apparatus. No. 1,115,441; Oct. 27; Gaz. vol. 207; p. 1195.
Lake, Wilmot, assignor of one-third to A. Harveycutter and one-third to H. A. Wrenn, Washington, D. C. Baseball game-board. No. 1,112,919; Oct. 6; Gaz. vol. 207; p. 177.
Lamb, Charles C., assignor of one-half to W. M. McEwen, Chicago, Ill. Rail-joint. No. 1,113,127; Oct. 6; Gaz. vol. 207; p. 246.
Lamb, James B., assignor to The Ohio Varnish Company, Cleveland, Ohio. Dust-mop. No. 1,115,442; Oct. 27; Gaz. vol. 207; p. 1196.
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Vacuum-bottle. No. 1,113,357; Oct. 13; Gaz. vol. 207; p. 373.
Lambert, John W., Anderson, Ind. Traction-wheel. No. 1,112,920; Oct. 6; Gaz. vol. 207; p. 177.
Land, Henry B., county of Essex, England. Apparatus for turning, shaping, and screw-threading rods or other metal blanks. No. 1,113,023; Oct. 6; Gaz. vol. 207; p. 211.
Landenberger, John C., Salt Lake City, Utah. Fracture-table. No. 1,113,658; Oct. 13; Gaz. vol. 207; p. 476.
Landers, Frary & Clark. (See Lamb, Joseph F., assignor.)
Landers, Frary & Clark. (See Twigg, Ernest, assignor.)
Landin, Carl J., assignor to Clifton Manufacturing Company, Boston, Mass. Fabric-feeding mechanism. No. 1,114,487; Oct. 20; Gaz. vol. 207; p. 812.
Landis, Abraham B., Enfield, Pa. Bolt-threading machine. No. 1,112,530; Oct. 6; Gaz. vol. 207; p. 45.
Landry, Joseph L., Napoleonville, La. Oil-burner. No. 1,114,994; Oct. 27; Gaz. vol. 207; p. 1042.
Landy, William R., Minneapolis, Minn. Shoe-buffer. No. 1,115,468; Oct. 27; Gaz. vol. 207; p. 1204.
Lane, Charles M., Rosedale, Kans. Boring-machine. No. 1,114,373; Oct. 20; Gaz. vol. 207; p. 769.
Lane, Charles W., Madrid, N. Y. Bait-holder. No. 1,114,698; Oct. 20; Gaz. vol. 207; p. 881.
Lane, John D., Cambridge, Mass. Book-marker. No. 1,112,813; Oct. 6; Gaz. vol. 207; p. 141.
Lane, Luther L., Hillsboro, Tex., assignor to Texas Auto Specialty Manufacturing Co. Motor-car wheel. No. 1,113,449; Oct. 13; Gaz. vol. 207; p. 405.
Langenfeld, Joseph V. (See Hove, Edmond, assignor.)
Langenhop, Herman F., New York, N. Y. Grate. No. 1,114,488; Oct. 20; Gaz. vol. 207; p. 813.
Langfeld Bros. & Co. (See Greenbaum, Oscar, assignor.)
Langley, James T., Portland, and E. Thomas, La Grande, Oreg. Globe-valve. No. 1,114,995; Oct. 27; Gaz. vol. 207; p. 1042.
Lansden, John M., Jr., Newark, N. J. Vehicle. No. 1,113,222; Oct. 13; Gaz. vol. 207; p. 324.
Lapray, George, *et al.* (See Watkins, William F., assignor.)
Larmuth, William O. (See Davidson and Larmuth.)
Larson, Oskar, Osakis, Minn. Grip for pulley-coverings. No. 1,114,775; Oct. 27; Gaz. vol. 207; p. 963.
Lasko, Henry A., and C. M. Snavely, Lancaster, Pa. Slip-casing for radiators. No. 1,113,790; Oct. 13; Gaz. vol. 207; p. 524.
Laskowski, Frank J., assignor of one-half to F. H. Fried, Allentown, Pa. Folding and reclining chair. No. 1,114,153; Oct. 20; Gaz. vol. 207; p. 690.
Latella, Anthony J., New York, N. Y. Convertible dumb-bell. No. 1,113,791; Oct. 13; Gaz. vol. 207; p. 524.
Latta, Emmit G., Syracuse, N. Y. Type-writing machine. No. 1,115,077; Oct. 27; Gaz. vol. 207; p. 1071.
Latus, Elmer J. (See Schoentag and Latus.)
Laufer, Rudolf. (See Huttenlocher and Laufer.)
Laughon, Ernest E., assignor of one-third to J. T. Jarrett, Portsmouth, Va. Car-door. No. 1,113,792; Oct. 13; Gaz. vol. 207; p. 525.
Lauletta, Nicholas, Philadelphia, Pa. Table or counter attachment. No. 1,113,793; Oct. 13; Gaz. vol. 207; p. 525.
Laurent, John W., assignor of one-third to W. Kellenger, Spokane, Wash. Current-motor. No. 1,114,489; Oct. 20; Gaz. vol. 207; p. 813.
Laurenti, Cesare, assignor to Società Fiat-San Giorgio, Spezia, Italy. Submarine tender. No. 1,113,450; Oct. 13; Gaz. vol. 207; p. 406.
Lauter Company. (See Lynde, Frank G., assignor.)
Laviolette, Albert J., New York, N. Y. Visible-title-plate file-holder. No. 1,115,216; Oct. 27; Gaz. vol. 207; p. 1121.
Lawlor, Michael W., Needham Heights, assignor of one-half to Ideal Can Company, Incorporated, Boston, Mass. Poultry-feeder. No. 1,114,892; Oct. 27; Gaz. vol. 207; p. 1004.
Lawrence, Frederick W., *et al.* (See Pierce, Joseph, assignor.)
Lawrence, Joseph L., Toronto, Ontario, Canada. Door-stop. No. 1,113,358; Oct. 13; Gaz. vol. 207; p. 373.
Lawrence, Leo W., and F. F. Bahnson, Winston-Salem, N. C. Treating tobacco. No. 1,113,902; Oct. 13; Gaz. vol. 207; p. 563.
Lawrence Manufacturing Company Limited, The. (See Sholes, Zalmon G., assignor.)
Lawson, Neal, Los Angeles, Cal. Collapsible boat. No. 1,114,996; Oct. 27; Gaz. vol. 207; p. 1042.
Lawton, Burton L. (See Wilcox and Lawton.)
Le Blond, Richard K., and W. F. Groene, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Lathe. No. 1,113,223; Oct. 13; Gaz. vol. 207; p. 324.
Le Boeuf, Arthur W., Woonsocket, R. I., assignor to Electric Compositor Company, New York, N. Y. Slug-delivery mechanism for line-casting machines. No. 1,112,628; Oct. 6; Gaz. vol. 207; p. 78.
Le Clair, George E., Flint, Mich. Attachment for bottles or jars. No. 1,115,444; Oct. 27; Gaz. vol. 207; p. 1196.
Le Roy, Harry E., Columbia, Pa. Flying dart. No. 1,115,078; Oct. 27; Gaz. vol. 207; p. 1072.
Lea, James E., Manchester, England. Meter or measuring instrument. No. 1,112,450; Oct. 6; Gaz. vol. 207; p. 16.
Leach, Charles E. and E. C., West Peabody, assignors to C. E. Leach & Co., Lynn, Mass. Shoe-heel-reducing device. No. 1,114,154; Oct. 20; Gaz. vol. 207; p. 691.
Leach & Co., Charles E. (See Leach, Charles E. and E. C., assignors.)
Leach, Ernest C. (See Leach, Charles E. and E. C.)
Leach, Frederick I., Lynn, Mass. Automatic train-stop. No. 1,115,443; Oct. 27; Gaz. vol. 207; p. 1196.
Leahey, Thomas F., Poughkeepsie, N. Y. Pants-press. No. 1,112,922; Oct. 6; Gaz. vol. 207; p. 178.
Leavitt, Harry W., Paris, Mo. Tractor. No. 1,112,460; Oct. 6; Gaz. vol. 207; p. 16.
Lelms, George F., Electra, Tex. Elevator-wrench. No. 1,113,659; Oct. 13; Gaz. vol. 207; p. 477.
Lechtenberg, Henry, Quincy, Ill., assignor to W. T. Lechtenberg. Dust-collector. No. 1,113,024; Oct. 6; Gaz. vol. 207; p. 212.
Lechtenberg, W. T. (See Lechtenberg, Henry, assignor.)
Leduc, Lucien A. J., Tours, France. Apparatus for raising submarines and submersibles. No. 1,114,155; Oct. 20; Gaz. vol. 207; p. 691.
Lee, Charles T., Blauvelt, N. Y. Cuspidor-lifter. No. 1,113,025; Oct. 6; Gaz. vol. 207; p. 212.
Lee, George C., Jr., *et al.* (See Beugler, Frank R., assignor.)
Lee, Thomas L., Westfield, N. J., assignor to Hall Switch & Signal Company. Asynchronous motor. No. 1,113,565; Oct. 13; Gaz. vol. 207; p. 446.
Leece, Harry H., Portland, Oreg. Device for chalking cues. No. 1,114,490; Oct. 20; Gaz. vol. 207; p. 813.
Leech, Stanley, Detroit, Mich. Weather-strip. No. 1,115,319; Oct. 27; Gaz. vol. 207; p. 1155.
Leechman, John A., La Fayette, Ind. Tensioning device for laces. No. 1,113,566; Oct. 13; Gaz. vol. 207; p. 446.
Leer, Leopold, New York, N. Y. Wrench. No. 1,113,903; Oct. 13; Gaz. vol. 207; p. 563.

Leeworth, George, Chicago, Ill. Lock-gage. No. 1,114,894; Oct. 27; Gaz. vol. 207; p. 1005.
Lefever, Charles F., assignor to Daisy Manufacturing Company, Plymouth, Mich. Shot-magazine for spring air-guns. No. 1,114,491; Oct. 20; Gaz. vol. 207; p. 814.
Legge, Alfred G., Brockton, Mass. Shoe-form. No. 1,115,320; Oct. 27; Gaz. vol. 207; p. 1155.
Legge, Alfred G., Brockton, Mass. High form for shoes. No. 1,115,445; Oct. 27; Gaz. vol. 207; p. 1196.
Lehner, Alfred, Kelsterbach, Germany, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Photographic screen and making the same. No. 1,112,540; Oct. 6; Gaz. vol. 207; p. 46.
Lehner, Alfred, Kelsterbach, Germany, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Manufacture of polychromic surfaces. No. 1,112,541; Oct. 6; Gaz. vol. 207; p. 46.
Lehner, Alfred, Kelsterbach-on-the-Main, Germany, assignor to Eastman Kodak Company, Rochester, N. Y. Copying from polychromic-screen negatives. No. 1,113,350; Oct. 13; Gaz. vol. 207; p. 373.
Leich, Oscar M., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Annunciator. No. 1,113,128; Oct. 6; Gaz. vol. 207; p. 246.
Leich, Oscar M., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Circuit-controlling device. No. 1,115,446; Oct. 27; Gaz. vol. 207; p. 1197.
Leilich, Henry L., assignor to The Delphos Manufacturing Company, Delphos, Ohio. Well-bucket. No. 1,114,776; Oct. 27; Gaz. vol. 207; p. 963.
Leissing, Albert H., New York, N. Y. Phonograph attachment. No. 1,114,492; Oct. 20; Gaz. vol. 207; p. 814.
Lenhart, Adam S., and J. L. Wells, Hamburg, Pa. Brake for automobiles. No. 1,113,567; Oct. 13; Gaz. vol. 207; p. 447.
Lenning, Malcolm N., Eskbank, Saskatchewan, Canada. Plow. No. 1,115,217; Oct. 27; Gaz. vol. 207; p. 1122.
Lennon, James, Jr. (See Terrian and Lennon.)
Leonard, Mercer M. (See White and Leonard.)
Lerche, Julius, Steglitz, near Berlin, assignor to Deutsche Post- und Eisenbahn-Verkehrswesen Aktiengesellschaft (Dapag-Efubag), Staaken, near Spandau, Germany. Apparatus for printing prepaid postage. No. 1,114,893; Oct. 27; Gaz. vol. 207; p. 1004.
Lerio, Louis, Mobile, Ala. Liquid-receptacle. No. 1,113,660; Oct. 13; Gaz. vol. 207; p. 477.
Lertora, Italo, Genoa, Italy. Liquid-fuel burner. No. 1,115,218; Oct. 27; Gaz. vol. 207; p. 1122.
Lessing, Wilhelm, Menzenberg, near Honnef, assignor to Mitteirheinische Cement-Industrie G. m. b. H. Cologne, Germany. Producing cement from molten blast-furnace slag. No. 1,115,321; Oct. 27; Gaz. vol. 207; p. 1155.
Levasseur, Clement C., and D. M. Morris, Mastelle, Iowa. Rural-mail-delivery apparatus. No. 1,113,451; Oct. 13; Gaz. vol. 207; p. 406.
Lever Brothers. (See Testrup, Nils, assignor.)
Levey, John, assignor to National Machine Works, Chicago, Ill. Pipe-clamp. No. 1,114,273; Oct. 20; Gaz. vol. 207; p. 734.
Levin, Samuel, Highland Park, Ill. Stylus. No. 1,114,493; Oct. 20; Gaz. vol. 207; p. 814.
Lewis, George W., Grinnell, Iowa. Dolly-shaft bearing for washing-machines. No. 1,113,452; Oct. 13; Gaz. vol. 207; p. 407.
Lewis, Harry A., Norristown, Pa. Roller-table for rolling-mills. No. 1,114,621; Oct. 20; Gaz. vol. 207; p. 854.
Lewis, John C. (See Doersch, George M., assignor.)
Lewis, Pearl A., and H. N. Faas, assignors to The American Seeding Machine Company, Springfield, Ohio. Single-disk furrow-opener. No. 1,114,156; Oct. 20; Gaz. vol. 207; p. 691.
Lewis, Wilfred, assignor to The Tabor Manufacturing Company, Philadelphia, Pa. Molding-machine. No. 1,113,224; Oct. 13; Gaz. vol. 207; p. 324.
Lewis, Wilfred, assignor to The Tabor Manufacturing Company, Philadelphia, Pa. Jar-molding machine. No. 1,113,705; Oct. 13; Gaz. vol. 207; p. 526.
Lewis, Wilfred, and J. T. Ramsden, assignors to The Tabor Manufacturing Company, Philadelphia, Pa. Molding-machine. No. 1,113,704; Oct. 13; Gaz. vol. 207; p. 525.
Lewis, Wilfred P., St. Louis, Mo. Horseshoe. No. 1,113,706; Oct. 13; Gaz. vol. 207; p. 526.
Library Bureau. (See Merrill, William F., assignor.)
Lichtenberg, Erich H., assignor to Koehring Machine Company, Milwaukee, Wis. Stop mechanism for concrete-distributers. No. 1,113,661; Oct. 13; Gaz. vol. 207; p. 478.
Lieb, John M., Atkins, Iowa. Bracket. No. 1,114,997; Oct. 27; Gaz. vol. 207; p. 1043.
Lieberman, Meyer L., Baltimore, Md. Knickerbocker-knee. No. 1,113,662; Oct. 13; Gaz. vol. 207; p. 478.
Liebman, Meyer, New York, N. Y. Printing device. No. 1,112,629; Oct. 6; Gaz. vol. 207; p. 78.
Lincoln Iron Works. (See Pierce, Frank, assignor.)
Linden, Gustaf. (See Kihlqvist and Linden.)
Linder, John, Spokane, Wash. View-finder. No. 1,114,895; Oct. 27; Gaz. vol. 207; p. 1005.
Link-Belt Company. (See Howson, Henry, assignor.)
Link, Manfred W., Seattle, Wash. Automobile axle-gage. No. 1,114,874; Oct. 20; Gaz. vol. 207; p. 769.
Linquist, William A., Minneapolis, Minn. Automobile-fender. No. 1,114,009; Oct. 20; Gaz. vol. 207; p. 639.
Lipe, Willard C., Syracuse, N. Y. Needle. No. 1,115,469; Oct. 27; Gaz. vol. 207; p. 1205.
Lipman, Carl E. L., Beloit, Wis. Air-motor. No. 1,115,470; Oct. 27; Gaz. vol. 207; p. 1205.
Lippitt, Frank K., *et al.* (See MacLean, John M., assignor.)
Litaker, Thomas F., Fellows, Cal. Rotary drill. No. 1,114,375; Oct. 20; Gaz. vol. 207; p. 769.
Littauer, Lucius N. (See Weis, John P., assignor.)
Little, Lillian A. (See Bowen, Philip A., assignor.)
Little, Robert C., Chicago, Ill. Automatic ribbon-reversing mechanism. No. 1,114,494; Oct. 20; Gaz. vol. 207; p. 815.
Littlefield, Charles H. (See Richardson and Littlefield.)
Littlefield, Lory L., Bellevue, Iowa. Protector for harness-straps. No. 1,112,708; Oct. 6; Gaz. vol. 207; p. 106.
Littlejohn, Demetrius D., Statesville, N. C. Plow-blade. No. 1,115,219; Oct. 27; Gaz. vol. 207; p. 1122.
Livermore Pay Station Company. (See Flagg and Livermore, assignors.)
Livermore, Walter H. (See Flagg and Livermore.)
Liversidge, Horace P., assignor to The Fairmont Electric and Manufacturing Company, Philadelphia, Pa. Pothead or end bell. No. 1,115,447; Oct. 27; Gaz. vol. 207; p. 1197.
Ljungström, Fredrik, assignor to Aktiebolaget Ljungströms Angturbin, Finspång, Sweden. Rotary field-magnet with two poles. No. 1,115,220; Oct. 27; Gaz. vol. 207; p. 1122.
Lloyd, Demarest. (See Ragot, Henry, assignor.)
Lockhart, Edward J. and E. M., Galesburg, Mich. Artificial bait. No. 1,113,360; Oct. 13; Gaz. vol. 207; p. 374.
Lockhart, Edward J. and E. M., Galesburg, Mich. Artificial bait. No. 1,113,361; Oct. 13; Gaz. vol. 207; p. 374.
Lockhart, Evelyn M. (See Lockhart, Edward J. and E. M.)
Lockhart, John, Tarrytown, N. Y. Awning-blind hinge and holder. No. 1,112,630; Oct. 6; Gaz. vol. 207; p. 79.
Lockling Improved Automatic Passenger Fare Registering Company, Paul P. (See Lockling and Parker, assignors.)
Lockling, Paul P., Fruitdale, and J. F. Parker, assignors to P. P. Lockling Improved Automatic Passenger Fare Registering Company, Mobile, Ala. Automatic fare-register. No. 1,113,707; Oct. 13; Gaz. vol. 207; p. 526.
Lockwood, Charles S., assignor to Hyatt Roller Bearing Company, Newark, N. J. Roller-bearing hanger-box. No. 1,114,777; Oct. 27; Gaz. vol. 207; p. 964.
Lockwood, John T., New York, N. Y. Space-band for composing-machines. No. 1,113,362; Oct. 13; Gaz. vol. 207; p. 374.
Loehler, Gustav G., Washington, D. C. Sanitary insulated receptacle. No. 1,112,709; Oct. 6; Gaz. vol. 207; p. 106.
Lofiin, Robert L., High Point, N. C. Pipe. No. 1,114,274; Oct. 20; Gaz. vol. 207; p. 735.
Loguin, Alexander J., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Circuit-breaker. No. 1,115,448; Oct. 27; Gaz. vol. 207; p. 1198.
Lohnes, Henry, and J. P. Rial, Kansas City, Mo. Woodworking-machine. No. 1,113,798; Oct. 13; Gaz. vol. 207; p. 527.
Lombard Governor Company, The. (See Warren, Henry E., assignor.)
Loney, James W., and T. C. Steger, Fort Wayne, Ind. Water-gage shield. No. 1,114,778; Oct. 27; Gaz. vol. 207; p. 964.
Long, George A., Hartford, Conn. Spark-plug. No. 1,114,157; Oct. 20; Gaz. vol. 207; p. 692.
Long, John R., assignor, by mesne assignments, to W. A. Byrider, Akron, Ohio. Bench-vise. No. 1,113,663; Oct. 13; Gaz. vol. 207; p. 478.
Long, John R., assignor, by mesne assignments, to W. A. Byrider, Akron, Ohio. Bench-vise. No. 1,113,664; Oct. 13; Gaz. vol. 207; p. 479.
Long, Otto M., and E. H. Matkin, Bonne Terre, Mo. Tool-sharpener. No. 1,112,461; Oct. 6; Gaz. vol. 207; p. 16.
Long, W. C., *et al.* (See Samuels, John, assignor.)
Longaker, Albert A., assignor to Chambersburg Engineering Company, Chambersburg, Pa. Convertible press. No. 1,114,708; Oct. 20; Gaz. vol. 207; p. 886.
Longaker, Albert A., Chambersburg, and W. H. Markland, Altoona, assignors to Chambersburg Engineering Company, Chambersburg, Pa. Spring-bending press. No. 1,114,699; Oct. 20; Gaz. vol. 207; p. 881.
Longtin, Xyste, St. Johns, Quebec, assignor of one-half to L. A. Gosselin, Montreal, Canada. Air-valve. No. 1,112,631; Oct. 6; Gaz. vol. 207; p. 79.
Longwell, Elbert F., New York, N. Y. Skeleton slug for type-casting machines. No. 1,113,665; Oct. 13; Gaz. vol. 207; p. 479.
Looker, Henry N., assignor of one-fourth to O. W. Platt and three-eighths to G. W. Reynolds, Chicago, Ill. Filter. No. 1,112,923; Oct. 6; Gaz. vol. 207; p. 178.
Losee, John R., Northwood, Iowa. Vehicle-seat. No. 1,115,322; Oct. 27; Gaz. vol. 207; p. 1156.
Loser, Harry A., Baltimore, Md. Adjustable and variable centering for concrete arches, &c. No. 1,112,542; Oct. 6; Gaz. vol. 207; p. 46.
Love, E. M. (See Love, William T., assignor.)
Love, George. (See Knil, Wilbert S., assignor.)
Love, Harry T., La Grande, Oreg. Tray. No. 1,114,998; Oct. 27; Gaz. vol. 207; p. 1043.

Tabor Manufacturing Company, The. (See Lewis, Wilfred, assignor.)

Tabor Manufacturing Company, The. (See Lewis and Ramsden, assignors.)

Taeubert, Edmund E., Los Angeles, Cal. Electric sad-iron. No. 1,114,413; Oct. 20; Gaz. vol. 207; p. 784.

Taggart, George H., New York, N. Y. Stop mechanism for phonographs. (Reissue.) No. 13,809; Oct. 13; Gaz. vol. 207; p. 580.

Taiz, Jacob, Philadelphia, Pa. Shade-roller bracket. No. 1,114,203; Oct. 20; Gaz. vol. 207; p. 710.

Tardieu, Jean, Caluire et Cuire, France. Machine for making corrugated paper. No. 1,113,260; Oct. 13; Gaz. vol. 207; p. 338.

Taub, Ludwig, and H. J. Hahl, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Acidyl derivatives of C-ortho-allyl-ortho-benzoic acids. No. 1,113,713; Oct. 13; Gaz. vol. 207; p. 497.

Taub, Ludwig, and G. Fickewirth, assignors to Farbenfabriken vorm Friedr. Bayer & Co., Elberfeld, Germany. Substance isolated from the apocynaceæ and producing the same. No. 1,113,714; Oct. 13; Gaz. vol. 207; p. 497.

Tauber, John C., Erie, Pa. Mechanism for knitting [illegible]-lined fabric. No. 1,114,414; Oct. 20; Gaz. vol. 207; p. 784.

Taurman, Alphonso, Richmond, Va. Articulated passenger-car. No. 1,114,552; Oct. 20; Gaz. vol. 207; p. 833.

Taylor, Albert H. (See Bayles and Taylor.)

Taylor, Eugene H., Hyde Park, assignor to J. F. Spaulding, Boston, and J. G. Tewksbury, Somerville; E. R. Spaulding, Wellesley, Mass., administrator of said J. F. Spaulding, deceased; A. H. Tewksbury, administratrix of said J. G. Tewksbury, deceased. Paper-box machine. No. 1,113,715; Oct. 13; Gaz. vol. 207; p. 497.

Taylor, Gus, Turlock, Cal. Metallic railway-tie and means for securing a rail to the same. No. 1,113,506; Oct. 13; Gaz. vol. 207; p. 426.

Taylor, Harry T., Petal, Miss. Reamer. No. 1,113,067; Oct. 6; Gaz. vol. 207; p. 226.

Taylor, Joseph and W., Rowland, Nev. Sheep hook or catcher. No. 1,112,867; Oct. 6; Gaz. vol. 207; p. 160.

Taylor, Wallace M., assignor of forty-nine one-hundredths to J. Hlatky, Cleveland, Ohio. Rivet-head-cutting machine. No. 1,115,348; Oct. 27; Gaz. vol. 207; p. 1163.

Taylor-Wharton Iron and Steel Company. (See Campbell, Hall, and Howe, assignors.)

Taylor, William. (See Taylor, Joseph and W.)

Teleelectric Company, The. (See Reed, Walter C., assignor.)

Templeton, William R., Roslindale, Mass. Apparatus for cleansing and sterilizing tumblers. No. 1,114,066; Oct. 20; Gaz. vol. 207; p. 659.

Tenney, Harry O. (See Thomas, Edwin E., assignor.)

Terrel, Jackson L., Stroud, Okla. Cultivator attachment. No. 1,114,310; Oct. 20; Gaz. vol. 207; p. 747.

Terrian, Zenford, and J. Lennon, Jr.; said J. Lennon, Jr., assignor to J. Lennon, Sr., Fort Edward, N. Y. Paper and pulp screen. No. 1,115,035; Oct. 27; Gaz. vol. 207; p. 1056.

Tesla, Nikola, New York, N. Y. Fountain. No. 1,113,716; Oct. 13; Gaz. vol. 207; p. 498.

Tessner, Edward, Milwaukee, Wis. Valve for pneumatic tires. No. 1,114,937; Oct. 27; Gaz. vol. 207; p. 1021.

Testrup, Nils, London, assignor to Lever Brothers, Limited, Port Sunlight, England. Treatment of oils, fats, and the like. No. 1,114,067; Oct. 20; Gaz. vol. 207; p. 659.

Tetlow, Lewis J., West Springfield, Mass. Aerial machine. No. 1,114,311; Oct. 20; Gaz. vol. 207; p. 747.

Tewksbury, Anna H., administratrix. (See Taylor, Eugene H.)

Tewksbury, James G., *et al.* (See Taylor, Eugene H., assignor.)

Texas Auto Specialty Manufacturing Co. (See Lane, Luther L., assignor.)

Thayer, Arthur E., West Hartford, Conn. Course-finding instrument. No. 1,113,717; Oct. 13; Gaz. vol. 207; p. 498.

Theis, Elmer E., Dayton, Ohio. Permutation switch-lock. No. 1,115,130; Oct. 27; Gaz. vol. 207; p. 1090.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Machine for filling the bottoms of shoes. No. 1,113,381; Oct. 13; Gaz. vol. 207; p. 381.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Shoe-bottom filler and making same. No. 1,114,819; Oct. 27; Gaz. vol. 207; p. 979.

Thomas, Andrew. (See Balogh and Thomas.)

Thomas, August, Salt Lake City, Utah. Device for turning crank-pins on engine-shafts. No. 1,114,068; Oct. 20; Gaz. vol. 207; p. 660.

Thomas, Bradford A., assignor of fifty-five one hundredths to M. Auerbach and forty-five one hundredths to F. J. Silvey, San Francisco, Cal. Monkey-wrench. No. 1,114,415; Oct. 20; Gaz. vol. 207; p. 785.

Thomas, Edwin. (See Langley and Thomas.)

Thomas, Edwin E., assignor of one-half to H. O. Tenney, Portland, Oreg. Pneumatic water-elevator. No. 1,115,131; Oct. 27; Gaz. vol. 207; p. 1090.

Thomas, George A., and C. Heberer, Valeria, assignors of one-third to A. H. Heberer, Minga, Iowa. Shingler's chair. No. 1,113,068; Oct. 6; Gaz. vol. 207; p. 226.

Thomas, Percy H., Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Electrical distribution system. No. 1,115,455; Oct. 27; Gaz. vol. 207; p. 1200.

Thomas, Percy H., Pittsburgh, Pa., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Electrical distribution system. No. 1,115,456; Oct. 27; Gaz. vol. 207; p. 1201.

Thomas, Robert T. (See Snyder, Augustus G., assignor.)

Thomas, William, *et al.* (See Hale, William H., assignor.)

Thomas, William B., Caledonia, Miss. Agricultural implement. No. 1,113,382; Oct. 13; Gaz. vol. 207; p. 382.

Thomason, Eugene, *et al.* (See Samuels, John, assignor.)

Thompson, Charles, Portland, Oreg. Mechanical toy. No. 1,113,587; Oct. 13; Gaz. vol. 207; p. 453.

Thompson, Ellis E., Cedar Rapids, Iowa. Burglar-proof safe. No. 1,113,507; Oct. 13; Gaz. vol. 207; p. 426.

Thompson, Mary E., Newark, N. J. Ventilating device. No. 1,114,938; Oct. 27; Gaz. vol. 207; p. 1022.

Thomsen, Charles M. (See Weigel, Charles, assignor.)

Thomsen, Peter. (See Schmidt and Thomsen.)

Thomsen, Peter, assignor to Schmidt'sche Heissdampf Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Connecting member for superheater-element ends. No. 1,112,868; Oct. 6; Gaz. vol. 207; p. 160.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Printing-press. No. 1,113,508; Oct. 13; Gaz. vol. 207; p. 427.

Thordarson, Chester H., Chicago, Ill. Machine for winding insulated coils and the like. No. 1,113,718; Oct. 13; Gaz. vol. 207; p. 498.

Thorschmidt, Ernest C., New York, N. Y. Liquid measuring and dispensing device. No. 1,115,036; Oct. 27; Gaz. vol. 207; p. 1056.

Thrall, George E., W. S., and P. O., Washington, D. C. Scaffold. No. 1,113,509; Oct. 13; Gaz. vol. 207; p. 427.

Thrall, Perry O. (See Thrall, George E., W. S., and P. O.)

Thrall, William S. (See Thrall, George E., W. S., and P. O.)

Thust, George J., Detroit, Mich. Tube-rolling machine. No. 1,113,383; Oct. 13; Gaz. vol. 207; p. 382.

Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Engine. No. 1,113,510; Oct. 13; Gaz. vol. 207; p. 427.

Tingley, Allen J., S. Roosa, and G. Gould, Owosso, Mich. Bean-gathering machine. No. 1,114,416; Oct. 20; Gaz. vol. 207; p. 785.

Tirrell, Edward J., Flint, Mich. Universal joint. No. 1,112,869; Oct. 6; Gaz. vol. 207; p. 160.

Tobacco Stemming Machine Company, The. (See Gerding and Billings, assignors.)

Tobias, Hermann B., New York, N. Y. Photographic-film package. No. 1,114,204; Oct. 20; Gaz. vol. 207; p. 710.

Tobie, Albert J., Westbury, N. Y. Mechanic's tool. No. 1,113,261; Oct. 13; Gaz. vol. 207; p. 339.

Tomasini, Thomas I. A., San Francisco, Cal. Spring-clip. No. 1,114,312; Oct. 20; Gaz. vol. 207; p. 748.

Tomlin, Wesley R., Fort Collins, Colo. Selective signal system. No. 1,114,939; Oct. 27; Gaz. vol. 207; p. 1022.

Topp, Charles H., Huntington, W. Va. Hydrocarbon-burner. No. 1,115,132; Oct. 27; Gaz. vol. 207; p. 1090.

Torbert, James R., Woodward, Ala. Globe-valve. No. 1,115,256; Oct. 27; Gaz. vol. 207; p. 1134.

Torkington, Alfred W., London, England. Spring suspension for vehicles. No. 1,114,553; Oct. 20; Gaz. vol. 207; p. 834.

Tormey, Peter. (See Barnwell and Tormey.)

Török, Elis, New York, N. Y. Dirigible airship. No. 1,115,457; Oct. 27; Gaz. vol. 207; p. 1201.

Torrance, James F. (See Peet, Wilbur G. and C. E., assignors.)

Tothill, William S., Chicago, Ill. Teeter-ladder and the like. No. 1,113,384; Oct. 13; Gaz. vol. 207; p. 383.

Tower, Daniel W. (See Annable, Warren W., assignor.)

Townsend, David. (See Melas, William, assignor.)

Townsend, Fitzhugh, deceased, New York, N. Y.; J. J. Townsend, administrator, assignor to General Railway Signal Company. System of automatic block-signaling for electric railways. No. 1,113,511; Oct. 13; Gaz. vol. 207; p. 428.

Townsend, John J., administrator. (See Townsend, Fitzhugh.)

Trabue, William, Louisville, Ky. Automatic magazine-firearm. No. 1,112,945; Oct. 6; Gaz. vol. 207; p. 185.

Trace, Russell A., assignor to Buckeye Iron and Brass Works, Dayton, Ohio. Gate-controlling device for cookers. No. 1,115,133; Oct. 27; Gaz. vol. 207; p. 1091.

Tracy, Oliver H. (See Meyers and Tracy.)

Trafford, Wesley, New York, N. Y. Alarm device. No. 1,112,576; Oct. 6; Gaz. vol. 207; p. 59.

Transmission Akts. (See Martins, Jens C., assignor.)

Trask, Sampson, San Francisco, Cal. Atomizer. No. 1,113,069; Oct. 6; Gaz. vol. 207; p. 227.

Treganza, Howard J., assignor to Ansonia Clock Company, New York, N. Y. Alarm mechanism for clocks. No. 1,115,134; Oct. 27; Gaz. vol. 207; p. 1091.

Trenowith, Romilly, McGill, Nev. Spoon-holder. No. 1,113,918; Oct. 13; Gaz. vol. 207; p. 568.

Tresca, Clifford F. (See Annis, John H., assignor.)

Triebel, Frieda, Strassburg, Germany. Hat-box. No. 1,114,313; Oct. 20; Gaz. vol. 207; p. 748.

Tripp, Benjamin D., Binghamton, assignor of one-fourth to A. R. Kelly, New York, one-fourth to W. J. Haskin and one-fourth to M. S. Squires, Binghamton, N. Y. Automatic train-stop. No. 1,113,385; Oct. 13; Gaz. vol. 207; p. 383.

Tripp, Elphalet A., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for shaping rands. No. 1,115,037; Oct. 27; Gaz. vol. 207; p. 1056.

Trivers, Daniel J., Bridgeport, and J. M. Schneider, Long Hill, Conn. Drill-press attachment for offset drilling. No. 1,112,730; Oct. 6; Gaz. vol. 207; p. 113.

Trojanoski, Walter, Patchogue, N. Y. Shade-hanger. No. 1,115,257; Oct. 27; Gaz. vol. 207; p. 1134.

Trompeter, William C., Edgemont, S. D. Agricultural implement. No. 1,114,940; Oct. 27; Gaz. vol. 207; p. 1022.

Trotter, George F., assignor of one-half to A. M. Millard, Des Moines, Iowa. Self-starter. No. 1,114,060; Oct. 20; Gaz. vol. 207; p. 660.

Trout, Peter N., Roanoke, Va. Headlight-actuating mechanism for locomotives. No. 1,112,577; Oct. 6; Gaz. vol. 207; p. 59.

True, Charles H., Phoenixville, Pa., assignor to The Railway Materials Company, Chicago, Ill. Brake-shoe. No. 1,114,941; Oct. 27; Gaz. vol. 207; p. 1023.

True, Charles H., Phoenixville, Pa., assignor to The Railway Materials Company, Chicago, Ill. Brake-shoe. No. 1,114,942; Oct. 27; Gaz. vol. 207; p. 1023.

Truesdell, Fred A., Youngstown, Ohio. Rotary valve for internal-combustion engines. No. 1,113,512; Oct. 13; Gaz. vol. 207; p. 428.

Trust, Henry, New York, N. Y. Food-handling apparatus. No. 1,114,070; Oct. 20; Gaz. vol. 207; p. 661.

Tucker, William S., Myrtlewood, Ala. Smoke-consumer. No. 1,113,070; Oct. 6; Gaz. vol. 207; p. 227.

Tufts, Gay L., Anahuac, Tex. Foot-rest. No. 1,113,719; Oct. 13; Gaz. vol. 207; p. 499.

Turbine Pump Company. (See Richards, John, assignor.)

Turnbull, Emily D., *et al.*, executors. (See Turnbull, Walter J.)

Turnbull, Walter J., deceased, New Orleans, La.; E. D. Turnbull and J. T. Sullivan, executors. Drill. No. 1,112,946; Oct. 6; Gaz. vol. 207; p. 186.

Turnbull, Walter J., deceased; J. T. Sullivan and E. D. Turnbull, executors, New Orleans, La. Conveyer. No. 1,112,947; Oct. 6; Gaz. vol. 207; p. 186.

Turnbull, Walter J., deceased; J. T. Sullivan and E. D. Turnbull, executors, New Orleans, La. Slat conveyer. No. 1,112,948; Oct. 6; Gaz. vol. 207; p. 187.

Turner, Alonzo O., Tampa, Fla. Auto-drive. No. 1,113,071; Oct. 6; Gaz. vol. 207; p. 227.

Turner, Day & Woolworth Handle Company. (See Cummins, James A., assignors.)

Turner, Ora N., assignor to Bay State Metal Wheel Company, Templeton, Mass. Collapsible vehicle. No. 1,114,314; Oct. 20; Gaz. vol. 207; p. 748.

Turner, Orton A., Coldwater, Mich. Fishing-rod. No. 1,113,847; Oct. 13; Gaz. vol. 207; p. 544.

Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Lubricator for air-pumps. No. 1,112,492; Oct. 6; Gaz. vol. 207; p. 27.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Quick-action triple-valve device. No. 1,112,493; Oct. 6; Gaz. vol. 207; p. 27.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Combined automatic and straight-air brake. No. 1,112,494; Oct. 6; Gaz. vol. 207; p. 28.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Duplex-pressure electric pump-governor. No. 1,112,495; Oct. 6; Gaz. vol. 207; p. 28.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Fluid-pressure brake. No. 1,114,820; Oct. 27; Gaz. vol. 207; p. 979.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Train-pipe vent-valve device. No. 1,114,821; Oct. 27; Gaz. vol. 207; p. 979.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Fluid-pressure brake. No. 1,114,822; Oct. 27; Gaz. vol. 207; p. 980.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Electro-pneumatic control-valve. No. 1,114,823; Oct. 27; Gaz. vol. 207; p. 980.

Turton, Charles M., Nashville, Tenn. Spring-cushion type-writer foot. No. 1,114,417; Oct. 20; Gaz. vol. 207; p. 785.

Tweedie, Charles, Jefferson City, Mo. Boot and shoe. No. 1,115,088; Oct. 27; Gaz. vol. 207; p. 1057.

Twigg, Ernest, assignor to Landers, Frary & Clark, New Britain, Conn. Grinding-mill. No. 1,114,657; Oct. 20; Gaz. vol. 207; p. 868.

Twombly Motors Company. (See Twombly, Willard I., assignor.)

Twombly, Willard I., New York, N. Y. Internal-combustion engine. No. 1,113,262; Oct. 13; Gaz. vol. 207; p. [illegible].

Twombly, Willard I., assignor to Twombly Motors Company, New York, N. Y. Aeroplane. No. 1,112,731; Oct. 6; Gaz. vol. 207; p. 114.

Tyden, Emil. (See Burton, Charles S., assignor.)

Tyler, William C., and E. Nail, assignors to The Goodyear Tire and Rubber Company, Akron, Ohio. Machine for covering bead-cores. No. 1,113,513; Oct. 13; Gaz. vol. 207; p. 428.

Tysseling, Peter, Pella, Iowa. Resilient wheel. No. 1,113,514; Oct. 13; Gaz. vol. 207; p. 429.

Tytianchuk, Anastazy. (See Fedorcio, Stanislaw, assignor.)

Uebler, William J., West Schuyler, N. Y. Milking-machine. No. 1,112,949; Oct. 6; Gaz. vol. 207; p. 187.

Uhl, Georg, New York, N. Y. Firearm-support. No. 1,112,732; Oct. 6; Gaz. vol. 207; p. 114.

Uhlig, Richard W., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,114,315; Oct. 20; Gaz. vol. 207; p. 749.

Uhlig, Richard W., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,114,316; Oct. 20; Gaz. vol. 207; p. 749.

Ullman, James A., New York, N. Y. Still. No. 1,113,515; Oct. 13; Gaz. vol. 207; p. 429.

Ullmann, Isaac A., Brooklyn, N. Y. Device for attaching collars to shirts. No. 1,115,258; Oct. 27; Gaz. vol. 207; p. 1134.

Ullrich, Georg, assignor to Fried. Krupp, Aktiengesellschaft, Grusonwerk, Magdeburg-Buckau, Germany. Magnetic separator. No. 1,114,071; Oct. 20; Gaz. vol. 207; p. 661.

Ulrich, Charles B., Hancock, Mich. Drawing-board structure. No. 1,113,263; Oct. 13; Gaz. vol. 207; p. 339.

Umphrey, Louis C., and J. F. McCloud, assignors to The Fulsmore Mfg. Co., Morgantown, Ind. Drawer construction for tables or the like. No. 1,112,733; Oct. 6; Gaz. vol. 207; p. 115.

Underfeed Stoker Company of America. (See Kenney, William J., assignor.)

Underwood, Herman M., *et al.* (See Beugler, Frank R., assignor.)

Underwood Typewriter Company. (See Cooper, John J., assignor.)

Underwood Typewriter Company. (See Lundeberg, Carl F., assignor.)

Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)

Underwood Typewriter Company. (See Smith, Charles E., assignor.)

Underwood Typewriter Company. (See Uhlig, Richard W., assignor.)

Ungaro, Daniel. (See Hirst and Ungaro.)

Unger, Salamon, New York, N. Y. Parquet-flooring. No. 1,115,039; Oct. 27; Gaz. vol. 207; p. 1057.

Union Draft Gear Company. (See Canfield, Lewis T., assignor.)

Union Metallic Cartridge Company. (See Hoagland, Frank O., assignor.)

Union Special Machine Company, The. (See Cone, Charles L., assignor.)

Union Special Machine Company. (See Moffatt, James R., assignor.)

Union Special Machine Company. (See Onderdonk, Lansing, assignor.)

Union Special Machine Company. (See Seymour, Dudley S., assignor.)

Union Special Machine Company. (See Woodward, Russel G., assignor.)

Unit Construction Company. (See Conselman, John E., assignor.)

United Centadrink Manufacturing Company. (See Malmstrom, Peter E., assignor.)

United Cigarette Machine Co. (See Ewers, Alexander L., assignor.)

United Gas Improvement Company, The. (See Glasgow, Arthur G., assignor.)

United Shoe Machinery Company. (See Ashton, Orrell, assignor.)

United Shoe Machinery Company. (See Bates and Silvester, assignors.)

United Shoe Machinery Company. (See Bazzoni, Lewis J., assignor.)

United Shoe Machinery Company. (See Brown, Louis M., assignor.)

United Shoe Machinery Company. (See Cavanagh, James, Jr., assignor.)

United Shoe Machinery Company. (See Cook, Miller, Jr., assignor.)

United Shoe Machinery Company. (See Eaton and Pease, assignors.)

United Shoe Machinery Company. (See Enslin, Herbert E., assignor.)

United Shoe Machinery Company. (See Eppler, Andrew, assignor.)

United Shoe Machinery Company. (See Fausse, Joseph, assignor.)

United Shoe Machinery Company. (See Freeman, Louis G., assignor.)

United Shoe Machinery Company. (See Gouldbourn, Joseph, assignor.)

United Shoe Machinery Company. (See Hess, Meyer S., assignor.)

Woodland, Frank O., Worcester, Mass. Front suspension for automobiles. No. 1,112,584; Oct. 6; Gaz. vol. 207; p. 62.
Woodland, Frank O., assignor to Economic Machinery Company, Worcester, Mass. Labeling-machine. No. 1,113,854; Oct. 13; Gaz. vol. 207; p. 547.
Woodland, Frank O., assignor to Economic Machinery Company, Worcester, Mass. Labeling-machine. No. 1,113,855; Oct. 13; Gaz. vol. 207; p. 547.
Woodland, Frank O., assignor to Economic Machinery Company, Worcester, Mass. Labeling-machine. No. 1,113,856; Oct. 13; Gaz. vol. 207; p. 548.
Woodland, William C., assignor to Packard Electric Company, Warren, Ohio. Wireless telegraphy. No. 1,114,840; Oct. 27; Gaz. vol. 207; p. 986.
Woodlock, Frank D., St. Louis, Mo. Reading device. No. 1,115,144; Oct. 27; Gaz. vol. 207; p. 1094.
Woodmansee, Ira M., St. Louis, Mo. Atomizing-lubricator. No. 1,113,276; Oct. 13; Gaz. vol. 207; p. 344.
Woodruff, Willis B., Cadiz, Ky. Churn. No. 1,113,396; Oct. 13; Gaz. vol. 207; p. 387.
Woods, George E., assignor of one-half to H. S. Jacobson, Pittsburgh, Pa. Folding box. No. 1,114,567; Oct. 20; Gaz. vol. 207; p. 838.
Woodsome, John O., assignor to Crane Company, Chicago, Ill. Drying-machine. No. 1,114,215; Oct. 20; Gaz. vol. 207; p. 714.
Woodward, Russel G., Waukegan, assignor to Union Special Machine Company, Chicago, Ill. Sewing and ruffling machine. No. 1,115,145; Oct. 27; Gaz. vol. 207; p. 1095.
Worden, Frank B., Jamestown, N. Y. Sheet-metal hinge. No. 1,113,176; Oct. 6; Gaz. vol. 207; p. 265.
Worsley, Otto G., Aurora, Ill. Spring-wheel. No. 1,113,177; Oct. 6; Gaz. vol. 207; p. 265.
Wrayge, Christian, Jr., Cass Lake, Minn. Display container and stand. No. 1,113,725; Oct. 13; Gaz. vol. 207; p. 502.
Wrenn, Herbert A., *et al.* (See Lake, Wilmot, assignor.)
Wright, Alice A., Oakland, assignor to The Resilia Corporation, San Francisco, Cal. Composition for and process of revivifying and preserving rubber. No. 1,114,841; Oct. 27; Gaz. vol. 207; p. 986.
Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Swivel rope-socket. No. 1,112,513; Oct. 6; Gaz. vol. 207; p. 35.
Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Hydraulic swivel. No. 1,113,397; Oct. 13; Gaz. vol. 207; p. 387.
Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Breaking-out tongs. No. 1,114,663; Oct. 20; Gaz. vol. 207; p. 870.
Wright, Frank R., Winfred, S. D. Corn-harvester. No. 1,113,857; Oct. 13; Gaz. vol. 207; p. 548.
Wright, Frederic W., and C. R. Itoof, New Glasgow, Nova Scotia, Canada. Manufacturing grip-nuts. No. 1,112,879; Oct. 6; Gaz. vol. 207; p. 164.
Wright, Harry J., Bloomfield, N. J., assignor to himself, and E. L. Scillitoe, Stapleton, N. Y. Door closer and check. No. 1,114,216; Oct. 20; Gaz. vol. 207; p. 714.
Wright, James M., Keokuk, Iowa. Lock. No. 1,113,858; Oct. 13; Gaz. vol. 207; p. 549.
Wright, Lane E., Fairgrange, Ill. Attachment for telephone-stands. No. 1,114,842; Oct. 27; Gaz. vol. 207; p. 986.
Wright, Reuben I., Wickliffe-on-the-Lake, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Safety limit-stop. No. 1,113,593; Oct. 13; Gaz. vol. 207; p. 455.
Wright, Reuben I., and H. F. Stratton, assignors to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Safety limit-switch. No. 1,113,592; Oct. 13; Gaz. vol. 207; p. 455.
Wright, Samson D., Cleveland, Ohio. Dump-car. No. 1,115,365; Oct. 27; Gaz. vol. 207; p. 1170.
Wright, William H., Duluth, Minn. Ammonia-still. No. 1,114,843; Oct. 27; Gaz. vol. 207; p. 987.
Wygodsky Engine Company. (See Wygodsky, Leon, assignor.)
Wygodsky, Leon, assignor to Wygodsky Engine Company, New York, N. Y. Engine. No. 1,114,217; Oct. 20; Gaz. vol. 207; p. 715.
Yaccarine, Anthony E., Brooklyn, N. Y. Eraser-holder. No. 1,113,527; Oct. 13; Gaz. vol. 207; p. 433.
Yale Knitting Company. (See Marsh, Lester D., assignor.)
Yamada, Daiji, Santa Ana, Cal. Electric-light-adjusting socket. No. 1,114,089; Oct. 20; Gaz. vol. 207; p. 668.
Yarrow, Haroid E., Glasgow, Scotland. Burner for liquid fuel. No. 1,114,664; Oct. 20; Gaz. vol. 207; p. 870.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,114,218; Oct. 20; Gaz. vol. 207; p. 715.
Yawman & Erbe Mfg. Co. (See Weiss, Albert T., assignor.)
Yingling, George S., Eau Gallie, Fla. Medicated insole for footwear. No. 1,113,726; Oct. 13; Gaz. vol. 207; p. 502.
Yoder, Samuel B., Lindsay, Cal. Churn. No. 1,115,146; Oct. 27; Gaz. vol. 207; p. 1095.
Yonker, Francher L., *et al.*, executors. (See Horrocks, William.)
Yoran, Clarence G., Manchester, Iowa. Ordnance. No. 1,112,748; Oct. 6; Gaz. vol. 207; p. 120.
Young, Charles D., Pittsburgh, Pa. Automatic stoker. No. 1,113,398; Oct. 13; Gaz. vol. 207; p. 387.
Young, Hanby L. (See McPherson, Samuel E., assignor.)
Young, Hugo H., Loudonville, Ohio. Spark-plug. No. 1,114,219; Oct. 20; Gaz. vol. 207; p. 715.
Young, John, Chillicothe, Ohio. Baling-press. No. 1,114,090; Oct. 20; Gaz. vol. 207; p. 669.
Zabriskie, Henry L., Westfield, and F. Diehl, assignors to Diehl Manufacturing Company, Elizabeth, N. J. Electric fan. No. 1,115,147; Oct. 27; Gaz. vol. 207; p. 1095.
Zacharias, Edwin H., Reading, Pa. Garment-pressing machine. No. 1,115,366; Oct. 27; Gaz. vol. 207; p. 1170.
Zähringer, Arnold, Stuttgart, Germany. Magneto-electric ignition apparatus. No. 1,113,147; Oct. 6; Gaz. vol. 207; p. 253.
Zarella, Peter, Medford, Mass. Dish-drainer. No. 1,114,220; Oct. 20; Gaz. vol. 207; p. 716.
Zart, Arthur, Opladen, and H. Schweitzer, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Azo dyes. No. 1,114,844; Oct. 27; Gaz. vol. 207; p. 987.
Zavodnik, David, New York, N. Y. Dress. No. 1,114,954; Oct. 27; Gaz. vol. 207; p. 1027.
Zdrodowski, Tadeusz, Pittston, Pa. Toilet article. No. 1,113,727; Oct. 13; Gaz. vol. 207; p. 502.
Zelenay, Constantine, Tver, Russia. Machine for excavating turf. No. 1,113,277; Oct. 13; Gaz. vol. 207; p. 344.
Zeller, George P. (See Nutter and Zeller.)
Zeni, Lorenzo, Scranton, Pa. Expanding carrier-spool. No. 1,113,082; Oct. 6; Gaz. vol. 207; p. 231.
Zettel, Louie A., Flint, Mich. Train-stopping device. No. 1,114,091; Oct. 20; Gaz. vol. 207; p. 669.
Zeunert, Hans C., Chicago, Ill. Strainer for coffee-pots. No. 1,113,859; Oct. 13; Gaz. vol. 207; p. 549.
Ziegler, Friedrich, Charlottenburg, Germany, assignor to General Electric Company. System of lubrication. No. 1,113,081; Oct. 6; Gaz. vol. 207; p. 230.
Zimmerman, Edward, and C. B. Britt, Kansas City, Mo. Spool-holder. No. 1,114,568; Oct. 20; Gaz. vol. 207; p. 839.
Zimmerman, Eugen, Peoria, Ill. Bed-covering-sustaining means. No. 1,112,514; Oct. 6; Gaz. vol. 207; p. 36.
Zimmerman, John W., deceased, Chicago, Ill.; F. L. Manton, administrator. Toy. No. 1,115,148; Oct. 27; Gaz. vol. 207; p. 1096.
Zinner, Ernest, assignor to Chalmers Motor Company, Detroit, Mich. Hood. No. 1,113,728; Oct. 13; Gaz. vol. 207; p. 502.
Zobel, Frederick C., New York, N. Y. Interlocking hinge. No. 1,113,278; Oct. 13; Gaz. vol. 207; p. 345.
Zonne, Charles S., Minneapolis, Minn. Bottle-crown. No. 1,112,880; Oct. 6; Gaz. vol. 207; p. 164.
Zsembery, Sándor. (See Horváth, Sándor, assignor.)
Zuck, Nicholas, and F. G. Pfistner, Rochester, N. Y. Laminated fabric for garments. No. 1,114,569; Oct. 20; Gaz. vol. 207; p. 839.
Zwick, Samuel, South Manchester, Conn. Wrench. No. 1,114,423; Oct. 20; Gaz. vol. 207; p. 788.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

American Arch Company. (See Neff, John P., assignor.)
American Electrical Heater Company. (See Kuhn, Frank, assignor.)
Armour & Company. (See McDougal, Thomas W., assignor.)
Auffero, Emanuel, assignor to E. A. Laboratories, Inc., New York, N. Y. Horn-casing. No. 46,522; Oct. 13; Gaz. vol. 207; p. 582.
Auth, Charles, and N. L. Schloss, New York, N. Y. Lamp-globe. No. 46,555; Oct. 20; Gaz. vol. 207; p. 890.
B-O-C. Mfg. Co., The. (See Kline, Robert, assignor.)
Bateman Manufacturing Company. (See Willis, Leland, assignor.)
Baxter, Howard A., Melrose Highlands, Mass., assignor to Panama-Pacific International Exposition Co., San Francisco, Cal. Spoon, fork, or similar article. No. 46,556; Oct. 20; Gaz. vol. 207; p. 891.
Beacon Falls Rubber Shoe Company, The. (See Hopwood, William B., assignor.)
Beardslee Chandelier Manufacturing Company. (See Beardslee and French, assignors.)
Beardslee, George M., and I. L. French, assignors to Beardslee Chandelier Manufacturing Company, Chicago, Ill. Shade for lighting-fixtures. No. 46,557; Oct. 20; Gaz. vol. 207; p. 891.
Becker, Frederick W., New York, N. Y. Chin-plate for violins. No. 46,490; Oct. 6; Gaz. vol. 207; p. 266.
Behrend, Gerhard, assignor to The Silex Co., Inc., New York, N. Y. Coffee-percolator. No. 46,523; Oct. 13; Gaz. vol. 207; p. 582.
Bernstein, Philip, New York, N. Y. Hair-pin. No. 46,524; Oct. 13; Gaz. vol. 207; p. 583.
Bigelow Carpet Company. (See Riddell, Robert F., assignor.)
Bigelow Carpet Company. (See Schindler, Francis, assignor.)
Bigelow Carpet Company. (See Spring, William A., assignor.)
Blake, Ludwig L., South Bend, Ind., assignor to F. C. Davidge & Co., F. C. Davidge, proprietor, Toronto, Canada. Wall-paper. Nos. 46,558–63; Oct. 20; Gaz. vol. 207; pp. 891–2.
Boman, Claes W., Brooklyn, assignor to Eagle Pencil Company, New York, N. Y. Tip for penholders. No. 46,588; Oct. 27; Gaz. vol. 207; p. 1215.
Bosh, Firm of Robert. (See Krauss, Adolf, assignor.)
Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Combination needle threader and sharpener. No. 46,491; Oct. 6; Gaz. vol. 207; p. 266.
Boye Needle Company, The. (See Boye, James H., assignor.)
Brohm, William C. (See Grainger and Brohm.)
Camp Fire Outfitting Co. (See Gulick, Charlotte V., assignor.)
Campbell, Jessie G. (See Woolner and Campbell.)
Campbell, Jessie G., and C. N. Woolner, Oakland, Cal. Garment. Nos. 46,589–90; Oct. 27; Gaz. vol. 207; p. 1215.
Chassaing, Joseph, Chicago, Ill., assignor to Shiras Electric Company, St. Louis, Mo. Lighting-fixture. No. 46,564; Oct. 20; Gaz. vol. 207; p. 892.
Cheney Brothers. (See Gattiker, Robert, assignor.)
Cheney Brothers. (See Scheidecker, Paul, assignor.)
Cheney Brothers. (See Sins, Emile, assignor.)
Cohn, Goldwater & Co. (See Haworth, Charles M., assignor.)
Cole, Ernest C., Chicago, Ill. Sheet-metal stove-body. No. 46,492; Oct. 6; Gaz. vol. 207; p. 266.
Colgan, Seth P., assignor of one-half to C. S. Melick, Orleans, Nebr. Badge or emblem. No. 46,493; Oct. 6; Gaz. vol. 207; p. 267.
Copp, Zed H., Philadelphia, Pa. Home-flag. No. 46,525; Oct. 13; Gaz. vol. 207; p. 583.
Davidge & Co., F. C. (See Blake, Ludwig L., assignor.)
Davies, Morgan, Denver, Colo. Shade-bracket. No. 46,494; Oct. 6; Gaz. vol. 207; p. 267.
Dodge Brothers. (See Dodge, John F. and H. E., assignors.)
Dodge, Horace E. (See Dodge, John F. and H. E.)
Dodge, John F. and H. E., assignors to Dodge Brothers, Detroit, Mich. Car-body. No. 46,565; Oct. 20; Gaz. vol. 207; p. 892.
Dorfeld, Samuel, Brooklyn, N. Y. Scalloped and fringed lace band for curtains. No. 46,591; Oct. 27; Gaz. vol. 207; p. 1215.
Dorithy, Arthur J., Springfield, Ill. Name-plate. No. 46,566; Oct. 20; Gaz. vol. 207; p. 893.
E. A. Laboratories. (See Auffero, Emanuel, assignor.)
Eagle Pencil Company. (See Boman, Claes W., assignor.)
Eick, Otto, St. Louis, Mo. Rubber brush. Nos. 46,592–6; Oct. 27; Gaz. vol. 207; p. 1216.
French, Ira L. (See Beardslee and French.)
Gattiker, Robert, Paris, France, assignor to Cheney Brothers, South Manchester, Conn. Textile fabric. No. 46,597; Oct. 27; Gaz. vol. 207; p. 1216.
Godley, Charles E., Detroit, Mich. Vehicle-lamp. No. 46,495; Oct. 6; Gaz. vol. 207; p. 267.
Goodwin, Myron, Berwick, Me. Polisher. No. 46,526; Oct. 13; Gaz. vol. 207; p. 583.
Grainger, Charles F., and W. C. Brohm, assignors to Grainger & Company, Louisville, Ky. Stand. No. 46,527; Oct. 13; Gaz. vol. 207; p. 583.
Grainger & Company. (See Grainger and Brohm, assignors.)
Griffin, James C., assignor to Griffin Manufacturing Company, Erie, Pa. Hinge-leaf. No. 46,496; Oct. 6; Gaz. vol. 207; p. 267.
Griffin Manufacturing Company. (See Griffin, James C., assignor.)
Gulick, Charlotte V., assignor to Camp Fire Outfitting Co., New York, N. Y. Frame for beadwork-looms. No. 46,497; Oct. 6; Gaz. vol. 207; p. 267.
Hall, Ezekiel, Sharon, Mass. Smoking set. No. 46,528; Oct. 13; Gaz. vol. 207; p. 583.
Hancock, Clara E., Oceanpark, Cal. Button. No. 46,567; Oct. 20; Gaz. vol. 207; p. 893.
Harper, George W., assignor to The Peerless Motor Car Company, Cleveland, Ohio. Automobile-body. No. 46,498; Oct. 6; Gaz. vol. 207; p. 267.
Hastings, Don T., assignor to Packard Motor Car Company, Detroit, Mich. Hub-cap. No. 46,499; Oct. 6; Gaz. vol. 207; p. 267.
Hawkes, Townsend D. M., Corning, N. Y. French-dressing bottle. No. 46,500; Oct. 6; Gaz. vol. 207; p. 268.
Haworth, Charles M., assignor to Cohn, Goldwater & Co., Los Angeles, Cal. Overalls. No. 46,598; Oct. 27; Gaz. vol. 207; p. 1217.
Highland Body Mfg. Company, The. (See Morrison, James, assignor.)
Hocking Valley Products Company. (See Reagan, Daniel E., assignor.)
Holton, Frank, Chicago, Ill. Cornet. No. 46,501; Oct. 6; Gaz. vol. 207; p. 268.
Hopwood, William B., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn. Sole for footwear. No. 46,568; Oct. 20; Gaz. vol. 207; p. 893.
Hussey, Frank H., Beverly, Mass. Sink-guard. No. 46,529; Oct. 13; Gaz. vol. 207; p. 583.
Inflexible Co. (See Schwarber, Henry, assignor.)
Jacobson, Abraham. (See Peters and Jacobson.)
Joslyn, Walter B. (See Walton and Joslyn.)
Kaufman, Charles, Santa Ana, Cal. Electric bracket-lamp. No. 46,569; Oct. 20; Gaz. vol. 207; p. 893.
Kaufmann, Eugene, New York, N. Y. Horn. No. 46,502; Oct. 6; Gaz. vol. 207; p. 268.
Kennedy, James E., Washington, D. C. Grate. No. 46,530; Oct. 13; Gaz. vol. 207; p. 584.
Kline, Robert, assignor to The B-O-C. Mfg. Co., Cleveland, Ohio. Savings-bank. No. 46,531; Oct. 13; Gaz. vol. 207; p. 584.
Krause, John, San Francisco, Cal. Pin. No. 46,532; Oct. 13; Gaz. vol. 207; p. 584.
Krauss, Adolf, Cannstatt, assignor to Firm of R. Bosch, Stuttgart, Germany. Cam-ring for mechanical interrupters in electrical ignition systems. No. 46,503; Oct. 6; Gaz. vol. 207; p. 268.
Kuhn, Frank, assignor to American Electrical Heater Company, Detroit, Mich. Curling-iron heater. No. 46,504; Oct. 6; Gaz. vol. 207; p. 268.
Landauer, Charles W., Grand Rapids, Mich. Base for spring-latch devices. No. 46,570; Oct. 20; Gaz. vol. 207; p. 893.
Lederman, Hugo, New York, N. Y. Statuette. No. 46,505; Oct. 6; Gaz. vol. 207; p. 268.
Lee, John E., Conshohocken, Pa. Tire. No. 46,506; Oct. 6; Gaz. vol. 207; p. 269.
Lindsey, Charles, Waynesboro, Miss. Combination-tool. No. 46,507; Oct. 6; Gaz. vol. 207; p. 269.
Lyons, Louis, Providence, R. I. Ring, pin, button, or similar article of jewelry. No. 46,599; Oct. 27; Gaz. vol. 207; p. 1217.
Maher, Ross F., St. Paul, Minn. Billiard-cue rack. No. 46,600; Oct. 27; Gaz. vol. 207; p. 1217.
McDougal, Thomas W., assignor to Armour & Company, Chicago, Ill. Cake of soap. No. 46,508; Oct. 6; Gaz. vol. 207; p. 269.
Melick, Charles S. (See Colgan, Seth P., assignor.)
Metzger, Emil F., Peoria, Ill. Basin. No. 46,533; Oct. 13; Gaz. vol. 207; p. 584.
Mlench, Stefan, Hyde Park, Pa. Picture-frame. No. 46,601; Oct. 27; Gaz. vol. 207; p. 1217.
Miller, John M., Providence, R. I. Finger-ring, bracelet, breastpin, or similar article of jewelry. Nos. 46,534–6; Oct. 13; Gaz. vol. 207; p. 584.

Mix, Henry D., assignor to Wightman & Hough Co., Providence, R. I. Pendant. No. 46,571; Oct. 20; Gaz. vol. 207; p. 893.

Morris, William D., assignor to The Republic Rubber Company, Youngstown, Ohio. Vehicle-tire. Nos. 46,537–8; Oct. 13; Gaz. vol. 207; p. 585.

Morrison, James, Cincinnati, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio. Automobile-body. Nos. 46,572–4; Oct. 20; Gaz. vol. 207; p. 894.

Morse, Raymond P., New York, N. Y. Overgaiter. No. 46,602; Oct. 27; Gaz. vol. 207; p. 1217.

Munson, John B., Phillipsburg, N. J. Flag. No. 46,539; Oct. 13; Gaz. vol. 207; p. 585.

Murray, James A., assignor to The Seamless Rubber Co., New Haven, Conn. Rubber bathing-cap. No. 46,603; Oct. 27; Gaz. vol. 207; p. 1218.

Neff, John P., East Orange, N. J., assignor to American Arch Company, New York, N. Y. Brick for locomotive-arches. No. 46,509; Oct. 6; Gaz. vol. 207; p. 269.

Otstot, George, Springfield, Ohio. Toy. No. 46,540; Oct. 13; Gaz. vol. 207; p. 585.

Ott, Charles B., Woodlawn, W. Va. Artificial-light inclosure. No. 46,541; Oct. 13; Gaz. vol. 207; p. 585.

Ott, Charles B., Woodlawn, W. Va. Artificial-light inclosure. No. 46,575; Oct. 20; Gaz. vol. 207; p. 894.

Over, Edwin G., Fort Worth, Tex. Sanitary tooth-cleaner. No. 46,510; Oct. 6; Gaz. vol. 207; p. 269.

Packard Motor Car Company. (See Hastings, Don T., assignor.)

Panama-Pacific International Exposition Co. (See Baxter, Howard A., assignor.)

Panchula, Miklos, Duxonville, Pa. Crucifix. No. 46,511; Oct. 6; Gaz. vol. 207; p. 270.

Parker, Stanley, New Britain, Conn. Soap-saver. No. 46,576; Oct. 20; Gaz. vol. 207; p. 894.

Parker, Stanley, New Britain, Conn. Bread-toaster. No. 46,577; Oct. 20; Gaz. vol. 207; p. 894.

Peerless Motor Car Company, The. (See Harper, George W., assignor.)

Peters, Charles, and A. Jacobson, Los Angeles, Cal. Souvenir clock-case. No. 46,578; Oct. 20; Gaz. vol. 207; p. 894.

Peterson, Frank W., Harcourt, Iowa. Manure-hook. No. 46,579; Oct. 20; Gaz. vol. 207; p. 895.

Re Maker, John M., Springfield, Mass. Lamp-shade standard. No. 46,512; Oct. 6; Gaz. vol. 207; p. 270.

Reagan, Daniel E., Columbus, assignor to Hocking Valley Products Company, Franklin, Ohio. Brick or similar article. No. 46,580; Oct. 20; Gaz. vol. 207; p. 895.

Rees, Alice A., Spring City, Pa. Game-board. No. 46,581; Oct. 20; Gaz. vol. 207; p. 895.

Republic Rubber Company, The. (See Morris, William D., assignor.)

Riddell, Robert F., Flushing, N. Y., assignor to Bigelow Carpet Company. Rug. Nos. 46,542–7; Oct. 13; Gaz. vol. 207; pp. 585–7.

Rogers, Walter F., Oak Park, Ill. Stove. No. 46,582; Oct. 20; Gaz. vol. 207; p. 895.

Sampson, Charles H., Rochester, N. Y. Casing for check-protectors. No. 46,604; Oct. 27; Gaz. vol. 207; p. 1218.

Saunders, Emmett A., Mishawaka, Ind. Boot. No. 46,548; Oct. 13; Gaz. vol. 207; p. 587.

Scheidecker, Paul, Paris, France, assignor to Cheney Brothers, South Manchester, Conn. Textile fabric. No. 46,605; Oct. 27; Gaz. vol. 207; p. 1218.

Schindler, Francis, Scarsdale, N. Y., assignor to Bigelow Carpet Company. Rug. Nos. 46,549–50; Oct. 13; Gaz. vol. 207; p. 587.

Schloss, Newton L. (See Auth and Schloss.)

Schwarber, Henry, Weehawken, assignor to Inflexible Co., West New York, N. J. Waist-front. No. 46,551; Oct. 13; Gaz. vol. 207; p. 587.

Seamless Rubber Co., The. (See Murray, James A., assignor.)

Seefried, Johann, Nuremberg, Germany. Fastener for paper bags. No. 46,513; Oct. 6; Gaz. vol. 207; p. 270.

Shiras Electric Company. (See Chassaing, Joseph, assignor.)

Silex Co., The. (See Rebrend, Gerhard, assignor.)

Sins, Emile, Paris, France, assignor to Cheney Brothers, South Manchester, Conn. Textile fabric. Nos. 46,606–12; Oct. 27; Gaz. vol. 207; p. 1218.

Smith, Edwin D., St. Louis, Mo. Lamp-post. No. 46,514; Oct. 6; Gaz. vol. 207; p. 270.

Spring, William A., Brooklyn, N. Y., assignor to Bigelow Carpet Company. Rug. Nos. 46,552–3; Oct. 13; Gaz. vol. 207; p. 588.

Stutson, Thomas E., Newton, Mass. Doll. No. 46,515; Oct. 6; Gaz. vol. 207; p. 270.

Thurmond, Walter J., Columbus, Ga. Fireplace. No. 46,516; Oct. 6; Gaz. vol. 207; p. 270.

Tillmanns, Carl W., Utica, N. Y. Knife-handle. No. 46,583; Oct. 20; Gaz. vol. 207; p. 895.

Todd, Robert R., Brookneal, Va. Spool-holder. No. 46,517; Oct. 6; Gaz. vol. 207; p. 271.

Tomka, George, and S. Varga, South Bethlehem, Pa. Sign. No. 46,584; Oct. 20; Gaz. vol. 207; p. 896.

Trask, Philip, Yonkers, N. Y. Badge. No. 46,585; Oct. 20; Gaz. vol. 207; p. 896.

Tucker, Nellie M., Sacramento, Cal. Stove-mat. No. 46,586; Oct. 20; Gaz. vol. 207; p. 896.

Varga, Sándor. (See Tomka and Varga.)

Vogan, Frank M., Canton, Ohio. Sheet metal. Nos. 46,518–19; Oct. 6; Gaz. vol. 207; p. 271.

Walberg, Oscar P., Kimball, Minn. Inkstand. No. 46,520; Oct. 6; Gaz. vol. 207; p. 271.

Walton, Moses S., and W. B. Joslyn, Los Angeles, Cal. Motor-truck body. No. 46,554; Oct. 13; Gaz. vol. 207; p. 588.

Wanner, Edwin P., New York, N. Y. Furniture-brace. No. 46,587; Oct. 20; Gaz. vol. 207; p. 896.

Wolfert, Carl, Chicago, Ill. Drapery. No. 46,613; Oct. 27; Gaz. vol. 207; p. 1219.

Wightman & Hough Co. (See Mix, Henry D., assignor.)

Willis, Leland, assignor to Bateman Manufacturing Company, Grenloch, N. J. Potato-planter frame. No. 46,614; Oct. 27; Gaz. vol. 207; p. 1220.

Wittstein, Charles T., Newark, N. J. Gem-setting. No. 46,521; Oct. 6; Gaz. vol. 207; p. 271.

Woolner, Clara N. (See Campbell and Woolner.)

Woolner, Clara N., and J. G. Campbell, Oakland, Cal. Garment. Nos. 46,615–16; Oct. 27; Gaz. vol. 207; p. 1220.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Leschen & Sons Rope Company, St. Louis, Mo. Wire rope. No. 100,712; Oct. 20; Gaz. vol. 207; p. 933.

A. Wilhelm Company, The, Reading, Pa. Furniture and floor polishes. No. 100,188; Oct. 6; Gaz. vol. 207; p. 296.

A. E. Nettleton Company, Syracuse, N. Y. Shoes. No. 100,600; Oct. 20; Gaz. vol. 207; p. 930.

A. F. Conery Company, Newark, N. J. Certain named brushes and brooms. No. 100,279; Oct. 20; Gaz. vol. 207; p. 920.

A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Oil-burning stoves, ranges, heaters, burners, and wicks. No. 100,714; Oct. 20; Gaz. vol. 207; p. 933.

A. & V. Oil Co., Cambridge, Md. Lubricating and cleaning oil. No. 100,145; Oct. 6; Gaz. vol. 207; p. 295.

A. W. Faber, Stein, near Nuremberg, Germany. Certain pencils, rubber erasers, and penholders. No. 100,302; Oct. 20; Gaz. vol. 207; p. 921.

Abbot Jacket Manufacturing Company, St. Louis, Mo. Workmen's aprons. No. 100,472; Oct. 20; Gaz. vol. 207; p. 926.

Abbott & Company, A. Theodore, Philadelphia, Pa. Silk curtains and piece goods. No. 100,738; Oct. 27; Gaz. vol. 207; p. 1241.

Abrams & Marcus, New York, N. Y. Shirts, No. 100,473; Oct. 20; Gaz. vol. 207; p. 926.

Abrams & Marcus, New York, N. Y. Shirts. No. 100,575; Oct. 20; Gaz. vol. 207; p. 929.

Actien-Gesellschaft für Anilin-Fabrikation, Berlin, Germany. Remedy for certain named diseases. No. 100,071; Oct. 6; Gaz. vol. 207; p. 293.

Ajello, Michele, Brooklyn, N. Y. Canned olive-oil, fruits, and vegetables. No. 100,739; Oct. 27; Gaz. vol. 207; p. 1241.

Alabama-Georgia Syrup Co., Montgomery, Ala. Table-syrup. No. 100,691; Oct. 20; Gaz. vol. 207; p. 932.

Albert Pick & Company, Chicago, Ill., and San Francisco, Cal. Impregnated safety-matches. No. 100,406; Oct. 20; Gaz. vol. 207; p. 924.

Alexander Bennie & Co., Nashville, Tenn. Overalls. No. 100,251; Oct. 20; Gaz. vol. 207; p. 919.

Alfred, Benjamin - Washington Co., New York, N. Y. Men's and young men's outer clothing. No. 100,752; Oct. 27; Gaz. vol. 207; p. 1241.

Allen & Smith Company, Inc., Richmond, Va. Candy, salted peanuts, peanut-butter. No. 100,692; Oct. 20; Gaz. vol. 207; p. 932.

Allison & Lamson, New York, N. Y. Canes, parasols, and umbrellas. No. 100,475; Oct. 20; Gaz. vol. 207; p. 926.

Allmade Bakeries, Inc., Detroit, Mich. Cake mixtures. No. 100,740; Oct. 27; Gaz. vol. 207; p. 1241.

Aluminum Castings Company, Cleveland, Ohio. Aluminum castings. No. 100,741; Oct. 27; Gaz. vol. 207; p. 1241.

Alzanne Cigarette Company, New York, N. Y. Cigarettes. No. 100,072; Oct. 6; Gaz. vol. 207; p. 293.

American Agricultural Chemical Co., New York, N. Y. Fertilizers. No. 100,476; Oct. 20; Gaz. vol. 207; p. 926.

American Chemical & Manufacturing Company, Inc., Norfolk, Va. Ready-mixed, waterproofing, and rustproofing paints. No. 100,073; Oct. 6; Gaz. vol. 207; p. 293.

American Cyanamid Company, Nashville, Tenn.; Niagara Falls, Ontario, Canada; Buffalo and New York, N. Y., and Atlanta, Ga. Certain fertilizer material. No. 100,232; Oct. 20; Gaz. vol. 207; p. 919.

American Rubber Company, Boston, Mass. Rubber boots and shoes. No. 100,477; Oct. 20; Gaz. vol. 207; p. 926.

Amoskeag Manufacturing Company, Manchester, N. H. Plain cotton flannels. No. 100,233; Oct. 20; Gaz. vol. 207; p. 919.

Amoskeag Manufacturing Company, Manchester, N. H. Cotton piece and dress goods. Nos. 100,234–40; Oct. 20; Gaz. vol. 207; p. 919.

Anchor Coal Company, Charleston, W. Va. Block coal. No. 100,742; Oct. 27; Gaz. vol. 207; p. 1241.

Anderson, Arminda J., Lesday, Tex. Medical herb preparation for female complaints. No. 100,074; Oct. 6; Gaz. vol. 207; p. 293.

Anti-Fog Company, Portland, Oreg. Composition for preventing accumulation or condensation of water upon glass, &c., surfaces. No. 100,743; Oct. 27; Gaz. vol. 207; p. 1241.

Anti-Vapor Co., New York, N. Y. Compounds for prevention of moisture on glass surfaces. No. 100,478; Oct. 20; Gaz. vol. 207; p. 926.

Aragon Coffee Co., Inc., South Richmond, Va. Tea and coffee. No. 100,744; Oct. 27; Gaz. vol. 207; p. 1241.

Armbruster, Elise, late Miss Haiblé, Landau, Germany. Hair-nets. No. 100,241; Oct. 20; Gaz. vol. 207; p. 919.

Armour & Company, Chicago, Ill. Sardines. No. 100,479; Oct. 20; Gaz. vol. 207; p. 926.

Armstrong, Frederick S., New York, N. Y. Coffee. No. 100,075; Oct. 6; Gaz. vol. 207; p. 293.

Armstrong, Harry, Atlanta, Ga. Remedy for asthma, bronchitis, hay-fever, &c. No. 100,745; Oct. 27; Gaz. vol. 207; p. 1241.

Arthur Chemical Co., The, New Haven, Conn. Perfume, toilet water, powders, and cold-cream. No. 100,480; Oct. 20; Gaz. vol. 207; p. 926.

Associated Portland Cement Manufacturers (1900), Limited, The, London, England. Portland cement. No. 100,481; Oct. 20; Gaz. vol. 207; p. 926.

Atlantic Chemical Corporation, Norfolk, Va. Fertilizers. No. 100,242; Oct. 20; Gaz. vol. 207; p. 919.

Atsco, Incorporated, New York, N. Y. Viscous cement. No. 100,746; Oct. 27; Gaz. vol. 207; p. 1241.

Aubry Sisters, New York, N. Y. Certain named chemical and pharmaceutical preparation. No. 100,076; Oct. 6; Gaz. vol. 207; p. 293.

Auerbach & Sons, D., New York, N. Y. Candy. No. 100,747; Oct. 27; Gaz. vol. 207; p. 1241.

August, A. & L., Fort Worth, Tex. Certain named clothing for men and boys. No. 100,482; Oct. 20; Gaz. vol. 207; p. 926.

Augusta Canning Co., Brunswick, Me. Canned corn, succotash, and Lima beans. No. 100,748; Oct. 27; Gaz. vol. 207; p. 1241.

Aunt Jemima Mills Company, St. Joseph, Mo. Wheat-flour. No. 100,077; Oct. 6; Gaz. vol. 207; p. 293.

Auspitz, Max, Chicago, Ill. Petticoats. No. 100,483; Oct. 20; Gaz. vol. 207; p. 926.

Automobile Blue Book Company, New York, N. Y. Printed books. No. 100,243; Oct. 20; Gaz. vol. 207; p. 919.

B. Birnbaum & Son, Limited, London, England. Raincoats. No. 100,492; Oct. 20; Gaz. vol. 207; p. 926.

B. F. Goodrich Company, The, New York, N. Y. Rubber hot-water bottles and fountain-syringe bags. No. 100,321; Oct. 20; Gaz. vol. 207; p. 921.

Bache, Leigh S., assignor to W. W. Smalley, Boundbrook, N. J. Poultry for breeding. No. 100,191; Oct. 13; Gaz. vol. 207; p. 605.

Baer & Snyder, Philadelphia, Pa. Unguents. No. 100,244; Oct. 20; Gaz. vol. 207; p. 919.

Baker-Shippee Manufacturing Co., Los Angeles, Cal. Exhausters, cookers, and coolers used in canning foods. No. 100,078; Oct. 6; Gaz. vol. 207; p. 293.

Balliet, A. H. (See Doll, Fred W., assignor.)

Balluteaud, J., Blanzac-Cognac, France. Brandy. No. 100,245; Oct. 20; Gaz. vol. 207; p. 919.

Baltimore Enamel & Novelty Company, The, Baltimore, Md. Ceramic enamel. No. 100,192; Oct. 13; Gaz. vol. 207; p. 605.

Barcley, Gaylord A., Newark, N. J. Clothing and certain named articles of merchandise accessory thereto. No. 100,484; Oct. 20; Gaz. vol. 207; p. 926.

Bardos, Coleman, Jr., New York, N. Y. Sterile solutions for intramuscular and hypodermic injections. No. 100,079; Oct. 6; Gaz. vol. 207; p. 293.

Barrett Manufacturing Company, New York, N. Y. Prepared roofings. Nos. 100,246–8; Oct. 20; Gaz. vol. 207; p. 919.

Barse & Hopkins, New York, N. Y. Series of books. No. 100,080; Oct. 6; Gaz. vol. 207; p. 293.

Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Cotton goods in the piece. No. 100,249; Oct. 20; Gaz. vol. 207; p. 919.

Beacon Manufacturing Co., Providence, R. I., and New York, N. Y. Steamer-rugs. No. 100,486; Oct. 20; Gaz. vol. 207; p. 926.

Beatey's Unadulterated Agricultural Phosphate Company of New England, Boston, Mass. Fertilizers. No. 100,250; Oct. 20; Gaz. vol. 207; p. 919.

Beaver Valley Milling Company, Des Moines, Iowa. Wheat-flour and cornmeal. No. 100,750; Oct. 27; Gaz. vol. 207; p. 1241.

Beggs Manufacturing Co., Chicago, Ill. Blood remedy. No. 100,751; Oct. 27; Gaz. vol. 207; p. 1241.

Beiersdorf & Co., P., Hamburg, Germany. Perfumery, &c. No. 100,487; Oct. 20; Gaz. vol. 207; p. 926.

Béligné, Henri, Langres, France. Certain named knives, scissors, shears, razors, &c. No. 100,488; Oct. 20; Gaz. vol. 207; p. 926.

Benson, William E., St. Paul, Minn. Lubricating-oil. No. 100,753; Oct. 27; Gaz. vol. 207; p. 1241.

Berlin Laboratory, Ltd., Inc., New York, N. Y. Medical preparations for use as a spray in nose or throat affections. No. 100,754; Oct. 27; Gaz. vol. 207; p. 1241.

Berlin Laboratory, Ltd., Inc., New York, N. Y. Medical preparations for gastro-intestinal disturbances. No. 100,755; Oct. 27; Gaz. vol. 207; p. 1241.

Berne Manufacturing Company, Berne, Ind. Overalls, shirts, and blouses. No. 100,490; Oct. 20; Gaz. vol. 207; p. 926.
Berry Brothers, Detroit, Mich. Shellac varnish. No. 100,081; Oct. 6; Gaz. vol. 207; p. 293.
Bertram, Ludwig, Hanover, Germany. Surgical rubber goods, rubber teats, nipples, and sponges. No. 100,491; Oct. 20; Gaz. vol. 207; p. 926.
Bigham, Herbert C., Peoria, Ill. Paint for waterproofing canvas duck. No. 100,756; Oct. 27; Gaz. vol. 207; p. 1241.
Blasdell Milk Producer Co., Ballinger, Tex. Tonic for stock. No. 100,082; Oct. 6; Gaz. vol. 207; p. 293.
Bleecker, Miles L., New York, N. Y. Boys' and girls' leather shoes. No. 100,252; Oct. 20; Gaz. vol. 207; p. 919.
Bloom & Millman, New York, N. Y. Outer waists for women and girls. No. 100,757; Oct. 27; Gaz. vol. 207; p. 1241.
Blumenthal & Co., B., New York, N. Y. Buttons. No. 100,253; Oct. 20; Gaz. vol. 207; p. 919.
Bon-Bon Company, New York, N. Y., assignor, by mesne assignments to Sterling Gum Company, Inc. Chewing-gum. No. 100,193; Oct. 13; Gaz. vol. 207; p. 605.
Bonney Vise & Tool Works, Inc., Philadelphia and Allentown, Pa., and New York, N. Y. Certain named metal castings and forgings. No. 100,084; Oct. 6; Gaz. vol. 207; p. 293.
Borsig, Firm of A., Tegel, near Berlin, Germany. Pumps and compressors, jump-valves, wind-kettles, and conduits. No. 100,085; Oct. 6; Gaz. vol. 207; p. 293.
Bouché, Paul, New York, N. Y. Alcoholic fruit-juice. No. 100,258; Oct. 20; Gaz. vol. 207; p. 919.
Boyer, Frederick W., Cleveland, Ohio. Paint and varnish cleanser and polish. No. 100,195; Oct. 13; Gaz. vol. 207; p. 605.
Bradley & Hubbard Mfg. Co., Meriden, Conn. Electric lamps. No. 100,086; Oct. 6; Gaz. vol. 207; p. 293.
Branex Company, The, Grand Rapids, Mich. Certain named foods. Nos. 100,087–8; Oct. 6; Gaz. vol. 207; p. 293.
Brewster, Evelyn R. S., Chicago, Ill. Plate, solder, and solder-flux. No. 100,259; Oct. 20; Gaz. vol. 207; p. 919.
Brewster, Gordon & Co., Rochester, N. Y. Certain named foods. No. 100,089; Oct. 6; Gaz. vol. 207; p. 293.
Bridgeport Wood Finishing Company, The, New Milford, Conn. Prepared paints, stains, varnishes, &c. Nos. 100,759–60; Oct. 27; Gaz. vol. 207; p. 1241.
Bristol-Myers Company, New York, N. Y. Antiseptics, disinfectants, and deodorants. No. 100,260; Oct. 20; Gaz. vol. 207; p. 920.
Brock, Millie G., Centralia, Ill. Scalp-tonic. No. 100,090; Oct. 6; Gaz. vol. 207; p. 293.
Brockett-Gorham Company, The, Marion, Ohio. Truck-chains. No. 100,493; Oct. 20; Gaz. vol. 207; p. 926.
Broderick & Bascom Rope Company, St. Louis, Mo. Wire-rope lubricants and preservatives. No. 100,761; Oct. 27; Gaz. vol. 207; p. 1241.
Brown Cracker & Candy Co., Dallas, Tex. Cakes. No. 100,762; Oct. 27; Gaz. vol. 207; p. 1241.
Brown, Fannie W., Milwaukee, Wis. Corsets. No. 100,261; Oct. 20; Gaz. vol. 207; p. 920.
Brown Shoe Company, Inc., St. Louis, Mo. Leather shoes. No. 100,262; Oct. 20; Gaz. vol. 207; p. 920.
Brucato, Joseph, New York, N. Y. Lemons and oranges. No. 100,763; Oct. 27; Gaz. vol. 207; p. 1241.
Buffalo Brewing Co., Sacramento, Cal. Beer. No. 100,764; Oct. 27; Gaz. vol. 207; p. 1241.
Burdick, James H., Sandwich, Ill. Liquid tonic for poultry. No. 100,406; Oct. 20; Gaz. vol. 207; p. 927.
Burke, Frank G., New York, N. Y. Talcum powder. No. 100,497; Oct. 20; Gaz. vol. 207; p. 927.
Burkhardt Brewing Company, Boston, Mass. Ale. No. 100,499; Oct. 20; Gaz. vol. 207; p. 927.
Burnham-Munger Root Dry Goods Co., Kansas City, Mo. Shirts. No. 100,500; Oct. 20; Gaz. vol. 207; p. 927.
C. Gotzian & Company, St. Paul, Minn. Ladies', misses', and children's leather shoes. No. 100,542; Oct. 20; Gaz. vol. 207; p. 928.
C. De Witt Lukens Surgical Manufacturing Co., St. Louis, Mo. Surgical sutures. No. 100,366; Oct. 20; Gaz. vol. 207; p. 923.
C. C. Smoot & Sons Co., Alexandria, Va. Leather in unmanufactured form. No. 100,171; Oct. 6; Gaz. vol. 207; p. 296.
C. S. Foulds-Briggs Company, The, Cincinnati, Ohio. Macaroni, elbow-macaroni, spaghetti, and noodles. No. 100,793; Oct. 27; Gaz. vol. 207; p. 1242.
C. W. Reynolds Co., Petersburg, N. Y. Shirts, night-shirts, and pajamas. No. 100,410; Oct. 20; Gaz. vol. 207; p. 924.
Campbell Electric Company, Lynn, Mass. X-ray apparatus. No. 100,091; Oct. 6; Gaz. vol. 207; p. 293.
Cannizzaro & Co., P., New York, N. Y. Cigars, cigarettes, and tobacco. No. 100,705; Oct. 27; Gaz. vol. 207; p. 1241.
Cannon, James W., Concord, N. C., and New York, N. Y. Hosiery. No. 100,501; Oct. 20; Gaz. vol. 207; p. 927.
Canton Biscuit Co., The, Canton, Ohio. Crackers and biscuits. No. 100,766; Oct. 27; Gaz. vol. 207; p. 1241.
Canton Culvert Company, The, Canton, Ohio. Silos. No. 100,693; Oct. 20; Gaz. vol. 207; p. 932.
Capewell Horse Nail Company, Hartford, Conn. Horse-nails. No. 100,264; Oct. 20; Gaz. vol. 207; p. 920.
Carlyle Johnson Machine Co., The, Manchester, Conn. Hydrocarbon-engines. No. 100,092; Oct. 6; Gaz. vol. 207; p. 293.
Carmel Wine Company, New York, N. Y. Honey, olive-oil, and almonds. No. 100,093; Oct. 6; Gaz. vol. 207; p. 293.
Carrabine, Oscar, New York, N. Y. Bathing-suits. No. 100,767; Oct. 27; Gaz. vol. 207; p. 1242.
Carrigan, James N., Washington, D. C. Preparation for treatment of cancers. No. 100,502; Oct. 20; Gaz. vol. 207; p. 927.
Carson, Pirie, Scott & Co., Chicago, Ill. Ginghams. No. 100,265; Oct. 20; Gaz. vol. 207; p. 920.
Cartabiliotta, Antonio, Swissvale, Pa. Stomach, liver, and bowel medicine. No. 100,266; Oct. 20; Gaz. vol. 207; p. 920.
Castillo & Company, Rafael del, New York, N. Y. Coffee. No. 100,199; Oct. 13; Gaz. vol. 207; p. 605.
Catlin & Co., New York, N. Y. Cotton piece goods. No. 100,267; Oct. 20; Gaz. vol. 207; p. 920.
Celia Brothers, Inc., New York, N. Y. Olive-oil and macaroni. No. 100,094; Oct. 6; Gaz. vol. 207; p. 293.
Cement Casket Mfg. Co., Battle Creek and Albion, Mich. Composition or artificial stone burial caskets and vaults. No. 100,268; Oct. 20; Gaz. vol. 207; p. 920.
Central Trading Corporation, Phillipsburg, Pa. Kegs, especially powder-kegs. No. 100,269; Oct. 20; Gaz. vol. 207; p. 920.
Challenge Cutlery Corporation, Bridgeport, Conn. Chiropodists' knives. No. 100,503; Oct. 20; Gaz. vol. 207; p. 927.
Chalmers & Williams, Inc., Chicago, Ill. Gyratory crushers. No. 100,096; Oct. 6; Gaz. vol. 207; p. 293.
Charles F. Mattlage & Sons, New York, N. Y. Pickled, salted, dried, and preserved fish. No. 100,858; Oct. 27; Gaz. vol. 207; p. 1244.
Charles Niedner's Sons Co., Malden, Mass. Linen hose. No. 100,873; Oct. 27; Gaz. vol. 207; p. 1245.
Charles W. Stores, Inc., The, Brooklyn, N. Y. Bicycles. No. 100,468; Oct. 20; Gaz. vol. 207; p. 926.
Chas. M. Cox Co., Boston, Mass. Certain named poultry and stock feeds. No. 100,284; Oct. 20; Gaz. vol. 207; p. 920.
Chas. M. Cox Co., Boston, Mass. Certain named poultry feeds. No. 100,516; Oct. 20; Gaz. vol. 207; p. 927.
Chas. S. Tanner Company, Providence, R. I. Gums. No. 100,650; Oct. 20; Gaz. vol. 207; p. 931.
Chesbro Manufacturing Company, The, Oneonta, N. Y. Lawn-mower sharpeners. No. 100,097; Oct. 6; Gaz. vol. 207; p. 293.
Chic-A-Lax Manufacturing Co., Minneapolis, Minn. Digestive agent. No. 100,098; Oct. 6; Gaz. vol. 207; p. 293.
Chicago Fire Brick Co., Chicago, Ill. Bricks, tile pipe, flue-lining, &c. No. 100,270; Oct. 20; Gaz. vol. 207; p. 920.
Christofidy, Theodose, New York, N. Y. Cigarettes. No. 100,271; Oct. 20; Gaz. vol. 207; p. 920.
Cincinnati Oil Works Co., The, Cincinnati, Ohio. Metal-polish. No. 100,505; Oct. 20; Gaz. vol. 207; p. 927.
Clanton & Webb Company, Atlanta, Ga. Blackboard crayons and erasers. No. 100,272; Oct. 20; Gaz. vol. 207; p. 920.
Cleveland Electro Metals Company, The, Cleveland, Ohio. Aluminum castings. No. 100,768; Oct. 27; Gaz. vol. 207; p. 1242.
Cleveland Metal Products Company, The, Cleveland, Ohio. Tables and stands. No. 100,506; Oct. 20; Gaz. vol. 207; p. 927.
Clip-Bar Manufacturing Company, Philadelphia, Pa. Concrete sockets and inserts. No. 100,273; Oct. 20; Gaz. vol. 207; p. 920.
Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Medicated stock food. No. 100,280; Oct. 20; Gaz. vol. 207; p. 920.
Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Shaving-lotions, glove-cleaner. No. 100,281; Oct. 20; Gaz. vol. 207; p. 920.
Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.,) Jackson, Tenn. Liquid clothes-cleaner. No. 100,514; Oct. 20; Gaz. vol. 207; p. 927.
Coburn, Jasen and Kline, San Francisco, Cal. Shock-absorbers. No. 100,507; Oct. 20; Gaz. vol. 207; p. 927.
Cochrane Co., Brooklyn, N. Y. Preparation for destroying insects. No. 100,508; Oct. 20; Gaz. vol. 207; p. 927.
Cochrane Manufacturing Co., Dedham, Mass. Carpets. Nos. 100,274–5; Oct. 20; Gaz. vol. 207; p. 920.
Coe-Mortimer Company, The, New York, N. Y. Combination fertilizer and worm and weed killer. No. 100,509; Oct. 20; Gaz. vol. 207; p. 927.
Collin Street Bakery, Corsicana, Tex. Fruit cake. No. 100,197; Oct. 13; Gaz. vol. 207; p. 605.
Collins Company, The, Collinsville, Conn. Certain named cutlery and tools. No. 100,099; Oct. 6; Gaz. vol. 207; p. 293.
Colton, Andrew J., Stapleton, N. Y. Compound digestive powder. No. 100,510; Oct. 20; Gaz. vol. 207; p. 927.
Columbia Wax Works, New York, N. Y. Paraffin-wax. No. 100,100; Oct. 6; Gaz. vol. 207; p. 294.
Columbus Dental Manufacturing Co., The, Columbus, Ohio. Artificial teeth and teeth-facings. No. 100,277; Oct. 20; Gaz. vol. 207; p. 920.

Colvin, George A., Chicago, Ill. Digestive tablet. No. 100,101; Oct. 6; Gaz. vol. 207; p. 294.
Commonwealth Electric & Manufacturing Company, St. Louis, Mo. Massage instruments. No. 100,278; Oct. 20; Gaz. vol. 207; p. 920.
Conradty, Firm of C., Nuremberg, Germany. Electrical and galvanic carbons. No. 100,769; Oct. 27; Gaz. vol. 207; p. 1242.
Consolidated Drug Co. Inc., The, Washington, D. C. Certain named medicines and preparations for treating certain diseases. No. 100,511; Oct. 20; Gaz. vol. 207; p. 927.
Consolidated Drug Co. Inc., The, Washington, D. C. Tooth-wash and antiseptic solution, eye remedy. No. 100,512; Oct. 20; Gaz. vol. 207; p. 927.
Consolidated Grocery Company, Tampa, Jacksonville, and Pensacola, Fla. Butter. No. 100,770; Oct. 27; Gaz. vol. 207; p. 1242.
Continental Motor Mfg. Co., Detroit and Muskegon, Mich. Gas-engines. No. 100,771; Oct. 27; Gaz. vol. 207; p. 1242.
Continental Oil Company, The, Denver, Colo. Gasolene, kerosene, and lubricating oil. No. 100,102; Oct. 6; Gaz. vol. 207; p. 294.
Convent Co., The, Morristown, N. J. Remedy for coughs and throat affections. No. 100,513; Oct. 20; Gaz. vol. 207; p. 927.
Converse Rubber Shoe Co., Malden, Mass. Rubber tires, casings, and inner tubes. No. 100,772; Oct. 27; Gaz. vol. 207; p. 1242.
Corn Products Refining Co., New York, N. Y. Starch. No. 100,282; Oct. 20; Gaz. vol. 207; p. 920.
Corpening, Thomas B., St. Louis, Mo. Hosiery. No. 100,515; Oct. 20; Gaz. vol. 207; p. 927.
Cowles-MacDowell Pneumobile Co., Chicago, Ill. Vehicles with pneumatic springs. No. 100,283; Oct. 20; Gaz. vol. 207; p. 920.
Cragg, Samuel H., New York, N. Y. Hanging bags. No. 100,285; Oct. 20; Gaz. vol. 207; p. 920.
Crescent Dental Mfg. Co., Chicago, Ill. Certain named articles used in dentistry. No. 100,286; Oct. 20; Gaz. vol. 207; p. 920.
Crescent Mill & Elevator Co., The, Denver, Colo. Wheat-flour. No. 100,517; Oct. 20; Gaz. vol. 207; p. 927.
Crew Levick Company, Philadelphia, Pa. Gasolene, naphtha, benzin, &c. No. 100,851; Oct. 27; Gaz. vol. 207; p. 1244.
Crichfield, William T. S., Jersey City, N. J., and New York, N. Y. Bituminous sidewalks and pavements. No. 100,287; Oct. 20; Gaz. vol. 207; p. 920.
Crocker, J. H., San Pedro and Los Angeles, Cal. Remedies for rheumatism. No. 100,773; Oct. 27; Gaz. vol. 207; p. 1242.
Crown Overall Manufacturing Co., The, Cincinnati, Ohio. Trousers and overalls. No. 100,774; Oct. 27; Gaz. vol. 207; p. 1242.
Cruttenden, Henry L., Northfield, Minn. Dental cement-tubes. No. 100,696; Oct. 20; Gaz. vol. 207; p. 932.
Curtis, Emma E., Melrose, Mass. Certain food preparation. No. 100,198; Oct. 13; Gaz. vol. 207; p. 605.
Custer Milling Company, Custer, Okla. Wheat-flour. No. 100,518; Oct. 20; Gaz. vol. 207; p. 927.
Cyklon Maschinenfabrik m. b. H., Berlin, Germany. Aeroplanes, motor-boats, automobile vehicles, bicycles, and parts. No. 100,695; Oct. 20; Gaz. vol. 207; p. 932.
D. D. Felton Brush Co., Atlanta, Ga. Brooms, brushes, and dusters. No. 100,311; Oct. 20; Gaz. vol. 207; p. 921.
Daimler-Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Certain named metal castings and forgings. No. 100,778; Oct. 27; Gaz. vol. 207; p. 1242.
Daimler-Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Certain named electrical apparatus and supplies. No. 100,779; Oct. 27; Gaz. vol. 207; p. 1242.
"Dalmatia" Portland Cement Works Company Ltd., Trieste, Austria-Hungary. Cement. No. 100,519; Oct. 20; Gaz. vol. 207; p. 927.
Daprato Statuary Company, Chicago, Ill. Statuary and images. No. 100,697; Oct. 20; Gaz. vol. 207; p. 932.
David E. Kennedy, Inc., New York, N. Y. Non-metallic flooring. No. 100,344; Oct. 20; Gaz. vol. 207; p. 922.
Davis & French, Portland, Oreg. Metal-polish. No. 100,520; Oct. 20; Gaz. vol. 207; p. 927.
De Laval Dairy Supply Company, Jersey City, N. J., and San Francisco, Cal. Silos. No. 100,288; Oct. 20; Gaz. vol. 207; p. 920.
De Martini, Paul, Brooklyn, N. Y. Macaroni, noodles, and spaghetti. No. 100,103; Oct. 6; Gaz. vol. 207; p. 294.
Dedek, Frank, Chicago, Ill. Foot-powder composition. No. 100,775; Oct. 27; Gaz. vol. 207; p. 1242.
Deming Company, The, Salem, Ohio. Spraying apparatus for trees, plants, and bushes. No. 100,780; Oct. 27; Gaz. vol. 207; p. 1242.
Denges, Henry J., Baltimore, Md. Medical ointments. No. 100,289; Oct. 20; Gaz. vol. 207; p. 920.
Dennison Manufacturing Company, Boston, Mass. Mucilage, glue, &c. No. 100,521; Oct. 20; Gaz. vol. 207; p. 927.
Dentists' Supply Company, The, New York, N. Y. Artificial teeth. No. 100,290; Oct. 20; Gaz. vol. 207; p. 920.
Detroit Steel Products Co., Detroit, Mich. Metal window-sash, doors, partitions, and door and window frames. No. 100,291; Oct. 20; Gaz. vol. 207; p. 920.
Diamond Star Insecticide Co., Philadelphia, Pa. Insecticides. No. 100,522; Oct. 20; Gaz. vol. 207; p. 927.
Diastatic Malt Extract Co., Chicago, Ill. Malt extract. No. 100,523; Oct. 20; Gaz. vol. 207; p. 927.
Didisheim, Goldschmidt Fils et Cie., Fabrique Juvenia, La Chaux-de-Fonds, Switzerland. Watches, clocks, watchcases, &c. No. 100,524; Oct. 20; Gaz. vol. 207; p. 927.
Dierckx, Christian J., New York, N. Y. Bread composed of pure honey and rye-flour. No. 100,776; Oct. 27; Gaz. vol. 207; p. 1242.
Dixie Cotton Felt Mattress Company, Chicago, Ill. Mattresses. No. 100,293; Oct. 20; Gaz. vol. 207; p. 921.
Doll, Fred W., assignor of one-half to A. H. Balliet, Allentown, Pa. Puzzles. No. 100,294; Oct. 20; Gaz. vol. 207; p. 921.
Dollfus-Mieg & Cie. Société Anonyme, Mülhouse, Germany. Braids and passementerie. Nos. 100,525–6; Oct. 20; Gaz. vol. 207; p. 927.
Donegal Motor Rug Co., New York, N. Y. Rugs. No. 100,295; Oct. 20; Gaz. vol. 207; p. 921.
Dond Milling Company, Manning and Denison, Iowa. Wheat-flour. No. 100,698; Oct. 20; Gaz. vol. 207; p. 933.
Dr. A. Wander, A. G., Berne, Switzerland. Food drink. No. 100,025; Oct. 27; Gaz. vol. 207; p. 1246.
Dreadnaught Tire & Rubber Co., Baltimore, Md. Rubber vehicle-tires and inner tubes. No. 100,104; Oct. 6; Gaz. vol. 207; p. 294.
Du Belle Grape Juice Co., Irondequoit, N. Y. Grape-juice. No. 100,489; Oct. 20; Gaz. vol. 207; p. 926.
Dubuque Biscuit Company, Dubuque, Iowa. Crackers, biscuits, cookies, and cakes. No. 100,781; Oct. 27; Gaz. vol. 207; p. 1242.
Dunbars, Lopez & Dukate Co., New Orleans, La. Canned shrimp. No. 100,105; Oct. 6; Gaz. vol. 207; p. 294.
Dunbars, Lopez & Dukate Co., New Orleans, La. Canned shrimp. No. 100,296; Oct. 20; Gaz. vol. 207; p. 921.
Dunham, James W., New York, N. Y. Electric lamps and stands. No. 100,777; Oct. 27; Gaz. vol. 207; p. 1242.
Dunlop Milling Co., The, Clarksville, Tenn. Self-rising wheat-flour. No. 100,297; Oct. 20; Gaz. vol. 207; p. 921.
Dunlop Milling Co., The, Clarksville, Tenn. Wheat-flour. No. 100,782; Oct. 27; Gaz. vol. 207; p. 1242.
Duryea, William F., New York, N. Y. Fountain-pens. No. 100,298; Oct. 20; Gaz. vol. 207; p. 921.
Dwiggins Wire Fence Company, Anderson, Ind. Metal fencing, gates, and fence-posts. No. 100,106; Oct. 6; Gaz. vol. 207; p. 294.
E. A. Tygert Co., Inc., Camden, N. J., and Philadelphia, Pa. Lubricating-oils. No. 100,916; Oct. 27; Gaz. vol. 207; p. 1246.
E. S. Holt Company—Manufacturing Pharmacists, Incorporated, Cedar Rapids, Iowa. Compound of enzyms or ferments for the conversion of food-assimilable products. No. 100,551; Oct. 20; Gaz. vol. 207; p. 928.
E. W. Burt & Company, Incorporated, Boston, Mass. Leather boots and shoes. No. 100,263; Oct. 20; Gaz. vol. 207; p. 920.
E. W. Scarborough Co., New York, N. Y. Writing and printing paper. Nos. 100,430–1; Oct. 20; Gaz. vol. 207; p. 925.
Eastman Kodak Co., Rochester, N. Y. Picture-projection apparatus. No. 100,200; Oct. 13; Gaz. vol. 207; p. 605.
Ebling Brewing Company, The, New York, N. Y. Extract of malt and hops. No. 100,527; Oct. 20; Gaz. vol. 207; p. 927.
Eclipse Machine Company, Elmira, N. Y. Clutches and drill-chucks. No. 100,783; Oct. 27; Gaz. vol. 207; p. 1242.
Edgemont Chemical Mfg. Co., Edgemont, S. D. Medicine for whooping-cough. No. 100,784; Oct. 27; Gaz. vol. 207; p. 1242.
Eisenberger Kiebsand-Werke, G. m. b. H., Eisenberg, Germany. Loam, molding sand and clay. No. 100,840; Oct. 27; Gaz. vol. 207; p. 1244.
Eli Lilly and Company, The, Indianapolis, Ind. Local anesthetic. No. 100,363; Oct. 20; Gaz. vol. 207; p. 923.
Elmendorf, George, Elmira, N. Y. Chewing-gum. No. 100,528; Oct. 20; Gaz. vol. 207; p. 927.
Empire Cotton Oil Company, Atlanta, Ga. Feed-meal for horses, mules, and cows. No. 100,107; Oct. 6; Gaz. vol. 207; p. 294.
Empire Cotton Oil Co., Atlanta, Ga. Fertilizers. No. 100,699; Oct. 20; Gaz. vol. 207; p. 933.
Escoffier (1907) Limited, London, England. Chutney, pickles, and condiment sauces. No. 100,108; Oct. 6; Gaz. vol. 207; p. 294.
Esterbrook Steel Pen Mfg. Co., The, Camden, N. J. Steel pens. No. 100,530; Oct. 20; Gaz. vol. 207; p. 928.
Eustis Citrus Growers Association, Eustis, Fla. Certain named citrus fruits. Nos. 100,109–10; Oct. 6; Gaz. vol. 207; p. 294.
Evans, Lewis S., Pittsburgh, Pa. Belt-dressings. No. 100,531; Oct. 20; Gaz. vol. 207; p. 928.
F. Kreuger and Company, Limited, London, England. Matches. No. 100,356; Oct. 20; Gaz. vol. 207; p. 922.
F. A. Patrick & Co., Duluth, Minn. Certain named embroidery, knitting, and crochet materials and sewing-silks. No. 100,396; Oct. 20; Gaz. vol. 207; p. 924.
F. A. Patrick & Co., Duluth, Minn. Knitted caps, hoods, sweaters, skirts, &c. No. 100,605; Oct. 20; Gaz. vol. 207; p. 930.

F. A. Patrick & Co., Duluth, Minn. Certain named textile fabrics. No. 100,606; Oct. 20; Gaz. vol. 207; p. 930.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 100,421–3; Oct. 20; Gaz. vol. 207; p. 924.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. No. 100,627; Oct. 20; Gaz. vol. 207; p. 930.
Faber, Eberhard, New York, N. Y. Certain named pencils, crayons, rubber erasers, &c. No. 100,532; Oct. 20; Gaz. vol. 207; p. 928.
Fahrenwald, William A., New York, N. Y. Cold-cream. No. 100,785; Oct. 27; Gaz. vol. 207; p. 1242.
Fair, The, Chicago, Ill. Satin ribbon. No. 100,303; Oct. 20; Gaz. vol. 207; p. 921.
Fair, The, Chicago, Ill. Clothes-wringer. No. 100,304; Oct. 20; Gaz. vol. 207; p. 921.
Fair, The, Chicago, Ill. Neckties. Nos. 100,305–6; Oct. 20; Gaz. vol. 207; p. 921.
Fair, The, Chicago, Ill. Clothes-wringer. No. 100,307; Oct. 20; Gaz. vol. 207; p. 921.
Far West Clay Co., The, Tacoma, Wash. Building bricks and blocks. No. 100,308; Oct. 20; Gaz. vol. 207; p. 921.
Farmers National Life Insurance Company of America, East Chicago, Ind., and Chicago, Ill. Publications. No. 100,786; Oct. 27; Gaz. vol. 207; p. 1241.
Farr and Bailey Manufacturing Company, Camden, N. J. Chemical composition for treatment of new and old floor oil-cloth and linoleum. No. 100,787; Oct. 27; Gaz. vol. 207; p. 1242.
Farr Brick Company, Cleveland, Ohio. Brick. No. 100,533; Oct. 20; Gaz. vol. 207; p. 928.
Farrell & Co., Omaha, Nebr. Table-syrups, sorghum, and maple-syrup molasses. No. 100,700; Oct. 20; Gaz. vol. 207; p. 933.
Fearing, Whiton & Co., Inc., Boston, Mass. Cotton piece goods. No. 100,309; Oct. 20; Gaz. vol. 207; p. 921.
Federal-Huber Co., Chicago, Ill. Water-closets, lavatories. No. 100,788; Oct. 27; Gaz. vol. 207; p. 1242.
Federal Milling Company, Lockport, N. Y. Feeds made from wheat, corn, and oats. No. 100,789; Oct. 27; Gaz. vol. 207; p. 1242.
Feldwisch, John, St. Louis, Mo. Salt. No. 100,534; Oct. 20; Gaz. vol. 207; p. 928.
Felt Embroidery Form Company, Marengo, Ill. Initials and embroidery designs. No. 100,310; Oct. 20; Gaz. vol. 207; p. 921.
Felters Company, New York, Middleville, and Lestershire, N. Y., and Boston and Millbury, Mass. Felts. No. 100,112; Oct. 6; Gaz. vol. 207; p. 294.
Ferbend & Co., Chicago, Ill. Cheese. No. 100,113; Oct. 6; Gaz. vol. 207; p. 294.
Ferguson Waterproof Co., St. Louis, Mo. Certain named clothing. No. 100,312; Oct. 20; Gaz. vol. 207; p. 921.
Feuerheerd, Junior & Companhia, Diederich M., Oporto, Portugal. Port-wine. No. 100,535; Oct. 20; Gaz. vol. 207; p. 928.
Field Bros. & Gross Company, Boston, Mass. Leather and canvas boots and shoes. No. 100,313; Oct. 20; Gaz. vol. 207; p. 921.
Fitzgerald Mfg. Co., The, Torrington, Conn. Electrical horns. Nos. 100,790–1; Oct. 27; Gaz. vol. 207; p. 1242.
Fitzgerald, Phelps & Fargo Shoe Co., Milwaukee, Wis. Leather boots and shoes. No. 100,536; Oct. 20; Gaz. vol. 207; p. 928.
Fitzpatrick Bros., Chicago, Ill. Washing compound. No. 100,314; Oct. 20; Gaz. vol. 207; p. 921.
Flint and Walling Manufacturing Co., Kendallville, Ind. Power washing-machines (laundry) and parts thereof. No. 100,315; Oct. 20; Gaz. vol. 207; p. 921.
Flintkote Manufacturing Co., Boston, Mass. Artificial board. No. 100,792; Oct. 27; Gaz. vol. 207; p. 1242.
Florence Manufacturing Company, Northampton, Mass. Tooth-brushes. No. 100,316; Oct. 20; Gaz. vol. 207; p. 921.
Flowerree Groves, Fort Myers, Fla. Citrus fruits. No. 100,201; Oct. 13; Gaz. vol. 207; p. 605.
Fox, Marshall P., Chicago, Ill. Electrical rectifiers. No. 100,794; Oct. 27; Gaz. vol. 207; p. 1242.
Frank, Bernard N., New York, N. Y. Shirt-waists. No. 100,317; Oct. 20; Gaz. vol. 207; p. 921.
Frank E. Block Co., Atlanta, Ga. Candy. No. 100,083; Oct. 6; Gaz. vol. 207; p. 293.
Franken & Frank, New York, N. Y. Crape piece goods. No. 100,796; Oct. 27; Gaz. vol. 207; p. 1242.
Frederick Stearns & Co., Detroit, Mich. Perfumes, face-powders, and toilet waters. No. 100,443; Oct. 20; Gaz. vol. 207; p. 925.
Fried, Joseph H., Montgomery, Ala. Metal-polish. No. 100,318; Oct. 20; Gaz. vol. 207; p. 921.
Frost, Augustine L., Minneapolis, Minn. Entire-wheat bread. No. 100,202; Oct. 13; Gaz. vol. 207; p. 605.
Fruit Pudding Co., The, Baltimore, Md. Farinaceous compound with fruit flavorings. No. 100,701; Oct. 20; Gaz. vol. 207; p. 933.
Fruitland Orchards, Inc., Staunton, Va. Fresh apples and peaches. No. 100,537; Oct. 20; Gaz. vol. 207; p. 928.
Fuerst & Kraemer, Ltd., New Orleans, La. Candy. No. 100,203; Oct. 13; Gaz. vol. 207; p. 605.
G. Washington Coffee Refining Company, New York, N. Y. Powdered food-flavoring. No. 100,926; Oct. 27; Gaz. vol. 207; p. 1246.
G. R. Farrington Company, New York, N. Y. Teas. No. 100,111; Oct. 6; Gaz. vol. 207; p. 294.
Garrod, Albert E., New York, N. Y. Shoes. No. 100,538; Oct. 20; Gaz. vol. 207; p. 928.
Gehe & Co., Aktiengesellschaft, Dresden, Germany. Malt extracts. No. 100,797; Oct. 27; Gaz. vol. 207; p. 1242.
Geo. Borgfeldt & Co., New York, N. Y. Certain named paper and stationery supplies. No. 100,194; Oct. 13; Gaz. vol. 207; p. 605.
Geo. Borgfeldt & Co., New York, N. Y. Military hair-brushes. No. 100,254; Oct. 20; Gaz. vol. 207; p. 919.
Geo. Borgfeldt & Co., New York, N. Y. Dolls. No. 100,255; Oct. 20; Gaz. vol. 207; p. 919.
Geo. Borgfeldt & Co., New York, N. Y. Hair, tooth, and nail brushes. No. 100,256; Oct. 20; Gaz. vol. 207; p. 919.
Geo. D. Witt Shoe Co., Lynchburg, Va. Leather boots and shoes. No. 100,680; Oct. 20; Gaz. vol. 207; p. 932.
George Borgfeldt & Co., New York, N. Y. Certain named furnishings, notions, and fancy goods. No. 100,257; Oct. 20; Gaz. vol. 207; p. 919.
George Borgfeldt & Co., New York, N. Y. Dolls. No. 100,758; Oct. 27; Gaz. vol. 207; p. 1241.
George Lueders & Co., New York, N. Y. Perfumery. No. 100,365; Oct. 20; Gaz. vol. 207; p. 923.
Giant Tire & Rubber Company, Omaha, Nebr. Rubber tubes for pneumatic tires. No. 100,798; Oct. 27; Gaz. vol. 207; p. 1242.
Gibford-Weiffenbach Company, The, Adrian, Mich. Razor-strops. No. 100,319; Oct. 20; Gaz. vol. 207; p. 921.
Gillespie, Shields & Co., Knoxville, Tenn. Men's trousers. No. 100,539; Oct. 20; Gaz. vol. 207; p. 928.
Gillinder & Sons, Inc., Philadelphia, Pa. Glass lamp globes, shades, reflectors, bodies, and chimneys. No. 100,799; Oct. 27; Gaz. vol. 207; p. 1242.
Glühstrumpffabrik Basel, Basel, Switzerland. Gas-mantle with attachments. No. 100,749; Oct. 27; Gaz. vol. 207; p. 1241.
Gold Medal Stock Food Co., Perrysville, Ohio. Stock-tonics. No. 100,800; Oct. 27; Gaz. vol. 207; p. 1242.
Goldberg, Harry, New York, N. Y. Oil trousers, jackets, and coats. No. 100,540; Oct. 20; Gaz. vol. 207; p. 928.
Golden Pheasant, The, San Francisco, Cal. Candies, cakes, confectionery, &c. No. 100,204; Oct. 13; Gaz. vol. 207; p. 605.
Goldstein Bros., Philadelphia, Pa. Waists and dresses. No. 100,801; Oct. 27; Gaz. vol. 207; p. 1242.
Good Roads Machinery Company, The, Kennett Square, Pa. Certain named articles of machinery. No. 100,115; Oct. 6; Gaz. vol. 207; p. 294.
Goodman, Cohen & Co., New York, N. Y. Shirts. No. 100,320; Oct. 20; Gaz. vol. 207; p. 921.
Goodman, Cohen & Co., New York, N. Y. Shirts. No. 100,541; Oct. 20; Gaz. vol. 207; p. 928.
Goodman, Joseph, New York, N. Y. Corn and bunion plasters, foot-powders, &c. No. 100,802; Oct. 27; Gaz. vol. 207; p. 1243.
Gorly, Vincent J., St. Louis, Mo. Candied popcorn. No. 100,702; Oct. 20; Gaz. vol. 207; p. 933.
Gottlieb Bauernschmidt Straus Brewing Company, The, Baltimore, Md. Lager-beer. No. 100,633; Oct. 20; Gaz. vol. 207; p. 931.
Gottlieb Bauernschmidt Straus Brewing Company, The, Baltimore, Md. Lager-beer. No. 100,909; Oct. 27; Gaz. vol. 207; p. 1246.
Gray, Robert D., Ridgewood, N. J. Reflectors. No. 100,803; Oct. 27; Gaz. vol. 207; p. 1243.
Great Western Mfg. Co., Laporte, Ind. Bicycles. No. 100,804; Oct. 27; Gaz. vol. 207; p. 1243.
Greensburg Tire & Rubber Co., Greensburg, Pa. Inner and outer tubes for pneumatic tires. No. 100,703; Oct. 20; Gaz. vol. 207; p. 933.
Greensburg Tire & Rubber Co., Greensburg, Pa. Inner tubes for pneumatic tires. No. 100,704; Oct. 20; Gaz. vol. 207; p. 933.
Gregory, Anna V., Davenport, Cal. Stove-polish. No. 100,543; Oct. 20; Gaz. vol. 207; p. 928.
Gulfport Grocery Co., Gulfport, Miss. Stock feed. No. 100,805; Oct. 27; Gaz. vol. 207; p. 1243.
Guth Chocolate Company, Wilmington, Del., and Baltimore, Md. Candy. Nos. 100,806–13; Oct. 27; Gaz. vol. 207; p. 1243.
H. Lesinsky Company, The, El Paso, Tex. Canned fruits, vegetables, fish, oysters, and shrimps. No. 100,713; Oct. 20; Gaz. vol. 207; p. 933.
H. Mueller Manufacturing Co., Decatur, Ill. Washers other than metal for couplings. No. 100,863; Oct. 27; Gaz. vol. 207; p. 1244.
H. Wenzel Tent & Duck Co., St. Louis, Mo. Tents, tarpaulins, and waterproof bed-sheets. Nos. 100,186–7; Oct. 6; Gaz. vol. 207; p. 296.
H. C. Whitmer Company, The, Columbus, Ind. Remedy for certain named diseases and ailments. No. 100,674; Oct. 20; Gaz. vol. 207; p. 932.
Hall & Ruckel. (See Tokalon, Incorporated, assignor.)
Hall & Ruckel, New York, N. Y. Talcum powder. No. 100,119; Oct. 6; Gaz. vol. 207; p. 294.
Hally & Sullivan, Denver, Colo. Compound to bind joints in plumbing and pipe-fitting. No. 100,545; Oct. 20; Gaz. vol. 207; p. 928.
Hampden Glazed Paper and Card Company, Holyoke, Mass. Writing, printing, and cover paper. No. 100,323; Oct. 20; Gaz. vol. 207; p. 921.
Hancock, B. A., Atlanta, Ga. Vinegar, sauer-krout, pickles, &c. No. 100,814; Oct. 27; Gaz. vol. 207; p. 1243.

Hanson & Van Winkle Company, The, Newark, N. J. Nickel salts. No. 100,324; Oct. 20; Gaz. vol. 207; p. 921.
Harbauer Company, The, Toledo, Ohio. Soup, purée, and catsup. No. 100,120; Oct. 6; Gaz. vol. 207; p. 294.
Hartmann Trunk Co., The, Racine, Wis. Trunks, suit-cases, and bags. No. 100,325; Oct. 20; Gaz. vol. 207; p. 921.
Hassel, Otto H., Chicago, Ill. Shoes, slippers, and boots. No. 100,705; Oct. 20; Gaz. vol. 207; p. 933.
Hatch, Nathan, Albany and Cohoes, N. Y. Woven and knitted underwear, combination-garments, &c. No. 100,547; Oct. 20; Gaz. vol. 207; p. 928.
Hawkeye Oil Company, The, Waterloo, S. D. Certain named oils and greases. No. 100,815; Oct. 27; Gaz. vol. 207; p. 1243.
Hawks, Incorporated, Bloomington, Ill. Certain named foods. No. 100,818; Oct. 27; Gaz. vol. 207; p. 1243.
Hecht & Co., Washington, D. C. Shoes. No. 100,326; Oct. 20; Gaz. vol. 207; p. 921.
Hecht, Ell G., Baltimore, Md. Wines. No. 100,121; Oct. 6; Gaz. vol. 207; p. 294.
Heidner, Hans, Tacoma, Wash. Hair, tooth, nail, and eyebrow brushes. No. 100,327; Oct. 20; Gaz. vol. 207; p. 921.
Heller & Co., B., Chicago, Ill. Flavoring extracts for foods. No. 100,819; Oct. 27; Gaz. vol. 207; p. 1243.
Hemingway & Company, Inc., Boundbrook, N. J. Enamel paint. No. 100,820; Oct. 27; Gaz. vol. 207; p. 1243.
Henry A. Dix & Sons Company, Millville, N. J., and New York, N. Y. Ladies' tub and house dresses, nurses' and waitresses' uniforms. No. 100,292; Oct. 20; Gaz. vol. 207; p. 920.
Hensel Chemical Works, The, Sioux City, Iowa. Medicine used in treating certain named diseases. No. 100,548; Oct. 20; Gaz. vol. 207; p. 928.
Herold Company, Phil. San Jose, Cal. Leather shoes. No. 100,328; Oct. 20; Gaz. vol. 207; p. 921.
Herrmann, Aukam & Co., New York, N. Y. Handkerchiefs. No. 100,549; Oct. 20; Gaz. vol. 207; p. 928.
Herrmann, Aukam & Co., New York, N. Y. Handkerchiefs. No. 100,816; Oct. 27; Gaz. vol. 207; p. 1243.
Heymann, Max, New York, N. Y. Trade publication. No. 100,122; Oct. 6; Gaz. vol. 207; p. 294.
Hezel Milling Company, East St. Louis, Ill. Wheat-flour. No. 100,817; Oct. 27; Gaz. vol. 207; p. 1243.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Bicycles, neck-yokes, toy wagons, &c. No. 100,329; Oct. 20; Gaz. vol. 207; p. 922.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Shotguns, ammunition-bags, and rifle-sheaths. No. 100,330; Oct. 20; Gaz. vol. 207; p. 922.
Higley, Christina J., New York, N. Y. Hose-supporters. No. 100,331; Oct. 20; Gaz. vol. 207; p. 922.
Hockensmith Wheel & Mine Car Company, Penn Station, Pa. Car-wheels. No. 100,332; Oct. 20; Gaz. vol. 207; p. 922.
Hoffmann, Guillaume, Brussels, Belgium. Surgical bandages. No. 100,550; Oct. 20; Gaz. vol. 207; p. 928.
Holland Food Corporation, New York, N. Y. Condensed milk. No. 100,123; Oct. 6; Gaz. vol. 207; p. 294.
Holmes & Son, Washington, D. C. Bread. No. 100,822; Oct. 27; Gaz. vol. 207; p. 1243.
Hough, Arthur, Choisy, Quebec, Canada. Nitrating liquids. No. 100,706; Oct. 20; Gaz. vol. 207; p. 933.
House of Childhood (Inc.), The, New York, N. Y. Geometrical insets, counters, and color-spools. No. 100,504; Oct. 20; Gaz. vol. 207; p. 927.
Hughes, James F., New York, N. Y. Golf-game apparatus, &c. No. 100,333; Oct. 20; Gaz. vol. 207; p. 922.
Hulse Brothers & Daniel Co., New York, N. Y. Umbrellas. No. 100,334; Oct. 20; Gaz. vol. 207; p. 922.
Human Hair Goods Industry, New York, N. Y. Human hair. No. 100,824; Oct. 27; Gaz. vol. 207; p. 1243.
Hurst & Company, John E., Baltimore, Md. Work-shirts and overalls. No. 100,707; Oct. 20; Gaz. vol. 207; p. 933.
I. B. Kleinert Rubber Company, New York, N. Y. Dress and garment shields. No. 100,351; Oct. 20; Gaz. vol. 207; p. 922.
Ihlers & Bell, Limited, Liverpool, England. Beer. No. 100,335; Oct. 20; Gaz. vol. 207; p. 922.
Imperial Rubber Co., New York, N. Y. Certain named hose, belting, gaskets, &c. No. 100,825; Oct. 27; Gaz. vol. 207; p. 1243.
Improved Sanitary Fixture Company, Los Angeles, Cal. Bath-tubs, washstands, bowls, closets, &c. No. 100,554; Oct. 20; Gaz. vol. 207; p. 928.
Indian Refining Company, Inc., Augusta, Me., and New York, N. Y. Certain named oils and greases. No. 100,826; Oct. 27; Gaz. vol. 207; p. 1243.
Industrial Appliance Company, Chicago, Ill. Gas for maturing and bleaching flour. No. 100,827; Oct. 27; Gaz. vol. 207; p. 1243.
Ingersoll-Rand Company, Jersey City, N. J., and New York, N. Y. Air-feed hammer-drills. No. 100,828; Oct. 27; Gaz. vol. 207; p. 1243.
International Buckle Company, New Britain, Conn. Certain named baggage and horse equipments. No. 100,336; Oct. 20; Gaz. vol. 207; p. 922.
Interwoven Stocking Company, New Brunswick, N. J. Hosiery. No. 100,337; Oct. 20; Gaz. vol. 207; p. 922.
J. Allen Smith & Company, Knoxville, Tenn. Self-rising wheat-flour. No. 100,901; Oct. 27; Gaz. vol. 207; p. 1245.
J. English & Son Limited, Redditch, England. Toilet-pins and hand-sewing needles. No. 100,299; Oct. 20; Gaz. vol. 207; p. 921.
J. English & Son Limited, Redditch, England. Needles for hand-sewing. No. 100,300; Oct. 20; Gaz. vol. 207; p. 921.
J. English & Son Limited, Redditch, England. Needles for hand-sewing and knitting-pins. No. 100,301; Oct. 20; Gaz. vol. 207; p. 921.
J. English & Son Limited, Redditch, England. Pins and needles. No. 100,529; Oct. 20; Gaz. vol. 207; p. 927.
J. Myer Co., New York, N. Y. Celery tonic. No. 100,138; Oct. 6; Gaz. vol. 207; p. 295.
J. A. Folger & Company, San Francisco, Cal. Tea. No. 100,114; Oct. 6; Gaz. vol. 207; p. 294.
J. B. Greenhut Co., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Coffee. Nos. 100,116–18; Oct. 6; Gaz. vol. 207; p. 294.
J. F. Lenigan Co., New York, N. Y. Coats, trousers, waistcoats, and overcoats. No. 100,567; Oct. 20; Gaz. vol. 207; p. 929.
J. F. Pyle & Son, San Jose, Cal. Sauces and canned fruits and vegetables. No. 100,886; Oct. 27; Gaz. vol. 207; p. 1245.
J. H. Way & Sons Co., Philadelphia, Pa. Certain named clothing. No. 100,461; Oct. 20; Gaz. vol. 207; p. 925.
J. S. Merrell Drug Co., St. Louis, Mo. Preparation for making hot drinks. No. 100,374; Oct. 20; Gaz. vol. 207; p. 923.
J. W. & A. P. Howard & Co. Ltd., Corry, Pa. Sole-leather. No. 100,823; Oct. 27; Gaz. vol. 207; p. 1243.
James & Co., T. M., New York, N. Y. Window-shades. No. 100,338; Oct. 20; Gaz. vol. 207; p. 922.
Jardine, William H., Philadelphia, Pa. Ventilators. No. 100,829; Oct. 27; Gaz. vol. 207; p. 1243.
Jarrosson, Les Fils de L., Lyon, France. Certain named textile fabrics known as piece goods. No. 100,362; Oct. 20; Gaz. vol. 207; p. 923.
Jellico Grocery Company, Jellico, Tenn. Coffee. No. 100,213; Oct. 13; Gaz. vol. 207; p. 605.
Jno. E. Magerl & Co., Camden, N. J., and Philadelphia, Pa. Woolen piece goods. No. 100,367; Oct. 20; Gaz. vol. 207; p. 923.
John Hoberg Company, The, Green Bay, Wis. Toilet-paper. Nos. 100,205–12; Oct. 13; Gaz. vol. 207; p. 605.
John Wildi Evaporated Milk Co., The, Columbus, Ohio. Evaporated milk. No. 100,676; Oct. 20; Gaz. vol. 207; p. 932.
John Wildi Evaporated Milk Co., The, Columbus, Ohio. Evaporated milk. Nos. 100,734–6; Oct. 20; Gaz. vol. 207; p. 934.
John Wilking Co. Inc., New York, N. Y. Preparation for the expulsion of uric acid from the blood, &c. No. 100,189; Oct. 6; Gaz. vol. 207; p. 269.
John Wilson (Gildersome) Ltd., Gildersome, England. Cloths and stuffs. No. 100,678; Oct. 20; Gaz. vol. 207; p. 932.
Johnson, Anders G., Chicago, Ill. Compound for removing carbon. No. 100,555; Oct. 20; Gaz. vol. 207; p. 928.
Johnson, John H., Boston, Mass. Cigars. No. 100,708; Oct. 20; Gaz. vol. 207; p. 933.
Johnson, Nestor, Chicago, Ill. Skates. No. 100,339; Oct. 20; Gaz. vol. 207; p. 922.
Johnstown Automobile Co., The, Johnstown, Pa. Friction-tape for wheel-tires and vulcanizing-cement. No. 100,556; Oct. 20; Gaz. vol. 207; p. 928.
Johnstown Automobile Co., The, Johnstown, Pa. Inner tubes, blow-out patches, tire-boots, &c. No. 100,830; Oct. 27; Gaz. vol. 207; p. 1243.
Jordan Marsh Company, Boston, Mass. Corsets. No. 100,578; Oct. 20; Gaz. vol. 207; p. 929.
Joseph Sankey & Sons, Limited, Bilston, England. Metal wheels and stampings in metal for motor-vehicles. No. 100,425; Oct. 20; Gaz. vol. 207; p. 924.
Josey-Miller Co., Beaumont, Tex. Poultry feed. No. 100,831; Oct. 27; Gaz. vol. 207; p. 1243.
Josey-Miller Co., Beaumont, Tex. Horse and cattle feed. Nos. 100,832–3; Oct. 27; Gaz. vol. 207; p. 1243.
Julius Schmid, Inc., Astoria, N. Y. Rubber ice-bags. No. 100,434; Oct. 20; Gaz. vol. 207; p. 925.
K-W Ignition Company, The, Cleveland, Ohio. Shock-absorbers for vehicles. No. 100,340; Oct. 20; Gaz. vol. 207; p. 922.
Kahn, Arthur J., New York, N. Y. Knitting-needles, crochet hooks, shuttles, &c. No. 100,834; Oct. 27; Gaz. vol. 207; p. 1243.
Kaitz, Isidor, New York, N. Y. Ladies' shirt-waists. No. 100,835; Oct. 27; Gaz. vol. 207; p. 1243.
Kamlee Company, The, Milwaukee, Wis. Trunks, suit-cases, and traveling-bags. No. 100,557; Oct. 20; Gaz. vol. 207; p. 928.
Kansas City Paper House, Kansas City, Mo. Writing-paper and envelops. No. 100,341; Oct. 20; Gaz. vol. 207; p. 922.
Kantorowicz & Co., Breslau, Germany. Glue. No. 100,343; Oct. 20; Gaz. vol. 207; p. 922.
Kastler, Edward L., Racine, Wis. Corn cereal foods. No. 100,214; Oct. 13; Gaz. vol. 207; p. 605.
Kastler, Edward L., Racine, Wis. Corn cereal foods. No. 100,709; Oct. 20; Gaz. vol. 207; p. 933.
Katz & Sons, K., Baltimore, Md. Coats, trousers, vests, and overcoats. No. 100,342; Oct. 20; Gaz. vol. 207; p. 922.

Kelim Farmers' Mill and Elevator Company, The, Loveland, Colo. Wheat-flour. No. 100,710; Oct. 20; Gaz. vol. 207; p. 933.
Kelley, James, Winsted, Conn. Toilet-pins. No. 100,558; Oct. 20; Gaz. vol. 207; p. 928.
Kendall Refining Company, Bradford, Pa. Kerosene, gasolene, neutral oils, &c. No. 100,838; Oct. 27; Gaz. vol. 207; p. 1244.
Keystone Hair Insulator Co Pittsburgh, Pa. Certain named insulating material. Nos. 100,345–8; Oct. 20; Gaz. vol. 207; p. 922.
Keystone Shock Absorber Co., Pittsburgh, Pa. Shock-absorbers. No. 100,559; Oct. 20; Gaz. vol. 207; p. 928.
Kilian, Henry F. C., New York, N. Y. Canned vegetables, fruits, salmon, and jam. No. 100,836; Oct. 27; Gaz. vol. 207; p. 1244.
Kinchelce, Joe A., Milan, Tenn. Liver-regulator. No. 100,349; Oct. 20; Gaz. vol. 207; p. 922.
King, George W., Thomaston, Ga. Remedy for certain named disorders of infants and children. No. 100,124; Oct. 6; Gaz. vol. 207; p. 294.
Kingan & Co. (Limited), Belfast, Ireland; Indianapolis, Ind., and Baltimore, Md. Lard. No. 100,839; Oct. 27; Gaz. vol. 207; p. 1244.
Kitchell, Jos. G., New York, N. Y. Pictures, prints, paintings, &c. Nos. 100,125–6; Oct. 6; Gaz. vol. 207; p. 294.
Klar, Adolph, New York, N. Y. Hair-nets. No. 100,350; Oct. 20; Gaz. vol. 207; p. 922.
Kohlman, Wm. B., New Orleans, La. Hosiery. No. 100,560; Oct. 20; Gaz. vol. 207; p. 928.
Kohnstamm & Co., H., New York, N. Y. Bleaching, water-softening, &c., preparations. No. 100,352; Oct. 20; Gaz. vol. 207; p. 922.
Kohnstamm & Co., H., New York, N. Y. Laundry starch. No. 100,837; Oct. 27; Gaz. vol. 207; p. 1244.
Kohnstamm & Co., H., New York, N. Y. Certain essences, oils, and flavors. No. 100,841; Oct. 27; Gaz. vol. 207; p. 1244.
Kohnstamm & Co., H., New York, N. Y. Laundry starch. No. 100,842; Oct. 27; Gaz. vol. 207; p. 1244.
Koken Barbers' Supply Co., St. Louis, Mo. Certain named furniture. No. 100,353; Oct. 20; Gaz. vol. 207; p. 922.
Koken Barbers' Supply Co., St. Louis, Mo. Certain named pharmaceutical preparations. No. 100,561; Oct. 20; Gaz. vol. 207; p. 928.
Koken Barbers' Supply Company, St. Louis, Mo. Hair-tonic. No. 100,354; Oct. 20; Gaz. vol. 207; p. 922.
Kolynos Co., The, New Haven, Conn. Antiseptic solution and germicidal disinfectant. No. 100,355; Oct. 20; Gaz. vol. 207; p. 922.
Kruskel & Kruskel, New York, N. Y. Certain named garments. No. 100,562; Oct. 20; Gaz. vol. 207; p. 928.
Kurzmans Sons, M., New York, N. Y. Cotton and silk crape piece goods. No. 100,357; Oct. 20; Gaz. vol. 207; p. 922.
Kurzmans Sons, M., New York, N. Y. Silk piece goods. No. 100,563; Oct. 20; Gaz. vol. 207; p. 928.
L. Frank & Son Company, Milwaukee, Wis. Sausage. No. 100,795; Oct. 27; Gaz. vol. 207; p. 1242.
L. Sonneborn Sons, Inc., New York, N. Y. Chemical compound to soften textile fabrics. No. 100,002; Oct. 27; Gaz. vol. 207; p. 1245.
L. N. Gross Company, The, Cleveland, Ohio. Certain named women's garments. No. 100,544; Oct. 20; Gaz. vol. 207; p. 928.
L-P-C Motor Company, Racine, Wis. Automobiles. No. 100,711; Oct. 20; Gaz. vol. 207; p. 933.
La Manna, Azema & Farnan, New York, N. Y. Canned sardines and olive-oil. No. 100,848; Oct. 27; Gaz. vol. 207; p. 1244.
Lackland Brothers, Fort Worth, Tex. Tire-puncture compound. No. 100,564; Oct. 20; Gaz. vol. 207; p. 929.
Lamson Company, The, Boston, Mass. Conveying and transmission apparatus. No. 100,358; Oct. 20; Gaz. vol. 207; p. 922.
Lamson Company, The, Boston, Mass. Store furniture. No. 100,359; Oct. 20; Gaz. vol. 207; p. 922.
Landers, Frary & Clark, New Britain, Conn. Vacuum-bottles, alcohol-flagons, lunch-boxes, &c. No. 100,360; Oct. 20; Gaz. vol. 207; p. 922.
Lanman & Kemp, New York, N. Y. Sarsaparilla. No. 100,565; Oct. 20; Gaz. vol. 207; p. 929.
Lauer, Bernhard, Berlin, Germany. Remedy for blood-purifying and laxative purposes. No. 100,127; Oct. 6; Gaz. vol. 207; p. 294.
Lauer, Bernhard, Berlin, Germany. Internal remedy for purifying the blood and for laxative purposes. No. 100,849; Oct. 27; Gaz. vol. 207; p. 1244.
Leader Evaporator Company, Burlington, Vt. Evaporating and sugaring-off pans. No. 100,128; Oct. 6; Gaz. vol. 207; p. 294.
Leader Evaporator Company, Burlington, Vt. Gathering-tanks. No. 100,566; Oct. 20; Gaz. vol. 207; p. 929.
Leavenworth Milling Co., The, Leavenworth, Kans. Wheat-flour. No. 100,850; Oct. 27; Gaz. vol. 207; p. 1244.
Leiblinger, Marie A., Cleveland, Ohio. Salve. No. 100,361; Oct. 20; Gaz. vol. 207; p. 923.
Levi & Co., Berth., Chicago, Ill. Sausage-binder. No. 100,215; Oct. 13; Gaz. vol. 207; p. 605.
Levor & Igstaedter, New York, N. Y. Manufacturing ladies' garments in piece form. No. 100,568; Oct. 20; Gaz. vol. 207; p. 929.
Liberty Motion Picture Company, Wilmington, Del., and Philadelphia, Pa. Motion-picture films. No. 100,129; Oct. 6; Gaz. vol. 207; p. 294.
Licking Creamery Company, The, Newark, Ohio. Ice-cream, butter, milk, and cream. No. 100,569; Oct. 20; Gaz. vol. 207; p. 929.
Limle & Company, Genesco, Ill. Bread, cookies, cakes, pies, &c. No. 100,570; Oct. 20; Gaz. vol. 207; p. 929.
Lindt, A. & W., Berne, Switzerland. Certain named foods. No. 100,216; Oct. 13; Gaz. vol. 207; p. 605.
Linhart, Joseph, New York, N. Y. Laxative biscuits. No. 100,130; Oct. 6; Gaz. vol. 207; p. 294.
Liszt Co., The, New York, N. Y. Certain named musical instruments and supplies. No. 100,217; Oct. 13; Gaz. vol. 207; p. 605.
Little & Company, A. E., Lynn, Mass. Boots and shoes. No. 100,571; Oct. 20; Gaz. vol. 207; p. 929.
Locke Insulator Mfg. Co., The, Victor, N. Y. Insulators. No. 100,131; Oct. 6; Gaz. vol. 207; p. 294.
Locomotive Arch Brick Company, Chicago, Ill. Bricks and tiles for furnace-arches. No. 100,572; Oct. 20; Gaz. vol. 207; p. 929.
Loose-Wiles Biscuit Company, Boston, Mass. Biscuit. No. 100,852; Oct. 27; Gaz. vol. 207; p. 1244.
Loose-Wiles Biscuit Company, Kansas City, Mo. Cakes. No. 100,853; Oct. 27; Gaz. vol. 207; p. 1244.
Lopez & Company, V., New York, N. Y. Compound of butter, salt brine, and corn-syrup. No. 100,132; Oct. 6; Gaz. vol. 207; p. 294.
Lozier Motor Company, Detroit, Mich. Automobiles. No. 100,364; Oct. 20; Gaz. vol. 207; p. 923.
M. Ainsa & Sons, Inc., El Paso, Tex. Wheat-flour. No. 100,474; Oct. 20; Gaz. vol. 207; p. 926.
M. Marsh & Son, Inc., Wheeling, W. Va. Stogies. No. 100,715; Oct. 20; Gaz. vol. 207; p. 933.
MacAndrews & Forbes Company, Camden, N. J., and New York, N. Y. Pulp-board. No. 100,573; Oct. 20; Gaz. vol. 207; p. 929.
Maier Pipe Company, Wilmington, Del. Smoking-pipes. No. 100,574; Oct. 20; Gaz. vol. 207; p. 929.
Manufacturers and Retailers Company, Chicago, Ill. Matches. No. 100,368; Oct. 20; Gaz. vol. 207; p. 923.
Mariani and Company, New York, N. Y., and Paris, France. Wine appetizer. No. 100,133; Oct. 6; Gaz. vol. 207; p. 294.
Mariani and Company, New York, N. Y., and Paris, France. Wine appetizer. No. 100,576; Oct. 20; Gaz. vol. 207; p. 929.
Marlowe Manufacturing Company, New York, N. Y. Hair-nets. No. 100,577; Oct. 20; Gaz. vol. 207; p. 929.
Marsh & Marsh, Omaha, Nebr. Butter and eggs. No. 100,716; Oct. 20; Gaz. vol. 207; p. 933.
Marshall Oil Company of Iowa, Marshalltown, Iowa. Oils and lubricants for motor-cycles. No. 100,134; Oct. 6; Gaz. vol. 207; p. 295.
Maryland Rubber Company, Baltimore, Md. Rubber coats. No. 100,369; Oct. 20; Gaz. vol. 207; p. 923.
Maskey's, Inc., San Francisco, Cal. Candy. No. 100,579; Oct. 20; Gaz. vol. 207; p. 929.
Mason-Seaman Transportation Company, New York, N. Y. Taxicabs and horse-drawn and motor-propelled vehicles. No. 100,370; Oct. 20; Gaz. vol. 207; p. 923.
Mathis and Fergusson, Salt Lake City, Utah. Flexible surgical pads, surgical bandages and belts. No. 100,717; Oct. 20; Gaz. vol. 207; p. 933.
McChesney, Harry W., St. Louis, Mo. Medicinal liniment. No. 100,580; Oct. 20; Gaz. vol. 207; p. 929.
McClellan Paper Company, Minneapolis, Minn. Writing-paper. No. 100,581; Oct. 20; Gaz. vol. 207; p. 929.
Mechanical Rubber Company, The, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Electrical insulating-tape. No. 100,135; Oct. 6; Gaz. vol. 207; p. 295.
Meier, Mae A., St. Louis, Mo. Salad-dressings. No. 100,582; Oct. 20; Gaz. vol. 207; p. 929.
Melba Manufacturing Company, Chicago, Ill. Perfumes, toilet powders and creams. No. 100,371; Oct. 20; Gaz. vol. 207; p. 923.
Melville Clark Piano Company, Chicago, Ill. Player-pianos and piano-players. No. 100,196; Oct. 13; Gaz. vol. 207; p. 605.
Melville, Frank, Jr., New York, N. Y. Leather shoes. No. 100,372; Oct. 20; Gaz. vol. 207; p. 923.
Melville, Frank, Jr., New York, N. Y. Shoes. No. 100,718; Oct. 20; Gaz. vol. 207; p. 933.
Men-Tho-Magic Co., The, Mechanicsville, N. Y. Salves used externally for certain named ailments. No. 100,584; Oct. 20; Gaz. vol. 207; p. 929.
Mendelsohn, Abraham, assignor to D. T. Punch, trustee for R. Punch, Chicago, Ill. Mops and parts therefor. No. 100,373; Oct. 20; Gaz. vol. 207; p. 923.
Mendelson Bros., Inc., San Francisco, Cal. Dress and negligée shirts, undershirts, pajamas, &c. No. 100,583; Oct. 20; Gaz. vol. 207; p. 929.
Metzler, Samuel S., Chicago, Ill. Liniments. No. 100,859; Oct. 27; Gaz. vol. 207; p. 1244.
Meyer, Isidore B., Denver, Colo. Cough medicines. No. 100,136; Oct. 6; Gaz. vol. 207; p. 295.
Mianus Mfg. Co., The, Coscob, Conn. Cloakings. No. 100,375; Oct. 20; Gaz. vol. 207; p. 923.
Micagraphic Slide Company. (See Watson Brothers, assignors.)
Miller-Cummings Company, Inc., New York, N. Y. Cantaloups. No. 100,376; Oct. 20; Gaz. vol. 207; p. 923.

Millville Flour and Grain Company, Millville, N. J. Wheat-flour. No. 100,856; Oct. 27; Gaz. vol. 207; p. 1244.
Milwaukee Chair Company, Milwaukee, Wis., and Chicago, Ill. Chairs. No. 100,377; Oct. 20; Gaz. vol. 207; p. 923.
Minnesota Macaroni Co., St. Paul, Minn. Spaghetti. No. 100,860; Oct. 27; Gaz. vol. 207; p. 1244.
Mississippi Packing Company Incorporated, Natchez, Miss. Lard and smoked meats. No. 100,857; Oct. 27; Gaz. vol. 207; p. 1244.
Missoula Mercantile Company, Missoula, Mont. Suits and overcoats for men and boys. No. 100,585; Oct. 20; Gaz. vol. 207; p. 929.
Mitchell, Harry R., Seattle, Wash. Bench hooks and clamps, wrenches. No. 100,861; Oct. 27; Gaz. vol. 207; p. 1244.
Mitchell-Tappen Company, New York, N. Y. Device for offset furring. No. 100,378; Oct. 20; Gaz. vol. 207; p. 923.
Model Kitchen Equipment Company, Chicago, Ill. Metal match-receptacles. No. 100,379; Oct. 20; Gaz. vol. 207; p. 923.
Model Mill Company, Johnson City, Tenn. Wheat-flour. No. 100,137; Oct. 6; Gaz. vol. 207; p. 295.
Mollen, Thompson & James Company, The, Cleveland, Ohio. Canned corn. No. 100,586; Oct. 20; Gaz. vol. 207; p. 929.
Monarch Motor Car Company, Detroit, Mich. Automobiles. No. 100,380; Oct. 20; Gaz. vol. 207; p. 923.
Montague, Wallace R., La Crosse, Wis. Candy. No. 100,381; Oct. 20; Gaz. vol. 207; p. 923.
Moore & Gibson Corporation of New York, New York, N. Y. Child's toy-watch bracelet. No. 100,382; Oct. 20; Gaz. vol. 207; p. 923.
Morg, Richard J., New York, N. Y. Preparation for treatment of diseases of the teeth and mouth. No. 100,588; Oct. 20; Gaz. vol. 207; p. 929.
Morgan, Bernard, Newport, R. I. Metal-polish. Nos. 100,589–90; Oct. 20; Gaz. vol. 207; p. 929.
Morris Metallic Packing Company, Philadelphia, Pa. Metallic rod-packings. No. 100,862; Oct. 27; Gaz. vol. 207; p. 1244.
Mosso, Bessie L., Chicago, Ill. Tempering compound. No. 100,591; Oct. 20; Gaz. vol. 207; p. 929.
Mulford, William B., New York, N. Y. Candy. No. 100,218; Oct. 13; Gaz. vol. 207; p. 605.
Munyon, James M., Philadelphia, Pa. Enema to relieve constipation. No. 100,383; Oct. 20; Gaz. vol. 207; p. 923.
Myers, Levi B., Altoona, Pa. Remedy for piles. No. 100,592; Oct. 20; Gaz. vol. 207; p. 929.
Nashua Card Gummed & Coated Paper Company, Nashua, N. H. Paper wrappers for food products. No. 100,219; Oct. 13; Gaz. vol. 207; p. 605.
Nashville Roller Mills, Nashville, Tenn. Wheat-flour. No. 100,593; Oct. 20; Gaz. vol. 207; p. 929.
Nashville Roller Mills, Nashville, Tenn. Wheat-flour. Nos. 100,719–21; Oct. 20; Gaz. vol. 207; p. 933.
Nashville Roller Mills, Nashville, Tenn. Wheat-flour. Nos. 100,864–5; Oct. 27; Gaz. vol. 207; p. 1244.
National Bed Spring Co., Chicago, Ill. Bed-springs. No. 100,384; Oct. 20; Gaz. vol. 207; p. 923.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 100,866–70; Oct. 27; Gaz. vol. 207; pp. 1244–5.
National Carbon Company, Cleveland, Ohio. Electric batteries, flash-lights, electrodes, &c. No. 100,139; Oct. 6; Gaz. vol. 207; p. 295.
National Carbon Company, Cleveland, Ohio. Electric batteries. No. 100,871; Oct. 27; Gaz. vol. 207; p. 1245.
National Laboratories Co., The, Cleveland, Ohio. Liquid polish and cleaner for floors, furniture, &c. No. 100,140; Oct. 6; Gaz. vol. 207; p. 295.
National Washboard Company, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Washboards. Nos. 100,385–6; Oct. 20; Gaz. vol. 207; p. 923.
National Washboard Company, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Washboards. Nos. 100,594–9; Oct. 20; Gaz. vol. 207; p. 929.
Nature Cereal Company, Minneapolis, Minn. Cereal meal. No. 100,220; Oct. 13; Gaz. vol. 207; p. 605.
New York & New Jersey Lubricant Co., New York, N. Y. Lubricating-oils for gas engines and motors. No. 100,872; Oct. 27; Gaz. vol. 207; p. 1245.
Nitedals Tændstikfabrik, Grönvold, near Christiania, Norway. Matches. No. 100,387; Oct. 20; Gaz. vol. 207; p. 923.
Nonotuck Silk Company, Northampton, Mass. Ribbons. No. 100,388; Oct. 20; Gaz. vol. 207; p. 923.
Norsk Hydro-elektrisk Kvaelstofaktieselskab, Christiania and Notodden, Norway. Certain named nitrogen products. No. 100,142; Oct. 6; Gaz. vol. 207; p. 295.
Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania and Notoden, Norway. Fertilizer. No. 100,875; Oct. 27; Gaz. vol. 207; p. 1245.
North American Mercantile Co., San Francisco, Cal. Rice. No. 100,876; Oct. 27; Gaz. vol. 207; p. 1245.
Northwestern Needle Company, Minneapolis, Minn. Sewing-machine needles. No. 100,143; Oct. 6; Gaz. vol. 207; p. 295.
Norton Company, Worcester, Mass. Refractory bricks or blocks. Nos. 100,877–8; Oct. 27; Gaz. vol. 207; p. 1245.
Norton & Curd Company, Louisville, Ky. Certain named foods. No. 100,144; Oct. 6; Gaz. vol. 207; p. 295.
O. S. Richards, Inc., Brooklyn, N. Y. Box-shooks. No. 100,414; Oct. 20; Gaz. vol. 207; p. 924.
O'Dell, John C., Rome, Ga. Non-alcoholic carbonated flavored beverage and syrup for making same. No. 100,221; Oct. 13; Gaz. vol. 207; p. 606.
Oakglen Apple Growers' Association, Oakglen, Cal. Fresh apples. No. 100,601; Oct. 20; Gaz. vol. 207; p. 930.
Ohio Brandy Distilling Company, The, Cleveland, Ohio. Juniper brandy. No. 100,602; Oct. 20; Gaz. vol. 207; p. 930.
Orinoka Pharmacal Company, Inc., New York, N. Y. Hair tonics and dyes. No. 100,389; Oct. 20; Gaz. vol. 207; p. 923.
Oshinsky & Valentine, New York, N. Y. Shirts, night-shirts, and pajamas. No. 100,603; Oct. 20; Gaz. vol. 207; p. 930.
Otto L. Kuehn Co., Milwaukee, Wis. Canned sardines. Nos. 100,843–7; Oct. 27; Gaz. vol. 207; p. 1244.
Outing Shoe Co., Boston, Mass. Warm-lined slippers and shoes for indoor use. No. 100,722; Oct. 20; Gaz. vol. 207; p. 933.
Ovanite Company. (See Schloss, Newton L., assignor.)
Oxola Manufacturing Company, The, Baltimore, Md. Shortening compound. No. 100,146; Oct. 6; Gaz. vol. 207; p. 295.
Ozone Company, Inc., New York, N. Y. Washing compounds. No. 100,390; Oct. 20; Gaz. vol. 207; p. 923.
P. G. Pickman & Bros., Inc., New York, N. Y. Liquid chocolate preparation. No. 100,611; Oct. 20; Gaz. vol. 207; p. 930.
Pace, James H., Shellman, Ga. Remedy for renal colic, diabetes, and Bright's disease. No. 100,147; Oct. 6; Gaz. vol. 207; p. 295.
Package Confectionery Company, Boston, Mass. Candy, wafers, lozenges, and tablets. No. 100,148; Oct. 6; Gaz. vol. 207; p. 295.
Palmer, E. Carlton, Philadelphia, Pa. Mouth-wash. No. 100,149; Oct. 6; Gaz. vol. 207; p. 295.
Palmer & Singer Manufacturing Company, New York, N. Y. Motor-vehicles. No. 100,391; Oct. 20; Gaz. vol. 207; p. 923.
Panard Company, The, New York, N. Y. Coats, suits, dresses, waists, &c. No. 100,604; Oct. 20; Gaz. vol. 207; p. 930.
Paper Sales Company, Chicago, Ill. Toilet-paper. No. 100,222; Oct. 13; Gaz. vol. 207; p. 606.
Paper Shell Pecan Growers Association, Chicago, Ill. Pecan-nuts. No. 100,723; Oct. 20; Gaz. vol. 207; p. 933.
Paramount Knitting Company, Chicago, Ill. Hosiery. No. 100,392; Oct. 20; Gaz. vol. 207; p. 923.
Pardridge Mfg. Co., Detroit, Mich. Menthol-inhaler. Nos. 100,393–4; Oct. 20; Gaz. vol. 207; p. 923.
Park Manufacturing Company, Incorporated. (See Perry, Lorenzo D., assignor.)
Patchogue Mfg. Co., New York, N. Y. Lace curtains. No. 100,395; Oct. 20; Gaz. vol. 207; p. 923.
Paugh, Phreeborn G., St. Louis, Mo. Emergency-dressings. No. 100,397; Oct. 20; Gaz. vol. 207; p. 924.
Paul Brothers, Inc., Philadelphia, Pa. Boots, shoes, and slippers. No. 100,398; Oct. 20; Gaz. vol. 207; p. 924.
Paulsen & Son, H. C., Baton Rouge, La. Toilet powder. No. 100,607; Oct. 20; Gaz. vol. 207; p. 930.
Peek, Frean and Company, Limited, London, England. Biscuits. No. 100,879; Oct. 27; Gaz. vol. 207; p. 1245.
Peerless Biscuit Company, Pittsburgh, Pa. Sugar wafers, cakes, crackers, and biscuits. No. 100,399; Oct. 20; Gaz. vol. 207; p. 924.
Peerless Machinery Company, Boston, Mass. Celluloid-covered eyelets and lacing-hooks for shoes. No. 100,400; Oct. 20; Gaz. vol. 207; p. 924.
Peerless Pattern Company, Beacon and New York, N. Y. Quarterly periodical. No. 100,150; Oct. 6; Gaz. vol. 207; p. 295.
Peirce, Charles H., La Fayette, Ind. Four-in-hand ties. No. 100,401; Oct. 20; Gaz. vol. 207; p. 924.
Penrith-Akers Mfg. Co., Minneapolis, Minn. Soft drink. No. 100,402; Oct. 20; Gaz. vol. 207; p. 924.
Perry, Lorenzo D., assignor to Park Manufacturing Company, Incorporated, Buffalo, N. Y. Cathartic tablets. No. 100,608; Oct. 20; Gaz. vol. 207; p. 930.
Peter Schoenhofen Brewing Company, The, Chicago, Ill. Malt extract. No. 100,729; Oct. 20; Gaz. vol. 207; p. 933.
Peters, Thos. J., Perrine, Fla. Fresh tomatoes. No. 100,223; Oct. 13; Gaz. vol. 207; p. 606.
Pharis Tire & Rubber Co., The, Newark, Ohio. Pneumatic tires and inner tubes therefor. No. 100,880; Oct. 27; Gaz. vol. 207; p. 1245.
Philip Carey Manufacturing Co., The, Lockland, Ohio. Imitation plaster, solid wood, and commercial veneer. No. 100,694; Oct. 20; Gaz. vol. 207; p. 932.
Philo Hay Specialties Co., Newark, N. J. Toilet-combs. No. 100,881; Oct. 27; Gaz. vol. 207; p. 1245.
Phoenix Flour Mill, Evansville, Ind. Self-rising flour. No. 100,609; Oct. 20; Gaz. vol. 207; p. 930.
Phoenix Oil Co., Cleveland, Ohio. Soaps. No. 100,403; Oct. 20; Gaz. vol. 207; p. 924.
Phoenix Silk Mfg. Co., New York, N. Y. Silk ribbon and silk piece goods. No. 100,610; Oct. 20; Gaz. vol. 207; p. 930.
Phoenix Toilet and Paper Manufacturing Company, Phoenix, N. Y. Toilet-papers. Nos. 100,404–5; Oct. 20; Gaz. vol. 207; p. 924.
Pierce Hardware Company, Taunton, Mass. Roofing felt and paper. No. 100,612; Oct. 20; Gaz. vol. 207; p. 930.

Pierce Oil Corporation, Richmond, Va., and St. Louis, Mo. Automobile, &c., lubricating-oils and transmission-grease. No. 100,882; Oct. 27; Gaz. vol. 207; p. 1245.

Piesse & Lubin, London, England. Certain named chemical and pharmaceutical preparations. No. 100,151; Oct. 6; Gaz. vol. 207; p. 295.

Polack Tyre & Rubber Co., New York, N. Y. Rubber tires. No. 100,883; Oct. 27; Gaz. vol. 207; p. 1245.

Porcela-Radox Company, Pittsburgh, Pa. Preparation for cleaning enameled and porcelain ware. No. 100,613; Oct. 20; Gaz. vol. 207; p. 930.

Portsmouth Engine Co., The, Portsmouth, Ohio. Small ammonia-compressors. No. 100,884; Oct. 27; Gaz. vol. 207; p. 1245.

Porzellanfabrik Schönwald A.-G., Schönwald, Germany. Porcelain, earthenware and crockery. No. 100,407; Oct. 20; Gaz. vol. 207; p. 924.

Potter & Wrightington, Boston, Mass. Dog-soap. No. 100,614; Oct. 20; Gaz. vol. 207; p. 930.

Premier Packing Co., Chicago, Ill. Canned albicore. No. 100,885; Oct. 27; Gaz. vol. 207; p. 1245.

Prenzlau's Fabrikwerke, L., Hamburg, Germany. Tanning greases and oils. No. 100,408; Oct. 20; Gaz. vol. 207; p. 924.

Prenzlau's Fabrikwerke, L., Hamburg, Germany. Tanning greases and oils. No. 100,615; Oct. 20; Gaz. vol. 207; p. 930.

Procaline Co., The, New York, N. Y. Medicinal ointment. No. 100,152; Oct. 6; Gaz. vol. 207; p. 295.

Procter & Gamble Company, The, Ivorydale and Cincinnati, Ohio. Laundry soap. No. 100,616; Oct. 20; Gaz. vol. 207; p. 930.

Proctor, George H., Newcastle-upon-Tyne, England. Pastils for use in asthma, catarrh, coughs, &c. No. 100,153; Oct. 6; Gaz. vol. 207; p. 295.

Protex Hosiery Company, Boston, Mass. Hosiery. No. 100,617; Oct. 20; Gaz. vol. 207; p. 930.

Pullman Mfg. Company, Rochester, N. Y. Sash-balances. No. 100,154; Oct. 6; Gaz. vol. 207; p. 295.

Punch, David T., trustee. (See Mendelsohn, Abraham.)

Quality Tailoring Co. of N. Y., Inc., New York, N. Y. Men's and young men's outer clothing. No. 100,728; Oct. 20; Gaz. vol. 207; p. 933.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. Cigarettes, cigars, and smoking-tobacco. No. 100,156; Oct. 6; Gaz. vol. 207; p. 295.

R. M. Hollingshead Co., The Camden, N. J. Liniment, ammonia, cough-syrup, and disinfectants. No. 100,821; Oct. 27; Gaz. vol. 207; p. 1243.

Randall-Faichney Co., The, Boston, Mass. Certain named surgical appliances and veterinary instruments. No. 100,409; Oct. 20; Gaz. vol. 207; p. 924.

Ranelagh Tobacco Company, The, New York, N. Y. Cigarettes. No. 100,157; Oct. 6; Gaz. vol. 207; p. 295.

Rawlings Bros., Ltd., London, England. Plugs for fixing screws in plaster, brick, slate, &c. No. 100,724; Oct. 20; Gaz. vol. 207; p. 933.

Reliance Buggy Co., St. Louis, Mo. Carriages and buggies. No. 100,619; Oct. 20; Gaz. vol. 207; p. 930.

Reliance Buggy Co., St. Louis, Mo. Carriages and buggies. No. 100,887; Oct. 27; Gaz. vol. 207; p. 1245.

Reliance Gas Mantle Company, New York, N. Y. Gas-mantles. No. 100,888; Oct. 27; Gaz. vol. 207; p. 1245.

Reliance Mfg. Co., Rock Stream, N. Y. Baking powder and soda. No. 100,620; Oct. 20; Gaz. vol. 207; p. 930.

Reussow & Troy, Mohawk, N. Y. Bread. No. 100,621; Oct. 20; Gaz. vol. 207; p. 930.

Reynolds Corporation, The, Bristol, Tenn. Polish for glass and metals. No. 100,411; Oct. 20; Gaz. vol. 207; p. 924.

Reynolds Wire Co., Dixon, Ill. Wire screen-cloth. No. 100,157; Oct. 6; Gaz. vol. 207; p. 295.

Rheumeolum Chem. Co., Seattle, Wash. Solid liniment in collapsible tubes. No. 100,624; Oct. 20; Gaz. vol. 207; p. 930.

Rhu-Lum-Sou Co., New York, N. Y. Rheumatism specific and a medicinal tonic. No. 100,889; Oct. 27; Gaz. vol. 207; p. 1245.

Rice-Stix Dry Goods Company, St. Louis, Mo. Carpet-warp. No. 100,412; Oct. 20; Gaz. vol. 207; p. 924.

Rice-Stix Dry Goods Company, St. Louis, Mo. Certain named clothing for men and boys. No. 100,413; Oct. 20; Gaz. vol. 207; p. 924.

Richard Hudnut, New York, N. Y. Nail-polish. Nos. 100,552–3; Oct. 20; Gaz. vol. 207; p. 928.

Richmond Radiator Company, New York, N. Y. Vacuum-cleaners. Nos. 100,415–16; Oct. 20; Gaz. vol. 207; p. 924.

Richmond Radiator Company, New York, N. Y. Vacuum-cleaners. No. 100,619; Oct. 20; Gaz. vol. 207; p. 930.

Richter, Hermann, Denver, Colo. Embroidery. No. 100,623; Oct. 20; Gaz. vol. 207; p. 930.

Rippen, Firm of H., Perth Amboy, N. J. Coffee. No. 100,890; Oct. 27; Gaz. vol. 207; p. 1245.

Ritchie, Alexander G., New York, N. Y. Handkerchiefs and serviettes. No. 100,622; Oct. 20; Gaz. vol. 207; p. 930.

Robert Melrose and Company, Limited, Edinburgh, Scotland. Tea. No. 100,855; Oct. 27; Gaz. vol. 207; p. 1244.

Robert Zinn & Co., Gesellschaft mit beschränkter Haftung, Barmen-Rittershausen, Germany. Shoe-eyelets, hooks, buttons, buckles, &c. No. 100,690; Oct. 20; Gaz. vol. 207; p. 932.

Rock Island Stove Company, Rock Island, Ill. Stoves and ranges. No. 100,417; Oct. 20; Gaz. vol. 207; p. 924.

Rockrohr, William A., Chicago, Ill. Rubber putty for repairing rubber articles. No. 100,418; Oct. 20; Gaz. vol. 207; p. 924.

Rogers, Amos, Ottawa, Canada. Blood restorative. No. 100,158; Oct. 6; Gaz. vol. 207; p. 295.

Rogers, Amos, Ottawa, Canada. Ointment. No. 100,159; Oct. 6; Gaz. vol. 207; p. 295.

Rome Importing Co., New York, N. Y. Olive-oil. No. 100,224; Oct. 13; Gaz. vol. 207; p. 606.

Rose, George, Kansas City, Mo. Cigarettes. No. 100,160; Oct. 6; Gaz. vol. 207; p. 295.

Rosenstern & Co., F., New York, N. Y. Certain named textile fabrics. No. 100,419; Oct. 20; Gaz. vol. 207; p. 924.

Rothschild Bros., Philadelphia, Pa. Compound of buchu and gin. No. 100,625; Oct. 20; Gaz. vol. 207; p. 930.

Rovira, Francisco R., Barcelona, Spain. Cigarette-paper. No. 100,420; Oct. 20; Gaz. vol. 207; p. 924.

Royal Tailors, The, Chicago, Ill. Men's coats, vests, and trousers. No. 100,626; Oct. 20; Gaz. vol. 207; p. 930.

Russian-French India Rubber, Guttapercha and Telegraph Works, "Prowodnik, Riga," Riga, Russia. Solid rubber and pneumatic tires. No. 100,891; Oct. 27; Gaz. vol. 207; p. 1245.

Salbenol Co., Philadelphia, Pa. Analgesic. No. 100,424; Oct. 20; Gaz. vol. 207; p. 924.

Salt's Textile Manufacturing Company, Bridgeport, Conn., and New York, N. Y. Coats, cloaks, wraps, and capes. No. 100,628; Oct. 20; Gaz. vol. 207; p. 930.

Salvo & Berdon Candy Co., Natchez, Miss. Candy. No. 100,892; Oct. 27; Gaz. vol. 207; p. 1245.

San-Knit-ary Textile Mills Incorporated, Philadelphia, Pa. Towels, washcloths, bath-mitts, sheets, &c. No. 100,426; Oct. 20; Gaz. vol. 207; p. 924.

Santo Rubber Co., The, Wilmington, Del., and Pittsburgh, Pa. Rubber and gutta-percha balls. Nos. 100,427–8; Oct. 20; Gaz. vol. 207; p. 924.

Santo Rubber Co., The, Wilmington, Del., and Pittsburgh, Pa. Balls. No. 100,725; Oct. 20; Gaz. vol. 207; p. 933.

Sarantides, Costas, New York, N. Y. Special Turkish pastry. No. 100,161; Oct. 6; Gaz. vol. 207; p. 295.

Savage Arms Company, Frankfort, N. Y. Rifles, pistols, and cartridges. No. 100,629; Oct. 20; Gaz. vol. 207; p. 930.

Saxon Motor Company, Detroit, Mich. Automobiles. No. 100,429; Oct. 20; Gaz. vol. 207; p. 925.

Schaffer Tinware Manufacturing Company, The, New York and Brooklyn, N. Y. Household receptacles for bread and cake. No. 100,432; Oct. 20; Gaz. vol. 207; p. 925.

Schuermann, Howard G., Philadelphia, Pa. Massage and skin cream and antiseptic ointment. No. 100,890; Oct. 27; Gaz. vol. 207; p. 1245.

Schield, William, St. Louis, Mo. Powdered lyes. No. 100,162; Oct. 6; Gaz. vol. 207; p. 295.

Schloss, Newton L., assignor to Ovanite Company, New York, N. Y. Cases for toilet articles. No. 100,433; Oct. 20; Gaz. vol. 207; p. 925.

Schloss, Newton L., assignor to Ovanite Company, New York, N. Y. Cases for toilet articles. No. 100,630; Oct. 20; Gaz. vol. 207; p. 930.

Schmidt, Firm of Johann, Nuremberg, Germany. Wafer capsules, tablets, or shells for administering medicines. No. 100,163; Oct. 6; Gaz. vol. 207; p. 295.

Schmitz-Horning Co., The, Cleveland, Ohio. Paper wall-covering. No. 100,631; Oct. 20; Gaz. vol. 207; p. 930.

Schubert Piano Co., The, New York N. Y. Pianos and piano-players. No. 100,632; Oct. 20; Gaz. vol. 207; p. 931.

Schuster Company, The, Cleveland, Ohio. Cordials. No. 100,164; Oct. 6; Gaz. vol. 207; p. 295.

Schweitzer, Edward S., Pittsburgh, Pa. Salve for treatment of infectious diseases of the respiratory tract. No. 100,165; Oct. 6; Gaz. vol. 207; p. 295.

Schwob, Adolphe, New York, N. Y. Watches, watchcases, and watch-movements. No. 100,225; Oct. 13; Gaz. vol. 207; p. 606.

Schwob Co., J. A., The, Moundsville, W. Va. Grain, rice, and corn cradles. No. 100,893; Oct. 27; Gaz. vol. 207; p. 1245.

Scofield, Raymond S., Ong, Nebr. Medicated ointment. No. 100,166; Oct. 6; Gaz. vol. 207; p. 295.

Segal & Pransky, Philadelphia, Pa. Gloves, overalls, and hosiery. No. 100,435; Oct. 20; Gaz. vol. 207; p. 925.

Seggerman Bros., Inc., New York, N. Y. Green, dried, and evaporated apples. No. 100,900; Oct. 27; Gaz. vol. 207; p. 1245.

Seneca Camera Mfg. Co., Rochester, N. Y. Photographic cameras, &c. No. 100,167; Oct. 6; Gaz. vol. 207; p. 296.

Shapiro Bros., New York, N. Y. Ladies', misses', juniors', and children's dresses. No. 100,634; Oct. 20; Gaz. vol. 207; p. 931.

Shapiro Bros., New York, N. Y. Waists and blouses. No. 100,635; Oct. 20; Gaz. vol. 207; p. 931.

Sheboygan Evaporated Milk Co., The, Sheboygan and Jefferson, Wis. Evaporated milk. No. 100,636; Oct. 20; Gaz. vol. 207; p. 931.

Shepard Manufacturing Company, The, Melrose, Mass. Key-chains. No. 100,894; Oct. 27; Gaz. vol. 207; p. 1245.

Sheppard-Strassheim Co., Chicago, Ill. Tea. No. 100,637; Oct. 20; Gaz. vol. 207; p. 931.

Sherman, Frank W., Memphis, Tenn. Candied popcorn in cakes. No. 100,895; Oct. 27; Gaz. vol. 207; p. 1245.

Sherwin-Williams Company, The, Cleveland, Ohio. Insecticides and fungicides. No. 100,436; Oct. 20; Gaz. vol. 207; p. 925.

Shoninger, Sol. H., Chicago, Ill. Sanitary napkins or surgical bandages. No. 100,437; Oct. 20; Gaz. vol. 207; p. 925.

Sicher, David E.; D. D. and S. A. Sicher, New York, N. Y., executors. Certain named clothing for women and children. No. 100,896; Oct. 27; Gaz. vol. 207; p. 1245.

Sicher, Dudley D., *et al.*, executors. (See Sicher, David E.)

Sicher, Samuel A., *et al.*, executors. (See Sicher, David E.)

Siggers, Edward G., Washington, D. C. Monthly paper. No. 100,168; Oct. 6; Gaz. vol. 207; p. 296.

Simonds Manufacturing Company, Fitchburg, Mass. Saws. No. 100,897; Oct. 27; Gaz. vol. 207; p. 1245.

Sincof Company, South Westville, N. J. Substitute for coffee. No. 100,898; Oct. 27; Gaz. vol. 207; p. 1245.

Smalley, William W. (See Eache, Leigh S., assignor.)

Smith, E. M., Los Angeles, Cal. Stitched and woven belting. No. 100,726; Oct. 20; Gaz. vol. 207; p. 933.

Smith & Hemenway Co., Inc., New York, N. Y. Pliers. No. 100,438; Oct. 20; Gaz. vol. 207; p. 925.

Smith, Kline & French Co., Philadelphia, Pa. Food for infants and invalids. No. 100,169; Oct. 6; Gaz. vol. 207; p. 296.

Smith, Kline & French Co., Philadelphia, Pa. Remedies for certain named diseases, antiseptic washes, and disinfectants. No. 100,170; Oct. 6; Gaz. vol. 207; p. 296.

Smith, Kline & French Co., Philadelphia, Pa. Laxative. No. 100,638; Oct. 20; Gaz. vol. 207; p. 931.

Société Anonyme de la Distillerie de la Liqueur de Mandarine de Bougie, Algiers, Algeria. Cordials. No. 100,439; Oct. 20; Gaz. vol. 207; p. 925.

South Bend Bread Co., South Bend, Ind. Bread. No. 100,226; Oct. 13; Gaz. vol. 207; p. 606.

Southern Syrup Company, Montgomery, Ala. Table-syrups. No. 100,172; Oct. 6; Gaz. vol. 207; p. 296.

Spero Chemical Co., Cleveland, Ohio. Foot-tablet. No. 100,903; Oct. 27; Gaz. vol. 207; p. 1245.

Spitalnik & Bushel New York, N. Y. Salad-oil made from cotton-seed, tomato catsup, and vinegars. No. 100,640; Oct. 20; Gaz. vol. 207; p. 931.

Sprague Sanitary Shield Co. Inc., Minneapolis, Minn. Sanitary shields. No. 100,639; Oct. 20; Gaz. vol. 207; p. 931.

Springfield Metallic Casket Company, The, Springfield, Ohio. Name-plates for caskets. No. 100,727; Oct. 20; Gaz. vol. 207; p. 933.

Stafford, George A., New York, N. Y. Woven cotton fabrics. Nos. 100,440–1; Oct. 20; Gaz. vol. 207; p. 925.

Standard Knitting Mills Company, New York, N. Y. Knitted vests and undershirts. No. 100,904; Oct. 27; Gaz. vol. 207; p. 1245.

Standard Milling Company, New York, N. Y. Wheat-flour. No. 100,227; Oct. 13; Gaz. vol. 207; p. 606.

Standard Portland Cement Company, Charleston, S. C. Portland cement. No. 100,442; Oct. 20; Gaz. vol. 207; p. 925.

Standard Scale & Supply Company, The, Pittsburgh, Pa. Scales, weighing machinery, &c. No. 100,905; Oct. 27; Gaz. vol. 207; p. 1246.

Stansbury & Young, York, Pa. Furniture-polish. No. 100,173; Oct. 6; Gaz. vol. 207; p. 296.

Statesville Flour Mill Company, Statesville, N. C. Wheat-flour. No. 100,174; Oct. 6; Gaz. vol. 207; p. 296.

Steet, Percy, New York, N. Y. Sauce in bottles. No. 100,175; Oct. 6; Gaz. vol. 207; p. 296.

Stein-Bloch Co., The, Rochester, N. Y. Coats. No. 100,907; Oct. 27; Gaz. vol. 207; p. 1246.

Stein, Charles M., New York, N. Y. Salves, ointments, liniments, and tooth-soap. No. 100,906; Oct. 27; Gaz. vol. 207; p. 1246.

Steinberg Bros. Inc., New York, N. Y. Dress-skirts and underskirts for women. No. 100,641; Oct. 20; Gaz. vol. 207; p. 931.

Sterling Gum Company. (See Bon-Bon Company, assignor.)

Stern & Saalberg Company, The, New York, N. Y. Chewing-gum. No. 100,444; Oct. 20; Gaz. vol. 207; p. 925.

Stevens, John A., Lowell, Mass. Steam-boilers and parts thereof. No. 100,908; Oct. 27; Gaz. vol. 207; p. 1246.

Stirn, L. & E., New York, N. Y. Cotton piece goods. No. 100,642; Oct. 20; Gaz. vol. 207; p. 931.

Stoeger, Conrad, Chicago, Ill. Non-intoxicating beverage. No. 100,176; Oct. 6; Gaz. vol. 207; p. 296.

Stollwerck, Henry V., New York, N. Y. Liquid cocoa, chocolate, pudding and jelly powders, and whipped cream. No. 100,643; Oct. 20; Gaz. vol. 207; p. 931.

Stone-Ordean-Wells Company, Duluth, Minn. Certain named foods. No. 100,177; Oct. 6; Gaz. vol. 207; p. 296.

Strauss Bros. & Co., New York, N. Y. Braids. No. 100,645; Oct. 20; Gaz. vol. 207; p. 931.

Strauss, Carl, Paris, France. Blouses and dresses. No. 100,644; Oct. 20; Gaz. vol. 207; p. 931.

Sullivan, James F., Camden, N. J. Dressing for white shoes. No. 100,646; Oct. 20; Gaz. vol. 207; p. 931.

Sun Typewriter Company, Newark, N. J., and New York, N. Y. Adding and recording machines. No. 100,178; Oct. 6; Gaz. vol. 207; p. 296.

Superior Peanut Company, Cleveland, Ohio. Salted peanuts. No. 100,647; Oct. 20; Gaz. vol. 207; p. 931.

Swabine Co., The, Cleveland, Ohio. Remedy for certain named diseases. No. 100,179; Oct. 6; Gaz. vol. 207; p. 296.

Sweet, Orr & Co., Inc., New York, N. Y. Overalls, trousers, shirts. No. 100,648; Oct. 20; Gaz. vol. 207; p. 931.

T. and C. Publishing Corporation, New York, N. Y. Monthly publication. No. 100,910; Oct. 27; Gaz. vol. 207; p. 1246.

T. V. Moreau Company, Minneapolis, Minn. Eye-water. No. 100,587; Oct. 20; Gaz. vol. 207; p. 929.

Tabor Manufacturing Company, The, Philadelphia, Pa. Molding machinery used in casting metals. No. 100,911; Oct. 27; Gaz. vol. 207; p. 1246.

Taft, Lillian L., Boston, Mass. Petticoats. No. 100,649; Oct. 20; Gaz. vol. 207; p. 931.

Tamm, Adolph, St. Louis, Mo. Cold, &c., creams, face, &c., powders, and skin-lotion. No. 100,181; Oct. 6; Gaz. vol. 207; p. 296.

Tanaka, Tuziyomon, Chicago, Ill. Baking-powders. No. 100,445; Oct. 20; Gaz. vol. 207; p. 925.

Texas Company, The, Port Arthur, Tex., and New York, N. Y. Composition felt roofing. No. 100,446; Oct. 20; Gaz. vol. 207; p. 925.

Texas Fire and Water Proof Paint Company, Houston, Tex. Dry, paste, and ready-mixed paint. No. 100,912; Oct. 27; Gaz. vol. 207; p. 1246.

Thibault, Martha, Paris, France. Preparations for the treatment of varicose veins and ulcers, piles, &c. No. 100,182; Oct. 6; Gaz. vol. 207; p. 296.

Thompson Milling Company, Lockport, N. Y. Wheat-flour. No. 100,228; Oct. 13; Gaz. vol. 207; p. 606.

Tokalon, Incorporated, assignor to Hall & Ruckel, New York, N. Y. Deodorants. No. 100,180; Oct. 6; Gaz. vol. 207; p. 296.

Toltec Mexican Oil Co., The, New York, N. Y. Asphalt and asphalt-residuum products. No. 100,447; Oct. 20; Gaz. vol. 207; p. 925.

Trey, Emmanuel de, Zurich, Switzerland. Dental cement. No. 100,448; Oct. 20; Gaz. vol. 207; p. 925.

Truax Company, C. C., Toledo, Ohio. Certain named chemical and pharmaceutical preparations. No. 100,651; Oct. 20; Gaz. vol. 207; p. 931.

Turner Flexible Innersole Co., Portland, Me. Leather shoes. No. 100,730; Oct. 20; Gaz. vol. 207; p. 933.

Turton Bros. & Matthews, Ltd., Sheffield, England. Unwrought and partly-wrought metals used in manufacture. No. 100,913; Oct. 27; Gaz. vol. 207; p. 1246.

Turton Bros. & Matthews, Ltd., Sheffield, England. Steel and iron. No. 100,914; Oct. 27; Gaz. vol. 207; p. 1246.

Turton Bros. & Matthews, Ltd., Sheffield, England. Steel and iron bars, sheets, hoops, &c. No. 100,915; Oct. 27; Gaz. vol. 207; p. 1246.

20th Century Manufacturing Co., Minneapolis, Minn. Ointment for hemorrhoids. No. 100,095; Oct. 6; Gaz. vol. 207; p. 293.

U. S. Hame Company, Buffalo, N. Y. Hames and parts thereof. No. 100,546; Oct. 20; Gaz. vol. 207; p. 928.

Underwood, F. K., Oskaloosa, Iowa. Frozen confection. No. 100,918; Oct. 27; Gaz. vol. 207; p. 1246.

Union Fibre Company, Winona, Minn. Vegetable self-sustaining heat-insulating material. No. 100,449; Oct. 20; Gaz. vol. 207; p. 925.

Union Salt Company, Cleveland, Ohio. Salt. Nos. 100,653–5; Oct. 20; Gaz. vol. 207; p. 931.

Unionite Co., Philadelphia, Pa. Pavements and roads and materials for same. No. 100,652; Oct. 20; Gaz. vol. 207; p. 931.

Unionsbrauerei Schillein & Co. A. G., Munich, Germany. Beer. No. 100,450; Oct. 20; Gaz. vol. 207; p. 925.

United Home Builders Company, Salt Lake City, Utah. Books of plans for houses and bungalows. No. 100,917; Oct. 27; Gaz. vol. 207; p. 1246.

United States Asphalt Refining Company, New York, N. Y. Asphalt and asphaltic residuum products. No. 100,451; Oct. 20; Gaz. vol. 207; p. 925.

United States Medicine Co., Montclair, N. J., and New York, N. Y. Certain medicines and preparations for treating certain diseases. No. 100,452; Oct. 20; Gaz. vol. 207; p. 925.

United States Tobacco Company, Richmond, Va. Pockets or containers to hold tobacco, &c. No. 100,453; Oct. 20; Gaz. vol. 207; p. 925.

Valentine & Company, New York, N. Y. Enamels, undercoatings, and paints. No. 100,919; Oct. 27; Gaz. vol. 207; p. 1246.

Van Orden Corset Co., Newark, N. J. Corsets. No. 100,731; Oct. 20; Gaz. vol. 207; p. 933.

Van Waveren & Kruijff, G. A., Philadelphia, Pa. Seeds, bulbs, plants, &c. No. 100,667; Oct. 20; Gaz. vol. 207; p. 932.

Vereinigte Lederleimfabriken vorm. J. E. Jenss Aktien Gesellschaft, Uetersen, near Hamburg, Germany. Gelatin-glue. No. 100,454; Oct. 20; Gaz. vol. 207; p. 925.

Ves-tong Manufacturing Co., Wenona, Ill. Hunting coats and vests. No. 100,656; Oct. 20; Gaz. vol. 207; p. 931.

Vick Chemical Co., Greensboro, N. C. Salve. No. 100,455; Oct. 20; Gaz. vol. 207; p. 925.

Victor Electric Company, Chicago, Ill. Automatic switches used with X-Ray apparatus. No. 100,920; Oct. 27; Gaz. vol. 207; p. 1246.

Victor Talking Machine Company, Camden, N. J. Cabinets for talking-machine records. No. 100,657; Oct. 20; Gaz. vol. 207; p. 931.

Virginia Bridge and Iron Company, Roanoke, Va. Steel bridges, girders, and structural steelwork. No. 100,456; Oct. 20; Gaz. vol. 207; p. 925.

Virginia Fairy Stone Company, Beckley, W. Va. Natural ornamental stone. No. 100,230; Oct. 13; Gaz. vol. 207; p. 606.

Vixen Tool Company, Philadelphia, Pa. Files. No. 100,183; Oct. 6; Gaz. vol. 207; p. 296.

Voelker, Matt, Waterloo, Wis. Popcorn. No. 100,184; Oct. 6; Gaz. vol. 207; p. 296.

Vogue Hat Company, New York, N. Y. Hats. No. 100,658; Oct. 20; Gaz. vol. 207; p. 931.

Von Glahn & Son, Henry, Brooklyn, N. Y. Canned vegetables, fruits, and fish. No. 100,659; Oct. 20; Gaz. vol. 207; p. 931.

Vrau & Cie., Ph., Lille, France. Threads and yarns. No. 100,660; Oct. 20; Gaz. vol. 207; p. 931.

Wagner, Edward H., New York, N. Y. Fireworks. No. 100,457; Oct. 20; Gaz. vol. 207; p. 925.

Wagner Electric Manufacturing Company, St. Louis, Mo. Electric motors, generators, converters, &c. No. 100,185; Oct. 6; Gaz. vol. 207; p. 296.

Waite Grass Carpet Co., Oshkosh, Wis. Grass rugs. No. 100,458; Oct. 20; Gaz. vol. 207; p. 925.

Walden Manufacturing Company, Worcester, Mass. Wrenches. No. 100,921; Oct. 27; Gaz. vol. 207; p. 1246.

Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Snap-buttons. No. 100,459; Oct. 20; Gaz. vol. 207; p. 925.

Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Snap-buttons. Nos. 100,661–3; Oct. 20; Gaz. vol. 207; pp. 931.

Walker, Charles H., New York, N. Y. Medicinal compounds of selenium. No. 100,922; Oct. 27; Gaz. vol. 207; p. 1246.

Walker-Moore Manufacturing Co., Racine, Wis. Shock-absorbers. No. 100,460; Oct. 20; Gaz. vol. 207; p. 925.

Wallace, William, Jr., Helena, Mont., and Washington, D. C. Grape-fruit, tangerines, and oranges. No. 100,732; Oct. 20; Gaz. vol. 207; p. 934.

Walter M. Lowney Company, The, Boston, Mass. Candies. No. 100,854; Oct. 27; Gaz. vol. 207; p. 1244.

Warren Brothers Company, Boston, Mass. Bituminous cement. No. 100,665; Oct. 20; Gaz. vol. 207; p. 931.

Waterless Window Washer Manufacturing Company, Winchester, Ky. Window-washing preparation. No. 100,666; Oct. 20; Gaz. vol. 207; p. 932.

Watson Brothers, assignor to Micagraphic Slide Company, Boston, Mass. Lantern-slides and apparatus for display by optical projection. No. 100,927; Oct. 27; Gaz. vol. 207; p. 1246.

Watters Co., R. J., Buffalo, N. Y. Certain compound for removing scale, rust, and oil from iron and steel products before finishing. No. 100,928; Oct. 27; Gaz. vol. 207; p. 1246.

Wayne Paint Co., Waynesboro, Pa. Ready-mixed and liquid paints. No. 100,929; Oct. 27; Gaz. vol. 207; p. 1246.

Webb & Company, Newtownards, Ireland. Certain named linen goods. No. 100,668; Oct. 20; Gaz. vol. 207; p. 932.

Weideman Company, The, Cleveland, Ohio. Coffee. No. 100,930; Oct. 27; Gaz. vol. 207; p. 1246.

Weinroth, Max, Philadelphia, Pa. Certain named knitted garments for men, women, and children. No. 100,462; Oct. 20; Gaz. vol. 207; p. 926.

Wenatchee North Central Fruit Distributors, Wenatchee, Wash. Fresh and green fruits. No. 100,931; Oct. 27; Gaz. vol. 207; p. 1246.

Werner-Service Mfg. Co., Jersey City, N. J. Detergent compounds for cleaning and renovating varnished surfaces. No. 100,932; Oct. 27; Gaz. vol. 207; p. 1246.

Wertheimer et Cie., E., Paris, France. Certain named pharmaceutical preparations. No. 100,463; Oct. 20; Gaz. vol. 207; p. 926.

Wertheimer et Cie., E., Paris, France. Perfumery, toilet waters, and face-tints. No. 100,669; Oct. 20; Gaz. vol. 207; p. 932.

Wertheimer & Cie., E., Paris, France. Perfumery and face-tints. No. 100,670; Oct. 20; Gaz. vol. 207; p. 932.

West India Oil Company, Bayonne, N. J. Refined petroleum for illuminating, heating, and power purposes. No. 100,933; Oct. 27; Gaz. vol. 207; p. 1246.

Western Honey Producers, Sioux City, Iowa. Honey. No. 100,231; Oct. 13; Gaz. vol. 207; p. 606.

Wetterer Brewing Company, The, Cincinnati, Ohio. Beer. Nos. 100,671–2; Oct. 20; Gaz. vol. 207; p. 932.

Wheeler & Motter Mercantile Company, St. Joseph, Mo. Bleached and unbleached sheetings. No. 100,934; Oct. 27; Gaz. vol. 207; p. 1246.

Wheeler & Motter Mercantile Company, St. Joseph, Mo. Bleached and unbleached muslins. No. 100,935; Oct. 27; Gaz. vol. 207; p. 1246.

Whelihan, J. F., Cedar Rapids, Iowa. Ginger-beer extract. No. 100,465; Oct. 20; Gaz. vol. 207; p. 926.

White & Bagley Co., The, Worcester, Mass. Lubricating oils and greases. No. 100,936; Oct. 27; Gaz. vol. 207; p. 1246.

Whitman Chemical Co., Inc., Boston, Mass. Remedy used as a liniment, stimulant, antiseptic, &c. No. 100,673; Oct. 20; Gaz. vol. 207; p. 932.

Wiebusch & Hilger, Limited, New York, N. Y. Folding rules. No. 100,937; Oct. 27; Gaz. vol. 207; p. 1247.

Wiebusch & Hilger, Limited, New York, N. Y. Steel letters and figures for stamping. No. 100,938; Oct. 27; Gaz. vol. 207; p. 1247.

Wiesenfeld, Joseph, Baltimore, Md. Fish-tongs. No. 100,733; Oct. 20; Gaz. vol. 207; p. 934.

Wightman, George E., Portland, Oreg. Fabric-cleaner. No. 100,464; Oct. 20; Gaz. vol. 207; p. 926.

Wilcox, Horace, Wakefield, R. I. Antiseptic lotion. No. 100,675; Oct. 20; Gaz. vol. 207; p. 932.

Wilde, Grace L., East Quogue, N. Y. Washing fluid. No. 100,466; Oct. 20; Gaz. vol. 207; p. 926.

Wiley-Spencer Company, Los Angeles, Cal. Games. No. 100,677; Oct. 20; Gaz. vol. 207; p. 932.

Wilford Hall Laboratories, Port Chester, N. Y. Headache-bandages. No. 100,322; Oct. 20; Gaz. vol. 207; p. 921.

William Barker Company, Watervliet, N. Y. Collars. No. 100,485; Oct. 20; Gaz. vol. 207; p. 926.

William Brown Company, Philadelphia, Pa. Hosiery. Nos. 100,494–5; Oct. 20; Gaz. vol. 207; p. 926.

William R. Burkhard Co., The, St. Paul, Minn. Certain sporting goods and gymnasium apparatus. No. 100,498; Oct. 20; Gaz. vol. 207; p. 927.

William Underwood Company, Boston, Mass. Canned fish, ham, poultry, and beef. No. 100,229; Oct. 13; Gaz. vol. 207; p. 606.

William Walker & Sons, Limited, Bolton, England. Leather and skins. Nos. 100,923–4; Oct. 27; Gaz. vol. 207; p. 1246.

Williams & Daly Company, The, Boston, Mass. Screening devices and separators. No. 100,939; Oct. 27; Gaz. vol. 207; p. 1247.

Williams, Guy W., St. Louis, Mo. Remedy for indigestion, gastritis, &c. No. 100,467; Oct. 20; Gaz. vol. 207; p. 926.

Williams, Mortimer, Petersburg, Va. Peanuts, peanut butter, and candy, salted peanuts. No. 100,190; Oct. 6; Gaz. vol. 207; p. 296.

Wing Patent Garment Co., New York, N. Y. Children's, misses', and women's coats and capes. No. 100,679; Oct. 20; Gaz. vol. 207; p. 932.

Winter, Charles A., Rahway, N. J. Certain detergent preparation. No. 100,469; Oct. 20; Gaz. vol. 207; p. 926.

Wizard Products Company, Chicago, Ill. Ironing-wax. No. 100,470; Oct. 20; Gaz. vol. 207; p. 926.

Wizard Products Company, Chicago, Ill. Mops. Nos. 100,681–2; Oct. 20; Gaz. vol. 207; p. 932.

Wm. Waltke & Co., St. Louis, Mo. Soap. No. 100,664; Oct. 20; Gaz. vol. 207; p. 931.

Wolf, George H., New York, N. Y. Cotton and cotton and silk piece goods. No. 100,683; Oct. 20; Gaz. vol. 207; p. 932.

Wolfson, Isadore D., New York, N. Y. Neckscarfs. No. 100,471; Oct. 20; Gaz. vol. 207; p. 926.

Worcester Baking Co., Worcester, Mass. Wheat-bread. No. 100,737; Oct. 20; Gaz. vol. 207; p. 934.

Worcester Salt Co., Silver Springs and New York, N. Y. Salt for bathing. No. 100,684; Oct. 20; Gaz. vol. 207; p. 932.

Wright & Ditson, Jersey City, N. J., and Boston, Mass. Golf-balls. No. 100,685; Oct. 20; Gaz. vol. 207; p. 932.

Yakima County Horticultural Union, North Yakima, Wash. Fresh deciduous fruits, apples, pears, peaches, and prunes. No. 100,940; Oct. 27; Gaz. vol. 207; p. 1247.

Yale & Towne Manufacturing Co., The, Stamford, Conn., and New York, N. Y. Automatic bolt-operating machines, pulley-blocks, and hoists. No. 100,941; Oct. 27; Gaz. vol. 207; p. 1247.

York-Bradford Co., San Francisco, Cal. Paper boxes. No. 100,687; Oct. 20; Gaz. vol. 207; p. 932.

York, Chauncey F., Detroit, Mich. Preparation for treatment of the skin. No. 100,686; Oct. 20; Gaz. vol. 207; p. 932.

Zeiss, Firm of Carl, Jena, Germany. Lenses for scientific use, prisms, &c. Nos. 100,688–9; Oct. 20; Gaz. vol. 207; p. 932.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. G. Spalding & Bros., Jersey City, N. J., and New York, N. Y. "Spalding 'Official National League' Ball." (For Base-Balls.) No. 18,040; Oct. 13; Gaz. vol. 207; p. 607.

American Lithographic Company, New York, N. Y. "Elegantes." (For Cigars.) No. 18,005; Oct. 13; Gaz. vol. 207; p. 607.

American Lithographic Company, New York, N. Y. "Superior Cigars." (For Cigars.) No. 18,006; Oct. 13; Gaz. vol. 207; p. 607.

American Lithographic Company, New York, N. Y. "Stanwick." (For Cigars.) No. 18,007; Oct. 13; Gaz. vol. 207; p. 607.

American Lithographic Company, New York, N. Y. "Seleccion Especial." (For Cigars.) No. 18,008; Oct. 13; Gaz. vol. 207; p. 607.

Barker, Moore & Mein Medicine Company, The, Philadelphia, Pa. "Barker's Nerve and Bone Liniment." (For Liniment.) No. 18,009; Oct. 13; Gaz. vol. 207; p. 607.

Brown, Edwin, New York, N. Y. "Perfection." (For Stamping-Paste.) No. 18,010; Oct. 13; Gaz. vol. 207; p. 607.

Burnet & Temple Ltd., Messrs., London, England. "Slippon." (For Hair-Nets.) No. 18,011; Oct. 13; Gaz. vol. 207; p. 607.

Cavenaget, Victor F., Newark, N. J. "Mother's Hair Tonic." (For Hair-Tonic.) No. 18,012; Oct. 13; Gaz. vol. 207; p. 607.

Dávila, Hijos de R. Jimenez, Port St. Marys, Spain. "Ojen Dávila." (For a Cordial.) No. 18,003; Oct. 6; Gaz. vol. 207; p. 297.

Deforth Bros., New York, N. Y. "Useful and Just." (For Provisions.) No. 18,013; Oct. 13; Gaz. vol. 207; p. 607.

Dusol, I., Los Angeles, Cal. "Champanola." (For a Beverage.) No. 18,014; Oct 13; Gaz. vol. 207; p. 607.

Emmer Products Company, Worland, Wyo. "Emmer Breakfast Food." (For Breakfast Food.) No. 18,015; Oct. 13; Gaz. vol. 207; p. 607.

Emmer Products Company, Worland, Wyo. "Improved Emmer Food." (For Emmer Food.) No. 18,016; Oct. 13; Gaz. vol. 207; p. 607.

Emmer Products Company, Worland, Wyo. "Emmer Stock and Poultry Food." (For Stock and Poultry Food.) No. 18,017; Oct. 13; Gaz. vol. 207; p. 607.

Fitzpatrick Brothers, Chicago, Ill. "Kitchen Cleaner." (For a Cleaning Compound.) No. 18,018; Oct. 13; Gaz. vol. 207; p. 607.

Frank H. Fleer Corporation, Philadelphia, Pa. "Spring-Root." (For Chewing-Gum.) No. 18,019; Oct. 13; Gaz. vol. 207; p. 607.

Franklin & Co., H. B., Chicago, Ill. "Chicago Subway." (For Cigars.) No. 18,020; Oct. 13; Gaz. vol. 207; p. 607.

Gangemi & Co., R., New York, N. Y. "Lucella Habana Cigars." (For Cigars.) No. 18,021; Oct. 13; Gaz. vol. 207; p. 607.

Hillinger, R. J., Chicago, Ill. "Bullfrog." (For Fishing-Lines.) No. 18,022; Oct. 13; Gaz. vol. 207; p. 607.

Horlick, Arnold A., Milwaukee, Wis. "Horlicks Malt-Oat Milk." (For Malt-Oat Milk.) No. 18,024; Oct. 13; Gaz. vol. 207; p. 607.

Houck & Dieter Co., El Paso, Tex. "Vino Mezcal de Tequila." (For a Remedy for Liver and Kidney Complaints.) No. 18,023; Oct. 13; Gaz. vol. 207; p. 607.

Hudson Condensed Milk Co., Inc., New York, N. Y. "United." (For Milk.) No. 18,025; Oct. 13; Gaz. vol. 207; p. 607.

Ideal Aeroplane & Supply Co., New York, N. Y. "Blue Bird Racing Aeroplane." (For a Flying Toy.) No. 18,026; Oct. 13; Gaz. vol. 207; p. 607.

Josselson Bros., Catlettsburg, Ky. "Sweetmash 100 proof Corn Whiskey." (For Corn Whisky.) No. 18,027; Oct. 13; Gaz. vol. 207; p. 607.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Krumbles." (For Prepared Cereal Foods.) No. 18,028; Oct. 13; Gaz. vol. 207; p. 607.

Nagle, Peter J., Rochester, N. Y. "Consult Elcaro." (For Games.) No. 18,029; Oct. 13; Gaz. vol. 207; p. 607.

National Steel & Copper Plate Company, Chicago, Ill. "Natsco." (For a Substitute for Potassium Iodid and Iodin Resublimed.) No. 18,030; Oct. 13; Gaz. vol. 207; p. 607.

New Lustre Mfg. Co., Kansas City, Mo. "New Lustre." (For a Polish.) No. 18,031; Oct. 13; Gaz. vol. 207; p. 607.

O'Connor & Co., Hugh, Brooklyn, N. Y. "Watch The Improved Victoria Pleater." (For a Plaiter.) No. 18,004; Oct. 6; Gaz. vol. 207; p. 297.

Paxton & Windham, Birmingham, Ala. "Paxton & Windham's New Life Angel Tonic." (For a Medicine.) No. 18,032; Oct. 13; Gaz. vol. 207; p. 607.

Petrie Italian-American Cigar Co., Inc., San Francisco, Cal. "Marca Petri." (For Cigars.) No. 18,033; Oct. 13; Gaz. vol. 207; p. 607.

Power Gas Products Company, Minneapolis, Minn. "Front label for can." (For a Lubricating Fluid.) No. 18,034; Oct. 13; Gaz. vol. 207; p. 607.

Republic Chemical Products Co., Chicago, Ill. "Odor Killer." (For a Disinfectant.) No. 18,035; Oct. 13; Gaz. vol. 207; p. 607.

Republic Chemical Products Co., Chicago, Ill. "Crystal Sparkle." (For a Cleansing Preparation.) No. 18,036; Oct. 13; Gaz. vol. 207; p. 607.

Savarese Macaroni Co., The, Brooklyn, N. Y. "Tripoli Brand." (For Macaroni.) No. 18,037; Oct. 13; Gaz. vol. 207; p. 607.

Scher, Emil M., and H. P. Skourup, Chicago, Ill. "909 'One's Enuff.'" (For Medicines.) No. 18,038; Oct. 13; Gaz. vol. 207; p. 607.

Skourup, H. P. (See Scher and Skourup.)

Smucker, Jerome M., Orrville, Ohio. "Smucker's Apple Butter." (For Apple-Butter.) No. 18,039; Oct. 13; Gaz. vol. 207; p. 607.

Standard Pickle Co., Inc., The, Hartford, Conn. "Standard Delicious Pickles." (For Sweet Mixed Pickles.) No. 18,041; Oct. 13; Gaz. vol. 207; p. 607.

Stuart, Charles R., Los Angeles, Cal. "Soil-Tone." (For a Mineral Fertilizer.) No. 18,042; Oct. 13; Gaz. vol. 207; p. 607.

Stuart, Frank A., Marshall, Mich. "Blue Rose Brand." (For Fruits.) No. 18,043; Oct. 13; Gaz. vol. 207; p. 607.

Van Camp Sea Food Company, Los Angeles and San Pedro, Cal. "Tuna." (For Tinned Sea-Fish.) No. 18,044; Oct. 13; Gaz. vol. 207; p. 607.

Wood Renew Manufacturing Co., Escanaba, Mich. "Liquid Wood Renew." (For Furniture-Polish.) No. 18,045; Oct. 13; Gaz. vol. 207; p. 607.

PRINTS.

C. P. Goerz American Optical Co., New York, N. Y. "Goerz V. P. Roll Film Tenax." (For Photographic Films.) No. 3,749; Oct. 13; Gaz. vol. 207; p. 608.

Campbell Bosworth Machinery Company, Boston, Mass. "Campbell." (For Sewing-Machines.) No. 3,746; Oct. 13; Gaz. vol. 207; p. 608.

Excelsior Baking Company, Minneapolis, Minn. "Butter-Krust Bread." (For Bread.) No. 3,747; Oct. 13; Gaz. vol. 207; p. 608.

Germicide Hairtone Company, Wagoner, Okla. "Germicide Hairtone." (For a Preparation for the Hair and Scalp.) No. 3,748; Oct. 13; Gaz. vol. 207; p. 608.

Milwaukee Bag Co., Milwaukee, Wis. "Bag." (For Bags.) No. 3,751; Oct. 13; Gaz. vol. 207; p. 608.

Monumental Brewing Co., The, Highlandtown, Md. "Das gute Bier." (For Beer.) No. 3,752; Oct. 13; Gaz. vol. 207; p. 608.

Peter Schoenhofen Brewing Co., The, Chicago, Ill. "A Case of Good Judgment." (For Beer.) Nos. 3,753–5; Oct. 13; Gaz. vol. 207; p. 608.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Worth Fighting for." (For Chewing-Tobacco.) No. 3,756; Oct. 13; Gaz. vol. 207; p. 608.

W. A. Adams Advertising Co., Philadelphia, Pa. "Cooks Thoro-Bread." (For Bread.) No. 3,745; Oct. 13; Gaz. vol. 207; p. 608.

Wm. J. Lemp Brewing Co., St. Louis, Mo. "Falstaff and Happiness." (For Beer.) No. 3,750; Oct. 13; Gaz. vol. 207; p. 608.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

Acetic anhydrid, Manufacturing. W. A. Beatty. No. 1,113,927; Oct. 13; Gaz. vol. 207; p. 571.
Acetylene-generator. J. Harris. No. 1,113,336; Oct. 13; Gaz. vol. 207; p. 365.
Acetylene-generator, Automatic. J. H. Klenck. No. 1,114,772; Oct. 27; Gaz. vol. 207; p. 962.
Acid, Chamber used in the manufacture of sulfuric. W. G. Mills and C. T. Packard. No. 1,112,546; Oct. 6; Gaz. vol. 207; p. 48.
Acid, Concentrating nitric. F. Hausmann. No. 1,115,102; Oct. 27; Gaz. vol. 207; p. 1112.
Acids, Acidyl derivatives of C-ortho-allyl-ortho-benzoic. L. Taub and H. J. Hahl. No. 1,113,713; Oct. 13; Gaz. vol. 207; p. 497.
Acids, Magnesium salts of acylated aromatic ortho-oxycarboxylic. R. Berendes and E. Rietz. No. 1,113,742; Oct. 13; Gaz. vol. 207; p. 507.
Actuating mechanism. H. M. Cox. No. 1,112,983; Oct. 6; Gaz. vol. 207; p. 109.
Actuating mechanism. H. Pletsch. No. 1,113,686; Oct. 13; Gaz. vol. 207; p. 487.
Adding and listing machine. F. C. Rinsche. No. 1,114,914; Oct 27; Gaz. vol. 207; p. 1013.
Adding-machine register. J. A. Smith. No. 1,114,056; Oct. 20; Gaz. vol. 207; p. 655.
Adhesive and making same. F. H. Patch. No. 1,113,681; Oct. 13; Gaz. vol. 207; p. 485.
Adhesive-plaster spool. P. S. Bauer. No. 1,113,291; Oct. 13; Gaz. vol. 207; p. 349.
Adjusting device. H. J. Mitchell. No. 1,113,463; Oct. 13; Gaz. vol. 207; p. 410.
Advertising apparatus. G. Brown. No. 1,114,223; Oct. 20; Gaz. vol. 207; p. 716.
Advertising apparatus. C. R. Pierce. No. 1,115,103; Oct. 27; Gaz. vol. 207; p. 1080.
Advertising device. L. H. Pummill. No. 1,115,021; Oct. 27; Gaz. vol. 207; p. 1051.
Advertising-machine. J. F. Porter. No. 1,112,656; Oct. 6; Gaz. vol. 207; p. 88.
Aerial machine. L. J. Tetlow. No. 1,114,311; Oct. 20; Gaz. vol. 207; p. 747.
Aeromobile. E. Berliner. No. 1,115,162; Oct. 27; Gaz. vol. 207; p. 1101.
Aeronautical vehicles, Stabilizer for. W. F. Hensel. No. 1,112,704; Oct. 6; Gaz. vol. 207; p. 134.
Aeroplane. W. I. Twombly. No. 1,112,731; Oct. 6; Gaz. vol. 207; p. 114.
Aeroplane. J. C. Battista. No. 1,112,885; Oct. 6; Gaz. vol. 207; p. 166.
Aeroplane. A. A. Holle. No. 1,115,073; Oct. 27; Gaz. vol. 207; p. 1070.
Aeroplane balancing mechanism. H. E. Hawes. No. 1,113,623; Oct. 13; Gaz. vol. 207; p. 465.
Aeroplanes, Curving rib for the supporting-surfaces of. P. C. Elliott. No. 1,115,201; Oct. 27; Gaz. vol. 207; p. 1145.
Aeroplanes, Transmission-gear for. H. A. Orme. No. 1,113,044; Oct. 6; Gaz. vol. 207; p. 219.
Agricultural apparatus. C. G. G. Groupe. No. 1,113,431; Oct. 13; Gaz. vol. 207; p. 400.
Agricultural apparatus. D. T. Phillips. No. 1,113,684; Oct. 13; Gaz. vol. 207; p. 486.
Agricultural implement. W. B. Thomas. No. 1,113,382; Oct. 13; Gaz. vol. 207; p. 382.
Agricultural implement. W. C. Trompeter. No. 1,114,940; Oct. 27; Gaz. vol. 207; p. 1022.
Air-brake apparatus. F. and T. R. Kosier and T. Bemis. No. 1,114,152; Oct. 20; Gaz. vol. 207; p. 690.
Air brake, Combined automatic and straight-. W. V. Turner. No. 1,112,494; Oct. 6; Gaz. vol. 207; p. 28.
Air-brake-controlling mechanism for block-signal systems. D. Dale. No. 1,113,314; Oct. 13; Gaz. vol. 207; p. 357.
Air-brake system, Electropneumatic. J. P. Costelloe. No. 1,115,286; Oct. 27; Gaz. vol. 207; p. 1143.
Air-brakes, Apparatus for electrically controlling. E. L. Orcutt. No. 1,114,642; Oct. 20; Gaz. vol. 207; p. 862.
Air-brakes, Apparatus for electrically controlling. E. L. Orcutt. No. 1,114,643; Oct. 20; Gaz. vol. 207; p. 863.
Air-compressors, Means for cooling the valve-chests of. C. W. Boring. No. 1,113,873; Oct. 13; Gaz. vol. 207; p. 554.
Air-conditioning apparatus. A. A. Blomfeldt. No. 1,113,950; Oct. 20; Gaz. vol. 207; p. 619.
Air-craft. F. D. Hollidge. No. 1,112,615; Oct. 6; Gaz. vol. 207; p. 74.
Air-motor. C. E. L. Lipman. No. 1,115,470; Oct. 27; Gaz. vol. 207; p. 1205.
Air-propulsion device. T. O'Brien. No. 1,114,640; Oct. 20; Gaz. vol. 207; p. 861.
Airship, Dirigible. E. Török. No. 1,115,457; Oct. 27; Gaz. vol. 207; p. 1201.
Alarm: *See* Burglar-alarm.
Alarm device. W. Trafford. No. 1,112,576; Oct. 6; Gaz. vol. 207; p. 59.
Alarm-device casing. G. I. Rockwood. No. 1,114,528; Oct. 20; Gaz. vol. 207; p. 825.
Alcohol from garbage, Manufacturing. J. J. Morgan. No. 1,114,017; Oct. 20; Gaz. vol. 207; p. 641.
Alkali cyanogen compounds, Making. J. C. Clancy. No. 1,112,893; Oct. 6; Gaz. vol. 207; p. 168.
Alloy. S. W. Parr. No. 1,115,239; Oct. 27; Gaz. vol. 207; p. 1129.
Alloy, Metal. E. Smith. No. 1,114,055; Oct. 20; Gaz. vol. 207; p. 655.
Amalgamator. F. Stringham. No. 1,113,065; Oct. 6; Gaz. vol. 207; p. 225.
Amalgamator. G. R. Bauer. No. 1,114,573; Oct. 20; Gaz. vol. 207; p. 840.
Ammonia and alumina from aluminium nitrid, Producing. E. Milde. No. 1,115,003; Oct. 27; Gaz. vol. 207; p. 1044.
Ammonia-compressors, Safety appliance for. A. L. Brown. No. 1,112,672; Oct. 6; Gaz. vol. 207; p. 93.
Ammonium phosphate, Making. F. S. Washburn. No. 1,115,044; Oct. 27; Gaz. vol. 207; p. 1059.
Amusement apparatus. F. W. Pierce. No. 1,115,017; Oct. 27; Gaz. vol. 207; p. 1050.
Amusement device. R. A. Bisbee. No. 1,114,958; Oct. 27; Gaz. vol. 207; p. 1028.
Anchor, Earth-. J. Blackburn. No. 1,114,724; Oct. 27; Gaz. vol. 207; p. 944.
Anchor, Guy-rope. J. Bilble. No. 1,113,869; Oct. 13; Gaz. vol. 207; p. 552.
Anchor, Stockless. A. F. W. Ståhlberger. No. 1,112,864; Oct. 6; Gaz. vol. 207; p. 159.
Annealing and tempering apparatus. E. H. Angle and A. H. Ketcham. No. 1,112,750; Oct. 6; Gaz. vol. 207; p. 120.
Annunciator. O. M. Leich. No. 1,113,128; Oct. 6; Gaz. vol. 207; p. 246.
Annunciator. A. Lungen. No. 1,114,275; Oct. 20; Gaz. vol. 207; p. 735.
Antisiphon self-scouring trap. G. Cody. No. 1,112,437; Oct. 6; Gaz. vol. 207; p. 7.
Antiskidding device for tires. L. Rakal. No. 1,115,105; Oct. 27; Gaz. vol. 207; p. 1081.
Antislipping device. W. Scace. No. 1,113,581; Oct. 13; Gaz. vol. 207; p. 451.
Anvil attachment. M. C. Bucher. No. 1,113,750; Oct. 13; Gaz. vol. 207; p. 511.
Apparel fastener, Wearing-. J. B. Conde and C. C. Mooney. No. 1,113,878; Oct. 13; Gaz. vol. 207; p. 553.
Arch-support. M. E. Stephenson. No. 1,113,380; Oct. 13; Gaz. vol. 207; p. 381.
Arm-rest, Writer's. S. J. King. No. 1,113,020; Oct. 6; Gaz. vol. 207; p. 211.
Article-carrier. A. J. Coughenour. No. 1,113,415; Oct. 13; Gaz. vol. 207; p. 394.
Ash-box. G. J. Hankins. No. 1,114,470; Oct. 20; Gaz. vol. 207; p. 806.
Asynchronous motor. T. L. Lee. No. 1,113,565; Oct. 13; Gaz. vol. 207; p. 446.
Atomizer. S. Traak. No. 1,113,069; Oct. 6; Gaz. vol. 207; p. 227.
Atomizing-lubricator. I. M. Woodmansee. No. 1,113,276; Oct. 13; Gaz. vol. 207; p. 344.
Auger, Earth-. B. G., T., and W. P. Watkins. No. 1,114,206; Oct. 20; Gaz. vol. 207; p. 711.
Auger, Post-hole. J. S. Hamilton. No. 1,113,332; Oct. 13; Gaz. vol. 207; p. 363.
Auto-drive. A. O. Turner. No. 1,113,071; Oct. 6; Gaz. vol. 207; p. 227.

Cream-separator. W. C. Hartmann. No. 1,113,005; Oct. 6; Gaz. vol. 207; p. 206.
Crib. W. H. Sekrit. No. 1,112,567; Oct. 6; Gaz. vol. 207; p. 55.
Crib, Collapsible. S. Jones. No. 1,113,647; Oct. 13; Gaz. vol. 207; p. 473.
Cross-head connection. G. C. Biondo. No. 1,115,276; Oct. 27; Gaz. vol. 207; p. 1140.
Crusher: *See* Ice-crusher.
Cue-chalking device. H. H. Leece. No. 1,114,490; Oct. 20; Gaz. vol. 207; p. 813.
Culinary utensil. N. S. Harter. No. 1,112,447; Oct. 6; Gaz. vol. 207; p. 11.
Culinary vessel. B. N. Crim. No. 1,112,684; Oct. 6; Gaz. vol. 207; p. 98.
Cultivator. W. L. Carter and D. B. Stults. No. 1,112,889; Oct. 6; Gaz. vol. 207; p. 167.
Cultivator. T. C. Kevitt. No. 1,113,563; Oct. 13; Gaz. vol. 207; p. 446.
Cultivator. E. M. Cole. No. 1,114,117; Oct. 20; Gaz. vol. 207; p. 678.
Cultivator. A. Rasmussen. No. 1,114,520; Oct. 20; Gaz. vol. 207; p. 823.
Cultivator attachment. J. L. Terrel. No. 1,114,310; Oct. 20; Gaz. vol. 207; p. 747.
Cultivator, Double-row. E. K. Reiher. No. 1,114,911; Oct. 27; Gaz. vol. 207; p. 1011.
Cultivator-tooth clamp. C. E. Bean. No. 1,113,293; Oct. 13; Gaz. vol. 207; p. 350.
Cultivators, Cotton-chopper attachment for. J. Goodrum. No. 1,115,425; Oct. 27; Gaz. vol. 207; p. 1191.
Cup: *See* Grease-cup; Shaving-cup.
Cup holder, Conical-sanitary. E. C. Haldeman. No 1,113,618; Oct. 13; Gaz. vol. 207; p. 463.
Cup holder, Drinking. C. Mettler. No. 1,112,824; Oct. 6; Gaz. vol. 207; p. 144.
Cupola-furnace. E. Schürmann. No. 1,112,846; Oct. 6; Gaz. vol. 207; p. 152.
Current-conductors, Outlet-fixture for. W. M. Webb. No. 1,112,953; Oct. 6; Gaz. vol. 207; p. 189.
Current generator, Variable-speed direct. A. Richter. No. 1,115,452; Oct. 27; Gaz. vol. 207; p. 1190.
Current-motor. J. W. Laurent. No. 1,114,489; Oct. 20; Gaz. vol. 207; p. 813.
Curtain. G. E. Lackey. (Reissue.) No. 13,811; Oct. 20; Gaz. vol. 207; p. 880.
Curtain-fastener, Vehicle. F. A. Nelder. No. 1,113,677; Oct. 13; Gaz. vol. 207; p. 483.
Curtain-fixture. A. C. Rader. No. 1,113,689; Oct. 13; Gaz. vol. 207; p. 488.
Curtain-fixture. A. C. Rader. No. 1,113,690; Oct. 13; Gaz. vol. 207; p. 489.
Curtain-rod. E. W. Vaughan. No. 1,112,950; Oct. 6; Gaz. vol. 207; p. 188.
Cuspidor. H. F. Schumann. No. 1,113,057; Oct. 6; Gaz. vol. 207; p. 223.
Cuspidor-lifter. C. T. Lee. No. 1,113,025; Oct. 6; Gaz. vol. 207; p. 212.
Cutter: *See* Butter-cutter; Cheese-cutter; Cigar-tip cutter; Grass-cutter; Hay-cutter; Pipe-cutter; Pipe and tube cutter; Vegetable-cutter.
Cutting and sewing machine, Combined. J. P. Weis. No. 1,114,082; Oct. 20; Gaz. vol. 207; p. 666.
Cutting-machine. R. C. Simmons. No. 1,113,699; Oct. 13; Gaz. vol. 207; p. 492.
Cuttlebone-holder. S. Nolan. No. 1,113,816; Oct. 13; Gaz. vol. 207; p. 534.
Cycles, Change-speed mechanism for motor-. E. W. Myers. No. 1,113,814; Oct. 13; Gaz. vol. 207; p. 533.
Cycles, Hand-grip control for motor-. P. Brix. No. 1,114,441; Oct. 20; Gaz. vol. 207; p. 795.
Cycles, Handle-grip control for motor-. P. Brix. No. 1,114,440; Oct. 20; Gaz. vol. 207; p. 794.
Cycles, Non-skid device for motor-. J. Hauerwas, Jr. No. 1,113,006; Oct. 6; Gaz. vol. 207; p. 207.
Cycles, Oil-tank for motor-. L. H. Cobb. No. 1,113,308; Oct. 13; Gaz. vol. 207; p. 355.
Cycles, Sectional mud-guard for motor-. H. L. Roderick. No. 1,112,478; Oct. 6; Gaz. vol. 207; p. 22.
Cylinder-lock. C. A. Müller. No. 1,114,709; Oct. 20; Gaz. vol. 207; p. 886.
Cylinders, Device in coring-tools for cutting. W. Patrosio. No. 1,115,010; Oct. 27; Gaz. vol. 207; p. 1046.
Dam and hydraulic-power converter. W. H. Baker. No. 1,115,376; Oct. 27; Gaz. vol. 207; p. 1173.
Damper, Coal-grate. J. E. Melton. No. 1,113,032; Oct. 6; Gaz. vol. 207; p. 215.
Damper for stovepipes, Automatic. C. S. Waybright. No. 1,112,505; Oct. 6; Gaz. vol. 207; p. 32.
Danger-signal. A. Demser. No. 1,114,451; Oct. 20; Gaz. vol. 207; p. 798.
Dehydrating apparatus. I. S. Joseph. No. 1,112,454; Oct. 6; Gaz. vol. 207; p. 13.
Delivery, Folding. E. W. Cooper. No. 1,113,414; Oct. 13; Gaz. vol. 207; p. 393.
Dental castings, Centered mold for. H. Schweitzer. No. 1,112,847; Oct. 6; Gaz. vol. 207; p. 153.
Dental handpiece. A. Campbell. No. 1,113,752; Oct. 13; Gaz. vol. 207; p. 511.
Dental impression-tray, Sanitary. R. C. Bell. No. 1,113,000; Oct. 6; Gaz. vol. 207; p. 233.
Derricks, Wheel for oil-well. L. C. Moore. No. 1,113,233; Oct. 13; Gaz. vol. 207; p. 328.
Desk, School-. C. J. Priest. No. 1,113,140; Oct. 6; Gaz. vol. 207; p. 251.
Detinning. W. Savage. No. 1,113,491; Oct. 13; Gaz. vol. 207; p. 421.
Detinning. J. Weber. No. 1,115,262; Oct. 27; Gaz. vol. 207; p. 1136.
Die: *See* Brick or tile die; Screw-threading die.
Die-stock. J. B. Martens. No. 1,112,818; Oct. 6; Gaz. vol. 207; p. 143.
Dish-holder, Sanitary. D. F. Curtin. No. 1,114,122; Oct. 20; Gaz. vol. 207; p. 679.
Dish-making machine, Butter-. E. Craig. No. 1,113,879; Oct. 13; Gaz. vol. 207; p. 555.
Dish-washing machine. N. G. De Laney. No. 1,114,591; Oct. 20; Gaz. vol. 207; p. 845.
Disinfectants or other fluids, Device for distributing. A. T. Klug. No. 1,112,807; Oct. 6; Gaz. vol. 207; p. 139.
Disinfecting and deodorizing device. C. P. Danks. No. 1,113,959; Oct. 20; Gaz. vol. 207; p. 622.
Disk-feeding machine. O. J. Olm. No. 1,114,177; Oct. 20; Gaz. vol. 207; p. 700.
Disk-feeding machine. O. J. Olm. No. 1,114,178; Oct. 20; Gaz. vol. 207; p. 701.
Display apparatus. E. T. Gray and J. J. Dauler. No. 1,112,901; Oct. 6; Gaz. vol. 207; p. 170.
Display apparatus. M. Kohn. No. 1,112,917; Oct. 6; Gaz. vol. 207; p. 176.
Display-cabinet. M. Bayuk. No. 1,113,737; Oct. 13; Gaz. vol. 207; p. 503.
Display cabinet, Stock-. S. Well and G. G. Waters. No. 1,114,089; Oct. 20; Gaz. vol. 207; p. 665.
Display-card. B. E. Sawyer. No. 1,113,580; Oct. 13; Gaz. vol. 207; p. 451.
Display-carton. R. R. Richardson. No. 1,114,041; Oct. 20; Gaz. vol. 207; p. 649.
Display container and stand. C. Wrayge, Jr. No. 1,113,725; Oct. 13; Gaz. vol. 207; p. 502.
Display-cover, Box. F. W. Gibson and C. S. Marden. No. 1,115,422; Oct. 27; Gaz. vol. 207; p. 1190.
Display, Electrical. V. E. Rumbarger. No. 1,113,250; Oct. 13; Gaz. vol. 207; p. 334.
Display-rack. A. Vanderveld. No. 1,113,386; Oct. 13; Gaz. vol. 207; p. 384.
Display-rack. C. H. Glashagel. No. 1,114,465; Oct. 20; Gaz. vol. 207; p. 804.
Display rack, Mattress-. A. Fisher. No. 1,114,455; Oct. 20; Gaz. vol. 207; p. 800.
Distilling apparatus. A. G. Waterhouse. No. 1,113,521; Oct. 13; Gaz. vol. 207; p. 431.
Ditching-machine. G. Edwards. No. 1,113,318; Oct. 13; Gaz. vol. 207; p. 359.
Door. T. Kundtz. No. 1,114,271; Oct. 20; Gaz. vol. 207; p. 734.
Door closer and check. F. J. Bayer and A. J. Rosentreter. No. 1,113,184; Oct. 13; Gaz. vol. 207; p. 309.
Door closer and check. P. A. Richmond. No. 1,114,184; Oct. 20; Gaz. vol. 207; p. 703.
Door closer and check. H. J. Wright. No. 1,114,216; Oct. 20; Gaz. vol. 207; p. 714.
Door-closing device, Automatic. W. E. Brown. No. 1,114,854; Oct. 27; Gaz. vol. 207; p. 991.
Door-controlling means. J. Gérard. No. 1,115,305; Oct. 27; Gaz. vol. 207; p. 1151.
Door-holding spring. G. W. Johnson. No. 1,112,620; Oct. 6; Gaz. vol. 207; p. 75.
Door-lock. A. J. Ross. No. 1,114,186; Oct. 20; Gaz. vol. 207; p. 704.
Door-lock. F. Kramarczyk. No. 1,114,368; Oct. 20; Gaz. vol. 207; p. 767.
Door-lock. E. H. O'Brien. No. 1,115,332; Oct. 27; Gaz. vol. 207; p. 1158.
Door lock for railway-cars and similar structures, Trap-. O. M. Edwards. No. 1,113,547; Oct. 13; Gaz. vol. 207; p. 440.
Door-lock, Vehicle. W. H. Appleby. No. 1,113,529; Oct. 13; Gaz. vol. 207; p. 434.
Door locks, Shield for railway-car vestibule-trap-. E. F. Chaffee. No. 1,115,394; Oct. 27; Gaz. vol. 207; p. 1179.
Door-locking device, Sliding-. A. Voigt. No. 1,112,738; Oct. 6; Gaz. vol. 207; p. 116.
Door-operating mechanism, Dump-. H. A. Bowen. No. 1,112,593; Oct. 6; Gaz. vol. 207; p. 65.
Door-operating mechanism, Dump-. W. J. Hoscelt. No. 1,112,617; Oct. 6; Gaz. vol. 207; p. 74.
Door-pull, Locking. T. O. Schrader. No. 1,114,296; Oct. 20; Gaz. vol. 207; p. 743.
Door-spring winder and set. S. Paulson. No. 1,112,471; Oct. 6; Gaz. vol. 207; p. 19.
Door-stop. J. L. Lawrence. No. 1,113,358; Oct. 13; Gaz. vol. 207; p. 373.
Doors and like movable structures, Controller for. D. J. Hurley. No. 1,113,997; Oct. 20; Gaz. vol. 207; p. 635.
Doubletree-brake. C. E. Cole. No. 1,113,755; Oct. 13; Gaz. vol. 207; p. 512.
Draft-equalizer. W. M. Adair. No. 1,115,460; Oct. 27; Gaz. vol. 207; p. 1202.
Draft-gear. L. T. Canfield. No. 1,112,767; Oct. 6; Gaz. vol. 207; p. 126.
Draft-regulator, Automatic. R. P. Mercer. No. 1,114,788; Oct. 27; Gaz. vol. 207; p. 967.
Drafting instrument. J. H. Blair. No. 1,113,404; Oct. 13; Gaz. vol. 207; p. 389.
Drag-box. E. B. Stone. No. 1,112,943; Oct. 6; Gaz. vol. 207; p. 185.
Drain-pipe. J. G. Hayes. No. 1,114,881; Oct. 27; Gaz. vol. 207; p. 1000.

Drainer, Dish-. P. Zarella. No. 1,114,220; Oct. 20; Gaz. vol. 207; p. 716.
Drawer and support. A. W. Rogman. No. 1,112,562; Oct. 6; Gaz. vol. 207; p. 53.
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Dress. D. Zavodnik. No. 1,114,954; Oct. 27; Gaz. vol. 207; p. 1027.
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Drier. S. W. Bonsall. No. 1,115,051; Oct. 27; Gaz. vol. 207; p. 1061.
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Dry cell. W. G. Waitt. No. 1,115,[illegible]; Oct. [illegible] Gaz. vol. 207; p. 1201.
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Drill. L. J. C. Van Es. No. 1,112,408; Oct. 6; Gaz. vol. 207; p. 30.
Drill. W. J. Turnbull. No. 1,112,946; Oct. 6; Gaz. vol. 207; p. 186.
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Electric conductors, Connector for. H. H. Russell. No. 1,115,114; Oct. 27; Gaz. vol. 207; p. 1084.
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Electric-light-adjusting socket. D. Yamada. No. 1,114,089; Oct. 20; Gaz. vol. 207; p. 668.
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Semaphore-arm. J. W. Fenton. No. 1,114,684; Oct. 20; Gaz. vol. 207; p. 877.
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Separators, Straw-deck for. W. C. Wachter. No. 1,114,073; Oct. 20; Gaz. vol. 207; p. 662.
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Ship-table, Non-spillable. P. W. Keymer. No. 1,115,213; Oct. 27; Gaz. vol. 207; p. 1120.
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Shoes, Making. W. D. Patterson. No. 1,115,099; Oct. 27; Gaz. vol. 207; p. 1078.
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Shot-carton, Tubular. C. H. Stevenson. No. 1,113,708; Oct. 13; Gaz. vol. 207; p. 495.
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Sign, Illuminated changeable. L. H. Jones. No. 1,114,267; Oct. 20; Gaz. vol. 207; p. 732.
Signal: *See* Automobile-signal; Danger-signal; Engine-room signal; Railway-crossing signal; Railway-signal; Railway danger-signal; Way-signal.
Signal apparatus. J. D. Nelson. No. 1,112,645; Oct. 6; Gaz. vol. 207; p. 84.
Signal device. G. J. Seiss. No. 1,112,566; Oct. 6; Gaz. vol. 207; p. 55.
Signal for submarine vessels. F. A. Lovegrove. No. 1,113,790; Oct. 13; Gaz. vol. 207; p. 527.
Signal mechanism, Inherent-power return. W. K. Howe. No. 1,114,766; Oct. 27; Gaz. vol. 207; p. 960.
Signal-sounder. W. Baumgartner. No. 1,113,400; Oct. 13; Gaz. vol. 207; p. 388.
Signal system. S. C. Venners. No. 1,115,349; Oct. 27; Gaz. vol. 207; p. 1163.
Signal system, Induction automatic stop and cab-. C. L. Bopp. No. 1,114,430; Oct. 20; Gaz. vol. 207; p. 790.
Signal system, selective. W. R. Tomlin. No. 1,114,939; Oct. 27; Gaz. vol. 207; p. 1022.
Signals, Apparatus for receiving or relaying electric. G. W. Pierce. No. 1,112,655; Oct. 6; Gaz. vol. 207; p. 87.
Signals, Automatic train control for cab. B. F. Wooding. No. 1,115,364; Oct. 27; Gaz. vol. 207; p. 1160.
Signaling and controlling system, Train. J. F. Webb, Jr. No. 1,114,078; Oct. 20; Gaz. vol. 207; p. 663.
Signaling apparatus, Alarm. L. A. Meyers and O. H. Tracy. No. 1,113,460; Oct. 13; Gaz. vol. 207; p. 409.
Signaling device. W. A. Bischoff. No. 1,113,187; Oct. 13; Gaz. vol. 207; p. 310.
Signaling device. D. G. McLean. No. 1,113,673; Oct. 13; Gaz. vol. 207; p. 482.
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Signaling device, Automatic. C. L. Bopp. No. 1,114,432; Oct. 20; Gaz. vol. 207; p. 791.
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Signaling system. H. O. Rugh. No. 1,114,040; Oct. 20; Gaz. vol. 207; p. 653.
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Signaling system, Electrical. E. E. Kleinschmidt. No. 1,114,007; Oct. 20; Gaz. vol. 207; p. 638.
Signature-opening machine. E. M. Roller. No. 1,112,659; Oct. 6; Gaz. vol. 207; p. 89.
Silage-handling apparatus. J. L. Beane. No. 1,113,738; Oct. 13; Gaz. vol. 207; p. 506.
Silo. F. J. Oberer. No. 1,114,639; Oct. 20; Gaz. vol. 207; p. 861.
Silo-filler. W. H. Mengle. No. 1,113,809; Oct. 13; Gaz. vol. 207; p. 531.
Silver-polish. A. T. Fletcher. No. 1,113,322; Oct. 13; Gaz. vol. 207; p. 300.
Singeing device. E. C. Daniels. No. 1,113,417; Oct. 13; Gaz. vol. 207; p. 394.
Sizing or classifying comminuted materials, Process and apparatus for. H. M. Sutton, W. L. and E. G. Steele. No. 1,114,935; Oct. 27; Gaz. vol. 207; p. 1020.
Skee-harness. O. Seimer. No. 1,113,496; Oct. 13; Gaz. vol. 207; p. 423.
Skelp-charging machine, Magnetic. W. T. Garlitz. No. 1,113,772; Oct. 13; Gaz. vol. 207; p. 518.
Skirt. K. Johnson. No. 1,113,998; Oct. 20; Gaz. vol. 207; p. 635.
Skirt-gage. C. H. Pearse. No. 1,112,651; Oct. 6; Gaz. vol. 207; p. 86.
Slag, Making articles from. M. Chiapponi. No. 1,114,581; Oct. 20; Gaz. vol. 207; p. 842.
Sled-knee. L. F. Jordan. No. 1,114,484; Oct. 20; Gaz. vol. 207; p. 811.
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Sling. F. F. Slutman. No. 1,112,866; Oct. 6; Gaz. vol. 207; p. 160.
Slugging-machine. F. E. Valois. No. 1,114,043; Oct. 27; Gaz. vol. 207; p. 1023.
Smelters, Fume-concentrator for. S. W. Smith. No. 1,112,860; Oct. 6; Gaz. vol. 207; p. 157.
Smelting apparatus, Ore-. J. A. Potter. No. 1,113,481; Oct. 13; Gaz. vol. 207; p. 417.
Smoke-abating system for railway-stations. R. A. Ilg. No. 1,114,001; Oct. 20; Gaz. vol. 207; p. 636.
Smoke-consumer. W. S. Tucker. No. 1,113,070; Oct. 6; Gaz. vol. 207; p. 227.
Smoke-filter and spark-eliminator. E. H. Gagnon. No. 1,114,461; Oct. 20; Gaz. vol. 207; p. 802.
Smoker's accessory. B. Stricker. No. 1,112,575; Oct. 6; Gaz. vol. 207; p. 59.
Snap-fastener top. A. H. Greenebaum. No. 1,113,211; Oct. 13; Gaz. vol. 207; p. 320.
Snatch-block. F. M. Smith. No. 1,114,814; Oct. 27; Gaz. vol. 207; p. 976.
Snow-scraper. C. J. Brodie. No. 1,114,442; Oct. 20; Gaz. vol. 207; p. 795.
Soap-box. A. L. Jones. No. 1,114,483; Oct. 20; Gaz. vol. 207; p. 811.
Soap, Embedding thin printed labels made of gelatin in transparent. H. Kestner. No. 1,114,006; Oct. 20; Gaz. vol. 207; p. 638.
Soldering-chain. C. A. Becker. No. 1,113,047; Oct. 20; Gaz. vol. 207; p. 618.
Soldering-iron, Self-heating. B. S. Suzuki. No. 1,113,846; Oct. 13; Gaz. vol. 207; p. 544.
Sole cutting and marking machine. M. Cook, Jr. No. 1,113,544; Oct. 13; Gaz. vol. 207; p. 430.
Sole-leveling machine. J. Gouldbourn. No. 1,114,253; Oct. 20; Gaz. vol. 207; p. 728.
Sole-plate. J. J. Olbrantz and J. Emanuel. No. 1,114,022; Oct. 20; Gaz. vol. 207; p. 643.
Sole protector, Boot and shoe. F. Genecand. No. 1,115,304; Oct. 27; Gaz. vol. 207; p. 1151.
Soles of boots and shoes, Device for moistening the. A. E. James. No. 1,113,638; Oct. 13; Gaz. vol. 207; p. 470.
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Sound-record, Metal. T. H. Macdonald. No. 1,114,010; Oct. 20; Gaz. vol. 207; p. 637.
Sound-records, Stylus-guiding attachment for. H. W. Rogers. No. 1,112,838; Oct. 6; Gaz. vol. 207; p. 149.
Spark-plug. G. A. Long. No. 1,114,157; Oct. 20; Gaz. vol. 207; p. 692.
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Speed-changing mechanism. J. C. Dorr. No. 1,115,058; Oct. 27; Gaz. vol. 207; p. 1064.
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Speed-regulating mechanism. E. L. Orcutt. No. 1,114,644; Oct. 20; Gaz. vol. 207; p. 863.
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Spike. C. Read. No. 1,112,557; Oct. 6; Gaz. vol. 207; p. 52.
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Spike-fastening means. L. H. Kirk. No. 1,115,438; Oct. 27; Gaz. vol. 207; p. 1104.
Spinning apparatus, Yarn-. A. Avery. No. 1,113,286; Oct. 13; Gaz. vol. 207; p. 347.
Spinning-machine. W. Hartley. No. 1,113,434; Oct. 13; Gaz. vol. 207; p. 401.
Spinning-machine. H. Ryder. No. 1,113,489; Oct. 13; Gaz. vol. 207; p. 421.
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Splitting-machine. A. W. Eaton and C. Pease. No. 1,115,059; Oct. 27; Gaz. vol. 207; p. 1064.
Sponge-retaining and water-supplying device. C. Budal. No. 1,114,678; Oct. 20; Gaz. vol. 207; p. 875.
Spool. J. C. Hoffman. No. 1,113,345; Oct. 13; Gaz. vol. 207; p. 368.
Spool, Expanding carrier-. L. Zeni. No. 1,113,082; Oct. 6; Gaz. vol. 207; p. 231.
Spool-holder. R. Fraser. No. 1,112,602; Oct. 6; Gaz. vol. 207; p. 101.
Spool-holder. E. Zimmerman and C. B. Britt. No. 1,114,568; Oct. 20; Gaz. vol. 207; p. 839.
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Typographical machine. C. Muehleisen and A. Walter. No. 1,115,234; Oct. 27; Gaz. vol. 207; p. 1127.
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Umbrella, Folding. M. Kozlowski and F. Grohal. No. 1,114,367; Oct. 20; Gaz. vol. 207; p. 767.
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Undergarment. K. Segal. No. 1,114,540; Oct. 20; Gaz. vol. 207; p. 830.
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Universal joint. E. J. Tirrell. No. 1,112,869; Oct. 6; Gaz. vol. 207; p. 160.
Urinal. S. D. Baker. No. 1,114,670; Oct. 20; Gaz. vol. 207; p. 872.
Utensil-lifter. A. A. Pospychala. No. 1,112,475; Oct. 6; Gaz. vol. 207; p. 21.
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Vacuum system. J. N. Walton. No. 1,112,872; Oct. 6; Gaz. vol. 207; p. 161.
Valve. F. C. Pfeil. No. 1,112,472; Oct. 6; Gaz. vol. 207; p. 20.
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Valve device, Quick-action triple-. W. V. Turner. No. 1,112,493; Oct. 6; Gaz. vol. 207; p. 27.
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Valve for flushing-tanks. W. E. Burke. No. 1,114,444; Oct. 20; Gaz. vol. 207; p. 796.
Valve for gas-engines, Inlet-. A. C. Menges. No. 1,113,810; Oct. 13; Gaz. vol. 207; p. 531.
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Valve for steam-heating systems. O. C. Hatch. No. 1,114,609; Oct. 20; Gaz. vol. 207; p. 851.
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Valve-lifter. O. T. Glasscock and W. F. Phillips. No. 1,115,424; Oct. 27; Gaz. vol. 207; p. 1190.
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Vegetable-washing machine. J. C. Wirts. No. 1,115,142; Oct. 27; Gaz. vol. 207; p. 1094.
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Vehicle, Collapsible. O. N. Turner. No. 1,114,314; Oct. 20; Gaz. vol. 207; p. 748.
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Vehicles, Bolster mechanism for. P. J. Smith. No. 1,112,663; Oct. 6; Gaz. vol. 207; p. 90.
Vehicles, Central buffing and draw gear for railway and like. A. Spencer. No. 1,113,916; Oct. 13; Gaz. vol. 207; p. 568.
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Ventilator. P. S. Delany. No. 1,113,883; Oct. 13; Gaz. vol. 207; p. 557.
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View-finder. J. Linder. No. 1,114,895; Oct. 27; Gaz. vol. 207; p. 1005.
Vise, Bench-. J. R. Long. No. 1,113,663; Oct. 13; Gaz. vol. 207; p. 478.
Vise, Bench-. J. R. Long. No. 1,113,664; Oct. 13; Gaz. vol. 207; p. 479.
Vise holder, Pipe-. F. W. Griffin. No. 1,113,781; Oct. 13; Gaz. vol. 207; p. 521.
Wage-paying machine or the like. A. Von Barth. No. 1,114,828; Oct. 27; Gaz. vol. 207; p. 981.
Wagon-beds, Scale attachment for supporting. C. E. Burnett. No. 1,113,931; Oct. 13; Gaz. vol. 207; p. 572.
Wagon, Dumping-. J. P. Christensen. No. 1,113,409; Oct. 13; Gaz vol. 207; p. 391.
Wall, Building-. A. M. Evans. No. 1,112,995; Oct. 6; Gaz. vol. 207; p. 202.
Wall construction. J. E. Conzelman. No. 1,114,584; Oct. 20; Gaz. vol. 207; p. 843.
Wall, Hollow-tile. P. H. Bevier. No. 1,112,757; Oct. 6; Gaz. vol. 207; p. 123.
Wall-tie. F. W. Gartrell. No. 1,114,251; Oct. 20; Gaz. vol. 207; p. 727.
Warming-closet. S. F. Swantees. No. 1,112,491; Oct. 6; Gaz. vol. 207; p. 27.
Warping-machine. E. E. Bradley. No. 1,114,337; Oct. 20; Gaz. vol. 207; p. 756.
Washbasin, Barber's. G. Cornacchia. No. 1,113,198; Oct. 13; Gaz. vol. 207; p. 315.
Washbench, Folding. A. F. Hanisch. No. 1,114,258; Oct. 20; Gaz. vol. 207; p. 730.
Washboiler attachment. G. N. Beasley. No. 1,115,378; Oct. 27; Gaz. vol. 207; p. 1174.
Washer: *See* Clothes-washer; Coal-washer.
Washing device, Suction. F. A. Wolf. No. 1,115,047; Oct. 27; Gaz. vol. 207; p. 1060.
Washing-machine. H. Budd. No. 1,112,766; Oct. 6; Gaz. vol. 207; p. 126.
Washing-machine. N. N. Chase. No. 1,112,892; Oct. 6; Gaz. vol. 207; p. 167.
Washing-machine. G. H. Huenergardt. No. 1,113,995; Oct. 20; Gaz. vol. 207; p. 634.
Washing-machine. L. S. Ansell and C. Speer. No. 1,115,373; Oct. 27; Gaz. vol. 207; p. 1172.
Washing machine, Clothes-. M. Hedglon. No. 1,114,261; Oct. 20; Gaz. vol. 207; p. 730.
Washing-machines, Dolly-shaft bearing for. G. W. Lewis. No. 1,113,452; Oct. 13; Gaz. vol. 207; p. 407.
Washstand, Portable. F. W. Schmidt. No. 1,113,495; Oct. 13; Gaz. vol. 207; p. 423.
Washtub. A. Hansen. No. 1,112,790; Oct. 6; Gaz. vol. 207; p. 133.
Watch-dials, Attachment for fastening. J. A. F. Wolf. No. 1,114,566; Oct. 20; Gaz. vol. 207; p. 838.
Watch-guard. R. Jahn. No. 1,113,011; Oct. 6; Gaz. vol. 207; p. 208.
Watch mechanism. W. F. Boast. No. 1,114,101; Oct. 20; Gaz. vol. 207; p. 672.
Watch-movements, Balance-shaft for. J. A. Meros. No. 1,113,450; Oct. 13; Gaz. vol. 207; p. 409.
Watch-regulator. F. McIntyre. No. 1,114,500; Oct. 20; Gaz. vol. 207; p. 817.
Watches, Setting-stem for. O. Ohlson. No. 1,114,907; Oct. 27; Gaz. vol. 207; p. 1010.
Watchcase-crown. L. F. Verberckmoes. No. 1,114,947; Oct. 27; Gaz. vol. 207; p. 1024.
Water-closet, Railway. A. Berry. No. 1,113,186; Oct. 13; Gaz. vol. 207; p. 310.
Water-closets, Compound-lever ball-cock for. W. U. Griffiths. No. 1,112,533; Oct. 6; Gaz. vol. 207; p. 43.
Water-elevator, Pneumatic. E. E. Thomas. No. 1,115,131; Oct. 27; Gaz. vol. 207; p. 1090.
Water-gage shield. J. W. Loney and T. C. Steger. No. 1,114,778; Oct. 27; Gaz. vol. 207; p. 964.
Water-heater. E. W. Evans. No. 1,112,529; Oct. 6; Gaz. vol. 207; p. 41.
Water-heater. T. Griffin. No. 1,113,003; Oct. 6; Gaz. vol. 207; p. 205.
Water-heater. L. F. Mergott. No. 1,113,232; Oct. 13; Gaz. vol. 207; p. 328.
Water-heater. J. Nelian. No. 1,115,006; Oct. 27; Gaz. vol. 207; p. 1045.
Water-heater. T. Gore. No. 1,115,306; Oct. 27; Gaz. vol. 207; p. 1151.
Water-heater, Gas-heated. J. Shimmelfennig. No. 1,112,484; Oct. 6; Gaz. vol. 207; p. 24.
Water-heating apparatus, Water-chamber for. G. W. Lake. No. 1,115,075; Oct. 27; Gaz. vol. 207; p. 1071.
Water-heating system. J. Mundorff. No. 1,113,238; Oct. 13; Gaz. vol. 207; p. 330.
Water-meter. T. R. Butts. No. 1,113,600; Oct. 13; Gaz. vol. 207; p. 458.
Water system. T. C. Wilkes and S. E. Phillips. No. 1,115,139; Oct. 27; Gaz. vol. 207; p. 1093.
Water-treating apparatus. C. L. Kennicott. No. 1,114,146; Oct. 20; Gaz. vol. 207; p. 688.
Water-tube boiler. A. Ross. No. 1,114,650; Oct. 20; Gaz. vol. 207; p. 865.
Water-wheel. M. Hughes. No. 1,113,440; Oct. 13; Gaz. vol. 207; p. 403.
Watering device for poultry and animals. C. C. Driscoll. No. 1,113,206; Oct. 13; Gaz. vol. 207; p. 319.
Watering device, Poultry-. H. E. Hoyle. No. 1,114,264; Oct. 20; Gaz. vol. 207; p. 731.
Watering-trough. J. F. Bower. No. 1,112,971; Oct. 6; Gaz. vol. 207; p. 195.
Way-signal or direction-indicator device. T. A. Miele. No. 1,112,825; Oct. 6; Gaz. vol. 207; p. 145.
Wear-ring, Adjustable. W. A. Doble. No. 1,114,238; Oct. 20; Gaz. vol. 207; p. 722.
Weather-strip. T. B. Coughlan. No. 1,114,864; Oct. 27; Gaz. vol. 207; p. 995.
Weather-strip. S. Leech. No. 1,115,319; Oct. 27; Gaz. vol. 207; p. 1155.
Weaving, Machine for preparing warps for. H. D. Colman. No. 1,115,309; Oct. 27; Gaz. vol. 207; p. 1181.
Weighing mechanism and mileage-recorder. C. B. Gamble. No. 1,113,609; Oct. 13; Gaz. vol. 207; p. 460.
Welding-clamp. W. Simpson and E. Birnie. No. 1,113,700; Oct. 13; Gaz. vol. 207; p. 492.
Welding-machine. E. T. Hendee. No. 1,115,195; Oct. 27; Gaz. vol. 207; p. 1113.
Welding-machine, Electric. W. E. Andrews. No. 1,115,461; Oct. 27; Gaz. vol. 207; p. 1202.
Well-casing. A. L. Collins. No. 1,112,676; Oct. 6; Gaz. vol. 207; p. 95.
Well-casing perforator. C. P. Skinner. No. 1,112,570; Oct. 6; Gaz. vol. 207; p. 57.
Well-digging apparatus. R. Brewster and J. Gottertz. No. 1,113,303; Oct. 13; Gaz. vol. 207; p. 353.
Well-drill jar. J. F. Craven. No. 1,112,773; Oct. 6; Gaz. vol. 207; p. 128.
Well-sinking apparatus. M. T. Chapman. No. 1,114,231; Oct. 20; Gaz. vol. 207; p. 719.
Welt-cutting machine. C. P. Stanbon. No. 1,115,123; Oct. 27; Gaz. vol. 207; p. 1087.
Welt-indenting machine. R. C. Simmons. No. 1,114,300; Oct. 20; Gaz. vol. 207; p. 744.
Wheel: *See* Automobile-wheel; Car-wheel; Metal-spoked wheel; Resilient wheel; Spring-wheel; Steering-wheel; Traction-wheel; Trolley-wheel; Vehicle-wheel; Water-wheel.
Wheel. M. M. Pratt. No. 1,112,554; Oct. 6; Gaz. vol. 207; p. 51.
Wheel. M. L. Donaway. No. 1,113,963; Oct. 20; Gaz. vol. 207; p. 624.
Wheel and tire therefor. H. Kitcher. No. 1,113,356; Oct. 13; Gaz. vol. 207; p. 372.
Wheel attachment, vehicle-. J. W. White. No. 1,115,355; Oct. 27; Gaz. vol. 207; p. 1165.
Wheel-guard or obstruction-remover for motor road-vehicles. G. Evanovitch. No. 1,113,421; Oct. 13; Gaz. vol. 207; p. 396.
Wheel-lock. J. E. Craver. No. 1,114,585; Oct. 20; Gaz. vol. 207; p. 843.
Wheel lock, Steering-. C. H. Fritsche. No. 1,112,782; Oct. 6; Gaz. vol. 207; p. 130.
Wheel-mount. A. Johnson. No. 1,114,481; Oct. 20; Gaz. vol. 207; p. 810.
Wheel-resetting device, Numeral-. H. E. Delvin. No. 1,112,805; Oct. 6; Gaz. vol. 207; p. 168.
Wheel-rim, Vehicle. F. L. Sessions. No. 1,112,568; Oct. 6; Gaz. vol. 207; p. 56.
Wheel-rim, Vehicle. C. W. Gressle. No. 1,112,603; Oct. 6; Gaz. vol. 207; p. 60.
Wheels, Lug for traction-. J. F. Steward. No. 1,114,714; Oct. 27; Gaz. vol. 207; p. 888.
Wheels, Traction device for. F. W. Grisinger. No. 1,114,983; Oct. 27; Gaz. vol. 207; p. 1036.
Whiffletree-hook. J. M. Fischer. No. 1,112,777; Oct. 6; Gaz. vol. 207; p. 129.
Wind-shield cleaner. C. J. Heineman. No. 1,112,793; Oct. 6; Gaz. vol. 207; p. 134.

ALPHABETICAL LIST OF DESIGNS.

Stove-mat. N. M. Tucker. No. 46,586; Oct. 20; Gaz. vol. 207; p. 896.
Tire. J. E. Lee. No. 46,506; Oct. 6; Gaz. vol. 207; p. 269.
Tire, Vehicle-. W. D. Morris. Nos. 46,537–8; Oct. 13; Gaz. vol. 207; p. 585.
Toaster, Bread-. S. Parker. No. 46,577; Oct. 20; Gaz. vol. 207; p. 894.
Tool, Combination-. C. Lindsey. No. 46,507; Oct. 6; Gaz. vol. 207; p. 269.
Tooth-cleaner, Sanitary. E. G. Over. No. 46,510; Oct. 6; Gaz. vol. 207; p. 269.
Toy. G. Otstot. No. 46,540; Oct. 13; Gaz. vol. 207; p. 585.
Truck body, Motor-. M. S. Walton and W. B. Joslyn. No. 46,554; Oct. 13; Gaz. vol. 207; p. 588.
Violin chin-plate. F. W. Becker. No. 46,490; Oct. 6; Gaz. vol. 207; p. 266.
Waist-front. H. Schwarber. No. 46,551; Oct. 13; Gaz. vol. 207; p. 587.

ALPHABETICAL LIST OF TRADE-MARKS.

Adding and recording machines. Sun Typewriter Company. No. 100,178; Oct. 6; Gaz. vol. 207; p. 296.
Aeroplanes, motor-boats, &c., and their parts. Cyklon Maschinenfabrik m. b. H. No. 100,695; Oct. 20; Gaz. vol. 207; p. 932.
Ale. Burkhardt Brewing Company. No. 100,499; Oct. 20; Gaz. vol. 207; p. 927.
Aluminum castings. The Cleveland Electro Metals Company. No. 100,768; Oct. 27; Gaz. vol. 207; p. 1242.
Ammonia-compressors, Small. The Portsmouth Engine Co. No. 100,884; Oct. 27; Gaz. vol. 207; p. 1245.
Analgesic. Sulbenol Co. No. 100,424; Oct. 20; Gaz. vol. 207; p. 924.
Anesthetics, Local. The Eli Lilly and Company. No. 100,363; Oct. 20; Gaz. vol. 207; p. 923.
Antiseptic solution and germicidal disinfectant. The Kolynos Co. No. 100,355; Oct. 20; Gaz. vol. 207; p. 922.
Antiseptics, disinfectants, and deodorants. Bristol-Myers Company. No. 100,260; Oct. 20; Gaz. vol. 207; p. 920.
Apples and peaches, Fresh. Fruitland Orchards. No. 100,537; Oct. 20; Gaz. vol. 207; p. 928.
Apples, Fresh. Oakglen Apple Growers' Association. No. 100,601; Oct. 20; Gaz. vol. 207; p. 930.
Apples, green, dried, and evaporated. Seggerman Bros. No. 100,900; Oct. 27; Gaz. vol. 207; p. 1245.
Aprons, Workmen's. Abbot Jacket Manufacturing Company. No. 100,472; Oct. 20; Gaz. vol. 207; p. 926.
Asphalt and asphaltic residuum products. The United States Asphalt Refining Company. No. 100,451; Oct. 20; Gaz. vol. 207; p. 925.
Asphalt and asphaltum residuum products. The Toltec Mexican Oil Co. No. 100,447; Oct. 20; Gaz. vol. 207; p. 925.
Automobiles. Lozier Motor Company. No. 100,364; Oct. 20; Gaz. vol. 207; p. 923.
Automobiles. Monarch Motor Car Company. No. 100,380; Oct. 20; Gaz. vol. 207; p. 923.
Automobiles. Saxon Motor Company. No. 100,429; Oct. 20; Gaz. vol. 207; p. 925.
Automobiles. L-P-C Motor Company. No. 100,711; Oct. 20; Gaz. vol. 207; p. 933.
Baggage and horse equipments, Certain named. International Buckle Company. No. 100,336; Oct. 20; Gaz. vol. 207; p. 922.
Bags, Hanging. S. H. Cragg. No. 100,285; Oct. 20; Gaz. vol. 207; p. 920.
Baking-powder. T. Tanaka. No. 100,445; Oct. 20; Gaz. vol. 207; p. 925.
Baking powder and soda. Reliance Mfg. Co. No. 100,620; Oct. 20; Gaz. vol. 207; p. 930.
Balls, Rubber and gutta-percha. The Santo Rubber Co. Nos. 100,427–8; Oct. 20; Gaz. vol. 207; p. 924.
Balls, Rubber and gutta-percha. The Santo Rubber Co. No. 100,725; Oct. 20; Gaz. vol. 207; p. 933.
Bandages, Headache-. Wilford Hall Laboratories. No. 100,322; Oct. 20; Gaz. vol. 207; p. 921.
Bath-tubs, washstands, bowls, &c. Improved Sanitary Fixture Company. No. 100,554; Oct. 20; Gaz. vol. 207; p. 928.
Bathing-suits. O. Carrabine. No. 100,767; Oct. 27; Gaz. vol. 207; p. 1242.
Batteries, Electric. National Carbon Company. No. 100,871; Oct. 27; Gaz. vol. 207; p. 1245.
Bed-springs. National Bed Spring Co. No. 100,384; Oct. 20; Gaz. vol. 207; p. 923.
Beer. Ihlers & Bell. No. 100,335; Oct. 20; Gaz. vol. 207; p. 922.
Beer. Unionsbrauerei Schillein & Co. A. G. No. 100,450; Oct. 20; Gaz. vol. 207; p. 925.
Beer. The Wetterer Brewing Company. Nos. 100,671–2; Oct. 20; Gaz. vol. 207; p. 932.
Beer. Buffalo Brewing Co. No. 100,764; Oct. 27; Gaz. vol. 207; p. 1241.
Beer, Lager-. The Gottlieb Bauernschmidt Straus Brewing Company. No. 100,633; Oct. 20; Gaz. vol. 207; p. 931.
Beer, Lager-. The Gottlieb Bauernschmidt Straus Brewing Company. No. 100,909; Oct. 27; Gaz. vol. 207; p. 1246.
Belt-dressings. L. S. Evans. No. 100,531; Oct. 20; Gaz. vol. 207; p. 928.
Belting, Stitched and woven. E. M. Smith. No. 100,726; Oct. 20; Gaz. vol. 207; p. 933.
Beverage and syrup for making same, Non-alcoholic, &c. J. C. O'Dell. No. 100,221; Oct. 13; Gaz. vol. 207; p. 606.
Beverage, Non-intoxicating. C. Stoeger. No. 100,176; Oct. 6; Gaz. vol. 207; p. 296.
Bicycles. The Charles William Stores, Inc. No. 100,468; Oct. 20; Gaz. vol. 207; p. 926.
Bicycles. Great Western Mfg. Co. No. 100,804; Oct. 27; Gaz. vol. 207; p. 1243.
Bicycles, neck-yokes, toy wagons, &c. Hibbard, Spencer, Bartlett & Co. No. 100,329; Oct. 20; Gaz. vol. 207; p. 922.
Biscuit. Loose-Wiles Biscuit Company. No. 100,852; Oct. 27; Gaz. vol. 207; p. 1244.
Biscuit. National Biscuit Company. Nos. 100,866–70; Oct. 27; Gaz. vol. 207; pp. 1244–5.
Biscuits. Peck, Frean and Company. No. 100,879; Oct. 27; Gaz. vol. 207; p. 1245.
Biscuits, Laxative. J. Linhart. No. 100,130; Oct. 6; Gaz. vol. 207; p. 294.
Bleaching, water-softening, &c., preparation. H. Kohnstamm & Co. No. 100,352; Oct. 20; Gaz. vol. 207; p. 922.
Blood-restorative. A. Rogers. No. 100,158; Oct. 6; Gaz. vol. 207; p. 295.
Blouses and dresses. C. Strauss. No. 100,644; Oct. 20; Gaz. vol. 207; p. 931.
Board, Artificial. Flintkote Manufacturing Co. No. 100,792; Oct. 27; Gaz. vol. 207; p. 1242.
Boilers and parts, Steam-. J. A. Stevens. No. 100,908; Oct. 27; Gaz. vol. 207; p. 1246.
Bolt-operating machines, pulley-blocks, and hoists, Automatic. The Yale & Towne Manufacturing Co. No. 100,941; Oct. 27; Gaz. vol. 207; p. 1247.
Books of plans for houses and bungalows. United Home Builders Company. No. 100,917; Oct. 27; Gaz. vol. 207; p. 1246.
Books, Printed. Automobile Blue Book Company. No. 100,243; Oct. 20; Gaz. vol. 207; p. 919.
Books, Series of. Barse & Hopkins. No. 100,080; Oct. 6; Gaz. vol. 207; p. 293.
Boots and shoes. Field Bros. & Gross Company. No. 100,313; Oct. 20; Gaz vol. 207; p. 921.
Boots and shoes. A. E. Little & Company. No. 100,571; Oct. 20; Gaz. vol. 207; p. 929.
Boots and shoes, Leather. E. W. Burt & Company. No. 100,263; Oct. 20; Gaz. vol. 207; p. 920.
Boots and shoes, Leather. Fitzgerald, Phelps & Fargo Shoe Co. No. 100,536; Oct. 20; Gaz. vol. 207; p. 928.
Boots and shoes, Leather. Geo. D. Witt Shoe Co. No. 100,680; Oct. 20; Gaz. vol. 207; p. 932.
Boots, shoes, and slippers. Paul Brothers. No. 100,308; Oct. 20; Gaz. vol. 207; p. 924.
Box-shooks. O. S. Richards, Inc. No. 100,414; Oct. 20; Gaz. vol. 207; p. 924.
Braids. Strauss Bros. & Co. No. 100,645; Oct. 20; Gaz. vol. 207; p. 931.
Braids and passementerie. Dollfus-Mieg & Cie. Société anonyme. Nos. 100,525–6; Oct. 20; Gaz. vol. 207; p. 927.
Brandy. J. Balluteaud. No. 100,245; Oct. 20; Gaz. vol. 207; p. 919.
Brandy, Juniper. The Ohio Brandy Distilling Company. No. 100,602; Oct. 20; Gaz. vol. 207; p. 930.
Bread. South Bend Bread Co. No. 100,226; Oct. 13; Gaz. vol. 207; p. 606.
Bread. Reussow & Troy. No. 100,621; Oct. 20; Gaz. vol. 207; p. 930.
Bread. Holmes & Son. No. 100,822; Oct. 27; Gaz. vol. 207; p. 1243.
Bread and cake receptacles. The Schaffer Tinware Manufacturing Company. No. 100,432; Oct. 20; Gaz. vol. 207; p. 925.
Bread, cookies, cakes, pies, &c. Limle & Company. No. 100,570; Oct. 20; Gaz. vol. 207; p. 929.
Bread, Entire-wheat. A. L. Frost. No. 100,202; Oct. 13; Gaz. vol. 207; p. 605.
Bread, Honey and rye-flour. C. J. Dierckx. No. 100,776; Oct. 27; Gaz. vol. 207; p. 1242.
Bread, Wheat-. Worcester Baking Co. No. 100,737; Oct. 20; Gaz. vol. 207; p. 934.
Brick. Farr Brick Company. No. 100,533; Oct. 20; Gaz. vol. 207; p. 928.
Bricks and blocks, Building. The Far West Clay Co. No. 100,308; Oct. 20; Gaz. vol. 207; p. 921.
Bricks and tiles for furnace-arches. Locomotive Arch Brick Corporation. No. 100,572; Oct. 20; Gaz. vol. 207; p. 929.
Bricks or blocks, Refractory. Norton Company. Nos. 100,877–8; Oct. 27; Gaz. 207; p. 1245.
Bricks, tile pipe, flue-lining, &c. Chicago Fire Brick Co. No. 100,270; Oct. 20; Gaz. vol. 207; p. 920.
Bridges, girders, and structural steelwork, Steel. Virginia Bridge and Iron Company. No. 100,456; Oct. 20; Gaz. vol. 207; p. 925.
Brooms, brushes, and dusters. D. D. Felton Brush Co. No. 100,311; Oct. 20; Gaz. vol. 207; p. 921.

Brushes and brooms, Certain named. A. F. Conery Company. No. 100,279; Oct. 20; Gaz. vol. 207; p. 920.
Brushes, Hair, tooth, and nail. Geo. Borgfeldt & Co. No. 100,256; Oct. 20; Gaz. vol. 207; p. 919.
Brushes, Hair, tooth, nail, and eyebrow. H. Heldner. No. 100,327; Oct. 20; Gaz. vol. 207; p. 921.
Brushes, Military hair-. Geo. Borgfeldt & Co. No. 100,254; Oct. 20; Gaz. vol. 207; p. 919.
Brushes, Tooth-. Florence Manufacturing Company. No. 100,316; Oct. 20; Gaz. vol. 207; p. 921.
Buchu and gin compound. Rothschild Bros. No. 100,625; Oct. 20; Gaz. vol. 207; p. 930.
Burial caskets, and vaults, Composition or artificial stone. Cement Casket Mfg. Co. No. 100,268; Oct. 20; Gaz. vol. 207; p. 920.
Butter. Consolidated Grocery Company. No. 100,770; Oct. 27; Gaz. vol. 207; p. 1242.
Butter and eggs. Marsh & Marsh. No. 100,716; Oct. 20; Gaz. vol. 207; p. 933.
Butter, salt-brine, and corn-syrup compound. V. Lopez & Company. No. 100,132; Oct. 6; Gaz. vol. 207; p. 294.
Buttons. B. Blumenthal & Co. No. 100,253; Oct. 20; Gaz. vol. 207; p. 919.
Buttons, Snap-. Waldes & Co. No. 100,450; Oct. 20; Gaz. vol. 207; p. 925.
Buttons, Snap-. Waldes & Co. Nos. 100,661–3; Oct. 20; Gaz. vol. 207; p. 931.
Cake, Fruit. Collin Street Bakery. No. 100,197; Oct. 13; Gaz. vol. 207; p. 605.
Cake mixtures. Allmade Bakeries. No. 100,740; Oct. 27; Gaz. vol. 207; p. 1241.
Cakes. Brown Cracker & Candy Co. No. 100,762; Oct. 27; Gaz. vol. 207; p. 1241.
Cakes. Loose-Wiles Biscuit Company. No. 100,853; Oct. 27; Gaz. vol. 207; p. 1244.
Candies. The Walter M. Lowney Company. No. 100,854; Oct. 27; Gaz. vol. 207; p. 1244.
Candies, cakes, confectionery, &c. The Golden Pheasant. No. 100,204; Oct. 13; Gaz. vol. 207; p. 605.
Candy. Frank E. Block Co. No. 100,083; Oct. 6; Gaz. vol. 207; p. 293.
Candy. Fuerst & Kraemer. No. 100,203; Oct. 13; Gaz. vol. 207; p. 605.
Candy. W. B. Mulford. No. 100,218; Oct. 13; Gaz. vol. 207; p. 605.
Candy. W. R. Montague. No. 100,381; Oct. 20; Gaz. vol. 207; p. 923.
Candy. Muskey's, Inc. No. 100,579; Oct. 20; Gaz. vol. 207; p. 929.
Candy. D. Auerbach & Sons. No. 100,747; Oct. 27; Gaz. vol. 207; p. 1241.
Candy. Guth Chocolate Company. Nos. 100,806–13; Oct. 27; Gaz. vol. 207; p. 1243.
Candy. Salvo & Berdon Candy Co. No. 100,892; Oct. 27; Gaz. vol. 207; p. 1245.
Candy, salted peanuts, peanut-butter. Allen & Smith Company. No. 100,692; Oct. 20; Gaz. vol. 207; p. 932.
Candy, wafers, lozenges, and tablets. Package Confectionery Company. No. 100,148; Oct. 6; Gaz. vol. 207; p. 295.
Canes, parasols, and umbrellas. Allison & Lamson. No. 100,475; Oct. 20; Gaz. vol. 207; p. 926.
Canned albicore. Premier Packing Co. No. 100,885; Oct. 27; Gaz. vol. 207; p. 1245.
Canned corn. The Mollen, Thompson & James Company. No. 100,586; Oct. 20; Gaz. vol. 207; p. 929.
Canned corn, succotash, and Lima beans. Augusta Canning Co. No. 100,748; Oct. 27; Gaz. vol. 207; p. 1241.
Canned fish, ham, poultry, and beef. William Underwood Company. No. 100,229; Oct. 13; Gaz. vol. 207; p. 606.
Canned fruits, vegetables, fish, &c. The H. Leslusky Company. No. 100,713; Oct. 20; Gaz. vol. 207; p. 933.
Canned olive-oil, fruits, and vegetables. M. Ajello. No. 100,739; Oct. 27; Gaz. vol. 207; p. 1241.
Canned sardines. Otto L. Kuehn Co. Nos. 100,843–7; Oct. 27; Gaz. vol. 207; p. 1244.
Canned sardines and olive-oil. La Manna, Azema & Farnan. No. 100,848; Oct. 27; Gaz. vol. 207; p. 1244.
Canned shrimp. Dunbars, Lopez & Dukate Co. No. 100,105; Oct. 6; Gaz. vol. 207; p. 294.
Canned shrimp. Dunbars, Lopez & Dukate Co. No. 100,206; Oct. 20; Gaz. vol. 207; p. 921.
Canned vegetables, fruits, and fish. H. von Glahn & Son. No. 100,659; Oct. 20; Gaz. vol. 207; p. 931.
Canned vegetables, fruits, salmon, and jam. H. F. C. Kilian. No. 100,836; Oct. 27; Gaz. vol. 207; p. 1244.
Cantaloups. Miller-Cummings Company. No. 100,376; Oct. 20; Gaz. vol. 207; p. 923.
Capsules, &c., for administering medicines. Firm of J. Schmidt. No. 100,163; Oct. 6; Gaz. vol. 207; p. 295.
Car-wheels. Hockensmith Wheel & Mine Car Company. No. 100,332; Oct. 20; Gaz. vol. 207; p. 922.
Carbon-removing compound. A. G. Johnson. No. 100,555; Oct. 20; Gaz. vol. 207; p. 928.
Carpet-warp. Rice-Stix Dry Goods Company. No. 100,412; Oct. 20; Gaz. vol. 207; p. 924.
Carpets. Cochrane Manufacturing Co. Nos. 100,274–5; Oct. 20; Gaz. vol. 207; p. 920.
Carriages and buggies. Reliance Buggy Co. No. 100,619; Oct. 20; Gaz. vol. 207; p. 930.
Carriages and buggies. Reliance Buggy Co. No. 100,887; Oct. 27; Gaz. vol. 207; p. 1245.
Casket name-plates, Burial-. The Springfield Metallic Casket Company. No. 100,727; Oct. 20; Gaz. vol. 207; p. 933.
Castings, Aluminum. The Aluminum Castings Company. No. 100,741; Oct. 27; Gaz. vol. 207; p. 1241.
Castings and forgings, Certain named metal. Daimler-Motoren-Gesellschaft. No. 100,778; Oct. 27; Gaz. vol. 207; p. 1242.
Castings and forgings, Metal. Bonney Vise & Tool Works. No. 100,084; Oct. 6; Gaz. vol. 207; p. 293.
Cement. "Dalmatia" Portland Cement Works Company. No. 100,519; Oct. 20; Gaz. vol. 207; p. 929.
Cement, Bituminous. Warren Brothers Company. No. 100,665; Oct. 20; Gaz. vol. 207; p. 931.
Cement, Portland. Standard Portland Cement Company. No. 100,442; Oct. 20; Gaz. vol. 207; p. 925.
Cement, Portland. The Associated Portland Cement Manufacturers (1900). No. 100,481; Oct. 20; Gaz. vol. 207; p. 926.
Cement, Viscous. Atsco, Incorporated. No. 100,746; Oct. 27; Gaz. vol. 207; p. 1241.
Cereal meal. Nature Cereal Company. No. 100,220; Oct. 13; Gaz. vol. 207; p. 605.
Chairs. Milwaukee Chair Company. No. 100,377; Oct. 20; Gaz. vol. 207; p. 923.
Cheese. Ferbend & Co. No. 100,113; Oct. 6; Gaz. vol. 207; p. 294.
Chemical and pharmaceutical preparations, Certain named. Aubry Sisters. No. 100,076; Oct. 6; Gaz. vol. 207; p. 293.
Chemical and pharmaceutical preparations, Certain named. Piesse & Lubin. No. 100,151; Oct. 6; Gaz. vol. 207; p. 295.
Chemical and pharmaceutical preparations, Certain named. C. C. Truax. No. 100,651; Oct. 20; Gaz. vol. 207; p. 931.
Chocolate preparations, Liquid. P. G. Pickman & Bros. No. 100,611; Oct. 20; Gaz. vol. 207; p. 930.
Chutney, pickles, and condiment sauces. Escoffier (1907) Limited. No. 100,108; Oct. 6; Gaz. vol. 207; p. 294.
Cigarette-paper. F. R. Rovira. No. 100,420; Oct. 20; Gaz. vol. 207; p. 924.
Cigarettes. Alzanne Cigarette Company. No. 100,072; Oct. 6; Gaz. vol. 207; p. 293.
Cigarettes. The Ranelagh Tobacco Company. No. 100,155; Oct. 6; Gaz. vol. 207; p. 295.
Cigarettes. G. Rose. No. 100,160; Oct. 6; Gaz. vol. 207; p. 295.
Cigarettes. T. Christofidy. No. 100,271; Oct. 20; Gaz. vol. 207; p. 929.
Cigarettes, cigars, and smoking-tobacco. R. J. Reynolds Tobacco Company. No. 100,156; Oct. 6; Gaz. vol. 207; p. 295.
Cigars. J. H. Johnson. No. 100,708; Oct. 20; Gaz. vol. 207; p. 933.
Cigars, cigarettes, and tobacco. P. Cannizzaro & Co. No. 100,765; Oct. 27; Gaz. vol. 207; p. 1241.
Cleaner, Fabric-. G. E. Wightman. No. 100,464; Oct. 20; Gaz. vol. 207; p. 926.
Cleaner, Liquid clothes-. Co-operative Drug Manufacturing Company, (now by change of name American Drug Mfg. Co.) No. 100,514; Oct. 20; Gaz. vol. 207; p. 927.
Cleaners, Vacuum-. Richmond Radiator Company. Nos. 100,415–16; Oct. 20; Gaz. vol. 207; p. 924.
Cleaners, Vacuum-. Richmond Radiator Company. No. 100,618; Oct. 20; Gaz. vol. 207; p. 930.
Cloakings. The Mianus Mfg. Co. No. 100,375; Oct. 20; Gaz. vol. 207; p. 923.
Closets, lavatories, Water-. Federal-Huber Co. No. 100,788; Oct. 27; Gaz. vol. 207; p. 1242.
Clothing and certain named articles of merchandise. G. A. Barcley. No. 100,484; Oct. 20; Gaz. vol. 207; p. 926.
Clothing, Certain named. Ferguson Waterproof Co. No. 100,312; Oct. 20; Gaz. vol. 207; p. 921.
Clothing, Certain named. J. H. Way & Sons Co. No. 100,461; Oct. 20; Gaz. vol. 207; p. 925.
Clothing for men and boys, Certain named. Rice-Stix Dry Goods Company. No. 100,413; Oct. 20; Gaz. vol. 207; p. 924.
Clothing for men and boys. A. & L. August. No. 100,482; Oct. 20; Gaz. vol. 207; p. 926.
Clothing for women, misses, and children, Certain named. D. E. Sicher. No. 100,896; Oct. 27; Gaz. vol. 207; p. 1245.
Clothing, Men's and young men's outer. Alfred Benjamin-Washington Co. No. 100,752; Oct. 27; Gaz. vol. 207; p. 1241.
Clothing, Men's outer. Quality Tailoring Co. of N. Y. No. 100,728; Oct. 20; Gaz. vol. 207; p. 933.
Cloths and stuffs. John Wilson (Gildersome). No. 100,678; Oct. 20; Gaz. vol. 207; p. 932.
Clutches and drill-chucks. Eclipse Machine Company. No. 100,783; Oct. 27; Gaz. vol. 207; p. 1242.
Coal, Block. Anchor Coal Company. No. 100,742; Oct. 27; Gaz. vol. 207; p. 1241.
Coats. The Stein-Bloch Co. No. 100,907; Oct. 27; Gaz. vol. 207; p. 1246.
Coats and capes. Wing Patent Garment Co. No. 100,679; Oct. 20; Gaz. vol. 207; p. 932.
Coats and vests, Hunting. Ves-tong Manufacturing Co. No. 100,656; Oct. 20; Gaz. vol. 207; p. 931.
Coats, cloaks, wraps, and capes. The Salt's Textile Manufacturing Company. No. 100,628; Oct. 20; Gaz. vol. 207; p. 930.
Coats, suits, dresses, &c. The Panard Company. No. 100,604; Oct. 20; Gaz. vol. 207; p. 930.

Coats, trousers, vests, and overcoats. K. Katz & Sons. No. 100,342; Oct. 20; Gaz. vol. 207; p. 922.
Coats, trousers, waistcoats, and overcoats. J. F. Lenigan Co. No. 100,567; Oct. 20; Gaz. vol. 207; p. 929.
Coats, vests, and trousers, Men's. The Royal Tailors. No. 100,626; Oct. 20; Gaz. vol. 207; p. 930.
Cocoa, chocolate, pudding-powders, &c., Liquid. H. V. Stollwerck. No. 100,643; Oct. 20; Gaz. vol. 207; p. 931.
Cocoas and chocolates. A. & W. Lindt. No. 100,216; Oct. 13; Gaz. vol. 207; p. 605.
Coffee. F. S. Armstrong. No. 100,075; Oct. 6; Gaz. vol. 207; p. 293.
Coffee. J. B. Greenhut Co., formerly Greenhut-Siegel Cooper Co., Inc. Nos. 100,116–18; Oct. 6; Gaz. vol. 207; p. 294.
Coffee. R. del Castillo & Company. No. 100,199; Oct. 13; Gaz. vol. 207; p. 605.
Coffee. Jello Grocery Company. No. 100,213; Oct. 13; Gaz. vol. 207; p. 605.
Coffee. H. Rippen. No. 100,890; Oct. 27; Gaz. vol. 207; p. 1245.
Coffee. The Weideman Company. No. 100,930; Oct. 27; Gaz. vol. 207; p. 1246.
Coffee substitute. Sincof Company. No. 100,898; Oct. 27; Gaz. vol. 207; p. 1245.
Collars. William Barker Company. No. 100,485; Oct. 20; Gaz. vol. 207; p. 926.
Combs, Toilet-. Philo Hay Specialties Co. No. 100,881; Oct. 27; Gaz. vol. 207; p. 1245.
Concrete sockets and inserts. Clip-Bar Manufacturing Company. No. 100,273; Oct. 20; Gaz. vol. 207; p. 920.
Confection, Frozen. F. K. Underwood. No. 100,918; Oct. 27; Gaz. vol. 207; p. 1246.
Conveying and transmission apparatus. The Lamson Company. No. 100,358; Oct. 20; Gaz. vol. 207; p. 922.
Cordials. The Schuster Company. No. 100,164; Oct. 6; Gaz. vol. 207; p. 295.
Cordials. Société Anonyme de la Distillerie de la Liqueur de Mandarine de Bougie. No. 100,439; Oct. 20; Gaz. vol. 207; p. 925.
Corn and bunion plasters, foot-powders, &c. J. Goodman. No. 100,802; Oct. 27; Gaz. vol. 207; p. 1243.
Corn cereal foods. E. L. Kastler. No. 100,709; Oct. 20; Gaz. vol. 207; p. 933.
Corsets. F. W. Brown. No. 100,261; Oct. 20; Gaz. vol. 207; p. 920.
Corsets. Jordan Marsh Company. No. 100,578; Oct. 20; Gaz. vol. 207; p. 929.
Corsets. Van Orden Corset Company. No. 100,731; Oct. 20; Gaz. vol. 207; p. 933.
Cotton and cotton and silk piece goods. G. H. Wolf. No. 100,683; Oct. 20; Gaz. vol. 207; p. 932.
Cotton and silk crape piece goods. M. Kurzmans Sons. No. 100,357; Oct. 20; Gaz. vol. 207; p. 922.
Cotton fabrics, Woven. G. A. Stafford. Nos. 100,440–1; Oct. 20; Gaz. vol. 207; p. 925.
Cotton flannels, Plain. Amoskeag Manufacturing Company. No. 100,233; Oct. 20; Gaz. vol. 207; p. 919.
Cotton goods in the piece. Beacon Manufacturing Co. No. 100,249; Oct. 20; Gaz. vol. 207; p. 919.
Cotton piece and dress goods. Amoskeag Manufacturing Company. Nos. 100,234–43; Oct. 20; Gaz. vol. 207; p. 919.
Cotton piece goods. Catlin & Co. No. 100,267; Oct. 20; Gaz. vol. 207; p. 920.
Cotton piece goods. Fearing, Whiton & Co. No. 100,309; Oct. 20; Gaz. vol. 207; p. 921.
Cotton piece goods. L. & E. Stirn. No. 100,642; Oct. 20; Gaz. vol. 207; p. 931.
Coupling-washers. H. Mueller Manufacturing Co. No. 100,863; Oct. 27; Gaz. vol. 207; p. 1244.
Crackers and biscuits. The Canton Biscuit Co. No. 100,766; Oct. 27; Gaz. vol. 207; p. 1241.
Crackers, biscuits, cookies, and cakes. Dubuque Biscuit Company. No. 100,781; Oct. 27; Gaz. vol. 207; p. 1242.
Cradles, Grain, rice, and corn. The J. A. Schwob Co. No. 100,893; Oct. 27; Gaz. vol. 207; p. 1245.
Crape piece goods. Franken & Frank. No. 100,796; Oct. 27; Gaz. vol. 207; p. 1242.
Crayons and erasers, Blackboard. Clanton & Webb Company. No. 100,272; Oct. 20; Gaz. vol. 207; p. 920.
Cream and antiseptic ointment, Massage and skin. H. G. Schauermann. No. 100,899; Oct. 27; Gaz. vol. 207; p. 1245.
Cream, Cold-. W. A. Fahrenwald. No. 100,785; Oct. 27; Gaz. vol. 207; p. 1242.
Creams, face, &c., powders, and skin-lotion, Cold-, &c. A. Tamm. No. 100,181; Oct. 6; Gaz. vol. 207; p. 296.
Crushers, Gyratory. Chalmers & Williams. No. 100,006; Oct. 6, Gaz. vol. 207; p. 293.
Curtains, Lace. Patchogue Mfg. Co. No. 100,395; Oct. 20; Gaz. vol. 207; p. 923.
Cutlery and tools, Certain named. The Collins Company. No. 100,099; Oct. 6; Gaz. vol. 207; p. 293.
Dental cement. E. de Trey. No. 100,448; Oct. 20; Gaz. vol. 207; p. 925.
Dental-cement tubes. H. L. Cruttenden. No. 100,696; Oct. 20; Gaz. vol. 207; p. 932.
Dentistry articles. Crescent Dental Mfg. Co. No. 100,286; Oct. 20; Gaz. vol. 207; p. 920.
Deodorants. Tokalon, Incorporated. No. 100,180; Oct. 6; Gaz. vol. 207; p. 296.
Detergent compound for renovating varnished surfaces. Werner-Service Mfg. Co. No. 100,932; Oct. 27; Gaz. vol. 207; p. 1246.
Detergent preparation, Certain. C. A. Winter. No. 100,469; Oct. 20; Gaz. vol. 207; p. 926.
Digestive agent. Chic-A-Lax Manufacturing Co. No. 100,098; Oct. 6; Gaz. vol. 207; p. 293.
Digestive powder, Compound. A. J. Colton. No. 100,510; Oct. 20; Gaz. vol. 207; p. 927.
Dolls. George Borgfeldt & Co. No. 100,255; Oct. 20; Gaz. vol. 207; p. 919.
Dolls. George Borgfeldt & Co. No. 100,758; Oct. 27; Gaz. vol. 207; p. 1241.
Dress and garment shields. I. B. Kleinert Rubber Company. No. 100,351; Oct. 20; Gaz. vol. 207; p. 922.
Dresses. Shapiro Bros. No. 100,634; Oct. 20; Gaz. vol. 207; p. 931.
Dresses, nurses' and waitresses' uniforms, Ladies' tub and house. Henry A. Dix & Sons Company. No. 100,292; Oct. 20; Gaz. vol. 207; p. 920.
Dressings, Emergency. P. G. Paugh. No. 100,397; Oct. 20; Gaz. vol. 207; p. 924.
Drills, Air-feed hammer-. Ingersoll-Rand Company. No. 100,828; Oct. 27; Gaz. vol. 207; p. 1243.
Drink preparation, Hot-. J. S. Merrell Drug Co. No. 100,374; Oct. 20; Gaz. vol. 207; p. 923.
Drink, Soft. Penrith-Akers Mfg. Co. No. 100,402; Oct. 20; Gaz. vol. 207; p. 924.
Electric batteries, flash-lights, &c. National Carbon Company. No. 100,130; Oct. 6; Gaz. vol. 207; p. 295.
Electric motors, generators, converters, &c. Wagner Electric Manufacturing Company. No. 100,185; Oct. 6; Gaz. vol. 207; p. 296.
Electrical and galvanic carbons. C. Conradty. No. 100,769; Oct. 27; Gaz. vol. 207; p. 1242.
Electrical apparatus and supplies, Certain named. Daimler-Motoren-Gesellschaft. No. 100,779; Oct. 27; Gaz. vol. 207; p. 1242.
Electrical horns. The Fitzgerald Mfg. Co. Nos. 100,790–1; Oct. 27; Gaz. vol. 207; p. 1242.
Electrical insulating-tape. The Mechanical Rubber Company. No. 100,135; Oct. 6; Gaz. vol. 207; p. 295.
Electrical rectifiers. M. P. Fox. No. 100,794; Oct. 27; Gaz. vol. 207; p. 1242.
Embroidery. H. Richter. No. 100,623; Oct. 20; Gaz. vol. 207; p. 930.
Embroidery, knitting and crochet materials, and sewing-silks, Certain named. F. A. Patrick. No. 100,396; Oct. 20; Gaz. vol. 207; p. 924.
Enamel, Ceramic. The Baltimore Enamel & Novelty Company. No. 100,192; Oct. 13; Gaz. vol. 207; p. 605.
Enamels, undercoatings, and paints. Valentine & Company. No. 100,919; Oct. 27; Gaz. vol. 207; p. 1246.
Enema. J. M. Munyon. No. 100,383; Oct. 20; Gaz. vol. 207; p. 923.
Engines, Gas-. Continental Motor Mfg. Co. No. 100,771; Oct. 27; Gaz. vol. 207; p. 1242.
Engines, Hydrocarbon-. Carlyle Johnson Machine Co. No. 100,092; Oct. 6; Gaz. vol. 207; p. 293.
Enzyms or ferments compound for the conversion of food-assimilable products. E. S. Holt Company—Manufacturing Pharmacists. No. 100,551; Oct. 20; Gaz. vol. 207; p. 928.
Essences, oils, and flavors. H. Kohnstamm & Co. No. 100,841; Oct. 27; Gaz. vol. 207; p. 1244.
Evaporating and sugaring-off pans. The Leader Evaporator Company. No. 100,128; Oct. 6; Gaz. vol. 207; p. 294.
Exhausters, cookers, and coolers used in canning. Baker-Shippee Manufacturing Co. No. 100,078; Oct. 6; Gaz. vol. 207; p. 293.
Eye-water. T. V. Moreau Company. No. 100,587; Oct. 20; Gaz. vol. 207; p. 929.
Fabrics, Certain named textile. F. Rosenstern & Co. No. 100,410; Oct. 20; Gaz. vol. 207; p. 924.
Fabrics, Certain named textile. F. A. Patrick & Co. No. 100,606; Oct. 20; Gaz. vol. 207; p. 930.
Fabrics known as piece goods, Certain named textile. Les Fils de L. Jarrosson. No. 100,362; Oct. 20; Gaz. vol. 207; p. 923.
Farinaceous compound with fruit flavorings. The Fruit Puddine Co. No. 100,701; Oct. 20; Gaz. vol. 207; p. 933.
Feed, Horse and cattle. Josey-Miller Co. Nos. 100,832–3; Oct. 27; Gaz. vol. 207; p. 1243.
Feed-meal for horses, mules, and cows. Empire Cotton Oil Company. No. 100,107; Oct. 6; Gaz. vol. 207; p. 294.
Feed, Poultry. Josey-Miller Co. No. 100,831; Oct. 27; Gaz. vol. 207; p. 1243.
Feed, Stock. Gulfport Grocery Co. No. 100,805; Oct. 27; Gaz. vol. 207; p. 1243.
Feeds made from wheat, corn, and oats. Federal Milling Company. No. 100,789; Oct. 27; Gaz. vol. 207; p. 1242.
Feeds, Poultry. Chas. M. Cox Co. No. 100,516; Oct. 20; Gaz. vol. 207; p. 927.
Feeds, Poultry and stock. Chas. M. Cox Co. No. 100,284; Oct. 20; Gaz. vol. 207; p. 920.
Felts. The Felters Company. No. 100,112; Oct. 6; Gaz. vol. 207; p. 294.
Fencing, gates, and fence-posts, Metal. Dwiggins Wire Fence Company. No. 100,106; Oct. 6; Gaz. vol. 207; p. 294.
Fertilizer. Norsk Hydro-Elektrisk Kvaelstofaktieselskab. No. 100,875; Oct. 27; Gaz. vol. 207; p. 1245.
Fertilizer and worm and weed killer, Combination. The Coe-Mortimer Company. No. 100,509; Oct. 20; Gaz. vol. 207; p. 927.

Fertilizer material. American Cyanamid Company. No. 100,232; Oct. 20; Gaz. vol. 207; p. 919.
Fertilizers. The Atlantic Chemical Corporation. No. 100,242; Oct. 20; Gaz. vol. 207; p. 919.
Fertilizers. Beatey's Unadulterated Agricultural Phosphate Company of New England. No. 100,250; Oct. 20; Gaz. vol. 207; p. 919.
Fertilizers. F. S. Royster Guano Co. Nos. 100,421–3; Oct. 20; Gaz. vol. 207; p. 924.
Fertilizers. American Agricultural Chemical Co. No. 100,476; Oct. 20; Gaz. vol. 207; p. 926.
Fertilizers. F. S. Royster Guano Co. No. 100,627; Oct. 20; Gaz. vol. 207; p. 930.
Fertilizers. Empire Cotton Mill Co. No. 100,699; Oct. 20; Gaz. vol. 207; p. 930.
Files. Vixen Tool Company. No. 100,183; Oct. 6; Gaz. vol. 207; p. 296.
Fireworks. E. H. Wagner. No. 100,457; Oct. 20; Gaz. vol. 207; p. 925.
Fish. Charles F. Nattlage & Sons. No. 100,858; Oct. 27; Gaz. vol. 207; p. 1244.
Fish-tongs. J. Wiesenfeld. No. 100,733; Oct. 20; Gaz. vol. 207; p. 934.
Flavoring extracts for foods. B. Heller & Co. No. 100,819; Oct. 27; Gaz. vol. 207; p. 1243.
Flooring, Non-metallic. David E. Kennedy. No. 100,344; Oct. 20; Gaz. vol. 207; p. 922.
Flour and cornmeal, Wheat-. Beaver Valley Milling Company. No. 100,750; Oct. 27; Gaz. vol. 207; p. 1241.
Flour, Self-rising. Phoenix Flour Mill. No. 100,609; Oct. 20; Gaz. vol. 207; p. 930.
Flour, Self-rising wheat-. The Dunlop Milling Co. No. 100,297; Oct. 20; Gaz. vol. 207; p. 921.
Flour, Self-rising wheat-. J. Allen Smith & Company. No. 100,901; Oct. 27; Gaz. vol. 207; p. 1245.
Flour, Wheat-. Aunt Jemima Mills Company. No. 100,077; Oct. 6; Gaz. vol. 207; p. 293.
Flour, Wheat-. Model Mill Company. No. 100,137; Oct. 6; Gaz. vol. 207; p. 295.
Flour, Wheat-. Statesville Flour Mill Company Corp. No. 100,174; Oct. 6; Gaz. vol. 207; p. 296.
Flour, Wheat-. Standard Milling Company. No. 100,227; Oct. 13; Gaz. vol. 207; p. 606.
Flour, Wheat-. Thompson Milling Company. No. 100,228; Oct. 13; Gaz. vol. 207; p. 606.
Flour, Wheat-. M. Ainsa & Sons. No. 100,474; Oct. 20; Gaz. vol. 207; p. 926.
Flour, Wheat-. The Crescent Mill & Elevator Co. No. 100,517; Oct. 20; Gaz. vol. 207; p. 927.
Flour, Wheat-. Custer Milling Company. No. 100,518; Oct. 20; Gaz. vol. 207; p. 927.
Flour, Wheat-. Nashville Roller Mills. No. 100,593; Oct. 20; Gaz. vol. 207; p. 929.
Flour, Wheat-. Doud Milling Company. No. 100,698; Oct. 20; Gaz. vol. 207; p. 933.
Flour, Wheat-. The Kellm Farmers' Mill and Elevator Company. No. 100,710; Oct. 20; Gaz. vol. 207; p. 933.
Flour, Wheat-. Nashville Roller Mills. Nos. 100,719–21; Oct. 20; Gaz. vol. 207; p. 933.
Flour, Wheat-. The Dunlop Milling Co. No. 100,782; Oct. 27; Gaz. vol. 207; p. 1242.
Flour, Wheat-. Hezel Milling Company. No. 100,817; Oct. 27; Gaz. vol. 207; p. 1243.
Flour, Wheat-. The Leavenworth Milling Co. No. 100,850; Oct. 27; Gaz. vol. 207; p. 1244.
Flour, Wheat-. Millville Flour and Grain Company. No. 100,856; Oct. 27; Gaz. vol. 207; p. 1244.
Flour, Wheat-. Nashville Roller Mills. Nos. 100,864–5; Oct. 27; Gaz. vol. 207; p. 1244.
Food drink. Dr. A. Wander A.-G. No. 100,925; Oct. 27; Gaz. vol. 207; p. 1246.
Food-flavoring preparation. G. Washington Coffee Refining Company. No. 100,926; Oct. 27; Gaz. vol. 207; p. 1246.
Food for infants and invalids. Smith, Kline & French Co. No. 100,169; Oct. 6; Gaz. vol. 207; p. 296.
Food, Medicated stock. Co-operative Drug Manufacturing Company (now by change of name American Drug Mfg. Co.). No. 100,280; Oct. 20; Gaz. vol. 207; p. 920.
Food preparation, Certain. E. E. Curtis. No. 100,198; Oct. 13; Gaz. vol. 207; p. 605.
Foods, Certain named. The Branex Company. Nos. 100,087–8; Oct. 6; Gaz. vol. 207; p. 293.
Foods, Certain named. Brewster Gordon & Co. No. 100,089; Oct. 6; Gaz. vol. 207; p. 293.
Foods, Certain named. Norton & Curd Company. No. 100,144; Oct. 6; Gaz. vol. 207; p. 295.
Foods, Certain named. Stone-Ordean-Wells Company. No. 100,177; Oct. 6; Gaz. vol. 207; p. 296.
Foods, Certain named. Hawks. No. 100,818; Oct. 27; Gaz. vol. 207; p. 1243.
Foods, Corn cereal. E. L. Kastler. No. 100,214; Oct. 13; Gaz. vol. 207; p. 603.
Fruit-juice, Alcoholic. P. Bouché. No. 100,258; Oct. 20; Gaz. vol. 207; p. 919.
Fruits, Citrus. Eustis Citrus Growers Association. Nos. 100,109–10; Oct. 6; Gaz. vol. 207; p. 294.
Fruits, Citrus. Flowertree Groves. No. 100,201; Oct. 13; Gaz. vol. 207; p. 603.
Fruits, First quality of fresh deciduous. Yakima County Horticultural Union. No. 100,940; Oct. 27; Gaz. vol. 207; p. 1247.
Fruits, Fresh and green. Wenatchee North Central Fruit Distributors. No. 100,931; Oct. 27; Gaz. vol. 207; p. 1246.
Fur garments. Kruskel & Kruskel. No. 100,562; Oct. 20; Gaz. vol. 207; p. 928.
Furnishings, notions, and fancy goods, Certain named. George Borgfeldt & Co. No. 100,257; Oct. 20; Gaz. vol. 207; p. 919.
Furniture and floor polishes. The A. Wilhelm Company. No. 100,188; Oct. 6; Gaz. vol. 207; p. 296.
Furniture, Certain named. Koken Barbers' Supply Co. No. 100,353; Oct. 20; Gaz. vol. 207; p. 922.
Furniture-polish. Stansbury & Young. No. 100,173; Oct. 6; Gaz. vol. 207; p. 296.
Furniture, Store. The Lamson Company. No. 100,359; Oct. 20; Gaz. vol. 207; p. 922.
Furring device, Offset. Mitchell-Tappen Company. No. 100,378; Oct. 20; Gaz. vol. 207; p. 923.
Games. Wiley-Spencer Company. No. 100,677; Oct. 20; Gaz. vol. 207; p. 932.
Garments, Certain named women's. The L. N. Gross Company. No. 100,544; Oct. 20; Gaz. vol. 207; p. 928.
Garments, Material for ladies'. Levor & Igstaedter. No. 100,568; Oct. 20; Gaz. vol. 207; p. 929.
Gas for maturing and bleaching flour. Industrial Appliance Company. No. 100,827; Oct. 27; Gaz vol. 207; p. 1243.
Gas-mantle with attachments. Glühstrumpffabrik Basel. No. 100,749; Oct. 27; Gaz. vol. 207; p. 1241.
Gas-mantles. Reliance Gas Mantle Company. No. 100,888; Oct. 27; Gaz. vol. 207; p. 1245.
Gasoline, kerosene, and lubricating-oil. The Continental Oil Company. No. 100,102; Oct. 6; Gaz. vol. 207; p. 294.
Gasoline, naphtha, benzin, &c. Crew Levick Company. No. 100,851; Oct. 27; Gaz. vol. 207; p. 1244.
Geometrical insets, counters, color-spools. The House of Childhood. No. 100,504; Oct. 20; Gaz. vol. 207; p. 927.
Ginger-beer extract. J. F. Whellhan. No. 100,465; Oct. 20; Gaz. vol. 207; p. 926.
Ginghams. Carson, Pirie, Scott & Co. No. 100,265; Oct. 20; Gaz. vol. 207; p. 920.
Glass, &c., Composition for preventing accumulation or condensation of water upon. Anti-Fog Company. No. 100,743; Oct. 27; Gaz. vol. 207; p. 1211.
Glass surfaces, Moisture-prevention compounds for. Anti-Vapor Co. No. 100,478; Oct. 20; Gaz. vol. 207; p. 926.
Gloves, overalls, and hosiery. Segal & Pransky. No. 100,435; Oct. 20; Gaz. vol. 207; p. 925.
Glue. Kantorowicz & Co. No. 100,343; Oct. 20; Gaz. vol. 207; p. 922.
Glue, Gelatin-. Vereinigte Lederleimfabriken vorm. J. E. Jenss Aktien Gesellschaft. No. 100,454; Oct. 20; Gaz. vol. 207; p. 925.
Golf-balls. Wright & Ditson. No. 100,685; Oct. 20; Gaz. vol. 207; p. 932.
Golf-game apparatus, &c. J. F. Hughes. No. 100,333; Oct. 20; Gaz. vol. 207; p. 922.
Grape-fruit, tangerines, and oranges. W. Wallace, Jr. No. 100,732; Oct. 20; Gaz. vol. 207; p. 934.
Grape-juice. Du Belle Grape Juice Co. No. 100,489; Oct. 20; Gaz. vol. 207; p. 926.
Greases and oils, Tanning. L. Prenzlau's Fabrikwerke. No. 100,408; Oct. 20; Gaz. vol. 207; p. 924.
Greases and oils, Tanning. L. Prenzlau's Fabrikwerke. No. 100,615; Oct. 20; Gaz. vol. 207; p. 930.
Gum, Chewing-. Bon-Bon Company. No. 100,193; Oct. 13; Gaz. vol. 207; p. 605.
Gum, Chewing-. The Stern & Saulberg Company. No. 100,444; Oct. 20; Gaz. vol. 207; p. 925.
Gum, Chewing-. G. Elmendorf. No. 100,528; Oct. 20; Gaz. vol. 207; p. 927.
Gums. Chas. S. Tanner Company. No. 100,650; Oct. 20; Gaz. vol. 207; p. 931.
Hair, Human. Human Hair Goods Industry. No. 100,824; Oct. 27; Gaz. vol. 207; p. 1243.
Hair-nets. E. Armbruster, late Miss Haiblé. No. 100,241; Oct. 20; Gaz. vol. 207; p. 919.
Hair-nets. A. Klar. No. 100,350; Oct. 20; Gaz. vol. 207; p. 922.
Hair-nets. Marlowe Manufacturing Company. No. 100,577; Oct. 20; Gaz. vol. 207; p. 929.
Hair-tonic. Koken Barbers' Supply Company. No. 100,354; Oct. 20; Gaz. vol. 207; p. 922.
Hair tonics and dyes. Orinoka Pharmacal Company. No. 100,389; Oct. 20; Gaz. vol. 207; p. 923.
Hames and parts. U. S. Hame Company. No. 100,546; Oct. 20; Gaz. vol. 207; p. 928.
Handkerchiefs. Herrmann, Aukam & Co. No. 100,540; Oct. 20; Gaz. vol. 207; p. 928.
Handkerchiefs. A. G. Ritchie. No. 100,622; Oct. 20; Gaz. vol. 207; p. 930.
Handkerchiefs. Herrmann Aukam & Co. No. 100,816; Oct. 27; Gaz. vol. 207; p. 1243.
Hats. Vogue Hat Company. No. 100,658; Oct. 20; Gaz. vol. 207; p. 931.
Honey. Western Honey Producers. No. 100,231; Oct. 13; Gaz. vol. 207; p. 606.
Honey, olive-oil, and almonds. Carmel Wine Company. No. 100,093; Oct. 6; Gaz. vol. 207; p. 293.
Hooks and clamps, wrenches, Bench. H. R. Mitchell. No. 100,861; Oct. 27; Gaz. vol. 207; p. 1244.
Hose, Linen. Charles Niedner's Sons Co. No. 100,873; Oct. 27; Gaz. vol. 207; p. 1245.
Hose-supporters. C. J. Higley. No. 100,331; Oct. 20; Gaz. vol. 207; p. 922.

Hose, tubing, belting, &c. Imperial Rubber Co. No. 100,825; Oct. 27; Gaz. vol. 207; p. 1243.
Hosiery. Interwoven Stocking Company. No. 100,337; Oct. 20; Gaz. vol. 207; p. 922.
Hosiery. Paramount Knitting Company. No. 100,392; Oct. 20; Gaz. vol. 207; p. 923.
Hosiery. William Brown Company. Nos. 100,494–5; Oct. 20; Gaz. vol. 207; p. 926.
Hosiery. J. W. Cannon. No. 100,501; Oct. 20; Gaz. vol. 207; p. 927.
Hosiery. T. B. Corpening. No. 100,515; Oct. 20; Gaz. vol. 207; p. 927.
Hosiery. W. B. Kohlman. No. 100,560; Oct. 20; Gaz. vol. 207; p. 928.
Hosiery. Protex Hosiery Company. No. 100,617; Oct. 20; Gaz. vol. 207; p. 930.
Ice-cream, butter, milk, and cream. The Licking Creamery Company. No. 100,569; Oct. 20; Gaz. vol. 207; p. 929.
Inhaler, Menthol-. Fardridge Mfg. Co. Nos. 100,393–4; Oct. 20; Gaz. vol. 207; p. 923.
Initials and embroidery designs. Felt Embroidery Form Company. No. 100,310; Oct. 20; Gaz. vol. 207; p. 921.
Insect-destroying preparation. Cochrane Co. No. 100,508; Oct. 20; Gaz. vol. 207; p. 927.
Insecticides. Diamond Star Insecticide Co. No. 100,522; Oct. 20; Gaz. vol. 207; p. 927.
Insecticides and fungicides. The Sherwin-Williams Company. No. 100,436; Oct. 20; Gaz. vol. 207; p. 925.
Insulating material, Certain named. Keystone Hair Insulator Co. Nos. 100,345–8; Oct. 20; Gaz. vol. 207; p. 922.
Insulating material, Self-sustaining heat-. Union Fibre Company. No. 100,449; Oct. 20; Gaz. vol. 207; p. 925.
Insulators. The Locke Insulator Mfg. Co. No. 100,131; Oct. 6; Gaz. vol. 207; p. 294.
Kegs. Central Trading Corporation. 100,269; Oct. 20; Gaz. vol. 207; p. 920.
Kerosene, gasoline, neutral oils, &c. Kendall Refining Company. No. 100,838; Oct. 27; Gaz. vol. 207; p. 1244.
Key-chains. The Shepard Manufacturing Company. No. 100,894; Oct. 27; Gaz. vol. 207; p. 1245.
Knitted caps, hoods, sweaters, &c. F. A. Patrick & Co. No. 100,605; Oct. 20; Gaz. vol. 207; p. 930.
Knitted garments, Certain named. M. Weinroth. No. 100,462; Oct. 20; Gaz. vol. 207; p. 926.
Knitted vests and undershirts. Standard Knitting Mills Company. No. 100,904; Oct. 27; Gaz. vol. 207; p. 1245.
Knitting-needles, crochet-hooks, shuttles, &c. A. J. Kahn. No. 100,834; Oct. 27; Gaz. vol. 207; p. 1243.
Knives, Chiropodists'. Challenge Cutlery Corporation. No. 100,503; Oct. 20; Gaz. vol. 207; p. 927.
Lamp globes, shades, reflectors, &c., Glass. Gillinder & Sons. No. 100,799; Oct. 27; Gaz. vol. 207; p. 1242.
Lamps and stands, Electric. J. W. Dunham. No. 100,777; Oct. 27; Gaz. vol. 207; p. 1242.
Lamps, Electric. The Bradley & Hubbard Mfg. Co. No. 100,086; Oct. 6; Gaz. vol. 207; p. 293.
Lantern-slides and optical projection display apparatus. Watson Brothers. No. 100,927; Oct. 27; Gaz. vol. 207; p. 1246.
Lard. Kingan & Co. No. 100,839; Oct. 27; Gaz. vol. 207; p. 1244.
Lard and smoked meats. Mississippi Packing Company. No. 100,857; Oct. 27; Gaz. vol. 207; p. 1244.
Laxative. Smith, Kline & French Co. No. 100,638; Oct. 20; Gaz. vol. 207; p. 931.
Leather and skins. William Walker & Sons. Nos. 100,923–4; Oct. 27; Gaz. vol. 207; p. 1246.
Leather, Sole-. J. W. & A. P. Howard & Co. No. 100,823; Oct. 27; Gaz. vol. 207; p. 1243.
Leather, Unmanufactured. C. C. Smoot & Sons Co. No. 100,171; Oct. 6; Gaz. vol. 207; p. 296.
Lemons and oranges. J. Brucato. No. 100,763; Oct. 27; Gaz. vol. 207; p. 1241.
Lenses for scientific use, prisms, &c. Firm of C. Zeiss. Nos. 100,688–9; Oct. 20; Gaz. vol. 207; p. 932.
Letters and figures for stamping, Steel. Wiebusch & Hilger. No. 100,938; Oct. 27; Gaz. vol. 207; p. 1247.
Linen goods. Webb & Company. No. 100,668; Oct. 20; Gaz. vol. 207; p. 932.
Liniment, ammonia, cough-syrup, and disinfectants. The R. M. Hollingshead Co. No. 100,821; Oct. 27; Gaz. vol. 207; p. 1243.
Liniment in tubes. Rheumeolum Chem. Co. No. 100,624; Oct. 20; Gaz. vol. 207; p. 930.
Liniment, Medicinal. H. W. McChesney. No. 100,580; Oct. 20; Gaz. vol. 207; p. 929.
Liniments. S. S. Metzler. No. 100,859; Oct. 27; Gaz. vol. 207; p. 1244.
Liver-regulator. J. A. Kincheloe. No. 100,340; Oct. 20; Gaz. vol. 207; p. 922.
Loam, molding sand and clay. Eisenberger Kiebsand-Werke, G. m. b. H. No. 100,840; Oct. 27; Gaz. vol. 207; p. 1244.
Lotion, Antiseptic. H. Wilcox. No. 100,675; Oct. 20; Gaz. vol. 207; p. 932.
Lotions and glove-cleaner, Shaving-. Co-operative Drug Manufacturing Company, now, by change of name, American Drug Mfg. Co. No. 100,281; Oct. 20; Gaz. vol. 207; p. 920.
Lubricants and preservatives, Wire-rope. Broderick & Bascom Rope Company. No. 100,761; Oct. 27; Gaz. vol. 207; p. 1241.
Lyes, Powdered. W. Schield. No. 100,162; Oct. 6; Gaz. vol. 207; p. 295.
Macaroni, noodles, and spaghetti. P. De Martini. No. 100,103; Oct. 6; Gaz vol. 207; p. 294.
Macaroni, spaghetti, and noodles. The C. S. Foulds-Briggs Company. No. 100,793; Oct. 27; Gaz. vol. 207; p. 1242.
Machinery, Certain named articles of. The Good Roads Machinery Company. No. 100,115; Oct. 6; Gaz. vol. 207; p. 294.
Malt and hops extract. The Ebling Brewing Company. No. 100,527; Oct. 20; Gaz. vol. 207; p. 927.
Malt extract. Diastatic Malt Extract Co. No. 100,523; Oct. 20; Gaz. vol. 207; p. 927.
Malt extract. The Peter Schoenhofen Brewing Company. No. 100,729; Oct. 20; Gaz. vol. 207; p. 933.
Malt extracts. Gehe & Co. Aktiengesellschaft. No. 100,797; Oct. 27; Gaz. vol. 207; p. 1242.
Massage instruments. Commonwealth Electric & Manufacturing Company. No. 100,278; Oct. 20; Gaz. vol. 207; p. 920.
Match-receptacles, Metal. Model Kitchen Equipment Company. No. 100,379; Oct. 20; Gaz. vol. 207; p. 923.
Matches. F. Kreuger and Company. No. 100,356; Oct. 20; Gaz. vol. 207; p. 922.
Matches. Manufacturers and Retailers Company. No. 100,368; Oct. 20; Gaz. vol. 207; p. 923.
Matches. Nitedals Taendstikfabrik. No. 100,387; Oct. 20; Gaz. vol. 207; p. 923.
Matches, Impregnated safety-. Albert Pick & Company. No. 100,406; Oct. 20; Gaz. vol. 207; p. 924.
Mattresses. Dixie Cotton Felt Mattress Company. No. 100,293; Oct. 20; Gaz. vol. 207; p. 921.
Medical herb preparation. A. J. Anderson. No. 100,074; Oct. 6; Gaz. vol. 207; p. 293.
Medical preparations for gastro-intestinal disturbances. Berlin Laboratory. No. 100,755; Oct. 27; Gaz. vol. 207; p. 1241.
Medical preparations for use as a spray for nose or throat affections. Berlin Laboratory. No. 100,754; Oct. 27; Gaz. vol. 207; p. 1241.
Medicinal compounds of selenium. C. H. Walker. No. 100,922; Oct. 27; Gaz. vol. 207; p. 1246.
Medicinal preparation for diseases of the teeth and mouth. R. J. Morg. No. 100,588; Oct. 20; Gaz. vol. 207; p. 929.
Medicine for whooping-cough. Edgemont Chemical Mfg. Co. No. 100,784; Oct. 27; Gaz. vol. 207; p. 1242.
Medicine, Stomach, liver, and bowel. A. Cartabillotta. No. 100,266; Oct. 20; Gaz. vol. 207; p. 920.
Medicine used in treating certain named diseases. The Hensel Chemical Works. No. 100,548; Oct. 20; Gaz. vol. 207; p. 928.
Medicines and preparations for certain diseases. United States Medicine Co. No. 100,452; Oct. 20; Gaz. vol. 207; p. 925.
Medicines and preparations for treating certain diseases, Certain named. The Consolidated Drug Co. No. 100,511; Oct. 20; Gaz. vol. 207; p. 927.
Medicines, Cough. I. B. Meyer. No. 100,136; Oct. 6; Gaz. vol. 207; p. 295.
Metal-polish. J. H. Fried. No. 100,318; Oct. 20; Gaz. vol. 207; p. 921.
Metal-polish. The Cincinnati Oil Works Co. No. 100,505; Oct. 20; Gaz. vol. 207; p. 927.
Metal-polish. Davis & French. No. 100,520; Oct. 20; Gaz. vol. 207; p. 927.
Metal-polish. B. Morgan. Nos. 100,589–90; Oct. 20; Gaz. vol. 207; p. 929.
Metals used in manufacture, Unwrought and partly-wrought. Turton Bros. & Matthews. No. 100,913; Oct. 27; Gaz. vol. 207; p. 1246.
Milk, Condensed. Holland Food Corporation. No. 100,123; Oct. 6; Gaz. vol. 207; p. 294.
Milk, Evaporated. The Sheboygan Evaporated Milk Co. No. 100,636; Oct. 20; Gaz. vol. 207; p. 931.
Milk, Evaporated. The John Wildi Evaporated Milk Co. No. 100,676; Oct. 20; Gaz. vol. 207; p. 932.
Milk, Evaporated. The John Wildi Evaporated Milk Co. Nos. 100,734–6; Oct. 20; Gaz. vol. 207; p. 934.
Molding machinery used in metal-casting. The Tabor Manufacturing Company. No. 100,911; Oct. 27; Gaz. vol. 207; p. 1246.
Mops. Wizard Products Company. Nos. 100,681–2; Oct. 20; Gaz. vol. 207; p. 932.
Mops and parts. A. Mendelsohn. No. 100,373; Oct. 20; Gaz. vol. 207; p. 923.
Mouth-wash. E. C. Palmer. No. 100,149; Oct. 6; Gaz. vol. 207; p. 295.
Mower sharpeners, Lawn-. The Cheabro Manufacturing Company. No. 100,097; Oct. 6; Gaz. vol. 207; p. 293.
Mucilage, glue, &c. Dennison Manufacturing Company. No. 100,521; Oct. 20; Gaz. vol. 207; p. 927.
Musical instruments and supplies, Certain named. The Liszt Co. No. 100,217; Oct. 13; Gaz. vol. 207; p. 605.
Nail-polish. Richard Hudnut. Nos. 100,552–3; Oct. 20; Gaz. vol. 207; p. 928.
Nails, Horse-. The Capewell Horse Nail Company. No. 100,264; Oct. 20; Gaz. vol. 207; p. 920.
Neckscarfs. I. D. Wolfson. No. 100,471; Oct. 20; Gaz. vol. 207; p. 926.
Neckties. The Fair. Nos. 100,305–6; Oct. 20; Gaz. vol. 207; p. 921.

Needles and knitting-pins. J. English & Son. No. 100,301; Oct. 20; Gaz. vol. 207; p. 921.
Needles, Hand-sewing. J. English & Son. No. 100,300; Oct. 20; Gaz. vol. 207; p. 921.
Needles, Sewing-machine. Northwestern Needle Company. No. 100,143; Oct. 6; Gaz. vol. 207; p. 295.
Nitrating liquids. A. Hough. No. 100,706; Oct. 20; Gaz. vol. 207; p. 933.
Nitrogen products. Norsk Hydro-elektrisk Kvaelstofaktieselskab. No. 100,142; Oct. 6; Gaz. vol. 207; p. 295.
Oil and macaroni, Olive-. Cella Brothers. No. 100,094; Oct. 6; Gaz. vol. 207; p. 293.
Oil-cloth and linoleum, Composition for treatment of new and old. Farr and Bailey Manufacturing Company. No. 100,787; Oct. 27; Gaz. vol. 207; p. 1242.
Oil, Lubricating-. W. E. Benson. No. 100,753; Oct. 27; Gaz. vol. 207; p. 1241.
Oil, Lubricating and cleaning. A & V Oil Co. No. 100,145; Oct. 6; Gaz. vol. 207; p. 295.
Oil, Olive-. Rome Importing Co. No. 100,224; Oct. 13; Gaz. vol. 207; p. 606.
Oil, tomato catsup, and vinegars, Salad-. Spitalnik & Bushel. No. 100,640; Oct. 20; Gaz. vol. 207; p. 931.
Oil trousers, jackets, and coats. H. Goldberg. No. 100,540; Oct. 20; Gaz. vol. 207; p. 928.
Oils and grease, Lubricating. Pierce Oil Corporation. No. 100,882; Oct. 27; Gaz. vol. 207; p. 1243.
Oils and greases. The Hawkeye Oil Company. No. 100,815; Oct. 27; Gaz. vol. 207; p. 1243.
Oils and greases, Certain named. Indian Refining Company. No. 100,826; Oct. 27; Gaz. vol. 207; p. 1243.
Oils and greases, Lubricating. The White & Bagley Co. No. 100,936; Oct. 27; Gaz. vol. 207; p. 1246.
Oils and lubricants for motor-cycles. Marshall Oil Company of Iowa. No. 100,134; Oct. 6; Gaz. vol. 207; p. 295.
Oils for gas engines and motors, Lubricating-. New York & New Jersey Lubricant Co. No. 100,872; Oct. 27; Gaz. vol. 207; p. 1245.
Oils, Lubricating-. E. A. Tygert Co. No. 100,916; Oct. 27; Gaz. vol. 207; p. 1246.
Ointment. A. Rogers. No. 100,159; Oct. 6; Gaz. vol. 207; p. 295.
Ointment, Hemorrhoid-. 20th Century Manufacturing Co. No. 100,005; Oct. 6; Gaz. vol. 207; p. 293.
Ointment, Medicated. R. S. Scofield. No. 100,166; Oct. 6; Gaz. vol. 207; p. 295.
Ointment, Medicinal. Procaline Co. No. 100,152; Oct. 6; Gaz. vol. 207; p. 295.
Ointments, Medical. H. J. Denges. No. 100,289; Oct. 20; Gaz. vol. 207; p. 920.
Overalls. Alexander Bennie & Co. No. 100,251; Oct. 20; Gaz. vol. 207; p. 919.
Overalls, shirts, and blouses. Berne Manufacturing Company. No. 100,490; Oct. 20; Gaz. vol. 207; p. 926.
Overalls, trousers, shirts. Sweet, Orr & Co. No. 100,648; Oct. 20; Gaz. vol. 207; p. 931.
Packings, Metallic rod-. Morris Metallic Packing Company. No. 100,862; Oct. 27; Gaz. vol. 207; p. 1244.
Paint. Texas Fire and Water Proof Paint Company. No. 100,912; Oct. 27; Gaz. vol. 207; p. 1246.
Paint and varnish cleanser and polish. F. W. Boyer. No. 100,195; Oct. 13; Gaz. vol. 207; p. 605.
Paint, Enamel. Hemingway & Company. No. 100,820; Oct. 27; Gaz. vol. 207; p. 1243.
Paint for waterproofing canvas duck. H. C. Bigham. No. 100,756; Oct. 27; Gaz. vol. 207; p. 1241.
Paints. American Chemical & Manufacturing Company. No. 100,073; Oct. 6; Gaz. vol. 207; p. 293.
Paints, Ready-mixed and liquid. Wayne Paint Co. No. 100,929; Oct. 27; Gaz. vol. 207; p. 1246.
Paints, stains, varnishes, &c. The Bridgeport Wood Finishing Company. Nos. 100,759–60; Oct. 27; Gaz. vol. 207; p. 1241.
Paper and envelops, Writing-. Kansas City Paper House. No. 100,341; Oct. 20; Gaz. vol. 207; p. 922.
Paper and stationery supplies, Certain named. G. Borgfeldt & Co. No. 100,194; Oct. 13; Gaz. vol. 207; p. 605.
Paper boxes. York-Bradford Co. No. 100,687; Oct. 20; Gaz. vol. 207; p. 932.
Paper, Monthly. E. G. Siggers. No. 100,168; Oct. 6; Gaz. vol. 207; p. 296.
Paper, Toilet-. The John Hoberg Company. Nos. 100,205–12; Oct. 13; Gaz. vol. 207; p. 605.
Paper, Toilet-. Paper Sales Company. No. 100,222; Oct. 13; Gaz. vol. 207; p. 606.
Paper wall-covering. The Schmitz-Horning Co. No. 100,631; Oct. 20; Gaz. vol. 207; p. 930.
Paper wrappers for food products. Nashua Card Gummed & Coated Paper Company. No. 100,219; Oct. 13; Gaz. vol. 207; p. 605.
Paper, Writing-. McClellan Paper Company. No. 100,581; Oct. 20; Gaz. vol. 207; p. 929.
Paper, Writing and printing. E. W. Scarborough Co. Nos. 100,430–1; Oct. 20; Gaz. vol. 207; p. 925.
Paper, Writing, printing, and cover. Hampden Glazed Paper and Card Company. No. 100,323; Oct. 20; Gaz. vol. 207; p. 921.
Papers, Toilet-. Phoenix Toilet and Paper Manufacturing Company. Nos. 100,404–5; Oct. 20; Gaz. vol. 207; p. 924.
Pastils for use in asthma, catarrh, coughs, &c. G. H. Proctor. No. 100,153; Oct. 6; Gaz. vol. 207; p. 295.
Pastry, Special Turkish. C. Sarantides. No. 100,161; Oct. 6; Gaz. vol. 207; p. 295.
Pavements and roads and material for same. Unionite Co. No. 100,652; Oct. 20; Gaz. vol. 207; p. 931.
Peanuts, peanut butter and candy, and salted peanuts. M. Williams. No. 100,190; Oct. 6; Gaz. vol. 207; p. 296.
Peanuts, Salted. Superior Peanut Company. No. 100,647; Oct. 20; Gaz. vol. 207; p. 931.
Pecan-nuts. Paper Shell Pecan Growers Association. No. 100,723; Oct. 20; Gaz. vol. 207; p. 923.
Pencils, crayons, holders, clips, and erasers. E. Faber. No. 100,532; Oct. 20; Gaz. vol. 207; p. 928.
Pencils, rubber erasers, and penholders. A. W. Faber. No. 100,302; Oct. 20; Gaz. vol. 207; p. 921.
Pens, Fountain-. W. F. Duryea. No. 100,298; Oct. 20; Gaz. vol. 207; p. 921.
Pens, Steel. The Esterbrook Steel Pen Mfg. Co. No. 100,530; Oct. 20; Gaz. vol. 207; p. 928.
Perfume, toilet water, powders, and cold-cream. The Arthur Chemical Co. No. 100,480; Oct. 20; Gaz. vol. 207; p. 926.
Perfumery. George Lueders & Co. No. 100,365; Oct. 20; Gaz. vol. 207; p. 923.
Perfumery, &c. P. Beiersdorf & Co. No. 100,487; Oct. 20; Gaz. vol. 207; p. 926.
Perfumery and face-tints. E. Wertheimer & Cie. No. 100,670; Oct. 20; Gaz. vol. 207; p. 932.
Perfumery, toilet waters, and face-tints. E. Wertheimer et Cie. No. 100,669; Oct. 20; Gaz. vol. 207; p. 932.
Perfumes, face-powders, and toilet waters. Frederick Stearns & Co. No. 100,443; Oct. 20; Gaz. vol. 207; p. 925.
Perfumes, toilet powders and creams. Melba Manufacturing Company. No. 100,371; Oct. 20; Gaz. vol. 207; p. 923.
Periodical, Quarterly. The Peerless Pattern Company. No. 100,150; Oct. 6; Gaz. vol. 207; p. 295.
Petroleum, Refined. West India Oil Company. No. 100,933; Oct. 27; Gaz. vol. 207; p. 1246.
Petticoats. M. Auspitz. No. 100,483; Oct. 20; Gaz. vol. 207; p. 926.
Petticoats. L. L. Taft. No. 100,649; Oct. 20; Gaz. vol. 207; p. 931.
Pharmaceutical preparations, Certain named. E. Wertheimer et Cie. No. 100,463; Oct. 20; Gaz. vol. 207; p. 926.
Pharmaceutical preparations, Certain named. Koken Barbers' Supply Co. No. 100,561; Oct. 20; Gaz. vol. 207; p. 928.
Photographic cameras, &c. Seneca Camera Mfg. Co. No. 100,167; Oct. 6; Gaz. vol. 207; p. 296.
Pianos and piano-players. The Schubert Piano Co. No. 100,632; Oct. 20; Gaz. vol. 207; p. 931.
Pianos and piano-players, Player-. Melville Clark Piano Company. No. 100,196; Oct. 13; Gaz. vol. 207; p. 605.
Picture films, Motion-. Liberty Motion Picture Company. No. 100,129; Oct. 6; Gaz. vol. 207; p. 294.
Picture-projection apparatus. Eastman Kodak Co. No. 100,200; Oct. 13; Gaz. vol. 207; p. 605.
Pictures, prints, paintings, &c. J. G. Kitchell. Nos. 100,125–6; Oct. 6; Gaz. vol. 207; p. 294.
Pins and needles, Toilet-. J. English & Son. No. 100,299; Oct. 20; Gaz. vol. 207; p. 921.
Pins and needles, Toilet-. J. English & Son. No. 100,529; Oct. 20; œaz. vol. 207; p. 927.
Pins, Toilet-. J. Kelley. No. 100,558; Oct. 20; Gaz. vol. 207; p. 928.
Pipes, Smoking-. Maier Pipe Company. No. 100,574; Oct. 20; Gaz. vol. 207; p. 929.
Plaster, solid wood, and commercial veneer, Imitation. The Philip Carey Manufacturing Co. No. 100,694; Oct. 20; Gaz. vol. 207; p. 932.
Plate, solder, and solder-flux. E. R. S. Brewster. No. 100,259; Oct. 20; Gaz. vol. 207; p. 919.
Pliers. Smith & Hemenway Co. No. 100,438; Oct. 20; Gaz. vol. 207; p. 925.
Plumbing and pipe-fitting joints, Compound to bind. Hally & Sullivan. No. 100,545; Oct. 20; Gaz. vol. 207; p. 928.
Polish and cleaner for floors, furniture, &c. National Laboratories Co. No. 100,140; Oct. 6; Gaz. vol. 207; p. 295.
Polish for glass and metals. The Reynolds Corporation. No. 100,411; Oct. 20; Gaz. vol. 207; p. 924.
Popcorn. M. Voelker. No. 100,184; Oct. 6; Gaz. vol. 207; p. 296.
Popcorn, Candied. V. J. Gorly. No. 100,702; Oct. 20; Gaz. vol. 207; p. 933.
Popcorn, Candied. F. W. Sherman. No. 100,895; Oct. 27; Gaz. vol. 207; p. 1245.
Porcelain, earthenware, and crockery. Porzellanfabrik Schönwald A. G. No. 100,407; Oct. 20; Gaz. vol. 207; p. 924.
Poultry for breeding. L. S. Bache. No. 100,191; Oct. 13; Gaz. vol. 207; p. 605.
Poultry-tonic. J. H. Burdick. No. 100,496; Oct. 20; Gaz. vol. 207; p. 927.
Powder, Foot-. F. Dedek. No. 100,775; Oct. 27; Gaz. vol. 207; p. 1242.
Powder, Talcum. Hall & Ruckel. No. 100,119; Oct. 6; Gaz. vol. 207; p. 294.
Powder, Talcum. F. G. Burke. No. 100,497; Oct. 20; Gaz. vol. 207; p. 927.

Powder, Toilet. H. C. Paulsen & Son. No. 100,607; Oct. 20; Gaz. vol. 207; p. 930.
Preparation for expulsion of uric acid from the blood, &c. John Wilking Co. No. 100,189; Oct. 6; Gaz. vol. 207; p. 296.
Preparations for treatment of varicose veins and ulcers, piles, &c. M. Thibault. No. 100,182; Oct. 6; Gaz. vol. 207; p. 296.
Publication, Monthly. T. and C. Publishing Corporation. No. 100,910; Oct. 27; Gaz. vol. 207; p. 1246.
Publication, Trade. M. Heymann. No. 100,122; Oct. 6; Gaz. vol. 207; p. 294.
Publications. Farmers National Life Insurance Company of America. No. 100,786; Oct. 27; Gaz. vol. 207; p. 1242.
Pulp-board. MacAndrews & Forbes Company. No. 100,573; Oct. 20; Gaz. vol. 207; p. 929.
Pumps and compressors, pump-valves, &c. Firm of A. Borsig. No. 100,085; Oct. 6; Gaz. vol. 207; p. 293.
Puzzles. F. W. Doll. No. 100,294; Oct. 20; Gaz. vol. 207; p. 921.
Preparations for cleaning enameled and porcelain ware. Porcela Radax Company. No. 100,613; Oct. 20; Gaz. vol. 207; p. 930.
Preparation for treatment of cancers. J. N. Carrigan. No. 100,502; Oct. 20; Gaz. vol. 207; p. 927.
Rain-coats. B. Birnbaum & Son. No. 100,492; Oct. 20; Gaz. vol. 207; p. 926.
Razor-strops. The Gibford-Weiffenbach Company. No. 100,319; Oct. 20; Gaz. vol. 207; p. 921.
Reflectors. R. D. Gray. No. 100,803; Oct. 27; Gaz. vol. 207; p. 1243.
Remedies for certain named diseases, antiseptic washes, and disinfectants. Smith, Kline & French Co. No. 100,170; Oct. 6; Gaz. vol. 207; p. 296.
Remedies, Rheumatism. J. H. Crocker. No. 100,773; Oct. 27; Gaz. vol. 207; p. 1242.
Remedy, Blood. Beggs Manufacturing Co. No. 100,751; Oct. 27; Gaz. vol. 207; p. 1241.
Remedy for asthma, bronchitis, &c. H. Armstrong. No. 100,745; Oct. 27; Gaz. vol. 207; p. 1241.
Remedy for blood-purifying and laxative purposes. B. Lauer. No. 100,127; Oct. 6; Gaz. vol. 207; p. 294.
Remedy for certain named diseases. Actien-Gesellschaft für Anilin-Fabrikation. No. 100,071; Oct. 6; Gaz. vol. 207; p. 293.
Remedy for certain named diseases. The Swabine Co. No. 100,179; Oct. 6; Gaz. vol. 207; p. 296.
Remedy for certain named disorders of infants and children. G. W. King. No. 100,124; Oct. 6; Gaz. vol. 207; p. 294.
Remedy for coughs, croup, asthma, &c. The H. C. Whitmer Company. No. 100,674; Oct. 20; Gaz. vol. 207; p. 932.
Remedy for coughs and throat affections. The Convent Co. No. 100,513; Oct. 20; Gaz. vol. 207; p. 927.
Remedy for indigestion, gastritis, &c. G. W. Williams. No. 100,467; Oct. 20; Gaz. vol. 207; p. 926.
Remedy for purifying the blood and for laxative purposes. B. Lauer. No. 100,849; Oct. 27; Gaz. vol. 207; p. 1244.
Remedy for renal colic, diabetes, and Bright's disease. J. H. Pace. No. 100,147; Oct. 6; Gaz. vol. 207; p. 295.
Remedy, Pile. L. B. Myers. No. 100,592; Oct. 20; Gaz. vol. 207; p. 929.
Remedy used as a liniment, stimulant, &c. Whitman Chemical Co. No. 100,673; Oct. 20; Gaz. vol. 207; p. 932.
Rheumatism specific and medicinal tonic. Rhu-Lum-Gou Co. No. 100,889; Oct. 27; Gaz. vol. 207; p. 1245.
Ribbon and silk piece goods, Silk. Phoenix Silk Mfg. Co. No. 100,610; Oct. 20; Gaz. vol. 207; p. 930.
Ribbon, Satin. The Fair. No. 100,303; Oct. 20; Gaz. vol. 207; p. 921.
Ribbons. The Nonotuck Silk Company. No. 100,388; Oct. 20; Gaz. vol. 207; p. 923.
Rice. North American Mercantile Co. No. 100,876; Oct. 27; Gaz. vol. 207; p. 1245.
Rifles, pistols, and cartridges. Savage Arms Company. No. 100,629; Oct. 20; Gaz. vol. 207; p. 930.
Roofing, Composition felt. The Texas Company. No. 100,446; Oct. 20; Gaz. vol. 207; p. 925.
Roofing felt and paper. Pierce Hardware Company. No. 100,612; Oct. 20; Gaz. vol. 207; p. 930.
Roofings, Prepared. Barrett Manufacturing Company. Nos. 100,246–8; Oct. 20; Gaz. vol. 207; p. 919.
Rubber coats. Maryland Rubber Company. No. 100,369; Oct. 20; Gaz. vol. 207; p. 923.
Rubber goods, Surgical. L. Bertram. No. 100,491; Oct. 20; Gaz. vol. 207; p. 926.
Rubber hot-water bottles and fountain-syringe bags. The B. F. Goodrich Company. No. 100,321; Oct. 20; Gaz. vol. 207; p. 921.
Rubber ice-bags. Julius Schmid, Inc. No. 100,434; Oct. 20; Gaz. vol. 207; p. 925.
Rubber putty for repairing rubber articles. W. A. Rockrohr. No. 100,418; Oct. 20; Gaz. vol. 207; p. 924.
Rugs. Donegal Motor Rug Co. No. 100,295; Oct. 20; Gaz. vol. 207; p. 921.
Rugs, Grass. Waite Grass Carpet Co. No. 100,458; Oct. 20; Gaz. vol. 207; p. 925.
Rugs, Steamer-. Beacon Manufacturing Co. No. 100,486; Oct. 20; Gaz. vol. 207; p. 926.
Rules, Folding. Wiebusch & Hilger. No. 100,937; Oct. 27; Gaz. vol. 207; p. 1247.
Salad-dressings. M. A. Meier. No. 100,582; Oct. 20; Gaz. vol. 207; p. 929.
Salt. J. Feldwisch. No. 100,534; Oct. 20; Gaz. vol. 207; p. 928.
Salt. The Union Salt Company. Nos. 100,653–5; Oct. 20; Gaz. vol. 207; p. 931.
Salt, Bathing-. Worcester Salt Co. No. 100,684; Oct. 20; Gaz. vol. 207; p. 932.
Salts, Nickel. The Hanson & Van Winkle Company. No. 100,324; Oct. 20; Gaz. vol. 207; p. 921.
Salve. M. A. Leiblinger. No. 100,361; Oct. 20; Gaz. vol. 207; p. 923.
Salve. The Vick Chemical Co. No. 100,455; Oct. 20; Gaz. vol. 207; p. 925.
Salve for treatment of diseases of respiratory tract. E. S. Schweitzer. No. 100,135; Oct. 6; Gaz. vol. 207; p. 295.
Salves for certain named ailments. Men-Tho-Magic Co. No. 100,584; Oct. 20; Gaz. vol. 207; p. 929.
Salves, ointments, liniments, and tooth-soap. C. M. Stein. No. 100,906; Oct. 27; Gaz. vol. 207; p. 1246.
Sanitary napkins or surgical bandages. S. H. Shoninger. No. 100,437; Oct. 20; Gaz. vol. 207; p. 925.
Sanitary shields. Sprague Sanitary Shield Co. No. 100,639; Oct. 20; Gaz. vol. 207; p. 931.
Sardines. Armour & Company. No. 100,479; Oct. 20; Gaz. vol. 207; p. 926.
Sarsaparilla. Lanman & Kemp. No. 100,565; Oct. 20; Gaz. vol. 207; p. 929.
Sash-balances. Pullman Mfg. Company. No. 100,154; Oct. 6; Gaz. vol. 207; p. 295.
Sauce in bottles. P. Steet. No. 100,175; Oct. 6; Gaz. vol. 207; p. 296.
Sauces and canned fruits and vegetables. J. F. Pyle & Son. No. 100,886; Oct. 27; Gaz. vol. 207; p. 1245.
Sausage. L. Frank & Son Company. No. 100,795; Oct. 27; Gaz. vol. 207; p. 1242.
Sausage-binder. B. Levi & Co. No. 100,215; Oct. 13; Gaz. vol. 207; p. 605.
Saws. Simonds Manufacturing Company. No. 100,897; Oct. 27; Gaz. vol. 207; p. 1245.
Scale, &c., from iron and steel products, Compound for removing. R. J. Watters Co. No. 100,928; Oct. 27; Gaz. vol. 207; p. 1246.
Scales, weighing machinery, &c. The Standard Scale & Supply Company. No. 100,005; Oct. 27; Gaz. vol. 207; p. 1246.
Scalp-tonic. M. G. Brock. No. 100,090; Oct. 6; Gaz. vol. 207; p. 293.
Scissors, shears, razors, &c. H. Béligné. No. 100,488; Oct. 20; Gaz. vol. 207; p. 926.
Screening devices and separators. The Williams & Daly Company. No. 100,939; Oct. 27; Gaz. vol. 207; p. 1247.
Screw-fixing plugs. Rawlings Bros. No. 100,724; Oct. 20; Gaz. vol. 207; p. 933.
Seeds, bulbs, plants, &c. Gt. van Waveren & Kruijff. No. 100,667; Oct. 20; Gaz. vol. 207; p. 932.
Shades, Window-. T. M. James & Co. No. 100,338; Oct. 20; Gaz. vol. 207; p. 922.
Sheetings, Bleached and unbleached. Wheeler & Motter Mercantile Company. Nos. 100,934–5; Oct. 27; Gaz. vol. 207; p. 1246.
Shirt-waists. B. N. Frank. No. 100,317; Oct. 20; Gaz. vol. 207; p. 921.
Shirts. Goodman, Cohen & Co. No. 100,320; Oct. 20; Gaz. vol. 207; p. 921.
Shirts. Abrams & Marcus. No. 100,473; Oct. 20; Gaz. vol. 207; p. 926.
Shirts. Abrams & Marcus. No. 100,575; Oct. 20; Gaz. vol. 207; p. 929.
Shirts. Burnham-Munger-Root Dry Goods Co. No. 100,500; Oct. 20; Gaz. vol. 207; p. 927.
Shirts and overalls, Work-. J. E. Hurst & Company. No. 100,707; Oct. 20; Gaz. vol. 207; p. 933.
Shirts, Men's work and negligée. Goodman, Cohen & Co. No. 100,541; Oct. 20; Gaz. vol. 207; p. 928.
Shirts, night-shirts, and pajamas. C. W. Reynolds Co. No. 100,410; Oct. 20; Gaz. vol. 207; p. 924.
Shirts, night-shirts, and pajamas. Osbinsky & Valentine. No. 100,603; Oct. 20; Gaz. vol. 207; p. 930.
Shirts, undershirts, pajamas, &c. Mendelson Bros. No. 100,583; Oct. 20; Gaz. vol. 207; p. 929.
Shock-absorbers. Walker-Moore Manufacturing Co. No. 100,460; Oct. 20; Gaz. vol. 207; p. 925.
Shock-absorbers. Coburn, Jasen and Kline. No. 100,507; Oct. 20; Gaz. vol. 207; p. 927.
Shock-absorbers. Keystone Shock Absorber Co. No. 100,559; Oct. 20; Gaz. vol. 207; p. 928.
Shock-absorbers for vehicles. The K-W Ignition Company. No. 100,340; Oct. 20; Gaz. vol. 207; p. 922.
Shoe dressing, White-. J. F. Sullivan. No. 100,646; Oct. 20; Gaz. vol. 207; p. 931.
Shoe eyelets, hooks, buttons, buckles, &c. Robert Zinn & Co., Gesellschaft mit beschränkter Haftung. No. 100,600; Oct. 20; Gaz. vol. 207; p. 932.
Shoe eyelets and lacing-hooks, Celluloid-covered. The Peerless Machinery Company. No. 100,400; Oct. 20; Gaz. vol. 207; p. 924.
Shoes. Hecht & Co. No. 100,326; Oct. 20; Gaz. vol. 207; p. 921.
Shoes. A. R. Garrod. No. 100,538; Oct. 20; Gaz. vol. 207; p. 928.
Shoes. A. E. Nettleton Company. No. 100,600; Oct. 20; Gaz. vol. 207; p. 930.
Shoes, Boys' and girls' leather. M. L. Bleecker. No. 100,252; Oct. 20; Gaz. vol. 207; p. 919.

Shoes, Ladies', misses', and children's. C. Gotzian & Company. No. 100,542; Oct. 20; Gaz. vol. 207; p. 928.
Shoes, Leather. Brown Shoe Company. No. 100,262; Oct. 20; Gaz. vol. 207; p. 920.
Shoes, Leather. P. Herold Company. No. 100,328; Oct. 20; Gaz. vol. 207; p. 921.
Shoes, Leather. F. Melville, Jr. No. 100,372; Oct. 20; Gaz. vol. 207; p. 923.
Shoes, Leather. F. Melville, Jr. No. 100,718; Oct. 20; Gaz. vol. 207; p. 933.
Shoes, Leather. Turner Flexible Innersole Co. No. 100,730; Oct. 20; Gaz. vol. 207; p. 933.
Shoes, slippers, and boots. O. H. Hassel. No. 100,705; Oct. 20; Gaz. vol. 207; p. 933.
Shortening compound. The Oxola Manufacturing Company. No. 100,144; Oct. 6; Gaz. vol. 207; p. 295.
Shotguns, ammunition-bags, and rifle-sheaths. Hibbard, Spencer, Bartlett & Co. No. 100,330; Oct. 20; Gaz. vol. 207; p. 922.
Sidewalks and pavements, Bituminous. W. T. S. Crichfield. No. 100,287; Oct. 20; Gaz. vol. 207; p. 920.
Silk curtains and piece goods. A. T. Abbott & Company. No. 100,738; Oct. 27; Gaz. vol. 207; p. 1247.
Silk piece goods. M. Kurzmuns Sons. No. 100,563; Oct. 20; Gaz. vol. 207; p. 928.
Silos. De Laval Dairy Supply Company. No. 100,288; Oct. 20; Gaz. vol. 207; p. 920.
Silos. The Canton Culvert Company. No. 100,693; Oct. 20; Gaz. vol. 207; p. 932.
Skates. N. Johnson. No. 100,339; Oct. 20; Gaz. vol. 207; p. 922.
Skin preparation. C. F. York. No. 100,686; Oct. 20; Gaz. vol. 207; p. 932.
Skirts and underskirts, Dress-. Steinberg Bros. No. 100,641; Oct. 20; Gaz. vol. 207; p. 931.
Slippers and shoes, Indoor. Outing Shoe Co. No. 100,722; Oct. 20; Gaz. vol. 207; p. 933.
Soap. Wm. Waltke & Co. No. 100,664; Oct. 20; Gaz. vol. 207; p. 931.
Soap, Dog-. Potter & Wrightington. No. 100,614; Oct. 20; Gaz. vol. 207; p. 930.
Soap, Laundry. The Procter & Gamble Company. No. 100,616; Oct. 20; Gaz. vol. 207; p. 930.
Soaps. The Phoenix Oil Co. No. 100,403; Oct. 20; Gaz. vol. 207; p. 924.
Solutions for intramuscular and hypodermic injections, Sterile. C. Bardos, Jr. No. 100,079; Oct. 6; Gaz. vol. 207; p. 293.
Soup, purée, and catsup. The Harbauer Company. No. 100,120; Oct. 6; Gaz. vol. 207; p. 294.
Spaghetti. Minnesota Macaroni Co. No. 100,860; Oct. 27; Gaz. vol. 207; p. 1244.
Sporting goods and gymnasium apparatus, Certain. The William R. Burkhard Co. No. 100,498; Oct. 20; Gaz. vol. 207; p. 927.
Spraying apparatus for trees, plants, and bushes. The Deming Company. No. 100,780; Oct. 27; Gaz. vol. 207; p. 1242.
Starch. Corn Products Refining Co. No. 100,282; Oct. 20; Gaz. vol. 207; p. 920.
Starch, Laundry. H. Kohnstamm & Co. No. 100,837; Oct. 27; Gaz. vol. 207; p. 1244.
Starch, Laundry. H. Kohnstamm & Co. No. 100,842; Oct. 27; Gaz. vol. 207; p. 1244.
Statuary and images. Daprato Statuary Company. No. 100,697; Oct. 20; Gaz. vol. 207; p. 932.
Steel and iron. Turton Bros. & Matthews. No. 100,914; Oct. 27; Gaz. vol. 207; p. 1246.
Steel and iron bars, sheets, hoops, &c. Turton Bros. and Matthews. No. 100,915; Oct. 27; Gaz. vol. 207; p. 1246.
Stogies. M. Marsh & Son. No. 100,715; Oct. 20; Gaz. vol. 207; p. 933.
Stone, Natural ornamental. Virginia Fairy Stone Company. No. 100,230; Oct. 13; Gaz. vol. 207; p. 606.
Stove-polish. A. V. Gregory. No. 100,543; Oct. 20; Gaz. vol. 207; p. 928.
Stoves and ranges, heaters, &c., Oil-burning cook. A. J. Lindemann & Hoverson Co. No. 100,714; Oct. 20; Gaz. vol. 207; p. 933.
Stoves and ranges, Heating and cooking. Rock Island Stove Company. No. 100,417; Oct. 20; Gaz. vol. 207; p. 924.
Suits and overcoats for men and boys. Missoula Mercantile Company. No. 100,585; Oct. 20; Gaz. vol. 207; p. 929.
Surgical appliances and veterinary instruments, Certain named. The Randall-Faichney Co. No. 100,409; Oct. 20; Gaz. vol. 207; p. 924.
Surgical bandages. G. Hoffmann. No. 100,550; Oct. 20; Gaz. vol. 207; p. 928.
Surgical pads, bandages, and belts. Mathis and Fergusson. No. 100,717; Oct. 20; Gaz. vol. 207; p. 933.
Surgical sutures. C. De Witt Lukens Surgical Manufacturing Co. No. 100,366; Oct. 20; Gaz. vol. 207; p. 923.
Syrup, Table-. Alabama-Georgia Syrup Co. No. 100,691; Oct. 20; Gaz. vol. 207; p. 932.
Syrups, sorghum, and molasses, Table-. Farrell & Co. No. 100,700; Oct. 20; Gaz. vol. 207; p. 933.
Syrups, Table-. Southern Syrup Company. No. 100,172; Oct. 6; Gaz. vol. 207; p. 296.
Tables and stands. The Cleveland Metal Products Company. No. 100,506; Oct. 20; Gaz. vol. 207; p. 927.
Tablet, Digestive. G. A. Colvin. No. 100,101; Oct. 6; Gaz. vol. 207; p. 294.
Tablet, Foot-. Spero Chemical Co. No. 100,903; Oct. 27; Gaz. vol. 207; p. 1245.
Tablets, Cathartic. L. D. Perry. No. 100,608; Oct. 20; Gaz. vol. 207; p. 930.
Talking-machine-record cabinets. Victor Talking Machine Company. No. 100,657; Oct. 20; Gaz. vol. 207; p. 931.
Tanks, Gathering-. The Lender Evaporator Company. No. 100,566; Oct. 20; Gaz. vol. 207; p. 929.
Taxicab and other vehicle doors. Mason-Seaman Transportation Company. No. 100,370; Oct. 20; Gaz. vol. 207; p. 923.
Tea. J. A. Folger & Co. No. 100,114; Oct. 6; Gaz. vol. 207; p. 294.
Tea. Sheppard-Strassheim Co. No. 100,637; Oct. 20; Gaz. vol. 207; p. 931.
Tea. Robert Melrose and Company. No. 100,855; Oct. 27; Gaz. vol. 207; p. 1244.
Tea and coffee. Aragon Coffee Co. No. 100,744; Oct. 27; Gaz. vol. 207; p. 1241.
Teas. The G. B. Farrington Company. No. 100,111; Oct. 6; Gaz. vol. 207; p. 294.
Teeth and teeth-facings, Artificial. The Columbus Dental Manufacturing Co. No. 100,277; Oct. 20; Gaz. vol. 207; p. 920.
Teeth, Artificial. The Dentists' Supply Company. No. 100,190; Oct. 20; Gaz. vol. 207; p. 920.
Tempering compound. B. L. Mosso. No. 100,591; Oct. 20; Gaz. vol. 207; p. 929.
Tents, tarpaulins, and waterproof bed-sheets. H. Wenzel Tent & Duck Co. Nos. 100,186–7; Oct. 6; Gaz. vol. 207; p. 296.
Textile fibers, Compound to soften. L. Sonnenborn Sons. No. 100,902; Oct. 27; Gaz. vol. 207; p. 1245.
Threads and yarns. Th. Vrau & Cie. No. 100,660; Oct. 20; Gaz. vol. 207; p. 931.
Ties, Four-in-hand. C. H. Peirce. No. 100,401; Oct. 20; Gaz. vol. 207; p. 924.
Tire-puncture compound. Lackland Brothers. No. 100,564; Oct. 20; Gaz. vol. 207; p. 929.
Tires and inner tubes, Pneumatic. The Pharis Tire & Rubber Co. No. 100,880; Oct. 27; Gaz. vol. 207; p. 1245.
Tires and inner tubes therefor, Rubber vehicle-. Dreadnaught Tire & Rubber Co. No. 100,104; Oct. 6; Gaz. vol. 207; p. 294.
Tires and vulcanizing-cement, Friction-tape for. The Johnstown Automobile Co. No. 100,556; Oct. 20; Gaz. vol. 207; p. 928.
Tires, castings, and inner tubes, Rubber. Converse Rubber Shoe Co. No. 100,772; Oct. 27; Gaz. vol. 207; p. 1242.
Tires, Inner tubes for pneumatic. Greensburg Tire & Rubber Co. No. 100,704; Oct. 20; Gaz. vol. 207; p. 933.
Tires, Rubber. Polack Tyre & Rubber Co. No. 100,883; Oct. 27; Gaz. vol. 207; p. 1245.
Tires, Rubber. Russian-French India Rubber, Gutta-percha and Telegraph Works, "Prowodnik, Riga." No. 100,891; Oct. 27; Gaz. vol. 207; p. 1245.
Tires, Rubber tubes for pneumatic. Giant Tire & Rubber Company. No. 100,798; Oct. 27; Gaz. vol. 207; p. 1242.
Tires, Tubes for pneumatic. Greensburg Tire & Rubber Co. No. 100,703; Oct. 20; Gaz. vol. 207; p. 933.
Tobacco, &c., pockets or containers. The United States Tobacco Company. No. 100,453; Oct. 20; Gaz. vol. 207; p. 925.
Toilet-article cases. N. L. Schloss. No. 100,433; Oct. 20; Gaz. vol. 207; p. 925.
Toilet-article cases. N. L. Schloss. No. 100,630; Oct. 20; Gaz. vol. 207; p. 930.
Tomatoes, Fresh. T. J. Peters. No. 100,223; Oct. 13; Gaz. vol. 207; p. 606.
Tonic, Celery. J. Myer Co. No. 100,138; Oct. 6; Gaz. vol. 207; p. 295.
Tonic, Stock-. Blasdell Milk Producer Co. No. 100,082; Oct. 6; Gaz. vol. 207; p. 293.
Tonics, Stock-. Gold Medal Stock Food Co. No. 100,800; Oct. 27; Gaz. vol. 207; p. 1242.
Tooth-wash and antiseptic solution, eye remedy. The Consolidated Drug Co. No. 100,512; Oct. 20; Gaz. vol. 207; p. 927.
Towels, washcloths, bath-mitts, sheets, &c. San-Knit-Ary Textile Mills. No. 100,426; Oct. 20; Gaz. vol. 207; p. 924.
Toy-watch bracelet, Child's. Moore & Gibson Corporation of New York. No. 100,382; Oct. 20; Gaz. vol. 207; p. 923.
Trousers and overalls. The Crown Overall Manufacturing Co. No. 100,774; Oct. 27; Gaz. vol. 207; p. 1242.
Trousers, Men's. Gillespie, Shields & Co. No. 100,539; Oct. 20; Gaz. vol. 207; p. 928.
Truck-chains. The Brockett-Gorham Company. No. 100,493; Oct. 20; Gaz. vol. 207; p. 926.
Trunks, suitcases, and bags. The Hartmann Trunk Co. No. 100,325; Oct. 20; Gaz. vol. 207; p. 921.
Trunks, suitcases, and traveling-bags. The Kamlee Company. No. 100,557; Oct. 20; Gaz. vol. 207; p. 928.
Tubes, blow-out patches, &c., Inner. The Johnstown Automobile Co. No. 100,830; Oct. 27; Gaz. vol. 207; p. 1243.
Umbrellas. Hulse Brothers & Daniel Co. No. 100,334; Oct. 20; Gaz. vol. 207; p. 922.
Underwear, combination-garments, &c., Woven and knitted. N. Hatch. No. 100,547; Oct. 20; Gaz. vol. 207; p. 928.
Unguents. Baer & Snyder. No. 100,244; Oct. 20; Gaz. vol. 207; p. 919.

Varnish, Shellac. Berry Brothers. No. 100,081; Oct. 6; Gaz. vol. 207; p. 293.
Vehicles, Metal wheels and stampings in metal for motor-. Joseph Sankey & Sons. No. 100,425; Oct. 20; Gaz. vol. 207; p. 924.
Vehicles, Motor-. Palmer & Singer Manufacturing Company. No. 100,301; Oct. 20; Gaz. vol. 207; p. 923.
Vehicles with pneumatic springs. Cowles-MacDowell Pneumobile Co. No. 100,283; Oct. 20; Gaz. vol. 207; p. 920.
Ventilators. W. H. Jardine. No. 100,829; Oct. 27; Gaz. vol. 207; p. 1243.
Vinegar, sauer-kraut, pickles, &c. B. A. Hancock. No. 100,814; Oct. 27; Gaz. vol. 207; p. 1243.
Wafers, cakes, crackers, and biscuits, Sugar. Peerless Biscuit Company. No. 100,399; Oct. 20; Gaz. vol. 207; p. 924.
Waists and blouses. Shapiro Bros. No. 100,635; Oct. 20; Gaz. vol. 207; p. 931.
Waists, Ladies' shirt-. I. Kaitz. No. 100,835; Oct. 27; Gaz. vol. 207; p. 1243.
Waists, shirt-waists, and dresses, Dress-. Goldstein Bros. No. 100,801; Oct. 27; Gaz. vol. 207; p. 1242.
Waists, Women's and girls' outer. Bloom & Milliman. No. 100,757; Oct. 27; Gaz. vol. 207; p. 1241.
Washboards. National Washboard Company. Nos. 100,385–6; Oct. 20; Gaz. vol. 207; p. 923.
Washboards. National Washboard Company. Nos. 100,594–9; Oct. 20; Gaz. vol. 207; pp. 929–30.
Washing compound and detergent. Fitzpatrick Bros. No. 100,314; Oct. 20; Gaz. vol. 207; p. 921.
Washing compounds. Ozene Company. No. 100,390; Oct. 20; Gaz. vol. 207; p. 923.
Washing fluid. G. L. Wilde. No. 100,466; Oct. 20; Gaz. vol. 207; p. 926.
Washing machines and parts, Power laundry-. Flint and Walling Manufacturing Co. No. 100,315; Oct. 20; Gaz. vol. 207; p. 921.
Watches, clocks, watchcases, &c. Didisheim, Goldschmidt Fils et Cie., Fabrique Juvenia. No. 100,524; Oct. 20; Gaz. vol. 207; p. 927.
Watches, watchcases, and watch-movements. A. Schwob. No. 100,225; Oct. 13; Gaz. vol. 207; p. 606.
Wax, Ironing-. Wizard Products Company. No. 100,470; Oct. 20; Gaz. vol. 207; p. 926.
Wax, Paraffin-. Columbia Wax Works. No. 100,100; Oct. 6; Gaz. vol. 207; p. 294.
Window-sash, doors, partitions, &c., Metal. Detroit Steel Products Co. No. 100,291; Oct. 20; Gaz. vol. 207; p. 920.
Window-washing preparation. Waterless Window Washer Manufacturing Company. No. 100,666; Oct. 20; Gaz. vol. 207; p. 932.
Wine appetizer. Mariani and Company. No. 100,133; Oct. 6; Gaz. vol. 207; p. 294.
Wine appetizer. Mariani and Company. No. 100,576; Oct. 20; Gaz. vol. 207; p. 929.
Wine, Port-. D. M. Feuerheerd, Junior & Companhia. No. 100,535; Oct. 20; Gaz. vol. 207; p. 928.
Wines. E. G. Hecht. No. 100,121; Oct. 6; Gaz. vol. 207; p. 294.
Wire rope. A. Leschen & Sons Rope Company. No. 100,712; Oct. 20; Gaz. vol. 207; p. 933.
Wire screen-cloth. Reynolds Wire Co. No. 100,157; Oct. 6; Gaz. vol. 207; p. 295.
Woolen piece goods. Jno. E. Magerl & Co. No. 100,367; Oct. 20; Gaz. vol. 207; p. 923.
Wrenches. Walden Manufacturing Company. No. 100,921; Oct. 27; Gaz. vol. 207; p. 1246.
Wringer, Clothes-. The Fair. No. 100,304; Oct. 20; Gaz. vol. 207; p. 921.
Wringer, Clothes-. The Fair. No. 100,307; Oct. 20; Gaz. vol. 207; p. 921.
X-ray apparatus. Campbell Electric Company. No. 100,091; Oct. 6; Gaz. vol. 207; p. 293.
X-ray apparatus, Automatic switches used with. Victor Electric Company. No. 100,920; Oct. 27; Gaz. vol. 207; p. 1246.

ALPHABETICAL LIST OF LABELS.

"Baker's Nerve and Bone Liniment." (For Liniment.) The Baker, Moore & Mein Medicine Company. No. 18,009; Oct. 13; Gaz. vol. 207; p. 607.

"Blue Bird Racing Aeroplane." (For a Flying Toy.) Ideal Aeroplane & Supply Co. No. 18,026; Oct. 13; Gaz. vol. 207; p. 607.

"Blue Rose Brand." (For Fruits.) F. A. Stuart. No. 18,043; Oct. 13; Gaz. vol. 207; p. 607.

"Bullfrog." (For Fishing-Lines.) R. J. Hillinger. No. 18,022; Oct. 13; Gaz. vol. 207; p. 607.

"Champanola." (For a Beverage.) I. Dusol. No. 18,014; Oct. 13; Gaz. vol. 207; p. 607.

"Chicago Subway." (For Cigars.) H. B. Franklin & Co. No. 18,020; Oct. 13; Gaz. vol. 207; p. 607.

"Consult Elcaro." (For Games.) P. J. Nagle. No. 18,029; Oct. 13; Gaz. vol. 207; p. 607.

"Crystal Sparkle." (For a Cleansing Preparation.) Republic Chemical Products Co. No. 18,036; Oct. 13; Gaz. vol. 207; p. 607.

"Elegantes." (For Cigars.) American Lithographic Company. No. 18,005; Oct. 13; Gaz. vol. 207; p. 607.

"Emmer Breakfast Food." (For Breakfast Food.) Emmer Products Company. No. 18,015; Oct. 13; Gaz. vol. 207; p. 607.

"Emmer Stock and Poultry Food." (For Stock and Poultry Food.) Emmer Products Company. No. 18,017; Oct. 13; Gaz. vol. 207; p. 607.

"Front label for can." (For a Lubricating Fluid.) Power Gas Products Company. No. 18,034; Oct. 13; Gaz. vol. 207; p. 607.

"Horlicks Malt-Oat Milk." (For Malt-Oat Milk.) A. A. Horlick. No. 18,024; Oct. 13; Gaz. vol. 207; p. 607.

"Improved Emmer Food." (For Emmer Food.) Emmer Products Company. No. 18,016; Oct. 13; Gaz. vol. 207; p. 607.

"Kitchen Cleaner." (For a Cleaning Compound.) Fitzpatrick Brothers. No. 18,018; Oct. 13; Gaz. vol. 207; p. 607.

"Krumbles." (For Prepared Cereal Foods.) Kellogg Toasted Corn Flake Co. No. 18,028; Oct. 13; Gaz. vol. 207; p. 607.

"Liquid Wood Renew." (For Furniture-Polish.) Wood Renew Manufacturing Company. No. 18,045; Oct. 13; Gaz. vol. 207; p. 607.

"Lucella Habana Cigars." (For Cigars.) R. Gangemi & Co. No. 18,021; Oct. 13; Gaz. vol. 207; p. 607.

"Marca Petri." (For Cigars.) Petri Italian-American Cigar Co. No. 18,033; Oct. 13; Gaz. vol. 207; p. 607.

"Mother's Hair Tonic." (For Hair-Tonic.) V. F. Caveneget. No. 18,012; Oct. 13; Gaz. vol. 207; p. 607.

"Natsco." (For a Substitute for Potassium Iodid and Iodin Resublimed.) National Steel & Copper Plate Company. No. 18,030; Oct. 13; Gaz. vol. 207; p. 607.

"New Lustre." (For a Polish.) New Lustre Mfg. Co. No. 18,031; Oct. 13; Gaz. vol. 207; p. 607.

"909 'One's Enuff.'" (For Medicines.) E. M. Scher and H. P. Skourup. No. 18,038; Oct. 13; Gaz. vol. 207; p. 607.

"Odor Killer." (For a Disinfectant.) Republic Chemical Products Co. No. 18,035; Oct. 13; Gaz. vol. 207; p. 607.

"Ojen Dávila." (For a Cordial.) Hijos de R. J. Dávila. No. 18,003; Oct. 6; Gaz. vol. 207; p. 297.

"Paxton & Windham's New Life Angel Tonic." (For a Medicine.) Paxton & Windham. No. 18,032; Oct. 13; Gaz. vol. 207; p. 607.

"Perfection." (For Stamping-Paste.) E. Brown. No. 18,010; Oct. 13; Gaz. vol. 207; p. 607.

"Seleccion Especial." (For Cigars.) American Lithographic Company. No. 18,008; Oct. 13; Gaz. vol. 207; p. 607.

"Slippon." (For Hair-Nets.) Messrs. Burnet & Temple. No. 18,011; Oct. 13; Gaz. vol. 207; p. 607.

"Smucker's Apple Butter." (For Apple-Butter.) J. M. Smucker. No. 18,039; Oct. 13; Gaz. vol. 207; p. 607.

"Soil-Tone." (For a Mineral Fertilizer.) C. R. Stuart. No. 18,042; Oct. 13; Gaz. vol. 207; p. 607.

"Spalding 'Official National League' Ball." (For Base-Balls.) A. G. Spalding & Bros. No. 18,040; Oct. 13; Gaz. vol. 207; p. 607.

"Spring-Root." (For Chewing-Gum.) Frank H. Fleer Corporation. No. 18,019; Oct. 13; Gaz. vol. 207; p. 607.

"Standard Delicious Pickles." (For Sweet Mixed Pickles.) The Standard Pickle Co. No. 18,041; Oct. 13; Gaz. vol. 207; p. 607.

"Stanwick." (For Cigars.) American Lithographic Company. No. 18,007; Oct. 13; Gaz. vol. 207; p. 607.

"Superior Cigars." (For Cigars.) American Lithographic Company. No. 18,006; Oct. 13; Gaz. vol. 207; p. 607.

"Sweetmash 100 proof Corn Whiskey." (For Corn Whisky.) Josselson Bros. No. 18,027; Oct. 13; Gaz. vol. 207; p. 607.

"Tripoli Brand." (For Macaroni.) The Savarese Macaroni Co. No. 18,037; Oct. 13; Gaz. vol. 207; p. 607.

"Tuna." (For Tinned Sea-Fish.) Van Camp Sea Food Company. No. 18,044; Oct. 13; Gaz. vol. 207; p. 607.

"United." (For Milk.) Hudson Condensed Milk Co. No. 18,025; Oct. 13; Gaz. vol. 207; p. 607.

"Useful and Just." (For Provisions.) Deforth Bros. No. 18,013; Oct. 13; Gaz. vol. 207; p. 607.

"Vino Mezcal de Tequila." (For a Remedy for Liver and Kidney Complaints.) Houck & Dieter Co. No. 18,023; Oct. 13; Gaz. vol. 207; p. 607.

"Watch The Improved Victoria Pleater." (For a Plaiter.) H. O'Connor & Co. No. 18,004; Oct. 6; Gaz. vol. 207; p. 297.

PRINTS.

"A Case of Good Judgment." (For Beer.) The Peter Schoenhofen Brewing Co. Nos. 3,753–5; Oct. 13; Gaz. vol. 207; p. 608.

"Bag." (For Bags.) Milwaukee Bag Co. No. 3,751; Oct. 13; Gaz. vol. 207; p. 608.

"Butter-Krust Bread." (For Bread.) Excelsior Baking Company. No. 3,747; Oct. 13; Gaz. vol. 207; p. 608.

"Campbell." (For Sewing-Machines.) Campbell Bosworth Machinery Company. No. 3,746; Oct. 13; Gaz. vol. 207; p. 608.

"Cooks Thoro-Bread." (For Bread.) W. A. Adams Advertising Co. No. 3,745; Oct. 13; Gaz. vol. 207; p. 608.

"Das gute Bier." (For Beer.) The Monumental Brewing Co. No. 3,752; Oct. 13; Gaz. vol. 207; p. 608.

"Falstaff and Happiness." (For Beer.) Wm. J. Lemp Brewing Co. No. 3,750; Oct. 13; Gaz. vol. 207; p. 608.

"Germicide Hairtone." (For a Preparation for the Hair and Scalp.) Germicide Hairtone Company. No. 3,748; Oct. 13; Gaz. vol. 207; p. 608.

"Goerz V. P. Roll Film Tenax." (For Photographic Films.) C. P. Goerz American Optical Co. No. 3,749; Oct. 13; Gaz. vol. 207; p. 608.

"Worth Fighting for." (For Chewing-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,756; Oct. 13; Gaz. vol. 207; p. 608.

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